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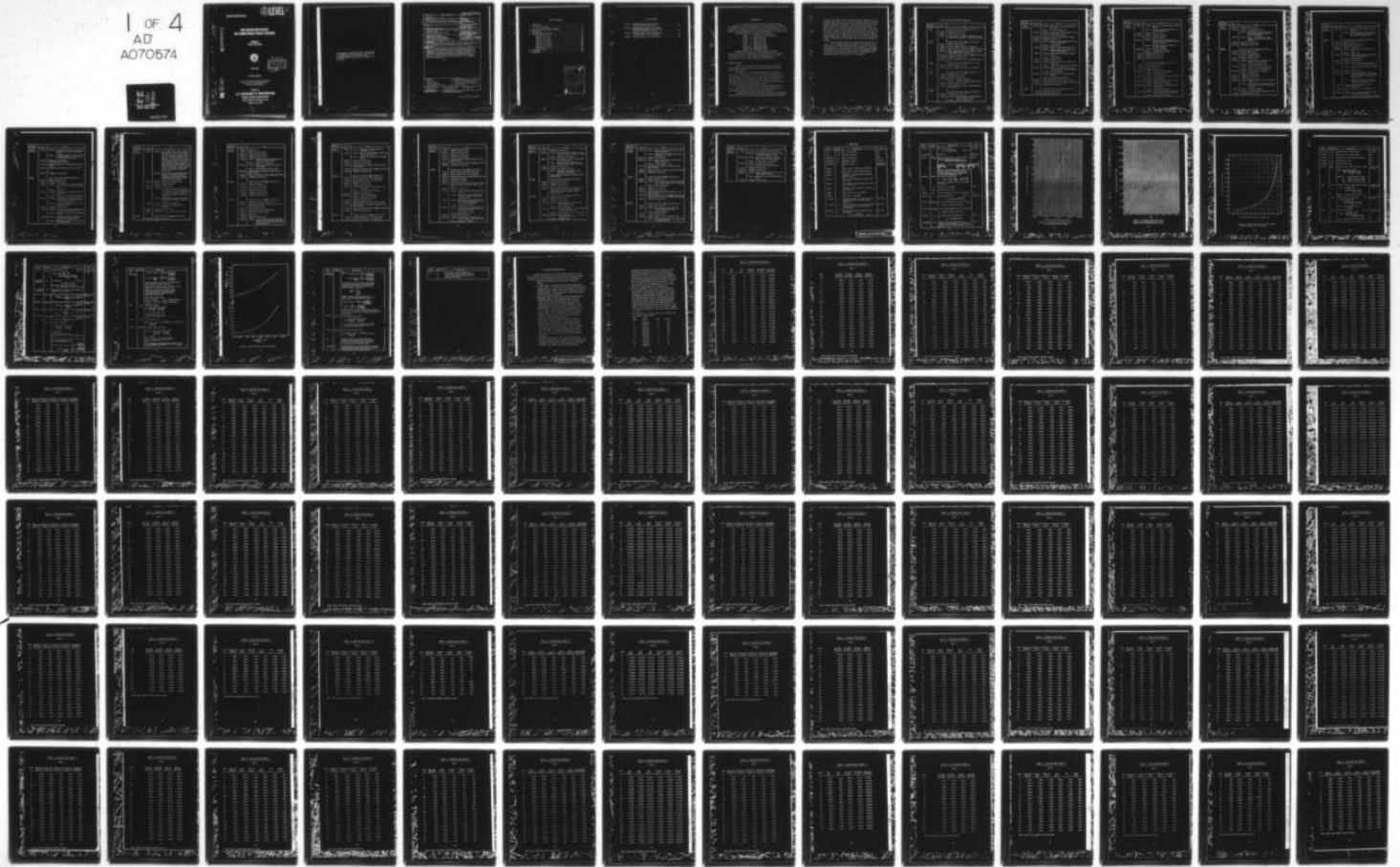
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TIME DEGRADATION FACTORS FOR TURBINE ENGINE EXHAUST EMISSIONS

VOLUME II
JT8D-9 TEST DATA



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INTERIM REPORT

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15. 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 II - 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 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
1/4023		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
2/3919	8/6/75	Cracked satellite assembly, sheetmetal fairing in the exhaust assembly. Dropped from program.
		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.
3/4019	6/19/75	Engine reinstalled on A/C No. <u>4310</u> , Position No. <u>2</u>
	12/17/75	"1800-Hour" Emission Test
	2/20/76	Engine removed due to first stage blade failure
4/3962		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.
6/3928		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	"600-Hour" Emission Test
6/3928	6/6/75	Engine removed due to no. 6 bearing pressure tube failure.
		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
7/3958		Original Test A/C No. <u>4318</u> , Position No. <u>1</u>
	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		Original Test A/C No. <u>4321</u> . Position No. <u>3</u>
		4/5/75	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	Repaired PT7 system leak
10/3903	3/13/76	"2400-Hour" Emission Test
		Original Test A/C No. <u>4331</u> , Position No. <u>3</u>
	4/15/75	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	Problem: Engine idle slow and engine slow to accelerate Correct: Reset idle speed. Aircraft set up for JFC change on next overnite lay-over due to fluctuating idle.
11/3988	4/13/75	Original Test A/C No. <u>4333</u> , Position No. <u>2</u> Baseline Emission Test
	4/14/75	Replaced bleed control valve
	6/27/75	"600-Hour" Emission Test
	8/25/75	Problem: N ₁ 30 per cent, N ₂ 53 per cent at idle Correct: Adjust idle
	9/12/75	Problem: Engine throttle knob behind engines 1 and 3 during cruise Correct: Trimmed engine
	9/16/75	"1200-Hour" Emission Test
	11/7/75	Problem: All three engines idle fast 60-61 per cent N ₂ and 1300-1400 lbs/hr F/F Correct: Trimmed all three engines and checked for T.O.
	11/17/75	"1800-Hour" Emission Test
	11/21/75	Problem: AVM reading markedly higher than previous readings at 75 per cent N ₁ AVM was steady 3.0 with occasional jumps to 3.5 Correct: Provided clearance for T/R line chaffing duct, changed AVM pickup because of loose head
	1/7/76	Engine removed due to poor performance, turbine blades warped
	2/23/76	Engine reinstalled on A/C No. <u>4334</u> , Position No. <u>1</u>
	2/25/76	Problem: Fuel flow reads 3000-4000 lbs high, other parameters normal Correct: Replaced F/F transmitter and F/F gage

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		Original Test A/C No. <u>4333</u> , Position No. <u>3</u>
	4/13/75	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 AVH 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	Engine reinstalled on A/C No. <u>4339</u> , Position No. <u>1</u>
15/1903	4/7/76	"3000-Hour" Emission Test
		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	"2400-Hour" Emission Test
4/8/76	"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	"600-Hour" Emission Test
	6/30/75	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
	8/29/75	"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. 2
	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
	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
20/1908		Original Test A/C No. <u>4340</u> , Position No. <u>1</u> Baseline Emission Test
	4/16/75	Baseline Emission Test
	7/18/75	"600-Hour" Emission Test
	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
21/1909		Original Test A/C No. <u>4340</u> , Position No. <u>2</u> Baseline Emission Test
	4/16/75	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 related to previous s.a.; problem 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>4210</u> , Position No. <u>2</u>
	4/10/76	"3000-Hour" Emission Test
22/1910		Original Test A/C No. <u>4340</u> , Position No. <u>3</u>
	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 $N_2' = N_2 \times \sqrt{518.7/T_a}$ (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

