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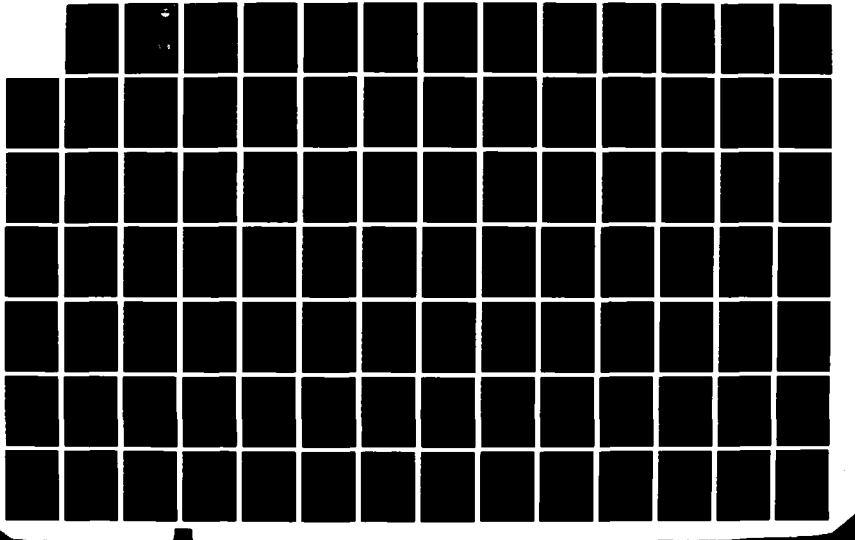

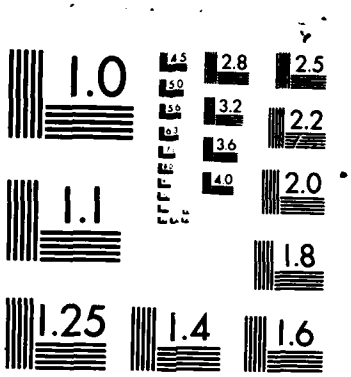

USAFOEHL REPORT

87-068EH0118ENA

FIRST ARTICLE NOISE SURVEY OF THE A/F32T-9 LARGE TURBO FAN ENGINE ENCLOSED NOISE SUPPRESSOR SYSTEM, FAR-FIELD NOISE, McCONNELL AFB KS

TERRY M. FAIRMAN, CAPTAIN, USAF, BSC

May 1987

Final Report

USAF Occupational and Environmental Health Laboratory
Human Systems Division (AFSC)
Brooks Air Force Base, Texas 78235-5501

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This report presents the results of noise measurements made on the A/F32T-9 Large Turbo Fan Engine, Enclosed Noise Suppressor System, during First Article Tests at McConnell AFB KS. Noise measurements obtained at 100 meters distance are summarized for the following engines: the J57-59W, TF33-P3, TF30-P7, F100, TF41-A1, J85-5, F101-GE-102, and the F109-CF-100.

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CONTENTS

TABLES

TABLES (Cont)

I. INTRODUCTION

A. Purpose: This report provides 1/3 octave band noise data on the A/F32T-9 Large Turbo Fan Engine Enclosed Noise Suppressor System (T-9 NSS), at McConnell AFB KS. Data were obtained in support of a request from the T-9 item managers, SA ALC/MMIMH, Kelly AFB TX, for noise data to support their First Article Tests (FAT) on the new facility.

B. Problem: The Williams Steel Inc./Cullum-Detuners Ltd. T-9 NSS is a prefabricated, air cooled, demountable, acoustically treated, jet engine noise suppressor system designed to totally enclose a single engine during ground runup operations. This facility is designed to permit testing of bare engines under controlled environmental conditions, and protect the neighboring area from noise through use of an air cooled exhaust system. This one facility can serve many different engine types and provides an efficient enclosed work area for maintenance personnel. T-9 noise suppressors are programmed to be sited at over 20 SAC bases and National Guard units in the next two years. Noise data are essential to evaluate the impact on the community noise environment around the T-9 facility, and determine if the T-9 noise suppressor meets the FAT requirements.

C. Scope: This report provides measured data defining bioacoustic environments produced by the following aircraft engines operating in the T-9 NSS during ground runup operations: J57-59W, TF33-P3, TF30-P7, F100, TF41-A1, J85-5, F101-GE-102, and F108-CF-100. All data are reported for 100 meters distance from the T-9 NSS, and are evaluated against the contractually specified criterion limit of 77 dB(A).

1. This report follows the data reporting format for the USAF Bioenvironmental Noise Data Handbooks established by the Armstrong Aerospace Medical Research Laboratory (AAMRL) under the report number AMRL-TR-75-50. The handbooks represent a multivolume library that quantifies the noise environments produced at flight/ground crew locations, and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbooks describe the noise produced during ground operations of aircraft, ground support equipment, and other ground-based equipment or facilities.

2. Volume 1 of the USAF Environmental Noise Data Handbook series discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Refer to Volume 1 (reference 2) for such information.

II. DISCUSSION

A. Measurements

1. USAFOEHL acquired the far-field noise data during an approximately 2 hour test period for each engine operating in the T-9 NSS, thus keeping similar meteorological conditions. Figure 1 shows the T-9 Noise Suppressor's

orientation relative to 20 microphone measurement sites centered on two 100 meter (328 feet) semicircles. The center of the front semicircle was located on the ground beneath the intersection of the engine centerline and a plane passing through the exhaust nozzle. The center of the back semicircle was located on the center of the exhaust stack. This two center approach was used because the T-9 NSS is designed with two main exit ports for the noise generated; the air inlets and the exhaust stack. These two exit ports are located a relatively large distance apart (over 100 feet) causing the T-9 to act like a two point noise source. For the T-9 to be measured as a single point source, noise measurements would have had to be taken at a much further distance than the 100 meter radius. Measured noise levels at farther distances would have been lower and possibly too close to the ambient noise environment to make a clear determination as to the source characteristics. The 1/3 octave band spectra for the two 90 degree positions were logarithmically averaged together to present only single values for the 90 degree measurement sites. This approximation was necessary since the OMEGA programs used to analyze the data only allow 19 angles to be presented. This method of averaging does not significantly affect the calculated overall values at any of the measurement locations.

2. Portable tape recording systems were used to sequentially record the noise at each far-field location. Approximately 10-15 seconds of noise at each location was recorded on audio tape for later analysis using a 1/3 octave band digital frequency analyzer. Two survey teams (three for the F101) recorded data using separate recording systems at different points to allow data collection within the time allowed by the operating constraints of the engine. The microphone was attached to a hand held pole, pointed at the source (0 degree angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 10 to 15 seconds during data acquisition at each measurement location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduces anomalies frequently present in data acquired by fixed height microphones.

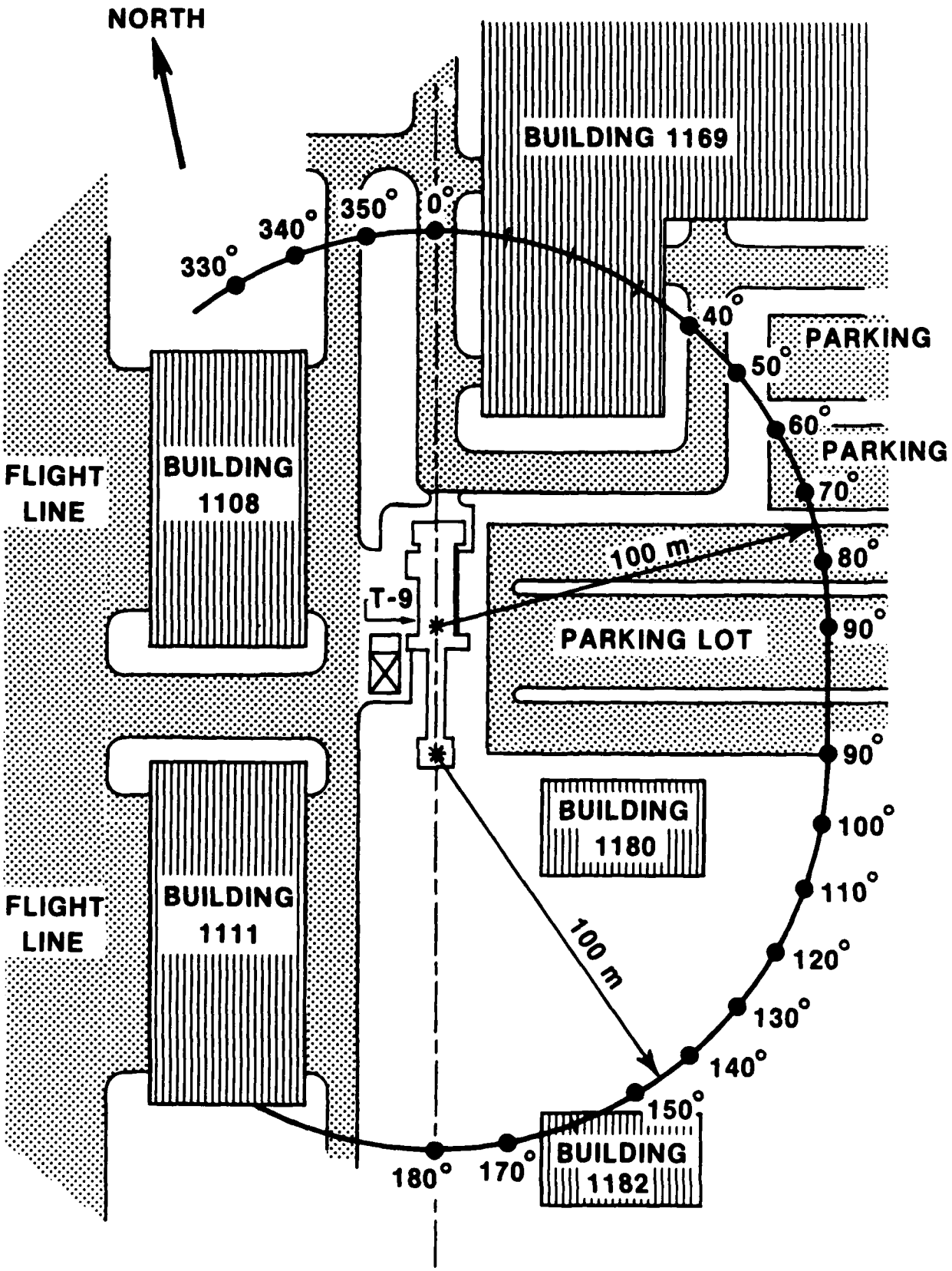

Figure 1: A/F32T-9 Noise Suppressor System
Far-Field Measurement Locations

B. Results

1. Table 1 presents a list of definitions of the acoustical quantities and terminology used in this report.

TABLE 1

DEFINITIONS OF ACOUSTICAL TERMS

OASPL	Overall Sound Pressure Level. Energy summation of sound pressure levels in all 1/3 octave bands with no frequency weighting applied.
OASLA	A-Weighted Overall Sound Level, in dB(A), as specified in American National Standards Institute (ANSI) Standard Number S1.4-1983.
OASLC	C-Weighted Overall Sound Level, in dB(C), as specified in ANSI Standard Number S1.4-1983.
PNLT	Tone Corrected Perceived Noise Level as specified in Federal Aviation Regulation (FAR) Part 36.
PSIL	Preferred Speech Interference Level as specified in AFR 161-35.
dB	Decibel, Base 10 logarithmic ratio of sound pressure.

2. Table 2 presents a summary of the OASLA values for each of the eight engines measured at McConnell AFB. These values were obtained from each of the Tables X.4 for each engine. The table summarizes the noise data for only the highest engine power setting of each engine, either military power or afterburner power, as this condition created the loudest noise levels. A review of this table indicates four of the eight engines had one or more measured angles where the A-weighted noise level exceeded the 77 dB(A) criteria. The four engines with OASLA values in excess of 77 dB(A) are the TF30-P7, the F100, the J85-5, and the F101. Each of these engines had afterburner capability. The F101 appears to be the worst offender in that 16 of the 18 measured locations exceeded the 77 dB(A) specification. As discussed next in the Observations section, each of these A-weighted values could be off by as much as ±3 dB(A), possibly even slightly more, because of the errors introduced from reflections and adverse weather conditions. Even conceding an overestimation of the actual noise level by as much as 3 or 4 dB(A), the noise levels measured for these engines would still be well in excess of the 77 dB(A) criteria particularly for the F101 engine.

TABLE 2

OVERALL SOUND LEVELS, A-WEIGHTED (OASLA)

ANGLE (Deg)	ENGINE							
	J57	T33	* TF30	* F100	TF41	* J85	* F101	F108
0	74	75	76	79	72	77	85	73
350	72	74	76	76	71	85	81	71
340	72	74	78	74	70	89	80	71
330	64	74	66	67	66	75	72	67
40	54	56	62	66	59	71	67	69
50	63	62	71	72	66	70	80	71
60	67	64	72	75	69	84	80	70
70	70	66	73	76	71	75	80	70
80	73	66	74	78	72	78	83	72
90	70	66	77	80	72	73	86	71
100	70	64	79	79	68	75	85	69
110	67	62	71	74	63	69	79	66
120	63	62	75	77	63	69	83	64
130	66	63	81	80	66	76	86	69
140	68	65	82	79	68	74	87	70
150	69	66	85	84	71	74	91	73
170	70	68	83	84	69	72	91	73
180	69	67	82	84	70	70	92	72

* Engines operating at maximum afterburner power. All other engines operating at military power or equivalent maximum thrust.

3. Tables "X".1 (specific "X" for each engine) provide the engine operating condition (%RPM) for each power setting used in the far-field tests. Also listed in these tables are the surface meteorological conditions during acquisition of the noise data for each engine operating in the T-9 NSS.

4. Tables "X".2 list the overall and 1/3 octave band sound pressure level (SPL) measured at the far-field locations under the specified engine power conditions and meteorological conditions at the time of each test.

5. Tables "X".3 present the overall and 1/3 octave band SPLs normalized to 100 meters distance and standard day meteorological conditions (15 degrees C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure).

6. Tables "X".4 present the measures of human noise exposure as specified in AFR 161-35.

7. Tables "X".5 list the overall and octave band SPL data normalized to standard conditions.

8. Some of the Tables "X".2 - "X".5 have missing data for certain angles and frequencies. Several conditions caused missing data. First, it was physically impossible to collect data at the angle 160 location. Secondly, the level of noise in certain frequencies may have been below the dynamic range of the analysis equipment. This is the case for those measurement locations where high frequency results are missing. Lastly, any data which was erroneously recorded and not analyzable is not included in the tables.

9. Background noise levels were measured at each microphone measurement angle, and these data are presented as the first tables in the Table "X".2 series. It was necessary to determine the ambient noise levels at each measured angle around the T-9 since a single measurement obtained somewhere in the near vicinity of the T-9 would not adequately represent the background conditions at any of the individual measurement sites. This is due to both the sound energy reflected off of the surrounding buildings and the spurious and transient nature of aircraft operations noise from the flight line. It is important to note background noise levels are reported in a separate table in this report, and have not been eliminated from any of the remaining tables of this report. Further discussion of the reasons for not applying background noise corrections to the data in this report is contained in the Observations section.

C. Observations

1. A review of the data clearly indicates that the T-9 site at McConnell AFB KS, was not good for acquiring far-field noise data. As depicted in Figure 1, the complete west side of the T-9 NSS is shielded by buildings 1108 and 1111, so no noise measurements could be made on that side. On the east side, building 1169 either completely blocked or interfered with measurements from 10° to 60°, and buildings 1180 and 1182 blocked or interfered with measurements from angles 100° to 170°. Noise measurements at all angles were affected to varying degrees due to reflection of the acoustic waves off these nearby buildings and the interaction of the reflected waves with the direct acoustic wave from the source. Sound levels in any particular band could be different from a free-field measurement by as much as ±4 dB. This could throw the final A-weighted levels at some of these locations off by as much as ±3 dB(A) from the effect of reflections alone.

2. Another possible problem with the data which cannot be quantified is the affect of collecting data under meteorological conditions outside of the desired parameters. Attempts were made to collect data only when the conditions of temperature, humidity, and wind speed were within the range specified by the AAMRL Standard Procedure. This was not always possible due to the importance placed on keeping the FAT on schedule, a restriction levied by the Test Directors. It was also unrealistic to delay the tests several days waiting for the weather to change at McConnell AFB KS, during the winter months. High wind speeds probably had the greatest adverse affect on the data due to the nearby buildings. The higher wind speeds would create even larger eddy currents around nearby buildings. These currents might have been outside of our wind speed tolerance, and we would not have known it since wind

velocity was measured at a single location. Noise signatures at measurement locations near these buildings would be distorted to some indeterminable extent in addition othe distortion caused by the reflection effects discussed above. The OMEGA programs do not correct for these types of effects.

3. All the noise data presented in this report were subject to interfering noise from highly active flight line operations. F-4 and KC-135 flyovers were routine, as were helicopters. Noise from ground support equipment and vehicular traffic seemed to be constant. Every effort was made to record samples of the noise from the T-9 NSS during the quietest periods, but for the most part this turned out to be a practical impossibility. Where it could be determined that an aircraft or helicopter flyover had adversely affected the recording, every effort was made to attempt to analyze a segment of the record with the least amount of outside interference.

4. Background noise readings were obtained at each measurement angle prior to starting each engine test run. A review of any of the Table "X".2, background power condition data tables will show the high level of the ambient noise environment existing during each test. Normally the OMEGA programs are equipped to eliminate background and electronic noise from the data. We chose not to apply the background noise corrections to the data because if applied, it would have created many blank tables. We therefore chose to present the background noise in a separate table, and the uncorrected measured results at all other engine power settings. To be able to identify a measured noise level as coming from a suspected source, the background or ambient noise levels should be very much quieter than the measured level. In practice background levels should be 10 or more decibels below the measured level. The OMEGA analysis programs look for a measured level at least 6 dB above background to be identified with any degree of reliability as coming from the measured source. On examining the background versus other power settings for any data set, we found only the measured results for power conditions of military power and afterburner power were reliable in terms of exceeding the background noise by the required 6 dB criteria. The engine power settings of idle and intermediate for all engines should not be relied on, but are included in this report since they are representative of the actual noise levels measured at McConnell AFB, under the given conditions.

III. CONCLUSIONS

A. The survey site at McConnell AFB, KS, was not the best location for the purpose of conducting a noise survey on the T-9 NSS. Although the location of this facility is ideal from the standpoint of locating the T-9 NSS close to the jet engine repair shop and the rest of the industrial complex of the base, the surrounding buildings and proximity to an active runway did not allow for the most accurate noise data collection.

B. Since we can not qualify the noise source characteristics of the data in this report (i.e., attribute all the measured noise levels as coming from only the T-9 NSS), we must emphasize the reported data can only be considered representative of the noise levels measured at the McConnell AFB T-9 NSS under

the given site location and weather conditions. The data in this report can not and should not be used for predicting noise levels in future siting applications at other installations.

C. Given the uncertainty level of the data as discussed above, it appears the T-9 NSS does not adequately suppress the noise output of four of the eight engines surveyed. The limiting criteria of 77 dB(A) was exceeded at one or more measurement locations for the TF30, F100, J85, and F101 engines.

IV. RECOMMENDATION

We recommend these noise data be recollected at some other location with better acoustic conditions in the future to establish data for noise level predictions.

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2. Cole, John N., USAF Bioenvironmental Noise Data Handbook Volume 1: Organization, Content and Application, AMRL-TR-75-50 (1), Armstrong Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio (1975)

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APPENDIX A

Far-Field Noise on the J57-59W Engine

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TABLE 3.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
J57-59W ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 8 February 1986

Time of Test: 1415 Hrs

Engine Operation

Idle	65.0 %RPM
80 %	80.0 %RPM
Military Power	94.4 %RPM

Meteorology

Temperature		-1 Deg C
Bar Pressure		0.727 M Hg
Rel Humidity		68 %
Wind	- Speed	3 - 6 Knots
	- Direction	340 Deg (True)

TABLE 3.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : -1 C
BAR PRESS :0.727 M HG
REL HUMID : 68 %

IDENTIFICATION:

OMEGA 1.5
TEST DP-OT9-100
RUN 05

05 MAR 87

PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160 **	170	180
25	59	57	59	55															
31.5	59	58	59	56															
40	57	57	57	55															
50	57	57	59	61															
63	59	60	59	57															
80	61	61	57	60															
100	68	67	62	65															
125	63	62	65	61															
160	55	56	56	54															
200	55	61	57	58															
250	49	52	54	56															
315	45	48	50	49															
400	45	47	51	49															
500	45	45	45	47															
630	44	47	48	50															
800	45	47	48	49															
1000	45	50	49	51															
1250	46	50	52	47															
1600	46	49	50	48															
2000	45	45	45	44															
2500	42	42	42	41															
3150	38	38	40	37															
4000	36	36	37	33															
5000	33	34	36	29															
6300	30	30	33	25															
8000	28	26	29	22															
10000	25	23	25	21															
OVERALL	71	71	70	70															

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 3.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-100 RUN 02 05 MAR 87 PAGE 2

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
J57-59(8P) ENGINE	INTMD POWER(80.0% RPM)	TEMP = -1 C
IN THE A/F32T-9 NSS	SINGLE ENGINE GROUND	BAR PRESS = 0.727 M HG
MCCONNELL AFB,KANSAS	RUNUP IN THE A/F32T-9	REL HUMID = 60 %
FAR FIELD NOISE	NSS MCCONNELL AFB	

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	85	83	86	79	76	74	76	79	78	81	79	78	77	77	78	75		77	80
31.5	84	82	79	76	68	70	74	74	78	78	76	73	72	72	74	77		74	75
40	81	79	76	69	62	69	73	73	74	74	72	70	68	66	68	71		68	69
50	73	72	72	68	59	65	70	69	70	69	65	64	64	64	66	65		66	69
63	74	71	70	67	56	64	68	66	69	68	68	63	62	60	64	68		65	66
80	70	66	65	63	51	59	63	64	63	65	63	60	57	57	59	59		61	59
100	71	68	67	66	51	56	59	61	59	59	55	53	53	54	59	58		58	59
125	67	60	63	57	47	54	58	58	57	56	54	49	51	51	53	54		55	56
160	58	57	57	53	44	51	53	51	52	52	48	46	47	45	48	48		52	50
200	59	61	60	54	52	52	51	52	51	53	50	49	46	47	46	47		48	47
250	52	52	53	48	41	45	47	45	48	48	44	44	45	45	42	43		46	44
315	48	48	50	43	38	41	44	44	46	45	44	41	41	44	42	43		45	44
400	48	49	51	47	36	39	45	48	50	46	45	41	42	44	44	46		48	47
500	46	46	47	42	33	37	44	47	52	45	45	40	41	42	43	45		44	43
630	48	51	50	48	34	36	43	45	46	45	43	40	39	40	42	43		43	42
800	46	49	47	44	34	35	43	43	44	42	41	38	39	39	40	42		47	42
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3150	49	45	45	42	30	32	41	40	40	39	38	35	31	34	33	34		34	35
4000	59	54	52	43	32	38	47	47	45	45	42	38	32	36	36	37		35	37
5000	53	48	46	41	30	31	41	41	39	38	37	32	30	32	33	33		31	34
6300	53	48	46	38	28	32	40	40	37	37	35	31	30	31	31	31		30	32
8000	51	45	44	37	30	31	37	38	36	36	34	30	30	31	32	32		30	33
10000	48	43	41	34	30	30	35	35	34	33	31	30	30	30	31	30		30	31
OVERALL	89	87	87	82	77	77	80	81	82	83	82	80	79	78	80	80		80	82

