

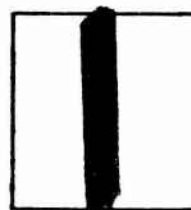
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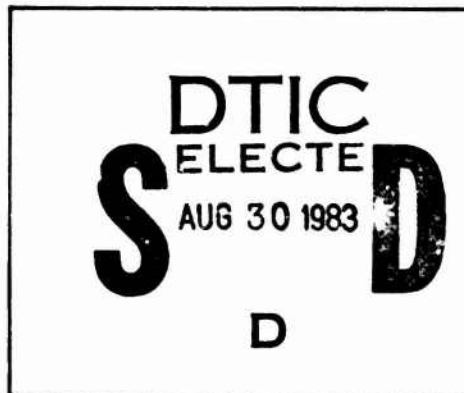
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TIME DEGRADATION FACTORS FOR TURBINE ENGINE EXHAUST EMISSIONS

VOLUME I
PROGRAM DESCRIPTION AND RESULTS

Melvin Platt and E. R. Norster



APRIL 1979

FINAL REPORT

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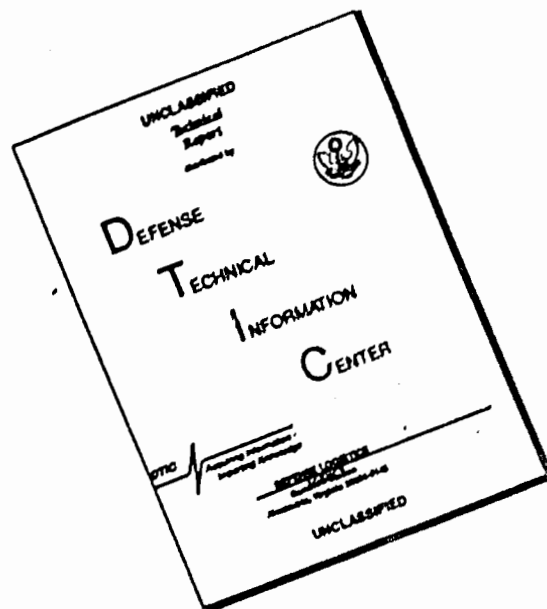
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16. Abstract This is the first volume of an eight-volume final report which documents a study of turbine emission degradation. This volume contains an introduction to the program, a description of the test schedule, equipment, procedures, and data analysis techniques, as well as a presentation of the principal results and conclusions of the program. A total of 519 repetitious emission tests were conducted over a period of 22 months on units of the following engine types: JT8D-9, JT8D-7, JT3D-7, JT3D-3B, JT9D-3A, RB211-22B, and CF700-2D. Emissions of CO ₂ , CO, HC, NO, NO _x , and smoke were monitored, in addition to various engine operating parameters, over an eight-mode test cycle ranging from cold idle to take-off and back to hot idle. Degradation, where it was found, is generally small and comparable in magnitude to other variations due to ambient conditions, unit-to-unit differences, measurement accuracy, and, perhaps, fuel characteristics.					
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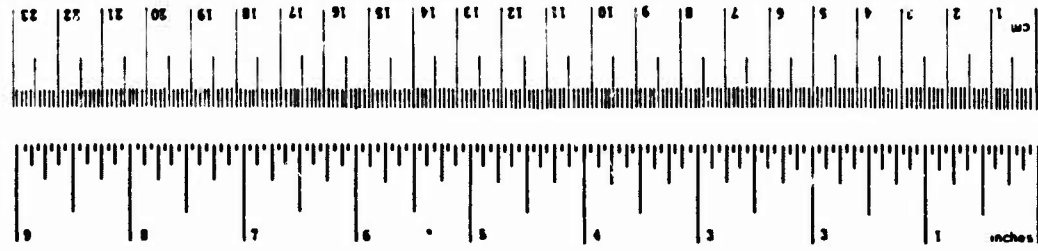
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
sq in	square inches	6.5	square centimeters	cm ²
sq ft	square feet	0.09	square meters	m ²
sq yd	square yards	0.8	square meters	m ²
sq mi	square miles	2.6	square kilometers	km ²
acres	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tblsp	tablespoons	5	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.96	liters	l
gal	gallons	3.8	liters	l
cu ft	cubic feet	0.03	cubic meters	m ³
cu yd	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
F	Fahrenheit temperature	5/9 (then subtracting 32)	Celsius temperature	°C

Approximate Conversions from Metric Measures

When You Know	Multiply by	To Find	Symbol
LENGTH			
millimeters	0.04	inches	in
centimeters	0.4	inches	in
meters	3.3	feet	ft
kilometers	1.1	yards	yd
	0.6	miles	mi
AREA			
square centimeters	0.16	square inches	in ²
square meters	1.2	square yards	yd ²
square kilometers	0.4	square miles	mi ²
hectares (10,000 m ²)	2.5	acres	
MASS (weight)			
grams	0.035	ounces	oz
kilograms	2.2	pounds	lb
tonnes (1000 kg)	1.1	short tons	
VOLUME			
milliliters	0.03	fluid ounces	fl oz
liters	2.1	pints	pt
	1.06	quarts	qt
	0.26	gallons	gal
cubic meters	35	cubic feet	ft ³
	1.3	cubic yards	yd ³
TEMPERATURE (exact)			
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature



For more exact conversions, use the following factors: 1 inch = 2.54 centimeters; 1 foot = 30.48 centimeters; 1 yard = 91.44 centimeters; 1 mile = 1.60934 kilometers; 1 ounce = 28.3495 grams; 1 pound = 453.592 grams; 1 short ton = 907.185 kilograms; 1 liter = 1.05669 quarts; 1 quart = 0.946353 liters; 1 gallon = 3.78541 liters; 1 cubic foot = 0.0283168 cubic meters; 1 cubic yard = 0.764555 cubic meters.

PREFACE

The turbine emission degradation study was conducted by Northern Research and Engineering Corporation (NREC) as prime contractor, and United Air Lines (UAL) as primary subcontractor, pursuant to Contract No. DOT FA74NA-1100 with the Federal Aviation Administration. Also participating as subcontractors in the study were Trans World Airlines (TWA) and Federal Express.

Mr. Melvin Platt directed the contract study for NREC. Mr. Platt had responsibility for NREC efforts as well as coordination of NREC efforts with UAL, TWA, and Federal Express. Other major participants in the program for NREC were E. R. Norster, R. G. Hanson, M. Chandler, and I. P. Krepchin. Dr. Norster was responsible for the design of the sampling probes, the specifications of the test facility, and the development of test procedures. With Mr. Platt, he also guided the analysis of the test data. Mr. Hanson, with the assistance of Mr. Chandler, was responsible for all NREC field testing, while Mr. Krepchin was responsible for all data processing. Also participating in the program for NREC were T. A. Blatt, E. P. Demetri, M. J. Paradise, W. H. Robinson, R. D. Gryzbinski, D. B. Chouinard, C. E. DeLong, and S. D. Ham.

UAL efforts were performed under the overall direction of L. C. "Tom" Ellis. Other major participants in the Program for UAL were D. Center, F. Dilts, J. Gibson, and R. Johnson. Messrs. Dilts, Gibson, and Johnson operated and maintained the emission testing equipment for all tests of the UAL JT8D-7, JT3D-3B, JT3D-7, and JT9D engines, while Mr. Center designed the sampling probe attachments for these engines and was responsible for probe manufacture. In addition, acknowledgment should be given to Mr. R. Raymond, who coordinated special routings of UAL aircraft to San Francisco for emission testing and to the SFO mechanics of UAL who operated the aircraft during testing under the supervision of Messrs. P. Giampoli, P. Snowden, R. Sorenson, and R. Horn.

TWA efforts were coordinated by Gary Riedl. In addition, acknowledgment should be given to Mr. C. Doan, who was responsible for special routings of TWA aircraft for emission testing, as well as the MCI

and SFO maintenance personnel of TWA who operated the aircraft during testing of the JT8D-9 and RB211 engines, respectively, and assisted the program in numerous ways.

Federal Express efforts were coordinated by George Boller with the assistance of E. J. Prestia. In addition, acknowledgment should be given to the schedulers who routed the aircraft to Memphis for emission testing and the mechanics who operated the aircraft during the CF700 tests.

The designated Technical Representative of the Federal Aviation Administration for this program was Mr. Thomas Rust of the National Aviation Facilities Experimental Center (NAFEC).

NREC would also like to acknowledge the cooperation of other individuals and organizations who contributed to the success of the degradation program. They are:

- Don Seizinger of the Energy Research and development Administration, Bartlesville Research Center, who coordinated the analysis of all the jet fuel samples taken in the program
- Dick Pfunter of General Electric, Wilmington, Massachusetts, who provided specifications for the special CF700 fuel flow indicator
- Al Reinhardt, Don Eiler, Art Nelson and others at the Pratt and Whitney Aircraft Division of United Technologies Corporation who provided engine performance data used in the analysis of the JT8D, JT3D, and JT9D engine types
- Tony Wassell of the Derby Engine Division of Rolls-Royce (1971) Limited, who provided engine performance data used in the analysis of the RB211 engine type
- Gene Martin of General Electric, Lynn, Massachusetts, who provided engine performance data used in the analysis of the CF700 engine type

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1. INTRODUCTION

1.1 PROGRAM OBJECTIVE

The objective of the program described in this report was to develop degradation factors for pollutant emissions of each class of aircraft gas-turbine engines over operating times between 2,500 and 3,000 hours. The degradation factors will provide a basis for the FAA to develop regulations which (1) insure compliance with the aircraft emission standards established by the EPA, and (2) provide for reasonable service times of the commercial aircraft fleet with respect to pollutant emissions.

1.2 BACKGROUND

In recent years, important federal legislation has been directed towards the improvement of air quality in the United States. Aircraft have been one source of pollutant emissions at which such legislation has been directed.

Section 231 of the Clean Air Amendments of 1970 (Ref 1) directed the Environmental Protection Agency (EPA) to establish appropriate standards for the emissions of air pollutants from aircraft engines. At the same time, Section 232 of the amendments directed the Department of Transportation (and ultimately, the FAA) to prescribe regulations to insure compliance with all standards. Such standards were initially proposed as EPA Part 87 in December 1972 and final standards were promulgated in July 1973 (Ref 2). The availability of a comprehensive draft of "tentative regulations" was announced by the Federal Aviation Administration (FAA) in January 1973, and a Special Federal Aviation Regulation concerning initial compliance with standards was published in December 1973 (Ref 3).

Section 87.31, paragraph (e) of the aircraft emission standards states that

"... each in-use aircraft gas turbine engine shall not exceed the level of emissions applicable to such engine when it was new."

As a consequence, to insure compliance, the FAA must be prepared to take into account the effect of engine operating time on aircraft emissions.

Operating time for commercial aircraft can amount to between 2,500 and 3,000 hours per year. However, available emission data for aircraft turbine engines had been limited to a span of approximately 50 hours of operation. This report documents a program which was undertaken by the FAA to obtain information for commercial aircraft operating over a period of approximately one year.

1.3 METHODOLOGY

The development of degradation factors for turbine engine emissions over operating times between 2,500 and 3,000 hours implies several requirements:

1. Information from a large number of engines to provide statistical validity.
2. Heavy engine usage so that the hours may be accumulated in a reasonable amount of time.
3. Repetitious testing so that incremental changes may be observed.

These requirements dictated a methodology based upon the emission testing of installed engines in regularly scheduled service. This meant that the EPA specification of conducting such tests on a thrust-measuring test stand (see Subpart G of Ref 2) would not be satisfied. Other EPA specifications which were not satisfied due to conflict with the interests of degradation testing, concern the sampling probe configurations and the number of smoke sample sizes.

Implementation of emission testing on installed aircraft engines involved several areas of development:

1. Sampling probes which could be positioned both quickly and securely.

Due to the movement of an installed engine at power, it was determined that a probe assembly must be used which was directly and simply attached to the engine, yet would remain attached at take-off power.

2. A test facility which would allow the emission tests to be conducted at designated airport run-up locations.

Since emission testing requires high-power engine operation, it must be restricted to designated run-up locations. These tend to be rather remote locations near the airport runways. The remote location led to instrumentation,

together with bottled gases, housed in mobile trailers which were equipped with their own power supply. Further, due to the proximity of such a significant exposed noise source as an aircraft engine, the trailers had to provide adequate sound attenuation for the protection of test personnel and equipment.

3. A test procedure which would cause minimum interference with normal airline operations.

Since aircraft in regularly scheduled service would be involved in the testing, it was necessary to keep their out-of-service time to a minimum. This led to a test procedure (including equipment specifications) which emphasized automatic acquisition of emission and calibration data, onboard instrumentation for engine operating parameters, minimum but practical engine stabilization periods, and a simplified smoke analysis. On the other hand, the procedure was expanded to allow for the special needs of a degradation study. For instance, fuel handling requirements were established to minimize variations in the fuel supply, and additional test modes were included to provide better definition of the variation of emissions with power level.

The amount of test data to be obtained in the program dictated a methodology for data processing and analysis which relied heavily on large-scale computer usage. A computer program was developed to accept raw test data and to provide calibrated emission levels, corrected for ambient effects. Further, all pertinent data were stored by the computer program into data banks to facilitate later analysis. This allowed many analysis techniques to then be computerized. The need for computerized analysis was amplified by the variation in emission levels between individual units of the same engine type, thus ensuring that analysis had to be done on a unit-by-unit basis.

It was also recognized that the effect of degradation on emissions could only be found if other concurrent effects were eliminated. Those effects which had to be addressed were the variation of ambient conditions (affecting emission levels directly, as well as engine operation conditions), fuel content, and airline maintenance. In the case of ambient conditions,

this led to the development of parameters which characterize the nominal variation of emission levels with ambient conditions and engine operating conditions. For fuel, this led to efforts to minimize and document the variations in content. In the case of maintenance, no efforts were made to alter normal airline maintenance procedures. Rather, extensive documentation was kept of all maintenance performed on test engines and tests were cancelled on all engines requiring major maintenance. Major maintenance was defined for this purpose as removal and replacement of major engine components in the gas path, such as fans, compressors, diffusers, combustors, nozzle guide vanes, and turbines.

1.4 REPORT ARRANGEMENT

The final report consists of eight volumes. This first volume contains an introduction to the program, a description of the test schedule, equipment, procedures, and data analysis techniques, and a presentation of the principal results and conclusions of the program. The remaining seven volumes are devoted, respectively, to the detailed test data obtained for each engine type as follows:

Volume II - JT8D-9
Volume III - JT8D-7
Volume IV - JT3D-7
Volume V - JT3D-3B
Volume VI - JT9D-3A
Volume VII - RB211-22B
Volume VIII - CF700-2D

Each volume of engine data includes maintenance and fuel analysis data, as well as the data obtained from the series of emission tests.

2. PROGRAM DESCRIPTION

2.1 ENGINE TYPES

Using two mobile facilities, it was possible to coordinate the testing of seven engine types in the program. These engine types are presented by EPA classification in Table 1 below.

TABLE 1. - ENGINE TYPES TESTED

EPA Class	Engine Type	Aircraft Type	Airline
T1	CF700-2D	Falcon	Federal Express
T2	JT9D-3A RB211-22B	747-100 L1011	UAL TWA
T3	JT3D-3B JT3D-7	DC-8-61 DC-8-62	UAL UAL
T4	JT8D-7 JT8D-9	727-100 727-231	UAL TWA

It can be seen that United Air Lines provided units of four engine types to the program, while Trans World Airlines provided two engine types and Federal Express provided a single engine type. No turboprop engine types (EPA Class P2) could be economically included in the program.

2.2 TEST SCHEDULE

An overall test schedule was established for each engine type, appropriate to its utilization, maintenance requirements, and reliability. The schedule is summarized in Table 2.

TABLE 2. - OVERALL TEST SCHEDULE

Engine Type	Test Location	Original Number of Units	Nominal Test Frequency in Hours	Nominal Test Period in Hours
CF700-2D	Memphis	16	400	1600
JT9D-3A	SF	20	600	3000
RB211-22B	SF	20	150	600
JT3D-3B	SF	18	600	3000
JT3D-7	SF	18	600	3000
JT8D-7	SF	20	600	3000
JT8D-9	KC	20	600	3000

One mobile facility accommodated all of the testing scheduled for San Francisco, where UAL maintenance operations are located. The second mobile facility was based in Kansas City, site of the TWA maintenance center, during the JT8D-9 tests and traveled to Memphis, headquarters of Federal Express, for each round of CF700 tests. These tests could be scheduled for weekends, when the Federal Express aircraft were not in operation.

The original number of units tested for each engine type was selected to insure, where possible, that ten units would remain at the end of the test period. Ten units were selected to allow a reasonable statistical basis for the degradation results. In the case of the JT9D, however, this requirement had to be relaxed due to practical considerations. The high attrition rate of this engine, in combination with a 3000 hour test period, required too many units initially.

A test period of 3000 hours had originally been an objective for all engine types, but this also had to be relaxed. In the case of the CF700, a reduced period was specified because the engine undergoes required maintenance of the combustor every 1350 hours. A 1600 hour test period was established to allow evaluation of degradation both with and without this maintenance. In the case of the RB211, a modularized

engine, current reliability data indicated that few units could be tested over more than 600 hours without a module being replaced.

Selection of the actual units to be tested was based on a number of considerations. First, the unit could not have a "hard time" limit, such as a turbine disk replacement, during the test period. Second, variation within the unit of combustor nozzle time should be minimal. Third, the number of aircraft in the program should be minimized. (Although, for the RB211, units in the center position could not be selected because they are difficult to reach.)

2.3 EMISSION SAMPLING PROBES

The emission sampling probes used in the program were custom designed for each engine type to be tested. The sampling configuration, based on a design developed by the FAA after extensive testing and optimization analysis at NAFEC (see Ref 4), is shown in Figure 1. It consists of a tube in the shape of a diamond, with each leg of the diamond containing three equally-spaced sampling holes of equal diameter. As such, the configuration does not conform to specifications contained in Reference 2 for emission sampling probes.

In each case, the sampling tube was fabricated from a single length of 0.375-inch-outside-diameter, Type 321 stainless steel tubing. The ends of the tube were welded into a block manifold which was provided with a straight-through quick-disconnect fitting for ease of connection to the sample line. Twelve 0.04-inch-diameter holes were drilled in each tube using a standard process to prevent the formation of burrs.

The sampling tube was secured with straps to a back-up structure consisting of four beams in the same general shape, and positioned on the nozzle rim with four equispaced clevis mounting pads (except for the CF700 where a blast shield limited the design to two wide mounting pads). This design allows for radial thermal expansion of the probe and provides minimal blockage of the nozzle flow area. The entire structure was then secured using four or six tensioning rods between the engine frame and a

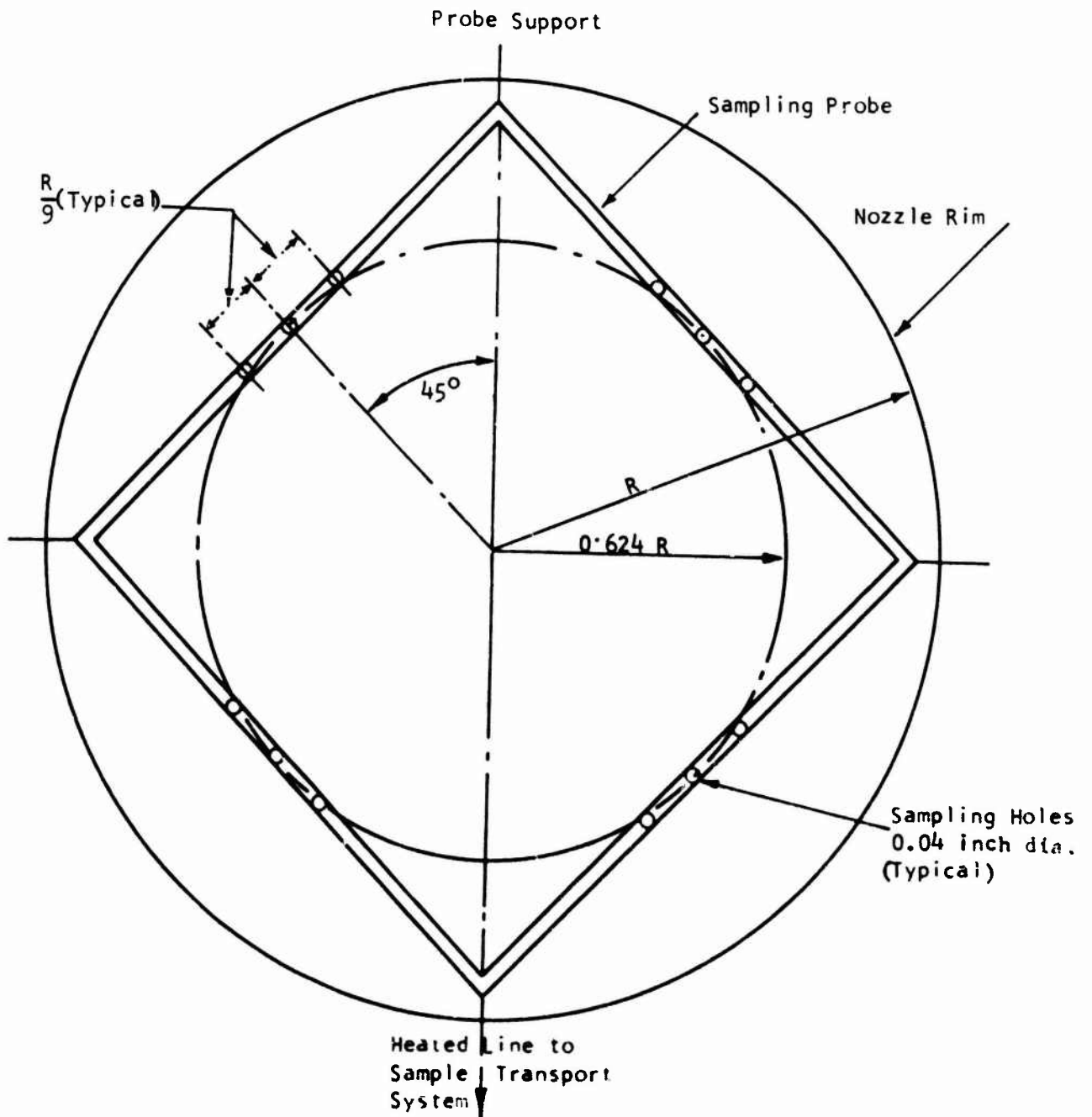
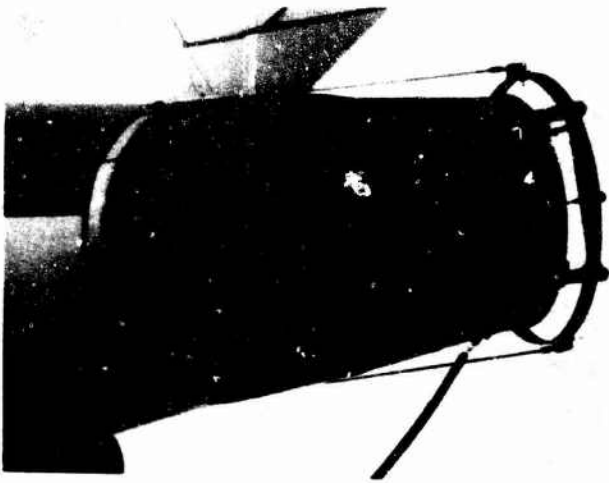
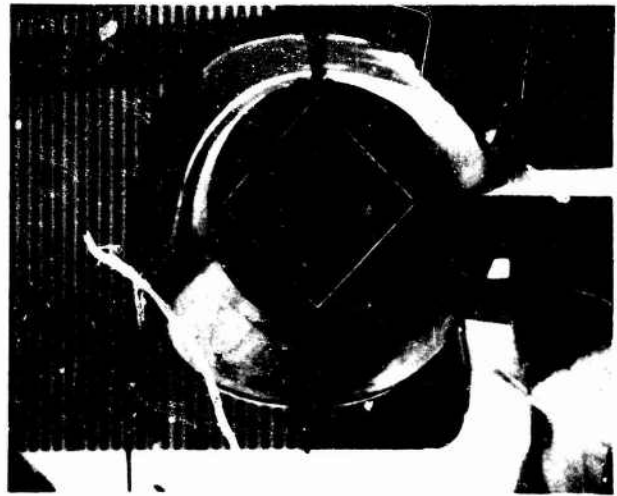


Figure 1. Sampling Probe Configuration



(a) JT8D-7, 9



(b) CF700



(c) JT3D-3B



(d) JT3D-7



(e) JT9D-3A



(f) RB211

Figure 2. Sampling Probe Installations

torsional support ring attached to the clevis pieces. Thermal expansion of the exhaust nozzle is taken up by compression of springs at the aft end of the tensioning rods.

Photographs of the installed sampling probes are shown in Figure 2 for each engine type. To assure consistent test-to-test orientation of the probes relative to the engine exhausts, a positioning scribe mark was located on each engine tail pipe. Further information concerning the sampling probes may be found in Section 11 of the Project Manual (Ref 5). Test data relating to the representativeness of the sample obtained with these probes is contained in Appendix A.

2.4 MOBILE EMISSION RESEARCH FACILITY (MERF)

Two MERFs were custom designed and built to measure and record, both accurately and consistently, the emissions of installed aircraft gas turbine engines. The units, consisting of

- Tow vehicle
- Trailer, provided with the following equipment
- Built-in air conditioning and heating systems
- Generator set
- Measurement system, including sampling train, instruments, and bottled gases
- Recording system
- Auxiliary equipment

are represented in Figure 3 and described below. More detailed information concerning the MERFs may be found in Section 1 of the Project Manual (Ref 6).

2.4.1 Tow Vehicle, Trailer, and Generator Set

The tow vehicles were 1974 one-ton platform stake trucks with auxiliary rear springs and dual rear wheels. Each unit was modified to shorten the platform and install a trailer hitch adjacent to the rear axle, auxiliary fuel tanks and electric fuel pump, and an electric brake control for the trailer.

The trailers were built according to the specifications of NREC and Beckman Instruments. Their function was to provide a controlled,

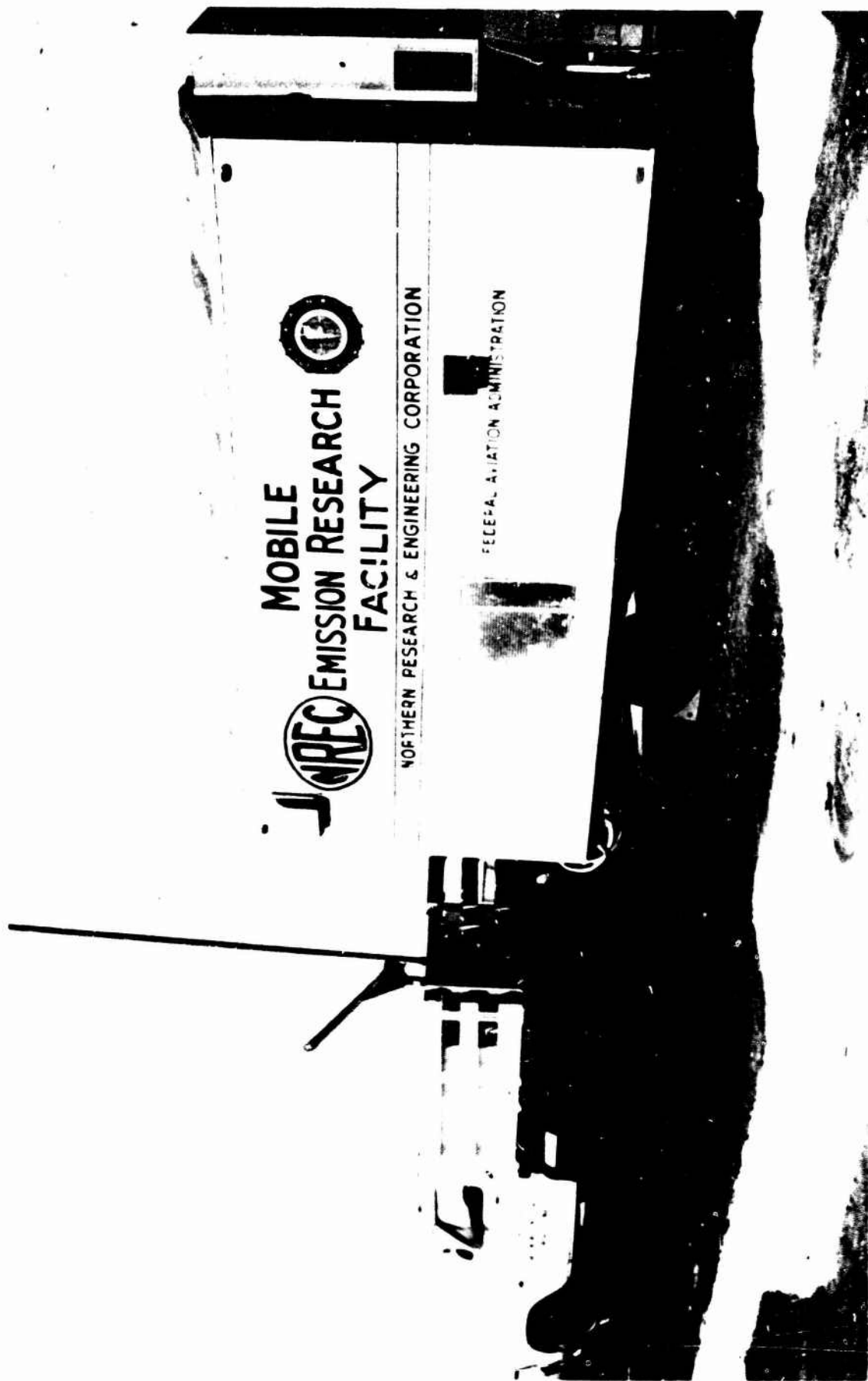


Figure 3. Mobile Emission Research Facility

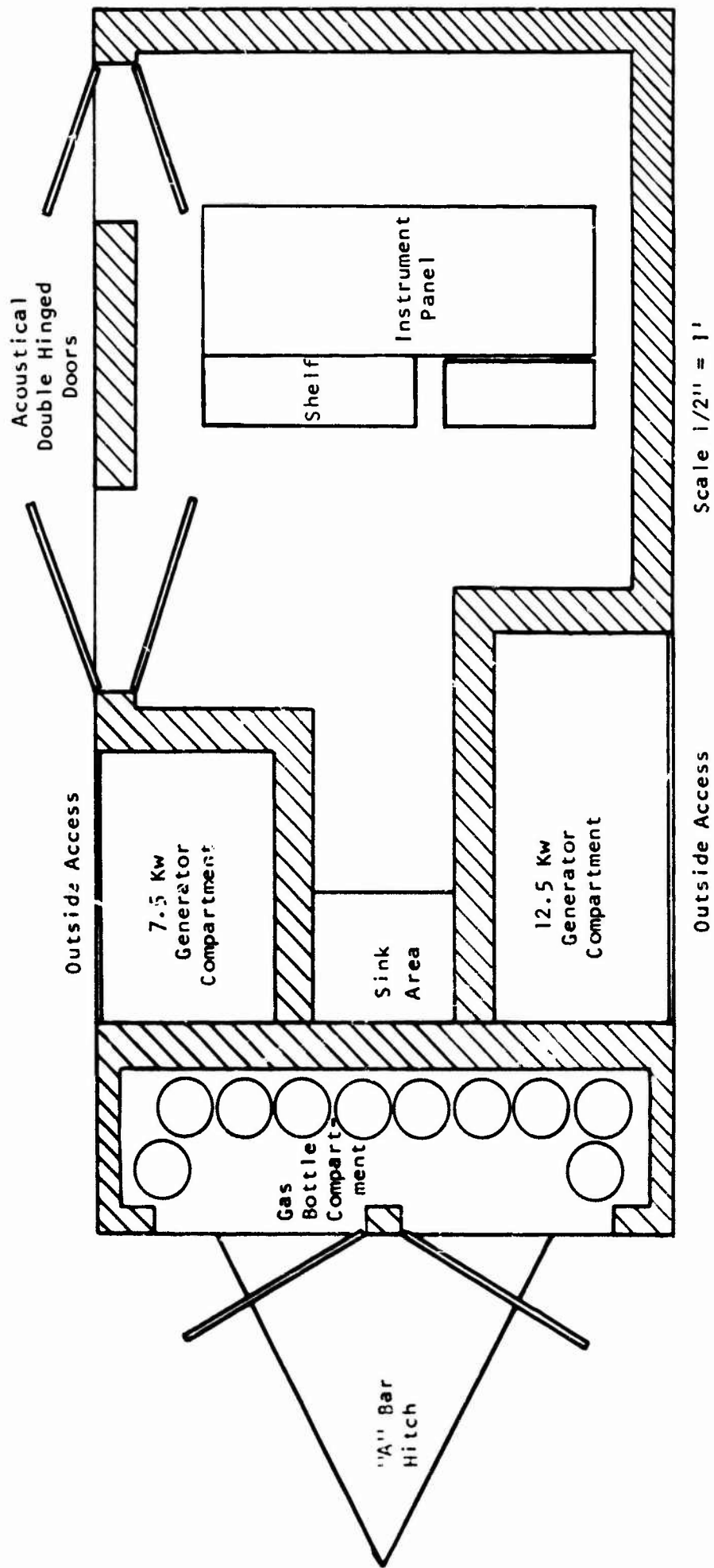


Figure 4. MERF Floor Plan

transportable, and self-contained environment for emission measuring equipment and personnel. Each unit, 16 ft long by 8 ft wide by 11 ft high, was constructed specifically as a sound-attenuated enclosure with walls, floor, and ceiling containing high- and low-frequency absorbing materials. A two-ton air-conditioning unit was mounted on the exterior rear wall of the trailer. Heating was provided by a number of 220-volt baseboard heaters.

As can be seen in the trailer floor plan of Figure 4, access to the main area of the trailer was through two double doorways on the left side of the trailer. This main area housed the instrument panel which was shock mounted for protection. Also within the perimeter of the trailer, but not within the sound-attenuated enclosure, were compartments for gas cylinders and each of two generators.

A 7.5-kW vacu-flow air-cooled generator was installed in the trailer to power the instrumentation. The heating, air-conditioning, and lighting requirements of the trailer were separately powered by a 12.5-kW vacu-flow air-cooled generator. These units provide 120/240 volts at 60 hertz with an AC voltage regulation of ± 3 percent and an AC frequency regulation of ± 5 percent.

2.4.2 Measurement System

The aircraft engine exhaust was analyzed by a system which provided for the measurement of the following emissions:

- Carbon dioxide (CO_2)
- Carbon monoxide (CO)
- Hydrocarbons (HC)
- Both nitric oxide (NO) and nitrogen dioxide (NO_2)
- Smoke number (SN)

CO_2 and CO concentrations were determined by nondispersive infrared analysis, HC was determined by flame ionization detection, NO and NO_2 by the Chemiluminescent method, and SN by the indirect filtration method, ARP 1179, and in general accordance with paragraphs 87.82 through 87.88 of the EPA standards (Ref 2).

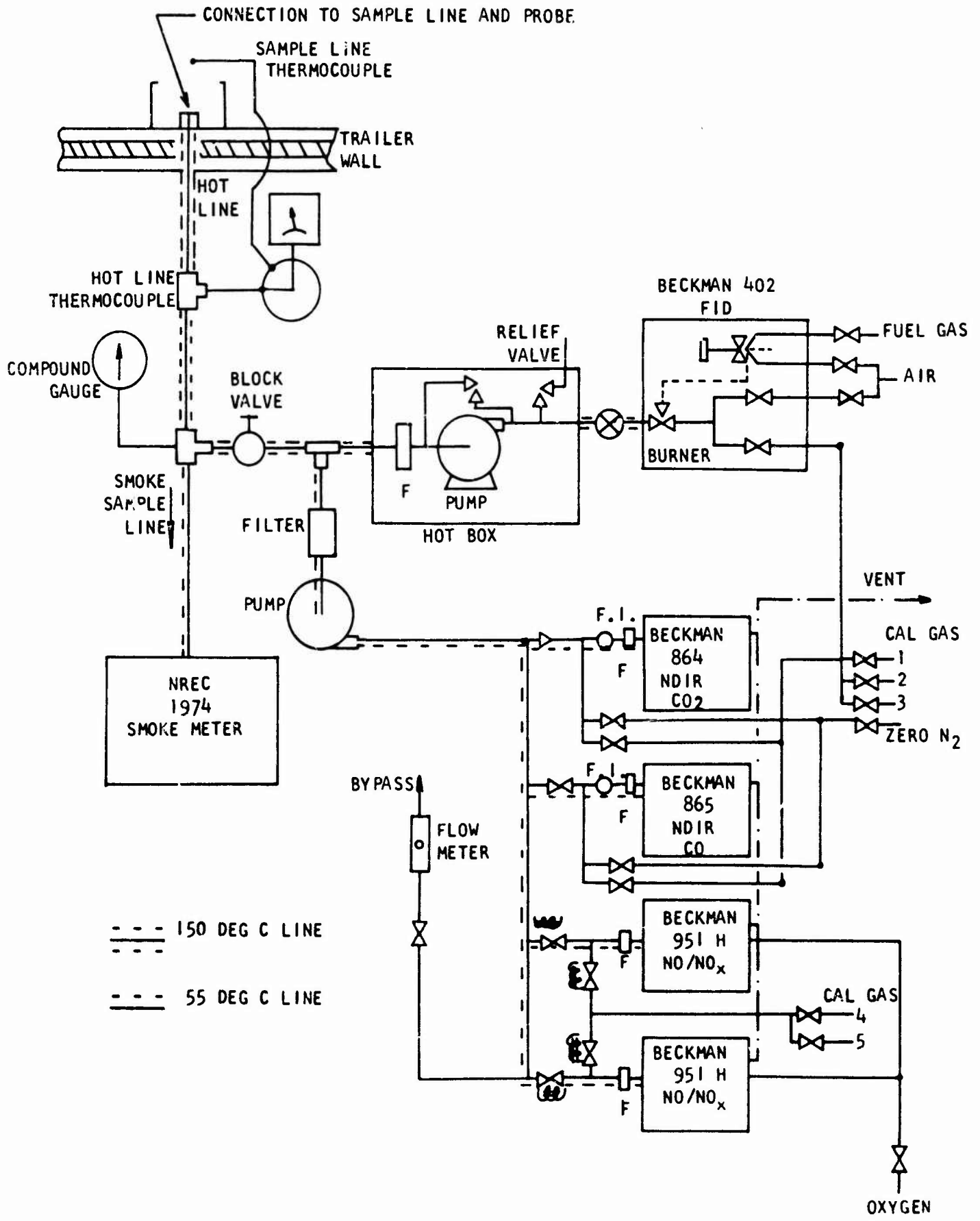


Figure 5. Measurement System

The system, which is illustrated schematically by Figure 5, is comprised of three elements--the sampling train, the instruments, and the associated bottled gases.

Sampling Train - The sampling train transports the exhaust sample from the probe to the instruments. External to the trailer, the sample was transported in a heated Teflon line. The line was 80 ft in length with an internal diameter of 0.18 inches. It was covered by steel braid, a heating element of 60 watts per lineal foot, double-thick insulation, and an abrasion-resistant covering. The sample line, which was furnished with a heating controller, a built-in Type J thermocouple, and an over-temperature thermostat, was capable of maintaining a temperature of 150 deg C. Connection of the line to the trailer was again made with a stainless steel straight-through quick-disconnect fitting.

The sampling train inside the trailer was confined to the immediate vicinity of the panel. The system was provided with three main pumps which supplied separately the hydrocarbon analyzer, the remaining analyzers, and the smoke unit. It is seen from Figure 5 that samples taken from the exterior line pass through a hot line maintained at 150 deg C to a tee connection. The flow of exhaust gas could be diverted at this tee so that the flow requirements of either the smoke meter or the gas analyzers or both could be satisfied at any time. The 150 deg C temperature was maintained for the sample flow leading to the hydrocarbon analyzer, necessitating the use of a hot box for its filter, pump, and relief valve. A separate tee upstream of the hot box led to sample line connections for the remaining gas analyzers in the system. These lines, which were maintained at a temperature of 55 deg C, also provided a connection to the bypass line. Finally, the sample line to the smoke meter was also maintained at 55 deg C in accordance with EPA requirements.

Instruments - The five gas analyzers and smoke meter were mounted on the instrument panel in the MERF as shown in Figure 6. Easy access for maintenance, adjustment, and connection to the sampling train was accomplished by the arrangement. A summary of the individual units is presented in Table 3 below.

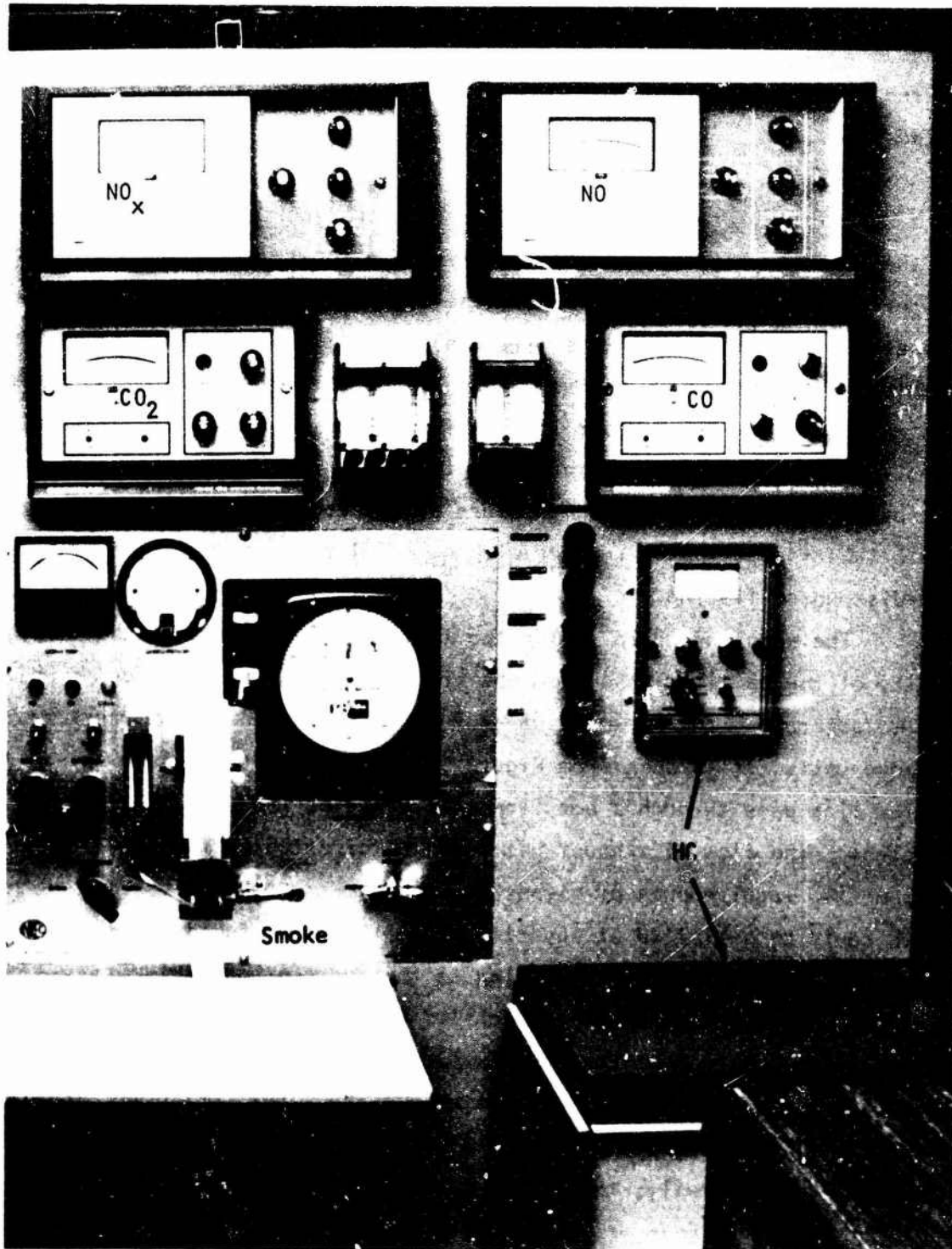


Figure 6. Mounted Gas Analyzers and Smoke Meter

TABLE 3. - INSTRUMENT SUMMARY

Emission Component	Manufacturer/ Instrument	Range	Accuracy
CO ₂	Beckman/ NDIR Model 864	0-2% 0-4%	+1% full scale -1% full scale
CO	Beckman/ NDIR Model 865	0-100 ppm 0-500 ppm 0-2500 ppm	+2% full scale +1% full scale -1% full scale
HC	Beckman/ FID Model 402	0-50 ppm C ₃ H ₈ 0-100 ppm C ₃ H ₈ 0-500 ppm C ₃ H ₈ 0-1000 ppm C ₃ H ₈	+2% full scale -2% full scale +1% full scale -1% full scale
NO and NO _x	Beckman/ Chemiluminescent Model 951H	0-100 ppm 0-250 ppm 0-1000 ppm	+1% for all ranges
Smoke	NREC/ Indirect Filtration Model 1974	0-100 SN	+0.5% full scale

Of the instruments summarized above, the smoke meter was specifically designed for the MERF. Figure 7 presents a schematic diagram of the unit to illustrate the main elements of the smoke analysis system. At the instrument panel, the smoke sample may be diverted from the filter paper holder through a three-way valve to a bypass line. Both main and bypass flows were maintained at the required rate by a downstream pump. The sample passed through a flow meter and wet meter before discharging to the system vent. The two-stack valve was included to allow the smoke analysis system to be isolated in conjunction with the gas analysis system, so that the compound gauge could be used to determine the engine exhaust total pressure at the probe.

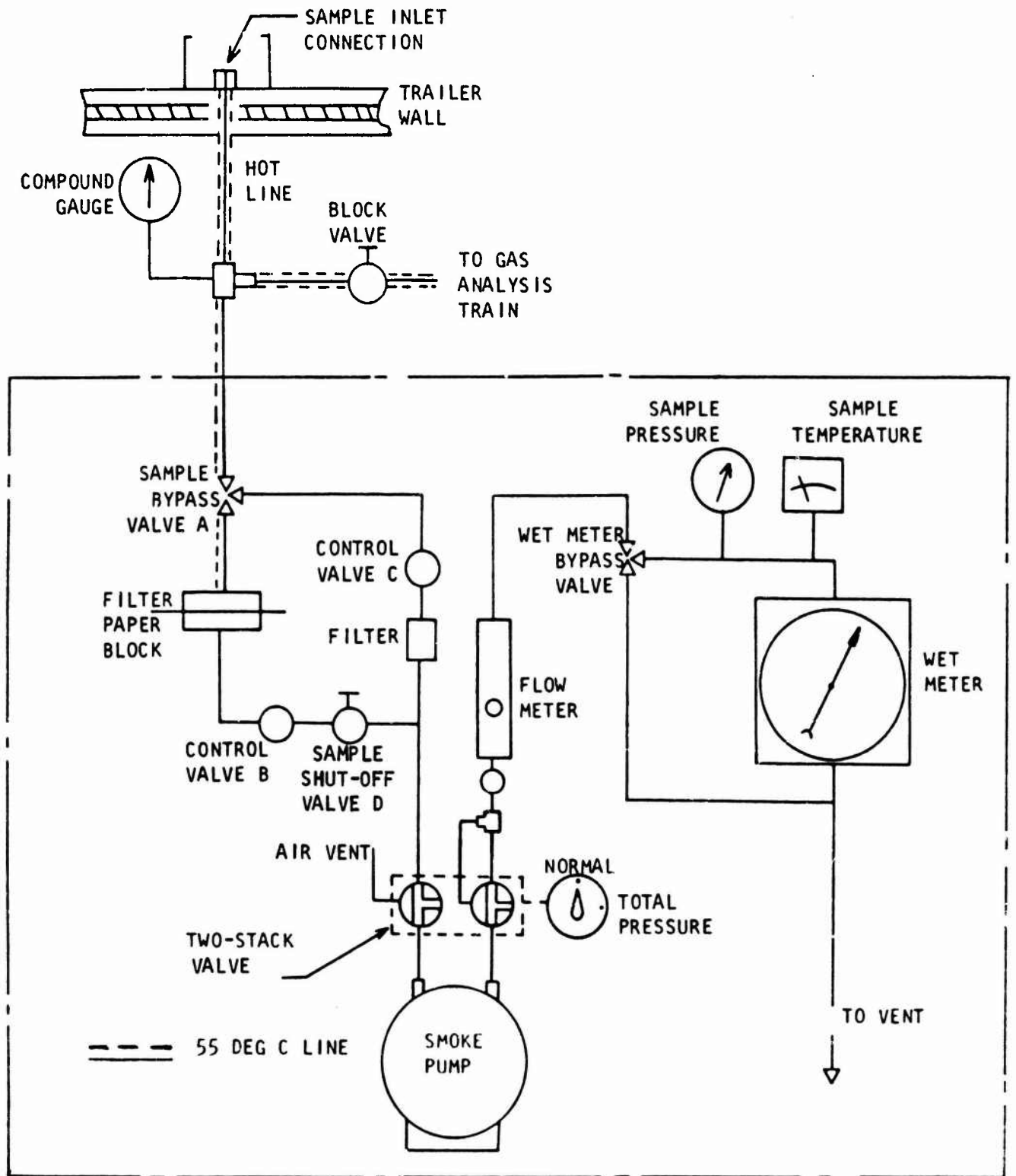


Figure 7. Schematic Diagram of NREC Model 1974 Smoke Meter

Bottled Gases - The instruments were provided with regulated bottled gases for flame ionization, oxidation, zeroing, and calibration. A total of ten bottled gases are accommodated by the trailer. Specifications used for the bottles during the program are given in Table 4 below.

TABLE 4. - SPECIFICATIONS OF PRIMARY GAS BOTTLES

Bottle	Nominal Concentration				Balance of Mixture
	CO ₂ per cent	CO ppmv	HC ppm C ₃ H ₈	NO ppmv	
CAL 1	3.6	90	--	--	N ₂
CAL 2	1.8	450	50	--	N ₂
CAL 3	1.0	1200	500	--	N ₂
CAL 4	--	--	--	200	N ₂
CAL 5	--	--	--	50	N ₂
NITROGEN	--	--	--	--	N ₂
ZERO 1	*	*	*	--	Air
ZERO 2	*	*	*	--	Air
FUEL	--	--	--	--	40 per cent H ₂ 60 per cent He
OXYGEN	--	--	--	--	O ₂

* Concentrations conform to industry standard air mixture

The calibration gases, listed as CAL 1 through CAL 5, were used before and after each engine emission test to provide current instrument calibrations. Supplementary calibrations, required on a monthly basis by the EPA standards made use of additional calibration gases not carried onboard the MERF.

Control valves for the bottled gases, as well as the sample gas main control valves, were operated from the instrument panel.

2.4.3 Recording System

A digital recording system was installed on the MERF to provide high speed, accurate data acquisition suitable for computer processing. The system was composed of seven individual components: a scanner, a digital voltmeter, a printer, two paper punch controllers (for manual and automatic data, respectively), a paper punch, and a keyboard for the manual entry of data. Interchangeable thumbwheel and pushbutton versions of the keyboard were made. As shown in Figure 8, all but the last component were rack mounted and located on the left-hand side of the instrument panel. Directly below, the keyboard was situated on the working shelf of the panel. The system could be used to acquire data either independently or simultaneously on the printer and punch units. The punch unit enters data onto paper tape in the ASCII code.

2.4.4 Auxiliary Equipment

Besides assorted hand tools and miscellaneous supplies, the MERF was equipped with several other instruments which were used to obtain test data. These included a sling psychrometer to obtain wet-bulb and dry-bulb values of ambient temperature (ambient pressure was obtained from the airport tower), a reflectometer to determine the reflectance of smoke spots, and radio equipment to communicate with the test aircraft and the airport tower. Also carried aboard the MERF were special fuel flow indicators which replaced cockpit indicators during emission tests of both JT8D engine types and the CF700 to improve their accuracy. In all other cases, standard aircraft cockpit instrumentation was used to monitor engine operating conditions.

2.5 OPERATING PROCEDURES

Since consistency was so important to the degradation study, standard operating procedures were adopted wherever possible. These procedures, covering system maintenance, pre-test, test, and post-test operations, are presented in step-by-step detail in Sections I and III of the Project Manual (Refs 6 and 7, respectively).

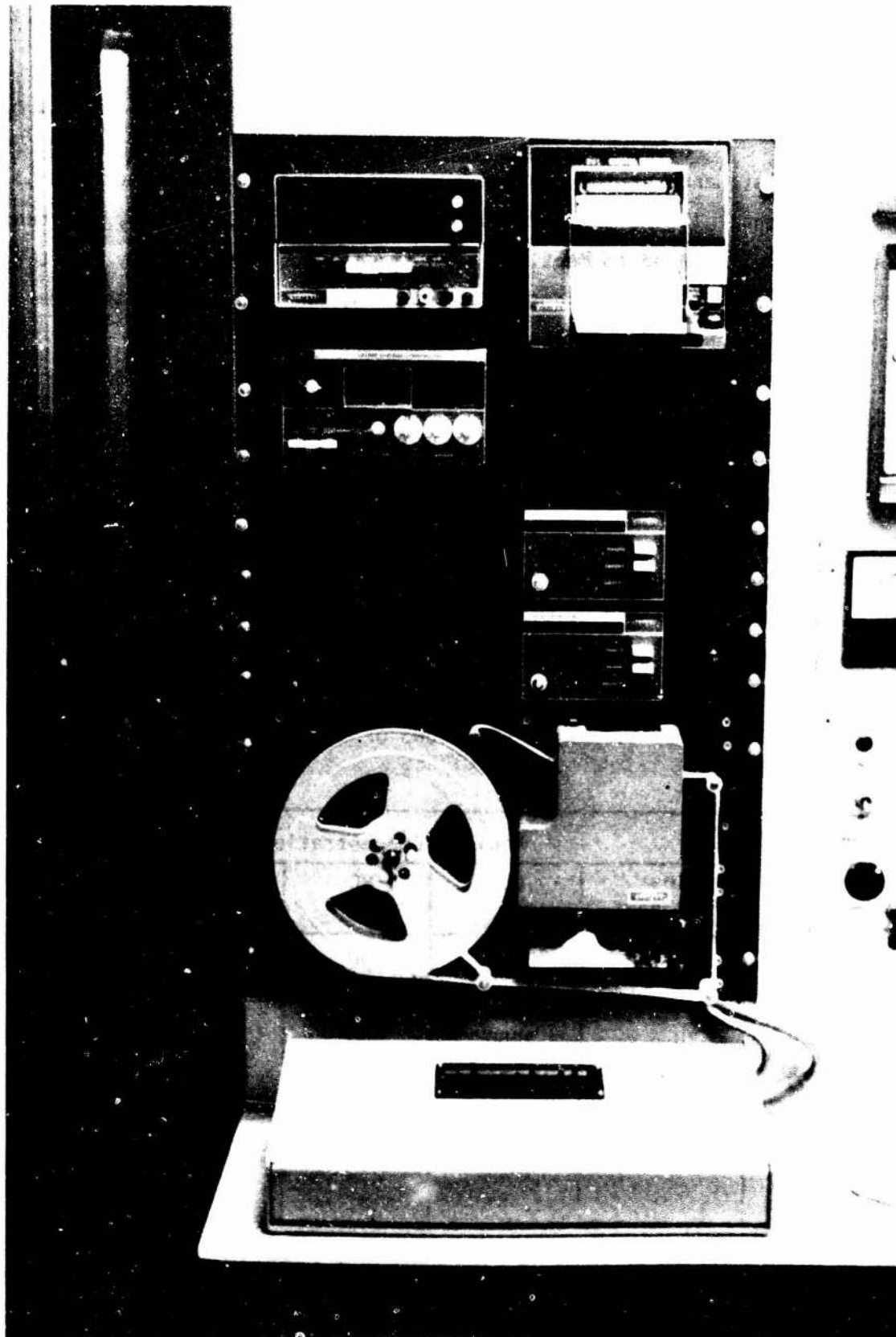


Figure 8. Digital Recording System
(Shown with Thumbwheel Keyboard)

2.5.1 System Maintenance

Maintenance of the equipment generally followed manufacturer recommendations. In the case of the measurement system, however, maintenance was eventually expanded to meet EPA specifications. Specifically, monthly instrument calibrations, various system checks, and weekly NO_x converter checks were implemented.

The monthly instrument calibrations made use of the primary calibration gases carried by the MERF (see Table 4) as well as additional calibration gases stored at the primary base of operations. The additional calibration gases are specified in Table 5 below. Together the gases allow the gas analyzers to be calibrated in accordance with EPA specifications. The monthly system checks involved leaks, contamination, and residence time. The weekly converter check was conducted with the Scott Model 140 NO_x Thermal Converter Efficiency Tester.

TABLE 5. - SPECIFICATIONS OF SECONDARY GAS BOTTLES

Bottle	Nominal Concentrations *				
	CO ₂ per cent	CO ppmv	HC ppm C ₃ H ₈	NO ppmv	NO ₂ ppmv
CAL 6	2.5	300	90	--	--
CAL 7	1.4	750	250	--	--
CAL 8	0.6	2200	900	--	--
CAL 9	4.0	50	25	--	--
CAL 10	--	--	--	80	15
CAL 11	--	--	--	850	100
CAL 12	--	--	--	450	50

* N₂ provides the balance of the mixture in each case

It should also be noted that NREC subscribed the MERFs to both the Scott CVS (Constant Volume Sampling) and Nitric Oxide Cross-Reference Services. The subscription provided a comparison of the performance of these two facilities in measuring concentrations of CO₂, CO, HC, and NO

versus each other, as well as versus various industrial, scientific and government facilities. In addition, late in the test schedule, the relative performance of the two MERFs were evaluated versus each other on the basis of special tests conducted on an FAA 727 aircraft (see Ref 8).

2.5.2 Pre-Test Procedures

Prior to an emission test, a general procedure was followed for all engine types. The aircraft on which the test engines were installed, would be withdrawn from regular service and released to airline maintenance personnel. The maintenance personnel were then responsible for the preparation of the aircraft for testing. This included probe installation (as previously discussed), fuel handling, and movement of the aircraft to the test site. Meanwhile, the test engineer was responsible for movement of the MERF to the test site, warm-up and check-out of the facility, and pre-test calibration.

Fuel Handling -- A fuel handling procedure was adopted in an effort to minimize the impact of variations in fuel content on measured exhaust emissions. In the case of UAL and TWA, the fuel was handled as follows:

- One designated fuel tank on the aircraft was emptied of any remaining fuel by onboard transfer pumps.
- That tank was then filled with the standard fuel supplied to the airport.
- A one quart sample of the fuel was taken and subsequently analyzed for API gravity, hydrogen-carbon ratio, and hydrocarbon characterization as paraffin, olefin, and aromatic (volume per cent). The analysis is included in the volumes of test data for each engine type.
- During the subsequent emission testing, each test engine on the aircraft was supplied with fuel from the designated tank.

In the case of Federal Express, the fuel handling procedure could not be accommodated, necessitating a fuel sample from each tank used to supply the test engines.

Warm-Up and Check-Out -- After the MERF reached the test site, final preparations for testing would be made. The preparations included:

- Connection of the external sample line, together with its heating system. (All other heating elements in the sampling train would also be connected.)
- Operation of first the smoke pump, and later the hot box and auxiliary pumps.
- Zeroing and spanning of each gas analyzer.
- Operation of all components of the recording system.
- Reading of air blank and zero nitrogen samples
- Recording ambient conditions (dry bulb and wet bulb temperatures, and barometric pressure).
- Recording test identification data (engine and aircraft serial numbers, engine position and time since overhaul, and date).

Pre-Test Calibration -- All of the gas analyzers were calibrated prior to each engine emission test using the bottled gases carried aboard the MERF. The sequence of events, as given in Section III of the Project Manual (Ref 7), began the acquisition of both printed and punched test data on the automatic recording system. Six sets of analyzer readings were acquired during calibration, normally corresponding to the instrument ranges and calibration gases shown below in Table 6.

TABLE 6. - CALIBRATION SPECIFICATIONS

Set No.	CO ₂ , per cent		CO, ppm		HC, ppm C ₃ H ₈		NO, NO _x , ppm	
	Range	Gas	Range	Gas	Range	Gas	Range	Gas
1	0-4	3.6	0-100	90	0-500	0	0-1000	200
2	0-4	3.6	0-500	90	0-500	0	0-250	200
3	0-4	1.8	0-500	450	0-50	50	0-250	50
4	0-2	1.8	0-2500	450	0-100	50	0-100	50
5	0-2	1.0	0-2500	1200	0-500	500	0-100	0
6	0-4	1.0	0-2500	1200	0-500	500	0-100	0

2.5.3 Test Operations

Once the aircraft had arrived at the test site and the pre-test calibration had been completed, the external sample line from the MERF was attached to the installed probe. For all but the high bypass flow engines, this was done while the test engine was idling. For the other engine types (the JT9D and RB211), the test engine was shut down for sample line attachment. The test engine was then started with all sampling pumps shutdown to create a back pressure in the sampling train and prevent contamination with liquid jet fuel.

The engine was then tested over a specified sequence of operating modes, as follows:

- Idle
- "Idle Plus"
- Take-Off
- Climb
- Intermediate
- Approach
- "Idle Plus"
- Idle

This sequence follows EPA specifications, but is supplemented by the "Idle Plus" modes in the low power regime and by the Intermediate mode at higher powers. Each volume of test data contains precise definitions of the test modes for the respective engine types, but there are several items in common:

1. Idle was set as the idle stop on the throttle.
2. "Idle Plus" was set as a designated rotor speed, approximately 500 rpm higher than the nominal idle speed.
3. Take-Off was set as the take-off EPR from the engine operating guide (which is ambient-temperature and altitude dependent).
4. Climb was set by EPR at either 85 or 90 percent of rated take-off thrust, according to engine type.
5. Intermediate was set by EPR at 60 percent of rated take-off thrust.
6. Approach was set by EPR at 30 percent of rated take-off thrust.

For each mode above, the aircraft crew would set and record manually the engine operating conditions (rotor speeds, fuel flow, EGT, and EPR), and allow no throttle movement while the emission data was being taken. In the MERF, upon word from the crew, a smoke sample would be taken first and then the gas analyzers would be read. The gas analyzers were scanned automatically and at least one cycle of readings was acquired by the recording system for the mode on both printed and punched tape. In addition, sample train temperatures and pressures were recorded manually. After the emission data was acquired, the aircraft crew would record the engine operating conditions once more, before moving the throttle to the next mode. Step-by-step detail of this general test procedure is provided in Section III of the Project Manual (Ref 7).

At take-off power special procedures had to be employed to limit transient effects, due to the time limitation which applies to such operation. A common procedure was, rather than moving directly from "Idle Plus" to Take-Off, to move the throttle first to the maximum continuous power position and allow the engine to stabilize for approximately five minutes. In other instances, the sampling pumps would be shutdown and the sample line disconnected from the MERF while the throttle was moved from "Idle Plus" to Take-Off.

2.5.4 Post-Test Procedures

At the conclusion of an emission test, a post-test calibration was always conducted. However, when one engine test followed immediately after another (such as consecutive engine tests on the same aircraft), one set of data was used for both post-test and pre-test calibrations. As implied by the preceding statement, the data acquired during the post-test calibration conformed to the specifications in Table 6.

After the last emission test of the day, a final air blank sample would be analyzed and all the data sheets would be collated for each engine test. Subsequently, the manually acquired test data would be either added directly onto the punched paper tape containing the automatic data or entered onto punched cards. The test data was then sent to the NREC offices in Cambridge, Massachusetts for processing and analysis.

2.5.5 Maintenance Data

Aircraft maintenance data, as compiled by the respective airlines, were reviewed for the period of engine testing in an effort to extract all items which pertain to the engines in the test program and their performance. The extracted data has been included in the volumes of test data for each engine type.

In addition, engine life-limit audits were obtained for each engine type, except the JT8D-9, to define the baseline configuration of the units tested. Due to their bulk, however, these audits have not been included in the final report. Also not included in the final report, are engine performance histories which were maintained in the case of the UAL engines. The performance histories of a unit provide deviations of engine operating parameters from manufacturer specifications on the date of every emission test.

2.6 DATA PROCESSING AND ANALYSIS

2.6.1 Program EMISHON

A computing system, entitled Program EMISHON was developed to process and store the large amounts of aircraft engine data obtained during degradation testing. The system, which is documented in Reference 9, converts the raw test data into meaningful form, performs certain calculations, and then stores the data and the results of the calculations in a data base for subsequent analysis.

The data requiring processing for a test, arrived at the NREC offices in one of two forms: (a) all data punched onto paper tape, or (b) automatic data plus identifying information punched onto paper tape, and manually acquired data on punched cards. The paper tape, punched in the ASCII code, would then undergo preliminary processing in the form of conversion to BCD code on punched cards. The entire set of data for a test, now in the form of punched cards, comprised the input to Program EMISHON. This program, written in the Fortran language for use with the CDC 700 computer, completed processing of the test data as follows:

- Checked pre-test calibrations versus post-test calibrations for significant changes in analyzer response.
- Converted gas analyzer readings, using exact concentrations of the calibration gases, to constituent concentrations in the exhaust sample.
- Calculated corresponding values of emission indexes, emission rates, and over-all EPA parameter for each exhaust constituent.
- Calculated various engine operating parameters based on the cockpit data.
- Calculated emission indexes of CO, HC, NO, and NO_x corrected to standard day conditions, using both empirical equations supplied by the FAA and analytical formulas derived by NREC.
- After sufficient data had been acquired, checked items of data versus typical values for the engine type.

A typical computer printout of processed test data for the second and third items above are shown in Figure 9. Specific equations used in the various calculations are defined by engine type in the respective volumes of test data. Discussion of the approaches to ambient corrections will follow later in this section.

Storage of the data into easily accessible data bases was also accomplished using Program EMISHUN. Two data bases were created and maintained over the course of the program. The original data base was created using the System 2000 software package, a general purpose data base management system. Unfortunately, this data base did not prove to be cost or time efficient, and was displaced for analysis purposes by what has been termed the "System NREC" data base. In the System NREC data base, one 74-item array per mode was used to contain all of the information stored in the data base for an emission test of the engine type. Each array on the tape was identified by the unit number, test series number, and mode number, and all auxiliary computer programs which had been developed to aid the degradation analysis were designed to access data stored in this manner. The items within each array are listed in Table 7.

AIRLINE- JNITEO TEST SITE - SAN FRAN DATE OF TEST 06/16/76 TEST NO OF DAY- 1
 AIRCRAFT NO 2470 ENGINE POSITION 1 ENGINE SERIAL NO 669229 ISO (MRS)-22919.00

DRY BULB TEMP START (DEG F)= 55.00 WET BULB TEMP FINISH (DEG F)= 55.00
 4FT BULB TEMP START (DEG F)= 53.00 WET BULB TEMP FINISH (DEG F)= 53.00
 BARO PRESSURE START (IN HG)= 29.82 BARO PRESSURE FINISH (IN HG)= 29.82

	MODE 1 IDLE	MODE 2 IDLE +	MODE 3 TAKE-OFF	MODE 4 CLIMB	MODE 5 INTERMED	MODE 6 APPROACH	MODE 7 IDLE +	MODE 8 IDLE
100 PER CENT N2= 9655 RPM								
ENGINE SPEED N1(PER CENT)	34.00	36.40	102.40	96.80	85.30	67.20	35.00	33.00
ENGINE SPEED N2(PER CENT)	61.00	64.00	101.00	99.00	94.00	86.00	63.00	60.00
MEASURED FUEL FLOW LB/HR	1280.00	1350.00	9600.00	8000.00	5500.00	2980.00	1260.00	1210.00
GAS GFN AIR FL LB/SEC FROM EMISSION COMP	43.70	43.83	176.14	163.01	135.04	94.01	43.64	40.44
GAS GEN AIR FL LB/SEC FROM MANUF THEORY	42.19	45.58	195.19	176.51	142.11	98.00	45.77	42.37
EXHAUST SAMPLE PR (PSI)	.90	1.00	12.10	9.70	6.00	2.90	.90	.80
AIRCRAFT PIT (PSI)	.44	.51	12.30	9.52	5.71	2.49	.51	.44
T17 (DEG F)	581.00	581.00	968.00	878.00	761.00	644.00	572.00	572.00
ENGINE PRESSURE RATIO	1.03	1.03	1.84	1.65	1.39	1.17	1.03	1.03
THRUST (LBS)	1153.86	1153.86	17360.03	15301.14	10836.22	5769.28	1153.96	1153.86
SMOKE NUMBER	10.16	10.16	51.51	51.82	47.58	37.34	19.82	19.01

	MODE 1 IDLE	MODE 2 IDLE +	MODE 3 TAKE-OFF	MODE 4 CLIMB	MODE 5 INTERMED	MODE 6 APPROACH	MODE 7 IDLE +	MODE 8 IDLE
CO2 CONCENTRATION (PPM)	11.29	10.25	93.40	74.07	44.83	25.72	11.66	11.30
CO2 EMISSION RATE (LBS/HR)	2.61	2.55	92.63	68.08	34.21	13.70	2.89	2.60
CO2 EMISSION INDEX(LB/1000 L3 FUEL)	2.04	1.89	9.65	8.51	6.22	4.60	2.30	2.15
CO CONCENTRATION (PPM)	10.12	9.86	87.29	70.20	44.79	25.23	11.51	9.64
CO EMISSION RATE (LBS/HR)	2.34	2.46	86.57	64.52	34.18	13.44	2.61	2.22
CO EMISSION INDEX(LB/1000 L3 FUEL)	1.83	1.82	9.02	8.07	6.22	4.51	2.07	1.83
HC CONCENTRATION (AS C3H8) (PPM)	660.12	550.32	7.44	4.90	4.56	21.37	586.49	678.19
HC EMISSION RATE (LBS/HR)	159.71	143.35	7.72	4.71	3.64	11.90	152.20	163.13
HC EMISSION INDEX(LB/1000 L3 FUEL)	124.77	106.19	.80	.59	.66	3.99	120.79	134.82
NO CONCENTRATION (PPM)	11.29	10.25	93.40	74.07	44.83	25.72	11.66	11.30
NO EMISSION RATE (LBS/HR)	2.61	2.55	92.63	68.08	34.21	13.70	2.89	2.60
NO EMISSION INDEX(LB/1000 L3 FUEL)	2.04	1.89	9.65	8.51	6.22	4.60	2.30	2.15
NOX CONCENTRATION (PPM)	10.12	9.86	87.29	70.20	44.79	25.23	11.51	9.64
NOX EMISSION RATE (LBS/HR)	2.34	2.46	86.57	64.52	34.18	13.44	2.61	2.22
NOX EMISSION INDEX(LB/1000 L3 FUEL)	1.83	1.82	9.02	8.07	6.22	4.51	2.07	1.83

EMISSION MASS/EPA CYCLE (LB/1000 LB FUEL THRUST-HR)

CO2- 2032.66 CO- 39.439 HC- 42.835 NO- 3.407 NOX- 3.196

NOTE - TEST PROCEDURES DO NOT FULLY CONFORM TO THOSE SPECIFIED BY EPA

Figure 9. Typical EMISSION Output of Measured Exhaust Emission Levels

TABLE 7. - STORAGE ARRAY OF SYSTEM NREC

Item	Description	Item	Description
1	Ambient humidity	33	Smoke number, back side
2	Ambient temperature	34	Corrected smoke number
3	Barometric pressure	35	TSM (CF700 only)
4	N1 speed	36	Corrected N3 speed (RB211 only)
5	N2 speed	37	CO concentration
6	Fuel flow	38	CO emission index
7	EPR	39	FAA-corrected CO emission index
8	Carbon balance air flow	40	NREC-corrected CO emission index
9	Performance air flow	41	CO emission factor
10	Thrust	42	Standardized CO emission factor
11	Carbon balance fuel-air ratio	43	HC concentration
12	Performance fuel-air ratio	44	HC emission index
13	Corrected N1 speed	45	FAA-corrected HC emission index
14	Corrected N2 speed	46	NREC-corrected HC emission index
15	Corrected fuel flow	47	HC emission factor
16	Corrected carbon balance air flow	48	Standardized HC emission factor
17	Corrected performance air flow	49	NO concentration
18	Corrected thrust	50	NO emission index
19	Corrected carbon balance fuel-air ratio	51	FAA-corrected NO emission index
20	Corrected performance fuel-air ratio	52	NREC-corrected NO emission index
21	TSO	53	NO emission factor
22	TSB (time since baseline test)	54	Standardized NO emission factor
23	Smoke number, front side	55	NO _x concentration
24	CO EPAP	56	NO _x emission index
25	HC EPAP	57	FAA-corrected NO _x emission index
26	NO EPAP	58	NREC-corrected NO _x emission index
27	NO _x EPAP	59	NO emission factor
28	Exhaust gas temperature	60	Standardized NO _x emission factor
29	Corrected exhaust gas temperature	61	Deg API of fuel
30	N3 speed (RB211 only)	62	H/C ratio of fuel
31	CO ₂ concentration	63	Per cent paraffins of fuel
32	CO ₂ emission index	64	Per cent aromatics of fuel
		65-72	Same as 49-52 and 55-58, respectively but based on modified calibration gases

In Table 7, it should be noted that Items 33 and 34 were added to the data base after it was discovered that contaminated smoke samples had been obtained in certain instances. Appendix C details the contamination problem and the corrective action which was taken. All smoke data appearing in this report, and results based on that data, have been corrected where possible. In addition, Items 65 through 72 were added to the data base when it was decided that concentrations of two NO calibration gases used on the San Francisco MERF were incorrectly specified. Appendix D provides the information on which the concentrations were modified. All affected NO and NO_x data appearing in this report, and results based on that data, have been corrected accordingly.

2.6.2 Auxiliary Computer Programs

Programs SCAN, CHANGE, RPORT, CALDSP, and INTERP were written during the course of the program to interface with the data base. The programs, which are documented in Reference 10, each filled individual needs as described below.

SCAN -- For each item designated from Table 7 and on a modal basis, this program scanned the test data for an engine type to calculate a mean value and standard deviation, identify outliers, and recalculate the mean value and standard deviation without the outliers. A modification based on the Grubbs Method of Reference 11 was used to statistically detect the outlying observations. In the modification, the sample size was assumed not to exceed 20 although, in fact, it did reach as large a value as 105 for the JT8D-7 data. Concerning the mean values and standard deviations, as mentioned previously, they were subsequently introduced into Program EMISHØN to detect outliers during processing. Such outliers were examined in greater detail to determine their cause.

CHANGE -- Program CHANGE, in its various forms, was used to add, delete, and/or alter data in the data base. New values could be either specified in the input data, or calculated using the data already in the data base and an equation incorporated into the program. The former approach was used to correct erroneous values detected through Programs SCAN or EMISHØN, while the latter approach was used to update various calculated items in the data base.

RPORT -- This program was written to tabulate in various formats, for analysis and report purposes, items designated from Table 7. The computer outputs appearing in Volumes II through VIII of this final report, which contain the test data of the degradation program, were printed using RPORT.

CALDSP -- This program allowed any two items designated from Table 7 to be plotted versus each other using the DISSPLA software package and the CALCOMP plotter. Such plots could be linear, semilog, or log-log in form, with individual units or test series specified by different symbols if required. Many of the plots appearing later in this volume were generated using CALDSP.

INTERP -- Program INTERP was used as an integral part of the degradation analysis. On a unit-by-unit basis, it obtained plots and performed interpolations of emission data versus specified engine operating parameter and time. Further, it performed various statistics on the results for individual units to obtain maximum, minimum, and mean changes of emission levels with time, and to identify standard deviations and outlying values in terms of emission degradation for the engine type.

2.6.3 Correction for Ambient Effects

As indicated in the Methodology, the effect of degradation could be determined only if other concurrent effects were eliminated. In the case of engine maintenance and fuel content, their effects could be taken into account only qualitatively. However, sufficient information was available to allow the effect of ambient variations to be quantitatively eliminated from the test data of the degradation program.

It has been common practice to analyze the test-bed data of gas turbine engines using operating parameters which are "corrected" to standard conditions. According to Reference 12, such corrections assume that

$$\frac{N}{\sqrt{T_a}} , \frac{F}{P_a \sqrt{T_a}} , \frac{A \sqrt{T_a}}{P_a} , \frac{TH}{P_a} , \text{ and } \frac{T}{T_a}$$

remain constant, where P_a is ambient pressure, T_a is ambient temperature, N is rotor speed, F is fuel flow, A is air flow, TH is thrust, and T is gas temperature. Engine operating parameters, corrected in this manner, have been calculated for the test data of the degradation program and can be found as items 13 through 20, 29, and 36 of the System NREC data base (see Table 7). However, it was recognized that these parameters alone, were insufficient to eliminate the total effect of ambient conditions on pollutant emissions. Rather, correlating parameters, specifically derived to characterize the emissions, were required.

Correlating parameters which characterize the emissions of CO, HC, and NO from aircraft gas turbine engines were developed during the course of the program. As derived in Appendix B they are of the basic form

$$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1} \text{ for CO (also HC in JT8D case)}$$

$$P_b^{1.8} \sqrt{T_b} e^{T_b/B_2} \text{ for HC (except in JT8D case)}$$

$$P_b^{0.5} e^{(T_b/B_3 - 19H)} \text{ for NO}$$

and vary inversely for CO and HC, and directly for NO, with emission index. In the parameters, the subscript b denotes burner inlet conditions, B_1 , B_2 , and B_3 are constants which depend upon engine type, and H is the specific humidity of the ambient air. The burner inlet conditions, themselves, can be represented in terms of measured operating parameters and ambient conditions.

In the System NREC data base, values of the above correlating parameters are normalized according to engine type and identified as "emission factors" (see items 41, 47, and 53 of Table 7). The emission factors have been used in two ways in the analysis of the test data. First, they have been used simply to present the scatter in the measured values of the respective emission indexes during the entire program. Secondly, as explained in Appendix B, they have been used in connection with "corrected emission factors" (items 42, 48, and 54 of Table 7) to correct the measured emission indexes to values which would have been obtained for the same EPRs at standard day conditions (i.e. 518.7 deg R, 29.92 in HG abs, and 0.0 lbm

H₂O/lbm dry air). The corrected emission indexes are identified as "NREC-corrected emission indexes" in the System NREC data base (items 40, 46, 52, and 58 in Table 7).

Values of emission indexes corrected to standard day conditions were also obtained using empirical factors supplied by the FAA. These factors are based on testing done at NAFEC and documented in Reference 13. The factors, which vary with power setting, correct for variations in ambient temperature and humidity. They were developed individually for the TF30 and J57 engine types. The correction factors for the TF30 (a mixed-flow exhaust engine) were applied to the mixed-flow exhaust types in the degradation program -- JT8D-9, JT8D-7, and CF700-2D -- while the correction factors for the J57 (a non-mixed exhaust engine) were applied to the non-mixed exhaust types -- JT3D-7, JT3D-3B, JT9D-3A, and RB211-22B. In the System NREC data base, values of emission indexes corrected using these factors are identified as "FAA-corrected emission indexes" (see items 39, 45, 51, and 57 of Table 7). Comparison of these FAA-corrected emission indexes with NREC-corrected values, by engine type, are also contained in Appendix B.

2.6.4 Development of Degradation Factors

It was first necessary to formulate a working definition of degradation factors, suitable to the purposes of this program. Since the factors were required to develop regulations for compliance with aircraft emission standards established by EPA, they had to be based upon application of those standards. This led to the general definition:

"Degradation factors for aircraft turbine engines characterize the increase of exhaust emissions with engine operating time, where testing is performed in accordance with specifications contained in the EPA standards"

In the case of the gaseous pollutants, the exhaust emissions of ultimate concern are expressed in terms of EPA parameter (EPAP) -- a combination of emissions at five operating modes, as specified in Reference 2. For smoke emissions, the maximum smoke number obtained during the specified operating cycle is of concern.

A number of practical problems exist with adoption of the above definition. First, as stated previously, the testing to develop the factors was not completely in accordance with EPA specifications. Secondly, the engine operating modes which comprise the EPA parameter are specified by power setting, which cannot be measured directly on an installed engine. Thirdly, the EPA parameter includes emission measurements at power settings where measurement error is high. Still, this definition provided a reasonable basis for subsequent data analysis, and it was implemented as follows:

1. Operating conditions which specify consistent power settings for the modes of the EPA parameter were established for each engine type.

At approach power and above, EPR was used to specify power setting, since it is the only measured operating parameter which has a constant relationship to corrected thrust over the operating life of the engine. In the vicinity of idle, however, the EPR-thrust relationship becomes imprecise and high-pressure (hp) rotor speed is the most reliable indicator of thrust. For this reason, hp rotor speed is used to establish idle trim limits by the airlines and, also, to specify a consistent idle for the degradation analysis. Table 8 below, contains the specific values used to define the EPA modes by engine type.*

The particular values of hp rotor speed in Table 8 were selected to correspond to the mid-point between the nominal idle and "idle plus" test modes. Recognizing the sensitivity of CO and HC emissions to idle speed, however, a supplementary analysis was also conducted to determine the effect of both higher and lower idle speeds on degradation factors.

2. Consideration was limited to emission data which minimized effects other than normal degradation.

As stated previously, degradation factors could be determined only if other concurrent effects were eliminated or reduced to a random scatter. This consideration dictated the entire approach to the degradation analyses. In this particular context, it was the reason that the degradation analysis of the gaseous pollutants was limited entirely to NREC-corrected emission indexes (i.e., emission levels corrected to standard ambient conditions).

*These defining values of the EPA modes are not to be confused with the mean test values which appear in Tables 9 through 15.

TABLE 8. - SPECIFICATION OF EPA MODES
FOR TIME DEGRADATION ANALYSIS

Engine Type	OPERATING CONDITION				
	Initial Idle, Percent Corrected HP Rotor Speed	Take-Off, EPR	Climb, EPR	Approach EPR	Final Idle, Percent Corrected HP Rotor Speed
JT8D-9	60	2.04	1.845	1.235	
JT8D-7	58	1.98	1.80	1.225	Same
JT3D-7	62	1.86	1.66	1.167	As
JT3D-3B	62	1.84	1.65	1.1625	Initial
JT9D-3A	67	1.42	1.325	1.080	Idle
RB211-22B	64	1.532	1.446	1.165	
CF700-2D	48.5	1.53	1.466	1.134	

In addition, it was the reason the data base was edited to eliminate the effect of major engine maintenance procedures. Further, it resulted in editing of the data base to eliminate other atypical test data, whether or not a specific cause could be identified.

3. Corrected emission levels from the test data were interpolated to the standard modal specifications of Item 1, and corresponding EPAPs were calculated.

Since actual engine operating modes depend on ambient conditions, the emission tests could not be conducted consistently at the same power levels. Therefore, it was necessary to interpolate the test data to the modal specifications of Item 1. The interpolation was accomplished separately for initial idle, the power modes as a group, and final idle. In each case, straight-line segments are used between the applicable test points, extrapolating the end segments for values outside the range. At idle, only the idle and "idle plus" test modes are used. At power, only the four non-idle test modes are used. It can be seen that the EPA idle specification was chosen to minimize extrapolation of the test data as much as possible.

4. The interpolated emission indexes for each mode and the corresponding EPAP were tabulated by unit in chronological order, and also plotted by unit versus time. In addition, normalized values of the emission levels were tabulated by unit in chronological order.

The information tabulated and plotted in this way constituted what was termed the "unit-time-mode analysis". That is, for each unit, a timewise variation of emission level by mode was obtained. Normalization of the data was accomplished on a unit-mode basis using the average emission level from the various tests. As an example, assume Unit 1 of a particular engine type has interpolated values of the NREC-corrected emission index for the "initial idle" mode of 36, 34, 32, 30 and 28 for the five tests conducted on that unit. The normalizing value would be the arithmetic average of those five values or 32, and the normalized values of the emission index would be 1.125, 1.0625, 1.0, 0.9375, and 0.875, respectively. If Unit 3 of that same engine type had comparable emission indexes of 27, 25.5, 24, 22.5, and 21 for five tests, its normalizing value would be 24

and the normalized emission indexes would also be 1.125, 1.0625, 1.0, 0.9375, and 0.875. Hence, this method of normalization eliminates the unit-to-unit differences associated with their absolute emission levels and considers only fractional changes of the values.

5. Degradation factors were obtained on a unit-mode basis as the slope of the least-squares straight line fit of normalized emission levels versus time. The uncertainty in the degradation factor was quantified statistically by the standard error of the slope.

Only in the case of the CF700 was a time used which was physically related to the engine's condition, Time Since Combustor Maintenance. For the other engine types, TSB (Time Since Baseline Test) was used, rather than choose among the times on various engine components.

A least-squares straight line fit was chosen as most appropriate to the number of tests, elapsed operating time, and randomness of the data. It also provided a means of separating the random component from any systematic trend, and quantifying its magnitude. The magnitude of the random component was used to indicate the uncertainty of the degradation factor. The slope of the straight line can be directly converted to the units of the degradation factor used later in the report, percentage increase per thousand hours of engine operating time. As such, a positive degradation factor denotes emissions increasing in time, while a negative factor denotes emissions decreasing with time.

6. Unit-to-unit frequency distributions of the degradation factor were compiled to determine if degradation for the engine type could be simply characterized. In addition, a simple regression analysis of the entire body of emission data versus time was conducted.

While a straight-line slope may be appropriate for one unit over the time period of the degradation program, a frequency distribution should help to indicate if a straight-line slope would be appropriate over longer time periods or for the engine type as a whole. However, the usefulness of the frequency distribution was limited by the relatively small number of units.

3. DISCUSSION OF TEST DATA

The test data obtained during the degradation program appear in Volumes II through VIII of the final report. A discussion of this data by engine type is presented below.

3.1 JT8D-9 ENGINE TYPE

3.1.1 Background

The Pratt & Whitney JT8D-9, as shown in Figure 10, is a two spool turbofan engine rated at 14,500 lbf thrust which was developed to power short-medium range transport aircraft. An annular by-pass duct runs the full length of the engine with mixing of the gas streams in the tailpipe. The combustor is a cannular type with nine cylindrical flametubes, each downstream of a single Duplex burner and discharging into a single annular nozzle.

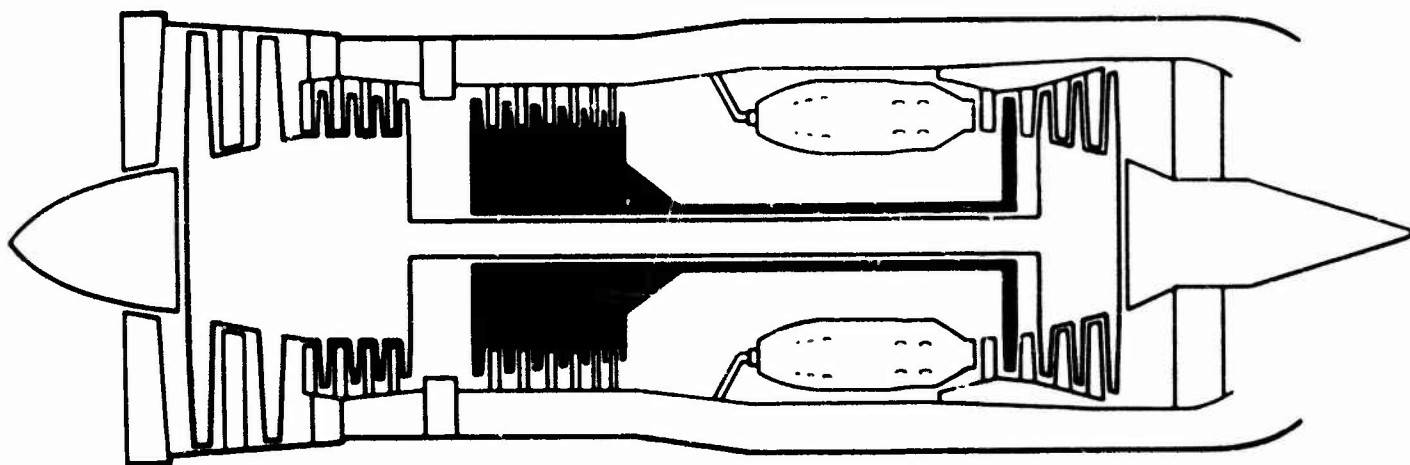


Figure 10. JT8D-9 Schematic

As indicated previously, emission tests of the JT8D-9 were conducted on installed units of the Boeing 727-231 fleet owned and operated by TWA. The tests took place at the TWA Maintenance Base adjacent to Kansas City International Airport. They were conducted during the 11 pm to 7 am shift under the direction of NREC personnel, who operated the MERF. Baseline testing was initiated on February 4, 1975 and the last test occurred on April 23, 1976. Ambient conditions varied between the following extremes: 15 to 82 deg F, 29.62 to 30.49 in Hg abs, and 0.00097 to 0.01649 lb H₂O/lb dry air. Of the twenty (20) units which were baselined, fourteen (14) were tested through at least 2400 hours of elapsed operating time. The maximum elapsed time was 3095 hours, and up to six tests were conducted per unit. Eight (8) of the fourteen surviving units were relatively new, each with less than 1700 hours of operation at baseline. The remaining six (6) engines had baseline TSOs of between 7350 and 15,316 hours. A total of 83 engine tests have been documented in Volume II for the JT8D-9.

3.1.2 Processed Data Overview

Mean values of the measured data obtained in the JT8D-9 emission tests are found in Table 9. They are presented for the five test modes corresponding to the EPA standards. When compared to the JT8D-9 data of Reference 14 for gaseous pollutants, the CO and NO_x emission indexes seem to be quite reasonable, but the HC values seem to be unusually high. These high values observed during the degradation program were traced to two sources. First, a significant number of the units were subject to leakage around the fuel manifold "B" nuts, resulting in disproportionately higher HC emissions with increasing power level. Secondly, seven months into testing, elements of the sampling train in the MERFs were discovered to be inadequately heated. This resulted in a slowed response of the system which was most noticeable at take-off power where test time is strictly limited. The deficiencies were corrected, but too late to prevent a sizeable percentage of the HC data from being affected. In the presentation of test data which continues

TABLE 9. - MEAN JT8D-9 TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.06	2.05	1.85	1.23	1.06
Corrected N_1 , per cent	34.2	95.2	88.7	61.2	35.1
Corrected N_2 , per cent	58.2	94.2	91.3	77.7	58.9
Corrected Fuel Flow, lb/hr	1060	8720	7150	2370	1060
Corrected EGT, deg R	1150	1460	1390	1130	1140
Exhaust Emissions					
CO ₂ Concentration, per cent	0.59	1.92	1.60	0.65	0.56
CO Emission Index, lb/1000 lb fuel	38.1	1.5	2.0	13.5	37.2
HC Emission Index, lb/1000 lb fuel	12.4	1.8	1.9	5.4	12.7
NO Emission Index, lb/1000 lb fuel	3.0	13.9	11.5	5.3	2.7
NO _x Emission Index, lb/1000 lb fuel	3.5	14.3	12.1	6.4	3.6
Smoke Number	---	30.7	29.6	9.0	---

* Without outlying values

below, the effect of both sources of misleading HC data can be seen on individual test points.

The scatter of the emission data from unit to unit and test to test for the entire body of JT8D-9 test data are combined in the next group of plots. The data is, however, limited to modes 3 through 8 for the purposes of continuity and clarity. Figures 11, 12, and 13 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as introduced in Section 2.6.3, and defined for the JT8D-9 in the nomenclature of Volume 11). As such, they also serve to indicate visually the validity of the relationship between independent and dependent variables for each pollutant.

In the case of CO, it can be seen that the emission index is highly correlated by the emission factor F_{CO} and that the dependency is accurately described by an inverse relationship (i.e., a line with a slope of -1 on the log-log plots). These observations have been quantified through the calculation of various statistics. For example, based on modes 6 through 8 (i.e. values of F_{CO} less than 0.2) where the CO emissions are most important, EI_{CO} versus F_{CO} data points for the entire set of JT8D-9 tests have a correlation coefficient of 0.91 with the inverse relationship (versus a value of 1.0 for perfect correlation).

The HC emission data for the JT8D-9, as shown in Figure 12, provides graphic evidence of the problems discussed above -- particularly at high power. The statistics bear out the poor quality of the data with correlation coefficient of 0.54 between EI_{HC} versus F_{HC} data points and an inverse relationship. It is obvious that any subsequent analysis of JT8D-9 HC emissions must eliminate the data invalidated by "B" nut leaks and inadequate heating of the sample train.

It can be seen from Figure 13 that the emission index of NO is highly correlated by F_{NO} at high powers, but the correlation deteriorates as idle is approached. Further, the dependency is accurately described by a direct proportionality (i.e., a line with a slope of +1, on the log-log plots). Based on modes 3 through 6 where the NO emissions are most important, EI_{NO} versus F_{NO} data points for the entire set of JT8D-9 tests have a correlation coefficient of 0.91 with direct proportionality.

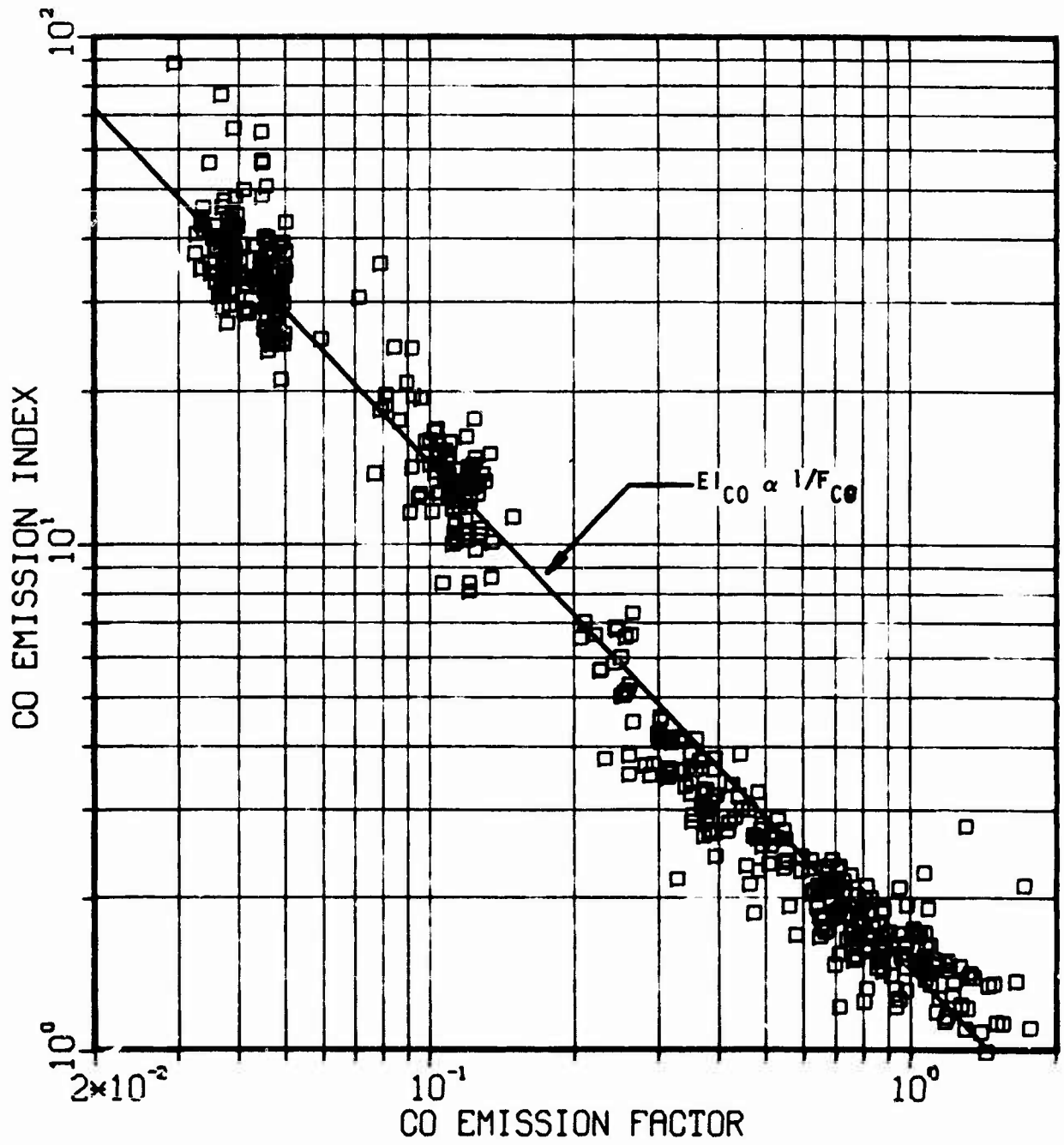


Figure 11. JT8D-9 Uncorrected CO Emission Data

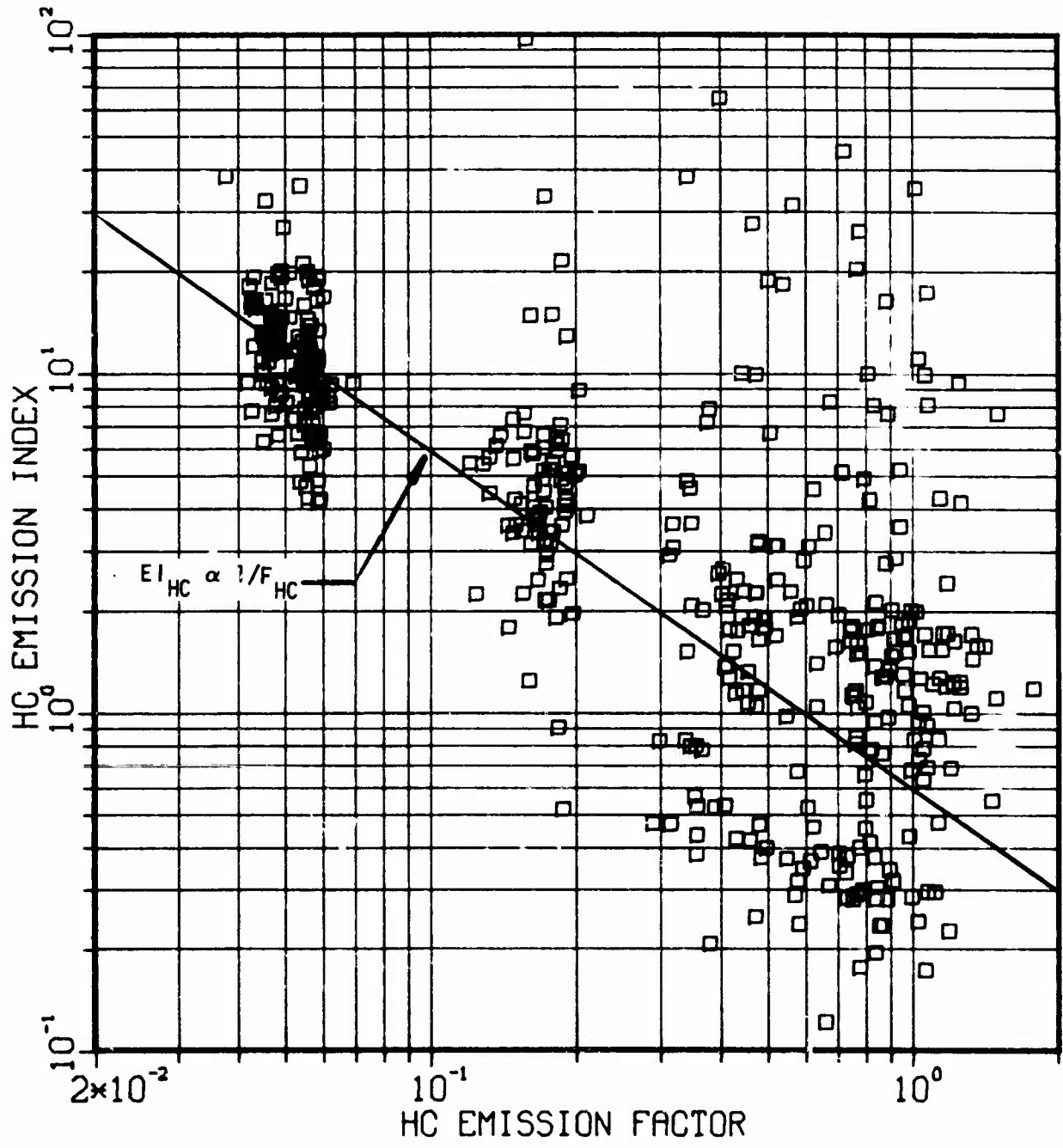


Figure 12. JT8D-9 Uncorrected HC Emission Data

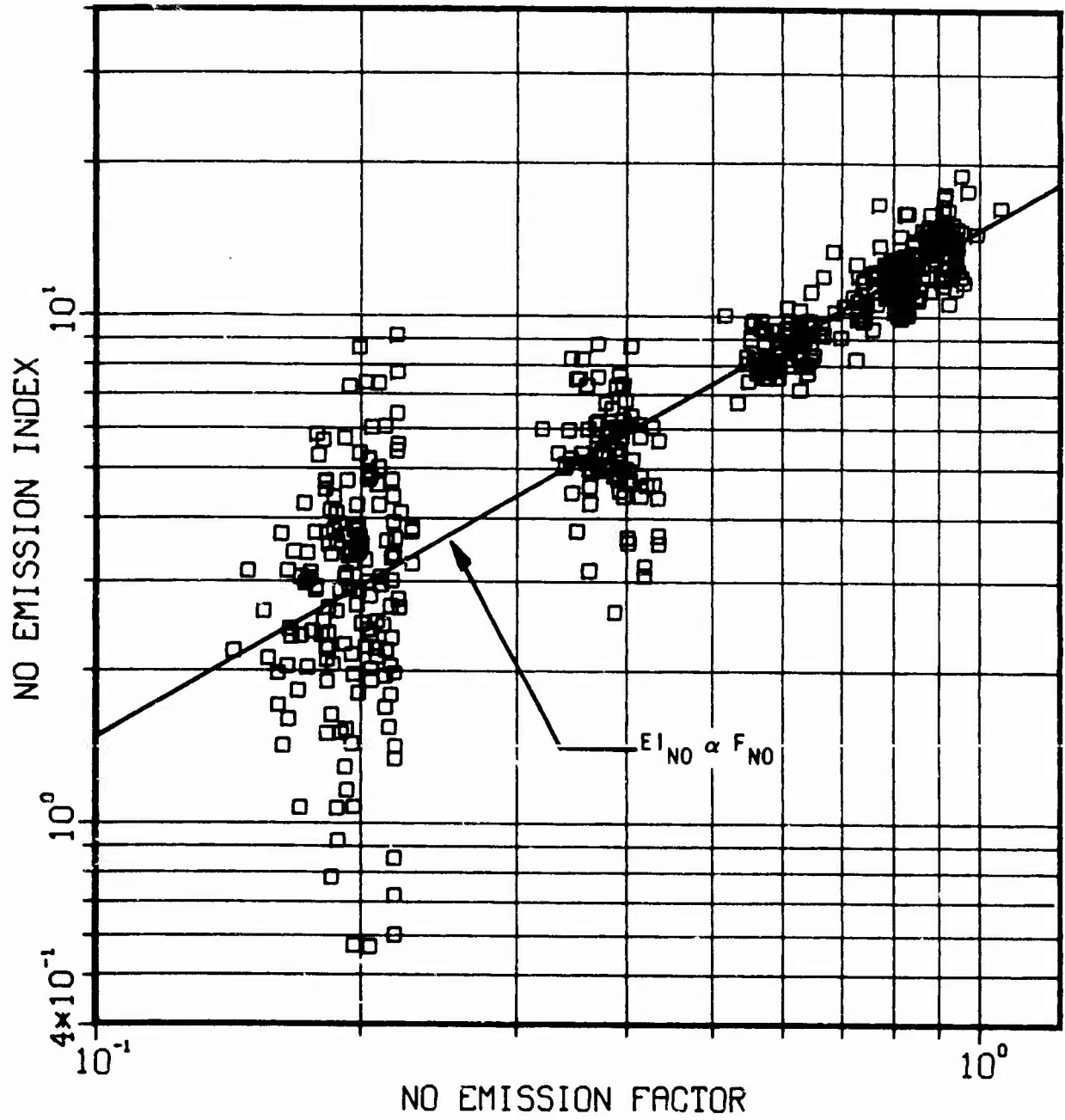


Figure 13. JT80-9 Uncorrected NO Emission Data

In the case of smoke, no emission factor to correlate the data has been developed. As a result, Figure 14 provides values of smoke number plotted versus EPR. For the JT8D-9, the values have been obtained only for modes 3 through 6, but certain trends can be seen. There is considerable scatter, but the most extreme values are attributable to contamination effects where sufficient information was not available for correction.

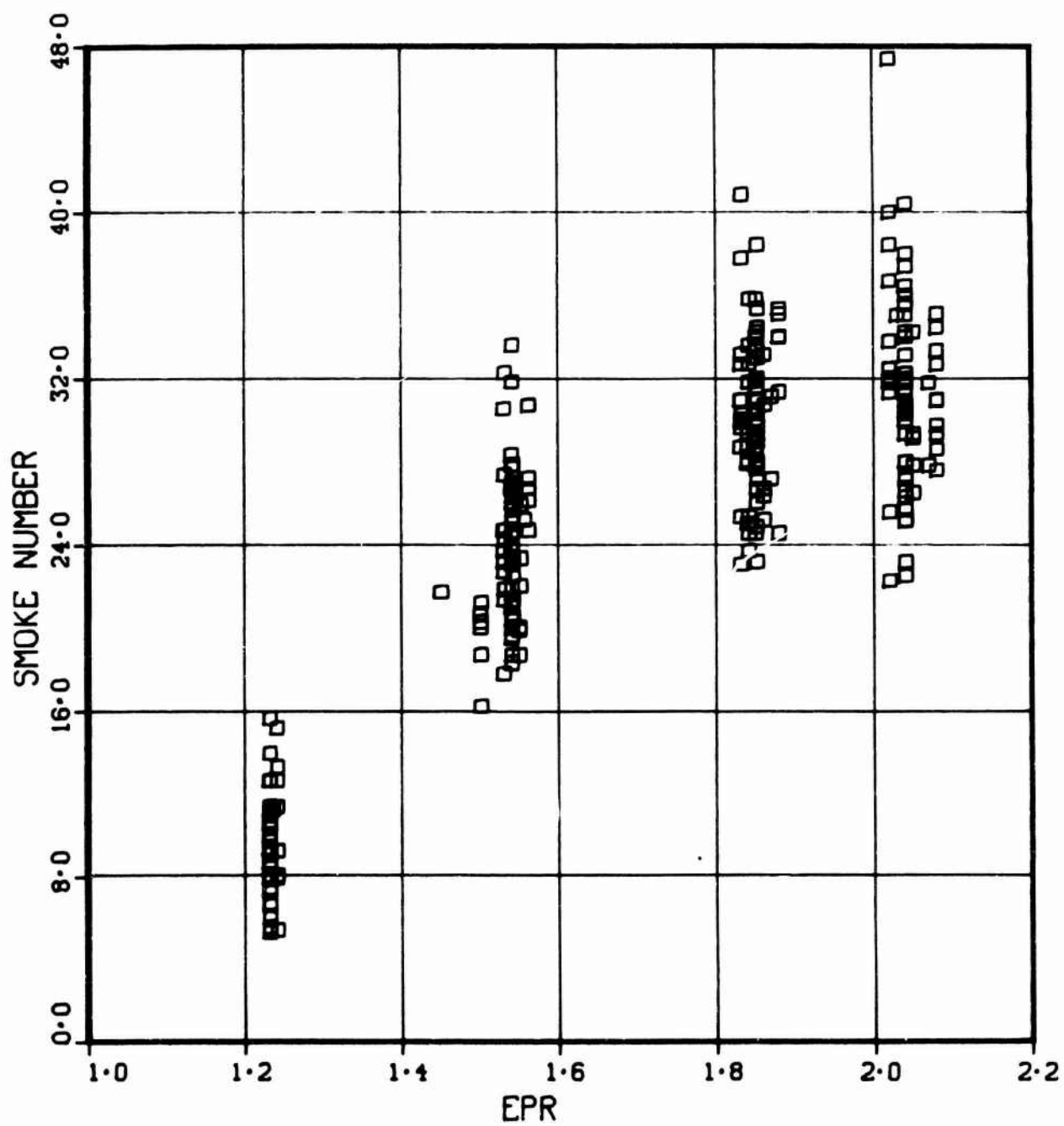


Figure 14. JT8D-9 Smoke Data

3.2 JT8D-7 ENGINE TYPE

3.2.1 Background

The Pratt & Whitney JT8D-7 is a slightly lower thrust counterpart (rated at 14,000 lbf) of the JT8D-9 engine type shown in Figure 10. Emission tests of the JT8D-7 were conducted on installed units of the Boeing 727-100 fleet owned and operated by United Air Lines. The tests took place at the San Francisco International Airport under the direction of UAL personnel, who operated the MERF. Baseline testing was initiated June 19, 1975 and the last test occurred on November 18, 1976. Ambient conditions varied between the following extremes: 42 to 85 deg F, 29.92 to 30.57 in Hg abs, and 0.00426 to 0.01023 lb H₂O/lb dry air. Of the twenty-one (21) units which were baselined, fifteen (15) were tested through at least 2300 hours of elapsed operating time. The maximum elapsed time was 2984 hours, and up to six tests were conducted per unit. The engines had baseline TSOs of between 14,190 and 24,920 hours. A total of 105 engine tests have been documented in Volume III for the JT8D-7.

3.2.2. Processed Data Overview

Mean values of the measured data obtained in the JT8D-7 emission tests are provided in Table 10. When compared to the JT8D-7 data of Reference 14 for gaseous pollutants, the CO, HC, and NO_x emission indexes all seem to be quite reasonable. (Although the sampling train of the MERF in San Francisco was also found to have elements which were inadequately heated, this was discovered only three months into testing and the data collected were not noticeably affected.) However, the smoke numbers still appear somewhat high, despite significant corrections for sample line contamination which had to be applied after the fact, as described in Appendix C. This might be attributable to residual contamination which could not be eliminated, a core-rich sample at high power (see Appendix A), or perhaps a high aromatic content of the fuel.

TABLE 10.- MEAN JT8D-7 TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.05	1.98	1.80	1.23	1.05
Corrected N_1 , per cent	32.2	93.4	88.1	61.2	33.0
Corrected N_2 , per cent	56.1	93.3	91.0	77.4	56.6
Corrected Fuel Flow, lb/hr	1130	8300	6930	2500	1130
Corrected EGT, deg R	1160	1450	1380	1100	1140
Exhaust Emissions					
CO_2 Concentration, per cent	0.63	1.92	1.54	0.51	0.58
CO Emission Index, lb/1000 lb fuel	38.1	1.5	1.9	10.7	36.6
HC Emission index, lb/1000 lb fuel	10.1	0.3	0.3	1.9	9.2
NO Emission Index, lb/1000 lb fuel	1.6	14.0	12.1	4.9	1.7
NO_x Emission Index, lb/1000 lb fuel	3.7	14.2	12.5	6.9	3.7
Smoke Number	1.5	33.1	31.7	9.5	1.4

* Without outlying values

Figures 15, 16, and 17 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as defined for the JT8D-7 in the nomenclature of Volume III). It is apparent, in each case, that the values of emission index are highly correlated by the emission factor. Specifically, for the entire set of JT8D-7 tests,

- Based on modes 6 through 8, EI_{CO} versus F_{CO} data points have a correlation coefficient of 0.93 with an inverse relationship, while EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.90.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.96 with direct proportionality.

Figure 18 provides values of smoke number versus EPR for the JT8D-7. The pattern is seen to be similar to that for the JT8D-9, but the values are higher generally. The smoke numbers again tend to level off at high power.

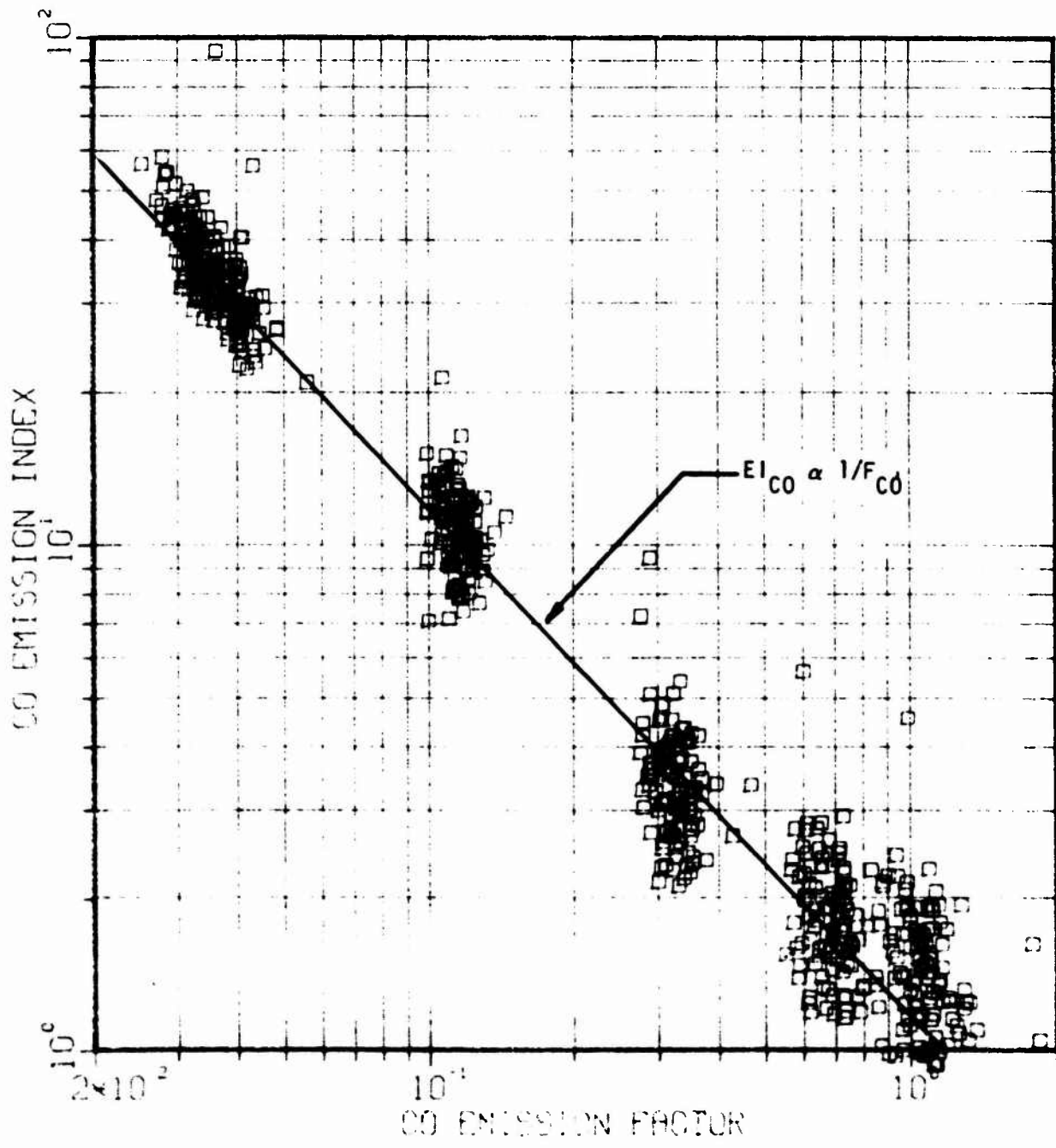


Figure 15. JT8D-7 Uncorrected CO Emission Data

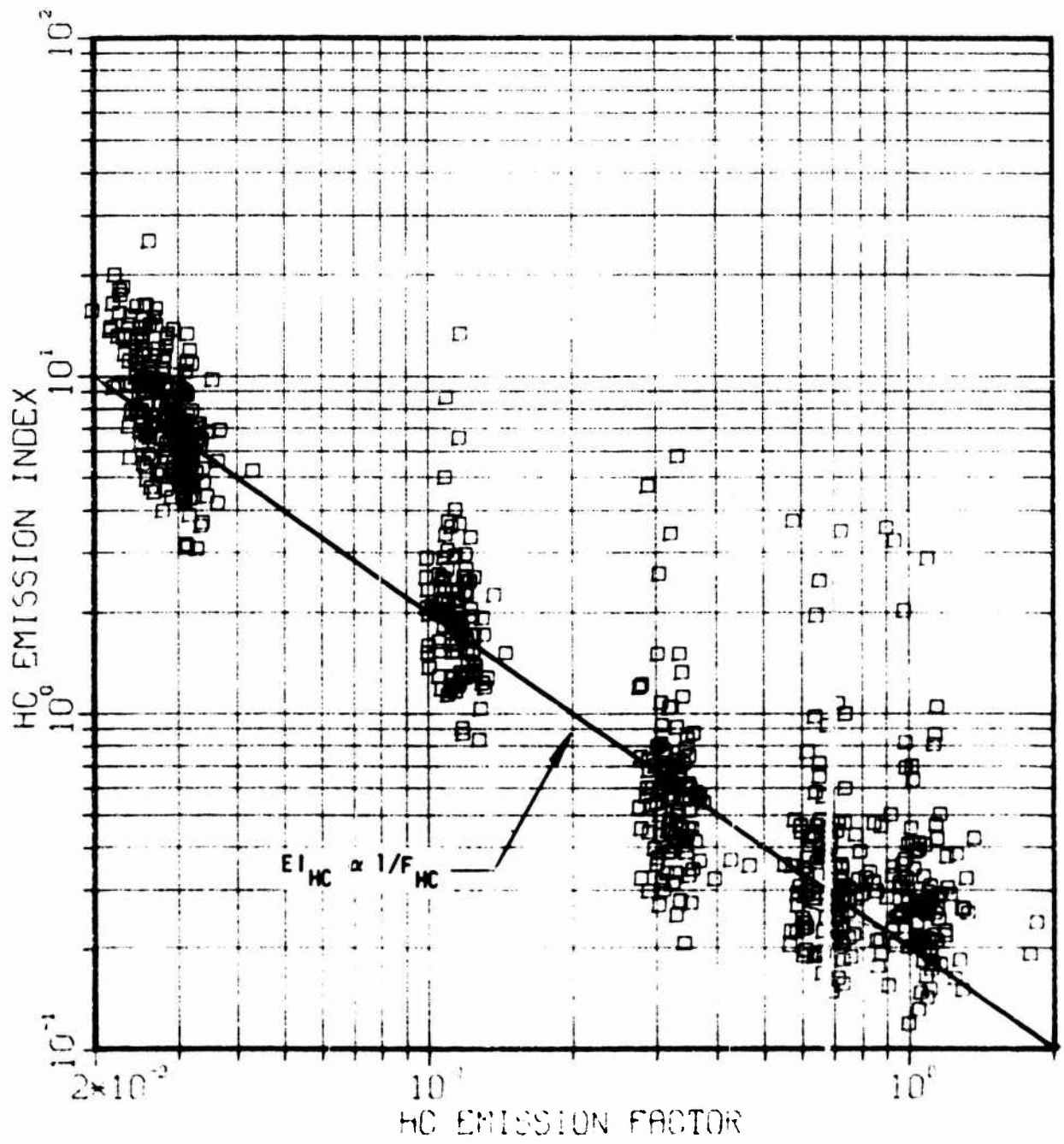


Figure 16. JT8D-7 Uncorrected HC Emission Data

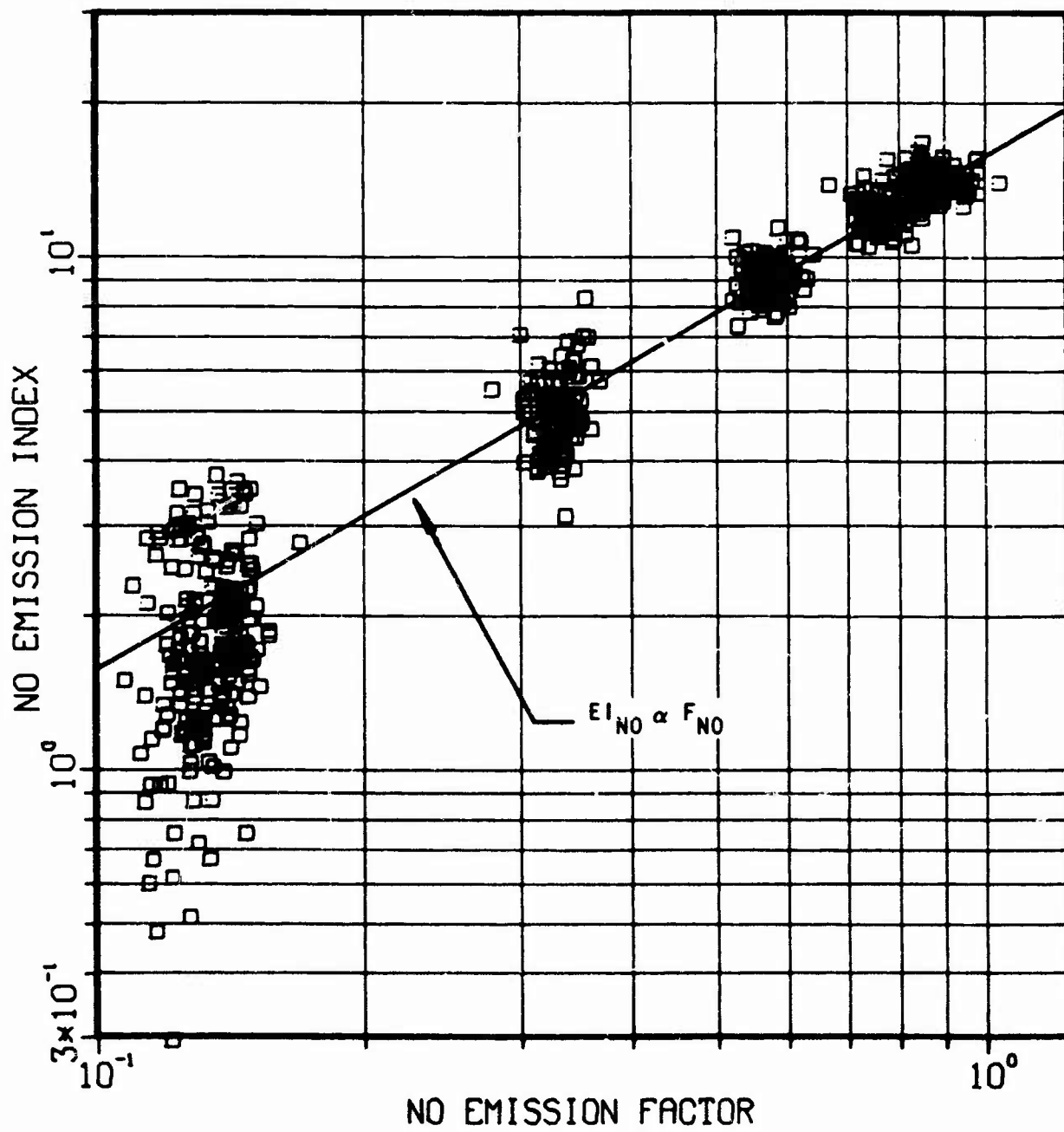


Figure 17. JT80-7 Uncorrected NO Emission Data

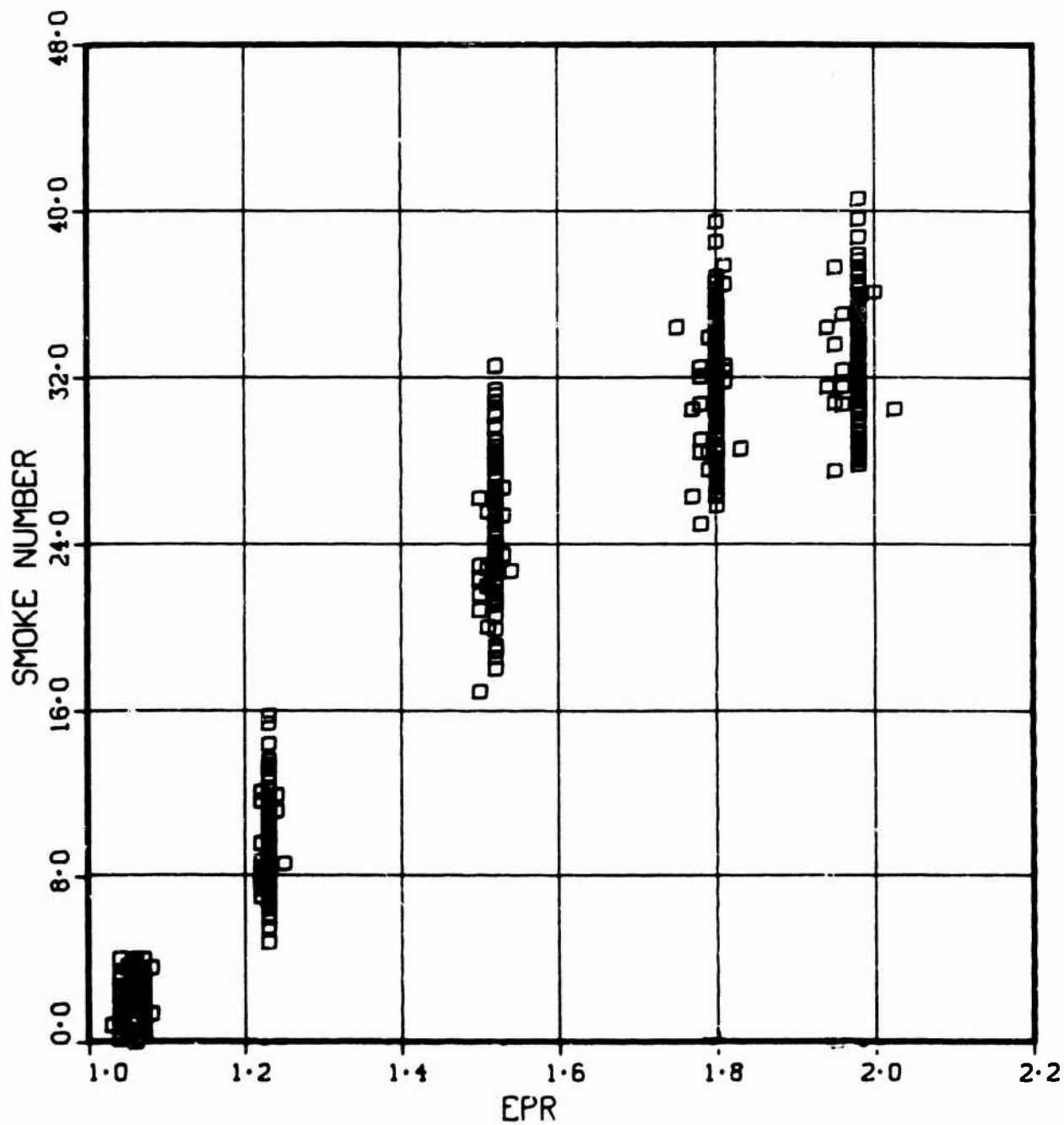


Figure 18. JT80-7 Smoke Data

3.3 JT3D-7 ENGINE TYPE

3.3.1 Background

The Pratt & Whitney JT3D-7 is a higher thrust counterpart (rated at 19,000 lbf) of the JT3D-3B engine type shown in Figure 23. Emission tests of the JT3D-7 were conducted on installed units of the DC-8-62 fleet owned and operated by United Air Lines. The tests took place at the San Francisco International Airport under the direction of UAL personnel, who operated the MERF. Baseline testing was initiated August 18, 1975 and the last test occurred on November 16, 1976. Ambient conditions varied between the following extremes: 42 to 76 deg F, 29.85 to 30.29 in Hg abs, and 0.00354 to 0.01169 lb H₂O/lb dry air. Of the eighteen (18) units which were baselined, ten (10) were tested through at least 2300 hours of elapsed operating time. The maximum elapsed time was 3012 hours, and up to six tests were conducted per unit. The engines had baseline TSOs of between 15,760 and 25,860 hours. A total of 74 engine tests have been documented in Volume IV for the JT3D-7.

3.3.2 Processed Data Overview

Mean values of the measured data obtained in the JT3D-7 emission tests are found in Table 11. When compared to the JT3D-7 data of Reference 14 for gaseous pollutants, the CO, HC, and NO_x emission indexes all seem to be quite reasonable. For CO and HC, the variation with power level and the low values agree very well, although the peak values in Table 11 tend to be higher. In the case of NO_x, again the low values agree very well, but the peak values in Table 11 are somewhat lower than the comparable values from Reference 14.

Figures 19, 20, and 21 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as defined for the JT3D-7 in the nomenclature of Volume IV). It is apparent, in each case, that a small group of values are different from the others. These are values obtained from measurements of Unit 13 which was fitted prior to the degradation program with a special low-smoke combustor. Aside from Unit 13, it should be noted that special considerations,

TABLE 11.- MEAN JT3D-7 TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.03	1.85	1.66	1.17	1.03
Corrected N_1 , per cent	32.8	101.4	96.1	69.2	33.3
Corrected N_2 , per cent	60.4	101.7	99.5	87.1	61.0
Corrected Fuel Flow, lb/hr	1240	10,000	8300	3280	1230
Corrected EGT, deg R	1030	1420	1340	1100	1030
Exhaust Emissions					
CO_2 Concentration, per cent	1.50	3.36	2.98	1.96	1.44
CO Emission Index, lb/1000 lb fuel	109	1.2	1.7	17.8	106
HC Emission Index, lb/1000 lb fuel	124	0.7	0.4	2.7	112
NO Emission Index, lb/1000 lb fuel	1.5	9.8	8.9	4.5	1.7
NO _x Emission Index, lb/1000 lb fuel	2.2	9.9	9.1	5.6	2.4
Smoke Number	19.5	50.5	50.6	43.6	18.7

* Without outlying values

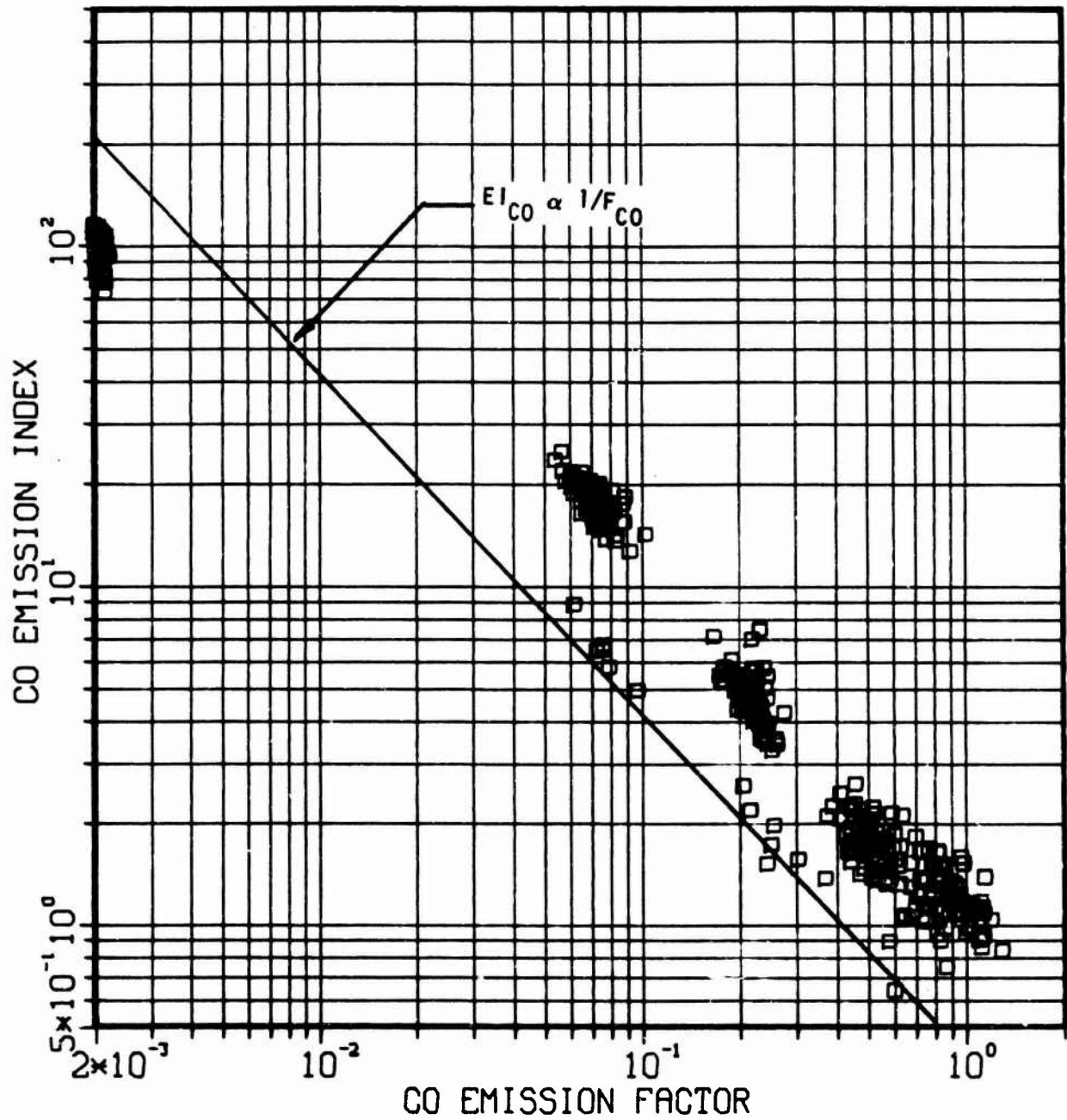


Figure 19. JT3D-7 Uncorrected CO Emission Data

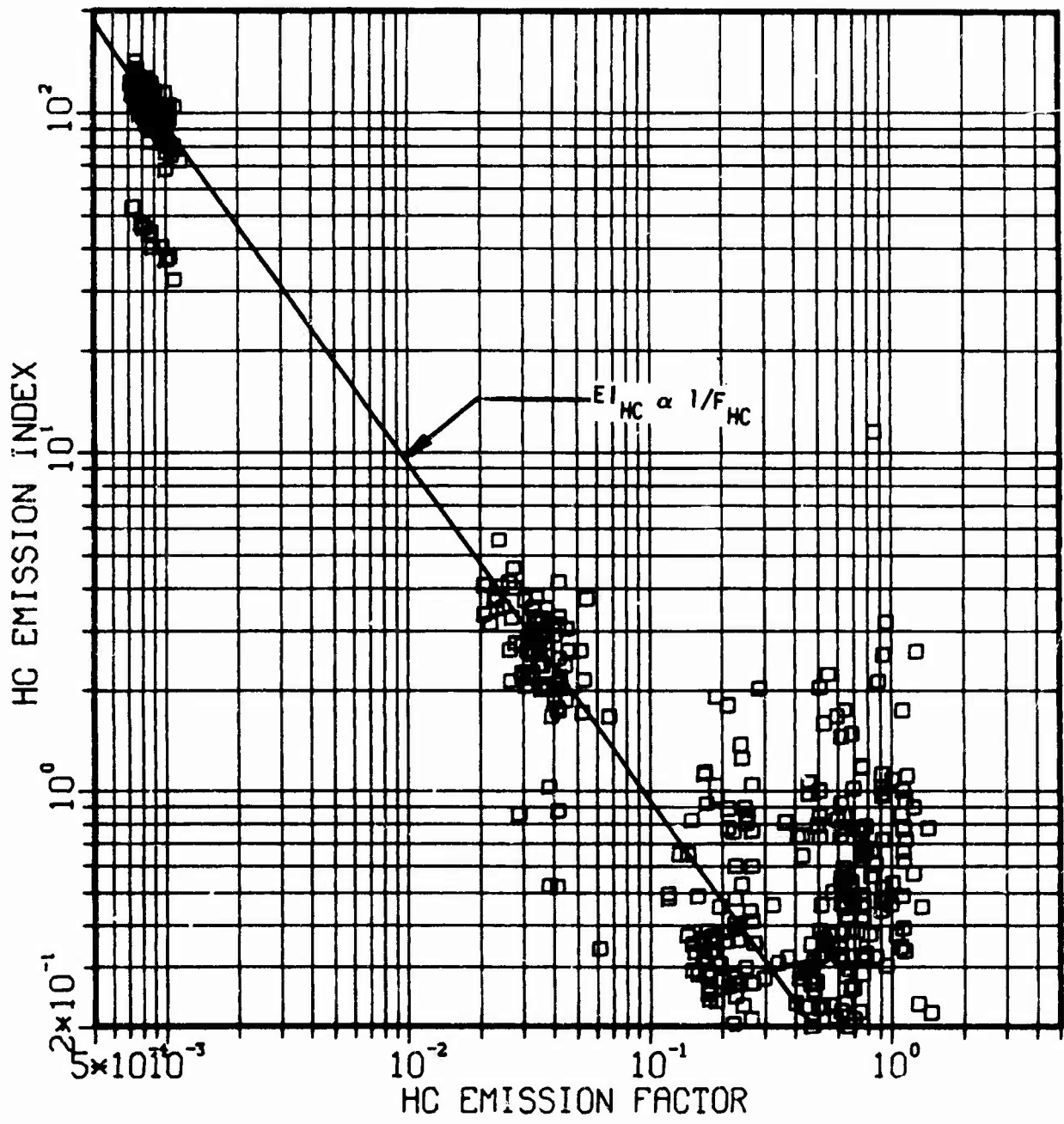


Figure 20. JT3D-7 Uncorrected HC Emission Data

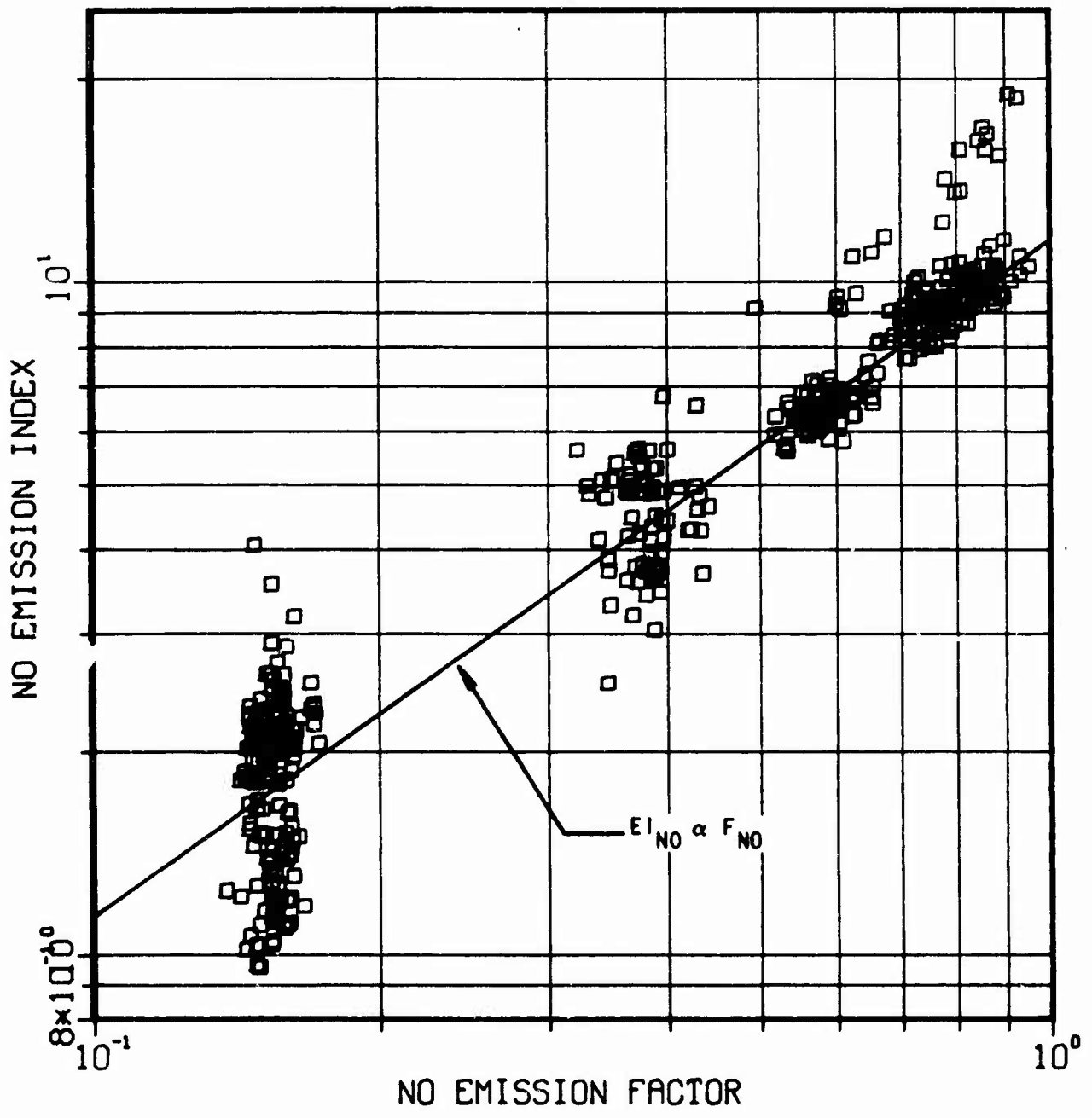


Figure 21. JT30-7 Uncorrected NO Emission Data

as detailed in Appendix B led to a modified CO emission factor. As a result, EI_{CO} versus F_{CO} data points could not be correlated with a slope of -1. However, based on modes 6 through 8, the points did have a correlation coefficient of 98 percent with a least-squares straight line whose slope was -0.51. For the remaining JT3D-7 gaseous pollutants,

- Based on modes 6 through 8, EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.99 with an inverse relationship.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.90 with direct proportionality.

Figure 22 provides values of smoke number versus EPR for the JT3D-7. It is obvious to see that the values for the low-smoke combustor are set apart, quite distinctly, from the other units. As opposed to the JT8Ds, there is tendency for smoke numbers to level off at the intermediate power setting. Residual contamination effects are responsible for the scatter of data at take-off power.

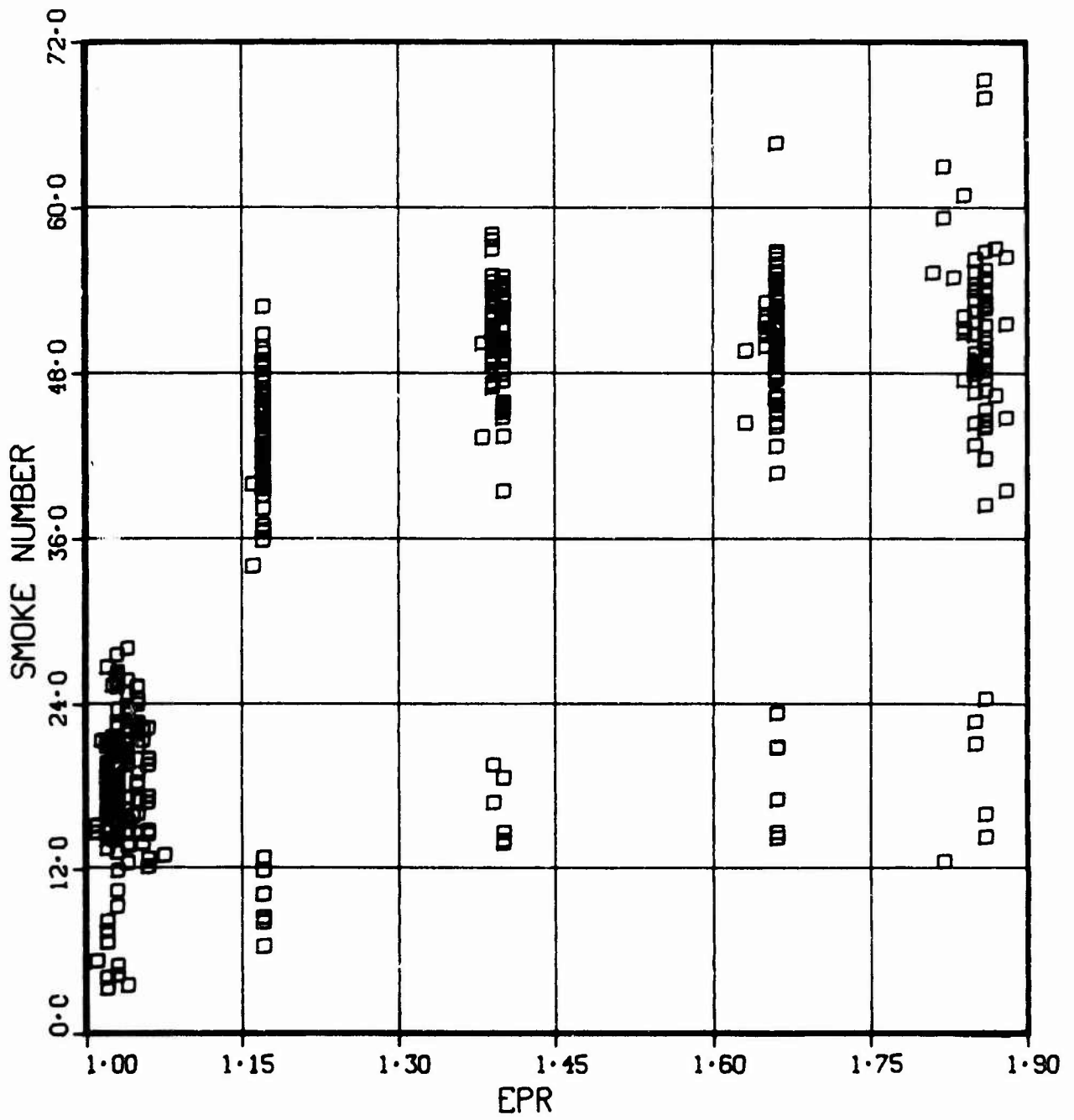


Figure 22. JT3D-7 Smoke Data

3.4 JT3D-3B ENGINE TYPE

3.4.1 Background

The Pratt & Whitney JT3D-3B, as shown in Figure 23, is a two spool turbofan engine rated at 18,000 lbf thrust which was developed to power long range transport aircraft. A short discharge duct exhausts the fan air just after passing through the fan. The combustor is a cannular type with eight cans and six fuel nozzles per can.

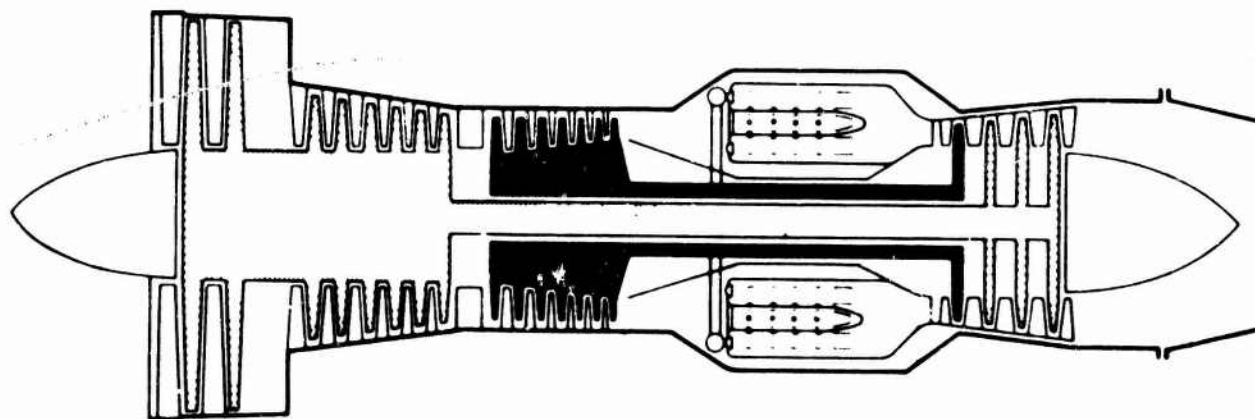


Figure 23. JT3D-3B Schematic

Emission tests of the JT3D-3B were conducted on installed units of the DC-8-61 fleet owned and operated by United Air Lines. The tests took place at the San Francisco International Airport under the direction of UAL personnel, who operated the MERF. Baseline testing was initiated on July 9, 1975 and the last test occurred on October 14, 1976. Ambient conditions varied between the following extremes: 42 to 64 deg F, 29.92 to 30.32 in Hg abs, and 0.00464 to 0.00998 lb H₂O/lb dry air. Of the eighteen (18) units which were baselined, ten (10) units were tested through at least 2355 hours of elapsed operating time. The maximum elapsed time was 3031 hours, and up to six tests were conducted per unit. The engines had baseline TSOs of between 17,670 and 31,250 hours. A total of 78 engine tests have been documented in Volume V for the JT3D-3B.

3.4.2 Processed Data Overview

Mean values of the measured data obtained in the JT3D-3B emission tests are found in Table 12. When compared to the JT3D-3B data for gaseous pollutants of Reference 14 the CO, HC, and NO_x emission indexes again seem to be quite reasonable. As the JT3D-7, the variation with power level and the low values agree very well for CO and HC, although the peak values of Table 12 tend to be higher. For NO_x, Table 11 generally gives high values at low power and lower values at high power.

Figures 24, 25, and 26 provide, respectively, values of CO, HC and NO emission indexes versus their appropriate emission factors (as defined for the JT3D-3B in the nomenclature of Volume V). As for the JT3D-7, special considerations for the JT3D-3B led to a modified CO emission factor which could not correlate the EI_{CO} versus F_{CO} data points with a slope of -1. However, based on modes 6 through 8, the points did have a correlation coefficient of 99 percent with a least-squares straight line whose slope was -0.47. For the remaining JT3D-3B gaseous pollutants,

- Based on modes 6 through 8, EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.99 with an inverse relationship.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.95 with direct proportionality.

Figure 27 provides values of smoke number versus EPR for the JT3D-3B. The values are seen to be very similar to those for the JT3D-7 at all power levels.

TABLE 12. - MEAN JT3D-3B TEST DATA *

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.04	1.84	1.65	1.17	1.04
Corrected N_1 , per cent	33.5	103.5	97.2	68.4	33.6
Corrected N_2 , per cent	60.6	101.3	98.7	86.4	60.7
Corrected Fuel Flow, lb/hr	1280	9590	7860	3060	1260
Corrected EGT, deg R	1020	1400	1310	1090	1020
Exhaust Emissions					
CO ₂ Concentration, per cent	1.47	3.31	2.91	1.84	1.42
CO Emission Index, lb/1000 lb fuel	108	1.3	2.0	20.6	109
HC Emission Index, lb/1000 lb fuel	128	0.5	0.4	3.4	132
NO Emission Index, lb/1000 lb fuel	1.6	9.6	8.3	4.5	1.8
NO _x Emission Index, lb/1000 lb fuel	2.2	9.6	8.6	5.2	2.3
Smoke Number	21.9	52.2	52.0	43.3	22.6

* Without outlying values

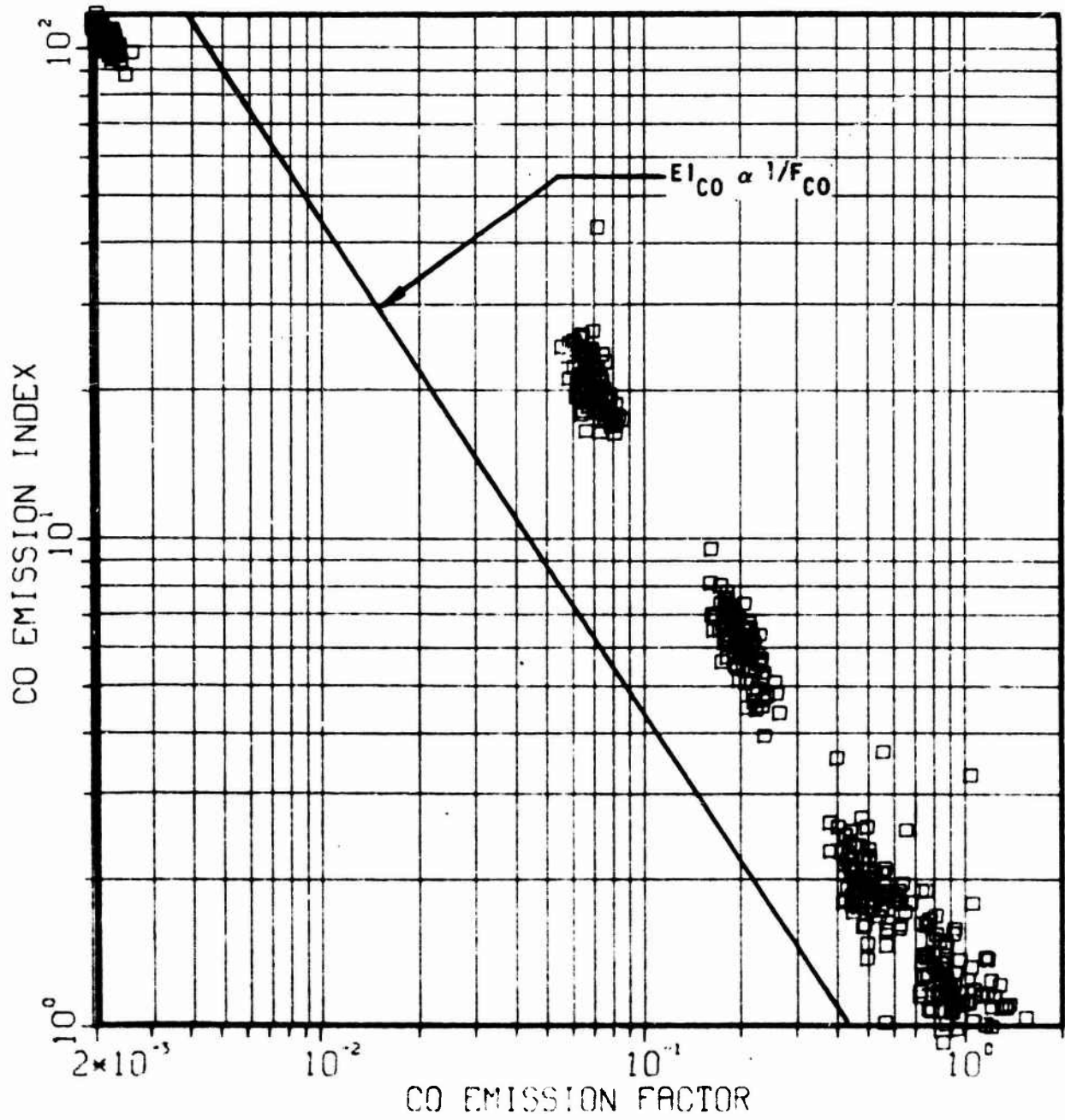


Figure 24. JT3D-3B Uncorrected CO Emission Data

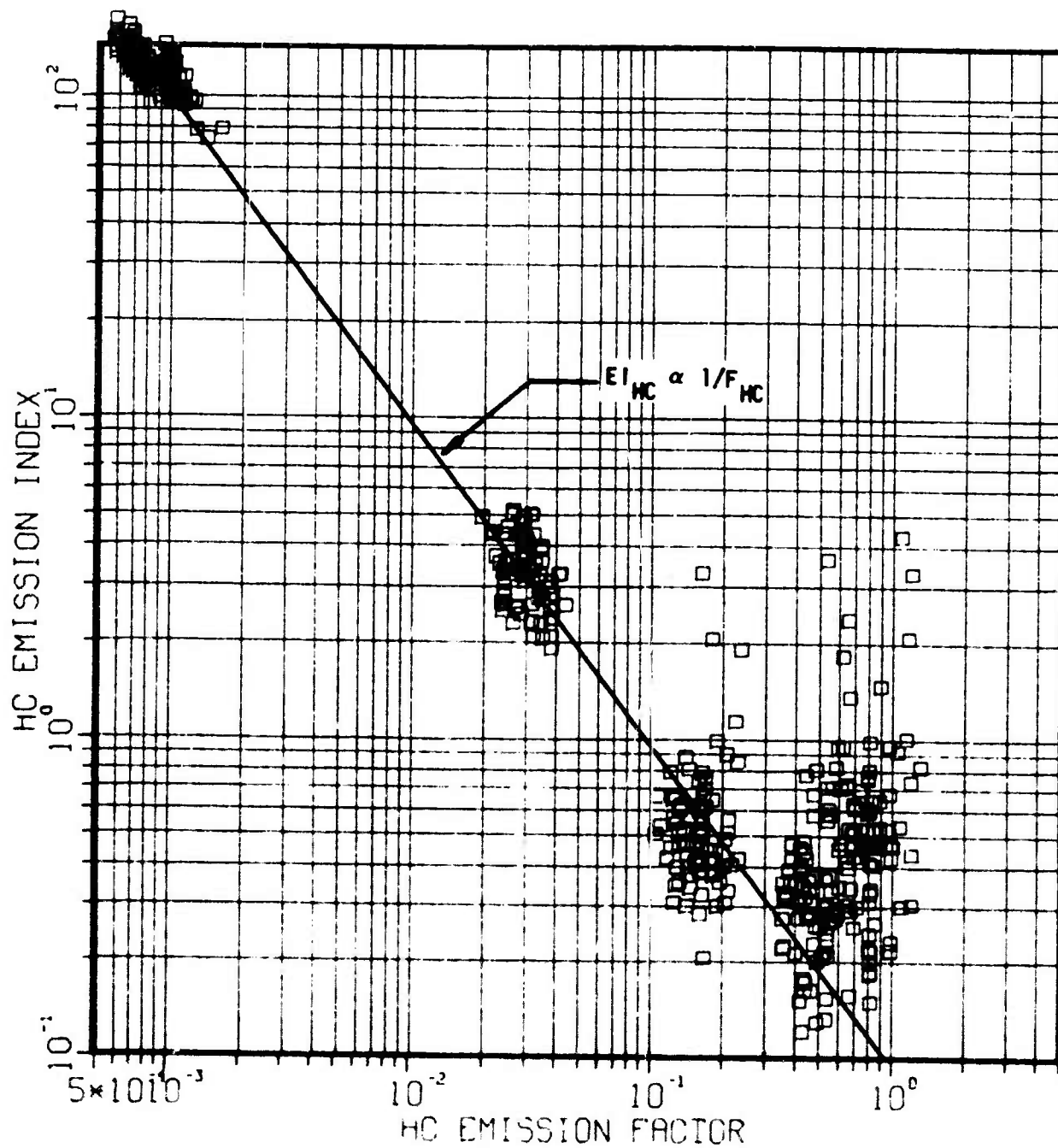


Figure 25. JT3D-3B Uncorrected HC Emission Data

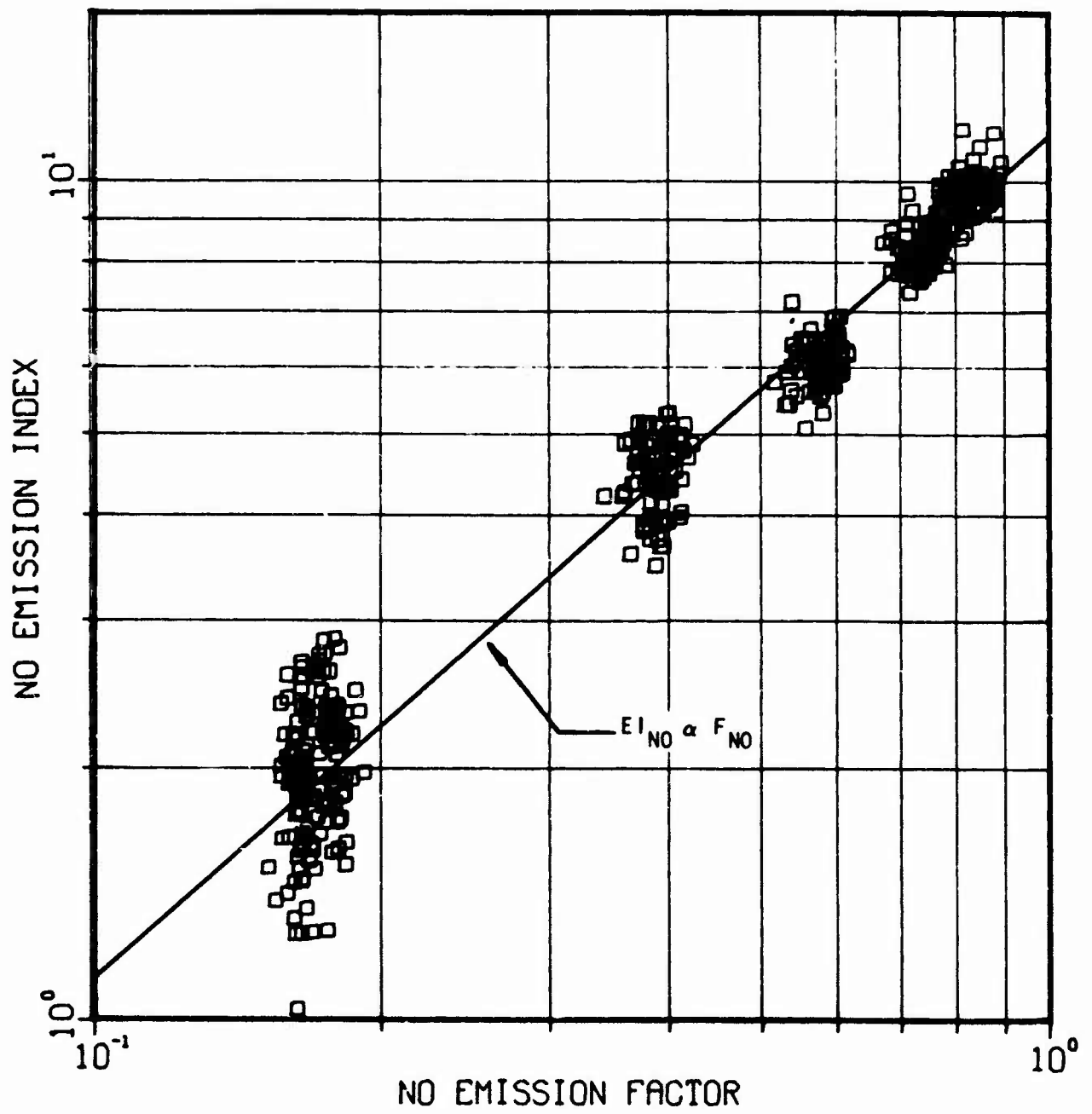


Figure 26. JT3D-3B Uncorrected NO Emission Data

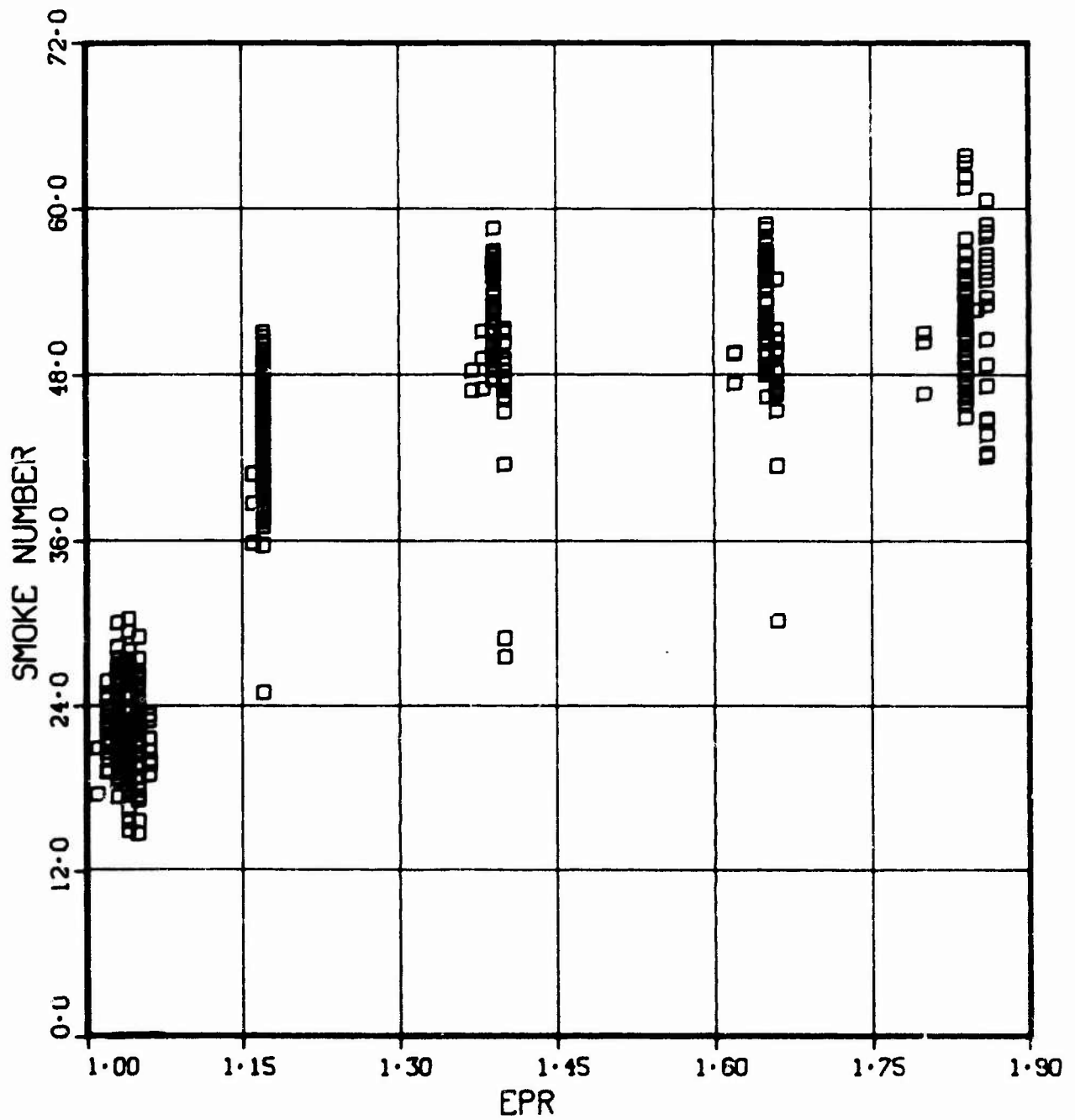


Figure 27. JT3D-38 Smoke Data

3.5 JT9D-3A ENGINE TYPE

3.5.1 Background

The Pratt & Whitney JT9D-3A, as shown in Figure 28 without exhaust plug, is a two spool turbofan engine with a compression ratio of approximately 22 to 1 and a bypass ratio of 5 to 1. The engine is rated dry at 43,500 lbf thrust and was developed to power jumbo jet transport aircraft. The combustor is an annular type design and contains two igniter plugs capable of continuous duty operation.

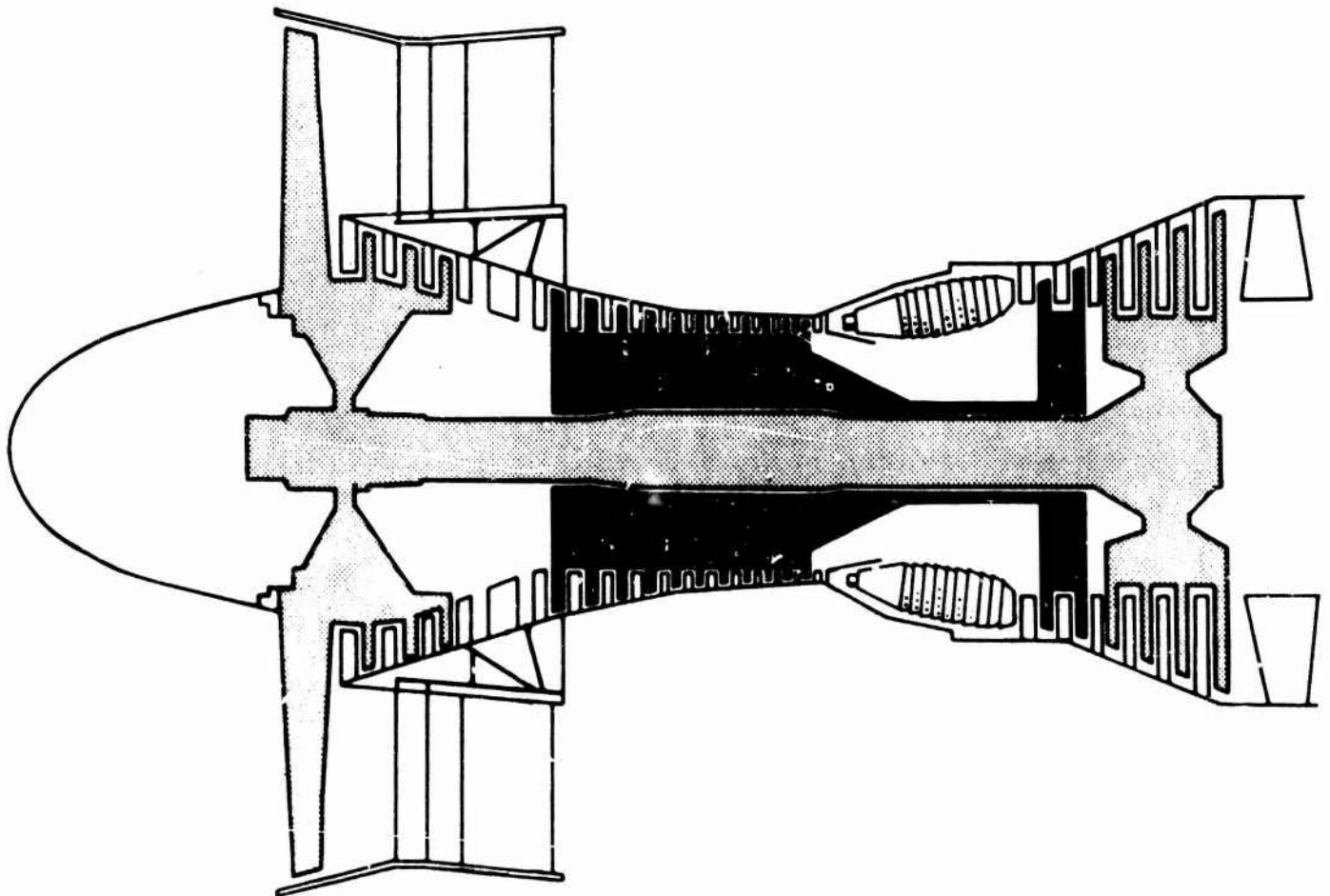


Figure 28. JT9D-3A Schematic

Emission tests of the JT9D-3A were conducted on installed units of the Boeing 747-100 fleet owned and operated by United Air Lines. The

tests took place at the San Francisco International Airport under the direction of UAL personnel, who operated the MERF. Baseline testing was initiated on September 4, 1975 and the last test occurred on November 22, 1976. Ambient conditions varied between the following extremes: 42 to 76 deg F, 29.80 to 30.46 in Hg abs, and 0.0046 to 0.0102 lb H₂O/lb dry air. Of the twenty-five (25) units which were baselined, ten (10) units were tested through at least 1490 hours of elapsed operating time. The maximum elapsed time was 2722 hours, and up to seven tests were conducted per unit. The engines had baseline TSOs of between 7,623 and 15,270 hours. In total, 76 engine tests have been documented in Volume VI for the JT9D.

3.5.2 Processed Data Overview

Mean values of the measured data obtained in the JT9D-3A emission tests are found in Table 13. When compared to the JT9D data of Reference 14 for gaseous pollutants, similar tendencies are found as for the previous engine types. For CO and HC emission indexes, the variation with power level and the low values agree well, but the peak values of Table 13 tend to be higher. For NO_x emission indexes, the values agree well at idle but, as power level increases, the values of Table 13 tend to be significantly lower.

Figures 29, 30, and 31 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as defined for the JT9D-3A in the nomenclature of Volume VI). Although a good deal of scatter exists at low emission levels, particularly in the case of HC, it can be seen that the values of emission index are highly correlated by emission factor where they are most significant. Specifically, for the entire set of JT9D-3A tests,

- Based on modes 6 through 8, EI_{CO} versus F_{CO} data points have a correlation coefficient of 0.98 with an inverse relationship, while EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.96.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.95 with direct proportionality.

TABLE 13. - MEAN JT9D-3A TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.02	1.40	1.31	1.08	1.02
Corrected N ₁ , per cent	28.5	89.8	84.3	56.5	27.5
Corrected N ₂ , per cent	64.5	94.5	92.7	83.9	65.2
Corrected Fuel Flow, lb/hr	1920	15,800	12,900	5210	1840
Corrected EGT, deg R	1160	1870	1770	1400	1180
Exhaust Emissions					
CO ₂ Concentration, per cent	1.72	3.92	3.48	2.35	1.71
CO Emission Index, lb/1000 lb fuel	81.3	0.6	0.7	7.1	82.0
HC Emission Index, lb/1000 lb fuel	35.4	1.0	0.7	0.9	32.7
NO Emission Index, lb/1000 lb fuel	2.2	24.9	18.6	6.3	1.8
NO _x Emission Index, lb/1000 lb fuel	3.3	25.6	19.1	7.6	3.2
Smoke Number	1.5	11.9	9.7	2.7	1.3

* Without outlying values

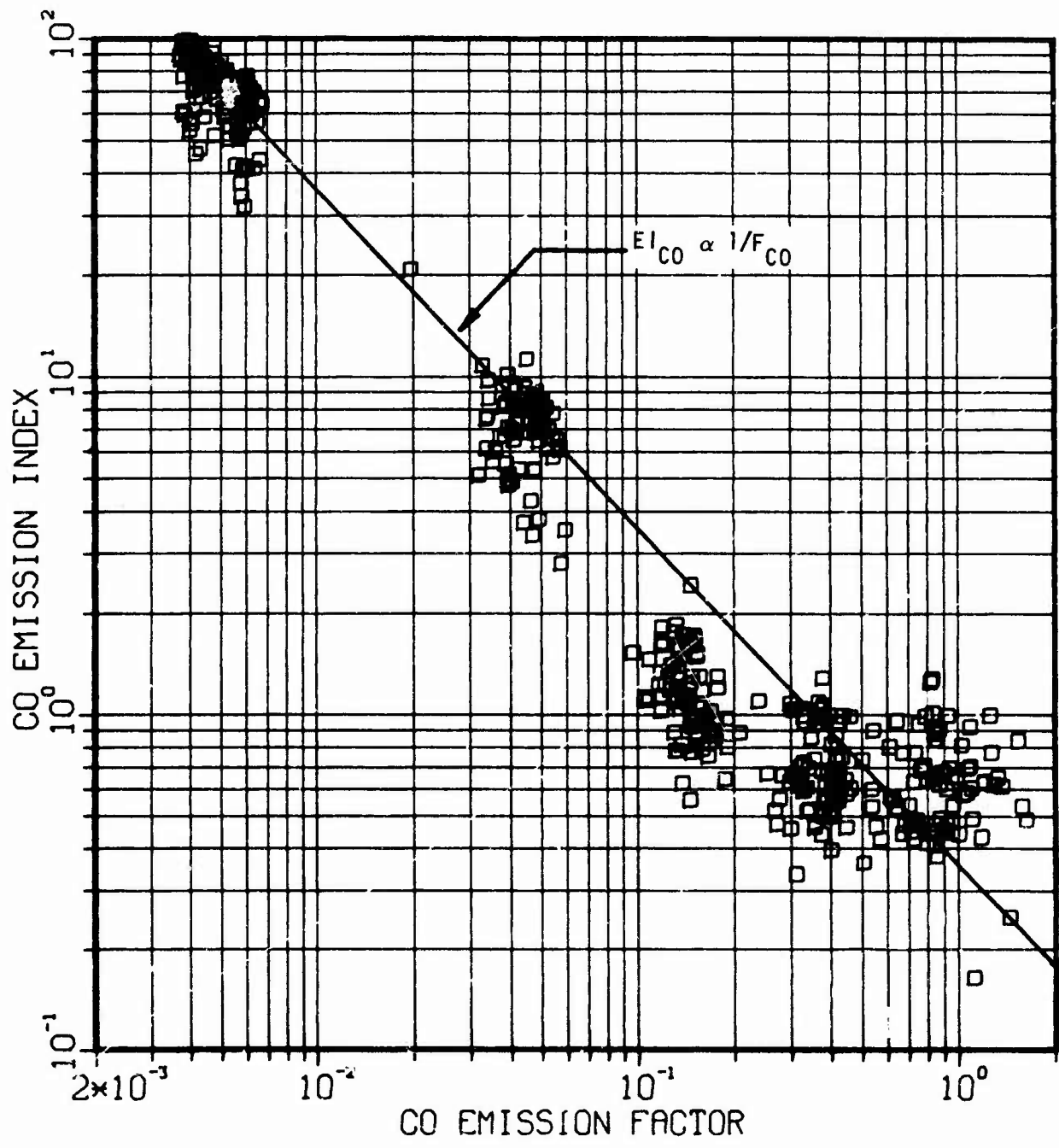


Figure 29. JT9D-3A Uncorrected CO Emission Data

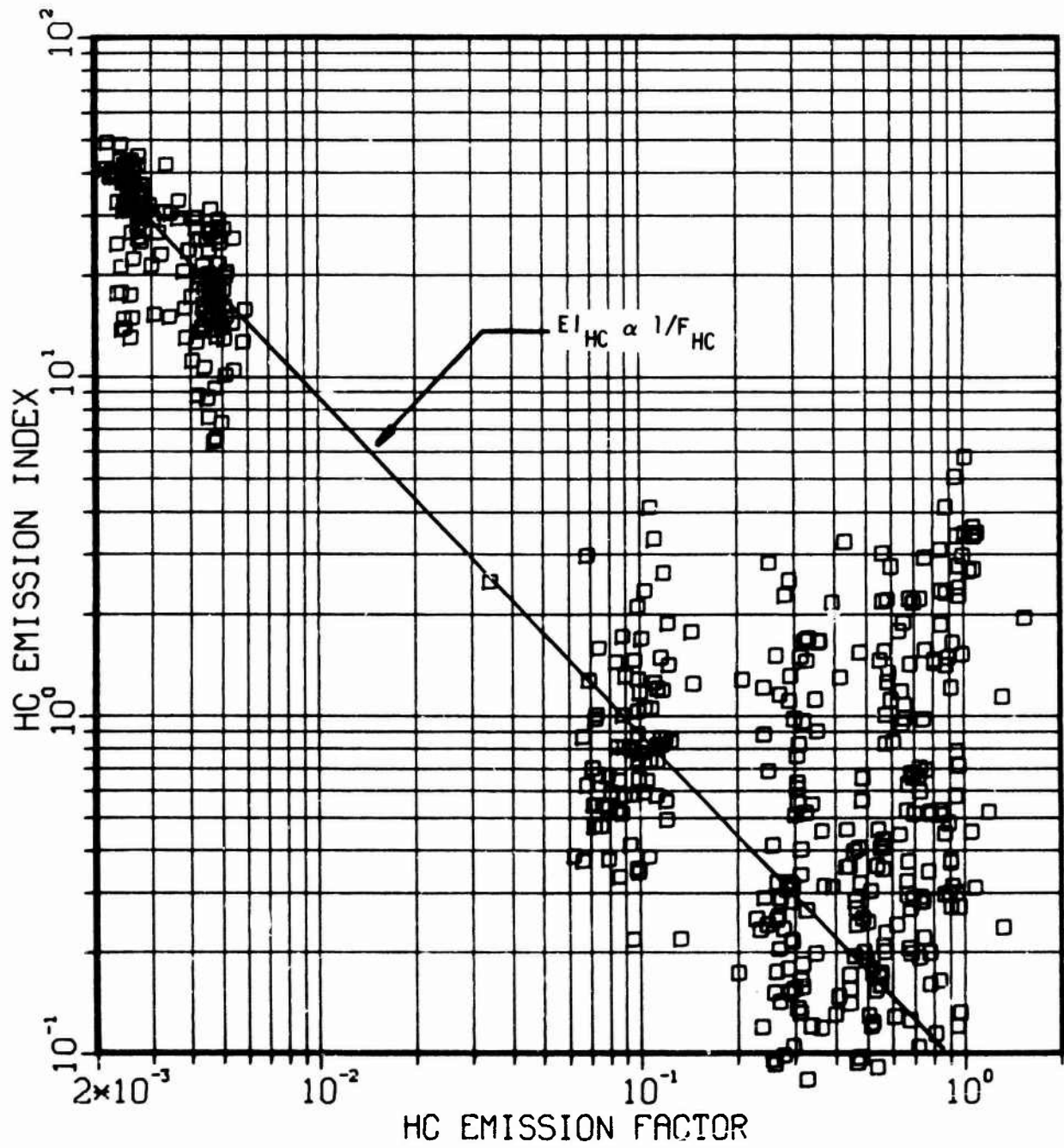


Figure 30. JT9D-3A Uncorrected HC Emission Data

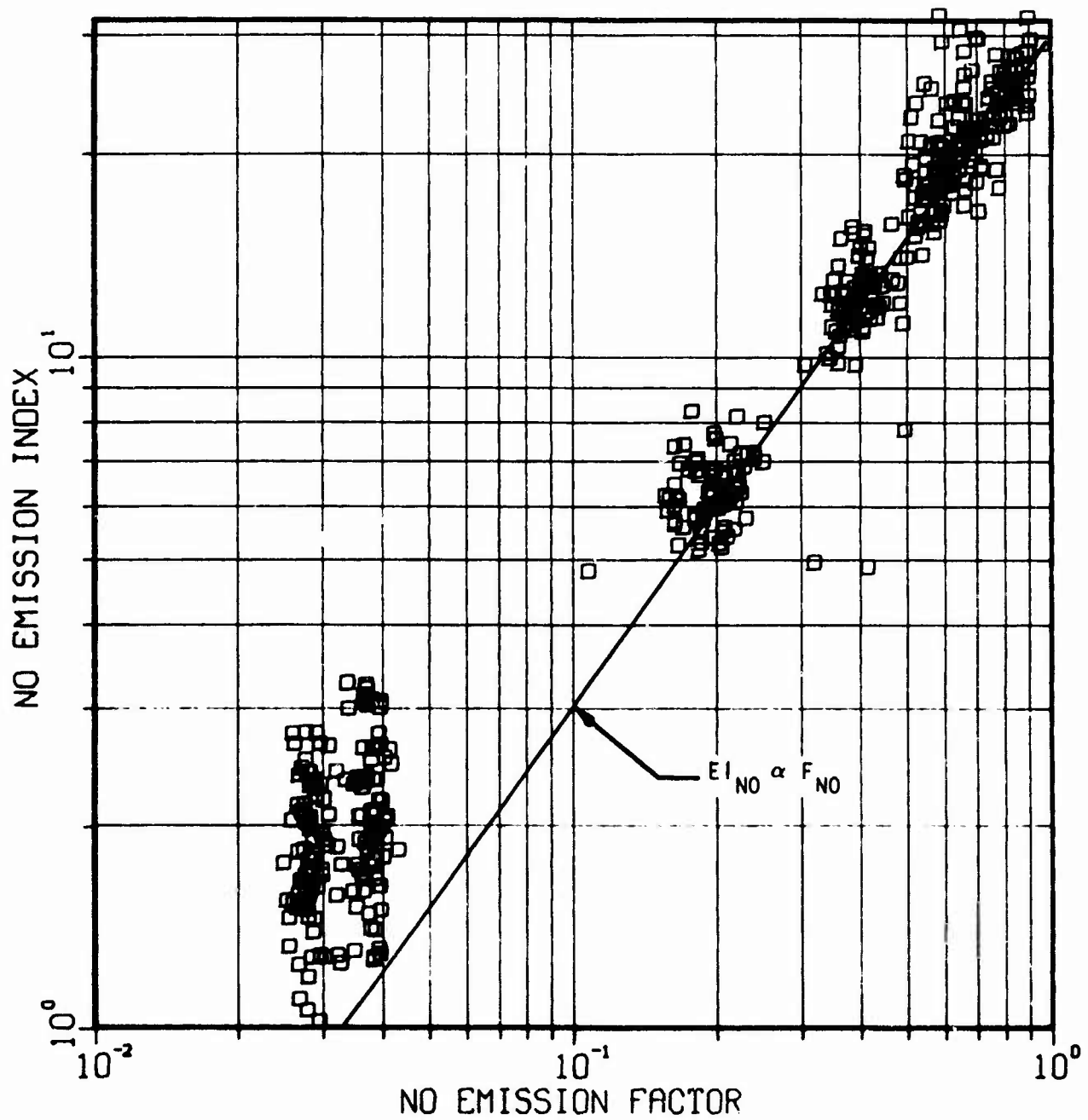


Figure 31. JT9D-3A Uncorrected NO Emission Data

Figure 32 provides values of smoke number versus EPR for the JT9D-3A. A great deal of scatter can be seen in the values which increase steadily with power level.

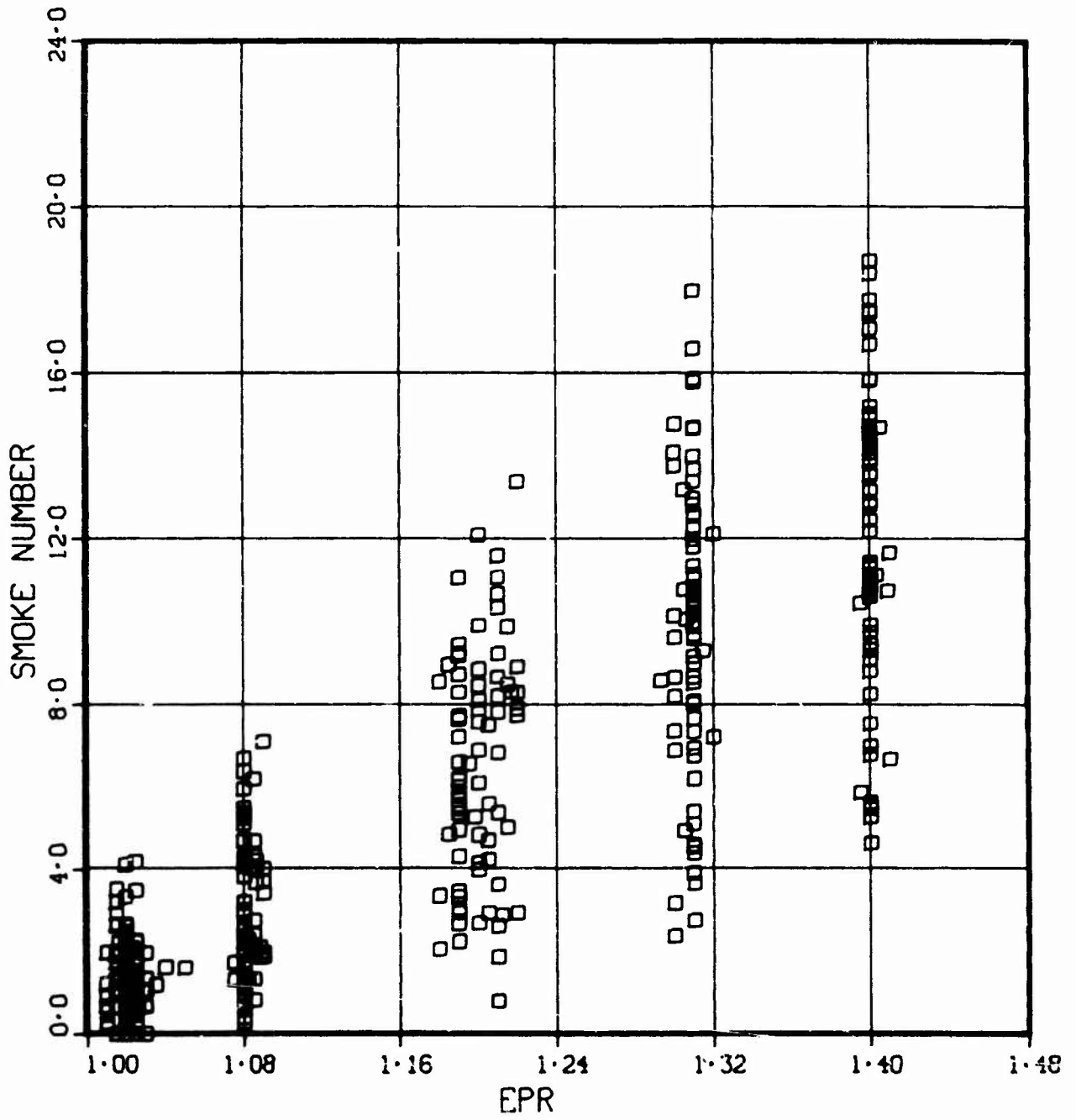


Figure 32. JT9D-3A Smoke Data

3.6 RB211-22B ENGINE TYPE

3.6.1 Background

The Rolls-Royce RB211-22B, as shown in Figure 33, is a three spool, high bypass turbofan engine with a compression ratio of 27 to 1. The engine is rated at 40,600 lbf thrust and was developed to power jumbo jet transport aircraft. The combustor is annular and is fitted with 18 fuel spray nozzle assemblies, two of which incorporate high energy igniter plugs.

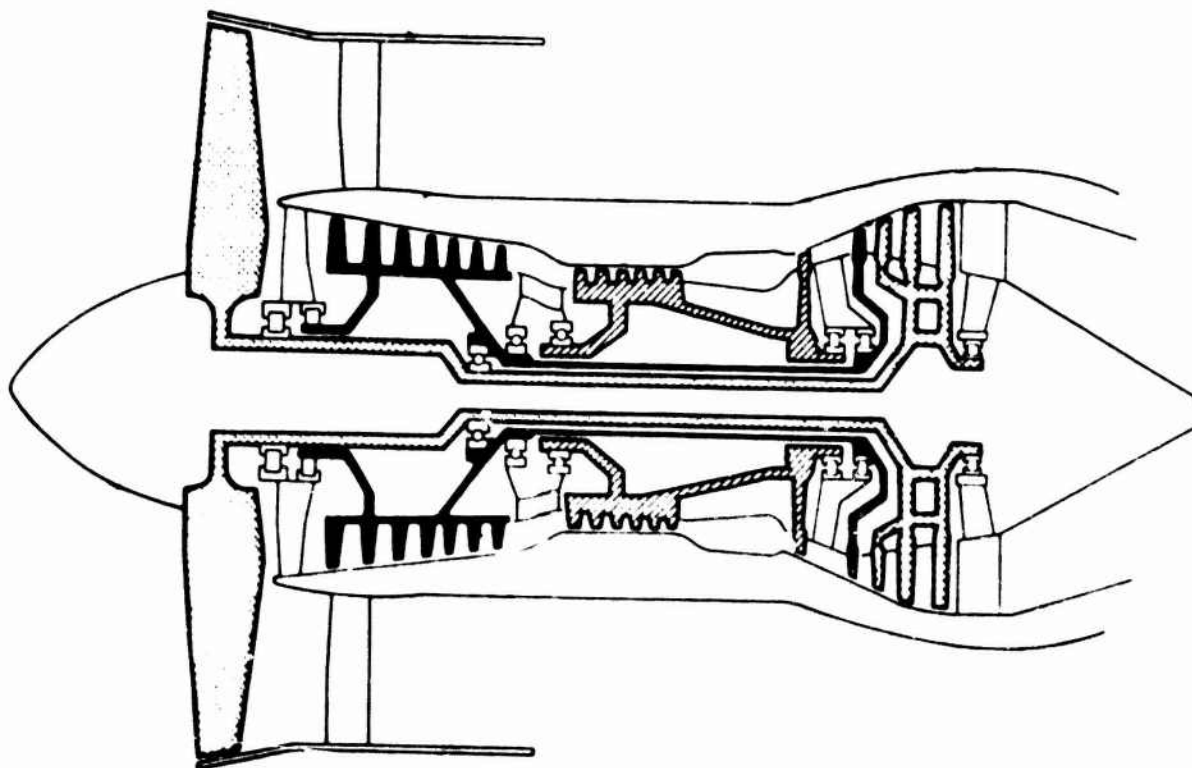


Figure 33. RB211-22B Schematic

Emission tests of the RB211-22B were conducted on installed units of the L1011 fleet owned and operated by TWA. The tests took place at the San Francisco International Airport under the direction of NREC personnel, who operated the MERF. Baseline testing was initiated on June 1, 1976 and the last test occurred on October 8, 1976. Ambient conditions varied between the following extremes: 59 to 84 deg F, 29.80

to 30.10 in Hg abs, and 0.00618 to 0.01162 lb H₂O/lb dry air. Of the nineteen (19) units which were baselined, ten (10) units were tested through at least 500 hours of elapsed operating time. The maximum elapsed time was 819 hours, and up to six tests were conducted per unit. The engines had baseline TSO. of between 359 and 6,295 hours. A total of 55 engine tests have been documented in Volume VII for the RB211.

3.6.2 Processed Data Overview

Mean values of the measured data obtained in the RB211 emission tests are found in Table 14. Review of these values by Rolls-Royce personnel indicated that the gaseous emissions were generally in good agreement with previous measurements of production engines. In the case of smoke, however, significant corrections for sample line contamination have had to be applied after the fact, as described in Appendix C, and these corrections have brought the take-off values of Table 14 down to a more reasonable mean.

Figures 34, 35, and 36 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as defined for the RB211 in the nomenclature of Volume VII). It can be seen, in each case, that the values of emission index are highly correlated by the emission factor. Specifically, for the entire set of RB211 tests,

- Based on modes 6 through 8, EI_{CO} versus F_{CO} data points have a correlation coefficient of 0.97 with an inverse relationship, while EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.98.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.97 with direct proportionality.

Figure 37 provides values of smoke number versus EPR for modes 3 through 6 of RB211 operation. The increasing slope exhibited by this data at high power indicates that residual contamination effects may still be present.

TABLE 14. - MEAN RB211-22B TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.02	1.53	1.45	1.13	1.02
Corrected N ₁ , per cent	23.4	92.8	87.2	54.1	23.2
Corrected N ₂ , per cent	44.6	96.8	93.8	76.8	44.1
Corrected N ₃ , per cent	62.1	91.7	89.6	77.5	62.2
Corrected Fuel Flow, lb/hr	1560	15,700	13,000	4230	1510
Corrected EGT, deg R	1040	1710	1610	1210	1030
Exhaust Emissions					
CO ₂ Concentration, per cent	1.54	3.88	3.45	1.98	1.46
CO Emission Index, lb/1000 lb fuel	96.3	1.3	2.0	22.2	108
HC Emission Index, lb/1000 lb fuel	93.4	0.5	0.3	6.7	99.8
NO Emission Index, lb/1000 lb fuel	1.2	34.3	26.2	6.4	1.1
NO _x Emission Index, lb/1000 lb fuel	2.1	34.9	26.9	8.4	2.4
Smoke Number	---	24.2	17.8	6.6	---

* Without outlying values

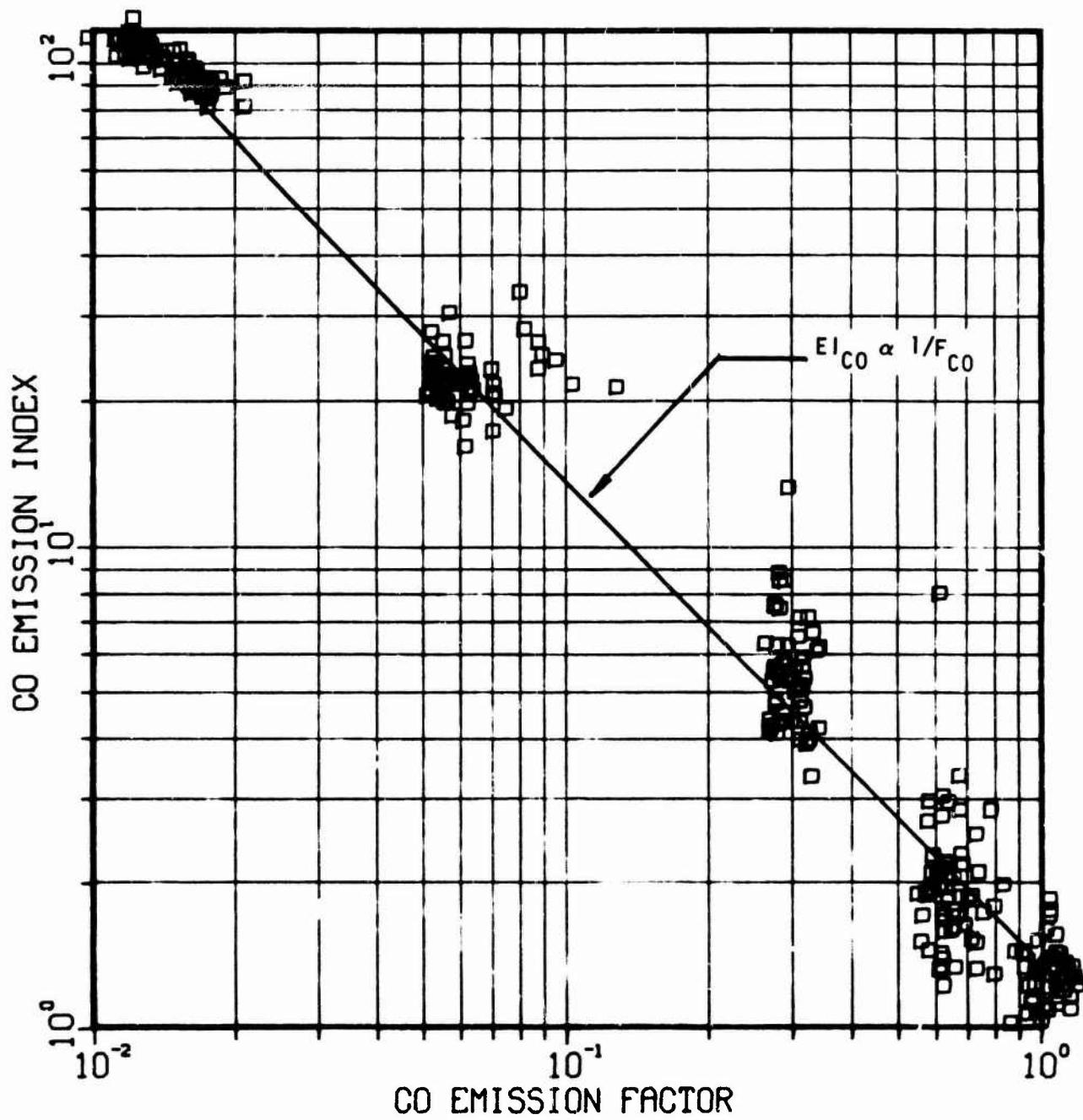


Figure 34. RB211-22B Uncorrected CO Emission Data

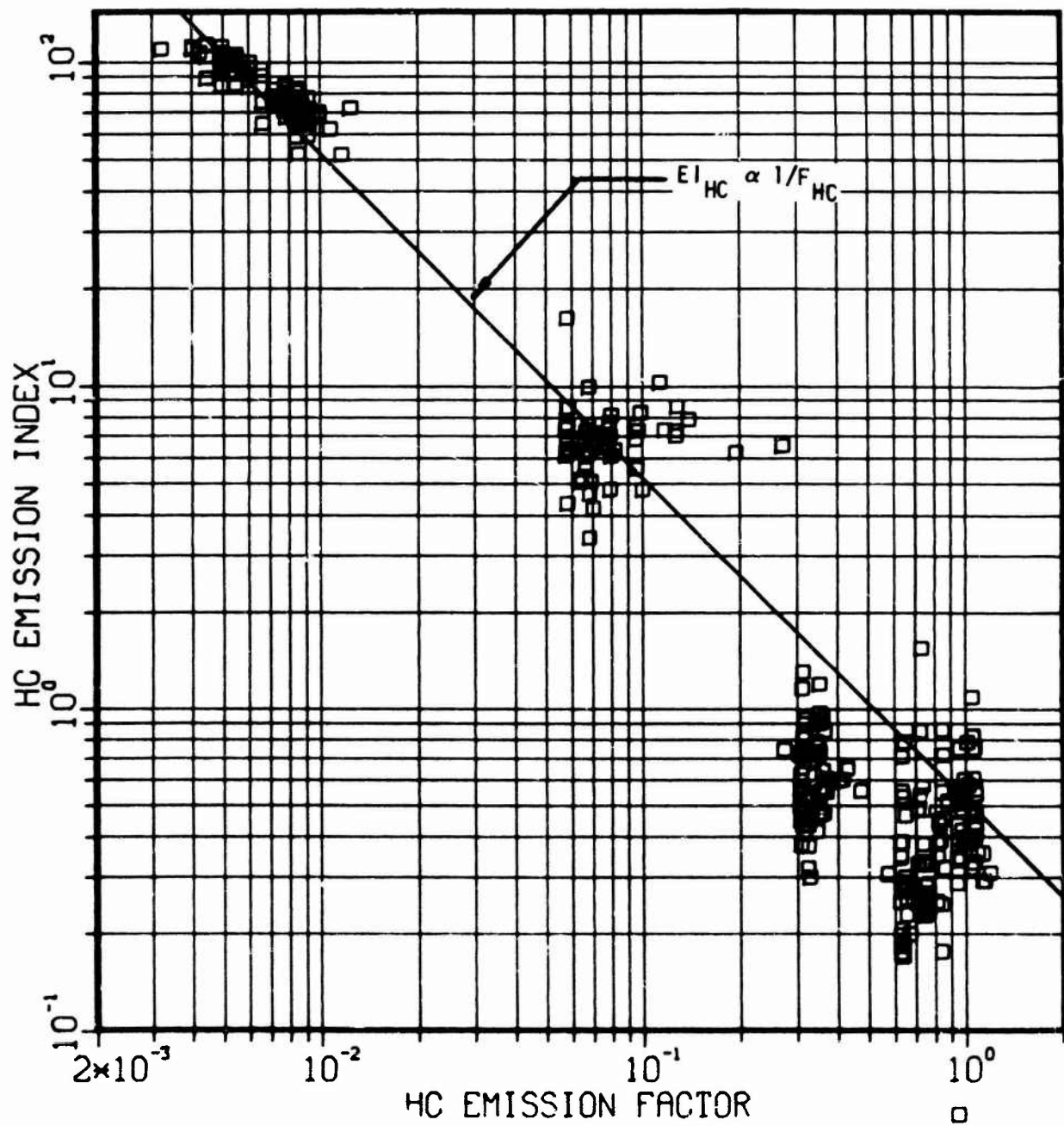


Figure 35. RB211-22B Uncorrected HC Emission Data

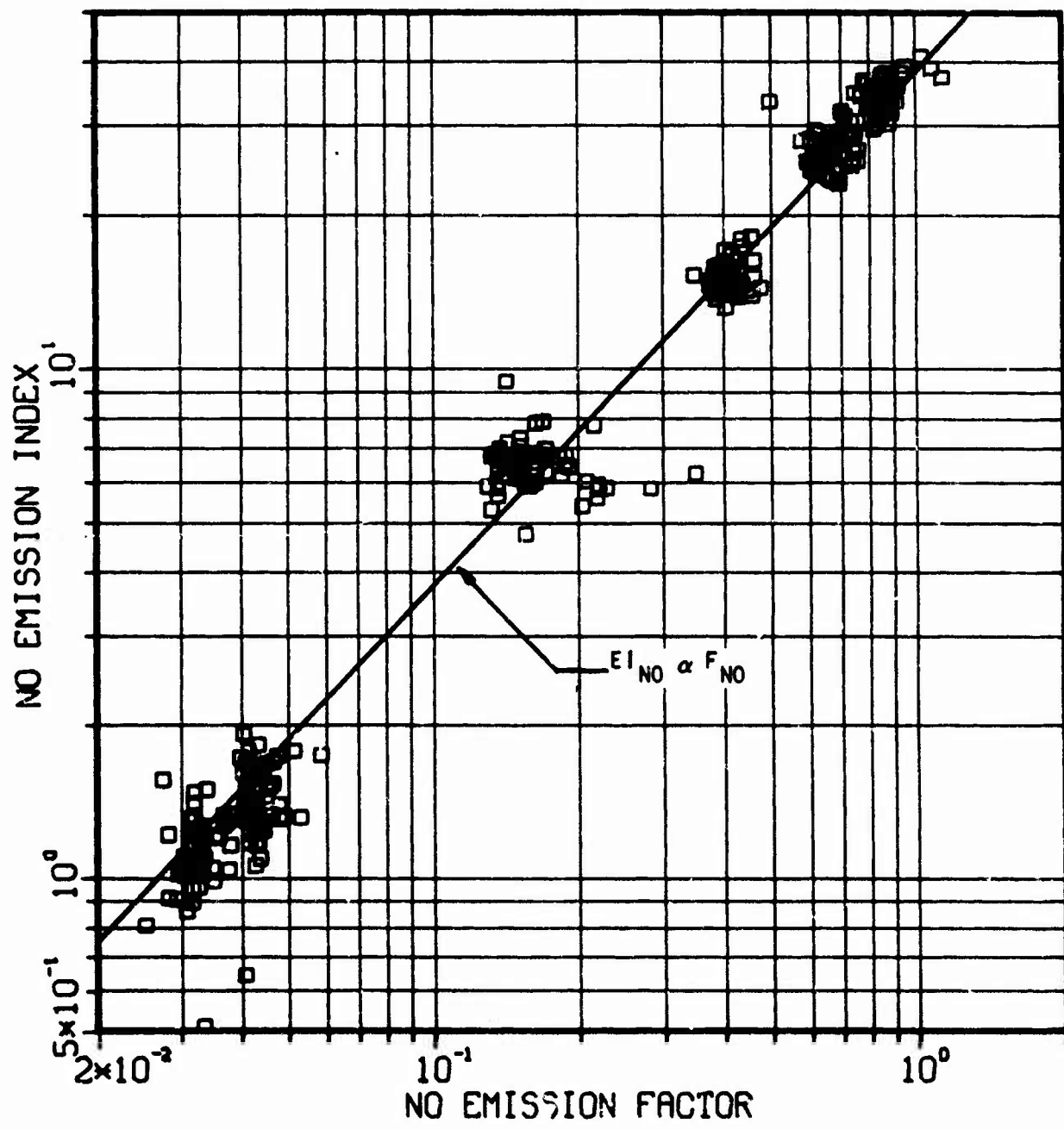


Figure 36. RB211-22B Uncorrected NO Emission Data

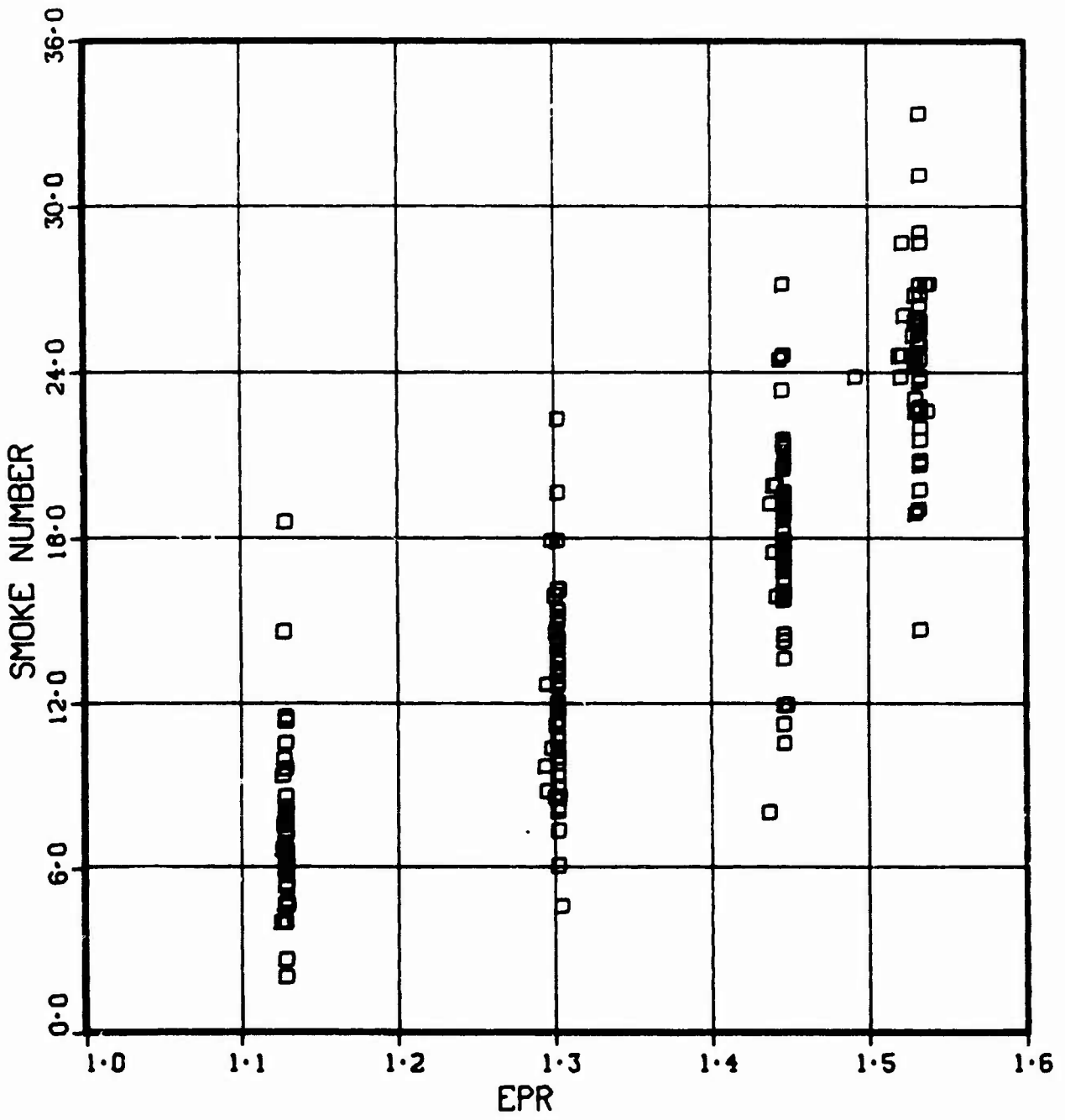


Figure 37. RB211-228 Smoke Data

3.7 CF700-2D ENGINE TYPE

3.7.1 Background

The General Electric CF700-2D, as shown in Figure 38, is an aft-fan turbine engine rated at 4250 lbf thrust which was developed to power military and business aircraft. The fan is a single-stage free-floating design directly attached to the fan turbine. Mixing of the fan and core gases takes place in the exhaust duct. The combustor is an annular type with twelve fuel nozzles.

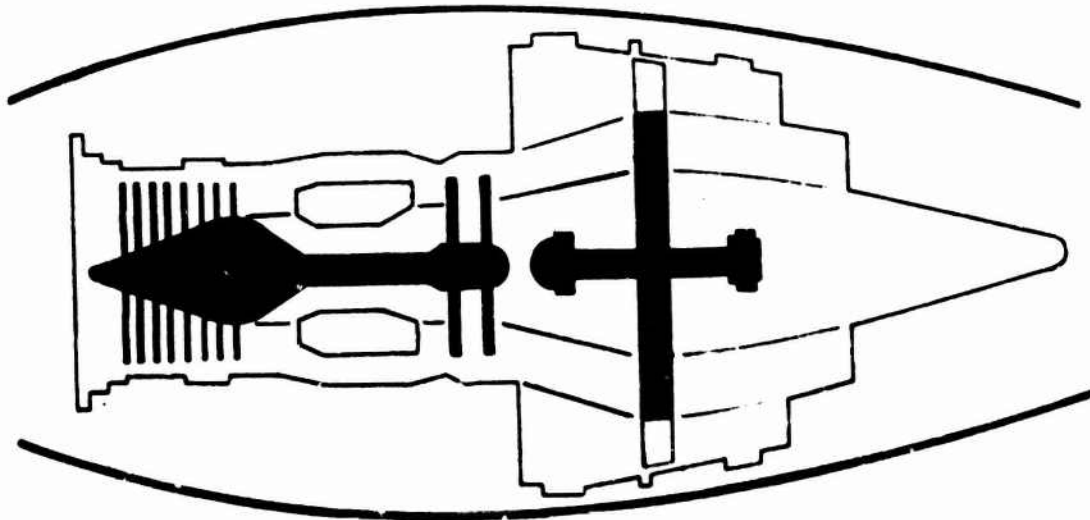


Figure 38. CF700-2D Schematic

Emission tests of the CF700-2D were conducted on installed units of the Dassault Falcon fleet owned and operated by Federal Express. The tests took place at the headquarters of Federal Express, adjacent to the Memphis International Airport. They were conducted under the direction of NREC personnel, who operated the MERF. Baseline testing was initiated on December 6, 1975 and the last tests occurred on July 17, 1976. Ambient conditions varied between the following extremes: 40 to 83 deg F, 29.75 to 30.43 in Hg abs, and 0.00097 to 0.01504 lb H₂O/lb dry air. Of the sixteen (16) units which were baselined, eleven

(11) were tested through at least 898 hours of elapsed operating time. The maximum elapsed time was 1205 hours, and up to four tests were conducted per unit. The engines had baseline TSOs of between 297 and 3054 hours (TSO, in this case, is assumed to be "time since extended maintenance"). With a final series of tests precluded, a total of 48 engine tests have been documented in Volume VIII for the CF700.

3.7.2 Processed Data Overview

Mean values of the measured data obtained in the CF700-2D emission tests are found in Table 15. A published source of comparative emission data has not been found but, based on personal communication with GE personnel, it appears that the tabulated emission data is reasonable.

Figures 39, 40, and 41 provide, respectively, values of CO, HC, and NO emission indexes versus their appropriate emission factors (as defined for the CF700-2D in the nomenclature of Volume VIII). It is apparent, in each case, that the values of emission index are correlated by the emission factor, although considerable scatter exists for NO at low power. Specifically, for the entire set of CF700 tests,

- Based on modes 6 through 8, EI_{CO} versus F_{CO} data points have a correlation coefficient of 0.97 with an inverse relationship, while EI_{HC} versus F_{HC} data points have a correlation coefficient of 0.94.
- Based on modes 3 through 6, EI_{NO} versus F_{NO} data points have a correlation coefficient of 0.89 with direct proportionality.

Figure 42 provides values of smoke number versus EPR for the CF700. These values, which were only obtained for modes 3 through 6, again show considerable scatter and an increasing trend to higher values as take-off power is approached.

TABLE 15. - MEAN CF700-2D TEST DATA*

Item	TEST MODE				
	Initial Idle	Take-Off	Climb	Approach	Final Idle
Performance Parameters					
EPR	1.05	1.53	1.47	1.13	1.05
Corrected N ₁ , ** per cent	28.6	99.2	95.9	56.2	29.2
Corrected N ₂ , ** per cent	47.1	97.0	94.5	74.4	47.3
Corrected Fuel Flow, lb/hr	536	2740	2410	992	531
Corrected EGT, deg R	1450	1720	1640	1330	1430
Exhaust Emissions					
CO ₂ Concentration, per cent	0.88	1.57	1.40	0.90	0.85
CO Emission Index, lb/1000 lb fuel	166	28.5	32.2	88.5	169
HC Emission Index, lb/1000 lb fuel	22.4	1.2	1.1	5.3	22.5
NO Emission Index, lb/1000 lb fuel	1.6	3.4	3.2	1.6	1.4
NO _x Emission Index, lb/1000 lb fuel	1.8	3.7	3.6	2.3	1.8
Smoke Number	---	15.4	13.6	3.7	---

* Without outlying values

** N₁ refers to fan speed while N₂ refers to core speed

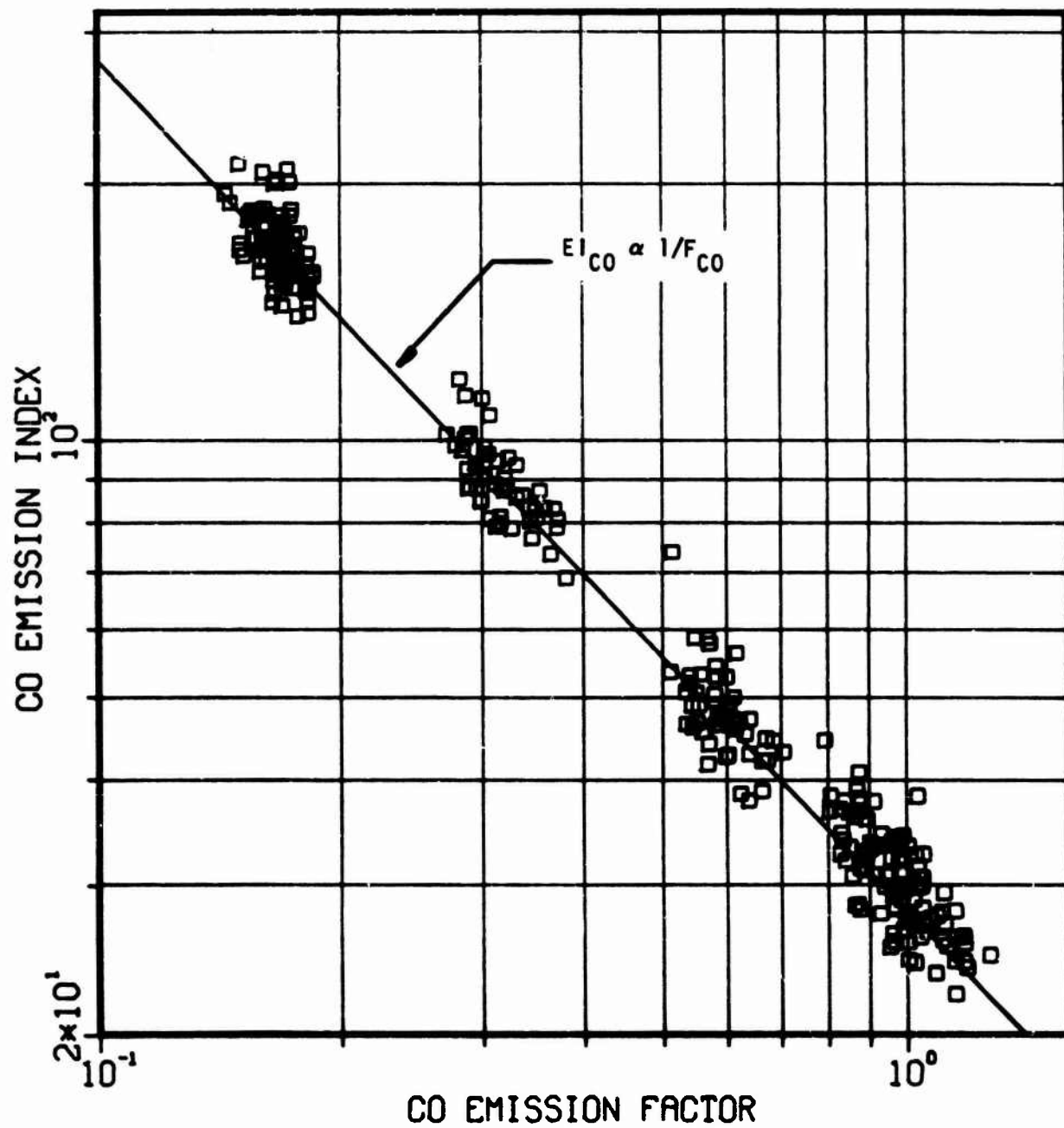


Figure 39. CF700-20 Uncorrected CO Emission Data

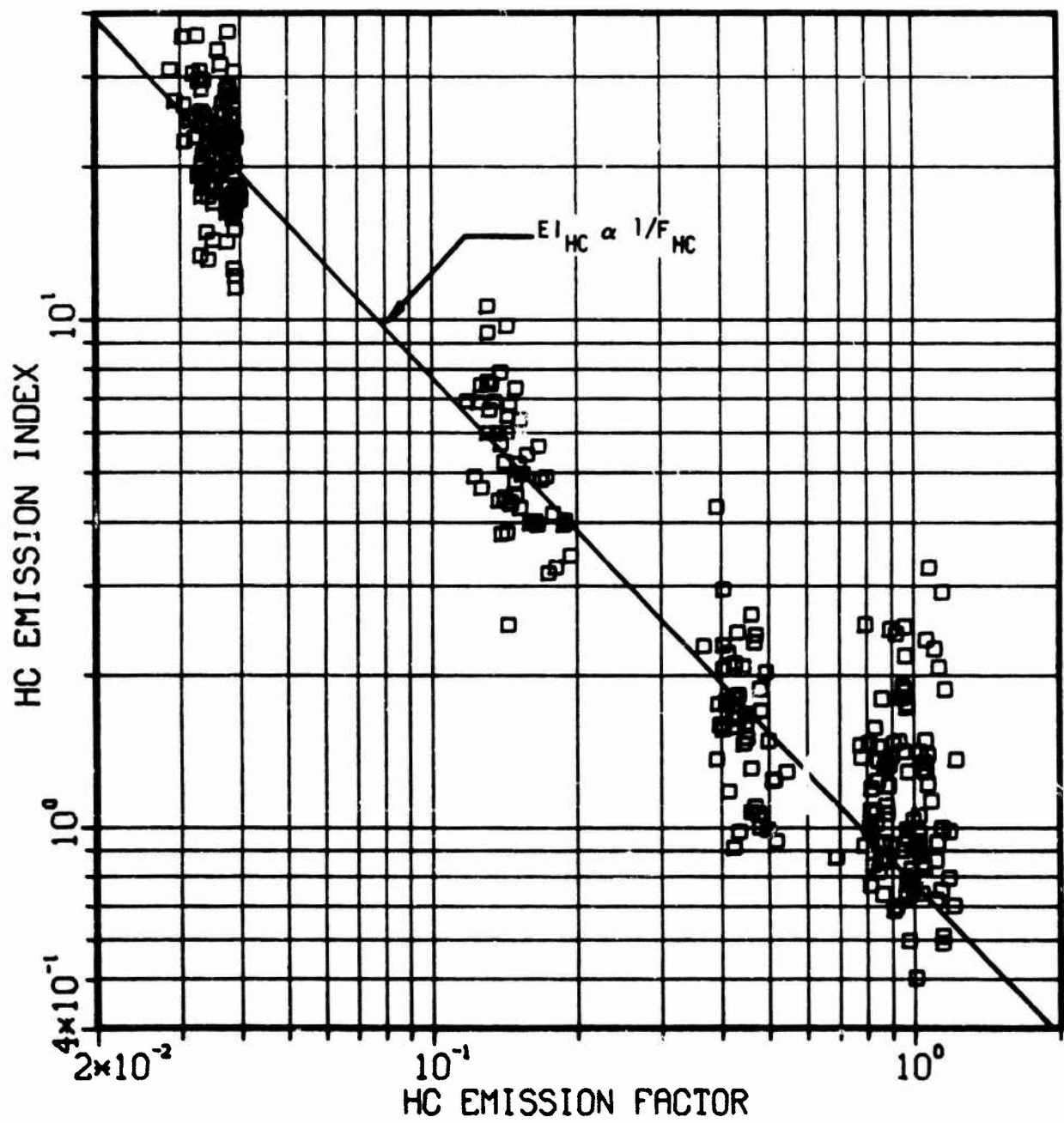


Figure 40. CF70C-2D Uncorrected HC Emission Data

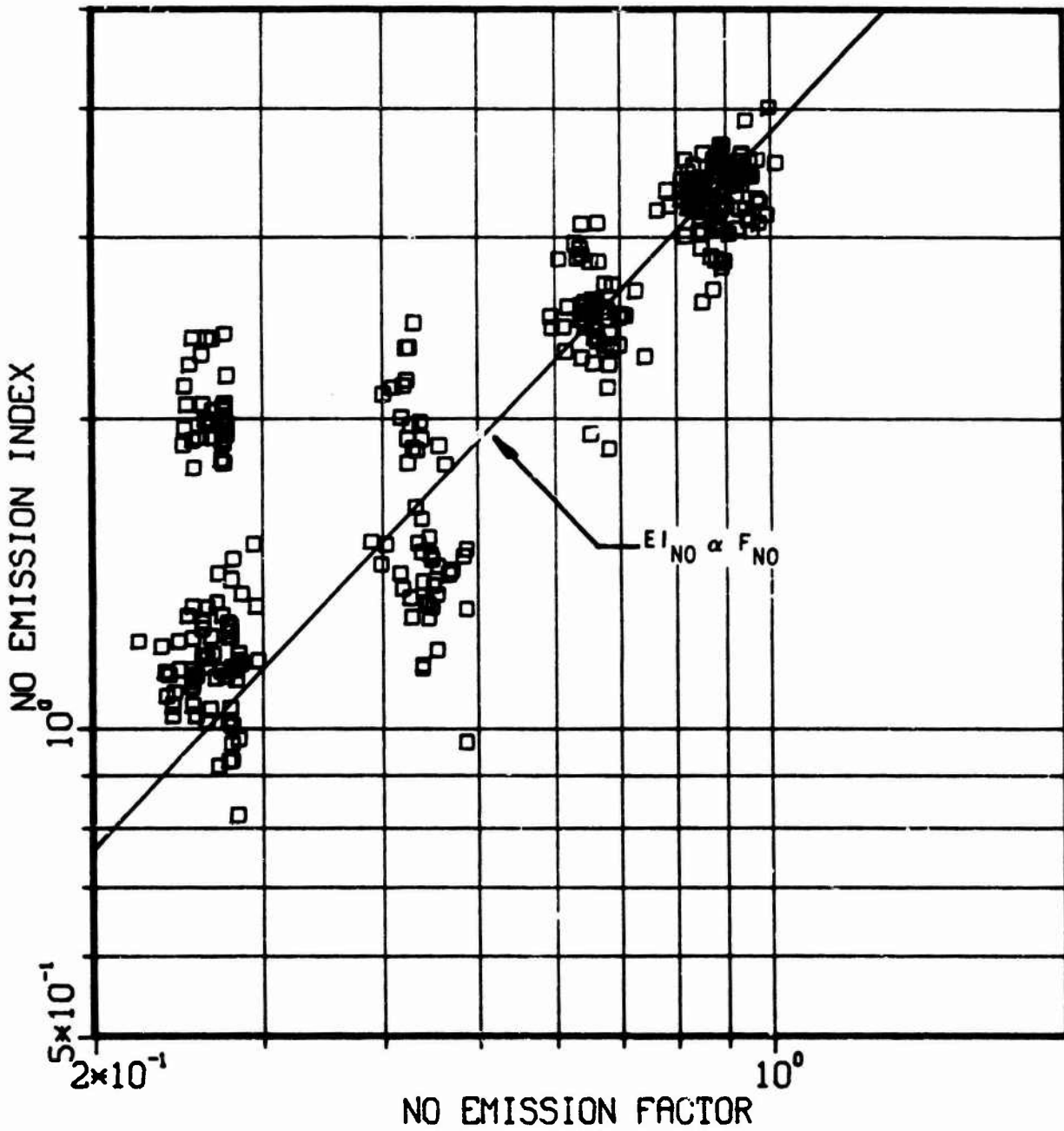


Figure 41. CF700-2D Uncorrected NO Emission Data

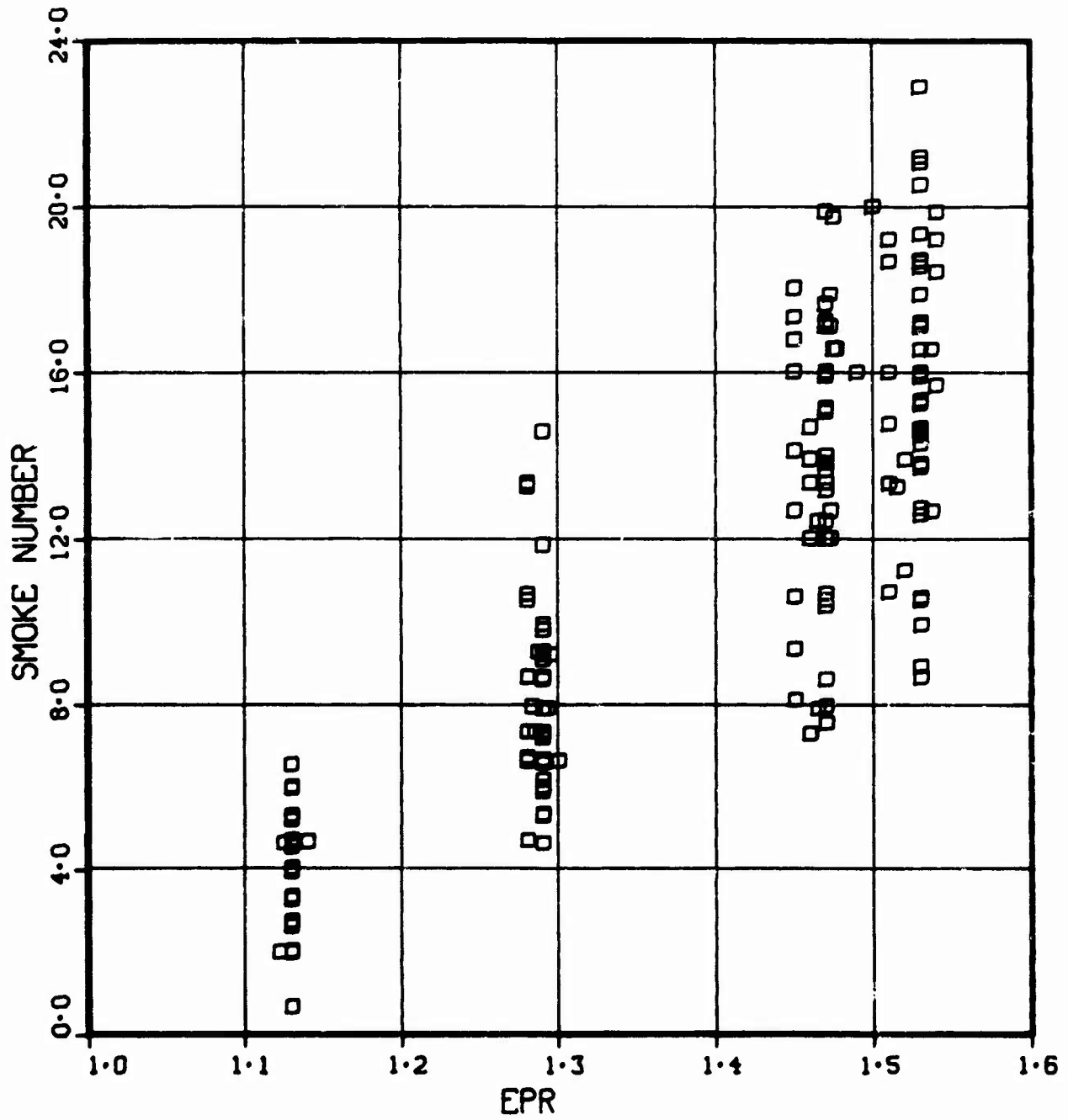


Figure 42. CF700-2D Smoke Data

4. DEGRADATION ANALYSIS

Results of the degradation analysis performed on the test data are presented below. The presentation is given by engine type, with the gaseous pollutants, CO, HC, and NO, and smoke considered in turn. The degradation analysis, as outlined in Section 2.6.4, concerns the individual units of an engine type, as well as the group (or groups) of units which are representative of the type.

In general, the degradation analysis was performed on an edited data base. The test data was first limited to those units tested over a sufficient elapsed operating time. Next, the data for the selected units was reviewed to eliminate those tests with spurious values. Items identified as outliers in the data volumes were not necessarily eliminated, because a consistency might exist among the various values measured at a test point. Rather, tests containing items identified as outliers in preliminary degradation analyses, or items associated with specific problem areas which could not be corrected, were eliminated for the specific pollutants involved.

4.1 JT8D-9 ENGINE TYPE

4.1.1 Data Editing

First of all, consideration of the JT8D-9 data base was limited to the fourteen units which were tested through at least 2400 hours of elapsed operating time. They are noted in Volume II as Units 7, 9 through 12, 14 through 19, and 21 through 23. Of these, Units 14 through 19, 21, and 22 were new engines with less than 1700 hours of operating time when testing was initiated. Review of the test data for the selected units resulted in the elimination of the following tests with spurious data points:

1. CO - Unit 7, 600 hour test; Unit 16, 2400 hour test;
Unit 21, 1800 hour test; Unit 23, 1800 hour test
2. NO - None
3. SN - Unit 17, 2400 hour test; Unit 18, 2400 hour test

In the case of HC, such a large amount of data was invalidated by the effects of "B" nut leaks and inadequate heating of the sample train, development of degradation factors was precluded.

4.1.2 JT8D-9 CO Degradation

CO degradation factors and their uncertainties are shown in Table 16 for the 14 JT8D-9 units which were tested over elapsed operating times of more than 2400 hours. The factors, which were calculated for each EPA mode, are shown only for the two idle modes -- where CO concentrations are largest -- as well as EPAP. They are based on a 60 percent N₂ idle speed, although subsequently the effect of varying idle will be indicated.

It can be determined from Table 16 that the average uncertainty of the degradation factors is approximately the same for the two idle modes as well as the EPAP. Therefore, since EPAP is of ultimate concern, discussion will focus on the degradation of that quantity. Overall, ten units exhibit increasing EPAPs while four units are decreasing, with an average degradation of 1.8 percent per 1000 hours. This compares to a degradation factor of 2.0 percent per 1000 hours obtained from a simple regression analysis of the entire group of JT8D-9 CO EPAPs.

Of the units with decreasing EPAPs, the uncertainty of the degradation factor is larger in each instance than the value itself and, hence, the decreasing trends may only be apparent. Meanwhile, four units have increasing EPAP trends greater than the associated uncertainty. An examination of the frequency distribution of the degradation factor from unit-to-unit also indicates that what appears to be a separate group of values between 0 and -2 percent, may really be part of a larger group centered around the mean value of 1.8 percent.

An illustration of the degradation in CO EPAP is shown in Figure 43 for Unit 12, which provided well behaved results. The calculated degradation factor is superimposed on the values of EPAP for each test. It can be seen that, although the EPAP actually decreased between the first two tests, there was a clear upward trend to the values with little randomness.

TABLE 16. - CO DEGRADATION FOR JT8D-9 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
7	4	4.0 ± 2.4	3.9 ± 2.3	5.5 ± 0.8
9	4	0.5 ± 4.5	3.8 ± 0.7	1.4 ± 3.0
10	4	-0.9 ± 4.5	1.9 ± 2.7	3.5 ± 4.8
11	5	2.5 ± 3.5	4.9 ± 3.7	3.2 ± 1.7
12	4	7.1 ± 2.3	7.2 ± 2.1	5.4 ± 1.1
14	5	-1.5 ± 6.2	-0.9 ± 4.8	1.0 ± 5.3
15	5	-1.1 ± 2.7	-4.1 ± 2.6	-0.8 ± 2.1
16	4	1.2 ± 0.03	4.4 ± 2.9	1.1 ± 1.8
17	6	4.2 ± 6.3	2.3 ± 5.3	4.3 ± 5.9
18	6	3.7 ± 4.1	1.9 ± 4.2	4.5 ± 4.5
19	5	0.6 ± 7.4	1.8 ± 8.6	-1.1 ± 8.8
21	3	3.1 ± 0.9	2.6 ± 4.3	3.2 ± 2.7
22	4	-1.7 ± 5.7	-1.2 ± 8.9	-0.4 ± 7.7
23	4	-5.0 ± 7.9	-2.3 ± 6.6	-5.2 ± 9.8

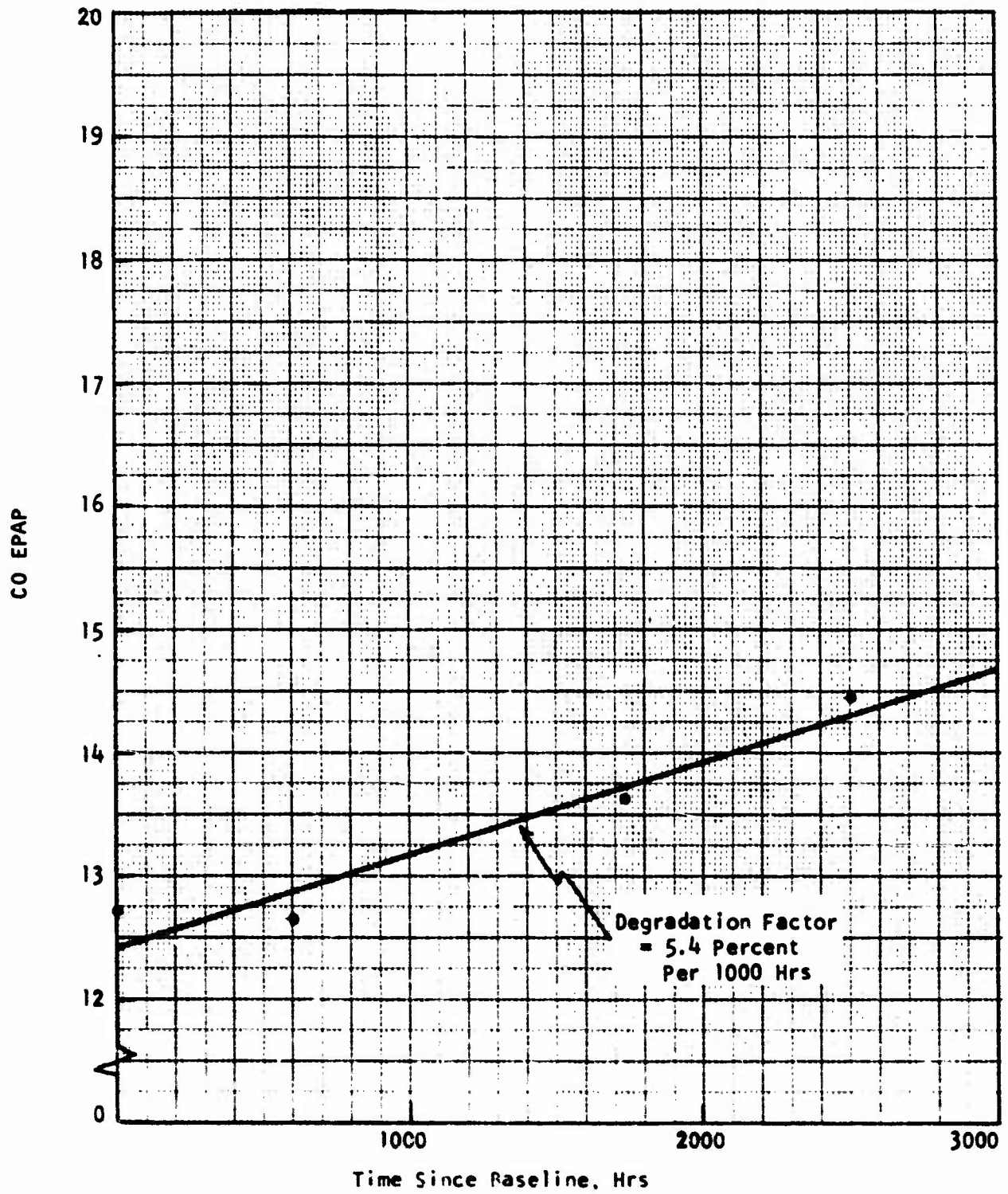


Figure 43. CO Degradation of JT8D-9 Unit 12

A sensitivity analysis was also conducted to determine the effect on CO degradation of a ± 2 percent N_2 change in the idle speed. The results are shown below:

<u>Idle Speed, percent N_2</u>	<u>Mean Degradation Factor JT8D-9 CO EPAP, percent per 1000 hours</u>
58	1.5
60	1.8
62	2.2

4.1.3 JT8D-9 NO Degradation

NO degradation factors and their uncertainties are shown in Table 17 for the 14 JT8D-9 units. The factors, which were calculated for each EPA mode, are shown only for the take-off and climb modes -- where NO concentrations are largest -- as well as EPAP.

It can be determined from Table 17 that the average uncertainty of the degradation factor is more than twice as high for the EPAP as either of the two high power modes. However, the trend of the EPAP is primarily increasing while those of the high power modes are overwhelmingly decreasing. Due to this dichotomy, discussion will concern both the climb mode, with the lowest uncertainty, and the EPAP.

Overall, for the climb mode, two units exhibit an increasing emission index while twelve units are decreasing, with an average degradation of -3.3 percent per 1000 hours. This compares to a degradation factor of -2.6 percent obtained by regression of the entire group of JT8D-9 NO emission indexes at climb. Of the ten instances where the unit factor is larger than its uncertainty, there is only one increasing value and nine decreasing values. On the other hand, for the EPAP, eleven units exhibit increasing values and only three units have decreasing values, with an average degradation of 2.3 percent per 1000 hours. The comparable degradation factor from regression of the entire group of JT8D-9 NO EPAPs is 2.5 percent. There are only two units for which the degradation factor is larger than its uncertainty, and both have increasing values.

TABLE 17. - NO DEGRADATION FOR JT8D-9 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
7	5	-3.2 ± 1.1	-1.9 ± 1.5	-2.3 ± 7.5
9	4	-8.2 ± 3.6	-7.0 ± 3.1	1.9 ± 1.6
10	4	-4.1 ± 3.1	-3.7 ± 3.2	6.0 ± 8.2
11	5	-5.8 ± 7.0	-4.1 ± 6.5	2.4 ± 8.5
12	4	-3.0 ± 6.3	-4.3 ± 1.2	0.5 ± 8.7
14	5	-5.7 ± 2.4	-5.5 ± 3.1	3.9 ± 6.4
15	5	-4.3 ± 3.5	-5.4 ± 4.0	2.7 ± 7.7
16	5	-3.3 ± 4.7	-2.8 ± 3.0	3.0 ± 4.4
17	6	5.1 ± 1.6	3.7 ± 2.1	5.4 ± 7.5
18	6	-0.9 ± 3.4	1.9 ± 2.5	6.2 ± 4.3
19	5	-1.9 ± 4.6	-2.7 ± 4.6	3.0 ± 6.7
21	4	-1.1 ± 2.9	-3.8 ± 2.4	-0.4 ± 6.4
22	4	-4.4 ± 9.5	-6.6 ± 6.0	1.3 ± 9.0
23	5	-7.7 ± 4.9	-4.5 ± 1.1	-1.7 ± 6.0

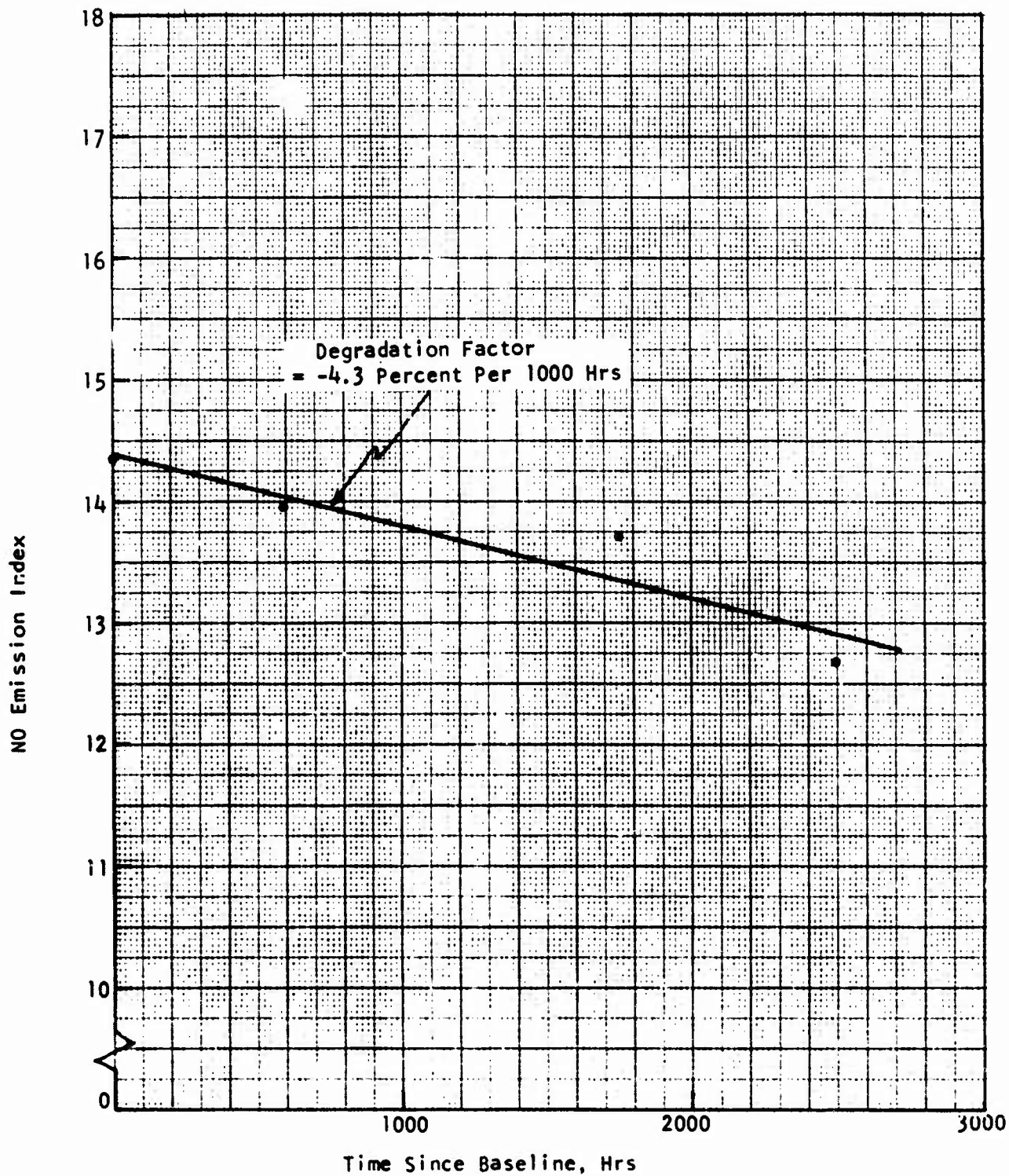


Figure 44. NO Degradation At Climb of JT8D-9 Unit 12

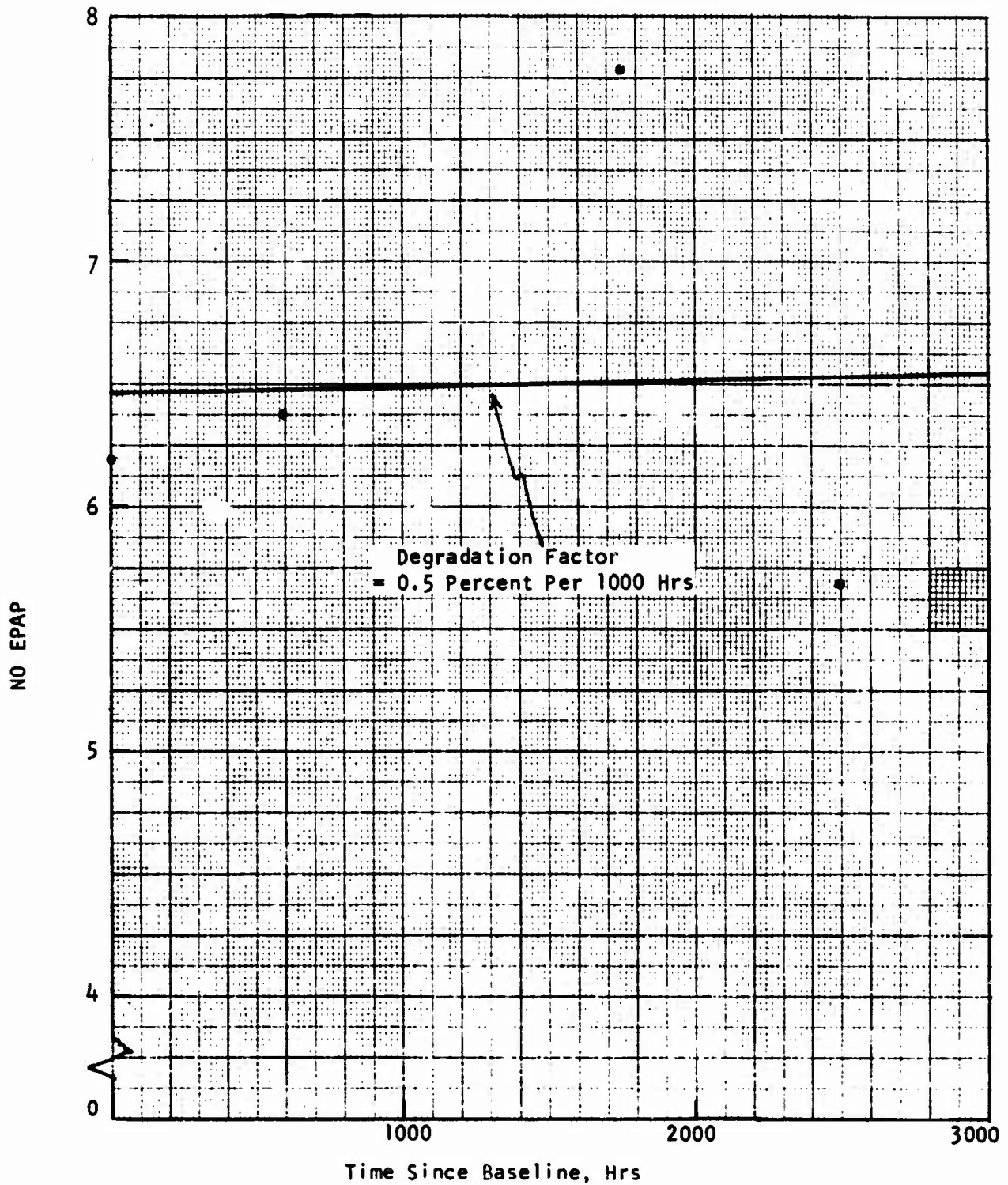


Figure 45. NO EPAP Degradation of JT8D-9 Unit 12

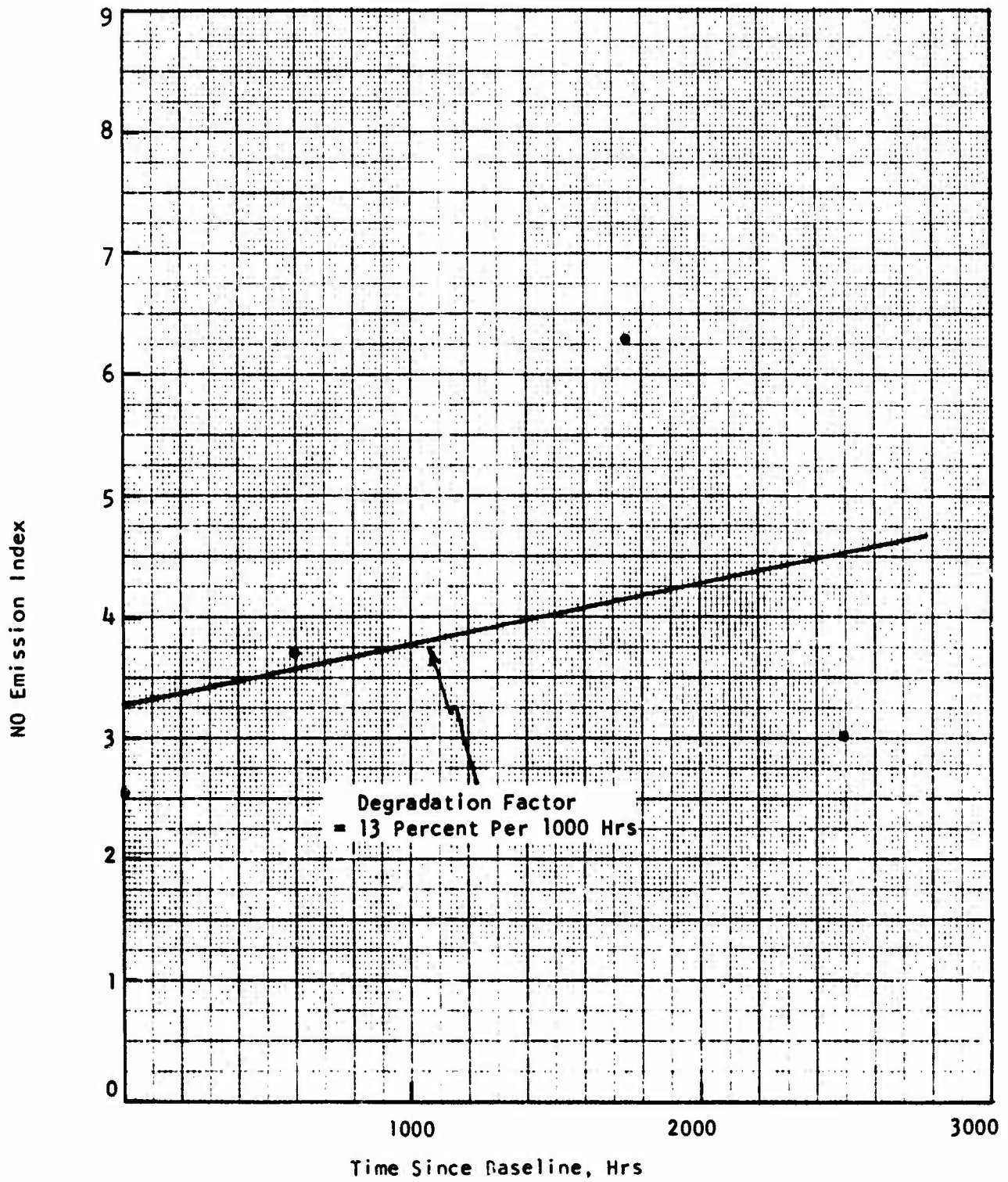


Figure 46. NO Degradation at Initial Idle of JT8D-9 Unit 12

The dichotomy in the NO degradation trends is illustrated in Figures 44 and 45 for Unit 12. It can be seen in Figure 44, for climb, that there is a monotonically decreasing trend to the values of emission index. However, Figure 45 shows a good deal of randomness and a slightly increasing trend for EPAP. The difference between the two plots can be seen from Figure 46 to be related to the initial idle mode, where the NO concentrations are low and measurement error is more important.

The importance of the idle modes in the NO EPAP is reinforced by the following results of the sensitivity analysis:

Idle Speed, percent N ₂	Mean Degradation Factor JT8D-9 NO EPAP, percent per 1000 hours
58	1.9
60	2.3
62	2.5

4.1.4 JT8D-9 Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 18 for the 14 selected JT8D-9 units. The factors, which were calculated for each EPA mode, are shown only for the take-off and climb modes where smoke number (SN) is largest.

It can be determined from Table 18 that the average uncertainty for the climb mode is somewhat less than for take-off. However, since the mean SN is larger at take-off, discussion will focus on that mode. Overall, eleven units exhibit an increasing SN at take-off while three units are decreasing, with an average degradation of 3.2 percent per 1000 hours. This compares to a degradation factor of 2.8 percent obtained by regression of the entire group of JT8D-9 SNs at take-off. Of the four units where the degradation factor is larger than its uncertainty, all have increasing values.

An illustration of the degradation in SN is shown in Figure 47 for the climb mode of Unit 12. It can be seen that, although the SN decreased substantially between the last two values, there was a clear upward trend to the values.

TABLE 18. - SN DEGRADATION FOR JT8D-9 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
7	5	-0.2 ± 1.2	0.3 ± 1.9	NOT APPLICABLE
9	4	1.8 ± 5.4	0.5 ± 2.4	
10	4	10.4 ± 4.0	9.8 ± 5.8	
11	5	-2.1 ± 3.0	-2.8 ± 3.6	
12	4	5.9 ± 1.3	9.4 ± 3.9	
14	5	-2.9 ± 6.0	-3.0 ± 4.2	
15	5	9.0 ± 5.8	5.3 ± 2.7	
16	5	0.7 ± 1.9	0.6 ± 1.4	
17	5	1.4 ± 5.3	3.7 ± 5.2	
18	5	1.6 ± 3.8	2.7 ± 2.7	
19	5	5.5 ± 6.2	5.2 ± 5.0	
21	4	2.1 ± 7.1	1.7 ± 5.6	
22	4	0.9 ± 5.4	4.1 ± 2.1	
23	5	10.3 ± 6.1	8.9 ± 6.4	

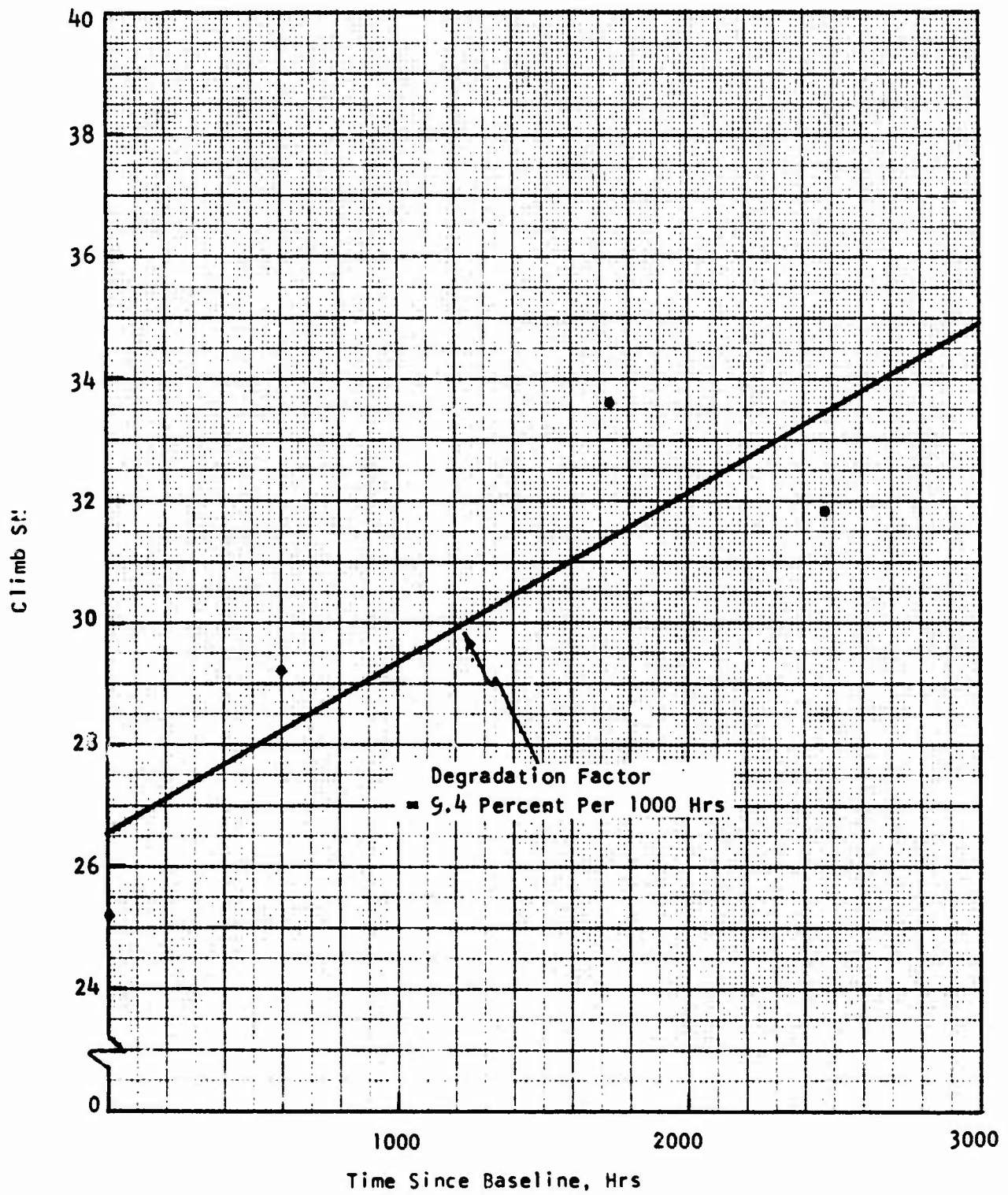


Figure 47. SN Degradation of JT8D-9 Unit 12

4.2 JT8D-7 ENGINE TYPE

4.2.1 Data Editing

The JT8D-7 data base, as contained in Volume III, was edited for purposes of the degradation analysis. First of all, consideration was limited to eighteen (18) units which were tested at least four times. They are noted in Volume III as Units 2, 4 through 16, and 18 through 21. Next, test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume III were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - Unit 2, 1200 hour test
2. HC - Unit 2, baseline and 3000 hour tests; Unit 4, baseline and 2400 hour tests; Units 5, 6, and 7, baseline test; Unit 8, baseline and 3000 hour tests; Unit 9, baseline test; Unit 10, 600 hour test; Unit 11, 1800 hour test; Units 12 and 13, entirely; Unit 15, 600 hour test; Unit 16, 2400 hour test; Units 18 and 20, baseline test; and Unit 21, 1800 hour test
3. NO - none
4. SN - Unit 2, 2400 hour test

The large number of tests eliminated for HC is primarily associated with fuel contamination of the sample line, aided by inadequate heating during baseline testing.

4.2.2 JT8D-7 CO Degradation

CO degradation factors and their uncertainties are shown in Table 19 for the eighteen selected units. The factors were calculated for each EPA mode, but are shown only for the two idle modes and EPAP. They are based on a 58 percent N_2 idle speed.

It can be determined from Table 19 that the average uncertainty of the degradation factors is least for the final idle mode and the EPAP. Again, since EPAP is of ultimate concern, discussion will focus on the

TABLE 19. - CO DEGRADATION FOR JT8D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
2	5	-5.3 ± 2.8	-6.9 ± 2.3	-4.4 ± 2.6
4	6	-11.7 ± 2.7	-4.7 ± 1.7	-7.8 ± 2.4
5	4	-12.9 ± 1.2	-9.9 ± 1.6	-10.6 ± 2.2
6	6	-7.0 ± 1.9	-4.3 ± 1.4	-3.6 ± 2.4
7	6	-8.1 ± 4.8	-6.5 ± 2.0	-7.5 ± 4.0
8	6	-7.4 ± 2.4	-5.2 ± 2.2	-5.7 ± 1.8
9	6	-7.8 ± 1.3	-8.1 ± 1.6	-7.4 ± 0.9
10	4	-3.7 ± 3.6	-7.1 ± 3.1	-4.0 ± 1.9
11	6	-13.2 ± 5.0	-8.5 ± 2.9	-10.2 ± 3.1
12	4	-13.6 ± 5.5	-10.7 ± 6.2	-9.5 ± 2.9
13	6	-4.6 ± 1.7	-4.0 ± 1.2	-3.7 ± 1.7
14	6	-4.5 ± 2.2	-8.1 ± 2.0	-4.7 ± 2.1
15	5	-9.4 ± 3.3	-10.4 ± 2.7	-7.2 ± 2.6
16	6	1.6 ± 1.4	-0.2 ± 0.7	2.2 ± 0.6
18	5	-9.7 ± 2.5	-6.1 ± 1.9	-10.6 ± 1.8
19	5	-1.6 ± 3.4	1.2 ± 1.9	-2.8 ± 2.8
20	6	-2.7 ± 2.9	7.7 ± 2.0	-4.5 ± 2.3
21	5	-7.6 ± 9.7	-2.9 ± 8.7	-3.3 ± 8.7

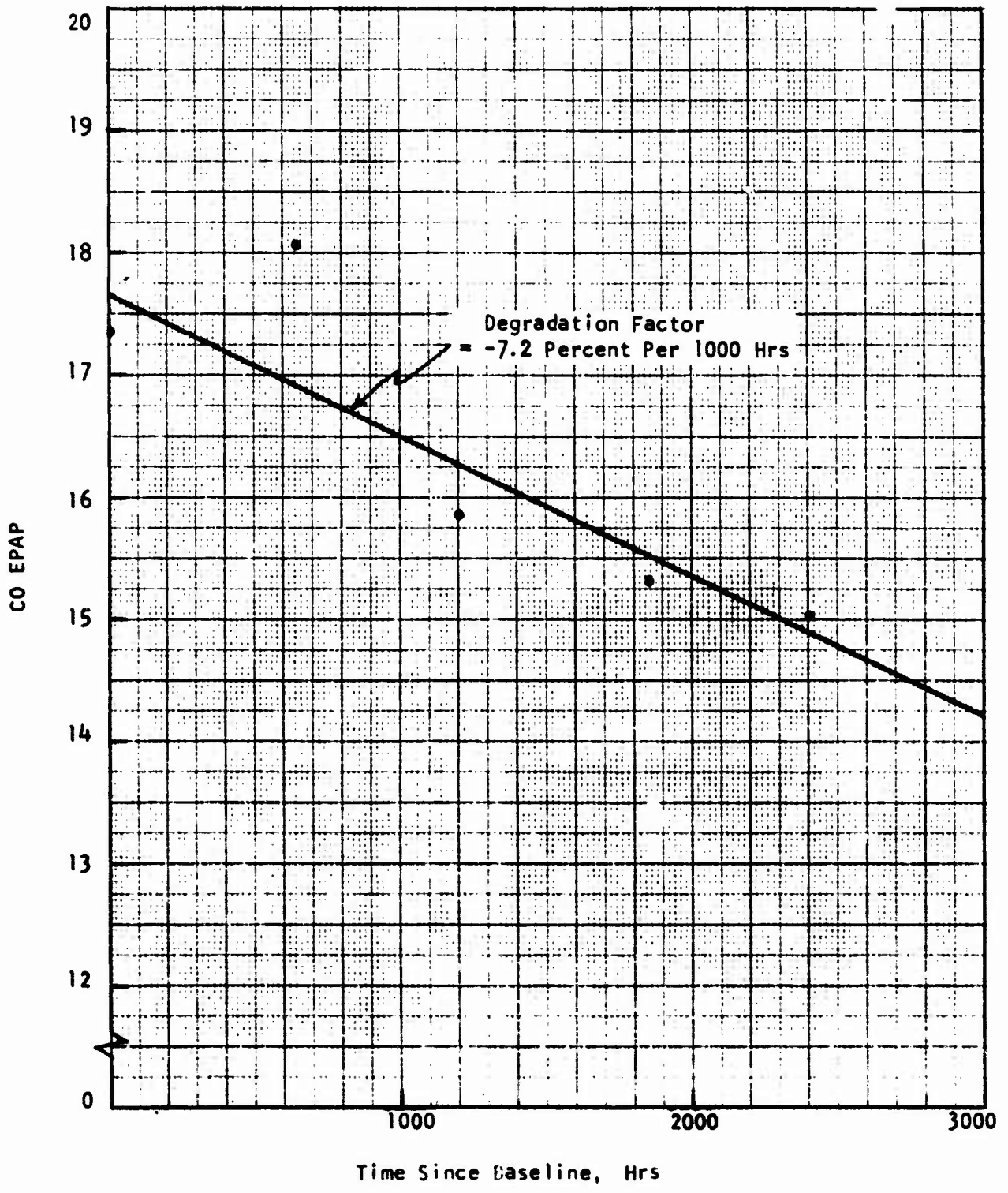


Figure 48. CO Degradation of JT80-7 Unit 15

degradation of that quantity. Overall, only one unit exhibits an increasing EPAP while seventeen units are decreasing, with an average degradation of -5.8 percent per 1000 hours. This compares to a degradation factor of -5.3 percent obtained from a simple regression analysis of the entire group of JT8D-7 CO EPAPs. Of the units with decreasing EPAP trends, the factor is larger than the uncertainty for all but two units. The lone unit with an increasing EPAP trend also has a factor larger than its uncertainty.

An illustration of the degradation in CO EPAP is shown in Figure 48 for Unit 15, which provided fairly typical results. It can be seen that, although a substantial increase occurred between the first two tests, overall there is a clear downward trend to the data.

The sensitivity analyses conducted on the CO degradation, yielded the following results for the JT8D-7 engine type.

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT8D-7 CO EPAP, percent per 1000 hours</u>
56	-5.9
58	-5.8
60	-5.5

4.2.3 JT8D-7 HC Degradation

HC degradation factors and their uncertainties are shown in Table 20 for the fifteen remaining units. The factors were calculated for each EPA mode, but are shown only for the two idle modes -- where HC concentrations are normally largest -- as well as EPAP. Again, they are based on a 50 percent N₂ idle speed.

It can be determined from Table 20 that the average uncertainty of the degradation factors is least for the EPAP and discussion will focus on the quantity. Overall, six units exhibit increasing EPAPs while nine units are decreasing, with an average degradation of -0.9 percent per 1000 hours. This compares to a degradation factor of -1.2 percent from a regression of the entire group of JT8D-7 HC EPAPs. For the seven units where the factor is larger than its uncertainty, three have increasing values and four have decreasing values.

TABLE 20. - HC DEGRADATION FOR JT8D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
2	4	-1.6 ± 6.4	-0.6 ± 9.8	-1.1 ± 6.5
4	4	-5.8 ± 13.0	-7.6 ± 7.9	-2.4 ± 9.1
6	5	3.0 ± 4.2	2.1 ± 5.1	7.9 ± 4.6
7	5	-6.6 ± 6.1	-11.7 ± 5.2	-6.3 ± 4.4
8	4	-4.8 ± 6.8	-12.5 ± 9.0	-0.03 ± 5.7
9	5	-0.8 ± 7.9	-3.9 ± 8.4	0.7 ± 7.5
10	3	-6.7 ± 10.2	-9.6 ± 1.4	-5.3 ± 5.6
11	5	-6.9 ± 6.6	-10.9 ± 8.6	-5.0 ± 5.4
14	6	-4.2 ± 5.5	-11.2 ± 4.8	-4.4 ± 6.5
15	4	-18.0 ± 3.0	-16.9 ± 8.7	-13.1 ± 6.1
16	5	2.0 ± 2.2	-0.07 ± 5.6	1.8 ± 3.0
18	4	-13.4 ± 6.1	-9.6 ± 9.2	-10.3 ± 6.4
19	5	7.4 ± 7.2	13.2 ± 8.3	8.3 ± 7.6
20	5	0.02 ± 8.9	-7.7 ± 5.8	3.8 ± 6.0
21	4	12.0 ± 4.9	13.4 ± 6.4	12.5 ± 4.0

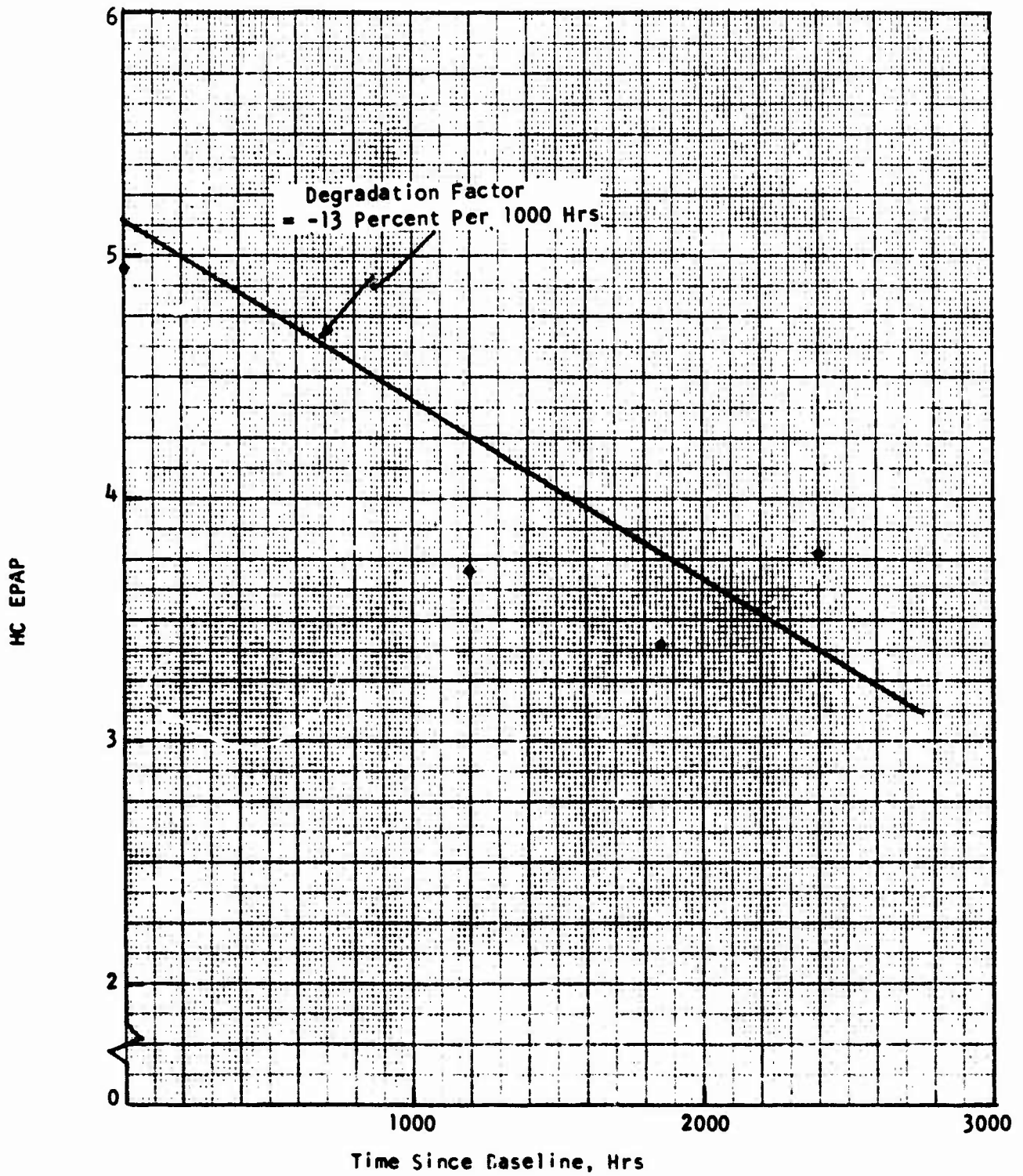


Figure 49. HC Degradation of JT8D-7 Unit 15

As illustration of the degradation in HC EPAP is shown in Figure 49, again for Unit 15. It can be seen that, although a substantial increase occurred between the last two tests, overall there is a downward trend to the data. However, that downward trend is heavily dependent on the baseline test when heating in the sample train was inadequate.

The sensitivity analysis conducted on the HC degradation, yielded a substantial variation for the JT8D-7 engine type:

Idle Speed, percent N ₂	Mean Degradation Factor JT8D-7 HC EPAP, percent per 1000 hours
56	-2.9
58	-0.9
60	+2.2

4.2.4 JT8D-7 NO Degradation

NO degradation factors and their uncertainties are shown in Table 21 for the eighteen selected units. The factors were calculated for each EPA mode, but are shown only for the take-off and climb modes, as well as EPAP.

It can be determined from Table 21 that, as with the JT8D-9, the average uncertainty of the degradation factors is much higher in the case of EPAP than for the high power modes. However, here, the trends are not in opposite directions. Focusing the discussion on EPAP, there are two units which exhibit increasing EPAPs while sixteen units are decreasing, with an average degradation of -3.2 percent per 1000 hours. This compares to a degradation factor of -3.1 percent from a regression of the entire group of JT8D-7 NO EPAPs. For the eight units where the factor is larger than its uncertainty, all eight have decreasing values.

An illustration of the degradation in NO EPAP is shown in Figure 50 for Unit 15. The randomness in the data can be seen to be minimal and a clear downward trend is apparent.

The sensitivity analysis conducted on the NO degradation, yielded the following results for one JT8D-7 engine type:

TABLE 21. - NO DEGRADATION FOR JT8D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
2	6	-1.8 ± 1.0	-3.6 ± 1.0	-2.0 ± 1.7
4	6	-1.1 ± 1.8	-2.7 ± 0.9	-3.7 ± 2.5
5	4	1.8 ± 3.4	0.2 ± 1.6	8.5 ± 10.8
6	6	-5.3 ± 1.7	-4.6 ± 1.5	-1.3 ± 3.4
7	6	-2.7 ± 1.7	-4.5 ± 0.8	-2.2 ± 3.1
8	6	-0.3 ± 1.2	-3.2 ± 1.0	-0.01 ± 3.6
9	6	-1.8 ± 1.2	-4.3 ± 0.8	-1.4 ± 3.3
10	4	-5.2 ± 2.0	-2.4 ± 0.1	-0.5 ± 7.9
11	6	-4.8 ± 0.7	-5.3 ± 1.4	-2.4 ± 3.9
12	4	-7.4 ± 1.6	-5.8 ± 1.7	-2.1 ± 6.5
13	6	-3.3 ± 1.1	-1.9 ± 1.1	1.2 ± 2.8
14	6	-6.0 ± 2.3	-5.4 ± 0.7	-1.7 ± 2.5
15	5	3.1 ± 4.2	0.6 ± 2.4	-8.5 ± 1.5
16	6	-1.3 ± 2.4	-2.8 ± 1.6	-5.3 ± 3.0
18	5	-7.0 ± 2.1	-9.2 ± 1.8	-12.3 ± 6.9
19	5	-2.3 ± 3.9	-6.6 ± 1.8	-10.9 ± 6.9
20	6	-1.9 ± 1.3	-3.1 ± 2.1	-7.0 ± 4.7
21	5	-1.1 ± 3.7	-4.2 ± 2.1	-6.3 ± 4.0

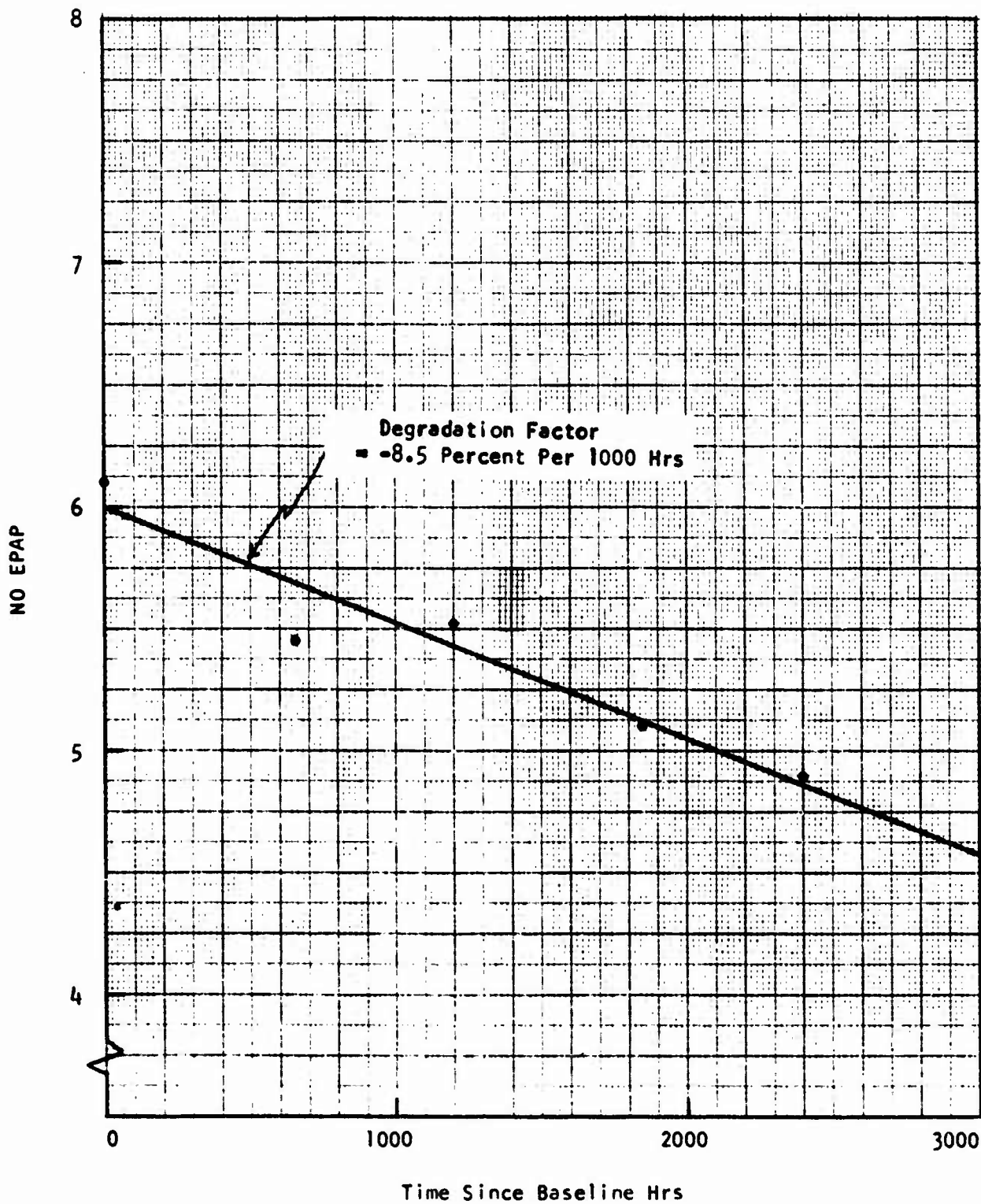


Figure 50. NO Degradation of JT8D-7 Unit 15

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT8D-7 NO EPAP, percent per 1000 hours</u>
56	3.3
58	3.2
60	3.0

4.2.5 JT8D-7 Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 22 for the eighteen selected units. The factors were calculated for each EPA mode, but are shown only for the take-off and climb modes.

Since the mean SN for the JT8D-7 is largest at take-off, discussion will focus on that mode. Overall, fourteen units exhibit increasing SNs while only four units are decreasing, with an average degradation of 2.6 percent per 1000 hours. This compares to a degradation factor of 0.02 percent from regression of the entire group of JT8D-7 SNs at take-off. Of the seven units where the factor is larger than its uncertainty, all have increasing values.

An illustration of the degradation in SN is shown for the climb mode of Unit 15 in Figure 51. A very large fluctuation of the values is seen from test to test, which is not really typical of the data as a whole.

TABLE 22. - SN DEGRADATION FOR JT8D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
2	5	-0.6 ± 1.6	4.4 ± 3.8	NOT APPLICABLE
4	6	-0.7 ± 1.7	0.8 ± 2.4	
5	4	5.1 ± 0.9	6.3 ± 1.8	
6	6	0.4 ± 1.4	0.5 ± 3.5	
7	6	-1.1 ± 4.2	1.1 ± 3.3	
8	6	1.6 ± 3.5	0.8 ± 5.1	
9	6	1.9 ± 4.3	3.2 ± 2.8	
10	4	9.0 ± 1.5	6.6 ± 1.7	
11	6	7.8 ± 2.7	-0.6 ± 2.6	
12	4	5.5 ± 2.1	5.1 ± 2.0	
13	6	2.5 ± 1.8	3.0 ± 3.0	
14	6	6.7 ± 1.3	6.0 ± 2.8	
15	5	4.0 ± 5.3	-0.6 ± 7.0	
16	6	0.8 ± 4.9	0.09 ± 6.2	
18	5	1.1 ± 5.9	3.9 ± 6.2	
19	5	2.2 ± 6.3	6.2 ± 7.9	
20	6	5.8 ± 4.7	5.7 ± 2.1	
21	5	-5.2 ± 5.4	-4.8 ± 5.2	

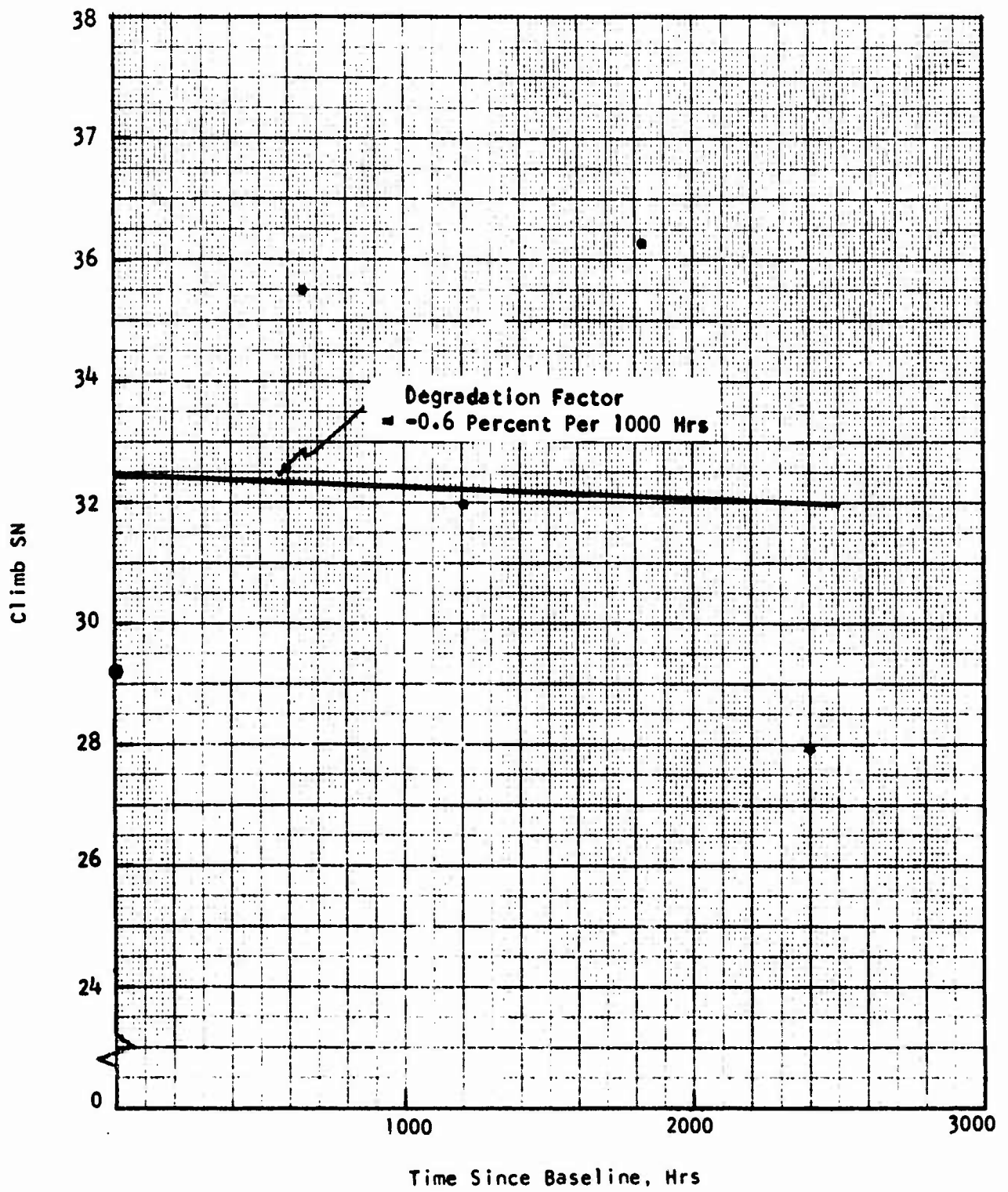


Figure 51. SN Degradation of JT8D-7 Unit 15

4.3 JT3D-7 ENGINE TYPE

4.3.1 Data Editing

The JT3D-7 data base, as contained in Volume IV, was edited for purposes of the degradation analysis. First of all, consideration was limited to the nine units which were tested over elapsed operating times of more than 2300 hours, but excluding the unit with the low-smoke combustor. They are noted in Volume IV as Units 2, 4, 5, 7, 8, 11, 14, 15, and 17. Next, test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume IV were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - none
2. HC - none
3. NO - Unit 15, 2400 hour test
4. SN - Units 11 and 14, entirely; and Units 15 and 17, baseline test.

4.3.2 JT3D-7 CO Degradation

CO degradation factors and their uncertainties are shown in Table 23 for the nine selected units. The factors are shown only for the two idle modes and EPAP. They are based on a 62 percent N₂ idle speed.

It can be determined from Table 23 that the average uncertainty of the degradation factors is least for the initial idle mode and EPAP. Focusing on EPAP, all nine units exhibit decreasing EPAPs, with an average degradation of -1.5 percent per 1000 hours. This compares to a degradation factor of identically -1.5 percent obtained from a simple regression analysis of the entire group of JT3D-7 CO EPAPs. Further, there are five instances where the factor is larger than its uncertainty.

An illustration of the degradation in CO EPAP is shown in Figure 52 for Unit 5, which provided typical results. It can be seen that, although substantial increases occur between the second and

TABLE 23. - CO DEGRADATION FOR JT3D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
2	6	-1.7 ± 1.5	-1.5 ± 1.6	-1.5 ± 1.5
4	6	-3.9 ± 0.5	-2.6 ± 0.9	-4.6 ± 1.6
5	6	-2.1 ± 0.8	-2.7 ± 0.5	-1.5 ± 1.0
7	5	-2.5 ± 0.7	-0.05 ± 2.1	-0.3 ± 0.5
8	6	-1.0 ± 0.3	-1.3 ± 0.3	-0.4 ± 1.1
11	6	-1.5 ± 0.6	0.1 ± 0.6	-1.2 ± 0.9
14	6	-1.6 ± 0.7	-1.2 ± 0.8	-0.6 ± 0.4
15	5	-4.2 ± 2.8	-4.8 ± 2.5	-3.3 ± 2.0
17	6	-1.4 ± 0.5	-0.3 ± 0.8	-0.1 ± 0.5

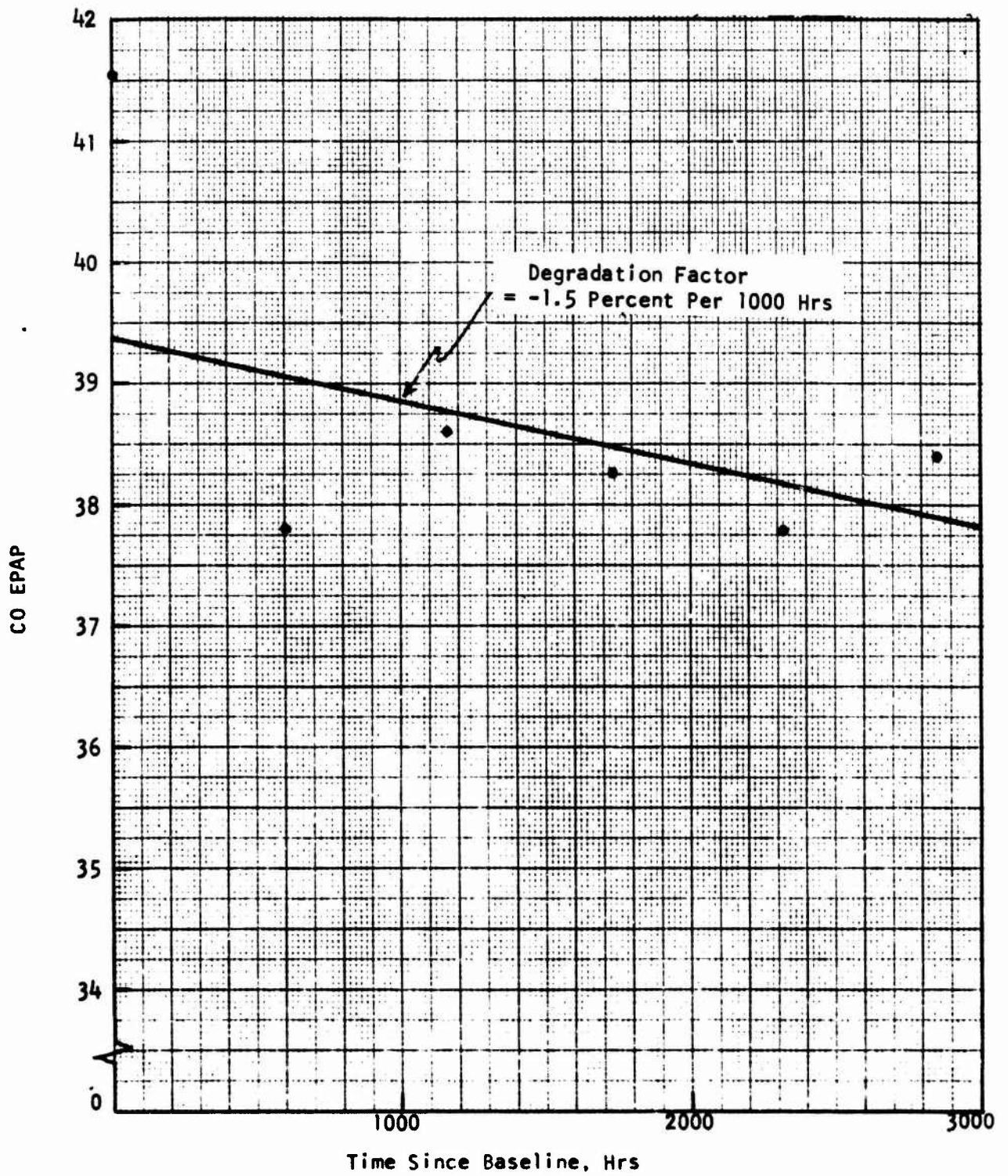


Figure 52. CO Degradation of JT30-7 Unit 5

third tests, and the last two tests, a downward trend is exhibited overall.

The sensitivity analysis conducted on the CO degradation, yielded the following results for the JT3D-7 engine type:

Idle Speed, percent N ₂	Mean Degradation Factor JT3D-7 CO EPAP, percent per 1000 hours
60	-1.5
62	-1.5
64	-1.5

4.3.3 JT3D-7 HC Degradation

HC degradation factors and their uncertainties are shown in Table 24 for the nine selected units. The factors are shown only for the two idle modes and EPAP. They are based on a 62 percent N₂ idle speed.

It can be determined from Table 24 that the average uncertainty of the degradation factors is the same in all three cases. Focusing on EPAP, two units exhibit increasing values while seven units are decreasing, with an average degradation of -2.6 percent per 1000 hours. This compares to a degradation factor of -2.3 percent from a regression of the entire group of JT3D-7 HC EPAPs. Further, there are five units where the factor is greater than its uncertainty, of which there is one increasing and four decreasing values.

An illustration of the degradation in HC EPAP is shown in Figure 53, again for Unit 5. Although there is considerable randomness, a clear downward trend is evident. Again, however, this downward trend is heavily dependent on the baseline test.

The sensitivity analysis on the HC degradation is summarized below for the JT3D-7 engine type:

Idle Speed, percent N ₂	Mean Degradation Factor JT3D-7 HC EPAP, percent per 1000 hours
60	1.9
62	2.6
64	3.6

TABLE 24. - HC DEGRADATION FOR JT3D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
2	6	-2.6 ± 2.6	-2.1 ± 2.7	-2.5 ± 2.7
4	6	-8.0 ± 1.5	-5.0 ± 2.1	-8.3 ± 2.2
5	6	-5.1 ± 1.6	-5.3 ± 2.0	-4.5 ± 2.0
7	5	-5.5 ± 3.2	1.5 ± 3.6	-2.9 ± 2.7
8	6	-7.0 ± 2.7	-2.4 ± 1.7	-1.6 ± 2.2
11	6	-0.5 ± 2.9	2.8 ± 1.7	0.8 ± 2.7
14	6	-0.8 ± 3.4	-1.3 ± 2.5	-0.6 ± 2.9
15	5	-7.6 ± 7.1	-8.0 ± 8.0	-7.5 ± 6.7
17	6	3.7 ± 1.3	2.6 ± 1.1	4.0 ± 1.4

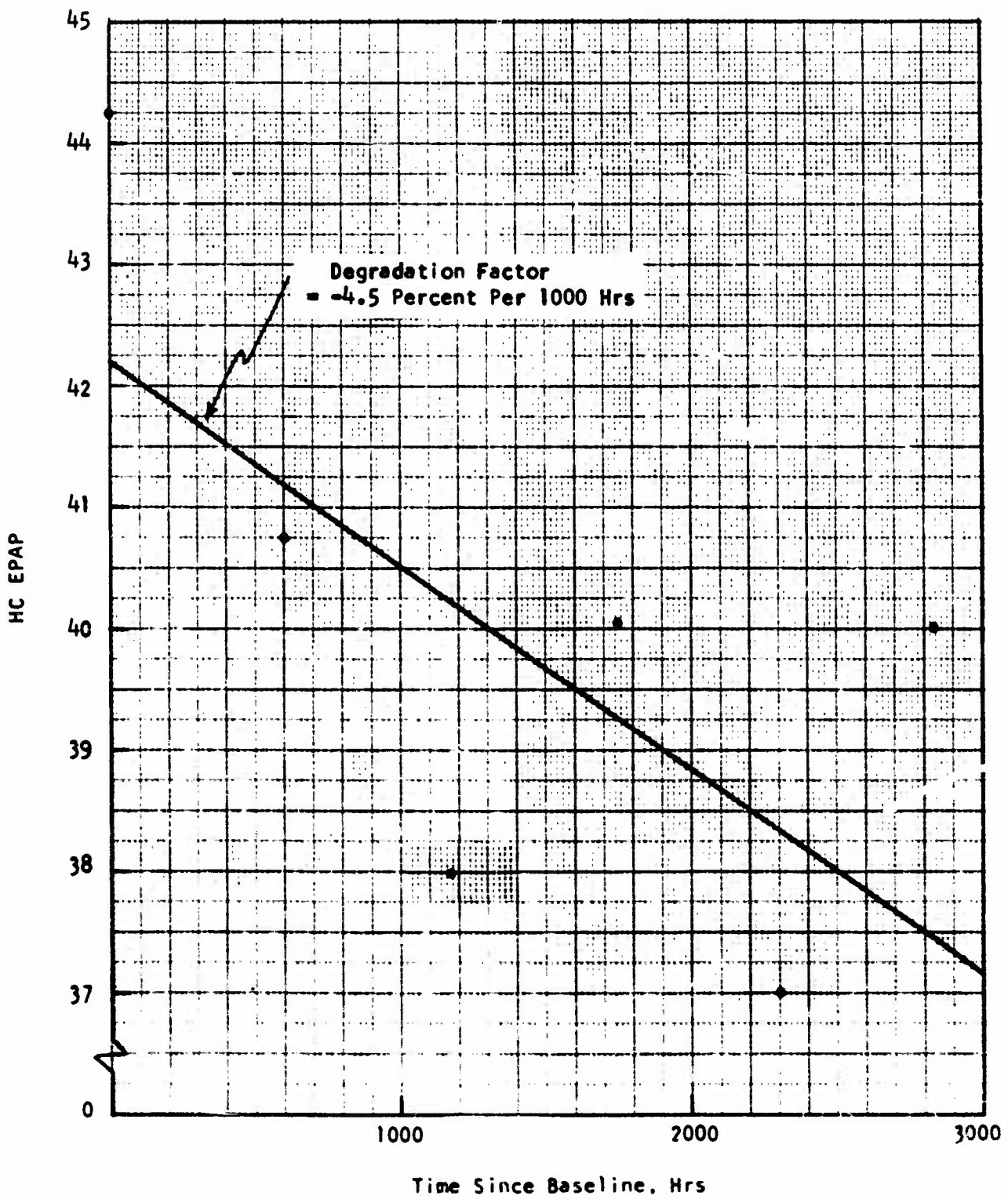


Figure 53. HC Degradation of JT3D-7 Unit 5

4.3.4 JT3D-7 NO Degradation

NO degradation factors and their uncertainties are shown in Table 25 for the nine selected units. The factors are shown only for the take-off and climb modes, as well as the EPAP.

It can be determined from Table 25 that the average uncertainty of the degradation factors is again considerably higher in the case of EPAP than for the high power modes. The trends of values are similar for the climb mode and EPAP, and discussion will focus on the EPAP. Overall, all nine units exhibit decreasing EPAPs, with an average degradation of -4.2 percent per 1000 hours. This compares to a degradation factor of -3.2 percent from a regression of the entire group of JT3D-7 NO EPAPs. Further, there are five units where the factor is greater than its uncertainty.

An illustration of the degradation in NO EPAP is shown in Figure 54 for Unit 5. It can be seen that, despite some randomness in the data, a clear downward trend is apparent.

The sensitivity analysis conducted on the NO degradation is summarized below for the JT3D-7 engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT3D-7 NO EPAP, percent per 1000 hours</u>
60	-4.1
62	-4.2
64	-4.3

4.3.5 JT3D-7 Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 26 for the seven remaining JT3D-7 units. The factors are shown only for the take-off and climb modes. Since the mean value of smoke number (SN) is marginally highest for climb, discussion will focus on that mode. Overall, three units exhibit increasing SNs while four have decreasing values, with an average degradation of -1.3 percent per 1000 hours. This compares to a degradation factor of -2.0 percent

TABLE 25. - NO DEGRADATION FOR JT3D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
2	6	3.1 ± 1.6	0.8 ± 2.0	-1.0 ± 3.4
4	6	1.4 ± 2.8	-0.7 ± 4.2	-1.7 ± 1.9
5	6	-1.0 ± 1.6	-2.8 ± 2.1	-3.0 ± 1.2
7	5	3.3 ± 1.6	0.8 ± 2.3	-3.2 ± 4.4
8	6	1.3 ± 2.9	-1.1 ± 3.0	-3.1 ± 2.0
11	6	3.3 ± 0.7	-0.3 ± 1.1	-3.4 ± 2.1
14	6	-0.07 ± 2.4	-1.4 ± 2.7	-2.4 ± 4.0
15	4	-5.5 ± 1.9	-4.9 ± 1.9	-12.4 ± 3.0
17	6	1.7 ± 2.3	0.8 ± 2.0	-7.7 ± 3.8

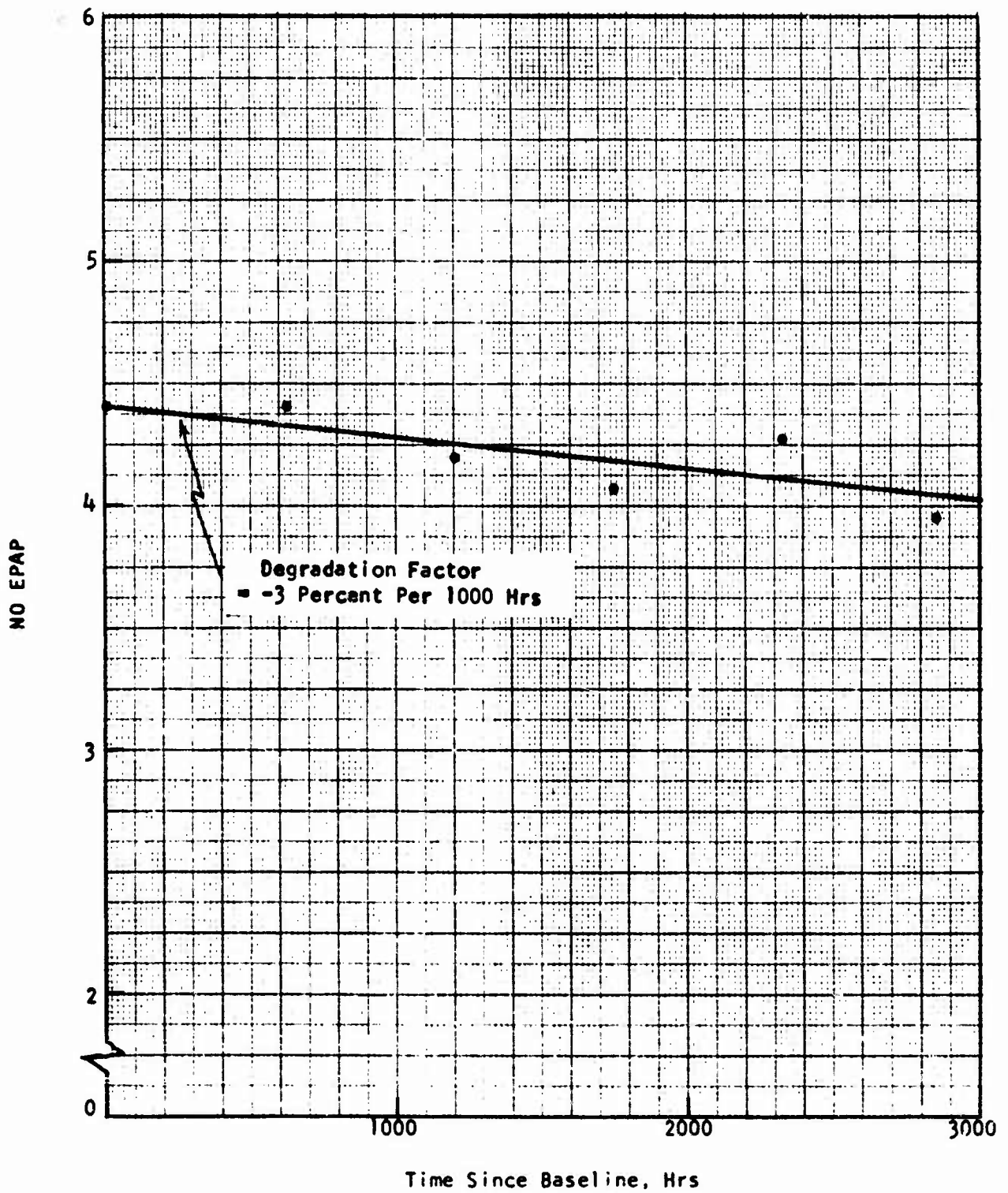


Figure 54. NO Degradation of JT3D-7 Unit 5

from a regression of the entire group of JT3D-7 SNs at climb. Of the three units where the factor is larger than its uncertainty, all have decreasing values.

An illustration of the degradation in SN is shown for the climb mode of Unit 5 in Figure 55. It is seen that an initially increasing trend was reversed, and, overall, a substantial decrease occurred.

TABLE 26. - SN DEGRADATION FOR JT3D-7 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
2	6	-7.7 ± 4.1	-3.2 ± 3.1	NOT APPLICABLE
4	6	-11.0 ± 4.5	-4.1 ± 3.2	
5	6	-3.2 ± 3.4	-3.5 ± 2.4	
7	5	-4.9 ± 2.3	$-.07 \pm 3.4$	
8	6	-0.07 ± 3.3	0.08 ± 3.2	
15	4	2.1 ± 4.5	3.7 ± 4.2	
17	5	-5.9 ± 2.3	-2.4 ± 3.7	

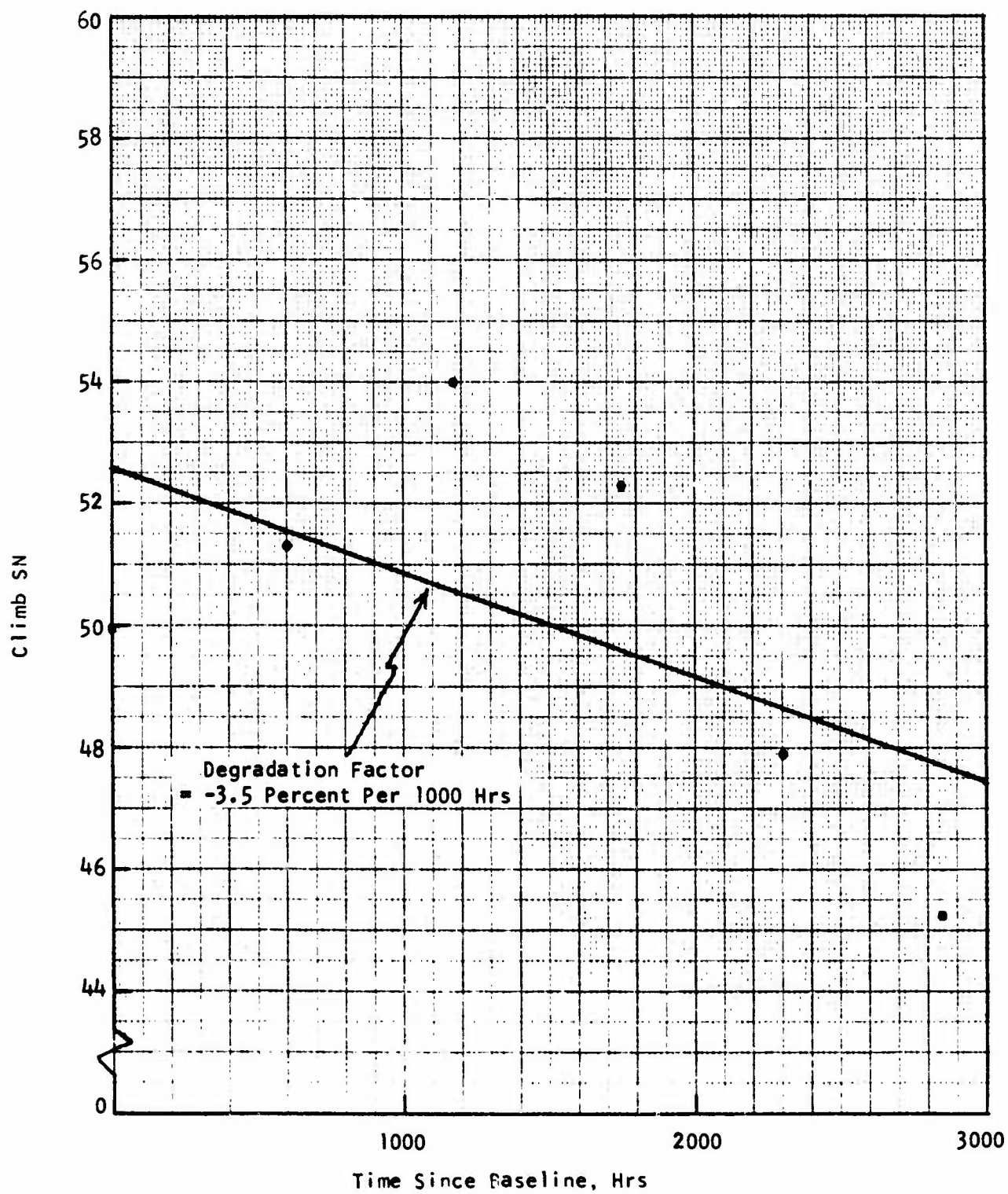


Figure 55. SN Degradation of JT3D-7 Unit 5

4.4 JT3D-3B ENGINE TYPE

4.4.1 Data Editing

The JT3D-3B data base, as contained in Volume V, was edited for purposes of the degradation analysis. First of all, consideration was limited to the thirteen units which were tested at least four times. They are noted in Volume V as Units 1, 2, 5, 7 through 14, 17, and 18. Next, test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume V were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - none
2. HC - none
3. NO - none
4. SN - Unit 2, baseline test; and Unit 10, 600 hour test

4.4.2 JT3D-3B CO Degradation

CO degradation factors and their uncertainties are shown in Table 27 for the thirteen selected units. The factors were calculated for each EPA mode, but are shown only for the two idle modes and EPAP. As the JT3D-7 results, they are based on a 62 percent N_2 idle speed.

It can be determined from Table 27 that the average uncertainty of the degradation factors is substantially higher for the EPAP than either of the two idle modes. However, since the trend of the initial idle mode is primarily decreasing while that of the final idle mode is primarily increasing, discussion again must be focused on EPAP. Overall, six units exhibit an increasing EPAP while seven units are decreasing, with an average degradation of -0.1 percent per 1000 hours. This compares to a degradation factor of identically -0.1 percent obtained by regression of the entire group of JT3D-3B CO EPAPs. Further, of the six instances where the factor is larger than its uncertainty, they are evenly divided between increasing and decreasing values.

TABLE 27. - CO DEGRADATION FOR JT3D-38 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	6	-2.4 ± 1.0	-0.6 ± 0.6	-2.3 ± 0.6
2	6	-4.3 ± 2.2	2.8 ± 0.8	-1.6 ± 1.1
5	5	2.7 ± 0.7	3.0 ± 0.6	3.0 ± 2.1
7	6	2.4 ± 1.1	1.3 ± 0.6	2.1 ± 1.1
8	5	-0.6 ± 1.0	2.2 ± 2.0	-2.4 ± 2.4
9	4	-0.7 ± 1.4	-0.4 ± 2.3	1.7 ± 0.5
10	6	-1.5 ± 1.3	-1.2 ± 1.5	-1.5 ± 1.1
11	5	-0.9 ± 0.8	0.3 ± 0.4	0.01 ± 0.7
12	6	-0.6 ± 0.4	0.9 ± 0.2	-0.01 ± 0.4
13	6	0.5 ± 1.2	1.3 ± 0.9	1.8 ± 2.9
14	4	1.1 ± 0.9	0.6 ± 1.4	-1.1 ± 1.4
17	5	-0.8 ± 1.1	0.8 ± 0.7	0.8 ± 1.7
18	4	-2.8 ± 1.0	-0.4 ± 1.1	-1.6 ± 2.2

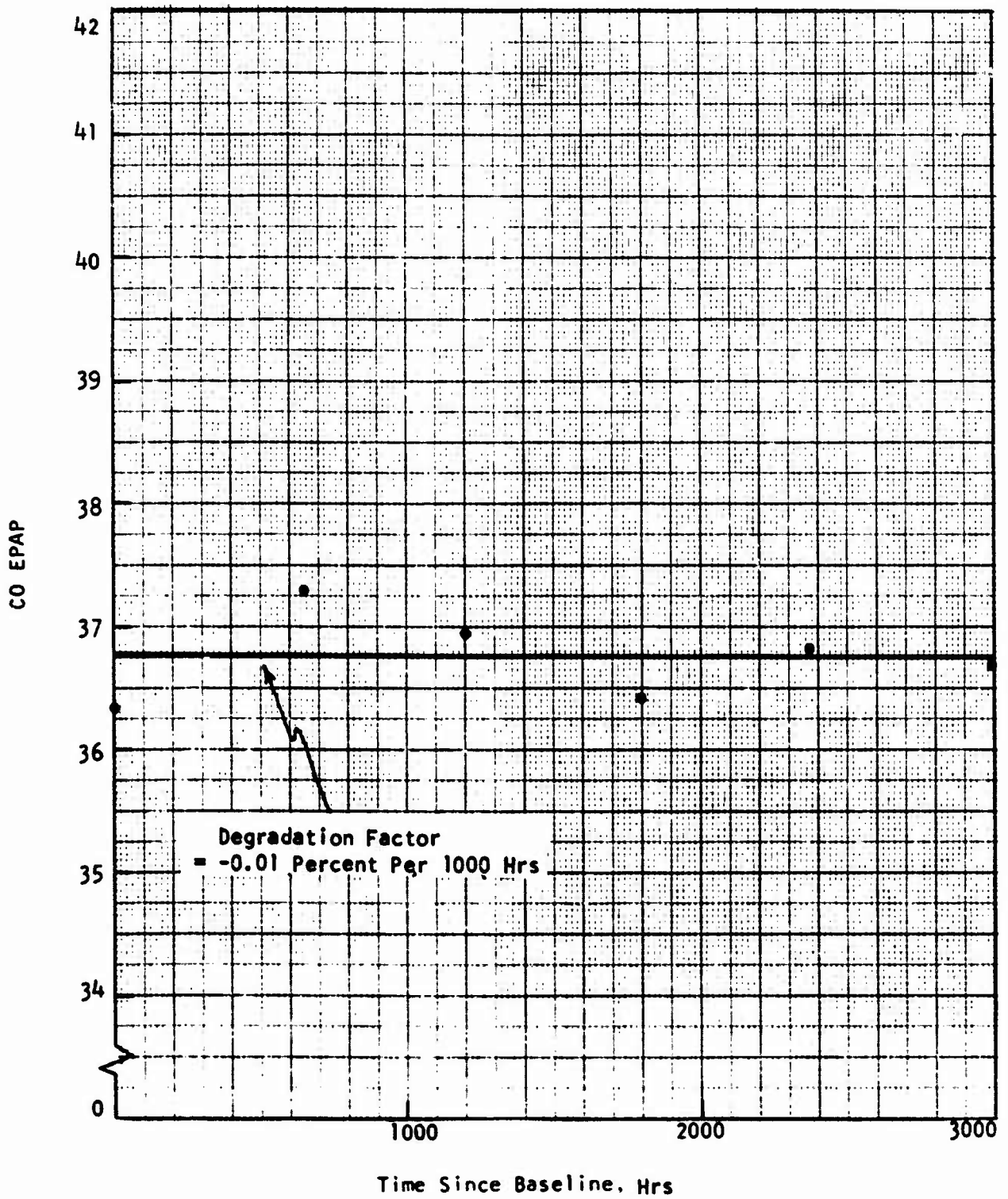


Figure 56. CO Degradation of JT3D-3B Unit 12

An illustration of the degradation in CO EPAP is shown in Figure 56 for Unit 12, which provided rather well-behaved results. It can be seen that changes are minimal from test to test, and no clear trend emerges.

The sensitivity analysis conducted on the CO degradation, yielded the following results for the JT3D-3B engine type:

Idle Speed, percent N ₂	Mean Degradation Factor JT3D-3B CO EPAP, <u>percent per 1000 hours</u>
60	-0.12
62	-0.10
64	-0.04

4.4.3 JT3D-3B HC Degradation

HC degradation factors and their uncertainties are shown in Table 28 for the thirteen selected units. The factors are shown only for the two idle modes and EPAP. They are based on a 62 percent N₂ idle speed.

Focusing the discussion on EPAP, nine units exhibit increasing values while four are decreasing, with an average degradation of 1.1 percent per 1000 hours. This compares to a degradation factor of 0.7 percent from a regression of the entire group of JT3D-3B HC EPAPs. Of the four units where the factor is greater than its uncertainty, three have increasing values and one has a decreasing value.

An illustration of the degradation in HC EPAP is shown in Figure 57, again for Unit 12. Although there is considerable randomness, a clear upward trend is observed.

The sensitivity analysis on the HC degradation is summarized below for the JT3D-3B engine type:

Idle Speed, percent N ₂	Mean Degradation Factor JT3D-3B HC EPAP, <u>percent per 1000 hours</u>
60	1.9
62	1.1
64	0.2

TABLE 28. - HC DEGRADATION FOR JT3D-3B UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	6	0.3 ± 2.9	0.3 ± 0.3	-0.3 ± 2.2
2	6	-5.0 ± 3.0	7.4 ± 1.1	-2.1 ± 2.6
5	5	6.4 ± 3.7	8.7 ± 2.6	7.3 ± 3.6
7	6	3.9 ± 1.4	1.5 ± 0.8	3.5 ± 1.3
8	5	-3.8 ± 3.1	-0.7 ± 3.1	-5.6 ± 2.9
9	4	-1.6 ± 1.7	-0.1 ± 5.1	1.0 ± 1.4
10	6	-2.3 ± 4.6	0.3 ± 3.0	-1.7 ± 4.1
11	5	0.3 ± 3.3	2.4 ± 2.1	1.1 ± 2.3
12	6	1.8 ± 2.6	2.0 ± 1.7	2.1 ± 2.2
13	6	0.4 ± 1.1	1.0 ± 0.6	0.5 ± 1.1
14	4	5.4 ± 1.9	1.5 ± 3.2	2.4 ± 2.2
17	5	2.4 ± 5.0	3.0 ± 5.8	3.9 ± 5.3
18	4	1.6 ± 5.5	1.7 ± 2.6	2.3 ± 5.3

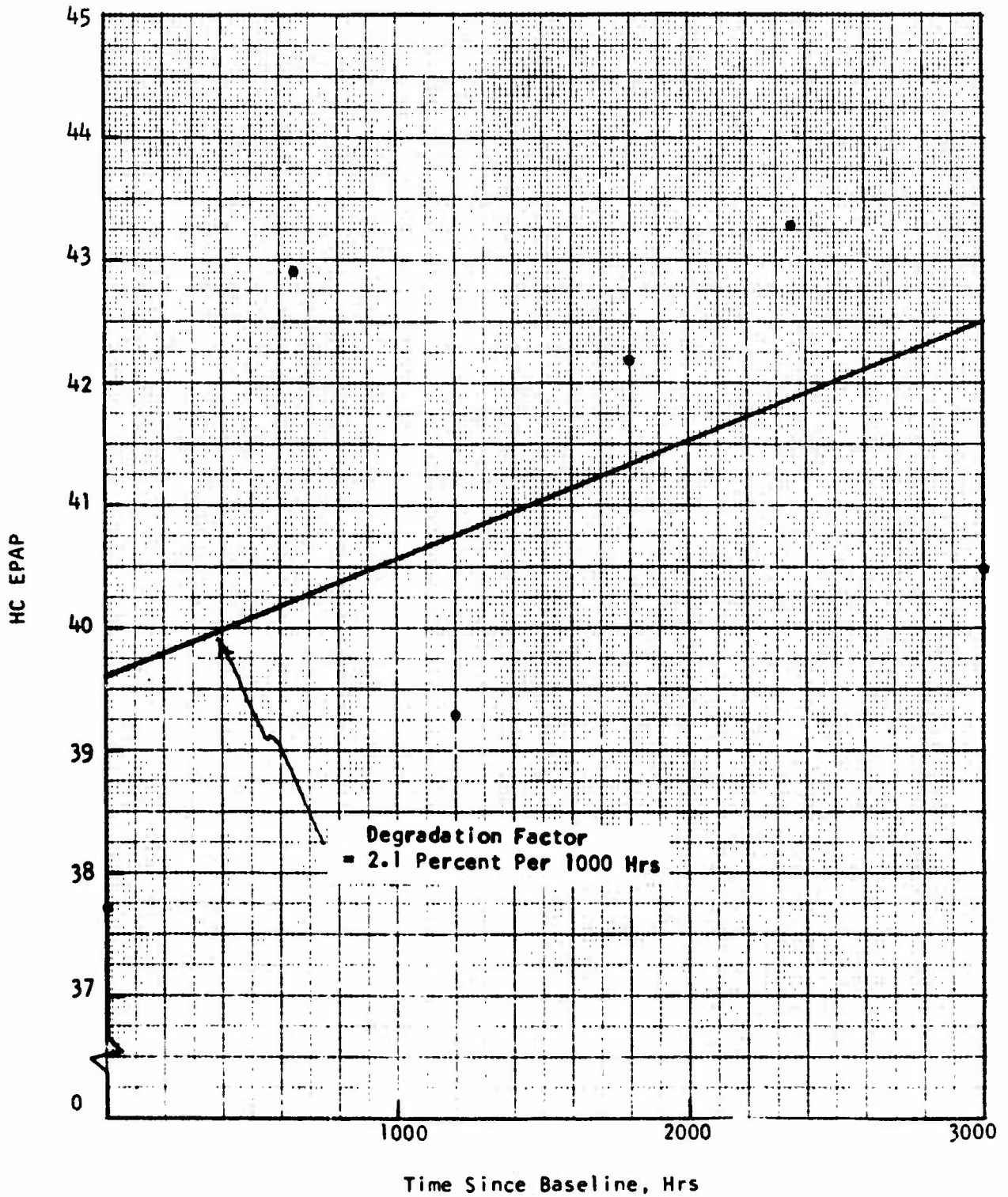


Figure 57. HC Degradation of JT3D-3B Unit 12

4.4.4 JT3D-3B NO Degradation

NO degradation factors and their uncertainties are shown in Table 29 for the thirteen selected units. The factors are shown only for the take-off and climb modes, as well as the EPAP.

It can be determined from Table 29 that the average uncertainty of the degradation factors is actually smallest in the case of the EPAP. Focusing on the EPAP, two units exhibit increasing values, while the remaining eleven units are decreasing, with an average degradation of -3.1 percent per 1000 hours. This compares to a degradation factor of -2.7 percent from a regression of the entire group of JT3D-3B NO EPAPs. Of the seven units where the factor is greater than its uncertainty, all have decreasing values.

An illustration of the degradation in NO EPAP is shown in Figure 58 for Unit 12. It can be seen that a clear monotonically decreasing trend is observed.