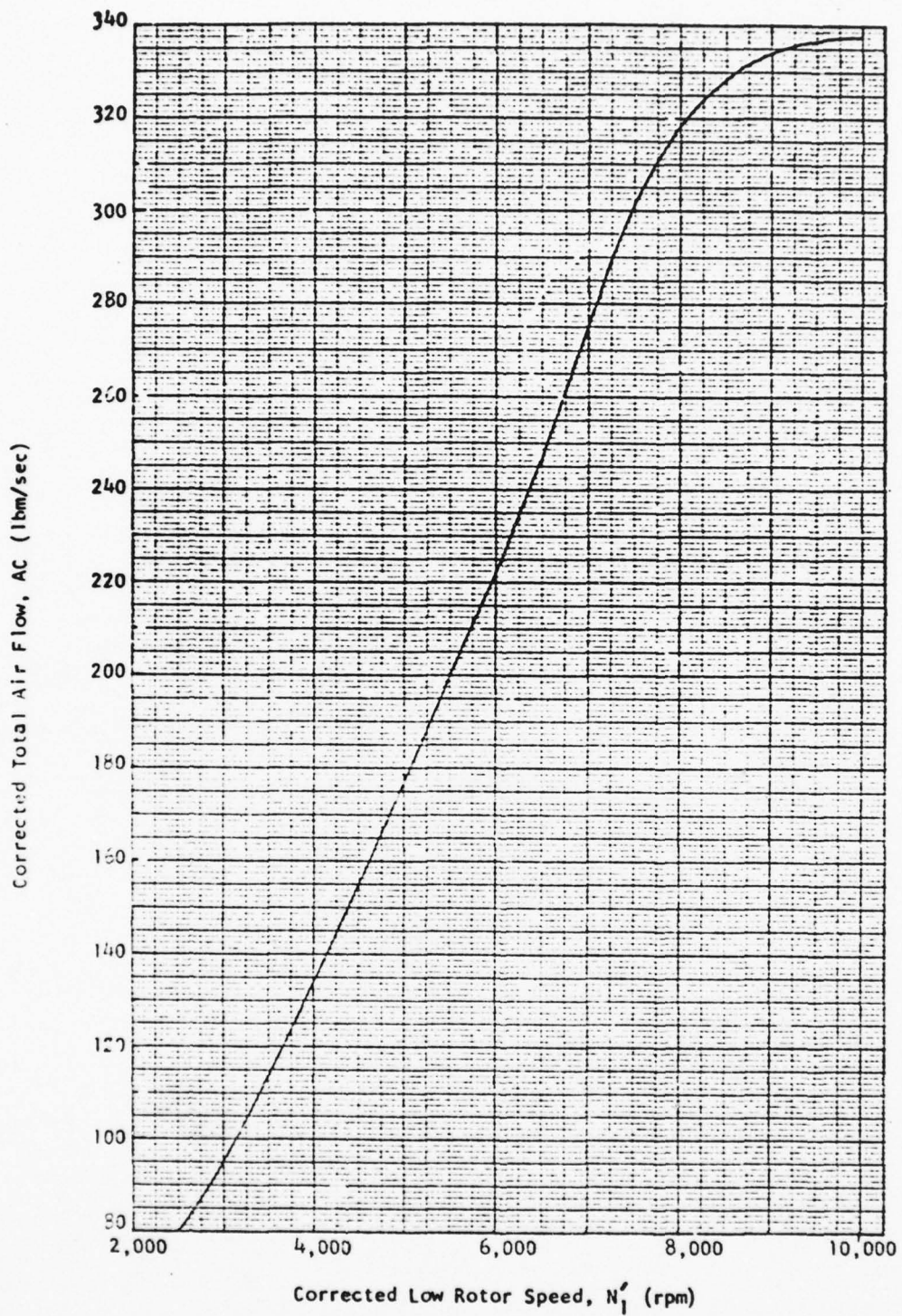


Figure 1. Estimated Corrected Total Air Flow versus Corrected Low Rotor Speed

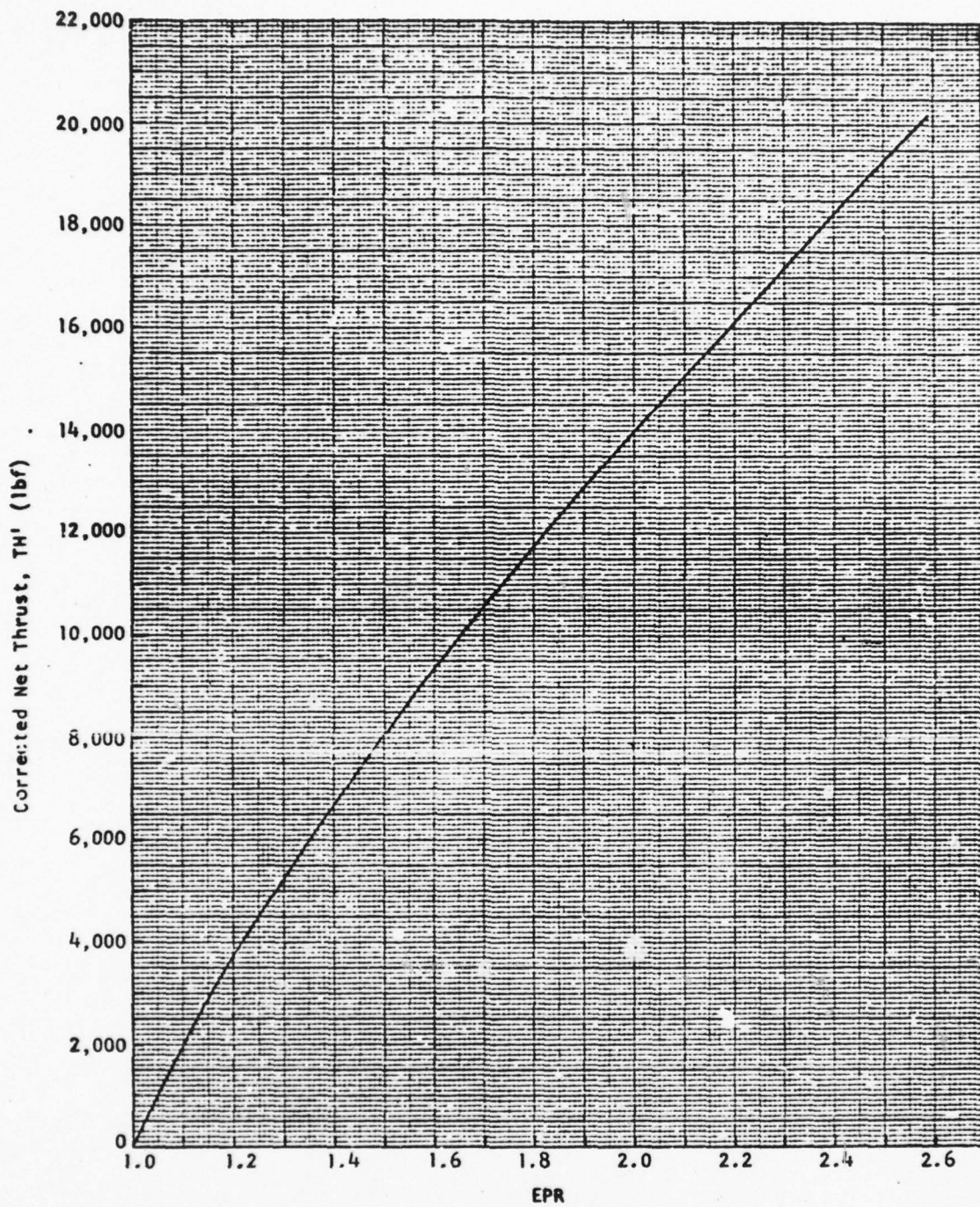


Figure 2. Estimated Engine Thrust versus Engine Pressure Ratio Characteristic with NAFEC Emissions Sampling Rake Installed

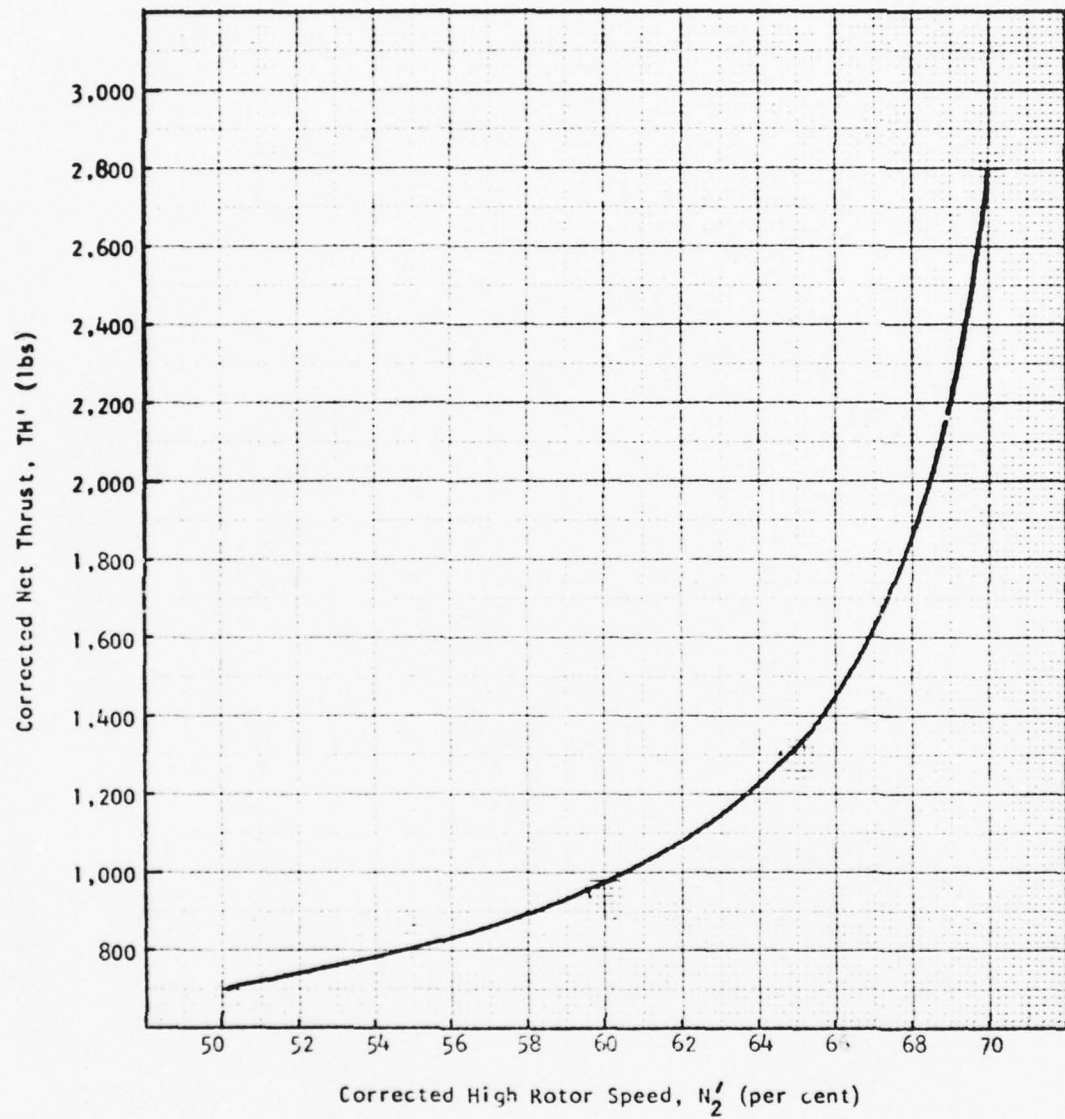


Figure 3. Estimated Engine Thrust versus Corrected High Rotor Speed in the Idle Regime

Name	Symbol	Description	Unit
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) $EI_{CO2} = \frac{M_{CO2} \times CO_2 \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ <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) $EI_{CO} = \frac{M_{CO} \times \frac{CO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ <p>where: M_{CO} = molecular weight of CO</p>	lbm per 1000 lbm fuel
HC EI	EI _{HC}	Emission index of hydrocarbons (Ref 3) $EI_{HC} = \frac{M_{HC} \times \frac{HC}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ <p>where: M_{HC} = molecular weight of methane</p>	lbm per 1000 lbm fuel
NO EI	EI _{NO}	Emission index of NO (Ref 3) $EI_{NO} = \frac{M_{NO2} \times \frac{NO}{10^4} \times 1000}{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2 + HC}{10^4} \right)}$ <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) $EI_{NO_x} = M_{NO_2} \times \frac{NO_x}{10^4} \times 1000$ $\frac{(M_C + a \times M_H) \left(\frac{CO}{10^4} + \frac{CO_2}{10^4} + \frac{HC}{10^4} \right)}$	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: $P_{b,ref} = P_{a,ref} \cdot f_1(N_{2,ref}, \sqrt{\frac{T_{a,ref}}{518.7}})$ $T_{b,ref} = \frac{T_{a,ref}}{518.7} \cdot f_2(N_{2,ref}, \sqrt{\frac{T_{a,ref}}{518.7}})$	

Name	Symbol	Description
FCO Continued		$P_{b,obs} = P_{a,obs} \cdot f_1 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,obs} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} / \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <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> $F/A_{,ref} = 0.0092 \quad P_{a,ref} = 30.09 \text{ in Hg abs}$ $N_{2,ref} = 11,377 \text{ rpm} \quad T_{a,ref} = 501.8 \text{ deg R}$
FHC	F_{HC}	<p>HC emission factor</p> $F_{HC} = \left[\frac{P_{b,obs}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,obs}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,obs}/(500 - F/A_{obs} \times 10^4)}}{e^{T_{b,ref}/(500 - F/A_{ref} \times 10^4)}}$
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> $(F_{CO})_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \left\{ \begin{array}{l} \frac{e^{T_{b,std}/315}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes } 1,2,7,8 \\ \frac{e^{T_{b,std}/\{400 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/(400 - F/A_{ref} \times 10^4)}} \text{ for modes } 3,4,5,6 \end{array} \right.$

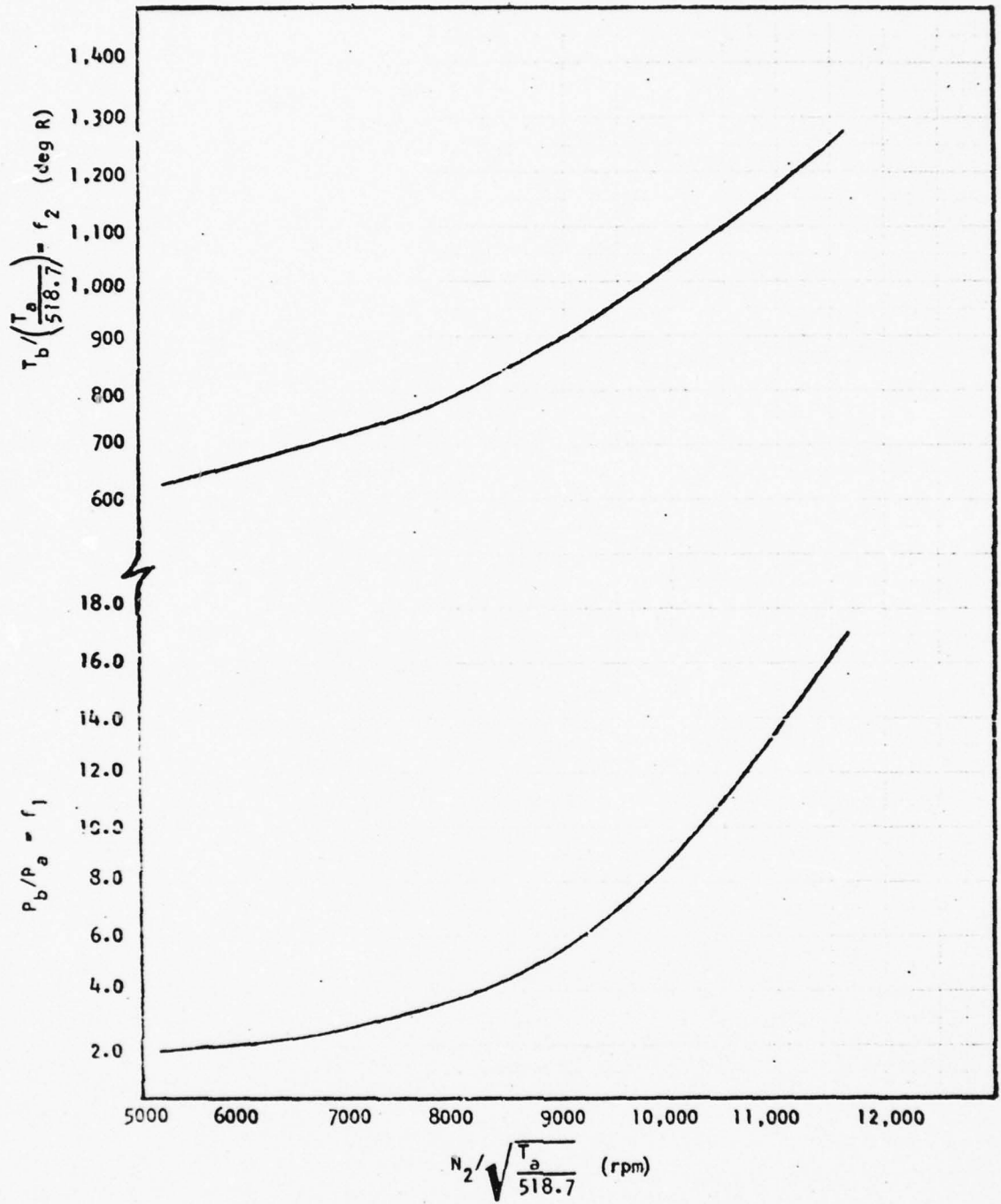


Figure 4. Typical Production Engine Performance

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> $T_{b,std} = \frac{T_{a,std}}{518.7} \cdot f_2 \left(N_{2,std} \sqrt{\frac{T_{a,std}}{518.7}} \right)$ <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> $\frac{F/A}{T_a} \quad \text{and} \quad \frac{N_2}{\sqrt{T_a}}$ <p>remain constant, and the equations for $T_{b,std}$ and $P_{b,std}$ should be modified to read:</p> $P_{b,std} = P_{a,std} \cdot f_1 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ $T_{b,std} = \frac{T_{a,obs}}{518.7} \cdot f_2 \left(N_{2,obs} \sqrt{\frac{T_{a,obs}}{518.7}} \right)$ <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> $HC)_{std} = \left[\frac{P_{b,std}}{P_{b,ref}} \right]^{3/4} \cdot \left[\frac{T_{b,std}}{T_{b,ref}} \right]^{1/2} \cdot \frac{e^{T_{b,std}/\{500 - T_{a,std}(F/A_{obs}/T_{a,obs}) \times 10^4\}}}{e^{T_{b,ref}/\{500 - F/A_{ref} \times 10^4\}}}$
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 Senda-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"	9	EPR
17	"1800-Hour"	5	N1