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 3.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS			IDENTIFICATION:
NOISE SOURCE/SUBJECT: J57-59(GP) ENGINE IN THE A/F32T-9 NSS MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: MILITARY PWR(94.4% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP : -1 C BAR PRESS :0.727 M HG REL HUMID : 60 %		OMEGA 1.5 TEST DP-OT9-100 RUN 03 05 MAR 87 PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	87	85	84	82	80	78	83	83	82	85	83	83	80	83	85	83		84	85
31.5	86	86	81	81	76	79	81	83	84	84	83	81	79	81	82	87		86	86
40	86	86	82	78	74	78	81	82	83	82	81	79	77	77	80	84		82	84
50	82	79	79	74	68	75	79	78	80	79	77	75	74	76	79	79		79	81
63	85	82	80	74	69	74	79	80	81	81	79	77	74	74	78	81		79	80
80	78	78	74	72	64	72	78	79	78	80	76	73	69	70	73	72		75	76
100	76	73	73	67	62	70	72	73	73	73	70	67	65	67	69	71		73	72
125	73	69	71	62	57	69	69	71	71	71	67	64	62	64	64	66		71	70
160	70	66	67	57	54	67	65	68	68	68	66	60	61	60	62	61		68	66
200	67	65	63	58	55	66	63	66	67	66	62	59	60	61	61	59		64	63
250	64	61	60	53	51	58	59	61	64	63	58	57	58	60	60	60		62	59
315	66	62	64	56	48	56	57	62	67	63	67	56	58	61	63	63		65	60
400	61	58	58	54	46	54	57	60	66	62	61	55	58	61	63	66		60	64
500	61	59	59	53	45	51	57	60	67	61	61	55	58	60	63	65		64	62
630	60	59	58	55	43	51	55	58	63	60	60	53	56	58	61	62		62	61
800	61	60	59	54	42	49	56	58	63	59	59	54	53	55	58	58		60	60
1000	60	59	58	55	40	48	55	58	62	58	59	55	51	54	55	57		58	56
1250	60	58	60	54	40	49	54	58	60	58	58	55	50	53	54	56		57	55
1600	61	60	60	52	37	46	54	56	57	56	54	51	48	51	52	55		56	54
2000	61	61	60	52	39	48	54	58	60	58	58	57	48	50	52	53		54	53
2500	61	60	59	50	40	47	55	57	59	57	56	59	46	49	50	51		52	51
3150	62	60	60	48		43	53	55	56	56	54	56	43	47	47	49		50	49
4000	57	56	55	43			47	48	48	48	45	44		43	42	45		46	45
5000	55	56	54	40			46	46	45	45	43	41		42	40	43		44	43
6300	54	55	53				44	45	43	43	40	39		40	39	41		42	41
8000	51	51	49				41	42	42	41	40	39	38	40	39	40		41	40
10000	49	49	46				39	41	41	40	40	39	39	40	39	40		40	40
OVERALL	93	92	89	86	82	85	88	89	90	90	88	87	85	87	89	91		90	91

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 3.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-100
RUN 05
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	59	57	59	55															
31.5	59	58	59	56															
40	57	57	57	55															
50	57	57	59	61															
63	59	60	59	57															
80	61	61	57	60															
100	68	67	62	65															
125	63	62	65	61															
160	55	56	56	54															
200	55	61	57	58															
250	49	52	54	56															
315	45	48	50	49															
400	45	47	51	49															
500	45	45	45	47															
630	44	47	48	50															
800	45	47	48	49															
1000	45	51	50	51															
1250	46	50	52	48															
1600	47	50	50	49															
2000	46	46	46	45															
2500	44	43	44	42															
3150	40	40	42	39															
4000	39	39	40	36															
5000	37	37	39	33															
6300	35	35	38	29															
8000	34	33	35	29															
10000	33	30	32	29															
OVERALL	71	71	70	70															

** NO DATA COLLECTED.

TABLE 3.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-100
RUN 02
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	85	83	86	79	76	74	76	79	78	81	79	78	77	77	78	75		77	80
31.5	84	82	79	76	68	70	74	74	78	78	76	73	72	72	74	77		74	75
40	81	79	76	69	62	69	73	73	74	74	72	70	68	66	68	71		68	69
50	73	72	72	68	59	65	70	69	70	69	65	64	64	64	66	65		66	69
63	74	71	70	67	56	64	68	66	69	68	68	63	62	60	64	68		65	66
80	70	66	65	63	51	59	63	64	63	65	63	60	57	57	59	59		61	59
100	71	68	67	66	51	56	59	61	59	59	55	53	53	54	59	58		58	59
125	67	60	63	57	47	54	58	58	57	56	54	49	51	51	53	54		55	56
160	58	57	57	53	44	51	53	51	52	52	48	46	47	45	48	48		52	50
200	59	61	60	54	52	52	51	52	51	53	50	49	46	47	46	47		48	47
250	52	52	53	48	41	45	47	45	48	48	44	44	45	45	42	43		46	44
315	48	48	50	43	38	41	44	44	46	45	44	41	41	44	42	43		45	44
400	48	49	51	47	36	39	45	48	50	46	45	41	42	44	44	46		48	47
500	46	46	47	42	33	37	44	47	52	45	45	40	41	42	43	45		44	43
630	48	51	50	48	34	36	43	45	46	45	43	40	39	40	42	43		43	42
800	46	50	47	44	34	35	43	43	44	42	42	38	39	40	40	42		47	42
1000	45	47	47	44	32	33	42	42	43	41	41	37	37	38	38	39		40	39
1250	47	48	48	46	34	34	45	43	43	42	41	36	36	38	38	39		38	39
1600	47	46	47	44	32	34	42	42	41	41	38	35	36	36	36	37		37	38
2000	61	57	56	50	38	50	53	56	55	55	55	53	48	47	46	47		44	49
2500	52	49	48	44	39	41	45	47	47	46	45	43	39	40	41	41		37	42
3150	51	47	47	44	32	34	43	42	42	41	40	37	33	36	35	36		36	37
4000	61	57	55	46	35	41	50	50	48	48	45	41	35	39	39	40		38	40
5000	57	51	50	44	34	34	45	44	43	42	40	36	34	35	37	36		34	38
6300	57	52	51	43	33	36	45	45	42	42	39	36	34	35	36	35		34	36
8000	57	52	50	43	36	38	43	44	42	42	40	36	37	38	38	38		36	39
10000	55	50	49	42	37	38	42	43	41	40	39	37	38	38	38	38		38	39
OVERALL	89	87	88	82	77	77	81	82	82	84	82	80	79	79	80	80		80	82

** NO DATA COLLECTED.

TABLE 3.3	SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION:
NOISE SOURCE/SUBJECT: J57-59(GP) ENGINE IN THE A/F32T-9 NSS MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: MILITARY PWR(94.4% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP = 15 C BAR PRESS =0.760 M HG REL HUMID = 70 %	OMEGA 1.5 TEST DP-OT9-100 RUN 03 05 MAR 87 PAGE 3

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	87	85	84	82	80	78	83	83	82	85	83	83	80	83	85	83		84	85
31.5	86	86	81	81	76	79	81	83	84	84	83	81	79	81	82	87		86	86
40	86	86	82	78	74	78	81	82	83	82	81	79	77	77	80	84		82	84
50	82	79	79	74	68	75	79	78	80	79	77	75	74	76	79	79		79	81
63	85	82	80	74	69	74	79	80	81	81	79	77	74	74	78	81		79	80
80	78	78	74	72	64	72	78	79	78	80	76	73	69	70	73	72		75	76
100	76	73	73	67	62	70	72	73	73	73	70	67	65	67	69	71		73	72
125	73	69	71	62	57	69	69	71	71	71	67	64	62	64	64	66		71	70
160	70	66	67	57	54	67	65	68	68	68	66	60	61	60	62	61		68	66
200	67	65	63	58	55	66	63	66	67	66	62	59	60	61	61	59		64	63
250	64	61	60	53	51	58	59	61	64	63	58	57	58	60	60	60		62	59
315	66	62	64	56	48	56	57	62	67	63	67	56	58	61	63	63		65	60
400	61	58	58	54	46	54	57	60	66	62	61	55	58	61	63	66		68	64
500	61	59	59	53	45	51	57	60	67	61	61	55	58	60	63	65		64	62
630	60	59	58	55	43	51	55	58	63	60	60	53	56	58	61	62		62	61
800	61	60	59	55	42	49	56	58	63	59	59	54	53	55	58	58		60	60
1000	60	59	59	55	41	48	55	59	62	59	59	55	52	54	55	58		59	57
1250	60	59	60	54	40	49	54	58	60	58	59	55	50	53	55	57		57	55
1600	62	60	61	53	38	47	54	57	58	57	55	52	49	52	53	55		56	55
2000	62	62	61	53	40	49	55	59	61	59	59	58	49	51	53	54		55	54
2500	63	61	61	51	42	48	57	59	60	58	58	60	47	51	51	53		54	53
3150	65	63	62	50		45	55	57	58	58	56	59	45	49	49	51		52	51
4000	59	59	58	45			50	51	51	51	48	47		46	45	48		49	48
5000	59	59	57	43			50	49	49	48	46	44		45	43	46		47	46
6300	59	59	57				48	49	48	47	45	44		45	43	45		46	45
8000	57	57	55				47	49	48	47	46	46	44	46	46	47		47	46
10000	56	56	54				46	49	48	48	47	47	46	47	47	47		48	47
OVERALL	93	92	89	86	82	85	88	89	90	90	89	87	85	87	89	91		91	91

** NO DATA COLLECTED.

TABLE 3.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-100
RUN 05
05 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																	
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	71		71		70		70												
OASLA	57		59		60		59												
T	1440		1440		1440		1440												
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	48		50		52		50												
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	73		73		73		72												
C	1		1		1		1												

** NO DATA COLLECTED.

TABLE 3.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-100
RUN 02
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	86	84	84	79	73	74	78	78	80	80	78	77	75	75	77	78		77	78
OASLA	68	64	63	58	49	54	59	60	60	59	58	56	53	53	53	54		54	55
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	57	56	55	51	40	43	51	52	52	51	49	46	44	45	45	46		46	47
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	88	83	82	75	64	73	77	79	79	79	78	75	71	71	71	72		70	73
C	4	3	3	2	2	4	3	4	4	4	4	5	4	3	3	3		2	3

** NO DATA COLLECTED.

TABLE 3.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR(94.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-100
RUN 03
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																	
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	91	89	87	84	79	83	86	87	88	88	86	84	82	84	86	89	88	89	
OASLA	74	72	72	64	54	63	67	70	73	70	70	67	63	66	68	69	70	69	
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	66	65	64	57			60	62	65	63	62	60		58	59	61	62	61	
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	91	88	88	78	67	77	83	85	87	86	85	84	76	80	81	84	85	83	
C	1	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	

** NO DATA COLLECTED.

TABLE 3.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-100
RUN 05
05 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	63	62	63	60															
63	64	64	63	65															
125	69	68	67	67															
250	56	61	60	61															
500	50	51	54	54															
1000	50	54	55	54															
2000	51	52	52	51															
4000	44	44	46	41															
8000	39	38	41	34															
OVERALL	71	71	70	70															

** NO DATA COLLECTED.

TABLE 3.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-100
RUN 02
05 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	89	86	87	81	77	76	80	81	82	83	81	80	79	78	80	80		80	82
63	78	75	75	71	61	60	73	71	73	72	70	67	66	66	69	70		69	71
125	73	69	69	67	53	59	62	63	62	61	58	55	56	56	60	59		60	61
250	60	61	61	55	53	53	53	53	54	55	51	51	49	50	49	49		51	50
500	52	54	54	51	40	42	49	52	55	50	49	45	45	47	48	50		51	49
1000	51	53	52	50	38	39	40	48	48	47	46	42	42	43	44	45		48	45
2000	62	58	57	52	42	51	54	57	56	56	55	53	49	48	48	48		45	50
4000	63	58	57	50	39	42	52	52	50	49	47	43	39	42	42	42		41	43
8000	61	56	55	47	41	42	48	49	47	46	44	41	41	42	42	42		41	43
OVERALL	89	87	88	82	77	77	81	82	82	84	82	80	79	79	80	80		80	82

** NO DATA COLLECTED.

TABLE 3.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J57-59(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR(94.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-100
RUN 03
05 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	91	90	87	85	82	83	87	87	88	89	87	86	84	86	88	90		89	90
63	87	85	83	79	72	79	83	84	84	85	82	80	78	79	82	83		83	84
125	78	75	76	69	64	73	74	76	76	76	73	69	68	70	71	73		76	75
250	71	68	67	61	57	67	65	68	71	69	68	62	64	66	66	66		68	65
500	66	63	63	59	49	57	61	64	70	66	65	59	62	65	67	70		70	67
1000	65	64	64	59	46	54	60	63	67	63	64	60	57	59	61	62		63	63
2000	67	66	66	57	45	53	60	63	65	63	62	62	53	56	57	59		60	59
4000	66	65	64	52			57	59	59	59	57	59		52	51	53		55	54
8000	62	63	61				52	54	53	52	51	50	48	51	50	51		52	51
OVERALL	93	92	89	86	82	85	88	89	90	90	89	87	85	87	89	91		91	91

** NO DATA COLLECTED.

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APPENDIX B

Far-Field Noise on the

TF33-P3 Engine

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TABLE 4.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
TF33-P3 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 13 February 1986

Time of Test: 1000 Hrs

Engine Operation

Idle	57.3 %RPM
80 %	80.3 %RPM
Military Power	99.0 %RPM

Meteorology

Temperature	-2 Deg C
Bar Pressure	0.727 M Hg
Rel Humidity	67 %
Wind - Speed	4 - 6 Knots (Gusts to 15)
- Direction	170 Deg (True)

TABLE 4.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 05
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 MSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
MSS MCCONNELL AFB

METEOROLOGY:
TEMP : -2 C
BAR PRESS :0.727 M HG
REL HUMID : 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	69	74	74	72	66	68	63	64	70	71	69	72	70	69	68	64		70	70
31.5	68	72	71	71	65	65	63	62	68	71	67	72	71	74	70	71		76	73
40	66	71	71	69	63	62	63	60	66	38	66	66	68	68	65	61		70	72
50	66	70	69	68	60	60	59	59	64	67	64	65	66	67	65	61		71	71
63	70	72	69	68	58	58	57	57	61	65	63	62	64	64	62	60		68	67
80	67	67	66	70	54	54	55	54	58	63	61	60	62	62	60	58		68	65
100	71	69	67	70	54	52	53	55	58	59	60	57	61	61	58	57		67	68
125	65	65	66	66	55	50	53	54	54	55	54	52	56	58	56	57		62	63
160	63	62	64	65	47	48	47	47	50	52	50	49	53	53	52	53		57	59
200	65	64	67	64	48	49	50	52	55	56	53	50	53	51	52	52		54	56
250	62	59	62	61	46	47	50	50	57	55	54	48	54	52	51	50		56	50
315	62	59	62	63	43	44	46	46	48	50	50	48	57	56	55	52		59	50
400	64	61	62	66	43	48	49	49	49	51	53	50	57	57	56	52		61	54
500	65	58	62	67	41	46	46	48	48	49	50	50	55	56	55	51		61	56
630	65	59	62	68	39	40	43	46	48	47	49	49	56	59	54	52		61	57
800	66	60	64	68	39	39	44	45	49	48	50	50	58	59	55	54		62	58
1000	67	61	65	67	37	37	43	44	46	47	47	49	57	57	55	52		59	55
1250	66	60	64	66	36	36	46	45	45	46	46	49	57	56	55	51		57	51
1600	62	57	62	62	34	33	41	41	42	43	43	44	54	52	52	48		54	47
2000	61	55	60	60	31	30	38	38	39	40	39	42	49	47	49	43		50	44
2500	56	52	57	56	30	27	38	35	35	38	36	40	44	43	45	41		47	40
3150	51	48	54	52	28		36	32	32	35	33	37	40	38	40	35		41	37
4000	47	44	49	49			33	29	29	32	31	34	37	34	34	33		36	33
5000	42	41	44	44			31		28	32	31	32	36	33	31	30		33	32
6300	37	37	40	39			31			32	31	31	35	31	31	32		32	32
8000	33	34	37	36			31			32	33	32	33	35	32	35		33	32
10000	31	32	33	33			29			32	32	32	32	32	32	33		32	32
OVERALL	79	80	80	81	71	71	69	69	74	76	74	76	76	77	75	74		80	79

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 4.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 01
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : -2 C
BAR PRESS :0.727 M HG
REL HUMID : 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	** 60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	68	73	67	77	69	68		69	70	68	66	65	68	71	66	65		67	65
31.5	67	71	67	74	67	66		68	68	67	64	64	68	69	70	69		73	71
40	63	70	64	72	67	64		65	66	67	63	62	66	66	67	69		70	66
50	64	68	66	70	66	61		65	65	67	63	62	67	67	67	69		71	73
63	70	72	67	69	64	60		64	62	67	63	62	64	66	64	65		68	70
80	65	67	65	67	61	59		59	62	66	58	57	62	63	60	62		66	65
100	68	69	68	67	59	61		62	63	64	61	56	59	60	57	58		62	64
125	70	69	71	69	59	55		56	58	61	56	53	55	56	54	55		59	61
160	70	69	71	71	60	53		52	52	57	49	50	52	52	49	50		54	59
200	67	67	69	68	61	51		52	54	58	51	49	54	50	50	47		51	58
250	61	61	64	62	60	50		51	52	58	46	46	49	48	46	46		51	60
315	58	60	61	59	60	48		48	47	57	45	45	48	47	46	45		52	58
400	57	59	57	59	58	48		48	47	53	44	45	49	47	47	44		53	59
500	57	58	57	58	55	46		49	47	50	43	44	47	46	48	43		54	60
630	60	62	59	63	52	45		46	44	49	43	43	48	46	47	43		54	57
800	60	61	58	60	49	43		43	45	47	42	43	45	44	45	41		52	56
1000	60	62	61	60	45	41		45	44	44	42	42	46	43	44	40		50	54
1250	59	61	62	58	43	40		43	44	43	41	40	42	41	41	39		48	52
1600	57	57	58	54	45	36		40	39	38	36	36	39	38	38	36		45	49
2000	57	58	58	55	43	34		39	38	37	35	35	36	37	35	34		43	46
2500	55	56	55	55	37	33		38	37	36	38	38	36	37	35	35		41	43
3150	54	54	54	56	33	31		37	35	33	33	32	33	35	32	30		39	40
4000	52	52	53	56	30	28		36	33	31	30	30	32	32	31	28		34	35
5000	51	52	52	56	28			34	32	31	32	32	33	31	34	29		32	32
6300	48	50	50	55				33	28		30	30	31	30	33	28		29	29
8000	50	51	53	59				33	27			28	32	30	31	28		29	29
10000	45	47	49	55				31					29	27	30			27	28
OVERALL	78	80	79	82	75	73		74	75	76	72	71	74	76	75	75		78	78

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 4.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 02
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = -2 C
BAR PRESS = 0.727 M HG
REL HUMID = 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	** 110	120	130	140	150	** 160	170	180
25	81	80	79	74	71	70	71	70	72	73	72		72	70	71	69		73	74
31.5	80	80	73	72	68	67	70	70	71	70	70		69	68	70	68		69	68
40	74	75	70	70	65	65	68	71	69	68	68		67	66	65	66		68	66
50	71	69	69	71	63	62	66	67	66	65	65		66	64	63	61		70	69
63	72	72	69	72	62	62	65	69	64	64	64		66	62	61	64		70	70
80	67	67	66	70	63	60	61	66	61	60	60		63	60	57	59		70	74
100	68	71	67	70	58	62	59	63	64	57	59		59	57	56	57		69	67
125	69	70	70	71	55	55	59	60	59	55	54		56	55	53	55		68	60
160	69	70	70	72	50	51	55	58	56	51	50		53	55	49	52		66	56
200	66	68	69	70	51	53	54	55	57	52	50		51	51	50	49		60	55
250	60	62	62	65	48	51	51	53	55	49	49		51	50	50	49		60	56
315	57	58	60	64	45	47	52	53	51	47	48		52	47	47	48		61	55
400	56	58	58	61	44	49	50	52	51	47	47		51	48	48	48		61	55
500	55	58	58	60	43	47	49	51	49	46	48		46	48	47	47		60	53
630	58	62	63	64	42	46	49	50	47	46	49		47	47	49	46		55	52
800	58	61	63	62	41	44	48	47	49	44	45		45	46	46	44		53	50
1000	59	61	65	62	40	42	47	46	47	43	44		45	45	46	43		50	48
1250	59	61	65	59	40	42	46	46	47	43	43		42	43	43	41		47	46
1600	57	58	59	56	37	38	44	43	44	41	38		40	42	38	38		44	45
2000	64	64	63	58	44	46	54	57	56	51	47		39	40	40	41		44	47
2500	58	58	57	55	37	39	46	48	47	43	40		35	39	39	36		40	42
3150	55	55	56	56	32	33	42	40	40	37	35		33	36	33	33		37	39
4000	59	57	57	58	30	35	45	43	42	38	36		30	31	32	33		34	36
5000	55	53	54	57		30	40	39	37	35	33		29	28	33	31		31	33
6300	54	52	53	57		29	39	38	35	35	31		28		32	30		30	31
8000	52	52	55	60			36	35	32	33	30		28		32	31		30	31
10000	49	48	51	56			32	32	29	32	27		27		31	30		30	30
OVERALL	85	85	82	82	75	74	76	77	77	77	76		76	74	75	74		79	81