The sensitivity analysis conducted on the NO degradation is summarized below for the JT3D-3B engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT3D-3B NO EPAP, percent per 1000 hours</u>
60	-3.3
62	-3.1
64	-3.1

4.4.5 JT3D-3B Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 30 for the thirteen selected JT3D-3B units. The factors are shown only for the take-off and climb modes. Since the mean value of smoke number (SN) is marginally highest at take-off, discussion will focus on that mode. Overall, four units exhibit increasing SNs while nine units are decreasing, with an average degradation of -1.6 percent per 1000 hours. This compares to a degradation factor of identically -1.6 percent from a regression of the entire group of JT3D-3B SNs at take-off. Of the seven units where the factor is larger than its

TABLE 29. - NO DEGRADATION FOR JT3D-3B UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	6	-2.5 ± 3.9	-2.8 ± 2.7	-1.7 ± 2.1
2	6	1.8 ± 1.1	3.4 ± 0.6	1.2 ± 1.3
5	5	-1.4 ± 2.7	-5.2 ± 1.9	-4.3 ± 0.4
7	6	-1.1 ± 1.5	-3.1 ± 1.4	-4.4 ± 2.0
8	5	-5.6 ± 3.2	-5.1 ± 1.8	-5.6 ± 1.9
9	4	-4.3 ± 2.5	-2.3 ± 4.3	-4.5 ± 5.4
10	6	0.6 ± 2.0	-3.3 ± 1.0	-5.0 ± 1.7
11	5	-4.5 ± 3.3	-4.4 ± 4.6	-4.0 ± 2.1
12	6	-1.5 ± 1.4	-0.9 ± 1.7	-4.9 ± 0.8
13	6	0.8 ± 1.5	0.9 ± 2.0	-0.06 ± 2.7
14	4	-1.3 ± 3.7	1.9 ± 2.6	-3.7 ± 4.1
17	5	4.3 ± 2.7	2.4 ± 3.6	2.1 ± 3.5
18	4	2.6 ± 2.4	2.7 ± 3.8	-5.1 ± 0.5

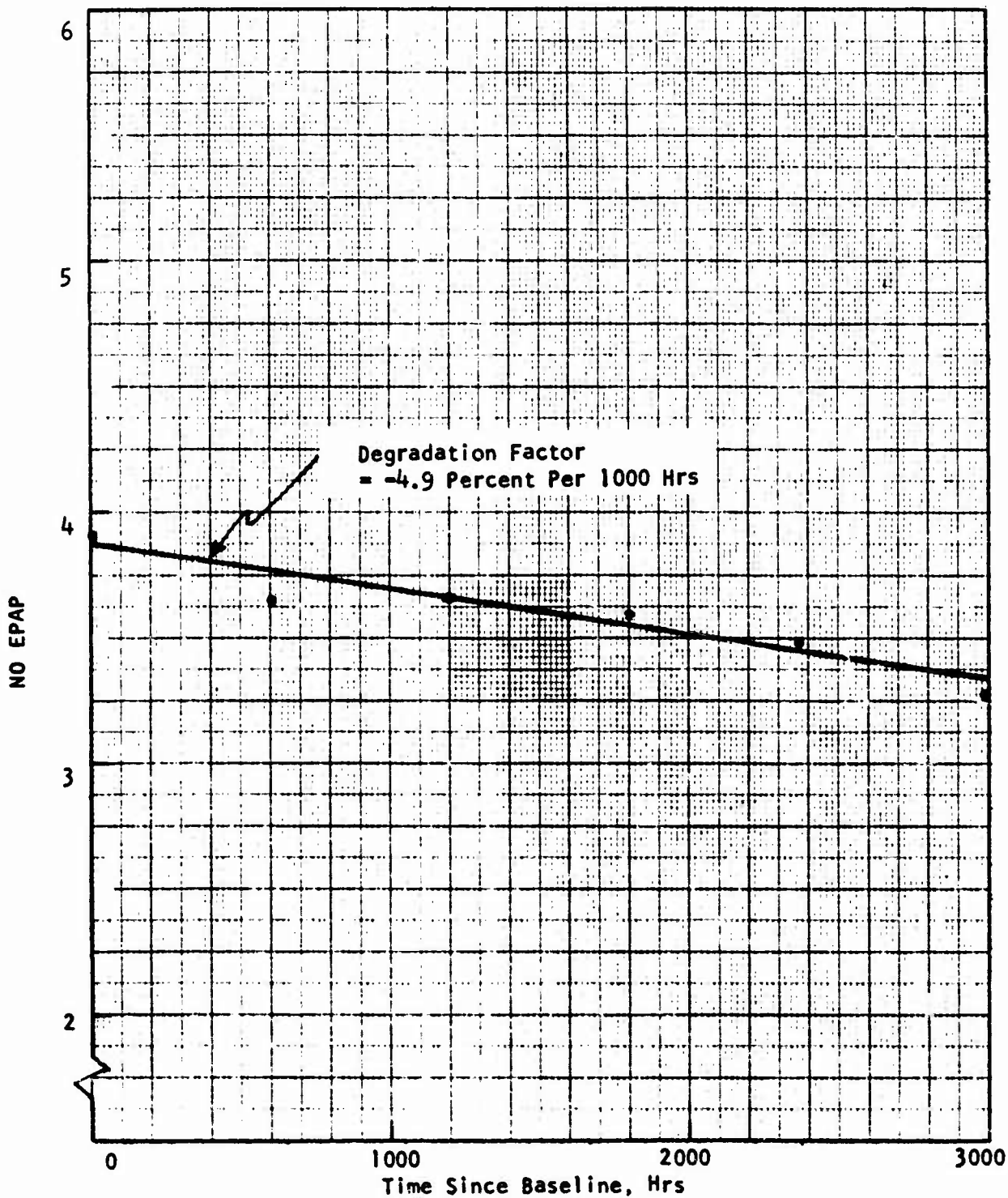


Figure 58. NO Degradation of JT3D-3B Unit :2

uncertainty, two have increasing values and five have decreasing values.

An illustration of the degradation in SN is shown for the climb mode of Unit 12 in Figure 59. It is seen that an initially substantial increasing trend was not quite reversed in the later tests.

TABLE 30. - SN DEDGRADATION FOR JT3D-3B UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	5	-0.7 + 4.0	0.8 + 3.8	NOT APPLICABLE
2	6	-0.5 + 1.8	-0.2 + 2.9	
5	5	5.8 + 6.6	10.3 + 1.2	
7	6	-1.9 + 4.6	2.1 + 2.5	
8	5	-1.8 + 3.3	4.6 + 2.7	
9	4	-4.8 + 9.7	4.7 + 3.6	
10	5	-3.6 + 2.6	0.5 + 3.8	
11	5	2.7 + 2.1	7.2 + 0.6	
12	6	-2.9 + 2.7	1.8 + 2.6	
13	6	-1.6 + 2.4	1.2 + 2.3	
14	4	-10.1 + 6.0	5.9 + 2.8	
17	5	4.3 + 4.1	3.6 + 1.3	
18	4	0.09 + 3.1	12.4 + 1.8	

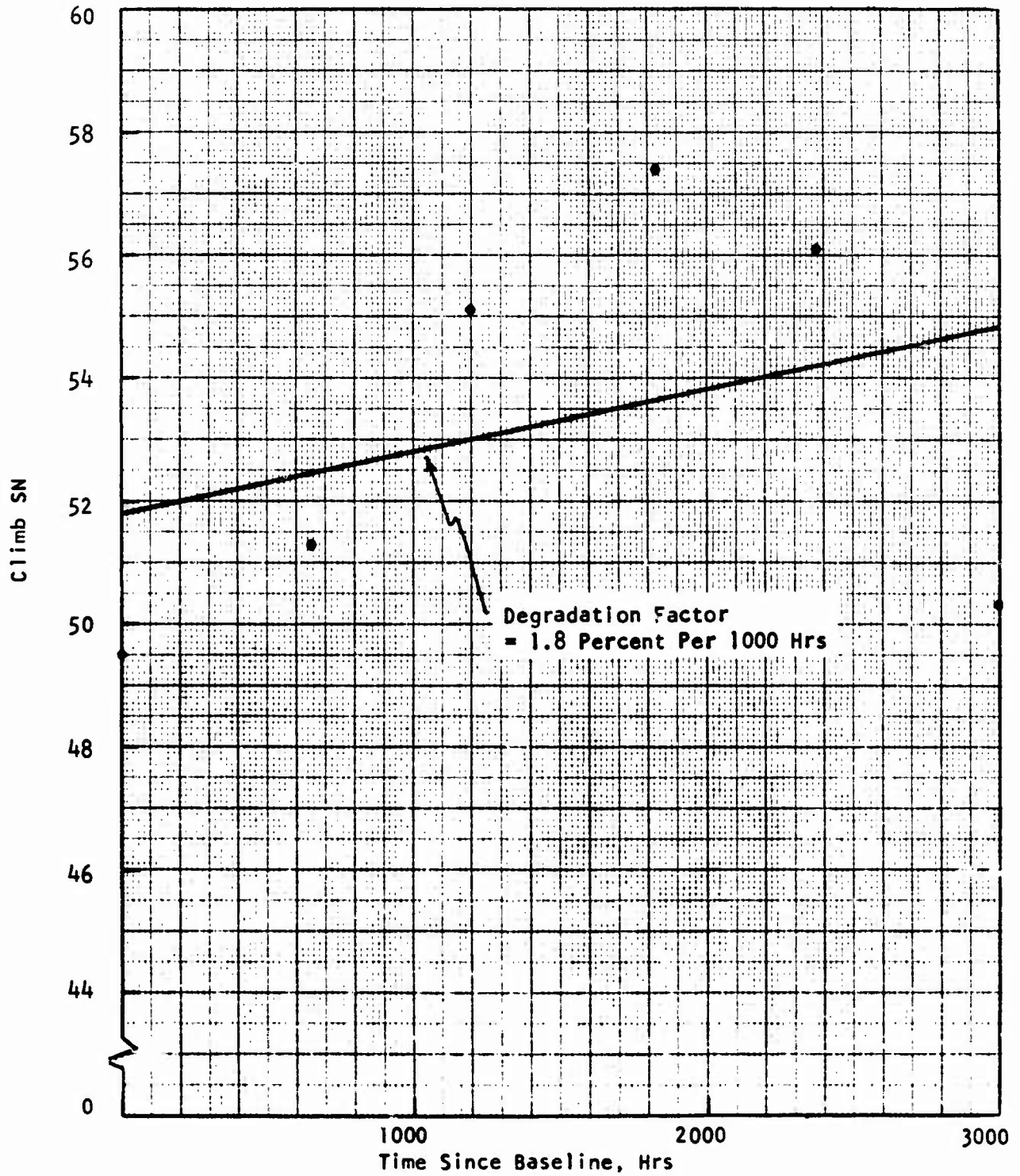


Figure 59. SN Degradation of JT3D-3B Unit 12

4.5 JT9D-3A ENGINE TYPE

4.5.1 Data Editing

The JT9D-3A data base, as contained in Volume VI, was edited for purposes of the degradation analysis. First of all, consideration was limited to units which were tested at least four times. They are noted in Volume VI as Units 6, 7, 9, 11, 12, 13, 16, 20, and 24. Next, the test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume VI were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - Unit 24, baseline test
2. HC - Units 11 and 12, entirely; Unit 13, 1800 hour test; and Unit 24, 1800 hour test
3. NO - Unit 11, 1200 hour test
4. SN - Unit 12, baseline test; Unit 13, entirely; and Unit 24, 600 hour test

4.5.2 JT9D CO Degradation

CO degradation factors and their uncertainties are shown in Table 31 for the nine selected units. The factors are shown only for the two idle modes and EPAP. They are based on 67 percent N_2 idle speed.

It can be determined from Table 31 that the average uncertainty of the degradation factors is considerably higher for the EPAP than either of the two idle modes. Focusing the discussion on the EPAP results, four units exhibit increasing values while five units are decreasing, with an average degradation of 0.2 percent per 1000 hours. This compares to a degradation factor of 0.3 percent obtained by regression of the entire group of JT9D CO EPAPs. Of the five units which have a factor larger than its uncertainty, two have increasing values and three have decreasing values.

An illustration of the two opposing trends in CO EPAP is provided in Figure 60. Unit 7 can be seen to have a well-defined

TABLE 31. - CO DEGRADATION FOR JT9D UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
6	5	-3.2 + 1.2	-1.9 + 1.1	-2.1 + 1.0
7	4	-2.8 + 2.3	0.3 + 1.1	-3.7 + 1.0
9	5	9.2 + 3.2	1.1 + 2.3	6.6 + 3.1
11	6	-1.8 + 4.0	-0.5 + 5.0	-0.1 + 4.2
12	4	-8.5 + 2.0	-6.4 + 4.2	-7.7 + 3.9
13	6	0.8 + 2.1	-0.6 + 1.2	-0.4 + 2.4
16	5	3.5 + 2.0	4.4 + 2.2	6.2 + 3.6
20	4	-0.9 + 2.3	-4.7 + 0.05	1.3 + 2.3
24	3	6.0 + 1.8	-10.2 + 7.1	1.6 + 6.8

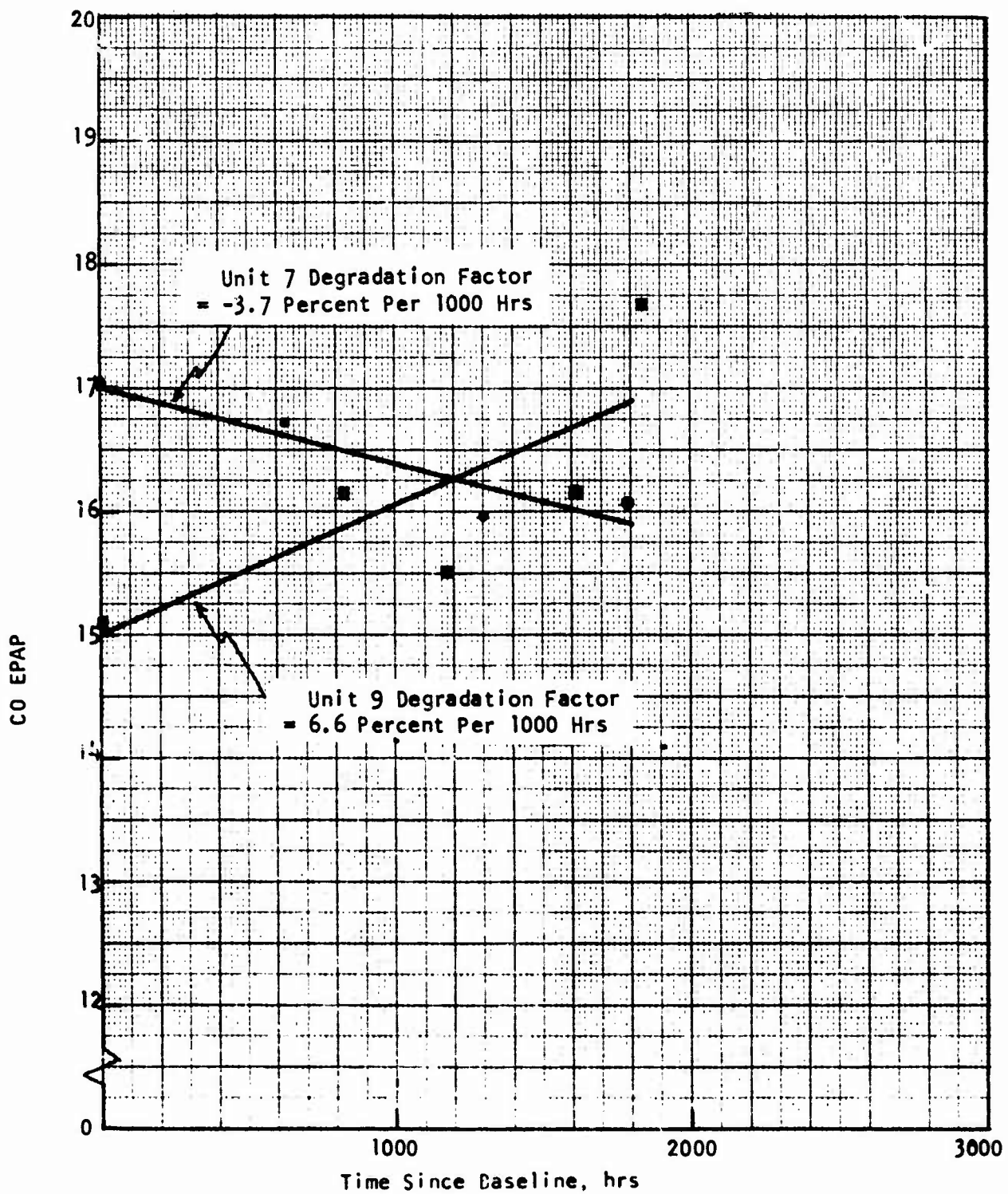


Figure 60. CO Degradations of JT9D Units 7 and 9

decreasing trend from test to test, while Unit 9 has a substantial increasing trend with considerable randomness.

The sensitivity analysis conducted on the CO degradation is summarized below for the JT9D engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT9D CO EPAP, percent per 1000 hours</u>
65	0.1
67	0.2
69	0.6

4.5.3 JT9D HC Degradation

HC degradation factors and their uncertainties are shown in Table 32 for the seven remaining JT9D units. The factors are shown only for the two idle modes and EPAP. They are based on a 67 percent N₂ idle speed.

Focusing the discussion on EPAP, four units exhibit increasing values while three are decreasing, with an average degradation of 0.5 percent per 1000 hours. This compares to a degradation factor of 1.3 percent from a regression of the entire group of JT9D HC EPAPs. Of the five units where the factor is greater than its uncertainty, three have increasing values and two have decreasing values.

Consistent with the CO, Figure 61 illustrates the two opposing trends in HC EPAP. Again, Unit 7 is seen to have a fairly well-defined decreasing trend, while Unit 9 has a substantial increasing trend with considerable randomness.

The sensitivity analysis conducted on the HC degradation is summarized below for the JT9D engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT9D HC EPAP, percent per 1000 hours</u>
65	4.0
67	0.5
69	-7.9

TABLE 32. - HC DEGRADATION FOR JT9D UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
6	5	-14.6 ± 5.2	-7.1 ± 6.0	-14.5 ± 4.5
7	4	-5.0 ± 6.0	0.09 ± 3.3	-8.3 ± 3.7
9	5	12.5 ± 6.1	13.5 ± 9.3	8.1 ± 6.5
13	5	5.0 ± 10.1	4.9 ± 6.5	0.6 ± 9.6
16	5	-5.2 ± 6.1	7.9 ± 4.6	-0.8 ± 6.5
20	4	5.5 ± 7.8	-3.7 ± 8.9	3.8 ± 5.1
24	3	13.2 ± 2.2	9.6 ± 5.3	14.7 ± 3.5

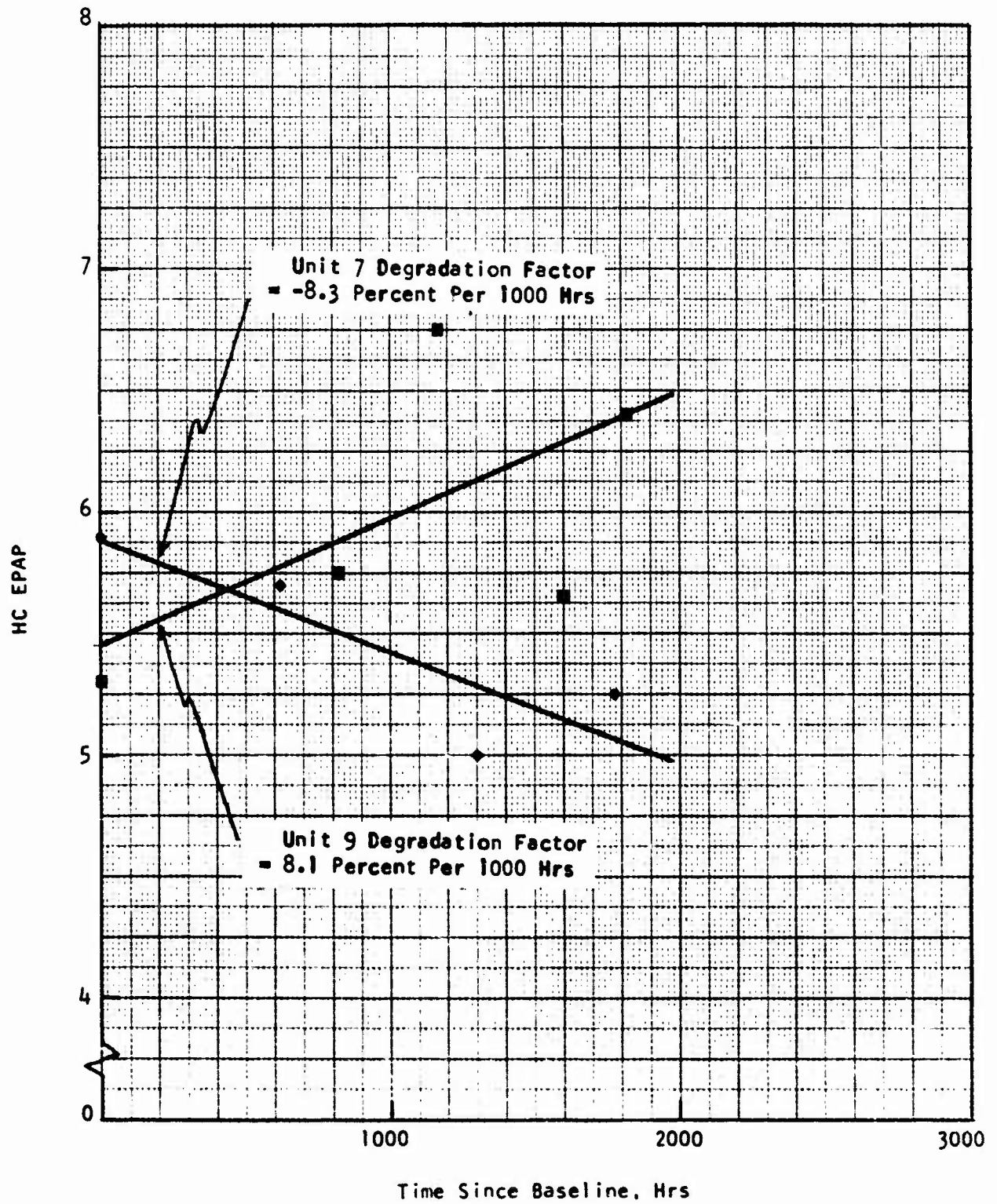


Figure 61. HC Degradations of JT9D Units 7 and 9

It is seen that the HC degradation is extremely sensitive to idle speed.

4.5.4 JT9D NO Degradation

NO degradation factors and their uncertainties are shown in Table 33 for the nine selected units. The factors are shown only for the take-off and climb modes, as well as the EPAP.

It can be determined from Table 33 that the average uncertainty of the degradation factors is again smallest in the case of the EPAP. Focusing on that quantity, all nine units are seen to exhibit decreasing EPAPs, with an average degradation of -5.7 percent per 1000 hours. This compares to a degradation factor of -6.2 percent from a regression of the entire group of JT9D NO EPAPs. There are seven units for which the factor is greater than its uncertainty.

An illustration of the degradation in NO EPAP is provided in Figure 62, again for Units 7 and 9. In this case, however, it is Unit 7 which is seen to have more randomness in its data.

The sensitivity analysis conducted on the NO degradation is summarized below for the JT9D engine type:

<u>idle Speed, percent N₂</u>	<u>Mean Degradation Factor JT9D NO EPAP, percent per 1000 hours</u>
65	-6.0
67	-5.7
69	-5.5

4.5.5 JT9D Smoke Analysis

Smoke degradation factors and their uncertainties are shown in Table 34 for the eight remaining units. The factors are shown only for the take-off and climb modes. Since the mean value of the smoke number (SN) is highest at take-off, discussion will focus on that mode. Overall, eight units exhibit increasing SNs while only one unit is decreasing, with an average degradation of 16 percent per 1000 hours. This compares to a degradation factor of 14 percent from a regression

TABLE 33. - NO DEGRADATION FOR JT9D UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
6	5	-5.1 + 3.9	-5.1 + 3.1	-4.2 + 3.9
7	4	2.2 + 4.9	-2.2 + 3.6	-0.8 + 5.2
9	5	-1.1 + 4.7	1.3 + 6.4	-5.3 + 3.2
11	5	-1.8 + 2.8	-1.6 + 1.5	-0.1 + 2.5
12	4	-9.1 + 3.6	-11.0 + 4.8	-15.6 + 4.0
13	6	-6.2 + 2.7	-6.9 + 2.5	-8.0 + 3.7
16	5	-4.8 + 4.6	-1.5 + 3.6	-6.4 + 2.3
20	4	-2.0 + 4.3	-5.3 + 1.8	-6.6 + 5.2
24	4	-7.6 + 3.3	-2.3 + 2.9	-3.9 + 1.7

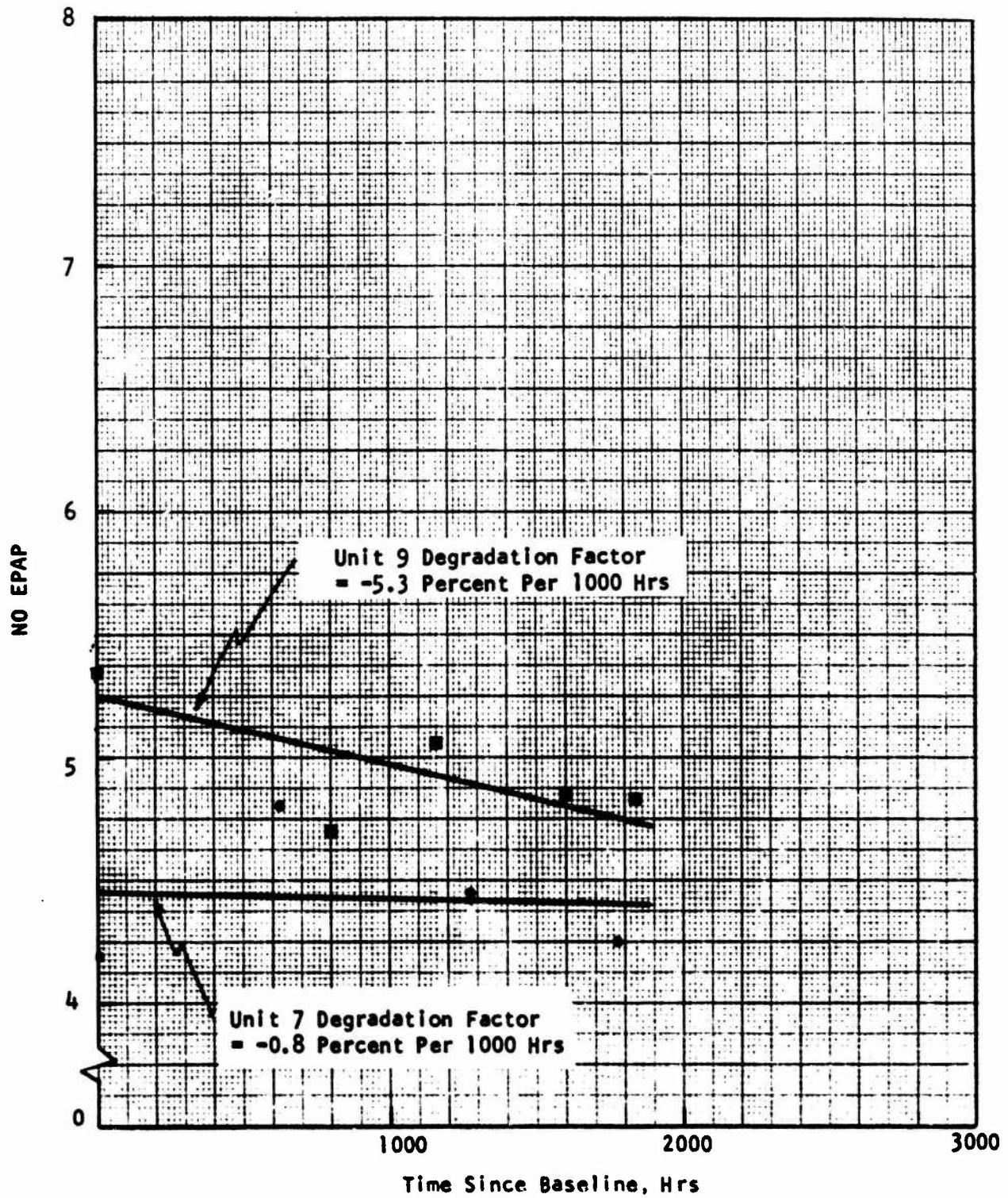


Figure 62. NO Degrations of JT9D Units 7 and 9

of the entire group of JT9D SNs at take-off. Of the six units where the factor is greater than its uncertainty, all have increasing values.

An illustration of the degradation in SN is shown in Figure 63 for the climb modes of Units 7 and 9. In both cases, an initial decrease is reversed and a clear upward trend is established.

TABLE 34. - SN DEGRADATION FOR JT9D UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
6	5	17.5 + 5.2	22.2 + 4.8	NOT APPLICABLE
7	4	18.9 + 13.3	16.6 + 9.0	
9	5	6.2 + 11.4	12.8 + 7.0	
11	6	22.4 + 6.5	23.3 + 7.0	
12	3	38.0 + 3.1	46.3 + 12.1	
16	5	14.3 + 6.8	17.1 + 4.5	
20	4	19.5 + 8.4	27.4 + 2.7	
24	3	-7.7 + 9.6	9.9 + 2.8	

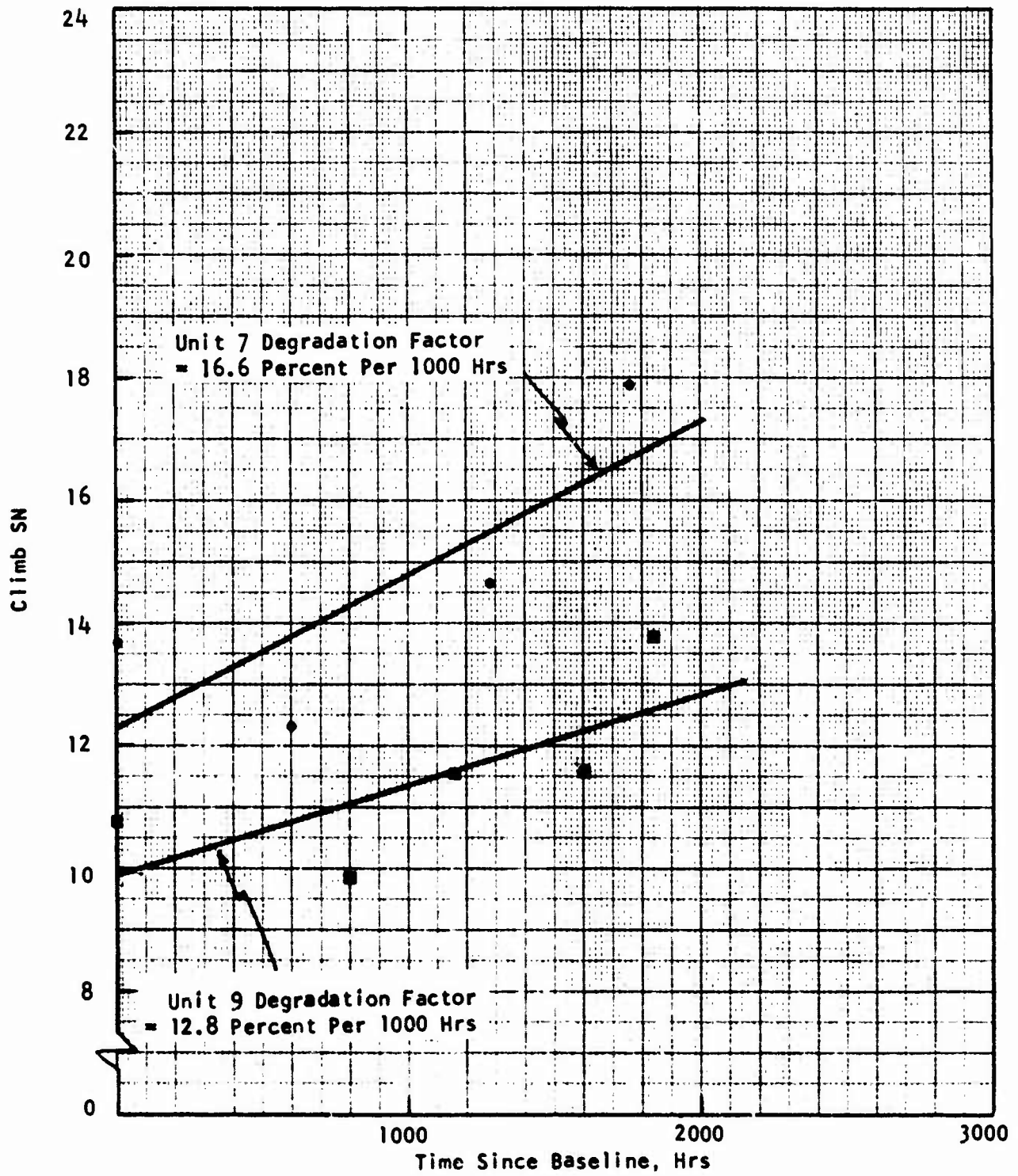


Figure 63. SN Degradations of JT9D Units 7 and 9

4.6 RB211-22B ENGINE TYPE

4.6.1 Data Editing

The RB211-22B data base, as contained in Volume VII, was edited for purposes of the degradation analysis. First of all, consideration was limited to the ten units which were tested over elapsed operating times of more than 500 hours. They are noted in Volume VII as Units 1, 3, 4, 7, 10 through 14, and 16. Next, test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume VII were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - none
2. HC - none
3. NO - none
4. Smoke - Unit 1, 600 hour test; and Unit 3, baseline test

4.6.2 RB211 CO Degradation

CO degradation factors and their uncertainties are shown in Table 35 for the ten selected units. The factors are shown only for the two idle modes, as well as the EPAP. They are based on 64 percent N_3 idle speed.

It can be seen from Table 35 that the average uncertainties for the RB211 are considerably larger than those observed for CO degradation of the previous engine types. This is largely attributable to the short test period of the RB211, rather than larger deviations from the least-squares straight line. Focusing attention on degradation for the EPAP, three units exhibit increasing values while seven units are decreasing, with an average degradation of -3.3 percent per 1000 hours. This compares to a degradation factor of -3.4 percent from a regression of the entire group of RB211 CO EPAPs. Of the five units where the factor is greater than its uncertainty, one has an increasing value and four have decreasing values.

An illustration of the degradation in CO EPAP is shown in Figure 64 for Unit 3. It appears that considerable randomness exists

TABLE 35. - CO DEGRADATION FOR RB211 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	4	3.7 + 5.6	4.9 + 7.0	1.2 + 7.3
3	5	-7.0 + 6.8	0.5 + 2.8	-2.8 + 5.6
4	6	0.9 + 5.3	-6.6 + 5.6	-1.3 + 2.8
7	4	0.07 + 6.8	-1.3 + 11.8	3.0 + 7.8
10	3	-2.3 + 1.4	-3.3 + 3.2	-9.0 + 1.8
11	4	-0.9 + 2.2	0.3 + 4.5	-14.2 + 3.6
12	4	-11.3 + 11.0	-5.4 + 5.4	-10.0 + 7.7
13	5	2.7 + 8.6	15.8 + 2.7	9.6 + 6.8
14	5	-15.4 + 10.2	-8.5 + 3.7	-4.5 + 4.0
16	3	14.1 + 22.9	22.0 + 8.9	-5.4 + 7.3

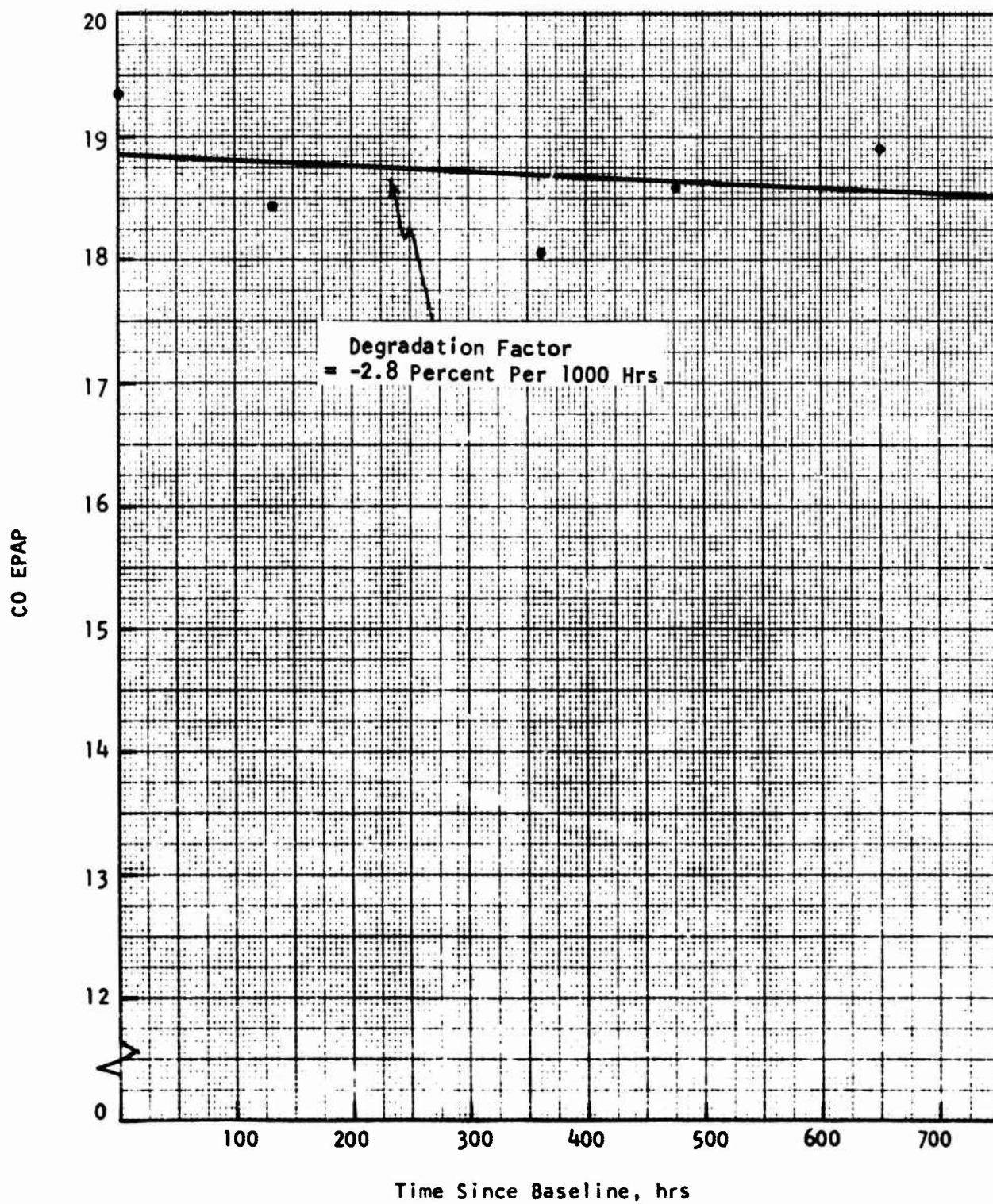


Figure 64. CO Degradation of RB211 Unit 3

in what is, overall, a downward trend. This should be expected for a case where the degradation factor is -2.8 percent and its uncertainty is 5.6 percent. However, the average deviation of the EPAP from the least-squares line is only 0.4 for the five tests. On the other hand, for Unit 9 of the JT9D the uncertainty for the CO EPAP was 3.1 percent but its deviation from the least-squares line was 0.5. This confirms that the short time period is the source of the larger uncertainties for the RB211.

The sensitivity analysis conducted on the CO degradation is summarized below for the RB211 engine type:

Idle Speed, percent N ₃	Mean Degradation Factor RB211 CO EPAP, percent per 1000 hours
62	-0.9
64	-3.3
66	-5.9

It is seen that the degradation of CO EPAP for the RB211 is quite sensitive to N₃ speed.

4.6.3 RB211 HC Degradation

HC degradation factors and their uncertainties are shown in Table 36 for the selected units. The factors are shown only for the two idle modes, as well as the EPAP. They are based on a 64 percent N₃ speed.

Focusing the discussion on EPAP, six units exhibit increasing values while four are decreasing, with an average degradation of 5.9 percent per 1000 hours. This compares to a degradation factor of 5.4 percent from a regression analysis of the entire group of RB211 HC EPAPs. Of the five units where the factor is greater than its uncertainty, four have increasing values and one has a decreasing value. Concerning, the magnitude of the uncertainties, the same situation exists as with the CO degradation.

An illustration of the degradation in HC EPAP is shown in Figure 65, again for Unit 3. Although there is considerable randomness, a clear upward trend is observed.

TABLE 36. - HC DEGRADATION FOR RB211 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	4	2.4 + 16.4	10.6 + 14.7	-1.1 + 23.3
3	5	5.1 + 5.5	7.6 + 8.5	7.6 + 6.3
4	6	6.8 + 4.6	-0.5 + 6.0	2.8 + 2.8
7	4	34.2 + 22.9	20.3 + 32.5	34.3 + 22.5
10	3	20.9 + 4.9	11.0 + 0.3	12.9 + 6.1
11	4	-7.3 + 2.8	-5.9 + 14.2	-18.9 + 5.7
12	4	-11.5 + 15.5	-5.7 + 14.9	-9.4 + 13.5
13	5	4.4 + 15.1	3.3 + 8.5	28.6 + 13.5
14	5	-11.7 + 14.1	-11.4 + 11.1	-3.2 + 7.0
16	3	20.9 + 4.4	34.6 + 9.6	5.3 + 5.6

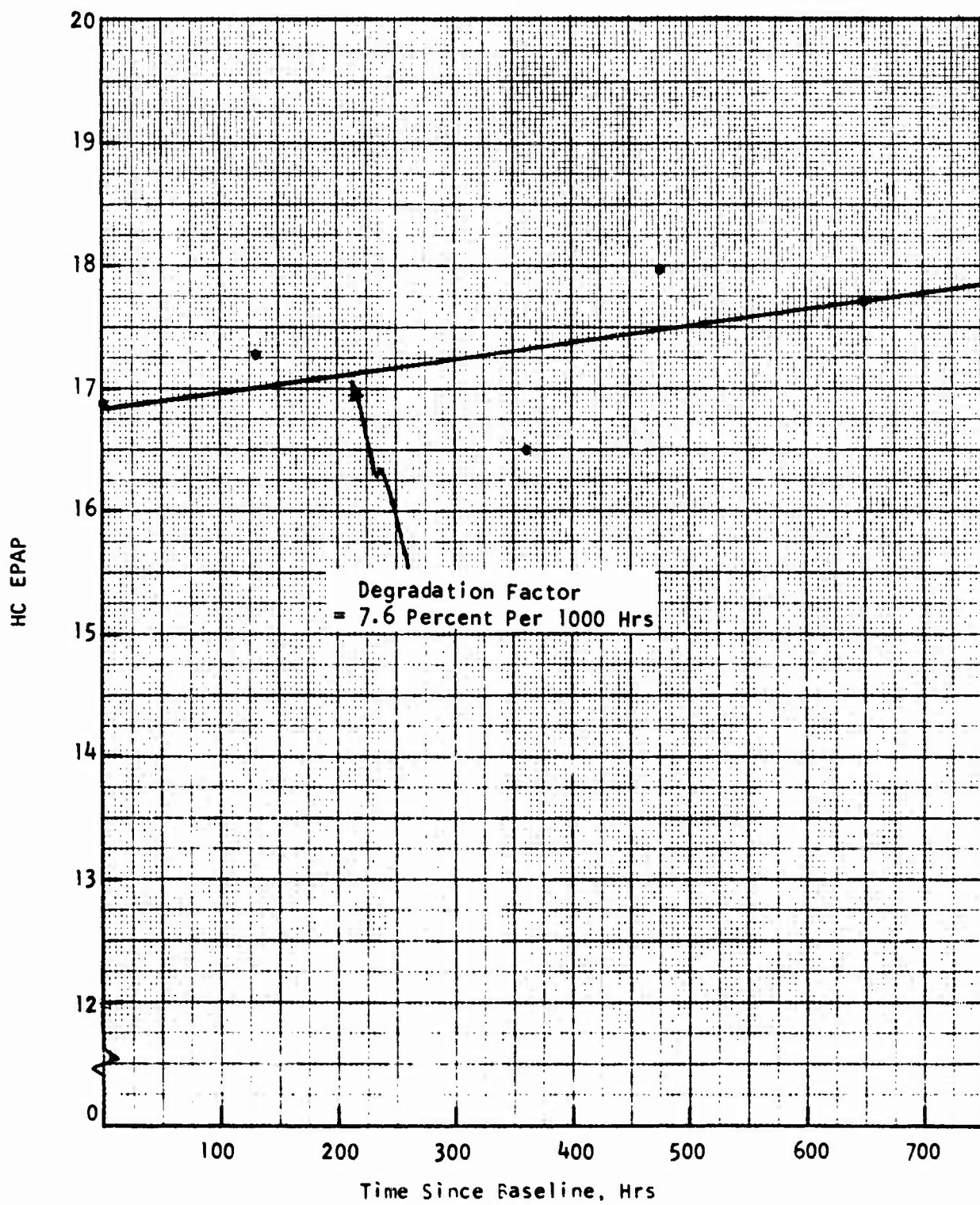


Figure 65. HC Degradation of RB211 Unit 3

The sensitivity analysis on the HC degradation is summarized below for the RB211 engine type:

<u>Idle Speed, percent N₃</u>	<u>Mean Degradation Factor RB211 HC EPAP, percent per 1000 hours</u>
62	10.0
64	5.9
66	0.6

Again, it is seen that the RB211 degradation factors are quite sensitive to idle speed.

4.6.4 RB211 NO Degradation

NO degradation factors and their uncertainties are shown in Table 37 for the ten selected units. The factors are shown only for the take-off and climb modes, as well as the EPAP.

It can be determined from Table 37 that the average uncertainty of the degradation factors is again quite good for the EPAP relative to the high power modes. Focusing the discussion on EPAP, seven units are seen to exhibit increasing values while three units are decreasing, with an average degradation of 3.6 percent per 1000 hours. This compares to a degradation factor of 3.0 percent from a regression of the entire group of RB211 NO EPAPs. Of the five units where the factor is larger than its uncertainty, three have increasing values and two have decreasing values.

An illustration of the degradation in NO EPAP is provided in Figure 66 for Unit 3. An overall upward trend is apparent but a decrease is observed between the second and third tests.

The sensitivity analysis conducted on the NO degradation is summarized below for the RB211 engine type:

<u>Idle Speed, percent N₃</u>	<u>Mean Degradation Factor RB211 NO EPAP, percent per 1000 hours</u>
62	2.9
64	3.6
66	4.3

TABLE 37. - NO DEGRADATION FOR RB211 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	4	-3.4 + 1.2	-3.5 + 8.1	0.08 + 3.0
3	5	6.1 + 12.5	-2.3 + 7.5	5.0 + 7.1
4	6	-7.4 + 6.7	-3.6 + 4.4	-5.3 + 4.9
7	4	19.9 + 7.0	13.1 + 1.8	12.1 + 5.8
10	3	19.8 + 34.1	15.2 + 23.6	10.2 + 29.0
11	4	9.2 + 10.8	13.5 + 9.5	9.7 + 9.3
12	4	6.9 + 11.9	3.5 + 10.0	-1.1 + 3.9
13	5	6.6 + 7.9	4.0 + 4.4	-1.8 + 1.6
14	5	-0.4 + 6.3	1.1 + 4.8	0.6 + 8.3
16	3	6.1 + 8.7	12.2 + 2.4	6.4 + 5.6

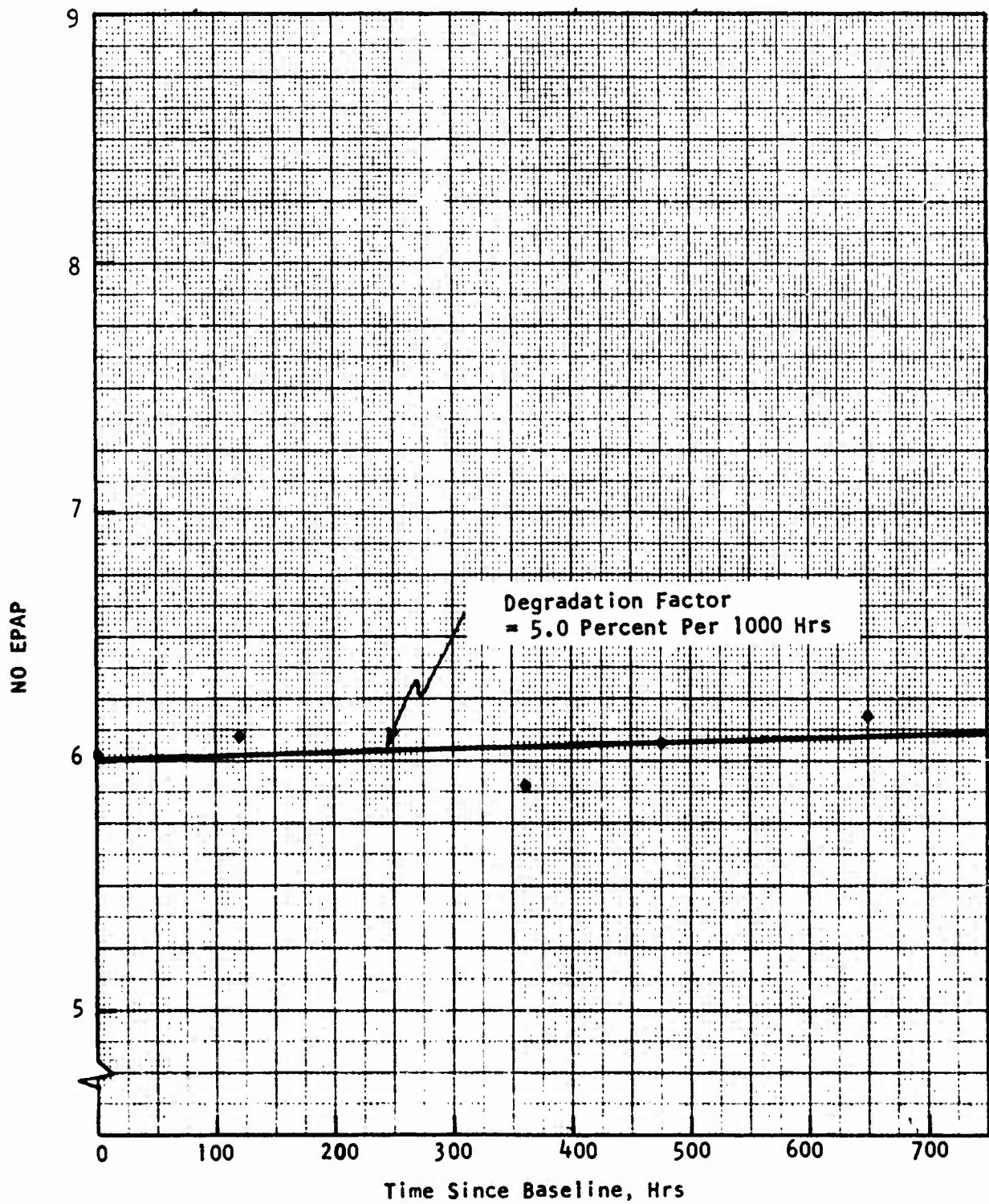


Figure 66. NO Degradation of RB211 Unit 3

4.6.5 RB211 Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 38 for the ten selected RB211 units. The factors are shown only for the take-off and climb modes. Since the mean value of smoke number is highest at take-off, discussion will focus on that mode. Overall, five units exhibit increasing SNs while five are decreasing, with an average degradation of -4.1 percent per 1000 hours. This compares to a degradation factor of -3.3 percent from a regression of the entire group of RB211 SNs at take-off. Further, of the three units where the factor is larger than its uncertainties, all have decreasing values.

An illustration of the degradation in SN is shown for the climb mode of Unit 3 in Figure 67. A rather clearly defined decreasing trend can be observed.

TABLE 38. - SN DEGRADATION FOR RB211 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	3	0.9 + 69.4	-4.2 + 28.0	NOT APPLICABLE
3	4	18.9 + 25.9	-12.8 + 3.9	
4	6	1.5 + 12.1	-9.1 + 10.5	
7	4	12.5 + 17.6	10.2 + 2.3	
10	3	-6.3 + 34.2	-20.5 + 13.3	
11	4	-15.6 + 7.9	-0.6 + 63.5	
12	4	1.0 + 27.0	-52.0 + 35.7	
13	5	-23.2 + 29.9	7.7 + 23.0	
14	5	-18.2 + 18.0	4.8 + 17.4	
16	3	-13.0 + 11.0	19.2 + 34.3	

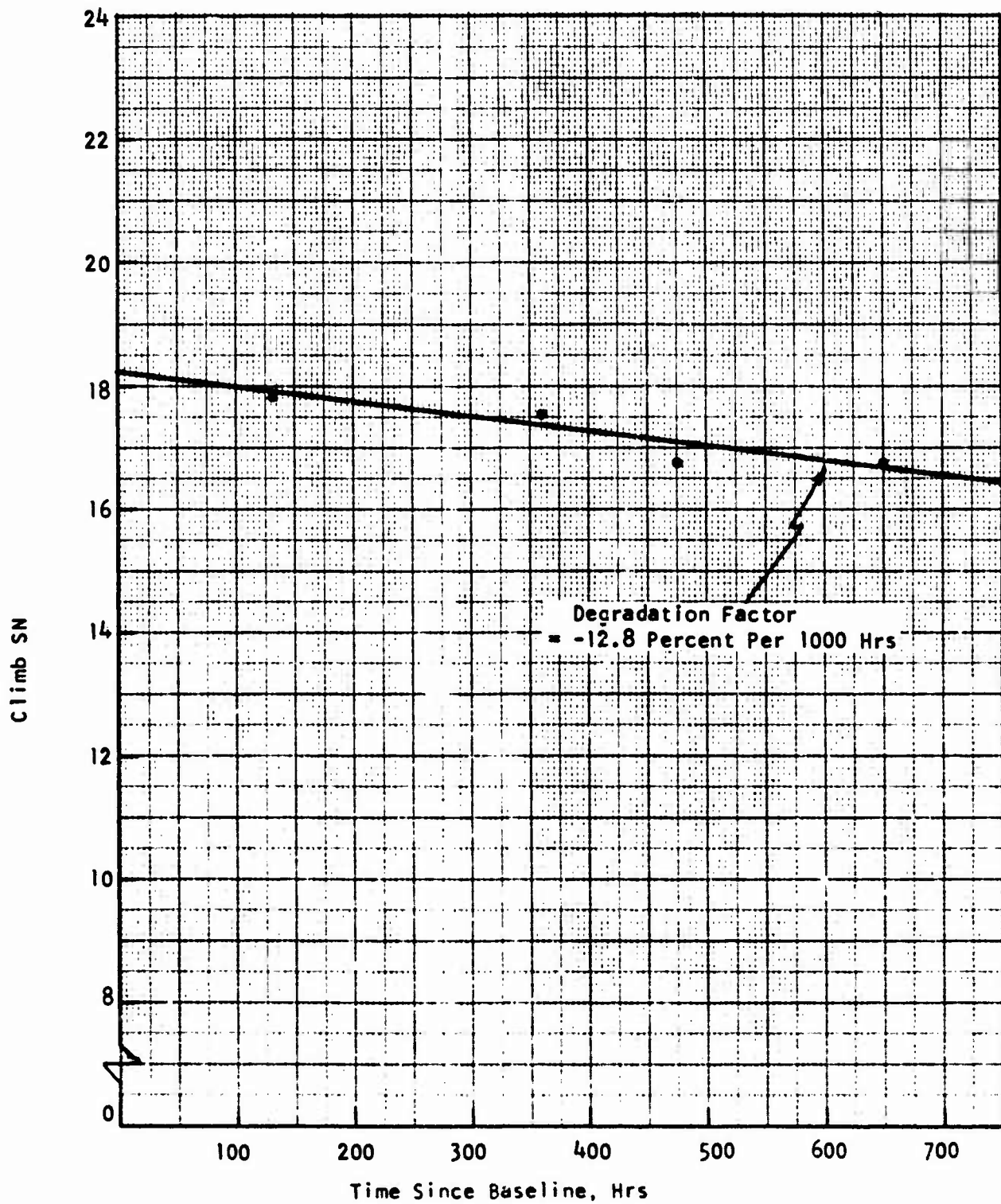


Figure 67. SN Degradation of RB211 Unit 3

4.7 CF700-2D ENGINE TYPE

4.7.1 Data Editing

The CF700-2D data base, as contained in Volume VIII, was edited for purposes of the degradation analysis. First of all, consideration was limited to the nine units which were tested within 250 hours after combustor maintenance and within 500 hours before combustor maintenance. They are noted in Volume VIII as Units 1, 6 through 10, 13, 15, and 16. Next, test data of the selected units were reviewed to eliminate those tests with spurious data points. Items identified as outliers in Volume VIII were not necessarily eliminated. Rather, the following tests were eliminated for specific pollutants:

1. CO - none
2. HC - Unit 1, test series 2; Unit 6, entirely; Unit 7, baseline test; Unit 9, test series 3; and Unit 16, entirely
3. NO - none
4. Smoke - Unit 15, baseline test

4.7.2 CF700 CO Degradation

CO degradation factors and their uncertainties are shown in Table 39 for the nine selected units. The factors are shown only for the two idle modes, as well as the EPAP. They are based on a 48.5 percent N_2 idle speed.

It can be seen from Table 36 that the average uncertainties for the CF700 are even larger than the comparable uncertainties for the RB211. As with the RB211, that increase is attributable in part to the short test period of the CF700. Focusing attention on degradation of the EPAP, four units exhibit increasing values while five units are decreasing, with an average degradation of -2.4 percent per 1000 hours. This compares to a degradation factor of -3.7 percent from a regression of the entire group of CF700 CO EPAPs. Of the six units where the factor is greater than its uncertainty, three have increasing trends and three have decreasing trends.

TABLE 39. - CO DEGRADATION FOR CF700 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	4	-21.6 ± 13.5	-12.9 ± 11.9	-22.3 ± 6.7
6	4	-0.3 ± 11.7	3.1 ± 16.6	1.0 ± 15.4
7	4	5.2 ± 7.0	4.5 ± 1.4	5.8 ± 5.1
8	4	-2.8 ± 5.0	-5.8 ± 7.9	-21.7 ± 5.8
9	4	-16.6 ± 5.6	-5.4 ± 8.4	-6.8 ± 2.7
10	3	32.1 ± 6.1	11.6 ± 1.5	33.6 ± 7.1
13	3	-0.7 ± 8.9	-4.0 ± 16.2	-20.2 ± 26.7
15	4	3.4 ± 5.8	-9.3 ± 3.7	-2.0 ± 11.4
16	3	0.1 ± 7.0	4.9 ± 12.5	11.5 ± 8.9

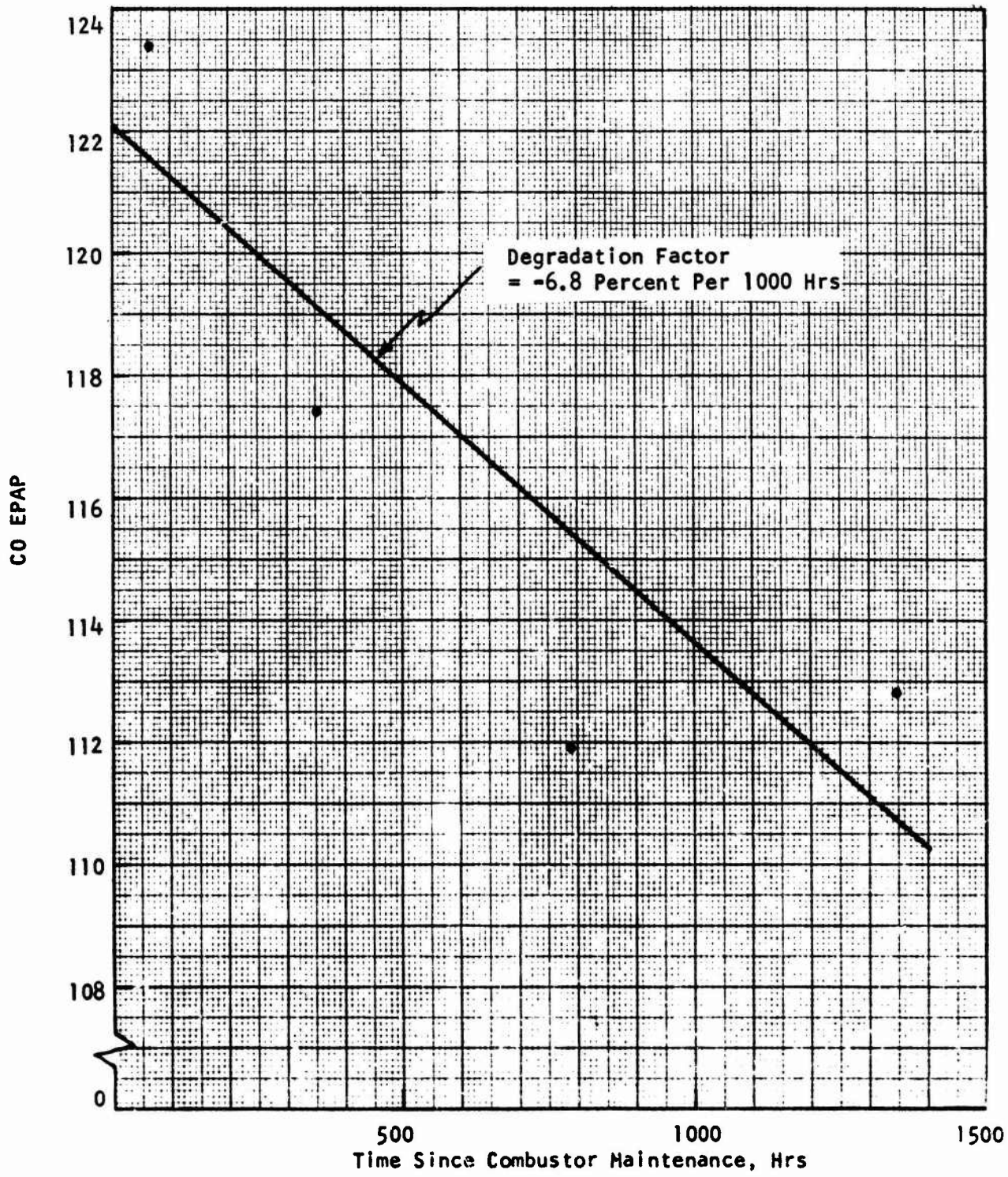


Figure 68. CO Degradation of CF700 Unit 9

An illustration of the degradation in CO EPAP is shown in Figure 68 for Unit 9. It is seen that, although there is an increase between the last two tests, overall a clear downward trend is observed.

The sensitivity analysis conducted on the CO degradation is summarized below for the CF700 engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor CF700 CO EPAP, percent per 1000 hours</u>
47	-4.0
48.5	-2.4
50	-1.6

4.7.3 CF700 HC Degradation

HC degradation factors and their uncertainties are shown in Table 40 for the seven remaining units. The factors are shown only for the two idle modes, as well as the EPAP. They are based on a 48.5 percent N₂ idle speed.

Focusing the discussion on EPAP, two units exhibit increasing values while five units are decreasing, with an average degradation of -13.3 percent per 1000 hours. This compares to a degradation factor of -4.8 percent from a regression of the entire group of CF700 HC EPAPs. Due to the extreme fluctuations from unit to unit, in this case, it would seem that the factor obtained from the regression analysis is more reliable. Of the three units where the factor is larger than its uncertainty, one has an increasing value and two have decreasing values.

An illustration of the degradation in HC EPAP is shown in Figure 69, again for Unit 9. Extreme fluctuations are observed in this worst case, which make the overall downward trend very uncertain.

The sensitivity analysis of the HC degradation is summarized below for the CF700 engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor CF700 HC EPAP, percent per 1000 hours</u>
47	-14.5
48.5	-13.3
50	-12.9

TABLE 40. - HC DEGRADATION FOR CF700 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Initial Idle Mode	Final Idle Mode	EPAP
1	3	6.9 ± 6.5	20.6 ± 8.5	2.6 ± 5.4
7	3	16.5 ± 6.6	22.8 ± 9.4	19.0 ± 5.8
8	4	-13.2 ± 24.8	-22.8 ± 17.3	-36.4 ± 17.3
9	3	-23.8 ± 7.5	6.4 ± 0.7	-7.9 ± 16.0
10	3	-4.4 ± 29.8	-41.5 ± 71.7	-9.1 ± 58.0
13	3	11.1 ± 10.9	1.7 ± 11.0	-10.9 ± 39.0
15	4	-38.8 ± 16.7	-63.5 ± 28.2	-50.1 ± 24.6

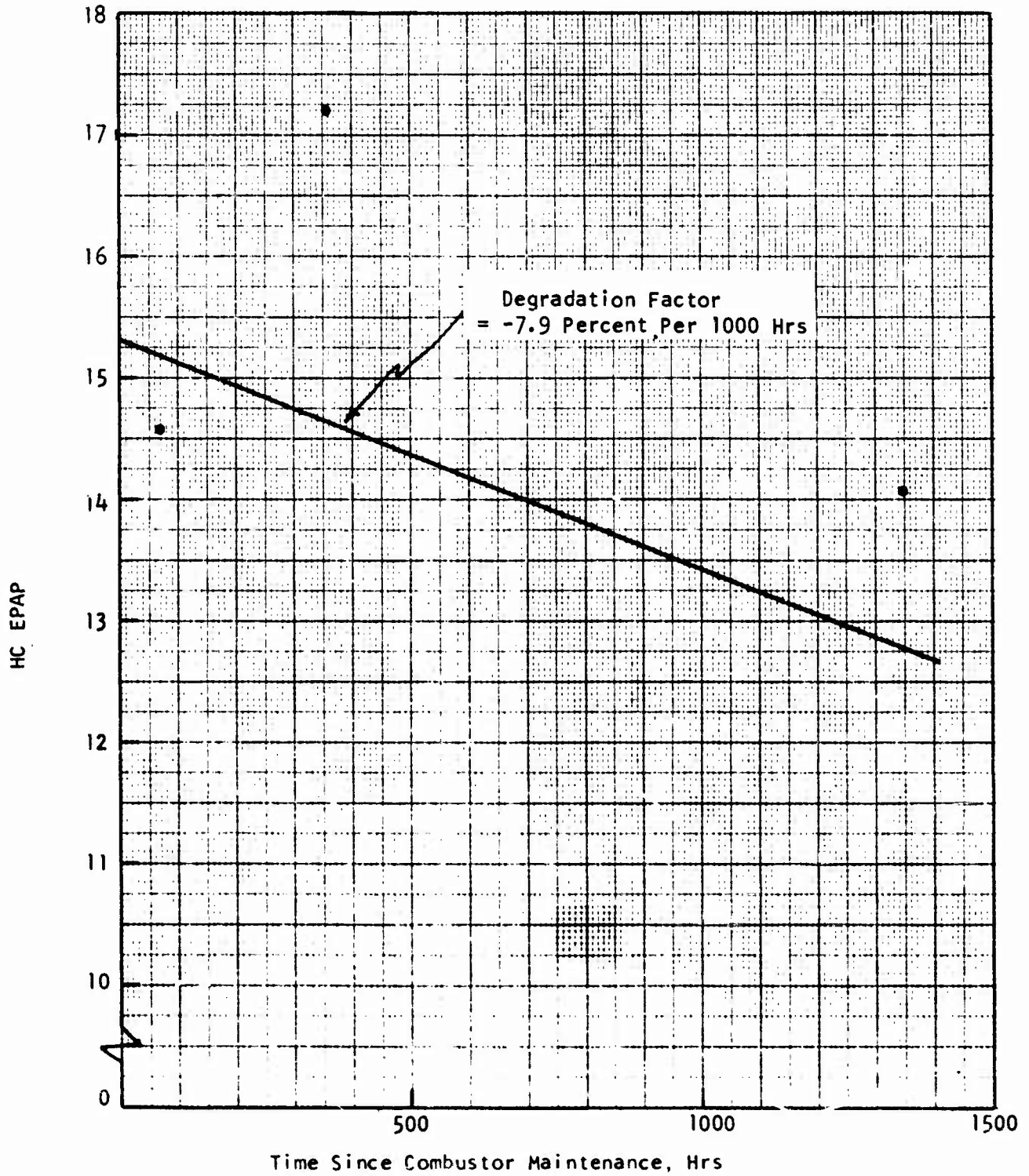


Figure 69. HC Degradation of CF700 Unit 9

4.7.4 CF700 NO Degradation

NO degradation factors and their uncertainties are shown in Table 41 for the nine selected units. The factors are shown only for the take-off and climb modes, as well as the EPAP.

It can be determined from Table 41 that the average uncertainty of the degradation factors is considerably worse for the EPAP than for the power modes. Focusing the discussion on EPAP, two units are seen to exhibit increasing values while seven units are decreasing, with an average degradation of -12.7 percent per 1000 hours. This compares to a degradation factor -8.4 percent from a regression of the entire group of CF700 NO EPAPs. Again, due to the extreme fluctuations from unit to unit and test to test, the factor obtained from the regression analysis is considered more reliable. Of the four units where the factor is larger than its uncertainty, two have increasing values and two have decreasing values.

An illustration of the degradation in NO EPAP is provided in Figure 70 for Unit 9. A clearly upward trend is observed with little deviation from the least-squares straight line.

The sensitivity analysis conducted on the NO degradation is summarized below for the CF700 engine type:

<u>Idle Speed, percent N₂</u>	<u>Mean Degradation Factor CF700 NO EPAP, percent per 1000 hours</u>
47	-11.9
48.5	-12.7
50	-13.5

4.7.5 CF700 Smoke Degradation

Smoke degradation factors and their uncertainties are shown in Table 42 for the nine selected CF700 units. The factors are shown only for the take-off and climb modes. Since the mean value of the smoke number is highest at take-off, discussion will focus on that mode. Overall, two units exhibit increasing SNs while seven units are decreasing, with an average degradation of -27.5 percent per 1000 hours. This compared

TABLE 41. - NO DEGRADATION FOR CF700 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	4	-3.6 ± 11.2	4.2 ± 10.7	17.6 ± 15.2
6	4	-15.4 ± 11.3	-17.1 ± 9.5	-19.1 ± 27.4
7	4	-11.8 ± 2.8	-15.8 ± 7.2	-25.5 ± 34.0
8	4	-14.8 ± 20.1	-19.4 ± 14.5	-29.0 ± 28.8
9	4	2.4 ± 9.1	2.7 ± 9.5	16.3 ± 4.7
10	3	-5.6 ± 28.6	-11.1 ± 25.9	-24.2 ± 18.1
13	3	-29.6 ± 23.5	-26.5 ± 26.4	-20.3 ± 70.5
15	4	-11.0 ± 19.3	-10.6 ± 17.7	-4.0 ± 45.5
16	3	-36.2 ± 0.4	-35.5 ± 5.1	-25.9 ± 74.6

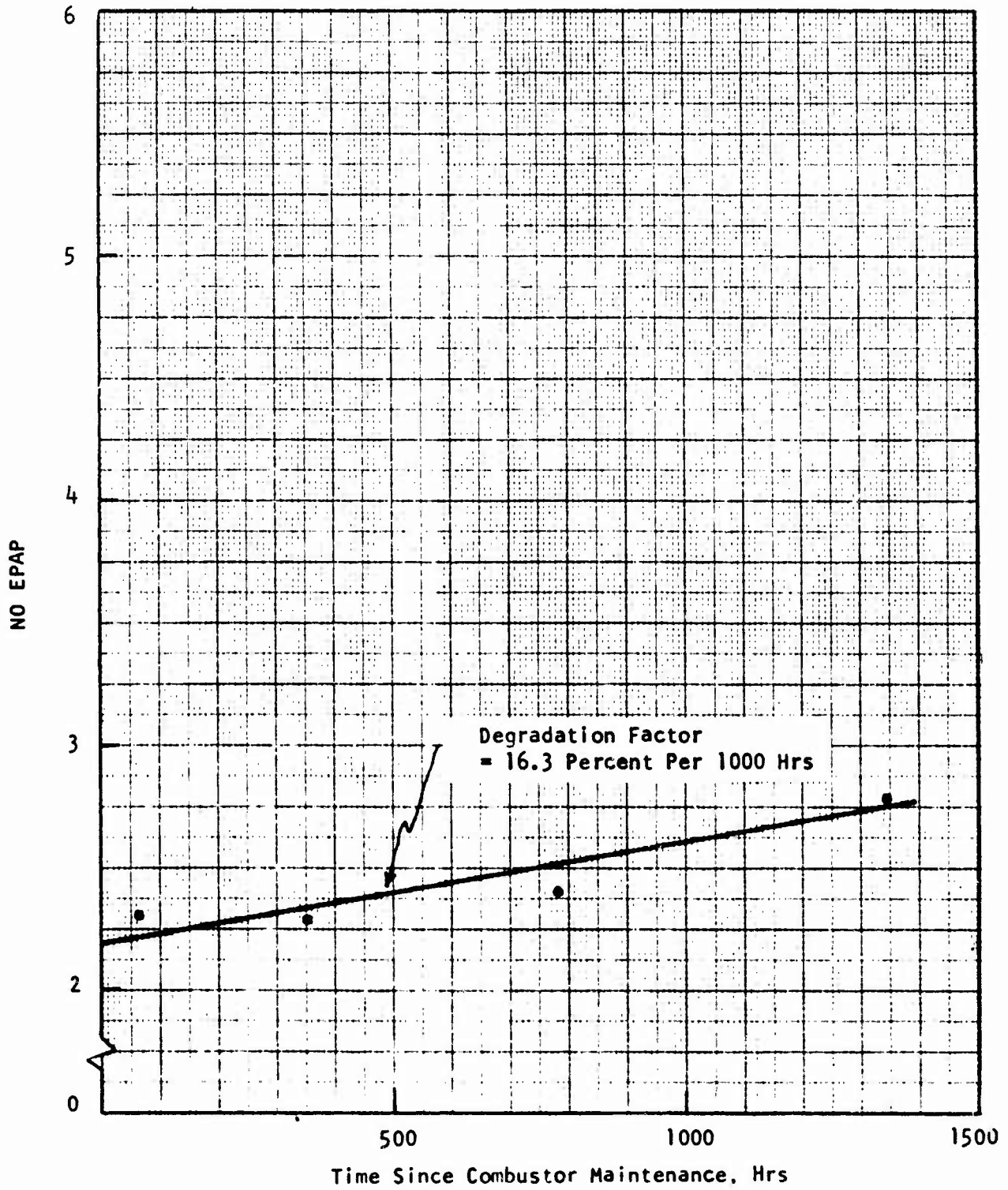


Figure 70. NO Degradation of CF700 Unit 9

to a degradation factor of -17.8 percent from a regression of the entire group of CF700 SNs at take-off. Once more, due to the extreme fluctuations from unit to unit and test to test, the factor obtained from the regression analysis is considered more reliable. Of the seven units where the factor is greater than the uncertainty, only one has an increasing value while six have decreasing values.

An illustration of the degradation in SN is shown for the climb mode of Unit 9 in Figure 71. Considerable randomness is seen to exist and the increasing trend is not well defined.

TABLE 42. - SN DEGRADATION FOR CF700 UNITS

Unit Number	No. of Tests	DEGRADATION, PERCENT PER 1000 HOURS		
		Take-Off Mode	Climb Mode	EPAP
1	4	13.9 ± 29.2	0.3 ± 22.3	NOT APPLICABLE
6	4	-6.9 ± 6.5	8.2 ± 28.1	
7	4	-41.1 ± 36.4	-19.0 ± 4.4	
8	4	-46.4 ± 17.5	-62.0 ± 16.0	
9	4	13.7 ± 8.4	3.8 ± 3.5	
10	3	-35.6 ± 62.5	-28.9 ± 89.2	
13	3	-47.1 ± 27.7	-37.1 ± 10.3	
15	3	-40.1 ± 1.2	-26.8 ± 10.2	
16	3	-57.6 ± 11.6	-64.5 ± 5.6	

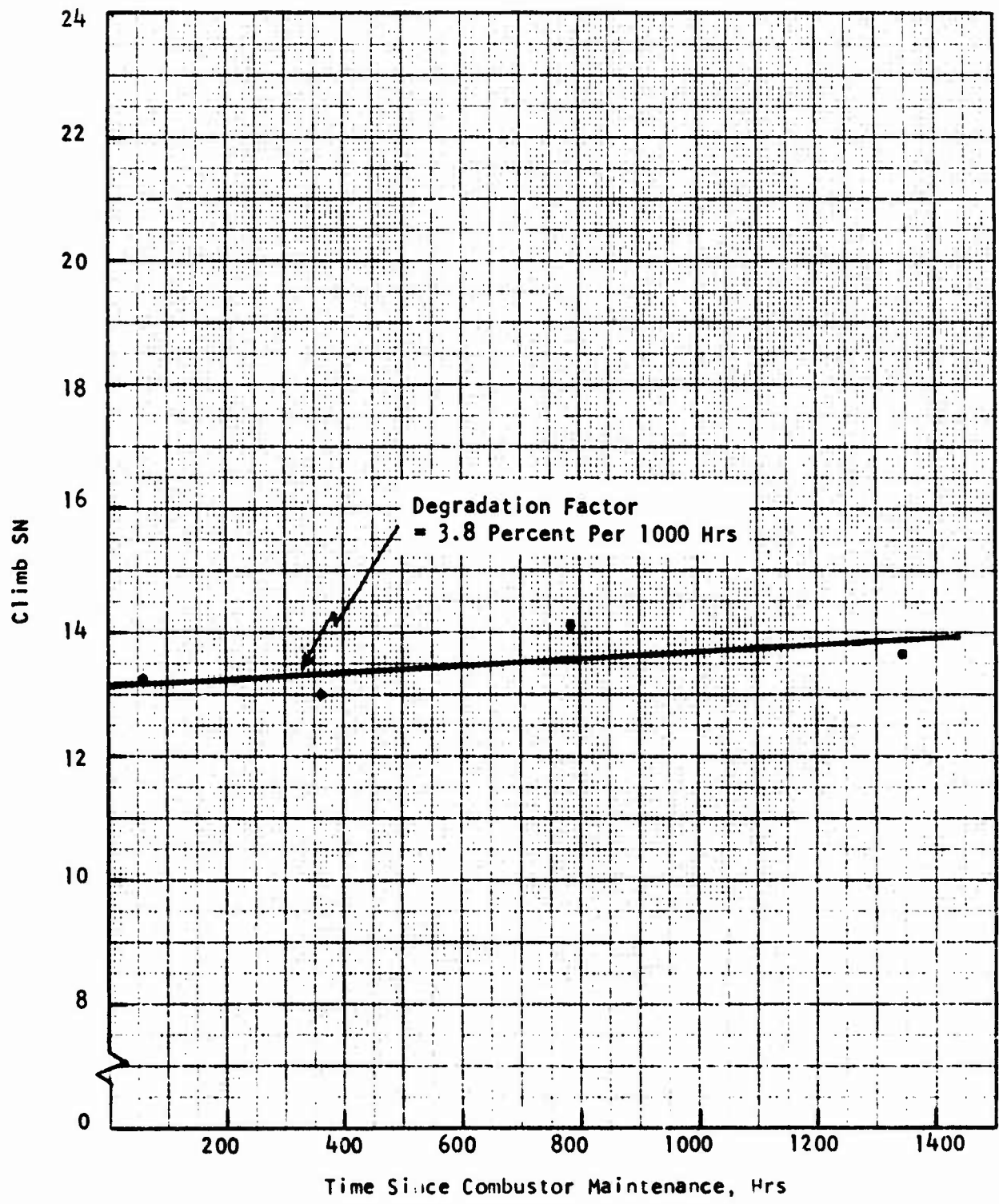


Figure 71. SN Degradation of CF700 Unit 9

5. SUMMARY OF RESULTS

The summarized results of the degradation analysis described in the previous section are presented below. The data is presented according to pollutant; specifically, CO, HC, NO and smoke are examined in turn. The various trends evident in the summarized data are considered in order to evaluate their validity.

5.1 CARBON MONOXIDE DEGRADATION

Degradation factors for carbon monoxide are summarized in Table 43. As can be seen, data is presented for each engine type of the study. Within a type, the data is delineated between units which show positive degradation (increasing emissions with time), units showing negative degradation (decreasing emissions with time), and then, the two groups together. For further comparison, the data is presented both for a dominant EPA mode (Initial Idle in the case of CO), and for the EPAP. In each category, the following information is provided:

1. No. Units - The number of engine units which fall into each category.
2. Av Unit Value - The average value of the degradation factor for those engine units.
3. Av Unit Error - The average value of the uncertainty in the degradation factor for those units, where uncertainty is defined in Section 2.6.4, Part 5.
4. Unit/Unit Deviation - The standard deviation in the individual values of the degradation factor for those units.

It should also be noted that, for each of the latter three items, the values are expressed in the units of percent per thousand hours.

A feature of the CO summary table is a preponderance of negative degradation factors. Totaling up the units for all engine types, it can be seen that the ratio of negative-to-positive factors is approximately 2-to-1 for both Initial Idle and EPAP. Examining the individual engine types, it is further seen that:

TABLE 43. - CO DEGRADATION SUMMARY

Engine Type/ Trend	DEGRADATION FACTOR, PERCENT PER 1000 HOURS							
	EI at Initial Idle				EPAP			
	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation
JT8D-9 / Pos	9	3.0	±3.5	±2.1	10	3.3	±3.2	±1.7
Neg	5	-2.0	±5.4	±1.7	4	-1.9	±7.1	±2.2
All	14	1.2	±4.2	±3.1	14	1.8	±4.3	±3.0
JT8D-7 / Pos	1	1.6	±1.4	--	1	2.2	±0.6	--
Neg	17	-7.7	±3.3	±3.7	17	-6.3	±2.8	±2.7
All	18	-7.2	±3.2	±4.2	18	-5.8	±2.6	±3.3
JT3D-7 / Pos	0	--	--	--	0	--	--	--
Neg	9	-2.2	±0.9	±1.1	9	-1.5	±1.0	±1.5
All	9	-2.2	±0.9	±1.1	9	-1.5	±1.0	±1.5
JT3D-3B/ Pos	4	1.7	±1.0	±1.0	6	1.6	±1.5	±1.0
Neg	9	-1.6	±1.1	±1.3	7	-1.5	±1.3	±0.8
All	13	0.6	±1.1	±2.0	13	-0.1	±1.4	±1.8
JT9D-3A/ Pos	4	4.9	±2.3	±3.6	4	3.9	±4.0	±2.9
Neg	5	-3.4	±2.4	±3.0	5	-2.8	±2.5	±3.1
All	9	0.3	±2.4	±5.3	9	0.2	±3.2	±4.5
RB211 / Pos	5	4.3	±9.8	±5.7	3	4.6	±7.3	±4.4
Neg	5	-7.4	±6.3	±6.1	7	-6.7	±4.7	±4.5
All	10	-1.6	±8.1	±8.3	10	-3.3	±5.5	±6.9
CF700 / Pos	4	10.2	±6.5	±14.8	4	13.0	±9.2	±14.4
Neg	5	-8.4	±8.9	±10.0	5	-14.6	±10.6	±9.5
All	9	-0.1	±7.8	±15.1	9	-2.3	±10.0	±18.3

1. The JT9D and CF700 show very mixed results for both Initial Idle and EPAP.
2. The JT3D-3B and RB211 show very mixed results in one instance (EPAP and Initial Idle, respectively) and fairly definite negative tendencies in the other instance.
3. The JT8D-7 and JT3D-7, in terms of numbers of units, show overwhelmingly negative trends in both instances.
4. The JT8D-9 shows a fairly definite positive tendency in both instances.

Before trying to find a physical significance for these observations, it is worth noting that only in the third case (the JT8D-7 and JT3D-7) is the average overall degradation factor greater than the average uncertainty and the deviation. Hence, the observed trends may only be an aberration which can be attributed to the variability in the data. Also, it should be noted that the higher uncertainties in the RB211 and CF700 data is largely the result of much shorter time intervals between tests for these cases.

With the above note of caution, the overall trend of decreasing CO emissions with time and the apparent anomaly between the trends observed for the JT8D-7 and the JT8D-9 was considered. On a physical basis, the downward trend could be caused by deterioration of turbine stator vanes, resulting in a shift of the operating line towards marginally higher combustor inlet temperatures. The differences between the JT8D-7 and the JT8D-9 may be related to the generally lower TSO values of the JT8D-9 units in the study. In any case, a preliminary degradation analysis of the engine operating parameters was conducted to establish a correspondence with the emission results. No corresponding trend could be found to account for the differences in CO degradation. Thus, the variations in emission level determined by the degradation analysis are either (1) not caused by variations in engine operation, or (2) too small to be manifested in the usual parameters of engine operation as measured on an in-service engine.

5.2 HYDROCARBON DEGRADATION

Hydrocarbon degradation factors are summarized in Table 44 for each engine type, with the exception of the JT8D-9. As before, data is presented for the Initial idle mode and the EPAP, using the established format. In the case of the JT8D-9, as stated previously, the development of HC degradation factors was precluded by the large amount of invalid data due to "B" nut leaks and inadequate heating of the sample train.

A much less distinctive pattern is found in the case of hydrocarbons than that shown for CO. In addition, it is seen that there is a much higher degree of uncertainty associated with these measurements. Totalling up the units for all engine types, the ratio of negative-to-positive factors is found to be 1.1. Examining the engine types individually, it is found that:

1. The JT9D shows very mixed results for both Initial Idle and EPAP.
2. The JT8D-7, JT3D-7, and CF700 show mixed but fairly apparent negative tendencies.
3. The JT3D-3B and RB211 show mixed but fairly apparent positive tendencies.

In view of the uncertainties involved, placing too much emphasis on the trends is unrealistic. However, it is worth noting that the JT8D-7 and JT8D-9, which showed very definite negative trends for CO, also show a negative trend for HC.

5.3 NITROGEN OXIDES DEGRADATION

Degradation factors for nitric oxide are summarized in Table 45. The choice of NO, rather than NO_x, to represent the degradation of nitrogen oxides emissions was based on reliability considerations. It precluded any problem associated with the performance of the thermal converter used in the Beckman 951H instrument. The data in the table is presented in the same format as that shown previously for CO and HC degradation.

TABLE 44. - HC DEGRADATION SUMMARY

Engine Type/ Trend	DEGRADATION FACTOR, PERCENT PER 1000 HOURS							
	EI at Initial Idle				EPAP			
	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation
JT8D-9 / Pos Neg All	--	--	--	--	--	--	--	--
JT8D-7 / Pos Neg All	5 10 15	4.9 -6.9 -3.0	± 5.5 ± 7.2 ± 6.6	± 4.8 ± 5.2 ± 7.5	6 9 15	5.8 -5.3 -0.9	± 5.5 ± 6.2 ± 5.9	± 4.5 ± 4.2 ± 7.0
JT3D-7 / Pos Neg All	1 8 9	3.7 -4.0 -3.1	± 1.3 ± 3.1 ± 2.9	-- ± 2.9 ± 3.8	2 7 9	2.4 -4.0 -2.6	± 2.1 ± 3.1 ± 2.8	± 2.3 ± 2.9 ± 3.9
JT3D-3B/ Pos Neg All	9 4 13	2.5 -3.2 0.7	± 3.0 ± 3.1 ± 3.1	± 2.3 ± 1.5 ± 3.4	9 4 13	2.7 -2.4 1.1	± 2.7 ± 3.0 ± 2.8	± 2.1 ± 2.2 ± 3.2
JT9D-3A/ Pos Neg All	4 3 7	9.1 -8.3 1.6	± 6.6 ± 5.8 ± 6.3	± 4.4 ± 5.5 ± 10.3	4 3 7	6.8 -7.9 0.5	± 6.2 ± 4.9 ± 5.6	± 6.1 ± 6.9 ± 9.8
RB211 / Pos Neg All	7 3 10	13.5 -10.2 6.4	± 10.5 ± 10.8 ± 10.6	± 12.0 ± 2.5 ± 15.1	6 4 10	15.3 -8.1 5.9	± 9.5 ± 12.4 ± 10.7	± 13.1 ± 8.0 ± 16.2
CF700 / Pos Neg All	3 4 7	11.5 -20.1 -6.5	± 8.0 ± 19.7 ± 14.7	± 4.8 ± 14.8 ± 20.0	2 5 7	10.8 -22.9 -13.3	± 5.6 ± 31.0 ± 23.7	± 11.6 ± 19.2 ± 23.2

TABLE 45. - NO DEGRADATION SUMMARY

Engine Type/ Trend	DEGRADATION FACTOR, PERCENT PER 1000 HOURS							
	EI at Climb				EPAP			
	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation	No. Units	Av Unit Value	Av Unit Error	Unit/Unit Deviation
JT8D-9 / Pos	2	2.8	± 2.3	± 1.3	11	3.3	± 6.6	± 1.9
Neg	12	-4.4	± 3.3	± 1.5	3	-1.5	± 6.6	± 1.0
All	14	-3.3	± 3.2	± 3.0	14	2.3	± 6.6	± 2.6
JT8D-7 / Pos	2	0.4	± 2.0	± 0.3	2	4.9	± 6.8	± 5.2
Neg	16	-4.4	± 1.3	± 1.8	16	-4.2	± 4.1	± 3.8
All	18	-3.8	± 1.4	± 2.3	18	-3.2	± 4.4	± 4.8
JT3D-7 / Pos	3	0.8	± 2.1	± 0.0	0	--	--	--
Neg	6	-1.9	± 2.5	± 1.7	9	-4.2	± 2.9	± 3.6
All	9	-1.0	± 2.4	± 1.9	9	-4.2	± 2.9	± 3.6
JT3D-3B/ Pos	5	2.3	± 2.5	± 0.9	2	1.7	± 2.4	± 0.6
Neg	8	-3.4	± 2.4	± 1.5	11	-3.9	± 2.2	± 1.6
All	13	-1.2	± 2.5	± 3.1	13	-3.1	± 2.2	± 2.6
JT9D-3A/ Pos	1	1.3	± 6.4	--	0	--	--	--
Neg	8	-4.5	± 3.0	± 3.3	9	-5.7	± 3.5	± 4.5
All	9	-3.9	± 3.4	± 3.6	9	-5.7	± 3.5	± 4.5
RB211 / Pos	7	8.9	± 8.1	± 5.8	7	6.3	± 9.7	± 4.7
Neg	3	-3.1	± 6.7	± 6.7	3	-2.7	± 3.5	± 2.3
All	10	5.3	± 7.7	± 7.5	10	3.6	± 7.8	± 5.9
CF700 / Pos	2	3.5	± 10.1	± 1.1	2	17.0	± 10.0	± 0.9
Neg	7	-19.4	± 15.2	± 8.9	7	-21.1	± 42.7	± 8.3
All	9	-14.3	± 14.1	± 12.7	9	-12.7	± 35.4	± 18.3

6. CONCLUSIONS

Based upon the data gathered in this study and the analysis of said data, it is concluded--in general--that:

The variation of exhaust emissions with time for aircraft in regular airline service, where it exists, is small and comparable in magnitude to other variations due to ambient conditions, unit-to-unit differences, measurement accuracy, and, perhaps, fuel characteristics.

In view of the above, considerable uncertainty must exist in the more specific conclusions to be drawn from the results. Nevertheless, these conclusions regarding specific pollutants are:

1. For most engine types, carbon monoxide emissions--on average--will tend to remain nearly constant or decrease slightly with operating time between overhauls. Only in the case of the JT8D-7, with an EPAP degradation factor of approximately -6 percent per 1000 hours, does a statistically significant decrease of importance occur.
2. Hydrocarbon emissions--on average--tend to remain fairly constant with operating time between overhauls. For no engine type did statistically significant degradation occur.
3. For most engine types, nitrogen oxide emissions will tend to decrease significantly with operating time between overhauls. On average, an EPAP degradation factor of approximately -4 percent per 1000 hours has been calculated. Only the RB211, where significant but uncertain emission increases occurred, does not fall within this characterization.

Again, due to problems encountered in measuring smoke emissions, no valid conclusions could be drawn regarding that pollutant.

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Again, due to problems encountered in measuring smoke emissions, no valid conclusions could be drawn regarding that pollutant.

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APPENDICES

APPENDIX A

REPRESENTATIVENESS OF EMISSION SAMPLE

INTRODUCTION

For some considerable time two major problems with respect to emission measurement have been identified by industrial and governmental study teams. These problems involve acquiring a representative emission sample from gas turbine exhausts and correction of emission levels for the effect of ambient conditions. The first of these problems is of primary concern in this appendix.

Stratification of emissions in the exhaust from gas turbines has been shown in numerous instances through detailed traverse probing and analysis of profile and contour plots of carbon monoxide, hydrocarbons and oxides of nitrogen. It would appear that the variability in stratification presents a problem for fixed probe sampling techniques. However, studies of data acquired by extensive sampling over the exhaust section of a JT8D-11 turbofan engine, Reference 4, indicate that the use of fixed probes for representative sampling is feasible. The optimized probe, for such sampling, is described in Section 2.3.

In the absence of similar data for the additional engines studied in this program the same design rules were applied for all probes. It should be emphasized that considerations of consistency of sampling, over long intervals of time, outweigh those of sample representativeness. It is the purpose of this appendix, however, to examine this factor for all engines tested.

COMPARISONS OF CARBON BALANCE AND PERFORMANCE FUEL-AIR RATIOS

An important technique which indicates the representativeness of sampling is a direct comparison of measured carbon balance fuel-air ratio with that derived from the performance of the engine. Carbon balance fuel-air ratios are calculated directly from the measured exhaust emissions-- carbon monoxide, hydrocarbons and carbon dioxide. Since only fuel flow could be measured on the test engines, the air flow pertaining to the performance

fuel-air ratio and the operating condition was predicted from performance data and measurable operating parameters-- N_2 and EPR. Attention should be drawn to the fact that all performance data used in the prediction of air flow had no allowance for installation and probe blockage effects. Comparisons of fuel-air ratios are shown in the following figures for all test data acquired on each engine type.

DISCUSSION

The fuel-air ratio comparisons for both the JT8D-9 and JT8D-7 are shown in Figures A-1 and A-2 respectively. Both engine types show similar trends with ascending power, changing from good agreement at idle conditions to a higher carbon balance fuel-air ratio bias at take-off conditions. It can be seen that considerable data spread exists, presumably due to unit-to-unit variation, and the maximum deviations amount to approximately 25 per cent at the highest power level.

The comparison for JT3D-7 and JT3D-3B, shown in Figures A-3 and A-4 respectively, exhibit similar but less severe trends than the JT8D type engine. Unit-to-unit spread is significantly improved and the maximum deviation varies from 10 to 15 percent. Although the trends exhibited in Figure A-5 for the JT9D-3A are similar to those discussed above, it can be seen that a high carbon balance fuel-air ratio bias exists at the idle condition. With ascending power an improvement in correspondence is indicated and at the take-off condition the deviation is small.

The fuel-air ratio comparison for the RB211 engine shown in Figure A-6 has the same characteristic trend seen previously. In this case good agreement exists at idle conditions and a distinctly low carbon balance fuel-air ratio bias exists for higher power settings. The average deviation at take-off conditions is close to 15 percent.

Considerable unit-to-unit data spread is shown in the fuel-air ratio comparison for the CF700 engine (see Figure A-7). Generally the carbon balance fuel-air ratio appears higher than the performance value by amounts from 5 to 15 percent. The unmixed co-axial nature of the fan-core streams presents a considerable problem for fixed probe sampling in this particular engine.

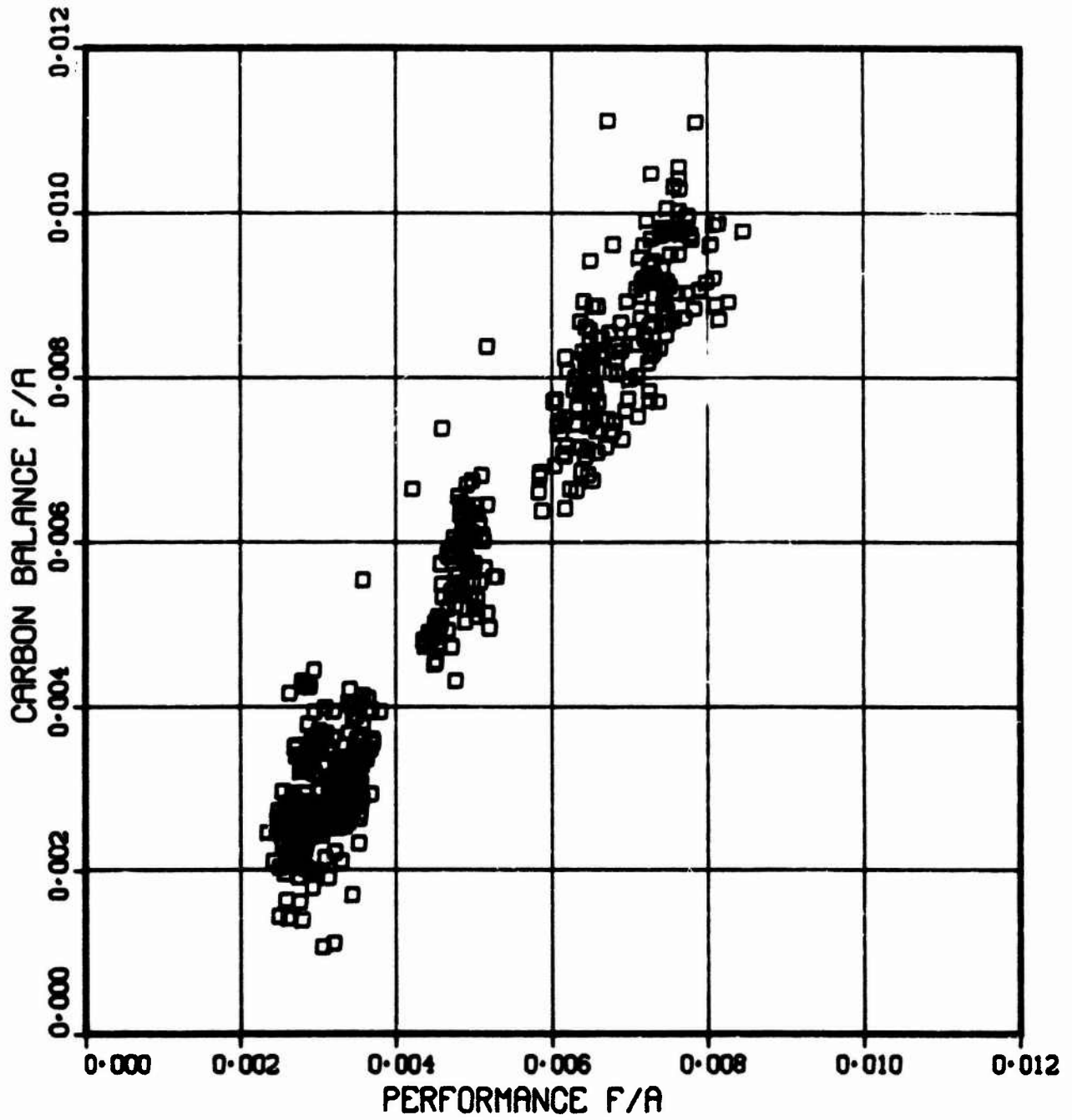


Figure A-1. JT80-9 Fuel-Air Ratio Comparison

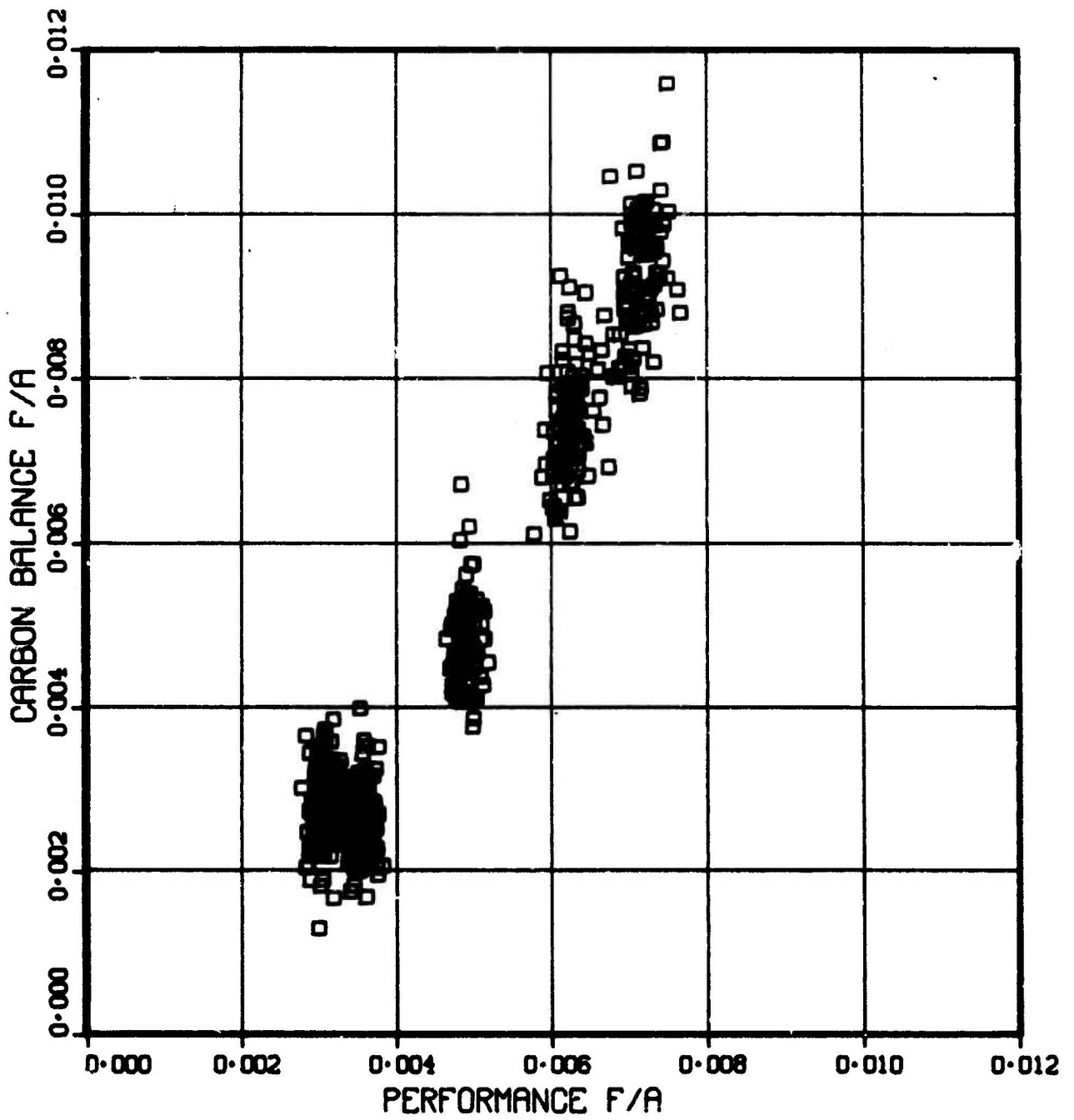


Figure A-2. JT80-7 Fuel-Air Ratio Comparison

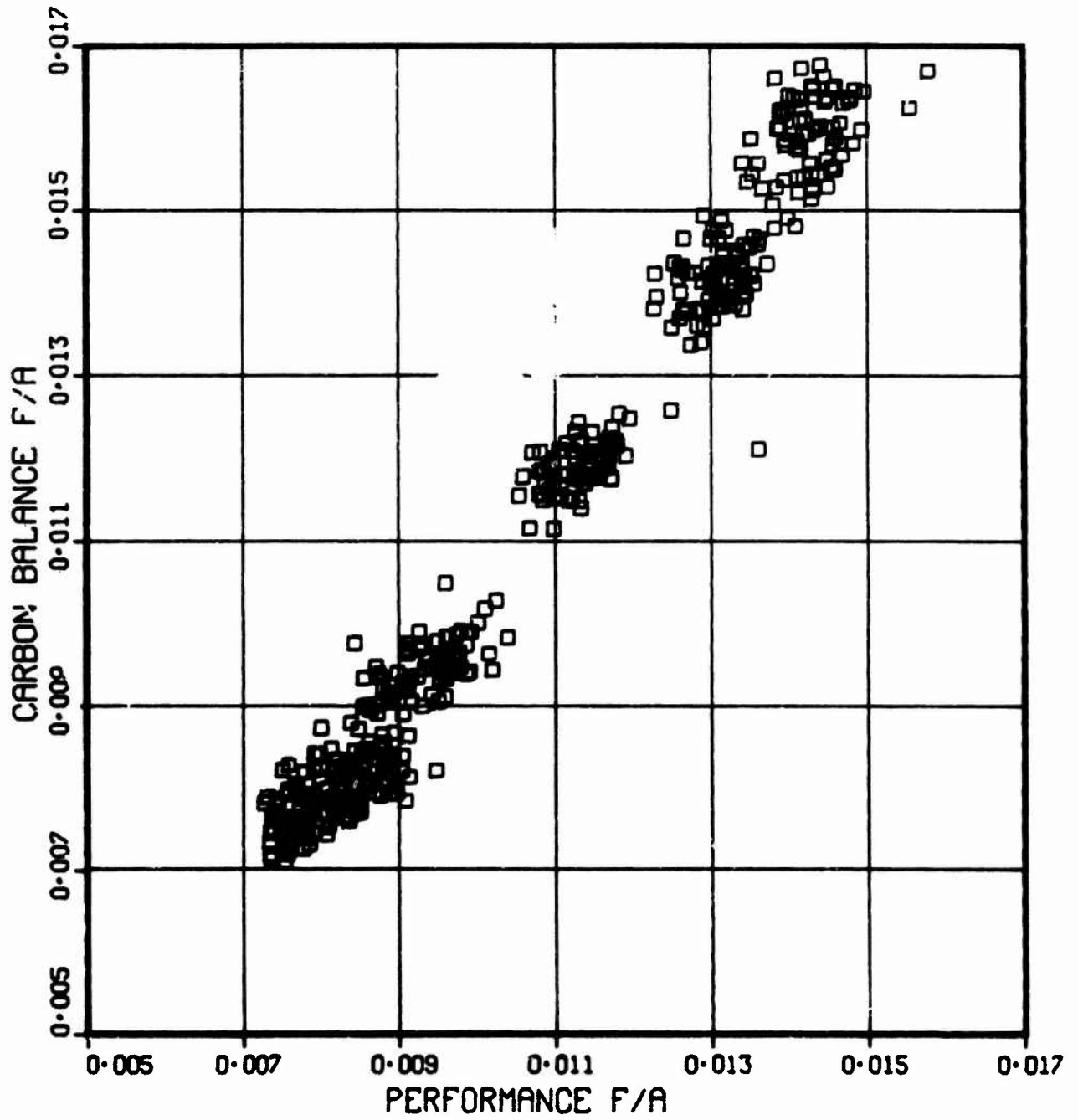


Figure A-3. JT30-7 Fuel-Air Ratio Comparison

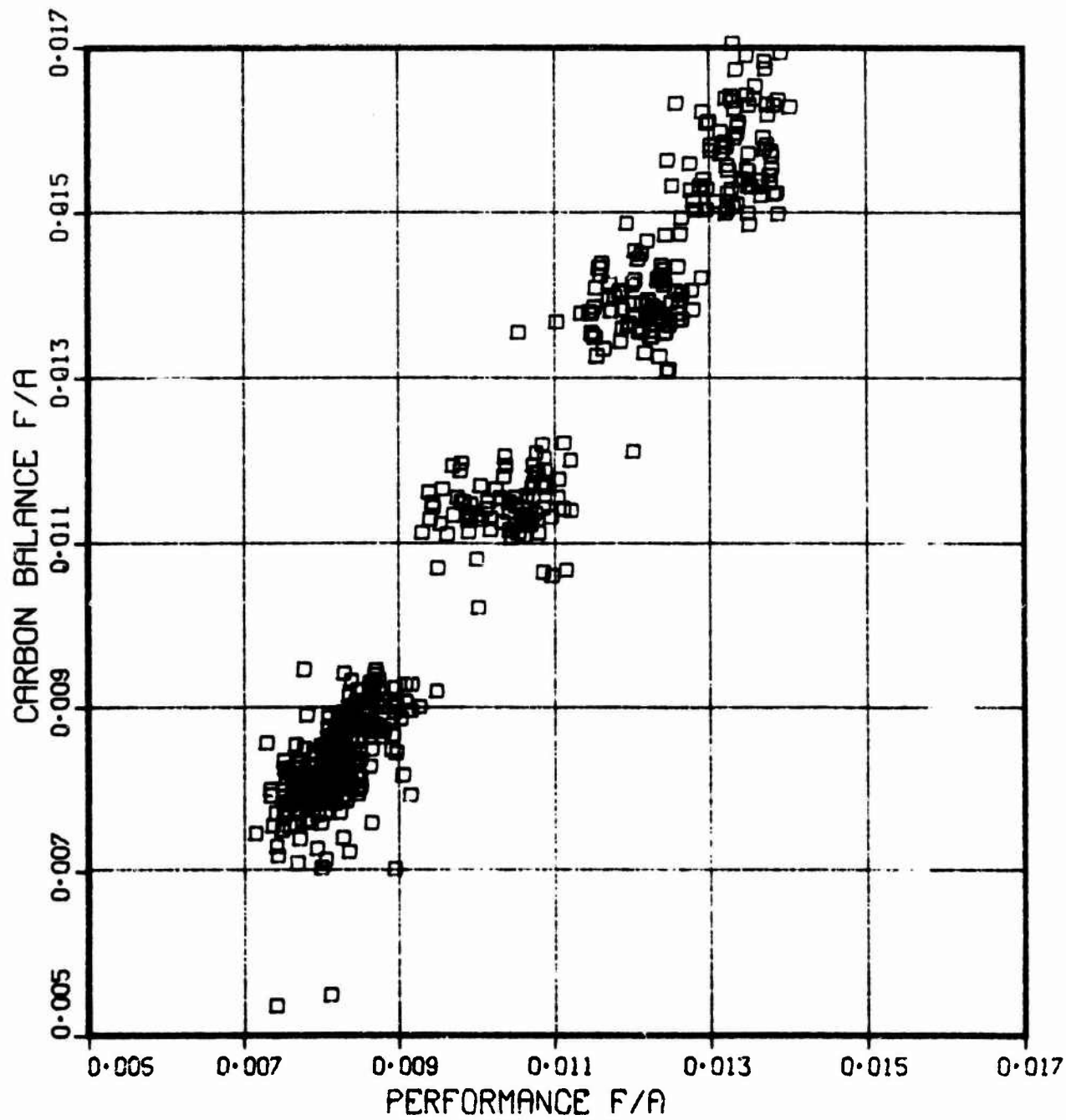


Figure A-4. JT30-3B Fuel-Air Ratio Comparison

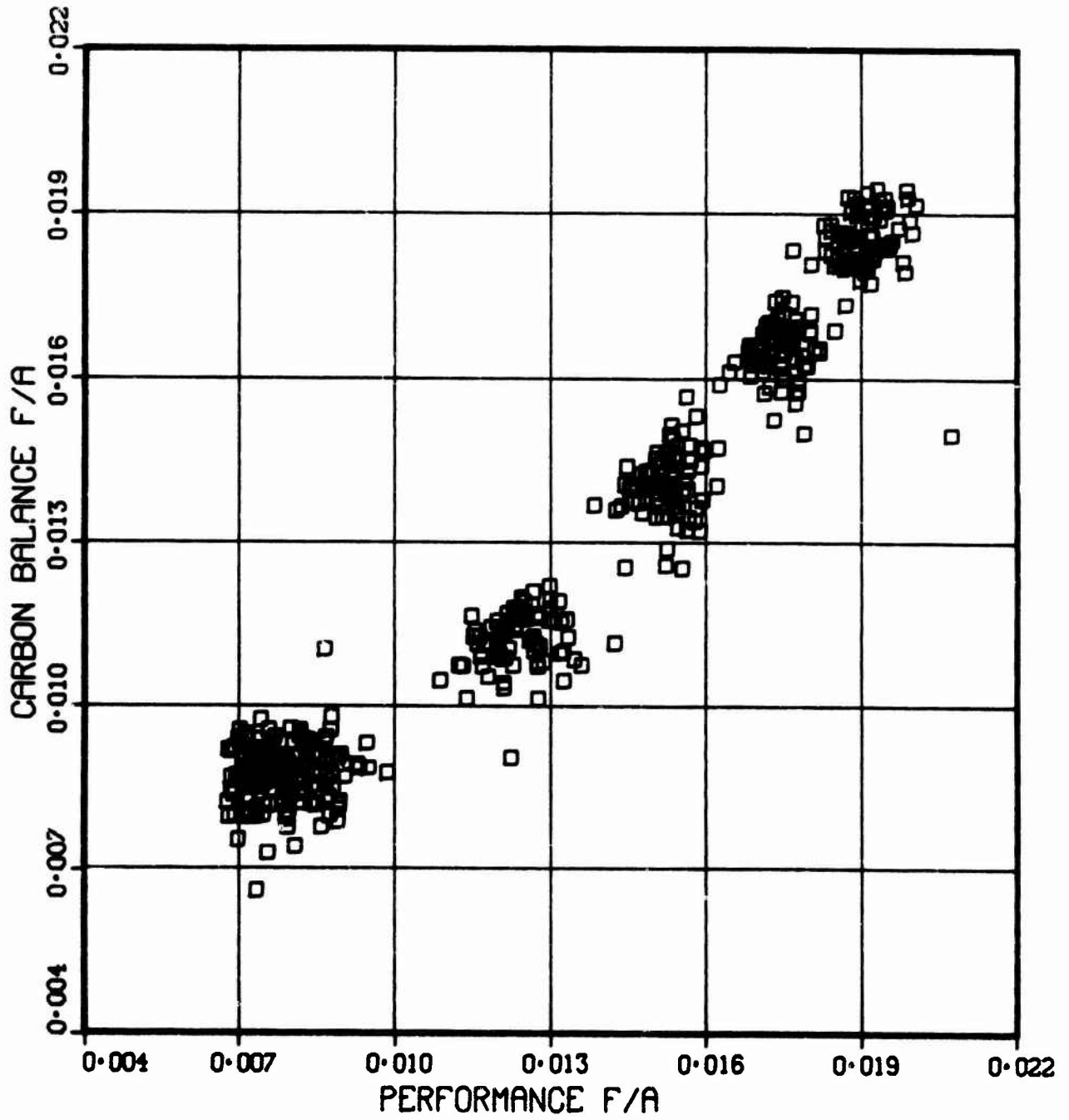


Figure A-5. JT9D-3A Fuel-Air Ratio Comparison

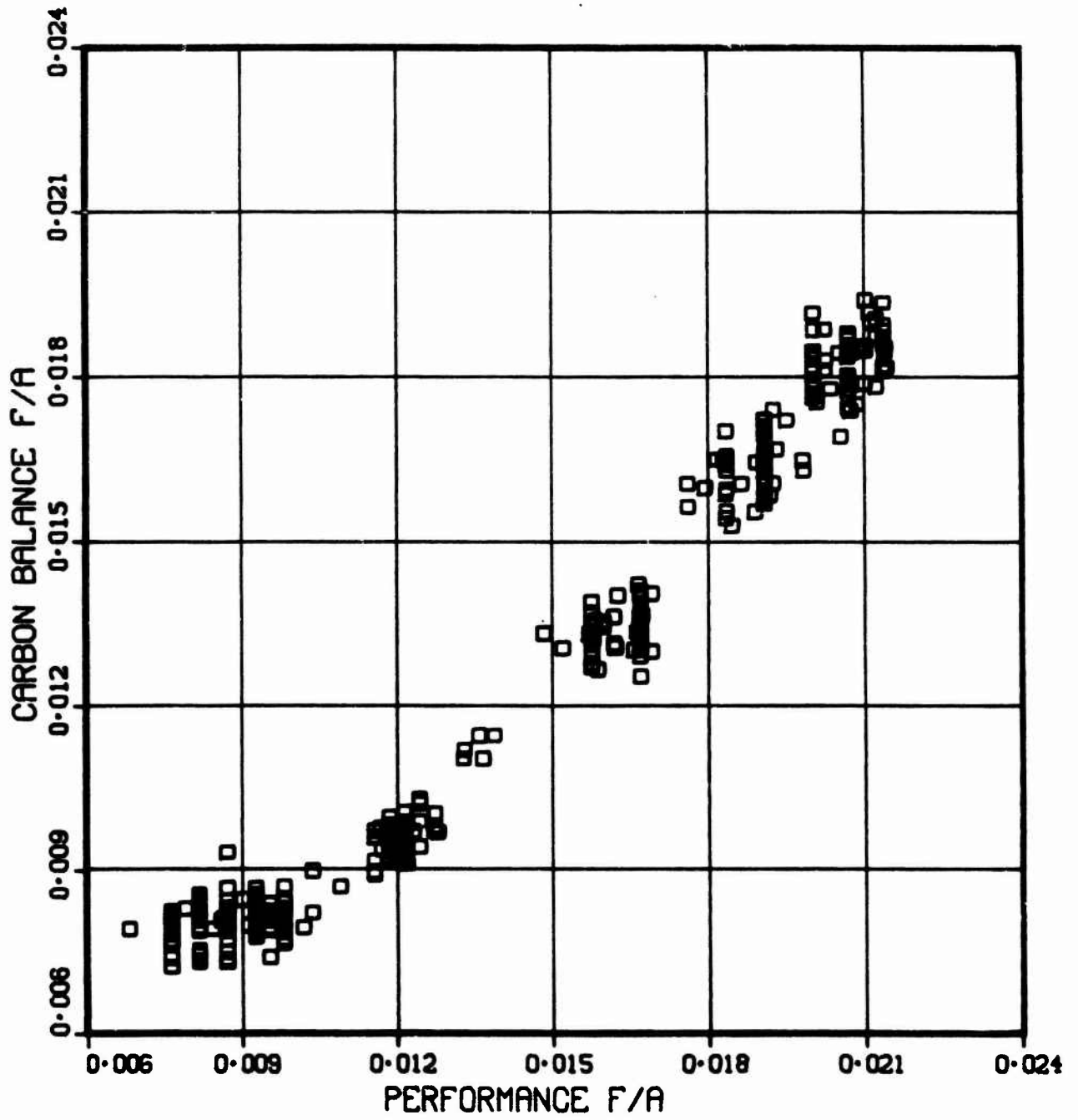


Figure A-6. RB211-22B Fuel-Air Ratio Comparison

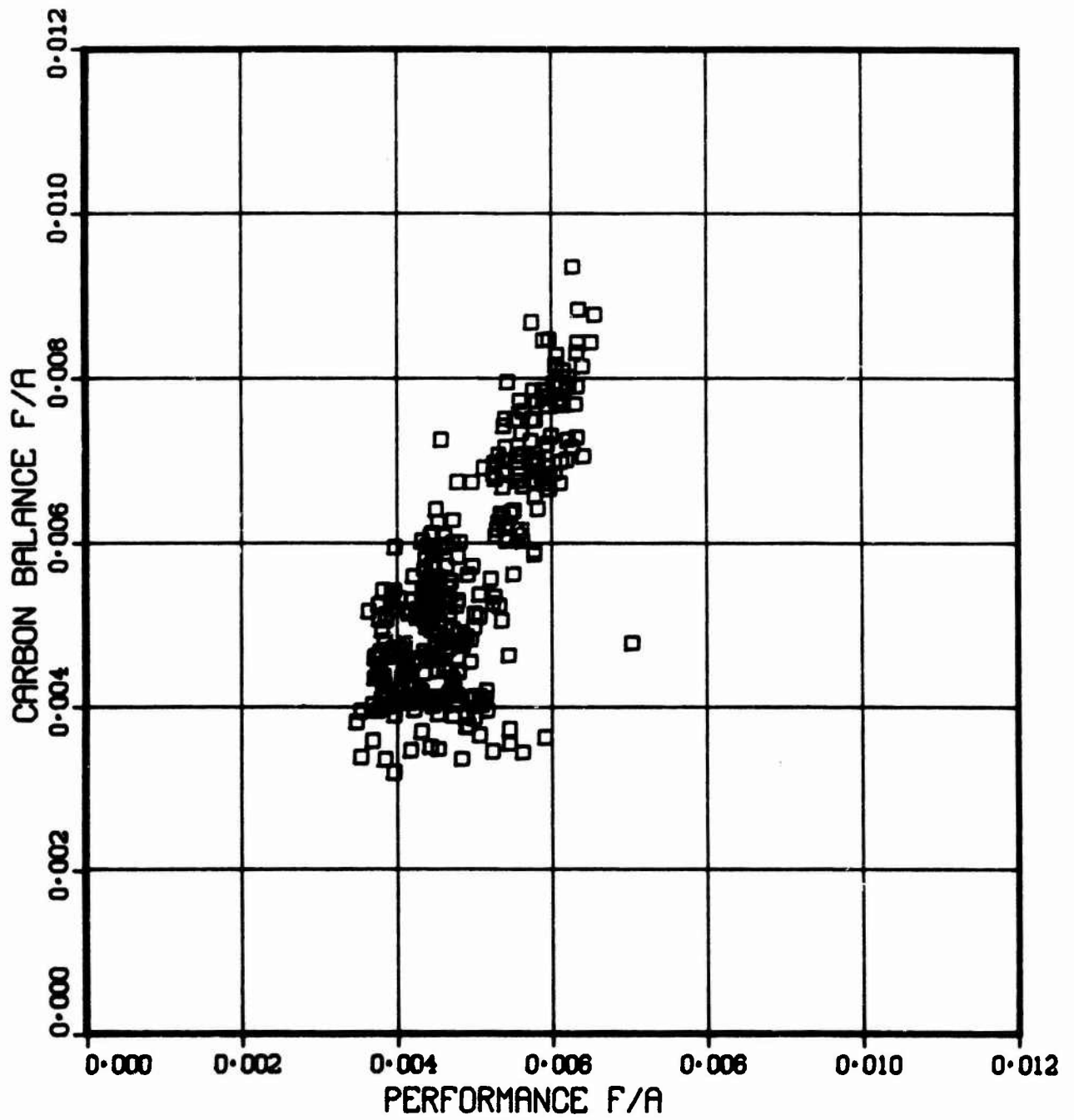


Figure A-7. CF700-2D Fuel-Air Ratio Comparison

APPENDIX B

DERIVATION OF GAS TURBINE EMISSION CORRELATING PARAMETERS AND AMBIENT CORRECTIONS

INTRODUCTION

The test program for the development of Time Degradation Factors for Turbine Engine Emissions was conducted on in-service engines to ensure that realistic results were obtained over the required intervals of engine operating time. Because of unavoidable variations in a number of factors in this field program, particularly ambient and engine operating conditions, the effect of time must be carefully separated from all other variables affecting emissions. Examination of the many factors which effect gas turbine emissions shows that the operating condition of the combustor, defined by the inlet variables pressures, temperature, humidity, air flow and fuel flow, are most significant. It should be appreciated, however, that for a given engine the combustor conditions are related specifically to engine operating conditions and the prevailing ambient pressure, temperature and humidity. From the more complete listing of factors together with their variables illustrated in Table B-1, it appears obvious that in order to separate the effect of time it is necessary to develop quantitative expressions which allow emission correlations for engine operating conditions and ambient corrections to be established. The analysis of these factors aimed at developing the required expressions is presented in this appendix.

TABLE B-1. - FACTORS EFFECTING ENGINE EMISSIONS

- ENGINE OPERATING CONDITIONS

Independent Variable - F

Dependent Variable - $\frac{N_1}{\sqrt{T_a}}, \frac{N_2}{\sqrt{T_a}}, \frac{M\sqrt{T_a}}{A P_a}, \text{EPR}$

- AMBIENT CONDITIONS

Pressure - P_a

Temperature - T_a

Humidity - H_a

- OPERATING LINE

Compressor Efficiency - η_{CP}

Compressor-Turbine Match - A_{NZ}, T_4

- FUEL CHARACTERISTICS

Carbon-Hydrogen Ratio

Aromatic Content

- TIME

BACKGROUND

The problem area affecting emission measurements, which is of particular importance here, involves the effect of changes in ambient temperature, pressure and humidity, on emission levels. The FAA has conducted investigations on this problem at the National Aviation Facilities Experimental Center (NAFEC) Atlantic City, New Jersey in order to quantify these effects for two engines, the TF30-P1 mixed flow turbofan and the J57-43 turbojet engine (Ref 13). Whereas the results of these investigations appear directly applicable to the data acquired from testing the JT8D and JT3D turbofan engines in the current degradation program, the mathematical expressions developed to describe the emissions characteristics as a function of ambient temperature and humidity cannot be applied with any degree of confidence to other engines. In addition, the results provide no quantitative expressions relating emission levels to the engine operating variable which will undoubtedly change in practice. It should be pointed out, however, that the data in covering a wide range of temperature and humidity presents an ideal source for the verification of emission models.

The derivation of emission models for NO_x and CO based on a kinetic analysis by Pratt & Whitney workers appears in Reference 15. The validity of these techniques was assessed through comparisons of corrected and uncorrected emission data spread and by the ability of the model to predict changes in emission levels with variations in burner operating conditions. Comparisons of the corrections, due to ambient effects, with those of the NAFEC work indicated substantial agreement in the case of NO_x . However, the comparisons in respect to carbon monoxide and hydrocarbons indicated poor agreement and anomalous effects of ambient temperature. An indication of the accuracy of the P&WA correction techniques is given in Table B-2.

As a result of these findings NREC has directed its efforts towards improved emission models for carbon monoxide and hydrocarbons. In this respect the early work associated with correlating combustion efficiency, Reference 16, appeared to be a particularly useful starting point.

TABLE B-2. - COMPARISON OF EMISSION INDEX SPREAD WITH VARIOUS CORRECTION TECHNIQUES

JT9D Production Engines
 19 Engine Pilot Lot
 Based on Interpolated Values

	Independent Variable	Correction Procedure	Standard Deviation 2S percent	Total Emission Index Spread percent
NO _x at Climb	Net Thrust	None	48.0	<u>+25.5</u>
	Burner Inlet Temperature	None	30.4	<u>+23.2</u>
	Burner Inlet Temperature	$NO_x \left[\frac{P_{ref}}{P_{obs}} \right]^{1/2}$	17.5	<u>+17.8</u>
	Burner Inlet Temperature	$NO_x \left[\frac{P_{ref}}{P_{obs}} \right]^{1/2} \cdot e^{.19 \Delta H}$	9.8	<u>+ 7.5</u>
CO at Idle	Net Thrust	None	56.4	<u>+40.9</u>
	Burner Fuel Air Ratio	None	48.4	<u>+39.8</u>
	Burner Fuel Air Ratio	$2016 \left[\frac{CO}{2016} \right] \left[\frac{P_{ref}}{P_{obs}} \right]^{.75} \left[\frac{T_{ref}}{T_{obs}} \right]$	35.0	<u>+27.0</u>
	Burner Fuel Air Ratio	$CO \cdot \left[\frac{P_{obs}}{P_{ref}} \right]$	19.6	<u>+16.0</u>
HC at Idle	Net Thrust	None	93.0	<u>+92.6</u>
	Burner Fuel Air Ratio	None	64.6	<u>+62.9</u>
	Burner Fuel Air Ratio	$HC \cdot \left[\frac{P_{obs}}{P_{ref}} \right]$	28.1	<u>+30.2</u>

INFLUENCE OF OPERATING VARIABLES ON CO EMISSIONS

Although combustion of a hydrocarbon fuel is a complex process considerable progress in quantifying its description may be made on the assumption that combustion can be fully described by a single global reaction. This view is supported by the suggestion that there is a limiting reaction which governs the over-all rate of combustion. Examination of the chemistry of the process shows that this is unlikely over a wide range of conditions and its justification lies in the fact that it allows greater simplification under limited circumstances. In the gas turbine combustor the circumstances which appear opportune for such simplifications are the normal operating conditions where carbon monoxide is a major contribution to combustion inefficiency.

Following the second order reaction rate theory approach of Longwell, Herbert and others, see Reference 16, it can be shown that the rate of fuel burned per unit volume is given by the following expression:

$$\frac{M \cdot F/A \cdot \eta}{V} = K [F] [O_2] \left(\frac{P}{RT}\right)^2 T^{0.5} e^{-E/RT}$$

or the fraction burned $\eta \propto \frac{VP^2}{M} \left\{ \frac{[F][O_2] e^{-E/RT}}{F/A T^{1.5}} \right\}$ (B-1)

where M/VP^2 is known as the reaction zone "loading". A weakness of Equation (B-1) is the complicated function of reaction zone temperature. In practical combustors this expression is not easily described and it is clearly advantageous to relate this factor to combustor entry conditions which are known more accurately. Fortunately, it has been found (see Ref 17), that this temperature dependent term is reasonably well described by the term $\exp(T_b/B)$, where T_b is the burner inlet temperature and B varies with the effective equivalence ratio of the reaction zone, as shown in Figure B-1. It should be added that experimental data indicates closer agreement with this overall model for a 1.75 exponent of pressure.

Hence a modified form of Equation B-1 may be written:

$$\eta \propto \left[\frac{VP^{1.75}}{M} \cdot e^{T_b/B} \right]$$

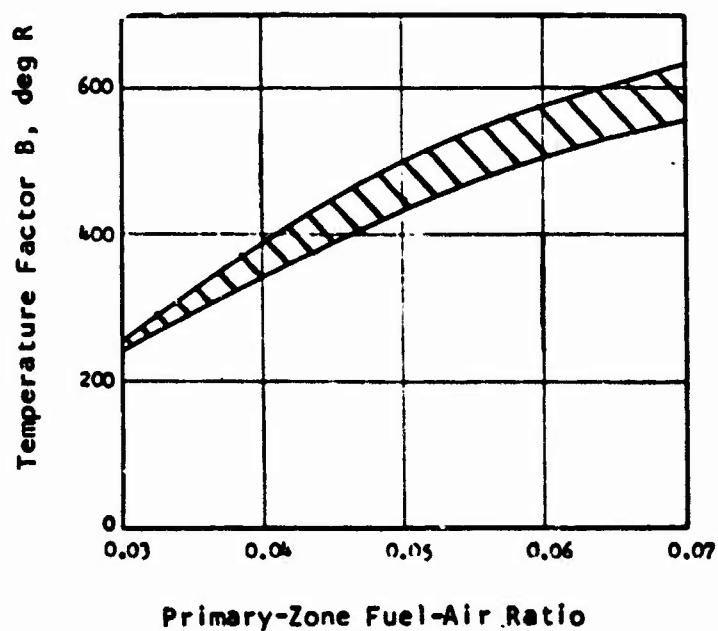


Figure B-1. Variation of Temperature Factor with Fuel-Air Ratio

The application of the theory of Greenhough and Lefebvre, Reference 17, results in a similar relationship which has been widely used in the design of combustors and correlation of experimental data.

$$\eta = f \left\{ \left[\frac{P_b^{1.75} A_{ref}^{0.75} D_{ref}^{0.4}}{M} \cdot \left(\frac{\Delta P}{q_{ref}} \right) \cdot e^{T_b/B} \right], \varphi \right\} \quad (B-2)$$

$$\text{or } \eta = f(\theta, \varphi)$$

where again the reaction zone temperature term is replaced by $\exp(T_b/B)$ in which B varies with effective equivalence ratio φ of the reaction zone. The over-all parameter given in Equation B-2, symbolized by θ , has been used extensively to correlate combustion efficiency and in most instances shows an inverse proportionality to combustion inefficiency as illustrated in Figure B-2. Hence for a given combustor geometry where A_{ref} , D_{ref} , $\Delta P/q_{ref}$ and $\frac{M\sqrt{T}}{P}$ are constants the combustion inefficiency:

$$\Delta\eta \propto \frac{1}{\theta} = \left[\frac{\text{Constant}}{P_b^{0.75} T_b^{0.5} e^{T_b/B}} \right]$$

It follows therefore that correlations of carbon monoxide emission index may be achieved through the following expression:

$$EI_{CO} \propto \left[\frac{1}{P_b^{0.75} T_b^{0.5} e^{T_b/B}} \right] \quad (B-3)$$

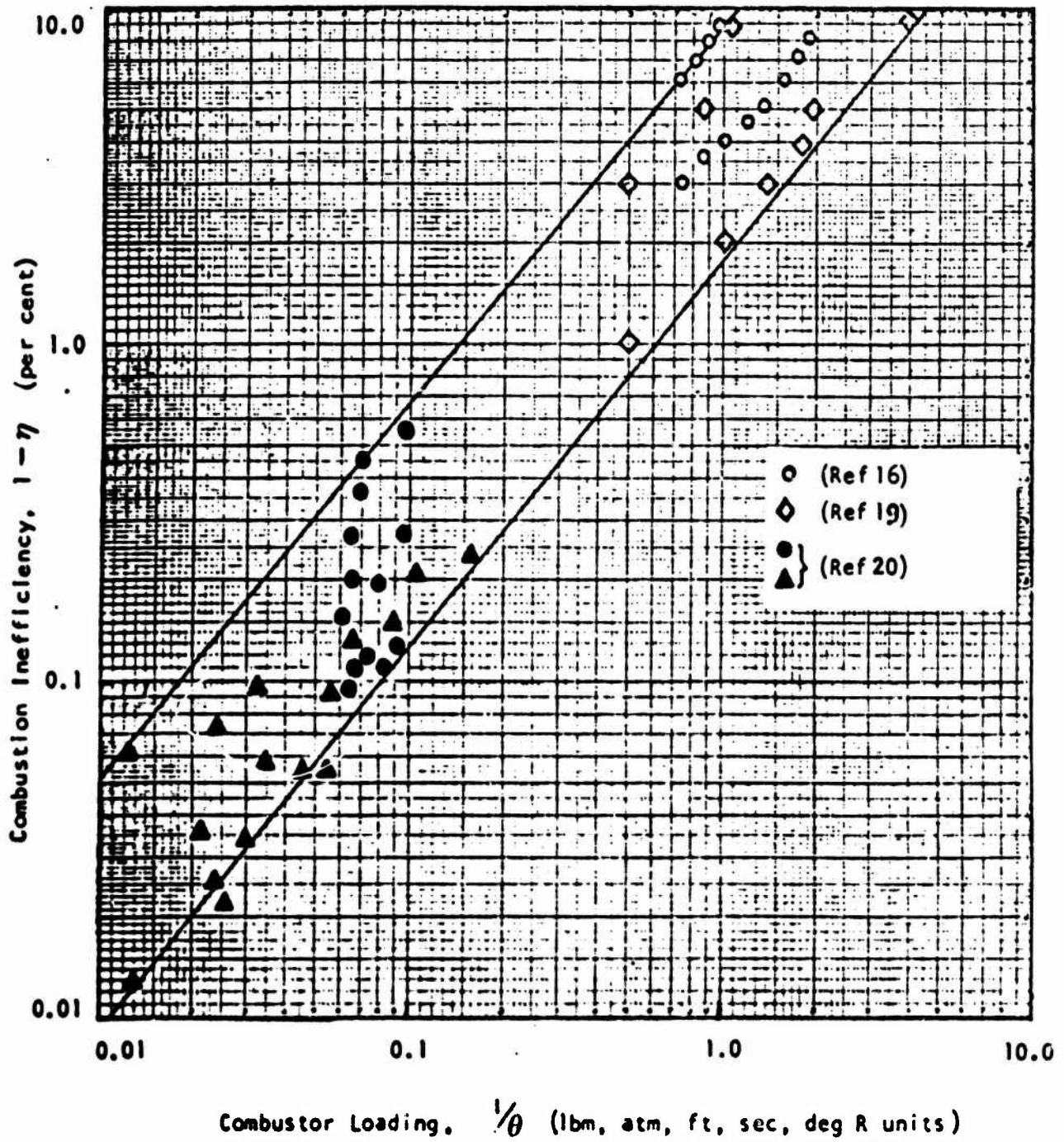
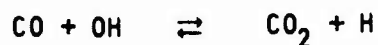


Figure B-2. Combustion Inefficiency Correlation

It is particularly significant at this point to compare the above relationships with those developed for the established rate controlling step for carbon monoxide oxidation, Reference 18.



This leads to the following rate equation:

$$-\frac{d[\text{CO}]}{dt} = k [\text{CO}] [\text{OH}] \left(\frac{P}{RT}\right)^2 T^{0.5} e^{-E/RT}$$

For the equilibrium $2 [\text{OH}] \rightleftharpoons [\text{H}_2\text{O}] + \frac{1}{2} [\text{O}_2]$, the above rate equation yields the following expression,

$$-\frac{d[\text{CO}]}{dt} = k [\text{CO}] [\text{H}_2\text{O}]^{0.5} [\text{O}_2]^{0.25} \left(\frac{P}{RT}\right)^{1.75} T^{0.5} e^{-E/RT} \quad (\text{B-4})$$

It can be seen that this expression satisfactorily explains the experimentally observed 1.75 exponent of pressure. Equation B-4 also indicates that for a given change in carbon monoxide fraction, the oxidation time

$$t_{\text{ox}} \propto \frac{1}{\left[[\text{H}_2\text{O}]^{0.5} [\text{O}_2]^{0.25} P_b^{1.75} T_b/B \right]}$$

Since the carbon monoxide inefficiency $\Delta\eta_{\text{CO}}$ may be expressed in terms of the ratio of oxidation time to the residence time in the reaction zone,

$$\eta_{\text{CO}} \propto \left[\frac{t_{\text{ox}}}{t_{\text{res}}} \right]$$

it follows that for a constant value of $\frac{M\sqrt{T_b}}{P_b}$ and small effects of water and oxygen concentrations:

$$Ei_{CO} \propto \frac{1}{\left[P_b^{0.75} \cdot T_b^{0.5} \cdot e^{T_b/B} \right]}$$

It would therefore appear comparing the above relationship with that found previously, Equation B-3, that from both carbon monoxide oxidation kinetics and semi-empirical global reaction rate theory the carbon monoxide emission index may be correlated using this expression. In order to further examine the validity of Equation B-3, a detailed analysis of the NAFEC work, Reference 13, was undertaken. Figure B-3 shows the carbon monoxide emission correlation over the operating power range of the TF30 engine and for ambient temperature varying from 18 to 90 deg F. The degree of correlation is very good and it is also apparent that over the prevailing ambient conditions investigated these effects are intrinsic to the correlating parameter. Since, for a given engine operating condition, T_b and P_b are related only to ambient temperature and pressure, ambient correction factors may be derived directly from the correlating parameter.

The carbon monoxide correlation for the J57 engine data, Figure B-4, although indicating some scatter is also good. At high power levels the effect of ambient temperature appears intrinsic to the correlation as with the TF30. At idle conditions, however, ambient temperature had little, if any, effect on the emissions. It will be seen later that this anomaly introduced an error in the derived ambient correction factor for both JT3D type engines.

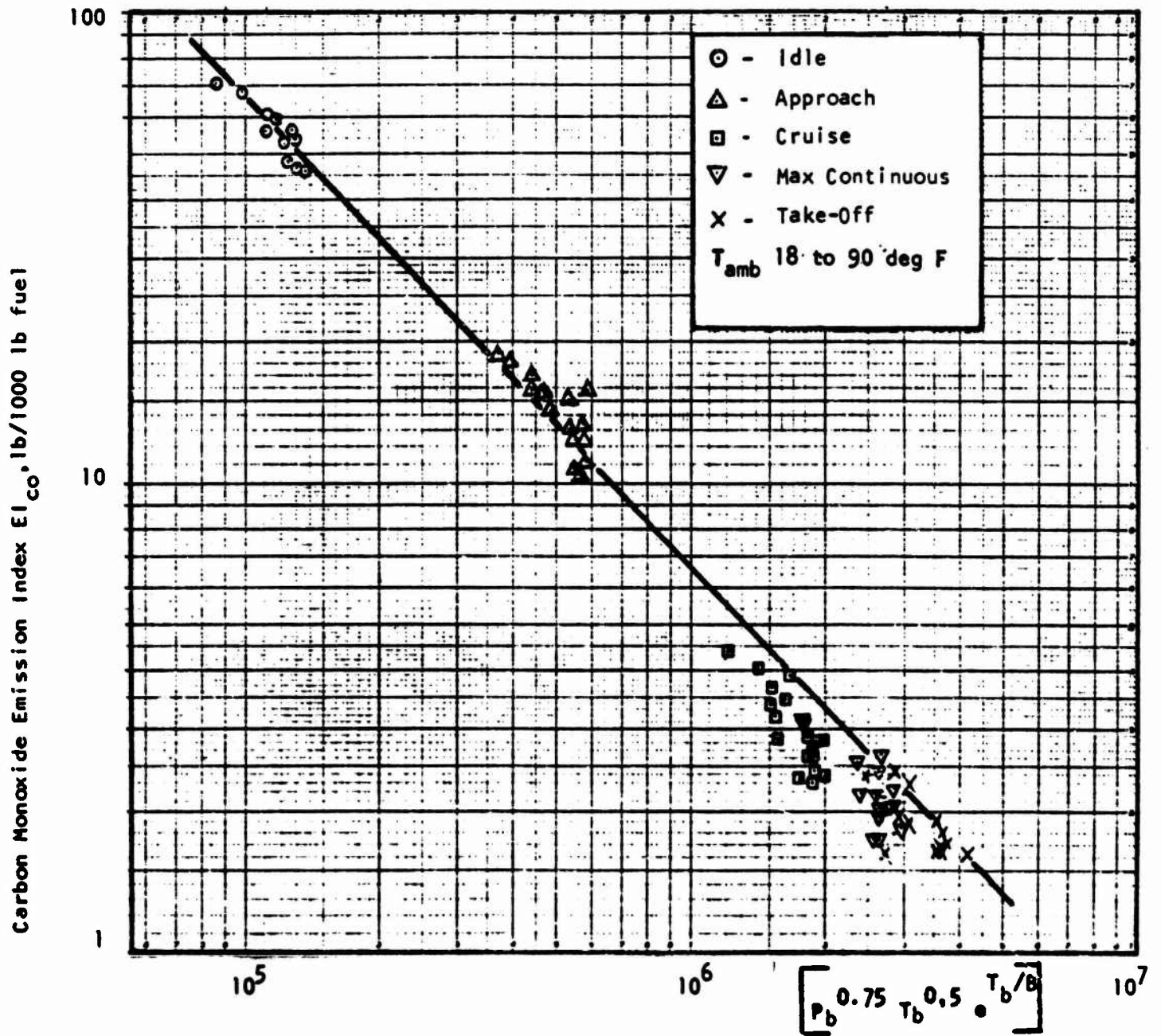


Figure B-3. Effect of Ambient Temperature on Carbon Monoxide Emissions for TF30

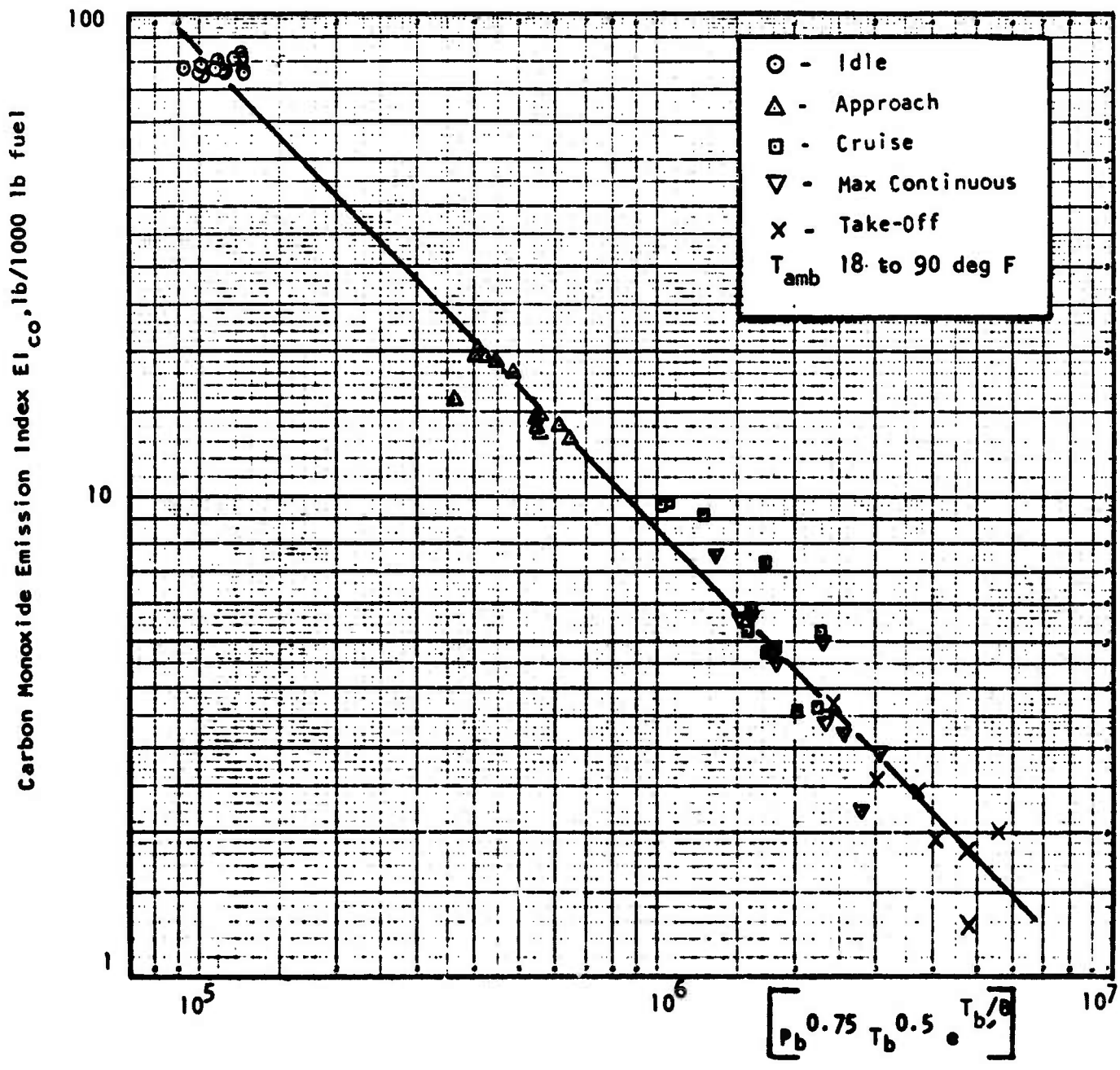


Figure B-4. Effect of Ambient Temperature on Carbon Monoxide Emissions for J57

INFLUENCE OF OPERATING VARIABLES ON HYDROCARBON EMISSIONS

As seen in the previous section simplified homogeneous gas phase reaction kinetics provided adequate expressions for correlating and correcting carbon monoxide emissions. Since the gas phase reaction of hydrocarbons are much faster than that for carbon monoxide oxidation, it may be postulated that the appearance of hydrocarbons in the exhaust from gas turbine combustors is due primarily to vapor or liquid phase-limiting processes. Under such conditions droplet evaporation in the cooler regions of the combustor, for example in film cooling or quenching layers close to the liner walls, is particularly significant.

The fraction of fuel injected which remains unburned will depend to a great extent on the over-all time for evaporation compared with the effective residence time in the combustor. On this basis it is reasonable to assume:

$$E_{\text{HC}} \propto \frac{\text{Evaporation Time} - t_{\text{ev}}}{\text{Residence Time} - \tau_{\text{res}}} \quad (\text{B-5})$$

It should be noted that this expression appears more valid at low power conditions of operation of the engine where temperatures are low and fuel droplets are relatively large due to the low fuel injector pressure. It is precisely these conditions where accurate correlations and correction factors are required due to the major contribution of low power emissions to the over-all emission cycle calculations.

It is well established that the lifetime of a droplet evaporating in a high temperature gas stream is given by:

$$t_{\text{ev}} = \frac{\rho_f d_0^2}{2.12 \mu_g B^{0.6} Re^{0.5}}$$

where ρ_f is the density of the fuel, B is the fuel transfer number, μ_g is the gas stream viscosity, Re is the Reynolds number and d_0 is the initial droplet size. Since the droplet size and relative velocity, U , may be expressed in terms of the fuel injector characteristic flow number, FN , and the volume flow of fuel, Q , as:

$$d_o = 300 \cdot \frac{FN^{0.8}}{Q^{0.55}}$$

$$U = \text{Constant} \cdot \frac{Q}{FN \rho_f^{0.5}}$$

then $t_{ev} = \text{Constant} \cdot \left[\frac{\rho_f^{1.25} FN^{1.7}}{\mu_g^{0.5} \rho_g^{0.5} Q^{1.325}} \right]$

The volume flow of fuel may be expressed alternatively as $Q = (M \cdot F/A) / \rho_f$ and since for normal operating condition of an engine $M \sqrt{T_b / P_b}$ is constant, the above expression may be written

$$t_{ev} = \text{Constant} \left[\frac{\rho_f^{1.25} FN^{1.7}}{\mu_g^{0.5} \rho_g^{0.5} \left(\frac{P_b \cdot F/A}{T_b^{0.5} \rho_f} \right)^{1.325}} \right]$$

or

$$t_{ev} = \text{Constant} \left[\frac{\rho_f^{2.575} FN^{1.7}}{P_b^{1.825} \left(\frac{F/A}{T_b^{0.5}} \right)^{1.325} \left(\frac{\mu_g}{T_g} \right)^{0.5}} \right]$$

Since the gas viscosity is proportional to the square root of the gas temperature, the term $(\mu_g/T_g)^{0.5}$ is approximately constant for the normal operating range of a combustor. Also, since the effective residence time of the droplet is related to the percentage pressure drop, $\Delta P/P_b$, a characteristic length, L_E , and the temperature, the following expression may be derived:

$$\frac{t_{ev}}{t_{res}} = \left[\frac{\rho_f^{2.575} FN^{1.7} \Delta P / P_b}{L_E} \right] \left[\frac{1}{P_b^{1.825} T_b^{0.5} f(F/A, T_b)} \right] \quad (B-6)$$

Examination of Equation B-6 indicates the powerful effect of fuel density and injector flow number and to a lesser extent, the influence of characteristic length. Also from both Equations B-5 and B-6 it can be seen that for a given combustor, fuel injector and fuel properties, the effect of operating conditions on hydrocarbon emissions may be correlated through the expression:

$$Ei_{HC} \propto \left[\frac{1}{P_b^{1.825} T_b^{0.5} f(F/A, T_b)} \right]$$

Although the precise functional relationship between the gas temperature effecting droplet evaporation, fuel-air ratio and combustor inlet temperature is difficult to establish, a convenient expression may be incorporated as follows:

$$Ei_{HC} \propto \left[\frac{1}{P_b^{1.8} T_b^{0.5} e^{T_b/B}} \right] \quad (B-7)$$

where B will depend on the effective fuel-air ratio in the region of droplet evaporation.

The validity of Equation B-7 was initially examined through the analysis of the NAFEC work, Reference 13, and the resulting correlations for the TF30 and J57 are shown in Figures B-5 and B-6 respectively. In both cases the low power, idle and approach, hydrocarbon emissions are illustrated. As can be seen the degree of correlation for the J57 engine is noticeably better than for the TF30 and would appear adequate for further development. It is of interest to note that although a search of the literature produced no help in establishing the above relationship, Equation B-7, a recent publication of work conducted by the General Electric Company, Reference 21,

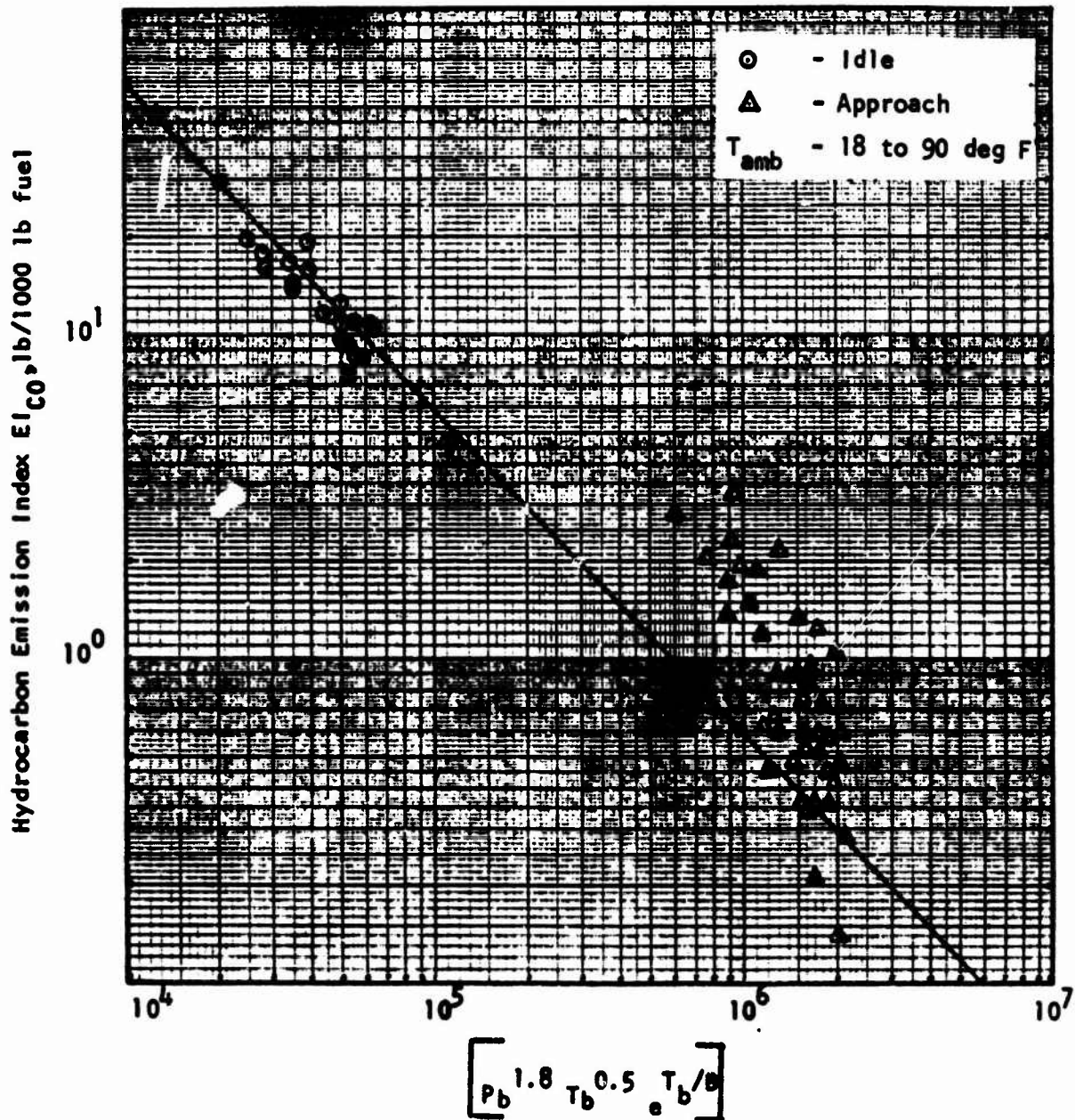


Figure B-5. Effect of Ambient Temperature on Hydrocarbon Emissions for TF30

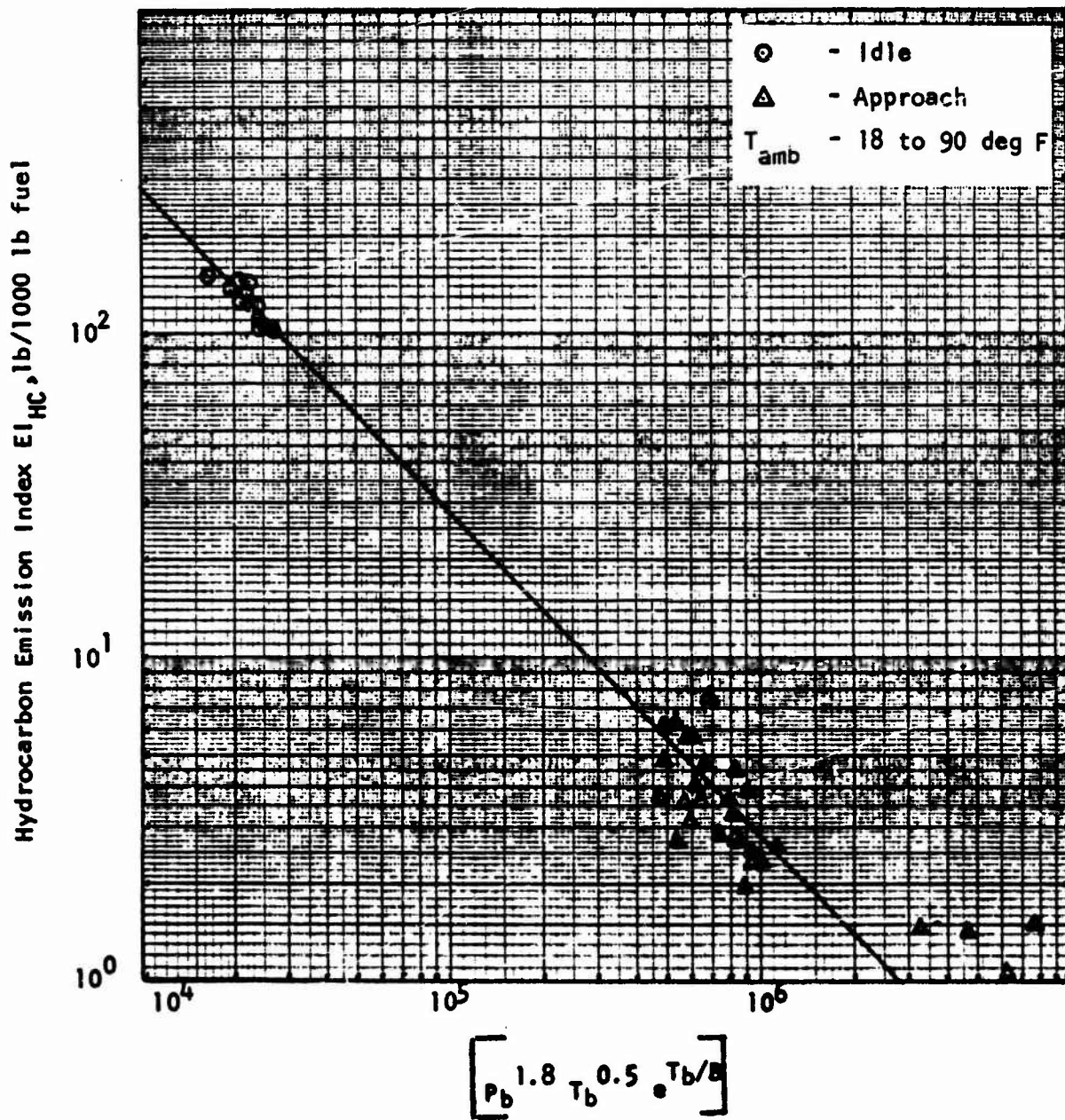


Figure B-6. Effect of Ambient Temperature on Hydrocarbon Emissions for J57

also indicates a pressure exponent of 1.8 controlling hydrocarbon emissions at low power conditions.

DEVELOPMENT OF CORRELATIONS

As indicated in Section 2.6.3 correlating parameters, derived on the theoretical basis outlined in the previous sections, were developed for each engine type during the course of the program. As derived they are of the basic form:

$$\left[P_b^{0.75} \cdot T_b \cdot e^{T_b/B_1} \right] \quad - \text{ for carbon monoxide}$$

$$\left[P_b^{1.8} \cdot T_b \cdot e^{T_b/B_2} \right] \quad - \text{ for hydrocarbons}$$

$$\left[P_b^{0.5} \cdot e^{(T_b/B_3 - 19H)} \right] \quad - \text{ for oxides of nitrogen}$$

The subscript b in the pressure and temperature terms denotes burner inlet conditions and B_1 , B_2 , and B_3 are constants which depend upon engine type. The burner inlet conditions, themselves, can be represented in terms of measured operating parameters and ambient conditions.

In addition to the basic data provided in Reference 13, analysis of results from individual engine types in the degradation program provided the appropriate values of B_1 , B_2 , and B_3 . The appropriate correlating parameter and constants for each engine type are given in Tables B-3, 4 and 5. It should be noted, however, that in the case of hydrocarbon emissions from the JT8D type engines, a significantly better correlation was found using the carbon monoxide parameter.

TABLE B-3. - CORRELATION PARAMETER FOR CARBON MONOXIDE

ENGINE TYPE	CORRELATING PARAMETERS CARBON MONOXIDE	
JT8D-9	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = \begin{cases} (400 - F/A \cdot 10^4) \\ 315 \text{ idle} \end{cases}$
JT8D-7	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = \begin{cases} (400 - F/A \cdot 10^4) \\ 330 \text{ idle} \end{cases}$
JT3D-3B	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = (400 - F/A \cdot 10^4)$
JT3D-7	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = (400 - F/A \cdot 10^4)$
JT9D-3A	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = (400 - F/A \cdot 10^4)$
CF700	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = \begin{cases} (600 - F/A \cdot 10^4) \\ 500 \text{ idle} \end{cases}$
RB211	$P_b^{0.75} \sqrt{T_b} e^{T_b/B_1}$	$B_1 = \begin{cases} (525 - F/A \cdot 10^4) \\ (600 - F/A \cdot 10^4) \\ \text{idle and Approach} \end{cases}$

TABLE B-4. - CORRELATION PARAMETER FOR HYDROCARBONS

ENGINE TYPE	CORRELATING PARAMETERS HYDROCARBONS
JT8D-9	$P_b^{0.75} \sqrt{T_b} \cdot T_b / (500 - F/A \cdot 10^4)$
JT8D-7	$P_b^{0.75} \sqrt{T_b} \cdot T_b / (400 - F/A \cdot 10^4)$
JT3D-3B	$P_b^{1.8} \sqrt{T_b} \cdot T_b / 140$
JT3D-7	$P_b^{1.8} \sqrt{T_b} \cdot T_b / 140$
JT9D-3A	$P_b^{1.8} \sqrt{T_b} \cdot T_b / 240$
CF700	$P_b^{1.8} \sqrt{T_b} \cdot T_b / 475$
RB211	$P_b^{1.8} \sqrt{T_b} \cdot T_b / 450$

TABLE B-5. - CORRELATION PARAMETER FOR OXIDES OF NITROGEN

ENGINE TYPE	CORRELATING PARAMETERS OXIDES OF NITROGEN
JT8D-9	$P_b^{0.5} \cdot e^{T_b/725} / e^{19H}$
JT8D-7	$P_b^{0.5} \cdot e^{T_b/500} / e^{19H}$
JT3D-3B	$P_b^{0.5} \cdot e^{T_b/675} / e^{19H}$
JT3D-7	$P_b^{0.5} \cdot e^{T_b/600} / e^{19H}$
JT9D-3A	$P_b^{0.5} \cdot e^{T_b/225} / e^{19H}$
CF700	$P_b^{0.5} \cdot e^{T_b/600} / e^{19H}$
RB211	$P_b^{0.5} \cdot e^{T_b/275} / e^{19H}$

AMBIENT CORRECTIONS

A convenient method of establishing "Reference" values of emission indexes is provided by normalizing the correlating parameter with respect to some reference value. These correlations are given below using a notation consistent with Reference 15, but it should be noted that--

Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)

Subscript "obs" refers to actual values or values observed for a particular test and mode

Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg, and 0.0 lbm H₂O/lbm dry air), or a value corrected to standard day conditions.

The normalized values of the correlating parameter are identified as "Emission Factors" - F_{CO} , F_{HC} and F_{NO} - and are defined:

$$F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{0.75} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{0.5} \left\{ \begin{array}{l} \left[\frac{T_{b,obs}/B'_1}{T_{b,ref}/(B'_1 - F/A_{ref} \cdot 10^4)} \right] \text{ for idle} \\ \left[\frac{T_{b,obs}/(B'_1 - F/A_{obs} \cdot 10^4)}{T_{b,ref}/(B'_1 - F/A_{ref} \cdot 10^4)} \right] \text{ elsewhere} \end{array} \right.$$

$$F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{0.5} \cdot e^{(T_{b,obs} - T_{b,ref})/B_2}$$

$$F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{0.5} \cdot e^{\{(T_{b,obs} - T_{b,ref})/B_3 - 19H\}}$$

where

$$B' = \begin{cases} B_1 & \text{for idle} \\ B_1 + F/A \cdot 10^4 & \text{elsewhere} \end{cases}$$

It follows therefore,

$$\frac{EI_{CO}}{(EI_{CO})_{ref}} = \frac{1}{F_{CO}}$$

$$\frac{EI_{HC}}{(EI_{HC})_{ref}} = \frac{1}{F_{HC}}$$

and

$$\frac{EI_{NO}}{(EI_{NO})_{ref}} = F_{NO}$$

Each of the above Emission Factors may be evaluated in terms of cockpit data by defining the burner inlet conditions P_b and T_b from:

$$P_{b,ref} = P_{a,ref} \cdot \left(\frac{T_{b,ref}}{T_{a,ref}} \right)^\alpha$$

$$T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$$

$$P_{b,obs} = P_{a,obs} \cdot \left(\frac{T_{b,obs}}{T_{a,obs}} \right)^\alpha$$

$$T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$$

where the functions f and α are obtained for an engine type from the manufacturer. The relationship necessary to correct emission indexes to "standard" conditions may be similarly derived:

$$\frac{(EI_{CO})_{std}}{(EI_{CO})_{ref}} = \frac{1}{(F_{CO})_{std}}$$

$$\frac{(EI_{HC})_{std}}{(EI_{HC})_{ref}} = \frac{1}{(F_{HC})_{std}}$$

$$\frac{(EI_{NO})_{std}}{(EI_{NO})_{ref}} = (F_{NO})_{std}$$

where

$$(F_{CO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{0.75} \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{0.5} \left\{ \begin{array}{l} \frac{e^{T_{b, std}/B_1'}}{e^{(T_{b, ref}/B_1' - F/A_{ref} \cdot 10^4)}} \quad \text{for idle} \\ \frac{e^{(T_{b, std}/B_1' - F/A_{std} \cdot 10^4)}}{e^{(T_{b, ref}/B_1' - F/A_{ref} \cdot 10^4)}} \quad \text{elsewhere} \end{array} \right\}$$

$$(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1.8} \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{0.5} \cdot e^{(T_{b, std} - T_{b, ref})/B_2}$$

$$(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{0.5} \cdot e^{(T_{b, std} - T_{b, ref})/B_3}$$

$$\text{and } P_{b, std} = P_{a, std} \left(\frac{T_{b, std}}{T_{a, std}} \right)^\alpha, \quad T_{b, std} = \frac{T_{a, std}}{518.7} \cdot f \left(N_{2, std} \sqrt{\frac{T_{a, std}}{518.7}} \right)$$

The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,

$$\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{T_a}$$

remain constant, and the equations for $T_{b, std}$ and $(F_{CO})_{std}$ should be modified to read

$$T_{b, std} = \frac{T_{a, std}}{518.7} \cdot f \left(N_{2, obs} \sqrt{\frac{T_{a, obs}}{518.7}} \right)$$

$$(F_{CO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{0.75} \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{0.5} \left\{ \begin{array}{l} \left[\frac{e^{T_{b, std}/B_1'}}{e^{(T_{b, ref}/B_1' - F/A_{ref} \cdot 10^4)}} \right] \quad \text{for idle} \\ \left[\frac{e^{(T_{b, std}/B_1' - T_{a, std} (F/A_{obs}/T_{a, obs}) \cdot 10^4)}}{e^{(T_{b, ref}/B_1' - F/A_{ref} \cdot 10^4)}} \right] \quad \text{otherwise} \end{array} \right\}$$

Dividing the equations for standardized emission indexes by the equations for observed values, emission indexes corrected to standard ambient conditions can then be calculated from

$$(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \cdot EI_{CO}$$

$$(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \cdot EI_{HC}$$

and

$$(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \cdot EI_{NO}$$

In general the comparisons between NREC and FAA corrected data for CO, HC, and NO are extremely good. Typical examples are shown in Figure B-7, B-8, and B-9 for the JT8D-7. In some instances, however, deviations appeared, particularly at idle conditions for carbon monoxide and hydrocarbons, which indicated a need for further examination.

In the case of the JT3D-7 and JT3D-3B variability in the carbon monoxide comparisons are evident-- Figure B-10 and B-11. Although the actual correlations of data for these engines appeared particularly good from Figures B-12 and B-13, closer examination of the original data from which these correlations were derived showed that the carbon monoxide emission index at idle had little if any dependence on ambient conditions (see Fig. B-4). It is evident, therefore, that in this particular case the deviations indicated are introduced by the application of the NREC ambient correction factor. Although a simple solution to this anomaly could be the elimination of any correction, in order to preserve the above rationale a mathematical approach is adopted. The approach consists of increasing the constant, B, in the correlating factor so as to make the correction relatively insensitive to ambient temperature at the idle condition. The modified expression used for this particular case is:

$$P_b^{0.75} \sqrt{T_b} e^{T_b / 2 \times 10^3}$$

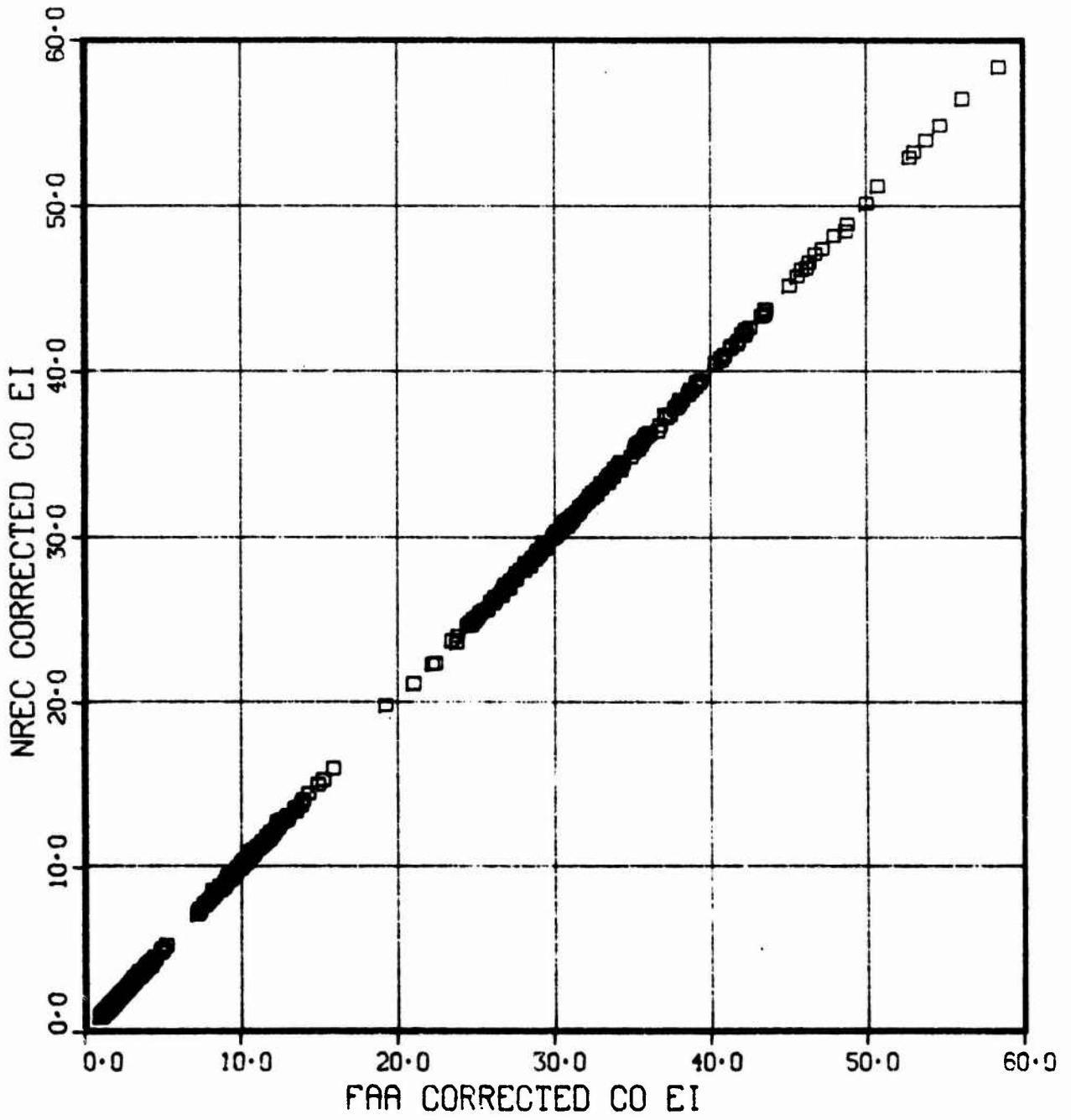


Figure B-7. Comparison of Ambient Corrections for JT8D-7 CO Emissions Data

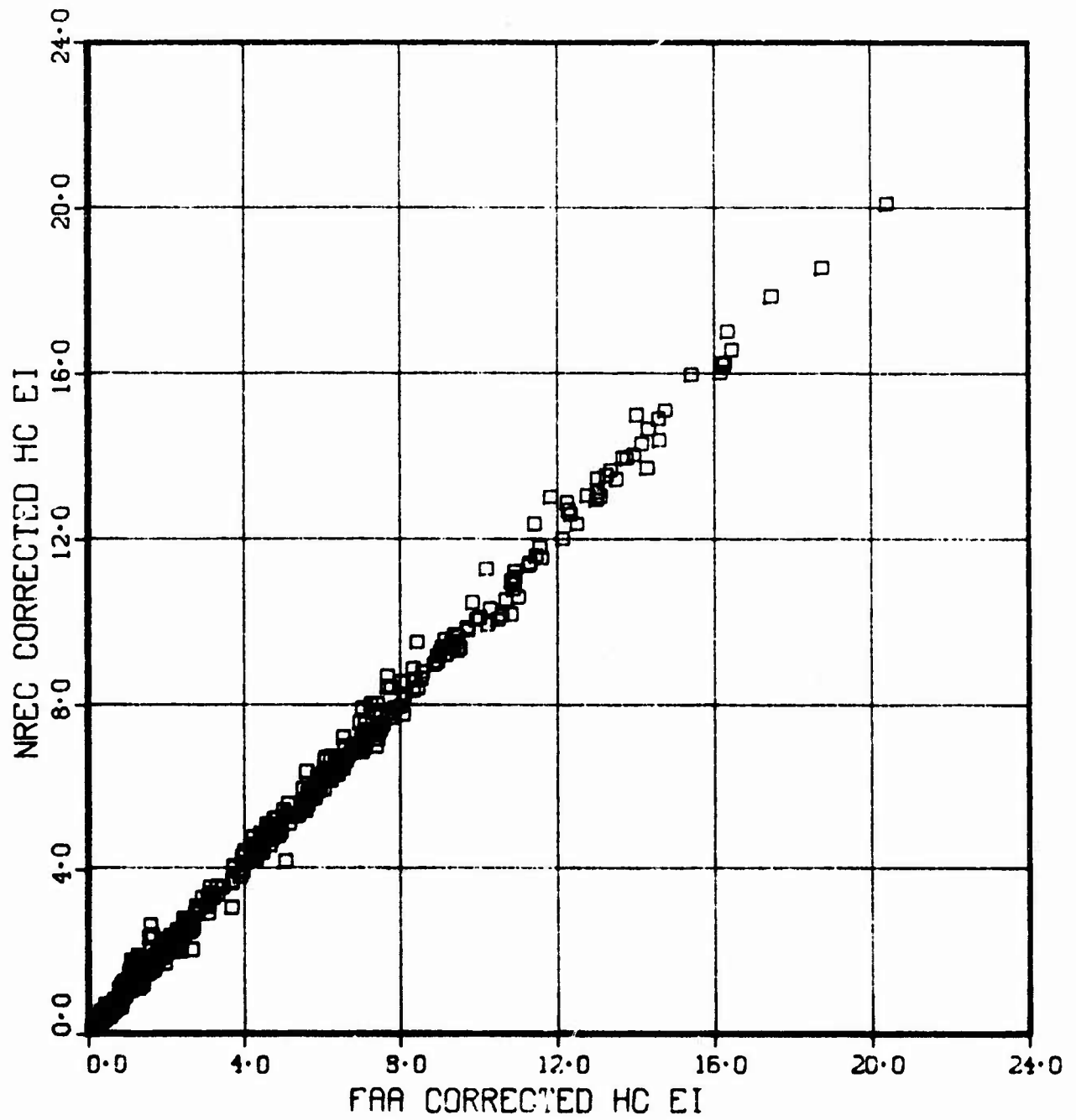


Figure B-8. Comparison of Ambient Corrections for JT8D-7 HC Emissions Data

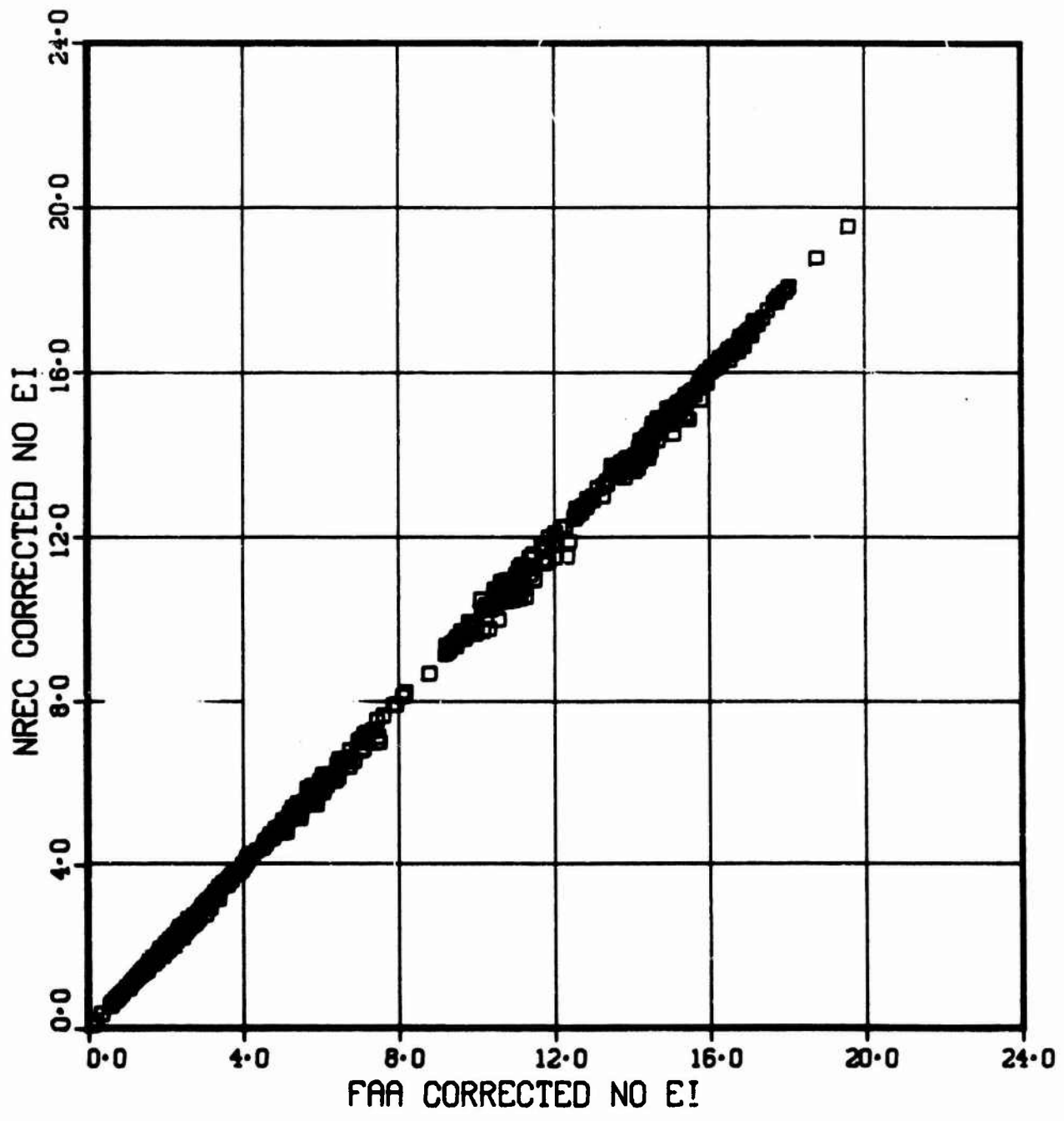


Figure B-9. Comparison of Ambient Corrections for JT80-7 NO Emissions Data

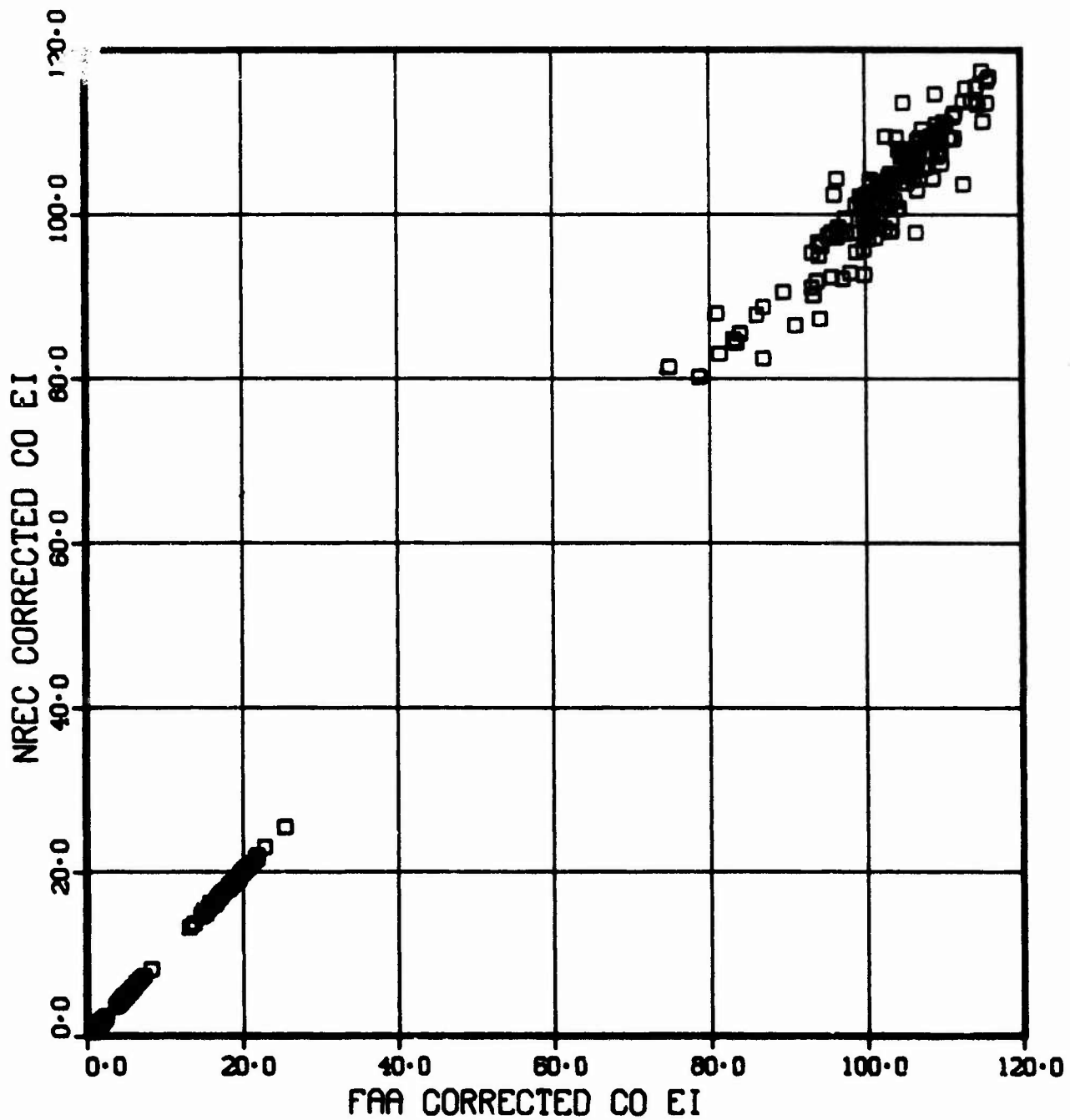


Figure B-10. Comparison of Ambient Corrections for JT3D-7 CO Emission Data

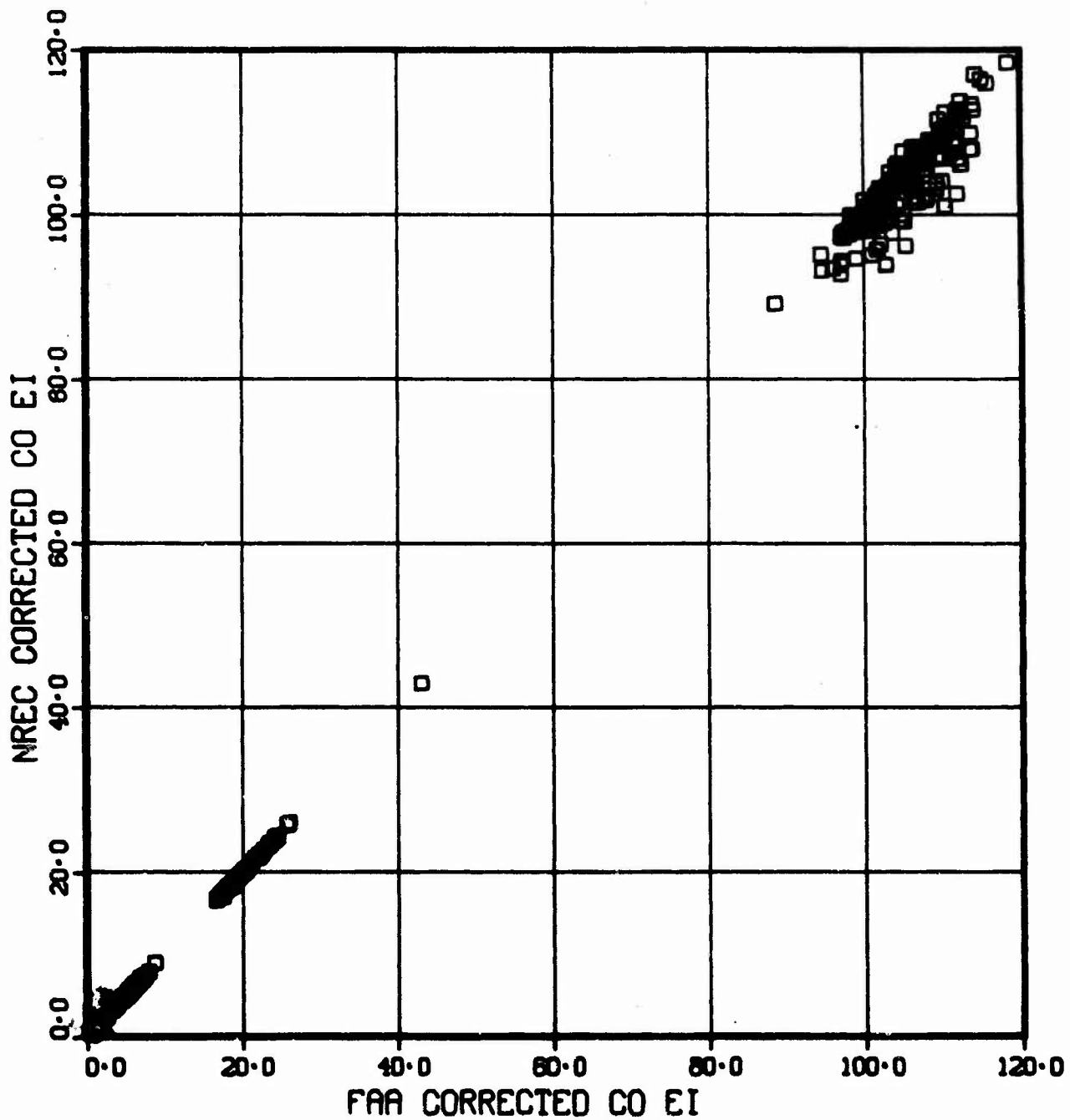


Figure B-11. Comparison of Ambient Corrections for JT3D-3B CO Emission Data

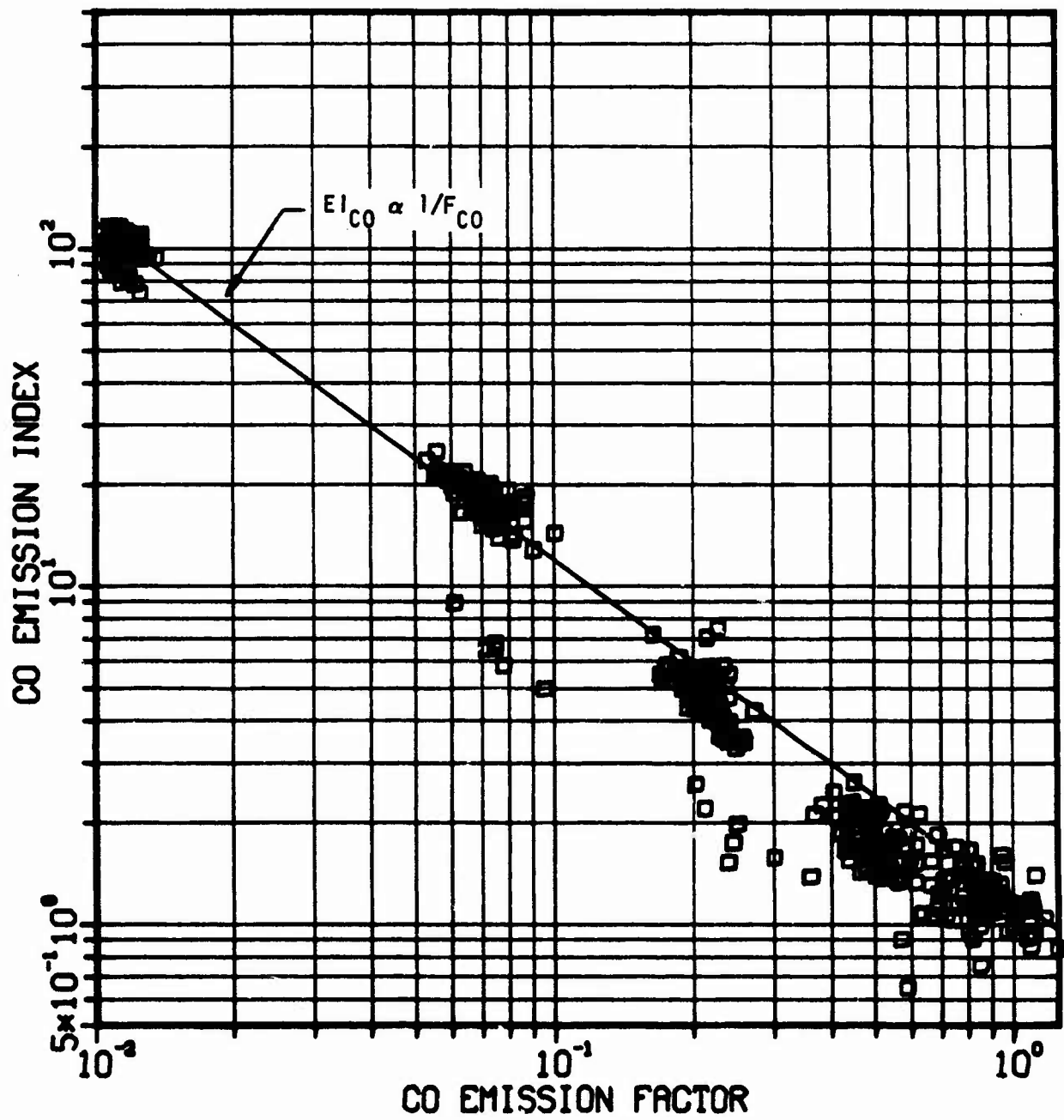


Figure B-12. JT3D-7 CO Emission Data

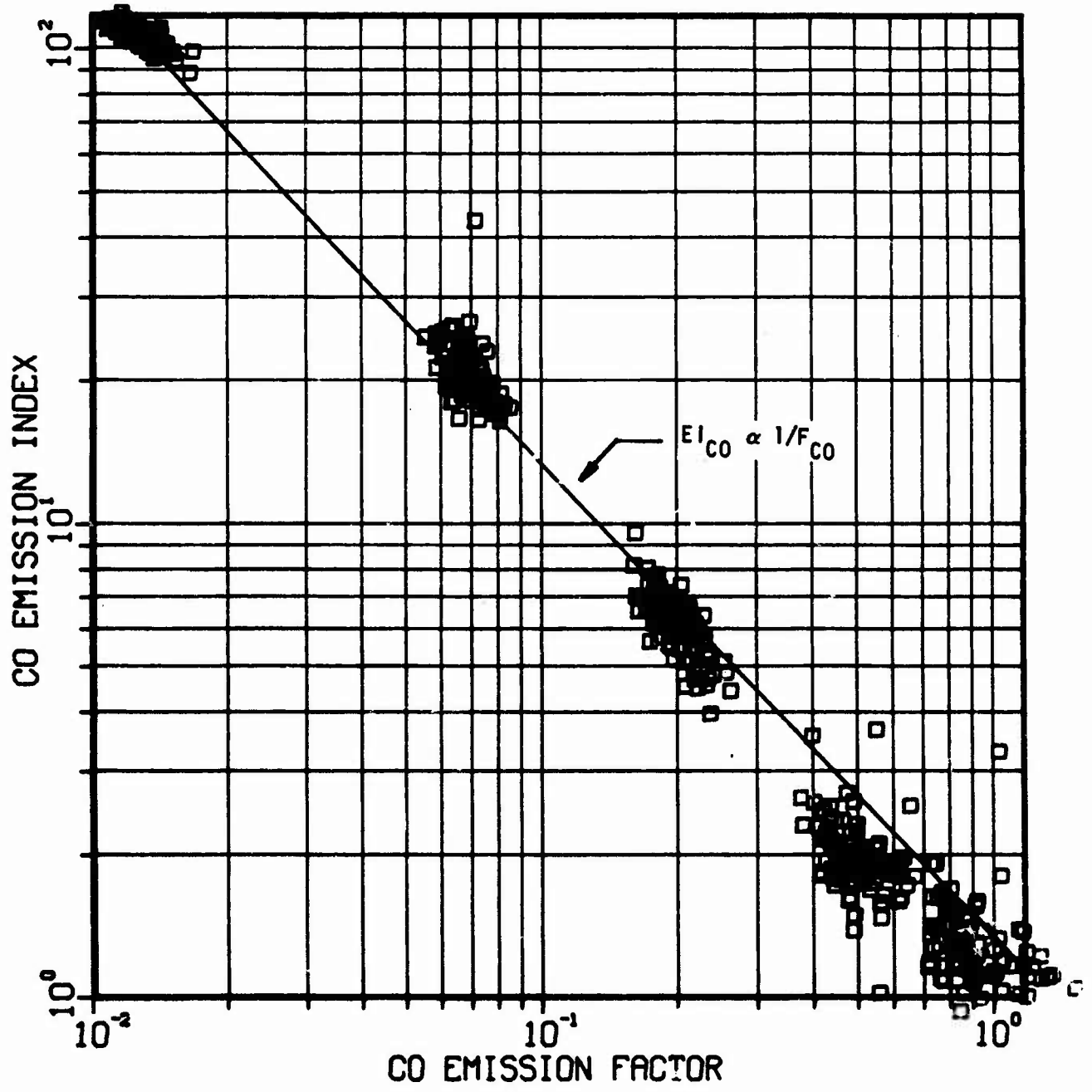


Figure B-13. JT30-3B CO Emission Data

The resultant improvement in comparisons of NREC and FAA corrected index is clearly indicated in Figure B-14 and B-15.

Due to considerable difficulty in applying the standard hydrocarbon correlating parameter, in the case of the JT8D-9 and the JT8D-7, the carbon monoxide parameter was applied more successfully. However, the comparisons between NREC and FAA corrected emission indexes in Figure B-16 indicates poor agreement in the case of the JT8D-9. It should be noted that for this particular engine type considerable problems were encountered in measuring consistent hydrocarbons due to fuel leaks from 'B' nuts.

Generally it can be stated that correlation and correction factors were found to be successfully applied on most engines. Difficulties were only encountered with the hydrocarbon factors applied to the mixed flow type engines.

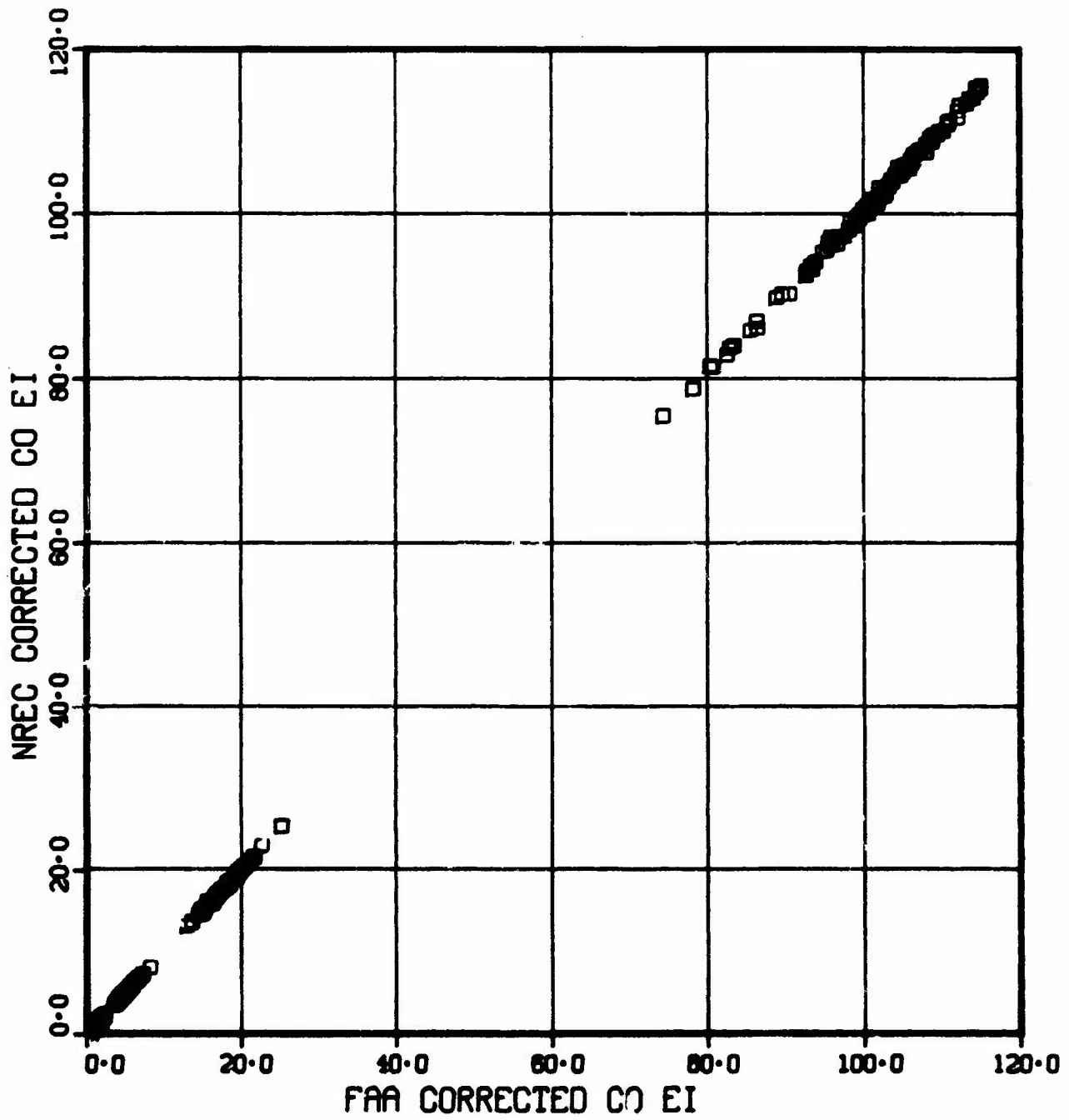


Figure B-14. Comparison of Ambient Corrections for JT3D-7 CO Emission Data

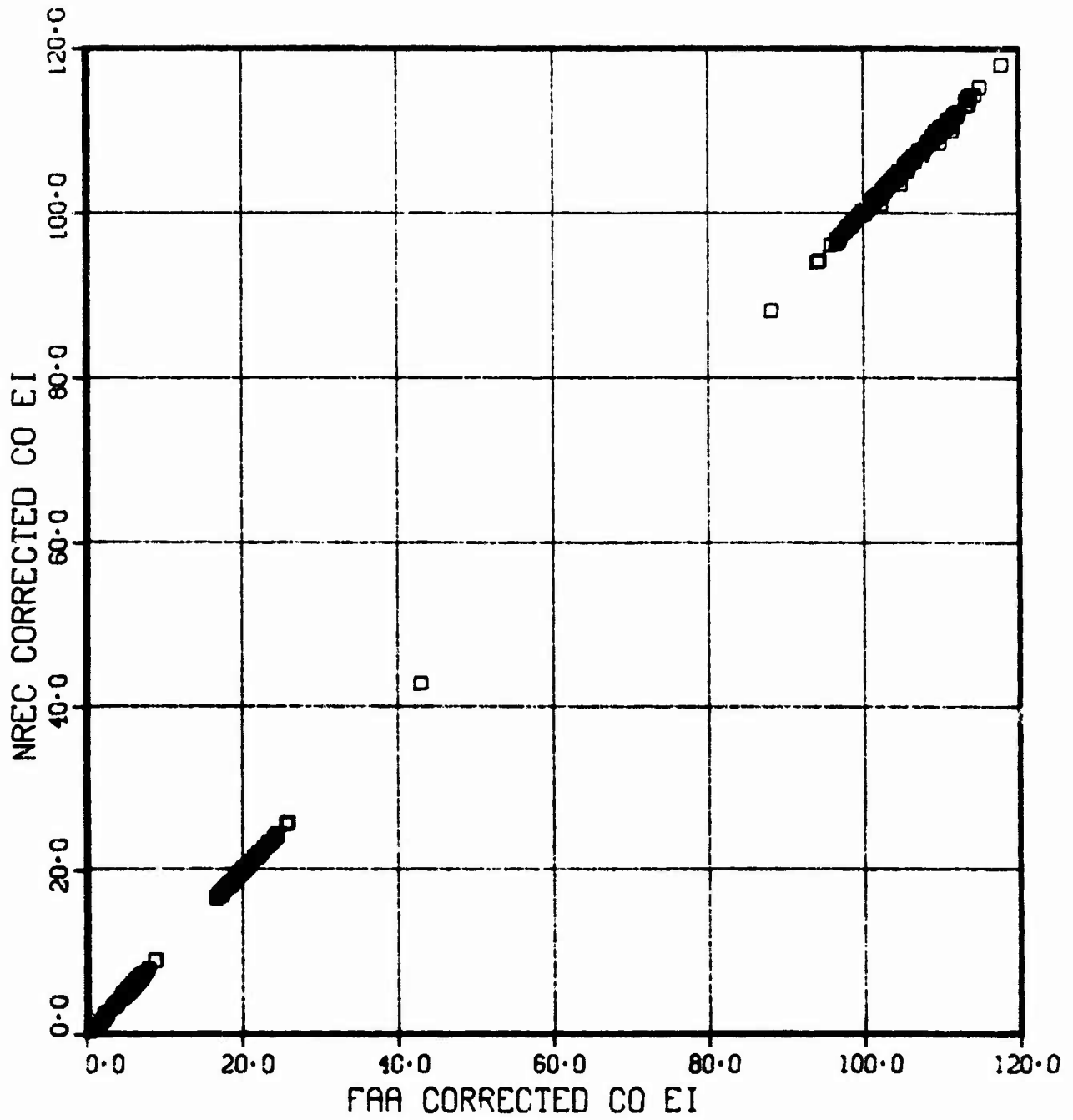


Figure B-15. Comparison of Ambient Corrections for JT3D-3B CO Emission Data

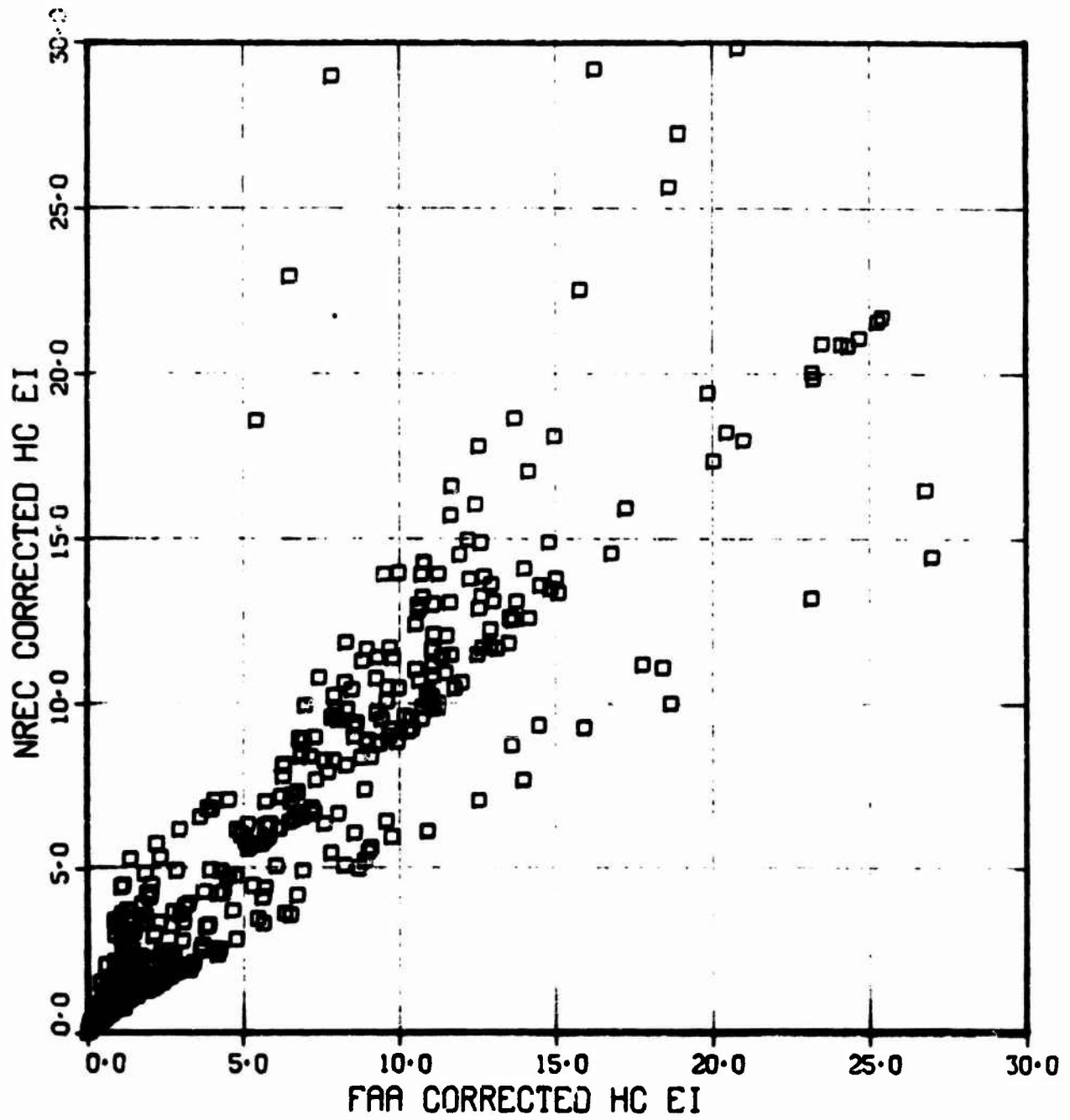


Figure B-16. Comparison of Ambient Corrections
for JT8D-9 HC Emission Data

APPENDIX C
DEVELOPMENT OF SMOKE NUMBER
CORRECTION FACTORS

INTRODUCTION

During the test program for the development of Time Degradation Factors for Turbine Engine Emissions in addition to monitoring gaseous emissions of carbon monoxide, hydrocarbons, and oxides of nitrogen, exhaust smoke was also measured. The technique employed for these smoke measurements was essentially that outlined by EPA, for aircraft engines in the Federal Register, July 17, 1973, Volume 38, Number 136 Part II. The method is basically one of paper filtration under controlled flow conditions and subsequent smoke spot reflectance measurement. Although a smoke meter conforming to the required standards was employed for smoke number determination procedural difficulties were encountered in the execution of the method due to the limited time engines could operate at take-off power. Consequently smoke measurements were made at only one sample weight per square inch of filter paper and corresponding to the interpolated value, 0.0230 lb/sq ins required in reporting the smoke number by the EPA method.

In addition to the above limitation it became evident as the program proceeded that sample line and smoke system contamination resulted in spurious smoke number measurements. The effects were most noticeable with tests conducted in San Francisco where smoke data from the JT9D and RB211 appeared higher than normal and also some unexplainably high smoke numbers were encountered from time-to-time on the JT8D-9 engines. From the evidence accumulated the problem appears to be related to soot build-up in the sampling line and smoke sampling train and is reasoned as follows.

The testing of JT3D type engines, which are copious producers of smoke results in gradual accumulation of smoke particles on the inside surfaces of the sample line and smoke sampling train. Subsequent operation of the system at high pressures, particularly at take-off EPR, scours the soot from the surfaces resulting in apparently high levels

of smoke due to this additional soot deposition on the filter paper. This reasoning is substantiated by the fact that most of the erratic levels of smoke are recorded for engines operating at take-off conditions. Also it has been seen that after cooling of the sample line, purging with nitrogen, at the appropriate pressure and flow for take-off conditions, deposits considerable amounts of soot on the smoke sampling filter paper. Detailed examination of the contaminating soot shows flakes of various sizes all much larger than normal soot particles. In addition it was found from chronological examination of smoke results that high smoke results usually appeared subsequent to JT3D testing.

This appendix summarizes the finds of work aimed at:

1. Identifying smoke contaminated results
2. Establishing appropriate correction factors.

APPROACH

Following careful examination of numerous smoke spot filter paper samples it became apparent that significant variations in the ratio of front to back side smoke number occurred when unusually high smoke numbers were detected. An appreciation of the change in value of this ratio can be made from the data illustrated in Figure C-1. It can be seen that at high operating EPR values, for the JT8D-9, JT8D-7, JT9D-3A and RB211 engines, a significant increase in the ratio symbolized by k occurs. The unusually high values of k were found to be the result of soot flakes on the front side of the smoke spot.

Further examination of many smoke sample spots, for all the engines in the test program, provided the average values of k shown in Figure III-2. Here the smoke ratio is compared with front side smoke number and it can be seen for low smoke engines large deviations from the average relationship are exhibited. As a result of these findings it would appear that identification of contaminated results may be made through higher than average values of front to back side smoke number. In addition, since in most instances the back side smoke numbers were not appreciably changed by contamination a corrected value of

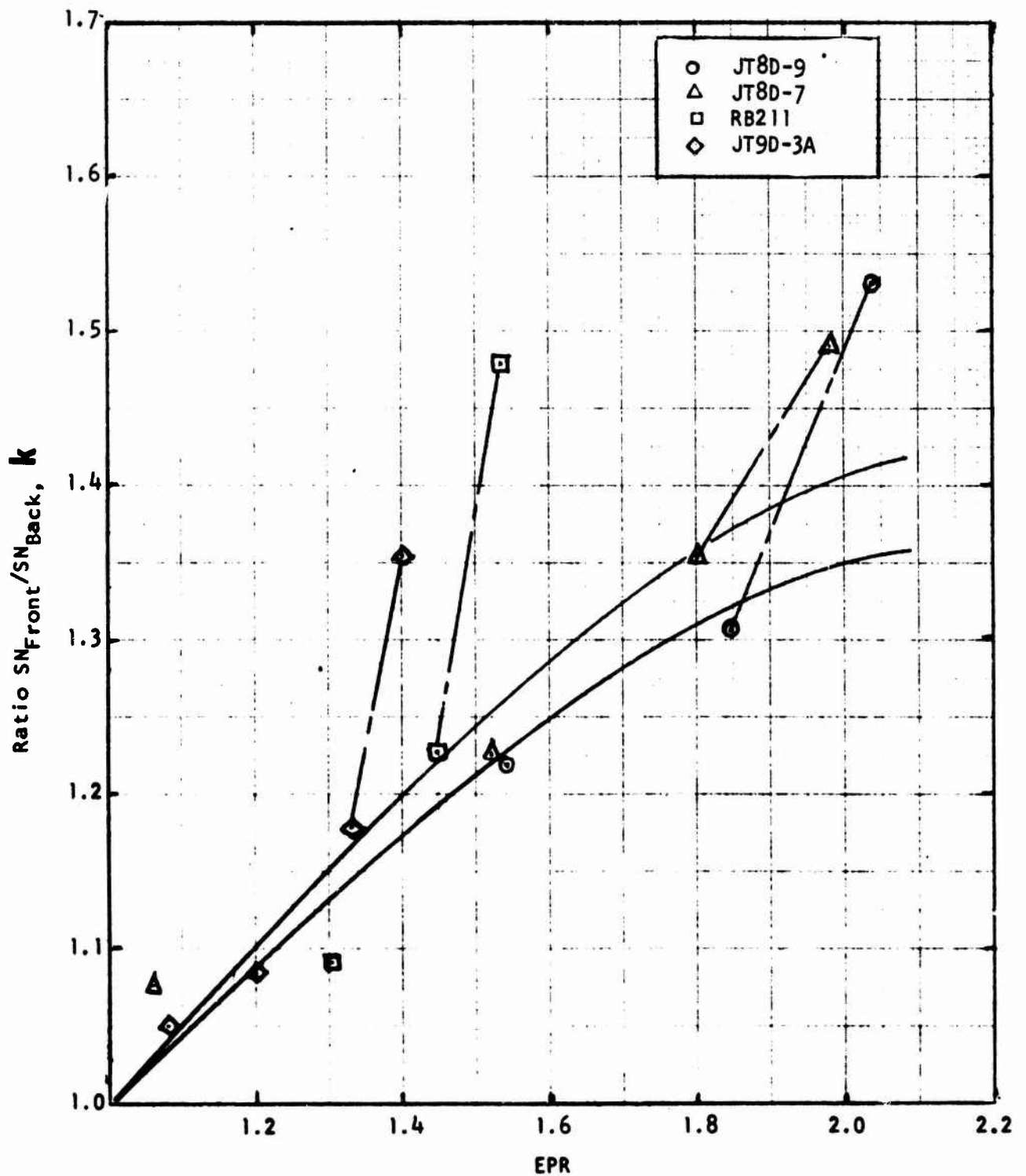


Figure C-1. Effect of EPR on Smoke Number Ratio

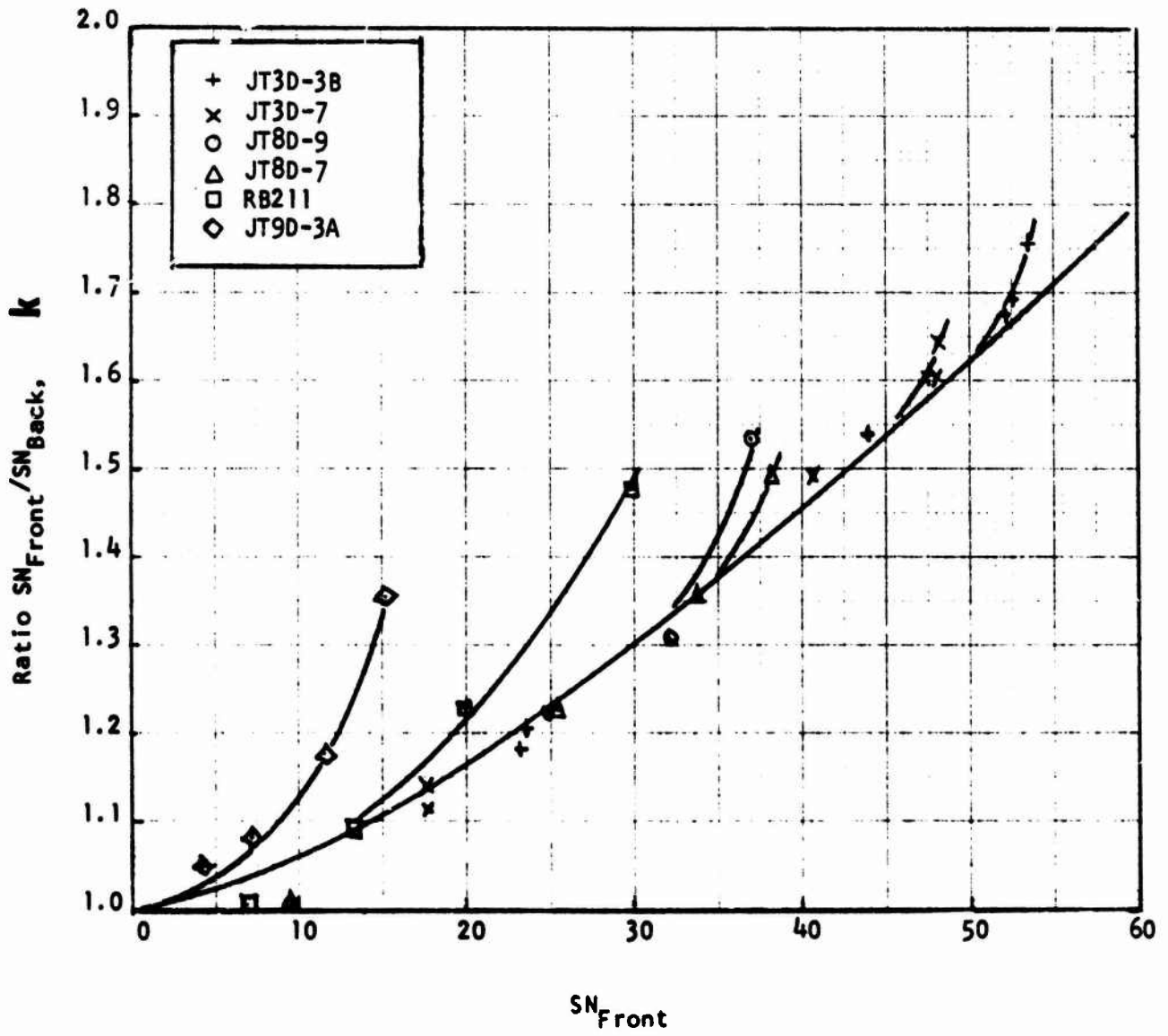


Figure C-2. Effect of Front-Side Smoke Number on Smoke Ratio

front side smoke number may be predicted for all but the JT3D and JT8D-7 engine types from the average relationship shown in Figure C-3.

Corrections were not made to the smoke number data for both JT3D type engines. In the case of the JT8D-7, the following equations were used:

a) Baseline, 600-hour, and 1200-hour test series

$$SN_{F, \text{corr}} = \begin{cases} SN_F & \text{if } k \leq 1.38 \\ 1.38 SN_B & \text{otherwise} \end{cases}$$

b) 1800-, 2400-, and 3000-hour test series

$$SN_{F, \text{corr}} = \begin{cases} SN_F & \text{if } k \leq 1.28 \\ 1.28 SN_B & \text{otherwise} \end{cases}$$

(The JT8D-7 corrections differed according to test series due to a variation in flow conditions.)

A summary of the corrected and uncorrected smoke numbers at take-off and climb is given in Table C-1.

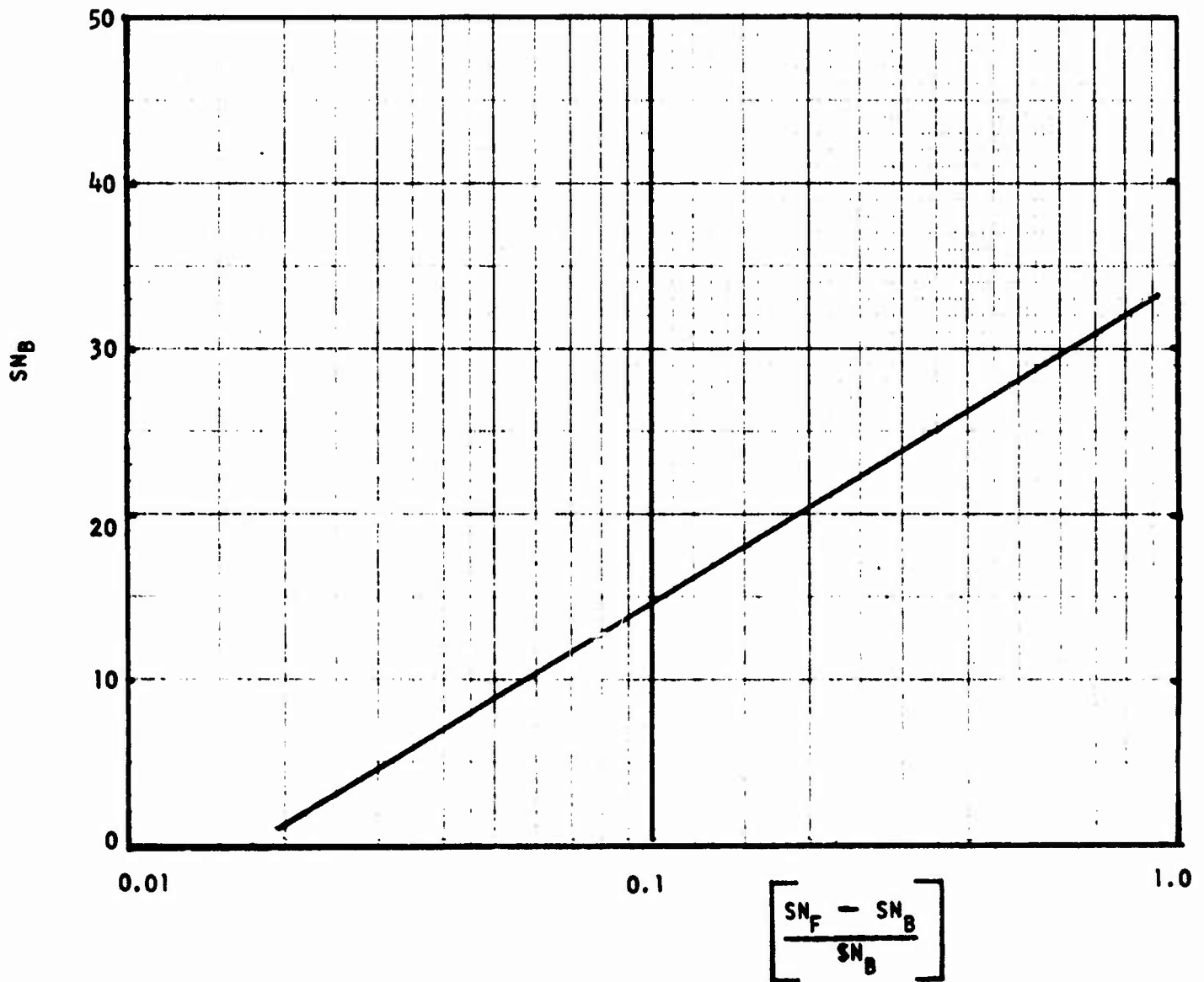


Figure C-3. Smoke Correction Chart

TABLE C-1. SUMMARY OF SMOKE NUMBERS

ENGINE TYPE	TAKE-OFF				MAX CONT				
	Max	Min	Mean	Std	Max	Min	Mean	Std	
JT8D-9	w/o uncor	44.0	21.2	31.2	4.47	37.7	22.3	30.0	3.53
	w/o cor	40.4	21.2	30.7	4.16	35.8	22.3	29.6	3.42
	w uncor	55.0	21.2	32.3	5.94	40.8	21.1	30.0	3.99
	w cor	50.3	21.2	31.3	5.23	40.8	21.1	29.7	3.90
JT8D-7	w/o uncor	51.7	27.5	35.5	4.77	41.2	24.9	32.7	3.82
	w/o cor	40.6	27.5	33.1	2.73	39.4	24.9	31.7	3.03
	w uncor	85.3	00.0	36.0	9.19	53.7	24.9	33.0	4.40
	w cor	40.6	00.0	32.1	6.15	39.4	24.9	31.4	4.21
JT3D-3B	w/o uncor	63.8	42.1	52.2	4.69	58.8	45.3	52.0	3.61
	w/o cor	63.8	42.1	52.2	4.69	58.8	45.3	52.0	3.61
	w uncor	75.9	42.1	52.8	5.95	58.8	30.1	51.6	4.50
	w cor	75.9	42.1	52.8	5.95	58.8	30.1	51.6	4.50
JT3D-7*	w/o uncor	60.9	39.5	50.7	4.38	56.8	42.7	50.5	3.41
	w/o cor	60.9	39.5	50.7	4.38	56.8	42.7	50.5	3.41
	w uncor	69.2	38.4	51.0	5.86	64.6	40.7	50.6	3.98
	w cor	69.2	38.4	51.0	5.86	64.6	40.7	50.6	3.98
JT9D-3A	w/o uncor	25.3	4.64	15.2	5.19	18.3	2.8	11.1	4.05
	w/o cor	18.7	4.64	11.9	3.61	16.5	2.4	9.7	3.37
	w uncor	35.8	00.0	15.1	6.1	21.1	00.0	10.9	4.50
	w cor	18.7	00.0	11.6	4.04	18.0	00.0	9.5	3.78
RB211	w/o uncor	36.4	21.3	29.8	3.23	26.7	11.4	19.4	3.54
	w/o cor	29.1	18.9	24.2	2.42	24.6	11.2	17.8	2.93
	w uncor	48.0	14.7	29.7	4.66	30.2	8.0	19.4	4.37
	w cor	33.3	14.7	24.3	3.10	27.2	8.0	17.7	3.53
CF700	w/o uncor	21.2	9.9	15.9	3.18	19.9	7.3	13.6	3.23
	w/o cor	21.2	8.7	15.4	3.37	19.9	7.3	13.6	3.27
	w uncor	22.9	8.7	15.9	3.44	19.9	7.3	13.6	3.23
	w cor	22.9	8.7	15.6	3.51	19.9	7.3	13.6	3.27

w/o denotes data without outlying values while w denotes data with such values

* excluding low smoke combustor - Unit 13

APPENDIX D
NO CALIBRATION GAS CORRECTIONS

Examination of daily calibrations indicated that the specified concentrations of two NO gas bottles used on the San Francisco MERF were in substantial error. One, Bottle No. 52671 with a specified concentration of 192 ppm, was installed 11/18/75 and removed 4/22/76. The second, Bottle No. 72902 with a specified concentration of 50 ppm, was installed 10/10/75 and removed 6/14/76.

Monthly calibrations performed on 2/25/76 and 4/22/76 confirmed the errors and were used to correct the concentrations. Figure D-1 shows the responses to a number of calibration gases on Range 1 of the NO analyzer on those dates. A least-squares fit through the origin, for each case, yielded calculated concentrations for Bottle No. 52671 of 208 ppm and 207 ppm, respectively. As a result, an average concentration of 207.5 ppm was adopted for Bottle No. 52671. In addition, Figure D-2 shows the responses of the two gas bottles in question on Range 2 of the NO analyzer for the same dates. Assuming a linear response of the analyzer, respective concentrations for Bottle No. 72902 of 53.9 ppm and 53.6 ppm were calculated. Again, an average concentration of 53.7 ppm was adopted for Bottle No. 72902.

All affected data, including JT8D-7, JT3D-7, JT3D-3B, JT9D, and a few RB211 tests were reprocessed using the adopted concentrations. New emission levels were stored as Items 65 through 72 of the System NREC data array. The original emission levels were retained as items 49 through 52 and 55 through 58.

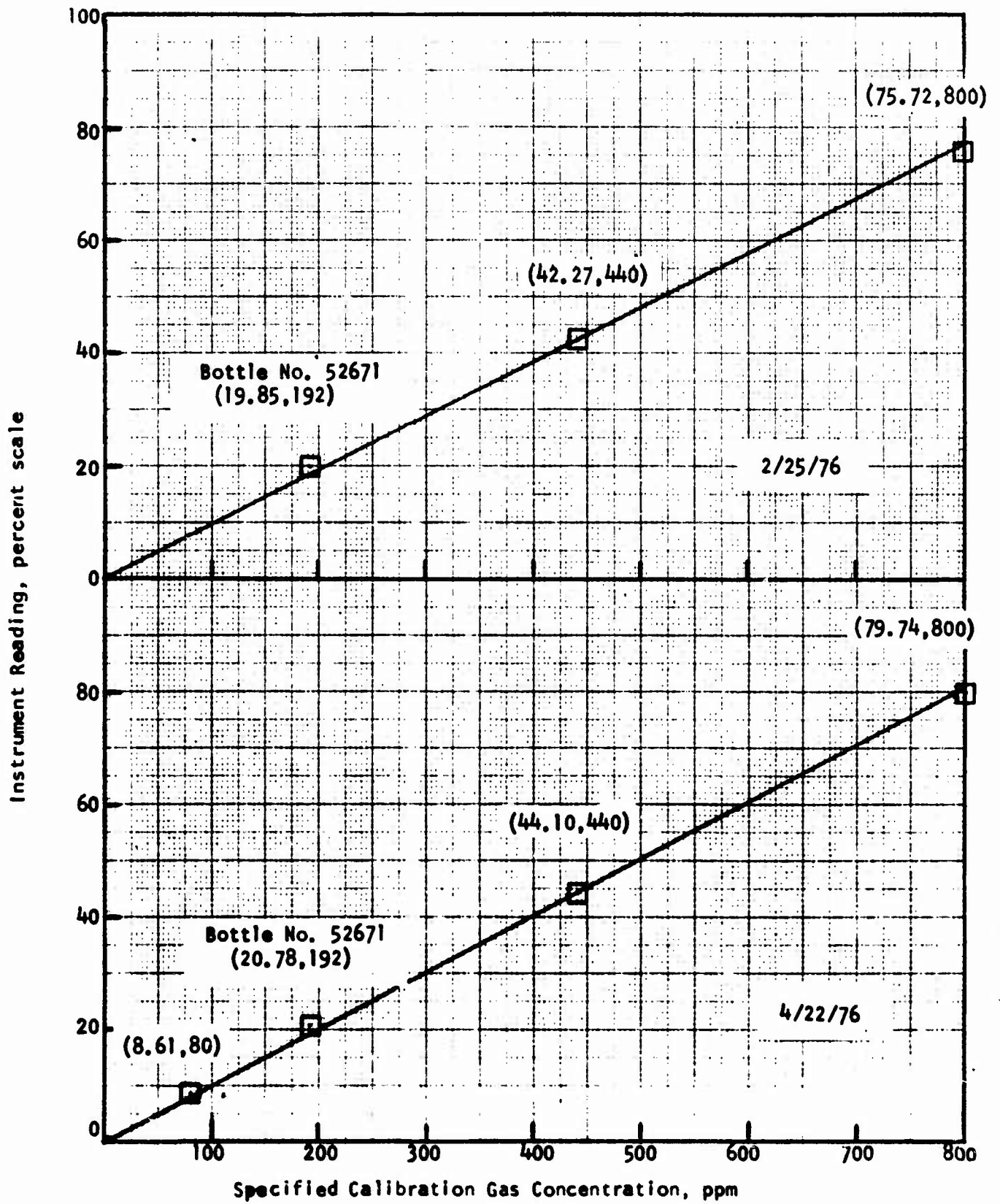


Figure D-1. Monthly NO Calibrations - Range 1

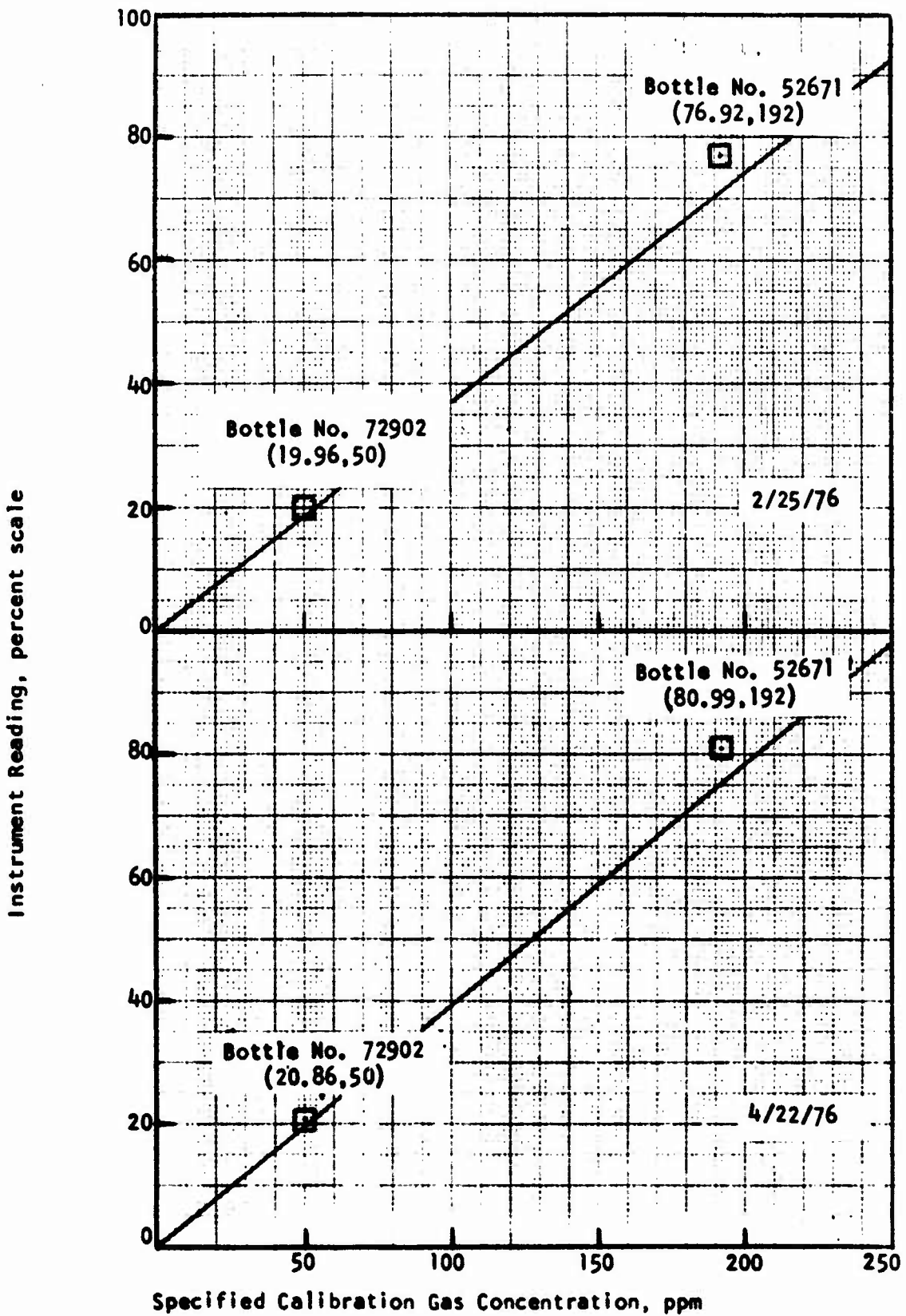


Figure D-2. Monthly NO Calibration - Range 2

Report No. FAA-RD-79-8, II

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME II
JT8D-9 TEST DATA**



APRIL 1979

FINAL REPORT

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**U. S. DEPARTMENT OF TRANSPORTATION
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16. Abstract This is the second volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the JT8D-9 engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the second volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the JT8D-9 engine type as installed on the 727-231 aircraft. The engines, owned and operated by TWA, were tested in Kansas City by NREC personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume III - JT8D-7 Test Data
- Volume IV - JT3D-7 Test Data
- Volume V - JT3D-3B Test Data
- Volume VI - JT9D-3A Test Data
- Volume VII - RB211-22B Test Data
- Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted the EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume; Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emissions and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the JT8D-9 engine there were six such series; Baseline; 600 Hour; 1200 Hour; 1800 Hour; 2400 Hour; and 3000 Hour. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of several tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/4023		Original Test A/C No. <u>4304</u> , Position No. <u>1</u>
	4/7/75	Baseline Emission Test
	6/20/75	"600-Hour" Emission Test
	8/6/75	Cracked satellite assembly, sheetmetal fairing in the exhaust assembly. Dropped from program.
2/3919		Original Test A/C No. <u>4307</u> , Position No. <u>2</u>
	3/15/75	Baseline Emission Test
	5/4/75	Engine removed to repair loose stators.
	6/1/75	Engine reinstalled on A/C No. <u>4332</u> , Position No. <u>2</u>
	6/14/75	Engine removed due to F.O.D. first and second stage blades beyond minimum limits.
	6/19/75	Engine reinstalled on A/C No. <u>4310</u> , Position No. <u>2</u>
	12/17/75 2/20/76	"1800-Hour" Emission Test Engine removed due to first stage blade failure
3/4019		Original Test A/C No. <u>4307</u> , Position No. <u>3</u>
	3/15/75	Baseline Emission Test
	5/11/75	Engine removed due to high oil consumption.
4/3962		Original Test A/C No. <u>4313</u> , Position No. <u>1</u>
	3/7/75	Replaced EPR transmitter
	3/8/75	Baseline Emission Test
	3/21/75	Problem: SAT gage inoperative
		Correct: Replaced SAT gage, operating normal
	5/23/75 6/6/75	"600-Hour" Emission Test Engine removed due to no. 6 bearing pressure tube failure.
6/3928		Original Test A/C No. <u>4317</u> , Position No. <u>3</u>
	3/20/75	Baseline Emission Test
	3/27/75	Problem: All F/F indicators are inoperative, suspect bad power supply. Correct: Replaced power supply

Unit No./ Serial No.	Date	Item
6/3928 Continued	4/21/75	Problem: Engine idle slow, approximately 50 per cent N ₂ Correct: Set idles, checked trim
	5/13/75	Problem: EPR gage reading 0.03 to 0.04 to low Correct: Replaced EPR indicator
	6/12/75	EPR system calibrated and EPR probe changed
	6/21/75	"600-Hour" Emission Test
	6/23/75	Problem: Throttle 1 knob behind engines 1 and 2 in cruise and climb Correct: Trimmed engine
	8/4/75	Problem: Unable to obtain chart EPR at T.O. Correct: Switched 2 and 3 EPR indicators for further troubleshooting
	8/6/75	Problem: Engine unable to obtain chart EPR at T.O. Correct: Trimmed engine
	9/9/75	"1200-Hour" Emission Test
	9/9/75	Problem: EPR went to 1.0 during descent and stayed there Correct: Changed EPR transmitter and indicator
	10/12/75	Problem: During climb EPR must be set 0.05 low to align other engine instruments Correct: Replaced EPR gage
	10/18/75	Problem: EPR high with all other parameters aligned Correct: Replaced EPR transmitter
12/26/75	Engine removed due to metal in oil screen	
2/16/76	Engine installed on A/C No. <u>4320</u> , Position No. <u>2</u>	
3/17/76	"2400-Hour" Emission Test	
	Original Test A/C No. <u>4318</u> , Position No. <u>1</u>	
7/3958	4/4/75	Baseline Emission Test
	7/2/75	"600-Hour" Emission Test

Unit No./ Serial No.	Date	Item	
7/3958 Continued	8/14/75	Problem: EGT reading fluctuates between 100 and 300 deg Correct: Switched 1 and 2 EGT indicators for further troubleshooting	
	11/18/75	"1800-Hour" Emission Test	
	11/19/75	Problem: SAT gage inoperative Correct: Replaced indicator	
	11/21/75	Problem: EGT rose into yellow band on T.O. Throttle had to be retarded 0.10 EPR to stay in limits. Correct: Switched 1 and 2 EGT indicators for troubleshooting	
	11/25/75	Problem: SAT gage inoperative Correct : Replaced SAT indicator	
	2/8/76	"2400-Hour" Emission Test	
	4/18/76	"3000-Hour" Emission Test	
	4/26/76	Changed EPR transmitter	
	9/3917	4/5/75	Original Test A/C No. <u>4321</u> , Position No. <u>3</u> Baseline Emission Test
		4/5/75	Duskin supply low
8/14/75		"600-Hour" Emission Test	
8/14/75		Problem: Throttle out of alignment Correct: Retrimmed engine	
9/12/75		Problem: On start N ₂ tach sticks on 0 per cent Correct: Changed N ₂ tach	
9/27/75		Problem: SAT-TAT relationship out of limits Correct: Replaced TAT indicator	
9/28/75		Problem: Necessary to hold EPR 0.05 low to align engines Correct: Replaced EPR indicator	
12/4/75		Problem: EPR reads 0.04 low with other parameters aligned with no. 1 engine Correct: Replaced EPR transmitter	

Unit No./ Serial No.	Date	Item
9/3917 Continued	12/10/75	"1800-Hour" Emission Test
	1/7/76	Problem: EPR indicates 0.2 low Correct: Changed EPR indicator, transmitter and replaced seals on coupler at bullet, leak checked.
	1/9/76	Problem: EPR still indicates low. Found apparent leak in PT7 but could not pinpoint.
	1/14/76 3/13/76	Repaired PT7 system leak "2400-Hour" Emission Test
10/3903	4/15/75	Original Test A/C No. <u>4331</u> , Position No. <u>3</u> Baseline Emission Test
	7/2/75	Problem: SAT gage broken Correct: Replaced SAT gage
	7/26/75	"600-Hour" Emission Test
	8/2/75	Problem: Engine slow to accelerate to T.O. power also slow hot starts Correct: Changed both igniter plugs
	8/7/75	Problem: Engine would not spin up for T.O. Correct: Replaced JFC and trimmed engine
	8/19/75	Problem: Throttles out of alignment Correct: Trimmed engine
	10/17/75	"1200-Hour" Emission Test
	12/13/75	"1800-Hour" Emission Test
	1/20/76	Problem: Engine vibrations felt at high power settings Correct: Adjust P&D valve, found anti-ice line off at JFK. Secured line and safetied same.
	2/3/76	Problem: TAT gage inoperative Correct: Replaced TAT gage and rosemont probe
	3/9/76	"2400-Hour" Emission Test

Unit No./ Serial No.	Date	Item
10/3903 Continued	3/19/76	<p>Problem: Engine idle slow and engine slow to accelerate</p> <p>Correct: Reset idle speed. Aircraft set up for JFC change on next overnite lay-over due to fluctuating idle.</p>
11/3988	<p>4/13/75</p> <p>4/14/75</p> <p>6/27/75</p> <p>8/25/75</p> <p>9/12/75</p> <p>9/16/75</p> <p>11/7/75</p> <p>11/17/75</p> <p>11/21/75</p> <p>1/7/76</p> <p>2/23/76</p> <p>2/25/76</p>	<p>Original Test A/C No. <u>4333</u>, Position No. <u>2</u></p> <p>Baseline Emission Test</p> <p>Replaced bleed control valve</p> <p>"600-Hour" Emission Test</p> <p>Problem: N₁ 30 per cent, N₂ 53 per cent at idle</p> <p>Correct: Adjust idle</p> <p>Problem: Engine throttle knob behind engines 1 and 3 during cruise</p> <p>Correct: Trimmed engine</p> <p>"1200-Hour" Emission Test</p> <p>Problem: All three engines idle fast 60-61 per cent N₂ and 1300-1400 lbs/hr F/F</p> <p>Correct: Trimmed all three engines and checked for T.O.</p> <p>"1800-Hour" Emission Test</p> <p>Problem: AVM reading markedly higher than previous readings at 75 per cent N₁ AVM was steady 3.0 with occasional jumps to 3.5</p> <p>Correct: Provided clearance for T/R line chaffing duct, changed AVM pickup because of loose head</p> <p>Engine removed due to poor performance, turbine blades warped</p> <p>Engine reinstalled on A/C No. <u>4334</u>, Position No. <u>1</u></p> <p>Problem: Fuel flow reads 3000-4000 lbs high, other parameters normal</p> <p>Correct: Replaced F/F transmitter and F/F gage</p>

Unit No./ Serial No.	Date	Item
11/3988 Continued	3/13/76	<p>Problem: Engine EPR reads low on T.O. and climb. Indicator and transducer changed but no help.</p> <p>Correct: Placarded inoperative. There is a leak in the PT7 manifold. MCI notified. No correction at this time.</p>
	3/14/76	"2400-Hour" Emission Test EPR problem still reads low
	3/14/76	Replaced broken PT7. EPR checked OK on engine runup.
	4/21/76	Generator tach replaced (nite engine tested)
	4/21/76	"3000-Hour" Emission Test
12/3949	4/13/75	Original Test A/C No. <u>4333</u> , Position No. <u>3</u> Baseline Emission Test
	6/27/75	"600-Hour" Emission Test
	8/9/75	<p>Problem: Engine needs oil, has been using more than nos. 1 and 2. 12 quarts in two days.</p> <p>Correct: Serviced oil</p>
	8/25/75	<p>Problem: Throttles at T.O. and reduced thrust out of rig</p> <p>Correct: Checked rig, and trimmed all engines</p>
	8/25/75	<p>Problem: All parameters off, fuel leak at B-nut fitting on fuel flow transmitter in line from fuel control</p> <p>Correct: Fixed fuel leak at transmitter, leak checked OK on runup</p>
	9/16/75	"1200-Hour" Emission Test
	11/7/75	<p>Problem: All three engines idle fast 60-61 per cent N₂ and 1300-1400 lbs/hr F/F</p> <p>Correct: Trimmed all three engines and checked for T.O.</p>
	11/7/75	<p>Problem: Engine has large leak at bottom of cowling, found leak to be fuel</p> <p>Correct: Replaced "O" ring seal at aft fitting on F/F transmitter</p>

Unit No./ Serial No.	Date	Item
12/3949 Continued	11/9/75	<p>Problem: At T.O. power engine throttle was 4-5 knobs ahead of nos. 1 and 2 to obtain T.O. EPR. N_1, N_2, EGT, and F/F were all just about equal across all three engines. Throttle stayed 4-5 knobs ahead until aircraft leveled at 5000 ft and power was reduced. At this time throttles were aligned. When climb power was applied engine was again 4-5 knobs ahead until about 28,000 ft, when it had to be gradually pulled back to maintain climb power. By-pass flow 350 all throttles were aligned at climb thrust.</p> <p>Correct: Found fuel line packing leaking above 85 per cent N_2 at aft end of F/F transmitter. Replaced packing and aligned steel fuel line, ran engine to T.O. and found no leaks.</p>
	11/17/75	<p>Problem: Engine fuel flow gage nervous</p> <p>Correct: Replaced indicator</p>
	11/17/75	"1800-Hour" Emission Test
	11/25/75	<p>Problem: Louder than normal engine noise in aft cabin during flight, especially T.O. and climb. Nos. 2 and 3 AVM read in the 1.5 - 2.0 range. There is a noticeable vibration in throttle (not excessive).</p> <p>Correct: Checked inlet and exhaust sections of the engine and throttle linkages and found OK.</p>
	1/9/76	<p>Problem: Engine fuel flow erratic</p> <p>Correct: Changed F/F indicator and F/F transmitter</p>
	2/27/76	"2400-Hour" Emission Test
	3/18/76	Removed from program, foreign object damage
14/1902	3/11/75	Original Test A/C No. <u>4338</u> , Position No. <u>1</u> Baseline Emission Test

Unit No./ Serial No.	Date	Item
14/1902 Continued	4/29/75	Reset idle
	6/1/75	"600-Hour" Emission Test
	8/17/75	"1200-Hour" Emission Test
	1/11/76	"2400-Hour" Emission Test
	3/6/76	Problem: Engine fuel flow erratic and slow to respond to throttle changes Correct: Replaced F/F transmitter
	3/12/76	Problem: Suspect fuel leak due to high fuel flow readings Correct: Leak checked and found to be OK
	3/23/76	Engine removed for quadruple torquing of fuel manifold B-nuts
	3/23/76 4/7/76	Engine reinstalled on A/C No. <u>4339</u> , Position No. <u>1</u> "3000-Hour" Emission Test
15/1903		Original Test A/C No. <u>4338</u> , Position No. <u>2</u>
	3/11/75	Baseline Emission Test
	4/14/75	Replace oil pressure gage
	6/1/75	"600-Hour" Emission Test
	8/17/75	"1200-Hour" Emission Test
	1/11/76 4/8/76	"2400-Hour" Emission Test "3000-Hour" Emission Test
16/1904		Original Test A/C No. <u>4338</u> , Position No. <u>3</u>
	2/12/75	Replaced oil pressure relief valve
	2/24/75	Special P71 check due to increase fuel flow, no irregularities found
	3/11/75	Baseline Emission Test
	4/16/75	Replaced CSD (Constant Speed Drive)
	4/22/75	Replaced auto-fueling valve
	4/29/75	Reset idle
	6/1/75 6/30/75	"600-Hour" Emission Test Problem: Engine slightly unstable at all power settings. Fuel flow varies 200 lbm per hr N ₁ 0.5 per cent, N ₂ 0.25 per cent, EPR 0.04 per cent.

Unit No./ Serial No.	Date	Item
16/1904 Continued	6/30/75	Correct: Inspected inlet and exhaust and found them to be OK
	7/4/75	Problem: Engine starting problems, and shutting down during operation
		Correct: Replaced JFC, fuel pump, and trimmed engine
	8/28/75	"1200-Hour" Emission Test
	1/11/76	"2400-Hour" Emission Test
	3/26/76	Engine removed for quadruple torquing of fuel manifold B-nuts
	4/6/76	Engine reinstalled on A/C No. <u>4339</u> , Position No. <u>3</u>
	4/16/76	"3000-Hour" Emission Test
17/1905		Original Test A/C No. <u>4339</u> , Position No. <u>1</u>
	2/4/75	Baseline Emission Test No. 1A (NO, NO _x)
	3/5/75	Baseline Emission Test No. 1B (others)
	5/21/75	"600-Hour" Emission Test
	8/13/75	"1200-Hour" Emission Test
	9/12/75	Problem: EGT on engine exceeds engine no. 2 by 45 deg
		Correct: Installed new EGT indicator
	11/11/75	"1800-Hour" Emission Test
	12/29/75	Problem: Engine EGT inoperative
		Correct: Replaced EGT indicator
	1/13/76	"2400-Hour" Emission Test
	1/23/76	Replaced damaged wire harness on EGT system
	3/26/76	Engine removed for quadruple torquing of fuel manifold B-nuts
4/2/76	Engine reinstalled on A/C No. <u>4302</u> , Position No. <u>1</u>	
4/19/76	"3000-Hour" Emission Test	
18/1906		Original Test A/C No. <u>4339</u> , Position No. <u>2</u>
	2/4/75	Baseline Emission Test No. 1A (NO, NO _x)
	3/5/75	Baseline Emission Test No. 1B (others)

Unit No./ Serial No.	Date	Item
18/1906 Continued	5/21/75	"600-Hour" Emission Test
	8/13/75	"1200-Hour" Emission Test
	11/11/75	"1800-Hour" Emission Test
	1/13/76	"2400-Hour" Emission Test
	3/6/76	Engine removed for quadruple torquing of fuel manifold B-nuts
	3/29/76	Engine reinstalled on A/C No. <u>4327</u> , Position No. <u>2</u>
	4/23/76	"3000-Hour" Emission Test
19/1907		Original Test A/C No. <u>4339</u> , Position No. <u>3</u>
	2/4/75	Baseline Emission Test No. 1A (NO, NO _x)
	3/5/75	Baseline Emission Test No. 1B (others)
	3/24/75	Replaced EGT indicator, reading 40 per cent low
	4/5/75	Replaced EPR indicator
	4/10/75	Replaced EGT indicator
	4/19/75	Special (No Bust) P71 check run on this engine due to fuel usage which caused engine to be suspect
	5/21/75	"600-Hour" Emission Test
	6/3/75	Problem: EGT flux 60 to 100 deg below engines 1 and 2 Correct: Cleaned hot section electrical connector and secured. System now operating normal.
	6/4/75	Problem: Reduced power from 2.00 EPR to 1.90 EPR engine at 83 deg OAT (deg F) to keep from overtemping EGT Correct: Changed EGT indicator
	6/29/75	Problem: EGT on engine running 20 deg to 30 deg hotter than engines 1 and 2 in all phases of flight Correct: Replaced EGT indicator
	8/13/75	"1200-Hour" Emission Test
	9/15/75	Problem: N ₁ indicator at zero until T.O. power is reached, then reads normal Correct: Replaced N ₁ indicator

Unit No./ Serial No.	Date	Item
19/1907 Continued	11/11/75	"1800-Hour" Emission Test
	12/27/75	Problem: EGT spread between engine no. 3 and engines 1 and 2 is in excess of 40 deg
		Correct: Replaced EGT indicator
	12/28/75	Problem: EGT intermittently 40-50 deg C lower than engines 1 and 2
		Correct: Cleaned firewall connections and checked terminal block for security
	1/13/76	"2400-Hour" Emission Test
20/1908	1/23/76	Problem: EGT readings fluctuate
		Correct: Replaced cannon plug at firewall, operation is now normal
		Engine removed for quadruple torquing of fuel manifold B-nuts
	4/16/75	Original Test A/C No. <u>4340</u> , Position No. <u>1</u> Baseline Emission Test
	7/18/75	"600-Hour" Emission Test
21/1909	12/15/75	"1800-Hour Emission Test
	12/25/75	Fire in engine burned a 6-8 in diameter hole through case due to B-nut leak. Engine removed for quadruple torquing of fuel manifold B-nuts
	4/16/75	Original Test A/C No. <u>4340</u> , Position No. <u>2</u> Baseline Emission Test
	7/18/75	"600-Hour" Emission Test
	7/22/75	Problem: Engine throttle is one full knob behind engines 1 and 3
		Correct: Down-trimmed engine
10/6/75	Problem: Numerous compressor stalls and torching on engine during taxi out	
	Correct: Adjust engine idle and inspect inlet	
10/8/75	Problem: Check for damage on engine related to previous stall problem (10/6/75)	
	Correct: No damage found	

Unit No./ Serial No.	Date	Item
21/1909 Continued	11/10/75	Problem: Engine stalls when coming out of idle when on the ground
		Correct: Tightened line on bleed control valve approximately 1/2 turn
	12/15/75	"1800-Hour" Emission Test
	12/27/75	Problem: Engine thrust lever is 4-knob widths ahead of engine 2
		Correct: Trimmed engines 1 and 2
	3/11/76	Engine removed for quadruple torquing of fuel manifold B-nuts
	3/29/76	Engine reinstalled on A/C No. <u>4310</u> , Position No. <u>2</u>
	4/10/76	"3000-Hour" Emission Test
	22/1910	
4/16/75		Baseline Emission Test
6/28/75		Problem: Engine idles 61 per cent N ₂ , 35 per cent N ₁ , fuel flow 1200 lbm per hr on ground
		Correct: Down-trimmed engine
7/18/75		"600-Hour" Emission Test
12/15/75		"1800-Hour" Emission Test
3/7/76		Engine removed for quadruple torquing of fuel manifold B-nuts
3/23/76		Engine reinstalled on A/C No. <u>4338</u> , Position No. <u>1</u> No problems found while in shop for modifications
4/15/76		"3000-Hour" Emission Test
23/4020		Original Test A/C No. <u>4335</u> , Position No. <u>3</u>
	4/17/75	Baseline Emission Test
	4/18/75	Problem: SAT gage reads 6 deg warmer than actual temperature at cruise
		Correct: Changed indicator
	7/3/75	"600-Hour" Emission Test
	8/1/75	Problem: Engine 2 will not reach T.O. EPR Correct: EPR gages for engines 2 and 3 switched for troubleshooting.

Unit No./ Serial No.	Date	Item
23/4020 Continued	8/3/75	Problem: No. 2 engine has high EGT history Correct: Switched EPR gages for engines 2 and 3, no further remarks in log
	8/15/75	Problem: Throttle one knob aft of engines 1 and 2 at T.O. and climb settings Correct: Trimmed engine, run-up normal
	9/17/75	Problem: SAT gage reads 12 deg low Correct: Replace SAT indicator and probe
	11/1/75	"1200-Hour" Emission Test
	12/17/75	"1800-Hour" Emission Test
	12/20/75	Problem: Engine slow to accelerate after start, idles at 48 per cent N ₂ Correct: Up-trimmed at idle and checked part-power
	3/3/76	"2400-Hour" Emission Test

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T_a	Ambient temperature	deg R
AMB PRESS	P_a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 58 per cent N_2 nominal	
MODE 2		Idle "plus", initial - 62 per cent N_2	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 per cent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 per cent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 per cent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N_1	Rotational speed of low pressure turbine, given as a per cent of design speed (8700 rpm)	per cent
N2 SPEED	N_2	Rotational speed of high pressure turbine, given as a per cent of design speed (12,250 rpm)	per cent
CORR N1	N_1'	N_1 speed corrected to standard ambient conditions $N_1' = N_1 \times \sqrt{518.7/T_a} \quad (\text{Ref 1})$	per cent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed $N_2' = N_2 \times \sqrt{518.7/T_a} \quad (\text{Ref 1})$	per cent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (see Ref 2, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28 + 0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4}} + 0.25a - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$ where a is the hydrogen-carbon ratio of the fuel as obtained in the fuel analysis. (A mean value was used when the analysis was not available), $a_{mean} = 1.90$	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio $(F/A)_{PF} = F / \left[AC \times \frac{Pa}{29.92} \times \sqrt{518.7/T_a} \right]$ where AC is obtained from the curve shown in Figure 1	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust, obtained from $TH = TH' \times (P_a/29.92)$	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)'_{PF}$	Corrected performance fuel-air ratio (Ref 1) $(F/A)'_{PF} = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3 thru 6 and from the curve shown in Fig 3 for modes 1,2,7, and 8)	lbf

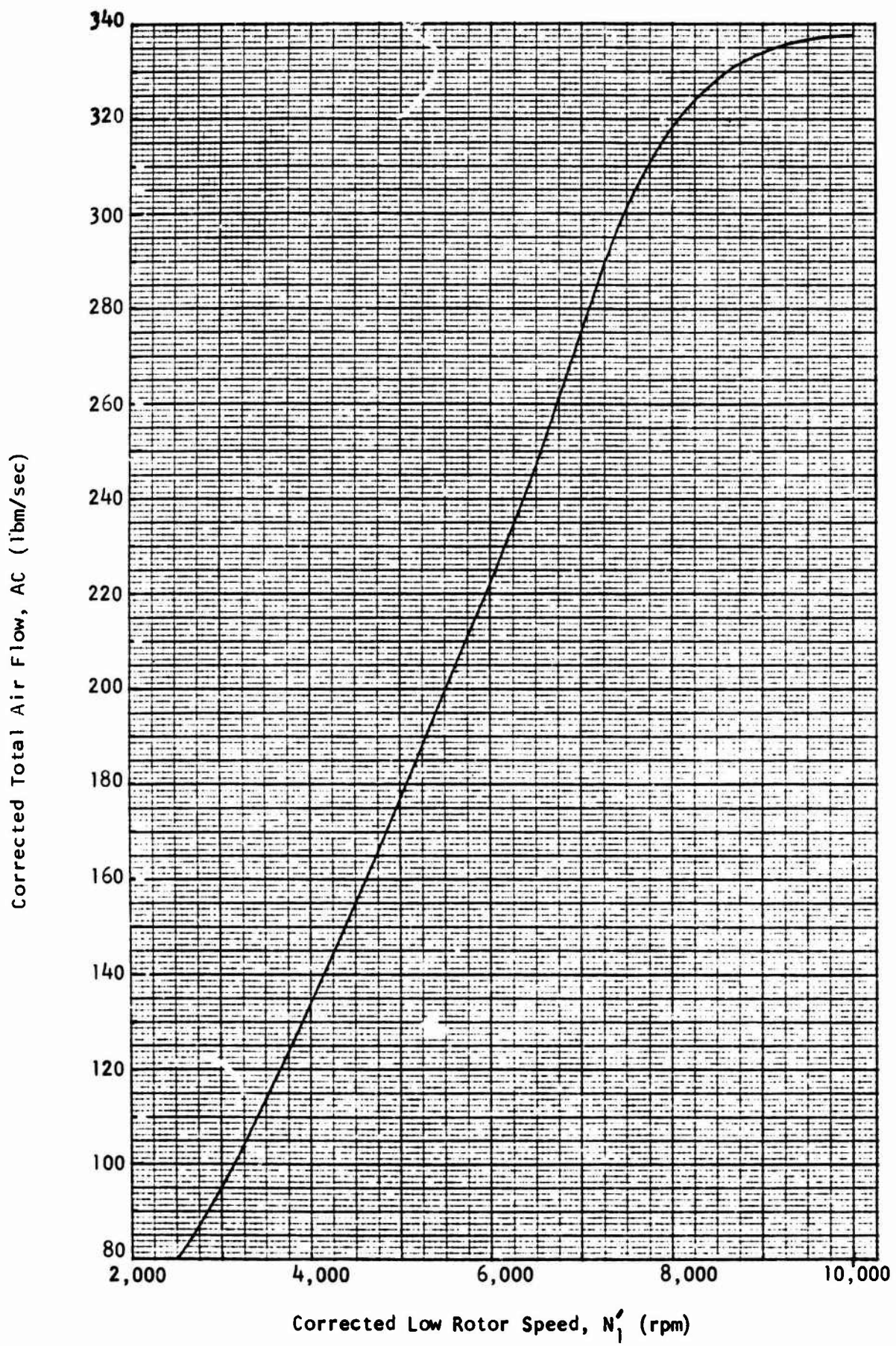


Figure 1. Estimated Corrected Total Air Flow versus Corrected Low Rotor Speed

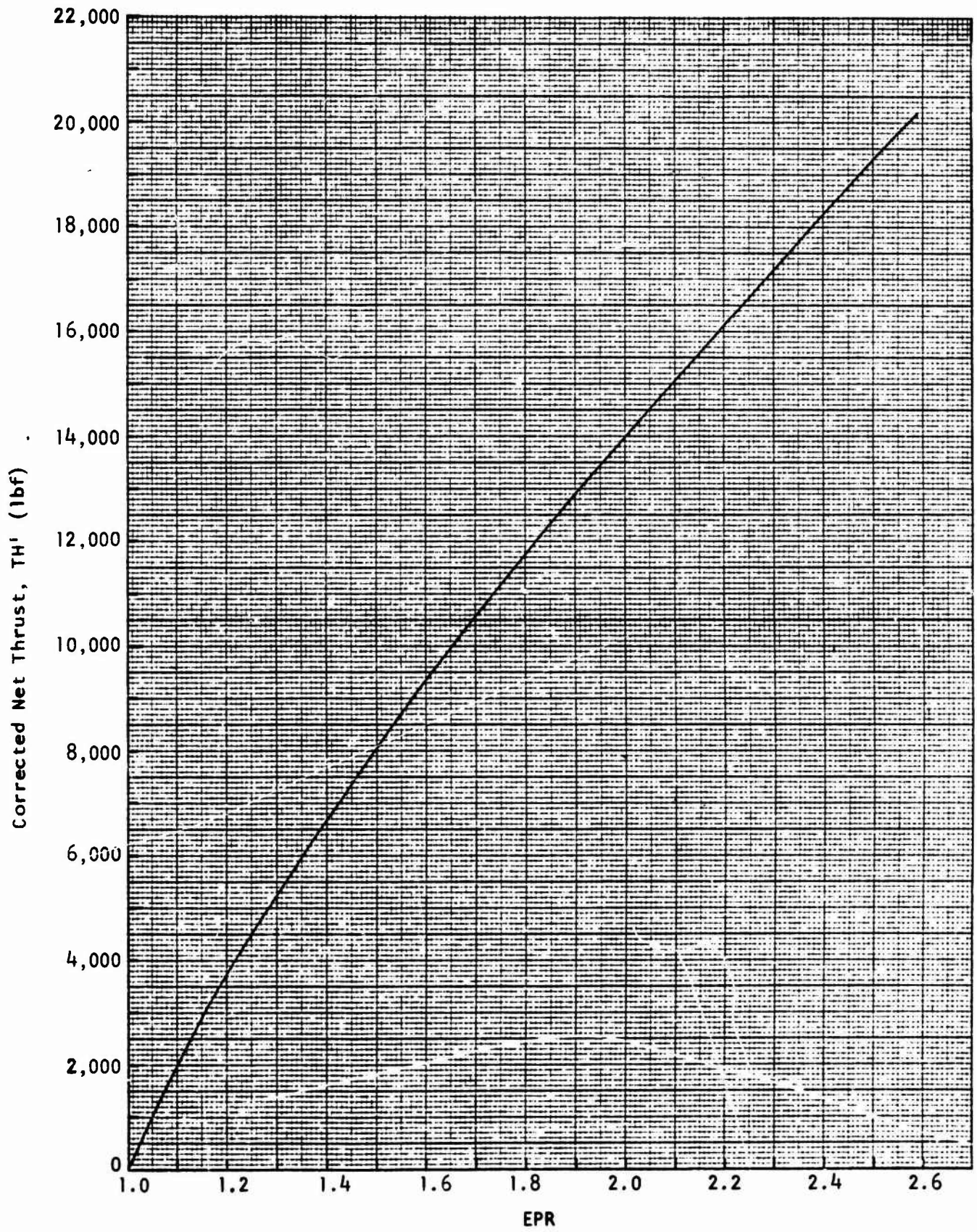


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed

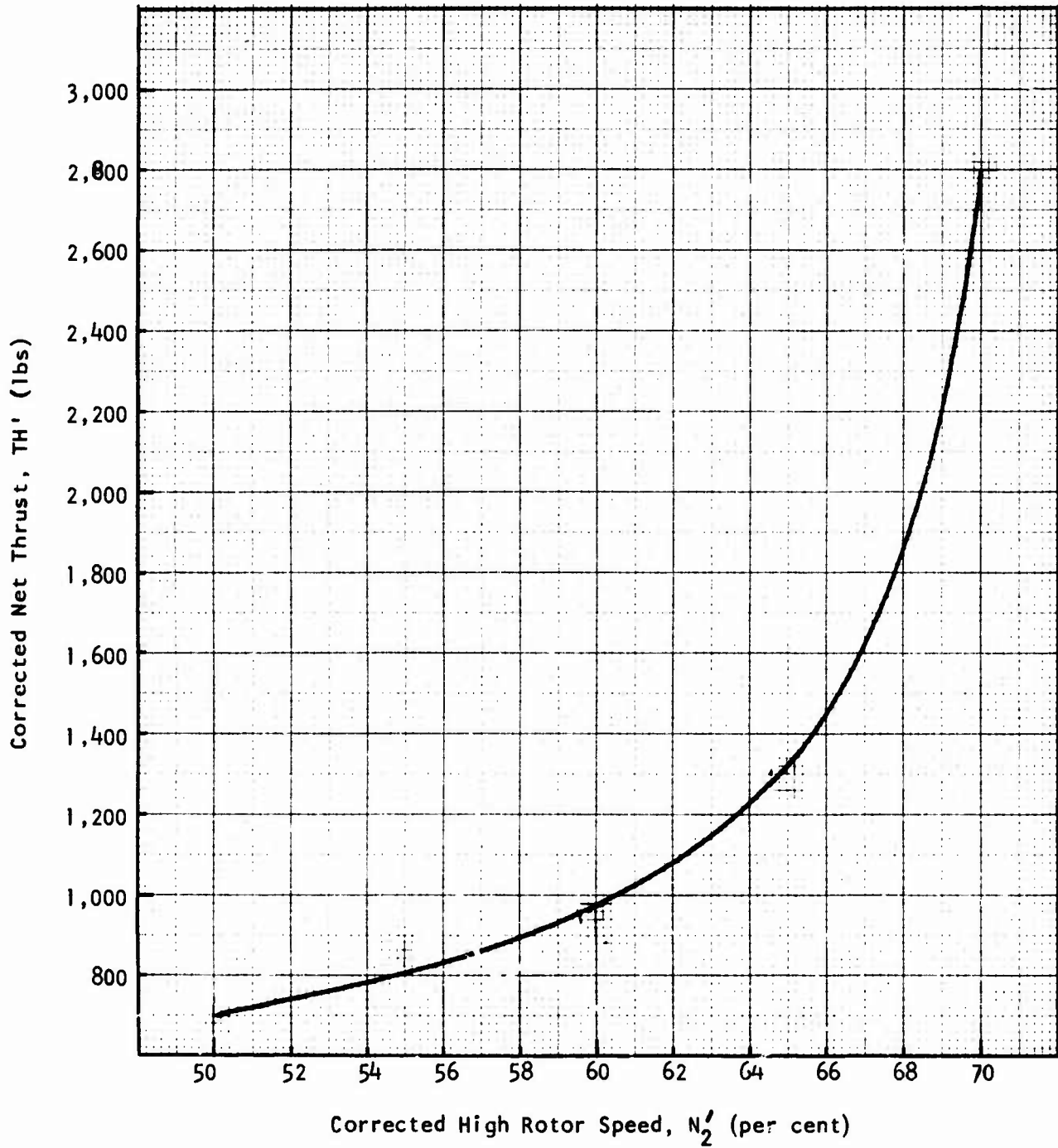


Figure 3. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
CO ₂ CONC	CO ₂	Concentration of carbon dioxide	per cent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NO _x CONC	NO _x	Concentration of NO _x	ppm
CO ₂ EI	EI _{CO₂}	Emission index of carbon dioxide (Ref 3) $EI_{CO_2} = \frac{M_{CO_2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO₂} = molecular weight of CO₂</p>	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO_2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO₂} = molecular weight of NO₂</p>	lbm per 1000 lbm fuel

Name	Symbol	Description	Unit
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = \frac{M_{NO_2} \times \frac{NO_x}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2}{10^4} + \frac{HC}{10^4} \right)}$	lbm per 1000 lbm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ where RS = smoke spot reflectance RW = reflectance of clean filter paper	
SMK NUMBER CORRECTED	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	lbm per 1000 lbm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	lbm per 1000 lbm fuel
NREC NO EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	lbm per 1000 lbm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO_x})_{std}}{F_{NO_x}} \times EI_{NO_x}$	lbm per 1000 lbm fuel
FCO	F_{CO}	CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$ $\frac{e^{T_{b,obs}/315}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes 1,2,7,8}$ $\frac{e^{T_{b,obs}/(400 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes 3,4,5,6}$ where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$	

Name	Symbol	Description
FCO Continued		$P_{b,obs} = P_{a,obs} \cdot f_1 \left(\frac{N_{2,obs}}{\sqrt{\frac{T_{a,obs}}{518.7}}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(\frac{N_{2,obs}}{\sqrt{\frac{T_{a,obs}}{518.7}}} \right)$ <p>where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see Fig 4)</p> <p>Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p>Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{,ref} = 0.0092 \quad P_{a,ref} = 30.09 \text{ in Hg abs}$ $N_{2,ref} = 11,377 \text{ rpm} \quad T_{a,ref} = 501.8 \text{ deg R}$
FHC	F_{HC}	<p>HC emission factor</p> $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,obs}/(500 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(500 - F/A_{ref} \times 10^4)}}$
FNO	F_{NO}	<p>NO emission factor</p> $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00138(T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	<p>Corrected CO emission factor</p> $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,std}/315}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes } 1,2,7,8$ $\frac{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes } 3,4,5,6$

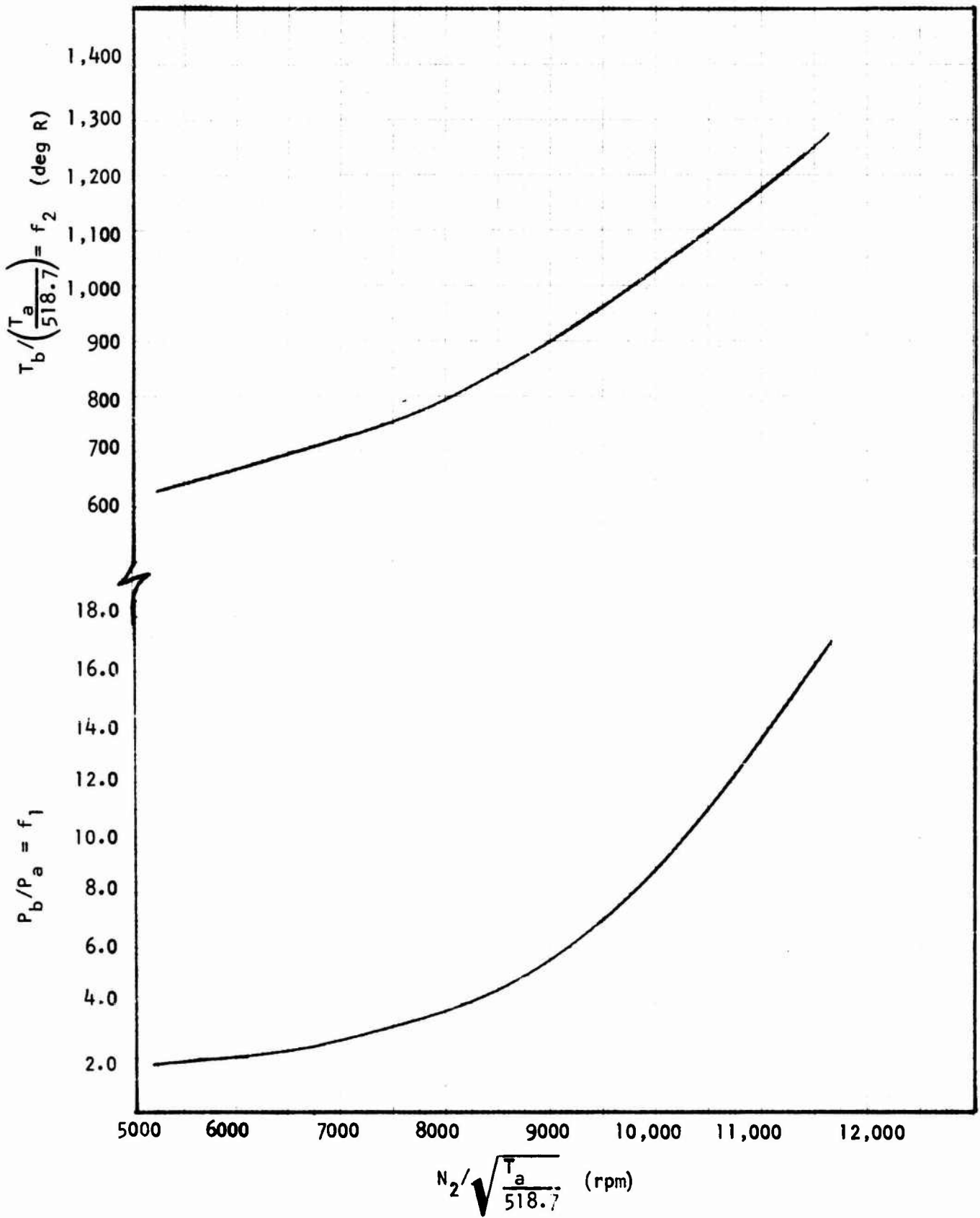


Figure 4. Typical Production Engine Performance

Name	Symbol	Description
STD FCO Continued		<p>where: $P_{b, std} = P_{a, std} \cdot f_1 \left(N_{2, std} / \sqrt{\frac{T_{a, std}}{518.7}} \right)$</p> <p>$T_{b, std} = \frac{T_{a, std}}{518.7} \cdot f_2 \left(N_{2, std} / \sqrt{\frac{T_{a, std}}{518.7}} \right)$</p> <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \quad \text{and} \quad N_2 \sqrt{\frac{1}{T_a}}$ <p>remain constant, and the equations for $T_{b, std}$ and $P_{b, std}$ should be modified to read:</p> <p>$P_{b, std} = P_{a, std} \cdot f_1 \left(N_{2, obs} / \sqrt{\frac{T_{a, obs}}{518.7}} \right)$</p> <p>$T_{b, std} = f_2 \left(N_{2, obs} / \sqrt{\frac{T_{a, obs}}{518.7}} \right)$</p> <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H₂O/lbm dry air), or a value corrected to standard day condition.</p>
STD FHC	$(F_{HC})_{std}$	<p>Corrected HC emission index</p> $(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{3/4} \cdot \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{1/2} \cdot \frac{e^{T_{b, std} / \{500 - T_{a, std} (F/A_{obs} / T_{a, obs}) \times 10^4\}}}{e^{T_{b, ref} / (500 - F/A_{ref} \times 10^4)}}$
STD FNO	$(F_{NO})_{std}$	<p>Corrected NO emission index</p> $(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1/2} \cdot e^{0.00138(T_{b, std} - T_{b, ref})}$
API		<p>Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.</p>
H/C RATIO	a	<p>Hydrogen-carbon ratio as determined using a Sanda-Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.</p>

Name	Symbol	Description
FIA		Fluorescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and NO_x the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. During the course of testing, some units gave extremely high hydrocarbon readings in the high power modes. This was true of unit 23, tests one through five, unit 20, tests two and four, and unit 18, tests three through five. One possible explanation for these results is a leak in the fuel manifold B-nuts. The FAA issued an Airworthiness Directive, (A.D. 75-05-06) calling for the inspection of the B-nuts on certain engines. This was subsequently revised to require quadruple torquing of the B-nuts, due to an increase in incidences of leaking and auto-ignition.
4. The original testing plan called for data to be taken at seven modes of engine operation. Subsequently, an eighth mode was added. However, units 4 and 14 through 19 were baseline tested under the old schedule, so there is no mode 6 (Approach) data listed for the baseline tests of these units. In addition, the mode 5 (Intermediate) setting for these tests was slightly different than the one eventually settled on.
5. The JT8D-9 engines were the first type to be tested and when testing began, certain instrument problems were experienced. On February 4, 1975, aircraft 4339, with units 17, 18 and 19, was tested. The sample line was not heating properly,

invalidating the hydrocarbon results. The same engine was tested again on March 5th, and this time the NO and NO_x analyzers malfunctioned. For the purposes of the degradation analysis the CO₂, CO and HC data collected on March 5th were considered the baseline data while the data from February 4th, were considered baseline for the NO and NO_x. In the tables, the first test is designated A (i.e., 17-A, 18-A, and 19-A) while the second test is designated B.

6. During the "3000-Hour" test of unit 16, a zero off-set on the CO analyzer occurred which went uncorrected for modes 3 through 8. To obtain useful information from this data, the procedure described below was followed. The CO to HC ratio was established for mode 1; and, assuming the same ratio held for mode 8, a CO value for mode 8 was obtained. Subtracting this value from the value obtained from the analyzer established the magnitude of the zero-shift. This same shift was then applied to the data for modes 3 through 7 to obtain corrected values. These are the values reported in the tables.
7. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode	Quantity
7	"2400-Hour"	2	EPR
9	" 600-Hour"	7	EPR
10	"Baseline"	7	EGT
10	"1800-Hour"	4	EPR
10	"2400-Hour"	4	N2
11	"2400-Hour"	7	EGT
12	"2400-Hour"	7	N1
14	" 600-Hour"	7	N1
15	" 600-Hour"	7	N1
16	"1200-Hour"	8	EPR
17	"1800-Hour"	5	N1

JT8D-9 * BASELINE TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DFG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
-----	-----	-----	-----	-----	-----
1	8198.	0.	508.7	30.08	.004450
2	15095.	0.	487.7	30.18	.003360
3	7261.	0.	487.7	30.18	.003360
4	13570.	0.	487.2	30.49	.002750
17A	1248.	0.	498.7	30.12	.003730
6	14777.	0.	511.7	29.87	.006680
7	13835.	0.	491.7	30.24	.003400
18A	1248.	0.	499.7	30.12	.003730
9	15316.	0.	503.7	30.17	.003410
10	15130.	0.	506.2	30.15	.005920
11	7350.	0.	507.7	30.13	.003900
12	13865.	0.	507.7	30.13	.003900
19A	1248.	0.	498.7	30.18	.003720
14	1475.	0.	492.7	30.07	.003350
15	1475.	0.	492.7	30.07	.003350
16	1475.	0.	492.7	30.07	.003350
17B	1470.	0.	494.2	29.98	.003580
18B	1470.	0.	493.7	29.98	.003700
19B	1470.	0.	494.2	29.98	.003580
20	1669.	0.	512.2	29.99	.005660
21	1669.	0.	512.2	29.99	.005660
22	1669.	0.	512.2	29.99	.005660
23	8280.	0.	525.2	29.67	.006430

JT8D-9 * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.50	59.00	36.86	59.58
2	34.00	56.00	35.06	57.75
3	33.00	55.70	34.03	57.44
4	34.00	57.50	35.08	59.23
17A	34.70	58.50	35.39	59.66
6	33.50	57.50	33.73	57.89
7	34.50	58.00	35.43	59.57
18A	34.25	58.00	34.93	59.15
9	36.00	59.00	36.53	59.87
10	33.50	56.50	33.91	57.19
11	31.50	-54.00	31.84	-54.58
12	35.00	59.00	35.38	59.64
19A	34.90	58.00	35.59	59.15
14	36.00	59.25	36.94	60.79
15	-37.00	59.00	-37.96	60.54
16	36.00	59.00	36.94	60.54
17B	35.00	58.50	35.86	59.93
18B	32.00	55.50	32.80	56.89
19B	35.00	58.25	35.86	59.68
20	34.50	58.00	34.72	58.37
21	-37.00	60.00	37.23	60.38
22	36.00	-61.00	36.23	61.39
23	34.00	58.00	33.79	57.64

JT8D-9 * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	-1300.	.3870	.3190	1167.	1.050	937.
2	1040.	.2400	.2550	1059.	1.070	897.
3	970.	.2620	.2440	1077.	1.060	891.
4	1135.	.3600	.2750	1095.	1.070	919.
17A	1100.	.2740	.2720	1050.	1.070	937.
6	1015.	.3030	.2680	1167.	1.050	909.
7	1100.	.3650	.2690	1086.	1.040	931.
18A	1040.	.2800	.2590	1104.	1.070	927.
9	-1255.	.2740	.3070	1116.	1.060	940.
10	1040.	.3180	.2690	1140.	1.060	887.
11	-900.	-.4170	.2580	1158.	1.060	-832.
12	-1200.	.3800	.2990	1122.	1.060	936.
19A	1055.	.2930	.2600	1053.	1.070	925.
14	1113.	.2590	.2680	1086.	1.070	-1004.
15	1140.	.2740	.2710	1077.	-1.080	985.
16	1160.	.2670	.2800	1073.	-1.080	985.
17B	1050.	.2680	.2580	1050.	1.070	947.
18B	950.	.2730	.2570	1059.	1.060	886.
19B	1115.	.2700	.2740	1032.	-1.080	942.
20	1050.	.2750	.2670	1140.	1.060	915.
21	1140.	.2730	.2800	1140.	1.070	976.
22	1110.	.2960	.2760	1140.	1.070	-1050.
23	1100.	.3410	.2960	1149.	1.060	911.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TFST SERIES *

MODE 1

UNIT	CORR FII FL LHM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1294.	-.3940	-.3250	1190.	942.
2	1017.	.2550	.2710	1126.	905.
3	949.	.2780	.2600	1145.	899.
4	1121.	.3830	.2930	1165.	937.
17A	1086.	.2850	.2730	-1092.	943.
6	1006.	.3070	.2720	1183.	908.
7	1082.	.3850	.2840	1145.	941.
18A	1026.	.2920	.2690	1148.	933.
9	-1247.	.2820	-.3160	1150.	947.
10	1035.	.3260	.2750	1168.	894.
11	-897.	-.4260	.2630	1183.	837.
12	-1195.	.3880	.3060	1146.	943.
13A	1043.	.3040	.2700	1096.	933.
14	1090.	.2720	.2830	1143.	-1009.
15	1116.	.2890	.2860	1134.	990.
16	1136.	.2810	.2950	1130.	990.
17B	1027.	.2820	.2710	1102.	949.
18B	-929.	.2860	.2700	1112.	888.
19B	1091.	.2840	.2880	-1083.	944.
20	1046.	.2790	.2700	1154.	917.
21	1135.	.2760	.2840	1154.	978.
22	1105.	.3000	.2800	1154.	-1053.
23	1097.	.3370	.2920	1134.	903.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.789	114.9	16.4	5.7	-10.3
2	.485	89.3	16.3	1.8	5.6
3	.526	117.7	27.6	1.4	4.7
4	.727	139.0	31.6	5.7	5.7
17A	.555	98.4	23.5	2.2	5.9
6	.614	107.0	17.5	6.9	7.3
7	.744	122.6	19.8	3.9	5.8
18A	.567	110.0	22.3	2.8	6.1
9	.555	92.8	20.6	3.3	6.9
10	.649	104.7	15.1	3.5	6.4
11	-.845	166.9	30.4	3.7	-8.8
12	.778	114.7	14.1	5.5	-10.4
19A	.590	117.1	29.6	2.2	6.3
14	.522	109.9	20.7	.6	3.7
15	.555	104.4	21.4	-.5	3.4
16	.542	91.5	19.9	.7	3.7
17B	.544	92.6	21.4	3.0	6.4
18B	.549	123.5	24.1	2.0	6.8
19B	.545	111.1	25.1	4.1	8.1
20	.559	97.9	18.0	3.9	6.6
21	.552	102.1	19.5	9.3	-11.3
22	.601	104.2	19.3	1.5	2.8
23	.692	122.6	23.1	5.3	8.5

JT8D-9 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3085.	28.62	7.02	2.32	4.21	0.00
2	3066.	35.90	11.24	1.17	3.73	0.00
3	3040.	43.32	17.43	.83	2.86	0.00
4	3058.	37.20	14.53	2.50	2.51	0.00
17A	3063.	34.59	14.17	1.26	3.40	-1.73
6	3074.	34.08	9.59	3.60	3.84	0.00
7	3080.	32.32	8.97	1.71	2.51	0.00
18A	3060.	37.81	13.18	1.60	3.46	-1.72
9	3068.	32.68	12.47	1.92	3.98	0.00
10	3085.	31.67	7.83	1.73	3.18	0.00
11	3062.	38.51	12.06	1.39	3.32	0.00
12	3093.	29.04	6.12	2.27	4.32	0.00
19A	3049.	38.53	16.76	1.21	3.41	-0.66
14	3058.	40.93	13.23	.39	2.29	0.00
15	3065.	36.71	12.44	.24	1.97	0.00
16	3072.	33.00	12.35	.42	2.17	0.00
17B	3067.	33.25	13.20	1.78	3.75	0.00
18B	3047.	43.64	14.65	1.16	3.93	0.00
19B	3051.	39.61	15.38	2.39	4.73	0.00
20	3072.	34.26	10.80	2.23	3.80	0.00
21	3067.	36.06	11.85	5.38	-6.53	0.00
22	3073.	33.89	10.80	.79	1.47	0.00
23	3071.	34.64	11.22	2.45	3.94	0.00

JTAD-9 * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
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1	3.9780	5.0790	19.5500	4.1870	5.2840	21.6410
2	3.2030	4.0840	18.2150	3.7670	4.6070	20.5290
3	3.1460	4.0490	18.0530	3.6990	4.5700	20.3420
4	3.5180	4.6020	19.3490	4.1280	5.2000	21.4890
17A	3.7850	4.7230	19.4890	4.2070	5.1120	21.6920
6	3.6520	4.5770	17.8980	3.7980	4.7190	20.6130
7	3.6340	4.7220	19.3330	4.1850	5.2660	21.6370
18A	3.6780	4.6180	19.2120	4.0860	4.9970	21.3800
9	3.9430	4.8730	19.9350	4.2580	5.1580	21.8220
10	3.4260	4.3770	17.6830	3.6440	4.5840	20.1910
11	-2.9450	3.9640	17.0180	3.1050	4.1300	-18.6420
12	3.9740	5.0680	19.7650	4.2010	5.2890	21.6770
19A	3.6840	4.6440	19.2370	4.0860	5.0190	21.3800
14	3.8920	4.8310	19.9930	4.4850	5.3730	22.3900
15	3.8380	4.7970	19.8540	4.4210	5.3370	22.2320
16	3.8380	4.7870	19.8540	4.4210	5.3240	22.2320
17B	3.7350	4.6730	19.4720	4.2720	5.1730	21.8590
18B	3.1310	4.0260	17.7970	3.5780	4.4550	20.0080
19B	3.6820	4.6200	19.3350	4.2110	5.1130	21.7020
20	3.7750	4.6680	18.5550	3.9050	4.7870	20.9020
21	4.2330	5.1410	19.6440	4.3820	5.2750	22.1340
22	-4.4770	-5.4330	20.1950	-4.6350	-5.5770	22.7580
23	3.8510	4.8040	18.2590	3.7420	4.7060	20.4610

JTAD-9 * BASELINE TEST SERIES *

 MODF 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
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1	27.19	6.75	2.57	4.66	0.00
2	30.52	9.97	1.32	4.20	0.00
3	36.85	15.44	.94	3.22	0.00
4	31.70	12.86	2.78	2.79	0.00
17A	31.12	13.09	1.40	3.78	-1.73
6	32.77	9.30	4.14	4.43	0.00
7	28.06	8.04	1.91	2.81	0.00
18A	34.03	12.18	1.78	3.85	-1.72
9	30.27	11.78	2.10	4.36	0.00
10	29.78	7.48	1.98	3.63	0.00
11	36.53	11.58	1.52	3.63	0.00
12	27.47	-5.86	2.49	4.73	0.00
19A	34.74	15.51	1.34	3.79	-.66
14	35.53	11.89	.44	2.56	0.00
15	31.87	11.63	.32	2.21	0.00
16	28.65	11.11	.47	2.43	0.00
17B	29.07	11.93	2.00	4.21	0.00
18B	38.19	13.24	1.33	4.42	0.00
19B	34.64	13.90	2.69	5.31	0.00
20	33.12	10.53	2.51	4.29	0.00
21	34.84	11.54	6.06	-7.36	0.00
22	32.73	10.52	.88	1.66	0.00
23	35.65	11.46	2.74	4.41	0.00

JT80-9 * BASELINE TFST SERIES *

MODF 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	39.00	62.00	39.38	62.61
2	40.00	62.00	41.25	63.94
3	-41.00	62.00	-42.28	63.94
4	39.00	62.00	40.24	63.97
17A	38.50	-61.70	39.26	62.93
6	38.00	62.00	38.26	62.42
7	38.50	62.00	39.54	63.68
18A	39.00	62.00	39.77	63.23
9	39.00	62.00	39.58	62.92
10	39.00	62.00	39.48	62.76
11	39.00	62.00	39.42	62.67
12	38.00	62.00	38.41	62.67
19A	39.00	62.00	39.77	63.23
14	39.00	62.00	40.02	63.61
15	-41.00	62.00	-42.07	63.61
16	39.50	62.00	40.53	63.61
17A	39.00	62.00	39.96	63.52
18A	38.50	62.00	39.46	63.55
19A	38.50	62.00	39.44	63.52
20	39.00	62.00	39.25	62.39
21	38.50	62.00	38.74	62.39
22	37.00	62.00	37.23	62.39
23	38.00	62.00	37.76	61.62

JT8D-9 * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LBF
1	-1450.	-.3870	-.3440	1167.	1.060	1137.
2	1320.	.2330	.2930	1113.	1.090	1231.
3	1320.	.2490	.2850	1095.	1.080	1231.
4	1350.	.3570	.3060	1086.	1.090	1221.
17A	1250.	.2790	.2940	1068.	1.080	1159.
6	1190.	.2820	.2890	1176.	1.060	1131.
7	1290.	.3480	.2990	1104.	1.060	1209.
18A	1220.	.2740	.2850	1122.	1.080	1181.
9	1390.	.2800	.3270	1140.	1.080	1156.
10	1345.	.2830	.3170	1149.	1.080	1145.
11	-1450.	-.4110	-.3430	1158.	1.090	1140.
12	1350.	-.3800	.3240	1140.	1.070	1140.
19A	1210.	.2930	.2820	1068.	1.080	1179.
14	1270.	.2610	.2940	1122.	1.080	1212.
15	1320.	.2680	.2890	1118.	1.080	1212.
16	1315.	.2610	.3010	1107.	1.090	1212.
17B	1275.	.2730	.2970	1068.	1.080	1208.
18B	1265.	.2610	.2960	1104.	1.080	1210.
19B	1255.	.2720	.2940	1068.	1.080	1208.
20	1200.	.2790	.2870	1158.	1.080	1125.
21	1230.	.2730	.2960	1140.	1.080	1125.
22	1140.	.2980	.2800	1140.	1.080	1125.
23	1250.	.3540	.3120	1158.	1.070	1079.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-9 * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	-1444.	-.3950	-.3510	1190.	1143.
2	1291.	.2480	.3120	1183.	1242.
3	1291.	.2640	.3030	1164.	1242.
4	1333.	-.3800	.3250	1156.	1244.
17A	1234.	.2900	.3060	-1111.	1166.
6	1180.	.2860	.2930	1192.	1129.
7	1269.	.3670	.3150	1164.	1222.
18A	1204.	.2850	.2960	1167.	1189.
9	-1381.	.2880	.3360	1174.	1166.
10	1339.	.2900	.3250	1177.	1154.
11	-1444.	-.4200	-.3510	1183.	1147.
12	1345.	-.3880	.3310	1164.	1147.
19A	1197.	.3050	.2930	-1111.	1189.
14	1244.	.2750	.3100	1181.	1217.
15	1293.	.2820	.3050	1177.	1217.
16	1288.	.2740	.3170	1166.	1217.
17B	1247.	.2860	.3120	1121.	1210.
18B	1237.	.2750	.3110	1160.	1213.
19B	1227.	.2860	.3090	1121.	1210.
20	1195.	.2830	.2910	1172.	1127.
21	1225.	.2770	.3000	1154.	1127.
22	1135.	.3020	.2840	1154.	1127.
23	1247.	.3490	.3080	1143.	1070.

JTRD-9 * BASELINE TFST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.793	95.1	14.1	6.2	-11.0
2	.475	65.6	12.6	2.6	6.7
3	.506	68.2	17.1	2.5	6.1
4	.725	107.3	-27.6	6.9	7.3
17A	.568	75.4	20.4	3.1	6.8
6	.575	76.3	14.1	7.6	7.7
7	.711	93.2	15.9	4.9	6.4
18A	.557	77.8	20.3	3.6	7.0
9	.569	86.1	18.2	3.6	7.6
10	.579	72.1	11.6	4.1	6.6
11	-.842	101.6	17.2	6.1	-11.1
12	-.780	94.2	11.9	6.4	-10.8
19A	.593	89.0	-29.6	3.3	7.6
14	.532	69.7	16.6	1.9	4.8
15	.546	79.9	17.4	-1.2	4.1
16	.532	70.7	15.2	1.5	4.4
17B	.555	76.4	18.4	3.6	7.4
18B	.532	76.9	15.0	3.2	7.8
19B	.552	89.7	20.3	3.9	8.3
20	.569	85.4	14.6	4.5	7.5
21	.557	82.4	14.9	4.8	7.5
22	.607	96.1	17.2	3.9	7.1
23	.725	88.5	14.3	6.7	-9.8

JT8D-9 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 FT LB/KLB FU	CO FT LB/KLB FU	HC FT LB/KLB FU	NO FT LB/KLB FU	NOX FT LB/KLB FU	SMK NUMBER FRONT SIDE
1	3095.	27.63	6.04	2.54	4.51	0.00
2	3086.	27.11	8.93	1.77	4.52	0.00
3	3083.	26.46	11.42	1.60	3.88	0.00
4	3075.	28.98	12.80	3.07	3.22	0.00
17A	3082.	26.04	12.09	1.78	3.88	-1.07
6	3090.	26.09	8.30	4.28	4.33	0.00
7	3095.	25.82	7.55	2.23	2.93	0.00
18A	3079.	27.35	12.25	2.05	4.07	-.93
9	3077.	29.62	10.78	2.02	4.27	0.00
10	3090.	24.58	6.92	2.32	3.70	0.00
11	3099.	23.80	6.93	2.35	4.27	0.00
12	3104.	23.86	5.19	2.65	4.50	0.00
19A	3064.	29.26	-16.72	1.78	4.11	-1.32
14	3089.	25.75	10.51	1.13	2.93	0.00
15	3094.	28.71	10.71	-.68	2.39	0.00
16	3091.	26.14	9.67	.94	2.68	0.00
17B	3083.	26.99	11.16	2.07	4.28	0.00
18B	3085.	28.37	9.50	1.95	4.75	0.00
19B	3072.	31.78	12.32	2.26	4.85	0.00
20	3086.	29.47	8.64	2.53	4.26	0.00
21	3085.	29.08	9.05	2.79	4.37	0.00
22	3081.	31.05	9.57	2.07	3.79	0.00
23	3100.	24.08	6.68	3.00	4.36	0.00

JTAD-9 * BASELINE TFST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.7370	5.8990	21.3180	4.9930	6.1430	23.6140
2	4.5910	5.5360	21.8010	5.4550	6.2880	24.6780
3	4.5910	5.5640	21.8010	5.4550	6.3240	24.6780
4	4.6230	5.8100	22.1680	5.4670	-6.6010	24.7040
17A	4.5730	5.5560	21.4110	5.1010	6.0280	23.8670
6	4.7340	5.6680	20.3630	4.9320	5.8490	23.4690
7	4.6280	5.7740	21.8070	5.3620	6.4630	24.4690
18A	4.6660	5.6420	21.6260	5.2060	6.1220	24.1110
9	4.7090	5.6780	21.7750	5.0980	6.0220	23.8600
10	4.7260	5.6900	20.7560	5.0450	5.9710	23.7370
11	4.7340	5.9510	21.5600	5.0140	6.2220	23.6630
12	4.7340	5.8860	21.5600	5.0140	6.1500	23.6630
19A	4.6730	5.6870	21.6530	5.2060	6.1650	24.1110
14	4.6150	5.5890	21.7650	5.3390	6.2330	24.4170
15	4.6150	5.6020	21.7650	5.3390	6.2500	24.4170
16	4.6150	5.5980	21.7650	5.3390	6.2320	24.4170
17B	4.6170	5.6040	21.6380	5.3060	6.2240	24.3400
18B	4.6130	5.5810	21.5920	5.3170	6.2100	24.3660
19B	4.6170	5.6030	21.6380	5.3060	6.2230	24.3400
20	4.7520	5.6810	20.9010	4.9210	5.8330	23.4450
21	4.7520	5.6700	20.8010	4.9210	5.8200	23.4450
22	4.7520	5.7180	20.8010	4.9210	5.8720	23.4450
23	4.8370	5.8610	20.4490	4.6940	5.7350	22.9010

JT80-9 * BASELINE TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	22.41	5.80	2.82	4.99	0.00
2	22.82	7.87	2.00	5.12	0.00
3	22.27	10.05	1.82	4.39	0.00
4	24.51	11.26	3.42	3.58	0.00
17A	23.35	11.14	1.98	4.33	-1.07
6	25.04	8.04	4.93	4.99	0.00
7	22.28	6.74	2.50	3.28	0.00
18A	24.51	11.28	2.29	4.53	-0.93
9	27.36	10.17	2.21	4.68	0.00
10	23.03	6.49	2.66	4.23	0.00
11	22.47	6.62	2.58	4.69	0.00
12	22.53	4.97	2.90	4.94	0.00
19A	26.27	-15.43	1.99	4.58	-1.32
14	22.26	9.42	1.27	3.29	0.00
15	24.81	9.60	-0.77	2.68	0.00
16	22.59	8.67	1.06	3.01	0.00
17B	23.48	10.04	2.33	4.82	0.00
18B	24.62	9.53	2.20	5.36	0.00
19B	27.65	11.10	2.54	5.46	0.00
20	28.46	8.42	2.85	4.81	0.00
21	28.08	8.81	3.14	4.93	0.00
22	29.98	9.32	2.34	4.27	0.00
23	24.81	6.82	3.36	4.88	0.00

JTAD-9 * BASFLINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	94.00	93.00	94.92	93.91
2	93.00	91.00	95.91	93.85
3	94.00	92.00	96.94	94.88
4	93.50	91.50	96.48	94.41
17A	96.00	93.50	-97.91	95.36
6	96.50	95.20	-97.16	95.85
7	94.65	92.90	-97.21	95.42
18A	95.00	93.00	96.89	94.85
9	94.00	93.00	95.39	94.37
10	94.50	92.62	95.66	93.76
11	94.00	93.00	95.01	94.00
12	94.00	94.00	95.01	95.01
19A	96.00	93.00	-97.91	94.85
14	93.75	92.00	96.19	94.40
15	94.50	92.00	96.96	94.40
16	93.50	91.25	95.94	93.63
17B	94.50	93.00	96.81	95.29
18B	94.50	93.00	96.86	95.33
19B	94.25	92.50	96.56	94.77
20	95.00	93.50	95.60	94.09
21	94.00	93.50	94.59	94.09
22	95.50	94.50	96.10	95.10
23	95.00	94.00	94.41	93.42

JT8D-9 * BASELINE TFST SERIES *

MODE 3

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	9100.	.9810	.7730	1428.	2.070	14618.
2	8640.	.9460	.7120	1368.	2.080	14676.
3	9070.	.9820	.7430	1395.	2.080	14676.
4	8700.	.9350	.7070	1356.	2.080	14527.
17A	-10000.	.8920	-.8270	1428.	2.080	14707.
6	9200.	.9680	.7800	1464.	2.050	14508.
7	8800.	.9910	.7220	1392.	2.080	14647.
18A	8650.	.8530	.7190	1428.	2.080	14707.
9	8900.	1.0060	.7480	1401.	2.080	14683.
10	8850.	.9770	.7450	1428.	2.070	14585.
11	8600.	.9690	.7280	1446.	2.080	14703.
12	8800.	.9000	.7450	1428.	2.080	14703.
19A	9050.	.8520	.7470	1392.	2.080	14676.
14	-9425.	.8840	.7830	1392.	2.080	14732.
15	9000.	.8900	.7440	1410.	2.080	14732.
16	9175.	.9500	.7630	1392.	2.080	14732.
17B	8725.	.8350	.7250	1392.	2.080	14774.
18B	8600.	.8580	.7140	1428.	2.080	14774.
19B	8850.	-.7770	.7370	1374.	2.080	14774.
20	8800.	.8660	.7500	1428.	2.050	14452.
21	8500.	.8270	.7280	1419.	2.050	14452.
22	8600.	.9240	.7310	1464.	2.050	14452.
23	9200.	.9860	.8080	1482.	2.040	14500.

JTAD-9 * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	9060.	1.0000	.7880	1456.	14697.
2	8451.	1.0060	.7580	1455.	14803.
3	8871.	1.0440	.7910	1484.	14803.
4	8592.	.9950	.7530	1443.	14803.
17A	-9869.	.9270	-.8600	1485.	14803.
6	9122.	.9810	.7900	1484.	14483.
7	8660.	-1.0460	.7610	1468.	14803.
18A	8537.	.8870	.7480	1485.	14803.
9	8842.	1.0360	.7710	1442.	14803.
10	8810.	1.0010	.7640	1463.	14697.
11	8567.	.9900	.7440	1477.	14803.
12	8766.	.9200	.7620	1459.	14803.
19A	8951.	.8870	.7770	1448.	14803.
14	9230.	.9310	-.8240	1465.	14803.
15	8814.	.9370	.7840	1484.	14803.
16	8985.	1.0000	-.8030	1465.	14803.
17B	8534.	.8770	.7610	1461.	14803.
18B	8407.	.9020	.7500	-1500.	14803.
19B	8656.	.8150	.7730	1442.	14803.
20	8764.	.8770	.7590	1446.	14483.
21	8465.	.8380	.7370	1437.	14483.
22	8565.	.9360	.7400	1482.	14483.
23	9179.	.9730	-.7980	1463.	14377.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	2.051	14.6	10.2	101.1	98.4
2	1.981	16.6	5.6	90.2	96.6
3	2.056	16.6	11.1	-107.2	106.7
4	1.954	16.5	18.9	-115.5	-110.1
17A	1.862	15.3	20.9	67.6	71.1
6	2.026	12.4	7.2	-116.6	-111.1
7	2.078	15.9	6.1	83.3	89.3
18A	1.780	15.8	18.9	68.1	69.9
9	2.106	15.5	9.4	95.3	100.4
10	2.047	15.4	5.6	85.5	96.6
11	2.031	17.3	4.6	93.7	102.9
12	1.886	13.5	3.8	101.1	99.9
19A	1.779	16.2	20.7	72.5	75.5
14	1.851	14.5	8.9	90.6	100.5
15	1.865	13.9	8.2	87.5	91.4
16	1.990	15.6	8.5	96.2	103.9
17B	1.745	14.2	17.9	95.9	97.3
18B	1.796	15.3	6.7	95.4	99.1
19B	-1.622	15.7	13.0	88.1	89.1
20	1.814	13.2	4.4	82.7	89.4
21	1.731	11.4	5.3	77.7	83.1
22	1.936	12.2	4.7	86.4	93.1
23	2.060	15.2	25.6	93.1	100.7

JTRD-9 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3142.	1.43	1.71	16.20	16.20	31.79
2	3148.	1.68	.97	14.98	16.04	33.33
3	3148.	1.62	1.86	-17.16	17.16	34.44
4	3144.	1.69	3.32	-19.43	-19.43	30.00
17A	3143.	1.64	3.85	11.92	12.54	27.73
6	3148.	1.23	1.23	-18.94	-18.94	29.33
7	3151.	1.53	1.00	13.20	14.16	35.10
18A	3143.	1.78	3.65	12.57	12.90	-21.19
9	3147.	1.48	1.53	14.89	15.68	32.67
10	3151.	1.51	.94	13.76	15.55	27.81
11	3151.	1.71	.78	15.19	16.68	35.10
12	3152.	1.44	.69	-17.66	17.66	32.67
19A	3142.	1.82	4.00	13.38	13.94	23.18
14	3151.	1.57	1.65	16.12	-17.89	28.60
15	3152.	1.50	1.51	15.46	16.15	27.60
16	3152.	1.57	1.47	15.92	17.20	31.00
17B	3144.	1.63	3.52	-18.07	-18.33	29.73
18B	3150.	1.71	1.29	-17.49	-18.16	29.33
19B	3145.	1.94	2.75	-17.85	-18.06	30.93
20	3151.	1.46	.83	15.03	16.23	29.14
21	3151.	1.32	1.05	14.78	15.81	26.49
22	3152.	1.26	.83	14.70	15.85	27.81
23	3142.	1.47	4.27	14.85	16.05	32.24

JT8D-9 * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	110.1140	105.6360	92.0460	123.3930	114.6360	103.3040
2	86.7920	88.6230	87.4970	123.7030	114.6130	103.0330
3	99.1780	97.9400	91.0850	-143.1930	-127.6320	107.4130
4	90.1630	92.0450	90.8870	128.2830	118.6960	105.5160
17A	100.5170	101.6480	95.2180	125.5900	119.6470	109.0750
6	128.5710	120.6880	95.2090	-139.9610	-128.4320	110.8060
7	108.2160	104.8290	93.9200	-149.0770	-131.9390	109.2850
18A	92.4890	95.9940	93.7030	114.8260	112.5820	107.3010
9	113.7470	107.9100	94.2530	135.4610	122.2600	105.3520
10	105.6840	102.3960	88.3010	121.6780	113.2860	102.6360
11	108.3990	104.7990	93.1350	122.6750	114.5330	103.7090
12	107.5910	106.8680	96.8320	121.3970	116.5870	107.8780
10A	92.6090	96.1320	93.8210	114.7860	112.5590	107.3010
14	87.8320	91.1850	90.8520	117.2390	112.7570	105.4480
15	88.5060	91.5850	90.8520	118.2680	113.3180	105.4480
16	89.1320	90.2260	88.0250	120.0570	112.0560	102.0700
17B	89.2590	93.8700	93.5840	116.7400	114.5820	108.7990
18B	91.6780	95.3230	93.3660	121.0470	117.0900	108.9670
19B	80.4750	87.5820	92.0950	104.1600	106.2710	107.0190
20	99.0620	100.4740	91.5690	106.2500	105.7840	104.1020
21	94.3250	97.6760	91.5630	101.0020	102.7460	104.1020
22	115.9030	112.4180	95.1240	124.7370	118.5950	108.1730
23	121.4830	113.2790	91.1000	113.5210	107.9840	101.1600

JTAD-9 * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	1.27	1.58	18.18	18.18	31.79
2	1.18	.75	17.64	18.89	33.33
3	1.12	1.43	-20.23	20.23	34.44
4	1.19	2.58	-22.56	-22.56	30.00
17A	1.32	3.27	13.66	14.36	27.73
6	1.13	1.15	-22.04	-22.04	29.33
7	1.11	.80	15.36	16.48	35.10
18A	1.43	3.12	14.40	14.78	-21.19
9	1.24	1.35	16.64	17.53	32.67
10	1.31	.85	15.99	18.08	27.81
11	1.51	.71	16.92	18.58	35.10
12	1.28	.63	-19.68	19.68	32.67
19A	1.47	3.42	15.31	15.95	23.18
14	1.18	1.33	18.71	-20.76	28.60
15	1.12	1.22	17.94	18.74	27.60
16	1.16	1.18	18.46	19.94	31.00
17B	1.24	2.89	-21.01	-21.31	29.73
18B	1.30	1.05	-20.41	-21.20	29.33
19B	1.50	2.26	-20.74	-20.99	30.93
20	1.36	.79	17.09	18.45	29.14
21	1.23	1.00	16.81	17.97	26.49
22	1.17	.79	16.72	18.03	27.81
23	1.58	4.48	16.49	17.82	32.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TFST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	87.50	90.50	88.36	91.39
2	85.70	88.00	88.38	90.75
3	86.50	89.20	89.21	91.99
4	85.25	88.00	87.96	90.80
17A	87.00	89.50	88.73	91.28
6	89.00	92.00	89.61	92.63
7	88.00	90.00	-90.38	92.44
18A	87.00	89.50	88.73	91.28
9	87.75	90.00	89.05	91.33
10	88.00	90.00	89.18	91.10
11	88.00	90.00	88.95	90.97
12	88.00	92.00	88.95	-92.99
19A	86.50	89.00	88.22	90.77
14	85.00	88.00	-87.21	90.29
15	86.75	88.00	89.01	90.29
16	86.00	88.00	88.24	90.29
17R	86.25	89.50	88.36	91.69
18B	86.50	89.00	88.66	91.23
19B	86.00	89.00	88.11	91.18
20	89.00	91.00	89.56	91.58
21	89.00	91.00	89.56	91.58
22	89.00	92.00	89.56	92.58
23	89.00	91.00	88.45	90.44

JT8D-9 * BASELINE TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	7550.	.8070	.6750	1356.	-1.870	12453.
2	7100.	.8070	.6190	1302.	-1.880	12521.
3	7500.	.8060	.6490	1320.	-1.880	12521.
4	6900.	.7970	.5980	1302.	1.840	-11954.
17A	7400.	.6740	.6520	1302.	1.840	12103.
6	7300.	.7650	.6510	1392.	1.850	12321.
7	7200.	.8240	.6170	1320.	-1.880	12496.
18A	6850.	.6920	.6030	1323.	1.840	12103.
9	7400.	.8220	.6520	1347.	-1.880	12527.
10	7200.	.8680	.6360	1356.	-1.870	12424.
11	7250.	.8610	.6430	1374.	-1.880	12544.
12	7300.	.8020	.6470	1356.	-1.880	12544.
19A	7050.	.6640	.6230	1266.	1.840	12077.
14	7262.	.6810	.6460	1320.	1.840	12123.
15	7045.	.7040	.6160	1320.	1.840	12123.
16	7000.	.7510	.6170	1320.	1.840	12123.
17B	6750.	.6800	.5970	1302.	1.840	12158.
18B	-6650.	.6840	.5860	1320.	1.840	12158.
19B	7100.	-.6230	.6290	1284.	1.840	12158.
20	7400.	.7080	.6580	1365.	1.860	12383.
21	7150.	.7150	.6360	1356.	1.860	12383.
22	7100.	.7640	.6320	1383.	1.860	12383.
23	-7700.	.8400	-.7090	1410.	1.850	12406.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	7517.	.8230	.6880	1382.	-12520.
2	6944.	.8580	.6590	1384.	-12630.
3	7336.	.8570	-.6900	1404.	-12630.
4	6815.	.8490	.6360	1386.	12182.
17A	7303.	.7010	.6780	1354.	12182.
6	7238.	.7760	.6600	1411.	12300.
7	7085.	.8690	.6510	1392.	-12630.
18A	6760.	.7200	.6280	1376.	12182.
9	7352.	.8470	.6710	1387.	-12630.
10	7167.	-.8890	.6520	1389.	-12520.
11	7222.	.8790	.6570	1403.	-12630.
12	7272.	.8200	.6610	1385.	-12630.
19A	6973.	.6900	.6480	-1316.	12182.
14	7112.	.7160	.6800	1389.	12182.
15	6899.	.7410	.6490	1389.	12182.
16	6855.	.7910	.6490	1389.	12182.
17B	6602.	.7140	.6260	1366.	12182.
18B	6501.	.7180	.6150	1387.	12182.
19B	6944.	-.6540	.6600	1347.	12182.
20	7369.	.7170	.6670	1382.	12410.
21	7120.	.7240	.6440	1373.	12410.
22	7071.	.7730	.6400	1400.	12410.
23	7682.	.8290	-.7000	1392.	12300.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TFST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.684	15.9	7.8	64.3	71.1
2	1.686	20.0	5.1	60.8	68.3
3	1.684	19.3	9.5	65.1	72.8
4	1.664	-21.1	17.5	64.2	-74.0
17A	1.404	17.1	12.9	-42.8	46.1
6	1.599	13.7	6.4	68.3	71.0
7	1.724	18.6	5.6	58.7	63.5
18A	1.441	19.2	19.7	44.9	48.5
9	1.718	17.9	9.0	65.3	71.3
10	1.816	17.2	5.5	60.5	69.0
11	1.802	18.9	4.2	67.7	-75.6
12	1.679	15.0	3.7	67.4	-74.0
19A	1.380	18.7	22.5	46.0	49.0
14	1.421	18.9	7.9	52.0	60.7
15	1.471	16.6	8.6	53.3	57.0
16	1.569	18.3	9.4	57.8	63.7
17B	1.418	18.6	13.9	59.0	62.0
18B	1.428	18.8	5.8	58.9	63.3
19B	-1.298	18.2	11.7	55.4	58.1
20	1.480	12.4	7.0	59.0	64.0
21	1.495	13.1	4.9	58.8	62.8
22	1.597	12.7	4.4	60.6	66.0
23	1.752	14.6	24.9	68.9	-76.4

JTAD-9 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3142.	1.89	1.59	12.54	13.88	31.13
2	3147.	2.38	1.04	11.87	13.32	35.10
3	3147.	2.29	1.94	12.71	14.22	33.95
4	3142.	2.54	3.60	12.67	14.60	30.67
17A	3143.	2.43	3.15	10.03	10.78	-21.05
6	3147.	1.72	1.38	-14.05	14.61	30.00
7	3149.	2.16	1.12	11.22	12.12	35.36
18A	3139.	2.66	4.68	10.22	11.05	-21.85
9	3145.	2.08	1.80	12.51	13.66	31.33
10	3150.	1.90	1.04	10.96	12.52	27.15
11	3150.	2.10	.81	12.37	13.81	34.00
12	3151.	1.79	.76	13.22	14.52	24.50
19A	3136.	2.70	5.59	10.94	11.65	-22.31
14	3149.	2.67	1.92	12.04	14.05	27.90
15	3149.	2.27	2.02	11.93	12.75	25.00
16	3149.	2.34	2.07	12.13	13.37	28.80
17B	3143.	2.62	3.37	-13.67	14.37	28.00
18B	3148.	2.64	1.40	-13.58	14.59	28.00
19B	3143.	2.80	3.09	-14.01	-14.70	29.33
20	3149.	1.68	1.63	13.12	14.24	26.67
21	3150.	1.76	1.13	12.95	13.83	25.17
22	3151.	1.60	.94	12.49	13.61	26.32
23	3140.	1.66	4.89	12.91	14.33	31.58

JTAD-9 * BASELINE TFST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	70.1590	76.5360	82.5990	77.4350	82.3270	92.5900
2	55.2150	63.0540	76.3930	75.3900	79.4840	89.5380
3	62.2650	69.9640	81.0000	85.4830	88.5450	95.1230
4	55.1100	63.2220	77.7430	74.9450	79.3290	89.7610
17A	55.1650	65.1770	80.6670	66.4210	75.0290	92.0640
6	76.3030	83.1590	84.1050	82.0510	87.8630	97.7880
7	68.5000	75.3400	83.6530	-90.4320	-92.5080	96.9900
18A	56.2570	65.9360	80.6670	67.8710	75.9880	92.0640
9	68.2470	74.6050	82.7760	79.2360	83.2860	92.3230
10	71.7470	76.5820	78.6110	81.4410	84.0130	91.2260
11	70.9590	75.9610	81.4720	79.2670	82.3680	90.5760
12	80.1190	85.9440	-89.2540	-89.4280	-93.2030	-99.3350
19A	51.8390	61.9340	78.6520	62.1600	71.0620	89.6020
14	47.7100	57.5050	75.6470	60.7740	69.1200	87.3410
15	48.8800	58.3330	75.6470	62.4670	70.2420	87.3410
16	51.3690	60.0570	75.6470	66.0910	72.5920	87.3410
17B	55.5070	65.5360	81.0770	70.1810	78.3570	93.8830
18B	53.0950	63.0120	79.0390	67.3860	75.5530	91.8140
19B	49.8420	60.6630	79.1470	62.4550	72.1400	91.5890
20	65.5470	74.2920	82.2240	69.7170	77.8280	93.4050
21	66.0530	74.6300	82.2240	70.2730	78.1930	93.4050
22	76.3780	83.2860	85.8870	81.4710	87.4040	97.5970
23	74.5690	78.8660	79.1900	70.2920	75.5720	88.0190

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 4

UNIT	NREC CO LB/KLB FU	EI FU	NREC HC LB/KLB FU	EI FU	NRE CNO LB/KLB FU	EI FU	NR CNOX LB/KLB FU	EI FU	SMK NUMBR CORRECTED
1		1.71		1.48		14.06		15.55	31.13
2		1.74		.83		13.91		15.61	35.10
3		1.67		1.53		14.92		16.70	33.95
4		1.86		2.87		14.63		16.86	30.67
17A		2.02		2.74		11.44		12.30	-21.05
6		1.60		1.30		-16.34		16.99	30.00
7		1.64		.91		13.01		14.05	35.36
18A		2.21		4.06		11.66		12.61	-21.85
9		1.80		1.61		13.95		15.23	31.33
10		1.68		.95		12.72		14.53	27.15
11		1.88		.75		13.75		15.36	34.00
12		1.61		.70		14.72		16.16	24.50
19A		2.25		4.87		12.46		13.27	-22.31
14		2.10		1.59		13.90		16.23	27.90
15		1.78		1.68		13.78		14.72	25.00
16		1.82		1.71		14.00		15.44	28.80
17B		2.07		2.82		-15.83		16.64	28.00
18B		2.08		1.17		-15.77		16.95	28.00
19B		2.24		2.60		-16.22		17.01	29.33
20		1.58		1.56		14.90		16.18	26.67
21		1.65		1.08		14.71		15.71	25.17
22		1.50		.90		14.20		15.47	26.32
23		1.76		5.10		14.35		15.92	31.58

JTAD-9 * BASELINE TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	79.00	86.00	79.77	86.84
2	76.50	83.00	78.89	85.60
3	77.00	85.00	79.41	87.66
4	75.00	83.00	-77.39	85.64
17A	76.00	84.00	77.51	85.67
6	80.00	87.00	80.55	87.59
7	78.50	85.00	80.63	87.30
18A	76.00	84.00	77.51	85.67
9	79.00	85.00	80.17	86.26
10	78.25	85.00	79.21	86.04
11	79.00	85.50	79.85	86.42
12	79.00	87.00	79.85	87.94
19A	75.50	84.00	-77.00	85.67
14	75.00	83.00	-76.95	85.16
15	75.25	83.00	-77.21	85.16
16	76.00	83.00	77.98	85.16
17B	76.00	84.00	77.86	86.06
18B	76.00	84.00	77.90	86.10
19B	75.50	84.00	-77.35	86.06
20	79.00	86.50	79.50	87.05
21	79.00	86.00	79.50	86.54
22	79.50	87.00	80.00	87.55
23	76.00	85.00	-75.53	-84.47

JT8D-9 * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	4800.	.6260	.4850	1248.	1.555	8741.
2	4670.	.5870	.4670	1194.	-1.560	8774.
3	4800.	.5580	.4760	1203.	-1.560	8774.
4	-4250.	.5700	-.4320	1171.	-1.500	-7949.
17A	-4200.	.4730	-.4360	1176.	-1.500	-8048.
6	4940.	.5510	.4980	1293.	1.550	8740.
7	4850.	.6040	.4730	1212.	-1.560	8756.
18A	-4180.	.4800	-.4340	1212.	-1.500	-8048.
9	4870.	.5820	.4850	1248.	-1.560	8778.
10	4750.	.6460	.4820	1233.	1.550	8658.
11	4750.	.6550	.4780	1248.	-1.560	8790.
12	4800.	.6070	.4830	1248.	-1.560	8790.
19A	-4280.	.4510	.4480	-1140.	-1.500	-8030.
14	-4312.	.4540	.4500	1208.	-1.500	-8061.
15	-4275.	.4820	.4440	1203.	-1.500	-8061.
16	-4355.	.4900	.4470	1205.	-1.500	-8061.
17B	-4255.	.4820	.4390	1185.	-1.500	-8084.
18B	-4200.	.4790	-.4330	1212.	-1.500	-8084.
19B	-4388.	.4410	.4570	1167.	-1.500	-8084.
20	4550.	.4920	.4650	1257.	1.550	8706.
21	4600.	.5390	.4700	1248.	1.550	8706.
22	4750.	.5360	.4810	1266.	1.550	8706.
23	-4150.	.5850	.4650	1248.	-1.450	-7451.

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	4779.	.6380	.4950	1272.	8788.
2	4568.	.6240	.4970	1270.	-8850.
3	4695.	.5930	.5070	1279.	-8850.
4	-4197.	.6070	-.4600	1247.	-8100.
17A	-4145.	.4920	-.4540	-1223.	-8100.
6	4898.	.5590	.5050	-1310.	8725.
7	4773.	.6370	.4990	1278.	-8850.
18A	-4125.	.4990	-.4520	1260.	-8100.
9	4838.	.5990	.5000	1285.	-8850.
10	4728.	.6620	.4940	1264.	8725.
11	4732.	.6690	.4890	1275.	-8850.
12	4781.	.6200	.4940	1275.	-8850.
19A	-4233.	.4690	-.4660	-1185.	-8100.
14	-4223.	.4780	.4740	1272.	-8100.
15	-4187.	.5070	.4680	1266.	-8100.
16	4265.	.5160	.4700	1268.	-8100.
17B	-4162.	.5050	-.4610	1243.	-8100.
18B	-4106.	.5030	-.4550	1273.	-8100.
19B	4292.	.4630	.4800	-1225.	-8100.
20	4531.	.4980	.4710	1273.	8725.
21	4581.	.5460	.4760	1264.	8725.
22	4730.	.5430	.4880	1282.	8725.
23	-4140.	.5780	-.4590	1232.	-7388.