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UNIT	TSO HR	TSR HR	AMP TF40 DFG R	AMP PRESS IN HG	AMP HUMID LA H2O/ATR
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.	499.7	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
18A	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
17A	1470.	0.	494.2	29.98	.003580
18A	1470.	0.	493.7	29.98	.003700
19A	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

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MODF 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	59.33
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	31.86	-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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

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MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	T77 DEG R	FPR	THRUST LBF
1	-1300.	.3870	.3190	1167.	1.050	937.
2	1040.	.2490	.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	.2880	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.	.3140	.2690	1140.	1.060	887.
11	-900.	-.4170	.2580	1158.	1.060	-832.
12	-1200.	.3200	.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	1050.	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 TEST SERIES •

MODE 1

UNIT	CORR FII FL LPM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LAF
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	.2830	-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.
19A	1043.	.3040	.2700	1096.	933.
14	1090.	.2720	.2830	1143.	-1079.
15	116.	.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

JTRD-9 • BASELINE TEST SERIES •

MODE 1

UNIT	CO2 CONC PER CFMT	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	5.9	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	-0.5	3.4
16	.542	91.5	19.9	.7	3.7
17A	.544	92.6	21.4	3.0	6.4
18A	.549	123.5	24.1	2.0	6.8
19A	.545	111.1	25.1	4.1	8.1
20	.550	97.9	18.0	3.9	6.6
21	.552	102.1	19.5	9.3	-11.3
22	.501	104.2	19.3	1.5	2.8
23	.692	122.6	23.1	5.3	8.5

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT40-9 • BASELINE TEST SERIES •

MODE 1

UNIT	CO2 EI LB/KLA FU	CO EI LB/KLA FU	HC EI LB/KLA FU	NO EI LB/KLA FU	NOX EI LB/KLA 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	3.50	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	12.94	.29	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	1.18	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	2.65	3.94	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 1

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
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	4.0430	18.0530	3.6990	4.5700	20.3420
4	3.5180	4.6020	19.1490	4.1280	5.2000	21.4890
17A	3.7550	4.7230	19.4290	4.2070	5.1120	21.6920
6	3.6520	4.5770	17.8990	3.7980	4.7100	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	3.9630	4.8730	19.9350	4.2580	5.1580	21.8220
10	3.6260	4.3770	17.6930	3.6640	4.5840	20.1910
11	-2.9450	3.9640	17.0180	3.1050	4.1300	-18.6420
12	3.0340	5.0680	19.7650	4.2010	5.2890	21.6770
10A	3.6240	4.6240	19.2370	4.0860	5.0190	21.3800
14	3.8920	4.8310	19.9930	4.4850	5.3730	22.3900
15	3.8380	4.7270	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	19.6720	4.2720	5.1730	21.8590
18B	3.1310	4.0260	17.7970	3.5780	4.4550	20.0080
19B	3.6920	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	19.6660	4.3820	5.2750	22.1340
22	-4.6770	-5.4330	20.1950	-4.6350	-5.5770	22.7580
23	3.8510	4.8040	18.2500	3.7420	4.7060	20.6610

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 1

UNIT	NREC CO EI LB/KLR FU	NREC MC EI LB/KLR FU	NRE CNO EI LB/KLR FU	NR CNOX EI LB/KLR FU	SMK NUMFR CORRECTED
1	27.19	6.75	2.57	4.46	0.00
2	30.52	9.97	1.32	4.20	0.00
3	34.85	15.44	.94	3.22	0.00
4	31.70	12.86	2.74	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	29.06	8.04	1.91	2.81	0.00
18A	34.03	12.14	1.74	3.85	-1.72
9	30.27	11.78	2.10	4.36	0.00
10	29.74	7.48	1.98	3.63	0.00
11	36.53	11.58	1.52	3.63	0.00
12	27.47	-5.66	2.60	4.75	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	34.19	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

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE 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	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	35.00	62.00	39.77	63.23
9	39.00	62.00	39.58	62.92
10	39.00	62.00	39.48	62.75
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
17B	39.00	62.00	39.96	63.52
18B	38.50	62.00	39.66	63.55
19B	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 2

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	-1450.	-.3870	-.7440	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	-.7430	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.	.2690	.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	1280.	.3540	.3120	1158.	1.070	1079.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT90-9 • BASELINE TEST SERIES •

MODE 2

UNIT	CORR FII FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-1444.	-.3750	-.3510	1190.	1143.
2	1291.	.2680	.3120	1193.	1242.
3	1291.	.2640	.3070	1164.	1242.
4	1333.	-.3300	.3250	1156.	1244.
17A	1236.	.2900	.3060	-1111.	1166.
6	1183.	.2460	.2970	1192.	1129.
7	1269.	.3670	.3150	1164.	1222.
18A	1204.	.2450	.2960	1167.	1189.
9	-1381.	.2980	.3360	1174.	1166.
10	1339.	.2300	.3250	1177.	1154.
11	-1444.	-.4200	-.3510	1183.	1147.
12	1145.	-.3480	.3310	1164.	1147.
19A	1197.	.3050	.2970	-1111.	1189.
14	1244.	.2750	.3100	1181.	1217.
15	1293.	.2920	.3050	1177.	1217.
16	1289.	.2740	.3170	1166.	1217.
17B	1247.	.2960	.3120	1121.	1210.
18B	1237.	.2750	.3110	1160.	1213.
19B	1227.	.2860	.3090	1121.	1210.
20	1195.	.2330	.2910	1172.	1127.
21	1225.	.2770	.3000	1154.	1127.
22	1135.	.3020	.2840	1154.	1127.
23	1247.	.3490	.3080	1143.	1070.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • BASELINE TEST 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	.560	86.1	18.2	3.6	7.6
10	.570	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	-10.6
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	.560	85.1	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

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 2

UNIT	CO2 FT LA/KLR FU	CO FT LA/KLR FU	HC FT LA/KLR FU	NO FT LA/KLR FU	NOX FT LA/KLR 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.	24.98	12.80	3.07	3.22	0.00
17A	3082.	26.04	12.09	1.78	3.88	-1.07
6	3090.	26.09	8.70	4.28	4.33	0.00
7	3095.	25.62	7.55	2.23	2.93	0.00
18A	3079.	27.35	12.25	2.05	4.07	-0.93
9	3077.	29.62	10.78	2.02	4.27	0.00
10	3090.	24.59	6.92	2.32	3.70	0.00
11	3090.	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	-0.68	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	6.58	3.00	4.36	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • BASELINE TEST SERIES •

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
1	4.7370	5.2990	21.3180	4.9930	6.1470	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	4.6270	5.8100	22.1680	5.4670	-6.6010	24.7040
17A	4.5770	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	6.2370	24.4170
15	4.6150	5.6020	21.7650	5.3390	6.2500	24.4170
16	4.6150	5.5880	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	20.8010	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 2

UNIT	NREC CO LA/KLR FU	ET	NREC HC LA/KLR FU	ET	NRE CNO LA/KLR FU	ET	NR CNOX LA/KLR FU	ET	SMK NUMBER CORRECTED
1	22.41		5.80		2.92		4.99		0.00
2	22.92		7.87		2.00		5.17		0.00
3	22.27		10.05		1.92		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
5	25.04		8.04		4.93		4.99		0.00
7	22.28		6.74		2.50		3.28		0.00
19A	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		2.42		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
18A	24.62		8.53		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		8.31		3.14		4.93		0.00
22	29.94		9.32		2.34		4.27		0.00
23	24.81		6.82		3.36		4.88		0.00

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NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE 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
13A	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
17A	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 3

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TTT DEG R	EPR	THRUST LRF
1	9100.	.9810	.7730	1428.	2.070	14618.
2	8640.	.9660	.7120	1369.	2.080	14676.
3	9070.	.9820	.7430	1395.	2.080	14676.
4	8700.	.9350	.7070	1356.	2.080	14527.
17A	-10000.	.8920	-.9270	1428.	2.080	14707.
6	9200.	.9680	.7800	1466.	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.	.9630	.7280	1446.	2.080	14703.
12	8200.	.9000	.7450	1428.	2.080	14703.
19A	7050.	.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	14700.
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	1466.	2.050	14452.
23	9200.	.9860	.8080	1482.	2.040	14500.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 3

UNIT	CORR FU FL LAM/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

JTAD-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	1.991	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	15.2	6.1	83.3	89.3
18A	1.790	15.8	18.9	66.1	69.9
9	2.126	15.5	9.4	95.3	100.4
10	2.067	15.4	5.6	85.5	96.6
11	2.031	17.3	4.6	93.7	102.9
12	1.896	13.5	3.9	101.1	99.9
19A	1.770	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	100.0

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 3

UNIT	CO2 ET LB/KLB FU	CO ET LB/KLB FU	HC ET LB/KLB FU	NO ET LB/KLB FU	NOX ET LB/KLB FU	SMK NUMBER FRONT SIDE
1	3142.	1.43	1.71	16.20	16.20	31.79
2	3148.	1.68	.97	14.96	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	14.99	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

NOTE - MISSING VALUES DENOTE OUTLYING VALUES

JTAD-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	123.7070	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	92.4800	95.9940	93.7030	114.8260	112.5820	107.3010
9	113.7470	107.9100	94.2530	135.4610	122.2600	105.3520
10	105.6860	102.3360	88.3010	121.6780	113.2860	102.6360
11	109.3900	104.7390	93.1350	122.6750	114.5330	103.7130
12	107.5810	106.3680	96.4320	121.3970	116.5870	107.8330
19A	92.5090	96.1320	93.8210	114.7860	112.5590	107.3010
14	87.9320	91.1350	90.8520	117.2390	112.7570	105.4480
15	89.5060	91.5850	90.8520	118.2680	113.3180	105.4480
16	89.1320	90.2360	89.0250	120.0570	112.0560	102.0700
17A	89.2590	93.8700	93.5840	116.7400	114.5820	108.7990
18A	91.6780	95.3330	93.3660	121.0470	117.0900	108.9670
19A	80.6750	87.5820	92.0950	104.1600	106.2710	107.0190
20	99.0520	100.4740	91.5690	106.2500	105.7840	104.1020
21	94.3250	97.6760	91.5620	101.0020	102.7460	104.1020
22	115.9030	112.4180	95.1240	124.7370	118.5950	108.1730
23	121.5830	113.2720	91.1000	113.5210	107.9940	101.1600

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 3

UNIT	NREC LA/KLA	CO FU	FI	NREC LA/KLA	HC FU	EI	NRE LA/KLA	CNO FU	FI	NR LA/KLA	CNOX FU	EI	SMK CORRECTED	NUMBER
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			1.34			.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			4.43			16.49			17.82		32.24

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST 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	92.46
18A	87.00	89.50	88.73	91.28
9	87.75	90.00	89.05	91.33
10	88.00	90.00	89.08	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
17B	86.25	89.50	88.36	91.69
18B	86.50	89.00	88.66	91.23
19B	86.00	87.00	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	88.65	90.44

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • BASELINE TEST SERIES •

MODE 4

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TY7 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	7290.	.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.	.7140	.6320	1393.	1.860	12383.
23	-7700.	.8400	-.7090	1410.	1.850	12406.