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 4.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 03
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : -2 C
BAR PRESS :0.727 M HG
REL HUMID : 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	88	88	87	83	81	80	82	84	83	84	83	80	78	82	82	80		81	83
31.5	89	86	85	81	78	79	81	82	83	83	82	79	77	79	79	83		82	82
40	87	88	83	78	74	76	81	81	82	81	79	76	75	75	78	81		81	79
50	83	82	80	76	72	75	77	78	80	78	77	74	73	75	77	76		79	79
63	86	83	79	74	71	74	76	76	78	77	76	73	73	72	75	78		77	77
80	79	79	75	70	66	71	75	74	75	77	72	69	70	68	71	71		74	74
100	75	74	73	68	63	70	71	68	69	71	68	65	66	67	68	70		72	70
125	75	73	73	71	58	67	69	67	68	70	66	61	62	63	66	67		70	68
160	73	72	71	73	58	63	65	66	65	66	62	59	58	58	64	65		68	66
200	71	71	69	70	57	61	62	65	65	66	60	59	57	56	62	63		66	64
250	66	68	64	65	54	60	58	60	63	64	58	57	55	56	61	57		61	59
315	63	66	61	65	50	59	56	58	60	62	56	55	54	54	60	55		60	60
400	62	64	61	63	49	55	54	58	58	60	57	54	55	57	59	58		62	63
500	61	63	61	61	47	51	53	56	57	58	57	55	55	56	59	58		60	60
630	62	65	65	65	45	50	51	55	56	57	56	53	54	56	57	58		59	60
800	61	63	64	62	44	49	50	54	55	54	55	52	52	54	56	58		60	60
1000	62	63	64	63	41	48	50	53	53	53	54	51	51	53	55	57		58	57
1250	62	62	62	60	39	47	49	53	53	52	52	49	51	52	53	54		56	54
1600	60	60	59	57		45	47	51	51	50	50	47	47	50	51	53		54	52
2000	60	60	59	58	37	44	47	52	51	49	48	45	45	48	49	51		52	50
2500	59	59	58	57		42	46	51	50	48	47	45	43	45	47	49		49	48
3150	62	60	60	58		41	48	52	49	47	46	44	39	42	44	46		46	46
4000	60	58	58	59		38	46	50	46	45	43	41			39	43		43	43
5000	57	55	56	58			43	46	42	42	41					41		41	41
6300	57	55	55	57			42	45	41	40	38					38			38
8000	56	55	56	61			40	43	39	38									
10000	52	51	53	57				39											
OVERALL	94	93	91	87	84	85	87	88	89	89	87	84	83	85	86	87		86	88

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 4.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 05
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	69	74	74	72	66	68	63	64	70	71	69	72	70	69	68	64		70	70
31.5	68	72	71	71	65	65	63	62	68	71	67	72	71	74	70	71		76	73
40	66	71	71	69	63	62	63	60	66	38	66	66	68	68	65	61		70	72
50	66	70	69	68	60	60	59	59	64	67	64	65	66	67	65	61		71	71
63	70	72	69	68	58	58	57	57	61	65	63	62	64	64	62	60		68	67
80	67	67	66	70	54	54	55	54	58	63	61	60	62	62	60	58		68	65
100	71	69	67	70	54	52	53	55	58	59	60	57	61	61	58	57		67	68
125	65	65	66	66	55	50	53	54	54	55	54	52	56	58	56	57		62	63
160	63	62	64	65	47	48	47	47	50	52	50	49	53	53	52	53		57	59
200	65	64	67	64	48	49	50	52	55	56	53	50	53	51	52	52		54	56
250	62	59	62	61	46	47	50	50	57	55	54	48	54	52	51	50		56	50
315	62	59	62	63	43	44	46	46	48	50	50	48	57	56	55	52		59	50
400	64	61	62	66	43	48	49	49	49	51	53	50	57	57	56	52		61	54
500	65	58	62	67	41	46	46	48	48	49	50	50	55	56	55	51		61	56
630	65	59	62	68	39	40	43	46	49	47	49	50	56	59	54	52		61	58
800	66	60	64	68	39	39	44	45	49	48	50	50	58	59	55	54		62	58
1000	67	61	65	68	37	37	43	45	46	47	47	49	57	57	56	53		59	55
1250	66	61	65	66	36	37	46	45	45	46	46	49	57	56	55	52		57	51
1600	63	58	63	63	34	34	41	42	43	44	44	45	54	53	53	49		55	48
2000	62	56	61	61	33	31	40	39	40	41	40	43	50	48	50	44		51	45
2500	58	53	59	58	32	29	40	37	37	40	38	42	46	45	47	42		48	42
3150	54	50	56	54	30		39	35	35	37	35	39	42	40	42	38		44	39
4000	50	48	53	52			37	32	33	36	35	37	40	38	37	36		39	36
5000	46	45	48	48			35		32	36	35	36	40	37	35	34		37	36
6300	42	42	46	45			36			37	37	37	40	37	36	38		38	38
8000	40	40	43	43			37			38	39	38	40	41	38	41		40	38
10000	38	39	40	40			35			39	39	39	39	39	38	40		39	39
OVERALL	80	80	80	81	71	71	69	69	74	76	74	76	76	77	75	74		80	79

** NO DATA COLLECTED.

TABLE 4.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 01
05 MAR 87
PAGE 3

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	** 60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	68	73	67	77	69	68		69	70	68	66	65	68	71	66	65		67	65
31.5	67	71	67	74	67	66		68	68	67	64	64	68	69	70	69		73	71
40	63	70	64	72	67	64		65	66	67	63	62	66	66	67	69		70	66
50	64	68	66	70	66	61		65	65	67	63	62	67	67	67	69		71	73
63	70	72	67	69	64	60		64	62	67	63	62	64	66	64	65		68	70
80	65	67	65	67	61	59		59	62	66	58	57	62	63	60	62		66	65
100	68	69	68	67	59	61		62	63	64	61	56	59	60	57	58		62	64
125	70	69	71	69	59	55		56	58	61	56	53	55	56	54	55		59	61
160	70	69	71	71	60	53		52	52	57	49	50	52	52	49	50		54	59
200	67	67	69	68	61	51		52	54	58	51	49	54	50	50	47		51	58
250	61	61	64	62	60	50		51	52	58	46	46	49	48	46	46		51	60
315	58	60	61	59	60	48		48	47	57	45	45	48	47	46	45		52	58
400	57	59	57	59	58	48		48	47	53	44	45	49	47	47	44		53	59
500	57	58	57	58	55	46		49	47	50	43	44	47	46	48	43		54	60
630	60	62	59	63	53	46		46	44	49	43	44	49	46	47	43		54	58
800	60	61	58	60	49	43		43	45	47	42	43	45	44	45	41		52	56
1000	60	62	61	61	45	42		45	44	45	42	42	46	43	44	40		51	54
1250	60	61	62	58	43	40		43	45	43	41	40	42	41	42	39		48	52
1600	58	58	59	55	46	37		40	40	39	37	37	39	39	38	36		46	49
2000	58	59	59	56	45	35		41	39	38	37	36	37	38	37	35		44	47
2500	57	57	57	56	39	35		39	39	38	39	40	37	38	37	37		43	44
3150	56	57	57	58	35	34		40	37	36	35	34	35	37	35	33		42	43
4000	55	56	57	60	34	32		39	36	34	33	33	36	35	34	32		38	38
5000	55	56	56	60	32			38	36	35	36	36	37	35	38	33		36	36
6300	53	55	55	60				38	34		36	35	37	36	38	33		34	34
8000	56	58	59	65				40	34			34	38	36	37	34		36	36
10000	52	54	56	62				38					36	34	36			34	35
OVERALL	79	80	79	82	75	73		74	75	76	72	71	74	76	75	75		78	78

** NO DATA COLLECTED.

TABLE 4.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 02
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	** 110	120	130	140	150	** 160	170	180
25	81	80	79	74	71	70	71	70	72	73	72		72	70	71	69		73	74
31.5	80	80	73	72	68	67	70	70	71	70	70		69	68	70	68		69	68
40	74	75	70	70	65	65	68	71	69	68	68		67	66	65	66		68	66
50	71	69	69	71	63	62	66	67	66	65	65		66	64	63	61		70	69
63	72	72	69	72	62	62	65	69	64	64	64		66	62	61	64		70	78
80	67	67	66	70	63	60	61	66	61	60	60		63	60	57	59		70	74
100	68	71	67	70	58	62	59	63	64	57	59		59	57	56	57		69	67
125	69	70	70	71	55	55	59	60	59	55	54		56	55	53	55		68	60
160	69	70	70	72	50	51	55	58	56	51	50		53	55	49	52		66	56
200	66	68	69	70	51	53	54	55	57	52	50		51	51	50	49		60	55
250	60	62	62	65	48	51	51	53	55	49	49		51	50	50	49		60	56
315	57	58	60	64	45	47	52	53	51	47	48		52	47	47	48		61	55
400	56	58	58	61	44	49	50	52	51	47	47		51	48	48	48		61	55
500	55	58	58	60	43	47	49	51	49	46	48		46	48	47	47		60	53
630	58	62	63	64	42	47	50	50	48	46	49		47	47	49	46		56	52
800	58	61	63	62	41	44	48	47	49	44	45		45	46	46	44		53	50
1000	59	62	66	62	40	43	47	46	47	43	45		45	45	46	43		50	49
1250	59	61	65	59	40	42	47	46	47	44	43		43	43	43	41		48	47
1600	58	59	60	57	38	39	45	43	44	42	39		41	42	38	39		45	45
2000	65	65	64	59	45	48	55	58	58	52	48		40	42	41	42		45	48
2500	60	59	59	57	39	41	48	49	49	45	41		37	40	40	38		42	44
3150	58	57	58	58	34	35	44	43	42	40	37		35	38	36	36		40	42
4000	63	60	60	61	34	38	49	46	46	42	39		34	35	35	36		37	39
5000	59	57	58	61		34	44	43	41	39	37		33	32	37	35		35	37
6300	60	57	59	62		34	45	43	41	40	37		33		37	36		36	36
8000	59	59	62	67			43	41	38	39	37		35		38	37		36	37
10000	56	55	58	63			39	39	35	38	34		34		38	36		37	37
OVERALL	85	85	83	82	75	74	76	77	77	77	76		7[illegible]	74	75	74		79	81

** NO DATA COLLECTED.

TABLE 4.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 03
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB.KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	88	88	87	83	81	80	82	84	83	84	83	80	78	82	82	80		81	83
31.5	89	86	85	81	78	79	81	82	83	83	82	79	77	79	79	83		82	82
40	87	88	83	78	74	76	81	81	82	81	79	76	75	75	78	81		81	79
50	83	82	80	76	72	75	77	78	80	78	77	74	73	75	77	76		79	79
63	86	83	79	74	71	74	76	76	78	77	76	73	73	72	75	78		77	77
80	79	79	75	70	66	71	75	74	75	77	72	69	70	68	71	71		74	74
100	75	74	73	68	63	70	71	68	69	71	68	65	66	67	68	70		72	70
125	75	73	73	71	58	67	69	67	68	70	66	61	62	63	66	67		70	68
160	73	72	71	73	58	63	65	66	65	66	62	59	58	58	64	65		68	66
200	71	71	69	70	57	61	62	65	65	66	60	59	57	56	62	63		66	64
250	66	68	64	65	54	60	58	60	63	64	58	57	55	56	61	57		61	59
315	63	66	61	65	50	59	56	58	60	62	56	55	54	54	60	55		60	60
400	62	64	61	63	49	55	54	58	58	60	57	54	55	57	59	58		62	63
500	61	63	61	61	47	51	53	56	57	58	57	55	55	56	59	58		60	60
630	62	65	65	65	45	50	52	55	56	57	56	53	54	56	57	58		59	60
800	62	63	64	63	44	49	50	54	55	55	55	52	52	54	56	58		60	60
1000	62	63	64	64	42	48	50	53	54	53	54	51	52	53	56	57		58	57
1250	63	63	63	61	39	47	49	53	54	52	53	49	51	52	54	55		57	54
1600	61	61	60	58		46	48	52	51	51	50	47	48	50	52	54		55	52
2000	61	61	60	59	38	45	48	53	52	50	49	46	46	49	50	52		53	51
2500	61	61	60	59		44	48	52	51	50	49	47	44	47	48	51		51	50
3150	64	63	63	60		44	51	55	51	50	48	46	42	44	46	48		49	48
4000	64	62	62	62		41	49	53	49	48	46	44			43	47		47	47
5000	61	59	60	62			47	49	46	46	44					45		45	45
6300	63	60	61	63			48	50	46	45	43					43			43
8000	62	61	63	67			46	49	45	44									
10000	59	57	59	64				46											
OVERALL	94	94	91	87	84	85	87	88	89	89	87	85	83	85	86	87		88	88

** NO DATA COLLECTED.

TABLE 4.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 05
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	79	79	79	80	68	69	67	67	72	73	72	73	74	75	73	71		78	77
OASLA	74	69	73	75	49	50	54	54	56	57	57	58	65	65	63	60		68	63
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	66	61	65	67			47	46	47	49	48	50	56	56	55	52		58	53
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	86	82	85	85	61	61	68	65	69	70	70	70	76	76	74	71		78	76
C	1	1	1	0	1	0	1	1	1	1	0	0	0	1	0	0		0	1

** NO DATA COLLECTED.

TABLE 4.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-200
RUN 01
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	**	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	78	79	78	80	73	70		72	72	74	70	69	72	73	73	73		76	77
OASLA	70	71	71	72	61	53		55	55	58	53	52	55	54	54	52		60	64
T	1440	1440	1440	1440	1440	1440		1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	63	64	63	64	50	44		48	47	47	44	45	46	46	46	43		52	55
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	84	85	85	88	73	66		70	69	71	67	67	69	68	67	66		72	76
C	1	1	1	1	0	1		1	0	0	1	1	1	0	0	1		0	0

** NO DATA COLLECTED.

TABLE 4.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 02
05 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
HAZARD/PROTECTION																				
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																				
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																				
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																				
NO PROTECTION																				
OASLC		82	83	80	81	72	72	74	75	74	74	73	**	74	72	72	72	**	78	80
OASLA		72	72	74	73	53	55	61	62	62	57	56	**	55	55	55	54	**	64	61
T		1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	**	1440	1440	1440	1440	**	1440	1440
COMMUNICATION																				
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																				
PSIL		64	65	66	65	44	47	54	54	53	49	49	**	46	47	47	46	**	53	52
ANNOYANCE																				
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																				
TONE CORRECTION (C IN DB)																				
PNLT		89	89	89	89	69	72	79	81	80	75	73	**	69	67	68	69	**	77	78
C		2	2	1	1	2	3	3	4	4	3	3	**	0	0	0	1	**	0	1

** NO DATA COLLECTED.

TABLE 4.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 03
05 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82) :																			
NO PROTECTION																			
OASLC	92	91	88	85	81	83	85	86	86	87	85	82	81	82	84	85	86	86	
OASLA	75	74	74	74	56	62	64	66	66	66	64	62	62	63	65	66	68	67	
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	67	67	67	66		51	55	59	58	57	56	54			56	58	60	59	
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	91	90	89	90	68	76	79	82	81	82	79	74	74	74	78	80	81	81	
C	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

** NO DATA COLLECTED.

TABLE 4.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 05
05 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	73	77	77	76	70	71	68	67	73	74	73	75	74	76	73	72		78	77
63	73	75	73	73	63	62	62	62	66	70	68	68	69	70	68	65		74	73
125	72	71	71	72	58	55	57	58	60	61	61	59	63	63	61	61		69	70
250	68	66	69	67	51	52	54	55	59	59	57	53	60	59	58	56		62	58
500	69	64	67	72	46	50	51	52	53	54	56	55	61	62	60	56		66	61
1000	71	65	69	72	42	43	49	50	52	52	53	54	62	63	60	58		64	60
2000	66	61	66	66	38	37	45	45	45	47	46	48	56	55	55	51		57	50
4000	56	53	58	57			42	37	38	41	40	42	46	43	44	41		46	42
8000	45	45	48	48			41			43	43	43	45	44	42	45		44	43
OVERALL	80	80	80	81	71	71	69	69	74	76	74	76	76	77	75	74		80	79

** NO DATA COLLECTED.

TABLE 4.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:

OMEGA 1.5
TEST DP-OT9-200
RUN 01

05 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	** 60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	71	76	71	79	73	71		72	73	72	69	69	72	74	73	73		76	73
63	72	74	71	74	69	65		68	68	71	67	65	70	70	69	71		74	75
125	74	74	75	74	64	63		63	64	66	62	58	61	62	59	60		64	67
250	68	69	71	69	65	55		55	57	62	53	52	56	53	53	51		56	64
500	63	65	63	65	61	51		53	51	56	48	49	53	51	52	48		58	64
1000	65	66	66	65	51	47		49	50	50	47	47	49	48	48	45		56	59
2000	62	63	63	61	49	40		45	44	43	43	43	43	43	42	41		49	52
4000	60	61	61	64	38	36		44	41	40	40	40	41	41	41	37		44	45
8000	59	61	62	68				43	37			38	42	40	42	37		39	40
OVERALL	79	80	79	82	75	73		74	75	76	72	71	74	76	75	75		78	78

** NO DATA COLLECTED.

TABLE 4.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-079-200
RUN 02
05 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110 **	120	130	140	150	160 **	170	180
31.5	84	84	80	77	74	73	75	75	75	76	75		75	73	74	73		75	75
63	75	75	73	76	68	66	69	72	69	68	68		70	67	66	67		75	80
125	74	75	74	76	60	63	63	66	66	60	61		61	60	59	60		72	68
250	68	70	70	72	53	56	57	58	60	55	54		56	55	54	53		65	60
500	61	65	65	67	48	52	55	56	54	51	53		53	52	53	52		64	58
1000	64	66	69	66	46	48	52	51	53	49	49		49	50	50	48		55	53
2000	67	67	66	63	47	49	56	59	58	53	49		44	46	45	45		49	51
4000	65	63	64	65	37	41	51	49	48	45	43		39	40	41	40		43	45
8000	63	62	65	69			48	46	43	44	41		39		43	41		41	42
OVERALL	85	85	83	82	75	74	76	77	77	77	76		76	74	75	74		79	81

** NO DATA COLLECTED.

TABLE 4.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-200
RUN 03
05 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
TF33-P3(GP) ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	93	92	90	86	83	83	86	87	87	88	86	84	82	84	85	86		86	87
63	89	86	83	79	75	79	81	81	83	82	80	77	77	77	80	81		82	82
125	79	78	77	76	65	72	74	72	73	74	71	67	68	69	71	73		75	73
250	73	74	71	72	59	65	64	66	68	69	63	62	60	60	66	64		68	66
500	66	69	67	68	52	57	58	62	62	63	61	59	59	61	63	63		65	66
1000	67	68	68	67	47	53	55	58	59	58	59	56	56	58	60	61		63	63
2000	66	66	65	63		50	53	57	56	55	54	52	51	54	55	57		58	56
4000	68	66	66	66		46	54	58	54	53	51	48			48	52		52	51
8000	66	64	66	70			50	54	49	48									
OVERALL	94	94	91	87	84	85	87	88	89	89	87	85	83	85	86	87		88	88

** NO DATA COLLECTED.

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APPENDIX C

Far-Field Noise on the TF30-P7 Engine

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TABLE 5.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
TF30-P7 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 22 February 1986

Time of Test: 1100

Engine Operation

Idle	66.4 %RPM
80 %	80.0 %RPM
Military Power	97.9 %RPM
Afterburner Power	95.1 %RPM

Meteorology

Temperature	11 Deg C
Bar Pressure	0.767 M Hg
Rel Humidity	60 %
Winds - Speed	5 - 8 Knots (Gusts to 15)
- Direction	10 Deg (True)

TABLE 5.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS			IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-300 RUN 05 05 MAR 87 PAGE 2
NOISE SOURCE/SUBJECT: TF30-P7 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: BACKGROUND NOISE SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP = 11 C BAR PRESS =0.767 M HG REL HUMID = 60 %		

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	57	58	59	61	56	61	66	61	55	62	62	69	67	66	63	65		67	67
31.5	59	58	60	61	56	60	63	61	56	61	61	69	66	65	62	62		67	66
40	61	60	59	59	56	57	62	59	53	59	59	68	64	63	61	61		64	65
50	63	60	60	60	52	55	58	56	52	58	58	67	64	62	59	64		64	65
63	65	63	61	60	49	53	57	55	53	56	60	66	62	60	59	62		61	62
80	66	58	69	64	49	52	52	53	54	55	60	63	61	61	56	62		60	59
100	61	57	61	59	47	50	50	55	53	53	57	61	57	56	54	65		61	59
125	67	63	69	67	46	48	47	52	50	51	54	58	54	54	52	59		57	56
160	58	57	58	58	42	46	44	47	45	47	51	55	51	52	55	57		56	55
200	62	64	61	62	43	48	49	49	48	52	49	55	49	51	55	56		55	53
250	58	58	57	60	38	40	44	43	43	44	47	51	46	50	50	54		52	50
315	54	52	54	56	36	41	39	40	42	41	44	50	46	51	53	56		52	49
400	54	53	55	56	37	43	38	42	44	44	43	49	47	51	54	58		51	51
500	51	52	52	54	38	42	41	42	41	44	43	45	46	49	52	53		48	53
630	47	50	52	51	32	36	39	40	39	40	42	46	45	46	53	54		48	51
800	49	52	53	55	31	36	38	38	41	40	44	46	43	43	50	55		46	47
1000	49	53	54	55	28	35	35	37	38	39	43	46	42	42	51	52		46	45
1250	51	54	55	56	26	33	34	37	35	38	51	43	38	42	51	52		46	46
1600	48	53	52	54	23	32	31	34	34	34	44	42	34	41	48	50		44	46
2000	45	50	49	50	22	28	28	33	33	31	34	39	31	37	46	47		41	43
2500	45	48	48	50	23	26	26	30	30	29	34	38	28	36	44	46		40	41
3150	39	44	43	46	23	24	24	27	26	25	30	37		36	40	43		39	37
4000	37	39	39	41	22	23	21	24	25	23	26	34		31	37	39		36	35
5000	33	36	36	38	19	24	22	23	24	27	32	35		32	38	38		34	31
6300	28	31	31	33		23	21	22	23	20	21	33		27	36	34		31	29
8000	25	26	26	28		23	22	22	23	22	18	28		27	36	31		28	29
10000	22	22	22	25		23	22	22	19	22	17								
OVERALL	73	71	74	73	62	66	69	67	63	67	69	76	73	71	70	73		73	73