JT8D-9 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.302	21.1	7.3	38.6	-44.4
2	1.221	31.2	5.4	29.6	37.1
3	1.160	26.5	9.0	31.2	37.6
4	1.184	-36.7	16.6	31.4	37.0
17A	.982	26.6	12.6	23.3	28.1
6	1.148	16.8	6.0	38.8	40.0
7	1.259	21.8	5.0	35.1	37.9
18A	.992	30.8	20.7	22.8	27.9
9	1.210	25.2	9.1	35.7	-41.1
10	1.347	23.9	5.4	34.4	40.2
11	1.366	27.9	4.5	37.3	-43.5
12	1.267	18.3	4.3	38.9	-44.3
19A	.932	28.4	22.9	-22.4	27.2
14	.944	31.3	3.0	-22.4	30.1
15	1.001	28.2	10.5	23.0	27.4
16	1.019	28.8	9.1	23.9	29.6
17B	1.000	25.2	10.5	27.1	32.7
18B	.996	29.8	6.0	27.6	33.6
19B	.915	26.7	12.9	26.5	30.8
20	1.024	18.3	4.5	29.9	34.4
21	1.123	20.0	4.1	32.2	35.5
22	1.117	21.5	4.3	31.3	36.2
23	1.213	21.3	25.4	34.9	39.4

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

MODF 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3139.	3.23	1.91	9.72	11.18	25.17
2	3141.	5.10	1.51	7.95	9.97	27.15
3	3141.	4.56	2.65	8.83	10.64	26.67
4	3133.	-6.17	4.79	8.68	10.23	24.00
17A	3135.	5.40	4.38	7.78	9.37	-15.23
6	3144.	2.93	1.81	-11.10	-11.46	22.00
7	3147.	3.46	1.37	9.16	9.89	26.12
18A	3127.	-6.18	7.13	7.52	9.19	17.32
9	3140.	4.17	2.57	9.68	11.14	24.67
10	3147.	3.55	1.37	8.40	9.83	23.33
11	3146.	4.09	1.14	8.98	10.49	-20.72
12	3148.	2.89	1.17	10.11	-11.50	-20.72
19A	3123.	-6.07	8.39	7.83	9.51	17.76
14	3140.	-6.63	2.91	7.80	10.46	-16.20
15	3139.	-5.63	3.59	7.54	8.93	21.20
16	3141.	-5.66	3.06	7.71	9.55	18.70
17B	3138.	5.03	3.60	8.90	10.71	20.27
18B	3141.	-5.99	2.07	9.10	11.09	20.00
19B	3134.	-5.82	4.82	9.48	11.03	20.67
20	3146.	3.57	1.51	9.60	11.04	20.00
21	3147.	3.57	1.27	9.44	10.41	18.67
22	3146.	3.86	1.33	9.22	10.66	19.87
23	3131.	3.50	7.16	9.42	10.64	21.71

JTAD-9 * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	34.8940	43.9340	64.1720	37.8830	46.7770	71.7590
2	25.3620	33.9100	57.6400	32.6590	41.2010	66.9900
3	30.5470	40.2980	64.3070	39.4880	49.1370	74.9760
4	25.2180	33.9190	58.6660	32.2940	40.9820	67.1560
17A	25.0000	34.2150	59.2820	29.1150	38.5390	67.2570
6	35.7200	45.6730	64.3770	37.9320	47.8740	74.7110
7	31.7150	41.0660	63.9150	39.7370	48.8010	73.5640
18A	25.1330	34.3250	59.2820	29.2840	38.6750	67.2570
9	30.3900	39.4860	62.5660	34.2500	43.2680	69.4990
10	32.1280	40.6970	59.3840	35.5870	43.9710	68.6830
11	34.0970	42.7430	63.2530	37.3410	45.7820	70.1330
12	38.1430	47.8110	-68.5620	-41.7590	51.2180	76.0820
19A	24.5700	33.8780	59.3570	28.5160	38.0570	67.2570
14	22.3440	31.1900	57.0000	-27.2280	-36.4340	65.3540
15	22.8560	31.6220	57.0000	-27.9310	-37.0000	65.3540
16	23.0170	31.7560	57.0000	-28.1510	-37.1760	65.3540
17B	25.3160	34.6080	59.7960	30.7140	40.2810	68.7360
18B	25.2830	34.6010	59.7210	30.7940	40.3970	68.9030
19B	24.4680	33.9000	59.7960	29.5680	39.3630	68.7360
20	32.1750	42.2890	63.9770	33.8560	43.9990	72.5620
21	31.8700	41.4290	62.2630	33.5660	43.1240	70.6060
22	35.2830	45.3660	65.7120	37.1870	47.2480	74.5420
23	29.0370	37.3660	56.5650	-27.7370	-36.1080	-62.9980

MODE 5

UNIT	NREC LB/KLB	CO FI FU	NREC LB/KLB	HC EI FU	NRE LB/KLB	CNO FI FU	NR LB/KLB	CNOX EI FU	SMK CORRECTED	NUMBER
1		2.98		1.80		10.87		12.50		25.17
2		3.96		1.25		9.24		11.59		27.15
3		3.53		2.18		10.29		12.41		26.67
4		-4.82		3.97		9.94		11.72		24.00
17A		4.64		3.89		8.83		10.63		-15.23
6		2.76		1.73		-12.88		-13.30		22.00
7		2.77		1.16		10.55		11.39		26.12
18A		-5.31		6.33		8.53		10.43		17.32
9		3.70		2.35		10.76		12.37		24.67
10		3.20		1.27		9.72		11.36		23.33
11		3.73		1.06		9.96		11.63		-30.72
12		2.64		1.09		11.22		12.76		-30.72
19A		-5.23		7.47		8.88		10.78		17.76
14		-5.44		2.49		8.94		11.99		-16.20
15		4.60		3.07		8.65		10.30		21.20
16		4.63		2.62		8.84		10.95		18.70
17B		4.15		3.09		10.23		12.32		20.27
18B		-4.92		1.78		10.50		12.79		20.00
19B		-4.82		4.15		10.90		12.68		20.67
20		3.39		1.45		10.89		12.52		20.00
21		3.39		1.22		10.71		11.81		18.67
22		3.67		1.27		10.46		12.10		19.87
23		3.66		7.41		10.50		11.85		21.71

JT8D-9 * BASELINE TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	61.50	76.50	62.10	77.25
2	-58.20	-74.00	60.02	76.32
3	60.00	76.00	61.88	78.38
6	62.00	77.55	62.42	78.08
7	61.50	76.75	-63.17	78.83
9	61.75	76.25	62.66	77.38
10	59.00	75.50	59.72	76.43
11	60.00	76.00	60.65	76.82
12	63.00	78.00	-63.68	78.84
20	61.50	77.00	61.89	77.49
21	61.00	77.00	61.39	77.49
22	61.50	78.50	61.89	79.00
23	62.00	78.00	61.62	77.52

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	2550.	-.4130	.3560	1122.	-1.235	-4091.
2	2220.	.2600	.3150	1062.	-1.240	-4164.
3	2370.	.2560	.3240	1068.	-1.240	-4164.
6	2450.	.2960	.3430	1140.	1.230	4032.
7	2525.	.3680	.3380	1077.	-1.240	-4156.
9	-2570.	.2630	.3520	1113.	-1.240	-4166.
10	2300.	.3320	.3350	1095.	1.230	3994.
11	2350.	-.4040	.3370	1104.	-1.240	-4171.
12	-2600.	-.4020	.3510	1104.	-1.240	-4171.
20	2350.	.2770	.3320	1122.	-1.240	-4191.
21	2300.	.3180	.3280	1122.	-1.240	-4191.
22	2400.	.3070	.3300	1122.	-1.240	-4191.
23	2450.	.3770	.3560	1122.	1.230	4060.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2539.	-.4210	.3630	1144.	-4113.
2	2171.	.2770	.3350	1130.	-4200.
3	2318.	.2720	.3450	1136.	-4200.
6	2429.	.3000	.3480	1155.	4025.
7	2485.	.3880	.3560	1136.	-4200.
9	2553.	.2700	.3630	1146.	-4200.
10	2290.	.3400	.3440	1122.	4025.
11	2341.	-.4130	.3440	1129.	-4200.
12	-2590.	-.4110	.3590	1128.	-4200.
20	2340.	.2800	.3360	1136.	-4200.
21	2291.	.3220	.3320	1136.	-4200.
22	2390.	.3110	.3430	1136.	-4200.
23	2444.	.3720	.3510	1109.	4025.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.852	52.0	9.7	12.4	18.3
2	.534	50.4	8.9	5.2	10.8
3	.526	39.5	10.4	5.9	10.1
6	.612	30.6	7.2	14.2	13.8
7	.761	40.1	6.5	13.4	14.9
9	.539	43.2	12.1	7.3	11.7
10	.685	43.2	7.2	8.9	12.9
11	-.836	52.6	7.7	12.3	17.7
12	-.833	43.6	6.0	15.3	-20.4
20	.571	36.1	6.2	9.3	12.9
21	.656	43.9	6.5	10.0	13.9
22	.634	45.5	7.6	9.0	13.4
23	.778	32.8	14.7	14.8	18.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3119.	12.12	3.90	4.74	6.99	11.18
2	3109.	18.67	5.66	-3.14	6.57	7.89
3	3114.	14.89	6.73	3.64	6.26	8.00
6	3127.	9.97	4.02	-7.60	7.60	7.89
7	3131.	10.49	2.93	5.75	6.39	12.58
9	3108.	15.88	7.62	4.39	7.04	7.95
10	3126.	12.53	3.57	4.25	6.14	9.27
11	3128.	12.52	3.14	4.83	6.93	-13.25
12	3133.	10.43	2.48	6.01	8.03	11.33
20	3126.	12.58	3.73	5.30	7.36	5.37
21	3126.	13.30	3.38	4.99	6.91	8.00
22	3122.	14.27	4.08	4.62	6.92	9.21
23	3125.	8.37	6.47	6.20	7.71	9.21

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	11.2090	16.8490	39.1200	11.9410	17.7080	43.5510
2	-8.1840	-13.2060	36.2170	9.8560	15.3410	41.5400
3	9.8410	15.6120	40.0280	11.9160	18.2140	46.0410
6	11.2880	17.3240	39.2200	11.8240	17.9900	45.3740
7	11.3750	17.3810	41.3970	13.5470	19.9620	47.1350
9	9.9350	15.6110	39.7030	10.8500	16.7500	43.8320
10	9.6600	15.0050	36.3220	10.4050	15.9120	41.7770
11	10.6390	16.1180	38.6280	11.3890	17.0030	42.6210
12	12.8640	19.1160	42.7030	13.8010	20.1980	47.1630
20	10.6090	16.4470	38.9710	11.0370	16.9770	44.0720
21	10.9150	16.7380	38.9710	11.3640	17.2860	44.0720
22	12.4860	18.9290	42.0230	13.0090	19.5600	47.5440
23	12.2500	18.2190	39.5460	11.8140	17.7190	44.1350

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	11.37	3.71	5.28	7.78	11.18
2	15.50	4.87	3.60	7.53	7.89
3	12.30	5.77	4.18	7.21	8.00
6	9.52	3.87	8.79	8.79	7.89
7	8.81	2.55	6.55	7.28	12.58
9	14.54	7.10	4.85	7.77	7.95
10	11.64	3.37	4.88	7.06	9.27
11	11.70	2.98	5.33	7.65	-13.25
12	9.72	2.34	6.64	8.87	11.33
20	12.09	3.62	6.00	8.33	5.37
21	12.78	3.27	5.65	7.82	8.00
22	13.70	3.95	5.22	7.83	9.21
23	8.68	6.65	6.92	8.60	9.21

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
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1	39.25	62.00	39.63	62.61
2	39.50	62.00	40.74	63.94
3	-40.00	62.00	41.25	63.94
4	38.50	-61.75	39.73	63.71
17A	38.00	-61.50	38.75	62.72
6	38.00	62.00	38.26	62.42
7	37.80	-61.75	38.82	63.42
18A	38.00	61.90	38.75	63.13
9	39.00	62.00	39.58	62.92
10	39.00	62.00	39.48	62.76
11	39.00	62.00	39.42	62.67
12	38.00	62.00	38.41	62.67
19A	38.50	-61.75	39.26	62.98
14	38.00	62.00	38.99	63.61
15	39.50	62.00	40.53	63.61
16	-40.00	62.00	41.04	63.61
17B	38.25	62.00	39.19	63.52
18B	38.00	62.00	38.95	63.55
19B	37.50	62.00	38.42	63.52
20	38.00	62.00	38.24	62.39
21	38.00	-61.50	38.24	61.89
22	37.50	62.00	37.74	62.39
23	39.00	62.00	38.76	61.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * RASFLINE TEST SERIES *

MODF 7

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	-1450.	-.3830	-.3430	1140.	1.070	1137.
2	1250.	.2250	.2820	1104.	1.090	1231.
3	1250.	.2330	.2780	1077.	1.080	1231.
4	1270.	.3250	.2900	1077.	1.090	1202.
17A	1100.	.2690	.2600	1077.	1.080	1144.
6	1150.	.2800	.2800	1167.	1.070	1131.
7	1250.	.3400	.2920	1086.	1.060	1191.
18A	1145.	.2670	.2710	1122.	1.080	1174.
9	-1370.	.2600	-.3220	1131.	1.080	1156.
10	1290.	.2650	.3040	1140.	1.080	1145.
11	1200.	-.4280	.2840	1140.	1.080	1140.
12	1250.	-.3700	.3000	1122.	1.070	1140.
19A	1150.	.2720	.2700	1050.	1.080	1160.
14	1160.	.2440	.2720	1113.	1.080	1212.
15	1245.	.2390	.2850	1102.	1.080	1212.
16	1260.	.2340	.2840	1104.	1.090	1212.
17B	1225.	.2560	.2880	1068.	1.080	1208.
18B	1190.	.2590	.2810	1104.	1.080	1210.
19B	1133.	.2590	.2690	1050.	1.080	1208.
20	1200.	.2520	.2910	1122.	1.080	1125.
21	1170.	.2670	.2840	1122.	1.090	1087.
22	1105.	.2780	.2700	1122.	1.070	1125.
23	1250.	.3280	.3080	1140.	1.070	1079.

JTAD-9 * BASELINE TFST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DFG R	COR THRUST LRF
1	-1444.	-.3910	-.3500	1162.	1147.
2	1223.	.2390	.3000	1174.	1242.
3	1223.	.2480	.2960	1145.	1242.
4	1254.	.3460	.3080	1146.	1225.
17A	1086.	.2800	.2710	1120.	1151.
6	1140.	.2840	.2840	1187.	1129.
7	1230.	-.3590	.3080	1145.	1203.
18A	1130.	.2780	.2820	1167.	1182.
9	-1361.	.2680	-.3310	1164.	1166.
10	1284.	.2710	.3120	1168.	1154.
11	1195.	-.4370	.2900	1164.	1147.
12	1245.	-.3780	.3060	1146.	1147.
19A	1137.	.2830	.2810	-1092.	1170.
14	1136.	.2570	.2870	1171.	1217.
15	1219.	.2510	.3000	1160.	1217.
16	1234.	.2470	.2990	1162.	1217.
17B	1198.	.2690	.3030	1121.	1210.
18B	1163.	.2720	.2950	1160.	1213.
19B	1108.	.2720	.2830	1102.	1210.
20	1195.	.2550	.2950	1136.	1127.
21	1165.	.2700	.2870	1136.	1090.
22	1100.	.2810	.2730	1136.	1127.
23	1247.	.3240	.3040	1126.	1070.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.783	101.8	15.2	5.3	-10.1
2	.457	68.2	13.7	2.0	6.4
3	.473	75.9	18.1	2.0	5.7
4	.656	117.2	-32.1	6.5	6.4
17A	.546	81.5	21.3	2.9	6.5
6	.571	75.0	13.4	8.4	7.7
7	.695	93.8	14.6	5.0	5.9
18A	.540	84.0	-30.8	3.0	6.5
9	.526	86.5	21.8	3.2	6.8
10	.542	69.2	10.6	3.7	6.1
11	-.877	109.3	15.4	5.5	-10.7
12	-.758	98.7	13.1	6.2	-10.8
19A	.540	103.2	-55.3	2.6	6.8
14	.497	74.6	15.8	1.3	4.0
15	.484	76.0	20.9	1.1	-3.2
16	.476	73.1	18.0	-.9	3.5
17B	.520	84.9	20.1	3.1	7.5
18B	.526	82.8	16.8	3.4	8.0
19B	.521	105.7	-29.6	3.1	-.8
20	.513	77.9	12.9	4.0	6.8
21	.540	98.5	12.2	3.9	6.7
22	.564	93.6	16.8	3.7	6.9
23	.669	96.9	17.9	5.8	9.3

JT8D-9 * BASELINE TEST SERIES *

MODE 7

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NO _x EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3091.	25.58	6.58	2.19	4.15	0.00
2	3080.	29.26	10.11	1.41	4.50	0.00
3	3071.	31.35	12.83	1.33	3.87	0.00
4	3056.	34.72	16.37	3.17	3.17	0.00
17A	3074.	29.22	13.14	1.68	3.84	-0.67
6	3091.	25.82	7.95	4.73	4.73	0.00
7	3095.	26.57	7.12	2.31	2.76	0.00
18A	3056.	30.29	-19.06	1.78	3.83	-1.99
9	3065.	32.07	13.85	1.97	4.13	0.00
10	3098.	25.20	6.64	2.20	3.66	0.00
11	3101.	24.59	5.97	2.04	3.94	0.00
12	3099.	25.69	5.87	2.66	4.63	0.00
19A	-3015.	36.56	-33.64	1.54	3.95	-0.66
14	3083.	29.44	10.70	.85	2.63	0.00
15	3070.	30.71	14.48	.72	2.14	0.00
16	3076.	30.07	12.71	.60	2.36	0.00
17B	3070.	31.92	12.98	1.92	4.64	0.00
18B	3078.	30.80	10.72	2.09	4.90	0.00
19B	-3042.	39.28	-18.93	1.92	-1.92	0.00
20	3086.	29.81	8.51	2.49	4.30	0.00
21	3067.	35.61	11.94	2.34	4.00	0.00
22	3077.	32.50	9.99	2.12	3.92	0.00
23	3086.	28.48	9.03	2.79	4.49	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.7370	5.8900	21.3180	4.9930	6.1340	23.6140
2	4.5910	5.5210	21.8010	5.4550	6.2690	24.6780
3	4.5910	5.5370	21.8010	5.4550	6.2880	24.6780
4	4.5470	5.6680	21.9870	5.3750	6.4280	24.4970
17A	4.5120	5.4740	21.2680	5.0310	5.9370	23.7050
6	4.7340	5.6650	20.3630	4.9320	5.8450	23.4690
7	4.5520	5.6780	21.6280	5.2720	6.3520	24.2640
18A	4.6350	5.5970	21.5540	5.1700	6.0730	24.0290
9	4.7090	5.6400	21.7750	5.0980	5.9790	23.8600
10	4.7260	5.6560	20.7560	5.0450	5.9330	23.7370
11	4.7340	5.9870	21.5600	5.0140	6.2610	23.6630
12	4.7340	5.8650	21.5600	5.0140	6.1270	23.6630
19A	4.5960	5.5680	21.4740	5.1180	6.0310	23.9080
14	4.6150	5.5580	21.7650	5.3390	6.1950	24.4170
15	4.6150	5.5480	21.7650	5.3390	6.1820	24.4170
16	4.6150	5.5400	21.7650	5.3390	6.1730	24.4170
17B	4.6170	5.5740	21.6380	5.3060	6.1870	24.3400
18B	4.6130	5.5770	21.5920	5.3170	6.2050	24.3660
19B	4.6170	5.5790	21.6380	5.3060	6.1940	24.3400
20	4.7520	5.6290	20.8010	4.9210	5.7770	23.4450
21	4.6020	5.5060	20.4720	4.7660	5.6510	23.0720
22	4.7520	5.6790	20.8010	4.9210	5.8300	23.4450
23	4.8370	5.8070	20.4490	4.6940	5.6840	22.9010

JTAD-9 * BASELINE TEST SERIES *

MODE 7

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		24.26			6.31			2.42			4.60		0.00	
2		24.63			8.90			1.60			5.09		0.00	
3		26.39			11.29			1.51			4.38		0.00	
4		29.38			14.43			3.53			3.53		0.00	
17A		26.21			12.11			1.88			4.28		-0.67	
6		24.79			7.71			5.45			5.45		0.00	
7		22.94			6.36			2.59			3.10		0.00	
18A		27.15			-17.57			1.99			4.27		-1.99	
9		29.63			13.07			2.16			4.53		0.00	
10		23.60			6.33			2.52			4.19		0.00	
11		23.22			5.71			2.24			4.32		0.00	
12		24.25			5.62			2.92			5.08		0.00	
19A		32.83			-31.06			1.72			4.40		-0.66	
14		25.44			9.60			.95			2.95		0.00	
15		26.55			12.99			.81			2.40		0.00	
16		25.99			11.41			.67			2.65		0.00	
17B		27.78			11.69			2.16			5.22		0.00	
18B		26.72			9.64			2.36			5.53		0.00	
19B		34.18			17.05			2.16			-2.16		0.00	
20		28.78			8.29			2.80			4.84		0.00	
21		34.39			11.63			2.64			4.50		0.00	
22		31.37			9.73			2.39			4.42		0.00	
23		29.34			9.23			3.13			5.03		0.00	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * RASFLINE TEST SERIES *

MODF 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.50	59.50	36.86	60.08
2	35.00	57.00	36.10	58.78
3	33.00	56.50	34.03	58.27
4	35.00	58.00	36.11	59.85
17A	35.00	58.50	35.69	59.66
6	35.00	58.50	35.24	58.90
7	35.00	58.50	35.95	60.08
18A	34.50	57.90	35.19	59.05
9	37.00	60.00	37.55	60.89
10	34.75	58.00	35.18	58.71
11	35.00	58.00	35.38	58.62
12	36.00	60.00	36.39	60.65
19A	34.50	58.00	35.19	59.15
14	36.25	60.00	37.19	61.56
15	-38.00	60.00	-38.99	61.56
16	36.00	59.00	36.94	60.54
17B	35.50	59.50	36.37	60.96
18B	33.00	57.00	33.83	58.43
19B	36.00	59.50	36.88	60.96
20	35.00	58.00	35.22	58.37
21	37.00	-61.00	37.23	61.39
22	37.00	-61.50	37.23	-61.89
23	35.00	58.00	34.78	57.64

JTAD-9 * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	-1300.	-.3940	-.3190	1159.	1.060	951.
2	1050.	.2330	.2540	1059.	1.070	918.
3	-930.	.2470	-.2340	1077.	1.060	907.
4	1130.	.3380	.2700	1068.	1.070	929.
17A	1000.	.2560	.2460	1059.	1.070	937.
6	1050.	.2950	.2660	1140.	1.050	930.
7	1120.	.3410	.2720	1086.	-1.040	946.
18A	1000.	.2740	.2480	1104.	1.070	925.
9	-1280.	.2560	-.3090	1122.	1.070	-1007.
10	1125.	.2840	.2810	1107.	1.060	917.
11	1050.	-.4160	.2620	1140.	1.060	916.
12	-1200.	.3620	.2950	1122.	1.060	991.
19A	1000.	.2730	.2480	1032.	1.070	925.
14	1100.	.2480	.2640	1104.	1.070	-1061.
15	1135.	.2490	.2670	1100.	-1.080	-1061.
16	1105.	.2350	.2670	1095.	-1.080	985.
17B	1125.	.2640	.2750	1050.	1.070	-1019.
18B	1000.	.2590	.2580	1059.	1.060	917.
19B	1068.	.2560	.2590	1032.	1.070	-1019.
20	1050.	.2600	.2650	1122.	1.060	915.
21	1150.	.2730	.2830	1122.	1.070	-1050.
22	1105.	.2820	.2710	1122.	1.070	-1087.
23	1100.	.3250	.2860	1122.	1.060	911.

JTAD-9 * BASELINE TFST SERIES *

MODE A

UNIT	CORR FU FL LAM/HR	COR CR X100	COR PF X100	COR TT7 DEG R	COR THRUST LBF
1	-1294.	-.4020	-.3250	1180.	956.
2	1027.	.2480	.2700	1126.	926.
3	-910.	.2630	.2490	1145.	915.
4	1116.	.3600	.2880	1137.	947.
17A	987.	.2660	.2560	1101.	943.
6	1041.	.2990	.2690	1155.	928.
7	1102.	.3600	.2870	1145.	956.
18A	987.	.2850	.2580	1148.	931.
9	-1272.	.2640	-.3180	1155.	-1016.
10	1120.	.2910	.2880	1135.	924.
11	1046.	-.4250	.2680	1164.	922.
12	-1195.	-.3700	.3020	1146.	998.
19A	989.	.2840	.2570	-1073.	933.
14	1077.	.2610	.2780	1162.	-1066.
15	1112.	.2620	.2810	1158.	-1066.
16	1082.	.2480	.2810	1152.	990.
17B	1100.	.2770	.2880	1102.	-1021.
18B	978.	.2720	.2710	1112.	919.
19B	1045.	.2680	.2720	-1083.	-1021.
20	1046.	.2630	.2680	1136.	917.
21	1145.	.2770	.2860	1136.	-1053.
22	1100.	.2850	.2750	1136.	-1090.
23	1097.	.3210	.2820	1108.	903.

JTAD-9 * BASELINE TEST SERIES *

MODE A

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
----	-----	-----	-----	-----	-----
1	-.804	118.4	17.5	4.5	-9.4
2	.472	84.0	16.9	1.6	5.9
3	.496	104.3	27.0	1.2	4.9
4	.682	132.3	-36.2	5.9	5.8
17A	.517	93.1	24.7	2.3	5.8
6	.601	90.3	16.6	7.7	7.5
7	.694	110.3	18.0	4.2	5.4
18A	.550	108.5	-34.7	2.2	6.0
9	.518	88.7	22.6	3.1	6.4
10	.579	85.4	13.0	2.9	5.9
11	-.848	136.3	21.8	4.0	-9.2
12	-.741	108.4	14.6	5.5	-10.4
19A	.535	120.9	-70.3	2.0	5.9
14	.502	92.6	17.4	.9	3.8
15	.501	99.7	25.0	-.4	2.9
16	.476	83.5	20.9	.4	-2.8
17B	.534	94.3	22.7	2.7	7.3
18B	.522	110.9	25.2	2.5	7.1
19B	.513	110.0	31.0	2.9	7.3
20	.527	99.0	17.8	3.4	6.2
21	.553	101.8	20.4	3.8	6.4
22	.571	99.2	19.3	3.6	6.8
23	.658	119.5	23.6	4.5	8.1

JT8D-9 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 FI LB/KLB FU	CO FI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX FI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3083.	28.92	7.35	1.79	3.76	0.00
2	3066.	34.69	12.03	1.07	4.01	0.00
3	3042.	40.73	18.11	.78	3.16	0.00
4	3048.	37.65	17.67	2.77	2.77	0.00
17A	3057.	35.04	15.99	1.43	3.60	-1.33
6	3082.	29.46	9.29	4.11	4.11	0.00
7	3083.	31.17	8.72	1.96	2.52	0.00
18A	3038.	38.12	-20.98	1.29	3.44	-1.99
9	3061.	33.37	14.59	1.91	3.93	0.00
10	3080.	28.99	7.60	1.63	3.29	0.00
11	3083.	31.53	8.66	1.53	3.49	0.00
12	3092.	28.80	6.66	2.40	4.52	0.00
19A	-2972.	42.72	-42.66	1.16	3.43	0.00
14	3070.	36.00	11.60	.57	2.40	0.00
15	3052.	38.64	16.65	.26	1.86	0.00
16	3064.	34.17	14.68	.30	1.91	0.00
17B	3063.	34.45	14.23	1.59	4.38	0.00
18B	3047.	41.21	16.08	1.53	4.33	0.00
19B	3036.	41.45	20.07	1.80	4.51	0.00
20	3069.	36.31	11.33	2.04	3.77	0.00
21	3066.	35.90	12.38	2.22	3.73	0.00
22	3073.	33.97	10.75	2.01	3.81	0.00
23	3067.	35.44	12.01	2.21	3.95	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST SERIES *

MODE A

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.0930	5.2180	19.8280	4.3090	5.4300	21.9510
2	3.3960	4.2850	18.7580	4.0000	4.8380	21.1550
3	3.2980	4.1970	18.4860	3.8820	4.7390	20.8410
4	3.6200	4.6850	19.6270	4.2510	5.2910	21.8050
17A	3.7850	4.6960	19.4890	4.2070	5.0800	21.6920
6	3.8710	4.7990	18.4270	4.0270	4.9480	21.2260
7	3.7390	4.8000	19.6090	4.3090	5.3510	21.9530
18A	3.6570	4.5860	19.1570	4.0620	4.9620	21.3180
9	4.1710	5.0830	20.5010	4.5080	5.3810	22.4480
10	3.7420	4.6680	18.4810	3.9840	4.8890	21.1110
11	3.7520	4.8830	19.2060	3.9640	5.0960	21.0590
12	4.2050	5.2870	20.3280	4.4480	5.5180	22.2990
19A	3.6840	4.6140	19.2370	4.0860	4.9840	21.3800
14	4.0580	4.9880	20.4110	4.6810	5.5490	22.8690
15	4.0580	4.9900	20.4110	4.6810	5.5510	22.8690
16	3.8380	4.7390	19.8540	4.4210	5.2650	22.2320
17B	3.9520	4.8960	20.0250	4.5260	5.4230	22.4920
18B	3.4220	4.3270	18.6380	3.9180	4.7910	20.9370
19B	3.9520	4.8830	20.0250	4.5260	5.4070	22.4920
20	3.7750	4.6450	18.5550	3.9050	4.7630	20.9020
21	-4.4770	-5.3910	20.1950	4.6350	5.5330	22.7580
22	-4.6020	-5.5340	20.4720	-4.7660	-5.6800	-23.0720
23	3.8510	4.7780	18.2590	3.7420	4.6810	20.4610

JTRD-9 * BASELINE TEST STRIPS *

MODE 8

UNIT	NREC CO FI LR/KLR FU	NREC HC EI LR/KLR FU	NRE CNO FI LR/KLR FU	NR CNOX FI LR/KLR FU	SMK NUMBER CORRECTED
1	27.47	7.06	1.99	4.16	0.00
2	29.45	10.65	1.20	4.52	0.00
3	34.60	16.04	.88	3.56	0.00
4	32.07	15.65	3.08	3.08	0.00
17A	31.53	14.78	1.59	4.01	-1.33
6	28.31	9.01	4.74	4.74	0.00
7	27.04	7.82	2.19	2.82	0.00
18A	34.32	19.40	1.43	3.82	-1.99
9	30.87	13.78	2.09	4.31	0.00
10	27.23	7.26	1.86	3.76	0.00
11	29.84	8.30	1.67	3.83	0.00
12	27.23	6.38	2.63	4.96	0.00
19A	38.52	-39.50	1.29	3.81	0.00
14	31.21	10.43	.64	2.69	0.00
15	33.50	14.97	.29	2.09	0.00
16	29.67	13.22	.33	2.13	0.00
17B	30.08	12.84	1.79	4.92	0.00
18B	36.00	14.52	1.72	4.88	0.00
19B	36.19	18.12	2.02	5.06	0.00
20	35.10	11.05	2.30	4.25	0.00
21	34.67	12.06	2.50	4.20	0.00
22	32.80	10.47	2.26	4.29	0.00
23	36.47	12.25	2.48	4.42	0.00

JT8D-9 * 600 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
1	8810.	612.	538.2	30.04	.014610
4	14162.	592.	526.7	29.93	.012740
6	15317.	540.	536.2	30.03	.015900
7	14477.	642.	533.2	30.20	.013270
9	16314.	998.	531.2	30.04	.015340
10	15909.	779.	530.7	30.07	.008570
11	7944.	594.	536.7	30.02	.016490
12	14459.	594.	536.7	30.02	.016490
14	2110.	635.	517.7	29.94	.008050
15	2110.	635.	517.7	29.94	.008050
16	2110.	635.	517.7	29.94	.008050
17	2100.	630.	524.7	29.74	.009960
18	2100.	630.	524.7	29.74	.009960
19	2100.	630.	524.7	29.74	.009960
20	2431.	762.	539.7	29.97	.012750
21	2431.	762.	539.7	29.97	.012750
22	2431.	762.	539.7	29.97	.012750
23	8905.	625.	536.7	30.21	.012460

JTAD-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	32.75	55.75	32.15	54.73
4	34.00	59.00	33.74	58.55
6	33.50	58.00	32.95	57.05
7	33.00	58.00	32.55	57.21
9	36.00	60.50	35.57	59.78
10	32.00	55.50	31.64	54.87
11	-30.00	-54.00	-29.49	-53.09
12	33.00	58.00	32.44	57.02
14	33.50	58.00	33.53	58.06
15	33.50	58.00	33.53	58.06
16	35.00	58.00	35.03	58.06
17	34.00	59.00	33.81	58.66
18	31.00	55.00	30.82	54.68
19	32.50	56.50	32.31	56.18
20	32.50	56.00	31.86	54.90
21	35.50	59.25	34.80	58.09
22	32.50	57.50	31.86	56.37
23	33.75	57.50	33.18	56.53

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1180.	.3600	-.3440	1221.	1.040	839.
4	1150.	.3670	.3080	1140.	1.060	921.
6	1050.	-.4360	.2940	1212.	-1.100	888.
7	1080.	.2870	.3050	1221.	1.040	886.
9	-1220.	.3300	.3110	1176.	1.070	942.
10	1050.	.3210	.3110	1239.	1.060	842.
11	-900.	-.4620	.3020	1212.	1.050	-790.
12	1113.	-.4180	.3190	1194.	1.040	887.
14	1000.	.2890	.2690	1212.	1.060	911.
15	1030.	.3210	.2760	1180.	1.060	911.
16	1000.	.2560	.2550	1158.	1.050	911.
17	1010.	.2300	.2710	1122.	1.060	929.
18	1000.	.3090	.3110	1194.	1.050	846.
19	950.	.2830	.2740	1176.	1.050	879.
20	975.	.2750	.2890	-1248.	1.050	846.
21	1075.	.2710	.2800	1212.	1.070	910.
22	950.	.2970	.2820	1212.	1.050	876.
23	1150.	.3270	.3160	1212.	1.050	872.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF

1	-1207.	.3470	-.3310	1176.	842.
4	1159.	.3610	.3030	1122.	921.
6	1071.	-.4210	.2840	1172.	891.
7	1105.	.2790	.2970	1188.	894.
9	-1240.	.3220	.3040	1148.	946.
10	1067.	.3140	.3040	-1211.	846.
11	-919.	-.4470	.2920	1171.	-793.
12	1135.	-.4040	.3080	1154.	890.
14	1000.	.2900	.2680	-1214.	911.
15	1030.	.3220	.2760	1182.	911.
16	1000.	.2560	-.2550	1160.	911.
17	1010.	.2270	.2680	1109.	923.
18	1000.	.3060	.3080	1180.	841.
19	950.	.2800	.2710	1162.	874.
20	996.	.2650	.2780	1199.	847.
21	1098.	.2600	.2690	1165.	912.
22	970.	.2850	.2710	1165.	877.
23	1181.	.3160	.3060	1171.	881.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM

1	.734	114.3	20.7	7.0	5.3
4	.746	120.6	18.9	7.0	8.2
6	-.885	158.7	29.8	7.2	6.5
7	.579	136.7	19.8	7.1	6.5
9	.670	107.9	23.1	4.8	3.8
10	.654	95.1	16.6	6.3	5.7
11	-.938	-187.5	29.5	-10.8	-1.4
12	-.854	130.2	20.6	7.3	7.4
14	.586	99.3	23.5	5.5	6.1
15	.651	125.5	23.0	5.8	6.9
16	.518	90.5	19.7	5.4	5.9
17	.468	75.7	12.1	7.6	6.0
18	.616	139.6	-48.6	6.6	7.3
19	.573	115.9	19.1	4.6	5.7
20	.552	135.8	25.3	3.6	3.3
21	.545	119.0	21.6	5.5	5.5
22	.593	158.1	29.8	5.2	6.3
23	.656	-169.3	33.0	7.6	8.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE I

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIJMER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	3082.	30.55	9.51	3.06	3.06	0.00
4	3076.	31.66	8.52	3.01	3.52	0.00
6	3072.	35.06	11.31	2.63	2.63	0.00
7	3057.	45.92	11.43	3.91	3.91	0.00
9	3068.	31.47	11.56	2.28	2.28	0.00
10	3081.	28.51	8.54	3.09	3.09	0.00
11	3066.	39.01	10.53	3.68	3.68	0.00
12	3087.	29.95	8.12	2.76	2.79	0.00
14	3069.	33.10	13.47	3.04	3.32	0.00
15	3067.	37.62	11.84	2.86	3.41	0.00
16	3070.	34.09	12.78	3.32	3.65	0.00
17	3084.	31.73	8.72	5.26	5.26	0.00
18	3018.	43.52	-26.01	3.38	3.97	0.00
19	3065.	39.49	11.20	2.59	3.21	0.00
20	3035.	47.53	15.19	2.05	2.05	0.00
21	3049.	42.38	13.21	3.22	3.23	0.00
22	3025.	-51.35	16.62	2.76	3.36	0.00
23	3032.	49.82	16.68	3.68	4.02	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	3.4810	4.4050	-14.7430	3.1340	4.0570	18.7290
4	4.1230	5.1380	16.7550	3.9470	4.9660	21.0130
6	3.9780	5.0760	15.3960	3.6120	4.6980	20.1020
7	3.9700	4.8250	16.2160	3.6470	4.5170	20.1990
9	-4.5520	-5.5060	16.7040	4.2360	5.2070	21.7680
10	3.3790	4.2600	16.3870	3.1610	4.0430	18.8100
11	3.1040	4.1350	-13.4450	-2.8220	-3.8280	-17.7670
12	3.9820	5.0470	-15.2240	3.6060	4.6640	20.0860
14	3.8160	4.7130	17.7450	3.8350	4.7310	20.7130
15	3.8160	4.7640	17.7450	3.8350	4.7820	20.7130
16	3.8160	4.6620	17.7450	3.8350	4.6790	20.7130
17	4.0860	4.8730	17.6000	3.9720	4.7770	21.0810
18	3.2100	4.0720	15.6050	3.1250	3.9930	18.7020
19	3.5220	4.3700	16.3440	3.4270	4.2840	19.5840
20	3.5400	4.3390	15.3810	3.1670	3.9870	18.8280
21	4.3080	5.1180	16.9600	3.8410	4.6920	20.7310
22	3.8820	4.7260	16.1030	3.4680	4.3350	19.6990
23	3.8810	4.7880	16.2440	3.5010	4.4160	19.7930

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		34.74		10.33				3.89			3.89		0.00	
4		33.07		8.82				3.78			4.41		0.00	
6		38.61		12.22				3.43			3.43		0.00	
7		49.98		12.21				4.87			4.87		0.00	
9		33.81		12.23				2.97			2.97		0.00	
10		30.48		8.99				3.54			3.54		0.00	
11		42.91		11.38				4.86			4.86		0.00	
12		33.07		8.79				3.64			3.68		0.00	
14		32.94		13.42				3.55			3.88		0.00	
15		37.43		11.80				3.34			3.98		0.00	
16		33.92		12.74				3.88			4.26		0.00	
17		32.63		8.89				6.31			6.31		0.00	
18		44.71		-26.52				4.05			4.76		0.00	
19		40.59		11.42				3.11			3.85		0.00	
20		-53.12		16.53				2.51			2.51		0.00	
21		47.53		14.41				3.93			3.95		0.00	
22		-57.49		18.12				3.37			4.11		0.00	
23		-55.23		18.08				4.48			4.90		0.00	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	39.00	62.00	38.29	60.87
4	39.00	62.00	38.70	61.53
6	37.00	62.00	36.39	60.98
7	38.00	62.00	37.48	61.15
9	-41.00	-65.00	40.51	64.23
10	39.00	62.00	38.56	61.30
11	38.50	62.00	37.85	60.95
12	38.00	62.00	37.36	60.95
14	38.00	62.00	38.04	62.06
15	38.50	62.00	38.54	62.06
16	39.00	62.00	39.04	62.06
17	38.00	62.00	37.78	61.64
18	38.00	62.00	37.78	61.64
19	38.00	62.00	37.78	61.64
20	38.50	62.00	37.74	60.78
21	38.00	62.00	37.25	60.78
22	37.00	62.00	36.27	60.78
23	38.00	62.00	37.36	60.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T77 DEG R	EPR	THRUST LBF
1	-1435.	-.3880	-.3560	1239.	1.060	1010.
4	1300.	.3570	.3180	1140.	1.080	1063.
6	1170.	-.4500	.2970	1221.	-1.100	1019.
7	1270.	.2610	.3150	1221.	1.060	1026.
9	-1480.	.3170	-.3520	1199.	1.080	1258.
10	1300.	.2780	.3190	1239.	1.080	1041.
11	1200.	-.4420	.2990	1212.	1.080	1017.
12	1275.	-.4050	.3200	1194.	-1.050	1017.
14	1150.	.2770	.2810	1212.	1.070	1102.
15	1210.	.2950	.2940	1176.	1.080	1102.
16	1175.	.2400	.2840	1162.	1.080	1102.
17	1150.	.2290	.2860	1131.	1.070	1078.
18	1255.	.2870	.3120	1194.	1.080	1078.
19	1160.	.2830	.2890	1176.	1.060	1078.
20	1120.	.2780	.2810	-1248.	-1.050	1006.
21	1175.	.2720	.2960	1212.	1.070	1006.
22	1113.	.2970	.2840	1212.	1.070	1006.
23	1305.	.3090	.3250	1212.	1.070	1011.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 600 HOUR TEST SERIES *

MODF 2

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	-1468.	.3740	-.3430	1194.	1014.
4	1310.	.3520	.3130	1122.	1063.
6	1194.	-.4350	.2870	1181.	1023.
7	1300.	.2540	.3060	1188.	1035.
9	-1504.	.3100	-.3440	1171.	1263.
10	1322.	.2720	.3110	1211.	1046.
11	1225.	-.4270	.2890	1171.	1020.
12	1301.	-.3910	.3090	1154.	1020.
14	1150.	.2780	.2820	1214.	1102.
15	1210.	.2950	.2950	1178.	1102.
16	1175.	.2400	.2840	1164.	1102.
17	1150.	.2270	.2830	1118.	1072.
18	1255.	.2840	.3090	1180.	1072.
19	1160.	.2800	.2850	1162.	1072.
20	1144.	.2670	.2700	1199.	1008.
21	1200.	.2610	.2850	1165.	1008.
22	1137.	.2860	.2730	1165.	1008.
23	1340.	.2990	.3140	1171.	1020.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOx CONC PPM
1	-.796	85.4	16.6	8.5	7.9
4	.730	93.1	15.0	7.9	9.1
6	-.920	-128.7	23.6	7.8	8.8
7	.529	108.4	17.2	7.9	7.5
9	.648	73.4	16.6	4.8	5.0
10	.569	57.4	13.3	7.0	6.1
11	-.906	106.6	20.1	-11.6	-11.8
12	-.870	93.8	17.5	7.2	8.1
14	.565	68.0	19.7	6.5	7.3
15	.600	96.4	18.1	6.5	7.1
16	.489	64.6	15.6	5.9	6.2
17	.470	58.0	8.7	7.9	6.5
18	.588	74.6	12.2	6.3	7.0
19	.578	82.4	12.8	5.3	6.6
20	.565	83.2	19.0	3.9	5.1
21	.552	86.2	17.0	5.4	6.4
22	.602	-111.6	21.2	5.2	6.8
23	.628	98.6	21.8	8.5	-9.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3103.	21.20	7.07	3.48	3.48	0.00
4	3091.	25.07	6.93	3.49	4.01	0.00
6	3091.	27.53	8.68	2.75	3.09	0.00
7	3068.	-40.02	10.93	4.76	4.76	0.00
9	3090.	22.26	8.65	2.41	2.49	0.00
10	3096.	-19.87	7.94	4.01	4.01	0.00
11	3099.	23.21	7.51	4.13	4.22	0.00
12	3101.	22.32	7.15	2.83	3.17	0.00
14	3089.	23.66	11.76	3.70	4.15	0.00
15	3081.	31.48	10.17	3.50	3.83	0.00
16	3088.	25.94	10.78	3.88	4.11	0.00
17	3103.	24.38	6.29	5.45	5.45	0.00
18	3100.	24.99	7.03	3.46	3.86	0.00
19	3093.	28.08	7.50	2.96	3.67	0.00
20	3075.	28.79	11.29	2.20	2.88	0.00
21	3075.	30.55	10.36	3.14	3.71	0.00
22	3062.	-36.16	11.81	2.75	3.63	0.00
23	3076.	30.71	11.66	4.41	4.77	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	5.0330	-6.0940	-17.7080	4.5030	5.5830	22.4360
4	4.8860	5.9190	18.2270	4.6720	5.7160	22.8460
6	5.0080	-6.2170	-17.2630	4.5320	5.7370	22.5060
7	4.9950	5.8100	18.1770	4.5750	5.4300	22.6120
9	-5.9910	-6.9190	19.1410	5.5590	6.5300	24.9110
10	4.9500	5.8070	19.8110	4.6120	5.5000	22.7020
11	5.0130	-6.2020	-17.0710	4.5240	5.7130	22.4880
12	5.0130	-6.1170	-17.0710	4.5240	5.6400	22.4880
14	4.7870	5.6900	19.8590	4.8120	5.7120	23.1820
15	4.7870	5.7250	19.8590	4.8120	5.7470	23.1820
16	4.7870	5.6190	19.8590	4.8120	5.6410	23.1820
17	4.8410	5.6200	19.1420	4.7020	5.5060	22.9200
18	4.8410	5.7330	19.1420	4.7020	5.6140	22.9200
19	4.8410	5.7240	19.1420	4.7020	5.6060	22.9200
20	5.0410	5.8600	18.3350	4.4820	5.3610	22.3830
21	5.0410	5.8470	18.3350	4.4820	5.3500	22.3830
22	5.0410	5.9000	18.3350	4.4820	5.3940	22.3830
23	5.0360	5.9370	18.4880	4.5240	5.4620	22.4880

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIFS *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMAER CORRECTED
1	23.69	7.71	4.41	4.41	0.00
4	26.22	7.17	4.37	5.03	0.00
6	30.43	9.41	3.58	4.02	0.00
7	-43.69	11.69	5.93	5.93	0.00
9	23.99	9.17	3.14	3.24	0.00
10	21.33	8.39	4.60	4.60	0.00
11	25.72	8.15	5.44	5.56	0.00
12	24.72	7.75	3.72	4.18	0.00
14	23.54	11.72	4.32	4.84	0.00
15	31.32	10.13	4.09	4.48	0.00
16	25.80	10.74	4.53	4.80	0.00
17	25.10	6.42	6.52	6.52	0.00
18	25.73	7.18	4.15	4.62	0.00
19	28.91	7.66	3.54	4.39	0.00
20	32.39	12.34	2.68	3.51	0.00
21	34.36	11.33	3.83	4.53	0.00
22	-40.67	12.91	3.36	4.43	0.00
23	34.18	12.68	5.36	5.80	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	96.00	95.00	94.24	93.26
4	96.00	94.00	95.27	93.28
6	96.00	96.00	94.42	94.42
7	96.20	95.00	94.88	93.70
9	97.00	96.00	95.85	94.86
10	95.00	93.00	93.92	-91.94
11	95.00	94.50	-93.39	92.90
12	96.00	96.00	94.38	94.38
14	96.00	94.25	96.09	94.34
15	95.50	94.00	95.59	94.09
16	96.00	94.00	94.09	94.09
17	96.00	95.00	95.45	94.46
18	96.00	95.00	95.45	94.46
19	96.00	95.00	95.45	94.46
20	97.00	95.75	95.09	93.87
21	96.50	95.50	94.60	93.62
22	97.50	96.75	95.58	94.85
23	96.00	94.25	94.38	-92.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

1	9200.	.9210	.8080	1500.	2.040	14319.
4	8800.	1.0420	.7630	1437.	2.040	14374.
6	8750.	-1.3050	.7670	1473.	2.040	14326.
7	8800.	-1.0560	.7630	1527.	2.020	14032.
9	9000.	.9740	.7780	1491.	2.040	14319.
10	8870.	.9970	.7740	1500.	2.020	14093.
11	8250.	-1.0480	.7280	1446.	2.040	14329.
12	8700.	1.0030	.7630	1482.	2.040	14329.
14	-9400.	.9620	.8040	1470.	2.040	14367.
15	8650.	.9330	.7420	1464.	2.040	14367.
16	8850.	.9760	.7570	1464.	2.040	14367.
17	8750.	.9030	.7610	1464.	2.040	14464.
18	8500.	.9730	.7400	1500.	2.040	14464.
19	8850.	.8730	.7700	1464.	2.040	14464.
20	9100.	.9160	.7990	1500.	2.040	14355.
21	8600.	.8700	.7570	1500.	2.040	14355.
22	8800.	.9660	.7700	1509.	2.040	14355.
23	-9350.	.8710	-.8150	1509.	2.020	-14030.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	9409.	.8870	.7790	1445.	14377.
4	8869.	1.0270	.7520	1415.	14377.
6	8928.	-1.2620	.7420	1425.	14377.
7	9006.	1.0280	.7420	1485.	14163.
9	9144.	.9510	.7600	1456.	14377.
10	9017.	.9750	.7570	1466.	14163.
11	8420.	1.0130	-.7030	-1397.	14377.
12	8879.	.9690	.7370	1432.	14377.
14	9397.	.9640	-.8060	1473.	14377.
15	8647.	.9350	.7430	1467.	14377.
16	8847.	.9770	.7580	1467.	14377.
17	8748.	.8430	.7530	1447.	14377.
18	8498.	.9620	.7310	1483.	14377.
19	8847.	.8630	.7610	1447.	14377.
20	9296.	.8800	.7680	1441.	14377.
21	8786.	.8360	.7270	1441.	14377.
22	8990.	.9290	.7400	1450.	14377.
23	-9601.	.8410	.7880	1458.	14163.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.928	13.0	9.6	84.3	87.7
4	2.183	13.2	4.3	85.8	89.0
6	-2.745	15.6	9.4	-132.8	-128.7
7	-2.219	14.9	6.4	79.8	87.6
9	2.036	10.1	10.1	72.9	68.5
10	2.088	-9.4	5.5	87.7	82.7
11	-2.199	11.9	7.6	-111.0	-121.7
12	2.102	11.9	9.6	83.5	95.0
14	2.017	15.0	9.0	89.8	93.7
15	1.957	14.7	6.9	86.6	91.8
16	2.046	11.9	7.5	89.6	96.1
17	1.892	10.7	9.4	73.2	79.7
18	2.039	11.2	9.6	83.5	81.0
19	1.829	10.8	2.5	71.9	76.3
20	1.900	-26.5	-52.0	79.4	87.0
21	1.816	13.1	12.7	81.7	77.3
22	2.022	13.3	6.3	-109.9	-113.2
23	1.812	12.5	-42.5	88.6	95.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3149.	1.35	1.71	14.40	14.97	27.15
4	3145.	1.21	.68	12.92	13.41	33.11
6	3153.	1.14	1.18	15.95	15.95	32.00
7	3156.	1.35	.99	11.86	13.03	33.77
9	3143.	.99	1.70	11.76	11.76	30.92
10	3145.	-.90	.91	13.81	13.81	32.45
11	3151.	1.08	1.19	16.63	-18.23	33.99
12	3150.	1.13	1.57	13.08	14.88	30.67
14	3152.	1.50	1.53	14.67	15.31	28.00
15	3152.	1.51	1.21	14.59	15.46	30.67
16	3153.	1.16	1.26	14.44	15.48	29.33
17	3152.	1.14	1.70	12.74	13.87	26.32
18	3152.	1.10	1.62	13.49	13.49	25.66
19	3155.	1.19	.47	12.97	13.76	23.18
20	-3121.	-2.77	-9.34	13.65	14.94	27.33
21	3152.	1.44	2.40	14.77	14.77	25.17
22	3146.	1.31	1.08	-17.87	-18.42	28.00
23	-3132.	1.38	-8.04	16.01	17.18	25.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	123.9880	117.4410	81.3910	99.8340	99.9800	100.4990
4	132.6830	119.2950	81.0900	120.7120	111.3910	100.5860
6	-248.9640	-177.2040	82.9310	-193.8830	-148.9730	105.5550
7	150.6060	131.5280	83.9110	125.7350	115.2180	102.3860
9	145.2550	131.9910	83.8570	125.3350	118.3820	107.3610
10	113.8370	106.5790	84.0830	99.0400	96.1750	-94.9200
11	141.5750	124.9700	-76.8950	114.2650	106.9300	98.9530
12	152.5870	135.5470	81.9770	123.3620	116.0010	105.3600
14	120.6310	114.2430	90.0010	122.0660	115.2070	105.2030
15	113.4000	109.6100	89.0580	114.7180	110.5180	104.0990
16	120.0890	113.2290	89.0580	121.5270	114.1870	104.0990
17	119.1900	115.0600	89.0110	112.0690	110.0540	105.7100
18	131.0990	121.4580	89.0110	122.9310	116.0030	105.7100
19	114.4640	112.4240	89.0110	107.7490	107.6000	105.7100
20	131.8060	123.7640	86.9020	104.4920	104.1980	103.1250
21	121.0800	117.1600	85.9810	96.6290	99.0090	102.0570
22	-154.6920	-138.8700	90.5130	121.4380	116.2440	107.3100
23	108.5620	107.0470	82.3850	-89.1140	-92.2380	-97.9100

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1		1.68		2.00			17.78			18.49			27.15	
4		1.33		.73			16.03			16.63			33.11	
6		1.47		1.41			-20.30			20.30			32.00	
7		1.62		1.13			14.47			15.89			33.77	
9		1.15		1.89			15.06			15.06			30.92	
10		1.04		1.01			15.59			15.59			32.45	
11		1.34		1.39			-21.41			-23.46			33.99	
12		1.40		1.84			16.81			19.12			30.67	
14		1.48		1.52			17.15			17.90			28.00	
15		1.49		1.20			17.05			18.07			30.67	
16		1.15		1.25			16.87			18.09			29.33	
17		1.21		1.78			15.13			16.48			26.32	
18		1.17		1.70			16.03			16.03			25.66	
19		1.26		.49			15.40			16.34			23.18	
20		-3.50		-11.09			16.19			17.73			27.33	
21		1.80		2.84			17.53			17.53			25.17	
22		1.67		1.29			-21.19			-21.83			28.00	
23		1.68		-9.33			19.03			20.41			25.56	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPFED PER CENT	CORR N1 PER CFNT	CORR N2 PER CENT
1	89.50	92.50	87.86	90.81
4	89.00	91.00	88.32	90.31
6	90.00	93.00	88.52	91.47
7	89.75	92.00	88.52	90.74
9	90.50	93.00	89.43	91.90
10	88.00	90.50	-87.00	-89.47
11	89.00	92.00	-87.49	90.44
12	89.50	93.00	87.99	91.43
14	89.00	91.50	89.09	91.59
15	89.00	91.00	89.09	91.09
16	89.00	91.00	89.09	91.09
17	89.50	92.50	88.99	91.97
18	89.00	92.00	88.49	91.47
19	89.00	92.00	88.49	91.47
20	90.75	93.00	88.97	91.17
21	91.00	93.50	89.21	91.66
22	91.00	94.00	89.21	92.15
23	89.75	92.00	88.23	90.44

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DFG R	EPR	THRUST LAF

1	7675.	.7520	-.7100	1428.	1.850	12251.
4	7200.	.3860	.6590	1338.	1.840	12180.
6	7325.	-1.1120	.6720	1410.	1.850	12257.
7	7225.	.8470	.6580	1428.	1.830	-11952.
9	7550.	.8390	.6830	1424.	1.850	12251.
10	7000.	.8570	.6480	1427.	1.830	12004.
11	6900.	-.8920	.6400	1428.	1.850	12259.
12	7300.	.8540	.6740	1392.	1.850	12259.
14	-7750.	.7730	.6970	1392.	1.850	12292.
15	7225.	.7620	.6500	1392.	1.850	12292.
16	7250.	.7870	.6520	1392.	1.850	12292.
17	7200.	.7350	.6570	1383.	1.840	12256.
18	6850.	.7850	.6280	1392.	1.840	12256.
19	7300.	.7150	.6690	1392.	1.840	12256.
20	7400.	.7450	.6800	1428.	1.850	12282.
21	7325.	.7490	.6710	1428.	1.850	12282.
22	7250.	.7930	.6650	1437.	1.850	12282.
23	-7800.	.8730	-.7140	1410.	1.830	-11950.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR C3 F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	-7849.	.7250	.6840	1376.	12300.
4	7257.	.8730	.6490	-1317.	12182.
6	7474.	-1.0750	.6500	1364.	12300.
7	7394.	.8240	.6400	1389.	12064.
9	7671.	.8190	.6670	1391.	12300.
10	7116.	.8380	.6330	1404.	12064.
11	7042.	.8620	.6190	1380.	12300.
12	7450.	.8250	.6510	1345.	12300.
14	7748.	.7740	-.6990	1394.	12300.
15	7223.	.7630	.6510	1394.	12300.
16	7248.	.7890	.6540	1394.	12300.
17	7198.	.7270	.6500	1367.	12182.
18	6848.	.7760	.6210	1376.	12182.
19	7298.	.7070	.6620	1376.	12182.
20	7560.	.7160	.6530	1372.	12300.
21	7483.	.7200	.6450	1372.	12300.
22	7406.	.7620	.6390	1381.	12300.
23	-8010.	.8440	-.6900	1362.	12064.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.572	13.0	8.2	60.4	63.5
4	1.852	16.4	4.2	58.7	61.6
6	-2.334	16.5	8.1	-84.6	-93.2
7	1.775	15.5	6.6	57.8	64.4
9	1.751	12.3	9.2	51.9	49.6
10	1.791	10.9	6.1	63.7	61.4
11	-1.868	13.4	7.3	-75.9	-84.6
12	1.787	10.9	8.8	59.0	67.7
14	1.616	14.8	8.2	62.9	66.2
15	1.593	15.7	6.9	58.7	62.7
16	1.646	18.7	7.2	57.2	62.4
17	1.537	11.5	7.9	52.5	56.5
18	1.641	12.6	10.1	57.0	56.1
19	1.496	11.6	2.4	49.3	52.4
20	1.534	-10.3	-74.0	65.0	64.3
21	1.561	13.8	13.0	59.9	57.6
22	1.657	13.5	6.6	-69.5	70.0
23	1.817	13.8	-40.1	64.7	70.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3148.	1.66	1.80	12.64	13.30	24.83
4	3144.	1.78	.78	10.42	10.93	32.67
6	3153.	1.42	1.20	11.94	13.16	32.00
7	3154.	1.76	1.28	10.75	11.96	30.92
9	3142.	1.41	1.81	9.73	9.73	30.92
10	3144.	1.22	1.16	11.68	11.68	32.67
11	3150.	1.44	1.34	13.38	-14.91	34.21
12	3149.	1.22	1.69	10.86	12.47	29.33
14	3150.	1.84	1.76	12.82	13.49	27.63
15	3151.	1.98	1.50	12.14	12.97	29.41
16	3150.	2.28	1.50	11.45	12.49	28.00
17	3151.	1.51	1.77	11.25	12.10	24.50
18	3150.	1.54	2.12	11.44	11.44	25.32
19	3154.	1.55	.55	10.87	11.55	23.68
20	-3104.	1.32	-16.36	-13.75	13.75	26.67
21	3141.	1.77	2.86	12.59	12.59	26.00
22	3145.	1.63	1.37	-13.80	13.89	26.67
23	3133.	1.51	-7.56	11.66	12.75	25.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	78.5800	84.4390	72.5570	64.9080	72.9860	89.8020
4	79.2950	81.8050	-70.3830	72.9960	76.9160	87.4080
6	-134.4920	-116.6000	72.8660	-108.7230	-100.0360	92.9710
7	84.2940	87.1610	73.1760	72.2320	77.5130	89.4740
9	92.2520	94.4920	73.8730	80.8690	85.5540	94.7410
10	71.9350	75.8390	73.7490	63.5370	69.0520	-83.3850
11	88.4430	89.1230	-68.2810	73.1960	77.3780	88.0610
12	94.1520	95.3400	-72.0200	78.0180	82.7910	92.7950
14	73.7800	80.3570	79.9640	74.5230	80.9500	93.4580
15	69.1890	76.2980	77.9880	69.8750	76.8540	91.1460
16	71.2530	77.6170	77.9880	71.9720	78.1890	91.1460
17	77.0510	84.0330	79.9640	73.0150	80.7510	95.0330
18	78.0280	83.6030	78.2280	73.8520	80.2900	92.9820
19	71.9580	79.7360	78.2280	68.2570	76.6700	92.9820
20	81.9260	87.6520	76.9450	66.8120	75.0550	91.5570
21	86.5700	91.7810	78.8410	70.4680	78.4890	93.7640
22	95.6540	98.4960	80.5890	77.3700	83.9150	95.7970
23	86.6830	88.2760	73.9500	71.5560	76.3750	88.0610

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	2.01	2.09	-15.64	16.47	24.83
4	1.93	.83	12.93	13.58	32.67
6	1.76	1.39	15.24	16.79	32.00
7	2.05	1.44	13.14	14.62	30.92
9	1.61	2.00	12.48	12.48	30.92
10	1.38	1.28	13.21	13.21	32.67
11	1.73	1.55	-17.26	-19.24	34.21
12	1.47	1.94	14.00	16.07	29.33
14	1.82	1.74	14.98	15.77	27.63
15	1.96	1.49	14.18	15.16	29.41
16	2.26	1.49	13.38	14.60	28.00
17	1.59	1.85	13.36	14.38	24.50
18	1.62	2.21	13.60	13.60	25.32
19	1.64	.57	12.92	13.73	23.68
20	1.62	-19.11	-16.36	16.36	26.67
21	2.18	3.34	14.98	14.98	26.00
22	2.01	1.61	-16.40	16.51	26.67
23	1.83	-8.73	13.89	15.18	25.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT -----	N1 SPEED PER CENT -----	N2 SPEED PER CENT -----	CORP N1 PER CENT -----	CORR N2 PER CENT -----
1	80.00	87.75	78.54	86.15
4	79.50	86.50	78.89	85.84
6	80.00	88.00	78.68	86.55
7	80.00	87.00	78.90	85.81
9	81.00	88.50	80.04	87.45
10	79.00	86.00	78.10	-85.02
11	79.50	87.00	78.16	85.53
12	80.00	89.00	78.65	87.49
14	79.00	86.50	79.08	86.58
15	79.00	86.00	79.08	86.08
16	79.00	86.00	79.08	86.08
17	80.50	88.00	80.04	87.50
18	80.00	87.50	79.54	87.00
19	80.00	88.00	79.54	87.50
20	81.50	88.75	79.90	87.01
21	81.00	88.00	79.41	86.27
22	81.00	89.00	79.41	87.25
23	80.00	87.25	78.65	85.77

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

1	4825.	.5680	.5130	1305.	1.540	A566.
4	4670.	.6690	.4900	1248.	1.540	A599.
6	4875.	-.8370	.5160	1311.	1.540	A570.
7	4745.	.5650	.4960	1323.	1.530	A396.
9	4855.	.6020	.5000	1302.	1.540	A566.
10	4580.	.6120	.4870	1320.	1.530	A433.
11	4650.	.6740	.4970	1284.	1.540	A571.
12	4863.	.6450	.5160	1302.	1.540	A571.
14	4660.	.5450	.4830	1284.	1.540	A594.
15	4665.	.5440	.4830	1266.	1.540	A594.
16	4650.	.5490	.4820	1275.	1.540	A594.
17	4830.	.5190	.4990	1248.	1.540	A652.
18	4720.	.5700	.4920	1302.	1.540	A652.
19	4825.	.5090	.5030	1284.	1.540	A652.
20	4950.	.5130	.5160	1320.	1.540	A587.
21	4825.	.5510	.5070	1302.	1.540	A587.
22	4775.	.5520	.5020	1324.	1.540	A587.
23	4775.	.6340	.5030	1296.	1.530	A395.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LRF
1	4935.	.5480	.4940	1258.	8600.
4	4707.	.6590	.4830	1229.	8600.
6	4974.	-.8090	.4990	1268.	8600.
7	4856.	.5490	.4830	1287.	8475.
9	4933.	.5880	.4880	1271.	8600.
10	4656.	.5980	.4760	1290.	8475.
11	4746.	.6510	.4800	1241.	8600.
12	4963.	.6230	.4980	1258.	8600.
14	4659.	.5460	.4840	1286.	8600.
15	4664.	.5450	.4840	1268.	8600.
16	4649.	.5500	.4870	1277.	8600.
17	4829.	.5130	.4940	1233.	8600.
18	4719.	.5630	.4860	1287.	8600.
19	4824.	.5040	.4970	1269.	8600.
20	5057.	.4930	.4960	1268.	8600.
21	4929.	.5300	.4880	1251.	8600.
22	4878.	.5300	.4830	1273.	8600.
23	4903.	.6130	.4860	1253.	8475.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.184	17.5	7.8	35.0	37.3
4	1.394	25.2	4.3	35.1	38.1
6	-1.752	22.2	3.4	-47.6	-53.5
7	1.178	21.3	7.8	34.4	38.3
9	1.253	21.0	9.0	28.7	28.4
10	1.274	13.9	6.5	35.8	35.3
11	-1.405	20.2	7.8	-42.6	-48.5
12	1.345	14.3	8.9	34.0	39.9
14	1.134	23.6	8.2	32.5	35.4
15	1.133	20.4	6.8	32.2	34.8
16	1.144	20.2	7.1	30.8	34.4
17	1.083	14.3	5.2	31.9	33.7
18	1.188	19.2	7.8	33.1	33.8
19	1.061	16.3	9.7	28.2	30.6
20	1.052	12.9	-58.3	33.6	33.9
21	1.146	17.2	10.7	32.6	33.0
22	1.147	19.4	7.0	36.0	37.3
23	1.313	17.9	-38.0	39.0	-43.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3145.	2.97	2.26	9.73	10.35	21.07
4	3140.	3.62	1.07	8.26	8.97	26.80
6	3152.	2.54	.67	8.95	10.06	26.67
7	3149.	3.62	2.28	9.62	10.72	17.76
9	3137.	1.35	2.47	7.53	-7.53	23.84
10	3141.	2.18	1.76	9.22	9.22	24.67
11	3146.	2.87	1.91	9.98	11.35	28.29
12	3146.	2.13	2.27	8.31	9.75	23.68
14	3145.	4.16	2.47	9.42	10.25	19.46
15	3147.	3.61	2.07	9.33	10.12	20.00
16	3147.	3.54	2.15	8.86	9.90	20.39
17	3150.	2.65	1.64	9.69	10.26	19.61
18	3147.	3.23	2.26	9.17	9.37	20.39
19	3145.	3.07	3.14	8.74	9.48	18.30
20	-3096.	2.42	-18.77	-10.34	10.43	20.95
21	3138.	3.00	3.20	9.34	9.43	18.67
22	3140.	3.39	2.09	10.31	10.66	21.33
23	3124.	2.71	9.89	9.72	10.73	23.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
----	-----	-----	-----	-----	-----	-----
1	37.9080	47.2180	55.5420	32.2360	41.5840	69.0750
4	37.1800	45.3890	54.5810	34.7140	43.0520	67.9120
6	-51.9430	-57.3880	55.1080	-43.9030	50.5440	70.6380
7	35.2670	44.4900	55.2340	31.1350	40.3060	67.7920
9	42.8930	52.3530	57.6490	38.4650	48.0780	74.1550
10	33.1200	41.5800	57.1820	29.8990	38.3740	-64.8320
11	38.8970	46.9000	-51.5010	33.2750	41.5690	66.7310
12	-46.8430	-55.6950	57.4610	39.9840	49.2630	74.3230
14	33.4420	43.0250	60.5590	33.7100	43.2870	70.7590
15	31.6840	41.0240	58.9140	31.9360	41.2720	68.8360
16	31.8330	41.1400	58.9140	32.0870	41.3890	68.8360
17	37.5990	47.8240	62.4500	35.9720	46.2380	74.3250
18	37.4580	47.0230	60.8000	35.8060	45.4430	72.3710
19	37.2470	47.5530	62.4500	35.6430	45.9820	74.3250
20	39.7740	49.9600	60.5610	33.5600	43.7130	72.4020
21	38.1370	47.6410	58.1350	32.1350	41.6630	69.5550
22	42.3860	52.2910	61.3800	35.6260	45.6440	73.3630
23	38.5760	47.1310	56.5670	32.9330	41.6380	67.6610

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		3.49			2.56			12.10			12.87		21.07	
4		3.87			1.13			10.28			11.16		26.80	
6		3.00			.76			11.47			12.90		26.67	
7		4.11			2.52			11.80			13.16		17.76	
9		3.74			2.69			9.68			9.68		23.84	
10		-2.41			1.91			10.45			10.45		24.67	
11		3.36			2.16			-12.93			-14.71		28.29	
12		2.50			2.57			10.75			12.61		23.68	
14		4.13			2.46			11.00			11.97		19.46	
15		3.58			2.06			10.91			11.82		20.00	
16		3.52			2.13			10.35			11.57		20.39	
17		2.77			1.69			11.54			12.21		19.61	
18		3.38			2.34			10.92			11.15		20.39	
19		3.21			3.25			10.40			11.28		18.30	
20		2.87			-21.45			-12.37			12.46		20.95	
21		3.56			3.65			11.17			11.29		18.67	
22		4.03			2.40			-12.32			12.75		21.33	
23		3.17			-11.20			11.62			12.84		23.18	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	62.50	78.50	61.36	77.06
4	60.00	77.00	59.54	76.41
6	61.00	78.75	60.00	77.45
7	62.00	78.50	61.15	77.43
9	61.80	79.00	61.07	78.06
10	61.50	77.00	60.80	76.12
11	60.25	77.75	59.23	76.44
12	62.00	79.00	60.95	77.66
14	61.00	77.50	61.06	77.57
15	60.25	77.00	60.31	77.07
16	61.00	77.00	61.06	77.07
17	61.00	78.00	60.65	77.55
18	61.00	78.00	60.65	77.55
19	61.00	78.50	60.65	78.05
20	61.25	78.00	60.05	76.47
21	62.00	78.75	60.78	77.20
22	61.75	79.25	60.54	77.69
23	62.00	78.00	60.95	76.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF

1	-2590.	.3930	-.3780	1167.	1.230	4009.
4	2360.	.3650	.3550	1122.	1.230	4024.
6	2375.	-.5530	.3560	1172.	1.230	4011.
7	2520.	.2930	.3660	1185.	1.230	3988.
9	2510.	.3480	.3660	1154.	1.230	4009.
10	2425.	.3280	.3550	1176.	1.230	4005.
11	2250.	.4000	.3430	1149.	1.230	4012.
12	2475.	.3940	.3640	1143.	1.230	4012.
14	2280.	.3080	.3290	1135.	1.230	4022.
15	2270.	.2800	.3330	1095.	1.230	4022.
16	2235.	.2570	.3230	1122.	1.230	4022.
17	2265.	.2630	.3340	1104.	1.230	4049.
18	2255.	.3090	.3330	1140.	1.230	4049.
19	2310.	.2800	.3410	1140.	1.230	4049.
20	2250.	.2810	.3380	1173.	1.230	4019.
21	2350.	.3150	.3480	1171.	1.230	4019.
22	2263.	.3030	.3370	1180.	1.230	4019.
23	2465.	.3390	.3600	1149.	1.230	3987.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-2649.	.3790	.3640	1124.	4025.
4	2379.	.3600	.3490	1105.	4025.
6	2423.	-.5350	.3440	1134.	4025.
7	-2579.	.2850	.3560	1152.	4025.
9	2550.	.3400	.3570	1127.	4025.
10	2465.	.3200	.3470	1149.	4025.
11	2296.	.3870	.3310	1110.	4025.
12	2526.	.3810	.3520	1105.	4025.
14	2279.	.3090	.3300	1137.	4025.
15	2269.	.2810	.3340	1097.	4025.
16	2234.	.2570	.3240	1124.	4025.
17	2264.	.2600	.3310	1091.	4025.
18	2254.	.3050	.3290	1127.	4025.
19	2309.	.2770	.3370	1127.	4025.
20	2299.	.2700	.3250	1127.	4025.
21	2401.	.3030	.3350	1126.	4025.
22	2311.	.2910	.3240	1134.	4025.
23	2531.	.3280	.3480	1110.	4025.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.812	43.7	11.2	14.7	16.5
4	.753	56.2	7.9	12.4	14.0
6	-1.146	-64.9	12.7	-17.8	-22.4
7	.604	41.5	10.5	15.2	17.6
9	.717	47.9	11.9	8.3	9.8
10	.676	-28.4	9.2	12.3	13.0
11	-.828	42.3	13.1	15.1	18.0
12	.816	35.1	12.0	12.5	15.7
14	.636	41.0	11.2	11.4	13.1
15	.578	45.6	9.8	9.9	11.6
16	.529	36.7	9.1	9.4	10.5
17	.543	32.0	5.1	12.5	11.8
18	.639	37.7	5.9	9.9	12.4
19	.578	32.5	10.5	10.6	11.3
20	.565	38.2	-56.5	7.9	10.5
21	.649	42.2	12.1	10.2	12.3
22	.622	50.8	11.0	9.1	11.6
23	.694	36.7	-30.6	-16.1	19.0

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	3126.	10.71	4.72	5.93	6.64	8.00
4	3116.	14.80	3.58	5.35	6.04	9.21
6	3130.	11.28	3.80	5.09	6.40	11.33
7	3123.	13.66	5.96	-8.19	-9.54	10.60
9	3113.	13.24	5.67	3.75	4.45	8.55
10	3123.	8.35	4.65	5.96	6.26	7.28
11	3125.	10.15	5.43	5.96	7.10	11.11
12	3129.	8.57	5.01	5.00	6.30	9.21
14	3122.	12.80	6.03	5.84	6.72	6.67
15	3118.	15.66	5.79	5.59	6.57	6.58
16	3120.	13.80	5.91	5.79	6.47	5.33
17	3131.	11.73	3.22	7.54	7.54	5.30
18	3131.	11.76	3.17	5.06	6.35	7.19
19	3124.	11.17	6.21	5.98	6.40	5.30
20	-3040.	13.07	-33.24	4.46	5.92	7.38
21	3114.	12.89	6.35	5.12	6.17	7.95
22	3110.	16.15	5.99	4.75	6.06	9.27
23	3099.	10.44	14.92	7.49	8.85	10.90

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	12.9640	19.0040	34.4150	11.3730	17.1020	43.1520
4	11.0970	16.7120	33.4370	10.5400	16.0330	41.7490
6	-15.1020	-21.0190	34.0740	13.2970	19.0090	44.0000
7	12.1480	18.3510	35.5970	11.0090	16.9220	43.9370
9	13.2250	19.5900	35.0570	12.1510	18.2900	45.3430
10	10.7900	16.3960	36.1030	9.9680	15.3690	41.1330
11	12.1430	17.9050	-32.0160	10.7700	16.2580	41.7960
12	13.6210	19.8680	34.0890	12.0600	18.0140	44.4590
14	11.2860	17.2350	37.8990	11.3540	17.3170	44.2640
15	10.5620	16.3260	36.9660	10.6240	16.4020	43.1730
16	10.3900	16.1600	36.9660	10.4510	16.2350	43.1730
17	11.3140	17.3640	37.0480	10.9480	16.9200	44.2160
18	11.6900	17.7190	37.0480	11.3020	17.2580	44.2160
19	11.9950	18.2370	37.9700	11.6000	17.7640	45.3100
20	11.3500	17.2430	34.6600	9.9570	15.5030	41.8650
21	12.4900	18.6630	35.9990	10.9200	16.7400	43.4520
22	12.9700	19.3530	36.9030	11.3370	17.3540	44.5230
23	11.9400	17.8730	35.1180	10.5710	16.1810	42.3230

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODF 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	12.21	5.25	7.43	8.32	8.00
4	15.59	3.73	6.67	7.54	9.21
6	12.82	4.21	6.57	8.26	11.33
7	15.07	6.46	-10.11	-11.77	10.60
9	14.41	6.08	4.85	5.75	8.55
10	9.04	4.96	6.79	7.13	7.28
11	11.45	5.98	7.78	9.27	11.11
12	9.68	5.53	6.53	8.21	9.21
14	12.72	6.00	6.82	7.85	6.67
15	15.57	5.76	6.53	7.67	6.58
16	13.72	5.88	6.76	7.55	5.33
17	12.12	3.30	-9.00	9.00	5.30
18	12.16	3.25	6.04	7.58	7.19
19	11.55	6.38	7.13	7.64	5.30
20	14.89	-36.97	5.39	7.15	7.38
21	14.74	7.08	6.18	7.45	7.95
22	-18.48	6.67	5.73	7.31	9.27
23	11.79	-16.48	-9.03	10.66	10.90

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	38.25	62.00	37.55	60.87
4	37.00	62.00	36.72	61.53
6	37.50	62.00	36.88	60.98
7	37.00	62.00	36.49	61.15
9	-40.30	-65.00	39.82	64.23
10	39.00	62.00	38.56	61.30
11	38.00	62.00	37.36	60.95
12	37.00	62.00	36.37	60.95
14	37.50	62.00	37.54	62.06
15	38.25	-61.75	38.29	61.81
16	38.75	62.00	38.79	62.06
17	37.50	62.00	37.28	61.64
18	38.00	62.00	37.78	61.64
19	37.00	62.00	36.79	61.64
20	37.75	62.00	37.01	60.78
21	38.00	62.00	37.25	60.78
22	36.50	62.00	35.78	60.78
23	38.00	62.00	37.36	60.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	-1400.	.3270	-.3500	-1215.	-1.050	1010.
4	1200.	.3470	.3020	1122.	1.080	1063.
6	1160.	-.4440	.2930	-1212.	-1.100	1019.
7	1210.	.2650	.3040	1194.	1.060	1026.
9	-1435.	.3110	-.3470	1194.	1.080	1258.
10	1250.	.2640	.3060	1194.	1.080	1041.
11	1150.	-.4240	.2880	1176.	1.080	1017.
12	1213.	-.3990	.3080	1176.	-1.050	1017.
14	1120.	.2590	.2760	1176.	1.070	1102.
15	1150.	.2660	.2810	1140.	1.080	1083.
16	1150.	.2400	.2790	1140.	1.070	1102.
17	1110.	.2230	.2780	1104.	1.070	1078.
18	1195.	.2720	.2970	1158.	1.080	1078.
19	1080.	.2550	.2720	1122.	1.070	1078.
20	1150.	.2520	.2910	-1212.	1.080	1006.
21	1150.	.2660	.2900	1203.	1.080	1006.
22	1075.	.2740	.2770	1185.	1.070	1006.
23	1290.	.3280	-.3220	1176.	1.070	1011.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	-1432.	.3150	-.3380	1171.	1014.
4	1209.	.3420	.2970	1105.	1063.
6	1184.	-.4290	.2830	1172.	1023.
7	1238.	.2580	.2960	1161.	1035.
9	-1458.	.3030	-.3380	1166.	1263.
10	1271.	.2580	.2990	1167.	1046.
11	1174.	-.4090	.2790	1136.	1020.
12	1237.	-.3860	.2980	1136.	1020.
14	1120.	.2600	.2760	1178.	1102.
15	1150.	.2670	.2810	1142.	1084.
16	1150.	.2410	.2790	1142.	1102.
17	1110.	.2200	.2750	-1091.	1072.
18	1195.	.2690	.2940	1144.	1072.
19	1080.	.2520	.2690	1109.	1072.
20	1175.	.2420	.2800	1165.	1008.
21	1175.	.2550	.2790	1156.	1008.
22	1098.	.2630	.2660	1139.	1008.
23	-1325.	.3170	.3110	1136.	1020.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.668	87.6	17.9	7.7	7.9
4	.705	112.5	17.9	8.2	8.4
6	-.905	-137.1	24.8	8.3	-11.1
7	.538	107.6	17.6	7.6	-9.6
9	.633	81.4	17.6	4.4	5.7
10	.540	-57.5	12.7	6.4	6.9
11	-.867	108.5	20.9	8.2	-10.6
12	-.817	103.9	20.6	5.9	8.5
14	.529	68.9	16.9	6.0	6.7
15	.541	85.4	18.0	5.7	6.6
16	.488	79.7	16.7	5.2	5.9
17	.456	66.2	9.1	8.0	6.6
18	.557	78.6	10.6	5.2	6.6
19	.518	84.8	16.5	5.9	5.8
20	.507	88.3	-29.1	3.5	6.3
21	.537	92.5	21.4	4.4	6.5
22	.552	112.4	20.7	4.6	6.7
23	.662	-119.2	-33.2	7.0	-9.7

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3091.	25.81	9.05	3.72	3.83	0.00
4	3077.	31.22	8.52	3.73	3.83	0.00
6	3086.	29.74	9.25	2.96	3.94	0.00
7	3069.	39.05	10.99	4.53	5.75	0.00
9	3084.	25.25	9.36	2.24	2.93	0.00
10	3094.	-20.98	7.95	3.82	4.15	0.00
11	3095.	24.65	8.16	3.04	3.95	0.00
12	3093.	25.04	8.54	2.33	3.38	0.00
14	3088.	25.59	10.76	3.67	4.06	0.00
15	3079.	30.93	11.19	3.38	3.92	0.00
16	3076.	32.01	11.50	3.42	3.89	0.00
17	3095.	28.63	6.72	5.71	5.71	0.00
18	3097.	27.80	6.45	3.03	3.81	0.00
19	3078.	32.10	10.71	3.68	3.68	0.00
20	3046.	33.78	-19.13	2.20	3.94	0.00
21	3062.	33.56	13.32	2.65	3.85	0.00
22	3055.	39.59	12.55	2.65	3.89	0.00
23	3055.	35.00	16.77	3.37	4.69	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
----	-----	-----	-----	-----	-----	-----
1	5.0330	5.9620	-17.7080	4.5030	5.4700	22.4360
4	4.8860	5.8960	18.2270	4.6720	5.6950	22.8460
6	5.0080	-6.2030	-17.2630	4.5320	5.7250	22.5060
7	4.9950	5.8190	18.1770	4.5750	5.4380	22.6120
9	-5.9910	-6.9010	19.1410	5.5590	-6.5150	24.9110
10	4.9500	5.7790	19.8110	4.6120	5.4750	22.7020
11	5.0130	-6.1600	-17.0710	4.5240	5.6770	22.4880
12	5.0130	-6.1050	-17.0710	4.5240	5.6300	22.4880
14	4.7870	5.6570	19.8590	4.8120	5.6780	23.1820
15	4.7210	5.6030	19.7230	4.7450	5.6240	23.0230
16	4.7870	5.6200	19.8590	4.8120	5.6410	23.1820
17	4.8410	5.6080	19.1420	4.7020	5.4950	22.9200
18	4.8410	5.7030	19.1420	4.7020	5.5860	22.9200
19	4.8410	5.6690	19.1420	4.7020	5.5530	22.9200
20	5.0410	5.8060	18.3350	4.4820	5.3160	22.3830
21	5.0410	5.8340	18.3350	4.4820	5.3390	22.3830
22	5.0410	5.8510	18.3350	4.4820	5.3530	22.3830
23	5.0360	5.9770	18.4880	4.5240	5.4960	22.4880

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	28.85	9.86	4.72	4.86	0.00
4	32.65	8.82	4.67	4.80	0.00
6	32.86	10.02	3.86	5.14	0.00
7	-42.63	11.76	5.64	-7.15	0.00
9	27.22	9.91	2.92	3.81	0.00
10	22.52	8.39	4.37	4.76	0.00
11	27.31	8.85	4.01	5.20	0.00
12	27.75	9.26	3.07	4.46	0.00
14	25.46	10.72	4.28	4.74	0.00
15	30.77	11.15	3.94	4.57	0.00
16	31.84	11.45	4.00	4.54	0.00
17	29.48	6.86	-6.84	-6.84	0.00
18	28.63	6.59	3.63	4.57	0.00
19	33.05	10.94	4.41	4.41	0.00
20	38.00	-20.90	2.68	4.81	0.00
21	37.75	14.56	3.23	4.70	0.00
22	-44.53	13.72	3.23	4.76	0.00
23	38.96	-18.23	4.10	5.70	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	-56.00	32.40	-54.98
4	34.75	59.00	34.49	58.55
6	34.50	58.25	33.93	57.29
7	34.00	58.00	33.53	57.21
9	36.30	-61.00	35.87	60.28
10	33.50	57.50	33.12	56.85
11	-32.00	-56.00	-31.46	-55.05
12	35.00	59.00	34.41	58.00
14	33.50	57.50	33.53	57.56
15	35.00	58.00	35.03	58.06
16	35.00	58.00	35.03	58.06
17	35.00	59.50	34.80	59.16
18	32.50	57.00	32.31	56.67
19	34.50	58.50	34.30	58.16
20	34.00	57.50	33.33	56.37
21	36.50	-60.50	35.78	59.31
22	34.00	59.00	33.33	57.84
23	35.00	58.00	34.41	57.02

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	-1200.	.3510	-.3450	-1221.	-1.040	-846.
4	1120.	.3590	.2900	1122.	1.060	921.
6	1040.	-.4310	.2780	1203.	-1.100	893.
7	1090.	.2740	.2940	1194.	-1.040	826.
9	-1245.	.3080	-.3170	1176.	1.070	967.
10	1070.	.2760	.2950	1194.	1.060	882.
11	-925.	-.4250	.2790	1176.	1.050	848.
12	1125.	-.3930	.2940	1176.	-1.040	907.
14	960.	.2670	.2570	1185.	1.060	901.
15	1030.	.2800	.2620	1149.	1.060	911.
16	990.	.2450	.2520	1140.	1.050	911.
17	1030.	.2420	.2670	1113.	1.060	939.
18	1000.	.2840	.2880	1158.	1.060	889.
19	970.	.2590	.2540	1122.	1.060	919.
20	975.	.2630	.2690	-1212.	1.070	876.
21	1100.	.2710	.2830	1203.	1.070	935.
22	975.	.2820	.2690	1185.	1.050	905.
23	1160.	.3130	.3010	1167.	1.050	882.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	CORR TT7 DEG R	COR THRUST LBF

1	-1227.		.3380	-.3330		1176.	849.
4	1129.		.3540	.2860		1105.	921.
6	1061.		-.4170	.2680		1163.	896.
7	1115.		.2660	.2860		1161.	894.
9	-1265.		.3010	-.3090		1148.	971.
10	1089.		.2700	.2980		1167.	887.
11	944.		-.4110	.2700		1136.	851.
12	1148.		-.3790	.2840		1136.	910.
14	960.		.2670	.2580		-1187.	901.
15	1030.		.2800	.2630		1151.	911.
16	990.		.2460	.2530		1142.	911.
17	1030.		.2390	.2640		1100.	933.
18	1000.		.2810	.2850		1144.	883.
19	970.		.2560	.2510		1109.	913.
20	996.		.2530	.2590		1165.	877.
21	1124.		.2600	.2720		1156.	936.
22	996.		.2710	.2590		1139.	907.
23	-1191.		.3020	.2910		1128.	890.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.712	123.9	23.1	7.0	7.1
4	.729	124.0	20.2	7.8	8.0
6	-.876	-152.8	30.4	7.1	-8.8
7	.552	136.1	20.9	6.4	8.5
9	.624	97.8	22.1	3.5	5.0
10	.562	77.6	15.1	5.3	6.2
11	-.862	-157.6	31.8	5.9	8.5
12	-.801	115.7	23.4	5.2	7.9
14	.541	88.2	21.2	5.2	6.2
15	.565	109.7	23.9	5.1	6.2
16	.495	94.8	22.2	4.4	5.2
17	.492	80.7	12.0	8.1	6.4
18	.576	112.8	17.5	4.3	5.6
19	.525	100.4	20.1	5.6	5.3
20	.528	105.6	29.2	2.8	5.7
21	.545	112.1	26.0	4.1	6.1
22	.565	-146.4	28.6	3.9	6.3
23	.626	-143.9	-76.4	6.2	-9.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE A

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
1	3072.	34.04	10.91	3.14	3.21	0.00
4	3071.	33.26	9.30	3.42	3.53	0.00
6	3073.	34.10	11.67	2.60	3.24	0.00
7	3051.	47.87	12.64	3.70	4.91	0.00
9	3068.	30.58	11.87	1.82	2.59	0.00
10	3082.	27.10	9.06	3.02	3.53	0.00
11	3066.	35.65	12.38	2.18	3.16	0.00
12	3084.	28.36	9.84	2.11	3.18	0.00
14	3072.	31.96	13.16	3.11	3.67	0.00
15	3060.	37.81	14.16	2.91	3.53	0.00
16	3059.	37.23	14.96	2.87	3.37	0.00
17	3085.	32.19	8.20	5.29	5.29	0.00
18	3070.	38.23	10.18	2.41	3.14	0.00
19	3064.	37.32	12.85	3.40	3.40	0.00
20	3040.	38.71	18.40	1.70	3.43	0.00
21	3045.	39.91	15.90	2.38	3.56	0.00
22	3027.	-49.95	16.75	2.19	3.55	0.00
23	3033.	44.36	19.28	3.14	4.54	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	3.5360	4.4500	-14.8590	-3.1820	-4.0980	-18.8740
4	4.1230	5.1240	16.7550	3.9470	4.9530	21.0130
6	4.0380	5.1330	-15.5110	3.6660	4.7510	20.2500
7	3.9700	4.8050	16.2160	3.6470	4.4980	20.1990
9	-4.6820	-5.5960	16.9390	4.3570	5.2930	22.0720
10	3.8200	4.6590	17.4180	3.5690	4.4210	19.9830
11	3.5240	4.5560	-14.3280	-3.1980	4.2150	-18.9190
12	4.2240	5.2610	-15.6800	3.8220	4.8620	20.6800
14	3.7050	4.5630	17.4860	3.7230	4.5800	20.4100
15	3.8160	4.6990	17.7450	3.8350	4.7160	20.7130
16	3.8160	4.6470	17.7450	3.8350	4.6640	20.7130
17	4.2050	5.0120	17.8540	4.0880	4.9130	21.3840
18	3.6310	4.4860	16.5930	3.5320	4.3980	19.8800
19	3.9690	4.8000	17.3460	3.8590	4.7050	20.7790
20	3.8820	4.6730	16.1030	3.4680	4.2910	19.6990
21	-4.6310	-5.4410	17.5810	4.1240	4.9840	21.4780
22	4.2460	5.0750	16.8370	3.7860	4.6520	20.5820
23	4.0000	4.8870	16.4880	3.6060	4.5080	20.0860

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 600 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	37.82	11.85	3.99	4.07	0.00
4	34.75	9.62	4.29	4.43	0.00
6	37.56	12.61	3.40	4.23	0.00
7	-52.11	13.50	4.61	6.12	0.00
9	32.87	12.55	2.37	3.37	0.00
10	29.01	9.55	3.46	4.05	0.00
11	39.29	13.38	2.87	4.17	0.00
12	31.34	10.65	2.78	4.19	0.00
14	31.71	13.11	3.63	4.28	0.00
15	37.62	14.11	3.40	4.12	0.00
16	37.05	14.91	3.35	3.93	0.00
17	33.11	8.37	-6.34	-6.34	0.00
18	39.30	10.38	2.48	3.76	0.00
19	38.38	13.11	4.07	4.07	0.00
20	43.34	20.04	2.08	4.20	0.00
21	44.82	17.36	2.91	4.34	0.00
22	-56.01	18.27	2.68	4.34	0.00
23	-49.21	20.90	3.82	5.53	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
14	2718.	1243.	536.2	29.99	.009160
15	2718.	1243.	536.2	29.99	.009160
16	2808.	1333.	531.7	30.18	.013630
17	2758.	1288.	541.7	29.95	.012950
18	2758.	1288.	541.7	29.95	.012950
19	2758.	1288.	541.7	29.95	.012950
23	9870.	1590.	521.7	29.94	.006590

JT80-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
14	33.50	58.50	32.95	57.54
15	34.75	59.75	34.18	58.77
16	31.00	-54.00	30.62	-53.34
17	34.00	60.50	33.27	59.20
18	31.50	59.00	30.82	57.73
19	33.00	58.00	32.29	56.76
23	32.25	56.00	32.16	55.84

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LRF
14	1070.	.3230	.2990	1230.	1.050	899.
15	1070.	-.4050	.2830	1185.	1.060	923.
16	-925.	.3220	.2890	1230.	1.040	-793.
17	1020.	.2010	.2830	1153.	1.060	933.
18	1025.	.2950	-.3220	1212.	1.050	904.
19	1000.	.2730	.2910	1117.	1.060	884.
23	1000.	.3180	.2880	1140.	1.050	866.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	1090.	.3130	.2900	1190.	901.
15	1090.	.3910	.2730	1146.	925.
16	945.	.3150	.2820	1200.	-800.
17	1043.	.1920	.2710	1104.	934.
18	1048.	.2840	.3080	1160.	905.
19	1023.	.2620	.2790	-1070.	885.
23	1003.	.3160	.2860	1133.	867.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	.656	109.1	19.7	1.3	-2.5
15	-.824	132.0	23.6	1.6	3.9
16	.651	149.4	28.3	3.9	3.5
17	.399	87.3	33.1	1.9	-1.4
18	.593	156.7	28.6	2.8	3.7
19	.544	138.1	-40.4	2.9	5.2
23	.639	152.1	33.4	7.4	5.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODF 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
14	3075.	32.54	10.08	.66	-1.21	0.00
15	3078.	31.40	9.65	.63	1.51	0.00
16	3055.	44.64	14.53	1.94	1.94	0.00
17	-3015.	41.94	-27.38	1.52	1.52	0.00
18	3032.	-50.98	15.97	1.50	1.98	0.00
19	-3012.	48.70	-24.49	1.70	3.02	0.00
23	3038.	46.02	17.38	3.70	3.70	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FCO 100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
14	4.0940	5.0010	17.7490	3.7190	4.6440	20.3990
15	-4.4040	-5.4780	18.4070	3.9960	5.0730	21.1450
16	3.0870	3.9420	-14.2190	-2.8680	-3.7190	-17.9120
17	-4.6500	-5.3230	17.5210	4.0980	4.8490	21.4110
18	4.2620	5.1080	16.7790	3.7630	4.6460	20.5180
19	4.0160	4.8190	16.2880	3.5500	4.3890	19.9290
23	3.4120	4.3140	17.2030	3.3570	4.2600	19.3830

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
14		35.82		10.85				.76			-1.39		0.00	
15		34.60		10.43				.72			1.74		0.00	
16		48.05		15.40				2.44			2.44		0.00	
17		47.59		-30.05				1.86			1.86		0.00	
18		-57.75		17.56				1.84			2.42		0.00	
19		-55.10		-26.89				2.08			3.70		0.00	
23		46.78		17.60				4.17			4.17		0.00	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
14	37.00	62.00	36.39	60.98
15	37.50	62.00	36.88	60.98
16	38.50	62.00	38.03	61.24
17	37.00	62.00	36.21	60.67
18	37.50	62.00	36.70	60.67
19	-36.50	-61.50	35.72	60.18
23	40.00	62.00	39.88	61.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
14	1180.	.3170	.3000	1221.	1.070	1020.
15	1150.	-.3810	.2900	1185.	1.070	1020.
16	1200.	.2920	.2950	1225.	1.070	1033.
17	1100.	.1920	.2820	1167.	1.060	999.
18	1240.	.2700	.3160	1212.	1.070	999.
19	1125.	.2720	.2900	1117.	1.060	963.
23	1250.	.3130	.3000	1140.	1.080	1084.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	1203.	.3070	.2900	1181.	1023.
15	1172.	.3690	.2810	1146.	1023.
16	1225.	.2850	.2880	1195.	1042.
17	1125.	-.1840	.2700	1117.	1000.
18	1268.	.2580	.3030	1160.	1000.
19	1151.	.2610	.2780	-1070.	963.
23	1254.	.3110	.2980	1133.	1085.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	.648	80.0	16.8	1.9	-3.7
15	-.780	107.6	16.2	-1.2	4.4
16	.597	75.5	19.5	4.8	5.0
17	.385	68.5	-28.5	2.3	-2.0
18	.549	85.2	16.1	3.7	4.7
19	.549	106.8	-25.3	3.0	5.7
23	.642	80.0	12.8	9.6	7.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NO _X EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
14	3091.	24.29	8.75	.92	-1.82	0.00
15	3092.	27.15	7.01	-.50	-1.83	0.00
16	3096.	24.91	11.06	2.59	2.70	0.00
17	-3035.	34.37	-24.54	1.91	-1.91	0.00
18	3081.	30.44	9.91	2.18	2.75	0.00
19	-3054.	-37.80	-15.40	1.77	3.30	0.00
23	3101.	24.61	6.76	4.83	4.83	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	5.0030	5.9180	19.6080	4.5320	5.4840	22.5060
15	5.0030	-6.0560	19.6080	4.5320	5.6030	22.5060
16	4.9740	5.8580	18.0340	4.5970	5.5100	22.6660
17	5.0620	5.7010	18.2740	4.4540	-5.1880	22.3140
18	5.0620	5.8540	18.2740	4.4540	5.3160	22.3140
19	4.9220	5.7230	18.0220	4.3330	5.1980	22.0110
23	4.8310	5.7900	20.4470	4.7480	5.7140	23.0300

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
14	26.82	9.44	1.06	-2.09	0.00
15	29.98	7.58	-.58	-2.10	0.00
16	26.95	11.76	3.25	3.40	0.00
17	-39.06	-24.96	2.33	-2.33	0.00
18	34.60	10.91	2.66	3.36	0.00
19	-42.93	-16.96	2.16	4.03	0.00
23	25.03	6.85	5.44	5.44	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
14	97.00	96.00	95.40	94.42
15	98.00	96.00	96.39	94.42
16	96.00	95.00	94.82	93.83
17	97.50	96.00	95.41	93.94
18	97.00	97.00	94.92	94.92
19	98.00	97.00	95.90	94.92
23	94.50	93.00	94.23	92.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
14	-9700.	.9780	-.8460	1527.	2.040	14343.
15	9050.	-1.1100	.7850	1513.	2.040	14343.
16	8950.	.9930	.7750	1477.	2.020	14044.
17	9000.	.9070	.7900	-1554.	2.040	14365.
18	8600.	1.0330	.7570	1500.	2.040	14365.
19	9175.	.9610	.8040	1464.	2.040	14365.
23	-9375.	.9870	-.8140	1500.	2.040	14369.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
14	-9885.	.9470	-.8190	1477.	14377.
15	9223.	-1.0740	.7600	1464.	14377.
16	9139.	.9690	.7560	1441.	14163.
17	9205.	.8680	.7570	1488.	14377.
18	8796.	.9890	.7250	1436.	14377.
19	9384.	.9200	.7690	-1402.	14377.
23	9407.	.9820	-.8090	1491.	14377.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	2.049	13.7	8.6	86.7	80.8
15	-2.329	12.8	7.5	96.2	87.3
16	2.087	14.4	7.5	79.9	74.1
17	1.894	13.2	22.8	77.5	72.5
18	2.153	-22.8	-47.6	75.4	74.4
19	2.014	11.3	9.2	90.4	85.8
23	2.055	13.9	-59.1	88.1	86.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
14	3148.	1.34	1.44	13.92	13.92	32.24
15	3149.	1.10	1.10	13.60	13.60	30.46
16	3159.	1.39	1.23	12.65	12.65	31.79
17	3142.	1.39	4.14	13.44	13.44	27.15
18	-3132.	2.11	-7.58	11.46	11.46	30.26
19	3150.	1.12	1.57	14.78	14.78	30.26
23	-3129.	1.35	-9.84	14.02	14.02	35.57

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
14	147.1140	132.7660	94.2000	120.0570	114.3580	105.5550
15	-179.2910	-148.2650	94.2000	-143.8880	126.5940	105.5550
16	137.0830	124.8140	83.3600	117.2340	111.1490	102.9620
17	133.3560	125.2550	87.3920	103.6010	103.8710	103.4360
18	-174.6280	-149.4230	90.9590	132.6380	122.3630	107.5500
19	-157.0580	-140.7670	90.9590	120.6610	115.9740	107.5500
23	111.4140	105.5710	87.5490	107.6890	102.9600	-98.2320

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
14	1.64	1.67	15.60	15.60	32.24
15	1.38	1.29	15.24	15.24	30.46
16	1.63	1.39	15.63	15.63	31.79
17	1.79	4.99	15.90	15.90	27.15
18	-2.78	-9.26	13.55	13.55	30.26
19	1.46	1.90	17.48	17.48	30.26
23	1.40	-10.09	15.74	15.74	35.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
14	90.00	93.50	88.52	91.96
15	91.00	93.00	89.50	91.47
16	90.00	92.00	88.89	90.87
17	91.00	94.00	89.05	91.98
18	91.00	94.00	89.05	91.98
19	91.00	94.00	89.05	91.98
23	89.00	91.00	88.74	90.74

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

14	-7950.	.8310	-.7310	1446.	1.850	12271.
15	7450.	-.9610	.6780	1432.	1.850	12271.
16	7300.	.8290	.6620	1437.	1.830	11962.
17	7500.	.7240	.6900	1455.	1.850	12290.
18	7200.	.8480	.6630	1437.	1.850	12290.
19	-7700.	.8010	-.7090	1392.	1.850	12290.
23	-7950.	.8470	-.7200	1437.	1.850	12294.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	-8102.	.8040	-.7070	1399.	12300.
15	7592.	-.9290	.6560	1385.	12300.
16	7454.	.8080	.6450	1402.	12064.
17	7671.	.6930	.6610	1393.	12300.
18	7364.	.8120	.6350	1376.	12300.
19	-7875.	.7670	.6790	-1333.	12300.
23	-7977.	.8420	-.7160	-1428.	12300.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	1.738	10.9	7.6	57.6	55.2
15	-2.011	14.6	7.4	61.4	57.9
16	1.738	13.6	6.4	56.3	52.9
17	1.507	14.2	22.8	52.8	49.9
18	1.759	15.3	-56.9	58.5	56.9
19	1.674	13.0	9.7	63.0	61.5
23	1.760	15.5	-51.3	64.7	63.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
14	3147.	1.26	1.51	10.90	10.90	30.26
15	3148.	1.45	1.26	10.05	10.05	29.80
16	3159.	1.58	1.28	10.70	10.70	30.26
17	3139.	1.88	5.19	11.49	11.49	27.15
18	-3123.	1.73	-11.04	10.85	10.85	28.95
19	3148.	1.55	2.00	12.38	12.38	28.95
23	-3128.	1.75	-9.97	12.03	12.03	35.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	95.7530	97.5040	84.6070	79.8930	85.0880	94.9990
15	-108.2430	-103.2350	82.7670	-89.1930	89.4990	92.9710
16	82.5170	86.1990	72.8010	71.9160	77.6260	90.0880
17	87.9160	93.6580	80.1680	70.3730	79.0450	95.0880
18	-102.5170	-102.4130	80.1680	80.7960	85.6900	95.0880
19	96.5600	98.9280	80.1680	76.5680	83.0540	95.0880
23	76.1110	80.3150	79.7090	73.8170	78.4850	89.4620

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
14	1.51	1.74	12.24	12.24	30.26
15	1.76	1.46	11.29	11.29	29.80
16	1.81	1.42	13.25	13.25	30.26
17	2.35	6.15	13.63	13.63	27.15
18	2.20	-13.20	12.87	12.87	28.95
19	1.96	2.38	14.69	14.69	28.95
23	1.81	-10.21	13.50	13.50	35.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
14	80.50	88.50	79.18	87.04
15	80.50	88.00	79.18	86.55
16	80.00	88.00	79.02	86.92
17	81.50	89.00	79.75	87.09
18	81.00	89.00	79.26	87.09
19	81.00	89.00	79.26	87.09
23	79.00	86.25	78.77	86.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
14	4560.	.5950	.4790	1320.	1.540	8580.
15	4840.	-.6800	.5090	1315.	1.540	8580.
16	4775.	.5680	.4980	1311.	1.530	8403.
17	4950.	.4950	.5190	1302.	1.540	8593.
18	4840.	.6010	.5110	1320.	1.540	8593.
19	5000.	.5570	.5280	1257.	1.540	8593.
23	4800.	.6440	.5020	1293.	1.540	8596.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	4647.	.5750	-.4640	1277.	8600.
15	4932.	.6580	.4920	1272.	8600.
16	4876.	.5550	.4860	1279.	8475.
17	5063.	.4740	.4970	1246.	8600.
18	4950.	.5750	.4900	1264.	8600.
19	5114.	.5340	.5060	-1203.	8600.
23	4816.	.6400	.4990	1285.	8600.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	1.238	16.8	11.2	30.8	30.6
15	-1.418	20.5	7.0	30.7	30.6
16	1.188	18.9	6.5	29.1	28.7
17	1.027	16.4	20.0	27.6	26.6
18	1.235	19.9	-66.5	32.4	32.8
19	1.160	16.4	10.5	33.2	32.8
23	1.334	19.0	-38.8	39.4	38.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
14	3141.	2.72	3.11	8.17	8.17	24.34
15	3144.	2.89	1.69	-7.13	-7.13	23.68
16	3155.	3.20	1.88	8.09	8.09	23.68
17	3133.	3.19	6.66	8.82	8.82	20.39
18	-3101.	3.19	-18.26	8.50	8.62	24.34
19	3143.	2.82	3.10	9.41	9.41	23.68
23	3126.	2.84	-9.95	9.66	9.66	27.81

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
14	42.2170	51.5870	64.3180	36.3930	45.9510	72.5490
15	43.6750	51.8440	62.5960	37.4450	46.0440	70.6380
16	39.4530	49.1100	58.0680	35.2090	44.8790	72.0560
17	39.9920	50.3850	60.9520	33.2720	43.5920	72.7300
18	44.4010	53.6540	60.9520	36.5760	46.1530	72.7300
19	42.4960	52.2640	60.9520	35.1540	45.0660	72.7300
23	35.5720	44.1100	61.0090	34.6720	43.2410	68.5250

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
14	3.15	3.49	9.21	9.21	24.34
15	3.37	1.90	-8.05	-8.05	23.68
16	3.58	2.06	10.04	10.04	23.68
17	3.83	7.69	10.52	10.52	20.39
18	3.87	-21.23	10.14	10.28	24.34
19	3.41	3.60	11.23	11.23	23.68
23	2.91	10.15	10.85	10.85	27.81

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
14	62.00	79.50	60.98	78.19
15	61.25	78.75	60.24	77.45
16	63.00	79.00	62.23	78.03
17	62.00	79.50	60.67	77.79
18	62.00	79.00	60.67	77.30
19	62.00	80.00	60.67	78.28
23	60.75	77.00	60.58	76.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
14	2450.	.3380	.3600	1176.	1.230	4016.
15	2330.	.3420	.3480	1140.	1.230	4016.
16	2475.	.2950	.3510	1176.	1.230	3991.
17	2355.	.2330	.3510	1140.	1.230	4022.
18	2300.	.2750	.3430	1185.	1.230	4022.
19	2368.	.2700	.3530	1104.	1.230	4022.
23	2475.	-.4090	.3630	1144.	1.230	4023.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF

14	2497.	.3270	.3480	1137.	4025.
15	2375.	.3310	.3360	1103.	4025.
16	2527.	.2880	.3430	1147.	4025.
17	2409.	.2230	.3360	1091.	4025.
18	2352.	.2630	.3280	1134.	4025.
19	2421.	.2580	.3380	-1057.	4025.
23	2483.	-.4060	.3600	1138.	4025.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	.698	35.3	10.5	7.6	9.7
15	.705	46.3	9.6	5.6	8.5
16	.611	38.3	9.1	8.6	10.2
17	.476	35.6	18.1	7.3	7.8
18	.558	38.0	-35.7	8.6	10.9
19	.554	42.0	14.5	9.0	10.2
23	-.845	42.9	16.2	-17.4	16.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
14	3124.	10.05	5.14	3.56	4.53	7.89
15	3120.	13.05	4.65	-2.60	3.93	6.62
16	3131.	12.48	5.10	4.59	5.47	8.61
17	3097.	14.71	12.87	4.94	5.27	7.89
18	-3076.	13.34	-21.49	4.97	6.26	7.28
19	3108.	15.01	8.90	5.26	5.99	8.55
23	3124.	10.11	6.56	6.72	6.72	12.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	13.6740	20.1770	40.1550	12.1800	18.3760	45.6250
15	12.7840	18.9850	38.7040	11.4000	17.3050	44.0000
16	12.7590	19.1790	36.2790	11.6700	17.8210	45.2620
17	12.5920	19.0910	37.1260	10.9200	16.9970	44.7450
18	12.3860	18.6570	36.2190	10.7240	16.5970	43.6740
19	13.5360	20.2220	38.0430	11.6990	17.9640	45.8280
23	11.5210	17.1700	37.8190	11.2920	16.8950	42.5330

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
14	11.28	5.64	4.05	5.15	7.89
15	14.64	5.10	-2.96	4.47	6.62
16	13.64	5.48	5.73	6.82	8.61
17	16.96	14.45	5.96	6.36	7.89
18	15.41	-24.15	6.00	7.54	7.28
19	17.37	10.02	6.34	7.22	8.55
23	10.32	6.67	7.55	7.55	12.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
14	36.75	62.00	36.15	60.98
15	37.75	62.00	37.13	60.98
16	38.00	62.00	37.53	61.24
17	37.50	62.00	36.70	60.67
18	37.00	62.00	36.21	60.67
19	-36.00	62.00	-35.23	60.67
23	-40.00	62.00	39.88	61.82

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LRF
14	1050.	.2860	.2680	1176.	1.060	1020.
15	1100.	.3330	.2770	1158.	1.070	1020.
16	1150.	.2730	.2850	1176.	1.080	1033.
17	1075.	.1920	.2740	1158.	1.070	999.
18	1150.	.2560	.2950	1185.	1.070	999.
19	1068.	.2430	.2770	1104.	1.060	999.
23	1250.	.2970	.3000	1113.	1.080	1084.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
14	1070.	.2770	.2590	1137.	1023.
15	1121.	.3220	.2680	1120.	1023.
16	1174.	.2660	.2780	1147.	1042.
17	1099.	.1840	.2620	1109.	1000.
18	1176.	.2450	.2820	1134.	1000.
19	1092.	.2330	.2660	-1057.	1000.
23	1254.	.2950	.2980	1106.	1085.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
14	.584	73.8	15.3	1.9	4.1
15	.679	102.7	17.1	1.2	4.2
16	.557	88.4	17.9	4.0	5.9
17	.386	74.5	20.9	1.8	-3.0
18	.516	91.0	-29.3	3.1	5.7
19	.489	108.2	24.0	3.2	4.8
23	.605	95.2	19.2	9.0	7.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
14	3090.	24.87	8.84	1.07	2.29	0.00
15	3084.	29.69	8.48	.57	-2.01	0.00
16	3086.	31.17	10.82	2.34	3.43	0.00
17	3047.	37.48	18.07	1.50	2.46	0.00
18	3050.	34.23	-18.93	1.89	3.50	0.00
19	-3044.	-42.86	16.34	2.09	3.11	0.00
23	3080.	30.85	10.70	4.80	4.80	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	5.0030	5.8530	19.6080	4.5320	5.4280	22.5060
15	5.0030	5.9520	19.6080	4.5320	5.5130	22.5060
16	4.9740	5.8200	18.0340	4.5970	5.4760	22.6660
17	5.0620	5.7000	18.2740	4.4540	5.1870	22.3140
18	5.0620	5.8270	18.2740	4.4540	5.2930	22.3140
19	5.0620	5.8010	18.2740	4.4540	5.2720	22.3140
23	4.8310	5.7580	20.4470	4.7480	5.6830	23.0300

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODF 7

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
14	27.45	9.53	1.23	2.63	0.00
15	32.79	9.16	.66	-2.31	0.00
16	33.73	11.50	2.95	4.31	0.00
17	-42.60	-19.85	1.83	3.00	0.00
18	38.91	-20.84	2.31	4.27	0.00
19	-48.72	-17.98	2.56	3.79	0.00
23	31.38	10.85	5.41	5.41	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
14	35.50	-60.50	34.92	59.50
15	36.25	60.00	35.65	59.01
16	35.00	58.00	34.57	57.29
17	35.00	59.50	34.25	58.22
18	33.00	58.00	32.29	56.76
19	34.50	58.50	33.76	57.24
23	36.00	-56.00	35.90	-55.84

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODF B

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T77 DEG R	EPR	THRUST LAF

14	1025.	.2930	.2660	1176.	1.050	938.
15	1050.	.3530	.2700	1158.	1.060	928.
16	1000.	.2820	.2580	1176.	1.050	888.
17	1000.	.2100	.2650	1158.	1.070	914.
18	1050.	.2640	-.3060	1185.	1.060	884.
19	975.	.2440	.2640	1104.	1.060	894.
23	1000.	.2970	.2530	1104.	1.050	866.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
14	1045.	.2830	.2570	1137.	940.
15	1070.	.3410	.2610	1120.	930.
16	1021.	.2750	.2510	1147.	896.
17	1023.	.2010	.2540	1109.	914.
18	1074.	.2530	.2930	1134.	885.
19	997.	.2330	.2530	-1057.	895.
23	1003.	.2950	.2510	1097.	867.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
14	.596	80.3	19.2	1.7	4.0
15	.718	117.6	20.7	.8	4.9
16	.571	110.7	22.1	3.5	5.7
17	.421	83.7	25.0	1.4	-2.8
18	.529	115.2	31.4	2.4	4.8
19	.487	125.6	28.3	2.5	4.4
23	.504	141.0	34.4	2.0	4.7

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
14	3082.	26.41	10.84	.92	2.19	0.00
15	3077.	32.07	9.70	.35	2.19	0.00
16	3070.	37.88	13.01	1.97	3.20	0.00
17	3041.	38.50	19.78	1.07	2.14	0.00
18	3036.	42.05	19.66	1.42	2.89	0.00
19	3025.	49.70	19.21	1.60	2.88	0.00
23	3010.	45.40	19.18	4.25	4.25	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	-4.5980	-5.4620	18.8050	4.1700	5.0700	21.5960
15	-4.4680	-5.4440	18.5390	4.0540	5.0470	21.2950
16	3.9550	4.8060	16.0920	3.6640	4.5290	20.2470
17	4.3890	5.0860	17.0250	3.8720	4.6350	20.8140
18	4.0160	4.8040	16.2880	3.5500	4.3770	19.9290
19	4.1380	4.8940	16.5320	3.6550	4.4600	20.2220
23	3.4120	4.2840	17.2030	3.3570	4.2300	-19.3830

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBFR CORRECTED
14	29.12	11.68	1.06	2.51	0.00
15	35.35	10.47	.40	2.51	0.00
16	40.88	13.80	2.48	4.02	0.00
17	43.63	-21.70	1.31	2.62	0.00
18	47.58	-21.58	1.73	3.53	0.00
19	-56.26	-21.08	1.95	3.52	0.00
23	46.55	19.42	4.79	4.79	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES



JT8D-9 * 1800 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DFG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
-----	-----	-----	-----	-----	-----
2	16979.	1884.	474.7	30.36	.003100
7	15588.	1753.	522.2	30.14	.006970
9	17277.	1961.	491.7	29.99	.003430
10	16983.	1853.	500.7	29.99	.004530
11	9096.	1746.	517.7	30.02	.006830
12	15611.	1746.	517.7	30.02	.006830
17	3494.	2024.	507.2	29.93	.005390
18	3494.	2024.	507.2	29.93	.005390
19	3494.	2024.	507.2	29.93	.005390
20	3629.	1960.	475.7	30.21	.003110
21	3629.	1960.	475.7	30.21	.003110
22	3629.	1960.	475.7	30.21	.003110
23	10224.	1944.	476.7	30.35	.003090



JTAD-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORP N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	34.50	56.00	36.06	58.54
7	33.00	58.00	32.89	57.81
9	34.00	56.50	34.92	58.03
10	33.00	55.00	33.59	55.98
11	33.00	56.00	33.03	56.05
12	35.00	59.00	35.03	59.06
17	36.00	60.00	36.41	60.68
18	33.25	57.25	33.62	57.90
19	33.75	58.00	34.13	58.65
20	36.00	58.00	37.59	60.56
21	-37.00	59.00	-38.64	61.61
22	35.00	59.00	36.55	61.61
23	32.00	55.00	33.38	57.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-1210.	-.1340	.2870	1068.	1.050	908.
7	1075.	.3260	.2960	1158.	1.040	900.
9	1160.	.2680	.2880	1104.	1.060	908.
10	1065.	.2630	.2790	1149.	1.070	868.
11	-1200.	.3670	-.3280	1176.	1.060	868.
12	-1200.	.3810	.3050	1140.	1.050	928.
17	1090.	.2380	.2700	1068.	1.050	-1000.
18	1050.	.2810	.2770	1122.	1.050	908.
19	1010.	.2640	.2610	1081.	1.050	923.
20	1150.	-.1610	.2690	1059.	-1.080	982.
21	1150.	.2620	.2650	1068.	-1.080	-1059.
22	1050.	.2670	.2490	1068.	1.070	-1059.
23	1050.	-.1690	.2680	1050.	1.060	885.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT4D-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	1174.	-.1460	-.3140	1167.	921.
7	1086.	.3240	.2940	1150.	906.
9	1132.	.2820	.3040	1164.	911.
10	1049.	.2720	.2890	1190.	870.
11	-1203.	.3680	-.3290	1178.	871.
12	-1203.	.3820	.3050	1142.	931.
17	1078.	.2430	.2760	-1092.	-1000.
18	1038.	.2880	.2840	1147.	908.
19	999.	.2700	.2670	1106.	923.
20	1112.	-.1750	.2930	1154.	-992.
21	1112.	.2860	.2890	1164.	-1069.
22	1015.	.2910	.2710	1164.	-1069.
23	1021.	-.1840	.2920	1142.	897.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	-.267	72.1	13.0	4.7	3.2
7	.664	114.4	16.1	9.4	7.5
9	.538	123.8	25.5	7.4	4.2
10	.533	102.1	15.9	9.8	5.3
11	.744	154.0	25.1	-10.3	-8.7
12	.780	118.9	12.6	-13.4	-8.7
17	.483	79.2	13.4	9.9	7.1
18	.565	134.8	24.3	8.3	5.9
19	.532	112.0	21.8	7.3	5.5
20	-.316	108.7	23.0	8.2	5.6
21	.514	-177.6	-47.1	9.0	7.5
22	.538	106.4	25.4	9.5	4.9
23	-.325	146.0	-39.8	6.3	3.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 FI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3030.	-52.11	16.14	5.53	5.53	0.00
7	3078.	33.75	8.16	4.54	4.54	0.00
9	3043.	44.56	15.76	4.36	4.36	0.00
10	3072.	37.47	10.01	-5.88	-5.88	0.00
11	3061.	40.36	11.32	4.44	4.44	0.00
12	3094.	30.02	-5.45	5.56	5.56	0.00
17	3078.	32.08	9.36	-6.58	-6.58	0.00
18	3042.	46.18	14.28	4.67	4.67	0.00
19	3052.	40.87	13.66	4.39	4.39	0.00
20	-2986.	-65.30	-23.71	-8.13	-8.13	0.00
21	-2969.	-65.28	-29.72	-5.97	-5.97	0.00
22	3050.	38.40	15.74	5.63	5.63	0.00
23	-2915.	-83.44	-39.02	-5.94	-5.94	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.1300	3.9220	18.3060	3.9440	4.6270	21.0060
7	3.8720	4.8200	18.1980	3.7790	4.7250	20.5610
9	3.3100	4.2220	18.4230	3.8290	4.7130	20.6970
10	3.0810	3.9410	17.2830	3.3860	4.2310	19.4670
11	3.3920	4.3750	17.1330	3.4010	4.3820	19.5110
12	4.0520	5.1200	18.7220	4.0640	5.1290	21.3220
17	4.1790	5.0440	19.6910	4.4550	5.2910	22.3180
18	3.5690	4.4730	18.2010	3.7990	4.6900	20.6150
19	3.7290	4.6170	18.6040	3.9700	4.8420	21.0760
20	3.5060	4.3460	19.3410	4.4280	5.1470	22.2490
21	3.7080	4.6990	19.8850	-4.6930	-5.6080	-22.8970
22	3.7080	4.7060	19.8850	-4.6930	-5.6180	-22.8970
23	-2.9630	-3.7750	17.7800	3.6830	4.4190	20.2990

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	41.36	13.68	6.35	6.35	0.00
7	34.58	8.33	5.13	5.13	0.00
9	38.53	14.11	4.90	4.90	0.00
10	34.09	9.32	6.63	-6.63	0.00
11	40.24	11.30	5.05	5.05	0.00
12	29.93	-5.44	6.33	6.33	0.00
17	30.10	8.92	-7.46	-7.46	0.00
18	43.39	13.62	5.29	5.29	0.00
19	38.38	13.03	4.98	4.98	0.00
20	51.70	-20.02	-9.35	-9.35	0.00
21	51.58	-24.90	-6.88	-6.88	0.00
22	30.34	13.19	6.48	-6.48	0.00
23	-67.12	-33.34	-6.79	-6.79	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	-41.00	62.00	-42.86	64.81
7	38.00	62.00	37.87	61.79
9	39.50	62.00	40.57	63.68
10	-41.00	62.00	-41.73	63.10
11	40.00	62.00	40.04	62.06
12	38.00	62.00	38.04	62.06
17	38.00	62.00	38.43	62.70
18	38.00	62.00	38.43	62.70
19	37.00	62.00	37.42	62.70
20	40.00	62.00	-41.77	64.74
21	39.00	62.00	40.72	64.74
22	38.00	62.00	39.68	64.74
23	-41.00	62.00	-42.77	64.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	-1570.	-.1450	.3280	1071.	1.090	1287.
7	1300.	.3240	.3180	1167.	1.060	1075.
9	-1450.	.2640	-.3320	1140.	1.080	1219.
10	-1460.	.2600	.3270	1176.	1.090	1177.
11	-1500.	.3630	-.3570	1194.	1.090	1099.
12	1350.	-.3800	-.3300	1158.	1.060	1099.
17	1170.	.2370	.2820	1071.	1.060	1150.
18	1250.	.2780	.3010	1140.	1.060	1150.
19	1170.	.2620	.2860	1086.	1.060	1150.
20	1300.	-.1590	.2910	1086.	1.090	1288.
21	1275.	.2520	.2840	1068.	1.060	1288.
22	1200.	.2720	.2730	1086.	1.080	1288.
23	1380.	.2050	.2890	1050.	1.090	1277.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTR0-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	-1524.	-.1580	-.3580	1171.	1306.
7	1314.	.3210	.3160	1159.	1083.
9	-1415.	.2790	-.3500	1202.	1222.
10	-1438.	.2690	.3380	-1218.	1180.
11	-1504.	.3640	-.3580	1196.	1102.
12	1353.	-.3810	.3300	1160.	1102.
17	1157.	.2420	.2890	-1096.	1150.
18	1236.	.2840	.3080	1166.	1150.
19	1157.	.2680	.2920	-1110.	1150.
20	1257.	-.1730	.3060	1184.	1301.
21	1233.	.2750	.3100	1164.	1301.
22	1160.	.2970	.2980	1184.	1301.
23	1342.	.2230	.3150	1142.	1296.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	-.294	55.4	8.8	5.4	4.1
7	.664	78.5	8.7	-10.4	8.3
9	.538	85.7	15.9	8.1	5.3
10	.533	63.9	9.2	-10.6	6.6
11	.744	102.0	13.1	-12.3	-10.5
12	-.780	100.0	9.4	-13.1	-9.7
17	.483	68.3	11.0	10.2	7.4
18	.565	90.4	12.5	9.3	6.9
19	.532	89.1	16.1	7.4	6.0
20	-.314	86.5	-26.0	9.3	6.5
21	.503	-138.9	-27.9	9.7	8.6
22	.554	79.0	15.7	9.5	5.4
23	.410	95.3	19.4	8.6	6.2

NOTE- MINUS SIGNS DENOTE OUTFLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3070.	-36.91	10.06	5.87	5.87	0.00
7	3105.	23.35	4.44	5.06	5.06	0.00
9	3080.	31.23	9.94	4.87	4.87	0.00
10	3105.	23.72	5.88	-6.45	-6.45	0.00
11	3097.	27.03	5.98	5.34	5.34	0.00
12	3105.	25.34	4.10	5.44	5.44	0.00
17	3089.	27.80	7.69	-6.82	-6.82	0.00
18	3084.	31.38	7.46	5.28	5.28	0.00
19	3074.	32.76	10.19	4.45	4.45	0.00
20	-2997.	-52.48	-27.08	-9.23	-9.23	0.00
21	-3020.	-53.12	-18.31	-6.09	-6.09	0.00
22	3083.	27.96	9.57	5.51	5.51	0.00
23	-3040.	-44.93	-15.69	-6.65	-6.65	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODF 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	4.5140	-5.3640	21.9740	-5.7720	6.3950	-25.3790
7	4.8600	5.8440	20.3740	4.7400	5.7260	23.0120
9	4.5990	5.5810	21.7050	5.3620	6.2650	24.4690
10	4.6660	5.6050	21.2550	5.1620	6.0450	24.0100
11	4.7970	5.8750	20.3540	4.8120	5.8860	23.1820
12	4.7970	5.9100	20.3540	4.8120	5.9220	23.1820
17	4.7070	5.5760	20.8880	5.0240	5.8540	23.6880
18	4.7070	5.6520	20.8880	5.0240	5.9380	23.6880
19	4.7070	5.6230	20.8880	5.0240	5.9060	23.6880
20	4.5050	5.3710	21.9180	-5.7470	6.4040	-25.3230
21	4.5050	5.5310	21.9180	-5.7470	-6.6320	-25.3230
22	4.5050	5.5670	21.9180	-5.7470	-6.6840	-25.3230
23	4.5280	5.4700	21.9770	-5.7220	6.4880	-25.2680

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		28.87			8.44			6.78			-6.78		0.00	
7		23.94			4.53			5.72			5.72		0.00	
9		26.78			8.86			5.49			5.49		0.00	
10		21.44			5.45			-7.29			-7.29		0.00	
11		26.95			5.97			6.08			6.08		0.00	
12		25.26			4.09			6.20			6.20		0.00	
17		26.05			7.33			-7.74			-7.74		0.00	
18		29.40			7.10			5.99			5.99		0.00	
19		30.69			9.70			5.04			5.04		0.00	
20		-41.14			-22.71			-10.67			-10.67		0.00	
21		-41.65			-15.27			-7.04			-7.04		0.00	
22		21.92			7.97			6.37			6.37		0.00	
23		-35.56			13.23			-7.64			-7.64		0.00	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-90.75	-89.00	94.86	93.03
7	94.00	93.00	93.68	-92.69
9	91.50	90.50	93.98	92.95
10	93.00	90.00	94.66	-91.60
11	94.00	92.00	94.09	-92.09
12	94.00	94.00	94.09	94.09
17	94.00	94.00	95.06	95.06
18	93.50	94.00	94.55	95.06
19	94.50	94.00	95.57	95.06
20	-91.00	90.00	95.02	93.98
21	-91.00	91.00	95.02	95.02
22	-91.00	91.00	95.02	95.02
23	-89.00	-88.00	-92.84	-91.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TY7 DEG R	EPR	THRUST LRF

2	9200.	.9160	.7480	1405.	2.020	-13960.
7	8800.	.9820	.7610	1464.	2.040	14274.
9	8500.	.9170	.7160	1392.	2.040	14343.
10	8588.	.9160	.7270	1428.	2.040	14343.
11	-9400.	.8890	-.8110	1446.	2.040	14329.
12	8700.	.9110	.7510	1437.	2.040	14329.
17	8675.	.8360	.7390	1392.	2.040	14374.
18	8300.	.9080	.7090	1410.	2.040	14374.
19	8800.	.8820	.7480	1383.	2.040	14374.
20	8600.	.8560	.7030	1338.	2.020	-14027.
21	8350.	.8220	-.6830	1356.	2.020	-14027.
22	-8100.	.8260	-.6620	1356.	2.020	-14027.
23	8700.	.9610	.7180	1392.	2.020	-13963.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	8929.	1.0010	-.8180	-1535.	14163.
7	8893.	.9760	.7560	1454.	14377.
9	8295.	.9670	.7550	1468.	14377.
10	8457.	.9490	.7530	1479.	14377.
11	-9422.	.8910	-.8130	1448.	14377.
12	8721.	.9120	.7520	1439.	14377.
17	8580.	.8550	.7560	1423.	14377.
18	8209.	.9290	.7250	1442.	14377.
19	8703.	.9020	.7650	1414.	14377.
20	8316.	.9330	.7670	1459.	14163.
21	8074.	.8960	.7440	1478.	14163.
22	-7832.	.9000	.7220	1478.	14163.
23	8460.	-1.0450	.7810	-1514.	14163.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.920	-19.8	1.6	70.7	70.2
7	2.059	16.5	1.0	75.0	70.7
9	1.921	17.4	2.1	62.6	61.3
10	1.921	-21.2	2.5	68.6	68.6
11	1.862	17.6	1.7	74.8	73.7
12	1.909	18.1	.1	101.0	97.5
17	1.747	13.9	10.1	73.4	71.6
18	1.872	-21.2	-95.4	65.2	67.2
19	1.848	13.7	.5	72.1	69.1
20	1.749	-19.0	-136.6	68.8	65.1
21	1.713	18.5	21.1	75.4	75.5
22	1.728	17.8	2.1	58.8	57.6
23	2.005	18.4	29.7	76.4	74.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3152.	2.07	.28	12.13	12.13	-47.37
7	3151.	1.61	.17	12.00	12.00	36.00
9	3152.	1.82	.37	10.73	10.73	-46.67
10	3153.	-2.22	.46	11.77	11.77	38.00
11	3152.	1.90	.32	13.24	13.24	36.00
12	3153.	1.90	.01	-17.44	17.44	34.21
17	3146.	1.60	1.98	13.81	13.81	22.52
18	-3103.	-2.24	-17.30	11.30	11.64	32.24
19	3151.	1.49	.09	12.86	12.86	31.73
20	-3078.	2.13	-26.28	12.66	12.66	36.67
21	3139.	-2.16	4.22	14.45	14.45	32.03
22	3149.	2.06	.41	11.21	11.21	32.47
23	3137.	1.83	5.09	12.50	12.50	38.41

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	69.6490	74.9000	81.6870	113.7970	107.0540	99.5140
7	111.2490	105.6890	87.1930	106.3970	102.1410	-98.0440
9	79.6470	82.9890	85.0720	107.7830	103.6040	99.1650
10	76.1820	79.4920	81.0350	92.7260	-91.8220	-93.5200
11	89.1610	90.8740	83.7700	-89.9580	-91.4070	-95.5290
12	110.2400	107.9530	91.2760	111.2790	108.6180	104.0990
17	98.5410	101.3370	93.7940	111.7380	111.2790	108.0400
18	108.0610	106.8480	93.7940	123.2160	117.6840	108.0400
19	104.5120	104.8260	93.7940	118.9280	115.3310	108.0400
20	70.7160	77.3350	84.9500	113.1930	109.3730	103.6110
21	73.8050	81.0920	88.3070	117.6710	114.5550	107.9160
22	74.1510	81.3110	88.3070	118.3590	114.9370	107.9160
23	67.0140	71.2900	-78.1300	107.5800	100.3450	-94.3090

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBR
2		1.27			.20			14.77			14.77		-47.37	
7		1.68			.18			13.50			13.50		36.00	
9		1.34			.30			12.51			12.51		37.38	
10		1.82			.39			13.59			13.59		38.00	
11		-1.88			.32			15.10			15.10		36.00	
12		-1.88			.01			-19.89			19.89		34.21	
17		1.41			1.81			15.91			15.91		22.52	
18		-1.96			-15.70			13.01			13.41		32.24	
19		1.31			.08			14.81			14.81		31.79	
20		1.33			-18.58			15.44			15.44		36.67	
21		1.35			2.99			17.66			17.66		32.03	
22		1.29			.29			13.70			13.70		32.47	
23		1.14			3.61			15.09			15.09		38.41	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	85.00	-86.75	88.85	90.68
7	88.00	91.00	87.70	90.69
9	85.50	88.00	87.82	90.78
10	87.00	88.00	88.55	-89.57
11	88.00	90.00	88.08	90.09
12	88.00	92.00	88.08	92.09
17	88.00	91.00	88.99	92.03
18	88.25	91.00	89.24	92.03
19	87.50	91.00	88.49	92.03
20	-84.00	-87.00	87.71	90.85
21	85.00	88.00	88.76	91.89
22	85.00	89.00	88.76	-92.94
23	-84.00	-87.00	-87.62	90.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	7650.	.8080	.6510	1356.	1.830	-11891.
7	7200.	.7860	.6550	1410.	1.850	12212.
9	7165.	.7780	.6350	1324.	1.850	12271.
10	7200.	.8310	.6390	1374.	1.850	12271.
11	-8000.	.7720	-.7250	1392.	1.840	12141.
12	7100.	.8210	.6430	1374.	1.840	12141.
17	7200.	.7030	.6420	1306.	1.850	12298.
18	6850.	.7460	.6090	1356.	1.860	12408.
19	7200.	.7110	.6450	1302.	1.850	12298.
20	7050.	.7320	.6110	1284.	1.830	-11948.
21	6800.	.6790	-.5830	1284.	1.830	-11948.
22	6800.	.6840	-.5830	1284.	1.830	-11948.
23	7550.	.8870	.6520	1320.	1.830	-11893.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	7425.	.8830	-.7120	-1481.	12064.
7	7276.	.7800	.6510	1400.	12300.
9	6992.	.8200	.6700	1397.	12300.
10	7091.	.8610	.6620	-1423.	12300.
11	-8019.	.7740	-.7260	1394.	12182.
12	7117.	.8220	.6440	1376.	12182.
17	7121.	.7190	.6570	-1336.	12300.
18	6775.	.7620	.6230	1386.	12410.
19	7121.	.7270	.6600	-1331.	12300.
20	6817.	.7990	.6660	1400.	12064.
21	6575.	.7400	.6360	1400.	12064.
22	6575.	.7460	.6360	1400.	12064.
23	7342.	-.9660	-.7100	-1436.	12064.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.690	-23.1	1.2	50.5	50.7
7	1.643	17.0	.8	54.6	50.5
9	1.627	-21.4	1.7	46.4	46.0
10	1.740	-23.7	2.3	53.0	53.0
11	1.615	19.2	1.8	54.9	54.6
12	1.718	18.2	.3	62.0	60.2
17	1.467	15.5	7.4	54.5	53.1
18	1.530	18.0	-92.1	52.4	50.7
19	1.486	13.7	.1	48.6	46.6
20	1.488	-22.9	-139.7	49.2	46.1
21	1.414	-22.9	11.5	54.4	55.0
22	1.429	20.4	1.6	-42.9	41.6
23	1.850	-21.3	24.5	59.1	58.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3151.	2.74	.24	9.84	9.88	-40.79
7	3150.	2.08	.18	10.94	10.94	34.44
9	3151.	2.63	.36	-9.40	9.40	36.42
10	3153.	2.73	.46	10.03	10.03	-38.41
11	3151.	2.39	.38	11.20	11.20	35.81
12	3152.	2.12	.06	11.88	11.88	33.55
17	3146.	2.12	1.74	12.21	12.21	23.18
18	-3094.	2.31	-20.35	11.08	11.08	30.72
19	3151.	1.85	.02	10.77	10.77	30.92
20	-3063.	-3.00	-31.44	10.59	10.59	33.11
21	3141.	-3.24	2.80	12.64	12.78	29.87
22	3148.	-2.86	.39	9.87	9.87	29.61
23	3138.	2.30	4.54	10.48	10.48	-37.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	49.4540	57.7950	73.5980	77.0630	80.3060	89.1920
7	71.0300	77.2890	79.3490	68.2770	74.9140	89.2550
9	52.8700	61.0940	75.5620	69.1440	74.7340	87.7750
10	55.1260	61.9290	72.8150	66.0570	70.8590	-83.8690
11	62.8680	70.0110	75.7500	63.3580	70.3740	-86.3740
12	81.9220	86.5500	83.7700	82.6140	87.0340	95.5290
17	65.0320	74.0930	82.8370	72.7480	80.6890	95.2670
18	68.1890	76.1830	82.8370	76.4870	83.0920	95.2670
19	65.6000	74.4730	82.8370	73.4200	81.1260	95.2670
20	46.6810	56.1740	74.2620	70.9260	76.9530	89.9850
21	48.7830	59.2780	77.9810	73.6120	80.9810	94.7080
22	53.6110	64.2180	81.4210	81.4760	88.1670	-99.0960
23	55.3380	62.0150	74.3370	86.3150	85.8570	89.5280

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		1.76			.17			11.92			11.97		-40.79	
7		2.16			.18			12.30			12.30		34.44	
9		2.01			.30			-10.92			10.92		32.97	
10		2.28			.40			11.56			11.56		-38.41	
11		2.37			.38			12.77			12.77		35.81	
12		2.10			.06			13.55			13.55		33.55	
17		1.89			1.60			14.05			14.05		23.18	
18		2.06			-18.66			12.74			12.74		30.72	
19		1.65			.02			12.39			12.39		30.92	
20		1.97			-22.95			12.83			12.83		33.11	
21		2.15			2.05			15.35			15.53		29.87	
22		1.88			.28			12.01			12.01		29.61	
23		1.47			3.28			12.62			12.62		-37.75	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	75.00	-81.00	78.40	-84.67
7	80.00	87.00	79.73	86.71
9	76.50	83.50	78.57	85.76
10	77.00	83.25	78.37	-84.73
11	78.00	85.00	78.08	85.08
12	79.00	87.00	79.08	87.08
17	80.00	87.00	80.90	87.98
18	78.75	87.00	79.64	87.98
19	78.50	87.00	79.38	87.98
20	75.00	83.00	78.32	86.67
21	76.00	84.00	79.36	87.71
22	76.00	84.00	79.36	87.71
23	75.00	-82.00	78.23	85.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
2	4600.	.5730	.4560	1203.	1.530	A354.
7	4950.	.6220	.5060	1302.	1.540	A539.
9	4450.	.5080	.4530	1212.	1.540	A580.
10	4675.	.6330	.4810	1261.	1.540	A580.
11	4850.	.6080	.5100	1266.	1.540	A571.
12	4750.	.6220	.4910	1266.	1.540	A571.
17	4775.	-.4310	.4750	1203.	1.540	A599.
18	4700.	.5590	.4780	1257.	1.540	A599.
19	4775.	.5020	.4880	1194.	1.540	A599.
20	4600.	.5330	.4590	1176.	1.530	A394.
21	4650.	.5000	.4560	1176.	1.530	A394.
22	4500.	.4890	.4410	1185.	1.530	A394.
23	4600.	-.7370	.4580	1212.	1.530	A355.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	4465.	.6260	.4980	-1314.	8475.
7	5002.	.6180	.5030	1293.	8600.
9	4343.	.5360	.4770	1278.	8600.
10	4604.	.6550	.4990	1307.	8600.
11	4862.	.6090	.5110	1268.	8600.
12	4761.	.6230	.4920	1268.	8600.
17	4723.	-.4400	.4860	1230.	8600.
18	4648.	.5720	.4890	1285.	8600.
19	4723.	.5130	.4990	-1221.	8600.
20	4448.	.5810	.5000	1282.	8475.
21	4496.	.5450	.4970	1282.	8475.
22	4351.	.5330	.4810	1292.	8475.
23	4473.	-.8020	.4980	-1318.	8475.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.194	-38.9	1.6	24.4	26.3
7	1.298	19.7	.9	35.8	32.9
9	1.057	-36.2	2.5	25.7	26.3
10	1.320	-34.8	3.1	32.9	32.2
11	1.268	26.8	1.9	34.1	33.1
12	1.298	21.3	.3	38.3	36.3
17	-.895	18.2	4.5	32.5	30.8
18	1.137	24.0	-93.6	32.3	30.6
19	1.047	17.4	.0	29.2	27.6
20	1.072	-37.5	-122.5	28.1	27.0
21	1.038	-37.9	6.1	32.4	34.3
22	1.016	-33.6	2.3	25.8	24.7
23	-1.532	-34.2	20.4	36.0	36.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3144.	-6.52	.47	-6.72	-7.23	-30.52
7	3148.	3.03	.25	9.08	9.08	26.97
9	3143.	-6.84	.83	8.00	8.17	28.10
10	3148.	5.29	.80	8.21	8.21	-31.79
11	3148.	4.23	.53	8.85	8.85	-33.56
12	3151.	3.28	.08	9.72	9.72	26.00
17	3142.	4.06	1.73	-11.92	-11.92	20.00
18	-3071.	4.13	-27.65	9.12	9.12	24.00
19	3148.	3.33	.01	9.19	9.19	24.50
20	-3039.	-6.76	-37.99	8.33	8.33	27.33
21	3137.	-7.29	2.00	10.24	10.84	24.18
22	3141.	-6.62	.78	8.32	8.32	24.68
23	3134.	4.45	4.57	7.70	7.71	-32.24

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	20.8320	-28.7960	-53.2330	29.6130	37.7580	-63.6360
7	37.9020	46.9520	63.2870	36.6030	45.6450	71.2410
9	24.6730	33.6560	58.5910	30.5940	39.8250	67.6140
10	26.3770	34.3980	55.6740	30.6420	38.6010	-63.8370
11	30.2240	38.6790	57.0690	30.4090	38.8380	65.0560
12	38.0330	47.2090	63.7740	38.2780	47.4150	72.7060
17	32.2570	43.1480	66.4730	35.3370	46.3750	76.2560
18	36.2590	46.3130	66.4730	39.9710	49.9590	76.2560
19	34.3920	44.8600	66.4730	37.8040	48.3120	76.2560
20	24.7990	33.9420	59.2400	35.1810	44.5260	71.0950
21	26.7390	36.5890	62.5150	37.9000	48.0180	75.1930
22	26.4940	36.3860	62.5150	37.4750	47.6940	75.1930
23	26.7700	34.4130	56.0760	38.8730	45.5500	66.7590

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	4.59	.36	-8.03	8.64	-30.52
7	3.14	.26	10.23	10.23	26.97
9	-5.52	.70	9.24	9.43	23.20
10	4.55	.71	9.41	9.41	-31.79
11	4.21	.53	10.09	10.09	-33.56
12	3.26	.08	11.08	11.08	26.00
17	3.71	1.61	-13.68	-13.68	20.00
18	3.74	-25.63	10.46	10.46	24.00
19	3.03	.01	10.55	10.55	24.50
20	4.77	-28.96	10.00	10.00	27.33
21	-5.14	1.52	-12.32	13.04	24.18
22	4.68	.59	10.01	10.01	24.68
23	3.07	3.45	9.17	9.18	-32.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	59.00	-73.00	61.67	76.31
7	62.00	78.00	61.79	77.74
9	58.50	74.50	60.08	76.52
10	58.50	-74.00	59.54	-75.32
11	60.00	76.00	60.06	76.07
12	61.00	78.00	61.06	78.08
17	60.50	77.50	61.18	78.37
18	58.75	76.50	59.41	77.36
19	60.00	77.50	60.68	78.37
20	-57.00	-74.00	59.52	77.27
21	59.00	75.00	61.61	78.32
22	-58.00	75.00	60.56	78.32
23	58.50	-74.00	61.02	77.19

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
5	2535.	-.1700	.3420	1068.	1.230	-3967.
7	-2600.	.3560	.3690	1140.	1.230	3996.
9	2340.	.2630	.3350	1072.	1.230	4016.
10	2270.	.2620	.3320	1131.	1.230	4016.
11	2500.	.3600	.3680	1122.	1.230	4012.
12	2550.	.3950	.3670	1104.	1.230	4012.
17	2350.	.2690	.3350	1068.	1.230	4024.
18	-2125.	.3080	.3140	1104.	1.230	4024.
19	2250.	.2780	.3240	1050.	1.230	4024.
20	2200.	-.1910	.3120	1032.	1.230	3986.
21	2300.	.2890	.3120	1041.	1.230	3986.
22	2250.	.2990	.3120	1050.	1.230	3986.
23	2450.	.3380	.3350	1059.	1.230	-3968.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	2460.	-.1860	-.3730	1167.	4025.
7	-2628.	.3530	.3670	1132.	4025.
9	2284.	.2770	.3540	1131.	4025.
10	2235.	.2710	.3440	-1171.	4025.
11	2506.	.3600	-.3680	1124.	4025.
12	2556.	.3960	-.3680	1106.	4025.
17	2324.	.2750	.3430	1092.	4025.
18	-2102.	.3150	.3210	1129.	4025.
19	2225.	.2840	.3320	-1074.	4025.
20	-2127.	-.2080	.3400	1125.	4025.
21	2224.	.3150	.3400	1135.	4025.
22	2176.	.3260	.3400	1145.	4025.
23	2382.	.3680	.3650	1152.	4025.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TFST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.347	53.7	5.6	8.1	8.5
7	.738	29.8	1.9	-16.4	14.0
9	.538	-66.3	9.7	10.1	10.2
10	.538	49.8	8.5	13.6	11.1
11	.744	53.4	4.9	-16.5	14.9
12	.821	39.9	1.2	-16.9	14.3
17	.554	34.3	5.2	14.7	12.5
18	.628	53.1	-27.5	12.7	11.7
19	.573	45.6	3.6	11.1	10.6
20	-.334	-70.1	-184.8	10.5	10.2
21	.591	-72.6	9.8	13.2	13.7
22	.615	-60.7	7.7	11.4	9.2
23	.695	-61.4	13.3	13.2	13.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3093.	-30.44	5.45	7.52	7.87	10.39
7	3138.	-8.07	.90	7.30	7.30	11.26
9	3101.	-24.32	6.11	6.12	6.12	9.21
10	3115.	18.33	5.39	-8.21	8.21	9.33
11	3127.	14.30	2.25	7.25	7.25	-13.91
12	3139.	9.70	.52	6.77	6.77	10.00
17	3125.	12.32	3.21	-8.67	8.67	9.33
18	-3087.	16.62	14.79	6.55	6.55	8.00
19	3123.	15.82	2.16	6.31	6.31	6.67
20	-2657.	-35.51	-160.75	-8.77	8.77	11.18
21	3100.	-24.22	5.60	7.25	7.49	9.87
22	3111.	-19.54	4.26	6.01	6.01	9.68
23	3108.	17.48	6.53	6.16	6.21	-15.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	-7.2090	-12.0290	35.3230	-9.2740	14.7660	41.5250
7	12.2410	18.3330	39.5820	11.9010	17.9040	44.6230
9	8.5110	13.6450	36.7920	10.0500	15.6130	41.9740
10	-7.9970	-12.8440	34.6540	-8.9090	-14.0180	-39.4310
11	10.1590	15.5240	36.0020	10.2000	15.5670	41.0240
12	12.6190	18.7190	39.8090	12.6740	18.7740	45.3660
17	11.0980	17.1750	40.3350	11.9320	18.2270	46.0300
18	10.3850	16.0710	38.4000	11.1780	17.0560	43.8000
19	11.1570	17.2420	40.3350	12.0100	18.3020	46.0300
20	-7.9770	-13.1330	37.0210	10.2990	16.1700	43.6030
21	9.3020	14.8350	38.8960	12.2110	18.4640	45.9010
22	9.3670	14.8990	38.8960	12.3140	18.5600	45.9010
23	8.7710	13.9380	37.0700	11.4220	17.2050	43.4270

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	-23.67	4.44	8.84	9.26	10.39
7	-8.30	.93	8.23	8.23	11.26
9	-20.59	5.34	6.98	6.98	5.53
10	16.46	4.94	-9.34	9.34	9.33
11	14.24	2.24	8.27	8.27	-13.91
12	9.66	.52	7.72	7.72	10.00
17	11.45	3.02	-9.90	9.90	9.33
18	15.44	13.93	7.47	7.47	8.00
19	14.70	2.03	7.20	7.20	6.67
20	-27.50	-130.56	-10.33	10.33	11.18
21	-18.45	4.50	8.55	8.83	9.87
22	14.86	3.42	7.09	7.09	9.68
23	13.42	5.29	7.21	7.27	-15.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-41.00	62.00	-42.86	-64.81
7	38.00	62.00	37.87	61.79
9	39.50	62.00	40.57	63.68
10	39.50	62.00	40.20	63.10
11	39.00	62.00	39.04	62.06
12	37.00	62.00	37.04	62.06
17	37.50	62.00	37.92	62.70
18	38.00	62.00	38.43	62.70
19	37.00	62.00	37.42	62.70
20	39.00	62.00	40.72	-64.74
21	39.00	62.00	40.72	-64.74
22	37.00	62.00	38.64	-64.74
23	-40.00	62.00	-41.72	64.67

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-1530.	-.1110	.3190	1104.	1.090	1287.
7	1200.	.3190	.2940	1149.	-1.050	1075.
9	-1370.	.2650	.3140	1122.	1.090	1219.
10	-1345.	.2620	.3140	1167.	1.090	1177.
11	-1450.	-.3600	-.3490	1158.	1.080	1099.
12	1250.	-.3670	.3090	1122.	1.060	1099.
17	1120.	.2190	.2720	1068.	1.060	1150.
18	1220.	.2640	.2940	1122.	1.060	1150.
19	1100.	.2560	.2690	1050.	1.060	1150.
20	1250.	-.1390	.2780	1068.	1.090	1288.
21	1250.	.2510	.2780	1063.	1.080	1288.
22	1100.	.2660	-.2540	1068.	1.080	1288.
23	-1350.	.1790	.2910	-1032.	1.090	1277.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	-1485.	-.1210	-.3490	-1206.	-1306.
7	1213.	.3170	.2920	1141.	1083.
9	-1337.	.2800	-.3310	1183.	1222.
10	-1325.	.2720	-.3260	-1209.	1180.
11	-1453.	-.3610	-.3500	1160.	1102.
12	1253.	-.3680	.3100	1124.	1102.
17	1108.	.2240	.2780	-1092.	1150.
18	1207.	.2700	.3010	1147.	1150.
19	1088.	.2620	.2750	-1074.	1150.
20	1209.	-.1520	.3040	1164.	-1301.
21	1209.	.2740	.3040	1159.	-1301.
22	1064.	.2900	.2770	1164.	-1301.
23	1313.	.1950	.3170	1123.	1296.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.222	-55.3	8.6	5.4	3.7
7	.655	84.9	8.1	-10.4	8.5
9	.538	95.0	17.7	7.3	5.1
10	.538	67.8	9.4	-10.0	6.7
11	-.736	106.7	13.6	-11.9	-10.4
12	-.753	106.7	9.5	-11.4	9.2
17	.445	73.5	12.9	-10.1	7.9
18	.538	93.0	12.3	8.3	6.7
19	.518	97.4	17.0	6.8	5.8
20	-.271	92.9	-29.8	8.0	6.7
21	.500	-148.0	-30.2	-10.1	9.0
22	.538	95.7	19.2	9.1	5.3
23	.355	104.1	22.8	6.3	5.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3045.	-48.21	12.85	-7.72	-7.72	0.00
7	3102.	25.60	4.19	5.18	5.18	0.00
9	3071.	34.49	11.02	4.38	4.38	0.00
10	3104.	24.91	5.32	-6.02	-6.02	0.00
11	3094.	28.55	6.24	5.21	5.21	0.00
12	3100.	27.94	4.25	4.90	4.90	0.00
17	3076.	32.32	9.76	-7.32	-7.32	0.00
18	3079.	33.89	7.67	5.00	5.00	0.00
19	3066.	36.69	11.01	4.21	4.21	0.00
20	-2955.	-64.46	-35.50	-9.11	-9.11	0.00
21	-3010.	-56.75	-19.90	-6.39	-6.39	0.00
22	3066.	34.72	11.95	5.40	5.40	0.00
23	-3008.	-56.09	-21.09	5.54	5.54	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	4.5140	-5.3080	21.9740	-5.7720	6.3160	-25.3790
7	4.8600	5.8350	20.3740	4.7400	5.7180	23.0120
9	4.5990	5.5830	21.7050	5.3620	6.2670	24.4690
10	4.6660	5.6090	21.2550	5.1620	6.0510	24.0100
11	4.7970	5.8680	20.3540	4.8120	5.8790	23.1820
12	4.7970	5.8840	20.3540	4.8120	5.8950	23.1820
17	4.7070	5.5440	20.8880	5.0240	5.8190	23.6880
18	4.7070	5.6270	20.8880	5.0240	5.9110	23.6880
19	4.7070	5.6110	20.8880	5.0240	5.8930	23.6880
20	4.5050	5.3380	21.9180	-5.7470	6.3570	-25.3730
21	4.5050	5.5290	21.9180	-5.7470	-6.6310	-25.3230
22	4.5050	5.5550	21.9180	-5.7470	-6.6670	-25.3230
23	4.5280	5.4270	21.9770	-5.7220	6.4270	-25.2680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	37.70	10.80	-8.92	-8.92	0.00
7	26.25	4.28	5.85	5.85	0.00
9	29.58	9.82	4.94	4.94	0.00
10	22.51	4.93	-6.80	6.80	0.00
11	28.46	6.23	5.93	5.93	0.00
12	27.86	4.25	5.58	5.58	0.00
17	30.28	9.30	-8.30	-8.30	0.00
18	31.75	7.30	5.67	5.67	0.00
19	34.38	10.49	4.78	4.78	0.00
20	-50.54	-29.81	-10.53	-10.53	0.00
21	-44.49	16.60	-7.38	-7.38	0.00
22	27.22	9.95	6.23	6.23	0.00
23	-44.39	-17.80	6.38	6.38	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE B

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	37.00	58.00	-38.68	60.63
7	34.00	58.00	33.89	57.81
9	34.50	57.00	35.43	58.54
10	34.00	56.50	34.61	57.51
11	35.00	58.00	35.03	58.06
12	36.00	60.00	36.03	60.06
17	37.00	-61.00	37.42	61.69
18	34.00	58.00	34.38	58.65
19	34.00	58.50	34.38	59.16
20	37.00	59.00	-38.64	61.61
21	37.00	60.00	-38.64	-62.65
22	36.00	59.00	37.59	61.61
23	33.00	-55.00	34.42	57.37

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-1330.	-.1070	-.3050	1104.	1.070	982.
7	1050.	.3210	.2760	1140.	1.050	900.
9	1160.	.2670	.2860	1095.	1.060	919.
10	1080.	.2540	.2720	1140.	1.070	898.
11	-1250.	.3620	-.3180	1158.	1.070	908.
12	-1200.	-.3680	.3010	1140.	1.050	951.
17	1100.	.2190	.2690	1068.	1.050	-1075.
18	1050.	.2670	.2680	1104.	1.050	923.
19	1000.	.2570	.2550	1050.	1.050	933.
20	1125.	-.1420	.2600	1050.	-1.080	-1059.
21	1150.	.2500	.2650	1068.	-1.080	-1135.
22	1050.	.2640	.2460	1068.	-1.080	-1059.
23	1020.	-.1440	.2480	-1014.	1.060	885.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	-1291.	-.1170	-.3330	-1206.	997.
7	1061.	.3190	.2740	1132.	906.
9	1132.	.2820	.3020	1155.	921.
10	1064.	.2630	.2810	1181.	900.
11	-1253.	.3630	-.3180	1160.	911.
12	-1203.	-.3690	.3010	1142.	954.
17	1088.	.2240	.2750	1092.	-1075.
18	1038.	.2730	.2740	1129.	923.
19	989.	.2630	.2610	-1074.	933.
20	1088.	-.1550	.2830	1145.	-1069.
21	1112.	.2730	.2890	1164.	-1146.
22	1015.	.2880	.2680	1164.	-1069.
23	992.	-.1570	.2700	1103.	897.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.213	-62.0	10.6	4.9	3.3
7	.655	104.8	12.7	-9.5	8.0
9	.538	117.3	25.1	6.9	4.4
10	.518	91.4	11.9	-9.1	6.3
11	-.736	136.3	20.9	-10.8	- .7
12	-.753	115.6	10.7	-11.0	8.8
17	.445	75.3	13.1	-10.2	8.0
18	.538	127.4	20.5	7.4	6.0
19	.518	116.4	22.6	6.3	5.3
20	-.275	112.3	27.6	7.7	6.3
21	.492	-170.5	-40.7	-9.5	8.4
22	.532	107.4	22.6	-8.9	5.1
23	-.277	131.7	33.2	5.3	4.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NO _X EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	-3023.	-56.03	16.47	-7.23	-7.23	0.00
7	3086.	31.45	6.57	4.69	4.69	0.00
9	3047.	42.28	15.55	4.06	4.06	0.00
10	3083.	34.64	7.73	-5.66	-5.66	0.00
11	3073.	36.21	9.55	4.71	4.71	0.00
12	3095.	30.23	-4.79	4.71	4.71	0.00
17	3075.	33.06	9.86	-7.35	-7.35	0.00
18	3047.	45.94	12.68	4.38	4.38	0.00
19	3045.	43.57	14.53	3.87	3.87	0.00
20	-2945.	-76.45	-32.25	-8.60	-8.60	0.00
21	-2977.	-65.61	-26.93	-5.99	-5.99	0.00
22	3053.	39.20	14.15	-5.33	5.33	0.00
23	-2911.	-88.07	-38.14	-5.82	-5.82	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.5110	4.2890	19.3850	4.4430	5.0680	22.2880
7	3.8720	4.8120	18.1980	3.7790	4.7170	20.5610
9	3.4090	4.3290	18.6960	3.9450	4.8350	21.0090
10	3.3730	4.2460	18.0820	3.7130	4.5630	20.3800
11	3.8230	4.8390	18.1870	3.8350	4.8480	20.7130
12	4.2900	5.3510	19.2610	4.3030	5.3610	21.9360
17	-4.4190	5.2550	20.2400	4.7130	5.5130	22.9460
18	3.7290	4.6220	18.6040	3.9700	4.8470	21.0760
19	3.8380	4.7220	18.8750	4.0880	4.9520	21.3850
20	3.7080	4.5310	19.8850	4.6930	5.3690	22.8970
21	3.9470	4.9390	20.5180	-5.0090	-5.9010	-23.6510
22	3.7080	4.7020	19.8850	4.6930	-5.6120	22.8970
23	-2.9630	-3.7490	17.7800	3.6830	4.3820	20.2990

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 1800 HOUR TEST SERIES *

MODE A

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	44.27	13.94	-8.31	-8.31	0.00
7	32.22	6.70	5.30	5.30	0.00
9	36.53	13.93	4.57	4.57	0.00
10	31.48	7.20	-6.38	-6.38	0.00
11	36.11	9.53	5.37	5.37	0.00
12	30.14	4.78	5.37	5.37	0.00
17	30.99	9.40	-8.34	-8.34	0.00
18	43.15	12.10	4.96	4.96	0.00
19	40.90	13.86	4.38	4.38	0.00
20	-60.40	-27.22	-9.90	-9.90	0.00
21	-51.71	-22.54	-6.91	-6.91	0.00
22	30.97	11.85	-6.14	6.14	0.00
23	-70.85	-32.62	-6.64	-6.64	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
-----	-----	-----	-----	-----	-----
6	17025.	2248.	492.7	30.12	.003410
7	16153.	2318.	492.7	29.96	.002720
9	17926.	2610.	484.7	30.18	.003370
10	17654.	2524.	500.7	29.91	.003310
11	9630.	2280.	492.7	30.06	.002480
12	16361.	2496.	512.7	30.11	.002660
14	3808.	2333.	486.7	30.08	.000970
15	3808.	2333.	486.7	30.08	.000970
16	3808.	2333.	486.7	30.08	.000970
17	3925.	2455.	496.7	29.75	.003440
18	3925.	2455.	496.7	29.75	.003440
19	3925.	2455.	496.7	29.75	.003440
23	10803.	2523.	498.7	29.90	.003360

JT80-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
6	34.50	57.00	35.40	58.48
7	33.00	57.00	33.86	58.48
9	32.00	-54.00	33.10	55.86
10	34.00	56.00	34.61	57.00
11	34.00	57.00	34.89	58.48
12	36.00	60.50	36.21	60.85
14	34.50	58.00	35.62	59.88
15	36.50	59.50	37.68	61.42
16	35.50	57.75	36.65	59.62
17	35.00	58.00	35.77	59.27
18	34.00	58.00	34.74	59.27
19	33.50	57.00	34.23	58.25
23	36.00	58.00	36.71	59.15

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
6	1060.	.1950	.2610	1086.	1.060	914.
7	1080.	.2510	.2780	1086.	1.050	918.
9	1150.	.2270	.3020	1095.	1.060	860.
10	1140.	.2220	.2880	1167.	1.060	890.
11	1025.	.1850	.2540	1104.	1.050	915.
12	1150.	.3150	.2850	1140.	1.050	-1007.
14	1075.	.1980	.2620	1104.	1.060	942.
15	1160.	.2310	.2750	1077.	1.075	-1050.
16	1068.	.2210	.2570	1077.	1.070	937.
17	1050.	-.1650	.2610	1068.	1.070	941.
18	1075.	.2690	.2710	1104.	1.070	941.
19	990.	.2810	.2530	1059.	1.060	920.
23	1120.	.2490	.2740	1050.	1.070	934.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR T17 DEG R	COR THRUST LBF

6	1040.	.2050	.2740	1143.	920.
7	1054.	.2650	.2920	1143.	920.
9	1121.	.2430	-.3230	1171.	867.
10	1120.	.2300	.2980	1209.	890.
11	1004.	.1950	.2680	1162.	920.
12	1151.	.3180	.2890	1153.	-1013.
14	1047.	.2110	.2790	1176.	948.
15	1130.	.2470	.2930	1147.	-1055.
16	1040.	.2350	.2740	1147.	942.
17	1021.	-.1720	.2730	1115.	935.
18	1046.	.2810	.2830	1153.	935.
19	963.	.2940	.2640	1106.	915.
23	1097.	.2590	.2850	-1092.	933.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6	.395	69.3	11.7	5.1	5.4
7	.506	107.3	20.7	5.3	5.7
9	.454	106.5	24.8	4.3	4.6
10	.453	70.0	10.7	4.7	5.3
11	.375	64.0	11.3	5.0	5.7
12	.642	102.6	11.5	5.7	5.7
14	.399	83.9	16.9	5.2	5.2
15	.468	94.9	15.0	4.4	5.7
16	.439	142.8	20.3	5.6	4.6
17	-.333	65.5	12.5	4.9	4.5
18	.542	120.6	26.8	4.5	6.0
19	.567	119.4	23.9	4.2	6.1
23	.506	83.6	15.8	6.1	6.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
6	3079.	34.36	9.98	4.13	4.42	0.00
7	3047.	41.14	13.63	3.31	3.60	0.00
9	3035.	45.27	18.14	3.02	3.22	0.00
10	3089.	30.38	7.95	3.32	3.79	0.00
11	3078.	33.41	10.17	4.26	4.88	0.00
12	3088.	31.40	6.07	2.87	2.87	0.00
14	3048.	40.79	14.13	4.13	4.15	0.00
15	3060.	39.50	10.73	3.03	3.93	0.00
16	-3012.	-62.35	15.22	4.02	4.02	0.00
17	3061.	38.27	12.57	4.74	4.74	0.00
18	3043.	43.14	16.44	2.65	3.55	0.00
19	3053.	40.92	14.10	2.39	3.42	0.00
23	3076.	32.35	10.51	3.85	3.85	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	3.4270	4.2520	18.7460	3.9320	4.7010	20.9730
7	3.4130	4.3090	18.9460	3.9320	4.7930	20.9730
9	-2.8210	-3.6580	17.1360	3.3620	4.1660	19.3970
10	3.2680	4.0900	18.2080	3.6020	4.3990	20.0740
11	3.4220	4.2330	19.0640	3.9320	4.6860	20.9730
12	-4.3720	-5.3590	-21.1330	4.5000	5.4730	22.4270
14	3.5800	4.4360	20.1650	4.2590	5.0410	21.8240
15	3.8950	4.8140	-21.0280	-4.6450	5.4870	22.7830
16	3.5290	4.4130	20.0230	4.1970	5.0180	21.6660
17	3.6280	4.4040	19.1880	4.1140	4.8350	21.4530
18	3.6280	4.5490	19.1880	4.1140	5.0090	21.4530
19	3.4240	4.3450	18.6390	3.8780	4.7830	20.8300
23	3.6580	4.5480	19.2780	4.0860	4.9440	21.3800

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLA FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
6	29.95	9.02	4.62	4.95	0.00
7	35.72	12.25	3.67	3.98	0.00
9	37.99	15.92	3.41	3.65	0.00
10	27.56	7.39	3.66	4.18	0.00
11	29.08	9.19	4.69	5.37	0.00
12	30.51	-5.94	3.05	3.05	0.00
14	34.29	12.44	4.47	4.49	0.00
15	33.12	9.41	3.28	4.26	0.00
16	-52.43	13.39	4.35	4.35	0.00
17	33.75	11.45	5.30	5.30	0.00
18	38.05	14.93	2.97	3.97	0.00
19	36.13	12.81	2.67	3.83	0.00
23	28.96	9.67	4.27	4.27	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
6	39.50	62.00	40.53	63.61
7	39.00	62.00	40.02	63.61
9	40.00	62.00	41.38	64.14
10	-41.00	62.00	-41.73	63.10
11	39.00	62.00	40.02	63.61
12	-36.50	-62.50	36.71	62.86
14	38.50	62.00	39.75	64.01
15	39.00	62.00	40.26	64.01
16	40.00	62.00	41.29	64.01
17	39.00	62.00	39.85	63.36
18	38.50	62.00	39.34	63.36
19	38.00	62.00	38.83	63.36
23	40.00	62.00	40.79	63.23

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
6	1300.	.2120	.2970	1122.	1.080	1209.
7	1360.	.2740	.3160	1104.	1.080	1216.
9	-1450.	.2200	.3200	1131.	1.090	1245.
10	-1490.	.2040	-.3340	1194.	1.090	1180.
11	1275.	.1950	.2960	1113.	1.070	1212.
12	1125.	.3220	.2770	1158.	1.060	1155.
14	1225.	.1970	.2830	1113.	1.070	1240.
15	1275.	.2270	.2920	1104.	1.080	1240.
16	1268.	.2080	.2820	1104.	1.080	1240.
17	1225.	-.1610	.2890	1104.	1.080	1206.
18	1275.	.2570	.3030	1113.	1.080	1206.
19	1200.	.2790	.2870	1068.	1.070	1206.
23	1320.	.2720	.3030	1068.	1.090	1190.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR X100	COR PF X100	COR TT7 DEG R	COR THRUST LBF

6	1275.	.2240	.3130	1181.	1217.
7	1327.	.2880	.3330	1162.	1217.
9	-1414.	.2360	-.3430	1210.	1256.
10	-1463.	.2120	-.3460	-1237.	1180.
11	1248.	.2050	.3110	1171.	1217.
12	1126.	.3260	.2810	1171.	1162.
14	1193.	.2100	.3020	1186.	1246.
15	1242.	.2420	.3120	1176.	1246.
16	1234.	.2220	.3010	1176.	1246.
17	1192.	-.1690	.3020	1153.	1199.
18	1240.	.2680	.3160	1162.	1199.
19	1167.	.2910	.2990	1115.	1199.
23	1293.	.2830	.3160	-1111.	1199.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6	.436	-51.2	-6.2	5.6	6.5
7	.558	81.1	11.9	5.7	6.6
9	.449	59.1	13.5	5.7	6.6
10	.419	-48.3	6.6	5.4	6.3
11	.400	-47.9	8.1	5.0	6.1
12	.659	92.3	10.0	6.0	6.4
14	.400	64.2	9.9	5.1	5.6
15	.461	81.1	13.8	4.9	6.0
16	.420	90.9	12.2	5.9	4.9
17	-.325	78.2	9.1	5.0	4.8
18	.522	81.4	19.9	5.6	6.8
19	.568	86.6	15.1	4.9	6.8
23	.556	67.9	11.8	6.2	7.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3111.	23.23	4.80	4.20	4.86	0.00
7	3085.	28.53	7.16	3.30	3.84	0.00
9	3087.	25.85	10.17	4.09	4.71	0.00
10	3108.	22.79	5.33	4.19	4.89	0.00
11	3102.	23.69	6.86	4.08	4.92	0.00
12	3096.	27.57	5.11	2.93	3.15	0.00
14	3079.	31.49	8.30	4.11	4.54	0.00
15	3070.	34.38	10.07	3.42	4.18	0.00
16	-3058.	-42.19	9.74	4.51	4.51	0.00
17	-3057.	-46.77	9.36	4.87	4.87	0.00
18	3073.	30.54	12.82	3.47	4.19	0.00
19	3084.	29.91	8.96	2.78	3.86	0.00
23	3098.	24.08	7.19	3.61	4.13	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	4.6220	5.5090	21.7580	5.3390	6.1240	24.4170
7	4.6030	5.5980	21.9900	5.3390	6.2620	24.4170
9	4.5690	5.5030	21.8010	5.5260	6.3300	24.8360
10	4.6570	5.4930	21.7240	5.1620	5.9280	24.0100
11	4.6150	5.4700	22.1270	5.3390	6.0870	24.4170
12	4.9330	5.9540	22.4390	5.0800	6.0830	23.8190
14	4.5720	5.4550	22.7800	5.4780	6.2280	24.7300
15	4.5720	5.5090	22.7800	5.4780	6.2980	24.7300
16	4.5720	5.4740	22.7800	5.4780	6.2530	24.7300
17	4.6080	5.3820	21.6110	5.2500	5.9270	24.2120
18	4.6080	5.5510	21.6110	5.2500	6.1310	24.2120
19	4.6080	5.5910	21.6110	5.2500	6.1790	24.2120
23	4.6410	5.6070	21.6990	5.2060	6.1170	24.1110

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
6	20.11	4.32	4.72	5.46	0.00
7	24.60	6.40	3.66	4.26	0.00
9	21.37	8.84	4.66	5.37	0.00
10	20.56	4.93	4.63	5.41	0.00
11	20.47	6.16	4.51	5.43	0.00
12	26.77	5.00	3.11	3.35	0.00
14	26.29	7.27	4.47	4.93	0.00
15	28.70	8.81	3.71	4.54	0.00
16	-35.21	8.53	4.90	4.90	0.00
17	-41.05	8.50	5.45	5.45	0.00
18	26.81	11.61	3.88	4.70	0.00
19	26.25	8.11	3.12	4.32	0.00
23	21.47	6.59	4.01	4.58	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTHD-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	91.50	91.00	93.88	93.37
7	92.00	90.50	94.40	92.86
9	-89.00	-89.00	-92.07	-92.07
10	92.00	-89.50	93.64	-91.09
11	93.00	91.00	95.42	93.37
12	93.00	94.00	93.54	94.55
14	91.50	91.00	94.46	93.94
15	91.50	91.00	94.46	93.94
16	91.75	90.75	94.72	93.69
17	94.00	93.00	96.06	95.04
18	93.00	93.75	95.04	95.80
19	93.50	92.75	95.55	94.78
23	92.00	90.00	93.83	-91.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
6	8200.	.8670	.6890	1392.	2.040	14281.
7	8600.	.8180	.7240	1374.	2.040	14357.
9	8200.	.8330	.6890	1356.	2.020	14041.
10	8500.	.8630	.7260	1410.	2.040	14381.
11	8350.	.8930	.6970	1360.	2.040	14310.
12	8500.	.9420	.7300	1446.	2.030	14180.
14	8850.	-.7710	.7370	1365.	2.020	14088.
15	8400.	.7980	.7000	1365.	2.020	14088.
16	8350.	-.7600	.6950	1365.	2.020	14088.
17	8600.	-.7840	.7250	1401.	2.040	14461.
18	8600.	.8830	.7300	1392.	2.040	14461.
19	8500.	.9210	.7190	1338.	2.040	14461.
23	9000.	.9750	.7660	1392.	2.040	14386.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	8045.	.9130	.7250	1465.	14377.
7	8393.	.8610	.7620	1446.	14377.
9	-7996.	.8920	.7370	1451.	14163.
10	8348.	.8940	.7520	1460.	14377.
11	8176.	.9400	.7330	1432.	14377.
12	8504.	.9530	.7380	1463.	14270.
14	8619.	.8220	.7860	1454.	14163.
15	8180.	.8510	.7460	1454.	14163.
16	8132.	-.8100	.7400	1454.	14163.
17	8366.	.9180	.7500	1463.	14377.
18	8366.	.9230	.7620	1453.	14377.
19	8269.	.9610	.7510	-1397.	14377.
23	8819.	1.0140	-.7970	1448.	14377.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	1.819	13.7	1.0	79.0	77.4
7	1.709	12.6	2.0	62.0	60.0
9	1.744	17.7	1.8	60.2	60.9
10	1.808	15.4	2.0	71.4	70.2
11	1.874	11.6	1.3	78.6	76.9
12	1.973	14.4	1.7	87.1	86.0
14	-1.612	15.1	1.4	61.5	61.9
15	1.668	15.8	5.2	61.0	63.8
16	-1.587	13.7	1.3	-56.8	58.4
17	-1.637	15.2	9.5	71.0	71.0
18	1.793	17.8	-189.1	65.3	67.6
19	1.929	14.6	2.4	70.5	71.9
23	2.030	16.4	-47.6	80.0	75.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3158.	1.52	.20	14.34	14.34	33.77
7	3146.	1.47	.40	11.92	11.92	-40.79
9	3152.	2.04	.35	11.37	11.50	31.33
10	3154.	1.72	.37	13.02	13.02	35.53
11	3156.	1.24	.24	13.84	13.84	-54.97
12	3150.	1.47	.30	14.53	14.53	-42.38
14	3148.	1.87	.30	12.55	12.64	-44.00
15	3145.	1.90	1.07	12.02	12.58	40.00
16	3148.	1.73	.29	11.77	12.12	34.44
17	3147.	1.86	2.00	14.27	14.27	-50.33
18	-3056.	1.94	-35.25	11.63	12.05	-40.40
19	3152.	1.52	.43	12.05	12.28	31.33
23	-3131.	1.61	-8.03	12.90	12.90	36.42

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	78.7350	83.5750	87.0670	104.2460	102.7610	100.9600
7	70.6880	77.4260	86.1350	93.0180	95.0250	98.7630
9	63.0380	70.2230	-80.4720	-89.9010	-91.3260	-95.4450
10	67.6200	73.0850	-80.7900	-81.8360	-84.2190	-91.1780
11	81.1580	84.9860	88.5430	108.1060	104.9100	100.9600
12	114.8150	110.8090	-99.1770	122.5200	116.0570	106.1240
14	70.1580	78.3690	91.4790	97.7480	100.4560	103.4540
15	72.3630	79.7930	91.4790	101.3650	102.5860	103.4540
16	67.7230	76.3070	90.5180	94.0350	97.6120	102.3280
17	83.8710	90.3390	93.5630	106.4750	108.1770	107.9620
18	99.7320	101.2440	95.6310	128.6740	122.3470	110.6460
19	97.6500	98.1460	92.8140	126.3960	118.7590	107.0770
23	81.7920	82.7700	82.8440	102.9110	97.8630	-94.2760

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NP CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
6	1.15	.16	16.62	16.62	30.41
7	1.12	.33	13.67	13.67	35.03
9	1.43	.27	13.49	13.64	31.33
10	1.42	.33	14.69	14.69	35.53
11	-.93	.19	15.78	15.78	30.41
12	1.37	.28	15.55	15.55	35.03
14	1.34	.23	14.20	14.30	-22.28
15	1.36	.83	13.60	14.23	-40.00
16	1.25	.23	13.30	13.70	31.86
17	1.46	1.67	16.46	16.46	-50.33
18	1.50	-29.17	13.43	13.91	-40.40
19	1.18	.36	13.90	14.17	31.33
23	1.28	-6.79	14.67	14.67	36.42

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6	86.50	89.00	88.75	91.32
7	86.00	88.00	88.24	90.29
9	-84.00	-87.00	-86.90	-90.00
10	86.50	92.50	88.04	-94.15
11	87.00	89.00	89.27	91.32
12	87.50	92.00	88.01	92.54
14	85.00	88.25	87.75	91.10
15	85.50	88.50	88.27	91.36
16	86.00	88.00	88.78	90.85
17	88.00	90.00	-89.93	91.97
18	87.00	90.00	88.91	91.97
19	87.00	90.00	88.91	91.97
23	87.00	89.00	88.73	90.77

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TFST SERIES *

MODF 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PFRF F/A X100	TT7 DEG R	FPR	THRUST LAF
6	6925.	.7410	.6060	1329.	1.850	12218.
7	7200.	-.6850	.6370	1320.	1.850	12284.
9	7000.	.7160	.6170	1302.	1.830	11960.
10	7200.	.8090	.6440	1356.	1.850	12304.
11	6888.	.7700	.6010	1293.	1.850	12243.
12	7200.	.8420	.6480	1374.	1.840	12105.
14	7175.	.6620	.6310	1320.	1.830	12000.
15	-6655.	.6600	-.5820	1293.	1.830	12000.
16	6725.	.6370	.5860	1293.	1.830	12000.
17	7000.	.6400	.6160	1320.	1.850	12372.
18	6800.	.7720	.6040	1338.	1.850	12372.
19	7200.	.7860	.6400	1275.	1.850	12372.
23	-7700.	.8040	.6830	1338.	1.850	12308.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	6794.	.7800	.6380	1399.	12300.
7	7027.	.7210	.6700	1389.	12300.
9	6825.	.7670	.6610	1393.	12064.
10	7072.	.8380	.6670	1404.	12300.
11	6744.	.8100	.6330	1361.	12300.
12	7204.	.8520	.6550	1390.	12182.
14	6987.	.7060	.6730	1406.	12064.
15	66481.	.7040	.6210	1378.	12064.
16	6549.	.6790	.6240	1378.	12064.
17	6810.	.6680	.6430	1378.	12300.
18	6615.	.8070	.6310	1397.	12300.
19	7004.	.8210	.6680	-1331.	12300.
23	7545.	.8360	-.7110	1391.	12300.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	1.553	14.9	.5	55.7	56.3
7	1.428	13.3	1.3	45.8	45.7
9	1.497	-22.4	1.6	44.7	46.4
10	1.695	16.9	1.7	54.3	55.0
11	1.612	13.6	1.4	54.9	54.8
12	1.762	14.7	1.4	63.0	63.2
14	1.381	18.2	1.4	45.4	47.0
15	1.377	17.5	2.1	-42.1	45.3
16	1.328	15.4	1.1	-41.1	43.1
17	1.334	15.7	8.1	48.7	49.8
18	1.552	16.7	-211.8	51.8	51.4
19	1.644	16.1	1.6	50.0	51.7
23	1.670	19.0	-40.2	59.0	56.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3157.	1.93	.12	11.83	11.97	33.33
7	3145.	1.86	.32	10.54	10.54	33.55
9	3150.	-3.00	.37	9.83	10.20	30.00
10	3154.	2.00	.34	10.57	10.70	34.00
11	3155.	1.69	.31	11.23	11.23	36.00
12	3150.	1.67	.28	11.78	11.81	31.79
14	3146.	2.63	.35	10.81	11.19	31.33
15	3146.	2.54	.52	10.06	10.82	30.92
16	3147.	2.32	.29	10.17	10.68	30.46
17	3146.	2.35	2.08	12.01	12.28	35.76
18	-3029.	2.08	-45.20	10.56	10.56	31.58
19	3152.	1.96	.34	10.01	10.36	30.46
23	-3130.	2.27	-8.24	11.55	11.55	34.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	56.7430	65.6840	79.7690	73.0940	79.4530	92.2630
7	47.7810	57.4940	76.4290	61.0580	69.3090	87.3410
9	45.1590	54.5220	72.7440	62.2570	69.4680	-85.9650
10	83.8270	89.4000	-92.2180	-101.6210	-103.2510	-104.3510
11	58.4410	66.7840	81.1210	75.7140	81.0950	92.2630
12	84.1470	88.1960	-91.0810	-89.2780	-92.0580	97.4060
14	48.5920	58.9570	81.0220	65.5730	74.0830	91.2290
15	49.7980	60.2650	82.0990	67.2570	75.7770	92.4830
16	46.1210	56.7360	79.9520	61.9020	71.0580	89.9850
17	55.2920	65.9370	82.6210	68.3630	77.6830	95.0410
18	63.8320	71.7520	82.6210	80.2090	85.3040	95.0410
19	64.8070	72.3880	82.6210	81.5760	86.1440	95.0410
23	59.9200	67.2270	78.8200	73.4900	78.3560	89.6020

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMFR
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6	1.50	.10	13.68	13.84	33.33
7	1.46	.26	12.05	12.05	33.55
9	2.18	.29	11.61	12.05	30.00
10	1.65	.30	11.96	12.11	34.00
11	-1.31	.25	12.77	12.77	29.24
12	1.58	.27	12.59	12.63	31.79
14	1.95	.28	12.18	12.60	23.05
15	1.88	.42	11.33	12.18	30.92
16	1.73	.23	11.45	12.02	28.67
17	1.90	1.77	13.82	14.13	35.76
18	1.65	-38.02	12.15	12.15	31.58
19	1.56	.28	11.52	11.92	30.46
23	1.85	-7.07	13.14	13.14	34.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	78.00	84.50	80.03	86.70
7	77.00	84.00	79.01	86.19
9	75.00	-82.00	77.59	-84.83
10	77.00	82.50	78.37	-83.97
11	78.00	84.00	80.03	86.19
12	78.75	87.00	79.21	87.51
14	76.25	84.00	78.72	86.72
15	77.00	84.00	79.49	86.72
16	76.50	84.00	78.97	86.72
17	79.00	86.00	80.73	87.88
18	78.00	85.00	79.71	86.86
19	77.50	85.25	79.20	87.12
23	-87.00	84.00	-88.73	85.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
6	4635.	.5480	.4580	1221.	1.540	8543.
7	4700.	.5220	.4750	1203.	1.540	8589.
9	-4400.	.5010	.4490	1189.	1.530	8402.
10	4650.	.5880	.4800	1248.	1.540	8603.
11	4688.	.5190	.4650	1198.	1.540	8560.
12	4800.	.6390	.4910	1266.	1.540	8546.
14	4500.	.4850	.4530	1212.	1.530	8430.
15	4563.	.4950	.4530	1212.	1.530	8430.
16	4525.	.4760	.4530	1198.	1.530	8430.
17	4725.	.4720	.4700	1212.	1.540	8651.
18	4675.	.5860	.4730	1230.	1.540	8651.
19	4575.	.5820	.4670	1158.	1.540	8651.
23	4730.	.6640	-.4200	1248.	1.540	8606.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
6	4548.	.5770	.4830	1285.	8600.
7	4587.	.5500	.5010	1266.	8600.
9	4290.	.5370	.4810	1273.	8475.
10	4567.	.6090	.4970	1293.	8600.
11	4590.	.5460	.4890	1261.	8600.
12	4802.	.6460	.4970	1281.	8600.
14	4382.	.5170	.4830	1241.	8475.
15	4443.	.5280	.4830	1291.	8475.
16	4407.	.5070	.4830	1277.	8475.
17	4597.	.4930	.4900	1265.	8600.
18	4548.	.6120	.4940	1284.	8600.
19	4451.	.6080	.4870	-1209.	8600.
23	4635.	-.6900	-.4360	1298.	8600.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6	1.145	20.9	.7	30.8	33.2
7	1.086	19.1	1.2	26.4	27.3
9	1.043	-36.6	2.5	23.6	27.2
10	1.227	23.1	1.7	29.9	32.4
11	1.082	20.6	1.4	28.9	31.0
12	1.333	17.9	1.4	36.7	37.7
14	1.008	-33.0	2.3	24.6	27.4
15	1.031	26.5	1.6	24.2	27.7
16	.989	24.8	1.6	23.9	25.8
17	.982	20.4	3.9	28.3	29.9
18	1.152	27.4	-229.8	29.5	30.8
19	1.214	25.1	1.9	28.3	30.6
23	1.377	25.5	31.4	36.3	36.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3154.	3.66	.21	8.87	9.57	24.50
7	3142.	3.51	.38	7.98	8.26	26.32
9	3147.	-7.02	.83	7.42	8.56	21.33
10	3151.	3.77	.47	8.03	8.70	25.33
11	3151.	3.83	.44	8.80	9.43	28.00
12	3148.	2.69	.37	9.06	9.30	21.85
14	3139.	-6.54	.80	8.01	8.91	22.67
15	3142.	5.14	.53	7.71	8.83	22.67
16	3142.	5.02	.57	7.94	8.56	21.85
17	3146.	4.16	1.37	9.48	10.01	25.66
18	-2971.	4.49	-64.77	7.95	8.30	25.17
19	3148.	4.14	.53	7.68	8.29	26.49
23	3129.	3.68	7.80	8.63	8.63	27.81

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	28.4630	37.8280	61.9680	35.1560	44.5490	71.2140
7	26.2770	35.4510	60.9310	32.4380	41.7940	69.2370
9	21.2790	-29.6710	54.7760	-27.6690	-36.4140	-64.1410
10	23.4390	31.3490	54.7630	-27.1410	-35.1330	-61.3950
11	26.2660	35.4770	61.3090	32.3310	41.7120	69.2370
12	39.0490	48.2390	-69.6550	40.9710	50.0020	74.3730
14	25.8190	35.3540	63.7820	33.2880	43.1310	71.2780
15	26.0480	35.5430	63.7820	33.6300	43.3980	71.2780
16	25.6130	35.1820	63.7820	32.9800	42.8900	71.2780
17	30.5760	40.9480	66.2740	36.7160	47.3370	75.8690
18	30.5540	39.7480	62.8250	36.9930	46.1490	71.8400
19	31.2590	40.5990	63.6800	37.8580	47.1510	72.8380
23	29.5120	37.7120	59.4830	35.1350	43.1200	67.2570

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
6	2.96	.18	10.19	11.00	23.05
7	2.84	.32	9.07	9.39	26.32
9	-5.40	.67	8.69	10.02	21.33
10	3.26	.42	9.00	9.75	25.33
11	3.11	.37	9.94	10.65	24.60
12	2.56	.36	9.67	9.93	21.85
14	-5.07	.65	8.95	9.96	22.67
15	3.98	.43	8.61	9.87	22.67
16	3.90	.47	8.88	9.56	21.85
17	3.46	1.18	10.85	11.46	25.66
18	3.71	-55.79	9.09	9.49	25.17
19	3.42	.46	8.75	9.48	26.49
23	3.09	6.82	9.76	9.76	27.81

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6	60.50	76.00	62.08	77.98
7	59.00	75.00	60.54	76.95
9	59.00	-74.00	61.03	76.55
10	59.00	-73.50	60.05	-74.81
11	60.00	75.50	61.56	77.47
12	60.50	78.00	60.85	78.46
14	59.00	75.75	60.91	78.20
15	59.00	75.75	60.91	78.20
16	59.75	75.00	61.68	77.43
17	61.00	77.00	62.34	78.69
18	59.50	76.00	60.80	77.66
19	59.50	76.50	60.80	78.18
23	60.00	75.00	61.19	76.49

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

6	2345.	.3310	.3220	1077.	1.230	3998.
7	2425.	.3160	.3450	1068.	1.230	4020.
9	2400.	.2540	.3330	1059.	1.230	3990.
10	2355.	.2920	.3420	1122.	1.230	4026.
11	2338.	.2520	.3250	1068.	1.230	4006.
12	2400.	.3480	.3450	1113.	1.230	4000.
14	2275.	.2730	.3180	1072.	1.230	4004.
15	2313.	.2800	.3230	1050.	1.230	4004.
16	2308.	.2720	.3180	1059.	1.230	4004.
17	2430.	.2590	.3380	1077.	1.230	4049.
18	2275.	.3350	.3260	1095.	1.230	4049.
19	2275.	.3150	.3260	1032.	1.230	4049.
23	2460.	.3880	.3480	1104.	1.230	4028.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	2301.	.3480	.3390	1134.	4025.
7	2367.	.3320	.3630	1124.	4025.
9	2340.	.2720	.3560	1133.	4025.
10	2313.	.3030	.3540	1162.	4025.
11	2289.	.2660	.3420	1124.	4025.
12	2401.	.3520	.3490	1126.	4025.
14	2215.	.2910	.3390	1143.	4025.
15	2252.	.2990	.3450	1119.	4025.
16	2247.	.2900	.3390	1128.	4025.
17	2364.	.2710	.3520	1124.	4025.
18	2213.	.3490	.3400	1143.	4025.
19	2213.	.3290	.3400	1077.	4025.
23	2410.	.4040	.3620	1148.	4025.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6	.686	39.7	2.5	10.4	13.8
7	.652	37.6	3.4	10.1	12.0
9	.522	51.7	6.8	7.8	10.7
10	.605	41.7	4.0	9.7	12.4
11	.521	37.0	5.2	9.2	11.4
12	.720	43.9	4.9	12.5	13.4
14	.560	54.7	6.8	8.3	11.3
15	.576	56.3	5.8	7.8	11.1
16	.559	58.4	5.9	8.5	9.1
17	.535	40.4	6.0	10.0	11.5
18	.633	55.4	-194.8	9.5	11.8
19	.649	54.9	7.7	9.4	11.5
23	.800	49.6	17.1	13.2	15.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3139.	11.55	1.24	4.96	6.60	8.61
7	3126.	11.49	1.79	5.06	6.02	10.53
9	3113.	-19.59	4.43	4.88	6.70	5.96
10	3130.	13.72	2.24	5.22	6.73	7.33
11	3127.	14.13	3.39	5.74	7.15	10.60
12	3128.	12.13	2.33	5.66	6.09	8.61
14	3110.	-19.30	4.13	4.81	6.57	8.00
15	3112.	-19.34	3.44	4.40	6.24	9.87
16	3109.	-20.70	3.56	4.97	5.28	7.89
17	3122.	15.02	3.81	6.08	7.05	9.33
18	-2866.	15.96	-96.41	4.50	5.59	8.67
19	3118.	16.78	4.03	4.73	5.79	7.89
23	3117.	12.30	7.29	5.38	6.45	9.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	10.2750	15.9650	39.7100	12.1260	18.2260	45.1540
7	9.2210	14.5190	38.1850	10.8850	16.5970	42.9110
9	-8.1870	-13.2430	36.3700	10.0470	15.6240	42.0450
10	-7.7620	-12.4300	34.5300	-8.6710	-13.5980	-38.4260
11	9.2960	14.8000	39.3980	10.9060	16.8420	44.0270
12	12.2790	18.4920	43.4050	12.7170	19.0030	46.2270
14	9.7120	15.3830	41.3680	11.8780	18.0970	45.6440
15	9.7600	15.4290	41.3680	11.9450	18.1600	45.6140
16	9.0560	14.4440	39.8660	11.0490	16.9620	43.9390
17	10.6080	16.6080	41.2650	12.2670	18.7030	46.7890
18	10.1620	15.7500	39.2510	11.7850	17.7620	44.4620
19	10.5040	16.2870	40.2270	12.1800	18.3680	45.5890
23	9.6020	14.8020	37.3810	10.9600	16.4570	41.9120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6	9.79	1.09	5.64	7.51	8.61
7	9.73	1.56	5.68	6.76	10.53
9	15.97	3.76	5.65	7.74	5.96
10	12.28	2.05	5.81	7.49	7.33
11	12.04	2.98	6.42	7.99	10.56
12	11.71	2.27	6.03	6.49	8.61
14	15.78	3.51	5.31	7.25	8.00
15	15.80	2.92	4.85	6.89	9.87
16	16.97	3.03	5.47	5.82	7.89
17	12.99	3.38	6.89	7.99	9.33
18	13.76	-85.49	5.09	6.33	8.67
19	14.47	3.58	5.36	6.56	7.89
23	10.77	6.56	6.03	7.23	9.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6	39.00	62.00	40.02	63.61
7	38.00	62.00	38.99	63.61
9	-40.00	62.00	-41.38	64.14
10	-40.75	62.00	-41.48	63.10
11	39.00	62.00	40.02	63.61
12	38.00	62.00	38.22	62.36
14	39.00	62.00	40.26	64.01
15	39.00	62.00	40.26	64.01
16	-40.00	62.00	-41.29	64.01
17	38.00	62.00	38.83	63.36
18	38.00	62.00	38.83	63.36
19	37.75	62.00	38.58	63.36
23	-40.00	-61.00	40.79	62.21

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
6	1230.	.2430	.2850	1086.	1.080	1209.
7	1300.	.2680	.3060	1077.	1.070	1216.
9	-1450.	.2220	-.3200	1104.	1.090	1245.
10	-1450.	.2110	-.3280	1185.	-1.100	1180.
11	1243.	.2000	.2880	1095.	1.070	1212.
12	1120.	.3400	.2710	1122.	1.070	1118.
14	1185.	.2040	.2720	1104.	1.080	1240.
15	1225.	.2250	.2810	1068.	1.090	1240.
16	1230.	.2040	.2740	1104.	1.090	1240.
17	1150.	-.1610	.2750	1086.	1.080	1206.
18	1250.	.2500	.2990	1122.	1.080	1206.
19	1150.	.2710	.2760	1050.	1.070	1206.
23	1280.	.2620	.2940	1068.	1.090	1114.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
6	1207.	.2560	.3000	1143.	1217.
7	1269.	.2820	.3230	1134.	1217.
9	-1414.	.2380	-.3430	1181.	1256.
10	-1424.	.2190	-.3390	-1227.	1180.
11	1217.	.2100	.3030	1152.	1217.
12	1121.	.3440	.2740	1135.	1125.
14	1154.	.2170	.2900	1176.	1246.
15	1193.	.2390	.2990	1138.	1246.
16	1198.	.2180	.2920	1176.	1246.
17	1119.	-.1680	.2870	1134.	1199.
18	1216.	.2610	.3120	1171.	1199.
19	1119.	.2830	.2880	1096.	1199.
23	1254.	.2730	.3060	1111.	1114.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	.499	64.2	6.3	5.2	7.6
7	.545	90.9	10.9	4.7	6.4
9	.452	75.0	13.8	5.1	6.7
10	.434	-52.4	5.9	5.2	6.9
11	.408	-57.3	9.5	5.1	6.7
12	.694	103.8	9.9	5.7	6.7
14	.415	64.9	8.7	4.8	6.0
15	.455	82.4	12.6	4.6	6.0
16	.413	85.0	11.5	4.9	4.5
17	-.324	84.2	10.2	4.8	5.1
18	.506	86.9	21.7	5.2	6.8
19	.552	92.7	15.2	5.1	6.5
23	.532	90.7	18.6	5.0	7.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JY8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 FI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
6	3109.	25.42	4.29	3.38	4.94	0.00
7	3079.	32.69	6.76	2.75	3.79	0.00
9	3077.	32.53	10.30	3.63	4.80	0.00
10	3108.	23.89	4.65	3.90	5.14	0.00
11	3093.	27.62	7.86	4.08	5.30	0.00
12	3094.	29.43	4.84	2.65	3.10	0.00
14	3084.	30.72	7.09	3.74	4.67	0.00
15	3070.	35.37	9.30	3.23	4.20	0.00
16	3063.	-40.14	9.32	3.79	3.79	0.00
17	3048.	-50.44	10.46	4.72	5.01	0.00
18	3064.	33.50	14.35	3.32	4.28	0.00
19	3079.	32.92	9.28	2.99	3.79	0.00
23	3071.	33.32	11.74	3.04	4.33	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	4.6220	5.5640	21.7580	5.3390	6.1930	24.4170
7	4.6030	5.5870	21.9900	5.3390	6.2490	24.4170
9	4.5690	5.5070	21.8010	5.5260	6.3350	24.8360
10	4.6570	5.5050	21.7240	5.1620	5.9430	24.0100
11	4.6150	5.4780	22.1270	5.3390	6.0970	24.4170
12	4.7700	5.8210	22.0650	4.9110	5.9470	23.4210
14	4.5720	5.4670	22.7800	5.4780	6.2440	24.7300
15	4.5720	5.5040	22.7800	5.4780	6.2920	24.7300
16	4.5720	5.4680	22.7800	5.4780	6.2450	24.7300
17	4.6080	5.3810	21.6110	5.2500	5.9260	24.2120
18	4.5080	5.5380	21.6110	5.2500	6.1150	24.2120
19	4.6080	5.5770	21.6110	5.2500	6.1620	24.2120
23	-4.3390	-5.2790	20.9820	4.8620	5.7530	23.3020

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
6	22.00	3.85	3.79	5.55	0.00
7	28.18	6.04	3.06	4.21	0.00
9	26.89	8.96	4.13	5.47	0.00
10	21.55	4.31	4.31	5.68	0.00
11	23.87	7.06	4.50	5.85	0.00
12	28.59	4.74	2.81	3.29	0.00
14	25.64	6.21	4.06	5.07	0.00
15	29.52	8.13	3.51	4.56	0.00
16	33.50	8.16	4.12	4.12	0.00
17	-44.27	9.50	5.29	5.61	0.00
18	29.40	12.99	3.72	4.80	0.00
19	28.90	8.40	3.35	4.24	0.00
23	29.74	10.77	3.38	4.81	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
6	33.75	56.25	34.63	57.72
7	34.00	58.00	34.89	59.51
9	35.00	57.00	36.21	58.97
10	35.50	58.00	36.13	59.03
11	35.00	58.00	35.91	59.51
12	36.00	-60.50	36.21	60.85
14	35.50	58.00	36.65	59.88
15	37.00	59.50	-38.20	61.42
16	35.00	57.00	36.13	58.84
17	36.00	59.00	36.79	60.29
18	34.50	58.00	35.26	59.27
19	34.50	59.00	35.26	60.29
23	37.00	59.00	37.73	60.17

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

6	990.	.2490	.2460	1104.	1.055	898.
7	1080.	.2800	.2690	1068.	1.050	939.
9	1175.	.2030	.2830	1086.	1.060	921.
10	1180.	.1990	.2920	1158.	1.070	931.
11	1045.	.1960	.2560	1095.	1.060	936.
12	1115.	.3270	.2770	1122.	1.050	-1007.
14	1040.	.2040	.2500	1104.	1.060	942.
15	1125.	.2240	.2650	1068.	-1.080	-1050.
16	1000.	.2120	.2420	1068.	1.060	922.
17	1050.	-.1640	.2580	1086.	1.070	977.
18	1100.	.2570	.2750	1104.	1.070	941.
19	1025.	.2660	.2570	1032.	1.060	977.
23	1130.	.2560	.2730	1050.	1.070	963.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HP	COR CB F/A X100	COR PF F/A X100	CORR TIT DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	971.	.2620	.2590	1162.	904.
7	1054.	.2950	.2830	1124.	940.
9	1146.	.2170	.3030	1162.	929.
10	1159.	.2060	.3020	-1199.	931.
11	1023.	.2070	.2690	1152.	940.
12	1116.	.3310	.2800	1135.	-1013.
14	1013.	.2170	.2670	1176.	948.
15	1096.	.2390	.2830	1138.	-1055.
16	974.	.2260	.2580	1138.	927.
17	1021.	-.1710	.2690	1134.	972.
18	1070.	.2690	.2880	1153.	935.
19	997.	.2780	.2680	-1077.	972.
23	1107.	.2660	.2840	1092.	963.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	.505	96.0	14.1	3.7	6.6
7	.567	109.4	15.9	3.8	5.9
9	.407	92.1	20.0	4.6	6.0
10	.406	-63.3	-7.6	4.2	5.9
11	.399	-66.8	11.8	4.7	6.3
12	.666	112.2	11.6	5.0	6.5
14	.411	84.8	16.3	4.2	5.3
15	.452	93.2	15.8	4.2	5.6
16	.425	93.7	20.2	4.3	3.6
17	-.332	69.9	10.7	4.4	4.8
18	.517	112.8	25.4	5.0	6.3
19	.537	113.9	22.0	4.5	5.8
23	.518	95.5	19.2	4.6	6.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTBD-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3076.	37.21	9.39	2.36	4.18	0.00
7	3064.	37.61	9.39	2.14	3.32	0.00
9	3042.	43.80	16.32	3.57	4.65	0.00
10	3093.	30.65	6.31	3.36	4.71	0.00
11	3079.	32.81	9.97	3.77	5.07	0.00
12	3086.	33.08	5.87	2.44	3.17	0.00
14	3052.	40.12	13.24	3.28	4.12	0.00
15	3056.	40.08	11.68	2.92	3.94	0.00
16	3041.	42.69	15.82	3.25	3.25	0.00
17	3062.	41.06	10.81	4.21	4.64	0.00
18	3045.	42.23	16.37	3.09	3.86	0.00
19	3054.	41.19	13.67	2.68	3.47	0.00
23	3065.	35.98	12.40	2.86	4.07	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	-3.2790	-4.1630	18.3370	3.7590	4.6090	20.5060
7	3.6160	4.5680	19.5010	4.1710	5.0910	21.6000
9	3.3740	4.2320	18.7430	4.0420	4.8320	21.2660
10	3.6750	4.4890	19.3110	4.0580	4.8320	21.3080
11	3.6250	4.4620	19.6220	4.1710	4.9460	21.6000
12	4.3720	-5.3810	21.1330	4.5000	5.4960	22.4270
14	3.5800	4.4440	20.1650	4.2590	5.0500	21.8240
15	3.8950	4.8030	21.0280	4.6450	5.4730	22.7830
16	3.3800	4.2420	19.5950	4.0140	4.8170	21.1920
17	3.8410	4.6200	19.7400	4.3600	5.0760	22.0810
18	3.6280	4.5320	19.1880	4.1140	4.9880	21.4530
19	3.8410	4.7700	19.7400	4.3600	5.2570	22.0810
23	3.8730	4.7840	19.8330	4.3310	5.2050	22.0060

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
6	32.47	8.48	2.64	4.67	0.00
7	32.61	8.43	2.37	3.68	0.00
9	36.56	14.29	4.06	5.28	0.00
10	27.75	5.86	3.71	5.20	0.00
11	28.52	9.00	4.15	5.58	0.00
12	32.15	5.74	2.59	3.36	0.00
14	33.73	11.65	3.55	4.46	0.00
15	33.61	10.25	3.18	4.27	0.00
16	35.95	13.93	3.51	3.51	0.00
17	36.17	9.84	4.71	5.19	0.00
18	37.25	14.87	3.46	4.32	0.00
19	36.29	12.41	3.00	3.88	0.00
23	32.18	11.39	3.18	4.51	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
7	16663.	2828.	521.7	29.97	.011190
11	9905.	2555.	510.7	29.62	.007480
14	4420.	2945.	520.7	29.92	.005650
15	4360.	2885.	520.7	30.12	.007200
16	4420.	2945.	527.7	29.68	.010580
17	4565.	3095.	515.7	30.13	.007790
18	4480.	3010.	527.7	29.83	.009230
21	4387.	2718.	512.7	30.10	.004460
22	4442.	2773.	529.7	29.85	.004690

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	31.60	56.00	31.51	55.84
11	35.25	58.50	35.53	58.96
14	33.00	58.00	32.94	57.89
15	34.00	58.00	33.93	57.89
16	-30.00	55.15	-29.74	54.68
17	31.75	56.50	31.84	56.66
18	32.00	56.00	31.73	55.52
21	34.25	58.25	34.45	58.59
22	33.00	58.00	32.66	57.39

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LRF
7	1070.	.3860	.3180	1212.	1.040	865.
11	1113.	.2510	.2830	1158.	1.050	939.
14	1025.	.2530	.2840	1176.	1.050	908.
15	1050.	.3660	.2750	1167.	1.050	902.
16	-880.	.2720	.2920	1210.	1.060	847.
17	1000.	.3250	.2890	1113.	1.050	877.
18	1050.	.3750	.3120	1176.	1.060	863.
21	1100.	.2770	.2800	1140.	1.050	916.
22	1050.	.3440	.2980	1185.	1.050	900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
7	1075.	.3840	-.3160	1205.	867.
11	1093.	.2550	.2870	1176.	929.
14	1027.	.2520	.2820	1171.	908.
15	1059.	.3640	.2740	1162.	908.
16	-880.	.2680	.2870	1189.	840.
17	1004.	.3270	.2900	1119.	883.
18	1056.	.3680	.3060	1156.	860.
21	1100.	.2800	.2830	1153.	922.
22	1059.	.3370	.2910	1160.	898.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	.780	166.5	32.7	6.2	5.7
11	.508	85.0	19.8	6.6	3.3
14	.512	107.1	16.6	5.9	5.1
15	.746	124.8	19.5	7.7	6.9
16	.549	121.8	19.8	3.5	3.4
17	.654	152.7	34.6	4.9	3.6
18	.755	157.3	34.7	7.6	6.7
21	.557	131.4	25.4	6.2	5.6
22	.692	153.9	32.8	4.7	4.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
7	3055.	41.48	14.01	2.54	2.54	0.00
11	3071.	32.67	13.10	4.18	4.18	0.00
14	3069.	40.86	10.86	3.68	3.68	0.00
15	3085.	32.85	8.81	3.31	3.31	0.00
16	3053.	43.13	12.07	2.01	2.01	0.00
17	3043.	45.25	17.63	2.37	2.37	0.00
18	3048.	40.43	15.32	3.23	3.23	0.00
21	3043.	45.68	15.14	3.55	3.55	0.00
22	3045.	43.09	15.77	2.17	2.17	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
7	3.4150	4.4160	15.7720	3.3570	4.3560	19.3A30
11	3.83A0	4.6950	18.0650	4.0400	4.8900	21.2610
14	3.83A0	4.6710	18.5A60	3.7970	4.6340	20.6110
15	3.85A0	4.8740	1A.1050	3.7970	4.8100	20.6110
16	3.2550	4.0620	15.4890	3.1230	-3.9440	18.6980
17	3.4920	4.4300	17.1010	3.5300	4.4620	19.8740
18	3.4440	4.4120	16.3570	3.2920	4.2610	19.1950
21	3.8450	4.7450	19.1610	3.9560	4.8430	21.0770
22	3.9060	4.8570	18.9560	3.6880	4.64A0	20.3120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
7	42.20	14.21	3.12	3.12	0.00
11	31.03	12.58	4.92	4.92	0.00
14	41.30	10.95	4.08	4.08	0.00
15	33.37	8.92	3.77	3.77	0.00
16	44.94	12.43	2.43	2.43	0.00
17	44.77	17.50	2.75	2.75	0.00
18	42.30	15.86	3.79	3.79	0.00
21	44.40	14.84	3.89	3.89	0.00
22	45.64	16.48	2.33	2.33	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
7	38.50	62.00	38.39	61.82
11	39.50	-62.50	39.81	62.99
14	38.00	62.00	37.93	61.88
15	38.00	62.00	37.93	61.88
16	37.65	62.00	37.33	61.47
17	37.25	-61.50	37.36	61.68
18	37.00	62.00	36.68	61.47
21	38.50	62.00	38.72	62.36
22	37.00	62.00	36.61	61.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

7	1315.	-.3850	.3210	1194.	1.060	1083.
11	1320.	.2340	.3170	1167.	1.070	1183.
14	1288.	.2400	.3170	1167.	1.070	1089.
15	1200.	.3470	.2930	1158.	1.070	1082.
16	1150.	.2370	.2890	1171.	1.065	1067.
17	1188.	.2950	.2910	1140.	1.060	1067.
18	1230.	.3250	.3110	1185.	1.070	1062.
21	1275.	.2650	.3060	1140.	1.060	1118.
22	1200.	.3140	.3040	1185.	1.070	1053.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	-.788	98.0	18.2	6.8	6.2
11	.477	68.0	15.7	6.7	-3.7
14	.493	65.2	8.4	6.5	5.8
15	.710	100.9	13.2	7.6	7.4
16	.485	64.0	9.8	4.0	4.1
17	.604	88.0	15.7	5.2	4.4
18	.660	100.1	21.8	8.3	7.4
21	.539	91.9	14.5	6.9	6.4
22	.638	105.6	19.5	5.3	4.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LRF
----	-----	-----	-----	-----	-----
7	1321.	-.3830	.3190	1187.	1085.
11	1297.	.2380	.3220	1185.	1171.
14	1290.	.2390	.3150	1162.	1089.
15	1210.	.3450	.2920	1153.	1089.
16	1151.	.2330	.2840	1151.	1059.
17	1192.	.2970	.2930	1146.	1074.
18	1237.	.3190	.3050	1164.	1059.
21	1275.	.2680	.3100	1153.	1125.
22	1210.	.3070	.2970	1160.	1050.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
7	3098.	24.52	7.80	2.78	2.78	0.00
11	3084.	27.98	11.09	4.56	4.56	0.00
14	3106.	26.17	5.78	4.26	4.26	0.00
15	3099.	28.04	6.32	3.46	3.46	0.00
16	3094.	26.00	6.84	2.69	2.74	0.00
17	3094.	28.68	8.77	2.80	2.80	0.00
18	3077.	29.68	11.10	4.02	4.02	0.00
21	3078.	33.43	9.08	4.11	4.11	0.00
22	3077.	32.42	10.28	2.67	2.67	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
7	4.8350	5.9430	18.7470	4.7480	5.8590	23.0700
11	4.8570	5.7000	20.3080	5.1220	5.9420	23.9170
14	4.8170	5.6380	20.8040	4.7640	5.5910	23.0670
15	4.8420	5.8780	20.2660	4.7640	5.7980	23.0670
16	4.8670	5.6490	18.9220	4.6570	5.4740	22.8100
17	4.6560	5.6050	19.7330	4.7110	5.6480	22.9410
18	4.8860	5.8440	19.4600	4.6570	5.6360	22.8100
21	4.7690	5.6720	21.3220	4.9110	5.7930	23.4210
22	4.9110	5.8400	21.2400	4.6270	5.5820	22.7380

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
7	24.97	7.92	3.41	3.41	0.00
11	26.53	10.64	5.37	5.37	0.00
14	26.46	5.82	4.73	4.73	0.00
15	28.50	6.40	3.94	3.94	0.00
16	27.17	7.06	3.24	3.30	0.00
17	28.35	8.70	3.25	3.25	0.00
18	31.14	11.51	4.71	4.71	0.00
21	32.47	8.89	4.51	4.51	0.00
22	34.41	10.75	2.86	2.86	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	94.50	93.00	94.23	92.73
11	95.00	92.50	95.74	93.22
14	96.00	94.00	95.82	93.82
15	93.00	93.00	-92.82	92.82
16	97.50	95.35	96.66	94.53
17	94.50	94.00	94.77	94.27
18	96.00	95.50	95.18	94.68
21	93.50	93.00	94.05	93.54
22	97.00	97.00	95.99	-95.99

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LBF
-----	-----	-----	-----	-----	-----	-----
7	8675.	.9500	.7520	1464.	2.040	14353.
11	8400.	.9200	.7230	1410.	2.050	14630.
14	9000.	.9030	.7740	1450.	2.040	14377.
15	8350.	.9370	.7250	1437.	2.040	14281.
16	9100.	.9060	.7900	1531.	2.040	14493.
17	8713.	.8660	.7450	1401.	2.040	14276.
18	8500.	.9190	.7410	1464.	2.040	14420.
21	8350.	.8990	.7150	1428.	2.040	14291.
22	8800.	1.0290	.7640	1509.	2.040	14410.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CH X100	COR PF X100	COR TT7 DEG R	COR THRUST LBF
7	8715.	.9440	.7480	1455.	14377.
11	8251.	.9340	.7340	1432.	14483.
14	9017.	.8990	.7710	1445.	14377.
15	8422.	.9340	.7230	1431.	14377.
16	9105.	.8900	.7770	-1505.	14377.
17	8748.	.8710	.7490	-1409.	14377.
18	8548.	.9030	.7280	1439.	14377.
21	8352.	.9100	.7240	1444.	14377.
22	8872.	1.0070	.7480	1477.	14377.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	1.992	16.8	4.2	68.2	64.0
11	1.928	16.3	6.5	82.2	77.8
14	1.896	15.1	1.6	81.7	77.6
15	1.968	14.2	1.4	86.1	81.0
16	1.898	12.2	1.2	84.9	80.5
17	1.817	15.4	3.3	75.3	71.4
18	1.923	14.0	5.7	76.5	73.7
21	1.885	12.3	1.6	82.3	77.9
22	2.158	14.7	3.4	-107.2	-109.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
7	3154.	1.69	.73	11.29	11.29	34.00
11	3152.	1.69	1.16	14.05	14.05	34.21
14	3159.	1.60	.30	14.24	14.24	29.33
15	3158.	1.45	.24	14.45	14.45	32.00
16	3151.	1.28	.23	14.74	14.74	30.00
17	3158.	1.70	.63	13.69	13.69	33.11
18	3148.	1.46	1.03	13.10	13.10	28.00
21	3153.	1.31	.29	14.40	14.40	25.83
22	3152.	1.37	.55	16.37	16.76	26.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
7	105.9740	102.6640	-80.2680	102.4140	100.0750	-98.2320
11	95.9290	95.8780	84.3210	105.7610	103.2160	100.3210
14	108.9950	107.0090	93.0600	106.6820	105.3130	102.9090
15	104.5690	102.0990	86.8580	101.8260	99.9780	98.6100
16	123.5530	118.2610	89.0670	112.5160	110.5180	106.0580
17	104.1810	104.7210	89.8700	107.1590	106.7820	104.9020
18	127.9310	121.2810	92.1820	115.9550	112.8520	106.7210
21	99.0850	99.3400	91.8710	105.4800	103.9070	101.7060
22	-167.3190	-145.3900	-105.6060	-146.7630	-132.2640	111.2970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LA/KLB FU	LA/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
7	1.75	.74	13.82	13.82	34.00
11	1.54	1.08	16.72	16.72	34.21
14	1.63	.30	15.75	15.75	29.33
15	1.49	.25	16.40	16.40	32.00
16	1.41	.24	17.55	17.55	30.00
17	1.66	.62	15.98	15.98	31.86
18	1.61	1.11	15.16	15.16	28.00
21	1.23	.27	15.94	15.94	25.14
22	1.56	.60	17.25	17.67	26.60

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	89.00	91.00	88.74	90.74
11	88.50	90.25	89.19	90.95
14	89.00	92.00	88.83	91.82
15	88.00	91.00	87.83	90.83
16	89.15	92.50	88.39	91.71
17	88.50	91.50	88.76	91.77
18	90.00	93.00	89.23	92.20
21	88.00	90.50	88.51	91.03
22	90.00	94.00	89.06	-93.02

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DFG R	EPR	THRUST LRF
7	7275.	.7700	.6590	1396.	1.850	12279.
11	6800.	.7060	.6140	1356.	1.860	12536.
14	7250.	.7820	.6560	1378.	1.850	12300.
15	7150.	-.9420	.6490	1392.	1.850	12218.
16	7350.	.7340	.6780	1437.	1.850	12399.
17	7263.	.7460	.6500	1356.	1.850	12214.
18	7100.	.7410	.6460	1392.	1.850	12337.
21	7050.	.7430	.6310	1356.	1.850	12226.
22	6900.	.7990	.6300	1437.	1.850	12329.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
<hr style="border-top: 1px dashed black;"/>					
7	7308.	.7660	.6550	1388.	12300.
11	6680.	.7170	.6230	1377.	12410.
14	7264.	.7790	.6540	1373.	12300.
15	7212.	-.9380	.6470	1386.	12300.
16	7354.	.7220	.6660	1412.	12300.
17	7292.	.7510	.6540	1364.	12300.
18	7140.	.7280	.6350	1368.	12300.
21	7051.	.7520	.6390	1372.	12300.
22	6956.	.7820	.6170	1407.	12300.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	1.612	19.1	4.0	50.7	47.2
11	1.476	17.9	6.7	54.8	51.8
14	1.640	16.6	1.4	56.2	54.3
15	-1.978	14.4	1.3	66.3	62.8
16	1.535	13.1	1.3	53.6	51.8
17	1.564	18.0	3.0	53.7	51.4
18	1.547	15.4	5.8	55.9	54.3
21	1.555	14.9	1.3	60.2	57.9
22	1.672	17.5	3.3	62.1	59.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
7	3152.	2.38	.85	10.37	10.37	33.33
11	3150.	2.43	1.56	12.23	12.23	33.11
14	3159.	2.03	.30	11.32	11.32	27.81
15	3158.	1.46	.23	11.07	11.07	29.80
16	3150.	1.71	.28	11.49	11.49	29.14
17	3157.	2.32	.66	11.34	11.34	33.55
18	3147.	1.99	1.29	11.90	11.90	28.95
21	3152.	1.92	.28	12.76	12.76	24.50
22	3151.	2.10	.68	12.24	12.24	28.48

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
7	69.5450	76.2510	73.0800	67.4730	74.4980	89.4620
11	60.0630	68.8960	76.1340	65.3670	73.6110	90.5010
14	78.0830	83.9620	85.3720	76.5680	82.7230	94.4260
15	86.2350	86.5210	79.1530	84.0180	84.7570	89.8900
16	76.9190	83.7740	78.8040	70.9170	78.8700	93.9490
17	71.8670	79.3700	80.7200	73.6790	80.7710	94.1890
18	81.3820	87.8000	82.8400	74.6840	82.3000	96.0070
21	64.8750	72.8490	82.1320	68.5190	75.8410	90.8570
22	95.7020	98.8370	-94.2370	85.6760	-90.9760	-99.4520

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO FI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
7	-2.45	.87	12.69	12.69	33.33
11	2.23	1.46	14.54	14.54	33.11
14	2.07	.31	12.53	12.53	27.81
15	1.50	.24	12.57	12.57	29.80
16	1.86	.30	13.70	13.70	29.14
17	2.26	.64	13.24	13.24	31.86
18	2.17	1.37	13.79	13.79	28.67
21	1.82	.27	14.12	14.12	24.50
22	2.35	.74	12.91	12.91	28.48

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	80.00	86.50	79.77	86.25
11	79.50	85.75	80.12	86.42
14	79.00	87.00	78.85	86.83
15	79.00	87.00	78.85	86.83
16	80.50	88.20	79.81	87.44
17	80.00	87.50	80.23	87.75
18	80.75	88.00	80.06	87.25
21	79.00	86.00	79.46	86.50
22	80.00	89.00	79.16	88.07

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
7	4825.	.6100	.4960	1302.	1.540	A586.
11	4845.	.5360	.4950	1248.	1.550	A813.
14	4688.	.5800	.4890	1248.	1.530	A475.
15	4650.	.6470	.4820	1275.	1.540	A543.
16	5025.	.5570	.5240	1320.	1.540	A670.
17	4988.	.5310	.5030	1248.	1.540	A540.
18	4840.	.5730	.5000	1302.	1.540	A626.
21	4763.	.5960	.4850	1248.	1.540	A549.
22	4555.	.5970	.4780	1320.	1.540	A620.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
7	4847.	.6060	.4930	1294.	8600.
11	4759.	.5440	.5030	1267.	8725.
14	4697.	.5780	.4880	1243.	8475.
15	4690.	.6450	.4800	1270.	8600.
16	5028.	.5480	-.5150	1297.	8600.
17	5008.	.5340	.5060	1255.	8600.
18	4867.	.5630	.4910	1280.	8600.
21	4763.	.6030	.4910	1262.	8600.
22	4592.	.5840	.4680	1292.	8600.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	1.273	21.6	4.3	30.0	27.7
11	1.116	22.7	7.3	30.4	27.8
14	1.213	21.7	1.5	30.6	30.7
15	1.354	21.0	1.8	37.6	35.4
16	1.161	22.0	1.3	29.8	30.1
17	1.108	20.7	3.4	30.7	29.4
18	1.193	21.4	6.2	32.9	32.4
21	1.244	22.2	1.5	35.9	35.5
22	1.244	23.9	3.5	30.9	30.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODF 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
7	3150.	3.40	1.16	7.76	7.76	25.17
11	3146.	4.08	2.24	8.95	8.95	29.61
14	3156.	3.59	.42	8.32	8.35	21.85
15	3154.	3.11	.47	9.17	9.17	23.18
16	3147.	3.79	.40	8.45	8.52	22.52
17	3154.	3.74	1.04	9.15	9.15	27.63
18	3143.	3.59	1.78	9.08	9.08	24.18
21	3149.	3.58	.42	9.51	9.51	20.53
22	3147.	3.85	.98	8.18	8.18	21.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
7	35.3870	44.3330	56.7150	34.4730	43.4290	69.4790
11	30.7500	40.1590	59.1070	33.0820	42.5890	70.1250
14	36.2790	45.7120	64.8150	35.6890	45.1300	71.7260
15	38.9480	47.7840	63.1380	38.1030	46.9260	71.7260
16	39.5770	49.4390	62.0460	36.9570	46.9270	74.1240
17	36.9080	47.2000	64.6190	37.6500	47.8820	75.3510
18	39.5050	49.1700	63.1350	36.7360	46.4880	73.3430
21	33.6940	42.8610	63.7710	35.2920	44.3830	70.4440
22	44.7810	54.4780	-72.3920	40.8440	50.7420	76.6180

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
7	3.49	1.19	9.50	9.50	25.17
11	3.79	2.11	10.62	10.62	25.86
14	3.65	.43	9.21	9.24	21.85
15	3.18	.47	10.42	10.42	23.18
16	4.06	.42	10.10	10.18	22.52
17	3.67	1.03	10.67	10.67	27.16
18	3.86	1.89	10.54	10.54	23.35
21	3.42	.41	10.50	10.50	20.53
22	4.22	1.05	8.65	8.65	21.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
7	61.20	77.50	61.02	77.28
11	62.50	77.75	62.99	78.36
14	62.00	78.00	61.88	77.85
15	60.00	77.00	59.88	76.85
16	-63.35	79.40	62.81	78.72
17	61.00	78.00	61.18	78.23
18	61.50	78.75	60.97	78.08
21	60.75	77.00	61.10	77.45
22	61.00	79.00	60.36	78.18

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
7	2490.	.3360	.3610	1131.	1.230	4018.
11	2530.	.3070	.3530	1095.	-1.240	-4243.
14	2475.	.3440	.3530	1113.	1.230	4025.
15	2225.	.3260	.3280	1108.	1.230	3998.
16	2500.	.2870	.3550	1171.	1.230	4058.
17	2385.	.2830	.3410	1104.	1.230	3997.
18	2420.	.3330	.3550	1131.	1.230	4037.
21	2375.	-.4200	.3390	1084.	1.230	4001.
22	2325.	.2800	.3460	1158.	1.230	4034.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
7	2501.	.3340	.3590	1124.	4025.
11	2485.	.3120	.3590	1112.	-4200.
14	2480.	.3430	.3520	1108.	4025.
15	2244.	.3250	.3270	1104.	4025.
16	2501.	.2820	.3490	1151.	4025.
17	2395.	.2850	.3430	1110.	4025.
18	2434.	.3270	.3490	1111.	4025.
21	2375.	-.4250	.3430	1097.	4025.
22	2344.	.2740	.3380	1134.	4025.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT6D-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	.695	38.0	5.6	11.3	10.5
11	.634	40.4	9.7	10.6	8.5
14	.713	42.2	4.0	11.3	12.5
15	.674	51.6	4.9	11.0	11.6
16	.593	40.8	3.4	8.8	9.4
17	.585	40.9	5.8	9.0	8.7
18	.687	45.2	8.5	12.4	12.4
21	-.869	56.4	5.4	13.1	14.7
22	.576	51.1	6.6	8.2	8.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
7	3133.	10.90	2.76	5.34	5.34	9.93
11	3124.	12.66	5.22	5.45	5.45	-15.13
14	3139.	11.81	1.91	5.20	5.73	9.93
15	3130.	15.25	2.46	5.31	5.61	7.33
16	3127.	13.70	1.96	4.86	5.17	8.61
17	3131.	13.94	3.41	5.02	5.02	8.67
18	3121.	13.09	4.24	5.91	5.91	9.27
21	3130.	12.92	2.14	4.93	5.55	10.53
22	3117.	17.59	3.92	4.63	4.63	7.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
7	11.4680	17.3590	35.5570	11.2360	17.0710	43.6130
11	11.5250	17.6090	38.8820	12.2330	18.5030	45.9910
14	12.0870	18.1730	40.5110	11.9320	17.9850	44.8690
15	10.9160	16.6520	37.5460	10.7250	16.4010	42.6920
16	13.0660	19.6360	39.0880	12.4080	18.8530	46.8700
17	11.6890	17.9000	39.2450	11.8550	18.0860	45.7020
18	12.7460	19.0340	38.9010	12.0500	18.2000	45.3670
21	11.7720	17.5480	39.9230	12.2060	18.0440	43.9890
22	12.5350	18.9370	42.8530	11.7110	17.9270	45.5880

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTBD-9 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
7	11.13	2.81	6.55	6.55	9.93
11	11.92	4.97	6.45	6.45	-15.13
14	11.96	1.93	5.76	6.35	9.93
15	15.52	2.50	6.04	6.37	7.33
16	14.43	2.04	5.83	6.20	8.61
17	13.75	3.38	5.84	5.84	8.67
18	13.84	4.43	6.90	6.90	8.40
21	12.46	2.09	5.43	6.12	10.53
22	-18.83	4.14	4.93	4.93	7.33

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TFST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	38.20	62.00	38.09	61.82
11	38.50	62.00	38.80	62.48
14	38.00	62.00	37.93	61.88
15	38.00	62.00	37.93	61.88
16	37.40	62.00	37.08	61.47
17	37.00	62.00	37.11	62.18
18	37.00	62.00	36.68	61.47
21	38.15	62.00	38.37	62.36
22	-36.00	62.00	35.62	61.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
7	1270.	.3500	.3120	1167.	1.060	1083.
11	1235.	.2510	.3000	1140.	1.060	1145.
14	1250.	.2150	.3070	1140.	1.070	1089.
15	1175.	.3290	.2870	1140.	1.070	1082.
16	1075.	.2050	.2710	1149.	1.060	1067.
17	1140.	.2780	.2800	1122.	1.060	1104.
18	1250.	.3450	.3160	1176.	1.070	1062.
21	1240.	.2490	.2990	1135.	1.070	1118.
22	1100.	.2950	.2820	1149.	1.070	1053.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LAM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
7	1276.	.3480	.3100	1160.	1085.
11	1213.	.2550	.3050	1158.	1134.
14	1252.	.2140	.3060	1135.	1089.
15	1185.	.3280	.2860	1135.	1089.
16	1076.	.2020	.2670	1129.	1059.
17	1145.	.2800	.2820	1128.	1111.
18	1257.	.3390	.3100	1156.	1059.
21	1240.	.2520	.3030	1148.	1125.
22	1109.	.2890	.2760	1125.	1050.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	.716	96.9	13.6	5.8	5.8
11	.510	81.2	18.4	5.6	-3.1
14	.438	63.4	11.3	6.3	5.5
15	.673	100.0	12.6	6.2	6.5
16	.418	59.1	10.8	3.7	3.9
17	.569	88.7	13.4	4.3	4.2
18	.703	101.6	17.6	7.4	7.1
21	.504	96.5	15.4	5.6	6.1
22	.598	117.4	20.0	3.6	3.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
7	3099.	26.66	6.42	2.60	2.62	0.00
11	3076.	31.13	12.13	3.53	3.53	0.00
14	3094.	28.51	8.75	4.63	4.63	0.00
15	3097.	29.27	6.35	2.98	3.15	0.00
16	3086.	27.76	8.74	2.87	3.03	0.00
17	3093.	30.72	7.99	2.46	2.46	0.00
18	3086.	28.39	8.47	3.40	3.40	0.00
21	3069.	37.41	10.28	3.58	3.90	0.00
22	3065.	38.32	11.19	1.94	-1.94	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
7	4.8350	5.8700	18.7470	4.7480	5.7870	23.0300
11	4.6970	5.5720	19.9700	4.9520	5.8080	23.5170
14	4.8170	5.5890	20.8040	4.7640	5.5430	23.0670
15	4.8420	5.8410	20.2660	4.7640	5.7620	23.0670
16	4.8670	5.5880	18.9220	4.6570	5.4170	22.8100
17	4.7950	5.7130	20.0220	4.8510	5.7570	23.2770
18	4.8860	5.8850	19.4600	4.6570	5.6740	22.8100
21	4.7690	5.6410	21.3220	4.9110	5.7610	23.4210
22	4.9110	5.8020	21.2400	4.6270	5.5480	22.7390

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
7	27.15	6.52	3.20	3.22	0.00
11	29.53	11.64	4.16	4.16	0.00
14	28.83	8.82	5.13	5.13	0.00
15	29.74	6.44	3.39	3.58	0.00
16	29.02	9.02	3.46	3.65	0.00
17	30.36	7.93	2.86	2.86	0.00
18	29.78	8.79	3.99	3.99	0.00
21	36.32	10.07	3.94	4.29	0.00
22	-40.67	11.70	2.08	-2.08	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 2000 HOUR TEST SERIES *

MODE A

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
7	34.00	57.50	33.90	57.33
11	35.50	59.00	35.78	59.46
14	33.00	58.00	32.94	57.89
15	34.00	58.00	33.93	57.89
16	32.60	57.50	32.32	57.01
17	33.00	57.00	33.10	57.17
18	34.50	58.00	34.20	57.50
21	34.90	58.60	35.10	58.94
22	33.00	58.00	32.66	57.39

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE B

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
7	1085.	-.3790	.2860	1167.	1.050	895.
11	1100.	.2380	.2790	1140.	1.050	949.
14	1100.	.2430	-.3040	1140.	1.050	908.
15	1025.	.3510	.2690	1140.	1.050	902.
16	-900.	.2230	.2600	1149.	1.060	897.
17	980.	.2860	.2660	1113.	1.050	887.
18	1120.	.3440	.2950	1158.	1.060	903.
21	1100.	.2550	.2770	1131.	1.060	923.
22	1000.	.3360	.2830	1158.	1.050	900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR T17 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
7	1090.	-.3760	.2850	1160.	897.
11	1081.	.2420	.2830	1158.	939.
14	1102.	.2420	.3030	1135.	908.
15	1034.	.3500	.2680	1135.	908.
16	-900.	.2200	.2560	1129.	890.
17	984.	.2880	.2670	1119.	893.
18	1126.	.3380	.2900	1138.	900.
21	1100.	.2580	.2800	1144.	929.
22	1008.	.3290	.2780	1134.	898.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	-.772	129.6	18.4	4.8	5.4
11	.482	89.7	20.4	5.3	2.9
14	.494	83.5	16.7	5.8	4.7
15	.716	124.3	18.7	5.5	6.0
16	.449	109.5	16.5	3.3	3.6
17	.580	119.4	22.5	3.7	3.7
18	.696	134.7	27.3	6.6	6.4
21	.513	112.8	20.8	4.6	5.1
22	.676	-155.1	30.9	3.2	3.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
7	3084.	32.94	8.02	2.03	2.25	0.00
11	3062.	36.27	14.20	3.54	3.54	0.00
14	3079.	33.14	11.39	3.76	3.76	0.00
15	3083.	34.07	8.79	2.49	2.68	0.00
16	3046.	47.25	12.25	2.32	2.54	0.00
17	3064.	40.18	12.99	2.02	2.03	0.00
18	3058.	37.66	13.12	3.03	3.03	0.00
21	3052.	42.59	13.55	2.89	3.14	0.00
22	3044.	44.48	15.24	1.50	-1.50	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
7	3.7390	4.7610	16.5000	3.6750	4.6960	20.2760
11	3.9500	4.7920	18.3260	4.1590	4.9900	21.5690
14	3.8380	4.6560	18.5860	3.7970	4.6190	20.6110
15	3.8580	4.8510	18.1050	3.7970	4.7860	20.6110
16	3.7590	4.5200	16.6420	3.6040	4.3870	20.0800
17	3.5990	4.4890	17.3590	3.6380	4.5210	20.1740
18	3.8880	4.8440	17.3720	3.7120	4.6760	20.3780
21	3.9240	4.7930	19.3560	4.0370	4.8910	21.2520
22	3.9060	4.8440	18.9560	3.6880	4.6360	20.3120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLA FU	NREC HC EI LB/KLA FU	NRE CNO EI LB/KLA FU	NR CNOX EI LB/KLA FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
7	33.52	8.13	2.49	2.77	0.00
11	34.45	13.64	4.17	4.17	0.00
14	33.50	11.49	4.17	4.17	0.00
15	34.61	8.91	2.84	3.06	0.00
16	-49.29	12.62	2.80	3.07	0.00
17	39.75	12.90	2.35	2.36	0.00
18	39.45	13.59	3.55	3.55	0.00
21	41.50	13.28	3.17	3.45	0.00
22	47.11	15.93	1.61	-1.61	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, per cent		
				Paraffin	Olefin	Aromatic
1	Baseline	44.5	1.95	83	2	15
	600-Hour	43.8	1.92	84	2	14
2	Baseline	44.1	1.93	84	2	14
	1800-Hour	43.2	1.92	82	2	16
3	Baseline	44.1	1.93	84	2	14
4	Baseline	43.2	1.92	84	2	14
	600-Hour	43.4	1.95	84	2	14
6	Baseline	43.8	1.93	84	2	14
	600-Hour	44.1	1.91	84	1	15
	2400-Hour	42.8	1.90	81	2	17
7	Baseline	43.4	1.92	83	2	15
	600-Hour	43.0	1.90	83	1	16
	1800-Hour	43.4	1.93	84	1	15
	2400-Hour	43.8	1.95	83	1	16
	3000-Hour	42.6	1.91	80	2	18
9	Baseline	44.1	1.93	84	2	14
	600-Hour	43.4	1.95	82	1	17
	1800-Hour	43.6	1.92	83	1	16
	2400-Hour	43.4	1.92	83	1	16
10	Baseline	43.4	1.92	84	2	14
	600-Hour	43.0	1.95	82	2	16
	1800-Hour	43.2	1.91	83	1	16
	2400-Hour	43.2	1.91	83	1	16
11	Baseline	43.6	1.92	84	2	14
	600-Hour	43.2	1.92	82	2	16
	1800-Hour	43.6	1.92	84	1	15
	2400-Hour	43.6	1.91	82	2	16
	3000-Hour	43.4	1.91	82	2	16

Unit No.	Test Series	deg API	H/C Ratio	FIA, per cent		
				Paraffin	Olefin	Aromatic
12	Baseline	43.6	1.92	84	2	14
	600-Hour	43.2	1.92	82	2	16
	1800-Hour	43.6	1.92	84	1	15
	2400-Hour	43.4	1.93	83	1	16
14	Baseline	43.8	1.91	83	2	15
	600-Hour	43.4	1.91	83	1	16
	1200-Hour	43.2	1.93	83	1	16
	2400-Hour	43.6	1.94	84	1	15
	3000-Hour	43.0	1.89	81	1	18
15	Baseline	43.8	1.91	83	2	15
	600-Hour	43.4	1.91	83	1	16
	1200-Hour	43.2	1.93	83	1	16
	2400-Hour	43.6	1.94	84	1	15
	3000-Hour	43.4	1.90	81	1	18
16	Baseline	43.8	1.91	83	2	15
	600-Hour	43.4	1.91	83	1	16
	1200-Hour	43.2	1.88	84	2	14
	2400-Hour	43.6	1.94	84	1	15
	3000-Hour	43.4	1.93	82	2	16
17	Baseline	43.4	1.92	83	2	15
	600-Hour	43.8	1.91	84	2	14
	1200-Hour	42.1	1.92	83	1	16
	1800-Hour	43.2	1.93	81	1	18
	2400-Hour	44.5	1.92	85	1	14
	3000-Hour	43.2	1.89	82	1	17
18	Baseline	43.4	1.92	83	2	15
	600-Hour	43.8	1.91	84	2	14
	1200-Hour	42.1	1.92	83	1	16
	1800-Hour	43.2	1.93	81	1	18
	2400-Hour	44.5	1.92	85	1	14
	3000-Hour	43.2	1.93	81	1	18

Unit No.	Test Series	deg API	H/C Ratio	FIA, per cent		
				Paraffin	Olefin	Aromatic
19	Baseline	43.4	1.92	83	2	15
	600-Hour	43.8	1.91	84	2	14
	1200-Hour	42.1	1.92	83	1	16
	1800-Hour	43.2	1.93	81	1	18
	2400-Hour	44.5	1.92	85	1	14
20	Baseline	43.8	1.92	85	2	13
	600-Hour	43.4	1.94	84	1	15
	1800-Hour	43.4	1.93	83	1	16
21	Baseline	43.8	1.92	85	2	13
	600-Hour	43.4	1.94	84	1	15
	1800-Hour	43.4	1.93	83	1	16
	3000-Hour *					
22	Baseline	43.8	1.92	85	2	13
	600-Hour	43.4	1.94	84	1	15
	1800-Hour	43.4	1.93	83	1	16
	3000-Hour *					
23	Baseline	43.6	1.92	83	1	16
	600-Hour	43.2	1.92	83	1	16
	1200-Hour	42.8	1.91	82	1	17
	1800-Hour	42.1	1.93	81	1	18
	2400-Hour	43.0	1.92	81	1	18

* Fuel analysis data not available

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2. 'T53 and T55 Gas Turbine Combustor and Engine Exhaust Emission Measurements', USAAMRDL Technical Report 73-47, December 1973.
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Report No. FAA-RD-79-8, III

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME III
JT8D-7 TEST DATA**



APRIL 1979

FINAL REPORT

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**U. S. DEPARTMENT OF TRANSPORTATION
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16. Abstract This is the third volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the JT8D-7 engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the third volume of an eight-volume report concerning the the degradation of turbine engine emissions. This volume contains test data obtained for the JT8D-7 engine type as installed on the 727-100 aircraft. The engines, owned and operated by UAL, were tested in San Francisco by UAL personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume II - JT8D-9 Test Data
- Volume IV - JT3D-7 Test Data
- Volume V - JT3D-3B Test Data
- Volume VI - JT9D-3A Test Data
- Volume VII - RB211-22B Test Data
- Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted that EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume; Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emissions and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the JT8D-7 engine there were six such series; Baseline; 600 Hour; 1200 Hour; 1800 Hour; 2400 Hour; and 3000 Hour. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/654931	6/19/75 6/26/75 7/28/75	Original Test A/C No. <u>7317</u> , Position No. <u>1</u> Baseline Emission Test Pneumatic line leak Engine removed from program
2/649083	6/19/75 9/22/75 1/26/76 5/14/76 5/24/76 6/12/76 6/13/76 8/31/76 11/16/76	Original Test A/C No. <u>7317</u> , Position No. <u>2</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test Retrimmed engine Replaced FCU Trimmed engine "2400-Hour" Emission Test "3000-Hour" Emission Test
3/655099	6/19/75 9/27/75 1/26/76 3/20/76	Original Test A/C No. <u>7317</u> , Position No. <u>3</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test Engine removed due to compressor blade failure
4/654425	6/21/75 9/8/75 10/6/75 1/22/76 5/12/76 8/16/76 11/4/76	Original Test A/C No. <u>7312</u> , Position No. <u>1</u> Baseline Emission Test Engine throttle rerigged, actuator alignment "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test "3000-Hour" Emission Test

Unit No./ Serial No.	Date	Item
5/654098	6/21/75 10/6/75 10/12/75 12/27/75 1/22/76 5/12/76 7/10/76	Original Test A/C No. <u>7312</u> , Position No. <u>2</u> Baseline Emission Test "600-Hour" Emission Test Anti-ice valve stuck open Replaced fuel control and P _{s3} line "1200-Hour" Emission Test "1800-Hour" Emission Test Engine removed from program due to metal in tailpipe
6/654034	6/21/75 10/6/75 1/22/76 5/12/76 8/16/76 11/4/76	Original Test A/C No. <u>7312</u> , Position No. <u>3</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test "3000-Hour" Emission Test
7/653914	6/23/75 6/25/75 10/3/75 12/6/75 1/21/76 5/11/76 5/18/76 8/4/76 9/20/76 11/9/76	Original Test A/C No. <u>7308</u> , Position No. <u>1</u> Baseline Emission Test Trimmed engine "600-Hour" Emission Test Align throttles, no noise trimmed "1200-Hour" Emission Test "1800-Hour" Emission Test Eighth-stage bleed valve stuck open "2400-Hour" Emission Test Rerigged and retrimmed engine "3000-Hour" Emission Test
8/655128	6/23/75	Original Test A/C No. <u>7308</u> , Position No. <u>2</u> Baseline Emission Test

Unit No./ Serial No.	Date	Item
8/655128 Continued	10/3/75	"600-Hour" Emission Test
	12/6/75	Align throttles, no noise trimmed
	1/21/76	"1200-Hour" Emission Test
	5/11/76	"1800-Hour" Emission Test
	8/4/76	"2400-Hour" Emission Test
	9/20/76	Rerigged and retrimmed engine
	11/9/76	"3000-Hour" Emission Test
9/654151		Original Test A/C No. <u>7308</u> , Position No. <u>3</u>
	6/23/75	Baseline Emission Test
	6/25/75	Trimmed engine
	10/3/75	"600-Hour" Emission Test
	12/6/75	Align throttles, no noise trimmed
	1/21/76	"1200-Hour" Emission Test
	5/11/76	"1800-Hour" Emission Test
	8/4/76	"2400-Hour" Emission Test
	9/20/76	Rerigged and retrimmed engine
11/9/76	"3000-Hour" Emission Test	
10/648798		Original Test A/C No. <u>7560</u> , Position No. <u>1</u>
	6/24/75	Baseline Emission Test
	10/1/75	"600-Hour" Emission Test
	1/23/76	"1200-Hour" Emission Test
	4/29/76	"1800-Hour" Emission Test
5/24/76	Engine removed due to compressor disk limit	
11/649625		Original Test A/C No. <u>7560</u> , Position No. <u>2</u>
	6/24/75	Baseline Emission Test
	10/1/75	"600-Hour" Emission Test
	1/23/76	"1200-Hour" Emission Test
	4/29/76	"1800-Hour" Emission Test
8/17/76	"2400-Hour" Emission Test	
11/5/76	"3000-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
12/653606		Original Test A/C No. <u>7560</u> , Position No. <u>3</u>
	6/24/75	Baseline Emission Test
	10/1/75	"600-Hour" Emission Test
	1/20/76	Replaced nose cowl
	1/23/76	"1200-Hour" Emission Test
	4/29/76	"1800-Hour" Emission Test
	5/18/76	Engine removed from program due to high oil consumption and breather pressure
13/654037		Original Test A/C No. <u>7576</u> , Position No. <u>1</u>
	6/25/75	Baseline Emission Test
	7/19/75	Down-trimmed engine 20 clicks
	9/24/75	"600-Hour" Emission Test
	11/15/75	No noise trim for throttle alignment
	1/9/76	"1200-Hour" Emission Test
	1/26/76	Operated with anti-ice valve in open position, valve replaced
	4/21/76	"1800-Hour" Emission Test
	7/13/76	Throttle rerigged
	7/22/76	"2400-Hour" Emission Test
10/15/76	"3000-Hour" Emission Test	
14/653665		Original Test A/C No. <u>7576</u> , Position No. <u>2</u>
	6/25/75	Baseline Emission Test
	9/24/75	"600-Hour" Emission Test
	1/9/76	"1200-Hour" Emission Test
	4/21/76	"1800-Hour" Emission Test
	7/13/76	Throttle rerigged
	7/22/76	"2400-Hour" Emission Test
10/15/76	"3000-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
15/665264		Original Test A/C No. <u>7550</u> , Position No. <u>1</u>
	7/13/75	Baseline Emission Test
	8/21/75	Throttle alignment rigged
	9/11/75	Accomplished no noise trim
	10/10/75	"600-Hour" Emission Test
	2/2/76	"1200-Hour" Emission Test
	5/10/76	"1800-Hour" Emission Test
	7/17/76	Retrimmed engine
	8/4/76	Replaced fuel pump
	9/13/76	"2400-Hour" Emission Test
10/20/76	Engine removed due to vibration	
16/648902		Original Test A/C No. <u>7550</u> , Position No. <u>2</u>
	7/13/75	Baseline Emission Test
	7/16/75	Saddle duct split left side
	9/11/75	Accomplished no noise trim
	10/10/75	"600-Hour" Emission Test
	2/2/76	"1200-Hour" Emission Test
	5/10/76	"1800-Hour" Emission Test
	7/17/76	Retrimmed engine
	9/13/76	"2400-Hour" Emission Test
11/17/76	"3000-Hour" Emission Test	
17/648723		Original Test A/C No. <u>7550</u> , Position No. <u>3</u>
	7/13/75	Baseline Emission Test
	9/11/75	Accomplished no noise trim
	10/14/75	"600-Hour" Emission Test
	2/2/76	"1200-Hour" Emission Test
3/4/76	Engine removed from program due to foreign object damage	

Unit No./ Serial No.	Date	Item
18/649498	6/30/75 10/8/75 2/3/76 5/17/76 8/26/76	Original Test A/C No. <u>7557</u> , Position No. <u>1</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test Engine removed from program due to metal in oil system
19/653877	6/30/75 10/8/75 2/3/76 5/17/76 8/26/76 10/23/76 10/29/76	Original Test A/C No. <u>7557</u> , Position No. <u>2</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test EPR low, corrected problem Engine removed from program
20/648789	6/30/75 9/4/75 9/15/75 10/8/75 2/3/76 5/17/76 6/11/76 8/26/76 11/18/76	Original Test A/C No. <u>7557</u> , Position No. <u>3</u> Baseline Emission Test FCU replaced Pneumatic 13th stage MOD valve replaced "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test Replaced engine bleed valve "2400-Hour" Emission Test "3000-Hour" Emission Test
21/649631	9/22/75 1/26/76	Original Test A/C No. <u>7317</u> , Position No. <u>1</u> Baseline Emission Test "600-Hour" Emission Test

Unit No./ Serial No.	Date	Item
21/649631 Continued	5/14/76	"1200-Hour" Emission Test
	8/31/76	"1800-Hour" Emission Test
	11/16/76	"2400-Hour" Emission Test

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T_a	Ambient temperature	deg R
AMB PRESS	P_a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 56 percent N ₂ nominal	
MODE 2		Idle "plus", initial - 60 percent N ₂	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 percent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 percent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 percent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N_1	Rotational speed of low pressure turbine, given as a percent of design speed (8700 rpm)	percent
N2 SPEED	N_2	Rotational speed of high pressure turbine, given as a percent of design speed (12,250 rpm)	percent
CORR N1	N_1'	N_1 speed corrected to standard ambient conditions $N_1' = N_1 \times \sqrt{518.7/T_a} \text{ (Ref 1)}$	percent
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel flow	lbm per hr

Name	Symbol	Description	Unit
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (see Ref 2, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28+0.04 \times 40)} \div \left[\frac{100}{\frac{CO+CO_2+HC}{10^4} + 0.25a - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right)} - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$ <p>where a is the hydrogen-carbon ratio of the fuel as obtained in the fuel analysis. (A mean value was used when the analysis was not available; $a_{mean} = 1.90$)</p>	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio $(F/A)_{PF} = F / \left[AC \times \frac{P_a}{29.92} \times \sqrt{518.7/T_a} \right]$ <p>where AC is obtained from the curve shown in Figure 1</p>	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust, obtained from $TH = TH' \times (P_a/29.92)$ (Ref 1)	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)'_{PF}$	Corrected performance fuel-air ratio (Ref 1) $(F/A)'_{PF} = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3 through 6 and from the curve shown in Fig 3 for modes 1, 2, 7 and 8)	lbf

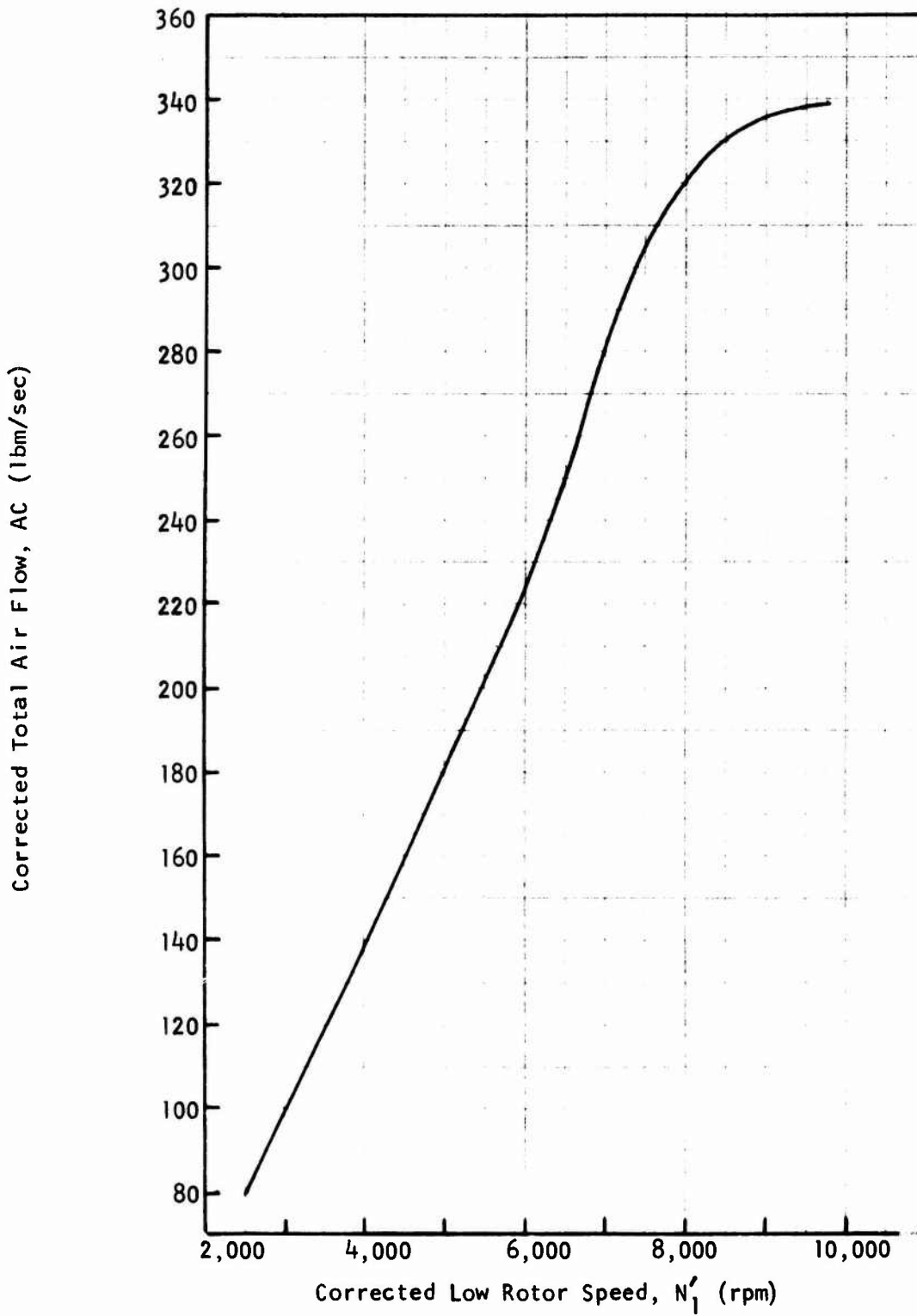


Figure 1. Estimated Corrected Total Air Flow versus Corrected Low Rotor Speed

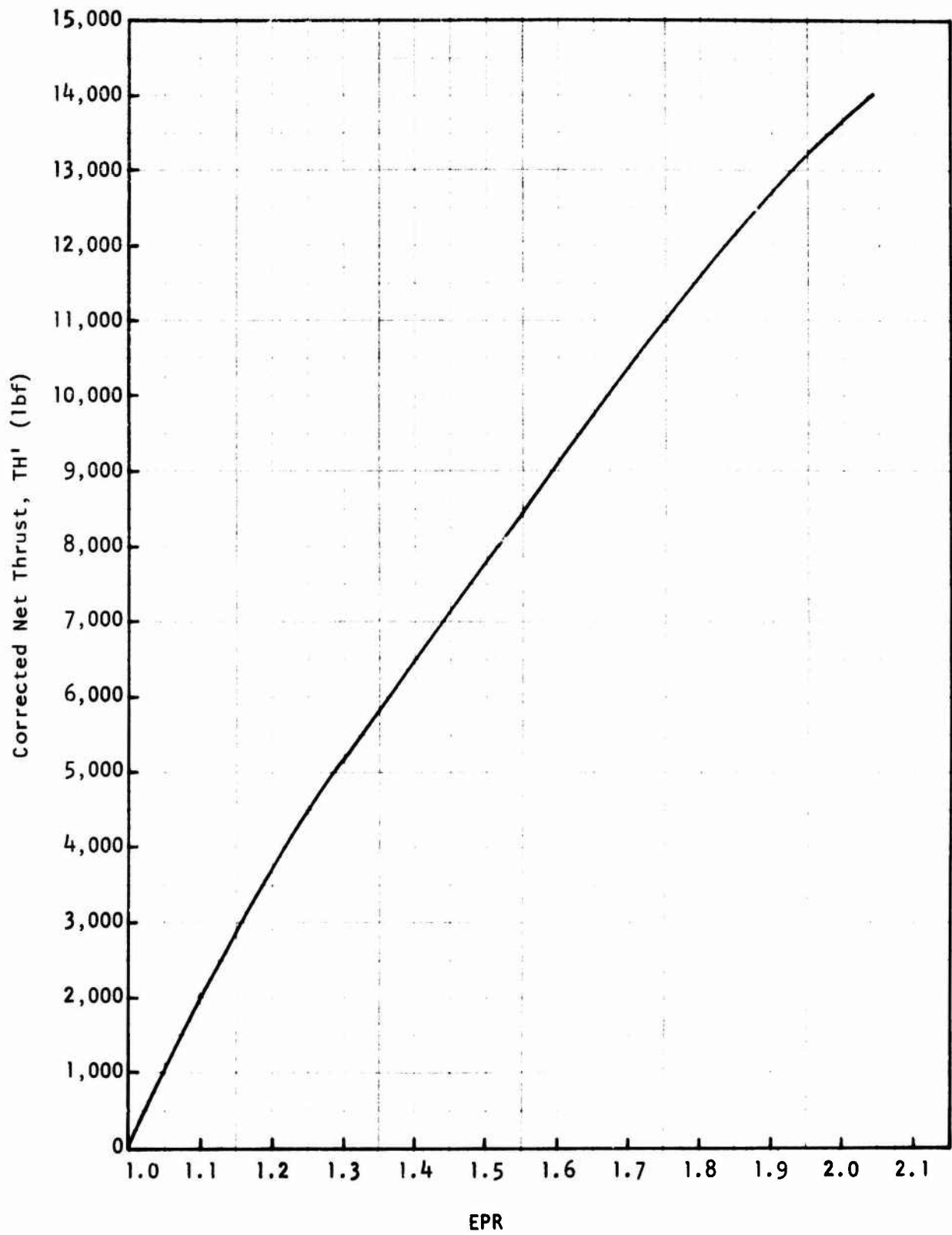


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed

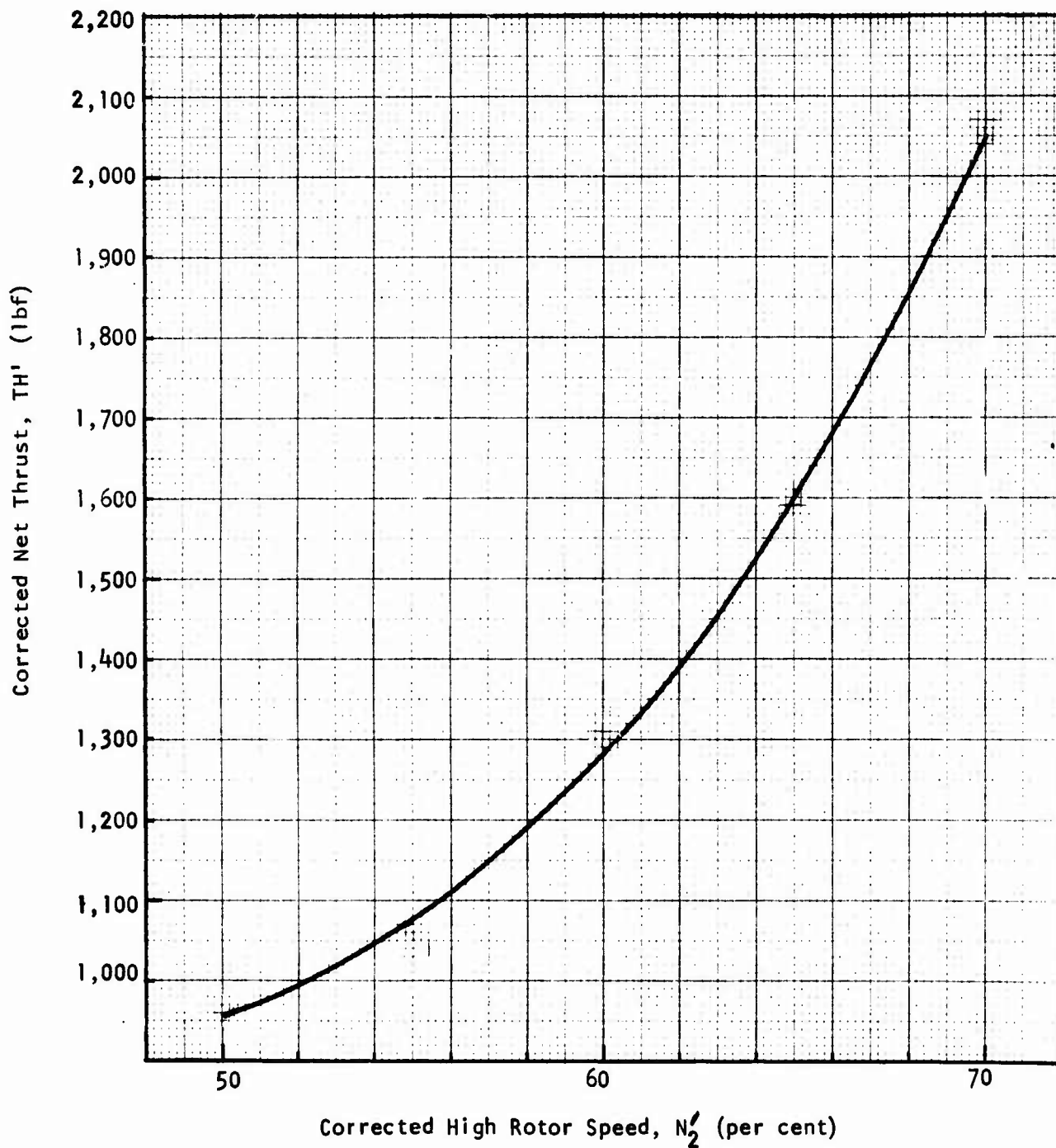


Figure 3. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
CO2 CONC	CO ₂	Concentration of carbon dioxide	percent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NOX CONC	NO _x	Concentration of NO _x	ppm
CO2 EI	EI _{CO2}	Emission index of carbon dioxide (Ref 3) $EI_{CO2} = \frac{M_{CO2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO2} = molecular weight of CO₂</p>	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO2} = molecular weight of NO₂</p>	lbm per 1000 lbm fuel

Name	Symbol	Description	Unit
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = \frac{M_{NO_2} \times \frac{NO_x}{10^4} \times 1000}{(M_c + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	lbm per 1000 lbm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ where RS = smoke spot reflectance RW = reflectance of clean filter paper	
SMK NUMBER CORRECTED	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I.	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	lbm per 1000 lbm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	lbm per 1000 lbm fuel
NRE CNO EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	lbm per 1000 lbm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO_x}$	lbm per 1000 lbm fuel
FCO	F_{CO}	CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$	

Name	Symbol	Description
FCO Continued		$\begin{cases} \frac{e^{T_{b,obs}/330}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} & \text{for modes 1,2,7,8} \\ \frac{e^{T_{b,obs}/(400 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} & \text{for modes 3,4,5,6} \end{cases}$ <p>where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$</p> $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see Fig 4)</p> <p>Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p>Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{ref} = 0.0098$ $N_{2,ref} = 11,393 \text{ rpm}$ $P_{a,ref} = 30.05 \text{ in Hg abs}$ $T_{a,ref} = 517.1 \text{ deg R}$

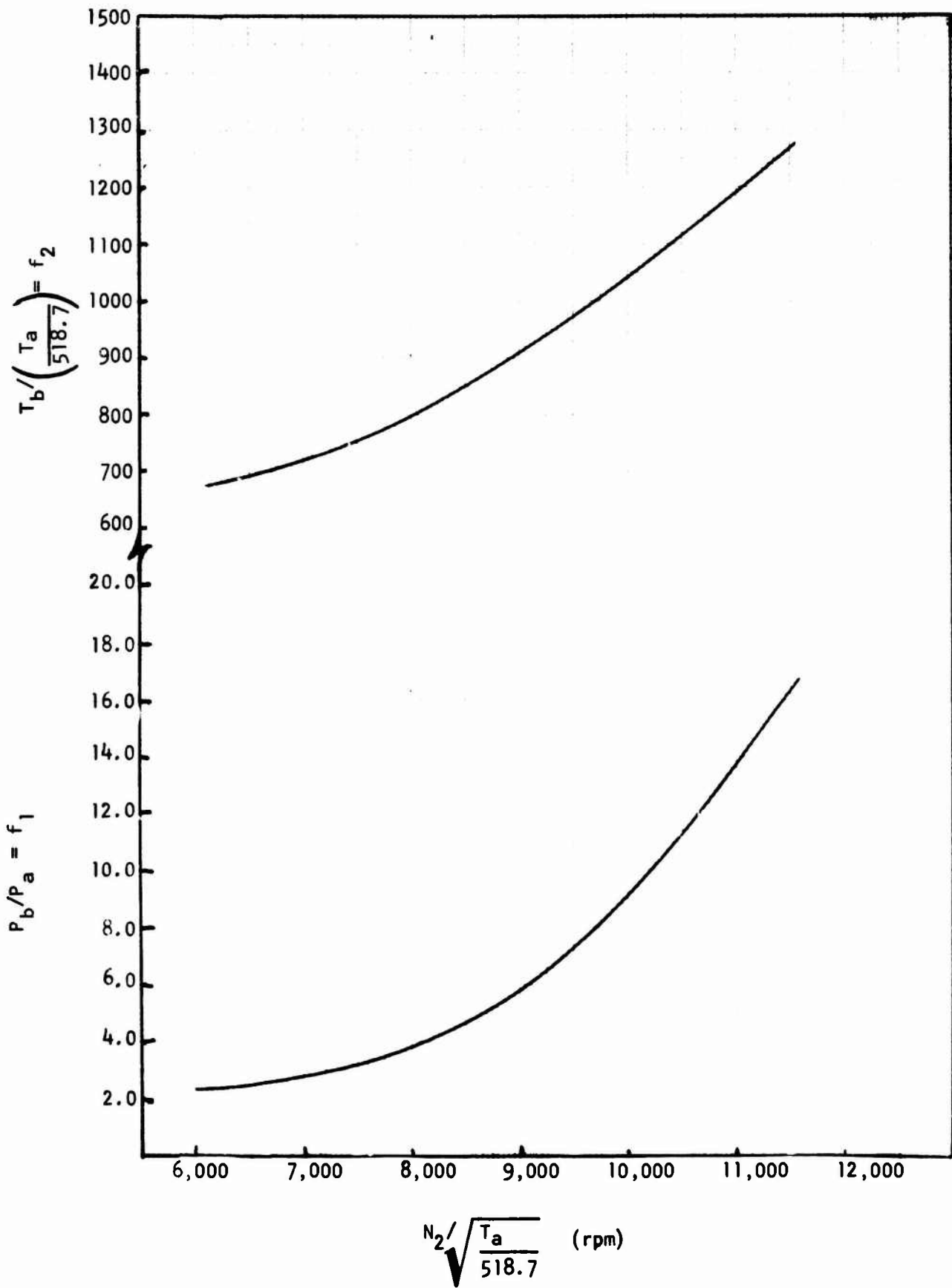


Figure 4. Typical Production Engine Performance

Name	Symbol	Description
FHC	F_{HC}	HC emission factor $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,obs}/(400 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}}$
FNO	F_{NO}	NO emission factor $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00200(T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	Corrected CO emission factor $(F_{CO})_{std} = \frac{P_{b,std}}{P_{b,ref}}^{3/4} \cdot \frac{T_{b,std}}{T_{b,ref}}^{1/2} \cdot \frac{e^{T_{b,std}/330}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes 1,2,7, 8}$ $\left\{ \frac{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \right\} \text{ for modes 3,4,5,6}$ <p>where:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \text{ and } \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p>

Name	Symbol	Description
STD FCO Continued		$P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,std} = f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in HC abs and 0.0 lbm H₂O/1bm dry air), or a value corrected to standard day condition.</p>
STD FHC	$(F_{HC})_{std}$	<p>Corrected HC emission index</p> $(F_{HC})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,std}/(400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4)}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}}$
STD FNO	$(F_{NO})_{std}$	<p>Corrected NO emission index</p> $(F_{NO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{1/2} \cdot e^{0.00200 (T_{b,std} - T_{b,ref})}$
API		<p>Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.</p>
H/C RATIO	a	<p>Hydrogen-carbon ratio as determined using a Danda Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.</p>
FIA		<p>Fluorescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.</p>

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. A variation in test procedure invalidated the hydrocarbon results for the baseline tests of units 1, 2 and 5. Blanks were left in the tables in these cases.
5. The calibration gas concentrations for NO and NO_x were questionable for the nominal 50 ppm bottle for tests conducted between 10/10/75 and 6/14/76; and for the nominal 200 ppm bottle for tests conducted between 11/18/75 and 4/22/76. The test data was processed in two different ways: the first assuming the stated concentrations were correct; and the second using calculated values for the concentrations. This is discussed in detail in Appendix IV of Volume I. In the following tables, the concentrations and emission indexes of NO and NO_x are based on the stated calibration gas concentrations, while the NREC corrected emission indexes are based on the calculated values.

6. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode Number	Quantity
10	"Baseline"	2	Fuel Flow
11	"1800-Hour"	1	N ₂
14	"600-Hour"	4	N ₁
14	"1200-Hour"	3,4	Fuel Flow
15	"600-Hour"	4	N ₂
16	"Baseline"	3-6	Fuel Flow
16	"600-Hour"	8	Fuel Flow
19	"Baseline"	3	Fuel Flow
20	"1200-Hour"	4	EPR
21	"Baseline"	3	Fuel Flow

JT8D-7 * BASELINE TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
1	16075.	0.	515.2	29.90	.007550
2	21202.	0.	515.2	29.92	.007540
3	14560.	0.	515.2	29.94	.007540
4	16929.	0.	514.2	30.09	.007190
5	19612.	0.	514.2	30.10	.007190
6	20741.	0.	514.2	30.09	.007190
7	19607.	0.	517.7	29.99	.007490
8	13734.	0.	517.7	30.00	.007490
9	20248.	0.	517.7	30.00	.007490
10	22490.	0.	517.7	30.11	.007340
11	22577.	0.	517.7	30.14	.007330
12	21222.	0.	517.7	30.17	.007330
13	20709.	0.	519.2	30.22	.006430
14	20823.	0.	519.2	30.27	.007070
15	13531.	0.	519.2	30.08	.008120
16	18405.	0.	520.7	29.82	.007850
17	22250.	0.	520.7	29.82	.007850
18	20417.	0.	516.2	30.10	.007690
19	20703.	0.	516.2	30.10	.007690
20	20780.	0.	516.2	30.10	.007690
21	24358.	0.	520.2	30.10	.008570

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	56.00	32.11	56.19
2	30.00	54.00	30.10	54.18
3	35.25	58.00	35.37	58.20
4	31.30	55.25	31.44	55.49
5	31.20	55.05	31.34	55.29
6	30.85	54.85	30.98	55.09
7	32.35	56.20	32.38	56.25
8	31.40	55.40	31.43	55.45
9	34.30	57.50	34.33	57.56
10	34.00	57.50	34.03	57.56
11	29.50	53.20	29.53	53.25
12	32.00	56.20	32.03	56.25
13	32.00	56.00	31.98	55.97
14	30.50	54.00	30.49	53.97
15	33.00	56.50	32.98	56.47
16	30.00	54.00	29.94	53.90
17	32.00	55.00	31.94	54.89
18	31.50	53.50	31.58	53.63
19	-28.50	-52.00	-28.57	-52.13
20	30.00	53.00	30.07	53.13
21	-37.00	-61.00	-36.95	-60.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1100.	-.2370	.3160	1158.	1.055	1118.
2	1025.	.3020	.3270	1140.	1.050	1044.
3	1160.	.3280	.2930	1140.	1.050	1213.
4	1118.	.3420	.3300	1140.	1.050	1077.
5	1100.	.3640	.3260	1158.	1.050	1068.
6	1075.	.3390	.3250	1153.	1.050	1058.
7	1133.	.3060	.3200	1140.	1.050	1118.
8	1035.	.2860	.3070	1140.	1.050	1079.
9	1153.	.2960	.2970	1140.	1.050	1180.
10	1165.	.3360	.3030	1143.	1.050	1175.
11	-980.	.2590	.3210	1185.	1.050	1018.
12	1055.	-.3740	.3020	1158.	1.060	1111.
13	1090.	.2640	.3120	1142.	1.050	1096.
14	1050.	.2670	.3250	1158.	1.050	1027.
15	1125.	.3150	.3080	1136.	1.060	1125.
16	1050.	.2980	.3410	1140.	1.040	1041.
17	1060.	.3040	.3090	1140.	1.050	1061.
18	1125.	.3070	.3300	1176.	-1.030	1026.
19	-1000.	.3270	.3440	1167.	-1.030	997.
20	1025.	.2940	.3260	1149.	1.040	1016.
21	-1340.	.2920	.3320	1176.	1.060	-1347.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1096.	-.2380	.3180	1166.	1117.
2	1021.	.3040	.3290	1147.	1044.
3	1157.	.3310	.2950	1147.	1213.
4	1119.	.3450	.3320	1150.	1084.
5	1102.	.3670	.3290	1168.	1074.
6	1076.	.3420	.3270	1168.	1064.
7	1135.	.3070	.3210	1142.	1120.
8	1037.	.2860	.3080	1142.	1082.
9	1155.	.2970	.2980	1142.	1183.
10	1171.	.3370	.3040	1146.	1183.
11	-986.	.2600	.3220	1187.	1025.
12	1063.	-.3750	.3020	1160.	1120.
13	1101.	.2640	.3120	1140.	1107.
14	1063.	.2660	.3250	1157.	1039.
15	1132.	.3140	.3080	1135.	1131.
16	1049.	.2970	.3400	1135.	1038.
17	1058.	.3030	.3080	1135.	1058.
18	1129.	.3080	.3310	1181.	1031.
19	-1004.	.3290	.3460	1172.	1003.
20	1029.	.2950	.3270	1154.	1023.
21	-1350.	.2910	.3310	1172.	-1355.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.444	136.7	-0.0	1.4	-3.7
2	.582	153.0	-0.0	1.5	4.8
3	.658	150.1	-39.9	1.2	6.4
4	.688	157.5	28.6	2.0	6.6
5	.688	-192.1	-0.0	.9	5.8
6	.680	161.1	-40.5	.3	6.3
7	.619	133.4	24.6	1.6	5.8
8	.575	131.0	30.6	.6	4.4
9	.602	105.9	20.4	1.7	6.3
10	.688	108.9	11.2	2.6	7.6
11	.520	131.6	21.5	1.0	5.3
12	-.763	138.1	15.8	2.3	8.5
13	.538	96.1	11.6	1.5	5.7
14	.537	128.2	21.7	1.1	5.4
15	.631	145.4	28.2	-6.0	6.3
16	.593	164.8	30.9	1.5	5.7
17	.617	107.1	13.5	2.3	6.8
18	.614	170.1	32.3	1.7	5.9
19	.659	162.4	26.9	1.7	6.1
20	.589	152.7	30.9	2.0	5.6
21	.597	84.4	12.6	4.3	9.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	-2842.	-55.72	-0.00	.91	2.46	.94
2	-2920.	48.87	-0.00	.77	2.51	2.14
3	3032.	44.00	-20.08	.56	3.06	2.56
4	3048.	44.41	13.86	.95	3.04	2.29
5	-2863.	50.87	-0.00	.37	2.53	2.67
6	3030.	45.72	-19.74	.13	2.92	.54
7	3058.	41.95	13.31	.82	3.00	1.34
8	3042.	44.16	17.74	.34	2.45	2.27
9	3075.	34.44	11.40	.92	3.37	2.01
10	3096.	31.18	5.52	1.21	3.57	2.83
11	3039.	48.93	13.76	.59	3.21	1.07
12	3085.	35.55	6.99	.97	3.60	1.08
13	3083.	35.09	7.29	.92	3.43	2.28
14	3048.	46.32	13.49	.67	3.19	1.20
15	3036.	44.51	14.86	3.04	3.19	2.40
16	-3016.	53.30	17.17	.78	3.02	.68
17	3073.	33.95	7.36	1.21	3.55	.13
18	3029.	-53.42	17.43	.86	3.04	1.74
19	3048.	47.83	13.60	.85	2.93	2.18
20	3034.	50.10	17.41	1.07	3.00	1.34
21	3097.	27.89	7.14	2.34	4.88	2.93

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	3.1810	2.4380	12.3390	3.2410	2.4810	14.3850
2	2.8870	2.2980	11.6490	2.9390	2.3390	13.5730
3	3.5510	2.8400	13.1820	3.6150	2.8900	15.3570
4	3.0750	2.4930	12.1820	3.1330	2.5400	14.1000
5	3.0460	2.5000	12.1140	3.1030	2.5470	14.0180
6	3.0160	2.4440	12.0420	3.0730	2.4900	13.9370
7	3.2400	2.5700	12.4800	3.2510	2.5780	14.4120
8	3.1180	2.4520	12.2000	3.1280	2.4590	14.0350
9	3.4670	2.7270	12.9960	3.4780	2.7350	15.0040
10	3.4760	2.7930	13.0550	3.4780	2.7950	15.0040
11	2.8070	2.1890	11.4970	2.8060	2.1880	13.2030
12	3.2540	2.6760	12.5560	3.2510	2.6740	14.4120
13	3.2400	2.5140	12.7320	3.2070	2.4890	14.2960
14	2.9420	2.2970	11.8790	2.9090	2.2720	13.4900
15	3.3070	2.6310	12.4800	3.2850	2.6140	14.5020
16	2.9200	2.3150	11.6360	2.8980	2.2990	13.4590
17	3.0670	2.4340	11.9830	3.0440	2.4160	13.8580
18	2.8360	2.2650	11.4950	2.8600	2.2830	13.3530
19	-2.6690	2.1590	-11.0860	-2.6900	2.1770	-12.8760
20	2.7660	2.1970	11.3250	2.7890	2.2150	13.1550
21	-4.3130	-3.3490	-14.5120	-4.2600	-3.3080	-16.9530

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-54.69	-0.00	1.06	2.87	.94
2	48.00	-0.00	.89	2.93	.92
3	43.22	-19.73	.65	3.57	1.29
4	43.58	13.60	1.10	3.52	1.84
5	49.93	-0.00	.43	2.93	2.67
6	44.87	-19.38	.15	3.37	.54
7	41.81	13.26	.95	3.46	1.34
8	44.03	17.68	.39	2.83	2.27
9	34.33	11.36	1.07	3.89	1.48
10	31.17	5.52	1.39	4.11	2.83
11	48.95	13.77	.68	3.69	1.07
12	35.58	7.00	1.12	4.13	.74
13	35.44	7.37	1.03	3.85	1.29
14	46.85	13.64	.76	3.62	1.20
15	44.81	14.95	3.53	3.71	2.40
16	-53.70	17.30	.90	3.49	.68
17	34.21	7.41	1.40	4.11	.13
18	-52.99	17.29	.99	3.54	1.11
19	47.45	13.49	.98	3.41	2.18
20	49.69	17.28	1.24	3.49	1.34
21	28.24	7.23	2.73	5.70	2.93

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	35.50	60.00	35.62	60.20
2	-34.00	-58.00	-34.12	-58.20
3	-39.25	-62.00	-39.38	-62.21
4	37.00	60.80	37.16	61.07
5	35.00	59.00	35.15	59.26
6	37.00	60.80	37.16	61.07
7	38.00	60.80	38.04	60.86
8	35.00	59.10	35.03	59.16
9	37.20	60.10	37.24	60.16
10	37.00	61.00	37.04	61.06
11	-34.10	59.00	-34.13	59.06
12	36.00	60.80	36.03	60.86
13	37.00	60.50	36.98	60.47
14	35.00	59.00	34.98	58.97
15	36.00	60.20	35.94	60.17
16	-34.00	-58.00	-33.93	-57.89
17	36.00	59.00	35.93	58.89
18	34.50	-58.00	34.58	-58.14
19	-31.50	-56.00	-31.58	-56.14
20	34.50	-57.50	34.58	-57.64
21	-41.00	-65.00	-40.94	-64.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1255.	-.2040	.3170	1140.	1.050	1313.
2	-1150.	.2680	.2990	1122.	1.050	1214.
3	1360.	.3300	.3260	1149.	1.060	-1432.
4	1340.	.3230	.3290	1122.	1.060	1356.
5	1230.	.3240	.3100	1140.	1.060	1257.
6	1294.	.3190	.3180	1158.	1.060	1356.
7	1340.	.2820	.3270	1158.	1.070	1348.
8	1175.	.2810	.2990	1140.	1.050	1256.
9	1318.	.2990	.3250	1140.	1.070	1306.
10	1345.	.3260	.3320	1176.	1.060	1355.
11	-1150.	.2330	.2980	1158.	1.060	1246.
12	1230.	-.3620	.3070	1176.	1.070	1341.
13	1280.	.2340	.3150	1149.	1.060	1315.
14	1165.	.2380	-.2940	1122.	1.060	1236.
15	1255.	.3080	.3150	1136.	1.050	1303.
16	1200.	.2990	.3180	1140.	1.050	-1203.
17	1250.	.2950	.3170	1140.	1.070	1251.
18	1275.	.2830	.3250	1167.	-1.040	-1203.
19	-1100.	.3090	.3220	1140.	-1.030	-1108.
20	1175.	.2750	.2990	1122.	1.050	-1180.
21	-1550.	.2980	-.3600	1179.	1.070	-1585.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1250.	-.2060	.3190	1147.	1312.
2	-1146.	.2700	.3010	1129.	1213.
3	1356.	.3330	.3290	1157.	-1433.
4	1342.	.3260	.3320	1132.	1364.
5	1232.	.3270	.3130	1150.	1264.
6	1296.	.3220	.3200	1168.	1364.
7	1342.	.2830	.3280	1160.	1352.
8	1177.	.2810	.2990	1142.	1260.
9	1320.	.3000	.3260	1142.	1309.
10	1352.	.3270	.3320	1178.	1364.
11	-1157.	-.2330	.2980	1160.	1255.
12	1239.	-.3630	.3070	1178.	1352.
13	1293.	-.2330	.3150	1148.	1328.
14	1179.	.2370	-.2940	1121.	1251.
15	1262.	.3070	.3140	1135.	1310.
16	1198.	.2980	.3160	1135.	-1199.
17	1248.	.2940	.3160	1135.	1247.
18	1280.	.2840	.3260	1172.	1211.
19	-1104.	.3110	.3240	1145.	-1115.
20	1179.	.2760	.3010	1127.	-1187.
21	-1561.	.2970	-.3590	1176.	-1594.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-0.404	68.5	-0.0	1.9	4.1
2	.534	93.3	-0.0	1.9	5.2
3	.670	105.6	-27.0	2.9	7.8
4	.659	103.1	16.1	3.2	7.6
5	.645	-125.1	-0.0	1.0	6.2
6	.649	100.3	-21.7	1.4	7.2
7	.576	92.6	13.3	2.4	6.6
8	.571	97.8	17.7	1.4	5.5
9	.610	89.2	16.3	2.5	6.9
10	.668	96.9	10.9	3.2	8.0
11	.474	74.9	8.6	1.8	5.5
12	-0.743	104.5	10.4	3.4	9.2
13	.478	65.2	6.9	2.3	5.9
14	.484	81.8	12.1	1.8	5.4
15	.623	111.7	17.2	-6.6	6.8
16	.605	-118.0	17.9	2.0	6.6
17	.603	83.1	8.6	3.5	7.6
18	.570	-124.4	-26.6	2.5	6.2
19	.629	-117.6	16.4	2.3	6.4
20	.558	103.1	16.4	2.5	5.7
21	.613	66.7	9.4	5.5	9.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
1	-2997.	32.37	-0.00	1.50	3.20	2.67
2	-3020.	33.55	-0.00	1.15	3.06	2.70
3	3070.	30.79	-13.51	1.41	3.71	2.16
4	3085.	30.71	8.22	1.57	3.73	2.40
5	-3011.	37.17	-0.00	-.47	3.04	-4.23
6	3077.	30.24	-11.25	.68	3.59	2.69
7	3089.	31.61	7.82	1.37	3.68	2.93
8	3079.	33.56	10.45	.80	3.11	1.08
9	3091.	28.75	9.02	1.32	3.64	2.41
10	3100.	28.64	5.52	1.55	3.88	2.28
11	3088.	31.02	6.12	1.23	3.72	-4.45
12	3104.	27.77	4.76	1.50	4.04	2.83
13	3102.	26.89	4.92	1.59	4.01	1.07
14	3083.	33.19	8.44	1.22	3.58	.40
15	-3066.	34.99	9.26	3.38	3.50	1.87
16	-3060.	-37.96	9.90	1.05	3.46	1.74
17	3091.	27.10	4.80	1.86	4.07	1.34
18	-3051.	-42.39	-15.56	1.42	3.45	2.00
19	3079.	36.67	8.77	1.17	3.30	.14
20	3076.	36.18	9.88	1.44	3.28	1.47
21	3112.	21.55	5.20	2.92	5.05	-4.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.0060	2.9820	14.1700	4.0830	3.0360	16.5260
2	-3.5490	-2.7480	13.1740	-3.6150	-2.7970	-15.3570
3	-4.5180	-3.5800	15.2390	-4.6030	-3.6470	-17.7620
4	4.2140	3.3370	14.7160	4.2990	3.4030	17.0460
5	3.7810	3.0100	13.7870	3.8550	3.0680	15.9630
6	4.2140	3.3300	14.7160	4.2990	3.3960	17.0460
7	4.2310	3.2720	14.6510	4.2460	3.2840	16.9210
8	3.8190	2.9650	13.7730	3.8320	2.9750	15.9030
9	4.0590	3.1740	14.2890	4.0720	3.1840	16.4990
10	4.2940	3.4010	14.8270	4.2970	3.4030	17.0420
11	3.8090	2.8840	13.7950	3.8080	2.8830	15.8440
12	4.2500	3.4370	14.7390	4.2460	3.4340	16.9210
13	4.1920	3.1590	14.8620	4.1490	3.1280	16.6870
14	3.8320	2.9070	13.9090	3.7880	2.8750	15.7940
15	4.1030	3.2210	14.2060	4.0760	3.2000	16.5070
16	3.5770	2.8110	-13.1340	-3.5490	-2.7900	-15.1870
17	3.7990	2.9710	13.6160	3.7680	2.9480	15.7440
18	3.5720	2.7870	13.1890	-3.6030	-2.8100	-15.3260
19	-3.2050	-2.5480	-12.3630	-3.2320	-2.5690	-14.3630
20	-3.4660	-2.6960	-12.9530	-3.4960	-2.7180	-15.0500
21	-5.5770	-4.2910	-16.9270	-5.5060	-4.2380	-19.7700

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	31.76	-0.00	1.75	3.74	2.67
2	32.93	-0.00	1.34	3.56	2.70
3	30.22	-13.26	1.65	4.33	.93
4	30.10	8.06	1.82	4.32	.55
5	-36.46	-0.00	-.55	3.52	-4.23
6	29.64	-11.04	.79	4.16	2.69
7	31.49	7.79	1.58	4.26	2.93
8	33.45	10.42	.92	3.59	1.08
9	28.66	8.99	1.52	4.21	2.41
10	28.62	5.52	1.78	4.46	2.28
11	31.02	6.13	1.41	4.28	-4.45
12	27.79	4.76	1.72	4.63	2.83
13	27.16	4.96	1.79	4.51	1.07
14	33.57	8.54	1.39	4.06	.40
15	35.22	9.32	3.93	4.07	1.87
16	-38.26	9.97	1.21	4.00	1.74
17	27.32	4.84	2.16	4.70	1.34
18	-42.03	-15.44	1.65	4.01	2.00
19	-36.36	8.70	1.35	3.83	.14
20	35.88	9.80	1.68	3.81	1.47
21	21.83	5.26	3.41	5.89	-4.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	93.00	94.00	93.32	94.32
2	91.50	92.75	91.81	93.06
3	93.50	92.00	93.82	92.31
4	93.00	-91.35	93.41	91.75
5	-90.65	93.00	-91.05	93.41
6	93.60	93.00	94.01	93.41
7	94.50	92.00	94.59	92.09
8	93.20	94.00	93.29	94.09
9	93.25	92.65	93.34	92.74
10	92.50	93.50	92.59	93.59
11	92.80	93.50	92.89	93.59
12	93.50	93.00	93.59	93.09
13	-91.00	93.00	-90.96	92.96
14	92.00	92.00	91.96	91.96
15	93.50	93.40	93.45	93.36
16	92.00	94.50	91.82	94.32
17	92.00	92.50	91.82	92.32
18	93.50	92.70	93.73	92.92
19	-91.00	93.00	-91.22	93.22
20	94.00	94.00	94.23	94.23
21	92.00	93.00	91.87	92.87

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8210.	.8780	.7130	1428.	1.960	13809.
2	7950.	.8270	.6960	-1392.	-1.940	-13602.
3	8350.	.9500	.7220	1428.	1.960	13791.
4	8500.	1.0050	.7320	1428.	1.980	13921.
5	-7600.	.8340	-.6650	1410.	1.980	13916.
6	8200.	.9900	.7040	1428.	1.980	13921.
7	8350.	.9910	.7190	1437.	1.980	13967.
8	8175.	.9040	.7090	1464.	-2.025	-14428.
9	8185.	.9050	.7100	1428.	1.980	13963.
10	8140.	.9270	.7060	1426.	1.980	13912.
11	8120.	.8140	.7030	1464.	1.980	13898.
12	8200.	.9650	.7060	1428.	1.980	13886.
13	8390.	.8840	.7360	1437.	1.960	-13663.
14	8000.	.8150	.6940	1430.	1.960	-13640.
15	8100.	.9670	.7010	1419.	1.980	13926.
16	8100.	.7880	.7150	1428.	-1.950	13746.
17	7900.	.9050	.6970	-1392.	-1.950	13746.
18	8450.	.9090	.7280	1446.	1.980	13916.
19	8150.	-.7810	.7140	-1383.	1.980	13916.
20	8150.	.8700	.7000	1410.	1.980	13916.
21	8150.	.9870	.7120	1428.	-1.950	-13620.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	8177.	.8840	.7170	1437.	13800.
2	7922.	.8320	.7010	-1401.	-13600.
3	8327.	.9560	.7270	1437.	13800.
4	8511.	1.0140	.7380	1440.	14000.
5	-7612.	.8410	-.6710	1422.	14000.
6	8211.	.9990	.7100	1440.	14000.
7	8361.	.9930	.7210	1439.	14000.
8	8189.	.9060	.7100	1467.	-14467.
9	8199.	.9070	.7110	1430.	14000.
10	8184.	.9280	.7080	1429.	14000.
11	8172.	.8150	.7040	1467.	14000.
12	8259.	.9670	.7070	1430.	14000.
13	8478.	.8830	.7350	1435.	13800.
14	8097.	.8140	.6930	1428.	13800.
15	8147.	.9660	.7000	1417.	14000.
16	8088.	-.7850	.7120	1422.	-13700.
17	7889.	.9010	.6950	-1386.	-13700.
18	8480.	.9130	.7310	1453.	14000.
19	8179.	-.7850	.7170	-1389.	14000.
20	8179.	.8740	.7030	1417.	14000.
21	8210.	.9840	.7100	1424.	-13700.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.835	-21.0	-0.0	81.5	81.7
2	1.726	19.1	-0.0	70.5	71.5
3	1.988	20.6	-11.6	85.5	87.0
4	2.107	20.1	-4.2	91.5	88.3
5	1.741	-21.2	-0.0	78.5	78.0
6	2.075	20.1	-6.3	95.4	91.5
7	2.080	19.9	2.3	-98.3	-100.6
8	1.897	19.5	-4.4	87.0	87.9
9	1.898	20.3	-4.5	89.2	91.5
10	1.945	18.7	1.6	91.8	93.7
11	1.702	16.2	1.5	75.7	80.2
12	2.026	17.6	1.2	91.9	92.5
13	1.853	17.1	1.1	85.4	87.2
14	1.707	19.4	1.7	74.2	76.3
15	2.021	18.1	1.4	90.0	-97.0
16	1.645	14.2	3.0	71.1	71.6
17	1.890	16.1	1.4	80.5	81.5
18	1.907	17.1	2.3	-96.6	-100.9
19	-1.636	17.3	2.2	64.9	69.0
20	1.824	17.3	1.4	80.1	81.1
21	2.073	10.4	2.8	85.2	89.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3144.	-2.29	-0.00	14.59	14.63	35.03
2	-3143.	2.22	-0.00	13.43	13.61	34.40
3	3147.	2.08	-2.00	14.15	14.40	32.35
4	3151.	1.91	-.69	14.31	14.31	35.07
5	-3143.	-2.43	-0.00	14.82	14.82	29.87
6	3150.	1.94	-1.04	15.14	15.14	32.45
7	3156.	1.92	.39	-15.58	-15.95	31.38
8	3155.	2.06	-.81	15.13	15.29	30.48
9	3155.	2.15	-.82	-15.49	-15.91	30.59
10	3157.	1.93	.28	-15.58	-15.00	34.00
11	3150.	1.90	.31	14.65	15.52	29.65
12	3157.	1.75	.20	14.96	15.06	35.03
13	3155.	1.85	.20	15.19	15.51	31.54
14	3154.	-2.28	.34	14.33	14.73	30.69
15	-3143.	1.80	.24	14.63	-15.77	30.32
16	-3142.	1.73	-.63	14.19	14.30	27.52
17	-3143.	1.70	.26	13.99	14.16	30.87
18	3157.	1.80	.41	-16.73	-17.46	28.30
19	3156.	2.12	.46	13.09	13.91	28.76
20	3157.	1.90	.26	14.50	14.68	28.57
21	3158.	1.01	.47	13.57	14.18	-51.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	109.1100	109.1100	92.0800	113.5420	113.5420	108.1510
2	89.8060	89.8060	85.2500	93.2450	93.2450	100.0630
3	97.5300	97.5300	81.5890	101.4570	101.4570	95.6950
4	98.5700	98.5700	79.2240	103.4540	103.4540	92.5130
5	93.3080	93.3080	87.3990	97.4980	97.4980	102.0890
6	114.3080	114.3080	87.3800	120.0510	120.0510	102.0890
7	103.0350	103.0350	81.6090	104.1190	104.1190	94.4250
8	112.6930	112.6930	92.0340	113.8080	113.8080	106.4800
9	98.2930	98.2930	84.8510	99.2450	99.2450	98.1600
10	110.3470	110.3470	89.6090	111.1430	111.1430	103.1940
11	95.5520	95.5520	89.6680	96.0880	96.0880	103.1940
12	110.6240	110.6240	87.1270	111.2960	111.2960	100.2120
13	99.5670	99.5670	88.6340	98.3540	98.3540	99.4200
14	82.8010	82.8010	82.5750	-81.7070	-81.7070	93.6730
15	115.1680	115.1680	87.6840	114.1400	114.1400	101.7850
16	101.9350	101.9350	93.9160	100.1330	100.1330	108.1480
17	96.2250	96.2250	83.1290	94.4550	94.4550	95.7530
18	99.5320	99.5320	84.9860	101.9230	101.9230	99.2380
19	87.4240	87.4240	86.5000	89.3450	89.3450	101.0110
20	108.2320	108.2320	92.0210	110.8130	110.8130	107.4780
21	113.7780	113.7780	84.8950	111.4290	111.4290	98.8960

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-2.20	-0.00	17.14	17.19	35.03
2	-2.14	-0.00	15.76	15.97	34.40
3	2.00	-1.92	16.60	16.89	32.35
4	1.82	-.66	16.71	16.71	33.90
5	-2.33	-0.00	17.31	17.31	29.87
6	1.85	-.99	17.69	17.69	32.45
7	1.90	.38	-18.03	-18.46	31.38
8	2.04	-.80	17.50	17.69	30.48
9	-2.13	-.81	17.92	-18.40	30.59
10	1.92	.28	-17.94	-18.32	31.78
11	1.89	.31	16.86	17.86	29.65
12	1.74	.20	17.21	17.32	33.61
13	1.87	.20	17.04	17.40	31.54
14	-2.31	.34	16.26	16.71	30.69
15	1.81	.25	16.98	-18.31	30.32
16	1.76	-.64	16.34	16.47	-27.52
17	1.74	.26	16.12	16.31	30.77
18	1.76	.40	-19.53	-20.39	28.30
19	2.08	.45	15.29	16.24	28.76
20	1.86	.25	16.93	17.15	28.57
21	1.03	.48	15.81	16.52	37.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT -----	N1 SPEED PER CENT -----	N2 SPEED PER CENT -----	CORR N1 PER CENT -----	CORR N2 PER CENT -----
1	88.00	92.00	88.30	92.31
2	87.20	90.00	87.50	90.31
3	88.00	90.00	88.30	90.31
4	88.50	89.50	88.89	89.89
5	-86.40	91.10	86.78	91.50
6	88.00	90.60	88.38	91.00
7	89.00	90.20	89.09	90.29
8	-86.15	90.85	-86.23	90.94
9	88.00	90.80	88.08	90.89
10	87.30	91.00	87.38	91.09
11	87.50	91.50	87.58	91.59
12	88.00	91.00	88.08	91.09
13	-86.00	90.00	-85.96	89.96
14	88.00	90.50	87.96	90.46
15	88.50	91.00	88.46	90.96
16	86.50	92.00	-86.33	91.82
17	87.00	90.00	86.83	89.83
18	87.50	90.20	87.71	90.42
19	88.00	92.00	88.21	92.22
20	88.50	91.50	88.71	91.72
21	87.50	91.00	87.37	90.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	7000.	.7060	.6340	1374.	-1.780	12098.
2	-6450.	.6790	-.5880	1329.	-1.770	-11902.
3	6938.	.7760	.6270	1356.	-1.780	11992.
4	-7250.	.8290	.6480	1356.	1.800	12131.
5	-6600.	.6870	.6020	1338.	1.800	12127.
6	6900.	.8070	.6200	1356.	1.800	12131.
7	7030.	.8170	.6310	1374.	1.800	12172.
8	6610.	.6940	.6100	1356.	-1.770	-11868.
9	6940.	.7510	.6290	1356.	1.800	12167.
10	6920.	.7700	.6290	1356.	1.800	12123.
11	6940.	.6540	.6290	1392.	1.800	12111.
12	6980.	.7900	.6290	1374.	1.800	12101.
13	6990.	.7210	.6440	1379.	1.800	12079.
14	6950.	.6710	.6260	1377.	1.790	-11960.
15	6800.	.7910	.6130	1354.	1.800	12135.
16	6700.	-.6140	.6230	1356.	-1.780	12040.
17	-6600.	.7420	.6110	1329.	-1.780	12040.
18	7000.	.7190	.6340	1365.	1.800	12127.
19	6850.	.6810	.6170	1338.	1.800	12127.
20	6700.	.6830	.6010	1338.	1.800	12127.
21	6900.	-.8470	.6290	1374.	-1.750	-11632.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	6972.	.7110	.6380	1383.	-12000.
2	-6427.	.6830	-.5920	-1338.	-11900.
3	6919.	.7810	.6320	1365.	-12000.
4	-7259.	.8360	-.6540	1368.	12200.
5	6611.	.6930	.6070	1349.	12200.
6	6909.	.8140	.6250	1368.	12200.
7	7040.	.8180	.6330	1376.	12200.
8	6621.	.6950	.6110	1358.	-11900.
9	6952.	.7520	.6300	1358.	12200.
10	6957.	.7720	.6310	1358.	12200.
11	6984.	.6550	.6310	1394.	12200.
12	7030.	.7910	.6310	1376.	12200.
13	7063.	.7200	.6430	1378.	12200.
14	7035.	.6700	.6260	1376.	12100.
15	6840.	.7900	.6130	1353.	12200.
16	6690.	-.6120	.6210	1350.	-12000.
17	-6591.	.7390	.6090	-1324.	-12000.
18	7025.	.7230	.6370	1371.	12200.
19	6875.	.6840	.6200	1344.	12200.
20	6724.	.6860	.6040	1344.	12200.
21	6950.	.8440	.6280	1370.	-11700.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.472	-21.5	-0.0	56.0	58.9
2	1.414	19.5	-0.0	48.7	51.3
3	1.621	20.4	-9.1	62.8	63.6
4	1.735	20.0	-3.2	-69.8	68.8
5	1.432	20.2	-0.0	55.5	56.9
6	1.687	-21.2	-5.2	65.5	65.3
7	1.712	19.8	2.1	-70.6	-73.4
8	1.451	19.9	-4.1	54.0	55.9
9	1.572	20.5	-4.2	64.0	68.3
10	1.614	19.2	1.3	65.5	69.8
11	1.365	16.4	1.6	52.0	56.0
12	1.655	18.9	1.3	63.1	65.0
13	1.508	18.5	1.0	59.2	62.2
14	1.403	19.1	1.4	53.6	56.7
15	1.650	18.6	1.5	64.1	68.5
16	-1.280	14.9	2.6	48.5	49.8
17	1.547	16.6	1.7	60.3	61.1
18	1.506	17.4	1.9	65.3	69.0
19	1.424	17.5	1.8	54.4	58.7
20	1.430	17.5	1.2	53.6	55.5
21	-1.776	11.3	2.2	63.0	67.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3142.	-2.92	-0.00	12.50	13.15	32.43
2	-3141.	2.75	-0.00	11.32	11.92	30.43
3	3147.	2.51	-1.94	12.73	12.90	30.69
4	3150.	2.31	.64	13.24	13.24	31.82
5	-3145.	-2.82	-0.00	12.74	13.07	29.33
6	3149.	2.52	-1.07	12.77	12.77	31.33
7	3156.	2.33	.42	-13.60	-14.14	30.45
8	3153.	2.76	-.97	12.28	12.70	26.23
9	3154.	2.62	-.92	-13.42	-14.33	30.19
10	3156.	2.39	.27	13.40	-14.28	33.11
11	3149.	2.41	.40	12.53	13.50	30.09
12	3156.	2.30	.28	12.57	12.96	33.29
13	3154.	2.46	.4	12.94	13.61	30.00
14	3153.	2.73	.35	12.59	13.32	28.38
15	-3142.	2.26	.30	12.76	13.63	29.24
16	-3141.	2.33	-.71	12.44	12.78	-24.93
17	-3142.	2.14	.37	12.80	12.98	28.38
18	3156.	2.32	.43	-14.31	-15.12	26.28
19	3155.	2.47	.45	12.60	13.60	25.81
20	3156.	2.46	.28	12.36	12.80	27.15
21	3157.	1.28	.43	11.72	12.50	36.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTED-7 * BASELINE TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	72.3700	72.3700	81.5170	74.9530	74.9530	95.6950
2	57.6060	57.6060	72.1890	59.5550	59.5550	84.6760
3	64.2230	64.2230	72.2290	66.4800	66.4800	84.6760
4	65.1250	65.1250	70.6970	67.9070	67.9070	82.5090
5	65.2060	65.2060	78.0510	67.7920	67.7920	91.1170
6	71.0820	71.0820	75.6910	74.1250	74.1250	88.3670
7	68.6770	68.6770	73.1100	69.2900	69.2900	84.5810
8	63.7810	63.7810	76.1250	64.2900	64.2900	88.0540
9	67.6750	67.6750	75.8920	68.2380	68.2380	87.7840
10	70.7960	70.7960	77.1820	71.2000	71.2000	88.8680
11	65.3300	65.3300	79.6210	65.6110	65.6110	91.6190
12	72.5400	72.5400	77.2750	72.8630	72.8630	88.8680
13	60.5370	60.5370	73.8550	59.8280	59.8280	82.8510
14	60.3920	60.3920	75.3450	59.6140	59.6140	85.4760
15	72.3670	72.3670	75.9350	71.7570	71.7570	88.1540
16	65.0960	65.0960	80.6710	64.0950	64.0950	92.9280
17	61.2840	61.2840	71.3190	60.3000	60.3000	82.1780
18	61.6790	61.6790	73.0580	62.9180	62.9180	85.2730
19	70.6450	70.6450	81.5240	72.0670	72.0670	95.1850
20	67.4710	67.4710	79.1110	68.8210	68.8210	92.3590
21	77.3830	77.3830	75.2520	75.9070	75.9070	87.6810

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-2.82	-0.00	14.68	15.44	32.43
2	2.66	-0.00	13.28	13.98	30.43
3	2.43	-1.87	14.93	15.12	30.69
4	2.22	.62	15.46	15.46	31.82
5	-2.72	-0.00	14.87	15.25	29.33
6	2.41	-1.02	14.91	14.91	31.33
7	2.31	.42	-15.73	16.36	30.45
8	-2.73	-.96	14.20	14.69	26.23
9	2.59	-.91	15.52	-16.58	29.81
10	2.38	.27	15.42	-16.44	32.20
11	2.40	.40	14.42	15.53	30.09
12	2.29	.28	14.46	14.91	33.29
13	2.49	.24	14.52	15.27	30.00
14	-2.77	.35	14.28	15.11	28.38
15	2.28	.31	14.81	15.82	29.24
16	2.37	-.72	14.33	14.72	-24.93
17	2.18	.38	14.75	14.96	28.38
18	2.28	.42	-16.70	-17.64	26.28
19	2.42	.44	14.71	15.88	25.81
20	2.41	.28	14.43	14.94	27.15
21	1.30	.44	13.65	14.56	34.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * BASELINE TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	79.00	87.00	79.27	87.30
2	-77.00	85.50	-77.26	85.79
3	79.00	85.00	79.27	85.29
4	79.00	85.00	79.34	85.37
5	77.50	86.25	77.84	86.63
6	78.20	86.00	78.54	86.38
7	79.20	85.40	79.28	85.48
8	78.80	86.50	78.88	86.58
9	78.55	85.45	78.63	85.53
10	78.10	86.50	78.18	86.58
11	78.80	86.50	78.88	86.58
12	78.50	86.00	78.58	86.08
13	78.00	86.00	77.96	85.96
14	79.00	86.00	78.96	85.96
15	79.00	87.00	78.96	86.96
16	-77.00	87.00	-76.85	86.83
17	78.00	85.00	77.85	-84.84
18	79.00	86.00	79.19	86.21
19	78.50	87.00	78.69	87.21
20	79.00	86.50	79.19	86.71
21	77.50	86.00	-77.39	85.88

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	4870.	.4110	.5030	1248.	1.510	A298.
2	-4463.	.4170	.4760	1212.	-1.500	-A151.
3	4700.	.5310	.4840	1230.	1.510	A286.
4	4800.	.5380	.4910	1230.	1.520	A386.
5	4550.	.4500	.4770	1212.	1.520	A384.
6	4600.	.5220	.4770	1230.	1.520	A386.
7	4830.	-.3760	.4980	1230.	1.530	-A556.
8	4770.	.4880	.4950	1248.	-1.540	-A695.
9	4750.	.4730	.4950	1246.	1.520	A412.
10	4670.	.5000	.4890	1230.	1.520	A381.
11	4780.	.4140	.4940	1266.	1.520	A372.
12	4830.	.5130	.5010	1248.	1.520	A365.
13	4765.	.4640	.4990	1248.	-1.500	-A069.
14	4700.	.4190	.4830	1239.	1.510	-A196.
15	4750.	.5080	.4920	1239.	1.520	A389.
16	4600.	-.3860	.4990	1230.	-1.500	-A177.
17	4600.	.4810	.4900	1212.	-1.500	-A177.
18	4875.	.4510	.5010	1244.	1.520	A384.
19	4675.	.4500	.4840	1212.	1.520	A384.
20	4625.	.4160	.4750	1212.	1.520	A384.
21	4700.	.5200	.5000	1248.	-1.500	-A103.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A COR TT7 DEG R	COR THRUST LBF
1	4850.	.4140	.5060	1256.	8292.
2	-4447.	.4200	.4800	1220.	-8150.
3	4687.	.5350	.4880	1238.	8292.
4	4806.	.5420	.4950	1240.	8434.
5	4557.	.4540	.4820	1222.	8434.
6	4606.	.5270	.4810	1240.	8434.
7	4837.	-.3770	.4990	1232.	8576.
8	4778.	.4880	.4960	1250.	-8718.
9	4758.	.4740	.4960	1248.	8434.
10	4695.	.5010	.4900	1232.	8434.
11	4811.	.4150	.4950	1268.	8434.
12	4865.	.5140	.5020	1250.	8434.
13	4815.	.4640	.4990	1247.	-8150.
14	4757.	.4190	.4830	1238.	8292.
15	4778.	.5070	.4910	1238.	8434.
16	4593.	-.3840	.4970	1225.	-8150.
17	4593.	.4790	.4880	-1207.	-8150.
18	4892.	.4530	.5030	1250.	8434.
19	4692.	.4520	.4870	1218.	8434.
20	4642.	.4180	.4770	1218.	8434.
21	4734.	.5180	.4990	1244.	-8150.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.852	23.0	-0.0	23.8	26.1
2	.865	22.0	-0.0	21.5	24.4
3	1.105	-25.2	-8.3	31.3	35.1
4	1.121	21.8	3.0	-34.6	35.5
5	.935	-23.8	-0.0	25.2	29.0
6	1.087	23.5	-4.7	29.9	33.4
7	-.782	-28.3	2.7	19.7	23.2
8	1.017	22.0	-3.9	28.6	31.4
9	.986	22.2	-4.3	29.0	32.3
10	1.044	21.6	1.2	30.2	34.6
11	.862	18.0	1.4	24.0	27.6
12	1.071	22.1	1.5	30.1	33.4
13	.968	19.8	1.3	29.4	33.0
14	.874	21.0	1.5	24.0	26.9
15	1.055	22.2	1.7	32.6	34.9
16	-.801	16.9	2.4	21.9	24.3
17	1.000	18.1	2.0	30.3	32.2
18	.941	18.8	1.8	29.0	32.4
19	.939	19.1	1.5	25.7	28.9
20	.866	19.5	1.2	25.4	27.8
21	1.086	14.0	2.2	29.2	34.7

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	-3132.	-5.38	-0.00	9.16	10.02	25.54
2	-3135.	-5.08	-0.00	8.15	9.24	21.56
3	-3142.	4.57	-2.58	9.30	10.44	22.84
4	3147.	3.90	.92	-10.14	10.43	26.47
5	-3139.	-5.09	-0.00	8.86	10.19	23.47
6	3145.	4.33	-1.50	9.04	10.10	24.97
7	3146.	-7.24	-1.19	8.30	9.77	23.46
8	3150.	4.34	-1.32	9.27	10.17	22.67
9	3149.	4.51	-1.50	9.68	10.79	23.82
10	3153.	4.15	.40	9.54	10.93	25.56
11	3145.	4.18	.57	9.16	10.53	21.33
12	3153.	4.14	.50	9.25	10.27	26.49
13	3151.	4.09	.45	10.00	-11.23	22.95
14	3149.	4.83	.60	9.04	10.13	21.97
15	-3139.	4.20	.56	-10.15	10.84	23.80
16	-3137.	4.21	1.04	8.98	9.95	-16.89
17	-3139.	3.61	.68	9.96	10.58	22.27
18	3152.	4.01	.67	-10.16	-11.34	20.56
19	3153.	4.07	.56	9.00	10.14	21.60
20	3152.	4.53	.48	9.66	10.57	23.73
21	3155.	2.58	.69	8.87	10.55	26.17

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	33.1400	33.1400	60.1360	34.0830	34.0830	70.5090
2	28.7480	28.7480	54.7500	29.5400	29.5400	64.1480
3	30.3570	30.3570	53.1770	31.2180	31.2180	62.2630
4	30.6780	30.6780	53.6890	31.6900	31.6900	62.5670
5	32.0730	32.0730	58.0260	33.0900	33.0900	67.6340
6	33.3760	33.3760	57.1090	34.4850	34.4850	66.5750
7	27.4940	27.4940	54.4550	27.6560	27.6560	62.9780
8	33.7790	33.7790	58.3320	33.9910	33.9910	67.4510
9	30.0440	30.0440	54.6270	30.2270	30.2270	63.1630
10	34.2650	34.2650	58.6000	34.3880	34.3880	67.4510
11	31.7430	31.7430	58.6390	31.8200	31.8200	67.4510
12	33.0280	33.0280	56.8500	33.1020	33.1020	65.3550
13	31.5830	31.5830	57.7920	31.2330	31.2330	64.8410
14	30.3890	30.3890	57.1460	30.0160	30.0160	64.8410
15	36.1730	36.1730	59.4700	35.8920	35.8920	69.0490
16	32.1550	32.1550	59.4330	31.7530	31.7530	68.5120
17	28.8220	28.8220	52.5730	28.4550	28.4550	60.6210
18	31.2350	31.2350	56.4810	31.7170	31.7170	65.8740
19	34.4500	34.4500	60.1270	34.9920	34.9920	70.1400
20	31.8070	31.8070	58.2850	32.2910	32.2910	67.9850
21	33.0640	33.0640	55.3270	32.5340	32.5340	64.5000

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		-5.23			-0.00			10.74			11.75		25.54	
2		-4.94			-0.00			9.55			10.83		21.56	
3		4.44			-2.51			10.89			12.22		22.84	
4		3.78			.89			11.82			12.15		26.47	
5		-4.93			-0.00			10.32			11.88		23.47	
6		4.19			-1.45			10.53			11.78		24.97	
7		-7.20			-1.19			9.60			11.30		23.46	
8		4.31			-1.31			10.72			11.76		22.67	
9		4.48			-1.49			11.19			12.47		23.82	
10		4.13			.40			10.99			12.58		25.56	
11		4.17			.57			10.54			12.11		21.35	
12		4.13			.49			10.64			11.81		26.49	
13		4.14			.45			11.22			12.60		22.95	
14		-4.89			.60			10.26			11.50		21.97	
15		4.23			.56			11.78			12.59		23.80	
16		4.26			1.05			10.35			11.47		-16.89	
17		3.66			.69			11.48			12.20		22.27	
18		3.95			.66			11.85			13.23		20.56	
19		4.01			.55			10.50			11.83		21.60	
20		4.46			.47			11.26			12.33		23.73	
21		2.63			.70			10.34			12.29		26.17	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	61.50	78.00	61.71	78.26
2	61.00	77.00	61.21	77.26
3	62.00	76.25	62.21	76.51
4	62.70	77.10	62.97	77.44
5	60.50	77.40	60.76	77.74
6	60.80	77.20	61.07	77.54
7	61.20	76.50	61.26	76.57
8	61.85	78.00	61.91	78.08
9	61.20	77.00	61.26	77.77
10	61.50	78.00	61.56	78.08
11	60.80	77.50	60.86	77.57
12	61.20	77.50	61.26	77.57
13	61.50	77.50	61.47	77.46
14	60.00	76.50	59.97	76.46
15	63.00	78.50	62.97	78.46
16	-58.00	77.00	-57.89	76.85
17	60.00	76.00	59.88	-75.85
18	62.00	77.50	62.15	77.69
19	61.50	78.00	61.65	78.19
20	61.00	77.50	61.15	77.69
21	61.00	77.00	60.91	76.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	2525.	-.1680	.3600	1104.	-1.220	-4123.
2	2425.	.2110	.3490	1086.	-1.220	-4121.
3	2492.	.3020	.3510	-1140.	-1.220	-4117.
4	2680.	.2770	.3700	1086.	1.230	4256.
5	2375.	.2410	.3420	1086.	1.230	4254.
6	2450.	.2720	.3510	1086.	1.230	4256.
7	2490.	.2550	.3580	1068.	1.230	4270.
8	2583.	.2430	.3660	1107.	-1.250	-4588.
9	2553.	.2490	.3670	1122.	1.230	4269.
10	2520.	.2690	.3580	1104.	1.230	4253.
11	2470.	.2170	.3560	1122.	1.230	4249.
12	2525.	.2860	.3610	1113.	1.230	4245.
13	2555.	.2250	.3630	1104.	1.230	4238.
14	2370.	.2050	.3470	1086.	-1.220	-4072.
15	2610.	.2610	.3620	1104.	1.230	4257.
16	2410.	.2040	.3740	-1050.	-1.220	4134.
17	2350.	.2340	.3500	1068.	-1.220	4134.
18	2650.	.2210	.3720	1104.	1.230	4254.
19	2550.	.2620	.3620	1086.	1.230	4254.
20	2375.	-.1750	.3400	1068.	1.230	4254.
21	2500.	.2690	.3610	1113.	-1.220	-4096.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	2515.	-.1690	.3620	1111.	-4120.
2	2416.	.2120	.3510	1093.	-4120.
3	2435.	.3040	.3530	-1147.	-4120.
4	2684.	.2800	.3730	1095.	4280.
5	2379.	.2430	.3450	1095.	4280.
6	2453.	.2740	.3540	1095.	4280.
7	2493.	.2550	.3580	1070.	4280.
8	2587.	.2440	.3670	1109.	-4600.
9	2557.	.2490	.3670	1124.	4280.
10	2534.	.2690	.3590	1106.	4280.
11	2486.	.2170	.3570	1124.	4280.
12	2543.	.2870	.3610	1115.	4280.
13	2582.	.2240	.3630	1103.	4280.
14	2399.	.2050	.3460	1085.	-4120.
15	2625.	.2610	.3620	1103.	4280.
16	2407.	.2030	.3730	-1046.	-4120.
17	2347.	.2330	.3490	-1064.	-4120.
18	2660.	.2220	.3740	1109.	4280.
19	2559.	.2630	.3630	1091.	4280.
20	2384.	-.1760	.3420	1073.	4280.
21	2518.	.2680	.3600	1109.	-4120.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM

1	-.343	28.5	-0.0	4.7	6.6
2	.433	30.4	-0.0	5.5	8.2
3	.623	-40.9	-9.1	8.6	12.8
4	.574	30.6	3.9	10.0	12.4
5	.496	37.1	-0.0	4.7	9.7
6	.561	34.6	-6.0	6.5	11.4
7	.528	34.6	3.3	7.6	10.9
8	.504	30.5	-4.9	6.8	9.1
9	.514	31.5	-5.4	7.4	10.6
10	.557	33.0	2.2	8.0	11.7
11	.447	29.5	2.4	5.7	9.2
12	.593	36.8	2.6	8.7	12.3
13	.464	30.0	2.7	6.6	9.7
14	.425	28.5	2.5	5.6	8.7
15	.538	33.4	2.7	-11.5	11.6
16	.419	28.9	3.6	5.6	8.3
17	.481	30.9	2.8	7.3	9.9
18	.458	26.4	2.9	7.3	9.8
19	.543	30.1	2.2	8.3	10.8
20	-.362	25.8	1.9	5.4	6.9
21	.558	23.0	2.9	8.7	12.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3094.	-16.35	-0.00	4.42	6.24	8.09
2	-3110.	13.91	-0.00	4.15	6.17	7.82
3	-3122.	13.06	-4.99	4.50	6.72	8.69
4	3133.	10.62	2.32	5.69	7.10	11.73
5	-3115.	-14.81	-0.00	-3.12	6.38	10.07
6	3127.	12.28	-3.63	3.80	6.63	11.26
7	3134.	13.10	2.17	4.71	6.79	9.31
8	3132.	12.07	3.32	4.45	5.92	8.59
9	3131.	12.20	-3.57	4.69	6.77	8.93
10	3138.	11.83	1.32	4.73	6.87	10.13
11	3128.	13.11	1.85	4.15	6.72	8.67
12	3137.	12.38	1.52	4.79	6.79	-13.32
13	3133.	12.87	1.98	4.62	6.87	10.55
14	3132.	13.36	2.01	4.30	6.69	8.13
15	-3123.	12.33	1.71	-6.98	7.02	12.20
16	-3117.	13.65	2.89	4.38	6.46	8.12
17	-3121.	12.75	1.96	4.97	6.70	7.97
18	3136.	11.51	2.18	5.26	7.03	7.43
19	3139.	11.06	1.38	4.99	6.55	8.11
20	3133.	14.22	1.80	4.92	6.23	7.79
21	3143.	8.24	1.81	5.15	7.53	11.61

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	11.6540	11.6540	34.5470	11.9140	11.9140	40.4200
2	10.8870	10.8870	32.4420	11.1270	11.1270	37.9360
3	10.8220	10.8220	31.0560	11.0610	11.0610	36.2890
4	11.5550	11.5550	32.9650	11.8420	11.8420	38.3260
5	11.6080	11.6080	33.6000	11.8880	11.8880	39.0590
6	11.5150	11.6150	33.1570	11.9030	11.9030	38.5510
7	10.7110	10.7110	31.5190	10.7600	10.7600	36.4300
8	12.2520	12.2520	34.5490	12.3060	12.3060	39.9280
9	11.1690	11.1690	32.4700	11.2180	11.2180	37.5230
10	12.5040	12.5040	34.7080	12.5260	12.5260	39.9280
11	11.4770	11.4770	33.6140	11.4860	11.4860	38.6430
12	12.0470	12.0470	33.6330	12.0520	12.0520	38.6430
13	11.5440	11.5440	34.2020	11.4240	11.4240	38.3840
14	10.4190	10.4190	31.8870	10.2980	10.2980	36.1910
15	-13.0320	-13.0320	35.2480	12.9400	12.9400	40.9370
16	10.7580	10.7580	32.0850	10.6550	10.6550	37.0350
17	10.0060	10.0060	30.2240	-9.9110	-9.9110	-34.8920
18	11.5280	11.5280	33.4260	11.6580	11.6580	38.9300
19	12.4710	12.4710	34.5330	12.6160	12.6160	40.2220
20	11.1800	11.1800	33.4260	11.3020	11.3020	38.9300
21	11.3280	11.3280	31.8090	11.1740	11.1740	37.1160

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-15.99	-0.00	5.17	7.30	8.09
2	13.61	-0.00	4.85	7.21	7.82
3	12.78	-4.88	5.25	7.85	8.69
4	10.36	2.26	6.61	8.26	11.73
5	-14.46	-0.00	-3.63	7.42	10.07
6	11.98	-3.55	4.42	7.70	11.26
7	13.04	2.16	5.44	7.84	9.31
8	12.02	3.31	5.15	6.84	8.59
9	12.15	-3.56	5.42	7.82	8.93
10	11.81	1.32	5.44	7.91	10.13
11	13.10	1.85	4.77	7.72	8.67
12	12.38	1.52	5.50	7.81	13.32
13	13.01	2.00	5.19	7.71	10.55
14	13.52	2.03	4.88	7.60	8.13
15	12.42	1.72	-8.10	8.15	12.20
16	13.78	2.92	5.06	7.45	8.12
17	12.88	1.98	5.74	7.74	7.97
18	11.39	2.15	6.12	8.19	7.43
19	10.93	1.37	5.81	7.63	8.11
20	-14.07	1.78	5.73	7.25	7.79
21	8.35	1.84	6.01	8.78	11.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	35.25	59.40	35.37	59.60
2	34.25	58.00	34.37	58.20
3	-39.00	-62.00	-39.13	-62.21
4	37.00	60.80	37.16	61.07
5	34.50	58.80	34.65	59.06
6	36.90	60.80	37.06	61.07
7	-39.00	61.40	-39.04	61.46
8	34.50	58.35	34.53	58.41
9	37.00	60.50	37.04	60.56
10	37.00	61.00	37.04	61.06
11	34.10	58.50	34.13	58.56
12	37.00	61.00	37.04	61.06
13	37.00	61.00	36.98	60.97
14	35.00	58.50	34.98	58.47
15	36.00	60.20	35.98	60.17
16	34.00	58.00	33.93	-57.89
17	35.00	59.00	34.93	58.89
18	34.50	-57.50	34.58	-57.64
19	-33.00	-57.00	-33.08	-57.14
20	34.00	-56.50	34.08	-56.64
21	-41.50	-65.00	-41.44	-64.91

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1190.	-.1820	.3010	1126.	1.050	1282.
2	1150.	.2470	.2960	1126.	1.050	1214.
3	1340.	.3100	.3230	1158.	1.050	-1432.
4	1290.	.3130	.3170	1104.	1.060	1356.
5	1175.	.2940	.2980	1104.	1.060	1247.
6	1260.	.3130	.3100	1140.	1.060	1356.
7	1350.	.2620	.3260	1142.	1.060	1384.
8	1143.	.2810	.2930	1136.	1.060	1220.
9	1275.	.2770	.3160	1122.	1.060	1330.
10	1310.	.3150	.3230	1149.	1.070	1355.
11	1120.	.2320	.2900	1140.	1.060	1222.
12	1220.	-.3450	.3000	1158.	1.070	1352.
13	1275.	.2180	.3140	1142.	1.060	1345.
14	1140.	.2240	.2880	1122.	1.050	1212.
15	1225.	.2980	.3070	1122.	1.050	1303.
16	1125.	.2720	.2980	1122.	1.060	1203.
17	1175.	.2630	.3020	1122.	1.070	1251.
18	1225.	.2680	.3120	1140.	-1.040	-1180.
19	-1100.	.2740	.2990	1104.	-1.040	-1151.
20	-1100.	.2480	-.2850	1104.	-1.040	-1132.
21	-1540.	.2990	-.3530	-1176.	-1.080	-1585.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1185.	-.1840	.3030	1134.	1281.
2	1146.	.2480	.2980	1134.	1213.
3	1336.	.3120	.3250	1166.	-1433.
4	1292.	.3160	.3190	1113.	1364.
5	1177.	.2970	.3010	1113.	1255.
6	1262.	.3160	.3120	1150.	1364.
7	1352.	.2620	.3260	1144.	1388.
8	1145.	.2810	.2930	1138.	1224.
9	1277.	.2770	.3160	1124.	1334.
10	1317.	.3160	.3240	1151.	1364.
11	1127.	.2320	.2900	1142.	1231.
12	1229.	-.3460	.3010	1160.	1364.
13	1288.	.2180	.3140	1140.	1358.
14	1154.	.2240	.2880	1121.	1227.
15	1232.	.2980	.3070	1121.	1310.
16	1123.	.2710	.2970	1117.	1199.
17	1173.	.2620	.3010	1117.	1247.
18	1229.	.2690	.3130	1145.	-1187.
19	-1104.	.2750	.3010	1109.	-1163.
20	-1104.	.2490	-.2870	1109.	-1139.
21	-1551.	.2980	-.3520	-1172.	-1594.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.370	56.6	0.0	1.6	4.0
2	.501	81.9	-0.0	1.8	5.3
3	.630	99.3	-18.1	2.8	7.7
4	.639	99.2	12.3	3.4	7.7
5	.594	-117.6	-0.0	-.2	6.2
6	.640	90.1	13.6	1.5	7.5
7	.535	83.3	10.2	2.7	6.6
8	.570	103.7	16.0	1.2	5.1
9	.566	82.2	11.0	2.2	6.4
10	.645	94.9	10.1	3.1	7.7
11	.472	72.3	8.4	1.8	5.3
12	-.709	101.8	9.2	3.6	9.0
13	.447	62.2	6.2	2.4	5.6
14	.455	81.6	12.3	1.8	5.1
15	.601	-124.4	-19.5	-6.6	6.4
16	.549	114.0	-17.2	2.1	6.2
17	.536	79.1	8.4	3.3	6.4
18	.540	-122.6	-22.8	2.1	5.7
19	.558	98.7	11.6	2.6	5.7
20	.500	107.4	-19.0	2.3	5.2
21	.615	64.7	9.4	5.2	8.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3072.	29.91	-0.00	1.40	3.44	.68
2	3073.	31.98	-0.00	1.13	3.40	1.60
3	3081.	30.90	9.69	1.45	3.91	2.01
4	3090.	30.53	6.52	1.70	3.88	2.67
5	-3058.	38.51	-0.00	-.10	3.34	2.14
6	3093.	27.71	7.18	.75	3.77	3.06
7	3095.	30.70	6.45	1.63	3.99	-3.57
8	3079.	35.63	9.41	-.67	2.90	1.61
9	3097.	28.63	6.59	1.23	3.66	2.93
10	3100.	29.00	5.29	1.53	3.85	2.26
11	3090.	30.08	6.00	1.26	3.62	1.75
12	3104.	28.39	4.38	1.66	4.10	-3.97
13	3102.	27.50	4.68	1.71	4.03	1.35
14	3078.	35.16	9.11	1.25	3.60	2.40
15	-3054.	-40.18	-10.84	-3.51	3.51	-3.59
16	-3055.	-40.36	-10.44	1.23	3.58	1.34
17	3087.	29.02	5.26	1.98	3.85	2.13
18	-3053.	-44.09	-14.07	1.25	3.39	2.01
19	3087.	34.70	6.98	1.48	3.31	1.34
20	-3060.	-41.84	-12.69	1.48	3.31	.68
21	3113.	-20.86	5.23	2.76	4.48	-3.55