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NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • BASELINE TEST SERIES •

MODE 4

UNIT	CORR FU FL LRM/HP	COR CR F/A X100	COR PF F/A X100	COR T17 DEG R	COR THRUST LRF
1	7517.	.8230	.6880	1382.	-12520.
2	6944.	.8580	.6590	1384.	-12630.
3	7336.	.8570	-.6900	1404.	-12630.
4	6815.	.8490	.6360	1384.	12182.
17A	7303.	.7010	.6780	1354.	12182.
6	7238.	.7760	.6400	1411.	12300.
7	7085.	.8690	.6510	1392.	-12630.
18A	6760.	.7200	.6280	1374.	12182.
9	7352.	.8470	.6710	1387.	-12630.
10	7167.	-.8990	.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.
17A	6602.	.7140	.6260	1366.	12182.
19A	6501.	.7180	.6150	1387.	12182.
19A	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

JT8D-9 • BASELINE TEST 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	5.4	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 4

UNIT	CO2 FT LB/KLB FU	CO ET LB/KLB FU	HC FT LB/KLB FU	NO FT LB/KLB FU	NOX ET LB/KLB FU	SMK NUMBER FRONT SIDE
1	3142.	1.89	1.50	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	.74	13.22	14.52	24.50
19A	3135.	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	3147.	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	12.69	13.61	26.32
23	3140.	1.66	4.89	12.91	14.33	31.58

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NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * BASELINE TEST 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	89.5780
3	62.2650	69.9640	81.0000	85.6830	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	82.7740	79.2360	83.2850	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	85.7440	-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	51.7690	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	49.5420	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

JTAD-9 • BASFLINE TEST SERIES •

MODE 4

UNIT	NREC CO FT LR/KLR FU	NREC HC ET LR/KLR FU	NRE CNO FT LR/KLR FU	NR CNOX FT LR/KLR FU	SMK NUMBER 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	-15.34	16.99	30.00
7	1.64	.91	13.01	14.05	35.76
19A	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	-22.71
14	2.10	1.59	13.90	16.23	27.90
15	1.78	1.68	13.79	14.72	25.00
16	1.82	1.71	14.00	15.44	28.80
17A	2.07	2.82	-15.83	16.64	28.00
19A	2.08	1.17	-15.77	16.95	28.00
19A	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MOOF 5

UNIT	FUFL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LRF
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	8700.
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.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 * BASELINE TEST SERIES *

MODE 5

UNIT	CORR FU FL LAM/HR	COR CR X100	F/A COR PF F/A X100	COR TT7 DEG R	COR THRUST LAF
1	4779.	.6380	.4950	1272.	8788.
2	4568.	.6240	.4970	1270.	-8850.
3	4695.	.5930	.5070	1279.	.3850.
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.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • BASELINE TEST SERIES •

MODE 5

UNIT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.702	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	1.149	16.8	6.0	38.8	40.0
7	1.250	21.8	5.0	35.1	37.9
18A	.902	30.8	20.7	22.8	27.9
9	1.210	25.2	9.1	35.7	-41.1
10	1.367	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	29.4	22.9	-22.4	27.2
14	.964	31.3	8.0	-22.4	30.1
15	1.001	28.2	10.5	23.0	27.4
16	1.019	28.8	9.1	23.0	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

JTAD-9 * BASELINE TEST SERIES *

MODE 5

UNIT	CO2 EI		CO EI		HC FI		NO FI		NOX EI		SMK NUMBER FRONT SIDE
	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	LB/KLB	FU	
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		22.70
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		8.98		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		9.64		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

NOTE - MINUS SIGN DENOTE OUTLYING VALUES

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JTAG-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	64.9900
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	67.0150	39.7370	48.8010	73.5660
18A	25.1330	34.3250	59.2820	29.2840	38.6750	67.2570
9	30.3900	39.4860	62.5660	34.2500	43.2680	69.4790
10	32.1280	40.6970	59.3840	35.5870	43.9710	68.6550
11	34.0970	42.7430	63.2570	37.3410	45.7820	70.1770
12	38.1430	47.8110	-68.5620	-41.7590	51.2190	76.0000
19A	24.5700	33.8780	59.3570	28.5160	38.0570	67.2570
14	22.3640	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	-37.1740	65.3540
17B	25.3160	34.6080	59.7960	30.7140	40.2810	68.7360
18B	25.2930	34.6010	59.7210	30.7940	40.3970	68.9030
19B	24.4680	33.9000	59.7260	29.5680	39.3630	68.7360
20	32.1750	42.2890	63.9770	33.8560	43.9990	72.5620
21	31.8700	41.4290	62.2570	33.5660	43.1240	70.6060
22	35.2330	45.3660	65.7120	37.1870	47.2480	74.5620
23	29.0370	37.3660	56.5650	-27.7370	-36.1080	-62.9980

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 5

UNIT	NREC LA/KLA	CO FU	EI	NREC LA/KLA	MC FU	EI	NRF LA/KLB	CNO FU	EI	NR LA/KLA	CNOX FU	EI	SMK CORRECTED	NUMBR
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	

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-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	76.72
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	77.78
10	59.00	75.50	59.72	76.63
11	60.00	76.00	60.65	76.82
12	63.00	76.00	-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

JTAD-9 • BASELINE TEST SERIES •

MODE 6

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
1	2550.	-.4130	.3560	1122.	-1.215	-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	.3390	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	CORP FUEL LBM/HR	COR CH 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.	.3890	.3560	1136.	-4200.
9	2553.	.2700	.3630	1146.	-4200.
10	2290.	.3400	.3440	1122.	4125.
11	2361.	-.4130	.3440	1128.	-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

ITRD-9 • BASELINE 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	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	4.32	-7.60	7.60	7.89
7	3131.	10.49	2.93	5.75	6.39	12.58
9	3108.	15.88	7.62	4.30	7.84	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

JTAD-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	42.7070	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	13.6090	19.5600	47.5440
23	12.2500	18.2190	39.5460	11.8140	17.7190	44.1350

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 6

UNIT	NREC LA/KLR	CO FI FU	NREC LA/KLR	HC EI FU	NRE LA/KLR	CNO FU	FI FU	NR LA/KLR	CNOX FU	EI FU	SMK CORRECTED	NUMFR
1		11.37		3.71		5.28		7.78		7.78		11.18
2		15.50		4.87		3.60		7.53		7.53		7.89
3		12.30		5.77		4.18		7.21		7.21		8.00
6		9.52		3.87		8.79		8.79		8.79		7.89
7		8.81		2.55		6.55		7.28		7.28		12.58
9		14.54		7.10		4.85		7.77		7.77		7.05
10		11.64		3.37		4.88		7.06		7.06		9.27
11		11.70		2.98		5.33		7.65		7.65		-13.25
12		9.72		2.34		8.64		8.87		8.87		11.33
20		12.09		3.62		6.00		8.73		8.73		5.37
21		12.78		3.27		5.65		7.82		7.82		8.00
22		13.70		3.95		5.22		7.83		7.83		9.21
23		8.68		6.65		6.92		8.60		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
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	39.00	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

JTAG-9 • BASELINE TEST SERIES •

MODE 7

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	-1450.	-.3830	-.3470	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.	.2500	-.3220	1131.	1.080	1156.
10	1230.	.2650	.3040	1140.	1.080	1145.
11	1200.	-.4230	.2840	1140.	1.080	1140.
12	1250.	-.3700	.3888	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.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • BASELINE TFST SERIES •

MODE 7

UNIT	CORP FU FL LAW/HR	COR CB X100	F/A COR PF X100	CORR TT7 DFG R	COR THRUST LAF
1	-1444.	-.3910	-.3500	1162.	1143.
2	1223.	.2390	.3000	1174.	1242.
3	1223.	.2480	.2960	1145.	1242.
4	1254.	.3460	.3080	1144.	1225.
17A	1046.	.2800	.2710	1120.	1151.
6	1140.	.2840	.2840	1183.	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	.3070	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.	.2310	.2730	1136.	1127.
23	1247.	.3240	.3040	1126.	1070.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE 7

UNIT	CO ₂ CONC PER CFMT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x CONC PPM
1	-.783	101.9	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	.456	117.2	-32.1	6.5	6.4
17A	.546	81.5	21.2	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	102.2	-5.3	2.6	6.8
14	.497	74.6	15.8	1.3	4.0
15	.486	76.0	20.9	1.1	-3.2
16	.476	73.1	18.0	-0.9	3.5
17B	.520	84.9	20.1	3.1	7.5
19B	.526	82.8	16.8	3.4	8.0
19C	.521	105.7	-29.6	3.1	-0.8
20	.513	77.9	12.9	4.0	6.8
21	.540	98.5	12.2	3.9	6.7
22	.566	93.6	16.8	3.7	6.9
23	.669	96.9	17.0	5.2	9.3

JTAD-9 • 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	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	3.86	-0.67
6	3091.	25.82	7.95	4.73	4.73	0.00
7	3095.	26.57	7.12	2.31	2.75	0.00
18A	3056.	30.29	-19.06	1.78	3.83	-1.99
9	3065.	32.07	13.25	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	-3006.	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	3070.	30.07	12.71	.60	2.75	0.00
17B	3070.	31.92	12.98	1.72	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	4.39	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

JTRD-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	4.0970	6.1740	23.6140
2	4.5910	5.5210	21.8010	5.4550	6.2600	24.6780
3	4.5910	5.5770	21.9010	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	23.4600
7	4.5520	5.6780	21.6240	5.2720	6.3520	24.2440
13A	4.6350	5.5970	21.5540	5.1700	6.0730	24.0290
9	4.7090	5.6400	21.7750	5.0980	5.9700	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	5.5540	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
17A	4.6170	5.5740	21.6380	5.3060	6.1870	24.3400
18A	4.6130	5.5770	21.5920	5.3170	6.2050	24.3660
19A	4.6170	5.5790	21.6380	5.3060	6.1960	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	20.4400	4.6940	5.6840	22.9010

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MONF 7

UNIT	NREC CO FI LB/KLR FU	NREC HC FI LB/KLR FU	NRE CNO FI LB/KLR FU	NR CNOX FI LB/KLR FU	SMR NUMRFR CORRECTFD
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 • BASELINE TEST SERIES •

MODE A

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	36.03	58.27
4	35.00	58.00	36.11	59.85
17A	35.00	58.50	35.69	59.66
6	35.30	58.50	35.24	58.90
7	35.00	58.50	35.95	60.08
18A	34.50	57.30	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	-38.00	61.56
16	36.00	59.00	36.94	60.54
17A	35.50	59.50	36.37	60.96
18A	33.00	57.00	33.83	58.43
19A	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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT9D-9 • BASELINE TFST SERIES •

MODE B

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	FPR	THRUST LBF
1	-1300.	-.3940	-.3190	1158.	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.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • BASELINE TEST SERIES •

MODE A

UNIT	CORR F1 FL LAM/HR	COR CR F/A X100	COR PE F/A X100	COR TT7 DEG R	COR THRUST LAF
1	-1294.	-.4020	-.3250	1180.	956.
2	1027.	.2480	.2700	1126.	926.
3	-910.	.2630	.2490	1145.	915.
4	1117.	.3600	.2880	1137.	947.
17A	987.	.2660	.2560	1101.	943.
5	1041.	.2990	.2690	1155.	928.
7	1102.	.3600	.2870	1145.	956.
18A	987.	.2850	.2520	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.	990.
13A	989.	.2840	.2570	-1073.	933.
14	1077.	.2610	.2790	1162.	-1066.
15	1112.	.2620	.2810	1158.	-1066.
16	1082.	.2480	.2810	1152.	990.
17A	1100.	.2770	.2880	1102.	-1021.
18A	978.	.2720	.2710	1112.	910.
19A	1045.	.2680	.2750	-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.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • BASELINE TEST SERIES •

MODE A

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x 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	-.868	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	98.0	17.8	3.4	6.2
21	.553	101.8	20.4	3.8	6.4
22	.571	99.2	18.3	3.6	6.8
23	.658	119.5	23.6	4.5	8.1

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • RASFLINE TEST SERIES •

MONF A

UNIT	CO ₂ FT LR/KLR FU	CO FT LR/KLR FU	HC FT LR/KLR FU	NO FT LR/KLR FU	NO _x FT LR/KLR FU	SMK NUMBER FRONT SIDE
1	3083.	28.92	7.75	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	3092.	29.46	9.29	4.11	4.11	0.00
7	3083.	31.17	8.72	1.96	2.52	0.00
19A	3038.	39.12	-20.99	1.29	3.44	-1.99
9	3061.	33.37	14.59	1.91	3.03	0.00
10	3080.	29.99	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	.70	1.91	0.00
17A	3063.	34.45	14.23	1.59	4.39	0.00
18A	3067.	41.21	16.78	1.53	4.33	0.00
19A	3036.	41.45	20.07	1.80	4.51	0.00
20	3069.	36.31	11.33	2.04	3.77	0.00
21	3064.	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	3.05	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
13A	3.6840	4.6140	19.2370	4.0860	4.9840	21.3900
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	3.9380	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	18.6080	3.9180	4.7910	20.9370
19A	3.9520	4.8830	20.0250	4.5260	5.4070	22.4920
20	3.7750	4.6450	18.5550	3.9050	4.7630	20.9920
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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTR-9 • BASFLINE TEST SERIES •

MODE A

UNIT	NREC LA/KLR FU	CO FI	NREC LA/KLR FU	HC EI	NRF LA/KLR FU	CNO FI	NR LA/KLR FU	CNOX FI	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
19A		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
17A		30.08		12.84		1.79		4.92	0.00
18A		36.00		14.52		1.72		4.88	0.00
19A		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

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 600 HOUR TEST SERIES •

UNIT	TSO HR	TSB HR	AMB TEMP DEG R	AMB PRESS IN HG	AMB HUMID %R 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	32.66	57.92
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

JTAD-9 • 600 HOUR TEST SERIES •

MODE 1

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PEPF F/A X100	TT7 DEG R	EPR	THRUST LAF
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	.2680	1212.	1.060	911.
15	1030.	.3210	.2760	1190.	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.	1.060	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

JTAD-9 • 600 HOUR TEST SERIES •

MODE 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PE 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.	896.
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.	.2540	-.2550	1160.	911.
17	1010.	.2270	.2680	1109.	923.
18	1000.	.3060	.3080	1180.	841.
19	950.	.2800	.2710	1162.	874.
20	896.	.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

JT80-9 • 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	-1.2
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	7.8
19	.573	115.9	19.1	4.6	5.7
20	.552	125.8	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	-167.3	33.0	7.6	8.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 600 HOUR TEST SERIES •

MODE 1

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	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	2.67	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	9.54	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

AD-A070 574

NORTHERN RESEARCH AND ENGINEERING CORP CAMBRIDGE MASS F/G 13/2
TIME DEGRADATION FACTORS FOR TURBINE ENGINE EXHAUST EMISSIONS. --ETC(U)
MAY 78