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 5.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-300
RUN 01
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER (66.42% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 11 C
BAR PRESS =0.767 M HG
REL HUMID = 60 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	69	64	66	66	67	65	63	57	62	63	63	63	70	57	67	63		69	69
31.5	71	70	69	67	67	65	63	55	63	63	61	62	68	60	67	61		70	69
40	73	73	72	68	63	63	63	63	65	65	63	61	67	68	68	67		68	68
50	71	67	68	66	62	59	59	55	60	61	60	59	67	65	64	66		67	66
63	69	65	67	64	61	58	57	55	59	58	58	58	65	64	62	62		66	64
80	67	64	66	63	56	55	56	55	61	60	61	59	62	63	60	60		63	61
100	66	63	65	63	55	52	57	54	64	57	57	54	61	60	58	57		61	59
125	67	65	67	66	53	51	59	52	68	55	54	54	59	59	57	57		58	57
160	65	63	65	64	47	49	58	51	66	54	51	51	55	55	57	58		56	54
200	62	62	65	64	50	50	57	49	66	52	48	50	52	52	55	57		53	51
250	61	60	62	60	44	45	56	49	61	48	47	48	48	52	55	56		52	48
315	61	59	60	60	42	43	53	50	59	49	51	48	47	50	53	56		52	47
400	63	60	63	63	44	45	50	51	57	50	51	50	46	51	52	55		51	48
500	58	58	58	57	40	41	45	48	51	50	46	47	43	47	47	51		47	44
630	58	58	57	56	37	38	42	46	47	49	43	44	40	46	47	49		45	44
800	57	56	55	55	36	36	40	45	45	46	41	42	39	44	46	48		43	45
1000	54	53	54	55	33	34	39	43	45	44	40	41	38	43	45	45		41	40
1250	53	52	52	55	32	33	37	42	43	42	39	39	38	42	44	43		39	39
1600	52	52	52	55	30	31	37	42	43	40	38	38	36	39	41	41		37	38
2000	57	54	52	53	31	33	44	48	48	42	42	40	37	39	41	41		37	40
2500	47	47	48	50	33	31	35	38	39	36	34	34	31	34	37	36		33	33
3150	45	44	46	48	33	30	35	36	36	35	31	31		30	33	34		30	30
4000	43	43	43	45	33	29	35	36	35	32	29	28			28	31		28	
5000	41	41	41	41	32		33	36	32	28		32	32		30	32		34	
6300	38	38	36	36	32		30	32	28			30	31		29	31		32	
8000	33	33	32	33	30			28								27		28	
10000	30	30	30	30				24											
OVERALL	79	78	78	76	72	70	70	67	75	71	70	69	75	75	74	73		76	75

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 5.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 02
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 11 C
BAR PRESS =0.767 M HG
REL HUMID = 60 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	83	79	81	76	71	69	68	73	73	72	69	71	70	68	72	68		71	72
31.5	80	78	75	71	63	65	68	69	70	71	68	68	66	67	69	68		71	71
40	74	73	72	68	61	64	67	70	68	69	67	66	65	65	66	70		70	71
50	66	64	68	63	58	60	64	63	64	65	65	64	62	63	63	65		71	68
63	68	65	68	63	56	59	63	62	62	63	63	61	60	63	62	65		69	67
80	65	64	65	63	53	56	61	61	60	62	62	58	58	60	60	62		66	64
100	63	63	64	64	51	54	57	58	57	59	59	56	55	58	58	61		64	61
125	64	67	65	68	48	52	55	55	55	56	56	54	53	56	58	58		62	58
160	64	65	64	69	46	49	51	54	51	52	52	51	49	53	56	55		57	56
200	64	66	64	66	50	49	50	53	52	51	50	49	47	50	52	51		54	56
250	61	63	62	61	44	47	47	49	49	49	47	46	45	49	50	48		51	54
315	61	61	61	60	43	46	46	49	49	48	47	46	44	49	51	51		52	5[illegible]
400	62	63	63	62	44	45	47	53	52	49	45	49	46	51	51	55		54	5[illegible]
500	57	59	58	59	41	42	43	49	48	46	42	46	44	49	49	55		55	55
630	58	58	58	60	38	38	40	49	46	46	41	46	41	49	48	56		53	55
800	57	57	57	58	36	36	40	46	45	44	39	43	40	45	46	53		56	54
1000	56	56	57	58	34	34	37	43	44	42	38	41	38	45	45	54		53	50
1250	54	55	56	57	32	32	36	41	42	41	37	39	37	44	45	53		53	50
1600	54	54	54	55	31	30	36	40	42	40	36	36	34	40	42	50		52	48
2000	53	52	52	53	32	30	39	39	41	40	36	35	32	38	40	48		48	45
2500	63	60	57	54	36	38	50	53	52	50	45	47	36	41	42	46		46	44
3150	57	55	52	49	32	36	44	47	47	45	40	42	31	36	37	42		42	39
4000	49	48	46	44	30	33	39	40	38	37	32	32		29	30	35		36	33
5000	52	50	47	42	28	32	40	42	39	37	31	31				28		29	31
6300	48	45	43	38	28	30	36	37	34	33									28
8000	45	42	40	37	28		33	33	30	28									
10000				34			27							27					27
OVERALL	85	83	83	80	72	72	74	77	76	76	74	74	73	73	75	75		78	78

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 5.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(97.9 %RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 11 C
BAR PRESS = 0.767 M HG
REL HUMID = 60 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-300
RUN 03
05 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	83	80	80	81	82	78	80	83	81	83	81	82	79	81	85	79		83	84
31.5	80	79	80	77	81	78	82	79	81	82	82	79	77	80	82	84		84	83
40	79	80	78	75	79	78	80	79	80	81	80	77	76	77	80	83		82	82
50	78	76	76	71	75	72	77	77	77	77	77	74	74	76	77	80		80	80
63	80	76	77	70	74	73	78	76	77	78	77	73	73	72	76	78		78	78
80	75	73	72	69	71	72	77	76	75	77	75	70	69	71	73	75		75	75
100	73	71	70	65	69	71	73	73	73	72	70	67	67	68	70	71		73	72
125	71	69	69	68	63	69	71	70	70	70	68	64	64	67	67	69		71	69
160	69	68	67	68	60	68	67	67	68	69	65	62	62	64	65	67		69	67
200	68	67	66	65	60	67	65	65	67	66	61	60	61	62	63	62		65	63
250	64	64	63	61	55	63	62	62	63	64	57	56	58	59	60	59		60	62
315	62	61	60	61	51	59	58	58	61	61	56	53	57	59	58	61		60	64
400	61	63	62	64	49	54	55	55	58	60	57	52	57	59	61	66		65	67
500	57	59	58	61	46	49	52	53	57	58	57	51	56	60	61	66		63	63
630	56	58	58	58	43	47	52	51	54	56	56	49	54	58	59	64		62	61
800	56	57	56	56	42	46	51	50	53	55	55	47	52	57	58	61		61	60
1000	55	55	55	57	41	45	49	48	51	54	55	47	51	56	57	59		59	58
1250	55	54	54	55	40	45	47	48	52	53	54	47	50	55	56	59		57	56
1600	54	53	54	54	39	43	47	47	50	53	52	45	49	55	55	58		57	55
2000	53	52	53	53	39	42	47	47	50	51	51	45	48	53	53	56		55	53
2500	52	50	50	51	38	40	46	46	49	50	50	46	45	51	51	54		53	51
3150	49	48	47	48		38	44	44	46	48	47	44	42	48	48	51		50	49
4000	49	48	46	44			43	43	43	45	44	38	39	45	45	47		47	46
5000	52	49	48	41			44	45	43	44	42			42	42	44		44	43
6300	56	43	42				39	39		38				39	38	40		40	39
8000	40																		
10000	39																		
OVERALL	88	86	86	84	87	84	87	87	87	88	87	85	84	86	89	89		89	89

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 5.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 04
05 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(95.1%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 11 C
BAR PRESS :0.767 M HG
REL HUMID : 60 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					80	76	74	81	84	83	83	87	85	80	82	82		77	80
4					87	88	88	88	88	88	89	89	88	90	89	89		87	87
5					82	82	85	82	83	84	85	85	84	87	82	84		82	89
6.3					81	83	81	81	84	84	84	87	85	87	88	89		86	88
8					86	84	86	89	88	90	87	89	89	90	89	92		89	90
10					87	88	89	90	90	91	91	94	91	92	89	94		95	92
12.5					89	88	90	94	94	95	93	92	93	95	98	98		98	96
16					92	92	95	95	96	96	97	96	95	99	100	101		97	101
20					90	89	93	94	93	97	95	95	94	96	97	94		98	96
25	94	89	96	89	88	89	94	92	91	96	93	92	89	95	98	94		95	98
31.5	89	88	95	87	85	86	91	88	89	93	91	89	86	92	94	97		96	96
40	89	90	93	85	83	85	88	88	88	88	90	86	85	87	93	97		95	96
50	89	89	93	85	81	84	87	87	86	87	88	86	86	89	91	94		95	95
63	85	85	89	79	78	80	84	84	83	86	85	81	84	84	88	91		92	93
80	83	82	84	74	74	78	81	83	82	84	82	78	78	80	84	87		86	87
100	80	81	82	71	70	77	79	79	79	80	79	75	76	79	82	81		82	81
125	78	80	81	69	66	75	77	77	77	79	77	73	73	76	79	80		79	78
160	78	78	80	66	64	74	73	74	75	77	76	71	71	74	76	77		76	76
200	77	77	78	66	62	72	71	72	74	76	75	70	71	73	76	75		74	75
250	76	76	77	64	61	70	68	69	72	73	72	69	70	75	75	76		72	73
315	73	72	76	63	57	67	65	66	70	71	69	67	69	75	75	77		72	74
400	69	69	71	59	52	64	63	64	68	68	69	64	68	75	75	78		76	76
500	66	67	69	59	48	61	63	64	66	68	71	65	69	76	77	80		80	80
630	64	65	65	55	46	61	63	62	65	69	72	63	69	76	77	80		77	76
800	64	65	64	53	45	60	62	62	64	69	72	60	65	72	75	76		73	72
1000	64	63	63	53	44	58	60	61	63	68	70	59	63	70	72	74		73	72
1250	62	61	63	51	44	58	58	61	63	66	69	59	64	70	71	74		72	71
1600	61	61	63	50	43	56	57	60	61	65	66	58	62	67	69	71		70	69
2000	60	60	62	49	42	54	56	59	60	63	64	56	60	65	67	69		68	68
2500	59	59	61	48	39	52	54	57	59	62	62	55	57	63	65	67		66	65
3150	58	57	60			50	52	54	56	59	59	52	53	59	61	63		62	62
4000	59	58	61			47	51	52	52	55	55		48	55	56				
5000	55	54	57			43				52	51			50	52				
6300	51	50	53							47									
8000			50																
10000			49																
OVERALL	98	96	101	93	98	99	101	102	102	104	103	102	101	104	106	106		106	106

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 5.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-300
RUN 05
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	57	58	59	61	56	61	66	61	55	62	62	69	67	66	63	65		67	67
31.5	59	58	60	61	56	60	63	61	56	60	61	69	66	65	62	62		67	66
40	61	59	59	59	56	57	62	58	52	59	59	68	64	63	60	61		63	65
50	63	60	60	60	52	55	58	56	52	57	58	67	64	62	59	64		64	65
63	65	63	61	60	49	53	56	55	52	56	59	65	62	60	59	62		61	62
80	66	58	69	64	49	52	52	53	54	55	60	63	61	61	56	62		60	59
100	61	57	61	59	46	50	50	55	53	53	56	61	56	56	53	65		61	59
125	67	63	69	67	46	48	47	52	50	51	54	58	54	54	52	59		57	56
160	58	57	58	58	42	46	44	47	45	47	51	55	51	52	55	57		56	55
200	62	64	61	62	43	47	49	49	48	52	49	55	49	50	54	56		55	53
250	58	58	57	60	38	40	44	43	43	44	47	51	46	50	50	54		52	50
315	53	51	54	56	35	41	39	40	41	41	44	50	46	51	53	56		52	49
400	54	53	54	56	37	43	38	41	44	44	43	49	46	50	54	58		51	51
500	51	52	52	54	37	42	40	42	41	44	43	45	45	49	52	52		48	53
630	47	50	51	51	32	36	39	40	39	40	42	46	45	46	53	54		47	51
800	49	52	53	55	31	36	38	38	41	40	44	46	43	43	50	55		46	47
1000	49	53	54	55	28	35	35	37	38	39	43	46	42	42	51	52		46	45
1250	51	54	55	56	26	33	34	36	35	38	51	43	38	42	51	52		46	45
1600	48	53	52	54	23	32	31	34	33	34	44	42	34	41	48	50		44	46
2000	45	50	49	50	22	28	28	33	33	31	34	39	31	37	46	47		41	43
2500	45	49	48	50	23	26	26	30	30	29	34	38	29	36	44	46		41	42
3150	40	44	43	46	23	24	24	27	26	25	30	37		37	41	43		39	37
4000	38	40	40	42	23	24	22	25	26	24	27	35		32	38	40		37	36
5000	34	37	37	39	20	25	23	24	25	28	33	36		33	39	39		35	32
6300	30	33	32	35		25	22	24	25	22	23	34		29	38	35		32	31
8000	27	28	29	31		26	24	25	26	24	21	30		30	39	33		30	31
10000	25	25	25	28		26	25	25	22	25	20								
OVERALL	73	71	74	73	62	66	69	67	63	67	69	75	73	71	70	73		73	73

** NO DATA COLLECTED.

TABLE 5.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-300
RUN 01
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER (66.42% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	69	64	65	66	67	65	63	57	62	63	63	63	70	67	67	63		69	69
31.5	71	70	69	67	67	65	63	55	63	63	61	62	68	68	67	61		70	69
40	73	73	72	68	63	63	62	62	65	64	63	61	67	68	68	67		68	68
50	71	67	68	66	62	59	59	55	60	61	60	59	67	65	64	66		67	66
63	69	65	67	64	60	57	56	55	59	58	58	57	65	64	62	62		66	64
80	67	64	66	63	56	55	56	55	61	60	61	59	62	63	60	60		63	61
100	66	63	65	63	55	52	57	54	63	57	57	54	61	60	58	57		61	59
125	66	65	66	66	53	51	59	52	60	55	54	54	59	59	57	57		58	57
160	65	63	65	64	47	49	58	51	66	54	51	51	55	55	57	58		56	54
200	62	62	65	63	49	50	57	49	66	51	48	50	52	52	55	57		52	51
250	61	60	62	60	44	45	56	49	61	48	47	48	48	52	55	56		52	48
315	61	59	60	60	42	43	53	50	59	49	51	48	47	50	53	56		52	47
400	62	60	62	63	43	45	50	51	57	49	51	49	46	51	52	54		50	47
500	58	58	58	57	40	41	45	48	51	49	46	46	43	47	47	51		47	44
630	58	58	57	56	37	38	41	46	47	49	42	44	40	46	47	49		45	43
800	57	56	55	55	36	36	40	45	45	46	41	42	39	44	46	48		43	45
1000	54	53	54	55	33	34	39	43	45	44	40	41	38	43	45	45		41	40
1250	53	52	52	55	32	33	37	42	43	42	39	39	38	41	44	43		39	38
1600	52	52	52	55	30	31	37	42	43	40	38	38	36	39	41	41		37	38
2000	57	54	52	53	31	33	44	48	48	42	42	40	37	39	41	41		37	40
2500	48	47	48	50	33	32	35	38	39	37	35	34	31	34	37	37		33	34
3150	46	45	46	48	33	30	35	36	37	35	31	31		30	33	34		31	31
4000	44	44	44	45	34	30	36	37	36	33	30	29			29	32		29	
5000	42	42	42	42	33		34	37	33	29		33	33		31	33		35	
6300	39	40	38	37	34		32	34	29			32	32		30	32		33	
8000	35	36	34	35	33			31								30		31	
10000	33	33	33	33				27											
OVERALL	79	78	78	76	72	70	70	67	74	71	70	69	75	75	74	73		76	75

** NO DATA COLLECTED.

TABLE 5.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 02
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	82	79	81	76	71	69	68	73	73	72	69	71	70	68	72	68		71	72
31.5	80	78	75	71	63	65	68	69	70	71	68	68	66	67	69	68		71	71
40	74	73	72	68	61	64	67	70	68	68	66	65	64	65	66	69		70	70
50	66	64	68	63	58	60	64	63	64	65	65	64	62	63	63	65		71	68
63	68	65	67	63	56	58	62	61	62	62	63	61	60	62	62	65		69	67
80	65	64	64	63	53	56	61	61	60	62	62	58	58	60	60	62		66	64
100	63	62	64	64	50	54	57	57	57	58	58	56	55	57	57	60		63	61
125	63	66	65	68	48	52	55	55	55	56	56	54	53	56	58	58		62	58
160	64	65	63	69	46	49	51	54	51	52	52	51	49	53	56	55		57	56
200	64	65	64	65	50	49	50	53	52	51	49	49	47	50	52	51		54	56
250	61	63	62	61	44	47	47	49	49	49	47	46	45	49	50	48		51	54
315	61	61	60	60	43	46	46	49	49	48	47	46	44	49	51	51		52	53
400	62	63	62	62	43	45	47	53	51	48	44	48	46	51	51	55		54	52
500	57	58	58	59	40	41	42	49	48	46	41	46	44	49	49	55		55	55
630	58	58	58	60	38	38	40	48	46	46	41	46	41	48	48	55		53	54
800	57	57	56	58	36	36	40	46	45	44	39	43	40	45	46	53		56	54
1000	56	56	57	58	34	34	37	43	44	42	38	41	38	45	45	54		53	50
1250	54	55	56	57	32	32	36	40	42	41	37	39	36	44	45	53		53	50
1600	54	54	54	55	31	30	36	40	42	40	36	36	34	40	42	50		52	48
2000	53	52	52	53	32	30	39	39	41	40	36	35	32	38	40	48		48	45
2500	63	60	57	54	36	38	50	53	53	50	45	47	36	41	42	47		47	44
3150	58	55	52	50	33	36	45	48	47	45	40	42	32	37	37	42		42	40
4000	50	49	47	45	31	34	40	41	39	38	33	33		30	31	36		37	34
5000	53	51	48	43	29	33	41	43	40	38	32	32				29		30	32
6300	49	47	45	40	30	31	37	39	35	34									29
8000	47	45	42	39	31		35	35	32	30									
10000				37			30							30					30
OVERALL	85	83	83	80	72	72	74	77	76	76	74	74	73	73	75	75		78	78

** NO DATA COLLECTED.

TABLE 5.3	SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-019-300 RUN 03 05 MAR 87 PAGE 3

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
TF30-P7 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB, KANSAS FAR FIELD NOISE	MILITARY POWER(97.9 %RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	TEMP : 15 C BAR PRESS : 0.760 M HG REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	83	80	80	81	82	78	80	83	81	83	81	82	79	81	85	79		83	84
31.5	80	79	80	77	81	78	82	79	81	82	82	79	77	80	82	83		84	83
40	79	80	77	74	79	78	80	79	80	80	80	77	76	77	80	83		82	82
50	78	76	76	71	75	72	77	77	77	77	77	74	74	76	77	80		80	80
63	80	76	77	70	74	73	78	76	77	77	77	73	73	72	76	78		78	78
80	75	73	72	69	70	71	76	76	75	77	74	70	69	70	73	74		75	75
100	73	71	70	65	69	71	72	72	73	72	70	67	67	68	69	71		73	71
125	70	69	69	68	63	69	71	70	70	70	68	64	64	67	67	69		71	69
160	68	67	67	67	60	67	67	67	68	69	65	62	62	64	65	67		69	66
200	67	67	66	65	60	67	65	65	66	66	61	59	61	62	63	62		64	63
250	64	64	63	61	55	62	62	61	62	64	57	55	58	59	59	59		60	62
315	62	61	60	61	51	59	58	58	60	61	55	53	56	58	58	61		60	64
400	61	63	61	64	49	54	55	55	58	60	57	52	57	59	61	66		65	67
500	57	58	58	61	45	49	52	53	57	58	56	51	56	59	61	66		63	63
630	56	58	58	58	43	47	52	51	54	56	56	49	54	58	59	64		62	61
800	56	57	56	56	42	46	51	50	53	55	55	47	52	57	58	61		61	60
1000	55	55	55	57	41	45	49	48	51	54	55	47	51	56	57	59		59	58
1250	55	54	54	55	40	45	47	48	52	53	54	47	50	55	56	59		57	56
1600	54	53	54	54	38	43	47	47	50	52	52	44	49	54	54	57		57	54
2000	53	52	53	53	39	42	47	47	50	51	51	45	48	53	53	56		55	53
2500	52	50	50	51	38	40	46	46	49	50	50	46	45	51	51	54		53	51
3150	49	48	48	48		38	44	45	47	48	48	44	43	49	48	51		50	49
4000	49	48	47	45			44	44	44	46	45	39	40	46	46	48		48	46
5000	53	50	49	42			45	46	44	45	43			43	43	45		45	44
6300	57	44	44				40	40		40				41	39	41		42	40
8000	43																		
10000	42																		
OVERALL	88	86	86	84	86	84	87	87	87	88	87	85	84	86	89	89		89	89

** NO DATA COLLECTED.

TABLE 5.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-300
RUN 04
05 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(95.1%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					80	76	74	81	84	83	83	87	85	80	82	82		77	88
4					87	88	88	88	88	88	89	89	88	90	89	89		87	87
5					82	82	85	82	83	84	85	85	84	87	82	84		82	89
6.3					81	83	81	81	84	84	83	87	85	87	88	89		86	88
8					85	84	85	89	87	90	87	89	89	90	89	92		88	90
10					86	88	89	90	90	91	91	94	91	92	89	93		94	91
12.5					89	88	90	94	94	95	93	92	93	95	98	98		98	96
16					91	92	95	95	96	96	96	96	95	99	100	100		97	100
20					90	89	93	94	93	97	95	95	94	96	97	94		98	96
25	94	89	96	89	88	89	94	92	91	96	93	92	89	95	98	94		95	98
31.5	89	88	94	87	85	86	91	88	89	93	91	89	86	92	94	97		96	96
40	89	89	93	85	83	85	87	87	88	88	90	86	84	87	92	97		94	96
50	89	89	93	85	81	84	87	87	86	86	88	86	86	89	91	94		95	95
63	85	85	89	79	78	80	84	84	83	86	85	81	84	84	88	91		92	93
80	83	82	84	74	74	77	81	82	82	84	82	77	77	80	84	87		86	87
100	80	81	82	71	70	77	79	79	79	80	79	75	76	79	82	81		82	81
125	78	80	81	69	66	75	77	77	77	79	77	73	73	76	79	80		79	78
160	78	78	79	66	63	73	73	74	75	77	76	71	71	74	76	77		76	76
200	77	77	78	66	62	72	70	72	74	76	75	70	71	73	75	75		74	75
250	76	76	77	64	61	70	68	69	72	73	72	69	70	75	75	76		72	73
315	73	72	76	63	57	67	65	66	69	71	69	67	69	75	74	77		72	74
400	69	69	70	59	52	64	63	64	67	68	69	64	68	75	75	78		76	76
500	66	67	69	59	48	61	63	64	66	68	71	65	69	75	77	80		79	79
630	64	65	65	55	46	61	63	62	64	69	72	62	68	75	77	80		77	75
800	64	65	64	53	45	60	62	62	64	69	72	60	65	72	75	76		73	72
1000	64	63	63	53	44	58	60	61	63	67	70	59	63	70	72	74		73	72
1250	62	61	63	51	44	58	58	61	62	66	68	59	63	70	71	74		72	71
1600	61	61	63	50	42	56	57	60	61	65	66	58	62	67	69	71		70	69
2000	60	60	62	49	42	54	56	59	60	63	64	56	60	65	67	69		68	68
2500	60	59	61	48	40	53	55	57	59	62	62	55	57	63	65	67		66	65
3150	58	57	60			51	53	55	56	59	59	52	53	60	62	64		63	62
4000	60	59	62			48	52	53	53	56	56		49	56	57				
5000	56	55	58			44				53	52			51	53				
6300	52	52	54							49									
8000			52																
10000			52																
OVERALL	98	96	101	93	98	98	101	102	102	104	103	102	101	104	106	106		106	106