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	3.8630	2.8490	13.8620	3.9370	2.9000	16.1670
2	3.5490	2.7180	13.1740	3.6150	2.7660	15.3570
3	-4.5180	-3.5380	15.2390	-4.6030	-3.6030	-17.7620
4	4.2140	3.3180	14.7160	4.2990	3.3840	17.0460
5	3.7350	2.9270	13.6850	3.8080	2.9820	15.8440
6	4.2140	3.3180	14.7160	4.2990	3.3840	17.0460
7	4.3850	3.3480	14.9700	4.4010	3.3590	17.2900
8	3.6490	2.8390	13.4010	3.6610	2.8480	15.4730
9	4.1570	3.2080	14.4970	4.1710	3.2180	16.7400
10	4.2940	3.3800	14.8270	4.2970	3.3820	17.0420
11	3.6950	2.8010	13.5440	3.6940	2.7990	15.5560
12	4.3000	3.4430	14.8450	4.2970	3.4410	17.0420
13	4.3180	3.2230	15.1310	4.2750	3.1910	16.9890
14	3.7170	2.8050	13.6590	3.6750	2.7740	15.5090
15	4.1030	3.2050	14.2060	4.0760	3.1840	16.5070
16	3.5770	2.7710	13.1340	3.5490	2.7510	-15.1870
17	3.7990	2.9190	13.6160	3.7680	2.8970	15.7440
18	-3.4660	2.6870	12.9530	-3.4960	-2.7090	-15.0500
19	-3.3620	-2.6180	-12.7180	-3.3900	-2.6390	-14.7770
20	-3.2830	-2.5250	-12.5400	-3.3110	-2.5450	-14.5690
21	-5.5770	-4.2920	-16.9270	-5.5060	-4.2390	-19.7700

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		29.35		-0.00			1.64			4.02			.68	
2		31.40		-0.00			1.32			3.97			.74	
3		30.33		9.52			1.69			4.56			2.01	
4		29.93		6.39			1.96			4.49			2.67	
5		37.78		-0.00			-.12			3.87			2.14	
6		27.17		7.04			.87			4.37			3.06	
7		30.58		6.43			1.89			4.61			-3.57	
8		35.51		9.39			-.77			3.35			1.61	
9		28.53		6.57			1.42			4.23			2.93	
10		28.98		5.29			1.76			4.43			2.26	
11		30.09		6.00			1.44			4.16			1.75	
12		28.41		4.39			1.90			4.71			-3.97	
13		27.78		4.73			1.92			4.53			1.35	
14		35.56		9.21			1.42			4.09			2.40	
15		-40.45		-10.91			-4.07			4.07			-3.59	
16		-40.68		-10.52			1.42			4.14			.56	
17		29.25		5.30			2.29			4.46			2.13	
18		-43.71		-13.96			1.45			3.94			.14	
19		34.41		6.92			1.72			3.84			1.13	
20		-41.49		-12.59			1.72			3.84			.68	
21		-21.13		5.30			3.23			5.23			-3.55	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	57.00	33.11	57.19
2	30.00	54.00	30.10	54.18
3	34.00	57.00	34.12	57.19
4	32.50	56.00	32.64	56.24
5	32.30	56.05	32.44	56.29
6	31.60	55.20	31.74	55.44
7	34.00	56.90	34.03	56.95
8	31.50	55.20	31.53	55.25
9	34.00	57.50	34.03	57.56
10	34.00	57.80	34.03	57.86
11	-29.50	-53.00	-29.53	-53.05
12	32.00	57.00	32.03	57.06
13	33.00	57.00	32.98	56.97
14	30.00	-53.00	29.99	-52.97
15	32.50	56.00	32.48	55.97
16	30.00	-53.00	29.94	-52.90
17	34.00	57.00	33.93	56.89
18	31.20	53.50	31.28	53.63
19	-29.00	-52.50	-29.07	-52.63
20	32.00	55.00	32.08	55.13
21	-37.00	-61.50	-36.95	-61.41

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1113.	-.1890	.3040	1140.	1.050	1166.
2	1025.	.2700	.3270	1149.	1.050	1044.
3	1160.	.3160	.3020	1149.	1.050	1164.
4	1130.	.3190	.3130	1104.	1.050	1113.
5	1100.	.3160	.3080	1131.	1.050	1115.
6	1075.	.3160	.3120	1122.	1.050	1075.
7	1155.	.2870	.3020	1140.	1.050	1151.
8	1045.	.2980	.3080	1141.	1.055	1069.
9	1173.	.2940	.3060	1122.	1.050	1180.
10	1170.	.3250	.3040	1143.	1.050	1190.
11	-980.	.2550	.3210	1176.	1.050	1014.
12	1075.	-.3610	.3080	1140.	1.060	1149.
13	1100.	.2450	.3000	1138.	1.050	1143.
14	995.	.2600	.3170	1158.	1.040	1008.
15	1100.	.3120	.3090	1122.	1.050	1101.
16	1000.	.2920	.3250	1140.	1.040	1021.
17	1110.	.2730	.2940	1122.	1.060	1155.
18	1115.	.3030	.3320	1176.	1.040	1026.
19	1000.	.2950	-.3370	1140.	-1.030	1006.
20	1050.	.2620	.3000	1113.	1.040	1060.
21	-1340.	.3010	.3320	1167.	1.060	-1377.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
1	1108.	-.1900	.3060	1147.	1165.
2	1021.	.2720	.3290	1157.	1044.
3	1157.	.3190	.3040	1157.	1165.
4	1131.	.3210	.3160	1113.	1120.
5	1102.	.3190	.3110	1141.	1122.
6	1076.	.3190	.3150	1132.	1081.
7	1157.	.2880	.3020	1142.	1154.
8	1047.	.2990	.3090	1143.	1072.
9	1175.	.2950	.3070	1124.	1183.
10	1176.	.3250	.3050	1146.	1197.
11	-986.	.2560	.3220	1178.	1021.
12	1083.	-.3610	.3080	1142.	1159.
13	1112.	.2450	.3000	1137.	1155.
14	1007.	.2600	.3170	1157.	1019.
15	1106.	.3110	.3090	1121.	1107.
16	999.	.2910	.3230	1135.	1018.
17	1108.	.2720	.2930	1117.	1151.
18	1119.	.3040	.3340	1181.	1033.
19	1004.	.2960	-.3390	1145.	1013.
20	1054.	.2630	.3010	1118.	1066.
21	-1350.	.3000	.3310	1163.	-1385.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-.381	67.1	0.0	1.2	3.7
2	.544	118.9	0.0	.8	5.1
3	.637	145.1	-28.5	1.0	6.4
4	.646	129.0	19.0	2.4	6.9
5	.636	141.6	-0.0	.3	6.1
6	.638	138.3	24.7	-.2	6.3
7	.582	122.3	17.6	1.9	6.3
8	.603	134.5	20.5	.6	5.0
9	.599	102.8	14.5	1.3	6.0
10	.665	105.5	11.2	2.4	7.3
11	.513	123.3	21.5	1.0	5.0
12	-.736	128.3	14.2	2.5	8.0
13	.500	85.9	9.8	1.9	5.7
14	.521	136.6	25.7	1.1	4.9
15	.623	-154.8	-30.4	-6.2	5.9
16	.578	-175.3	-35.2	1.6	5.6
17	.557	85.4	9.4	3.0	6.5
18	.606	-168.6	-32.9	1.8	5.7
19	.594	146.1	24.3	2.0	5.4
20	.527	125.2	23.7	2.1	5.2
21	.616	81.3	12.4	4.2	8.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	3064.	34.30	0.00	.99	3.11	.55
2	3047.	42.40	0.00	.48	2.99	.40
3	3046.	44.17	14.90	.52	3.19	-3.33
4	3068.	39.00	9.87	1.18	3.44	1.33
5	3044.	43.13	-0.00	-.15	3.07	2.28
6	3054.	42.16	12.93	-.08	3.17	2.40
7	3068.	41.04	10.14	1.03	3.46	2.50
8	3061.	43.45	11.40	-.30	2.64	1.20
9	3085.	33.67	8.18	.72	3.25	2.01
10	3096.	31.28	5.70	1.17	3.54	2.65
11	3042.	46.54	13.92	.60	3.12	-3.44
12	3089.	34.26	6.53	1.11	3.53	2.02
13	3087.	33.77	6.58	1.21	3.67	2.70
14	3034.	50.60	-16.37	.67	2.96	.67
15	-3027.	47.85	-16.13	-3.14	3.14	2.01
16	-3001.	-57.89	-19.95	.86	3.01	2.53
17	3084.	30.10	5.69	1.72	3.75	1.35
18	-3027.	-53.65	-17.98	.93	2.98	2.27
19	3048.	47.74	13.63	1.07	2.91	.81
20	3047.	46.11	15.02	1.28	3.14	.41
21	3101.	26.05	6.80	2.23	4.24	-3.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	3.3390	2.4910	12.7000	3.4020	2.5350	14.8070
2	2.8870	2.2610	11.6490	2.9390	2.3010	13.5730
3	3.3420	2.6620	12.7110	3.4020	2.7090	14.8070
4	3.1880	2.5490	12.4470	3.2490	2.5970	14.4080
5	3.1960	2.5520	12.4670	3.2570	2.6000	14.4280
6	3.0670	2.4540	12.1640	3.1260	2.4990	14.0790
7	3.3500	2.6260	12.7310	3.3610	2.6350	14.7010
8	3.0880	2.4450	12.1300	3.0970	2.4520	14.0030
9	3.4670	2.7230	12.9960	3.4780	2.7320	15.0040
10	3.5400	2.8250	13.1990	3.5420	2.8260	15.1690
11	2.7800	2.1650	11.4300	2.7780	2.1640	13.1260
12	3.3800	2.7560	12.8440	3.3770	2.7530	14.7430
13	3.3980	2.6050	13.1000	3.3640	2.5790	14.7080
14	2.8020	2.1870	11.5400	2.7710	2.1630	13.1050
15	3.2280	2.5680	12.3030	3.2070	2.5510	14.2960
16	2.7850	2.2060	11.3120	2.7640	2.1910	13.0840
17	3.3770	2.6260	12.6900	3.3510	2.6060	14.6740
18	2.8360	2.2610	11.4950	2.8600	2.2790	13.3530
19	2.7160	2.1600	-11.2020	-2.7380	2.1770	-13.0110
20	3.0540	2.3750	12.0120	3.0790	2.3940	13.9550
21	-4.4440	-3.4620	-14.7750	-4.3880	-3.4210	-17.2600

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	33.66	0.00	1.16	3.63	.55
2	41.65	0.00	.56	3.48	.19
3	43.39	14.65	.60	3.72	1.66
4	38.27	9.69	1.36	3.98	1.33
5	42.33	0.00	-.18	3.55	2.28
6	41.37	12.70	-.09	3.67	2.40
7	40.90	10.10	1.19	3.99	2.50
8	43.32	11.36	-.34	3.05	.74
9	33.56	8.15	.83	3.75	2.01
10	31.26	5.70	1.34	4.07	2.65
11	46.57	13.93	.69	3.58	2.60
12	34.29	6.53	1.28	4.05	2.02
13	34.11	6.65	1.35	4.12	.75
14	-51.18	-16.55	.76	3.36	.67
15	48.16	-16.23	-3.65	3.65	2.01
16	-58.33	-20.09	1.00	3.48	2.53
17	30.33	5.73	1.99	4.34	1.35
18	-53.21	-17.84	1.08	3.46	.14
19	47.36	13.52	1.25	3.38	.81
20	45.72	14.90	1.48	3.65	.41
21	26.38	6.88	2.61	4.95	-3.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
-----	-----	-----	-----	-----	-----
2	21806.	604.	520.2	30.10	.008570
3	15163.	603.	520.2	30.10	.008570
4	17572.	643.	521.2	29.91	.009040
5	20255.	643.	521.2	29.91	.009040
6	21384.	643.	521.2	29.91	.009040
7	20223.	616.	517.7	30.14	.007880
8	14350.	616.	517.7	30.13	.007880
9	20864.	616.	521.7	30.13	.009270
10	23059.	569.	518.2	30.07	.007900
11	23146.	569.	518.2	30.07	.007900
12	21791.	569.	518.2	30.07	.007900
13	21299.	590.	525.7	30.01	.009740
14	21413.	590.	525.7	30.03	.009730
15	14194.	663.	520.7	29.96	.010230
16	18949.	544.	520.7	29.96	.010230
17	22819.	569.	524.7	30.25	.009320
18	21016.	599.	519.7	29.96	.006930
19	21302.	599.	519.7	29.96	.006930
20	21379.	599.	519.7	29.96	.006930
21	24921.	563.	505.2	30.35	.005250

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT ----	N1 SPEED PER CENT -----	N2 SPEED PER CENT -----	CORR N1 PER CENT -----	CORR N2 PER CENT -----
2	29.00	53.00	-28.96	-52.92
3	34.00	57.00	33.95	56.92
4	32.00	56.40	31.92	56.26
5	31.50	55.00	31.42	54.87
6	34.10	58.00	34.02	57.86
7	33.00	56.00	33.03	56.05
8	29.50	53.00	29.53	-53.05
9	31.50	55.00	31.41	54.84
10	34.00	57.20	34.02	57.23
11	29.20	53.20	29.21	53.23
12	34.50	58.00	34.52	58.03
13	32.00	56.00	31.79	55.63
14	30.00	54.00	29.80	53.64
15	32.00	56.00	31.94	55.89
16	30.00	54.00	29.94	53.90
17	33.50	57.00	33.31	56.67
18	31.20	55.00	31.17	54.95
19	29.50	53.60	29.47	53.55
20	32.40	55.70	32.37	55.65
21	32.50	57.00	32.93	57.76

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TFST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	-1000.	.2910	.3410	1158.	1.050	1013.
3	1160.	.3080	.3040	1167.	1.050	1145.
4	1120.	.3380	.3260	1158.	1.040	1121.
5	1075.	.3500	.3210	1147.	1.040	1058.
6	1130.	-.3730	.2970	1140.	1.050	1198.
7	1140.	.3420	.3110	1176.	1.040	1102.
8	1125.	.3330	-.3690	1176.	1.050	1014.
9	1100.	.3230	.3270	1167.	1.040	1049.
10	1170.	.3040	.3050	1158.	1.050	1161.
11	-960.	-.2400	.3220	1176.	1.050	1019.
12	1100.	-.3720	-.2810	1158.	1.050	1199.
13	1050.	.2540	.3080	1140.	1.040	1087.
14	1050.	.2740	.3430	1185.	1.040	1029.
15	1150.	.3330	.3340	1185.	1.050	1101.
16	1100.	.3300	-.3550	1185.	1.040	1037.
17	1160.	.3010	.3130	1176.	1.060	1128.
18	1100.	.2820	.3320	1176.	1.050	1058.
19	-1000.	.3440	.3320	1158.	1.040	1030.
20	1050.	.2960	.2980	1140.	1.050	1090.
21	1200.	.3070	.3220	1158.	1.060	1176.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	-1007.	.2900	.3400	1154.	1018.
3	1168.	.3070	.3030	1163.	1152.
4	1122.	.3360	.3250	1152.	1121.
5	1077.	.3480	.3200	1141.	1057.
6	1132.	.3710	.2960	1134.	1197.
7	1147.	.3430	.3110	1178.	1111.
8	1132.	.3340	-.3700	1178.	1021.
9	1111.	.3210	.3250	1160.	1057.
10	1175.	.3050	.3060	1159.	1167.
11	-964.	-.2410	.3220	1177.	1025.
12	1105.	-.3730	-.2810	1159.	1205.
13	1060.	-.2510	.3040	-1125.	1090.
14	1061.	.2700	.3380	1169.	1033.
15	1154.	.3320	.3330	1180.	1103.
16	1104.	.3290	-.3540	1180.	1038.
17	1180.	.2970	.3090	1162.	1140.
18	1103.	.2810	.3310	1173.	1059.
19	-1002.	.3440	.3310	1155.	1031.
20	1052.	.2950	.2970	1138.	1091.
21	1201.	.3160	.3310	1189.	1192.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.589	127.6	18.2	2.0	4.0
3	.621	141.6	23.1	2.2	5.1
4	.685	136.0	20.8	-7.2	9.5
5	.706	157.2	28.3	-6.4	10.2
6	-.761	123.4	16.5	-6.6	-10.9
7	.694	127.8	18.9	-6.8	9.6
8	.673	149.6	22.9	5.5	9.3
9	.656	124.6	17.5	5.2	9.6
10	.622	90.8	11.5	-6.2	8.7
11	-.482	120.8	22.1	4.2	6.8
12	-.759	133.4	17.4	-6.2	-10.8
13	.516	93.5	15.5	3.8	6.2
14	.552	128.3	22.3	2.6	6.3
15	.668	170.3	33.3	5.1	8.7
16	.658	-187.1	-35.9	4.2	8.1
17	.615	87.1	11.0	5.9	9.3
18	.565	149.4	28.5	-7.1	8.6
19	.696	151.9	23.4	-6.4	9.9
20	.597	131.0	23.2	5.8	8.7
21	.620	144.8	21.7	3.4	8.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3066.	42.26	10.36	1.06	2.15	1.47
3	3057.	44.36	12.43	1.15	2.65	1.32
4	3065.	38.75	10.19	-3.39	4.43	3.41
5	3049.	43.24	13.36	2.89	4.59	1.58
6	3084.	31.84	7.29	2.79	4.60	0.00
7	3072.	35.99	9.15	-3.17	4.45	-9.35
8	3055.	43.23	11.36	2.61	4.40	1.32
9	3071.	37.12	8.94	2.55	4.72	1.96
10	3096.	28.74	6.24	-3.20	4.51	.94
11	3040.	48.47	15.25	2.77	4.50	1.84
12	3083.	34.51	7.72	2.65	4.59	1.86
13	3075.	35.48	10.10	2.39	3.89	3.05
14	3050.	45.11	13.50	1.48	3.65	.66
15	3033.	49.22	16.51	2.44	4.14	-44.66
16	-3021.	-54.65	-18.02	2.04	3.90	-16.12
17	3095.	27.91	6.06	-3.12	4.92	-12.39
18	3032.	51.08	16.75	-3.99	4.84	2.97
19	3061.	42.50	11.22	2.93	4.56	1.96
20	3056.	42.67	12.95	-3.12	4.63	.91
21	3050.	45.35	11.70	1.75	4.12	1.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	2.7990	2.2170	11.2020	2.7660	2.1920	13.0910
3	3.3960	2.6890	12.5690	3.3550	2.6570	14.6860
4	3.2930	2.6530	12.2220	3.2520	2.6200	14.4160
5	3.0780	2.5020	11.7390	3.0400	2.4720	13.8480
6	3.5880	2.9360	12.8640	3.5430	2.8990	15.1720
7	3.2210	2.6040	12.3480	3.2200	2.6040	14.3300
8	2.7790	2.2510	11.3090	2.7780	2.2510	13.1260
9	3.0990	2.4840	11.7380	3.0360	2.4340	13.8370
10	3.4130	2.6970	12.7730	3.4090	2.6940	14.8250
11	2.8060	2.1680	11.3670	2.8020	2.1650	13.1930
12	3.5830	2.9320	13.1500	3.5790	2.9290	15.2640
13	3.2770	2.5230	12.0100	3.1540	2.4330	14.1550
14	2.9720	2.3240	11.3340	2.8610	2.2410	13.3570
15	3.2310	2.5980	11.8170	3.1950	2.5700	14.2630
16	2.9300	2.3620	-11.1490	2.8980	2.3370	13.4590
17	3.4490	2.7160	12.4910	3.3160	2.6140	14.5840
18	3.0700	2.4100	12.2090	3.0520	2.3960	13.8900
19	2.8650	2.3300	11.7170	2.8480	2.3170	13.3210
20	3.1760	2.5070	12.4590	3.1570	2.4920	14.1630
21	3.3150	2.6360	13.2640	3.5210	2.7950	15.1140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		42.77		10.48			1.24			2.51			1.47	
3		44.90		12.58			1.34			3.09			1.32	
4		39.23		10.32			-4.00			5.23			-3.26	
5		43.78		13.52			3.40			5.42			1.58	
6		32.25		7.39			3.29			5.42			0.00	
7		36.00		9.16			-3.68			5.16			-6.54	
8		43.24		11.36			3.03			5.11			.14	
9		37.90		9.12			3.01			5.57			1.96	
10		28.77		6.24			-3.72			5.24			.94	
11		48.53		15.27			3.21			5.22			1.84	
12		34.55		7.73			3.07			5.33			1.86	
13		36.86		10.48			2.81			4.58			2.80	
14		46.87		14.00			1.75			4.30			.66	
15		49.78		16.70			2.94			5.00			-17.11	
16		-55.26		-18.22			2.64			5.06			-8.72	
17		29.02		6.30			-3.91			-6.17			-8.24	
18		51.39		16.85			-4.53			5.50			1.99	
19		42.76		11.29			3.33			5.18			1.96	
20		42.93		13.03			3.54			5.26			.91	
21		42.70		11.03			2.14			5.04			1.56	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-34.00	-58.00	-33.95	-57.92
3	-38.50	61.00	38.44	60.91
4	37.00	60.50	36.91	60.35
5	34.50	59.00	34.42	58.86
6	38.00	-62.00	37.91	61.85
7	38.00	61.00	38.04	61.06
8	-33.00	-58.00	-33.03	-58.06
9	36.00	59.00	35.90	58.83
10	37.00	61.00	37.02	61.03
11	-33.00	-57.30	-33.02	-57.33
12	38.00	-62.00	38.02	-62.03
13	36.50	60.50	36.26	60.10
14	-34.00	-58.00	-33.77	-57.61
15	36.50	60.00	36.43	59.88
16	-34.00	-58.00	-33.93	-57.89
17	37.50	61.00	37.28	60.65
18	35.10	58.80	35.07	58.74
19	-33.30	58.20	-33.27	-58.14
20	36.20	60.00	36.17	59.94
21	36.00	60.00	36.48	60.80

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TY7 DEG R	EPR	THRUST LAF
2	-1150.	.2750	.3010	1140.	1.050	-1193.
3	1350.	.3080	.3280	1176.	1.060	1347.
4	1295.	.3360	.3230	1143.	-1.040	1322.
5	1200.	.3450	.3106	1143.	-1.040	1246.
6	1280.	-.3660	.3150	1167.	1.050	-1412.
7	1350.	.3200	.3280	1176.	1.060	1354.
8	-1140.	.3070	.3110	1167.	1.050	-1198.
9	1240.	.3090	.3110	1167.	1.050	1235.
10	1325.	.2920	.3270	1176.	1.050	1355.
11	-1070.	-.2150	-.2930	1149.	1.050	-1166.
12	1300.	-.3820	.3170	1176.	1.070	-1415.
13	1250.	-.2300	.3150	1158.	1.050	1302.
14	1160.	.2510	.3090	1149.	1.050	-1181.
15	1260.	.3220	.3160	1167.	1.060	1293.
16	1225.	.3080	.3230	1185.	1.050	-1197.
17	1350.	.3010	.3330	1149.	1.070	1324.
18	1240.	.2660	.3160	1143.	1.050	1238.
19	-1125.	.3360	.3060	1140.	1.060	1209.
20	1200.	.2880	.3010	1140.	1.050	1295.
21	1300.	.2880	.3170	1140.	1.060	1329.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	-1158.	.2750	.3000	1136.	-1200.
3	1360.	.3070	.3270	1172.	1355.
4	1297.	.3340	.3220	1138.	1321.
5	1202.	.3440	.3090	1138.	1245.
6	1282.	-.3640	.3140	1161.	-1411.
7	1359.	.3200	.3290	1178.	1364.
8	-1147.	.3080	.3110	1169.	-1207.
9	1252.	.3070	.3100	1160.	1244.
10	1331.	.2920	.3280	1177.	1362.
11	-1075.	-.2150	-.2930	1150.	-1172.
12	1306.	-.3820	.3170	1177.	-1422.
13	1262.	-.2270	.3110	1142.	1306.
14	1172.	.2480	.3050	1133.	-1185.
15	1264.	.3200	.3140	1162.	1294.
16	1229.	.3070	.3220	1180.	-1199.
17	1373.	.2970	.3290	1136.	1339.
18	1243.	.2660	.3160	1141.	1240.
19	-1128.	.3350	.3050	1138.	1211.
20	1203.	.2870	.3010	1138.	1297.
21	1301.	.2950	.3250	1170.	1348.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.564	80.2	8.9	2.4	4.2
3	.628	104.5	15.8	3.5	6.7
4	.687	93.8	11.5	-7.8	10.5
5	.701	-125.3	19.5	-6.8	10.5
6	-.751	90.9	9.6	-7.7	-11.8
7	.654	88.1	11.3	-6.9	10.2
8	.626	106.6	12.6	5.5	9.5
9	.632	93.6	10.1	-6.4	10.2
10	.598	80.3	10.8	-6.6	9.7
11	-.436	82.5	10.8	4.2	6.8
12	-.784	101.7	11.1	-7.4	-11.8
13	-.470	63.9	10.4	4.0	6.3
14	.511	84.7	14.0	3.2	6.4
15	.651	-128.0	-21.7	5.3	8.8
16	.624	-122.4	-20.1	4.6	8.5
17	.618	66.4	7.3	-6.6	10.3
18	.538	110.4	18.9	-7.3	8.7
19	.687	102.4	11.1	-7.0	10.5
20	.588	93.9	11.1	-6.5	9.7
21	.586	96.1	13.2	3.0	8.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODF 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3102.	28.06	5.35	1.38	2.44	1.07
3	3086.	32.66	8.49	1.82	3.45	-0.00
4	3096.	26.90	5.66	-3.68	4.96	1.97
5	3073.	34.95	9.33	3.12	4.79	1.97
6	3104.	23.89	4.31	3.34	5.09	1.32
7	3096.	26.54	5.85	3.41	5.07	-4.24
8	3083.	33.39	6.76	2.84	4.88	3.12
9	3093.	29.17	5.41	3.25	5.24	2.21
10	3100.	26.47	6.11	-3.59	5.27	-5.05
11	3077.	37.06	8.32	3.10	5.00	1.99
12	3105.	25.63	4.79	3.05	4.88	-4.67
13	3095.	26.82	7.49	2.77	4.34	1.59
14	3082.	32.52	9.23	2.03	4.06	.53
15	-3065.	-38.34	-11.16	2.62	4.32	-39.71
16	-3066.	-38.29	10.78	2.39	4.37	-13.67
17	3111.	21.29	4.01	-3.49	5.44	-13.73
18	-3063.	-39.98	-11.75	-4.33	5.20	2.60
19	3097.	29.36	5.47	3.30	4.97	.65
20	3091.	31.41	6.36	-3.56	5.32	1.95
21	3082.	32.18	7.59	1.65	4.69	2.44

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.5980	2.7930	-13.0110	-3.5550	-2.7600	-15.2020
3	4.3130	3.3790	14.5120	4.2600	3.3390	16.9530
4	4.1750	3.3250	14.0920	4.1210	3.2830	16.6170
5	3.8100	3.0620	13.3360	3.7620	3.0240	15.7270
6	-4.5650	-3.6860	14.8730	4.5060	-3.6390	17.5350
7	4.2980	3.3910	14.6830	4.2970	3.3910	17.0420
8	3.5850	2.8320	13.1620	-3.5850	2.8320	-15.2790
9	3.8350	3.0210	13.3320	3.7550	2.9600	15.7100
10	4.2940	3.3370	14.6670	4.2900	3.3330	17.0240
11	-3.4340	-2.5900	-12.8200	-3.4300	-2.5870	-14.8800
12	-4.5590	-3.7180	15.2040	-4.5540	-3.7150	-17.6480
13	4.2210	3.1670	13.9810	4.0570	3.0510	16.4620
14	3.6300	-2.7760	-12.7690	-3.4900	-2.6740	-15.0350
15	4.0530	3.2070	13.5370	4.0060	3.1710	16.3350
16	3.5900	2.8340	-12.5840	-3.5490	-2.8030	-15.1870
17	4.3670	3.4020	14.3960	4.1940	3.2710	16.7950
18	3.7590	2.8970	13.7770	3.7350	2.8790	15.6600
19	3.6260	2.9060	13.4840	-3.6040	2.8890	-15.3280
20	4.0450	3.1430	14.4020	4.0200	3.1240	15.3700
21	3.9760	3.1040	14.7960	4.2310	3.2950	16.8830

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	28.40	5.42	1.62	2.85	1.07
3	33.07	8.60	2.12	4.03	0.00
4	27.25	5.74	-4.34	5.85	1.97
5	35.40	9.45	3.68	5.65	1.97
6	24.21	4.37	3.94	6.00	1.32
7	26.54	5.86	3.95	5.88	2.20
8	33.39	6.76	3.30	5.66	3.12
9	29.79	5.52	3.83	6.17	2.21
10	26.50	6.12	-4.17	6.12	3.92
11	-37.10	8.33	3.60	5.80	1.99
12	25.66	4.80	3.54	5.67	-4.67
13	27.90	7.78	3.27	5.11	1.59
14	33.82	9.58	2.40	4.79	.53
15	-38.79	-11.29	3.16	5.21	-17.04
16	-38.73	10.90	3.10	5.66	-6.54
17	22.17	4.17	-4.37	-6.82	-7.26
18	-40.23	-11.82	-4.93	5.91	2.60
19	29.55	5.50	3.75	5.65	.65
20	31.61	6.40	-4.04	6.05	1.28
21	30.24	7.14	2.02	5.75	2.44

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	92.50	93.00	92.37	92.87
3	93.00	91.50	92.87	-91.37
4	94.50	92.50	94.27	92.28
5	94.50	-96.30	94.27	-96.07
6	94.30	93.80	94.07	93.57
7	94.50	92.50	94.59	92.59
8	92.50	94.00	92.59	94.09
9	93.00	93.00	92.73	92.73
10	92.50	93.80	92.54	93.85
11	91.70	93.50	91.74	93.55
12	94.00	92.50	94.05	92.54
13	92.00	93.00	-91.39	92.38
14	92.00	92.50	-91.39	91.88
15	95.00	94.00	94.82	93.82
16	93.00	94.00	92.82	93.82
17	93.50	93.00	92.96	92.47
18	94.30	93.40	94.21	93.31
19	93.50	-94.80	93.41	94.71
20	95.00	94.40	94.91	94.31
21	92.00	92.50	93.22	93.73

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	8100.	.9250	.7060	1428.	-1.950	-13620.
3	8000.	.8860	.6950	1426.	-1.950	-13620.
4	8550.	1.0290	.7420	1464.	1.980	14007.
5	-7800.	-1.0460	-.6770	1471.	1.980	14007.
6	8100.	1.0130	.7040	1446.	1.980	14007.
7	8300.	-1.0520	.7110	1464.	1.980	13898.
8	8050.	.8750	.6980	1464.	1.980	13902.
9	8250.	.9630	.7180	1428.	1.980	13902.
10	8300.	.9000	.7220	1428.	1.980	13930.
11	-7850.	.8020	.6860	1464.	1.980	13930.
12	8400.	.9820	.7240	1455.	1.980	13930.
13	8500.	1.0030	-.7520	1464.	1.980	13958.
14	8000.	.8630	.7070	1455.	-1.940	-13550.
15	8300.	1.0100	.7170	1464.	1.980	13981.
16	-7800.	.8540	-.6810	1428.	1.980	13981.
17	8400.	.9900	.7290	1428.	1.980	13847.
18	8600.	.9430	.7440	1464.	1.980	13981.
19	8300.	.8770	.7220	1428.	1.980	13981.
20	8400.	.9720	.7240	1464.	1.980	13981.
21	8200.	.9050	.6950	1410.	1.980	13804.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	8159.	.9230	.7040	1424.	-13700.
3	8058.	.8830	.6930	1422.	-13700.
4	8566.	1.0240	.7390	1457.	14000.
5	-7815.	1.0410	-.6740	1464.	14000.
6	8115.	1.0080	-.7010	1439.	14000.
7	8353.	-1.0540	.7130	1467.	14000.
8	8099.	.8770	.6990	1467.	14000.
9	8332.	.9580	.7130	1419.	14000.
10	8338.	.9010	.7220	1429.	14000.
11	7886.	.8020	-.6870	1465.	14000.
12	8438.	.9820	.7250	1456.	14000.
13	9583.	.9890	.7420	1444.	14000.
14	8083.	.8520	.6980	1435.	-13600.
15	8327.	1.0060	.7140	1458.	14000.
16	-7825.	.8500	-.6790	1422.	14000.
17	8542.	.9780	.7200	1411.	14000.
18	8620.	.9410	.7430	1461.	14000.
19	8319.	.8760	.7200	1425.	14000.
20	8419.	.9700	.7230	1461.	14000.
21	8208.	.9290	.7130	1447.	14000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.943	11.4	2.2	82.8	86.0
3	1.859	11.3	1.6	87.3	89.9
4	2.158	14.5	1.3	85.0	84.4
5	2.194	17.8	1.2	92.8	94.1
6	2.123	20.6	1.1	87.2	86.4
7	-2.208	11.3	1.4	92.3	95.5
8	1.833	14.2	.8	76.0	77.0
9	2.019	14.3	.9	88.4	89.5
10	1.887	14.3	1.6	81.9	81.4
11	1.679	18.5	1.2	73.4	74.4
12	2.060	16.6	1.3	92.0	90.8
13	2.105	15.3	3.0	94.6	94.7
14	1.810	14.2	2.6	79.6	79.2
15	2.119	13.2	1.6	85.4	83.6
16	1.788	14.3	1.4	-64.2	-63.0
17	2.076	14.2	1.6	76.8	76.2
18	1.979	11.6	1.6	93.9	94.4
19	1.840	15.9	1.2	87.0	88.9
20	2.039	12.3	.9	89.9	92.8
21	1.895	18.3	2.0	74.5	72.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3158.	1.18	.39	14.08	14.62	40.54
3	3158.	1.22	.30	-15.50	-15.97	-0.00
4	3151.	1.35	.21	12.97	12.97	42.54
5	3151.	1.63	.19	13.93	14.13	39.74
6	3150.	1.94	.18	13.53	13.53	43.79
7	3151.	1.02	.23	13.77	14.25	-57.68
8	3151.	1.56	.14	13.56	13.85	42.48
9	3151.	1.42	.15	14.42	14.61	44.34
10	3155.	1.52	.29	14.30	14.30	36.00
11	3154.	2.21	.25	14.42	14.60	32.45
12	3155.	1.62	.22	14.74	14.74	37.20
13	3155.	1.46	.50	14.83	14.83	42.40
14	3154.	1.57	.50	14.50	14.50	31.54
15	3153.	1.25	.26	13.28	13.28	-85.30
16	3153.	1.60	.26	11.83	11.83	-56.79
17	3153.	1.37	.26	12.19	12.19	-60.52
18	3156.	1.18	.28	-15.65	15.74	-46.60
19	3155.	1.74	.22	-15.59	-15.93	37.29
20	3156.	1.21	.15	14.54	15.01	37.25
21	3150.	1.93	.37	12.95	12.95	37.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	104.7210	104.7210	84.8950	102.6150	102.6150	98.8960
3	85.4940	85.4940	-77.5900	83.8290	83.8290	-90.4010
4	114.0280	114.0280	81.3660	110.8710	110.8710	95.5000
5	-178.3340	-178.3340	-103.7120	-173.0650	-173.0650	-121.6390
6	127.2710	127.2710	87.8610	123.7210	123.7210	103.1010
7	118.5810	118.5810	83.6670	119.4530	119.4530	97.2890
8	108.8240	108.8240	91.5410	109.5200	109.5200	104.6800
9	110.2280	110.2280	83.7480	106.0700	106.0700	98.1180
10	109.6320	109.6320	90.1440	109.9040	109.9040	104.7380
11	93.9930	93.9930	88.5830	94.1840	94.1840	102.9230
12	107.2970	107.2970	83.5150	107.5910	107.5910	97.0310
13	115.9140	115.9140	82.6730	106.7870	106.7870	96.0770
14	91.6170	91.6170	80.2670	84.9270	84.9270	93.2500
15	129.5090	129.5090	87.0070	126.4610	126.4610	104.5800
16	104.9610	104.9610	87.0070	102.6870	102.6870	104.5800
17	114.5350	114.5350	83.7120	106.1460	106.1460	96.5820
18	111.2230	111.2230	89.4860	109.9450	109.9450	101.5110
19	118.7680	118.7680	-97.9030	117.4200	117.4200	111.0540
20	128.7540	128.7540	95.2780	127.2360	127.2360	108.9800
21	97.9500	97.9500	88.8110	112.8010	112.8010	104.0250

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JY80-7 * 404 W/2R TEST SERIES *

NOTE 1

UNIT	NRFD CO FI	MSEC HC FI	NRFD CND FI	NR CNDR FI	SNR NUMBRS
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
2	2.20	.20	15.40	17.07	33.57
3	2.24	.22	-19.06	-18.60	20.89
4	1.38	.22	15.22	18.22	41.87
5	1.68	.20	16.04	14.57	31.59
6	2.00	.19	15.87	15.87	33.29
7	1.82	.22	14.81	14.58	34.73
8	1.58	.14	15.84	14.11	30.24
9	1.48	.16	14.86	17.11	33.81
10	1.52	.24	14.62	16.62	34.2
11	-2.21	.25	16.75	16.97	31.86
12	1.42	.21	17.12	17.12	34.08
13	1.52	.24	17.23	17.24	37.85
14	1.70	.24	16.85	16.85	31.54
15	1.28	.27	15.94	15.94	29.44
16	1.64	.27	15.27	15.27	31.82
17	1.48	.28	15.11	15.11	32.12
18	1.19	.28	17.75	17.85	32.75
19	1.26	.28	17.60	18.07	30.59
20	1.22	.15	14.57	14.02	28.91
21	1.48	.32	14.29	14.29	33.27

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	COND N1 PER CENT	COND N2 PER CENT
2	87.50	91.00	87.77	90.87
3	88.00	-89.00	87.87	-88.87
4	89.00	90.40	88.79	90.18
5	-89.40	-93.80	89.19	-93.57
6	89.00	91.80	88.79	91.58
7	89.00	90.00	89.89	90.09
8	87.00	91.00	87.88	91.09
9	88.50	91.00	87.75	90.74
10	88.00	91.40	88.04	91.44
11	86.50	91.00	-86.54	91.04
12	88.00	91.00	88.06	91.04
13	87.50	91.00	86.92	90.79
14	88.50	91.00	87.91	90.79
15	89.00	91.00	88.87	90.83
16	89.00	92.00	88.87	91.82
17	88.00	91.00	87.50	90.48
18	88.20	90.45	88.12	90.71
	88.00	92.10	87.92	91.83
20	89.00	92.00	88.91	91.91
21	-86.00	89.50	87.75	90.69

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	OB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	-6600.	.7350	.6020	1356.	-1.780	-11930.
3	6860.	.7270	.6170	1356.	-1.780	-11930.
4	7100.	.8420	.6440	1383.	1.800	12206.
5	6900.	-.9110	.6230	1392.	1.810	-12306.
6	6850.	-.8800	.6210	1383.	1.800	12206.
7	6950.	-.8730	.6210	1392.	1.800	12111.
8	6700.	.7060	.6110	1392.	1.800	12115.
9	7000.	.7950	.6360	1392.	1.800	12115.
10	7000.	.7380	.6340	1374.	1.810	12239.
11	-6600.	-.6330	.6060	1374.	1.790	12040.
12	6900.	.7930	.6250	1365.	1.790	12040.
13	7150.	.8100	-.6600	1392.	1.810	12263.
14	7000.	.7230	.6400	1392.	-1.830	-12454.
15	6800.	.8220	.6150	1383.	1.800	12184.
16	6900.	.7130	.6240	1374.	1.800	12184.
17	7000.	.7890	.6370	1356.	1.800	12067.
18	7050.	.7280	.6410	1392.	1.800	12184.
19	6900.	.7250	.6290	1338.	1.800	12184.
20	6900.	.7440	.6230	1374.	1.800	12184.
21	6800.	.7360	.6080	1338.	1.800	12029.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	6648.	.7330	-.6000	1352.	-12000.
3	6850.	.7250	.6150	1352.	-12000.
4	7114.	.8380	.6400	1376.	12200.
5	6913.	-.9060	.6200	1385.	12300.
6	6863.	-.8760	.6180	1376.	12200.
7	6994.	-.8750	.6220	1394.	12200.
8	6741.	.7080	.6120	1394.	12200.
9	7069.	.7900	.6330	1384.	12200.
10	7032.	.7390	.6340	1375.	12300.
11	6630.	.6340	.6070	1375.	12100.
12	6931.	.7940	.6250	1366.	12100.
13	7220.	.7990	-.6520	1373.	12300.
14	7073.	.7130	.6310	1373.	-12500.
15	6822.	.8180	.6120	1377.	12200.
16	6923.	.7100	.6210	1368.	12200.
17	7118.	.7800	.6300	1340.	12200.
18	7066.	.7270	.6400	1389.	12200.
19	6916.	.7230	.6270	-1335.	12200.
20	6916.	.7430	.6210	1371.	12200.
21	6806.	.7560	.6240	1373.	12200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODF 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.539	12.0	2.0	55.7	59.2
3	1.523	11.8	1.6	63.7	67.3
4	1.762	15.2	1.2	66.6	66.6
5	-1.907	18.0	1.1	-74.7	-75.9
6	-1.843	19.8	1.0	65.4	66.3
7	-1.828	11.7	1.3	-71.9	-74.6
8	1.476	14.1	.7	53.3	55.7
9	1.663	14.7	.8	63.3	66.2
10	1.545	14.4	1.2	61.7	63.4
11	-1.323	18.6	1.1	50.5	51.9
12	1.662	17.4	1.1	62.3	63.3
13	1.696	16.0	2.9	65.8	68.0
14	1.512	14.4	2.5	58.1	59.4
15	1.720	13.9	1.4	59.0	59.2
16	1.491	14.5	1.2	48.3	49.5
17	.650	16.5	1.5	55.1	56.2
18	1.525	12.1	1.6	65.0	67.4
19	1.517	16.1	1.1	61.8	64.9
20	1.558	12.5	.8	66.2	68.8
21	1.538	19.4	2.1	50.6	51.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3157.	1.57	.45	11.94	12.70	32.00
3	3157.	1.55	.35	-13.79	-14.59	28.99
4	3150.	1.73	.23	12.45	12.45	35.74
5	3150.	1.90	.19	12.89	13.10	36.71
6	3150.	2.16	.19	11.69	11.85	37.25
7	3151.	1.28	.25	12.97	13.44	37.19
8	3150.	1.91	.17	11.90	12.43	32.72
9	3150.	1.77	.16	12.54	13.11	35.74
10	3154.	1.87	.27	13.18	13.53	32.27
11	3153.	-2.82	.29	12.59	12.93	27.53
12	3154.	2.10	.23	12.37	12.57	34.00
13	3154.	1.90	.60	12.79	13.22	32.54
14	3154.	1.92	.57	12.67	12.95	28.51
15	3153.	1.63	.28	11.31	11.35	-53.67
16	3152.	1.95	.28	10.67	10.94	39.95
17	3152.	2.01	.32	11.00	11.22	-42.52
18	3155.	1.59	.37	-14.06	-14.59	32.68
19	3154.	2.13	.26	-13.45	-14.12	36.62
20	3155.	1.61	.19	-14.00	-14.56	32.20
21	3148.	2.53	.46	10.83	10.96	34.94

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	67.8140	67.8140	75.2520	66.5760	66.5760	87.6810
3	-55.0270	-55.0270	-66.6030	-54.0460	-54.0460	-77.6200
4	71.8920	71.8920	71.5700	70.1510	70.1510	84.0330
5	-110.7060	-110.7060	-87.8610	-107.7920	-107.7920	-103.1010
6	-87.0680	-87.0680	78.0080	-84.8740	-84.8740	91.5700
7	72.2020	72.2020	71.8470	72.6010	72.6010	83.5300
8	65.8530	65.8530	76.4160	66.1690	66.1690	88.8680
9	72.6980	72.6980	74.2090	70.2200	70.2200	86.9780
10	70.9230	70.9230	78.1730	71.0390	71.0390	90.8200
11	60.6970	60.6970	76.2880	60.7720	60.7720	88.6290
12	72.6350	72.6350	76.2880	72.7670	72.7670	88.6290
13	73.5500	73.5500	73.1880	68.4560	68.4560	85.1350
14	66.5230	66.5230	73.2220	62.0830	62.0830	85.1350
15	74.7740	74.7740	72.7220	73.2370	73.2370	87.4460
16	72.8350	72.8350	77.2920	71.3980	71.3980	92.9280
17	72.2260	72.2260	74.1250	67.5350	67.5350	85.5920
18	65.8030	65.8030	76.5360	65.1370	65.1370	86.8420
19	74.5780	74.5780	-82.8410	73.8130	73.8130	93.9870
20	75.5200	75.5200	82.3440	74.7400	74.7400	93.4240
21	59.4440	59.4440	74.2380	67.1220	67.1220	86.7100

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		1.60			.46			13.91			14.80			32.00
3		1.58			.36			-16.08			-17.00			28.99
4		1.78			.24			14.62			14.62			33.24
5		1.95			.20			15.13			15.37			31.78
6		2.21			.20			13.72			13.91			32.96
7		1.28			.25			15.08			15.62			30.24
8		1.90			.17			13.84			14.46			30.22
9		1.83			.16			14.70			15.36			31.75
10		1.87			.27			15.31			15.71			32.27
11		-2.82			.29			14.62			15.03			27.53
12		2.10			.23			14.37			14.60			33.90
13		2.04			.64			14.87			15.38			32.54
14		2.05			.61			14.73			15.05			28.51
15		1.66			.29			13.60			13.65			35.51
16		1.99			.29			13.78			14.13			32.95
17		2.15			.34			13.64			13.92			34.50
18		1.61			.37			-15.95			-16.55			28.52
19		2.15			.26			15.26			16.01			29.58
20		1.62			.19			-15.89			-16.52			29.05
21		2.24			.41			13.58			13.75			33.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-76.50	85.00	-76.39	-84.88
3	78.50	85.00	78.39	-84.88
4	79.50	86.00	79.31	85.79
5	79.50	-88.50	79.31	-88.29
6	79.00	87.00	78.81	86.79
7	79.00	86.00	79.08	86.08
8	78.00	87.00	78.08	87.08
9	79.00	86.00	78.77	85.75
10	79.00	87.00	79.04	87.04
11	77.80	86.20	77.84	86.24
12	79.00	86.50	79.04	86.54
13	78.00	86.50	-77.48	85.92
14	79.00	86.50	78.47	85.92
15	-80.00	87.00	79.85	86.83
16	78.00	87.00	77.85	86.83
17	79.00	86.00	78.55	85.51
18	79.20	86.40	79.12	86.32
19	79.40	87.30	79.32	87.22
20	-79.80	87.20	79.72	87.12
21	-77.00	85.00	78.02	86.13

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
2	-4350.	.4260	.4710	1212.	-1.500	-A103.
3	4640.	.4640	.4850	1230.	-1.500	-A103.
4	4780.	-.5730	.4960	1248.	1.520	A438.
5	4750.	-.6200	.4930	1248.	1.520	A438.
6	4600.	-.6030	.4810	1248.	1.520	A438.
7	4750.	-.5610	.4890	1248.	1.520	A372.
8	4740.	.4630	.4970	1248.	1.520	A375.
9	4840.	.5310	.5030	1275.	1.520	A375.
10	4780.	.4910	.4940	1248.	1.530	A533.
11	4580.	.4060	.4830	1257.	1.520	A392.
12	4830.	.5210	.4990	1248.	1.530	A533.
13	4750.	.5020	.5090	1266.	1.520	A409.
14	4650.	.4320	.4890	1248.	1.510	A262.
15	4650.	.5290	.4770	1248.	1.520	A423.
16	-4500.	.4250	.4770	1212.	1.520	A423.
17	4890.	.5230	.5100	1230.	1.520	A342.
18	4900.	.4370	.5080	1248.	1.520	A423.
19	4750.	.4950	.4910	1212.	1.520	A423.
20	4700.	.4700	.4820	1248.	1.520	A423.
21	4775.	.4860	.4910	1230.	1.520	A316.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	-4382.	.4240	-.4700	-1208.	-8150.
3	4674.	.4630	.4840	1226.	-8150.
4	4789.	-.5700	.4930	1242.	8434.
5	4759.	-.6170	.4900	1242.	8434.
6	4609.	-.6000	.4790	1242.	8434.
7	4780.	-.5620	.4900	1250.	8434.
8	4769.	.4640	.4980	1250.	8434.
9	4888.	.5280	.5000	1267.	8434.
10	4802.	.4910	.4940	1249.	8576.
11	4601.	.4060	.4830	1258.	8434.
12	4852.	.5220	.4990	1249.	8576.
13	4796.	.4950	.5020	1249.	8434.
14	4698.	.4260	.4830	1231.	8292.
15	4665.	.5270	.4750	1243.	8434.
16	4515.	.4240	.4760	-1207.	8434.
17	-4972.	.5170	.5040	1216.	8434.
18	4911.	.4360	.5070	1245.	8434.
19	4761.	.4940	.4900	-1209.	8434.
20	4711.	.4690	.4820	1245.	8434.
21	4779.	.4990	.5040	1263.	8434.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.888	14.5	1.9	22.1	24.5
3	.968	16.2	1.7	32.0	35.8
4	-1.194	17.7	1.5	-37.0	-39.4
5	-1.294	21.7	1.3	-39.5	-42.1
6	-1.257	21.2	1.2	-35.4	-38.4
7	-1.169	14.4	1.3	-34.1	-38.1
8	.964	15.9	.9	27.7	30.8
9	1.108	16.4	.9	33.2	-36.6
10	1.023	16.9	2.6	33.3	35.7
11	.845	20.4	2.6	24.5	26.8
12	1.088	20.3	2.3	31.4	34.2
13	1.046	18.1	-3.4	29.7	33.1
14	.899	16.0	2.7	25.1	28.0
15	1.104	17.7	1.8	29.8	31.8
16	.886	16.7	1.7	21.2	23.4
17	1.091	17.6	1.6	29.1	31.7
18	.911	13.3	1.6	31.4	33.7
19	1.033	17.8	1.1	33.4	36.3
20	.980	14.3	1.0	32.0	34.8
21	1.012	19.9	2.1	24.6	28.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3153.	3.28	.74	8.19	9.08	20.81
3	3154.	3.35	.60	-10.89	-12.20	22.31
4	3148.	2.98	.43	-10.19	10.84	27.63
5	3147.	3.36	.35	10.05	10.71	29.53
6	3147.	3.38	.32	9.28	10.06	27.27
7	3149.	2.47	.39	9.59	10.72	25.56
8	3148.	3.31	.33	9.47	10.50	23.07
9	3148.	2.97	.28	9.85	10.89	27.72
10	3151.	3.31	.87	-10.74	-11.49	25.33
11	3148.	-4.84	1.07	9.54	10.44	20.53
12	3150.	3.73	.74	9.50	10.36	26.66
13	3150.	3.47	-1.12	9.34	10.40	22.06
14	3150.	3.56	1.04	9.19	10.25	20.00
15	3149.	3.21	.57	8.90	9.47	-37.89
16	3148.	3.78	.64	7.90	8.71	26.38
17	3149.	3.24	.51	8.80	9.58	-32.11
18	3152.	2.93	.61	-11.36	-12.18	21.36
19	3152.	3.45	.36	-10.64	-11.59	24.94
20	3153.	2.92	.34	-10.76	-11.69	23.98
21	3146.	3.93	.70	7.98	9.20	25.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	27.6610	27.6610	52.1210	-27.2350	-27.2350	60.7680
3	28.5970	28.5970	52.1210	28.1510	28.1510	60.7680
4	34.5370	34.5370	54.6030	33.8540	33.8540	64.1620
5	-46.5240	-46.5240	-63.7950	-45.5470	-45.5470	-74.9300
6	-39.3640	-39.3640	58.1640	-38.5620	-38.5620	68.3340
7	34.4960	34.4960	56.2300	34.6020	34.6020	65.3550
8	34.8170	34.8170	59.8580	34.9200	34.9200	69.5920
9	33.3870	33.3870	54.5410	32.4260	32.4260	63.9040
10	35.6350	35.6350	59.7540	35.6550	35.6550	69.4110
11	30.5200	30.5200	56.8320	30.5290	30.5290	66.0140
12	34.8910	34.8910	57.9160	34.9130	34.9130	67.2750
13	33.9090	33.9090	55.4880	32.0040	32.0040	64.6910
14	31.8370	31.8370	55.5140	30.0890	30.0890	64.6910
15	36.7430	36.7430	56.9440	36.1190	36.1190	68.5120
16	33.4070	33.4070	56.9440	32.8640	32.8640	68.5120
17	33.1620	33.1620	54.5030	31.3540	31.3540	63.0680
18	31.8430	31.8430	58.4390	31.5720	31.5720	66.3290
19	36.7020	36.7020	-61.8220	36.3790	36.3790	70.1640
20	35.5040	35.5040	61.4400	35.1950	35.1950	69.7310
21	29.7460	29.7460	56.3620	32.7960	32.7960	65.5420

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 • 400 HOUR TEST SERIES •

MODE 5

UNIT	NRFC LA/KLA	CO FU	EI	NRFC LA/KLA	HC FU	EI	NRFC LA/KLA	CNO FU	EI	NR LA/KLA	CNOX FU	EI	SMK CORRECTED	NUMBER
2		3.74			.74			9.54			10.59		20.81	
3		1.40			.61			-12.70			-14.23		22.31	
4		3.04			.44			-11.98			12.74		27.63	
5		3.43			.36			11.80			12.58		29.53	
6		3.45			.33			10.90			11.82		27.27	
7		2.44			.38			11.14			12.46		25.56	
8		1.70			.33			11.00			12.21		23.07	
9		3.85			.29			11.56			12.77		25.06	
10		3.31			.87			-12.47			13.35		25.33	
11		-4.84			1.07			11.08			12.13		20.53	
12		3.73			.74			11.04			12.04		26.66	
13		3.67			-1.18			10.89			12.13		22.06	
14		3.77			-1.10			10.71			11.94		20.00	
15		3.27			.58			10.71			11.40		30.30	
16		3.84			.65			10.20			11.26		26.78	
17		3.42			.54			10.93			11.91		31.11	
18		2.95			.62			-12.89			-13.83		21.36	
19		3.48			.37			-12.07			13.15		24.94	
20		2.95			.35			-12.22			13.27		23.98	
21		3.54			.63			9.97			11.49		25.95	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

UTAO-7 • 600 HOUR TEST SERIES •

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-59.00	77.00	-58.91	76.89
3	61.00	76.00	60.91	-75.89
4	-63.30	78.00	-63.15	77.81
5	62.00	-79.20	61.85	-79.01
6	61.50	78.30	61.35	78.11
7	62.00	77.00	62.06	77.07
8	61.50	78.00	61.56	78.08
9	61.00	77.00	60.82	76.78
10	60.80	77.80	60.83	77.84
11	59.20	77.00	59.23	77.04
12	60.50	77.50	60.53	77.54
13	60.00	77.50	59.60	76.98
14	61.00	77.50	60.59	76.98
15	63.00	-79.00	62.88	-78.85
16	60.50	78.00	60.38	77.85
17	61.00	77.00	60.65	76.56
18	62.90	78.30	62.84	78.22
19	61.00	79.00	60.94	77.92
20	61.80	78.40	61.74	78.32
21	60.00	76.50	60.80	77.52

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FUFL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	2325.	.2000	.3500	1086.	-1.220	-4096.
3	2475.	.2060	.3500	1104.	-1.220	-4096.
4	2700.	-.3510	.3760	1104.	1.230	4282.
5	2500.	-.3220	.3570	1104.	1.230	4282.
6	2480.	-.3240	.3580	1104.	1.230	4282.
7	2525.	-.3430	.3550	1104.	-1.240	-4408.
8	2540.	.2520	.3610	1104.	1.230	4250.
9	2500.	.3050	.3620	1122.	1.230	4250.
10	2480.	.2420	.3590	1104.	-1.220	-4099.
11	2320.	.2050	.3470	1104.	-1.220	-4099.
12	2450.	.3090	.3560	1104.	-1.220	-4099.
13	2440.	.2210	.3650	1104.	1.230	4267.
14	2475.	.2170	.3550	1104.	-1.220	-4105.
15	2600.	.2700	.3630	1122.	1.230	4274.
16	2400.	.2290	.3520	1068.	1.230	4274.
17	2550.	.2820	.3700	1086.	1.230	4233.
18	2650.	.2220	.3700	1104.	1.230	4274.
19	2500.	.3140	.3620	1068.	1.230	4274.
20	2425.	.2240	.3460	1086.	1.230	4274.
21	2500.	.2380	.3540	1086.	1.230	4220.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	2342.	.2000	.3490	1083.	-4120.
3	2443.	.2050	.3490	1101.	-4120.
4	-2705.	-.3490	.3740	1098.	4280.
5	2505.	-.3200	.3550	1098.	4280.
6	2485.	-.3220	.3560	1098.	4280.
7	2541.	-.3440	.3560	1106.	-4440.
8	2555.	.2530	.3620	1106.	4280.
9	2525.	.3040	.3600	1115.	4280.
10	2491.	.2420	.3590	1105.	-4120.
11	2331.	.2060	.3470	1105.	-4120.
12	2461.	.3090	.3570	1105.	-4120.
13	2464.	.2180	.3600	1089.	4280.
14	2450.	.2140	.3510	1089.	-4120.
15	2608.	.2690	.3620	1117.	4280.
16	2408.	.2280	.3510	-1064.	4280.
17	2593.	.2790	.3660	1073.	4280.
18	2656.	.2210	.3690	1102.	4280.
19	2506.	.3140	.3620	-1066.	4280.
20	2431.	.2240	.3450	1084.	4280.
21	2502.	.2440	.3630	1115.	4280.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.414	23.9	2.8	5.7	6.9
3	.426	32.2	3.1	9.1	11.2
4	-.727	30.9	2.5	-14.2	-17.3
5	-.666	-37.9	2.9	-12.4	-16.4
6	-.671	32.7	2.5	-12.2	-15.7
7	-.711	32.1	2.6	-13.1	-17.0
8	.522	26.7	2.0	10.0	13.0
9	.632	32.6	2.3	-11.9	-15.7
10	.500	27.9	3.9	10.4	12.9
11	.424	31.9	4.2	7.8	9.9
12	.639	-38.7	4.6	11.1	14.5
13	.456	29.3	-5.3	7.0	10.2
14	.449	25.2	3.8	7.3	9.5
15	.559	29.6	3.6	10.0	13.1
16	.473	28.0	3.4	7.6	10.2
17	.584	33.1	2.8	9.4	13.1
18	.459	21.4	2.3	-11.6	13.3
19	.652	33.2	2.0	-13.4	-16.6
20	.465	23.9	1.9	9.8	12.0
21	.491	29.0	2.9	6.2	11.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3136.	11.50	2.33	4.50	5.48	7.38
3	3130.	-15.08	2.52	-7.03	-8.64	8.39
4	3137.	8.47	1.19	-6.39	7.80	-14.34
5	3132.	11.34	1.51	6.10	8.05	-13.27
6	3135.	9.74	1.27	5.97	7.69	-13.55
7	3136.	9.01	1.28	6.02	7.82	11.88
8	3134.	10.19	1.33	-6.26	8.16	9.47
9	3134.	10.28	1.23	6.15	8.11	10.97
10	3133.	11.13	2.67	-6.81	8.43	9.57
11	3125.	-14.97	3.37	6.04	7.62	6.99
12	3132.	12.08	2.46	5.67	7.42	12.08
13	3127.	12.81	-4.01	5.05	7.32	9.21
14	3133.	11.19	2.93	5.29	6.94	8.24
15	3133.	10.56	2.23	5.86	7.64	11.59
16	3131.	11.79	2.45	5.24	7.07	9.47
17	3134.	11.29	1.62	5.26	7.33	12.85
18	3139.	9.30	1.71	-8.28	-9.50	9.00
19	3139.	10.18	1.03	-6.72	8.36	10.39
20	3138.	10.29	1.38	-6.95	8.49	8.99
21	3130.	11.74	2.03	4.14	7.48	10.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	10.8120	10.8120	31.8090	10.6670	10.6670	37.1160
3	9.8980	9.8980	-29.9660	-9.7670	-9.7670	-34.9690
4	-13.1240	-13.1240	33.3590	12.9160	12.9160	39.2510
5	-14.4930	-14.4930	-36.0340	-14.2620	-14.2620	-42.3900
6	-13.2660	-13.2660	34.0170	13.0570	13.0570	40.0230
7	11.9750	11.9750	32.3030	11.9890	11.9890	37.5230
8	12.3680	12.3680	34.3640	12.3830	12.3830	39.9280
9	11.6160	11.6160	31.3720	11.3370	11.3370	36.8740
10	12.0040	12.0040	33.8550	11.9980	11.9980	39.3150
11	10.8620	10.8620	32.2430	10.8550	10.8550	37.4410
12	12.2070	12.2070	33.1980	12.2020	12.2020	38.5520
13	11.3930	11.3930	31.8790	10.8890	10.8890	37.3210
14	11.3710	11.3710	31.8950	10.8640	10.8640	37.3210
15	-13.7150	-13.7150	34.8360	-13.5270	-13.5270	-41.9580
16	12.0590	12.0590	32.6640	11.8980	11.8980	39.3470
17	11.4330	11.4330	31.3430	10.9210	10.9210	36.3970
18	12.3840	12.3840	35.5010	12.2960	12.2960	40.3160
19	12.8300	12.8300	34.8170	12.7350	12.7350	39.5400
20	12.5320	12.5320	35.7310	12.4420	12.4420	40.5770
21	10.8020	10.8020	33.3660	11.6350	11.6350	38.5020

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	11.65	2.36	5.26	6.39	7.38
3	-15.28	2.56	-8.20	10.08	8.39
4	8.61	1.21	-7.52	9.17	-14.34
5	11.52	1.53	7.18	9.47	13.27
6	9.90	1.29	7.02	9.05	-13.55
7	9.00	1.27	7.00	9.09	11.88
8	10.18	1.33	7.28	9.48	9.47
9	10.53	1.26	7.23	9.54	10.97
10	11.13	2.67	-7.91	9.79	9.57
11	-14.98	3.37	7.01	8.85	6.99
12	12.09	2.46	6.58	8.62	12.08
13	13.40	-4.19	5.91	8.56	9.21
14	11.72	3.06	6.19	8.12	8.24
15	10.71	2.27	7.06	9.20	11.59
16	11.95	2.48	6.78	9.14	9.47
17	11.81	1.69	6.56	9.15	12.85
18	9.36	1.72	-9.41	-10.78	9.00
19	10.26	1.04	-7.63	9.50	10.39
20	10.36	1.39	-7.89	9.64	8.99
21	10.90	1.88	5.13	9.27	10.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-33.50	-57.00	-33.45	-56.92
3	38.00	61.00	37.95	60.91
4	37.00	60.40	36.91	60.25
5	35.00	59.00	34.92	58.86
6	38.00	-62.00	37.91	61.85
7	38.00	61.00	38.04	61.06
8	-32.00	-56.00	-32.03	-56.05
9	34.50	58.00	34.40	-57.83
10	36.60	60.90	36.62	60.93
11	-33.40	-57.50	-33.42	-57.53
12	37.30	-61.90	37.32	61.93
13	35.00	59.50	34.77	59.10
14	34.00	58.00	-33.77	-57.61
15	36.00	60.00	35.93	59.88
16	-33.00	58.00	-32.94	-57.89
17	37.00	61.00	36.79	60.65
18	34.90	58.50	34.87	58.44
19	-33.50	-57.90	-33.47	-57.84
20	35.50	59.00	35.47	58.94
21	35.50	60.00	35.97	60.80

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-1100.	.2380	.2950	1122.	1.070	-1145.
3	1300.	-.1670	.3180	-1176.	-1.080	1347.
4	1250.	.3140	.3120	1107.	-1.040	1316.
5	1180.	.3180	.3020	1138.	-1.040	1246.
6	1280.	.3360	.3150	1140.	1.050	-1412.
7	1275.	.2920	.3100	1122.	1.060	1354.
8	-1050.	.2910	.3010	1140.	1.050	-1103.
9	1150.	.2900	.2950	1122.	1.050	-1188.
10	1270.	.2790	.3150	1143.	1.050	1349.
11	-1050.	-.2040	-.2820	1113.	1.050	-1175.
12	1240.	-.3480	.3050	1143.	1.070	-1409.
13	1160.	.2340	.2980	1140.	1.050	1253.
14	1125.	.2190	.2990	1140.	1.050	-1181.
15	1225.	.3040	.3090	1140.	1.060	1293.
16	1150.	.3050	.3180	1149.	-1.040	1197.
17	1275.	.2830	.3160	1140.	1.070	1324.
18	1200.	.2530	.3070	1140.	1.050	1224.
19	-1100.	.2950	.2960	1104.	1.060	1195.
20	1125.	.2740	-.2850	1122.	1.050	1248.
21	1250.	.2790	.3060	1122.	1.060	1329.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	-1108.	.2370	.2940	1118.	-1152.
3	1309.	-.1670	.3170	-1172.	1355.
4	1252.	.3120	.3100	1102.	1315.
5	1182.	.3170	.3010	1132.	1245.
6	1282.	.3350	.3140	1134.	-1411.
7	1283.	.2930	.3110	1124.	1364.
8	-1056.	.2920	.3010	1142.	-1111.
9	1161.	.2880	.2940	1115.	1196.
10	1276.	.2790	.3160	1144.	1356.
11	-1055.	-.2040	-.2820	1114.	-1181.
12	1246.	-.3480	.3050	1144.	-1416.
13	1171.	.2310	.2940	1125.	1257.
14	1137.	.2160	.2950	1125.	-1185.
15	1229.	.3030	.3080	1135.	1294.
16	1154.	.3040	.3160	1144.	1199.
17	1296.	.2800	.3120	1127.	1339.
18	1203.	.2530	.3060	1138.	1225.
19	-1103.	.2950	.2950	1102.	1197.
20	1128.	.2730	-.2850	1120.	1249.
21	1251.	.2860	.3150	1152.	1348.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.487	75.6	8.4	2.3	-3.6
3	-.336	96.8	13.4	3.4	6.2
4	.641	97.0	11.8	-6.4	10.1
5	.646	-116.0	-17.8	-6.1	9.7
6	.690	85.0	8.5	-7.5	-10.9
7	.597	89.7	10.9	-6.4	9.8
8	.590	-118.8	15.8	5.2	8.6
9	.591	96.2	11.1	-5.8	9.1
10	.570	85.1	11.8	-6.2	9.2
11	-.414	76.7	12.0	4.4	6.4
12	-.712	105.8	11.7	-6.6	-10.7
13	.478	72.0	10.6	3.3	6.5
14	.445	78.0	12.8	2.8	5.6
15	.614	-127.1	-21.8	5.0	8.4
16	.616	-126.4	-22.5	4.4	7.9
17	.582	67.0	6.3	-6.0	9.2
18	.512	110.7	-19.7	-6.0	8.4
19	.602	98.1	13.2	-5.9	9.1
20	.557	99.0	12.3	5.7	8.6
21	.567	96.8	12.0	2.6	8.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3096.	30.62	5.84	1.53	-2.50	3.03
3	-3036.	-55.75	-13.28	3.25	-5.83	1.33
4	3090.	29.77	6.23	3.24	5.07	1.84
5	3073.	35.13	9.25	3.02	4.84	-8.24
6	3104.	24.34	4.19	-3.52	5.11	1.57
7	3090.	29.57	6.20	-3.44	5.32	-0.00
8	-3067.	-39.28	8.99	2.80	4.69	1.57
9	3086.	31.99	6.33	3.16	4.99	2.22
10	3093.	29.40	6.98	-3.52	5.22	2.00
11	3074.	36.24	9.78	-3.43	4.99	1.61
12	3097.	29.26	5.58	3.01	4.87	2.54
13	3091.	29.65	7.47	2.26	4.37	1.59
14	3078.	34.30	9.69	2.02	4.06	.27
15	-3060.	-40.30	-11.86	2.58	4.36	-4.95
16	-3060.	-39.95	-12.22	2.29	4.08	-3.77
17	3110.	22.80	3.67	-3.38	5.16	-4.12
18	-3057.	-42.09	-12.86	-3.74	5.24	1.70
19	3088.	31.99	7.37	3.18	4.86	1.83
20	3083.	34.89	7.47	-3.32	4.98	1.95
21	3081.	33.47	7.13	1.46	4.61	2.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	-3.3960	-2.5930	-12.5690	-3.3550	-2.5630	-14.6860
3	4.3130	3.1340	14.5120	4.2600	3.0970	16.9530
4	4.1500	3.2660	14.0410	4.0960	3.2250	16.5570
5	3.8100	3.0170	13.3360	3.7620	2.9790	15.7270
6	-4.5650	-3.6240	14.8730	-4.5060	-3.5770	17.5350
7	4.2980	3.3400	14.6830	4.2970	3.3400	17.0420
8	-3.2200	-2.5350	-12.3450	-3.2200	-2.5350	-14.3290
9	3.6120	2.8230	-12.8610	-3.5370	2.7660	-15.1560
10	4.2690	3.2940	14.6140	4.2640	3.2900	16.9640
11	-3.4760	-2.6060	-12.9140	-3.4720	-2.6030	-14.9890
12	-4.5320	-3.6250	15.1490	-4.5270	-3.6220	-17.5850
13	3.9720	2.9970	13.4760	3.8190	2.8870	15.8710
14	3.6300	2.7300	-12.7690	-3.4900	-2.6310	-15.0350
15	4.0530	3.1760	13.5370	4.0060	3.1400	16.3350
16	3.5900	2.8300	-12.5840	3.5490	2.7980	-15.1870
17	4.3670	3.3690	14.3960	4.1940	3.2400	16.7950
18	3.6920	2.8290	13.6300	3.6690	2.8120	15.4940
19	3.5610	2.7950	13.3390	-3.5390	2.7780	-15.1630
20	3.8050	2.9420	13.8800	3.7820	2.9250	15.7770
21	3.9760	3.0890	14.7960	4.2310	3.2780	16.8830

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LA/KLB FU	NR CNOX EI LA/KLB FU	SMK NUMBER CORRECTED
2	30.99	5.91	1.79	2.92	2.41
3	-56.45	-13.44	3.80	-6.81	1.33
4	30.16	6.31	3.82	5.98	1.84
5	35.59	9.37	3.56	5.71	-3.99
6	24.66	4.24	4.14	6.03	1.57
7	29.57	6.20	-4.00	6.18	0.00
8	-39.28	9.00	3.25	5.44	1.57
9	32.67	6.46	3.73	5.88	2.22
10	29.43	6.99	-4.08	6.05	2.00
11	36.28	9.80	-3.98	5.79	1.61
12	29.29	5.58	3.49	5.66	2.54
13	30.84	7.75	2.66	5.15	1.59
14	35.67	10.06	2.38	4.78	.27
15	-40.77	-11.99	3.12	5.27	-3.99
16	-40.42	-12.36	2.97	5.28	3.27
17	27.74	3.81	-4.23	6.46	3.24
18	-42.35	-12.93	-4.25	5.96	1.70
19	32.19	7.42	3.61	5.53	1.83
20	35.11	7.52	3.77	5.66	1.95
21	31.45	6.72	1.79	5.65	2.04

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 • 600 HOUR TEST SERIES •

MODE B

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	31.00	55.00	30.96	54.92
3	35.00	58.00	34.95	57.92
4	33.70	57.00	33.62	56.86
5	31.00	54.00	30.93	53.87
6	34.20	58.20	34.12	58.06
7	35.00	58.00	35.03	58.06
8	30.00	54.00	30.03	54.05
9	33.00	56.50	32.96	56.74
10	35.00	59.10	35.02	59.13
11	30.30	54.10	30.31	54.13
12	34.90	59.00	34.92	59.03
13	32.00	56.00	31.79	55.83
14	30.00	56.00	29.80	53.86
15	33.50	57.00	33.66	56.89
16	30.00	53.50	29.96	53.40
17	34.00	57.50	33.81	57.17
18	31.90	55.50	31.82	55.45
19	-29.50	53.80	-29.62	53.75
20	33.10	57.10	33.07	57.05
21	34.00	58.50	34.45	58.38

NOTE - MINUS SIGNS DENOTE DIVERGING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TY7 DFG R	EPR	THRUST LRF
2	1050.	.2520	.3190	1140.	1.060	1052.
3	1175.	-.1300	.2990	1140.	1.060	1193.
4	1120.	.3210	.3000	1122.	1.040	1150.
5	1050.	.3280	.3220	1140.	1.040	1038.
6	1140.	-.3500	.2990	1140.	1.050	1207.
7	1160.	.3150	.2940	1140.	1.050	1198.
8	1010.	.2990	.3220	1158.	1.050	1034.
9	1110.	.2960	.3060	1122.	1.050	1116.
10	1260.	.2820	.3050	1140.	1.050	1252.
11	-970.	-.2230	.3050	1167.	1.050	1037.
12	1110.	-.3650	-.2820	1147.	1.050	1247.
13	1025.	.2450	.3010	1131.	1.040	1087.
14	1025.	.2570	.3350	1176.	1.040	1029.
15	1150.	.3130	.3100	1144.	1.080	1149.
16	1150.	.3250	-.3720	1176.	1.040	1027.
17	1160.	.2890	.3060	1122.	1.060	1151.
18	1100.	.2710	.3200	1158.	1.050	1080.
19	1000.	.3140	.3320	1140.	1.050	1034.
20	1050.	.2860	.2980	1122.	1.050	1109.
21	1200.	.2810	.3000	1122.	1.060	1248.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1058.	.2520	.3180	1136.	1058.
3	1184.	-.1300	.2980	1136.	1200.
4	1122.	.3190	.2990	1116.	1149.
5	1052.	.3260	.3210	1134.	1037.
6	1142.	-.3490	.2970	1134.	1207.
7	1167.	.3160	.2940	1142.	1207.
8	1016.	.3000	.3230	1160.	1041.
9	1121.	.2940	.3040	1115.	1124.
10	1205.	.2820	.3050	1141.	1258.
11	-974.	-.2240	.3050	1168.	1043.
12	1115.	-.3660	-.2820	1148.	1253.
13	1035.	.2420	.2970	1116.	1090.
14	1036.	.2530	.3300	1160.	1033.
15	1154.	.3110	.3090	1144.	1151.
16	1154.	.3240	-.3700	1171.	1028.
17	1180.	.2850	.3020	1109.	1164.
18	1103.	.2700	.3200	1155.	1081.
19	1002.	.3140	.3310	1138.	1035.
20	1052.	.2860	.2870	1120.	1110.
21	1201.	.2890	.3080	1152.	1265.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.514	93.8	12.0	1.9	-3.6
3	-.253	126.7	19.7	2.1	4.7
4	.651	122.3	17.8	-6.1	9.5
5	.659	-155.3	-28.1	-5.8	9.1
6	-.714	118.2	16.1	-6.2	-10.1
7	.640	115.7	16.4	5.5	9.6
8	.604	135.8	21.0	4.9	8.6
9	.601	108.6	12.9	5.4	9.1
10	.575	90.9	12.4	-6.1	8.7
11	-.451	97.6	17.7	4.1	6.2
12	-.745	126.9	16.2	-5.9	-10.0
13	.498	93.8	14.5	2.7	5.8
14	.517	118.2	20.5	2.3	5.7
15	.627	-156.8	-29.9	4.9	7.9
16	.649	-183.0	-36.0	4.4	7.9
17	.591	85.5	9.1	5.0	8.5
18	.543	139.9	26.4	-6.0	8.3
19	.634	146.4	24.6	-5.6	8.7
20	.579	121.0	19.8	5.4	8.3
21	.571	110.8	14.4	2.1	7.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
2	3083.	35.81	7.86	1.20	-2.23	2.76
3	-2944.	-93.80	-25.10	2.59	-5.71	2.65
4	3071.	36.71	9.19	-2.99	4.68	2.24
5	3043.	45.65	14.20	2.81	4.40	1.32
6	3082.	32.49	7.58	2.82	4.57	1.70
7	3074.	35.36	8.63	2.74	4.84	2.45
8	3053.	43.69	1.59	2.61	4.54	.92
9	3078.	35.41	7.24	2.92	4.89	2.61
10	3089.	31.09	7.30	-3.43	4.88	2.12
11	3056.	42.13	13.10	2.90	4.38	.80
12	3086.	33.44	7.33	2.55	4.31	-3.97
13	3073.	36.82	9.79	1.75	3.75	1.32
14	3052.	44.39	13.21	1.39	3.52	1.46
15	3037.	48.32	15.83	2.48	3.98	-3.26
16	-3020.	-54.22	-18.34	2.12	3.86	2.37
17	3097.	28.53	5.21	2.75	4.64	-6.13
18	3036.	49.80	16.12	-3.51	4.84	1.56
19	3052.	44.87	12.95	2.82	4.40	1.57
20	3063.	40.73	11.47	-3.00	4.61	1.95
21	3071.	37.94	8.49	1.17	4.37	2.20

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNC X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.0840	2.3850	11.8690	3.0480	2.3570	13.8690
3	3.5980	2.5940	13.0110	3.5550	2.5650	15.2020
4	3.3890	2.7010	12.4320	3.3470	2.6680	14.6630
5	2.9300	2.3590	11.3990	2.8940	2.3310	13.4480
6	3.6320	2.9330	12.9570	3.5860	2.8960	15.2810
7	3.5860	2.8450	13.1650	3.5850	2.8440	15.2790
8	2.9210	2.3200	11.6490	2.9200	2.3200	13.5210
9	3.3320	2.6230	12.2560	3.2640	2.5700	14.4460
10	3.8290	2.9750	13.6860	3.8250	2.9710	15.8860
11	2.9340	2.2430	11.6750	2.9310	2.2400	13.5500
12	3.8060	-3.0960	13.6360	3.8020	-3.0930	15.8270
13	3.2770	2.5120	12.0100	3.1540	2.4230	14.1550
14	2.9720	2.3040	11.3340	2.8610	2.2220	13.3570
15	3.3890	2.6900	12.1580	3.3510	2.6600	14.6740
16	2.8580	2.3010	-10.9850	2.8270	2.2760	13.2610
17	3.5330	2.7620	12.6720	3.3970	2.6580	14.7940
18	3.1460	2.4520	12.3870	3.1270	2.4380	14.0920
19	2.8940	2.3160	11.7870	2.8760	2.3030	13.4000
20	3.2380	2.5410	12.6020	3.2180	2.5260	14.3260
21	3.6310	2.8360	-14.0080	3.8600	3.0080	15.9740

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	36.24	7.95	1.40	2.61	2.76
3	-94.96	-25.39	3.03	-6.67	2.42
4	37.18	9.30	3.53	5.52	2.24
5	46.21	14.37	3.32	5.19	1.32
6	32.90	7.68	3.32	5.38	1.70
7	35.37	8.63	3.18	5.62	2.45
8	43.70	11.59	3.03	5.27	.92
9	36.15	7.39	3.44	5.76	2.61
10	31.12	7.31	-3.98	5.66	1.85
11	42.18	13.11	3.36	5.09	.80
12	33.48	7.34	2.96	5.00	-3.67
13	38.25	10.15	2.06	4.42	1.32
14	46.12	13.70	1.64	4.15	1.46
15	48.87	16.00	2.99	4.81	-3.10
16	-54.82	-18.54	2.75	5.01	2.37
17	29.67	5.42	3.45	5.82	-3.63
18	50.11	-16.21	-3.99	5.50	.92
19	45.14	13.03	3.21	5.00	1.57
20	40.98	11.54	3.41	5.24	1.46
21	35.68	8.00	1.43	5.35	2.20

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
2	22369.	1167.	505.2	30.36	.005240
3	15727.	1167.	505.2	30.37	.005240
4	18103.	1174.	501.7	30.18	.004390
5	20789.	1177.	501.7	30.19	.004390
6	21915.	1174.	510.2	30.19	.004260
7	20789.	1182.	507.7	30.28	.005090
8	14916.	1182.	507.7	30.28	.005090
9	21430.	1182.	507.7	30.28	.005090
10	23672.	1182.	506.0	30.05	.006470
11	23759.	1182.	506.0	30.05	.006470
12	22404.	1182.	506.0	30.05	.006470
13	21893.	1184.	509.7	30.04	.007600
14	22011.	1188.	509.7	30.08	.007590
15	14744.	1213.	509.7	30.02	.006220
16	19499.	1094.	509.7	30.03	.006220
17	23344.	1094.	509.7	30.03	.006220
18	21611.	1194.	507.0	29.93	.006320
19	21897.	1194.	507.0	29.93	.006320
20	21974.	1194.	507.0	29.93	.006320
21	25544.	1188.	514.7	29.97	.006480

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	30.50	54.00	30.90	54.72
3	32.00	55.00	32.42	55.73
4	29.00	54.00	29.49	54.91
5	32.50	56.00	33.05	56.94
6	32.00	56.00	32.27	56.46
7	31.00	56.00	31.33	56.60
8	33.00	56.00	33.36	56.60
9	33.00	56.00	33.36	56.60
10	35.00	58.00	35.44	58.73
11	32.00	56.00	32.40	56.70
12	34.50	57.00	34.93	57.71
13	30.00	54.00	30.26	54.47
14	30.00	53.00	30.26	53.47
15	34.00	57.50	34.30	58.01
16	30.50	54.00	30.77	54.47
17	33.50	56.50	33.79	57.00
18	33.00	56.00	33.38	56.65
19	32.50	57.00	32.87	57.66
20	33.00	57.00	33.38	57.66
21	32.60	57.20	32.73	57.42

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	1150.	.2900	.3430	1140.	1.050	1039.
3	1110.	.3370	.3060	1140.	1.050	1079.
4	1100.	.2710	-.3560	1158.	1.060	1049.
5	1140.	.3040	.3050	1140.	1.050	1143.
6	1125.	.3130	.3160	1140.	1.060	1120.
7	1225.	.3470	-.3580	1176.	1.040	1123.
8	1125.	.2790	.2980	1140.	1.060	1123.
9	1150.	.2960	.3040	1140.	1.050	1123.
10	1250.	.3070	.3120	1158.	1.050	1234.
11	1060.	-.2170	.2950	1131.	1.060	1137.
12	1150.	.3420	.2890	1176.	1.050	1185.
13	1050.	.3030	.3290	1158.	1.040	1045.
14	1050.	.2860	.3280	1158.	1.050	1024.
15	1180.	.3070	.3020	1140.	1.050	1200.
16	1100.	.3120	.3350	1140.	-1.020	1046.
17	1140.	.3150	.2980	-1104.	1.060	1152.
18	1190.	.2710	.3180	1149.	1.050	1139.
19	1115.	.2830	.3050	1131.	1.050	1187.
20	1105.	.3040	.2950	1131.	1.060	1187.
21	1200.	.3300	.3330	1158.	1.050	1174.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1151.	.2970	.3520	1170.	1054.
3	1112.	.3460	.3140	1170.	1095.
4	1091.	.2800	-.3680	-1197.	1058.
5	1131.	.3150	.3160	1178.	1153.
6	1126.	.3180	.3210	1159.	1130.
7	1227.	.3540	-.3660	-1201.	1137.
8	1126.	.2860	.3040	1164.	1137.
9	1151.	.3020	.3110	1164.	1137.
10	1240.	.3150	.3200	1187.	1239.
11	1051.	-.2230	.3030	1159.	1142.
12	1141.	.3510	.2960	-1205.	1190.
13	1045.	.3090	.3350	1178.	1049.
14	1046.	.2910	.3340	1178.	1029.
15	1174.	.3130	.3070	1160.	1204.
16	1094.	.3170	.3410	1160.	1049.
17	1134.	.3210	.3040	-1123.	1158.
18	1177.	.2770	.3250	1175.	1139.
19	1103.	.2900	.3120	1157.	1188.
20	1093.	.3110	.3020	1157.	1188.
21	1197.	.3320	.3350	1167.	1176.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.584	149.7	15.0	2.0	7.5
3	.677	170.1	26.2	2.2	8.9
4	.548	118.9	14.7	3.4	9.8
5	.618	122.1	16.4	3.0	9.6
6	.635	122.8	15.5	2.6	9.7
7	.696	-177.1	25.9	4.4	-10.5
8	.568	102.0	11.1	2.8	9.0
9	.602	105.1	10.9	2.9	8.9
10	.628	91.9	8.5	4.4	8.8
11	-.441	99.8	8.4	1.6	6.2
12	.699	111.3	11.0	2.9	8.6
13	.616	129.6	15.3	3.8	8.8
14	.577	142.6	19.8	2.5	8.9
15	.621	132.3	18.9	4.7	-10.3
16	.623	-178.1	27.7	1.8	8.5
17	.644	98.4	10.3	2.5	9.3
18	.545	132.7	19.8	3.3	9.4
19	.578	108.1	9.9	2.9	9.2
20	.616	121.7	15.1	2.8	9.6
21	.666	135.6	24.9	1.3	6.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3052.	49.78	8.59	1.09	4.10	1.31
3	3042.	48.62	12.87	1.04	4.18	.79
4	3065.	42.34	9.01	2.02	-5.73	2.11
5	3071.	38.62	8.91	1.55	5.01	2.09
6	3074.	37.80	8.21	1.34	4.92	0.00
7	303A.	49.19	12.34	2.01	4.80	2.76
8	3076.	35.18	6.5A	1.59	5.09	1.18
9	3079.	34.21	6.07	1.57	4.76	1.96
10	309A.	28.87	4.57	2.25	4.56	2.87
11	3069.	44.22	6.40	1.19	4.52	1.56
12	3092.	31.34	5.34	1.32	3.96	1.95
13	3073.	41.15	8.35	1.99	4.60	4.61
14	3054.	47.99	11.45	1.41	4.92	.66
15	305A.	41.47	10.20	2.44	-5.33	2.86
16	3024.	-55.05	14.72	.91	4.32	1.96
17	3089.	30.06	5.40	1.25	4.69	1.30
18	3046.	47.23	12.08	1.91	-5.48	1.83
19	30A7.	36.73	5.80	1.60	-5.16	1.58
20	3070.	38.62	8.21	1.47	4.99	1.31
21	3059.	39.63	12.51	.61	2.91	1.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 • 1200 HOUR TEST SERIES •

MODE 1

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	2.8476	2.2600	12.1150	3.0170	2.3900	13.7470
3	2.9900	2.4250	12.4740	3.1700	2.5700	14.1970
4	2.8100	2.2120	12.2280	3.0460	2.3900	13.8630
5	3.0950	2.4660	12.9510	3.3590	2.6710	14.6950
6	3.1430	2.5250	13.1190	3.2840	2.6190	14.4980
7	3.1500	2.5610	12.8930	3.3050	2.6870	14.5560
8	3.1500	2.4740	12.8930	3.3050	2.5900	14.5560
9	3.1500	2.4950	12.8930	3.3050	2.6130	14.5560
10	3.5000	2.7740	13.3760	3.7320	2.9530	15.6510
11	3.1180	2.3750	12.4850	3.3210	2.5190	14.5960
12	3.2950	2.6680	12.9030	3.5110	2.8420	15.0910
13	2.8570	2.2800	11.5850	2.9820	2.3770	13.6900
14	2.7210	2.1580	11.2580	2.8360	2.2460	13.2880
15	3.4170	2.7100	13.2340	3.5740	2.8310	15.2510
16	2.8560	2.2890	11.8920	2.9820	2.3870	13.6900
17	3.2230	2.5730	12.7780	3.3680	2.6870	14.7180
18	3.1170	2.4370	12.5090	3.3120	2.5840	14.5730
19	3.2910	2.5840	12.9230	3.4990	2.7410	15.0600
20	3.2910	2.6110	12.9230	3.4950	2.7720	15.0600
21	3.3830	2.7130	13.0650	3.4500	2.7660	14.9310

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 • 1200 HOUR TEST SERIES •

MODE 1

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NREC CNR FI LB/KLB FU	NREC CNR FI LB/KLB FU	ERR NUMBER CORRECTED
2	46.97	8.12	1.77	5.01	1.77
3	45.86	12.14	1.27	5.11	.79
4	39.06	8.34	2.45	-4.98	2.11
5	35.59	8.22	1.89	6.10	2.09
6	36.42	7.91	1.59	5.86	0.00
7	46.88	11.77	2.67	5.82	1.86
8	33.52	6.28	1.93	-4.18	1.18
9	32.61	5.80	1.90	5.77	1.46
10	27.07	4.30	2.82	5.76	2.38
11	41.53	6.03	1.49	5.67	1.56
12	29.41	5.01	1.66	4.98	1.82
13	39.43	8.01	2.53	5.84	2.02
14	46.04	11.00	1.78	-6.24	.66
15	39.66	9.76	3.01	-6.59	2.18
16	-52.73	14.11	1.12	5.35	1.96
17	28.76	5.18	1.54	5.80	1.27
18	44.45	11.39	2.40	-6.85	1.83
19	34.55	5.46	2.00	-6.46	1.58
20	36.72	7.74	1.83	-6.24	1.10
21	38.86	12.27	.75	3.58	1.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.50	60.00	36.98	60.80
1	37.50	60.00	38.00	60.80
4	36.50	60.00	37.11	61.01
5	36.00	60.00	36.60	61.01
6	36.50	60.00	36.80	60.50
7	37.00	60.00	37.40	60.65
8	37.00	60.00	37.40	60.65
9	37.00	60.00	37.40	60.65
10	37.00	61.00	37.46	61.76
11	36.00	60.00	36.45	60.75
12	37.00	60.00	37.46	60.75
13	-33.00	-58.00	-33.29	58.51
14	-34.00	-58.00	34.30	58.51
15	36.50	60.50	36.82	61.03
16	36.00	60.00	36.32	60.53
17	37.00	60.00	37.33	60.53
18	36.00	59.70	36.41	60.39
19	36.50	60.00	36.92	60.69
20	36.50	60.50	36.92	61.20
21	35.70	60.00	35.84	60.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1300.	.2760	.3140	1122.	1.070	1328.
3	1310.	.3250	.3120	1158.	1.060	1328.
4	1325.	.2540	.3210	1140.	1.070	1349.
5	1260.	.3010	.3070	1140.	1.060	1349.
6	1280.	.3070	.3130	1140.	1.070	1318.
7	1320.	.2950	.3190	1158.	1.070	1323.
8	1275.	.2710	.3080	1140.	1.060	1323.
9	1300.	.2910	.3140	1140.	1.070	1323.
10	1300.	.3030	.3160	-1347.	1.060	-1400.
11	1210.	-.1900	.2980	1140.	1.060	1339.
12	1260.	.3340	.3060	1176.	1.050	1339.
13	1175.	.2870	.3150	1149.	1.050	1224.
14	1170.	.2590	.3090	1140.	1.060	1222.
15	1280.	.3080	.3150	1140.	1.060	1357.
16	1280.	.2920	.3170	1140.	1.070	1327.
17	1300.	.3130	.3180	1122.	1.070	1327.
18	1325.	.2460	.3280	1140.	1.052	1323.
19	1240.	.2660	.3050	1113.	1.070	1341.
20	1240.	.2790	.3050	1140.	1.061	1371.
21	1300.	.3180	.3260	1170.	1.050	1312.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1302.	.2830	.3230	1152.	1348.
3	1312.	.3340	.3210	1189.	1348.
4	1314.	.2620	.3310	1178.	1360.
5	1250.	.3110	.3170	1178.	1360.
6	1281.	.3130	.3190	1159.	1330.
7	1322.	.3010	.3260	1183.	1339.
8	1277.	.2770	.3150	1164.	1339.
9	1302.	.2970	.3210	1164.	1339.
10	1290.	.3110	.3240	-1381.	-1406.
11	1200.	-.1950	.3050	1168.	1345.
12	1250.	.3430	.3140	-1205.	1345.
13	1169.	.2920	.3200	1169.	1228.
14	1166.	.2640	.3040	1160.	1228.
15	1273.	.3130	.3210	1160.	1362.
16	1274.	.2970	.3230	1160.	1332.
17	1293.	.3190	.3230	1142.	1332.
18	1310.	.2520	.3360	1166.	1323.
19	1226.	.2720	.3120	1138.	1341.
20	1226.	.2860	.3120	1166.	1372.
21	1297.	.3210	.3290	1179.	1314.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.562	102.1	7.6	3.1	8.4
3	.662	110.7	14.4	2.9	10.2
4	.521	64.3	5.8	4.8	10.9
5	.614	104.4	13.3	3.0	10.0
6	.630	83.8	8.8	3.9	10.6
7	.601	91.9	9.7	4.7	10.9
8	.554	74.3	6.2	3.6	9.5
9	.595	82.1	7.5	3.5	9.7
10	.621	84.2	8.0	4.4	9.0
11	-.389	62.0	5.6	1.9	6.4
12	.686	93.7	8.0	3.2	9.4
13	.586	99.9	10.1	3.9	9.3
14	.527	100.5	12.4	2.9	9.2
15	.625	111.6	14.1	5.0	-11.2
16	.593	103.4	13.9	2.6	9.4
17	.642	81.4	6.8	3.5	10.1
18	.499	94.9	12.5	3.2	9.6
19	.546	74.9	5.7	3.5	9.8
20	.570	89.8	8.6	3.1	9.9
21	.649	98.1	14.8	2.1	6.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3085.	35.69	4.54	1.76	4.82	1.95
3	3082.	32.79	7.33	1.40	4.94	2.34
4	3107.	24.42	3.80	3.01	-6.83	2.76
5	3083.	33.40	7.30	1.58	5.26	2.10
6	3102.	26.27	4.74	1.98	5.44	1.83
7	3087.	30.02	5.47	2.51	-5.87	3.68
8	3097.	26.43	3.77	2.12	-5.57	.39
9	3095.	27.20	4.24	1.93	5.26	3.25
10	3102.	26.75	4.35	2.30	4.71	2.35
11	3093.	31.40	4.84	1.54	5.34	2.22
12	3103.	26.97	3.95	1.53	4.43	3.01
13	3092.	33.56	5.84	2.16	5.14	2.65
14	3080.	37.40	7.93	1.75	-5.60	.92
15	3076.	34.92	7.57	2.57	-5.74	2.09
16	3076.	34.15	7.89	1.39	5.09	2.47
17	3102.	25.02	3.59	1.79	5.09	2.61
18	3072.	37.17	8.44	2.09	-6.20	.78
19	3108.	27.12	3.54	2.10	-5.84	1.45
20	3091.	31.01	5.12	1.76	-5.62	.79
21	3088.	29.69	7.70	1.04	3.24	1.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.9770	3.0840	14.7990	4.2310	3.2730	16.8A30
3	3.9780	3.1690	14.8020	4.2310	3.3660	16.8A30
4	3.9340	3.0200	14.9580	4.2840	3.2750	17.0120
5	3.9340	3.0970	14.9590	4.2840	3.3650	17.0120
6	3.9970	3.1490	15.0970	4.1560	3.2700	16.7030
7	3.9880	3.1220	14.8540	4.1930	3.2780	16.7930
8	3.9880	3.0830	14.8540	4.1930	3.2340	16.7930
9	3.9880	3.1160	14.8540	4.1930	3.2710	16.7930
10	4.1960	3.2930	14.9220	4.4820	-3.5110	17.4A00
11	3.9520	2.9320	14.3950	4.2190	3.1150	16.8560
12	3.9520	3.1630	14.3950	4.2190	3.3750	16.8560
13	-3.5230	-2.7600	-13.1290	3.6840	2.8810	15.5300
14	-3.5270	-2.7230	-13.1400	3.6840	2.8380	15.5300
15	4.0970	3.2240	14.7610	4.2900	3.3720	17.0260
16	3.9780	3.1070	14.5020	4.1640	3.2470	16.7210
17	3.9780	3.1440	14.5020	4.1640	3.2870	16.7210
18	3.8770	2.9620	14.2610	4.1290	3.1440	16.6370
19	3.9480	3.0450	14.4160	4.2040	3.2340	16.8200
20	4.0670	3.1540	14.6760	4.3320	3.3520	17.1260
21	4.0090	3.1720	14.4710	4.0910	3.2360	16.5440

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	33.54	4.28	2.16	5.90	1.95
3	30.83	6.90	1.72	6.05	2.34
4	22.42	3.50	3.68	-8.34	2.72
5	30.67	6.72	1.93	6.42	2.10
6	25.26	4.56	2.76	6.46	1.83
7	28.55	5.21	3.05	-7.13	3.68
8	25.14	3.60	2.58	-6.76	.39
9	25.86	4.04	2.34	6.38	3.25
10	25.04	4.08	2.90	5.93	2.35
11	29.41	4.56	1.94	-6.72	2.22
12	25.26	3.70	1.92	5.57	3.01
13	32.10	5.59	2.74	6.53	2.65
14	35.81	7.61	2.22	-7.11	.92
15	33.35	7.24	3.18	-7.11	2.09
16	32.63	7.55	1.72	6.31	2.37
17	23.90	3.43	2.21	6.30	2.61
18	34.91	7.95	2.61	-7.77	.78
19	25.46	3.33	2.64	-7.31	1.45
20	29.11	4.82	2.21	-7.05	.79
21	29.10	7.55	1.28	3.98	1.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	92.50	93.00	93.73	94.23
3	93.00	92.00	94.23	93.22
4	92.00	-91.00	93.55	92.53
5	92.00	93.50	93.55	-95.07
6	93.00	93.00	93.77	93.77
7	93.50	92.00	94.51	92.99
8	94.00	94.00	95.01	95.01
9	93.00	93.00	94.00	94.00
10	92.00	92.50	93.15	93.66
11	92.00	92.50	93.15	93.66
12	94.00	92.50	95.18	93.66
13	-91.00	92.00	91.80	92.81
14	91.50	91.50	92.30	92.30
15	94.00	92.50	94.83	93.31
16	93.00	94.00	93.82	94.83
17	93.00	92.50	93.82	93.31
18	92.70	92.10	93.77	93.16
19	-91.00	93.00	92.05	94.07
20	93.50	93.50	94.58	94.58
21	92.80	92.90	93.16	93.26

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	8300.	.8680	.7010	-1392.	1.980	13799.
3	8400.	.9280	.7070	-1392.	1.980	13795.
4	8500.	.9610	.7200	1428.	1.980	13879.
5	7900.	.8770	-.6690	1428.	1.980	13877.
6	8200.	.9470	.7000	1410.	1.980	13875.
7	8200.	.9830	.6930	1446.	1.980	13834.
8	8300.	.9080	.6990	1464.	1.980	13834.
9	8200.	.9240	.6950	1410.	1.980	13834.
10	8100.	.9230	.6940	1428.	1.980	13939.
11	8200.	.8050	.7030	1428.	1.980	13939.
12	8450.	.9600	.7160	1446.	1.980	13939.
13	8450.	.9140	.7330	1410.	1.980	13944.
14	8150.	.7910	.7040	1410.	1.980	13926.
15	8300.	.9650	.7080	1428.	1.980	13953.
16	8300.	.8650	.7110	1428.	1.980	13949.
17	8300.	.9590	.7110	-1392.	1.980	13949.
18	8400.	.8960	.7210	1428.	1.980	13995.
19	-7550.	-.7610	-.6540	-1374.	1.980	13995.
20	8125.	.9000	.6940	1446.	1.980	13995.
21	8500.	.9580	.7360	1446.	1.980	13977.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	8310.	.8910	.7200	1429.	14000.
3	8413.	.9530	.7260	1429.	14000.
4	8432.	.9940	.7450	1476.	14000.
5	-7838.	.9070	.6920	1476.	14000.
6	8206.	.9630	.7110	1433.	14000.
7	8210.	1.0050	.7080	1477.	14000.
8	8310.	.9270	.7150	-1495.	14000.
9	8210.	.9440	.7100	1440.	14000.
10	8035.	.9470	.7110	1464.	14000.
11	8134.	.8260	.7200	1464.	14000.
12	8382.	.9840	.7340	1482.	14000.
13	8410.	.9300	.7460	1435.	14000.
14	8122.	.8050	.7160	1435.	14000.
15	8255.	.9820	.7200	1453.	14000.
16	8258.	.8800	.7240	1453.	14000.
17	8258.	.9760	.7240	1416.	14000.
18	8307.	.9170	.7370	1461.	14000.
19	-7466.	-.7790	-.6690	-1406.	14000.
20	8035.	.9210	.7100	1479.	14000.
21	8481.	.9660	.7420	1457.	14000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.813	-41.2	1.7	68.9	69.2
3	1.945	13.6	1.7	77.5	78.9
4	2.016	16.5	.9	80.7	80.9
5	1.838	15.5	1.1	73.3	76.1
6	1.985	13.8	.9	76.1	79.2
7	2.058	16.7	1.2	91.5	91.2
8	1.899	15.4	1.0	78.5	78.2
9	1.932	14.2	.8	78.4	80.6
10	1.936	15.5	.7	74.8	77.7
11	1.686	14.9	.9	-62.3	65.9
12	2.014	16.9	.8	74.8	77.3
13	1.919	14.6	1.1	74.6	74.1
14	1.658	15.3	1.1	-62.0	-63.4
15	2.021	16.7	2.4	84.9	83.4
16	1.810	15.7	1.4	70.2	71.8
17	2.008	15.3	1.2	74.6	78.0
18	1.876	16.0	1.2	74.1	74.0
19	-1.595	15.0	1.0	-58.5	-61.2
20	1.886	13.9	1.1	73.6	75.9
21	2.009	10.0	2.4	73.1	72.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3146.	-4.55	.32	12.50	12.54	33.12
3	3151.	1.40	.30	13.13	13.37	31.24
4	3153.	1.65	.15	13.19	13.23	34.44
5	3153.	1.70	.21	13.15	13.65	33.07
6	3153.	1.39	.16	12.63	13.15	32.16
7	3146.	1.62	.20	14.62	14.62	36.40
8	3146.	1.62	.18	13.60	13.60	32.94
9	3146.	1.47	.15	13.34	13.72	36.88
10	3153.	1.60	.12	12.74	13.23	35.07
11	3153.	1.77	.18	12.19	12.89	33.16
12	3153.	1.68	.13	12.25	12.66	34.64
13	3157.	1.53	.20	12.83	12.83	43.75
14	3157.	1.86	.22	12.34	12.62	35.70
15	3148.	1.65	.41	13.83	13.83	37.88
16	3148.	1.74	.27	12.77	13.06	34.56
17	3148.	1.52	.21	12.23	12.79	37.58
18	3150.	1.71	.23	13.00	13.00	31.67
19	3157.	1.89	.21	12.10	12.67	34.69
20	3151.	1.48	.20	12.86	13.26	36.75
21	3153.	1.00	.41	11.99	11.99	40.60

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	98.7060	98.7060	91.7720	113.3860	113.3860	107.5300
3	96.1090	96.1090	86.2940	110.7550	110.7550	100.9880
4	90.3860	90.3860	82.6000	109.1350	109.1350	96.9400
5	106.0040	106.0040	-96.6590	127.6040	127.6040	-113.8020
6	108.1590	108.1590	92.7120	118.4970	118.4970	104.2900
7	103.0100	103.0100	86.3110	116.0790	116.0790	99.6320
8	115.8830	115.8830	-98.0330	130.3020	130.3020	-113.3580
9	105.4000	105.4000	91.6130	118.4220	118.4220	105.8350
10	99.5430	99.5430	86.3190	114.6750	114.6750	103.6040
11	85.8970	85.8970	86.3190	97.9840	97.9840	103.6040
12	104.4530	104.4530	86.3190	120.7290	120.7290	103.6040
13	93.4970	93.4970	81.8750	103.0680	103.0680	98.5630
14	-76.5510	-76.5510	79.5490	83.6580	83.6580	95.6510
15	105.0050	105.0050	86.5330	116.2600	116.2600	101.5350
16	108.5920	108.5920	95.3180	119.7280	119.7280	111.9400
17	104.1660	104.1660	86.5510	115.2560	115.2560	101.5350
18	92.0880	92.0880	84.3470	104.8820	104.8820	100.6340
19	85.5390	85.5390	89.0610	96.6040	96.6040	106.3400
20	107.5710	107.5710	92.1380	122.8870	122.8870	110.0690
21	108.0520	108.0520	87.8610	113.0420	113.0420	101.2210

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
2	-3.96	.28	15.73	15.78	33.10
3	1.21	.26	16.50	16.80	31.24
4	1.36	.13	16.63	16.67	33.37
5	1.41	.17	16.63	17.26	31.90
6	1.27	.15	15.26	15.89	31.86
7	1.44	.18	16.88	16.88	33.41
8	1.44	.16	16.89	16.89	32.13
9	1.31	.13	16.55	17.03	35.95
10	1.39	.10	16.42	17.05	35.07
11	1.55	.15	15.71	16.61	28.14
12	1.46	.11	15.79	16.32	34.64
13	1.39	.19	16.58	16.58	36.56
14	1.70	.20	14.84	15.17	32.13
15	1.49	.37	16.23	16.23	32.96
16	1.58	.25	16.10	16.47	34.56
17	1.38	.19	15.40	16.11	35.95
18	1.50	.20	16.65	16.65	31.67
19	1.67	.19	15.52	16.24	32.06
20	1.29	.17	16.50	17.01	35.72
21	.95	.39	14.83	14.83	-40.59

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	87.00	90.00	88.15	91.19
3	87.50	89.50	88.66	90.69
4	88.00	-89.00	89.48	90.50
5	87.00	91.50	88.46	-93.04
6	87.50	90.50	88.23	91.25
7	88.00	-89.00	88.95	89.96
8	88.00	91.00	88.95	91.98
9	87.00	90.00	87.94	90.97
10	87.00	91.00	88.09	92.14
11	86.50	90.50	87.58	91.63
12	88.00	90.00	89.10	91.13
13	-86.00	90.00	86.76	90.79
14	87.00	90.00	87.76	90.79
15	88.00	90.50	88.77	91.30
16	88.00	92.00	88.77	-92.81
17	87.50	90.50	88.27	91.30
18	87.00	90.00	88.00	91.04
19	-86.00	90.50	86.99	91.54
20	88.00	91.50	89.01	-92.55
21	87.00	90.50	87.34	90.85

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LAM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	6700.	.6950	-.5930	-1320.	1.800	12025.
3	6900.	.7620	.6070	1338.	1.800	12021.
4	7100.	.7920	.6210	1356.	1.800	12095.
5	6700.	.7370	-.5920	-1212.	1.800	12093.
6	6800.	.7830	.6070	1356.	1.800	12091.
7	6750.	.8060	-.5950	1356.	1.800	12055.
8	6900.	.7420	.6090	1356.	1.800	12055.
9	6900.	.7510	.6150	1356.	1.800	12055.
10	7000.	.7700	.6260	1374.	1.800	12147.
11	6800.	.6380	.6110	1356.	1.800	12147.
12	7100.	.7750	.6290	1374.	1.800	12147.
13	6900.	.7120	.6280	1338.	1.800	12151.
14	6650.	.6520	.5980	1356.	1.800	12135.
15	6800.	.7790	.6070	1356.	1.800	12159.
16	7100.	.7070	.6340	1356.	1.800	12155.
17	7000.	.8020	.6280	-1320.	1.800	12155.
18	7020.	.7080	.6320	1347.	1.800	12196.
19	-6350.	-.6110	-.5770	1356.	1.800	12196.
20	6800.	.7220	.6060	1356.	1.800	12196.
21	7000.	.7870	.6380	1374.	1.800	12180.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

 MODF 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	6708.	.7130	.6080	1355.	12200.
3	6911.	.7820	.6230	1373.	12200.
4	7043.	.8190	.6430	1402.	12200.
5	6648.	.7620	.6120	-1253.	12200.
6	6805.	.7960	.6170	1378.	12200.
7	6756.	.8240	.6080	1385.	12200.
8	6909.	.7580	.6220	1385.	12200.
9	6909.	.7670	.6280	1385.	12200.
10	6943.	.7890	.6420	1408.	12200.
11	6745.	.6540	.6270	1390.	12200.
12	7043.	.7950	.6450	1408.	12200.
13	6867.	.7250	.6390	1361.	12200.
14	6627.	.6630	.6090	1380.	12200.
15	6763.	.7930	.6180	1380.	12200.
16	7064.	.7190	.6450	1380.	12200.
17	6965.	.8160	.6390	1343.	12200.
18	6942.	.7240	.6460	1378.	12200.
19	-6280.	-.6260	-.5900	1387.	12200.
20	6725.	.7390	.6200	1387.	12200.
21	6985.	.7930	.6430	1384.	12200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.449	-40.7	1.9	48.0	49.9
3	1.593	14.6	1.4	53.7	55.8
4	1.658	16.7	1.1	59.4	62.0
5	1.542	16.1	1.6	53.8	56.7
6	1.639	14.1	1.1	53.5	57.2
7	1.684	16.7	1.0	63.5	63.5
8	1.548	15.5	1.0	53.1	54.9
9	1.568	15.0	.9	54.3	57.3
10	1.611	16.5	.8	56.8	60.0
11	1.332	14.7	1.1	43.5	47.2
12	1.622	16.3	.9	51.4	54.6
13	1.492	14.8	.8	52.3	52.4
14	1.364	15.5	.8	43.8	47.4
15	1.628	16.7	2.0	58.0	58.4
16	1.476	15.8	1.3	50.5	53.0
17	1.677	15.3	1.0	55.1	58.3
18	1.479	16.5	1.1	49.5	51.9
19	-1.279	15.2	.8	-41.7	44.8
20	1.509	15.0	1.0	51.3	54.8
21	1.648	10.6	1.9	51.4	52.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	-3144.	-5.62	.44	10.89	11.31	32.76
3	3150.	1.84	.30	11.10	11.54	30.78
4	3152.	2.03	.23	11.81	12.33	32.45
5	3152.	2.09	.35	11.50	12.11	31.27
6	3153.	1.73	.23	10.76	11.50	31.12
7	3145.	1.99	.20	12.39	12.40	32.32
8	3145.	2.00	.21	11.28	11.66	32.38
9	3146.	1.91	.19	11.38	12.02	32.63
10	3152.	2.06	.16	11.62	12.28	34.08
11	3152.	2.21	.29	10.75	11.68	26.32
12	3152.	2.02	.19	10.44	11.10	34.64
13	3157.	1.99	.19	11.56	11.60	37.12
14	3156.	2.28	.20	10.59	11.47	31.93
15	3147.	2.05	.42	11.71	11.81	35.74
16	3147.	2.14	.31	11.26	11.81	32.03
17	3148.	1.83	.21	10.81	11.44	35.22
18	3149.	2.24	.25	11.02	11.55	28.65
19	3156.	2.39	.23	10.77	11.57	30.45
20	3150.	1.99	.22	11.19	11.97	36.08
21	3153.	1.29	.40	10.28	10.51	-40.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	59.7610	59.7610	76.5640	67.3180	67.3180	89.4500
3	61.1970	61.1970	74.2680	69.2010	69.2010	86.7100
4	60.0780	60.0780	73.1820	70.8540	70.8540	85.6830
5	72.4020	72.4020	-85.0820	-85.4080	-85.4080	-99.9020
6	68.7960	68.7960	79.9110	74.4710	74.4710	89.7580
7	60.8660	60.8660	71.9490	67.3950	67.3950	82.8630
8	69.2420	69.2420	81.3330	76.5840	76.5840	93.8130
9	63.3270	63.3270	76.5490	69.9800	69.9800	88.2270
10	71.1580	71.1580	79.0160	80.7400	80.7400	94.7130
11	58.5770	58.5770	76.6770	65.8000	65.8000	91.8680
12	64.8040	64.8040	74.3840	73.4330	73.4330	89.0810
13	60.2280	60.2280	72.5790	65.5020	65.5020	87.2640
14	56.4860	56.4860	72.6420	61.1960	61.1960	87.2640
15	68.2350	68.2350	76.8010	74.5430	74.5430	90.0030
16	72.8740	72.8740	-84.0440	79.4400	79.4400	-98.5630
17	70.0890	70.0890	76.8170	76.6430	76.6430	90.0030
18	59.9030	59.9030	74.3820	67.0950	67.0950	88.5920
19	56.7800	56.7800	76.6800	63.2690	63.2690	91.3660
20	70.5410	70.5410	81.4140	79.2640	79.2640	-97.0870
21	68.5340	68.5340	76.0760	71.2800	71.2800	87.5860

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
2	-4.99	.39	13.67	14.19	31.78
3	1.63	.26	13.92	14.47	30.78
4	1.72	.19	14.85	15.50	32.45
5	1.77	.29	14.50	15.27	31.27
6	1.60	.21	12.98	13.88	31.12
7	1.80	.18	15.33	15.33	31.29
8	1.81	.19	13.97	14.45	32.38
9	1.73	.17	14.09	14.88	32.63
10	1.81	.14	14.96	15.81	34.08
11	1.97	.26	13.83	15.03	26.32
12	1.78	.17	13.43	14.27	33.96
13	1.83	.18	14.92	14.98	35.70
14	2.11	.19	13.66	14.80	31.26
15	1.88	.38	14.74	14.86	31.98
16	1.96	.28	14.18	14.87	32.03
17	1.67	.20	13.60	14.40	32.54
18	2.00	.22	14.10	14.77	28.65
19	2.15	.20	13.78	14.80	30.45
20	1.77	.20	14.33	15.33	30.87
21	1.24	.38	12.71	12.99	-39.43

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	77.50	85.00	78.53	86.13
3	78.00	-84.50	79.04	85.62
4	78.00	85.00	79.31	86.43
5	78.00	86.50	79.31	-87.95
6	78.00	85.50	78.65	86.21
7	78.00	85.00	78.84	85.92
8	78.50	86.00	79.35	86.93
9	78.00	85.00	78.84	85.92
10	78.00	86.00	78.98	87.08
11	78.00	86.00	78.98	87.08
12	79.00	85.50	-79.99	86.57
13	-77.00	85.00	77.68	85.75
14	78.00	85.00	78.69	85.75
15	79.00	86.00	79.69	86.76
16	79.50	87.00	-80.20	-87.76
17	78.50	85.50	79.19	86.25
18	78.00	85.00	78.90	85.98
19	77.50	86.00	78.39	86.99
20	77.50	86.00	78.39	86.99
21	78.00	85.80	78.30	86.13

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	4600.	.4470	.4690	-1194.	1.520	A313.
3	4700.	.5110	.4750	1212.	1.520	A310.
4	4750.	.4630	.4790	1248.	1.520	A361.
5	4600.	.4830	-.4640	1212.	1.520	A360.
6	4575.	.4950	.4700	1212.	1.520	A359.
7	4625.	.5010	.4710	1212.	1.520	A334.
8	4850.	.4780	.4900	1230.	1.520	A334.
9	4850.	.4840	.4940	1248.	1.520	A334.
10	4750.	.4960	.4860	1239.	1.520	A398.
11	4650.	.4200	.4750	1230.	1.520	A398.
12	4900.	.5070	.4930	1248.	1.520	A398.
13	4700.	.4600	.4930	1212.	1.520	A400.
14	4600.	.4200	.4740	1212.	1.520	A389.
15	4700.	.4980	.4770	1230.	1.520	A406.
16	4850.	.4620	.4880	1230.	1.520	A403.
17	4840.	.5370	.4950	-1194.	1.520	A403.
18	4775.	.4180	.4910	1212.	1.520	A431.
19	4550.	.4180	.4720	-1194.	1.520	A431.
20	4550.	.4490	.4720	1212.	1.520	A431.
21	4900.	.5170	-.5130	1248.	1.520	A420.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	4606.	.4590	.4810	1226.	8434.
3	4707.	.5250	.4870	1244.	8434.
4	4712.	.4790	.4950	-1290.	8434.
5	4564.	.4990	.4790	1253.	8434.
6	4578.	.5030	.4780	1232.	8434.
7	4631.	.5120	.4810	1238.	8434.
8	4856.	.4890	.5010	1256.	8434.
9	4856.	.4940	.5050	1275.	8434.
10	4712.	.5080	.4980	1270.	8434.
11	4612.	.4310	.4870	1261.	8434.
12	4860.	.5200	.5050	-1279.	8434.
13	4678.	.4680	.5020	1233.	8434.
14	4584.	.4280	.4820	1233.	8434.
15	4675.	.5070	.4850	1251.	8434.
16	4825.	.4700	.4970	1251.	8434.
17	4815.	.5470	.5040	1215.	8434.
18	4722.	.4280	.5030	1240.	8434.
19	-4500.	.4280	.4830	1221.	8434.
20	-4500.	.4590	.4830	1240.	8434.
21	4889.	.5210	-.5170	1257.	8434.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.927	-43.7	2.0	22.1	26.1
3	1.065	18.6	1.6	27.2	32.0
4	.965	17.4	1.7	27.0	31.9
5	1.006	20.6	2.3	25.7	30.9
6	1.032	16.1	2.3	25.1	30.6
7	1.042	19.5	1.1	29.6	32.7
8	.995	17.3	1.2	26.9	30.5
9	1.007	16.4	1.2	26.0	30.4
10	1.034	19.3	1.4	26.8	31.5
11	.875	16.9	1.7	21.9	26.3
12	1.057	19.1	1.7	24.3	29.3
13	.960	17.7	.8	25.9	28.9
14	.876	18.4	.8	21.6	26.9
15	1.036	19.6	1.8	28.5	32.2
16	.961	20.4	1.4	24.8	29.3
17	1.119	17.7	1.0	28.3	32.3
18	.871	19.3	1.2	22.0	27.1
19	.873	17.2	.8	24.6	26.6
20	.935	16.4	.9	23.9	29.3
21	1.078	13.0	1.9	24.7	27.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	-3137.	-9.40	.73	7.80	9.24	25.00
3	3147.	3.51	.53	8.41	9.90	23.47
4	3149.	3.62	.60	9.20	10.87	24.61
5	3147.	4.10	.79	8.40	10.12	25.91
6	3149.	3.12	.76	8.00	9.75	23.82
7	3142.	3.75	.37	9.32	10.32	25.33
8	3143.	3.47	.40	8.88	10.08	25.07
9	3143.	3.26	.40	8.48	9.91	25.49
10	3149.	3.74	.47	8.53	10.04	-34.29
11	3148.	3.86	.68	8.24	9.90	18.85
12	3149.	3.63	.55	7.57	9.13	28.87
13	3154.	3.70	.30	8.88	9.93	28.33
14	3153.	4.22	.32	8.12	10.10	23.01
15	3144.	3.79	.61	9.04	10.21	25.36
16	3143.	4.24	.51	8.48	10.02	23.92
17	3146.	3.16	.31	8.32	9.49	27.32
18	3145.	4.45	.45	8.32	10.22	21.14
19	3153.	3.95	.32	9.31	10.05	22.73
20	3147.	3.52	.34	8.41	10.32	25.29
21	3150.	2.41	.62	7.56	8.44	-31.37

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	28.7460	28.7460	56.3730	31.6180	31.6180	65.5420
3	28.9430	28.9430	54.6480	31.9140	31.9140	63.4930
4	29.1670	29.1670	57.3330	33.1790	33.1790	66.7960
5	34.3890	34.3890	-62.9080	-39.2870	-39.2870	-73.4200
6	31.2070	31.2070	58.8310	33.1960	33.1960	65.8800
7	29.9900	29.9900	56.3270	32.4730	32.4730	64.6650
8	32.4770	32.4770	59.9810	35.1760	35.1760	68.9140
9	29.5400	29.5400	56.3270	31.9620	31.9620	64.6650
10	32.8700	32.8700	58.2980	36.3580	36.3580	69.5610
11	30.7450	30.7450	58.2980	33.8750	33.8750	69.5610
12	31.5920	31.5920	56.5100	34.9380	34.9380	67.3970
13	28.6800	28.6800	53.3800	30.6910	30.6910	63.9730
14	27.7340	27.7340	53.4260	29.6070	29.6070	63.9730
15	32.7590	32.7590	58.3510	35.1590	35.1590	68.1840
16	34.9900	34.9900	-62.0840	37.5330	37.5330	-72.5780
17	32.3060	32.3060	56.5600	34.6980	34.6980	66.0560
18	27.6970	27.6970	54.7430	30.3210	30.3210	64.9260
19	30.5660	30.5660	58.2890	33.5070	33.5070	69.1910
20	31.3920	31.3920	58.2890	34.4620	34.4620	69.1910
21	32.4300	32.4300	57.0230	33.4640	33.4640	65.5610

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	-8.55	.66	9.74	11.54	25.00
3	3.18	.48	10.49	12.36	23.47
4	3.18	.53	11.51	-13.60	24.61
5	3.59	.69	10.53	12.68	25.91
6	2.93	.71	9.62	11.72	23.82
7	3.46	.34	11.50	12.73	25.33
8	3.20	.37	10.96	12.43	25.07
9	3.01	.37	10.45	12.22	25.49
10	3.38	.43	10.94	12.86	27.78
11	3.51	.62	10.56	12.69	18.85
12	3.28	.50	9.69	11.69	28.87
13	3.45	.28	11.42	12.78	28.33
14	3.95	.30	10.45	12.99	23.01
15	3.53	.56	11.35	12.81	25.36
16	3.95	.48	10.65	12.58	23.92
17	2.94	.29	10.43	11.90	27.32
18	4.06	.42	10.60	13.02	21.14
19	3.60	.29	11.86	12.81	22.73
20	3.21	.31	10.73	13.16	25.29
21	2.34	.60	9.34	10.42	-31.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	60.00	76.50	60.80	77.52
3	61.00	76.00	61.81	77.01
4	62.00	76.50	63.04	77.79
5	60.00	77.00	61.01	78.29
6	60.00	77.00	60.50	77.64
7	62.00	77.00	62.67	77.83
8	62.00	78.00	62.67	-78.84
9	61.50	77.00	62.16	77.83
10	61.50	77.50	62.27	78.47
11	60.00	76.50	60.75	77.46
12	62.00	77.00	62.78	77.96
13	-59.00	76.00	59.52	76.67
14	60.00	76.00	60.53	76.67
15	62.00	77.50	62.54	78.18
16	60.00	77.50	60.53	78.18
17	60.00	76.00	60.53	76.67
18	60.50	76.50	61.20	77.38
19	59.50	76.50	60.19	77.38
20	59.50	77.00	60.19	77.89
21	60.90	77.30	61.14	77.60

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
-----	-----	-----	-----	-----	-----	-----
2	2400.	.2160	.3400	1068.	1.230	4219.
3	-2000.	.3010	-.2770	1086.	1.230	4217.
4	2625.	.2140	.3560	1086.	1.230	4243.
5	2425.	.2420	.3420	1086.	1.230	4242.
6	2425.	.2690	.3490	1086.	1.230	4242.
7	2550.	.2810	.3500	1086.	1.230	4229.
8	2600.	.2370	.3560	1095.	1.230	4229.
9	2600.	.2540	.3600	1104.	1.230	4229.
10	2570.	.2620	.3570	1104.	1.230	4261.
11	2350.	.2100	-.3360	1086.	1.230	4261.
12	2620.	.3060	.3600	1104.	1.230	4261.
13	2400.	.2050	.3540	1068.	1.230	4263.
14	2350.	.2130	.3390	1077.	1.230	4257.
15	2540.	.2680	.3530	1104.	1.230	4266.
16	2440.	.2250	.3520	-1050.	1.230	4264.
17	2460.	.2840	.3550	-1050.	1.230	4264.
18	2520.	.2150	.3590	1077.	1.230	4279.
19	2300.	.2340	-.3350	-1050.	1.230	4279.
20	2320.	.2350	.3380	1068.	1.230	4279.
21	2550.	.2580	.3660	-1194.	1.230	4273.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	2403.	.2220	.3490	1096.	4280.
3	-2003.	.3090	-.2850	1115.	4280.
4	2604.	.2210	.3680	1122.	4280.
5	2406.	.2500	.3540	1122.	4280.
6	2427.	.2730	.3550	1104.	4280.
7	2553.	.2870	.3570	1109.	4280.
8	2603.	.2420	.3640	1118.	4280.
9	2603.	.2600	.3680	1128.	4280.
10	2549.	.2690	.3660	1132.	4280.
11	2331.	.2150	.3450	1113.	4280.
12	2599.	.3140	.3700	1132.	4280.
13	2389.	.2090	.3600	1087.	4280.
14	2342.	.2160	.3450	1096.	4280.
15	2526.	.2730	.3590	1123.	4280.
16	2428.	.2290	.3590	1068.	4280.
17	2448.	.2890	.3620	1068.	4280.
18	2492.	.2200	.3680	1102.	4280.
19	-2275.	.2400	.3430	1074.	4280.
20	-2294.	.2400	.3460	1092.	4280.
21	2544.	.2600	.3690	-1203.	4280.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.444	-47.8	3.3	5.3	10.2
3	.622	37.0	3.3	7.9	14.3
4	.443	23.2	2.5	7.6	13.4
5	.499	35.3	4.3	6.7	12.4
6	.556	28.0	3.5	7.8	13.3
7	.581	32.2	2.2	10.3	14.8
8	.491	24.3	1.9	8.0	12.3
9	.526	24.7	1.8	7.9	13.0
10	.542	30.0	2.6	8.3	12.6
11	.434	30.1	3.3	5.0	9.9
12	.634	34.1	3.2	7.8	13.4
13	.425	28.4	2.0	6.9	11.0
14	.440	29.2	1.8	6.2	11.8
15	.554	30.8	2.7	9.3	14.6
16	.464	29.1	2.6	6.3	11.5
17	.587	35.9	2.2	6.9	13.0
18	.444	29.0	2.1	6.6	12.5
19	.485	29.2	1.7	6.7	12.4
20	.485	27.4	1.8	6.5	12.5
21	.535	22.3	2.9	6.2	9.4

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	-3113.	-21.32	2.51	3.88	7.51	8.40
3	3130.	11.86	1.82	4.16	7.53	8.98
4	3134.	10.46	1.97	5.64	-9.92	8.37
5	3126.	14.08	2.91	4.42	8.13	10.72
6	3134.	10.03	2.15	4.57	7.84	9.33
7	3128.	11.03	1.32	5.81	8.32	12.24
8	3130.	9.88	1.30	5.33	8.21	9.49
9	3131.	9.37	1.16	4.94	8.11	8.83
10	3134.	11.02	1.63	5.02	7.63	11.30
11	3127.	13.82	2.58	3.76	7.48	6.82
12	3134.	10.75	1.70	4.03	6.92	-13.16
13	3135.	13.36	1.59	5.30	8.49	10.26
14	3136.	13.25	1.37	4.62	-8.76	8.42
15	3129.	11.06	1.66	5.48	-8.61	10.32
16	3127.	12.48	1.88	4.44	8.11	8.95
17	3129.	12.16	1.29	3.85	7.25	10.26
18	3129.	12.99	1.63	4.85	-9.19	6.56
19	3138.	12.03	1.18	4.56	8.39	7.32
20	3132.	11.27	1.27	4.35	8.44	9.03
21	3138.	8.33	1.88	3.81	5.74	-13.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	10.6490	10.6490	33.3730	11.4570	11.4570	38.5020
3	10.7760	10.7760	32.4190	11.6230	11.6230	37.3790
4	10.6490	10.6490	33.9610	11.7660	11.7660	39.1810
5	11.4090	11.4090	35.0850	12.6300	12.6300	40.4960
6	11.4590	11.4590	34.8220	12.0160	12.0160	38.8060
7	11.6320	11.6320	34.4310	12.3750	12.3750	39.2950
8	12.4710	12.4710	-36.7200	-13.2620	-13.2620	-41.9380
9	11.4200	11.4200	34.4310	12.1380	12.1380	39.2950
10	12.0370	12.0370	34.5810	13.0250	13.0250	40.9590
11	10.5210	10.5210	32.4250	11.3490	11.3490	38.3740
12	11.8010	11.8010	33.4820	12.7840	12.7840	39.6410
13	9.9850	9.9850	30.7340	10.5180	10.5180	36.6340
14	10.0440	10.0440	30.7600	10.5720	10.5720	36.6340
15	12.0070	12.0070	34.5830	12.6910	12.6910	40.2030
16	11.6600	11.6600	34.5910	12.3060	12.3060	40.2030
17	10.5230	10.5230	31.5480	11.1110	11.1110	36.6340
18	10.5160	10.5160	32.4280	11.3080	11.3080	38.2030
19	10.6490	10.6490	32.4280	11.4590	11.4590	38.2030
20	11.1860	11.1860	33.4670	12.0430	12.0430	39.4420
21	11.5800	11.5800	33.7420	11.8630	11.8630	38.7060

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		-19.82			2.33			4.81			9.31			8.40
3		11.00			1.69			5.15			9.33			8.98
4		9.46			1.78			6.99		-12.29				8.37
5		12.72			2.63			5.48			10.07			10.72
6		9.56			2.05			5.47			9.38			9.33
7		10.37			1.24			7.12			10.20			12.24
8		9.29			1.23			6.53			10.07			9.49
9		8.81			1.09			6.05			9.94			8.83
10		10.18			1.51			6.38			9.71			11.30
11		12.81			2.39			4.78			9.51			6.82
12		9.92			1.57			5.12			8.80			13.16
13		12.68			1.51			6.79		-10.87				10.26
14		12.59			1.30			5.91		-11.21				8.42
15		10.46			1.57			6.84		-10.75				10.32
16		11.83			1.78			5.55			10.13			8.95
17		11.52			1.22			4.80			9.04			10.26
18		12.08			1.51			6.14		-11.63				6.56
19		11.18			1.10			5.77		-10.61				7.32
20		10.46			1.18			5.51		-10.68				9.03
21		8.13			1.84			4.69			7.08			13.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.50	60.00	36.98	60.80
3	37.00	60.00	37.49	60.80
4	37.00	60.00	37.62	61.01
5	36.00	60.00	36.60	61.01
6	36.00	60.00	36.30	60.50
7	37.00	60.00	37.40	60.65
8	36.50	60.00	36.89	60.65
9	36.50	60.00	36.89	60.65
10	37.00	61.00	37.46	61.76
11	35.00	60.00	35.44	60.75
12	37.00	60.00	37.46	60.75
13	35.00	58.00	35.31	58.51
14	34.00	-57.00	34.30	-57.50
15	36.00	60.00	36.32	60.53
16	36.00	60.00	36.32	60.53
17	36.50	60.00	36.82	60.53
18	36.10	59.50	36.52	60.19
19	35.70	59.50	36.11	60.19
20	35.80	60.00	36.21	60.69
21	35.00	60.00	35.14	60.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1250.	.2600	.3020	-1050.	1.070	1328.
3	1255.	.3090	.3010	1122.	1.060	1328.
4	1250.	.2400	.3000	1104.	1.070	1349.
5	1250.	.2830	.3040	1104.	1.060	1349.
6	1260.	.2970	.3110	1122.	1.070	1318.
7	1275.	.2690	.3080	1122.	1.060	1323.
8	1225.	.2640	.2980	1104.	1.060	1323.
9	1250.	.2790	.3040	1095.	1.070	1323.
10	1280.	.2920	.3110	1140.	1.060	-1400.
11	1150.	-.1890	.2870	1104.	1.070	1339.
12	1220.	.3400	.2960	1149.	1.060	1339.
13	1200.	.2470	.3010	1104.	1.050	1224.
14	1120.	.2270	-.2860	1104.	1.060	-1174.
15	1240.	.2980	.3070	1122.	1.050	1327.
16	1250.	.2750	.3100	1104.	1.070	1327.
17	1250.	.2970	.3080	1104.	1.070	1327.
18	1280.	.2390	.3160	1113.	1.070	1311.
19	1175.	.2440	.2920	-1086.	1.070	1311.
20	1200.	.2560	.2980	1122.	1.070	1341.
21	1250.	.3010	.3170	1104.	1.050	1312.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1252.	.2670	.3100	-1078.	1348.
3	1257.	.3180	.3090	1152.	1348.
4	1240.	.2480	.3110	1141.	1360.
5	1240.	.2920	.3150	1141.	1360.
6	1261.	.3020	.3160	1140.	1330.
7	1277.	.2750	.3150	1146.	1339.
8	1227.	.2700	.3040	1128.	1339.
9	1252.	.2850	.3110	1118.	1339.
10	1270.	.2990	.3190	-1168.	1406.
11	1141.	-.1940	.2940	1132.	1345.
12	1210.	-.3480	.3040	-1178.	1345.
13	1194.	.2520	.3070	1123.	1228.
14	1116.	.2310	.2910	1123.	-1180.
15	1233.	.3030	.3130	1142.	1332.
16	1244.	.2800	.3150	1123.	1332.
17	1244.	.3020	.3130	1123.	1332.
18	1266.	.2450	.3240	1138.	1311.
19	1162.	.2500	.2990	1111.	1311.
20	1187.	.2610	.3050	1148.	1341.
21	1247.	.3030	.3190	1112.	1314.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.531	84.5	7.4	3.0	8.1
3	.629	108.9	14.3	2.5	9.3
4	.490	74.5	7.5	3.5	-10.2
5	.574	104.1	14.7	3.3	9.4
6	.609	83.9	9.0	3.6	10.0
7	.547	89.6	9.2	4.4	9.7
8	.540	81.2	7.6	3.7	8.6
9	.569	79.8	7.1	3.7	9.1
10	.597	87.4	9.1	4.3	8.9
11	-.387	56.5	6.3	1.8	6.2
12	.696	99.7	8.9	3.3	9.2
13	.506	83.3	7.6	4.0	8.5
14	.460	93.4	12.2	2.8	8.6
15	.605	104.7	11.7	3.9	-10.6
16	.558	104.0	12.1	2.9	8.8
17	.609	76.2	5.7	3.6	9.7
18	.484	96.1	12.3	3.0	9.2
19	.499	82.7	7.5	3.2	9.1
20	.522	79.8	7.5	3.1	9.5
21	.612	99.1	15.9	2.1	6.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3091.	31.35	4.70	1.82	4.92	2.09
3	3079.	33.89	7.67	1.29	4.74	2.60
4	3095.	29.94	5.18	2.28	-6.71	1.97
5	3077.	35.49	8.58	1.83	5.28	2.73
6	3099.	27.18	4.99	1.94	5.34	2.61
7	3083.	32.10	5.69	2.62	-5.68	2.24
8	3090.	29.58	4.77	2.22	5.15	1.94
9	3094.	27.59	4.24	2.09	5.18	1.69
10	3096.	28.84	5.15	2.35	4.85	1.43
11	3096.	28.76	5.53	1.54	5.23	1.32
12	3100.	28.27	4.34	1.55	4.29	1.96
13	3095.	32.48	5.10	2.53	-5.47	1.45
14	3074.	-39.68	8.90	1.94	-5.99	2.35
15	3080.	33.91	6.53	2.08	-5.61	.78
16	3074.	36.44	7.30	1.70	5.07	2.36
17	3104.	24.73	3.16	1.91	5.18	.52
18	3069.	-38.76	8.51	1.96	-6.11	1.56
19	3095.	32.66	5.07	2.09	-5.87	1.05
20	3093.	30.11	4.85	1.92	-5.88	1.58
21	3082.	31.74	8.77	1.09	3.27	2.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.9770	3.0590	14.7990	4.2310	3.2440	16.8830
3	3.9780	3.1410	14.8020	4.2310	3.3360	16.8830
4	3.9340	2.9980	14.9580	4.2840	3.2500	17.0120
5	3.9340	3.0660	14.9590	4.2840	3.3290	17.0120
6	3.9970	3.1320	15.0970	4.1560	3.2520	16.7030
7	3.9880	3.0790	14.8540	4.1930	3.2300	16.7930
8	3.9880	3.0720	14.8540	4.1930	3.2230	16.7930
9	3.9880	3.0950	14.8540	4.1930	3.2480	16.7930
10	4.1960	3.2730	14.9220	4.4820	3.4890	17.4800
11	3.9520	2.9310	14.3950	4.2190	3.1130	16.8560
12	3.9520	3.1730	14.3950	4.2190	3.3850	16.8560
13	3.5230	2.7040	13.1290	3.6840	2.8110	15.5300
14	-3.3200	-2.5300	-12.6740	-3.4660	-2.6340	-14.9740
15	3.9770	3.1160	14.4980	4.1640	3.2580	16.7210
16	3.9780	3.0800	14.5020	4.1640	3.2180	16.7210
17	3.9780	3.1160	14.5020	4.1640	3.2570	16.7210
18	3.8310	2.9170	14.1580	4.0790	3.0960	16.5150
19	3.8310	2.9250	14.1580	4.0790	3.1050	16.5150
20	3.9480	3.0280	14.4160	4.2040	3.2150	16.8200
21	4.0090	3.1420	14.4710	4.0910	3.2040	16.5440

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	29.47	4.44	2.23	6.03	2.09
3	31.86	7.22	1.58	5.81	2.60
4	27.49	4.78	2.78	-8.19	1.97
5	32.59	7.91	2.24	6.45	2.73
6	26.14	4.81	2.30	6.34	2.61
7	30.53	5.42	3.18	-6.90	2.24
8	28.13	4.54	2.69	6.25	1.80
9	26.24	4.04	2.54	6.29	1.69
10	26.99	4.83	2.96	6.10	1.43
11	26.94	5.21	1.94	6.57	1.32
12	26.48	4.06	1.95	5.39	1.96
13	31.07	4.89	3.21	-6.95	1.45
14	38.01	8.54	2.46	-7.61	2.35
15	32.39	6.25	2.58	-6.95	.78
16	34.82	6.99	2.10	6.28	2.36
17	23.63	3.02	2.37	6.42	.52
18	36.40	8.02	2.45	-7.66	1.56
19	30.67	4.78	2.62	-7.35	1.05
20	28.28	4.56	2.40	-7.37	1.58
21	31.11	8.60	1.34	4.02	2.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	33.50	57.00	33.94	57.76
3	33.00	56.00	33.44	56.74
4	31.00	54.50	31.52	55.42
5	32.00	56.00	32.54	56.94
6	32.50	56.00	32.77	56.46
7	33.50	56.00	33.86	56.60
8	32.50	56.00	32.85	56.60
9	33.00	56.50	33.36	57.11
10	36.00	59.00	-36.45	59.74
11	32.00	56.00	32.40	56.70
12	35.00	58.00	35.44	58.73
13	30.00	53.50	30.26	53.97
14	-29.00	-51.00	-29.25	-51.45
15	34.50	58.50	34.80	59.01
16	32.00	56.00	32.28	56.49
17	34.00	57.00	34.30	57.50
18	32.70	55.00	33.08	55.63
19	32.70	56.70	33.08	57.35
20	33.50	57.50	33.89	58.16
21	33.50	58.00	33.63	58.22

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1140.	.2550	.2920	-1077.	-1.070	1175.
3	1120.	.3220	.2940	1140.	1.060	1127.
4	1080.	.2530	.3120	1140.	1.060	1071.
5	1125.	.2930	.3090	1140.	1.050	1143.
6	1125.	.3000	.3080	1122.	1.060	1120.
7	1125.	.2830	.2910	1104.	1.050	1123.
8	1100.	.2710	.2980	1122.	1.050	1123.
9	1125.	.2800	.2980	-1095.	1.060	1147.
10	1230.	.2900	.3030	1131.	1.050	-1282.
11	1020.	-.2050	.2840	1104.	1.060	1137.
12	1150.	-.3440	.2870	1149.	1.050	1234.
13	1035.	.2740	.3240	1140.	1.040	1035.
14	1000.	.2620	.3310	1158.	1.040	-984.
15	1160.	.2930	.2930	1122.	1.050	1249.
16	1100.	.2800	.3100	1104.	-1.030	1127.
17	1160.	.3030	.2970	-1086.	-1.070	1176.
18	1090.	.2620	.2950	1140.	1.050	1090.
19	1090.	.2580	.2950	1104.	-1.070	1173.
20	1110.	.2720	.2900	1113.	1.060	1211.
21	1200.	.3050	.3190	1104.	1.050	1213.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1141.	.2620	.3000	1105.	1192.
3	1122.	.3300	.3010	1170.	1144.
4	1071.	.2620	.3230	1178.	1080.
5	1116.	.3030	.3190	1178.	1153.
6	1126.	.3050	.3130	1140.	1130.
7	1126.	.2890	.2970	1128.	1137.
8	1101.	.2770	.3050	1146.	1137.
9	1126.	.2860	.3040	1118.	1161.
10	1220.	.2970	.3100	1159.	-1287.
11	1012.	-.2100	.2910	1132.	1142.
12	1141.	-.3530	.2940	1178.	1239.
13	1030.	.2790	.3300	1160.	1039.
14	997.	.2670	-.3370	1178.	-989.
15	1154.	.2980	.2990	1142.	1253.
16	1094.	.2850	.3150	1123.	1132.
17	1154.	.3080	.3020	1105.	1180.
18	1078.	.2690	.3020	1166.	1090.
19	1078.	.2640	.3020	1129.	1173.
20	1098.	.2780	.2960	1138.	1212.
21	1197.	.3080	.3210	1112.	1215.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE B

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.521	88.0	8.3	2.4	7.4
3	.648	150.6	23.2	1.6	8.5
4	.513	110.0	14.3	2.7	9.5
5	.592	124.7	18.2	2.7	9.2
6	.609	111.2	14.2	2.7	9.2
7	.572	119.6	15.1	3.5	9.3
8	.549	106.5	13.0	2.6	8.2
9	.563	96.6	9.3	2.8	8.3
10	.592	89.8	9.3	3.8	8.7
11	-.418	71.5	8.7	1.4	5.8
12	-.703	117.9	9.6	2.9	9.2
13	.554	124.0	15.3	3.4	8.2
14	.524	-152.7	24.7	2.3	8.6
15	.593	116.7	14.5	3.3	-10.3
16	.563	131.8	18.5	2.1	8.2
17	.619	95.4	8.5	2.8	9.1
18	.526	140.2	20.8	2.4	8.9
19	.525	96.9	9.8	2.8	8.7
20	.553	99.8	11.7	2.6	9.2
21	.619	114.3	21.1	1.6	6.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIIMRER FRONT SIDE
2	3087.	33.20	5.38	1.47	4.57	2.47
3	3050.	45.10	11.95	.81	4.16	-3.47
4	3064.	41.85	9.38	1.67	-5.95	1.32
5	3063.	41.03	10.30	1.45	4.95	1.97
6	3078.	35.77	7.84	1.43	4.89	2.74
7	3061.	40.75	8.83	1.96	-5.21	-3.77
8	3068.	37.87	7.92	1.50	4.80	1.17
9	3082.	33.32	5.48	1.56	4.72	1.32
10	3094.	29.87	5.32	2.06	4.76	.78
11	3084.	33.58	7.06	1.09	4.49	-0.00
12	3091.	33.00	4.59	1.33	4.21	2.22
13	3067.	43.64	9.25	1.96	4.72	-3.63
14	-3029.	-56.15	15.58	1.39	-5.17	.79
15	3069.	38.42	8.18	1.81	-5.55	1.96
16	3050.	45.42	10.92	1.16	4.65	.78
17	3091.	30.34	4.66	1.48	4.77	1.57
18	3037.	-51.46	13.10	1.44	-5.40	.91
19	3086.	36.22	6.32	1.71	-5.33	1.82
20	3078.	35.38	7.13	1.52	-5.38	1.05
21	3068.	36.07	11.43	.81	3.14	1.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.3160	2.5670	13.2660	3.5210	2.7170	15.1140
3	3.1370	2.5190	12.8340	3.3280	2.6690	14.6130
4	2.8790	2.2440	12.4070	3.1220	2.4240	14.0690
5	3.0950	2.4520	12.9510	3.3590	2.6540	14.6950
6	3.1630	2.5080	13.1190	3.2840	2.6000	14.4980
7	3.1500	2.4780	12.8930	3.3050	2.5950	14.5560
8	3.1500	2.4630	12.8930	3.3050	2.5790	14.5560
9	3.2260	2.5300	13.0760	3.3860	2.6500	14.7650
10	3.7210	2.9150	13.8810	-3.9700	-3.1040	-16.2480
11	3.1180	2.3610	12.4850	3.3210	2.5030	14.5960
12	3.5000	2.8300	13.3760	3.7320	3.0160	15.6510
13	2.7870	2.1940	11.4160	2.9080	2.2860	13.4880
14	-2.5210	-1.9830	-10.7600	-2.6270	-2.0620	-12.6950
15	3.6300	2.8490	13.7220	3.7980	2.9760	15.8190
16	3.1470	2.4700	12.5980	3.2880	2.5760	14.5100
17	3.3160	2.6270	12.9980	3.4660	2.7430	14.9740
18	2.9710	2.3190	12.1570	3.1550	2.4570	14.1580
19	3.2320	2.5060	12.7820	3.4350	2.6570	14.8940
20	3.3920	2.6430	13.1590	3.6080	2.8040	15.3380
21	3.5500	2.8050	13.4500	3.6210	2.8590	15.3720

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2		31.27			5.08			1.80			5.59		2.47	
3		42.51			11.27			.99			5.09		-3.47	
4		38.60			8.68			2.04			-7.24		1.32	
5		37.80			9.51			1.76			-6.03		1.97	
6		34.46			7.56			1.69			5.80		2.18	
7		38.84			8.43			2.37			-6.31		-3.63	
8		36.10			7.56			1.82			5.82		.91	
9		31.74			5.24			1.90			5.72		1.32	
10		27.99			5.00			2.60			5.98		.78	
11		31.53			6.66			1.36			5.64		0.00	
12		30.94			4.31			1.67			5.29		2.22	
13		41.81			8.87			2.49			5.98		-3.07	
14		-53.90			14.99			1.76			-6.55		.79	
15		36.72			7.83			2.24			-6.87		1.96	
16		43.47			10.47			1.44			5.75		.78	
17		29.02			4.46			1.83			5.91		1.57	
18		48.45			12.36			1.80			-6.75		.91	
19		34.07			5.96			2.14			-6.67		1.82	
20		33.26			6.72			1.91			-6.74		1.05	
21		35.36			11.21			1.00			3.85		1.31	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
2	22992.	1790.	513.7	29.97	.006710
4	18747.	1818.	522.2	30.02	.008020
5	21433.	1821.	525.2	30.02	.009230
6	22559.	1818.	528.7	30.02	.009680
7	21412.	1805.	516.7	30.12	.007570
8	15539.	1805.	515.2	30.13	.007480
9	22053.	1805.	517.7	30.13	.007880
10	24287.	1797.	518.7	30.19	.006550
11	24374.	1797.	518.7	30.19	.006550
12	23019.	1797.	518.7	30.19	.006550
13	22521.	1816.	521.7	29.90	.008170
14	22639.	1816.	516.7	29.90	.007090
15	15360.	1829.	512.2	30.10	.007130
16	20115.	1710.	513.7	30.10	.007310
18	22257.	1840.	511.7	30.07	.005640
19	22543.	1840.	513.7	30.08	.005730
20	23620.	1840.	513.2	30.08	.005470
21	26216.	1860.	518.7	29.96	.008270

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	32.10	56.20	32.26	56.47
4	30.50	56.00	30.40	55.81
5	32.00	56.00	31.80	55.65
6	32.50	56.00	32.19	55.47
7	32.00	56.00	32.06	56.11
8	32.50	56.00	32.61	56.19
9	33.00	56.50	33.03	56.55
10	32.00	55.50	32.00	55.50
11	31.00	55.00	31.00	55.00
12	33.50	56.00	33.50	56.00
13	33.00	57.50	32.90	57.33
14	32.80	56.30	32.86	56.41
15	34.00	57.50	34.22	57.86
16	30.00	53.50	30.15	53.76
18	32.50	56.00	32.72	56.38
19	30.50	54.00	30.65	54.26
20	33.50	57.50	33.68	57.81
21	-38.00	-62.00	-38.00	-62.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1140.	.2970	.3230	1140.	1.050	1129.
4	1175.	.2920	-.3700	1176.	1.050	1095.
5	1175.	.3430	.3440	-1194.	1.050	1088.
6	1175.	.3340	.3390	1176.	1.060	1079.
7	1150.	.2730	.3290	1158.	1.045	1106.
8	1150.	.2880	.3190	1176.	1.050	1109.
9	1230.	.3190	.3350	1158.	1.060	1127.
10	1170.	.3390	.3350	1176.	1.050	1074.
11	1090.	.2510	.3290	1176.	1.060	1051.
12	1150.	-.3770	.3060	1176.	1.060	1098.
13	1110.	.2570	.3080	1122.	1.050	1173.
14	1120.	.2650	.3100	1140.	1.055	1128.
15	1250.	.3100	.3210	-1104.	1.050	1190.
16	1150.	.3320	-.3630	1140.	1.050	1029.
18	1150.	.2940	.3170	1149.	1.040	1121.
19	1050.	.3030	.3230	1140.	1.050	1040.
20	1150.	.3130	.3030	1122.	1.050	1189.
21	-1415.	.2870	.3470	1167.	-1.070	-1418.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	1136.	.3000	.3260	1151.	1131.
4	1183.	.2900	-.3670	1168.	1099.
5	1186.	.3390	.3400	1179.	1091.
6	1190.	.3280	.3320	1153.	1082.
7	1155.	.2740	.3300	1162.	1113.
8	1154.	.2900	.3210	1184.	1117.
9	1237.	.3200	.3360	1160.	1135.
10	1181.	.3390	.3350	1176.	1084.
11	1100.	-.2510	.3290	1176.	1060.
12	1160.	-.3770	.3060	1176.	1108.
13	1112.	.2560	.3060	-1115.	1172.
14	1117.	.2660	.3110	1144.	1128.
15	1250.	.3140	.3250	-1118.	1197.
16	1151.	.3360	-.3670	1151.	1035.
18	1148.	.2980	.3210	1164.	1126.
19	1051.	.3060	.3260	1151.	1045.
20	1150.	.3160	.3070	1134.	1195.
21	-1417.	.2870	.3470	1167.	-1420.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.606	100.0	13.5	1.5	5.8
4	.597	93.2	10.7	3.0	6.0
5	.698	127.2	19.1	2.9	6.7
6	.678	120.7	20.7	3.0	6.7
7	.552	108.7	16.0	2.1	4.7
8	.585	98.2	13.8	2.0	5.9
9	.650	106.2	15.0	2.4	5.5
10	.690	115.1	12.6	3.3	7.1
11	.510	79.8	12.3	3.0	5.1
12	-.772	114.8	11.2	3.4	8.0
13	.526	81.6	9.4	3.9	5.8
14	.540	101.4	12.1	2.4	5.6
15	.629	121.9	16.4	3.1	5.8
16	.663	-207.4	32.6	2.3	5.9
18	.594	135.0	23.7	2.0	5.6
19	.613	124.5	22.0	1.5	5.8
20	.637	106.1	17.5	2.4	6.6
21	.587	75.5	11.6	3.1	6.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3084.	32.37	7.53	.79	3.11	1.57
4	3091.	30.72	6.07	1.60	3.26	1.96
5	3075.	35.67	9.22	1.32	3.10	2.60
6	3073.	34.82	10.26	1.42	3.15	.92
7	3066.	38.43	9.74	1.21	2.76	2.89
8	3080.	32.91	7.92	1.07	3.25	1.70
9	3082.	32.03	7.77	1.18	2.73	1.96
10	3083.	32.71	6.14	1.52	3.33	1.95
11	3081.	30.69	8.13	1.90	3.21	3.39
12	3092.	29.28	4.89	1.42	3.35	2.10
13	3096.	30.59	6.05	2.42	3.57	2.10
14	3082.	36.85	7.55	1.45	3.33	1.19
15	3074.	37.94	8.78	1.60	2.96	2.22
16	-3019.	-60.12	16.21	1.09	2.83	2.49
18	3054.	44.19	13.34	1.08	3.03	2.47
19	3065.	39.60	12.01	.80	3.04	1.96
20	3084.	32.69	9.28	1.23	3.34	2.22
21	3091.	25.30	6.70	1.72	3.73	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.2050	2.5340	12.6010	3.2850	2.5950	14.5020
4	3.2480	2.5550	12.3590	3.1820	2.5050	14.2310
5	3.2730	2.6430	12.1220	3.1580	2.5510	14.1650
6	3.3030	2.6510	12.0710	3.1300	2.5140	14.0900
7	3.2110	2.5050	12.4030	3.2280	2.5170	14.3520
8	3.1990	2.5160	12.4020	3.2410	2.5480	14.3850
9	3.2980	2.6320	12.5220	3.2980	2.6320	14.5350
10	3.1560	2.5500	12.5080	3.1350	2.5330	14.1030
11	3.0800	2.3800	12.3280	3.0590	2.3650	13.9010
12	3.2330	2.6640	12.6890	3.2110	2.6470	14.3070
13	3.4840	2.6800	12.8460	3.4310	2.6420	14.8840
14	3.2400	2.5160	12.5770	3.2750	2.5420	14.4750
15	3.4400	2.7290	13.0500	3.5430	2.8090	15.1730
16	2.8190	2.2830	11.5450	2.8780	2.3300	13.4040
18	3.1660	2.5020	12.7770	3.2710	2.5820	14.4640
19	2.8880	2.3010	12.0690	2.9510	2.3500	13.6040
20	3.4440	2.7360	13.4730	3.5310	2.8040	15.1420
21	-4.5500	-3.5160	-15.0770	-4.5460	-3.5130	-17.6290

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	31.58	7.35	.98	3.84	1.57
4	31.36	6.19	1.98	4.03	1.68
5	36.97	9.55	1.66	3.89	2.51
6	36.74	10.82	1.78	3.95	.84
7	38.23	9.69	1.50	3.42	2.89
8	32.49	7.82	1.34	4.05	1.70
9	32.04	7.77	1.48	3.41	1.96
10	32.94	6.18	1.84	4.03	1.95
11	30.90	8.19	2.31	3.88	2.53
12	29.48	4.92	1.72	4.06	2.10
13	31.06	6.13	3.02	4.44	2.02
14	36.45	7.47	1.79	4.11	1.19
15	36.83	8.53	1.99	3.69	2.17
16	-58.88	15.88	1.36	3.53	2.49
18	42.78	12.93	1.31	3.68	2.47
19	38.76	11.77	.97	3.68	1.96
20	31.89	9.06	1.48	4.03	1.85
21	25.32	6.71	2.01	4.36	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	60.00	36.17	60.29
4	36.50	60.00	36.38	59.80
5	36.00	60.00	35.78	59.63
6	36.50	60.00	36.15	59.43
7	38.00	60.00	38.07	60.12
8	36.20	60.00	36.32	60.20
9	36.90	60.00	36.94	60.06
10	36.50	60.00	36.50	60.00
11	36.50	60.00	36.50	60.00
12	37.50	60.00	37.50	60.00
13	36.00	60.00	35.90	59.83
14	36.20	60.00	36.27	60.12
15	36.00	60.00	36.23	60.38
16	36.00	60.00	36.17	60.29
18	36.50	60.20	36.75	60.61
19	35.80	60.00	35.97	60.29
20	35.50	60.00	35.69	60.32
21	38.00	-62.00	38.00	-62.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

2	1270.	.2880	.3170	1140.	1.050	1315.
4	1350.	.2870	.3380	1176.	1.060	1286.
5	1325.	.3290	.3360	1176.	1.070	1278.
6	1325.	.3130	.3350	1176.	1.070	1268.
7	1360.	.2490	.3300	1176.	1.060	1298.
8	1300.	.2710	.3230	1167.	1.060	1303.
9	1360.	.3110	.3360	1149.	1.065	1294.
10	1350.	.3330	.3350	1185.	1.060	1288.
11	1225.	-.2200	.3040	1158.	1.070	1288.
12	1320.	-.3710	.3230	1194.	1.060	1288.
13	1240.	.2460	.3140	1122.	1.065	1293.
14	1240.	.2500	.3110	1140.	1.060	1308.
15	1340.	.3080	.3320	-1104.	1.050	1315.
16	1350.	.2970	.3360	1131.	1.050	1310.
18	1320.	.2730	.3250	1140.	1.050	1330.
19	1230.	.3020	.3070	1122.	1.060	1310.
20	1240.	.3120	.3100	1140.	1.060	1312.
21	-1415.	.2840	-.3470	1167.	1.070	-1418.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1266.	.2910	.3200	1151.	1317.
4	1359.	.2850	.3360	1168.	1290.
5	1338.	.3250	.3320	1161.	1282.
6	1342.	.3070	.3290	1153.	1273.
7	1366.	.2500	.3320	1180.	1307.
8	1305.	.2720	.3250	1175.	1312.
9	1368.	.3110	.3360	1151.	1303.
10	1362.	.3330	.3350	1185.	1300.
11	1236.	-.2200	.3040	1158.	1300.
12	1332.	-.3710	.3230	1194.	1300.
13	1243.	.2450	.3120	-1115.	1292.
14	1237.	.2510	.3120	1144.	1307.
15	1340.	.3120	.3370	1118.	1323.
16	1352.	.3000	.3390	1142.	1317.
18	1318.	.2770	.3300	1155.	1337.
19	1231.	.3050	.3100	1133.	1317.
20	1240.	.3150	.3140	1152.	1319.
21	-1417.	.2840	-.3470	1167.	-1420.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.589	75.6	9.5	2.1	6.3
4	.589	65.8	6.8	3.8	6.9
5	.673	96.1	13.9	3.4	7.1
6	.641	86.3	12.4	3.9	7.2
7	.509	70.4	8.5	2.5	5.0
8	.555	68.9	7.1	2.6	6.0
9	.636	83.1	8.4	3.1	5.9
10	.683	88.1	8.3	4.2	7.6
11	-.451	-49.6	4.7	3.5	5.3
12	-.763	88.2	6.3	4.6	8.9
13	.506	66.3	6.9	3.8	5.9
14	.512	72.4	7.5	2.9	5.8
15	.629	102.3	12.4	3.4	6.1
16	.606	97.2	11.9	2.8	6.5
18	.558	89.5	12.4	2.7	6.0
19	.620	72.7	8.3	3.0	6.7
20	.638	89.0	11.7	2.9	6.7
21	.580	75.5	11.4	3.0	6.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3101.	25.33	5.45	1.17	3.46	2.61
4	3110.	22.09	3.92	2.12	3.81	2.10
5	3093.	28.11	6.96	1.64	3.40	-4.24
6	3096.	26.53	6.56	1.98	3.63	2.85
7	3095.	27.22	5.64	1.58	3.18	1.97
8	3103.	24.54	4.31	1.54	3.51	2.48
9	3101.	25.76	4.46	1.56	3.02	2.72
10	3100.	25.46	4.13	2.00	3.59	2.87
11	3108.	21.72	3.53	2.52	3.78	2.22
12	3108.	22.87	2.81	1.94	3.78	3.92
13	3107.	25.93	4.63	2.41	3.78	2.10
14	3103.	27.94	4.97	1.81	3.65	1.58
15	3090.	31.97	6.63	1.76	3.12	2.62
16	3090.	31.55	6.63	1.50	3.49	1.97
18	3090.	31.52	7.48	1.54	3.46	1.45
19	3111.	23.20	4.56	1.56	3.50	1.57
20	3100.	27.50	6.20	1.45	3.41	2.34
21	3091.	25.60	6.61	1.68	3.51	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	4.0020	3.1150	14.3970	4.1050	3.1930	16.5790
4	4.0700	3.1580	14.1480	3.9850	3.0940	16.2840
5	4.0930	3.2480	13.8580	3.9440	3.1320	16.1820
6	4.1190	3.2360	13.7790	3.8960	3.0660	16.0650
7	4.0390	3.0770	14.2330	4.0620	3.0930	16.4740
8	4.0290	3.1060	14.2410	4.0830	3.1460	16.5260
9	4.0470	3.1860	14.1610	4.0480	3.1860	16.4390
10	4.0610	3.2360	14.5480	4.0340	3.2150	16.4040
11	4.0610	3.0440	14.5480	4.0340	3.0240	16.4040
12	4.0610	3.3070	14.5480	4.0340	3.2850	16.4040
13	4.0540	3.0780	14.0730	3.9920	3.0340	16.3010
14	4.0170	3.0610	14.3100	4.0620	3.0940	16.4740
15	4.0030	3.1530	14.2970	4.1270	3.2470	16.6320
16	4.0150	3.1400	14.2650	4.1050	3.2090	16.5790
18	4.0450	3.1250	14.8000	4.1840	3.2280	16.7710
19	4.0130	3.1470	14.6940	4.1050	3.2180	16.5790
20	4.0080	3.1620	14.7600	4.1120	3.2420	16.5960
21	-4.5500	-3.5100	15.0770	-4.5460	-3.5070	-17.6290

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2		24.69			5.32			1.45			4.28		2.61	
4		22.56			4.00			2.62			4.71		2.10	
5		29.17			7.22			2.06			4.27		-4.24	
6		28.05			6.92			2.48			4.55		2.85	
7		27.06			5.61			1.96			3.95		1.97	
8		24.21			4.26			1.92			4.38		2.48	
9		25.76			4.45			1.94			3.77		2.72	
10		25.63			4.16			2.42			4.35		2.87	
11		21.87			3.55			3.06			4.58		2.22	
12		23.02			2.83			2.36			4.58		3.92	
13		26.33			4.69			3.00			4.70		2.10	
14		27.63			4.92			2.23			4.51		1.36	
15		31.01			6.44			2.20			3.89		2.62	
16		30.86			6.49			1.87			4.36		1.97	
18		30.47			7.24			1.88			4.21		1.45	
19		22.68			4.46			1.89			4.24		1.57	
20		26.80			6.05			1.75			4.12		2.34	
21		25.62			6.62			1.96			4.10		1.32	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	93.70	93.90	94.15	94.36
4	94.50	92.00	94.18	91.69
5	94.50	-95.50	93.91	94.91
6	94.50	94.00	93.60	93.11
7	93.50	92.30	93.68	92.48
8	93.00	93.60	93.32	93.92
9	92.50	92.50	92.59	92.59
10	93.00	93.00	93.00	93.00
11	91.50	93.00	91.50	93.00
12	94.00	92.00	94.00	92.00
13	91.80	92.80	91.54	92.53
14	92.80	92.50	92.98	92.68
15	94.00	92.50	94.59	93.09
16	94.00	94.00	94.46	94.46
18	92.50	92.30	93.13	92.93
19	93.00	94.00	93.45	94.46
20	93.50	93.80	94.00	94.30
21	92.50	93.00	92.50	93.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	8600.	.9210	.7400	1428.	1.980	13977.
4	8600.	.9870	.7450	1482.	1.980	13953.
5	8500.	.9270	.7390	1482.	1.980	13953.
6	8400.	.9860	.7340	1464.	1.980	13953.
7	8350.	.9110	.7190	1464.	1.980	13907.
8	8100.	.8770	.6980	1473.	1.980	13902.
9	8300.	.9550	.7200	1455.	1.980	13902.
10	8200.	.9740	.7090	1464.	1.980	13875.
11	-7800.	.8030	-.6810	1428.	1.980	13875.
12	8400.	1.0150	.7220	1464.	1.980	13875.
13	8680.	.8800	-.7670	1428.	1.980	14009.
14	8400.	.8200	.7320	1464.	1.980	14009.
15	8350.	1.0060	.7130	1446.	1.980	13916.
16	8400.	.8770	.7190	1428.	1.980	13916.
18	8300.	.8820	.7150	1446.	1.980	13930.
19	8000.	.8540	.6890	1428.	-2.000	-14124.
20	8200.	.9160	.7040	1464.	1.980	13928.
21	8350.	.8780	.7290	1464.	1.980	13981.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL C LBM/HR	C < CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	8573.	.9300	.7470	1442.	14000.
4	8658.	.9800	.7400	1472.	14000.
5	8582.	.9160	.7300	1463.	14000.
6	8509.	.9680	.7210	1436.	14000.
7	8390.	.9150	.7220	1469.	14000.
8	8129.	.8830	.7020	1483.	14000.
9	8350.	.9570	.7210	1458.	14000.
10	8274.	.9740	.7090	1464.	14000.
11	-7870.	.8030	-.6810	1428.	14000.
12	8476.	1.0150	.7220	1464.	14000.
13	8699.	.8750	-.7620	1419.	14000.
14	8378.	.8230	.7340	1469.	14000.
15	8347.	1.0190	.7220	1464.	14000.
16	8410.	.8860	.7260	1442.	14000.
18	8285.	.8940	.7240	1465.	14000.
19	8004.	.8630	.6950	1442.	-14200.
20	8199.	.9260	.7110	1479.	14000.
21	8361.	.8780	.7290	1464.	14000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.930	9.5	2.4	73.0	72.8
4	2.070	11.9	2.1	84.6	83.7
5	1.943	10.6	2.4	85.0	84.4
6	2.069	11.1	2.3	81.8	81.6
7	1.909	10.5	1.4	78.6	77.7
8	1.838	9.0	1.1	75.6	75.0
9	2.002	10.1	1.4	80.1	79.4
10	2.040	9.5	1.1	83.0	81.6
11	1.680	8.2	1.4	65.4	65.4
12	2.127	10.4	1.1	81.4	79.4
13	1.846	9.2	1.3	77.7	79.0
14	1.720	8.7	1.1	65.0	66.3
15	2.112	9.8	1.1	85.1	80.0
16	1.839	9.2	1.1	75.9	75.5
18	1.852	9.0	1.9	78.0	77.9
19	1.792	8.7	1.4	67.1	68.5
20	1.924	9.0	1.4	73.4	73.5
21	1.835	10.6	1.2	76.0	75.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
2	3153.	.99	.42	12.46	12.46	41.93
4	3153.	1.16	.35	13.48	13.48	41.29
5	3153.	1.09	.42	14.42	14.42	37.66
6	3153.	1.08	.38	13.03	13.03	37.82
7	3151.	1.10	.25	13.56	13.56	39.07
8	3151.	.99	.21	13.54	13.54	37.01
9	3151.	1.01	.24	13.18	13.18	39.61
10	3149.	.93	.18	13.40	13.40	42.63
11	3149.	.98	.28	12.82	12.82	38.56
12	3149.	.98	.18	12.60	12.60	41.67
13	3158.	1.00	.25	13.90	14.13	41.05
14	3158.	1.02	.21	12.47	12.72	34.56
15	3156.	.93	.17	13.30	13.30	36.84
16	3156.	1.00	.21	13.62	13.62	36.58
18	3158.	.97	.35	13.91	13.91	36.70
19	3158.	.98	.27	12.37	12.62	40.39
20	3158.	.94	.26	12.59	12.61	40.76
21	3147.	1.15	.23	13.62	13.62	34.04

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	114.5060	114.5060	93.2190	121.1210	121.1210	108.4240
4	102.4210	102.4210	80.6130	98.2720	98.2720	92.1910
5	-136.6400	-136.6400	-97.6980	126.6540	126.6540	-112.5530
6	125.4340	125.4340	87.7220	111.6350	111.6350	100.3120
7	95.9660	95.9660	83.1900	97.6720	97.6720	96.6500
8	104.6600	104.6600	90.0500	108.2580	108.2580	105.2220
9	103.7180	103.7180	83.6490	104.4220	104.4220	97.2890
10	112.0330	112.0330	88.4060	111.3660	111.3660	99.6830
11	89.9360	89.9360	88.4060	89.3820	89.3820	99.6830
12	106.9480	106.9480	83.2980	106.3160	106.3160	93.9230
13	96.2180	96.2180	84.1870	93.2730	93.2730	96.9630
14	86.8350	86.8350	84.6390	88.7620	88.7620	97.8080
15	111.1260	111.1260	85.0560	119.4990	119.4990	100.1840
16	109.7400	109.7400	92.9940	115.5400	115.5400	109.1680
18	92.5110	92.5110	86.4520	99.5240	99.5240	99.2670
19	106.5270	106.5270	-95.7910	112.1290	112.1290	109.1680
20	112.9200	112.9200	95.0210	119.7840	119.7840	108.0220
21	98.1270	98.1270	85.2500	98.0920	98.0920	99.6830

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	.94	.40	15.57	15.57	35.57
4	1.21	.36	16.55	16.55	33.86
5	1.18	.46	17.84	17.84	32.96
6	1.21	.43	16.00	16.00	33.85
7	1.08	.25	16.92	16.92	37.18
8	.95	.21	17.00	17.00	35.37
9	1.00	.24	16.46	16.46	-39.61
10	.94	.18	16.22	16.22	37.88
11	.99	.28	15.52	15.52	35.02
12	.99	.18	15.25	15.25	37.63
13	1.03	.26	17.20	17.47	34.40
14	1.00	.21	15.48	15.79	34.56
15	.87	.16	15.67	15.67	36.84
16	.95	.20	17.17	17.17	36.45
18	.90	.32	17.15	17.15	35.14
19	.93	.26	15.14	15.45	36.07
20	.88	.24	15.37	15.40	-38.74
21	1.15	.23	17.21	17.21	33.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	87.80	90.80	88.23	91.24
4	88.50	90.00	88.20	89.70
5	88.50	-92.50	87.95	91.93
6	89.00	92.00	88.15	91.13
7	88.00	90.00	88.17	90.17
8	87.60	91.00	87.90	91.31
9	87.30	90.50	87.38	90.59
10	88.00	91.00	88.00	91.00
11	87.00	91.00	87.00	91.00
12	88.50	90.00	88.50	90.00
13	86.60	90.50	-86.35	90.24
14	87.70	90.40	87.87	90.57
15	88.50	90.00	89.06	90.57
16	88.00	92.00	88.43	92.45
18	87.00	90.00	87.59	90.61
19	88.00	92.00	88.43	92.45
20	88.00	91.50	88.47	91.99
21	87.00	90.50	87.00	90.50

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	6750.	.7190	.6090	1338.	1.800	12180.
4	7000.	.7600	.6360	1392.	1.800	12159.
5	6900.	.7340	.6300	1392.	1.800	12159.
6	6900.	.7650	.6310	1392.	1.800	12159.
7	6800.	.6900	.6130	1383.	1.800	12119.
8	6800.	.7090	.6130	1401.	1.800	12115.
9	6950.	.7660	.6320	1392.	1.800	12115.
10	6950.	.7920	.6270	1410.	1.800	12091.
11	-6600.	.6430	.6010	1356.	1.800	12091.
12	7100.	.8020	.6380	1392.	1.800	12091.
13	-7250.	.6920	-.6730	1356.	1.800	12208.
14	6950.	.6550	.6330	1392.	1.800	12208.
15	6900.	.8320	.6140	1356.	1.810	12226.
16	6950.	.7050	.6230	1356.	1.800	12127.
18	7000.	.7280	.6320	1356.	1.800	12139.
19	6900.	.7090	.6190	1356.	1.810	12235.
20	6900.	.7440	.6190	1374.	1.800	12137.
21	6800.	.7170	.6240	1392.	1.800	12184.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CH F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	6729.	.7260	.6150	1351.	12200.
4	7047.	.7550	.6320	1382.	12200.
5	6966.	.7250	.6230	1374.	12200.
6	6989.	.7700	.6190	1365.	12200.
7	6832.	.6930	.6150	1388.	12200.
8	6825.	.7140	.6180	1410.	12200.
9	6992.	.7670	.6330	1394.	12200.
10	7013.	.7920	.6270	1410.	12200.
11	6660.	.6430	.6010	1356.	12200.
12	7164.	.8020	.6380	1392.	12200.
13	-7266.	.6880	-.6690	1348.	12200.
14	6932.	.6570	.6350	1397.	12200.
15	6898.	.8430	.6220	1373.	12300.
16	6958.	.7110	.6300	1369.	12200.
18	6987.	.7380	.6410	1374.	12200.
19	6903.	.7160	.6250	1369.	12300.
20	6899.	.7520	.6260	1388.	12200.
21	6809.	.7170	.6240	1392.	12200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.505	10.0	2.1	47.1	48.1
4	1.589	14.0	2.0	57.4	59.0
5	1.536	9.1	1.4	56.7	57.6
6	1.643	11.0	1.8	55.6	56.4
7	1.443	10.6	1.1	50.9	52.0
8	1.482	11.9	1.0	50.6	51.6
9	1.601	10.6	1.1	54.9	55.1
10	1.657	9.6	.9	61.4	62.3
11	1.343	8.0	1.2	48.2	49.2
12	1.677	10.1	.9	55.6	56.1
13	1.449	8.9	1.0	52.6	54.4
14	1.371	9.5	.9	44.6	46.8
15	1.745	10.2	.7	59.3	59.7
16	1.475	9.3	.9	51.7	53.0
18	1.525	9.7	1.5	52.6	54.2
19	1.486	8.8	1.3	49.6	51.5
20	1.559	9.0	1.2	53.5	54.8
21	1.497	11.1	1.2	52.7	53.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3152.	1.34	.48	10.32	10.54	39.48
4	3152.	1.76	.43	11.90	12.23	36.86
5	3153.	1.19	.32	12.17	12.36	34.90
6	3153.	1.34	.39	11.15	11.32	37.76
7	3151.	1.47	.27	11.63	11.87	35.26
8	3150.	1.61	.22	11.26	11.47	35.13
9	3151.	1.32	.25	11.30	11.34	38.16
10	3149.	1.16	.18	12.20	12.39	40.52
11	3149.	1.19	.30	11.81	12.06	33.16
12	3149.	1.21	.20	10.92	11.01	-41.18
13	3158.	1.24	.23	11.99	12.39	36.58
14	3158.	1.39	.22	10.74	11.28	34.65
15	3156.	1.18	.15	11.22	11.29	37.07
16	3156.	1.27	.21	11.56	11.86	35.64
18	3158.	1.27	.33	11.38	11.72	35.04
19	3158.	1.20	.30	11.02	11.45	37.35
20	3158.	1.16	.28	11.32	11.61	-40.86
21	3146.	1.48	.28	11.58	11.76	31.55

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	65.4320	65.4320	77.2090	68.6250	68.6250	89.7030
4	62.7970	62.7970	71.2680	60.5870	60.5870	81.5430
5	78.3170	78.3170	81.0470	73.3360	73.3360	93.5050
6	78.9510	78.9510	77.7890	71.3300	71.3300	89.0750
7	58.5480	58.5480	72.3130	59.3860	59.3860	83.9860
8	66.1640	66.1640	77.1360	68.1060	68.1060	90.0750
9	66.9700	66.9700	74.1010	67.3130	67.3130	86.1730
10	72.7280	72.7280	78.3920	72.2780	72.2780	88.3910
11	61.5270	61.5270	78.3920	61.1380	61.1380	88.3910
12	66.3750	66.3750	73.6780	65.9650	65.9650	83.0760
13	61.0810	61.0810	73.1830	59.4420	59.4420	84.3300
14	58.3500	58.3500	74.5340	59.4940	59.4940	86.1050
15	68.9960	68.9960	73.1610	73.4560	73.4560	86.0760
16	72.6680	72.6680	82.2350	75.9950	75.9950	96.4670
18	61.2070	61.2070	75.2540	65.2750	65.2750	86.3120
19	73.0300	73.0300	-84.7080	76.4220	76.4220	96.4670
20	72.3240	72.3240	-82.6400	76.1220	76.1220	93.8610
21	63.0600	63.0600	73.2980	63.0260	63.0260	85.7070

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	1.27	.46	12.87	13.15	-38.48
4	1.83	.44	14.62	15.03	36.57
5	1.27	.34	15.09	15.31	33.35
6	1.48	.43	13.71	13.92	36.55
7	1.45	.26	14.50	14.81	33.68
8	1.56	.22	14.12	14.38	35.13
9	1.32	.25	14.11	14.16	35.84
10	1.17	.19	14.77	15.00	35.90
11	1.20	.30	14.30	14.60	30.66
12	1.22	.20	13.22	13.33	36.81
13	1.27	.24	14.84	15.33	36.58
14	1.37	.22	13.33	14.00	34.65
15	1.11	.14	14.18	14.26	36.45
16	1.22	.20	14.57	14.94	35.64
18	1.19	.31	14.02	14.44	34.19
19	1.14	.29	13.48	14.00	37.35
20	1.10	.26	13.81	14.17	33.98
21	1.48	.28	13.54	13.75	31.55

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	78.50	86.10	78.88	86.52
4	79.00	85.50	78.73	85.21
5	79.00	-87.50	78.51	86.96
6	79.00	87.00	78.25	86.17
7	79.00	85.50	79.15	85.67
8	78.50	86.30	78.77	86.59
9	78.00	85.50	78.08	85.58
10	78.50	86.00	78.50	86.00
11	78.00	86.50	78.00	86.50
12	79.00	85.00	79.00	85.00
13	78.00	86.00	77.78	85.75
14	78.20	86.00	78.35	86.17
15	79.50	86.00	-80.00	86.54
16	79.00	87.00	79.38	87.42
18	78.00	85.50	78.53	86.08
19	78.00	87.00	78.38	87.42
20	78.50	86.50	78.92	86.96
21	78.50	86.00	78.50	86.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	4750.	.4790	.4920	1221.	1.520	A420.
4	4650.	.4630	.4860	1248.	1.520	A406.
5	4625.	.5000	.4860	1248.	1.520	A406.
6	4600.	.4880	.4870	1266.	1.520	A406.
7	4750.	.4160	.4880	1248.	1.520	A378.
8	4875.	.4660	.5040	1266.	1.520	A375.
9	4765.	.4730	.4990	1257.	1.520	A375.
10	4650.	.5090	.4830	-1284.	1.520	A359.
11	-4500.	.4230	.4720	1248.	1.520	A359.
12	4900.	.5220	.5050	1266.	1.520	A359.
13	4850.	.4540	-.5170	1248.	1.520	A440.
14	4740.	.4070	.4980	1266.	1.520	A440.
15	4800.	.5430	.4850	1230.	1.520	A384.
16	4725.	.4700	.4830	1212.	1.520	A384.
18	4830.	.4700	.5000	1221.	1.520	A392.
19	4600.	.4600	.4780	1212.	1.520	A389.
20	4750.	.4780	.4890	1221.	1.520	A391.
21	4850.	.4830	.5080	1266.	1.520	A423.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	4735.	.4830	.4960	1233.	8434.
4	4681.	.4600	.4820	1239.	8434.
5	4669.	.4940	.4800	1232.	8434.
6	4660.	.4790	.4780	1242.	8434.
7	4773.	.4180	.4900	1253.	8434.
8	4893.	.4700	.5070	1274.	8434.
9	4794.	.4740	.5000	1259.	8434.
10	4692.	.5090	.4830	-1284.	8434.
11	4541.	.4230	.4720	1248.	8434.
12	4944.	.5220	.5050	1266.	8434.
13	4861.	.4510	-.5140	1241.	8434.
14	4728.	.4080	.4990	1271.	8434.
15	4799.	.5500	.4910	1245.	8434.
16	4730.	.4750	.4870	1223.	8434.
18	4821.	.4760	.5070	1237.	8434.
19	4602.	.4650	.4830	1223.	8434.
20	4749.	.4830	.4950	1234.	8434.
21	4856.	.4830	.5080	1266.	8434.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.998	12.6	2.0	23.1	25.7
4	.966	10.4	1.5	26.8	29.0
5	1.044	12.4	1.6	27.8	30.4
6	1.017	11.9	1.8	26.2	28.0
7	.866	11.7	1.1	22.1	23.9
8	.972	13.4	.9	24.1	26.6
9	.986	15.2	1.2	24.7	26.6
10	1.061	11.2	.8	29.5	31.5
11	.881	10.0	1.0	23.4	25.4
12	1.088	12.5	.9	26.8	29.3
13	.948	11.0	.8	26.2	28.5
14	.848	12.6	.9	20.4	23.1
15	1.135	13.1	.7	30.2	32.2
16	.981	11.8	.8	24.6	26.8
18	.981	12.3	1.4	25.3	27.7
19	.961	10.8	1.3	23.4	25.8
20	.998	10.9	1.3	26.1	28.4
21	1.005	13.4	1.3	24.5	26.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3150.	2.52	.70	7.63	8.50	30.78
4	3151.	2.16	.54	9.13	9.88	-33.33
5	3151.	2.38	.54	8.76	9.61	29.24
6	3151.	2.35	.59	8.47	9.06	27.98
7	3148.	2.70	.44	8.41	9.09	26.05
8	3148.	2.76	.34	8.17	9.01	27.17
9	3148.	3.09	.43	8.23	8.88	27.92
10	3147.	2.12	.25	9.14	9.76	30.13
11	3147.	2.28	.39	8.74	9.50	22.67
12	3147.	2.31	.27	8.10	8.86	-31.63
13	3156.	2.33	.30	9.12	9.90	28.16
14	3155.	2.99	.35	7.95	8.99	24.05
15	3154.	2.32	.21	8.78	9.37	-33.51
16	3154.	2.42	.27	8.28	9.02	27.11
18	3155.	2.52	.50	8.52	9.30	25.49
19	3156.	2.25	.45	8.02	8.86	28.39
20	3156.	2.19	.46	8.63	9.40	28.95
21	3144.	2.66	.45	8.01	8.68	26.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	32.3240	32.3240	57.9150	33.6070	33.6070	67.1740
4	29.8510	29.8510	54.1160	28.9860	28.9860	61.9870
5	-37.4610	-37.4610	59.7090	35.4620	35.4620	69.0440
6	35.0860	35.0860	57.2000	32.3340	32.3340	65.7300
7	28.8200	28.8200	54.8440	29.1240	29.1240	63.6560
8	32.6900	32.6900	57.8630	33.4440	33.4440	67.4900
9	30.2960	30.2960	54.4930	30.3820	30.3820	63.3480
10	32.8770	32.8770	57.6570	32.6650	32.6650	65.0110
11	31.9990	31.9990	59.5080	31.7910	31.7910	67.0990
12	30.2300	30.2300	54.2870	30.0350	30.0350	61.2120
13	30.9380	30.9380	55.4820	30.2460	30.2460	63.9940
14	29.8720	29.8720	56.9070	30.3540	30.3540	65.7010
15	34.1250	34.1250	57.2950	35.8560	35.8560	67.2840
16	35.1660	35.1660	60.6880	36.4570	36.4570	71.0660
18	30.3630	30.3630	57.1100	31.9780	31.9780	65.3540
19	34.8310	34.8310	-62.5130	36.1200	36.1200	71.0660
20	33.7150	33.7150	60.9290	35.1110	35.1110	69.0670
21	31.9200	31.9200	55.5980	31.8960	31.8960	65.0110

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	2.43	.68	9.50	10.59	30.22
4	2.23	.56	11.23	12.16	28.89
5	2.52	.57	10.88	11.93	27.87
6	2.55	.65	10.46	11.18	27.98
7	2.67	.44	10.49	11.33	26.05
8	2.69	.33	10.23	11.29	27.17
9	3.08	.43	10.28	11.08	27.92
10	2.13	.25	11.07	11.82	30.13
11	2.29	.39	10.59	11.51	22.67
12	2.32	.27	9.81	10.73	30.77
13	2.38	.30	11.30	12.27	28.16
14	2.94	.35	9.85	11.14	24.05
15	2.21	.20	11.08	11.81	-32.51
16	2.33	.26	10.41	11.35	27.11
18	2.39	.47	10.47	11.43	25.49
19	2.17	.44	9.80	10.82	26.43
20	2.11	.44	10.51	11.44	28.63
21	2.66	.45	9.36	10.15	26.29

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	60.50	77.10	60.79	77.47
4	62.00	76.00	61.79	-75.74
5	61.00	78.50	60.62	78.01
6	60.00	77.50	59.43	76.76
7	62.50	77.20	62.62	77.35
8	61.00	77.50	61.21	77.76
9	61.40	77.00	61.46	77.07
10	61.50	77.50	61.50	77.50
11	-59.00	76.50	-59.00	76.50
12	62.50	77.00	62.50	77.00
13	60.80	77.30	60.62	77.08
14	61.00	77.00	61.12	77.15
15	63.00	78.00	-63.40	78.49
16	61.50	78.50	61.80	-78.88
18	61.50	77.20	61.92	77.73
19	61.50	77.50	61.80	77.88
20	61.00	77.50	61.33	77.91
21	61.00	77.00	61.00	77.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	2450.	.2400	.3540	1104.	1.230	4273.
4	2550.	.2240	.3640	1104.	1.230	4266.
5	2460.	.2670	.3600	1122.	1.230	4266.
6	2450.	.2350	.3690	1122.	1.230	4266.
7	2575.	.2270	.3580	1104.	1.230	4252.
8	2500.	.2220	.3570	1122.	1.230	4250.
9	2600.	.2580	.3700	1104.	1.230	4250.
10	2550.	.2580	.3630	1122.	1.230	4242.
11	-2275.	.2290	.3400	1104.	1.230	4242.
12	2650.	-.3160	.3690	-1140.	1.230	4242.
13	2530.	.2200	.3710	1086.	1.230	4283.
14	2490.	.2250	.3590	1122.	1.230	4283.
15	-2700.	.2840	.3690	1104.	1.230	4254.
16	2575.	.2430	.3630	1068.	-1.240	-4413.
18	2600.	.2250	.3660	1104.	1.230	4259.
19	2470.	.2870	.3490	1086.	1.230	4257.
20	2460.	.2160	.3500	1068.	1.230	4258.
21	2520.	.2300	.3650	-1140.	1.230	4274.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	2442.	.2420	.3580	1114.	4280.
4	2567.	.2230	.3610	1096.	4280.
5	2484.	.2640	.3560	1108.	4280.
6	2482.	.2300	.3620	1100.	4280.
7	2587.	.2280	.3600	1108.	4280.
8	2509.	.2230	.3590	1129.	4280.
9	2616.	.2590	.3710	1106.	4280.
10	2573.	.2580	.3630	1122.	4280.
11	-2296.	.2290	-.3400	1104.	4280.
12	2674.	.3160	.3690	1140.	4280.
13	2536.	.2190	.3690	1079.	4280.
14	2484.	.2260	.3610	1126.	4280.
15	2699.	.2880	.3730	1118.	4280.
16	2578.	.2450	.3670	1078.	-4440.
18	2595.	.2280	.3710	1119.	4280.
19	2471.	.2890	.3520	1096.	4280.
20	2460.	.2190	.3540	1079.	4280.
21	2523.	.2300	.3650	1140.	4280.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.497	24.1	3.3	5.7	9.0
4	.465	-16.4	2.0	6.9	9.2
5	.553	26.4	3.1	7.3	10.5
6	.486	20.1	2.7	7.0	9.0
7	.470	21.6	2.1	5.9	8.2
8	.459	18.0	1.6	5.9	8.5
9	.535	21.9	2.0	7.0	9.1
10	.534	19.7	1.3	7.7	10.1
11	.474	23.9	2.1	6.4	8.7
12	-.654	25.9	1.7	9.3	12.4
13	.457	21.4	1.6	6.8	9.1
14	.467	22.0	1.5	6.1	8.8
15	.590	22.6	1.4	8.8	11.2
16	.503	22.3	1.8	6.6	9.4
18	.466	20.0	2.6	6.7	8.8
19	.595	23.9	2.3	7.8	11.0
20	.449	17.8	2.3	6.0	7.9
21	.475	-17.0	-5.1	5.8	7.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3134.	9.68	2.29	3.74	5.93	9.08
4	3141.	7.06	1.51	4.90	6.51	9.45
5	3136.	9.54	1.92	4.32	6.24	10.66
6	313A.	8.27	1.92	4.71	6.06	10.55
7	3135.	9.15	1.52	4.09	5.71	9.81
8	313A.	7.84	1.21	4.22	6.09	9.21
9	3137.	8.17	1.29	4.27	5.60	10.13
10	3137.	7.37	.87	4.76	6.23	12.74
11	3131.	10.06	1.53	4.40	5.98	8.38
12	3136.	7.91	.90	4.64	6.23	-15.71
13	3142.	9.35	1.21	4.87	6.53	11.05
14	3143.	9.41	1.13	4.27	6.19	8.50
15	3144.	7.66	.83	4.88	6.23	12.18
16	3141.	8.86	1.23	4.29	6.12	11.11
18	3142.	8.59	1.91	4.69	6.21	8.74
19	-3144.	8.03	1.30	4.32	6.07	10.92
20	3143.	7.92	1.74	4.40	5.82	8.55
21	312A.	7.12	-3.70	3.98	5.35	9.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	11.2340	11.2340	33.2160	11.5780	11.5780	38.4100
4	9.9780	9.9780	30.1950	-9.7450	-9.7450	-34.6630
5	12.9540	12.9540	34.2560	12.3990	12.3990	39.7660
6	11.4760	11.4760	31.8620	10.7640	10.7640	36.8420
7	11.2510	11.2510	32.8890	11.3360	11.3360	38.1320
8	11.5620	11.5620	33.6110	11.7560	11.7560	39.1230
9	11.2780	11.2780	32.2960	11.2910	11.2910	37.5230
10	11.8050	11.8050	34.1160	11.7270	11.7270	38.4680
11	10.5690	10.5690	32.1670	10.4990	10.4990	36.2710
12	11.7480	11.7480	33.1330	11.6700	11.6700	37.3590
13	11.1930	11.1930	32.4820	10.9940	10.9940	37.5300
14	10.9750	10.9750	32.6820	11.1180	11.1180	37.6870
15	12.7440	12.7440	35.0520	13.2360	13.2360	41.0190
16	12.9740	12.9740	-36.0100	-13.3370	-13.3370	-42.0460
18	11.2880	11.2880	34.2390	11.7500	11.7500	39.0290
19	12.1050	12.1050	34.7820	12.4530	12.4530	39.4140
20	11.5410	11.5410	34.9720	11.8990	11.8990	39.5120
21	11.0070	11.0070	31.9500	10.9970	10.9970	37.3590

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO FI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	9.39	2.23	4.65	7.36	9.08
4	7.23	1.55	6.05	8.03	9.45
5	9.97	2.00	5.38	7.77	10.66
6	8.81	2.05	5.85	7.53	10.55
7	9.08	1.51	5.09	7.11	9.81
8	7.71	1.19	5.27	7.61	9.21
9	8.16	1.28	5.33	6.99	10.13
10	7.42	.87	5.77	7.55	12.74
11	10.13	1.54	5.33	7.24	8.38
12	7.96	.91	5.62	7.54	-15.71
13	9.52	1.23	6.04	8.11	11.05
14	9.29	1.11	5.29	7.67	8.50
15	7.38	.80	6.14	7.83	12.18
16	8.62	1.20	5.38	7.68	11.11
18	8.25	1.84	5.75	7.60	8.74
19	7.80	1.27	5.25	7.39	10.92
20	7.68	1.68	5.34	7.06	8.55
21	7.13	-3.71	4.66	6.26	9.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	35.70	60.00	35.87	60.29
4	36.50	60.00	36.38	59.80
5	35.00	60.00	34.78	59.63
6	35.50	60.00	35.16	59.43
7	37.00	60.00	37.07	60.12
8	36.50	60.00	36.62	60.20
9	36.50	60.00	36.54	60.06
10	36.50	60.00	36.50	60.00
11	36.00	60.50	36.00	60.50
12	37.00	60.00	37.00	60.00
13	35.00	59.00	34.90	58.83
14	36.30	60.00	36.37	60.12
15	36.00	59.00	36.23	59.37
16	36.00	60.00	36.17	60.29
18	37.00	60.00	37.25	60.41
19	35.00	59.00	35.17	59.29
20	35.80	60.00	35.99	60.32
21	38.00	-63.00	38.00	-63.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1230.	.2760	.3080	1113.	1.060	1315.
4	1290.	.2560	.3230	1140.	1.060	1286.
5	1260.	.3110	.3240	1158.	1.060	1278.
6	1260.	.2940	.3230	1158.	1.065	1268.
7	1300.	.2440	.3200	1140.	1.060	1298.
8	1275.	.2580	.3150	1149.	1.070	1303.
9	1305.	.2920	.3240	1113.	1.070	1294.
10	1300.	.3080	.3220	-1176.	1.070	1288.
11	1210.	.2210	.3020	1143.	1.070	1318.
12	1280.	-.3580	.3150	-1176.	1.060	1288.
13	1180.	.2400	.3030	1104.	1.065	1245.
14	1220.	.2180	.3050	1122.	1.070	1308.
15	1270.	.3050	.3150	1113.	1.050	1262.
16	1300.	.2900	.3230	1104.	1.060	1310.
18	1310.	.2570	.3210	1122.	1.060	1318.
19	1160.	.2810	.2920	1104.	1.060	1259.
20	1210.	.2950	.3020	1113.	1.070	1312.
21	-1400.	.2630	-.3430	1140.	1.070	-1478.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CORR F1J FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	1226.	.2790	.3110	1124.	1317.
4	1299.	.2550	.3210	1132.	1290.
5	1272.	.3070	.3200	1143.	1282.
6	1276.	.2890	.3170	1136.	1273.
7	1306.	.2450	.3210	1144.	1307.
8	1280.	.2600	.3170	1157.	1312.
9	1313.	.2930	.3240	1115.	1303.
10	1312.	.3080	.3220	-1176.	1300.
11	1221.	.2210	.3020	1143.	1330.
12	1292.	-.3580	.3150	-1176.	1300.
13	1183.	.2380	.3010	-1097.	1244.
14	1217.	.2190	.3070	1126.	1307.
15	1270.	.3090	.3190	1127.	1270.
16	1302.	.2930	.3260	1114.	1317.
18	1308.	.2600	.3250	1137.	1325.
19	1161.	.2830	.2950	1114.	1266.
20	1210.	.2980	.3050	1125.	1319.
21	-1402.	.2630	-.3430	1140.	-1480.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.566	75.5	8.6	2.4	6.1
4	.525	70.3	7.3	3.0	6.0
5	.634	94.2	13.0	3.4	6.7
6	.601	89.4	11.8	3.7	6.6
7	.498	73.1	8.7	2.3	4.6
8	.528	73.3	8.4	2.4	5.8
9	.598	77.6	8.5	3.0	5.7
10	.630	85.6	8.1	3.9	7.2
11	.454	-50.9	4.1	3.3	5.2
12	-.735	92.4	6.7	4.4	8.5
13	.491	72.0	6.3	3.2	5.6
14	.446	62.9	6.5	2.6	5.2
15	.623	105.1	12.0	3.0	6.1
16	.591	99.2	11.8	2.7	6.4
18	.525	83.0	10.7	2.7	5.8
19	.573	86.3	12.8	2.3	5.7
20	.604	81.9	10.7	3.0	6.4
21	.536	72.7	10.9	3.0	6.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3100.	26.31	5.18	1.38	3.49	1.31
4	3101.	26.42	4.70	1.83	3.69	1.44
5	3091.	29.21	6.91	1.73	3.42	1.31
6	3092.	29.25	6.61	1.97	3.55	.65
7	3092.	28.89	5.93	1.51	3.00	2.61
8	3096.	27.35	5.38	1.46	3.54	2.35
9	3100.	25.58	4.84	1.63	3.08	2.99
10	3097.	26.77	4.33	1.99	3.69	1.31
11	3108.	22.15	3.10	2.34	3.72	1.45
12	3104.	24.84	3.07	1.96	3.76	-3.94
13	3103.	28.94	4.34	2.12	3.70	1.97
14	3103.	27.84	4.98	1.91	3.77	2.74
15	3088.	33.13	6.49	1.58	3.19	1.56
16	3088.	32.98	6.72	1.46	3.48	-3.76
18	3093.	31.13	6.91	1.65	3.56	1.69
19	3093.	29.65	7.52	1.31	3.24	1.31
20	3102.	26.78	6.00	1.63	3.44	1.95
21	3088.	26.68	6.87	1.83	3.76	.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	4.0020	3.0960	14.3970	4.1050	3.1730	16.5790
4	4.0700	3.1070	14.1480	3.9850	3.0450	16.2840
5	4.0930	3.2140	13.8580	3.9440	3.1000	16.1820
6	4.1190	3.2030	13.7790	3.8960	3.0350	16.0650
7	4.0390	3.0680	14.2330	4.0620	3.0840	16.4740
8	4.0290	3.0850	14.2410	4.0830	3.1250	16.5260
9	4.0470	3.1540	14.1610	4.0480	3.1540	16.4390
10	4.0610	3.1910	14.5480	4.0340	3.1700	16.4040
11	4.1850	3.1340	14.8150	4.1570	3.1130	16.7040
12	4.0610	3.2820	14.5480	4.0340	3.2600	16.4040
13	3.8130	2.8940	13.5620	3.7550	2.8530	15.7100
14	4.0170	3.0100	14.3100	4.0620	3.0420	16.4740
15	3.7680	2.9710	13.7830	3.8830	3.0590	16.0310
16	4.0150	3.1290	14.2650	4.1050	3.1970	16.5790
18	3.9970	3.0620	14.6940	4.1340	3.1620	16.6500
19	3.7760	2.9360	14.1660	3.8620	3.0010	15.9800
20	4.0080	3.1320	14.7600	4.1120	3.2110	16.5960
21	-4.8270	-3.6680	-15.6200	-4.8220	-3.6650	-18.2650

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		25.65		5.06			1.70			4.31			1.31	
4		26.99		4.79			2.26			4.56			1.44	
5		30.31		7.16			2.17			4.29			1.31	
6		30.92		6.98			2.46			4.44			.65	
7		28.73		5.90			1.88			3.72			2.61	
8		26.99		5.32			1.82			4.41			2.35	
9		25.58		4.84			2.03			3.84			2.99	
10		26.96		4.36			2.41			4.46			1.31	
11		22.30		3.13			2.83			4.50			1.45	
12		25.00		3.09			2.37			4.55			-3.94	
13		29.39		4.40			2.63			4.60			1.97	
14		27.53		4.93			2.35			4.66			2.74	
15		32.15		6.31			1.97			3.98			1.56	
16		32.26		6.58			1.83			4.35			-3.76	
18		30.09		6.69			2.00			4.33			1.68	
19		28.99		7.36			1.58			3.92			1.31	
20		26.11		5.85			1.96			4.15			1.95	
21		26.70		6.88			2.13			4.39			.27	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	33.00	56.70	33.16	56.98
4	32.50	56.00	32.39	55.81
5	32.00	56.00	31.80	55.65
6	32.50	56.00	32.19	55.47
7	33.00	56.00	33.06	56.11
8	33.00	56.50	33.11	56.69
9	33.00	56.20	33.03	56.25
10	33.00	56.00	33.00	56.00
11	31.00	55.00	31.00	55.00
12	34.00	57.00	34.00	57.00
13	33.50	57.60	33.40	57.43
14	32.80	56.00	32.86	56.11
15	34.00	57.00	34.22	57.36
16	30.00	53.50	30.15	53.76
18	34.00	56.20	34.23	56.58
19	32.50	57.00	32.66	57.28
20	34.00	58.00	34.18	58.31
21	-38.00	-63.00	-38.00	-63.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1130.	.2710	.3070	1113.	1.060	1153.
4	1160.	.2650	.3290	1140.	1.060	1095.
5	1150.	.3150	-.3370	1158.	1.050	1088.
6	1150.	.2990	.3310	1158.	1.060	1079.
7	1150.	.2590	.3130	1140.	1.040	1106.
8	1145.	.2620	.3100	1149.	1.060	1133.
9	1180.	.2990	.3220	1113.	1.060	1112.
10	1180.	.3110	.3220	1167.	1.060	1098.
11	1060.	.2410	.3200	1143.	1.060	1051.
12	1175.	-.3670	.3060	1176.	1.060	1146.
13	1120.	.2360	.3030	1104.	1.060	1178.
14	1090.	.2380	.3020	1122.	1.050	1114.
15	1210.	.3080	.3110	1122.	1.050	1166.
16	1110.	.3200	-.3510	1131.	1.040	1029.
18	1170.	.2790	.3000	1140.	1.040	1130.
19	1100.	.2820	.3050	1104.	1.050	1163.
20	1150.	.3040	.2960	1104.	1.060	1213.
21	-1400.	.2640	-.3430	1140.	-1.070	-1478.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1126.	.2740	.3100	1124.	1155.
4	1168.	.2630	.3270	1132.	1099.
5	1161.	.3110	.3330	1143.	1091.
6	1165.	.2930	.3250	1136.	1082.
7	1155.	.2600	.3140	1144.	1113.
8	1149.	.2640	.3120	1157.	1141.
9	1187.	.3000	.3220	1115.	1120.
10	1191.	.3110	.3220	1167.	1108.
11	1070.	.2410	.3200	1143.	1060.
12	1186.	-.3670	.3060	1176.	1156.
13	1122.	.2350	.3020	-1097.	1177.
14	1087.	.2390	.3030	1126.	1113.
15	1210.	.3120	.3150	1136.	1173.
16	1111.	.3230	-.3540	1142.	1035.
18	1168.	.2830	.3040	1155.	1136.
19	1101.	.2850	.3080	1114.	1169.
20	1150.	.3070	.2990	1116.	1219.
21	-1402.	.2640	-.3430	1140.	-1480.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.553	87.4	11.2	1.9	5.7
4	.540	90.6	11.5	2.5	5.7
5	.640	113.6	19.5	2.7	6.2
6	.607	109.8	17.5	2.9	6.0
7	.525	97.9	15.2	2.0	4.6
8	.531	98.7	14.8	1.8	5.2
9	.611	94.1	12.1	2.5	5.2
10	.635	93.5	9.3	3.4	6.7
11	.491	82.6	8.3	2.7	5.1
12	-.751	106.0	8.8	3.8	7.9
13	.484	72.9	6.4	3.0	5.5
14	.484	93.2	11.3	2.3	5.0
15	.624	128.7	18.3	2.6	5.8
16	.640	-179.4	-33.5	2.2	5.8
18	.563	126.2	22.4	2.1	5.6
19	.574	95.9	16.3	1.9	5.5
20	.620	95.2	13.9	2.6	6.3
21	.538	72.4	11.0	3.1	6.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3088.	31.06	6.87	1.11	3.31	1.31
4	3084.	32.96	7.16	1.52	3.39	1.96
5	3073.	34.75	10.23	1.37	3.10	2.46
6	3074.	35.40	9.67	1.56	3.18	1.29
7	3070.	36.43	9.68	1.24	2.78	2.24
8	3071.	36.29	9.38	1.12	3.12	1.84
9	3088.	30.30	6.70	1.31	2.76	2.60
10	3092.	28.95	4.92	1.72	3.42	1.70
11	3084.	33.00	5.71	1.80	3.32	.66
12	3097.	27.82	3.96	1.65	3.42	1.97
13	3101.	29.74	4.51	1.99	3.68	1.57
14	3079.	37.76	7.88	1.51	3.35	1.97
15	3068.	40.26	9.85	1.33	2.97	1.05
16	-3026.	-54.00	-17.35	1.07	2.88	1.32
18	3056.	43.59	13.28	1.18	3.18	1.18
19	3083.	32.79	9.60	1.08	3.10	1.70
20	3092.	30.22	7.56	1.37	3.31	1.31
21	3089.	26.46	6.89	1.86	3.80	.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.2820	2.5570	12.7810	3.3640	2.6180	14.7100
4	3.2480	2.5190	12.3590	3.1820	2.4700	14.2310
5	3.2730	2.6030	12.1220	3.1580	2.5140	14.1650
6	3.3030	2.6010	12.0710	3.1300	2.4690	14.0900
7	3.2110	2.4870	12.4030	3.2280	2.5000	14.3520
8	3.2770	2.5400	12.5790	3.3190	2.5710	14.5920
9	3.2510	2.5690	12.4160	3.2510	2.5690	14.4120
10	3.2330	2.5710	12.6890	3.2110	2.5540	14.3070
11	3.0800	2.3690	12.3280	3.0590	2.3530	13.9010
12	3.3910	2.7730	13.0550	3.3680	2.7550	14.7200
13	3.5050	2.6670	12.8930	3.4520	2.6290	14.9380
14	3.1930	2.4470	12.4700	3.2280	2.4730	14.3520
15	3.3370	2.6490	12.8140	3.4370	2.7260	14.8980
16	2.8190	2.2680	11.5450	2.8780	2.3150	13.4040
18	3.1970	2.5050	12.8490	3.3020	2.5840	14.5470
19	3.3450	2.6180	13.1700	3.4190	2.6740	14.8520
20	3.5500	2.8030	13.7180	3.6400	2.8720	15.4190
21	-4.8270	-3.6700	-15.6200	-4.8220	-3.6670	-18.2650

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	30.30	6.71	1.37	4.09	.84
4	33.64	7.30	1.88	4.19	1.96
5	36.02	10.60	1.72	3.89	2.46
6	37.36	10.19	1.95	3.99	1.29
7	36.23	9.64	1.55	3.46	2.24
8	35.83	9.26	1.39	3.89	1.84
9	30.30	6.70	1.63	3.44	2.60
10	29.15	4.96	2.08	4.14	1.70
11	33.23	5.74	2.18	4.02	.66
12	28.01	3.99	2.00	4.15	1.97
13	30.20	4.57	2.47	4.58	1.57
14	37.36	7.80	1.87	4.15	1.86
15	39.10	9.57	1.67	3.71	1.05
16	-52.89	-17.00	1.33	3.60	1.32
18	42.20	12.87	1.43	3.86	1.18
19	32.07	9.39	1.30	3.76	1.70
20	29.47	7.37	1.65	3.99	1.31
21	26.49	6.90	2.18	4.45	.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
2	23664.	2462.	518.7	29.96	.008270
4	19318.	2389.	516.7	29.98	.008160
6	23130.	2389.	517.7	29.98	.008040
7	21990.	2383.	521.7	30.20	.009250
8	16117.	2383.	521.7	30.20	.009250
9	22631.	2383.	521.7	30.20	.009360
11	24952.	2375.	520.7	29.95	.008970
13	23138.	2433.	514.2	29.94	.007230
14	23256.	2433.	514.7	29.94	.007650
15	15910.	2389.	518.7	30.02	.008360
16	20755.	2350.	518.7	30.02	.008820
18	22802.	2385.	517.5	30.02	.008090
19	23088.	2385.	516.5	30.02	.007770
20	24165.	2385.	515.7	30.02	.007820
21	26676.	2320.	517.7	30.20	.009580

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	33.50	57.50	33.50	57.50
4	-28.50	-51.50	-28.56	-51.60
6	30.50	54.50	30.53	54.55
7	-37.00	-60.00	-36.89	-59.83
8	35.00	-59.00	34.90	58.83
9	-36.00	-59.00	-35.90	58.83
11	31.00	55.50	30.94	55.39
13	32.00	56.00	32.14	56.24
14	33.50	56.50	33.63	56.72
15	34.40	58.00	34.40	58.00
16	31.00	55.10	31.00	55.10
18	33.00	57.00	33.04	57.07
19	30.00	55.00	30.07	55.12
20	33.00	58.00	33.10	58.17
21	32.00	57.00	32.03	57.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1200.	.2940	.3220	1140.	1.050	1178.
4	1125.	.3230	-.3890	-1230.	1.060	990.
6	1150.	.3240	-.3580	1176.	1.050	1049.
7	-1280.	.3570	.3170	1176.	1.060	-1280.
8	1240.	.2840	.3150	1140.	1.060	1232.
9	-1260.	.2900	.3160	1140.	-1.070	1232.
11	1020.	.2610	.3120	1176.	1.060	1078.
13	1150.	.2840	.3290	1176.	1.040	1119.
14	1200.	.2710	.3190	1158.	1.060	1142.
15	-1290.	.3090	.3310	-1194.	-1.070	1200.
16	1160.	.3320	.3520	1149.	1.060	1061.
18	1150.	.2730	.3140	1158.	-1.030	1155.
19	1050.	.2960	.3350	1131.	-1.030	1062.
20	1100.	.2910	.2990	1122.	1.040	1208.
21	1225.	.3220	.3500	-1203.	1.050	1148.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1202.	.2940	.3220	1140.	1180.
4	1125.	.3240	-.3910	-1234.	992.
6	1151.	.3250	-.3590	1178.	1051.
7	-1296.	.3550	.3150	1169.	-1292.
8	-1255.	.2820	.3130	1133.	-1244.
9	-1275.	.2890	.3140	1133.	-1244.
11	1023.	.2600	.3110	1171.	1079.
13	1146.	.2860	.3310	1186.	1120.
14	1196.	.2730	.3220	1167.	1143.
15	-1294.	.3090	.3310	1194.	1204.
16	1164.	.3320	.3520	1149.	1065.
18	1152.	.2730	.3150	1161.	1159.
19	1051.	.2970	.3360	1136.	1066.
20	1100.	.2930	.3010	1128.	1212.
21	1235.	.3230	.3510	-1205.	1159.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.601	82.4	9.0	2.6	6.1
4	.649	155.9	30.8	2.1	4.8
6	.657	135.1	21.0	1.6	6.3
7	.729	105.4	14.2	5.7	7.9
8	.582	78.1	8.6	2.9	6.2
9	.596	74.7	7.9	3.7	6.7
11	.530	90.5	14.2	2.2	5.0
13	.578	93.8	16.1	-6.3	5.9
14	.550	102.7	16.8	4.9	5.6
15	.629	107.2	15.5	1.9	5.4
16	.662	-172.9	-41.6	1.2	5.9
18	.553	92.8	15.8	2.0	5.3
19	.597	123.0	19.3	1.0	5.4
20	.589	110.9	18.1	1.5	5.9
21	.652	119.9	24.3	3.0	5.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3093.	26.99	5.05	1.39	3.28	.40
4	3040.	46.48	15.79	1.04	2.35	1.56
6	3064.	40.12	10.69	.77	3.05	.39
7	3093.	28.44	6.60	2.52	3.50	2.97
8	3100.	26.49	5.04	1.61	3.47	.64
9	3105.	24.79	4.51	2.00	3.66	1.30
11	3074.	33.40	9.02	1.30	3.03	1.17
13	3082.	31.84	9.38	-3.51	3.51	.26
14	3073.	36.51	10.28	2.86	3.29	.92
15	3081.	33.40	8.30	.99	2.79	1.69
16	-3020.	50.19	-20.75	.57	2.81	1.32
18	3071.	32.82	9.60	1.17	3.09	1.56
19	3056.	40.06	10.81	.54	2.86	.78
20	3063.	36.70	10.29	.80	3.20	1.72
21	3065.	35.85	12.50	1.48	2.81	1.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.4700	2.7250	12.8060	3.4660	2.7230	14.9740
4	-2.6180	-2.1160	-10.8600	-2.6410	-2.1340	-12.7360
6	2.9820	2.3970	11.7560	2.9930	2.4060	13.7210
7	-4.0850	-3.2950	-13.8570	-3.9920	-3.2210	-16.3010
8	-3.8420	-2.9850	13.3540	-3.7550	2.9200	-15.7100
9	-3.8420	-2.9960	13.3250	-3.7550	2.9300	-15.7100
11	3.1530	2.4450	11.9280	3.1190	2.4190	14.0600
13	3.1760	2.4940	12.4060	3.2490	2.5500	14.4080
14	3.2570	2.5370	12.4920	3.3240	2.5870	14.6030
15	3.5820	2.8320	13.0300	3.5730	2.8250	15.2480
16	3.0820	2.4830	11.8100	3.0740	2.4770	13.9410
18	3.3660	2.6180	12.6250	3.3790	2.6280	14.7480
19	3.0500	2.4140	11.9820	3.0770	2.4350	13.9490
20	3.5620	2.7910	13.1320	3.6090	2.8270	15.3410
21	3.3830	2.7010	12.3130	3.3770	2.6960	14.7430

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	27.02	5.06	1.62	3.84	.40
4	46.09	15.66	1.21	2.76	1.56
6	39.97	10.65	.90	3.56	.39
7	29.10	6.75	2.96	4.12	2.97
8	27.10	5.15	1.90	4.09	.64
9	25.36	4.61	2.35	4.32	1.30
11	33.77	9.12	1.54	3.57	1.17
13	31.12	9.18	-4.08	4.08	.26
14	35.78	10.08	3.35	3.85	.92
15	33.48	8.32	1.15	3.26	1.69
16	50.31	-20.80	.67	3.31	1.32
18	32.69	9.56	1.36	3.61	1.56
19	39.70	10.72	.63	3.33	.78
20	36.22	10.16	.94	3.73	1.72
21	35.91	12.52	1.77	3.36	1.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	35.00	60.00	35.00	60.00
4	36.50	59.50	36.57	59.62
6	37.00	60.50	37.04	60.56
7	37.00	60.00	36.89	59.83
8	36.00	60.00	35.90	59.83
9	37.00	60.00	36.89	59.83
11	35.50	60.00	35.43	59.88
13	36.00	60.00	36.16	60.26
14	37.00	60.00	37.14	60.23
15	36.50	60.00	36.50	60.00
16	35.70	60.00	35.70	60.00
18	36.00	60.00	36.04	60.07
19	36.00	60.00	36.08	60.13
20	35.50	60.00	35.60	60.17
21	36.00	61.00	36.03	61.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
-----	-----	-----	-----	-----	-----	-----
2	1250.	.2970	.3190	1140.	1.050	1298.
4	1350.	.2880	.3360	1194.	1.060	1279.
6	1350.	.3190	.3340	1176.	1.050	1331.
7	1280.	.3190	.3170	1176.	1.060	1280.
8	1300.	.2810	.3260	1140.	1.060	1280.
9	1300.	.2940	.3210	1140.	1.070	1280.
11	1180.	.2330	.3000	1176.	1.070	1293.
13	1325.	.2380	.3310	1140.	1.070	1315.
14	1325.	.2630	.3270	1158.	1.070	1313.
15	1370.	.2920	-.3420	1194.	1.070	1296.
16	1320.	.3080	.3330	1140.	1.060	1296.
18	1240.	.2480	.3110	1140.	1.050	1300.
19	1200.	.2920	.3000	-1104.	1.060	1303.
20	1225.	.2920	.3080	1140.	1.050	1306.
21	1375.	.3040	-.3430	1194.	1.050	1351.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1252.	.2970	.3190	1140.	1300.
4	1350.	.2890	.3370	-1198.	1282.
6	1351.	.3200	.3350	1178.	1334.
7	1296.	.3170	.3150	1169.	1292.
8	1316.	.2790	.3240	1133.	1292.
9	1316.	.2930	.3200	1133.	1292.
11	1183.	-.2320	.2990	1171.	1294.
13	1320.	.2400	.3340	1150.	1316.
14	1321.	.2660	.3300	1167.	1314.
15	1375.	.2920	.3420	1194.	1300.
16	1324.	.3080	.3330	1140.	1300.
18	1243.	.2490	.3110	1142.	1304.
19	1201.	.2930	.3020	-1109.	1308.
20	1226.	.2940	.3100	1146.	1310.
21	1387.	.3050	-.3430	1196.	1364.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.608	74.3	7.8	3.4	7.2
4	.590	71.4	13.8	3.7	6.5
6	.654	77.7	10.8	3.3	7.2
7	.653	88.7	13.5	5.8	7.4
8	.576	68.1	7.3	3.5	6.5
9	.604	72.8	7.9	3.6	6.7
11	.477	58.2	8.5	2.9	5.4
13	.487	61.2	10.6	5.5	5.6
14	.539	72.8	10.7	5.3	6.0
15	.597	86.2	11.6	1.8	5.6
16	.625	106.0	19.2	1.7	6.5
18	.504	87.0	13.8	2.4	5.0
19	.597	71.8	7.8	2.1	6.2
20	.596	89.4	11.2	2.0	6.4
21	.620	88.0	16.7	3.4	6.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
2	3099.	24.12	4.33	1.82	3.82	1.05
4	3097.	23.87	7.95	2.03	3.55	1.30
6	3104.	23.45	5.61	1.66	3.58	.92
7	3095.	26.79	6.97	2.88	3.68	.65
8	3107.	23.37	4.32	1.99	3.67	1.55
9	3106.	23.84	4.43	1.94	3.63	1.43
11	3097.	24.07	6.01	1.95	3.64	1.30
13	3099.	24.77	7.39	-3.68	3.70	.79
14	3098.	26.63	6.73	3.18	3.63	1.45
15	3093.	28.40	6.55	1.00	3.02	1.44
16	3075.	33.19	10.33	.87	3.34	2.47
18	3071.	33.76	9.18	1.51	3.20	.79
19	3100.	23.70	4.45	1.15	3.35	1.31
20	3085.	29.48	6.35	1.06	3.48	2.11
21	3087.	27.90	9.10	1.78	3.23	2.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

 MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	4.0380	3.1540	14.0290	4.0340	3.1510	16.4040
4	3.9050	3.0420	13.7870	3.9410	3.0690	16.1750
6	4.1550	3.2820	14.3400	4.1710	3.2950	16.7400
7	4.0850	3.2270	13.8570	3.9920	3.1550	16.3010
8	4.0850	3.1590	13.8570	3.9920	3.0890	16.3010
9	4.0850	3.1830	13.8270	3.9920	3.1130	16.3010
11	4.0520	3.0560	13.8620	4.0060	3.0240	16.3350
13	4.0020	3.0340	14.2520	4.0980	3.1020	16.5610
14	4.0060	3.0770	14.1460	4.0910	3.1390	16.5440
15	4.0440	3.1510	14.0180	4.0340	3.1430	16.4040
16	4.0440	3.1770	13.8960	4.0340	3.1690	16.4040
18	4.0340	3.0710	14.0770	4.0510	3.0840	16.4480
19	4.0270	3.1390	14.1530	4.0660	3.1680	16.4820
20	4.0210	3.1360	14.1290	4.0760	3.1780	16.5090
21	4.3040	3.3670	14.2320	4.2970	3.3610	17.0420

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	24.14	4.34	2.13	4.47	1.05
4	23.66	7.87	2.38	4.17	1.30
6	23.36	5.59	1.94	4.18	.92
7	27.41	7.13	3.39	4.33	.65
8	23.92	4.42	2.34	4.32	1.55
9	24.39	4.53	2.28	4.27	1.43
11	24.35	6.08	2.30	4.29	1.30
13	24.19	7.22	-4.28	4.30	.79
14	26.08	6.59	3.72	4.24	1.45
15	28.48	6.57	1.16	3.53	1.44
16	33.27	10.36	1.03	3.94	1.85
18	33.62	9.14	1.76	3.73	.79
19	23.47	4.41	1.34	3.91	1.31
20	29.09	6.27	1.24	4.06	.84
21	27.94	9.11	2.13	3.86	2.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	94.00	94.00	94.00	94.00
4	95.00	92.00	95.18	92.18
6	94.50	93.80	94.59	93.89
7	94.00	93.00	93.73	92.73
8	94.00	94.00	93.73	93.73
9	93.00	93.00	92.73	92.73
11	93.50	94.00	93.32	93.82
13	92.00	92.00	92.40	92.40
14	92.00	92.00	92.36	92.36
15	94.20	92.80	94.20	92.80
16	92.60	94.10	92.60	94.10
18	93.00	93.00	93.11	93.11
19	93.00	-95.00	93.20	-95.21
20	95.00	94.50	95.28	94.77
21	93.00	93.00	93.09	93.09

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	8500.	.9290	.7360	1446.	1.980	13981.
4	8650.	.9780	.7420	1446.	1.980	13972.
6	8400.	.9670	.7240	1446.	1.980	13972.
7	8600.	-1.0860	.7420	-1500.	1.980	13870.
8	8400.	.9000	.7250	1428.	1.980	13870.
9	8400.	.9610	.7290	1464.	1.980	13870.
11	8100.	.8240	.7060	1464.	1.980	13986.
13	8250.	.8370	.7180	1428.	1.980	13991.
14	8050.	.8360	.7010	1446.	1.980	13991.
15	8400.	.9010	.7250	1428.	1.980	13953.
16	7900.	.8130	.6880	1437.	1.980	13953.
18	8300.	.8660	.7200	1473.	1.980	13953.
19	8200.	.8640	.7100	1428.	1.980	13953.
20	8500.	.9570	.7270	-1491.	1.980	13953.
21	8500.	.9530	.7330	1464.	1.980	13870.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	8511.	.9290	.7360	1446.	14000.
4	8651.	.9820	.7450	1451.	14000.
6	8409.	.9690	.7250	1448.	14000.
7	8706.	-1.0800	.7380	-1491.	14000.
8	8503.	.8950	.7210	1419.	14000.
9	8503.	.9550	.7250	1455.	14000.
11	8124.	.8210	.7030	1458.	14000.
13	8220.	.8440	.7250	1440.	14000.
14	8024.	.8420	.7070	1457.	14000.
15	8428.	.9010	.7250	1428.	14000.
16	7926.	.8130	.6880	1437.	14000.
18	8318.	.8680	.7220	1476.	14000.
19	8210.	.8580	.7130	1434.	14000.
20	8504.	.9630	.7310	-1499.	14000.
21	8571.	.9550	.7350	1467.	14000.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.943	12.1	1.6	80.4	79.3
4	2.051	13.2	-4.1	80.9	79.2
6	2.027	12.8	2.2	78.6	78.2
7	-2.282	11.9	2.1	95.1	91.9
8	1.887	10.0	1.2	81.2	78.1
9	2.015	11.5	1.6	86.0	83.6
11	1.723	11.7	2.3	68.8	68.0
13	1.754	11.8	2.4	71.2	67.9
14	1.752	12.2	1.6	-63.9	-62.6
15	1.889	10.5	1.6	85.0	84.1
16	1.703	10.4	2.0	71.1	71.2
18	1.810	11.2	1.9	76.0	76.5
19	1.806	11.3	1.6	73.0	72.1
20	2.003	13.2	1.5	81.2	80.0
21	1.999	12.6	1.5	75.9	75.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3146.	1.25	.29	13.62	13.62	30.98
4	3152.	1.29	-.70	13.00	13.00	38.70
6	3153.	1.27	.38	12.78	12.78	39.77
7	3153.	1.05	.32	13.75	13.75	40.36
8	3154.	1.06	.22	14.18	14.18	34.90
9	3153.	1.15	.27	14.06	14.06	38.15
11	3148.	1.36	.46	13.15	13.15	35.84
13	3155.	1.35	.47	13.40	13.40	44.16
14	3155.	1.40	.31	12.03	12.03	36.61
15	3153.	1.12	.30	14.84	14.84	30.43
16	3153.	1.22	.41	13.77	13.77	28.91
18	3146.	1.24	.36	13.80	13.91	28.00
19	3146.	1.25	.30	13.30	13.30	27.81
20	3146.	1.32	.26	13.34	13.34	34.04
21	3153.	1.27	.25	12.53	12.53	32.01

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	116.0850	116.0850	90.4980	116.0520	116.0520	105.8200
4	101.3140	101.3140	80.6150	103.5690	103.5690	94.9310
6	119.6170	119.6170	89.7980	120.9170	120.9170	105.0280
7	-131.3490	-131.3490	83.8830	125.8590	125.8590	98.1180
8	112.1740	112.1740	88.9600	107.8360	107.8360	104.0340
9	110.0480	110.0480	83.7010	105.7180	105.7180	98.1180
11	101.0860	101.0860	89.0980	98.9520	98.9520	104.5800
13	84.5050	84.5050	82.1040	88.6050	88.6050	96.2090
14	84.3810	84.3810	81.4350	88.0060	88.0060	95.9510
15	99.2810	99.2810	84.1800	99.1000	99.1000	98.5120
16	101.3020	101.3020	90.2580	101.1080	101.1080	106.5470
18	96.8470	96.8470	85.6790	97.9760	97.9760	100.3440
19	120.1330	120.1330	-98.1500	122.9420	122.9420	-114.8450
20	128.6780	128.6780	94.8850	-133.0250	-133.0250	111.5490
21	108.9750	108.9750	83.5290	109.5300	109.5300	100.2120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LA/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	1.25	.29	15.92	15.92	30.98
4	1.26	-.68	15.31	15.31	35.61
6	1.26	.37	14.95	14.95	34.34
7	1.09	.34	16.08	16.08	34.88
8	1.10	.23	16.58	16.58	33.25
9	1.20	.28	16.48	16.48	34.97
11	1.39	.47	15.43	15.43	34.00
13	1.29	.45	15.70	15.70	33.75
14	1.34	.30	-14.18	-14.18	35.67
15	1.12	.30	-18.77	-18.77	30.43
16	1.23	.41	16.26	16.26	28.91
18	1.22	.35	16.16	16.29	28.00
19	1.22	.30	15.56	15.56	27.81
20	1.27	.25	15.68	15.68	34.04
21	1.26	.25	15.03	15.03	32.01

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	88.00	91.00	88.00	91.00
4	89.00	90.00	89.17	90.17
6	88.80	91.50	88.89	91.59
7	89.00	91.00	88.74	90.74
8	88.00	92.00	87.75	91.74
9	88.00	91.00	87.75	90.74
11	87.00	91.60	86.83	91.42
13	87.00	90.00	87.38	90.39
14	87.50	90.00	87.84	90.35
15	88.20	90.10	88.20	90.10
16	87.40	92.00	87.40	92.00
18	88.00	91.00	88.11	91.11
19	88.50	92.00	88.69	92.20
20	89.00	92.00	89.26	92.27
21	87.00	91.00	87.00	91.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	6700.	.7220	.6090	1356.	1.800	12184.
4	7050.	.7370	.6320	1374.	1.800	12176.
6	7000.	.7370	.6300	1374.	1.800	12176.
7	7000.	-.8670	.6290	1392.	1.800	12087.
8	6800.	.6970	.6170	1356.	1.800	12087.
9	7000.	.7620	.6350	1392.	1.800	12087.
11	-6550.	-.6300	.6040	1392.	1.800	12188.
13	7100.	.6810	.6470	1356.	1.800	12192.
14	6750.	.6710	.6130	1392.	1.800	12192.
15	6900.	.6940	.6250	1392.	1.800	12159.
16	-6600.	.6440	.6030	1365.	1.800	12159.
18	7000.	.6880	.6340	1392.	1.800	12159.
19	6700.	.7020	.6030	1356.	1.800	12159.
20	7025.	.7660	.6280	-1419.	1.800	12159.
21	6800.	.7700	.6180	1392.	1.800	12087.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	6709.	.7220	.6090	1356.	12200.
4	7051.	.7400	.6350	1379.	12200.
6	7007.	.7390	.6310	1376.	12200.
7	7086.	-.8620	.6250	1384.	12200.
8	6883.	.6930	.6130	1348.	12200.
9	7086.	.7580	.6310	1384.	12200.
11	-6569.	-.6270	.6020	1386.	12200.
13	7074.	.6870	-.6530	1368.	12200.
14	6728.	.6760	.6180	1303.	12200.
15	6923.	.6940	.6250	1392.	12200.
16	6622.	.6440	.6030	1365.	12200.
18	7015.	.6900	.6350	1395.	12200.
19	6708.	.7050	.6050	1362.	12200.
20	7028.	.7700	.6320	-1427.	12200.
21	6857.	.7710	.6200	1394.	12200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.506	12.8	1.7	49.9	51.7
4	1.541	12.8	-3.4	55.1	55.2
6	1.542	13.3	2.1	51.9	53.2
7	-1.816	12.0	1.5	-68.0	66.8
8	1.457	10.4	1.4	51.3	51.0
9	1.595	12.1	1.6	57.2	56.6
11	-1.314	11.9	2.2	44.8	45.6
13	1.425	11.4	2.0	51.5	49.2
14	1.403	12.5	1.4	44.9	44.9
15	1.450	11.8	1.3	56.0	55.2
16	1.345	10.5	1.5	47.8	48.7
18	1.436	11.4	1.9	50.5	51.8
19	1.465	11.5	1.5	49.0	50.3
20	1.599	13.2	1.3	56.1	56.5
21	1.611	13.1	1.2	51.0	51.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
2	3145.	1.70	.38	10.88	11.28	30.00
4	3151.	1.66	-.77	11.79	11.80	36.77
6	3152.	1.73	.47	11.10	11.36	36.47
7	3153.	1.33	.29	12.35	12.35	36.88
8	3153.	1.43	.33	11.61	11.61	32.11
9	3153.	1.52	.35	11.83	11.83	35.24
11	3147.	1.81	.58	11.21	11.42	29.61
13	3154.	1.60	.48	11.92	11.92	38.01
14	3154.	1.79	.35	10.55	10.55	34.34
15	3152.	1.63	.31	12.71	12.71	27.95
16	3152.	1.57	.39	11.71	11.94	26.95
18	3145.	1.59	.46	11.57	11.87	26.67
19	3146.	1.58	.35	11.01	11.30	27.44
20	3146.	1.66	.28	11.54	11.61	31.54
21	3153.	1.63	.26	10.43	10.54	31.38

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	66.6810	66.6810	75.5930	66.6450	66.6450	88.3910
4	61.4160	61.4160	71.3400	62.5460	62.5460	83.9860
6	71.4160	71.4160	78.3460	72.0460	72.0460	91.6190
7	-79.4170	-79.4170	74.3290	76.4860	76.4860	86.9780
8	71.9040	71.9040	79.0100	69.4090	69.4090	92.4360
9	70.1080	70.1080	74.1680	67.6340	67.6340	86.9780
11	63.8430	63.8430	77.2550	62.6540	62.6540	90.7090
13	57.8410	57.8410	72.7030	60.3300	60.3300	85.1400
14	57.1820	57.1820	72.1020	59.3480	59.3480	84.9080
15	59.1030	59.1030	71.4360	58.9810	58.9810	83.5990
16	67.5910	67.5910	79.5640	67.4500	67.4500	93.9230
18	64.4070	64.4070	75.9950	65.0410	65.0410	88.9880
19	72.1850	72.1850	81.2810	73.6280	73.6280	95.0580
20	77.7340	77.7340	81.2280	79.9590	79.9590	95.4390
21	70.9130	70.9130	74.0850	71.1580	71.1580	88.8680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTBD-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK	NUMBER
	LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		CORRECTED	
2		1.70			.38		12.73				13.19			30.00
4		1.63			-.75		13.88				13.90			32.75
6		1.71			.47		12.98				13.29			34.58
7		1.38			.30		14.45				14.45			34.67
8		1.48			.34		13.58				13.58			30.62
9		1.58			.36		13.87				13.87			34.74
11		1.85			.59		13.17				13.41			29.24
13		1.53			.46		13.96				13.96			34.89
14		1.72			.34		-12.42				-12.42			34.34
15		1.63			.31		14.88				14.88			27.95
16		1.58			.39		13.82				14.10			26.95
18		1.57			.46		13.55				13.90			26.67
19		1.55			.35		12.88				13.22			27.44
20		1.61			.27		13.55				13.64			31.54
21		1.62			.26		12.51				-12.65			31.38

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	79.00	87.00	79.00	87.00
4	79.00	85.00	79.15	85.16
6	78.80	86.50	78.88	86.58
7	79.00	86.00	78.77	85.75
8	78.00	86.00	77.78	85.75
9	79.00	86.00	78.77	85.75
11	79.00	87.00	78.85	86.83
13	78.00	86.00	78.34	86.38
14	78.00	85.00	78.30	85.33
15	79.40	86.00	79.40	86.00
16	78.20	87.00	78.20	87.00
18	79.00	86.00	79.10	86.10
19	-80.00	87.00	-80.17	87.19
20	79.00	87.00	79.23	87.25
21	79.00	86.00	79.08	86.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

2	4650.	.4650	.4830	1248.	1.520	8423.
4	4650.	.4320	.4800	1230.	1.520	8417.
6	4550.	.4660	.4730	1248.	1.520	8417.
7	4770.	-.5740	.4950	1266.	1.520	8356.
8	4730.	.4480	.4990	1212.	1.520	8356.
9	4820.	.4710	.5000	1248.	1.520	8356.
11	4560.	.4090	.4760	-1284.	1.520	8426.
13	4700.	.4420	.4920	1248.	1.520	8428.
14	4520.	.4170	.4730	1248.	1.520	8428.
15	4710.	.4680	.4850	1257.	1.520	8406.
16	4570.	.4110	.4800	1230.	1.520	8406.
18	-4950.	.4270	-.5110	1248.	1.520	8406.
19	4800.	.4710	.4870	1212.	1.520	8406.
20	4750.	.4990	.4890	1257.	1.520	8406.
21	4800.	.4970	.4930	1266.	1.520	8356.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8C-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	4656.	.4650	.4830	1248.	8434.
4	4650.	.4330	.4820	1234.	8434.
6	4555.	.4670	.4730	1250.	8434.
7	4829.	-.5710	.4920	1258.	8434.
8	4788.	.4450	.4960	-1205.	8434.
9	4879.	.4680	.4970	1241.	8434.
11	4573.	.4070	.4740	1279.	8434.
13	4683.	.4460	.4960	1259.	8434.
14	-4506.	.4200	.4770	1257.	8434.
15	4726.	.4680	.4850	1257.	8434.
16	4585.	.4110	.4800	1230.	8434.
18	-4961.	.4280	-.5130	1251.	8434.
19	4806.	.4730	.4890	1217.	8434.
20	4752.	.5020	.4920	1264.	8434.
21	4840.	.4980	.4940	1268.	8434.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.967	14.5	1.7	23.9	25.8
4	.899	13.6	-3.2	24.0	25.1
6	.971	15.3	2.0	24.2	26.3
7	-1.199	15.9	2.1	33.1	33.2
8	.934	12.6	1.8	23.4	24.7
9	.982	13.0	1.1	25.2	27.1
11	.850	13.8	2.2	22.5	24.4
13	.921	14.4	2.1	25.1	25.1
14	.868	16.8	1.3	21.5	21.9
15	.976	13.3	1.9	26.9	29.0
16	.856	12.7	1.5	21.3	23.4
18	.889	13.8	2.1	21.3	22.9
19	.979	13.4	1.6	24.6	26.5
20	1.039	14.5	1.3	26.6	28.9
21	1.037	15.6	1.3	24.4	26.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3143.	3.01	.60	8.10	8.76	22.38
4	3148.	3.03	-1.21	8.80	9.17	24.42
6	3149.	3.16	.72	8.20	8.92	25.16
7	3150.	2.65	.62	9.09	9.13	29.62
8	3150.	2.71	.67	8.27	8.72	23.61
9	3151.	2.66	.39	8.45	9.08	25.59
11	3144.	3.26	.91	8.70	9.43	19.08
13	3151.	3.14	.78	8.97	8.98	28.83
14	3151.	3.88	.52	8.14	8.32	24.45
15	3150.	2.73	.68	9.07	9.78	22.97
16	3150.	2.96	.61	8.18	9.00	19.90
18	3142.	3.10	.81	7.86	8.45	18.54
19	3143.	2.73	.56	8.26	8.89	-18.00
20	3144.	2.79	.41	8.41	9.15	24.27
21	3150.	3.02	.43	7.76	8.36	24.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	34.6970	34.6970	59.2060	34.6710	34.6710	69.2300
4	27.7990	27.7990	52.5400	28.1910	28.1910	61.8100
6	33.1110	33.1110	57.7000	33.3330	33.3330	67.4510
7	34.8270	34.8270	54.6290	33.7480	33.7480	63.9940
8	31.0100	31.0100	54.6290	30.0920	30.0920	63.9940
9	31.6540	31.6540	54.5110	30.7100	30.7100	63.9940
11	32.9090	32.9090	58.3120	32.3860	32.3860	68.5120
13	30.9290	30.9290	56.9230	32.0290	32.0290	66.5750
14	27.4520	27.4520	53.0770	28.2920	28.2920	62.4150
15	31.5550	31.5550	55.5530	31.4830	31.4830	65.0110
16	33.1060	33.1060	58.6460	33.0300	33.0300	69.2300
18	30.4830	30.4930	55.9110	30.7080	30.7080	65.4610
19	35.0160	35.0160	59.9440	35.5740	35.5740	70.0490
20	35.9670	35.9670	59.9160	36.7750	36.7750	70.3240
21	32.5830	32.5830	54.5020	32.6240	32.6240	65.3550

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-59.00	77.00	-59.00	77.00
4	62.00	77.00	62.12	77.15
6	61.00	77.20	61.06	77.27
7	62.00	-75.00	61.82	-74.78
8	61.00	78.00	60.82	77.78
9	61.00	77.00	60.82	76.78
11	60.50	78.00	60.38	77.85
13	-59.00	76.00	59.26	76.33
14	-59.00	76.00	59.23	76.29
15	60.90	77.00	60.90	77.00
16	59.60	77.80	59.60	77.80
18	62.00	78.00	62.07	78.09
19	61.00	78.00	61.13	78.17
20	61.00	78.00	61.18	78.23
21	62.00	78.00	62.06	78.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	3.01	.61	9.48	10.24	22.38
4	2.99	-1.20	10.35	10.79	24.42
6	3.14	.72	9.54	10.43	25.16
7	2.74	.63	10.65	10.70	29.62
8	2.79	.69	9.68	10.22	23.61
9	2.74	.40	9.92	10.66	25.59
11	3.31	.92	10.22	11.08	19.08
13	3.03	.75	10.49	10.50	28.39
14	3.77	.51	9.57	9.78	24.45
15	2.74	.68	10.61	11.45	22.97
16	2.97	.61	9.65	10.63	19.90
18	3.08	.80	9.20	9.89	18.54
19	2.69	.55	9.65	10.39	-18.00
20	2.73	.41	9.87	10.73	24.27
21	3.02	.43	9.30	10.03	24.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-2280.	.1820	.3440	1104.	1.230	4274.
4	2600.	.2210	.3670	1086.	1.230	4271.
6	2600.	.2690	.3750	1122.	1.230	4271.
7	2550.	-.3520	.3610	1104.	1.230	4240.
8	2450.	.2270	.3540	1104.	1.230	4240.
9	2500.	.2400	.3610	1104.	1.230	4240.
11	2370.	.2180	.3480	1122.	1.230	4276.
13	2550.	.2060	-.3810	1086.	1.230	4277.
14	2350.	.2150	.3510	1104.	1.230	4277.
15	2500.	.2230	.3620	1104.	1.230	4266.
16	2350.	.2360	.3490	1068.	1.230	4266.
18	2650.	.1950	.3740	1104.	1.230	4266.
19	2500.	.2620	.3590	1068.	1.230	4266.
20	2400.	.2550	.3440	1104.	1.230	4266.
21	2650.	.2520	.3720	-1140.	1.230	4240.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	-2283.	.1820	.3440	1104.	4280.
4	2600.	.2220	.3680	1090.	4280.
6	2603.	.2690	.3760	1124.	4280.
7	2581.	-.3500	.3590	1097.	4280.
8	2480.	.2260	.3520	1097.	4280.
9	2531.	.2390	.3590	1097.	4280.
11	2377.	.2170	.3470	1117.	4280.
13	2541.	.2080	-.3840	1095.	4280.
14	2342.	.2170	.3540	1112.	4280.
15	2508.	.2230	.3620	1104.	4280.
16	2358.	.2360	.3490	1068.	4280.
18	2656.	.1950	.3750	1106.	4280.
19	2503.	.2630	.3610	1072.	4280.
20	2401.	.2560	.3460	1110.	4280.
21	2672.	.2530	.3730	-1142.	4280.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.376	21.3	2.4	4.5	6.9
4	.458	21.0	4.1	6.8	8.8
6	.556	26.3	3.1	7.4	10.2
7	-.730	34.3	4.4	-12.2	13.6
8	.470	20.2	1.9	5.9	8.5
9	.498	22.6	1.7	6.1	9.0
11	.449	25.4	3.3	5.9	8.3
13	.427	24.9	3.6	7.1	7.7
14	.445	25.8	3.0	7.3	7.7
15	.461	24.8	3.6	5.5	8.4
16	.487	28.5	3.2	5.5	8.5
18	.402	19.4	3.0	5.5	7.3
19	.541	26.4	2.7	6.4	9.8
20	.526	26.0	2.4	6.2	9.4
21	.522	24.7	2.3	6.5	8.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3125.	11.28	2.17	3.89	5.97	-4.70
4	3133.	9.13	3.04	4.86	6.30	8.03
6	3136.	9.44	1.89	4.39	6.01	10.00
7	3136.	9.37	2.05	5.49	6.10	12.16
8	3139.	8.57	1.42	4.14	5.91	7.55
9	3138.	9.06	1.17	4.02	5.90	7.68
11	3127.	11.26	2.53	4.32	6.04	6.74
13	3132.	11.63	2.88	5.46	5.93	9.57
14	3134.	11.55	2.32	5.40	5.68	7.84
15	3132.	10.72	2.67	3.90	5.97	6.41
16	3131.	11.66	2.28	3.68	5.73	-5.50
18	3127.	9.58	2.54	4.43	5.97	6.08
19	3129.	9.73	1.70	3.87	5.91	5.96
20	3129.	9.85	1.54	3.86	5.87	9.27
21	3137.	9.45	1.50	4.11	5.62	-17.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODF 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	10.6630	10.6630	31.9500	10.6530	10.6530	37.3590
4	10.9690	10.9690	32.0700	11.0900	11.0900	37.6870
6	11.5260	11.5260	32.4970	11.5830	11.5830	37.9660
7	9.9430	9.9430	-27.8350	-9.6900	-9.6900	-32.6770
8	12.0970	12.0970	33.3730	11.7910	11.7910	39.1530
9	11.1210	11.1210	31.3540	10.8410	10.8410	36.8740
11	11.9630	11.9630	33.4490	11.8070	11.8070	39.3470
13	9.9240	9.9240	30.7950	10.1950	10.1950	35.9090
14	9.9770	9.9770	30.5420	10.2190	10.2190	35.8290
15	10.9720	10.9720	31.9240	10.9450	10.9450	37.3590
16	11.9290	11.9290	33.2230	11.9010	11.9010	39.2180
18	11.8610	11.8610	34.1780	11.9240	11.9240	39.9770
19	12.4400	12.4400	34.4250	12.5890	12.5890	40.1730
20	12.3910	12.3910	34.4160	12.6010	12.6010	40.3210
21	12.3870	12.3870	33.3150	12.3810	12.3810	39.9280

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	11.29	2.17	4.55	6.99	-4.70
4	9.03	3.00	5.71	7.41	8.03
6	9.39	1.88	5.13	7.02	-0.13
7	9.61	2.11	6.45	7.16	12.16
8	8.80	1.46	4.86	6.94	7.55
9	9.30	1.20	4.72	6.94	7.68
11	11.41	2.56	5.08	7.10	6.74
13	11.32	2.80	6.37	6.92	9.57
14	11.27	2.26	6.33	6.67	7.84
15	10.75	2.68	4.56	6.99	6.41
16	11.69	2.29	4.35	6.77	-5.50
18	9.53	2.52	5.18	6.98	6.08
19	9.61	1.68	4.52	6.89	5.96
20	9.68	1.51	4.52	6.87	9.27
21	9.46	1.50	4.92	6.73	-15.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	60.00	36.00	60.00
4	36.00	60.00	36.07	60.12
6	36.00	60.00	36.03	60.06
7	36.00	60.00	35.90	59.83
8	36.00	60.00	35.90	59.83
9	38.00	60.00	37.89	59.83
11	35.20	60.00	35.13	59.88
13	36.00	60.00	36.16	60.26
14	36.00	60.00	36.14	60.23
15	36.30	60.00	36.30	60.00
16	35.00	60.00	35.00	60.00
18	36.00	60.00	36.04	60.07
19	35.50	60.00	35.58	60.13
20	35.00	60.00	35.10	60.17
21	35.00	59.00	35.03	59.06

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	1240.	.2590	.3120	1104.	1.050	1298.
4	1275.	.2490	.3200	1104.	1.060	1304.
6	1290.	.3110	.3240	1140.	1.050	1301.
7	1200.	.2930	.3010	1140.	1.060	1280.
8	1200.	.2610	.3010	1104.	1.060	1280.
9	1300.	.2830	.3170	1140.	1.070	1280.
11	1140.	.2190	.2910	1140.	1.070	1293.
13	1350.	.2270	-.3380	1140.	1.070	1315.
14	1265.	.2350	.3170	1140.	1.070	1313.
15	1325.	.2690	-.3310	-1176.	1.070	1296.
16	1250.	.2720	.3180	1104.	1.060	1296.
18	1250.	.2480	.3130	1140.	1.050	1300.
19	1150.	.2560	.2900	-1086.	1.060	1303.
20	1200.	.2720	.3040	1122.	1.050	1306.
21	-1375.	.2870	-.3470	1158.	1.060	1243.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	1242.	.2590	.3120	1104.	1300.
4	1275.	.2500	.3210	1108.	1307.
6	1291.	.3120	.3240	1142.	1303.
7	1215.	.2910	.2990	1133.	1292.
8	1215.	.2600	.2990	-1097.	1292.
9	1316.	.2810	.3150	1133.	1292.
11	1143.	.2180	.2900	1135.	1294.
13	1345.	.2290	-.3410	1150.	1316.
14	1261.	.2370	.3190	1149.	1314.
15	1329.	.2690	-.3310	-1176.	1300.
16	1254.	.2720	.3180	1104.	1300.
18	1253.	.2490	.3140	1142.	1304.
19	1151.	.2570	.2910	-1090.	1308.
20	1201.	.2730	.3060	1128.	1310.
21	-1387.	.2880	-.3480	1160.	1255.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	.530	66.4	6.7	3.1	6.5
4	.508	71.5	10.2	3.1	5.6
6	.637	89.5	11.0	3.2	7.1
7	.600	84.4	9.1	4.2	6.6
8	.534	71.8	8.6	2.9	5.8
9	.581	70.8	6.6	3.6	6.6
11	.448	56.5	6.7	2.8	5.0
13	.465	64.1	7.4	4.8	5.4
14	.480	71.4	10.4	4.8	5.3
15	.548	81.7	11.4	2.2	6.1
16	.552	99.2	16.9	1.7	5.9
18	.504	87.0	13.6	2.4	5.0
19	.523	77.1	8.9	1.8	5.5
20	.554	84.4	9.6	2.2	6.2
21	.584	96.5	-17.4	2.4	5.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
2	3098.	24.69	4.31	1.89	3.95	1.07
4	3094.	27.70	6.81	1.96	3.55	.91
6	3096.	27.68	5.82	1.64	3.59	1.32
7	3098.	27.77	5.17	2.26	3.59	1.04
8	3099.	26.50	5.45	1.75	3.51	1.44
9	3107.	24.09	3.85	2.03	3.67	.92
11	3098.	24.84	5.05	2.04	3.60	1.92
13	3101.	27.23	5.41	-3.33	3.74	1.32
14	3092.	29.29	7.33	3.26	3.58	.66
15	3091.	29.31	7.04	1.32	3.60	1.57
16	3072.	35.16	-10.29	.99	3.45	1.18
18	3071.	33.76	9.08	1.52	3.20	.66
19	3088.	29.00	5.75	1.10	3.39	.93
20	3086.	29.90	5.84	1.28	3.59	1.60
21	3077.	32.38	10.04	1.30	3.23	1.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	4.0380	3.0900	14.0290	4.0340	3.0870	16.4040
4	4.0250	3.0660	14.0410	4.0620	3.0920	16.4740
6	4.0320	3.1760	14.0830	4.0480	3.1880	16.4390
7	4.0850	3.1800	13.8570	3.9920	3.1100	16.3010
8	4.0850	3.1260	13.8570	3.9920	3.0570	16.3010
9	4.0850	3.1630	13.8270	3.9920	3.0940	16.3010
11	4.0520	3.0330	13.8620	4.0060	3.0010	16.3350
13	4.0020	3.0160	14.2520	4.0980	3.0840	16.5610
14	4.0060	3.0310	14.1460	4.0910	3.0910	16.5440
15	4.0440	3.1110	14.0180	4.0340	3.1030	16.4040
16	4.0440	3.1160	13.8960	4.0340	3.1080	16.4040
18	4.0340	3.0710	14.0770	4.0510	3.0830	16.4480
19	4.0270	3.0800	14.1530	4.0660	3.1080	16.4820
20	4.0210	3.1020	14.1290	4.0760	3.1420	16.5090
21	3.8150	2.9730	13.2320	3.8080	2.9680	15.8440

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	24.71	4.31	2.21	4.62	1.07
4	27.44	6.76	2.30	4.17	.91
6	27.58	5.80	1.91	4.19	1.32
7	28.41	5.28	2.66	4.22	1.04
8	27.12	5.57	2.05	4.13	1.44
9	24.65	3.93	2.39	4.33	.92
11	25.13	5.10	2.41	4.24	1.92
13	26.59	5.29	3.87	4.34	1.32
14	28.69	7.19	3.81	4.19	.66
15	29.39	7.06	1.55	4.21	1.57
16	35.25	-10.32	1.17	4.08	1.18
18	33.62	9.04	1.78	3.74	.66
19	28.73	5.70	1.29	3.94	.93
20	29.49	5.77	1.49	4.19	1.60
21	32.43	10.06	1.55	3.87	1.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	-60.00	36.00	-60.00
4	31.50	55.00	31.56	55.11
6	31.50	54.50	31.53	54.55
7	-38.00	-61.00	-37.89	-60.82
8	35.00	58.00	34.90	57.83
9	-38.00	-61.00	-37.89	-60.82
11	32.10	56.30	32.04	56.19
13	33.00	56.00	33.14	56.24
14	35.00	57.00	35.14	57.22
15	35.20	59.00	35.20	59.00
16	32.50	56.30	32.50	56.30
18	35.00	57.50	35.04	57.57
19	31.50	55.50	31.57	55.62
20	34.00	58.50	34.10	58.67
21	33.00	58.00	33.03	58.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LSM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1240.	.2690	.3120	1140.	1.050	-1298.
4	1100.	.2610	.3240	1122.	1.060	1063.
6	1125.	.3090	.3320	1140.	1.050	1049.
7	-1280.	.3030	.3120	1140.	1.060	-1337.
8	1170.	.2680	.2970	1104.	1.060	1185.
9	-1300.	.2810	.3170	1140.	-1.070	-1337.
11	1010.	.2300	.2920	1140.	1.060	1116.
13	1175.	.2460	.3200	1140.	1.050	1119.
14	1225.	.2460	.3110	1158.	1.060	1166.
15	-1275.	.2780	.3240	1176.	-1.070	1248.
16	1175.	.2840	.3300	1104.	1.060	1119.
18	1200.	.2600	.3050	1140.	1.040	1179.
19	1050.	.2740	.3090	1104.	1.040	1086.
20	1125.	.2750	.2920	1122.	1.050	1232.
21	1225.	.2820	.3330	1158.	1.060	1195.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	1242.	.2690	.3120	1140.	-1300.
4	1100.	.2620	.3250	1126.	1065.
6	1126.	.3090	.3330	1142.	1051.
7	-1296.	.3010	.3110	1133.	-1349.
8	1184.	.2670	.2950	-1097.	1196.
9	-1316.	.2790	.3150	1133.	-1349.
11	1013.	-.2290	.2910	1135.	1117.
13	1171.	.2480	.3220	1150.	1120.
14	1221.	.2480	.3130	1167.	1167.
15	-1279.	.2780	.3240	1176.	1252.
16	1179.	.2840	.3300	1104.	1122.
18	1203.	.2600	.3060	1142.	1183.
19	1051.	.2750	.3100	1109.	1090.
20	1125.	.2770	.2940	1128.	1236.
21	1235.	.2830	.3340	1160.	1207.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	.550	69.5	7.2	2.7	5.9
4	.529	107.9	17.5	2.2	5.0
6	.626	122.0	17.7	1.8	6.1
7	.622	76.2	8.8	5.1	7.1
8	.548	80.4	9.8	2.3	5.8
9	.577	68.5	6.1	3.4	6.6
11	.467	72.8	9.5	2.3	4.9
13	.502	81.4	11.7	4.4	5.2
14	.501	86.0	13.3	4.7	5.3
15	.565	94.3	14.0	1.8	6.0
16	.572	125.2	24.0	1.3	5.6
18	.524	106.4	18.0	2.0	4.9
19	.553	111.3	16.4	1.1	5.1
20	.560	90.8	12.2	1.8	5.8
21	.573	103.6	18.9	2.0	5.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3098.	24.91	4.42	1.59	3.50	.67
4	3063.	39.77	11.08	1.34	3.05	1.31
6	3070.	38.10	9.47	.93	3.13	1.32
7	3105.	24.22	4.79	2.64	3.73	2.58
8	3094.	28.89	6.03	1.38	3.40	1.42
9	3109.	23.48	3.58	1.90	3.73	1.31
11	3084.	30.57	6.88	1.60	3.39	.65
13	3086.	31.85	7.89	2.80	3.34	1.18
14	3081.	33.66	8.96	-3.01	3.43	1.18
15	3082.	32.73	8.32	1.01	3.41	1.31
16	3051.	42.51	13.98	.75	3.10	1.43
18	3056.	39.49	11.46	1.24	2.98	1.98
19	3060.	39.16	9.94	.62	2.95	1.85
20	3079.	31.80	7.35	1.03	3.33	1.06
21	3070.	35.33	11.05	1.11	3.21	2.43

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	-4.0380	-3.1060	-14.0290	-4.0340	-3.1030	-16.4040
4	3.0490	2.3700	11.8890	3.0750	2.3900	13.9440
6	2.9820	2.3780	11.7560	2.9930	2.3860	13.7210
7	-4.3370	-3.3870	-14.3680	-4.2380	-3.3110	-16.9000
8	3.6180	2.7960	12.8810	3.5370	2.7350	15.1560
9	-4.3370	-3.3460	-14.3360	-4.2380	-3.2710	-16.9000
11	3.2770	2.4950	12.2050	3.2410	2.4690	14.3860
13	3.1760	2.4470	12.4060	3.2490	2.5000	14.4080
14	3.3390	2.5650	12.6780	3.4080	2.6150	14.8220
15	3.8040	2.9490	13.5100	3.7950	2.9420	15.8100
16	3.2660	2.5590	12.2240	3.2580	2.5530	14.4310
18	3.4670	2.6750	12.8500	3.4810	2.6850	15.0120
19	3.1250	2.4420	12.1560	3.1530	2.4630	14.1530
20	3.6700	2.8480	13.3700	3.7190	2.8840	15.6190
21	3.5910	2.8000	12.7610	3.5850	2.7950	15.2790

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	24.93	4.42	1.86	4.09	.67
4	39.43	10.99	1.57	3.57	1.31
6	37.97	9.44	1.09	3.65	1.32
7	24.79	4.30	3.10	4.39	2.58
8	29.55	6.17	1.63	4.00	1.42
9	24.03	3.66	2.25	4.40	1.31
11	30.91	6.95	1.89	3.99	.65
13	31.13	7.72	3.25	3.88	1.18
14	32.98	8.79	3.52	4.01	1.18
15	32.82	8.34	1.18	3.99	1.31
16	42.62	14.01	.89	3.66	1.43
18	39.33	11.42	1.45	3.48	.84
19	38.81	9.86	.72	3.43	1.34
20	31.38	7.26	1.21	3.89	1.06
21	35.39	11.07	1.33	3.84	2.43

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
2	24124.	2922.	517.7	30.20	.009580
4	19818.	2889.	520.2	30.08	.007890
6	23630.	2889.	523.7	30.08	.007660
7	22440.	2833.	522.2	30.07	.008170
8	16567.	2833.	520.7	30.07	.008350
9	23081.	2833.	517.7	30.05	.007360
11	25470.	2893.	516.7	30.01	.007600
13	23689.	2984.	514.7	29.93	.008080
14	23807.	2984.	514.7	29.93	.008080
16	21140.	2735.	518.7	30.22	.009450
20	24630.	2850.	516.7	30.08	.009260

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	33.00	57.00	33.03	57.06
4	30.60	54.50	30.56	54.42
6	31.50	55.00	31.35	54.74
7	33.50	57.00	33.39	56.81
8	33.00	57.00	32.94	56.89
9	34.50	58.00	34.53	58.06
11	31.80	55.00	31.86	55.11
13	31.00	55.00	31.12	55.21
14	35.00	58.00	35.14	58.22
16	31.00	55.00	31.00	55.00
20	34.00	57.50	34.07	57.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1200.	-.4170	.3260	1158.	1.040	1148.
4	1125.	.3660	.3500	1176.	1.055	1043.
6	1150.	.3270	.3440	-1194.	1.050	1049.
7	1175.	.3630	.3170	1176.	1.050	1141.
8	1100.	.2660	.3030	1158.	1.060	1145.
9	1160.	.3140	.2960	1122.	1.060	1201.
11	1125.	.2970	.3260	-1194.	1.060	1062.
13	1100.	.3000	.3320	1140.	1.040	1070.
14	1200.	.2880	.3040	1140.	1.060	1214.
16	1160.	.3690	.3500	1158.	1.060	1049.
20	1190.	.3290	.3090	1140.	1.050	1179.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1210.	-.4180	.3270	1160.	1159.
4	1133.	.3650	.3490	1172.	1048.
6	1162.	.3240	.3400	1182.	1055.
7	1185.	.3610	.3150	1168.	1147.
8	1108.	.2650	.3020	1153.	1151.
9	1164.	.3150	.2970	-1124.	1207.
11	1126.	.2980	.3270	-1198.	1065.
13	1096.	.3020	.3340	1149.	1070.
14	1196.	.2900	.3070	1149.	1215.
16	1172.	.3690	.3500	1158.	1060.
20	1194.	.3300	.3100	1144.	1185.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	-.854	128.0	13.7	3.0	8.0
4	.742	135.9	23.0	3.1	6.5
6	.664	120.1	18.2	2.8	6.4
7	.739	127.3	19.1	4.0	7.3
8	.540	89.1	14.7	3.7	5.8
9	.642	89.4	12.2	4.5	7.0
11	.606	91.6	12.6	3.9	5.8
13	.608	117.1	18.6	2.6	5.4
14	.585	92.3	14.8	2.3	5.9
16	.739	-190.5	-36.1	2.2	6.5
20	.669	113.6	16.5	2.5	6.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3095.	29.54	5.44	1.14	3.02	1.39
4	3071.	35.80	10.42	1.32	2.81	1.97
6	3075.	35.39	9.22	1.36	3.10	.67
7	3079.	33.74	8.70	1.76	3.17	.66
8	3080.	32.32	9.19	2.18	3.47	1.57
9	3095.	27.43	6.43	2.26	3.52	.93
11	3090.	29.72	7.04	2.10	3.11	.40
13	3064.	37.60	10.26	1.35	2.86	1.06
14	3079.	30.89	8.52	1.29	3.22	1.45
16	3031.	49.76	16.22	.95	2.80	2.63
20	3079.	33.26	8.29	1.19	3.10	1.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.3830	2.8460	12.3130	3.3770	2.8410	14.7430
4	3.0090	2.4700	11.8460	2.9740	2.4420	13.6680
6	3.1110	2.4960	12.1230	3.0200	2.4250	13.7950
7	3.4120	2.7820	12.6890	3.3380	2.7220	14.6410
8	3.3990	2.6310	12.6240	3.3510	2.5960	14.6740
9	3.5780	2.8370	13.2770	3.5850	2.8420	15.2790
11	3.0510	2.4160	12.0210	3.0750	2.4350	13.9440
13	3.0290	2.4040	11.8680	3.0910	2.4520	13.9870
14	3.5470	2.7760	13.0390	3.6210	2.8320	15.3720
16	3.0820	2.5330	11.6730	3.0590	2.5140	13.9010
20	3.4670	2.7760	12.5720	3.4900	2.7940	15.0350

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	29.59	5.45	1.36	3.62	1.39
4	36.22	10.54	1.53	3.24	1.97
6	36.45	9.50	1.55	3.53	.67
7	34.49	8.89	2.03	3.66	.66
8	32.78	9.31	2.53	4.03	1.35
9	27.37	6.41	2.60	4.05	.93
11	29.48	6.98	2.43	3.61	.40
13	36.84	10.06	1.59	3.37	1.06
14	30.26	8.35	1.52	3.80	1.45
16	50.13	16.34	1.13	3.33	2.63
20	33.04	8.24	1.42	3.70	1.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	36.00	60.00	36.03	60.06
4	36.50	60.00	36.45	59.91
6	36.00	60.00	35.83	59.71
7	37.00	60.00	36.88	59.80
8	36.50	60.00	36.43	59.88
9	37.00	60.50	37.04	60.56
11	36.80	60.00	36.87	60.12
13	36.00	59.00	36.14	59.23
14	37.00	61.00	37.14	61.24
16	36.00	60.00	36.00	60.00
20	36.00	60.00	36.07	60.12

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
2	1225.	-.4080	.3050	1158.	1.050	1291.
4	1340.	.3510	.3340	1176.	1.055	1289.
6	1320.	.3250	.3330	1194.	1.060	1279.
7	1300.	.3410	.3230	1176.	1.060	1284.
8	1230.	.2490	.3070	1158.	1.060	1288.
9	1280.	.3110	.3160	1122.	1.070	1328.
11	1310.	.2510	.3250	1176.	1.060	1303.
13	1340.	.2770	.3350	1140.	1.060	1263.
14	1300.	.2830	.3210	1140.	1.060	1374.
16	1325.	.3360	.3300	1140.	1.070	1287.
20	1300.	.3270	.3250	1158.	1.060	1300.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1235.	-.4090	.3060	1160.	1303.
4	1349.	.3500	.3330	1172.	1296.
6	1333.	.3220	.3360	1182.	1286.
7	1311.	.3390	.3210	1168.	1290.
8	1239.	.2480	.3060	1150.	1294.
9	1284.	.3110	.3170	1124.	1334.
11	1311.	.2520	.3260	1180.	1307.
13	1335.	.2790	.3380	1149.	1263.
14	1295.	.2860	.3240	1149.	1374.
16	1338.	.3360	.3300	1140.	1300.
20	1304.	.3280	.3260	1162.	1307.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.838	105.7	11.5	3.7	8.4
4	.722	81.6	10.6	4.8	7.5
6	.666	84.7	12.0	4.0	7.0
7	.699	89.8	11.6	4.6	7.6
8	.509	65.9	9.3	4.2	6.1
9	.638	74.8	9.1	5.3	7.3
11	.515	-53.6	6.5	4.7	5.3
13	.567	74.5	10.2	3.3	6.1
14	.580	70.9	9.7	2.8	6.2
16	.685	110.0	14.6	3.1	7.2
20	.669	84.2	10.4	3.0	7.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3104.	24.93	4.65	1.42	3.27	2.01
4	3107.	22.37	4.99	2.16	3.36	2.37
6	3100.	25.12	6.12	1.94	3.43	1.07
7	3101.	25.34	5.63	2.13	3.53	1.19
8	3099.	25.51	6.17	2.69	3.86	.66
9	3106.	23.19	4.87	2.69	3.73	1.46
11	3112.	20.62	4.29	2.97	3.37	2.00
13	3094.	25.90	6.08	1.90	3.47	1.46
14	3098.	24.11	5.68	1.56	3.45	1.95
16	3084.	31.50	7.17	1.46	3.41	3.29
20	3100.	24.82	5.26	1.45	3.44	1.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	4.0540	3.3720	13.7290	4.0480	3.3680	16.4390
4	4.0610	3.2680	14.1760	4.0130	3.2300	16.3530
6	4.0870	3.2370	14.2770	3.9640	3.1420	16.2330
7	4.0750	3.2580	14.1180	3.9850	3.1870	16.2840
8	4.0640	3.0910	14.0560	4.0060	3.0490	16.3350
9	4.1620	3.2730	14.5450	4.1710	3.2800	16.7400
11	4.0280	3.0710	14.1980	4.0620	3.0950	16.4740
13	3.7690	2.9240	13.5230	3.8490	2.9840	15.9460
14	4.2510	3.2910	14.5420	4.3420	3.3600	17.1510
16	4.0640	3.2440	13.7760	4.0340	3.2200	16.4040
20	4.0350	3.2050	13.7730	4.0620	3.2270	16.4740

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	24.97	4.66	1.70	3.92	2.01
4	22.64	5.05	2.49	3.88	2.37
6	25.90	6.31	2.20	3.90	1.07
7	25.91	5.76	2.46	4.07	1.19
8	25.88	6.25	3.12	4.48	.66
9	23.14	4.86	3.10	4.30	1.46
11	20.45	4.25	3.45	3.91	2.00
13	25.36	5.96	2.24	4.09	1.46
14	23.60	5.56	1.84	4.07	1.95
16	31.74	7.22	1.74	4.06	3.29
20	24.66	5.23	1.74	4.12	1.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	95.00	-95.00	95.09	-95.09
4	94.20	92.00	94.06	91.87
6	93.50	93.50	93.05	93.05
7	94.50	92.50	94.18	92.19
8	93.50	94.00	93.32	93.82
9	93.00	92.50	93.09	92.59
11	94.00	94.40	94.18	94.58
13	92.00	93.00	92.36	93.36
14	93.00	92.00	93.36	92.36
16	92.00	94.00	92.00	94.00
20	94.00	94.00	94.18	94.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
-----	-----	-----	-----	-----	-----	-----
2	-8800.	-1.1580	.7500	1464.	1.980	13870.
4	8500.	.9640	.7340	1482.	1.980	13926.
6	8250.	.9990	.7190	1455.	1.980	13926.
7	8600.	-1.0870	.7440	1482.	1.980	13930.
8	8400.	.8680	.7290	-1500.	1.980	13930.
9	8400.	.9630	.7280	1464.	1.980	13939.
11	8300.	.9880	.7150	1464.	1.980	13958.
13	8600.	.9220	.7500	1446.	1.980	13995.
14	-8800.	.9080	-.7630	1464.	1.980	13995.
16	8050.	.8880	.6990	1446.	1.980	13861.
20	8100.	.9060	.6960	1464.	1.980	13926.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODF 3

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
2	-8874.	-1.1600	-.7520	1467.	14000.
4	8558.	.9610	.7320	1477.	14000.
6	8334.	.9900	.7120	1441.	14000.
7	8672.	-1.0800	.7390	1472.	14000.
8	8458.	.8650	.7260	-1494.	14000.
9	8428.	.9650	.7300	1467.	14000.
11	8309.	.9920	.7180	1469.	14000.
13	8570.	.9290	-.7550	1457.	14000.
14	-8769.	.9150	-.7680	1475.	14000.
16	8131.	.8880	.6990	1446.	14000.
20	8128.	.9090	.6990	1469.	14000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-2.433	12.7	1.7	-96.8	-96.6
4	2.022	13.3	1.7	85.4	85.5
6	2.096	12.1	1.8	83.1	84.3
7	-2.283	12.7	1.1	-97.7	-100.6
8	1.819	13.5	1.7	77.4	77.8
9	2.020	14.5	1.6	83.7	82.1
11	2.072	12.8	1.5	78.5	77.6
13	1.930	11.4	1.5	78.2	76.6
14	1.901	13.2	1.8	70.6	69.4
16	1.861	12.1	1.7	70.9	70.2
20	1.896	12.3	-4.7	78.9	80.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3154.	1.05	.24	13.12	13.12	33.77
4	3153.	1.32	.28	13.92	13.93	31.66
6	3153.	1.15	.29	13.06	13.26	31.87
7	3154.	1.12	.16	14.12	14.53	28.59
8	3153.	1.49	.33	14.03	14.10	28.95
9	3153.	1.44	.28	13.66	13.66	31.39
11	3153.	1.24	.25	12.49	12.49	36.93
13	3149.	1.18	.27	13.34	13.34	35.89
14	3148.	1.39	.33	12.23	12.23	-0.00
16	3151.	1.31	.31	12.54	12.54	30.53
20	3149.	1.30	-.86	13.69	13.92	32.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	-183.9760	-183.9760	94.9750	-185.3330	-185.3330	-113.9610
4	99.5640	99.5640	80.9950	97.5850	97.5850	93.1760
6	121.6120	121.6120	88.7930	114.3930	114.3930	99.9920
7	124.3770	124.3770	82.9010	118.8730	118.8730	94.9970
8	107.2530	107.2530	90.3410	104.6230	104.6230	104.5800
9	104.6130	104.6130	84.3750	105.5390	105.5390	97.2890
11	-132.4820	-132.4820	94.5150	-135.4580	-135.4580	110.1080
13	103.8990	103.8990	85.6760	108.7000	108.7000	101.8190
14	92.3600	92.3600	80.7610	96.5350	96.5350	95.9510
16	110.7770	110.7770	88.8630	110.0250	110.0250	105.8200
20	113.3220	113.3220	89.2230	115.5040	115.5040	107.1440

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	1.04	.24	15.74	15.74	33.77
4	1.34	.29	16.02	16.03	31.66
6	1.23	.31	14.71	14.93	31.87
7	1.17	.17	16.17	16.65	28.59
8	1.53	.34	16.24	16.32	28.95
9	1.43	.27	17.02	17.02	31.39
11	1.22	.25	14.55	-14.55	36.93
13	1.13	.26	15.85	15.85	35.89
14	1.33	.31	14.53	-14.53	-0.00
16	1.32	.31	14.94	14.94	30.53
20	1.28	-.84	16.45	16.72	32.24

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	88.00	92.00	88.08	92.09
4	89.00	90.00	88.87	89.87
6	88.50	91.20	88.08	90.76
7	88.50	90.00	88.20	89.70
8	87.00	91.00	86.83	90.83
9	87.50	90.50	87.58	90.59
11	88.00	92.20	88.17	92.38
13	87.00	91.00	87.34	91.35
14	89.00	90.00	89.35	90.35
16	87.50	92.00	87.50	92.00
20	88.50	92.00	88.67	92.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
----	-----	-----	-----	-----	-----	-----
2	6800.	-.9240	.6120	1356.	1.800	12087.
4	6950.	.7880	.6250	1401.	1.800	12135.
6	6800.	.7890	.6180	1392.	1.800	12135.
7	7100.	-.9040	.6440	1410.	1.800	12139.
8	6800.	.6730	.6240	1410.	1.800	12139.
9	6950.	.7780	.6320	1387.	1.800	12147.
11	6900.	.7860	.6240	1410.	1.800	12163.
13	-7300.	.7430	-.6660	1374.	1.800	12196.
14	-7400.	.7760	-.6620	1410.	1.800	12196.
16	7000.	.7300	.6340	1410.	1.800	12079.
20	6750.	.7200	.6060	1392.	1.800	12135.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	6857.	-.9260	.6140	1358.	12200.
4	6997.	.7860	.6230	1397.	12200.
6	6869.	.7820	.6130	1378.	12200.
7	7160.	-.8980	.6400	1400.	12200.
8	6847.	.6700	.6220	1404.	12200.
9	6973.	.7800	.6330	1385.	12200.
11	6907.	.7890	.6270	-1415.	12200.
13	-7274.	.7490	-.6710	1384.	12200.
14	-7374.	.7830	-.6680	-1421.	12200.
16	7070.	.7300	.6340	1410.	12200.
20	6773.	.7220	.6090	1397.	12200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-1.938	13.7	1.4	62.5	64.2
4	1.651	11.5	1.4	62.6	63.5
6	1.652	12.2	2.3	56.3	57.8
7	-1.895	13.9	1.2	-68.1	-71.1
8	1.406	14.8	1.8	47.5	48.3
9	1.629	15.6	1.8	58.1	58.9
11	1.644	14.5	1.5	52.4	52.2
13	1.552	11.2	1.5	55.0	54.4
14	1.623	12.5	1.7	52.2	52.2
16	1.526	12.4	1.3	50.1	50.5
20	1.504	11.8	-4.3	53.9	55.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3153.	1.42	.25	10.63	10.93	35.57
4	3153.	1.40	.29	12.51	12.68	32.19
6	3152.	1.49	.47	11.24	11.54	29.68
7	3153.	1.47	.21	11.85	12.36	28.67
8	3151.	2.10	.44	11.13	11.31	26.43
9	3152.	1.92	.37	11.76	11.92	31.32
11	3152.	1.77	.32	10.50	10.50	27.55
13	3148.	1.45	.33	11.65	11.65	32.36
14	3148.	1.54	.36	10.59	10.59	31.63
16	3150.	1.63	.30	10.81	10.89	28.35
20	3148.	1.58	-.99	11.80	12.10	31.97

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	-94.8430	-94.8430	78.7120	-95.2900	-95.2900	94.4250
4	65.0900	65.0900	71.6140	63.9130	63.9130	82.4020
6	73.5060	73.5060	77.2970	69.6940	69.6940	87.1160
7	74.6760	74.6760	71.1170	71.7610	71.7610	81.5430
8	63.2320	63.2320	75.5090	61.8530	61.8530	87.4460
9	67.8190	67.8190	74.7440	68.3070	68.3070	86.1730
11	-81.0890	-81.0890	82.4950	-82.6160	-82.6160	96.0740
13	68.4370	68.4370	76.0410	71.1970	71.1970	90.3180
14	64.2620	64.2620	71.5050	66.8700	66.8700	84.9080
16	74.8310	74.8310	78.8730	74.3090	74.3090	93.9230
20	73.7700	73.7700	79.0750	74.9650	74.9650	94.9310

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	1.42	.25	12.75	13.11	34.00
4	1.43	.30	14.39	14.59	32.19
6	1.57	.50	12.67	13.01	29.68
7	1.53	.22	13.59	14.18	28.67
8	2.15	.45	12.89	13.10	26.43
9	1.91	.37	13.56	13.74	31.32
11	1.73	.32	-12.22	-12.22	27.55
13	1.39	.32	13.84	13.84	32.36
14	1.48	.35	12.58	-12.58	31.63
16	1.64	.30	12.88	12.97	28.35
20	1.55	-.98	14.16	14.52	31.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	79.00	87.00	79.08	87.08
4	79.50	85.50	79.39	85.38
6	79.00	86.50	78.62	86.09
7	78.50	85.50	78.24	85.21
8	77.50	86.00	-77.35	85.83
9	78.50	85.50	78.58	85.58
11	79.00	87.00	79.15	87.17
13	78.00	86.00	78.30	86.33
14	78.00	85.00	78.30	85.33
16	78.00	87.00	78.00	87.00
20	79.00	87.00	79.15	87.17

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	4700.	-.6710	.4830	1248.	1.520	8356.
4	4725.	.4870	.4860	1266.	1.520	8389.
6	4625.	.5010	.4840	1266.	1.520	8389.
7	4750.	-.5750	.4990	1266.	1.520	8392.
8	4700.	.4110	.5010	1266.	1.520	8392.
9	4800.	.4980	.5000	1248.	1.520	8398.
11	4650.	.5060	.4800	1266.	1.520	8409.
13	4900.	.4830	-.5130	1248.	1.520	8431.
14	4750.	.4540	.4980	1266.	1.520	8431.
16	4700.	.4780	.4920	1230.	1.520	8350.
20	4650.	.4560	.4790	1248.	1.520	8389.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
<hr style="border-top: 1px dashed black;"/>					
2	4739.	-.6730	.4840	1250.	8434.
4	4757.	.4850	.4850	1262.	8434.
6	4672.	.4960	.4790	1254.	8434.
7	4790.	-.5720	.4960	1257.	8434.
8	4733.	.4090	.4990	1261.	8434.
9	4816.	.4980	.5010	1250.	8434.
11	4655.	.5080	.4820	1271.	8434.
13	4883.	.4870	-.5170	1257.	8434.
14	4733.	.4580	.5010	1276.	8434.
16	4747.	.4780	.4920	1230.	8434.
20	4666.	.4580	.4800	1253.	8434.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-1.403	18.6	1.5	32.4	35.3
4	1.015	13.1	1.7	29.6	30.3
6	1.044	16.9	2.1	26.2	27.9
7	-1.201	17.5	1.4	31.5	33.2
8	.855	16.8	2.0	22.2	23.4
9	1.037	18.7	1.9	28.8	29.0
11	1.055	19.0	1.8	25.4	26.1
13	1.005	13.4	1.6	26.5	27.6
14	.945	16.5	1.6	21.0	23.2
16	.996	16.2	1.3	23.3	25.3
20	.951	13.0	2.3	25.1	27.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3151.	2.66	.37	7.62	8.28	30.20
4	3150.	2.59	.58	9.61	9.83	23.18
6	3149.	3.25	.71	8.27	8.81	21.91
7	3150.	2.93	.41	8.63	9.11	24.54
8	3148.	3.94	.79	8.55	9.00	-17.99
9	3148.	3.62	.64	9.13	9.20	22.27
11	3149.	3.60	.58	7.94	8.14	21.05
13	3146.	2.67	.56	8.65	9.02	25.62
14	3144.	3.50	.57	-7.30	-8.06	23.03
16	3147.	3.25	.45	7.71	8.35	22.70
20	3147.	2.73	.84	8.69	9.44	23.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	-42.6350	-42.6350	58.0320	-42.7330	-42.7330	69.5920
4	30.5750	30.5750	54.3680	30.1030	30.1030	62.5880
6	34.0140	34.0140	57.9040	32.5590	32.5590	65.3680
7	33.1270	33.1270	54.0020	32.0790	32.0790	61.9870
8	29.9550	29.9550	55.5100	29.3970	29.3970	64.3710
9	30.8950	30.8950	54.9670	31.0490	31.0490	63.3480
11	36.1560	36.1560	60.1130	36.6790	36.6790	69.9570
13	32.0560	32.0560	55.9820	33.0960	33.0960	66.3990
14	28.3510	28.3510	52.6380	29.2440	29.2440	62.4150
16	35.3390	35.3390	58.1360	35.0840	35.0840	69.2300
20	34.6070	34.6070	58.3130	35.0310	35.0310	69.9570

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	2.65	.36	9.13	9.93	30.17
4	2.63	.59	11.06	11.32	23.18
6	3.39	.74	9.34	9.94	21.91
7	3.03	.43	9.91	10.45	24.54
8	4.01	.81	9.91	10.43	-17.99
9	3.60	.64	10.52	10.60	22.27
11	3.55	.57	9.24	-9.47	21.05
13	2.59	.54	10.26	10.69	25.62
14	3.39	.55	-8.65	-9.55	23.03
16	3.28	.46	9.18	9.94	22.70
20	2.70	.83	10.43	11.32	23.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	60.00	77.00	60.06	77.07
4	62.00	77.00	61.91	76.89
6	62.00	78.00	61.70	77.63
7	61.00	76.50	60.80	76.24
8	-59.00	77.00	-58.89	76.85
9	61.50	77.50	61.56	77.57
11	60.80	77.80	60.92	77.95
13	61.00	77.00	61.24	77.30
14	60.00	76.00	60.23	76.29
16	50.00	77.00	60.00	77.00
20	61.00	78.00	61.12	78.15

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
2	2400.	-.3980	.3510	1104.	1.230	4240.
4	2600.	.2540	.3690	1113.	1.230	4257.
6	2600.	.2630	.3710	1131.	1.230	4257.
7	2450.	-.3590	.3560	1122.	1.230	4259.
8	2325.	.2000	.3510	1122.	1.230	4259.
9	2550.	.2880	.3630	1104.	1.230	4261.
11	2450.	.2700	.3540	1113.	1.230	4267.
13	2600.	.2270	.3730	1104.	1.230	4279.
14	2500.	.2440	.3660	1122.	1.230	4279.
16	2400.	.3130	.3510	1086.	1.230	4238.
20	2400.	.2030	.3440	1104.	1.230	4257.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	2420.	-.3990	.3510	1106.	4280.
4	2618.	.2540	.3670	1109.	4280.
6	2626.	.2600	.3680	1120.	4280.
7	2471.	-.3570	.3530	1114.	4280.
8	2341.	.1990	.3490	1117.	4280.
9	2559.	.2890	.3640	1106.	4280.
11	2453.	.2710	.3550	1117.	4280.
13	2591.	.2290	.3760	1112.	4280.
14	2491.	.2460	.3690	1130.	4280.
16	2424.	.3130	.3510	1086.	4280.
20	2408.	.2040	.3460	1108.	4280.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	-.824	-41.3	-6.1	9.7	14.0
4	.527	21.3	2.5	8.7	10.4
6	.544	24.3	3.1	8.0	10.0
7	-.744	37.4	3.3	10.3	13.3
8	.413	23.9	3.0	6.7	7.9
9	.597	30.9	3.9	9.4	11.3
11	.558	28.8	3.3	7.9	9.2
13	.470	23.5	2.9	6.0	8.2
14	.504	25.9	3.1	6.1	8.7
16	.647	36.9	3.4	7.5	11.3
20	.420	25.9	3.6	5.0	7.7

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3133.	10.00	2.52	3.86	5.55	10.00
4	3139.	8.06	1.60	5.32	6.50	10.53
6	3137.	8.90	1.94	4.84	6.00	8.97
7	3136.	10.02	1.52	4.55	5.84	11.18
8	3131.	11.51	2.50	5.28	6.27	-4.79
9	3134.	10.31	2.24	5.16	6.18	9.21
11	3134.	10.31	2.03	4.64	5.43	7.53
13	3130.	9.95	2.13	4.18	5.68	8.24
14	3130.	10.25	2.08	3.96	5.65	7.67
16	3131.	11.35	1.80	3.81	5.71	9.25
20	3126.	12.27	2.96	3.92	6.01	7.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	12.4830	12.4830	31.3110	12.4820	12.4820	37.5230
4	11.2110	11.2110	32.2140	11.0640	11.0640	37.1160
6	12.3250	12.3250	34.2510	11.8950	11.8950	38.7750
7	11.4970	11.4970	31.0530	11.1990	11.1990	35.7190
8	10.7990	10.7990	31.9190	10.6290	10.6290	37.0350
9	12.0340	12.0340	33.5480	12.0730	12.0730	38.6430
11	12.2510	12.2510	34.0750	12.3820	12.3820	39.6050
13	11.0180	11.0180	32.1320	11.2930	11.2930	38.0190
14	10.1650	10.1650	30.2890	10.4180	10.4180	35.8290
16	11.7330	11.7330	31.3730	11.6470	11.6470	37.3590
20	11.9610	11.9610	33.4860	12.0640	12.0640	40.1240

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	10.00	2.52	4.63	6.65	10.00
4	8.17	1.62	6.21	7.49	10.53
6	9.22	2.01	5.48	6.79	8.97
7	10.29	1.56	5.24	6.72	11.18
8	11.70	2.54	6.13	7.28	-4.79
9	10.27	2.23	5.94	7.12	9.21
11	10.20	2.01	5.39	6.31	7.53
13	9.71	2.07	4.95	6.72	8.24
14	10.00	2.03	4.69	6.69	7.67
16	11.44	1.81	4.53	6.80	9.25
20	12.16	2.93	4.70	7.20	7.89

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	59.00	36.03	59.06
4	36.80	60.00	36.75	59.91
6	35.70	59.50	35.53	59.22
7	37.00	60.00	36.88	59.80
8	35.50	60.00	35.43	59.88
9	37.00	59.50	37.04	59.56
11	35.30	60.00	35.37	60.12
13	36.00	60.00	36.14	60.23
14	36.00	59.00	36.14	59.23
16	36.00	60.00	36.00	60.00
20	36.00	60.00	36.07	60.12

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF

2	1225.	-.3720	.3050	1140.	1.050	1243.
4	1290.	.3130	.3200	1140.	1.060	1289.
6	1275.	.3010	.3230	1167.	1.060	1256.
7	1250.	.3190	.3110	1140.	1.060	1284.
8	1190.	.2510	.3010	1140.	1.070	1288.
9	1200.	.2980	.2970	1104.	1.060	1273.
11	1250.	.2450	.3160	1158.	1.060	1303.
13	1275.	.2330	.3190	1104.	1.070	1314.
14	1250.	.2550	.3130	1140.	1.060	1263.
16	1275.	.3160	.3180	1113.	1.070	1287.
20	1225.	.2800	.3060	1140.	1.060	1300.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF

2	1235.	-.3720	.3060	1142.	1255.
4	1299.	.3130	.3190	1136.	1296.
6	1288.	.2980	.3200	1156.	1262.
7	1260.	.3170	.3090	1132.	1290.
8	1198.	.2500	.3000	1135.	1294.
9	1204.	.2990	.2970	1106.	1279.
11	1251.	.2460	.3170	1162.	1307.
13	1270.	.2350	.3220	1112.	1314.
14	1246.	.2570	.3150	1149.	1263.
16	1288.	.3160	.3180	1113.	1300.
20	1229.	.2810	.3070	1144.	1307.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.760	97.9	-20.1	3.7	7.8
4	.641	92.3	10.2	4.2	7.1
6	.615	82.8	12.1	3.8	6.5
7	.654	87.8	11.2	4.4	7.1
8	.513	75.7	11.1	4.1	5.9
9	.510	83.0	10.4	4.7	6.9
11	.504	57.5	6.7	4.1	5.2
13	.476	64.2	8.7	2.5	5.1
14	.520	72.6	10.9	2.6	5.5
16	.644	112.5	15.0	2.7	7.0
20	.572	80.4	10.5	2.4	6.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIJMER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3092.	25.34	8.95	1.55	3.33	2.67
4	3097.	28.37	5.39	2.14	3.56	1.32
6	3096.	26.52	6.63	2.01	3.45	.66
7	3098.	26.49	5.82	2.18	3.51	1.99
8	3090.	29.01	7.33	2.56	3.68	1.97
9	3098.	26.80	5.79	2.49	3.65	1.46
11	3108.	22.56	4.50	2.67	3.37	2.24
13	3093.	26.57	6.15	1.72	3.46	.79
14	3089.	27.44	7.07	1.62	3.42	1.57
16	3078.	34.23	7.86	1.37	3.51	2.37
20	3093.	27.69	6.20	1.36	3.56	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	3.8150	3.1140	13.2320	3.8080	3.1090	15.8440
4	4.0610	3.2100	14.1760	4.0130	3.1620	16.3530
6	3.9650	3.1020	14.0160	3.8450	3.0120	15.9380
7	4.0750	3.2190	14.1180	3.9850	3.1490	16.2840
8	4.0640	3.0950	14.0560	4.0060	3.0530	16.3350
9	3.9190	3.0680	14.0250	3.9270	3.0740	16.1400
11	4.0280	3.0620	14.1980	4.0620	3.0870	16.4740
13	4.0050	3.0270	14.0290	4.0910	3.0890	16.5440
14	3.7690	2.8910	13.5230	3.8490	2.9490	15.9460
16	4.0640	3.2090	13.7760	4.0340	3.1850	16.4040
20	4.0350	3.1250	13.7730	4.0670	3.1440	16.4740

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	25.39	8.96	1.86	3.99	2.67
4	28.72	5.45	2.47	4.11	1.32
6	27.35	6.83	2.28	3.92	.66
7	27.09	5.95	2.52	4.05	1.99
8	29.43	7.43	2.97	4.28	1.97
9	26.75	5.78	2.86	4.20	1.36
11	22.37	4.46	3.10	3.91	2.24
13	26.01	6.03	2.03	4.08	.79
14	26.87	6.93	1.91	4.03	1.57
16	34.48	7.92	1.63	4.18	2.37
20	27.51	6.16	1.63	4.25	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPFED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	35.00	59.00	35.03	59.06
4	34.70	56.00	34.65	55.92
6	32.50	55.80	32.34	55.53
7	35.50	58.00	35.38	57.81
8	33.00	57.00	32.94	56.89
9	34.50	58.00	34.53	58.06
11	31.10	55.00	31.16	55.11
13	31.00	55.00	31.12	55.21
14	36.00	59.00	36.14	59.23
16	32.00	56.00	32.00	56.00
20	34.50	58.50	34.57	58.61

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF

2	1250.	-.3850	.3160	1140.	1.050	1243.
4	1150.	.3200	.2940	1140.	1.055	1098.
6	1160.	.2960	.3300	1158.	1.050	1080.
7	1200.	.3360	.3040	1158.	1.060	1189.
8	1100.	.2550	.3030	1140.	1.060	1145.
9	1160.	.3010	.2960	1104.	1.060	1201.
11	1075.	.2780	.3230	1176.	1.060	1062.
13	1050.	.2460	.3170	1122.	1.050	1070.
14	1225.	.2580	.3070	1140.	1.060	1263.
16	1140.	.3350	.3260	1122.	1.060	1097.
20	1200.	.2880	.3060	1140.	1.050	1227.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1260.	-.3860	.3160	1142.	1255.
4	1158.	.3190	.2930	1136.	1104.
6	1172.	.2930	.3260	1147.	1086.
7	1210.	.3340	.3020	1150.	1195.
8	1108.	.2540	.3020	1135.	1151.
9	1164.	.3010	.2970	1106.	1207.
11	1076.	.2800	.3240	1180.	1065.
13	1046.	.2480	.3190	1130.	1070.
14	1221.	.2600	.3090	1149.	1263.
16	1151.	.3350	.3260	1122.	1108.
20	1204.	.2900	.3070	1144.	1233.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE B

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-.785	104.0	25.7	3.7	8.1
4	.651	110.8	16.0	3.5	6.3
6	.602	102.6	17.3	3.1	5.8
7	.686	104.6	13.9	4.1	7.2
8	.517	93.2	16.4	3.5	5.5
9	.615	86.3	10.9	4.6	6.7
11	.567	92.9	13.2	3.6	5.2
13	.499	92.0	13.9	1.9	4.8
14	.526	79.0	11.5	2.6	5.5
16	.674	-162.6	-28.7	2.0	6.5
20	.588	90.2	11.2	2.3	6.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3085.	26.03	11.04	1.54	3.34	1.32
4	3081.	33.38	8.30	1.72	3.14	1.32
6	3077.	33.41	9.67	1.65	3.10	1.32
7	3090.	30.00	6.84	1.94	3.40	2.37
8	3071.	35.20	10.63	2.14	3.42	1.45
9	3096.	27.65	6.02	2.43	3.53	1.60
11	3084.	32.15	7.85	2.02	2.93	1.05
13	3069.	36.01	9.36	1.19	3.08	.27
14	3085.	29.47	7.34	1.58	3.39	.52
16	3041.	46.72	14.18	.94	3.06	1.19
20	3089.	30.14	6.44	1.26	3.48	1.32

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	3.8150	-3.1370	13.2320	3.8080	-3.1330	15.8440
4	3.2370	2.5850	12.3720	3.1990	2.5550	14.2740
6	3.2340	2.5490	12.4080	3.1400	2.4770	14.1170
7	3.6100	2.8920	13.1240	3.5310	2.8300	15.1410
8	3.3990	2.6170	12.6240	3.3510	2.5820	14.6740
9	3.5780	2.8160	13.2770	3.5850	2.8220	15.2790
11	3.0510	2.3930	12.0210	3.0750	2.4110	13.9440
13	3.0290	2.3390	11.8680	3.0910	2.3850	13.9870
14	3.7690	2.8950	13.5230	3.8490	2.9540	15.9460
16	3.2350	2.6060	12.0150	3.2110	2.5870	14.3070
20	3.6820	2.8770	13.0340	3.7070	2.8950	15.5880

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	26.07	11.06	1.84	4.00	1.32
4	33.78	8.40	1.98	3.62	1.32
6	34.41	9.95	1.88	3.52	1.32
7	30.67	6.99	2.23	3.92	2.21
8	35.70	10.78	2.49	3.97	1.45
9	27.59	6.01	2.79	4.06	1.60
11	31.89	7.79	2.34	3.40	1.05
13	35.29	9.18	1.41	3.63	.27
14	28.86	7.19	1.86	4.00	.52
16	47.07	14.29	1.12	3.64	1.15
20	29.94	6.40	1.51	4.17	1.32

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg. API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	42.6	1.92	83	2	15
2	Baseline	42.6	1.92	83	2	15
	600-Hour	40.9	1.90	84	2	14
	1200-Hour	43.4	1.93	85	1	14
	1800-Hour	43.4	1.92	84	2	14
	2400-Hour	45.4	1.95	83	1	16
	3000-Hour *					
3	Baseline	42.6	1.92	83	2	15
	600-Hour	40.9	1.90	84	2	14
	1200-Hour	43.4	1.93	85	1	14
4	Baseline	42.1	1.92	82	2	16
	600-Hour	42.1	1.93	84	2	14
	1200-Hour	44.1	1.92	86	1	13
	1800-Hour *					
	2400-Hour *					
	3000-Hour	45.4	1.92	80	2	18
5	Baseline	42.1	1.92	82	2	16
	600-Hour	42.1	1.93	84	2	14
	1200-Hour	44.1	1.92	86	1	13
	1800-Hour *					
6	Baseline	42.1	1.92	82	2	16
	600-Hour	42.1	1.93	84	2	14
	1200-Hour	44.1	1.92	86	1	13
	1800-Hour *					
	2400-Hour *					
	3000-Hour	45.4	1.92	80	2	18
7	Baseline	42.1	1.90	82	2	16
	600-Hour	42.3	1.93	84	2	14
	1200-Hour	43.8	1.95	85	2	13
	1800-Hour	42.3	1.93	85	1	14
	2400-Hour *					
	3000-Hour *					

* * Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
8	Baseline	42.1	1.90	82	2	16
	600-Hour	42.3	1.93	84	2	14
	1200-Hour	43.8	1.95	85	2	13
	1800-Hour	42.3	1.93	85	1	14
	2400-Hour *					
	3000-Hour *					
9	Baseline	42.1	1.90	82	2	16
	600-Hour	42.3	1.93	84	2	14
	1200-Hour	43.8	1.95	85	2	13
	1800-Hour	42.3	1.93	85	1	14
	2400-Hour *					
	3000-Hour *					
10	Baseline	42.3	1.90	82	2	16
	600-Hour	41.1	1.91	82	2	16
	1200-Hour *					
	1800-Hour	43.2	1.94	84	1	15
11	Baseline	42.3	1.93	82	2	16
	600-Hour	41.1	1.91	82	2	16
	1200-Hour *					
	1800-Hour	43.2	1.94	84	1	15
	2400-Hour	45.4	1.94	82	1	17
	3000-Hour *					
12	Baseline	42.3	1.90	82	2	16
	600-Hour	41.1	1.91	82	2	16
	1200-Hour *					
	1800-Hour	43.2	1.94	84	1	15
13	Baseline	42.3	1.91	81	3	16
	600-Hour	41.3	1.91	84	2	14
	1200-Hour	44.1	1.90	84	2	14
	1800-Hour	43.6	1.90	84	1	15
	2400-Hour	44.5	1.91	83	1	16
	3000-Hour	45.2	1.94	81	1	18
14	Baseline	42.3	1.91	81	3	16
	600-Hour	41.3	1.91	84	2	14
	1200-Hour	44.1	1.90	84	2	14

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
14 Cont.	1800-Hour	43.6	1.90	84	1	15
	2400-Hour	44.5	1.91	83	1	16
	3000-Hour	45.2	1.94	81	1	18
15	Baseline	44.3	1.96	86	1	13
	600-Hour	41.7	1.92	84	2	14
	1200-Hour	43.2	1.94	85	2	13
	1800-Hour	43.0	1.91	84	2	14
	2400-Hour	44.9	1.92	82	1	17
16	Baseline	44.3	1.96	86	1	13
	600-Hour	41.7	1.92	84	2	14
	1200-Hour	43.2	1.94	85	2	13
	1800-Hour	43.0	1.91	84	2	14
	2400-Hour	44.9	1.92	82	1	17
	3000-Hour	44.5	1.93	81	1	18
17	Baseline	44.3	1.96	86	1	13
	600-Hour	42.1	1.92	84	2	14
	1200-Hour	43.2	1.94	85	2	13
18	Baseline	40.6	1.90	83	2	15
	600-Hour	41.3	1.91	83	2	15
	1200-Hour	43.2	1.93	84	1	15
	1800-Hour	42.8	1.90	84	2	14
	2400-Hour	45.4	1.95	83	1	16
19	Baseline	40.6	1.90	83	2	15
	600-Hour	41.3	1.91	83	2	15
	1200-Hour	43.2	1.93	84	1	15
	1800-Hour	42.8	1.90	84	2	14
	2400-Hour	45.4	1.95	83	1	16
20	Baseline	40.6	1.90	83	2	15
	600-Hour	41.3	1.91	83	2	15
	1200-Hour	43.2	1.93	84	1	15

* Fuel analysis data not available

6. REFERENCES

1. Adams, H. T., Elements of Internal Combustion Turbine Theory, Cambridge University Press, 1949.
2. "T53 and T55 Gas Turbine Combustor and Engine Exhaust Emission Measurements", USAAMRDL Technical Report 73-47, December 1973.
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Report No. FAA-RD-79-8, IV

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME IV
JT3D-7 TEST DATA**



APRIL 1979

FINAL REPORT

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16. Abstract This is the fourth volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the JT3D-7 engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the fourth volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the JT3D-7 engine type as installed on the DC-8-62 aircraft. The engines, owned and operated by UAL, were tested in San Francisco by UAL personnel.

The other volumes of the report are listed below:

Volume I - Program Description and Results

Volume II - JT8D-9 Test Data

Volume III - JT8D-7 Test Data

Volume V - JT3D-3B Test Data

Volume VI - JT9D-3A Test Data

Volume VII - RB211-22B Test Data

Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted the EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume: Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emissions and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the JT3D-7 engine there were six such series; Baseline; 600 Hour; 1200 Hour; 1800 Hour; 2400 Hour; and 3000 Hour. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/671292		Original Test A/C No. <u>2266</u> , Position No. <u>1</u>
	8/18/75	Baseline Emission Test
	11/4/75	"600-Hour" Emission Test
	1/4/76	Trimmed engine 35 clicks counterclockwise
	1/28/76	"1200-Hour" Emission Test
	2/25/76	Engine removed due to burner can shift
2/671220		Original Test A/C No. <u>2266</u> , Position No. <u>2</u>
	8/21/75	Baseline Emission Test
	11/4/75	"600-Hour" Emission Test
	1/4/76	Trimmed engine 18 clicks counterclockwise
	2/3/76	"1200-Hour" Emission Test
	5/18/76	"1800-Hour" Emission Test
	8/17/76	"2400-Hour" Emission Test
	8/25/76	Retrimmed engine
	11/3/76	"3000-Hour" Emission Test
3/671228		Original Test A/C No. <u>2266</u> , Position No. <u>3</u>
	8/21/75	Baseline Emission Test
	11/4/75	"600-Hour" Emission Test
	1/26/76	High bleed valve open, replaced valve
	2/3/76	"1200-Hour" Emission Test
	5/18/76	Engine removed due to metal in oil system
4/671142		Original Test A/C No. <u>2266</u> , Position No. <u>4</u>
	8/21/75	Baseline Emission Test
	11/4/75	"600-Hour" Emission Test
	12/29/75	Pneumatic bleed valve will not switch from "Auto" to "HI", replaced valve

Unit No./ Serial No.	Date	Item
4/671142 Continued	1/4/76	Trimmed engine 35 clicks counterclockwise
	1/29/76	EPR low - replaced PT ₇ line
	2/3/76	"1200-Hour" Emission Test
	5/18/76	"1800-Hour" Emission Test
	8/24/76	Retrimmed engine
	8/17/76	"2400-Hour" Emission Test
	11/3/76	"3000-Hour" Emission Test
5/671325		Original Test A/C No. <u>2270</u> , Position No. <u>1</u>
	8/19/75	Baseline Emission Test
	8/30/75	Accomplished FCU trim
	9/30/75	Pneumatic system inoperative in "Auto" replaced switch
	11/5/75	"600-Hour" Emission Test
	2/27/76	"1200-Hour" Emission Test
	5/26/76	"1800-Hour" Emission Test
	8/19/76	"2400-Hour" Emission Test
	10/16/76	FCU replaced
10/21/76	"3000-Hour" Emission Test	
6/671143		Original Test A/C No. <u>2270</u> , Position No. <u>2</u>
	8/19/75	Baseline Emission Test
	8/24/75	Engine removed due to foreign object damage, and reinstalled on the same aircraft and position
	8/30/75	Accomplished FCU trim
	9/12/75	Adjust fuel control
	11/5/75	"600-Hour" Emission Test
	12/16/75	Engine removed due to high oil consumption
7/671268		Original Test A/C No. <u>2270</u> , Position No. <u>3</u>
	8/19/75	Baseline Emission Test
	8/30/75	Accomplished FCU trim

Unit No./ Serial No.	Date	Item
7/67/268 Continued	11/5/75	"600-Hour" Emission Test
	2/27/76	"1200-Hour" Emission Test
	5/26/76	"1800-Hour" Emission Test
	8/19/76	"2400-Hour" Emission Test
		C-2 disk limit, removed from program
8/671306		Original Test A/C No. <u>2270</u> , Position No. <u>4</u>
	8/25/75	Baseline Emission Test
	8/30/75	Accomplished FCU trim
	11/5/75	"600-Hour" Emission Test
	2/27/76	"1200-Hour" Emission Test
	3/10/76	FCU replaced
	5/26/76	"1800-Hour" Emission Test
	8/19/76	"2400-Hour" Emission Test
	10/21/76	"3000-Hour" Emission Test
9/671315		Original Test A/C No. <u>2267</u> , Position No. <u>1</u>
	8/22/75	Baseline Emission Test
	9/16/76	Engine removed due to oil leak
10/671171		Original Test A/C No. <u>2267</u> , Position No. <u>2</u>
	8/22/75	Baseline Emission Test
	9/29/75	Engine removed due to burner can shift
11/671203		Original Test A/C No. <u>2267</u> , Position No. <u>3</u>
	8/22/75	Baseline Emission Test
	11/17/75	"600-Hour" Emission Test
	1/1/76	Trimmed engine 59 clicks clockwise
	2/17/76	"1200-Hour" Emission Test
	5/19/76	"1800-Hour" Emission Test
	6/1/76	Jet air bleed open
	8/10/76	"2400-Hour" Emission Test

Unit No./ Serial No.	Date	Item
11/671203 Continued	9/19/76	Trimmed engine
	10/19/76	"3000-Hour" Emission Test
12/671214		Original Test A/C No. <u>2267</u> , Position No. <u>4</u>
	8/26/	Baseline Emission Test
	11/17/75	"600-Hour" Emission Test
	2/17/76	"1200-Hour" Emission Test
	3/4/76	Engine removed from program due to oil can shift
13/671227		Original Test A/C No. <u>2266</u> , Position No. <u>1</u>
	8/28/75	Baseline Emission Test
	11/11/75	"600-Hour" Emission Test
	12/31/75	Rerigged to part power
	2/23/76	"1200-Hour" Emission Test
	3/1/76	Engine retrimmed
	5/25/76	"1800-Hour" Emission Test
	8/3/76	"2400-Hour" Emission Test
	8/19/76	Engine removed due to C-2 disk limit
	9/16/76	Engine reinstalled on A/C No. <u>2266</u> , Position No. <u>1</u>
11/3/76	"3000-Hour" Emission Test	
14/671197		Original Test A/C No. <u>2268</u> , Position No. <u>2</u>
	8/28/75	Baseline Emission Test
	11/18/75	"600-Hour" Emission Test
	12/31/75	Rerigged to part power
	2/23/76	"1200-Hour" Emission Test
	3/1/76	Engine retrimmed
	5/25/76	"1800-Hour" Emission Test
	8/3/76	"2400-Hour" Emission Test
	8/27/76	Engine retrimmed
	10/26/76	"3000-Hour" Emission Test

Unit No./ Serial No.	Date	Item
15/671293		Original Test A/C No. <u>2268</u> , Position No. <u>3</u>
	8/28/75	Baseline Emission Test
	8/31/75	Pneumatic system will not shift to "H" bleed in "Auto" position
	11/18/75	"600-Hour" Emission Test
	2/23/76	"1200-Hour" Emission Test
	3/1/76	Engine retrimmed
	5/26/76	"1800-Hour" Emission Test
	8/3/76	"2400-Hour" Emission Test
	8/27/76	Retrimmed engine
	10/6/76	Engine removed due to damaged compressor stators
16/671164		Original Test A/C No. <u>2268</u> , Position No. <u>4</u>
	8/28/75	Baseline Emission Test
	11/3/75	Engine removed from program due to high vibration
17/645691		Original Test A/C No. <u>2269</u> , Position No. <u>3</u>
	9/10/75	Baseline Emission Test
	11/19/75	"600-Hour" Emission Test
	2/9/76	Engine retrimmed
	3/5/76	"1200-Hour" Emission Test
	6/2/76	"1800-Hour" Emission Test
	8/20/76	"2400-Hour" Emission Test
	9/9/76	Rerigged throttle
	11/16/76	"3000-Hour" Emission Test
18/671297		Original Test A/C No. <u>2269</u> , Position No. <u>4</u>
	9/10/75	Baseline Emission Test
	10/9/75	Will not shift to high pneumatic, replaced switch
	11/19/75	"600-Hour" Emission Test
	12/23/76	Engine removed due to high oil consumption

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T_a	Ambient temperature	deg R
AMB PRESS	P_a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 60 percent N_2 nominal	
MODE 2		Idle "plus", initial - 64 percent N_2	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 percent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 percent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 percent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N_1	Rotational speed of low pressure turbine, given as a percent of design speed (7000 rpm)	percent
N2 SPEED	N_2	Rotational speed of high pressure turbine, given as a percent of design speed (9655 rpm)	percent
CORR N1	N_1'	N_1 speed corrected to standard ambient conditions (Ref 1) $N_1' = N_1 \times \sqrt{518.7/T_a}$	percent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (Ref 2, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28+0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4}} + 0.25a - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio, obtained iteratively from $(F/A)_{PF} = \frac{F \sqrt{TT/3600}}{W \times CD \times ARN \times A_{rat} \times EPR \times F_a}$ <p>where:</p> <p>EPR is obtained from the curve shown in Figure 1 for modes 1,2,7, and 8. Actual test data is used for the other modes.</p> <p>W (nozzle flow parameter) =</p> $\frac{M \sqrt{\gamma g/R} \sqrt{1 + \frac{\gamma-1}{2} M^2}}{\left(1 + \frac{\gamma-1}{2} M^2\right)^{\frac{\gamma}{\gamma-1}}}$ <p>M(nozzle discharge Mach Number) =</p> $\left[\frac{EPR \frac{\gamma-1}{\gamma} - 1}{\frac{\gamma-1}{2}} \right]^{1/2}$ <p>$g = 32.174 \text{ ft per sec}^2$</p>	

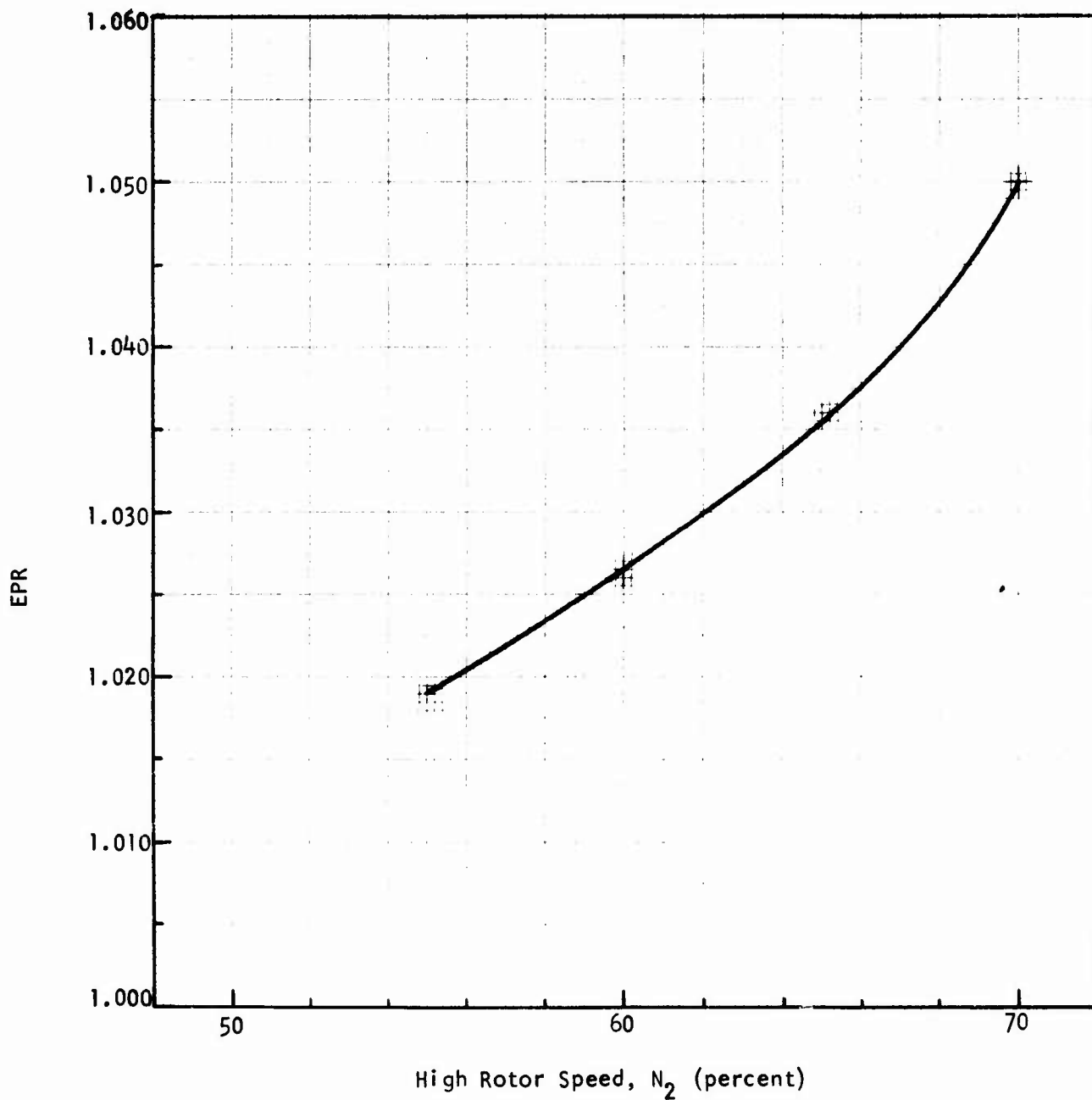


Figure 1. Mean EPR versus N_2 Curve in the Idle Regime

Name	Symbol	Description	Unit
PERF F/A Continued		<p>ARN(nozzle discharge area) = 538 sq in</p> <p>γ (nozzle specific heat ratio) = $1.3837 - 0.685 (F/A)_{PF}$ $-0.0000636 (T_{T7} - 950)$</p> <p>R(nozzle gas constant) = $53.342 + 4.797 (F/A)_{PF}$</p> <p>$A_{rat}$ (nozzle thermal growth ratio) = $1 + 0.000015 (T_{T7} - 200)$</p> <p>CD(nozzle discharge coefficient) = $0.88 + 0.0667 (EPR - 1)$</p> <p>Initially, $(F/A)_{CB}$ is used in the calculation of γ and R</p>	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust, obtained from $TH = TH' \times (P_a / 29.92)$ (Ref 1)	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times 518.7/T_a$	lbm per hr
COR CB F/A	$(F/A)_{CB}'$	Corrected carbon balance fuel-air ratio (Ref i) $(F/A)_{CB}' = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)_{PF}'$	Corrected performance fuel-air ratio (Ref 1) $(F/A)_{PF}' = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R

Name	Symbol	Description	Unit
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3 through 6 and from the curve shown in Fig 3 for modes 1, 2, 7 and 8)	lbf
CO2 CONC	CO ₂	Concentration of carbon dioxide	percent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	PPM
NOX CONC	NO _x	Concentration of NO _x	ppm
CO2 EI	EI _{CO2}	Emission index of carbon dioxide (Ref 3) $EI_{CO2} = \frac{M_{CO2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO2} = molecular weight of CO₂</p>	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO2} = molecular weight of NO₂</p>	lbm per 1000 lbm fuel

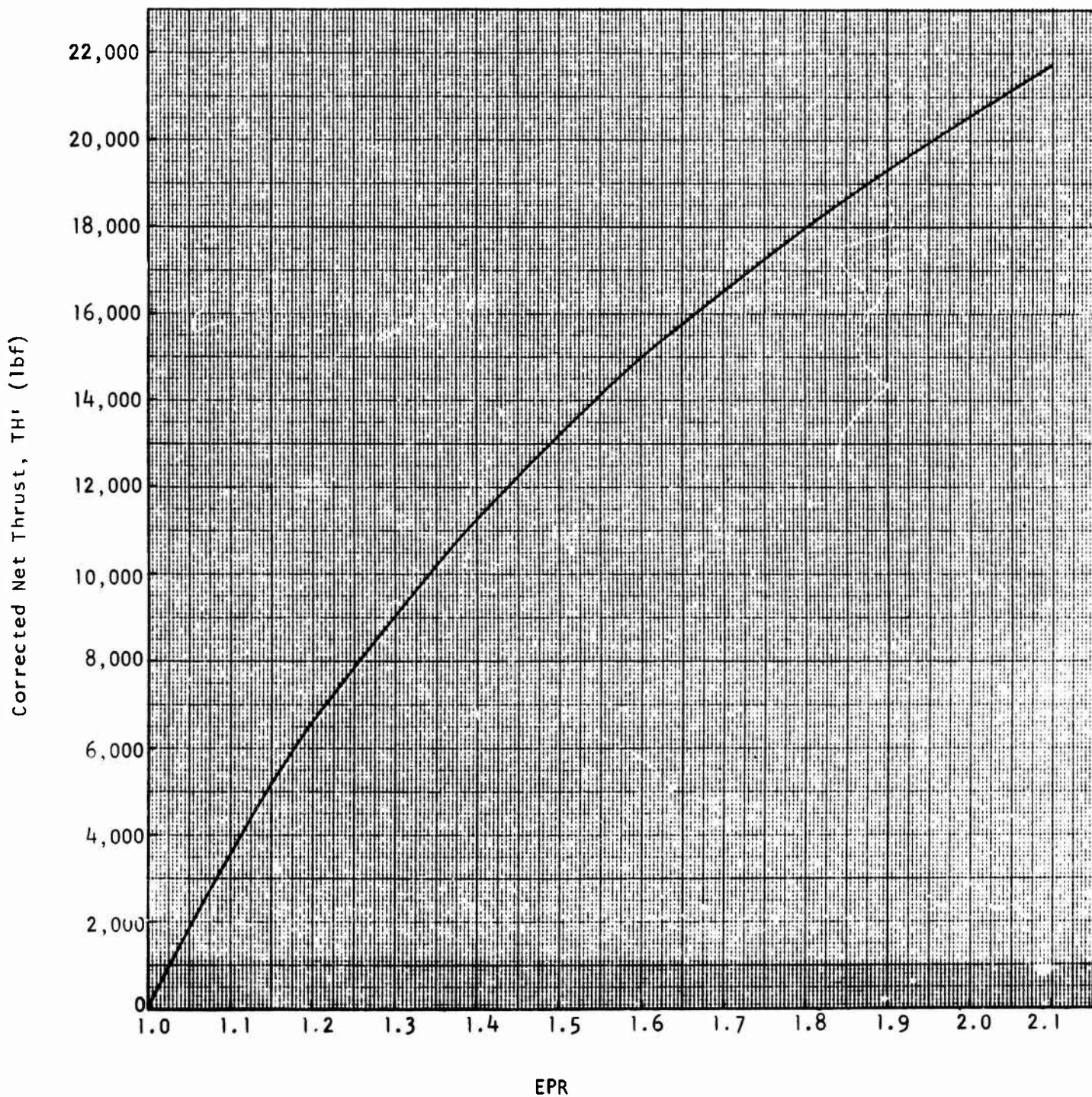


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed

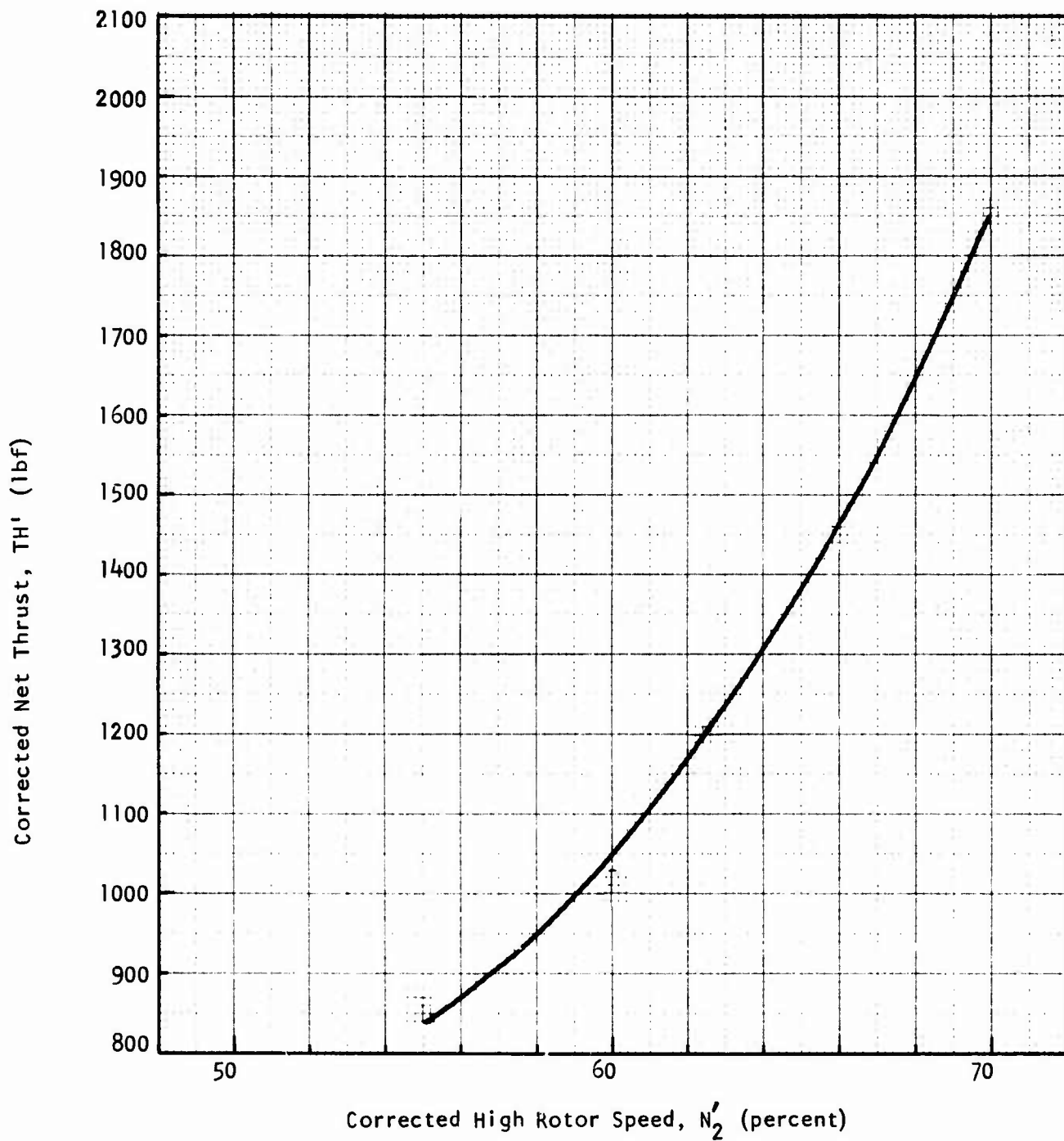


Figure 3. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = M_{NO_2} \times \frac{NO_x}{10^4} \times 1000$ $\frac{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	lbm per 1000 lbm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ <p>where RS = smoke spot reflectance RW = reflectance of clean filter paper</p>	
SMK NUMBER CORRECTED	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	lbm per 1000 lbm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	lbm per 1000 lbm fuel
NRE CNO EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	lbm per 1000 lbm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO_x}$	lbm per 1000 lbm fuel
FCO	F_{CO}	CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$	

Name	Symbol	Description
FCO Continued		$\begin{cases} \frac{e^{T_{b,obs}/2000}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} & \text{for modes 1,2,7,8} \\ \frac{e^{T_{b,obs}/(400 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} & \text{for modes 3,4,5,6} \end{cases}$ <p>where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$</p> $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see Fig 4)</p> <p>Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p>Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{ref} = 0.0162$ $N_{2,ref} = 9891 \text{ rpm}$ $P_{a,ref} = 29.92 \text{ in Hg abs}$ $T_{a,ref} = 520.2 \text{ deg R}$

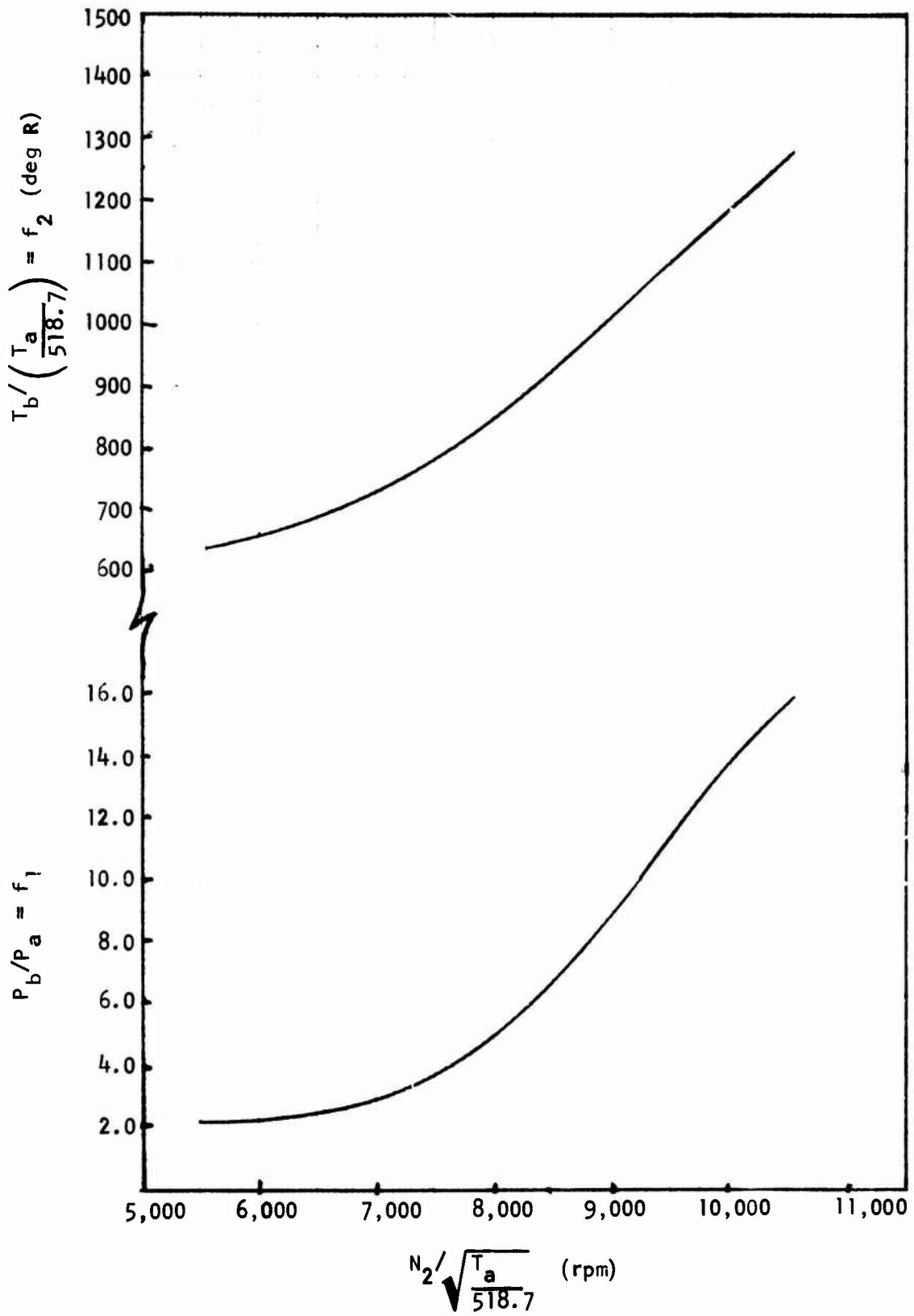


Figure 4. Typical Production Engine Performance

Name	Symbol	Description
FHC	F_{HC}	<p>HC emission factor</p> $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00714 (T_{b,obs} - T_{b,ref})}$
FNO	F_{NO}	<p>NO emission factor</p> $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00167 (T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	<p>Corrected CO emission factor</p> $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \begin{cases} e^{T_{b,std}/2000} & \text{for modes 1, 2, 7, and 8} \\ \frac{e^{T_{b,ref}/(400 - F/A_{ref}) \times 10^4}}{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}} & \text{for modes 3, 4, 5 and 6} \end{cases}$ <p>where:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p>

Name	Symbol	Description	Unit
STD FCO Continued		$P_{b, std} = P_{a, std} \cdot f_1 \left(N_{2, obs} / \sqrt{\frac{T_{a, obs}}{518.7}} \right)$ $T_{b, std} = \cdot f_2 \left(N_{2, obs} / \sqrt{\frac{T_{a, obs}}{518.7}} \right)$ <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H₂O/1bm dry air), or a value corrected to standard day condition.</p>	
STD FHC	$(F_{HC})_{std}$	<p>Corrected HC emission index</p> $(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1.8} \cdot \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{1/2} \cdot e^{0.00714 (T_{b, std} - T_{b, ref})}$	
STD FNO	$(F_{NO})_{std}$	<p>Corrected NO emission index</p> $(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1/2} \cdot e^{0.00167 (T_{b, std} - T_{b, ref})}$	
API		Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.	
H/C RATIO	a	Hydrogen-carbon ratio as determined using a Sanda-Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.	
FIA		Flourescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.	