UNCLASSIFIED

NREC-1238-7

FAA-RD-78-56-2

NL

2 OF 4
AD
A070574

Row	Col 1 (NREC-1238-7)	Col 2 (NREC-1238-7)	Col 3 (NREC-1238-7)	Col 4 (NREC-1238-7)	Col 5 (NREC-1238-7)	Col 6 (NREC-1238-7)	Col 7 (NREC-1238-7)	Col 8 (FAA-RD-78-56-2)	Col 9 (FAA-RD-78-56-2)	Col 10 (FAA-RD-78-56-2)	Col 11 (NL)	Col 12 (NL)
1	Header	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11
2	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
3	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
4	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
5	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
6	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
7	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
8	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
9	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12
10	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10	Table 11	Table 12

JTAD-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	14.7550	3.9470	4.9640	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	18.9100
11	3.1040	4.1350	-17.4450	-2.9220	-3.6280	-17.7470
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	14.9600	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

JTAD-9 • 600 HOUR TEST SERIES •

MODE 1

UNIT	NREC CO EI LB/KLB FU	NREC MC EI LB/KLB FU	NRE CNO EI LB/KLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER CORRECTED
1	37.94	10.33	3.89	3.89	0.00
4	33.07	8.82	3.78	4.41	0.00
6	34.61	12.22	3.43	3.43	0.00
7	49.98	12.21	4.97	4.97	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	3.64	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	31.92	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

JTAD-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	36.33	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	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
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	-1490.	.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	.2610	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	1005.
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 • 400 HOUR TEST SERIES •

MONF 2

INIT	CORR FII FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LRF
1	-146A.	.3740	-.3430	1194.	1014.
4	1310.	.3520	.3130	1122.	1063.
6	1194.	-.6350	.2870	1181.	1023.
7	1300.	.2540	.3060	118A.	1035.
9	-1504.	.3100	-.3440	1171.	1263.
10	1322.	.2720	.3110	1211.	1046.
11	1225.	-.6270	.2890	1171.	1020.
12	1301.	-.3910	.3090	1154.	1020.
14	1150.	.2780	.2820	1214.	1102.
15	1210.	.2950	.2950	117A.	1102.
16	1175.	.2400	.2840	1164.	1102.
17	1150.	.2270	.2830	111A.	1072.
18	1255.	.2840	.3090	1180.	1072.
19	1160.	.2800	.2850	1162.	1072.
20	1144.	.2670	.2700	1199.	100A.
21	1200.	.2610	.2850	1165.	100A.
22	1137.	.2860	.2730	1165.	100A.
23	1340.	.2990	.3140	1171.	1020.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-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	-.830	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	8.6	-9.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 600 HOUR TEST SERIES •

PAGE 2

UNIT	CO ₂ 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	3107.	21.20	7.07	3.48	3.48	0.00
4	3091.	25.17	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	7.96	4.01	4.01	0.00
11	3090.	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	3091.	31.48	10.17	3.50	3.83	0.00
16	3088.	25.94	10.78	3.88	4.11	0.00
17	3107.	24.33	6.29	5.45	5.45	0.00
18	3100.	24.99	7.07	3.46	3.86	0.00
19	3097.	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.	-16.16	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	5.0310	-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	18.4820	4.5240	5.4620	22.4880

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 600 HOUR TEST SERIES •

MODE 2

UNIT	NREC CO FI LB/KLB FU	NREC HC FI LB/KLB FU	NRF CNO EI LA/KLB FU	NR CNOX EI LA/KLB FU	SMK NUMRFR 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	-43.60	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	8.14	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

JTAD-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	96.09	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	95.00	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 • 200 HOUR TEST SERIES •

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TTT DEG R	EPR	THRUST LBF
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.	-1.0680	.7280	1466.	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 LAM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	9409.	.8870	.7790	1445.	14377.
4	8A69.	1.0270	.7520	1415.	14377.
6	892A.	-1.2620	.7420	1425.	14377.
7	900A.	1.0280	.7420	1485.	14163.
9	914A.	.9510	.7600	1456.	14377.
10	9017.	.9750	.7570	1466.	14153.
11	8420.	1.0130	-.7030	-1397.	14377.
12	8A70.	.9690	.7370	1432.	14377.
14	9397.	.9640	-.8060	1473.	14377.
15	8647.	.9350	.7430	1467.	14377.
16	8A47.	.9770	.7580	1467.	14377.
17	8748.	.8930	.7530	1467.	14377.
18	849A.	.9520	.7310	1483.	14377.
19	8A47.	.8630	.7610	1447.	14377.
20	929A.	.8800	.7680	1441.	14377.
21	878A.	.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	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x CONC PPM
1	1.924	13.0	9.6	84.3	87.7
4	2.141	13.2	4.3	85.8	89.0
6	-2.745	15.6	9.4	-112.8	-128.7
7	-2.219	14.9	6.4	79.8	87.6
9	2.076	10.1	10.1	72.9	68.5
10	2.088	-9.4	5.5	87.7	82.7
11	-2.109	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	2.079	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

JTAD-9 • 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	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	22.00
7	3156.	1.35	.99	11.86	13.03	23.77
9	3143.	.99	1.70	11.76	11.76	20.92
10	3145.	-.90	.91	13.81	13.81	22.45
11	3151.	1.08	1.19	16.63	-18.23	23.99
12	3150.	1.13	1.57	13.08	14.88	20.67
14	3152.	1.50	1.53	14.67	15.21	28.00
15	3152.	1.51	1.21	14.59	15.46	20.67
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	13.42	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	3142.	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

JTAN-9 • 600 HOUR TEST SERIES •

MODE 3

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
1	123.9880	117.4410	81.7910	99.8340	99.9800	100.4990
4	132.6870	119.2950	81.0900	120.7120	111.3910	100.5860
6	-248.9660	-177.2040	82.9310	-193.8870	-148.9730	105.5550
7	150.4060	131.5280	83.9110	125.7350	115.2180	102.3860
9	145.2550	131.9410	83.8570	125.3350	118.3820	107.3410
10	113.9370	106.5790	84.0830	99.0400	96.1750	-96.9200
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	120.6710	114.2430	90.0010	122.0660	115.2070	105.2030
15	113.4000	109.6100	89.0580	114.7180	110.5180	104.0990
16	120.0990	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	116.0070	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	107.1250
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	82.7850	-89.1140	-92.2380	-97.9100

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 • 600 HOUR TEST SERIES •

MODE 3

UNIT	NREC LB/KLA	CO FU	EI	NREC LB/KLA	MC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLA	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		1.74			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

JTAD-9 • 600 HOUR TEST SERIES •

MODE 4

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	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.	.8860	.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	1437.	1.830	12004.
	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 GOING VALUES

JTAD-9 • 600 HOUR TEST SERIES •

MODE 4

UNIT	CORR FIJ FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
1	-7869.	.7250	.6840	1376.	12300.
4	7257.	.8730	.6490	-1317.	12182.
5	7474.	-1.0750	.6500	1364.	12300.
7	7194.	.8240	.6400	1389.	12064.
9	7671.	.8190	.6670	1391.	12300.
10	7114.	.8380	.6330	1404.	12064.
11	7042.	.8620	.6190	1380.	12300.
12	7450.	.8250	.6510	1345.	12300.
14	7748.	.7740	-.6990	1394.	12300.
15	7227.	.7630	.6510	1394.	12300.
16	7248.	.7890	.6540	1394.	12300.
17	7198.	.7270	.6500	1367.	12182.
18	6868.	.7750	.6210	1376.	12182.
19	7298.	.7070	.6620	1376.	12182.
20	7560.	.7140	.6530	1372.	12300.
21	7487.	.7200	.6450	1372.	12300.
22	7406.	.7620	.6390	1381.	12300.
23	-8010.	.8440	-.6900	1362.	12064.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 600 HOUR TEST SERIES •

MODE 4

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x 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

JTGD-9 • 600 HOUR TEST SERIES •

MODE 4

UNIT	CO ₂ EI LB/KLB FU	CO EI LB/KLB	HC EI LB/KLB FU	NO FI 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	1.31	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	23.58
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

JT8D-9 • 600 HOUR TEST SERIES •

MODE 4

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	-68.2910	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	77.9980	71.9720	78.1800	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 LB/KLA	CO FU	ET	NREC LB/KLB	HC FU	ET	NRE LB/KLA	CNO FU	ET	NR LB/KLA	CNOX FU	ET	SMK CORRECTED	NUMFR
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		1.78		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	CORR 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	89.50	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

JTAD-9 • 600 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	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	4867.	.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.	.5690	.5030	1284.	1.540	A652.
20	4950.	.513	.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 LBM/HR	COR CB F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
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	.4830	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

JTRD-9 • 600 HOUR TEST SERIES •

MODE 5

UNIT	CO2 CONC PER CFMT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
1	1.184	17.5	7.8	35.0	37.3
4	1.196	25.2	4.7	35.1	38.1
6	-1.752	22.2	3.4	-47.6	-53.5
7	1.178	21.1	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	-47.6	-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	4.8	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	26.2	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

JTRD-9 • 600 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	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.	3.35	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.	5.39	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

JTAN-9 • 600 HOUR TEST SERIES •

MODE 5

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	31.6860	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	35.4430	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	73.3430
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 CO LB/KLB FU	EI FU	NREC HC LB/KLB FU	EI FU	NRE CND LB/KLB FU	EI FU	NR CNDX LB/KLB FU	EI FU	SMK NUMBER CORRECTED
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		11.00		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	3.78		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	77.05
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 LRM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	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

JTAD-9 • 600 HOUR TFST SERIES •

MODE 6

UNIT	CORR FII FL LAM/HR	COR CA 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	.3540	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	2300.	.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 LA/KLA FU	CO EI LA/KLA FU	HC EI LA/KLA FU	NO EI LA/KLA FU	NOX EI LA/KLB FU	SMK NUMBER 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	3139.	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	8.1
10	3123.	8.35	4.65	5.96	6.25	7.28
11	3125.	10.15	5.43	5.96	7.10	11.11
12	3129.	8.57	5.01	5.00	6.30	5.21
14	3122.	12.80	6.03	5.84	6.72	5.67
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	4.44	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	10.50

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	43.9170
9	13.2250	19.5900	35.0570	12.1510	18.2900	45.3430
10	10.7900	16.3960	36.1030	9.9680	15.3620	41.1330
11	12.1470	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 •

MODE 6

UNIT	NREC CO EI LB/KLR FU	NREC HC EI LB/KLR FU	NRF CNO FI LB/KLR FU	NR CNOX FI LB/KLR F'J	SMK NUMFR 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	-48.30	-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	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
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.	.2650	.2810	1140.	1.080	1083.
16	1150.	.2400	.2790	1140.	1.070	1102.
17	1110.	.2230	.2780	1104.	1.070	1078.
18	1195.	.2720	.2070	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 LAM/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	.519	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/KLR FU	CO EI LB/KLR FU	HC EI LB/KLR FU	NO EI LB/KLR FU	NOX EI LB/KLR FU	SMK NUMER 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	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
1	5.0330	5.9620	-17.7080	4.5030	5.4700	22.4360
4	4.8860	5.4960	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	4.5150	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 FI 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	31.77	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

JTAD-9 • 600 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	-56.00	32.40	-54.99
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	60.29
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	59.00	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	35.79	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	TTT 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	886.
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	914.
20	975.	.2630	.2690	-1212.	1.070	870.
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

JTAD-9 • 600 HOUR TEST SERIES •

MODE 8

UNIT	CORR FU FL LAM/HR	COR CR X100	F/A COR PF F/A X100	COR TT7 DEG P	COR THRUST LRF
1	-1227.	.3380	-.3330	1176.	A49.
4	1129.	.3540	.2860	1105.	921.
6	1061.	-.4170	.2680	1163.	A96.
7	1115.	.2660	.2860	1161.	A94.
9	-1265.	.3010	-.3090	1144.	971.
10	1089.	.2730	.2880	1167.	A87.
11	944.	-.4110	.2700	1136.	A51.
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.	A83.
19	970.	.2560	.2510	1109.	913.
20	996.	.2530	.2590	1165.	A77.
21	1124.	.2600	.2720	1156.	936.
22	996.	.2710	.2590	1139.	907.
23	-1191.	.3020	.2910	1128.	A90.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 600 HOUR TEST SERIES •

MODE A

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	.521	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	-36.4	6.2	-9.0

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 600 HOUR TEST SERIES •

MODE A

UNIT	CO2 EI LB/KLA FU	CO EI LB/KLA FU	HC EI LA/KLA FU	NO EI LA/KLA FU	NOX EI LA/KLB FU	SMK NUMBER FRONT SIDE
1	3072.	34.04	10.91	3.14	3.21	0.00
4	3071.	33.26	9.70	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	306A.	30.58	11.87	1.82	2.59	0.00
10	30A2.	27.10	9.06	3.02	3.53	0.00
11	3066.	35.65	12.38	2.18	3.16	0.00
12	30A4.	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	30A5.	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	3.50	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 B

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	4.1210	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	19.9430
11	3.5240	4.5560	-14.3280	-3.1980	4.2150	-18.0190
12	4.224	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	4.6490	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	4.8670	16.4880	3.6060	4.5080	20.0860