** NO DATA COLLECTED.

TABLE 5.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 05
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																	
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	73	71	74	72	60	63	67	65	61	65	67	73	70	69	68	72		71	71
OASLA	60	62	63	64	42	47	47	48	48	49	55	55	52	54	60	62		56	57
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	51	54	54	56	32	37	37	39	39	40	45	47		46	52	54		48	49
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	75	76	77	78	53	59	59	61	61	64	69	68	62	68	71	75		69	70
C	1	1	2	1	1	1	1	1	1	2	3	0	0	1	0	1		0	0

** NO DATA COLLECTED.

TABLE 5.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER (66.42% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 01
05 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	78	76	77	75	69	68	68	65	74	69	68	67	73	73	72	71		74	73
OASLA	66	65	65	66	49	48	55	55	62	55	53	53	52	55	56	58		55	53
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	58	57	57	58	40	39	45	48	49	46	44	44			46	47		44	
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	82	79	79	79	63	61	71	71	77	68	67	67	66	66	69	70		69	66
C	2	1	1	1	1	1	3	3	2	1	2	1	1	0	0	0		1	2

** NO DATA COLLECTED.

TABLE 5.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 02
05 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	82	80	80	78	69	69	72	74	73	74	72	72	70	71	72	73		76	75
OASLA	69	68	67	67	48	50	55	59	58	56	53	54	50	55	56	62		62	61
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	62	61	60	59	40	41	47	52	51	49	44	47		46	47	54		54	52
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	87	85	83	80	62	65	74	77	76	74	70	72	63	68	69	72		74	72
C	2	2	2	0	1	2	3	3	3	2	2	3	1	1	1	0		0	0

** NO DATA COLLECTED.

TABLE 5.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(97.9 %RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 03
05 MAR 87
PAGE 4

ANGLE (DEGREES)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	86	84	84	81	84	82	85	85	85	86	85	83	81	83	86	87		87	87
OASLA	68	67	67	67	58	63	64	64	65	67	65	60	62	66	67	70		69	69
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	59	59	59	59			53	53	56	57	57	51	53	58	59	62		61	61
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	85	82	82	80	72	76	81	81	80	81	79	74	75	79	80	83		83	84
C	2	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0		1	1

** NO DATA COLLECTED.

TABLE 5.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR [illegible], APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 04
05 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(95.1%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	95	94	98	90	91	92	96	95	95	98	97	95	94	97	100	101		101	102
OASLA	76	76	78	66	62	71	72	73	74	77	79	71	75	81	82	85		83	82
T	1440	1440	1358	1440	1440	1440	1440	1440	1440	1440	1142	1440	1440	807	679	404		571	679
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	67	67	68			61	62	64	65	69	70		65	72	74				
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	92	92	95	82	77	86	87	88	89	92	92	86	88	93	95	97		98	98
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1	1

** NO DATA COLLECTED.

TABLE 5.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 05
05 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	64	63	64	65	61	65	68	65	59	65	66	73	71	69	67	68		71	71
63	70	65	70	67	55	58	61	60	58	61	64	70	67	66	63	68		67	67
125	68	65	70	68	50	53	53	57	55	56	59	63	59	59	58	67		63	62
250	64	65	63	65	45	49	50	50	50	53	52	57	52	55	58	60		58	56
500	56	57	58	59	41	46	44	46	47	48	47	52	50	53	58	60		54	57
1000	54	58	59	60	33	40	41	42	43	44	52	50	46	47	55	58		51	51
2000	51	56	55	57	28	35	34	37	37	37	45	45	37	44	51	53		47	49
4000	42	46	45	48	27	29	28	30	31	31	36	41		39	44	46		42	40
8000	32	34	34	37		30	29	29	29	28	26	36		32	41	37		34	34
OVERALL	73	71	74	73	62	66	69	67	63	67	69	75	73	71	70	73		73	73

** NO DATA COLLECTED.

TABLE 5.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER (66.42% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 01

05 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	76	75	75	72	71	69	67	64	68	68	67	67	73	73	72	69		74	73
63	74	71	72	69	65	62	62	60	65	64	65	63	70	69	67	68		70	69
125	71	69	70	69	57	56	63	57	71	60	59	58	64	63	62	62		63	62
250	66	65	68	66	51	52	60	54	68	55	54	54	54	56	59	61		57	54
500	65	63	64	64	46	47	52	54	58	54	53	52	48	53	54	57		53	50
1000	60	59	58	60	39	39	43	48	49	49	45	46	43	47	50	50		46	47
2000	58	57	56	58	37	37	45	49	50	45	44	43	40	43	45	45		41	43
4000	49	49	49	51	38	33	40	41	40	38	34	36			36	38		37	
8000	41	42	40	40	36			36								34		35	
OVERALL	79	78	78	76	72	70	70	67	74	71	70	69	75	75	74	73		76	75

** NO DATA COLLECTED.

TABLE 5.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.0% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 02
05 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	85	82	82	78	72	71	73	76	75	75	72	73	72	71	74	73		76	76
63	71	69	72	68	61	63	67	67	67	68	68	66	65	67	67	69		73	71
125	68	70	69	72	53	57	60	60	60	61	61	59	58	61	62	63		66	64
250	67	68	67	68	52	52	53	56	55	55	53	52	50	54	56	55		57	59
500	64	65	65	65	46	47	49	55	54	52	47	52	49	54	54	60		59	59
1000	60	61	61	62	39	39	42	48	48	47	43	46	43	49	50	58		59	56
2000	64	62	60	59	38	39	50	53	53	51	46	48	39	45	46	53		54	51
4000	60	57	55	51	36	39	47	50	48	47	42	43		38	38	43		43	41
8000	51	49	47	43	33		40	40	37	36									33
OVERALL	85	83	83	80	72	72	74	77	76	76	74	74	73	73	75	75		78	78

** NO DATA COLLECTED.

TABLE 5.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF30-P7 ENGINE
IN THE A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(97.9 %RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-300
RUN 03
05 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	86	84	84	83	86	83	86	85	85	87	86	84	82	84	88	87		88	88
63	83	80	80	75	78	77	82	81	81	82	81	78	77	78	80	83		83	83
125	76	74	73	72	70	74	75	75	75	75	73	70	69	71	72	74		76	74
250	70	70	68	68	61	69	67	67	69	69	63	61	64	65	65	66		67	68
500	63	65	64	66	51	55	58	58	61	63	61	56	60	64	65	70		68	69
1000	60	60	60	61	46	50	54	53	57	59	59	52	56	61	61	64		64	63
2000	58	57	57	58	43	47	51	51	55	56	56	50	52	58	58	61		60	58
4000	56	54	53	51			49	50	50	51	50	45	44	51	51	54		53	52
8000	57																		
OVERALL	88	86	86	84	86	84	87	87	87	88	87	85	84	86	89	89		89	89

** NO DATA COLLECTED.

TABLE 5.5	SOUND PRESSURE LEVEL (DB) OCTAVE BAND DISTANCE = 100 METERS		IDENTIFICATION: OMEGA 1.5 TEST DP-0T9-300 RUN 04 05 MAR 87 PAGE 5
NOISE SOURCE/SUBJECT: TF30-P7 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: AFTERBURNER POWER(95.1%) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP : 15 C BAR PRESS :0.760 M HG REL HUMID : 70 %	

FREQ	ANGLE (DEGREES)																		
(HZ)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
4					89	89	89	89	90	90	91	92	91	92	90	91		89	93
8					90	90	91	93	93	94	93	96	94	95	93	96		96	95
16					95	95	98	99	99	101	100	99	99	102	103	103		102	103
31.5	96	94	99	92	90	92	96	94	94	98	96	94	92	97	100	101		100	101
63	91	91	95	86	84	86	89	90	89	90	90	88	89	90	93	96		97	97
125	84	85	86	74	72	80	82	82	82	83	82	78	79	81	85	84		85	84
250	80	80	82	69	65	75	73	74	77	79	77	73	75	79	80	81		78	79
500	71	72	73	63	54	67	68	68	71	73	76	69	73	80	81	84		82	82
1000	68	68	68	57	49	64	65	66	68	73	75	64	69	75	78	79		77	76
2000	65	65	67	54	46	59	61	64	65	68	69	61	65	70	72	74		73	72
4000	63	62	65			53	56	57	58	62	61		54	62	63				
8000			58																
OVERALL	98	96	101	93	98	98	101	102	102	104	103	102	101	104	106	106		106	106

** NO DATA COLLECTED.

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APPENDIX D

Far-Field Noise on the F100 Engine

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TABLE 6.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
F100 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 26 February 1986

Time of Test: 1330 Hrs

Engine Operation

Idle	66.7 %RPM
80 %	80.0 %RPM
Military Power	90.7 %RPM
Afterburner Power	90.6 %RPM

Meteorology

Temperature	24 Deg C
Bar Pressure	0.721 M Hg
Rel Humidity	30 %
Winds - Speed	5 - 9 Knots (Gusts to 18)
- Direction	350 Deg (True

TABLE 6.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 05
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB.KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 24 C
BAR PRESS = 0.721 M HG
REL HUMID = 30 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	65	63	69	66	57	63	67	67	65	71	66	69	64	69	63	63		72	73
31.5	67	65	71	68	59	62	65	65	65	69	65	69	63	66	63	63		71	71
40	68	67	74	70	56	58	65	66	66	68	65	68	63	63	64	64		69	70
50	70	71	72	67	61	63	64	65	66	66	62	66	60	62	61	61		65	67
63	66	64	71	67	59	58	62	64	65	65	62	63	60	62	66	66		70	72
80	64	63	69	66	69	62	59	65	66	68	58	61	58	59	58	58		62	64
100	67	66	70	67	64	64	60	63	66	64	58	60	58	56	54	54		61	58
125	72	71	74	73	59	60	59	64	66	64	55	56	55	53	52	52		62	57
160	72	71	72	74	56	56	57	61	67	62	53	53	52	51	49	49		60	55
200	69	70	70	71	56	57	57	60	65	62	53	53	50	50	50	50		59	55
250	64	66	66	65	54	55	58	59	64	62	53	53	50	48	48	48		60	54
315	61	59	62	61	53	52	56	58	65	62	52	53	52	47	47	47		57	50
400	63	59	62	63	55	52	56	59	64	62	54	54	54	47	50	50		55	50
500	59	57	60	59	51	52	57	57	64	62	53	53	52	45	45	45		56	46
630	62	60	60	61	51	54	59	60	65	60	54	52	52	44	44	44		54	45
800	62	61	61	61	53	57	59	60	61	59	52	51	50	45	44	44		52	45
1000	59	61	63	60	50	55	57	58	59	57	52	51	49	42	42	42		53	44
1250	59	59	66	60	48	58	58	60	54	57	50	50	48	41	41	41		53	43
1600	59	59	65	60	47	54	56	59	49	54	48	48	46	38	40	40		51	41
2000	57	58	64	60	45	52	54	56	47	49	45	44	41	37	36	36		47	40
2500	56	57	63	58	42	54	54	55	47	43	41	41	38	35	35	35		44	42
3150	54	56	59	58	41	48	52	53	49	41	38	39	33	34	34	34		42	41
4000	52	53	56	56	39	44	48	48	37	36	35	36	31	33	32	32		37	37
5000	50	52	55	56	31	38	42	41	33	35	34	35	31	32	31	31		36	36
6300	47	49	52	54	29	32	35	35	32	35	32	33	32	32	28	28		36	36
8000	53	55	58	61	32	27	32	33	33	36	33	34	33	34	29	29		37	37
10000	47	50	52	55	24	25	31	34	34	36	34	35	34	34	29	29		38	38
OVERALL	81	79	82	80	73	72	74	76	77	78	72	75	71	73	71	71		78	79

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 6.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 01
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(66.7% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 24 C
BAR PRESS :0.721 M HG
REL HUMID : 30 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	66	64	65	67	64	64	66	61	60	63	66	66	65	60	70	64		67	71
31.5	60	67	66	60	65	63	64	61	67	63	64	65	64	62	70	65		66	60
40	69	60	70	69	67	65	62	63	66	64	64	66	66	66	69	69		65	69
50	65	62	63	66	73	66	59	60	65	65	62	63	63	62	66	67		65	66
63	65	62	66	72	69	65	59	69	64	71	59	64	62	59	65	72		64	64
80	60	60	60	60	65	65	58	69	64	63	66	62	61	56	63	74		63	63
100	59	60	59	69	64	62	60	63	66	62	58	63	59	54	58	69		62	61
125	63	60	65	71	60	60	57	57	64	67	56	59	57	53	56	66		60	60
160	60	60	61	67	58	57	54	53	57	59	52	57	55	51	52	65		56	55
200	61	60	62	67	54	57	57	56	60	60	54	54	55	49	50	64		55	53
250	57	57	58	67	51	59	55	55	56	58	54	52	55	47	45	65		56	52
315	54	53	54	67	48	60	53	55	56	58	56	50	53	44	42	69		56	50
400	57	57	58	65	46	58	51	52	54	57	55	51	51	47	47	69		54	49
500	53	53	56	65	42	56	48	52	53	56	57	51	49	45	46	66		52	47
630	51	51	53	65	39	55	46	55	55	53	57	49	47	42	44	62		47	45
800	52	52	54	62	39	52	44	49	52	52	54	48	45	42	43	55		46	43
1000	54	52	54	61	37	51	44	47	49	51	53	46	44	42	42	51		45	42
1250	52	52	53	59	36	47	43	47	48	49	50	43	42	40	41	46		45	41
1600	52	51	52	57	33	44	41	46	47	48	45	40	41	37	38	42		43	39
2000	49	48	49	54	29	39	38	45	44	45	40	35	39	34	35	37		39	36
2500	57	54	53	52	30	35	46	48	47	47	40	38	38	36	38	38		39	37
3150	53	51	51	48		32	45	47	47	45	40	38	38	35	40	38		38	37
4000	53	51	49	45		34	42	44	44	41	33	31	35	29	34	35		36	34
5000	50	48	47	42			41	42	40	38	31	29	32	26	33	35		36	35
6300	45	41	40	37			38	35	36	32			29	23	32	36		36	36
8000	44	40	37	32			34	33	37	30				24	33	37		37	37
10000	34	33	30	30			31	29	34					24	34	39		38	38
OVERALL	75	74	75	80	77	74	71	75	75	75	73	73	72	70	76	80		74	76

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 6.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.8% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 24 C
BAR PRESS = 0.721 M HG
REL HUMID = 30 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 02
11 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	83	80	81	77	74	73	74	77	76	78	78	76	74	75	77	73		76	76
31.5	84	81	78	75	69	72	75	75	76	76	77	75	70	74	75	77		75	75
40	80	82	79	75	66	72	74	76	75	75	75	74	70	71	73	75		73	74
50	75	75	74	71	64	68	71	71	71	71	72	72	67	71	70	73		73	72
63	76	73	71	69	67	69	69	68	71	70	70	69	65	68	69	71		70	70
80	74	73	68	65	63	67	70	70	69	71	69	67	62	63	63	68		68	68
100	76	75	63	63	68	67	67	66	65	65	64	65	60	64	59	62		67	64
125	78	77	67	65	57	64	62	70	62	63	63	66	58	60	57	61		62	62
160	78	79	63	64	55	64	56	58	58	57	64	67	55	62	55	58		60	59
200	79	76	62	64	56	66	54	58	59	58	63	69	54	57	53	55		61	62
250	78	74	60	61	52	67	53	55	57	56	60	68	52	55	54	52		61	60
315	74	69	57	59	49	63	50	53	56	54	58	65	52	54	55	54		62	60
400	72	68	57	60	47	60	50	52	54	51	54	61	53	56	56	57		62	60
500	70	66	54	55	47	58	48	50	53	50	50	60	53	57	53	55		57	59
630	67	64	54	53	45	56	47	48	54	50	48	59	53	56	52	55		55	56
800	62	62	55	55	42	53	46	48	54	50	46	57	51	55	50	53		53	53
1000	57	58	55	57	39	48	45	47	53	50	44	53	48	53	48	51		51	49
1250	54	54	55	55	36	44	45	46	51	50	44	46	46	49	48	49		50	46
1600	52	52	53	54	34	42	47	45	49	50	43	41	43	47	45	47		47	44
2000	52	50	51	51	32	40	45	45	48	47	42	41	41	44	44	46		45	42
2500	51	50	50	50	30	39	44	46	46	44	41	40	39	41	42	44		43	39
3150	53	51	51	48	31	38	44	46	44	44	41	39	37	40	40	42		42	35
4000	51	49	49	45	31	37	43	44	42	41	38	36	34	37	38	39		39	
5000	52	50	50	42	31	36	43	45	41	41	38	36	33	36	37				
6300	54	52	51	39	32	36	44	46	42	42	39	37	32	34	37				31
8000	46	41	39	35	32	34	35	43	38	38	38	37	33	34	37				
10000	40		36	34	33	34	35	43	38	38	38	38	33	34	38	38		38	
OVERALL	90	88	85	82	77	80	81	82	82	82	83	82	77	80	81	81		82	81

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 6.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 03
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 24 C
BAR PRESS = 0.721 M HG
REL HUMID = 30 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	85	82	84	81	80	80	83	83	80	81	84	83	80	85	87	82		85	86
31.5	84	81	82	79	78	79	83	83	82	79	84	80	77	81	85	87		88	87
40	82	82	81	77	76	78	80	83	82	78	81	78	75	78	82	87		84	86
50	80	78	79	73	71	75	79	80	80	74	79	75	75	78	80	84		83	83
63	81	76	78	71	70	75	77	75	79	74	79	73	74	76	78	80		80	81
80	78	76	75	70	67	74	74	77	77	73	76	70	71	71	74	78		76	77
100	73	72	73	66	64	72	71	71	71	69	72	67	69	71	71	72		74	74
125	70	71	71	69	59	70	71	68	70	67	70	64	64	67	68	69		71	72
160	70	67	68	63	58	66	68	67	67	64	67	61	60	64	65	68		69	71
200	68	65	66	62	60	64	65	69	66	62	63	60	58	60	63	63		65	68
250	65	62	63	58	55	61	62	65	65	59	59	58	57	60	59	58		59	62
315	61	59	60	57	50	58	60	62	64	57	57	56	58	61	58	61		60	59
400	61	59	60	56	48	55	58	60	63	57	59	56	59	63	61	66		65	63
500	59	57	58	54	45	51	55	58	62	56	61	55	60	64	62	67		64	63
630	56	55	56	52	43	50	56	56	59	56	61	55	56	62	60	64		63	62
800	56	56	55	53	41	50	53	55	59	56	61	53	54	60	59	61		62	63
1000	55	55	55	54	40	49	51	55	58	55	60	52	53	58	57	59		58	59
1250	56	55	54	54	39	49	51	55	58	59	65	52	52	56	56	58		58	57
1600	56	56	55	52	37	48	51	54	55	56	61	52	51	55	54	57		57	57
2000	58	55	57	55	50	59	61	63	57	54	59	52	50	54	53	56		55	55
2500	58	55	56	51	45	54	56	59	57	53	59	51	48	52	51	54		53	53
3150	56	53	54	44		42	50	51	57	49	54	49	46	50	49	52		51	50
4000	55	51	53	41			47	47	50	44	48	43	42	46	46	48		48	47
5000	52	48	50				44	44	44	40	44	41	39	44	44	45		45	45
6300	53	48	50				43	42	42		42	40		41	42	42		42	42
8000	45	41	43				41	41	41		42	41		42	42	42		42	42
10000	38		40	39			41	42	42		42	42		42	42	42		43	43
OVERALL	90	88	89	85	84	86	88	89	88	85	89	86	84	88	91	92		92	92

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 6.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-400
RUN 04
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(90.6%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 24 C
BAR PRESS =0.721 M HG
REL HUMID = 30 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	75	76	78	77	78	76	77	81	87	83	81	87	81	83	81	80		83	83
4	88	87	89	89	86	87	88	88	89	89	89	90	90	90	89	87		89	89
5	84	85	84	83	83	82	81	83	84	84	85	85	85	85	85	85		84	83
6.3	87	85	83	84	80	81	82	83	84	85	82	83	87	85	86	87		88	88
8	89	88	87	83	85	83	85	85	89	88	85	87	90	88	88	92		89	89
10	91	89	88	86	87	86	88	88	89	90	89	90	88	93	88	93		93	91
12.5	92	92	87	88	87	92	90	93	92	94	92	92	92	95	96	94		96	94
16	92	94	89	88	90	90	93	95	95	95	95	95	94	99	99	99		95	101
20	90	89	88	88	89	90	92	92	93	96	94	94	96	97	95	94		99	97
25	92	86	87	86	88	89	92	93	91	93	93	92	88	93	96	95		96	96
31.5	87	86	88	85	84	86	90	91	89	91	92	89	87	92	92	99		96	97
40	87	88	86	82	82	85	88	88	89	89	89	86	85	88	93	97		95	96
50	88	88	86	81	87	85	89	88	87	87	89	86	86	88	91	94		96	95
63	87	81	82	76	83	83	84	85	85	87	87	80	83	85	87	94		93	93
80	83	82	79	75	78	81	82	84	83	86	84	78	79	81	82	89		88	88
100	79	77	77	69	74	79	78	79	79	80	80	73	76	78	78	83		82	82
125	75	76	76	66	70	76	76	75	76	78	76	71	72	75	74	78		79	77
160	75	73	73	62	65	74	73	75	75	74	74	69	70	72	73	75		76	74
200	74	71	70	62	64	72	69	74	73	74	73	67	71	71	70	71		73	72
250	71	69	68	61	61	70	68	72	72	72	69	69	73	69	69	71		71	73
315	69	66	66	60	58	68	66	68	72	71	66	68	72	71	68	74		74	76
400	67	65	65	59	55	66	65	67	70	70	68	67	71	74	71	76		77	78
500	67	64	65	57	52	63	65	67	69	71	72	66	72	76	75	80		81	82
630	67	64	64	56	50	59	64	66	67	70	73	64	70	73	73	77		77	77
800	68	65	63	57	50	58	64	66	68	70	71	63	66	69	70	73		72	73
1000	68	66	63	58	49	57	64	66	68	70	69	63	65	68	69	72		72	74
1250	68	65	63	56	49	57	64	65	67	70	67	63	65	68	68	72		73	74
1600	66	65	61	55	47	55	61	64	65	67	65	61	63	66	67	70		70	71
2000	67	65	61	53	48	54	61	62	66	67	64	60	61	64	65	68		68	69
2500	66	63	60	52		52	60	61	64	65	62	59	59	62	62	66		65	67
3150	64	62	58	48		50	58	59	61	62	59	56	56	60	59	64		62	64
4000	62	60	55	45			54	55	55	57	55	51	51	56	55	59		58	59
5000	60	58	53	41			51	53	53	54	52			52	52	55		54	55
6300	57	55	49	39			49	52	51	52	51			51	51	52		52	52
8000	52	49	45	39	49			52	52	52	52			51	51	52		52	52
10000			44	39	48	47	47	53	53	53	53	47		53	52	53		53	52
OVERALL	101	100	98	97	97	99	100	102	101	103	102	102	101	104	104	106		106	106