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave high readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. Unit 13 was fitted with a low smoke combustor. This is reflected in the markedly different pollutant levels recorded.
5. The calibration gas concentrations for NO and NO_x were questionable for the nominal 50 ppm bottle for tests conducted between 10/10/75 and 6/14/76; and for the nominal 200 ppm bottle for tests conducted between 11/18/75 and 4/22/76. The test data was processed in two different ways: the first assuming the stated concentrations were correct; and the second using calculated values for the concentrations. This is discussed in detail in Appendix IV of Volume I. In the following tables, the concentrations and emission indexes of NO and NO_x are based on the stated calibration gas concentrations, while the NREC corrected emission indexes are based on the calculated values.
6. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode	Quantity
1	'1200-Hour'	4	N ₁
3	'Baseline'	4	N ₂
7	'Baseline'	2	EPR
13	'1200-Hour'	8	Fuel Flow

JT3D-7 * BASELINE TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DFG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1	16586.	0.	520.5	29.98	.009730
2	18963.	0.	520.2	29.92	.009690
3	17724.	0.	520.2	29.92	.009690
4	16688.	0.	520.2	29.95	.009680
5	16589.	0.	519.7	29.96	.008720
6	17087.	0.	519.7	29.96	.008720
7	17206.	0.	519.7	29.96	.008720
8	18194.	0.	517.2	29.94	.009310
9	16703.	0.	520.7	29.99	.010160
10	18681.	0.	520.7	30.00	.010160
11	15765.	0.	520.7	30.01	.010150
12	18082.	0.	516.2	29.91	.008410
13	17365.	0.	522.2	30.10	.009890
14	18613.	0.	522.2	30.11	.009890
15	18992.	0.	522.2	30.12	.009880
16	18616.	0.	522.2	30.12	.009880
17	25865.	0.	519.2	29.93	.008280
18	17340.	0.	519.2	29.93	.008280

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	60.00	31.95	59.90
2	33.00	60.00	32.95	59.91
3	33.00	60.00	32.95	59.91
4	32.50	60.00	32.45	59.91
5	33.00	60.00	32.97	59.94
6	33.00	61.00	32.97	60.94
7	32.40	61.00	32.37	60.94
8	31.80	59.90	31.85	59.99
9	32.20	60.00	32.14	59.88
10	-35.10	-62.10	-35.03	-61.98
11	31.80	60.00	31.74	59.88
12	32.20	61.00	32.28	61.15
13	32.40	60.50	32.29	60.30
14	33.00	61.00	32.89	60.80
15	33.00	60.00	32.89	59.80
16	33.90	61.00	33.79	60.80
17	32.80	60.00	32.78	59.97
18	32.20	60.00	32.18	59.97

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1170.	.8990	.8350	1032.	1.020	1015.
2	1270.	.8880	.9080	1032.	1.030	1017.
3	1240.	.8780	.8870	1032.	1.040	1017.
4	1275.	.8660	.9110	1032.	-1.050	1016.
5	1250.	.8680	.9060	1064.	1.020	1017.
6	1290.	.8790	.8880	1032.	1.020	1086.
7	1160.	.8170	.7980	1032.	1.030	1086.
8	1180.	.8240	.8310	996.	1.030	1019.
9	1245.	.8340	.8880	1032.	1.040	1014.
10	1340.	.8800	.9020	1068.	1.030	-1160.
11	1240.	.7890	.8840	1032.	-1.050	1013.
12	1230.	.7830	.8480	1032.	1.020	1103.
13	-1100.	.7890	-.7670	1032.	1.020	1035.
14	1160.	-.7800	.7880	1014.	1.030	1070.
15	1270.	.8340	.9210	1077.	1.030	1006.
16	1250.	.8100	.8630	1050.	1.030	1070.
17	1270.	.7880	.9230	1068.	1.030	1019.
18	1190.	-.7770	.8580	1050.	-1.050	1019.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1174.	.8960	.8320	1028.	1017.
2	1272.	.8850	.9060	1029.	1017.
3	1242.	.8760	.8840	1029.	1017.
4	1278.	.8630	.9080	1029.	1017.
5	1253.	.8670	.9050	1062.	1018.
6	1293.	.8770	.8860	1030.	1088.
7	1163.	.8150	.7970	1030.	1088.
8	1179.	.8260	.8340	999.	1020.
9	1250.	.8310	.8850	1028.	1016.
10	-1346.	.8770	.8980	1064.	-1163.
11	1246.	.7860	.8810	1028.	1016.
12	1227.	.7870	.8520	1037.	1103.
13	-1110.	.7830	-.7620	1025.	1041.
14	1171.	-.7740	.7820	1007.	1077.
15	1283.	.8280	.9150	1069.	1013.
16	1263.	.8050	.8570	1043.	1077.
17	1271.	.7870	.9220	1067.	1019.
18	1191.	-.7760	.8570	1049.	1019.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.551	1035.9	748.5	11.5	12.5
2	1.568	1006.3	631.4	6.2	12.0
3	1.542	1017.0	646.3	6.3	12.8
4	1.500	1051.8	683.9	3.7	11.7
5	1.488	1043.0	741.4	7.3	13.4
6	1.527	1022.6	693.0	6.2	12.6
7	1.432	925.7	608.2	5.2	11.7
8	1.434	935.4	642.5	6.8	13.1
9	1.449	1005.6	635.5	8.7	13.5
10	1.565	983.5	582.7	8.4	14.0
11	1.379	920.6	583.8	7.0	11.8
12	-1.351	951.8	631.2	7.5	12.4
13	1.500	-696.1	-266.1	11.0	13.8
14	-1.372	878.4	561.8	7.9	13.6
15	1.465	980.4	598.4	9.0	13.8
16	1.419	955.3	593.7	8.6	13.4
17	1.385	964.8	550.0	11.2	12.2
18	-1.374	913.6	530.3	10.6	12.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2607.	110.78	137.51	2.01	2.20	16.33
2	2665.	108.88	117.36	1.10	2.14	25.33
3	2650.	111.28	121.48	1.13	2.31	21.85
4	2617.	116.75	130.42	.67	2.13	16.89
5	2588.	115.46	141.00	1.33	2.44	21.27
6	2623.	111.79	130.15	1.12	2.26	17.51
7	2647.	108.92	122.94	1.01	2.26	18.67
8	2629.	109.15	128.81	1.30	2.51	22.87
9	2624.	115.91	125.83	1.64	2.56	17.73
10	2683.	107.32	109.24	1.51	2.51	14.94
11	2640.	112.17	122.21	1.41	2.37	19.87
12	2607.	116.92	133.20	1.51	2.51	14.46
13	-2870.	-84.74	-55.65	2.20	2.75	-6.62
14	2659.	108.33	119.03	1.60	2.76	15.75
15	2653.	112.98	118.47	1.71	2.61	15.47
16	2646.	113.35	121.01	1.69	2.61	14.57
17	2657.	117.74	115.32	2.25	2.44	18.45
18	2671.	113.08	112.76	2.15	2.44	17.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.1980	.0760	14.3950	.1970	.0740	17.2360
2	.1980	.0750	14.3840	.1970	.0740	17.2390
3	.1980	.0750	14.3860	.1970	.0740	17.2390
4	.1980	.0750	14.3960	.1970	.0740	17.2390
5	.1980	.0750	14.6520	.1970	.0740	17.2460
6	.2010	.0790	14.8390	.2000	.0780	17.4660
7	.2010	.0790	14.8390	.2000	.0780	17.4660
8	.1970	.0730	14.4170	.1970	.0740	17.2560
9	.1980	.0760	14.2840	.1970	.0740	17.2330
10	-.2050	-.0850	14.6710	-.2040	-.0820	-17.6960
11	.1980	.0760	14.2910	.1970	.0740	17.2330
12	.2000	.0770	14.8460	.2010	.0790	17.5120
13	.2000	.0790	14.5040	.1980	.0760	17.3240
14	.2020	.0810	14.6010	.2000	.0780	17.4340
15	.1990	.0770	14.4200	.1970	.0740	17.2140
16	.2020	.0810	14.6050	.2000	.0780	17.4340
17	.1980	.0750	14.7600	.1970	.0740	17.2520
18	.1980	.0750	14.7600	.1970	.0740	17.2520

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	111.25	140.43	2.41	2.63	16.33
2	109.12	119.09	1.31	2.56	25.33
3	111.54	123.31	1.35	2.77	21.85
4	117.11	132.62	.81	2.55	16.89
5	115.76	142.75	1.57	2.88	21.27
6	112.08	131.78	1.32	2.66	17.51
7	109.20	124.47	1.19	2.66	18.67
8	108.93	127.01	1.55	3.01	22.87
9	116.49	128.91	2.14	3.33	17.73
10	107.86	111.96	1.82	3.03	14.94
11	112.78	125.34	1.69	2.86	19.87
12	116.42	129.83	1.79	2.96	14.46
13	-85.59	-58.23	2.63	3.29	-6.62
14	109.45	124.68	1.91	3.30	15.75
15	114.18	124.15	2.04	3.11	15.47
16	114.55	126.83	2.01	3.12	14.57
17	117.87	115.96	2.63	2.85	18.45
18	113.19	113.39	2.51	2.85	17.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	35.20	64.00	35.14	63.89
2	37.00	-65.00	36.95	64.91
3	36.00	64.00	35.95	63.91
4	35.50	64.00	35.45	63.91
5	36.80	64.00	36.76	63.94
6	-37.50	-65.50	37.46	-65.44
7	36.50	-65.00	36.46	64.94
8	35.80	64.90	35.85	64.99
9	36.10	64.30	36.03	64.18
10	-38.50	-66.00	-38.43	-65.87
11	35.00	64.00	34.93	63.88
12	36.00	-65.00	36.09	65.16
13	35.60	64.50	35.48	64.28
14	37.30	-65.00	37.17	64.78
15	36.50	64.00	36.38	63.79
16	37.20	-65.00	37.08	64.78
17	36.90	-65.00	36.88	64.97
18	36.20	-65.00	36.18	64.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	1300.	-.9220	.8210	1059.	1.030	1297.
2	1390.	.8690	.8510	1048.	1.030	1372.
3	1360.	.8690	.8500	1032.	1.040	1301.
4	1380.	.8420	.8620	1032.	1.050	1299.
5	1360.	.8400	.8620	1064.	1.020	1301.
6	1440.	.8500	.8570	1032.	1.030	-1408.
7	1260.	.8000	.7650	1032.	1.030	1372.
8	1310.	.8070	.7840	996.	1.040	1377.
9	1360.	.8170	.8410	1032.	1.050	1317.
10	1450.	.8650	.8610	1068.	1.040	-1437.
11	1340.	.7680	.8350	1032.	1.050	1294.
12	1330.	.7670	.8080	1032.	1.030	1390.
13	-1240.	.7840	.7600	1032.	1.030	1320.
14	1320.	.7670	.7940	1023.	1.040	1354.
15	1390.	.8160	.8780	1068.	1.040	1283.
16	1340.	.7890	.8160	1050.	1.040	1354.
17	1390.	.7800	.8580	1068.	1.030	1376.
18	1320.	.7670	.8090	1050.	1.050	1376.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1305.	-.9190	.8190	1055.	1299.
2	1392.	.8660	.8490	1045.	1372.
3	1362.	.8650	.8480	1029.	1301.
4	1383.	.8400	.8600	1029.	1301.
5	1363.	.8380	.8600	1062.	1303.
6	1443.	.8490	.8560	1030.	-1410.
7	1263.	.7990	.7630	1030.	1374.
8	1309.	.8090	.7860	999.	1378.
9	1366.	.8140	.8380	1028.	1320.
10	1456.	.8620	.8570	1064.	-1441.
11	1347.	.7650	.8320	1028.	1298.
12	1326.	.7710	.8120	1037.	1390.
13	-1251.	.7790	-.7550	1025.	1327.
14	1333.	.7620	.7880	1016.	1363.
15	1404.	.8110	.8720	1061.	1292.
16	1354.	.7840	.8100	1043.	1363.
17	1391.	.7790	.8580	1067.	1376.
18	1321.	.7660	.8080	1049.	1376.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.646	953.4	-625.8	-12.3	13.9
2	1.575	878.1	517.5	6.0	13.3
3	1.566	926.5	532.2	6.6	13.7
4	1.506	932.0	540.2	3.6	12.4
5	1.478	943.3	611.0	7.8	14.4
6	1.539	885.1	502.1	6.5	13.8
7	1.438	832.5	506.2	5.3	12.7
8	1.443	823.3	531.5	6.3	14.5
9	1.457	890.9	527.7	8.8	14.3
10	1.585	868.7	451.4	8.4	15.1
11	1.380	816.5	471.7	7.2	12.9
12	-1.359	845.4	528.4	6.8	13.1
13	1.521	-604.7	-197.2	10.5	14.8
14	1.399	-764.7	424.9	7.7	14.8
15	1.468	882.6	501.0	9.3	14.5
16	1.419	857.9	481.8	8.4	14.0
17	1.398	858.7	492.0	11.5	13.1
18	1.380	806.8	479.0	9.3	12.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2695.	99.34	112.02	2.10	2.39	21.22
2	2736.	97.08	98.29	1.08	2.42	23.42
3	2720.	102.44	101.09	1.19	2.49	19.55
4	2700.	106.36	105.91	.67	2.33	18.97
5	2657.	107.92	120.10	1.46	2.70	-35.25
6	2732.	99.96	97.42	1.21	2.56	17.49
7	2712.	99.95	104.40	1.04	2.50	19.31
8	2701.	98.08	108.77	1.23	2.85	20.66
9	2694.	104.81	106.66	1.69	2.77	17.42
10	2764.	96.39	86.04	1.54	2.76	13.01
11	2713.	102.16	101.40	1.48	2.66	20.53
12	2677.	105.98	113.79	1.40	2.70	15.22
13	-2926.	-74.05	-41.48	2.11	2.98	-2.25
14	2754.	95.80	91.44	1.58	3.05	15.11
15	2715.	103.90	101.33	1.80	2.80	13.38
16	2715.	104.73	100.82	1.68	2.81	14.59
17	2706.	105.80	104.15	-2.32	2.66	16.78
18	2716.	101.08	103.10	1.91	2.61	17.52

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODF 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	.0970	15.2940	.2110	.0950	18.3110
2	.2160	.1040	15.5640	.2160	.1030	18.6510
3	.2120	.0970	15.2850	.2110	.0950	18.3160
4	.2120	.0970	15.2960	.2110	.0950	18.3160
5	.2120	.0970	15.5710	.2120	.0960	18.3260
6	-.2180	-.1080	16.0000	-.2180	-.1070	-18.8310
7	.2160	.1040	15.8560	.2160	.1030	18.6620
8	.2160	.1020	15.6060	.2160	.1040	18.6810
9	.2140	.1000	15.2580	.2130	.0970	18.4060
10	-.2210	-.1140	15.7370	-.2200	-.1110	-18.9800
11	.2120	.0980	15.1820	.2110	.0950	18.3060
12	.2160	.1020	15.8810	.2170	.1050	18.7360
13	.2150	.1030	15.4430	.2130	.0980	18.4420
14	-.2170	-.1070	15.5890	.2150	.1020	18.6090
15	.2130	.0990	15.3120	.2110	.0940	18.2750
16	-.2170	-.1070	15.5930	.2150	.1020	18.6090
17	.2160	.1040	15.9760	.2160	.1030	18.6730
18	.2160	.1040	15.9760	.2160	.1030	18.6730

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	99.77	114.44	2.52	2.86	21.22
2	97.30	99.79	1.30	2.89	23.42
3	102.68	102.65	1.43	2.99	19.55
4	106.70	107.73	.80	2.79	18.97
5	108.21	-121.62	1.72	3.18	-35.25
6	100.22	98.67	1.42	3.01	17.49
7	100.21	105.73	1.23	2.94	19.31
8	97.88	107.20	1.48	3.41	20.66
9	105.34	109.32	2.04	3.35	17.42
10	96.88	88.24	1.85	3.32	13.01
11	102.72	104.04	1.78	3.21	20.53
12	105.52	110.83	1.65	3.18	15.22
13	-74.79	-43.44	2.52	3.56	-2.25
14	96.80	95.87	1.88	3.65	15.11
15	105.01	106.27	2.15	3.35	13.38
16	105.85	105.77	2.00	3.35	14.59
17	105.91	104.75	2.72	3.11	16.78
18	101.19	103.69	2.23	3.05	17.52

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	101.70	102.20	101.53	102.03
2	102.00	102.00	101.85	101.85
3	102.00	102.00	101.85	101.85
4	101.00	102.50	100.85	102.35
5	102.10	102.00	102.00	101.90
6	102.90	101.00	102.80	100.90
7	102.80	-105.00	102.70	-104.90
8	101.90	103.00	102.05	103.15
9	101.30	102.00	101.11	101.80
10	102.00	101.00	101.80	100.81
11	102.00	103.20	101.80	103.00
12	102.20	103.00	102.45	103.25
13	102.30	-104.00	101.96	103.65
14	102.80	103.50	102.45	103.15
15	102.50	102.00	102.16	101.66
16	-103.20	103.10	-102.85	102.75
17	101.00	101.00	100.95	100.95
18	101.20	103.00	101.15	102.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	10340.	1.6060	1.4660	1431.	1.870	1A810.
2	10350.	1.6440	-1.4970	1464.	1.860	1A727.
3	10080.	1.6080	1.4210	1392.	1.860	1A724.
4	10100.	1.6020	1.4400	1428.	1.860	1A705.
5	10230.	1.6010	1.4570	1460.	-1.8A0	-1A947.
6	10230.	1.6760	1.4410	1428.	-1.8A0	-1A947.
7	10160.	1.6090	1.4150	1395.	-1.8A0	-1A947.
8	10120.	1.6250	1.4170	1392.	1.870	1A839.
9	9900.	1.5790	1.3960	1401.	1.860	1A680.
10	10190.	1.6480	1.4560	1437.	1.860	1A677.
11	10180.	1.6360	1.4490	1428.	1.860	1A66A.
12	10160.	1.6380	1.4340	1428.	-1.8A0	-1A978.
13	9870.	1.6600	1.3A30	1392.	1.860	1A615.
14	9940.	1.6010	1.3870	13A3.	1.860	1A606.
15	10250.	1.6370	1.4770	1473.	1.860	1A600.
16	10140.	1.6320	1.4470	1446.	1.860	1A600.
17	9950.	1.6510	1.4600	1437.	-1.820	-1A156.
18	9740.	1.6370	1.4070	1392.	-1.820	-1A156.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	10378.	1.6010	1.4610	1426.	18848.
2	10363.	1.6400	-1.4920	1459.	18724.
3	10095.	1.6030	1.4170	1388.	18724.
4	10125.	1.5970	1.4360	1424.	18724.
5	10254.	1.5980	1.4550	1457.	-18972.
6	10254.	1.6730	1.4380	1425.	-18972.
7	10183.	1.6060	1.4120	1393.	-18972.
8	10110.	1.6300	1.4210	1396.	18848.
9	9942.	1.5730	1.3910	1395.	18724.
10	10235.	1.6420	1.4500	1431.	18724.
11	10230.	1.6300	1.4430	1422.	18724.
12	10132.	1.6460	1.4410	1435.	-18972.
13	9961.	1.6490	1.3740	1382.	18724.
14	10037.	1.5900	1.3780	1373.	18724.
15	10353.	1.6260	1.4670	1463.	18724.
16	10242.	1.6210	1.4370	1436.	18724.
17	9958.	1.6500	1.4590	1435.	-18162.
18	9748.	1.6360	1.4050	1390.	-18162.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.383	22.0	-31.3	93.9	98.4
2	3.472	19.8	11.3	98.3	103.9
3	3.395	20.7	10.1	92.8	95.7
4	3.381	19.7	10.6	102.1	107.1
5	3.377	22.3	9.6	101.7	107.7
6	3.538	19.3	12.0	96.8	101.3
7	3.390	19.1	-25.5	97.5	100.3
8	3.427	18.7	10.0	101.3	103.8
9	3.327	17.6	6.9	107.8	112.8
10	3.475	20.1	7.7	91.0	97.0
11	3.448	18.7	11.1	98.7	102.2
12	3.458	19.0	7.7	98.7	101.0
13	3.506	14.7	4.6	-163.3	-170.1
14	3.378	18.5	8.8	101.6	107.1
15	3.450	19.9	-25.5	92.2	95.6
16	3.444	20.2	9.3	100.3	105.0
17	3.487	18.7	11.9	91.0	90.0
18	3.455	16.1	17.4	97.0	110.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3147.	1.30	-3.18	9.13	9.57	56.99
2	3153.	1.15	1.12	9.33	9.87	53.94
3	3153.	1.22	1.02	9.02	9.30	50.53
4	3153.	1.17	1.08	9.95	10.44	56.78
5	3151.	1.33	.98	9.92	10.50	44.73
6	3151.	1.09	1.17	9.01	9.43	51.56
7	3147.	1.13	-2.59	9.46	9.73	56.38
8	3149.	1.09	1.00	9.73	9.97	46.37
9	3148.	1.06	.72	10.66	-11.16	44.00
10	3147.	1.16	.76	8.62	9.19	45.32
11	-3147.	1.09	1.11	9.42	9.75	-49.21
12	3152.	1.10	.77	9.40	9.63	39.48
13	3153.	.84	.45	-15.36	-15.99	-14.32
14	3152.	1.10	.89	9.91	10.44	41.76
15	3147.	1.15	-2.54	8.80	9.12	-67.91
16	3151.	1.17	.93	9.59	10.05	52.70
17	3153.	1.08	1.18	8.60	8.60	62.91
18	3152.	.93	1.73	9.25	10.51	59.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	94.6490	95.2670	82.1580	91.9740	92.1430	98.0910
2	100.1580	91.3240	81.3780	97.8320	89.0580	97.2940
3	92.9340	91.3510	81.3880	90.8210	89.0580	97.2940
4	96.8290	100.8410	83.3590	94.5510	98.1150	99.5770
5	91.6680	91.6690	82.9850	90.2440	89.9110	97.5160
6	96.1870	75.3730	79.1820	94.6370	73.9450	93.0520
7	111.2950	126.6770	89.6620	109.5190	124.1980	105.3530
8	107.0160	111.5610	86.0870	-109.9870	114.3840	103.3000
9	87.8070	91.6380	80.7250	85.0120	88.2140	97.0730
10	90.8130	75.3490	77.0290	87.8080	72.5460	92.6270
11	112.1000	115.7120	85.3760	108.2770	111.1910	102.6030
12	109.9320	111.5940	87.6000	-115.0850	116.5920	103.7740
13	-127.6380	-133.2080	88.7130	-119.7130	124.0480	105.3230
14	107.7670	122.9750	87.0460	101.3390	114.4570	103.3160
15	99.1130	92.0570	81.2240	93.1410	85.7350	96.4120
16	110.2500	113.9440	85.4800	103.5400	106.0220	101.4410
17	91.2620	75.3280	79.8560	90.6480	75.6550	93.2660
18	109.7950	111.1220	87.6490	109.0420	110.1030	102.3620

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	1.34	-3.29	10.91	11.42	56.99
2	1.17	1.15	11.16	11.80	53.94
3	1.25	1.05	10.78	11.12	50.53
4	1.20	1.11	11.89	12.47	56.78
5	1.35	1.00	11.66	12.34	44.73
6	1.11	1.19	10.59	11.08	51.56
7	1.14	-2.64	11.12	11.43	56.38
8	1.07	.98	11.68	11.96	46.37
9	1.10	.74	-12.82	-13.42	44.00
10	1.20	.79	10.36	11.05	45.32
11	1.12	1.15	11.32	11.71	-69.21
12	1.05	.74	11.14	11.41	39.48
13	.90	.49	-18.23	-18.99	-14.32
14	1.17	.96	11.77	12.40	41.76
15	1.23	-2.73	11.29	11.70	-67.91
16	1.25	1.00	11.38	11.92	52.70
17	1.09	1.19	-10.05	-10.05	62.91
18	.94	1.75	10.80	12.27	59.22

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * BASELINE TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
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1	96.00	99.40	95.84	99.23
2	96.50	99.00	96.36	98.86
3	97.00	100.00	96.86	99.86
4	96.00	100.00	95.86	99.86
5	96.50	99.00	96.41	98.90
6	96.90	98.50	96.81	98.41
7	96.20	-101.80	96.11	-101.70
8	95.00	99.80	95.14	99.94
9	95.60	99.00	95.42	98.81
10	96.20	98.00	96.02	97.81
11	96.50	100.60	96.31	100.41
12	96.00	100.00	96.23	100.24
13	96.80	101.00	96.48	100.66
14	97.00	100.80	96.67	100.46
15	96.20	99.00	95.88	98.67
16	97.20	100.20	96.87	99.86
17	96.00	98.50	95.95	98.45
18	95.80	100.00	95.75	99.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	FUFL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	8420.	1.4170	1.3300	1332.	1.660	15794.
2	8460.	1.4580	1.3600	1374.	1.660	15829.
3	8380.	1.4340	1.3200	1320.	1.660	15826.
4	8500.	1.4100	1.3550	1356.	1.660	15810.
5	8400.	1.3990	1.3400	1358.	1.660	15805.
6	8330.	1.4650	1.3100	1320.	1.660	15805.
7	8120.	1.3780	1.2640	1293.	1.660	15805.
8	8040.	1.3940	-1.2300	-1248.	1.660	15818.
9	8050.	1.3790	1.2820	1356.	1.660	15789.
10	8270.	1.4300	1.3170	1356.	1.660	15786.
11	8370.	1.4300	1.3280	1347.	1.660	15779.
12	8170.	1.4130	1.2890	1323.	1.660	15831.
13	8080.	1.4650	1.2650	1320.	1.660	15734.
14	8140.	1.3990	1.2610	1293.	1.660	15726.
15	8340.	1.4440	1.3350	1383.	1.660	15721.
16	8300.	1.4440	1.3160	1356.	1.660	15721.
17	8250.	1.4640	1.3620	1383.	-1.630	-15383.
18	-7880.	1.4230	1.2710	1320.	-1.630	-15383.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8451.	1.4120	1.3250	1328.	15826.
2	8471.	1.4530	1.3560	1370.	15826.
3	8392.	1.4300	1.3160	1316.	15826.
4	8521.	1.4060	1.3520	1352.	15826.
5	8419.	1.3960	1.3370	1355.	15826.
6	8349.	1.4630	1.3080	1317.	15826.
7	8139.	1.3750	1.2610	1290.	15826.
8	8032.	1.3990	-1.2340	-1251.	15826.
9	8084.	1.3740	1.2770	1350.	15826.
10	8307.	1.4240	1.3120	1350.	15826.
11	8411.	1.4250	1.3220	1342.	15826.
12	8148.	1.4200	1.2950	1330.	15826.
13	8155.	1.4550	1.2560	1311.	15826.
14	8219.	1.3900	1.2520	-1284.	15826.
15	8424.	1.4350	1.3260	1373.	15826.
16	8384.	1.4340	1.3070	1347.	15826.
17	8257.	1.4630	1.3610	1381.	-15388.
18	-7886.	1.4210	1.2690	1318.	-15388.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.980	30.6	-19.2	80.4	85.4
2	3.072	25.6	-8.9	82.8	89.1
3	3.022	25.7	6.5	81.5	85.9
4	2.970	25.2	7.9	87.0	91.7
5	2.945	28.4	7.2	85.4	92.5
6	3.086	27.4	-8.8	79.7	86.8
7	2.897	26.9	-17.8	79.0	85.3
8	2.933	25.6	7.0	79.6	85.1
9	2.899	24.2	6.2	80.0	86.9
10	3.007	29.1	6.4	74.7	81.4
11	3.007	22.9	-8.9	82.4	86.8
12	2.975	28.0	6.7	80.0	84.4
13	3.089	-16.3	4.1	-114.4	-122.6
14	2.946	22.2	6.6	84.4	88.3
15	3.038	27.2	-17.8	77.6	81.1
16	3.041	26.9	6.8	81.7	87.4
17	3.086	26.2	-9.4	71.8	74.5
18	2.996	20.8	-12.6	73.6	89.9

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
1	3149.	2.06	-2.21	8.88	9.43	52.14
2	3153.	1.67	-1.00	8.89	9.57	50.13
3	3153.	1.71	.74	8.89	9.37	50.27
4	3153.	1.70	.92	9.65	10.18	52.79
5	3151.	1.93	.84	9.55	10.34	49.87
6	3150.	1.78	-.98	8.51	9.26	47.58
7	-3147.	1.86	-2.11	8.98	9.69	50.13
8	3149.	1.75	.82	8.94	9.55	47.84
9	-3147.	1.67	.73	9.08	9.86	45.65
10	-3146.	1.94	.73	8.17	8.90	44.99
11	-3146.	1.52	-1.02	9.01	9.49	50.92
12	3151.	1.89	.78	8.96	9.34	-40.70
13	3153.	-1.06	.45	-12.21	-13.09	-14.63
14	3151.	1.51	.77	9.44	9.87	-0.00
15	-3148.	1.79	-2.02	8.41	8.78	49.40
16	3151.	1.77	.77	8.85	9.47	46.08
17	3153.	1.71	-1.06	7.67	7.95	49.54
18	3152.	1.39	-1.44	8.10	9.89	44.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	49.7210	54.7530	71.9340	48.5240	53.0190	85.9080
2	51.0350	50.3400	70.5370	50.0390	49.1440	84.3540
3	54.4260	61.5820	74.0420	53.3590	60.0780	88.5280
4	52.2580	61.6930	74.0940	51.2110	60.0780	88.5280
5	46.3130	50.5540	71.9390	45.7010	49.6190	84.5490
6	49.1300	45.6670	70.2000	48.4600	44.8280	82.5080
7	59.4850	-88.1670	82.2150	58.6810	-86.4800	-96.6120
8	49.9660	59.7130	74.1110	51.0620	61.1540	88.9060
9	44.8200	50.4910	69.9620	43.6150	48.6730	84.1580
10	43.8390	40.9890	-66.5130	42.6330	39.5200	80.0080
11	57.6300	69.6790	75.6070	55.9680	67.0390	90.8890
12	52.6270	62.2120	76.1560	54.6010	64.8830	90.1780
13	-63.9700	75.5240	77.4420	-60.6070	70.5000	91.9940
14	55.8790	72.6560	76.7370	53.0480	67.7740	91.1270
15	50.0840	50.6510	70.3700	47.5220	47.2900	83.5770
16	56.7260	64.5150	74.5950	53.7800	60.1740	88.5610
17	49.0180	45.6580	70.8040	48.7300	45.2630	82.7000
18	53.4100	61.7870	76.1470	53.0970	61.2420	88.9370

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		2.11			-2.29			10.61			11.26		52.14	
2		1.70			-1.02			10.63			11.44		50.13	
3		1.74			.76			10.63			11.20		50.27	
4		1.74			.94			11.53			-12.16		52.79	
5		1.96			.86			11.22			-12.16		49.87	
6		1.81			1.00			10.00			10.88		47.58	
7		1.89			-2.16			10.55			11.38		50.13	
8		1.71			.80			10.72			11.45		47.84	
9		1.72			.76			10.93			11.86		45.65	
10		1.99			.76			9.83			10.70		44.99	
11		1.57			-1.06			10.84			11.41		50.92	
12		1.82			.75			10.49			11.06		-40.70	
13		-1.12			.48			-14.50			-15.55		-14.63	
14		1.59			.83			11.21			11.72		-0.00	
15		1.89			-2.16			9.98			10.43		49.40	
16		1.87			.83			10.51			11.24		46.08	
17		1.72			-1.06			8.95			9.29		49.54	
18		1.40			-1.46			9.45			11.55		44.32	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TFST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
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1	87.00	95.00	86.85	94.84
2	87.00	94.50	86.87	94.36
3	87.00	95.00	86.87	94.86
4	87.00	95.00	86.87	94.86
5	87.00	94.50	86.92	94.41
6	86.70	94.00	86.62	93.91
7	86.20	96.30	86.12	96.21
8	85.90	95.70	86.02	95.84
9	85.10	94.10	-84.94	93.92
10	86.10	93.50	85.93	93.32
11	87.00	96.00	86.83	95.82
12	85.80	95.50	86.01	95.73
13	86.50	96.00	86.21	95.68
14	87.00	95.80	86.71	95.48
15	86.40	94.50	86.11	94.18
16	-88.00	95.70	-87.70	95.38
17	86.00	94.00	85.96	93.95
18	86.00	95.50	85.96	95.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	6030.	1.2020	1.1900	1244.	1.400	11178.
2	6030.	-1.2470	1.1950	1248.	1.400	11202.
3	6040.	1.2150	1.1790	1212.	1.400	11200.
4	5930.	1.1930	1.1610	1221.	1.400	11189.
5	5920.	1.1750	1.1710	1248.	1.400	11185.
6	5800.	1.2190	1.1290	1208.	1.400	11185.
7	5660.	1.1510	1.0990	1203.	1.400	11185.
8	5770.	1.1790	1.1090	1176.	1.400	11194.
9	5560.	1.1560	1.0790	1203.	1.400	11174.
10	5780.	1.2020	1.1420	1248.	1.400	11172.
11	5910.	1.1770	1.1550	1221.	1.400	11166.
12	5540.	1.1710	1.0860	1221.	1.400	11204.
13	5600.	1.1920	1.0910	1221.	1.400	11135.
14	5630.	1.1490	1.0840	1194.	1.400	11129.
15	5840.	1.1990	1.1570	-1266.	1.400	11126.
16	5830.	1.1870	1.1430	1239.	1.400	11126.
17	5740.	1.2150	1.1670	1248.	-1.380	-10731.
18	5570.	1.1790	1.1240	1230.	-1.380	-10731.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	6052.	1.1980	1.1860	1240.	11200.
2	6038.	-1.2430	1.1910	1244.	11200.
3	6049.	1.2110	1.1760	1208.	11200.
4	5945.	1.1890	1.1580	1217.	11200.
5	5934.	1.1730	1.1690	1245.	11200.
6	5813.	1.2170	1.1270	1206.	11200.
7	5673.	1.1490	1.0970	1200.	11200.
8	5765.	1.1820	1.1130	1179.	11200.
9	5584.	1.1510	1.0750	1198.	11200.
10	5806.	1.1980	1.1380	1243.	11200.
11	5939.	1.1720	1.1500	1216.	11200.
12	5525.	1.1760	1.0910	1227.	11200.
13	5652.	1.1840	1.0840	1213.	11200.
14	5685.	-1.1410	1.0770	1186.	11200.
15	5899.	1.1910	1.1490	1257.	11200.
16	5889.	1.1790	1.1350	1230.	11200.
17	5745.	1.2140	1.1660	1247.	-10735.
18	5575.	1.1770	1.1230	1229.	-10735.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.520	65.9	-13.1	52.4	59.2
2	-2.618	54.8	-7.9	52.1	62.3
3	2.550	58.1	5.8	50.8	60.6
4	2.504	52.8	6.4	51.1	61.1
5	2.463	62.1	6.9	53.3	64.0
6	2.556	67.5	-8.4	49.7	60.3
7	2.410	65.7	-14.1	49.5	60.5
8	2.471	47.9	5.8	51.7	60.3
9	2.419	63.6	6.5	47.7	58.2
10	2.517	67.8	6.0	48.3	57.2
11	2.464	48.6	-7.5	51.2	59.9
12	2.450	-91.4	-8.9	45.8	58.0
13	2.504	-21.6	4.4	-70.2	-76.2
14	2.409	47.6	5.9	50.4	58.3
15	2.512	61.2	-13.9	48.8	56.9
16	2.489	62.7	6.5	49.2	59.5
17	2.550	60.6	-8.4	48.3	55.4
18	2.473	44.4	-9.8	51.6	59.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	3145.	5.23	-1.79	6.84	7.72	52.70
2	3149.	4.19	-1.04	6.55	7.84	53.33
3	3149.	4.57	.78	6.56	7.82	53.95
4	3149.	4.23	.89	6.72	8.04	52.37
5	3145.	5.04	.96	7.11	-8.54	48.92
6	3144.	5.28	-1.12	6.39	7.76	48.72
7	-3142.	5.45	-2.01	6.75	8.25	52.00
8	3145.	3.88	.80	6.88	8.02	-39.35
9	-3141.	5.25	.92	6.48	7.90	49.14
10	-3141.	5.38	.82	6.30	7.46	45.29
11	-3142.	3.95	-1.04	6.83	7.98	49.13
12	-3141.	-7.46	-1.25	6.14	7.77	-43.37
13	3152.	-1.73	.60	-9.24	-10.03	-14.59
14	3147.	3.95	.85	6.89	7.96	45.73
15	3143.	4.87	-1.90	6.38	7.44	45.07
16	3146.	5.04	.89	6.50	7.86	45.80
17	3148.	4.76	-1.14	6.23	7.15	50.13
18	3149.	3.60	-1.37	6.87	7.93	-43.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	22.4940	21.0940	56.9810	22.0430	20.4620	68.0780
2	22.5860	18.7410	55.3790	22.2250	18.3240	66.2510
3	22.8600	21.0480	56.9890	22.4950	20.5690	68.1660
4	22.2170	21.0860	57.0290	21.8510	20.5690	68.1660
5	20.5640	18.8480	56.5030	20.3370	18.5180	66.4240
6	20.6080	16.7620	54.8900	20.3770	16.4700	64.5300
7	24.2160	28.3740	62.4840	23.9460	27.8670	73.4480
8	23.6440	25.0980	60.0220	24.0600	25.6680	71.9810
9	19.1570	17.0870	53.6470	18.7330	16.5080	64.5660
10	19.0110	14.8130	-51.7880	18.5790	14.3100	62.3250
11	24.2460	26.4840	59.7720	23.6770	25.5340	71.8890
12	22.9200	24.0860	60.4650	23.5980	25.0550	71.5550
13	24.7340	26.4150	60.0030	23.6950	24.7570	71.3450
14	22.8790	25.2720	59.3630	21.9340	23.6680	70.5610
15	21.2010	18.7470	55.1570	20.3110	17.5650	65.5630
16	23.8100	24.7210	59.0470	22.8020	23.1400	70.1700
17	20.5090	16.7840	55.3870	20.4080	16.6470	64.7000
18	23.0540	23.7350	60.3240	22.9400	23.5380	70.4650

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

 MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNG EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	5.34	-1.85	8.17	9.22	52.70
2	4.26	-1.07	7.83	9.38	53.33
3	4.64	.79	7.85	9.35	53.95
4	4.30	.91	8.04	9.61	52.37
5	5.10	.98	8.36	-10.05	48.92
6	5.34	-1.14	7.51	9.12	48.72
7	5.51	-2.05	7.94	9.69	52.00
8	3.82	.78	8.25	9.62	-39.35
9	5.37	.95	7.80	9.51	49.14
10	5.51	.85	7.58	8.98	45.29
11	4.04	-1.08	8.21	9.60	49.13
12	-7.24	-1.20	7.27	9.20	-43.37
13	-1.81	.64	-10.99	-11.93	-14.59
14	4.13	.90	8.18	9.47	45.73
15	5.08	-2.03	7.58	8.84	45.07
16	5.26	.96	7.72	9.34	45.80
17	4.78	-1.15	7.28	8.35	50.13
18	3.61	-1.38	8.03	9.26	-43.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

 MODF 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	70.00	87.50	69.88	87.35
2	71.00	87.00	70.90	86.87
3	70.50	87.50	70.40	87.37
4	70.50	88.00	70.40	87.87
5	70.40	87.00	70.33	86.92
6	69.00	86.00	68.93	85.92
7	67.60	88.00	67.53	87.92
8	68.90	88.00	69.00	88.13
9	-66.10	85.60	-65.97	85.44
10	68.10	85.50	67.97	85.34
11	69.00	88.00	68.87	87.83
12	70.00	89.00	70.17	-89.22
13	67.30	87.60	67.67	87.31
14	68.10	87.20	67.87	86.91
15	68.80	86.20	68.57	85.91
16	68.90	87.10	68.67	86.81
17	70.40	87.00	70.37	86.96
18	69.20	88.00	69.17	87.96

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF

1	3380.	.9850	.9730	1107.	1.170	5624.
2	3450.	-1.0000	1.0010	1122.	1.170	5636.
3	3430.	.9900	.9790	1086.	1.170	5635.
4	3450.	.9890	.9920	1104.	1.170	5629.
5	3390.	.9460	.9790	1115.	1.170	5627.
6	3300.	.9570	.9370	1077.	1.170	5627.
7	3060.	.9390	.8730	1086.	1.170	5627.
8	3220.	.9180	.9110	1068.	1.170	5632.
9	-2990.	-.8710	.8480	1077.	1.170	5622.
10	3160.	.9630	.9110	1113.	1.170	5621.
11	3240.	.8990	.9300	1104.	1.170	5618.
12	3360.	.9400	.9710	1113.	1.170	5637.
13	3040.	.9460	.8700	1104.	1.170	5602.
14	3040.	.8990	.8590	1077.	1.170	5599.
15	3240.	.9470	.9410	-1140.	1.170	5598.
16	3120.	.9150	.8920	1104.	1.170	5598.
17	3380.	.9430	1.0190	-1140.	-1.160	-5328.
18	3190.	.9040	.9500	1113.	-1.160	-5328.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODF 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	3392.	.9820	.9690	1104.	5635.
2	3454.	.9970	.9980	1118.	5635.
3	3435.	.9880	.9770	1083.	5635.
4	3458.	.9870	.9890	1101.	5635.
5	3398.	.9440	.9770	1112.	5635.
6	3368.	.9550	.9350	1075.	5635.
7	3067.	.9370	.8710	1084.	5635.
8	3217.	.9210	.9140	1071.	5635.
9	-3003.	-.8670	-.8450	1073.	5635.
10	3174.	.9590	.9070	1108.	5635.
11	3256.	.8950	.9260	1099.	5635.
12	3351.	.9450	.9760	1118.	5635.
13	3062.	.9400	.8640	1096.	5635.
14	3070.	.8930	.8530	1069.	5635.
15	3273.	.9410	.9350	1132.	5635.
16	3151.	.9080	.8860	1056.	5635.
17	3383.	.9430	1.0180	1139.	-5330.
18	3193.	.9030	.9490	1112.	-5330.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.046	177.3	20.9	-35.3	37.0
2	2.076	190.8	21.3	31.1	36.5
3	2.058	169.9	17.6	30.6	36.6
4	2.056	174.2	18.8	26.0	37.0
5	1.960	182.6	18.9	33.5	-38.8
6	1.981	200.1	24.2	30.8	35.4
7	1.946	169.9	23.7	29.1	35.3
8	1.908	132.3	12.0	26.1	34.8
9	-1.792	-226.4	-29.3	26.7	31.5
10	1.992	198.1	20.3	30.4	34.6
11	1.865	138.3	13.5	28.4	33.9
12	1.949	179.9	21.2	25.5	36.1
13	1.977	-64.5	-5.9	33.0	38.3
14	1.867	154.6	14.7	29.6	33.9
15	1.963	176.4	23.0	28.7	35.2
16	1.894	182.4	20.9	24.3	34.0
17	1.961	157.1	16.3	29.2	34.3
18	1.877	143.1	18.1	25.4	34.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3122.	17.22	3.49	5.64	5.91	44.59
2	3120.	18.25	3.50	4.89	5.74	48.67
3	3124.	16.41	2.93	4.86	5.80	46.43
4	3123.	16.84	3.12	4.13	5.87	45.48
5	3118.	18.48	3.28	5.57	-6.44	40.19
6	3113.	20.02	4.16	5.05	5.82	-0.00
7	3117.	17.32	4.16	4.87	5.91	43.07
8	3126.	13.79	2.15	4.48	5.96	43.45
9	-3097.	-24.91	-5.54	4.82	5.69	39.07
10	3111.	19.70	3.47	4.97	5.64	36.85
11	3121.	14.73	2.48	4.98	5.94	42.11
12	3117.	18.31	3.71	4.27	6.04	36.45
13	-3143.	-6.52	-1.03	5.49	-6.37	-6.31
14	3123.	16.46	2.68	5.17	5.92	38.08
15	3117.	17.83	4.00	4.77	5.85	36.50
16	3116.	19.09	3.75	4.18	5.85	35.81
17	3125.	15.94	2.84	4.86	5.72	39.89
18	3125.	15.16	3.29	4.43	6.02	-33.96

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	7.7000	3.7200	37.2540	7.5760	3.6190	44.5400
2	7.3970	3.3050	36.2200	7.3060	3.2400	43.3570
3	7.7310	3.7120	37.2590	7.6340	3.6370	44.5930
4	8.1540	4.1690	38.3350	8.0450	4.0770	45.8470
5	7.0220	3.3240	36.9540	6.9590	3.2720	43.4600
6	6.3650	2.6260	34.8920	6.3090	2.5860	41.0370
7	7.7580	4.1830	39.0770	7.6880	4.1160	45.9540
8	7.6400	4.2420	38.8140	7.7400	4.3270	46.5180
9	-5.6080	2.3740	-33.1160	-5.5120	2.3030	39.8930
10	6.0450	2.3180	-32.9240	5.9370	2.2480	39.6580
11	7.4520	4.1730	37.9980	7.3150	4.0380	45.7400
12	-8.7470	-5.4350	41.9780	-8.9490	-5.6330	-49.6350
13	7.4740	3.7950	37.3030	7.2260	3.5810	44.4240
14	6.8470	3.4620	36.4850	6.6240	3.2650	43.4370
15	6.4320	2.7370	34.4570	6.2190	2.5820	41.0210
16	6.8750	3.3850	36.2870	6.6480	3.1900	43.1930
17	7.0100	3.3280	37.2850	6.9820	3.3040	43.5630
18	7.4970	4.1870	39.4240	7.4670	4.1560	46.0610

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	17.50	3.59	6.74	7.06	44.59
2	18.48	3.57	5.85	6.87	48.67
3	16.62	2.99	5.81	6.94	46.43
4	17.07	3.20	4.94	7.02	45.48
5	18.64	3.34	6.55	-7.58	40.19
6	20.20	4.23	5.94	6.85	-0.00
7	17.48	4.22	5.73	6.95	43.07
8	13.62	2.10	5.37	7.15	43.45
9	-25.34	-5.71	5.81	6.85	39.07
10	20.06	3.58	5.98	6.80	36.85
11	15.01	2.56	5.99	7.15	42.11
12	17.89	3.58	5.05	7.14	36.45
13	-6.74	1.09	6.54	-7.59	-6.31
14	17.02	2.85	6.16	7.05	38.08
15	18.45	4.24	5.67	6.96	36.50
16	19.74	3.98	4.98	6.96	35.81
17	16.00	2.86	5.68	6.68	39.89
18	15.22	3.32	5.17	7.03	-33.96

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	35.50	64.20	35.44	64.09
2	35.50	64.00	35.45	63.91
3	36.00	64.00	35.95	63.91
4	35.00	64.00	34.95	63.91
5	35.80	-63.00	35.77	-62.94
6	36.00	64.00	35.97	63.94
7	35.00	64.00	34.97	63.94
8	34.50	-63.00	34.55	63.09
9	35.80	64.00	35.73	63.88
10	-38.90	-66.00	-38.83	-65.87
11	34.50	64.00	34.43	63.88
12	35.00	-65.00	35.08	-65.16
13	35.20	-64.50	35.08	64.28
14	-37.00	-65.00	36.88	64.78
15	35.90	64.00	35.78	63.79
16	36.10	-65.00	35.98	64.78
17	35.90	64.00	35.88	63.97
18	35.10	64.00	35.08	63.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1220.	.7970	.7570	1032.	1.030	1311.
2	1315.	.8150	.8220	1032.	1.030	1301.
3	1300.	.8230	.7990	996.	1.050	1301.
4	1350.	.7970	.8430	1032.	1.050	1299.
5	1280.	.7830	.8310	1050.	1.020	-1230.
6	1350.	.8130	.8340	1010.	1.030	1301.
7	1180.	.7660	.7370	1032.	1.030	1301.
8	1230.	.7910	.7790	996.	1.030	1242.
9	1310.	.7550	.8100	1014.	1.045	1295.
10	-1430.	.8310	.8420	1050.	1.040	-1437.
11	1270.	.7310	.7850	1014.	-1.060	1294.
12	1240.	.7220	.7500	1023.	1.020	-1390.
13	1200.	.7450	.7380	1041.	1.040	1320.
14	1270.	-.7190	.7570	1005.	1.050	1354.
15	1290.	.7770	.8150	1068.	1.040	1283.
16	1240.	.7550	.7480	1032.	1.040	1354.
17	1330.	.7690	.8450	1068.	1.030	1305.
18	1230.	.7390	.7820	1068.	-1.060	1305.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF

1	1225.	.7950	.7540	1028.	1314.
2	1317.	.8120	.8200	1029.	1301.
3	1302.	.8200	.7970	993.	1301.
4	1353.	.7950	.8410	1029.	1301.
5	1283.	.7820	.8290	1048.	-1231.
6	1353.	.8110	.8330	1008.	1303.
7	1183.	.7650	.7350	1030.	1303.
8	1229.	.7930	.7810	999.	1242.
9	1316.	.7520	.8070	1010.	1298.
10	-1436.	.8280	.8390	1046.	-1441.
11	1276.	.7280	.7820	1010.	1298.
12	1237.	.7260	.7540	1028.	-1390.
13	1211.	.7400	.7330	1034.	1327.
14	1282.	-.7150	.7520	998.	1363.
15	1303.	.7710	.8090	1061.	1292.
16	1252.	.7500	.7430	1025.	1363.
17	1331.	.7680	.8440	1067.	1305.
18	1231.	.7380	.7810	1067.	1305.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.434	849.7	495.9	13.1	14.2
2	1.482	844.2	460.7	9.5	14.0
3	1.489	872.5	483.8	9.4	14.0
4	1.450	855.5	443.9	6.7	12.8
5	1.382	902.0	-547.2	10.4	14.5
6	1.471	869.8	468.9	10.6	14.6
7	1.391	799.5	435.9	9.6	13.6
8	1.438	808.9	445.4	9.9	14.3
9	1.363	822.1	431.3	11.0	14.7
10	-1.546	806.4	362.9	12.8	16.0
11	1.342	755.3	363.3	10.5	13.8
12	-1.292	788.7	460.0	9.2	13.3
13	1.448	-604.9	-169.1	12.0	14.6
14	1.327	-716.1	-348.9	12.4	15.3
15	1.396	857.3	470.2	10.6	14.4
16	1.353	822.9	475.0	10.1	13.9
17	1.391	843.3	442.9	11.9	13.8
18	1.352	746.4	394.2	9.8	13.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2716.	102.40	102.67	2.60	2.81	19.44
2	2746.	99.56	93.34	1.83	2.71	25.66
3	2732.	101.88	97.05	1.80	2.69	18.92
4	2744.	103.07	91.87	1.32	2.53	22.27
5	-2665.	-110.69	-115.35	2.10	2.93	16.78
6	2733.	102.82	95.23	2.06	2.84	16.44
7	2741.	100.28	93.93	1.99	2.80	18.22
8	2744.	98.23	92.93	1.97	2.86	19.54
9	2728.	104.69	94.35	2.31	3.07	15.82
10	-2807.	93.18	-72.03	2.43	3.04	13.65
11	2770.	99.26	82.03	2.27	2.98	19.95
12	2702.	105.02	105.23	2.02	2.91	14.10
13	-2931.	-77.94	-37.43	2.55	3.09	-3.50
14	2786.	95.66	80.07	2.71	3.37	16.01
15	2715.	106.10	99.98	2.16	2.93	13.78
16	2706.	104.77	103.89	2.12	2.90	14.59
17	2732.	105.39	95.09	2.44	2.83	17.51
18	2764.	97.09	88.11	2.09	2.93	12.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2130	.0990	15.3500	.2120	.0970	18.3780
2	.2120	.0970	15.2840	.2110	.0950	18.3160
3	.2120	.0970	15.2850	.2110	.0950	18.3160
4	.2120	.0970	15.2960	.2110	.0950	18.3160
5	-.2080	.0900	15.2890	-.2070	-.0880	-17.9940
6	.2120	.0970	15.5710	.2120	.0960	18.3260
7	.2120	.0970	15.5710	.2120	.0960	18.3260
8	-.2080	.0880	15.0760	.2080	.0890	18.0450
9	.2120	.0970	15.1750	.2110	.0950	18.3060
10	-.2210	-.1140	15.7370	-.2200	-.1110	-18.9800
11	.2120	.0980	15.1820	.2110	.0950	18.3060
12	-.2160	.1020	15.8810	-.2170	-.1050	-18.7360
13	.2150	.1030	15.4430	.2130	.0980	18.4420
14	-.2170	-.1070	15.5890	.2150	.1020	18.6090
15	.2130	.0990	15.3120	.2110	.0940	18.2750
16	-.2170	-.1070	15.5930	.2150	.1020	18.6090
17	.2120	.0960	15.6880	.2120	.0960	18.3370
18	.2120	.0960	15.6880	.2120	.0960	18.3370

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	102.85	104.90	3.11	3.36	19.44
2	99.79	94.75	2.20	3.25	25.66
3	102.13	98.55	2.16	3.23	18.92
4	103.40	93.46	1.59	3.03	22.27
5	-110.97	-116.81	2.47	3.45	16.78
6	103.09	96.44	2.42	3.34	16.44
7	100.54	95.12	2.34	3.30	18.22
8	98.03	91.61	2.35	3.42	19.54
9	105.21	96.70	2.79	3.70	15.82
10	93.66	-73.87	2.93	3.66	13.65
11	99.81	84.17	2.73	3.59	19.95
12	104.57	102.49	2.38	3.44	14.10
13	-78.72	-39.20	3.04	3.69	-3.50
14	96.66	83.95	3.24	4.02	16.01
15	107.24	104.86	2.57	3.50	13.78
16	105.89	108.99	2.53	3.46	14.59
17	105.50	95.64	2.85	3.31	17.51
18	97.20	88.61	2.45	3.42	12.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	61.00	32.94	60.90
2	33.00	61.00	32.95	60.91
3	33.50	61.00	33.45	60.91
4	33.00	61.00	32.95	60.91
5	33.50	60.00	33.47	59.94
6	33.60	61.00	33.57	60.94
7	33.00	61.00	32.97	60.94
8	32.90	60.50	32.95	60.59
9	33.00	61.00	32.94	60.88
10	-35.00	62.00	-34.93	61.88
11	32.20	60.50	32.14	60.38
12	33.00	62.00	33.08	62.15
13	32.30	61.00	32.19	60.80
14	33.20	61.00	33.09	60.80
15	33.00	50.20	32.89	60.00
16	34.20	62.00	34.09	61.79
17	32.90	60.00	32.88	59.97
18	32.90	60.00	32.88	59.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1160.	.8410	.7980	1032.	1.030	1082.
2	1250.	.8440	.8620	1032.	1.030	1086.
3	1200.	.8480	.8130	996.	1.050	1086.
4	1280.	.8290	.8810	1032.	1.050	1085.
5	1230.	.8180	.8860	1050.	1.020	1017.
6	1290.	.8380	.8860	1028.	1.020	1086.
7	1150.	.7910	.7910	1032.	1.030	1086.
8	1170.	.7990	.8070	996.	1.030	1062.
9	1240.	.7800	.8450	1014.	1.040	1081.
10	1310.	.8550	.8810	1059.	1.030	1153.
11	1200.	.7650	.8320	1014.	-1.060	1044.
12	1220.	.7520	.8090	1023.	1.020	-1175.
13	1110.	.7640	.7600	1032.	1.030	1071.
14	1160.	.7530	.7810	996.	1.040	1070.
15	1240.	.8030	.8850	1059.	1.030	1013.
16	1220.	-.7430	.8070	1032.	1.030	1141.
17	1260.	.7840	.9080	1050.	1.030	1019.
18	1160.	.7600	.8360	1050.	-1.060	1019.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1164.		.8380	.7950	1028.	1085.
2	1252.		.8420	.8590	1029.	1086.
3	1202.		.8460	.8100	993.	1086.
4	1283.		.8260	.8790	1029.	1086.
5	1233.		.8160	.8840	1048.	1018.
6	1293.		.8370	.8850	1026.	1088.
7	1153.		.7900	.7900	1030.	1088.
8	1169.		.8020	.8090	999.	1062.
9	1245.		.7770	.8420	1010.	1084.
10	1316.		.8510	.8780	1055.	1155.
11	1206.		.7630	.8290	1010.	1048.
12	1217.		.7550	.8130	1028.	1175.
13	1120.		.7590	.7550	1025.	1077.
14	1171.		.7480	.7750	989.	1077.
15	1252.		.7970	.8790	1052.	1020.
16	1232.		-.7380	.8010	1025.	1149.
17	1261.		.7830	.9080	1049.	1019.
18	1161.		.7590	.8350	1049.	1019.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.474	949.9	633.5	12.1	13.5
2	1.499	933.3	575.7	8.4	13.2
3	1.499	960.0	599.7	8.2	13.0
4	1.468	956.0	563.2	5.6	11.6
5	1.411	977.9	-665.9	9.4	13.6
6	1.480	949.5	590.4	9.0	13.3
7	1.412	865.9	517.1	8.3	12.4
8	1.422	874.9	533.4	8.4	13.9
9	1.364	920.2	573.4	10.0	13.8
10	1.541	929.9	503.0	11.2	14.6
11	1.371	845.0	473.1	9.0	12.7
12	-1.311	863.9	576.8	7.8	12.4
13	1.469	-661.5	-212.5	11.3	14.1
14	1.342	829.7	490.7	10.4	14.0
15	1.410	935.1	579.5	9.3	13.5
16	-1.299	881.0	549.0	8.7	12.0
17	1.382	922.9	550.8	10.9	12.9
18	1.357	827.7	490.0	8.7	13.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	2646.	108.56	124.38	2.26	2.53	18.75
2	2682.	106.26	112.62	1.56	2.47	25.17
3	2667.	108.73	116.68	1.53	2.41	16.93
4	2676.	110.88	112.22	1.07	2.21	20.88
5	-2606.	114.98	-134.51	1.81	2.63	17.53
6	2666.	108.86	116.28	1.69	2.50	17.85
7	2695.	105.17	107.90	1.65	2.48	17.50
8	2686.	105.20	110.19	1.67	2.75	21.07
9	2640.	113.35	121.34	2.02	2.80	17.17
10	2721.	104.49	97.11	2.06	2.69	14.57
11	2705.	106.09	102.06	1.86	2.61	19.52
12	2634.	110.51	126.75	1.64	2.60	14.06
13	-2899.	-83.11	-45.86	2.33	2.91	-4.27
14	2694.	105.99	107.68	2.18	2.94	15.45
15	2653.	111.99	119.23	1.83	2.66	14.52
16	2642.	114.02	122.08	1.84	2.54	15.78
17	2662.	113.14	115.99	2.20	2.60	17.04
18	2696.	104.69	108.43	1.80	2.69	12.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2010	.0800	14.5790	.2000	.0780	17.4570
2	.2010	.0790	14.5680	.2000	.0780	17.4600
3	.2010	.0790	14.5700	.2000	.0780	17.4600
4	.2010	.0790	14.5800	.2000	.0780	17.4800
5	.1980	.0750	14.6520	.1970	.0740	17.2460
6	.2010	.0790	14.8390	.2000	.0780	17.4660
7	.2010	.0790	14.8390	.2000	.0780	17.4660
8	.1990	.0760	14.5280	.1990	.0770	17.3880
9	.2010	.0800	14.4670	.2000	.0780	17.4530
10	.2040	.0840	14.6520	.2030	.0820	17.6740
11	.2000	.0780	14.3820	.1990	.0760	17.3430
12	.2030	.0810	15.0340	.2040	.0830	17.7350
13	.2020	.0810	14.5960	.2000	.0780	17.4340
14	.2020	.0810	14.6010	.2000	.0780	17.4340
15	.2000	.0780	14.4570	.1970	.0750	17.2580
16	-.2050	.0860	14.7900	.2030	.0820	17.6550
17	.1980	.0750	14.7600	.1970	.0740	17.2520
18	.1980	.0750	14.7600	.1970	.0740	17.2520

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * BASELINE TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	109.03	127.03	2.71	3.03	18.75
2	106.51	114.28	1.87	2.96	25.17
3	108.99	118.45	1.83	2.89	16.93
4	111.23	114.12	1.28	2.65	20.88
5	115.28	-135.18	2.13	3.10	17.53
6	109.14	117.74	1.99	2.94	17.85
7	105.44	109.25	1.94	2.92	17.50
8	104.98	108.65	2.00	3.29	21.07
9	113.92	124.31	2.44	3.37	17.17
10	105.02	99.53	2.49	3.24	14.57
11	106.67	104.68	2.25	3.15	19.52
12	110.04	123.53	1.94	3.07	14.06
13	-83.94	-47.99	2.78	3.47	-4.27
14	107.09	112.79	2.60	3.51	15.45
15	113.18	124.95	2.18	3.17	14.52
16	115.24	127.97	2.20	3.03	15.78
17	113.26	116.64	2.57	3.04	17.04
18	104.80	109.04	2.10	3.15	12.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 600 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
----	-----	-----	-----	-----	-----
1	17235.	649.	514.7	29.98	.008120
2	19598.	635.	514.7	29.98	.008120
3	18359.	635.	514.7	29.98	.008120
4	17323.	635.	514.7	29.98	.008120
5	17198.	609.	520.5	29.99	.007970
6	17540.	453.	520.5	29.99	.007970
7	17815.	609.	520.5	30.00	.007970
8	18766.	572.	520.5	30.00	.007970
11	16419.	654.	510.7	30.15	.003540
12	18701.	619.	510.7	30.15	.003540
13	17927.	562.	519.7	30.29	.006830
14	19210.	597.	513.7	30.16	.003870
15	19589.	597.	513.7	30.17	.003870
17	26398.	533.	513.7	30.22	.004320
18	17873.	533.	513.7	30.22	.004320

JT30-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	60.00	33.13	60.23
2	33.00	60.00	33.13	60.23
3	33.50	60.00	33.63	60.23
4	33.00	60.50	33.13	60.73
5	33.50	60.50	33.44	60.40
6	33.00	60.50	32.94	60.40
7	32.00	60.00	31.95	59.90
8	32.00	60.20	31.95	60.10
11	33.00	61.00	33.26	61.48
12	32.00	60.50	32.25	60.97
13	33.00	61.00	32.97	60.94
14	33.00	61.00	33.16	61.30
15	33.50	60.00	33.66	60.29
17	32.00	-59.00	32.16	59.29
18	33.00	61.00	33.16	61.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1220.	-.9780	.8710	1032.	1.020	1035.
2	1270.	.8540	.9220	1068.	1.020	1035.
3	1290.	.8730	.9210	1032.	1.020	1035.
4	1330.	.8480	.9470	1068.	1.020	1071.
5	1225.	.9010	.8650	1050.	1.020	1046.
6	1270.	.8840	.8930	1041.	1.020	1046.
7	1150.	.8500	.8270	1050.	1.030	1014.
8	1190.	.8380	.8210	978.	1.020	1024.
11	1250.	.7970	.8400	996.	-1.050	1118.
12	1200.	.8250	.8290	1014.	1.010	1082.
13	1140.	.7890	-.7690	1014.	1.020	1074.
14	1180.	.8100	.7860	978.	1.030	1104.
15	1290.	.8890	.9230	1050.	1.030	1032.
17	1240.	.8870	.9030	1032.	1.020	986.
18	1250.	.8600	.8560	1041.	-1.060	1102.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	CORR TT7	COR THRUST
-----	LBM/HR	X100	X100	DEG R	LBF
-----	-----	-----	-----	-----	-----
1	1218.	-.9850	.8780	1040.	1037.
2	1268.	.8610	.9290	1076.	1037.
3	1288.	.8800	.9280	1040.	1037.
4	1328.	.8540	.9550	1076.	1073.
5	1230.	.8980	.8620	1046.	1049.
6	1275.	.8810	.8900	1037.	1049.
7	1155.	.8470	.8240	1046.	1017.
8	1195.	.8350	.8180	-974.	1027.
11	1250.	.8100	.8530	1011.	1126.
12	1200.	.8380	.8420	1030.	1090.
13	1155.	.7880	-.7680	1012.	1088.
14	1184.	.8180	.7940	-987.	1113.
15	1294.	.8980	.9320	1060.	1041.
17	1246.	.8960	.9110	1042.	996.
18	1256.	.8680	.8650	1051.	1113.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.735	986.7	708.5	10.9	12.9
2	1.476	1003.5	698.0	9.9	11.8
3	1.525	1000.6	669.7	10.8	13.4
4	1.471	1001.8	671.1	9.1	12.8
5	1.568	1006.6	718.5	12.0	14.6
6	1.549	1014.4	660.4	11.3	13.8
7	1.483	954.4	661.4	10.4	12.9
8	1.449	929.7	697.9	9.6	13.1
11	1.413	885.0	544.2	9.9	13.6
12	1.393	1004.3	765.2	10.3	13.1
13	1.504	-696.5	-256.4	-14.1	13.9
14	1.418	919.3	604.5	9.9	14.3
15	1.547	1043.3	688.8	9.8	13.6
17	1.526	1071.0	737.1	-13.2	14.5
18	1.502	956.7	663.1	10.5	14.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2678.	-96.92	119.56	1.76	2.08	19.34
2	2610.	112.96	134.98	1.83	2.19	20.88
3	2638.	110.12	126.62	1.95	2.42	19.14
4	2621.	113.59	130.72	1.69	2.38	19.48
5	2628.	107.41	131.70	2.11	2.56	20.39
6	2646.	110.30	123.36	2.01	2.46	19.01
7	2636.	107.94	128.50	1.93	2.39	18.90
8	2613.	106.69	137.58	1.80	2.48	23.98
11	2677.	106.68	112.69	1.95	2.70	24.29
12	-2552.	117.05	-153.21	1.97	2.51	22.25
13	-2874.	-84.71	-53.57	-2.81	2.81	-6.58
14	2646.	109.15	123.31	1.93	2.79	21.43
15	2628.	112.76	127.89	1.73	2.42	20.26
17	2597.	116.04	137.21	-2.35	2.58	22.22
18	2638.	106.95	127.36	1.93	2.65	21.85

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.1970	.0730	14.7250	.1980	.0750	17.3100
2	.1970	.0730	14.7250	.1980	.0750	17.3100
3	.1970	.0730	14.7250	.1980	.0750	17.3100
4	.1990	.0750	14.8190	.2000	.0770	17.4210
5	.2000	.0780	14.9810	.1990	.0760	17.3460
6	.2000	.0780	14.9810	.1990	.0760	17.3460
7	.1980	.0760	14.8890	.1970	.0740	17.2360
8	.1990	.0770	14.9270	.1980	.0750	17.2800
11	.2010	.0750	-16.2260	.2020	.0800	17.5850
12	.1990	.0730	-16.1240	.2000	.0780	17.4730
13	-.2030	.0810	15.4670	.2000	.0780	17.4660
14	.2010	.0770	-16.1940	.2010	.0800	17.5450
15	.1980	.0730	-15.9930	.1980	.0760	17.3230
17	-.1950	.0700	15.6680	.1950	.0720	17.1010
18	.2010	.0770	-16.0730	.2010	.0800	17.5450

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-96.45	115.30	2.22	2.63	19.34
2	112.41	130.16	2.31	2.76	20.88
3	109.59	122.11	2.47	3.05	19.14
4	113.03	126.05	2.14	3.01	19.48
5	107.90	134.59	2.62	3.19	20.39
6	110.80	126.06	2.50	3.06	19.01
7	108.46	131.39	2.40	2.97	18.90
8	107.20	140.67	2.24	3.08	23.98
11	105.92	105.45	2.27	3.14	24.29
12	116.23	143.39	2.30	2.92	22.25
13	-85.63	-55.32	-3.41	3.41	-6.58
14	108.93	118.98	2.24	3.25	21.43
15	112.57	123.50	2.02	2.81	20.26
17	115.99	132.92	2.75	3.02	22.22
18	106.90	123.33	2.27	3.11	21.85

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.00	64.00	36.14	64.25
2	36.00	64.00	36.14	64.25
3	37.00	64.50	37.14	64.75
4	35.50	64.00	35.64	64.25
5	36.50	64.00	36.44	63.89
6	36.50	64.00	36.44	63.89
7	35.00	64.00	34.94	63.89
8	35.00	64.00	34.94	63.89
11	35.30	64.00	35.58	64.50
12	35.30	64.50	35.58	65.00
13	35.50	64.00	35.47	63.94
14	36.00	64.00	36.17	64.31
15	37.00	64.00	37.18	64.31
17	36.50	64.00	36.68	64.31
18	36.00	64.00	36.17	64.31

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	1330.	-.9510	.8360	1032.	1.030	1322.
2	1390.	.8310	.8750	1050.	1.030	1322.
3	1400.	.8530	.9610	1032.	1.030	1358.
4	1420.	.8270	.9010	1068.	1.030	1322.
5	1320.	.8660	.8300	1050.	1.020	1296.
6	1400.	.8630	.8770	1041.	1.020	1296.
7	1250.	.8270	.7830	1041.	1.030	1296.
8	1280.	.8210	.7780	-978.	1.030	1296.
11	1360.	.7800	.8290	996.	1.050	1333.
12	1370.	.8060	.8310	1014.	-1.010	1368.
13	-1200.	.7750	-.7410	1032.	1.020	1287.
14	1250.	.7850	.7620	996.	1.040	1319.
15	1400.	.8650	.8750	1050.	1.035	1318.
17	1400.	.8550	.8670	1032.	1.030	1316.
18	1350.	.8360	.8430	1050.	-1.060	1316.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1328.	-.9580	.8360	1040.	1325.
2	1387.	.8370	.8810	1058.	1325.
3	1397.	.8600	.8680	1040.	1361.
4	1417.	.8340	.9080	1076.	1325.
5	1325.	.8630	.8280	1046.	1299.
6	1406.	.8600	.8740	1037.	1299.
7	1255.	.8240	.7800	1037.	1299.
8	1286.	.8180	.7750	-974.	1299.
11	1360.	.7920	.8420	1011.	1343.
12	1370.	.8190	.8440	1030.	1379.
13	-1216.	.7730	-.7400	1030.	1303.
14	1254.	.7930	.7690	1005.	1324.
15	1405.	.8740	.8840	1060.	1329.
17	1407.	.8630	.8750	1042.	1329.
18	1357.	.8440	.8510	1060.	1329.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-1.733	893.9	562.3	11.0	13.4
2	1.488	897.8	534.4	9.5	12.6
3	1.539	898.5	522.5	10.4	14.3
4	1.486	901.4	514.7	8.5	13.6
5	1.545	922.8	581.8	12.2	15.6
6	1.570	898.5	489.8	11.3	15.0
7	1.490	854.2	517.7	10.2	13.6
8	1.464	846.5	559.2	9.2	13.8
11	1.419	802.2	431.8	9.6	14.5
12	1.409	908.3	616.4	9.3	13.7
13	1.494	-639.1	-207.1	-13.1	14.4
14	1.406	837.0	501.6	9.1	14.8
15	1.557	935.1	530.6	9.7	14.5
17	1.524	945.9	562.5	-12.4	15.7
18	1.507	859.8	516.3	9.9	15.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2749.	-90.26	97.54	1.82	2.22	18.82
2	2704.	103.82	106.17	1.80	2.39	19.92
3	2722.	101.15	101.06	1.92	2.64	18.43
4	2712.	104.71	102.72	1.62	2.59	18.91
5	2693.	102.37	110.88	2.22	2.84	21.22
6	2744.	99.94	93.61	2.07	2.74	18.23
7	2719.	99.23	103.31	1.94	2.59	19.22
8	2694.	99.12	112.50	1.77	2.65	24.90
11	2747.	98.86	91.42	1.94	2.93	22.94
12	-2639.	108.28	-126.24	1.81	2.68	20.85
13	-2908.	-79.18	-44.07	-2.67	2.93	-5.65
14	2705.	102.47	105.50	1.84	2.98	-0.00
15	2715.	103.80	101.19	1.77	2.65	20.31
17	2691.	106.30	108.61	2.30	2.90	21.71
18	2721.	98.81	101.93	1.87	2.93	21.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	.0940	15.6740	.2130	.0980	18.4300
2	.2120	.0940	15.6740	.2130	.0980	18.4300
3	.2140	.0980	15.8170	.2150	.1020	18.5990
4	.2120	.0940	15.6740	.2130	.0980	18.4300
5	.2120	.0970	15.8150	.2110	.0950	18.3110
6	.2120	.0970	15.8150	.2110	.0950	18.3110
7	.2120	.0970	15.8190	.2110	.0950	18.3110
8	.2120	.0970	15.8190	.2110	.0950	18.3110
11	.2120	.0930	-17.0770	.2140	.1000	18.5140
12	.2140	.0970	-17.2330	.2160	.1040	18.6840
13	.2140	.0990	16.2290	.2120	.0960	18.3260
14	.2130	.0950	-17.0260	.2130	.0980	18.4510
15	.2130	.0950	-17.0300	.2130	.0980	18.4510
17	.2130	.0950	-16.8990	.2130	.0980	18.4510
18	.2130	.0950	-16.8990	.2130	.0980	18.4510

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 600 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-89.82	93.97	2.30	2.80	18.22
2	107.30	102.28	2.27	3.02	19.92
3	100.65	97.34	2.42	3.34	18.43
4	104.19	98.96	2.05	3.27	18.91
5	102.84	113.35	2.75	3.53	21.22
6	100.40	95.69	2.58	3.41	18.23
7	99.71	105.68	2.41	3.22	19.22
8	99.59	115.07	2.20	3.29	24.90
11	98.15	85.39	2.25	3.41	22.94
12	107.50	117.88	2.11	3.13	20.85
13	-80.05	-45.52	-3.24	3.55	-5.65
14	102.26	101.69	2.14	3.46	-0.00
15	103.61	97.60	2.06	3.08	20.31
17	106.24	105.06	2.69	3.41	21.71
18	98.75	98.60	2.19	3.43	21.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	99.50	100.50	-99.89	100.89
2	101.00	101.00	101.39	101.39
3	101.00	101.00	101.39	101.39
4	101.00	101.00	101.39	101.39
5	101.00	101.00	100.83	100.83
6	101.50	100.50	101.33	100.33
7	101.50	-104.00	101.33	103.83
8	100.50	102.00	100.33	101.83
11	99.80	101.00	100.58	101.79
12	99.90	101.00	100.68	101.79
13	101.00	103.00	100.90	102.90
14	101.50	101.50	101.99	101.99
15	101.00	100.00	101.49	100.49
17	101.00	-99.00	101.49	-99.48
18	101.50	103.00	101.99	103.50

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
-----	-----	-----	-----	-----	-----	-----
1	-9640.	1.6220	1.3990	1392.	-1.810	-17980.
2	10060.	1.5800	1.4560	1437.	1.840	18417.
3	9920.	1.6110	1.4210	1392.	-1.830	-18271.
4	10220.	1.5980	1.4930	1464.	1.840	18417.
5	9670.	1.5850	1.3940	1428.	1.840	18411.
6	9950.	1.5980	1.4350	1428.	1.840	18411.
7	9850.	1.5400	1.4110	1410.	1.840	18405.
8	9850.	1.6220	1.3920	1374.	1.840	18405.
11	9780.	1.5370	1.3940	1428.	1.850	18458.
12	9800.	1.5070	1.3790	1392.	1.850	18458.
13	9820.	1.5270	1.3660	1374.	1.850	18373.
14	9970.	1.5280	1.3840	1356.	1.850	18452.
15	9970.	1.5140	1.4290	1446.	1.850	18446.
17	10150.	1.5620	1.4480	1437.	1.850	18415.
18	10130.	1.6480	1.4320	1428.	1.860	18538.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-9622.	1.6340	1.4100	1403.	-18016.
2	10041.	1.5920	1.4670	1448.	18454.
3	9901.	1.6230	1.4330	1403.	-18308.
4	10201.	1.6110	-1.5040	1475.	18454.
5	9709.	1.5800	1.3900	1423.	18454.
6	9990.	1.5930	1.4300	1423.	18454.
7	9893.	1.5350	1.4060	1405.	18454.
8	9893.	1.6160	1.3880	1369.	18454.
11	9779.	1.5610	1.4160	1450.	18600.
12	9799.	1.5310	1.4010	1414.	18600.
13	9951.	1.5240	1.3640	1371.	18600.
14	10001.	1.5430	1.3980	1369.	18600.
15	10005.	1.5280	1.4430	1460.	18600.
17	10202.	1.5770	1.4620	1451.	18600.
18	10192.	1.6640	1.4460	1442.	18724.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.425	-28.0	2.6	81.8	80.5
2	3.335	24.3	4.4	89.4	88.2
3	3.401	25.5	6.4	88.2	88.2
4	3.376	25.0	3.1	87.6	87.9
5	3.348	23.4	2.8	95.5	97.3
6	3.374	25.3	4.7	95.1	97.4
7	3.250	24.6	2.2	91.7	93.5
8	3.425	27.1	5.1	90.9	92.3
11	3.240	22.2	3.1	94.2	91.4
12	3.176	-28.9	1.2	93.3	87.0
13	3.219	19.7	3.1	-185.0	-184.5
14	3.191	27.0	-106.7	104.7	102.7
15	3.180	-33.5	7.7	94.1	90.2
17	3.292	-28.1	15.1	98.9	96.6
18	3.480	24.1	7.2	110.9	107.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3155.	1.64	.26	-7.88	-7.88	55.25
2	3155.	1.47	.46	8.84	8.84	52.10
3	3154.	1.50	.64	8.55	8.55	54.90
4	3155.	1.49	.32	8.56	8.59	60.89
5	3155.	1.40	.29	9.41	9.58	51.20
5	3154.	1.51	.48	9.39	9.52	47.49
7	3155.	1.52	.23	9.30	9.49	51.26
8	3154.	1.59	.52	8.75	8.89	50.92
11	3151.	1.38	.33	9.58	9.58	56.21
12	3151.	-1.83	.78	9.68	9.68	50.79
13	3151.	1.23	.33	-18.93	-18.93	-22.70
14	-3122.	-1.68	-11.41	10.71	10.71	-0.00
15	3150.	-2.11	.84	9.71	9.71	48.68
17	3149.	-1.71	1.58	9.89	9.89	54.07
18	3152.	1.39	.72	10.50	10.50	49.74

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	81.5570	69.2310	78.6110	87.2140	73.7560	92.9950
2	79.1700	76.3650	80.4820	84.5090	81.3940	95.2190
3	84.2000	76.3650	80.4820	90.0300	81.3940	95.2190
4	82.1430	76.3650	80.4820	87.7710	81.3940	95.2190
5	79.9690	75.3720	80.3090	77.7560	72.8930	92.7330
6	77.7260	68.2720	78.4250	75.5700	66.0400	90.5620
7	97.4370	128.5120	91.2600	94.7040	124.0690	105.3270
8	95.7510	91.7420	84.1900	92.9760	88.6350	97.1830
11	73.3100	77.8590	88.3580	82.9010	87.9410	97.0000
12	69.3280	77.8590	88.3580	78.1670	87.9410	97.0000
13	88.6480	113.4350	90.5990	86.6030	109.0610	102.1290
14	75.9610	85.2790	89.6560	81.8340	71.5140	97.9700
15	63.2250	63.6070	83.5740	67.9210	68.0950	91.2310
17	62.2860	52.2740	79.0560	66.9540	55.7300	86.9440
18	113.1750	114.1890	-95.3410	-122.9680	122.3180	104.9700

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO LB/KLB FU	EI FU	NREC HC LB/KLB FU	EI FU	NRE CNO LB/KLB FU	EI FU	NR CNOX LB/KLB FU	EI FU	SMK NUMBR CORRECTED
1	1.54		.24		-10.01		-10.01		55.25
2	1.37		.43		11.23		11.23		52.10
3	1.41		.60		10.86		10.87		54.90
4	1.39		.30		10.88		10.92		60.89
5	1.44		.30		11.67		11.89		51.20
6	1.55		.50		11.65		11.81		47.49
7	1.56		.24		11.53		11.76		51.26
8	-1.64		.53		10.85		11.02		50.92
11	1.22		.29		11.29		11.29		56.21
12	-1.62		.69		11.41		11.41		50.79
13	1.26		.35		-21.34		-21.34		-22.70
14	1.56		-10.64		12.57		12.57		-0.00
15	-1.96		.78		11.39		11.39		48.68
17	-1.59		1.49		11.68		11.68		54.07
18	1.28		.67		11.57		11.57		49.74

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	95.50	98.50	95.87	98.88
2	96.00	99.00	96.37	99.38
3	96.00	99.00	96.37	99.38
4	95.00	99.00	95.37	99.38
5	96.00	99.00	95.84	98.83
6	96.50	98.70	96.34	98.53
7	96.50	-101.50	96.34	-101.33
8	95.00	99.50	-94.84	99.33
11	95.10	99.50	95.84	100.28
12	95.20	99.00	95.94	99.77
13	96.00	100.50	95.91	100.40
14	96.50	100.00	96.97	100.49
15	96.00	98.00	96.47	98.48
17	96.00	98.00	96.47	98.48
18	96.00	100.00	96.47	100.49

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	8360.	-1.4870	1.3140	1320.	1.660	15794.
2	8420.	1.4200	1.3520	1356.	-1.650	15649.
3	8310.	1.4500	1.3160	1320.	-1.650	15649.
4	8290.	1.4080	1.3400	1374.	-1.650	15649.
5	8110.	1.4320	1.2970	1347.	-1.650	15643.
6	8240.	1.4280	1.3090	1329.	-1.650	15643.
7	8250.	1.3830	1.3150	1338.	-1.650	15638.
8	-7970.	1.4350	1.2530	1302.	-1.650	15638.
11	8350.	1.3990	1.3140	1338.	1.660	15705.
12	8230.	1.3780	1.2860	1320.	1.660	15705.
13	8090.	1.3570	1.2500	1302.	1.660	15633.
14	8230.	1.3750	1.2680	1284.	1.660	15700.
15	8470.	1.3790	1.3410	1356.	1.660	15695.
17	8500.	1.4180	1.3430	1356.	1.660	15669.
18	8400.	1.4750	1.3190	1338.	1.660	15669.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8344.	-1.4990	1.3240	1330.	15826.
2	8404.	1.4310	1.3620	1366.	-15680.
3	8294.	1.4610	1.3270	1330.	-15680.
4	8275.	1.4190	1.3500	1384.	-15680.
5	8143.	1.4270	1.2930	1342.	-15680.
6	8273.	1.4230	1.3050	1324.	-15680.
7	8286.	1.3790	1.3100	1333.	-15680.
8	-8005.	1.4300	1.2490	1297.	-15680.
11	8349.	1.4210	1.3340	1359.	15826.
12	8229.	1.4000	1.3060	1340.	15826.
13	8198.	1.3550	1.2470	1299.	15826.
14	8256.	1.3880	1.2800	1296.	15826.
15	8500.	1.3920	1.3540	1369.	15826.
17	8544.	1.4320	1.3560	1369.	15826.
18	8443.	-1.4890	1.3310	1351.	15826.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-3.137	-34.9	1.8	67.9	69.2
2	2.992	29.9	2.0	71.7	72.9
3	3.056	30.9	2.9	70.3	73.2
4	2.968	32.5	1.4	66.2	69.8
5	3.018	28.9	1.6	76.8	80.9
6	3.010	31.5	2.2	75.2	79.0
7	2.914	31.1	1.2	71.1	75.4
8	3.024	32.3	2.0	69.5	73.1
11	2.945	27.9	1.8	76.8	77.7
12	2.901	-37.8	3.0	76.0	74.0
13	2.856	20.6	1.7	-135.5	-136.7
14	2.890	27.6	-14.6	83.0	83.6
15	2.901	-35.5	6.2	76.4	76.1
17	2.985	33.6	5.6	78.9	80.3
18	3.109	26.3	2.6	84.9	85.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3154.	2.23	.20	7.14	7.27	51.63
2	3154.	-.01	.23	7.90	8.03	50.91
3	3154.	2.03	.33	7.59	7.89	52.03
4	3154.	2.20	.16	7.36	7.76	53.06
5	3155.	1.92	.18	8.39	8.84	51.25
6	3154.	2.10	.26	8.24	8.66	49.87
7	3154.	2.15	.14	8.04	8.53	50.68
8	3154.	2.14	.23	7.58	7.97	51.75
11	3150.	1.90	.21	8.59	8.69	-64.64
12	3151.	-2.61	.36	8.63	8.63	50.47
13	3151.	1.45	.21	-15.62	-15.76	-23.27
14	3148.	1.92	-1.74	9.45	9.52	50.06
15	3150.	-2.45	.74	8.67	8.67	48.80
17	3151.	2.26	.64	8.71	8.86	52.00
18	3152.	1.70	.28	9.00	9.02	51.18

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	51.2400	46.4500	71.4240	54.3220	49.3920	84.4560
2	48.1110	51.3780	73.1780	50.8740	54.6580	86.5390
3	50.6260	51.3780	73.1780	53.6030	54.6580	86.5390
4	47.2030	51.3780	73.1780	49.8890	54.6580	86.5390
5	48.9060	50.5290	72.9530	47.7120	49.9080	84.2560
6	47.0980	47.5400	71.8900	45.9560	46.0200	83.0310
7	58.2690	-83.2060	82.2420	56.8240	-80.4050	-94.9400
8	51.8130	55.9350	74.7640	50.5250	54.0960	86.3240
11	49.2870	58.0040	82.3340	54.8560	65.3280	90.3270
12	45.2740	52.5120	80.3900	50.2990	59.0860	88.1740
13	50.8660	69.6400	80.5950	49.7870	66.9950	90.8750
14	49.7370	63.5690	-83.5570	53.0330	68.0950	91.2310
15	40.7890	42.5820	75.8880	43.4040	45.4780	82.7950
17	43.5000	42.7090	75.3040	46.3230	45.4780	82.7950
18	59.0560	63.7970	82.9310	-63.2190	68.0950	91.2310

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLA FU	LB/KLB FU	LB/KLA FU	LB/KLA FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	2.10	.19	9.06	9.23	51.63
2	1.90	.22	10.03	10.20	50.91
3	1.91	.31	9.63	10.03	52.03
4	2.08	.15	9.34	9.86	53.06
5	1.97	.19	10.41	10.96	51.25
6	2.16	.26	10.22	10.74	49.87
7	-2.20	.15	9.97	10.57	50.68
8	-2.20	.24	9.40	9.88	51.75
11	1.70	.19	10.12	10.23	-64.64
12	-2.35	.32	10.16	10.16	50.47
13	1.48	.22	-17.61	-17.77	-23.27
14	1.80	-1.62	11.08	11.16	50.06
15	-2.30	.69	10.16	10.16	48.80
17	2.12	.60	10.28	10.47	52.00
18	1.58	.26	10.63	10.66	51.18

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	86.00	94.00	86.33	94.36
2	86.00	94.00	86.33	94.36
3	86.00	94.50	86.33	94.87
4	85.00	94.00	85.33	94.36
5	87.00	94.50	86.85	94.34
6	86.50	94.10	86.35	93.94
7	86.00	96.00	85.86	95.84
8	85.00	95.00	-84.86	94.84
11	85.50	95.00	86.17	95.74
12	85.00	95.00	85.66	95.74
13	85.50	95.50	85.42	95.41
14	86.50	95.00	86.92	95.46
15	85.50	93.50	85.92	93.95
17	86.00	93.50	86.42	93.95
18	86.00	95.00	86.42	95.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	5900.	-1.2530	1.1820	1248.	1.390	10946.
2	5810.	1.1970	1.1630	1248.	1.390	10946.
3	5910.	1.2030	1.1670	1212.	1.390	10946.
4	5780.	1.1800	1.1570	1248.	1.390	10946.
5	5880.	1.2240	1.1690	1230.	1.390	10942.
6	5840.	1.2070	1.1520	1212.	1.390	10942.
7	5520.	1.1550	1.0810	1194.	1.390	10938.
8	5580.	1.1950	1.0970	1203.	1.390	10938.
11	5800.	1.1690	1.1380	1212.	1.390	10884.
12	5680.	1.1540	1.1070	1194.	1.390	10884.
13	5500.	-1.1150	1.0670	1194.	1.390	10834.
14	5640.	1.1640	1.0980	1194.	1.390	10880.
15	5720.	1.1760	1.1300	1230.	1.390	10877.
17	5830.	1.1950	1.1460	1221.	1.390	10859.
18	5690.	1.2180	1.1140	1212.	1.390	10859.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DFG R	COR THRUST LBF
1	5889.	-1.2620	1.1910	1257.	10968.
2	5799.	1.2070	1.1730	1257.	10968.
3	5899.	1.2130	1.1760	1221.	10968.
4	5769.	1.1890	1.1660	1257.	10968.
5	5904.	1.2200	1.1650	1226.	10968.
6	5864.	1.2030	1.1480	1208.	10968.
7	5544.	1.1510	1.0770	1190.	10968.
8	5604.	1.1910	1.0930	1199.	10968.
11	5799.	1.1870	1.1560	1231.	10968.
12	5679.	1.1720	1.1240	1212.	10968.
13	5573.	-1.1130	1.0640	1191.	10968.
14	5658.	1.1750	1.1090	1205.	10968.
15	5740.	1.1870	1.1410	1242.	10968.
17	5860.	1.2070	1.1570	1233.	10968.
18	5719.	1.2300	1.1250	1223.	10968.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-2.631	75.3	2.2	44.2	49.0
2	2.514	66.4	1.9	45.1	51.0
3	2.526	68.1	2.2	44.5	51.4
4	2.478	64.3	1.8	41.3	49.0
5	2.570	59.3	1.8	51.1	57.8
6	2.534	67.5	2.1	48.4	55.4
7	2.422	69.6	1.9	43.3	50.7
8	2.510	57.6	1.9	44.0	51.6
11	2.451	54.9	1.8	48.3	53.8
12	2.417	-84.5	3.4	45.2	51.2
13	-2.340	-25.5	1.6	-71.7	-74.3
14	2.441	55.6	5.4	52.5	58.8
15	2.465	75.0	2.0	47.9	53.4
17	2.506	68.9	3.5	50.9	57.2
18	2.558	52.2	2.0	52.3	59.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3148.	5.74	.29	5.54	6.13	51.17
2	3149.	5.29	.26	5.90	6.67	51.05
3	3149.	5.40	.31	5.81	6.71	51.16
4	3149.	5.20	.25	5.49	6.51	51.95
5	3150.	4.63	.24	6.54	7.41	50.80
6	3149.	5.34	.29	6.29	7.19	50.20
7	3148.	5.76	.27	5.88	6.89	52.77
8	3150.	4.60	.26	5.77	6.78	52.82
11	3146.	4.48	.25	6.48	7.22	54.49
12	3144.	-6.99	.48	6.14	6.96	50.59
13	3150.	-2.18	.23	-10.09	-10.45	-16.76
14	3147.	4.56	.75	7.08	7.93	50.32
15	3146.	6.09	.29	6.39	7.13	49.01
17	3146.	5.50	.49	6.69	7.50	53.34
18	3149.	4.09	.27	6.73	7.59	52.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	21.8020	17.3060	56.0840	22.8250	18.3270	66.2540
2	20.2470	17.3060	56.0840	21.1600	18.3270	66.2540
3	21.5630	19.4300	57.7080	22.5480	20.5860	68.1790
4	19.8000	17.3060	56.0840	20.6830	18.3270	66.2540
5	21.9160	18.7980	57.2650	21.4690	18.2270	66.1640
6	20.4970	17.1130	55.9530	20.0850	16.5960	64.6510
7	23.5570	26.5020	62.3210	23.0800	25.6660	71.9800
8	22.3030	21.1200	58.9370	21.8470	20.4620	68.0780
11	22.0230	22.4830	-65.3870	23.9770	25.1120	71.5950
12	21.5950	22.4830	-65.3870	23.4890	25.1120	71.5950
13	21.4040	24.1870	62.3180	20.9980	23.2950	70.2850
14	21.7620	22.1360	64.6510	22.8890	23.5770	70.4930
15	18.7500	15.6630	59.3710	19.7020	16.6440	64.6970
17	19.2390	15.7100	58.9140	20.2040	16.6440	64.6970
18	23.4210	22.2160	64.1670	24.6490	23.5770	70.4930

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	5.48	.28	7.02	7.78	51.17
2	5.06	.24	7.49	8.47	51.05
3	5.16	.29	7.37	8.51	51.16
4	4.98	.24	6.96	8.26	51.95
5	4.72	.25	8.12	9.19	50.80
6	5.44	.30	7.81	8.92	50.20
7	5.88	.28	7.29	8.54	52.77
8	4.70	.27	7.16	8.41	52.82
11	4.12	.22	7.63	8.49	54.49
12	-6.43	.43	7.22	8.19	50.59
13	-2.23	.24	-12.23	-12.66	-16.76
14	4.34	.71	8.29	9.29	50.32
15	5.80	.27	7.48	8.34	49.01
17	5.24	.46	7.88	8.85	53.34
18	3.88	.25	7.94	8.95	52.29

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	69.00	86.50	69.27	86.84
2	70.00	87.00	70.27	87.34
3	69.50	87.00	69.77	87.34
4	-66.50	85.50	-66.76	85.83
5	69.00	86.00	68.88	85.86
6	69.00	86.50	68.88	86.35
7	69.00	88.00	68.88	87.85
8	68.00	88.00	67.89	87.85
11	70.00	87.50	70.55	88.18
12	69.90	88.00	70.45	88.69
13	68.50	87.50	68.43	87.42
14	69.00	87.00	69.33	87.42
15	67.50	-85.00	67.83	85.41
17	69.50	86.00	69.84	86.42
18	70.00	88.00	70.34	88.43

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF

1	3340.	-1.0480	.9590	1104.	1.170	5624.
2	3420.	.9730	.9860	1113.	1.170	5624.
3	3400.	.9640	.9770	1104.	1.170	5624.
4	3150.	.9280	.9120	1122.	1.170	5624.
5	3210.	.9740	.9290	1122.	1.170	5622.
6	3250.	.9690	.9260	1086.	1.170	5622.
7	3150.	.9390	.8970	1086.	1.170	5620.
8	3150.	.9270	.9040	1104.	1.170	5620.
11	3360.	.9320	.9520	1086.	1.170	5592.
12	3380.	.9390	.9580	1086.	1.170	5592.
13	3080.	.9000	.8690	1086.	1.170	-5566.
14	3150.	.9140	.8850	1068.	1.170	5590.
15	3190.	.9750	.9110	1104.	1.170	5588.
17	3390.	.9390	.9660	1104.	1.170	5579.
18	3360.	.9600	.9610	1113.	1.170	5579.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CORR FUE FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	3334.	-1.0560	.9670	1112.	5635.
2	3414.	.9810	.9940	1121.	5635.
3	3394.	.9720	.9840	1112.	5635.
4	3144.	.9360	.9190	1130.	5635.
5	3223.	.9710	.9260	1118.	5635.
6	3263.	.9650	.9230	1082.	5635.
7	3164.	.9360	.8940	1082.	5635.
8	3164.	.9240	.9010	1100.	5635.
11	3360.	.9470	.9670	1103.	5635.
12	3380.	.9540	.9730	1103.	5635.
13	3121.	.8990	.8670	1084.	5635.
14	3160.	.9230	.8940	1078.	5635.
15	3201.	.9850	.9190	1114.	5635.
17	3407.	.9480	.9760	1114.	5635.
18	3377.	.9690	.9710	1124.	5635.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-2.181	186.2	13.1	30.7	31.5
2	2.019	203.2	15.4	29.1	31.5
3	2.003	175.2	13.9	27.7	31.9
4	1.921	210.3	22.8	21.2	29.2
5	2.022	192.7	15.6	31.0	34.2
6	2.010	199.8	16.0	29.0	33.0
7	1.951	166.0	11.5	27.2	32.0
8	1.928	147.7	9.8	22.9	30.9
11	1.936	150.7	10.5	27.4	33.5
12	1.947	187.8	17.3	25.7	33.7
13	1.881	-60.9	-2.9	-35.9	-38.8
14	1.895	176.0	16.5	26.7	34.3
15	2.020	209.1	18.6	25.7	33.5
17	1.946	194.7	15.7	29.3	35.7
18	1.994	165.6	13.8	27.3	36.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TFST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3126.	16.98	2.05	4.60	4.72	43.57
2	3120.	19.99	2.60	4.71	5.09	42.76
3	3124.	17.39	2.37	4.52	5.21	45.10
4	3113.	21.69	4.05	3.59	4.95	43.48
5	3121.	18.93	2.63	5.00	5.52	42.33
6	3120.	19.74	2.72	4.71	5.35	41.45
7	3126.	16.93	2.02	4.55	5.36	44.75
8	3129.	15.26	1.73	3.88	5.24	47.40
11	3124.	15.48	1.85	4.62	5.66	48.83
12	3117.	19.14	3.03	4.31	5.63	41.45
13	-3142.	-6.47	-.52	-6.27	-6.78	-10.13
14	3119.	18.43	2.96	4.60	5.90	46.31
15	3115.	20.52	3.14	4.14	5.39	42.33
17	3117.	19.85	2.75	4.91	5.98	46.32
18	3123.	16.51	2.36	4.47	5.92	45.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	7.4640	3.0530	36.6800	7.7330	3.2110	43.2610
2	7.3000	3.4280	37.7280	7.5520	3.6070	44.5020
3	7.2350	3.4280	37.7280	7.4840	3.6070	44.5020
4	5.9410	2.4110	34.6290	6.1350	2.5370	40.8720
5	6.4660	2.6180	35.3610	6.3640	2.5480	40.8890
6	6.7960	2.9490	36.4000	6.6870	2.8680	42.0890
7	7.7520	4.1760	39.6190	7.6250	4.0570	45.7930
8	7.6620	4.1760	39.6190	7.5370	4.0570	45.7930
11	7.4970	3.9820	-42.7640	7.9930	4.3860	46.6740
12	7.9830	4.4990	-44.0700	-8.5180	-4.9610	48.1090
13	7.1470	3.8060	39.6140	7.0260	3.6720	44.6970
14	6.9390	3.4850	41.0970	7.1990	3.6780	44.7140
15	5.9180	2.1770	36.6440	6.1390	2.2900	39.8790
17	6.3910	2.7720	38.5440	6.6200	2.9110	42.2410
18	8.0980	4.4240	-43.1980	8.4050	4.6570	47.3680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 6

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		16.39			1.95			5.82				5.98		43.57
2		19.32			2.47			5.96				6.45		42.76
3		16.82			2.25			5.73				6.50		45.10
4		21.01			3.85			4.55				6.27		43.48
5		19.24			2.70			6.21				6.85		42.33
6		20.06			2.80			5.85				6.65		41.45
7		17.21			2.08			5.65				6.66		44.75
8		15.51			1.78			4.82				6.51		47.40
11		14.52			1.68			5.41				6.63		48.83
12		17.94			2.75			5.05				6.61		41.45
13		-6.58			-0.54			-7.60				-8.22		-10.13
14		17.76			2.81			5.37				6.89		46.31
15		19.78			2.98			4.84				6.30		42.33
17		19.16			2.62			5.77				7.04		46.32
18		15.90			2.24			5.26				6.97		45.92

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.00	64.00	36.14	64.25
2	36.50	64.00	36.64	64.25
3	36.50	-64.50	36.64	64.75
4	36.00	64.00	36.14	64.25
5	36.50	64.00	36.44	63.89
6	35.00	64.00	34.94	63.89
7	35.00	64.00	34.94	63.89
8	-34.00	64.00	-33.94	63.89
11	35.00	64.00	35.27	64.50
12	35.10	-64.50	35.37	-65.00
13	36.00	64.00	35.97	63.94
14	35.50	64.00	35.67	64.31
15	36.50	64.00	36.68	64.31
17	35.50	64.00	35.67	64.31
18	36.00	64.00	36.17	64.31

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1280.	-.8720	.7990	1032.	1.030	1322.
2	1380.	.7940	.8680	1050.	1.030	1322.
3	1380.	.8150	.8490	1032.	1.030	1358.
4	-1400.	.7930	-.8880	1068.	1.030	1322.
5	1310.	.8110	.8240	1050.	1.020	1296.
6	1330.	.8260	.8300	1032.	1.020	1296.
7	1190.	.7850	.7420	1032.	1.030	1296.
8	1190.	.7700	.7410	1030.	1.030	1296.
11	1280.	.7570	.7810	996.	1.050	1333.
12	1260.	.7630	.7640	1014.	1.020	-1368.
13	1230.	-.7100	.7530	1014.	1.020	1287.
14	1240.	.7280	.7560	996.	1.040	1319.
15	1340.	.8230	.8420	1061.	1.035	1318.
17	1350.	.8100	.8390	1041.	1.030	1316.
18	1270.	.7890	.7860	1032.	1.055	1316.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1278.	-.8790	.8050	1040.	1325.
2	1377.	.8010	.8750	1058.	1325.
3	1377.	.8220	.8550	1040.	1361.
4	1397.	.7990	-.8950	-1076.	1325.
5	1315.	.8080	.8210	1046.	1299.
6	1335.	.8240	.8270	1028.	1299.
7	1195.	.7820	.7400	1028.	1299.
8	1195.	.7670	.7390	1026.	1299.
11	1280.	.7690	.7930	1011.	1343.
12	1260.	.7750	.7760	1030.	-1379.
13	1246.	-.7090	.7520	1012.	1303.
14	1244.	.7350	.7630	1005.	1329.
15	1345.	.8310	.8500	-1071.	1329.
17	1357.	.8180	.8470	1051.	1329.
18	1277.	.7960	.7940	1042.	1329.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-1.591	844.4	497.3	12.3	13.6
2	1.444	841.2	444.9	11.3	12.9
3	1.483	851.6	461.7	11.3	13.9
4	1.437	855.7	453.5	9.0	13.3
5	1.458	870.1	501.2	12.4	14.8
6	1.495	886.3	483.3	11.8	14.4
7	1.426	814.1	449.6	11.4	13.6
8	1.399	766.7	445.9	9.9	13.6
11	1.381	779.8	405.6	10.2	14.5
12	1.350	848.7	527.2	9.2	13.7
13	1.375	-612.2	-159.7	13.3	14.1
14	-1.322	769.8	407.8	10.1	14.9
15	1.493	883.5	465.6	10.6	15.1
17	1.455	909.4	494.4	12.1	16.0
18	1.454	769.2	394.5	10.7	16.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2754.	93.01	94.10	2.23	2.45	17.31
2	2745.	101.73	92.42	2.24	2.55	18.55
3	2744.	100.32	93.43	2.18	2.69	19.74
4	2736.	103.68	94.39	1.80	2.64	19.07
5	2716.	103.15	102.08	2.42	2.89	19.22
6	2731.	103.03	96.53	2.26	2.75	17.65
7	2742.	99.67	94.55	2.29	2.73	19.97
8	2745.	95.74	95.65	2.03	2.80	23.51
11	2755.	99.00	88.46	2.12	3.02	22.56
12	-2675.	106.97	-114.17	1.91	2.83	17.60
13	-2922.	-82.77	-37.08	-2.95	3.12	-6.68
14	2742.	101.61	92.47	2.18	3.23	20.31
15	2738.	103.10	93.34	2.04	2.89	19.55
17	2710.	107.84	100.72	2.35	3.12	21.50
18	2782.	93.69	82.54	2.15	3.26	21.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	.0940	15.6740	.2130	.0980	18.4300
2	.2120	.0940	15.6740	.2130	.0980	18.4300
3	.2140	.0980	15.8170	.2150	.1020	18.5990
4	.2120	.0940	15.6740	.2130	.0980	18.4300
5	.2120	.0970	15.8150	.2110	.0950	18.3110
6	.2120	.0970	15.8150	.2110	.0950	18.3110
7	.2120	.0970	15.8190	.2110	.0950	18.3110
8	.2120	.0970	15.8190	.2110	.0950	18.3110
11	.2120	.0930	-17.0770	.2140	.1000	18.5140
12	.2140	.0970	-17.2330	-.2160	-.1040	-18.6840
13	.2140	.0990	16.2290	.2120	.0960	18.3260
14	.2130	.0950	-17.0260	.2130	.0980	18.4510
15	.2130	.0950	-17.0300	.2130	.0980	18.4510
17	.2130	.0950	-16.8990	.2130	.0980	18.4510
18	.2130	.0950	-16.8990	.2130	.0980	18.4510

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	92.55	90.66	2.82	3.10	17.31
2	101.22	89.04	2.83	3.23	18.55
3	99.82	90.00	2.76	3.40	19.74
4	103.16	90.94	2.27	3.33	19.07
5	103.62	104.36	3.00	3.59	19.22
6	103.50	98.68	2.81	3.42	17.65
7	100.15	96.72	2.84	3.39	19.97
8	96.20	97.84	2.53	3.48	23.51
11	98.29	82.63	2.47	3.51	22.56
12	106.20	106.60	2.22	3.29	17.60
13	-83.67	-38.30	-3.59	3.79	-6.68
14	101.40	89.14	2.54	3.76	20.31
15	102.91	90.03	2.37	3.36	19.55
17	107.78	97.43	2.76	3.66	21.50
18	93.63	79.85	2.52	3.82	21.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	60.50	33.13	60.73
2	33.00	60.00	33.13	60.23
3	33.50	60.50	33.63	60.73
4	33.00	60.50	33.13	60.73
5	34.00	60.50	33.94	60.40
6	33.50	61.10	33.44	61.00
7	32.50	60.50	32.45	60.40
8	33.00	61.80	32.94	61.70
11	33.00	61.00	33.26	61.48
12	32.30	60.50	32.55	60.97
13	33.00	60.50	32.97	60.44
14	33.50	61.50	33.66	61.80
15	34.00	61.00	34.17	61.30
17	33.00	60.00	33.16	60.29
18	34.00	61.00	34.17	61.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1220.	-.8990	.8540	1032.	1.030	1071.
2	1260.	.8210	.9030	1041.	1.020	1035.
3	1290.	.8390	.9040	1032.	1.020	1071.
4	1330.	.8210	-.9470	-1068.	1.020	1071.
5	1230.	.8340	.8680	1050.	1.020	1046.
6	1280.	.8480	.8770	1032.	1.020	1089.
7	1140.	.8120	.7980	1032.	1.030	1046.
8	1180.	.7900	.7880	1030.	1.030	1139.
11	1240.	.7920	.8330	996.	1.050	1118.
12	1150.	.7860	.7940	1014.	1.020	1082.
13	1130.	-.7260	.7770	1014.	1.020	1039.
14	1180.	.7720	.7720	-978.	1.030	1140.
15	1290.	.8410	.8890	1050.	1.030	1104.
17	1260.	.8380	.8920	1032.	1.020	1031.
18	1230.	.8110	.8390	1032.	-1.055	1102.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TFST SERIES *

MODF 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DFG R	COR THRUST LBF
1	1218.	-.9060	.8610	1040.	1073.
2	1258.	.8270	.9100	1049.	1037.
3	1288.	.8450	.9110	1040.	1073.
4	1328.	.8280	-.9550	-1076.	1073.
5	1235.	.8320	.8660	1046.	1049.
6	1285.	.8450	.8740	1028.	1092.
7	1145.	.8100	.7950	1028.	1049.
8	1185.	.7880	.7850	1026.	1142.
11	1240.	.8050	.8470	1011.	1126.
12	1150.	.7980	.8060	1030.	1090.
13	1145.	-.7250	.7750	1012.	1052.
14	1184.	.7790	.7800	-987.	1149.
15	1294.	.8490	.8980	1060.	1113.
17	1266.	.8460	.9010	1042.	1041.
18	1236.	.8190	.8470	1042.	1113.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.599	935.0	628.0	11.4	12.7
2	1.443	950.3	592.0	10.5	12.2
3	1.482	953.9	590.9	10.3	13.1
4	1.447	952.1	584.1	8.9	12.6
5	1.461	950.4	629.1	11.7	14.2
6	1.507	951.9	573.2	11.2	13.9
7	1.442	896.9	557.0	10.8	13.1
8	1.419	819.9	507.6	9.1	13.4
11	1.417	861.8	502.3	9.4	13.8
12	1.345	944.2	-672.8	8.7	13.1
13	1.388	-671.6	-208.5	12.4	13.7
14	1.378	852.8	497.3	9.8	14.8
15	1.487	959.5	579.5	9.8	14.4
17	1.461	-1008.5	630.6	10.9	15.0
18	1.464	850.4	489.1	9.9	15.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2685.	99.89	115.27	2.00	2.22	17.68
2	2656.	111.31	119.12	2.01	2.34	18.74
3	2667.	109.27	116.29	1.95	2.47	19.04
4	2661.	111.41	117.42	1.70	2.42	19.48
5	2645.	109.48	124.49	2.22	2.69	19.61
6	2683.	107.87	111.59	2.09	2.60	18.23
7	2681.	106.12	113.22	2.11	2.55	18.98
8	2711.	99.70	106.04	1.81	2.67	22.50
11	2702.	104.56	104.70	1.87	2.75	24.29
12	-2586.	115.53	-141.42	1.74	2.64	19.66
13	-2884.	-88.81	-47.37	-2.70	2.98	-6.62
14	2697.	106.25	106.44	2.00	3.02	19.90
15	2671.	109.71	113.82	1.83	2.70	18.67
17	2633.	115.65	124.23	2.05	2.83	20.93
18	2725.	100.73	99.53	1.93	3.03	22.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
----	-----	-----	-----	-----	-----	-----
1	.1990	.0750	14.8190	.2000	.0770	17.4210
2	-.1970	.0730	14.7250	.1980	.0750	17.3100
3	.1990	.0750	14.8190	.2000	.0770	17.4210
4	.1990	.0750	14.8190	.2000	.0770	17.4210
5	.2000	.0780	14.9810	.1990	.0760	17.3460
6	.2010	.0800	15.0950	.2010	.0780	17.4790
7	.2000	.0780	14.9840	.1990	.0760	17.3460
8	.2040	.0830	15.2330	.2030	.0810	17.6330
11	.2010	.0750	-16.2260	.2020	.0800	17.5850
12	.1990	.0730	-16.1240	.2000	.0780	17.4730
13	.2010	.0790	15.3690	.1990	.0760	17.3560
14	.2030	.0790	-16.2960	.2030	.0820	17.6560
15	.2010	.0770	-16.1970	.2010	.0800	17.5450
17	.1980	.0730	-15.8700	.1980	.0760	17.3230
18	.2010	.0770	-16.0730	.2010	.0800	17.5450

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 600 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	99.40	111.15	2.52	2.80	17.68
2	110.76	114.88	2.54	2.95	18.74
3	108.74	112.14	2.46	3.12	19.04
4	110.87	113.22	2.15	3.06	19.48
5	109.98	127.22	2.76	3.34	19.61
6	108.36	114.04	2.60	3.23	18.23
7	106.63	115.77	2.62	3.17	18.98
8	100.18	108.44	2.25	3.32	22.50
11	103.82	97.97	2.18	3.20	24.29
12	114.71	-132.35	2.03	3.07	19.66
13	-89.78	-48.92	-3.27	3.61	-6.62
14	106.03	102.70	2.33	3.51	19.90
15	109.51	109.89	2.13	3.15	18.67
17	115.59	120.33	2.41	3.32	20.93
18	100.67	95.38	2.26	3.55	22.10

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
1	17698.	1112.	502.7	30.19	.004900
2	20104.	1141.	511.2	29.85	.005920
3	18865.	1141.	511.2	29.85	.005920
4	17829.	1141.	511.2	29.85	.005920
5	17767.	1178.	510.7	30.21	.007330
7	18384.	1178.	510.7	30.21	.007330
8	19335.	1141.	510.7	30.21	.007330
11	16965.	1200.	513.7	30.26	.007260
12	19248.	1166.	513.7	30.27	.007670
13	18557.	1192.	507.7	30.04	.006070
14	19805.	1192.	507.7	30.03	.006080
15	20184.	1192.	507.7	30.03	.006080
17	27019.	1154.	501.5	30.13	.004450

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	33.00	60.00	33.52	60.95
2	33.00	60.00	33.24	60.44
3	34.00	61.10	-34.25	-61.55
4	33.00	60.90	33.24	61.35
5	-30.00	61.00	-30.23	61.48
7	33.00	-62.00	33.26	-62.48
8	32.50	60.00	32.75	60.47
11	32.00	60.50	32.16	60.79
12	32.00	60.00	32.16	60.29
13	33.00	60.00	33.36	60.65
14	33.00	60.80	33.36	61.46
15	34.00	60.50	-34.37	61.15
17	34.00	-61.50	-34.58	-62.55

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1230.	.8710	.8640	1014.	1.030	1078.
2	1260.	.8570	.9030	1032.	1.025	1054.
3	1300.	.8570	.8870	1014.	-1.050	-1134.
4	1330.	.8610	.9340	1059.	-1.060	1119.
5	1270.	.8500	.8700	1041.	1.020	1115.
7	1200.	.8170	-.7810	1005.	1.030	-1187.
8	1250.	.8560	.8630	978.	1.020	1044.
11	1250.	.8090	.8530	996.	1.020	1065.
12	1210.	.8340	.8410	996.	1.010	1029.
13	-1110.	-.7640	-.7770	996.	1.030	1062.
14	1200.	.7880	.8080	978.	1.040	1121.
15	1300.	.8460	.9090	1032.	1.040	1099.
17	1320.	.8570	.8840	1023.	1.040	-1195.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1222.	.8980	.8920	1046.	1088.
2	1248.	.8690	.9170	1047.	1052.
3	1288.	.8700	.9000	1029.	-1131.
4	1317.	.8730	.9470	1074.	1117.
5	1272.	.8640	.8840	1057.	1126.
7	1202.	.8300	.7930	1020.	-1199.
8	1252.	.8690	.8760	993.	1054.
11	1258.	.8160	.8610	1005.	1077.
12	1218.	.8420	.8490	1005.	1041.
13	-1102.	.7800	.7940	1017.	1067.
14	1192.	.8050	.8260	999.	1125.
15	1291.	.8640	.9290	1054.	1103.
17	1307.	.8860	.9140	1058.	-1203.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.491	949.7	764.6	8.3	14.1
2	1.490	993.9	664.8	5.1	15.7
3	1.522	948.0	591.8	5.3	15.0
4	1.510	992.3	628.2	8.9	14.6
5	1.488	950.8	647.6	9.9	10.5
7	1.450	880.8	566.7	6.0	9.7
8	1.485	944.5	696.2	5.7	9.6
11	1.408	923.5	630.0	6.1	9.5
12	1.416	996.2	751.6	3.8	9.0
13	1.453	-699.6	-252.6	6.5	10.2
14	1.376	883.4	609.8	4.3	9.7
15	1.494	937.3	604.4	5.9	10.4
17	1.479	1024.0	700.0	5.5	9.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	2586.	104.86	145.01	1.51	2.56	18.21
2	2627.	111.51	128.13	.94	2.89	18.16
3	2679.	106.22	111.99	.97	2.76	15.79
4	2649.	110.81	120.51	1.63	2.67	16.95
5	2642.	107.48	125.76	1.84	1.95	23.66
7	2679.	103.59	114.49	1.15	1.88	22.48
8	2621.	106.07	134.32	1.06	1.77	25.49
11	2630.	109.81	128.69	1.20	1.86	22.37
12	-2566.	114.94	-148.99	.72	1.71	16.56
13	-2870.	-87.94	-54.55	1.34	2.11	-8.91
14	2638.	107.80	127.84	.85	1.95	25.07
15	2667.	106.47	117.95	1.10	1.94	20.67
17	2608.	114.87	134.91	1.02	1.78	25.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.1970	-.0680	15.4550	.2000	.0780	17.4680
2	.1960	.0700	15.2490	.1990	.0760	17.3550
3	.1990	.0740	15.4630	.2020	-.0810	-17.6000
4	.1990	.0740	15.4240	.2020	.0800	17.5560
5	.2010	.0750	15.1140	.2020	.0800	17.5850
7	-.2040	.0800	15.3360	-.2050	-.0850	-17.8440
8	.1980	.0720	14.9240	.1990	.0760	17.3620
11	.2000	.0750	15.1120	.2000	.0780	17.4340
12	.1980	.0730	14.9020	.1980	.0760	17.3230
13	.1970	-.0690	15.1780	.1990	.0770	17.4010
14	.1990	.0720	15.3310	.2020	.0800	17.5800
15	.1980	.0710	15.2730	.2010	.0790	17.5130
17	.2010	.0730	-15.8790	-.2060	-.0860	-17.8660

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	102.88	125.55	1.84	3.11	18.21
2	109.98	118.38	1.07	3.28	18.16
3	104.77	103.44	1.19	3.37	15.79
4	109.29	111.31	1.99	3.27	16.95
5	106.87	118.10	2.30	2.44	23.66
7	103.01	107.46	1.44	2.35	22.48
8	105.48	126.17	1.32	2.21	25.49
11	109.86	124.93	1.49	2.31	22.37
12	115.03	144.74	.90	2.13	16.56
13	-86.65	-49.20	1.66	2.60	-8.91
14	106.20	115.24	1.05	2.40	25.07
15	104.89	106.34	1.35	2.38	20.67
17	112.30	114.77	1.23	2.15	25.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.50	64.00	37.08	65.01
2	36.50	64.20	36.77	64.67
3	37.00	64.50	37.27	64.97
4	36.00	64.10	36.26	64.57
5	37.00	64.00	37.29	64.50
7	35.50	-65.00	35.78	-65.51
8	36.00	64.50	36.28	65.00
11	35.00	64.50	35.17	64.81
12	36.00	64.00	36.17	64.31
13	35.40	64.00	35.78	64.69
14	36.20	64.50	36.59	65.20
15	37.00	64.50	37.40	65.20
17	36.30	64.00	36.92	65.09

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	1360.	.8460	.8390	1023.	1.050	1367.
2	1370.	.8330	.8540	1032.	1.025	1358.
3	1400.	.8360	.8610	1023.	1.050	1380.
4	1430.	.8450	.9050	1059.	-1.060	1351.
5	1380.	.8300	.8620	1050.	1.030	1330.
7	1290.	.8110	.7660	1005.	1.040	-1401.
8	1360.	.8360	.8090	-978.	1.030	1366.
11	1350.	.7840	.8080	996.	1.025	1350.
12	1350.	.8090	.8200	996.	1.015	1314.
13	-1210.	-.7560	-.7470	1014.	1.030	1351.
14	1290.	.7720	.7720	-978.	1.040	1387.
15	1430.	.8370	.8780	1032.	1.040	1387.
17	1390.	.8450	.8590	1023.	1.050	1375.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1351.	.8730	.8660	1055.	1379.
2	1357.	.8450	.8660	1047.	1355.
3	1387.	.8480	.8740	1038.	1377.
4	1416.	.8580	-.9180	1074.	1348.
5	1383.	.8430	.8750	1066.	1343.
7	1292.	.8240	.7780	1020.	-1415.
8	1363.	.8490	.8210	993.	1379.
11	1359.	.7920	.8160	1005.	1365.
12	1359.	.8170	.8280	1005.	1329.
13	-1202.	.7720	.7630	1036.	1356.
14	1281.	.7890	.7880	999.	1392.
15	1420.	.8550	.8977	1054.	1392.
17	1376.	.8740	.8890	1058.	1385.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.503	843.6	589.3	8.7	15.4
2	1.492	894.6	527.7	4.8	16.2
3	1.514	880.7	479.4	5.1	-16.9
4	1.528	900.3	495.3	7.9	16.1
5	1.491	865.8	522.2	8.6	10.6
7	1.476	806.3	463.8	5.9	10.3
8	1.501	845.5	542.2	5.6	10.2
11	1.410	832.2	487.7	6.7	10.3
12	1.436	871.2	559.8	3.6	10.1
13	1.455	-646.8	-207.5	6.9	10.8
14	1.394	789.0	473.6	4.1	10.5
15	1.523	845.3	477.7	5.9	11.1
17	1.491	957.3	597.5	5.4	10.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	2683.	95.85	115.02	1.63	2.87	16.99
2	2704.	103.23	104.61	.91	3.07	-0.00
3	2735.	101.25	94.67	.96	3.19	-3.14
4	2728.	102.27	96.66	1.48	3.00	15.94
5	2713.	100.26	103.90	1.63	2.01	23.12
7	2747.	95.50	94.37	1.15	2.00	18.93
8	2710.	97.17	107.04	1.06	1.93	25.26
11	2714.	101.96	102.65	1.35	2.08	20.39
12	2680.	103.51	114.26	.71	1.97	15.75
13	-2905.	-82.18	-45.29	1.43	2.25	10.66
14	2726.	98.21	101.27	.83	2.14	25.00
15	2747.	97.03	94.20	1.11	2.09	20.53
17	2667.	108.93	116.81	1.00	1.91	24.64

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	-.0890	16.5160	.2160	.1040	1A.6A70
2	.2120	.0930	16.3100	.2150	.1010	1A.5720
3	.2130	.0950	16.3980	.2160	.1030	1A.6730
4	.2110	.0920	16.2800	.2140	.1000	1A.5780
5	.2130	.0930	15.9070	.2140	.1000	1A.5140
7	-.2170	.1010	16.1970	-.2180	-.10A0	-1A.8550
8	.2150	.0970	16.0520	.2160	.1040	1A.6A40
11	.2150	.0990	16.1350	.2150	.1020	1A.6200
12	.2130	.0950	15.86A0	.2130	.0980	1A.4510
13	.2110	.0910	16.1930	.2150	.1010	1A.5780
14	.2140	.0940	16.3390	.2170	.1050	1A.7490
15	.2140	.0940	16.3390	.2170	.1050	1A.7490
17	.2110	-.0A80	16.6190	.2160	.1040	1A.7140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBFR CORRECTED
----	-----	-----	-----	-----	-----
1	94.01	99.14	1.98	3.49	16.99
2	101.80	96.46	1.12	3.76	-0.00
3	99.85	87.27	1.18	-3.90	-3.14
4	100.86	89.13	1.81	3.67	15.94
5	99.69	97.39	2.04	2.52	23.12
7	94.95	88.41	1.44	2.50	18.93
8	96.61	100.30	1.32	2.41	25.26
11	102.00	99.51	1.68	2.58	20.39
12	103.57	110.86	.88	2.46	15.75
13	-80.95	-40.74	1.77	2.78	10.66
14	96.73	91.01	1.03	2.64	25.00
15	95.57	84.66	1.37	2.57	20.53
17	106.46	99.02	1.21	2.31	24.64

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODF 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-99.00	100.00	100.56	101.58
2	100.50	100.50	101.23	101.23
3	101.00	101.00	101.74	101.74
4	100.00	100.50	100.73	101.23
5	100.00	100.00	100.78	100.78
7	100.00	103.00	100.78	103.80
8	100.00	101.00	100.78	101.79
11	100.00	102.50	100.49	103.00
12	101.00	101.00	101.49	101.49
13	100.00	101.50	101.08	102.59
14	101.00	102.00	102.09	103.10
15	101.80	99.40	-102.90	100.47
17	100.20	99.50	101.91	101.20

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	9830.	-1.4780	1.3810	1392.	1.850	18434.
2	9930.	1.5240	1.4300	1428.	1.850	18644.
3	9870.	1.5930	1.4020	1390.	1.850	18644.
4	9880.	1.5570	1.4270	1437.	1.850	18644.
5	-9570.	1.5440	-1.3530	1410.	1.850	18421.
7	9650.	1.5350	-1.3460	1374.	1.850	18421.
8	10050.	1.6210	1.3880	-1347.	1.850	18421.
11	9970.	-1.4910	1.3980	1392.	1.850	18391.
12	10010.	1.5220	1.4120	1410.	1.850	18385.
13	9760.	1.5570	1.3600	1356.	1.850	18529.
14	9690.	1.5870	-1.3510	1356.	1.850	18532.
15	9860.	1.6160	1.3930	1392.	1.850	18532.
17	10160.	1.5290	1.4490	1428.	1.850	18470.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1200 HOUR TEST SERIES *

MONF 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	9765.	1.5250	1.4250	1436.	18600.
2	9835.	1.5460	1.4510	1449.	18600.
3	9775.	1.6160	1.4220	1410.	18600.
4	9785.	1.5800	1.4480	1458.	18600.
5	-9588.	1.5690	1.3740	1432.	18600.
7	9668.	1.5590	1.3670	1395.	18600.
8	10069.	1.6460	1.4100	1368.	18600.
11	10035.	-1.5050	1.4110	1405.	18600.
12	10078.	1.5360	1.4260	1423.	18600.
13	9693.	1.5910	1.3900	1385.	18600.
14	-9622.	1.6210	1.3800	1385.	18600.
15	9791.	1.6510	1.4230	1422.	18600.
17	10060.	1.5810	-1.4990	1477.	18600.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-3.110	-10.0	3.8	-80.2	84.5
2	3.211	24.4	4.4	88.6	93.1
3	3.359	-27.7	1.7	95.6	97.5
4	3.283	27.0	3.4	83.7	89.1
5	3.258	21.1	4.3	86.9	86.8
7	3.236	21.4	8.0	86.4	82.6
8	3.420	21.6	6.7	89.9	86.7
11	-3.143	18.8	3.4	93.9	92.0
12	3.208	20.3	6.1	97.9	98.9
13	3.287	18.4	3.1	-164.5	-160.9
14	3.351	22.5	4.7	100.9	99.0
15	3.412	23.0	4.9	95.4	92.9
17	3.222	21.2	15.6	90.4	87.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	3147.	-.64	.43	8.49	8.94	48.19
2	3150.	1.53	.47	9.09	9.54	44.37
3	3151.	-1.66	.18	9.37	9.56	46.58
4	3150.	-1.65	.35	8.40	8.94	48.19
5	3153.	1.30	.46	8.79	8.79	49.42
7	3151.	1.32	.85	8.79	8.79	53.95
8	3152.	1.27	.67	8.66	8.66	54.44
11	3153.	1.20	.38	9.85	9.85	48.95
12	3152.	1.27	.66	10.06	10.16	48.43
13	3156.	1.12	.72	-16.51	-16.51	-21.10
14	3155.	1.35	.48	9.93	9.93	52.44
15	3155.	1.35	.50	9.22	9.22	53.26
17	3152.	1.32	1.66	9.24	9.24	55.26

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	59.5630	65.4740	82.8260	75.6600	84.4290	96.0580
2	67.3790	69.2840	82.0580	75.9900	78.9270	94.5190
3	80.9850	76.3840	84.0000	92.0240	87.0920	96.7750
4	71.7540	69.2840	82.0580	81.1810	78.9270	94.5190
5	67.0660	64.2560	78.5320	75.6460	72.1800	92.5150
7	87.7830	109.8650	89.2960	99.4180	124.0660	105.3260
8	86.4260	78.1380	82.3030	98.4580	87.9410	97.0000
11	78.5750	104.0310	88.1750	84.3370	111.1060	102.5840
12	71.3810	77.8810	81.6330	76.6150	82.9800	95.6400
13	80.0170	85.7280	86.2300	95.6950	102.8000	100.6950
14	89.3650	94.3230	88.2220	107.5000	113.2890	103.0630
15	71.8630	56.9210	78.1650	86.2280	67.9010	91.1680
17	61.8960	59.3660	81.6210	81.0340	78.3470	94.3520

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	E:	SMK CORRECTED	NUMBER
1		-0.51			.33			10.57			11.13		48.19	
2		1.35			.41			11.25			11.81		44.37	
3		1.46			.16			11.67			11.90		46.58	
4		1.46			.31			10.39			11.06		48.19	
5		1.15			.41			11.12			11.12		49.42	
7		1.17			.76			11.14			11.14		53.95	
8		1.11			.60			10.96			10.96		54.44	
11		1.12			.35			11.45			11.45		48.95	
12		1.18			.61			11.79			11.91		48.43	
13		.94			.27			-19.28			-19.28		-21.10	
14		1.12			.40			11.60			11.60		52.44	
15		1.13			.42			10.76			10.76		53.26	
17		1.01			1.26			11.47			11.47		55.26	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-94.00	-97.50	95.48	99.04
2	95.00	98.20	95.69	98.92
3	96.50	99.00	-97.21	99.72
4	95.00	98.90	95.69	99.62
5	96.00	98.00	96.75	98.76
7	95.00	100.00	95.74	100.78
8	-94.50	99.00	95.24	99.77
11	95.50	100.00	95.96	100.49
12	96.00	98.50	96.47	98.98
13	95.60	99.80	96.63	100.88
14	96.20	100.20	-97.24	101.24
15	95.40	-96.80	96.43	97.84
17	94.90	-97.00	96.52	98.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8250.	-1.3360	1.2740	1293.	1.660	15684.
2	8200.	1.3680	1.3030	1338.	1.660	15863.
3	8350.	1.4310	1.3090	1302.	1.660	15863.
4	8270.	1.3860	1.3230	1356.	1.660	15863.
5	8340.	1.3950	1.3100	1338.	1.660	15674.
7	-7980.	1.3800	-1.2270	1284.	1.660	15674.
8	8180.	1.4310	1.2630	1293.	1.660	15674.
11	8350.	-1.3390	1.2870	1293.	1.660	15648.
12	8150.	1.3680	1.2600	1302.	1.660	15643.
13	8130.	1.4170	1.2580	1284.	1.660	15765.
14	8170.	1.4270	1.2640	1284.	1.660	15768.
15	-7880.	1.4220	-1.2280	1302.	1.660	15768.
17	8240.	1.3770	1.2890	1320.	1.660	15716.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8195.	1.3790	1.3150	1334.	15826.
2	8121.	1.3880	1.3220	1357.	15826.
3	8270.	1.4520	1.3280	1321.	15826.
4	8191.	1.4070	1.3430	1376.	15826.
5	8356.	1.4160	1.3300	1359.	15826.
7	-7995.	1.4010	1.2470	1304.	15826.
8	8195.	1.4530	1.2820	1313.	15826.
11	8404.	-1.3520	1.2990	1305.	15826.
12	8206.	1.3810	1.2720	1314.	15826.
13	8074.	1.4470	1.2850	1312.	15826.
14	8113.	1.4570	1.2920	1312.	15826.
15	-7825.	1.4530	1.2540	1330.	15826.
17	8159.	1.4250	1.3330	1365.	15826.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-2.807	19.3	1.9	64.4	69.8
2	2.877	29.8	1.9	69.0	75.4
3	3.012	29.8	1.4	73.9	77.5
4	2.917	33.2	1.9	65.9	73.2
5	2.937	27.1	2.5	70.7	72.0
7	2.904	29.8	4.4	67.5	67.1
8	3.014	26.3	3.1	68.4	68.5
11	-2.818	23.8	1.9	74.2	74.5
12	2.880	26.8	2.6	77.3	78.6
13	2.987	20.3	1.9	-122.0	-121.8
14	3.007	27.1	2.6	79.4	80.2
15	2.996	33.6	2.7	70.3	72.2
17	2.900	30.4	6.8	69.1	69.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3146.	1.37	.23	7.54	8.18	48.43
2	3150.	2.08	.23	7.90	8.63	46.18
3	3150.	1.99	.16	8.08	8.48	47.51
4	3149.	2.28	.23	7.44	8.26	48.57
5	3152.	1.85	.29	7.94	8.08	54.04
7	3151.	2.06	.53	7.65	7.65	55.16
8	3152.	1.75	.35	7.48	7.49	56.58
11	3153.	1.69	.23	8.68	8.71	48.95
12	3152.	1.87	.31	8.85	8.99	50.00
13	3155.	1.36	.22	-13.48	-13.48	-20.79
14	3155.	1.81	.30	8.71	8.80	55.13
15	3154.	2.25	.31	7.74	7.94	54.64
17	3153.	2.10	.81	7.85	7.88	56.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-36.6190	39.9250	73.5480	45.0370	50.9910	85.1060
2	40.6800	43.8520	73.5200	45.1290	49.7500	84.6030
3	48.9670	51.5010	76.4190	54.6540	58.5120	87.9680
4	45.0330	50.4820	76.0520	50.0800	57.3430	87.5420
5	41.9800	43.0990	71.3450	46.5560	48.2300	83.9730
7	50.2800	64.2560	78.5320	55.8730	72.1800	92.5150
8	49.4150	52.7000	74.8800	55.0570	59.0860	88.1740
11	47.0390	63.9490	78.4700	49.9420	68.0950	91.2310
12	42.3420	47.4090	72.4600	44.9440	50.3630	84.8520
13	52.2300	61.6080	79.6660	-61.0810	73.5460	92.9320
14	55.3030	66.6120	81.1690	-64.8190	-79.6280	-94.7190
15	-38.5730	-33.5790	68.8180	44.8410	39.7860	80.1390
17	-37.0380	36.1080	72.4280	46.6600	47.1610	83.5220

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-1.12	.18	9.37	10.17	48.43
2	1.87	.20	9.76	10.67	46.18
3	1.78	.14	9.99	10.48	47.51
4	2.05	.20	9.20	10.21	48.57
5	1.67	.26	10.03	10.22	54.04
7	1.85	.47	9.68	9.68	55.16
8	1.57	.31	9.46	9.48	56.58
11	1.59	.22	10.84	10.88	48.95
12	1.76	.29	11.13	11.30	50.00
13	-1.16	.19	-15.72	-15.72	-20.79
14	1.54	.25	10.16	10.26	55.13
15	1.93	.26	9.68	9.93	54.64
17	1.67	.62	9.72	9.76	56.68

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.00	93.00	86.34	94.47
2	86.00	94.00	86.63	94.69
3	86.00	94.20	86.63	94.89
4	85.50	94.00	86.12	94.69
5	85.00	93.00	85.66	93.73
7	85.00	95.00	85.66	95.74
8	85.00	94.00	85.66	94.73
11	86.00	95.00	86.42	95.46
12	85.00	94.00	85.41	94.46
13	84.80	94.40	85.71	95.42
14	86.20	95.00	87.13	96.02
15	85.40	-92.20	86.32	93.19
17	85.10	-92.80	86.55	94.38

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	5800.	-1.1390	1.1330	1203.	1.390	10869.
2	5830.	1.1860	1.1600	1221.	1.390	10993.
3	5820.	1.2020	1.1370	1176.	1.390	10993.
4	5730.	1.1760	1.1480	1239.	1.390	10993.
5	5650.	1.1660	1.1070	1212.	1.390	10862.
7	5530.	1.1770	1.0590	-1158.	1.390	10862.
8	5660.	1.1870	1.0960	1185.	1.390	10862.
11	5700.	-1.1140	1.0980	1176.	1.390	10844.
12	5670.	1.1610	1.0920	1176.	1.390	10841.
13	-5430.	1.1540	-1.0540	1176.	1.390	10926.
14	5590.	1.1820	1.0850	1176.	1.390	10927.
15	5520.	1.1840	1.0800	1194.	1.390	10927.
17	5790.	1.1740	1.1330	1203.	1.390	10891.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CORR FJ FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	5761.	1.1760	1.1690	1241.	10968.
2	5774.	1.2040	1.1770	1239.	10968.
3	5764.	1.2190	1.1530	1193.	10968.
4	5675.	1.1930	1.1650	1257.	10968.
5	5661.	1.1840	1.1240	1231.	10968.
7	5540.	1.1960	1.0760	1176.	10968.
8	5671.	1.2060	1.1140	1203.	10968.
11	5737.	-1.1250	1.1090	1187.	10968.
12	5709.	1.1720	1.1030	1187.	10968.
13	-5393.	1.1790	1.0770	1201.	10968.
14	5551.	1.2070	1.1090	1201.	10968.
15	5481.	1.2090	1.1030	1220.	10968.
17	5733.	1.2150	1.1720	1244.	10968.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-2.384	62.9	2.5	43.8	51.1
2	2.488	62.0	1.7	44.6	54.6
3	2.519	66.4	2.5	48.3	55.8
4	2.464	67.8	1.9	40.7	51.8
5	2.445	68.6	2.7	43.4	48.2
7	2.468	69.6	4.3	40.3	46.5
8	2.492	53.8	2.7	43.1	47.7
11	-2.336	52.7	1.9	44.0	48.5
12	2.434	64.8	2.5	41.3	49.1
13	2.426	-31.2	1.9	-62.2	-67.1
14	2.480	65.4	2.8	44.4	52.5
15	2.482	-88.5	3.6	39.3	47.9
17	2.464	71.4	4.6	42.2	48.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3140.	5.27	.35	6.03	7.04	49.61
2	3145.	4.99	.24	5.89	7.21	47.24
3	3144.	5.28	.33	6.30	7.29	49.80
4	3144.	5.51	.26	5.43	6.91	48.69
5	3146.	5.62	.37	5.84	6.49	53.05
7	3145.	5.65	.60	5.37	6.20	55.05
8	3148.	4.32	.37	5.69	6.30	57.61
11	3148.	4.52	.28	6.20	6.84	52.11
12	3147.	5.33	.36	5.59	6.64	49.09
13	3153.	-2.58	.28	-8.45	-9.12	-19.53
14	3149.	5.28	.39	5.89	6.97	-58.04
15	3146.	-7.14	.50	5.21	6.35	53.95
17	3147.	5.80	.65	5.64	6.51	56.90

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	-17.3660	14.9450	57.8210	20.5510	19.7760	66.6500
2	20.0390	17.5350	58.7460	21.8510	19.7520	67.4880
3	20.8910	18.3620	59.4170	22.8050	20.6910	68.2640
4	19.7610	17.5350	58.7460	21.5350	19.7520	67.4880
5	17.6390	14.2180	54.3520	19.1230	15.7670	63.8380
7	22.2900	22.5640	60.9060	24.2430	25.1120	71.5950
8	20.2650	17.9710	57.5880	22.0260	19.9650	67.6660
11	20.4650	22.2690	60.7150	21.4330	23.5770	70.4930
12	19.4920	17.7150	56.9450	20.4270	18.7240	66.6040
13	20.3160	19.8250	60.4770	22.9080	23.3430	70.3210
14	22.4360	22.6790	62.5080	25.3860	26.7510	72.7150
15	-16.5140	-11.8550	53.2670	18.5950	13.8870	61.8650
17	17.7640	14.3260	57.7360	21.4350	18.4050	66.3230

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	4.46	.28	7.47	8.71	49.61
2	4.58	.21	7.27	8.90	47.24
3	4.84	.30	7.77	8.99	49.80
4	5.05	.23	6.70	8.53	48.69
5	5.18	.34	7.36	8.19	53.05
7	5.19	.54	6.78	7.83	55.05
8	3.98	.33	7.18	7.95	57.61
11	4.32	.26	7.73	8.52	52.11
12	5.09	.34	7.02	8.34	49.09
13	-2.29	.23	-10.55	-11.39	-19.53
14	4.67	.33	7.36	8.71	-58.04
15	-6.34	.42	-6.49	7.92	53.95
17	4.81	.51	6.95	8.03	56.90

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	69.00	86.00	70.09	87.36
2	70.00	86.50	70.51	87.13
3	70.00	86.70	70.51	87.33
4	69.00	86.50	69.50	87.13
5	70.50	86.50	71.05	87.17
7	67.50	87.00	68.03	87.68
8	67.00	87.00	67.52	87.68
11	68.00	87.00	68.33	87.42
12	69.00	86.50	69.33	86.92
13	67.00	86.00	67.72	86.93
14	-71.80	88.50	-72.57	-89.45
15	67.00	-84.60	67.72	85.51
17	67.00	-84.80	68.14	86.25

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	3300.	.9550	.9340	1086.	1.170	5585.
2	3370.	.9580	.9720	1104.	1.170	5648.
3	3380.	.9830	.9600	1068.	1.170	5648.
4	3330.	.9450	.9650	1113.	1.170	5648.
5	3430.	.9470	.9780	1104.	1.170	5581.
7	3070.	.9330	.8540	-1050.	1.170	5581.
8	3150.	.9040	.8910	1086.	1.170	5581.
11	3140.	.8900	.8720	-1050.	1.170	-5572.
12	3270.	.9350	.9150	1068.	1.170	-5570.
13	-2970.	-.8790	-.8380	1068.	1.170	5613.
14	3440.	.9550	.9710	1068.	1.170	5614.
15	3060.	.8940	.8630	1068.	1.170	5614.
17	3140.	.9100	.8870	1077.	1.170	5596.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DEG R	COR THRUST LBF
1	3278.	.9850	.9640	1120.	5635.
2	3338.	.9720	.9870	1120.	5635.
3	3348.	.9970	.9740	1083.	5635.
4	3298.	.9590	.9790	1129.	5635.
5	3436.	.9610	.9930	1121.	5635.
7	3076.	.9480	.8670	1066.	5635.
8	3156.	.9180	.9050	1103.	5635.
11	3160.	.8990	.8800	1060.	5635.
12	3292.	.9440	.9240	1078.	5635.
13	-2950.	.8980	.8560	1091.	5635.
14	3416.	.9750	.9920	1091.	5635.
15	3039.	.9140	.8820	1091.	5635.
17	3109.	.9410	.9170	1114.	5635.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.979	168.9	12.7	29.8	34.2
2	1.983	204.7	15.3	22.0	33.6
3	2.041	176.4	13.4	21.1	35.6
4	1.958	192.5	12.5	27.1	33.1
5	1.961	201.2	16.8	28.5	29.3
7	1.933	186.4	18.5	-16.7	26.5
8	1.875	162.3	12.9	20.2	26.8
11	1.847	163.2	10.8	25.9	27.4
12	1.937	186.6	16.1	19.7	29.4
13	-1.835	-81.3	-4.6	27.6	31.2
14	1.983	174.9	15.2	20.7	31.1
15	1.849	219.3	22.2	19.6	26.2
17	1.883	208.1	20.3	-17.1	27.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JY3D-7 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LA/KLB FU	HC EI LA/KLB FU	NO FI LA/KLB FU	NOX EI LA/KLB FU	SMK NIIMBER FRONT SIDE
1	3116.	16.93	2.19	4.91	5.62	39.61
2	3114.	20.46	2.62	3.62	5.51	40.92
3	3120.	17.16	2.25	3.38	5.68	43.44
4	3117.	19.50	2.17	4.50	5.50	40.00
5	3116.	20.35	2.92	4.73	4.86	48.32
7	3117.	19.12	3.26	-2.82	4.46	48.81
8	3122.	17.20	2.35	3.52	4.66	50.73
11	3123.	17.56	2.00	4.58	4.84	47.24
12	3118.	19.11	2.83	3.32	4.95	39.74
13	-3142.	-8.87	-0.85	4.94	5.58	-12.76
14	3123.	17.53	2.61	3.41	5.12	-52.75
15	3110.	-23.48	4.07	3.45	4.62	49.67
17	3114.	21.90	3.67	2.96	4.70	46.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TFST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	6.6570	2.9610	38.8890	7.6050	3.6240	44.5530
2	6.8460	3.0940	38.4110	7.3210	3.4400	43.9930
3	7.1720	3.2400	38.8440	7.6790	3.6040	44.4930
4	6.7620	3.0940	38.4110	7.2280	3.4400	43.9930
5	6.8420	3.1710	37.6520	7.2800	3.4740	44.0980
7	7.1210	3.5570	38.7180	7.5770	3.9000	45.3570
8	6.9230	3.5570	38.7180	7.3570	3.9000	45.3570
11	6.7970	3.5060	38.5950	7.0300	3.6780	44.7140
12	6.7260	3.1250	37.2400	6.9600	3.2750	43.4690
13	6.1020	2.8460	37.5860	6.6650	3.2800	43.4850
14	8.6060	-5.1380	-43.4320	-9.4780	-5.9620	-50.3300
15	-5.3180	2.0420	34.6630	5.8020	2.3460	40.0720
17	-5.6180	2.2480	36.6890	6.4550	2.7960	41.8270

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODF 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBR
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	14.82	1.79	6.04	6.92	39.61
2	19.13	2.36	4.45	6.78	40.92
3	16.03	2.02	4.15	6.99	43.44
4	18.25	1.95	5.54	6.77	40.00
5	19.12	2.67	5.95	6.11	48.32
7	17.97	2.97	-3.54	5.61	48.81
8	16.18	2.14	4.43	5.86	50.73
11	16.98	1.91	5.70	6.02	47.24
12	18.47	2.70	4.16	6.21	39.74
13	-8.12	-.74	6.14	6.93	-12.76
14	15.92	2.25	4.24	6.37	-52.75
15	21.52	3.55	4.29	5.73	49.67
17	19.06	2.95	3.63	5.75	46.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	35.50	64.00	36.06	-65.01
2	36.00	63.50	36.26	63.96
3	36.00	63.50	36.26	63.96
4	36.00	64.00	36.26	64.47
5	36.00	-63.00	36.28	63.49
7	35.00	64.00	35.27	64.50
8	35.00	64.00	35.27	64.50
11	35.00	64.00	35.17	64.31
12	36.00	64.00	36.17	64.31
13	34.90	-63.20	35.28	63.88
14	35.70	63.60	36.08	64.29
15	36.30	63.50	36.69	64.18
17	36.20	64.00	36.82	-65.09

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DFG R	EPR	THRUST LRF
1	1260.	.7900	.7740	1014.	1.050	-1367.
2	1320.	.7960	.8390	1030.	1.025	1308.
3	1330.	.8320	.8320	996.	1.050	1308.
4	1370.	.8020	.8620	1041.	-1.060	1344.
5	1280.	.7640	.8170	1032.	1.030	1259.
7	1205.	.7810	.7270	-978.	1.040	1330.
8	1280.	.7710	.7900	1025.	1.040	1330.
11	1290.	.7480	.7700	-960.	1.025	1314.
12	1260.	.7610	.7650	996.	1.020	1314.
13	1160.	-.7180	.7340	1014.	1.030	1294.
14	1240.	.7440	.7620	-978.	1.050	1323.
15	1340.	.8000	.8470	1032.	1.040	1315.
17	1335.	.7980	.8250	1023.	1.050	-1375.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1252.	.8150	.7990	1046.	-1379.
2	1307.	.8080	.8510	1045.	1305.
3	1317.	.8440	.8440	1010.	1305.
4	1357.	.8130	.8750	1056.	1341.
5	1282.	.7760	.8300	1048.	1271.
7	1207.	.7930	.7380	993.	1343.
8	1282.	.7830	.8020	1041.	1343.
11	1298.	.7560	.7770	-969.	1329.
12	1269.	.7680	.7730	1005.	1329.
13	-1152.	.7340	.7500	1036.	1299.
14	1231.	.7600	.7780	999.	1328.
15	1331.	.8180	.8660	1054.	1320.
17	1322.	.8250	.8540	1058.	-1385.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.423	781.3	490.4	10.5	15.7
2	1.444	840.2	451.2	7.3	15.7
3	1.504	865.8	493.1	7.0	-17.1
4	1.459	856.2	434.1	9.9	16.0
5	1.375	830.0	464.6	10.7	11.0
7	1.431	760.5	416.8	6.4	10.3
8	1.409	750.1	422.7	8.2	11.1
11	1.366	782.2	399.7	9.2	10.6
12	1.372	798.9	458.9	4.9	10.4
13	1.379	-653.3	-193.3	9.3	10.7
14	1.352	756.4	427.4	6.1	10.7
15	1.461	822.0	436.2	7.7	11.2
17	1.422	895.2	523.6	5.5	10.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2719.	95.00	102.44	2.09	3.13	14.56
2	2738.	101.39	93.54	1.44	3.12	17.08
3	2728.	99.93	97.78	1.33	3.24	18.08
4	2747.	102.60	89.37	1.94	3.15	17.23
5	2716.	104.38	100.37	2.21	2.27	20.65
7	2767.	93.59	88.11	1.28	2.08	20.53
8	2760.	93.53	90.55	1.68	2.27	-27.97
11	2756.	100.43	88.17	1.93	2.24	21.57
12	2724.	100.94	99.61	1.02	2.15	15.93
13	-2899.	-87.38	-44.41	2.05	2.35	-10.39
14	2744.	97.74	94.88	1.30	2.27	25.23
15	2756.	98.68	89.95	1.52	2.20	24.67
17	2691.	107.84	108.36	1.10	2.04	23.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TFST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	.0890	-16.5160	-.2160	-.1040	-18.6870
2	.2090	.0880	16.1030	.2120	.0960	18.3350
3	.2090	.0880	16.1030	.2120	.0960	18.3350
4	.2110	.0920	16.2500	.2140	.0990	18.5040
5	-.2080	-.0870	15.6200	.2100	.0920	18.1770
7	.2130	.0930	15.9070	.2140	.1000	18.5140
8	.2130	.0930	15.9070	.2140	.1000	18.5140
11	.2130	.0950	15.9900	.2130	.0980	18.4510
12	.2130	.0950	15.8620	.2130	.0980	18.4510
13	-.2080	-.0860	15.9600	.2110	.0950	18.3070
14	.2100	.0880	16.0750	.2130	.0980	18.4430
15	.2090	.0880	16.0450	.2130	.0970	18.4090
17	.2110	.0880	-16.6190	-.2160	-.1040	-18.7140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	93.17	88.29	2.54	3.81	14.56
2	99.99	86.28	1.76	3.82	17.08
3	98.55	90.19	1.63	3.96	18.08
4	101.18	82.41	2.38	3.85	17.23
5	103.79	94.15	2.76	2.83	20.65
7	93.05	82.60	1.60	2.60	20.53
8	92.99	84.88	2.11	2.83	-27.97
11	100.47	85.50	2.39	2.77	21.57
12	101.00	96.64	1.27	2.68	15.93
13	-86.08	-39.97	2.53	2.90	-10.39
14	96.28	85.34	1.61	2.80	25.23
15	97.20	80.92	1.87	2.71	24.67
17	105.39	91.86	1.33	2.47	23.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	33.50	61.00	34.03	61.96
2	33.50	60.50	33.74	60.94
3	34.00	61.50	34.25	61.95
4	34.00	61.60	34.25	62.05
5	34.00	61.00	34.27	61.48
7	33.00	62.00	33.26	-62.48
8	33.00	61.00	33.26	61.48
11	33.00	61.00	33.16	61.30
12	32.50	60.00	32.66	60.29
13	32.80	60.80	33.15	61.46
14	33.30	61.00	33.66	61.66
15	34.40	61.00	-34.77	61.66
17	34.40	61.80	-34.99	-62.85

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1210.	.8150	.8190	1014.	1.030	1151.
2	1255.	.8180	.8820	1030.	1.025	1090.
3	1290.	.8560	.8610	996.	1.050	1163.
4	1330.	.8210	.9030	1041.	-1.060	1170.
5	1250.	.7850	.8500	1023.	1.020	1115.
7	1180.	.8280	.7580	-978.	1.030	-1187.
8	1240.	.7980	.8350	1005.	1.030	1115.
11	1240.	.7710	.8160	-960.	1.015	1101.
12	1170.	.7890	.8130	996.	1.010	1029.
13	-1070.	-.7340	-.7340	1014.	1.030	1120.
14	1170.	.7660	.7830	-978.	1.050	1135.
15	1280.	.8240	.8790	1032.	1.040	1135.
17	1305.	.8090	.8610	1014.	1.040	-1217.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	CORR TT7	COR THRUST
-----	LBM/HR	X100	X100	DEG R	LBF
-----	-----	-----	-----	-----	-----
1	1202.	.8410	.8450	1046.	1161.
2	1243.	.8300	.8950	1045.	1088.
3	1278.	.8680	.8730	1010.	1160.
4	1317.	.8330	.9170	1056.	1168.
5	1252.	.7970	.8630	1039.	1126.
7	1182.	.8410	.7700	993.	-1199.
8	1242.	.8100	.8490	1020.	1126.
11	1248.	.7780	.8240	-969.	1113.
12	1178.	.7970	.8210	1005.	1041.
13	-1063.	.7500	.7490	1036.	1125.
14	1162.	.7830	.8100	999.	1139.
15	1271.	.8420	.8980	1054.	1139.
17	1292.	.8370	.8910	1049.	-1225.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.432	854.0	605.3	9.8	15.5
2	1.446	927.1	567.8	5.9	15.2
3	1.521	921.6	578.8	5.9	-17.2
4	1.464	930.4	526.0	8.6	15.7
5	1.384	899.2	555.1	10.0	10.5
7	1.500	826.4	492.6	6.2	10.2
8	1.429	835.2	516.1	7.1	10.2
11	1.373	862.0	504.6	8.4	10.1
12	1.378	898.8	601.7	4.4	9.5
13	1.395	-699.7	-234.8	8.6	10.4
14	1.363	827.7	522.1	5.2	10.0
15	1.477	891.9	523.6	6.9	10.5
17	1.408	960.1	622.6	5.3	9.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIIMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2654.	100.73	122.66	1.90	3.00	15.01
2	2668.	108.90	114.59	1.13	2.94	17.94
3	2685.	103.50	111.67	1.09	3.17	18.26
4	2692.	108.91	105.77	1.66	3.03	16.82
5	2662.	110.11	116.78	2.01	2.11	21.24
7	2736.	-95.91	98.23	1.19	1.94	19.81
8	2705.	100.63	106.83	1.40	2.02	-27.51
11	2690.	107.49	108.10	1.71	2.06	21.33
12	2638.	109.49	125.92	.89	1.90	15.13
13	-2869.	-91.60	-52.80	1.85	2.23	-9.27
14	2686.	103.83	112.51	1.07	2.05	25.17
15	2707.	104.03	104.93	1.33	2.01	23.33
17	2630.	114.14	127.16	1.03	1.92	25.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2000	.0710	15.6510	.2040	.0820	17.6930
2	.1980	.0720	15.3460	.2000	.0780	17.4670
3	.2010	.0760	15.5410	.2030	.0820	17.6900
4	.2010	.0760	15.5600	.2040	.0830	17.7120
5	.2010	.0750	15.1140	.2020	.0800	17.5850
7	.2040	.0800	15.3360	-.2050	-.0850	-17.8440
8	.2010	.0750	15.1140	.2020	.0800	17.5850
11	.2020	.0770	15.2080	.2010	.0800	17.5450
12	.1980	.0730	14.9020	.1980	.0760	17.3230
13	.1990	.0720	15.3320	.2020	.0800	17.5800
14	.2000	.0730	15.3700	.2030	.0810	17.6250
15	.2000	.0730	15.3700	.2030	.0810	17.6250
17	.2020	.0750	-15.9670	-.2070	-.0880	-17.9660

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED	
-----	-----	-----	-----	-----	-----	
1	98.83	106.13		2.30	3.64	15.01
2	107.41	105.86		1.38	3.59	17.94
3	102.08	103.13		1.34	-3.88	18.26
4	107.42	97.68		2.03	3.70	16.82
5	109.50	109.66		2.52	2.63	21.24
7	-95.37	92.20		1.48	2.42	19.81
8	100.07	100.32		1.75	2.53	-27.51
11	107.54	104.93		2.12	2.55	21.33
12	109.57	122.33		1.11	2.37	15.13
13	-90.25	-47.61		2.28	2.74	-9.27
14	102.29	101.41		1.32	2.53	25.17
15	102.49	94.58		1.64	2.48	23.33
17	111.57	108.14		1.24	2.32	25.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
2	20758.	1795.	516.7	29.95	.006550
4	18483.	1795.	516.7	29.95	.006550
5	18336.	1747.	529.2	29.90	.008860
7	18953.	1747.	526.2	29.90	.007840
8	19904.	1701.	523.7	29.90	.007710
11	17553.	1788.	519.7	29.96	.006930
13	19182.	1817.	523.2	29.98	.007230
14	20430.	1817.	522.7	29.97	.007350
15	20809.	1817.	521.7	29.97	.007130
17	27637.	1772.	520.2	30.04	.006790

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	33.50	60.00	33.56	60.12
4	33.00	60.50	33.06	60.62
5	34.00	-61.50	33.66	60.89
7	33.00	-61.50	32.76	61.06
8	32.00	60.00	31.85	59.71
11	32.20	60.00	32.17	59.94
13	32.50	60.20	32.36	59.94
14	32.50	60.20	32.38	59.97
15	-34.50	-61.50	-34.40	61.32
17	33.50	60.40	33.45	60.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1270.	.8640	.9110	1041.	1.020	1027.
4	1330.	.8550	.9560	-1086.	-1.060	1063.
5	1250.	.8690	.8610	1068.	1.040	1085.
7	1190.	.8420	.8060	1032.	1.030	1097.
8	1220.	.8610	.8510	978.	1.020	1011.
11	1280.	.8760	.9060	1014.	1.020	1017.
13	-1090.	.8100	-.7660	1014.	1.020	1016.
14	1180.	.8580	.8150	978.	1.040	1017.
15	1300.	.8640	.8710	1014.	1.040	1113.
17	1300.	.8830	.9080	1023.	1.040	1038.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1269.	.8680	.9150	1045.	1028.
4	1329.	.8590	.9600	-1090.	1064.
5	1262.	.8510	.8440	1047.	1084.
7	1198.	.8300	.7950	1017.	1096.
8	1225.	.8530	.8420	-968.	1010.
11	1283.	.8740	.9050	1012.	1018.
13	-1097.	.8030	-.7590	1005.	1018.
14	1187.	.8510	.8080	-970.	1019.
15	1306.	.8590	.8660	1008.	1115.
17	1307.	.8810	.9060	1020.	1043.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.495	1022.7	704.2	7.4	9.5
4	1.505	977.9	625.1	5.3	9.6
5	1.538	962.1	609.4	9.3	10.6
7	1.494	910.3	585.3	6.1	9.2
8	1.493	960.8	706.3	6.1	9.2
11	1.534	996.2	657.9	5.5	9.9
13	1.549	-684.5	-256.7	8.9	10.7
14	1.480	976.9	717.8	6.0	9.0
15	1.513	999.0	641.1	6.2	9.5
17	1.539	1050.9	674.3	6.4	9.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2613.	113.73	134.55	1.35	1.74	22.70
4	2657.	109.89	120.68	.98	1.77	22.38
5	2673.	106.43	115.80	1.69	1.92	20.62
7	2680.	103.93	114.80	1.14	1.73	21.70
8	2618.	107.23	135.43	1.11	1.69	25.10
11	2644.	109.27	123.97	.99	1.79	25.49
13	-2885.	-81.13	-52.26	1.73	2.09	-7.75
14	2605.	109.45	138.17	1.11	1.66	22.98
15	2645.	111.18	122.57	1.13	1.73	20.89
17	2630.	114.35	126.04	1.14	1.72	23.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.1970	.0740	15.2060	.1980	.0750	17.2840
4	.1990	.0760	15.3030	.1990	.0770	17.3950
5	-.2030	-.0870	15.0750	.2000	.0780	17.4540
7	-.2030	-.0850	15.3070	.2010	.0790	17.4930
8	.1980	.0770	15.0030	.1970	.0730	17.1950
11	.1980	.0750	15.1610	.1970	.0740	17.2460
13	.1990	.0780	15.1880	.1970	.0740	17.2450
14	.1990	.0780	15.1430	.1970	.0740	17.2520
15	-.2030	.0820	15.4370	.2020	.0800	17.5510
17	.1990	.0770	15.3090	.1980	.0760	17.3280

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
2	113.46	132.13	1.65	2.12	22.70
4	109.62	118.51	1.20	2.17	22.38
5	108.16	128.45	2.11	2.39	20.62
7	105.13	123.59	1.40	2.13	21.70
8	108.03	142.17	1.37	2.08	25.10
11	109.55	125.52	1.21	2.19	25.49
13	-81.83	-54.84	2.11	2.55	-7.75
14	110.29	144.22	1.36	2.03	22.98
15	111.85	126.69	1.37	2.11	20.89
17	114.96	128.86	1.38	2.09	23.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	37.00	-65.00	37.07	65.13
4	36.00	64.00	36.07	64.12
5	36.00	64.00	35.64	63.36
7	-34.50	64.00	-34.25	63.54
8	35.50	64.00	35.33	63.69
11	35.00	64.00	34.97	63.94
13	36.00	64.00	35.84	63.72
14	35.50	64.00	35.36	63.75
15	37.00	64.50	36.89	64.31
17	37.00	64.50	36.95	64.41

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	1400.	.8280	.8530	1041.	1.040	1386.
4	1400.	.8420	.8930	1077.	-1.060	1315.
5	1310.	.8500	.8330	1068.	1.040	1262.
7	-1230.	.8240	.7700	1032.	1.030	1275.
8	1340.	.8400	.8200	987.	1.020	1286.
11	1330.	.8210	.8160	996.	1.025	1301.
13	-1210.	.7760	-.7490	1014.	1.030	1285.
14	1270.	.8380	.7790	996.	1.040	1287.
15	1400.	.8590	.8610	1032.	1.040	1327.
17	1430.	.8600	.8780	1032.	1.040	1331.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODF 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1399.	.8310	.8570	1045.	1388.
4	1399.	.8450	.8960	1081.	1316.
5	1322.	.8340	.8170	1047.	1262.
7	-1238.	.8120	.7590	1017.	1274.
8	1346.	.8320	.8130	-977.	1285.
11	1333.	.8190	.8150	994.	1303.
13	-1217.	.7690	-.7420	1005.	1287.
14	1277.	.8310	.7730	-988.	1290.
15	1406.	.8540	.8560	1026.	1330.
17	1438.	.8570	.8750	1029.	1336.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.486	900.4	524.0	7.9	10.4
4	1.517	908.4	516.2	5.2	10.3
5	1.534	904.7	517.0	9.6	10.8
7	1.480	858.9	524.0	5.6	9.5
8	1.504	867.0	554.6	5.8	9.9
11	1.469	882.0	528.5	4.9	10.2
13	1.500	-624.1	-201.4	8.4	10.9
14	1.492	884.1	567.9	5.7	9.6
15	1.542	926.8	535.9	5.8	9.6
17	1.551	929.3	512.5	6.2	10.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	2710.	104.47	104.44	1.51	1.98	22.68
4	2720.	103.68	101.23	.98	1.94	20.68
5	2722.	102.20	100.33	1.77	2.01	20.68
7	2713.	100.21	105.04	1.08	1.82	20.58
8	2703.	99.19	109.00	1.10	1.85	27.07
11	2702.	103.28	106.32	.95	1.96	24.93
13	-2917.	-77.23	-42.82	1.71	2.22	-6.84
14	2690.	101.40	111.91	1.07	1.81	21.97
15	2710.	103.66	102.99	1.06	1.77	20.00
17	2723.	103.84	98.37	1.13	1.85	22.79

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	.2160	.1030	16.4710	.2170	.1050	18.7260
4	.2120	.0950	16.1750	.2120	.0970	18.3880
5	.2130	.1020	15.6680	.2090	.0910	18.1340
7	.2120	.1000	15.9250	.2100	.0930	18.1940
8	.2120	.0980	15.9230	.2110	.0940	18.2450
11	.2120	.0970	16.1120	.2120	.0960	18.3260
13	.2120	.0990	16.0800	.2110	.0940	18.2550
14	.2120	.0980	16.0350	.2110	.0940	18.2650
15	.2140	.1020	16.2330	.2130	.0980	18.4520
17	.2150	.1010	16.3310	.2130	.0990	18.4830

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	104.21	102.49	1.84	2.41	22.68
4	103.42	99.36	1.20	2.36	20.68
5	103.87	111.46	2.20	2.50	20.68
7	101.37	113.22	1.32	2.23	20.58
8	99.94	114.55	1.35	2.28	27.07
11	103.55	107.66	1.16	2.40	24.93
13	-77.90	-44.97	2.09	2.71	-6.84
14	102.18	116.91	1.31	2.22	21.97
15	104.31	106.51	1.29	2.16	20.00
17	104.41	100.62	1.38	2.25	22.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	100.50	101.00	100.69	101.20
4	100.50	101.00	100.69	101.20
5	101.50	101.50	100.49	100.49
7	102.50	-104.50	101.77	103.75
8	101.00	102.00	100.52	101.51
11	100.80	102.50	100.70	102.40
13	101.00	102.20	100.56	101.76
14	102.00	103.00	101.61	102.61
15	102.50	100.50	102.20	100.21
17	101.00	100.00	100.85	99.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
2	10150.	1.5500	1.4570	1446.	1.860	18705.
4	10100.	1.5490	1.4590	1464.	1.860	18705.
5	9750.	1.5770	1.4100	1464.	1.860	18737.
7	10200.	1.5810	1.4660	1446.	1.860	18737.
8	10170.	1.6510	1.4300	1383.	1.860	18737.
11	9950.	1.5410	1.4190	1428.	1.860	18699.
13	9650.	1.5580	-1.3400	1356.	1.860	18690.
14	9870.	1.5990	1.3890	1392.	1.860	18693.
15	10000.	1.5920	1.4250	1428.	1.860	18693.
17	10200.	1.5880	1.4600	1446.	1.860	18649.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	10141.	1.5560	1.4620	1451.	18724.
4	10091.	1.5550	1.4640	1469.	18724.
5	9842.	1.5460	1.3820	1435.	18724.
7	10267.	1.5580	1.4460	1425.	18724.
8	10212.	1.6350	1.4160	1370.	18724.
11	9973.	1.5380	1.4160	1425.	18724.
13	9710.	1.5450	-1.3280	-1344.	18724.
14	9925.	1.5870	1.3780	1381.	18724.
15	10046.	1.5820	1.4170	1419.	18724.
17	10256.	1.5840	1.4550	1442.	18724.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TFST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	3.273	16.7	4.0	87.7	85.7
4	3.271	18.5	6.3	85.4	86.5
5	3.331	14.9	3.6	99.1	94.2
7	3.338	15.5	7.5	103.5	96.8
8	3.488	17.1	4.5	100.0	97.1
11	3.251	15.9	5.0	100.9	92.1
13	3.288	-12.3	2.9	-156.0	-148.3
14	3.375	16.7	4.8	98.4	92.6
15	3.356	19.3	14.4	86.1	84.2
17	3.352	17.6	5.1	89.9	88.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3158.	1.03	.42	8.84	8.84	52.63
4	3157.	1.1	.67	8.62	8.73	55.42
5	3156.	.90	.38	9.81	9.81	51.44
7	3155.	.93	.77	10.23	10.23	52.81
8	3155.	.98	.44	9.46	9.46	54.62
11	3153.	.98	.53	10.23	10.23	54.84
13	3154.	-.75	.30	-15.64	-15.64	-24.34
14	3153.	.99	.49	9.61	9.61	53.20
15	3150.	1.15	1.48	8.45	8.45	54.87
17	3153.	1.06	.52	8.84	8.84	52.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	74.6010	75.8700	82.7340	77.0680	78.3210	94.3440
4	74.4960	75.8700	82.7340	76.9570	78.3210	94.3440
5	82.6500	81.0200	80.0960	70.2320	68.1290	91.2420
7	112.1210	-141.1330	-93.3620	99.2920	124.0600	105.3250
8	101.4200	90.5530	84.2260	93.3860	83.3300	95.7570
11	85.8390	101.0020	87.8830	84.5470	99.0530	99.8040
13	85.9680	94.6890	85.9400	80.0670	87.4550	96.8720
14	101.5290	110.6640	89.0260	95.0670	103.0270	100.7480
15	76.6630	67.9690	79.5650	73.1150	64.4810	90.0440
17	72.3610	62.0270	78.3920	70.5710	60.0780	88.5280

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	.99	.41	10.83	10.83	52.63
4	1.10	.65	10.56	10.69	55.42
5	1.06	.45	11.18	11.18	51.44
7	1.05	.88	11.54	11.54	52.81
8	1.07	.48	10.75	10.75	54.62
11	.99	.54	11.62	11.62	54.84
13	-.81	.33	-17.63	-17.63	-24.34
14	1.06	.52	10.87	10.87	53.20
15	1.21	1.56	10.27	10.27	54.87
17	1.08	.54	10.72	10.72	52.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	95.50	98.50	95.68	98.69
4	95.50	98.50	95.68	98.69
5	96.50	99.00	95.54	98.01
7	96.50	-102.00	95.81	101.27
8	96.00	100.00	95.54	99.52
11	95.50	100.00	95.41	99.90
13	97.00	100.90	96.58	100.47
14	97.00	100.50	96.63	100.11
15	-97.50	98.90	-97.22	98.62
17	96.00	98.00	95.86	97.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	8430.	1.3970	1.3440	1356.	1.660	15810.
4	8260.	1.3840	1.3300	1383.	1.660	15810.
5	8170.	1.4100	1.3050	1356.	1.660	15837.
7	8310.	1.3910	1.3180	1338.	1.660	15837.
8	8390.	1.4500	1.3310	1338.	1.660	15837.
11	8150.	1.3600	1.2820	1320.	1.660	15805.
13	8320.	1.4110	1.2990	1302.	1.660	15797.
14	8120.	1.4290	1.2590	1284.	1.660	15800.
15	8400.	1.4350	1.3390	1356.	1.660	15800.
17	8450.	1.4270	1.3390	1347.	1.660	15763.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	8422.	1.4030	1.3490	1361.	15826.
4	8252.	1.3890	1.3350	-1388.	15826.
5	8247.	1.3820	1.2790	1329.	15826.
7	8364.	1.3720	1.3000	1319.	15826.
8	8425.	1.4360	1.3180	1325.	15826.
11	8160.	1.3570	1.2790	1317.	15826.
13	8371.	1.3980	1.2880	1291.	15826.
14	8165.	1.4180	1.2490	-1274.	15826.
15	8438.	1.4260	1.3310	1348.	15826.
17	8496.	1.4230	1.3350	1343.	15826.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODF 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	2.947	22.6	2.3	70.5	68.9
4	2.917	24.1	3.0	67.8	69.5
5	2.973	21.0	2.3	77.3	78.7
7	2.932	22.0	4.0	75.9	76.5
8	3.058	20.8	3.0	76.2	77.3
11	2.863	21.0	2.6	75.6	71.9
13	2.972	-13.3	1.9	-122.5	-116.4
14	3.010	19.9	2.3	76.6	73.7
15	3.021	24.6	6.9	68.9	69.3
17	3.007	24.7	2.4	69.7	70.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	-3157.	1.54	.27	7.89	7.89	53.24
4	3157.	1.66	.35	7.67	7.86	56.75
5	3155.	1.42	.27	8.58	8.73	52.16
7	3155.	1.51	.47	8.53	8.61	54.43
8	3155.	1.37	.34	8.21	8.33	55.32
11	3153.	1.47	.32	8.70	8.70	56.21
13	3154.	-.90	.22	-13.59	-13.59	-20.71
14	3153.	1.33	.26	8.39	8.39	54.20
15	3151.	1.63	.79	7.51	7.56	54.77
17	3153.	1.65	.28	7.64	7.70	55.16

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
----	-----	-----	-----	-----	-----	-----
2	43.9430	46.0770	73.3940	45.1810	47.5090	83.6700
4	42.9740	46.0770	73.3940	44.1710	47.5090	83.6700
5	46.7570	48.7620	70.8750	40.6840	41.2540	80.8520
7	-61.8650	-90.0540	-83.8440	55.8390	-79.4850	-94.6790
8	55.8300	60.9160	76.5830	52.1060	56.1890	87.1150
11	48.1570	61.8140	78.1230	47.5270	60.6570	88.7320
13	57.3420	73.3300	80.8310	53.8450	67.8210	91.1420
14	56.7740	67.7920	79.1600	53.6680	63.2630	89.6330
15	48.5750	49.2630	73.6420	46.6000	46.7880	83.3620
17	43.7260	41.1850	71.0100	42.7670	39.9190	80.2050

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	1.50	.26	9.66	9.66	53.24
4	1.61	.34	9.39	9.62	56.75
5	1.63	.32	10.51	10.70	52.16
7	1.67	.53	10.35	10.44	54.43
8	1.46	.37	10.04	10.18	55.32
11	1.49	.32	10.61	10.61	56.21
13	-0.96	.24	-15.32	-15.32	-20.71
14	1.40	.28	9.50	9.50	54.20
15	1.70	.83	9.13	9.19	54.77
17	1.68	.29	9.27	9.34	55.16

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	86.50	94.00	86.67	94.18
4	86.00	94.00	86.17	94.18
5	86.50	94.50	85.64	93.56
7	87.50	-97.00	86.87	96.31
8	86.00	95.50	85.59	95.04
11	86.00	95.70	85.92	95.61
13	87.00	96.00	86.63	95.59
14	-88.00	96.00	-87.66	95.63
15	87.00	93.00	86.75	-92.73
17	86.50	93.50	86.38	93.37

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	5900.	1.1880	1.1680	1248.	1.400	11189.
4	5880.	1.1740	1.1720	-1266.	1.400	11189.
5	5680.	1.2000	1.1260	1248.	1.400	11207.
7	5850.	1.1940	1.1430	1212.	1.400	11207.
8	5800.	1.2200	1.1330	1212.	1.400	11207.
11	5750.	1.1510	1.1210	1212.	1.400	11185.
13	5790.	1.1750	1.1280	1212.	1.400	11179.
14	5860.	1.2310	1.1250	1176.	1.400	11181.
15	5630.	1.1980	1.0970	1212.	1.400	11181.
17	5900.	1.2060	1.1470	1212.	1.400	11155.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	5895.	1.1930	1.1720	1253.	11200.
4	5875.	1.1790	1.1760	-1271.	11200.
5	5733.	1.1760	1.1030	1223.	11200.
7	5888.	1.1770	1.1270	1194.	11200.
8	5824.	1.2090	1.1220	1200.	11200.
11	5763.	1.1490	1.1190	1209.	11200.
13	5826.	1.1650	1.1190	1201.	11200.
14	5892.	1.2210	1.1170	-1167.	11200.
15	5656.	1.1910	1.0910	1205.	11200.
17	5932.	1.2020	1.1440	1208.	11200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	2.496	58.0	2.2	44.9	48.3
4	2.467	53.5	2.8	43.7	49.2
5	2.521	53.9	2.5	48.8	52.7
7	2.507	53.1	3.3	47.7	52.9
8	2.565	44.1	2.0	47.4	52.0
11	2.416	47.8	2.1	45.9	50.3
13	2.470	-18.7	1.5	-66.8	-68.9
14	2.585	44.1	2.0	49.5	53.4
15	2.512	65.2	4.7	40.7	46.4
17	2.530	62.4	2.2	43.1	48.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3152.	4.66	.31	5.93	6.37	52.60
4	3153.	4.35	.39	5.85	6.57	54.43
5	3151.	4.29	.34	6.38	6.88	52.54
7	3150.	4.25	.46	6.27	6.95	54.30
8	3152.	3.45	.27	6.09	6.69	54.51
11	3149.	3.96	.30	6.26	6.85	54.90
13	3153.	-1.52	.21	-8.91	-9.20	-18.56
14	3150.	3.42	.27	6.30	6.81	53.08
15	3146.	5.20	.65	5.32	6.07	52.36
17	3147.	4.94	.29	5.60	6.29	54.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	17.9040	17.0660	57.5340	20.3530	17.5600	65.5590
4	19.5440	17.0660	57.5340	19.9800	17.5600	65.5590
5	20.8080	17.7200	55.2740	18.5760	15.1490	63.2100
7	-27.3030	-31.9960	-65.2630	25.1100	-28.4840	73.8440
8	24.1730	23.1230	60.4650	22.8700	21.4370	68.8630
11	22.7260	24.8110	62.5580	22.4740	24.3700	71.0700
13	24.0820	26.0900	62.8800	22.8940	24.2520	70.9850
14	25.9870	26.1500	62.7900	24.8060	24.5030	71.1650
15	17.8720	13.1730	53.2840	-17.2930	-12.5610	-60.3740
17	19.1460	14.9020	55.3080	18.7930	14.4650	62.4920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	4.56	.30	7.25	7.80	52.60
4	4.26	.37	7.15	8.04	54.43
5	4.80	.39	7.83	8.45	52.54
7	4.62	.51	7.62	8.45	54.30
8	3.65	.29	7.45	8.18	54.51
11	4.01	.30	7.64	8.36	54.90
13	-1.60	.23	-10.81	-11.16	-18.56
14	3.59	.29	7.67	8.29	53.08
15	5.37	.68	-6.48	7.39	52.36
17	5.03	.30	6.80	7.63	54.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	69.00	86.00	69.13	86.17
4	69.00	86.50	69.13	86.67
5	68.00	86.00	67.32	-85.14
7	68.00	88.00	67.51	87.37
8	68.00	87.50	67.67	87.08
11	68.50	87.50	68.43	87.42
13	70.00	88.00	69.70	87.62
14	-72.50	89.00	-72.22	88.66
15	69.00	85.50	68.80	-85.25
17	69.50	86.00	69.40	85.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	3310.	.9330	.9590	1122.	1.170	5629.
4	3380.	.9380	.9870	-1140.	1.170	5629.
5	3040.	.9340	.8760	1104.	1.170	5639.
7	3090.	.9200	.8790	1077.	1.170	5639.
8	3160.	.9250	.9100	1104.	1.170	5639.
11	3200.	.8890	.9050	1068.	1.170	5627.
13	3320.	.9510	.9540	1104.	1.170	5625.
14	3490.	.9890	.9870	1068.	1.170	5626.
15	3200.	.9750	-.8430	-924.	1.170	5626.
17	3350.	.9500	.9490	1077.	1.170	5612.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	3307.	.9370	.9630	1126.	5635.
4	3377.	.9420	.9910	-1144.	5635.
5	3069.	.9160	.8580	1082.	5635.
7	3110.	.9070	.8670	1061.	5635.
8	3173.	.9170	.9010	1093.	5635.
11	3207.	.8880	.9030	1066.	5635.
13	3340.	.9430	.9460	1094.	5635.
14	3509.	.9820	.9790	1060.	5635.
15	3215.	.9700	-.8380	-918.	5635.
17	3368.	.9470	.9460	1074.	5635.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.935	202.5	18.5	27.3	28.7
4	1.946	182.4	21.1	21.1	29.0
5	1.935	206.0	20.0	28.1	28.4
7	1.910	156.2	16.2	18.8	28.1
8	1.925	145.7	11.5	21.5	28.3
11	1.848	139.4	11.2	19.6	28.7
13	1.989	-57.6	-3.0	31.7	34.5
14	2.061	131.4	10.3	25.1	31.7
15	2.022	191.2	22.1	19.0	27.6
17	1.973	162.8	12.3	20.2	28.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
2	3119.	20.77	3.27	4.61	4.84	43.51
4	3121.	18.61	3.69	3.54	4.86	47.71
5	3115.	21.11	3.52	4.73	4.79	42.75
7	3125.	16.27	2.90	3.21	4.80	45.53
8	3129.	15.08	2.04	3.65	4.81	48.26
11	3127.	15.01	2.08	3.47	5.07	49.35
13	-3145.	-5.79	-.52	5.23	5.70	-11.83
14	3131.	-12.71	1.72	3.98	5.04	47.71
15	3116.	18.76	3.72	3.07	4.45	42.11
17	3124.	16.40	2.13	3.34	4.68	46.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	6.2680	2.6760	36.5700	6.3720	2.7430	41.6740
4	6.6480	3.0110	37.6350	6.7600	3.0870	42.8490
5	6.0710	2.4580	34.1180	-5.5790	2.1450	-39.2050
7	7.4960	4.0200	39.2620	7.0450	3.6340	44.5850
8	7.1870	3.6330	38.4350	6.8990	3.4000	43.8670
11	7.0140	3.7320	39.3270	6.9520	3.6720	44.6970
13	7.7970	4.1070	39.9720	7.4950	3.8490	45.2110
14	-9.0610	-5.2250	42.3140	-8.7370	-4.9270	48.0290
15	6.1000	2.2990	34.7890	5.9440	2.2040	-39.4650
17	6.3270	2.6310	36.2100	6.2330	2.5600	40.9780

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	20.43	3.19	5.64	5.92	43.51
4	18.31	3.60	4.33	5.94	47.71
5	-22.97	4.03	5.83	5.91	42.75
7	17.31	3.21	3.91	5.86	45.53
8	15.71	2.18	4.47	5.90	48.26
11	15.14	2.11	4.24	6.19	49.35
13	-6.03	-0.56	6.36	6.92	-11.83
14	-13.18	1.82	4.85	6.15	47.71
15	19.25	3.88	3.74	5.42	42.11
17	16.65	2.19	4.06	5.68	46.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	64.00	36.07	64.12
4	35.50	64.00	35.57	64.12
5	36.50	64.00	36.14	63.36
7	34.50	64.00	34.25	63.54
8	34.50	-63.00	34.33	-62.70
11	34.40	-63.00	34.37	-62.94
13	35.00	63.50	34.85	63.23
14	35.00	63.50	34.87	63.26
15	-37.00	64.00	36.89	63.82
17	36.00	64.00	35.95	63.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	1350.	.7740	.8470	1041.	1.040	1315.
4	1380.	.7900	.8760	1068.	-1.060	1315.
5	1300.	.7940	.8200	1050.	1.040	1262.
7	1200.	.7780	.7440	1014.	1.030	1275.
8	1240.	.7830	.8000	1032.	1.030	-1215.
11	1260.	.7680	.7900	-978.	1.025	-1230.
13	1160.	.7460	.7350	1032.	1.020	1250.
14	1220.	.7920	.7560	-987.	1.050	1252.
15	1350.	.8240	.8430	1032.	1.040	1292.
17	1330.	.8240	.8250	1023.	1.040	1295.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CH F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	1349.	.7770	.8500	1045.	1316.
4	1379.	.7930	.8800	-1072.	1316.
5	1312.	.7790	.8040	1029.	1262.
7	1208.	.7670	.7340	999.	1274.
8	1245.	.7750	.7920	1022.	-1214.
11	1263.	.7670	.7890	-976.	-1231.
13	-1167.	.7400	.7290	1023.	1252.
14	1227.	.7860	.7510	-979.	1254.
15	1356.	.8200	.8380	1026.	1294.
17	1337.	.8210	.8220	1020.	1301.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.395	857.4	467.5	9.8	10.6
4	1.433	846.0	451.2	6.9	10.3
5	1.439	846.9	458.9	10.7	10.5
7	1.412	805.0	450.9	5.5	9.7
8	1.430	771.9	433.1	7.7	10.2
11	1.385	823.7	460.7	5.0	10.1
13	1.442	-638.6	-182.3	9.9	10.3
14	1.432	816.8	471.0	7.1	9.7
15	1.486	876.2	499.6	5.9	9.4
17	1.472	-918.9	525.8	6.3	9.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2720.	106.41	99.68	2.00	2.15	19.69
4	2740.	102.94	94.32	1.37	2.06	20.00
5	2736.	102.44	95.37	2.12	2.12	19.55
7	2740.	99.41	95.65	1.12	1.96	20.05
8	2759.	94.76	91.35	1.55	2.05	-26.23
11	2722.	103.01	98.97	1.03	2.06	25.29
13	-2916.	-82.17	-40.31	2.10	2.17	-8.14
14	2731.	99.12	98.19	1.41	1.93	21.82
15	2721.	102.12	100.02	1.12	1.80	21.31
17	2698.	107.20	105.39	1.21	1.75	23.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2120	.0950	16.1750	.2120	.0970	18.3880
4	.2120	.0950	16.1750	.2120	.0970	18.3880
5	.2130	.1020	15.6680	.2090	.0910	18.1340
7	.2120	.1000	15.9250	.2100	.0930	18.1940
8	-.2080	.0910	15.6330	-.2060	-.0870	-17.9150
11	-.2080	.0900	15.8190	-.2070	-.0880	-17.9940
13	.2100	.0950	15.9340	.2090	.0900	18.0890
14	.2100	.0950	15.8890	.2090	.0910	18.0990
15	.2120	.0980	16.0850	.2110	.0950	18.2850
17	.2130	.0970	16.1830	.2110	.0950	18.3160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	106.15	97.85	2.44	2.53	19.69
4	102.68	92.58	1.68	2.51	20.00
5	104.13	105.95	2.64	2.64	19.55
7	100.56	103.09	1.37	2.41	20.05
8	95.47	95.96	1.90	2.53	-26.23
11	103.28	100.22	1.26	2.52	25.29
13	-82.87	-42.33	2.56	2.64	-8.14
14	99.89	102.56	1.72	2.36	21.82
15	102.74	103.44	1.37	2.20	21.31
17	107.79	107.79	1.47	2.13	23.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	33.50	60.50	33.56	60.62
4	34.00	62.00	34.07	62.12
5	34.00	61.50	33.66	60.89
7	33.00	62.00	32.76	61.56
8	34.00	61.00	33.84	60.71
11	32.90	61.20	32.87	61.14
13	32.50	60.20	32.36	59.94
14	33.00	61.00	32.87	60.77
15	-35.00	62.00	-34.90	61.82
17	33.50	61.00	33.45	60.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1270.	.8030	.8940	1041.	1.030	1063.
4	-1350.	.8130	.9130	-1068.	-1.060	1171.
5	1250.	.8160	.8540	1050.	1.040	1085.
7	1160.	.8050	.7660	1014.	1.030	1133.
8	1220.	.8120	.8410	1032.	1.030	1072.
11	1230.	.8000	.8190	-978.	1.020	1101.
13	1110.	.7710	.7860	1032.	1.020	1016.
14	1150.	.8190	.7780	996.	1.050	1073.
15	1290.	.8390	.8570	1032.	1.040	1149.
17	1280.	.8490	.8750	1023.	1.040	1081.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	COR PF X100	CORR TT7 DEG R	COR THRUST LBF
2	1269.	.8060	.8980	1045.	1064.
4	-1349.	.8160	.9160	-1072.	1173.
5	1262.	.7990	.8370	1029.	1084.
7	1168.	.7930	.7550	999.	1132.
8	1225.	.8040	.8330	1022.	1071.
11	1233.	.7990	.8170	-976.	1102.
13	-1117.	.7640	.7800	1023.	1018.
14	1156.	.8130	.7720	-988.	1075.
15	1296.	.8340	.8520	1026.	1151.
17	1287.	.8460	.8720	1020.	1086.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.402	954.4	607.4	9.1	9.9
4	1.449	916.2	533.3	6.1	9.8
5	1.448	911.4	554.8	10.0	10.1
7	1.442	862.4	515.2	5.4	9.3
8	1.461	838.0	511.1	6.6	9.7
11	1.417	901.3	549.9	4.9	9.8
13	1.478	-683.1	-220.0	9.4	10.1
14	1.453	890.6	567.9	6.5	9.0
15	1.480	945.9	595.7	5.5	9.0
17	1.489	987.5	620.6	6.1	8.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2638.	114.33	125.00	1.80	1.95	22.28
4	2693.	108.37	108.36	1.18	1.90	22.19
5	2681.	107.40	112.33	1.93	1.95	20.31
7	2706.	103.00	105.70	1.05	1.82	20.18
8	2717.	99.21	103.94	1.29	1.88	26.04
11	2674.	108.28	113.49	.97	1.93	-26.62
13	-2893.	-85.10	-47.08	1.91	2.07	-7.45
14	2678.	104.45	114.43	1.25	1.74	22.02
15	2664.	108.34	117.21	1.04	1.70	22.01
17	2649.	111.83	120.73	1.13	1.62	22.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE B

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	.1990	.0760	15.3030	.1990	.0770	17.3950
4	.2030	.0820	15.5950	.2040	.0830	17.7270
5	.2030	-.0870	15.0750	.2000	.0780	17.4540
7	-.2050	-.0870	15.4040	.2020	.0810	17.6020
8	.2010	.0810	15.1950	.2000	.0770	17.4150
11	.2010	.0800	15.3940	.2010	.0790	17.5110
13	.1990	.0780	15.1880	.1970	.0740	17.2450
14	.2010	.0810	15.2970	.2000	.0780	17.4280
15	.2040	.0850	15.5350	.2030	.0820	17.6610
17	.2010	.0800	15.4260	.2000	.0780	17.4600

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	114.05	122.75	2.20	2.38	22.28
4	108.10	106.40	1.44	2.32	22.19
5	109.15	124.60	2.40	2.42	20.31
7	104.19	113.81	1.29	2.23	20.18
8	99.95	109.13	1.59	2.31	26.04
11	108.57	114.91	1.19	2.36	-26.62
13	-85.82	-49.40	2.33	2.52	-7.45
14	105.25	119.46	1.53	2.13	22.02
15	108.99	121.16	1.27	2.08	22.01
17	112.44	123.44	1.37	1.97	22.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
2	21381.	2418.	523.2	29.94	.008400
4	19106.	2418.	523.2	29.95	.008400
5	18902.	2313.	524.7	29.92	.011170
7	19579.	2373.	524.7	29.92	.011170
8	20503.	2300.	524.7	29.92	.011170
11	18208.	2443.	518.2	30.01	.008480
13	19720.	2355.	522.7	30.10	.009660
14	20967.	2354.	522.7	30.10	.009660
15	21346.	2354.	522.7	30.11	.009660
17	28197.	2332.	520.2	29.89	.011690

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	32.60	59.60	32.46	59.34
4	33.50	60.50	33.36	60.24
5	34.00	61.00	33.81	60.65
7	32.00	60.00	31.82	59.66
8	-31.00	-59.00	-30.82	-58.66
11	32.00	60.00	32.02	60.03
13	32.00	60.00	31.88	59.77
14	32.50	61.00	32.38	60.77
15	34.00	60.00	33.87	59.77
17	32.50	59.50	32.45	59.41

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1240.	.8680	.8960	1032.	1.030	997.
4	1300.	.8500	.9270	1068.	-1.070	1036.
5	1250.	.8850	.8760	1068.	1.010	1067.
7	1170.	-.9410	.8440	1050.	1.030	1008.
8	1180.	-.9600	.8680	1032.	1.020	974.
11	1240.	.8680	.8800	1023.	1.020	1019.
13	-1130.	.8220	.8100	1050.	1.010	1006.
14	1220.	.8430	.8360	1032.	1.010	1069.
15	1300.	.8910	.9360	1059.	1.020	1006.
17	1260.	.9170	.9140	1032.	1.030	1001.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
2	1246.	.8600	.8880	1023.	998.
4	1307.	.8430	.9190	1059.	1037.
5	1257.	.8750	.8660	1055.	1067.
7	1177.	-.9300	.8340	1038.	1008.
8	1187.	-.9490	.8580	1020.	974.
11	1243.	.8690	.8810	1024.	1022.
13	-1141.	.8150	.8040	1042.	1012.
14	1232.	.8370	.8290	1024.	1075.
15	1313.	.8840	.9280	1051.	1012.
17	1261.	.9140	.9120	1029.	1000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.541	954.8	585.8	4.0	8.2
4	1.527	925.4	523.8	4.4	10.1
5	1.572	973.9	611.7	7.0	9.7
7	-1.683	1020.8	619.5	6.1	8.1
8	-1.685	-1074.1	727.0	6.2	8.2
11	1.507	970.3	707.1	3.9	7.3
13	1.584	-657.1	-233.3	11.9	11.9
14	1.510	901.1	541.2	8.6	9.8
15	1.622	921.2	-498.9	8.7	10.5
17	1.579	-1097.2	743.9	6.3	10.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2682.	105.72	111.44	.73	1.49	13.73
4	2710.	104.53	101.64	.82	1.87	13.73
5	2681.	105.70	114.05	1.25	1.73	16.08
7	2699.	104.20	108.64	1.02	1.36	14.70
8	2649.	107.47	124.95	1.01	1.34	18.42
11	2623.	107.46	134.53	.71	1.33	20.65
13	-2907.	-76.75	-46.81	2.29	2.29	-5.07
14	2704.	102.70	105.96	1.61	1.83	16.45
15	-2746.	-99.30	-92.38	1.55	1.86	14.59
17	2601.	115.00	133.94	1.08	1.72	17.39

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.1970	.0750	14.7320	.1950	.0720	17.1140
4	.2000	.0790	14.9060	.1980	.0750	17.3110
5	.2010	.0820	14.2530	.1990	.0770	17.4020
7	.1980	.0780	-14.0730	.1960	.0730	17.1830
8	-.1950	.0740	-13.8930	-.1930	-.0700	-16.9640
11	.1980	.0750	14.7020	.1980	.0750	17.2650
13	.1990	.0770	14.4860	.1970	.0740	17.2080
14	.2020	.0820	14.6720	.2000	.0780	17.4280
15	.1990	.0780	14.4900	.1970	.0740	17.2080
17	.1960	.0730	-13.7550	.1960	.0720	17.1290

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	NPEC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2		106.53		116.67				.85			1.73		13.73	
4		105.36		106.50				.96			2.17		13.73	
5		106.71		121.10				1.52			2.12		16.08	
7		105.19		115.32				1.25			1.66		14.70	
8		108.49		132.60				1.24			1.64		18.42	
11		107.62		134.58				.83			1.56		20.65	
13		-77.59		-49.24				2.72			2.72		-5.07	
14		103.82		111.47				1.91			2.18		16.45	
15		-100.41		-97.23				1.84			2.21		14.59	
17		115.19		135.71				1.35			2.14		17.39	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.40	64.50	36.24	64.22
4	36.20	64.50	36.04	64.22
5	37.00	64.00	36.79	63.63
7	35.00	64.00	34.80	63.63
8	35.00	64.00	34.80	63.63
11	35.50	64.50	35.52	64.53
13	36.00	64.00	35.86	63.75
14	36.50	64.00	36.36	63.75
15	-38.00	64.00	-37.85	63.75
17	36.00	64.00	35.95	63.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1380.	.8410	.8570	1050.	1.035	1322.
4	1390.	.8380	.8700	1068.	-1.080	1322.
5	1350.	.8630	.8580	1068.	1.020	1281.
7	1320.	-.9080	.8460	-1086.	1.040	1281.
8	1370.	-.9210	.8600	1041.	1.030	1281.
11	1350.	.8320	.8220	1014.	1.020	1341.
13	1280.	.8420	.8090	1068.	1.030	1282.
14	1320.	.7930	.8200	1032.	1.030	1282.
15	1430.	.8680	.9000	1059.	1.030	1281.
17	1380.	.8910	.8640	1034.	1.030	1302.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1387.	.8340	.8500	1041.	1323.
4	1397.	.8310	.8630	1059.	1323.
5	1358.	.8530	.8480	1055.	1281.
7	1328.	.8970	.8360	1073.	1281.
8	1378.	-.9100	.8500	1029.	1281.
11	1353.	.8330	.8230	1015.	1345.
13	1293.	.8350	.8030	1060.	1290.
14	1333.	.7870	.8140	1024.	1290.
15	1445.	.8610	.8930	1051.	1290.
17	1381.	.8880	.8620	1031.	1301.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.545	828.2	436.1	4.1	10.1
4	1.547	838.4	-405.0	5.0	11.2
5	1.569	901.6	491.8	7.9	10.9
7	-1.673	894.3	467.7	6.2	9.9
8	-1.685	928.2	502.3	6.5	10.4
11	1.500	847.2	521.2	4.2	9.0
13	-1.659	-550.0	-163.1	-13.6	13.6
14	1.456	-780.8	413.2	9.1	10.5
15	1.624	811.7	-371.7	10.4	12.2
17	1.592	-976.5	565.5	6.9	11.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
2	2771.	94.51	85.50	.78	1.90	12.42
4	2784.	96.02	-79.69	.94	2.11	12.43
5	2745.	100.39	94.09	1.44	1.99	15.53
7	2779.	94.56	84.96	1.08	1.73	13.25
8	2761.	96.79	89.99	1.11	1.78	18.77
11	2723.	97.86	103.43	.79	1.72	19.84
13	-2970.	-62.65	-31.91	-2.55	2.55	-4.67
14	2771.	94.61	86.02	1.80	2.09	14.74
15	-2821.	-89.76	-70.61	1.89	2.22	14.30
17	2696.	105.29	104.75	1.22	1.95	16.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2140	.1020	15.8630	.2130	.0980	18.4210
4	.2140	.1020	15.8660	.2130	.0980	18.4210
5	.2120	.0990	-14.9300	.2100	.0930	18.2250
7	.2120	.0990	-14.9300	.2100	.0930	18.2250
8	.2120	.0990	-14.9300	.2100	.0930	18.2250
11	.2140	.1000	15.7750	.2140	.1000	18.5250
13	.2130	.0990	15.3800	.2110	.0940	18.2650
14	.2130	.0990	15.3800	.2110	.0940	18.2650
15	.2130	.0990	15.3830	.2110	.0940	18.2650
17	.2120	.0970	-14.7090	.2110	.0950	18.3160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	95.25	89.63	.90	2.21	12.42
4	96.79	83.59	1.09	2.45	12.43
5	101.36	100.00	1.75	2.42	15.53
7	95.47	90.30	1.32	2.11	13.25
8	97.73	95.65	1.35	2.17	18.77
11	98.00	103.46	.93	2.02	19.84
13	-63.34	-33.59	-3.03	3.03	-4.67
14	95.65	90.56	2.14	2.49	14.74
15	-90.77	-74.38	2.24	2.63	14.30
17	105.46	106.17	1.52	2.42	16.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	102.00	101.70	101.56	101.26
4	101.60	101.50	101.16	101.06
5	100.30	100.20	-99.72	99.63
7	100.20	100.40	-99.63	99.82
8	101.00	101.50	100.42	100.92
11	101.00	103.00	101.05	103.05
13	101.90	103.00	101.51	102.61
14	103.00	103.00	102.61	102.61
15	103.00	100.00	102.61	99.62
17	102.00	100.50	101.85	100.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	10300.	1.6300	1.4700	1428.	1.860	18711.
4	10220.	1.6460	1.4850	1482.	1.860	18705.
5	10230.	1.6340	1.4790	1464.	1.860	18724.
7	9950.	1.5450	1.4290	1446.	1.860	18724.
8	9830.	1.6000	1.3850	1392.	1.860	18724.
11	9970.	1.5430	1.4370	1446.	1.850	18544.
13	9900.	1.6390	1.4000	1419.	1.860	18612.
14	10020.	1.6350	1.4130	1410.	1.860	18612.
15	10120.	1.6620	1.4450	1446.	1.860	18606.
17	10240.	1.5810	1.4820	1464.	1.860	18743.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	10351.	1.6160	1.4570	1415.	18724.
4	10275.	1.6320	1.4720	1469.	18724.
5	10289.	1.6150	1.4620	1447.	18724.
7	10007.	1.5270	1.4130	1429.	18724.
8	9887.	1.5810	1.3690	1376.	18724.
11	9995.	1.5440	1.4380	1447.	18600.
13	9998.	1.6260	1.3900	1408.	18724.
14	10119.	1.6230	1.4020	1399.	18724.
15	10223.	1.6490	1.4340	1435.	18724.
17	10245.	1.5760	1.4780	1459.	18724.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	3.439	19.8	6.0	107.3	104.0
4	3.473	21.4	6.7	106.8	103.9
5	3.454	16.1	4.5	104.4	104.0
7	3.263	18.0	5.1	100.2	96.9
8	3.380	20.3	5.5	107.8	104.6
11	3.257	19.6	7.4	102.8	99.2
13	3.460	14.8	3.9	-177.3	-174.9
14	3.452	17.8	6.6	110.4	105.5
15	3.510	19.2	5.6	99.7	96.2
17	3.329	22.5	5.2	95.4	93.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3150.	1.16	.61	10.28	10.28	48.83
4	3150.	1.23	.67	10.13	10.13	49.67
5	3158.	.94	.45	9.98	9.98	44.11
7	3157.	1.11	.54	10.13	10.13	47.64
8	3157.	1.21	.56	10.52	10.52	48.18
11	3156.	1.21	.78	10.41	10.41	51.68
13	3153.	.86	.39	-16.89	-16.89	-15.95
14	3152.	1.03	.66	10.54	10.54	49.03
15	3153.	1.10	.55	9.36	9.36	50.20
17	-3145.	1.35	.54	9.43	9.43	46.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	94.1720	85.6850	82.0620	87.4860	79.3480	94.6390
4	95.2860	82.4320	81.3110	88.4370	76.3060	93.7570
5	80.5490	63.3130	-72.3600	73.1760	57.3730	87.5530
7	69.1630	65.9020	-73.0600	-63.2110	59.7020	88.3940
8	86.5700	81.9950	76.9930	78.7040	74.1670	93.1190
11	90.7760	111.8620	87.4920	91.4630	112.2210	102.8300
13	110.5970	111.5300	85.3860	103.0170	103.0270	100.7480
14	109.8330	111.5300	85.3860	102.3280	103.0270	100.7480
15	83.9790	61.8600	-74.1400	78.3260	57.2720	87.5160
17	74.9620	67.9060	-72.9740	73.3800	66.3570	90.6660

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
2	1.24	.65	11.85	11.85	48.83
4	1.33	.72	11.68	11.68	49.67
5	1.03	.50	12.08	12.08	44.11
7	1.21	.59	12.26	12.26	47.64
8	1.33	.62	-12.73	12.73	48.18
11	1.20	.78	12.24	12.24	51.68
13	.92	.42	-19.93	-19.93	-15.95
14	1.11	.72	12.44	12.44	49.03
15	1.18	.60	11.05	11.05	50.20
17	1.38	.55	11.71	11.71	46.71

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TFST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	96.50	99.20	96.08	98.77
4	96.20	99.10	95.79	98.67
5	97.00	99.00	96.44	98.43
7	96.00	99.50	95.45	98.93
8	96.00	100.00	95.45	99.43
11	96.00	100.00	96.05	100.05
13	97.00	101.00	96.63	100.61
14	97.00	100.50	96.63	100.11
15	97.00	-97.50	96.63	-97.13
17	96.00	98.50	95.86	98.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
2	8490.	1.4670	1.3540	1356.	1.660	15815.
4	8350.	1.4540	1.3490	1392.	1.660	15810.
5	8400.	1.4570	1.3410	1356.	1.660	15826.
7	8200.	1.3810	1.3000	1338.	1.660	15826.
8	8200.	1.4210	1.3040	1347.	1.660	15826.
11	8160.	1.3580	1.2900	1338.	1.660	15779.
13	8270.	1.4650	1.2990	1329.	1.660	15731.
14	8230.	1.4230	1.2790	1302.	1.660	15731.
15	8210.	1.4750	1.3020	1356.	1.660	15726.
17	8400.	1.4070	1.3420	1356.	1.660	15842.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	8532.	1.4550	1.3430	1344.	15826.
4	8395.	1.4420	1.3370	1380.	15826.
5	8448.	1.4410	1.3250	1340.	15826.
7	8247.	1.3650	1.2850	1322.	15826.
8	8247.	1.4050	1.2900	1331.	15826.
11	8181.	1.3600	1.2910	1339.	15826.
13	8352.	1.4540	1.2890	1319.	15826.
14	8311.	1.4120	1.2700	1292.	15826.
15	8294.	1.4640	1.2920	1345.	15826.
17	8404.	1.4030	1.3380	1352.	15826.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	3.091	24.4	3.3	84.6	84.6
4	3.062	24.6	4.1	87.3	87.6
5	3.076	23.4	2.9	84.2	85.4
7	2.911	24.4	3.2	77.6	77.2
8	2.997	23.2	3.1	81.0	80.4
11	2.863	24.0	4.5	77.6	76.3
13	3.089	-16.5	4.4	-132.3	-130.5
14	2.998	20.0	3.4	83.6	82.7
15	3.109	25.4	2.9	-104.0	-104.7
17	2.956	32.5	2.6	72.6	73.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
2	3150.	1.58	.36	9.01	9.02	49.74
4	3150.	1.61	.46	9.38	9.42	50.00
5	3157.	1.53	.32	9.04	9.17	47.94
7	3157.	1.68	.37	8.80	8.80	48.49
8	3157.	1.55	.35	8.92	8.92	49.21
11	3156.	1.68	.54	8.95	8.95	51.56
13	3153.	-1.07	.49	-14.12	-14.12	-17.01
14	3153.	1.34	.39	9.19	9.19	50.20
15	3152.	1.64	.32	-11.02	-11.09	52.46
17	-3145.	2.20	.30	8.07	8.21	47.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	52.9580	52.0270	72.7960	49.7220	48.3070	84.0060
4	51.2350	51.0110	72.4580	48.1240	47.3400	83.5980
5	50.8790	49.6600	68.2540	46.8380	45.0770	82.6180
7	47.1390	54.9770	69.9460	43.5590	49.8690	84.6510
8	53.0750	60.8190	71.6640	48.9070	55.1290	86.7170
11	48.1360	62.2520	76.0270	48.4140	62.4310	89.3480
13	-63.9730	75.4530	77.7540	-60.1650	69.8330	91.7840
14	56.4310	68.3220	75.9230	53.1820	63.2630	89.6330
15	44.8270	36.7420	-65.3400	42.2480	-34.0940	-77.1700
17	44.4300	45.3900	-66.2370	43.6250	44.3860	82.3090

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	1.68	.39	10.40	10.40	49.74
4	1.71	.49	10.83	10.87	50.00
5	1.66	.35	10.94	11.10	47.94
7	1.82	.41	10.65	10.65	48.49
8	1.69	.39	10.79	10.79	49.21
11	1.67	.54	10.51	10.51	51.56
13	-1.14	.53	-16.67	-16.67	-17.01
14	1.42	.42	10.85	10.85	50.20
15	1.74	.35	-13.01	-13.10	52.46
17	-2.24	.31	10.03	10.20	47.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	87.00	94.90	86.63	94.49
4	86.80	94.70	86.43	94.29
5	87.00	94.50	86.50	93.96
7	86.00	96.00	85.51	95.45
8	86.00	95.50	85.51	94.95
11	85.50	95.50	85.54	95.55
13	86.00	96.00	85.67	95.63
14	-88.00	96.00	-87.66	95.63
15	86.00	-92.50	85.67	-92.15
17	87.00	94.00	86.87	93.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100.	TT7 DEG R.	EPR	THRUST LAF
2	5970.	1.2360	1.1730	1230.	1.400	11193.
4	5930.	1.2130	1.1730	1248.	1.400	11189.
5	5790.	1.2310	1.1470	1248.	1.400	11200.
7	5630.	1.1780	1.0990	1212.	1.400	11200.
8	5640.	1.2090	1.1050	1221.	1.400	11200.
11	5670.	1.1490	1.1180	1212.	1.390	10935.
13	5570.	1.2070	1.0810	1212.	1.400	11133.
14	5840.	1.2200	1.1330	1212.	1.400	11133.
15	5500.	1.2060	1.0710	1221.	1.400	11129.
17	5980.	1.2200	1.1770	1230.	1.400	11211.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	6000.	1.2250	1.1630	1219.	11200.
4	5962.	1.2030	1.1630	1237.	11200.
5	5823.	1.2170	1.1340	1233.	11200.
7	5662.	1.1650	1.0870	1198.	11200.
8	5673.	1.1950	1.0920	1207.	11200.
11	5684.	1.1500	1.1190	1213.	10968.
13	5625.	1.1980	1.0730	1202.	11200.
14	5898.	1.2110	1.1250	1202.	11200.
15	5556.	1.1970	1.0630	1211.	11200.
17	5983.	1.2170	1.1740	1226.	11200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	2.593	57.3	2.9	49.7	55.4
4	2.545	52.3	3.4	52.3	57.1
5	2.588	51.7	2.8	51.8	56.0
7	2.475	57.5	3.2	46.5	50.9
8	2.543	45.5	2.7	48.5	51.9
11	2.413	50.0	3.7	47.2	51.0
13	2.576	-24.9	5.6	-72.6	-74.2
14	2.563	45.4	3.1	53.7	56.8
15	2.530	69.1	3.5	-70.1	-76.8
17	2.556	64.7	2.4	45.9	51.9

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3146.	4.42	.38	6.31	7.03	47.84
4	3146.	4.11	.45	6.75	7.37	50.13
5	3153.	4.01	.37	6.60	7.13	49.61
7	3152.	4.66	.44	6.14	6.77	48.21
8	-3154.	3.59	.36	6.29	6.73	50.26
11	3152.	4.15	.53	6.45	6.96	50.84
13	3151.	-1.97	.76	-9.44	-9.63	-13.82
14	3149.	3.55	.41	6.90	7.29	51.28
15	3146.	5.47	.48	-9.11	-9.98	49.87
17	-3140.	5.06	.32	5.90	6.67	50.46

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	23.1460	20.2410	57.7730	21.9990	18.8750	66.7370
4	21.9540	19.3310	57.1260	20.8780	18.0190	65.9770
5	21.8970	18.2440	53.3870	20.4860	16.6600	64.7130
7	24.0820	25.8010	58.1450	22.5480	23.5140	70.4480
8	23.7800	23.0230	56.5380	22.2460	20.9960	68.5120
11	22.2600	23.9770	60.2740	22.3520	24.0330	70.8270
13	25.2350	26.3550	60.2220	24.0270	24.5030	71.1650
14	25.7000	26.3550	60.2220	24.4600	24.5030	71.1650
15	-17.1660	-11.8430	-49.4850	-16.3760	-11.0390	-58.5060
17	20.5820	16.6390	-51.7740	20.2720	16.2950	64.3590

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
2		4.65			.41		7.28			8.12			47.84	
4		4.33			.49		7.80			8.52			50.13	
5		4.29			.40		8.00			8.65			49.61	
7		4.98			.48		7.50			8.21			48.21	
8		3.84			.40		7.62			8.15			50.26	
11		4.14			.53		7.58			8.18			50.84	
13		-2.07			.82		-11.15			-11.38			-13.82	
14		3.73			.44		8.16			8.62			51.28	
15		5.73			.51		-10.77			-11.80			49.87	
17		5.14			.33		7.33			8.29			50.46	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	71.50	87.50	71.19	87.12
4	70.20	87.20	69.90	86.82
5	71.00	87.00	70.59	86.50
7	68.00	88.50	67.61	87.99
8	69.00	88.00	68.60	87.50
11	69.50	88.00	69.53	88.04
13	70.00	88.00	69.73	87.66
14	-74.00	-90.00	-73.72	-89.65
15	68.50	-85.00	68.24	-84.67
17	70.00	86.50	69.90	86.38

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	3500.	.9630	1.0150	1122.	1.170	5631.
4	3420.	.9410	.9910	1122.	1.170	5629.
5	3310.	.9320	.9600	1122.	1.170	5635.
7	3210.	.9350	.9240	1104.	1.170	5635.
8	3160.	.9250	.9100	1104.	1.170	5635.
11	3270.	.9130	.9420	1113.	1.170	5618.
13	3200.	.9050	.9160	1104.	1.170	5601.
14	-3630.	.9820	-1.0390	1104.	1.170	5601.
15	3180.	.9680	.9100	1104.	1.170	5599.
17	3340.	.9640	.9620	1104.	1.170	5641.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF

2	3517.	.9540	1.0060	1112.	5635.
4	3438.	.9330	.9830	1112.	5635.
5	3329.	.9210	.9490	1109.	5635.
7	3229.	.9250	.9130	1091.	5635.
8	3178.	.9140	.8990	1091.	5635.
11	3278.	.9140	.9430	1114.	5635.
13	3232.	.8980	.9090	1095.	5635.
14	-3666.	.9740	-1.0310	1095.	5635.
15	3213.	.9610	.9030	1095.	5635.
17	3341.	.9610	.9600	1101.	5635.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.995	192.2	16.1	22.7	30.7
4	1.948	193.6	18.1	25.3	31.1
5	1.934	197.1	16.9	30.1	31.3
7	1.944	169.7	14.9	20.3	27.7
8	1.924	153.8	11.7	22.2	27.9
11	1.899	146.8	12.1	22.9	29.3
13	1.891	-63.7	-4.8	32.3	34.2
14	2.044	146.3	10.0	28.6	33.0
15	2.006	205.8	19.7	34.6	-47.2
17	1.998	176.0	13.2	25.4	30.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3116.	19.11	2.75	3.70	5.01	42.78
4	3114.	19.70	3.16	4.22	5.20	44.16
5	3122.	19.23	2.98	5.09	5.29	44.31
7	3126.	17.37	2.62	3.42	4.65	42.63
8	3130.	15.92	2.09	3.77	4.74	44.94
11	3130.	15.40	2.19	3.95	5.06	45.75
13	-3143.	-6.73	-0.88	5.61	5.94	-8.44
14	3129.	14.26	1.67	4.57	5.27	47.44
15	3115.	20.34	3.35	5.62	-7.66	43.06
17	3115.	17.47	2.26	4.14	4.99	40.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	7.4720	3.6530	37.9960	7.1890	3.4320	43.9690
4	7.0840	3.4090	37.3660	6.8180	3.2020	43.2330
5	6.8400	3.2180	34.9310	6.5090	2.9690	42.4440
7	8.0560	4.5500	37.9990	7.6560	4.1890	46.1500
8	7.5620	4.0590	36.9610	7.1920	3.7400	44.8960
11	7.5930	4.2310	39.3910	7.6120	4.2370	46.2780
13	7.4850	4.1490	38.2830	7.2090	3.8860	45.3160
14	-10.0750	-6.6880	-43.0360	-9.6790	-6.2520	-50.9200
15	5.7290	2.0370	-32.1860	-5.5190	-1.9120	-38.1160
17	6.7530	2.9360	33.8780	6.6760	2.8820	42.1390

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	19.86	2.92	4.29	5.80	42.78
4	20.46	3.36	4.89	6.02	44.16
5	20.20	3.23	6.18	6.43	44.31
7	18.27	2.85	4.15	5.65	42.63
8	16.74	2.27	4.58	5.76	44.94
11	15.36	2.18	4.64	5.94	45.75
13	-6.99	-.93	6.64	7.03	-8.44
14	14.84	1.78	5.41	6.24	47.44
15	21.11	3.57	6.66	-9.07	43.06
17	17.67	2.30	5.15	6.20	40.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	35.50	63.50	35.35	63.23
4	35.60	64.00	35.45	63.72
5	36.00	64.00	35.79	63.63
7	-34.00	64.00	-33.81	63.63
8	35.00	64.00	34.80	63.63
11	-34.00	63.50	-34.02	63.53
13	35.00	64.00	34.87	63.75
14	36.00	64.00	35.86	63.75
15	-37.00	64.00	36.86	63.75
17	35.00	64.00	34.95	63.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1300.	.8070	.8250	1032.	1.040	1251.
4	1350.	.7700	.8500	1050.	-1.075	1286.
5	1300.	.7830	.8200	1050.	1.020	1281.
7	1170.	.7880	.7310	1032.	1.030	1281.
8	1220.	.7990	.7690	1050.	1.030	1281.
11	1240.	.7620	.7780	1014.	1.030	1270.
13	1180.	-.7130	.7360	1041.	1.030	1282.
14	1230.	.7540	.7610	1023.	1.030	1282.
15	1360.	.8410	.8520	1050.	1.030	1281.
17	1310.	.8340	.8200	1032.	1.030	1302.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1306.	.8000	.8170	1023.	1252.
4	1357.	.7630	.8430	1041.	1287.
5	1307.	.7740	.8100	1038.	1281.
7	1177.	.7790	.7230	1020.	1281.
8	1227.	.7900	.7600	1038.	1281.
11	1243.	.7630	.7790	1015.	1274.
13	1192.	-.7080	.7310	1033.	1290.
14	1242.	.7480	.7550	1015.	1290.
15	1374.	.8340	.8460	1042.	1290.
17	1311.	.8310	.8180	1029.	1301.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.483	809.3	405.0	6.1	10.4
4	1.422	788.5	357.1	6.9	10.8
5	1.434	813.0	415.3	10.1	11.2
7	1.437	806.4	436.6	5.5	9.0
8	1.478	773.9	394.6	7.6	10.2
11	1.382	793.3	442.5	6.3	10.0
13	1.384	-597.6	-158.8	11.2	11.2
14	1.393	740.1	364.0	10.3	10.7
15	-1.577	781.5	-346.8	-18.9	-23.8
17	1.486	-949.6	528.7	7.6	10.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2775.	96.37	82.85	1.20	2.03	12.42
4	2789.	98.39	76.55	1.41	2.22	12.94
5	2764.	99.74	87.53	2.04	2.26	14.71
7	2755.	98.38	91.52	1.10	1.81	14.72
8	2791.	93.03	81.49	1.51	2.01	18.00
11	2740.	100.09	95.92	1.31	2.07	17.92
13	-2929.	-80.45	-36.73	2.47	2.47	-4.90
14	2789.	94.32	79.70	2.15	2.25	15.67
15	-2829.	-89.22	-68.02	-3.54	-4.47	14.47
17	2690.	109.40	104.65	1.44	1.90	15.50

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2100	.0950	15.5760	.2090	.0900	18.0890
4	.2120	.0990	15.7220	.2110	.0940	18.2550
5	.2120	.0990	-14.9300	.2100	.0930	18.2250
7	.2120	.0990	-14.9300	.2100	.0930	18.2250
8	.2120	.0990	-14.9300	.2100	.0930	18.2250
11	.2100	.0930	15.4900	.2100	.0930	18.1910
13	.2130	.0990	15.3800	.2110	.0940	18.2650
14	.2130	.0990	15.3800	.2110	.0940	18.2650
15	.2130	.0990	15.3830	.2110	.0940	18.2650
17	.2120	.0970	-14.7090	.2110	.0950	18.3160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
2	97.12	86.82	1.39	2.36	12.42
4	99.17	80.28	1.64	2.58	12.94
5	100.70	93.03	2.49	2.75	14.71
7	99.34	97.28	1.35	2.21	14.72
8	93.93	86.62	1.84	2.46	18.00
11	100.23	95.95	1.53	2.43	17.92
13	-81.34	-38.67	2.94	2.94	-4.90
14	95.36	83.91	2.56	2.67	15.67
15	-90.22	-71.66	-4.21	-5.31	14.47
17	109.59	106.07	1.80	2.36	15.50

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	33.00	60.00	32.86	-59.74
4	33.90	61.40	33.75	61.14
5	34.00	61.00	33.81	60.65
7	33.00	62.00	32.81	61.64
8	33.00	61.00	32.81	60.65
11	32.50	60.50	32.52	60.53
13	-32.00	60.50	-31.88	60.27
14	33.00	61.00	32.87	60.77
15	-35.00	61.50	-34.87	61.26
17	32.50	-59.50	32.45	-59.41

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	1240.	.8320	.8860	1032.	1.030	1011.
4	1310.	.7930	.8970	1050.	-1.055	1101.
5	1230.	.8090	.8550	1050.	1.010	1067.
7	1150.	.7950	.7660	1032.	1.030	1138.
8	1190.	.8240	.8230	1041.	1.020	1067.
11	1190.	.7950	.8290	1023.	1.020	1055.
13	-1090.	-.7370	.7600	1032.	1.010	1033.
14	1170.	.7850	.7950	1014.	1.010	1069.
15	1300.	.8650	.8780	1041.	1.020	1104.
17	1230.	.8670	.8930	1032.	1.030	1001.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LRM/HR	COR CB X100	COR PF X100	COR TT7 DEG R	COR THRUST LBF

2	1246.	.8250	.8790	1023.	1011.
4	1317.	.7860	.8890	1041.	1102.
5	1237.	.8000	.8450	1038.	1067.
7	1157.	.7860	.7570	1020.	1138.
8	1197.	.8150	.8140	1029.	1067.
11	1193.	.7950	.8300	1024.	1058.
13	-1101.	-.7310	.7550	1024.	1039.
14	1182.	.7790	.7890	1006.	1075.
15	1313.	.8580	.8720	1033.	1111.
17	1231.	.8640	.8900	1029.	1000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.494	901.8	513.3	5.1	9.6
4	1.437	871.4	442.1	5.8	10.0
5	1.448	894.9	521.3	9.3	10.3
7	1.431	857.6	493.3	5.1	8.7
8	1.497	854.7	474.3	6.4	9.5
11	1.412	879.1	541.3	5.2	9.4
13	1.413	-659.8	-206.5	10.5	10.6
14	1.421	821.9	456.3	9.6	10.0
15	-1.594	860.9	-429.8	-22.2	-26.2
17	1.512	-1037.1	642.6	6.8	9.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	2711.	104.13	101.83	.96	1.82	13.19
4	2735.	105.56	92.02	1.16	2.00	13.84
5	2702.	106.26	106.34	1.81	2.02	14.64
7	2717.	103.61	102.39	1.01	1.72	14.34
8	2743.	99.65	95.00	1.22	1.82	18.68
11	2685.	106.36	112.50	1.03	1.86	19.10
13	-2894.	-86.00	-46.23	2.25	2.26	-5.31
14	2734.	100.64	95.98	1.93	2.00	15.06
15	-2781.	-95.56	-81.97	-4.05	-4.79	14.71
17	2633.	114.94	122.35	1.24	1.72	15.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.1980	.0770	14.8080	.1970	.0740	-17.2020
4	.2030	.0830	15.0770	.2010	.0790	17.5090
5	.2010	.0820	14.2530	.1990	.0770	17.4020
7	.2040	.0860	14.4340	.2030	.0810	17.6220
8	.2010	.0820	14.2530	.1990	.0770	17.4020
11	.1990	.0770	14.7960	.1990	.0770	17.3750
13	.2000	.0790	14.5790	.1980	.0760	17.3180
14	.2020	.0820	14.6720	.2000	.0780	17.4280
15	.2040	.0840	14.7680	.2010	.0800	17.5380
17	-.1960	.0730	-13.7550	-.1960	-.0720	-17.1290

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 2400 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	104.93	106.62	1.12	2.12	13.19
4	106.40	96.43	1.35	2.32	13.84
5	107.28	112.90	2.21	2.46	14.64
7	104.61	108.73	1.24	2.10	14.34
8	100.60	100.87	1.49	2.22	18.68
11	106.51	112.55	1.21	2.18	19.10
13	-86.94	-48.63	2.67	2.69	-5.31
14	101.74	100.97	2.30	2.38	15.06
15	-96.63	-86.29	-4.81	-5.68	14.71
17	115.13	123.97	1.55	2.14	15.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
2	21904.	2941.	534.2	30.07	.008280
4	19629.	2941.	531.2	30.07	.007840
5	19433.	2844.	522.2	29.95	.009220
8	21001.	2798.	522.7	29.94	.009110
11	18777.	3012.	518.7	30.08	.008340
13	20158.	2793.	536.2	30.07	.008470
14	21528.	2915.	522.7	30.14	.006310
17	28750.	2885.	517.7	30.21	.009570

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	33.00	60.50	32.52	59.62
4	33.00	60.50	32.61	59.78
5	34.00	61.00	33.89	60.80
8	-31.50	60.00	-31.38	59.77
11	33.00	60.00	33.00	60.00
13	32.00	60.50	31.47	59.50
14	32.50	60.50	32.38	60.27
17	33.00	60.00	33.03	60.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	1250.	.8900	.8880	1068.	1.020	1002.
4	1200.	.8950	.8660	-1104.	-1.060	1008.
5	1300.	.9100	.9100	1068.	1.020	1076.
8	1150.	.8930	.8150	1014.	1.020	1012.
11	1230.	.8340	.8680	1014.	1.030	1015.
13	-1120.	.8380	.7950	1068.	1.020	998.
14	1190.	.8520	.8150	996.	1.020	1032.
17	1310.	.8930	.9280	1032.	1.040	1014.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	CORR TT7	COR THRUST
-----	LBM/HR	X100	X100	DEG R	LAF
-----	-----	-----	-----	-----	-----
2	1275.	.8640	.8620	1037.	1007.
4	1220.	.8740	.8450	1078.	1013.
5	1306.	.9040	.9040	1061.	1077.
8	1155.	.8860	.8090	1006.	1012.
11	1237.	.8340	.8680	1014.	1020.
13	1144.	.8110	-.7690	1033.	1003.
14	1203.	.8460	.8090	-988.	1039.
17	1321.	.8950	.9300	1034.	1024.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
2	1.595	963.7	561.9	6.8	9.6
4	1.621	959.6	519.1	5.8	9.7
5	1.605	1001.3	656.2	9.0	10.2
8	1.553	986.9	713.8	5.4	8.6
11	1.476	912.8	585.3	7.0	8.6
13	-1.631	-640.8	-197.6	11.4	13.2
14	1.502	931.4	621.7	5.3	8.7
17	1.534	1028.0	759.8	3.5	8.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	2706.	104.04	104.22	1.21	1.71	13.91
4	-2732.	102.90	-95.63	1.02	1.71	14.47
5	2663.	105.73	119.03	1.55	1.77	16.53
8	2627.	106.22	131.99	.96	1.53	20.00
11	2671.	105.13	115.82	1.32	1.63	16.40
13	-2934.	-73.36	-38.86	2.13	2.48	-6.45
14	2661.	105.01	120.41	.98	1.61	17.53
17	2594.	110.68	140.54	.62	1.47	22.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2020	-.0860	15.1970	.1960	.0730	17.1740
4	.2010	-.0840	15.2630	.1970	.0740	17.2110
5	.2010	.0810	14.7480	.2000	.0780	17.4340
8	.1980	.0770	14.6000	.1970	.0740	17.2080
11	.1980	.0750	14.7680	.1970	.0750	17.2590
13	.2020	-.0870	15.1850	.1960	.0730	17.1490
14	.2010	.0800	15.5490	.1980	.0760	17.3180
17	.1990	.0750	14.4380	.1980	.0750	17.2710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	107.02	122.66	1.37	1.93	13.91
4	105.35	109.26	1.16	1.92	14.47
5	106.40	123.49	1.84	2.10	16.53
8	106.95	137.52	1.13	1.80	20.00
11	105.55	116.94	1.55	1.91	16.40
13	-75.70	-46.65	2.41	2.80	-6.45
14	106.26	126.97	1.09	1.79	17.53
17	111.30	141.58	.74	1.76	22.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
2	36.00	64.50	35.47	63.56
4	36.00	64.00	35.57	63.24
5	36.40	64.00	36.28	63.79
8	35.50	64.00	35.36	63.75
11	-33.50	64.00	-33.50	64.00
13	36.00	-65.00	35.41	63.93
14	35.50	64.00	35.36	63.75
17	36.00	64.00	36.03	64.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
2	1370.	.8740	.8540	1068.	1.020	1269.
4	1300.	.8770	.8360	-1104.	-1.060	1247.
5	1390.	-.9040	.8830	1068.	1.025	1291.
8	1300.	.8690	.8720	-1194.	1.025	1289.
11	1320.	.8070	.8140	1014.	1.030	1300.
13	-1240.	.7980	-.7560	1050.	1.020	1296.
14	1270.	.8340	.7780	1005.	1.020	1280.
17	1390.	.8730	.8610	1032.	1.040	1299.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1397.	.8490	.8290	1037.	1276.
4	1322.	.8560	.8160	1078.	1253.
5	1396.	.8970	.8770	1061.	1292.
8	1306.	.8620	.8650	-1185.	1290.
11	1327.	.8070	.8140	1014.	1307.
13	1267.	.7720	-.7310	1015.	1302.
14	1284.	.8280	.7720	997.	1290.
17	1402.	.8750	.8620	1034.	1312.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.614	860.6	429.0	6.8	11.2
4	1.629	857.7	-403.4	5.9	10.7
5	1.637	935.5	533.2	9.4	10.9
8	1.569	875.5	537.5	5.6	9.5
11	1.467	818.5	456.2	6.8	10.0
13	1.569	-566.8	-148.7	12.0	13.0
14	1.510	850.4	496.2	5.0	10.4
17	1.546	943.7	613.0	3.4	8.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	2785.	94.52	80.94	1.23	2.02	13.99
4	-2800.	93.86	-75.84	1.07	1.92	14.04
5	2733.	99.42	97.34	1.64	1.90	16.71
8	2724.	96.75	102.06	1.01	1.73	20.13
11	2744.	97.45	93.30	1.33	1.95	16.44
13	-2965.	-68.14	-30.71	-2.38	2.58	-5.01
14	2733.	97.96	98.19	.95	1.98	16.21
17	2672.	103.84	115.89	.62	1.58	21.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2160	-.1100	16.1170	.2100	.0930	18.1990
4	.2140	.1040	16.0550	.2090	.0910	18.0950
5	.2120	.0980	15.4620	.2110	.0940	18.2750
8	.2120	.0980	15.5000	.2110	.0940	18.2650
11	.2130	.0970	15.6990	.2120	.0960	18.3470
13	-.2180	-.1150	16.2410	.2110	.0950	18.3240
14	.2130	.0990	16.4030	.2110	.0940	18.2650
17	.2130	.0970	15.3540	.2120	.0960	18.3680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	97.25	95.59	1.38	2.28	13.99
4	96.11	86.85	1.20	2.16	14.04
5	100.05	101.05	1.94	2.25	16.71
8	97.43	106.43	1.19	2.04	20.13
11	97.84	94.20	1.56	2.28	16.44
13	-70.34	-37.03	2.68	2.91	-5.01
14	99.14	103.63	1.06	2.20	16.21
17	104.43	116.72	.74	1.89	21.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT -----	N1 SPEED PER CENT -----	N2 SPEED PER CENT -----	CORR N1 PER CENT -----	CORR N2 PER CENT -----
2	-104.00	103.00	102.48	101.49
4	102.00	102.50	100.79	101.29
5	101.40	101.00	101.06	100.66
8	100.60	102.00	100.21	101.61
11	100.00	103.00	100.00	103.00
13	102.00	-104.50	100.32	102.78
14	102.50	103.50	102.11	103.10
17	101.00	100.00	101.10	100.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
-----	-----	-----	-----	-----	-----	-----
2	-10710.	1.6690	-1.5790	-1536.	1.860	18631.
4	-10490.	1.6240	-1.5550	-1554.	1.860	18631.
5	10020.	1.6000	1.4470	1446.	1.850	18581.
8	10000.	1.6720	1.4170	1392.	1.850	18588.
11	10000.	1.5840	1.4110	1410.	1.860	18624.
13	9830.	1.5530	1.4540	1473.	-1.820	-18071.
14	10050.	1.5740	1.4150	1410.	1.860	18587.
17	10250.	1.5670	1.4680	1464.	1.860	18544.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
2	-10923.	1.6210	-1.5330	-1491.	18724.
4	-10669.	1.5860	-1.5190	-1517.	18724.
5	10064.	1.5890	1.4370	1436.	18600.
8	10045.	1.6590	1.4060	1381.	18600.
11	10053.	1.5840	1.4110	1410.	18724.
13	10045.	-1.5030	1.4070	1425.	-18162.
14	10163.	1.5620	1.4040	1399.	18724.
17	10339.	1.5700	1.4700	1467.	18724.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	3.526	18.2	3.5	-120.6	-121.1
4	3.428	16.8	4.6	-114.3	-114.5
5	3.375	22.7	6.7	95.3	92.6
8	3.530	20.1	9.9	101.6	98.1
11	3.340	15.8	6.0	107.0	101.1
13	3.278	14.8	2.1	-185.7	-189.9
14	3.321	18.2	5.5	109.8	110.3
17	3.304	20.2	5.6	94.5	95.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
2	3153.	1.04	.34	-11.28	-11.33	38.43
4	3153.	.99	.46	-10.99	11.01	38.41
5	3152.	1.35	.68	9.31	9.31	42.80
8	3151.	1.14	.97	9.48	9.48	47.89
11	3150.	.95	.62	10.55	10.55	44.56
13	3154.	.91	.22	-18.68	-19.10	-12.50
14	3153.	1.10	.57	10.90	10.95	41.79
17	3150.	1.23	.59	9.42	9.48	49.07

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	118.0580	108.8170	86.8150	90.5250	83.0510	95.6800
4	101.5340	99.2700	85.7280	82.5200	79.7400	94.7510
5	82.1320	74.8700	78.2470	77.6970	70.5000	91.9940
8	106.2510	90.9700	82.1460	99.2840	84.9250	96.1930
11	98.7090	112.2290	87.7810	98.4980	111.1570	102.5960
13	108.5170	-145.1820	92.6300	82.1180	106.5680	101.5660
14	102.0300	123.0880	-33.1850	95.2060	113.3790	103.0820
17	69.8570	63.0860	-74.7510	70.5750	63.0340	89.5550

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK	NUMBER
	LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		CORRECTED	
2		1.35			.45			12.43			12.48			38.43
4		1.21			.57			12.15			12.17			38.41
5		1.42			.72			10.94			10.94			42.80
8		1.22			1.03			11.10			11.10			47.89
11		.95			.62			12.33			12.33			44.56
13		1.20			.30			-20.49			-20.94			-12.50
14		1.18			.62			12.05			12.11			41.79
17		1.21			.59			11.28			11.36			49.07

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODF 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	-98.00	100.50	96.57	99.03
4	96.50	100.00	95.36	98.82
5	96.50	99.00	96.18	98.67
8	95.50	100.00	95.13	99.62
11	97.00	100.00	97.00	100.00
13	-97.50	-102.50	95.90	100.81
14	-97.50	101.10	97.13	100.71
17	96.00	98.00	96.09	98.09

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-8750.	-1.4800	-1.4080	1392.	1.660	15747.
4	8520.	1.4340	-1.3710	1392.	1.660	15747.
5	8200.	1.4220	1.3030	1347.	1.660	15810.
8	8140.	-1.4930	1.2900	1338.	1.660	15815.
11	8220.	1.3900	1.2960	1338.	1.660	15742.
13	8370.	1.4100	1.3290	1356.	1.660	15747.
14	8360.	1.4010	1.3070	1320.	1.660	15710.
17	8540.	1.4210	1.3500	1356.	1.660	15674.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LAF
2	-8924.	1.4370	1.3670	1351.	15826.
4	-8665.	1.4000	1.3390	1359.	15826.
5	8236.	1.4130	1.2940	1338.	15826.
8	8177.	-1.4810	1.2800	1327.	15826.
11	8264.	1.3900	1.2960	1338.	15826.
13	8553.	1.3640	1.2860	1311.	15826.
14	8454.	1.3900	1.2970	1310.	15826.
17	-8614.	1.4240	1.3530	1358.	15826.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
----	-----	-----	-----	-----	-----
2	-3.120	20.5	1.8	-92.7	94.2
4	3.022	21.9	2.8	85.7	88.7
5	2.996	24.4	3.3	74.8	78.2
8	-3.146	24.5	4.2	76.3	78.9
11	2.926	20.3	3.2	80.1	81.3
13	2.972	-15.7	1.3	-145.3	-148.0
14	2.951	20.2	2.7	88.2	88.2
17	2.992	25.9	2.6	73.7	76.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
2	3153.	1.32	.20	9.79	9.95	-42.65
4	3153.	1.46	.32	9.34	9.67	44.37
5	3152.	1.63	.39	8.23	8.61	45.17
8	3152.	1.56	.46	7.99	8.26	49.74
11	3150.	1.39	.38	9.02	9.16	46.31
13	3154.	-1.06	.15	-16.13	-16.42	-14.21
14	3153.	1.37	.32	9.85	9.85	44.08
17	3150.	1.74	.30	8.12	8.41	52.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	-61.9510	66.1000	77.0260	49.5660	50.9060	85.0720
4	54.2850	60.2350	76.0390	45.5870	48.7390	84.1860
5	48.0330	50.1380	71.0610	45.8030	47.2900	83.5770
8	60.2890	61.2330	74.7040	56.9100	57.2720	87.5160
11	50.7780	62.4300	76.2760	50.6420	61.8330	89.1420
13	-67.3180	-98.1790	-84.7470	52.6840	72.6550	92.6600
14	57.8400	-77.1440	-83.3200	54.4760	71.2210	92.2180
17	43.5770	42.0320	67.7810	43.9200	41.9770	81.1960

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	1.65	.26	10.82	10.99	-42.65
4	1.73	.40	10.34	10.71	44.37
5	1.71	.41	9.68	10.12	45.17
8	1.66	.50	9.36	9.68	49.74
11	1.39	.38	10.54	10.70	46.31
13	1.35	.20	-17.71	-18.04	-14.21
14	1.46	.34	10.90	10.90	44.08
17	1.72	.30	9.72	10.07	52.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
2	-88.00	95.50	86.71	94.10
4	87.00	95.50	85.97	94.37
5	86.30	94.00	86.01	93.68
8	86.00	95.00	85.67	94.64
11	87.50	96.00	-87.50	96.00
13	-88.00	-98.00	86.55	96.39
14	87.50	96.50	87.16	96.13
17	86.00	93.50	86.08	93.59

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	-6310.	-1.2570	-1.2480	1257.	1.400	11144.
4	-6800.	1.2100	-1.3600	-1284.	1.400	11144.
5	5680.	1.2080	1.1220	1212.	1.390	10957.
8	5710.	-1.2430	1.1290	1212.	1.390	10960.
11	5800.	1.1480	1.1300	1221.	1.400	11140.
13	5970.	1.1980	1.1680	1230.	1.400	11144.
14	5680.	1.1840	1.0930	1194.	1.400	11118.
17	6020.	1.2180	1.1640	1212.	1.400	11092.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	-6436.	1.2210	-1.2120	1220.	11200.
4	-6916.	1.1810	-1.3280	1253.	11200.
5	5705.	1.2000	1.1150	1204.	10968.
8	5736.	1.2340	1.1200	1202.	10968.
11	5831.	1.1480	1.1300	1221.	11200.
13	-6100.	1.1590	1.1300	1190.	11200.
14	5744.	1.1750	1.0840	1185.	11200.
17	6072.	1.2200	1.1660	1214.	11200.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-2.642	43.4	1.6	56.2	60.2
4	2.540	44.7	3.0	53.0	58.7
5	2.536	56.2	2.7	47.8	54.3
8	-2.612	46.6	2.7	47.3	53.3
11	2.408	43.5	2.5	48.6	52.8
13	2.519	-19.7	1.0	-88.5	-89.7
14	2.486	43.0	2.0	55.0	59.7
17	2.555	60.8	2.5	43.9	51.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	3150.	3.29	.20	7.00	7.50	44.71
4	3149.	3.53	.41	6.87	7.61	45.55
5	3148.	4.44	.36	6.21	7.05	46.94
8	3149.	3.58	.36	5.97	6.72	51.32
11	3147.	3.61	.35	6.64	7.21	49.87
13	3153.	-1.57	.13	-11.58	-11.74	-14.04
14	3150.	3.47	.28	7.29	7.90	47.40
17	3145.	4.77	.33	5.65	6.65	52.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	25.0620	22.0090	58.8560	20.9450	17.2440	65.2650
4	23.5930	22.3960	59.6850	20.4740	18.3490	66.2740
5	20.1990	16.4900	54.0970	19.4340	15.6140	63.6840
8	23.6760	20.7760	57.3790	22.6240	19.5190	67.2910
11	23.4780	26.8670	62.1400	23.4050	26.6100	72.6210
13	-30.2260	-38.4960	-67.2350	24.7280	-29.0010	74.1710
14	2.8300	-29.5460	-66.0170	24.5770	27.3920	73.1390
17	19.6460	15.3020	52.8800	19.7420	15.2670	63.3310

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODF 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
2	3.94	.26	7.77	8.32	44.71
4	4.06	.50	7.63	8.44	45.55
5	4.61	.38	7.31	8.30	46.94
8	3.74	.38	7.00	7.88	51.32
11	3.63	.36	7.76	8.43	49.87
13	-1.92	.17	-12.78	-12.95	-14.04
14	3.64	.30	8.07	8.75	47.40
17	4.74	.33	6.76	7.96	52.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	-72.00	88.00	70.95	86.71
4	70.00	88.00	69.17	86.96
5	70.00	87.00	69.77	86.71
8	69.00	88.00	68.74	87.66
11	71.00	88.20	71.00	88.20
13	71.50	-90.00	70.32	88.52
14	70.50	89.00	70.23	88.66
17	69.00	86.00	69.07	86.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
2	3520.	-1.0270	1.0240	-1140.	1.170	5607.
4	3420.	-1.0170	1.0100	-1176.	1.170	5607.
5	3300.	.9780	.9490	1104.	1.170	5629.
8	3220.	.9900	.9260	1104.	1.170	5631.
11	3350.	.9100	.9590	1104.	1.170	5605.
13	3380.	.9620	.9530	1068.	1.170	5607.
14	3290.	.9440	.9330	1086.	1.170	5594.
17	3330.	.9550	.9490	1104.	1.170	5581.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	-3590.	.9970	.9940	1107.	5635.
4	3478.	.9930	.9860	-1148.	5635.
5	3314.	.9710	.9430	1096.	5635.
8	3235.	.9830	.9190	1095.	5635.
11	3368.	.9100	.9590	1104.	5635.
13	3454.	.9310	.9210	-1033.	5635.
14	3327.	.9370	.9250	1077.	5635.
17	3359.	.9570	.9510	1106.	5635.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	-2.139	151.3	10.5	28.2	34.4
4	-2.115	144.8	19.3	23.9	33.1
5	2.029	181.7	15.2	30.2	31.7
8	2.062	146.3	10.6	22.8	29.3
11	1.891	141.9	10.3	25.5	29.5
13	2.014	-49.7	-2.0	-40.0	-41.1
14	1.962	152.8	12.3	25.6	32.1
17	1.973	215.9	-26.6	-15.3	26.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
2	3129.	14.09	1.67	4.31	5.26	36.36
4	3126.	13.62	3.12	3.70	5.11	40.39
5	3121.	17.79	2.55	4.85	5.10	39.57
8	3129.	14.13	1.76	3.61	4.65	45.18
11	3125.	14.93	1.86	4.40	5.10	44.53
13	-3147.	-4.94	-.34	-6.53	-6.71	-8.08
14	3126.	15.49	2.13	4.26	5.34	42.71
17	-3107.	21.65	-4.57	-2.53	4.40	46.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	8.2530	3.8790	38.5050	7.1790	3.1210	42.9630
4	8.2190	3.9470	39.0370	7.3400	3.3040	43.5630
5	7.2040	3.2730	36.4350	6.9890	3.1170	42.9490
8	8.1170	4.1100	38.5830	7.8370	3.8860	45.3160
11	7.7500	4.4470	39.9790	7.7230	4.4050	46.7230
13	-9.5460	-6.1270	-42.8600	8.1690	4.7630	47.6300
14	-8.6840	-5.2790	-43.2830	8.3450	-4.9270	48.0290
17	6.4240	2.7010	34.6110	6.4360	2.6900	41.4340

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
2	16.20	2.08	4.81	5.87	36.36
4	15.25	3.73	4.12	5.71	40.39
5	18.34	2.68	5.71	6.01	39.57
8	14.64	1.87	4.24	5.47	45.18
11	14.98	1.88	5.14	5.96	44.53
13	-5.78	-.44	-7.25	7.46	-8.08
14	16.12	2.29	4.73	5.93	42.71
17	21.61	-4.59	-3.02	-5.27	46.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	36.00	64.00	35.47	63.06
4	35.00	64.00	34.59	63.24
5	36.00	64.00	35.88	63.79
8	34.50	64.00	34.37	63.75
11	36.00	63.70	36.00	63.70
13	35.00	64.00	34.42	-62.95
14	35.00	64.00	34.87	63.75
17	35.00	63.50	35.03	63.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
2	1310.	.8230	.8220	1050.	1.030	1234.
4	1250.	.8210	.7910	1068.	-1.060	1247.
5	1320.	.7980	.8240	1032.	1.025	1291.
8	1200.	.8210	.7500	1032.	1.030	1289.
11	1250.	.7470	.7780	1014.	1.030	1279.
13	1200.	.7460	.7470	1032.	1.020	-1226.
14	1210.	.7630	.7450	1014.	1.020	1280.
17	1330.	.8210	.8360	1032.	1.040	1264.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	COR TT7 DEG R	COR THRUST LBF
2	1336.	.7990	.7980	1019.	1240.		
4	1271.	.8020	.7720	1043.	1253.		
5	1326.	.7920	.8190	1025.	1292.		
8	1205.	.8150	.7440	1024.	1290.		
11	1257.	.7470	.7780	1014.	1286.		
13	1226.	-.7210	.7220	998.	-1232.		
14	1224.	.7570	.7300	1006.	1290.		
17	1342.	.8230	.8180	1034.	1276.		

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.522	808.5	393.5	8.5	10.4
4	1.526	806.5	373.0	5.8	10.3
5	1.444	839.9	465.2	11.0	10.9
8	1.511	799.1	421.7	7.8	9.9
11	1.363	770.3	399.2	8.4	9.5
13	1.460	-567.8	-145.7	13.5	11.6
14	1.397	777.0	399.1	7.2	10.5
17	1.469	895.4	524.1	-3.9	8.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
2	2791.	94.36	78.90	1.62	1.99	11.84
4	2802.	94.28	-74.92	1.11	1.97	14.47
5	2733.	101.15	96.25	2.18	2.18	16.10
8	2776.	93.48	84.75	1.50	1.90	20.32
11	2756.	99.10	88.23	1.79	2.00	17.20
13	-2953.	-73.09	-32.22	-2.86	2.86	-3.29
14	2765.	97.88	86.37	1.49	2.18	16.54
17	2700.	104.76	105.34	-.76	1.66	20.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
2	.2140	-.1050	15.9700	.2080	.0890	18.0360
4	.2140	-.1040	16.0550	.2090	.0910	18.0950
5	.2120	.0980	15.4620	.2110	.0940	18.2750
8	.2120	.0980	15.5000	.2110	.0940	18.2650
11	.2110	.0950	15.6130	.2110	.0940	18.2470
13	.2140	-.1070	15.9460	-.2070	-.0880	-17.9970
14	.2130	.0990	16.4030	.2110	.0940	18.2650
17	.2110	.0930	15.2150	.2100	.0930	18.2010

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLA FU	NR CNOX EI LB/KLA FU	SMK NUMBER CORRECTED
2	97.08	93.13	1.83	2.24	11.84
4	96.54	85.80	1.25	2.22	14.47
5	101.80	99.92	2.57	2.57	16.10
8	94.13	88.38	1.77	2.24	20.32
11	99.49	89.08	2.09	2.34	17.20
13	-75.43	-38.80	3.22	3.22	-3.29
14	99.05	91.16	1.66	2.42	16.54
17	105.35	106.10	-0.91	1.98	20.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
2	33.50	61.00	33.01	60.11
4	33.50	61.00	33.10	60.28
5	-34.50	61.50	34.38	61.29
8	33.00	61.00	32.87	60.77
11	34.00	61.00	34.00	61.00
13	-32.00	60.50	-31.47	-59.50
14	33.00	61.00	32.87	60.77
17	34.00	61.50	34.03	61.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

2	1240.	.8470	.8570	1050.	1.020	1023.
4	1190.	.8450	.8430	-1104.	-1.060	1035.
5	1300.	.8630	.9120	-1113.	1.020	1112.
8	1160.	.8420	.7920	1014.	1.025	1074.
11	1230.	.7740	.8360	1014.	1.030	1086.
13	1130.	.7450	.7890	1032.	1.020	998.
14	1170.	.7820	.7940	1014.	1.020	1067.
17	1320.	.8340	.8850	1032.	1.040	1121.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	COR PF X100	COR F/A DEG R	COR THRUST LBF
2	1265.	.8220	.8330	1019.	1028.
4	1210.	.8250	.8230	-1078.	1040.
5	1306.	.8570	.9060	-1105.	1113.
8	1165.	.8350	.7860	1006.	1075.
11	1237.	.7740	.8360	1014.	1092.
13	1155.	-.7210	.7630	998.	1003.
14	1183.	.7760	.7870	1006.	1075.
17	1332.	.8360	.8870	1034.	1132.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
2	1.529	906.0	505.4	7.3	9.3
4	1.542	887.0	456.6	5.5	9.7
5	-1.550	918.0	538.0	10.6	10.7
8	1.523	868.7	501.1	6.7	9.2
11	1.383	853.8	494.8	7.3	8.9
13	1.443	-613.5	-181.3	12.3	11.1
14	1.404	842.5	482.1	6.0	9.9
17	1.471	945.3	591.7	3.9	8.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
2	2724.	102.74	98.47	1.37	1.74	13.49
4	2753.	100.78	-89.13	1.03	1.81	14.74
5	2713.	102.24	102.93	1.93	1.95	14.80
8	2731.	99.11	98.22	1.26	1.72	19.84
11	2698.	105.99	105.52	1.50	1.82	14.86
13	-2922.	-79.03	-40.13	-2.60	2.60	-4.08
14	2714.	103.60	101.85	1.22	1.99	16.34
17	2661.	108.88	117.09	.75	1.57	20.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
2	.2030	-.0880	15.2940	.1930	.0750	17.2820
4	.2030	.0860	15.3600	.1980	.0760	17.3200
5	.2030	.0830	14.8420	.2010	.0800	17.5440
8	.2010	.0810	14.7870	.2000	.0780	17.4280
11	.2010	.0790	14.9560	.2010	.0780	17.4790
13	.2020	-.0870	15.1850	-.1960	-.0730	-17.1490
14	.2020	.0820	15.6480	.2000	.0780	17.4280
17	.2030	.0810	14.7160	.2020	.0810	17.6030

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-7 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
2	105.69	115.93	1.54	1.97	13.49
4	103.18	101.87	1.16	2.04	14.74
5	102.89	106.79	2.29	2.31	14.80
8	99.80	102.35	1.49	2.03	19.84
11	106.41	106.54	1.75	2.12	14.86
13	-81.54	-48.17	2.94	2.94	-4.08
14	104.84	107.41	1.35	2.22	16.34
17	109.50	117.95	-0.89	1.88	20.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	42.6	1.91	84	2	14
	600-Hour	42.3	1.91	84	2	14
	1200-Hour	43.2	1.95	85	2	13
2	Baseline	43.0	1.91	84	2	14
	600-Hour	42.3	1.91	84	2	14
	1200-Hour	43.2	1.93	85	2	13
	1800-Hour	42.8	1.90	82	2	16
	2400-Hour	45.2	1.93	82	1	17
	3000-Hour	44.9	1.92	81	2	17
3	Baseline	43.0	1.91	84	2	14
	600-Hour	42.3	1.91	84	2	14
	1200-Hour	43.2	1.93	85	2	13
4	Baseline	43.0	1.91	84	2	14
	600-Hour	42.3	1.91	84	2	14
	1200-Hour	43.2	1.93	85	2	13
	1800-Hour	42.8	1.90	82	2	16
	2400-Hour	45.2	1.93	82	1	17
	3000-Hour	44.9	1.92	81	2	17
5	Baseline	42.8	1.92	83	3	14
	600-Hour	42.3	1.91	85	1	14
	1200-Hour	43.4	1.92	85	2	13
	1800-Hour	42.6	1.91	84	2	14
	2400-Hour	44.9	1.90	82	1	17
	3000-Hour	44.3	1.92	82	1	17
6	Baseline	42.8	1.92	83	3	14
	600-Hour	42.3	1.91	85	1	14
7	Baseline	42.8	1.92	83	3	14
	600-Hour	42.3	1.91	85	1	14
	1200-Hour	43.4	1.92	85	2	13
	1800-Hour	42.6	1.91	84	2	14
	2400-Hour	44.9	1.90	82	1	17

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
8	Baseline	43.6	1.93	85	2	13
	600-Hour	42.3	1.91	85	1	14
	1200-Hour	43.4	1.92	85	2	13
	1800-Hour	42.6	1.91	84	2	14
	2400-Hour	44.9	1.90	82	1	17
	3000-Hour	44.3	1.92	82	1	17
9	Baseline	43.2	1.94	84	3	13
10	Baseline	43.2	1.94	84	3	13
11	Baseline	43.2	1.94	84	3	13
	600-Hour	42.8	1.93	84	2	14
	1200-Hour	43.4	1.92	85	2	13
	1800-Hour	42.8	1.91	82	2	16
	2400-Hour	44.9	1.90	83	1	16
	3000-Hour	45.4	1.93	82	1	17
12	Baseline	43.6	1.92	85	2	13
	600-Hour	42.8	1.93	84	2	14
	1200-Hour	43.4	1.92	85	2	13
13	Baseline	43.8	1.92	86	2	12
	600-Hour	42.3	1.93	84	2	14
	1200-Hour	42.8	1.91	85	2	13
	1800-Hour	42.8	1.92	84	1	15
	2400-Hour *					
	3000-Hour	44.9	1.92	81	2	17
14	Baseline	43.8	1.92	86	2	12
	600-Hour	42.8	1.92	84	2	14
	1200-Hour	42.8	1.91	85	2	13
	1800-Hour	42.8	1.92	84	1	15
	2400-Hour *					
	3000-Hour	43.8	1.92	82	1	17
15	Baseline	43.8	1.92	86	2	12
	600-Hour	42.8	1.92	84	2	14
	1200-Hour	42.8	1.91	85	2	13
	1800-Hour	42.8	1.92	84	1	15
	2400-Hour *					

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
16	Baseline	43.8	1.92	86	2	12
17	Baseline	43.0	1.91	85	2	13
	600-Hour	42.8	1.92	84	1	15
	1200-Hour	43.4	1.91	85	1	14
	1800-Hour	43.0	1.92	82	2	16
	2400-Hour	44.9	1.95	83	1	16
	3000-Hour	44.9	1.93	81	1	18
18	Baseline	43.0	1.91	85	2	13
	600-Hour	42.8	1.92	84	1	15

* Fuel analysis data not available

6. REFERENCES

1. Adams, H. T., Elements of Internal Combustion Turbine Theory, Cambridge University Press, 1949.
2. "T53 and T55 Gas Turbine Combustor and Engine Exhaust Emission Measurements", USAAMRDL Technical Report 73-47, December 1973.
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Report No. FAA-RD-79-8, V

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME V
JT3D-3B TEST DATA**



APRIL 1979

FINAL REPORT

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16. Abstract This is the fifth volume of eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the JT3D-3B engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the fifth volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the JT3D-3B engine type as installed on the DC-8-61 aircraft. The engines, owned and operated by UAL, were tested in San Francisco by UAL personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume II - JT8D-9 Test Data
- Volume III - JT8D-7 Test Data
- Volume IV - JT3D-7 Test Data
- Volume VI - JT9D-3A Test Data
- Volume VII - RB211-22B Test Data
- Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted that EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume: Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emissions and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data

It consists of a number of tables arranged according to test series. For the JT3D-3B engine there were six such series; Baseline; 600 Hour; 1200 Hour; 1800 Hour; 2400 Hour; and 3000 Hour. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/669229	7/9/75	Original Test A/C No. <u>2470</u> , Position No. <u>1</u> Baseline Emission Test
	9/3/75	Throttle rigged out of rig
	9/7/75	Accomplished FCU trim
	9/23/75	"600-Hour" Emission Test
	10/10/75	Down-trimmed engine 35 clicks
	12/3/75	"1200-Hour" Emission Test
	3/9/76	FCU replaced
	3/30/76	"1800-Hour" Emission Test
	6/16/76	"2400-Hour" Emission Test
	8/20/76	"3000-Hour" Emission Test
	9/14/76	Retrimmed engine down
2/669432	7/9/75	Original Test A/C No. <u>2470</u> , Position No. <u>2</u> Baseline Emission Test
	9/23/75	"600-Hour" Emission Test
	10/10/75	Down-trimmed engine 35 clicks
	12/3/75	"1200-Hour" Emission Test
	3/30/76	"1800-Hour" Emission Test
	6/16/76	"2400-Hour" Emission Test
	8/20/75	"3000-Hour" Emission Test
	9/14/76	Retrimmed engine up
3/669448	7/9/75	Original Test A/C No. <u>2470</u> , Position No. <u>3</u> Baseline Emission Test
	9/23/75	"600-Hour" Emission Test
	11/24/75	Engine removed due to metal in oil screen
4/644408	8/27/75	Original Test A/C No. <u>2470</u> , Position No. <u>4</u> Baseline Emission Test
	10/7/75	"600-Hour" Emission Test

Unit No./ Serial No.	Date	Item
4/644408 Continued	2/25/76 4/6/76	"1200-Hour" Emission Test Engine removed due to compressor damage
5/642511	7/14/75 8/8/75 10/2/75 1/12/76 3/16/76 5/24/76 6/28/76	Original Test A/C No. <u>2598</u> , Position No. <u>2</u> Baseline Emission Test Replaced pneumatic regulator actuator output low "600-Hour" Emission Test "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test Engine removed from program due to N ₁ shaft out of limits
6/669235	7/14/75 10/2/75 1/12/76 1/14/76	Original Test A/C No. <u>2598</u> , Position No. <u>3</u> Baseline Emission Test "600-Hour" Emission Test "1200-Hour" Emission Test Engine removed from program due to deteriorated hot section
7/669338	7/21/75 7/30/75 10/7/75 10/8/75 1/13/76 3/22/76 7/14/76 8/30/76	Original Test A/C No. <u>2478</u> , Position No. <u>1</u> Baseline Emission Test Anti-ice valve open replaced valve "600-Hour" Emission Test Anti-ice valve open in flight, replaced "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test "3000-Hour" Emission Test
8/669234	7/21/75 10/6/75	Original Test A/C No. <u>2478</u> , Position No. <u>2</u> Baseline Emission Test Anti-ice valve inoperative, replaced

Unit No. / Serial No.	Date	Item
8/669234 Continued	10/7/75	"600-Hour" Emission Test
	1/13/76	"1200-Hour" Emission Test
	3/22/76	"1800-Hour" Emission Test
	4/5/76	Pneumatic relief open, adjusted valve
	7/14/76	"2400-Hour" Emission Test
	7/15/76	Engine removed from program due to compressor disk limit
	9/669533	
7/21/75		Baseline Emission Test
7/30/75		Pneumatic heat exchanger leaking, replaced
10/7/75		"600-Hour" Emission Test
1/19/76		"1200-Hour" Emission Test
3/22/76		"1800-Hour" Emission Test
4/24/76		Engine removed due to burner can shift
10/643983		Original Test A/C No. <u>2478</u> , Position No. <u>4</u>
	7/21/75	Baseline Emission Test
	10/7/75	"600-Hour" Emission Test
	1/13/76	"1200-Hour" Emission Test
	3/22/76	"1800-Hour" Emission Test
	7/14/76	"2400-Hour" Emission Test
	8/30/76	"3000-Hour" Emission Test
11/645348		Original Test A/C No. <u>2595</u> , Position No. <u>1</u>
	9/9/75	Baseline Emission Test
	12/9/75	"600-Hour" Emission Test
	2/19/76	Engine retrimmed
	2/24/76	"1200-Hour" Emission Test
	5/7/76	"1800-Hour" Emission Test
	7/21/76	"2400-Hour" Emission Test
	8/31/76	Retrimmed engine
9/9/76	Engine removed from program due to disk limit	

Unit No./ Serial No.	Date	Item
12/669646	9/9/75 12/9/75 2/19/76 2/24/76 5/7/76 7/21/76 10/14/76	Original Test A/C No. <u>2595</u> , Position No. <u>2</u> Baseline Emission Test "600-Hour" Emission Test Engine retrimmed "1200-Hour" Emission Test "1800-Hour" Emission Test "2400-Hour" Emission Test "3000-Hour" Emission Test
13/669477	9/9/75 12/9/75 2/19/76 3/2/76 5/7/76 5/14/76 7/21/76 10/14/76	Original Test A/C No. <u>2595</u> , Position No. <u>3</u> Baseline Emission Test "600-Hour" Emission Test Retrimmed engine "1200-Hour" Emission Test "1800-Hour" Emission Test Up-trimmed idle screw; retrimmed engine in part power; rerigged throttle "2400-Hour" Emission Test "3000-Hour" Emission Test
14/644947	9/9/75 12/9/75 2/19/76 3/2/76 5/7/76 5/27/76	Original Test A/C No. <u>2595</u> , Position No. <u>4</u> Baseline Emission Test "600-Hour" Emission Test Retrimmed engine "1200-Hour" Emission Test "1800-Hour" Emission Test Engine removed due to high oil consumption
15/645448	9/11/75 11/24/75	Original Test A/C No. <u>2499</u> , Position No. <u>1</u> Baseline Emission Test Engine removed due to second stage fan damage

Unit No./ Serial No.	Date	Item
16/669373	9/11/75	Original Test A/C No. <u>2499</u> , Position No. <u>2</u> Baseline Emission Test
	11/4/75	Engine removed due to foreign object damage
	17/644804	9/11/75
12/2/75		"600-Hour" Emission Test
3/11/76		"1200-Hour" Emission Test
5/12/76		Replaced pneumatic on/off valve
5/21/76		"1800-Hour" Emission Test
7/20/76		Retrimmed engine
7/27/76		"2400-Hour" Emission Test
7/30/76		Engine removed from program due to compressor T-1 disk limit
18/645024	9/11/75	Original Test A/C No. <u>2499</u> , Position No. <u>4</u> Baseline Emission Test
	12/2/75	"600-Hour" Emission Test
	3/11/76	"1200-Hour" Emission Test
	5/21/76	"1800-Hour" Emission Test
	7/20/76	Retrimmed engine
	7/24/76	Engine removed from program due to compressor disk limit

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T _a	Ambient temperature	deg R
AMB PRESS	P _a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		idle, initial - 60 per cent N ₂ nominal	
MODE 2		Idle "plus", initial - 64 per cent N ₂	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 percent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 percent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N ₁	Rotational speed of low pressure turbine, given as a percent of design speed (7000 rpm)	percent
N2 SPEED	N ₂	Rotational speed of high pressure turbine, given as a percent of design speed (9655 rpm)	percent
CORR N1	N ₁ '	N ₁ speed corrected to standard ambient conditions $N_1' = N_1 \times \sqrt{518.7/T_a} \text{ (Ref 1)}$	percent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (Ref 2, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28 + 0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4} + 0.25a} - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio, obtained iteratively from $(F/A)_{PF} = \frac{F \sqrt{T_{T7}/3600}}{W \times CD \times ARN \times A_{rat} \times EPR \times P_a}$ <p>where EPR is obtained from curve shown in Figure 1 for modes 1, 2, 7 and 8. Actual test data is used for other modes.</p> <p>W(nozzle flow parameter) =</p> $\frac{M \sqrt{\gamma g/R} \sqrt{1 + \frac{\gamma-1}{2} M^2}}{\left(1 + \frac{\gamma-1}{2} M^2\right)^{\frac{\gamma}{\gamma-1}}}$ <p>M(nozzle discharge Mach Number) =</p> $\left[\frac{EPR \frac{\gamma-1}{\gamma} - 1}{\frac{\gamma-1}{2}} \right]^{1/2}$ <p>$g = 32.174 \text{ ft per sec}^2$</p> <p>ARN(nozzle discharge area) = 548 sq in</p> <p>γ (nozzle specific heat ratio) =</p> $1.3837 - 0.685 (F/A)_{PF}$ $- 0.0000636 (T_{T7} - 950)$	

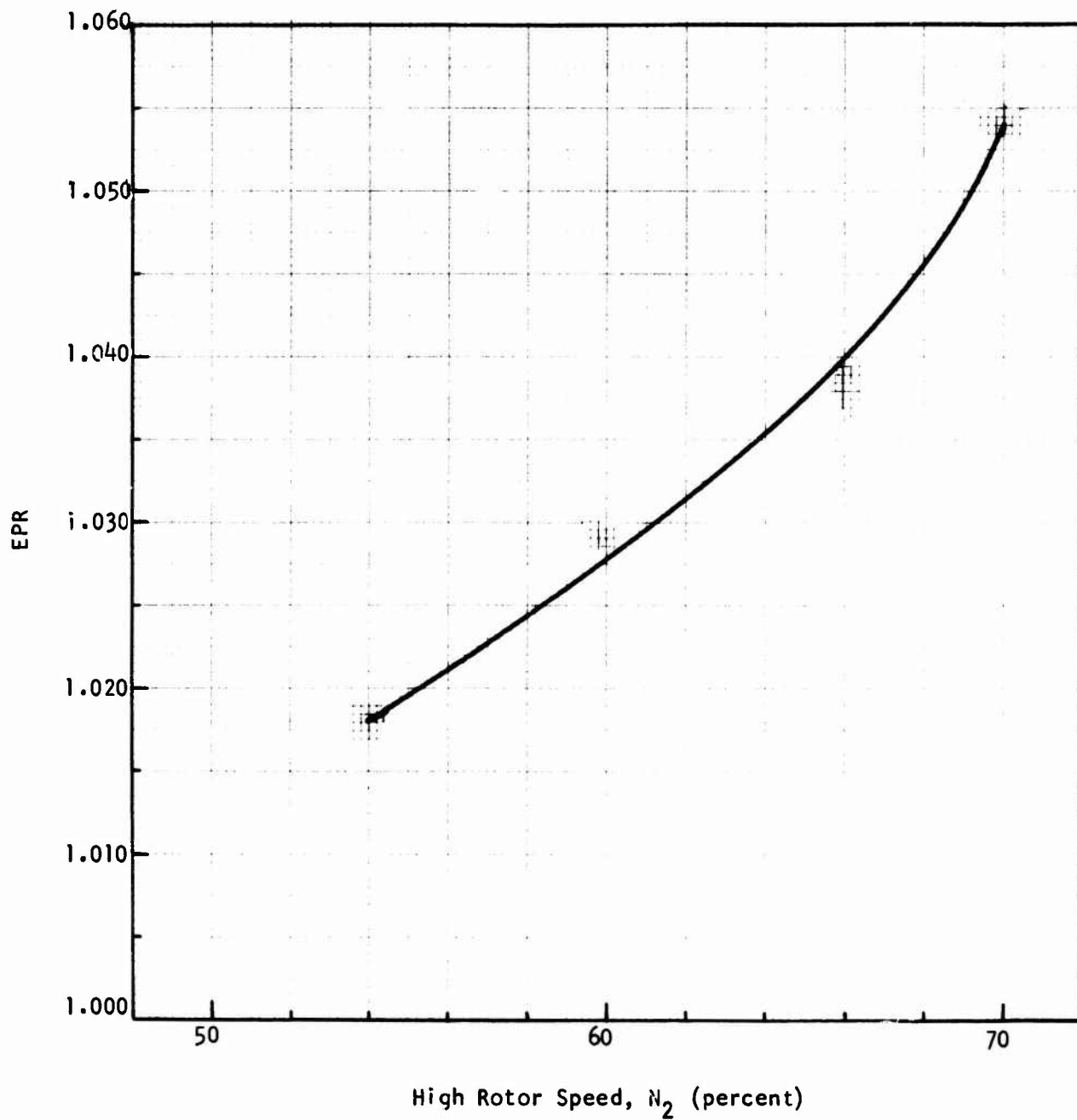


Figure 1. Mean EPR versus N_2 Curve
in the Idle Regime

Name	Symbol	Description	Unit
PERF F/A Continued		$R(\text{nozzle gas constant}) =$ $53.342 + 4.797 (F/A)_{PF}$ $A_{rat}(\text{nozzle thermal growth ratio}) =$ $1 + 0.000015 (T_{T7} - 200)$ $CD(\text{nozzle discharge coefficient}) =$ $0.88 + 0.0667 (EPR - 1)$ Initially, $(F/A)_{CB}$ is used in the calculation of γ and R	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust (obtained from $TH = TH' \times (P_a/29.92)$ (Ref 1)	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)'_{PF}$	Corrected performance fuel-air ratio (Ref 1) $(F/A)'_{PF} = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3 through 6 and from the curve shown in Fig 3 for modes 1, 2, 7 and 8)	lbf

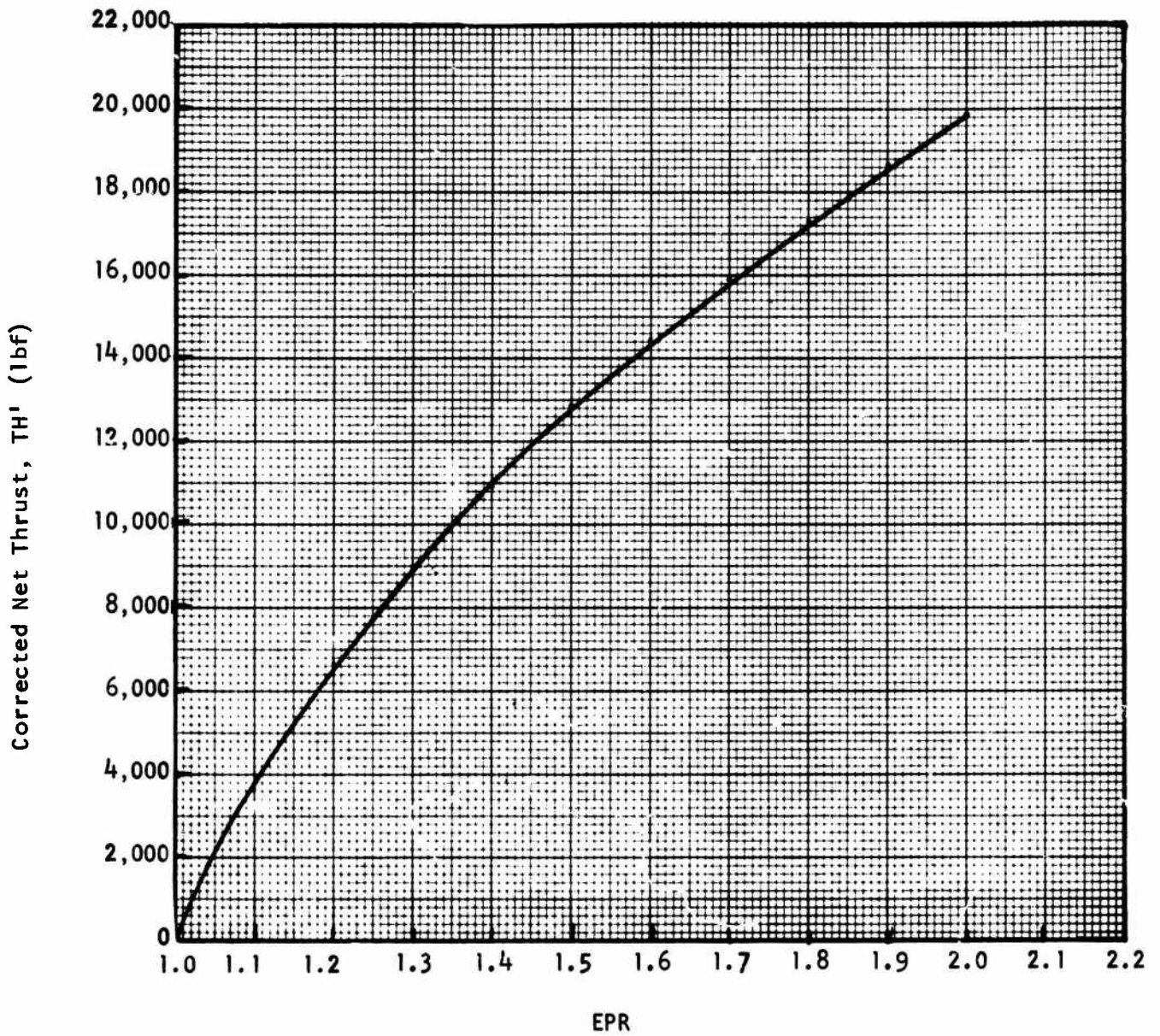
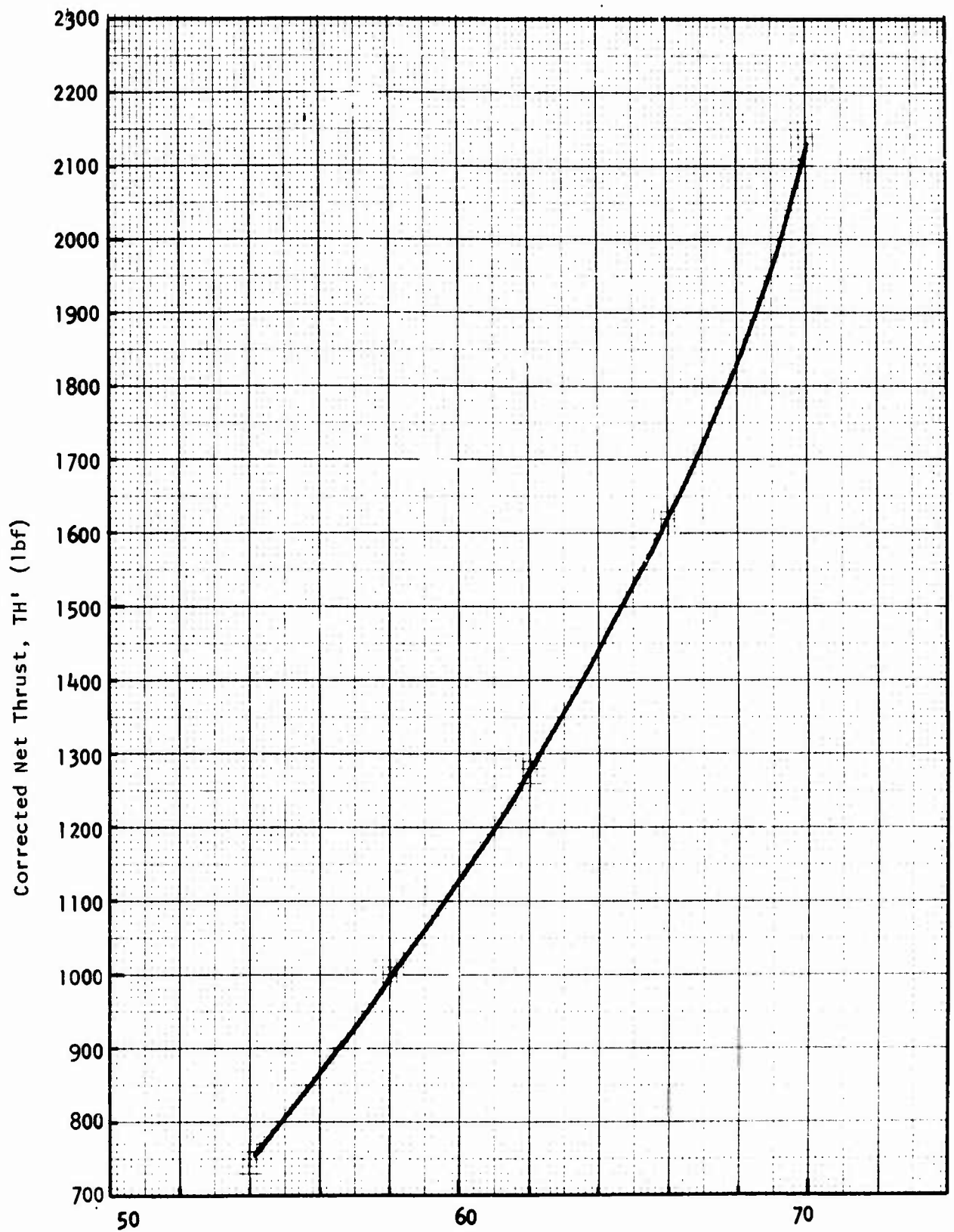


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed



Corrected High Rotor Speed, N₂' (percent)

Figure 3. Estimated Engine Thrust
versus Corrected High Rotor
Speed in the Idle Regime

Name	Symbol	Description	Unit
CO2 CONC	CO ₂	Concentration of carbon dioxide	per cent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NOX CONC	NO _x	Concentration of NO _x	ppm
CO2 EI	EI _{CO₂}	Emission index of carbon dioxide (Ref 3) $EI_{CO_2} = \frac{M_{CO_2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO₂} = molecular weight of CO₂</p>	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO_2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO₂} = molecular weight of NO₂</p>	lbm per 1000 lbm fuel

Name	Symbol	Description	Unit
NOX EI	(EI_{NO_x})	Emission index of NO_x (Ref 3) $EI_{NO_x} = M_{NO_2} \times \frac{NO_x}{10^4} \times 1000$ $\frac{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ where RS = smoke spot reflectance RW = reflectance of clean filter paper	
SMK NUMBER CORRECTED	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	1bm per 1000 1bm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	1bm per 1000 1bm fuel
NRE CND EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	1bm per 1000 1bm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO_x})_{std}}{F_{NO_x}} \times EI_{NO_x}$	1bm per 1000 1bm fuel
FCO	F_{CO}	CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$	

Name	Symbol	Description
FCO Continued		$\begin{cases} \frac{e^{T_{b,obs}/2000}}{e^{T_{b,ref}/(400-F/A_{ref} \times 10^4)}} & \text{for modes 1,2,7,8} \\ \frac{e^{T_{b,obs}/(400-F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400-F/A_{ref} \times 10^4)}} & \text{for modes 3,4,5,6} \end{cases}$ <p>where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$</p> $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see Fig 4)</p> <p>Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p>Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{ref} = 0.0156$ $N_{2,ref} = 9858 \text{ rpm}$ $P_{a,ref} = 29.95 \text{ in Hg abs}$ $T_{a,ref} = 520.0 \text{ deg R}$
FHC	F_{HC}	<p>HC emission factor</p> $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00714 (T_{b,obs} - T_{b,ref})}$

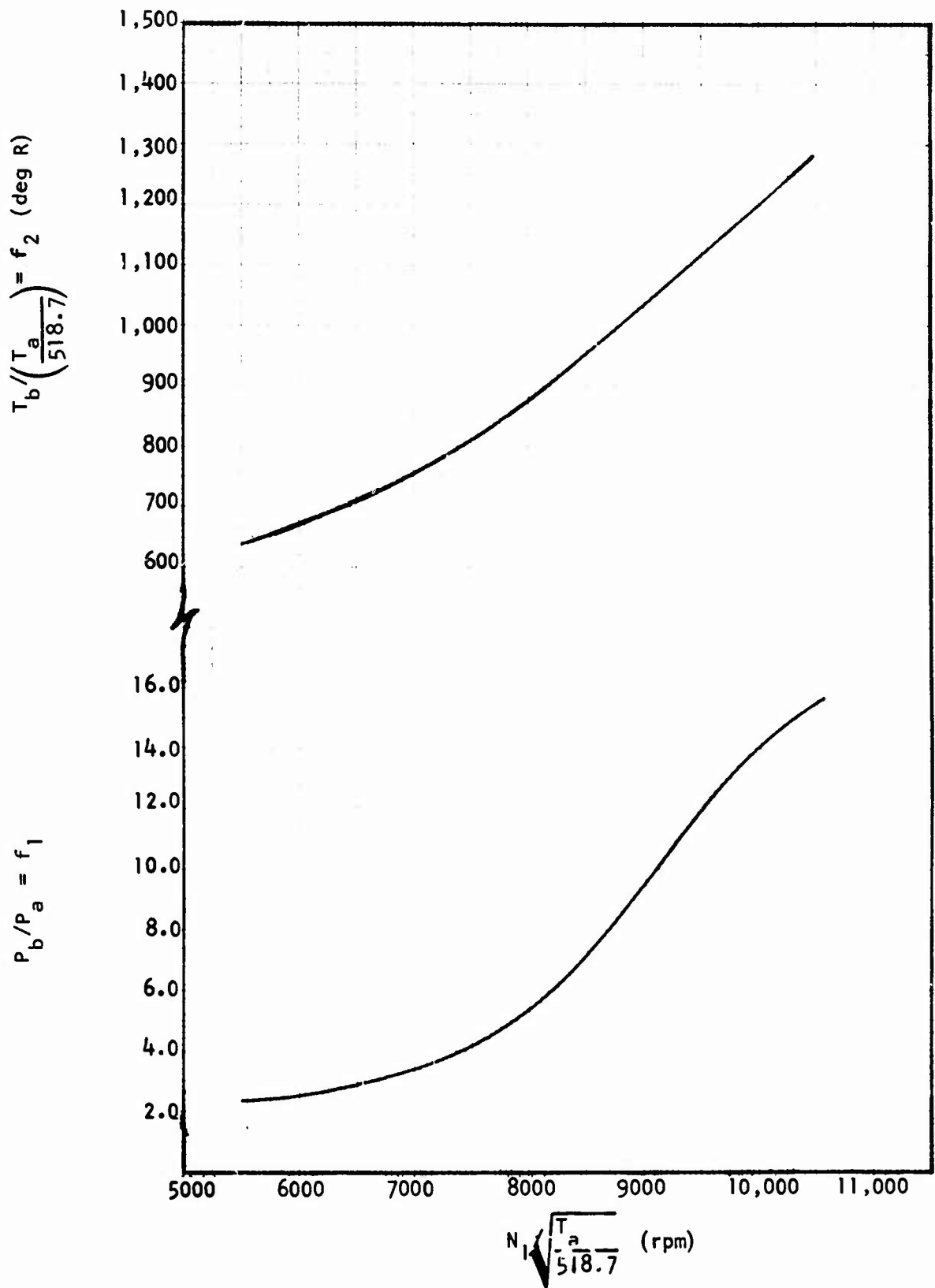


Figure 4. Typical Production Engine Performance

Name	Symbol	Description	Unit
FNO	F_{NO}	NO emission factor $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00148(T_{b,obs} - T_{b,ref}) - 19H\}}$	
STD FCO	$(F_{CO})_{std}$	Corrected CO emission factor $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \left\{ \frac{e^{T_{b,std}/2000}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes 1, 2, 7, 8} \right.$ $\left. \frac{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \right\} \text{ for modes 3, 4, 5 and 6}$ <p>where:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = T_{a,std} \cdot f_2 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \text{ and } \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,std} = T_{a,std} \cdot f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H_2O/lbm dry air), or a value corrected to standard day condition.</p>	

Name	Symbol	Description	Unit
STD FHC	$(F_{HC})_{std}$	Corrected HC emission index $(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1.8} \cdot \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{1/2} \cdot e^{0.00714 (T_{b, std} - T_{b, obs})}$	
STD FNO	$(F_{NO})_{std}$	Corrected NO emission index $(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1/2} \cdot e^{0.00148 (T_{b, std} - T_{b, ref})}$	
API		Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.	
H/C RATIO	a	Hydrogen-carbon ratio as determined using a Sandacarlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.	
FIA		Fluorescent Indicator Absorption - Fuel samples were analyzed for apraffin, olefin, and aromatic content using the ASTM Method D1319-70.	

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. The baseline test of unit 1 was performed before UAL began to routinely trim the engines before each test. This is believed to be the reason for the unusually high idle and idle plus rotor speeds.
5. Fuel flow readings for unit 10, modes 3 and 4, were consistently low throughout the testing program.
6. The calibration gas concentrations for NO and NO_x were questionable for the nominal 50 ppm bottle for tests conducted between 10/10/75 and 6/14/76; and for the nominal 200 ppm bottle for tests conducted between 11/18/75 and 4/22/76. The test data was processed in two different ways: the first assuming the stated concentrations were correct, and the second using calculated values for the concentrations. This is discussed in detail in Appendix IV of Volume 1. In the following tables, the concentrations and emission indices of NO and NO_x are based on the stated calibration gas concentrations, while the NREC corrected emission indices are based on the calculated values.

7. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode	Quantity
2	"600-Hour"	7	Fuel Flow
2	"1200-Hour"	6	N1
4	"Baseline"	8	Fuel Flow
5	"Baseline"	6	EPR
5	"1200-Hour"	8	N1
6	"1200-Hour"	6	N2
10	"Baseline"	4	Fuel Flow
13	"Baseline"	5	EPR
17	" 600-Hour"	6	TT7

JT3D-3B * BASELINE TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
1	20448.	0.	517.7	30.02	.009750
2	21074.	0.	519.2	30.02	.008710
3	20506.	0.	519.2	30.02	.008710
4	23056.	0.	519.2	29.95	.008160
5	19962.	0.	520.7	29.88	.008410
6	22641.	0.	520.7	29.88	.008410
7	20351.	0.	518.2	30.01	.009050
8	20734.	0.	518.2	30.01	.009050
9	19754.	0.	518.2	30.01	.009050
10	22342.	0.	518.2	30.01	.009050
11	21349.	0.	522.2	29.97	.009820
12	14673.	0.	522.2	29.97	.009820
13	20020.	0.	522.2	29.97	.009820
14	26148.	0.	522.2	29.97	.009820
15	25551.	0.	520.2	29.88	.009110
16	22787.	0.	520.2	29.87	.009110
17	31248.	0.	520.2	29.88	.009110
18	25771.	0.	520.2	29.89	.009100

JT3D-38 * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-36.00	-63.50	-36.03	-63.56
2	32.00	59.00	31.98	58.97
3	32.00	60.00	31.98	59.97
4	33.00	60.00	32.98	59.97
5	35.00	-63.00	34.93	-62.88
6	35.00	62.00	34.93	61.88
7	32.80	59.90	32.82	59.93
8	32.80	61.00	32.82	61.03
9	33.00	60.00	33.02	60.03
10	33.50	61.00	33.52	61.03
11	32.50	61.50	32.39	61.29
12	32.00	60.50	31.89	60.30
13	33.00	59.50	32.89	59.30
14	33.00	60.00	32.89	59.80
15	34.00	60.00	33.95	59.91
16	35.00	-62.40	34.95	-62.31
17	34.60	61.50	34.55	61.41
18	33.00	60.00	32.95	59.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1330.	.7970	-.7540	-906.	1.030	-1408.
2	-1190.	-.7230	.8080	1014.	1.020	1064.
3	1240.	.8860	.8070	996.	1.020	1134.
4	1280.	-.7640	.8350	996.	1.050	1137.
5	1310.	.9060	.8050	1032.	1.030	-1357.
6	1230.	.8430	-.7720	1023.	1.050	1273.
7	1270.	.8340	.8150	-960.	1.030	1132.
8	-1380.	.9030	.8890	1032.	1.050	1209.
9	1240.	.8720	.8250	1041.	1.050	1139.
10	1290.	.8730	.8310	1032.	1.050	1209.
11	-1190.	-.7740	-.7510	1014.	1.020	1228.
12	1240.	.8080	.8040	1014.	1.050	1159.
13	1260.	.8190	.8500	1032.	1.020	1089.
14	1320.	.8130	.8530	978.	-1.010	1124.
15	1300.	.8260	.8730	1050.	1.030	1136.
16	1280.	-.7430	.7950	1023.	1.050	-1309.
17	1300.	.7890	.8270	1023.	1.030	1240.
18	1290.	.8220	.8580	1032.	1.040	1135.