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 600 HOUR TEST SERIES •

MODE B

UNIT	NREC CO FT LB/KLA FU	NREC HC ET LB/KLA FU	NRE CNO FT LB/KLA FU	NR CNOX ET LB/KLA 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	29.91	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	3.53	4.28	0.00
15	37.67	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	2.88	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

JTAD-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	TT7 DEG R	EPR	THRUST LBF
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.	.2960	-.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 LRM/HR	COR CH F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LRF
14	1090.	.3130	.2900	1190.	901.
15	1090.	.3910	.2730	1146.	925.
16	645.	.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	.2960	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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 1

UNIT	CO2 FT LB/KLR FU	CO ET LA/KLR FU	HC ET LA/KLR FU	NO FT LA/KLR FU	NOX ET LA/KLR FU	SMK NUMBER FRONT SIDE
14	3075.	32.54	10.08	.66	-1.21	0.00
15	3078.	31.40	9.65	.67	1.51	0.00
16	3055.	44.64	14.53	1.94	1.94	0.00
17	-3015.	41.94	-27.78	1.52	1.52	0.00
19	3072.	-50.98	15.07	1.50	1.98	0.00
19	-3012.	48.70	-24.49	1.70	3.02	0.00
23	3078.	46.02	17.78	3.70	3.70	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 1200 HOUR TEST SERIES •

MODE 1

UNIT	FCO X100	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	-4.6590	-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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 1

UNIT	NREC LB/KLA	CO FU	FI	NREC LB/KLA	HC FU	EI	NRE LB/KLA	CNO FU	EI	NR LB/KLA	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	49.05			15.40			2.44			2.44			0.00	
17	47.59			-30.05			1.86			1.86			0.00	
18	-57.75			17.56			1.86			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	CR F/A X100	PERF F/A X100	TTT DEG R	EPR	THRUST LBF
14	1140.	.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 CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	1203.	.3070	.2900	1141.	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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 2

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x 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	105.8	-25.7	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	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	SNK NIMRER 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

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 2

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	5.0930	5.9180	19.6080	4.5320	5.4840	22.5060
15	5.0930	-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	20.3470	4.7480	5.7140	23.0300

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 • 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	29.9A	7.58	-0.5A	-2.10	0.00
16	26.95	11.76	3.25	3.40	0.00
17	-39.06	-26.96	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

JTRD-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	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
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	-.9140	1500.	2.040	14369.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 1200 HOUR TEST SERIES •

MONF 3

UNIT	CORR FI FL LRM/HR	COR CR F/A X100	COR FF F/A X100	COR TT7 DEG R	COR THRUST LBF
14	-9885.	.9470	-.8190	1477.	14377.
15	9223.	-1.0740	.7600	1444.	14377.
16	9179.	.9690	.7560	1441.	14163.
17	9205.	.8680	.7570	1488.	14377.
18	8796.	.9890	.7250	1436.	14377.
19	9184.	.9200	.7690	-1407.	14377.
23	9407.	.9820	-.8030	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	9.6	86.7	80.8
15	-2.329	12.8	7.5	96.2	87.3
16	2.097	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

JTAD-9 • 1200 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	NO _x EI LB/KLB FU	SMK NUMBER FRONT SIDE
14	3148.	1.34	1.44	13.92	13.92	72.24
15	3149.	1.10	1.10	13.60	13.60	70.46
16	3150.	1.39	1.23	13.45	12.65	71.79
17	3142.	1.39	4.14	13.44	13.44	77.15
18	-3132.	2.11	-7.58	11.46	11.46	70.26
19	3150.	1.12	1.57	14.78	14.78	70.26
23	-3129.	1.35	-9.96	14.02	14.02	75.57

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 • 1200 HOUR TEST SERIES •

MODE 3

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	-98.2120

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 1200 HOUR TEST SERIES •

MODE 3

UNIT	NREC LA/KLH	CI FU	NREC LA/KLH	HC FU	EI FU	NRE LA/KLH	CNO FU	FI	NR LA/KLH	CNOX FU	EI	SMK NUMBER 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

JTAD-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

JTAD-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 LBF
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 •

NOTE 4

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
14	-8102.	.8040	-.7070	1399.	12300.
15	7592.	-.9290	.4560	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	-16.9	58.5	56.9
19	1.674	13.0	7.7	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 NIMMER 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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 4

UNIT	FCO X100	FHC X100	FNO X100	STD FCO X100	STD FHC X100	STD FNO X100
14	95.7570	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	90.0480
17	87.9160	93.6580	80.1580	70.3730	79.0450	95.0480
18	-102.5170	-102.4130	80.1680	80.7960	85.6900	95.0480
19	96.5400	98.9280	80.1680	76.5680	83.0540	95.0480
23	76.1110	80.5150	79.7090	73.8170	78.4450	89.4620

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 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
14	1.51	1.74	12.24	12.24	30.26
15	1.76	1.46	11.29	11.29	29.80
16	1.91	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 • 12 HOUR TEST SERIES •

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
14	4560.	.5950	.4790	1320.	1.540	A580.
15	4840.	-.6800	.5090	1315.	1.540	A580.
16	4775.	.5680	.4980	1311.	1.530	A403.
17	4950.	.4950	.5190	1302.	1.540	A593.
18	4840.	.6010	.5110	1320.	1.540	A593.
19	5000.	.5570	.5280	1257.	1.540	A593.
23	4800.	.6440	.5020	1293.	1.540	A596.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 1200 HOUR TEST SERIES •

MODE 5

UNIT	COMP FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TIT DEG R	COR THRUST LBF
14	6647.	.5750	-.4660	1277.	8600.
15	6932.	.6580	.4920	1272.	8600.
16	6876.	.5550	.4860	1279.	8475.
17	5063.	.4740	.4970	1246.	8600.
18	4950.	.5750	.4900	1264.	8600.
19	5114.	.5340	.5060	-1203.	8600.
23	6816.	.6630	.4990	1285.	8600.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTBD-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	1.278	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	1.275	19.9	-66.5	32.4	32.8
19	1.160	16.4	10.5	33.2	32.8
23	1.374	19.0	-38.8	39.4	38.3

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 1200 HOUR TEST SERIES •

MODE 5

UNIT	CO2 FI		CO EI		HC FI		NO FI		NOX EI		SMK NUMBER FRONT SIDE
	LA/KLA	FU	LA/KLA	FU	LA/KLA	FU	LA/KLA	FU	LA/KLA	FU	
14	3141.		2.72		3.11		8.17		8.17		24.34
15	3144.		2.19		1.69		-7.13		-7.13		23.68
16	3155.		3.20		1.88		8.09		8.09		23.68
17	3177.		3.19		6.66		8.82		8.82		20.39
18	-3101.		3.19		-18.26		8.50		8.62		24.34
19	3147.		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	FMC X100	FNO X100	STD FCO X100	STD FMC 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	70.6780
16	39.4530	49.1100	58.0680	35.2090	44.8790	72.0560
17	39.9920	50.3850	60.9520	37.2720	43.5920	72.7700
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	68.5750

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 5

UNIT	NREC LA/KLA	CO FU	FI	NREC LA/KLA	HC FU	EI	NRE LA/KLA	CNO FU	ET	NR LA/KLA	CNOX FU	ET	SMK NUMBER CORRECTED
14		3.15			3.49			9.21			9.21		24.34
15		3.37			1.90			-9.05			-9.05		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		3.61			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	CR F/A X100	PERF F/A X100	TYT DEG R	FPR	THRUST LBF
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.	.2930	.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 CUTLYING VALUES

JT8D-9 • 1200 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
14	2497.	.3270	.3480	1137.	4025.
15	2375.	.3310	.3360	1103.	4025.
16	2527.	.2930	.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

JTAD-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	-.945	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 FI LB/KLB FU	NO FI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER 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	4.90	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	45.2420
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	42.5130

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 * 1200 HOUR TEST SERIES *

MODE 6

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LA/KLB	CNO FU	EI	NR LA/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
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			6.61
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

JT80-9 • 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	60.99
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	39.98	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	TT7 DEG R	EPR	THRUST LAF
14	1050.	.2860	.2650	1176.	1.060	1020.
15	1100.	.3330	.2770	1158.	1.070	1020.
16	1150.	.2730	.2850	1174.	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

AD-A070 574

NORTHERN RESEARCH AND ENGINEERING CORP CAMBRIDGE MASS
TIME DEGRADATION FACTORS FOR TURBINE ENGINE EXHAUST EMISSIONS. --ETC(U)
MAY 78

F/G 13/2

DOT-FA74NA-1100

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FAA-RD-78-56-2

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The image shows a microfiche card with a grid of 140 frames. The frames are arranged in 10 rows and 14 columns. Each frame contains a small, illegible image, likely a scan of a document page. The frames are arranged in a regular grid pattern across the card.

JT8D-9 • 1200 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
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

JTAD-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	15.7	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	-29.7	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

JT80-9 • 1200 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	NO _x EI LB/KLB FU	SMK NUMBER 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	3084.	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	22.6460
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	5.8910	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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 7

UNIT	NREC LA/KLA	CO FU	ET	NREC LA/KLA	MC FU	EI	NRE LA/KLA	CNO FU	EI	NR LA/KLA	CNOX FU	EI	SMK NUMBER 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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE A

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 •

MODE 8

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
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

JTAD-9 • 1200 HOUR TEST SERIES •

MODE 8

UNIT	CORR FII FL LBM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
14	1045.	.2830	.2570	1137.	940.
15	1070.	.3610	.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

JTAD-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	.594	141.0	-34.4	8.0	6.7

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 1200 HOUR TEST SERIES •

MODE 8

UNIT	CO ₂ EI LB/KLR FU	CO EI LB/KLR FU	HC EI LB/KLR FU	NO EI LB/KLR FU	NO _x EI LB/KLR 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	3036.	45.80	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 B

UNIT	NREC LB/KLB	CO FU	FI	NREC LB/KLB	HC FU	EI	NRE LB/KLB	CNO FU	FI	NR LB/KLB	CNOX FU	FI	SMK CORRECTED	NUMFR
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	15598.	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	CORR 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	34.42	58.03
10	33.00	55.00	33.59	55.94
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	60.64
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	CR F/A X100	PERF F/A X100	TYT DEG R	EPR	THRUST LBF
2	-1210.	-.1340	.2870	1068.	1.050	908.
7	1075.	.3260	.2960	1158.	1.040	960.
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.	.3910	.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

JTMD-9 • 1800 HOUR TEST SERIES •

MODE 1

UNIT	CORR FU FL LAW/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 DEG R	COR THRUST LBF
2	1174.	-.1460	-.3140	1167.	921.
7	1086.	.7240	.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	1078.	.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

JTAD-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	.644	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	.740	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	9.9	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/KLA FU	CO FI LA/KLA FU	HC FI LA/KLA FU	NO FI LA/KLA FU	NOX EI LA/KLA FU	SMK NUMBER FRONT SIDE
2	3070.	-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	11.72	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	14.26	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.	39.40	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 FI LA/KLA FU	NREC HC E; LB/KLB FU	NRE CNO FI LB/KLA FU	NR CNX EI LA/KLA FU	SMK NUMBER CORRECTED
2	41.75	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	49.24	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	38.78	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	30.74	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	CR F/A X10	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
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.	-.3900	-.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	.2810	1086.	1.090	1288.
21	1275.	.2520	.2840	1068.	1.080	1288.
22	1200.	.2720	.2730	1086.	1.080	1288.
23	1380.	.2050	.2890	1050.	1.090	1277.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-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.	1101.
23	1342.	.2230	.3150	1142.	1296.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT80-9 • 1800 HOUR TEST SERIES •

MODE 2

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x 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	-139.9	-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 OUTLYING VALUES

JT80-9 * 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 NIMPER 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

JTAN-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

JTAD-9 • 1800 HOUR TEST SERIES •

MODE 2

UNIT	NREC LB/KLB	CO FU	EI	NREC LA/KLB	HC FU	EI	NRE LA/KLB	CNO FU	EI	NR LA/KLB	CNOX FU	EI	SMK CORRECTED	NUMFR
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		23.95			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	94.05
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 • 1400 HOUR TEST SERIES •

MODE 3

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TTT DEG R	EPR	THRUST LAF
2	9200.	.9160	.7480	1405.	2.020	-13960.
7	8800.	.9820	.7610	1466.	2.040	14274.
9	8500.	.9170	.7160	1392.	2.040	14343.
10	8588.	.9160	.7270	1428.	2.040	14343.
11	-9400.	.8890	-.8110	1466.	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

JTAD-9 • 1800 HOUR TEST SERIES •

WONE 3

UNIT	CORR FL FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR 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	8707.	.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

JTAD-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

JTR0-9 • 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	76.00
9	3152.	1.82	.37	10.73	10.73	-46.67
10	3153.	-2.22	.46	11.77	11.77	78.00
11	3152.	1.90	.32	13.24	13.24	76.00
12	3153.	1.90	.01	-17.44	17.44	74.21
17	3146.	1.60	1.98	13.81	13.81	22.52
18	-3103.	-2.24	-17.30	11.30	11.64	72.24
19	3151.	1.49	.09	12.86	12.86	71.79
20	-3078.	2.13	-26.28	12.66	12.66	76.67
21	3139.	-2.15	4.22	14.45	14.45	32.03
22	3149.	2.06	.41	11.21	11.21	72.47
23	3137.	1.83	5.09	12.50	12.50	78.41