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 6.3	SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-400 RUN 05 11 MAR 87 PAGE 3

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
F100 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB, KANSAS FAR FIELD NOISE	BACKGROUND NOISE SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	TEMP = 15 C BAR PRESS = 0.760 M HG REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	65	63	70	66	57	63	68	68	65	72	66	69	64	69	63	63		72	73
31.5	67	65	71	68	60	62	65	65	65	69	65	69	63	66	63	63		71	72
40	68	67	74	70	56	58	65	66	66	68	65	68	63	64	64	64		69	70
50	70	71	72	67	61	63	65	66	66	66	63	67	60	62	61	61		66	67
63	66	64	71	67	59	58	62	64	65	65	62	63	60	62	66	66		70	73
80	64	63	69	66	70	62	59	65	66	68	58	62	59	59	58	58		62	64
100	67	66	70	68	64	64	60	63	66	64	58	60	58	56	55	55		61	59
125	73	72	75	73	60	60	59	64	67	64	55	56	56	53	52	52		62	57
160	72	71	73	74	56	56	57	62	67	62	54	53	53	52	49	49		61	55
200	69	70	71	71	56	58	57	61	65	62	53	53	50	50	51	51		59	55
250	64	66	66	66	54	55	58	59	65	62	53	54	50	48	48	48		60	54
315	62	60	62	62	53	53	56	59	65	62	53	54	52	47	48	48		57	51
400	63	60	62	64	55	53	57	59	65	62	54	54	54	48	50	50		56	50
500	59	57	60	60	52	52	57	57	64	62	53	53	52	46	45	45		56	46
630	62	60	61	61	51	54	59	60	65	61	54	52	52	44	44	44		54	45
800	63	61	62	62	54	57	59	60	62	59	52	51	51	45	44	44		53	45
1000	60	61	63	60	51	55	57	58	60	57	53	51	50	43	43	43		53	44
1250	59	59	66	61	49	58	59	60	54	57	51	50	48	42	42	42		53	43
1600	60	59	65	61	47	55	56	59	49	54	49	48	47	39	41	41		51	42
2000	58	59	65	60	45	53	55	57	47	50	46	45	42	38	37	37		48	40
2500	57	57	63	59	43	55	55	55	48	44	42	42	38	35	36	36		45	43
3150	55	57	60	59	42	49	54	54	50	42	39	40	34	35	35	35		43	42
4000	54	55	58	58	40	45	50	50	39	37	37	38	33	34	33	33		39	39
5000	52	54	57	58	34	41	44	43	35	37	36	37	33	34	33	33		38	38
6300	49	51	55	57	32	34	38	37	35	38	35	36	34	35	31	31		39	39
8000	57	59	62	65	37	31	36	37	37	40	37	38	37	38	33	33		41	41
10000	53	55	58	61	30	30	37	39	39	42	39	40	39	40	35	35		43	44
OVERALL	82	79	83	81	73	72	74	76	78	78	73	75	71	73	71	71		78	79

** NO DATA COLLECTED.

TABLE 6.3	SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-0T9-400 RUN 01 11 MAR 87 PAGE 3

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
F100 ENGINE IN THE	FLIGHT IDLE(66.7% RPM)	TEMP = 15 C
A/F32T-9 NSS AT	SINGLE ENGINE GROUND	BAR PRESS =0.760 M HG
MCCONNELL AFB,KANSAS	RUNUP IN THE A/F32T-9	REL HUMID = 70 %
FAR FIELD NOISE	NSS MCCONNELL AFB	

FREQ	ANGLE (DEGREES)																**		
(HZ)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	67	64	65	67	64	64	66	61	68	63	66	66	65	60	70	64		67	72
31.5	68	67	66	69	66	64	64	61	67	63	64	65	65	63	70	66		66	69
40	69	68	70	69	67	65	62	63	66	64	64	66	66	66	70	69		66	69
50	65	62	63	66	73	66	60	68	65	65	63	63	63	62	66	68		65	67
63	65	62	66	72	69	65	59	69	64	71	59	64	62	59	65	72		64	64
80	61	60	60	68	65	65	59	69	64	63	66	62	61	56	63	74		64	63
100	59	61	59	69	64	62	60	63	66	63	58	63	59	54	58	70		62	61
125	63	60	66	71	60	60	58	57	64	67	56	59	57	53	56	66		60	60
160	60	60	61	68	58	58	55	53	58	59	52	57	55	51	52	65		56	56
200	61	61	62	68	54	57	58	56	60	60	54	55	55	49	50	64		55	53
250	57	58	58	67	51	59	56	55	57	59	54	52	55	47	45	65		56	52
315	54	54	55	67	48	61	53	55	56	58	56	50	53	44	43	69		56	51
400	58	58	58	66	46	59	51	53	54	57	55	51	51	47	47	69		54	50
500	53	53	56	66	43	57	48	52	53	56	57	51	49	45	46	66		52	48
630	52	51	53	65	39	55	46	55	55	54	57	50	47	42	45	62		47	46
800	52	52	54	62	39	53	45	50	52	53	55	48	46	42	44	56		47	44
1000	54	52	54	62	37	51	44	48	49	51	53	46	44	42	42	51		46	43
1250	53	53	54	59	37	48	43	47	48	50	51	44	43	40	41	47		45	42
1600	52	51	52	57	34	44	41	47	47	48	46	40	41	38	39	42		43	40
2000	49	49	50	54	29	39	39	45	44	45	40	35	40	34	35	38		40	36
2500	58	55	54	53	31	36	46	49	48	48	41	39	39	37	38	39		40	38
3150	55	53	53	50		34	46	48	48	46	41	39	39	36	41	39		39	38
4000	55	52	51	47		36	44	46	45	43	34	32	37	30	36	37		37	36
5000	52	50	49	44			43	44	42	40	34	31	34	28	35	37		38	37
6300	48	44	43	39			40	38	39	35			32	26	34	39		39	39
8000	48	44	41	36			38	37	41	34				28	37	41		41	41
10000	40	39	36	36			36	35	40					29	39	44		43	44
OVERALL	76	74	76	80	77	74	72	75	75	76	73	73	72	70	76	80		74	76

** NO DATA COLLECTED.

TABLE 6.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-400
RUN 02
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.8% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	83	80	81	77	74	73	74	77	76	78	79	77	74	75	77	73		77	77
31.5	84	81	78	75	69	72	75	75	77	77	78	75	70	74	75	77		75	75
40	80	82	79	75	66	72	74	76	76	75	75	75	70	72	74	75		73	74
50	75	75	74	71	64	69	71	71	72	71	73	72	68	71	71	73		73	72
63	76	73	71	69	67	69	69	68	71	71	71	70	65	68	69	72		70	70
80	75	73	68	65	63	67	70	70	70	71	69	67	62	63	63	68		68	68
100	76	75	64	63	68	67	67	67	66	65	65	65	60	64	59	62		68	64
125	79	77	67	65	58	64	63	70	62	63	64	66	58	60	58	61		63	63
160	78	79	63	64	55	64	57	58	59	58	64	68	55	63	55	58		61	60
200	79	76	62	64	56	66	54	58	59	58	64	70	54	58	53	56		61	62
250	78	74	60	62	52	67	53	55	57	56	60	68	53	55	54	52		61	60
315	74	69	57	60	49	63	51	53	56	54	58	65	53	54	55	54		62	60
400	72	68	57	60	47	60	50	52	54	52	54	62	54	56	57	57		62	60
500	71	66	55	56	47	58	49	51	54	50	51	60	53	58	53	55		58	59
630	67	65	54	53	45	56	47	49	54	50	49	60	53	57	52	55		55	56
800	63	62	55	55	42	53	46	48	54	51	46	57	51	55	50	53		54	53
1000	57	58	55	57	39	49	45	47	53	50	45	53	49	53	49	51		51	50
1250	54	55	55	56	36	45	45	47	52	50	45	47	46	49	48	50		50	47
1600	53	53	53	55	34	42	47	46	50	50	44	42	44	47	46	47		48	44
2000	53	51	52	52	33	41	46	46	48	48	43	41	42	45	44	46		45	42
2500	52	51	51	51	31	40	44	47	46	45	41	40	39	42	43	45		44	40
3150	54	52	52	49	32	39	45	47	45	45	42	40	38	41	41	43		43	36
4000	53	51	51	47	32	38	44	46	43	43	40	38	36	39	40	41		41	
5000	54	52	52	44	33	38	45	47	43	43	40	38	35	38	39				
6300	57	55	54	42	34	39	47	49	45	44	42	40	35	36	40				33
8000	50	45	43	39	36	38	39	47	42	42	42	41	37	38	41				
10000	46		41	40	39	40	40	49	44	44	44	43	39	40	44	44		44	
OVERALL	90	89	85	82	78	80	81	82	82	83	83	82	78	80	81	82		82	82

** NO DATA COLLECTED.

TABLE 6.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-400
RUN 03
11 MAR 87
PAGE 3

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	85	82	84	81	80	80	83	83	80	81	84	83	80	85	87	82		85	86
31.5	84	81	82	79	78	79	83	83	82	79	84	80	77	82	86	87		88	88
40	82	82	81	77	77	78	80	83	82	78	81	78	76	78	82	87		84	86
50	80	78	80	73	71	75	79	81	80	74	80	75	75	78	80	85		83	83
63	81	76	78	71	71	75	77	76	79	74	79	73	74	76	78	80		80	81
80	78	77	76	70	67	74	75	77	77	74	76	71	71	72	74	78		77	78
100	74	73	73	67	65	73	71	71	72	69	72	67	69	72	72	72		74	74
125	70	71	71	69	59	70	72	68	70	67	70	64	64	67	68	70		71	72
160	70	68	69	63	58	66	68	68	67	65	67	61	60	65	66	68		69	71
200	69	66	66	62	60	64	66	69	66	62	63	60	58	61	63	63		65	68
250	65	62	63	58	55	61	62	65	65	59	59	58	58	60	59	59		59	62
315	62	59	60	57	50	58	60	62	64	58	57	56	58	61	58	62		61	59
400	61	59	60	56	48	55	58	60	63	57	60	57	59	64	61	67		65	63
500	59	57	58	54	45	51	55	59	62	57	61	56	60	64	62	67		64	63
630	56	56	56	52	43	50	56	57	59	57	62	55	57	62	61	64		63	62
800	56	56	55	53	42	50	53	55	59	56	61	53	54	60	59	61		62	63
1000	56	55	55	54	40	50	51	55	58	55	60	52	53	58	57	59		59	60
1250	56	55	55	54	40	49	52	56	59	59	65	53	53	57	56	58		58	58
1600	57	56	55	52	38	49	52	54	56	56	61	52	52	56	55	58		57	57
2000	58	56	58	55	50	60	61	64	58	55	59	53	51	54	54	56		55	55
2500	59	56	57	52	45	54	57	60	58	54	60	52	49	53	52	55		54	54
3150	57	54	55	45		43	51	52	58	50	55	50	47	51	50	53		52	51
4000	57	53	54	42			49	49	59	46	50	45	44	48	48	50		49	49
5000	54	50	52				46	46	46	42	46	43	41	46	46	47		47	47
6300	56	51	53				45	45	44		44	43		44	44	45		45	45
8000	49	45	47				45	45	45		46	45		46	46	46		46	46
10000	44		46	44			47	47	47		48	47		48	48	48		48	48
OVERALL	90	88	89	85	84	86	89	90	89	86	90	87	85	89	91	92		92	93

** NO DATA COLLECTED.

TABLE 6.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-400
RUN 04
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(90.6%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	76	76	78	77	78	76	78	81	87	83	82	87	82	84	82	80		83	83
4	88	87	89	89	86	87	89	89	89	89	90	90	90	90	89	88		89	89
5	84	86	84	83	84	83	81	83	84	85	85	86	85	85	86	85		84	83
6.3	87	85	83	84	80	81	83	83	85	85	83	83	87	86	86	87		88	88
8	89	88	87	83	85	83	86	86	89	88	85	88	91	88	88	92		90	90
10	91	89	88	86	87	86	88	88	89	90	89	90	88	93	88	93		93	91
12.5	92	93	88	88	87	92	90	93	92	94	93	92	93	95	97	94		96	94
16	92	94	89	88	90	90	93	96	95	96	96	95	94	99	99	99		95	101
20	91	89	88	88	89	90	92	92	94	96	94	95	96	97	96	94		99	97
25	92	86	87	86	88	89	93	93	92	93	93	93	88	93	96	95		96	96
31.5	88	86	88	85	84	86	91	91	89	91	92	89	88	92	93	99		97	97
40	87	88	86	82	82	86	88	89	89	89	90	86	85	88	93	98		95	96
50	88	88	86	81	87	85	89	88	87	87	89	86	86	88	91	94		96	96
63	87	81	82	76	83	83	84	85	85	88	87	80	84	85	87	94		93	93
80	84	82	80	75	79	81	82	84	83	86	84	78	80	82	82	89		89	88
100	79	77	77	69	75	79	78	79	79	80	80	73	76	79	78	83		82	82
125	76	76	76	66	70	76	77	75	77	79	77	72	73	75	75	78		79	77
160	75	74	73	63	65	74	74	75	75	75	74	70	70	72	73	76		76	75
200	74	72	70	62	64	72	70	74	73	74	73	68	71	71	71	71		73	73
250	72	69	68	61	61	71	68	72	72	72	69	69	73	69	69	71		71	74
315	69	66	66	60	59	68	67	68	72	71	66	68	72	71	69	74		74	76
400	68	65	66	59	55	67	66	68	70	71	68	67	72	74	71	77		77	78
500	68	65	65	57	53	63	65	68	69	71	72	66	72	76	75	80		81	82
630	67	64	64	56	51	60	64	66	67	71	73	64	71	73	73	78		77	77
800	68	66	63	57	50	59	64	66	68	70	71	64	66	69	70	74		72	73
1000	69	66	63	58	50	57	65	66	68	70	69	63	65	69	69	72		72	74
1250	68	65	63	57	50	57	64	66	68	70	68	63	65	68	69	72		73	74
1600	67	65	62	55	48	56	62	64	65	68	66	61	64	66	67	71		70	72
2000	67	65	62	54	49	55	62	63	67	68	65	61	62	65	65	69		69	70
2500	67	64	61	53		53	61	62	65	66	63	60	60	63	63	67		66	67
3150	65	63	59	50		52	59	60	62	63	60	58	57	61	60	65		63	65
4000	64	61	57	46			56	57	57	59	57	52	53	57	57	61		60	61
5000	62	60	55	43			53	55	55	56	55			54	54	57		56	58
6300	60	58	52	42			51	54	54	55	54			54	53	55		54	55
8000	56	53	49	43	53			56	56	56	56			56	56	56		56	56
10000			49	45	54	53	53	58	58	58	58	53		58	58	58		58	58
OVERALL	101	100	98	97	98	99	101	102	102	103	102	102	102	104	105	106		106	106

** NO DATA COLLECTED.

TABLE 6.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 05
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	81	79	82	80	72	71	73	75	77	76	71	73	69	70	70	70		76	77
OASLA	71	71	75	73	60	65	67	69	70	67	61	60	59	53	53	53		63	57
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	64	63	67	65	52	57	60	62	59	57	52	52	50	45	45	45		54	48
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	86	86	90	88	74	79	79	81	83	79	72	72	70	66	67	67		75	72
C	1	1	1	1	1	1	0	0	2	0	0	0	0	0	1	1		0	0

** NO DATA COLLECTED.

TABLE 6.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 01
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(66.7% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	74	73	74	80	76	73	70	74	74	75	71	72	71	68	74	80		73	74
OASLA	65	64	65	71	54	62	58	61	62	62	62	57	56	52	54	70		58	56
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	59	58	58	62		50	50	54	54	54	52	48	47	44	46	54		49	46
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	82	80	80	83	69	73	73	76	76	77	74	70	69	64	69	82		72	69
C	2	1	1	0	2	0	1	1	0	1	1	1	0	0	1	0		0	0

** NO DATA COLLECTED.

TABLE 6.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 02
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.8% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	89	87	83	79	75	78	79	80	80	80	81	81	75	78	79	80		80	79
OASLA	77	74	66	66	55	65	59	61	63	61	61	67	59	63	60	62		64	63
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	64	62	58	58	43	52	51	53	55	53	50	54	50	53	52	53		54	
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	91	89	81	79	72	78	76	79	77	76	76	80	71	75	73	74		77	75
C	1	1	1	0	1	0	1	1	1	0	0	0	0	1	0	0		0	0

** NO DATA COLLECTED.

TABLE 6.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-019-400
RUN 03
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	88	86	87	82	81	84	86	87	87	83	87	84	82	86	88	90		90	90
OASLA	70	68	69	65	58	66	68	70	70	67	72	64	65	69	68	71		70	70
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	62	60	61	56			59	61	64	59	64	57	57	61	60	63		62	62
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	87	84	84	79	74	83	86	88	88	81	87	79	77	82	82	86		85	85
C	1	1	0	1	3	3	2	2	2	1	1	0	0	0	0	0		0	0

** NO DATA COLLECTED.

TABLE 6.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION: OMEGA 1.5 / TEST DP-0T9-400 / RUN 04 / 11 MAR 87 / PAGE 4

NOISE SOURCE/SUBJECT: F100 ENGINE IN THE A/F32T-9 MSS AT MCCONNELL AFB, KANSAS FAR FIELD NOISE

OPERATION: AFTERBURNER POWER(90.6%) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 MSS MCCONNELL AFB

METEOROLOGY: TEMP = 15 C, BAR PRESS = 0.760 M HG, REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	95	94	92	90	92	93	96	96	96	97	97	95	95	98	99	102		102	102
OASLA	79	76	74	67	66	72	75	76	78	80	79	74	77	80	79	84		84	84
T	1142	1440	1440	1440	1440	1440	1440	1440	1358	960	1142	1440	1440	960	1142	480		480	480
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	71	69	66	59			67	68	70	72	71	66	68	71	71	75		75	76
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	94	92	89	81	84	87	91	92	93	94	93	88	89	93	94	98		100	100
C	0	0	0	0	0	0.	0	0	0	0	0	0	0	0	0	0		1	1

** NO DATA COLLECTED.

TABLE 6.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS : 0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 05
11 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	72	70	77	73	63	67	71	71	70	75	71	74	68	72	68	68		76	77
63	78	73	76	72	71	67	67	70	70	71	66	69	64	66	68	68		72	74
125	76	75	77	77	66	66	64	68	71	68	61	62	61	59	57	57		66	62
250	71	72	72	73	59	60	62	64	70	67	58	58	56	53	54	54		64	58
500	67	64	66	67	58	58	62	64	69	67	59	58	58	51	52	52		60	53
1000	66	65	69	66	56	62	63	64	64	63	57	56	54	48	48	48		58	49
2000	63	63	69	65	50	59	60	62	53	56	51	51	48	42	43	43		54	47
4000	59	60	63	63	45	51	56	55	51	44	42	43	38	39	39	39		45	45
8000	59	61	64	67	38	37	42	43	42	45	42	43	42	43	38	38		46	47
OVERALL	82	79	83	81	73	72	74	76	78	78	73	75	71	73	71	71		78	79

** NO DATA COLLECTED.

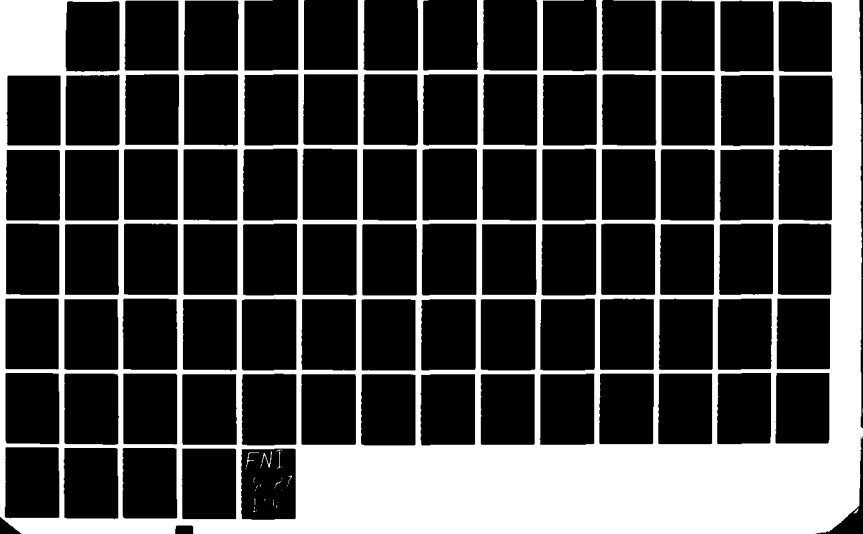
TABLE 6.5	SOUND PRESSURE LEVEL (DB) OCTAVE BAND DISTANCE = 100 METERS			IDENTIFICATION:
NOISE SOURCE/SUBJECT: F100 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: FLIGHT IDLE(66.7% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP = 15 C BAR PRESS =0.760 M HG REL HUMID = 70 %		OMEGA 1.5 TEST DP-OT9-400 RUN 01 11 MAR 87 PAGE 5