NOTE- MINUS SIGNS DENOTE OULYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
1	1333.	.7980	-.7560	-907.	-1413.
2	-1195.	-.7230	.8070	1013.	1068.
3	1245.	.8860	.8070	995.	1138.
4	1282.	-.7640	.8350	995.	1138.
5	1311.	.9030	.8020	1028.	-1355.
6	1231.	.8400	-.7690	1019.	1272.
7	1273.	.8350	.8160	-961.	1135.
8	-1383.	.9040	.8900	1033.	1212.
9	1243.	.8730	.8260	1042.	1142.
10	1293.	.8740	.8320	1033.	1212.
11	-1196.	-.7680	-.7460	1007.	1231.
12	1246.	.8020	.7990	1007.	1161.
13	1266.	.8140	.8440	1025.	1091.
14	1327.	.8070	.8480	-971.	1126.
15	1300.	.8240	.8700	1047.	1134.
16	1279.	-.7410	.7930	1020.	-1306.
17	1300.	.7870	.8240	1020.	1239.
18	1291.	.8200	.8560	1029.	1134.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.421	910.4	506.7	5.6	11.3
2	-1.209	972.0	673.9	7.5	9.7
3	1.541	1001.4	700.7	5.1	8.6
4	-1.336	901.9	569.4	8.1	13.0
5	-1.652	897.9	517.9	9.7	12.9
6	1.522	908.8	-503.3	7.6	11.8
7	1.472	915.3	605.8	9.6	11.3
8	-1.597	1001.8	649.0	10.0	11.6
9	1.527	1015.1	652.3	7.5	10.8
10	1.538	956.1	643.7	8.9	11.0
11	1.364	867.5	546.5	8.8	11.6
12	1.429	894.8	560.9	11.2	12.1
13	1.432	952.0	609.2	10.5	12.0
14	1.403	941.2	664.3	9.8	11.6
15	1.494	901.4	-480.0	11.9	12.4
16	-1.313	-850.4	514.1	11.2	12.3
17	1.398	854.3	552.4	10.4	12.1
18	1.447	967.9	581.6	10.7	12.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
1	2693.	109.79	104.98	1.11	2.25	-6.76
2	-2528.	-129.31	154.02	1.64	2.12	21.50
3	2625.	108.57	130.51	.90	1.53	19.81
4	2640.	113.45	123.04	1.68	2.69	-14.53
5	-2750.	-95.12	-94.26	1.69	2.24	21.33
6	-2725.	103.55	-98.51	1.42	2.21	17.07
7	2666.	105.51	119.96	1.81	2.14	22.40
8	2668.	106.53	118.55	1.75	2.03	21.33
9	2646.	111.91	123.54	1.35	1.96	22.40
10	2661.	105.26	121.75	1.62	1.99	21.16
11	2664.	107.82	116.69	1.80	2.37	20.88
12	2672.	106.48	114.67	2.20	2.37	18.46
13	2641.	111.74	122.83	2.02	2.31	19.25
14	2608.	111.36	135.03	1.91	2.25	17.99
15	-2728.	104.79	-95.85	-2.27	2.37	15.54
16	2669.	110.04	114.29	-2.38	2.61	16.89
17	2675.	104.06	115.59	2.09	2.42	19.73
18	2658.	113.11	116.76	2.06	2.33	17.45

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	-.2270	-.0940	16.7330	-.2270	-.0940	-20.1450
2	.2040	.0630	15.5890	.2030	.0620	18.3460
3	.2080	.0680	15.8670	.2070	.0670	18.6730
4	.2070	.0680	16.0130	.2070	.0670	18.6730
5	-.2220	-.0890	16.9150	-.2220	-.0870	-19.7820
6	.2160	.0800	16.5070	.2150	.0780	19.3050
7	.2070	.0670	15.7170	.2070	.0670	18.6590
8	.2120	.0730	16.0230	.2120	.0730	19.0220
9	.2080	.0680	15.7450	.2070	.0680	18.6920
10	.2120	.0730	16.0230	.2120	.0730	19.0220
11	.2140	.0780	15.9750	.2130	.0750	19.1100
12	.2100	.0720	15.6990	.2080	.0690	18.7900
13	.2060	.0660	-15.4240	.2040	.0640	18.4530
14	.2080	.0690	15.5610	.2060	.0670	18.6160
15	.2070	.0680	15.7210	.2070	.0670	18.6540
16	-.2180	-.0830	16.4160	-.2180	.0820	-19.4810
17	.2140	.0770	16.1410	.2130	.0760	19.1490
18	.2070	.0680	15.7270	.2070	.0670	18.6540

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	109.89	104.52	1.34	2.70	-6.76
2	-129.74	-155.72	1.93	2.50	21.50
3	108.92	131.95	1.06	1.81	19.81
4	113.61	123.85	1.96	3.14	-14.53
5	-95.33	-95.98	1.97	2.62	21.33
6	103.78	100.30	1.66	2.59	17.07
7	105.65	119.97	2.15	2.54	22.40
8	106.67	118.56	2.08	2.42	21.33
9	112.06	123.55	1.60	2.32	22.40
10	105.40	121.75	1.92	2.36	21.16
11	108.56	121.27	2.16	2.83	20.88
12	107.21	119.13	2.63	2.84	18.46
13	112.50	127.57	2.42	2.77	19.25
14	112.12	140.26	2.28	2.69	17.99
15	104.92	-97.04	-2.69	2.81	15.54
16	110.16	115.67	-2.82	3.09	16.89
17	104.20	117.08	2.48	2.87	19.73
18	113.29	118.31	2.44	2.77	17.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-40.50	-68.00	-40.54	-68.07
2	-35.00	-63.00	-34.98	-62.97
3	36.00	64.00	35.98	63.97
4	36.10	64.00	36.08	63.97
5	-39.50	-67.00	-39.42	-66.87
6	-39.00	-66.00	-38.93	-65.87
7	36.50	64.00	36.52	64.03
8	36.50	65.00	36.52	65.03
9	36.00	64.00	36.02	64.03
10	37.00	65.00	37.02	65.03
11	37.50	-65.50	37.37	65.28
12	36.00	64.50	35.88	64.28
13	36.20	63.50	36.08	63.29
14	37.00	64.50	36.88	64.28
15	37.00	64.00	36.95	63.91
16	-39.20	-66.40	-39.14	-66.30
17	-38.80	-65.50	-38.74	65.41
18	37.00	64.20	36.95	64.11

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	-1495.	.7820	.7680	996.	1.030	-1882.
2	-1280.	-.6840	.7730	1005.	1.030	-1358.
3	1360.	.8710	.7980	996.	1.030	1443.
4	1330.	.7600	.7830	996.	1.050	1446.
5	1450.	.8790	.7940	1032.	1.030	-1736.
6	1370.	.8280	.7830	1023.	1.050	-1611.
7	1380.	-.9550	.7970	-963.	1.040	1449.
8	-1470.	.8650	.8580	1032.	1.050	1533.
9	1390.	.8520	.8340	1041.	1.060	1449.
10	1400.	.8500	.8180	1032.	1.060	1533.
11	1340.	-.7460	.7710	1023.	1.030	1556.
12	1365.	.7770	.8040	1023.	1.050	1472.
13	1360.	.8160	.8230	1032.	1.040	1387.
14	1325.	.7930	.7630	978.	-1.010	1472.
15	1390.	.8220	.8410	1050.	1.030	1444.
16	1410.	-.7410	.7910	1023.	1.050	-1663.
17	1430.	.7750	.8260	1023.	1.030	1572.
18	1400.	.8170	.8360	1032.	1.050	1461.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1499.	.7830	.7700	998.	-1889.
2	-1285.	-.6830	.7720	1004.	-1362.
3	1365.	.8700	.7970	995.	1447.
4	1332.	-.7590	.7820	995.	1447.
5	1451.	.8750	.7910	1028.	-1733.
6	1371.	.8240	.7800	1019.	-1609.
7	1383.	-.9560	.7980	-964.	1453.
8	-1473.	.8650	.7590	1033.	1538.
9	1393.	.8530	.8350	1042.	1453.
10	1403.	.8510	.8180	1033.	1538.
11	1347.	-.7410	.7660	1016.	1559.
12	1372.	.7720	.7920	1016.	1474.
13	1367.	.8110	.8180	1025.	1389.
14	1332.	.7880	.7580	-971.	1474.
15	1390.	.8190	.8390	1047.	1442.
16	1409.	-.7390	.7880	1020.	-1660.
17	1430.	.7730	.8230	1020.	1569.
18	1401.	.8140	.8330	1029.	1459.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.433	801.8	-400.3	6.0	12.2
2	-1.165	880.9	574.1	7.5	10.2
3	1.561	886.2	565.1	5.3	10.5
4	1.358	818.1	494.9	7.4	13.6
5	-1.646	780.0	-389.7	9.7	14.1
6	1.542	791.0	-371.8	7.7	13.0
7	-1.758	854.0	528.9	7.5	12.3
8	1.574	888.9	492.5	10.3	12.6
9	1.538	914.7	519.0	7.5	11.4
10	1.548	852.1	489.3	9.2	12.2
11	1.355	-751.6	-426.9	7.9	12.6
12	1.405	783.3	464.8	9.9	12.9
13	1.457	881.3	534.3	9.2	12.6
14	1.415	825.3	529.3	9.1	12.6
15	1.503	821.4	445.4	11.2	13.2
16	-1.342	-760.3	435.1	11.3	13.2
17	1.404	764.8	465.6	10.9	13.1
18	1.470	875.5	496.6	10.9	12.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2767.	98.52	-84.52	1.21	2.47	-29.46
2	-2578.	-124.01	-138.85	1.75	2.36	23.03
3	2706.	97.77	107.11	.97	1.90	20.45
4	2698.	103.48	107.53	1.54	2.82	-14.23
5	-2824.	-85.18	-73.11	1.73	2.53	21.33
6	-2811.	-91.77	-74.11	1.48	2.48	18.11
7	-2775.	-85.79	91.28	1.23	2.04	20.32
8	2747.	98.74	93.99	1.87	2.30	21.33
9	2723.	103.08	100.48	1.39	2.11	20.73
10	2749.	96.28	94.97	1.70	2.26	20.00
11	2742.	96.82	94.47	1.67	2.66	20.30
12	2730.	96.86	98.74	2.00	2.62	19.46
13	2694.	103.73	108.03	1.79	2.43	19.73
14	2694.	107.01	110.19	1.82	2.50	20.49
15	2760.	95.99	89.43	2.15	2.53	15.78
16	2735.	98.64	96.99	-2.41	2.82	17.01
17	2735.	94.80	99.14	2.21	2.67	21.35
18	2719.	103.01	100.31	2.10	2.48	16.49

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2630	-.1600	-18.9230	-.2630	-.1600	-22.7830
2	-.2230	.0890	-16.8510	-.2220	-.0880	-19.8300
3	.2310	.1000	17.3040	.2300	.0990	20.3630
4	.2300	.0990	17.4630	.2300	.0990	20.3630
5	-.2520	-.1390	-18.7610	-.2510	-.1360	-21.9370
6	-.2440	-.1250	18.2930	-.2440	-.1220	-21.3900
7	.2310	.0990	17.1800	.2300	.0990	20.3960
8	.2380	.1110	17.6330	.2380	.1110	20.9340
9	.2310	.0990	17.1800	.2300	.0990	20.3960
10	.2380	.1110	17.6330	.2380	.1110	20.9340
11	.2410	-.1190	17.6180	.2390	.1140	21.0680
12	.2340	.1060	17.1670	.2320	.1020	20.5310
13	.2260	.0950	-16.7210	.2250	.0910	19.9990
14	.2340	.1060	17.1670	.2320	.1020	20.5310
15	.2300	.0990	17.1360	.2290	.0980	20.3300
16	-.2470	-.1300	18.2250	-.2470	-.1280	-21.6260
17	.2410	-.1180	17.8190	.2400	.1160	21.1360
18	.2310	.1020	17.2320	.2310	.1000	20.4370

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODF 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	98.61	-84.11	1.46	2.97	-29.46
2	-124.42	-140.40	2.05	2.77	23.03
3	98.09	108.32	1.14	2.23	20.45
4	103.63	108.26	1.80	3.29	-14.23
5	-85.37	-74.51	2.03	2.96	21.33
6	-91.98	-75.51	1.72	2.90	18.11
7	-85.90	91.28	1.46	2.42	20.32
8	98.87	93.97	2.22	2.73	21.33
9	103.22	100.47	1.65	2.51	20.73
10	96.40	94.95	2.02	2.68	20.00
11	97.49	98.31	1.99	3.18	20.30
12	97.54	102.72	2.39	3.13	19.46
13	104.44	112.34	2.14	2.90	19.73
14	100.71	114.62	2.17	2.99	20.49
15	96.12	90.59	2.55	3.00	15.78
16	98.75	98.22	-2.86	3.34	17.01
17	94.93	100.47	2.62	3.17	21.35
18	103.19	101.78	2.49	2.95	16.49

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	103.00	101.50	103.10	101.60
2	104.00	102.50	103.95	102.45
3	105.00	103.00	104.95	-102.95
4	-105.50	103.00	-105.45	-102.95
5	104.50	102.00	104.30	101.80
6	105.00	102.50	104.80	102.30
7	104.40	102.00	104.45	102.05
8	104.00	103.00	104.05	-103.05
9	105.00	103.00	105.05	-103.05
10	103.20	102.00	103.25	102.05
11	104.00	102.90	103.65	102.55
12	104.40	102.80	104.05	102.45
13	105.20	102.40	104.85	102.06
14	105.00	-103.50	104.65	-103.15
15	104.70	101.00	104.55	100.85
16	105.10	102.00	104.95	101.85
17	104.60	101.00	104.45	100.85
18	104.00	101.50	103.85	101.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	9300.	-1.3820	1.2780	1383.	1.860	1A107.
2	9700.	1.6740	1.3720	-1464.	1.860	1A107.
3	9700.	1.6360	1.3880	-1500.	1.860	1A107.
4	9480.	1.5810	1.3010	1374.	1.860	1A153.
5	9600.	1.6350	1.3300	1392.	1.860	1A192.
6	10000.	1.6280	1.4030	1428.	1.860	1A192.
7	9900.	1.6420	1.3480	1356.	1.860	1A117.
8	10000.	1.4980	1.3880	1410.	1.860	1A117.
9	9610.	1.6300	1.3510	-1446.	1.860	1A117.
10	9620.	1.6410	1.3270	1392.	1.860	1A117.
11	9480.	1.6080	1.2960	1365.	1.860	1A138.
12	9650.	1.6250	1.3320	1392.	1.860	1A138.
13	9950.	-1.6930	1.3920	1428.	1.860	1A138.
14	9700.	-1.6900	1.3480	1410.	1.860	1A138.
15	9600.	1.6730	1.3340	1401.	1.860	1A195.
16	9600.	-1.7050	1.3300	1392.	1.860	1A201.
17	9200.	1.6320	-1.2570	1356.	1.860	1A192.
18	9900.	-1.6830	1.3710	1392.	1.860	1A186.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	9322.	-1.3840	1.2800	1385.	18168.
2	9737.	1.6720	1.3700	-1462.	18168.
3	9737.	1.6340	1.3870	-1498.	18168.
4	9492.	1.5800	1.3000	1372.	18168.
5	9606.	1.6280	1.3240	1386.	18168.
6	10006.	1.6210	1.3980	1422.	18168.
7	9923.	1.6440	1.3490	-1357.	18168.
8	-10024.	1.5000	1.3900	1411.	18168.
9	9633.	1.6320	1.3520	1447.	18168.
10	9643.	1.6420	1.3280	1393.	18168.
11	9528.	1.5970	1.2870	-1356.	18168.
12	9699.	1.6140	1.3240	1382.	18168.
13	10000.	-1.6820	1.3820	1418.	18168.
14	9749.	1.6780	1.3390	1400.	18168.
15	9599.	1.6680	1.3300	1397.	18168.
16	9596.	-1.7000	1.3260	1388.	18168.
17	9201.	1.6280	-1.2540	-1352.	18168.
18	9904.	1.6780	1.3670	1388.	18168.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-2.905	26.0	-12.4	101.6	98.8
2	3.521	19.4	-43.9	100.7	100.3
3	3.442	18.7	-32.9	96.7	100.9
4	3.336	16.8	7.1	-106.8	-110.2
5	3.451	23.7	9.6	101.8	101.8
6	3.438	21.2	5.3	-105.3	105.6
7	3.472	23.6	2.2	102.7	103.4
8	3.163	17.4	4.0	-109.3	-112.0
9	3.447	20.8	3.0	105.1	103.6
10	3.469	20.1	4.7	102.8	102.7
11	3.387	16.9	-20.4	100.2	98.6
12	3.427	19.7	-10.0	96.9	100.5
13	-3.573	19.7	9.5	99.9	105.4
14	-3.566	18.5	8.5	104.1	-122.1
15	3.533	20.4	7.9	101.8	102.9
16	-3.601	19.6	7.1	99.1	102.3
17	3.446	19.1	7.5	92.2	96.8
18	-3.554	19.4	4.7	93.5	99.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3147.	-1.79	-1.47	-11.51	-11.51	-42.32
2	-3140.	1.10	-4.28	9.39	9.39	56.67
3	-3143.	1.09	-3.28	9.23	9.63	44.81
4	3152.	1.01	.74	-10.55	-10.89	43.66
5	3153.	1.38	.95	9.72	9.72	44.67
6	3155.	1.24	.53	10.11	10.13	-42.09
7	3158.	1.37	.22	9.76	9.83	47.17
8	3158.	1.10	.44	-11.41	-11.69	50.53
9	3158.	1.21	.30	10.07	10.07	55.33
10	3157.	1.17	.47	9.78	9.78	56.24
11	-3146.	1.00	-2.07	9.73	9.73	52.96
12	3149.	1.15	1.01	9.31	9.66	58.28
13	3149.	1.10	.92	9.21	9.71	58.83
14	3150.	1.04	.82	9.61	-11.27	60.57
15	3152.	1.16	.77	9.50	9.60	48.67
16	3152.	1.09	.68	9.07	9.36	54.86
17	3152.	1.11	.75	8.82	9.26	53.53
18	3153.	1.09	.46	8.67	9.26	57.94

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	67.5920	89.4750	81.1830	68.4850	90.4820	97.8720
2	-133.1010	108.9410	86.4100	-131.8600	107.3500	101.6090
3	-129.4190	-120.3510	88.3150	-128.2270	-118.5850	-103.8480
4	115.1890	-110.8110	-89.1280	114.3670	-118.5850	-103.8480
5	115.0580	97.3850	84.6980	111.4930	94.3080	98.7650
6	119.8740	107.6570	86.5800	116.1510	104.2290	100.9540
7	117.3820	98.7150	84.0350	118.4000	99.0660	99.8370
8	97.7800	-120.5020	87.7870	98.5130	-120.9470	-104.2970
9	-127.9410	-120.5020	87.7870	-129.0560	-120.9470	-104.2970
10	117.0810	98.7150	84.0350	118.0950	99.0660	99.8370
11	120.3950	-116.8520	85.7840	113.5040	109.6000	102.0720
12	-123.4870	-114.5400	85.4100	116.3410	107.4410	101.6280
13	-137.0920	105.7230	83.9240	-128.7930	99.2070	99.8680
14	-154.0950	-131.6820	88.0570	-144.6460	-123.4420	-104.7640
15	111.5810	79.6520	79.9830	109.0340	77.8560	94.6950
16	-134.0600	97.4150	83.5880	-130.9060	95.2390	98.9780
17	102.3600	79.6760	79.9920	100.0830	77.8560	94.6950
18	120.6420	88.2160	81.8080	117.8010	86.1320	96.8190

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	-1.77	-1.45	-13.88	-13.88	-42.32
2	1.11	-4.35	11.04	11.04	56.67
3	1.10	-3.33	10.85	11.33	44.81
4	1.01	.75	-12.29	-12.69	43.66
5	1.42	.99	11.34	11.34	44.67
6	1.28	.55	11.78	11.82	-42.09
7	1.36	.22	11.60	11.68	47.17
8	1.10	.43	-13.55	-13.88	50.53
9	1.20	.30	11.96	11.96	55.33
10	1.16	.47	11.62	11.62	56.24
11	1.06	-2.21	11.58	11.58	52.96
12	1.22	-1.07	11.08	11.49	58.28
13	1.18	.98	10.96	11.56	58.83
14	1.11	.88	11.43	-13.41	60.57
15	1.19	.79	11.24	11.37	48.67
16	1.12	.69	10.74	11.08	54.86
17	1.14	.77	10.44	10.96	53.53
18	1.12	.47	10.26	10.95	57.94

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	97.00	98.50	97.09	98.60
2	96.50	99.00	96.45	98.95
3	97.00	100.00	96.95	99.95
4	98.40	100.00	98.35	99.95
5	98.00	100.00	97.81	99.81
6	-98.50	100.00	98.31	99.81
7	97.10	98.90	97.15	98.95
8	97.30	100.00	97.35	100.05
9	98.00	100.10	98.05	100.15
10	-93.70	97.90	-93.75	97.95
11	97.00	99.80	96.67	99.46
12	97.50	99.80	97.17	99.46
13	98.00	99.50	97.67	99.17
14	-98.50	100.00	98.17	99.66
15	98.10	98.50	97.96	98.36
16	-99.00	99.10	-98.86	98.96
17	-98.80	98.50	-98.66	98.36
18	97.10	98.50	96.96	98.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	7900.	-1.2110	1.2000	1284.	1.660	15301.
2	7600.	1.4230	1.1590	1293.	1.660	15301.
3	7700.	1.4140	1.1700	1284.	1.660	15301.
4	8000.	1.3750	1.2010	-1248.	1.660	15339.
5	7800.	1.4430	1.2070	1320.	1.660	15373.
6	8000.	1.4180	1.2380	1320.	1.660	15373.
7	8000.	1.4350	1.2370	1329.	1.660	15309.
8	8200.	1.3700	1.2640	1320.	1.660	15309.
9	-8300.	1.4200	-1.2880	1338.	1.660	15309.
10	7980.	1.3540	1.2040	1266.	1.660	15309.
11	8050.	1.3860	1.2250	1284.	1.660	15326.
12	7800.	1.4170	1.2030	1320.	1.660	15326.
13	7900.	-1.4650	1.2190	1320.	1.660	15326.
14	7850.	1.4530	1.2030	1302.	1.660	15326.
15	7800.	1.4490	1.2110	1329.	1.660	15375.
16	7700.	-1.4860	1.1920	1320.	1.660	15380.
17	7600.	1.4380	1.1600	1284.	1.660	15373.
18	8100.	-1.4730	1.2620	1338.	1.660	15367.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LPM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	7919.	-1.2130	1.2030	1286.	15352.
2	7629.	1.4220	1.1570	1291.	15352.
3	7729.	1.4120	1.1690	1282.	15352.
4	8011.	1.3740	1.2000	-1247.	15352.
5	7805.	1.4370	1.2020	1315.	15352.
6	8005.	1.4130	1.2330	1315.	15352.
7	8019.	1.4360	1.2380	1330.	15352.
8	8219.	1.3710	1.2650	1321.	15352.
9	-8320.	1.4210	1.2890	1339.	15352.
10	7999.	1.3550	1.2060	1267.	15352.
11	8091.	1.3770	1.2170	1275.	15352.
12	7839.	1.4080	1.1950	1311.	15352.
13	7940.	1.4560	1.2110	1311.	15352.
14	7890.	1.4440	1.1950	1293.	15352.
15	7800.	1.4450	1.2080	1325.	15352.
16	7697.	-1.4810	1.1890	1316.	15352.
17	7601.	1.4340	1.1570	1280.	15352.
18	8104.	-1.4690	1.2580	1334.	15352.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-2.542	33.2	5.9	74.5	75.5
2	2.987	27.5	-31.5	71.0	72.2
3	2.970	27.6	-20.4	-80.3	-84.5
4	2.894	22.7	6.0	-83.8	-88.0
5	3.041	29.7	6.4	-81.5	-84.9
6	2.989	26.9	3.6	78.1	81.0
7	3.026	31.6	1.9	77.6	81.7
8	2.889	21.0	3.3	-85.3	-89.1
9	2.994	28.2	2.5	74.9	77.2
10	2.852	35.7	3.3	72.0	76.5
11	2.913	22.9	-15.4	72.5	74.6
12	2.981	27.0	-8.2	71.5	77.2
13	-3.085	27.5	-7.3	71.8	79.9
14	3.059	26.1	-6.5	75.2	-94.1
15	3.052	28.0	6.0	74.2	78.6
16	-3.131	24.7	5.1	75.3	79.9
17	3.030	25.4	5.1	71.0	77.2
18	-3.104	29.2	3.3	69.2	76.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	3147.	-2.62	-.80	-9.64	-9.78	-30.14
2	-3141.	1.84	-3.63	7.81	7.94	49.73
3	-3144.	1.86	-2.36	8.89	-9.35	46.62
4	3151.	1.57	.71	-9.54	-10.02	-41.37
5	3153.	1.96	.72	8.84	9.20	46.67
6	3154.	1.81	.41	8.61	8.93	45.33
7	3157.	2.10	.22	8.47	8.91	46.93
8	3157.	1.46	.40	-9.75	-10.18	46.81
9	3157.	1.89	.29	8.25	8.51	49.46
10	3155.	2.51	.40	8.33	8.85	48.24
11	3146.	1.58	-1.82	8.19	8.43	48.14
12	3148.	1.81	-.95	7.89	8.52	49.40
13	3149.	1.79	-.82	7.66	8.53	50.47
14	3149.	1.71	.73	8.10	-10.12	47.03
15	3151.	1.84	.67	8.01	8.48	46.52
16	3152.	1.58	.56	7.93	8.40	47.11
17	3152.	1.68	.58	7.72	8.39	51.22
18	3152.	1.89	.37	7.35	8.13	46.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	37.8430	48.4490	70.9310	-38.2470	48.9570	85.4990
2	55.5510	53.4820	73.9020	55.1010	52.7240	86.9090
3	60.8710	-65.7150	77.3330	60.3740	64.7760	90.9410
4	56.8870	65.4190	78.0450	56.5350	64.7760	90.9410
5	-63.7350	64.8750	77.4670	-62.0720	62.8910	90.3520
6	-61.0540	64.8750	77.4670	59.4890	62.8910	90.3520
7	56.0550	52.5080	73.1440	56.4150	52.6740	86.8910
8	56.5700	-65.8490	76.8850	56.9150	-66.0660	91.3370
9	-62.1720	-67.2090	77.2320	-62.5740	-67.4320	91.7490
10	43.8440	42.1930	69.6580	44.0950	42.3210	82.7470
11	56.6520	62.3150	74.7220	53.9890	58.6130	88.9610
12	59.6880	62.3150	74.7220	56.8250	58.6130	88.9610
13	-62.8720	58.5720	73.7090	59.7710	55.1070	87.7600
14	-64.9950	64.9350	75.4030	61.7920	61.0660	89.7680
15	54.6870	47.5850	71.4010	53.6730	46.5580	84.5520
16	-62.3240	53.9200	73.3940	61.1410	52.7760	86.9280
17	53.7270	47.5990	71.4090	52.7310	46.5580	84.5520
18	57.0740	47.6280	71.4260	55.9750	46.5580	84.5520

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 4

UNIT	NREC LB/KLR	CO FU	EI	NREC LB/KLR	HC FU	EI	NRE LB/KLR	CNO FU	EI	NR LB/KLR	CNOX FU	EI	SMK CORRECTED	NUMBER
1		-2.59			-.80			-11.62			-11.78			-30.14
2		1.85			-3.68			9.19			9.33			49.73
3		1.87			-2.40			10.45			10.99			46.62
4		1.58			.72			-11.11			-11.67			-41.37
5		2.01			.74			10.31			10.73			46.67
6		1.86			.43			10.05			10.42			45.33
7		2.08			.21			10.06			10.59			46.93
8		1.45			.40			-11.58			-12.09			46.81
9		1.88			.29			9.80			10.11			49.46
10		-2.50			.40			9.89			10.51			48.24
11		1.65			-1.93			9.75			10.03			48.14
12		1.91			-1.01			9.40			10.14			49.40
13		1.88			-.87			9.12			10.16			50.47
14		1.80			-.77			9.64			-12.05			47.03
15		1.88			.69			9.49			10.05			46.52
16		1.62			.57			9.39			9.95			47.11
17		1.71			.59			9.14			9.94			51.22
18		1.92			.38			-8.70			9.62			46.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	86.00	93.50	86.08	93.59
2	85.50	94.00	85.46	93.95
3	87.00	-95.50	86.96	-95.45
4	87.00	95.00	86.96	94.95
5	86.50	94.00	86.33	93.82
6	-88.00	95.00	-87.83	94.82
7	86.30	94.00	86.34	94.05
8	86.30	95.00	86.34	95.05
9	86.80	95.40	86.84	-95.45
10	85.20	94.00	85.24	94.05
11	85.50	94.50	85.21	94.18
12	-87.50	95.40	87.21	95.08
13	87.00	94.70	86.71	94.38
14	-88.00	-95.50	-87.70	95.18
15	87.00	93.50	86.87	93.37
16	-88.00	94.50	-87.87	94.36
17	87.40	94.20	87.27	94.06
18	86.40	94.00	86.28	93.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	5400.	-1.0210	1.0010	-1140.	1.400	10914.
2	5200.	1.1870	.9780	1176.	1.400	10914.
3	5500.	1.2040	1.0350	1176.	1.400	10914.
4	5050.	1.1230	.9520	1176.	1.400	10941.
5	5400.	1.1930	1.0360	1212.	1.400	10965.
6	5700.	1.1680	1.0860	1194.	1.400	10965.
7	5600.	1.2030	1.0860	-1248.	1.400	10919.
8	5600.	1.1670	1.0700	1212.	1.400	10919.
9	5600.	1.1850	1.0740	1221.	1.400	10919.
10	5710.	1.1720	1.0830	1194.	1.400	10919.
11	5300.	-1.0800	.9990	1176.	1.400	10932.
12	5300.	1.1540	1.0290	-1248.	1.400	10932.
13	5600.	1.1940	1.0710	1212.	1.400	10932.
14	5200.	1.1960	.9800	1176.	1.400	10932.
15	5300.	1.1650	1.0240	1230.	1.400	10966.
16	5600.	1.2090	1.0750	1212.	1.400	10970.
17	5200.	1.1490	.9830	1176.	1.400	10965.
18	5800.	1.2000	1.1190	1226.	1.400	10961.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	5413.	-1.0230	1.0020	-1142.	10950.
2	5220.	1.1860	.9770	1175.	10950.
3	5521.	1.2030	1.0340	1175.	10950.
4	5057.	1.1220	.9520	1175.	10950.
5	5403.	1.1880	1.0320	1207.	10950.
6	5703.	1.1640	1.0810	1189.	10950.
7	5613.	1.2040	1.0870	1249.	10950.
8	5613.	1.1680	1.0710	1213.	10950.
9	5613.	1.1860	1.0750	1222.	10950.
10	5723.	1.1730	1.0840	1195.	10950.
11	5327.	-1.0720	.9920	1168.	10950.
12	5327.	1.1460	1.0220	1239.	10950.
13	5628.	1.1860	1.0640	1204.	10950.
14	5226.	1.1880	.9730	1168.	10950.
15	5300.	1.1610	1.0210	1226.	10950.
16	5598.	1.2050	1.0720	1208.	10950.
17	5201.	1.1460	.9800	1172.	10950.
18	5803.	1.1960	1.1160	1223.	10950.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-2.135	73.9	5.0	46.6	54.4
2	2.481	67.0	-23.9	44.9	52.8
3	2.522	55.4	-13.9	47.6	54.6
4	2.354	-52.4	-6.1	49.2	57.6
5	2.502	70.9	5.4	47.4	54.5
6	2.453	57.1	3.5	45.9	52.8
7	2.527	76.8	3.0	46.3	53.9
8	2.451	-48.1	3.6	-50.9	58.1
9	2.489	63.0	3.1	47.6	55.3
10	2.459	82.5	4.0	48.2	55.2
11	-2.257	57.9	-13.5	45.7	53.7
12	2.417	57.4	-8.0	48.6	56.1
13	2.501	64.9	-7.2	43.7	54.8
14	2.506	60.2	-6.2	49.7	-64.2
15	2.441	66.6	-6.2	47.3	55.5
16	-2.537	57.3	4.8	48.3	55.2
17	2.409	61.0	4.9	45.4	52.4
18	2.515	79.3	3.8	46.7	55.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3141.	6.92	.80	-7.16	-8.37	-28.86
2	-3136.	5.39	-3.30	5.94	6.97	51.25
3	3142.	4.39	-1.90	6.20	7.11	46.31
4	3146.	4.46	-.89	-6.87	-8.05	-41.49
5	3147.	5.67	.74	6.23	7.17	46.81
6	3150.	4.67	.49	6.17	7.09	-27.50
7	3150.	6.09	.40	6.03	7.02	48.25
8	-3153.	-3.94	.51	-6.85	-7.81	47.37
9	-3151.	5.08	.42	6.30	7.32	47.33
10	3148.	6.72	.56	6.46	7.39	49.07
11	3140.	5.13	-2.05	6.64	-7.80	47.61
12	3143.	4.75	-1.14	6.61	7.62	50.99
13	3143.	5.19	-.99	5.74	7.20	48.67
14	3144.	4.81	.85	6.52	-8.42	46.14
15	3145.	5.46	-.88	6.38	7.48	45.27
16	3147.	4.52	.64	6.26	7.17	47.57
17	3146.	5.07	.70	6.20	7.15	50.20
18	3145.	6.31	.52	6.11	7.20	48.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.6290	14.4480	53.8400	-16.7640	14.5800	64.8790
2	21.5530	16.2280	56.3620	21.4000	16.0090	66.2910
3	-26.4440	-23.6290	61.4320	-26.2520	-23.3050	-72.2510
4	22.3510	20.7860	60.2680	22.2350	20.5950	70.2370
5	21.5450	15.9020	56.3490	21.1150	15.4640	65.7650
6	23.5670	20.4780	59.7190	23.0950	19.9040	69.6900
7	22.0810	16.3420	56.1090	22.1780	16.3830	66.6450
8	23.7530	21.0130	59.4400	23.8560	21.0690	70.6040
9	-25.5270	-23.1960	60.7990	-25.6400	-23.2590	-72.2190
10	21.1930	16.3420	56.1090	21.2820	16.3830	66.6450
11	19.7830	17.9500	56.3720	19.0710	16.9660	67.1820
12	24.2070	-22.4980	59.3680	23.2850	21.2470	70.7400
13	23.4510	18.8820	57.0310	22.5460	17.8430	67.9650
14	-25.8960	-23.0630	59.7050	-24.8840	-21.7780	71.1410
15	19.5540	14.0310	54.0350	19.2790	13.7550	64.0140
16	23.4320	18.1130	57.3010	23.0930	17.7610	67.8920
17	20.9020	16.8010	56.3270	20.6040	16.4610	66.7180
18	21.7820	15.9750	55.6830	21.4580	15.6430	65.9400

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		6.87			.80			-8.63			-10.09		-28.86	
2		5.43			-3.34			6.98			8.20		51.25	
3		4.42			-1.92			7.29			8.36		46.31	
4		4.48			-.90			-8.01			-9.38		-41.49	
5		5.79			.76			7.27			8.35		46.81	
6		4.76			.50			7.20			8.27		-27.50	
7		6.07			.40			7.16			8.34		48.25	
8		-3.92			.51			-8.14			9.27		47.37	
9		5.06			.42			7.48			8.70		47.33	
10		6.69			.55			7.67			8.78		49.07	
11		5.32			-2.17			-7.92			9.30		47.61	
12		4.94			-1.21			7.88			9.08		50.99	
13		5.40			-1.05			6.84			8.58		48.67	
14		5.01			-.90			7.76			-10.03		46.14	
15		5.54			-.90			7.55			8.86		45.27	
16		4.59			.66			7.42			8.49		47.57	
17		5.14			.71			7.34			8.47		50.20	
18		6.41			.53			7.23			8.53		48.24	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * BASELINE TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	69.00	86.50	69.07	86.58
2	68.00	86.50	67.97	86.46
3	68.00	87.00	67.97	86.96
4	69.40	87.00	69.37	86.96
5	69.50	87.00	69.37	86.83
6	70.00	87.00	69.87	86.83
7	67.20	85.80	67.23	85.84
8	69.00	87.50	69.03	87.54
9	68.80	87.50	68.83	87.54
10	67.00	86.00	67.03	86.04
11	67.50	86.50	67.27	86.21
12	70.00	-87.90	69.77	87.60
13	-71.00	87.50	70.76	87.21
14	-71.00	-88.00	70.76	87.70
15	68.90	85.50	68.80	85.38
16	69.60	86.50	69.50	86.38
17	67.50	85.20	67.40	85.08
18	68.00	86.00	67.90	85.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	3130.	.8760	.8740	1086.	1.170	5661.
2	3020.	.9320	.8370	1068.	1.170	5661.
3	2990.	.9410	.8280	1068.	1.170	5661.
4	3110.	.8480	.8640	1068.	1.170	5675.
5	3070.	.9310	.8680	1104.	1.170	5688.
6	3100.	.8950	.8630	1068.	1.170	5688.
7	2970.	.9070	.8500	-1140.	1.170	5664.
8	3220.	.9270	.9070	1104.	1.170	5664.
9	3040.	.9260	.8630	1122.	1.170	5664.
10	3030.	.9010	.8400	1068.	1.170	5664.
11	2910.	-.8140	.8080	1068.	1.170	5671.
12	3170.	.8850	.9010	1122.	1.170	5671.
13	3245.	.9270	-.9150	1104.	1.170	5671.
14	3270.	.9060	.9070	1068.	1.170	5671.
15	3050.	.8790	.8630	1104.	1.170	5689.
16	3040.	.9050	.8600	1104.	1.170	5690.
17	2970.	.8520	.8270	1068.	1.170	5688.
18	3050.	.9150	.8660	1113.	1.170	5686.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	3137.	.8780	.8760	1088.	5680.
2	3032.	.9310	.8360	1067.	5680.
3	3001.	.9400	.8280	1067.	5680.
4	3114.	.8480	.8630	1067.	5680.
5	3072.	.9270	.8650	1099.	5680.
6	3102.	.8920	.8600	1064.	5680.
7	2977.	.9080	.8510	-1141.	5680.
8	3228.	.9270	.9080	1105.	5680.
9	3047.	.9270	.8640	1123.	5680.
10	3037.	.9020	.8410	1069.	5680.
11	2925.	-.8080	.8020	1061.	5680.
12	3186.	.8790	.8950	1114.	5680.
13	3261.	.9210	.9090	1096.	5680.
14	-3286.	.9000	.9010	1061.	5680.
15	3050.	.8760	.8600	1101.	5680.
16	3039.	.9020	.8580	1101.	5680.
17	2970.	.8490	.8240	1065.	5680.
18	3051.	.9120	.8630	1109.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.811	202.3	16.6	28.5	31.7
2	1.928	173.8	-28.1	27.5	29.8
3	1.948	173.2	22.7	21.9	29.7
4	1.757	161.2	18.4	26.6	32.3
5	1.931	185.2	15.9	29.3	31.0
6	1.859	163.2	12.4	24.7	31.2
7	1.876	215.9	22.8	26.7	28.7
8	1.924	180.9	15.8	-30.2	32.3
9	1.925	171.9	13.4	25.2	31.6
10	1.864	208.8	24.2	26.5	30.1
11	-1.679	178.1	24.8	26.4	30.1
12	1.835	156.4	17.4	29.7	32.0
13	1.922	157.9	17.4	24.3	32.4
14	1.876	167.0	18.0	28.7	-36.7
15	1.819	183.0	19.2	27.4	31.3
16	1.878	155.1	12.7	29.5	31.6
17	1.764	175.7	14.5	23.0	29.0
18	1.898	172.1	13.6	28.5	31.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
1	3110.	22.12	3.12	5.11	5.69	38.01
2	3112.	17.85	4.96	4.65	5.03	40.00
3	3115.	17.63	3.97	3.67	4.96	39.60
4	3118.	18.20	3.56	4.94	-6.00	35.60
5	3121.	19.05	2.80	4.95	5.24	41.74
6	3124.	17.46	2.28	4.34	5.49	-24.93
7	3113.	22.80	4.32	4.64	4.97	39.60
8	3123.	18.69	2.81	5.13	5.48	43.93
9	3126.	17.77	2.38	4.28	5.37	41.72
10	3113.	22.20	4.42	4.62	5.26	40.40
11	3107.	20.97	-5.01	5.11	5.83	40.11
12	3118.	16.91	3.24	5.27	5.69	43.07
13	3120.	16.31	3.09	4.12	5.49	42.27
14	3117.	17.66	3.27	4.99	-6.37	40.08
15	3115.	19.94	3.60	4.91	5.61	45.42
16	3124.	16.41	2.31	5.12	5.50	38.79
17	3117.	19.76	2.80	4.25	5.36	37.33
18	3121.	18.01	2.45	4.91	5.40	36.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	7.1440	3.1900	37.8910	7.1880	3.2150	45.6470
2	7.5290	3.1800	38.5900	7.4820	3.1390	45.3950
3	7.9340	3.4970	39.480	7.8840	3.4520	46.4040
4	7.2470	3.4810	39.8110	7.2160	3.4520	46.4040
5	7.8230	3.4560	39.5190	7.7030	3.3710	46.1500
6	7.5570	3.4560	39.5190	7.4430	3.3710	46.1500
7	6.9120	2.7830	37.1870	6.9290	2.7870	44.1620
8	8.1700	3.8460	40.0760	8.1920	3.8520	47.5950
9	8.1660	3.8460	40.0760	8.1880	3.8520	47.5950
10	6.9960	2.8930	37.5220	7.0140	2.8970	44.5400
11	6.7140	3.1480	37.6260	6.5260	2.9930	44.8960
12	8.0990	-4.140	40.0030	7.8590	3.8980	47.7230
13	8.1510	3.8070	39.3180	7.9050	3.6170	46.9080
14	-8.3320	-4.1810	40.1750	8.0820	3.9710	47.9280
15	6.5220	2.5900	36.4820	6.4540	2.5460	43.2410
16	7.3000	3.1430	38.1520	7.2220	3.0890	45.2280
17	6.1940	2.4430	35.9890	6.1300	2.4000	42.6520
18	7.0600	2.8580	37.3310	6.9810	2.8060	44.2300

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	21.98	3.10	6.16	6.86	38.01
2	17.96	-5.02	5.47	5.91	40.00
3	17.74	4.02	4.31	5.83	39.60
4	18.28	3.59	5.76	6.99	35.60
5	19.35	2.87	5.78	6.13	41.74
6	17.73	2.34	5.07	6.41	-24.93
7	22.74	4.32	5.51	5.90	39.60
8	18.64	2.81	6.09	6.51	43.93
9	17.73	2.37	5.09	6.37	41.72
10	22.14	4.41	5.49	6.25	40.40
11	21.58	-5.27	6.09	6.96	40.11
12	17.43	3.41	6.29	6.79	43.07
13	16.82	3.25	4.91	6.56	42.27
14	18.20	3.44	5.95	-7.59	40.08
15	20.16	3.67	5.87	6.65	45.42
16	16.59	2.34	6.08	6.51	38.79
17	19.97	2.85	5.03	6.35	37.33
18	18.21	2.49	5.81	6.40	36.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-40.00	-68.00	-40.04	-68.07
2	35.00	63.00	34.98	-62.97
3	36.00	64.50	35.98	64.47
4	36.80	64.00	36.78	63.97
5	-39.00	-67.00	-38.93	-66.87
6	-38.00	-66.00	-37.93	-65.87
7	36.00	64.00	36.02	64.03
8	36.20	65.00	36.22	65.03
9	35.60	64.00	35.62	64.03
10	36.10	65.00	36.12	65.03
11	37.00	-65.50	36.88	65.28
12	37.00	64.00	36.88	63.79
13	35.50	63.50	35.38	63.29
14	36.00	64.00	35.88	63.79
15	37.00	64.00	36.95	63.91
16	-38.60	-66.00	-38.54	-65.90
17	37.50	65.00	37.45	64.91
18	36.70	64.30	36.65	64.21

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	-1450.	.7670	.7520	1014.	1.040	-1882.
2	-1250.	.8340	.7510	996.	1.030	-1358.
3	1320.	-.8530	.7660	996.	1.030	1485.
4	1310.	.7390	.7710	996.	1.050	1446.
5	-1390.	.8320	.7680	1050.	1.030	-1736.
6	1290.	.7990	.7340	1014.	1.050	-1611.
7	1310.	.8250	.7990	-1077.	1.040	1449.
8	-1440.	.8470	-.8410	1032.	1.050	1533.
9	1290.	.8490	.7770	1050.	-1.060	1449.
10	1320.	.8330	.7710	1032.	-1.060	1533.
11	1290.	-.7180	.7430	1023.	1.030	1556.
12	1280.	.7740	.7660	1032.	1.050	1429.
13	1280.	.7800	.7750	1032.	1.040	1387.
14	1320.	.7560	.7660	-969.	-1.010	1429.
15	1360.	.7710	.8230	1050.	1.040	1444.
16	1360.	.7780	.7810	1032.	1.050	-1615.
17	1350.	.7590	.7850	1014.	1.030	1529.
18	1330.	.8010	.7990	1050.	1.050	1469.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	-1453.	.7680	.7530	1016.	-1889.
2	1255.	.8330	.7510	995.	-1362.
3	1325.	.8520	.7650	995.	1490.
4	1312.	.7380	.7700	995.	1447.
5	1391.	.8290	.7650	1046.	-1733.
6	1291.	.7960	-.7310	1010.	-1609.
7	1313.	.8250	.8000	-1078.	1453.
8	-1443.	.8480	.8420	1033.	1538.
9	1293.	.8500	.7780	1051.	1453.
10	1323.	.8340	.7720	1033.	1538.
11	1297.	-.7130	.7380	1016.	1559.
12	1286.	.7690	.7600	1025.	1432.
13	1286.	.7750	.7700	1025.	1389.
14	1327.	.7510	.7610	-962.	1432.
15	1360.	.7690	.8210	1047.	1442.
16	1359.	.7750	.7780	1029.	-1612.
17	1350.	.7570	.7830	1011.	1527.
18	1331.	.7990	.7960	1047.	1468.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.415	779.3	-365.5	11.3	13.4
2	1.509	842.6	497.0	9.7	10.9
3	-1.541	856.3	522.5	6.9	11.1
4	1.314	802.9	496.4	11.0	14.6
5	-1.555	762.5	-370.5	13.0	14.1
6	1.482	780.9	-377.9	9.4	12.7
7	1.478	846.6	543.8	12.1	12.3
8	-1.543	860.3	487.8	12.6	13.1
9	-1.537	900.9	504.2	10.5	12.2
10	1.509	841.5	502.0	11.8	12.9
11	1.300	-740.0	-417.4	11.8	13.6
12	1.396	783.3	471.2	12.9	13.4
13	1.390	830.9	520.3	11.5	12.6
14	1.327	828.3	558.1	12.4	14.5
15	1.396	800.8	450.6	12.5	13.3
16	1.412	781.5	452.1	13.7	13.9
17	1.367	763.0	475.0	11.1	12.9
18	1.448	858.9	470.7	12.5	13.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	-2784.	97.61	-78.64	2.33	2.75	18.92
2	2731.	97.05	98.35	1.83	2.06	21.66
3	2725.	96.39	101.04	-1.28	2.05	20.00
4	2687.	104.53	111.02	2.35	3.13	-15.60
5	-2819.	-87.95	-73.43	2.47	2.67	20.40
6	-2797.	-93.81	-77.98	1.86	2.51	17.12
7	2707.	98.66	108.87	2.33	2.36	21.44
8	2749.	97.55	94.05	2.35	2.44	23.33
9	2732.	101.89	97.96	1.95	2.27	22.87
10	2735.	97.05	99.46	2.23	2.45	21.52
11	2734.	99.10	96.02	2.60	2.98	20.93
12	2725.	97.30	100.54	2.64	2.73	22.00
13	2691.	102.34	110.09	2.33	2.56	21.81
14	2653.	105.37	121.96	2.59	3.04	20.86
15	2734.	99.83	96.51	2.56	2.72	-14.86
16	2741.	96.56	95.97	-2.77	2.83	19.47
17	2720.	96.64	103.36	2.31	2.68	22.80
18	2728.	102.97	96.94	2.46	2.62	18.70

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2630	-.1600	-18.9230	-.2630	-.1600	-22.7830
2	.2230	.0890	16.8510	-.2220	.0880	-19.8300
3	.2340	.1060	17.5320	.2330	.1040	20.6310
4	.2300	.0990	17.4630	.2300	.0990	20.3630
5	-.2520	-.1390	-18.7610	-.2510	-.1360	-21.9370
6	-.2440	-.1250	18.2930	-.2440	-.1220	-21.3900
7	.2310	.0990	17.1800	.2300	.0990	20.3960
8	.2380	.1110	17.6330	.2380	.1110	20.9340
9	.2310	.0990	17.1800	.2300	.0990	20.3960
10	.2380	.1110	17.6330	.2380	.1110	20.9340
11	-.2410	-.1190	17.6180	.2390	.1140	21.0680
12	.2300	.1010	16.9430	.2280	.0970	20.2640
13	.2260	.0950	-16.7210	.2250	.0910	19.9990
14	.2300	.1010	16.9430	.2280	.0970	20.2640
15	.2300	.0990	17.1360	.2290	.0980	20.3300
16	-.2440	-.1240	18.0410	-.2440	-.1230	-21.4080
17	.2370	.1110	17.5910	.2370	.1100	20.8660
18	.2320	.1030	17.2770	.2320	.1010	20.4900

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 7

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		97.70		-78.26			2.81			3.31			18.92	
2		97.37		99.45			2.15			2.43			21.66	
3		96.71		102.18			-1.50			2.41			20.00	
4		104.68		111.76			2.74			3.65			-15.60	
5		-88.15		-74.83			2.89			3.12			20.40	
6		-94.02		-79.46			2.18			2.93			17.12	
7		98.79		108.86			2.76			2.81			21.44	
8		97.67		94.03			2.79			2.90			23.33	
9		102.03		97.96			2.32			2.69			22.87	
10		97.18		99.44			2.64			2.91			21.52	
11		99.79		99.92			3.11			3.57			20.93	
12		97.98		104.57			3.16			3.26			22.00	
13		103.05		114.48			2.79			3.06			21.81	
14		106.11		-126.85			3.10			3.64			20.86	
15		99.96		97.76			3.04			3.23			-14.86	
16		96.66		97.19			-3.29			3.35			19.47	
17		96.78		104.74			2.74			3.18			22.80	
18		103.15		98.29			2.92			3.11			18.70	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-37.00	-64.50	-37.04	-64.56
2	33.00	60.50	32.98	60.47
3	33.00	61.50	32.98	61.47
4	34.00	60.00	33.98	59.97
5	34.00	61.00	33.93	60.88
6	-36.00	62.00	-35.93	61.88
7	34.00	61.00	34.02	61.03
8	32.70	61.00	32.72	61.03
9	32.20	60.00	32.22	60.03
10	33.50	61.00	33.52	61.03
11	35.50	-63.50	35.38	-63.29
12	35.50	60.50	35.38	60.30
13	33.50	60.50	33.39	60.30
14	34.00	61.00	33.89	60.80
15	35.20	62.00	35.15	61.91
16	-35.80	-62.70	-35.75	-62.61
17	-35.80	-63.00	-35.75	-62.91
18	34.50	62.00	34.45	61.91

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1335.	.7980	.7810	1014.	1.030	-1493.
2	1190.	.8560	-.7290	-906.	1.020	1169.
3	1250.	-.8900	.7810	996.	1.030	1239.
4	1230.	.7550	.8030	996.	1.050	1137.
5	1245.	.8740	.8090	1041.	1.030	1203.
6	1210.	.8210	-.7560	1014.	1.050	1273.
7	1260.	.8320	.8280	-1073.	1.030	1209.
8	-1350.	-.9450	-.8700	1032.	1.040	1209.
9	1240.	.8860	.8290	1050.	1.050	1139.
10	1260.	.8590	.8120	1032.	1.040	1209.
11	1240.	-.7300	-.7410	1005.	1.020	-1387.
12	1240.	.7900	.8110	1032.	1.050	1159.
13	1230.	.8060	.8050	1032.	1.040	1159.
14	1315.	.7900	.8270	978.	-1.010	1194.
15	-1350.	.8270	.8620	1059.	1.040	1276.
16	1290.	.7890	.7990	1032.	1.050	-1334.
17	1320.	.7710	.8040	1014.	1.030	-1359.
18	1280.	.8150	.8130	1050.	1.040	1275.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1338.	.8000	.7830	1016.	-1498.
2	1195.	.8550	-.7290	-905.	1173.
3	1255.	.8890	.7800	995.	1243.
4	1232.	.7540	.8020	995.	1138.
5	1246.	.8710	.8060	1037.	1202.
6	1211.	.8180	-.7530	1010.	1272.
7	1263.	.8330	.8280	-1074.	1212.
8	-1353.	-.9460	.8710	1033.	1212.
9	1243.	.8870	.8290	1051.	1142.
10	1263.	.8600	.8130	1033.	1212.
11	1246.	-.7260	-.7360	998.	-1389.
12	1246.	.7850	.8060	1025.	1161.
13	1236.	.8010	.7990	1025.	1161.
14	1322.	.7850	.8210	-971.	1196.
15	-1350.	.8250	.8590	1056.	1274.
16	1289.	.7870	.7970	1029.	-1332.
17	1320.	.7680	.8020	1011.	-1357.
18	1281.	.8130	.8110	1047.	1274.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.432	878.9	-491.0	9.5	12.0
2	1.517	912.0	597.0	8.9	10.1
3	-1.572	953.6	638.3	5.8	10.2
4	1.311	872.6	593.1	9.5	13.7
5	-1.570	918.8	558.2	11.3	12.6
6	1.491	865.4	-469.0	8.3	11.8
7	1.459	913.5	639.0	10.9	11.6
8	-1.690	966.0	641.4	11.5	12.0
9	-1.557	1018.8	652.9	9.2	11.0
10	1.522	930.1	611.1	10.4	11.8
11	1.303	-783.7	-477.3	10.9	12.9
12	1.396	850.5	564.1	11.9	12.6
13	1.406	910.4	619.8	10.3	12.1
14	1.367	899.1	640.5	10.9	14.2
15	1.481	882.7	533.9	11.3	13.0
16	1.396	851.0	562.5	-12.8	13.1
17	1.370	-799.2	533.4	10.3	12.3
18	1.441	913.9	572.7	11.7	12.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-2709.	105.78	-101.54	1.88	2.38	18.67
2	2677.	102.42	115.18	1.65	1.85	21.38
3	2667.	102.98	118.41	-1.03	1.82	20.05
4	2625.	111.22	129.88	1.98	2.86	-14.65
5	-2711.	-100.94	-105.35	2.03	2.27	20.00
6	-2740.	101.25	-94.26	1.60	2.26	17.34
7	2647.	105.50	126.78	2.06	2.20	21.79
8	2699.	-98.16	111.96	1.92	2.01	22.40
9	2653.	110.48	121.65	1.65	1.97	23.13
10	2675.	104.02	117.42	1.91	2.17	20.40
11	2595.	103.16	107.93	2.36	2.79	19.14
12	2668.	103.42	117.85	2.38	2.51	20.38
13	2635.	108.58	126.99	2.01	2.38	20.86
14	2614.	109.46	133.95	2.18	2.84	17.50
15	2703.	102.51	106.52	2.16	2.47	-15.54
16	2670.	103.62	117.68	-2.56	2.63	17.84
17	2686.	-99.70	114.30	2.12	2.51	22.30
18	2668.	107.71	115.96	2.26	2.47	18.30

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * BASELINE TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2340	-.1050	-17.1790	-.2340	-.1060	-20.6810
2	.2100	.0710	16.0070	.2090	.0700	18.8370
3	.2140	.0770	16.2890	.2140	.0760	19.1680
4	.2070	.0680	16.0130	.2070	.0670	18.6730
5	.2110	.0740	16.2230	.2110	.0730	18.9730
6	.2160	.0800	16.5070	.2150	.0780	19.3050
7	.2120	.0730	16.0230	.2120	.0730	19.0220
8	.2120	.0730	16.0230	.2120	.0730	19.0220
9	.2080	.0680	-15.7450	.2070	.0680	18.6920
10	.2120	.0730	16.0230	.2120	.0730	19.0220
11	-.2260	-.0950	16.7210	-.2250	-.0910	-19.9990
12	.2100	.0720	-15.6990	.2080	.0690	18.7800
13	.2100	.0720	-15.6990	.2080	.0690	18.7800
14	.2120	.0750	15.8370	.2110	.0720	18.9440
15	.2160	.0800	16.2860	.2150	.0790	19.3150
16	-.2200	-.0850	16.5490	-.2200	-.0840	-19.6390
17	-.2220	-.0890	16.6890	-.2220	-.0870	-19.7980
18	.2160	.0800	16.2850	.2150	.0790	19.3150

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * BASELINE TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	105.88	-101.09	2.26	2.86	18.67
2	102.76	116.45	1.94	2.18	21.38
3	103.32	119.73	-1.21	2.14	20.05
4	111.38	130.73	2.31	3.34	-14.65
5	101.16	107.24	2.38	2.66	20.00
6	101.47	-95.97	1.88	2.65	17.34
7	105.64	126.79	2.44	2.61	21.79
8	-98.29	111.97	2.28	2.38	22.40
9	110.63	121.66	1.95	2.34	23.13
10	104.16	117.43	2.27	2.58	20.40
11	103.87	112.24	2.82	3.33	19.14
12	104.13	122.44	-2.85	3.00	20.38
13	109.32	131.93	2.40	2.84	20.86
14	110.21	139.18	2.61	3.39	17.50
15	102.65	107.87	2.57	2.94	-15.54
16	103.73	119.11	-3.03	3.12	17.84
17	-99.84	115.80	2.51	2.98	22.30
18	107.89	117.53	2.69	2.92	18.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
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1	21069.	621.	518.7	30.08	.008230
2	21695.	621.	518.7	30.10	.008230
3	21127.	621.	518.7	30.11	.008220
4	23653.	591.	515.2	30.20	.007890
5	20646.	684.	520.7	30.00	.008480
6	23325.	684.	520.7	30.00	.008480
7	20975.	624.	518.5	29.99	.008370
8	21358.	624.	518.5	30.00	.008370
9	20378.	624.	518.5	30.02	.008360
10	22966.	624.	518.5	30.03	.008360
11	21998.	649.	512.2	30.04	.006630
12	18322.	649.	516.2	30.05	.006640
13	20669.	649.	518.7	30.05	.006710
14	26797.	649.	518.7	30.04	.007130
17	31894.	646.	512.2	30.24	.006470
18	26417.	646.	512.2	30.24	.006470

JT3D-3B * 600 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.50	61.00	33.50	61.00
2	32.80	60.50	32.80	60.50
3	33.00	60.00	33.00	60.00
4	33.20	60.00	33.31	60.20
5	34.00	61.00	33.93	60.88
6	34.00	61.00	33.93	60.88
7	33.00	60.10	33.01	60.11
8	32.00	60.00	32.01	60.01
9	32.00	59.50	32.01	59.51
10	32.00	59.00	32.01	59.01
11	33.50	60.20	33.71	60.58
12	32.00	60.00	32.08	60.15
13	32.80	59.30	32.80	59.30
14	33.50	60.00	33.50	60.00
17	33.40	60.50	33.61	60.88
18	34.20	61.00	34.42	61.39

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	1280.	.7800	.8050	987.	1.020	1204.
2	1230.	.7790	.8010	1032.	1.015	1168.
3	1280.	.8190	.8380	1014.	1.020	1133.
4	1280.	.8380	.8430	1032.	1.050	1144.
5	1325.	.8500	.8540	1032.	1.020	1199.
6	1235.	.7930	.7820	996.	1.050	1199.
7	1300.	.8290	.8520	1014.	1.035	1145.
8	-1370.	.8840	-.8960	1005.	1.050	1138.
9	.270.	.8900	.8550	1032.	1.050	1103.
10	1250.	.8680	.8480	1014.	1.030	1067.
11	-1210.	.8220	.7830	996.	1.020	1176.
12	1280.	.8420	.8210	969.	1.020	1145.
13	1280.	.8570	.8630	1023.	1.020	1086.
14	1300.	.8070	.8310	-960.	1.020	1135.
17	1330.	.8670	.8470	996.	1.020	1189.
18	1340.	.8580	.8420	996.	1.050	1224.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1287.	.7800	.8050	987.	1210.
2	1237.	.7790	.8010	1032.	1175.
3	1288.	.8190	.8380	1014.	1140.
4	1288.	.8430	.8490	1039.	1154.
5	1331.	.8470	.8510	1028.	1202.
6	1241.	.7900	.7790	992.	1202.
7	1303.	.8300	.8530	1014.	1148.
8	-1373.	.8840	-.8970	1005.	1141.
9	1274.	.8900	.8550	1032.	1106.
10	1254.	.8680	.8490	1014.	1071.
11	1207.	.8320	.7930	1008.	1181.
12	1282.	.8460	.8250	973.	1150.
13	1286.	.8570	.8630	1023.	1091.
14	1305.	.8070	.8310	-960.	1140.
17	1336.	.8780	.8580	1008.	1202.
18	1346.	.8680	.8530	1008.	1237.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.375	892.0	560.9	6.9	10.7
2	1.360	905.1	598.5	7.3	10.8
3	1.463	921.0	533.8	8.1	11.0
4	1.410	994.3	-802.8	11.6	12.5
5	1.500	886.7	624.2	11.7	13.9
6	1.389	885.9	595.0	-12.2	13.8
7	1.441	913.7	662.2	-12.3	-15.3
8	1.529	-1036.4	708.2	-13.7	-15.7
9	1.557	1011.9	666.4	-12.5	13.4
10	1.475	999.3	787.6	11.7	-14.7
11	1.414	929.2	693.6	7.3	12.6
12	1.448	923.5	717.5	7.5	12.6
13	1.472	986.1	724.1	6.3	12.4
14	1.369	942.4	730.0	5.9	11.9
17	1.510	912.7	715.0	9.0	14.1
18	1.496	966.7	680.1	8.5	-14.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2662.	109.90	118.73	1.40	2.16	20.67
2	2637.	111.67	126.85	1.48	2.19	18.21
3	2696.	108.03	107.57	1.57	2.12	19.33
4	-2544.	114.19	-158.38	2.19	2.36	27.38
5	2664.	-100.20	121.17	2.18	2.58	23.19
6	2645.	107.35	123.88	-2.43	2.75	24.84
7	2625.	105.93	131.90	-2.33	-2.92	22.98
8	2613.	112.71	132.31	-2.45	-2.80	21.06
9	2643.	109.29	123.66	2.22	2.38	22.12
10	2568.	110.75	149.96	2.13	2.68	20.26
11	2598.	108.69	139.38	1.41	2.41	23.79
12	2599.	105.48	140.80	1.40	2.37	22.37
13	2595.	110.60	139.53	1.16	2.29	23.34
14	2565.	112.36	149.53	1.15	2.32	22.28
17	2632.	101.25	136.28	1.65	2.57	25.78
18	2635.	108.37	130.98	1.56	2.68	21.88

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2120	.0740	16.3030	.2120	.0730	19.0120
2	.2100	.0710	16.1670	.2090	.0700	18.8470
3	.2080	.0680	16.0290	.2070	.0680	18.6820
4	.2080	.0670	16.1090	.2080	.0690	18.7490
5	.2120	.0740	16.2320	.2110	.0730	18.9730
6	.2120	.0740	16.2320	.2110	.0730	18.9730
7	.2080	.0680	15.9780	.2080	.0680	18.7200
8	.2080	.0680	15.9530	.2070	.0680	18.6870
9	.2060	.0650	15.8190	.2050	.0650	18.5230
10	.2030	.0630	15.6830	.2030	.0630	18.3600
11	.2080	.0670	16.4680	.2100	.0710	18.8730
12	.2080	.0670	16.4700	.2080	.0680	18.7300
13	.2050	.0650	16.2800	.2040	.0640	18.4530
14	.2080	.0680	16.3470	.2070	.0680	18.6820
17	.2100	.0690	16.6610	.2110	.0730	18.9730
18	.2130	.0720	16.8070	.2130	.0750	19.1400

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
1	110.74	119.87	1.63	2.52	20.67
2	112.16	128.19	1.73	2.56	18.21
3	108.53	108.77	1.83	2.47	19.33
4	114.34	-155.49	2.55	2.74	27.38
5	-100.72	124.24	2.54	3.01	23.19
6	107.91	127.02	-2.84	3.22	24.84
7	106.08	132.12	-2.74	-3.42	22.98
8	112.89	132.61	-2.87	3.28	21.06
9	109.51	124.06	2.60	2.79	22.12
10	111.00	-150.53	2.50	3.14	20.26
11	107.98	131.49	1.74	2.97	23.79
12	105.40	138.38	1.72	2.89	22.37
13	110.96	140.62	1.41	2.79	23.34
14	112.69	-150.61	1.41	2.85	22.22
17	101.00	130.08	2.01	3.14	25.78
18	108.10	124.99	1.91	3.27	21.88

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	37.50	-65.50	37.50	65.50
2	37.00	64.50	37.00	64.50
3	36.40	64.00	36.40	64.00
4	35.80	64.00	35.92	64.22
5	-38.00	-66.00	37.93	-65.87
6	-38.00	65.00	37.93	64.86
7	37.00	64.50	37.01	64.52
8	36.00	64.00	36.01	64.02
9	36.00	64.00	36.01	64.02
10	-35.00	-63.00	-35.01	-63.02
11	36.50	64.10	36.73	64.51
12	35.50	64.00	35.59	64.15
13	37.00	64.00	37.00	64.00
14	36.00	64.00	36.00	64.00
17	37.00	64.00	37.23	64.40
18	36.40	64.00	36.63	64.40

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1410.	.7760	.7980	996.	1.020	1569.
2	1370.	.7660	.8070	1032.	1.020	1484.
3	1390.	.8180	.8210	1014.	1.020	1441.
4	1390.	.8220	.8250	1032.	1.050	1455.
5	1430.	.8190	.8170	1032.	1.040	-1605.
6	1370.	.7780	.7900	1005.	1.050	1520.
7	1410.	.8150	.8260	1014.	1.040	1490.
8	-1470.	.8530	.8670	1005.	1.050	1447.
9	1420.	.8560	.8480	1032.	1.050	1447.
10	1350.	.8440	.8190	1014.	1.030	-1362.
11	1320.	.7960	.7720	996.	1.030	1487.
12	1370.	.8200	.7930	969.	1.030	1457.
13	1400.	.8280	.8320	1023.	1.030	1444.
14	1310.	.8050	-.7550	-960.	1.030	1444.
17	1450.	.8370	.8450	996.	1.020	1469.
18	1400.	.8450	.8160	996.	1.050	1469.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1418.	.7760	.7980	996.	1578.
2	1378.	-.7660	.8070	1032.	1493.
3	1399.	.8180	.8210	1014.	1450.
4	1398.	.8280	.8310	1039.	1468.
5	1437.	.8160	.8140	1028.	-1609.
6	1376.	.7750	.7870	1001.	1524.
7	1413.	.8150	.8260	1014.	1494.
8	-1474.	.8530	.8680	1005.	1451.
9	1424.	.8560	.8490	1032.	1451.
10	1354.	.8450	.8190	1014.	-1366.
11	1317.	.8070	.7820	1008.	1493.
12	1373.	.8240	.7960	-973.	1463.
13	1406.	.8280	.8320	1023.	1450.
14	1315.	.8050	-.7550	-960.	1450.
17	1456.	.8480	.8560	1008.	1484.
18	1406.	.8560	.8260	1008.	1484.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

 MODF 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.400	805.9	479.7	7.2	12.3
2	1.385	783.9	464.3	7.3	12.0
3	1.484	836.4	479.9	7.5	11.7
4	1.437	911.3	-638.1	11.7	13.3
5	1.491	791.1	471.9	-11.8	15.3
6	1.414	792.3	442.8	-12.6	14.9
7	1.466	838.6	507.8	11.6	-15.9
8	1.522	924.3	558.0	-13.6	-16.3
9	1.551	887.1	493.7	-12.7	-17.0
10	1.490	899.5	-610.4	-11.9	15.5
11	1.416	832.5	544.1	6.9	13.1
12	1.457	838.4	570.5	7.3	13.4
13	1.480	872.7	535.7	6.3	13.3
14	1.407	884.2	-613.0	5.7	13.0
17	1.509	807.2	550.3	8.1	14.8
18	1.504	910.2	584.2	8.4	14.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2724.	99.81	102.06	1.47	2.51	20.00
2	2731.	98.41	100.14	1.50	2.48	21.07
3	2740.	98.27	96.86	1.45	2.25	20.77
4	-2639.	-106.53	-128.15	2.24	2.56	25.16
5	2747.	-92.76	95.07	-2.28	2.95	22.66
6	2742.	97.83	93.92	-2.55	3.03	22.85
7	2716.	98.90	102.88	2.25	3.08	20.98
8	2694.	104.10	107.97	-2.52	3.02	22.21
9	2736.	99.57	95.20	-2.34	-3.14	23.53
10	2665.	102.40	119.39	2.23	2.89	21.77
11	2684.	100.46	112.80	1.37	2.60	23.61
12	2682.	98.24	114.84	1.41	2.57	23.77
13	2699.	101.28	106.80	1.19	2.54	23.38
14	-2640.	105.59	-125.76	1.12	2.55	22.34
17	2722.	-92.67	108.54	1.53	2.79	25.23
18	2689.	103.54	114.17	1.56	2.77	22.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2420	-.1180	18.1690	.2410	.1170	21.1880
2	.2350	.1060	17.7120	.2340	.1050	20.6470
3	.2310	.1000	17.4850	.2300	.0990	20.3790
4	.2320	.1000	17.6050	.2320	.1020	20.4950
5	-.2450	-.1250	18.3040	-.2440	-.1220	-21.3900
6	.2380	.1120	17.8400	.2360	.1090	20.8490
7	.2340	.1050	17.6300	.2340	.1050	20.6560
8	.2300	.0990	17.4050	.2300	.0990	20.3870
9	.2310	.1000	17.4110	.2300	.0990	20.3870
10	-.2230	.0890	16.9590	-.2230	-.0890	-19.8540
11	.2320	.0990	18.0100	.2340	.1050	20.6500
12	.2310	.0990	17.9890	.2310	.1010	20.4620
13	.2310	.1000	17.9800	.2300	.0790	20.3790
14	.2310	.1000	17.8320	.2300	.0990	20.3790
17	.2320	.0990	18.0780	.2330	.1040	20.5960
18	.2320	.0990	18.0780	.2330	.1040	20.5960

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	100.21	103.04	1.72	2.93	20.00
2	98.84	101.20	1.75	2.89	21.07
3	98.72	97.95	1.68	2.62	20.77
4	-106.67	-125.65	2.61	2.98	25.16
5	93.25	97.57	2.66	3.45	22.66
6	98.34	96.38	-2.98	3.54	22.85
7	99.04	103.04	2.64	3.61	20.98
8	104.27	108.21	-2.95	3.54	22.21
9	99.77	95.50	-2.74	-3.68	23.53
10	102.63	-119.83	2.61	3.39	21.77
11	99.70	106.15	1.69	3.20	23.61
12	98.16	112.77	1.72	3.14	23.77
13	101.61	107.64	1.45	3.10	23.38
14	-105.91	-126.67	1.37	3.13	22.34
17	-92.43	103.38	1.88	3.42	25.23
18	103.27	108.74	1.91	3.39	22.18

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	101.50	101.00	-101.50	101.00
2	102.40	100.80	102.40	100.80
3	102.00	100.30	102.00	100.30
4	104.50	102.00	104.85	102.35
5	104.00	101.00	103.80	100.81
6	105.00	102.00	104.80	101.80
7	103.00	101.00	103.02	101.02
8	103.00	102.00	103.02	102.02
9	104.00	102.50	104.03	102.52
10	103.00	102.00	103.02	102.02
11	102.50	101.00	103.15	101.64
12	102.50	100.50	102.75	100.74
13	102.80	100.60	102.80	100.60
14	102.80	101.00	102.80	101.00
17	102.10	99.50	102.75	100.13
18	102.10	99.00	102.75	-99.63

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	9420.	1.5280	1.3280	1356.	-1.800	-17248.
2	9200.	1.5980	1.3140	1392.	-1.800	-17239.
3	-9100.	1.6100	1.2990	1392.	-1.800	-17233.
4	9600.	1.5230	1.3230	1392.	1.850	17883.
5	9400.	1.6380	1.3210	1410.	1.840	17860.
6	9500.	1.5950	1.3350	1410.	1.840	17860.
7	9650.	1.5520	1.3480	1392.	1.840	17866.
8	9800.	1.5910	1.3690	1392.	1.840	17860.
9	9750.	1.5450	1.3770	1424.	1.840	17851.
10	9250.	1.6220	1.2910	1392.	1.840	17845.
11	9600.	1.4990	1.3210	1356.	1.840	17836.
12	9300.	1.5030	1.2950	1388.	1.840	17831.
13	9500.	1.5510	1.3240	1392.	1.840	17831.
14	9200.	1.5140	1.2790	1383.	1.840	17836.
17	9450.	1.5400	1.2920	1356.	1.840	17718.
18	9700.	1.5100	1.3350	1374.	1.840	17718.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	9470.	1.5280	1.3280	-1356.	-17340.
2	9254.	1.5980	1.3140	1392.	-17340.
3	-9156.	1.6100	1.2990	1392.	-17340.
4	9657.	1.5330	1.3320	1401.	18050.
5	9443.	1.6320	1.3160	1404.	17908.
6	9544.	1.5890	1.3300	1404.	17908.
7	9670.	1.5530	1.3490	1392.	17908.
8	9824.	1.5910	1.3690	1392.	17908.
9	9779.	1.5460	1.3780	1425.	17908.
10	9280.	1.6230	1.2910	1392.	17908.
11	9578.	1.5180	1.3380	1373.	17908.
12	9318.	1.5100	1.3010	1395.	17908.
13	9541.	1.5510	1.3240	1392.	17908.
14	9237.	1.5140	1.2790	1383.	17908.
17	9491.	1.5590	1.3080	1373.	17908.
18	9742.	1.5300	1.3520	1391.	17908.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	3.224	20.0	9.2	88.9	92.4
2	3.378	16.6	6.0	96.4	99.6
3	3.403	18.1	6.0	96.3	97.4
4	3.214	25.3	4.3	95.8	91.4
5	3.458	22.8	2.2	89.7	91.2
6	3.365	19.9	2.1	95.1	97.5
7	3.272	23.7	2.3	91.6	92.1
8	3.354	-29.9	4.1	98.8	100.3
9	3.257	20.2	2.8	93.5	95.7
10	3.423	19.7	2.3	95.2	98.9
11	3.156	22.1	5.9	98.1	92.4
12	3.163	-29.9	6.4	88.1	85.5
13	3.266	24.3	4.3	90.7	87.4
14	3.189	24.6	3.1	95.9	96.7
17	3.256	26.3	4.4	99.3	94.4
18	3.191	-40.1	5.4	85.3	86.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3156.	1.25	.98	9.09	9.46	46.62
2	3157.	.99	.61	9.42	9.73	50.34
3	3157.	1.07	.61	9.34	9.45	50.99
4	3154.	1.58	.46	9.83	9.83	52.63
5	3151.	1.32	.22	8.54	8.69	61.48
6	3151.	1.19	.22	9.31	9.55	-75.91
7	3151.	1.45	.25	9.22	9.27	-62.24
8	3150.	-1.79	.42	9.70	9.85	54.63
9	3151.	1.24	.30	9.46	9.68	-63.33
10	3151.	1.15	.23	9.16	9.52	-75.56
11	3147.	1.41	.64	10.23	10.23	48.89
12	-3146.	-1.89	.70	9.16	9.16	50.91
13	3148.	1.49	.46	9.07	9.07	50.85
14	3148.	1.54	.33	9.90	9.98	47.98
17	-3161.	1.62	.47	10.08	10.08	54.07
18	-3159.	-2.53	.58	8.83	8.96	53.12

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * 600 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	83.5290	80.9640	81.7320	83.3360	80.1900	95.3120
2	93.9260	77.8160	81.0350	93.6910	77.0040	94.4660
3	90.9400	70.3300	79.2600	90.6910	69.5540	92.3770
4	92.7360	100.5880	86.4390	97.5760	105.1270	101.1440
5	103.9420	80.1440	81.0700	100.4580	77.0950	94.4910
6	106.2850	98.0900	84.7460	102.7800	94.3080	98.7650
7	87.3920	80.5820	81.4100	87.7420	80.5870	95.4150
8	105.3760	98.6260	85.1090	105.8050	98.5790	99.7290
9	101.5680	109.0950	87.0240	101.9210	108.9490	101.9390
10	112.6140	98.7740	85.1570	113.0250	98.5790	99.7290
11	79.3480	82.1590	84.7340	87.7200	91.2290	98.0490
12	75.5760	73.5260	82.5580	78.4160	76.1190	94.2270
13	83.4720	74.5160	82.6030	83.3450	73.9370	93.6260
14	81.3380	80.7700	83.3980	81.2280	80.1900	95.3120
17	73.0850	61.3770	79.7740	80.4680	67.1720	91.6710
18	65.5180	55.4100	77.9970	71.9090	60.5890	-89.6130

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		1.25			.99		10.60			11.03			46.62	
2		.99			.62		10.98			11.04			50.34	
3		1.07			.61		10.89			11.01			50.99	
4		1.50			.44		11.51			11.51			52.63	
5		1.37			.23		-9.96			-10.12			61.48	
6		1.23			.23		10.85			11.12			-75.91	
7		1.44			.25		10.81			10.87			-62.24	
8		-1.78			.42		11.37			11.54			54.63	
9		1.24			.30		11.08			11.34			-63.33	
10		1.15			.23		10.73			11.14			-75.56	
11		1.27			.58		-12.72			-12.72			48.89	
12		-1.83			.67		11.23			11.23			50.91	
13		1.49			.46		11.04			11.04			50.85	
14		1.55			.33		-12.15			12.25			47.9A	
17		1.47			.43		11.59			11.59			54.07	
18		-2.30			.53		10.90			11.05			53.12	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	96.00	99.00	96.00	99.00
2	96.40	98.00	96.40	98.00
3	96.00	97.50	96.00	97.50
4	98.00	99.00	98.33	99.34
5	98.00	98.00	97.81	97.81
6	-98.50	99.00	98.31	98.81
7	96.50	98.00	96.52	98.02
8	96.50	99.00	96.52	99.02
9	97.00	99.50	97.02	99.52
10	96.00	99.00	96.02	99.02
11	96.50	99.00	97.11	99.63
12	97.00	98.90	97.23	99.14
13	97.20	98.50	97.20	98.50
14	97.50	99.00	97.50	99.00
17	-95.20	97.00	95.80	97.61
18	96.00	97.00	96.61	97.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	7900.	1.3720	1.2370	1284.	-1.620	-14705.
2	7500.	1.4030	1.1860	1311.	-1.620	-14698.
3	7500.	1.3950	1.1690	1275.	-1.620	-14693.
4	7900.	1.3560	1.2100	1320.	1.660	15210.
5	7500.	1.4320	1.1570	1302.	1.650	15169.
6	7600.	1.3980	1.1770	1311.	1.650	15169.
7	7800.	1.3650	1.1960	1284.	1.650	15174.
8	8000.	1.4170	1.2340	1302.	1.650	15169.
9	7950.	1.3250	1.2350	1320.	1.650	15162.
10	7500.	1.3520	1.1480	1284.	1.650	15157.
11	8000.	1.3300	1.2160	1266.	1.650	15149.
12	7700.	1.3590	1.1860	1302.	1.650	15144.
13	8000.	1.4190	1.2320	1302.	1.650	15144.
14	7800.	1.3630	1.1940	1284.	1.650	15149.
17	7600.	1.3540	1.1470	1266.	1.650	15049.
18	8000.	1.3490	1.2250	1302.	1.650	15049.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	7942.	1.3720	1.2370	1284.	-14784.
2	7544.	1.4030	1.1360	1311.	-14784.
3	7546.	1.3950	1.1690	1275.	-14784.
4	7947.	1.3650	1.2180	1329.	15352.
5	7535.	1.4270	1.1530	1297.	15210.
6	7635.	1.3930	1.1720	1306.	15210.
7	7816.	1.3660	1.1960	1284.	15210.
8	8019.	1.4180	1.2350	1302.	15210.
9	7973.	-1.3250	1.2350	1320.	15210.
10	7525.	1.3530	1.1490	1284.	15210.
11	7982.	1.3470	1.2310	1282.	15210.
12	7715.	1.3650	1.1920	1308.	15210.
13	8035.	1.4190	1.2320	1302.	15210.
14	7831.	1.3630	1.1940	1284.	15210.
17	7633.	1.3710	1.1620	1282.	15210.
18	8035.	1.3660	1.2400	1318.	15210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.890	27.4	5.9	74.4	-83.4
2	2.958	23.5	4.1	73.3	76.2
3	2.942	25.1	4.0	69.2	73.7
4	2.856	32.8	2.2	72.6	71.9
5	3.015	33.2	1.1	73.4	76.5
6	2.943	27.5	1.1	76.9	79.7
7	2.871	33.5	1.5	75.1	77.7
8	2.983	30.6	2.1	-79.2	61.3
9	2.784	28.0	-7.6	76.3	80.0
10	2.844	27.5	1.3	75.3	80.5
11	2.794	27.8	3.0	75.5	72.9
12	2.855	-36.5	3.0	68.5	69.3
13	2.985	30.6	2.3	71.3	71.9
14	2.865	31.9	2.0	73.3	77.4
17	2.857	-36.5	2.6	71.5	70.7
18	2.845	-50.1	2.7	64.6	68.3

NOTE~ MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3156.	1.91	.71	8.50	-9.52	47.33
2	3157.	1.60	.48	7.84	8.50	49.47
3	3156.	1.72	.47	7.76	8.26	49.54
4	3154.	2.30	.27	8.38	8.38	54.87
5	3150.	2.20	.12	8.02	8.35	48.09
6	3150.	1.88	.13	8.61	8.92	56.90
7	3149.	2.34	.18	8.62	8.91	52.03
8	3150.	2.06	.25	8.74	8.97	51.73
9	3148.	2.02	-.94	-9.02	-9.46	51.93
10	3150.	1.94	.15	8.72	-9.32	55.67
11	3147.	1.99	.37	8.89	8.89	50.20
12	3146.	-2.56	.36	7.89	7.98	51.26
13	3147.	2.06	.26	7.86	7.92	50.99
14	3147.	2.23	.23	8.42	8.89	48.68
17	-3160.	-2.57	.32	8.27	8.27	55.13
18	-3159.	-3.54	.33	7.50	7.93	53.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	51.0620	53.7610	74.6890	50.9240	53.2480	87.0980
2	48.0760	43.2970	71.1800	47.9300	42.8450	82.9780
3	44.7480	38.5370	69.3330	44.6000	38.1110	80.8070
4	50.1020	54.7580	75.6250	52.2380	57.0720	88.4400
5	50.1880	42.5570	70.4650	48.7820	41.0010	82.1560
6	53.1720	53.1580	74.0640	51.6920	51.1880	86.3440
7	45.1320	43.0870	70.8900	45.2610	43.0810	83.0810
8	55.0150	53.5470	74.4140	55.1740	53.5110	87.1930
9	49.8450	59.4200	76.1510	49.9530	59.3290	89.1990
10	49.4070	53.6280	74.4560	49.5050	53.5110	87.1930
11	47.9650	54.7520	77.4990	52.2400	60.5890	89.6130
12	49.5550	52.9920	76.8150	51.1590	54.8030	87.6530
13	52.3000	48.3740	75.1040	52.2020	47.9970	85.1260
14	50.2900	53.6330	76.2110	50.2040	53.2480	87.0980
17	40.1940	35.9190	70.8090	43.5060	39.1420	81.2970
18	39.8820	35.9190	70.8090	43.1540	39.1420	81.2970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 4

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK NUMBER
-----	LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		CORRECTED
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1		1.91			.71			9.91			11.11		47.33
2		1.60			.49			9.14			9.91		49.47
3		1.72			.47			9.04			9.63		49.54
4		2.21			.25			9.80			9.80		54.87
5		2.27			.13			9.75			9.73		48.09
6		1.93			.14			10.03			10.39		56.90
7		2.33			.18			10.10			10.44		52.03
8		2.05			.25			10.24			10.51		51.73
9		2.01			-.94			10.56			11.08		51.93
10		1.94			.15			10.21			10.92		55.67
11		1.83			.34			-11.04			11.04		50.20
12		-2.48			.35			9.66			9.78		51.26
13		2.06			.26			9.57			9.65		50.99
14		2.23			.24			10.33			10.91		48.68
17		2.37			.29			10.19			10.19		55.13
18		-3.27			.30			9.25			9.78		53.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.00	94.00	85.00	94.00
2	85.30	93.20	85.30	93.20
3	85.50	95.00	85.50	95.00
4	87.00	95.00	87.30	-95.72
5	86.00	94.00	85.83	93.82
6	87.00	94.00	86.83	93.82
7	85.00	93.50	85.02	93.52
8	85.00	94.95	85.02	94.92
9	86.00	95.00	86.02	95.02
10	85.00	94.00	85.02	94.02
11	85.40	94.00	85.94	94.59
12	86.20	94.20	86.41	94.43
13	86.60	94.00	86.60	94.00
14	87.20	94.70	87.20	94.70
17	84.70	93.00	85.24	93.59
18	84.60	-92.00	85.14	-92.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	5500.	1.1080	1.0600	1176.	-1.380	-10454.
2	5200.	1.1290	1.0170	1212.	-1.380	-10449.
3	5400.	1.1370	1.0400	1176.	-1.380	-10445.
4	5500.	1.1320	1.0580	1212.	1.390	10631.
5	5030.	1.1550	.9740	1212.	1.390	10701.
6	5075.	1.1930	.9680	1176.	1.390	10701.
7	5040.	1.1100	.9610	1176.	1.390	10705.
8	5600.	1.1720	1.0720	1185.	1.390	10701.
9	5060.	1.1490	.9790	1212.	1.390	10696.
10	5010.	1.1650	.9550	1176.	1.390	10692.
11	5500.	1.1060	1.0440	1167.	1.390	10687.
12	5200.	1.1280	1.0050	1212.	1.390	10684.
13	5600.	1.1240	1.0780	1203.	1.390	10684.
14	5600.	1.1570	1.0630	1167.	1.390	10687.
17	5300.	1.1270	.9910	1149.	1.390	10616.
18	5500.	1.1210	1.0490	1194.	1.390	10616.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	5529.	1.1080	1.0600	1176.	-10510.
2	5230.	1.1290	1.0170	1212.	-10510.
3	5433.	1.1370	1.0400	1176.	-10510.
4	5533.	1.1400	1.0650	1220.	10730.
5	5053.	1.1510	.9700	1207.	10730.
6	5098.	1.1880	.9640	1171.	10730.
7	5051.	1.1110	.9620	1176.	10730.
8	5614.	1.1730	1.0730	1185.	10730.
9	5075.	1.1500	.9790	1212.	10730.
10	5026.	1.1650	.9550	1176.	10730.
11	5487.	1.1200	1.0570	1182.	10730.
12	5210.	1.1340	1.0100	1218.	10730.
13	5624.	1.1840	1.0780	1203.	10730.
14	5622.	1.1570	1.0630	1167.	10730.
17	5323.	1.1420	1.0040	1163.	10730.
18	5524.	1.1350	1.0620	1209.	10730.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.322	73.0	5.3	44.5	53.6
2	2.368	67.4	4.2	45.0	53.8
3	2.385	66.1	3.9	42.7	51.7
4	2.373	75.1	2.8	45.0	50.0
5	2.418	78.5	4.2	44.5	52.3
6	2.501	63.8	2.1	47.6	57.1
7	2.323	83.3	2.7	45.8	52.4
8	2.457	65.1	2.2	49.9	56.0
9	2.408	68.2	2.3	48.0	55.0
10	2.441	72.2	2.3	46.6	55.7
11	2.315	66.5	3.0	45.1	48.7
12	2.360	77.6	2.8	42.4	48.0
13	2.479	71.6	2.7	43.1	50.1
14	2.422	70.7	2.5	43.1	52.3
17	2.366	91.7	4.3	40.4	47.5
18	2.351	-111.6	4.5	37.3	46.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3148.	6.30	.79	6.31	7.59	46.93
2	3150.	5.71	.62	6.26	7.49	49.14
3	3150.	5.55	.56	5.90	7.14	51.11
4	3147.	6.34	.40	6.24	6.93	55.84
5	3142.	6.49	.60	6.04	7.10	47.63
6	3145.	5.11	.28	6.26	7.50	50.26
7	3141.	7.17	.40	6.48	7.41	50.40
8	3144.	5.30	.31	6.68	7.49	50.34
9	3144.	5.67	.33	6.55	7.51	51.01
10	3143.	5.92	.33	6.27	7.50	51.04
11	3141.	5.74	.45	6.39	6.91	50.60
12	3140.	6.57	.41	5.90	6.68	51.97
13	3141.	5.77	.38	5.71	6.63	49.93
14	3141.	5.83	.36	5.85	7.08	49.21
17	-3151.	7.77	.63	5.63	6.61	55.92
18	3148.	-9.51	.66	5.23	6.49	52.63

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	19.5450	16.3510	56.9980	19.4820	16.1950	66.4680
2	18.2020	13.3270	54.3820	18.1370	13.1880	63.3960
3	22.8650	21.0630	60.4210	22.7790	20.8300	70.4200
4	23.0080	-21.7250	61.3720	23.7600	-22.5600	-71.7170
5	20.5770	16.0170	56.3820	20.1150	15.4640	65.7650
6	21.6080	16.0170	56.3820	21.1130	15.4640	65.7650
7	18.4220	14.3330	55.1400	18.4520	14.3270	64.6190
8	23.6190	20.4540	59.8390	23.6580	20.4350	70.1110
9	23.2120	20.9880	60.2010	23.2410	20.9490	70.5120
10	20.9980	16.3290	56.8370	21.0180	16.2890	66.5560
11	19.8830	17.1570	59.6090	21.2620	18.8240	68.8040
12	20.6850	17.5080	59.7580	21.1960	18.0510	68.1450
13	21.5150	16.3220	58.6420	21.4640	16.1950	66.4680
14	22.6140	19.4680	60.5700	22.5660	19.3280	69.2230
17	18.1740	13.4640	56.5830	19.3340	14.5720	64.8720
18	16.1950	11.340	53.6990	-17.2060	11.6000	-61.5460

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	6.32	.79	7.35	8.85	46.93
2	5.73	.62	7.29	8.73	49.14
3	5.58	.56	6.88	8.33	51.11
4	6.14	.39	7.29	8.10	55.84
5	6.64	.62	7.05	8.28	47.63
6	5.23	.29	7.30	8.75	50.26
7	7.16	.40	7.59	8.69	50.40
8	5.29	.31	7.83	8.70	50.34
9	5.56	.34	7.68	8.80	51.01
10	5.92	.33	7.35	8.79	51.04
11	5.37	.41	-7.92	8.57	50.60
12	6.41	.40	7.22	8.18	51.97
13	5.79	.38	6.95	8.08	49.93
14	5.85	.36	7.18	8.70	49.21
17	7.31	.58	6.93	8.14	55.92
18	-8.96	.61	6.43	7.99	52.63

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-65.50	85.50	-65.50	85.50
2	68.00	85.50	68.00	85.50
3	66.00	85.00	66.00	85.00
4	-72.10	-88.00	-72.34	-88.30
5	69.00	86.00	68.87	85.83
6	70.00	86.50	69.87	86.33
7	67.00	85.50	67.02	85.52
8	68.00	87.00	68.02	87.02
9	67.50	87.00	67.52	87.02
10	66.00	86.00	66.02	86.02
11	68.50	86.80	68.93	87.35
12	69.00	87.00	69.17	87.21
13	68.90	86.00	68.90	86.00
14	70.50	87.30	70.50	87.30
17	67.80	85.00	68.23	85.54
18	66.60	84.40	67.02	84.93

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	-2820.	.8350	.8490	-1194.	-1.160	-5361.
2	3090.	.8440	.8950	1104.	-1.160	-5359.
3	2890.	.8600	.8200	1059.	-1.160	-5357.
4	-3370.	.9190	-.9470	1113.	1.170	5627.
5	3000.	.9200	.8450	1104.	1.170	5665.
6	3230.	.9040	.8950	1068.	1.170	5665.
7	2910.	.8560	.8070	1068.	1.170	5667.
8	-2780.	.9450	-.7770	1086.	1.170	5665.
9	2960.	.9130	.8340	1104.	1.170	5662.
10	2950.	.8760	.8070	1041.	1.170	5660.
11	3040.	.8810	.8420	1068.	1.170	5657.
12	3090.	.8760	.8620	1086.	1.170	5655.
13	3100.	.8990	.8620	1077.	1.170	5655.
14	3260.	.9000	.8950	1050.	1.170	5657.
17	3140.	.9020	.8560	1050.	1.170	5620.
18	2960.	.8890	.8210	1086.	1.170	5620.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR T17 DEG R	COR THRUST LBF
1	-2835.	-.8350	.8490	-1194.	-5390.
2	3108.	.8440	.8950	1104.	-5390.
3	2908.	.8600	.8200	1059.	-5390.
4	-3390.	.9250	-.9530	1120.	5680.
5	3014.	.9170	.8420	1099.	5680.
6	3245.	.9010	.8920	1064.	5680.
7	2916.	.8570	.8070	1068.	5680.
8	-2787.	.9460	-.7770	1086.	5680.
9	2969.	.9130	.8340	1104.	5680.
10	2960.	.8770	.8070	-1041.	5680.
11	3033.	.8930	.8520	1081.	5680.
12	3096.	.8800	.8660	1091.	5680.
13	3113.	.8990	.8620	1077.	5680.
14	3273.	.9000	.8950	1050.	5680.
17	3154.	.9140	.8670	1063.	5680.
18	2973.	.9000	.8310	1099.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.721	222.9	26.1	24.0	28.8
2	1.750	172.2	17.2	26.2	30.2
3	1.782	173.8	17.4	19.6	27.6
4	1.909	167.2	14.6	28.3	32.6
5	1.906	183.2	18.2	28.3	31.2
6	1.876	163.3	12.7	25.9	32.5
7	1.763	231.5	26.4	28.0	30.9
8	1.961	176.1	11.8	-31.7	-34.6
9	1.891	183.6	15.1	25.1	32.7
10	1.806	219.8	26.0	26.2	31.2
11	1.821	193.0	17.2	25.8	28.7
12	1.811	184.9	14.5	25.7	28.8
13	1.858	196.9	18.7	20.9	28.5
14	1.862	183.9	16.2	21.5	30.4
17	1.877	170.3	14.3	23.8	30.1
18	1.839	-234.6	23.7	22.9	29.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3106.	25.60	-5.14	4.52	5.44	35.76
2	3121.	19.54	3.35	4.88	5.63	40.77
3	3121.	19.37	3.32	3.59	5.06	38.62
4	3124.	17.42	2.60	4.85	5.57	51.03
5	3115.	19.06	3.26	4.83	5.34	41.06
6	3120.	17.29	2.31	4.51	5.65	44.27
7	-3099.	-25.90	-5.07	5.14	5.67	41.72
8	3120.	17.84	2.05	5.27	5.76	41.22
9	3116.	19.25	2.71	4.32	5.64	41.50
10	-3102.	24.03	4.89	4.71	5.60	39.06
11	3110.	20.97	3.22	4.60	5.12	45.95
12	3112.	20.23	2.73	4.62	5.17	46.12
13	3109.	20.97	3.43	3.66	4.99	43.27
14	3112.	19.57	2.96	3.75	5.31	45.54
17	-3129.	18.08	2.61	4.15	5.25	47.06
18	3113.	25.27	4.39	4.06	5.23	42.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	6.3030	2.6330	37.2890	6.2800	2.6080	43.4850
2	6.3600	2.6360	37.3020	6.3350	2.6080	43.4850
3	6.1710	2.3900	36.4660	6.1450	2.3640	42.5010
4	-8.5640	-4.3510	-42.2620	-8.7710	-4.4930	-49.3290
5	7.1130	2.8740	37.8230	6.9850	2.7840	44.1480
6	7.3200	3.1650	38.6780	7.1880	3.0650	45.1450
7	6.4170	2.6210	37.1440	6.4210	2.6190	43.5260
8	7.9670	3.4980	39.7180	7.9730	3.4930	46.5320
9	7.7220	3.5010	39.7310	7.7240	3.4930	46.5320
10	6.8350	2.8940	38.0210	6.8350	2.8860	44.5190
11	7.3920	3.4220	40.9790	7.7870	3.7160	47.2000
12	7.4660	3.5250	41.1760	7.6020	3.6200	46.9170
13	6.9870	2.8970	39.2410	6.9670	2.8740	44.4780
14	7.8300	3.7080	41.2120	7.8110	3.6820	47.1000
17	6.4750	2.4540	38.0790	6.7830	2.6270	43.5590
18	6.0610	2.1800	37.0450	6.3430	2.3330	42.3710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	-25.69	-5.19	5.27	6.34	35.76
2	19.62	3.39	5.69	6.57	40.77
3	19.45	3.36	4.18	5.90	38.62
4	17.01	2.52	5.66	6.50	51.03
5	19.41	3.36	5.64	6.23	41.06
6	17.61	2.38	5.26	6.60	44.27
7	-25.88	-5.07	6.02	6.65	41.72
8	17.83	2.05	6.17	6.75	41.22
9	19.25	2.72	5.06	6.60	41.50
10	24.03	-4.91	5.52	6.56	39.06
11	19.91	2.96	5.69	6.34	45.95
12	19.87	2.66	5.66	6.32	46.12
13	21.03	3.45	4.46	6.08	43.27
14	19.61	2.98	4.60	6.52	45.54
17	17.26	2.44	5.10	6.45	47.06
18	24.15	4.10	4.98	6.42	42.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	37.00	-65.50	37.00	-65.50
2	35.70	63.70	35.70	63.70
3	35.70	64.00	35.70	64.00
4	36.70	64.20	36.82	64.42
5	37.00	64.00	36.93	63.88
6	37.50	65.00	37.43	64.88
7	36.00	64.00	36.01	64.02
8	35.50	64.00	35.51	64.02
9	35.00	63.50	35.01	63.52
10	35.00	63.50	35.01	63.52
11	35.80	64.00	36.03	64.40
12	37.50	64.00	37.59	64.15
13	36.00	64.00	36.00	64.00
14	35.80	64.00	35.80	64.00
17	35.80	64.00	36.03	64.40
18	36.80	64.00	37.03	64.40

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1370.	.7610	.7790	1005.	-1.020	1569.
2	1290.	.7450	.7740	1032.	-1.020	1416.
3	1340.	.7850	.7880	1005.	1.030	1441.
4	1350.	.7880	.7980	1032.	1.050	1472.
5	1350.	.8070	.8070	1032.	1.040	1436.
6	1300.	.7490	.7490	1005.	1.050	1520.
7	1320.	.7810	.7820	1014.	1.040	1448.
8	-1420.	.8280	-.8410	1014.	-1.060	1447.
9	1265.	.7980	.7650	1032.	1.050	1404.
10	1300.	.7820	.7720	996.	1.040	1404.
11	1280.	.7730	.7510	996.	1.030	1478.
12	1310.	.7850	.7710	1005.	1.030	1457.
13	1320.	.8040	.7840	1023.	1.030	1444.
14	1310.	.7830	.7550	-960.	1.030	1444.
17	1350.	.8050	.7870	996.	1.030	1469.
18	1370.	.8150	.8120	1032.	1.050	1469.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1377.	.7610	.7790	1005.	-1578.
2	1298.	.7450	.7740	1032.	1425.
3	1348.	.7850	.7880	1005.	1450.
4	1358.	.7940	.8030	1039.	1486.
5	1356.	.8040	.8040	1028.	1440.
6	1306.	.7460	.7470	1001.	1524.
7	1323.	.7810	.7830	1014.	1451.
8	-1423.	.8290	.8420	1014.	1451.
9	1269.	.7980	.7650	1032.	1409.
10	1304.	.7820	.7720	996.	1409.
11	1277.	.7830	.7600	1008.	1484.
12	1313.	.7890	.7750	1010.	1463.
13	1326.	.8040	.7840	1023.	1450.
14	1315.	.7830	.7550	-960.	1450.
17	1356.	.8150	.7970	1008.	1484.
18	1376.	.8260	.8220	1045.	1484.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.377	801.6	453.7	10.4	13.3
2	1.345	786.5	450.5	10.5	12.5
3	1.411	822.8	499.9	8.6	11.1
4	1.381	866.8	600.6	12.1	13.7
5	1.453	821.0	504.5	13.3	14.8
6	1.360	763.7	-423.0	13.5	14.7
7	1.383	836.3	545.4	-14.0	-16.3
8	1.475	907.7	548.8	-14.3	16.0
9	1.411	899.1	551.3	13.5	15.8
10	1.382	849.1	552.7	13.4	15.5
11	1.370	812.3	536.2	10.1	13.6
12	1.392	804.6	549.0	10.9	13.7
13	1.427	849.1	555.2	8.2	13.5
14	1.358	871.0	627.4	8.3	13.1
17	1.419	806.7	619.9	9.3	14.2
18	1.460	869.0	540.7	10.8	14.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2731.	101.20	98.41	2.15	2.76	21.33
2	2727.	101.47	99.85	2.23	2.65	23.68
3	2714.	100.73	105.12	1.72	2.23	20.67
4	2647.	105.73	125.85	2.43	2.74	24.36
5	2717.	97.69	103.14	2.60	2.89	23.73
6	2744.	98.04	93.30	-2.84	3.11	-0.00
7	2675.	102.98	115.31	-2.83	-3.30	22.28
8	2688.	105.31	109.39	2.73	3.04	23.24
9	2670.	108.29	114.07	2.67	3.12	24.00
10	2669.	104.40	116.75	2.72	3.14	21.81
11	2677.	101.78	114.57	2.07	2.77	25.71
12	2680.	98.55	115.52	2.19	2.76	23.51
13	2679.	101.45	113.96	1.60	2.64	23.68
14	-2620.	106.92	-132.33	1.67	2.64	23.28
17	2664.	96.38	127.24	1.82	2.79	26.32
18	2704.	102.43	109.49	2.08	2.89	21.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2420	-.1180	18.1690	-.2410	-.1170	-21.1880
2	.2290	.0970	17.3440	.2280	.0960	20.2190
3	.2310	.1000	17.4850	.2300	.0990	20.3790
4	.2330	.1020	17.6970	.2330	.1040	20.6030
5	.2300	.1000	17.3800	.2290	.0980	20.3130
6	.2380	.1120	17.8400	.2360	.1090	20.8490
7	.2300	.0990	17.4010	.2300	.0990	20.3870
8	.2300	.0990	17.4050	.2300	.0990	20.3870
9	.2270	.0940	17.1830	.2260	.0940	20.1200
10	.2270	.0940	17.1860	.2260	.0940	20.1200
11	.2310	.0980	17.9630	.2330	.1040	20.5960
12	.2310	.0990	17.9890	.2310	.1010	20.4620
13	.2310	.1000	17.9800	.2300	.0990	20.3790
14	.2310	.1000	17.8320	.2300	.0990	20.3790
17	.2320	.0990	18.0780	.2330	.1040	20.5960
18	.2320	.0990	18.0780	.2330	.1040	20.5960

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	101.61	99.36	2.51	3.21	21.33
2	101.92	100.90	2.59	3.08	23.68
3	101.20	106.29	2.00	2.60	20.67
4	105.87	123.38	2.83	3.19	24.36
5	98.21	105.82	3.04	3.38	23.73
6	98.56	95.73	-3.32	3.63	-0.00
7	103.12	115.57	-3.32	-3.86	22.28
8	105.47	109.63	3.19	3.56	23.24
9	108.51	114.43	3.13	3.66	24.00
10	104.64	117.18	3.18	3.67	21.81
11	101.01	107.83	2.55	3.41	25.71
12	98.47	113.44	2.68	3.37	23.51
13	101.78	114.86	1.95	3.22	23.68
14	107.25	-133.29	2.05	3.24	23.28
17	96.12	121.19	2.23	3.41	26.32
18	102.16	104.28	2.55	3.54	21.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	34.40	62.00	34.40	62.00
2	34.50	61.50	34.50	61.50
3	32.00	59.50	32.00	59.50
4	33.40	60.20	33.51	60.40
5	35.00	62.00	34.93	61.88
6	35.00	62.00	34.93	61.88
7	34.50	62.00	34.51	62.01
8	32.00	60.00	32.01	60.01
9	33.00	60.00	33.01	60.01
10	34.00	62.00	34.01	62.01
11	32.50	60.00	32.71	60.38
12	35.10	60.30	35.18	60.45
13	33.40	60.00	33.40	60.00
14	32.50	60.00	32.50	60.00
17	33.00	60.00	33.21	60.38
18	35.00	61.00	35.22	61.39

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT? DEG R	EPR	THRUST LBF
1	1280.	.7820	.7910	1005.	1.020	1273.
2	1260.	.7580	.7990	1032.	1.020	1238.
3	1250.	.8130	.8280	1005.	1.020	1098.
4	1270.	.8180	.8310	1032.	1.050	1157.
5	1325.	.8150	.8320	1032.	1.020	1268.
6	1230.	.7810	-.7590	996.	1.050	1268.
7	1300.	.8030	.8090	1014.	1.040	1278.
8	1340.	.8720	-.8810	1014.	1.050	1138.
9	1280.	.7990	.8480	1032.	1.050	1137.
10	1290.	.7680	.7950	996.	1.030	1277.
11	1180.	.8010	.7680	996.	1.020	1162.
12	1250.	.8200	.8060	996.	1.020	1166.
13	1260.	.8350	.8300	1023.	1.020	1135.
14	1300.	.7910	.8270	-951.	1.020	1135.
17	1250.	.8260	.8080	996.	1.030	1154.
18	1320.	.8360	.8440	1032.	1.050	1224.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	CORR TT7	COR THRUST
	LBM/HR	X100	X100	DEG R	LBF
1	1287.	.7820	.7910	1005.	1280.
2	1267.	.7580	.7990	1032.	1245.
3	1259.	.8130	.8280	1005.	1105.
4	1278.	.8230	.8370	1039.	1168.
5	1331.	.8120	.8280	1028.	1272.
6	1236.	.7780	-.7560	992.	1272.
7	1303.	.8030	.8100	1014.	1281.
8	1343.	.8730	-.8810	1014.	1141.
9	1284.	.7990	.8480	1032.	1141.
10	1294.	.7680	.7960	996.	1281.
11	1177.	.8120	.7770	1008.	1167.
12	1252.	.8240	.8100	1001.	1171.
13	1265.	.8350	.8300	1023.	1140.
14	1305.	.7910	.8270	-951.	1140.
17	1255.	.8360	.8180	1008.	1167.
18	1326.	.8460	.8550	1045.	1237.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.381	871.6	559.9	9.2	12.2
2	1.355	-820.8	-499.3	9.8	12.2
3	1.416	924.4	638.3	7.3	10.3
4	1.379	968.0	774.8	11.3	13.0
5	1.441	858.7	583.4	-12.8	14.8
6	1.388	845.5	526.4	11.7	13.9
7	1.401	389.3	618.8	-13.6	-15.7
8	1.512	1014.7	691.2	-14.2	-15.4
9	1.372	977.9	657.8	12.2	15.3
10	1.331	893.1	608.1	-12.8	-15.4
11	1.371	917.2	694.5	8.8	12.6
12	1.416	896.2	683.9	9.7	13.0
13	1.440	949.9	688.5	7.2	12.8
14	1.329	945.3	752.9	7.3	12.1
17	1.416	890.6	746.6	8.1	13.7
18	1.471	931.3	624.0	9.6	14.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2668.	107.13	118.22	1.86	2.46	22.22
2	2699.	104.04	108.73	2.05	2.55	22.59
3	2633.	109.36	129.74	1.41	2.00	21.12
4	2549.	113.91	156.63	2.18	2.51	24.18
5	2670.	101.27	118.20	-2.48	2.87	22.73
6	2685.	104.05	111.29	2.37	2.81	22.37
7	2637.	106.51	127.31	-2.67	-3.08	22.61
8	2619.	111.82	130.87	-2.57	2.78	22.72
9	2595.	-117.73	136.05	-2.42	-3.02	23.73
10	2619.	111.83	130.81	-2.63	-3.16	21.16
11	2585.	110.08	143.20	1.73	2.49	24.48
12	2608.	105.09	137.77	1.86	2.50	23.14
13	2606.	109.37	136.18	1.36	2.42	24.77
14	-2539.	114.95	-157.30	1.45	2.42	20.53
17	2592.	103.74	149.40	1.55	2.61	25.68
18	2658.	107.15	123.34	1.82	2.76	21.83

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2170	.0800	16.5890	.2160	.0790	19.3450
2	.2150	.0770	16.4510	.2140	.0760	19.1780
3	.2060	.0660	15.8890	.2050	.0650	18.5180
4	.2090	.0690	16.1650	.2090	.0700	18.8150
5	.2160	.0800	16.5170	.2150	.0780	19.3050
6	.2160	.0800	16.5170	.2150	.0780	19.3050
7	.2160	.0790	16.5160	.2160	.0790	19.3500
8	.2080	.0680	15.9530	.2070	.0680	18.6870
9	.2080	.0680	15.9530	.2070	.0680	18.6870
10	.2160	.0790	16.5290	.2160	.0790	19.3500
11	.2070	.0660	16.4110	.2090	.0700	18.8070
12	.2090	.0690	16.5560	.2090	.0700	18.8290
13	.2080	.0680	16.4830	.2070	.0680	18.6820
14	.2080	.0680	16.3470	.2070	.0680	18.6820
17	.2080	.0670	16.5160	.2090	.0700	18.8070
18	.2130	.0720	16.8070	.2130	.0750	19.1400

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 600 HOUR TEST SERIES *

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MODE 8

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	107.56	119.37	2.16	2.86	22.22
2	104.50	109.88	2.39	2.97	22.59
3	109.87	131.19	1.65	2.33	21.12
4	114.07	-153.77	2.54	2.92	24.18
5	101.80	121.21	-2.90	3.35	22.73
6	104.59	114.13	2.77	3.28	22.37
7	106.65	127.52	-3.12	-3.61	22.61
8	112.00	131.17	-3.01	3.26	22.72
9	-117.96	136.49	2.83	3.53	23.73
10	112.08	131.31	-3.08	-3.70	21.16
11	109.26	135.10	2.13	3.07	24.48
12	105.01	135.40	2.28	3.06	23.14
13	109.73	137.25	1.66	2.95	24.77
14	115.30	-158.44	1.78	2.97	20.53
17	103.49	142.64	1.90	3.20	25.68
18	106.88	117.70	2.23	3.38	21.83

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
1	21640.	1192.	507.7	30.08	.006720
2	22265.	1191.	507.7	30.08	.006720
4	24236.	1174.	510.2	30.32	.005920
5	21314.	1352.	505.7	30.25	.005550
6	23993.	1352.	505.7	30.25	.005550
7	21583.	1232.	505.2	30.28	.004760
8	21967.	1233.	505.2	30.28	.004760
9	21042.	1288.	516.7	29.98	.004640
10	23574.	1232.	505.2	30.28	.004760
11	22562.	1213.	508.7	30.21	.006290
12	18886.	1213.	508.7	30.24	.006280
13	21279.	1259.	501.7	29.84	.005300
14	27407.	1259.	501.7	29.83	.006200
17	32506.	1258.	512.7	30.05	.006910
18	27029.	1258.	512.7	30.07	.006910

JT30-38 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-36.50	-64.50	-36.89	-65.20
2	34.00	61.00	34.37	61.66
4	34.00	60.00	34.28	60.50
5	33.00	60.00	33.42	60.77
6	34.00	60.00	34.43	60.77
7	33.20	60.00	33.64	60.80
8	32.80	60.00	33.24	60.80
9	34.50	62.00	34.57	62.12
10	32.20	60.00	32.63	60.80
11	-39.00	-67.00	-39.38	-67.66
12	32.50	60.00	32.82	60.59
13	33.00	59.50	33.55	60.50
14	33.20	60.00	33.76	61.01
17	34.10	61.00	34.30	61.36
18	33.80	60.00	34.00	60.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	-1380.	.8580	.7890	969.	1.030	-1544.
2	1220.	.8330	-.7710	996.	1.020	1249.
4	1300.	.8580	.8530	1032.	1.040	1159.
5	1360.	.8950	.8020	1050.	1.030	1181.
6	1260.	.8420	.8140	996.	1.050	1181.
7	1300.	-.7660	.8540	1032.	1.060	1182.
8	-1420.	.7850	-.9170	996.	1.060	1182.
9	1350.	.7840	.8520	1041.	1.020	1288.
10	1280.	-.7480	.8260	996.	1.030	1182.
11	-1420.	.8080	-.7560	996.	1.030	-1818.
12	1280.	.8380	.8350	1014.	1.060	1169.
13	1280.	.8400	.8670	1032.	1.030	1178.
14	1300.	.8100	.8370	-960.	1.030	1214.
17	1320.	.8370	.8420	1014.	1.040	1230.
18	1300.	.8910	.8670	1050.	1.050	1159.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	-1372.	.8760	.8060	990.	-1552.
2	1213.	.8510	.7870	1017.	1256.
4	1307.	.8720	.8670	1049.	1175.
5	1358.	.9180	-.9250	-1077.	1194.
6	1258.	.8640	.8350	1021.	1194.
7	1298.	.7860	.8770	1059.	1196.
8	-1418.	.8060	-.9410	1022.	1196.
9	1350.	.7870	.8550	1045.	1290.
10	1278.	-.7680	.8480	1022.	1196.
11	-1420.	.8230	-.7710	1015.	-1835.
12	1281.	.8540	.8510	1034.	1181.
13	1255.	.8690	.8960	1067.	1175.
14	1274.	.8380	.8650	992.	1211.
17	1318.	.8460	.8520	1026.	1235.
18	1299.	.9020	.8770	1062.	1165.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.537	937.2	545.4	8.0	13.6
2	1.448	953.7	662.4	7.6	12.4
4	1.467	992.7	753.7	6.7	9.9
5	1.571	1002.1	665.6	8.8	13.6
6	1.482	947.7	611.2	5.8	12.9
7	-1.318	877.4	644.6	6.2	13.9
8	1.372	910.0	592.5	7.6	13.5
9	1.391	872.9	534.9	7.5	14.3
10	-1.280	855.4	651.0	5.5	13.7
11	1.492	-751.8	-402.3	5.1	11.3
12	1.454	911.2	682.3	6.9	10.4
13	1.427	969.7	771.7	5.3	9.5
14	1.340	953.4	-849.7	4.6	9.1
17	1.488	905.1	566.9	6.2	10.6
18	1.568	987.6	655.8	6.8	10.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

J130-38 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2705.	104.99	104.96	1.46	2.50	22.24
2	2625.	110.05	131.32	1.44	2.36	22.73
4	2583.	111.25	145.10	1.24	1.82	23.14
5	2650.	107.57	122.75	1.55	2.40	23.09
6	2657.	108.13	119.80	1.09	2.42	21.11
7	2601.	110.21	139.08	1.29	-2.87	16.05
8	2639.	111.44	124.64	1.53	2.71	17.91
9	2679.	106.98	112.62	1.51	-2.89	-0.00
10	2588.	110.09	143.93	1.17	-2.90	16.67
11	-2788.	-89.41	-82.19	.99	2.20	26.97
12	2620.	104.53	134.47	1.30	1.95	25.97
13	2565.	110.98	151.74	.99	1.79	25.82
14	-2502.	113.27	-173.42	.89	1.77	24.80
17	2686.	103.97	111.87	1.18	2.01	27.79
18	2655.	106.45	121.42	1.21	1.82	22.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2350	-.1020	-18.1520	-.2390	-.1130	-21.0220
2	.2110	.0700	16.6200	.2140	.0770	19.2310
4	.2090	.0660	16.6830	.2090	.0700	18.8460
5	.2080	.0640	16.7180	.2100	.0720	18.9350
6	.2080	.0640	16.7180	.2100	.0720	18.9350
7	.2080	.0640	16.9720	.2110	.0720	18.9450
8	.2080	.0640	16.9720	.2110	.0720	18.9450
9	.2160	.0790	-17.6990	.2160	.0800	19.3850
10	.2080	.0640	16.9720	.2110	.0720	18.9450
11	-.2560	-.1380	-19.6170	-.2590	-.1510	-22.4530
12	.2080	.0650	16.5260	.2100	.0710	18.8750
13	.2030	.0590	16.4800	.2090	.0700	18.8470
14	.2050	.0610	16.3410	.2120	.0730	19.0150
17	.2120	.0710	16.6210	.2130	.0750	19.1300
18	.2070	.0660	16.3410	.2090	.0700	18.7970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	103.51	-94.36	1.82	3.11	22.24
2	108.54	118.56	1.79	2.93	22.73
4	110.84	136.42	1.51	2.21	23.14
5	106.20	109.80	1.89	2.91	23.09
6	106.76	107.16	1.33	2.95	21.11
7	108.80	123.99	1.54	-3.44	16.05
8	110.01	111.12	1.83	3.25	17.91
9	106.80	110.75	1.78	-3.39	-0.00
10	108.68	128.32	1.40	-3.47	16.67
11	-88.57	-75.07	1.22	2.71	26.97
12	103.68	123.92	1.59	2.39	25.97
13	107.75	127.22	1.22	2.20	25.82
14	109.93	145.17	1.11	2.21	24.80
17	103.30	106.09	1.46	2.48	27.79
18	105.82	115.34	1.49	2.24	22.5A

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.50	64.50	36.89	65.20
2	37.00	64.50	37.40	65.20
4	37.00	64.00	37.31	64.53
5	37.50	65.00	37.98	-65.83
6	37.00	64.00	37.47	64.82
7	37.00	64.00	37.49	64.85
8	36.40	65.00	36.88	-65.86
9	-39.00	-66.00	-39.08	-66.13
10	36.40	64.00	36.88	64.85
11	36.00	64.00	36.35	64.63
12	36.00	64.00	36.35	64.63
13	37.00	64.00	37.62	65.08
14	37.00	64.00	37.62	65.08
17	36.80	64.00	37.01	64.37
18	36.60	64.00	36.81	64.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1380.	.8480	.7890	969.	1.030	1544.
2	1340.	.8190	.7760	996.	1.030	1543.
4	1400.	.8290	.8280	1032.	1.050	1475.
5	1450.	.8300	.8330	1014.	1.040	-1588.
6	1370.	.8150	.7910	978.	1.050	1503.
7	1430.	-.7480	.8470	1032.	1.060	1504.
8	-1500.	.7840	.8610	1014.	1.060	-1589.
9	-1510.	.7630	.8670	1041.	1.030	-1633.
10	1390.	-.7440	.8090	996.	1.030	1504.
11	1340.	.8210	.7820	996.	1.030	1489.
12	1380.	.8190	.8110	1014.	1.060	1487.
13	1410.	.8120	.8470	1032.	1.030	1546.
14	1300.	.8010	-.7540	-960.	1.040	1546.
17	1440.	.8090	.8520	1014.	1.040	1475.
18	1400.	.8830	.8420	1050.	1.050	1474.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1372.	.8670	.8060	990.	1552.
2	1333.	.8370	.7930	1017.	1552.
4	1407.	.8430	.8420	1049.	1495.
5	1448.	.8510	.8540	1040.	-1606.
6	1368.	.8360	.8110	1003.	1519.
7	1428.	.7680	.8690	1059.	1522.
8	-1498.	.8050	.8840	1041.	-1608.
9	-1510.	-.7660	.8700	1045.	-1637.
10	1388.	-.7640	.8300	1022.	1522.
11	1340.	.8370	.7970	1015.	1503.
12	1381.	.8350	.8270	1034.	1503.
13	1383.	.8390	.8760	1067.	1541.
14	-1274.	.8280	.7800	992.	1541.
17	1438.	.8180	.8620	1026.	1482.
18	1399.	-.8930	.8520	1062.	1482.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.515	934.3	554.2	7.6	13.7
2	1.471	866.2	517.1	7.6	13.2
4	1.470	884.5	581.3	6.4	10.7
5	1.502	836.1	499.0	7.6	14.2
6	1.478	850.2	474.3	5.7	14.5
7	-1.339	784.5	488.1	6.3	14.9
8	1.431	796.3	-427.5	7.7	15.2
9	1.413	-741.3	-363.8	7.7	-15.6
10	-1.329	767.8	495.6	5.3	15.0
11	1.482	826.0	498.7	4.6	10.4
12	1.473	811.8	519.8	6.7	11.1
13	1.440	854.2	569.6	5.0	10.2
14	1.391	863.7	-652.2	4.6	9.8
17	1.477	809.6	444.4	6.2	11.4
18	-1.595	909.8	532.5	6.9	11.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2696.	105.83	107.85	1.41	2.55	23.06
2	2712.	101.65	104.25	1.46	2.55	24.52
4	2677.	102.54	115.78	1.22	2.03	25.59
5	2732.	96.77	99.22	1.45	2.69	23.09
6	2735.	100.16	95.99	1.10	2.80	22.08
7	2702.	100.78	107.73	1.32	-3.14	18.13
8	2756.	97.57	90.00	1.54	3.07	17.88
9	-2793.	93.30	-78.66	1.59	-3.23	-0.00
10	2698.	99.21	110.02	1.12	-3.18	16.36
11	2727.	96.68	100.28	.88	1.99	28.24
12	2716.	95.27	104.79	1.30	2.13	26.92
13	2679.	101.14	115.86	.97	1.99	26.89
14	-2624.	103.70	-134.52	.90	1.93	24.48
17	2756.	96.17	90.69	1.21	2.22	27.57
18	2727.	98.99	99.53	1.23	1.99	22.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2350	.1020	18.1520	.2390	.1130	21.0220
2	.2350	.1020	18.1540	.2390	.1130	21.0220
4	.2330	.0990	18.2800	.2340	.1050	20.6640
5	.2400	.1080	-18.8400	-.2440	-.1220	-21.3670
6	.2330	.0970	18.3620	.2360	.1090	20.8180
7	.2330	.0970	18.6460	.2360	.1090	20.8360
8	.2410	.1080	-19.1320	-.2440	-.1220	-21.3850
9	-.2450	-.1240	-19.6530	-.2460	-.1260	-21.5290
10	.2330	.0970	18.6460	.2360	.1090	20.8360
11	.2320	.0970	18.1110	.2350	.1060	20.7150
12	.2330	.0980	18.1220	.2350	.1060	20.7150
13	.2310	.0930	18.2980	.2380	.1120	20.9580
14	.2310	.0930	17.9850	.2380	.1120	20.9580
17	.2310	.0980	17.8740	.2330	.1030	20.5790
18	.2310	.0980	17.8810	.2330	.1030	20.5790

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK	NUMBER
-----	LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		CORRECTED	-----
1	104.34			96.96			1.76			3.17			23.06	
2	100.23			93.75			1.81			3.18			24.52	
4	102.13			108.49			1.48			2.46			25.59	
5	95.50			88.18			1.77			3.28			23.09	
6	98.85			85.42			1.34			3.41			22.08	
7	99.46			95.53			1.59			-3.77			18.13	
8	96.28			-79.70			1.85			-3.68			17.88	
9	93.13			-77.29			1.87			-3.81			-0.00	
10	97.91			97.57			1.35			-3.82			16.36	
11	95.80			91.90			1.08			2.45			28.24	
12	94.47			96.20			1.60			2.62			26.92	
13	98.15			96.42			1.19			2.45			26.89	
14	100.60			111.85			1.13			2.42			24.48	
17	95.54			85.85			1.50			2.75			27.57	
18	98.39			94.34			1.52			2.46			22.08	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	102.00	100.00	103.10	101.08
2	102.00	99.50	103.10	100.57
4	102.00	100.20	102.85	101.03
5	102.00	100.00	103.30	101.28
6	103.50	100.00	104.82	101.28
7	102.50	99.00	103.86	100.31
8	101.90	100.00	103.25	101.33
9	-100.30	101.00	-100.49	101.20
10	101.80	101.00	103.15	102.34
11	102.00	101.00	103.00	101.99
12	103.00	100.00	104.01	100.98
13	103.30	100.50	105.04	102.19
14	103.80	101.00	-105.54	102.70
17	103.00	100.00	103.60	100.58
18	103.10	99.50	103.70	100.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TY7 DEG R	EPR	THRUST LAF
1	9500.	1.5130	1.3060	1356.	1.840	17816.
2	9500.	1.5710	1.3140	1374.	1.840	17813.
4	9400.	1.5030	1.2820	1356.	1.840	17672.
5	9420.	1.5280	1.2960	1374.	1.840	17713.
6	-9000.	1.5630	-1.2460	1392.	1.840	17713.
7	9700.	1.4850	1.3510	1410.	1.840	17695.
8	9820.	1.5320	1.3500	1374.	1.840	17695.
9	9600.	1.5510	1.3500	1410.	1.840	17872.
10	9200.	1.4930	-1.2640	1374.	1.840	17695.
11	9600.	1.5030	1.3230	1374.	1.840	17736.
12	9300.	1.5320	1.2880	1392.	1.840	17718.
13	9700.	1.5770	1.3710	1410.	1.840	17956.
14	9400.	1.5850	1.3200	1392.	1.840	17965.
17	9700.	1.5400	1.3440	1374.	1.840	17831.
18	9800.	1.5820	1.3740	1410.	1.840	17819.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	9447.	1.5460	1.3340	1385.	17908.
2	9449.	1.6050	1.3430	1403.	17908.
4	9447.	1.5280	1.3030	1378.	17908.
5	9404.	1.5670	1.3290	1409.	17908.
6	-8985.	1.6030	1.2780	1427.	17908.
7	9688.	1.5240	1.3870	1447.	17908.
8	9808.	1.5730	1.3860	1410.	17908.
9	9601.	1.5570	1.3550	1415.	17908.
10	9189.	1.5330	1.2980	1410.	17908.
11	9599.	1.5320	1.3490	1401.	17908.
12	9308.	1.5620	1.3140	1419.	17908.
13	9514.	1.6310	-1.4170	-1457.	17908.
14	9215.	1.6390	1.3650	1439.	17908.
17	9686.	1.5580	1.3590	1390.	17908.
18	9792.	1.6010	1.3900	1426.	17908.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.191	-30.2	4.7	84.0	81.8
2	3.315	27.3	6.7	87.0	84.5
4	3.168	22.2	2.7	90.2	89.4
5	3.220	25.9	5.9	86.6	82.2
6	3.297	27.6	2.5	85.0	81.7
7	3.128	25.1	6.4	91.1	94.7
8	3.231	20.5	4.3	96.0	98.0
9	3.272	24.1	1.9	89.0	86.3
10	3.148	23.6	2.4	91.0	90.7
11	3.166	20.9	4.8	94.4	94.5
12	3.228	22.2	4.8	90.9	91.8
13	3.328	20.9	4.4	95.2	91.6
14	3.345	18.5	3.9	99.4	97.0
17	3.250	17.6	3.2	102.5	100.0
18	3.339	19.3	3.4	94.2	93.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3154.	-1.90	.51	8.68	8.68	52.82
2	3154.	1.65	.70	8.65	8.65	52.10
4	3153.	1.40	.30	9.39	9.39	51.38
5	3152.	1.61	.63	8.86	8.86	49.80
6	3153.	1.68	.26	8.49	-8.49	52.70
7	3151.	1.61	.71	9.60	9.97	49.40
8	3153.	1.28	.46	9.80	10.00	46.32
9	3153.	1.48	.20	8.96	8.96	48.04
10	3153.	1.50	.26	9.53	9.53	48.18
11	3150.	1.32	.52	9.82	9.83	51.56
12	3150.	1.38	.51	9.28	9.37	53.78
13	3153.	1.26	.46	9.43	9.43	54.75
14	3153.	1.11	.40	9.80	9.80	49.74
17	3153.	1.09	.34	-10.40	-10.40	54.10
18	3153.	1.16	.35	9.30	9.30	54.19

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	73.3340	68.1390	81.3560	87.0220	81.4590	95.6410
2	77.4670	61.6060	79.5760	92.5370	73.5190	93.5100
4	73.8640	71.4930	83.4540	83.6230	80.6990	95.4440
5	75.7820	69.2360	83.5970	92.7300	84.8140	96.4920
6	81.0490	69.2360	83.5970	99.7650	84.8140	96.4920
7	62.9430	56.7480	81.2560	76.8040	69.7530	92.4350
8	76.5190	69.4540	84.9480	94.4170	85.6770	96.7070
9	87.2180	80.9090	87.5300	90.0900	83.4220	96.1420
10	79.2210	84.8280	-88.7600	97.4300	105.0150	101.1210
11	80.3770	83.7420	85.8250	93.6430	97.8560	99.5680
12	76.1980	68.6230	82.1720	88.8110	79.8360	95.2190
13	87.2790	75.4570	85.6090	116.9460	101.8700	100.4490
14	93.6130	83.2550	85.9980	-125.9990	-112.7540	102.7080
17	76.9230	67.0870	80.6010	84.4820	73.6880	93.5570
18	78.8660	60.6670	78.8500	86.7870	66.5040	91.4700

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LA/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	1.60	.42	10.95	10.95	52.82
2	1.38	.59	10.92	10.92	52.10
4	1.24	.26	11.53	11.53	51.38
5	1.32	.51	10.98	10.98	49.80
6	1.37	.21	10.53	10.53	52.70
7	1.32	.58	10.92	11.35	49.40
8	1.03	.37	11.15	11.38	46.32
9	1.43	.20	10.57	10.57	48.04
10	1.22	.21	11.65	11.65	48.18
11	1.14	.44	11.39	11.41	51.56
12	1.19	.44	11.55	11.66	53.78
13	.94	.34	11.07	11.07	54.75
14	.82	.30	11.70	11.70	49.74
17	.99	.31	12.07	12.07	54.10
18	1.05	.32	10.79	10.79	54.19

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	96.00	98.50	97.03	99.56
2	95.50	97.00	96.53	98.05
4	96.00	98.20	96.80	99.01
5	96.00	97.50	97.23	98.75
6	97.00	97.50	98.24	98.75
7	96.30	97.00	97.58	98.29
8	95.60	98.00	96.87	99.30
9	96.50	98.00	96.69	98.19
10	95.80	98.00	97.07	99.30
11	97.00	99.00	97.95	99.97
12	96.50	98.00	97.44	98.96
13	96.40	97.50	98.02	99.14
14	96.80	98.50	98.43	100.15
17	95.80	97.50	96.36	98.07
18	96.50	97.00	97.06	97.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	8000.	1.3560	1.2230	1284.	1.650	15132.
2	7530.	1.3850	1.1510	1284.	1.650	15129.
4	7600.	1.3480	1.1520	1284.	1.650	15009.
5	-7250.	1.3670	-1.1020	1284.	1.650	15044.
6	-8320.	1.4040	1.2560	1266.	1.650	15044.
7	8100.	-1.3090	1.2470	1320.	1.650	15029.
8	7990.	1.3590	1.2130	1284.	1.650	15029.
9	8000.	-1.3070	1.2440	1320.	1.650	15180.
10	7600.	1.3260	1.1540	1284.	1.650	15029.
11	8200.	1.3630	1.2480	1284.	1.650	15064.
12	7600.	1.3340	1.1630	1302.	1.650	15049.
13	7900.	1.3820	1.2260	1302.	1.650	15251.
14	7700.	1.3820	1.1870	1284.	1.650	15258.
17	7800.	1.3430	1.1850	1266.	1.650	15144.
18	8100.	1.4000	1.2640	1338.	1.650	15134.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	7956.	1.3860	1.2490	1312.	15210.
2	7490.	1.4150	1.1760	1312.	15210.
4	7638.	1.3710	1.1710	1305.	15210.
5	-7238.	1.4020	-1.1300	1317.	15210.
6	-8306.	1.4400	1.2880	1298.	15210.
7	8090.	1.3440	1.2800	-1355.	15210.
8	7980.	1.3960	1.2450	1318.	15210.
9	8001.	-1.3120	1.2490	1325.	15210.
10	7591.	1.3610	1.1850	1318.	15210.
11	8199.	1.3900	1.2720	1309.	15210.
12	7607.	1.3600	1.1860	1327.	15210.
13	7749.	1.4290	1.2670	1346.	15210.
14	7549.	1.4280	1.2270	1327.	15210.
17	7788.	1.3590	1.1990	1281.	15210.
18	8093.	1.4170	1.2790	1353.	15210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.856	-38.1	2.3	65.9	67.3
2	2.917	35.8	2.7	65.4	67.3
4	2.838	29.8	1.9	68.4	70.5
5	2.877	34.2	2.6	69.5	65.6
6	2.957	34.6	1.3	67.3	67.0
7	-2.754	31.4	3.1	68.4	71.8
8	2.862	26.4	2.3	72.5	74.9
9	-2.749	31.2	1.3	71.3	71.6
10	2.790	31.4	1.3	67.5	71.6
11	2.867	26.3	2.8	74.5	77.0
12	2.805	29.9	2.7	69.3	72.5
13	2.909	30.3	2.3	68.1	69.1
14	2.909	28.2	2.2	69.8	72.9
17	2.828	25.3	1.8	73.5	74.4
18	2.949	28.2	1.9	69.2	70.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3153.	-2.68	.28	7.60	7.76	52.37
2	3153.	2.46	.32	7.39	7.60	55.61
4	3152.	2.10	.23	7.94	8.19	54.29
5	3151.	2.39	.31	7.95	7.95	54.01
6	3152.	2.35	.15	7.50	7.50	51.26
7	3151.	2.29	.39	8.18	8.60	51.84
8	3152.	1.85	.28	8.35	8.62	48.29
9	3152.	2.28	.16	8.55	8.58	49.48
10	3152.	2.26	.16	7.97	8.46	47.95
11	3150.	1.84	.33	8.55	8.84	53.23
12	3149.	2.14	.34	8.13	8.51	55.03
13	3152.	2.09	.28	7.71	7.83	56.36
14	3152.	1.95	.26	7.90	8.26	53.31
17	3152.	1.79	.21	8.56	8.67	55.42
18	3152.	1.92	.22	7.73	7.86	56.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	47.7200	50.2290	76.0740	55.3450	59.7870	89.3510
2	42.4370	36.5460	70.8880	49.1900	43.2980	83.1760
4	45.8130	47.5280	76.2780	50.9310	53.4090	87.1570
5	43.9200	41.5860	74.7170	52.0980	50.5090	86.0900
6	46.6260	41.5860	74.7170	55.5830	50.5090	86.0900
7	38.1220	37.5310	74.1630	45.1040	45.8050	84.2410
8	45.8330	46.2620	77.6780	54.7390	56.6620	88.3000
9	41.3130	43.4940	76.3260	42.3730	44.7750	83.8090
10	43.4860	46.2620	77.6780	51.7050	56.6620	88.3000
11	50.9580	55.9130	78.5330	58.1810	64.9950	91.0090
12	43.8340	45.6170	75.1040	49.7610	52.7930	86.9340
13	44.7060	41.1360	74.9100	56.8740	54.7910	87.6490
14	49.6640	50.4230	77.0240	-63.4420	-67.5240	91.7770
17	41.6770	39.7930	71.8050	45.0220	43.5370	83.2800
18	43.0230	35.4490	69.9610	46.5800	38.7070	81.0920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 4

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK	NUMBER
	LB/KLB		FU	LB/KLB		FU	LB/KLB		FU	LB/KLB		FU	CORRECTED	
1		2.31			.24		9.59			9.79			52.37	
2		2.12			.27		9.31			9.58			55.61	
4		1.89			.20		9.75			10.05			54.29	
5		2.01			.25		9.84			9.84			54.01	
6		1.97			.12		9.28			9.28			51.26	
7		1.93			.32		9.98			10.49			51.84	
8		1.55			.23		10.19			10.52			48.29	
9		2.22			.16		10.08			10.12			49.48	
10		1.90			.13		9.73			10.33			47.95	
11		1.61			.29		10.64			11.00			53.23	
12		1.88			.29		10.11			10.58			55.03	
13		1.64			.21		9.69			9.84			56.36	
14		1.52			.19		10.12			10.57			53.31	
17		1.66			.20		-10.66			10.80			55.42	
18		1.77			.20		9.63			9.78			56.32	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.00	93.50	85.92	94.51
2	85.00	92.50	85.92	93.50
4	85.50	93.50	86.21	94.28
5	-83.50	-92.00	84.57	93.18
6	86.00	93.00	87.10	94.19
7	85.80	92.50	86.94	93.73
8	85.00	92.50	86.13	93.73
9	85.50	93.00	85.67	93.18
10	84.20	93.00	85.32	94.23
11	85.50	94.00	86.34	94.92
12	85.50	94.00	86.34	94.92
13	85.90	93.00	87.34	94.56
14	86.00	93.50	87.44	95.07
17	85.10	93.00	85.60	93.54
18	85.50	92.50	86.00	93.04

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	5600.	1.1340	1.0610	1167.	1.390	10675.
2	5170.	1.1470	.9910	1194.	1.390	10673.
4	5200.	1.1130	.9890	1194.	1.390	10588.
5	4950.	1.1120	-.9290	1158.	1.390	10613.
6	5000.	1.1610	.9380	1158.	1.390	10613.
7	5800.	-1.0670	1.1130	1212.	1.390	10602.
8	5610.	1.1270	1.0680	1194.	1.390	10602.
9	5600.	-1.0640	1.0850	1212.	1.390	10709.
10	5100.	-1.0690	.9490	-1140.	1.390	10602.
11	5500.	1.1150	1.0420	1176.	1.390	10627.
12	5200.	1.1330	.9990	1212.	1.390	10616.
13	5500.	1.1330	1.0630	1194.	1.390	10759.
14	5200.	1.1320	.9900	1158.	1.390	10764.
17	5300.	1.1160	1.0170	1194.	1.390	10684.
18	5200.	1.1690	1.0040	1212.	1.390	10676.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	5569.	1.1580	1.0840	1192.	10730.
2	5142.	1.1720	1.0120	1220.	10730.
4	5226.	1.1320	1.0050	1214.	10730.
5	4941.	1.1400	.9530	1187.	10730.
6	4991.	1.1910	.9630	1187.	10730.
7	5793.	-1.0950	1.1420	1244.	10730.
8	5603.	1.1570	1.0970	1226.	10730.
9	5600.	-1.0680	1.0890	1216.	10730.
10	5094.	-1.0980	.9740	1170.	10730.
11	5500.	1.1370	1.0620	1199.	10730.
12	5205.	1.1550	1.0180	1236.	10730.
13	5395.	1.1710	1.0990	1234.	10730.
14	5098.	1.1710	1.0240	1197.	10730.
17	5292.	1.1290	1.0290	1208.	10730.
18	5196.	1.1830	1.0160	1226.	10730.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.377	81.7	2.8	40.7	46.6
2	2.405	81.0	3.2	40.2	46.1
4	2.331	82.7	3.2	37.5	45.5
5	2.326	-94.3	3.6	40.9	42.7
6	2.434	74.1	2.1	41.1	47.5
7	-2.232	78.0	3.7	40.7	48.4
8	2.362	66.0	2.1	43.2	51.3
9	-2.228	72.2	2.3	40.8	47.7
10	-2.238	82.4	2.8	38.0	48.0
11	2.335	69.3	2.9	40.6	47.8
12	2.373	74.1	3.1	41.0	46.8
13	2.374	79.2	3.2	38.7	45.9
14	2.371	81.1	3.4	38.3	46.8
17	2.339	71.6	2.4	41.1	48.3
18	2.450	84.7	3.0	38.4	46.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	3146.	6.89	.41	5.63	6.46	51.05
2	3146.	6.74	.46	5.50	6.31	52.42
4	3143.	7.10	.47	5.29	6.42	55.40
5	3142.	-8.11	.53	5.77	6.03	53.17
6	3145.	6.09	.30	5.56	6.42	50.80
7	3143.	6.99	.57	6.00	7.13	49.93
8	3146.	5.59	.31	6.01	7.14	48.29
9	3145.	6.49	.35	6.02	7.04	48.56
10	3143.	7.36	.44	5.58	7.05	47.71
11	3143.	5.93	.42	5.72	6.73	50.00
12	3143.	6.24	.45	5.68	6.49	55.12
13	3144.	6.67	.46	5.36	6.36	55.77
14	3144.	6.84	.50	5.30	6.49	53.77
17	3145.	6.13	.36	5.78	6.79	55.53
18	3144.	6.92	.43	5.15	6.18	55.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	19.6620	15.7000	58.4640	22.0920	18.4160	68.4600
2	17.7080	12.1720	55.1380	19.8750	14.2320	64.5190
4	19.1310	15.6220	59.2450	20.7550	17.3700	67.5460
5	16.1370	11.0100	55.1730	18.3590	13.1200	63.3200
6	19.3550	14.2060	58.5130	22.1740	16.9870	67.2020
7	16.2860	12.5790	57.7790	18.5620	15.1050	65.4100
8	17.4980	12.5790	57.7790	20.0530	15.1050	65.4100
9	16.5010	12.7910	57.7110	-16.8240	13.1330	63.3350
10	17.3460	14.2880	59.5000	19.7990	17.1890	67.3840
11	20.3990	17.7980	60.6540	22.5810	20.4170	70.0970
12	20.8730	17.8300	60.6920	23.1180	20.4170	70.0970
13	18.7310	14.3090	58.9450	22.6190	18.6730	68.6770
14	19.8490	16.1940	59.6190	24.0140	21.2010	70.7040
17	17.8190	13.2570	55.8650	18.9350	14.4010	64.6960
18	17.9680	11.7680	54.3570	19.1170	12.7580	62.9130

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		6.13			.35			7.08			8.12		51.05	
2		6.01			.39			6.91			7.92		52.42	
4		6.55			.43			6.47			7.86		55.40	
5		7.12			.45			7.11			7.44		53.17	
6		5.32			.25			6.86			7.91		50.80	
7		6.13			.47			7.29			8.66		49.93	
8		4.88			.26			7.31			8.68		48.29	
9		6.36			.34			7.10			8.30		48.56	
10		6.45			.36			6.78			8.57		47.71	
11		5.36			.37			7.10			8.35		50.00	
12		5.64			.39			7.05			8.04		55.12	
13		5.53			.36			6.71			7.96		55.77	
14		5.65			.38			6.75			8.26		53.77	
17		5.77			.33			7.19			8.45		55.53	
18		6.50			.39			6.40			7.68		55.79	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	67.00	86.00	67.72	86.93
2	66.50	84.50	67.22	85.41
4	67.50	85.50	68.06	86.21
5	68.00	85.50	68.87	86.59
6	69.50	85.50	70.39	86.59
7	70.00	86.00	-70.93	87.14
8	66.90	85.00	67.79	86.13
9	66.50	85.00	66.63	85.16
10	66.80	85.00	67.69	86.13
11	67.00	86.00	67.66	86.84
12	67.50	87.00	68.16	87.85
13	69.00	85.00	70.16	86.43
14	70.50	86.50	-71.68	-87.95
17	67.40	85.00	67.79	85.50
18	67.50	85.00	67.89	85.50

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	2970.	.8870	.8080	-1032.	1.170	5651.
2	3030.	.8700	.8380	1068.	1.170	5650.
4	2990.	.8930	.8270	1086.	1.170	-5605.
5	3040.	.8730	.8430	1086.	1.170	5618.
6	3250.	.9000	.8790	-1032.	1.170	5618.
7	-3290.	-.8160	.9040	1068.	1.170	-5612.
8	-2780.	-.8240	-.7640	1068.	1.170	-5612.
9	2900.	-.8060	.8110	1086.	1.170	5669.
10	3050.	-.7850	.8310	1050.	1.170	-5612.
11	2930.	.8380	.8070	1068.	1.170	5625.
12	3020.	.8620	.8370	1086.	1.170	5620.
13	3120.	.8700	.8770	1086.	1.170	5695.
14	3230.	.8930	.8930	1050.	1.170	5698.
17	3110.	.8620	.8610	1068.	1.170	5655.
18	3080.	.9220	.8730	1122.	1.170	5652.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2954.	.9060	.8250	1054.	5680.
2	3014.	.8890	.8560	1091.	5680.
4	3005.	.9080	.8410	1104.	5680.
5	3035.	.8960	.8640	1114.	5680.
6	3244.	.9230	.9010	1058.	5680.
7	-3286.	-.8380	-.9280	1096.	5680.
8	-2777.	.8460	-.7840	1096.	5680.
9	2900.	-.8100	.8140	1090.	5680.
10	3046.	-.8060	.8530	1078.	5680.
11	2930.	.8540	.8220	1089.	5680.
12	3023.	.8790	.8540	1107.	5680.
13	3060.	.9000	.9060	1122.	5680.
14	3187.	.9230	-.9240	1085.	5680.
17	3105.	.8720	.8710	1080.	5680.
18	3077.	.9330	.8830	1135.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.830	-244.5	22.6	24.2	28.0
2	1.798	220.0	19.5	24.5	27.6
4	1.848	195.4	17.9	20.6	26.6
5	1.805	203.2	18.2	25.7	27.3
6	1.865	191.5	14.1	20.9	30.4
7	-1.685	191.3	20.1	24.7	30.1
8	1.703	191.8	16.3	24.1	29.4
9	-1.669	177.7	12.3	20.4	28.4
10	-1.619	204.0	21.7	-18.3	28.8
11	1.729	203.4	16.3	21.5	25.3
12	1.780	213.0	16.2	23.9	26.4
13	1.800	189.9	18.9	18.9	26.0
14	1.849	182.9	19.0	21.0	27.9
17	1.784	186.6	15.0	19.8	26.6
18	1.909	207.4	17.6	21.2	26.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3105.	-26.40	4.20	4.28	4.97	38.50
2	3110.	24.22	3.69	4.43	4.99	42.60
4	3114.	20.96	3.29	3.64	4.69	47.64
5	3111.	22.30	3.42	4.64	4.92	45.78
6	3117.	20.37	2.57	3.65	5.30	46.10
7	3109.	22.47	4.06	4.76	5.81	43.01
8	3112.	22.31	3.26	4.61	5.61	39.79
9	3116.	21.11	2.50	3.98	5.55	37.66
10	3104.	24.90	4.56	3.68	5.78	37.66
11	3108.	23.27	3.20	4.04	4.76	48.48
12	3108.	23.67	3.09	4.36	4.83	48.89
13	3113.	20.90	3.57	3.42	4.71	47.58
14	3115.	19.61	3.50	3.69	4.91	46.96
17	3115.	20.74	2.87	3.61	4.86	48.09
18	3113.	21.53	3.14	3.62	4.59	46.53

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	6.9610	2.9780	39.7220	7.6090	3.4320	46.3400
2	6.0110	2.2320	37.1510	6.5510	2.5630	43.3080
4	6.7330	2.7310	39.4970	7.1590	2.9930	44.8960
5	6.6190	2.7500	39.9330	7.3160	3.2200	45.6440
6	6.7870	2.7500	39.9330	7.5150	3.2200	45.6640
7	6.5670	3.0320	41.4800	7.2620	3.5740	46.7770
8	6.0690	2.5060	39.6890	6.7060	2.9460	44.7330
9	5.8760	2.3860	39.0470	-5.9610	2.4420	42.8230
10	5.8680	2.5060	39.6890	6.4690	2.9460	44.7330
11	6.6700	2.9960	40.0940	7.1870	3.3760	46.1670
12	7.4320	3.6200	-41.8950	8.0190	-4.0800	48.2290
13	6.2720	2.4630	39.1490	7.2390	3.1210	45.3340
14	7.2840	3.2640	41.0750	-8.4500	-4.1590	-48.4410
17	6.2060	2.4230	37.6190	6.4970	2.6060	43.4770
18	6.5670	2.4260	37.6350	6.8840	2.6060	43.4770

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/LB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	24.15	3.64	5.37	6.23	38.50
2	22.22	3.22	5.55	6.25	42.60
4	19.71	3.00	4.44	5.73	47.64
5	20.17	2.92	5.70	6.04	45.78
6	18.40	2.19	4.49	6.51	46.10
7	20.32	3.45	5.77	7.03	43.01
8	20.19	2.77	5.58	6.79	39.79
9	20.81	2.44	4.69	6.54	37.66
10	22.59	3.19	4.45	7.00	37.66
11	21.59	2.84	4.99	5.88	48.48
12	21.94	2.74	5.38	5.97	48.89
13	18.11	2.82	4.25	5.85	47.58
14	16.91	2.75	4.68	6.23	46.96
17	19.81	2.67	4.49	6.03	48.09
18	20.54	2.92	4.49	5.69	46.53

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.50	64.00	36.89	64.69
2	36.00	64.00	36.39	64.69
4	36.50	64.00	36.80	64.53
5	36.00	64.00	36.46	64.82
6	37.00	64.00	37.47	64.82
7	36.50	64.00	36.98	64.85
8	35.20	63.00	35.67	63.84
9	37.50	65.00	37.57	65.13
10	35.10	63.00	35.57	63.84
11	37.00	65.00	37.36	-65.64
12	36.00	64.00	36.35	64.63
13	36.00	64.00	36.60	65.08
14	36.10	64.00	36.71	65.08
17	36.00	64.00	36.21	64.37
18	36.80	64.00	37.01	64.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1310.	.8130	.7540	-960.	1.030	1501.
2	1270.	.7900	.7500	1014.	1.030	1501.
4	1370.	.7910	.8100	1032.	1.040	1475.
5	-1390.	.7960	.8170	1014.	1.040	1503.
6	1320.	.7940	.7620	978.	1.050	1503.
7	1350.	-.7030	.7990	1032.	-1.060	1504.
8	-1450.	.7580	-.8640	996.	1.050	1419.
9	1370.	-.7130	.8040	1041.	1.040	1543.
10	1300.	-.7090	.7680	978.	1.030	1419.
11	1330.	.7540	.7580	996.	1.040	-1574.
12	1320.	.7940	.7760	1014.	1.050	1487.
13	1310.	.7850	.7870	1032.	1.040	1546.
14	1300.	.7710	.7540	-960.	1.040	1546.
17	1320.	.7760	.7810	1014.	1.030	1475.
18	1350.	.8380	.8180	-1068.	1.040	1474.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	COR TT7 DEG R	COR THRUST LBF
1	1303.	.8310	.7700			-980.	1509.
2	1263.	.8080	.7670			1036.	1509.
4	1377.	.8040	.8240			1049.	1495.
5	1388.	.8160	.8380			1040.	1519.
6	1318.	.8140	.7820			1003.	1519.
7	1348.	-.7220	.8210			1059.	1522.
8	-1448.	.7780	-.8870			1022.	1436.
9	1370.	-.7160	.8070			1045.	1546.
10	1298.	-.7280	.7880			1004.	1436.
11	1330.	.7690	.7730			1015.	-1589.
12	1321.	.8090	.7910			1034.	1503.
13	1285.	.8120	.8140			1067.	1541.
14	1274.	.7970	.7800			992.	1541.
17	1318.	.7850	.7900			1026.	1482.
18	1349.	.8480	.8280			-1080.	1482.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.435	920.1	577.0	10.8	13.7
2	1.408	867.5	527.1	11.0	13.8
4	1.371	879.3	-645.5	9.1	10.5
5	1.412	848.6	554.0	10.3	14.1
6	1.432	840.5	478.6	7.6	15.8
7	-1.238	763.7	513.8	9.1	15.0
8	1.348	836.5	506.1	9.5	15.5
9	-1.290	-748.8	-419.7	8.3	14.7
10	-1.254	758.9	502.1	7.7	15.8
11	1.358	779.7	462.9	8.6	10.9
12	1.417	804.3	533.4	10.1	11.5
13	1.374	849.3	602.7	7.1	10.6
14	1.322	854.4	-673.4	7.3	10.3
17	1.405	784.1	460.2	8.3	11.2
18	1.505	881.1	527.8	9.4	11.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2666.	108.79	117.19	2.10	2.66	22.53
2	2690.	105.49	110.12	2.20	2.75	25.75
4	-2618.	106.87	-134.79	1.82	2.10	26.05
5	2679.	102.49	114.95	2.03	2.79	23.73
6	2723.	101.75	99.54	1.51	3.15	22.88
7	2660.	104.49	120.77	2.04	-3.37	20.65
8	2686.	106.13	110.31	1.99	3.22	19.69
9	2731.	100.92	97.18	1.83	-3.26	20.85
10	2673.	102.99	117.05	1.72	-3.53	17.32
11	2719.	99.38	101.36	1.80	2.29	29.34
12	2696.	97.41	110.98	2.00	2.30	26.25
13	2644.	104.03	126.84	1.42	2.12	27.27
14	-2592.	106.63	-144.37	1.49	2.11	24.74
17	2735.	97.13	97.92	1.69	2.28	27.45
18	2712.	101.05	103.98	1.78	2.14	22.88

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2320	.0960	17.9180	.2350	.1070	20.7490
2	.2320	.0960	17.9200	.2350	.1070	20.7490
4	.2330	.0990	18.2800	.2340	.1050	20.6640
5	.2330	.0970	18.3620	.2360	.1090	20.8180
6	.2330	.0970	18.3620	.2360	.1090	20.8180
7	.2330	.0970	-18.6460	.2360	.1090	20.8160
8	.2260	.0860	18.1640	.2290	.0970	20.2910
9	.2380	.1110	-19.1570	.2380	.1120	20.9850
10	.2260	.0860	18.1640	.2290	.0970	20.2910
11	.2400	.1090	18.5850	-.2420	-.1190	-21.2610
12	.2330	.0980	18.1220	.2350	.1060	20.7150
13	.2310	.0930	18.2980	.2380	.1120	20.9580
14	.2310	.0930	17.9850	.2380	.1120	20.9580
17	.2310	.0980	17.8740	.2330	.1030	20.5790
18	.2310	.0980	17.8810	.2330	.1030	20.5790

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	107.26	105.42	2.61	3.31	22.53
2	104.02	99.09	2.74	3.42	25.75
4	106.45	-126.31	2.21	2.55	26.05
5	101.15	102.29	2.48	3.40	23.73
6	100.42	-88.58	1.84	3.83	22.88
7	103.12	107.10	2.45	-4.04	20.65
8	104.75	97.96	2.38	-3.87	19.69
9	100.74	95.50	2.16	3.83	20.85
10	101.65	103.95	2.07	-4.23	17.32
11	98.47	92.79	2.21	2.81	29.34
12	96.59	101.88	2.46	2.82	26.25
13	100.96	105.56	1.75	2.61	27.27
14	103.43	120.04	1.86	2.64	24.74
17	96.49	92.70	2.09	2.82	27.45
18	100.44	98.55	2.20	2.64	22.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	60.00	33.36	60.65
2	33.50	61.00	33.86	61.66
4	33.00	60.00	33.27	60.50
5	32.50	59.00	32.92	59.75
6	34.00	60.50	34.43	61.27
7	33.80	60.50	34.25	61.30
8	32.00	59.00	32.42	59.78
9	33.50	60.50	33.56	60.62
10	32.40	60.00	32.83	60.80
11	34.00	61.00	34.33	61.40
12	33.00	59.50	33.32	60.08
13	33.10	59.50	33.66	60.50
14	32.60	59.50	33.15	60.50
17	33.10	60.20	33.29	60.55
18	34.20	61.20	34.40	61.56

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1260.	.8530	.8040	-960.	1.020	1179.
2	1230.	.8180	.7840	1014.	1.020	1249.
4	1270.	.8310	.8260	1014.	1.030	1159.
5	1230.	.8380	.8210	996.	1.030	1110.
6	1240.	.8190	.7830	978.	1.050	1216.
7	1290.	-.7230	.8350	1032.	-1.060	1217.
8	-1370.	.7920	-.9140	996.	1.050	1111.
9	1260.	-.7400	.8270	1041.	1.030	1181.
10	1240.	-.7270	.7930	978.	1.030	1182.
11	1230.	.7940	.7740	996.	1.030	1240.
12	1230.	.8230	.8150	1014.	1.050	1134.
13	1250.	.8170	.8460	1032.	1.040	1178.
14	1300.	.8030	.8500	-960.	1.030	1179.
17	1240.	.8030	.8090	1014.	1.030	1173.
18	1300.	.8660	.8380	1050.	1.040	1243.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1253.	.8710	.8220	980.	1185.
2	1223.	.8360	.8010	1036.	1256.
4	1276.	.8440	.8400	1031.	1175.
5	1228.	.8600	.8420	1021.	1123.
6	1238.	.8400	.8030	1003.	1229.
7	128A.	-.7420	.8580	1059.	1231.
8	-1368.	.8130	-.9380	1022.	1125.
9	1260.	-.7430	.8310	1045.	1183.
10	1238.	-.7460	.8140	1004.	1196.
11	1230.	.8090	.7890	1015.	1252.
12	1231.	.8390	.8310	1034.	1146.
13	1226.	.8450	.8750	1067.	1175.
14	1274.	.8300	-.8790	992.	1175.
17	1238.	.8120	.8180	1026.	1179.
18	1299.	.8760	.8480	1062.	1249.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.463	1017.4	726.6	8.9	12.9
2	1.423	937.6	646.5	9.9	13.1
4	1.387	984.8	-829.8	8.3	9.6
5	1.440	960.9	716.7	8.7	13.4
6	1.439	926.8	600.2	6.1	15.1
7	-1.240	834.2	619.4	7.4	14.2
8	1.366	934.8	649.6	8.8	14.7
9	-1.284	864.6	584.4	7.3	14.0
10	-1.250	-822.9	618.0	6.8	15.1
11	1.382	883.9	622.4	7.2	9.8
12	1.412	915.8	714.2	9.0	10.6
13	1.381	949.4	769.4	6.1	9.7
14	1.329	945.0	-839.5	6.2	9.4
17	1.409	899.8	592.9	7.2	10.4
18	1.522	957.8	641.2	8.4	10.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-33 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	2592.	114.72	140.76	1.65	2.40	20.00
2	2627.	110.17	130.51	1.91	2.53	25.75
4	-2524.	114.08	-165.13	1.58	1.82	25.92
5	2595.	110.20	141.21	1.64	2.52	22.16
6	2653.	108.78	121.02	1.18	2.91	21.96
7	2593.	111.02	141.60	1.63	-3.10	18.90
8	2606.	113.47	135.45	1.75	2.93	19.40
9	2621.	112.35	130.47	1.55	-3.00	20.57
10	2599.	108.90	140.50	1.49	-3.28	18.44
11	2630.	107.05	129.51	1.44	1.95	26.96
12	2592.	107.01	143.37	1.73	2.03	25.53
13	2553.	111.76	155.60	1.18	1.88	27.27
14	-2503.	113.33	-172.95	1.23	1.85	24.58
17	2652.	107.75	121.97	1.41	2.05	28.31
18	2654.	106.27	122.21	1.54	1.93	23.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2070	.0640	16.3310	.2100	.0710	18.8950
2	.2110	.0700	16.6200	.2140	.0770	19.2310
4	.2090	.0660	16.6830	.2090	.0700	18.8460
5	.2040	.0590	16.4270	.2060	.0660	18.6010
6	.2100	.0670	16.8640	.2130	.0750	19.1030
7	.2100	.0670	-17.1210	.2130	.0750	19.1130
8	.2040	.0590	16.6770	.2060	.0670	18.6110
9	.2090	.0700	-17.2440	.2100	.0710	18.8850
10	.2080	.0640	-16.9720	.2110	.0720	18.9450
11	.2120	.0700	16.8060	.2140	.0770	19.2110
12	.2060	.0630	16.3820	.2080	.0680	18.7090
13	.2030	.0590	16.4800	.2090	.0700	18.8470
14	.2030	.0590	16.1990	.2090	.0700	18.8470
17	.2080	.0670	16.3910	.2100	.0710	18.8640
18	.2130	.0730	16.6860	.2140	.0760	19.1970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		113.14			127.15			2.05			2.98		20.00	
2		108.66			117.82			2.37			3.15		25.75	
4		113.65			-155.25			1.91			2.21		25.92	
5		108.81			126.44			2.00			3.06		22.16	
6		107.40			108.19			1.44			3.55		21.96	
7		109.60			126.16			1.95			-3.72		18.90	
8		112.03			120.89			2.10			3.52		19.40	
9		112.16			128.33			1.82			3.52		20.57	
10		107.51			125.26			1.78			-3.94		18.44	
11		106.10			119.05			1.77			2.39		26.96	
12		106.15			132.18			2.12			2.49		25.53	
13		108.52			130.46			1.45			2.31		27.27	
14		109.99			144.88			1.54			2.31		24.58	
17		107.06			115.72			1.74			2.54		28.31	
18		105.64			116.03			1.90			2.39		23.61	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * 1800 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1	22305.	1857.	507.7	30.12	.005700
2	22930.	1856.	508.2	30.13	.005640
5	21808.	1846.	513.2	30.11	.005780
7	22146.	1795.	516.2	30.11	.007150
8	22530.	1796.	516.2	30.11	.007150
9	21549.	1795.	516.2	30.11	.007150
10	24137.	1795.	516.2	30.11	.007150
11	23164.	1815.	518.2	29.98	.007270
12	19488.	1815.	519.7	29.98	.007470
13	21835.	1815.	519.7	29.98	.007470
14	27963.	1815.	524.2	29.98	.008160
17	33039.	1791.	512.2	29.99	.006150
18	27562.	1791.	512.7	30.00	.006420

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.10	60.00	33.46	60.65
2	32.70	59.80	33.04	60.41
5	34.60	62.00	34.78	-62.33
7	34.00	60.00	34.08	60.15
8	32.00	60.00	32.08	60.15
9	33.50	60.00	33.58	60.15
10	32.50	60.00	32.58	60.15
11	32.50	59.50	32.52	59.53
12	33.00	60.50	32.97	60.44
13	33.00	59.50	32.97	59.44
14	34.00	61.00	33.82	60.68
17	34.10	61.00	34.32	61.39
18	32.80	59.00	32.99	59.34

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	1290.	.8490	.8440	1014.	1.030	1177.
2	1240.	.8470	.8240	1032.	1.030	1161.
5	1340.	.8690	.8380	1032.	1.040	-1300.
7	1310.	.8570	.8690	1041.	1.040	1143.
8	1230.	-.9410	.8230	1059.	1.050	1143.
9	1320.	.8900	-.9220	-1158.	1.020	1143.
10	1270.	.8630	.8350	1023.	1.030	1143.
11	-1190.	.8580	.7880	996.	1.030	1105.
12	1260.	.8530	.8170	1014.	1.040	1169.
13	1270.	.8610	.8560	1032.	1.040	1099.
14	1270.	.8220	.8050	996.	1.040	1185.
17	1310.	.8440	.8300	996.	1.030	1234.
18	1280.	.8700	.8770	1032.	1.060	1091.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1285.	.8680	.8630	1036.	1185.
2	1236.	.8640	.8410	1053.	1169.
5	1341.	.8790	.8470	1043.	-1308.
7	1315.	.8610	.8730	1046.	1150.
8	1235.	-.9450	.8270	1064.	1150.
9	1325.	.8940	-.9260	-1163.	1150.
10	1275.	.8670	.8390	1028.	1150.
11	-1192.	.8580	.7890	997.	1107.
12	1264.	.8510	.8150	1012.	1171.
13	1274.	.8590	.8540	1030.	1101.
14	1279.	.8130	.7970	985.	1188.
17	1305.	.8550	.8410	1008.	1237.
18	1276.	.8800	.8870	1044.	1094.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.482	968.0	665.2	8.1	9.8
2	1.446	991.9	754.8	7.9	9.0
5	1.530	923.8	652.8	8.6	10.6
7	1.499	951.5	655.2	8.4	10.0
8	-1.662	-1058.8	665.7	9.1	10.8
9	1.566	1006.4	546.7	7.7	9.8
10	1.460	983.2	-814.0	6.9	9.4
11	1.493	976.5	672.7	8.2	9.5
12	1.480	935.6	695.9	9.2	10.2
13	1.484	993.5	717.4	8.9	9.9
14	1.406	947.0	715.7	7.6	9.4
17	1.458	887.5	721.3	5.7	9.6
18	1.485	1001.5	776.4	6.6	9.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2636.	109.59	129.37	1.51	1.83	21.10
2	2582.	112.58	147.31	1.47	1.69	23.92
5	2658.	102.11	123.97	1.56	1.93	27.02
7	2642.	106.74	126.27	1.55	1.85	23.10
8	2666.	108.07	116.74	1.53	1.82	24.28
9	2656.	108.65	119.95	1.37	1.76	25.81
10	-2556.	109.55	-155.83	1.27	1.71	23.33
11	2629.	109.44	129.51	1.52	1.75	26.54
12	2621.	105.45	134.74	1.70	1.88	25.56
13	2604.	110.95	137.63	1.63	1.81	23.40
14	2587.	110.86	143.93	1.47	1.80	25.06
17	2610.	-101.10	141.16	1.06	1.80	-28.87
18	2578.	110.67	147.38	1.20	1.73	25.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.2070	.0640	16.6630	.2100	.0710	18.8950
2	.2070	.0640	16.6340	.2090	.0700	18.8190
5	-.2170	.0780	-17.3350	-.2180	.0820	-19.4920
7	.2080	.0670	16.3270	.2080	.0680	18.7300
8	.2080	.0670	16.3270	.2080	.0680	18.7300
9	.2080	.0670	16.3270	.2080	.0680	18.7300
10	.2080	.0670	16.3270	.2080	.0680	18.7300
11	.2050	.0650	16.1380	.2050	.0650	18.5280
12	.2100	.0710	16.3830	.2090	.0700	18.8280
13	.2050	.0660	16.0970	.2050	.0650	18.4990
14	.2120	.0760	16.3770	.2100	.0710	18.9060
17	.2110	.0710	16.8410	.2130	.0750	19.1400
18	.2030	.0610	16.1850	.2040	.0640	18.4670

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	108.20	117.18	1.84	2.22	21.10
2	111.38	134.21	1.79	2.05	23.92
5	101.68	118.49	1.88	2.33	27.02
7	106.82	124.55	1.91	2.28	23.10
8	108.15	115.15	1.89	2.24	24.28
9	108.73	118.02	1.69	2.17	25.81
10	109.63	-153.71	1.56	2.11	23.33
11	109.51	129.29	1.87	2.16	26.54
12	105.77	136.60	2.10	2.32	25.56
13	111.29	139.51	2.01	2.24	23.40
14	112.01	-152.68	1.82	2.23	25.06
17	-100.23	132.71	1.30	2.19	-28.87
18	109.82	139.45	1.47	2.12	25.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.80	64.10	37.20	64.79
2	36.80	64.40	37.18	65.06
5	36.20	64.00	36.39	64.34
7	37.00	64.00	37.09	64.15
8	36.00	64.00	36.09	64.15
9	37.00	64.00	37.09	64.15
10	36.00	64.00	36.09	64.15
11	36.00	64.00	36.02	64.03
12	36.20	64.50	36.17	64.44
13	36.50	64.00	36.46	63.94
14	37.00	65.00	36.81	64.66
17	37.30	64.00	37.54	64.40
18	37.50	64.00	37.72	64.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1390.	.8300	.8180	1014.	1.030	1507.
2	1370.	.8200	.8080	1032.	1.030	1530.
5	1370.	.8550	.8190	1041.	1.040	1470.
7	1410.	.8280	.8390	1032.	1.040	1454.
8	1420.	-.9170	.8600	1068.	1.050	1454.
9	1420.	.8620	.8600	1068.	1.020	1454.
10	1380.	.8420	-.8850	-1203.	1.030	1454.
11	1310.	.8300	.7700	996.	1.040	1450.
12	1350.	.8280	.7980	1032.	1.050	1484.
13	1380.	.8320	.8250	1032.	1.045	1442.
14	-1290.	.8010	-.7410	996.	1.040	1503.
17	1420.	.8200	.8340	996.	1.030	1481.
18	1440.	.8610	.8610	1032.	1.060	1478.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1384.	.8480	.8360	1036.	1517.
2	1366.	.8370	.8240	1053.	1540.
5	1371.	.8640	.8280	1052.	1479.
7	1416.	.8320	.8440	1037.	1463.
8	1426.	-.9210	.8640	1073.	1463.
9	1426.	.8660	.8640	1073.	1463.
10	1385.	.8460	-.8890	-1209.	1463.
11	1312.	.8300	.7710	997.	1453.
12	1354.	.8260	.7960	1030.	1487.
13	1384.	.8300	.8240	1030.	1445.
14	-1299.	.7920	-.7330	985.	1506.
17	1414.	.8300	.8450	1008.	1484.
18	1435.	.8710	.8710	1044.	1482.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.493	878.7	527.0	7.7	10.4
2	1.456	875.0	579.6	8.1	10.2
5	1.525	877.7	589.3	8.3	10.9
7	1.485	851.3	532.3	8.2	10.6
8	-1.678	932.0	491.9	9.7	11.8
9	1.561	903.9	501.1	7.6	10.7
10	1.471	899.4	-661.1	6.9	10.0
11	1.490	863.6	527.1	8.1	10.3
12	1.484	830.6	542.4	9.3	10.8
13	1.482	891.2	556.9	9.3	10.6
14	1.417	861.9	564.8	7.6	10.0
17	1.458	797.8	582.6	5.6	10.4
18	1.545	889.1	555.3	6.7	10.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2715.	101.70	104.79	1.47	1.98	20.39
2	2681.	102.54	116.68	1.56	1.95	23.34
5	2691.	98.61	113.74	1.54	2.00	26.40
7	2709.	98.83	106.16	1.56	2.03	23.86
8	2760.	97.55	88.45	1.67	2.03	23.60
9	2734.	100.77	95.97	1.39	1.96	24.84
10	-2639.	102.66	-129.64	1.29	1.88	24.48
11	2711.	100.01	104.88	1.54	1.96	26.47
12	2708.	96.43	108.19	1.77	2.05	25.56
13	2691.	102.98	110.54	1.77	2.00	25.03
14	2674.	103.48	116.49	1.50	1.98	24.05
17	2687.	93.55	117.37	1.07	2.01	-30.07
18	2708.	99.18	106.41	1.23	1.95	23.78

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2330	.0980	18.3300	.2360	.1080	20.8040
2	.2350	.1010	18.5000	.2380	.1120	20.9500
5	.2310	.0980	18.2830	.2320	.1030	20.5630
7	.2310	.0990	17.8330	.2310	.1010	20.4620
8	.2310	.0990	17.8330	.2310	.1010	20.4620
9	.2310	.0990	17.8330	.2310	.1010	20.4620
10	.2310	.0990	17.8330	.2310	.1010	20.4620
11	.2300	.0990	17.7650	.2300	.0990	20.3960
12	.2340	.1060	17.9390	.2330	.1040	20.6140
13	.2300	.1000	17.7060	.2300	.0980	20.3460
14	.2370	.1130	17.9670	.2350	.1070	20.7320
17	.2310	.0970	18.1150	.2330	.1040	20.5960
18	.2310	.0980	18.0260	.2330	.1030	20.5790

NOTE= MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	100.38	94.50	1.79	2.42	20.39
2	101.32	105.81	1.89	2.38	23.34
5	98.18	108.59	1.86	2.42	26.40
7	98.90	104.62	1.93	2.50	23.86
8	97.62	87.17	2.06	2.50	23.60
9	100.84	94.57	1.72	2.42	24.84
10	102.73	-127.75	1.59	2.32	24.48
11	100.07	104.68	1.90	2.42	26.47
12	96.74	109.72	2.18	2.53	25.56
13	103.30	112.10	2.19	2.47	25.03
14	104.57	-123.83	1.86	2.45	24.05
17	92.73	110.13	1.31	2.45	-30.07
18	98.39	100.40	1.50	2.39	23.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N. PER CENT	CORR N2 PER CENT
1	102.00	100.10	103.10	101.18
2	102.00	100.50	103.05	101.53
5	103.70	101.00	104.25	101.54
7	103.50	100.00	103.75	100.24
8	102.50	101.00	102.75	101.24
9	103.00	101.00	103.25	101.24
10	102.00	101.00	102.25	101.24
11	103.50	101.50	103.55	101.55
12	103.00	101.50	102.90	101.40
13	104.00	101.50	103.90	101.40
14	104.00	102.00	103.45	101.46
17	102.00	99.00	102.65	-99.63
18	103.40	99.80	104.00	100.38

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	9700.	1.4990	1.3490	1392.	1.840	17789.
2	9800.	1.5530	1.3800	1428.	1.840	17783.
5	9300.	1.5750	1.3020	1410.	1.840	17798.
7	9500.	1.5070	1.3300	1410.	1.840	17795.
8	9900.	1.5360	1.3780	1392.	1.840	17795.
9	9700.	1.5390	1.3670	1428.	1.840	17795.
10	-9000.	1.5320	-1.2520	1392.	1.840	17795.
11	9900.	1.6180	1.3750	1374.	1.840	17875.
12	9400.	1.5570	1.3220	1410.	1.840	17872.
13	9300.	1.5720	1.3160	1428.	1.840	17872.
14	9600.	1.5710	1.3500	1410.	1.840	17872.
17	9700.	1.6090	1.3370	1356.	1.840	17866.
18	9900.	1.6300	1.3830	1392.	1.840	17863.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	9661.	1.5310	1.3780	1422.	1790A.
2	976A.	1.5850	1.4090	-1457.	1790B.
5	930A.	1.5920	1.3160	1425.	1790A.
7	9537.	1.5150	1.3370	1417.	1790A.
8	9939.	1.5440	1.3840	139A.	1790A.
9	973A.	1.5460	1.3740	1435.	1790A.
10	-9035.	1.5400	-1.25A0	139A.	1790A.
11	9913.	1.6200	1.3760	1375.	1790A.
12	942A.	1.5540	1.3190	1407.	1790A.
13	932A.	1.5690	1.3140	1425.	1790A.
14	9670.	1.5540	1.3360	1395.	1790A.
17	9662.	1.6290	1.3540	1373.	1790A.
18	9867.	1.6490	1.3990	140B.	1790A.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.166	18.6	5.7	91.3	89.9
2	3.283	20.0	4.6	94.5	92.4
5	3.326	25.6	4.6	88.9	89.7
7	3.179	18.3	1.5	95.2	94.3
8	3.241	15.0	1.4	95.5	92.3
9	3.246	21.2	2.0	87.5	84.6
10	3.232	21.7	3.2	88.8	86.7
11	3.417	17.4	4.7	100.3	94.0
12	3.284	21.0	5.0	85.9	83.5
13	3.317	22.6	6.2	93.2	88.7
14	3.314	18.6	5.0	97.0	91.4
17	3.396	18.2	6.0	95.0	93.7
18	3.440	20.5	4.3	90.0	88.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3159.	1.18	.62	9.52	9.52	51.69
2	-3159.	1.22	.49	9.51	9.51	52.50
5	3154.	1.55	.47	8.81	8.89	54.00
7	3154.	1.15	.16	9.87	9.87	54.74
8	3154.	.93	.15	9.72	9.72	51.37
9	3153.	1.31	.22	8.89	8.89	54.90
10	3153.	1.35	.34	9.06	9.06	54.55
11	3153.	1.02	.47	9.68	9.68	54.19
12	3152.	1.28	.53	8.62	8.62	56.04
13	3152.	1.37	.64	9.26	9.26	54.66
14	3153.	1.13	.52	9.65	9.65	48.34
17	3153.	1.08	.61	9.22	9.22	-63.82
18	3153.	1.20	.43	8.62	8.62	56.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	72.3330	69.7140	83.3790	85.6010	83.1410	96.0710
2	83.6380	75.4970	84.9310	98.9710	89.3040	97.5910
5	91.9990	82.2670	86.1310	100.4820	89.4280	97.6200
7	72.2260	66.6530	80.0310	74.8140	68.7330	92.1360
8	85.0850	81.6490	83.6820	88.2720	84.2530	96.3520
9	85.5180	81.6490	83.6820	88.7280	84.2530	96.3520
10	84.4400	81.6490	83.6820	87.5910	84.2530	96.3520
11	105.5310	89.1210	85.0020	106.4930	89.5930	97.6600
12	93.1100	88.8080	84.5550	91.6430	86.9840	97.0290
13	96.0390	88.8080	84.5550	94.5120	86.9840	97.0290
14	100.9070	87.1300	84.9540	92.3120	88.0630	97.2920
17	78.4650	54.5880	78.1550	87.3690	60.5890	-89.6130
18	89.5070	64.2030	80.5650	99.1140	70.7310	92.7180

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1000 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	1.00	.52	11.78	11.78	51.69
2	1.03	.41	11.74	11.74	52.50
5	1.42	.44	10.73	10.82	54.00
7	1.11	.15	11.36	11.36	54.74
8	.89	.15	11.19	11.19	51.37
9	1.26	.21	10.99	10.99	54.90
10	1.30	.33	11.20	11.20	54.55
11	1.01	.47	11.12	11.12	54.19
12	1.31	.54	10.62	10.62	56.04
13	1.39	.66	11.41	11.41	54.66
14	1.23	.58	11.05	11.05	48.34
17	.97	.55	11.35	11.35	-63.82
18	1.08	.39	10.66	10.66	56.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3H * 1800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	96.70	98.10	97.74	99.16
2	96.00	98.00	96.99	99.01
5	98.00	98.00	98.52	98.52
7	97.50	98.00	97.74	98.24
8	96.50	98.50	96.73	98.74
9	97.00	98.00	97.23	98.24
10	96.00	98.50	96.23	98.74
11	97.00	99.50	97.05	99.55
12	97.00	99.00	96.91	98.90
13	98.00	99.50	97.91	99.40
14	98.00	99.50	97.48	98.98
17	95.30	97.00	95.90	97.61
18	96.30	97.00	96.86	97.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8100.	1.3530	1.2410	1293.	1.650	15109.
2	7900.	1.3770	1.2220	1320.	1.650	15104.
5	7700.	1.4040	1.1840	1302.	1.650	15117.
7	8000.	1.3540	1.2430	1329.	1.650	15114.
8	8000.	1.3830	1.2300	1302.	1.650	15114.
9	8000.	1.3690	1.2470	1338.	1.650	15114.
10	7500.	1.3790	1.1450	1284.	1.650	15114.
11	8100.	1.4120	1.2420	1284.	1.650	15182.
12	7600.	1.3800	1.1730	1302.	1.650	15180.
13	8100.	1.3930	1.2590	1320.	1.650	15180.
14	7800.	1.3890	1.2130	1320.	1.650	15180.
17	7900.	1.3880	1.2020	1266.	1.650	15174.
18	8100.	1.4330	1.2590	1320.	1.650	15172.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8067.	1.3820	1.2680	1321.	15210.
2	7875.	1.4060	1.2470	1347.	15210.
5	7706.	1.4190	1.1970	1316.	15210.
7	8031.	1.3610	1.2490	1335.	15210.
8	8031.	1.3900	1.2360	1308.	15210.
9	8031.	1.3760	1.2530	1344.	15210.
10	7529.	1.3860	1.1500	1290.	15210.
11	8111.	1.4140	1.2440	1285.	15210.
12	7623.	1.3780	1.1710	1299.	15210.
13	8124.	1.3910	1.2570	1317.	15210.
14	7857.	1.3740	1.2000	1306.	15210.
17	7869.	1.4050	1.2180	1282.	15210.
18	8073.	1.4490	1.2730	1335.	15210.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.853	25.7	2.6	70.5	71.6
2	2.905	28.4	2.4	69.6	68.8
5	2.958	32.7	2.4	67.1	69.6
7	2.851	25.2	2.7	71.6	70.6
8	2.913	-20.0	1.1	73.4	72.3
9	2.883	28.8	1.4	66.3	66.5
10	2.904	25.3	1.7	67.7	68.2
11	2.975	24.2	2.4	71.7	69.0
12	2.906	28.7	2.6	65.6	65.6
13	2.934	28.6	2.5	69.9	68.1
14	2.924	25.3	2.3	72.0	71.3
17	2.922	26.5	3.0	68.3	70.1
18	3.018	29.7	2.4	66.4	68.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3159.	1.81	.31	8.16	8.29	54.72
2	-3159.	1.96	.29	7.91	7.91	56.66
5	3154.	2.22	.28	7.48	7.76	56.93
7	3152.	1.77	.32	8.27	8.27	56.31
8	3153.	-1.38	.13	8.30	9.30	55.19
9	3152.	2.00	.17	7.58	7.60	55.39
10	3153.	1.75	.20	7.69	7.74	56.56
11	3153.	1.63	.28	7.94	7.94	55.71
12	3152.	1.98	.30	7.44	7.44	57.40
13	3152.	1.96	.30	7.85	7.85	54.87
14	3152.	1.73	.27	8.12	8.12	51.32
17	3152.	1.82	.35	7.71	7.91	56.58
18	3152.	1.97	.27	-7.26	7.45	58.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	45.5450	46.3900	76.2260	52.6930	55.0050	87.7240
2	46.8330	45.3950	75.9340	53.9180	53.3270	87.1270
5	48.6470	44.5650	75.2560	52.3350	48.2350	85.2190
7	44.6880	43.9590	73.0000	46.0370	45.2720	84.0190
8	49.4730	48.9560	74.7710	51.0180	50.4350	86.0620
9	45.7850	43.9590	73.0000	47.1850	45.2720	84.0190
10	49.1350	48.9560	74.7710	50.6650	50.4350	86.0620
11	57.5390	59.3240	77.7270	57.9470	59.6230	89.2970
12	51.6230	53.2670	75.5620	50.9140	52.2070	86.7200
13	55.6630	59.0670	77.3030	54.8880	57.8840	88.7160
14	55.0030	58.2380	75.9210	51.0090	52.9910	87.0060
17	42.1160	35.3860	70.9530	45.9690	39.1420	81.2970
18	45.2550	35.2900	70.5270	49.1870	38.7070	81.0920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		1.56			.26			10.09			10.24		54.72	
2		1.70			.24			9.75			9.75		56.66	
5		2.06			.25			9.10			9.43		56.93	
7		1.72			.31			10.23			10.23		56.31	
8		-1.33			.13			10.27			10.27		55.19	
9		1.94			.17			9.37			9.40		55.39	
10		1.70			.20			9.50			9.57		56.56	
11		1.62			.28			9.12			9.12		55.71	
12		2.01			.31			9.17			9.17		57.40	
13		1.99			.30			9.68			9.68		54.87	
14		1.87			.30			9.99			9.99		51.32	
17		1.66			.32			9.49			9.74		56.58	
18		1.81			.25			8.96			9.20		58.82	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	84.70	93.60	85.61	94.61
2	84.50	93.00	85.37	93.96
5	86.00	93.00	86.46	93.50
7	86.50	93.50	86.71	93.73
8	85.50	94.00	85.71	94.23
9	86.50	94.50	86.71	94.73
10	85.00	93.50	85.21	93.73
11	86.00	94.50	86.04	94.55
12	86.00	94.50	85.92	94.41
13	87.00	94.50	86.92	94.41
14	87.00	95.00	86.54	94.50
17	85.00	93.00	85.54	93.59
18	85.40	-92.00	85.90	-92.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	5500.	1.1120	1.0530	1194.	1.390	10659.
2	5600.	1.1120	1.0790	1212.	1.390	10655.
5	5200.	1.1330	.9690	-1131.	1.390	10664.
7	5800.	1.1390	1.1200	1215.	1.390	10662.
8	5600.	1.1550	1.0720	1194.	1.390	10662.
9	5700.	1.1550	1.1030	1221.	1.390	10662.
10	5000.	1.1430	.9430	1158.	1.390	10662.
11	5500.	1.1450	1.0500	1176.	1.390	10710.
12	5100.	1.1360	.9880	1212.	1.390	10709.
13	5600.	1.1420	1.0850	1212.	1.390	10709.
14	5700.	-1.0600	1.0960	1194.	1.390	10709.
17	5500.	1.1490	1.0410	1158.	1.390	10705.
18	5700.	1.1770	1.1040	1212.	1.390	10703.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	5478.	1.1360	1.0760	1220.	10730.
2	5582.	1.1350	1.1020	1237.	10730.
5	5204.	1.1450	.9800	-1143.	10730.
7	5823.	1.1450	1.1260	1221.	10730.
8	5622.	1.1610	1.0770	1199.	10730.
9	5722.	1.1610	1.1090	1227.	10730.
10	5020.	1.1480	.9470	1163.	10730.
11	5507.	1.1460	1.0510	1177.	10730.
12	5115.	1.1340	.9860	1209.	10730.
13	5617.	1.1400	1.0830	1209.	10730.
14	5742.	-1.0490	1.0850	1181.	10730.
17	5478.	1.1640	1.0550	1172.	10730.
18	5681.	1.1910	1.1170	1226.	10730.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	2.335	75.7	2.6	41.1	45.5
2	2.332	85.3	3.6	39.6	43.1
5	2.375	89.6	3.3	38.2	42.9
7	2.388	66.0	2.4	43.4	47.3
8	2.423	54.4	1.5	43.1	47.4
9	2.422	65.1	2.1	40.3	45.3
10	2.395	72.7	2.6	38.3	44.7
11	2.400	73.3	2.7	40.4	45.1
12	2.380	78.1	2.9	39.3	43.0
13	2.393	69.9	2.6	42.4	45.4
14	-2.220	59.9	2.6	37.6	41.0
17	2.408	76.2	3.6	38.4	45.5
18	2.467	80.4	3.6	37.8	45.2

NOTE- MINUS SIGNS DLNOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODF 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	-3151.	6.51	.39	5.81	6.42	52.49
2	3150.	7.33	.53	5.59	6.09	53.99
5	3145.	7.55	.47	5.29	5.95	56.00
7	3146.	5.53	.34	5.98	6.52	55.67
8	3148.	4.50	.21	5.85	6.44	53.59
9	3147.	5.38	.30	5.47	6.16	53.83
10	3145.	6.08	.37	5.25	6.14	56.13
11	3145.	6.11	.39	5.54	6.18	56.03
12	3144.	6.56	.42	5.42	5.94	-58.55
13	3146.	5.85	.38	5.82	6.24	55.19
14	3146.	5.41	.40	5.58	6.08	53.68
17	3145.	6.34	.51	5.24	6.21	55.79
18	3144.	6.52	.51	5.04	6.03	56.60

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	19.3950	16.1420	59.9980	21.7360	18.8900	68.8600
2	18.0090	13.8230	57.9460	20.0420	16.0130	66.2960
5	18.1860	13.2460	57.0630	19.2090	14.2330	64.5200
7	19.2900	14.7040	56.8620	19.7350	15.0990	65.4040
8	20.9180	16.7050	58.5550	21.4120	17.1580	67.3570
9	22.2190	18.9460	60.2720	22.7490	19.4670	69.3360
10	19.3750	14.7040	56.8620	19.8240	15.0990	65.4040
11	21.7360	18.5130	59.7290	21.8430	18.5940	68.6100
12	21.4010	18.3080	59.2980	21.1580	17.9650	68.0710
13	21.5510	18.3080	59.2980	21.3060	17.9650	68.0710
14	20.3780	20.0730	59.6330	19.2470	18.3830	68.4310
17	18.5590	13.2650	56.6980	19.8870	14.5720	64.8720
18	17.2300	10.5570	53.4960	18.3640	11.4900	-61.4110

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO FI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
1	5.81	.33	7.16	7.92	52.49
2	6.59	.45	6.86	7.48	53.99
5	7.15	.44	6.42	7.22	56.00
7	5.41	.33	7.38	8.05	55.67
8	4.39	.20	7.23	7.96	53.59
9	5.25	.29	6.76	7.61	53.83
10	5.94	.36	6.49	7.58	56.13
11	6.08	.38	6.83	7.62	56.03
12	6.64	.43	6.68	7.32	-58.55
13	5.91	.38	7.18	7.70	55.19
14	5.72	.44	6.87	7.50	53.68
17	5.91	.47	6.43	7.63	55.79
18	6.12	.46	-6.21	7.43	56.60

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	67.50	86.00	68.23	86.93
2	68.00	85.50	68.70	86.38
5	68.80	86.00	69.17	86.46
7	70.00	86.50	70.17	86.71
8	68.50	86.50	68.67	86.71
9	67.50	85.50	67.66	85.71
10	66.50	85.50	66.66	85.71
11	69.00	87.50	69.03	87.54
12	69.50	87.50	69.43	87.42
13	-71.00	87.50	-70.93	87.42
14	70.00	87.50	69.63	87.04
17	66.80	85.00	67.22	85.54
18	67.80	84.80	68.20	85.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	3040.	.8740	.8390	1068.	1.170	5642.
2	3080.	.8700	.8640	1104.	1.170	5640.
5	2920.	.8910	.8200	1104.	1.170	5645.
7	3230.	.8950	.9140	1122.	1.170	5644.
8	3070.	.9290	.8620	1104.	1.170	5644.
9	3000.	.9010	.8420	1104.	1.170	5644.
10	3030.	.8810	.8300	1050.	1.170	5644.
11	3080.	.9040	.8550	1068.	1.170	5670.
12	3120.	.9080	.8800	1104.	1.170	5669.
13	3280.	.9000	-.9250	1104.	1.170	5669.
14	3220.	-.7020	.8930	1068.	1.170	5669.
17	3080.	.8910	.8470	1050.	1.170	5667.
18	3130.	.9390	.8680	1068.	1.170	5666.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DEG R	COR THRUST LBF
1	3028.	.8930	.8580	1091.	5680.
2	3070.	.8880	.8820	1127.	5680.
5	2922.	.9010	.8290	1116.	5680.
7	3243.	.9000	.9180	1127.	5680.
8	3082.	.9330	.8660	1109.	5680.
9	3012.	.9060	.8460	1109.	5680.
10	3042.	.8860	.8340	1055.	5680.
11	3084.	.9050	.8550	1069.	5680.
12	3129.	.9060	.8780	1102.	5680.
13	-3290.	.8980	-.9230	1102.	5680.
14	3244.	-.6940	.8840	1057.	5680.
17	3068.	.9020	.8580	1063.	5680.
18	3120.	-.9500	.8780	1080.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.809	217.1	19.2	24.5	26.3
2	1.806	182.3	13.5	25.1	26.3
5	1.846	189.0	16.7	24.7	25.9
7	1.853	197.6	18.1	26.4	27.7
8	1.928	169.4	11.7	26.8	28.3
9	1.869	174.9	12.5	20.5	25.8
10	1.818	218.3	-26.8	20.6	25.4
11	1.878	160.7	10.5	25.5	27.4
12	1.885	161.2	11.5	26.4	27.6
13	1.867	159.1	12.9	23.5	27.5
14	-1.453	-120.7	10.7	-18.7	-21.3
17	1.848	166.4	15.2	19.7	26.5
18	1.945	189.9	20.1	21.3	26.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3115.	23.79	3.62	4.42	4.73	41.59
2	3124.	20.07	2.56	4.54	4.75	44.31
5	3118.	20.32	3.08	4.35	4.57	47.30
7	3114.	21.13	3.33	4.64	4.86	47.37
8	3123.	17.46	2.07	4.53	4.78	48.31
9	3120.	18.58	2.29	3.58	4.51	44.91
10	3105.	23.73	5.00	3.68	4.54	43.36
11	3124.	17.02	1.91	4.43	4.76	49.61
12	3123.	17.00	2.08	4.58	4.79	50.65
13	3123.	16.94	2.36	4.10	4.80	50.26
14	3123.	16.51	2.52	4.19	4.79	47.11
17	3120.	17.89	2.80	3.48	4.68	49.08
18	3116.	19.37	3.52	3.56	4.50	48.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	6.8870	2.9860	40.5290	7.5140	3.4320	46.3400
2	6.5700	2.7140	39.6750	7.1300	3.0920	45.2750
5	6.9710	2.9460	40.2170	7.2670	3.1400	45.3980
7	7.2970	3.2190	39.9360	7.4200	3.2930	45.9000
8	7.5370	3.2190	39.9360	7.6660	3.2930	45.9000
9	6.7220	2.6550	38.1940	6.8330	2.7150	43.8940
10	6.5960	2.6550	38.1940	6.7040	2.7150	43.8940
11	7.9870	3.8390	41.4400	8.0140	3.8520	47.5950
12	8.0120	3.8290	41.2220	7.9360	3.7620	47.3360
13	7.9460	3.8290	41.2220	7.8720	3.7620	47.3360
14	6.6130	3.7940	40.5080	6.7380	3.5060	46.5700
17	6.3690	2.4170	38.1560	6.7100	2.6270	43.5590
18	6.5400	2.3220	37.5960	6.8700	2.5050	43.0800

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	21.81	3.15	5.43	5.81	41.59
2	18.50	2.24	5.55	5.82	44.31
5	19.49	2.89	5.28	5.54	47.30
7	20.78	3.25	5.73	6.00	47.37
8	17.16	2.03	5.59	5.90	48.31
9	18.28	2.24	4.42	5.56	44.91
10	23.35	-4.89	4.54	5.60	43.36
11	16.96	1.90	5.47	5.87	49.61
12	17.16	2.11	5.65	5.90	50.65
13	17.10	2.40	5.06	5.92	50.26
14	17.23	2.72	5.18	5.92	47.11
17	16.98	2.58	4.27	5.73	49.08
18	18.44	3.26	4.39	5.54	48.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	35.10	63.00	35.48	63.68
2	36.50	64.00	36.88	64.66
5	36.00	64.00	36.19	64.34
7	36.00	63.50	36.09	63.65
8	35.50	64.00	35.59	64.15
9	36.00	63.50	36.09	63.65
10	36.00	64.00	36.09	64.15
11	36.00	64.00	36.02	64.03
12	37.00	64.50	36.96	64.44
13	36.50	63.50	36.46	63.44
14	37.00	65.00	36.81	64.66
17	36.00	64.00	36.23	64.40
18	36.60	64.00	36.81	64.37

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1290.	.7900	.7730	996.	1.030	1413.
2	1320.	.7840	.7850	1032.	1.030	1495.
5	1380.	.8210	.8220	1032.	1.040	1470.
7	1350.	.7820	.8170	1041.	1.040	1412.
8	-1420.	.8180	-.8450	1032.	1.050	1454.
9	1340.	.8330	.8140	1050.	1.030	1412.
10	1320.	.8100	.7830	1023.	1.030	1454.
11	-1250.	.7910	.7350	996.	1.040	1450.
12	1300.	.7960	.7680	1032.	1.050	1484.
13	1320.	.7950	.8050	1050.	1.050	1399.
14	1290.	-.5360	.7410	996.	1.035	1503.
17	1310.	.7960	.7700	996.	1.040	1481.
18	1360.	.8340	.8200	1050.	1.050	1478.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1285.	.8070	.7900	1017.	1423.
2	1316.	.8000	.8020	1053.	1506.
5	1381.	.8300	.8310	1043.	1479.
7	1355.	.7860	.8210	1046.	1421.
8	-1426.	.8220	-.8500	1037.	1463.
9	1345.	.8370	.8180	1055.	1421.
10	1325.	.8130	.7860	1028.	1463.
11	1252.	.7920	.7350	997.	1453.
12	1304.	.7940	.7670	1030.	1487.
13	1324.	.7930	.8040	1048.	1402.
14	1299.	-.5300	.7330	985.	1506.
17	1305.	.8060	.7790	1008.	1484.
18	1356.	.8430	.8290	1062.	1482.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.388	885.2	590.5	10.5	10.3
2	1.388	863.4	558.1	10.7	10.8
5	1.452	868.7	592.6	10.7	10.8
7	1.378	883.2	559.5	9.9	10.2
8	1.460	887.0	536.5	10.2	10.9
9	1.494	897.0	524.8	9.0	10.6
10	1.427	843.1	601.9	9.1	10.6
11	1.409	844.3	529.3	10.9	10.8
12	1.418	816.7	542.0	11.1	11.1
13	1.409	856.3	552.8	10.2	10.8
14	-0.949	-578.2	-370.9	6.9	-7.5
17	1.394	804.1	629.7	8.1	10.3
18	1.486	891.8	559.0	9.5	11.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2655.	107.77	123.50	2.10	2.10	22.47
2	2674.	105.88	117.58	2.16	2.17	26.63
5	2671.	101.72	119.20	2.05	2.08	27.27
7	2661.	108.52	118.12	1.99	2.06	25.78
8	2695.	104.23	108.32	1.98	2.11	26.26
9	2708.	103.50	104.03	1.70	2.01	26.68
10	2662.	100.12	122.78	1.78	2.07	24.15
11	2691.	102.62	110.52	2.17	2.17	26.14
12	2692.	98.67	112.49	2.20	2.20	25.86
13	2678.	103.55	114.85	2.03	2.14	27.34
14	2678.	103.92	114.50	2.05	2.22	20.00
17	2645.	97.10	130.62	1.62	2.04	-30.26
18	2691.	102.79	110.70	1.81	2.08	26.05

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2250	.0860	17.8090	.2280	.0960	20.2070
2	.2320	.0970	18.3090	.2350	.1070	20.7320
5	.2310	.0980	18.2830	.2320	.1030	20.5630
7	.2280	.0940	17.6000	.2270	.0950	20.1940
8	.2310	.0990	17.8330	.2310	.1010	20.4620
9	.2280	.0940	17.6000	.2270	.0950	20.1940
10	.2310	.0990	17.8330	.2310	.1010	20.4620
11	.2300	.0990	17.7650	.2300	.0990	20.3960
12	.2340	.1060	17.9390	.2330	.1040	20.6140
13	.2270	.0940	17.4740	.2260	.0930	20.0790
14	.2370	-.1130	17.9670	.2350	.1070	20.7320
17	.2310	.0970	18.1150	.2330	.1040	20.5960
18	.2310	.0980	18.0260	.2330	.1030	20.5790

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	106.39	111.52	2.56	2.56	22.47
2	104.62	106.68	2.63	2.64	26.63
5	101.27	113.81	2.48	2.51	27.27
7	108.60	116.41	2.45	2.54	25.78
8	104.30	106.74	2.44	2.59	26.26
9	103.57	102.53	2.09	2.48	26.68
10	100.18	121.00	2.20	2.55	24.15
11	102.67	110.31	2.67	2.67	26.14
12	98.98	114.08	2.72	2.72	25.86
13	103.88	116.46	2.50	2.65	27.34
14	105.01	121.72	2.54	2.75	20.00
17	96.24	122.57	1.97	2.49	-30.26
18	101.98	104.45	2.22	2.55	26.05

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 1800 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	-58.50	32.34	59.13
2	32.80	59.80	33.14	60.41
5	32.30	59.00	32.47	59.32
7	33.00	59.50	33.08	59.64
8	32.50	60.00	32.58	60.15
9	33.00	60.00	33.08	60.15
10	33.50	61.00	33.58	61.15
11	32.00	59.50	32.02	59.53
12	35.00	61.00	34.97	60.94
13	33.50	60.00	33.47	59.94
14	34.00	61.00	33.82	60.68
17	33.10	60.00	33.31	60.38
18	32.90	60.00	33.09	60.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1220.	.8280	.8320	996.	1.030	1072.
2	1230.	.8300	.8170	1032.	1.030	1161.
5	1200.	.8680	.8190	1032.	1.030	1085.
7	1260.	.8140	.8490	1041.	1.040	1108.
8	1230.	.8640	.8120	1032.	1.050	1143.
9	1340.	.8650	-.8920	1050.	1.030	1143.
10	1290.	.8350	.8250	1023.	1.030	1213.
11	-1170.	.8260	.7680	978.	1.030	1105.
12	1260.	.8270	.8060	1014.	1.040	1203.
13	1250.	.8300	.8290	1032.	1.040	1134.
14	1290.	-.5490	.8110	978.	1.020	1185.
17	1210.	.8270	.7890	996.	1.030	1164.
18	1280.	.8580	.8490	1032.	1.050	1162.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DEG R	COR THRUST LBF
1	1215.	.8460	.8500	1017.	1079.
2	1226.	.8470	.8340	1053.	1169.
5	1201.	.8770	.8280	1043.	1092.
7	1265.	.8180	.8530	1046.	1115.
8	1235.	.8690	.8160	1037.	1150.
9	1345.	.8690	-.8970	1055.	1150.
10	1295.	.8390	.8290	1028.	1220.
11	-1172.	.8270	.7690	979.	1107.
12	1264.	.8250	.8040	1012.	1206.
13	1254.	.8280	.8270	1030.	1136.
14	1299.	-.5430	.8020	-967.	1188.
17	1205.	.8380	.7990	1008.	1167.
18	1276.	.8680	.8580	1044.	1165.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.410	985.4	748.0	9.4	9.8
2	1.415	975.0	748.8	9.6	9.9
5	1.483	991.2	774.2	9.8	10.2
7	1.398	940.0	691.3	9.3	9.9
8	1.505	1000.2	672.2	9.7	10.4
9	1.516	992.4	641.8	8.0	10.1
10	1.440	920.1	708.8	8.1	10.0
11	1.425	956.1	684.0	10.0	10.1
12	1.439	900.4	661.4	10.2	10.3
13	1.429	961.4	693.6	9.5	9.9
14	-.938	-643.9	-472.3	6.3	-6.9
17	1.402	898.5	784.8	7.2	9.7
18	1.472	998.5	735.2	8.2	9.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2573.	114.49	149.30	1.79	1.86	23.87
2	2576.	113.00	149.08	1.84	1.88	25.78
5	2581.	109.82	147.36	1.79	1.85	26.81
7	2596.	111.09	140.34	1.80	1.92	25.42
8	2629.	111.23	128.42	1.76	1.89	25.91
9	2646.	110.28	122.53	1.46	1.84	25.66
10	2605.	105.92	140.17	1.53	1.88	24.48
11	2606.	111.26	136.74	1.91	1.94	26.42
12	2629.	104.70	132.12	1.94	1.97	27.14
13	2602.	111.42	138.09	1.81	1.88	26.63
14	2588.	113.01	142.42	1.81	1.99	19.21
17	2562.	104.48	156.79	1.37	1.85	-30.00
18	2592.	111.86	141.50	1.50	1.83	25.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 1800 HOUR TEST SERIES *

MODE A

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2010	-.0570	16.2290	.2040	.0630	18.3970
2	.2070	.0640	16.6340	.2090	.0700	18.8190
5	.2030	.0610	16.4200	.2040	.0640	18.4580
7	.2060	.0650	16.1840	.2060	.0660	18.5650
8	.2080	.0670	16.3270	.2080	.0680	18.7300
9	.2080	.0670	16.3270	.2080	.0680	18.7300
10	.2120	.0730	16.6150	.2120	.0740	19.0610
11	.2050	.0650	16.1380	.2050	.0650	18.5280
12	.2120	.0740	16.5270	.2110	.0730	18.9930
13	.2080	.0680	16.2400	.2070	.0670	18.6630
14	.2120	.0760	16.3770	.2100	.0710	18.9060
17	.2070	.0660	16.5500	.2090	.0700	18.8070
18	.2070	.0660	16.4730	.2090	.0700	18.7970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	113.05	135.41	2.18	2.27	23.87
2	111.69	135.82	2.23	2.28	25.78
5	109.36	141.06	2.16	2.23	26.81
7	111.17	138.45	2.22	2.37	25.42
8	111.31	126.68	2.17	2.33	25.91
9	110.36	120.86	1.79	2.26	25.66
10	105.99	138.24	1.89	2.32	24.48
11	111.32	136.51	2.35	2.39	26.42
12	105.03	133.95	2.40	2.43	27.14
13	111.76	139.98	2.23	2.32	26.63
14	114.18	-151.08	2.25	2.47	19.21
17	103.57	147.48	1.67	2.25	-30.00
18	111.00	133.81	1.84	2.24	25.23

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
1	22919.	2471.	514.7	29.82	.008110
2	23544.	2470.	514.2	29.82	.007800
5	22361.	2399.	511.7	29.99	.006650
7	23015.	2664.	517.2	29.88	.007640
8	23399.	2665.	517.7	29.88	.007960
10	25006.	2664.	517.2	29.89	.007630
11	23714.	2365.	517.7	30.01	.006830
12	20038.	2365.	517.7	30.01	.007370
13	22385.	2365.	517.7	30.01	.007370
17	33628.	2380.	517.7	29.88	.009090

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	34.00	61.00	34.13	61.24
2	33.90	61.00	34.05	61.27
5	32.50	59.00	32.72	59.40
7	34.50	61.20	34.55	61.29
8	33.00	60.20	33.03	60.26
10	33.00	60.50	33.05	60.59
11	33.50	59.50	33.53	59.56
12	34.00	60.50	34.03	60.56
13	34.50	61.00	34.53	61.06
17	33.00	59.00	33.03	59.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1280.	.8770	.8330	1041.	1.030	1231.
2	1280.	.8450	.8300	1032.	1.040	1233.
5	1240.	.8620	.8500	1032.	1.030	1096.
7	1330.	.8400	.8630	1050.	1.030	1232.
8	1290.	.8700	.8460	1014.	1.050	1160.
10	1270.	.8430	.8190	996.	1.030	1182.
11	-1210.	.8310	.8010	996.	1.030	1106.
12	1280.	.8440	.8290	1014.	1.040	1176.
13	1320.	.8540	.8580	1050.	1.040	1210.
17	1300.	.8870	.8790	996.	1.030	1075.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	CORR TT7 DEG R	COR THRUST LBF
1	1271.	.8840	.8400	.8400	1049.	1227.	
2	1270.	.8520	.8370	.8370	1041.	1229.	
5	1234.	.8740	.8610	.8610	1046.	1098.	
7	1326.	.8420	.8660	.8660	1053.	1230.	
8	1287.	.8710	.8480	.8480	1016.	1158.	
10	1267.	.8450	.8210	.8210	999.	1181.	
11	1212.	.8320	.8020	.8020	998.	1109.	
12	1283.	.8450	.8310	.8310	1016.	1179.	
13	1323.	.8560	.8590	.8590	1052.	1214.	
17	1297.	.8890	.8800	.8800	998.	1074.	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.539	980.5	660.1	10.9	9.7
2	1.473	952.6	658.6	10.1	10.0
5	1.471	990.0	771.5	8.9	9.2
7	1.404	939.6	656.7	6.7	9.8
8	1.530	991.7	627.2	11.0	11.2
10	1.463	942.4	681.0	9.2	10.0
11	1.438	940.0	689.9	7.7	9.4
12	1.454	917.4	734.4	8.7	10.1
13	1.497	1010.0	636.9	7.6	10.1
17	1.526	988.3	764.9	10.5	10.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2649.	107.41	124.23	1.95	1.95	18.16
2	2635.	108.40	128.76	1.88	1.88	20.05
5	2579.	110.43	147.86	1.62	1.69	27.50
7	2633.	107.53	129.11	1.27	1.85	22.37
8	2657.	109.58	119.06	2.00	2.04	20.78
10	2621.	107.48	133.43	1.72	1.88	20.39
11	2615.	108.81	137.21	1.47	1.80	26.01
12	2604.	104.57	143.81	1.62	1.88	25.29
13	2646.	113.64	123.12	1.41	1.86	24.68
17	2597.	107.08	142.36	1.87	1.87	24.28

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

 MODF 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.2110	.0710	16.2130	.2130	.0750	19.0910
2	.2110	.0710	16.3030	.2130	.0750	19.1010
5	.2030	.0600	16.1000	.2050	.0650	18.4860
7	.2120	.0740	16.4700	.2130	.0750	19.1080
8	.2080	.0680	16.0920	.2080	.0690	18.7670
10	.2090	.0700	16.2730	.2100	.0710	18.8760
11	.2050	.0650	16.2740	.2050	.0650	18.5370
12	.2100	.0700	16.3950	.2100	.0710	18.8660
13	.2120	.0730	16.5380	.2120	.0740	19.0320
17	.2030	.0620	-15.4190	.2030	.0630	18.3740

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	106.46	118.58	2.30	2.30	18.16
2	107.35	122.28	2.20	2.20	20.05
5	109.39	138.46	2.00	2.09	27.50
7	107.16	126.86	1.47	2.14	22.37
8	109.30	117.59	2.34	2.38	20.78
10	107.14	131.19	2.00	2.18	20.39
11	108.88	136.58	1.68	2.05	26.01
12	104.64	143.14	1.87	2.17	25.29
13	113.72	122.54	1.63	2.15	24.68
17	106.80	140.61	2.23	2.23	24.28

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	36.40	64.00	36.54	64.25
2	36.00	64.00	36.16	64.28
5	37.50	64.50	37.76	64.94
7	36.00	64.00	36.05	64.09
8	36.00	64.00	36.03	64.06
10	-35.00	64.00	-35.05	64.09
11	36.00	64.00	36.03	64.06
12	36.00	64.00	36.03	64.06
13	37.00	64.00	37.04	64.06
17	37.00	64.50	37.04	64.56

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1350.	.8590	.8150	1041.	1.035	1476.
2	1340.	.8300	.8060	1032.	1.045	1479.
5	1400.	.8300	.8270	1032.	1.040	1526.
7	1420.	.8260	.8590	1050.	1.030	1460.
8	1380.	.8490	.8210	1014.	1.050	1457.
10	1350.	.8300	.7960	996.	1.030	1459.
11	1300.	.7970	.7630	996.	1.030	1451.
12	1330.	.8150	.7940	1032.	1.040	1451.
13	1410.	.8190	.8490	1050.	1.040	1451.
17	-1500.	.8540	.8740	996.	1.040	1500.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LAM/HR	COR CB X100	F/A COR PF X100	F/A COR TT7 DEG R	COR THRUST LBF
1	1340.	.8660	.8210	1049.	1471.
2	1330.	.8380	.8130	1041.	1474.
5	1394.	.8420	.8390	1046.	1530.
7	1416.	.8290	.8620	1053.	1458.
8	1377.	.8500	.8220	1016.	1455.
10	1347.	.8320	.7980	999.	1458.
11	-1303.	.7980	.7650	998.	1455.
12	1333.	.8160	.7960	1034.	1455.
13	1413.	.8210	.8510	1052.	1455.
17	-1497.	.8560	.8760	998.	1498.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.540	920.4	550.3	9.9	9.5
2	1.485	884.8	544.5	10.1	10.1
5	1.485	854.5	556.1	8.7	10.1
7	1.479	868.9	536.0	7.8	10.8
8	1.537	889.2	497.0	10.7	11.3
10	1.480	868.8	560.2	10.1	10.4
11	1.427	831.1	526.5	7.8	10.4
12	1.457	842.6	551.6	8.8	10.6
13	1.466	933.3	521.0	7.3	10.6
17	1.541	843.9	538.3	11.0	11.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI		CO EI		HC EI		NO FI		NOX EI		SMK NUMBER	
	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	FRONT	SIDE
1	2706.		102.92		105.73		1.81		1.81		18.16	
2	2700.		102.40		108.26		1.92		1.92		20.26	
5	2699.		98.88		110.55		1.65		1.92		28.28	
7	2703.		101.06		107.09		1.49		2.05		21.72	
8	2733.		100.61		96.62		1.99		2.09		20.85	
10	2692.		100.60		111.43		1.93		1.98		20.26	
11	2706.		100.27		109.11		1.55		2.07		25.46	
12	2700.		99.40		111.78		1.70		2.06		25.42	
13	2703.		-109.51		105.02		1.41		2.04		24.42	
17	2722.		94.88		103.97		2.03		2.16		25.76	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2300	.0970	17.4160	.2320	.1020	20.5120
2	.2300	.0970	17.5170	.2320	.1020	20.5290
5	.2350	.1030	18.1750	.2370	.1100	20.8840
7	.2300	.0980	17.6070	.2310	.1000	20.4290
8	.2300	.0990	17.5020	.2300	.1000	20.4120
10	.2300	.0980	17.6100	.2310	.1000	20.4290
11	.2310	.0990	17.9190	.2300	.1000	20.4120
12	.2310	.0990	17.7370	.2300	.1000	20.4120
13	.2310	.0990	17.7370	.2300	.1000	20.4120
17	.2340	.1040	17.3530	.2340	.1060	20.6810

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	102.00	100.80	2.13	2.13	18.16
2	101.40	102.68	2.25	2.25	20.26
5	97.92	103.15	2.03	2.37	28.28
7	100.71	105.18	1.73	2.38	21.72
8	100.35	95.39	2.32	2.44	20.85
10	100.28	109.50	2.23	2.30	20.26
11	100.33	108.57	1.76	2.36	25.46
12	99.46	111.23	1.96	2.37	25.42
13	-109.58	104.50	1.62	2.35	24.42
17	94.63	102.64	2.42	2.57	25.76

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	102.40	101.00	102.80	101.39
2	102.50	101.00	102.95	101.44
5	104.00	100.20	104.71	100.88
7	103.00	99.60	103.15	-99.74
8	104.00	100.30	104.10	100.40
10	102.00	101.00	102.15	101.15
11	103.00	101.00	103.10	101.10
12	103.20	101.00	103.30	101.10
13	103.50	101.00	103.60	101.10
17	102.00	100.00	102.10	100.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	9600.	1.5200	1.3660	1428.	1.840	17968.
2	9700.	1.5690	1.3800	1428.	1.840	17968.
5	9500.	1.6040	1.3360	1410.	1.840	17866.
7	9500.	1.5400	1.3410	1410.	1.840	17932.
8	9500.	1.5900	1.3320	1392.	1.840	17932.
10	-9100.	1.5590	1.2750	1392.	1.840	17926.
11	9800.	1.6530	1.3590	1374.	1.840	17854.
12	9400.	1.5790	1.3210	1410.	1.840	17854.
13	9600.	1.6370	1.3580	1428.	1.840	17854.
17	9800.	1.6310	1.3740	1392.	1.840	17932.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DFG R	COR THRUST LBF
1	9531.	1.5320	1.3770	1439.	1790A.
2	9626.	1.5820	1.3930	1440.	1790A.
5	945A.	1.6260	1.3540	1429.	1790A.
7	9474.	1.5440	1.3450	1414.	1790A.
8	947A.	1.5940	1.3350	1394.	1790A.
10	-907A.	1.5640	1.2790	1396.	1790A.
11	9A20.	1.6570	1.3620	1376.	1790A.
12	9419.	1.5820	1.3230	1412.	1790A.
13	9620.	1.6400	1.3600	1430.	1790A.
17	9777.	1.6340	1.3770	1394.	1790A.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.206	18.8	7.4	89.8	83.9
2	3.312	17.9	5.7	96.1	87.1
5	3.387	19.2	5.2	85.8	81.2
7	3.248	21.8	4.3	87.9	84.6
8	3.357	16.9	4.2	97.9	94.6
10	3.290	19.4	3.0	91.2	88.9
11	3.499	-7.5	4.7	98.7	95.2
12	3.338	20.2	4.0	91.9	89.6
13	3.460	-56.3	1.8	94.8	94.0
17	3.443	19.3	3.0	103.5	97.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3154.	1.17	.80	9.24	9.24	51.51
2	3155.	1.08	.60	9.57	9.57	50.39
5	3155.	1.14	.53	-8.36	-8.36	57.79
7	3153.	1.35	.45	8.92	8.92	52.94
8	3153.	1.01	.43	9.61	9.61	48.89
10	3153.	1.18	.31	9.14	9.14	51.30
11	-3161.	-.43	.47	9.32	9.32	54.07
12	-3160.	1.21	.41	9.10	9.10	56.04
13	3157.	-3.27	.18	9.04	9.04	55.96
17	3153.	1.12	.30	9.91	9.91	55.69

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	81.9320	80.5560	81.8880	87.6380	86.7980	96.9830
2	90.0840	80.6610	82.4170	97.4090	87.6650	97.1950
5	88.8690	69.8080	81.7390	99.9600	78.3120	94.8170
7	72.9790	60.3940	-77.4950	74.9060	62.0770	90.0940
8	86.9910	69.5850	79.4430	88.6770	70.9410	92.7790
10	88.4200	80.3660	82.5270	90.8180	82.6010	95.9340
11	107.4570	80.8400	83.9180	109.3170	81.7890	95.7260
12	92.2040	80.8400	83.0650	93.6870	81.7890	95.7260
13	103.8410	80.8400	83.0650	105.6100	81.7890	95.7260
17	91.1800	65.4520	-76.7060	92.9990	66.7220	91.5360

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		1.10			.74		10.94			10.94			51.51	
2		1.00			.55		11.29			11.29			50.39	
5		1.01			.47		10.41			10.41			57.79	
7		1.32			.44		10.37			10.37			52.94	
8		.99			.42		11.23			11.23			48.89	
10		1.15			.30		10.62			10.62			51.30	
11		-.42			.46		10.64			10.64			54.07	
12		1.20			.41		10.48			10.48			56.04	
13		-3.21			.18		10.42			10.42			55.96	
17		1.10			.30		11.83			11.83			55.69	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	96.80	99.00	97.18	99.38
2	95.80	98.00	96.22	98.43
5	97.00	97.50	97.66	98.16
7	97.00	97.50	97.14	97.64
8	98.00	98.00	98.09	98.09
10	96.00	98.80	96.14	98.94
11	96.80	99.00	96.89	99.10
12	97.20	99.00	97.29	99.10
13	97.00	98.20	97.09	98.29
17	96.00	97.20	96.09	97.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8000.	1.3690	1.2590	1338.	1.650	15261.
2	7800.	1.3780	1.2270	1338.	1.650	15261.
5	7600.	1.3770	1.1480	-1248.	1.650	15174.
7	7900.	1.3720	1.2320	1320.	1.650	15230.
8	8000.	1.4230	1.2390	1302.	1.650	15230.
10	7500.	1.4080	1.1530	1284.	1.650	15225.
11	8100.	1.4290	1.2410	1284.	1.650	15164.
12	7700.	1.3930	1.2200	-1374.	1.650	15164.
13	8000.	-1.4720	1.2430	1320.	1.650	15164.
17	7800.	1.4120	1.2000	1284.	1.650	15230.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	7942.	1.3790	1.2690	1348.	15210.
2	7740.	1.3900	1.2380	1349.	15210.
5	7566.	1.3960	1.1640	1265.	15210.
7	7878.	1.3760	1.2360	1324.	15210.
8	7982.	1.4260	1.2420	1304.	15210.
10	7482.	1.4130	1.1570	1287.	15210.
11	8117.	1.4320	1.2430	1286.	15210.
12	7716.	1.3960	1.2220	-1376.	15210.
13	8016.	-1.4750	1.2450	1322.	15210.
17	7782.	1.4150	1.2020	1286.	15210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.882	26.0	4.9	71.2	67.5
2	2.902	26.1	3.7	73.0	66.8
5	2.901	30.8	3.0	-62.4	-61.0
7	2.887	31.6	3.0	68.3	66.8
8	2.998	22.0	3.0	75.7	74.9
10	2.967	27.4	1.8	69.8	70.0
11	3.018	-15.3	2.6	74.5	74.6
12	2.940	26.6	2.4	70.4	69.9
13	-3.106	-56.4	3.3	71.4	72.0
17	2.975	27.4	1.9	76.2	74.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3154.	1.81	.59	8.15	8.15	51.82
2	3154.	1.80	.45	8.29	8.29	51.32
5	3154.	2.13	.35	-7.09	-7.09	58.50
7	3151.	2.20	.36	7.79	7.79	54.21
8	3153.	1.47	.35	8.32	8.32	53.11
10	3152.	1.85	.21	7.75	7.78	52.04
11	-3160.	-1.02	.30	8.16	8.17	56.60
12	-3159.	1.82	.29	7.90	7.90	56.09
13	3156.	-3.65	.36	7.59	7.64	55.79
17	3152.	1.85	.22	8.44	8.44	56.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	50.6620	53.6090	74.8710	53.7190	57.6420	88.6340
2	46.2230	43.6580	71.9970	49.3250	47.2820	84.8440
5	43.9990	39.8810	72.2300	48.3590	44.5180	83.7000
7	42.9820	38.3610	70.0440	43.9500	39.3980	81.4170
8	49.5800	42.9880	71.4150	50.3950	43.7990	83.3920
10	52.9460	51.2450	74.7460	54.1810	52.6250	86.8730
11	56.1650	53.7090	76.6970	56.9200	54.3110	87.4790
12	52.8840	53.7090	75.9170	53.5720	54.3110	87.4790
13	55.3950	45.3830	73.1380	56.1590	45.8820	84.2730
17	44.2450	35.6380	-66.9840	44.9570	36.3030	-79.9220

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODF 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LA/KLA FU	LA/KLA FU	CORRECTED
1	1.71	.55	9.65	9.65	51.82
2	1.69	.41	9.77	9.77	51.32
5	1.94	.32	8.83	-8.83	58.50
7	2.15	.35	9.06	9.06	54.21
8	1.45	.34	9.72	9.72	53.11
10	1.81	.20	9.01	9.04	52.04
11	-1.00	.30	9.30	9.32	56.60
12	1.80	.28	9.11	9.11	56.09
13	-3.60	.36	8.74	-8.81	55.79
17	1.62	.22	10.07	10.07	56.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.30	94.00	85.63	94.36
2	85.00	93.00	85.37	93.41
5	86.00	93.00	86.59	93.63
7	85.00	92.80	85.12	-92.93
8	87.00	93.80	87.08	93.89
10	85.00	94.00	85.12	94.14
11	85.50	94.00	85.58	94.09
12	86.00	94.00	86.08	94.09
13	86.50	94.00	86.58	94.09
17	85.00	93.10	85.08	93.19

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	5500.	1.1360	1.0750	1221.	1.390	10766.
2	5700.	1.1410	1.1100	1212.	1.390	10766.
5	5300.	1.1410	1.0110	1176.	1.390	10705.
7	5500.	1.1220	1.0690	1212.	1.390	10744.
8	5800.	-1.2210	1.1110	1176.	1.390	10744.
10	5000.	1.1480	.9420	-1140.	1.390	10741.
11	5500.	1.1550	1.0490	1176.	1.390	10698.
12	5200.	1.1500	1.0140	1230.	1.390	10698.
13	5600.	-1.2190	1.0840	1212.	1.390	10698.
17	5400.	1.1800	1.0340	1176.	1.390	10744.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LRM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DFG R	COR THRUST LAF
1	5460.	1.1450	1.0830	1230.	10730.
2	5656.	1.1510	1.1200	1222.	10730.
5	5276.	1.1570	1.0250	1192.	10730.
7	5485.	1.1260	1.0720	1215.	10730.
8	5787.	-1.2240	1.1130	1178.	10730.
10	4988.	1.1510	.9450	-1143.	10730.
11	5511.	1.1570	1.0510	1178.	10730.
12	5211.	1.1530	1.0160	1232.	10730.
13	5611.	-1.2220	1.0860	1214.	10730.
17	5388.	1.1820	1.0360	1178.	10730.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	2.382	69.5	4.6	43.1	43.1
2	2.393	74.1	3.8	44.2	42.4
5	2.391	87.1	4.2	38.0	40.6
7	2.348	-93.9	5.4	43.1	44.1
8	-2.564	59.6	3.1	47.5	49.2
10	2.404	88.2	3.5	40.8	44.5
11	2.427	61.5	3.6	42.3	45.6
12	2.415	75.8	3.3	40.9	44.3
13	-2.563	62.8	3.7	41.0	46.4
17	2.474	74.3	2.9	44.5	47.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 2400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3147.	5.85	.66	5.95	5.95	47.58
2	3147.	6.20	.55	6.07	6.07	51.90
5	3145.	7.29	.60	5.22	5.58	56.88
7	3141.	-8.00	.79	6.02	6.17	52.80
8	3147.	4.66	.41	6.09	6.32	51.69
10	3143.	7.34	.50	5.58	6.09	49.87
11	-3153.	5.09	.52	5.74	6.19	56.24
12	-3152.	6.30	.46	5.59	6.05	55.73
13	-3154.	4.92	.50	5.28	5.97	55.09
17	3145.	6.01	.40	5.91	6.36	56.34

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	20.3630	16.6090	57.4160	21.3330	17.7650	67.8960
2	18.1780	12.9130	54.5210	19.1350	13.9020	64.1710
5	18.4030	13.3200	56.2310	19.8200	14.7450	65.0480
7	17.3010	12.1770	53.8740	17.6050	12.4830	62.5980
8	22.0340	15.4740	56.5690	22.3280	15.7480	66.0420
10	20.5500	16.3570	57.6700	20.9190	16.7660	67.0000
11	20.7750	16.4110	58.6020	20.9720	16.5730	66.8220
12	20.6500	16.4110	58.0060	20.8450	16.5730	66.8220
13	22.5930	16.4110	58.0060	22.8200	16.5730	66.8220
17	19.1430	12.9330	-53.1190	19.3890	13.1610	63.3650

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		5.58			.62			7.04			7.04		47.58	
2		5.89			.51			7.14			7.14		51.90	
5		6.77			.54			6.49			6.94		56.88	
7		-7.86			.77			6.99			7.17		52.80	
8		4.60			.41			7.11			7.37		51.69	
10		7.21			.49			6.48			7.07		49.87	
11		5.04			.51			6.55			7.06		56.24	
12		6.24			.46			6.43			6.97		55.73	
13		4.87			.50			-6.08			6.88		55.09	
17		5.93			.39			7.05			7.58		56.34	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	67.20	86.00	67.46	86.33
2	66.10	85.00	66.39	85.37
5	67.00	85.00	67.46	85.58
7	66.00	84.50	66.10	-84.62
8	70.00	86.50	70.07	86.58
10	67.00	86.00	67.10	86.12
11	67.20	86.00	67.26	86.08
12	68.80	86.80	68.87	86.88
13	69.20	86.00	69.27	86.08
17	67.00	85.00	67.06	85.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	2980.	.8840	.8450	1104.	1.170	5699.
2	2850.	.8450	.8010	1086.	1.170	5699.
5	2930.	.8720	.8160	1077.	1.170	5667.
7	2900.	.8540	.8200	1104.	1.170	5688.
8	3110.	.9330	.8730	1086.	1.170	5688.
10	3020.	.8750	.8730	1050.	1.170	5686.
11	2970.	.8550	.8230	1068.	1.170	5663.
12	3060.	.8780	.8690	1122.	1.170	5663.
13	3170.	.9230	.8930	1104.	1.170	5663.
17	3080.	.8950	.8570	1068.	1.170	5688.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODF 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
----	-----	-----	-----	-----	-----
1	2959.	.8910	.8510	1112.	5680.
2	-2828.	.8530	.8080	1095.	5680.
5	2917.	.8840	.8270	1091.	5680.
7	2892.	.8570	.8230	1107.	5680.
8	3103.	.9350	.8740	1088.	5680.
10	3013.	.8770	.8360	1053.	5680.
11	2976.	.8570	.8250	1070.	5680.
12	3066.	.8800	.8700	1124.	5680.
13	3176.	.9250	.8950	1106.	5680.
17	3073.	.8970	.8590	1070.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.826	224.2	21.4	24.7	24.3
2	1.744	218.6	22.3	24.7	-22.4
5	1.804	196.3	23.0	24.1	23.7
7	1.764	209.1	22.5	26.4	25.2
8	1.934	189.1	14.8	28.1	28.4
10	1.806	214.0	22.2	24.1	25.2
11	1.772	194.3	18.8	24.4	25.2
12	1.823	174.8	14.7	25.3	25.9
13	1.894	-416.0	19.3	20.4	25.7
17	1.855	178.2	14.5	24.0	27.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3109.	24.29	3.98	4.40	4.40	37.34
2	3107.	24.78	4.35	4.61	4.61	37.93
5	3112.	21.56	4.33	4.34	4.34	47.40
7	3107.	23.44	4.33	4.86	4.86	40.79
8	3118.	19.40	2.61	4.73	4.79	64.62
10	3108.	23.44	4.18	4.33	4.53	41.48
11	3119.	21.77	3.63	4.49	4.64	48.83
12	3125.	19.07	2.76	4.53	4.65	49.22
13	-3086.	-43.14	3.44	3.48	4.38	47.78
17	3119.	19.07	2.66	4.21	4.74	48.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TFST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	6.8680	2.8850	38.2300	7.1210	3.0650	45.1450
2	6.0700	2.3800	36.7860	6.3110	2.5430	43.2300
5	6.2620	2.4210	37.8170	6.6210	2.6490	43.6420
7	5.8460	2.1440	35.9610	-5.9250	2.1920	-41.7630
8	7.5160	3.1640	39.1120	7.5920	3.2150	45.6470
10	6.8090	2.8800	38.5180	6.9020	2.9440	44.7260
11	6.7060	2.8970	39.1650	6.7480	2.9210	44.6430
12	7.3430	3.3760	40.1640	7.3910	3.4040	46.2530
13	7.1510	2.8970	38.7670	7.1990	2.9210	44.6430
17	6.3460	2.3650	-35.7760	6.4080	2.4020	42.6620

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	23.43	3.74	5.20	5.20	37.34
2	23.84	4.07	5.42	5.42	37.93
5	20.39	3.96	5.38	5.38	47.40
7	23.13	4.23	5.65	5.65	40.79
8	19.21	2.57	5.52	5.59	44.62
10	23.13	4.09	5.03	5.26	41.48
11	21.63	3.60	5.11	5.29	48.83
12	18.95	2.74	5.21	5.35	49.22
13	-42.85	3.41	-4.01	-5.04	47.78
17	18.88	2.62	5.03	5.66	48.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	35.00	63.00	35.14	63.24
2	35.80	64.00	35.96	64.28
5	36.00	64.00	36.25	64.44
7	37.00	64.00	37.05	64.09
8	36.00	64.00	36.03	64.06
10	36.00	64.00	36.05	64.09
11	36.00	64.00	36.03	64.06
12	36.00	64.00	36.03	64.06
13	36.50	64.00	36.54	64.06
17	36.00	63.00	36.03	63.06

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	1260.	.8050	.7760	1032.	1.035	1390.
2	1280.	.7990	.7690	1032.	1.045	1479.
5	1320.	.8140	.7890	1032.	1.050	1484.
7	1350.	.7910	.8100	1032.	1.030	1460.
8	1330.	.8270	.7910	1014.	1.050	1457.
10	1340.	.7990	.7900	996.	1.030	1459.
11	1260.	.7690	.7400	996.	1.040	1451.
12	1300.	.7910	.7830	1050.	1.040	1451.
13	1330.	.8290	.8010	1050.	1.040	1451.
17	-1400.	.7930	-.8460	996.	1.040	1372.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3A * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LRM/HR	COR CB X100	F/A COR PF X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1251.	.8120	.7820	1040.	1386.
2	1270.	.8060	.7760	1041.	1474.
5	1314.	.8250	.8000	1046.	1487.
7	1346.	.7930	.8120	1035.	1458.
8	1327.	.8280	.7930	1016.	1455.
10	1337.	.8020	.7920	999.	1458.
11	1263.	.7700	.7410	998.	1455.
12	1303.	.7930	.7850	1052.	1455.
13	1333.	.8310	.8030	1052.	1455.
17	-1397.	.7950	-.8470	998.	1370.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.418	904.7	586.5	11.2	10.1
2	1.409	881.2	576.5	11.2	9.4
5	1.432	870.8	609.0	11.1	10.2
7	1.394	861.4	572.8	11.6	11.1
8	1.496	881.9	480.7	12.0	11.5
10	1.422	851.4	546.0	10.7	10.7
11	1.363	823.3	546.6	10.1	10.3
12	1.407	829.4	556.7	10.6	10.6
13	1.476	-941.9	556.3	8.3	10.5
17	1.392	842.7	602.6	11.6	11.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2659.	107.99	120.27	2.20	2.20	19.82
2	2664.	106.08	119.23	2.21	2.21	21.88
5	2658.	102.85	123.58	2.15	2.15	28.94
7	2663.	104.73	119.66	2.31	2.31	22.32
8	2732.	102.46	95.94	2.29	2.29	21.00
10	2686.	102.36	112.79	2.11	2.11	20.39
11	2679.	102.97	117.45	2.07	2.13	26.47
12	2686.	100.76	116.18	2.12	2.12	26.27
13	2687.	109.14	110.74	1.58	2.00	26.87
17	2651.	102.13	125.46	2.30	2.30	27.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.2220	.0870	16.9630	.2240	.0910	19.9760
2	.2300	.0970	17.5170	.2320	.1020	20.5290
5	.2310	.0970	17.9400	.2330	.1040	20.6130
7	.2300	.0980	17.6070	.2310	.1000	20.4290
8	.2300	.0990	17.5020	.2300	.1000	20.4120
10	.2300	.0980	17.6100	.2310	.1000	20.4290
11	.2310	.0990	17.9190	.2300	.1000	20.4120
12	.2310	.0990	17.7370	.2300	.1000	20.4120
13	.2310	.0990	17.7370	.2300	.1000	20.4120
17	.2230	.0880	-16.6800	.2230	.0890	19.8780

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 2400 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	107.02	114.71	2.59	2.59	19.82
2	105.04	113.08	2.60	2.60	21.88
5	101.86	115.35	2.65	2.65	28.94
7	104.37	117.52	2.68	2.68	22.32
8	102.19	94.72	2.67	2.67	21.00
10	102.04	110.84	2.45	2.45	20.39
11	103.03	116.87	2.36	2.42	26.47
12	100.82	115.60	2.44	2.44	26.27
13	-109.21	110.19	1.82	2.30	26.87
17	101.87	123.88	2.74	2.74	27.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 2400 HOUR TEST SERIES *

MODE A

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	33.00	60.00	33.13	60.23
2	33.00	61.00	33.14	61.27
5	32.50	59.00	32.72	59.40
7	35.00	61.50	35.05	61.59
8	33.00	60.40	33.03	60.46
10	33.00	61.00	33.05	61.09
11	32.00	59.50	32.03	59.56
12	34.20	61.00	34.23	61.06
13	34.50	61.50	34.53	61.56
17	33.00	60.00	33.05	60.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1210.	.8350	.8070	1032.	1.030	1160.
2	1220.	.8280	.7910	1032.	1.040	1233.
5	1220.	.8560	.8360	1032.	1.030	1096.
7	1310.	.8100	.8360	1032.	1.030	1253.
8	1290.	.8540	.8340	995.	1.050	1174.
10	1260.	.8160	.7870	-960.	1.030	1217.
11	1180.	.8030	.7740	978.	1.030	1106.
12	1270.	.8180	.8180	1032.	1.040	1210.
13	1290.	.8440	.8270	1050.	1.040	1245.
17	-1360.	.8480	-.8900	996.	1.030	1146.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL	COR CB	F/A	COR PF	F/A	CORR TT7	COR THRUST
-----	LBM/HR	X100	X100	X100	X100	DEG R	LBF
-----	-----	-----	-----	-----	-----	-----	-----
1	1201.		.8410		.8130	1040.	1156.
2	1211.		.8350		.7980	1041.	1229.
5	1215.		.8670		.8470	1046.	1098.
7	1306.		.8120		.8390	1035.	1251.
8	1287.		.8550		.8360	998.	1172.
10	1257.		.8190		.7890	-962.	1216.
11	1182.		.8050		.7760	980.	1109.
12	1273.		.8190		.8200	1034.	1214.
13	1293.		.8460		.8290	1052.	1249.
17	-1357.		.8500		-.8910	998.	1144.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.444	968.6	678.2	10.9	9.3
2	1.419	959.6	716.2	10.4	8.4
5	1.452	991.4	788.6	10.1	9.4
7	1.404	923.3	652.8	10.5	10.2
8	1.503	977.5	613.1	11.3	10.8
10	1.418	915.0	652.9	9.1	9.6
11	1.374	933.5	712.1	3.9	9.7
12	1.426	895.4	653.4	9.9	10.4
13	1.472	997.4	651.4	7.2	10.0
17	1.453	939.9	749.4	10.3	10.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE A

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2615.	111.59	134.23	2.06	2.06	19.01
2	2591.	111.51	142.97	1.99	1.99	22.79
5	2565.	111.45	152.29	1.87	1.87	28.26
7	2618.	109.61	133.15	2.04	2.04	23.28
8	2658.	110.04	118.58	2.09	2.09	20.39
10	2624.	107.76	132.09	1.76	1.87	21.53
11	2585.	111.80	146.51	1.75	1.90	26.62
12	2635.	105.31	132.02	1.91	2.01	25.58
13	2635.	113.61	127.46	1.36	1.86	26.01
17	2588.	106.57	145.98	1.95	1.97	27.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.2060	.0660	15.9330	.2080	.0690	18.7590
2	.2110	.0710	16.3030	.2130	.0750	19.1010
5	.2030	.0600	16.1000	.2050	.0650	18.4860
7	.2130	.0750	16.5560	.2140	.0770	19.2080
8	.2090	.0690	16.1490	.2090	.0700	18.8330
10	.2110	.0720	16.4160	.2120	.0740	19.0410
11	.2050	.0650	16.2740	.2050	.0650	18.5370
12	.2120	.0730	16.5380	.2120	.0740	19.0320
13	.2140	.0760	16.6830	.2140	.0760	19.1980
17	.2070	.0670	-15.6930	.2070	.0680	18.7010

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 2400 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	110.60	128.17	2.42	2.42	19.01
2	110.42	135.77	2.33	2.33	22.79
5	110.40	142.61	2.30	2.30	28.26
7	109.24	130.82	2.37	2.37	23.28
8	109.76	117.11	2.44	2.44	20.39
10	107.42	129.87	2.04	2.16	21.53
11	111.87	145.84	2.00	2.17	26.62
12	105.38	131.40	2.20	2.31	25.58
13	113.68	126.86	1.56	2.14	26.01
17	106.29	144.17	2.32	2.35	27.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
1	23470.	3022.	521.7	29.86	.009980
2	24095.	3021.	521.7	29.86	.009980
7	23380.	3029.	517.7	30.00	.009060
10	25371.	3029.	515.7	30.00	.008380
12	20704.	3031.	514.2	30.00	.008170
13	23051.	3031.	513.7	30.00	.008290

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	60.00	32.90	59.83
2	33.50	61.00	33.40	60.82
7	35.00	62.00	35.03	62.06
10	35.00	60.00	35.10	60.17
12	35.00	62.00	35.15	62.27
13	35.00	62.00	35.17	-62.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1	1240.	.9050	.8400	-1068.	1.030	1130.
2	1250.	.8620	.8160	1050.	1.040	1200.
7	1330.	.8580	.8350	1032.	1.040	1282.
10	1320.	.8650	.8600	996.	1.040	1149.
12	1320.	.8360	.8250	1023.	1.050	1300.
13	1310.	.8510	.8190	1023.	1.050	-1302.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	COR TT7	COR THRUST
	LBM/HR	X100	X100	DEG R	LBF
----	-----	-----	-----	-----	-----
1	1241.	.9000	.8350	1062.	1128.
2	1251.	.8570	.8120	1044.	1198.
7	1332.	.8590	.8360	1034.	1285.
10	1320.	.8700	.8650	1001.	1152.
12	1318.	.8440	.8320	1032.	1303.
13	1307.	.8590	.8270	1033.	-1306.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.595	1011.5	650.0	6.1	8.5
2	1.511	973.7	639.1	6.1	9.2
7	1.507	937.8	647.0	6.4	9.1
10	1.547	890.9	580.8	6.0	9.9
12	1.477	871.7	608.4	4.6	9.5
13	1.493	929.2	635.8	6.9	-6.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2660.	107.35	118.51	1.06	1.48	17.27
2	2647.	108.59	122.45	1.12	1.69	18.16
7	2654.	105.09	124.54	1.17	1.67	18.50
10	2701.	-99.01	110.89	1.10	1.80	16.67
12	2667.	-100.16	120.09	.86	1.80	20.21
13	2650.	104.98	123.40	1.29	-1.29	20.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.2070	.0690	15.4800	.2060	.0670	18.6250
2	.2110	.0740	15.7540	.2110	.0720	18.9540
7	.2160	.0790	16.2950	.2160	.0790	19.3650
10	.2070	.0670	15.9130	.2080	.0690	18.7390
12	.2160	.0780	16.5400	.2170	.0810	19.4600
13	.2160	.0780	16.5020	-.2180	.0810	-19.4760

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	107.70	121.69	1.27	1.78	17.27
2	108.95	125.76	1.35	2.04	18.16
7	105.13	123.87	1.39	1.99	18.50
10	-98.73	108.12	1.29	2.12	16.67
12	-99.63	115.25	1.01	2.12	20.21
13	104.34	117.81	1.52	-1.52	20.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	36.00	64.00	35.90	63.82
2	36.30	64.00	36.20	63.82
7	37.00	64.00	37.04	64.06
10	-38.00	64.00	38.11	64.19
12	36.20	64.00	36.36	64.28
13	37.00	64.00	37.18	64.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TY7 DEG R	EPR	THRUST LBF

1	1340.	.8770	.8180	1068.	1.030	1437.
2	1335.	.8400	.8080	1050.	1.040	1437.
7	1450.	.8370	-.8810	1068.	1.040	1451.
10	1400.	.8500	.8220	996.	1.040	1462.
12	1350.	.8210	.8030	1023.	1.050	1470.
13	1400.	.8350	.8350	1028.	1.040	1472.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	CORR TT7 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----	-----
1	1341.	.8720	.8130	.8130	1062.	1434.
2	1336.	.8350	.8040	.8040	1044.	1434.
7	1452.	.8380	.8830	.8830	1070.	1455.
10	1400.	.8550	.8270	.8270	1001.	1466.
12	1348.	.8280	.8100	.8100	1032.	1474.
13	1397.	.8430	.8430	.8430	1038.	1476.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.582	922.8	526.8	6.8	9.9
2	1.514	886.3	506.8	6.4	10.5
7	1.514	849.5	510.3	6.5	10.2
10	1.551	827.2	489.6	6.1	10.2
12	1.472	824.3	538.0	4.5	10.3
13	1.500	862.6	528.8	6.3	-7.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2723.	101.11	99.16	1.23	1.78	16.88
2	2721.	101.36	99.57	1.21	1.97	17.75
7	2731.	97.53	100.65	1.22	1.92	18.37
10	2753.	93.47	95.04	1.13	1.89	17.69
12	2705.	96.46	108.14	.86	1.98	19.21
13	2711.	99.21	104.48	1.31	-1.48	20.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2290	.1000	-16.8600	.2290	.0970	20.2810
2	.2290	.1000	-16.8600	.2290	.0970	20.2810
7	.2310	.0990	17.1750	.2300	.1000	20.4120
10	.2310	.0990	17.3850	.2310	.1010	20.4790
12	.2310	.0980	17.4450	.2320	.1020	20.5290
13	.2310	.0980	17.4050	.2320	.1030	20.5460

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	101.45	101.92	1.47	2.15	16.88
2	101.70	102.35	1.46	2.37	17.75
7	97.57	100.09	1.45	2.28	18.37
10	93.20	92.56	1.34	2.23	17.69
12	95.94	103.68	1.01	2.34	19.21
13	98.60	99.65	1.55	-1.75	20.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	103.00	101.00	102.70	100.71
2	103.00	101.00	102.70	100.71
7	103.00	100.00	103.10	100.10
10	102.00	101.00	102.30	101.29
12	104.00	100.00	104.45	100.44
13	103.00	101.00	103.50	101.49

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	9600.	1.5220	1.3820	-1464.	1.840	17944.
2	9700.	1.5740	1.3790	1428.	1.840	17944.
7	9800.	1.5230	1.3860	1428.	1.840	17860.
10	9200.	1.5270	1.2760	1374.	1.840	17860.
12	9700.	1.5310	1.3630	1410.	1.840	17860.
13	9700.	1.5310	1.3550	1392.	1.840	17860.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	9608.	1.5140	1.3740	-1455.	17908.
2	9709.	1.5650	1.3710	1419.	17908.
7	9817.	1.5260	1.3890	1430.	17908.
10	9198.	1.5360	1.2840	1382.	17908.
12	9684.	1.5440	1.3750	1422.	17908.
13	9679.	1.5460	1.3680	1405.	17908.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.208	20.5	5.5	98.8	93.9
2	3.319	19.3	5.0	97.7	95.5
7	3.216	20.2	4.9	91.6	90.9
10	3.225	17.3	1.7	91.9	93.7
12	3.224	22.4	-12.7	89.5	90.4
13	3.228	18.6	4.4	94.2	90.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3150.	1.28	.59	10.14	10.14	45.98
2	3150.	1.16	.52	9.69	9.69	44.92
7	3157.	1.26	.53	9.40	9.40	47.11
10	315A.	1.08	.19	9.41	9.59	46.54
12	314A.	1.39	-1.35	9.14	9.23	47.63
13	3151.	1.16	.47	9.61	9.61	49.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	82.1020	79.2570	78.5370	78.6150	75.5970	94.0840
2	90.8130	79.2570	78.5370	86.8040	75.5970	94.0840
7	74.1240	65.9260	-76.9170	75.2530	66.7220	91.5360
10	83.3580	81.2200	81.6350	87.3850	85.0920	96.5610
12	75.4060	66.6000	78.5080	80.9010	71.5190	92.9440
13	84.1810	81.6450	81.9400	91.1510	88.5410	97.4070

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
----	-----	-----	-----	-----	-----
1	1.34	.62	-12.14	12.14	45.98
2	1.22	.55	11.61	11.61	44.92
7	1.24	.52	11.18	11.18	47.11
10	1.03	.18	12.03	12.26	46.54
12	1.30	-1.26	10.82	10.92	47.63
13	1.07	.43	11.43	11.43	49.29

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-3B * 3000 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	97.00	98.00	96.72	97.72
2	96.00	98.00	95.72	97.72
7	97.00	97.50	97.09	97.59
10	96.00	99.00	96.28	99.29
12	97.00	98.00	97.42	98.43
13	97.50	98.00	97.97	98.48

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	7900.	1.3770	1.2580	-1374.	1.650	15241.
2	7900.	1.3900	1.2500	-1356.	1.650	15241.
7	7800.	1.3540	1.2120	1320.	1.650	15169.
10	-7400.	1.3770	-1.1340	1284.	1.650	15169.
12	7700.	1.3490	1.2240	-1383.	1.650	15169.
13	-8300.	1.4050	1.2760	1293.	1.650	15169.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	7907.	1.3690	1.2510	-1366.	15210.
2	7907.	1.3820	1.2430	1348.	15210.
7	7813.	1.3570	1.2140	1322.	15210.
10	-7398.	1.3850	-1.1400	1291.	15210.
12	7687.	1.3610	1.2350	-1395.	15210.
13	-8282.	1.4190	1.2890	1305.	15210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT30-38 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	2.897	27.7	3.9	76.6	75.1
2	2.924	25.7	3.4	75.6	74.4
7	2.853	30.5	3.5	67.3	69.4
10	2.903	25.1	1.8	68.5	72.9
12	2.837	29.5	6.4	69.2	69.6
13	2.958	23.8	3.6	74.4	72.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3149.	1.92	.46	8.70	8.70	48.59
2	3150.	1.76	.40	8.51	8.51	48.10
7	3156.	2.15	.42	7.78	8.03	49.47
10	3157.	1.73	.21	7.79	8.28	46.34
12	3148.	2.09	-.77	8.03	8.08	50.33
13	3150.	1.61	.42	8.28	8.28	50.59

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	45.5500	41.9550	-68.2070	43.8870	40.1110	81.7490
2	46.4960	41.9550	-68.2070	44.7840	40.1110	81.7490
7	41.8750	38.5240	-68.2520	42.3960	38.9640	81.2130
10	51.5320	54.0210	74.6300	53.6630	56.5080	88.2470
12	44.3860	44.1340	71.7010	47.0920	47.2820	84.8440
13	48.6210	44.2100	71.5880	52.0810	47.7560	85.0310

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	1.99	.48	10.43	10.43	48.59
2	1.83	.42	10.20	10.20	48.10
7	2.12	.42	9.26	9.56	49.47
10	1.67	.20	9.21	9.80	46.34
12	1.97	.72	9.50	9.56	50.33
13	1.51	.39	9.83	9.83	50.59

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	84.50	94.00	-84.26	93.73
2	-84.00	93.00	-83.76	-92.73
7	85.00	93.00	85.08	93.09
10	-84.00	93.50	-84.24	93.77
12	86.00	94.00	86.38	94.41
13	87.00	94.00	87.42	94.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	5400.	1.1310	1.0950	-1248.	-1.370	-10311.
2	4945.	1.1270	.9880	1212.	-1.370	-10311.
7	5500.	1.1310	1.0650	1212.	1.390	10701.
10	5000.	1.1280	.9390	-1140.	1.390	10701.
12	5300.	1.1250	1.0330	1230.	1.390	10701.
13	5700.	1.1880	1.0870	1176.	1.390	10701.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	5405.	1.1240	1.0880	1241.	-10290.
2	4949.	1.1200	.9820	1205.	-10290.
7	5509.	1.1330	1.0670	1214.	10730.
10	4999.	1.1340	.9440	-1146.	10730.
12	5291.	1.1350	1.0420	1240.	10730.
13	5688.	1.2000	1.0980	1187.	10730.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3A * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.368	72.8	4.3	43.7	46.9
2	2.358	78.5	4.5	41.3	44.9
7	2.371	88.7	4.6	38.9	44.6
10	2.365	83.0	3.9	36.4	44.6
12	2.356	67.7	5.2	39.6	45.9
13	2.490	59.9	4.4	46.3	48.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI	CO EI	HC EI	NO EI	NOX EI	SMK NUMBER FRONT SIDE
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	
1	3142.	6.15	.62	6.07	6.51	46.81
2	3141.	6.66	.65	5.75	6.25	48.29
7	3147.	7.49	.67	5.40	6.19	48.95
10	3148.	7.04	.56	5.06	6.21	48.32
12	3143.	5.74	.75	5.52	6.40	49.66
13	3144.	4.81	.61	6.11	6.37	51.44

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	19.8260	15.7560	54.5440	19.2510	15.1110	65.4170
2	17.6470	12.4710	-51.6820	-17.1440	11.9690	-61.9930
7	17.8760	12.7610	-53.0120	18.0440	12.8910	63.0640
10	18.9970	14.6670	55.5110	19.5890	15.2730	65.5800
12	20.2200	16.8550	57.5880	21.1960	17.9710	68.0770
13	21.9360	16.9200	57.5290	23.1730	18.1810	68.2580

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMFR CORRECTED
1	6.34	.65	7.28	7.81	46.81
2	6.85	.68	6.89	7.50	48.29
7	-7.42	.66	6.42	7.37	48.95
10	6.82	.54	-5.98	7.34	48.32
12	5.48	.71	6.53	7.57	49.66
13	4.55	.57	7.25	7.56	51.44

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	68.00	87.00	67.80	86.75
2	68.00	86.00	67.80	85.75
7	-65.00	-84.00	-65.06	-84.08
10	68.00	86.50	68.20	86.75
12	69.00	86.00	69.30	86.38
13	70.00	86.00	70.34	86.42

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODF 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	3030.	.9030	.8710	-1140.	1.170	5691.
2	3000.	.8990	.8490	1104.	1.170	5691.
7	-2800.	.8440	-.7890	1104.	1.170	5665.
10	3120.	.8950	.8360	-996.	1.170	5665.
12	3090.	.8630	.8780	1122.	1.170	5665.
13	3220.	.9050	.8930	1068.	1.170	5665.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	3033.	.8970	.8660	1133.	5680.
2	3003.	.8940	.8440	1097.	5680.
7	-2805.	.8460	-.7900	1106.	5680.
10	3119.	.9000	.8410	-1001.	5680.
12	3085.	.8710	.8850	1132.	5680.
13	3213.	.9140	.9010	1078.	5680.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.864	215.2	21.2	26.2	28.1
2	1.856	222.0	18.7	24.8	27.0
7	1.743	216.0	25.1	22.6	24.6
10	1.852	201.1	23.4	21.3	26.3
12	1.786	172.6	19.8	22.7	26.0
13	1.872	177.3	25.8	22.9	25.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 6

UNIT	CO ₂ EI	CO EI	HC EI	NO EI	NOX EI	SMK NUMBER FRONT SIDE
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	
1	3107.	22.84	3.87	4.57	4.89	38.81
2	3107.	23.65	3.43	4.35	4.73	39.38
7	3109.	24.52	4.89	4.21	4.59	37.52
10	3115.	21.52	4.30	3.74	4.62	39.22
12	3113.	19.15	3.78	4.13	4.74	44.41
13	3111.	18.75	4.70	3.98	4.49	43.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	7.6030	3.4450	38.3050	7.4290	3.3180	45.9820
2	6.9380	2.8420	36.6370	6.7820	2.7400	43.9850
7	-5.5500	-1.9500	-34.2360	-5.5850	-1.9660	-40.7130
10	7.2760	3.2010	38.9600	7.4500	3.3190	45.9850
12	6.7700	2.9200	38.3210	7.0130	3.0900	45.2290
13	7.0440	2.9240	38.2590	7.3350	3.1150	45.3130

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	23.37	4.02	5.48	5.88	38.81
2	24.20	3.56	5.22	5.68	39.38
7	24.37	-4.84	5.00	5.46	37.52
10	21.02	4.15	4.42	5.45	39.22
12	18.48	3.57	4.88	5.59	44.41
13	18.01	4.41	4.71	5.31	43.16

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	35.50	64.00	35.40	63.82
2	35.00	64.00	34.90	63.82
7	-38.00	64.00	-38.04	64.06
10	-38.00	64.00	-38.11	64.19
12	36.00	63.00	36.16	63.28
13	36.00	63.00	36.17	63.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1290.	.8060	.7870	-1068.	1.040	1437.
2	1260.	.8160	.7630	1050.	1.040	1437.
7	1360.	.7880	.8260	-1068.	1.040	1451.
10	1330.	.7960	.7810	996.	1.040	1462.
12	1300.	.7840	.8020	1050.	-1.060	1385.
13	1330.	.7990	.8110	1023.	1.040	1387.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1291.	.8020	.7830	1062.	1434.
2	1261.	.8120	.7580	1044.	1434.
7	1362.	.7900	.8280	1070.	1455.
10	1330.	.8000	.7860	1001.	1466.
12	1298.	.7910	.8090	1059.	1388.
13	1327.	.8060	.8180	1033.	1391.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.440	883.8	520.2	9.4	11.0
2	1.446	898.5	562.6	8.4	10.6
7	1.408	835.9	524.7	10.4	10.9
10	1.446	782.1	471.8	9.1	11.0
12	1.387	823.6	561.0	7.5	10.6
13	1.420	834.7	545.7	9.3	9.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2696.	105.32	106.50	1.83	2.15	17.78
2	2675.	105.77	113.79	1.62	2.04	19.66
7	2699.	101.96	109.94	2.07	2.19	19.45
10	2743.	-94.47	97.90	1.80	2.18	17.58
12	2671.	100.93	118.12	1.51	2.14	19.68
13	2686.	100.47	112.83	1.84	1.91	21.72

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2290	.1000	16.8600	.2290	.0970	20.2810
2	.2290	.1000	16.8600	.2290	.0970	20.2810
7	.2310	.0990	17.1750	.2300	.1000	20.4120
10	.2310	.0990	17.3850	.2310	.1010	20.4790
12	.2230	.0870	16.9910	.2250	.0910	19.9920
13	.2240	.0870	16.9510	.2250	.0920	20.0090

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3A * 3000 HOUR TEST SERIES *

MODF 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	105.67	109.47	2.20	2.59	17.78
2	106.13	116.96	1.94	2.46	19.66
7	102.00	109.33	2.47	2.60	19.45
10	-94.20	95.34	2.12	2.57	17.58
12	100.39	113.30	1.78	2.52	19.68
13	99.86	107.67	2.18	2.26	21.72

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.30	59.00	32.21	-58.83
2	32.00	60.00	31.91	59.83
7	35.00	62.00	35.03	62.06
10	33.00	61.00	33.10	61.18
12	34.50	61.00	34.65	61.27
13	35.00	62.00	35.17	62.30

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	1190.	.8420	.8330	1068.	1.040	-1060.
2	1190.	.8520	.7990	1050.	1.040	1130.
7	1320.	.8080	.8290	1032.	1.040	1282.
10	1210.	.8250	-.7530	-960.	1.040	1219.
12	1290.	.8050	.8380	1050.	-1.060	1225.
13	1300.	.8240	.8120	1023.	1.040	1302.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1191.	.8370	.8280	1062.	-1058.
2	1191.	.8470	.7950	1044.	1128.
7	1322.	.8100	.8300	1034.	1285.
10	1210.	.8300	-.7570	-965.	1222.
12	1288.	.8120	.8460	1059.	1229.
13	1297.	.8320	.8200	1033.	1306.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-38 * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.457	998.0	672.5	8.1	10.0
2	1.468	986.8	707.8	7.5	9.8
7	1.412	908.8	626.3	9.4	10.2
10	1.447	884.1	634.2	7.6	9.7
12	1.399	887.8	644.9	6.5	9.8
13	1.436	910.7	642.8	8.3	9.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2613.	113.93	131.88	1.52	1.87	-16.54
2	2602.	111.35	137.22	1.39	1.83	19.95
7	2639.	108.14	128.04	1.83	1.99	19.53
10	2650.	103.03	126.97	1.46	1.86	18.13
12	2624.	105.99	132.26	1.27	1.92	20.00
13	2633.	106.25	128.84	1.59	1.73	20.57

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT3D-3B * 3000 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.2030	.0630	-15.2090	-.2020	-.0620	-18.3000
2	.2070	.0690	-15.4800	.2060	.0670	18.6250
7	.2160	.0790	16.2950	.2160	.0790	19.3650
10	.2120	.0720	16.1930	.2120	.0740	19.0710
12	.2120	.0720	16.2360	.2130	.0750	19.1010
13	.2160	.0780	16.5020	-.2180	.0810	19.4760

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	114.30	135.37	1.83	2.25	-16.54
2	111.72	140.89	1.67	2.20	19.95
7	108.18	127.35	2.17	2.37	19.53
10	102.74	123.77	1.72	2.19	18.13
12	105.43	126.97	1.49	2.25	20.00
13	105.61	123.01	1.88	2.04	20.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	43.6	1.93	85	2	13
	600-Hour	40.9	1.90	83	2	15
	1200-Hour	43.2	1.91	84	1	15
	1800-Hour	44.1	1.89	86	1	13
	2400-Hour	43.0	1.91	83	1	16
	3000-Hour	44.9	1.93	82	1	17
2	Baseline	43.6	1.93	85	2	13
	600-Hour	40.9	1.90	83	2	15
	1200-Hour	43.2	1.91	84	1	15
	1800-Hour	44.1	1.89	86	1	13
	2400-Hour	44.1	1.91	83	1	16
	3000-Hour	44.9	1.93	82	1	17
3	Baseline	43.6	1.93	85	2	13
	600-Hour	40.9	1.90	83	2	15
4	Baseline	43.6	1.92	85	2	13
	600-Hour	42.3	1.91	84	2	14
	1200-Hour	43.4	1.92	85	1	14
5	Baseline	42.6	1.91	83	2	15
	600-Hour	42.1	1.93	84	2	14
	1200-Hour	41.3	1.92	84	2	14
	1800-Hour	43.2	1.91	85	2	13
	2400-Hour	42.6	1.91	84	2	14
6	Baseline	42.6	1.91	83	2	15
	600-Hour	42.1	1.93	84	2	14
	1200-Hour	41.3	1.92	84	2	14
7	Baseline	41.9	1.90	84	2	14
	600-Hour	42.1	1.93	84	2	14
	1200-Hour *					
	1800-Hour	43.4	1.92	85	2	13
	2400-Hour	43.2	1.92	85	2	13
	3000-Hour	46.3	1.90	84	1	15

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
8	Baseline	41.9	1.90	84	2	14
	600-Hour	42.1	1.93	84	2	14
	1200-Hour *					
	1800-Hour	43.4	1.92	85	2	13
	2400-Hour	43.2	1.92	85	2	13
9	Baseline	41.9	1.90	84	2	14
	600-Hour	42.1	1.93	84	2	14
	1200-Hour *					
	1800-Hour	43.4	1.92	85	2	13
10	Baseline	41.9	1.90	84	2	14
	600-Hour	42.1	1.93	84	2	14
	1200-Hour *					
	1800-Hour	43.4	1.92	85	2	13
	2400-Hour	43.2	1.92	85	2	13
3000-Hour	46.3	1.90	84	1	15	
11	Baseline	43.4	1.93	84	2	14
	600-Hour	43.8	1.94	84	2	14
	1200-Hour	43.0	1.93	86	1	13
	1800-Hour *					
	2400-Hour	44.5	1.89	83	1	16
12	Baseline	43.4	1.93	84	2	14
	600-Hour	43.8	1.94	84	2	14
	1200-Hour	43.0	1.93	86	1	13
	1800-Hour *					
	2400-Hour	44.4	1.89	83	1	16
3000-Hour	45.2	1.93	82	1	17	
13	Baseline	43.4	1.93	84	2	14
	600-Hour	43.8	1.94	84	2	14
	1200-Hour	43.4	1.92	84	2	14
	1800-Hour *					
	2400-Hour	44.5	1.89	83	1	16
3000-Hour	45.2	1.93	82	1	17	

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
14	Baseline	43.4	1.93	84	2	14
	600-Hour	43.8	1.94	84	2	14
	1200-Hour	43.4	1.92	84	2	14
	1800-Hour *					
15	Baseline	43.0	1.92	83	3	14
16	Baseline	43.0	1.92	83	3	14
17	Baseline	43.0	1.92	83	3	14
	600-Hour	43.0	1.88	84	2	14
	1200-Hour	43.4	1.92	86	1	13
	1800-Hour *					
	2400-Hour *					
18	Baseline	43.0	1.92	83	3	14
	600-Hour	43.0	1.88	84	2	14
	1200-Hour	43.4	1.92	86	1	13
	1800-Hour *					

* Fuel analysis data not available

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Report No. FAA-RD-79-8, VI

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME VI
JT9D-3A TEST DATA**



APRIL 1979

FINAL REPORT

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16. Abstract This is the sixth volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the JT9D-3A engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.			
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1. INTRODUCTION

This is the sixth volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the JT9D-3A engine type as installed on the 747-100 aircraft. The engines, owned and operated by UAL, were tested in San Francisco by UAL personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume II - JT8D-9 Test Data
- Volume III - JT8D-7 Test Data
- Volume IV - JT3D-7 Test Data
- Volume V - JT3D-3B Test Data
- Volume VII - RB211-22B Test Data
- Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted that EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF REPORT

There are four sections that make up the volume: Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emissions and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the JT9D-3A engine there were six such series; Baseline; 600 Hour; 1200 Hour; 1500 Hour; 1800 Hour; 2100 Hour and above. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/662794		Original Test A/C No. <u>8020</u> , Position No. <u>1</u>
	9/4/75	Baseline Emission Test
	10/17/75	Nozzle guide vane burned through; Engine Vane Control (EVC) trim
	11/12/75	"600-Hour" Emission Test
	1/8/76	EVC trim
	1/30/76	"1200-Hour" Emission Test
	3/17/76	Engine removed from program due to eroded nozzle guide vane and broken turbine blade
2/663025		Original Test A/C No. <u>8020</u> , Position No. <u>3</u>
	9/1/75	Uptrimmed engine 51 clicks
	9/4/75	Baseline Emission Test
	9/14/75	FCU replaced
	9/26/75	Uptrimmed engine 25 clicks
	10/3/75	Down-trimmed engine 7 clicks
	10/6/75	Down-trimmed engine 7 clicks
	10/17/75	EVC trim
	11/12/75	"600-Hour" Emission Test
	1/8/76	EVC trim
	1/30/76	"1200-Hour" Emission Test
	3/17/76	Engine removed from program due to cracked turbine blade
3/663059		Original Test A/C No. <u>8020</u> , Position No. <u>4</u>
	9/4/75	Baseline Emission Test
	9/14/75	FCU replaced
	9/22/75	Uptrimmed engine 16 clicks
	9/23/75	Down-trimmed engine 16 clicks
	9/26/75	Down-trimmed engine 26 clicks
	9/30/75	Number 15 and 16 fuel nozzles replaced
	10/6/75	Uptrimmed engine 13 clicks
	10/7/75	Uptrimmed engine 13 clicks
	10/17/75	EVC trim

Unit No./ Serial No.	Date	Item
3/663059 Continued	11/12/75	"600-Hour" Emission Test
	1/3/76	Engine removed from program due to engine failure
4/662802		Original Test A/C No. <u>8018</u> , Position No. <u>1</u>
	9/8/75	Baseline Emission Test
	11/7/75	EVC trim
	11/10/75	Retrimmed engine
	11/10/75	"600-Hour" Emission Test
	1/13/76	Engine removed from program due to oil leak in angle gear box and oil out of towershaft
	2/5/76	Engine reinstalled on A/C No. <u>8035</u> , Position No. <u>3</u> This engine had been removed but the repair did not affect gas path parameter so it has been reentered.
	3/4/76	Engine removed from program due to cracked turbine blades
5/663083		Original Test A/C No. <u>8018</u> , Position No. <u>2</u>
	9/8/75	Baseline Emission Test
	11/7/75	Engine removed from program due to failed turbine blade
6/662734		Original Test A/C No. <u>8018</u> , Position No. <u>3</u>
	9/8/75	Baseline Emission Test
	11/7/75	EVC trim
	11/10/75	Trimmed engine
	11/10/75	"600-Hour" Emission Test
	2/12/76	"1200-Hour" Emission Test
	2/16/76	Replaced nose cowl
	2/27/76	EVC trim
	4/7/76	"1500-Hour" Emission Test
	5/6/76	EVC trim
	5/21/76	"2100-Hour" Emission Test
	6/14/76	"2400-Hour" Emission Test
7/12/76	"2700-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
7/662516	9/8/75 11/7/75 11/10/75 11/10/75 2/2/76 2/27/76 4/7/76 4/8/76	Original Test A/C No. <u>8018</u> , Position No. <u>4</u> Baseline Emission Test EVC trim Trimmed engine "600-Hour" Emission Test "1200-Hour" Emission Test EVC trim "1500-Hour" Emission Test Engine removed due to cracked turbine blade
8/663007	9/11/75 1/4/76	Original Test A/C No. <u>8011</u> , Position No. <u>1</u> Baseline Emission Test Engine removed from program due to cracked turbine blade
9/662619	9/11/75 10/10/75 1/15/76 2/23/76 3/1/76 4/28/76 5/20/76 6/15/76	Original Test A/C No. <u>8011</u> , Position No. <u>3</u> Baseline Emission Test Uptrimmed engine 25 clicks "600-Hour" Emission Test Throttle rig checked and adjusted "1200-Hour" Emission Test "1500-Hour" Emission Test "1800-Hour" Emission Test Engine removed from program due to turbine blade failure
10/662628	9/15/75 9/18/75 9/22/75 11/7/75 12/4/75 12/11/75 1/14/76	Original Test A/C No. <u>8032</u> , Position No. <u>1</u> Baseline Emission Test No noise trimmed engine Decreased engine trim 26 clicks EVC trim Replaced fuel nozzle, engine slow to start "600-Hour" Emission Test Engine removed due to loss of oil

Unit No./ Serial No.	Date	Item
11/662733		Original Test A/C No. <u>8032</u> , Position No. <u>2</u>
	9/18/75	No noise trimmed engine
	9/22/75	Baseline Emission Test
	10/5/75	FCU replaced
	11/7/75	EVC trim
	11/22/75	High stage bleed will not open, replaced
	12/2/75	Slow to start, replaced T _{T2} sensor
	12/15/75	"600-Hour" Emission Test
	1/8/76	Trimmed engine
	3/4/76	EVC trim
	3/8/76	"1200-Hour" Emission Test
	3/11/76	Retrimmed engine
	4/4/76	Retrimmed engine
	4/12/76	Rerigged throttle
	4/21/76	"1500-Hour" Emission Test
	5/11/76	EVC trim
	5/19/76	"1800-Hour" Emission Test
	6/17/76	"2100-Hour" Emission Test
	7/5/76	Bleed valve opens in cruise, replaced flow divider
	7/18/76	Engine removed
12/662424		Original Test A/C No. <u>8032</u> , Position No. <u>4</u>
	9/15/75	Baseline Emission Test
	9/18/75	No noise trimmed engine
	11/7/75	EVC trim
	12/4/75	Slow to start, replaced fuel nozzles
	12/11/75	"600-Hour" Emission Test
	1/8/76	Trimmed engine
	3/4/76	EVC trim
	3/11/76	"1200-Hour" Emission Test
	3/12/76	Engine removed due oil smell in cabin, EVC trim
3/22/76	Engine reinstalled on A/C No. <u>8004</u> , Position No. <u>1</u>	

Unit No./ Serial No.	Date	Item
12/662424 Continued	4/22/76	"1500-Hour" Emission Test
	4/25/76	Engine removed from program due to cracked turbine blade
13/663046		Original Test A/C No. <u>8010</u> , Position No. <u>1</u>
	9/16/75	Baseline Emission Test
	9/18/75	EVC trim
	9/20/75	Accomplished FCU trim
	12/4/75	"600-Hour" Emission Test
	2/27/76	"1200-Hour" Emission Test
	3/10/76	EVC trim
	3/31/76	"1500-Hour" Emission Test
	5/12/76	EVC trim
	5/13/76	"1800-Hour" Emission Test
	6/9/76	"2100-Hour" Emission Test
	8/9/76	Retrimmed engine
	8/10/76	"2700-Hour" Emission Test
	8/31/76	EVC trim
9/20/76	Engine removed from program due to disk limit	
14/663031		Original Test A/C No. <u>8010</u> , Position No. <u>2</u>
	9/16/75	Baseline Emission Test
	9/18/75	EVC trim
	9/20/75	Accomplished FCU trim
	11/13/75	Engine removed from program due to failed turbine blade
15/663092		Original Test A/C No. <u>8004</u> , Position No. <u>2</u>
	9/17/75	Baseline Emission Test
	11/25/75	Engine removed from program due to bird ingestion
16/662575		Original Test A/C No. <u>8004</u> , Position No. <u>3</u>
	9/17/75	Baseline Emission Test
	11/22/75	Checked throttle rig

Unit No./ Serial No.	Date	Item
16/662575 Continued	1/8/76	"600-Hour" Emission Test
	1/12/76	Engine removed due to fan rev damage
	1/21/76	EVC trim
	1/23/76	Engine reinstalled on A/C No. <u>8013</u> , Position No. <u>3</u>
	1/28/76	Replaced EVC
	3/25/76	"1200-Hour" Emission Test
	5/7/76	EVC trim
	5/19/76	"1500-Hour" Emission Test
	6/29/76	"1800-Hour" Emission Test
	7/4/76	Engine removed from program due to metal in tailpipe
17/662728		Original Test A/C No. <u>8004</u> , Position No. <u>4</u>
	9/17/75	Baseline Emission Test
	11/22/75	Checked throttle rig
	1/8/76	"600-Hour" Emission Test
	1/12/76	Replaced fan case
	1/23/76	EPR reads low replaced transmitter
	3/8/76	Engine removed from program due to eroded NGV
18/663069		Original Test A/C No. <u>8027</u> , Position No. <u>2</u>
	9/19/75	Baseline Emission Test
	11/11/75	Engine removed from program due to nozzle guide vane erosion
19/663075		Original Test A/C No. <u>8027</u> , Position No. <u>3</u>
	9/19/75	Baseline Emission Test
	10/3/75	EVC trim
	11/11/75	Engine removed from program due to failed turbine blade
20/663088		Original Test A/C No. <u>8003</u> , Position No. <u>1</u>
	9/22/75	Baseline Emission Test
	10/16/75	EVC trim

Unit No./ Serial No.	Date	Item
20/663088 Continued	10/26/75	Replaced high stage bleed valve
	11/21/75	"600-Hour" Emission Test
	2/2/76	EVC trim
	2/11/76	Hard to start, replaced T _{T2} sensor
	3/9/76	"1200-Hour" Emission Test
	4/8/76	"1500-Hour" Emission Test
	4/11/76	Engine removed from program due to turbine failure
21/662618		Original Test A/C No. <u>8018</u> , Position No. <u>4</u>
	4/13/76	Baseline Emission Test
	9/14/76	Fuel control replaced
	10/16/76	EVC trim
	10/20/76	"1500-Hour" Emission Test Engine removed from program due to compressor damage
22/663069		Original Test A/C No. <u>8018</u> , Position No. <u>2</u>
	11/10/75	Baseline Emission Test
	1/29/76	"600-Hour" Emission Test
	2/27/76	EVC trim
	4/13/76	"1200-Hour" Emission Test
	5/6/76	Engine removed from program due to metal in oil system
23/662607		Original Test A/C No. <u>8003</u> , Position No. <u>2</u>
	4/8/76	Baseline Emission Test
	6/28/76	Emission test aborted, due to high vibration during mode 3, cause not known
	7/15/76	"600-Hour" Emission Test
	9/24/76	"1200-Hour" Emission Test
	11/22/76	Engine removed from program

Unit No./ Serial No.	Date	Item
24/663059		Original Test A/C No. <u>8010</u> , Position No. <u>4</u>
	3/31/76	Baseline Emission Test
	5/8/76	Engine removed, 3.0 bleed actuator replaced
	5/26/76	Engine reinstalled on A/C No. <u>8013</u> , Position No. <u>1</u>
	6/29/76	"600-Hour" Emission Test
	8/9/76	EVC trim
	9/24/76	"1200-Hour" Emission Test
	11/22/76	"1500-Hour" Emission Test
25/662628		Original Test A/C No. <u>8020</u> , Position No. <u>1</u>
	4/2/76	Baseline Emission Test
	7/6/76	EVC trim
	8/24/76	"1200-Hour" Emission Test
	9/24/76	Engine removed from program due to broken turbine blades

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T_a	Ambient temperature	deg R
AMB PRESS	P_a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 65 percent N_2 nominal	
MODE 2		Idle "plus", initial - 69 percent N_2	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 percent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 percent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 percent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N_1	Rotational speed of low pressure turbine, given as a percent of design speed (3400 rpm)	percent
N2 SPEED	N_2	Rotational speed of high pressure turbine, given as a percent of design speed (7807 rpm)	percent
CORR N1	N_1'	N_1 speed corrected to standard ambient conditions (Ref 1) $N_1' = N_1 \times \sqrt{518.7/T_a}$	percent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (Ref 1, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28 + 0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4} + 0.25a} - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$ where a is the hydrogen-carbon ratio of the fuel as obtained in the fuel analysis. (A mean value was used when the analysis was not available; $a_{mean} = 1.90$)	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio $(F/A)_{PF} = F \div \left(\frac{FP_7 \times A_j \times P_a \times EPR}{T_6} - \frac{F}{3600} \right)$ where FP_7 is obtained from the curve shown in Figure 1 and A_j , the nozzle discharge area equals 914 sq in. EPR is obtained from the curve shown in Figure 2 for modes 1,2,7, and 8. Actual test data is used for the other modes.	
TT6	T_{T6}	Turbine interstage temperature	deg R
EPR	EPR	Engine pressure ratio	
THURST	TH	Thrust, obtained from $TH = TH' \times (P_a/29.92)$ (Ref 1)	
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	

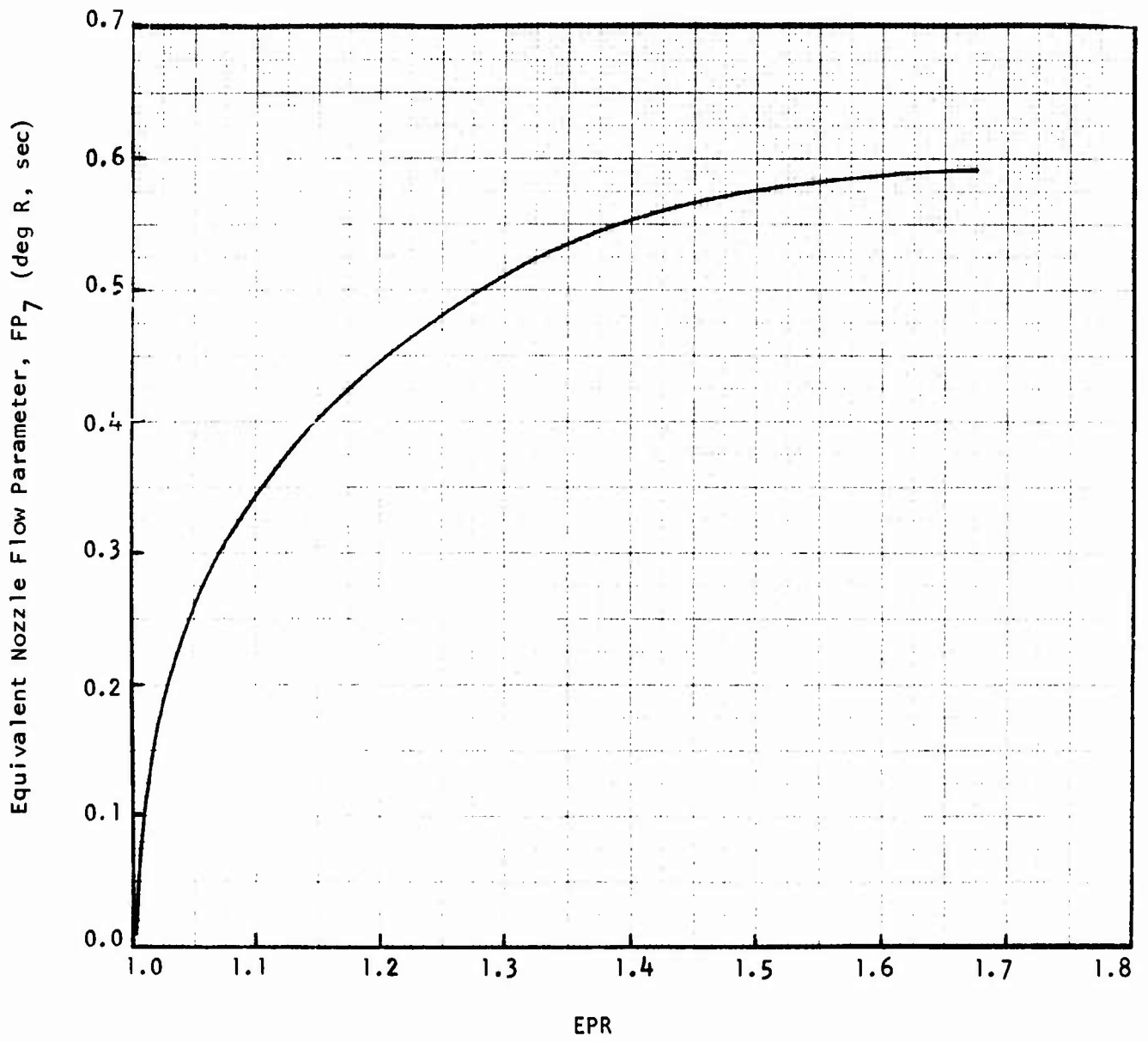


Figure 1. Equivalent Nozzle Flow Parameter versus EPR

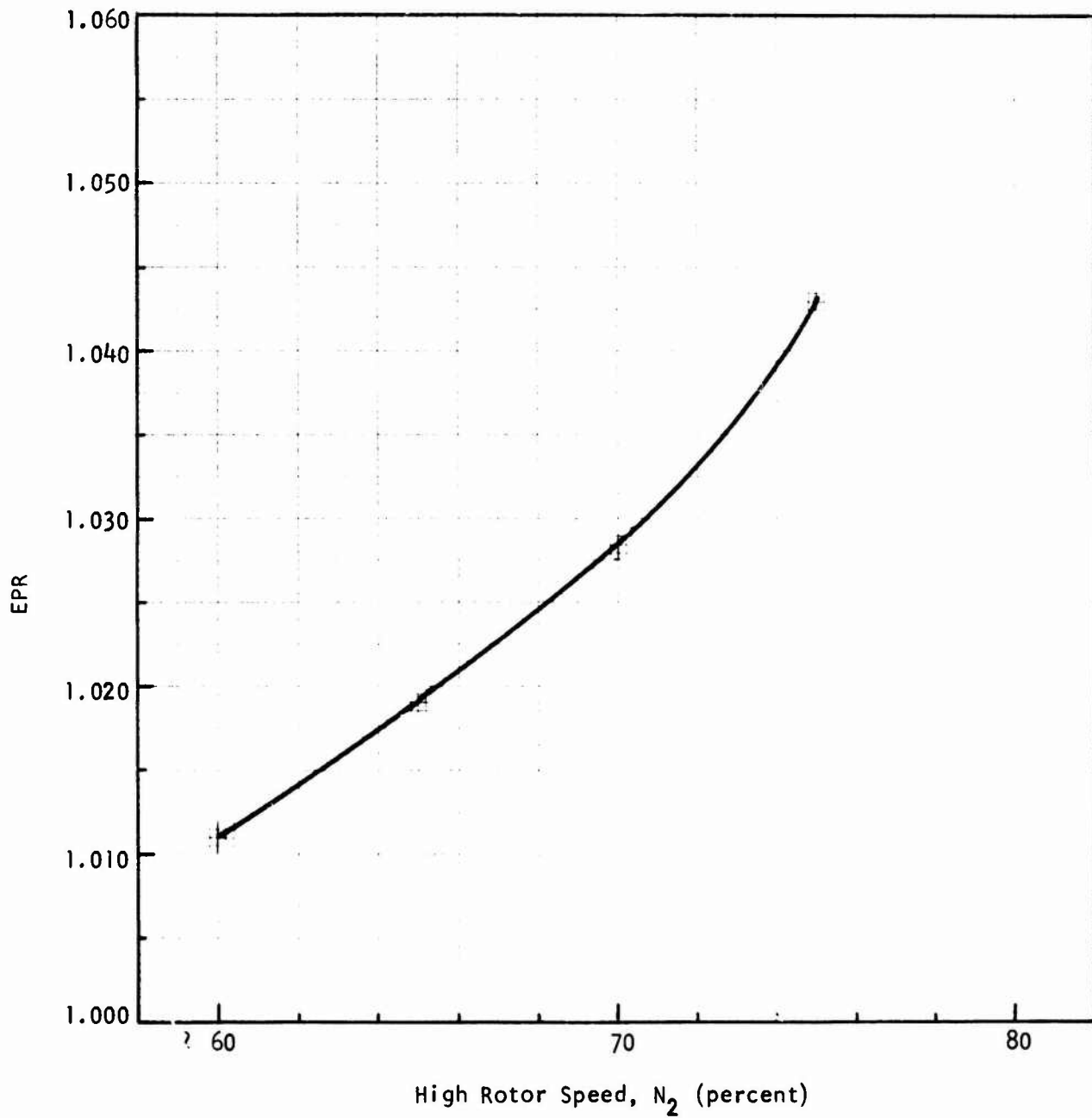


Figure 2. Mean EPR versus N₂ Curve in the Idle Regime

Name	Symbol	Description	Unit
COR PF F/A	$(F/A)_{PF}^1$	Corrected performance fuel-air ratio (Ref 1) $(F/A)_{PF}^1 = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT6	T_{T6}	Corrected turbine interstage temperature $T_{T6}^1 = T_{T6} \times (518.7/T_a)$	deg R
COR THRUST	TH ¹	Corrected thrust (obtained from curve shown in Fig 3 for modes 3 thru 6 and from the curve shown in Fig 4 for modes 1,2,7,8)	lbf
CO2 CONC	CO ₂	Concentration of carbon dioxide	percent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NOX CONC	NO _x	Concentration of NO _x	ppm
CO2 EI	EI _{CO₂}	Emission index of carbon dioxide (Ref 3) $EI_{CO_2} = \frac{M_{CO_2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2}{10^4} + \frac{HC}{10^4} \right)}$ where: M _C = atomic weight of carbon M _H = atomic weight of hydrogen M _{CO₂} = molecular weight of CO ₂	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2}{10^4} + \frac{HC}{10^4} \right)}$ where: M _{CO} = molecular weight of CO	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2}{10^4} + \frac{HC}{10^4} \right)}$ where: M _{HC} = molecular weight of methane	lbm per 1000 lbm fuel

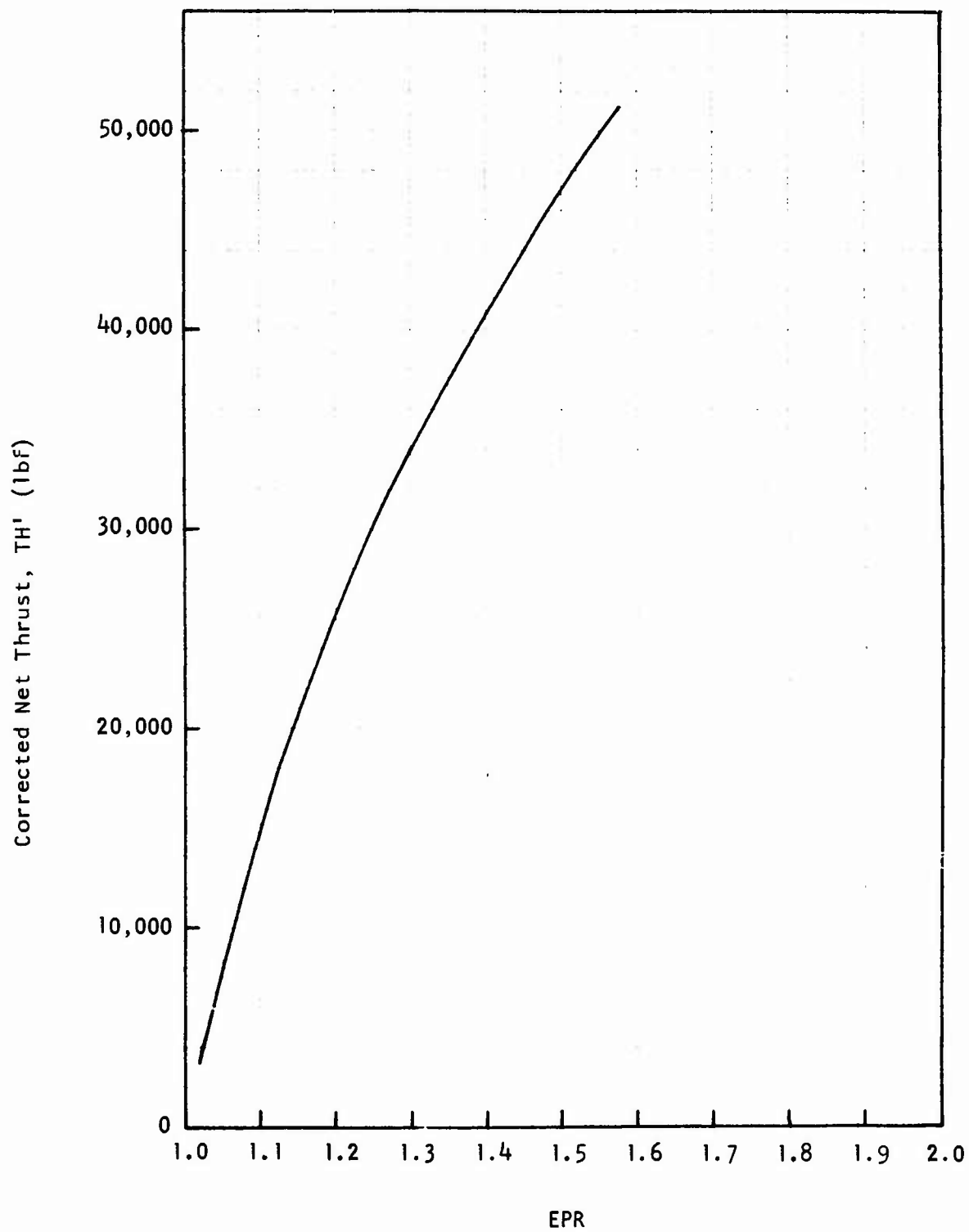


Figure 3. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed

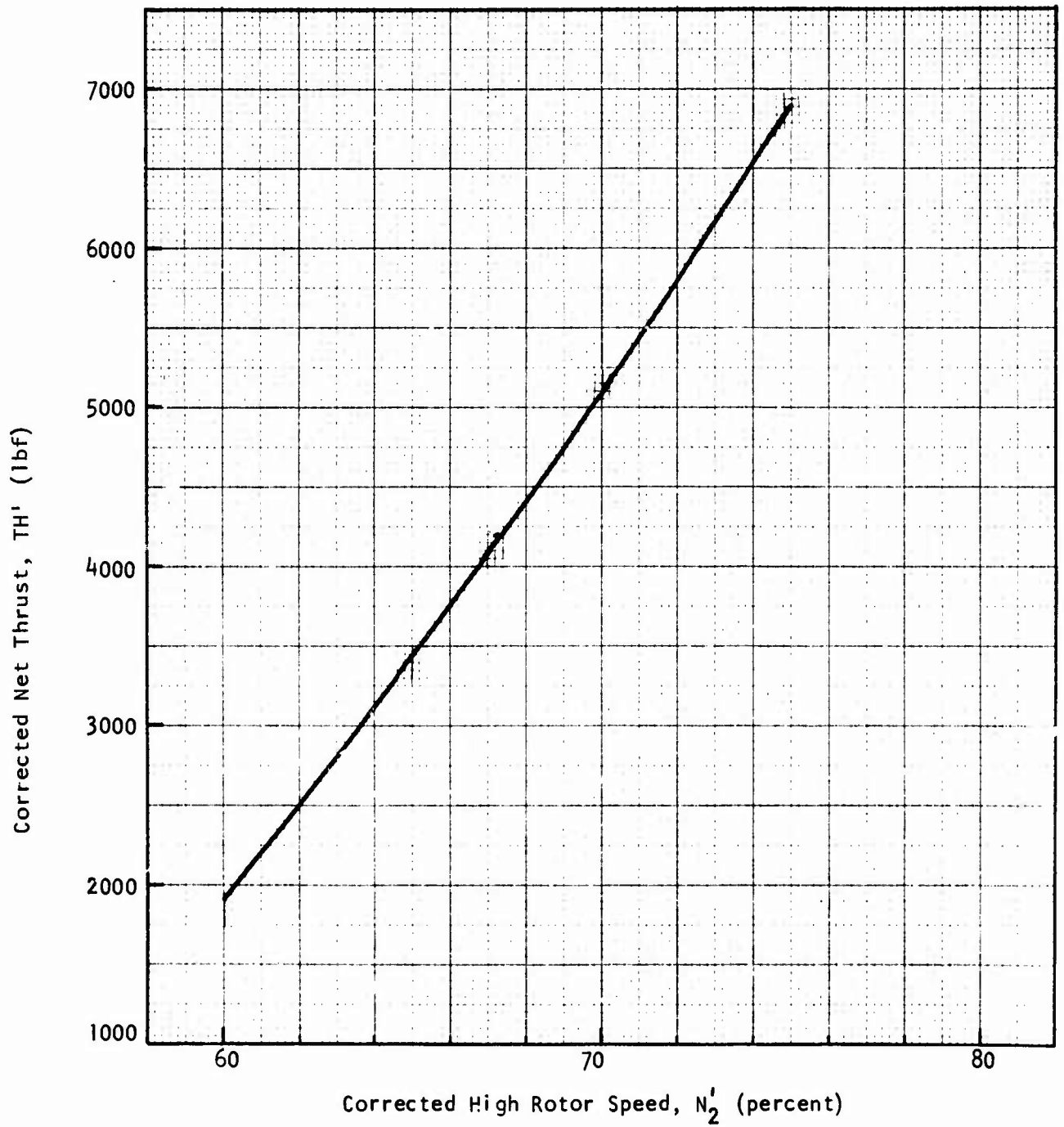


Figure 4. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
NO EI	EI_{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO_2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ where: M_{NO_2} = molecular weight of NO_2	lbm per 1000 lbm fuel
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = \frac{M_{NO_2} \times \frac{NO_x}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	lbm per 1000 lbm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ where RS = smoke spot reflectance RW = reflectance of clean filter paper	
SMK NUMBER CORRECTED	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	lbm per 1000 lbm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	lbm per 1000 lbm fuel
NRE CNO EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	lbm per 1000 lbm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO_x})_{std}}{F_{NO_x}} \times EI_{NO_x}$	lbm per 1000 lbm fuel

Name	Symbol	Description
FCO	F_{CO}	<p data-bbox="592 300 871 331">CO emission factor</p> $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$ $\frac{e^{T_{b,obs}/(400-F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(400-F/A_{ref} \times 10^4)}}$ <p data-bbox="592 683 1287 778">where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$</p> $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p data-bbox="592 1129 1318 1204">where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see² Fig 5)</p> <p data-bbox="592 1225 1350 1300">Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p data-bbox="592 1321 1444 1427">Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p data-bbox="592 1459 997 1491">The reference values were:</p> $F/A_{ref} = 0.0185$ $N_{2,ref} = 7430 \text{ rpm}$ $P_{a,ref} = 29.97 \text{ in Hg abs}$ $T_{a,ref} = 519.2 \text{ deg R}$

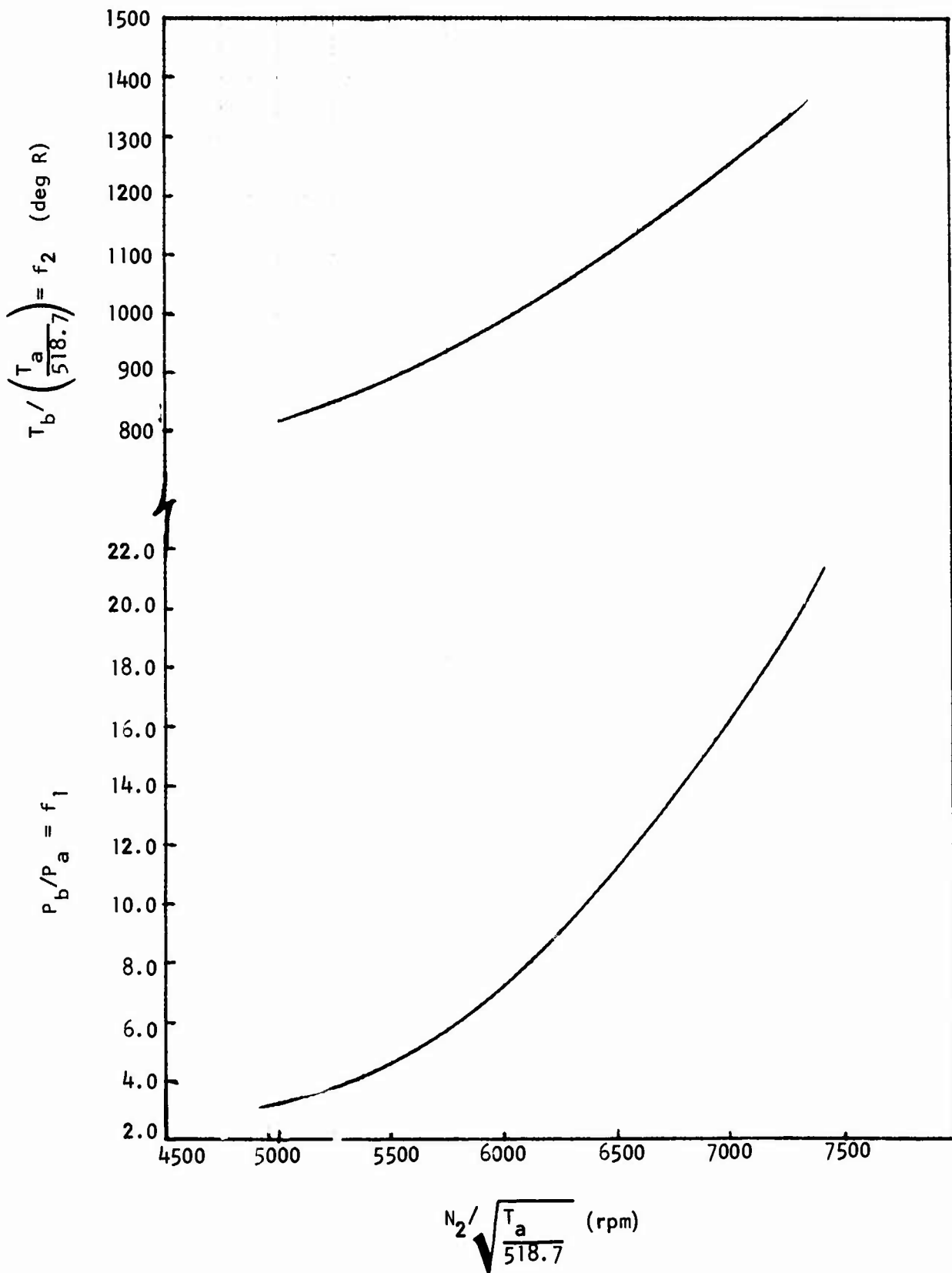


Figure 5. Typical Production Engine Performance

Name	Symbol	Description
FHC	F_{HC}	HC emission factor $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00417 (T_{b,obs} - T_{b,ref})}$
FNO	F_{NO}	NO emission factor $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00444 (T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	Corrected CO emission factor $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/\{400 - F/A_{ref} \times 10^4\}}}$ <p>where:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$

Name	Symbol	Description
STD FCO Continued		$T_{b, std} = f_2 \left(N_{2, obs} \sqrt{\frac{T_{a, obs}}{518.7}} \right)$ <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H₂O lbm dry air), or a value corrected to standard day condition.</p>
STD FHC	$(F_{HC})_{std}$	<p>Corrected HC emission index</p> $(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1.8} \cdot \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{1/2} \cdot e^{0.00417 (T_{b, std} - T_{b, ref})}$
STD FNO	$(F_{NO})_{std}$	<p>Corrected NO emission index</p> $(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1/2} \cdot e^{0.00444 (T_{b, std} - T_{b, ref})}$
API		<p>Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.</p>
H/C RATIO	a	<p>Hydrogen-carbon ratio as determined using a Sanda-Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.</p>
FIA		<p>Fluorescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.</p>

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. The JT9D-3A engines dropped out of the program at a rapid rate. For that reason, after the 1200 Hour test series, it was decided to test the remaining engines every 300 hours. In addition, units 21 and 23-25 were added to the program.
5. Unit 18 was removed from the program early and then returned. However, due to the nature of the maintenance performed (see Section 2), it was assigned a new unit number, number 22.
6. For the baseline test of unit 21 no mode 1 data was obtained, and for the 600 Hour test of unit 17, no mode 4 data was obtained. These units have been left out of the relevant tables.
7. For the 600 Hour test of unit 12, N₂ data was not available. Mean values were substituted instead.

8. The calibration gas concentrations for NO and NO_x were questionable for the nominal 50 ppm bottle for tests conducted between October 10, 1975 and June 14, 1976; and for the nominal 200 ppm bottle for tests conducted between November 18, 1975 and April 22, 1976. The test data was processed in two different ways: the first assuming the stated concentrations were correct; and the second using calculated values for the concentrations. This is discussed in detail in Appendix IV of Volume I. In the following tables, the concentrations and emission indices of NO and NO_x are based on the stated calibration gas concentrations, while the NREC corrected emission indices are based on the calculated values.
9. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode	Quantity
1	"600-Hour"	5	NI
1	"3000-Hour"	2	EGT
6	"3000-Hour"	2	EGT
10	"600-Hour"	7	EPR
17	"600-Hour"	5	NI

JT9D-3A * BASELINE TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
----	-----	-----	-----	-----	-----
1	11776.	0.	521.7	29.91	.009350
2	11144.	0.	521.7	29.91	.009350
3	11796.	0.	521.7	29.91	.009350
4	12531.	0.	520.2	29.88	.008640
5	7733.	0.	520.2	29.88	.008640
6	14240.	0.	520.2	29.88	.008640
7	12394.	0.	520.2	29.88	.008640
8	10938.	0.	523.7	29.87	.009510
9	13685.	0.	523.7	29.87	.009510
10	12508.	0.	520.2	30.03	.008470
11	14058.	0.	518.7	29.97	.007700
12	13525.	0.	520.2	30.05	.008470
13	12125.	0.	517.2	30.04	.008140
14	10403.	0.	517.2	30.04	.008140
15	7623.	0.	516.2	30.00	.008270
16	12537.	0.	516.2	30.00	.008270
17	12332.	0.	516.2	30.00	.008270
18	11924.	0.	518.2	30.07	.007790
19	11274.	0.	518.2	30.08	.007780
20	8223.	0.	516.2	30.07	.008240
22	12033.	0.	514.2	30.13	.006610
23	14379.	0.	511.7	29.94	.007280
24	12903.	0.	508.7	30.10	.006310
25	13519.	0.	523.7	29.99	.006670

JT90-3A * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-26.00	-63.20	-25.93	-63.02
2	28.00	-66.50	27.92	66.31
3	30.50	65.50	30.41	65.31
4	27.50	65.50	27.46	65.41
5	28.50	64.50	28.46	64.41
6	27.00	64.50	26.96	64.41
7	30.00	65.00	29.96	64.91
8	27.50	65.20	27.37	64.89
9	28.20	64.20	28.07	63.89
10	28.00	64.50	27.96	64.41
11	30.50	65.40	30.50	65.40
12	27.50	65.00	27.46	64.91
13	29.00	66.00	29.04	66.10
14	30.00	66.00	30.04	66.10
15	30.00	64.50	30.07	64.66
16	28.00	64.80	28.07	64.96
17	27.00	-63.50	27.07	63.65
18	28.50	65.00	28.51	65.03
19	28.00	65.00	28.01	65.03
20	29.00	64.70	29.07	64.86
22	28.50	65.50	28.62	65.79
23	27.00	65.00	27.18	65.44
24	29.00	65.00	29.28	65.64
25	29.00	65.50	28.86	65.19

JT9D-3A * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
1	1750.	.8710	.9470	1154.	1.020	-2806.
2	1900.	.8840	-.7700	1188.	1.020	3827.
3	2000.	-.5560	.8690	1143.	1.020	3502.
4	1800.	.8320	-.7800	1136.	1.015	3537.
5	2000.	.8040	.9460	1125.	1.020	3226.
6	1850.	.8450	.8830	1149.	1.020	3226.
7	2000.	.8230	.9320	1192.	1.020	3376.
8	1800.	.8180	.8120	1165.	1.020	3372.
9	1900.	.8380	.8870	1158.	1.015	3073.
10	1840.	-.6370	.8990	-1214.	1.020	3210.
11	1850.	.8250	.8100	1145.	1.020	3524.
12	1900.	.7600	.8840	1203.	-1.010	3358.
13	2000.	.8130	.8410	1183.	-1.010	3742.
14	-2100.	.8090	.8900	1201.	1.020	3742.
15	2000.	.7570	.9460	1134.	-1.030	3289.
16	1950.	.8500	.9000	1140.	1.020	3379.
17	1800.	.8180	.9340	1133.	1.020	2989.
18	1900.	.8300	.8630	1149.	1.020	3393.
19	1900.	.7750	.8630	1151.	1.020	3392.
20	1950.	.8500	.9010	1129.	-1.010	3340.
22	2000.	.9140	.8660	1152.	1.020	3631.
23	1800.	.9490	.8380	1199.	1.020	3542.
24	1900.	.8410	.8520	1124.	1.020	3585.
25	1800.	.8310	.7860	1163.	-1.025	3453.

JT9D-3A * BASELINE TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1754.	.8660	.9420	1147.	-2805.
2	1905.	.8790	-.7650	1181.	3825.
3	2005.	-.5520	.8640	1137.	3501.
4	1800.	.8300	-.7770	1133.	3532.
5	2000.	.8010	.9430	1122.	3222.
6	1850.	.8420	.8810	1145.	3222.
7	2000.	.8210	.9290	1188.	3372.
8	1806.	.8110	.8050	1154.	3366.
9	1806.	.8300	.8780	1147.	3068.
10	1849.	-.6350	.8960	1210.	3222.
11	1853.	.8250	.8100	1145.	3530.
12	1911.	.7580	.8810	1199.	3372.
13	2005.	.8160	.8440	1186.	3756.
14	-2105.	.8110	.8930	1204.	3756.
15	2000.	.7610	.9500	1140.	3297.
16	1950.	.8540	.9040	1145.	3387.
17	1800.	.8220	.9390	1138.	2996.
18	1909.	.8310	.8640	1150.	3410.
19	1909.	.7760	.8640	1152.	3410.
20	1955.	.8540	.9060	1134.	3357.
22	2005.	.9220	.8740	1162.	3655.
23	1789.	.9620	.8500	-1216.	3544.
24	1893.	.8570	.8690	1146.	3607.
25	1813.	.8270	-.7780	1152.	3461.

JT90-3A * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
----	-----	-----	-----	-----	-----
1	1.682	807.2	205.8	12.9	17.4
2	1.737	718.3	146.8	11.6	17.9
3	-.992	-1190.4	163.0	10.5	15.8
4	1.610	808.2	186.1	12.3	17.4
5	1.591	584.7	123.8	13.6	19.2
6	1.624	824.1	219.0	11.0	17.7
7	1.607	729.9	155.9	8.5	17.2
8	1.579	764.8	186.3	15.0	17.3
9	1.632	709.0	161.3	15.7	17.6
10	-1.204	696.4	192.7	13.0	15.2
11	1.619	669.7	147.6	11.0	19.4
12	1.505	598.3	91.9	15.4	-20.9
13	1.595	618.3	146.4	11.3	17.6
14	1.615	-509.3	87.1	15.1	19.3
15	-1.441	798.0	216.5	10.9	15.5
16	1.641	804.0	202.3	14.3	17.3
17	1.585	781.6	171.7	11.6	14.3
18	1.641	674.9	114.1	13.9	16.8
19	1.496	744.8	182.3	13.3	16.1
20	1.648	743.7	188.9	10.4	16.9
22	1.779	803.7	195.7	16.9	19.4
23	1.823	841.3	268.7	12.6	15.8
24	1.688	-500.9	84.9	11.1	19.5
25	1.679	-408.0	-65.4	14.8	-20.7

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NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	2909.	88.88	38.94	2.33	3.14	.65
2	2959.	77.85	27.34	2.07	3.18	2.67
3	-2699.	-206.09	48.48	3.00	-4.51	0.00
4	2915.	93.15	36.84	2.33	3.29	.53
5	2983.	69.80	25.39	2.66	3.76	2.70
6	2898.	93.60	42.74	2.05	3.30	1.89
7	2943.	85.08	31.22	1.62	3.28	2.01
8	2908.	89.64	37.52	2.88	3.32	0.00
9	2937.	81.18	31.73	2.95	3.31	.27
10	-2854.	105.03	49.94	3.21	3.76	1.33
11	2957.	77.86	29.48	2.09	3.71	1.59
12	2983.	75.50	19.91	3.19	-4.34	3.90
13	2955.	72.91	29.66	2.18	3.40	1.96
14	3008.	60.38	-17.73	2.95	3.75	.67
15	2872.	101.21	47.16	2.28	3.23	.93
16	2910.	90.73	39.21	2.66	3.20	1.97
17	2921.	91.69	34.60	2.24	2.75	2.53
18	2978.	77.94	22.63	2.64	3.19	1.72
19	2911.	92.23	38.78	2.70	3.28	2.38
20	2923.	83.94	36.64	1.93	3.13	1.72
22	2931.	84.27	35.25	2.91	3.33	1.96
23	2892.	84.97	46.61	2.09	2.61	3.28
24	-3025.	57.13	-16.64	2.07	3.65	1.04
25	-3042.	-47.04	-12.96	2.80	3.92	-4.35

JT9D-3A * BASELINE TFST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.3870	.2260	-2.4970	.3790	.2210	-2.9220
2	.4680	-.3040	2.9760	.4580	.2970	3.4790
3	-.3410	.2730	2.8050	-.3350	.2670	3.2810
4	.4190	.2720	2.8280	.4150	.2700	3.2990
5	.3850	.2440	2.6650	.3820	.2420	3.1100
6	.3980	.2440	2.6650	.3940	.2420	3.1100
7	.4040	.2580	2.7460	.4000	.2560	3.2030
8	.4100	.2640	2.7640	.3960	.2550	3.2000
9	.3930	.2390	2.6120	.3800	.2310	3.0250
10	-.3410	.2470	2.6800	-.3360	.2420	3.1100
11	.4140	.2710	2.8520	.4140	.2700	3.2980
12	.3850	.2610	2.7620	.3800	.2560	3.2030
13	.4250	.2890	2.9180	.4280	.2910	3.4360
14	.4230	.2890	2.9180	.4270	.2910	3.4360
15	.3690	.2450	2.6540	.3750	.2490	3.1560
16	.4050	.2530	2.7020	.4120	.2570	3.2130
17	.3680	.2250	-2.5200	.3740	.2280	2.9060
18	.4060	.2610	2.7810	.4060	.2590	3.2270
19	.3890	.2610	2.7810	.3890	.2590	3.2270
20	.4030	.2520	2.6900	.4090	.2540	3.1940
22	.4460	.2750	2.8920	.4600	.2810	3.3740
23	.4410	.2570	2.7410	.4660	.2710	3.3070
24	.4020	.2590	2.7720	.4310	.2770	3.3450
25	.4230	.2750	2.9760	.4080	.2640	3.2570

JT9D-3A * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	90.78	39.79	2.72	3.67	.65
2	79.59	27.95	2.42	3.72	1.38
3	-209.93	49.57	3.51	-5.27	0.00
4	94.05	37.18	2.72	3.84	.53
5	70.45	25.62	3.11	4.38	.68
6	94.49	43.12	2.39	3.85	1.89
7	85.88	31.50	1.89	3.83	2.01
8	92.77	38.85	3.34	3.85	0.00
9	84.02	32.84	3.42	3.83	.27
10	-106.33	50.84	3.73	4.36	1.33
11	77.93	29.57	2.42	4.30	1.59
12	76.50	20.29	3.70	-5.03	-3.90
13	72.30	29.53	2.57	4.01	.54
14	59.87	-17.65	3.47	4.41	.67
15	99.61	46.49	2.71	3.85	.93
16	89.21	38.65	3.16	3.81	1.34
17	90.20	34.11	2.67	3.27	2.53
18	77.92	22.75	3.07	3.71	1.72
19	92.24	39.00	3.14	3.80	1.78
20	82.69	36.28	2.29	3.72	.94
22	81.78	34.48	3.65	4.18	1.96
23	80.44	44.25	2.71	3.39	-3.28
24	-53.27	-15.58	2.68	4.73	1.04
25	-48.84	-13.51	3.29	4.61	1.99

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-30.00	-67.00	-29.91	-66.81
2	32.50	-70.50	32.41	70.30
3	-36.30	69.70	36.20	69.50
4	33.00	70.00	32.95	69.90
5	34.00	69.50	33.95	69.40
6	33.00	69.20	32.95	69.10
7	35.00	69.50	34.95	69.40
8	31.50	69.00	31.35	68.67
9	35.50	70.00	35.33	69.67
10	32.50	68.50	32.45	68.40
11	-36.50	-70.10	-36.50	70.10
12	32.50	70.00	32.45	69.90
13	34.50	-71.00	34.55	-71.10
14	35.00	-70.50	35.05	-70.60
15	36.00	69.70	36.09	69.87
16	32.50	68.60	32.58	68.77
17	32.00	68.40	32.08	68.57
18	33.50	69.00	33.52	69.03
19	32.00	68.50	32.02	68.53
20	34.50	69.40	34.58	69.57
21	31.50	-68.50	31.56	68.63
22	32.00	69.00	32.14	69.30
23	31.00	69.00	31.21	69.47
24	33.00	69.50	33.32	70.18
25	33.30	69.50	33.14	69.17

MODE 2

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT6 DFG R	FPR	THRUST LRF
1	-2000.	.8730	.7660	1154.	1.020	-3989.
2	2250.	.8820	.7570	1197.	1.030	5209.
3	2450.	-.5540	.8280	1160.	1.030	4926.
4	2200.	.8500	.7380	1154.	1.020	5071.
5	2400.	.8230	.8050	1133.	1.030	4896.
6	2250.	.8570	.7710	1169.	1.030	4791.
7	2400.	.8470	.8290	1199.	1.030	4896.
8	2100.	.8350	.7250	1178.	1.025	4642.
9	2400.	.8550	.8150	1179.	1.020	4991.
10	2200.	-.5940	.7770	-1223.	1.020	4524.
11	2400.	.8470	.8060	1169.	1.030	5127.
12	2200.	.8590	.7520	1212.	1.020	5044.
13	2400.	.8290	.7950	1203.	1.020	-5476.
14	2450.	.8250	.8280	1215.	1.030	-5296.
15	2500.	-.7900	.8430	1160.	-1.040	5041.
16	2200.	.8600	.7530	1151.	1.020	4656.
17	2200.	.8070	.7550	1151.	1.020	4586.
18	2250.	.8450	.7680	1167.	1.025	4738.
19	2200.	-.7840	.7540	1158.	1.020	4562.
20	2400.	.8760	.8100	1156.	1.020	4924.
21	-2000.	.8580	-.6890	-1158.	1.025	4624.
22	2250.	.9160	.7660	1165.	1.025	4822.
23	2150.	.9350	.7450	1192.	-1.075	4911.
24	2250.	.8560	.7580	1160.	1.030	5134.
25	2150.	.8730	.7360	1188.	1.030	4797.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A COR TT6 DEG R	COR THRUST LBF
1	-2005.	.8680	.7610	1147.	-3987.
2	2256.	.8770	.7530	1190.	5207.
3	2456.	-.5510	.8240	1153.	4925.
4	2200.	.8480	.7360	1151.	5065.
5	2400.	.8210	.8030	-1129.	4890.
6	2250.	.8540	.7680	1165.	4785.
7	2400.	.8450	.8260	1196.	4890.
8	2107.	.8270	.7180	1166.	4634.
9	2408.	.8470	.8070	1168.	4983.
10	2211.	-.5920	.7740	-1219.	4540.
11	2404.	.8470	.8060	1169.	5136.
12	2212.	.8560	.7500	1208.	5065.
13	2406.	.8320	.7970	1206.	-5497.
14	2456.	.8270	.8300	-1219.	-5317.
15	2500.	-.7940	.8470	1165.	5054.
16	2200.	.8640	.7560	1156.	4668.
17	2200.	.8110	.7590	1156.	4598.
18	2260.	.8460	.7690	1168.	4762.
19	2211.	-.7840	.7550	1159.	4587.
20	2406.	.8810	.8140	1162.	4949.
21	-1995.	.8620	-.6920	-1162.	4621.
22	2256.	.9240	.7730	1175.	4855.
23	2137.	.9480	.7550	1208.	4915.
24	2242.	.8730	.7730	1182.	5165.
25	2165.	.8650	.7290	1177.	4809.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.717	661.1	155.2	13.1	20.0
2	1.762	556.0	99.5	11.9	21.4
3	-1.004	-1199.4	113.9	11.9	21.5
4	1.696	570.4	104.9	12.5	22.1
5	1.662	429.9	75.6	15.5	23.1
6	1.690	632.0	148.4	11.2	21.0
7	1.691	572.6	99.9	8.9	20.4
8	1.643	623.5	135.3	15.0	20.5
9	1.719	472.7	76.2	17.4	23.2
10	-1.143	562.1	135.3	12.1	19.7
11	1.711	438.6	73.5	12.7	-25.3
12	1.738	445.3	56.9	16.5	24.7
13	1.668	423.1	84.6	12.4	22.1
14	1.672	375.7	55.9	16.0	22.4
15	-1.551	635.8	136.9	11.6	20.4
16	1.692	658.9	151.1	15.0	19.7
17	1.608	565.9	93.5	10.8	19.3
18	1.703	508.0	69.0	17.2	21.7
19	-1.538	623.4	144.1	12.8	18.7
20	1.749	548.9	109.6	10.2	21.5
21	1.752	-363.7	43.7	10.5	21.4
22	1.819	649.9	129.7	16.2	22.2
23	1.842	680.4	162.6	15.1	18.3
24	1.737	416.1	56.6	11.3	21.4
25	1.787	-301.1	37.9	17.5	-26.0

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIMRER FRONT SIDE
1	2362.	72.59	29.28	2.36	3.61	2.22
2	3010.	60.44	18.59	2.13	3.83	2.25
3	-2736.	-208.08	-33.96	3.40	-6.14	1.94
4	3006.	64.33	20.32	2.32	4.09	-0.00
5	3043.	50.08	15.13	2.96	4.42	1.60
6	2973.	70.75	28.55	2.06	3.87	.27
7	3008.	64.80	19.42	1.65	3.78	2.80
8	2966.	71.62	26.69	2.82	3.87	2.54
9	3028.	52.99	14.67	3.20	4.27	.67
10	-2910.	-91.03	-37.63	3.23	-5.24	1.19
11	3043.	49.66	14.30	2.36	-4.70	1.72
12	3049.	49.70	10.91	3.03	4.54	1.69
13	3028.	48.90	16.80	2.35	4.19	-0.00
14	3052.	43.66	11.15	3.05	4.28	1.32
15	2961.	77.22	28.57	2.32	4.07	1.33
16	2966.	73.50	28.95	2.75	3.60	.66
17	3002.	67.26	19.10	2.10	3.77	3.33
18	3035.	57.62	13.45	3.21	4.05	.94
19	2960.	76.33	30.30	2.57	3.76	1.32
20	3005.	60.03	20.59	1.84	3.85	1.60
21	3074.	40.60	8.37	1.93	3.92	.65
22	2990.	67.97	23.31	2.79	3.81	1.95
23	2965.	69.72	28.63	2.55	3.09	2.09
24	3057.	46.61	10.88	2.08	3.94	1.95
25	-3080.	-33.02	7.15	3.15	-4.68	.79

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.4800	-.3240	-3.0780	-.4700	-.3170	-3.5990
2	.6650	-.5760	4.1320	.6490	.5620	4.8260
3	-.4710	.5020	3.8360	-.4620	.4900	4.4810
4	.6150	.5300	3.9890	.6090	.5250	4.6510
5	.5720	.4860	3.8070	.5660	.4820	4.4390
6	.5720	.4620	3.7050	.5670	.4580	4.3210
7	.5840	.4860	3.8070	.5780	.4820	4.4390
8	.5530	.4440	3.6150	.5340	.4280	4.1780
9	.6170	.5230	3.9400	.5950	.5040	4.5510
10	-.4380	.4180	3.5270	-.4330	.4110	4.0900
11	.6210	.5450	4.0970	.6200	.5440	4.7390
12	.6220	.5360	4.0130	.6130	.5250	4.6510
13	-.6680	-.6410	-4.4100	.6740	-.6440	-5.1970
14	.6340	-.5890	-4.2130	.6400	-.5920	-4.9640
15	.5690	.5150	3.8950	.5790	.5230	4.6380
16	.5460	.4280	3.5360	.5560	.4350	4.2090
17	-.5130	.4150	3.4810	.5220	.4210	4.1440
18	.5590	.4550	3.7030	.5590	.4530	4.2980
19	-.5090	.4220	3.5610	-.5090	.4190	4.1330
20	.5970	.4910	3.7940	.6070	.4960	4.5100
21	.5390	-.4190	-3.6580	.5480	-.4260	-4.1660
22	.5960	.4620	3.7650	.6150	.4730	4.3980
23	.6040	.4620	3.6950	.6390	.4880	4.4690
24	.5940	.5140	3.9390	.6400	.5510	4.7740
25	.5990	.4830	3.9750	.5750	.4620	4.3430

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	74.20	29.95	2.76	4.23	2.22
2	61.85	19.03	2.49	4.47	2.25
3	-212.15	-34.76	3.98	-7.17	1.90
4	64.99	20.51	2.70	4.77	-0.00
5	50.58	15.27	3.45	5.16	.68
6	71.47	28.82	2.40	4.51	.27
7	65.46	19.61	1.92	4.41	1.09
8	74.26	27.68	3.27	4.47	2.54
9	54.99	15.22	3.70	4.93	.67
10	-92.17	-38.33	3.74	-6.07	1.19
11	49.70	14.35	2.73	5.44	1.08
12	50.42	11.13	3.51	5.26	1.35
13	48.45	16.71	2.77	4.94	-0.00
14	43.26	11.09	3.60	5.05	1.32
15	75.89	28.13	2.76	4.85	1.33
16	72.20	28.51	3.28	4.29	.66
17	66.11	18.81	2.50	4.49	-3.33
18	57.59	13.52	3.73	4.70	.94
19	76.33	30.48	2.99	4.37	1.32
20	59.06	20.36	2.18	4.58	1.60
21	39.94	8.23	2.36	4.79	.65
22	65.87	22.77	3.50	4.78	.93
23	65.86	27.11	3.31	4.01	1.99
24	43.25	10.15	2.71	5.12	1.95
25	-34.38	7.47	3.70	5.49	.79

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	90.80	95.30	90.54	95.03
2	91.00	-96.50	90.74	-96.22
3	90.40	95.00	90.14	94.73
4	90.50	-97.00	90.37	-96.86
5	90.00	95.00	89.87	94.86
6	89.50	95.20	89.37	95.06
7	90.00	94.00	89.87	93.86
8	89.00	95.70	88.57	95.24
9	91.00	95.20	90.56	94.74
10	88.50	95.50	88.37	95.36
11	90.50	95.00	90.50	95.00
12	90.50	95.50	90.37	95.36
13	91.00	95.50	91.13	95.64
14	-91.50	94.50	-91.63	94.64
15	89.50	94.30	89.72	94.53
16	91.00	94.90	91.22	95.13
17	91.00	95.00	91.22	95.23
18	91.00	94.50	91.04	94.65
19	90.00	95.40	90.04	95.45
20	89.50	94.30	89.72	94.53
21	88.50	93.00	88.67	93.18
22	90.00	94.00	90.39	94.41
23	89.00	94.50	89.61	95.14
24	88.50	-92.30	89.37	93.20
25	-87.50	-92.50	-87.08	-92.06

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	15800.	1.8410	1.9220	1869.	1.400	40914.
2	16100.	1.8740	1.9720	1892.	1.400	40914.
3	15500.	1.8070	1.8770	1853.	1.400	40914.
4	-15000.	1.8800	1.8290	1878.	1.400	40955.
5	15700.	1.8140	1.9040	1854.	1.400	40955.
6	15700.	1.8810	1.9000	1845.	1.400	40955.
7	15500.	1.9320	1.8740	1844.	1.400	40955.
8	15700.	1.9140	1.9390	-1921.	1.400	40968.
9	16200.	1.9290	1.9890	1896.	1.400	40968.
10	-16900.	-1.4980	-2.0750	1914.	1.400	40750.
11	15800.	1.8230	1.9240	1880.	1.400	40832.
12	15800.	1.7740	1.9190	1880.	1.400	40730.
13	16300.	1.8880	1.9930	-1939.	-1.410	-41401.
14	16000.	1.8010	1.9120	1854.	-1.410	-41401.
15	15800.	1.8060	1.9130	1862.	1.400	40798.
16	15900.	1.8890	1.9360	1881.	1.400	40798.
17	16300.	1.8130	1.9800	1872.	1.400	40798.
18	-16400.	1.7950	1.9840	1865.	1.400	40696.
19	-16400.	1.9160	-2.0050	1905.	1.400	40682.
20	15700.	1.8350	1.9160	1872.	-1.395	40368.
21	15500.	1.8670	-1.8610	-1820.	1.400	40927.
22	16000.	1.8170	1.9230	1851.	1.400	40622.
23	15450.	1.8530	1.8670	1849.	1.400	40873.
24	-15100.	1.8080	-1.8040	1829.	1.400	40655.
25	-15050.	1.8700	1.8420	1876.	-1.395	40475.

MODE 3

UNIT	CORR FU FL LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	15840.	1.8300	1.9110	1858.	40900.
2	16141.	1.8630	1.9610	1881.	40900.
3	15540.	1.7970	1.8660	1842.	40900.
4	-15002.	1.8740	-1.8240	1872.	40900.
5	15702.	1.8090	1.8990	1849.	40900.
6	15702.	1.8750	1.8940	1840.	40900.
7	15502.	1.9260	1.8690	1838.	40900.
8	15749.	1.8950	1.9210	1903.	40900.
9	16251.	1.9110	1.9700	1878.	40900.
10	-16987.	-1.4940	-2.0690	1908.	40900.
11	15826.	1.8230	1.9240	1880.	40900.
12	15889.	-1.7690	1.9140	1874.	40900.
13	16339.	1.8940	-1.9990	-1945.	-41560.
14	16038.	1.8060	1.9170	1860.	-41560.
15	15801.	1.8140	1.9220	1871.	40900.
16	15901.	1.8980	1.9450	1890.	40900.
17	16301.	1.8220	1.9900	1881.	40900.
18	-16474.	1.7960	1.9860	1867.	40900.
19	-16480.	1.9170	-2.0070	1907.	40900.
20	15741.	1.8440	1.9250	1881.	-40570.
21	15460.	1.8740	-1.8680	1827.	40900.
22	16040.	1.8330	1.9400	1867.	40900.
23	15356.	1.8780	1.8920	1874.	40900.
24	-15044.	1.8430	1.8390	1865.	40900.
25	15158.	1.8520	-1.8240	1858.	-40570.

MODF 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.895	12.7	-39.0	328.0	-385.9
2	3.965	12.0	13.0	313.7	340.7
3	3.808	12.5	-55.7	256.9	-212.4
4	3.982	10.5	22.3	306.3	309.3
5	3.836	11.7	-37.5	291.2	324.1
6	3.980	11.9	33.9	287.0	-363.5
7	4.096	11.7	18.4	260.0	276.1
8	4.037	13.0	-39.4	300.4	297.2
9	4.072	15.6	32.6	317.0	323.7
10	-3.151	9.4	32.8	305.6	318.5
11	3.855	12.9	26.6	296.9	302.8
12	3.745	7.0	29.2	295.9	313.4
13	3.982	12.4	-39.8	-358.0	-365.5
14	3.799	13.3	25.3	306.2	304.1
15	3.816	12.9	33.9	244.5	254.7
16	3.998	13.9	26.0	293.1	295.9
17	3.837	12.8	16.8	297.4	304.9
18	3.800	13.0	16.2	298.1	299.4
19	4.054	12.4	-40.3	329.3	351.6
20	3.877	12.4	26.1	270.2	278.1
21	3.959	8.7	2.7	339.0	335.5
22	3.845	17.8	15.9	298.3	295.1
23	3.920	9.2	3.5	272.8	273.9
24	3.831	8.8	2.5	314.7	315.3
25	3.955	10.4	2.0	-357.2	360.0

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3145.	.65	-3.45	27.77	-32.66	13.91
2	3152.	.61	1.13	26.07	28.31	12.80
3	-3141.	.66	-5.03	22.16	22.16	9.91
4	3157.	.53	1.93	25.39	25.63	5.52
5	3153.	.61	-3.37	25.02	27.84	9.72
6	3154.	.60	2.94	23.78	30.12	10.67
7	3158.	.57	1.55	20.96	22.25	13.55
8	-3141.	.65	-3.35	24.43	24.43	7.03
9	-3143.	.77	2.75	25.57	26.12	-35.75
10	-3145.	.60	-3.57	-31.89	-33.24	19.03
11	3153.	.67	2.38	25.38	25.90	13.29
12	3148.	.38	2.69	26.00	27.54	-0.00
13	-3141.	.62	-3.43	29.53	30.14	6.67
14	-3144.	.70	2.29	26.49	26.49	15.66
15	3151.	.68	3.06	21.11	21.99	11.18
16	3153.	.70	2.25	24.16	24.40	12.00
17	3155.	.67	1.51	25.57	26.22	20.53
18	3158.	.69	1.47	25.90	26.01	13.77
19	3152.	.62	-3.43	26.77	28.59	-0.00
20	3149.	.64	2.32	22.94	23.61	10.44
21	3159.	.44	.24	28.28	28.28	7.53
22	3155.	.93	1.42	25.59	25.59	16.34
23	3152.	.47	.31	22.93	23.02	18.83
24	3159.	.46	.23	27.13	27.18	5.88
25	3150.	.53	.17	-29.74	29.97	7.43

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	98.6160	100.4060	84.8740	92.1570	96.8940	97.8570
2	-136.5620	-132.3010	-102.2370	-127.1520	-127.5680	-117.7720
3	84.7980	93.7890	81.1320	79.4240	90.5270	93.5620
4	-157.7190	-154.2110	-115.1160	-152.4580	-151.7040	-133.2480
5	86.8650	94.8560	82.4380	84.2380	93.3840	95.4990
6	109.7360	99.2560	84.9490	106.2130	97.7090	98.4010
7	103.1770	75.3300	70.8810	99.7930	74.1860	82.1400
8	-131.9630	107.7720	89.4480	116.8150	101.7440	101.0780
9	126.5140	96.2320	82.9730	111.9280	90.8990	93.8150
10	-42.5400	107.1550	89.3480	-41.3680	104.5280	102.9080
11	89.6160	96.6240	84.2810	89.7790	96.3340	97.4820
12	84.9730	107.2520	89.3780	82.1230	104.5280	102.9080
13	120.1150	109.9230	90.4050	124.8140	111.1840	107.2320
14	77.5520	87.7170	77.8530	80.2680	88.6940	92.3110
15	75.9720	84.3400	75.4670	80.5520	86.5100	90.8110
16	108.3580	96.6770	82.5680	115.5370	99.1970	99.3910
17	87.8300	98.8800	83.8100	93.2380	101.4630	100.8920
18	77.3270	89.1380	79.4520	78.1460	88.8710	92.4320
19	-128.4830	106.8850	89.5810	-130.0890	106.5100	104.2030
20	82.8420	84.7200	75.5930	87.8160	86.5100	90.8110
21	71.2470	61.5790	64.4660	74.9680	63.1090	74.0000
22	75.0960	80.7850	74.9110	83.1950	84.2030	89.2150
23	91.4820	91.5510	79.8560	108.8390	99.5250	99.6090
24	54.9160	57.0740	-58.9460	68.8090	63.4560	74.2610
25	64.1910	-51.5450	-58.3360	-57.3210	-48.4800	-62.5580

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	.70	-3.58	32.02	-37.66	13.91
2	.65	1.17	30.03	32.61	12.80
3	.70	-5.21	25.55	25.55	9.91
4	.55	1.96	29.39	29.67	5.52
5	.63	-3.42	28.98	32.25	9.72
6	.62	2.98	27.54	34.89	10.67
7	.59	1.58	24.28	25.78	13.55
8	.73	-3.55	27.61	27.61	5.62
9	.87	2.91	28.91	29.53	14.06
10	.61	-3.66	-36.73	-38.28	15.18
11	.67	2.38	29.36	29.95	12.18
12	.39	2.76	29.93	31.70	-0.00
13	.60	-3.39	-35.02	-35.75	6.67
14	.68	2.26	31.41	31.41	11.65
15	.64	2.98	25.40	26.46	9.30
16	.65	2.19	29.08	29.37	9.07
17	.63	1.47	30.78	31.56	14.57
18	.68	1.48	30.13	30.26	11.05
19	.61	-3.44	31.14	33.25	-0.00
20	.60	2.27	27.56	28.37	10.44
21	.42	.23	-35.08	-35.08	6.99
22	.84	1.37	30.47	30.47	11.11
23	.39	.29	30.91	31.03	15.83
24	.37	.20	-36.94	-37.00	5.46
25	.59	.18	34.47	34.74	5.87

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.40	92.80	85.15	92.53
2	84.50	94.00	84.26	93.73
3	85.30	-94.70	85.05	-94.43
4	85.50	-94.50	85.38	-94.36
5	85.00	94.00	84.88	93.86
6	84.50	93.00	84.38	92.87
7	83.50	92.00	83.38	91.87
8	85.00	93.70	84.59	93.25
9	85.00	93.50	84.59	93.05
10	83.30	93.50	83.18	93.37
11	85.50	93.30	85.50	93.30
12	85.50	93.80	85.38	93.66
13	84.00	93.50	84.12	93.64
14	85.50	92.50	85.62	92.63
15	84.50	92.50	84.70	92.82
16	86.00	92.70	-86.21	92.92
17	85.00	92.80	85.21	93.02
18	85.00	92.70	85.04	92.74
19	84.00	92.60	84.04	92.64
20	84.00	93.00	84.20	93.22
21	83.00	91.50	83.16	91.68
22	84.50	93.00	84.87	93.41
23	83.50	92.30	84.07	92.93
24	82.50	91.20	83.31	92.09
25	83.80	91.90	83.40	91.46

MODE 4

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
1	12900.	1.6190	1.7440	1764.	1.310	34465.
2	12800.	1.6390	1.7050	1768.	-1.320	-35252.
3	12900.	1.6250	1.7160	1763.	-1.320	-35252.
4	13000.	1.6660	1.7650	1775.	1.310	34499.
5	13300.	1.6220	1.7970	1757.	1.310	34499.
6	13000.	1.6630	1.7510	1746.	1.310	34499.
7	12700.	1.6930	1.7440	1761.	1.300	32712.
8	13100.	1.6250	1.7910	1797.	1.310	34511.
9	13100.	1.6530	1.8190	1795.	1.300	33723.
10	13100.	-1.5010	1.7900	-1815.	1.310	34327.
11	13200.	1.6410	1.7870	1775.	1.310	34396.
12	13150.	1.5920	1.7790	1781.	1.310	34310.
13	12700.	1.5980	1.7500	1790.	1.300	33538.
14	13250.	-1.5540	1.7730	1741.	1.310	34321.
15	13000.	1.5760	1.7460	1750.	1.310	34367.
16	13300.	1.6860	1.8020	1779.	1.310	34367.
17	13000.	1.5740	1.7740	1750.	1.300	33582.
18	13100.	1.5750	1.7790	1743.	1.300	33499.
19	-13600.	1.6870	-1.8490	1800.	1.310	34270.
20	12800.	1.6480	1.7520	1770.	1.300	33499.
21	12700.	1.6250	1.6890	-1709.	1.310	34476.
22	13250.	1.6360	1.7720	1750.	1.310	34219.
23	12600.	1.6590	1.6850	1732.	1.310	34430.
24	12300.	1.5880	-1.6270	1714.	1.310	34247.
25	12600.	1.6980	1.7310	1775.	1.300	33588.

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LRF
1	12933.	1.6090	1.7340	1754.	34453.
2	12833.	1.6300	1.6950	1758.	-35240.
3	12933.	1.6160	1.7060	1752.	-35240.
4	13001.	1.6610	1.7600	1770.	34453.
5	13301.	1.6180	1.7920	1752.	34453.
6	13001.	1.6590	1.7460	1741.	34453.
7	12701.	1.6880	1.7390	1756.	33667.
8	13141.	1.6090	1.7740	1780.	34453.
9	13141.	1.6370	1.8010	1778.	33667.
10	13167.	-1.4970	1.7850	-1809.	34453.
11	13222.	1.6410	1.7870	1775.	34453.
12	13224.	1.5870	1.7740	1775.	34453.
13	12730.	1.6030	1.7550	1795.	33667.
14	13282.	-1.5590	1.7780	1746.	34453.
15	13001.	1.5840	1.7540	1758.	34453.
16	13301.	1.6940	1.8100	1787.	34453.
17	13001.	1.5810	1.7820	1758.	33667.
18	13159.	1.5760	1.7810	1744.	33667.
19	-13666.	1.6890	-1.9510	1802.	34453.
20	12833.	1.6560	1.7600	1778.	33667.
21	12667.	1.6310	1.6960	-1715.	34453.
22	13283.	1.6500	1.7880	1765.	34453.
23	12523.	1.6810	1.7080	1756.	34453.
24	-12254.	1.6190	1.6590	1748.	34453.
25	12690.	1.6820	1.7150	1758.	33667.

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.409	12.6	-29.7	215.3	241.4
2	3.460	10.4	9.7	190.5	206.6
3	3.420	12.5	-40.7	171.5	159.1
4	3.521	10.5	18.8	201.6	205.7
5	3.425	10.9	-28.9	198.7	227.8
6	3.514	11.2	-27.9	191.5	243.3
7	3.520	12.2	15.8	171.8	186.9
8	3.424	12.5	14.0	189.9	191.8
9	3.482	12.9	18.9	200.3	206.7
10	-3.162	5.2	-20.2	226.5	232.9
11	3.469	13.0	9.8	209.3	219.3
12	3.355	6.6	-21.4	203.8	218.4
13	3.364	11.3	-21.0	208.8	215.0
14	-3.272	10.3	13.7	186.3	187.6
15	3.328	10.2	14.8	160.3	167.5
16	3.564	9.9	12.9	193.1	199.8
17	3.323	11.9	10.6	184.5	190.8
18	3.328	10.8	9.6	193.6	196.2
19	3.567	10.3	-22.4	222.0	236.9
20	3.477	11.9	17.8	184.5	198.3
21	3.437	7.8	1.4	228.1	226.6
22	3.457	17.1	9.4	214.5	212.6
23	3.503	8.8	1.8	188.1	187.2
24	3.358	8.7	1.7	211.6	209.0
25	3.585	7.8	2.9	-255.2	-254.0

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3147.	.74	-2.99	20.77	23.29	10.35
2	3152.	.60	.97	18.14	19.67	12.08
3	-3144.	.73	-4.09	16.47	16.47	7.19
4	3157.	.60	1.84	18.90	19.28	8.51
5	3154.	.64	-2.91	19.13	21.93	10.14
6	3154.	.64	-2.74	17.97	22.83	8.05
7	3157.	.68	1.53	15.84	17.23	13.96
8	3146.	.73	1.41	18.25	18.43	5.09
9	-3145.	.74	1.86	18.92	19.52	14.70
10	3149.	.33	-2.20	-23.59	-24.25	12.70
11	3157.	.75	.98	19.91	20.86	10.93
12	3149.	.39	-2.20	20.00	21.43	-0.00
13	-3144.	.67	-2.14	20.40	21.02	3.73
14	3146.	.63	1.44	18.72	18.86	10.20
15	3155.	.62	1.54	15.89	16.61	9.01
16	3156.	.56	1.25	17.88	18.50	8.00
17	3156.	.72	1.10	18.32	18.94	16.12
18	3159.	.65	.99	19.21	19.47	10.17
19	3156.	.58	-2.16	20.53	21.91	12.23
20	3150.	.69	1.76	17.48	18.78	7.32
21	3159.	.46	.14	21.92	21.92	4.58
22	3156.	.99	.94	20.47	20.47	9.87
23	3152.	.51	.17	17.70	17.70	14.38
24	3159.	.52	.17	20.81	20.81	4.15
25	3150.	.44	.28	-23.44	23.44	3.76

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	35.2760	55.8550	58.0010	33.4260	53.9900	66.9900
2	45.6200	-74.4170	69.7320	43.1350	71.8750	80.4720
3	-49.7030	-87.5600	-77.5430	46.9890	-84.5310	-89.4420
4	-53.3060	-84.6000	-76.4580	-51.8900	-83.3010	-88.5870
5	44.0100	-75.3300	70.8810	42.8900	-74.1860	82.1400
6	40.8680	59.4130	60.8310	39.8160	58.5290	70.5190
7	37.2030	47.4240	52.6870	36.2410	46.7330	61.0980
8	41.5190	67.8540	66.0560	37.8730	64.1990	74.8180
9	42.8690	64.6880	64.0570	39.0400	61.2170	72.5710
10	30.8660	67.5670	66.0490	30.0420	65.9540	76.1270
11	41.1540	65.1380	65.1660	41.1960	64.9420	75.3730
12	39.7360	72.5950	69.1670	38.5920	70.7920	79.6840
13	38.7270	69.5560	66.9290	39.8160	70.3070	79.3310
14	29.5740	54.7630	57.4280	30.3550	55.3360	68.0460
15	31.6790	56.5410	58.2850	33.1740	57.9410	70.0660
16	41.6810	57.9210	59.1870	43.8530	59.3580	71.1540
17	32.5920	59.3290	60.1020	34.1330	60.8050	72.2580
18	31.9300	57.0250	59.5100	32.1680	56.8420	69.2160
19	40.8930	55.6920	58.6130	41.2370	55.4790	68.1570
20	40.1780	62.5170	62.0730	42.1360	63.7920	74.5130
21	29.6410	43.9750	52.0130	30.8520	45.0390	59.6670
22	39.3520	63.9580	64.3910	42.8470	66.5980	76.6040
23	36.9780	54.8540	57.2950	42.5510	59.4300	71.2090
24	26.5280	44.0010	49.9980	31.8320	48.8050	62.8280
25	37.1560	45.8820	54.1250	33.7110	43.1760	58.0750

MODF 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	.78	-3.10	23.99	26.90	10.35
2	.63	1.01	20.94	22.70	12.08
3	.78	-4.24	20.54	20.54	7.19
4	.62	1.87	21.89	22.34	8.51
5	.66	-2.95	22.17	25.41	10.14
6	.66	-2.78	20.84	26.47	8.05
7	.70	1.55	18.36	19.98	13.73
8	.80	1.49	20.67	20.88	5.09
9	.82	-1.97	21.43	22.12	9.58
10	.34	-2.25	-27.18	27.95	10.31
11	.75	.98	23.02	22.13	9.96
12	.41	-2.26	23.04	24.69	-0.00
13	.65	-2.12	24.18	24.91	3.16
14	.61	1.43	22.18	22.35	9.13
15	.59	1.50	19.10	19.96	8.64
16	.53	1.22	21.49	22.24	8.00
17	.69	1.07	22.02	22.77	14.06
18	.65	1.00	22.34	22.65	10.10
19	.58	-2.17	23.88	25.48	9.94
20	.65	1.73	20.98	22.54	7.32
21	.44	.14	-27.18	27.18	4.58
22	.91	.90	24.35	24.35	9.87
23	.44	.16	21.99	21.99	11.32
24	.43	.15	26.15	26.15	3.90
25	.48	.30	-27.18	27.18	-2.37

MODF 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
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1	73.70	88.80	-73.49	88.54
2	75.60	90.50	75.38	90.24
3	76.40	-91.50	76.18	-91.24
4	74.00	90.50	73.89	90.37
5	75.50	-91.00	75.39	-90.87
6	74.50	89.50	74.39	89.37
7	75.00	89.00	74.89	88.87
8	75.50	90.20	75.14	89.77
9	75.50	90.00	75.14	89.57
10	74.50	90.00	74.39	89.87
11	76.00	88.50	76.00	88.50
12	76.00	90.50	75.89	90.37
13	75.00	90.00	75.11	90.13
14	76.00	89.00	76.11	89.13
15	74.00	88.40	74.18	88.61
16	76.00	89.80	76.18	90.02
17	76.00	89.50	76.18	89.72
18	76.00	89.70	76.04	89.74
19	75.50	89.40	75.54	89.44
20	75.00	90.20	75.18	90.42
21	75.00	89.50	75.15	89.67
22	75.00	89.50	75.33	89.89
23	73.50	89.20	74.00	89.81
24	74.00	88.50	74.72	89.37
25	75.50	89.10	75.14	88.67

MODE 5

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
1	9000.	1.3470	1.5260	1579.	1.180	23648.
2	9450.	1.3870	1.5300	1620.	1.200	25809.
3	9500.	1.3760	1.5360	1615.	1.200	25809.
4	8900.	1.3470	1.5160	1590.	1.180	23672.
5	-10200.	1.4030	-1.6210	1624.	1.210	26622.
6	9200.	1.3900	1.5220	1592.	1.190	24753.
7	9400.	1.3970	1.5650	1611.	1.190	24753.
8	8900.	-1.2870	1.5250	1608.	1.180	23680.
9	9400.	1.3630	1.5810	1642.	1.190	24761.
10	9300.	-1.252	1.5540	1640.	1.190	24629.
11	9300.	1.357	1.5460	1617.	1.190	24679.
12	9500.	1.3390	1.5790	1622.	1.190	24617.
13	9300.	1.3270	1.5450	1622.	1.190	24625.
14	9300.	-1.2570	1.5230	1577.	1.190	24625.
15	8850.	-1.2530	1.4430	-1561.	1.190	24658.
16	9400.	1.3880	1.5560	1606.	1.190	24658.
17	9600.	1.3200	1.5880	1602.	1.190	24658.
18	9650.	1.3440	1.5670	1599.	1.195	25134.
19	9600.	1.3770	1.5930	1620.	1.190	24589.
20	9500.	1.4020	1.5300	1620.	1.200	25671.
21	9500.	1.3810	1.4850	1579.	1.210	26604.
22	9400.	1.3650	1.5380	1583.	1.190	24552.
23	8850.	1.3990	1.4520	1575.	1.190	24703.
24	9200.	1.3590	-1.4260	1575.	1.210	26428.
25	9400.	1.4650	1.5060	1631.	1.205	26132.

MODE 5

UNIT	CORR FUJ FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	9023.	1.3390	1.5170	-1570.	23640.
2	9474.	1.3790	1.5210	1611.	25800.
3	9524.	1.3680	1.5270	1606.	25800.
4	8901.	1.3430	1.5110	1585.	23640.
5	-10201.	1.3990	-1.6160	1619.	26587.
6	9201.	1.3860	1.5170	1587.	24720.
7	9401.	1.3930	1.5610	1607.	24720.
8	8928.	-1.2750	1.5100	1592.	23640.
9	9429.	1.3500	1.5660	1626.	24720.
10	9348.	-1.2480	1.5500	1635.	24720.
11	9316.	1.3570	1.5460	1617.	24720.
12	9553.	1.3340	1.5740	1617.	24720.
13	9322.	1.3310	1.5500	1627.	24720.
14	9322.	-1.2600	1.5280	1582.	24720.
15	8851.	-1.2590	1.4500	-1568.	24720.
16	9401.	1.3940	1.5640	1614.	24720.
17	9601.	1.3260	1.5960	1610.	24720.
18	9694.	1.3450	1.5690	1600.	25260.
19	9647.	1.3790	1.5940	1622.	24720.
20	9525.	1.4090	1.5380	1628.	25800.
21	9475.	1.3860	1.4910	1585.	26587.
22	9423.	1.3770	1.5510	1596.	24720.
23	8796.	1.4190	1.4720	1597.	24720.
24	9166.	1.3860	1.4540	1606.	26587.
25	9467.	1.4510	1.4920	1616.	26193.

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.829	18.9	-23.1	102.4	119.1
2	2.920	15.2	7.6	105.4	116.2
3	2.890	17.3	-27.1	91.1	-80.0
4	2.838	18.3	-13.5	101.5	107.1
5	2.957	14.0	-18.4	116.2	-140.0
6	2.928	16.1	-21.2	105.2	131.7
7	2.946	17.4	-12.8	95.7	104.5
8	-2.702	18.9	11.3	95.5	97.3
9	2.864	16.1	-12.3	106.6	111.0
10	-2.630	14.9	-12.6	111.6	117.2
11	2.860	17.4	7.2	106.7	112.9
12	2.814	-7.8	-13.5	113.5	124.5
13	2.786	17.7	-13.6	107.3	111.7
14	-2.638	14.8	8.8	93.1	95.8
15	-2.637	20.0	9.2	-80.6	-85.0
16	2.925	18.1	8.1	97.4	104.6
17	2.780	18.6	7.8	100.9	107.0
18	2.934	11.0	6.7	111.0	113.7
19	2.904	15.1	10.9	111.2	120.1
20	2.952	17.3	9.5	106.6	116.5
21	2.913	9.1	.9	-133.1	131.3
22	2.876	22.3	5.0	114.0	115.6
23	2.947	16.8	1.3	97.8	99.7
24	2.867	14.6	1.3	118.0	117.9
25	3.085	12.5	2.2	-145.4	-143.8

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-3146.	1.34	-2.80	11.90	13.84	8.68
2	3152.	1.05	.89	11.90	13.11	8.82
3	-3145.	1.20	-3.23	10.36	10.36	4.82
4	3156.	1.30	-1.64	11.81	12.45	3.33
5	3155.	.95	-2.14	12.97	-15.62	5.35
6	3154.	1.10	-2.49	11.84	14.82	6.17
7	3157.	1.19	-1.50	10.72	11.71	10.20
8	-3145.	1.40	1.44	11.62	11.84	2.80
9	-3146.	1.12	-1.48	12.24	12.75	6.47
10	3150.	1.13	-1.65	13.97	14.67	5.46
11	3156.	1.22	.87	12.31	13.02	6.53
12	3150.	.56	-1.65	13.29	14.57	6.13
13	-3145.	1.27	-1.68	12.66	13.19	2.24
14	-3146.	1.12	1.14	11.61	11.94	6.58
15	3155.	1.53	1.20	10.09	10.63	2.93
16	3156.	1.24	.95	10.98	11.80	5.33
17	3156.	1.34	.97	11.98	12.70	10.53
18	3159.	.78	.82	12.93	13.25	6.53
19	3158.	1.04	1.30	12.64	13.65	8.27
20	3151.	1.18	1.11	11.90	13.00	2.68
21	3159.	.62	.10	-15.09	15.09	4.55
22	3156.	1.56	.60	13.08	13.27	9.33
23	3151.	1.14	.15	10.94	11.15	9.74
24	3158.	1.03	.15	13.59	13.59	2.61
25	3149.	.81	.25	-15.52	-15.52	3.01

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	11.6530	24.9020	34.8370	11.1800	24.1220	40.3290
2	15.7170	35.0000	43.0660	15.0440	33.8740	49.8070
3	17.6050	-42.7190	-48.8570	16.8440	-41.3230	-56.4730
4	14.6250	35.2750	43.6450	14.3390	34.7750	50.6340
5	17.3560	-38.9840	-46.4890	17.0000	-38.4260	-53.9250
6	13.8320	28.8440	38.4840	13.5570	28.4420	44.6590
7	13.1080	26.1210	36.1850	12.8490	25.7610	41.9960
8	12.5750	32.4230	41.2730	11.7540	30.7780	46.9130
9	14.0060	31.1470	40.2500	13.0470	29.5730	45.7590
10	11.6510	32.1620	41.1900	11.3960	31.4260	47.5250
11	11.4670	23.9790	34.6760	11.4680	23.9070	40.1070
12	14.4520	35.6260	43.9050	14.1120	34.7750	50.6340
13	13.3170	32.8150	41.4890	13.5900	33.1350	49.1240
14	10.3670	26.8600	36.6240	-10.5640	27.1150	43.3510
15	-9.5390	23.9170	33.9080	-9.8600	24.4620	40.6780
16	14.4580	31.6410	40.3370	15.0120	32.3820	48.4220
17	12.3000	29.7590	38.8280	12.7440	30.4520	46.6040
18	13.1600	30.7270	40.2170	13.2250	30.6200	46.7630
19	13.4340	28.9690	38.7590	13.5000	28.8500	45.0570
20	15.7150	34.4620	42.5030	16.2990	35.1170	50.9470
21	13.6560	29.4900	40.4320	14.1000	30.1820	46.3460
22	13.4020	30.4000	40.1830	14.2820	31.5580	47.6500
23	13.6930	28.7580	38.1040	15.2610	31.0290	47.1510
24	11.7100	25.7410	35.7010	13.5430	28.4130	44.6300
25	15.0560	26.2450	38.0930	13.9240	24.7590	40.9800

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	1.39	-2.89	13.78	16.02	8.52
2	1.09	.92	13.76	15.16	8.82
3	1.26	-3.34	12.94	12.94	4.82
4	1.32	-1.66	13.70	14.44	3.33
5	.97	-2.17	15.04	-18.12	5.35
6	1.13	-2.53	13.74	17.20	6.17
7	1.21	-1.52	12.44	13.59	9.43
8	1.50	-1.52	13.20	13.46	2.05
9	1.20	-1.56	15.03	15.66	4.30
10	1.16	-1.69	16.12	16.93	5.46
11	1.22	.87	14.24	15.06	5.54
12	-.57	-1.69	15.33	16.80	5.74
13	1.25	-1.67	14.99	15.61	2.24
14	1.10	1.13	13.74	14.14	6.58
15	1.48	1.17	12.10	12.75	2.93
16	1.20	.93	13.19	14.17	5.33
17	1.29	.95	14.37	15.25	8.70
18	.78	.82	15.04	15.41	6.53
19	1.04	1.31	14.69	15.87	8.27
20	1.14	1.09	14.26	15.58	2.68
21	-.61	.10	-17.30	17.30	-.78
22	1.46	.58	15.51	15.73	7.68
23	1.02	.14	13.53	13.79	9.14
24	.89	.14	16.99	16.99	2.61
25	.88	.26	16.70	16.70	2.93

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	55.50	82.30	55.34	82.06
2	55.50	85.00	55.34	84.76
3	55.50	84.70	55.34	84.46
4	58.00	-86.00	57.92	-85.88
5	57.50	84.50	57.42	84.38
6	57.50	85.00	57.42	84.88
7	58.00	83.50	57.92	83.38
8	56.00	84.30	55.73	83.90
9	59.00	85.00	58.72	84.59
10	55.00	84.00	54.92	83.88
11	57.00	82.50	57.00	82.50
12	-59.50	-86.00	59.41	-85.88
13	58.00	85.00	58.08	85.12
14	57.50	84.00	57.58	84.12
15	56.00	82.50	56.14	82.70
16	58.00	84.50	58.14	84.70
17	58.00	83.90	58.14	84.10
18	59.00	84.80	59.03	84.84
19	57.00	83.80	57.03	83.84
20	58.50	85.00	58.64	85.21
21	-52.50	82.00	-52.60	82.16
22	56.00	84.50	56.24	84.87
23	54.50	84.00	54.87	84.57
24	54.50	82.00	55.03	82.80
25	54.90	82.80	54.64	82.40

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
1	4900.	1.0720	1.1690	1356.	1.080	12244.
2	5000.	1.0860	1.2120	1399.	1.080	12244.
3	4900.	1.0520	1.1790	1379.	1.080	12244.
4	5400.	1.1130	1.2710	1408.	1.085	-12947.
5	5600.	1.1000	1.2680	1392.	-1.090	-13638.
6	5200.	1.1190	1.2590	1390.	1.080	12256.
7	5400.	1.0980	1.3240	1424.	1.080	12256.
8	5000.	1.0310	1.2090	1388.	1.080	12260.
9	5500.	1.0730	-1.3590	-1444.	1.080	12260.
10	5000.	-0.9030	1.2230	1435.	1.080	12195.
11	5100.	1.0730	1.2270	1383.	1.080	12220.
12	-5800.	1.1140	-1.4230	-1439.	1.080	12189.
13	5500.	1.0840	1.3450	1431.	1.080	12193.
14	5300.	-1.0120	1.2750	1388.	1.080	12193.
15	5100.	-1.0120	1.1370	1365.	-1.090	-13586.
16	5500.	1.1240	1.3330	1403.	1.080	12209.
17	5500.	1.0450	1.3250	1386.	1.080	12209.
18	5650.	1.0710	1.2750	1401.	-1.090	-13552.
19	5300.	1.0780	1.2740	1390.	1.080	12175.
20	5650.	1.1570	1.3310	1426.	1.085	12866.
21	-4600.	1.0450	-1.0870	-1332.	1.080	12248.
22	5300.	1.1080	1.2780	1403.	1.080	12157.
23	4800.	1.1260	1.1500	1370.	1.080	12232.
24	4800.	1.0710	1.1300	-1338.	1.080	12167.
25	4800.	1.1360	1.1540	1385.	1.080	12211.

MODF 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	4913.	1.0660	1.1620	-1348.	12240.
2	5013.	1.0800	1.2050	1391.	12240.
3	4913.	1.0460	1.1720	1371.	12240.
4	5401.	1.1100	1.2680	1404.	12930.
5	5601.	1.0970	1.2640	1388.	-13620.
6	5201.	1.1160	1.2550	1386.	12240.
7	5401.	1.0950	1.3200	1420.	12240.
8	5016.	-1.0210	1.1980	1375.	12240.
9	5517.	1.0630	1.3460	1430.	12240.
10	5026.	-.9000	1.2190	1431.	12240.
11	5109.	1.0730	1.2270	1383.	12240.
12	-5833.	1.1110	-1.4180	1434.	12240.
13	5513.	1.0870	1.3490	1435.	12240.
14	5313.	-1.0150	1.2790	1392.	12240.
15	5100.	-1.0170	1.1430	1371.	-13620.
16	5500.	1.1300	1.3390	1409.	12240.
17	5500.	1.0500	1.3320	1393.	12240.
18	5676.	1.0720	1.2760	1402.	-13620.
19	5326.	1.0790	1.2760	1391.	12240.
20	5665.	1.1630	1.3370	1433.	12930.
21	-4588.	1.0490	-1.0920	-1337.	12240.
22	5313.	1.1180	1.2890	1415.	12240.
23	4771.	1.1410	1.1660	1389.	12240.
24	4782.	1.0920	1.1520	1364.	12240.
25	4834.	1.1250	1.1430	1371.	12240.