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 1800 HOUR TEST SERIES •

MODE 3

UNIT	FCO Y	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	-93.5700
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	91.0920	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 FU	CO FU	FI	NREC LB/KLB FU	HC FU	EI	NRE LB/KLB FU	CNO FU	EI	NR LB/KLB FU	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			.73			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	90.38
10	87.00	88.00	88.55	-89.57
11	88.00	90.00	88.08	90.09
12	89.00	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	CR F/A X100	PERF F/A X100	TTT DEG R	EPR	THRUST LBF
2	7650.	.8080	.6510	1356.	1.830	-11891.
7	7200.	.7860	.6550	1410.	1.850	12212.
9	7165.	.7780	.6750	1324.	1.850	12271.
10	7200.	.8310	.6790	1374.	1.850	12271.
11	-8000.	.7720	-.7250	1392.	1.840	12141.
12	7100.	.8210	.6430	1374.	1.81	12299.
17	7200.	.7030	.6420	1306.	1.850	12299.
18	6850.	.7460	.6090	1356.	1.860	12403.
19	7200.	.7110	.6450	1302.	1.850	12290.
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

JTAD-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 LAF
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

JTAD-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

JTAD-9 • 1000 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 NUMER 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	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
2	49.4540	57.7950	73.5440	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	62.8640	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	77.9910	73.6120	80.9810	94.7080
22	53.6110	64.2180	81.4210	81.4760	88.1670	-99.0960
23	55.3340	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 FU	CO EI	NREC LB/KLB FU	MC EI	NRE LA/KLB FU	CNO EI	NR LA/KLB FU	CNOX EI	SMK CORRECTED	NUMBR
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

JTAD-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
11	77.00	83.25	78.37	-84.73
11	78.00	85.00	78.08	85.08
12	79.00	87.00	79.08	87.09
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	TY7 DEG R	EPR	THRUST LBF
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	.4910	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

JT80-9 • 1800 HOUR TEST SERIES •

MODE 5

UNIT	CORR FI LBM/MR	FI COR CB X100	F/A COR PF X100	F/A 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	4648.	.5810	.5000	1282.	8475.
21	4496.	.5450	.4970	1282.	8475.
22	4351.	.5330	.4810	1222.	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

JTAD-9 • 1800 HOUR TEST SERIES •

MODE 5

UNIT	CO2 EI LB/KLA FU	CO EI LB/KLA FU	HC EI LB/KLA FU	NO EI LB/KLA 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	3147.	-6.44	.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	-3079.	-6.76	-37.09	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

JT8D-9 • 300 HOUR TEST SERIES •

MODE 5

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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

JTAD-9 • 1800 HOUR TEST SERIES •

MODE 5

UNIT	NREC CO FI LA/KLR FU	NREC HC EI LA/KLR FU	NRE CNO FI LA/KLR FU	NR CNOX FI LA/KLR 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 • 140. 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 LBF
2	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

JTRD-9 * 1800 HOUR TEST SERIES *

MODE 6

UNIT	CORR FU FL LAM/HR	COR CB X100	F/A COR PF X100	F/A 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 TEST 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	.578	-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	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	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
25	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	36.7320	10.0300	15.6130	41.9740
10	-7.9970	-12.8440	34.6540	-8.9990	-14.0180	-30.4310
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 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		-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	1290.	.3190	.2940	1149.	-1.050	1075.
9	-1370.	.2650	.3140	1122.	1.090	1219.
10	-1345.	.2620	.3140	1167.	1.050	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 FUI FL LRM/HR	COR CR F/A X100	COR PF F/A X100	CORR T17 DEG F	COR THRUST LBF
2	-1485.	-.1210	-.3490	-1206.	-1306.
7	1213.	.3170	.2920	1141.	1083.
9	-1337.	.2800	-.3310	1193.	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	1099.	.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	8.4	-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

JT80-9 • 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	FMC X100	FNO X100	STD FCO X100	STD FMC 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	24.4490
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	-25.3230
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

JTAD-9 • 1900 HOUR TEST SERIES •

MONF 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
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	34.78	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 8

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	CR 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	1099.	.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	.555	104.8	12.7	-9.5	8.0
9	.577	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	-9.7
12	-.757	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	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	-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.	35.21	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.	-16.45	-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 A

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	-5.0630	-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 B

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		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

JTRD-9 • 2400 HOUR TEST SERIES •

UNIT	TSO HR	TSR HR	AMR TFMP DFG R	AMR PRESS IN HG	AMR HUMID LR H2O/AIR
6	17025.	2248.	492.7	30.12	.003410
7	16157.	2318.	492.7	29.96	.002720
9	17926.	2610.	486.7	30.18	.003370
10	17654.	2524.	500.7	29.91	.003310
11	9630.	2280.	492.7	30.06	.002480
12	16761.	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

JT8D-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

JTRD-9 * 2400 HOUR TEST SERIES *

MODE 1

UNIT	FUEL FLOW LRM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LRF
6	1060.	.1950	.2610	1086.	1.360	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 •

MONF 1

UNIT	CORR FU FL LBM/HR	COR CR F/A X100	COR PF F/A X100	CORR TT7 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

JTRD-9 • 2400 HOUR TEST SERIES •

MODE 1

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x 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	87.9	16.9	5.2	5.2
15	.468	94.9	15.0	4.4	5.7
16	.479	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

JTAD-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 NUMBER 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	2.07	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 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
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

JTRD-9 • 2400 HOUR TFST 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	40.51	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 LAF
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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 2

UNIT	CORR FU FL LBM/HR	COR CA F/A X100	COR PF F/A 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	-1467.	.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

JTAD-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	74.2	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

JT8D-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	0.50
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	4.56	0.00
15	3070.	34.38	10.07	3.42	4.19	0.00
16	-3058.	-42.19	9.74	4.51	4.51	0.00
17	-3057.	-46.77	9.36	4.97	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
21	3098.	24.08	7.19	3.61	4.13	0.00

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTF-9 * 24 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	6.1260	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	24.8760
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 LA/KLR	CO FU	FI	NREC LA/KLR	HC FU	EI	NRF LA/KLR	CNO FU	EI	NR LA/KLR	CNOX FU	EI	SMR CORRECTED	NUMFR
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		24.77			5.00			3.11			3.35		0.00	
14		24.29			7.27			4.47			4.93		0.00	
15		24.70			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			5.59			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

JT4D-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 LBF
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	1345.	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	1378.	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 FII FL LRM/HR	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LRF
6	8045.	.9130	.7250	1465.	14377.
7	8393.	.8610	.7620	1446.	14377.
9	-7994.	.8920	.7370	1451.	14163.
10	8348.	.8940	.7520	1460.	14377.
11	8176.	.9400	.7330	1432.	14377.
12	8504.	.9530	.7180	1463.	14270.
14	8619.	.8220	.7860	1454.	14163.
15	8180.	.8510	.7460	1454.	14163.
16	8132.	-.8100	.7400	1454.	14163.
17	8366.	.9180	.7580	1463.	14377.
18	8366.	.9230	.7620	1453.	14377.
19	8269.	.9610	.7510	-1397.	14377.
21	8119.	1.0140	-.7970	1448.	14377.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-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	1.974	11.6	1.3	78.6	76.9
12	1.973	14.4	1.7	87.1	84.0
14	-1.612	15.1	1.4	61.5	61.9
15	1.648	15.8	5.2	61.0	63.8
16	-1.587	13.7	1.3	-56.8	58.4
17	-1.537	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	-47.4	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 NIMPER 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	3157.	1.52	.43	12.05	12.28	31.33
23	-3131.	1.61	-8.03	12.91	12.90	36.42

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 2400 HOUR TEST SERIES •

MODE 3

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
6	78.7350	83.5750	87.0670	104.2460	102.7610	100.9600
7	70.6980	77.4260	86.1750	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	83.2710	90.3390	93.5630	106.4150	108.1770	107.9620
18	99.7320	101.2440	95.8310	128.6740	122.3470	110.6460
19	97.6500	98.1460	92.8140	126.1960	118.7590	107.0770
23	81.7920	82.7700	92.8440	102.9110	97.8630	-94.2760

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 2400 HOUR TEST SERIES •

MODE 3

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	MC FU	EI	NRE LB/KLB	CNO FU	EI	NP LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBER
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	88.71	91.97
23	87.00	89.00	88.73	90.77

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 2400 HOUR TEST SERIES •

MODE 4

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	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	12338.
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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 4

UNIT	CORR FU FL LRM/HP	COR CR F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
6	5794.	.7800	.6380	1393.	12300.
7	7027.	.7210	.6700	1389.	12300.
9	5925.	.7670	.6610	1393.	12064.
10	7072.	.8380	.6670	1404.	12300.
11	6744.	.8100	.5330	1361.	12300.
12	7204.	.8520	.6550	1390.	12142.
14	4987.	.7060	.6730	1406.	12064.
15	-6481.	.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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 4

UNIT	CO ₂ FT	CO FT	HC FT	NO FT	NO _x FT	SMK NUMBER FRONT SIDE
	LA/KLA FU	LA/KLA FU	LA/KLA FU	LA/KLA FU	LA/KLA FU	
6	3157.	1.93	.12	11.83	11.57	33.33
7	3145.	1.86	.32	10.54	10.54	33.55
9	3150.	-3.00	.37	9.83	10.20	30.60
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	-3020.	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

AD-A070 574

NORTHERN RESEARCH AND ENGINEERING CORP CAMBRIDGE MASS F/G 13/2
TIME DEGRADATION FACTORS FOR TURBINE ENGINE EXHAUST EMISSIONS. --ETC(U)
MAY 78 DOT-FA74NA-1100

UNCLASSIFIED

NREC-1238-7

FAA-RD-78-56-2

NL

4 OF 4
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NO
TOP

The microfiche card contains a grid of frames. The frames are arranged in 7 rows and 14 columns. The first row contains 13 frames of data tables and 1 frame with the text 'NO TOP'. The second through sixth rows each contain 14 frames of data tables. The seventh row contains 13 frames of data tables and 1 frame with the text 'FILMED ANA-64A NAFEC ATLANTIC CITY, N.J. 08405'. The data tables in the frames are too small to read but appear to be organized in columns and rows.

FILMED
ANA-64A
NAFEC
ATLANTIC CITY, N.J.
08405

END
DATE
FILMED
8-79
DDC

JTRD-9 • 2400 HOUR TEST SERIES •

MODE 4

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	50.4410	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	91.2790
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	85.3020	95.0410
19	64.8070	72.3880	82.6210	81.5760	86.1420	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 •

MODF 4

UNIT	NREC LB/KLR	CO FU	EI	NREC LB/KLR	HC FU	EI	NRE LA/KLR	CNO FU	FI	NR LA/KLR	CNOX FU	EI	SMK CORRECTED	NUMAER
6		1.50			.10			13.68			13.84		33.33	
7		1.46			.26			12.05			12.05		33.55	
9		2.14			.29			11.61			12.05		30.00	
10		1.65			.30			11.54			12.11		34.00	
11		-1.71			.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			14.77		35.76	
18		1.65			-78.02			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	85.86
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	EPR	THRUST LAF
6	4635.	.5480	.4580	1221.	1.540	A543.
7	4700.	.5220	.4750	1203.	1.540	A589.
9	-4400.	.5010	.4490	1189.	1.530	A402.
10	4650.	.5880	.4800	1248.	1.540	A603.
11	4688.	.5190	.4650	1198.	1.540	A560.
12	4800.	.6390	.4910	1266.	1.540	A546.
14	4500.	.4850	.4530	1212.	1.530	A430.
15	4563.	.4950	.4530	1212.	1.530	A430.
16	4525.	.4760	.4530	1198.	1.530	A430.
17	4725.	.4720	.4700	1212.	1.540	A651.
18	4675.	.5860	.4730	1230.	1.540	A651.
19	4575.	.5820	.4670	1158.	1.540	A651.
23	4730.	.6640	-.4200	1248.	1.540	A606.