FREQ (HZ)	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160 **	170	180
31.5	73	72	72	73	71	69	69	67	72	68	70	71	70	68	75	72		71	75
63	69	66	69	74	75	70	64	74	69	73	68	68	67	65	70	77		69	70
125	66	65	67	74	66	65	63	64	69	69	61	65	62	58	61	72		65	64
250	63	63	64	72	57	64	61	60	63	64	60	57	59	52	52	72		60	57
500	60	60	61	70	48	62	54	58	59	61	61	55	54	50	51	71		57	53
1000	58	57	59	66	43	56	49	53	55	56	58	51	49	46	47	57		51	48
2000	59	57	57	60	36	46	48	52	52	52	48	43	45	41	42	45		46	43
4000	59	57	56	52		38	49	51	51	48	43	41	42	37	43	42		43	42
8000	51	48	45	42			43	42	45	38				33	42	47		46	46
OVERALL	76	74	76	80	77	74	72	75	75	76	73	73	72	70	76	80		74	76

** NO DATA COLLECTED.

AD-A182 475 FIRST ARTICLE NOISE SURVEY OF THE A/F32T-9 LARGE TURBO FAN ENGINE ENCLOSE..(U) AIR FORCE OCCUPATIONAL AND ENVIRONMENTAL HEALTH LAB RROOKS AF.. T M FAIRMAN 2/2

UNCLASSIFIED MAY 87 USAFOEHL-87-060E0110ENA F/G 24/2 NL



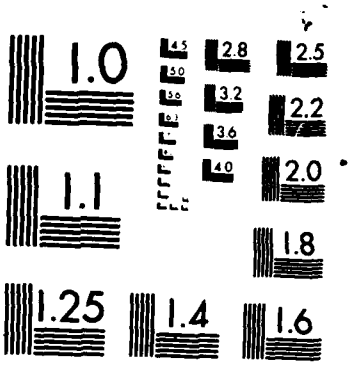


TABLE 6.5	SOUND PRESSURE LEVEL (DB) OCTAVE BAND DISTANCE = 100 METERS			IDENTIFICATION:
NOISE SOURCE/SUBJECT: F100 ENGINE IN THE A/F32T-9 NSS AT MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: INTMD POWER (80.8% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP = 15 C BAR PRESS =0.760 M HG REL HUMID = 70 %	OMEGA 1.5 TEST DP-0T9-400 RUN 02 11 MAR 87 PAGE 5	

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	88	86	84	80	76	77	79	81	81	82	82	80	77	79	80	80		80	80
63	80	79	77	74	70	73	75	75	76	76	76	75	70	73	73	76		76	75
125	82	82	70	69	69	70	69	72	68	68	69	71	63	67	62	66		69	67
250	82	79	65	67	58	71	58	61	62	61	66	73	58	61	59	59		66	66
500	75	71	60	62	51	63	54	55	59	55	57	65	58	62	59	61		64	64
1000	64	64	60	61	45	55	50	52	58	55	50	59	54	58	54	56		57	55
2000	57	56	57	57	38	46	51	51	53	53	47	46	47	50	49	51		51	47
4000	58	57	56	52	37	43	50	52	49	48	45	44	41	44	45	45		45	
8000	58	56	55	45	42	44	48	53	49	48	47	46	42	43	47				
OVERALL	90	89	85	82	78	80	81	82	82	83	83	82	78	80	81	82		82	82

** NO DATA COLLECTED.

TABLE 6.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-400
RUN 03

11 MAR 87

PAGE 5

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY POWER(90.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	89	87	87	84	83	84	87	88	86	84	88	86	83	87	90	91		91	91
63	85	82	83	76	75	80	82	83	84	79	83	78	79	81	83	87		85	86
125	77	75	76	72	66	75	75	74	75	72	75	69	71	74	74	75		77	77
250	71	68	68	64	62	67	68	71	70	65	65	63	63	65	66	66		67	70
500	64	62	63	59	51	57	61	63	66	62	66	61	63	68	66	71		69	68
1000	61	60	60	59	45	54	57	60	64	62	67	58	58	63	62	64		65	65
2000	63	61	61	58	52	61	63	66	62	60	65	57	55	59	58	61		61	60
4000	61	58	59	47			54	54	62	52	57	52	49	53	53	55		55	54
8000	57	52	55				51	51	51		51	50		51	51	51		51	51
OVERALL	90	88	89	85	84	86	89	90	89	86	90	87	85	89	91	92		92	93

** NO DATA COLLECTED.

TABLE 6.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER(90.6%)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-400
RUN 04
11 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	90	90	90	90	89	89	90	90	92	91	91	93	92	92	91	90		91	91
8	94	93	91	89	90	89	91	91	93	93	91	92	94	95	92	96		96	95
16	96	97	93	93	94	96	97	99	98	100	99	99	99	102	102	101		102	103
31.5	95	92	92	90	90	92	96	96	95	96	97	95	92	96	99	102		101	101
63	91	90	88	83	89	88	91	91	90	92	92	88	89	90	93	98		98	98
125	82	81	81	71	76	82	81	82	82	83	83	76	78	81	80	85		84	84
250	77	74	73	66	67	75	73	77	77	78	75	73	77	75	74	77		78	79
500	72	69	70	62	58	69	70	72	74	76	76	71	76	80	78	83		84	84
1000	73	70	68	62	55	62	69	71	73	75	74	68	70	74	74	78		77	79
2000	72	70	66	59	51	60	66	68	70	72	69	65	67	70	70	74		73	75
4000	69	66	62	52			61	63	64	65	63	59	58	63	63	67		66	67
8000	62	59	55	48	56		55	61	61	61	61			61	61	61		61	61
OVERALL	101	100	98	97	98	99	101	102	102	103	102	102	102	104	105	106		106	106

** NO DATA COLLECTED.

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APPENDIX E

Far-Field Noise on the TF41-A1 Engine

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TABLE 7.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
TF41-A1 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 6 March 1986

Time of Test: 0945 Hrs

Engine Operation

Idle	57.2 %RPM
80 %	80.7 %RPM
Military Power	96.5 %RPM

Meteorology

Temperature	16 Deg C
Bar Pressure	0.728 M Hg
Rel Humidity	56 %
Winds - Speed	3 - 8 Knots
- Direction	260 Deg (True)

TABLE 7.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-580
RUN 05
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 16 C
BAR PRESS = 0.728 M HG
REL HUMID = 56 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	58	58	59	57	52	54	57	59	61	59	59	56	57	59	58	59		63	56
31.5	61	60	60	59	58	61	59	62	64	65	63	61	60	64	66	62		70	59
40	61	59	60	61	57	58	58	64	64	70	67	64	63	66	69	65		69	62
50	62	62	61	64	58	57	58	62	64	66	60	61	60	61	63	64		69	60
63	64	63	65	66	58	61	62	62	63	64	61	63	60	61	63	61		69	62
80	64	64	63	65	55	58	62	60	59	62	59	59	59	58	60	59		63	61
100	64	66	64	65	53	55	62	59	58	61	57	59	57	56	57	59		59	59
125	65	66	66	67	54	55	59	58	58	61	58	57	56	56	58	56		58	59
160	62	65	64	67	50	50	55	55	56	61	56	55	54	52	54	57		56	56
200	67	69	67	66	55	56	58	62	58	61	55	58	52	54	50	53		56	55
250	57	66	61	60	48	51	50	53	53	58	49	49	46	50	48	49		50	51
315	54	63	61	61	45	48	49	50	51	56	48	48	46	51	49	51		51	51
400	57	60	62	61	45	51	52	53	50	56	52	53	50	54	51	53		51	52
500	54	58	58	60	40	46	48	50	48	51	49	48	47	51	50	52		49	49
630	53	60	59	60	38	44	47	51	50	51	49	48	47	53	52	52		49	48
800	52	57	60	61	35	41	45	49	50	50	49	46	45	51	50	50		46	46
1000	51	56	56	59	33	38	44	46	46	49	45	42	43	51	48	48		43	43
1250	53	57	56	57	32	35	41	43	43	47	42	40	41	48	47	47		41	41
1600	53	56	55	54	31	32	39	41	41	48	41	37	38	45	45	47		40	39
2000	50	53	53	53	28	28	36	39	39	45	39	34	35	43	42	45		38	36
2500	46	51	52	54	28	26	35	38	36	41	35	30	33	42	39	42		36	34
3150	42	48	48	52	28	27	33	36	34	37	32	27	31	38	36	39		36	33
4000	37	45	45	50	29	29	32	34	34	36	31	26	30	35	33	35		34	33
5000	32	42	42	48	29	26	30	29	31	32	31	25	30	32	31	32		32	31
6300	30	37	34	40	30	26	30	26	31	30	31	26	30	31	31	31		32	31
8000	31	34	32	35	31	27	32	27	32	30	32	27	32	32	32	32		32	32
10000	28	30	29	30	32	28	33	28	32	29	33	28	33	33	33	33		33	33
OVERALL	74	76	75	76	66	68	70	71	72	75	71	70	69	71	73	71		76	70

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 7.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-5B0
RUN 01
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.2% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 16 C
BAR PRESS =0.728 M HG
REL HUMID = 56 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	71	68	68	66	64	64	65	65	68	68	67	66	65	66	67	65		64	68
31.5	77	75	70	70	65	61	62	68	73	70	68	71	71	70	70	69		73	72
40	75	76	72	70	59	60	62	64	67	68	69	69	67	65	64	67		69	69
50	70	69	70	66	62	62	63	64	68	67	63	64	63	64	65	64		67	68
63	76	73	69	70	63	65	67	64	69	66	61	65	64	63	63	63		65	67
80	63	62	73	71	58	58	60	60	66	59	58	63	59	60	60	58		60	64
100	60	60	76	75	60	56	58	60	63	59	59	61	58	57	57	60		57	60
125	61	59	69	66	60	55	56	57	61	56	55	58	55	55	55	62		56	56
160	59	59	63	62	57	53	51	56	60	53	50	54	50	51	52	53		51	52
200	61	65	65	64	56	53	49	56	63	54	49	52	50	48	47	50		50	50
250	57	57	58	58	54	52	47	53	59	48	44	48	47	45	44	49		51	46
315	57	54	55	57	52	52	46	49	58	47	44	47	48	47	45	46		47	47
400	56	54	56	60	51	51	46	48	58	47	46	48	50	48	46	47		46	46
500	52	51	54	55	49	53	44	46	57	47	44	45	50	47	44	46		47	45
630	53	54	55	55	44	47	44	43	54	46	47	45	47	46	46	46		47	46
800	52	53	54	55	39	37	43	43	50	45	46	43	44	45	45	45		47	45
1000	50	50	53	52	35	34	40	43	47	43	44	42	42	44	46	45		45	44
1250	49	50	53	53	33	34	42	44	46	44	44	42	40	43	46	43		44	43
1600	48	50	53	53	30	32	38	39	46	42	42	40	39	41	44	42		43	42
2000	48	48	51	52	29	31	38	38	45	42	39	37	35	38	41	39		40	40
2500	47	46	50	49	28	31	37	38	43	38	37	35	33	36	38	36		36	38
3150	45	44	48	47	30	32	36	36	40	35	34	33	33	35	37	34		33	35
4000	43	42	45	44	29	33	35	36	40	36	34	33	33	34	34	34		31	34
5000	41	40	42	41	29	34	35	35	40	35	34	34	34	34	34	34		30	34
6300	39	38	39	39	30	35	35	35	40	35	35	35	35	35	35	35		30	35
8000	38	37	38	38	32	37	37	37	41	37	36	36	36	36	37	37		32	37
10000	38	38	38	38	33	38	38	38	43	38	37	37	38	38	38	38		33	38
OVERALL	82	81	81	80	72	71	72	73	78	75	74	75	74	74	74	74		76	76

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 7.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-0T9-5B0 RUN 02 11 MAR 87 PAGE 2

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
TF41 ENGINE IN THE A/F32T-9 NSS MCCONNELL AFB, KANSAS FAR FIELD NOISE	INTMD POWER (80.7% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	TEMP = 16 C BAR PRESS = 0.728 M HG REL HUMID = 56 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	80	85	85	81	79	76	78	80	80	79	81	79	77	77	80	74		78	79
31.5	80	85	79	75	73	73	78	77	78	79	78	76	72	75	75	74		75	76
40	83	82	77	73	68	71	74	79	75	75	75	72	70	71	71	75		69	71
50	79	78	77	76	69	73	71	74	73	73	70	70	67	68	69	73		68	70
63	79	76	74	70	69	73	72	71	73	72	70	68	66	67	68	70		65	68
80	70	69	68	65	71	67	66	68	66	68	66	66	70	60	62	65		62	64
100	67	66	66	62	65	67	63	64	63	62	62	63	59	56	58	59		59	59
125	69	64	64	62	64	63	61	62	61	60	57	61	56	54	56	58		57	57
160	62	62	62	61	57	59	56	59	58	57	52	56	53	50	52	56		56	53
200	63	65	64	62	55	57	55	57	59	56	51	52	50	46	47	54		51	53
250	58	58	58	58	54	54	49	56	56	54	48	47	44	45	44	55		45	45
315	56	56	55	58	51	50	45	56	54	56	49	45	45	47	43	55		45	43
400	59	57	55	62	48	47	47	54	54	56	51	46	46	48	47	54		47	46
500	55	50	51	55	45	46	46	53	52	53	49	46	44	47	48	52		46	45
630	55	50	50	55	43	46	45	51	50	51	51	47	43	47	49	50		46	45
800	53	49	50	55	41	45	44	49	50	49	52	44	42	47	47	48		44	44
1000	52	49	50	51	38	44	42	47	49	49	51	43	41	43	47	47		43	43
1250	51	48	50	50	35	42	41	44	47	47	52	42	41	43	47	45		42	42
1600	50	48	51	49	32	41	41	43	47	45	49	42	38	41	45	42		40	40
2000	52	49	49	50	31	38	40	43	50	53	57	41	35	41	42	40		39	37
2500	55	52	51	50	33	40	45	47	52	48	54	42	35	39	41	40		41	40
3150	52	51	48	48	33	38	42	43	44	41	45	42	34	37	38	38		38	36
4000	47	46	44	46	33	37	38	40	40	37	38	38	33	38	38	38		39	34
5000	50	49	46	43	34	38	40	41	41	38	39	40	35	40	41	40		40	37
6300	45	44	41	38	35	37	37	41	40	36	36	40	35	40	40	40		40	36
8000	44	42	39	38	37	37	38	42	42	37	37	42	37	42	42	42		42	37
10000	44	39		38	38	38	38	43	43	38	38	43	38	43	43	43		43	38
OVERALL	92	90	87	84	81	81	83	84	84	84	84	82	80	80	82	81		81	82

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 7.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS			IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-SBO RUN 03 11 MAR 87 PAGE 2
NOISE SOURCE/SUBJECT: TF41 ENGINE IN THE A/F32T-9 NSS MCCONNELL AFB,KANSAS FAR FIELD NOISE	OPERATION: MILITARY PWR (96.3% RPM) SINGLE ENGINE GROUND RUNUP IN THE A/F32T-9 NSS MCCONNELL AFB	METEOROLOGY: TEMP = 16 C BAR PRESS =0.728 M HG REL HUMID = 56 %		

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	88	85	86	82	83	83	83	85	83	87	83	84	79	84	87	85		84	86
31.5	87	85	82	80	80	82	84	85	83	86	84	82	78	82	83	87		86	88
40	86	85	82	76	78	80	84	85	85	82	82	79	76	78	80	85		83	85
50	82	81	80	72	74	77	80	81	82	79	79	76	76	77	80	81		81	81
63	85	80	80	72	75	79	81	79	81	83	80	75	75	76	78	82		79	80
80	80	78	76	71	71	76	79	80	80	81	78	73	72	73	74	74		77	77
100	75	76	74	65	67	73	77	77	74	74	73	68	69	71	70	74		74	72
125	72	71	71	63	64	72	75	74	72	74	69	67	65	68	67	70		72	69
160	70	69	67	62	60	69	72	72	69	71	68	66	61	63	64	65		69	67
200	66	67	66	62	58	66	68	72	68	69	63	63	58	60	61	63		67	68
250	63	62	62	58	53	65	63	68	64	68	58	58	55	59	56	59		60	60
315	61	61	59	57	50	62	61	66	64	66	57	54	53	57	55	61		57	59
400	63	62	61	63	51	58	60	63	67	66	60	53	55	59	61	65		61	63
500	62	60	60	59	48	55	58	62	67	65	60	54	56	60	62	65		60	61
630	60	60	58	57	46	52	56	60	61	62	59	52	54	58	60	64		60	62
800	60	60	58	57	43	50	56	59	61	60	58	51	53	56	58	61		61	62
1000	60	60	59	55	42	51	56	58	61	61	58	51	52	56	58	60		60	60
1250	59	58	58	54	41	51	55	58	60	61	57	50	51	54	56	58		56	58
1600	59	59	59	53	40	50	54	56	57	59	54	49	49	52	54	57		55	57
2000	60	59	58	53	41	49	54	58	59	59	55	48	47	51	53	55		54	56
2500	59	58	57	52	41	48	53	57	59	57	54	48	47	49	51	54		53	54
3150	58	57	55	50	39	45	51	53	54	54	51	46	43	47	48	52		50	51
4000	58	56	54	47	38	43	49	51	49	51	47	43	41	44	46	49		48	49
5000	53	52	50	43	39	42	45	48	45	50	46	41	41	44	46	50		48	49
6300	50	48	47	42	40	41	43	46	42	47	42	41	40	42	42	46		43	46
8000	47	46	46	42	42	45	43	47	43	47	43	42	42	42	43	47		43	47
10000	44	44	44	43	43	43	43	48	43	48	43	43	43	43	43	48		43	48
OVERALL	93	91	90	86	87	88	90	91	91	92	89	88	85	88	90	92		91	92

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 7.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-5B0
RUN 05
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	58	58	59	57	52	54	57	59	61	59	59	56	57	59	58	59		63	56
31.5	61	60	60	59	58	61	59	62	64	65	63	61	60	64	66	62		70	59
40	61	59	60	61	57	58	59	64	65	70	67	64	63	66	69	65		69	63
50	62	62	61	64	58	58	58	62	64	67	60	61	60	61	63	64		69	60
63	64	64	65	67	58	62	62	62	63	64	62	63	60	61	64	61		69	62
80	64	65	63	65	55	58	62	60	60	62	59	59	59	58	60	59		63	61
100	64	67	64	65	53	55	63	59	58	61	58	59	57	56	57	59		59	59
125	65	66	66	67	54	55	59	58	58	61	58	57	56	56	58	56		58	59
160	62	65	64	67	50	50	56	55	56	61	56	55	54	53	54	57		56	56
200	68	70	67	66	55	56	58	62	58	61	55	58	53	54	50	53		56	55
250	57	66	61	60	48	51	50	53	53	58	49	49	46	50	48	49		50	51
315	54	63	61	61	45	48	50	51	51	56	48	48	46	51	49	52		51	51
400	57	60	62	61	45	52	52	53	50	56	52	53	50	54	51	53		51	52
500	55	58	58	60	40	46	48	50	48	51	49	48	47	51	50	52		49	49
630	53	60	59	60	38	44	47	51	50	51	49	48	47	53	52	52		49	48
800	53	57	60	61	35	41	45	49	50	50	49	46	45	51	50	50		46	46
1000	51	56	56	59	33	38	44	46	46	49	45	42	43	51	48	48		43	43
1250	53	57	57	57	32	35	41	43	44	47	43	40	41	48	47	47		41	41
1600	53	56	55	54	31	32	39	42	42	48	41	37	38	46	45	48		40	39
2000	50	53	53	53	29	28	36	39	39	45	39	34	35	43	43	45		38	37
2500	47	52	52	54	28	27	35	39	36	41	35	30	34	42	40	42		36	34
3150	43	49	48	52	28	27	34	36	35	37	32	27	31	38	37	39		36	33
4000	37	46	46	51	30	30	33	35	35	37	32	27	31	36	34	36		34	33
5000	33	43	42	48	30	27	31	30	32	33	32	26	31	33	32	33		33	32
6300	32	38	36	42	31	27	32	28	32	31	32	27	32	32	32	32		33	32
8000	32	35	34	36	32	28	33	28	33	31	33	28	33	33	34	34		33	33
10000	30	32	31	32	34	30	35	30	34	31	35	30	35	35	35	35		35	35
OVERALL	74	76	75	76	66	68	70	71	72	75	71	71	69	71	73	71		76	70

** NO DATA COLLECTED.

TABLE 7.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-5BO
RUN 01
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.2% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	71	68	68	66	64	65	65	65	68	68	67	66	66	66	67	66		64	68
31.5	77	75	70	70	65	61	62	68	73	70	68	71	71	71	70	69		73	72
40	75	77	73	71	59	60	62	64	68	68	69	69	67	66	64	67		69	69
50	70	69	70	66	62	62	63	65	68	67	63	65	63	64	65	64		67	68
63	76	73	69	70	64	65	67	64	69	66	61	65	64	63	63	63		65	67
80	63	62	73	71	59	58	60	60	66	59	58	63	59	60	60	58		60	64
100	60	60	76	75	60	56	58	60	64	59	59	61	58	58	57	60		57	61
125	61	60	69	66	60	55	56	57	61	57	55	59	56	55	55	62		56	57
160	59	59	63	62	58	53	52	56	60	53	50	55	50	51	52	53		51	52
200	61	65	65	64	56	53	49	56	63	54	49	52	50	48	47	50		50	50
250	57	57	58	58	54	52	47	53	59	48	44	48	47	46	44	49		51	46
315	57	54	55	57	52	52	46	50	58	47	44	47	48	47	45	47		47	47
400	56	54	56	60	51	51	47	48	58	48	46	48	50	48	46	47		46	46
500	53	52	55	55	49	53	44	46	57	47	44	45	50	47	44	46		47	45
630	53	54	55	55	44	47	44	43	54	46	47	45	47	47	46	46		47	46
800	52	53	54	55	39	37	43	43	50	45	46	43	44	45	45	45		47	45
1000	50	50	53	52	35	34	40	43	47	43	44	42	42	44	46	45		45	44
1250	49	50	53	53	33	34	42	44	47	44	44	42	40	43	46	43		44	43
1600	48	50	53	53	31	32	39	40	46	42	42	40	39	41	44	42		43	43
2000	48	48	51	52	30	31	38	38	45	42	40	38	35	38	41	40		40	40
2500	48	47	51	49	28	32	37	38	44	39	37	35	34	36	39	36		37	38
3150	45	44	48	47	30	33	36	36	41	36	35	33	33	35	37	34		33	35
4000	43	42	46	44	30	34	36	36	41	36	34	34	34	34	35	34		31	35
5000	41	41	43	41	30	35	36	36	41	36	35	35	35	35	35	35		30	35
6300	41	39	40	40	32	36	37	37	41	36	36	36	36	36	36	37		32	36
8000	39	39	39	40	33	38	38	38	43	38	38	38	38	38	38	38		33	38
10000	40	40	40	40	35	40	40	40	45	40	39	39	40	40	40	40		35	40
OVERALL	82	81	81	80	72	71	72	73	78	75	74	76	75	74	74	74		76	77