MONF 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.238	85.4	-19.4	41.9	53.1
2	2.273	77.4	7.9	43.3	55.6
3	2.194	94.3	-21.1	36.1	-37.6
4	2.335	70.5	-12.0	49.3	57.2
5	2.303	49.3	-27.5	46.4	-65.3
6	2.343	82.9	-17.9	45.5	57.6
7	2.302	74.5	11.5	38.3	50.6
8	-2.150	98.4	10.6	39.8	48.1
9	2.244	59.7	9.6	45.8	52.4
10	-1.882	81.1	11.5	44.1	54.9
11	2.250	62.7	6.6	47.3	56.0
12	2.336	-32.6	3.4	-56.5	-65.1
13	2.265	73.1	-12.3	49.5	58.4
14	-2.116	54.4	7.2	43.9	51.2
15	-2.113	113.8	9.7	-33.7	46.8
16	2.354	94.7	8.6	43.8	55.3
17	2.189	76.0	8.1	44.2	54.0
18	2.250	-38.0	5.3	-55.5	-60.9
19	2.259	76.8	9.5	46.2	59.2
20	2.424	69.7	9.9	46.2	58.2
21	2.191	55.6	2.4	45.4	51.0
22	2.323	83.1	4.9	45.9	52.3
23	2.355	87.7	4.1	39.7	46.4
24	2.244	84.0	4.6	40.9	50.3
25	2.378	56.7	3.3	-55.7	59.8

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3136.	7.62	-2.97	6.14	7.77	5.02
2	3142.	6.81	1.19	6.25	8.04	1.33
3	-3133.	8.57	-3.30	5.39	-5.61	.65
4	3148.	6.05	1.76	6.95	8.35	2.40
5	3145.	4.29	-4.11	6.62	-9.31	1.97
6	3144.	7.08	-2.53	6.39	8.09	2.67
7	3148.	6.49	1.71	5.48	7.23	5.93
8	-3132.	9.12	1.68	6.06	7.32	.27
9	3139.	5.31	1.47	6.70	7.67	1.33
10	3137.	8.60	-2.09	-7.68	-9.57	1.73
11	3149.	5.59	1.00	6.92	8.19	1.62
12	3148.	-2.79	1.23	-7.96	-9.17	5.08
13	3136.	6.44	-1.87	7.16	8.45	1.19
14	3140.	5.14	1.17	6.81	7.95	4.64
15	3139.	-10.76	1.58	5.24	7.26	3.42
16	3144.	8.05	1.25	6.11	7.72	3.18
17	3146.	6.95	1.28	6.64	8.12	-6.99
18	-3155.	-3.39	.81	-8.13	-8.92	3.96
19	3148.	6.81	1.45	6.73	8.62	5.33
20	3143.	5.75	1.41	6.26	7.89	.81
21	-3151.	5.09	.37	6.83	7.67	1.17
22	3147.	7.17	.73	6.50	7.40	3.25
23	3140.	7.44	.59	5.53	6.52	1.97
24	3147.	7.49	.70	6.00	7.37	.91
25	3143.	4.77	.47	-7.69	8.26	2.89

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	3.3790	6.7870	15.8400	3.2750	6.5960	18.4000
2	4.7950	11.6690	21.8480	4.6400	11.3260	25.3440
3	4.4150	10.9900	21.0670	4.2750	10.6680	24.4420
4	5.6460	-14.3380	-25.0110	5.5580	-14.1510	-29.0520
5	4.6000	10.6430	20.8430	4.5310	10.5090	24.2210
6	5.0230	11.7590	22.1420	4.9460	11.6090	25.7260
7	4.0650	8.7430	18.5310	4.0050	8.6340	21.5390
8	4.0820	10.0270	20.0340	3.8750	9.5660	22.8930
9	4.6920	11.4950	21.7550	4.4460	10.9610	24.8450
10	3.3920	9.7410	19.7670	3.3350	9.5330	22.8450
11	3.4950	7.2440	16.7680	3.4930	7.2230	19.3950
12	-5.6740	-14.4800	-25.1600	5.5630	-14.1510	-29.0520
13	4.8330	12.0930	22.4220	4.9070	12.1950	26.5120
14	3.8950	9.9160	19.8850	3.9500	9.9980	23.5060
15	3.2500	7.3750	16.6020	3.3330	7.5250	19.8640
16	4.7960	10.9790	21.0320	4.9330	11.2100	25.1860
17	4.0150	9.7580	19.5900	4.1220	9.9610	23.4540
18	4.6290	11.5690	22.0360	4.6410	11.5240	25.6120
19	4.1360	9.5050	19.5740	4.1460	9.4610	22.7420
20	5.3600	12.1930	22.3950	5.5080	12.3970	26.7800
21	3.1720	6.5910	16.2820	3.2440	6.7290	18.6140
22	4.7250	11.2070	21.7620	4.9560	11.5890	25.7000
23	4.5420	10.1800	20.1610	4.9300	10.9150	24.7810
24	3.3420	7.0390	16.2760	3.7160	7.6840	20.1090
25	3.9070	7.4670	17.7220	3.6910	7.0810	19.1720

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	7.86	-3.05	7.14	9.03	4.68
2	7.04	1.22	7.25	9.32	1.33
3	8.85	-3.40	6.25	-6.51	.65
4	6.15	1.79	8.07	9.70	2.40
5	4.35	-4.16	7.69	-10.82	1.97
6	7.19	-2.66	7.42	9.40	2.67
7	6.59	1.73	6.37	8.40	5.23
8	9.61	1.76	6.92	8.37	.27
9	5.61	1.54	7.66	8.75	1.33
10	8.75	-2.14	8.87	-11.07	1.36
11	5.59	1.01	8.00	9.47	1.62
12	-2.85	1.26	-9.19	-10.59	5.08
13	6.34	1.85	8.47	10.00	1.19
14	5.06	1.16	8.05	9.39	4.14
15	-10.50	1.55	6.27	8.69	3.42
16	7.83	1.22	7.32	9.24	3.18
17	6.77	1.25	7.95	9.72	-6.35
18	-3.38	.82	-9.45	10.37	3.70
19	6.80	1.46	7.82	10.02	5.33
20	5.60	1.39	7.49	9.44	.81
21	4.97	.36	8.39	-9.42	1.17
22	6.83	.71	8.25	9.39	2.53
23	6.86	.55	7.30	8.60	1.97
24	6.74	.64	7.96	9.79	.91
25	5.05	.50	8.94	9.60	1.59

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	29.00	-66.50	28.92	-66.31
2	29.00	69.70	28.92	69.50
3	31.50	68.50	31.41	68.30
4	31.00	69.50	30.96	69.40
5	32.00	69.50	31.95	69.40
6	30.00	69.50	29.96	69.40
7	33.50	69.50	33.45	69.40
8	30.00	68.00	29.86	-67.67
9	29.00	-67.00	28.86	-66.68
10	28.40	-67.30	28.36	-67.20
11	-34.50	69.60	34.50	69.60
12	29.50	68.80	29.46	68.70
13	30.50	69.00	30.54	69.10
14	32.00	70.00	32.05	70.10
15	33.00	-67.60	33.08	-67.76
16	31.00	68.70	31.07	68.87
17	31.50	68.70	31.58	68.87
18	31.00	68.40	31.01	68.43
19	30.50	68.60	30.51	68.63
20	33.00	69.00	33.08	69.17
21	31.00	69.00	31.06	69.13
22	29.50	68.00	29.63	68.30
23	29.00	68.80	29.20	69.27
24	31.50	68.50	31.81	69.17
25	32.60	69.40	32.44	69.07

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
1	1900.	.8660	.7630	1167.	1.020	-3827.
2	2250.	.8770	.7770	1212.	1.020	4926.
3	2000.	.7990	.6900	1161.	1.020	4507.
4	2100.	.8480	.7160	1172.	1.020	4896.
5	2250.	.8170	.7580	1143.	-1.030	4896.
6	2000.	.8670	.6830	1178.	1.020	4896.
7	2300.	.8330	.7990	1215.	1.020	4896.
8	1900.	.7960	.6790	1174.	1.020	-4293.
9	1900.	.7950	.7330	1169.	1.020	-3952.
10	1900.	-.6610	.7320	1237.	1.020	-4106.
11	2200.	.7990	.7460	1169.	-1.030	4952.
12	2000.	.8640	.7010	1223.	1.020	4626.
13	2100.	.8510	.7310	1212.	-1.015	4767.
14	2250.	.8200	.7720	1217.	1.025	5117.
15	2200.	-.7760	.7930	1131.	-1.030	-4306.
16	2100.	.8480	.7190	1156.	1.020	4691.
17	2150.	.8040	.7330	1147.	1.020	4691.
18	2050.	.7950	.7090	1174.	1.020	4529.
19	2100.	.8010	.7200	1163.	1.020	4597.
20	2250.	.8430	.7650	1158.	1.020	4784.
21	2000.	.8360	.6890	1178.	1.025	4800.
22	2000.	.9050	.7230	1223.	1.020	4473.
23	1950.	.9160	.6840	1215.	1.020	4841.
24	2100.	.8300	.7190	1156.	1.020	4781.
25	2050.	.8650	.7030	1190.	1.026	4763.

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	1905.	.8610	.7580	1160.	-3825.
2	2256.	.8720	.7730	1205.	4925.
3	2005.	.7940	.6860	1195.	4506.
4	2100.	.8450	.7140	1169.	4890.
5	2250.	.8150	.7560	1140.	4890.
6	2000.	.8640	.6820	1174.	4890.
7	2300.	.8300	.7970	1212.	4890.
8	1906.	.7890	.6720	1163.	-4286.
9	1906.	.7870	.7260	1157.	-3946.
10	1910.	-.6590	.7300	1233.	-4121.
11	2204.	.7990	.7460	1169.	4960.
12	2011.	.8620	.6990	1219.	4645.
13	2105.	.8540	.7330	1215.	4785.
14	2255.	.8220	.7740	1221.	5137.
15	2200.	-.7800	.7970	1136.	-4317.
16	2100.	.8520	.7220	1162.	4703.
17	2150.	.8080	.7370	1152.	4703.
18	2059.	.7960	.7100	1175.	4552.
19	2110.	.8020	.7210	1164.	4622.
20	2256.	.8470	.7690	1163.	4808.
21	1995.	.8390	.6920	-1182.	4797.
22	2005.	.9130	.7300	1233.	4504.
23	1938.	.9290	.6930	1232.	4844.
24	2092.	.8460	.7330	1179.	4810.
25	2065.	.8570	.6960	1179.	4774.

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.701	677.8	152.7	9.5	19.0
2	1.748	620.9	95.6	7.8	20.1
3	1.567	651.6	133.2	6.6	-15.4
4	1.694	578.6	92.9	9.6	21.6
5	1.648	452.1	72.7	9.1	22.2
6	1.709	676.1	145.4	6.9	19.2
7	1.662	586.5	92.6	6.7	19.1
8	1.569	661.6	98.8	11.8	18.5
9	1.565	642.9	110.4	10.5	17.7
10	-1.284	617.7	121.3	7.8	18.8
11	1.613	418.2	67.5	11.1	-23.8
12	1.747	482.3	55.8	12.8	22.7
13	1.697	561.7	90.6	10.2	19.6
14	1.665	-348.5	51.8	13.2	21.6
15	-1.507	733.1	155.4	8.6	18.3
16	1.679	667.3	109.1	11.1	19.8
17	1.610	538.8	73.2	8.8	20.6
18	1.602	487.6	60.6	11.9	20.6
19	1.592	602.3	96.0	8.8	19.4
20	1.678	582.5	100.8	8.9	21.4
21	1.706	-367.7	38.5	11.6	21.2
22	1.792	688.8	129.3	12.4	20.9
23	1.809	676.5	141.3	14.2	17.6
24	1.676	434.5	70.6	10.2	20.2
25	1.773	-286.2	34.4	15.7	-25.1

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
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1	2958.	75.04	29.04	1.72	3.45	2.05
2	3000.	67.83	17.94	1.40	3.61	0.00
3	2958.	78.26	27.48	1.30	3.03	.51
4	3010.	65.44	18.06	1.78	4.01	1.85
5	3039.	53.06	14.66	1.75	4.27	.69
6	2969.	74.77	27.63	1.26	3.49	.94
7	3006.	67.53	18.32	1.27	3.61	.96
8	2970.	79.70	20.46	2.34	3.67	1.60
9	2967.	77.57	22.88	2.08	3.50	1.72
10	-2932.	-89.79	30.29	1.86	-4.49	.13
11	3043.	50.22	13.92	2.19	-4.69	1.07
12	3043.	53.47	10.63	2.32	4.14	1.18
13	3004.	63.26	17.53	1.89	3.63	0.00
14	3059.	-40.76	10.40	2.53	4.15	0.00
15	-2928.	-90.62	-33.00	1.75	3.71	1.33
16	2984.	75.46	21.20	2.07	3.67	1.72
17	3015.	64.23	16.22	1.72	4.03	-4.49
18	3036.	58.81	12.55	2.37	4.08	.79
19	2995.	72.11	19.74	1.72	3.81	1.19
20	2998.	66.25	19.69	1.67	4.00	.66
21	-3073.	-42.16	7.57	2.18	3.99	.92
22	2981.	72.95	23.54	2.15	3.64	1.96
23	2973.	77.74	25.39	2.44	3.03	2.62
24	3043.	50.21	14.01	1.93	3.83	1.18
25	-3084.	-31.68	6.54	-2.85	-4.57	.92

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-.4600	-.3040	-2.9760	-.4500	-.2970	-3.4790
2	.6120	.5020	3.8360	.5980	.4900	4.4810
3	.5140	.4140	3.4730	.5030	.4040	4.0590
4	.5840	.4860	3.8070	.5780	.4820	4.4390
5	.5690	.4860	3.8070	.5630	.4820	4.4390
6	.5940	.4860	3.8070	.5880	.4820	4.4390
7	.5770	.4860	3.8070	.5710	.4820	4.4390
8	-.4910	.3790	-3.3390	-.4750	.3660	3.8610
9	-.4500	-.3220	-3.0790	-.4340	-.3100	-3.5620
10	-.4170	-.3450	-3.2050	-.4110	-.3390	-3.7170
11	.5670	.5000	3.9110	.5670	.4990	4.5230
12	.5590	.4390	3.6130	.5520	.4300	4.1880
13	.5610	.4550	3.6680	.5660	.4580	4.3210
14	.6020	-.5410	4.0230	.6070	.5440	4.7400
15	-.4670	-.3660	-3.2690	-.4750	.3710	3.8880
16	.5450	.4350	3.5640	.5540	.4410	4.2430
17	.5250	.4350	3.5640	.5340	.4410	4.2430
18	.5090	.4150	3.5330	.5100	.4130	4.1010
19	.5210	.4280	3.5890	.5210	.4260	4.1660
20	.5570	.4570	3.6540	.5660	.4620	4.3430
21	.5520	.4520	3.8040	.5610	.4600	4.3320
22	.5400	.3950	3.4740	.5570	.4040	4.0570
23	.5820	.4460	3.6260	.6150	.4710	4.3850
24	.5260	.4320	3.5890	.5660	.4620	4.3440
25	.5900	.4760	3.9440	.5670	.4550	4.3100

MODE 7

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX FI LB/KLB FU	SMK NUMBER CORRECTED
1	76.70	29.70	2.01	4.03	2.05
2	69.40	18.37	1.64	4.22	0.00
3	79.96	28.11	1.52	3.54	.51
4	66.10	18.23	2.07	4.68	1.74
5	53.59	14.80	2.04	4.98	.69
6	75.54	27.89	1.47	4.07	.94
7	68.21	18.49	1.48	4.21	.96
8	82.54	21.20	2.71	4.24	1.60
9	80.29	23.70	2.40	4.05	1.07
10	-90.93	-30.85	2.16	5.20	.13
11	50.26	13.97	2.53	-5.43	1.07
12	54.24	10.83	2.69	4.80	.95
13	62.69	17.45	2.22	4.27	0.00
14	-40.39	10.35	2.98	4.89	0.00
15	-89.12	-32.51	2.09	4.42	1.33
16	74.14	20.88	2.46	4.37	1.72
17	63.13	15.97	2.05	4.79	-4.10
18	58.79	12.62	2.75	4.73	.79
19	72.10	19.85	2.00	4.43	1.09
20	65.21	19.48	1.99	4.75	.66
21	-41.48	7.45	2.67	4.88	.92
22	70.74	23.00	2.70	4.56	1.96
23	66.88	24.04	3.17	3.93	-2.41
24	46.70	13.08	2.50	4.98	1.18
25	-32.98	6.83	3.35	5.36	.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
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1	25.50	-63.00	25.43	-62.82
2	26.50	-66.80	26.42	66.61
3	-30.50	-67.70	-30.41	-67.51
4	25.50	65.50	25.46	65.41
5	28.00	65.20	27.96	65.11
6	27.00	64.50	26.96	64.41
7	29.50	65.20	29.46	65.11
8	27.50	65.50	27.37	65.19
9	28.00	65.50	27.87	65.19
10	26.20	63.80	26.16	63.71
11	29.50	65.40	29.50	65.40
12	25.50	64.30	25.46	64.21
13	27.00	65.50	27.04	65.59
14	29.00	-66.50	29.04	66.60
15	-30.00	65.50	30.07	65.66
16	28.00	65.20	28.07	65.36
17	26.50	64.50	26.56	64.66
18	27.00	64.30	27.01	64.33
19	27.00	64.80	27.01	64.83
20	28.00	65.80	28.07	65.96
21	27.00	65.00	27.05	65.13
22	27.00	65.50	27.12	65.79
23	25.30	65.00	25.47	65.44
24	-30.00	-67.00	-30.29	-67.66
25	28.10	64.30	27.97	63.99

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
1	1700.	.8850	-.9490	1179.	1.020	-2746.
2	1850.	.8960	-.7370	1208.	1.020	-3524.
3	1950.	.8060	-.7080	1161.	1.020	-4228.
4	1700.	.8530	.7450	1163.	-1.010	3537.
5	1900.	.8190	.8460	1133.	1.020	3439.
6	1800.	.8760	.8680	1172.	1.020	3226.
7	1900.	.8320	.8720	1203.	1.020	3439.
8	1800.	.7910	.7910	1169.	1.020	3466.
9	1800.	.8000	.7900	1167.	-1.010	3466.
10	1700.	.7870	.8900	1224.	1.020	3001.
11	1800.	.8000	.7890	1149.	1.020	3524.
12	1700.	.8800	.8460	1217.	-1.010	3149.
13	1850.	.8640	.8220	1208.	-1.010	3580.
14	2000.	.8210	.8140	1210.	1.020	3904.
15	2000.	-.7770	.8580	1122.	-1.030	3605.
16	1850.	.8580	.8240	1143.	1.020	3507.
17	1800.	.8180	.8510	1134.	1.020	3289.
18	1800.	.7990	.8750	1163.	1.020	3183.
19	1800.	.8210	.8390	1172.	-1.010	3332.
20	1900.	.8520	.7960	1136.	-1.010	3693.
21	1700.	.8270	.7850	-1178.	1.020	3443.
22	1900.	.9110	.8470	1223.	1.020	3631.
23	1750.	.9390	.8240	1224.	1.015	3542.
24	2000.	-.7290	.7550	1136.	1.020	-4254.
25	1700.	.8440	.8260	1156.	1.020	3090.

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	1704.	.8800	-.9440	1173.	-2746.
2	1855.	.8900	-.7320	1201.	3922.
3	1955.	.8020	-.7040	1155.	-4227.
4	1700.	.8510	.7430	1160.	3532.
5	1900.	.8170	.8430	1129.	3434.
6	1800.	.8730	.8660	1169.	3222.
7	1900.	.8300	.8690	1199.	3434.
8	1806.	.7830	.7830	1157.	3461.
9	1806.	.7920	.7830	1156.	3461.
10	1709.	.7840	.8870	1221.	3012.
11	1803.	.8000	.7890	1149.	3530.
12	1710.	.8770	.8430	1214.	3162.
13	1854.	.8660	.8250	1212.	3593.
14	2005.	.8230	.8170	1213.	3919.
15	2000.	.7800	.8620	1127.	3614.
16	1850.	.8620	.8280	1149.	3516.
17	1800.	.8220	.8550	1140.	3297.
18	1808.	.8000	.8760	1164.	3199.
19	1809.	.8220	.8400	1173.	3349.
20	1905.	.8560	.8000	1142.	3712.
21	1696.	.8310	.7880	-1182.	3441.
22	1905.	.9190	.8550	1233.	3655.
23	1739.	.9520	.8350	-1241.	3544.
24	1993.	-.7430	.7700	1158.	-4279.
25	1712.	.8360	.8180	1145.	3098.

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.711	796.5	209.0	9.9	17.1
2	1.761	729.1	144.6	7.2	18.3
3	1.578	673.1	143.4	6.4	16.3
4	1.655	804.4	183.2	9.3	17.8
5	1.626	605.9	110.2	8.5	19.2
6	1.691	825.3	213.3	6.9	16.8
7	1.625	735.9	156.8	5.6	14.2
8	1.530	744.0	162.1	11.5	17.2
9	1.567	679.8	124.4	10.3	17.0
10	1.518	728.1	185.3	7.7	17.4
11	1.572	645.5	135.9	9.7	19.9
12	1.752	641.2	94.4	12.0	19.8
13	1.696	669.9	147.8	8.9	17.4
14	1.644	-498.8	-75.8	11.4	19.5
15	-1.488	794.7	197.8	7.9	16.4
16	1.662	798.0	189.2	11.0	17.1
17	1.597	727.0	153.2	8.2	17.7
18	1.591	640.6	102.1	12.1	18.0
19	1.594	760.7	174.5	8.8	17.0
20	1.656	746.6	177.1	7.8	17.4
21	1.668	-481.0	-65.2	9.3	18.8
22	1.781	789.8	174.1	11.9	19.2
23	1.825	812.5	203.4	12.0	15.0
24	-1.472	-357.2	-66.2	10.4	-20.8
25	1.697	-468.6	-70.5	12.0	20.1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT STDF
1	2913.	86.32	38.91	1.77	3.65	2.74
2	2960.	78.03	26.58	1.27	3.21	1.32
3	2950.	80.06	29.31	1.25	3.18	.13
4	2924.	90.42	35.38	1.72	3.29	.53
5	2990.	70.93	22.17	1.64	3.69	1.10
6	2911.	90.40	40.15	1.24	3.02	1.07
7	2944.	84.84	31.05	1.76	2.69	.83
8	2917.	90.28	33.20	2.30	3.43	0.00
9	2953.	81.55	25.63	2.04	3.36	.93
10	2910.	88.81	38.43	1.54	3.49	.66
11	2962.	77.38	27.28	1.91	-3.93	.80
12	2998.	69.83	17.67	2.15	3.55	1.97
13	2957.	74.35	28.19	1.63	3.17	.27
14	-3018.	-58.26	-15.22	2.19	3.74	.66
15	2841.	98.23	42.01	1.60	3.34	0.00
16	2921.	89.24	36.35	2.03	3.14	0.00
17	2942.	85.22	30.25	1.58	3.41	3.31
18	2964.	76.93	21.06	2.38	3.55	1.99
19	2927.	88.90	35.04	1.69	3.27	1.32
20	2930.	84.09	34.26	1.45	3.23	.66
21	-3037.	-55.73	-12.97	1.76	3.58	.65
22	2944.	83.09	31.46	2.06	3.31	2.58
23	2926.	82.89	35.64	2.01	2.52	-3.51
24	-3045.	-47.04	-14.98	2.25	-4.49	.39
25	-3030.	-53.24	-13.76	2.24	3.75	1.57

MODE A

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.3890	.2240	-2.4780	.3800	.2190	-2.9000
2	-.4810	-.3140	3.0280	.4700	-.3070	3.5410
3	-.4830	-.3640	-3.2580	.4730	-.3560	-3.8090
4	.4270	.2720	2.8280	.4230	.2700	3.2990
5	.4070	.2640	2.7780	.4030	.2610	3.2420
6	.4080	.2440	2.6650	.4050	.2420	3.1100
7	.4120	.2640	2.7780	.4080	.2610	3.2420
8	.4080	.2730	2.8130	.3950	.2640	3.2570
9	.4110	.2730	2.8130	.3970	.2640	3.2570
10	.3690	.2330	2.5280	-.3640	.2290	3.0030
11	.4060	.2710	2.8520	.4050	.2700	3.2980
12	.4070	.2410	2.6490	.4010	.2370	3.0730
13	.4290	.2740	2.8340	.4330	.2750	3.3370
14	.4400	-.3050	3.0050	.4440	.3060	3.5380
15	.3990	.2730	2.8160	.4050	.2770	3.3490
16	.4180	.2650	2.7660	.4250	.2690	3.2900
17	.3880	.2450	2.6340	.3940	.2490	3.1560
18	.3790	.2410	2.6670	.3790	.2400	3.0950
19	.3980	.2550	2.7480	.3980	.2540	3.1890
20	.4320	.2840	2.8700	.4390	.2860	3.4090
21	.4020	.2580	2.8320	.4080	.2620	3.2450
22	.4450	.2750	2.8920	.4590	.2810	3.3740
23	.4380	.2570	2.7410	.4620	.2710	3.3070
24	.4270	-.3410	-3.1990	.4570	-.3650	-3.8550
25	.3970	.2420	2.7730	.3830	.2320	3.0370

MOOF 8

UNIT	NREC CO FT LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FT LB/KLB FU	NR CNO LB/KL	U	MARK NUMBER CORRECTED
1	88.18	39.76	2.07	3.57		1.63
2	79.79	27.19	1.49	3.75		1.32
3	81.80	29.99	1.46	3.72		.13
4	91.30	35.69	2.00	3.84		.53
5	71.60	22.37	1.92	4.30		.68
6	91.28	40.51	1.45	3.52		1.07
7	85.65	31.33	1.24	3.14		.83
8	93.39	35.00	2.66	3.97		0.00
9	84.38	26.54	2.36	3.89		.93
10	89.96	39.53	1.78	4.05		.66
11	77.45	28.07	2.21	4.54		.68
12	70.80	18.00	2.49	4.11		1.97
13	73.70	28.06	1.92	3.74		.27
14	-57.77	-15.15	2.58	4.40		.66
15	96.65	41.41	1.91	3.97		0.00
16	87.72	35.83	2.41	3.74		0.00
17	83.82	30.41	1.88	4.05		-3.31
18	76.92	21.17	2.77	4.12		1.36
19	88.90	35.24	1.96	3.79		1.22
20	82.82	33.92	1.72	3.83		.66
21	-54.88	-12.76	2.15	4.37		.65
22	80.64	30.77	2.58	4.15		2.11
23	78.49	33.83	2.60	3.26		-3.19
24	-43.99	-14.01	2.92	-5.83		.39
25	-55.27	-14.35	2.63	4.41		1.45

JT9D-3A * 600 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
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1	12396.	620.	521.2	30.25	.005050
2	11764.	620.	521.2	30.25	.005050
3	12416.	620.	521.2	30.25	.005050
4	13146.	615.	514.2	30.09	.006620
6	14855.	615.	514.2	30.14	.006610
7	13009.	615.	514.2	30.16	.006600
9	14486.	801.	507.2	30.35	.005300
10	13184.	676.	509.2	30.05	.006210
11	14643.	585.	510.7	30.46	.004950
12	14199.	674.	503.7	30.05	.006100
13	12776.	651.	509.7	30.08	.006580
16	13328.	791.	506.7	30.30	.006420
17	13123.	791.	506.7	30.27	.006420
20	8762.	539.	509.7	30.22	.004760
22	12582.	549.	502.7	30.17	.006310
23	15144.	774.	513.2	29.96	.008720
24	13429.	626.	514.7	29.92	.008280

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	27.30	64.50	27.23	64.35
2	26.50	65.00	26.44	64.84
3	29.00	64.00	28.93	63.85
4	27.50	64.50	27.62	64.74
6	27.00	64.50	27.12	64.79
7	29.00	64.50	29.13	64.74
9	-31.00	65.00	-31.35	65.73
10	28.70	-63.00	28.97	63.58
11	29.50	64.50	29.73	65.00
12	28.00	65.00	28.25	65.57
13	29.50	65.50	29.76	66.08
16	29.00	64.40	29.34	65.16
17	30.00	64.70	30.35	65.46
20	29.00	65.00	29.25	65.57
22	26.40	-63.00	27.06	63.62
23	28.50	65.50	28.49	65.47
24	27.00	64.40	27.00	64.40

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	1900.	.9620	.9080	1179.	1.020	3169.
2	1900.	.9490	.8740	1194.	1.020	3317.
3	1900.	.8460	.9350	1140.	1.020	3021.
4	1800.	.9310	.8500	1140.	1.015	3316.
6	1850.	.9050	.8750	1147.	1.020	3310.
7	1900.	.8780	.9000	1152.	1.020	3308.
9	2050.	.8630	.9200	1142.	1.020	3587.
10	1900.	.9250	-1.0600	1187.	1.020	2963.
11	1920.	.8370	.8870	1118.	1.020	3341.
12	1870.	.9110	.9590	1174.	1.020	3570.
13	1900.	.9050	.8270	1161.	1.015	3730.
16	1900.	.9100	.8910	1118.	1.020	3409.
17	2050.	.9080	.9400	1125.	1.020	3509.
20	2030.	.8830	.9000	-1106.	1.015	3550.
22	1900.	.9360	-1.0370	1143.	1.020	2960.
23	2000.	.9470	.9950	-1215.	1.020	3548.
24	1840.	-.7530	.8880	1156.	1.015	3221.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LAM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	1926.	.9570	.9040	1174.	3204.
2	1926.	.9440	.8700	1199.	3353.
3	1926.	.8420	.9300	1134.	3054.
4	1802.	.9390	.8570	1150.	3334.
6	1856.	.9130	.8830	1157.	3334.
7	1907.	.8850	.9080	1162.	3334.
9	2056.	.8430	.9410	1167.	3638.
10	1891.	.9430	-1.0800	1209.	2975.
11	1940.	.8510	.9010	1136.	3401.
12	1862.	.9280	.8740	1195.	3586.
13	1894.	.9210	.8410	1182.	3750.
16	1901.	.9320	.9120	1145.	3451.
17	2050.	.9300	.9620	1152.	3550.
20	2032.	.8980	.9160	1125.	3586.
22	1837.	.9540	-1.0570	1166.	2085.
23	2004.	.9460	.8960	-1214.	3552.
24	1840.	-.7530	.8880	1156.	3220.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.881	792.4	199.0	17.5	-20.6
2	1.858	799.3	172.7	14.5	20.5
3	1.623	837.2	215.1	10.8	17.8
4	1.789	871.8	258.6	16.4	18.0
6	1.727	910.6	266.8	15.4	17.7
7	1.701	828.6	190.4	12.1	18.2
9	1.682	736.0	166.6	11.7	19.0
10	1.797	791.5	215.0	9.8	18.0
11	1.608	796.7	223.3	8.4	18.6
12	1.798	711.5	141.2	10.9	18.7
13	1.773	694.0	176.6	10.6	18.8
16	1.747	816.9	250.8	12.8	-19.1
17	1.774	720.2	200.6	13.6	14.5
20	1.700	810.2	231.2	15.0	19.2
22	1.793	896.5	263.4	9.2	18.2
23	1.849	773.2	200.2	-19.4	17.6
24	1.508	-429.0	87.1	13.4	16.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2944.	78.92	32.16	2.87	3.37	3.79
2	2947.	80.70	29.95	2.41	3.40	1.31
3	2892.	94.91	41.89	2.00	3.31	1.56
4	2894.	89.75	45.73	2.77	3.04	-6.86
6	2875.	96.52	48.59	2.69	3.08	1.96
7	2920.	90.55	35.75	2.17	3.27	2.74
9	2936.	81.75	31.79	2.14	3.47	2.47
10	2924.	81.98	38.41	1.67	3.07	1.97
11	2894.	91.27	43.95	1.59	3.49	1.17
12	2971.	74.81	25.51	1.88	3.23	1.95
13	2951.	73.95	32.15	1.84	3.27	1.32
16	2891.	92.37	45.38	2.22	3.30	2.40
17	2941.	76.07	36.37	2.35	3.39	1.18
20	2901.	88.09	43.17	2.67	3.44	.66
22	2887.	81.45	46.36	1.57	3.14	2.47
23	2939.	79.28	34.88	1.22	3.22	3.95
24	-3018.	-54.63	19.06	2.81	3.48	-5.23

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.4450	.2500	2.8800	.4330	.2410	3.0980
2	.4540	.2640	2.9670	.4420	.2540	3.1920
3	.3930	.2390	2.8070	.3830	.2300	3.0190
4	.4250	.2460	2.7250	.4380	.2520	3.1800
6	.4160	.2470	2.7290	.4280	.2520	3.1800
7	.4070	.2470	2.7290	.4180	.2520	3.1800
9	.4110	.2630	2.8260	.4430	.2400	3.3640
10	.3850	-.2130	-2.4920	.4130	.2270	2.9480
11	.3940	.2510	2.7970	.4120	.2590	3.2220
12	.4270	.2590	2.7310	.4560	.2750	3.3220
13	.4380	.2730	2.8690	.4670	.2900	3.4320
16	.4100	.2450	2.6620	.4460	.2630	3.2520
17	.4170	.2530	2.7080	.4540	.2720	3.3100
20	.4180	.2610	2.8700	.4440	.2750	3.3220
22	.3890	-.2150	-2.4870	.4170	.2280	2.9920
23	.4630	.2730	2.8180	.4600	.2720	3.3120
24	.3670	.2420	2.6560	.3670	.2420	3.1080

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBR
1		81.09			33.42			3.31			3.89		2.14	
2		82.92			31.13			2.78			3.93		1.31	
3		97.40			43.53			2.32			3.82		.66	
4		37.03			44.65			3.47			3.81		-4.65	
6		93.76			47.59			3.36			3.86		1.46	
7		88.05			35.05			2.72			4.09		2.66	
9		75.77			29.88			2.73			4.44		2.47	
10		76.48			36.06			2.15			3.95		1.74	
11		87.20			42.72			1.97			4.32		1.06	
12		70.00			24.01			2.41			4.14		1.32	
13		69.25			30.30			2.38			4.23		1.32	
16		85.00			42.37			2.92			4.33		1.61	
17		69.95			33.90			3.09			4.45		.79	
20		82.87			41.04			3.33			4.29		.66	
22		85.57			43.67			2.03			4.06		1.53	
23		78.63			35.09			3.78			3.78		-3.88	
24		-54.61			19.06			3.29			4.08		2.66	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.20	68.70	32.12	68.54
2	32.60	69.30	32.52	69.13
3	34.00	68.30	33.92	68.63
4	32.50	69.00	32.64	69.30
6	34.00	69.50	34.15	69.80
7	34.00	69.00	34.15	69.30
9	-37.50	69.00	-37.92	69.78
10	35.60	69.40	35.93	70.04
11	36.00	70.00	36.28	70.55
12	-36.30	69.70	-36.62	70.31
13	34.00	69.20	34.30	69.81
16	33.00	68.60	33.39	69.41
17	33.50	68.70	33.80	69.51
20	35.00	69.50	35.31	70.11
22	32.40	69.00	32.72	69.67
23	-30.50	69.00	-30.49	68.97
24	32.50	69.00	32.50	69.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LPM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	2220.	.9420	.7610	1178.	1.025	4537.
2	2250.	.9360	.7720	1205.	1.025	4744.
3	2300.	.9670	.7780	1151.	1.025	4572.
4	2200.	.9370	.7460	1154.	1.025	4828.
6	2400.	.9070	.8120	1170.	1.030	4994.
7	2400.	.8990	.8180	1170.	1.025	4817.
9	2550.	.8780	-.8630	1167.	1.030	4951.
10	2460.	.9420	.8520	1215.	1.030	5094.
11	2420.	.8450	.7880	1129.	1.027	5203.
12	2550.	.9220	-.3740	1201.	1.030	5190.
13	2230.	.9020	.7590	1170.	1.020	5006.
16	2250.	.9160	.7570	1136.	1.025	4932.
17	2350.	.9210	.7920	1140.	1.025	4871.
20	2400.	.9030	.7960	1133.	1.025	5089.
22	2370.	.9270	.8070	1164.	1.025	4945.
23	2100.	.9360	.7330	1214.	1.025	4732.
24	2160.	-.7550	.7450	1179.	1.024	4751.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	CORR F11 FL LAM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	2250.	.9380	.7570	1172.	4587.
2	2280.	.9310	.7680	1199.	4797.
3	2331.	.8630	.7740	1145.	4622.
4	2207.	.9450	.7530	1164.	4855.
6	2407.	.9150	.8190	1181.	5031.
7	2409.	.9070	.8260	1181.	4855.
9	-2558.	.8980	-.8830	1193.	5022.
10	2448.	.9590	-.8680	-1238.	5116.
11	2445.	.8590	.9010	1147.	5297.
12	2539.	.9390	-.8890	-1222.	5213.
13	2222.	.9180	.7730	1191.	5033.
15	2252.	.9380	.7750	1163.	4893.
17	2350.	.9430	.8110	1167.	4928.
20	2403.	.9190	.8100	1153.	5140.
22	2367.	.9450	.8230	1191.	4986.
23	2104.	.9350	.7330	1212.	4738.
24	2160.	-.7550	.7450	1179.	4750.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.889	606.5	90.2	17.1	24.3
2	1.877	608.4	83.2	14.6	24.0
3	1.713	653.6	130.8	11.9	22.3
4	1.865	611.4	133.1	18.0	22.6
6	1.803	616.2	130.8	16.8	22.7
7	1.793	612.9	108.0	12.5	22.0
9	1.758	533.8	88.0	14.5	23.4
10	1.887	555.2	112.0	11.9	23.0
11	1.692	554.9	84.4	9.1	24.0
12	1.885	379.5	39.0	14.0	-25.1
13	1.798	557.8	121.5	12.0	22.3
16	1.799	721.0	169.2	15.0	22.6
17	1.839	580.9	122.4	16.2	23.9
20	1.795	590.0	130.6	15.2	24.2
22	1.839	654.4	134.8	10.0	22.5
23	1.844	689.3	166.3	-20.1	18.5
24	-1.534	-322.8	53.8	15.5	19.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JIT90-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3016.	61.64	15.75	2.86	4.05	3.27
2	3018.	62.26	14.63	2.46	4.04	1.44
3	2974.	72.24	24.83	2.15	4.04	1.31
4	2998.	62.54	23.38	3.02	3.80	1.69
6	2993.	65.12	23.75	2.92	3.94	2.47
7	3004.	65.34	19.77	2.19	3.85	1.69
9	3015.	58.25	16.49	2.59	4.20	1.96
10	3016.	56.48	19.58	1.98	3.85	2.37
11	3014.	62.92	16.44	1.70	4.46	.65
12	-3077.	39.42	6.96	2.38	4.28	1.55
13	3002.	59.26	22.18	2.10	3.89	2.61
16	2958.	75.44	30.42	2.57	3.89	.93
17	3005.	60.43	21.88	2.76	4.09	1.32
20	2994.	62.64	23.83	2.65	4.21	1.45
22	2986.	67.62	23.93	1.70	3.82	2.09
23	2967.	70.60	29.26	3.39	3.39	-3.65
24	3059.	40.99	11.73	3.24	4.02	1.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.5980	.4360	3.8470	.5820	.4190	4.1340
2	.6260	.4780	4.0310	.6090	.4600	4.3320
3	.5640	.4430	3.8770	.5490	.4260	4.1660
4	.6060	.4610	3.7620	.6270	.4730	4.3980
6	.6210	.5050	3.9460	.6410	.5170	4.6100
7	.5870	.4630	3.7670	.6050	.4730	4.3980
9	.5800	.4810	3.8430	.6290	.5140	4.5990
10	.6340	.5030	3.9100	.6840	.5390	4.7150
11	.6230	-.5680	-4.2690	.6540	-.5870	-4.9380
12	.6410	.5290	4.0310	.6880	.5640	4.8330
13	.6000	.4860	3.8150	.6430	.5170	4.6120
16	.5760	.4480	3.6700	.6290	.4820	4.4430
17	.5840	.4560	3.6520	.6390	.4910	4.4850
20	.6210	.5160	4.0700	.6630	.5450	4.7440
22	.6030	.4740	3.7660	.6510	.5050	4.5550
23	.6050	.4510	3.6390	.6020	.4480	4.2760
24	-.5170	.4500	3.6630	.5170	.4510	4.2870

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NREC CNO FI LB/KLB FU	NREC CNOX FI LB/KLB FU	SMR NUMBER CORRECTED
1	63.38	16.38	3.30	4.68	1.99
2	64.02	15.22	2.83	4.66	.66
3	74.22	25.83	2.49	4.67	.92
4	60.53	22.79	3.79	4.77	1.58
6	63.13	23.21	3.66	4.94	1.73
7	63.39	19.35	2.74	4.83	1.32
9	53.72	15.44	3.33	5.39	1.72
10	52.36	18.24	2.57	4.98	1.99
11	59.86	15.92	2.11	5.54	.65
12	-36.72	6.52	3.07	5.51	1.55
13	55.32	20.84	2.72	5.05	.26
16	69.09	28.28	3.39	5.13	.53
17	55.29	20.30	3.64	5.40	1.32
20	59.66	22.57	3.31	5.27	1.45
22	62.69	22.42	2.21	4.96	1.32
23	70.92	29.45	3.98	3.98	-3.65
24	40.97	11.73	3.79	4.71	1.06

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	90.00	95.00	89.78	94.77
2	-92.00	94.60	-91.78	94.37
3	90.50	94.50	90.28	94.27
4	90.50	95.00	90.90	95.41
6	89.50	94.00	89.89	94.41
7	89.50	93.50	89.89	93.91
9	90.00	93.00	91.01	94.05
10	89.40	93.00	90.23	93.86
11	89.70	94.30	90.40	95.04
12	90.30	95.00	91.09	95.84
13	90.00	94.50	90.79	95.33
16	89.20	93.50	90.25	94.60
17	88.50	92.80	89.54	93.89
20	89.00	94.50	89.78	95.33
22	88.00	93.00	88.86	93.91
23	89.00	95.50	89.96	95.65
24	89.50	94.40	89.50	94.40

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TTC DEG R	FPR	THRUST LBF
1	15850.	1.7960	1.9070	1871.	1.400	40454.
2	16100.	1.9110	1.9460	1887.	1.400	40454.
3	16000.	1.8970	1.9190	1858.	1.400	40454.
4	15900.	1.9270	1.9340	1890.	1.400	40669.
6	15950.	1.8330	1.9100	1838.	1.400	40601.
7	15750.	1.8980	1.8310	1851.	1.400	40575.
9	15800.	1.8000	1.8800	1842.	1.400	-40321.
10	15450.	1.8180	1.8700	1869.	1.400	40723.
11	15750.	1.8310	1.8650	1849.	-1.403	40369.
12	15750.	1.7790	1.8970	1849.	1.400	40723.
13	15800.	1.8260	1.9210	1889.	1.400	40682.
16	15500.	1.8270	1.8420	1833.	1.400	40394.
17	15950.	1.9140	1.8920	1820.	1.400	40427.
20	15700.	1.8520	1.8780	1845.	1.400	40494.
22	15400.	1.8320	1.8310	1818.	1.400	40561.
23	15900.	1.9460	1.9310	1869.	1.400	40845.
24	15440.	1.9300	1.8860	1885.	1.400	40907.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

J790-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	CORR EQ F1 LBM/HR	COR CR F/A X100	COR PE F/A X100	COR TT6 SEC R	COR THRUST LBF
1	16067.	1.7880	1.8980	1862.	40900.
2	16317.	1.9010	1.9370	1878.	40900.
3	16215.	1.8880	1.9100	1849.	40900.
4	15921.	1.9440	1.9510	1907.	40900.
6	15997.	1.8490	1.9260	1854.	40900.
7	15807.	1.9140	1.9070	1867.	40900.
9	15848.	1.8410	1.9220	1883.	40900.
10	15374.	1.8520	1.9050	1904.	40900.
11	15910.	1.8600	1.8940	1878.	-41038.
12	15681.	1.8110	1.9300	1882.	40900.
13	15746.	1.8580	1.9550	-1922.	40900.
16	15512.	1.8710	1.8860	1876.	40900.
17	15949.	-1.9590	1.9370	1863.	40900.
20	15719.	1.8850	1.9110	1878.	40900.
22	15378.	1.8680	1.8670	1854.	40900.
23	15929.	1.9440	1.9290	1867.	40900.
24	15437.	1.9300	1.8860	1885.	40900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.799	19.0	7.8	326.9	320.4
2	4.042	18.4	16.4	341.3	341.7
3	4.016	16.1	5.9	305.7	305.3
4	4.067	-20.1	-68.1	314.2	298.8
6	3.880	19.0	16.3	294.2	299.1
7	4.022	18.0	7.7	273.8	279.7
9	3.803	17.1	2.7	233.5	249.6
10	3.849	18.3	7.0	270.4	273.3
11	3.874	16.9	13.5	292.4	295.0
12	3.745	-23.2	4.9	249.2	251.7
13	3.842	16.2	6.4	303.2	316.6
16	3.872	14.8	1.8	222.6	231.7
17	4.058	-25.5	3.8	258.0	280.9
20	3.921	-19.2	8.9	266.2	261.4
22	3.879	14.8	1.4	234.7	251.0
23	4.127	-5.1	3.7	287.7	288.8
24	4.088	-3.3	6.2	348.1	353.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3152.	-1.00	.71	28.36	28.36	19.61
2	3151.	.91	1.40	27.81	27.84	18.42
3	3153.	.80	.51	25.10	25.10	12.50
4	-3143.	-.99	-5.75	25.38	25.38	16.23
6	3155.	-.98	1.45	25.01	25.43	17.39
7	3157.	.90	.56	22.47	22.96	18.56
9	3149.	.90	.24	20.21	21.60	14.47
10	3155.	.95	.62	23.17	23.42	17.43
11	3153.	.88	1.20	24.88	25.10	14.60
12	3155.	-1.24	.45	21.84	22.05	15.58
13	3153.	.84	.57	25.88	27.02	10.26
16	3159.	.77	.16	18.98	19.76	18.45
17	3158.	-1.26	.32	20.99	22.85	25.26
20	3154.	-.98	.78	22.45	22.45	12.91
22	3157.	.77	.12	19.97	21.36	14.17
23	3157.	-.25	.31	23.01	23.10	18.68
24	3154.	-.16	.52	28.08	28.49	20.39

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	83.0150	96.1370	88.6310	78.0170	91.4690	94.2030
2	108.5660	87.7180	83.4440	101.5120	83.4770	88.7100
3	102.1290	85.7180	82.1920	95.5710	81.5780	87.3840
4	125.5610	101.1620	86.9320	-141.1750	105.7680	103.7180
6	78.6500	80.8570	74.9350	87.2370	84.2030	89.2150
7	86.9220	72.0940	69.5200	96.9040	74.9500	82.6890
9	61.7080	69.3180	67.3140	79.7560	77.4380	84.4640
10	63.9790	66.8100	65.5420	79.7370	74.1710	82.1300
11	84.1820	91.0550	81.8870	100.9130	97.1160	98.0050
12	81.5430	104.8340	88.4480	100.4930	-116.1510	-110.4140
13	85.2510	93.9410	81.4250	105.7080	103.7910	102.4240
16	72.8210	77.9030	71.0460	96.3180	87.9620	91.8090
17	82.6000	66.1590	63.9300	111.5270	74.6740	82.4910
20	92.4790	94.7290	84.4850	114.8900	103.7910	102.4240
22	66.7180	67.6110	65.6380	84.1430	74.9740	82.7060
23	-143.5650	107.6100	88.9780	-142.0660	106.7000	104.3270
24	111.1370	83.9760	76.1000	111.5460	84.0010	89.0750

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRF LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	FI	SMC CORRECTED	QSMR2
1		-1.07			.74			30.15			30.15		13.74	
2		-.98			1.47			29.56			29.60		14.00	
3		.86			.53			26.48			26.68		13.78	
4		.88			-5.50			30.29			30.29		13.78	
6		.89			1.39			29.78			30.28		13.78	
7		.81			.63			26.73			27.31		13.78	
9		.70			.22			27.41			29.30		13.78	
10		.76			.56			31.38			31.72		13.78	
11		.73			1.13			32.18			32.46		13.78	
12		-1.01			.41			29.46			29.75		13.78	
13		.68			.52			-35.18			-36.77		13.78	
16		.58			.14			24.53			25.54		13.78	
17		-.94			.29			29.26			31.86		13.78	
20		.79			.71			29.41			29.41		13.78	
22		.61			.11			27.19			29.08		13.78	
23		-.25			.31			26.98			27.08		13.78	
24		-.16			.52			32.86			33.35		13.78	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TEST SERIES *

MODE 4

TEST	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	85.40	92.70	85.19	92.49
2	85.50	93.00	85.29	92.78
3	85.30	92.70	85.10	92.48
4	85.00	93.00	85.37	93.41
5	84.00	92.50	84.37	92.90
6	84.00	91.50	84.37	91.90
7	84.50	91.50	85.45	92.53
8	83.50	91.10	84.28	91.95
9	83.50	91.60	84.15	92.31
10	84.70	93.00	85.44	93.82
11	84.50	93.00	85.24	93.82
12	83.00	92.00	83.98	93.08
13	83.00	91.50	83.73	92.30
14	82.50	92.00	83.31	92.90
15	84.00	93.50	83.96	93.45
16	84.00	92.00	84.00	92.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	13225.	1.6330	1.7730	1773.	1.310	34077.
2	13210.	1.7060	1.7730	1781.	1.310	34077.
3	13200.	1.6860	1.7640	1763.	1.310	34077.
4	13100.	1.6760	1.7690	1781.	1.310	34259.
6	13100.	1.6490	1.7460	1741.	1.310	34202.
7	13100.	1.7170	1.7500	1752.	1.310	34179.
9	13000.	1.6230	1.7220	1745.	1.310	33965.
10	12850.	1.6450	1.7280	1763.	1.310	34304.
11	12850.	1.6510	1.7070	1746.	1.306	33533.
12	12900.	1.6080	1.7480	1734.	1.300	33521.
13	13100.	1.6570	1.7670	1775.	1.310	34270.
16	12750.	1.6530	1.7100	1727.	1.300	-33250.
20	12700.	1.6540	1.6850	1736.	1.310	34111.
22	12700.	1.6440	1.6840	1728.	1.310	34168.
23	12900.	1.7080	1.7390	1759.	1.310	34407.
24	-12240.	1.6100	1.6460	1748.	1.310	34459.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CR X100	F/A COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	13403.	1.6250	1.7650	1765.	34453.
2	13378.	1.6980	1.7650	1772.	34453.
3	13378.	1.6780	1.7560	1754.	34453.
4	13117.	1.6910	1.7850	1796.	34453.
6	13139.	1.6640	1.7610	1756.	34453.
7	13148.	1.7320	1.7660	1767.	34453.
9	13040.	1.6600	1.7610	1784.	34453.
10	12787.	1.6760	1.7600	1795.	34453.
11	12981.	1.6770	1.7340	1714.	34139.
12	12843.	1.6370	1.7790	1764.	33667.
13	13055.	1.6870	1.7980	1806.	34453.
16	12760.	1.6920	1.7500	1767.	33667.
20	12716.	1.6840	1.7140	1766.	34453.
22	12682.	1.6760	1.7170	1762.	34453.
23	12923.	1.7070	1.7370	1757.	34453.
24	-12238.	1.6100	-1.6460	1748.	34453.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.448	-18.7	4.0	228.7	230.5
2	3.604	17.7	8.7	226.2	231.9
3	3.563	15.4	3.6	201.4	204.7
4	3.543	17.4	12.0	210.5	196.7
6	3.486	18.1	8.3	200.9	202.1
7	3.633	17.0	4.2	189.1	193.6
9	3.423	17.7	2.0	-146.7	170.7
10	3.476	18.7	3.6	192.7	196.5
11	3.488	17.2	6.6	197.5	199.3
12	3.398	-21.7	2.9	172.5	176.4
13	3.501	16.4	3.7	215.9	222.7
16	3.496	16.4	1.6	161.4	160.0
20	3.496	18.1	4.1	180.7	176.9
22	3.475	14.7	.9	165.6	173.4
23	3.614	6.5	2.1	193.6	192.9
24	3.400	11.2	5.5	214.2	216.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3153.	1.09	.40	21.86	22.03	14.29
2	3152.	.98	.83	20.68	21.20	15.71
3	3154.	.87	.35	18.64	18.94	8.91
4	3156.	.99	1.17	19.60	19.60	8.85
6	3157.	1.04	.82	19.02	19.13	13.02
7	3158.	.94	.39	17.18	17.60	15.61
9	3149.	1.04	.20	14.11	16.42	11.27
10	3156.	1.08	.36	18.29	18.64	15.47
11	3155.	.99	.65	18.68	18.85	11.04
12	3155.	-1.28	.29	16.75	17.13	10.16
13	3153.	.94	.37	20.33	20.97	5.39
16	3159.	.94	.16	15.25	15.25	9.34
20	3155.	1.04	.40	17.05	17.05	9.58
22	3157.	.85	.09	15.73	16.46	11.88
23	3157.	.36	.20	17.68	17.68	15.88
24	3153.	.66	.56	20.77	20.97	4.90

NOTE- MINUS SIGN DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	36.2440	55.9130	62.4070	34.3580	53.2650	66.4190
2	45.6540	60.1410	65.3680	43.1520	57.2830	69.5580
3	41.2010	55.9130	62.4070	38.9820	53.2650	66.4190
4	43.3510	63.8250	64.3420	47.3880	66.5980	76.6040
6	37.2660	56.8060	59.6740	40.5650	59.0690	70.9320
7	37.1810	45.3210	51.6800	40.5950	47.0250	61.3430
9	30.4310	48.4980	53.5960	37.6230	53.9730	66.9770
10	29.6740	42.9060	49.4410	35.6030	47.4490	61.6980
11	32.6550	48.0190	54.3920	37.7320	51.1840	64.7670
12	37.4660	66.4920	65.0100	44.5600	73.3760	81.5570
13	42.0960	66.6110	65.0430	-50.3940	73.3760	81.5570
16	35.6210	54.8320	56.6620	44.9110	61.6650	72.9100
20	32.2900	46.8760	53.6780	38.2970	51.0540	64.6630
22	34.5060	53.3340	56.3920	41.8230	59.0120	70.8890
23	-50.1820	67.9340	65.8080	-49.7420	67.3740	77.1780
24	30.7080	47.9320	53.0660	30.7770	47.9470	62.1140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO FI LB/KLR FU	NREC HC EI LB/KLR FU	NRE CNO FI LB/KLR FU	NR CNOX FI LB/KLR FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	-1.15	.42	23.27	23.45	11.77
2	-1.04	.87	22.01	22.56	10.67
3	.92	.37	19.84	20.16	7.31
4	.90	1.12	23.34	23.34	6.73
6	.96	.79	22.61	22.74	10.48
7	.86	.38	20.39	20.89	12.56
9	.84	.18	17.63	20.52	9.66
10	.90	.32	22.82	23.26	11.11
11	.86	.61	22.24	22.44	10.02
12	-1.08	.27	20.82	21.29	8.43
13	.79	.33	25.49	26.29	4.53
16	.75	.14	19.62	19.62	8.18
20	.98	.37	20.54	20.54	9.58
22	.70	.08	19.77	20.69	9.85
23	.36	.20	20.73	20.73	12.56
24	.66	.56	24.31	24.54	3.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-72.40	89.50	-72.23	89.23
2	75.50	89.50	75.32	89.38
3	75.50	90.00	75.32	89.74
4	74.00	89.50	74.42	89.89
6	74.50	89.50	74.83	84.89
7	74.50	89.00	74.83	89.34
9	76.00	89.00	76.26	90.00
10	75.00	-87.90	75.70	88.72
11	75.20	88.00	75.89	89.09
12	75.80	90.00	76.67	-90.70
13	74.50	89.00	75.15	89.78
16	76.00	89.20	76.99	90.35
17	76.00	88.50	76.89	89.54
20	73.50	88.00	74.15	88.77
22	-71.50	88.50	-72.20	89.37
23	74.50	89.50	74.46	89.46
24	76.00	89.70	76.00	89.70

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TTC DEG R	FPR	THRUST LBF
1	9600.	1.4200	1.5350	1615.	1.200	25519.
2	9200.	1.4310	1.5330	1608.	1.185	23916.
3	9300.	1.4010	1.5230	1599.	1.190	24450.
4	9100.	1.4050	1.4940	1592.	1.190	24580.
6	9350.	1.3940	1.5310	1586.	1.190	24540.
7	10000.	1.4770	1.5690	1615.	1.210	26375.
9	9500.	1.3790	1.5050	1599.	1.200	25434.
10	9400.	1.4060	1.5130	1617.	1.200	25688.
11	9500.	1.4120	1.5100	1601.	1.198	25130.
12	9600.	1.3800	1.5360	1597.	1.200	25688.
13	8900.	1.3750	1.4590	1584.	1.190	24589.
16	9620.	1.4310	1.4900	1592.	1.210	26258.
17	10000.	1.4760	1.5450	1579.	1.210	26279.
20	9100.	1.3980	1.4820	1579.	1.190	24475.
22	8900.	1.3660	-1.4360	-1547.	1.190	24515.
23	9200.	1.4380	1.4470	1606.	1.210	26551.
24	9500.	1.3460	1.5050	1622.	1.210	26591.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A • 600 HOUR TEST SERIES •

MODE 5

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PE F/A X100	COR TTA DEG F	COR THRUST LBF
1	9729.	1.4130	1.5270	1607.	25800.
2	9324.	1.4240	1.5260	1607.	25140.
3	9425.	1.3940	1.5150	1591.	24720.
4	9112.	1.4170	1.5070	1605.	24720.
5	9379.	1.4050	1.5440	1600.	24720.
7	10036.	1.4900	1.5830	1629.	26587.
9	9529.	1.4100	1.5400	1635.	25800.
10	9354.	1.4320	1.5410	1647.	25800.
11	9597.	1.4340	1.5330	1626.	25584.
12	9559.	1.4040	1.5630	1625.	25800.
13	8870.	1.4000	1.4840	1612.	24720.
16	9627.	1.4650	1.5260	1629.	26587.
17	9999.	1.5110	1.5820	1616.	26587.
20	9111.	1.4230	1.5080	1607.	24720.
22	9887.	1.3930	1.4640	1577.	24720.
23	9217.	1.4360	-1.4460	1604.	26587.
24	9498.	1.3450	1.5050	1622.	26587.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-34 * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.951	23.4	2.7	131.1	134.6
2	3.013	22.8	4.4	118.1	125.2
3	2.931	21.9	2.3	105.2	110.8
4	2.962	24.0	6.5	113.9	114.1
6	2.938	24.1	4.6	112.5	116.0
7	3.118	20.1	2.1	112.7	118.0
9	2.239	-26.7	1.8	85.3	99.7
10	2.963	24.0	2.1	111.1	114.7
11	2.976	20.8	3.5	112.6	115.6
12	2.908	24.8	1.7	100.4	104.0
13	2.696	25.3	2.6	104.0	109.7
16	3.019	25.0	1.4	103.2	100.8
17	3.114	-37.1	2.9	110.4	120.7
20	2.947	-26.6	2.0	98.6	100.4
22	2.879	23.0	.8	89.8	94.2
23	3.032	13.1	2.5	106.6	106.3
24	2.833	15.4	5.2	124.9	127.0

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3153.	1.60	.31	14.45	14.83	8.50
2	3152.	1.52	.51	12.91	13.69	8.94
3	3153.	1.49	.26	11.75	12.37	3.54
4	3156.	1.63	.76	12.69	12.71	4.76
6	3156.	1.65	.55	12.64	13.03	7.19
7	3158.	1.29	.23	11.93	12.50	-13.16
9	3148.	-1.84	.22	9.68	11.31	7.61
10	3155.	1.63	.25	12.37	12.77	9.54
11	3155.	1.41	.41	12.48	12.81	5.24
12	3155.	1.71	.20	11.38	11.80	3.97
13	3152.	1.76	.31	11.83	12.48	4.41
16	3157.	1.67	.17	11.28	11.28	8.01
17	3156.	-2.39	.32	11.70	12.78	11.97
20	3155.	-1.81	.23	11.04	11.24	5.77
22	3155.	1.60	.09	10.29	10.79	6.01
23	3156.	.87	.28	11.60	11.60	9.21
24	3152.	1.09	.63	14.52	14.77	3.92

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	14.7280	29.3130	41.4590	14.0810	27.9650	44.1910
2	15.2290	29.8970	41.9710	14.5550	28.5210	44.7360
3	15.2060	32.3710	44.1090	14.5400	30.8760	47.0060
4	14.4030	30.3370	40.1530	15.3930	31.5580	47.6500
6	14.1260	30.4270	40.1960	15.0700	31.5580	47.6500
7	15.4430	27.5630	37.7870	16.5370	28.5420	44.7560
9	13.0680	29.1710	38.9010	15.4290	32.2910	48.3370
10	11.7150	22.7030	33.2040	13.5100	24.9710	41.1970
11	12.7740	25.4630	36.4090	14.2700	26.9040	43.1410
12	14.8190	34.4750	43.2100	16.9950	-37.8380	-53.4010
13	12.8470	28.2200	37.7640	14.6810	30.8660	46.9970
16	14.9650	31.0030	39.5230	17.9790	34.6480	50.5170
17	14.5880	26.3260	35.7280	17.6080	29.4140	45.6050
20	11.7590	23.3250	34.6500	13.3920	25.2600	41.4900
22	11.8780	25.8490	35.7530	13.7240	28.4130	44.6300
23	15.1540	29.1570	38.4680	15.0450	28.9280	45.1330
24	13.1460	30.3400	39.7320	13.1660	30.3500	46.5060

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

J190-3A * 600 HOUR TEST SERIES *

MODE 5

UNIT	NRFC CO FT LB/KLB FU	NRFC HC FT LB/KLB FU	NRFC CNK FT LB/KLB FU	NRFC CNK FT LB/KLB FU	SMK NUMBER CORRECTED
1	1.67	.33	15.10	15.80	6.87
2	1.59	.53	13.76	14.59	8.94
3	1.55	.28	13.53	14.25	2.67
4	1.52	.73	15.06	15.08	3.46
6	1.54	.53	14.08	15.45	7.19
7	1.21	.22	14.13	14.80	11.05
9	1.56	.20	12.03	14.06	6.08
10	1.41	.23	15.34	15.85	8.44
11	1.26	.39	14.78	15.19	5.24
12	1.49	.18	14.07	14.58	3.97
13	1.54	.28	14.73	15.53	3.32
16	1.39	.15	14.42	14.42	6.80
17	-1.98	.29	14.94	16.32	10.31
20	1.59	.21	13.22	13.45	5.77
22	1.39	.08	12.84	13.47	5.97
23	.87	.28	13.61	13.61	9.21
24	1.09	.63	17.00	17.29	3.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	56.00	82.70	55.87	82.50
2	56.90	85.00	56.76	84.80
3	57.00	84.00	56.86	83.80
4	57.50	85.00	57.75	85.37
6	55.50	84.50	55.74	84.27
7	56.50	83.50	56.75	83.86
9	57.00	83.00	57.64	83.94
10	54.50	81.70	55.01	82.46
11	58.30	82.60	58.75	83.24
12	57.00	83.00	57.50	83.73
13	57.00	84.00	57.50	84.74
16	56.70	83.50	57.37	84.48
17	56.00	82.00	56.66	82.97
20	57.50	84.30	58.01	85.04
22	55.10	84.00	55.64	84.82
23	56.00	85.00	55.97	84.96
24	58.00	84.00	58.00	84.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	5100.	1.1360	1.2120	1374.	1.080	12106.
2	5350.	1.1900	1.2490	1421.	1.085	12789.
3	5200.	1.1300	1.2000	1388.	1.085	12789.
4	5400.	1.1560	1.3020	1397.	1.080	12171.
6	5100.	1.1380	1.2150	1372.	1.080	12151.
7	5400.	1.1580	1.2510	1390.	1.085	12827.
9	5100.	1.0850	1.2080	1376.	1.080	12067.
10	4900.	1.1120	1.1800	1394.	1.080	12187.
11	5250.	1.0900	1.1650	1356.	-1.085	-13107.
12	5380.	1.1560	1.2960	1392.	1.080	12187.
13	5300.	1.1610	1.2780	1397.	1.080	12175.
16	5200.	1.1420	1.1850	1359.	1.085	12770.
17	5300.	1.1580	1.2310	1350.	1.082	12371.
20	5500.	1.1900	1.3160	1388.	1.080	12118.
22	5400.	1.1450	1.2320	1367.	1.086	-12960.
23	5200.	1.1840	1.2630	1406.	1.080	12224.
24	5330.	1.0410	1.2090	1403.	-1.090	-13622.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	5169.	1.1300	1.2060	1367.	12240.
2	5422.	1.1840	1.2430	1414.	12930.
3	5270.	1.1250	1.1940	1381.	12930.
4	5407.	1.1660	1.3130	1402.	12240.
6	5115.	1.1480	1.2260	1384.	12240.
7	5420.	1.1690	1.2620	1402.	12930.
9	5116.	1.1100	1.2360	1407.	12240.
10	4876.	1.1330	1.2020	1421.	12240.
11	5303.	1.1070	1.1830	1377.	-13344.
12	5356.	1.1770	1.3190	1416.	12240.
13	5282.	1.1810	1.3000	1422.	12240.
16	5204.	1.1690	1.2130	1391.	12930.
17	5300.	1.1850	1.2600	1382.	12516.
20	5507.	1.2110	1.3390	1413.	12240.
22	5342.	1.1670	1.2560	1393.	13068.
23	5209.	1.1820	1.2610	1405.	12240.
24	5329.	1.0410	1.2090	1403.	-13620.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.379	84.1	3.8	47.0	55.9
2	2.494	76.9	4.0	50.7	-60.8
3	2.365	98.0	4.5	41.0	50.7
4	2.425	79.7	5.9	49.1	54.9
6	2.384	100.6	5.7	43.0	50.9
7	2.430	82.5	2.9	41.2	50.0
9	2.264	114.9	5.3	36.8	45.0
10	2.327	112.8	5.9	38.9	49.3
11	2.284	75.9	3.9	45.0	54.4
12	2.426	64.4	2.4	45.6	53.0
13	2.431	87.1	4.5	46.2	59.5
16	2.389	-134.5	6.1	41.9	47.7
17	2.424	113.7	6.9	41.1	52.1
20	2.495	86.4	4.2	47.6	56.1
22	2.399	89.8	2.7	40.8	50.2
23	2.482	80.4	6.2	48.8	50.7
24	2.179	53.0	6.5	49.9	54.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO FI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3143.	7.07	.54	6.50	7.72	4.08
2	3145.	6.17	.56	6.68	8.01	3.50
3	3141.	8.28	.65	5.69	7.04	1.32
4	3148.	6.58	.84	6.66	7.44	2.67
6	3145.	8.45	.82	5.93	7.02	4.79
7	3149.	6.80	.42	5.58	6.77	-6.17
9	-3133.	10.12	.81	5.32	6.51	1.56
10	3141.	9.69	.87	5.49	6.96	2.89
11	3146.	6.66	.59	6.49	7.84	2.09
12	3149.	5.32	.73	6.18	7.19	4.17
13	3143.	7.17	.64	6.24	8.04	1.31
16	3140.	-11.25	.88	5.76	6.55	2.24
17	3143.	9.38	.97	5.57	7.06	2.52
20	3146.	6.93	.58	6.27	7.39	3.64
22	3145.	7.49	.38	5.60	6.87	4.83
23	3146.	6.49	.85	6.46	6.72	3.82
24	3145.	4.87	1.03	-7.53	8.17	1.96

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODF 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	3.9010	7.5520	18.1430	3.7650	7.2250	19.3980
2	5.5970	11.9470	23.8470	5.3910	11.4200	25.4710
3	4.5430	9.8120	21.1780	4.3870	9.3830	22.6300
4	5.3700	12.3590	23.1120	5.6510	12.8120	27.3260
6	4.9230	11.2170	21.7690	5.1670	11.5890	25.7000
7	4.4790	9.2190	19.3420	4.6990	9.5060	22.8070
9	3.8760	8.8130	18.7440	4.3700	9.6400	22.9980
10	3.3870	6.5760	15.7200	3.7580	7.1610	19.2990
11	3.7080	8.0160	18.0390	4.0040	8.4040	21.1970
12	4.2140	8.5260	18.3750	4.6740	9.2560	22.4480
13	4.8000	10.4000	20.4920	5.3310	11.2880	25.2920
16	4.4370	9.7120	19.4310	5.0710	10.7240	24.5190
17	3.7680	7.2050	16.2920	4.3000	7.9430	20.5050
20	5.2120	11.1410	22.0540	5.7840	11.9960	26.2470
22	4.7120	10.5250	20.6390	5.2790	11.4790	25.5510
23	5.5250	11.8900	22.1390	5.4920	11.8010	25.9850
24	4.0180	9.7590	19.7970	4.0220	9.7620	23.1730

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	7.33	.57	7.46	8.86	4.08
2	6.41	.58	7.67	9.19	1.99
3	8.58	.68	6.53	8.08	1.32
4	6.26	.81	8.45	9.45	2.00
6	8.05	.79	7.52	8.91	4.28
7	6.49	.40	7.07	8.57	-6.17
9	8.97	.74	7.01	8.58	.92
10	8.73	.79	7.24	9.17	2.27
11	6.16	.56	8.19	9.89	2.09
12	4.80	.31	8.11	9.43	2.68
13	6.45	.59	8.28	-10.66	1.31
16	9.84	.80	7.81	8.88	2.14
17	8.22	.88	7.54	9.54	2.27
20	6.25	.54	8.02	9.45	2.00
22	6.69	.35	7.44	9.14	4.02
23	6.53	.86	7.59	7.89	3.82
24	4.87	1.03	8.81	9.57	1.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	31.00	69.00	30.93	68.83
2	29.50	68.70	29.43	68.54
3	33.50	69.30	33.42	69.13
4	30.50	69.00	30.63	69.30
6	29.50	68.50	29.63	68.80
7	33.00	69.00	33.14	69.30
9	33.50	69.00	33.88	69.78
10	-34.50	69.20	-34.82	69.84
11	33.00	68.50	33.26	69.03
12	-35.00	69.00	-35.31	69.61
13	32.50	69.50	32.79	70.11
16	33.70	69.70	34.10	70.52
17	32.70	69.00	33.08	69.81
20	33.00	69.20	33.29	69.81
22	29.50	68.00	29.79	68.67
23	28.50	69.00	28.49	68.97
24	30.50	68.00	30.50	68.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
1	2150.	.8990	.7350	1185.	1.025	4641.
2	2000.	.9380	.6980	1223.	1.022	4537.
3	2200.	.8500	.7420	1165.	1.025	4744.
4	2000.	.9180	.6780	1156.	1.020	4828.
6	2000.	.9220	.6910	1181.	1.025	4646.
7	2200.	.8710	.7500	1172.	1.025	4817.
9	2200.	.8380	.7400	1156.	1.025	4951.
10	2300.	.8740	.7990	1215.	1.020	5023.
11	2130.	.8010	.7110	-1127.	1.025	4678.
12	-2490.	.8940	-.8680	1212.	-1.030	4941.
13	2150.	.9030	.7350	1192.	1.020	5113.
16	2250.	.9050	.7470	1151.	1.025	5222.
17	2250.	.8960	.7550	1143.	1.025	4976.
20	2250.	.8800	.7490	1129.	1.025	4983.
22	2100.	.9080	.7480	1188.	1.025	4594.
23	2000.	.9320	.7020	1228.	1.020	4732.
24	1940.	-.7530	.6970	1190.	1.020	4401.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LRF
1	2179.	.8950	.7310	1179.	4692.
2	2027.	.9340	.6940	1217.	4587.
3	2230.	.8460	.7380	1159.	4797.
4	2003.	.9260	.6840	1166.	4855.
6	2006.	.9300	.6970	1191.	4680.
7	2208.	.8790	.7570	1182.	4855.
9	2207.	.8570	.7570	1182.	5022.
10	2289.	.8900	-.8140	1238.	5045.
11	2152.	.8140	.7220	1145.	4762.
12	-2479.	.9100	-.8830	1233.	4962.
13	2143.	.9190	.7480	1213.	5140.
16	2252.	.9260	.7650	1178.	5297.
17	2250.	.9170	.7730	1170.	5034.
20	2253.	.8960	.7620	1149.	5033.
22	2097.	.9260	.7630	1212.	4633.
23	2004.	.9310	.7020	1227.	4738.
24	1940.	-.7530	.6970	1190.	4400.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.799	612.7	81.7	14.1	22.9
2	1.872	682.1	90.7	11.1	22.8
3	1.690	636.1	90.3	9.7	21.4
4	1.835	639.5	94.7	13.6	21.5
6	1.822	699.5	142.4	12.5	20.1
7	1.742	626.4	81.4	9.9	20.8
9	1.665	627.4	82.7	10.5	20.6
10	1.748	580.8	88.1	9.7	22.2
11	1.592	610.0	86.7	7.0	20.8
12	1.827	-383.0	34.8	11.0	-24.2
13	1.812	558.1	82.2	8.7	22.3
16	1.791	649.5	140.3	10.9	22.8
17	1.803	556.9	71.1	11.1	-23.8
20	1.744	618.0	132.6	10.4	22.9
22	1.814	632.4	95.0	8.6	20.9
23	1.834	752.5	154.2	-18.6	17.9
24	-1.518	-402.9	59.4	14.3	17.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	3012.	65.30	14.96	2.47	4.01	1.96
2	3003.	69.65	15.91	1.86	3.82	1.69
3	2995.	71.75	17.50	1.79	3.97	1.99
4	3009.	66.73	16.97	2.34	3.69	1.48
6	2976.	72.71	25.44	2.13	3.42	2.20
7	3010.	68.89	15.38	1.79	3.75	2.49
9	2994.	71.79	16.26	1.97	3.88	1.82
10	3013.	63.71	16.60	1.74	4.01	1.05
11	2994.	73.04	17.83	1.38	4.09	1.04
12	-3076.	-41.05	6.42	1.94	4.26	2.23
13	3022.	59.22	14.99	1.52	3.89	.92
16	2982.	68.81	25.54	1.90	3.96	2.25
17	3031.	59.58	13.07	1.95	4.19	1.45
20	2984.	67.31	24.80	1.86	4.09	1.05
22	3006.	66.70	17.22	1.49	3.62	1.84
23	2962.	77.34	27.23	-3.14	3.14	2.36
24	3040.	51.35	13.01	-3.00	3.66	1.69

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.5900	.4570	3.9380	.5740	.4390	4.2320
2	.5960	.4360	3.8470	.5800	.4190	4.1340
3	.5790	.4780	4.0310	.5640	.4600	4.3320
4	.5960	.4610	3.7620	.6160	.4730	4.3980
6	.5730	.4270	3.6140	.5910	.4370	4.2200
7	.5730	.4630	3.7670	.5900	.4730	4.3980
9	.5600	.4810	3.8430	.6060	.5140	4.5990
10	.5950	.4860	3.8380	.6290	.5200	4.6270
11	.5190	.4390	3.7210	.5440	.4530	4.2990
12	.5840	.4680	3.7770	.6250	.4990	4.5260
13	.6190	.5120	3.9230	.6630	.5450	4.7440
16	.6350	-.5420	4.0070	-.6940	-.5840	-4.9270
17	.5880	.4800	3.7550	.6430	.5180	4.6140
20	.5910	.4900	3.9590	.6300	.5170	4.6120
22	.5410	.4010	3.4570	.5820	.4280	4.1760
23	.6030	.4510	3.6390	.6000	.4430	4.2760
24	-.4740	.3850	3.3850	-.4740	.3850	3.9630

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLR FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLR FU	NR CNOX EI LB/KLR FU	SMK NUMBR CORRECTED
1	67.11	15.56	2.85	4.63	1.72
2	71.61	16.55	2.14	4.40	.66
3	73.71	18.20	2.07	4.58	1.06
4	64.60	16.55	2.94	4.63	1.48
6	70.49	24.88	2.67	4.29	1.32
7	66.88	15.06	2.25	4.71	2.00
9	66.35	15.22	2.53	4.99	.66
10	59.26	15.51	2.26	5.19	1.05
11	69.68	17.28	1.71	5.07	.79
12	-38.31	6.02	2.50	-5.48	1.32
13	55.27	14.07	1.97	5.06	.92
16	62.96	23.70	2.51	5.23	1.47
17	54.56	12.13	2.57	-5.53	1.45
20	63.11	23.50	2.32	5.12	.53
22	61.96	16.16	1.93	4.70	1.84
23	77.69	27.40	-3.69	3.69	1.33
24	51.32	13.00	-3.51	4.29	1.20

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TFST SERIES *

MODE B

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	25.70	64.50	25.64	64.35
2	26.00	65.50	25.94	65.34
3	28.00	64.30	27.93	64.15
4	26.50	65.50	26.62	65.79
6	25.50	64.50	25.61	64.78
7	28.50	64.50	28.62	64.78
9	-30.50	66.00	-30.84	-66.74
10	28.00	-63.20	28.26	63.79
11	29.30	65.40	29.53	65.91
12	26.50	65.00	26.73	65.57
13	28.50	65.50	28.75	66.08
16	28.50	64.90	28.84	65.66
17	28.70	65.50	29.04	66.27
20	27.50	64.50	27.74	65.07
22	25.10	-63.50	25.35	64.12
23	27.00	66.00	26.99	65.97
24	27.00	65.00	27.00	65.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF

1	1800.	.9420	.8680	1201.	1.015	3169.
2	1800.	.9580	.7990	1223.	1.020	3473.
3	1840.	.8480	.8810	1142.	1.020	3109.
4	1700.	.9190	-.7330	1143.	1.015	3635.
6	1750.	.9270	.8360	1170.	1.020	3310.
7	1900.	.8690	.9030	1160.	1.020	3308.
9	2000.	.8380	.8180	1143.	1.020	-3911.
10	1800.	.8760	-.9850	1190.	1.020	3023.
11	1870.	.8040	.7950	1116.	1.020	3630.
12	1720.	.8940	.7940	1187.	1.016	3570.
13	1800.	.9040	.7880	1176.	1.015	3730.
16	1850.	.8960	.8320	1125.	1.020	3571.
17	1950.	.9060	.8310	1129.	1.020	3769.
20	1900.	.8700	.8810	1109.	1.015	3388.
22	1800.	.9310	-.9460	1174.	1.016	3110.
23	1900.	.9460	.8170	1230.	1.020	3710.
24	1740.	-.7410	.8070	1187.	1.016	3401.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 600 HOUR TFST SERIES *

MODF 8

UNIT	CORR FUI FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	1824.	.9370	.8640	1195.	3204.
2	1824.	.9530	.7950	1217.	3511.
3	1865.	.8440	.8770	1136.	3144.
4	1702.	.9280	.7400	1153.	3655.
6	1755.	.9360	.8430	1181.	3334.
7	1907.	.8770	.9110	1170.	3334.
9	2006.	.8570	.8370	1169.	-3967.
10	1791.	.8920	-1.0030	1212.	3036.
11	1889.	.8170	.8070	1134.	3696.
12	1712.	.9100	.8080	1207.	3586.
13	1794.	.9200	.8020	1196.	3750.
16	1851.	.9170	.8520	1152.	3616.
17	1950.	.9270	.8510	1156.	3813.
20	1902.	.8850	.8970	1129.	3422.
22	1797.	.9490	-.9640	1197.	3136.
23	1903.	.9450	.8160	1229.	3715.
24	1740.	-.7410	.8070	1187.	3400.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM

1	1.836	821.3	185.8	13.0	20.4
2	1.872	838.1	173.3	10.6	20.1
3	1.633	817.6	202.3	8.9	18.1
4	1.789	825.8	191.9	12.4	18.6
6	1.788	887.9	232.3	11.5	17.6
7	1.691	802.5	172.2	9.5	17.9
9	1.631	727.1	162.3	9.4	19.4
10	1.691	792.9	218.4	8.0	17.8
11	1.556	748.4	179.7	6.1	17.9
12	1.760	722.7	144.3	8.7	18.2
13	1.775	702.0	168.3	7.4	18.6
16	1.724	850.3	235.9	8.1	19.2
17	1.780	705.8	165.7	9.2	-21.6
20	1.675	805.6	222.8	9.2	19.0
22	1.799	858.5	223.1	7.3	18.6
23	1.849	819.5	175.2	-16.5	16.2
24	-1.482	-468.3	-78.1	13.0	15.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE B

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2935.	83.58	32.48	2.18	3.41	2.22
2	2942.	83.83	29.79	1.74	3.31	1.04
3	2903.	92.49	39.31	1.66	3.36	2.24
4	2931.	86.09	34.37	2.12	3.18	2.55
6	2903.	91.78	41.26	1.95	2.99	1.95
7	2932.	88.55	32.65	1.72	3.24	1.97
9	2933.	83.24	31.92	1.78	3.64	1.58
10	2909.	86.81	41.09	1.44	3.20	1.97
11	2917.	89.27	36.83	1.19	3.51	.52
12	2964.	77.45	26.57	1.54	3.21	1.56
13	2955.	74.39	30.63	1.29	3.24	2.34
16	2898.	91.00	43.37	1.42	3.38	.53
17	2960.	74.70	30.14	1.60	3.75	1.06
20	2903.	88.85	42.22	1.66	3.43	2.08
22	2911.	88.40	39.47	1.23	3.14	2.10
23	2943.	83.05	30.68	-2.75	2.75	2.61
24	-3013.	-60.61	17.37	-2.76	3.34	1.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.4370	.2500	2.8800	.4260	.2410	3.0980
2	.4720	.2790	-3.0570	.4600	.2680	3.2870
3	.3990	.2450	2.8460	.3880	.2350	3.0610
4	.4480	.2740	2.8900	.4620	.2810	3.3740
6	.4240	.2470	2.7280	.4370	.2520	3.1800
7	.4040	.2470	2.7290	.4150	.2520	3.1800
9	.4290	.2950	3.0030	.4630	-.3140	-3.5810
10	.3720	-.2160	-2.5120	.3980	.2300	3.0120
11	.4050	.2770	2.9500	.4240	.2850	3.3990
12	.4200	.2590	2.7900	.4490	.2750	3.3320
13	.4380	.2730	2.8490	.4670	.2900	3.4320
16	.4180	.2590	2.7410	.4540	.2780	3.3500
17	.4370	.2760	2.8380	.4760	.2960	3.4720
20	.4010	.2470	2.7870	.4260	.2600	3.2340
22	.3950	.2210	2.5400	.4240	.2350	3.0570
23	.4760	.2880	2.9020	.4740	.2870	3.4110
24	.3770	.2580	2.7520	.3780	.2580	3.2210

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 600 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX FI LB/KLB FU	SMK NUMBER CORRECTED
1	85.86	33.76	2.52	3.94	.93
2	86.15	30.96	2.01	3.82	.66
3	94.92	40.86	1.92	3.89	.93
4	83.46	33.55	2.66	3.99	1.73
6	89.11	40.41	2.44	3.74	1.72
7	86.12	32.02	2.15	4.05	1.74
9	77.17	29.97	2.27	-4.66	1.32
10	81.14	38.57	1.86	4.13	.67
11	85.33	35.78	1.48	4.34	.52
12	72.53	25.00	1.97	4.11	1.33
13	69.66	28.87	1.67	4.20	1.59
16	83.76	40.48	1.87	4.43	.53
17	68.65	28.07	2.10	-4.92	.53
20	83.66	40.15	2.07	4.28	1.32
22	82.35	37.17	1.59	4.06	1.99
23	83.42	30.87	-3.23	3.23	2.61
24	-60.58	-17.36	-3.23	3.91	1.45

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR

1	12905.	1129.	508.7	30.20	.006290
2	12273.	1129.	514.7	30.20	.006940
6	15529.	1289.	510.7	30.16	.006450
7	13683.	1289.	510.7	30.16	.006450
9	14852.	1167.	502.2	29.86	.005190
11	15245.	1187.	511.2	29.99	.005770
12	14824.	1299.	519.7	30.10	.008000
13	13321.	1196.	513.2	30.22	.007390
16	13756.	1219.	518.7	30.32	.004600
20	9486.	1263.	514.7	30.01	.006640
22	13261.	1228.	513.2	29.90	.005940
23	15623.	1253.	525.7	30.06	.008990
24	14066.	1263.	524.7	30.06	.009220
25	14779.	1260.	523.2	30.06	.010180

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	28.50	65.00	28.78	65.64
2	29.00	65.30	29.11	65.55
6	28.40	65.00	28.62	65.51
7	29.50	65.50	29.73	66.01
9	-31.50	66.00	-32.01	-67.08
11	30.50	65.00	30.72	65.48
12	26.40	65.50	26.37	65.44
13	28.50	64.50	28.65	64.84
16	29.00	65.00	29.00	65.00
20	28.50	64.00	28.61	64.25
22	28.00	64.50	28.15	64.84
23	28.00	65.20	27.81	64.76
24	-26.00	-62.50	-25.85	-62.14
25	30.00	66.00	29.87	65.72

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DFG R	EPR	THRUST LBF

1	2000.	.9550	.9070	1154.	1.020	3573.
2	2000.	.9350	.8790	1149.	1.022	3547.
6	2000.	.9220	.9040	1143.	1.022	3536.
7	2030.	.9400	.8880	1178.	-1.025	3699.
9	-2150.	.9050	.8940	1142.	1.020	-4085.
11	2000.	.8420	.8990	1120.	1.020	3546.
12	1850.	-1.0050	.8320	-1242.	1.015	3521.
13	1850.	.9000	.8770	1158.	1.020	3320.
16	2000.	.9080	.9020	1151.	1.020	3355.
20	1900.	.8970	.9410	1136.	1.015	3165.
22	1900.	.8750	.9150	1169.	1.020	3356.
23	1900.	.9280	.8720	-1217.	1.020	3314.
24	1750.	.8520	-1.0150	1154.	1.015	-2531.
25	1800.	.8640	-.7530	1176.	1.020	3616.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LAM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG P	COR THRUST LBF
1	1999.	.9730	.9250	1177.	3607.
2	2011.	.9420	.8860	1158.	3580.
6	2000.	.9370	.9180	1161.	3565.
7	2030.	.9550	.9020	1196.	3729.
9	-2111.	.9350	.9230	1179.	-4076.
11	1990.	.8540	.9130	1136.	3554.
12	1863.	1.0030	.8310	-1240.	3542.
13	1859.	.9090	.8860	1170.	3353.
16	2027.	.9080	.9020	1151.	3400.
20	1898.	.9040	.9480	1145.	3174.
22	1889.	.8850	.9240	1181.	3353.
23	1922.	.9160	.8600	1201.	3329.
24	1768.	.8420	-1.0030	1141.	-2542.
25	1816.	.8560	-.7470	1166.	3633.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.864	767.0	197.6	8.3	19.2
2	1.806	863.8	217.0	-5.5	19.0
6	1.771	860.1	240.9	-5.3	15.8
7	1.841	779.3	162.5	8.8	17.1
9	1.764	755.0	195.0	9.2	17.8
11	1.645	675.4	167.8	8.7	16.2
12	-2.019	640.9	-69.5	12.1	17.8
13	1.736	765.8	236.5	10.0	15.0
16	1.743	876.6	240.8	11.9	15.6
20	1.720	831.0	255.7	7.6	15.0
22	1.679	862.8	234.2	12.5	15.1
23	1.795	790.6	226.9	6.7	15.6
24	1.680	559.6	151.5	13.3	16.9
25	1.741	-441.2	-77.9	14.7	18.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 FI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2939.	76.98	34.07	1.37	3.16	2.10
2	2910.	88.55	38.22	-0.92	3.20	.26
6	2893.	89.40	43.02	-0.90	2.71	3.12
7	2948.	79.43	28.45	1.48	2.86	1.32
9	2937.	80.00	35.49	1.60	3.09	-4.31
11	2944.	76.92	33.22	1.62	3.03	2.36
12	-3022.	61.04	-11.37	1.89	2.78	2.60
13	2907.	81.61	43.30	1.76	2.63	1.18
16	2891.	92.54	43.67	2.06	2.71	1.30
20	2888.	88.90	46.34	1.34	2.63	2.74
22	2891.	94.53	44.08	2.25	2.71	1.31
23	2913.	81.66	40.26	1.14	2.64	-4.52
24	2972.	63.00	29.29	2.45	3.13	.26
25	-3034.	-48.94	-14.85	2.69	3.40	.65

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.4430	.2610	2.7780	.4770	.2770	3.3450
2	.4500	.2710	2.8490	.4610	.2740	3.3280
6	.4330	.2610	2.7860	.4580	.2730	3.3190
7	.4530	.2750	2.8690	.4800	.2880	3.4190
9	.4480	.2910	2.9570	-.5100	-.3320	-3.6790
11	.4030	.2580	2.9190	.4260	.2720	3.3130
12	-.4890	.2760	2.8680	.4840	.2710	3.3060
13	.4140	.2480	2.6820	.4290	.2540	3.1920
16	.4370	.2650	2.9720	.4330	.2580	3.2210
20	.4000	.2320	2.6450	.4110	.2380	3.0800
22	.4030	.2430	2.7420	.4200	.2540	3.1920
23	.4540	.2680	2.8190	.4290	.2520	3.1760
24	.3770	.2230	-2.4740	-.3600	-.2120	-2.8230
25	.4490	.2910	2.8660	.4330	.2790	3.3600

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	FI	SMK CORRECTED	NUMBER
1		71.60		32.10			1.77			4.09			1.33	
2		86.40		37.70			-1.16			4.02			.26	
6		84.51		41.07			-1.16			3.46			2.40	
7		75.01		27.15			1.90			3.66			1.32	
9		70.18		31.12			2.14			4.13			2.66	
11		72.47		31.51			2.05			3.82			1.33	
12		61.78		-11.58			2.34			3.44			2.60	
13		74.83		42.29			2.25			3.37			1.18	
16		93.43		44.72			2.40			3.15			1.30	
20		86.33		45.80			1.67			3.28			2.74	
22		90.65		42.24			2.81			3.39			.66	
23		86.39		42.80			1.28			2.97			-4.52	
24		65.95		30.86			2.80			3.57			.26	
25		-50.76		-15.50			3.15			3.98			.65	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	34.00	69.30	34.33	69.98
2	34.30	69.30	34.43	69.57
6	32.00	68.50	32.25	69.03
7	34.00	69.00	34.27	69.54
9	33.50	68.70	34.05	69.82
11	36.00	69.50	36.26	70.01
12	-30.00	69.00	-29.97	68.93
13	33.00	69.00	33.18	69.37
16	33.50	69.00	33.50	69.00
20	35.00	69.50	35.14	69.77
22	34.00	69.50	34.18	69.87
23	31.50	-68.20	31.29	-67.74
24	33.50	69.50	33.31	69.10
25	33.50	69.00	33.36	68.70

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
1	2400.	.9670	.8110	1165.	1.030	5045.
2	2400.	.9410	.8140	1174.	1.030	4903.
6	2270.	.9070	.7750	1152.	-1.038	4724.
7	2400.	.9360	.8240	1187.	1.030	4899.
9	2250.	.8950	.7730	1152.	1.025	5047.
11	2500.	.8650	.8400	1143.	1.025	5091.
12	2100.	.9670	.7350	-1232.	1.025	4698.
13	2200.	.9030	.7480	1170.	1.030	4831.
16	2500.	.9110	.8450	1161.	1.025	4687.
20	2450.	.9120	.8280	1160.	1.020	5004.
22	2400.	.8870	.8190	1172.	1.030	5058.
23	2100.	.9210	.7480	1215.	1.025	-4290.
24	2270.	.8510	.7750	1187.	1.025	4764.
25	2050.	.8660	-.7080	1194.	1.025	4624.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	2399.	.9860	.8270	1188.	5092.
2	2413.	.9480	.8200	1183.	4949.
6	2270.	.9210	.7870	1170.	4762.
7	2401.	.9510	.8370	1205.	4938.
9	2209.	.9250	.7980	1190.	5037.
11	2488.	.8780	.8520	1160.	5103.
12	2115.	.9650	.7340	-1229.	4727.
13	2210.	.9120	.7560	1183.	4879.
16	2533.	.9110	.8450	1161.	4750.
20	2448.	.9190	.8350	1169.	5019.
22	2386.	.8960	.8280	1185.	5055.
23	2124.	.9090	.7380	1199.	-4311.
24	2293.	.8410	.7660	1173.	4786.
25	2069.	.8590	-.7010	1183.	4646.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	1.934	578.2	118.6	11.7	23.6
2	1.884	632.2	81.3	7.2	23.5
6	1.780	687.2	164.9	-6.0	18.7
7	1.878	625.7	67.3	10.1	19.9
9	1.758	704.2	167.6	8.6	18.8
11	1.748	474.8	60.5	11.1	20.6
12	1.957	519.0	49.5	13.3	20.1
13	1.786	600.6	148.0	11.4	17.9
16	1.793	694.5	154.8	12.6	19.3
20	1.817	570.5	128.2	9.7	19.8
22	1.772	646.5	82.8	14.7	18.9
23	1.806	691.2	-178.1	7.4	17.6
24	1.730	-359.5	51.7	15.3	22.6
25	1.761	-356.1	55.6	17.6	21.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3008.	57.26	20.21	1.91	3.83	1.83
2	3013.	64.36	14.22	1.21	3.92	1.04
6	2955.	72.63	29.93	-1.05	3.25	2.86
7	3018.	64.01	11.82	1.69	3.35	2.47
9	2957.	75.39	30.83	1.52	3.31	1.84
11	3042.	52.58	11.51	2.02	3.74	2.10
12	3045.	51.39	8.42	2.17	3.27	.92
13	2979.	63.76	27.00	2.00	3.11	3.13
16	2964.	73.10	27.98	2.19	3.33	3.10
20	2998.	59.92	23.13	1.67	3.41	2.34
22	3009.	69.85	15.37	2.61	3.36	.79
23	2951.	71.88	31.83	1.26	3.01	-2.37
24	3060.	40.49	10.00	2.82	4.18	1.32
25	3060.	39.39	10.57	3.19	3.87	3.01

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.6450	.5000	3.8750	.6970	.5330	4.6860
2	.6290	.4890	3.8550	.6460	.4960	4.5100
6	.5640	.4310	3.5990	.5980	.4530	4.2990
7	.6080	.4700	3.7640	.6450	.4930	4.4970
9	.5660	.4520	3.6940	.6480	.5180	4.6170
11	.5970	.5060	3.9850	.6320	.5350	4.6990
12	.6250	.4540	3.7020	.6170	.4460	4.2650
13	.5900	.4670	3.7110	.6120	.4790	4.4260
16	.5960	.4610	3.9550	.5910	.4510	4.2870
20	.6220	.5000	3.9370	.6410	.5140	4.5960
22	.6070	.5000	3.9760	.6340	.5230	4.6390
23	.5610	-.3940	-3.4520	.5290	-.3700	-3.8830
24	.5880	.4840	3.8000	.5600	.4580	4.3210
25	.5710	.4500	3.5760	.5500	.4300	4.1890

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		53.00		18.96			2.48			4.98			1.83	
2		62.70		14.01			-1.52			4.93			1.04	
6		68.52		28.50			-1.34			4.16			1.87	
7		60.29		11.25			2.17			4.30			.93	
9		65.89		26.91			2.04			4.44			1.60	
11		49.62		10.88			2.56			4.74			1.33	
12		52.02		8.57			2.69			4.05			.92	
13		61.45		26.31			2.56			3.99			-2.68	
16		73.79		28.66			2.55			3.88			-3.10	
20		58.12		22.52			2.10			4.28			1.85	
22		66.80		14.69			3.27			4.21			.66	
23		76.16		-33.89			-1.42			-3.39			-3.37	
24		42.52		10.57			3.21			4.75			1.32	
25		40.90		11.04			3.74			4.54			.92	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	88.50	93.50	89.37	94.41
2	89.00	93.20	89.35	93.56
6	-87.50	93.00	-88.18	93.73
7	88.50	93.50	89.19	94.23
9	89.00	-92.50	90.45	94.01
11	89.00	93.00	89.65	93.68
12	89.00	95.00	88.91	94.91
13	89.00	94.50	89.48	95.01
16	89.00	94.00	89.00	94.00
20	88.50	93.60	88.84	93.96
22	88.00	-92.50	88.47	-92.99
23	91.00	94.90	90.39	94.27
24	90.00	94.00	89.48	93.46
25	91.00	93.70	90.61	93.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	15500.	1.8190	1.8550	1845.	1.400	40521.
2	15600.	1.9040	1.8800	1871.	1.400	40521.
6	15700.	1.8000	1.8680	1818.	1.400	40575.
7	15450.	1.8810	1.8410	1826.	1.400	40575.
9	15700.	1.8330	1.8880	1838.	-1.405	-41313.
11	15400.	1.8050	1.8580	1851.	1.400	40805.
12	15600.	-1.7340	1.8690	1836.	1.400	40655.
13	15200.	1.8580	1.8310	1874.	1.400	40494.
16	15800.	1.8140	1.8980	1872.	1.400	-40360.
20	15300.	1.8070	1.8480	1856.	1.400	40777.
22	15500.	1.8150	1.8650	1829.	1.400	40927.
23	16100.	1.8430	1.9550	1880.	1.400	40710.
24	15500.	1.8190	1.8820	1881.	1.400	40716.
25	15400.	1.8650	1.8730	1889.	1.400	40710.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	15494.	1.8550	1.8910	1882.	40900.
2	15685.	1.9190	1.8940	1885.	40900.
6	15703.	1.8280	1.8970	1847.	40900.
7	15453.	1.9110	1.8700	1854.	40900.
9	15417.	1.8930	1.9500	1898.	-41230.
11	15324.	1.8320	1.8860	1878.	40900.
12	15709.	-1.7300	1.8650	-1833.	40900.
13	15271.	1.8780	1.8510	1894.	40900.
16	16011.	1.8140	1.8980	1872.	40900.
20	15287.	1.8210	1.8620	1871.	40900.
22	15407.	1.8350	1.8850	1849.	40900.
23	16284.	1.8180	1.9290	1854.	40900.
24	15660.	1.7980	1.8610	1860.	40900.
25	15539.	1.8490	1.8570	1872.	40900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.846	8.9	7.6	227.5	257.1
2	4.031	9.4	2.4	247.2	279.6
6	3.803	15.1	5.8	254.8	259.1
7	3.979	16.7	2.5	243.7	249.3
9	3.884	10.7	5.0	261.1	270.0
11	3.817	10.8	11.8	280.9	278.8
12	-3.659	9.7	1.4	251.1	250.2
13	3.926	13.5	18.6	283.8	280.0
16	3.838	9.2	5.6	266.1	274.0
20	3.823	8.9	6.6	241.1	246.0
22	3.847	8.1	2.2	256.2	251.8
23	3.895	11.6	5.4	271.0	275.7
24	3.844	9.3	3.1	346.9	357.1
25	3.944	12.5	3.3	340.5	345.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODF 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3151.	.47	.68	19.49	22.02	21.69
2	3152.	.47	.20	20.21	22.86	16.93
6	3149.	.80	.52	22.06	22.43	17.30
7	3149.	.84	.22	20.17	20.63	21.03
9	3158.	.55	.44	22.19	22.95	16.00
11	3152.	.57	1.07	24.25	24.25	22.02
12	3148.	.53	.13	22.59	22.59	16.47
13	3148.	.69	1.63	23.79	23.79	10.00
16	3154.	.48	.51	22.86	23.54	13.59
20	3154.	.47	.59	20.80	21.27	16.67
22	3159.	.43	.20	21.99	21.99	20.00
23	3149.	.60	.48	22.90	23.30	18.59
24	3150.	.48	.28	29.71	-30.59	-4.64
25	3150.	.64	.29	28.43	28.81	5.26

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	70.5100	76.0570	70.8080	88.8240	84.2820	89.2700
2	83.7710	67.0330	65.9750	92.1370	69.0910	78.4420
6	60.6600	66.2940	65.1470	72.5220	71.8120	80.4260
7	83.7790	74.4880	70.2530	101.7920	80.7600	86.8110
9	62.1560	62.8380	62.7630	92.5730	76.7010	83.9400
11	61.1270	65.3090	65.7300	72.5970	71.0430	79.8670
12	69.8520	96.5370	83.8350	68.2330	94.3570	96.1550
13	93.1400	91.8840	79.8400	106.0770	96.4440	97.5560
16	73.6490	78.4230	77.3480	73.1360	76.5710	83.8470
20	67.6350	72.7940	70.2770	74.1470	75.9140	83.3780
22	56.8720	56.5590	60.3390	64.6220	-60.3680	-71.9250
23	91.5120	89.2660	80.0280	77.7260	81.4450	87.2920
24	72.6530	72.9750	69.6100	63.4640	67.4710	77.2490
25	79.0960	68.9640	65.5060	71.1710	64.8830	75.3290

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	.37	.62	26.55	30.01	14.45
2	.43	.20	25.97	29.37	12.88
6	.67	.48	29.43	29.93	12.43
7	.69	.20	26.93	27.55	14.50
9	.37	.36	32.08	33.17	14.66
11	.48	.98	31.84	31.84	17.50
12	.55	.13	28.00	28.00	14.28
13	.60	1.55	31.42	31.42	8.78
16	.48	.52	26.78	27.58	10.59
20	.43	.57	26.67	27.27	14.50
22	.37	.19	28.33	28.33	14.99
23	.70	.52	24.98	25.42	14.58
24	.55	.30	32.97	33.95	-4.64
25	.71	.30	32.69	33.13	5.26

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	84.00	91.50	84.82	92.39
2	84.00	92.00	84.33	92.36
6	82.60	92.30	83.24	93.02
7	84.00	91.50	84.66	92.21
9	83.00	91.00	84.35	92.48
11	84.00	91.00	84.61	91.67
12	83.50	93.00	83.42	92.91
13	83.50	92.50	83.95	92.99
16	84.50	92.50	84.50	92.50
20	83.50	93.60	83.82	93.96
22	83.50	91.00	83.95	91.49
23	84.50	92.50	83.94	91.88
24	84.50	92.80	84.02	92.27
25	85.00	91.90	84.63	91.50

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
1	12700.	1.6560	1.6880	1741.	1.310	34134.
2	12850.	1.7010	1.7210	1766.	1.310	34134.
6	12750.	1.6040	1.6870	1719.	1.310	34179.
7	12900.	1.6960	1.7170	1739.	1.310	34179.
9	12600.	1.6530	1.7030	1730.	1.305	34128.
11	12800.	1.6290	1.7190	1750.	1.310	34373.
12	12850.	1.5720	1.7130	1737.	1.310	34247.
13	12400.	1.6510	1.6830	1761.	1.300	-33332.
16	13300.	1.6600	1.7660	1775.	1.315	34387.
20	12800.	1.6440	1.7240	1763.	1.310	34350.
22	12800.	1.6120	1.7100	1723.	1.310	34476.
23	13000.	1.6920	1.7420	1750.	1.310	34293.
24	12800.	1.6690	1.7230	1766.	1.310	34299.
25	12500.	1.6350	1.6850	1773.	1.310	34293.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	12695.	1.6880	1.7220	1775.	34453.
2	12920.	1.7140	1.7350	1780.	34453.
6	12753.	1.6300	1.7130	1746.	34453.
7	12903.	1.7230	1.7440	1766.	34453.
9	12373.	1.7070	1.7580	1787.	34060.
11	12737.	1.6530	1.7440	1776.	34453.
12	12940.	1.5690	1.7090	1734.	34453.
13	12458.	1.6690	1.7010	1780.	33667.
16	13478.	1.6600	1.7660	1775.	34847.
20	12789.	1.6570	1.7370	1776.	34453.
22	12723.	1.6290	1.7290	1741.	34453.
23	13149.	1.6700	1.7190	-1727.	34453.
24	12932.	1.6500	1.7030	1746.	34453.
25	12613.	1.6210	1.6710	1758.	34453.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.495	10.3	3.2	164.4	179.9
2	3.593	9.9	1.3	173.4	193.5
6	3.383	16.1	4.0	168.8	171.0
7	3.580	17.5	2.5	163.5	167.9
9	3.496	11.6	3.6	170.4	173.3
11	3.437	11.3	12.9	-75.5	-75.1
12	3.313	10.0	1.2	174.5	174.8
13	3.478	18.5	-22.2	189.6	188.9
16	3.507	9.9	4.1	191.2	189.6
20	3.471	10.0	7.1	173.0	172.5
22	3.408	8.0	1.5	177.0	173.1
23	3.572	10.8	3.1	190.8	200.3
24	3.523	9.0	1.6	239.4	-250.0
25	3.449	12.1	2.7	236.6	239.7

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 FI LB/KLB FU	CO FI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX FI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3152.	.59	.32	15.49	16.95	15.10
2	3152.	.55	.13	15.90	17.75	13.77
6	3149.	.95	.41	16.43	16.64	11.84
7	3142.	.98	.24	15.04	15.44	17.49
9	3158.	.67	.36	16.10	16.37	11.37
11	3151.	.66	1.30	-7.23	-7.23	18.28
12	3148.	.60	.13	17.34	17.36	13.39
13	-3146.	1.07	-2.19	17.92	17.92	7.22
16	3154.	.57	.40	17.97	17.97	10.75
20	3153.	.58	.70	16.43	16.43	12.03
22	3159.	.47	.15	17.15	17.15	14.71
23	3150.	.61	.30	17.59	18.47	13.73
24	3150.	.51	.16	22.37	23.37	4.56
25	3149.	.70	.27	22.59	22.88	-2.76

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	32.4940	47.3170	52.2610	39.3510	52.2020	65.5780
2	38.5910	50.2280	54.8920	41.6450	51.7160	65.1910
6	32.9050	56.1440	58.5690	38.1600	60.7420	72.2100
7	35.4840	46.2440	51.8130	41.5470	49.9600	63.7840
9	30.1000	43.9380	49.9980	41.8800	53.3360	66.4750
11	28.0970	41.4390	49.1980	32.3880	44.9360	59.5790
12	33.2550	60.5030	61.8780	32.5730	59.1630	71.0050
13	37.6360	57.6530	59.0160	41.7150	60.3680	71.9250
16	37.7580	54.8550	61.4850	37.4700	53.5590	66.6520
20	44.2840	72.7940	70.2770	47.9500	-75.9140	-83.3780
22	26.9040	40.7260	48.9650	29.8680	43.3970	58.2650
23	39.9040	51.1850	55.9040	34.7570	46.8670	61.2100
24	39.4810	54.6410	57.8430	35.1130	50.5990	64.2990
25	32.0300	46.2090	50.6890	29.4140	43.5460	58.3930

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODF 4

UNIT	NREC CO LB/KLB FU	EI	NREC HC LB/KLB FU	EI	NRE CNO LB/KLB FU	EI	NR CNOX LB/KLB FU	EI	SMK NUMBER CORRECTED
1		.49		.29		19.44		21.27	12.27
2		.51		.12		20.41		22.78	11.10
6		.82		.38		20.26		20.51	9.95
7		.83		.22		18.51		19.00	14.66
9		.48		.29		21.41		21.76	10.74
11		.57		1.20		-9.41		-9.41	-16.54
12		.62		.13		21.50		21.53	13.36
13		.96		-2.09		21.84		21.84	6.87
16		.57		.41		19.48		19.48	9.27
20		.53		.67		19.49		19.49	11.77
22		.42		.14		22.06		22.06	12.79
23		.70		.33		19.26		20.22	12.21
24		.58		.17		24.87		25.97	4.56
25		.77		.28		26.02		26.36	-2.76

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
1	73.50	-87.20	74.22	-88.05
2	74.00	88.60	74.29	88.94
6	73.60	89.50	74.17	90.20
7	74.50	88.20	75.08	88.89
9	75.00	88.80	76.22	90.25
11	75.00	-87.50	75.55	-88.14
12	76.50	90.50	76.43	90.41
13	74.00	89.00	74.40	89.48
16	77.00	90.50	77.00	90.50
20	74.50	88.50	74.79	88.84
22	75.50	90.00	75.90	90.48
23	-77.50	89.70	76.98	89.10
24	77.00	90.00	76.56	89.48
25	76.50	89.20	76.17	88.82

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
1	8900.	1.4060	1.4430	1565.	1.190	24491.
2	9000.	1.4240	1.4730	1593.	1.190	24491.
6	9300.	1.3720	1.4700	1572.	1.200	25595.
7	9450.	1.4530	1.5040	1592.	1.200	25595.
9	9500.	1.4490	1.5150	1602.	1.205	26246.
11	9300.	1.3840	1.5320	1590.	1.190	24662.
12	10000.	1.4120	1.5600	1626.	1.215	26819.
13	8900.	1.4030	1.4550	1592.	1.190	24475.
16	-10500.	1.4720	-1.6240	1655.	1.220	27012.
20	9300.	1.4020	1.4940	1606.	1.200	25723.
22	10000.	1.4180	1.5390	1597.	1.220	27392.
23	9900.	1.4970	1.5300	1628.	1.220	27246.
24	9850.	1.4480	1.5270	1637.	1.220	27250.
25	9400.	1.4290	1.4840	1628.	1.210	26463.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODF 5

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
1	8896.	1.4330	1.4710	1595.	24720.
2	9049.	1.4350	1.4840	1606.	24720.
6	9302.	1.3940	1.4930	1596.	25800.
7	9452.	1.4750	1.5270	1616.	25800.
9	9329.	1.4970	1.5650	1655.	26193.
11	9254.	1.4040	1.5540	1613.	24720.
12	10070.	1.4100	1.5570	1623.	26980.
13	8941.	1.4180	1.4700	1609.	24720.
16	-10640.	1.4720	-1.6240	1655.	27373.
20	9292.	1.4130	1.5050	1618.	25800.
22	9940.	1.4330	1.5560	1614.	27373.
23	10013.	1.4770	1.5100	1606.	27373.
24	9952.	1.4310	1.5090	1618.	27373.
25	9485.	1.4160	1.4710	1614.	26587.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.959	21.5	1.5	87.1	97.5
2	2.998	20.8	.8	88.7	100.7
6	2.886	24.8	3.4	95.3	99.6
7	3.057	24.0	2.6	92.2	98.2
9	3.058	18.8	2.8	101.4	104.7
11	2.912	16.0	10.8	-40.6	-41.2
12	2.971	12.3	1.0	107.8	111.6
13	2.947	21.5	-19.4	100.0	100.8
16	3.103	15.0	2.8	120.7	120.1
20	2.952	17.5	5.8	97.4	98.6
22	2.993	11.8	1.0	110.6	109.2
23	3.152	13.6	2.0	117.3	126.7
24	3.048	11.4	1.4	-141.8	-153.5
25	3.006	16.2	2.5	-136.4	-141.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3151.	1.46	.17	9.69	10.85	7.60
2	3151.	1.39	.10	9.74	11.06	9.64
6	3148.	1.72	.40	10.86	11.36	7.55
7	3148.	1.57	.29	9.92	10.57	-15.67
9	3156.	1.23	.32	10.95	11.30	5.56
11	3151.	1.10	1.27	-4.59	-4.66	11.63
12	3147.	.83	.12	11.94	12.36	8.55
13	-3145.	1.46	-2.26	11.15	11.25	4.94
16	3154.	.97	.31	12.82	12.82	8.03
20	3152.	1.19	.68	10.87	11.01	8.38
22	3159.	.79	.12	12.20	12.20	9.03
23	3149.	.86	.21	12.26	13.23	10.00
24	3150.	.75	.16	-15.31	-16.58	3.52
25	3149.	1.08	.29	-14.94	-15.42	2.22

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	10.7100	-19.3400	-30.4830	12.3790	-21.8290	-37.9360
2	13.2430	25.4440	35.7700	14.0050	26.1340	42.3710
6	13.6810	31.1840	40.3730	15.3760	33.5940	49.5480
7	13.3040	24.0360	34.3560	15.0240	25.8460	42.0820
9	14.4030	28.1390	37.7690	-18.8800	33.9260	49.8550
11	10.6370	-20.5860	-31.8230	11.8790	22.2190	-38.3480
12	16.6060	35.8580	44.3460	16.3020	35.0800	50.9130
13	13.4750	27.8300	37.2620	14.5690	29.0350	45.2370
16	-18.7660	-36.5630	-47.4860	-18.6120	35.6990	51.4760
20	12.4950	24.6590	35.4210	13.2620	25.6150	41.8490
22	15.7580	33.4080	43.2020	17.2150	35.5630	51.3530
23	17.3720	29.3460	39.3100	15.4980	26.9640	43.2000
24	16.4550	31.3110	40.6070	14.9580	29.0820	45.2830
25	14.2750	26.9730	36.1220	13.3030	25.4740	41.7060

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		1.26			.16		12.06			13.50			7.60	
2		1.31			.09		-11.54			13.10			9.21	
6		1.53			.37		13.33			13.94			7.55	
7		1.39			.27		12.15			12.94			-12.05	
9		.94			.26		14.45			14.92			5.56	
11		.98			1.18		-5.94			-6.02			11.03	
12		.84			.12		13.71			14.19			8.46	
13		1.35			-2.16		13.54			13.66			4.94	
16		.98			.32		13.90			13.90			7.86	
20		1.12			.66		12.85			13.01			8.07	
22		.72			.11		15.68			15.68			7.70	
23		.97			.23		13.47			14.54			8.89	
24		.83			.17		-17.07			-18.49			2.93	
25		1.16			.30		-17.25			-17.81			1.85	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
1	56.00	82.00	56.55	82.80
2	56.00	83.20	56.22	83.52
6	57.00	84.50	57.44	85.16
7	56.50	83.50	56.94	84.15
9	57.00	83.30	57.93	84.66
11	58.00	82.00	58.42	82.60
12	58.00	85.50	57.94	85.42
13	56.50	84.00	56.80	84.45
16	57.00	84.00	57.00	84.00
20	56.50	83.30	56.72	83.62
22	-53.00	82.00	-53.28	82.44
23	55.50	83.40	55.13	82.84
24	56.00	83.40	55.68	82.92
25	56.00	83.00	55.76	82.64

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUFL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF
1	5050.	1.1630	1.1470	1351.	1.086	-12947.
2	5200.	1.1730	1.2440	1388.	1.080	12127.
6	5400.	1.1400	1.2060	1321.	-1.090	-13512.
7	5400.	1.1930	1.2980	1395.	1.080	12143.
9	5400.	1.1530	1.2310	1392.	-1.089	-13509.
11	5300.	1.1250	1.2660	1365.	1.080	12211.
12	5700.	1.1770	1.2980	1430.	-1.090	-13539.
13	5200.	1.1700	1.2470	1395.	1.080	12118.
16	5500.	1.1630	1.2740	1404.	1.085	12759.
20	5300.	1.1790	1.2390	1401.	1.085	12891.
22	4900.	1.0900	1.1660	1349.	1.080	12248.
23	4900.	1.1470	1.2150	1377.	-1.075	-11496.
24	5000.	1.0980	1.1960	1376.	1.080	12185.
25	4900.	1.1120	1.1580	1401.	1.080	12183.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR F1J FL LAM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	5048.	1.1860	1.1700	1388.	13068.
2	5228.	1.1820	1.2540	1399.	12240.
6	5401.	1.1580	1.2240	1403.	-13620.
7	5401.	1.2120	1.3120	1417.	12240.
9	5303.	1.1970	1.2710	1437.	-13482.
11	5274.	1.1410	1.2850	1385.	12240.
12	-5740.	1.1750	1.2960	1427.	-13620.
13	5224.	1.1830	1.2600	1410.	12240.
16	5574.	1.1630	1.2740	1404.	12930.
20	5295.	1.1880	1.2480	1412.	12930.
22	4871.	1.1010	1.1790	1363.	12240.
23	4956.	1.1310	1.1990	1359.	-11550.
24	5052.	1.0860	1.1820	1360.	12240.
25	4843.	1.1020	1.1480	1389.	12240.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TFST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.433	99.2	3.9	38.8	48.8
2	2.453	109.3	3.7	36.8	49.2
6	2.382	101.1	5.9	41.0	51.5
7	2.496	94.1	4.2	38.0	49.2
9	2.429	97.7	5.6	41.4	50.7
11	2.355	70.5	8.6	41.4	49.1
12	2.467	-43.2	1.6	49.2	55.9
13	2.445	92.1	-16.6	42.2	50.2
16	2.433	104.8	5.5	42.7	52.1
20	2.468	99.5	7.2	40.9	50.4
22	2.281	110.9	4.1	36.6	44.4
23	2.397	96.5	5.6	37.6	48.0
24	2.298	56.4	3.5	49.1	57.8
25	2.327	57.3	4.5	-52.3	56.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 FI LB/KLB FU	CO FI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX FI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3139.	8.15	.54	5.23	6.58	3.67
2	3138.	8.90	.51	4.92	6.57	3.25
6	3136.	8.47	.46	5.64	7.08	3.99
7	3138.	7.53	.58	4.99	6.47	5.88
9	3146.	8.06	.79	5.61	6.77	1.85
11	3143.	5.99	1.26	5.78	6.86	5.92
12	3143.	-3.50	.22	6.56	7.45	-7.30
13	3135.	7.51	-2.33	5.65	6.73	2.48
16	3140.	8.61	.77	5.77	7.03	4.71
20	3142.	7.25	1.00	5.44	6.71	4.04
22	3143.	9.73	.62	5.28	6.30	2.99
23	3136.	8.04	.81	5.15	6.56	1.97
24	3142.	4.91	.53	7.02	8.26	2.22
25	3142.	4.93	.66	-7.38	7.94	.39

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	3.7760	7.0810	16.3100	4.2170	7.6840	20.1090
2	4.4050	8.6820	18.5660	4.5900	8.8840	21.9060
6	4.9690	11.4820	21.8580	5.4380	12.2830	26.6290
7	4.7230	9.4120	19.3900	5.1780	10.0560	23.5880
9	4.4140	9.3570	19.2930	5.3970	11.1040	25.0410
11	3.5560	6.8770	16.4090	3.8670	7.3720	19.6270
12	-5.8480	-13.2060	-23.9150	5.7570	12.9310	27.4810
13	4.8540	10.2600	20.2180	5.1500	10.6540	24.4220
16	4.7810	9.9990	21.3760	4.7390	9.7620	23.1730
20	4.4760	8.7560	18.8330	4.6870	9.0630	22.1680
22	3.3790	6.7430	16.3250	3.5940	7.1310	19.2510
23	4.2710	8.3710	18.2640	3.9340	7.7480	20.2070
24	4.0060	8.4210	18.1640	3.7390	7.8740	20.3990
25	3.8900	7.8380	17.0020	3.6910	7.4370	19.7290

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRF CNO FI LB/KLB FU	NR CNOX FI LB/KLB FU	SMK NUMBER CORRECTED
1	7.30	.50	6.93	8.71	3.67
2	8.54	.50	6.24	8.33	3.20
5	7.74	.80	7.37	9.26	3.99
7	6.87	.55	6.53	8.45	5.46
9	6.59	.67	7.82	9.44	1.85
11	5.51	1.18	7.42	8.81	-5.92
12	3.56	.22	8.10	9.19	-7.07
13	7.08	-2.24	7.33	8.72	2.02
16	8.68	.79	6.72	8.19	4.35
20	6.92	.37	6.87	8.40	4.04
22	9.14	.59	6.69	8.10	2.93
23	8.73	.87	-5.70	7.27	1.73
24	5.25	.56	7.83	9.28	2.22
25	5.19	.70	8.56	9.22	.30

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.20	69.00	32.51	69.67
2	32.00	69.50	32.12	69.77
6	30.50	69.40	30.74	69.94
7	32.00	68.60	32.25	69.14
9	32.50	69.10	33.03	70.23
11	-35.00	69.50	-35.26	70.01
12	28.50	69.50	28.47	69.43
13	32.50	69.50	32.67	69.87
16	32.00	69.00	32.00	69.00
20	32.50	68.50	32.63	68.77
22	30.50	69.00	30.66	69.37
23	30.00	68.40	29.40	67.94
24	32.10	69.30	31.42	69.40
25	33.00	69.30	32.86	69.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
1	2250.	.9410	.7680	1178.	1.025	4940.
2	2150.	.9170	.7300	1185.	1.025	4973.
6	2100.	.9090	.7100	1169.	1.025	5039.
7	2200.	.9230	.7630	1196.	-1.035	4759.
9	2150.	.8740	.7350	1158.	1.025	5192.
11	2350.	.8460	.7880	1140.	1.025	5091.
12	2100.	-.9730	.7410	-1273.	1.020	4872.
13	2150.	.9150	.7310	1192.	1.025	5005.
16	2350.	.8830	.7990	1179.	1.023	4687.
20	2200.	.8970	.7560	1156.	1.020	4654.
22	2200.	.8610	.7600	1181.	-1.030	4882.
23	2000.	.9060	.7270	1224.	1.020	4360.
24	2100.	.8260	.7140	1192.	1.025	4868.
25	2000.	.8670	.6900	1206.	1.025	4728.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FID FL LHM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
1	2249.	.9600	.7830	1201.	4986.
2	2162.	.9240	.7350	1194.	5019.
6	2100.	.9230	.7210	1197.	5080.
7	2200.	.9370	.7750	1214.	4797.
9	2111.	.9020	.7590	1196.	5181.
11	2338.	.8590	.8000	1156.	5103.
12	2115.	.9710	.7400	-1270.	4902.
13	2160.	.9240	.7390	1205.	5055.
16	-2381.	.8530	.7990	1178.	4750.
20	2198.	.9040	.7610	1165.	4668.
22	2187.	.8700	.7680	1194.	4879.
23	2023.	.8940	.6970	1208.	4380.
24	2122.	.8170	.7060	1178.	4890.
25	2018.	.9400	.6840	1196.	4750.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.887	616.9	78.2	10.6	22.2
2	1.828	662.6	89.6	7.0	21.0
6	1.790	674.7	150.2	7.1	18.0
7	1.840	682.6	79.1	8.7	18.3
9	1.717	690.9	154.0	8.6	18.4
11	1.706	475.9	66.2	9.0	19.7
12	-1.081	442.8	43.1	13.5	20.8
13	1.826	574.3	100.1	10.7	19.0
16	1.739	677.5	142.6	11.4	19.1
20	1.786	629.0	101.9	9.0	18.1
22	1.711	683.7	88.7	13.3	17.7
23	1.778	700.1	161.7	8.7	17.5
24	1.677	-350.5	50.5	14.4	22.0
25	1.729	-300.8	47.5	-16.8	20.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3017.	62.77	13.67	1.78	3.72	-3.77
2	3001.	69.24	16.08	1.20	3.60	.26
6	2965.	71.14	27.21	1.22	3.12	1.85
7	3001.	70.85	14.11	1.49	3.12	1.18
9	2962.	75.83	29.04	1.55	3.32	-3.95
11	3036.	53.88	12.89	1.68	3.65	1.31
12	3061.	-43.54	7.29	2.19	3.35	1.17
13	3005.	60.16	19.63	1.83	3.27	1.43
16	2967.	73.56	26.61	2.03	3.42	2.09
20	2993.	67.22	18.70	1.58	3.14	2.47
22	2994.	76.16	16.48	2.43	3.23	1.30
23	2954.	74.02	29.38	1.51	3.04	0.00
24	3058.	-41.72	10.07	2.75	4.12	1.31
25	-3073.	-34.03	9.23	-3.12	3.89	.13

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	.5120	.4740	3.7690	.6600	.5050	4.5550
2	.4280	.5060	3.9280	.6440	.5140	4.5960
6	.6170	.5040	3.9060	.6540	.5290	4.6700
7	.5770	.4380	3.6270	.6120	.4600	4.3320
9	.5780	.4850	3.9330	.6600	.5560	4.7350
11	.5870	.5060	3.9850	.6210	.5350	4.6990
12	-.4590	.4940	3.8660	.6510	.4840	4.4530
13	.6270	.5090	3.8880	.6510	.5230	4.6390
16	.5820	.4610	3.9550	.5760	.4510	4.2870
20	.5590	.4230	3.6090	.5750	.4350	4.2090
22	.5640	.4580	3.7940	.5890	.4790	4.4260
23	.5630	.4070	3.5080	.5320	.3820	3.9450
24	.5920	.5030	3.9350	.5640	.4820	4.4390
25	.5760	.4710	3.6610	.5550	.4510	4.2990

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 1200 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX FI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
1	58.20	12.83	2.31	4.82	-3.47
2	67.48	15.83	1.51	4.52	.26
6	67.06	25.89	1.57	4.01	1.33
7	66.80	13.43	1.91	4.00	1.18
9	66.33	25.34	2.09	4.46	1.99
11	50.99	12.18	2.12	4.63	1.31
12	44.08	7.42	2.71	4.15	1.17
13	57.95	19.13	2.35	4.19	1.43
16	74.26	27.25	2.26	3.98	2.79
20	65.25	18.22	1.98	3.98	2.00
22	72.90	16.23	3.04	4.05	.66
23	78.40	-31.29	1.70	3.42	0.00
24	63.79	10.65	3.12	4.77	.92
25	-35.33	9.64	-2.65	4.55	.13

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	28.40	65.40	28.68	66.04
2	28.00	65.80	28.11	66.06
6	25.50	64.30	25.70	64.80
7	28.50	65.00	28.72	65.51
9	27.00	63.60	27.44	64.64
11	29.00	64.50	29.21	64.97
12	-22.50	64.50	-22.48	64.44
13	27.00	64.50	27.14	64.84
16	27.50	65.00	27.50	65.00
20	28.50	64.80	28.61	65.05
22	27.50	65.00	27.65	65.35
23	26.50	65.00	26.32	64.57
24	26.50	-63.50	26.35	-63.14
25	28.50	65.00	28.38	64.72

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE B

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
1	2000.	.9550	.9770	1165.	1.020	3703.
2	1900.	.9300	.8040	1169.	1.020	3708.
6	1800.	.9040	.8690	1154.	1.020	3314.
7	1950.	.9080	.8960	1183.	1.020	3536.
9	1800.	.8860	.9310	1138.	1.015	3298.
11	1900.	.8180	.8930	1120.	1.020	3384.
12	1700.	-1.1030	.8650	-1323.	1.015	3212.
13	1740.	.9270	.8300	1174.	1.015	3320.
16	2000.	.8910	.9050	1160.	1.020	3355.
20	1900.	.9040	.8800	1151.	1.015	3406.
22	1900.	.8730	.8780	1176.	1.020	3515.
23	1800.	.9290	.8440	1226.	1.015	3255.
24	1700.	.8230	.8930	1167.	1.015	-2828.
25	1700.	.8410	.7840	1185.	1.020	3301.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
1	1999.	.9740	.8940	1188.	3738.
2	1910.	.9380	.8100	1178.	3743.
6	1800.	.9190	.8830	1172.	3340.
7	1950.	.9230	.9100	1201.	3565.
9	1768.	.9150	-.9620	1175.	3291.
11	1891.	.8300	.9060	1136.	3391.
12	1712.	-1.1010	.8630	-1321.	3231.
13	1748.	.9370	.8390	1186.	3353.
16	2027.	.8910	.9050	1160.	3400.
20	1898.	.9110	.8870	1159.	3417.
22	1889.	.8830	.8870	1188.	3513.
23	1821.	.9170	.8330	1210.	3270.
24	1718.	.8130	.8830	1153.	-2841.
25	1715.	.8340	.7770	1175.	3316.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.867	776.4	186.7	9.3	20.4
2	1.807	836.0	192.9	5.6	18.9
6	1.722	905.7	-264.4	5.9	14.6
7	1.761	835.5	187.3	7.8	15.8
9	1.689	905.4	-263.4	7.6	14.8
11	1.584	731.5	185.6	7.7	15.4
12	-2.213	715.1	93.3	13.8	18.5
13	1.797	771.3	222.1	9.1	15.1
16	1.714	860.9	222.9	10.3	15.7
20	1.753	784.0	205.2	8.0	15.2
22	1.690	828.1	197.9	12.1	15.4
23	1.796	817.8	224.9	7.0	15.2
24	1.633	-509.0	122.7	10.7	18.1
25	1.697	-398.6	-75.9	13.1	17.4

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2943.	77.90	32.18	1.53	3.37	2.10
2	2925.	86.11	34.14	-0.95	3.21	.91
6	2868.	96.03	48.15	1.03	2.54	3.27
7	2920.	88.15	33.95	1.36	2.74	2.12
9	2872.	98.00	-48.98	1.36	2.63	-4.71
11	2919.	85.76	37.38	1.48	2.96	2.49
12	-3014.	-61.96	-13.89	1.96	2.64	2.63
13	2920.	79.76	39.46	1.54	2.56	1.95
16	2897.	92.61	41.19	1.82	2.78	1.69
20	2923.	83.18	37.40	1.40	2.66	2.85
22	2915.	90.93	37.34	2.18	2.78	1.30
23	2910.	84.34	39.84	1.19	2.57	-3.52
24	2991.	-59.32	24.57	2.04	3.47	.66
25	-3039.	-45.43	-14.86	2.44	3.26	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	.4550	.2720	2.8440	.4890	.2890	3.4250
2	.4620	.2850	2.9340	.4740	.2890	3.4280
6	.4080	.2410	2.6730	.4310	.2530	3.1840
7	.4280	.2610	2.7860	.4520	.2730	3.3190
9	.3750	-.2180	2.5420	.4250	.2480	3.1520
11	.3840	.2440	2.7370	.4040	.2580	3.2160
12	-.5040	.2470	2.7030	-.4980	.2430	3.1150
13	.4240	.2480	2.6820	.4390	.2540	3.1920
16	.4300	.2650	2.9720	.4260	.2580	3.2210
20	.4230	.2530	2.7730	.4350	.2600	3.2310
22	.4150	.2570	2.8240	.4320	.2680	3.2880
23	.4490	.2620	2.7860	.4240	.2460	3.1390
24	.3820	.2340	2.5740	.3650	.2220	2.9360
25	.4140	.2610	2.7010	.3990	.2510	3.1680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	72.43	30.31	1.98	4.35	2.10
2	84.01	33.67	1.19	4.02	.80
6	90.87	45.99	1.31	3.24	2.65
7	83.37	32.41	1.74	3.51	2.12
9	86.36	43.09	1.81	3.51	1.99
11	81.33	35.47	1.87	3.73	2.49
12	62.73	-14.14	2.43	3.27	2.63
13	77.00	38.54	1.97	3.27	1.95
16	93.49	42.19	2.12	3.24	1.69
20	80.84	36.49	1.75	3.32	2.66
22	87.18	35.77	2.72	3.47	1.30
23	89.23	42.35	1.34	2.90	-3.52
24	62.08	25.90	2.33	3.95	.66
25	-47.09	-15.50	2.87	3.82	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

UNIT	TSG HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
9	15294.	1609.	513.2	30.02	.005310
11	15602.	1544.	520.7	29.90	.007270
12	15049.	1524.	518.7	29.97	.007700
13	13624.	1499.	508.7	30.10	.006310
16	14063.	1526.	519.7	29.96	.006390
20	9713.	1490.	511.7	29.94	.006660
21	16891.	1624.	524.2	30.03	.008850

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
9	27.50	63.90	27.65	64.24
11	29.70	66.10	29.64	65.97
12	28.30	64.50	28.30	64.50
13	28.50	65.50	28.78	66.14
16	28.70	64.50	28.67	64.44
20	29.50	65.00	29.70	65.44
21	26.50	-63.50	26.36	-63.17

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
9	1830.	.9000	.9190	1149.	1.016	3162.
11	2000.	.8430	.8260	1151.	1.020	3719.
12	1840.	.9370	.8940	1196.	1.020	3245.
13	1900.	.8690	.8260	1161.	1.020	3748.
16	2000.	.9370	.9580	1161.	1.020	3227.
20	-2300.	.9320	-1.0450	1136.	1.015	3542.
21	1800.	.8860	.9480	1170.	1.015	-2839.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

9	1826.	.9100	.9290	1161.	3172.
11	2003.	.8400	.8230	1146.	3716.
12	1843.	.9370	.8940	1196.	3250.
13	1897.	.8860	.8430	1184.	3771.
16	2005.	.9350	.9560	1159.	3231.
20	-2286.	.9450	-1.0590	1152.	3544.
21	1816.	.8770	.9390	1158.	-2850.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
9	1.734	866.3	217.9	10.8	15.7
11	1.679	619.2	-82.6	9.9	16.6
12	1.871	671.5	85.0	9.9	15.8
13	1.682	739.3	217.7	14.6	16.3
16	1.806	899.5	232.9	7.0	15.5
20	1.803	813.8	224.8	10.2	16.1
21	1.774	-524.9	95.9	15.8	18.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX FI LB/KLB FU	SMK NUMRER FRONT SIDE
9	2904.	92.30	39.89	1.88	2.74	1.97
11	2999.	70.40	-16.13	1.84	3.10	1.31
12	3007.	68.67	-14.93	1.67	2.66	.79
13	2919.	81.64	41.30	2.66	2.96	2.09
16	2903.	92.06	40.94	1.18	2.60	2.76
20	2913.	83.67	39.71	1.72	2.72	-4.58
21	-3013.	-56.74	-17.81	2.81	3.24	1.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
9	.3970	.2300	2.6830	.4130	.2380	3.0790
11	.4400	.2910	3.0130	.4340	.2870	3.4120
12	.4300	.2450	2.7030	.4300	.2450	3.1270
13	.4240	.2730	2.8540	.4550	.2920	3.4450
16	.4310	.2450	2.7800	.4270	.2430	3.1150
20	.4350	.2570	2.7740	.4590	.2710	3.3070
21	.4010	.2340	2.5850	.3840	.2230	2.9390

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-2A * 1500 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
9	88.75	38.51	2.32	3.38	1.74
11	71.38	-16.36	2.24	3.77	1.31
12	68.72	-14.97	2.07	3.30	.79
13	76.01	38.67	3.44	3.84	2.09
16	92.82	41.35	1.42	3.13	2.76
20	79.25	37.70	2.20	3.48	-4.02
21	59.21	18.68	3.20	3.69	1.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
9	33.60	69.80	33.78	70.17
11	33.80	69.40	33.74	69.27
12	33.50	69.50	33.50	69.50
13	32.50	69.00	32.82	69.67
16	33.60	69.20	33.57	69.13
20	34.70	69.80	34.94	70.28
21	32.40	69.40	32.23	69.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
9	2300.	.9110	.7780	1176.	1.025	5145.
11	2250.	.8650	.7650	1161.	1.023	4847.
12	2260.	.9400	.7820	1212.	1.026	4917.
13	2200.	.8830	.7550	1181.	-1.050	4956.
16	2350.	.9300	.8070	1179.	1.025	4790.
20	2450.	.9470	.8260	1160.	1.022	5196.
21	2100.	.9010	.7190	1188.	1.020	4745.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL	COR CB F/A	COR PF F/A	CORR TT6	COR THRUST
-----	LBM/HR	X100	X100	DEG R	LBF
-----	-----	-----	-----	-----	-----
9	2295.	.9210	.7870	1188.	5162.
11	2253.	.8610	.7620	1157.	4843.
12	2264.	.9400	.7820	1212.	4925.
13	2192.	.9000	.7690	1204.	4986.
16	2355.	.9280	.8050	1177.	4797.
20	2435.	.9600	.8370	1175.	5199.
21	2119.	.8910	.7110	1176.	4762.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
9	1.825	625.9	82.4	11.4	20.4
11	1.745	500.5	54.3	10.5	19.5
12	1.912	465.9	45.1	11.4	19.4
13	1.752	586.4	137.5	16.8	19.2
16	1.842	691.7	136.7	7.5	19.0
20	1.889	585.2	122.2	12.3	20.4
21	1.839	-347.8	41.3	19.1	22.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TFST SERIES *

MODF 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIMMER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
9	3014.	65.81	14.89	1.97	3.53	.66
11	3038.	55.47	10.34	1.92	3.55	1.56
12	3060.	47.45	7.88	1.91	3.25	1.95
13	2990.	63.68	25.65	3.00	3.43	1.45
16	2982.	71.28	24.19	1.27	3.21	3.27
20	3002.	59.18	21.24	2.04	3.39	1.70
21	3073.	-36.98	7.54	3.34	3.89	1.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
9	.6400	.5300	4.1450	.6680	.5510	4.7710
11	.5880	.4770	3.8740	.5790	.4700	4.3840
12	.6370	.4920	3.8740	.6360	.4900	4.4810
13	.5790	.4720	3.7610	.6240	.5050	4.5550
16	.6120	.4650	3.8680	.6070	.4600	4.3320
20	.6610	.5300	4.0270	.7000	.5600	4.8170
21	.6090	.4760	3.7910	.5820	.4530	4.2990

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
9	63.07	14.33	2.43	4.36	.66
11	56.28	10.49	2.33	4.31	1.45
12	47.48	7.91	2.38	4.04	1.95
13	59.06	23.94	3.91	4.47	1.45
16	71.89	24.44	-1.53	3.86	-3.27
20	55.84	20.10	2.61	4.36	1.70
21	38.71	7.93	3.78	4.41	1.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODF 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
9	90.00	94.00	90.48	94.50
11	89.70	95.00	89.53	94.82
12	90.50	93.70	90.50	93.70
13	-87.40	94.30	88.25	95.22
16	89.50	94.40	89.41	94.31
20	88.50	93.80	89.10	94.44
21	90.00	94.00	89.53	93.51

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
9	15900.	1.8950	1.9240	1862.	1.400	40764.
11	15700.	1.8620	1.9160	1880.	1.400	40927.
12	15300.	1.8620	1.8560	1867.	1.400	40832.
13	-14600.	-1.7480	-1.7480	1840.	1.400	40655.
16	16000.	1.8510	1.9590	1898.	1.400	40845.
20	15500.	1.8570	1.8830	1869.	1.400	40873.
21	15800.	1.9100	1.9110	1862.	1.400	40750.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

9	15868.	1.9160	1.9440	1881.	40900.
11	15720.	1.8550	1.9090	1872.	40900.
12	15326.	1.8620	1.8560	1867.	40900.
13	-14546.	1.7820	-1.7830	1876.	40900.
16	16037.	1.8480	1.9550	1894.	40900.
20	15405.	1.8830	1.9090	1894.	40900.
21	15942.	1.8900	1.8910	1842.	40900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
9	4.017	8.9	1.3	289.3	279.6
11	3.941	8.6	1.4	293.3	290.8
12	3.943	8.1	1.2	241.8	248.4
13	-3.701	8.1	3.9	273.0	268.7
16	3.925	9.5	1.9	282.7	270.9
20	3.929	8.6	5.9	249.7	256.0
21	4.041	10.7	3.4	-363.0	347.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
9	3157.	.44	.11	23.77	23.77	17.72
11	3153.	.44	.12	24.52	24.52	21.18
12	3155.	.41	.10	20.23	20.78	18.61
13	3159.	.44	.37	24.36	24.36	8.05
16	3159.	.49	.16	23.79	23.79	13.82
20	3151.	.44	.52	20.94	21.47	17.63
21	3150.	.53	.29	29.58	29.58	7.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
9	94.6380	81.0110	76.8080	108.6970	86.0010	90.4600
11	100.0160	94.5570	84.5570	95.6640	92.4220	94.8490
12	79.4790	71.5970	69.2650	79.6310	71.3820	80.1140
13	66.5570	90.7030	79.6200	83.1230	101.2940	100.7810
16	87.1730	83.4460	78.7800	85.3160	82.2600	87.8610
20	81.6420	78.0590	72.7770	96.9700	84.7660	89.6060
21	95.3980	73.2120	70.1490	83.4660	68.1850	77.7760

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
9	.39	.11	27.99	27.99	15.83
11	.43	.12	29.73	29.73	17.06
12	.41	.10	25.28	25.97	14.92
13	.35	.33	33.33	33.33	7.53
16	.50	.17	26.53	26.53	11.03
20	.37	.48	27.87	28.56	13.50
21	.61	.31	32.80	32.80	6.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUI'S

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
9	84.00	91.70	84.45	92.19
11	84.90	92.40	84.74	92.22
12	85.10	91.80	85.10	91.80
13	-81.50	91.70	-82.30	92.60
16	84.00	92.40	83.92	92.31
20	84.00	92.20	84.57	92.83
21	85.00	92.50	84.55	92.01

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
9	13100.	-1.7330	1.7660	1766.	1.310	34339.
11	13000.	1.6760	1.7670	1781.	1.310	34476.
12	12600.	1.6810	1.7100	1759.	1.305	34003.
13	-11800.	1.5660	-1.5630	1721.	1.310	34247.
16	13000.	1.6740	1.7650	1784.	1.310	34407.
20	12950.	1.6900	1.7550	1775.	1.310	34430.
21	13000.	1.6620	1.7450	1754.	1.310	34327.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
9	13074.	-1.7570	1.7850	1785.	34453.
11	13016.	1.6690	1.7600	1774.	34453.
12	12621.	1.6810	1.7100	1759.	34060.
13	-11756.	1.5970	-1.5940	1755.	34453.
16	13030.	1.6710	1.7620	1781.	34453.
20	12871.	1.7130	1.7790	1799.	34453.
21	13117.	1.6440	1.7270	1735.	34453.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
9	-3.679	9.3	1.0	200.5	193.3
11	3.540	8.8	1.2	204.0	199.3
12	3.554	8.2	1.0	167.8	172.3
13	3.310	9.2	1.8	175.1	166.3
16	3.542	10.1	1.3	192.4	185.0
20	3.569	8.8	3.7	176.7	177.4
21	3.507	9.1	1.8	-245.4	238.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
9	3157.	.51	.10	17.99	17.99	13.19
11	3152.	.50	.12	18.99	18.99	17.28
12	3155.	.46	.09	15.57	16.00	14.29
13	3159.	.56	.19	17.47	17.47	5.81
16	3159.	.57	.12	17.94	17.94	12.19
20	3152.	.50	.36	16.31	16.38	13.43
21	3150.	.52	.18	23.05	23.05	4.38

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
9	40.2700	46.9780	54.1590	45.1540	49.7330	63.5960
11	37.8020	51.1400	56.8540	36.4560	50.0420	63.8520
12	35.2800	46.2670	52.3830	35.3180	46.1280	60.5A80
13	27.4240	49.3900	53.7810	32.8560	54.8390	67.6570
16	37.8380	51.8530	58.0130	37.1540	51.1380	64.7310
20	39.1710	53.5470	57.0980	45.2300	58.0050	70.1150
21	37.0850	51.5250	56.0120	33.3580	48.0710	62.2180

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
9	.45	.09	21.12	21.12	10.75
11	.52	.12	21.33	21.33	13.97
12	.46	.09	18.01	18.50	13.16
13	.47	.17	21.98	21.98	5.39
16	.58	.12	21.64	21.64	10.60
20	.43	.33	20.03	20.11	11.96
21	.58	.19	-27.66	27.66	4.38

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9C-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
9	76.00	89.00	76.41	89.48
11	76.30	88.50	76.15	-88.33
12	77.00	90.00	77.00	90.00
13	74.00	89.20	74.72	90.07
16	77.00	89.80	76.93	89.71
20	75.00	89.80	75.51	89.41
21	74.50	89.50	74.11	89.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
9	9700.	-1.5140	1.5340	1628.	1.210	26498.
11	9650.	1.4310	1.5660	1626.	1.200	25817.
12	9900.	-1.5040	1.5550	1649.	1.217	27092.
13	9000.	1.3670	-1.3840	1586.	1.215	26819.
16	10000.	1.4680	1.5970	1651.	1.210	26551.
20	9600.	1.4590	1.5390	1628.	1.205	26176.
21	9000.	1.3540	1.4770	1584.	1.190	24629.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
9	9681.	-1.5300	1.5510	1645.	26587.
11	9662.	1.4250	1.5600	1619.	25800.
12	9917.	1.5040	1.5550	1649.	27137.
13	8966.	1.3940	-1.4120	1617.	26980.
16	10023.	1.4660	1.5940	1648.	26587.
20	9541.	1.4790	1.5610	1650.	26193.
21	9081.	1.3390	1.4620	-1568.	24720.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
9	-3.197	14.3	.9	115.7	112.9
11	3.014	11.7	1.0	112.8	111.5
12	-3.174	10.1	.8	109.1	112.5
13	2.884	16.1	1.3	104.8	97.8
16	3.100	15.7	1.2	113.9	112.1
20	3.075	14.8	2.3	102.6	105.1
21	2.847	12.6	1.5	121.6	119.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIJMER FRONT SIDE
9	3156.	.90	.10	11.94	11.94	8.16
11	3152.	.78	.12	12.33	12.33	11.84
12	3155.	.64	.08	11.34	11.69	8.29
13	3158.	1.12	.15	11.99	11.99	5.06
16	3158.	1.02	.13	12.13	12.13	8.55
20	3151.	.96	.25	10.99	11.26	8.50
21	3149.	.88	.18	14.06	14.06	3.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
9	16.5840	27.4990	38.6330	18.1570	29.0350	45.2370
11	13.0280	23.5720	34.9140	12.6640	23.0970	39.2680
12	-16.5090	32.3660	41.7740	-18.5180	32.2690	48.3170
13	13.0440	29.6320	38.9560	15.1250	32.7480	48.7640
16	16.7340	30.8450	41.7310	16.4800	30.4340	46.5860
20	14.5070	26.5530	36.6950	16.2370	28.6360	44.8480
21	12.9300	28.4100	38.4300	11.9240	26.5830	42.8210

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 5

UNIT	NREC	CO	EI	NREC	HC	EI	NRE	CNO	EI	NR	CNOX	EI	SMK	NUMBER
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	LB/KLB	FU		LB/KLB	FU		LB/KLB	FU		LB/KLB	FU			CORRECTED
9		.82			.09			13.98						7.80
11		.80			.12			13.87						9.88
12		.64			.08			13.12						8.29
13		.97			.14			15.01						5.01
16		1.04			.13			14.63						8.18
20		.86			.24			13.44						7.47
21		.96			.19			16.93						3.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
9	55.50	82.70	55.80	83.14
11	55.60	81.80	55.49	-81.64
12	57.30	83.80	57.30	83.80
13	-45.50	-78.50	-45.95	-79.27
16	56.00	84.00	55.95	83.92
20	57.00	83.30	57.39	83.87
21	-53.00	84.10	-52.72	83.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
9	5100.	1.1780	1.2280	1390.	1.080	12199.
11	5000.	1.1090	1.1980	1365.	1.080	12248.
12	5300.	1.1970	1.2430	1426.	1.086	-13046.
13	-3700.	-.9780	-.8780	-1273.	-1.075	-11481.
16	5250.	1.1660	1.2750	1406.	1.080	12224.
20	5400.	1.2080	1.2660	1403.	1.085	12921.
21	5000.	1.0920	1.2010	1385.	1.080	12195.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

 MODF 6

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

9	5090.	1.1910	1.2410	1405.	12240.
11	5006.	1.1040	1.1930	1359.	12240.
12	5309.	1.1970	1.2430	1426.	13068.
13	-3686.	-.9980	-.8950	-1298.	-11550.
16	5262.	1.1640	1.2720	1403.	12240.
20	5367.	1.2240	1.2830	1422.	12930.
21	5045.	1.0810	1.1880	1370.	12240.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
9	2.469	97.8	3.8	40.5	49.0
11	2.321	71.0	2.6	40.8	46.9
12	2.514	47.4	1.6	44.4	51.2
13	-2.031	-211.6	-14.8	-27.8	-31.6
16	2.443	110.3	5.3	37.9	49.6
20	2.530	86.7	4.3	42.5	51.7
21	2.288	-42.2	2.3	-52.5	58.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
9	3144.	7.93	.53	5.40	6.53	2.89
11	3143.	6.12	.38	5.78	6.64	4.07
12	3149.	3.78	.22	5.81	6.71	4.18
13	-3121.	-20.70	-2.49	-4.46	-5.07	1.32
16	3144.	9.04	.74	5.11	6.68	4.08
20	3141.	6.85	.58	5.51	6.71	4.94
21	3145.	3.69	.35	-7.54	8.36	1.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
9	4.1600	7.8430	17.9960	4.4320	8.2320	20.9400
11	3.3380	6.1710	15.5390	3.2700	-6.0610	-17.5190
12	4.8580	9.4140	19.5690	4.8570	9.3860	22.6740
13	-1.9450	-3.3940	-10.7630	-2.1370	-3.6850	-17.2200
16	4.7540	9.7290	20.5400	4.6980	9.6090	22.9540
20	4.6740	8.8790	18.7990	5.0920	9.5120	22.8160
21	4.3330	9.7040	19.8700	4.0680	9.1260	22.2580

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
9	7.44	.51	6.74	8.16	2.67
11	6.25	.39	7.00	8.04	4.07
12	3.78	.22	7.22	8.34	4.18
13	-18.84	-2.29	5.88	-6.69	1.32
16	9.15	.75	6.13	8.01	4.08
20	6.29	.54	7.19	8.75	4.29
21	3.93	.37	8.44	9.36	1.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
9	32.80	69.60	32.98	69.97
11	32.40	68.30	32.34	68.17
12	30.50	68.50	30.50	68.50
13	31.00	69.50	31.30	70.18
16	32.00	69.40	31.97	69.33
20	32.50	68.90	32.72	69.37
21	30.00	69.00	29.84	68.64

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF

9	2200.	.8980	.7480	1179.	1.025	5073.
11	2280.	.8540	.7920	1160.	1.020	4462.
12	2200.	.9310	.7790	1224.	1.021	4567.
13	2100.	.9000	.7200	1201.	-1.050	5134.
16	2200.	.8940	.7550	1187.	1.025	4860.
20	2250.	.9070	.7700	1160.	1.020	4876.
21	2000.	.8710	.6940	1205.	1.020	4606.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

9	2196.	.9080	.7560	1192.	5090.
11	2283.	.8510	.7890	1155.	4459.
12	2204.	.9310	.7790	1224.	4575.
13	2092.	.9180	.7340	1225.	5165.
16	2205.	.8920	.7530	1184.	4867.
20	2236.	.9200	.7810	1175.	4879.
21	2018.	.8610	.6870	1192.	4623.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
9	1.788	631.3	110.2	11.0	19.5
11	1.722	492.1	57.6	11.8	18.7
12	1.888	501.5	49.7	10.5	17.9
13	1.799	574.8	111.2	16.0	18.5
16	1.765	690.8	139.6	7.9	18.6
20	1.800	610.9	129.6	10.0	18.9
21	1.775	-338.2	45.5	-18.0	20.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
9	2997.	67.37	20.19	1.92	3.43	1.33
11	3036.	55.22	11.10	2.18	3.44	1.32
12	3051.	51.56	8.78	1.78	3.03	2.58
13	3009.	61.17	20.33	2.80	3.24	1.82
16	2973.	74.08	25.73	1.40	3.28	-4.61
20	2988.	64.52	23.52	1.73	3.28	1.04
21	-3069.	-37.22	8.59	-3.25	3.76	.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
9	.6210	.5120	4.0690	.6470	.5320	4.6830
11	.5290	.4020	3.5480	.5220	.3960	4.0160
12	.5770	.4180	3.5640	.5770	.4170	4.1220
13	.6180	.5140	3.9390	.6670	.5510	4.7740
16	.6040	.4810	3.9390	.5990	.4760	4.4120
20	.5830	.4540	3.7040	.6160	.4790	4.4270
21	.5730	.4480	3.6740	.5480	.4260	4.1670

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
9	64.59	19.44	2.38	4.23	1.20
11	56.02	11.26	2.65	4.18	1.32
12	51.60	8.81	2.21	3.76	1.47
13	56.65	18.96	-3.64	4.22	1.61
16	74.71	25.99	1.68	3.94	-4.18
20	61.01	22.27	2.22	4.21	1.04
21	-38.92	9.03	-3.68	4.27	.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
9	26.50	63.70	26.64	64.04
11	29.10	65.90	29.04	65.77
12	26.50	64.50	26.50	64.50
13	27.00	64.90	27.26	65.53
16	27.50	64.80	27.47	64.74
20	29.40	65.80	29.60	66.25
21	25.00	-63.50	24.87	-63.17

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
9	1800.	.8900	.9270	1161.	1.020	3102.
11	2000.	.8520	.8400	1149.	1.020	3654.
12	1700.	.9370	.8330	1219.	1.016	3245.
13	1750.	.9050	.8140	1188.	-1.040	3552.
16	1900.	.9000	.8890	1170.	1.020	3317.
20	2000.	.9060	.8460	1147.	1.015	3803.
21	-1600.	.8710	.8560	1208.	-1.010	-2839.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE B

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR IT6 DEG R	COR THRUST LBF
9	1796.	.9000	-.9370	1174.	3112.
11	2003.	.8480	.8370	1144.	3651.
12	1703.	.9370	.8370	1219.	3250.
13	1743.	.9230	.8300	1212.	3574.
16	1904.	.8980	.8880	1168.	3321.
20	1988.	.9190	.8570	1163.	3806.
21	-1614.	.8620	.8470	1195.	-2850.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
9	1.714	872.1	216.4	9.6	15.3
11	1.677	644.7	138.9	9.8	16.1
12	1.874	651.9	-84.2	9.2	15.5
13	1.771	736.8	182.2	13.4	15.8
16	1.729	890.5	232.9	6.8	15.2
20	1.766	752.1	189.7	8.7	16.1
21	1.743	-521.0	93.2	-15.2	17.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMER FRONT SIDE
9	2901.	93.91	40.03	1.71	2.71	2.01
11	2966.	72.58	26.87	1.81	2.97	1.96
12	-3011.	66.66	-14.79	1.54	2.61	2.21
13	2947.	78.05	33.16	2.34	2.75	2.08
16	2894.	94.86	42.62	1.19	2.67	1.96
20	2934.	79.54	34.46	1.51	2.81	-3.85
21	-3013.	-57.32	17.61	-2.74	3.23	.13

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
9	.3890	.2250	2.6520	.4040	.2330	3.0420
11	.4370	.2850	2.9780	.4310	.2810	3.3720
12	.4300	.2450	2.7030	.4300	.2450	3.1270
13	.4210	.2560	2.7560	.4530	.2740	3.3250
16	.4250	.2540	2.8300	.4220	.2510	3.1710
20	.4470	.2800	2.9070	.4720	.2950	3.4670
21	.3960	.2340	2.5850	.3800	.2230	2.9390

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1500 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
9	90.32	38.65	2.10	3.34	2.01
11	73.59	27.25	2.20	3.62	1.72
12	65.71	-14.84	1.92	3.24	2.21
13	72.58	31.06	3.03	3.57	1.61
16	95.63	43.05	1.43	3.21	1.32
20	75.36	32.70	1.93	3.59	-2.93
21	-59.81	18.47	-3.12	3.67	.13

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
6	16031.	1791.	517.5	29.91	.006920
7	14185.	1791.	517.7	29.91	.007400
9	15506.	1821.	517.2	29.96	.007070
11	15874.	1816.	511.7	29.95	.006270
13	13958.	1833.	535.2	29.99	.008730
16	14451.	1914.	520.2	29.92	.008510
24	14540.	1737.	513.7	30.10	.007720

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	27.50	64.00	27.53	64.08
7	28.50	65.00	28.53	65.06
9	-31.00	-66.50	-31.04	66.60
11	29.50	65.00	29.70	65.44
13	27.00	65.50	26.58	64.48
16	28.50	64.00	28.46	63.91
24	-25.30	-62.20	-25.42	-62.50

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
6	1900.	.9300	.9530	1158.	1.020	3124.
7	1950.	.9540	.9120	1205.	1.020	3422.
9	-2100.	.9190	.8390	1160.	1.020	-3914.
11	2000.	.8910	.9090	1142.	1.015	3540.
13	1800.	.9500	.8060	-1223.	1.020	3237.
16	1950.	.8120	.9800	1163.	1.018	3072.
24	-1600.	.8530	.9480	1133.	1.015	-2635.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODF 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

6	1897.	.9320	.9550	1161.	3123.
7	1947.	.9560	.9140	1207.	3420.
9	-2100.	.9220	.8420	1163.	-3919.
11	1988.	.9030	.9220	1157.	3544.
13	1833.	.9210	-.7810	1185.	3245.
16	1953.	.8100	.9780	1160.	3072.
24	-1602.	.8620	.9570	1144.	-2651.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	1.796	866.5	223.0	13.8	15.5
7	1.865	823.5	177.1	10.9	16.7
9	1.793	808.7	179.2	7.8	15.8
11	1.740	722.2	183.1	9.5	16.5
13	1.882	672.8	148.1	8.9	16.6
16	1.550	834.4	222.3	8.4	-11.2
24	1.673	591.6	185.6	11.2	17.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6	2909.	89.35	39.50	2.35	2.63	2.65
7	2944.	82.73	30.56	1.79	2.76	1.96
9	2938.	84.34	32.11	1.33	2.71	2.60
11	2947.	77.74	33.86	1.67	2.91	1.84
13	2981.	67.81	25.65	1.47	2.74	2.49
16	2877.	98.57	45.12	1.63	-2.18	2.63
24	2953.	66.48	35.32	2.07	3.13	1.58

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	.4120	.2310	2.6500	.4160	.2340	3.0490
7	.4490	.2580	2.7890	.4530	.2600	3.2330
9	.4780	-.3040	-3.0620	.4830	-.3060	-3.5380
11	.4200	.2570	2.7950	.4430	.2710	3.3070
13	-.4810	.2780	2.9730	.4230	.2440	3.1240
16	.3780	.2340	2.6020	.3740	.2310	3.0270
24	.3590	-.2100	-2.3970	.3710	.2150	-2.8640

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
6	88.44	39.11	2.70	3.03	2.12
7	82.03	30.31	2.08	3.20	1.96
9	83.41	31.82	1.65	3.36	2.60
11	73.75	32.16	2.13	3.70	1.32
13	77.03	29.16	1.66	3.09	2.49
16	99.59	45.63	1.89	-2.54	2.01
24	64.38	34.90	2.47	3.74	1.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	32.00	69.00	32.04	69.08
7	32.00	69.00	32.03	69.07
9	36.00	-70.50	36.05	-70.60
11	34.00	69.00	34.23	69.47
13	-30.50	69.30	-30.03	-68.22
16	33.50	69.40	33.45	69.30
24	32.50	69.20	32.66	69.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LRF
6	2250.	.9660	.7730	1170.	1.030	4781.
7	2300.	.9640	.8050	1212.	1.025	4775.
9	2500.	.9190	.8340	1179.	-1.035	-5310.
11	2400.	.8910	.8160	1149.	1.020	4910.
13	2050.	.9400	.7180	-1235.	1.030	-4468.
16	2320.	.8230	.7950	1179.	1.025	4855.
24	2100.	.8810	.7140	1169.	1.025	4908.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6	1.923	658.2	125.0	16.8	19.1
7	1.921	667.9	116.0	12.7	19.7
9	1.844	604.4	80.8	8.8	19.6
11	1.784	565.3	97.5	10.6	19.4
13	1.896	545.9	71.9	10.9	19.3
16	1.634	638.7	88.8	9.6	-14.6
24	1.786	400.7	68.8	12.6	22.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

6	2247.	.9680	.7750	1173.	4779.
7	2297.	.9660	.9060	1214.	4773.
9	2500.	.9220	.9370	1183.	-5317.
11	2386.	.9040	.8280	1164.	4915.
13	2087.	.9110	-.6960	1197.	-4478.
16	2323.	.8210	.7920	1176.	4855.
24	2102.	.8900	.7210	1180.	4938.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6	2997.	65.28	21.30	2.74	3.11	1.06
7	3000.	66.36	19.80	2.07	3.21	2.09
9	3020.	62.99	14.47	1.50	3.36	2.58
11	3013.	60.77	18.01	1.87	3.43	1.57
13	3036.	55.63	12.59	1.83	3.24	2.34
16	2990.	74.40	17.77	1.83	-2.80	2.89
24	3052.	43.58	12.85	2.26	3.93	1.70

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	.6200	.4520	3.7480	.6270	.4560	4.3150
7	.6190	.4510	3.7160	.6250	.4550	4.3090
9	-.6890	-.5870	-4.2930	.6970	-.5920	-4.9640
11	.5810	.4620	3.7670	.6140	.4880	4.4690
13	.6310	.4560	3.8600	.5530	.3990	4.0330
16	.5670	.4790	3.7830	.5610	.4730	4.3980
24	.5890	.4790	3.7520	.6100	.4930	4.4960

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CND EI LB/KLB FU	NR CNDX EI LB/KLB FU	SMK NUMBER CORRECTED
6	64.56	21.08	3.15	3.58	.92
7	65.77	19.64	2.39	3.72	1.99
9	62.25	14.33	1.86	4.17	2.51
11	57.50	17.07	2.39	4.36	1.57
13	63.47	14.38	2.05	3.63	2.25
16	75.22	17.99	2.13	-3.25	1.33
24	42.06	12.48	2.71	4.71	1.46

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	89.00	94.50	89.11	94.61
7	89.00	94.00	89.09	94.09
9	89.70	94.00	89.83	94.14
11	89.50	94.40	90.11	95.04
13	90.50	-97.00	89.09	95.49
16	90.50	94.60	90.37	94.46
24	-87.50	93.50	-87.92	93.95

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF

6	15600.	1.9200	1.8920	1858.	1.400	40914.
7	15700.	1.9390	1.9110	1871.	1.400	40914.
9	16000.	1.8460	1.9490	1878.	1.400	40845.
11	15800.	1.8590	1.9210	1871.	1.400	40859.
13	15750.	1.9130	1.9500	-1944.	1.400	40805.
16	16150.	1.9440	1.9870	1910.	1.400	40900.
24	-14800.	1.8340	-1.7680	1831.	1.400	40655.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

6	15576.	1.9240	1.8960	1862.	40900.
7	15680.	1.9430	1.9140	1874.	40900.
9	15994.	1.8510	1.9540	1883.	40900.
11	15709.	1.8840	1.9470	1896.	40900.
13	16036.	1.8540	1.8900	1884.	40900.
16	16173.	1.9390	1.9810	1905.	40900.
24	-14817.	1.8520	-1.7860	1849.	40900.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

BT9D-3A * 1800 HOUR TEST SERIES *

MODF 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	4.069	9.8	3.5	271.6	275.3
7	4.110	11.9	4.1	265.9	281.5
9	3.911	8.7	2.2	286.5	276.9
11	3.938	8.7	3.4	289.9	314.9
13	4.055	9.7	2.8	-381.6	-370.8
16	4.119	12.9	5.3	283.1	279.6
24	3.883	12.1	2.2	313.2	321.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6	3157.	.49	.30	22.03	22.33	19.33
7	3156.	.58	.34	21.34	22.60	24.34
9	3157.	.45	.20	24.18	24.18	19.35
11	3157.	.45	.30	24.29	26.39	22.22
13	3157.	.48	.24	-31.06	-31.06	17.32
16	3154.	.63	.44	22.66	22.66	15.58
24	3154.	.63	.19	26.60	27.31	5.26

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	110.0550	86.8680	79.4780	114.0420	88.2320	91.9940
7	106.4740	77.2350	72.9950	109.6590	78.2040	85.0080
9	80.5060	77.8250	73.5870	83.5840	79.0330	85.5950
11	91.5030	89.5590	80.2190	108.9060	97.2870	98.1190
13	-162.1930	-132.1020	-108.3700	107.6080	107.6360	104.9360
16	120.2780	86.7780	77.8610	116.1260	85.2370	89.9320
24	72.1840	72.1740	68.0650	81.0290	75.7530	83.2640

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

J19D-3A * 1800 HOUR TEST SERIES *

MODE 3

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
6		.47			.29		25.50			25.84			15.83	
7		.56			.34		24.86			26.32			17.74	
9		.43			.20		28.13			28.13			14.39	
11		.37			.27		29.71			32.28			18.68	
13		.73			.29		30.07			30.07			11.29	
16		.65			.45		26.18			26.18			11.42	
24		.56			.18		32.54			33.41			5.26	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6	83.00	92.50	83.10	92.61
7	84.00	92.00	84.08	92.09
9	85.00	91.50	85.12	91.63
11	84.00	91.50	84.57	92.12
13	84.00	-94.50	82.70	93.03
16	85.00	92.60	84.88	92.47
24	83.70	92.20	84.11	92.65

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LAF
6	12750.	1.6880	1.7160	1748.	1.310	34465.
7	12800.	-1.7390	1.7340	1772.	1.310	34465.
9	12900.	1.6810	1.7460	1773.	1.310	34407.
11	12800.	1.6740	1.7280	1764.	1.310	34419.
13	12600.	1.6860	1.7270	-1824.	1.310	34373.
16	13200.	1.6820	1.8020	1799.	1.310	34453.
24	12350.	1.6290	1.6560	1734.	1.305	33856.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
6	12730.	1.6920	1.7200	1752.	34453.
7	12783.	1.7420	1.7370	1775.	34453.
9	12899.	1.6860	1.7510	1778.	34453.
11	12726.	1.6970	1.7520	1788.	34453.
13	12829.	1.6340	1.6740	1767.	34453.
16	13219.	1.6770	1.7970	1793.	34453.
24	12364.	1.6450	1.6730	1751.	34060.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	3.571	10.1	1.7	175.6	169.9
7	-3.679	12.1	2.7	176.0	183.4
9	3.555	9.2	1.6	191.8	183.3
11	3.540	9.1	2.0	192.8	187.8
13	3.555	9.4	2.9	237.2	228.7
16	3.553	14.5	4.7	180.2	181.7
24	3.440	11.9	1.5	214.4	224.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6	3157.	.57	.17	16.23	16.23	13.91
7	3156.	.66	.25	15.78	16.45	-21.05
9	3157.	.52	.15	17.80	17.80	14.29
11	3157.	.51	.19	17.98	17.98	18.17
13	3157.	.53	.28	21.96	21.96	7.63
16	3153.	.82	.46	16.72	16.86	13.07
24	3154.	.69	.15	20.55	21.49	4.94

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	40.2020	54.2150	58.6190	41.3290	55.0360	67.8110
7	41.8660	48.1910	53.9530	42.8590	48.7740	62.8030
9	33.8320	44.0040	51.0570	34.8840	44.6530	59.3380
11	33.4170	45.4050	51.8130	38.4270	49.1030	63.0750
13	-53.3470	-74.0960	-74.0020	38.6030	60.9140	72.3410
16	39.8560	54.0470	57.3660	38.7840	53.1220	66.3060
24	33.7340	52.9720	55.8270	37.0390	55.5190	68.1980

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
6		.55			.17			18.78			18.78		12.94	
7		.64			.25			18.37			19.15		-17.97	
9		.51			.15			22.36			22.36		13.64	
11		.45			.18			21.89			21.89		15.83	
13		.73			.34			21.47			21.47		7.63	
16		.84			.47			20.89			21.06		10.82	
24		.63			.15			25.10			26.25		4.94	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6	76.00	-91.00	76.09	-91.11
7	77.00	89.00	77.07	89.09
9	77.00	89.00	77.11	89.13
11	77.00	88.70	-77.52	89.30
13	74.00	90.30	-72.85	88.90
16	76.40	-91.50	76.29	-91.37
24	75.50	89.50	75.87	89.93

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
6	9900.	1.4890	1.5360	1624.	1.220	27382.
7	10100.	-1.5310	1.5910	1651.	1.220	27382.
9	9700.	1.4570	1.5390	1631.	1.210	26551.
11	10000.	1.4720	1.5900	1635.	1.210	26560.
13	8950.	1.4270	1.4960	1638.	1.190	24662.
15	-10600.	-1.5240	-1.7310	-1716.	1.210	26587.
24	9400.	1.3970	1.4640	1602.	1.212	26584.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

 MODF 5

UNIT	CORR FU FL LAM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	9885.	1.4930	1.5400	1628.	27373.
7	10087.	-1.5340	1.5840	1654.	27373.
9	9699.	1.4610	1.5440	1636.	26587.
11	9942.	1.4920	1.6120	-1657.	26587.
13	9113.	1.3830	1.4500	1588.	24720.
16	-10615.	-1.5190	-1.7260	-1711.	26587.
24	9411.	1.4100	1.4780	1618.	26744.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	3.143	13.8	1.2	114.2	104.0
7	-3.233	14.3	1.9	112.0	114.9
9	3.073	14.1	1.3	111.1	107.5
11	3.107	11.9	1.6	117.4	115.7
13	3.008	14.9	2.9	117.0	114.1
16	-3.213	17.5	4.3	126.3	128.4
24	2.942	16.5	1.2	125.8	132.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
6	3156.	.88	.13	11.99	11.99	8.27
7	3156.	.89	.20	11.43	11.72	-16.47
9	3156.	.92	.14	11.93	11.93	8.65
11	3156.	.77	.17	12.47	12.47	11.84
13	3156.	.99	.34	12.83	12.83	6.15
16	3153.	1.09	.46	12.96	13.17	11.84
24	3154.	1.12	.14	14.09	14.86	2.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	-20.6310	-39.7180	-48.0670	-21.1070	-40.3050	-55.5830
7	17.0230	26.5770	37.0660	17.3440	26.8840	43.1210
9	14.7270	26.7390	37.3270	15.0880	27.1150	43.3510
11	14.6740	26.0510	36.5240	16.4350	28.0740	44.2970
13	16.2170	31.0990	42.5190	12.6470	25.8920	42.1290
16	-23.6540	-43.1280	-49.6530	-23.0970	-42.4030	-57.4090
24	14.2010	30.4570	39.3350	15.2850	31.8410	47.9160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6	.86	.13	13.86	13.86	8.27
7	.87	.20	13.29	13.64	-13.36
9	.90	.14	14.97	14.97	8.65
11	.69	.16	15.12	15.12	10.64
13	1.27	.41	12.71	12.71	6.15
16	1.12	.47	16.19	16.46	11.58
24	1.04	.13	-17.17	-18.10	2.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6	56.00	85.00	56.07	85.10
7	56.50	84.00	56.55	84.08
9	56.00	82.50	56.08	82.62
11	57.00	82.20	57.39	82.76
13	54.50	84.60	53.65	83.29
16	56.50	84.30	56.42	84.18
24	54.70	83.10	54.97	83.50

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
5	5200.	1.1630	1.2530	1381.	1.080	12244.
7	5300.	-1.2190	1.2980	1426.	1.080	12244.
9	5100.	1.1400	1.2300	1388.	1.080	12224.
11	5300.	1.1610	1.2740	1377.	1.080	12228.
13	4900.	1.1540	1.1970	1428.	1.080	12211.
16	5280.	1.0790	1.2860	1410.	1.080	12240.
24	4800.	1.0730	1.1230	1358.	1.082	12441.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6	5192.	1.1660	1.2560	1384.	12240.
7	5293.	1.2210	1.3010	1429.	12240.
9	5099.	1.1430	1.2330	1392.	12240.
11	5269.	1.1770	1.2920	1396.	12240.
13	4989.	1.1190	1.1600	1384.	12240.
16	5288.	1.0760	1.2820	1406.	12240.
24	4806.	1.0840	1.1330	1371.	12516.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	2.437	94.3	3.5	42.5	47.8
7	-2.559	77.5	2.6	40.9	46.9
9	2.387	99.8	4.6	37.6	45.5
11	2.435	67.1	3.3	42.1	49.2
13	2.419	84.5	5.5	42.9	50.6
16	2.254	104.6	6.9	35.6	-42.6
24	2.246	74.9	4.2	46.0	53.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6	3145.	7.74	.49	5.73	6.45	4.20
7	3148.	6.07	.34	5.26	6.03	-7.48
9	3143.	8.36	.67	5.17	6.27	2.20
11	3148.	5.52	.47	5.69	6.65	5.13
13	3145.	6.99	.78	5.83	6.88	1.83
16	3138.	9.27	1.05	5.19	6.21	2.63
24	3144.	6.67	.64	6.73	7.78	1.32

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6	5.3720	11.9840	22.9010	5.4600	12.1450	26.4450
7	5.1370	9.8130	20.1270	5.2070	9.9190	23.3940
9	3.8210	7.3120	16.9710	3.8860	7.4020	19.6750
11	3.8180	7.1250	16.6340	4.1420	7.6190	20.0090
13	4.9380	10.0200	21.1440	4.0860	8.4740	21.3010
16	4.3700	10.2620	20.4250	4.3000	10.1090	23.6620
24	3.8040	8.5120	18.0470	4.0060	8.8500	21.8570

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6	7.62	.49	6.62	7.44	4.20
7	5.99	.34	6.11	-7.00	-6.65
9	8.22	.66	6.44	7.80	2.20
11	5.09	.44	7.35	8.59	4.21
13	8.45	.92	6.31	7.45	1.59
16	9.42	1.07	6.01	7.19	2.63
24	6.34	.62	8.16	9.42	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
6	31.00	70.00	31.04	70.08
7	31.00	69.00	31.03	69.07
9	-35.00	-70.50	-35.05	-70.60
11	32.50	69.00	32.72	69.47
13	29.00	68.80	28.55	-67.73
16	31.00	68.50	30.96	68.40
24	32.60	-70.30	32.76	-70.64

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	FPR	THRUST LBF

6	2200.	.9170	.7470	1185.	-1.030	5132.
7	2100.	.9370	.7370	1221.	1.020	4775.
9	2350.	.8860	.7860	1187.	1.025	-5310.
11	2200.	.8580	.7500	1154.	1.020	4910.
13	2000.	.9460	.7140	-1260.	1.020	-4296.
16	2100.	.8100	.7330	1187.	1.020	4540.
24	2050.	.8430	.6830	1176.	1.025	-5299.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF

6	2197.	.9190	.7490	1188.	5130.
7	2097.	.9390	.7380	1223.	4773.
9	-2350.	.8880	.7890	1190.	-5317.
11	2187.	.8700	.7600	1170.	4915.
13	2036.	.9170	.6920	1221.	-4306.
16	2103.	.8080	.7310	1183.	4540.
24	2052.	.8520	.6890	1187.	-5331.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	1.838	618.9	79.7	15.2	19.3
7	1.863	688.0	114.3	10.4	-16.1
9	1.774	589.1	84.6	9.7	19.4
11	1.711	574.7	103.7	10.7	17.7
13	1.908	552.6	77.7	10.3	18.7
16	1.585	678.3	144.0	9.0	-13.8
24	1.712	-360.7	64.9	13.3	20.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6	3017.	64.67	14.30	2.60	3.31	1.96
7	2993.	70.34	20.07	1.75	-2.71	1.31
9	3015.	63.72	15.73	1.72	3.44	-2.97
11	3003.	64.18	19.90	1.96	3.25	1.97
13	3033.	55.93	13.50	1.71	3.11	2.85
16	2949.	80.34	29.29	1.75	-2.69	.65
24	3057.	-40.99	12.66	2.48	3.77	1.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	-.6540	.5370	4.1100	.6610	.5420	4.7320
7	.6040	.4510	3.7160	.6100	.4550	4.3090
9	-.6680	-.5870	-4.2930	.6760	-.5920	-4.9640
11	.5640	.4620	3.7670	.5950	.4880	4.4690
13	.6070	.4210	3.7080	.5330	.3690	3.8780
16	.5190	.4150	3.5180	.5130	.4110	4.0900
24	.6340	-.5790	-4.1540	.6560	-.5960	-4.9820

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6	63.97	14.15	3.00	3.81	1.96
7	69.72	19.90	2.03	-3.14	1.31
9	62.99	15.58	2.13	4.28	2.24
11	60.79	16.85	2.50	4.14	1.74
13	63.80	15.42	1.92	3.49	-2.65
16	81.21	29.64	2.04	-3.13	.65
24	-39.57	12.29	2.97	4.52	1.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
-----	-----	-----	-----	-----
6	26.00	65.00	26.03	65.08
7	27.50	65.00	27.53	65.06
9	-30.00	-67.00	30.04	-67.10
11	29.00	65.40	29.20	65.85
13	26.50	65.50	26.09	64.48
16	27.40	64.30	27.36	64.21
24	27.60	65.40	27.73	65.72

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
6	1800.	.9280	.8280	1169.	1.020	3427.
7	1850.	.9350	.8660	1208.	1.020	3422.
9	2000.	.8830	.7710	1172.	1.020	-4079.
11	2000.	.8700	.8780	1149.	-1.010	3671.
13	1800.	.9540	.8170	-1255.	1.020	3237.
16	1820.	.8090	.8910	1169.	1.015	3162.
24	1680.	.8230	-.6760	-978.	1.020	3611.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
6	1797.	.9300	.8300	1171.	3426.
7	1848.	.9360	.8680	1210.	3420.
9	2000.	.8850	.7730	1176.	-4084.
11	1988.	.8820	.8900	1164.	3675.
13	1833.	.9250	.7910	1216.	3245.
16	1823.	.8070	.8890	1165.	3162.
24	1682.	.8310	-.6820	-987.	3633.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6	1.797	846.5	213.7	12.1	15.3
7	1.822	853.8	175.5	9.3	14.6
9	1.726	761.0	163.6	8.2	15.9
11	1.704	695.4	167.3	9.4	15.9
13	1.894	659.0	144.3	9.5	16.3
16	1.547	829.7	212.8	7.7	-11.6
24	1.630	-526.0	139.0	10.4	16.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
6	2917.	87.43	37.92	2.06	2.60	1.70
7	2936.	87.55	30.92	1.57	2.47	2.09
9	2945.	82.64	30.52	1.47	2.84	2.22
11	2951.	76.63	31.67	1.69	2.88	1.57
13	2986.	66.14	24.87	1.57	2.69	2.09
16	2882.	98.41	43.35	1.51	-2.26	1.96
24	2983.	-61.27	27.82	1.98	3.12	1.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6	.4390	.2580	2.8120	.4430	.2610	3.2160
7	.4410	.2580	2.7890	.4450	.2600	3.2330
9	-.4840	-.3300	-3.1890	-.4900	-.3330	-3.6850
11	.4230	.2690	2.8620	.4460	.2830	3.3860
13	-.4830	.2780	2.9730	.4250	.2440	3.1240
16	.3820	.2400	2.6410	.3780	.2370	3.0730
24	.4100	.2720	2.8100	.4240	.2790	3.3610

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 1800 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
-----	-----	-----	-----	-----	-----
5	86.53	37.54	2.37	2.99	1.70
7	86.81	30.67	1.82	2.86	2.09
9	81.75	30.24	1.82	3.52	2.22
11	72.72	30.08	2.15	3.65	1.20
13	75.15	28.27	1.78	3.03	1.99
16	99.43	43.84	1.75	-2.63	1.96
24	-59.31	27.07	2.37	3.73	1.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
6-5	16402.	2162.	514.7	30.00	.006580
6-6	16616.	2376.	536.2	29.92	.007370
11-6	16133.	2075.	519.7	29.80	.008660
13-6	14196.	2071.	513.7	29.93	.006320
6-7	16901.	2661.	520.7	29.93	.009090
13-7	14847.	2722.	529.2	30.04	.010200

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6-5	29.10	65.30	29.21	65.55
6-6	27.50	64.30	27.05	-63.24
11-6	28.50	64.20	28.47	64.14
13-6	29.00	66.00	29.14	66.32
6-7	28.00	-63.00	27.95	-62.88
13-7	27.00	64.80	26.73	64.15

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
6-5	2050.	.9240	.9050	1143.	1.024	3570.
6-6	1850.	.8750	.9100	1179.	-1.025	-2873.
11-6	1850.	.9210	.9180	1167.	1.015	3154.
13-6	1950.	.8950	.8250	1188.	1.020	3828.
6-7	1940.	.8970	-1.0710	1151.	1.020	-2763.
13-7	1800.	.9690	-.7770	-1003.	1.020	3134.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
6-5	2048.	.9310	.9120	1152.	3580.
6-6	1881.	.8470	.8810	1141.	-2873.
11-6	1844.	.9190	.9160	1164.	3141.
13-6	1941.	.9040	.8330	1200.	3829.
6-7	1944.	.8930	-1.0660	1146.	-2764.
13-7	1825.	.9500	-.7620	-983.	3146.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6-5	1.785	823.8	225.6	6.8	15.3
6-6	1.693	778.4	198.9	13.3	15.1
11-6	1.793	778.5	198.6	16.2	15.7
13-6	1.757	676.3	170.4	-17.9	16.5
6-7	1.717	882.7	244.6	13.3	14.2
13-7	1.898	743.6	195.4	9.0	14.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6-5	2911.	85.49	40.23	1.16	2.60	3.52
6-6	2915.	85.27	37.42	2.38	2.72	1.69
11-6	2931.	81.00	35.50	2.77	2.77	2.97
13-6	2956.	72.43	31.36	3.15	3.15	-5.13
6-7	2884.	94.38	44.93	2.33	2.49	2.23
13-7	2949.	73.53	33.20	1.46	2.37	4.17

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6-5	.4430	.2670	2.8590	.4570	.2740	3.3280
6-6	.4270	.2550	2.8920	.3760	.2240	2.9480
11-6	.4150	.2350	2.6090	.4140	.2350	3.0600
13-6	.4500	.2870	2.9800	.4680	.2980	3.4820
6-7	.3910	.2230	-2.4800	.3860	.2200	-2.9060
13-7	.4620	.2570	2.7200	.4250	.2350	3.0630

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 1

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
----	-----	-----	-----	-----	-----
6-5	83.02	39.21	1.45	3.25	-3.31
6-6	96.77	42.62	2.61	2.98	1.31
11-6	81.34	35.51	3.25	3.25	1.85
13-6	69.69	30.19	3.95	3.95	1.32
6-7	95.77	45.63	2.73	2.91	2.23
13-7	79.95	36.17	1.65	-2.67	2.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6-5	33.50	69.50	33.63	69.77
6-6	32.00	68.60	31.47	-67.47
11-6	34.50	69.30	34.47	69.23
13-6	32.50	69.30	32.66	69.64
6-7	34.30	69.00	34.23	68.87
13-7	31.00	69.00	30.69	68.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DFG R	EPR	THRUST LRF
-----	-----	-----	-----	-----	-----	-----
6-5	2400.	.9300	.8120	1161.	1.030	5006.
6-6	2100.	.8880	.7310	1185.	1.025	-4215.
11-6	2300.	.9150	.7920	1178.	1.023	4851.
13-6	2200.	.8860	.7600	1196.	1.020	4971.
6-7	2400.	.9090	.8270	1178.	1.030	4702.
13-7	2100.	.9690	.7360	-1228.	1.023	4491.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
6-5	2397.	.9380	.8190	1170.	5019.
6-6	2135.	.8590	.7070	1146.	-4215.
11-6	2293.	.9140	.7900	1175.	4832.
13-6	2190.	.8940	.7670	1207.	4973.
6-7	2405.	.9050	.8240	1173.	4704.
13-7	2130.	.9500	.7210	1204.	4509.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6-5	1.845	641.8	139.2	7.7	18.5
6-6	1.765	606.3	107.2	16.4	18.8
11-6	1.836	607.7	76.6	-20.0	19.8
13-6	1.776	560.8	82.8	-19.5	18.8
6-7	1.818	610.7	86.3	18.3	19.2
13-7	1.935	591.7	126.3	11.7	18.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6-5	2985.	66.08	24.45	1.30	3.13	3.26
6-6	2994.	65.46	19.89	2.90	3.33	.65
11-6	3018.	63.59	13.77	3.44	3.44	1.18
13-6	3018.	60.67	15.38	3.47	3.47	2.23
6-7	3012.	64.38	15.63	3.17	3.32	1.30
13-7	3005.	58.49	21.45	1.90	3.00	1.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6-5	.6320	.5000	3.9410	.6520	.5140	4.5960
6-6	.5650	.4050	3.7480	-.4940	-.3540	-3.7980
11-6	.6070	.4680	3.7270	.6050	.4680	4.3700
13-6	.5940	.4830	3.8790	.6190	.5020	4.5390
6-7	.5900	.4490	3.6240	.5810	.4410	4.2430
13-7	.6300	.4430	3.6210	.5770	.4050	4.0620

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6-5	64.06	23.79	1.63	3.92	-2.66
6-6	74.76	22.78	3.16	3.62	.39
11-6	63.87	13.78	4.03	4.03	1.18
13-6	58.30	14.79	-4.36	4.36	1.32
6-7	65.39	15.89	3.71	3.89	.92
13-7	63.83	23.45	2.13	-3.37	1.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6-5	88.50	93.30	88.84	93.66
6-6	91.00	95.40	89.50	93.83
11-6	90.50	94.80	90.41	94.71
13-6	88.50	94.80	88.93	95.26
6-7	89.60	95.00	89.43	94.82
13-7	90.00	-96.30	89.10	95.34

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
6-5	15600.	1.8500	1.8740	1835.	1.400	40791.
6-6	15850.	1.9060	1.9470	1905.	1.400	40900.
11-6	15850.	1.8360	1.9520	1899.	1.400	41065.
13-6	15500.	1.8080	1.8880	1878.	1.400	40886.
6-7	16200.	1.8440	1.9510	1865.	-1.409	-41480.
13-7	15800.	1.9280	1.9450	-1930.	1.400	40737.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR YHRUST LBF
----	-----	-----	-----	-----	-----
6-5	15581.	1.8640	1.8880	1849.	40900.
6-6	16115.	1.8440	1.8830	1843.	40900.
11-6	15802.	1.8320	1.9480	1896.	40900.
13-6	15430.	1.8250	1.9070	1896.	40900.
6-7	16237.	1.8370	1.9430	1858.	-41494.
13-7	16023.	1.8900	1.9070	1892.	40900.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TFSTS *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
6-5	3154.	.42	.27	21.16	21.16	21.57
6-6	3150.	.43	.37	26.96	26.96	20.78
11-6	3154.	.45	.27	24.78	24.78	19.29
13-6	3155.	.41	.27	25.67	25.67	22.80
6-7	3154.	.48	.30	22.20	22.20	23.45
13-7	3153.	.83	.52	29.13	29.13	14.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6-5	3.917	8.3	3.0	251.3	243.9
6-6	4.032	8.6	4.3	330.2	321.1
11-6	3.886	8.7	3.1	291.9	277.7
13-6	3.825	7.7	3.0	297.8	290.3
6-7	3.903	9.3	3.4	262.7	261.8
13-7	4.084	16.9	6.1	-360.9	355.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
----	-----	-----	-----	-----	-----	-----
6-5	72.3540	67.8150	67.2110	79.5930	70.7440	79.6500
6-6	117.3320	90.4650	86.9460	77.3440	73.5970	81.7160
11-6	89.1620	90.5920	79.9280	87.6230	90.1620	93.3130
13-6	84.0020	96.2090	84.7140	94.7050	102.1610	101.3530
6-7	94.6250	94.7280	81.7170	90.5030	92.4220	94.8490
13-7	-152.8520	-118.9870	-95.9270	117.0170	104.0050	102.5650

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
----	-----	-----	-----	-----	-----
6-5	.39	.26	25.07	25.07	16.68
6-6	.65	.46	25.34	25.34	17.45
11-6	.46	.27	28.93	28.93	17.44
13-6	.36	.25	30.72	30.72	9.31
6-7	.50	.31	25.76	25.76	10.72
13-7	-1.09	.59	31.15	31.15	14.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6-5	-82.30	92.50	-82.62	92.86
6-6	84.50	93.30	83.11	91.76
11-6	85.50	92.30	85.42	92.21
13-6	83.30	93.30	83.70	93.75
6-7	82.80	91.00	-82.64	-90.83
13-7	84.50	94.00	83.66	93.06

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
6-5	12450.	1.6460	1.6840	1723.	1.300	33577.
6-6	12900.	1.6930	1.7790	-1835.	1.310	34453.
11-6	13200.	1.6530	1.8110	1800.	1.310	34592.
13-6	12800.	1.6410	1.7280	1761.	1.310	34442.
6-7	12500.	1.5850	1.7230	1730.	-1.293	-33105.
13-7	13200.	1.7160	1.8030	-1815.	1.310	34316.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
6-5	12435.	1.6590	1.6970	1736.	33667.
6-6	13116.	1.6380	1.7210	1775.	34453.
11-6	13160.	1.6500	1.9070	1797.	34453.
13-6	12742.	1.6570	1.7440	1778.	34453.
6-7	12528.	1.5790	1.7160	-1723.	-33116.
13-7	13386.	1.6820	1.7680	1779.	34453.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6-5	3.477	9.0	2.1	163.4	159.3
6-6	3.573	8.2	4.5	225.2	215.9
11-6	3.493	8.2	2.5	208.6	196.3
13-6	3.465	9.5	6.8	205.4	196.5
6-7	3.345	11.1	3.0	159.3	157.3
13-7	3.626	16.2	5.3	236.0	233.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6-5	3155.	.52	.21	15.49	15.49	15.84
6-6	3149.	.46	.43	20.75	20.75	15.71
11-6	3154.	.47	.24	19.70	19.70	16.14
13-6	3153.	.55	.68	19.54	19.54	7.19
6-7	3154.	.67	.31	15.70	15.70	17.03
13-7	3153.	.89	.51	21.45	21.45	8.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6-5	36.7640	56.0490	59.4860	39.7540	58.4300	70.4420
6-6	44.3190	55.8890	63.6660	31.7040	45.8150	60.3240
11-6	35.2570	50.1450	54.5840	34.7690	49.9340	63.7630
13-6	41.8300	68.1770	67.6230	46.2700	72.2750	80.7620
6-7	-25.1470	38.9810	46.1250	-24.3110	-38.0940	-53.6300
13-7	-53.9860	69.8390	67.6010	43.6010	61.3670	72.6840

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6-5	.48	.20	19.83	19.83	14.74
6-6	.64	.52	19.66	19.66	14.63
11-6	.48	.24	23.01	23.01	15.75
13-6	.50	.64	23.34	23.34	6.18
6-7	.69	.32	18.25	18.25	8.56
13-7	-1.11	.58	23.07	23.07	8.97

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6-5	75.40	89.70	75.69	90.05
6-6	76.00	-91.10	74.75	89.60
11-6	77.20	88.70	77.13	88.61
13-6	74.70	89.80	75.06	90.24
6-7	75.00	89.50	74.86	89.33
13-7	75.50	90.50	74.75	89.60

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LRF
6-5	9800.	1.4650	1.5240	1606.	1.215	26908.
6-6	9600.	1.4500	1.5710	1655.	1.200	25800.
11-6	9900.	1.4390	1.5910	1653.	1.210	26694.
13-6	9400.	1.4070	1.4950	1610.	1.205	26185.
6-7	9500.	1.3670	1.5110	1601.	1.205	26185.
13-7	9400.	1.4500	1.5280	1647.	1.200	25697.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6-5	9788.	1.4770	1.5360	1618.	26980.
6-6	9761.	1.4030	1.5200	1601.	25800.
11-6	9870.	1.4360	1.5880	1650.	26587.
13-6	9358.	1.4200	1.5140	1625.	26193.
6-7	9521.	1.3620	1.5050	1594.	26193.
13-7	9533.	1.4220	1.4980	1615.	25800.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6-5	3.089	13.8	1.6	-42.4	-43.8
6-6	3.053	12.2	4.0	129.8	124.4
11-6	3.033	12.3	2.1	119.0	111.2
13-6	2.963	14.6	4.4	110.6	108.2
6-7	2.880	17.3	2.7	97.3	98.3
13-7	3.056	19.7	4.8	119.4	120.8

NOTE- MINUS SIG IS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6-5	3154.	.90	.18	-4.52	-4.68	10.13
6-6	3149.	.80	.46	13.99	13.99	7.84
11-6	3154.	.81	.24	12.94	12.94	10.21
13-6	3153.	.99	.51	12.30	12.30	4.82
6-7	3153.	1.21	.32	11.13	11.26	11.43
13-7	3152.	1.30	.55	12.88	13.03	4.15

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6-5	16.5440	31.3240	41.1430	17.6400	32.5850	48.6120
6-6	-18.8600	36.0550	-48.1350	14.4100	29.7570	45.9370
11-6	13.5820	24.5540	34.8020	13.4360	24.4660	40.6820
13-6	15.0110	32.0420	41.8400	16.2420	33.8510	49.7850
6-7	13.2790	28.8440	38.1860	12.9080	28.2030	44.4240
13-7	17.5890	33.6110	42.3960	14.9130	29.7380	45.9180

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 5

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
----	-----	-----	-----	-----	-----
6-5	.84	.18	-5.74	-5.93	9.85
6-6	1.05	.55	13.35	13.35	7.84
11-6	.82	.24	15.13	15.13	9.21
13-6	.91	.49	14.64	14.64	4.68
6-7	1.24	.33	12.95	13.10	4.22
13-7	1.53	.62	13.95	14.11	4.15

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6-5	55.50	84.50	55.72	84.83
6-6	55.00	85.00	54.10	83.60
11-6	58.50	83.00	58.44	82.92
13-6	55.00	83.40	55.27	83.80
6-7	/ 55.50	84.50	55.39	84.34
13-7	55.00	83.50	54.45	82.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TY6 DEG R	EPR	THRUST LAF
6-5	5250.	1.1680	1.2160	1376.	1.085	12896.
6-6	4800.	1.1250	1.1630	1399.	1.080	12240.
11-6	5400.	1.1520	1.3200	1408.	1.080	12289.
13-6	4950.	1.0890	1.1910	1381.	1.080	12236.
6-7	5070.	1.1040	1.2190	1377.	1.080	12236.
13-7	4850.	1.1100	1.1720	1403.	1.080	12191.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
-----	-----	-----	-----	-----	-----
6-5	5244.	1.1770	1.2250	1386.	12930.
6-6	4880.	1.0890	1.1250	1353.	12240.
11-6	5384.	1.1500	1.3170	1405.	12240.
13-6	4928.	1.0990	1.2030	1394.	12240.
6-7	5081.	1.1000	1.2140	1372.	12240.
13-7	4918.	1.0880	1.1490	1375.	12240.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
6-5	2.445	98.8	5.8	38.3	47.7
6-6	2.352	87.1	7.2	45.7	50.0
11-6	2.413	87.7	2.6	49.7	50.0
13-6	2.276	94.4	8.7	40.6	45.1
6-7	2.309	101.8	4.9	39.1	44.8
13-7	2.320	108.2	9.7	40.5	47.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
6-5	3141.	8.08	.81	5.15	6.41	4.68
6-6	3137.	7.40	1.05	6.37	6.97	2.61
11-6	3143.	7.27	.37	6.77	6.81	4.94
13-6	3139.	8.28	1.31	5.85	6.50	2.08
6-7	3140.	8.81	.73	5.55	6.37	4.88
13-7	3137.	9.31	1.44	5.72	6.72	.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6-5	5.1110	11.0880	21.7250	5.3570	11.4930	25.5700
6-6	4.9670	10.7420	22.7340	4.0810	9.0240	22.1110
11-6	4.1020	7.8920	17.4290	4.0720	7.8710	20.3950
13-6	4.0080	8.9420	19.1440	4.2420	9.3950	22.6480
6-7	4.6290	10.6450	20.6840	4.5280	10.4260	24.1060
13-7	4.0910	8.3470	18.0340	3.6350	7.4760	19.7880

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
6-5	7.71	.78	6.51	8.10	4.68
6-6	9.00	1.25	6.65	7.28	2.26
11-6	7.33	.38	7.93	7.97	4.70
13-6	7.83	1.24	7.43	8.26	1.98
6-7	9.00	.75	6.47	7.42	1.31
13-7	-10.48	1.61	6.28	7.37	.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
----	-----	-----	-----	-----
6-5	30.50	69.00	30.62	69.27
6-6	31.00	68.40	30.49	-67.27
11-6	32.00	68.00	31.97	67.93
13-6	30.50	68.80	30.65	69.13
6-7	33.30	69.50	33.24	69.37
13-7	31.00	69.50	30.69	68.81

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LAF

6-5	2100.	.9370	.7160	1161.	1.025	4831.
6-6	2000.	.8840	.7050	1206.	1.025	-4146.
11-6	2050.	.8530	.7350	1174.	1.020	4395.
13-6	2050.	.8890	.7200	1217.	1.020	4795.
6-7	2300.	.8630	.7900	1190.	-1.030	4877.
13-7	2000.	.9530	.7010	-1251.	1.025	4664.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CS F/A X100	COR PF F/A X100	CORR TT6 DEG R	COR THRUST LBF
6-5	2097.	.9440	.7220	1170.	4844.
6-6	2033.	.8560	.6820	1167.	-4146.
11-6	2044.	.8520	.7330	1172.	4377.
13-6	2041.	.8980	.7270	1229.	4797.
6-7	2305.	.8590	.7870	1186.	4878.
13-7	2028.	.9340	.6870	1226.	4682.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6-5	1.839	713.1	-177.4	7.8	16.3
6-6	1.751	624.0	126.5	-16.7	18.3
11-6	1.701	624.8	82.3	-17.7	17.4
13-6	1.779	598.2	83.7	15.9	17.4
6-7	1.717	571.8	112.4	-16.9	18.8
13-7	1.911	558.7	108.0	12.0	18.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6-5	2956.	72.96	-31.18	1.31	-2.75	2.60
6-6	2980.	67.61	23.55	-2.98	3.25	1.96
11-6	3002.	70.19	15.88	-3.27	3.27	1.95
13-6	3012.	64.45	15.50	-2.82	3.08	.78
6-7	2997.	63.53	21.45	-3.08	3.43	1.03
13-7	3017.	56.13	18.63	1.98	3.10	1.69

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
6-5	.6050	.4580	3.7610	.6240	.4710	4.3840
6-6	.5530	.3920	3.6880	.4850	-.3430	-3.7390
11-6	.5140	.3820	-3.3610	.5120	.3810	3.9420
13-6	.5680	.4420	3.7030	.5910	.4600	4.3320
6-7	.5930	.4870	3.7800	.5840	.4790	4.4250
13-7	.6480	.4790	3.7660	.5940	.4370	4.2230

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
6-5	70.74	-30.35	1.64	3.44	2.25
6-6	77.18	26.96	3.24	3.54	1.45
11-6	70.48	15.88	-3.83	3.83	1.59
13-6	61.95	14.91	-3.55	3.87	.66
6-7	64.52	21.80	-3.61	4.02	1.03
13-7	61.24	20.38	2.22	3.48	1.69

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
6-5	28.40	-67.00	28.51	-67.26
6-6	27.50	65.60	27.05	64.52
11-6	27.50	64.20	27.47	64.14
13-6	27.50	65.80	27.63	66.12
6-7	27.60	65.50	27.55	65.37
13-7	26.00	64.50	25.74	63.86

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT6 DEG R	EPR	THRUST LBF
-----	-----	-----	-----	-----	-----	-----
6-5	1950.	.9140	.7440	1152.	-1.025	-4130.
6-6	1750.	.8800	.7670	1188.	1.020	3256.
11-6	1750.	.8630	.8690	1170.	1.015	3154.
13-6	1850.	.9090	.8040	1212.	1.020	3763.
6-7	1850.	.8560	.8100	1163.	1.020	3520.
13-7	1800.	.9540	.7570	-904.	1.020	3045.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT6 DEG R	COR THRUST LBF
6-5	1948.	.9210	.7500	1161.	-4141.
6-6	1779.	.8520	.7420	1150.	3256.
11-6	1745.	.8610	.8670	1168.	3141.
13-6	1842.	.9180	.8120	1223.	3764.
6-7	1854.	.8520	.8070	1159.	3522.
13-7	1825.	.9350	.7420	-886.	3057.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
6-5	1.763	813.5	233.7	6.9	15.0
6-6	1.705	781.7	195.6	13.7	15.5
11-6	1.678	782.5	171.3	-14.5	14.7
13-6	1.783	703.8	171.2	-14.3	15.7
6-7	1.638	839.6	231.4	13.0	14.5
13-7	1.872	729.9	183.6	9.4	15.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
6-5	2906.	85.34	42.13	1.19	2.59	2.22
6-6	2917.	85.12	36.59	2.45	2.78	1.82
11-6	2930.	86.95	32.70	-2.65	2.68	1.05
13-6	2954.	74.21	31.02	2.47	2.72	1.43
6-7	2886.	94.02	44.56	2.40	2.66	1.82
13-7	2954.	73.22	31.68	1.54	2.53	1.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
6-5	-.4970	-.3330	-3.2050	-.5120	-.3420	-3.7340
6-6	.4550	.2800	-3.0760	.4000	.2450	3.1310
11-6	.3950	.2350	2.6090	.3940	.2350	3.0600
13-6	.4500	.2810	2.9450	.4680	.2910	3.4410
6-7	.4280	.2730	2.8110	.4220	.2690	3.2930
13-7	.4500	.2510	2.6820	.4140	.2300	3.0210

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-3A * 2100 HOUR AND ABOVE TESTS *

MODE 8

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
-----	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
-----	-----	-----	-----	-----	-----
6-5	82.85	41.04	1.49	3.24	1.99
6-6	96.78	41.73	2.68	3.03	1.82
11-6	87.29	32.71	-3.11	3.14	1.05
13-6	71.39	29.87	-3.10	3.41	1.43
6-7	95.40	45.27	2.82	3.12	1.82
13-7	79.54	34.51	1.74	2.85	1.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	42.6	1.92	84	2	14
	600-Hour	43.2	1.92	84	2	14
	1200-Hour	43.6	1.93	87	1	12
2	Baseline	42.6	1.92	84	2	14
	600-Hour	43.2	1.92	84	2	14
	1200-Hour	43.6	1.93	87	1	12
3	Baseline	42.6	1.92	84	2	14
	600-Hour	43.2	1.92	84	2	14
4	Baseline	41.3	1.89	84	3	13
	600-Hour	41.9	1.90	84	1	15
5	Baseline	41.3	1.89	84	3	13
6	Baseline	41.3	1.89	84	3	13
	600-Hour	41.9	1.90	84	1	15
	1200-Hour	43.4	1.94	86	2	12
	1500-Hour	43.8	1.91	86	1	13
	2100-Hour *					
	2400-Hour	43.4	1.94	83	2	15
	2700-Hour	43.6	1.92	85	1	14
7	Baseline	41.3	1.89	84	3	13
	600-Hour	41.9	1.90	84	1	15
	1200-Hour	43.4	1.94	86	2	12
	1500-Hour	43.8	1.91	86	1	13
8	Baseline	42.8	1.94	85	2	13
9	Baseline	42.8	1.94	85	2	13
	600-Hour	44.7	1.94	86	1	13
	1200-Hour	42.2	1.90	84	2	14
	1500-Hour	43.6	1.91	83	1	16
	1800-Hour	44.7	1.91	83	1	16

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
10	Baseline	42.1	1.92	84	2	14
	600-Hour	44.1	1.91	84	2	14
11	Baseline	41.7	1.90	83	2	15
	600-Hour *					
	1200-Hour *					
	1500-Hour	43.8	1.93	84	1	15
	1800-Hour	42.3	1.91	84	1	15
2100-Hour	43.4	1.92	84	2	14	
12	Baseline	42.1	1.92	84	2	14
	600-Hour	44.1	1.91	84	2	14
	1200-Hour	43.8	1.95	85	2	13
	1500-Hour	43.6	1.92	84	1	15
13	Baseline	42.1	1.94	85	2	13
	600-Hour	43.4	1.92	84	2	14
	1200-Hour	43.4	1.93	86	2	12
	1500-Hour	44.3	1.90	84	2	14
	1800-Hour	42.8	1.91	84	2	14
	2100-Hour	42.8	1.92	84	2	14
	2700-Hour *					
14	Baseline	42.1	1.94	85	2	13
15	Baseline	39.0	1.90	83	2	15
16	Baseline	39.0	1.90	83	2	15
	600-Hour	43.0	1.90	84	2	14
	1200-Hour	44.5	1.92	86	1	13
	1500-Hour	42.3	1.90	83	2	15
	1800-Hour	42.6	1.92	84	2	14
17	Baseline	39.0	1.90	83	2	15
	600-Hour	43.0	1.90	84	2	14
18	Baseline	39.0	1.89	83	2	15
19	Baseline	39.0	1.89	83	2	15

* Fuel analysis data not available

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
20	Baseline	42.3	1.92	85	2	13
	600-Hour	41.9	1.91	84	2	14
	1200-Hour	43.2	1.92	85	1	14
	1500-Hour	44.1	1.93	86	2	12
21	Baseline	44.1	1.90	86	1	13
	1500-Hour	45.4	1.94	81	2	17
22	Baseline	41.9	1.90	84	1	15
	600-Hour	44.1	1.92	87	2	11
	1200-Hour	44.1	1.90	86	1	13
23	Baseline	44.1	1.93	86	2	12
	600-Hour *	44.5	1.91	84	1	15
	1200-Hour	44.5	1.91	82	1	17
24	Baseline	44.3	1.90	84	2	14
	600-Hour	42.6	1.92	84	2	14
	1200-Hour *					
	1500-Hour *					
25	Baseline	43.8	1.94	85	1	14
	1200-Hour *					

* Fuel analysis data not available

6. REFERENCES

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Report No. FAA-RD-79-8, VII

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME VII
RB211-22B TEST DATA**



APRIL 1979

FINAL REPORT

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16. Abstract This is the seventh volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the RB211-22B engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the seventh volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the RB211-22B engine type as installed on the L1011 aircraft. The engines, owned and operated by TWA, were tested in San Francisco by NREC personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume II - JT8D-9 Test Data
- Volume III - JT8D-7 Test Data
- Volume IV - JT3D-7 Test Data
- Volume V - JT3D-3B Test Data
- Volume VI - JT9D-3A Test Data
- Volume VIII - CF700-2D Test Data

Regarding the test data, it should be noted that EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume: Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emission and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the RB211-22B engine there were five such series; Baseline; 150 Hour; 300 Hour; 450 Hour; and 600 Hour and Above. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/4802	6/1/76	Original Test A/C No. <u>11020</u> , Position No. <u>1</u> Baseline Emission Test
	6/28/76	"150-Hour" Emission Test
	7/27/76	"300-Hour" Emission Test
	8/23/76	"600-Hour" Emission Test
2/4425	6/1/76	Original Test A/C No. <u>11020</u> , Position No. <u>3</u> Baseline Emission Test
	6/18/76	The following took place after numerous squaks pertaining to high oil temperature in the engine. On start of take-off roll engine had what sounded like a compressor stall. We closed the throttle and the engine got to 750 deg before shutdown. The engine was removed from the program.
3/4487	6/3/76	Original Test A/C No. <u>11027</u> , Position No. <u>1</u> Baseline Emission Test
	6/13/76	Disc: Engine TGT was normal for first 2 1/2 hours then became erratic C/A: Replaced TGT indicator
	6/14/76	Disc: Same squak as above C/A: Cleaned TGT indicator connectors
	6/16/76	Disc: Same squak as above C/A: Replaced indicator
	6/18/76	C/A: Screws too long in panel on top of engine splitter are causing to wear on TGT leads, replaced screws.
	6/21/76	"150-Hour" Emission Test
	7/25/76	"300-Hour" Emission Test
	8/7/76	"450-Hour" Emission Test
	9/2/76	"600-Hour" Emission Test
	9/11/76	Disc: Checked engine for puddling after flight termination C/A: Replaced engine per MI39-585, engine removed from program

Unit No./ Serial No.	Date	Item
4/4454	6/3/76	Original Test A/C No. <u>11027</u> , Position No. <u>3</u> Baseline Emission Test
	6/21/76	"150-Hour" Emission Test
	7/25/76	"300-Hour" Emission Test
	8/7/76	"450-Hour" Emission Test
	9/2/76	"600-Hour" Emission Test
	9/15/76	Disc: After take-off oil psi started dropping, then oil quantity dropped to zero. After T.O. AH synthetic oil smell was apparent 5 minutes before oil loss. Isolated duct and stopped smell. Shut down engine at 12452 - idled engine 1 min approx 20 psi. Engine windmilled 26 mins, zero quantity and 20 mins zero set C/A: Found main oil screen clogged. Replaced screen, completed M139-59A and performed test no. 9 (oil consumption) no oil consumed, also changed oil
	10/8/76	"750-Hour" Emission Test
5/4468	6/11/76	Original Test A/C No. <u>11002</u> , Position No. <u>1</u> Baseline Emission Test
	7/12/76	Engine removed from program
6/4429	6/11/76	Original Test A/C No. <u>11002</u> , Position No. <u>3</u> Baseline Emission Test
	7/20/76	Engine removed from program
7/4470	6/14/76	Original Test A/C No. <u>11019</u> , Position No. <u>1</u> Baseline Emission Test
	6/21/76	Disc: On engine start oil pressure lite came on as engine was started
		C/A: Changed main oil and scan screen
	7/11/76	"150-Hour" Emission Test
	8/6/76	"450-Hour" Emission Test
8/31/76	"600-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
8/4814	6/15/76 7/2/76 7/11/76 7/30/76	Original Test A/C No. <u>11019</u> , Position No. <u>3</u> Baseline Emission Test Disc: Engine EPR reads low with all other parameters aligned C/A: Replaced EPR indicator "150-Hour" Emission Test All engine parameters low, with fuel control amp switch set to override, all engine parameters indicate power restored, engine removed from program, per M139-585.
9/4457	6/15/76 6/28/76	Original Test A/C No. <u>11031</u> , Position No. <u>1</u> Baseline Emission Test Engine removed from program
10/4898	6/15/76 6/26/76 8/11/76 8/19/76 8/19/76 8/21/76 8/29/76	Original Test A/C No. <u>11031</u> , Position No. <u>3</u> Baseline Emission Test Disc: Engine oil filter pressure lite on/off during take-off and early climb out. Temperature and quantity Ok. C/A: Replaced pressure and scavenger filters Disc: Parameter indicator readings fluctuating with fuel control amp switch set to override. Fluctuation did not drop. C/A: Replaced fuel flow regulator, same squak on JFK leg of flight. No maint action requested as per TWA directive MSL 7-99-C73 but MCI engineering department advised Disc: Engine oil filter lite on in climb out of LAX; went out in cruise C/A: Replaced main and scavenger oil filters "600-Hour" Emission Test Disc: Engine EPR indication loss C/A: Replaced EPR indicator Disc: Engine very slow to start C/A: Replaced both ignition plugs

Unit No./ Serial No.	Date	Item
10/4898 Continued	9/16/76	Disc: Engine slow to light-off after ignition on
		C/A: Washed APU and changed P-3 filter and checked, OK for proper trim
	9/24/76	Disc: Engine reverser intransit lite on during flight
		C/A: Proximity sensor gap adjusted, same squak on next leg, corrected by switch adjustment
11/4489	10/7/76	"750-Hour" Emission Test
		Original Test A/C No. <u>11009</u> , Position No. <u>1</u>
	6/22/76	Baseline Emission Test
	7/4/76	On descent to JFK engine would not accelerate. Used handbook procedure, operation normal but the during taxi in - same thing.
		C/A: Changed FFR
	7/17/76	Disc: On take-off with throttle against stop, unable to obtain take-off power. Take-off power should be 1.538
		C/A: Replaced P ₄ filter assembly
	7/19/76	Same squak, uptrimmed 2 turns
	7/27/76	Same squak again, replaced amplifier and reads TGT
	8/2/76	"300-Hour" Emission Test
	8/10/76	Out of JFT at full no reduction thrust take-off no. 1 engine 0.03 EPR low at full throttle. All other instruments low. Normal power at all other settings.
		C/A: Uptrimmed at San Francisco
8/11/76	Same complaint again, retrimmed again	
8/12/76	Similar complaint as above, replaced fuel flow regulator	
8/24/76	"450-Hour" Emission Test	
9/15/76	"600-Hour" Emission Test	

Unit No./ Serial No.	Date	Item	
12/4816		Original Test A/C No. <u>11009</u> , Position No. <u>3</u>	
	6/22/76	Baseline Emission Test	
	8/2/76	"300-Hour" Emission Test	
	8/24/76	"450-Hour" Emission Test	
	8/28/76	Engine generator bearing lite on, all other indications normal	
		C/A: Replaced generator control unit	
	9/1/76	Same squak again, replaced generator bearing unit again	
	9/14/76	No ignition on engine during start until "Cont" ignition pushed, all other indications normal	
13/4495		C/A: Replaced "A" excitor unit and engine start normal	
	9/15/76	"600-Hour" Emission Test	
	13/4495		Original Test A/C No. <u>11012</u> , Position No. <u>1</u>
		7/3/76	Baseline Emission Test
		7/5/76	Disc: EPR inoperative
			C/A: Replaced EPR transmitter
		7/6/76	Disc: N ₁ and N ₃ maximum indicator lites on and would not reset
			C/A: Replaced N ₁ indicator, placard N ₃ indicator
		7/7/76	Replaced N ₃ indicator and removed placard
		7/11/76	Disc: N ₃ indicator fluctuates
			C/A: Replaced N ₃ indicator module, reset CB
		7/20/76	"150-Hour" Emission Test
		8/11/76	"300-Hour" Emission Test
8/29/76		"450-Hour" Emission Test	
8/29/76		Disc: ISLN valve would not open after engine start. No air flow or flowbar. Pulling CB no help.	
	C/A: Replaced ISLN valve		
9/23/76	"600-Hour" Emission Test		
14/4804		Original Test A/C No. <u>11012</u> , Position No. <u>3</u>	
	7/3/76	Baseline Emission Test	

Unit No./ Serial No.	Date	Item
14/4804 Continued	7/13/76	Disc: Engine would not develop take-off thrust, reduced EPR was 0.502 and 0.480 was obtained with throttle on the stop. All other parameters also low. Engine operation in climb and cruise appears normal except throttle is 3/4 to 1 knob ahead of others. Take-off temperature 83 deg F alt 29.31
		C/A: Replaced engine lower tongue box and teleflex cable
	7/20/76	"150-Hour" Emission Test
	7/31/76	Disc: Engine oil found draining down from rear turbine
		C/A: Replaced scavage filter
	8/6/76	Changed N ₃ indicator and TGT indicator
	8/11/76	"300-Hour" Emission Test
	8/29/76	"450-Hour" Emission Test
	9/11/76	Engine AVM reads off scale in turbine position
		C/A: Changed vibration monitor
	9/12/76	Disc: Same squak as above
		C/A: Found AVM pickup mount bracket loose, secured same
	9/18/76	Above condition persisted thru 9/18/76 - engine placarded during this period and then a harness change was made and placard removed
	9/21/76	Engine AVM squak appeared again and the turbine AVM pickup was replaced
	9/23/76	Same squak again, replaced signal conditioner unit
	9/23/76	"600-Hour" Emission Test
15/4435	7/9/76	Original Test A/C No. <u>11004</u> , Position No. <u>3</u> Baseline Emission Test
	7/23/76	"150-Hour" Emission Test
16/4474	7/30/76	Original Test A/C No. <u>11008</u> , Position No. <u>1</u> Baseline Emission Test

Unit No./ Serial No.	Date	Item
16/4474 Continued	8/25/76 9/4/76 10/5/76	"150-Hour" Emission Test ACM growls loudly, changed ACM on 9/6/76 "450-Hour" Emission Test
17/4403	7/30/76 8/25/76 9/13/76 9/23/76	Original Test A/C No. <u>11008</u> , Position No. <u>3</u> Baseline Emission Test "150-Hour" Emission Test Replaced fuel quantity indicator Engine experienced a series of compressor stalls on descent. Changed engine and removed from program.
18/4801	8/9/76	Original Test A/C No. <u>11015</u> , Position No. <u>1</u> Baseline Emission Test
19/4479	8/9/76 8/30/76	Original Test A/C No. <u>11015</u> , Position No. <u>3</u> Baseline Emission Test Engine removed from program

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T_a	Ambient temperature	deg R
AMB PRESS	P_a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 23 per cent N_1 nominal	
MODE 2		Idle "plus", initial - 27 percent N_1	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 85 per cent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 per cent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 per cent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N_1	Rotational speed of low pressure turbine, given as a percent of design speed (3900 rpm)	percent
N2 SPEED	N_2	Rotational speed of intermediate pressure turbine, given as a percent of design speed (7000 rpm)	percent
N3 SPEED	N_3	Rotational speed of high pressure turbine, given as a percent of design speed (10,600 rpm)	percent
CORR N1	N_1'	N_1 speed corrected to standard ambient conditions (Ref 1) $N_1' = N_1 \times \sqrt{518.7/T_a}$	percent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
CORR N3	N_3'	Corrected N_3 speed (Ref 1) $N_3' = N_3 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (Ref 2, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28+0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4} + 0.25a} - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$ where a is the hydrogen-carbon ratio of the fuel as obtained in the fuel analysis (a mean value was used when the analysis was not available; $a_{mean} = 1.90$)	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio where air flow is obtained from curve shown in Figure 1 and fuel flow is measured	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust, obtained from $TH = TH' \times (P_a/29.92)$ (Ref 1)	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)'_{PF}$	Corrected performance fuel-air ratio (Ref 1) $(F/A)'_{PF} = (F/A)_{PF} \times (518.7/T_a)$	

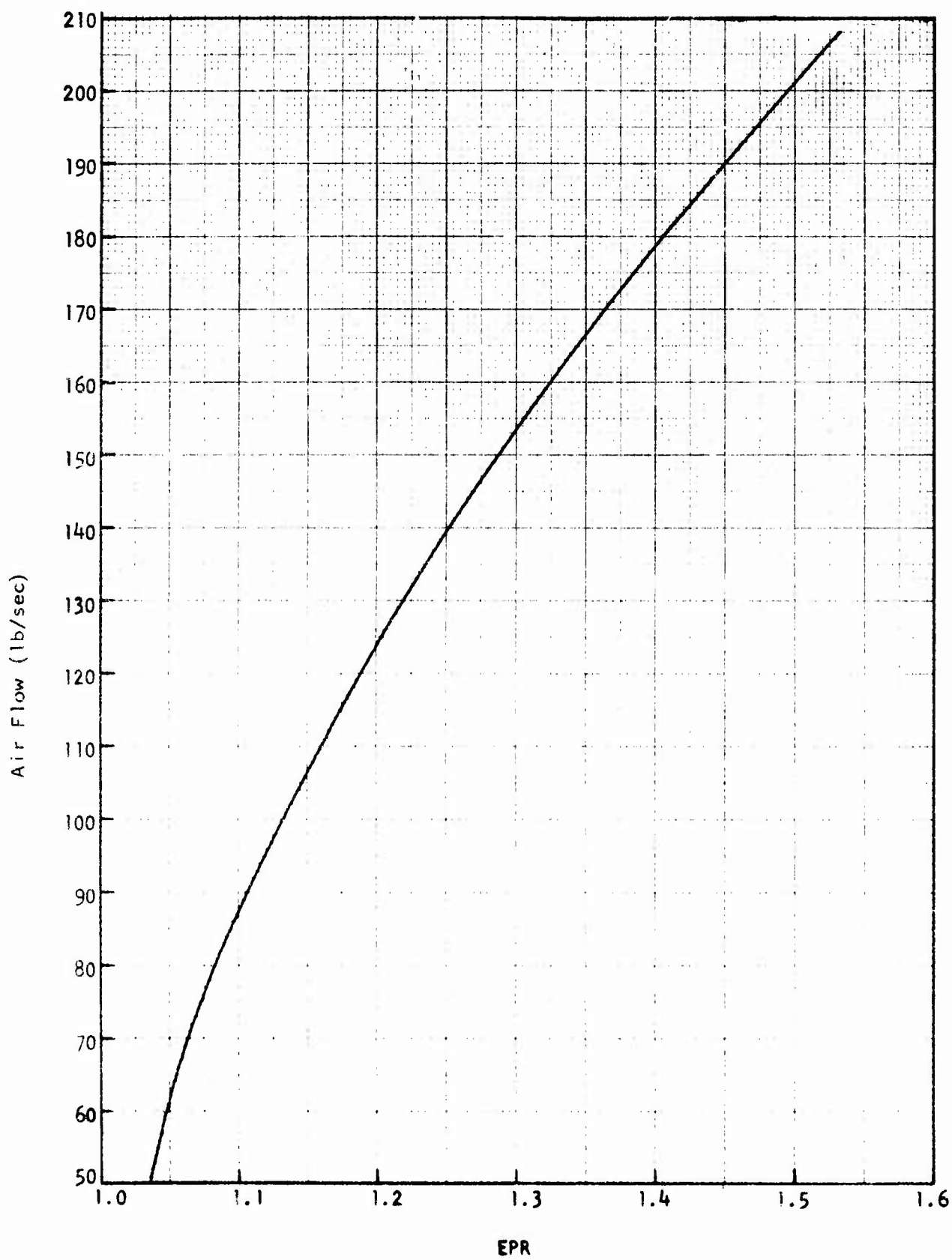


Figure 1. Estimated Total Air Flow versus EPR

Name	Symbol	Description	Unit
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3 through 6 and from the curve shown in Fig 3 for modes 1, 2, 7 and 8)	lbf
CO2 CONC	CO_2	Concentration of carbon dioxide	percent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NOX CONC	NO_x	Concentration of NO_x	ppm
CO2 EI	EI_{CO_2}	Emission index of carbon dioxide (Ref 3) $EI_{CO_2} = \frac{M_{CO_2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO_2} = molecular weight of CO_2	lbm per 1000 lbm fuel
CO EI	EI_{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ where: M_{CO} = molecular weight of CO	lbm per 1000 lbm fuel
HC EI	EI_{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ where: M_{HC} = molecular weight of methane	lbm per 1000 lbm fuel

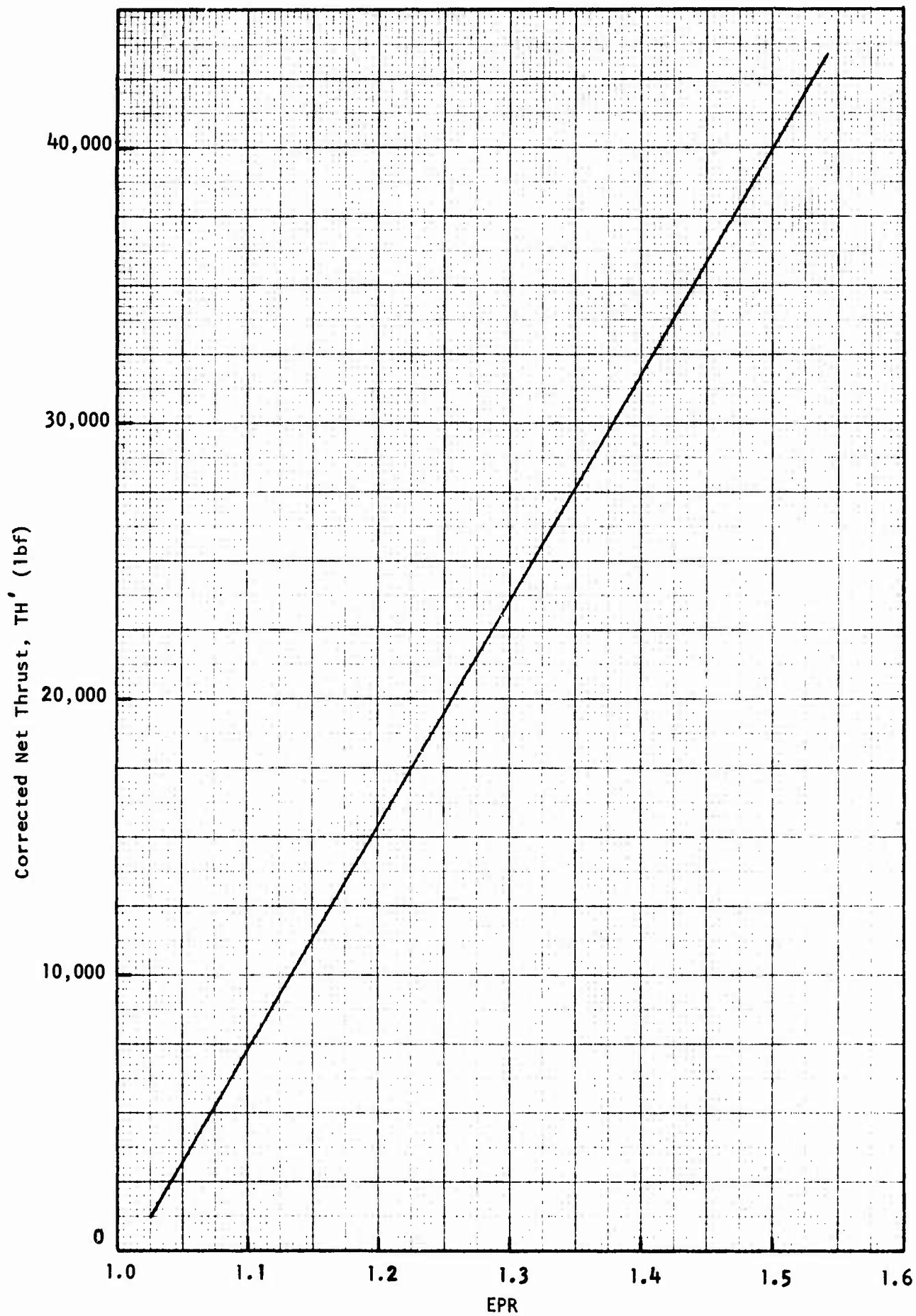


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic

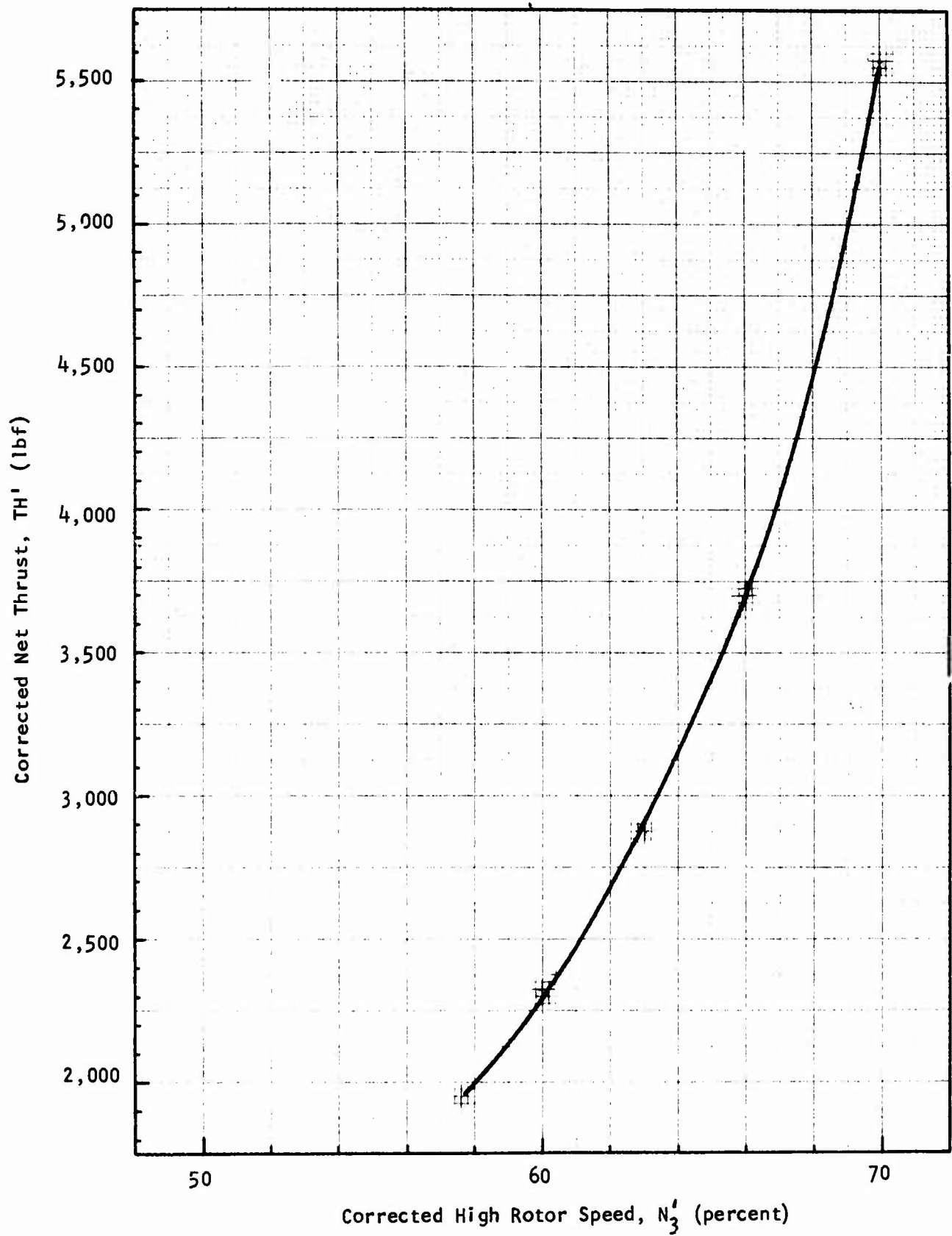


Figure 3. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
NO EI	EI_{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO_2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO_2} = molecular weight of NO_2</p>	1bm per 1000 1bm fuel
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = \frac{M_{NO_2} \times \frac{NO_x}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	1bm per 1000 1bm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ <p>where RS = smoke spot reflectance RW = reflectance of clean filter paper</p>	
SMK NUMBER	SN'	Smoke Number corrected in manner shown in Appendix III of Volume I	1bm per 1000 1bm fuel
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	1bm per 1000 1bm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})} \times EI_{HC}$	1bm per 1000 1bm fuel
NRE CNO EI	$(EI_{NO_x})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	1bm per 1000 1bm fuel

Name	Symbol	Description	
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO _x emission index (see Appendix II of Volume I) : $(EI_{NO_x})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO_x}$	lbm per 1000 lbm fuel
FCO	F_{CO}	CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,obs}/(B - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(B - F/A_{ref} \times 10^4)}}$ <p>where: B = 600 for modes 1,2,6,7,8 B = 525 for modes 3,4,5 and $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$</p> <p>where $f_1 = P_b/P_a$ and $f_2 = T_b/(T_a/518.7)$, and P_b and T_b are obtained from curves supplied by Rolls-Royce (1971) Ltd. (see Fig. 4)</p> <p>Subscript "obs" refers to actual values or values observed for a particular test and mode.</p> <p>Subscript "ref" refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{ref} = 0.0180$ $N_{2,ref} = 6800 \text{ rpm}$ $P_{a,ref} = 30.00 \text{ in Hg abs}$ $T_{a,ref} = 520.0 \text{ deg R}$	

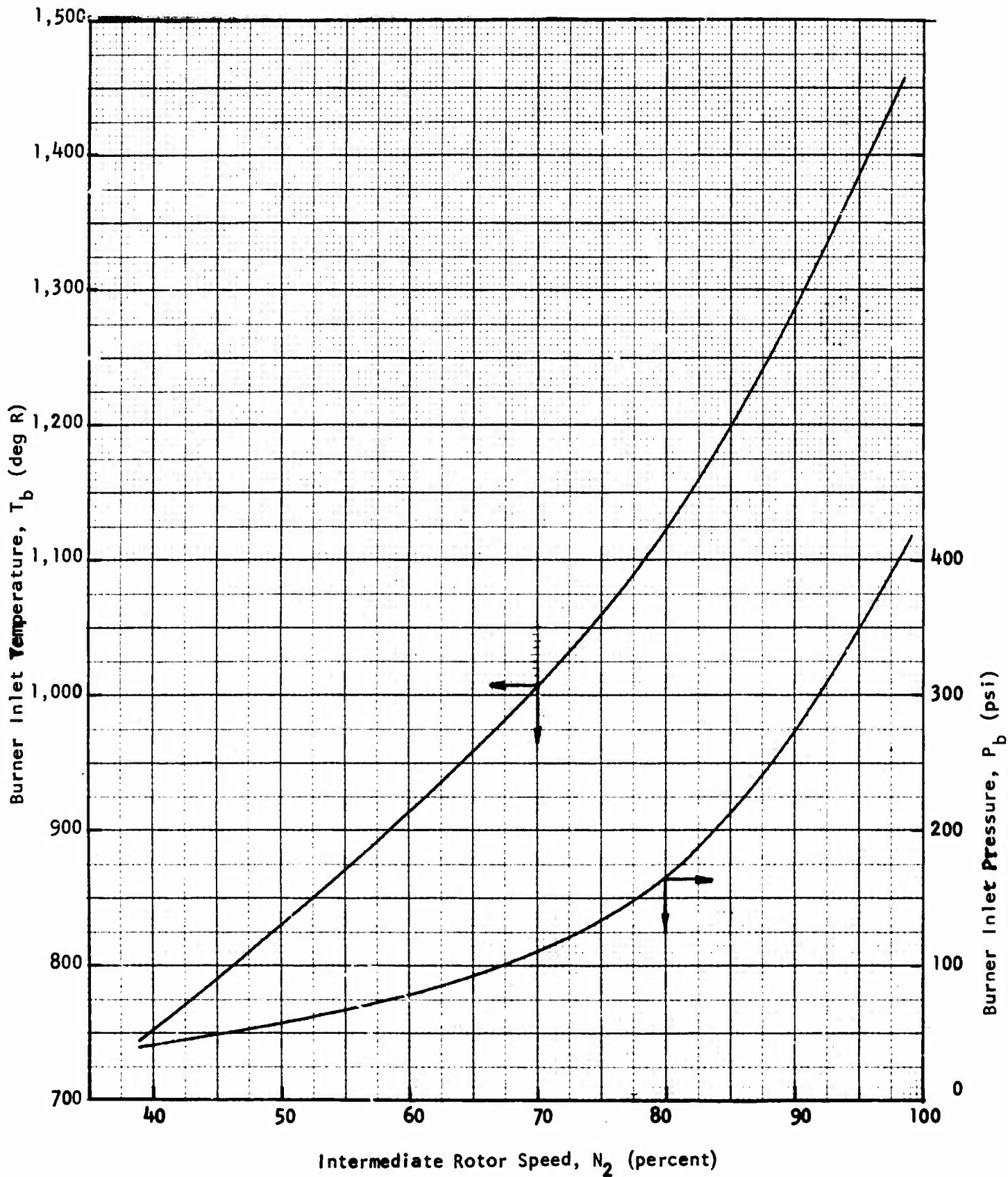


Figure 4. Typical Production Engine Performance

Name	Symbol	Description
FHC	F_{HC}	<p>HC emission factor</p> $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00222 (T_{b,obs} - T_{b,ref})}$
FNO	F_{NO}	<p>NO emission factor</p> $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00267 (T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	<p>Corrected CO emission factor</p> $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,std}/\{B - T_{a,std} (F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref} (B - F/A_{ref} \times 10^4)}}$ <p>where: $B = 600$ for modes 1,2,6,7,8 $B = 525$ for modes 3,4,5</p> <p>and</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} / \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$

Name	Symbol	Description
STD FCO Continued		Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H ₂ O/lbm dry air), or a value corrected to standard day condition.
STD FHC	$(F_{HC})_{std}$	Corrected HC emission index $(F_{HC})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{1.8} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00222 (T_{b,std} - T_{b,ref})}$
STD FNO	$(F_{NO})_{std}$	Corrected NO emission index $(F_{NO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{1/2} \cdot e^{0.00267 (T_{b,std} - T_{b,ref})}$
API		Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.
H/C RATIO	a	Hydrogen-carbon ratio as determined using a Sanda-Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.
FIA		Fluorescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. The CO results for modes 3 through 5 of the Baseline test of unit 19 were unusually high. There is no present explanation for this and the data was not used for analysis purposes.
5. The calibration gas concentrations for NO and NO_x were questionable for the nominal 50 ppm bottle for tests conducted between October 10, 1975 and June 14, 1976; and for the nominal 200 ppm bottle for tests conducted between November 18, 1975 and April 22, 1976. The test data was processed in two different ways: the first assuming the stated concentrations were correct; and the second using calculated values for the concentrations. This is discussed in detail in Appendix IV of Volume I. In the following tables, the concentrations and emission indices of NO and NO_x are based on the stated calibration gas concentrations, while the NREC corrected emission indices are based on the calculated values.

6. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode	Quantity
1	"Baseline"	8	N3
1	"600-Hour"	1	N3
3	"Baseline"	8	N3, Fuel Flow
3	"600-Hour"	3	Fuel Flow
6	"Baseline"	4	EGT
7	"600-Hour"	2,7	N2
9	"Baseline"	8	Fuel Flow
11	"450-Hour"	2	N3
12	"300-Hour"	8	Fuel Flow
12	"600-Hour"	2	N3
16	"150-Hour"	7	N3

RB211-228 * BASELINE TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
----	-----	-----	-----	-----	-----
1	2294.	0.	525.7	30.07	.007200
2	5934.	0.	525.7	30.07	.007200
3	3018.	0.	523.7	30.00	.006550
4	5097.	0.	523.7	30.00	.006550
5	3983.	0.	524.7	30.08	.008600
6	4928.	0.	524.7	30.08	.008600
7	4405.	0.	543.7	29.90	.006830
8	1221.	0.	543.7	29.90	.006830
9	5429.	0.	543.7	29.90	.006180
10	3713.	0.	543.7	29.90	.006180
11	2941.	0.	526.7	29.99	.007580
12	859.	0.	526.7	29.99	.007580
13	2889.	0.	524.7	30.05	.009220
14	1375.	0.	524.7	30.05	.009220
15	2410.	0.	527.7	30.08	.009140
16	3372.	0.	523.7	29.96	.008870
17	6295.	0.	523.7	29.96	.008870
18	2715.	0.	526.7	29.92	.010060
19	4095.	0.	526.7	29.92	.010060

RB211-228 * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	25.00	46.00	63.00	24.83	45.69	62.58
2	-26.50	-49.50	-64.75	-26.32	-49.17	-64.32
3	-27.50	44.50	62.00	-27.37	44.29	61.70
4	24.00	45.00	63.00	23.89	44.78	62.70
5	25.00	46.00	64.00	24.86	45.74	63.63
6	23.00	44.00	62.00	22.87	43.75	61.64
7	24.00	46.00	64.00	23.44	44.93	62.51
8	25.00	-48.00	-65.00	24.42	-46.88	63.49
9	24.00	45.00	63.50	23.44	43.95	62.02
10	-26.00	-49.00	-65.00	-25.40	-47.86	63.49
11	25.00	46.00	63.25	24.81	45.65	62.77
12	23.00	45.00	62.50	22.82	44.66	62.02
13	24.00	45.00	63.00	23.86	44.74	62.64
14	24.00	44.00	62.50	23.86	43.75	62.14
15	22.00	-41.50	61.00	21.81	-41.14	60.48
16	23.00	44.00	62.00	22.89	43.79	61.70
17	22.00	43.00	61.00	21.89	42.79	60.71
18	-27.00	47.00	64.00	-26.79	46.64	63.51
19	-26.00	47.00	-65.00	-25.80	46.64	-64.50

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF

1	-1800.	.8390	-.9800	1045.	1.030	2802.
2	-1700.	.8330	-.9260	1068.	1.030	-3243.
3	1600.	.8070	.8710	1063.	1.028	2634.
4	1500.	.8070	.8170	1032.	1.029	2832.
5	1600.	.8210	.8710	1050.	1.029	3060.
6	1600.	.8210	.8710	1050.	1.030	2615.
7	1580.	.8210	.8610	1077.	1.018	2804.
8	1600.	.8400	.8710	1086.	1.016	3039.
9	1600.	.8630	.8710	1068.	1.025	2706.
10	-1800.	.8920	-.9800	1086.	1.022	3039.
11	-1700.	.8540	-.9260	1063.	1.023	2847.
12	1500.	.8620	.8170	1050.	1.023	2698.
13	1500.	-.9660	.8170	1064.	1.030	2816.
14	1550.	.8290	.8440	1032.	1.015	2717.
15	1500.	.8290	.8170	1054.	1.010	2383.
16	1600.	-.9580	.8710	-1104.	1.025	2637.
17	1500.	.8860	.8170	1050.	1.025	2438.
18	1600.	.8870	.8710	1068.	1.025	3044.
19	-1700.	-.9090	-.9260	1068.	1.025	-3310.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1821.	.8270	-.9670	1031.	2816.
2	-1720.	.8210	-.9140	1053.	-3260.
3	1612.	.7990	.8630	1053.	2641.
4	1511.	.7990	.8090	1022.	2840.
5	1618.	.8120	.8610	1038.	3076.
6	1618.	.8120	.8610	1038.	2629.
7	1617.	.7830	.8210	1027.	2802.
8	1637.	.8020	.8310	1036.	3037.
9	1637.	.8240	.8310	1019.	2705.
10	-1842.	.8510	-.9350	1036.	3037.
11	-1717.	.8410	-.9120	1047.	2854.
12	1515.	.8490	.8050	1034.	2705.
13	1515.	-.9550	.8080	1052.	2828.
14	1566.	.8200	.8350	1020.	2728.
15	1521.	.8150	.8030	1036.	2396.
16	1610.	-.9490	.8630	-1093.	2641.
17	1509.	.8780	.8090	1040.	2442.
18	1612.	.8740	.8580	1051.	3044.
19	-1713.	-.8950	-.9120	1051.	-3310.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-22B * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.529	836.0	478.2	8.1	12.9
2	1.515	-726.0	519.5	-12.2	-15.7
3	1.443	908.3	524.4	4.9	11.5
4	1.477	859.9	427.8	6.6	12.6
5	1.490	871.2	489.6	8.7	12.1
6	1.481	888.3	512.1	8.0	11.1
7	1.551	760.3	-324.8	4.5	12.0
8	1.588	-715.3	-351.1	8.1	13.4
9	1.599	878.0	414.9	5.7	12.1
10	-1.689	784.3	-353.7	8.7	13.9
11	1.585	794.3	418.5	7.1	12.9
12	1.569	862.8	507.0	6.5	12.8
13	-1.834	787.3	381.7	6.6	13.0
14	1.514	830.3	466.4	6.0	9.3
15	1.495	848.7	518.6	4.8	8.4
16	-1.775	870.8	493.0	-9.5	12.7
17	1.595	-943.1	561.1	6.2	10.0
18	1.649	-754.5	445.9	8.8	-15.2
19	-1.679	898.4	451.1	7.9	13.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2752.	95.75	94.10	1.52	2.42	0.00
2	2746.	83.78	102.98	-2.32	-2.98	0.00
3	2701.	108.20	107.30	.95	2.25	0.00
4	2764.	102.41	87.52	1.29	2.46	0.00
5	2740.	101.91	98.39	-1.68	2.32	0.00
6	2724.	103.99	102.99	1.54	2.14	0.00
7	-2849.	88.89	-65.24	.87	2.31	0.00
8	-2850.	-81.72	-68.90	1.51	2.52	0.00
9	2794.	97.65	79.29	1.05	2.21	0.00
10	-2853.	84.33	-65.33	1.54	2.46	0.00
11	2800.	89.35	80.86	1.32	2.39	0.00
12	2746.	96.10	97.00	1.18	2.33	0.00
13	-2859.	-78.13	-65.08	1.07	2.12	0.00
14	2755.	96.16	92.79	1.15	1.77	0.00
15	2723.	98.36	103.27	.91	1.61	0.00
16	2793.	87.18	84.80	1.56	2.09	0.00
17	2716.	102.19	104.44	1.10	1.78	0.00
18	2803.	-81.62	82.88	1.56	-2.70	0.00
19	2785.	94.84	81.82	1.37	2.39	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.3980	.6020	3.6740	1.3500	.5780	4.0390
2	-1.6450	-.8110	-4.3470	-1.5880	-.7790	-4.7710
3	1.2700	.5180	3.3980	1.2410	.5040	3.7380
4	1.3060	.5440	3.4960	1.2750	.5300	3.8450
5	1.3880	.6020	3.5660	1.3460	.5810	4.0470
6	1.2450	.4950	3.1910	1.2080	.4770	3.6250
7	1.4270	.5990	-3.9180	1.2800	.5380	3.8760
8	-1.5860	-.7170	-4.3390	1.4190	-.6420	-4.2790
9	1.3680	.5430	3.7460	1.2260	.4870	3.6670
10	-1.6910	-.7800	-4.6100	-1.5080	-.6980	-4.4850
11	1.4040	.5990	3.6560	1.3520	.5760	4.0700
12	1.3340	.5440	3.4610	1.2850	.5230	3.8170
13	1.3760	.5460	3.3370	1.3340	.5280	3.8350
14	1.2470	.4940	3.1520	1.2110	.4770	3.6250
15	-1.0830	-.3790	-2.7540	-1.0390	-.3620	-3.1130
16	1.2920	.4910	3.1580	1.2620	.4790	3.6330
17	1.1930	.4430	2.9810	1.1660	.4320	3.4310
18	-1.4870	.6520	3.6580	-1.4340	.6290	4.2700
19	-1.4970	.6520	3.6580	-1.4430	.6290	4.2700

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-228 * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	99.15	97.93	1.79	2.86	0.00
2	-86.83	107.28	-2.73	-3.51	0.00
3	110.79	110.20	1.12	2.66	0.00
4	104.87	89.90	1.53	2.91	0.00
5	105.08	102.01	-2.04	2.82	0.00
6	107.16	106.73	1.87	2.61	0.00
7	99.12	-72.70	.93	2.45	0.00
8	91.34	76.92	1.49	2.49	0.00
9	108.91	88.26	1.02	2.16	0.00
10	94.51	-73.00	1.50	2.39	0.00
11	92.76	84.13	1.45	2.63	0.00
12	99.75	100.89	1.31	2.58	0.00
13	-80.57	-67.34	1.23	2.43	0.00
14	99.02	95.99	1.32	2.03	0.00
15	102.60	108.31	1.03	1.82	0.00
16	89.27	86.87	1.79	2.40	0.00
17	104.55	106.97	1.26	2.05	0.00
18	-84.65	85.88	1.80	-3.12	0.00
19	98.38	84.79	1.58	2.77	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	-28.50	-52.00	67.00	-28.31	51.65	66.55
2	-29.00	-52.50	67.00	-28.81	-52.15	66.55
3	27.00	50.00	67.00	26.87	49.76	66.68
4	27.00	51.00	66.50	26.87	50.76	66.18
5	27.00	50.00	66.00	26.85	49.71	65.62
6	27.00	50.00	66.00	26.85	49.71	65.62
7	27.00	50.00	67.00	26.37	48.84	65.44
8	27.00	50.00	66.00	26.37	48.84	64.46
9	27.00	50.00	66.00	26.37	48.84	64.46
10	-29.00	-54.00	-67.50	-28.33	-52.74	65.93
11	-28.00	-52.00	66.00	-27.79	51.60	65.50
12	-26.00	49.00	65.00	-25.80	48.63	64.50
13	27.00	49.50	65.50	26.85	49.22	65.12
14	27.00	49.00	65.00	26.85	48.72	64.63
15	27.50	-47.75	65.00	27.26	-47.34	64.44
16	27.00	51.00	67.00	26.87	50.76	66.68
17	27.00	50.00	66.00	26.87	49.76	65.68
18	-29.00	-52.00	67.00	-28.78	51.60	66.49
19	-29.00	-52.00	67.00	-28.78	51.60	66.49

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	-1950.	.8480	-1.0620	1068.	1.035	3944.
2	-1900.	.8290	-1.0350	1026.	1.035	3944.
3	1800.	.8290	.9800	1059.	1.032	-4012.
4	1750.	.8110	.9530	1066.	1.031	3784.
5	1800.	.8190	.9800	1068.	1.031	3589.
6	1800.	.8160	.9800	-1041.	1.032	3589.
7	1700.	.8360	.9260	-1104.	1.022	3563.
8	1750.	.8490	.9530	-1104.	1.020	3301.
9	1700.	.8570	.9260	1068.	1.030	3301.
10	-2000.	-.9090	-1.0890	-1104.	1.030	3694.
11	-1900.	.8630	-1.0350	1077.	1.031	3567.
12	1700.	.8620	.9260	1068.	1.025	3302.
13	1825.	.8060	.9940	1068.	1.035	3461.
14	1800.	.8500	.9800	1050.	1.026	3328.
15	1700.	.8310	.9260	1068.	1.030	3276.
16	-2000.	-.9760	-1.0890	-1140.	1.035	-4017.
17	1800.	.8850	.9800	1068.	1.035	3621.
18	1800.	.8870	.9800	1077.	1.030	3935.
19	-1900.	-.9200	-1.0350	1086.	1.032	3935.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1973.	.8370	-1.0480	1053.	3964.
2	-1922.	.8180	1.0210	1071.	3964.
3	1813.	.8210	.9710	1049.	-4023.
4	1763.	.8030	.9440	1056.	3794.
5	1820.	.8100	.9690	1055.	3609.
6	1820.	.8060	.9690	-1029.	3609.
7	1739.	.7970	.8830	1053.	3560.
8	1790.	.8100	.9090	1053.	3299.
9	1739.	.8180	.8830	-1019.	3299.
10	-2046.	.8680	-1.0390	1053.	3691.
11	-1919.	.8500	1.0190	1060.	3575.
12	1717.	.8490	.9120	1051.	3310.
13	1844.	.7970	.9830	1055.	3476.
14	1813.	.8410	.9690	1038.	3342.
15	1724.	.8170	.9100	1049.	3293.
16	-2012.	-.9670	-1.0790	-1129.	-4023.
17	1811.	.8770	.9710	1058.	3625.
18	1814.	.8730	.9660	1060.	3935.
19	-1915.	-.9060	1.0190	1069.	3935.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.612	664.9	329.1	7.5	15.8
2	1.556	664.3	376.6	-11.7	16.8
3	1.553	724.0	375.1	5.2	14.3
4	1.542	708.2	298.9	6.8	15.3
5	1.522	788.1	401.2	-9.2	13.4
6	1.518	758.8	399.6	8.4	13.2
7	1.607	673.9	-268.2	5.0	15.4
8	1.623	685.0	307.8	6.3	15.0
9	1.617	788.7	342.3	5.8	14.4
10	-1.753	701.0	289.0	8.3	17.0
11	1.643	686.7	326.1	7.3	16.3
12	1.602	780.3	423.3	6.1	14.9
13	1.511	729.5	347.0	4.8	14.0
14	1.592	734.3	387.5	5.5	12.7
15	1.551	713.5	396.0	-3.8	11.6
16	-1.880	706.6	329.5	8.2	-17.5
17	1.670	736.9	376.3	7.2	14.3
18	1.684	659.9	358.7	7.6	12.8
19	-1.742	793.0	351.4	7.5	16.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2867.	75.26	64.00	1.40	2.95	0.00
2	2834.	76.98	74.96	-2.23	-3.20	0.00
3	2828.	83.90	74.67	1.00	2.72	0.00
4	2867.	83.82	60.78	1.31	2.98	0.00
5	2803.	-92.39	80.80	-1.78	2.58	0.00
6	2807.	89.35	80.84	-1.62	2.55	0.00
7	-2901.	77.40	-52.93	.95	2.90	0.00
8	-2882.	77.41	59.76	1.17	2.78	0.00
9	2845.	88.35	65.87	1.07	2.64	0.00
10	-2905.	-73.93	-52.76	1.44	2.94	0.00
11	2872.	76.38	62.31	1.34	2.98	0.00
12	2804.	86.92	81.01	1.12	2.73	0.00
13	2829.	86.91	71.03	.94	2.73	0.00
14	2824.	82.90	75.16	1.01	2.35	0.00
15	2815.	82.41	78.58	-.72	2.19	0.00
16	-2901.	-69.40	-55.60	1.33	2.82	0.00
17	2845.	79.91	70.11	1.28	2.55	0.00
18	2863.	-71.38	66.67	1.34	2.28	0.00
19	2855.	82.72	62.97	1.28	2.81	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.8490	-.9900	-4.8810	1.7820	.9490	5.3520
2	-1.8770	-1.0280	-4.9940	-1.8100	-.9870	-5.4750
3	1.6710	.8400	4.4670	1.6300	.8170	4.9050
4	1.7380	.9100	4.6790	1.6950	.8850	5.1360
5	1.6730	.8450	4.3180	1.6210	.8140	4.8940
6	1.6710	.8450	4.3180	1.6200	.8140	4.8940
7	1.7370	.8480	4.7760	1.5520	.7580	4.6970
8	1.7450	.8480	4.7760	1.5580	.7580	4.6970
9	1.7500	.8480	4.8350	1.5620	.7580	4.6970
10	-2.1260	-1.1590	-5.8240	-1.8880	-1.0320	-5.6250
11	1.8580	-.9860	4.8580	1.7860	.9460	5.3400
12	1.6230	.7760	4.2250	1.5620	.7450	4.6500
13	1.6280	.8100	4.1660	1.5790	.7820	4.7810
14	1.6130	.7770	4.0690	1.5650	.7510	4.6710
15	-1.5230	-.7020	3.8840	-1.4570	-.6680	-4.3750
16	1.8330	.9080	4.4740	1.7880	.8850	5.1360
17	1.7000	.8380	4.2710	1.6600	.8170	4.9050
18	-1.8690	.9820	4.6290	1.8000	.9460	5.3400
19	-1.8900	.9820	4.6290	-1.8190	.9460	5.3400

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	78.07	66.71	1.64	3.47	0.00
2	79.84	78.15	-2.62	-3.77	0.00
3	86.01	76.77	1.18	3.20	0.00
4	85.94	62.50	1.55	3.52	0.00
5	-95.34	83.85	-2.16	3.14	0.00
6	92.20	83.89	-1.97	3.11	0.00
7	86.65	59.19	1.00	3.07	0.00
8	86.71	66.84	1.15	2.74	0.00
9	-98.98	73.67	1.04	2.57	0.00
10	83.29	-58.77	1.39	2.84	0.00
11	79.44	64.94	1.47	3.27	0.00
12	90.32	84.35	1.23	3.00	0.00
13	89.60	73.57	1.08	3.13	0.00
14	85.48	77.84	1.16	2.69	0.00
15	86.16	82.60	-.81	2.47	0.00
16	-71.16	-57.03	1.53	3.23	0.00
17	81.88	71.90	1.47	2.93	0.00
18	-74.14	69.19	1.55	2.63	0.00
19	85.94	65.35	1.47	3.25	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	93.25	97.00	92.00	92.63	96.35	91.39
2	92.75	98.00	91.75	92.13	97.35	91.14
3	93.00	96.00	92.00	92.55	95.54	91.56
4	93.00	96.00	92.00	92.55	95.54	91.56
5	-92.50	98.00	92.00	91.97	97.44	91.47
6	93.50	97.00	92.00	92.96	96.44	91.47
7	94.00	99.00	93.00	91.81	96.70	90.84
8	94.00	99.00	-94.00	91.81	96.70	91.81
9	94.00	-100.00	92.50	91.81	97.67	-90.35
10	-95.00	97.00	92.75	92.79	-94.74	90.59
11	93.50	96.00	92.00	92.79	95.27	91.30
12	93.75	97.00	93.00	93.04	96.26	92.29
13	93.50	97.00	93.50	92.96	96.44	-92.96
14	-91.00	-95.00	-90.00	-90.48	-94.46	-89.48
15	94.00	97.00	92.00	93.19	96.17	91.21
16	93.00	97.00	92.00	92.55	96.54	91.56
17	93.00	98.00	92.00	92.55	97.53	91.56
18	94.00	97.00	93.00	93.28	96.26	92.29
19	94.00	98.00	92.00	93.28	97.25	91.30

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-228 * BASELINE TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	15500.	1.8790	2.0680	1752.	1.537	42083.
2	16000.	1.8130	2.1350	1761.	-1.539	42229.
3	15700.	1.7880	2.0990	1716.	1.530	41668.
4	15500.	-1.7380	2.0720	1711.	1.530	41668.
5	15900.	1.8170	2.1420	1725.	-1.523	-41045.
6	15500.	1.8690	2.0680	1752.	1.533	41777.
7	15800.	1.8990	2.1120	1752.	1.530	41807.
8	16000.	1.8530	2.1390	-1797.	1.530	41807.
9	15000.	1.9150	2.0010	1770.	1.533	42028.
10	16000.	-1.9340	2.1350	1770.	1.532	41955.
11	15750.	1.8560	2.1010	1752.	1.533	41902.
12	15750.	-1.9390	2.1010	1747.	1.533	41902.
13	15000.	1.7530	2.0080	1711.	1.529	41525.
14	-14000.	-1.7210	-1.9490	1707.	-1.492	-38817.
15	15750.	1.8470	2.1010	1734.	1.533	41777.
16	15000.	1.8120	2.0220	1734.	-1.522	-41136.
17	15000.	1.8860	2.0220	1752.	-1.522	-41136.
18	15900.	1.8730	2.1210	1734.	1.533	42000.
19	15500.	1.8750	2.0680	1752.	1.532	41926.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR T17 DEG R	COR THRUST LBF
1	15682.	1.8540	2.0400	1728.	42294.
2	16188.	1.7890	2.1060	1737.	-42441.
3	15818.	1.7710	2.0790	1699.	41779.
4	15616.	-1.7210	2.0530	1695.	41779.
5	16077.	1.7960	2.1170	1705.	-41265.
6	15673.	1.8480	2.0440	1732.	42000.
7	16165.	1.8120	2.0150	-1671.	41779.
8	16370.	1.7680	2.0410	1714.	41779.
9	15347.	1.8270	-1.9090	1688.	42000.
10	16370.	1.8450	2.0370	1688.	41926.
11	15908.	1.8280	2.0690	1725.	42000.
12	15908.	-1.9100	2.0690	1721.	42000.
13	15152.	1.7330	1.9850	1692.	41706.
14	-14142.	-1.7010	-1.9270	1687.	-38985.
15	15971.	1.8160	2.0660	1704.	42000.
16	15092.	1.7940	2.0030	1717.	-41191.
17	15092.	1.8680	2.0030	1735.	-41191.
18	16022.	1.8450	2.0890	1707.	42000.
19	15619.	1.8460	2.0370	1725.	41926.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.982	-11.3	8.7	458.4	-463.3
2	3.840	22.2	4.9	442.9	457.1
3	3.790	27.2	2.7	414.2	426.6
4	3.683	16.9	5.8	405.9	421.1
5	3.858	21.4	6.7	406.8	391.4
6	3.970	24.5	5.9	416.1	397.9
7	4.034	23.0	3.4	-473.3	-473.0
8	3.933	23.9	4.0	-461.1	-468.4
9	4.065	19.8	3.6	457.0	448.0
10	-4.107	26.1	3.8	445.8	439.7
11	3.935	22.1	4.9	437.8	448.7
12	-4.115	26.1	6.6	417.6	437.2
13	3.710	19.8	3.6	378.4	377.6
14	-3.639	-38.1	6.0	-317.1	-327.6
15	3.915	-9.6	4.5	418.9	426.9
16	3.840	25.9	-0.5	396.7	391.4
17	4.000	26.7	3.7	393.7	396.2
18	3.966	28.3	6.2	402.8	393.2
19	3.960	-131.9	3.8	399.3	407.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	3157.	-.57	.75	38.00	38.41	27.15
2	3157.	1.16	.44	38.07	39.30	27.15
3	3162.	1.44	.25	36.13	37.21	33.11
4	3162.	.92	.55	36.43	37.80	32.00
5	3166.	1.12	.60	34.91	34.91	33.33
6	3166.	1.25	.51	34.69	34.69	31.33
7	3165.	1.15	.29	38.82	38.82	-48.03
8	3164.	1.22	.35	38.78	39.39	28.29
9	3163.	.98	.31	37.17	37.17	31.13
10	3162.	1.28	.32	35.88	35.88	-22.67
11	3160.	1.13	.43	36.75	37.66	31.33
12	3159.	1.28	.55	33.52	35.10	34.44
13	3158.	1.07	.34	33.67	33.67	33.77
14	3156.	-2.10	.57	-28.75	-29.70	-36.42
15	3159.	-.49	.39	35.33	36.00	-19.74
16	3161.	1.36	-.04	34.13	34.13	31.54
17	3160.	1.34	.32	32.51	32.72	28.67
18	3154.	1.43	.54	33.49	33.49	28.95
19	-3147.	-6.67	.33	33.18	33.88	28.76

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	108.5970	95.4570	86.6920	98.6320	90.0900	92.5350
2	107.9660	105.7370	93.1700	98.2860	99.7470	99.3780
3	87.6870	83.8060	79.3240	82.2470	80.5700	85.4490
4	-82.7990	83.8060	79.3240	-77.7830	80.5700	85.4490
5	107.5630	105.0580	89.8400	99.1580	99.7470	99.3780
6	107.3200	96.0480	84.3390	98.7870	91.2230	93.3450
7	-135.2950	112.3160	-107.5950	97.0320	94.4100	95.6110
8	-127.3810	112.3160	-107.5950	92.0940	94.4100	95.6110
9	-144.0590	-118.7670	-113.3690	102.8500	99.7470	99.3780
10	115.2330	85.6500	89.5440	82.8470	-72.2990	-79.1470
11	94.9320	82.3010	77.9050	85.4920	-77.5630	-83.1500
12	117.0890	94.4710	86.0470	104.7910	88.9700	91.7350
13	93.2220	95.8760	83.3150	86.2750	91.2230	93.3450
14	-73.6350	-73.0050	-68.6350	-68.3600	-69.5340	-77.0270
15	104.3720	94.4510	83.7550	92.4960	87.8640	90.9420
16	99.7890	95.8910	83.6470	93.5380	92.3710	94.1620
17	115.8130	103.5730	88.3150	108.2300	99.7470	99.3780
18	107.4080	94.0750	81.9950	96.6680	88.9700	91.7350
19	117.2140	105.5300	88.9090	105.3630	99.7470	99.3780

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNQX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	-.63	.80	40.56	41.00	27.15
2	1.28	.46	40.61	41.92	27.15
3	1.54	.25	38.92	40.08	24.60
4	.98	.57	39.25	40.72	24.29
5	1.22	.63	38.62	38.62	26.05
6	1.35	.54	38.40	38.40	24.96
7	1.60	.35	34.49	34.49	22.59
8	1.69	.42	34.46	35.00	25.86
9	1.37	.37	-32.58	-32.58	-31.13
10	1.78	.38	-31.72	-31.72	-19.03
11	1.26	.46	39.22	40.20	25.68
12	1.43	.59	35.74	37.42	22.74
13	1.16	.35	37.72	37.72	25.32
14	-2.26	.60	-32.27	-33.33	23.82
15	-.55	.42	38.36	39.09	19.74
16	1.45	-.04	38.42	38.42	24.60
17	1.43	.33	36.59	36.82	28.67
18	1.59	.57	37.47	37.47	22.59
19	-7.42	.35	37.08	37.87	25.14

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
----	-----	-----	-----	-----	-----	-----
1	87.00	94.00	89.50	86.42	93.37	88.90
2	87.00	95.00	89.50	86.42	94.37	88.90
3	87.00	94.00	90.00	86.58	93.55	89.57
4	87.50	95.00	89.00	87.08	94.55	88.57
5	87.00	95.00	90.00	86.50	94.46	89.48
6	88.00	95.00	90.00	87.50	94.46	89.48
7	89.00	95.00	-92.00	86.93	92.79	89.86
8	89.00	95.00	-92.00	86.93	92.79	89.86
9	88.50	96.00	90.25	86.44	93.77	88.15
10	89.00	95.00	90.00	86.93	92.79	-87.91
11	88.00	94.00	89.50	87.33	93.28	88.82
12	88.00	94.00	90.50	87.33	93.28	89.81
13	87.50	94.00	90.00	87.00	93.46	89.48
14	87.00	94.00	-88.00	86.50	93.46	-87.50
15	88.50	94.00	90.00	87.74	93.19	89.23
16	88.00	94.00	89.00	87.58	93.55	88.57
17	87.00	96.00	91.00	86.58	-95.54	90.56
18	88.00	95.00	90.00	87.33	94.28	89.31
19	88.00	94.00	89.50	87.33	93.28	88.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	-12250.	1.6490	1.8150	-1603.	-1.437	-34824.
2	12700.	1.6040	1.8620	1639.	1.446	35436.
3	-12200.	1.5970	-1.7930	1630.	1.444	35382.
4	12500.	-1.5410	1.8330	1608.	1.446	35518.
5	13000.	1.5810	1.9060	1635.	1.446	35424.
6	13000.	1.6590	1.9060	1653.	1.446	35424.
7	13000.	-1.7220	1.9060	1680.	1.446	35637.
8	-13500.	1.6470	-1.9790	-1698.	1.446	35637.
9	13000.	1.7090	1.9060	1675.	1.446	35637.
10	13000.	-1.7190	1.9060	1662.	1.446	35637.
11	13000.	1.6320	1.9060	1630.	1.446	35530.
12	13000.	1.6650	1.9080	1644.	1.445	35462.
13	12500.	-1.5280	1.8440	1608.	-1.441	-35119.
14	13000.	1.5840	1.9170	-1603.	-1.441	-35119.
15	13000.	1.6530	1.9060	1653.	1.446	35424.
16	13000.	1.6060	1.9220	1644.	-1.439	-35088.
17	13000.	-1.7400	1.9220	1662.	-1.439	-35088.
18	13000.	1.6460	1.9060	1626.	1.446	35613.
19	12500.	1.6420	1.8330	1644.	1.446	35613.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-12394.	1.6270	1.7910	-1582.	-34998.
2	12850.	1.5830	1.8370	1617.	35613.
3	-12291.	1.5820	-1.7760	1615.	35477.
4	12594.	-1.5270	1.8150	1592.	35613.
5	13145.	1.5630	1.8840	1616.	35613.
6	13145.	1.6400	1.8840	1634.	35613.
7	13301.	1.6430	1.8180	1602.	35613.
8	-13812.	1.5710	1.8880	1620.	35613.
9	13301.	1.6310	1.8180	1598.	35613.
10	13301.	1.6400	1.8180	-1585.	35613.
11	13131.	1.6080	1.8770	1605.	35613.
12	13131.	1.6400	1.8790	1619.	35545.
13	12627.	-1.5110	1.8230	1589.	-35272.
14	13132.	1.5660	1.8950	-1585.	-35272.
15	13182.	1.6250	1.8740	1625.	35613.
16	13080.	1.5910	1.9040	1628.	-35135.
17	13080.	-1.7230	1.9040	1646.	-35135.
18	13100.	1.6210	1.8770	1601.	35613.
19	12596.	1.6170	1.8050	1619.	35613.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.485	24.1	5.3	294.3	296.7
2	3.386	34.5	-15.1	290.4	301.0
3	3.379	35.3	1.8	283.1	293.9
4	-3.260	21.4	3.6	279.5	286.6
5	3.347	31.0	4.7	263.6	252.4
6	3.516	28.6	3.4	280.2	269.5
7	-3.651	24.1	2.4	-334.5	-333.8
8	3.488	32.5	2.6	-320.2	-330.4
9	3.621	23.3	2.5	-321.0	310.5
10	-3.639	45.8	2.7	291.4	289.5
11	3.452	33.5	2.8	282.9	289.0
12	3.522	34.2	3.9	276.7	288.6
13	-3.227	30.5	2.5	241.4	242.1
14	3.344	49.4	2.7	242.0	254.4
15	3.495	21.2	2.1	303.9	313.6
16	3.396	32.8	1.7	270.2	273.8
17	-3.684	36.4	1.9	298.4	305.0
18	3.476	39.8	2.6	270.6	271.3
19	3.457	-138.3	1.7	256.7	269.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3157.	1.39	.53	27.87	28.09	19.21
2	3153.	2.05	-1.54	28.27	29.30	-11.92
3	3161.	2.10	.18	27.68	28.74	25.66
4	3162.	1.32	.38	28.35	29.06	21.05
5	3165.	1.87	.48	26.06	26.06	17.33
6	-3166.	1.64	.33	26.38	26.38	18.24
7	3165.	1.33	.23	-30.31	-30.31	24.84
8	3164.	1.87	.26	-30.36	-31.33	20.26
9	3162.	1.29	.24	29.30	29.30	14.47
10	3160.	2.53	.25	26.46	26.5	14.47
11	3159.	1.95	.28	27.07	27.65	-28.95
12	3159.	1.95	.38	25.94	27.06	23.33
13	3157.	1.90	.27	4.69	24.76	21.05
14	3155.	2.97	.28	23.87	25.09	25.33
15	3158.	1.22	.20	28.71	29.62	16.00
16	3159.	1.94	.17	26.28	26.62	19.87
17	3159.	1.99	.17	26.75	27.34	19.87
18	3154.	2.30	.26	25.66	25.74	19.46
19	-3145.	-8.01	.17	24.41	25.59	17.11

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	61.7770	63.4510	64.9470	56.8740	59.9890	69.5270
2	64.9620	72.6950	71.4140	59.8470	68.6890	76.3770
3	58.5370	63.8810	65.5520	55.2960	61.4660	70.7100
4	60.8590	73.1840	72.0660	57.5340	70.3890	77.6840
5	63.4390	73.1370	69.4790	59.1320	69.5340	77.0270
6	68.8510	73.1370	69.4790	64.0110	69.5340	77.0270
7	72.8540	65.3100	73.0270	54.6270	55.3530	65.7780
8	67.0590	65.3100	73.0270	50.8150	55.3530	65.7780
9	-79.2650	74.8400	-81.3850	59.3220	63.3020	72.1750
10	72.5900	65.3100	73.9250	54.4550	55.3530	65.7780
11	60.5720	62.8010	64.4550	55.2920	59.2640	68.9440
12	62.7040	62.8010	64.4550	57.1530	59.2640	68.9440
13	54.6500	63.7230	62.4260	51.1040	60.7230	70.1150
14	57.7660	63.7230	62.4260	53.9250	60.7230	70.1150
15	61.9900	62.7930	62.7290	55.7780	58.5480	68.3670
16	59.0050	63.7280	62.6830	55.7820	61.4660	70.7100
17	-82.9150	-83.6050	75.8530	-77.9650	-80.5700	-85.4490
18	67.5720	71.6500	67.5410	61.6790	67.8540	75.7330
19	61.0580	62.5370	61.4190	55.8090	59.2640	68.9440

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	1.51	.56	29.83	30.07	19.21
2	2.22	-1.63	30.24	31.34	11.92
3	2.23	.19	29.86	31.00	-24.44
4	1.40	.39	30.56	31.32	18.74
5	2.00	.51	28.89	28.89	17.33
6	1.76	.35	29.24	29.24	16.50
7	1.77	.27	27.30	27.30	20.63
8	2.47	.30	27.35	28.22	19.61
9	1.73	.28	25.99	-25.99	14.47
10	-3.37	.30	-23.54	-23.54	13.60
11	2.14	.30	28.95	29.57	20.78
12	2.14	.40	27.75	28.94	23.33
13	2.03	.28	27.73	27.80	15.86
14	3.18	.30	26.81	28.18	19.90
15	1.36	.22	31.29	32.29	16.00
16	2.05	.18	29.64	30.03	17.47
17	2.11	.18	30.14	30.80	19.87
18	2.52	.28	28.78	28.86	19.03
19	-8.76	.18	27.40	28.72	17.11

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	76.50	89.00	85.00	75.99	88.41	84.43
2	-76.25	89.00	85.00	-75.74	88.41	84.43
3	77.00	89.00	86.00	76.63	88.57	85.59
4	77.00	89.00	85.00	76.63	88.57	84.59
5	77.00	90.00	86.00	76.56	89.48	85.51
6	77.00	90.00	86.00	76.56	89.48	85.51
7	-79.00	90.00	-87.00	77.16	87.91	84.98
8	77.00	90.00	-84.00	-75.21	87.91	-82.05
9	77.50	90.00	86.00	-75.70	87.91	-84.00
10	78.00	90.00	86.00	76.19	87.91	-84.00
11	77.25	89.50	84.75	76.66	88.82	84.10
12	77.50	90.00	85.75	76.91	89.31	85.10
13	77.00	90.00	85.75	76.56	89.48	85.26
14	77.00	89.00	-84.50	76.56	88.49	-84.02
15	77.00	89.00	85.50	76.34	88.24	84.77
16	77.00	89.00	85.00	76.63	88.57	84.59
17	77.00	89.00	86.00	76.63	88.57	85.59
18	78.00	90.00	86.00	77.41	89.31	85.34
19	78.00	89.00	85.00	77.41	88.32	84.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	8500.	1.3550	1.5800	1464.	1.300	-24289.
2	8700.	1.3120	1.6180	1464.	1.300	-24289.
3	-8200.	1.3050	-1.5190	1459.	1.302	24503.
4	8500.	1.2700	1.5740	1450.	1.302	24503.
5	9000.	1.3070	1.6670	1459.	1.302	24438.
6	9000.	1.3620	1.6670	1473.	1.302	24438.
7	9000.	-1.4100	1.6670	-1500.	1.302	24585.
8	9000.	1.3500	1.6670	-1500.	1.302	24585.
9	8775.	1.4010	1.6250	1495.	1.302	24585.
10	9000.	-1.4200	1.6640	1486.	1.303	24663.
11	8975.	1.3340	1.6620	1473.	1.302	24511.
12	8750.	1.3620	1.6180	1464.	1.303	24589.
13	8500.	1.2650	1.5870	-1435.	-1.298	-24148.
14	8875.	1.3020	1.6570	-1419.	-1.298	-24148.
15	9000.	1.3340	1.6670	1464.	1.302	24438.
16	9000.	1.2980	1.6900	1464.	-1.295	-23985.
17	9000.	1.4040	1.6900	1482.	-1.295	-23985.
18	9000.	1.3380	1.6670	1464.	1.302	24568.
19	9000.	1.3840	1.6670	1464.	1.302	24568.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	8600.	1.3370	1.5590	1444.	24411.
2	8802.	1.2950	1.5960	1444.	24411.
3	-8261.	1.2920	-1.5040	1445.	24568.
4	8564.	1.2580	1.5590	1436.	24568.
5	9100.	1.2920	1.6480	1443.	24568.
6	9100.	1.3470	1.6480	1456.	24568.
7	9208.	1.3450	1.5900	1431.	24568.
8	9208.	1.2880	1.5900	1431.	24568.
9	8978.	1.3370	1.5510	1426.	24568.
10	9208.	1.3550	1.5870	-1418.	24647.
11	9065.	1.3130	1.6370	1450.	24568.
12	8838.	1.3410	1.5930	1441.	24647.
13	8586.	-1.2500	1.5680	-1418.	-24253.
14	8965.	1.2870	1.6380	-1402.	-24253.
15	9126.	1.3120	1.6390	1439.	24568.
16	9055.	1.2860	1.6730	1450.	-24017.
17	9055.	-1.3900	1.5730	1468.	-24017.
18	9069.	1.3180	1.6420	1441.	24568.
19	9069.	1.3630	1.6420	1441.	24568.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.850	64.2	5.9	139.1	142.5
2	2.757	86.2	-9.2	142.1	146.3
3	2.746	77.1	3.9	132.8	141.2
4	2.675	55.4	3.4	130.7	134.5
5	2.754	76.7	7.4	130.4	126.3
6	2.873	76.3	5.3	133.4	129.8
7	-2.976	49.3	2.7	-161.8	-159.9
8	2.847	67.8	3.6	-155.6	-157.7
9	-2.956	58.4	3.2	-144.9	145.7
10	-2.991	99.0	4.6	136.4	136.0
11	2.805	87.3	5.6	128.6	134.2
12	2.866	80.4	6.1	126.4	138.1
13	-2.658	71.4	3.6	113.0	-119.1
14	2.733	103.6	6.4	118.0	128.7
15	2.806	75.3	3.7	135.0	144.0
16	2.730	75.4	4.5	126.3	133.8
17	-2.956	78.8	3.9	133.0	143.7
18	2.810	91.3	5.9	129.1	136.3
19	2.898	-191.9	3.8	126.4	135.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
1	3151.	4.52	.71	16.07	16.48	15.89
2	3147.	6.26	-1.15	-16.96	-17.46	8.55
3	3155.	5.64	.49	15.95	16.96	15.79
4	3157.	4.16	.43	16.13	16.59	13.82
5	3158.	5.60	.93	15.63	15.63	12.75
6	3159.	5.34	.64	15.33	15.33	8.05
7	-3161.	3.33	.32	-17.96	-17.96	14.29
8	3159.	4.78	.43	-18.05	-18.29	11.92
9	3158.	3.97	.37	16.19	16.27	13.33
10	3153.	6.64	.53	15.03	15.03	8.55
11	3151.	6.24	.69	15.11	15.76	18.79
12	3152.	5.63	.73	14.53	15.88	16.11
13	3151.	5.39	.47	14.01	14.76	11.33
14	3146.	7.59	.81	14.20	15.49	-20.53
15	3151.	5.38	.46	15.85	16.90	9.93
16	3152.	5.54	.57	15.25	16.16	12.67
17	3153.	5.35	.46	14.84	16.02	8.78
18	3146.	6.50	.72	15.12	15.95	18.42
19	-3136.	-13.22	.45	14.30	15.33	11.84

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	28.7290	31.0010	40.1080	26.8390	29.3940	43.1380
2	27.7420	31.0010	40.1080	25.9480	29.3940	43.1380
3	27.4850	31.0980	40.3770	26.2260	29.9850	43.7020
4	26.7370	31.0980	40.3770	25.5290	29.9850	43.7020
5	30.2360	35.7640	42.6830	28.5140	34.0880	47.5150
6	31.6670	35.7640	42.6830	29.8230	34.0880	47.5150
7	32.7880	32.3580	45.3390	25.9870	27.6960	41.5030
8	31.1380	32.3580	45.3390	24.8300	27.6960	41.5030
9	32.5480	32.3580	-45.8960	25.8190	27.6960	41.5030
10	33.0920	32.3580	-45.8960	26.1990	27.6960	41.5030
11	29.2970	32.5970	41.4250	27.1830	30.8540	44.5290
12	31.4940	35.0870	43.4710	29.1790	33.2000	46.7030
13	29.1820	35.7000	42.1650	27.5690	34.0880	47.5150
14	27.4740	31.0780	38.5010	25.9490	29.6880	43.4190
15	28.2840	30.7920	38.8380	25.9570	28.8150	42.5820
16	27.3100	31.0240	38.6100	26.0890	29.9850	43.7020
17	29.8280	31.0240	38.6100	28.4330	29.9850	43.7020
18	30.8060	34.9400	41.4240	28.6150	33.2000	46.7030
19	29.3480	30.6100	37.9780	27.2430	29.1030	42.8590

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	4.84	.75	17.29	17.72	15.89
2	6.69	-1.21	-18.24	18.77	8.55
3	5.91	.51	17.26	18.35	14.97
4	4.36	.45	17.46	17.96	12.75
5	5.94	.97	17.40	17.40	12.75
6	5.67	.67	17.07	17.07	8.05
7	4.21	.37	16.44	16.44	13.48
8	6.00	.51	16.52	16.74	11.22
9	5.01	.44	-14.64	-14.71	12.99
10	8.39	.62	-13.59	-13.59	8.55
11	6.72	.73	16.24	16.94	15.35
12	6.07	.78	15.61	17.06	16.11
13	5.70	.49	15.79	16.63	10.35
14	8.03	.84	16.01	17.46	-17.89
15	5.86	.49	17.38	18.53	9.80
16	5.80	.59	17.26	18.29	12.67
17	5.61	.47	16.79	18.14	8.78
18	7.00	.76	17.04	17.98	11.79
19	-14.24	.47	16.14	17.30	11.67

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

R8211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	53.00	77.00	77.50	52.65	76.49	76.98
2	53.00	77.00	-77.00	52.65	76.49	76.49
3	54.50	77.00	78.00	54.24	76.63	77.63
4	55.00	76.00	78.00	54.74	75.64	77.63
5	55.00	79.00	79.00	54.68	78.55	-78.55
6	54.00	76.00	78.00	53.69	75.56	77.55
7	56.00	78.00	79.00	54.70	76.19	77.16
8	56.00	80.00	78.00	54.70	78.14	-76.19
9	54.00	78.00	78.25	52.74	76.19	-76.43
10	55.00	78.00	78.50	53.72	76.19	76.67
11	54.00	76.00	77.25	53.59	75.42	76.66
12	54.00	79.00	78.50	53.59	78.40	77.90
13	54.50	77.00	78.00	54.19	76.56	77.55
14	54.00	-81.00	78.00	53.69	-80.54	77.55
15	55.00	76.00	78.00	54.53	75.35	77.33
16	53.00	77.00	78.00	52.75	76.63	77.63
17	-52.00	76.00	78.00	-51.75	75.64	77.63
18	55.00	78.00	78.00	54.58	77.41	77.41
19	54.00	80.50	78.00	53.59	79.89	77.41

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	4075.	.9570	1.1820	1216.	-1.127	-10378.
2	4150.	.9150	1.1930	1216.	-1.129	10563.
3	4200.	.9640	1.2130	1207.	1.128	10495.
4	4000.	-.8900	1.1550	-1194.	1.128	10495.
5	4300.	.9420	1.2420	1221.	1.128	10467.
6	4200.	.9740	1.2130	1230.	1.128	10467.
7	4300.	-1.0210	1.2420	1257.	1.128	10530.
8	4200.	.9680	1.2130	-1266.	1.128	10530.
9	4100.	.9950	1.1840	1239.	1.128	10530.
10	4300.	-1.0280	1.2420	1243.	1.128	10530.
11	4200.	.9800	1.2130	1230.	1.128	10498.
12	4200.	.9860	1.2130	1225.	1.128	10498.
13	4150.	.9160	1.2040	1207.	-1.127	-10385.
14	-4700.	-1.1020	-1.3640	-1284.	-1.127	-10385.
15	4100.	.9360	1.1840	1212.	1.128	10467.
16	4100.	.9250	1.1950	1212.	-1.126	-10323.
17	4000.	.9760	1.1660	1212.	-1.126	-10323.
18	4000.	.9590	1.1550	1212.	1.128	10523.
19	4200.	1.0050	1.2130	1230.	1.128	10523.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	4123.	.9440	1.1660	1200.	-10430.
2	4199.	.9020	1.1770	1200.	-10616.
3	4231.	.9550	1.2010	1196.	10523.
4	4030.	-.8820	1.1440	1182.	10523.
5	4348.	.9310	1.2270	1207.	10523.
6	4247.	.9630	1.1990	1216.	10523.
7	4399.	.9740	1.1850	1199.	10523.
8	4297.	.9230	1.1570	1208.	10523.
9	4195.	.9500	1.1290	1182.	10523.
10	4399.	.9800	1.1850	1186.	10523.
11	4242.	.9650	1.1940	1211.	10523.
12	4242.	.9710	1.1940	1207.	10523.
13	4192.	.9060	1.1900	1193.	-10430.
14	-4748.	-1.0900	-1.3480	-1269.	-10430.
15	4158.	.9200	1.1640	1191.	10523.
16	4125.	.9160	1.1640	1200.	-10337.
17	4025.	.9670	1.1550	1200.	-10337.
18	4031.	.9440	1.1370	1193.	10523.
19	4232.	.9890	1.1940	1211.	10523.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

PB211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.980	198.9	36.7	36.7	48.5
2	1.884	253.6	38.3	39.4	52.0
3	1.995	227.7	35.4	38.0	51.8
4	-1.846	190.9	23.5	-49.5	50.7
5	1.949	228.7	41.6	35.9	47.9
6	2.014	235.7	50.5	43.1	-44.0
7	-2.128	171.9	-21.1	-47.5	54.7
8	2.010	194.6	28.1	-47.4	54.0
9	2.064	226.9	28.2	-43.9	53.5
10	-2.124	285.6	38.8	40.8	50.1
11	2.023	244.8	44.8	38.5	47.9
12	2.041	211.2	41.0	40.1	53.3
13	1.894	212.3	31.8	37.9	46.4
14	-2.278	268.9	48.7	41.5	56.6
15	1.930	230.8	42.0	39.4	51.1
16	1.908	238.0	40.7	37.0	50.3
17	2.014	251.1	45.2	34.8	50.7
18	1.977	228.0	44.9	41.5	50.9
19	2.062	-351.9	44.7	38.2	53.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3112.	19.90	6.31	6.04	7.97	9.93
2	3100.	26.55	6.90	6.77	8.95	4.64
3	3113.	22.61	6.04	6.19	8.44	7.24
4	3121.	20.53	4.34	-8.75	8.96	6.62
5	3113.	23.25	7.27	6.00	8.00	4.61
6	3110.	23.16	8.52	6.96	-7.11	-2.01
7	-3133.	-16.10	-3.39	7.32	8.42	5.26
8	-3124.	19.25	4.78	-7.71	8.78	5.30
9	3118.	21.81	4.66	6.93	8.45	7.33
10	3106.	26.59	6.20	6.24	7.66	7.89
11	3105.	23.91	7.52	6.18	7.68	-13.91
12	3112.	20.49	6.84	6.39	8.49	7.28
13	3110.	22.19	5.71	6.50	7.97	7.95
14	3104.	23.32	7.26	5.91	8.06	-14.57
15	3103.	23.62	7.38	6.62	8.59	6.62
16	3104.	24.64	7.23	6.30	8.55	9.33
17	3103.	24.62	7.62	5.60	8.17	4.00
18	3101.	22.75	7.69	6.80	8.34	6.58
19	-3085.	-33.52	7.32	5.98	8.39	5.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	5.6190	6.5470	15.2030	5.3760	6.2410	16.4990
2	5.5190	6.5470	15.2030	5.2840	6.2410	16.4990
3	5.6660	6.6430	15.4250	5.4930	6.4300	16.8020
4	5.0900	5.8080	14.2150	4.9400	5.6230	15.4920
5	6.9520	9.6200	18.7520	6.6810	9.2060	21.0120
6	5.2880	5.8270	13.7350	5.0880	5.5840	15.4280
7	6.1160	6.7900	16.9190	5.2860	5.9260	15.9880
8	7.4490	9.9490	-21.5600	6.4230	8.6400	20.2140
9	6.0460	6.7900	17.1270	5.2320	5.9260	15.9880
10	6.1340	6.7900	17.1270	5.3000	5.9260	15.9880
11	5.3000	5.7790	14.0730	5.0520	5.5080	15.3010
12	7.0650	9.4760	19.1470	6.7200	9.0140	20.7500
13	5.5400	6.6010	14.6510	5.3360	6.3350	16.6500
14	-8.7320	-12.5890	-21.8670	-8.3750	-12.0590	-24.7720
15	5.2190	5.8010	13.7280	4.9390	5.4700	15.2380
16	5.5670	6.6270	14.7500	5.4040	6.4300	16.8020
17	5.2710	5.7940	13.5930	5.1160	5.6230	15.4920
18	6.2620	7.8500	16.2370	5.9740	7.5050	18.4890
19	7.9940	11.5930	20.6810	7.6080	11.0650	23.4900

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	20.80	6.62	7.04	9.29	9.93
2	27.74	7.24	7.89	10.43	4.64
3	23.32	6.24	7.24	9.88	7.24
4	21.15	4.48	-10.25	10.49	6.62
5	24.19	7.59	7.22	9.63	4.61
6	24.07	8.89	7.81	-7.98	-2.01
7	18.63	-3.89	7.42	8.54	5.26
8	22.33	5.50	7.22	8.23	5.30
9	25.20	5.34	6.47	-7.89	7.33
10	-30.77	7.11	-5.82	-7.15	7.89
11	25.08	7.89	6.72	8.35	8.18
12	21.54	7.19	6.93	9.20	7.28
13	23.04	5.95	7.39	9.06	7.54
14	24.31	7.58	6.69	9.13	-14.57
15	24.96	7.83	7.35	9.53	6.62
16	25.38	7.45	7.17	9.74	9.33
17	25.37	7.85	6.38	9.31	4.00
18	23.85	8.05	7.74	9.50	6.58
19	-35.21	7.67	6.79	9.53	5.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	-28.00	50.50	66.25	-27.81	50.16	65.81
2	-29.00	-53.00	67.00	-28.81	-52.65	66.55
3	27.00	49.00	66.00	26.87	48.77	65.68
4	27.00	48.50	66.00	26.87	48.27	65.68
5	27.00	49.00	66.00	26.85	48.72	65.62
6	27.00	50.00	66.00	26.85	49.71	65.62
7	27.00	50.00	67.00	26.37	48.84	65.44
8	27.00	50.00	67.00	26.37	48.84	65.44
9	27.00	49.00	66.25	26.37	47.86	64.71
10	-29.00	-54.00	-68.00	-28.33	-52.74	66.42
11	-28.00	51.00	66.00	-27.79	50.61	65.50
12	-26.00	50.00	66.00	-25.80	49.62	65.50
13	27.00	49.00	65.25	26.85	48.72	64.88
14	27.00	50.00	66.00	26.85	49.71	65.62
15	27.50	50.00	66.00	27.26	49.57	65.43
16	27.00	50.00	67.00	26.87	49.76	66.68
17	27.00	49.00	66.00	26.87	48.77	65.68
18	-29.00	51.00	67.00	-28.78	50.61	66.49
19	-29.00	-52.00	-68.00	-28.78	-51.60	-67.48

NOTE- MINUS SIGNS NOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1800.	.8140	.9800	1068.	1.035	3640.
2	-1900.	.7950	1.0180	1077.	-1.037	3944.
3	1600.	.8150	.8710	1059.	1.035	3616.
4	1600.	-.7500	.8710	1054.	1.031	3616.
5	1675.	.7990	.9120	1063.	1.031	3589.
6	1700.	.7950	.9260	1054.	1.032	3589.
7	1650.	.8450	.8990	-1104.	1.022	3563.
8	1750.	.7950	.9530	1086.	-1.020	3563.
9	-1900.	.8210	-1.0350	1077.	1.030	3367.
10	-2000.	-.8690	-1.0890	-1108.	1.031	3905.
11	1800.	.8410	.9800	1090.	1.032	3567.
12	1700.	.8110	.9260	1077.	1.025	3567.
13	1750.	.8070	.9530	1057.	1.028	3394.
14	1750.	.8250	.9530	1059.	1.025	3593.
15	1750.	.7900	.9530	1077.	1.030	3540.
16	-1900.	-.8980	-1.0350	-1122.	1.025	-4017.
17	1800.	.8430	.9800	1086.	1.035	3621.
18	1750.	.8380	.9530	1086.	1.030	3935.
19	1800.	-.8690	.9800	1059.	1.032	-4392.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1821.	.8040	.9670	1053.	3658.
2	-1922.	.7840	1.0050	1062.	3964.
3	1612.	.8080	.8630	1049.	3625.
4	1612.	-.7430	.8630	1044.	3625.
5	1694.	.7900	.9020	1051.	3609.
6	1719.	.7860	.9150	1042.	3609.
7	1688.	.8070	.8570	1053.	3560.
8	1790.	.7590	.9090	1036.	3560.
9	-1944.	.7830	.9870	-1027.	3364.
10	-2046.	.8290	-1.0390	1057.	3902.
11	1818.	.8280	.9660	1074.	3575.
12	1717.	.7980	.9120	1060.	3575.
13	1768.	.7980	.9420	1045.	3409.
14	1768.	.8160	.9420	1047.	3609.
15	1775.	.7770	.9370	1058.	3559.
16	-1912.	-.8890	-1.0250	-1111.	-4023.
17	1811.	.8350	.9710	1075.	3625.
18	1763.	.8250	.9390	1069.	3935.
19	1814.	-.8560	.9660	1043.	-4392.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.529	744.1	341.8	7.2	14.9
2	1.502	736.3	299.2	8.3	16.0
3	1.515	787.5	387.6	6.0	13.5
4	-1.385	832.2	345.0	7.2	13.6
5	1.473	839.1	406.3	7.5	-12.3
6	1.481	770.9	374.5	8.6	13.4
7	-1.625	712.8	-265.8	6.5	14.8
8	1.500	739.7	317.6	7.0	13.7
9	1.541	811.7	335.2	6.9	13.8
10	-1.669	734.2	-272.9	-9.6	16.5
11	1.593	739.1	323.4	9.0	16.1
12	1.506	786.7	380.0	6.3	14.2
13	1.506	789.7	351.0	7.6	13.8
14	1.539	757.4	378.2	6.1	14.6
15	1.474	753.2	353.3	5.9	14.0
16	-1.708	796.9	318.5	9.5	-17.9
17	1.567	807.3	396.8	6.9	15.5
18	1.563	739.0	392.3	8.4	15.2
19	-1.629	841.6	357.1	8.4	-17.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R9211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2833.	87.72	69.23	1.39	2.88	0.00
2	2850.	88.94	62.08	1.65	3.17	0.00
3	2804.	92.76	78.43	1.16	2.61	0.00
4	2789.	-106.64	75.94	1.51	2.86	0.00
5	2781.	100.85	83.89	1.49	-2.43	0.00
6	2810.	93.10	77.69	1.70	2.65	0.00
7	-2898.	-80.91	-51.84	1.22	2.77	0.00
8	2846.	89.35	65.91	1.39	2.71	0.00
9	2831.	94.93	67.35	1.33	2.64	0.00
10	-2896.	-81.05	-51.76	1.74	2.99	0.00
11	2856.	84.34	63.40	1.69	3.02	0.00
12	2804.	93.21	77.34	1.23	2.76	0.00
13	2816.	94.00	71.78	1.48	2.70	0.00
14	2814.	88.15	75.63	1.16	2.79	0.00
15	2814.	91.53	73.75	1.17	2.79	0.00
16	-2868.	85.18	-58.49	1.66	3.14	0.00
17	2805.	92.00	77.68	1.30	2.91	0.00
18	2813.	84.68	77.21	1.57	2.87	0.00
19	2826.	92.93	67.73	1.53	3.18	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.7110	.8800	4.5550	1.6510	.8440	4.9970
2	-1.8970	-1.0680	-5.1090	-1.8300	-1.0250	-5.6000
3	1.5900	.7740	4.2620	1.5520	.7530	4.6810
4	1.5230	.7430	4.1620	1.4870	.7230	4.5720
5	1.5890	.7790	4.1200	1.5400	.7510	4.6710
6	1.6600	.8450	4.3180	1.6090	.8140	4.8940
7	1.7430	.8480	4.7760	1.5560	.7580	4.6970
8	1.7150	.8480	4.7760	1.5340	.7580	4.6970
9	1.6510	.7800	4.6100	1.4770	.6980	4.4850
10	-2.0970	-1.1590	-5.8240	-1.8640	-1.0320	-5.6250
11	1.7650	.9120	4.6390	1.6980	.8750	5.1020
12	1.6710	.8420	4.4280	1.6090	.8080	4.8720
13	1.5910	.7770	4.0690	1.5440	.7510	4.6710
14	1.6750	.8430	4.2650	1.6240	.8140	4.8940
15	1.6670	.8470	4.3210	1.5950	.8050	4.8620
16	1.7070	.8380	4.2710	1.6660	.8170	4.9050
17	1.6030	.7730	4.0750	1.5650	.7530	4.6810
18	1.7600	.9080	4.4210	1.6960	.8750	5.1020
19	-1.8580	-.9820	4.6290	-1.7900	-.9460	-5.3400

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	90.92	72.14	1.64	3.39	0.00
2	92.22	64.73	1.94	3.73	0.00
3	95.07	80.62	1.37	3.08	0.00
4	-109.24	78.05	1.79	3.38	0.00
5	104.03	87.04	1.81	2.96	0.00
6	96.05	80.62	-2.07	3.22	0.00
7	90.62	-57.98	1.28	2.92	0.00
8	99.90	73.71	1.37	-2.67	0.00
9	-106.14	75.25	1.29	-2.57	0.00
10	91.17	-58.09	1.68	2.89	0.00
11	87.68	66.05	1.85	3.32	0.00
12	96.84	80.55	1.36	3.04	0.00
13	96.89	74.34	1.70	3.10	0.00
14	90.90	78.34	1.33	3.20	0.00
15	95.71	77.58	1.32	3.14	0.00
16	87.28	-59.99	1.91	3.61	0.00
17	94.22	79.65	1.49	3.34	0.00
18	87.87	80.11	1.82	3.31	0.00
19	96.49	70.30	1.76	3.67	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

R8211-22B * BASELINE TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	24.00	45.50	63.00	23.84	45.20	62.58
2	-26.00	-48.00	-65.00	-25.83	-47.68	-64.57
3	23.00	42.50	62.00	22.89	42.30	61.70
4	23.00	44.00	63.00	22.89	43.79	62.70
5	25.00	45.00	64.00	24.86	44.74	63.63
6	24.00	44.00	63.00	23.86	43.75	62.64
7	25.00	-47.00	-65.00	24.42	45.91	63.49
8	25.00	-47.00	-65.00	24.42	45.91	63.49
9	24.00	45.00	64.00	23.44	43.95	62.51
10	25.00	-48.00	-64.75	24.42	-46.88	63.24
11	24.00	46.00	63.00	23.82	45.65	62.52
12	23.00	45.00	62.50	22.82	44.66	62.02
13	23.50	44.00	62.25	23.37	43.75	61.89
14	22.50	44.00	62.50	22.37	43.75	62.14
15	22.00	-40.00	-60.00	21.81	-39.66	-59.49
16	23.00	44.00	62.00	22.89	43.79	61.70
17	22.00	-42.00	61.00	21.89	-41.80	60.71
18	25.00	-47.00	64.00	24.81	-46.64	63.51
19	25.00	-47.00	64.00	24.81	-46.64	63.51

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R9211-228 * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1588.	.8110	.8650	1036.	1.025	2802.
2	1600.	.7880	.8710	1050.	1.030	-3309.
3	1400.	.8100	.7630	1032.	1.030	2634.
4	1400.	-.7390	.7630	1027.	1.029	2832.
5	1600.	.8030	.8710	1032.	1.029	3060.
6	1500.	.7910	.8170	1050.	1.030	2813.
7	1586.	.8110	.8640	-1086.	1.018	3039.
8	1580.	.8080	.8610	1068.	1.016	3039.
9	-1700.	.8160	-.9260	1050.	1.025	2804.
10	-1700.	.8550	-.9260	1077.	1.020	2974.
11	1600.	.8310	.8710	1063.	1.025	2797.
12	1500.	.8110	.8170	1050.	1.020	2698.
13	1500.	.8110	.8170	1036.	1.022	2667.
14	1500.	.8140	.8170	1023.	1.015	2717.
15	1500.	.7950	.8170	1041.	-1.010	-2211.
16	1600.	-.9320	.8710	-1122.	1.026	2637.
17	1500.	.8480	.8170	1050.	1.025	2438.
18	1600.	.8440	.8710	1068.	1.025	3044.
19	1600.	.8670	.8710	1050.	1.022	3044.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	COR TT7 DEG R	COR THRUST LBF
1	1606.	.8000	.8530	1022.	2816.		
2	1619.	.7770	.8600	1036.	-3326.		
3	1410.	.8020	.7550	1022.	2641.		
4	1410.	-.7320	.7550	1017.	2840.		
5	1618.	.7940	.8610	1020.	-3076.		
6	1517.	.7820	.8080	1038.	2828.		
7	1623.	.7740	.8240	1036.	3037.		
8	1617.	.7710	.8210	1019.	3037.		
9	-1739.	.7790	.8830	-1001.	2802.		
10	-1739.	.8160	.8830	1027.	2972.		
11	1616.	.8180	.8580	1047.	2804.		
12	1515.	.7990	.8050	1034.	2705.		
13	1515.	.8010	.8080	1024.	2679.		
14	1515.	.8040	.8080	1011.	2728.		
15	1521.	.7810	.8030	1023.	-2223.		
16	1610.	-.9230	.8630	-1111.	2641.		
17	1509.	.8400	.8090	1040.	2442.		
18	1612.	.8310	.8580	1051.	3044.		
19	1612.	-.8540	.8580	1034.	3044.		