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTRD-9 • 2400 HOUR TEST SERIES •

MODE 5

UNIT	CORR F11 FL LRM/HR	COR CA 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	1256.	8600.
9	4290.	.5770	.4810	1273.	8475.
10	4547.	.6090	.4970	1293.	8600.
11	4590.	.5460	.4890	1261.	8600.
12	4802.	.6460	.4970	1281.	8600.
14	4782.	.5170	.4830	1291.	8475.
15	4447.	.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	-.4760	1298.	8600.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-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/KLR FU	CO EI LB/KLR FU	HC EI LA/KLR FU	NO EI LA/KLR FU	NOX EI LA/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	3143.	-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	7.96	8.56	21.85
17	3146.	4.16	1.37	9.48	10.01	25.66
18	-2971.	4.44	-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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 5

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	69.2170
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	69.2170
12	39.0490	48.2390	-69.6550	40.5710	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	72.8180
23	29.5120	37.7120	59.4830	35.1350	43.1200	67.2570

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 5

UNIT	NREC LB/KLR FIJ	CO FT FIJ	NREC LB/KLR FIJ	HC FU	EI	NRE LB/KLR FIJ	CNO FIJ	EI	NR LB/KLR FIJ	CNOX FIJ	EI	SMK CORRECTED	NUMBER
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		3.25		.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		8.78				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	61.36	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	77.60
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 LBF
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	2311.	.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	COR FU FL LBM/HR	COR CB X100	F/A X100	COR FF X100	F/A	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.	.2650	.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	CO ₂ 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	.575	40.4	6.0	10.0	11.5
18	.613	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

JTAD-9 * 2400 HOUR TEST SERIES *

MODE 6

UNIT	CO2 EI LB/KLA FU	CO EI LB/KLB FU	HC EI LA/KLA FU	NO EI LA/KLA FU	NOX EI LA/KLG FU	SMK NUMBER FRONT SIDE
6	3135.	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	4.08	7.05	9.33
18	-2866.	15.96	-96.41	4.50	5.59	3.67
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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 6

UNIT	FCO X100	FHC X100	FNC 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	-9.1870	-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	15.3930	41.3480	11.8780	18.0970	45.6440
15	9.7600	15.4290	41.3430	11.9450	18.1600	45.6440
16	9.0540	14.4440	39.8440	11.0490	16.9620	43.9390
17	10.6090	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

JT80-9 • 2400 HOUR TEST SERIES •

MODE 6

UNIT	NREC LB/KLB	CO FU	EI	NREC LB/KLB	HC FU	EI	NRE LA/KLB	CND FU	EI	NR LA/KLB	CNDX FU	EI	SMK CORRECTED	NUMBER
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			5.55			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		6.67	
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

JTAD-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

JTAD-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 LAF
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	1145.	-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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 7

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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 7

UNIT	CO2 FI LA/KLA FU	CO EI LA/KLA FU	HC FI LA/KLA FU	NO FI LA/KLA FU	NOX EI LA/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	3109.	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

JT6D-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	4.6070	5.5870	21.9900	5.3390	4.2490	24.4170
9	4.5690	5.5070	21.8010	5.5260	6.3350	24.8760
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	4.6080	5.5380	21.6110	5.2500	6.1150	24.2120
19	4.6080	5.5770	21.6110	5.2500	6.1120	24.2120
23	-4.3390	-5.2790	20.9820	4.8620	5.7530	23.3020

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 2400 HOUR TEST SERIES •

MODE 7

UNIT	NREC LA/KLR FU	CO FI LA/KLR FU	NREC LA/KLR FU	HC EI LA/KLR FU	NOE 1/KLR FU	CNO EI LA/KLR FU	NR LA/KLR FU	CNOX LA/KLR FU	EI FU	SMK CORRECTED	NUMBER
6		27.00		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		4.11		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	36.63	57.72
7	34.00	58.00	36.89	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 A

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
6	990.	.2490	.2460	1104.	1.055	898.
7	1090.	.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

JT80-9 • 2400 HOUR TEST SERIES •

MODE 8

UNIT	CORR FL LBM/HR	FL COR	CR X100	F/A COR	PF X100	F/A COR	TT7 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	15.0	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	.446	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

JTAD-9 • 2400 HOUR TEST SERIES •

MODE B

UNIT	CO ₂ EI LB/KLA FU	CO EI LB/KLA FU	HC EI LA/KLB FU	NO EI LA/KLA FU	NO _x EI LB/KLA 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.	39.65	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	3054.	40.08	11.68	2.93	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

JTRD-9 • 2400 HOUR TEST SERIES •

MODE A

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
6	-3.2790	-4.1630	18.3370	3.7590	4.6090	20.5060
7	3.6160	4.5640	19.5010	4.1710	5.0910	21.6000
9	3.3740	4.2320	18.7430	4.0420	4.8320	21.2660
10	3.6750	4.4990	19.3110	4.0580	4.8320	21.3080
11	3.6250	4.4620	19.6220	4.1710	4.9440	21.6000
12	4.3720	-5.3810	21.1330	4.5000	5.4960	22.4270
14	3.5300	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 NUMFR CORRECTED
6	32.47	8.48	2.64	4.67	0.00
7	32.61	8.43	2.37	3.69	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	3.98	0.00
23	32.18	11.39	3.18	4.51	0.00

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 3000 HOUR TEST SERIES •

UNIT	TSO HR	TSR HR	AMB TEMP DFG R	AMB PRESS IN HG	AMB HUMID LR H2O/AIR
7	16643.	2828.	521.7	29.97	.011190
11	9905.	2555.	510.7	29.62	.007480
14	4420.	2945.	520.7	29.92	.005650
15	4360.	2895.	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

JTAD-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

JT4D-9 • 3000 HOUR TEST SERIES •

MODE 1

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
7	1070.	.3860	.3180	1212.	1.040	865.
11	1117.	.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	1117.	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

JTAD-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	16.6	4.9	3.6
18	.755	157.3	16.7	7.6	6.7
21	.557	131.4	25.4	6.2	5.6
22	.692	153.9	12.8	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 EI LB/KLB FU	NOX EI LB/KLB FU	SMK NUMBER 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

JTAD-9 • 3600 HOUR TEST SERIES •

MODE 1

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
7	3.4150	4.4160	15.7720	3.3570	4.3560	19.3430
11	3.8380	4.6950	18.0650	4.0400	4.8900	21.2410
14	3.8380	4.6710	18.5860	3.7970	4.6340	20.6110
15	3.8580	4.8740	18.1050	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	4.6430	21.0170
22	3.9060	4.8570	18.9560	3.6880	4.6480	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 LA/KLB FU	NR CNOX EI LA/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

JTAD-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 LAF
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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 2

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

JT9D-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

J180-9 • 3000 HOUR TEST SERIES •

MONF 2

UNIT	CO ₂ FI 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
7	3098.	24.52	7.80	2.78	2.78	0.00
11	3094.	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	6.72	3.46	3.46	0.00
16	3094.	26.00	6.84	2.60	2.74	0.00
17	3094.	28.58	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	10.78	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	23.0100
11	4.8570	5.7000	20.3090	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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 2

UNIT	NREC LA/KLA	CO FU	EI	NREC LB/KLA	HC FU	EI	NRE LB/KLA	CNO FU	EI	NO LA/KLA	CNOX FU	EI	SMK CORRECTED	NUMBER
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		28.59			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	
19		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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 3

UNIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
7	8675.	.9500	.7520	1466.	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 CR F/A X100	COR PF F/A X100	CORR 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

JTAG-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	4.7	88.2	64.0
11	1.928	14.3	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

JY80-9 • 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 NUMBER 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	315A.	1.45	.24	14.45	14.45	32.00
16	3151.	1.28	.23	14.74	14.74	30.00
17	315A.	1.70	.63	13.69	13.69	33.11
18	314A.	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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 3

UNIT	FCO X100	FMC X100	FNO X100	STD FCO X100	STD FMC 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	105.7210	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 LB/KLB FU	NREC MC EI LB/KLB FU	NRE CNO EI LB/XLB FU	NR CNOX EI LB/KLB FU	SMK NUMBER 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 LAF
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

JT4D-9 • 3000 HOUR TEST SERIES •

MODE 4

UNIT	CORR FU FL LAM/HR	COR CA F/A X100	COR PF F/A X100	COR TT7 DEG R	COR THRUST LBF
7	7308.	.7660	.6550	1388.	12300.
11	668.	.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	6954.	.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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 4

INIT	CO2 FI LA/KLA FU	CO EI LA/KLA FU	HC FI LA/KLA FU	NO FI LA/KLA FU	NOX EI LA/KLA 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	3157.	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	11.74	11.74	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

.T8D-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	73.0900	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

JT40-9 • 3000 HOUR TEST SERIES •

MODE 4

UNIT	NREC LB/KLR	CO FU	FI	NREC LB/KLR	MC FU	EI	NRE LA/KLR	CNO FU	EI	NR LA/KLR	CNOX FU	EI	SMK CORRECTED	NUMFR
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		31.26	
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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 5

UNIT	N1 SPEED PER CENT	N2 SPEED PER CENT	CORR N1 PER CENT	CCORR 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

JT4D-9 • 3000 HOUR TEST SERIES •

MODE 5

UNIT	FUEL FLOW LBM/HR	CR F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LBF
7	4825.	.6100	.4960	1302.	1.540	8586.
11	4445.	.5360	.4950	1248.	1.530	8813.
14	4688.	.5400	.4890	1248.	1.530	8475.
15	4650.	.6470	.4820	1175.	1.540	8543.
16	5025.	.5570	.5240	1320.	1.540	8670.
17	4988.	.5310	.5030	1248.	1.540	8540.
19	4840.	.5730	.5000	1302.	1.540	8626.
21	4763.	.5960	.4850	1248.	1.540	8549.
22	4555.	.5970	.4780	1320.	1.540	8620.

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 •

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
7	3150.	3.40	1.10	7.76	7.76	25.17
11	3146.	4.08	2.24	8.95	8.95	29.61
14	3154.	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

JTAD-9 • 3000 HOUR TEST SERIES •

MODF 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 LB/KLB	CO FU	EI	NREC LB/KLB	MC FU	EI	NRE LB/KLB	CNO FU	EI	NR LB/KLB	CNOX FU	EI	SMK CORRECTED	NUMBR
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

JTAD-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	77.29
11	62.50	77.75	62.90	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	78.19

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	EPR	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.	.2670	.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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 6

UNIT	CORR FII FL LAM/HR	COR CB F/A X100	COR PF F/A X100	COR 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.
19	2434.	.3270	.3490	1111.	4025.
21	2375.	-.4250	.3430	1097.	4025.
22	2344.	.2740	.3380	1134.	4025.

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-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	5.7	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	8.9	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 NUMBER 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 TFST 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	11.6490	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

JTAD-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	6.06	6.37	7.33
16	14.43	2.04	5.83	6.20	8.61
17	13.75	3.38	5.86	5.86	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	-18.93	4.14	4.93	6.93	7.33

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-9 • 3000 HOUR TEST 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

JTAD-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 LRF
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	1140.	1.060	1067.
17	1140.	.2740	.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 LBM/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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 7

UNIT	CO ₂ CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NO _x CONC PPM
7	.716	96.9	13.6	5.8	5.8
11	.510	81.2	18.4	5.6	-3.1
14	.478	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	.549	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 NUMBER 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.	34.32	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	FMC X100	FNO X100	STD FCO X100	STD FMC X100	STD FNO X100
7	4.8750	5.8700	18.7470	4.7480	5.7870	23.0700
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	22.7380

NOTE - MINUS SIGNS DENOTE OUTLYING VALUES

JT8D-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	3.29	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 • 3000 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

JTRD-9 * 3000 HOUR TEST SERIES *

MODE 8

INIT	FUEL FLOW LBM/HR	CB F/A X100	PERF F/A X100	TT7 DEG R	EPR	THRUST LAF
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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE A

UNIT	CORR FU FL LBM/HR	COR CS F/A X100	COR PE F/A X100	COR TT? DEG R	COR THRUST LBF
7	1090.	-.3760	.2850	1160.	897.
11	1051.	.2420	.2830	1158.	939.
14	1102.	.2420	.3030	1135.	908.
15	1034.	.3500	.2680	1135.	908.
16	-900.	.2200	.2560	1129.	890.
17	984.	.2380	.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

IT	CO2 CONC PER CENT	CO CONC PPM	HC CONC PPM	NO CONC PPM	NOX CONC PPM
7	-.772	129.6	18.4	4.9	5.4
1	.442	89.7	20.4	5.3	2.9
4	.494	83.5	16.7	5.8	4.7
5	.716	124.3	18.7	5.5	6.0
6	.449	109.5	16.5	3.3	3.6
7	.540	119.4	22.5	3.7	3.7
8	.696	134.7	27.3	6.6	6.4
1	.513	112.8	20.8	4.6	5.1
2	.676	-155.1	30.9	3.2	3.2

NOTE- MINUS SIGNS DENOTE OUTLYING VALUES

JTAD-9 • 3000 HOUR TEST SERIES •

MODE B

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	SMR NUMBER FRONT SIDE
7	3044.	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	3087.	34.07	8.79	2.49	2.68	0.00
16	3044.	47.25	12.25	2.32	2.54	0.00
17	3064.	40.16	12.99	2.02	2.03	0.00
18	3058.	37.66	13.12	3.03	3.03	0.00
21	3052.	42.69	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	16.5100	3.6750	4.6960	20.2760
11	3.9500	4.7920	18.3260	4.1590	4.9900	21.5690
14	3.8390	4.6550	18.5860	3.7970	4.6190	20.6110
15	3.8590	4.8510	18.1050	3.7970	4.7860	20.6110
16	3.7590	4.5200	16.6420	3.4040	4.3870	20.0800
17	3.5990	4.4890	17.3590	3.6380	4.5210	20.1740
18	3.8990	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

JTAD-9 • 3000 HOUR TEST SERIES •

MODE 8

UNIT	NREC CO FI LA/KLA FU	NREC HC EI LA/KLA FU	NRE CNO EI LA/KLA FU	NR CNOX EI LA/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

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.
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.

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