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-228 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.474	855.4	461.7	5.8	12.5
2	1.455	-826.8	-371.0	6.6	13.6
3	1.447	937.9	523.7	5.1	11.1
4	-1.316	953.2	457.2	5.5	11.5
5	1.446	913.1	495.6	7.0	10.8
6	1.421	901.5	498.6	6.9	10.9
7	1.532	-767.0	-316.5	5.9	13.8
8	1.506	-794.2	-367.9	6.0	12.8
9	1.496	890.9	420.0	5.4	11.7
10	-1.593	858.8	-384.8	7.0	13.4
11	1.525	841.2	439.8	7.0	13.4
12	1.458	911.9	502.2	5.4	12.2
13	1.469	901.2	461.7	5.6	11.8
14	1.468	885.5	488.0	5.9	11.9
15	1.412	935.0	527.2	-4.1	10.8
16	-1.717	953.4	474.2	7.2	-14.3
17	1.507	-991.7	-569.9	4.9	12.1
18	1.539	-818.0	485.2	7.0	13.3
19	1.576	956.2	475.5	6.9	-14.4

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2744.	101.31	93.94	1.12	2.43	0.00
2	-2789.	100.84	-77.75	1.33	-2.73	0.00
3	2697.	111.27	106.74	.99	2.16	0.00
4	2690.	-124.00	102.18	1.18	2.45	0.00
5	2718.	109.25	101.87	1.39	2.13	0.00
6	2712.	109.50	104.04	1.37	2.17	0.00
7	-2848.	-90.77	-64.35	1.14	-2.68	0.00
8	-2813.	-94.43	-75.15	1.17	2.50	0.00
9	2767.	104.87	-84.93	1.04	2.27	0.00
10	-2810.	-96.43	-74.24	1.29	2.46	0.00
11	2770.	-97.26	87.35	1.33	2.55	0.00
12	2713.	108.01	102.20	1.05	2.37	0.00
13	2735.	106.80	94.00	1.09	2.29	0.00
14	2725.	104.57	99.00	1.13	2.31	0.00
15	2682.	113.05	109.50	-.81	2.14	0.00
16	-2778.	98.20	-83.91	1.21	2.42	0.00
17	2682.	112.33	110.90	.91	2.24	0.00
18	2752.	-93.09	94.86	1.30	2.48	0.00
19	2744.	105.91	90.48	1.26	2.62	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * BASELINE TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.3510	.5740	3.5790	1.3050	.5520	3.9340
2	-1.5140	-.7160	-4.0480	-1.4620	-.6880	-4.4460
3	1.1340	.4210	3.0280	1.1080	.4100	3.3330
4	1.2110	.4920	3.3030	1.1830	.4790	3.6330
5	1.3090	.5470	3.3780	1.2700	.5280	3.8350
6	1.2340	.4950	3.1910	1.1980	.4770	3.6250
7	-1.4980	-.6580	-4.1320	1.3420	.5890	4.0810
8	-1.4960	-.6580	-4.1320	1.3410	.5890	4.0810
9	1.3480	.5430	-3.7460	1.2100	.4870	3.6670
10	-1.5930	-.7170	-4.3930	-1.4250	-.6420	-4.2790
11	1.3940	.5990	3.6560	1.3430	.5760	4.0300
12	1.3140	.5440	3.4610	1.2660	.5230	3.8170
13	1.2400	.4940	3.1520	1.2040	.4770	3.6250
14	1.2410	.4940	3.1520	1.2050	.4770	3.6250
15	-.9780	-.3200	-2.5150	-.9390	-.3050	-2.8460
16	1.2820	.4910	3.1580	1.2520	.4790	3.6330
17	1.1130	.3980	2.8110	1.0880	.3890	-3.2370
18	-1.4670	-.6520	3.6580	-1.4150	-.6290	-4.2300
19	-1.4770	-.6520	3.6580	-1.4250	-.6290	-4.2300

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * BASELINE TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	104.86	97.76	1.32	2.87	0.00
2	104.43	-80.96	1.57	-3.22	0.00
3	113.89	109.57	1.17	2.56	0.00
4	-126.91	104.93	1.39	2.90	0.00
5	112.60	105.59	-1.69	2.59	0.00
6	112.82	107.82	-1.67	2.65	0.00
7	-101.27	-71.78	1.21	2.84	0.00
8	105.35	-83.83	1.16	2.47	0.00
9	116.79	94.54	1.01	-2.22	0.00
10	107.84	-82.88	1.26	2.40	0.00
11	-100.95	90.88	1.46	2.81	0.00
12	112.04	106.29	1.15	2.61	0.00
13	109.96	97.24	1.25	2.64	0.00
14	107.67	102.41	1.31	2.66	0.00
15	117.81	114.77	-.91	2.42	0.00
16	-100.52	-85.96	1.39	2.79	0.00
17	114.88	113.56	1.05	2.58	0.00
18	-96.49	98.31	1.51	2.87	0.00
19	109.81	93.77	1.46	3.03	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1	2480.	186.	538.7	29.80	.008670
3	3150.	132.	521.7	29.99	.008140
4	5230.	133.	521.7	29.90	.008170
7	4617.	212.	527.7	29.95	.011130
8	1432.	211.	527.7	29.95	.011130
13	3057.	168.	523.7	30.10	.008830
14	1543.	168.	523.7	30.10	.008830
15	2525.	115.	527.7	30.05	.011090
16	3558.	186.	529.7	30.00	.009990
17	6482.	187.	529.7	30.00	.009990

RB211-22B * 150 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	25.00	46.00	64.00	24.53	45.14	62.80
3	23.00	44.00	61.50	22.93	43.87	61.32
4	23.00	45.00	62.00	22.93	44.87	61.82
7	24.00	45.00	62.00	23.79	44.61	61.47
8	23.00	45.00	62.00	22.80	44.61	61.47
13	24.00	46.00	63.00	23.89	45.78	62.70
14	23.00	44.00	64.00	22.89	43.79	63.69
15	23.00	-42.00	61.50	22.80	-41.64	60.97
16	23.50	44.50	62.00	23.25	44.04	61.35
17	22.00	-42.00	61.00	21.77	-41.56	-60.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1600.	.8320	.8710	1077.	1.026	2872.
3	1500.	.8320	.8170	1032.	1.012	2559.
4	1500.	.8080	.8170	1050.	1.018	2666.
7	1550.	.8090	.8440	1050.	1.025	2591.
8	1500.	.8310	.8170	1041.	1.028	2591.
13	1600.	-.9770	.8710	1050.	1.020	2823.
14	1600.	.8660	.8710	1032.	1.020	2074.
15	1500.	.8840	.8170	1068.	1.020	2484.
16	-1400.	.8320	-.7630	1032.	1.026	2564.
17	1500.	.8630	.8170	1068.	1.024	2366.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1624.	.8010	.8390	1037.	2860.
3	1508.	.8270	.8120	1026.	2565.
4	1503.	.8040	.8120	1044.	2664.
7	1565.	.7950	.8300	1032.	2594.
8	1514.	.8170	.8030	1023.	2594.
13	1617.	-.9680	.8630	1040.	2840.
14	1617.	.8570	.8630	1022.	-3093.
15	1520.	.8680	.8030	1049.	2495.
16	-1419.	.8140	-.7470	1010.	2571.
17	1520.	.8450	.8000	1046.	2373.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.545	790.5	393.2	7.2	13.2
3	1.478	894.1	571.9	6.5	11.1
4	1.468	874.3	450.7	6.8	11.9
7	1.480	835.9	428.6	4.7	7.9
8	1.512	847.6	474.0	5.2	9.9
13	-1.847	803.2	393.3	8.5	14.1
14	1.579	853.4	484.2	8.7	10.6
15	1.625	861.5	469.1	5.4	10.9
16	1.518	872.4	461.0	5.1	11.4
17	1.567	891.5	509.8	6.7	10.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2801.	91.22	77.94	1.36	2.50	0.00
3	-2684.	103.34	113.56	1.24	2.10	0.00
4	2742.	103.93	92.04	1.34	2.32	0.00
7	2762.	99.31	87.49	.91	1.55	0.00
8	2746.	97.98	94.14	.99	1.89	0.00
13	-2848.	-78.81	-66.71	1.37	2.27	0.00
14	2752.	94.66	92.26	1.59	1.94	0.00
15	2775.	93.62	87.57	.97	1.95	0.00
16	2756.	100.76	91.47	.97	2.16	0.00
17	2742.	99.27	97.52	1.22	1.91	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.4170	.5950	3.7170	1.3010	.5490	3.9220
3	1.2400	.4920	3.1840	1.2220	.4840	3.6510
4	1.2990	.5410	3.3630	1.2830	.5350	3.8630
7	1.3130	.5430	3.2430	1.2620	.5210	3.8080
8	1.3220	.5430	3.2430	1.2700	.5210	3.8080
13	1.4560	.6020	3.5400	1.4160	.5830	4.0560
14	1.2600	.4950	3.1680	1.2270	.4790	3.6330
15	-1.1340	-.4000	-2.7320	-1.0870	-.3820	-3.2060
16	1.2920	.5180	3.2450	1.2290	.4920	3.6450
17	-1.1280	-.3990	2.8050	-1.0740	-.3790	-3.1920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-22B * 150 HOUR TEST RESULTS *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	99.32	84.49	1.44	2.64	0.00
3	104.88	115.54	1.42	2.41	0.00
4	105.25	93.15	1.53	2.67	0.00
7	103.37	91.17	1.07	1.82	0.00
8	102.01	98.10	1.16	2.22	0.00
13	-81.02	-68.53	1.57	2.60	0.00
14	97.20	95.31	1.82	2.22	0.00
15	97.66	91.70	1.14	2.28	0.00
16	105.94	96.42	1.10	2.45	0.00
17	104.28	102.67	1.39	2.17	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	-28.00	51.00	67.00	27.48	50.04	65.74
3	27.00	50.00	66.00	26.92	49.86	65.81
4	27.00	50.00	66.00	26.92	49.86	65.81
7	27.00	50.00	66.00	26.77	49.57	65.43
8	27.00	50.00	66.00	26.77	49.57	65.43
13	27.00	50.00	66.00	26.87	49.76	65.68
14	27.00	51.00	67.00	26.87	50.76	66.68
15	27.00	-48.00	65.00	26.77	-47.59	64.44
16	27.00	50.00	66.00	26.72	49.48	65.31
17	27.00	51.00	66.00	26.72	50.47	65.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1800.	.8470	.9800	-1104.	1.032	3656.
3	1800.	.8270	.9800	1068.	1.022	3651.
4	1700.	.8150	.9260	1068.	1.026	3662.
7	1800.	.8210	.9800	1068.	1.030	3555.
8	1800.	.8340	.9800	1068.	1.029	3555.
13	1800.	.8460	.9800	1068.	1.028	3604.
14	1800.	.8780	.9800	1066.	1.028	-3998.
15	1800.	.8640	.9800	1086.	1.028	3279.
16	1700.	.8390	.9260	1068.	1.034	3516.
17	1800.	.8640	.9800	1086.	1.036	3516.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-228 * 150 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1827.	.8160	.9440	1063.	3642.
3	1809.	.8220	.9750	1062.	3659.
4	1704.	.8100	.9210	1062.	3659.
7	1817.	.8070	.9640	1049.	3559.
8	1817.	.8200	.9640	1049.	3559.
13	1820.	.8380	.9710	1058.	3625.
14	1820.	.8690	.9710	1056.	-4023.
15	1823.	.8490	.9640	1067.	3293.
16	1723.	.8220	.9070	1046.	3526.
17	1824.	.8460	.9600	1063.	3526.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.621	667.0	289.9	6.1	-17.8
3	1.537	724.2	405.4	5.6	15.0
4	1.538	724.3	318.3	6.5	15.2
7	1.548	716.4	327.7	4.2	11.7
8	1.563	734.0	367.5	5.3	12.3
13	1.594	727.4	345.1	6.8	15.0
14	1.651	717.2	375.4	7.5	15.7
15	1.617	709.9	410.2	7.1	13.3
16	1.590	718.6	330.1	5.2	14.4
17	1.656	-646.7	309.3	6.7	15.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
-----	-----	-----	-----	-----	-----	-----
1	-2885.	75.56	-56.41	1.14	-3.31	0.00
3	2804.	84.11	80.89	1.06	2.85	0.00
4	2847.	85.35	64.43	1.25	2.94	0.00
7	2846.	83.82	65.86	.80	2.24	0.00
8	2826.	84.48	72.66	1.00	2.33	0.00
13	2840.	82.49	67.23	1.27	2.79	0.00
14	2837.	78.42	70.51	1.34	2.83	0.00
15	2824.	78.89	78.30	1.29	2.42	0.00
16	2858.	82.22	64.90	.97	2.71	0.00
17	-2890.	-71.85	59.03	1.22	2.74	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.8020	.9100	4.7380	1.6490	.8360	4.9700
3	1.6640	.8390	4.3010	1.6380	.8240	4.9260
4	1.6530	.8340	4.2920	1.6320	.8240	4.9260
7	1.6780	.8400	4.1520	1.6090	.8050	4.8620
8	1.6850	.8400	4.1520	1.6160	.8050	4.8620
13	1.6850	.8450	4.2850	1.6390	.8170	4.9050
14	1.7800	.9160	4.4890	1.7310	.8850	5.1360
15	1.5560	-.7160	-3.7860	1.4880	-.6830	-4.4270
16	1.6970	.8440	4.2780	1.6100	.7990	4.8400
17	1.7890	.9140	4.4830	1.6960	.8650	5.0680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	82.60	61.37	1.20	3.48	0.00
3	85.42	82.36	1.22	3.27	0.00
4	86.47	65.24	1.43	3.38	0.00
7	87.40	68.74	.94	2.63	0.00
8	88.10	75.84	1.17	2.72	0.00
13	84.79	69.53	1.46	3.19	0.00
14	80.64	72.94	1.53	3.23	0.00
15	82.45	82.17	1.51	2.83	0.00
16	86.65	68.56	1.10	3.07	0.00
17	-75.78	62.39	1.38	3.10	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	-95.00	99.00	93.40	93.22	97.14	91.65
3	94.00	96.00	93.00	93.73	95.72	92.73
4	93.50	96.00	92.50	93.23	95.72	92.23
7	93.00	97.00	92.00	92.20	96.17	91.21
8	93.00	97.00	92.00	92.20	96.17	91.21
13	93.00	97.50	93.00	92.55	97.03	92.55
14	93.50	97.00	93.00	93.05	96.54	92.55
15	93.00	-92.00	92.00	92.20	-91.21	91.21
16	94.00	98.00	92.00	93.02	96.98	91.04
17	93.00	-100.00	93.00	92.03	-98.96	92.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	15800.	1.9170	2.1080	-1806.	1.533	42169.
3	15000.	1.8170	2.0010	1716.	1.533	41902.
4	15000.	1.7700	2.0010	1734.	1.533	42028.
7	15500.	1.7450	2.0680	1716.	1.533	41958.
8	15500.	1.8030	2.0680	1734.	1.533	41958.
13	15005.	1.8090	2.0020	1716.	1.533	41749.
14	15500.	1.8430	2.0680	1747.	1.533	41749.
15	15000.	1.8300	2.0250	1725.	-1.521	-40940.
16	16000.	1.8200	2.1350	1752.	1.533	41888.
17	16000.	1.8600	2.1350	1761.	1.533	41888.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	16037.	1.8460	2.0300	1739.	42000.
3	15079.	1.8060	1.9900	1706.	42000.
4	15033.	1.7600	1.9900	1724.	42000.
7	15650.	-1.7150	2.0330	1686.	42000.
8	15650.	1.7720	2.0330	1704.	42000.
13	15168.	1.7920	1.9830	1699.	42000.
14	15668.	1.8260	2.0480	1731.	42000.
15	15195.	1.7980	1.9900	1695.	-41118.
16	16212.	1.7830	2.0900	1715.	42000.
17	16212.	1.8220	2.0900	1724.	42000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	4.062	21.7	3.4	-503.9	-503.1
3	3.844	27.6	8.0	399.3	408.4
4	3.744	19.0	-9.3	393.2	417.5
7	3.690	24.6	3.7	-342.6	-337.4
8	3.816	24.8	3.2	376.7	383.6
13	3.825	17.9	4.4	380.4	383.1
14	3.896	33.3	4.7	365.1	385.8
15	3.877	27.5	6.2	391.2	394.1
16	3.860	22.9	6.2	413.8	422.8
17	3.947	24.1	4.0	425.2	441.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3156.	1.07	.29	-40.93	-40.93	27.81
3	3154.	1.44	.71	34.25	35.03	25.17
4	3154.	1.02	-.85	34.63	36.77	27.15
7	3155.	1.34	.34	30.62	30.62	29.14
8	3155.	1.31	.29	32.57	33.17	27.81
13	3151.	.94	.39	32.76	32.99	33.33
14	3150.	1.72	.42	30.86	32.60	30.00
15	3159.	1.42	.55	33.32	33.56	30.20
16	3162.	1.19	.56	35.43	36.21	28.86
17	3162.	1.23	.35	35.61	37.01	30.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-137.6580	113.9860	-102.7040	105.2630	99.7470	99.3780
3	90.3670	84.7330	76.8620	87.3720	82.6410	87.0240
4	-85.8490	84.2750	76.7040	82.8060	82.6410	87.0240
7	92.0190	93.7170	80.4680	82.3140	87.8640	90.9420
8	98.5560	93.7170	80.4680	87.8640	87.8640	90.9420
13	104.9090	103.4230	87.9870	97.9630	98.7730	98.6930
14	104.0330	96.6990	83.9190	97.0740	92.3710	94.1620
15	-61.4210	-47.2130	-49.7810	-54.9400	-44.1650	-56.4690
16	111.2680	106.4240	90.7260	96.3260	98.0310	98.1710
17	118.5130	108.3000	91.8600	102.2600	99.7470	99.3780

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	1.40	.33	39.61	39.61	20.78
3	1.50	.73	38.78	39.66	22.74
4	1.06	-.87	39.29	41.72	22.59
7	1.49	.37	34.61	34.61	24.44
8	1.47	.31	36.81	37.48	20.63
13	1.01	.41	36.75	37.00	-33.33
14	1.84	.44	34.62	36.58	28.67
15	1.59	.59	37.80	38.07	23.82
16	1.38	.60	38.74	39.18	23.66
17	1.42	.38	38.53	40.04	25.50

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	89.00	95.00	-92.00	87.33	93.22	90.28
3	88.00	94.00	91.00	87.75	93.73	90.74
4	88.00	94.00	90.00	87.75	93.73	89.74
7	88.00	94.00	90.00	87.25	93.19	89.23
8	88.00	94.00	90.00	87.25	93.19	89.23
13	88.00	95.00	91.00	87.58	94.55	90.56
14	87.00	94.50	91.00	86.58	94.05	90.56
15	88.00	94.00	90.00	87.25	93.19	89.23
16	87.50	95.00	90.00	86.59	94.01	89.06
17	87.50	96.00	-92.00	86.59	95.00	-91.04

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	12500.	1.7000	1.8330	-1689.	1.446	35757.
3	13000.	1.6410	1.9060	1644.	1.446	35530.
4	12500.	1.5860	1.8330	1635.	1.446	35637.
7	13000.	1.5730	1.9060	-1599.	1.446	35578.
8	13000.	1.5820	1.9060	1608.	1.446	35578.
13	12500.	1.5940	1.8330	1614.	1.446	35400.
14	13000.	1.6260	1.9060	1626.	1.446	35400.
15	13000.	1.6680	1.9290	1644.	-1.436	-34779.
16	13000.	1.6070	1.9060	1644.	1.446	35518.
17	13000.	1.7030	1.9060	1680.	1.446	35518.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	12688.	1.6370	-1.7650	1626.	35613.
3	13068.	1.6320	1.8950	1634.	35613.
4	12528.	1.5760	1.8220	1625.	35613.
7	13125.	1.5470	1.8740	-1571.	35613.
8	13125.	1.5550	1.8740	-1580.	35613.
13	12636.	1.5790	1.8150	1599.	35613.
14	13141.	1.6100	1.8880	1610.	35613.
15	13169.	1.6400	1.8960	1616.	-34930.
16	13172.	1.5740	1.8660	1610.	35613.
17	13172.	1.6680	1.8660	1645.	35613.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.595	27.4	2.1	-345.4	-349.3
3	3.466	37.1	4.7	277.5	288.7
4	3.347	24.2	-7.6	271.4	287.4
7	3.322	31.5	1.8	245.3	246.5
8	3.339	44.8	1.9	254.2	265.7
13	3.362	26.7	2.2	251.7	-228.6
14	3.428	50.4	2.7	244.6	263.7
15	3.529	36.5	3.6	299.9	308.0
16	3.401	29.7	2.4	290.7	302.9
17	3.608	32.1	2.6	315.6	-333.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3155.	1.53	.20	-31.70	-32.05	20.00
3	3154.	2.15	.46	26.39	27.46	19.74
4	3154.	1.45	-.78	26.74	28.32	17.76
7	3155.	1.90	.18	24.35	24.47	18.67
8	3153.	2.69	.20	25.09	26.23	19.33
13	3150.	1.59	.23	24.66	24.66	18.00
14	-3148.	2.95	.27	23.49	25.32	20.81
15	3159.	2.08	.35	28.06	28.82	-8.00
16	3162.	1.76	.25	28.26	29.44	16.56
17	3162.	1.79	.25	28.92	-30.54	23.13

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	71.0930	66.6940	70.0620	56.6380	58.7480	68.5280
3	61.3100	64.5420	63.4670	59.1900	62.9800	71.9190
4	57.7520	64.1940	63.3370	55.9310	62.9800	71.9190
7	56.9160	62.3060	60.2680	51.5790	58.5480	68.3670
8	57.4340	62.3060	60.2680	52.0270	58.5480	68.3670
13	64.3890	73.6240	69.1370	60.6350	70.3890	77.6840
14	63.4140	68.7760	65.9390	59.6860	65.7670	74.1170
15	62.9730	62.6810	60.4160	56.6600	58.5480	68.3670
16	64.9060	70.8150	67.9310	57.2950	65.4120	73.8410
17	-79.3430	-81.0590	74.6820	-69.5040	74.8070	81.0580

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 4

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		1.92			.23		31.00			31.35			18.17	
3		2.23			.48		29.91			31.12			17.89	
4		1.50			-.80		30.36			32.15			17.61	
7		2.10			.19		27.63			27.76			17.05	
8		2.97			.21		28.47			29.76			18.89	
13		1.69			.24		27.71			27.71			14.47	
14		3.13			.28		26.40			28.46			20.78	
15		2.31			.37		31.75			32.61			-8.00	
16		1.99			.27		30.71			32.00			15.73	
17		2.04			.27		31.39			33.15			18.89	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-228 * 150 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	78.00	90.00	-87.00	76.54	88.31	85.37
3	78.00	90.00	86.00	77.78	89.74	85.75
4	77.00	89.00	86.00	76.78	88.74	85.75
7	78.00	89.00	86.00	77.33	88.24	85.26
8	77.00	89.00	86.00	76.34	88.24	85.26
13	77.00	90.00	86.00	76.63	89.57	85.59
14	77.00	89.00	86.00	76.63	88.57	85.59
15	77.00	-88.00	85.50	76.34	-87.25	84.77
16	77.00	89.00	86.00	76.20	88.07	85.10
17	77.00	90.00	86.00	76.20	89.06	85.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8500.	1.3890	1.5740	-1509.	1.302	24667.
3	9000.	1.3520	1.6670	1464.	1.302	24511.
4	8500.	1.2920	1.5740	1455.	1.302	24585.
7	9000.	1.2890	1.6670	-1428.	1.302	24544.
8	8750.	1.3060	1.6210	-1428.	1.302	24544.
13	8500.	1.3220	1.5770	-1439.	1.301	24343.
14	9000.	1.3570	1.6670	1464.	1.302	24421.
15	8500.	1.3440	1.5990	1473.	-1.294	-23835.
16	8500.	1.3110	1.5740	1464.	1.302	24503.
17	9000.	1.4030	1.6670	-1500.	1.302	24503.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8628.	1.3370	-1.5160	1453.	24568.
3	9047.	1.3440	1.6570	1455.	24568.
4	8519.	1.2850	1.5650	1446.	24568.
7	9087.	1.2670	1.6390	-1403.	24568.
8	8834.	1.2840	1.5930	-1403.	24568.
13	8592.	1.3100	1.5620	1426.	24490.
14	9098.	1.3440	1.6510	1450.	24568.
15	8611.	1.3210	1.5720	1448.	-23938.
16	8613.	1.2840	1.5420	1433.	24568.
17	9119.	1.3740	1.6320	1469.	24568.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.923	56.8	2.5	-158.1	-161.9
3	2.840	83.5	7.0	132.8	140.4
4	2.715	57.5	-10.3	120.8	130.3
7	2.708	71.1	3.5	121.0	124.2
8	2.742	103.3	4.8	120.8	131.7
13	2.776	69.8	3.8	119.8	121.6
14	2.844	-120.8	7.4	123.7	135.2
15	2.826	88.8	6.1	130.3	134.6
16	2.761	65.1	4.5	132.0	145.1
17	-2.959	60.5	3.6	-149.6	-164.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3151.	3.89	.30	-17.82	-18.24	15.79
3	3147.	5.89	.85	15.39	16.26	13.64
4	3148.	4.24	-1.30	14.65	15.80	10.67
7	3149.	5.26	.45	14.72	15.10	13.25
8	3145.	7.54	.60	14.48	15.79	13.82
13	3144.	5.03	.47	14.19	-14.40	11.18
14	-3138.	-8.49	.90	14.27	15.60	14.57
15	3151.	6.30	.74	15.18	15.69	10.00
16	3156.	4.73	.56	15.77	-17.33	6.08
17	3157.	4.11	.41	-16.69	-18.31	15.89

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	32.0110	32.7430	43.2160	26.6600	29.0750	42.8320
3	31.4550	36.3060	42.9630	30.5420	35.4630	48.7650
4	27.1190	31.1380	38.9130	26.4200	30.5880	44.2770
7	27.1550	30.5530	37.3140	25.0440	28.8150	42.5820
8	27.5500	30.5530	37.3140	25.3920	28.8150	42.5820
13	30.6840	36.0530	42.5080	29.1780	34.5410	47.9270
14	28.7750	31.2850	38.7360	27.3590	29.9850	43.7020
15	26.3220	-27.2530	-34.5940	24.1890	-25.5640	-39.4190
16	27.7190	30.4180	38.3350	25.0600	28.2480	42.0360
17	32.4940	34.3870	41.5590	29.2210	31.9100	45.5160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	4.68	.34	17.66	18.08	15.35
3	6.06	.87	17.46	18.46	12.75
4	4.36	-1.33	16.67	17.97	10.67
7	5.70	.48	16.79	17.23	13.25
8	8.18	.63	16.53	18.02	12.63
13	5.29	.49	16.00	-16.24	11.18
14	-8.92	.93	16.10	17.60	12.75
15	6.85	.79	17.30	17.87	9.69
16	5.24	.60	17.30	19.01	-6.08
17	4.57	.45	-18.27	-20.06	14.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-22B * 150 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	55.00	78.00	79.00	53.97	76.54	77.52
3	55.50	77.00	79.00	55.34	76.78	-78.77
4	55.00	76.00	78.00	54.84	75.78	77.78
7	54.00	76.00	78.00	53.54	75.35	77.33
8	55.00	78.00	78.00	54.53	77.33	77.33
13	55.00	78.00	78.50	54.74	77.63	78.12
14	53.00	-81.00	-80.00	52.75	-80.61	-79.62
15	55.00	76.00	78.00	54.53	75.35	77.33
16	54.00	76.00	78.00	53.44	75.21	77.19
17	54.00	76.00	78.00	53.44	75.21	77.19

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	4100.	.9810	1.1840	1257.	1.128	10565.
3	4300.	.9870	1.2420	1221.	1.128	10498.
4	4100.	.9490	1.1840	1212.	1.128	10530.
7	4100.	.9200	1.1840	1203.	1.128	10512.
8	4200.	.9450	1.2130	1221.	1.128	10512.
13	4200.	.9580	1.2130	1212.	1.128	10460.
14	-4800.	-1.1450	-1.3860	-1279.	1.128	10460.
15	4100.	.9810	1.1950	1230.	-1.126	-10292.
16	4000.	.9160	1.1550	1221.	1.123	10495.
17	4000.	.9710	1.1550	1221.	1.123	10495.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	4162.	.9450	1.1400	1210.	10523.
3	4323.	.9820	1.2340	1214.	10523.
4	4109.	.9440	1.1770	1205.	10523.
7	4140.	.9040	1.1640	1182.	10523.
8	4241.	.9290	1.1920	1200.	10523.
13	4246.	.9490	1.2010	1200.	10523.
14	-4852.	-1.1340	-1.3730	-1267.	10523.
15	4153.	.9640	1.1750	1209.	-10337.
16	4053.	.8970	1.1310	1195.	10523.
17	4053.	.9500	1.1310	1195.	10523.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-228 * 150 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.035	186.6	25.0	-48.7	57.1
3	2.038	223.1	45.7	40.4	54.4
4	1.944	208.4	-93.2	40.4	50.3
7	1.898	224.7	35.1	-30.9	-41.8
8	1.950	235.4	37.7	35.3	46.9
13	1.977	210.9	37.1	41.1	51.1
14	-2.360	-298.2	48.8	42.2	57.4
15	2.024	235.0	51.1	41.9	51.6
16	1.893	229.0	33.9	36.8	52.6
17	2.008	236.2	36.9	39.6	53.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3118.	18.20	4.18	-7.80	9.15	8.00
3	3103.	21.62	7.60	6.43	8.66	6.54
4	-3081.	21.02	-16.15	6.69	8.33	5.92
7	3104.	23.40	6.27	-5.28	-7.15	8.55
8	3103.	23.84	6.56	5.88	7.80	6.58
13	3103.	21.06	6.37	6.74	8.39	4.67
14	-3095.	24.89	7.00	5.79	7.87	-11.33
15	3103.	22.92	8.56	6.71	8.26	6.67
16	3111.	23.95	6.09	6.32	9.03	5.33
17	3111.	23.29	6.25	6.42	8.67	6.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.0600	6.9960	16.3390	5.4110	6.3090	16.6080
3	5.7610	6.7650	15.0130	5.6510	6.6250	17.1120
4	5.1920	5.7900	13.6720	5.1070	5.7020	15.6220
7	5.1680	5.7560	13.1890	4.9080	5.4700	15.2380
8	6.2100	7.7950	15.8950	5.8870	7.3970	18.3230
13	6.3490	8.1470	16.7440	6.1370	7.8350	18.9960
14	-8.9240	-12.6710	-21.9990	-8.5990	-12.1720	-24.9130
15	5.3160	5.7910	13.2220	5.0310	5.4700	15.2380
16	5.1760	5.7560	13.5780	4.8550	5.3950	15.1130
17	5.2970	5.7560	13.5780	4.9640	5.3950	15.1130

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	20.38	4.64	7.93	9.30	8.00
3	22.04	7.76	7.32	9.87	6.54
4	21.38	-16.40	7.64	9.52	5.43
7	24.63	6.60	-6.11	8.26	8.55
8	25.15	6.91	6.78	8.99	6.58
13	21.79	6.62	7.65	9.51	4.67
14	25.83	7.29	6.55	8.91	-11.33
15	24.22	9.06	7.73	9.52	6.67
16	25.54	6.50	7.04	10.06	5.33
17	24.86	6.67	7.15	9.64	6.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	-28.00	51.00	67.00	27.48	50.04	65.74
3	27.00	49.00	66.00	26.92	48.86	65.81
4	27.00	50.00	66.50	26.92	49.86	66.31
7	27.00	51.00	67.00	26.77	50.56	66.43
8	27.00	48.00	65.50	26.77	47.59	64.94
13	-28.00	51.00	67.00	-27.87	50.76	66.68
14	-26.00	49.00	67.00	-25.88	48.77	66.68
15	27.00	49.00	66.00	26.77	48.58	65.43
16	27.00	50.00	66.00	26.72	49.48	65.31
17	27.00	50.00	66.00	26.72	49.48	65.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1800.	.8000	.9800	-1176.	1.033	3656.
3	1600.	.8130	.8710	1068.	1.022	3651.
4	1700.	.7850	.9260	1068.	1.028	3854.
7	1800.	.7850	.9800	1054.	1.023	3902.
8	1700.	.8170	.9260	1059.	1.023	3423.
13	1800.	.8220	.9800	1068.	1.028	-3998.
14	1700.	.8480	.9260	1063.	1.028	-3998.
15	1800.	.8420	.9800	1095.	1.030	3543.
16	1700.	.8090	.9260	1050.	1.034	3516.
17	1700.	.8170	.9260	1077.	-1.036	3516.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1827.	.7700	.9440	-1132.	3642.
3	1608.	.8080	.8660	1062.	3659.
4	1704.	.7810	.9210	1062.	3852.
7	1817.	.7720	.9640	1036.	3906.
8	1716.	.8030	.9100	1041.	3426.
13	1820.	.8140	.9710	1058.	-4023.
14	1718.	.8400	.9170	1053.	-4023.
15	1823.	.8280	.9640	1076.	3559.
16	1723.	.7920	.9070	1028.	3526.
17	1723.	.8000	.9070	1054.	3526.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.517	714.3	-286.4	8.8	-17.1
3	1.505	771.7	395.4	6.8	14.1
4	1.467	795.7	321.7	7.9	14.3
7	1.471	759.1	321.7	5.4	13.2
8	1.513	812.0	387.3	6.0	12.9
13	1.549	747.1	316.0	8.7	15.8
14	1.579	772.2	387.2	7.9	16.3
15	1.573	760.0	389.8	9.2	13.7
16	1.519	769.9	334.1	7.3	16.0
17	1.528	769.3	364.9	7.8	15.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	-2861.	85.75	-59.05	1.73	-3.38	0.00
3	2795.	91.18	80.27	1.32	2.73	0.00
4	2820.	97.32	67.59	1.60	2.87	0.00
7	2827.	92.82	67.57	1.09	2.65	0.00
8	2794.	95.45	78.21	1.16	2.50	0.00
13	2842.	87.27	63.42	1.68	3.03	0.00
14	2810.	87.44	75.32	1.46	3.03	0.00
15	2817.	86.65	76.35	1.72	2.56	0.00
16	2834.	91.42	68.15	1.41	3.11	0.00
17	2821.	90.41	73.68	1.50	2.95	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.7750	.9100	4.7380	1.6250	.8360	4.9700
3	1.5830	.7730	4.1040	1.5590	.7590	4.7020
4	1.6380	.8340	4.2920	1.6170	.8240	4.9260
7	1.7350	.9100	4.3500	1.6640	.8720	5.0910
8	1.5290	.7120	3.7770	1.4670	.6830	4.4270
13	1.7480	.9160	4.4890	1.7010	.8850	5.1360
14	1.6110	.7790	4.0890	1.5670	.7530	4.6810
15	1.6180	.7790	3.9710	1.5480	.7420	4.6400
16	1.6800	.8440	4.2780	1.5950	.7990	4.8400
17	1.6850	.8440	4.2780	1.5990	.7990	4.8400

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	93.62	64.24	1.82	3.55	0.00
3	92.58	81.71	1.52	3.13	0.00
4	98.59	68.44	1.83	3.30	0.00
7	96.78	70.55	1.28	3.10	0.00
8	99.46	81.58	1.36	2.93	0.00
13	89.70	65.60	1.92	3.47	0.00
14	89.36	77.89	1.67	3.46	0.00
15	90.57	80.15	2.01	2.99	0.00
16	96.30	72.00	1.60	3.52	0.00
17	95.25	77.84	1.70	3.34	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	25.00	46.00	64.00	24.53	45.14	62.80
3	23.00	43.00	62.00	22.93	42.88	61.82
4	23.00	44.00	62.50	22.93	43.87	62.32
7	24.00	45.00	63.00	23.79	44.61	62.46
8	23.00	44.00	62.00	22.80	43.62	61.47
13	24.00	44.00	63.00	23.89	43.79	62.70
14	23.00	44.00	63.00	22.89	43.79	62.70
15	22.00	-42.00	-60.00	21.81	-41.64	-59.49
16	22.00	44.00	62.00	21.77	43.54	61.35
17	22.00	-42.00	61.00	21.77	-41.56	-60.36

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIFS *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1550.	.7920	.8440	-1086.	1.028	2872.
3	1400.	.8150	.7630	1032.	1.014	2658.
4	1400.	.7820	.7630	1032.	1.018	2766.
7	1500.	.7890	.8170	1041.	1.014	2789.
8	1500.	.8250	.8170	1032.	1.015	2591.
13	1500.	.8280	.8170	1050.	1.020	2823.
14	1500.	.8220	.8170	1032.	1.020	2823.
15	1500.	.8500	.8170	1068.	1.020	-2213.
16	1400.	.8000	.7630	1032.	1.026	2564.
17	1400.	.8250	.7630	1068.	1.025	-2366.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1573.	.7630	.8130	1045.	2860.
3	1407.	.8100	.7580	1026.	2664.
4	1403.	.7770	.7580	1026.	2764.
7	1514.	.7750	.8030	1023.	2792.
8	1514.	.8110	.8030	1014.	2594.
13	1516.	.8200	.8090	1040.	2840.
14	1516.	.8150	.8090	1022.	2840.
15	1520.	.8350	.8030	1049.	-2223.
16	1419.	.7830	.7470	1010.	2571.
17	1419.	.8080	.7470	1046.	-2373.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 150 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.453	838.4	-401.0	6.5	-14.4
3	1.445	927.1	553.6	5.2	11.1
4	1.403	937.7	458.0	6.4	11.6
7	1.431	886.1	435.3	4.8	11.2
8	1.483	892.4	509.9	4.5	11.0
13	1.500	909.3	463.6	6.9	12.7
14	1.483	882.5	490.5	6.9	13.5
15	1.518	913.7	567.6	-8.4	10.8
16	1.438	923.2	485.5	5.3	12.2
17	1.468	966.1	547.4	6.4	11.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-228 * 150 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2769.	101.68	-83.55	1.29	-2.86	0.00
3	2678.	109.38	112.21	1.01	2.16	0.00
4	2711.	115.31	96.77	1.30	2.34	0.00
7	2739.	107.92	91.09	.96	2.25	0.00
8	2715.	103.95	102.04	.86	2.10	0.00
13	2734.	105.47	92.38	1.32	2.42	0.00
14	2722.	103.09	98.45	1.32	2.59	0.00
15	2698.	103.33	110.28	-1.55	-2.01	0.00
16	2716.	110.94	100.23	1.05	2.41	0.00
17	2687.	112.58	109.59	1.22	2.27	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.3990	.5950	-3.7170	1.2860	.5490	3.9220
3	1.1660	.4440	3.0060	1.1490	.4360	3.4470
4	1.2190	.4890	3.1770	1.2040	.4840	3.6510
7	1.3050	.5430	3.2430	1.2550	.5210	3.8080
8	1.2480	.4910	3.0630	1.1990	.4710	3.5990
13	1.2460	.4950	3.1680	1.2140	.4790	3.6330
14	1.2440	.4950	3.1680	1.2120	.4790	3.6330
15	1.1220	.4000	-2.7320	-1.0760	-.3820	-3.2060
16	1.2440	.4920	3.1530	1.1840	.4670	3.5820
17	1.1160	.3990	2.8050	-1.0630	-.3790	-3.1920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 150 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	110.59	90.56	1.36	3.02	0.00
3	110.98	114.14	1.16	2.48	0.00
4	116.74	97.92	1.49	2.69	0.00
7	112.30	94.92	1.12	2.64	0.00
8	108.18	106.29	1.01	2.46	0.00
13	108.28	95.43	1.51	2.78	0.00
14	105.83	101.70	1.51	2.98	0.00
15	107.74	115.48	-1.82	2.36	0.00
16	116.56	105.62	1.19	2.74	0.00
17	118.21	115.38	1.38	2.58	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1	2680.	386.	527.7	29.98	.009810
3	3379.	361.	527.7	29.90	.009210
4	5448.	351.	527.7	29.90	.009210
11	3252.	311.	527.7	30.02	.009790
12	1170.	311.	527.7	30.02	.009790
13	3217.	328.	520.7	30.05	.008940
14	1703.	328.	520.7	30.05	.008940

RB211-22B * 300 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	25.00	46.00	62.00	24.79	45.61	61.47
3	23.00	44.00	62.50	22.80	43.62	61.96
4	23.00	45.00	63.00	22.80	44.61	62.46
11	24.00	44.00	62.00	23.79	43.62	61.47
12	24.00	46.00	63.00	23.79	45.61	62.46
13	24.00	45.00	63.00	23.95	44.91	62.88
14	23.00	44.00	62.00	22.96	43.92	61.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1600.	.8330	.8710	1068.	-1.008	2589.
3	1500.	.8560	.8170	1032.	1.012	2695.
4	1500.	.8310	.8170	1041.	1.017	2794.
11	1500.	.8620	.8170	1059.	1.015	2585.
12	1550.	.8690	.8440	1059.	1.015	2783.
13	1600.	.8460	.8710	1050.	1.020	2863.
14	1600.	.8600	.8710	1032.	1.022	2665.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1617.	.8180	.8570	1049.	2594.
3	1512.	.8420	.8030	1014.	2693.
4	1512.	.8170	.8030	1023.	2792.
11	1518.	.8470	.8030	1041.	2594.
12	1569.	.8540	.8300	1041.	2792.
13	1610.	.8430	.8680	1046.	2876.
14	1610.	.8560	.8680	1028.	2676.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.516	869.6	472.0	7.0	-2.5
3	1.547	862.5	539.2	6.3	11.3
4	1.513	891.2	468.6	7.7	10.0
11	1.621	-753.2	-363.5	5.7	14.0
12	1.583	877.0	493.2	6.0	11.8
13	1.545	858.4	478.7	6.0	10.0
14	1.564	867.1	506.2	6.6	10.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	2748.	100.32	93.55	1.32	-1.32	0.00
3	2728.	96.78	103.94	1.16	2.08	0.00
4	2748.	103.02	93.06	1.46	1.90	0.00
11	-2836.	83.86	-69.52	1.03	2.57	0.00
12	2749.	96.94	93.66	1.09	2.14	0.00
13	2756.	97.43	93.35	1.13	1.87	0.00
14	2746.	96.90	97.19	1.21	1.99	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.3970	.5990	3.5170	1.3410	.5740	4.0220
3	1.2580	.4890	3.1750	1.2100	.4710	3.5990
4	1.3210	.5410	3.3610	1.2700	.5210	3.8080
11	1.2640	.4930	3.1460	1.2120	.4710	3.5990
12	1.4140	.6010	3.5200	1.3550	.5740	4.0220
13	1.3170	.5460	3.3120	1.3010	.5370	3.8730
14	1.2510	.4940	3.1290	1.2360	.4860	3.6590

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
----	-----	-----	-----	-----	-----
1	104.57	97.69	1.51	-1.51	0.00
3	100.62	107.95	1.31	2.35	0.00
4	107.12	96.69	1.66	2.16	0.00
11	-87.45	-72.72	1.18	2.94	0.00
12	101.18	98.04	1.24	2.45	0.00
13	98.61	94.91	1.32	2.18	0.00
14	98.07	98.81	1.41	2.32	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	27.00	50.00	66.00	26.77	49.57	65.43
3	27.00	50.00	66.00	26.77	49.57	65.43
4	27.00	50.00	66.00	26.77	49.57	65.43
11	-28.00	51.00	66.00	-27.76	50.56	65.43
12	27.00	50.00	66.00	26.77	49.57	65.43
13	27.00	49.00	66.00	26.95	48.91	65.87
14	27.00	51.00	66.00	26.95	50.90	65.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TY7 DEG R	EPR	THRUST LAF
1	1800.	.8450	.9800	1086.	1.030	3552.
3	1800.	.8490	.9800	1050.	1.020	3561.
4	1700.	.8220	.9260	1059.	1.024	3561.
11	1800.	.8600	.9800	1068.	1.025	3547.
12	1700.	.8790	.9260	1068.	1.030	3547.
13	1800.	.8420	.9800	1068.	1.025	3660.
14	-1900.	.8790	-1.0350	1068.	1.030	3660.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1819.	.8300	.9640	1067.	3559.
3	1814.	.8340	.9640	-1032.	3559.
4	1714.	.8080	.9100	1041.	3559.
11	1822.	.8450	.9640	1049.	3559.
12	1720.	.8640	.9100	1049.	3559.
13	1811.	.8390	.9770	1064.	3676.
14	-1912.	.8760	-1.0310	1064.	3676.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODF 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.579	776.6	380.5	7.2	-2.7
3	1.590	703.9	400.7	7.3	14.2
4	1.547	755.9	340.3	8.0	13.6
11	1.615	756.8	364.9	5.3	14.8
12	1.649	753.6	386.7	6.5	14.4
13	1.582	734.9	374.3	5.3	13.6
14	1.656	729.8	387.5	6.6	14.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2820.	88.26	74.29	1.34	-1.34	0.00
3	2826.	79.64	77.89	1.35	2.63	0.00
4	2839.	88.27	68.26	1.53	2.61	0.00
11	2833.	84.50	69.99	.97	2.71	0.00
12	2830.	82.29	72.55	1.17	2.59	0.00
13	2832.	83.77	73.29	.99	2.55	0.00
14	2840.	79.67	72.67	1.19	2.62	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.6920	.8420	4.2600	1.6210	.8050	4.8620
3	1.6910	.8380	4.3030	1.6230	.8050	4.8620
4	1.6770	.8380	4.3030	1.6100	.8050	4.8620
11	1.7800	.9140	4.4670	1.7030	.8720	5.0910
12	1.7130	.8440	4.2640	1.6390	.8050	4.8620
13	1.5970	.7750	4.0320	1.5770	.7620	4.7120
14	1.7680	.9110	4.4260	1.7460	.8950	5.1710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	92.12	77.69	1.53	-1.53	0.00
3	82.97	81.05	1.53	2.97	0.00
4	91.93	71.04	1.73	2.95	0.00
11	88.33	73.39	1.10	3.09	0.00
12	86.02	76.04	1.33	2.95	0.00
13	84.81	74.54	1.15	2.98	0.00
14	80.68	73.92	1.39	3.06	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	94.00	98.00	92.00	93.19	97.16	91.21
3	93.75	96.50	93.00	92.95	95.67	92.20
4	94.00	98.00	92.50	93.19	97.16	91.71
11	93.00	96.00	92.00	92.20	95.18	91.21
12	93.00	97.00	93.00	92.20	96.17	92.20
13	93.00	98.00	93.00	92.82	97.81	92.82
14	93.00	97.00	92.00	92.82	96.81	91.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	15500.	1.8410	2.0680	1770.	1.533	41916.
3	15375.	1.8430	2.0510	1734.	1.533	41991.
4	15625.	1.7500	2.0850	1738.	1.538	42359.
11	15500.	1.8470	2.0940	1743.	-1.520	-40907.
12	15900.	1.9050	2.1210	1743.	1.533	41860.
13	15500.	1.7850	2.0720	1734.	1.530	41599.
14	15500.	1.8430	2.0720	1752.	1.530	41599.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	15665.	1.8100	2.0330	1740.	42000.
3	15497.	1.8120	2.0160	1704.	41963.
4	15749.	-1.7200	2.0490	1709.	42331.
11	15686.	1.8150	2.0590	1713.	-41044.
12	16091.	1.8730	2.0850	1713.	42000.
13	15597.	1.7780	2.0640	1727.	41779.
14	15597.	1.8360	2.0640	1745.	41779.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.903	25.5	5.2	426.9	416.9
3	3.908	29.5	5.8	383.6	380.7
4	3.708	20.5	4.3	372.4	375.3
11	3.910	23.8	5.0	411.1	403.4
12	4.037	27.4	-0.6	395.0	395.5
13	3.784	19.4	4.2	372.1	371.1
14	3.909	-35.9	4.3	354.4	357.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3159.	1.31	.46	36.13	36.13	30.00
3	3161.	1.52	.51	32.43	32.43	-22.67
4	3162.	1.11	.40	33.20	33.46	28.00
11	3155.	1.22	.44	34.68	34.68	30.67
12	3156.	1.37	-.05	32.29	32.32	32.67
13	3162.	1.03	.38	32.51	32.51	32.45
14	3161.	-1.85	.38	29.96	30.21	28.38

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	113.5710	106.6590	90.3240	100.7950	99.7470	99.3780
3	98.1510	87.2400	79.3560	87.4670	82.0700	86.5910
4	101.4400	106.1470	91.2390	90.7080	99.7470	99.3780
11	93.8650	-82.0040	74.8120	83.4440	-76.6210	-82.4340
12	112.0630	94.1120	82.6410	99.0950	87.8640	90.9420
13	99.7400	101.9560	85.7350	96.9970	99.7470	99.3780
14	103.9950	98.0220	83.3900	101.0690	95.9030	96.6680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	1.48	.50	39.75	39.75	26.78
3	1.70	.54	35.39	35.39	22.59
4	1.24	.42	36.16	36.44	22.59
11	1.38	.48	38.22	38.22	24.60
12	1.54	-.06	35.53	35.57	28.67
13	1.06	.39	37.69	37.69	26.78
14	1.90	.39	34.73	35.02	23.05

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	87.00	94.00	90.00	86.25	93.19	89.23
3	88.75	94.00	90.75	87.99	93.19	89.97
4	88.00	94.00	90.00	87.25	93.19	89.23
11	88.00	94.00	90.00	87.25	93.19	89.23
12	88.00	94.00	90.00	87.25	93.19	89.23
13	88.00	95.00	91.00	87.83	94.82	90.83
14	88.00	95.00	89.00	87.83	94.82	88.83

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	12500.	1.6390	1.8330	1662.	1.446	35542.
3	13000.	1.6640	1.9060	1644.	1.446	35637.
4	12875.	1.5530	1.8880	1639.	1.446	35637.
11	12500.	1.6540	1.8330	1653.	1.446	35495.
12	12500.	1.6280	1.8330	1635.	1.446	35495.
13	12500.	1.5540	1.8330	1626.	1.446	35459.
14	13000.	1.6320	1.9060	1644.	1.446	35459.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	12633.	1.6110	1.8020	1633.	35613.
3	13104.	1.6350	1.8740	1616.	35613.
4	12978.	-1.5260	1.8560	1611.	35613.
11	12650.	1.6250	1.8020	1625.	35613.
12	12650.	1.6000	1.8020	1607.	35613.
13	12578.	1.5480	1.8260	1619.	35613.
14	13082.	1.6250	1.8990	1637.	35613.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	3.467	33.9	3.4	306.0	305.9
3	3.521	38.8	3.9	269.4	269.3
4	3.285	24.7	2.4	258.1	262.0
11	3.494	29.9	2.7	276.3	278.4
12	3.438	35.8	-.2	253.0	264.4
13	3.287	28.9	2.2	239.2	242.7
14	3.451	-57.3	2.6	242.0	254.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3159.	1.97	.34	29.15	29.15	23.49
3	3161.	2.21	.38	25.28	25.28	17.57
4	3162.	1.51	.25	25.98	26.37	17.33
11	3155.	1.72	.27	26.09	26.28	-30.20
12	3155.	2.09	-.02	24.27	25.36	23.33
13	3162.	1.77	.23	24.05	24.40	17.88
14	3159.	-3.34	.26	23.17	24.32	19.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	60.9610	62.4180	61.8350	55.0270	58.5480	68.3670
3	62.4390	62.1190	62.4610	56.4050	58.5480	68.3670
4	55.6870	62.1190	62.4610	50.5770	58.5480	68.3670
11	61.9480	62.5680	61.8950	55.8220	58.5480	68.3670
12	60.2870	62.5680	61.8950	54.3960	58.5480	68.3670
13	61.8190	74.6070	68.7120	60.3140	73.0190	79.6970
14	66.9710	74.6070	68.7120	65.2890	73.0190	79.6970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	2.18	.37	32.23	32.23	19.61
3	2.45	.40	27.67	27.67	17.57
4	1.66	.26	28.43	28.86	15.99
11	1.91	.29	28.82	29.03	-27.16
12	2.32	-.03	26.81	28.01	21.53
13	1.81	.23	27.90	28.30	14.22
14	-3.43	.27	26.87	28.21	17.75

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	78.00	89.00	86.00	77.33	88.24	85.26
3	78.00	89.00	86.50	77.33	88.24	85.76
4	77.50	89.00	85.75	76.84	88.24	85.02
11	78.00	90.00	86.00	77.33	89.23	85.26
12	78.00	90.00	86.00	77.33	89.23	85.26
13	77.00	90.00	86.00	76.85	89.83	85.83
14	77.00	89.00	85.00	76.85	88.83	84.84

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	8500.	1.3220	1.5740	1482.	1.302	24519.
3	8625.	1.3520	1.5980	1464.	1.302	24585.
4	8500.	1.2720	1.5740	1459.	1.302	24585.
11	8500.	1.3690	1.5740	-1518.	1.302	24486.
12	8500.	1.3470	1.5740	1482.	1.302	24486.
13	8500.	1.2880	1.5740	1464.	1.302	24462.
14	8500.	1.3360	1.5740	1464.	1.302	24462.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	8591.	1.3000	1.5480	1456.	24568.
3	8694.	1.3290	1.5700	1439.	24568.
4	8568.	-1.2510	1.5480	1434.	24568.
11	8602.	1.3460	1.5480	-1492.	24568.
12	8602.	1.3240	1.5480	1456.	24568.
13	8553.	1.2830	1.5680	1458.	24568.
14	8553.	1.3300	1.5680	1458.	24568.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	2.782	76.2	5.0	132.7	139.9
3	2.848	80.8	6.0	130.3	136.6
4	2.679	58.4	3.9	117.7	125.5
11	2.880	66.5	4.1	128.6	135.6
12	2.832	72.9	3.8	124.1	133.6
13	2.711	71.6	4.3	115.4	124.1
14	2.807	-119.4	6.6	119.3	129.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMP'R FRONT SIDE
1	3152.	5.50	.62	15.72	16.57	16.00
3	3154.	5.69	.72	15.09	15.82	10.60
4	3157.	4.38	.50	14.50	15.46	10.74
11	3150.	4.63	.49	14.70	15.50	-28.10
12	3149.	5.16	.46	14.42	15.53	-20.53
13	3155.	5.30	.55	14.05	15.10	9.27
14	3149.	-8.53	.81	13.99	15.18	12.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	27.9360	30.6080	38.2840	25.7140	28.8150	42.5820
3	28.5850	30.4610	38.6720	26.3350	28.8150	42.5820
4	26.7630	30.4610	38.6720	24.7270	28.8150	42.5820
11	31.6750	34.9090	41.7130	29.0470	32.7640	46.3030
12	31.0740	34.9090	41.7130	28.5190	32.7640	46.3030
13	29.9160	36.6840	42.3510	29.2930	35.9340	49.1890
14	28.1810	31.5340	38.3610	27.5910	30.8940	44.5680

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	5.97	.66	17.49	18.43	15.10
3	6.18	.76	16.62	17.42	10.35
4	4.74	.53	15.97	17.02	10.74
11	5.05	.52	16.32	17.20	-22.28
12	5.62	.49	16.01	17.24	-19.61
13	5.42	.56	16.32	17.54	8.94
14	-8.71	.82	16.26	17.63	10.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	54.00	76.00	78.00	53.54	75.35	77.33
3	55.00	77.50	78.75	54.53	76.84	78.08
4	55.00	77.00	78.00	54.53	76.34	77.33
11	55.00	76.00	78.00	54.53	75.35	77.33
12	54.00	78.00	78.00	53.54	77.33	77.33
13	55.00	77.00	78.00	54.89	76.85	77.85
14	53.00	-81.00	78.00	52.90	-80.84	77.85

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	4050.	.9370	1.1690	1248.	1.128	10502.
3	4200.	.9700	1.2300	1221.	-1.125	-10250.
4	4200.	.9120	1.2180	1221.	-1.127	10437.
11	4400.	1.0030	1.2710	1248.	1.128	10488.
12	4200.	.9700	1.2130	1239.	1.128	10488.
13	4200.	.9200	1.2130	1212.	1.128	10477.
14	-4600.	-1.1030	-1.3280	1248.	1.128	10477.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	4093.	.9210	1.1490	1226.	10523.
3	4233.	.9540	1.2090	1200.	-10243.
4	4233.	.8970	1.1980	1200.	-10430.
11	4453.	.9850	1.2490	1226.	10523.
12	4250.	.9530	1.1920	1218.	10523.
13	4226.	.9170	1.2080	1207.	10523.
14	-4629.	-1.0990	-1.3230	-1243.	10523.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.936	213.5	37.6	40.4	50.2
3	2.007	220.3	42.7	36.7	49.6
4	1.891	193.5	28.0	38.1	48.7
11	2.073	211.8	39.0	37.1	49.4
12	2.003	223.3	40.7	39.2	52.3
13	1.903	217.3	38.0	35.7	49.6
14	-2.276	-305.0	-57.9	39.1	56.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB2:1-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3110.	21.83	6.61	6.78	8.43	10.07
3	3111.	21.73	7.16	5.94	8.04	4.00
4	3119.	20.31	5.06	6.57	8.40	4.03
11	3109.	20.21	6.39	5.82	7.74	-18.54
12	3105.	22.03	6.89	6.35	8.48	-11.18
13	3111.	22.61	6.80	6.10	8.48	2.65
14	3100.	26.44	8.63	5.56	8.01	6.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	5.2080	5.7670	13.5320	4.9410	5.4700	15.2380
3	5.9220	7.0390	15.4840	5.6220	6.7030	17.2360
4	5.4520	6.3580	14.5440	5.1820	6.0570	16.2010
11	5.3610	5.7800	13.5450	5.0760	5.4700	15.2380
12	6.2880	7.8280	16.3240	5.9480	7.3970	18.3230
13	5.6270	6.8530	14.8270	5.5450	6.7240	17.2700
14	-8.7200	-12.7440	-21.7470	-8.5820	-12.4970	-25.3040

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-22B * 300 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LA/KLA FU	NR CNOX EI LA/KLA FU	SMK NUMBER CORRECTED
1	23.00	6.96	7.64	9.50	6.37
3	22.90	7.52	6.61	8.94	4.00
4	21.37	5.31	7.32	9.35	4.03
11	21.35	6.75	6.55	8.71	-18.54
12	23.29	7.29	7.13	9.52	9.58
13	22.94	6.93	7.10	9.87	2.65
14	26.87	8.80	6.47	9.32	6.62

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	27.00	49.00	66.00	26.77	48.58	65.43
3	27.00	49.00	66.00	26.77	48.58	65.43
4	27.00	49.00	66.25	26.77	48.58	65.68
11	-28.00	51.00	66.00	-27.76	50.56	65.43
12	-25.00	48.00	-65.00	-24.79	47.59	-64.44
13	27.00	49.00	66.00	26.95	48.91	65.87
14	27.00	50.00	66.00	26.95	49.90	65.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1700.	.7950	.9260	1086.	1.030	3552.
3	1600.	.8130	.8710	1059.	1.022	3561.
4	1600.	.7730	.8710	1059.	1.024	3627.
11	1800.	.8450	.9800	1086.	1.025	3547.
12	1600.	.8290	.8710	1068.	1.025	3282.
13	1600.	.7970	.8710	1068.	1.025	3660.
14	1800.	.8250	.9800	1068.	1.030	3660.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1718.	.7810	.9100	1067.	3559.
3	1613.	.7990	.8570	1041.	3559.
4	1613.	.7600	.8570	1041.	3625.
11	1822.	.8300	.9640	1067.	3559.
12	1619.	.8140	.8570	1049.	3293.
13	1610.	.7940	.8680	1064.	3676.
14	1811.	.8220	.9770	1064.	3676.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.470	907.5	381.4	8.5	15.1
3	1.514	761.7	383.3	8.3	14.8
4	1.442	784.0	331.7	8.7	14.3
11	1.580	785.0	365.8	7.3	15.2
12	1.527	833.6	413.1	7.0	14.4
13	1.467	830.4	406.2	6.6	14.5
14	1.532	772.2	404.0	7.4	15.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2792.	97.62	79.22	1.68	3.00	0.00
3	2810.	89.98	77.78	1.60	2.88	0.00
4	2818.	97.46	70.84	1.78	2.93	0.00
11	2822.	89.22	71.42	1.36	2.84	0.00
12	2781.	96.61	82.26	1.34	2.73	0.00
13	2777.	100.04	84.07	1.31	2.86	0.00
14	2802.	89.89	80.79	1.42	3.04	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 300 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.5910	.7760	4.0640	1.5260	.7420	4.6400
3	1.5980	.7720	4.1050	1.5350	.7420	4.6400
4	1.5770	.7720	4.1050	1.5160	.7420	4.6400
11	1.7720	.9140	4.4670	1.6950	.8720	5.0910
12	1.5370	.7150	3.8790	1.4720	.6830	4.4270
13	1.5740	.7750	4.0320	1.5550	.7620	4.7120
14	1.6620	.8410	4.2250	1.6420	.8270	4.9370

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TFST SERIES *

MODE 7

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	101.80	82.81	1.97	3.43	0.00
3	93.66	80.92	1.81	3.26	0.00
4	101.41	73.70	2.01	3.31	0.00
11	93.26	74.89	1.55	3.23	0.00
12	100.86	86.17	1.53	3.12	0.00
13	101.27	85.50	1.53	3.35	0.00
14	91.00	82.17	1.66	3.56	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22A * 300 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1	25.00	46.00	63.00	24.79	45.61	62.46
3	23.00	44.00	62.50	22.80	43.62	61.96
4	23.00	44.00	63.00	22.80	43.62	62.46
11	24.00	44.00	62.00	23.79	43.62	61.47
12	23.00	45.00	63.00	22.80	44.61	62.46
13	24.00	44.00	63.00	23.95	43.92	62.88
14	23.00	44.00	62.00	22.96	43.92	61.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1600.	.8040	.8710	1050.	1.025	2787.
3	1400.	.8160	.7530	1032.	1.014	2695.
4	1400.	.7710	.7630	1032.	1.019	2794.
11	1500.	.8550	.8170	1059.	1.015	2585.
12	1450.	.8290	.7900	1068.	1.020	2783.
13	1500.	.8080	.8170	1050.	1.020	2863.
14	1500.	.8190	.8170	1032.	1.022	2665.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22R * 300 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1617.	.7900	.8570	1032.	2792.
3	1411.	.8030	.7500	1014.	2693.
4	1411.	.7580	.7500	1014.	2792.
11	1518.	.8400	.8030	1041.	2594.
12	1467.	.8150	.7760	1049.	2792.
13	1509.	.8040	.8140	1046.	2876.
14	1509.	.8160	.8140	1028.	2676.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE B

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.450	887.6	485.3	6.2	12.7
3	1.472	891.8	501.1	6.4	11.8
4	1.395	893.8	440.4	6.8	12.0
11	1.537	910.7	536.6	5.5	12.4
12	1.487	936.5	511.4	5.7	12.6
13	1.449	924.5	502.5	5.5	12.4
14	1.469	899.5	529.0	6.2	12.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-22B * 300 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2723.	106.08	99.64	1.21	2.50	0.00
3	2722.	104.97	101.32	1.25	2.27	0.00
4	2731.	111.37	94.28	1.40	2.46	0.00
11	2713.	102.32	103.58	1.01	2.29	0.00
12	2708.	108.55	101.83	1.09	2.40	0.00
13	2710.	110.03	102.74	1.07	2.43	0.00
14	2707.	105.51	106.60	1.20	2.47	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE B

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	1.3850	.5990	3.5170	1.3290	.5740	4.0220
3	1.2430	.4890	3.1750	1.1960	.4710	3.5990
4	1.2270	.4890	3.1750	1.1810	.4710	3.5990
11	1.2620	.4930	3.1460	1.2100	.4710	3.5990
12	1.3240	.5450	3.3310	1.2690	.5210	3.8080
13	1.2310	.4940	3.1290	1.2170	.4860	3.6590
14	1.2360	.4940	3.1290	1.2210	.4860	3.6590

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 300 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	110.53	104.05	1.38	2.86	0.00
3	109.08	105.23	1.41	2.58	0.00
4	115.68	97.92	1.59	2.79	0.00
11	106.70	108.35	1.16	2.62	0.00
12	113.21	106.56	1.25	2.74	0.00
13	111.34	104.45	1.25	2.84	0.00
14	106.77	108.37	1.40	2.89	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
3	3494.	476.	527.7	30.03	.010440
4	5573.	476.	527.7	30.03	.010440
7	4825.	420.	522.7	30.09	.009660
11	3434.	493.	525.7	30.00	.010260
12	1352.	493.	525.7	30.00	.010260
13	3332.	443.	528.7	29.95	.010900
14	1818.	443.	528.7	29.95	.010900
16	3889.	517.	529.7	29.95	.007500

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	23.00	44.00	62.00	22.80	43.62	61.47
4	24.00	45.00	63.00	23.79	44.61	62.46
7	22.00	-42.00	61.00	21.92	-41.84	60.77
11	23.00	44.00	62.00	22.95	43.71	61.59
12	23.00	46.00	63.00	22.85	45.69	62.58
13	23.00	45.00	63.00	22.78	44.57	62.40
14	22.00	43.00	62.00	21.79	42.59	61.41
16	23.00	44.00	62.00	22.76	43.54	61.35

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
3	1500.	.8500	.8170	1032.	1.012	2584.
4	1600.	-.9260	.8710	1068.	1.018	2782.
7	-1400.	.8630	-.7630	1032.	1.015	2439.
11	1600.	.8980	.8710	1068.	1.020	2610.
12	1600.	.8460	.8710	1059.	1.015	2808.
13	1500.	.8730	.8170	1068.	1.020	2777.
14	1500.	.8780	.8170	1032.	1.020	2580.
16	-1400.	.7930	-.7630	1068.	1.026	2568.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
3	1519.	.8350	.8030	1014.	2594.
4	1620.	-.9100	.8570	1049.	2792.
7	-1413.	.8560	-.7570	1024.	2453.
11	1615.	.8860	.8600	1053.	2617.
12	1615.	.8350	.8600	1045.	2816.
13	1516.	.8570	.8020	1048.	2780.
14	1516.	.8610	.8020	1012.	2582.
16	-1416.	.7770	-.7470	1046.	2571.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	1.520	875.8	-576.5	5.8	10.1
4	-1.729	836.0	436.4	7.9	12.7
7	1.525	-991.5	-602.8	6.2	9.2
11	1.655	864.6	476.8	6.3	9.9
12	1.538	855.7	503.2	6.9	9.0
13	1.594	898.6	484.6	7.0	11.3
14	1.592	867.3	531.9	6.3	10.4
16	1.448	770.5	449.0	4.8	9.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
3	2702.	99.06	112.03	1.07	1.88	0.00
4	-2816.	86.63	77.69	1.35	2.16	0.00
7	-2668.	-110.41	-115.32	1.13	1.67	0.00
11	2780.	92.40	87.53	1.10	1.73	0.00
12	2743.	97.16	98.15	1.29	1.67	0.00
13	2754.	98.83	91.56	1.26	2.05	0.00
14	2737.	94.91	100.00	1.13	1.87	0.00
16	2757.	93.36	93.46	.96	1.84	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	1.2600	.4930	3.1080	1.2080	.4710	3.5990
4	1.3640	.5460	3.2910	1.3060	.5210	3.8080
7	-1.1200	-.4010	-2.7670	-1.0960	-.3900	-3.2440
11	1.2740	.4920	3.0970	1.2320	.4750	3.6160
12	1.3990	.5990	3.4630	1.3530	.5780	4.0390
13	1.3420	.5430	3.2680	1.2820	.5190	3.7990
14	1.1990	.4430	2.9130	1.1470	.4230	3.3910
16	1.2400	.4910	3.3020	1.1820	.4670	3.5820

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
3	103.33	117.26	1.24	2.18	0.00
4	90.48	81.35	1.56	2.50	0.00
7	-112.80	-118.51	1.33	1.96	0.00
11	95.50	90.67	1.29	2.02	0.00
12	100.44	101.73	1.50	1.95	0.00
13	103.40	95.83	1.47	2.38	0.00
14	99.22	104.57	1.31	2.18	0.00
16	97.95	98.20	1.05	1.99	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	27.00	49.00	66.00	26.77	48.58	65.43
4	27.00	50.00	66.00	26.77	49.57	65.43
7	27.00	50.00	66.00	26.90	49.81	65.75
11	-26.00	49.00	65.00	-25.83	48.67	64.57
12	-26.00	50.00	66.00	-25.83	49.67	65.56
13	27.00	50.00	67.00	26.74	49.52	66.36
14	27.00	50.00	65.00	26.74	49.52	64.38
16	27.00	49.00	65.00	26.72	48.49	64.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
-----	-----	-----	-----	-----	-----	-----
3	1700.	.8580	.9260	1050.	1.021	3546.
4	1700.	.8290	.9260	1068.	1.024	3546.
7	1700.	.8520	.9260	1068.	1.030	3622.
11	1700.	.8950	.9260	1086.	1.028	3317.
12	1700.	.8520	.9260	1068.	1.028	3582.
13	1800.	.8690	.9800	1086.	1.025	3873.
14	1800.	-.9140	.9800	1068.	1.025	3274.
16	-1600.	-.7820	-.8710	1068.	1.032	3257.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
3	1721.	.8440	.9100	-1032.	3559.
4	1721.	.8140	.9100	1049.	3559.
7	1716.	.8450	.9190	1060.	3642.
11	1716.	.8830	.9140	1071.	3326.
12	1716.	.8410	.9140	1053.	3592.
13	1819.	.8520	.9620	1065.	3877.
14	1819.	-.8970	.9620	1048.	3277.
16	-1618.	-.7660	-.8530	1046.	3261.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	1.594	739.7	-441.3	6.3	13.5
4	1.554	765.5	357.6	6.6	13.9
7	1.593	771.6	379.9	6.2	13.4
11	1.693	757.2	366.4	6.2	13.4
12	1.593	742.4	403.5	7.3	13.1
13	1.637	743.9	363.1	7.2	13.6
14	-1.721	737.6	406.0	6.7	13.7
16	-1.462	680.6	359.1	5.1	12.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
3	2802.	82.77	-84.83	1.17	2.49	0.00
4	2830.	88.71	71.20	1.26	2.66	0.00
7	2820.	86.96	73.55	1.16	2.48	0.00
11	2852.	81.20	67.50	1.09	2.37	0.00
12	2819.	83.63	78.10	1.36	2.42	0.00
13	2842.	82.20	68.93	1.31	2.48	0.00
14	2838.	77.41	73.19	1.15	2.36	0.00
16	2821.	83.60	75.78	1.04	2.50	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22R * 450 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	1.5260	.7780	4.0190	1.5560	.7420	4.6400
4	1.6860	.8440	4.2130	1.6130	.8050	4.8620
7	1.6840	.8440	4.2010	1.6470	.8210	4.9160
11	1.6380	.7750	4.0010	1.5820	.7480	4.6610
12	1.6910	.8420	4.1940	1.6340	.8110	4.8830
13	1.7080	.8410	4.1860	1.6290	.8020	4.8510
14	1.7340	.8410	4.1860	1.6530	.8020	4.8510
16	1.5900	.7750	4.2750	1.5130	.7360	4.6200

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

R8211-22B * 450 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
3	86.49	-88.94	1.35	2.87	0.00
4	92.70	74.68	1.45	3.06	0.00
7	88.95	75.68	1.35	2.90	0.00
11	84.04	70.01	1.27	2.76	0.00
12	86.54	81.02	1.58	2.81	0.00
13	86.16	72.27	1.52	2.87	0.00
14	81.19	76.74	1.33	2.74	0.00
16	87.88	79.79	1.12	2.70	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	94.00	97.00	93.00	93.19	96.17	92.20
4	93.00	97.00	92.00	92.20	96.17	91.21
7	93.00	97.00	92.00	92.64	96.63	91.65
11	94.00	99.00	92.00	93.37	98.34	91.39
12	94.00	98.00	93.00	93.37	97.35	92.38
13	94.00	98.00	93.00	93.11	97.07	92.12
14	94.00	98.00	92.00	93.11	97.07	91.13
16	94.00	98.00	93.00	93.02	96.98	92.03

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
3	15000.	1.8850	2.0010	1734.	1.533	41846.
4	15000.	1.7910	2.0010	1734.	1.533	41846.
7	15900.	1.7820	2.1210	1734.	1.533	41763.
11	15500.	1.8500	2.0680	1752.	1.533	41888.
12	15500.	1.7970	2.0680	1734.	1.533	41888.
13	15000.	1.8460	2.0010	1734.	1.533	41958.
14	16000.	1.8840	2.1350	1770.	1.533	41958.
16	15500.	1.7930	2.0680	1761.	1.533	41958.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-22B * 450 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
3	15185.	1.8520	1.9670	1704.	42000.
4	15185.	1.7600	1.9670	1704.	42000.
7	16052.	1.7680	2.1050	1720.	42000.
11	15646.	1.8250	2.0400	1728.	42000.
12	15646.	1.7730	2.0400	1711.	42000.
13	15159.	1.8110	1.9630	1701.	42000.
14	16170.	1.8480	2.0940	1736.	42000.
16	15679.	1.7550	2.0250	1724.	42000.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 3

JNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	3.998	28.3	5.8	416.1	409.9
4	3.796	20.4	4.8	386.3	391.6
7	3.770	23.2	5.2	357.1	365.4
11	3.924	24.0	5.5	399.8	400.6
12	3.810	26.3	5.2	346.7	363.7
13	3.911	21.3	4.8	392.7	392.9
14	3.990	-41.8	6.2	383.6	385.9
16	3.794	24.9	8.3	451.2	442.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
3	3161.	1.42	.51	34.40	34.40	29.80
4	3162.	1.08	.43	33.64	34.10	28.19
7	3155.	1.24	.48	31.24	31.97	26.00
11	3162.	1.23	.49	33.68	33.74	28.48
12	3162.	1.39	.47	30.08	31.55	22.89
13	3158.	1.10	.42	33.15	33.17	23.55
14	3156.	-2.10	.54	31.72	31.91	22.68
16	3156.	1.32	.75	-39.24	39.24	29.80

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	109.2050	94.1680	81.6490	96.6720	87.8640	90.9420
4	97.3240	94.1680	81.6490	86.6540	87.8640	90.9420
7	96.6530	97.1790	82.4850	91.5470	93.5340	94.9890
11	112.8340	105.2940	87.8110	102.7130	99.7470	99.3780
12	105.7310	105.2940	87.8110	96.4910	99.7470	99.3780
13	114.7170	106.6700	88.9830	100.5370	99.2400	99.0220
14	120.3820	106.6700	88.9830	105.2170	99.2400	99.0220
16	107.4250	106.1050	95.0320	93.3070	98.0310	98.1710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LA/KLB FU	NR CNOX EI LA/KLB FU	SMK NUMBER CORRECTED
3	1.61	.54	38.31	38.31	20.78
4	1.21	.47	37.46	37.98	21.98
7	1.31	.49	35.98	36.82	21.53
11	1.35	.51	38.11	38.18	22.59
12	1.52	.49	34.04	35.71	23.82
13	1.25	.45	36.89	36.91	27.16
14	-2.40	.58	35.29	35.51	24.44
16	1.52	.81	40.54	40.54	23.66

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TFST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	88.00	94.00	91.00	87.25	93.19	90.22
4	88.00	95.00	90.00	87.25	94.19	89.23
7	88.00	94.00	90.00	87.66	93.64	89.65
11	88.00	96.00	90.00	87.41	-95.36	89.40
12	89.00	95.00	91.00	-88.41	94.37	90.39
13	87.00	96.00	-92.00	86.17	95.09	-91.13
14	88.00	96.00	90.00	87.16	95.09	89.14
16	88.00	95.00	90.00	87.08	94.01	89.06

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
3	13000.	1.6740	1.9060	1644.	1.446	35483.
4	13000.	1.6150	1.9060	1644.	1.446	35483.
7	13000.	1.5810	1.9060	1644.	1.446	35412.
11	13000.	1.6540	1.9060	1662.	1.446	35518.
12	-13500.	1.6290	-1.9790	1664.	1.446	35518.
13	13000.	1.6270	1.9060	1644.	1.446	35578.
14	-14000.	1.6900	-2.0530	1662.	1.446	35578.
16	13000.	1.6130	1.9060	1680.	1.446	35578.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
3	13161.	1.6450	1.8740	1616.	35613.
4	13161.	1.5880	1.8740	1616.	35613.
7	13124.	1.5690	1.8910	1631.	35613.
11	13122.	1.6320	1.8810	1640.	35613.
12	-13627.	1.6070	-1.9530	1641.	35613.
13	13138.	1.5960	1.8700	1613.	35613.
14	-14148.	1.6580	-2.0140	1630.	35613.
16	13150.	1.5790	1.8660	1645.	35613.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	3.543	38.8	2.9	281.3	285.0
4	3.419	22.7	2.4	276.1	284.0
7	3.338	31.4	2.9	251.3	260.3
11	3.501	30.3	3.9	271.9	280.4
12	3.447	29.3	2.3	243.8	248.4
13	3.439	25.7	3.4	260.7	268.3
14	3.573	50.4	3.9	269.4	281.0
16	3.408	27.4	4.8	-321.2	-323.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
3	3161.	2.20	.29	26.23	26.58	18.67
4	3162.	1.34	.25	26.70	27.46	20.00
7	3154.	1.89	.30	24.82	25.72	21.85
11	3161.	1.74	.39	25.66	26.47	-26.67
12	3162.	1.71	.23	23.38	23.82	15.89
13	3157.	1.50	.35	25.02	25.74	19.74
14	3155.	2.84	.38	24.87	25.94	22.88
16	3157.	1.62	.48	-31.10	-31.28	19.87

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	63.3160	62.6060	61.1520	56.9820	58.5480	68.3670
4	65.5740	71.7290	67.2520	59.1100	67.0300	75.0960
7	57.7480	64.5780	61.8220	55.0540	62.2190	71.3110
11	-75.3000	-82.8340	74.0140	-69.2850	-78.5530	-83.9080
12	66.5100	72.3900	67.3060	61.3230	68.6890	76.3770
13	72.9130	-81.2380	73.2510	64.9920	-75.7090	81.7430
14	-78.1280	-81.2380	73.2510	-69.3860	-75.7090	81.7430
16	65.2130	70.6020	71.1550	57.6180	65.4120	73.8410

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
3	2.45	.31	29.33	29.72	16.78
4	1.48	.26	29.81	30.66	17.89
7	1.98	.31	28.63	29.66	19.46
11	1.89	.41	29.10	30.01	14.47
12	1.85	.25	26.53	27.03	14.22
13	1.69	.37	27.92	28.73	17.75
14	3.19	.41	27.75	28.95	20.49
16	1.83	.52	-32.28	32.46	19.32

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	78.00	89.00	86.00	77.33	88.24	85.26
4	78.00	89.00	86.00	77.33	88.24	85.26
7	77.00	89.00	86.00	76.70	88.66	85.67
11	78.00	90.00	85.00	77.48	89.40	84.43
12	78.00	-91.00	86.00	77.48	-90.39	85.43
13	78.00	-91.00	-87.00	77.26	-90.14	-86.17
14	77.00	90.00	85.00	76.27	89.14	84.19
16	77.00	90.00	86.00	76.20	89.06	85.10

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLGW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
3	9000.	1.3680	1.6670	1464.	1.302	24478.
4	9000.	1.3160	1.6670	1464.	1.302	24478.
7	9000.	1.3100	1.6670	1464.	1.302	24429.
11	9000.	1.3410	1.6670	1482.	1.302	24503.
12	9000.	1.3220	1.6670	1464.	1.302	24503.
13	9000.	1.3380	1.6670	1482.	1.302	24544.
14	9000.	1.4000	1.6670	1482.	1.302	24544.
16	9000.	1.3030	1.6670	-1500.	1.302	24544.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
3	9111.	1.3450	1.6390	1439.	24568.
4	9111.	1.2940	1.6390	1439.	24568.
7	9086.	1.3000	1.6540	1453.	24568.
11	9085.	1.3230	1.6450	1462.	24568.
12	9085.	1.3040	1.6450	1444.	24568.
13	9095.	1.3130	1.6350	1454.	24568.
14	9095.	1.3730	1.6350	1454.	24568.
16	9104.	1.2760	1.6320	1469.	24568.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	2.881	83.9	5.2	132.0	140.9
4	2.774	56.6	3.0	125.2	133.8
7	2.754	66.2	4.1	125.7	133.7
11	2.825	61.0	4.5	123.1	132.1
12	2.781	84.3	4.8	116.9	129.5
13	2.816	59.0	4.8	121.5	133.1
14	2.942	104.9	6.5	126.7	141.5
16	2.740	59.3	6.3	-143.9	-154.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
3	3154.	5.85	.63	15.11	16.12	10.00
4	3158.	4.10	.38	14.90	15.92	12.00
7	3149.	4.82	.52	15.02	15.99	14.47
11	3157.	4.34	.55	14.38	15.43	18.79
12	3154.	6.08	.60	13.86	15.35	15.33
13	3152.	4.20	.59	14.22	15.58	12.99
14	3147.	7.14	.76	14.17	15.82	15.23
16	3151.	4.34	.79	-17.30	-18.59	8.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TFST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	29.0580	30.7000	37.8610	26.6670	28.8150	42.5820
4	27.8340	30.7000	37.8610	25.5930	28.8150	42.5820
7	27.6570	31.3810	38.0310	26.5680	30.2850	43.9880
11	30.9950	35.3500	41.3140	28.9950	33.6410	47.1070
12	-33.7180	-41.1500	45.6990	-31.5320	-39.1370	-52.0560
13	-34.0200	-40.2380	45.1570	-30.9650	-37.6560	-50.7360
14	32.4050	34.5230	40.8030	29.4570	32.3340	45.9070
16	29.8090	34.2840	43.5310	26.9640	31.9100	45.5160

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LA/KLB FU	SMK NUMBER CORRECTED
3	6.37	.67	16.99	18.14	10.00
4	4.46	.40	16.76	17.90	12.00
7	5.02	.54	17.38	18.49	13.24
11	4.63	.58	16.39	17.60	-17.89
12	6.51	.63	15.79	17.49	14.22
13	4.62	.63	15.98	17.51	12.99
14	7.85	.82	15.94	17.80	14.35
16	4.80	.84	18.09	-19.43	8.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	55.00	79.00	79.00	54.53	78.32	78.32
4	55.00	77.00	78.00	54.53	76.34	77.33
7	55.00	76.00	-77.00	54.79	75.71	76.70
11	55.00	78.00	78.00	54.63	77.48	77.48
12	54.00	78.00	78.00	53.64	77.48	77.48
13	55.00	-88.00	78.00	54.48	-87.16	77.26
14	-52.00	-82.00	78.00	-51.51	-81.22	77.26
16	54.00	77.00	78.00	53.44	76.20	77.19

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
3	4400.	.9790	1.2710	1212.	1.128	10484.
4	4200.	.9400	1.2130	1230.	1.128	10484.
7	4200.	.9460	1.2130	1212.	1.128	10464.
11	4400.	.9730	1.2710	1248.	1.128	10495.
12	4100.	.9650	1.1840	1230.	1.128	10495.
13	4200.	.9630	1.2130	1230.	1.128	10512.
14	-4700.	-1.1440	-1.3570	-1302.	1.128	10512.
16	4000.	-.8970	1.1550	1248.	1.128	10512.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
3	4454.	.9620	1.2490	1191.	10523.
4	4252.	.9240	1.1920	1209.	10523.
7	4240.	.9390	1.2030	1202.	10523.
11	4441.	.9600	1.2540	1231.	10523.
12	4139.	.9530	1.1680	1213.	10523.
13	4245.	.9450	1.1900	1206.	10523.
14	-4750.	-1.1220	-1.3310	-1277.	10523.
16	4046.	-.8780	1.1310	1222.	10523.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	2.024	220.9	45.0	41.8	54.5
4	1.950	195.4	29.4	42.7	52.9
7	1.954	218.7	36.2	40.8	50.9
11	2.015	212.9	36.0	36.9	49.1
12	1.995	221.0	47.5	36.6	49.4
13	1.990	214.7	38.3	38.1	51.0
14	-2.362	289.8	54.8	42.5	57.0
16	-1.852	200.9	37.3	40.1	52.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
3	3110.	21.60	7.57	6.72	8.75	7.84
4	3120.	19.90	5.14	7.15	8.86	6.62
7	3106.	22.13	6.30	6.78	8.47	7.24
11	3115.	20.96	6.08	5.97	7.94	-11.49
12	3108.	21.91	8.10	5.97	8.05	4.70
13	3109.	21.35	6.54	6.22	8.32	5.30
14	3101.	24.21	7.87	5.83	7.82	10.53
16	3108.	21.45	6.34	7.04	9.27	6.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	7.0410	9.4520	18.1750	6.6520	8.9190	20.6200
4	5.5350	6.4080	14.2390	5.2420	6.0570	16.2010
7	5.2160	5.8480	13.3750	5.0770	5.6620	15.5570
11	6.3330	7.9580	16.2200	6.0640	7.6130	18.6560
12	6.3130	7.9580	16.2200	6.0450	7.6130	18.6560
13	-12.7520	-26.9830	-34.7330	-11.9360	-25.3060	-39.1650
14	-9.5010	-13.8550	-22.8880	-8.8910	-13.0380	-25.9500
16	5.4130	6.3140	15.0670	5.0840	5.9320	15.9970

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
3	22.87	8.02	7.63	9.93	7.84
4	21.01	5.44	8.13	10.08	6.62
7	22.73	6.50	7.89	9.85	7.24
11	21.89	6.36	6.86	9.13	-11.49
12	22.88	8.46	6.86	9.26	4.70
13	22.80	6.97	7.02	9.39	4.80
14	25.87	8.36	6.61	8.87	10.53
16	22.84	7.28	7.47	9.85	6.58

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	27.00	49.00	67.00	26.77	48.58	66.43
4	27.00	49.00	66.00	26.77	48.58	65.43
7	27.00	49.00	66.00	26.90	48.81	65.75
11	27.00	50.00	-65.00	26.82	49.67	-64.57
12	-26.00	49.00	66.00	-25.83	48.67	65.56
13	27.00	-55.00	67.00	26.74	-54.48	66.36
14	27.00	50.00	66.00	26.74	49.52	65.37
16	27.00	49.00	66.00	26.72	48.49	65.31

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
3	1800.	.8270	.9800	1068.	1.024	3892.
4	1600.	.7930	.8710	1068.	1.028	3546.
7	1700.	.8160	.9260	1068.	1.030	3622.
11	1800.	.8300	.9800	-1104.	1.030	3317.
12	1600.	.8130	.8710	1068.	1.028	3582.
13	1700.	.8330	.9260	1086.	1.028	3873.
14	1700.	-.8670	.9260	1086.	1.028	3539.
16	1600.	-.7310	.8710	1059.	1.032	3522.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A X100	COR PF X100	F/A	COR TT7 DEG R	COR THRUST LBF
3	1822.	.8130	.9640			1049.	3906.
4	1620.	.7790	.8570			1049.	3559.
7	1716.	.8100	.9190			1060.	3642.
11	1817.	.8190	.9670			-1089.	3326.
12	1615.	.8020	.8600			1053.	3592.
13	1718.	.8170	.9080			1065.	3877.
14	1718.	-.8510	.9080			1065.	3542.
16	1618.	-.7160	.8530			1037.	3526.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	1.532	777.9	417.1	6.8	14.8
4	1.481	783.3	344.8	-9.6	15.6
7	1.509	823.1	387.4	8.3	14.8
11	1.555	778.4	357.4	8.3	14.6
12	1.503	800.0	409.0	6.9	13.9
13	1.556	795.0	363.3	6.9	14.6
14	1.615	793.2	407.7	7.1	14.3
16	-1.356	732.3	338.1	7.0	14.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
3	2795.	90.34	83.20	1.30	2.81	0.00
4	2819.	94.89	71.75	-1.92	3.11	0.00
7	2791.	96.89	78.33	1.61	2.87	0.00
11	2829.	90.09	71.05	1.57	2.77	0.00
12	2789.	94.49	82.99	1.33	2.70	0.00
13	2819.	91.67	71.97	1.31	2.77	0.00
14	2810.	87.82	77.55	1.30	2.60	0.00
16	2800.	96.23	76.34	1.52	3.06	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

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MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	1.6100	.7780	4.0190	1.5410	.7420	4.6400
4	1.5930	.7780	4.0190	1.5250	.7420	4.6400
7	1.5910	.7780	4.0080	1.5560	.7560	4.6910
11	1.6790	.8420	4.1940	1.6220	.8110	4.8830
12	1.5950	.7750	4.0010	1.5430	.7480	4.6610
13	-2.0970	-1.2340	-5.2610	-1.9980	-1.1750	-6.0800
14	1.7070	.8410	4.1860	1.6280	.8020	4.8510
16	1.5650	.7750	4.2750	1.4900	.7360	4.6200

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
3	94.36	87.24	1.50	3.25	0.00
4	99.07	75.23	-2.21	3.59	0.00
7	99.08	80.59	1.88	3.36	0.00
11	93.21	73.72	1.83	3.23	0.00
12	97.73	86.08	1.55	3.14	0.00
13	96.21	75.60	1.52	3.20	0.00
14	92.05	81.32	1.50	3.01	0.00
16	101.09	80.38	1.64	3.30	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
3	23.00	44.00	62.00	22.80	43.62	61.47
4	23.00	45.00	63.00	22.80	44.61	62.46
7	24.00	45.00	63.00	23.91	44.83	62.76
11	24.00	44.00	62.00	23.84	43.71	61.59
12	23.00	45.00	63.00	22.85	44.70	62.58
13	22.00	45.00	63.00	21.79	44.57	62.40
14	22.00	43.00	62.00	21.79	42.59	61.41
16	24.00	44.00	62.00	23.75	43.54	61.35

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 450 HOUR TEST SERIES *

MODE A

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
3	1500.	.8250	.8170	1032.	1.015	2584.
4	1400.	.7960	.7630	1032.	1.018	2782.
7	1600.	.8190	.8710	1050.	1.020	2836.
11	1600.	.8260	.8710	1068.	1.020	2610.
12	1500.	.8190	.8170	1050.	1.020	2808.
13	1500.	.8380	.8170	1068.	1.020	2777.
14	1500.	.8540	.8170	1032.	1.020	2580.
16	1400.	-.7220	.7630	1068.	1.026	2568.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
3	1519.	.8110	.8030	1014.	2594.
4	1417.	.7820	.7500	1014.	2792.
7	1615.	.8130	.8650	1042.	2852.
11	1615.	.8150	.8600	1053.	2617.
12	1514.	.8080	.8060	1036.	2816.
13	1516.	.8220	.8020	1048.	2780.
14	1516.	.8380	.8020	1012.	2582.
16	1416.	-.7070	.7470	1046.	2571.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
3	1.470	908.0	557.0	5.6	12.2
4	1.430	915.9	484.7	5.8	12.4
7	1.469	930.3	506.9	6.4	12.4
11	1.496	887.2	490.3	6.8	11.9
12	1.468	911.4	521.4	6.0	11.7
13	1.504	950.4	517.1	6.0	11.8
14	1.537	907.4	535.2	4.9	11.3
16	-1.291	845.8	446.8	5.1	11.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-228 * 450 HOUR TEST SERIES *

MODE A

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBR FRONT SIDE
3	2693.	105.83	111.53	1.08	2.33	0.00
4	2715.	110.65	100.61	1.16	2.45	0.00
7	2706.	109.10	102.14	1.24	2.40	0.00
11	2734.	103.17	97.96	1.30	2.28	0.00
12	2708.	107.00	105.16	1.15	2.25	0.00
13	2710.	108.97	101.86	1.14	2.22	0.00
14	2716.	102.07	103.43	.91	2.08	0.00
16	2703.	112.67	102.25	1.11	2.51	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
3	1.2500	.4930	3.1080	1.1990	.4710	3.5990
4	1.3110	.5460	3.2910	1.2570	.5210	3.8080
7	1.3120	.5470	3.2900	1.2840	.5320	3.8540
11	1.2460	.4920	3.0970	1.2060	.4750	3.6160
12	1.3150	.5440	3.2790	1.2720	.5260	3.8260
13	1.3270	.5430	3.2680	1.2690	.5190	3.7990
14	1.1910	.4430	2.9130	1.1390	.4230	3.3910
16	1.2140	.4910	3.3020	1.1580	.4670	3.5820

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 450 HOUR TEST SERIES *

MODE 8

UNI	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LA/KLB FU	SMK NUMBER CORRECTED
3	110.35	116.74	1.25	2.69	0.00
4	115.39	105.35	1.34	2.84	0.00
7	111.50	105.02	1.45	2.81	0.00
11	106.58	101.47	1.52	2.66	0.00
12	110.55	108.96	1.34	2.62	0.00
13	113.96	106.61	1.32	2.59	0.00
14	106.67	108.15	1.06	2.42	0.00
16	118.10	107.43	1.21	2.72	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1-5	2927.	633.	529.7	29.98	.010660
3-5	3668.	650.	525.7	29.87	.009680
4-5	5747.	650.	525.7	29.87	.009680
7-5	5053.	648.	520.7	29.90	.008990
10-5	4257.	544.	525.7	29.90	.011620
11-5	3600.	659.	519.7	29.97	.008040
12-5	1515.	656.	519.7	29.97	.008040
13-5	3467.	578.	518.7	29.95	.008270
14-5	1952.	577.	518.7	29.95	.008270
4-6	5885.	788.	525.7	29.98	.009640
10-6	4532.	819.	521.7	30.04	.006450

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	25.00	46.00	63.00	24.74	45.52	62.34
3-5	22.00	44.50	62.00	21.85	44.20	61.59
4-5	24.00	45.00	63.00	23.84	44.70	62.58
7-5	24.00	47.00	62.00	23.95	-46.91	61.88
10-5	22.00	45.00	62.00	21.85	44.70	61.59
11-5	24.00	45.00	62.00	23.98	44.96	61.94
12-5	24.00	45.00	62.00	23.98	44.96	61.94
13-5	23.00	45.00	63.00	23.00	45.00	63.00
14-5	23.00	44.00	61.00	23.00	44.00	61.00
4-6	24.00	45.50	64.00	23.84	45.20	63.57
10-6	23.00	44.00	62.00	22.93	43.87	61.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

 MODF 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
-----	-----	-----	-----	-----	-----	-----
1-5	1675.	.8580	.9120	1086.	1.025	2763.
3-5	1500.	.8380	.8170	1032.	1.020	2622.
4-5	1500.	.8130	.8170	1032.	1.020	2821.
7-5	1500.	.8720	.8170	1086.	1.021	2678.
10-5	1500.	.8000	.8170	1068.	1.014	2619.
11-5	1500.	.7960	.8170	1068.	-1.009	2684.
12-5	1500.	.7840	.8170	1068.	1.020	2684.
13-5	1500.	.7880	.8170	1032.	1.020	2904.
14-5	1600.	.7920	.8710	1032.	1.020	2497.
4-6	1600.	.8350	.8710	1050.	1.010	2054.
10-6	1600.	.8180	.8710	1050.	1.018	2654.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	1696.	.8400	.8930	1063.	2768.
3-5	1508.	.8260	.8060	1018.	2617.
4-5	1508.	.8020	.8060	1018.	2816.
7-5	1502.	.8680	.8140	-1082.	2676.
10-5	1509.	.7900	.8060	1053.	2617.
11-5	1504.	.7940	.8150	-1066.	2688.
12-5	1504.	.7830	.8150	-1066.	2688.
13-5	1502.	.7880	.8170	1032.	2907.
14-5	1602.	.7920	.8710	1032.	2500.
4-6	1614.	.8240	.8600	1036.	3060.
10-6	1611.	.8140	.8660	1044.	2664.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	1.573	831.3	465.4	5.2	12.7
3-5	1.493	903.6	563.3	4.4	8.4
4-5	1.480	879.8	443.8	5.3	10.5
7-5	1.561	-983.3	570.9	4.7	10.5
10-5	1.461	829.7	439.0	5.4	7.9
11-5	1.472	-746.8	385.7	5.0	11.2
12-5	1.420	791.1	462.1	6.1	10.1
13-5	1.432	828.3	446.7	4.7	9.6
14-5	1.428	816.2	486.7	4.6	9.9
4-6	1.534	845.9	438.3	-1.7	-6.2
10-6	1.486	818.2	481.5	3.7	8.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1-5	2767.	93.03	89.47	.97	2.33	0.00
3-5	2691.	103.67	111.04	.83	1.58	0.00
4-5	2748.	103.94	90.06	1.04	2.05	0.00
7-5	2703.	108.37	108.09	.86	1.90	0.00
10-5	2756.	99.61	90.54	1.07	1.55	0.00
11-5	2793.	90.14	79.98	1.00	2.22	0.00
12-5	2734.	96.93	97.27	1.23	2.03	0.00
13-5	2745.	101.05	93.63	.95	1.92	0.00
14-5	2722.	99.03	101.46	.91	1.97	0.00
4-6	2770.	97.24	86.57	-.33	-1.18	0.00
10-6	2741.	96.04	97.09	.72	1.64	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	1.4130	.6000	3.4850	1.3440	.5690	4.0050
3-5	1.2820	.5140	3.2160	1.2450	.5000	3.7200
4-5	1.3080	.5400	3.3080	1.2700	.5260	3.8260
7-5	1.4620	.6490	3.6530	-1.4500	-.6440	-4.2850
10-5	1.3040	.5410	3.1900	1.2660	.5260	3.8260
11-5	1.2930	.5430	3.3540	1.2850	.5390	3.8820
12-5	1.2880	.5430	3.3540	1.2810	.5390	3.8820
13-5	1.2870	.5420	3.3270	1.2860	.5410	3.8910
14-5	1.2190	.4910	3.1440	1.2180	.4900	3.6770
4-6	1.3580	.5710	3.4120	1.3140	.5520	3.9340
10-6	1.2370	.4930	3.2910	1.2170	.4840	3.6510

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 1

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1-5	97.86	94.27	1.11	2.68	0.00
3-5	106.77	114.13	.96	1.83	0.00
4-5	107.03	92.59	1.20	2.37	0.00
7-5	109.30	108.93	1.01	2.23	0.00
10-5	102.64	93.25	1.28	1.86	0.00
11-5	90.64	80.57	1.15	2.57	0.00
12-5	97.46	97.99	1.43	2.36	0.00
13-5	101.11	93.79	1.11	2.24	0.00
14-5	99.09	101.64	1.07	2.30	0.00
4-6	100.45	89.60	-.38	-1.36	0.00
10-6	97.59	99.08	.80	1.82	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	27.00	49.00	65.00	26.72	48.49	64.32
3-5	27.00	50.00	66.00	26.82	49.67	65.56
4-5	27.00	50.00	66.00	26.82	49.67	65.56
7-5	27.00	50.00	65.00	26.95	49.90	64.88
10-5	27.00	50.00	65.00	26.82	49.67	64.57
11-5	27.00	51.00	66.00	26.97	50.95	65.94
12-5	27.00	-52.00	65.00	26.97	-51.95	64.94
13-5	27.00	-52.00	67.00	27.00	-52.00	-67.00
14-5	27.00	51.00	65.00	27.00	51.00	65.00
4-6	27.00	50.00	66.00	26.82	49.67	65.56
10-6	27.00	49.00	65.00	26.92	48.86	64.81

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RH211-228 * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1-5	1750.	.8540	.9530	1077.	1.030	3254.
3-5	1800.	.8470	.9800	1050.	1.030	3598.
4-5	1700.	.8200	.9260	1068.	1.030	3598.
7-5	1800.	.8680	.9800	-1104.	1.025	3411.
10-5	1800.	.8150	.9800	1086.	1.022	3328.
11-5	1800.	-.7720	.9800	1072.	1.026	3687.
12-5	1800.	.8080	.9800	1068.	1.028	3420.
13-5	1800.	.7990	.9800	1054.	1.030	-4166.
14-5	1800.	.8310	.9800	1059.	1.030	3439.
4-6	1700.	.8380	.9260	1068.	1.020	3585.
10-6	1800.	.8240	.9800	1068.	1.024	3379.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	1772.	.8360	.9330	1054.	3261.
3-5	1809.	.8350	.9670	1036.	3592.
4-5	1709.	.8090	.9140	1053.	3592.
7-5	1802.	.8650	.9770	-1099.	3409.
10-5	1811.	.8040	.9670	1071.	3326.
11-5	1805.	-.7700	.9790	1070.	3693.
12-5	1805.	.8070	.9790	1066.	3426.
13-5	1802.	.7990	.9800	1054.	-4170.
14-5	1802.	.8310	.9800	1059.	3442.
4-6	1715.	.8270	.9140	1053.	3592.
10-6	1812.	.8190	.9750	1062.	3392.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	1.588	776.6	405.1	4.8	13.6
3-5	1.568	740.1	-474.2	5.3	12.5
4-5	1.539	767.3	374.4	5.0	13.2
7-5	1.640	755.2	361.7	6.2	14.7
10-5	1.529	732.5	346.8	5.8	-10.7
11-5	-1.460	660.8	291.0	4.2	14.4
12-5	1.525	-644.1	332.4	6.6	14.6
13-5	1.507	686.6	326.6	5.1	13.6
14-5	1.558	691.6	373.0	4.6	13.3
4-6	1.588	701.6	323.9	-1.7	-8.1
10-6	1.536	735.1	381.6	4.9	11.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	2806.	87.35	78.29	.89	2.51	0.00
3-5	2794.	83.95	84.60	.99	2.32	0.00
4-5	2832.	89.88	67.30	.97	2.53	0.00
7-5	2850.	83.53	68.72	1.12	2.66	0.00
10-5	2832.	86.34	70.22	1.12	-2.07	0.00
11-5	2854.	82.21	62.20	.86	2.95	0.00
12-5	2847.	76.53	67.85	1.29	2.86	0.00
13-5	2846.	82.51	67.42	1.01	2.69	0.00
14-5	2827.	79.86	73.99	.87	2.52	0.00
4-6	2859.	80.38	63.75	-.32	-1.52	0.00
10-6	2814.	85.69	76.42	.94	-2.10	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	1.6280	.7770	4.0280	1.5460	.7360	4.6200
3-5	1.6820	.8350	4.2310	1.6310	.8110	4.8830
4-5	1.6680	.8350	4.2310	1.6170	.8110	4.8830
7-5	1.6780	.8330	4.2110	1.5540	.8270	4.9370
10-5	1.6660	.8360	4.0800	1.6150	.8110	4.8830
11-5	1.7020	.9060	4.4790	1.6920	.8990	5.1830
12-5	1.7980	.9790	4.6890	1.7880	-.9720	-5.4250
13-5	1.7890	.9770	4.6490	1.7880	-.9750	-5.4380
14-5	1.7300	.9040	4.4410	1.7290	.9020	5.1040
4-6	1.6820	.8400	4.2420	1.6260	.8110	4.8830
10-6	1.5900	.7750	4.2420	1.5640	.7590	4.7020

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1-5	91.99	82.58	1.02	2.98	0.00
3-5	86.59	-87.08	1.14	2.68	0.00
4-5	92.68	69.28	1.12	2.92	0.00
7-5	84.26	69.27	1.31	3.12	0.00
10-5	89.10	72.42	1.34	2.48	0.00
11-5	82.68	62.68	1.00	3.42	0.00
12-5	-76.97	68.37	1.49	3.31	0.00
13-5	82.56	67.55	1.19	3.15	0.00
14-5	79.91	74.12	1.01	2.94	0.00
4-6	83.13	66.06	-0.37	-1.75	0.00
10-6	87.12	78.03	1.04	-2.33	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	94.00	97.00	92.00	93.02	95.99	91.04
3-5	94.00	98.00	93.00	93.37	97.35	92.38
4-5	94.00	98.00	92.50	93.37	97.35	91.88
7-5	-92.00	99.00	-95.00	91.82	-98.81	-94.82
10-5	-95.00	99.00	93.00	-94.37	98.34	92.38
11-5	93.00	97.00	92.00	92.91	96.91	91.91
12-5	93.00	98.00	92.00	92.91	97.91	91.91
13-5	-92.00	97.00	92.00	92.00	97.00	92.00
14-5	93.50	99.00	-91.00	93.50	-99.00	91.00
4-6	94.00	98.00	93.00	93.37	97.35	92.38
10-6	93.75	97.00	91.75	93.48	96.72	91.49

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1-5	16000.	1.8940	2.1350	1770.	1.533	41916.
3-5	15500.	1.7750	2.0680	1725.	1.533	42070.
4-5	15250.	1.7780	2.0350	1725.	1.523	42070.
7-5	15000.	1.7620	2.0010	1716.	1.533	42028.
10-5	16000.	1.8100	2.1350	1770.	1.533	42028.
11-5	15500.	1.8360	2.0680	1752.	1.533	41930.
12-5	15000.	1.8340	2.0010	1716.	1.533	41930.
13-5	15000.	1.7810	2.0010	1707.	1.533	41958.
14-5	15000.	1.8390	2.0010	1725.	1.533	41958.
4-6	16000.	1.8660	2.1350	1752.	1.533	41916.
10-6	16000.	1.8460	2.1390	1734.	1.530	41613.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODF 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	16201.	1.8550	2.0900	1733.	42000.
3-5	15578.	1.7510	2.0400	1702.	42000.
4-5	15327.	1.7550	2.0080	1702.	42000.
7-5	15019.	1.7560	1.9940	1709.	42000.
10-5	16097.	1.7860	2.1060	1746.	42000.
11-5	15541.	1.8330	2.0640	-1748.	42000.
12-5	15040.	1.8300	1.9970	1712.	42000.
13-5	15015.	1.7810	2.0010	1707.	42000.
14-5	15015.	1.8390	2.0010	1725.	42000.
4-6	16140.	1.8420	2.1060	1728.	42000.
10-6	16111.	1.8360	2.1270	1724.	41779.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	4.012	24.5	6.4	433.7	423.1
3-5	3.753	29.9	8.8	424.3	409.0
4-5	3.761	20.4	-11.8	401.6	410.5
7-5	3.739	24.7	6.2	383.0	384.2
10-5	3.832	29.8	8.2	437.9	432.4
11-5	3.882	23.4	5.9	437.9	439.7
12-5	3.875	26.9	8.8	392.8	403.5
13-5	3.770	21.6	6.5	391.0	394.1
14-5	3.891	34.1	4.4	367.4	380.5
4-6	3.954	22.8	-9.4	386.1	382.0
10-6	3.909	26.2	5.5	384.6	390.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	3155.	1.23	.55	35.65	35.65	29.05
3-5	3153.	1.60	-.81	37.28	37.28	30.67
4-5	3153.	1.09	-1.08	35.21	35.98	30.87
7-5	3146.	1.33	.57	33.90	34.01	27.52
10-5	3156.	1.56	.74	37.71	37.71	-14.67
11-5	3150.	1.21	.53	37.15	37.31	28.67
12-5	-3149.	1.39	.78	33.38	34.29	31.13
13-5	3157.	1.15	.60	34.23	34.50	33.11
14-5	3152.	1.76	.39	31.12	32.23	30.26
4-6	3156.	1.16	-.82	32.23	32.23	29.53
10-6	3155.	1.35	.48	32.45	32.97	-21.33

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	110.3140	92.8410	81.3730	95.1830	85.7010	89.3430
3-5	102.5840	104.4750	88.5950	94.0230	99.7470	99.3780
4-5	103.0400	104.4750	88.5950	94.4240	99.7470	99.3780
7-5	96.7980	101.0420	85.4400	94.5150	99.7470	99.3780
10-5	107.1300	104.6640	85.4350	97.9540	99.7470	99.3780
11-5	102.9200	98.0900	84.6210	101.5670	97.1100	97.5210
12-5	104.6650	100.7550	86.2350	103.2870	99.7470	99.3780
13-5	96.3240	98.5100	84.1190	96.3690	98.3320	98.3930
14-5	104.4070	99.9270	84.9700	104.4640	99.7470	99.3780
4-6	115.1140	105.1680	89.8280	104.7570	99.7470	99.3780
10-6	104.3510	97.4250	87.5090	100.1030	94.7110	95.8240

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RA211-22B * 600 HOUR AND ABOVE TESTS *

MODE 3

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1-5		1.42			.60			39.14			39.14		29.05	
3-5		1.75			-.85			-41.81			41.81		25.86	
4-5		1.19			-1.13			39.50			40.36		26.41	
7-5		1.36			.58			39.43			39.56		25.68	
10-5		1.71			.77			-43.86			-43.86		-14.67	
11-5		1.23			.53			-42.81			-42.99		23.66	
12-5		1.41			.79			38.46			39.51		23.66	
13-5		1.15			.60			40.03			40.35		23.82	
14-5		1.76			.39			36.40			37.70		25.86	
4-6		1.27			-.87			36.06			36.06		22.59	
10-6		1.40			.50			35.54			36.10		-18.89	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	88.00	95.00	90.00	87.08	94.01	89.06
3-5	88.50	95.00	91.00	87.91	94.37	90.39
4-5	89.00	95.00	90.00	-88.41	94.37	89.40
7-5	88.00	96.00	-94.00	87.83	-95.82	-93.82
10-5	-90.00	94.00	90.00	-89.40	93.37	89.40
11-5	87.00	-93.00	89.00	86.92	92.91	88.91
12-5	88.00	94.00	90.00	87.92	93.91	89.91
13-5	87.00	95.00	90.00	87.00	95.00	90.00
14-5	88.00	95.00	89.00	88.00	95.00	89.00
4-6	88.00	94.00	90.50	87.41	93.37	89.90
10-6	89.00	94.00	89.50	-88.74	93.73	89.24

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-22B * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1-5	13000.	1.6930	1.9060	1666.	1.446	35542.
3-5	13000.	1.6540	1.9060	1644.	1.446	35673.
4-5	13000.	1.5690	1.9060	1635.	1.446	35673.
7-5	13000.	1.5810	1.9060	1653.	1.446	35637.
10-5	13000.	1.6510	1.9060	1644.	1.446	35637.
11-5	13000.	1.6470	1.9060	1644.	1.446	35554.
12-5	-12000.	1.6040	-1.7590	1644.	1.446	35554.
13-5	-12000.	1.5630	-1.7590	1608.	1.446	35578.
14-5	13000.	1.6370	1.9060	1617.	1.446	35578.
4-6	12900.	1.6430	1.8910	1644.	1.446	35542.
10-6	12500.	1.6470	1.8280	1644.	1.448	35607.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LAF
1-5	13163.	1.6580	1.8660	1632.	35613.
3-5	13066.	1.6320	1.8810	1622.	35613.
4-5	13066.	1.5480	1.8810	1613.	35613.
7-5	13016.	1.5750	1.8990	1646.	35613.
10-5	13079.	1.6290	1.8810	1622.	35613.
11-5	13034.	1.6440	1.9020	1641.	35613.
12-5	-12032.	1.6010	-1.7560	1641.	35613.
13-5	-12012.	1.5630	-1.7590	1608.	35613.
14-5	13013.	1.6370	1.9060	1617.	35613.
4-6	13013.	1.6210	1.8660	1622.	35613.
10-6	12586.	1.6380	1.8180	1634.	35750.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

 MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1-5	3.578	33.6	3.4	293.5	296.5
3-5	3.493	38.2	5.4	282.9	292.4
4-5	3.310	26.1	-8.1	271.9	286.7
7-5	3.349	30.6	4.4	257.7	268.2
10-5	3.487	47.9	5.5	268.4	271.9
11-5	3.476	29.7	3.1	294.2	306.1
12-5	3.383	38.6	2.8	258.5	278.5
13-5	3.301	28.1	3.1	248.6	262.7
14-5	3.454	48.9	2.8	241.5	266.1
4-6	3.473	23.1	-7.1	272.8	281.3
10-6	3.477	-52.5	2.8	250.3	266.9

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	3154.	1.89	.33	27.05	27.32	-10.53
3-5	3153.	2.19	.53	26.70	27.60	18.67
4-5	3153.	1.58	-.84	27.07	28.55	17.22
7-5	3166.	1.84	.45	25.47	26.50	23.53
10-5	3155.	2.76	.55	25.39	25.72	-11.41
11-5	3150.	1.71	.30	27.87	29.00	25.33
12-5	3149.	2.29	.28	25.16	27.11	20.67
13-5	3157.	1.71	.33	24.86	26.27	17.65
14-5	3151.	2.84	.28	23.03	25.38	21.57
4-6	3156.	1.34	-.70	25.92	26.73	20.27
10-6	3153.	-3.03	.27	23.72	25.29	-12.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22H * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	71.1370	70.7300	67.0490	62.4920	65.4120	73.8410
3-5	68.1190	71.8270	67.9070	62.9480	68.6890	76.3770
4-5	62.3020	71.8270	67.9070	57.7620	68.6890	76.3770
7-5	69.8150	-84.7640	75.4800	-68.3330	-83.6960	-87.8250
10-5	61.6390	62.8070	59.5550	56.9840	59.9890	69.5270
11-5	56.0090	56.8370	57.7050	55.3590	56.2880	66.5390
12-5	59.0330	65.1660	63.4490	58.3520	64.5320	73.1520
13-5	62.2490	74.9620	69.3190	62.2590	74.8270	81.0740
14-5	67.2220	74.9620	69.3190	-67.2390	74.8270	81.0740
4-6	61.2820	63.1090	61.9200	56.5570	59.9890	69.5270
10-6	61.7470	64.7360	65.5970	59.5330	62.9800	71.9190

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 4

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMFR CORRECTED
1-5	2.15	.35	29.79	30.09	-10.53
3-5	2.37	.56	30.03	31.04	16.78
4-5	1.71	-.88	30.45	32.11	15.73
7-5	1.88	.46	29.63	30.83	21.23
10-5	2.98	.57	29.64	30.03	-11.22
11-5	1.73	.31	32.14	-33.44	-24.60
12-5	2.31	.29	29.01	31.25	18.74
13-5	1.71	.33	29.08	30.73	15.86
14-5	2.84	.28	26.94	29.69	21.38
4-6	1.45	-.74	29.11	30.01	17.89
10-6	3.14	.28	25.01	27.73	11.91

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	77.00	90.00	86.00	76.20	89.06	85.10
3-5	77.00	90.00	86.00	76.49	89.40	85.43
4-5	78.00	90.00	86.00	77.48	89.40	85.43
7-5	77.00	90.00	-82.00	76.85	89.83	-87.83
10-5	-79.00	90.00	86.00	-78.47	89.40	85.43
11-5	77.00	89.00	85.00	76.93	88.91	84.92
12-5	77.00	-91.00	85.00	76.93	-90.91	84.92
13-5	76.50	90.00	86.00	76.50	90.00	86.00
14-5	77.00	89.00	-84.50	77.00	89.00	84.50
4-6	78.00	90.00	86.00	77.48	89.40	85.43
10-6	-75.25	89.00	85.00	-75.03	88.74	84.76

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1-5	9000.	1.3640	1.6700	1477.	1.301	24441.
3-5	9000.	1.3510	1.6670	1464.	1.302	24609.
4-5	9000.	-1.2520	1.6670	1464.	1.302	24609.
7-5	9000.	1.3110	1.6670	1464.	1.302	24585.
10-5	9000.	1.3400	1.6670	1482.	1.302	24585.
11-5	9000.	1.3380	1.6670	1473.	1.302	24527.
12-5	-8000.	1.3310	-1.4820	1464.	1.302	24527.
13-5	8500.	1.2760	1.5740	-1428.	1.302	24544.
14-5	9000.	1.3420	1.6670	1464.	1.302	24544.
4-6	9000.	1.3420	1.6670	1464.	1.302	24519.
10-6	8500.	1.3300	1.5680	1464.	-1.304	24627.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CORR FU FL LAM/HR	COR CR F/A X100	COR PE F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	9113.	1.3360	1.6360	1447.	24490.
3-5	9045.	1.3330	1.6450	1444.	24568.
4-5	9045.	-1.2350	1.6450	1444.	24568.
7-5	9011.	1.3060	1.6610	1458.	24568.
10-5	9054.	1.3220	1.6450	1462.	24568.
11-5	9024.	1.3360	1.6640	1470.	24568.
12-5	-8021.	1.3290	-1.4790	1461.	24568.
13-5	8509.	1.2760	1.5740	1428.	24568.
14-5	9009.	1.3420	1.6670	1464.	24568.
4-6	9074.	1.3240	1.6450	1444.	24568.
10-6	4550.	1.3220	1.5590	1455.	-24726.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	2.868	73.3	5.7	132.5	138.5
3-5	2.838	83.5	-9.8	130.2	144.2
4-5	-2.631	57.2	4.2	123.7	138.5
7-5	2.764	69.0	4.5	119.3	133.6
10-5	2.814	100.3	7.9	122.2	130.1
11-5	2.811	60.4	3.5	131.9	145.1
12-5	2.792	86.4	5.3	122.0	139.9
13-5	2.681	70.9	4.7	112.3	127.7
14-5	2.816	104.8	6.2	117.4	135.6
4-6	2.823	56.0	7.4	120.2	132.8
10-6	2.789	-123.3	7.5	111.8	128.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CO2 CONC PER CFMT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	2.868	73.3	5.7	132.5	138.5
3-5	2.838	83.5	-9.8	130.2	144.2
4-5	-2.631	57.2	4.2	123.7	138.5
7-5	2.764	69.0	4.5	119.3	133.6
10-5	2.814	100.3	7.9	122.2	130.1
11-5	2.811	60.4	3.5	131.9	145.1
12-5	2.792	86.4	5.3	122.0	139.9
13-5	2.681	70.9	4.7	112.3	127.7
14-5	2.816	104.8	6.2	117.4	135.6
4-6	2.823	56.0	7.4	120.2	132.8
10-6	2.780	-123.3	7.5	111.8	128.2

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RR211-228 * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	CO2 FI LB/KLB FU	CO FI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	3149.	5.12	.69	15.21	15.90	14.57
3-5	3146.	5.89	-1.19	15.09	16.71	9.33
4-5	3150.	4.36	.55	15.49	-17.34	10.00
7-5	3160.	5.02	.56	14.27	15.97	15.33
10-5	3147.	7.14	.96	14.29	15.20	7.33
11-5	3146.	4.30	.43	15.43	16.99	20.00
12-5	3142.	6.19	.65	14.35	16.45	13.33
13-5	3150.	5.30	.60	13.70	15.69	9.33
14-5	3142.	7.44	.75	13.69	15.82	13.64
4-6	3152.	3.98	.90	14.03	15.50	11.33
10-6	3142.	-9.84	.93	-13.17	15.10	-4.61

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	31.3990	34.3460	41.0190	28.3030	31.9100	45.5160
3-5	31.1650	35.0750	41.6830	29.2410	33.6410	47.1070
4-5	28.7130	35.0750	41.6830	27.0160	33.6410	47.1070
7-5	30.3730	36.3550	42.2050	29.8470	35.9340	49.1890
10-5	30.8860	35.1390	40.1960	28.9660	33.6410	47.1070
11-5	28.1680	31.4980	38.9840	27.8900	31.2040	44.8610
12-5	-34.2260	-42.6790	-47.5300	-33.8810	-42.2740	-54.8210
13-5	29.6400	36.9590	42.7960	29.6350	-36.8920	-50.0530
14-5	28.2880	31.6640	38.6770	28.2840	31.6070	45.2350
4-6	31.0020	35.3080	41.7920	29.0150	33.6410	47.1070
10-6	28.0580	31.4010	40.3020	27.2270	30.5880	44.2770

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-228 * 600 HOUR AND ABOVE TESTS *

MODE 5

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1-5	5.68	.73	16.87	17.64	14.57
3-5	6.28	-1.24	17.05	18.88	9.33
4-5	4.63	.57	17.50	-19.59	10.00
7-5	5.11	.57	16.63	18.61	15.10
10-5	7.61	-1.01	16.74	17.82	7.33
11-5	4.34	.43	17.80	-19.59	16.11
12-5	6.25	.66	16.55	18.98	11.91
13-5	5.30	.60	16.13	18.35	9.33
14-5	7.45	.76	16.01	18.50	13.64
4-6	4.25	.95	15.81	17.48	11.33
10-6	-9.11	.95	-14.46	16.59	-4.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	54.00	78.00	78.00	53.44	77.19	77.19
3-5	55.00	78.00	79.00	54.63	77.48	78.47
4-5	55.00	78.00	78.00	54.63	77.48	77.48
7-5	-77.00	-85.00	-75.00	-76.85	-84.84	-74.86
10-5	55.00	76.00	78.00	54.63	75.49	77.48
11-5	55.00	77.00	78.00	54.95	76.93	77.92
12-5	54.00	79.00	78.00	53.95	78.92	77.92
13-5	55.00	77.00	79.00	55.00	77.00	-79.00
14-5	53.00	80.00	77.50	53.00	80.00	77.50
4-6	56.00	79.00	78.50	55.63	78.47	77.98
10-6	54.00	77.00	77.50	53.94	76.78	77.28

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-228 * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1-5	4100.	.9570	1.1840	1239.	1.128	10502.
3-5	4300.	.9880	1.2420	1221.	1.128	10541.
4-5	4200.	.9310	1.2130	1212.	1.128	10541.
7-5	4200.	.9470	1.2130	1221.	1.128	10530.
10-5	4200.	.9440	1.2130	1248.	1.128	10530.
11-5	4200.	.9710	1.2130	1239.	1.128	10505.
12-5	4000.	.9600	1.1550	1230.	1.128	10505.
13-5	4200.	.9240	1.2130	1203.	1.128	10512.
14-5	-4600.	-1.1180	-1.3280	1257.	1.128	10512.
4-6	-4425.	.9680	-1.2780	1229.	1.128	10502.
10-6	4200.	.9530	1.2130	1221.	1.128	10481.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	4152.	.9380	1.1590	1213.	10523.
3-5	4322.	.9750	1.2250	1204.	10523.
4-5	4221.	.9190	1.1970	1196.	10523.
7-5	4205.	.9430	1.2080	1216.	10523.
10-5	4225.	.9320	1.1970	1231.	10523.
11-5	4211.	.9690	1.2100	-1236.	10523.
12-5	4011.	.9580	1.1530	1227.	10523.
13-5	4204.	.9240	1.2130	1203.	10523.
14-5	-4605.	-1.1180	-1.3280	-1257.	10523.
4-6	4464.	.9550	-1.2610	1212.	10523.
10-6	4229.	.9470	1.2060	1214.	10523.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	1.978	211.4	37.7	41.4	51.5
3-5	2.040	217.4	42.1	42.2	56.0
4-5	1.927	192.0	27.1	38.8	53.4
7-5	1.963	213.7	35.9	35.1	47.4
10-5	1.944	273.2	42.4	35.1	47.5
11-5	2.008	188.8	30.0	39.4	52.7
12-5	1.978	207.5	48.3	41.1	55.3
13-5	1.908	210.4	37.7	36.2	51.6
14-5	-2.296	-328.6	-69.6	38.3	57.3
4-6	2.007	174.8	32.8	38.0	-35.1
10-6	1.953	-302.5	-57.4	-28.6	46.1

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	3107.	21.14	6.47	6.80	8.45	8.05
3-5	3106.	21.06	7.01	6.72	8.91	5.92
4-5	3114.	19.74	4.78	6.55	9.01	4.00
7-5	3119.	21.60	6.23	5.82	7.87	7.33
10-5	3097.	-27.70	7.39	5.85	7.91	6.62
11-5	3110.	18.61	5.07	6.39	8.53	-11.33
12-5	3098.	20.68	8.26	6.73	9.05	5.96
13-5	3108.	21.81	6.71	6.16	8.79	5.30
14-5	-3084.	-28.09	-10.22	5.38	8.04	5.33
4-6	3118.	-17.28	5.57	6.17	-6.17	6.04
10-6	-3083.	-30.40	-9.91	-4.72	7.61	6.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	6.2070	7.6720	15.9990	5.8110	7.1870	17.9970
3-5	6.3540	7.8960	16.3650	6.1030	7.6130	18.6560
4-5	6.1990	7.8960	16.3650	5.9580	7.6130	18.6560
7-5	-10.2860	-19.3420	-28.1490	-10.1630	-19.1300	-32.8430
10-5	5.2030	5.7560	12.9740	5.0020	5.5460	15.3640
11-5	5.7570	6.8840	15.0870	5.7170	6.8250	17.4290
12-5	7.0140	9.7900	18.7800	6.9650	9.7040	21.6880
13-5	5.6590	6.9390	15.0390	5.6560	6.9270	17.5890
14-5	-8.1520	11.2550	20.2730	-8.1480	11.2350	23.7100
4-6	7.0100	9.5160	18.3840	6.7120	9.1090	20.8810
10-6	5.6830	6.7850	15.5170	5.5690	6.6250	17.1120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 6

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	ET	NR LB/KLB	CNOX FU	ET	SMK CORRECTED	NUMBR
1-5		22.58			6.90			7.65			9.51		8.05	
3-5		21.93			7.27			7.66			10.15		5.43	
4-5		20.54			4.96			7.46			10.28		4.00	
7-5		21.87			6.30			6.80			9.19		7.33	
10-5		-28.81			7.67			6.93			9.37		6.62	
11-5		18.73			5.12			7.38			9.86		-11.33	
12-5		20.83			8.34			7.78			10.45		5.96	
13-5		21.82			6.72			7.21			10.28		5.30	
14-5		-28.10			-10.24			6.29			9.41		5.33	
4-6		-18.05			5.82			7.01			-7.01		6.04	
10-6		-31.02			-10.15			-5.20			8.40		6.16	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	27.00	50.00	66.00	26.72	49.48	65.31
3-5	27.00	50.00	66.00	26.82	49.67	65.56
4-5	27.00	50.00	67.00	26.82	49.67	66.55
7-5	27.00	50.00	66.00	26.95	49.90	65.87
10-5	27.00	50.00	66.00	26.82	49.67	65.56
11-5	27.00	50.00	-65.00	26.97	49.95	64.94
12-5	27.00	51.00	67.00	26.97	50.95	-66.94
13-5	27.00	50.50	67.00	27.00	50.50	-67.00
14-5	27.00	50.00	-65.00	27.00	50.00	65.00
4-6	-26.00	49.00	66.00	-25.83	48.67	65.56
10-6	27.00	-52.00	66.00	26.92	-51.85	65.81

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
1-5	1700.	.8290	.9260	1068.	1.029	3518.
3-5	1700.	.8160	.9260	1063.	1.030	3598.
4-5	1700.	.7810	.9260	1077.	1.030	3971.
7-5	1700.	.8250	.9260	1077.	1.028	3678.
10-5	1800.	.7970	.9800	1095.	1.022	3594.
11-5	1600.	-.7370	.8710	1068.	1.026	3420.
12-5	1700.	.7780	.9260	-1104.	1.030	-4133.
13-5	1750.	-.7400	.9530	1059.	1.030	-4166.
14-5	1800.	.7730	.9800	1050.	1.030	3439.
4-6	1600.	.7960	.8710	1050.	-1.018	3585.
10-6	1800.	.7660	.9800	1063.	1.026	3645.

NOTE: MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR X100	F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1-5	1721.	.8110	.9070	1046.	3526.	
3-5	1709.	.8050	.9140	1049.	3592.	
4-5	1709.	.7710	.9140	1062.	3964.	
7-5	1702.	.8220	.9220	1073.	3676.	
10-5	1811.	.7870	.9670	1080.	3592.	
11-5	1604.	-.7360	.8700	1066.	3426.	
12-5	1704.	.7760	.9240	-1102.	-4140.	
13-5	1752.	-.7400	.9530	1059.	-4170.	
14-5	1802.	.7730	.9800	1050.	3442.	
4-6	1614.	.7850	.8600	1036.	3592.	
10-6	1812.	.7610	.9750	1057.	3659.	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	1.543	795.1	375.8	7.2	14.8
3-5	1.507	786.0	407.8	6.6	15.1
4-5	1.460	783.7	319.9	6.1	15.0
7-5	1.556	780.4	331.4	7.0	15.1
10-5	1.488	796.4	339.5	7.8	14.8
11-5	-1.381	-692.4	300.7	6.9	14.5
12-5	1.463	-693.5	310.7	7.4	16.2
13-5	-1.373	751.6	334.2	5.8	14.4
14-5	1.440	712.0	352.8	-5.2	14.1
4-6	1.468	841.8	378.1	-3.2	-8.2
10-6	1.433	727.0	323.4	6.4	15.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	2808.	92.13	74.81	1.38	2.81	0.00
3-5	2787.	92.51	82.45	1.27	2.91	0.00
4-5	2821.	96.38	67.58	1.24	3.03	0.00
7-5	2845.	90.81	66.24	1.33	2.89	0.00
10-5	2817.	95.95	70.26	1.54	2.93	0.00
11-5	2827.	90.19	67.29	1.48	3.11	0.00
12-5	2838.	85.62	65.89	1.50	3.28	0.00
13-5	2802.	97.64	74.58	1.23	3.07	0.00
14-5	2810.	88.43	75.27	1.06	2.87	0.00
4-6	2786.	-101.65	78.44	-.64	-1.63	0.00
10-6	2824.	91.18	69.67	1.32	3.13	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-22B * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	1.6900	.8430	4.2230	1.6050	.7990	4.8400
3-5	1.6660	.8350	4.2310	1.6150	.8110	4.8830
4-5	1.6470	.8350	4.2310	1.5980	.8110	4.8830
7-5	1.6560	.8330	4.2110	1.6420	.8270	4.9370
10-5	1.6570	.8360	4.0800	1.6060	.8110	4.8830
11-5	1.6110	.8360	4.2770	1.6020	.8300	4.9480
12-5	1.7050	.9060	4.4790	1.6950	.8990	5.1830
13-5	1.6440	.8690	4.3400	1.6430	.8670	5.0760
14-5	1.6250	.8350	4.2410	1.6240	.8330	4.9600
4-6	1.5860	.7750	4.0470	1.5340	.7480	4.6610
10-6	1.7850	-.9850	-4.8750	-1.7550	-.9640	-5.4010

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-228 * 600 HOUR AND ABOVE TESTS *

MODE 7

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1-5	97.02	78.94	1.58	3.23	0.00
3-5	95.39	84.88	1.46	3.36	0.00
4-5	99.34	69.57	1.43	3.50	0.00
7-5	91.59	66.77	1.56	3.39	0.00
10-5	98.99	72.46	1.84	3.51	0.00
11-5	90.70	67.80	1.71	3.59	0.00
12-5	86.11	66.40	1.73	-3.80	0.00
13-5	97.70	74.72	1.44	3.60	0.00
14-5	88.49	75.41	1.24	3.35	0.00
4-6	-105.06	81.26	-0.74	-1.87	0.00
10-6	92.71	71.17	1.46	3.47	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RR211-22B * 600 HOUR AND ABOVE TESTS *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	N3 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT	CORR N3 PER CENT
1-5	25.00	46.00	63.00	24.74	45.52	62.34
3-5	22.00	43.00	62.00	21.85	42.71	61.59
4-5	24.00	45.00	63.00	23.84	44.70	62.58
7-5	22.00	43.00	62.00	21.96	42.92	61.88
10-5	22.00	44.00	61.00	21.85	43.71	-60.59
11-5	23.00	44.00	62.00	22.98	43.96	61.94
12-5	22.00	44.00	62.00	21.98	43.96	61.94
13-5	22.00	44.00	63.00	22.00	44.00	63.00
14-5	22.00	44.00	61.50	22.00	44.00	61.50
4-6	24.00	45.00	63.00	23.84	44.70	62.58
10-6	22.50	44.00	61.00	22.44	43.87	60.82

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE A

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1-5	1600.	.8290	.8710	1068.	1.025	2763.
3-5	1400.	.8120	.7630	1032.	1.020	2622.
4-5	1400.	.7840	.7630	1032.	1.020	2821.
7-5	1500.	.8260	.8170	-1086.	1.020	2678.
10-5	1500.	.7920	.8170	1068.	1.014	2420.
11-5	1500.	-.7310	.8170	1068.	1.018	2684.
12-5	1400.	.7660	.7630	1068.	1.020	2684.
13-5	1500.	-.7340	.8170	1032.	1.020	2904.
14-5	1500.	.7530	.8170	1032.	1.020	2597.
4-6	-1250.	.7920	-.6810	1032.	-1.010	2810.
10-6	1500.	-.7450	.8170	1050.	1.018	2455.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 8

UNIT	CORR FUI FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1-5	1620.	.8120	.8530	1046.	2768.
3-5	1407.	.8010	.7520	1018.	2617.
4-5	1407.	.7740	.7520	1018.	2816.
7-5	1502.	.8230	.8140	-1082.	2676.
10-5	1509.	.7820	.8060	1053.	2419.
11-5	1504.	-.7300	.8150	-1066.	2688.
12-5	1404.	.7640	.7610	-1066.	2688.
13-5	1502.	-.7340	.8170	1032.	2907.
14-5	1502.	.7530	.8170	1032.	2600.
4-6	-1261.	.7820	-.6720	1018.	2816.
10-6	1510.	.7410	.8120	1044.	2465.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE B

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1-5	1.502	887.6	481.2	5.2	12.1
3-5	1.437	941.6	555.5	5.3	12.1
4-5	1.416	920.3	442.2	5.0	12.3
7-5	1.513	892.4	444.7	5.3	12.4
10-5	1.422	923.4	479.0	5.5	12.0
11-5	-1.324	-782.0	414.3	5.6	11.5
12-5	1.380	849.3	446.6	5.3	12.0
13-5	-1.308	873.2	466.8	4.4	11.7
14-5	1.349	850.4	464.4	4.2	11.7
4-6	1.425	926.3	468.9	-2.6	-7.2
10-6	-1.328	873.0	474.1	5.0	11.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE A

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1-5	2734.	102.82	95.76	.98	2.31	0.00
3-5	2673.	111.47	112.98	1.04	2.35	0.00
4-5	2726.	112.75	93.06	1.02	2.48	0.00
7-5	2763.	103.74	88.80	1.02	2.37	0.00
10-5	2710.	112.03	99.84	1.10	2.40	0.00
11-5	2735.	102.84	93.59	1.20	2.49	0.00
12-5	2722.	106.59	96.30	1.09	2.48	0.00
13-5	2692.	114.44	105.10	.95	2.52	0.00
14-5	2706.	108.58	101.87	.89	2.46	0.00
4-6	2716.	112.35	97.70	-.51	-1.44	0.00
10-6	2693.	112.67	105.12	1.05	2.43	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1-5	1.4010	.6000	3.4850	1.3320	.5690	4.0050
3-5	1.1680	.4400	2.9500	1.1350	.4290	3.4150
4-5	1.2970	.5400	3.3080	1.2600	.5260	3.8260
7-5	1.1650	.4410	2.9440	1.1560	.4380	3.4550
10-5	1.2310	.4890	3.0140	1.1950	.4750	3.6160
11-5	1.2000	.4910	3.1690	1.1940	.4880	3.6680
12-5	1.2120	.4910	3.1690	1.2060	.4880	3.6680
13-5	1.1990	.4910	3.1440	1.1980	.4900	3.6770
14-5	1.2050	.4910	3.1440	1.2040	.4900	3.6770
4-6	1.3040	.5440	3.3170	1.2630	.5260	3.8260
10-6	1.2110	.4930	3.2910	1.1920	.4840	3.6510

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

RB211-22B * 600 HOUR AND ABOVE TESTS *

MODE 8

UNIT	NREC CO EI LB/KLR FU	NREC HC EI LB/KLR FU	NRE CNO EI LB/KLR FU	NR CNOX EI LB/KLR FU	SMK NUMBER CORRECTED
1-5	108.12	100.89	1.13	2.65	0.00
3-5	114.72	116.08	1.20	2.72	0.00
4-5	116.08	95.67	1.18	2.87	0.00
7-5	104.57	89.46	1.20	2.78	0.00
10-5	115.40	102.80	1.32	2.88	0.00
11-5	103.39	94.28	1.39	2.88	0.00
12-5	107.17	97.01	1.27	2.87	0.00
13-5	114.51	105.29	1.11	2.95	0.00
14-5	108.65	102.06	1.04	2.87	0.00
4-6	116.00	101.11	-0.59	-1.66	0.00
10-6	114.46	107.27	1.17	2.70	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	41.1	1.90	79	2	19
	150-Hour	40.6	1.91	82	2	16
	300-Hour	41.1	1.89	79	2	19
	600-Hour	40.9	1.91	80	2	18
2	Baseline	41.1	1.90	79	2	19
3	Baseline	41.1	1.88	81	1	18
	150-Hour	40.6	1.91	82	3	15
	300-Hour	40.6	1.88	78	1	21
	450-Hour	40.6	1.88	82	1	17
	600-Hour	40.6	1.91	81	2	17
4	Baseline	41.1	1.88	81	1	18
	150-Hour	40.6	1.91	82	3	15
	300-Hour	40.6	1.88	78	1	21
	450-Hour	40.6	1.88	82	1	17
	600-Hour	40.6	1.91	81	2	17
	750-Hour	41.9	1.90	77	2	21
5	Baseline	40.9	1.86	79	1	20
6	Baseline	40.9	1.86	79	1	20
7	Baseline	41.1	1.87	79	1	20
	150-Hour	40.6	1.91	84	2	14
	450-Hour	40.6	1.91	85	1	14
	600-Hour	40.0	1.86	82	1	17
8	Baseline	41.1	1.87	79	1	20
	150-Hour	40.6	1.91	84	2	14
9	Baseline	40.9	1.88	78	2	20

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
10	Baseline	40.9	1.88	78	2	20
	600-Hour	39.4	1.90	82	1	17
	750-Hour	41.9	1.91	81	2	17
11	Baseline	40.4	1.89	81	2	17
	300-Hour	40.6	1.91	84	1	15
	450-Hour	40.4	1.88	79	1	20
	600-Hour	43.4	1.93	80	2	18
12	Baseline	40.4	1.89	81	2	17
	300-Hour	40.6	1.91	84	1	15
	450-Hour	40.4	1.88	79	1	20
	600-Hour	43.4	1.93	80	2	18
13	Baseline *					
	150-Hour	41.3	1.93	83	1	16
	300-Hour	41.9	1.88	81	1	18
	450-Hour	40.4	1.90	80	1	19
14	Baseline *					
	150-Hour	41.3	1.93	83	1	16
	300-Hour	41.9	1.88	81	1	18
	450-Hour	40.4	1.90	80	1	19
15	Baseline	40.0	1.90	81	2	17
	150-Hour	40.4	1.89	79	2	19
	Baseline	40.2	1.89	81	1	18
	150-Hour	40.6	1.88	79	1	20
16	450-Hour	42.3	1.90	80	2	18
	Baseline	40.2	1.89	81	1	18
17	150-Hour	40.6	1.88	79	1	20
	Baseline	40.6	1.91	80	1	19
18	Baseline	40.6	1.91	80	1	19
19	Baseline	40.6	1.91	80	1	19

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Report No. FAA-RD-79-8, VIII

**TIME DEGRADATION FACTORS
FOR TURBINE ENGINE EXHAUST EMISSIONS**

**VOLUME VIII
CF700-2D TEST DATA**



APRIL 1979

FINAL REPORT

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16. Abstract This is the last volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains a compilation of all emission test data and analysis data used in the development of degradation factors for the CF700-2D engine type. In addition, the volume contains maintenance data for the test units during the period of testing, as well as analyses of the samples of fuel used in each test.					
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1. INTRODUCTION

This is the last volume of an eight-volume report concerning the degradation of turbine engine emissions. This volume contains test data obtained for the CF700-2D engine type as installed on the Falcon aircraft. The engines, owned and operated by Federal Express, were tested in Memphis by NREC personnel.

The other volumes of the report are listed below:

- Volume I - Program Description and Results
- Volume II - JT8D-9 Test Data
- Volume III - JT8D-7 Test Data
- Volume IV - JT3D-7 Test Data
- Volume V - JT3D-3B Test Data
- Volume VI - JT9D-3A Test Data
- Volume VII - RB211-22B Test Data

Regarding the test data, it should be noted that EPA test specifications were not followed where they conflicted with the interests of degradation testing. Hence, comparison of absolute emission levels presented in this report with EPA standards may be misleading.

1.1 CONTENT OF VOLUME

There are four sections that make up the volume: Engine Test and Maintenance Chronology; Nomenclature; Emissions and Analysis Data; and Fuel Analysis Data.

The Engine Test and Maintenance Chronology section contains a chronological, unit-by-unit, listing of noteworthy events occurring to a particular engine in the course of the program. This includes test dates, dates and descriptions of maintenance, and the dates of installations onto other aircraft that may have occurred. If an engine was removed from the program, the date and reason are also included.

The Nomenclature section contains a listing and description of all the titles and column headings used in the two succeeding sections. This includes all equations used in the various calculations.

The Emission and Analysis Data section includes all data gathered during a test, plus the results of any calculations performed on that data.

It consists of a number of tables arranged according to test series. For the CF700-2D engine there were four such series; Baseline; 400 Hour; 800 Hour; and 1200 Hour. The hour designations represent the nominal value of time since baseline (TSB) for each engine tested. The actual values of TSB are scattered about the nominal values. Within each test series, the data is further subdivided into a table of data pertinent to an entire test for an engine and a series of seven tables for each of the eight modes tested. Thus there are a total of 57 tables for each test series. In addition, the section begins with a set of notes documenting the data.

The Fuel Analysis Data section contains a unit-by-unit listing of the results of analyses performed on samples of jet fuel used during the emission tests. During each engine test, a sample of fuel was taken from the same fuel tank as used during the test and subsequently analyzed. The results of the analyses include API gravity, hydrogen-carbon ratio and the percentages of paraffins, olefins and aromatics.

2. ENGINE TEST AND MAINTENANCE CHRONOLOGY

Unit No./ Serial No.	Date	Item
1/299-104	7/17/75	Original Test A/C No. <u>1FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	2/12/76	Engine removed due to minor maintenance
	2/16/76	Engine reinstalled on A/C No. <u>15FE</u> , Position No. <u>1</u>
	2/21/76	"400-Hour" Emission Test
	2/26/76	Disc: Engine fan, foreign object damage
		C/A: Blend repaired 4 fan blades in accordance with maintenance manual
	2/27/76	Disc: Jet calibrated and replace engine if necessary due to low performance
		C/A: R/R engine no. 1, operation and leak check good on ground run per SEI 187.
	3/31/76	Engine reinstalled on A/C No. <u>7FE</u> , Position No. <u>2</u>
	5/8/76	"800-Hour" Emission Test
	6/3/76	Engine EGT limited on take-off at ABQ (P.A. 5300, temp 70 deg F) 740 deg EGT 1.50 max EPR, all other indications normal.
		C/A: R/R engine no. 2
	6/16/76	Engine reinstalled on A/C No. <u>10FE</u> , Position No. <u>2</u>
	6/17/76	Disc: Engine tach inoperative
		C/A: R/R tach generator, ops check good
	6/23/76	Disc: Oil leak in engine no. 2
	C/A: R/R horizontal drive shaft rear covering 'O' ring. Leak check due	
6/23/76	Disc: Engine fan rpm gage inoperative	
	C/A: Repaired C/P at aircraft side of engine tail cone. Ops check good	
6/25/76	Disc: Engine fan tach inoperative	
	C/A: R/R fan tach sensor, ops and leak check due	
	Checks good	
6/29/76	Disc: Engines 1 and 2 will over temp prior to reaching take-off EPR	

Unit No./ Serial No.	Date	Item
1/299-104 Continued	6/29/76	C/A: Checked engines' EGT and EPR system. Ran aircraft pulled 1488 on both engines with 40 deg C. OK in accordance with power chart
	7/17/76	"1200-Hour" Emission Test
2/299-099	8/23/75	Original Test A/C No. <u>1FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	12/23/75	Engine removed compressor foreign object damage
	12/24/75	Disc: Engine due minor maintenance
	1/27/76	C/A: R/R engine leak check and ground run good Engine Reinstalled on A/C No. <u>10FE</u> , Position No. <u>1</u>
		Disc: Removed engine due minimum maintenance
	2/14/76	C/A: R/R engine, ground run and leak check good Disc: Engine removed due to foreign object damage of compressors starters
		C/A: R/R engine, ops check and leak check good on ground
	2/27/76	Engine reinstalled on A/C No. <u>15FE</u> , Position No. <u>1</u>
		Disc: Jet cal and replace engine if necessary due to low performance
3/16/76	C/A: R/R no. 1 engine, ops and leak check good on ground run Disc: Engine 8th stage bleed air line broken of.	
	C/A: R/R line, ops check good	
5/8/76	"800-Hour" Emission Test	
6/20/76	Engine removed from program due to extended maintenance	
3/245D-196	10/8/75	Original Test A/C No. <u>2FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	12/18/75	Disc: Fan foreign object damage C/A: Blended buckets as needed
	1/3/76	Forward front frame liner panel cracked at the 7:00 position and cracked front frame of pan under panel. Premature removal of engine

Unit No./ Serial No.	Date	Item
3/245D-196 Continued	1/8/76	Engine reinstalled on A/C No. <u>21FE</u> , Position No. <u>1</u>
	2/21/76	"400-Hour" Emission Test
	4/8/76	Disc: Fan tach inoperative
		C/A: R/R fan tach
	5/3/76	Disc: Removed engine for cleaning (wreck)
	5/6/76	C/A: R/R engine
		Engine reinstalled on A/C No. <u>10FE</u> , Position No. <u>1</u>
	5/12/76	Engine removed due to borescope inspection
	6/9/76	Engine reinstalled on A/C No. <u>1FE</u> , Position No. <u>1</u>
	6/22/76	Disc: EGT unreadable, fluctuates approximately 100 deg in flight
		C/A: R/R EGT indicator, ops check good
	6/23/76	Disc: EGT intermittently drops to 50-80 deg and is unuseable
		C/A: Changed C/P on engine and ops check good
	6/26/76	Disc: Engine's T-2 line broken off at engine mount point
		C/A: R/R T-2 line ground run engine, checked out good
6/26/76	Disc: EGT fluctuates plus/minus at cruise	
	C/A: R/R EGT indicator, ran engine for ops check, checked out good	
7/17/76	"1200-Hour" Emission Test	
4/299-138	10/2/75	Original Test A/C No. <u>2FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	2/23/76	Disc: Engine top igniter lead broken
		C/A: R/R engine top igniter lead
	4/13/76	Disc: Fan tach reads 13 per cent high at all times except cruise and take-off power
C/A: R/R fan tach indicator, ops check OK on engine ground run		
5/8/76	"800-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
5/299-094	3/5/75	Original Test A/C No. <u>5FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	1/21/76	Engine removed for minor maintenance
	4/21/76	Engine reinstalled on A/C No. <u>32FE</u>
	4/28/76	Disc: Bird strike
		C/A: R/R engine blended blades as required
5/17/76	Engine reinstalled on A/C No. <u>27FE</u>	
6/299-049	9/20/75	Original Test A/C No. <u>5FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	5/8/76	"800-Hour" Emission Test
	6/14/76	Engine removed due to minor maintenance
	6/25/76	Engine reinstalled on A/C No. <u>18FE</u> , Position No. <u>1</u>
	6/28/76	Disc: EGT flux at high rpm setting generally above 690 deg and +20 deg
		C/A: R/R EGT gage
7/17/76	"1200-Hour" Emission Test	
7/299-135	10/3/75	Original Test A/C No. <u>27FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	2/26/76	Disc: Foreign object damage to engine fan
	4/11/76	C/A: Blended blades IAW G.E. Maintenance Manual
		Disc: Engine has had bad igniter lead
	4/11/76	C/A: R/R both igniter leads, ops check good
		"800-Hour" Emission Test
	5/17/76	Engine removed due to minor maintenance
	6/29/76	Engine reinstalled on A/C No. <u>23FE</u> , Position No. <u>1</u>
7/7/76	Disc: Engine oil pressure gage fluctuates C/A: Aligned gearbox face, R/R transfer gearbox, ops check and leak check good	

Unit No./ Serial No.	Date	Item
7/299-135 Continued	7/8/76	Disc: Fuel leaks out of drain mast no. 1 engine C/A: R/R IGV on LH side of LH engine, ops check good
	7/17/76	"1200-Hour" Emission Test
8/299-124	9/2/75	Original A/C No. <u>27FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	3/31/76	Disc: Engine removed due to foreign object damage to fan liner ring
		C/A: R/R engine, rebuild fan
	4/23/76	Engine reinstalled on A/C No. <u>33FE</u> , Position No. <u>1</u>
		Disc: Left fan goes to 20 percent in flight at times
		C/A: Cleaned and retaped cannon plug, ops check good
	4/26/76	Disc: Engine N ₁ rpm gage inoperative
		C/A: R/R tach generator, ops check good
	5/8/76	"800-Hour" Emission Test
	5/18/76	Engine removed for wrench foreign object damage
	5/26/76	Engine reinstalled on A/C No. <u>20FE</u> , Position No. <u>1</u>
	6/2/76	Engine fan rpm varies from 80 to 100 per cent in climb, then stabilizes to normal, all other engine instruments normal.
		C/A: Found ground tach sensor C/P badly corroded. Washed with W040 and applied contact cleaner, ground ran good, checked resistance of sensor, found to be OK
	7/1/76	Disc: Engine temperature limited for take-off and climb
		C/A: Cleaned EPR probe C/W OEI 139 (Midskin contour) ground run good
	7/17/76	"1200-Hour" Emission Test
	9/299-140	Original Test A/C No. <u>28FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	12/16/75	Engine removed due to minor maintenance

Unit No./ Serial No.	Date	Item
9/299-140 Continued	12/16/75	Engine reinstalled on A/C No. <u>16FE</u> , Position No. <u>1</u>
	2/21/76	"400-Hour" Emission Test
	3/4/76	Disc: Remove engine for A/C No. <u>17FE</u> , reinstall when aircraft is available
		C/A: Installed engine on A/C No. <u>17FE</u> , Position No. <u>1</u> , leak and ops check good
	4/16/76	Disc: Igniter lite out
		C/A: Ops check good
	5/8/76	"800-Hour" Emission Test
	5/15/76	Disc: EPR moves upward and down 0.01, EPR at all power settings all the time
		C/A: R/R EPR trnsmitter, leak check OK. Ground run-up check good
	5/20/76	Disc: EPR transducer reads 0.03 low verified with jet cal run
		C/A: R/R EPR transducer
	5/20/76	Removed engine for low performance, engine unable to get to take-off EPR. Got 1.5 at stop full forward 98.5 rpm and 740 deg EGT.
		C/A: Installed engine 299-001, ground run and leak check good
	6/8/76	Engine reinstalled on A/C No. <u>17FE</u> , Position No. <u>2</u>
7/15/76	Disc: Engine slow to start, 8 to 40 seconds. Only one igniter plug firing.	
	C/A: R/R both igniter plugs, due ops check on start. Ops check good, start within limits	
7/15/76	Disc: Engine will not meet power assurance check Exceeds EGT by 15 deg, max EGT limit is 718 deg, OAT +22 TAS 730 deg, 101 Fan, oil psi 50, 3000 # F/F.	
	C/A: #2 transducer reads 1.57, checket T-5 harness within degree. Checked EPR transducer, lines and probe checked engine for foreign object damage none found. Checked aspirator hoses, leak check due.	
	C/A: #2 transducer reads 1.57, checket T-5 harness within degree. Checked EPR transducer, lines and probe checked engine for foreign object damage none found. Checked aspirator hoses, leak check due.	
	C/A: #2 transducer reads 1.57, checket T-5 harness within degree. Checked EPR transducer, lines and probe checked engine for foreign object damage none found. Checked aspirator hoses, leak check due.	
	C/A: #2 transducer reads 1.57, checket T-5 harness within degree. Checked EPR transducer, lines and probe checked engine for foreign object damage none found. Checked aspirator hoses, leak check due.	
	C/A: #2 transducer reads 1.57, checket T-5 harness within degree. Checked EPR transducer, lines and probe checked engine for foreign object damage none found. Checked aspirator hoses, leak check due.	
7/17/76	"1200-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
10/299-067	9/24/75	Original Test A/C No. <u>28FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	2/25/76	Disc: Lower ignition lead electrode is broken
		C/A: R/R ignition lead
	3/29/76	Disc: 5th stage bleed air line gasket blown
		C/A: R/R gasket on left engine 5th stage bleed line.
	5/7/76	Engine removed due to minor maintenance
	6/1/76	Engine reinstalled on A/C No. <u>34FE</u> , Position No. <u>2</u>
	6/21/76	Disc: EGT chatters intermittently
		C/A: R/R EGT gage, run-up check OK
	6/22/76	Disc: EPR fluctuates +0.05 units constantly
		C/A: R/R EPR gage, run-up check OK
6/30/76	Disc: EGT fluctuates rapidly 40 deg	
	C/A: R/R EGT gage, ops check good	
7/10/76	Disc: EGT fluctuates and rolls back	
	C/A: R/R EGT gage, ground ran engine, ops check good	
7/17/76	"1200-Hour" Emission Test	
11/299-086	8/22/75	Original Test A/C No. <u>30FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	3/3/76	Engine temp/EPR limited in climb FL 270
		C/A: Replaced blown bleed air duct (tube) ran engine checked good
	3/13/76	Engine rolls back to 42 per cent N ₁ momentarily when power is used to taxi and then returned to idle. Power limited when anti-ice is on.
C/A: Found blown gasket and loose fitting on T-2 aspirator.		
3/24/76	EGT limited below 34,000, throttle limited above 34,000 at full throttle, EGT 685 deg. C/A: Replaced 'O' ring in P-3 line in pylon R/R EGT gage.	

Unit No./ Serial No.	Date	Item
11/299-086 Continued	3/31/76	Engine EPR limited above 350 max EPR 1.62, throttle is all the way forward.
		C/A: Replaced both donut seals on engine. Checked EGT system, ground ran engine also jam excess stalls, ops check good
	3/31/76	EGT reads low in cruise, intermittently down to 560 deg and below and reads high during climb
		C/A: Checked gage calibration and EGT harness. Checked OK, inspected engine per G.E troubleshoot chart, found to be OK
	3/31/76	Engine throttle limited on climb passing FL 240 EPR 1.54, EGT 710 deg, RAT 140, FAN 92 per cent
		C/A: Inspected engine per G.E. troubleshoot chart, found no discrepancies, ground ran engine 1.53 EPR
	4/1/76	Engine throttle limited at altitude
		C/A: Inspected engine and found T-2 aspirator hose with hole in it. R/R hose, ops check good
	4/6/76	No response above idle on engine throttle
		C/A: R/R MFC and fuel pump, leak and ops check good on ground run.
	4/22/76	Engine removed for minor maintenance
6/3/76	Engine reinstalled on A/C No. <u>7FE</u> , Position No. <u>2</u>	
7/8/76	Bleed air valve fail lite stays on in flight. Anti-ice system seems to work OK	
	C/A: Cycled valve numerous times. Ops check good, CNDM.	
7/17/76	"1200-Hour" Emission Test	
12/299-109	3/31/75	Original Test A/C No. <u>30FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	1/13/76	Engine removed for minor maintenance
	5/14/76	Engine reinstalled on A/C No. 26FE
	7/3/76	Disc: Bird strike
		C/A: Replaced blades as required

Unit No./ Serial No.	Date	Item
13/245D-052	9/8/75	Original Test A/C No. <u>37FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	2/22/76	Check engine oil consumption, oil within limits of SEI 18772-00
	3/24/76	Both N ₁ 's and EGTs flux excessively at idle
		C/A: R/R both EGT gages, CNDM, N ₁ fluctuation check good and ops check good
	5/1/76	Engine removed for minor maintenance
	6/14/76	Engine reinstalled on A/C No. <u>5FE</u> , Position No. <u>2</u>
	7/16/76	"1200-Hour" Emission Test
14/299-079	10/15/75	Original Test A/C No. <u>37FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	1/3/76	Disc: Right throttle will not retard properly, starting at descent can only reduce using about 75 per cent
		C/A: R/R engine teleforce cable
	2/14/76	Disc: Remove engine due to cracked blucket
		C/A: R/R engine, ops and leak check good
	3/5/76	Engine reinstalled on A/C No. <u>26FE</u> , Position No. <u>1</u>
		Disc: Engine change due in compliance with S/B 72-125
		C/A: R/R engine, leak and ops check good on ground run
	3/7/76	Disc: Thrust levers out of rig at approximately 2 in forward of left hand, right engine rpm and EGT limited before reaching max EPR on take-off
		C/A: Lubed cable on engine, ran aircraft LH and RH levers, go up together, checked
	4/8/76	Disc: N ₁ sticks on starts 0-40 per cent
		C/A: R/R N ₁ gage, ran aircraft, system check OK
4/18/76	Disc: Top ignition lead was damaged in removal	
	C/A: R/R ignition lead	
5/8/76	"800-Hour" Emission Test	

Unit No./ Serial No.	Date	Item
15/304H-040	8/25/75	Original Test A/C No. <u>4FE</u> , Position No. <u>2</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	2/27/76	Disc: Engine will not produce 1.0 EPR on take-off C/A: R/R engine, ops check and ground run good
	4/7/76	Engine reinstalled on A/C No. <u>23FE</u> , Position No. <u>2</u>
	5/8/76	"800-Hour" Emission Test
	6/12/76	Engine is leaking excessive fuel from drain mast C/A: Drained ecology drain box before engine run, engine started and ran normally, did not find excessive fuel drain. OK after shutdown
	7/16/76	"1200-Hour" Emission Test
16/299-050	9/23/75	Original Test A/C No. <u>7FE</u> , Position No. <u>1</u>
	12/6/75	Baseline Emission Test
	2/21/76	"400-Hour" Emission Test
	3/11/76	Disc: Engine igniter box inoperative C/A: R/R igniter box, ops check good
	3/12/76	Disc: Engine 3 o'clock strut top half is cracked C/A: R/R strut fairing
	4/13/76	Disc: Engine rpm inoperative C/A: R/R N ₁ indicator, ops check good
	5/5/76	Engine removed for minor maintenance
	6/9/76	Engine reinstalled on A/C No. <u>33FE</u> , Position No. <u>2</u>
7/17/76	"1200-Hour" Emission Test	

3. NOMENCLATURE

Name	Symbol	Description	Unit
TSO	TSO	Time Since Overhaul	hrs
TSB	TSB	Time Since Baseline	hrs
AMB TEMP	T _a	Ambient temperature	deg R
AMB PRESS	P _a	Barometric pressure	in Hg abs
AMB HUMID	H	Ambient humidity	lbm H ₂ O per lbm dry air
MODE 1		Idle, initial - 47 percent N ₂ nominal	
MODE 2		Idle "plus", initial - 50 percent N ₂	
MODE 3		Take-off - T.O. EPR from airline engine operating guide	
MODE 4		Climb - EPR corresponding to 90 percent T.O. thrust	
MODE 5		Intermediate - EPR corresponding to 60 percent T.O. thrust	
MODE 6		Approach - EPR corresponding to 30 percent T.O. thrust	
MODE 7		Idle "plus", final - see MODE 2	
MODE 8		Idle, final - see MODE 1	
N1 SPEED	N ₁	Rotational speed of low pressure turbine, given as a percent of design speed (8570 rpm)	percent
N2 SPEED	N ₂	Rotational speed of high pressure turbine, given as a percent of design speed (16,500 rpm)	percent
CORR N1	N ₁ '	N ₁ speed corrected to standard ambient conditions (Ref 1) $N_1' = N_1 \times \sqrt{518.7/T_a}$	percent

Name	Symbol	Description	Unit
CORR N2	N_2'	Corrected N_2 speed (Ref 1) $N_2' = N_2 \times \sqrt{518.7/T_a}$	percent
FUEL FLOW	F	Fuel Flow	lbm per hr
CB F/A	$(F/A)_{CB}$	Carbon balance fuel-air ratio (Ref 1, dry basis) $(F/A)_{CB} = \frac{(12+a) \times 4.77(1+0.25a)}{(1+0.25a)(32+3.73 \times 28 + 0.04 \times 40)} \div$ $\left[\frac{100}{\frac{CO+CO_2+HC}{10^4}} + 0.25a - \frac{1}{2} \left(\frac{CO/10^4}{\frac{CO+CO_2+HC}{10^4}} \right) - \frac{(1+0.25a)HC/10^4}{\frac{CO+CO_2+HC}{10^4}} \right]$ <p>where a is the hydrogen-carbon ratio of the fuel as obtained in the fuel analysis. (A mean values was used when the analysis was not available; $a_{mean} = 1.90$)</p>	
PERF F/A	$(F/A)_{PF}$	Performance fuel-air ratio $(F/A)_{PF} = F / \left[(W_C + W_F) \times \frac{Pa}{29.92} \times \sqrt{518.7/T_a} \right]$ <p>where W_C and W_F are obtained from the curves C in Figure 1</p>	
TT7	T_{T7}	Exhaust gas temperature	deg R
EPR	EPR	Engine pressure ratio	
THRUST	TH	Thrust, obtained from $TH = TH' \times (P_a/29.92)$ (Ref 1)	lbf
CORR FU FL	F'	Corrected fuel flow (Ref 1) $F' = F \times (29.92/P_a) \times \sqrt{518.7/T_a}$	lbm per hr
COR CB F/A	$(F/A)'_{CB}$	Corrected carbon balance fuel-air ratio (Ref 1) $(F/A)'_{CB} = (F/A)_{CB} \times (518.7/T_a)$	
COR PF F/A	$(F/A)'_{PF}$	Corrected performance fuel-air ratio (Ref 1) $(F/A)'_{PF} = (F/A)_{PF} \times (518.7/T_a)$	
CORR TT7	T_{T7}'	Corrected exhaust gas temperature $T_{T7}' = T_{T7} \times (518.7/T_a)$	deg R
COR THRUST	TH'	Corrected thrust (obtained from curve shown in Fig 2 for modes 3,4,5 and 6 and from curve shown in Fig 3 for modes 1,2,7, and 8)	lbf

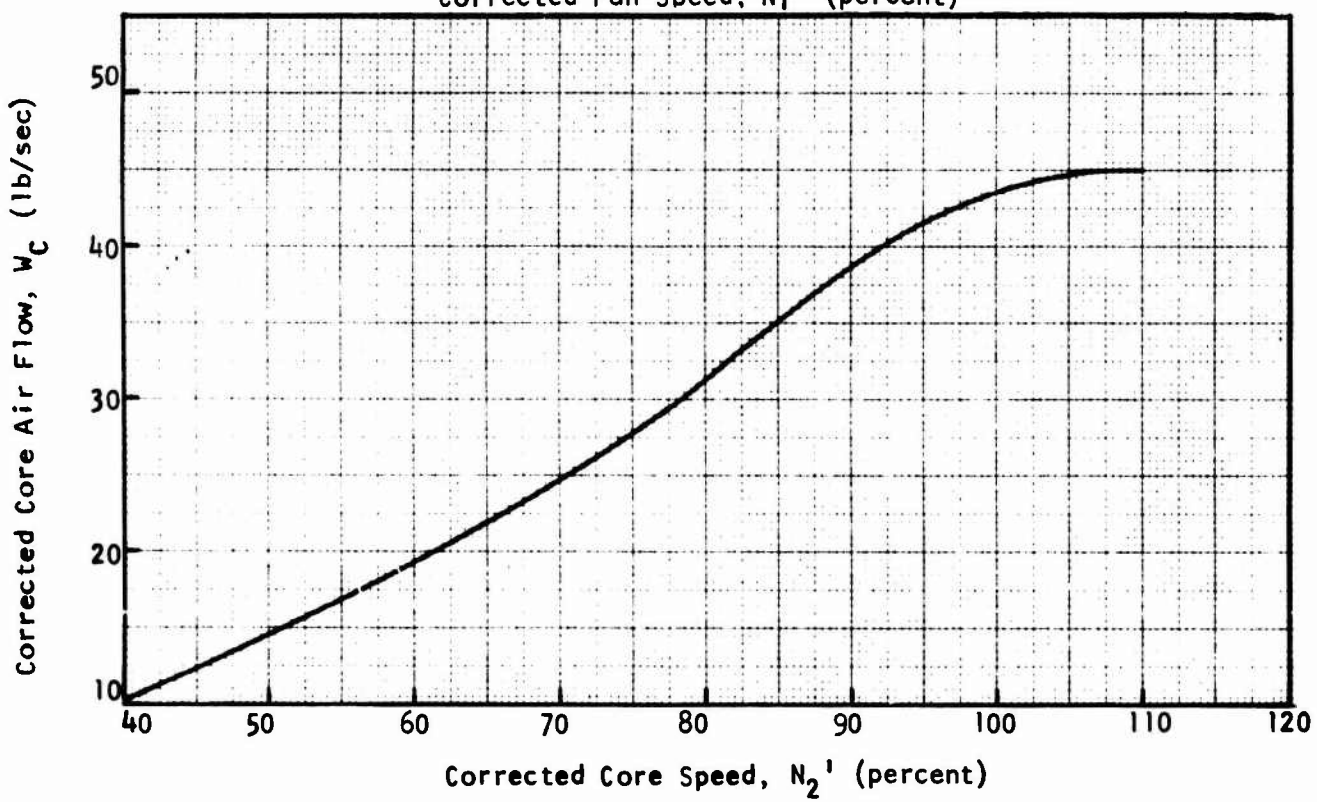
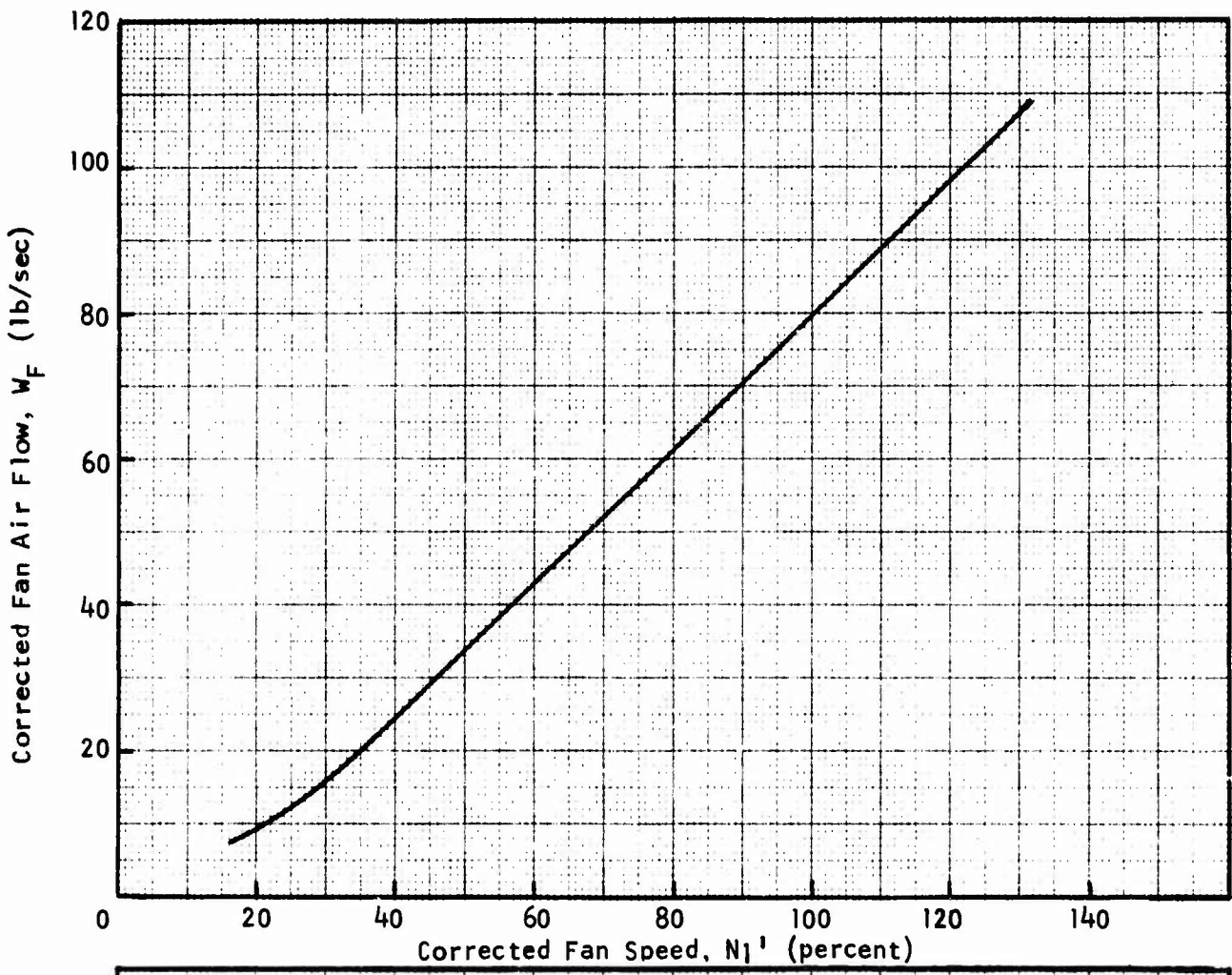


Figure 1. Estimated Corrected Total Air Flow versus Rotor Speed

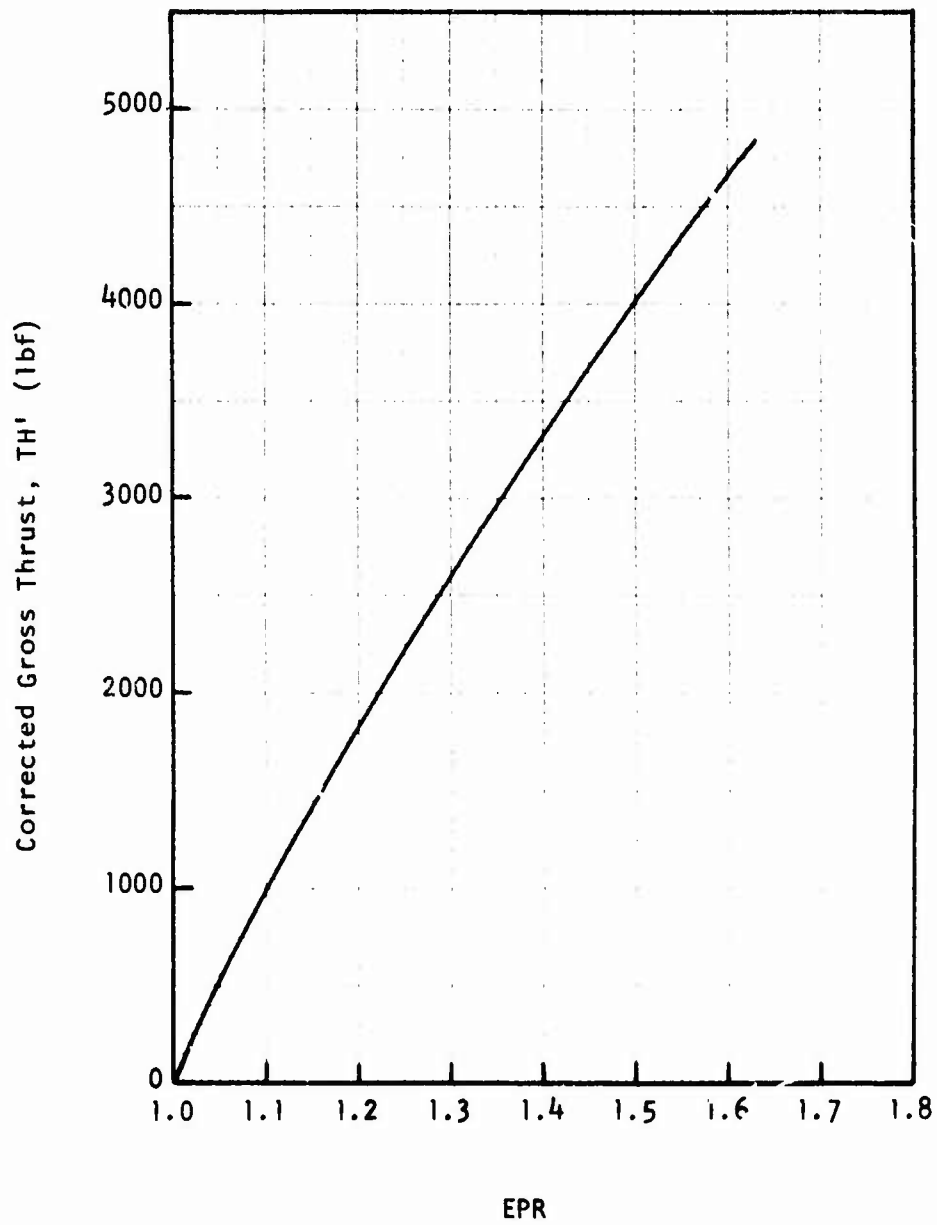


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic

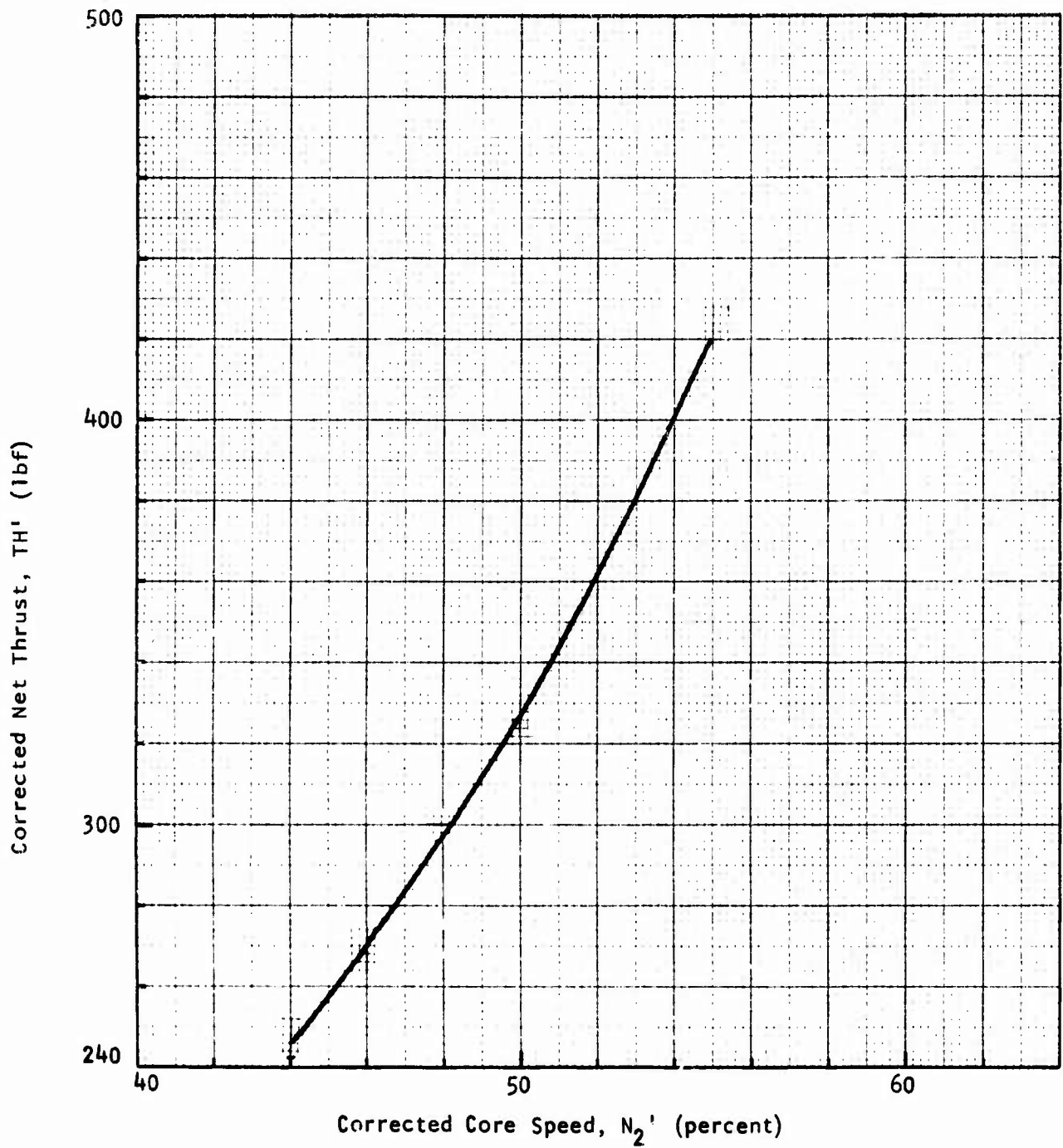


Figure 3. Estimated Engine Thrust versus Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
CO2 CONC	CO ₂	Concentration of carbon dioxide	percent
CO CONC	CO	Concentration of carbon monoxide	ppm
HC CONC	HC	Concentration of hydrocarbons (propane)	ppm
NO CONC	NO	Concentration of NO	ppm
NOX CONC	NO _x	Concentration of NO _x	ppm
CO2 EI	EI _{CO2}	Emission index of carbon dioxide (Ref 3) $EI_{CO2} = \frac{M_{CO2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_C = atomic weight of carbon M_H = atomic weight of hydrogen M_{CO2} = molecular weight of CO₂</p>	lbm per 1000 lbm fuel
CO EI	EI _{CO}	Emission index of carbon monoxide (Ref 3) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$ <p>where: M_{NO2} = molecular weight of NO₂</p>	lbm per 1000 lbm fuel

Name	Symbol	Description	Unit
NOX EI	EI_{NO_x}	Emission index of NO_x (Ref 3) $EI_{NO_x} = \frac{M_{NO_2} \times \frac{NO_x}{10^4} \times 1000}{(M_c + a \times M_H) \left(\frac{CO}{10^4} + CO_2 + \frac{HC}{10^4} \right)}$	lbm per 1000 lbm fuel
SMK NUMBER FRONT SIDE	SN	Smoke Number (Ref 3) $SN = 100 \times (1 - RS/RW)$ where RS = smoke spot reflectance RW = reflectance of clean filter paper	
SMK NUMBER CORRECTED	SN'	Corrected Smoke Number, obtained as shown in Appendix III of Volume I.	
NREC CO EI	$(EI_{CO})_{std}$	NREC corrected CO emission index (see Appendix II of Volume I) $(EI_{CO})_{std} = \frac{F_{CO}}{(F_{CO})_{std}} \times EI_{CO}$	lbm per 1000 lbm fuel
NREC HC EI	$(EI_{HC})_{std}$	NREC corrected HC emission index (see Appendix II of Volume I) $(EI_{HC})_{std} = \frac{F_{HC}}{(F_{HC})_{std}} \times EI_{HC}$	lbm per 1000 lbm fuel
NRE CNO EI	$(EI_{NO})_{std}$	NREC corrected NO emission index (see Appendix II of Volume I) $(EI_{NO})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO}$	lbm per 1000 lbm fuel
NR CNOX EI	$(EI_{NO_x})_{std}$	NREC corrected NO_x emission index (see Appendix II of Volume I) $(EI_{NO_x})_{std} = \frac{(F_{NO})_{std}}{F_{NO}} \times EI_{NO_x}$	lbm per 1000 lbm fuel
FCO		CO emission factor $F_{CO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2}$	

Name	Symbol	Description
FCO Continued		$\left\{ \begin{array}{l} \frac{e^{T_{b,obs}/500}}{e^{T_{b,ref}/(600 - F/A_{ref} \times 10^4)}} \quad \text{for modes 1,2,7,8} \\ \frac{e^{T_{b,obs}/(600 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(600 - F/A_{ref} \times 10^4)}} \quad \text{for modes 3,4,5,6} \end{array} \right.$ <p>where: $P_{b,ref} = P_{a,ref} \cdot f_1 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$</p> $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2 \left(N_{2,ref} / \sqrt{\frac{T_{a,ref}}{518.7}} \right)$ $P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <p>where the functions f_1 and f_2 are obtained from curves supplied by P&WA (see Fig 4)</p> <p>Subscript 'obs' refers to actual values or values observed for a particular test and mode.</p> <p>Subscript 'ref' refers to reference values, arbitrarily chosen as the average values for the baseline tests (and at take-off power where appropriate)</p> <p>The reference values were:</p> $F/A_{,ref} = 0.0078$ $N_{2,ref} = 15,861 \text{ rpm}$ $P_{a,ref} = 30.28 \text{ in Hg abs}$ $T_{a,ref} = 507.4 \text{ deg R}$

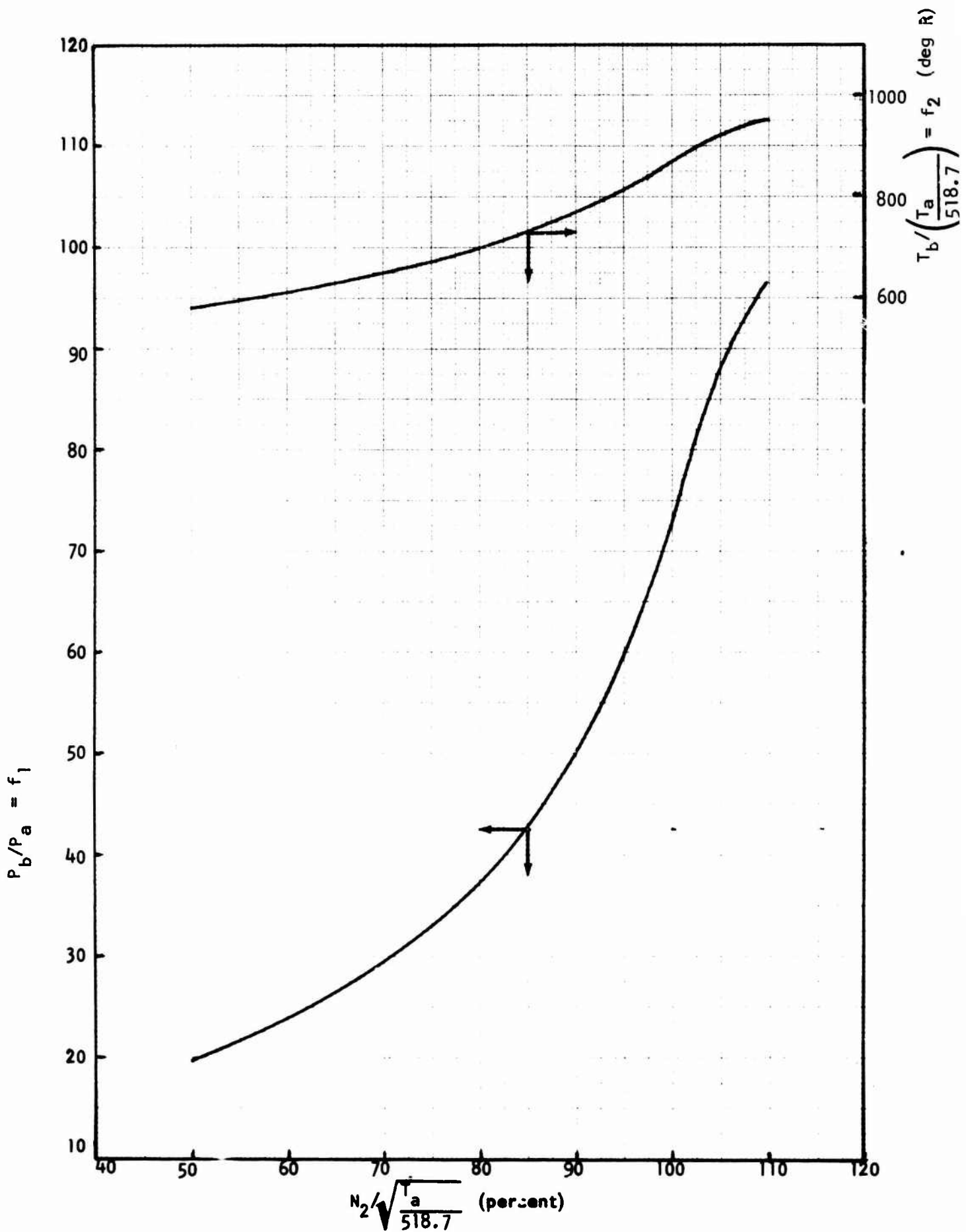


Figure 4. Typical Production Engine Performance

Name	Symbol	Description
FHC	F_{HC}	HC emission factor $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1.8} \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot e^{0.00211 (T_{b,obs} - T_{b,ref})}$
FNO	F_{NO}	NO emission factor $F_{NO} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{1/2} \cdot e^{\{0.00167 (T_{b,obs} - T_{b,ref}) - 19H\}}$
STD FCO	$(F_{CO})_{std}$	Corrected CO emission factor $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \begin{cases} e^{T_{b,std}/500} & \text{for modes 1,2,7, and 8} \\ \frac{e^{T_{b,ref}/(600 - F/A_{ref} \times 10^4)}}{e^{T_{b,std}/\{600 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}} & \text{for modes 3,4,5,6} \end{cases}$ <p>where:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <p>The values of the engine operating parameters in the standardized emission factors may be obtained by assuming that corrected thrust remains constant. Therefore,</p> $\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{T_a}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p>

Name	Symbol	Description
STD FCO Continued		$P_{b, std} = P_{a, std} \cdot f_1 \left(N_{2, obs} \sqrt{\frac{T_{a, obs}}{518.7}} \right)$ $T_{b, std} = f_2 \left(N_{2, obs} \sqrt{\frac{T_{a, obs}}{518.7}} \right)$ <p>Subscript "std" refers to standard day conditions (i.e., 518.7 deg R, 29.92 in Hg abs and 0.0 lbm H₂O/1bm dry air), or a value corrected to standard day condition.</p>
STD FHC	$(F_{HC})_{std}$	<p>Corrected HC emission index</p> $(F_{HC})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1.8} \cdot \left[\frac{T_{b, std}}{T_{b, ref}} \right]^{1/2} \cdot e^{0.00211 (T_{b, std} - T_{b, ref})}$
STD FNO	$(F_{NO})_{std}$	<p>Corrected NO emission index</p> $(F_{NO})_{std} = \left[\frac{P_{b, std}}{P_{b, ref}} \right]^{1/2} \cdot e^{0.00167 (T_{b, std} - T_{b, ref})}$
API		<p>Specific gravity of jet fuel measured at 60 deg F using "Relative Density or Density of Liquid-Balance Method" and converted to API gravity using a conversion table.</p>
H/C RATIO	a	<p>Hydrogen-carbon ratio as determined using a Sanda-Carlo Erba Model 1100 elemental analyzer and the indium sample encapsulation technique.</p>
FIA		<p>Flourescent Indicator Adsorption - Fuel samples were analyzed for paraffin, olefin, and aromatic content using the ASTM Method D1319-70.</p>

4. EMISSIONS AND ANALYSIS DATA

The data which appears on the following pages consists of actual test data as well as calculated values which were used for analysis purposes. In examining this data, certain points should be noted, as listed below:

1. Data has been rounded off to no more than 4 significant figures.
2. In some instances, the NO analyzer gave higher readings than the NO_x analyzer. In these cases, the NO_x emission index and the NREC corrected emission index were set equal to the corresponding NO values. The NO_x concentration and the FAA corrected emission index were not changed.
3. In certain tests, smoke data could not be obtained for a particular mode. Values of 0.0 are printed in the tables for these cases.
4. The fuel flow transmitters used for the tests of CF700-2D tended to be unreliable. For some tests readings could not be taken, and for others, the readings were erratic. For the Baseline and "400-Hour" tests of unit 11, for the "800-Hour" test of unit 2 and for the "1200-Hour" test of unit 10, no fuel flow data was recorded, but mean values, consistent with the other operating parameters, were entered in the data base for analysis purposes. In addition, there were isolated modes in other tests where fuel data could not be obtained. These included the "800-Hour" tests of unit 6, mode 8, unit 14 modes 1 and 2, and unit 15 mode 6; and the "1200-Hour" tests of unit 7 modes 6, 7, and 8, and unit 9 modes 7 and 8. Again mean values were entered in the data base.
5. For the Baseline test series, the CO₂ analyzer was not functioning properly. However, a comparison between Baseline and "400-Hour" test results showed a similarity among engine operating parameters which could be used to correct the Baseline CO₂ values. These corrected values appear in the data base.

6. The following items of data were found to be erroneous and were changed in the data base:

Unit Number	Test Series	Mode Number	Quantity
1	"Baseline"	5	EGT
1	"800-Hour"	6	Fuel Flow
1	"1200-Hour"	1	EPR
1	"1200-Hour"	2	Fuel Flow
3	"800-Hour"	5	N ₂
4	"800-Hour"	5,6	N ₁
6	"Baseline"	5	EGT
6	"1200-Hour"	6	N ₂
7	"Baseline"	1	EGT
7	"800-Hour"	2	N ₁
8	"800-Hour"	4	N ₁
8	"800-Hour"	8	Fuel Flow
9	"400-Hour"	3	EPR
9	"1200-Hour"	6	N ₁
11	"400-Hour"	3	N ₂
15	"Baseline"	6	N ₂

CF700-20 * BASELINE TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
1	897.	0.	504.2	30.28	.004660
2	3054.	0.	504.2	30.28	.004660
3	297.	0.	513.2	30.26	.006860
4	2902.	0.	509.7	30.26	.005570
5	2914.	0.	506.7	30.30	.004970
6	331.	0.	506.7	30.30	.004970
7	2914.	0.	505.7	30.32	.004750
8	2513.	0.	505.7	30.32	.004750
9	2526.	0.	505.7	30.32	.004750
10	2378.	0.	505.7	30.32	.004750
11	538.	0.	504.2	30.28	.004660
12	1191.	0.	504.2	30.28	.004660
13	3024.	0.	517.7	30.26	.008410
14	2251.	0.	515.7	30.26	.007760
15	512.	-1.	504.2	30.28	.004660
16	2300.	0.	504.2	30.28	.004660

CF700-2D * BASELINE TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	29.50	-45.25	29.92	45.90
2	28.00	47.00	28.40	47.67
3	25.00	47.25	25.13	47.50
4	28.50	48.50	28.75	48.93
5	30.00	46.00	30.35	46.54
6	25.50	-44.50	25.80	45.02
7	29.00	46.70	29.37	47.30
8	30.00	48.45	30.38	49.07
9	27.50	46.15	27.85	46.74
10	29.50	48.00	29.88	48.61
11	27.50	-44.95	27.89	45.59
12	27.50	46.85	27.89	47.52
13	32.00	47.20	32.03	47.25
14	31.50	46.95	31.59	47.09
15	28.00	-44.00	28.40	-44.63
16	25.00	46.50	25.36	47.16

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	497.	.4670	.4520	1455.	1.040	265.
2	482.	.4100	.4470	1430.	1.060	287.
3	555.	.3820	.5720	1395.	1.040	285.
4	577.	.4210	.5190	1381.	1.040	305.
5	550.	.4570	.4880	1408.	1.050	273.
6	523.	.3790	.5500	1426.	1.050	254.
7	550.	.4250	.4970	1410.	1.070	282.
8	522.	.4560	.4470	1433.	1.050	307.
9	558.	.4440	.5340	1426.	1.060	275.
10	563.	.4140	.4930	1392.	1.040	300.
11	517.	.4910	.5030	1457.	1.060	261.
12	562.	.4160	.5310	-1335.	1.040	285.
13	547.	.4270	.4560	1447.	-1.010	282.
14	545.	.4250	.4620	1367.	1.031	280.
15	524.	.4030	.5090	1431.	-1.090	-249.
16	523.	.3940	.5410	1377.	1.050	281.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIFS *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	495.	.4800	.4640	1497.	268.
2	-481.	.4220	.4600	1471.	291.
3	558.	.3860	.5780	1410.	289.
4	578.	.4280	.5280	1405.	309.
5	550.	.4680	.5000	1441.	276.
6	524.	.3880	.5630	1460.	257.
7	550.	.4360	.5100	1446.	286.
8	522.	.4670	.4590	1470.	311.
9	559.	.4550	.5470	1463.	279.
10	564.	.4240	.5060	1427.	304.
11	515.	.5050	.5170	1499.	264.
12	560.	.4280	.5460	-1373.	289.
13	552.	.4280	.4570	1449.	285.
14	550.	.4270	.4640	-1374.	283.
15	523.	.4150	.5240	1472.	-252.
16	522.	.4060	.5570	1417.	284.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.882	768.5	57.6	5.5	4.6
2	.770	690.9	56.3	5.4	3.3
3	.703	738.5	64.0	5.2	5.1
4	.770	847.7	78.4	5.8	4.7
5	.850	798.8	80.5	5.7	4.5
6	.685	801.5	86.2	6.1	3.9
7	.795	734.5	66.1	-7.0	7.2
8	.850	808.4	69.5	6.0	4.6
9	.842	682.7	54.6	5.5	3.7
10	.777	697.9	55.0	4.7	4.0
11	.909	928.6	79.6	-7.0	4.9
12	.770	776.4	72.2	5.8	4.9
13	.795	792.1	60.4	6.2	6.0
14	.795	751.0	56.6	6.0	4.5
15	.750	750.2	60.6	6.2	2.8
16	.720	747.5	87.3	-7.9	2.9

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	2856.	158.36	20.39	1.87	1.87	0.00
2	2841.	162.24	22.71	2.09	2.09	0.00
3	2787.	186.31	27.73	2.15	2.15	0.00
4	-2767.	-193.86	30.79	2.18	2.18	0.00
5	2812.	168.16	29.12	1.97	1.97	0.00
6	-2733.	-203.51	-37.60	2.53	2.53	0.00
7	2827.	166.22	25.68	-2.60	2.66	0.00
8	2821.	170.74	25.21	2.08	2.08	0.00
9	2868.	147.97	20.33	1.95	1.95	0.00
10	2840.	162.39	21.97	1.80	1.80	0.00
11	2799.	181.97	26.78	2.24	2.24	0.00
12	2797.	179.52	28.68	2.18	2.18	0.00
13	2814.	178.42	23.39	2.31	2.31	0.00
14	2830.	170.16	22.05	2.23	2.23	0.00
15	2813.	179.09	24.85	2.42	2.42	0.00
16	-2764.	182.61	-36.66	-3.19	-3.19	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-14.7630	-2.9620	25.1940	15.3520	3.0480	28.1470
2	15.5580	3.2490	26.0400	16.1870	3.3450	29.1040
3	15.9470	3.3200	25.3330	16.1070	3.3160	29.0130
4	16.4300	3.5270	26.4660	16.7940	3.5680	29.7890
5	15.1830	3.0950	25.4820	15.6530	3.1540	28.4940
6	-14.5070	-2.8560	24.7620	14.9510	2.9090	27.6810
7	15.4810	3.2120	25.9090	16.0090	3.2810	28.9010
8	16.3010	3.5160	26.7650	16.8630	3.5930	29.8670
9	15.2290	3.1200	25.6430	15.7460	3.1870	28.6000
10	16.0870	3.4360	26.5440	16.6410	3.5110	29.6170
11	-14.6290	-2.9150	25.0500	15.2110	2.9990	27.9840
12	15.4890	3.2240	25.9670	16.1150	3.3190	29.0220
13	16.0650	3.3270	24.7010	15.9850	3.2720	28.8740
14	15.8840	3.2770	24.8350	15.9090	3.2450	28.7880
15	-14.2740	-2.7870	24.6640	14.8390	2.8670	27.5480
16	15.3290	3.1650	25.7970	15.9460	3.2590	28.8300

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	152.29	19.82	2.09	2.09	0.00
2	155.94	22.06	2.34	2.34	0.00
3	184.46	27.76	2.47	2.47	0.00
4	-189.66	30.44	2.46	2.46	0.00
5	163.11	28.57	2.20	2.20	0.00
6	-197.47	-36.91	2.83	2.83	0.00
7	160.74	25.14	-2.90	2.97	0.00
8	165.04	24.67	2.32	2.32	0.00
9	-143.11	19.90	2.17	2.17	0.00
10	156.99	21.50	2.01	2.01	0.00
11	175.01	26.03	2.50	2.50	0.00
12	172.55	27.86	2.44	2.44	0.00
13	179.32	23.78	2.70	2.70	0.00
14	169.89	22.26	2.58	2.58	0.00
15	172.27	24.15	2.70	2.70	0.00
16	175.54	-35.61	-3.56	-3.56	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	49.80	32.46	50.51
2	30.00	50.50	30.43	51.22
3	28.50	50.05	28.65	50.32
4	30.00	50.15	30.26	50.59
5	32.00	50.30	32.38	50.89
6	29.00	49.50	29.34	50.08
7	31.00	50.00	31.40	50.64
8	32.00	49.90	32.41	50.54
9	30.00	50.20	30.38	50.84
10	31.00	50.20	31.40	50.84
11	31.50	50.00	31.95	50.71
12	30.00	50.05	30.43	50.76
13	33.00	49.85	33.03	49.90
14	33.50	50.65	-33.60	50.80
15	30.00	50.25	30.43	50.97
16	29.00	-51.75	29.41	-52.49

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	550.	.4580	.4380	1409.	1.040	331.
2	517.	.4090	.4310	1409.	1.060	344.
3	605.	.3690	-.5350	1374.	1.040	327.
4	598.	.4280	.5040	1372.	1.040	333.
5	607.	.4480	.4810	1361.	1.050	338.
6	577.	.3700	.5020	1385.	1.050	323.
7	576.	.4000	.4700	1392.	1.070	333.
8	553.	.4500	.4400	1413.	1.050	331.
9	600.	.4390	.5020	1401.	1.060	337.
10	590.	.4170	.4800	1359.	1.040	337.
11	568.	.4870	.4570	1421.	1.060	335.
12	600.	.4150	.5030	-1312.	1.040	336.
13	553.	.4310	.4350	1410.	-1.020	320.
14	588.	.4230	.4510	1349.	1.031	337.
15	594.	.4010	.4970	1385.	-1.090	310.
16	583.	.3930	.4920	1345.	1.050	-368.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	549.	.4710	.4500	1449.	335.
2	-515.	.4200	.4430	1449.	348.
3	609.	.3730	.5410	1388.	331.
4	600.	.4360	.5130	1396.	336.
5	607.	.4590	.4920	1393.	342.
6	577.	.3790	.5140	1417.	327.
7	576.	.4110	.4820	1427.	337.
8	554.	.4620	.4510	1450.	335.
9	600.	.4500	.5150	1437.	341.
10	590.	.4280	.4930	1394.	341.
11	567.	.5010	.4710	1461.	339.
12	599.	.4270	.5180	-1349.	340.
13	559.	.4320	.4360	1412.	323.
14	593.	.4260	.4540	-1356.	340.
15	593.	.4120	.5110	1424.	344.
16	582.	.4040	.5060	1384.	-373.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.868	731.7	54.0	5.5	4.9
2	.770	675.2	51.3	5.2	3.4
3	.678	720.8	61.6	5.1	5.1
4	.786	839.8	77.6	5.6	4.8
5	.835	779.1	76.4	5.4	4.7
6	.670	779.4	79.5	5.6	3.9
7	.750	679.6	59.9	6.4	7.1
8	.842	788.9	63.2	5.9	4.8
9	.835	661.2	50.0	5.0	3.8
10	.787	678.0	52.0	4.6	4.1
11	.909	886.6	67.9	6.5	5.1
12	.770	754.5	68.6	5.7	5.0
13	.803	790.4	58.3	6.3	6.2
14	.795	731.9	52.8	6.2	4.6
15	.750	716.5	52.4	5.4	3.1
16	.720	724.6	-85.3	6.6	2.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2865.	153.73	19.50	1.90	1.90	0.00
2	2851.	159.11	20.78	2.01	2.01	0.00
3	-2784.	-188.36	27.65	2.20	2.21	0.00
4	-2777.	-188.83	-29.98	2.07	2.07	0.00
5	2816.	167.23	28.16	1.92	1.92	0.00
6	-2740.	-202.82	-35.53	-2.37	2.37	0.00
7	2833.	163.41	24.76	-2.54	-2.81	0.00
8	2829.	168.71	23.23	2.09	2.09	0.00
9	2876.	144.98	18.84	1.80	1.80	0.00
10	2854.	156.45	20.60	1.75	1.75	0.00
11	2820.	175.05	23.03	2.10	2.10	0.00
12	2808.	175.11	27.36	2.18	2.18	0.00
13	2819.	176.61	22.39	2.32	2.32	0.00
14	2840.	166.41	20.64	2.31	2.31	0.00
15	2833.	172.25	21.66	2.15	2.15	0.00
16	-2774.	177.63	-35.93	-2.65	2.65	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.8230	3.7330	27.3570	17.5160	3.8460	30.5960
2	17.0800	3.8420	27.6240	17.7850	3.9590	30.8960
3	17.2650	3.8180	26.6370	17.4430	3.8150	30.5140
4	17.1620	3.8140	27.2070	17.5460	3.8580	30.6290
5	17.1140	3.8290	27.4850	17.6600	3.9060	30.7570
6	16.8200	3.7040	27.1810	17.3540	3.7780	30.4140
7	16.9720	3.7810	27.4590	17.5640	3.8660	30.6500
8	16.9360	3.7650	27.4210	17.5260	3.8500	30.6070
9	17.0460	3.8120	27.5350	17.6410	3.8980	30.7350
10	17.0460	3.8120	27.5350	17.6410	3.8980	30.7350
11	16.8960	3.7640	27.4330	17.5930	3.8780	30.6810
12	16.9150	3.7710	27.4520	17.6120	3.8860	30.7030
13	17.3590	3.8090	25.9390	17.2730	3.7460	30.3230
14	17.5920	3.9280	26.4950	17.6240	3.8910	30.7170
15	16.9880	3.8030	27.5290	17.6890	3.9180	30.7890
16	17.5420	4.0430	28.1000	-18.2700	-4.1670	-31.4340

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	147.65	18.92	2.13	2.13	0.00
2	152.80	20.16	2.25	2.25	0.00
3	-186.44	27.67	2.52	2.53	0.00
4	184.69	-29.63	2.33	2.33	0.00
5	162.06	27.60	2.15	2.15	0.00
6	-196.57	-34.83	2.66	2.66	0.00
7	157.90	24.22	-2.84	-3.14	0.00
8	163.03	22.72	2.33	2.33	0.00
9	-140.09	18.42	2.00	2.00	0.00
10	151.18	20.15	1.96	1.96	0.00
11	168.12	22.35	2.35	2.35	0.00
12	168.18	26.55	2.44	2.44	0.00
13	177.49	22.76	-2.71	2.71	0.00
14	166.11	20.83	-2.68	2.68	0.00
15	165.42	21.02	2.40	2.40	0.00
16	170.55	-34.86	-2.97	2.97	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	100.00	95.50	101.43	96.86
2	100.00	95.50	101.43	96.86
3	99.00	98.65	99.53	-99.18
4	98.00	97.05	98.86	97.90
5	100.00	95.20	101.18	96.32
6	99.00	95.40	100.17	96.52
7	101.00	95.35	102.29	96.57
8	99.00	95.45	100.26	96.67
9	97.50	97.40	98.75	98.64
10	-96.50	94.45	97.73	95.66
11	97.50	95.60	98.89	96.96
12	99.50	96.70	100.92	98.08
13	100.00	97.50	100.10	97.59
14	99.00	95.75	99.29	96.03
15	101.00	97.00	-102.44	98.38
16	99.00	96.00	100.41	97.37

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	2580.	.7600	.5640	1665.	1.530	4161.
2	-2472.	.7510	-.5410	1745.	1.530	4161.
3	2833.	.7160	.6270	1699.	1.540	4233.
4	2792.	.8010	.6220	1712.	1.530	4163.
5	2632.	.7850	.5770	1646.	1.530	4158.
6	2618.	-.5860	.5780	1671.	1.540	4227.
7	2665.	.6870	.5790	1680.	1.537	4204.
8	2778.	.7920	.6120	1701.	1.530	4155.
9	2882.	.8140	.6400	1750.	1.540	4224.
10	2633.	.6790	.5940	1660.	1.530	4155.
11	2720.	.8160	.6060	1706.	1.537	4209.
12	2890.	.7280	.6330	1651.	1.540	4230.
13	2702.	.6830	.5970	1727.	1.530	4163.
14	2668.	.7660	.5950	-1613.	1.530	4163.
15	2913.	.7680	.6310	1705.	1.530	4161.
16	2690.	.6930	.5920	1665.	1.530	4161.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2574.	.7820	.5800	1713.	4210.
2	-2466.	.7720	.5560	-1795.	4210.
3	2850.	.7230	.6340	1717.	4280.
4	2798.	.8160	.6330	1742.	4210.
5	2634.	.8030	.5900	1684.	4210.
6	2620.	-.6000	.5920	1710.	4280.
7	2666.	.7050	.5940	1723.	4259.
8	2780.	.8120	.6280	1745.	4210.
9	2883.	.8340	.6570	-1795.	4280.
10	2634.	.6970	.6090	1703.	4210.
11	2714.	.8390	.6230	1755.	4259.
12	2883.	.7490	.6510	1698.	4280.
13	2729.	.6840	.5980	1730.	4210.
14	2690.	.7700	.5980	-1622.	4210.
15	2906.	.7900	.6490	1754.	4210.
16	2684.	.7130	.6090	1713.	4210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODF 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.570	223.0	4.4	16.1	17.2
2	1.550	221.4	4.5	16.4	15.7
3	1.475	206.0	8.1	17.7	17.7
4	1.650	-272.7	7.2	16.8	17.1
5	1.620	210.8	9.0	17.1	17.3
6	-1.200	229.5	8.8	13.4	13.4
7	1.415	214.3	9.1	16.1	17.8
8	1.630	-280.8	8.3	16.2	16.8
9	1.680	232.6	5.6	17.9	17.3
10	1.396	238.4	6.0	13.7	14.7
11	1.680	-291.9	6.4	18.3	17.8
12	1.498	253.0	5.7	16.4	16.8
13	1.405	212.5	-13.4	16.0	16.8
14	1.580	230.7	8.1	16.5	16.3
15	1.580	-305.9	6.0	17.6	17.6
16	1.422	246.3	4.3	14.9	14.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3114.	28.15	.95	3.34	3.57	17.88
2	3111.	28.28	.99	3.44	3.44	18.54
3	3107.	27.62	1.87	-3.90	3.90	19.21
4	3101.	32.61	1.48	3.29	3.36	18.71
5	3110.	25.75	1.90	3.44	3.47	-22.88
6	-3090.	-37.61	-2.48	3.59	3.62	15.69
7	3105.	29.93	2.18	3.68	4.08	16.56
8	3100.	33.98	1.72	3.23	3.35	15.23
9	3110.	27.41	1.12	3.47	3.47	18.42
10	3099.	33.68	1.46	3.17	3.41	17.22
11	3101.	34.29	1.28	3.53	3.53	12.67
12	3102.	33.34	1.30	3.55	3.64	19.87
13	3102.	29.85	-3.24	3.69	3.88	21.05
14	3108.	28.88	1.74	3.39	3.39	17.22
15	3099.	-38.19	1.28	3.62	3.62	9.93
16	-3095.	34.11	1.03	3.39	3.39	14.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	96.5710	96.4840	89.8020	102.9440	101.3410	101.9720
2	96.2790	96.4840	89.8020	102.6110	101.3410	101.9720
3	108.8130	115.7940	94.4130	110.9540	-116.6320	-108.8350
4	104.7610	105.4220	92.3680	108.8010	107.9860	105.0100
5	96.3590	94.5980	88.6340	101.3980	96.0120	100.4150
6	91.0420	95.7740	89.1360	95.4710	99.2420	100.9930
7	93.8550	95.6850	89.3810	99.0340	99.5160	101.1210
8	97.6120	96.2770	89.6340	103.2230	100.1380	101.4120
9	106.6340	108.4540	94.6740	112.9660	112.9450	107.2200
10	90.1870	90.4940	87.1360	95.0930	94.0630	98.5360
11	98.8490	97.0790	90.0550	105.5180	101.9740	102.2650
12	100.3920	103.8350	92.8780	107.0340	109.1570	105.5360
13	102.9410	107.5930	88.9540	102.6000	105.9740	104.0990
14	98.3700	96.8010	85.6340	99.0260	96.2560	99.5840
15	103.0470	105.7460	93.6600	109.9920	111.1890	106.4430
16	96.4040	99.4910	91.0730	102.6490	104.5380	103.4440

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	26.41	.90	3.79	4.05	17.88
2	26.54	.94	3.90	3.90	18.54
3	27.08	1.85	-4.49	4.49	19.21
4	31.40	1.45	3.74	3.82	18.71
5	24.47	1.83	3.89	3.94	-22.88
6	-35.86	-2.39	4.07	4.10	15.69
7	28.36	2.09	4.17	4.61	16.56
8	32.14	1.65	3.65	3.79	15.23
9	25.87	1.08	3.93	3.93	18.42
10	31.94	1.40	3.59	3.85	17.22
11	32.12	1.22	4.01	4.01	12.67
12	31.27	1.24	4.04	4.13	19.87
13	29.95	-3.29	4.32	4.54	21.05
14	28.69	1.75	3.94	3.94	17.22
15	-35.77	1.22	4.11	4.11	9.93
16	32.04	.98	3.86	3.86	14.57

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	98.00	93.70	99.40	95.04
2	99.00	93.00	100.41	94.33
3	92.50	95.05	92.99	95.56
4	92.50	94.05	93.31	94.88
5	98.00	93.30	99.15	94.40
6	92.00	92.85	93.08	93.94
7	98.00	93.05	99.25	94.24
8	95.50	93.45	96.72	94.64
9	92.50	93.95	93.68	95.15
10	92.00	92.50	93.18	93.68
11	92.00	93.35	93.31	94.68
12	95.00	93.85	96.36	95.19
13	98.00	94.60	98.09	94.69
14	95.00	93.00	95.28	-93.27
15	100.00	93.75	-101.43	95.09
16	95.00	93.25	96.36	94.58

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 4

UNIT	FUFL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LAF
1	2287.	.6900	.5120	1589.	1.477	3794.
2	-2142.	.6730	-.4780	1644.	1.470	3746.
3	2488.	.6410	.5820	1602.	1.470	3748.
4	2480.	.7000	.5820	1626.	1.470	3748.
5	2363.	.7060	.5310	1568.	1.475	3778.
6	2265.	-.5050	.5350	1576.	1.470	3743.
7	2352.	.6160	.5290	1608.	1.473	3761.
8	2455.	.7330	.5610	1628.	1.473	3761.
9	2473.	.6950	.5770	1624.	1.470	3741.
10	2352.	.6100	.5560	1588.	1.473	3761.
11	2525.	.7190	.5940	1616.	1.473	3766.
12	2527.	.6560	.5780	1560.	1.475	3780.
13	2390.	.6210	.5400	1651.	1.470	3748.
14	2307.	.6670	.5370	-1534.	1.470	3748.
15	2527.	.6750	.5570	1608.	1.470	3746.
16	2365.	.6190	.5430	1568.	1.470	3748.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2281.	.7100	.5270	1634.	3839.
2	-2137.	.6920	-.4920	-1691.	3790.
3	2503.	.6480	.5880	1619.	3790.
4	2486.	.7130	.5920	1654.	3790.
5	2365.	.7230	.5440	1605.	3825.
6	2267.	-.5170	.5480	1614.	3790.
7	2353.	.6310	.5420	1649.	3811.
8	2456.	.7520	.5760	1670.	3811.
9	2474.	.7130	.5920	1666.	3790.
10	2353.	.6250	.5700	1629.	3811.
11	2519.	.7390	-.6110	1662.	3811.
12	2521.	.6740	.5950	1605.	3825.
13	2414.	.6220	.5410	1654.	3790.
14	2326.	.6710	.5400	-1543.	3790.
15	2521.	.6940	.5730	1654.	3790.
16	2359.	.6370	.5590	1613.	3790.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.423	226.5	3.9	14.1	15.2
2	1.385	224.9	4.0	14.5	13.4
3	1.318	206.6	5.7	14.7	15.7
4	1.438	262.0	4.7	13.9	14.9
5	1.455	209.4	6.7	14.9	15.4
6	-1.030	233.9	-7.7	11.1	11.6
7	1.266	209.5	4.4	13.7	15.5
8	1.505	-288.6	6.0	14.1	15.0
9	1.430	226.6	4.5	14.0	14.6
10	1.250	233.0	5.3	11.6	12.7
11	1.475	-291.5	5.4	15.4	15.4
12	1.345	259.9	5.4	13.6	14.7
13	1.275	211.5	-9.2	14.0	15.1
14	1.371	236.2	5.5	14.1	14.0
15	1.385	-286.6	5.4	14.6	14.6
16	1.268	243.4	4.0	12.5	12.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3109.	31.48	.93	3.22	3.48	16.56
2	3105.	32.09	.99	3.41	3.41	17.65
3	3103.	30.96	1.47	-3.61	3.87	17.22
4	3096.	35.91	1.10	3.13	3.35	15.13
5	3107.	28.46	1.57	3.34	3.45	19.74
6	-3079.	-44.50	-2.51	3.46	3.62	15.03
7	3104.	32.68	1.19	3.51	3.96	17.88
8	3095.	37.77	1.35	3.02	3.24	12.67
9	3104.	31.30	1.06	3.17	3.32	13.82
10	3094.	36.71	1.44	3.00	3.28	17.11
11	3094.	38.91	1.23	3.37	3.37	12.00
12	3095.	38.05	1.35	3.28	3.54	16.56
13	3100.	32.72	-2.45	3.56	3.83	17.11
14	3101.	34.01	1.37	3.33	3.33	14.00
15	3095.	-40.76	1.31	3.42	3.42	10.39
16	-3089.	37.75	1.07	3.18	3.18	12.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	87.5700	86.2820	85.3460	93.0810	90.5090	96.8130
2	84.0400	81.0070	83.3220	89.2570	84.9400	94.4850
3	91.5260	92.9080	85.3050	93.1760	93.4900	98.2600
4	89.2420	87.2900	84.7950	92.4250	89.2960	96.2990
5	86.2180	82.6010	83.6760	90.4950	85.4910	94.7170
6	79.1680	79.2250	82.3700	82.7970	81.9780	93.2230
7	82.7900	81.1150	83.3480	87.1180	84.2450	94.1910
8	87.7240	84.1600	84.5150	92.5360	87.4260	95.5260
9	88.7660	87.7150	85.9090	93.5920	91.1450	97.1240
10	80.3210	77.0570	81.7550	84.4870	80.0070	92.3690
11	86.8370	83.6600	84.3410	92.3380	87.7390	95.6560
12	87.1470	87.0960	85.7110	92.5730	91.3730	97.2340
13	89.2020	89.1620	81.7720	88.8840	87.8070	95.6840
14	83.4140	77.4400	-78.3040	83.9010	-76.9760	-91.0340
15	87.3210	86.5530	85.4680	92.7890	90.7960	96.9530
16	83.7120	82.8960	84.0490	88.8230	86.9330	95.3210

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	29.62	.88	3.65	3.95	16.56
2	30.22	.94	3.86	3.86	17.65
3	30.41	1.47	-4.16	4.46	17.22
4	34.67	1.07	3.55	3.81	15.13
5	27.12	1.52	3.78	3.90	19.74
6	-42.55	-2.42	3.92	4.10	15.03
7	31.06	1.14	3.97	4.47	17.88
8	35.81	1.30	3.42	3.66	12.67
9	29.69	1.02	3.58	3.75	13.82
10	34.90	1.39	3.39	3.70	17.11
11	36.59	1.17	3.82	3.82	12.00
12	35.82	1.29	3.72	4.01	16.56
13	32.84	-2.49	-4.17	4.49	17.11
14	33.81	1.38	3.87	3.87	14.00
15	38.36	1.25	3.87	3.87	10.39
16	35.57	1.02	3.60	3.60	12.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	81.00	86.15	82.16	87.38
2	80.00	86.00	81.14	87.23
3	79.00	88.10	79.42	88.57
4	78.50	87.15	79.19	87.92
5	81.00	86.10	81.95	87.11
6	77.00	85.80	77.91	86.81
7	80.00	85.80	81.02	86.90
8	80.00	86.70	81.02	87.81
9	77.00	86.25	77.98	87.35
10	78.00	85.15	79.00	-86.24
11	78.00	86.50	79.11	87.73
12	79.50	87.00	80.64	88.24
13	81.50	88.00	81.58	88.08
14	80.00	86.35	80.23	86.60
15	81.50	86.00	82.66	87.23
16	79.00	86.00	80.13	87.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	1550.	.5590	.4210	1402.	1.287	2445.
2	-1440.	.5200	-.3950	1453.	1.290	2468.
3	1688.	.4850	.4640	1417.	1.295	2508.
4	1682.	.5460	.4660	1423.	1.290	2470.
5	1602.	.5180	.4360	1381.	1.290	2467.
6	-1523.	-.3690	.4310	1395.	1.290	2467.
7	1575.	.5130	.4330	1428.	1.290	2465.
8	1637.	.6110	.4460	1453.	1.293	2488.
9	1600.	.5240	.4500	1416.	1.290	2465.
10	1582.	.4940	.4450	1408.	1.283	2411.
11	1600.	.5730	.4450	1433.	1.290	2468.
12	1705.	.5340	.4660	1380.	1.290	2468.
13	1627.	.5070	.4400	1457.	1.290	2470.
14	1580.	.5410	.4370	1379.	1.290	2470.
15	1640.	.5550	.4430	1404.	1.290	2468.
16	1582.	.4980	.4380	1372.	1.290	2468.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FIJ FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1546.	.5750	.4330	1442.	2474.
2	-1437.	.5350	-.4060	1495.	2498.
3	1698.	.4900	.4690	1432.	2536.
4	1686.	.5560	.4750	1448.	2498.
5	1603.	.5310	.4460	1414.	2498.
6	-1524.	-.3770	.4410	1428.	2498.
7	1576.	.5260	.4440	1464.	2498.
8	1637.	.6270	.4580	1490.	2521.
9	1601.	.5370	.4620	1452.	2498.
10	1582.	.5070	.4560	1444.	2443.
11	1596.	.5900	.4580	1474.	2498.
12	1701.	.5500	.4800	1420.	2498.
13	1643.	.5080	.4400	1459.	2498.
14	1593.	.5440	.4400	-1387.	2498.
15	1636.	.5710	.4560	1445.	2498.
16	1578.	.5120	.4500	1411.	2498.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.139	283.9	6.0	9.1	10.3
2	1.060	264.4	4.9	9.5	8.6
3	.986	247.4	5.0	9.5	10.8
4	1.110	300.4	6.9	9.0	10.4
5	1.056	248.5	6.5	9.6	10.2
6	-.738	282.9	-9.5	6.9	7.7
7	1.046	248.2	5.4	9.3	11.6
8	1.243	-346.3	6.1	9.6	10.5
9	1.067	254.1	5.6	8.6	9.1
10	1.003	275.2	6.8	7.3	8.3
11	1.162	-350.1	7.3	10.3	10.7
12	1.088	280.0	5.2	9.6	10.8
13	1.033	258.2	7.1	9.9	11.4
14	1.102	285.0	5.2	9.8	9.9
15	1.125	-338.4	-9.9	8.0	8.2
16	1.010	269.0	6.2	8.1	8.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3079.	48.84	1.77	2.56	2.91	9.27
2	3077.	48.84	1.56	2.88	2.88	7.89
3	3074.	49.10	1.70	-3.09	3.51	9.21
4	3067.	52.82	2.08	2.60	3.00	6.58
5	3078.	46.09	2.06	2.92	3.11	9.80
6	-3028.	-73.87	-4.28	-2.95	3.32	9.09
7	3080.	46.51	1.75	2.86	3.57	9.93
8	3068.	54.39	1.64	2.47	2.70	7.89
9	3078.	46.65	1.77	2.59	2.73	5.30
10	3066.	53.52	2.28	2.32	2.67	7.95
11	-3060.	-58.68	2.11	2.84	2.94	9.21
12	3075.	50.37	1.60	2.83	3.18	7.28
13	3075.	48.91	2.31	-3.08	3.55	9.80
14	3074.	50.59	1.59	2.85	2.88	7.89
15	3063.	-58.63	-2.94	2.29	2.35	4.64
16	3064.	51.93	2.06	2.57	2.59	6.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	55.3270	40.8640	64.2830	58.3660	42.6530	72.6330
2	54.2490	40.2190	63.8870	57.1840	41.9740	72.1780
3	60.2670	48.0290	66.2780	61.1830	48.2480	76.2420
4	58.1730	44.2180	65.5200	59.9690	45.1080	74.2450
5	54.4100	40.2280	63.6640	56.7130	41.4700	71.8380
6	51.3390	38.9570	62.8770	53.3900	40.1520	70.9390
7	53.4350	39.1870	63.2160	55.8930	40.5210	71.1930
8	58.0200	43.1060	65.6020	60.8230	44.6020	73.9170
9	55.0840	41.1120	64.4030	57.6450	42.5250	72.5480
10	51.0740	36.5250	61.5220	53.3860	-37.7520	-69.2600
11	56.7480	42.3920	65.2120	59.8980	44.2670	73.6980
12	57.8490	44.6660	66.5520	61.0400	46.6520	75.2360
13	60.0000	46.6250	63.9030	59.7590	45.9030	74.7580
14	54.9300	39.5360	-60.5350	55.1710	39.2620	70.3230
15	54.7640	40.2190	63.8870	57.7620	41.9740	72.1780
16	53.9190	40.2190	63.8870	56.8140	41.9740	72.1780

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 5

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLA FU	NR CNOX EI LB/KLA FU	SMK NUMBER CORRECTED
1	46.30	1.70	2.90	3.29	9.27
2	46.33	1.50	3.25	3.25	7.89
3	48.36	1.69	-3.55	4.04	9.21
4	51.24	2.04	2.95	3.40	6.58
5	44.21	2.00	3.29	3.51	9.80
6	-71.03	-4.16	3.33	3.75	9.09
7	44.46	1.69	3.22	4.03	9.93
8	51.89	1.59	2.78	3.04	7.89
9	44.58	1.72	2.91	3.07	5.30
10	51.20	2.20	2.61	3.00	7.95
11	55.59	2.02	3.21	3.33	9.21
12	47.74	1.54	3.20	3.59	7.28
13	49.11	2.35	-3.60	4.15	9.80
14	50.37	1.61	3.31	3.34	7.89
15	55.58	-2.82	2.58	2.65	4.64
16	49.29	1.97	2.90	2.93	6.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	58.00	73.05	58.83	74.09
2	51.00	71.00	51.73	72.01
3	53.50	74.75	53.79	75.15
4	58.00	76.15	58.51	76.82
5	59.00	74.00	59.69	74.87
6	52.00	72.50	52.61	73.35
7	55.50	72.65	56.21	73.58
8	54.50	71.80	55.20	72.72
9	53.50	73.50	54.18	74.44
10	55.00	72.50	55.70	73.43
11	52.00	72.00	52.74	73.03
12	52.50	72.80	53.25	73.84
13	59.50	75.10	59.56	75.17
14	58.00	72.15	58.17	72.36
15	53.00	74.00	53.76	75.06
16	53.50	72.50	54.26	73.54

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	958.	.4620	.3720	1284.	1.130	1208.
2	-810.	.3940	-.3530	1319.	1.130	1208.
3	1017.	-.3460	.4170	1291.	1.130	1209.
4	1083.	.4410	.4120	1309.	1.130	1209.
5	1005.	.4180	.3820	1259.	1.130	1207.
6	933.	-.3190	.3960	1291.	1.130	1207.
7	942.	.4090	.3790	1284.	1.130	1207.
8	918.	.4670	.3780	1309.	-1.125	-1166.
9	987.	.4350	.4060	1297.	1.130	1207.
10	983.	.4190	.3990	1295.	1.130	1207.
11	962.	.4770	.4090	1313.	1.130	1208.
12	988.	.4120	.4140	-1232.	-1.122	-1143.
13	995.	.4460	.3770	1331.	1.130	1209.
14	938.	.4600	.3710	1248.	1.130	1209.
15	893.	.4020	.3680	1275.	1.130	1208.
16	920.	.4010	.3810	1244.	1.130	1208.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR T17 DEG R	COR THRUST LBF
1	956.	.4760	.3820	1321.	1223.
2	-808.	.4060	.3630	1357.	1223.
3	1023.	-.3490	.4210	1305.	1223.
4	1086.	.4490	.4190	1332.	1223.
5	1006.	.4280	.3920	1288.	1223.
6	934.	-.3270	.4050	1321.	1223.
7	942.	.4200	.3890	1317.	1223.
8	919.	.4790	.3870	1343.	-1181.
9	988.	.4470	.4160	1331.	1223.
10	984.	.4300	.4090	1328.	1223.
11	959.	.4910	.4210	1351.	1223.
12	986.	.4240	.4260	-1267.	-1157.
13	1005.	.4470	.3780	1333.	1223.
14	946.	.4630	.3730	-1255.	1223.
15	891.	.4130	.3780	1311.	1223.
16	918.	.4120	.3920	-1280.	1223.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.916	451.0	19.3	5.5	6.3
2	.777	415.5	16.5	5.3	4.4
3	-.678	383.4	15.3	5.4	6.9
4	.874	428.4	15.0	5.2	7.0
5	.828	391.6	15.1	5.2	6.4
6	-.620	390.3	20.5	4.7	4.9
7	.812	373.1	16.4	6.0	8.1
8	.923	472.3	19.4	5.9	5.9
9	.866	384.6	15.0	5.1	5.6
10	.829	402.6	19.1	4.8	5.3
11	.935	-558.9	-21.5	-6.5	6.6
12	.811	435.3	18.6	5.1	6.5
13	.885	418.2	17.1	6.1	8.1
14	.916	421.1	13.0	6.1	6.2
15	.786	466.9	-23.6	4.8	4.0
16	.786	417.4	-22.8	4.8	4.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NIJMER FRONT SIDE
1	2994.	93.82	6.90	1.87	2.14	3.97
2	2980.	101.43	6.90	2.14	2.14	3.29
3	-2968.	-106.80	7.33	-2.47	-3.16	4.61
4	2994.	93.39	5.62	1.88	2.50	3.95
5	2998.	90.21	5.98	1.98	2.42	5.19
6	-2942.	-117.86	-10.63	-2.33	2.46	4.55
7	3002.	87.79	6.64	-2.34	-3.14	4.00
8	2987.	97.25	6.86	2.00	2.00	4.64
9	3007.	85.00	5.68	1.86	2.05	2.01
10	2990.	92.41	7.55	1.81	2.01	3.95
11	-2961.	-112.63	7.43	2.14	2.18	5.26
12	2978.	101.72	7.46	1.96	2.50	2.00
13	2999.	90.20	6.34	2.17	2.86	4.61
14	3007.	87.99	4.66	2.11	2.14	4.61
15	-2960.	-111.90	-9.72	1.90	1.90	3.27
16	-2968.	100.31	-9.42	1.91	1.91	2.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

 MODF 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	29.4720	13.5080	42.8420	30.8480	14.0070	48.1540
2	27.0950	11.8780	40.9250	28.3140	12.3090	45.9750
3	30.6590	14.9340	42.9600	31.0220	14.9610	49.3130
4	33.0580	16.6340	45.6150	33.9230	16.9060	51.5380
5	30.1920	14.3140	43.5800	31.2780	14.6810	48.9780
6	28.1090	13.0560	42.1680	29.0760	13.3850	47.3750
7	28.8080	13.2000	42.4690	29.9280	13.5720	47.6110
8	28.3780	12.5170	41.6720	29.4970	12.8660	46.7080
9	29.8060	13.9090	43.2710	30.9830	14.3040	48.5200
10	28.7320	13.0780	42.3280	29.8520	13.4450	47.4510
11	28.5600	12.6560	41.8570	29.8900	13.1180	47.0340
12	28.8920	13.3020	42.6070	30.2160	13.7910	47.8860
13	31.9180	15.2300	42.1940	31.7740	14.9870	49.3430
14	28.9510	12.6850	39.9290	29.0330	12.5800	46.3750
15	29.9910	14.3250	43.7520	31.3730	14.8580	49.1900
16	28.5330	13.0570	42.3250	29.8330	13.5360	47.5660

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTFD
1	89.64	6.65	2.10	2.41	3.97
2	97.06	6.66	2.40	2.40	3.29
3	-105.55	7.32	-2.83	-3.63	4.61
4	91.01	5.53	2.12	2.83	3.95
5	87.08	5.83	2.22	2.72	5.19
6	-113.93	-10.36	-2.62	2.76	4.55
7	84.50	6.46	-2.62	-3.53	4.00
8	93.56	6.67	2.24	2.24	4.64
9	81.77	5.53	2.08	2.30	2.01
10	88.95	7.34	2.02	2.25	3.95
11	-107.62	7.17	2.41	2.44	5.26
12	97.26	7.19	2.21	2.81	2.00
13	90.61	6.45	2.54	3.35	4.61
14	87.74	4.70	2.44	2.49	4.61
15	-106.98	-9.37	2.14	2.14	3.27
16	95.94	-9.09	2.14	2.14	2.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D ◊ BASELINE TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	33.00	49.90	33.47	50.61
2	33.00	50.00	33.47	50.71
3	28.00	50.15	28.15	50.42
4	29.50	-49.10	29.76	49.53
5	34.00	50.00	34.40	50.59
6	30.00	-50.55	30.35	51.15
7	31.50	49.95	31.90	50.59
8	32.00	49.85	32.41	50.49
9	30.00	49.55	30.38	50.18
10	32.00	50.25	32.41	50.89
11	31.50	49.75	31.95	50.46
12	30.00	50.00	30.43	50.71
13	33.50	49.95	33.53	50.00
14	-36.50	50.20	-36.61	50.35
15	31.00	50.25	31.44	50.97
16	28.00	50.00	28.40	50.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	528.	.4510	.4090	1385.	1.040	333.
2	502.	.4000	.3880	1386.	1.060	335.
3	583.	.3450	.5230	1363.	1.050	329.
4	583.	.4120	.5060	1363.	1.040	314.
5	580.	.4060	.4380	1332.	1.050	332.
6	578.	.3360	.4830	1374.	1.050	343.
7	557.	.4120	.4480	1392.	1.070	332.
8	547.	.4680	.4350	1405.	1.050	330.
9	583.	.4100	.4930	1386.	1.060	324.
10	572.	.4070	.4530	1331.	1.040	338.
11	568.	.4810	.4590	1403.	1.070	330.
12	583.	.3880	.4890	-1261.	1.040	335.
13	545.	.3960	.4220	1406.	-1.025	321.
14	575.	.4450	.4110	1345.	1.070	328.
15	580.	.3890	.4720	1345.	-1.090	340.
16	552.	.3760	.4910	-1300.	1.050	335.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	527.	.4640	.4210	1425.	337.
2	-500.	.4110	.3990	1426.	339.
3	587.	.3480	.5290	1378.	333.
4	585.	.4200	.5150	1387.	318.
5	580.	.4150	.4480	1364.	336.
6	579.	.3440	.4940	1406.	347.
7	557.	.4230	.4600	1427.	336.
8	547.	.4800	.4460	1441.	334.
9	584.	.4210	.5050	1422.	329.
10	572.	.4170	.4640	1366.	342.
11	567.	.4950	.4720	1443.	334.
12	581.	.4000	.5030	-1297.	339.
13	551.	.3970	.4230	1409.	325.
14	580.	.4470	.4140	1353.	332.
15	579.	.4000	.4850	1384.	344.
16	550.	.3870	.5050	-1337.	339.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIFS *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.850	766.8	54.2	5.2	4.8
2	.750	690.2	50.9	5.0	3.4
3	.630	717.2	56.9	5.2	5.4
4	.750	863.6	-78.8	5.0	4.8
5	.750	756.3	69.3	4.8	4.6
6	.610	725.3	62.2	4.7	3.9
7	.778	651.4	57.5	-6.3	7.1
8	.880	796.5	62.6	-5.9	4.6
9	.770	590.6	57.2	4.9	4.0
10	.761	693.8	61.8	5.1	4.0
11	.895	898.9	67.4	-6.2	5.2
12	.720	713.4	64.6	5.0	4.9
13	.735	765.7	50.3	5.8	6.4
14	.842	729.2	47.4	5.6	4.8
15	.726	701.6	54.8	4.7	2.9
16	.687	716.2	-83.2	4.9	2.8

NOTE- M*NUMS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2849.	163.57	19.87	1.81	1.81	0.00
2	2839.	166.30	21.09	1.99	1.99	0.00
3	-2766.	-200.41	27.32	-2.38	2.47	0.00
4	-2752.	-201.71	-31.60	1.91	1.91	0.00
5	2796.	179.47	28.27	1.89	1.89	0.00
6	-2745.	-207.76	-30.60	2.20	2.20	0.00
7	2856.	152.12	23.07	-2.41	-2.71	0.00
8	2840.	163.61	22.11	2.00	2.00	0.00
9	2838.	162.00	23.04	1.90	1.90	0.00
10	2829.	164.14	25.11	1.97	1.97	0.00
11	2812.	179.75	23.16	2.04	2.04	0.00
12	2805.	176.86	27.51	2.04	2.04	0.00
13	2808.	-186.19	21.02	-2.30	-2.57	0.00
14	2862.	157.75	17.63	1.98	1.98	0.00
15	2826.	173.86	23.31	1.92	1.92	0.00
16	-2763.	183.32	-36.60	2.07	2.07	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.8600	3.7480	27.3950	17.5540	3.8620	30.6390
2	16.8960	3.7640	27.4330	17.5930	3.8780	30.6810
3	17.3020	3.8340	26.6740	17.4810	3.8310	30.5560
4	16.7190	-3.6360	26.7590	17.0910	3.6780	30.1210
5	17.0040	3.7820	27.3710	17.5450	3.8580	30.6280
6	17.2070	3.8690	27.5800	17.7560	3.9470	30.8640
7	16.9540	3.7730	27.4400	17.5450	3.8580	30.6280
8	16.9170	3.7580	27.4020	17.5070	3.8420	30.5850
9	16.8070	3.7110	27.2880	17.3920	3.7940	30.4570
10	17.0640	3.8200	27.5540	17.6600	3.9060	30.7570
11	16.8050	3.7250	27.3380	17.4970	3.8380	30.5740
12	16.8960	3.7640	27.4330	17.5930	3.8780	30.6810
13	17.4090	3.8280	25.9870	17.3220	3.7650	30.3780
14	17.4220	3.8560	26.3300	17.4540	3.8200	30.5260
15	16.9880	3.8030	27.5290	17.6890	3.9180	30.7890
16	16.8960	3.7640	27.4330	17.5930	3.8780	30.6810

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIFS *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	157.10	19.29	2.02	2.02	0.00
2	159.72	20.47	2.22	2.22	0.00
3	-198.37	27.34	-2.73	-2.83	0.00
4	-197.32	-31.24	2.15	2.15	0.00
5	173.93	27.72	2.11	2.11	0.00
6	-201.33	-29.99	2.46	2.46	0.00
7	147.00	22.57	-2.69	-3.02	0.00
8	158.10	21.62	2.24	2.24	0.00
9	156.55	22.53	2.12	2.12	0.00
10	158.60	24.56	2.20	2.20	0.00
11	172.64	22.48	2.29	2.29	0.00
12	169.86	26.70	2.28	2.28	0.00
13	-187.11	21.38	-2.69	-3.01	0.00
14	157.47	17.80	2.30	2.30	0.00
15	166.97	22.62	2.15	2.15	0.00
16	176.06	-35.52	2.31	2.31	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	30.00	45.80	30.43	46.45
2	28.00	48.00	28.40	48.69
3	26.00	47.45	26.14	47.70
4	29.00	48.80	29.25	49.23
5	30.00	46.50	30.35	47.05
6	-25.00	-45.50	-25.29	46.04
7	29.00	47.60	29.37	48.21
8	31.00	48.05	31.40	48.66
9	28.00	-45.70	28.36	46.28
10	31.00	-49.30	31.40	-49.93
11	28.00	-44.95	28.40	45.59
12	28.00	47.35	28.40	48.03
13	32.00	47.70	32.03	47.75
14	31.50	47.15	31.59	47.29
15	28.00	-44.50	28.40	-45.14
16	27.00	47.00	27.39	47.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	496.	.4580	.4410	1421.	1.040	272.
2	487.	.4010	.4460	1413.	1.060	302.
3	548.	.3550	.5450	1386.	1.050	288.
4	-583.	.4190	.5150	1367.	1.040	-310.
5	542.	.4140	.4770	1379.	1.050	279.
6	533.	.3440	-.5620	1412.	1.050	267.
7	530.	.4230	.4730	1410.	1.070	294.
8	529.	.4600	.4430	1421.	1.050	301.
9	543.	.4090	.5140	1421.	1.060	270.
10	558.	.4080	.4600	1345.	1.040	-320.
11	517.	.4820	.4950	1448.	1.070	261.
12	558.	.3950	.5160	-1304.	1.040	292.
13	518.	.4190	.4300	1428.	-1.020	289.
14	545.	.4500	.4610	1365.	1.070	283.
15	528.	.4020	.5090	1410.	-1.090	-255.
16	520.	.3860	.4990	1352.	1.050	287.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 8

UNIT	CORR FII FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
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1	495.	.4710	.4530	1462.	275.
2	486.	.4130	.4580	1454.	305.
3	552.	.3590	.5510	1401.	291.
4	-585.	.4260	.5240	1391.	-313.
5	542.	.4230	.4890	1412.	283.
6	534.	.3520	-.5750	1445.	270.
7	530.	.4340	.4850	1446.	298.
8	529.	.4720	.4540	1458.	305.
9	544.	.4190	.5280	1457.	273.
10	559.	.4190	.4720	1379.	-324.
11	515.	.4960	.5090	1489.	264.
12	557.	.4070	.5310	-1341.	295.
13	524.	.4200	.4310	1430.	292.
14	550.	.4530	.4630	-1373.	286.
15	527.	.4140	.5240	1450.	-258.
16	519.	.3970	.5130	1391.	291.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.859	794.4	61.9	5.2	4.6
2	.750	711.2	54.6	5.0	3.3
3	.645	758.8	63.0	5.4	5.3
4	.761	869.2	85.6	5.4	4.8
5	.761	790.5	76.0	5.0	4.6
6	.620	752.4	74.4	4.9	3.9
7	.795	692.0	64.4	-6.4	7.1
8	.859	809.2	68.0	5.8	4.4
9	.761	721.6	65.3	4.9	3.8
10	.761	707.1	65.5	4.7	3.9
11	.889	950.2	78.2	-6.3	5.0
12	.729	751.6	70.7	5.0	4.8
13	.779	798.7	55.7	5.7	6.4
14	.849	757.2	52.3	5.6	4.6
15	.737	811.9	75.1	4.8	2.6
16	.705	743.7	84.0	5.0	2.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2837.	166.95	22.35	1.79	1.79	0.00
2	2828.	170.69	22.50	1.97	1.97	0.00
3	-2752.	-206.01	29.39	-2.39	2.39	0.00
4	-2749.	-199.83	-33.81	2.03	2.03	0.00
5	2783.	183.99	30.38	1.91	1.91	0.00
6	-2727.	-210.64	-35.80	-2.25	2.25	0.00
7	2842.	157.43	25.17	-2.39	-2.64	0.00
8	2825.	169.35	24.45	1.98	1.98	0.00
9	2816.	169.94	26.41	1.90	1.90	0.00
10	2821.	166.80	26.53	1.82	1.82	0.00
11	2787.	189.56	26.80	2.06	2.06	0.00
12	2789.	183.03	29.57	1.99	1.99	0.00
13	2810.	183.33	21.96	2.14	2.43	0.00
14	2851.	161.88	19.21	1.95	1.95	0.00
15	2773.	194.36	30.88	1.88	1.88	0.00
16	-2761.	185.39	-35.97	2.06	2.06	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * BASELINE TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	15.0100	-3.0500	25.4590	15.6120	3.1400	28.4470
2	16.0240	3.4220	26.5280	16.6760	3.5240	29.6570
3	16.0420	3.3540	25.4270	16.2030	3.3510	29.1220
4	16.5740	3.5810	26.6130	16.9420	3.6230	29.9550
5	15.4120	3.1780	25.7230	15.8910	3.2390	28.7670
6	-14.9560	-3.0140	25.2410	15.4170	3.0710	28.2220
7	15.8990	3.3650	26.3490	16.4450	3.4390	29.3960
8	16.1110	3.4440	26.5680	16.6660	3.5200	29.6450
9	15.0240	-3.0460	25.4250	15.5320	3.1110	28.3550
10	16.7080	-3.6700	27.1840	-17.2880	-3.7520	-30.3400
11	-14.6290	-2.9150	25.0500	15.2110	2.9990	27.9840
12	15.7200	3.3090	26.2100	16.3570	3.4070	29.2970
13	16.3050	3.4150	24.9330	16.2230	3.3580	29.1450
14	15.9780	3.3110	24.9280	16.0040	3.2790	28.8960
15	-14.4290	-2.8450	24.8340	-15.0020	-2.9270	-27.7410
16	15.5580	3.2490	26.0400	16.1870	3.3450	29.1040

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * BASELINE TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	160.52	21.72	2.00	2.00	0.00
2	164.02	21.84	2.20	2.20	0.00
3	-203.97	29.42	-2.74	2.74	0.00
4	-195.49	-33.43	2.29	2.29	0.00
5	178.44	29.81	2.14	2.14	0.00
6	-204.34	-35.13	-2.52	2.52	0.00
7	152.21	24.63	-2.67	-2.95	0.00
8	163.72	23.92	2.21	2.21	0.00
9	164.38	25.86	2.12	2.12	0.00
10	161.20	25.95	2.03	2.03	0.00
11	182.30	26.04	2.30	2.30	0.00
12	175.90	28.72	2.22	2.22	0.00
13	184.25	22.33	-2.51	2.84	0.00
14	161.62	19.39	2.26	2.26	0.00
15	186.94	30.02	2.10	2.10	0.00
16	178.19	-34.94	2.30	2.30	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
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1	1304.	407.	521.7	29.76	.003450
3	573.	376.	511.7	29.85	.003820
4	3287.	385.	521.7	29.76	.003450
6	737.	406.	522.7	29.76	.004830
7	3359.	445.	518.7	30.43	.003500
8	2958.	445.	518.7	30.43	.003500
9	2916.	390.	499.7	30.25	.002700
10	2826.	448.	522.7	30.38	.007220
11	934.	396.	499.7	30.25	.002700
13	3454.	430.	505.7	30.30	.000970
15	891.	379.	505.2	30.31	.001080
16	2716.	416.	504.7	30.32	.001190

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	29.00	47.50	28.92	47.36
3	29.00	48.00	29.20	48.33
4	30.00	48.50	29.91	48.36
6	28.00	47.50	27.89	47.32
7	25.00	48.50	25.00	48.50
8	28.00	47.00	28.00	47.00
9	-24.00	46.50	24.45	47.38
10	29.00	46.00	28.89	45.87
11	30.00	48.00	30.57	48.90
13	32.00	48.00	32.41	48.61
15	29.00	47.50	29.38	48.13
16	25.00	47.00	25.34	47.65

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	535.	.4690	.4950	1467.	1.050	288.
3	532.	.4160	.4820	1412.	1.040	301.
4	547.	.4320	.4840	1403.	1.035	302.
6	517.	.3780	.4940	1446.	-1.025	288.
7	567.	.4100	.5730	1439.	1.070	297.
8	-433.	.4360	-.4060	1485.	1.050	278.
9	570.	.3550	-.6080	1410.	1.060	284.
10	500.	.3510	.4630	1468.	1.050	263.
11	567.	.4510	.4870	1449.	1.060	305.
13	-450.	.3470	-.3670	1426.	1.040	300.
15	500.	.4070	.4470	1451.	1.060	293.
16	567.	.3790	-.5810	-1354.	1.050	287.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LRM/HR	COR CB X100	F/A COR PF F/A X100	CORR T17 DEG R	COR THRUST LBF
1	534.	.4670	.4920	1459.	287.
3	527.	.4210	.4890	1431.	300.
4	545.	.4290	.4820	1394.	300.
6	516.	.3750	.4900	1435.	286.
7	576.	.4100	.5730	1439.	303.
8	-441.	.4360	.4060	1485.	282.
9	566.	.3680	-.6320	1463.	287.
10	510.	.3480	.4600	1457.	267.
11	562.	.4680	.5050	1504.	309.
13	-450.	.3560	-.3760	1463.	304.
15	500.	.4170	.4590	1490.	297.
16	566.	.3890	-.5970	-1391.	291.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.862	932.0	85.5	3.8	2.9
3	.777	718.0	62.0	4.1	2.1
4	.812	737.8	55.8	2.7	2.0
6	.706	682.0	54.0	4.3	4.0
7	.783	616.8	-36.4	2.7	3.4
8	.814	791.2	58.1	3.2	4.1
9	.662	607.0	57.6	4.0	3.6
10	.651	676.6	41.3	2.9	4.4
11	.843	790.1	64.7	5.8	4.1
13	.646	630.2	49.2	4.1	1.9
15	.757	749.9	49.9	4.0	4.9
16	.699	628.3	72.6	3.0	3.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	-2778.	-191.09	30.10	1.29	1.29	0.00
3	2829.	166.35	24.66	1.56	1.56	0.00
4	2843.	164.47	21.37	.99	.99	0.00
6	2825.	173.73	23.64	1.81	1.81	0.00
7	-2890.	144.82	14.70	1.03	1.33	0.00
8	2823.	174.68	22.03	1.15	1.49	0.00
9	2828.	164.90	26.87	1.78	1.78	0.00
10	2812.	185.95	19.52	1.31	1.99	0.00
11	2828.	168.62	23.72	2.04	2.04	0.00
13	2821.	175.07	23.49	1.86	1.86	0.00
15	2817.	177.57	20.29	1.54	1.90	0.00
16	2792.	177.64	30.85	1.24	1.49	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 400 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.1360	3.2950	27.1890	16.0400	3.2920	28.9380
3	16.0920	3.3630	26.9900	16.5030	3.4600	29.4610
4	16.6180	3.4690	27.7000	16.5190	3.4660	29.4790
6	16.1660	3.2970	26.5120	16.0190	3.2850	28.9130
7	16.7980	3.5990	27.8880	16.5860	3.4910	29.5560
8	16.0710	3.3310	27.1200	15.8680	3.2310	28.7410
9	15.1840	3.1460	26.6330	16.0460	3.2950	28.9440
10	15.7000	3.1640	24.8430	15.3190	3.0360	28.1080
11	15.8720	3.4010	27.3460	16.7830	3.5630	29.7770
13	16.0810	3.4320	-28.5140	16.6410	3.5110	29.6170
15	15.8350	3.3450	28.1810	16.4080	3.4260	29.3540
16	15.5910	3.2600	27.8510	16.1760	3.3410	29.0920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1	-192.22			30.12			1.38			1.38			0.00	
3	162.21			23.97			1.70			1.70			0.00	
4	165.46			21.39			1.05			-1.05			0.00	
6	175.32			23.73			1.98			1.98			0.00	
7	-146.67			15.15			1.09			1.41			0.00	
8	176.91			22.71			1.21			1.58			0.00	
9	156.03			25.66			1.93			1.93			0.00	
10	-190.58			20.33			1.48			2.25			0.00	
11	159.47			22.64			2.22			2.22			0.00	
13	169.18			22.96			1.93			1.93			0.00	
15	171.37			19.82			1.61			1.98			0.00	
16	171.22			30.09			1.29			1.55			0.00	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	30.00	50.00	29.91	49.86
3	30.00	50.00	30.20	50.34
4	30.00	50.00	29.91	49.85
6	29.00	50.00	28.89	49.81
7	29.00	50.00	29.00	50.00
8	30.00	-51.00	30.00	51.00
9	30.00	49.50	30.57	50.43
10	32.00	-50.80	31.88	50.61
11	32.00	50.00	32.60	50.94
13	-15.00	50.00	-15.45	50.64
15	30.00	50.00	30.40	50.66
16	29.00	50.00	29.40	50.69

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	568.	.4680	.4940	1449.	1.050	325.
3	560.	.4080	.4800	1399.	1.050	332.
4	562.	.4310	.4880	1392.	1.040	325.
6	545.	.4040	.4880	1421.	-1.020	324.
7	583.	.3860	.5080	1430.	1.070	320.
8	-500.	.4440	.4180	1464.	1.050	338.
9	595.	.3540	.5010	1390.	1.060	330.
10	600.	.3400	.4790	1435.	1.070	332.
11	593.	.4430	.4690	1433.	1.060	339.
13	-500.	.3590	-.3680	1406.	1.040	333.
15	600.	.4010	.5030	1433.	-1.085	333.
16	592.	.3960	.5110	1336.	1.050	334.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 400 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	567.	.4660	.4910	1441.	323.
3	555.	.4130	.4870	1418.	332.
4	560.	.4280	.4850	1384.	323.
6	544.	.4010	.4840	1410.	322.
7	593.	.3860	.5080	1430.	325.
8	-509.	.4440	.4180	1464.	344.
9	590.	.3670	.5200	1443.	333.
10	612.	.3370	.4750	1424.	337.
11	589.	.4600	.4870	-1488.	343.
13	-500.	.3690	-.3770	1442.	337.
15	600.	.4120	.5170	1471.	338.
16	591.	.4070	.5250	-1373.	338.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO _x CONC PPM	NOX CONC PPM
1	.865	899.3	80.5	3.7	3.0
3	.762	710.6	60.0	3.4	2.1
4	.809	744.7	56.2	3.4	2.2
6	.763	673.9	49.1	3.6	4.1
7	.734	613.7	-35.5	2.5	3.5
8	.838	753.6	47.2	2.8	4.1
9	.661	608.1	58.1	3.6	3.7
10	.636	624.2	-34.5	2.5	4.5
11	.826	803.6	60.4	4.8	4.1
13	.672	633.9	48.5	3.7	1.9
15	.751	707.2	47.5	3.3	4.7
16	.737	686.7	67.8	2.8	3.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
1	2792.	184.83	28.41	1.26	1.26	0.00
3	2828.	167.76	24.33	1.30	1.30	0.00
4	2840.	166.38	21.56	1.24	1.24	0.00
6	2855.	160.52	20.10	1.39	1.60	0.00
7	2876.	152.98	15.21	1.01	1.44	0.00
8	2853.	163.37	17.58	1.00	1.44	0.00
9	2826.	165.54	27.17	1.59	1.64	0.00
10	2834.	176.94	16.79	1.17	2.09	0.00
11	2822.	174.63	22.54	1.70	1.70	0.00
13	2832.	169.94	22.33	1.61	1.61	0.00
15	2831.	169.60	19.55	1.30	1.85	0.00
16	2816.	166.95	28.33	1.12	1.51	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	17.3570	3.7420	28.4720	17.2520	3.7390	30.3000
3	17.0130	3.7100	27.9580	17.4520	3.8190	30.5240
4	17.3570	3.7420	28.4720	17.2520	3.7390	30.3000
6	17.3890	3.7450	27.7640	17.2280	3.7300	30.2740
7	17.5440	3.8820	28.6660	17.3230	3.7660	30.3790
8	17.9270	4.0450	29.0650	17.7010	3.9240	30.8030
9	16.5290	3.6560	28.0970	17.4860	3.8330	30.5620
10	17.9950	4.0240	27.1290	17.5520	3.8610	30.6350
11	16.7090	3.7330	28.2930	17.6790	3.9140	30.7780
13	16.9660	3.7780	29.4970	17.5640	3.8660	30.6500
15	16.9510	3.7770	29.4210	17.5740	3.8700	30.6600
16	16.9350	3.7770	29.3450	17.5830	3.8740	30.6710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	-185.96	28.43	1.34	1.34	0.00
3	163.54	23.64	1.42	1.42	0.00
4	167.40	21.58	1.31	1.31	0.00
6	162.02	20.18	1.52	1.75	0.00
7	154.93	15.68	1.08	1.53	0.00
8	165.45	18.12	1.06	1.53	0.00
9	156.48	25.92	1.73	1.78	0.00
10	181.41	17.50	1.32	2.36	0.00
11	165.05	21.49	1.85	1.85	0.00
13	164.16	21.82	1.67	1.67	0.00
15	163.58	19.08	1.36	1.93	0.00
16	160.80	27.61	1.17	1.57	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	99.00	99.00	98.71	98.71
3	-95.00	97.00	-95.65	97.66
4	98.00	97.00	97.72	96.72
6	98.00	96.00	97.62	95.63
7	98.00	96.50	98.00	96.50
8	98.00	96.50	98.00	96.50
9	-95.00	97.00	96.79	-98.83
10	98.00	97.00	97.62	96.63
11	98.00	98.00	99.85	-99.85
13	99.00	96.50	100.26	97.73
15	100.00	96.00	101.33	97.27
16	-95.00	96.00	96.31	97.32

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	2873.	.8430	-.6510	1750.	1.530	4233.
3	2610.	.6840	.6040	1674.	1.530	4220.
4	2685.	.8090	.6150	1700.	1.530	4233.
6	2520.	.6750	.5790	1736.	1.530	4233.
7	2642.	.6720	.5910	1728.	1.530	4139.
8	2700.	.7940	.6040	1741.	1.530	4139.
9	2803.	.7900	.6330	1723.	1.530	4164.
10	2500.	-.6020	-.5620	1730.	1.520	4077.
11	2793.	.7910	.6150	1676.	1.530	4164.
13	2633.	.7020	.5800	1676.	1.530	4157.
15	2900.	.8430	.6340	1764.	1.530	4156.
16	2633.	.6650	.5970	1637.	1.530	4154.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 400 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2866.	.8380	.6480	1740.	4210.
3	2586.	.6930	.6120	1697.	4210.
4	2678.	.8040	.6120	1690.	4210.
6	-2516.	.6700	.5750	1722.	4210.
7	2687.	.6720	.5910	1728.	4210.
8	2746.	.7940	.6040	1741.	4210.
9	2782.	.8200	.6570	1788.	4210.
10	2548.	-.5980	.5570	1717.	4140.
11	2772.	.8210	.6390	1740.	4210.
13	2633.	.7200	.5950	1719.	4210.
15	2899.	.8660	.6500	-1811.	4210.
16	2632.	.6840	.6130	1682.	4210.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.745	229.8	5.1	19.0	18.3
3	1.412	193.7	3.8	13.6	14.3
4	1.670	253.7	4.5	15.6	16.9
6	1.391	226.8	5.8	12.9	14.9
7	1.387	185.9	4.0	15.1	15.8
8	1.638	261.3	5.1	15.7	18.0
9	1.632	214.4	-11.2	16.4	18.7
10	-1.239	202.7	3.0	13.2	15.6
11	1.630	-275.5	4.1	14.0	15.8
13	1.448	227.9	6.0	14.0	14.8
15	1.738	253.2	3.9	17.4	19.3
16	1.367	233.6	3.6	13.0	15.6

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3117.	26.12	1.00	3.54	3.54	15.89
3	3113.	27.17	.91	3.13	3.29	12.58
4	3111.	30.07	.92	-3.04	3.30	13.82
6	3108.	32.24	1.41	-3.02	3.49	14.67
7	3114.	26.56	.97	3.55	3.71	21.19
8	3106.	31.54	1.05	3.11	3.56	9.93
9	3113.	26.03	-2.34	3.27	3.73	17.11
10	3105.	32.34	.83	3.47	4.09	11.26
11	3103.	33.39	.86	-2.79	3.14	10.60
13	3108.	31.14	1.40	3.15	3.33	14.47
15	3104.	28.85	.75	3.24	3.60	14.29
16	3100.	33.72	.90	3.09	3.71	10.53

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	114.7460	114.0120	-101.2970	113.4460	-113.4300	-107.4340
3	99.5230	102.3990	94.8080	103.2020	106.4080	104.2960
4	104.2680	100.9430	95.7360	103.1350	100.4560	101.5600
6	95.5610	94.7840	90.6700	94.1520	93.9210	98.4680
7	98.8960	102.1620	95.2330	97.6630	99.1010	100.9270
8	103.1230	102.1620	95.2330	101.8410	99.1010	100.9270
9	103.4570	106.0160	96.9920	113.2080	-114.1980	-107.7720
10	98.7460	104.6670	90.0720	95.8050	99.8860	101.2940
11	107.8450	112.5960	-99.7120	-118.1330	-121.4000	-110.8890
13	98.8670	102.5890	99.1720	104.4710	106.8710	104.5060
15	101.6130	99.6050	97.5810	107.9090	103.9240	103.1630
16	95.6650	99.7110	97.3730	101.4330	104.2300	103.3040

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI	NREC HC EI	NRE CNO FI	NR CNOX EI	SMK NUMAFR
	LB/KLA FU	LB/KLB FU	LA/KLA FU	LA/KLA FU	CORRECTED
1	26.42	1.00	3.76	3.76	15.89
3	26.20	.87	3.45	3.62	12.58
4	30.40	.93	-3.22	3.50	13.82
6	32.73	1.42	3.28	3.79	14.67
7	26.89	1.00	3.77	3.93	8.94
8	31.93	1.08	3.30	3.77	9.93
9	23.79	2.17	3.63	4.14	17.11
10	33.33	.87	3.90	4.60	11.26
11	30.48	.80	-3.11	3.49	10.60
13	29.47	1.35	3.32	3.51	14.47
15	27.17	.72	3.43	3.80	14.29
16	31.80	.86	3.28	3.93	10.53

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	93.00	96.00	92.73	95.72
3	90.00	94.00	90.61	94.64
4	93.00	94.00	92.73	93.73
6	97.00	94.00	96.63	93.64
7	95.00	94.00	95.00	94.00
8	92.00	94.50	92.00	94.50
9	90.00	93.50	91.70	95.26
10	95.00	94.30	94.64	93.94
11	92.00	92.50	93.73	94.24
13	98.00	94.10	99.25	95.30
15	100.00	93.00	101.33	94.23
16	93.00	93.00	94.28	94.28

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	2512.	.7290	-.5990	1653.	1.470	3810.
3	2308.	.6150	.5610	1590.	1.470	3799.
4	2388.	.7490	.5740	1620.	1.470	3810.
6	2260.	.6080	.5270	1655.	1.470	3811.
7	2300.	.6240	.5310	1636.	1.465	3692.
8	2350.	.7490	.5530	1658.	1.460	3658.
9	2410.	.7230	.5730	1601.	1.470	3749.
10	2250.	-.5560	.5210	1655.	1.470	3733.
11	-2630.	.7000	-.6190	1610.	1.470	3749.
13	2350.	.6830	.5250	1613.	1.470	3742.
15	2533.	.7060	.5610	1667.	1.465	3707.
16	2300.	.6310	.5370	1550.	1.470	3740.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2505.	.7250	.5960	1643.	3790.
3	2287.	.6240	.5690	1611.	3790.
4	2382.	.7440	.5710	1611.	3790.
6	2256.	.6030	.5230	1642.	3790.
7	2339.	.6240	.5310	1636.	3755.
8	2390.	.7490	.5530	1658.	3720.
9	2392.	.7500	.5950	1661.	3790.
10	2293.	-.5510	.5170	1642.	3790.
11	-2610.	.7260	-.6430	1671.	3790.
13	2350.	.7010	.5390	1655.	3790.
15	2533.	.7250	.5760	-1712.	3755.
16	2299.	.6480	.5520	1593.	3790.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.504	227.9	4.0	14.8	15.2
3	1.267	197.4	3.0	11.2	12.1
4	1.544	251.8	4.6	12.7	14.3
6	1.249	231.8	5.4	11.3	13.2
7	1.287	185.5	3.2	12.2	13.6
8	1.542	-269.7	4.2	13.5	15.6
9	1.491	211.7	-7.8	13.0	15.8
10	-1.141	209.0	2.5	11.3	13.9
11	1.437	-269.2	3.9	11.5	13.3
13	1.407	232.4	5.5	13.2	13.2
15	1.451	245.2	3.3	13.6	16.4
16	1.295	227.5	4.1	11.3	14.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3111.	30.00	.90	3.19	3.29	15.13
3	3107.	30.82	.82	2.87	3.11	12.42
4	3107.	32.26	1.00	-2.66	3.01	13.82
6	3101.	36.62	1.47	2.92	3.41	12.00
7	3111.	28.53	.85	3.09	3.44	7.89
8	3101.	34.53	.92	-2.84	3.27	7.28
9	3111.	28.10	-1.79	2.85	3.45	13.16
10	3099.	36.14	.74	3.20	3.94	10.53
11	3098.	36.93	.92	-2.59	2.99	7.95
13	3106.	32.63	1.33	3.05	3.05	13.64
15	3097.	33.32	.77	3.04	3.65	12.42
16	3098.	34.64	1.08	-2.83	3.51	8.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	97.2690	94.9010	-93.0530	96.2590	94.4570	98.7250
3	85.6920	84.1970	86.8970	88.7060	87.4040	95.5170
4	88.9460	80.7220	87.1910	88.0390	80.3660	92.5250
6	84.9130	80.4000	84.9050	83.7190	79.6950	92.2330
7	86.9460	84.9580	88.1400	85.8610	82.4120	93.4090
8	92.9270	88.9550	89.6900	91.7700	86.2900	95.0520
9	87.4990	85.4850	87.9070	95.2230	91.7780	97.4320
10	86.1600	85.8240	82.8500	83.6530	81.9440	93.2080
11	82.7030	78.5600	85.0500	89.8680	84.2740	94.2030
13	88.9670	88.4620	-92.6800	93.8280	92.0120	97.5460
15	84.9780	80.8690	89.2180	89.8000	84.2140	94.1780
16	83.0130	81.0710	89.0560	87.7810	84.5760	94.3310

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	30.31	.90	3.39	3.49	15.13
3	29.78	.79	3.15	3.42	12.42
4	32.59	1.01	-2.83	-3.19	13.82
6	37.14	1.48	3.18	3.71	12.00
7	28.90	.88	3.27	3.65	7.89
8	34.97	.95	-3.01	3.47	7.28
9	-25.82	1.67	3.15	3.82	13.16
10	37.23	.77	3.60	4.44	10.53
11	33.98	.86	-2.87	3.32	7.95
13	30.94	1.27	3.21	-3.21	13.64
15	31.53	.74	3.21	3.86	12.42
16	32.76	1.04	-3.00	3.71	8.61

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	80.00	88.50	79.77	88.25
3	78.00	87.50	78.53	88.10
4	80.00	87.50	79.77	87.25
6	79.00	87.30	78.70	86.97
7	79.00	87.00	79.00	87.00
8	79.00	88.00	79.00	88.00
9	77.00	86.50	78.45	88.13
10	81.00	88.30	80.69	87.96
11	79.00	85.50	80.49	87.11
13	82.00	88.00	83.05	-89.12
15	83.00	86.50	-84.10	87.65
16	79.00	86.00	80.09	87.18

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1717.	.5830	-.4780	1464.	1.290	2511.
3	1608.	.5050	.4540	1421.	1.290	2503.
4	1628.	.5940	.4570	1435.	1.290	2511.
6	1547.	.4610	.4390	1468.	1.290	2511.
7	1600.	.4610	.4430	1462.	1.290	2456.
8	1633.	.5870	.4490	1507.	1.290	2456.
9	1615.	.5580	.4520	1403.	1.290	2470.
10	1600.	.4410	.4340	1497.	-1.300	-2536.
11	1615.	.5950	.4470	1444.	1.290	2470.
13	1600.	.5180	.4250	1430.	1.290	2466.
15	1683.	.5860	.4470	1487.	1.290	2465.
16	1550.	.4580	.4290	1374.	1.290	2465.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 400 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1712.	.5800	.4750	1455.	2498.
3	1594.	.5120	.4600	1440.	2498.
4	1624.	.5900	.4540	1427.	2498.
6	1544.	.4570	.4360	1457.	2498.
7	1627.	.4610	.4430	1462.	2498.
8	1661.	.5870	.4490	-1507.	2498.
9	1603.	.5790	.4690	1456.	2498.
10	1631.	-.4380	.4300	1486.	-2575.
11	1603.	.6180	.4640	1499.	2498.
13	1600.	.5320	.4360	1466.	2498.
15	1683.	.6010	.4590	-1527.	2498.
16	1549.	.4710	.4400	1412.	2498.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.192	283.5	3.9	9.3	9.9
3	1.031	243.7	4.5	7.2	7.9
4	1.212	286.3	5.9	7.0	8.8
6	.936	254.4	6.2	6.6	8.7
7	.941	218.3	5.0	7.9	9.0
8	1.191	-343.6	-8.5	9.4	10.6
9	1.141	241.9	6.1	7.6	10.3
10	.897	241.9	2.8	6.8	9.8
11	1.211	-328.1	4.9	7.3	9.4
13	1.056	269.2	6.4	7.5	8.1
15	1.195	268.6	3.2	8.7	11.3
16	.931	241.6	6.3	7.0	9.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3084.	46.68	1.10	2.51	2.68	-11.84
3	3081.	46.37	1.46	2.25	2.46	5.33
4	3083.	46.34	1.65	-1.86	2.33	5.96
6	3073.	53.14	2.21	2.26	2.97	7.89
7	3082.	45.49	1.80	2.70	3.07	5.30
8	3063.	56.26	2.39	2.52	2.86	7.84
9	3090.	41.68	1.82	-2.14	2.92	7.28
10	3072.	52.75	1.07	2.43	3.52	6.62
11	3071.	52.97	1.36	-1.93	2.49	5.33
13	3076.	49.92	2.03	2.29	2.47	7.19
15	3080.	44.06	.91	2.35	3.05	8.61
16	3070.	50.68	2.29	2.42	3.11	5.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	62.1400	46.8390	-70.8670	61.5900	46.6670	75.2450
3	58.0020	44.3610	68.1520	59.8640	45.9580	74.7930
4	58.6710	42.2130	68.0260	58.1580	42.0640	72.2390
6	55.7460	41.1320	65.6620	55.0650	40.8220	71.3980
7	55.9490	42.2390	67.4680	55.2480	40.9730	71.5010
8	61.5790	46.9070	70.2970	60.8090	45.5020	74.5000
9	56.7670	43.2090	67.8920	61.1430	46.1130	74.8920
10	59.8090	47.4160	66.0610	58.1580	45.3210	74.3830
11	53.9760	38.8850	65.1670	58.1320	41.4560	71.8290
13	61.0420	49.2270	-74.2670	-63.9730	-51.0270	-77.9530
15	56.9280	42.2450	69.7900	59.7840	43.8680	73.4370
16	53.3750	40.2330	68.2650	56.0200	41.7830	72.0500

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 5

UNIT	NREC CO FI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	47.10	1.10	2.66	2.84	-11.84
3	44.93	1.41	2.47	2.70	5.33
4	46.75	1.65	-1.98	-2.48	5.96
6	53.80	2.23	2.45	3.23	7.89
7	46.07	1.86	2.86	3.26	5.30
8	-56.98	2.47	2.67	3.03	6.16
9	-38.69	1.70	2.36	3.22	7.28
10	54.25	1.12	2.74	3.96	6.62
11	49.18	1.29	-2.12	2.74	5.33
13	47.63	1.95	2.40	2.59	7.19
15	41.95	.88	2.47	3.21	8.61
16	48.29	2.20	2.55	3.28	5.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	58.00	75.50	57.83	75.28
3	59.00	77.50	59.40	-78.03
4	59.00	77.00	58.83	76.78
6	52.00	74.00	51.80	73.72
7	52.00	74.00	52.00	74.00
8	53.50	73.30	53.50	73.30
9	52.00	74.00	52.98	75.39
10	59.00	74.30	58.77	74.02
11	58.00	72.50	59.09	73.87
13	60.00	75.00	60.77	75.96
15	55.00	71.50	55.73	72.45
16	55.00	73.50	55.76	74.51

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODF 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1003.	.4710	.3950	1329.	1.130	-1229.
3	-1115.	.4230	.4210	1322.	1.130	-1225.
4	1052.	.4710	.4030	1320.	1.130	-1229.
6	917.	.3890	.3960	1328.	1.130	-1229.
7	917.	.4100	.3860	1338.	1.130	1202.
8	900.	.4400	.3740	1356.	1.130	1202.
9	1003.	.4050	.4170	1278.	1.130	1209.
10	1000.	-.3350	.3840	1352.	1.130	1204.
11	1000.	.4610	.3880	1327.	1.130	1209.
13	933.	.3810	-.3470	1295.	1.130	1207.
15	933.	.4310	.3820	1347.	1.130	1207.
16	933.	.3950	.3750	1248.	1.130	1206.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	1001.	.4680	.3920	1321.	1223.
3	1105.	.4290	.4260	1340.	1223.
4	1049.	.4690	.4010	1312.	1223.
6	915.	.3860	.3930	1318.	1223.
7	932.	.4100	.3860	1338.	1223.
8	915.	.4400	.3740	1356.	1223.
9	996.	.4210	-.4330	1327.	1223.
10	1019.	-.3320	.3820	1342.	1223.
11	992.	.4790	.4030	-1377.	1223.
13	933.	.3910	.3560	1328.	1223.
15	933.	.4420	.3920	-1383.	1223.
16	933.	.4060	.3850	-1282.	1223.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.933	466.4	14.8	4.2	5.4
3	.845	352.9	10.6	4.0	4.4
4	.941	409.1	13.8	-2.9	5.0
6	.771	380.2	14.1	3.4	5.7
7	.819	344.4	9.4	3.5	5.3
8	.870	448.3	11.7	4.1	5.8
9	.807	356.7	15.8	3.1	5.8
10	-.663	334.9	8.9	-2.7	5.9
11	.910	487.4	16.7	3.4	5.3
13	.757	351.2	11.4	3.5	3.8
15	.850	441.6	12.8	3.6	6.6
16	.782	360.5	18.8	4.5	5.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2996.	95.34	5.20	1.41	1.80	-6.54
3	3021.	80.27	4.15	1.49	1.64	5.26
4	3016.	83.47	4.84	.97	1.68	-6.67
6	2998.	94.12	5.98	1.39	2.30	2.65
7	3021.	80.84	3.80	1.35	2.06	3.31
8	2992.	98.09	4.41	1.47	2.07	3.31
9	3010.	84.70	6.46	1.19	2.25	3.31
10	2995.	96.26	4.38	1.28	2.79	2.67
11	2982.	101.61	5.98	1.15	1.81	3.31
13	3007.	88.79	4.97	1.47	1.59	2.63
15	2983.	98.61	4.92	1.32	2.43	5.26
16	2996.	87.85	7.88	1.80	2.29	1.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	32.3070	15.1450	46.5570	32.0750	15.1110	49.4890
3	34.3680	-17.8270	-48.5550	-35.3580	-18.4180	-53.1710
4	34.2810	16.8970	-48.4370	34.0310	16.8560	51.4930
6	30.1410	13.7670	43.8580	29.8290	13.6880	47.7570
7	30.6630	14.3580	45.3450	30.2780	13.9270	48.0560
8	30.1730	13.7530	44.6500	29.7950	13.3410	47.3190
9	29.9190	14.4030	45.3110	31.8550	15.2360	49.6360
10	30.5320	14.5560	42.6270	29.7540	13.9400	48.0720
11	28.7680	13.0670	43.7630	30.6430	13.8130	47.9140
13	31.1090	15.4220	-48.2510	32.3410	15.8830	50.3860
15	27.8400	12.2810	44.3630	28.9790	12.6510	46.4280
16	29.4990	13.9190	46.2680	30.7590	14.3680	48.5980

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	96.03	5.21	1.50	1.92	-6.54
3	78.03	4.01	1.63	1.80	5.26
4	84.09	4.85	1.03	1.78	-.67
6	95.11	6.02	1.51	2.51	2.65
7	81.86	3.92	1.43	2.18	2.63
8	99.34	4.54	1.56	2.20	2.73
9	79.56	6.11	1.30	2.46	3.31
10	98.78	4.57	1.44	3.15	2.67
11	95.39	5.65	1.26	1.98	3.31
13	85.41	4.82	1.53	1.66	2.63
15	94.74	4.78	1.38	2.55	5.26
16	84.26	7.63	1.89	2.40	1.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	30.00	50.00	29.91	49.86
3	30.00	50.00	30.20	50.34
4	30.00	49.50	29.91	49.36
6	30.00	50.00	29.88	49.81
7	29.00	-49.30	29.00	49.30
8	29.00	-49.00	29.00	49.00
9	29.00	50.00	29.55	50.94
10	31.50	-49.30	31.38	49.11
11	33.00	50.00	33.62	50.94
13	35.00	50.00	-35.45	50.64
15	32.00	50.50	32.42	51.17
16	29.00	50.00	29.40	50.69

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	552.	.4910	.4790	1444.	1.055	325.
3	527.	.3910	.4520	1347.	1.040	332.
4	548.	.4440	.4790	1379.	1.040	317.
6	537.	.4170	.4670	1422.	-1.020	324.
7	567.	.4130	.4990	1424.	1.070	309.
8	-433.	.4260	.3830	1463.	1.050	305.
9	588.	.3650	.5060	1340.	1.060	339.
10	550.	.3480	.4530	1413.	1.050	307.
11	587.	.4440	.4520	1397.	1.060	339.
13	500.	.3580	-.3680	1399.	1.040	333.
15	517.	.4090	.4080	1386.	-1.090	343.
16	567.	.3750	.4890	-1287.	1.050	334.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	550.	.4880	.4760	1436.	323.
3	522.	.3960	.4580	1365.	332.
4	547.	.4410	.4770	1371.	315.
6	536.	.4140	.4630	1411.	322.
7	576.	.4130	.4990	1424.	315.
8	-441.	.4260	.3830	1463.	310.
9	584.	.3790	.5260	1390.	343.
10	561.	.3450	.4500	1402.	312.
11	582.	.4600	.4690	1450.	343.
13	-500.	.3670	.3770	1435.	337.
15	517.	.4200	.4190	1423.	347.
16	566.	.3850	.5030	-1323.	338.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.908	934.2	-83.5	3.6	3.3
3	.727	704.6	60.0	3.6	2.0
4	.840	725.8	52.5	2.3	2.2
6	.783	717.0	54.4	3.3	4.4
7	.795	665.9	35.4	2.5	3.9
8	.801	745.6	47.2	3.0	3.8
9	.688	599.6	49.2	2.7	3.8
10	.655	605.4	34.1	2.3	4.4
11	.828	798.4	61.1	3.3	4.0
13	.676	599.2	39.4	3.0	-1.8
15	.772	673.1	39.9	3.0	4.8
16	.695	670.0	65.1	3.6	4.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2796.	183.15	28.12	1.16	1.16	0.00
3	2816.	173.63	25.40	1.46	1.46	0.00
4	2860.	157.34	19.55	.82	-.82	0.00
6	2843.	165.63	21.57	1.25	1.68	0.00
7	2875.	155.27	14.20	.98	1.49	0.00
8	2843.	168.49	18.33	1.11	1.40	0.00
9	2851.	158.16	22.32	1.16	1.66	0.00
10	2850.	167.59	16.21	1.04	1.99	0.00
11	2824.	173.22	22.77	1.18	1.42	0.00
13	2857.	161.09	18.20	1.31	1.31	0.00
15	2858.	158.58	16.16	1.16	1.86	0.00
16	2806.	172.28	28.74	1.51	1.69	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
-----	-----	-----	-----	-----	-----	-----
1	17.3570	3.7420	28.4720	17.2520	3.7390	30.3000
3	17.0130	3.7100	27.9580	17.4520	3.8190	30.5240
4	17.1080	-3.6490	28.2140	17.0050	3.6460	30.0250
6	17.3890	3.7450	27.7640	17.2280	3.7300	30.2740
7	17.1930	3.7480	28.3020	16.9770	3.6360	29.9940
8	17.0440	3.6910	28.1460	16.8300	3.5810	29.8290
9	16.7090	3.7330	28.2930	17.6790	3.9140	30.7780
10	17.3090	3.7530	26.4660	16.8840	3.6010	29.8900
11	16.7090	3.7330	28.2930	17.6790	3.9140	30.7780
13	16.9660	3.7780	29.4970	17.5640	3.8660	30.6500
15	17.1350	3.8560	-29.6250	17.7660	3.9510	30.8750
16	16.9350	3.7770	29.3450	17.5830	3.8740	30.6710

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	-184.26	28.14	1.23	1.23	0.00
3	169.27	24.67	1.59	1.59	0.00
4	158.30	19.57	.87	-.87	0.00
6	167.18	21.66	1.37	1.83	0.00
7	157.26	14.64	1.03	1.58	0.00
8	170.64	18.90	1.18	1.48	0.00
9	149.49	21.28	1.26	1.80	0.00
10	171.81	16.89	1.18	2.25	0.00
11	163.72	21.72	1.29	1.54	0.00
13	155.61	17.78	1.36	1.36	0.00
15	152.95	15.77	1.21	1.94	0.00
16	165.93	28.02	1.58	1.76	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	30.00	47.50	29.91	47.36
3	29.00	48.00	29.20	48.33
4	30.00	48.80	29.91	48.66
6	29.00	47.00	28.89	46.82
7	28.00	48.00	28.00	48.00
8	28.00	48.00	28.00	48.00
9	-24.00	46.50	-24.45	47.38
10	30.00	47.00	29.88	46.82
11	31.00	47.00	31.58	47.89
13	32.00	48.00	32.41	48.61
15	30.00	47.30	30.40	47.93
16	26.00	47.00	26.36	47.65

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	525.	.4950	.4710	1462.	1.050	288.
3	523.	.4020	.4750	1403.	1.040	301.
4	543.	.4420	.4790	1388.	1.040	307.
6	505.	.4340	.4710	1451.	-1.020	282.
7	-467.	.4180	.4310	1437.	1.070	290.
8	-400.	.4350	-.3700	1473.	1.050	290.
9	553.	.3620	-.5910	1383.	1.060	284.
10	500.	.3510	.4430	1436.	1.050	276.
11	553.	.4440	.4680	1437.	1.060	290.
13	-433.	.3380	-.3530	1419.	1.035	300.
15	500.	.4110	.4350	1440.	-1.090	290.
16	550.	.3720	.5450	-1323.	1.050	287.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	524.	.4920	.4690	1453.	287.
3	519.	.4080	.4810	1422.	300.
4	542.	.4390	.4770	1380.	305.
6	504.	.4310	.4670	1440.	280.
7	-475.	.4180	.4310	1437.	295.
8	-407.	.4350	-.3700	1473.	295.
9	549.	.3760	-.6130	1435.	287.
10	510.	.3480	.4400	1425.	280.
11	549.	.4610	.4860	1491.	294.
13	-433.	.3470	-.3620	1455.	304.
15	500.	.4220	.4470	1479.	294.
16	550.	.3820	.5600	-1360.	291.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE B

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	.911	960.9	-92.1	3.6	3.1
3	.748	745.3	59.4	3.6	2.0
4	.833	736.2	55.1	2.6	2.1
6	.815	752.4	59.7	3.1	4.3
7	.796	667.5	-36.2	2.5	3.8
8	.815	775.9	52.0	2.8	3.8
9	.678	-618.0	53.8	2.7	3.7
10	.656	650.6	-38.4	2.9	4.4
11	.824	837.1	67.3	3.7	4.0
13	.633	-604.2	43.3	2.9	1.7
15	.770	735.2	43.4	3.0	4.7
16	.687	688.4	66.1	3.3	3.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2783.	186.78	30.75	1.14	1.14	0.00
3	2811.	178.36	24.40	1.41	1.41	0.00
4	2852.	160.43	20.61	.93	-.93	0.00
6	2838.	166.85	22.75	1.15	1.56	0.00
7	2878.	153.60	14.32	.93	1.44	0.00
8	2834.	171.74	19.79	1.02	1.40	0.00
9	2835.	164.34	24.57	1.18	1.60	0.00
10	2828.	178.57	18.11	1.31	1.99	0.00
11	2805.	181.30	25.03	1.33	1.42	0.00
13	2832.	171.99	21.19	1.35	1.35	0.00
15	2833.	172.09	17.46	1.14	1.79	0.00
16	2795.	178.22	29.38	1.39	1.65	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.1360	3.2950	27.1890	16.0400	3.2920	28.9380
3	16.0920	3.3630	26.9900	16.5030	3.4600	29.4610
4	16.7640	3.5220	27.8530	16.6640	3.5190	29.6430
6	15.9270	3.2130	26.2640	15.7830	3.2000	28.6440
7	16.5530	3.5080	27.6310	16.3450	3.4030	29.2830
8	16.5530	3.5080	27.6310	16.3450	3.4030	29.2830
9	15.1840	3.1460	26.6330	16.0460	3.2950	28.9440
10	16.1790	3.3350	25.3590	15.7830	3.2000	28.6440
11	15.4110	3.2290	26.8830	16.2900	3.3830	29.2210
13	16.0810	3.4320	28.5140	16.6410	3.5110	29.6170
15	15.7420	3.3110	28.0770	16.3100	3.3900	29.2440
16	15.5910	3.2600	27.8510	16.1760	3.3410	29.0920

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 400 HOUR TFST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	187.89	30.77	1.21	1.21	0.00
3	173.93	23.71	1.54	1.54	0.00
4	161.40	20.63	.99	-.99	0.00
6	168.37	22.83	1.25	1.70	0.00
7	155.56	14.76	.98	1.53	0.00
8	173.93	20.40	1.08	1.48	0.00
9	155.51	23.46	1.28	1.74	0.00
10	183.03	18.88	1.49	2.25	0.00
11	171.52	23.90	1.44	1.54	0.00
13	166.21	20.72	1.40	1.40	0.00
15	166.10	17.05	1.19	1.87	0.00
16	171.77	28.66	1.46	1.72	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
-----	-----	-----	-----	-----	-----
1	1561.	664.	525.7	30.24	.005480
2	3708.	654.	525.7	30.24	.005480
3	1195.	898.	542.7	30.10	.011120
4	3689.	787.	525.7	30.24	.005480
6	1138.	807.	521.7	30.29	.005320
7	3808.	894.	524.7	30.23	.005180
8	3273.	760.	521.7	30.29	.005320
9	3343.	817.	525.7	30.24	.005480
14	3049.	798.	524.7	30.23	.005180
15	1073.	561.	523.7	30.26	.005400

CF700-2D * 800 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	29.00	46.80	28.81	46.49
2	30.00	47.00	29.80	46.69
3	30.00	47.00	29.33	45.95
4	32.00	48.00	31.79	47.68
6	28.00	46.20	27.92	46.07
7	25.00	-49.10	24.86	48.82
8	29.00	48.50	28.92	48.36
9	30.00	46.80	29.80	46.49
14	30.00	46.00	29.83	45.74
15	25.00	46.00	24.88	45.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	540.	.6100	.4980	1512.	1.060	273.
2	533.	.4980	.4760	1435.	1.040	275.
3	515.	.6040	.4700	1532.	1.040	267.
4	543.	.5790	.4520	1449.	1.040	288.
6	517.	.5100	.4940	1467.	1.050	267.
7	545.	.4570	.5520	1457.	1.070	304.
8	553.	.5380	.4960	1453.	1.050	297.
9	562.	.4870	.5030	1471.	1.050	273.
14	530.	.5500	.4800	1408.	-1.080	263.
15	512.	.5460	.5440	1482.	1.060	264.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODF 1

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF X100	F/A CORR TT7 DEG R	COR THRUST LBF
1	549.	.6010	.4920	1492.	276.
2	543.	.4910	.4700	1416.	278.
3	530.	.5780	.4490	1464.	269.
4	553.	.5710	.4460	1430.	291.
6	525.	.5070	.4910	1459.	270.
7	554.	.4520	.5460	1440.	307.
8	562.	.5350	.4930	1445.	300.
9	571.	.4800	.4960	1451.	276.
14	539.	.5440	.4740	-1392.	266.
15	520.	.5410	.5390	1468.	267.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.155	964.7	72.1	4.9	-8.1
2	.938	817.7	70.6	5.7	-8.1
3	1.146	966.4	72.8	4.4	2.7
4	1.091	975.4	70.3	3.8	6.8
6	.952	925.9	71.8	4.5	7.2
7	.864	762.6	46.4	3.6	5.7
8	1.006	970.3	75.6	4.7	-8.5
9	.927	759.3	46.9	4.2	6.0
14	1.037	920.6	76.2	6.0	7.8
15	1.019	940.2	-90.7	4.7	7.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2861.	152.10	19.52	1.26	2.10	0.00
2	2848.	158.04	23.43	1.81	2.56	0.00
3	2862.	153.66	19.89	1.14	1.14	0.00
4	2846.	161.91	20.06	1.04	1.84	0.00
6	2822.	174.73	23.27	1.39	2.23	0.00
7	2858.	160.54	16.78	1.25	1.96	0.00
8	2826.	173.48	23.23	1.38	2.51	0.00
9	2879.	150.01	15.92	1.35	1.95	0.00
14	2847.	160.85	22.87	1.71	2.25	0.00
15	2821.	165.56	27.42	1.35	2.15	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.1210	3.2840	26.1400	15.6270	3.1450	28.4650
2	16.2170	3.3180	26.2390	15.7200	3.1780	28.5720
3	16.7090	3.3530	23.9720	15.3770	3.0570	28.1760
4	16.7050	3.4950	26.7350	16.1910	3.3470	29.1090
6	15.7290	3.1770	25.8300	15.4310	3.0760	28.2390
7	17.2130	-3.6910	27.4070	16.7410	3.5480	29.7300
8	16.8390	3.5810	26.9680	16.5190	3.4660	29.4790
9	16.1210	3.2840	26.1400	15.6270	3.1450	28.4650
14	15.7030	3.1430	25.8620	15.2780	3.0220	28.0620
15	15.6840	3.1450	25.7390	15.2980	3.0290	28.0850

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1	156.90			20.38			1.37			2.28			0.00	
2	163.03			24.46			1.98			2.79			0.00	
3	166.97			21.82			1.34			1.34			0.00	
4	167.05			20.95			1.13			2.00			0.00	
6	178.10			24.03			1.52			2.44			0.00	
7	165.07			17.45			1.35			2.12			0.00	
8	176.85			24.00			1.51			2.74			0.00	
9	154.74			16.62			1.47			2.13			0.00	
14	165.33			23.78			1.85			2.44			0.00	
15	169.73			28.47			1.48			2.35			0.00	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	31.00	-50.90	30.79	50.56
2	32.00	50.00	31.79	49.67
3	32.00	50.00	31.28	48.88
4	-35.00	50.00	-34.77	49.67
6	30.00	50.20	29.91	50.06
7	28.00	50.00	-27.84	49.71
8	30.00	50.00	29.91	49.86
9	32.00	50.00	31.79	49.67
14	-35.00	50.00	-34.80	49.71
15	30.00	-51.00	29.86	50.76

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TI7 DEG R	FPR	THRUST LAF
1	588.	-.6150	.4850	1484.	1.060	332.
2	567.	.4950	.4600	1412.	1.060	317.
3	548.	.5960	.4540	1507.	1.040	306.
4	563.	.5720	.4230	1435.	1.040	317.
6	562.	.4770	.4780	1439.	1.050	322.
7	553.	.4610	.5030	1449.	1.070	317.
8	547.	.5340	.4660	1442.	1.050	319.
9	600.	.4830	.4870	1442.	1.050	317.
14	560.	.5740	.4200	1381.	-1.080	317.
15	568.	.5310	.4800	1439.	1.060	336.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LRM/HR	COR CB X100	F/A X100	COR PF X100	F/A	COR TT7 DEG R	COR THRUST LBF
1	599.	-.6070	.4790			1464.	336.
2	577.	.4890	.4540			1393.	320.
3	564.	.5700	.4340			1440.	308.
4	573.	.5640	.4180			1416.	320.
6	570.	.4750	.4750			1430.	326.
7	562.	.4550	.4970			1433.	321.
8	555.	.5310	.4640			1434.	323.
9	610.	.4760	.4810			1423.	320.
14	569.	.5670	.4160			-1365.	321.
15	578.	.5260	.4750			1425.	340.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.172	938.6	63.6	4.5	-8.2
2	.939	778.7	62.0	4.7	6.8
3	1.137	910.5	64.8	4.2	3.2
4	1.083	932.7	63.0	3.5	6.9
6	.891	872.6	65.0	4.2	7.3
7	.873	752.7	44.8	3.3	5.8
8	.999	953.4	74.0	4.7	-8.7
9	.926	703.8	39.5	3.9	6.1
14	1.093	867.8	68.4	4.6	7.5
15	1.000	877.2	74.1	4.3	7.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2876.	146.61	17.07	1.16	2.10	0.00
2	2866.	151.23	20.67	1.49	2.18	0.00
3	2878.	146.75	17.96	1.11	1.11	0.00
4	2860.	156.79	18.21	.96	1.91	0.00
6	2822.	175.87	22.49	1.38	2.43	0.00
7	2865.	157.23	16.06	1.13	2.00	0.00
8	2830.	171.85	22.92	1.40	2.57	0.00
9	2901.	140.29	13.51	1.27	1.99	0.00
14	2880.	145.47	19.69	1.25	2.07	0.00
15	2843.	158.73	23.03	1.28	2.19	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	18.0970	4.0260	28.1280	17.5340	3.8540	30.6160
2	17.7070	3.8680	27.7390	17.1570	3.7030	30.1950
3	18.2500	3.9100	25.3520	16.7720	3.5590	29.7650
4	17.7070	3.8680	27.7390	17.1570	3.7030	30.1950
6	17.6830	3.8990	27.8150	17.3440	3.7740	30.4030
7	17.6670	3.8620	27.8630	17.1810	3.7120	30.2210
8	17.5880	3.8630	27.7210	17.2520	3.7390	30.3000
9	17.7070	3.8680	27.7390	17.1570	3.7030	30.1950
14	17.6670	3.8620	27.8630	17.1810	3.7120	30.2210
15	18.0610	4.0350	28.1450	17.6090	3.8850	30.6990

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	151.31	17.83	1.27	2.28	0.00
2	156.07	21.59	1.62	2.37	0.00
3	159.68	19.72	1.31	1.31	0.00
4	161.81	19.02	1.04	2.08	0.00
6	179.30	23.24	1.51	2.66	0.00
7	161.68	16.71	1.23	2.17	0.00
8	175.20	23.68	1.53	2.81	0.00
9	144.78	14.11	1.39	2.17	0.00
14	149.59	20.48	1.36	2.24	0.10
15	162.81	23.92	1.40	2.38	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	98.00	96.30	97.35	95.66
2	99.00	97.50	98.34	96.85
3	100.00	99.00	97.76	96.79
4	101.00	98.50	100.33	97.84
6	100.00	97.10	99.71	96.82
7	99.00	97.50	98.43	96.94
8	99.00	96.70	98.71	96.42
9	101.00	99.50	100.33	-98.84
14	100.00	97.00	99.43	96.44
15	100.50	98.00	100.02	97.53

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	2668.	.7900	.6050	1781.	1.530	4165.
2	2700.	.8160	.6060	1709.	1.530	4165.
3	2623.	.7770	.5950	1768.	-1.510	-4046.
4	2787.	.7670	.6150	1759.	1.530	4165.
6	2892.	.7050	.6410	1755.	1.530	4159.
7	2728.	.6980	.6120	1764.	1.530	4167.
8	2750.	.8090	.6150	1761.	1.530	4159.
9	2872.	.8310	.6330	1800.	1.530	4165.
14	2727.	.7730	.6080	1692.	1.530	4167.
15	2698.	.8470	.5970	1743.	1.530	4163.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TFST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LRF
1	2715.	.7800	.5970	1757.	4210.
2	2747.	.8050	.5980	1686.	4210.
3	2699.	.7430	.5690	1690.	-4070.
4	2835.	.7560	.6070	1735.	4210.
6	2936.	.7010	.6380	1745.	4210.
7	2772.	.6900	.6050	1744.	4210.
8	2792.	.8050	.6110	1751.	4210.
9	2922.	.8200	.6250	1776.	4210.
14	2771.	.7640	.6010	1673.	4210.
15	2742.	.8390	.5910	1726.	4210.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.634	200.5	3.7	17.2	20.9
2	1.691	201.2	6.9	16.6	20.2
3	1.609	180.9	4.7	17.9	16.5
4	1.581	235.3	3.5	17.3	21.3
6	1.451	238.8	5.7	15.1	19.1
7	1.439	217.8	5.1	15.3	18.9
8	1.675	227.7	4.6	17.4	21.8
9	1.722	208.0	3.5	-21.2	-24.1
14	1.598	246.7	3.5	17.7	21.5
15	1.750	225.1	-11.5	18.5	-22.5

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODF 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3113.	24.32	.77	3.43	4.16	21.19
2	3120.	23.63	1.38	3.20	3.91	16.56
3	3120.	22.32	.99	3.62	3.62	18.67
4	3108.	29.43	.75	3.56	4.37	19.33
6	3106.	32.52	1.34	3.37	4.26	13.91
7	3106.	29.93	1.21	3.45	4.27	-8.67
8	3118.	26.97	.93	3.39	4.24	15.33
9	3119.	23.97	.70	-4.01	-4.56	16.00
14	3113.	30.60	.74	3.60	4.38	20.53
15	3110.	25.46	-2.24	3.43	4.18	18.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	102.0500	99.1420	91.1660	97.8090	94.0660	98.5370
2	108.3150	106.7560	94.3340	103.7410	101.2490	101.9290
3	114.4960	114.4390	88.9180	101.2290	100.8610	101.7490
4	110.9300	113.4760	97.0440	106.2640	107.5860	104.8290
6	102.3290	104.8440	93.4740	99.9290	101.0730	101.8470
7	103.8420	106.7850	94.8220	100.0850	101.8240	102.1960
8	104.3680	102.2960	92.4190	101.8800	98.6230	100.7030
9	118.3730	-120.5530	-99.8190	113.2750	-114.2560	-107.7970
14	104.3810	103.5550	93.4850	100.5540	98.7590	100.7660
15	111.7630	110.3890	95.7810	108.0290	105.5670	103.9140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	25.37	.81	3.71	4.50	21.19
2	24.67	1.46	3.45	4.22	16.56
3	25.25	1.12	4.14	4.14	18.67
4	30.73	.79	3.85	4.72	19.33
6	33.31	1.39	3.67	4.64	13.73
7	31.05	1.27	3.71	4.61	-8.67
8	27.63	.97	3.70	4.62	15.33
9	25.05	.74	4.33	4.92	16.00
14	31.76	.77	3.88	4.72	20.53
15	26.34	-2.34	3.72	4.53	18.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	93.50	95.10	92.88	94.46
2	95.00	95.00	94.37	94.37
3	98.00	96.50	95.81	94.34
4	100.00	95.90	99.33	95.26
6	95.00	94.10	94.73	93.83
7	98.00	94.80	97.44	94.26
8	92.00	94.00	91.74	93.73
9	99.00	96.00	98.34	95.36
14	98.00	94.00	97.44	93.46
15	98.00	95.50	97.53	95.04

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	-2607.	.7710	-.6130	1696.	1.470	3750.
2	2400.	.6820	.5580	1638.	1.470	3750.
3	2337.	.7150	.5400	1689.	1.450	3628.
4	2488.	.7050	.5560	1674.	1.470	3750.
6	2373.	.6390	.5510	1649.	1.460	3675.
7	2405.	.6360	.5470	1668.	1.470	3751.
8	2330.	.6980	.5550	1667.	1.460	3675.
9	2485.	.7710	.5590	1685.	1.460	3681.
14	2357.	.6870	.5380	1592.	1.470	3751.
15	2375.	.7410	.5700	1651.	1.460	3678.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-2652.	.7600	.6040	1673.	3790.
2	2442.	.6730	.5500	1616.	3790.
3	2404.	.6830	.5160	1614.	3650.
4	2532.	.6960	.5490	1652.	3790.
6	2410.	.6350	.5480	1640.	3720.
7	2444.	.6280	.5400	1649.	3790.
8	2366.	.6940	.5510	1658.	3720.
9	2528.	.7610	.5520	1663.	3720.
14	2395.	.6790	.5320	-1573.	3790.
15	2414.	.7340	.5320	1635.	3720.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.591	211.8	3.2	15.0	18.5
2	1.407	197.6	5.7	14.1	17.5
3	1.479	-182.6	3.2	15.1	14.3
4	1.452	235.5	3.4	14.4	18.6
6	1.312	244.0	5.6	12.2	16.4
7	1.307	219.5	4.6	12.7	16.6
8	1.440	234.1	4.3	14.4	18.8
9	1.594	206.7	2.8	-16.7	-20.2
14	1.416	235.4	3.5	14.6	18.4
15	1.527	228.1	-8.1	15.0	19.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMRER FRONT SIDE
----	-----	-----	-----	-----	-----	-----
1	3110.	26.35	.68	3.07	3.78	19.87
2	3113.	27.82	1.38	3.26	4.04	14.00
3	3118.	24.51	.74	3.33	3.33	16.00
4	3103.	32.03	.80	3.21	4.16	16.00
6	3099.	36.67	1.45	3.02	4.04	12.00
7	3100.	33.15	1.20	3.16	4.11	8.61
8	3109.	32.17	1.02	3.25	4.24	13.33
9	3116.	25.71	.60	3.41	4.12	13.91
14	3109.	32.90	.84	3.36	4.23	15.89
15	3105.	29.51	-1.80	3.19	4.17	14.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	95.8830	90.6190	87.8080	91.9520	86.0120	94.9360
2	92.5790	89.7960	87.5030	88.8650	85.2330	94.6090
3	100.2480	96.2380	82.4320	89.0700	85.0510	94.5320
4	97.4610	96.7080	90.1290	93.5040	91.7690	97.4270
6	87.3990	84.1070	85.1890	85.4060	81.1150	92.8500
7	90.2740	88.4300	87.3980	87.1180	84.3850	94.2500
8	88.6350	83.3280	84.8890	86.5950	80.3660	92.5250
9	100.0880	97.3120	90.3880	95.9580	92.3390	97.7040
14	88.0660	82.1130	84.9760	84.9690	78.3730	91.6520
15	96.9630	94.6170	89.2070	93.8560	90.5390	96.8270

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	27.47	.72	3.32	4.09	19.87
2	28.98	1.46	3.53	4.37	14.00
3	27.58	.84	3.82	3.82	16.00
4	33.39	.84	3.48	4.50	16.00
6	37.52	1.50	3.29	4.41	12.00
7	34.35	1.26	3.41	4.43	7.54
8	32.93	1.05	3.54	4.62	13.33
9	26.82	.63	3.69	4.46	13.91
14	34.10	.88	3.62	4.56	15.89
15	30.48	-1.88	3.46	4.53	14.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	79.00	87.65	78.47	87.06
2	81.00	88.00	80.46	87.41
3	82.00	90.00	80.17	87.99
4	80.00	89.00	79.47	88.41
6	79.00	87.40	78.77	87.15
7	79.00	88.00	78.55	87.50
8	80.00	88.00	79.77	87.75
9	82.00	88.60	81.45	88.01
14	81.00	87.50	80.54	87.00
15	82.00	88.50	81.61	88.08

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	1648.	.6080	.4610	1523.	1.290	2471.
2	1620.	.5310	.4430	1455.	1.290	2471.
3	1657.	.6080	.4520	1518.	1.280	2406.
4	1710.	.5530	.4690	1485.	1.290	2471.
6	1673.	.4710	.4660	1464.	1.290	2467.
7	1615.	.4880	.4500	1471.	1.290	2472.
8	1720.	.5990	.4720	1514.	1.290	2467.
9	1677.	.6250	.4530	1473.	1.290	2471.
14	1625.	.5480	.4460	1430.	1.290	2472.
15	1603.	.6020	.4320	1464.	1.290	2469.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	1677.	.6000	.4540	1503.	2498.
2	1648.	.5240	.4370	1435.	2498.
3	1705.	.5810	.4320	1451.	2420.
4	1740.	.5450	.4630	1466.	2498.
6	1699.	.4680	.4630	1455.	2498.
7	1641.	.4830	.4450	1454.	2498.
8	1746.	.5960	.4700	-1505.	2498.
9	1706.	.6170	.4470	1453.	2498.
14	1651.	.5420	.4410	1413.	2498.
15	1629.	.5960	.4280	1450.	2498.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.242	269.3	3.6	10.0	-13.7
2	1.086	236.0	4.8	8.6	11.7
3	1.247	242.3	3.2	10.2	9.7
4	1.127	270.7	5.0	8.8	12.8
6	.954	282.4	6.9	7.1	11.2
7	.994	239.6	4.9	7.3	10.5
8	1.225	285.8	4.7	9.6	-13.9
9	1.283	246.2	3.8	10.7	-13.8
14	1.120	272.9	5.2	9.0	12.6
15	1.229	283.6	6.8	8.9	13.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	3084.	42.56	.98	2.61	3.56	-14.57
2	3089.	42.70	1.50	2.56	3.48	6.67
3	3096.	38.28	.87	2.66	2.66	10.67
4	3078.	47.06	1.48	2.50	3.65	9.27
6	3063.	57.72	2.42	2.39	3.75	6.62
7	3077.	47.20	1.67	2.35	3.39	5.30
8	3087.	45.82	1.31	2.54	3.66	7.33
9	3096.	37.80	1.00	2.69	3.47	7.28
14	3083.	47.83	1.58	2.58	3.61	8.67
15	3080.	45.23	1.87	2.32	3.51	9.27

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	59.9000	43.3620	66.1860	57.6670	41.2550	71.6930
2	59.8460	44.9890	67.1490	57.6440	42.7970	72.7290
3	67.5890	51.0710	64.5830	60.6610	45.4430	74.4620
4	63.9430	49.8890	69.9460	61.5580	47.4400	75.7350
6	57.6250	43.1180	65.9570	55.8470	41.6230	71.9420
7	59.1710	45.1590	67.5750	57.2650	43.1730	72.9780
8	61.3850	45.9170	67.6050	60.0430	44.3210	73.7330
9	63.7910	47.8830	68.8190	61.3830	45.5400	74.5240
14	58.3940	42.8440	66.1940	56.4980	40.9660	71.4960
15	63.1350	47.8550	68.7670	61.2620	45.8630	74.7320

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1		44.21			1.03			2.82				3.85		-14.57
2		44.33			1.58			2.77				3.77		6.67
3		42.66			.98			3.06				3.06		10.67
4		48.89			1.56			2.71				3.95		9.27
6		-58.98			2.51			2.61				4.10		6.62
7		48.77			1.75			2.54				3.66		5.30
8		46.85			1.35			2.77				3.99		7.33
9		-39.28			1.05			2.91				3.76		7.28
14		49.44			1.65			2.79				3.90		8.67
15		46.62			1.45			2.53				3.81		9.27

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	58.00	75.20	57.61	74.70
2	58.00	74.00	57.61	73.51
3	59.00	77.50	57.68	75.77
4	55.00	78.20	54.63	-77.68
6	55.00	74.30	54.84	74.09
7	53.00	74.90	52.70	74.47
8	55.50	74.75	55.34	74.53
9	55.00	74.00	54.63	73.51
14	60.00	74.50	59.66	74.07
15	58.00	76.90	57.72	76.53

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TFST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DFG R	EPR	THRUST LBF
1	980.	.5420	.3820	1374.	1.130	1210.
2	980.	.5120	.3860	1325.	1.130	1210.
3	1020.	.5370	.3930	1395.	1.130	1215.
4	1080.	.5090	-.4270	1363.	1.130	1210.
6	975.	.4670	.3960	1352.	1.130	1208.
7	972.	.4190	.4050	1356.	1.130	1210.
8	-1130.	.5030	-.4540	1368.	1.130	1208.
9	948.	.4690	.3890	1331.	1.130	1210.
14	987.	.5070	.3770	1293.	1.130	1210.
15	947.	.5160	.3630	1349.	1.130	1209.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 6

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	997.	.5340	.3770	1355.	1223.
2	997.	.5050	.3800	1307.	1223.
3	1050.	.5130	.3760	1334.	1223.
4	1099.	.5020	.4210	1345.	1223.
6	990.	.4640	.3940	1344.	1223.
7	987.	.4140	.4010	1340.	1223.
8	-1147.	.5010	-.4510	1360.	1223.
9	965.	.4620	.3830	1313.	1223.
14	1003.	.5010	.3720	-1278.	1223.
15	962.	.5110	.3590	1336.	1223.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.078	482.7	14.0	4.7	-9.4
2	1.024	425.4	16.2	3.7	7.8
3	1.079	410.8	10.3	5.6	5.4
4	1.015	439.5	12.4	4.2	9.1
6	.924	457.9	19.1	3.9	8.3
7	.832	384.0	11.4	3.5	7.0
8	1.003	462.9	14.6	4.9	-9.8
9	.937	385.0	12.7	4.7	7.7
14	1.011	459.3	13.3	4.1	8.2
15	1.031	435.5	15.3	4.7	-9.3

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 830 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3007.	85.66	4.26	1.37	2.75	5.96
2	3021.	79.86	5.24	1.14	2.40	2.67
3	3034.	73.50	3.17	1.64	1.64	5.30
4	3014.	83.08	4.02	1.31	2.81	3.33
6	2994.	94.40	6.77	1.32	2.80	2.00
7	3005.	88.26	4.50	1.31	2.66	3.33
8	3011.	88.41	4.79	1.53	3.06	2.67
9	3022.	79.04	4.47	1.60	2.59	3.31
14	3014.	87.17	4.34	1.28	2.57	4.64
15	3015.	81.08	4.90	1.42	2.84	4.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	33.0430	15.2260	44.9400	31.9180	14.5290	48.7940
2	31.5350	14.1570	43.7740	30.4740	13.5120	47.5350
3	36.3980	17.4140	43.1140	33.0670	15.6620	50.1320
4	36.7870	-18.8430	-48.5550	-35.5250	-17.9700	-52.6950
6	31.3870	14.4840	44.0950	30.7540	14.0010	48.1470
7	31.7060	14.9500	44.8620	30.7750	14.3310	48.5530
8	32.1380	14.8840	44.5310	31.4870	14.3870	48.6210
9	31.2010	14.1570	43.7740	30.1600	13.5120	47.5350
14	31.9700	14.5930	44.4710	31.0160	13.9890	48.1330
15	35.0170	17.2420	46.9900	34.0640	16.5600	51.1530

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 6

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	88.68	4.46	1.49	2.98	5.96
2	82.64	5.49	1.24	2.60	2.67
3	80.90	3.53	1.91	1.91	5.30
4	86.03	4.21	1.42	3.05	3.33
6	96.74	7.00	1.45	3.05	2.00
7	90.94	4.69	1.42	2.88	2.02
8	90.24	4.95	1.67	3.34	2.67
9	81.76	4.68	1.73	2.91	2.02
14	89.85	4.53	1.38	2.78	4.64
15	83.35	5.10	1.55	3.09	2.73

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 800 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	31.00	49.50	30.79	49.17
2	32.00	50.00	31.79	49.67
3	30.00	50.00	29.33	48.88
4	35.00	50.20	34.77	49.86
6	30.00	49.90	29.91	49.76
7	28.00	50.00	27.84	49.71
8	31.00	49.75	30.91	49.61
9	32.00	50.00	31.79	49.67
14	35.00	50.00	34.80	49.71
15	29.00	50.00	28.86	49.74

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	573.	-.6010	.4810	1480.	1.060	309.
2	533.	.5100	.4330	1397.	1.060	317.
3	530.	.5720	.4640	1496.	1.040	306.
4	555.	.5140	.4160	1417.	1.040	320.
6	-823.	.4780	-.7030	1403.	1.050	317.
7	543.	.4550	.4940	1431.	1.070	317.
8	-608.	.5370	.5060	1425.	1.060	315.
9	570.	.4680	.4630	1395.	1.050	317.
14	567.	.5140	.4250	1365.	-1.080	317.
15	530.	.5140	.4670	1444.	1.060	318.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 300 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LAF
1	583.	-.5930	.4750	1460.	313.
2	543.	.5030	.4270	1379.	320.
3	545.	.5470	.4440	1430.	308.
4	565.	.5070	.4100	1398.	323.
6	-836.	.4750	-.6990	1394.	321.
7	552.	.4500	.4880	1415.	321.
8	-618.	.5340	.5030	1417.	319.
9	580.	.4620	.4570	1377.	320.
14	576.	.5080	.4210	1349.	321.
15	539.	.5090	.4620	1430.	321.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.143	943.0	62.5	4.3	-7.8
2	.963	831.7	69.8	3.4	6.0
3	1.089	897.0	59.6	4.1	3.4
4	.959	933.2	70.7	3.1	6.3
6	.893	858.0	64.8	3.7	7.0
7	.861	755.6	43.6	2.9	5.3
8	1.013	902.0	69.2	4.3	-8.0
9	.890	678.5	35.7	3.7	5.7
14	.968	866.0	70.2	3.7	6.5
15	.962	885.5	76.7	4.0	6.8

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 7

UNIT	CO2 FI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2870.	150.66	17.15	1.12	2.06	0.00
2	2852.	156.80	22.60	1.04	1.85	0.00
3	2874.	150.63	17.19	1.14	1.14	0.00
4	2819.	174.66	22.73	.96	1.94	0.00
6	2827.	172.85	22.43	1.23	2.30	0.00
7	2861.	159.81	15.83	1.00	1.85	0.00
8	2850.	161.60	21.31	1.26	2.35	0.00
9	-2904.	-139.53	12.60	1.24	1.92	0.00
14	2846.	162.04	22.57	1.15	1.90	0.00
15	2828.	165.69	24.65	1.23	2.09	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	17.4530	3.7720	27.4870	16.9130	3.6120	29.9220
2	17.7070	3.8680	27.7390	17.1570	3.7030	30.1950
3	18.2500	3.9100	25.3520	16.7720	3.5590	29.7650
4	17.8090	3.9070	27.8400	17.2560	3.7400	30.3050
6	17.5380	3.8430	27.6700	17.2020	3.7200	30.2450
7	17.6670	3.8620	27.8630	17.1810	3.7120	30.2210
8	17.4620	3.8150	27.5950	17.1280	3.6920	30.1630
9	17.7070	3.8680	27.7390	17.1570	3.7030	30.1950
14	17.6670	3.8620	27.8630	17.1810	3.7120	30.2210
15	17.6450	3.8640	27.7290	17.2040	3.7210	30.2470

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	155.47	17.91	1.22	2.24	0.00
2	161.82	23.61	1.14	2.01	0.00
3	163.90	18.88	1.34	1.34	0.00
4	180.26	23.74	1.05	2.11	0.00
6	176.22	23.18	1.34	2.52	0.00
7	164.33	16.46	1.09	2.01	0.00
8	164.75	22.01	1.38	2.57	0.00
9	-144.00	13.16	1.35	2.09	0.00
14	166.62	23.49	1.24	2.16	0.00
15	169.94	25.60	1.34	2.28	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE A

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	29.00	47.00	28.81	46.69
2	30.00	47.00	29.80	46.69
3	28.00	47.00	27.37	45.95
4	32.00	46.50	31.79	48.18
6	28.00	46.50	27.92	46.37
7	-25.00	-49.50	-24.86	49.22
8	30.00	49.00	29.91	48.86
9	30.00	47.50	29.80	47.18
14	32.00	47.90	31.82	47.63
15	27.00	47.00	26.87	46.78

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	T17 DEG R	EPR	THRUST LRF
1	540.	.5710	.4970	1503.	1.060	275.
2	567.	.5100	.5060	1422.	1.060	275.
3	507.	.5610	.4910	1520.	1.040	267.
4	540.	.5320	.4470	1437.	1.040	294.
6	510.	.4800	.4850	1466.	1.050	271.
7	540.	.4630	.5440	1445.	1.070	-310.
8	550.	.5230	.4760	1442.	1.060	304.
9	552.	.4860	.4890	1433.	1.050	282.
14	537.	.5300	.4470	1385.	-1.080	287.
15	510.	.4970	.4990	1469.	1.060	276.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TFST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	549.	.5640	.4900	1483.	278.
2	577.	.5030	.4990	1403.	278.
3	521.	.5360	.4690	1452.	269.
4	549.	.5250	.4810	1418.	298.
6	518.	.4770	.4820	1457.	274.
7	549.	.4580	.5380	1427.	-313.
8	558.	.5200	.4730	1434.	308.
9	561.	.4790	.4830	1414.	285.
14	545.	.5240	.4420	-1369.	290.
15	518.	.4920	.4940	1455.	279.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.075	962.6	70.2	4.2	-7.7
2	.956	862.3	79.1	3.3	5.9
3	1.061	912.7	64.3	4.0	3.2
4	.991	966.7	76.6	3.1	6.3
6	.888	924.0	72.6	3.8	7.0
7	.877	762.2	46.4	3.0	5.5
8	.980	935.7	72.1	4.3	-8.0
9	.928	731.6	43.7	3.3	5.6
14	.996	901.6	77.3	3.8	6.4
15	.919	921.1	84.8	4.1	7.0

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMAER FRONT SIDE
1	2843.	162.03	20.31	1.17	2.13	0.00
2	2834.	162.71	25.63	1.02	1.84	0.00
3	2860.	156.53	18.95	1.13	1.13	0.00
4	2816.	174.77	23.78	.92	1.88	0.00
6	2800.	185.43	25.04	1.27	2.31	0.00
7	2862.	158.23	16.53	1.01	1.86	0.00
8	2830.	172.01	22.79	1.29	2.43	0.00
9	2890.	144.92	14.86	1.23	1.83	0.00
14	2840.	163.53	24.07	1.12	1.91	0.00
15	2798.	178.47	28.24	1.31	2.21	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	16.2170	3.3180	26.2390	15.7200	3.1780	28.5720
2	16.2170	3.3180	25.2390	15.7200	3.1780	28.5720
3	16.7090	3.3530	23.9720	15.3770	3.0570	28.1760
4	16.9520	3.5860	26.9850	16.4300	3.4340	29.3790
6	15.8710	3.2280	25.9780	15.5710	3.1250	28.3990
7	17.4140	-3.7660	27.6090	16.9360	3.6200	29.9480
8	17.0870	-3.6730	27.2180	16.7610	3.5550	29.7520
9	16.4600	3.4060	26.4860	15.9550	3.2620	28.8400
14	16.6190	3.4710	26.8050	16.1650	3.3380	29.0800
15	16.1620	3.3150	26.2310	15.7620	3.1930	28.6200

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 800 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI	NREC HC EI	NRE CNO EI	NR CNOX EI	SMK NUMBER
	LB/KLB FU	LB/KLB FU	LB/KLB FU	LB/KLB FU	CORRECTED
1	167.15	21.21	1.27	2.32	0.00
2	167.85	26.76	1.11	2.00	0.00
3	170.09	20.79	1.32	1.32	0.00
4	180.32	24.83	1.00	2.05	0.00
6	189.01	25.86	1.39	2.53	0.00
7	162.70	17.20	1.10	2.02	0.00
8	175.36	23.54	1.41	2.66	0.00
9	-149.51	15.52	1.33	2.00	0.00
14	168.12	25.04	1.21	2.07	0.00
15	182.99	29.32	1.43	2.42	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

UNIT	TSO HR	TSR HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID LB H2O/AIR
1	1859.	962.	539.7	30.09	.009670
6	1405.	1074.	542.7	30.08	.011130
7	3967.	1053.	542.7	30.08	.011130
8	3642.	1129.	542.7	30.09	.011130
9	3471.	945.	539.7	30.09	.009670
10	3583.	1205.	535.7	30.11	.015040
11	1559.	1021.	542.7	30.09	.011130
13	4088.	1064.	542.7	30.10	.011120
15	1434.	922.	542.7	30.08	.011130
16	3324.	1024.	542.7	30.09	.011130

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	48.00	31.37	47.06
6	28.00	47.00	27.37	45.95
7	30.00	47.50	29.33	46.44
8	28.00	47.00	27.37	45.95
9	-33.00	47.00	32.35	46.08
10	29.00	46.50	28.54	45.76
11	31.00	47.50	30.31	46.44
13	25.00	48.00	24.44	46.93
15	28.00	47.50	27.37	46.44
16	29.00	46.50	28.35	45.46

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	483.	.6140	.4100	1521.	1.055	281.
6	560.	.5550	.5430	1520.	1.060	267.
7	510.	.5330	.4620	1503.	-1.080	274.
8	503.	.4910	.4880	1478.	1.040	267.
9	480.	.5470	-.4010	1536.	1.050	269.
10	500.	.6020	.4700	1523.	1.040	265.
11	-693.	.6170	-.6100	1521.	1.060	274.
13	498.	.5390	.5250	1518.	1.050	280.
15	500.	.5230	.4810	1512.	1.060	274.
16	503.	.5270	.4760	1496.	1.050	261.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	496.	.5910	-.3940	1462.	283.
6	576.	.5300	.5190	1452.	269.
7	524.	.5100	.4420	1437.	275.
8	518.	.4690	.4660	1413.	269.
9	492.	.5260	-.3850	1476.	270.
10	511.	.5830	.4550	1475.	266.
11	-713.	.5890	.5830	1454.	275.
13	513.	.5160	.5020	1451.	281.
15	514.	.4990	.4600	1445.	275.
16	518.	.5040	.4550	1430.	263.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.168	982.8	63.3	5.3	7.5
6	1.055	904.9	46.9	4.1	3.4
7	1.024	786.5	44.5	3.8	3.1
8	.928	826.4	53.8	4.0	4.1
9	1.019	980.2	84.6	4.8	4.3
10	1.144	948.5	68.8	4.7	5.9
11	1.164	-1036.1	66.9	4.7	2.7
13	1.020	884.0	65.0	4.5	5.5
15	.986	880.4	58.9	3.7	3.0
16	1.000	846.1	57.5	3.7	3.6

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2870.	153.70	17.00	1.35	1.92	0.00
6	2873.	156.86	13.98	1.16	1.16	0.00
7	-2900.	-141.80	13.79	1.14	1.14	0.00
8	2856.	161.96	18.11	1.30	1.31	0.00
9	2813.	172.16	25.52	1.38	1.38	0.00
10	2868.	151.41	18.87	1.23	1.55	0.00
11	2851.	161.47	17.90	1.22	1.22	0.00
13	2858.	157.61	19.92	1.31	1.62	0.00
15	2852.	162.06	18.64	1.13	1.13	0.00
16	2864.	154.28	18.02	1.11	1.11	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	17.1080	3.5180	25.0220	15.8950	3.2400	28.7720
6	16.7000	3.3490	23.9590	15.3770	3.0570	28.1760
7	16.9510	3.4370	24.1870	15.6040	3.1370	28.4380
8	16.7040	3.3510	23.9650	15.3770	3.0570	28.1760
9	16.6070	3.3400	24.5550	15.4360	3.0780	28.2440
10	16.2400	3.2430	-21.8720	15.2870	3.0260	28.0720
11	16.9550	3.4390	24.1930	15.6040	3.1370	28.4380
13	17.2130	3.5320	24.4280	15.8340	3.2180	28.7010
15	16.9510	3.4370	24.1870	15.6040	3.1370	28.4380
16	16.4560	3.2640	23.7380	15.1510	2.9780	27.9140

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 1

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
1	165.43			18.46				1.56			2.21		0.00	
6	170.37			15.32				1.37			1.37		0.00	
7	154.04			15.11				1.34			1.34		0.00	
8	175.94			19.85				1.52			1.54		0.00	
9	185.22			27.69				1.58			1.58		0.00	
10	160.85			20.22				1.58			1.99		0.00	
11	175.45			19.63				1.43			1.43		0.00	
13	171.34			21.86				1.55			1.90		0.00	
15	176.05			20.43				1.33			1.33		0.00	
16	167.56			19.75				1.31			1.31		0.00	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 2

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-34.00	49.50	33.33	-48.53
6	30.00	50.00	29.33	48.88
7	32.50	50.50	31.77	49.37
8	30.00	50.00	29.33	48.88
9	-34.00	50.00	33.33	49.02
10	31.00	50.50	30.50	49.69
11	33.00	50.00	32.26	48.88
13	28.00	50.50	-27.37	49.37
15	30.00	49.50	29.33	-48.39
16	32.00	50.00	31.28	48.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	570.	.6050	.4500	1507.	1.060	301.
6	597.	.5490	.5230	1505.	1.060	307.
7	548.	.5210	.4460	1480.	-1.080	314.
8	547.	.4680	.4790	1466.	1.040	306.
9	512.	.5330	-.4010	1514.	1.050	309.
10	533.	.6010	.4480	1499.	1.040	318.
11	-727.	.5980	-.5870	1507.	1.060	306.
13	533.	.5320	.4920	1496.	1.050	314.
15	530.	.5160	.4680	1496.	1.060	-299.
16	540.	.5030	.4480	1467.	1.050	306.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	COR TT7 DFG R	COR THRUST LAF
1	585.	.5810	.4320	1448.	303.
6	614.	.5250	.5000	1439.	308.
7	564.	.4980	.4260	1414.	316.
8	562.	.4480	.4580	1401.	308.
9	525.	.5120	-.3860	1455.	310.
10	545.	.5820	.4340	1451.	320.
11	-748.	.5710	-.5610	1440.	308.
13	549.	.5090	.4700	1430.	316.
15	545.	.4930	.4470	1430.	-301.
16	555.	.4800	.4280	1402.	308.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 2

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.152	955.7	60.3	4.9	7.9
6	1.047	874.9	42.0	3.8	3.8
7	1.004	748.9	39.8	3.5	3.5
8	.887	778.5	48.2	3.8	5.4
9	.999	910.5	72.9	4.4	4.8
10	1.149	904.5	58.8	4.6	7.0
11	1.128	-1016.7	64.5	4.2	3.8
13	1.010	851.6	60.5	4.4	5.8
15	.975	870.6	56.0	3.6	3.4
16	.953	801.3	54.2	3.8	3.7

NOTE.. MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODF 2

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2874.	151.83	16.45	1.29	2.06	0.00
6	2883.	153.24	12.65	1.09	1.09	0.00
7	-2909.	-138.12	12.62	1.05	1.07	0.00
8	2862.	159.98	17.03	1.29	1.81	0.00
9	2833.	164.43	22.62	1.30	1.43	0.00
10	2887.	144.66	16.15	1.22	1.84	0.00
11	2848.	163.43	17.80	1.11	1.11	0.00
13	2867.	153.86	18.78	1.31	1.73	0.00
15	2854.	162.22	17.94	1.10	1.10	0.00
16	2866.	153.37	17.83	1.18	1.18	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIFS *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	17.8760	3.7980	25.7290	-16.5990	-3.4960	-29.5710
6	18.2410	3.9050	25.3390	16.7720	3.5590	29.7650
7	18.5050	4.0040	25.5720	17.0120	3.6490	30.0330
8	18.2450	3.9080	25.3460	16.7720	3.5590	29.7650
9	18.1370	3.8940	25.9670	16.8380	3.5840	29.8390
10	18.2640	3.9790	-23.5630	17.1700	3.7080	30.2100
11	18.2450	3.9080	25.3460	16.7720	3.5590	29.7650
13	18.5150	4.0090	25.5850	17.0120	3.6490	30.0330
15	17.9780	3.8080	25.1070	-16.5340	-3.4720	-29.4970
16	18.2450	3.9080	25.3460	16.7720	3.5590	29.7650

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 2

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	163.51	17.86	1.48	2.36	0.00
6	166.66	13.88	1.28	1.28	0.00
7	150.25	13.85	1.23	1.26	0.00
8	174.03	18.69	1.51	2.12	0.00
9	177.11	24.58	1.50	1.65	0.00
10	153.87	17.33	1.57	2.36	0.00
11	177.78	19.54	1.31	1.31	0.00
13	161.45	20.63	1.53	2.03	0.00
15	176.38	19.67	1.30	1.30	0.00
16	166.84	19.58	1.39	1.39	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	102.00	100.00	100.00	98.04
6	98.00	98.50	-95.81	96.30
7	101.00	98.50	98.74	96.30
8	100.00	99.00	97.76	96.79
9	100.00	99.50	98.04	97.54
10	100.00	98.50	98.40	96.92
11	-103.00	98.75	100.70	96.54
13	98.00	99.00	-95.81	96.79
15	-102.50	99.50	100.21	97.28
16	-105.00	99.00	-102.65	96.79

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DFG R	FPR	THRUST LRF
1	2818.	-.9350	.6280	1790.	-1.490	-3908.
6	2752.	.8830	.6350	1804.	1.515	4083.
7	2607.	.6810	.5880	-1880.	-1.510	4048.
8	2690.	.6720	.6110	1770.	-1.510	4047.
9	2745.	.7250	.6210	1784.	1.520	4117.
10	2567.	.7490	.5790	1779.	1.530	4183.
11	-2952.	.8770	-.6560	1791.	-1.500	-3977.
13	2560.	.8460	.5900	1762.	-1.510	-4046.
15	2642.	.7850	.5890	1763.	-1.510	4048.
16	2652.	.7720	.5810	1775.	-1.510	4047.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	2891.	-.8980	.6030	1720.	-3930.
6	2830.	.8440	.6070	1724.	4105.
7	2681.	.6510	.5620	-1797.	-4070.
8	2767.	.6420	.5840	1691.	-4070.
9	2816.	.6970	.5970	1715.	4140.
10	2625.	.7250	.5610	1722.	4210.
11	-3036.	.8380	.6270	1712.	-4000.
13	2634.	.8080	.5640	1684.	-4070.
15	2717.	.7510	.5620	1685.	-4070.
16	2728.	.7380	.5550	1697.	-4070.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.936	242.3	7.7	-20.8	-24.3
6	1.827	240.3	4.6	19.8	20.9
7	1.409	-167.5	3.0	15.4	15.7
8	1.385	195.1	-11.8	15.5	17.6
9	1.494	211.5	4.3	16.0	17.3
10	1.549	202.0	4.2	16.2	18.3
11	1.811	234.8	-11.0	19.6	21.4
13	1.753	215.1	3.0	18.5	21.8
15	1.624	214.1	3.8	17.6	18.7
16	1.598	196.8	2.9	17.3	18.8

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3115.	24.82	1.36	3.50	4.08	16.00
6	3115.	26.07	.86	3.52	3.73	13.25
7	3121.	23.62	.72	3.57	3.63	10.74
8	3109.	27.88	-2.90	3.65	4.14	13.33
9	3107.	27.98	.98	3.49	3.76	13.91
10	3115.	25.85	.93	3.41	3.84	13.91
11	3108.	25.65	2.06	3.52	3.84	20.00
13	3121.	24.37	.59	3.45	4.07	19.21
15	3115.	26.14	.79	3.52	3.75	16.00
16	3116.	24.43	.61	3.54	3.84	14.77

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-126.4590	-121.8300	93.8970	112.7510	108.8560	105.4010
6	116.5510	110.8500	87.6090	102.7600	97.8710	100.3480
7	108.3010	110.8500	87.6090	96.1750	97.8710	100.3480
8	110.2430	114.3710	88.8950	97.8490	100.8610	101.7490
9	114.4800	118.1900	92.5720	102.8260	105.6570	103.9550
10	110.5700	111.6830	-81.1230	101.2160	101.7210	102.1480
11	117.5570	112.6320	88.2610	103.6120	99.3560	101.0470
13	117.4400	114.4390	88.9180	103.5730	100.8610	101.7490
15	117.2120	117.8460	90.1500	103.5890	103.9290	103.1650
16	114.2810	114.3710	88.8950	101.0800	100.8610	101.7490

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 3

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	27.84	1.52	3.93	4.58	16.00
6	29.57	.97	4.03	4.27	13.25
7	26.59	.81	4.09	4.15	10.74
8	31.42	-3.29	4.17	4.74	13.33
9	31.15	1.10	3.92	4.22	13.91
10	28.24	1.02	4.29	4.83	12.75
11	29.10	-2.34	4.03	4.40	20.00
13	27.64	.67	3.95	4.65	19.21
15	29.58	.90	4.03	4.29	16.00
16	27.62	.69	4.05	4.40	14.77

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	100.00	-97.50	98.04	95.58
6	92.00	95.25	-89.94	-93.12
7	99.00	96.00	95.81	93.85
8	99.00	96.00	96.79	93.85
9	100.00	-97.50	98.04	95.58
10	98.00	96.50	96.43	94.96
11	100.00	96.50	97.76	94.34
13	95.00	97.00	92.88	94.83
15	98.00	97.00	95.81	94.83
16	100.00	96.50	97.76	94.34

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	2530.	-.8670	.5740	1723.	1.450	3629.
6	2427.	.7760	.5890	1716.	1.450	3631.
7	2305.	.6350	.5340	1671.	1.450	3631.
8	2353.	.6020	.5410	1683.	1.450	3629.
9	2483.	.6680	.5630	1712.	1.470	3769.
10	2297.	.6770	.5270	1701.	1.470	3766.
11	-2658.	-.8270	-.6060	1721.	1.450	3629.
13	2297.	-.7940	.5430	1699.	1.450	3628.
15	2322.	.6990	.5370	1676.	1.450	3631.
16	2305.	.6950	.5250	1680.	1.450	3629.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
1	-2595.	-.8340	.5520	1656.	3650.
6	2495.	.7420	.5630	1640.	3650.
7	2370.	.6070	.5100	1597.	3650.
8	2421.	-.5760	.5170	1609.	3650.
9	2547.	.6420	.5420	1645.	3790.
10	2349.	.6550	.5110	1647.	3790.
11	-2735.	.7910	.5790	1645.	3650.
13	2363.	.7590	.5190	1623.	3650.
15	2387.	.6680	.5130	1602.	3650.
16	2371.	.6640	.5020	1605.	3650.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODF 4

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.794	245.3	4.4	-17.8	-21.9
6	1.601	236.2	4.4	15.8	17.4
7	1.313	-167.9	2.7	13.4	13.5
8	1.239	193.7	-8.8	12.5	15.1
9	1.375	209.0	3.4	13.9	15.6
10	1.395	209.4	3.4	13.6	16.2
11	-1.705	244.1	-9.3	-17.2	19.4
13	-1.643	219.4	2.4	16.3	-19.9
15	1.440	224.0	3.4	14.3	15.8
16	1.433	201.4	3.1	14.1	15.9

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 4

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3113.	27.09	.83	3.23	3.97	17.33
6	3110.	29.19	.94	3.21	3.54	8.11
7	-3119.	25.37	.70	3.32	3.35	9.33
8	3105.	30.89	-2.40	3.26	3.96	10.60
9	3104.	30.02	.85	3.28	3.68	13.33
10	3109.	29.70	.83	3.18	3.78	10.67
11	3104.	28.28	-1.85	3.27	3.70	18.00
13	3117.	26.50	.50	3.24	3.95	16.78
15	3108.	30.75	.80	3.22	3.57	14.09
16	3110.	27.82	.73	3.20	3.61	12.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-110.8830	-104.5410	87.4270	-99.3560	93.6430	98.3340
6	95.9020	85.6670	-78.8430	85.1800	-75.8910	-90.5490
7	95.0480	91.8370	80.9620	84.7520	81.2980	92.9290
8	94.0350	91.8920	80.9830	83.9160	81.2980	92.9290
9	-103.2790	-104.5410	87.4270	93.1110	93.6430	98.3340
10	99.1410	98.5890	-76.5890	91.0630	89.9420	96.5640
11	-104.2740	96.1800	82.4110	92.3130	85.0510	94.5320
13	-105.7300	-100.6700	83.8720	93.6420	88.9260	96.1470
15	102.2090	-100.5500	83.8290	90.8630	88.9260	96.1470
16	99.5210	96.1800	82.4110	88.5070	85.0510	94.5320

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 4

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	30.24	.93	3.63	4.47	17.33
6	32.86	1.06	3.68	4.06	8.11
7	28.45	.79	3.81	3.85	9.33
8	34.62	-2.71	3.74	4.54	10.60
9	33.30	.95	3.69	4.14	13.33
10	32.74	.91	4.01	4.77	10.67
11	31.95	-2.10	3.75	4.24	18.00
13	29.92	.57	3.72	4.53	16.78
15	34.59	.91	3.69	4.10	14.09
16	31.29	.83	3.67	4.14	12.67

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	-85.00	90.00	-83.33	88.23
6	78.00	88.00	-76.26	-86.03
7	82.00	89.00	80.17	87.01
8	80.00	89.00	78.21	87.01
9	-85.00	-90.50	-83.33	-88.72
10	81.50	89.75	80.20	88.31
11	-84.50	88.75	82.61	86.77
13	78.50	89.75	-76.74	87.74
15	82.00	90.00	80.17	87.99
16	83.00	90.00	81.14	87.99

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	-1723.	-.7240	.4570	1521.	1.280	2406.
6	1642.	.6270	.4720	1514.	1.280	2407.
7	1575.	.5400	.4330	1493.	1.280	2407.
8	1610.	.4580	.4510	1520.	1.280	2406.
9	1672.	.5400	.4420	1521.	1.285	2445.
10	1600.	.5690	.4360	1521.	1.290	2482.
11	-1842.	-.6720	-.4960	1506.	1.280	2406.
13	1595.	.6400	.4500	1523.	1.280	2406.
15	1598.	.5800	.4360	1493.	1.280	2407.
16	1627.	.5420	.4400	1491.	1.280	2406.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1768.	-.6960	.4390	1462.	2420.
6	1688.	.6000	.4510	1447.	2420.
7	1620.	.5160	-.4140	1427.	2420.
8	1656.	-.4370	.4310	1452.	2420.
9	1715.	.5190	.4250	1462.	2459.
10	1636.	.5510	.4230	1473.	2498.
11	-1894.	.6420	.4740	1439.	2420.
13	1641.	.6120	.4300	1456.	2420.
15	1644.	.5540	.4170	1427.	2420.
16	1673.	.5180	.4210	1425.	2420.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TFST SERIES *

 MODC 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
-----	-----	-----	-----	-----	-----
1	-1.483	-324.8	4.1	10.9	-15.1
6	1.284	279.4	4.5	10.0	10.9
7	1.107	216.1	3.5	8.8	8.9
8	.932	224.3	7.3	7.4	9.8
9	1.102	249.4	4.2	8.7	10.1
10	1.165	249.1	4.3	8.8	11.6
11	-1.373	300.1	6.8	10.4	12.2
13	1.312	280.4	3.8	10.1	13.3
15	1.185	269.7	4.4	9.0	10.1
16	1.110	218.4	4.1	8.7	10.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 5

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3088.	43.04	.94	2.37	3.29	-13.33
6	3088.	42.75	1.18	2.51	2.73	4.70
7	3097.	38.48	1.07	2.57	2.61	7.33
8	3079.	47.15	2.63	2.56	3.37	6.62
9	3080.	44.38	1.29	2.54	2.96	7.33
10	3089.	42.04	1.24	2.44	3.21	6.00
11	3082.	42.85	1.66	2.45	2.85	-13.25
13	3092.	42.06	.99	2.49	3.27	10.53
15	3085.	44.66	1.25	2.45	2.75	8.67
16	3092.	38.73	1.24	2.53	2.90	6.71

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 5

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	-70.2860	51.6710	66.5020	-63.7020	46.6020	75.2040
6	60.1270	41.3370	-59.4060	54.0920	-36.9170	-68.6630
7	62.3020	45.9840	61.9470	56.1190	41.0160	71.5300
8	60.8490	46.0120	61.9630	54.9190	41.0160	71.5300
9	-68.3890	-54.3540	67.8610	62.2480	-48.9950	-76.7070
10	66.2920	51.2650	-59.6150	61.3300	47.0000	75.4570
11	63.8740	44.8140	61.3220	57.3200	39.9610	70.8080
13	67.2440	49.7760	63.9260	60.3130	44.3040	73.7230
15	66.9850	51.0100	64.5490	60.1980	45.4430	74.4620
16	66.2350	51.0410	64.5660	59.5730	45.4430	74.4620

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 5

UNIT	NREC LB/KLA	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	EI	NR LA/KLA	CNOX FU	EI	SMK CORRECTED	NUMBER
1		47.49			1.04			2.69			3.72		-13.33	
6		47.52			1.32			2.90			3.15		4.70	
7		42.72			1.20			2.96			3.01		7.33	
8		52.24			-2.95			2.96			3.89		6.62	
9		48.76			1.43			2.87			3.35		7.33	
10		45.45			1.35			3.09			4.06		6.00	
11		47.75			1.87			2.83			3.30		-13.25	
13		46.90			1.11			2.87			3.77		10.53	
15		49.70			1.40			2.83			3.18		8.67	
16		43.06			1.39			2.92			3.35		6.71	

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	60.00	76.75	58.82	75.24
6	55.00	74.50	53.77	72.83
7	55.00	74.00	53.77	72.35
8	60.00	76.00	58.66	74.30
9	55.00	-78.50	53.92	76.96
10	59.00	76.50	58.06	75.28
11	60.00	76.25	58.66	74.54
13	55.00	78.00	53.77	76.26
15	58.00	77.00	56.70	75.28
16	61.00	-79.00	59.64	-77.23

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	1040.	-.5940	.3970	1374.	1.130	1216.
6	997.	.5180	.4150	1377.	1.130	1216.
7	1007.	.4530	.4210	1365.	1.130	1216.
8	992.	.4370	.3820	1385.	1.130	1216.
9	-1207.	.4750	-.4840	1395.	1.130	1216.
10	1000.	.5060	.3860	1394.	1.130	1215.
11	-1182.	.5520	-.4540	1395.	1.130	1216.
13	998.	.5310	.4030	1412.	-1.140	-1297.
15	970.	.4930	.3800	1370.	1.130	1216.
16	1035.	.4800	.3840	1359.	1.130	1216.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LRM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DFG R	COR THRUST LBF
1	1067.	-.5710	.3820	1320.	1223.
6	1025.	.4950	.3970	1316.	1223.
7	1035.	.4330	.4020	1304.	1223.
8	1020.	.4180	.3650	1323.	1223.
9	-1238.	.4570	-.4650	1341.	1223.
10	1023.	.4900	.3740	1350.	1223.
11	-1216.	.5280	-.4340	1334.	1223.
13	1027.	.5070	.3850	1349.	-1305.
15	997.	.4710	.3630	1310.	1223.
16	1065.	.4590	.3670	1299.	1223.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.187	-515.1	14.2	5.7	-10.3
6	1.038	423.7	7.9	4.9	5.9
7	.906	382.8	10.4	4.1	4.6
8	.871	391.7	14.3	3.9	7.0
9	.949	399.0	11.4	4.3	6.7
10	1.014	403.1	12.3	4.9	8.4
11	1.102	476.0	13.3	4.8	6.5
13	1.064	435.3	10.5	5.0	8.4
15	.981	446.6	14.4	4.2	5.6
16	.965	343.5	10.0	4.4	5.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	3017.	83.28	3.93	1.51	2.73	4.03
6	3028.	78.68	2.51	1.51	1.81	3.29
7	3022.	81.25	3.78	1.44	1.62	4.67
8	3010.	86.15	5.41	1.41	2.53	3.33
9	3016.	80.72	3.95	1.44	2.23	5.26
10	3027.	76.58	4.00	1.52	2.62	2.67
11	3013.	82.82	3.97	1.37	1.85	6.00
13	3028.	78.86	3.26	1.48	2.50	4.67
15	3008.	87.13	4.84	1.34	1.80	5.30
16	3038.	-68.81	3.43	1.46	1.88	4.70

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 6

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	35.7750	16.5380	43.3720	32.8490	15.0650	49.4350
6	32.6340	14.3690	40.2000	29.7240	12.9600	46.8310
7	31.5820	13.9310	-39.7540	28.8160	12.5690	46.3200
8	33.6060	15.7480	41.5620	30.6360	14.1840	48.3730
9	-37.1530	-18.7630	45.4160	34.1690	-17.0750	-51.7240
10	34.5420	16.3410	-38.8420	32.2410	15.1040	49.4810
11	34.8820	15.9850	41.7880	31.7090	14.3960	48.6320
13	-37.0560	-18.0540	43.6850	33.6600	16.2320	50.7830
15	35.2610	16.7700	42.5230	32.0950	15.1060	49.4830
16	-38.0050	-19.3700	44.8260	-34.5520	-17.4140	-52.0950

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIFS *

MODE 6

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLA FU	NR CNOX EI LB/KLA FU	SMK NUMBER CORRECTED
1	90.70	4.32	1.72	3.11	4.03
6	86.38	-2.78	1.76	2.10	3.29
7	89.05	4.19	1.68	1.88	4.67
8	94.51	6.01	1.65	2.94	3.33
9	87.77	4.34	1.63	2.54	5.26
10	82.04	4.33	1.93	3.34	2.67
11	91.11	4.41	1.59	2.16	6.00
13	86.82	3.62	1.72	2.91	4.67
15	95.73	5.37	1.56	2.09	5.30
16	-75.69	3.81	1.70	2.19	4.70

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	34.50	50.00	33.82	49.02
6	30.00	50.00	29.33	48.88
7	32.00	50.00	31.28	48.88
8	35.00	50.00	34.22	48.88
9	-37.00	50.00	-36.27	49.02
10	31.00	50.50	30.50	49.69
11	35.00	50.50	34.22	49.37
13	-25.00	50.00	-24.44	48.88
15	30.00	50.50	29.33	49.37
16	31.00	50.00	30.31	48.88

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
1	567.	-.5960	.4390	1489.	1.060	309.
6	570.	.5130	.5000	1457.	1.060	307.
7	533.	.5150	.4420	1472.	-1.080	307.
8	533.	.4640	.4090	1446.	1.050	306.
9	517.	.5250	.3760	1498.	1.050	309.
10	500.	.5310	.4200	1466.	1.040	318.
11	-722.	.5620	-.5500	1467.	1.060	314.
13	513.	.5260	.5240	1493.	1.050	306.
15	535.	.5280	.4660	1433.	1.060	314.
16	513.	.5060	.4370	1435.	1.050	306.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CORR FU FL LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	581.	-.5730	.4220	1431.	310.
6	586.	.4900	.4770	1392.	308.
7	548.	.4920	.4230	1407.	308.
8	549.	.4440	.3910	1382.	308.
9	530.	.5040	-.3620	1440.	310.
10	511.	.5140	.4070	1419.	320.
11	-742.	.5380	.5260	1402.	316.
13	528.	.5020	.5010	1427.	308.
15	550.	.5050	.4450	1370.	316.
16	528.	.4830	.4180	1371.	308.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.137	927.8	54.2	4.7	-7.9
6	.984	772.6	35.8	3.6	3.4
7	.990	753.1	37.9	3.6	3.4
8	.876	797.5	50.1	3.3	5.5
9	.988	876.4	64.4	3.9	4.8
10	1.009	840.1	57.8	4.0	6.7
11	1.065	919.3	59.3	4.0	4.2
13	.997	845.1	58.4	4.1	5.7
15	1.003	854.3	54.8	3.4	3.6
16	.963	782.2	49.9	3.4	3.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 7

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER FRONT SIDE
1	2882.	149.63	15.02	1.25	2.09	0.00
6	2899.	144.92	11.52	1.12	1.12	0.00
7	-2906.	140.73	12.16	1.10	1.10	0.00
8	2852.	165.29	17.83	1.11	1.86	0.00
9	2846.	160.63	20.29	1.17	1.45	0.00
10	2870.	152.09	17.97	1.20	2.01	0.00
11	2859.	157.13	17.40	1.12	1.17	0.00
13	2867.	154.67	18.35	1.22	1.72	0.00
15	2867.	155.49	17.13	1.03	1.06	0.00
16	2877.	148.78	16.31	1.05	1.08	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	18.1370	3.8940	25.9670	16.8380	3.5840	29.8390
6	18.2410	3.9050	25.3390	16.7720	3.5590	29.7650
7	18.2410	3.9050	25.3390	16.7720	3.5590	29.7650
8	18.2450	3.9080	25.3460	16.7720	3.5590	29.7650
9	18.1370	3.8940	25.9670	16.8380	3.5840	29.8390
10	18.2640	-3.9790	-23.5630	17.1700	3.7080	30.2100
11	18.5100	-4.0060	25.5790	17.0120	3.6490	30.0330
13	18.2500	3.9100	25.3520	16.7720	3.5590	29.7650
15	18.5050	-4.0040	25.5720	17.0120	3.6490	30.0330
16	18.2450	3.9080	25.3460	16.7720	3.5590	29.7650

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 7

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO FI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	161.17	16.32	1.44	2.40	0.00
6	157.61	-12.64	1.32	1.32	0.00
7	153.05	13.34	1.29	1.29	0.00
8	179.81	19.58	1.30	2.19	0.00
9	173.02	22.04	1.35	1.67	0.00
10	161.78	19.28	1.54	2.57	0.00
11	170.97	19.11	1.32	1.37	0.00
13	168.29	20.16	1.43	2.02	0.00
15	169.15	18.80	1.21	1.25	0.00
16	161.85	17.91	1.23	1.26	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CORR N2 PER CENT
1	32.00	48.00	31.37	47.06
6	28.00	46.75	27.37	45.70
7	30.00	47.50	29.33	46.44
8	30.00	46.50	29.33	45.46
9	-35.00	47.00	-34.31	46.08
10	29.00	47.50	28.54	46.74
11	33.00	47.50	32.26	46.44
13	-24.00	48.25	-23.46	47.17
15	28.00	47.50	27.37	46.44
16	30.00	47.75	29.33	46.68

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
1	540.	.5970	.4580	1509.	1.060	281.
6	540.	.5350	.5260	1502.	1.060	264.
7	500.	.5270	.4530	1491.	-1.080	274.
8	498.	.4780	.4580	1484.	1.050	261.
9	500.	.5420	-.3960	1533.	1.050	269.
10	483.	.5510	.4480	1500.	1.040	277.
11	-693.	.5900	-.5770	1507.	1.060	274.
13	490.	.5230	.5320	1509.	1.050	283.
15	497.	.5300	.4780	1506.	1.060	274.
16	497.	.5130	.4480	1464.	1.050	277.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CORR FU FL LBM/HR	COR CB X100	F/A COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	554.	.5740	.4400	1450.	283.
6	555.	.5110	.5020	1435.	266.
7	514.	.5040	.4330	1425.	275.
8	513.	.4570	.4370	1418.	263.
9	513.	.5210	-.3810	1473.	270.
10	494.	.5340	.4340	1452.	279.
11	-713.	.5640	.5520	1440.	275.
13	504.	.5000	.5090	1442.	284.
15	511.	.5070	.4570	1439.	275.
16	511.	.4900	.4290	1399.	278.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 CO1 C PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	-1.135	958.1	61.2	4.9	-7.9
6	1.022	826.1	43.3	3.6	3.5
7	1.011	787.9	41.8	3.4	3.5
8	.899	847.3	55.6	3.4	5.4
9	1.018	927.0	69.2	3.9	4.8
10	1.043	900.0	65.1	4.2	6.8
11	1.117	974.1	62.2	3.9	4.2
13	.989	853.7	61.4	4.0	5.9
15	1.002	886.1	59.0	3.5	3.6
16	.973	812.6	56.5	3.5	3.4

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-20 * 1200 HOUR TEST SERIES *

MODE 8

UNIT	CO2 EI LB/KLB FU	CO EI LB/KLB FU	HC EI LB/KLB FU	NO EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBRER FRONT SIDE
1	2870.	154.18	16.91	1.29	2.09	0.00
6	2898.	148.59	13.37	1.07	1.07	0.00
7	-2899.	143.73	13.10	1.03	1.06	0.00
8	2840.	170.43	19.22	1.13	1.79	0.00
9	2837.	164.45	21.10	1.14	1.41	0.00
10	2858.	157.01	19.50	1.21	1.95	0.00
11	2857.	158.57	17.40	1.05	1.12	0.00
13	2860.	157.06	19.42	1.21	1.77	0.00
15	2855.	160.73	18.39	1.05	1.08	0.00
16	2866.	152.42	18.22	1.08	1.08	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	17.1080	3.5180	25.0220	15.8950	3.2400	28.7720
6	16.5760	3.3050	23.8460	15.2630	3.0170	28.0450
7	16.9510	3.4370	24.1870	15.6040	3.1370	28.4380
8	16.4560	3.2640	23.7380	15.1510	2.9780	27.9140
9	16.6070	3.3400	24.5550	15.4360	3.0780	28.2440
10	16.7330	3.4170	-22.2900	15.7460	3.1870	28.6010
11	16.9550	3.4390	24.1930	15.6040	3.1370	28.4380
13	17.3410	3.5780	24.5430	15.9490	3.2600	28.8340
15	16.9510	3.4370	24.1870	15.6040	3.1370	28.4380
16	17.0820	3.4840	24.3080	15.7190	3.1770	28.5700

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

CF700-2D * 1200 HOUR TEST SERIES *

MODE 8

UNIT	NREC CO EI LB/KLB FU	NREC HC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	165.94	18.36	1.48	2.41	0.00
6	161.36	14.65	1.26	1.26	0.00
7	156.14	14.36	1.21	1.25	0.00
8	185.10	21.07	1.33	2.11	0.00
9	176.93	22.90	1.31	1.62	0.00
10	166.85	20.91	1.56	2.50	0.00
11	172.30	19.08	1.23	1.31	0.00
13	170.76	21.32	1.43	2.08	0.00
15	174.61	20.15	1.24	1.27	0.00
16	165.63	19.98	1.27	1.27	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

5. FUEL ANALYSIS DATA

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
1	Baseline	44.1	1.91	82	1	17
	400-Hour	43.2	1.90	80	1	19
	800-Hour	43.4	1.93	81	2	17
	1200-Hour	40.6	1.91	80	1	19
2	Baseline	44.1	1.91	82	1	17
	800-Hour	43.0	1.90	80	2	18
3	Baseline	44.1	1.92	83	1	16
	400-Hour	43.8	1.91	81	1	18
	800-Hour	40.6	1.91	80	1	19
4	Baseline	44.1	1.92	83	1	16
	400-Hour	44.1	1.90	81	1	18
	800-Hour	42.3	1.92	80	2	18
5	Baseline	42.8	1.92	82	1	17
6	Baseline	42.8	1.92	82	1	17
	400-Hour	42.6	1.89	80	2	18
	800-Hour	44.1	1.90	80	2	18
	1200-Hour	42.1	1.91	80	1	19
7	Baseline	42.1	1.91	80	1	19
	400-Hour	43.8	1.91	82	1	17
	800-Hour	42.8	1.92	82	1	17
	1200-Hour	42.8	1.90	79	1	20
8	Baseline	42.1	1.91	80	1	19
	400-Hour	43.8	1.91	82	1	17
	800-Hour	44.3	1.89	82	1	17
	1200-Hour	42.8	1.90	84	1	15
9	Baseline	44.1	1.92	82	1	17
	400-Hour	43.2	1.90	82	1	17
	800-Hour	43.4	1.91	81	1	18
	1200-Hour	42.1	1.93	79	1	20

Unit No.	Test Series	deg API	H/C Ratio	FIA, percent		
				Paraffin	Olefin	Aromatic
10	Baseline	44.1	1.92	82	1	17
	400-Hour *					
	1200-Hour	43.4	1.91	82	1	17
11	Baseline	43.2	1.91	82	1	17
	400-Hour	43.0	1.91	82	1	17
	1200-Hour	43.4	1.93	83	1	16
12	Baseline	43.2	1.91	82	1	17
13	Baseline	44.1	1.91	83	1	16
	400-Hour	43.0	1.90	82	2	16
	1200-Hour	43.4	1.90	80	1	19
14	Baseline	44.1	1.91	83	1	16
	800-Hour	43.6	1.89	82	1	17
15	Baseline	43.6	1.89	82	1	17
	400-Hour	41.7	1.94	81	2	17
	800-Hour	44.1	1.92	80	2	18
	1200-Hour	42.8	1.91	79	1	20
16	Baseline	43.2	1.94	82	1	17
	400-Hour	43.4	1.92	81	1	18
	1200-Hour	43.6	1.92	82	1	17

* Fuel analysis data not available

6. REFERENCES

1. Adams, H. T., Elements of Internal Combustion Turbine Theory, Cambridge University Press, 1949.
2. 'T53 and T55 Gas Turbine Combustor and Engine Exhaust Emission Measurement', USAAMRDL Technical Report 73-47, December 1973.
3. 'Control of Air Pollution from Aircraft and Aircraft Engines, Emissions Standards and Test Procedures for Aircraft', Federal Register, vol. 38, no. 136, Part II, July 17, 1973.