** NO DATA COLLECTED.

TABLE 7.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-5B0
RUN 02
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.7% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	88	85	85	81	79	76	79	80	80	79	81	79	77	77	80	74		78	80
31.5	88	86	80	76	73	73	78	77	79	79	78	76	72	75	75	74		76	76
40	83	83	78	74	68	71	74	79	75	75	75	72	70	71	72	75		70	71
50	79	78	77	76	69	74	71	74	73	73	70	70	67	68	69	73		68	70
63	80	76	74	70	69	73	72	71	73	72	70	68	66	67	68	70		65	68
80	70	69	68	65	71	67	66	68	66	68	66	66	70	60	62	65		62	64
100	67	66	66	62	65	67	63	64	63	63	63	63	59	56	59	60		59	59
125	69	65	64	62	64	63	61	62	61	60	57	61	56	54	56	58		57	57
160	62	62	62	61	58	59	57	59	58	57	52	56	53	50	52	56		56	53
200	63	65	64	62	55	57	55	58	59	56	51	53	50	46	47	54		51	53
250	58	58	58	58	54	54	49	56	56	54	48	47	44	45	44	55		45	45
315	56	56	55	58	51	50	45	56	55	56	49	45	45	47	43	55		45	44
400	59	57	56	62	49	48	47	54	54	56	51	46	46	48	47	54		47	46
500	55	50	51	55	45	46	46	53	52	53	49	46	44	47	48	52		46	45
630	55	50	50	55	43	46	45	51	50	51	51	47	43	47	49	50		46	45
800	53	49	50	55	41	45	44	49	50	49	52	44	42	47	47	48		44	44
1000	52	49	50	51	38	44	42	47	49	49	51	43	41	43	47	47		43	43
1250	51	48	50	50	35	42	41	44	48	47	52	42	41	43	47	46		42	42
1600	51	48	51	49	32	41	41	43	47	45	49	42	38	41	45	42		40	41
2000	52	49	49	50	31	39	40	43	50	53	57	41	35	41	42	41		39	37
2500	55	53	51	50	33	40	46	48	52	49	55	43	35	39	41	40		41	41
3150	52	51	49	48	33	38	42	43	44	42	45	42	34	38	39	38		39	36
4000	48	47	45	47	34	38	38	41	40	38	38	39	34	39	39	39		39	35
5000	51	50	46	43	35	39	41	42	41	39	40	40	35	40	41	41		41	37
6300	46	45	42	40	37	38	38	42	41	37	37	41	37	41	41	41		42	37
8000	46	44	41	39	38	39	39	43	43	38	38	43	38	43	43	43		43	38
10000	46	41		40	40	40	40	45	45	40	40	45	40	45	45	45		45	40
OVERALL	92	90	88	84	82	81	83	85	84	84	84	82	80	80	82	81		81	82

** NO DATA COLLECTED.

TABLE 7.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1 5
TEST DP-0T9-5B0
RUN 03

11 MAR 87

PAGE 3

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITAR PWR (96.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
25	88	85	86	83	83	83	83	85	83	87	83	84	79	84	87	85		84	86
31.5	87	85	82	80	81	82	84	85	84	87	84	82	78	83	83	87		87	88
40	86	85	82	76	78	80	84	85	85	82	82	79	77	79	80	85		83	85
50	83	82	81	72	74	77	80	81	82	79	79	76	76	77	80	81		81	81
63	85	81	80	73	75	79	81	80	81	83	80	75	75	76	78	83		79	80
80	80	78	76	71	71	76	79	80	80	81	78	73	72	73	74	74		77	77
100	75	76	74	65	68	74	77	77	75	74	73	68	69	71	70	74		74	72
125	72	71	71	63	64	72	75	74	72	74	69	67	65	68	67	70		72	69
160	70	69	67	62	60	69	72	72	69	71	68	66	61	63	64	65		69	68
200	67	68	67	62	58	66	68	72	68	69	63	63	59	60	61	63		68	68
250	63	62	62	58	53	65	63	68	64	68	58	58	55	59	56	59		60	60
315	61	61	59	57	50	62	61	66	65	66	57	54	53	57	55	61		57	59
400	63	62	61	63	51	58	60	64	67	66	60	53	55	59	61	65		61	64
500	62	60	60	59	48	55	58	62	67	65	60	54	56	60	62	66		60	61
630	60	60	58	57	46	52	56	60	61	62	59	52	54	58	60	64		60	62
800	60	60	59	58	43	50	56	59	61	60	58	51	53	56	58	62		61	62
1000	60	60	59	55	42	51	56	58	61	61	58	51	52	56	58	60		60	60
1250	59	58	58	54	41	51	56	58	60	61	57	50	51	54	56	58		57	59
1600	60	59	59	53	40	50	54	56	57	59	54	49	49	52	54	57		55	57
2000	60	59	58	53	41	49	54	58	60	59	55	49	48	51	53	56		54	56
2500	60	58	57	53	41	48	53	57	59	57	54	49	47	50	52	54		53	54
3150	59	57	55	50	39	45	51	54	54	55	51	47	44	47	49	52		51	52
4000	58	57	55	48	39	43	50	51	50	52	48	44	42	45	47	50		49	50
5000	54	52	50	44	40	42	46	49	46	51	47	42	42	45	47	51		49	49
6300	51	49	48	43	41	42	44	47	44	48	43	42	42	43	44	48		45	48
8000	48	47	47	44	43	46	44	48	44	48	44	44	43	44	44	48		45	48
10000	46	46	46	45	45	45	45	50	45	50	45	45	45	45	45	50		45	50
OVERALL	94	91	90	86	87	88	91	92	91	92	90	88	85	88	90	92		91	92

** NO DATA COLLECTED.

TABLE 7.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-5B0
RUN 05
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160 **	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	74	76	75	76	65	67	69	70	70	74	70	69	68	70	71	70		75	69
OASLA	64	68	67	68	50	53	56	58	57	60	56	55	54	59	57	59		56	56
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	54	59	59	61	38	41	46	48	47	51	47	43	44	50	49	51		47	46
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	78	82	80	81	65	66	70	73	70	73	69	69	67	70	69	71		70	69
C	1	1	1	0	1	1	1	1	1	0	1	1	1	0	0	0		1	0

** NO DATA COLLECTED.

TABLE 7.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE 100 METERS

IDENTIFICATION:

OMEGA 1.5
TEST DP-OT9-580
RUN 01

11 MAR 87

PAGE 4

NOISE SOURCE/SUBJECT
TF41 ENGINE IN THE
A/F32T-9 MSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.2% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
MSS MCCONNELL AFB

METEOROLOGY:
TEMP 15 C
BAR PRESS 0 760 M HG
REL HUMID 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	80	79	80	79	70	69	71	71	76	73	72	74	72	72	72	72		74	74
OASLA	62	62	65	65	55	55	53	55	62	55	54	54	54	54	55	55		55	55
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	54	54	56	57	41	43	45	46	52	47	46	45	45	46	47	46		46	46
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	77	78	82	81	67	69	68	70	76	69	67	68	67	67	68	70		67	68
C	0	1	1	1	0	1	1	1	1	1	0	0	0	0	0	1		0	0

** NO DATA COLLECTED.

TABLE 7.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-SBO
RUN 02
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.7% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DUC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	89	87	84	81	79	79	80	82	81	81	81	79	77	77	79	79		78	79
OASLA	66	64	63	64	56	58	57	60	61	61	63	56	54	56	57	59		55	55
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	58	55	55	57	43	47	48	52	53	53	55	48	44	48	49	50		47	46
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	83	80	79	79	72	73	73	76	78	78	79	71	70	69	70	73		70	70
C	1	1	1	1	0	0	1	1	1	2	2	0	0	0	0	0		0	1

** NO DATA COLLECTED.

TABLE 7.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR (96.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS : 0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-079-580
RUN 03
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	91	89	88	83	84	86	89	89	89	90	87	85	83	85	87	89		89	90
OASLA	72	71	70	66	59	66	69	71	72	72	68	63	63	66	68	71		69	70
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	64	64	62	59	48	55	59	62	64	64	60	54	54	58	60	63		61	62
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	88	86	85	81	75	82	85	87	87	87	83	78	78	80	82	86		83	85
C	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0		0	1

** NO DATA COLLECTED

TABLE 7.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS : 0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-SBO
RUN 05
11 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	65	64	64	64	61	63	63	67	68	71	69	66	65	69	71	67		73	65
63	69	68	68	70	62	64	66	66	67	69	65	66	65	65	67	67		73	66
125	69	71	69	71	57	59	65	62	62	66	62	62	61	60	61	62		63	63
250	68	72	69	68	56	58	59	63	60	64	57	59	54	57	54	56		58	58
500	60	64	65	65	47	53	54	56	55	58	55	55	53	57	56	57		55	55
1000	57	62	63	64	39	43	49	52	52	54	51	48	48	55	53	53		49	49
2000	55	59	58	59	34	34	42	45	44	50	44	39	41	49	48	50		43	42
4000	44	51	51	56	34	33	37	39	39	41	37	31	36	41	39	41		39	38
8000	36	41	39	43	30	33	30	34	30	36	30	33	30	30	39	30		30	30
OVERALL	74	76	75	76	66	68	70	71	72	75	71	71	69	71	73	71		76	70

** NO DATA COLLECTED.

TABLE 7.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(57.2% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-580
RUN 01

11 MAR 87

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	80	79	75	74	68	67	68	71	75	74	73	74	73	73	72	72		75	75
63	77	75	76	75	67	68	69	68	73	70	66	69	67	68	68	67		70	71
125	65	64	77	76	64	60	61	63	67	62	61	64	61	60	60	65		60	62
250	64	66	66	66	59	57	53	59	66	56	51	55	53	52	50	54		55	53
500	59	58	60	62	54	56	50	51	61	52	51	51	54	52	50	51		52	51
1000	55	56	58	58	41	40	47	48	53	49	50	47	47	49	50	49		50	49
2000	53	53	57	57	34	36	43	43	50	46	45	43	41	44	47	45		46	46
4000	48	47	51	50	35	39	41	41	46	41	39	39	39	40	41	39		37	40
8000	45	44	44	44	38	43	43	43	48	43	43	43	43	43	43	43		38	43
OVERALL	82	81	81	80	72	71	72	73	78	75	74	76	75	74	74	74		76	77

** NO DATA COLLECTED.

TABLE 7.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER (80.7% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-5B0
RUN 02
11 MAR 87

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	92	89	87	83	80	79	82	84	83	83	83	81	79	80	82	79		80	82
63	83	80	79	77	74	77	75	77	76	76	74	73	73	71	72	75		71	73
125	72	70	69	67	68	69	66	67	66	65	64	66	62	59	61	63		62	62
250	65	66	66	65	58	59	57	61	62	60	54	54	52	51	50	60		53	54
500	62	59	58	63	51	52	51	58	57	59	55	51	50	52	53	57		51	50
1000	57	54	55	57	44	49	47	52	54	53	56	48	46	50	52	52		48	48
2000	58	55	55	55	37	45	48	50	55	55	60	47	41	45	48	46		45	44
4000	55	54	52	51	39	43	46	47	47	45	47	45	39	44	45	44		45	41
8000	51	48	44	44	43	44	44	48	48	43	43	48	43	48	48	48		48	43
OVERALL	92	90	88	84	82	81	83	85	84	84	84	82	80	80	82	81		81	82

** NO DATA COLLECTED.

TABLE 7.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-5B0
RUN 03
11 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
TF41 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR (96.3% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
31.5	92	90	89	85	86	87	89	90	89	90	88	87	83	87	89	91		90	91
63	88	85	84	77	78	82	85	85	86	86	84	80	79	81	83	85		84	85
125	78	78	76	68	70	77	80	80	77	78	75	72	71	73	72	76		77	75
250	69	69	69	65	60	70	70	74	71	73	65	65	61	64	63	66		69	69
500	66	66	65	65	53	61	63	67	71	69	64	58	60	64	66	70		65	67
1000	65	64	63	61	47	56	61	63	66	66	62	56	57	60	62	65		64	65
2000	65	64	63	58	45	54	59	62	63	63	59	54	53	56	58	61		59	61
4000	62	61	59	53	44	49	54	56	56	57	54	49	47	50	52	56		54	55
8000	54	52	52	49	48	50	49	53	49	54	49	49	48	49	49	53		50	53
OVERALL	94	91	90	86	87	88	91	92	91	92	90	88	85	88	90	92		91	92

** NO DATA COLLECTED.

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APPENDIX F

Far-Field Noise on the

J85-5 Engine

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TABLE 8.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
J85-5 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 12 March 1986

Time of Test: 1400

Engine Operation

Idle	49.0 %RPM
Military Power	100 %RPM
Afterburner Power	100 %RPM

Meteorology

Temperature	12 Deg C
Bar Pressure	0.712 M Hg
Rel Humidity	90 %
Wind - Speed	8 - 14 Knots (Gusts to 17)
- Direction	290 Deg (True)

TABLE 8.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 05
03 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 12 C
BAR PRESS :0.712 M HG
REL HUMID : 90 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	76	81	80	79	63	70	78	79	82	77	72	80	79	80	80	77		75	76
4	88	87	89	87	68	74	77	80	80	74	72	77	78	77	80	75		73	75
5	81	84	83	80	62	70	77	79	81	78	71	80	76	79	79	77		73	76
6.3	74	77	83	79	62	69	76	77	81	75	70	79	75	78	78	77		70	73
8	72	76	80	78	55	65	74	73	81	74	69	75	74	76	79	76		71	72
10	73	75	78	78	58	67	69	73	80	71	65	74	76	79	77	72		67	72
12.5	74	75	79	80	61	64	68	73	78	70	66	71	75	78	77	70		66	69
16	73	75	78	78	54	62	67	72	76	69	64	69	71	75	75	70		65	68
20	76	77	78	78	57	59	67	70	73	67	63	67	68	72	71	67		65	69
25	76	76	78	78	56	58	64	66	71	66	62	68	67	71	68	65		63	64
31.5	74	75	76	76	60	59	64	66	73	67	63	68	67	70	68	66		63	64
40	72	74	74	76	65	58	63	66	70	67	61	71	66	68	67	65		64	66
50	69	71	72	75	66	58	65	66	69	67	60	77	67	69	69	65		64	67
63	68	67	69	74	70	64	58	64	65	63	62	78	64	66	67	64		68	67
80	65	64	66	77	76	59	59	63	64	62	62	80	63	64	64	64		69	63
100	65	63	67	78	73	58	58	65	64	66	62	81	59	62	62	64		74	67
125	63	64	66	77	65	58	57	65	64	64	65	81	57	59	61	63		69	65
160	62	61	64	75	64	55	63	70	67	67	61	79	54	55	60	59		64	62
200	61	60	62	74	57	56	52	66	63	63	58	78	51	53	60	58		63	59
250	58	57	59	76	56	50	60	66	61	59	55	80	50	54	61	59		65	58
315	59	57	60	79	51	51	54	64	60	57	56	81	54	56	61	61		66	61
400	58	58	60	78	47	51	61	66	63	60	58	81	57	60	63	64		66	64
500	55	57	57	79	44	48	57	66	66	55	60	78	56	60	63	63		66	57
630	55	55	57	79	42	47	58	67	72	57	62	76	57	59	62	62		66	58
800	55	55	56	76	41	48	56	68	74	59	63	75	58	59	62	62		64	56
1000	55	54	55	74	39	46	54	68	72	57	62	72	58	58	61	61		63	56
1250	53	52	54	72	36	46	51	64	70	57	64	70	59	61	66	64		62	56
1600	53	51	54	68	34	43	48	61	68	56	62	68	59	60	64	62		60	53
2000	51	48	52	63	34	40	46	54	64	55	60	64	59	60	61	60		59	51
2500	48	46	48	58	34	39	45	50	59	54	60	61	59	60	62	61		60	52
3150	46	46	46	51	32	38	44	46	53	53	59	56	58	59	60	59		58	50
4000	44	44	44	47	30	37	44	45	48	51	55	50	56	56	57	57		57	50
5000	41	40	41	45	29	35	43	43	45	49	51	44	51	51	51	51		52	46
6300				41	29	34	41	42	43	44	44	40	44	44	44	45		46	43
8000				40	30	34	41	41	43	42	37	38	39	40	39	41		42	43
10000					30	34	38	39	42	41	34	38	35	37	35	39		37	40
OVERALL	90	91	92	93	80	79	84	87	90	84	80	92	86	88	88	85		83	83

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 8.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(49% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 12 C
BAR PRESS = 0.712 M HG
REL HUMID = 90 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 01
03 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	68	67	70	69	63	63	72	69	70	70	68	66	70	72	65	71		64	63
4	68	71	70	66	68	70	70	70	71	71	68	66	71	72	69	69		67	68
5	64	66	67	66	63	63	69	67	67	72	66	64	67	68	65	66		64	65
6.3	63	66	66	64	60	62	68	70	67	68	65	62	66	65	65	64		64	62
8	63	65	65	61	56	59	68	66	66	66	62	59	63	62	64	64		64	63
10	58	61	62	58	57	58	63	64	65	66	60	59	60	59	60	62		61	60
12.5	57	61	61	58	55	57	63	61	63	65	60	58	60	59	58	58		59	59
16	56	58	63	60	55	56	63	60	63	61	60	56	59	57	58	59		59	59
20	61	61	62	61	57	56	61	59	61	60	58	57	58	59	58	57		59	58
25	59	58	60	60	58	57	60	58	62	62	60	58	60	59	59	59		58	59
31.5	61	60	60	60	58	55	62	58	62	61	60	59	62	58	57	57		58	60
40	61	60	62	60	59	53	61	54	61	59	59	60	63	57	58	57		59	59
50	63	62	65	61	60	56	60	55	62	61	58	59	66	58	66	54		56	60
63	64	61	62	62	59	56	59	54	58	61	57	57	63	57	59	58		53	62
80	63	63	63	63	66	52	54	55	59	61	57	54	61	63	57	56		52	64
100	65	64	67	65	64	52	52	55	54	58	58	52	58	60	59	52		52	61
125	70	69	71	70	58	51	52	54	53	58	56	59	54	60	56	49		55	60
160	72	73	71	74	54	50	52	58	50	57	57	54	50	55	55	46		50	56
200	71	72	69	73	50	48	48	56	48	58	51	51	46	49	51	45		48	50
250	66	66	65	73	46	43	44	52	45	56	48	47	45	46	50	44		44	45
315	63	62	64	68	47	44	44	53	45	53	46	45	47	44	46	47		45	43
400	64	61	63	67	47	45	46	55	48	50	43	43	49	47	46	47		47	45
500	59	58	57	60	46	43	44	54	47	47	39	40	47	46	45	44		44	42
630	63	62	60	66	46	44	45	55	50	45	40	39	48	47	47	49		46	47
800	60	60	61	65	45	42	42	53	48	43	39	38	47	47	47	49		46	47
1000	62	62	64	66	43	42	42	52	48	40	39	39	45	47	49	45		45	44
1250	62	62	64	64	41	41	43	49	48	40	38	37	44	46	50	43		42	43
1600	60	59	59	61	40	40	41	47	45	39	39	37	44	45	50	46		41	41
2000	59	60	60	62	39	37	47	44	44	37	41	36	42	44	50	42		40	40
2500	58	60	60	62	38	36	42	43	43	37	38	36	42	43	49	41		40	39
3150	58	61	62	63	38	37	37	42	43	37	35	34	40	42	45	40		39	37
4000	61	63	62	65	38	39	49	45	46	40	36	36	39	40	43	39		38	37
5000	60	63	62	67	35	36	45	42	43	42	37	37	37	38	42	38		38	37
6300	58	61	60	67	35	34	33	38	39	33	31	35	36	37	39	34		34	33
8000	61	62	63	69	35	35	37	40	38	33	32	36	37	37	38	33		33	32
10000	55	56	57	64	35	35	34	38	34	33	33	37	38	38	38	33		33	33
OVERALL	80	80	80	82	74	73	78	77	77	78	75	73	77	77	75	76		73	75

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 8.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE = 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-600 RUN 03 03 MAR 87 PAGE 2

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
J85-5(GP) ENGINE	MILITARY PWR (99% RPM)	TEMP : 12 C
IN THE A/F32T-9 NSS	SINGLE ENGINE GROUND	BAR PRESS :0.712 M HG
MCCONNELL AFB,KANSAS	RUNUP IN THE A/F32T-9	REL HUMID : 90 %
FAR FIELD NOISE	NSS MCCONNELL AFB	

FREQ	ANGLE (DEGREES)																		
(HZ)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	67	65	63	70	63	70	71	69	68	75	71	66	72	70	73	73		66	68
4	71	72	68	74	70	71	74	71	70	74	70	71	73	73	76	76		72	69
5	66	65	65	69	69	71	73	69	70	73	67	69	68	70	72	73		69	67
6.3	75	74	75	70	66	72	72	74	72	75	65	66	71	70	71	74		72	71
8	78	79	76	73	69	69	74	75	74	74	70	69	70	72	71	79		75	76
10	77	77	79	77	74	71	72	74	72	76	74	70	69	71	70	75		71	71
12.5	73	71	73	72	74	73	73	72	71	75	70	72	72	71	73	74		72	73
16	74	73	70	70	73	75	74	74	72	75	71	74	76	77	77	76		75	76
20	76	73	72	70	75	72	73	73	75	75	75	71	72	74	74	69		75	75
25	84	82	81	77	74	74	74	76	75	76	76	73	73	73	75	70		73	75
31.5	86	83	78	74	71	71	72	75	73	74	74	71	69	70	69	70		73	71
40	83	83	78	73	65	69	73	74	71	70	74	70	68	67	67	70		67	67
50	81	79	78	74	64	68	72	73	72	71	70	70	69	69	67	66		68	69
63	81	77	76	70	65	70	71	70	74	66	70	65	63	64	67	69		65	66
80	73	71	71	68	61	67	65	67	67	64	63	62	57	61	61	62		62	61
100	71	69	69	67	59	60	63	62	65	60	58	57	54	59	57	58		61	61
125	74	72	70	70	57	61	65	61	66	58	58	55	53	54	56	57		60	63
160	73	71	70	73	56	58	60	60	62	55	54	52	49	52	53	53		56	56
200	70	70	68	71	53	56	59	57	59	54	51	49	47	50	51	52		54	53
250	67	67	66	71	50	57	57	55	59	56	51	47	48	49	49	52		51	49
315	67	67	66	69	51	57	57	58	61	58	56	50	50	52	52	60		57	52
400	68	68	68	69	52	58	61	63	66	58	59	54	54	55	55	64		61	56
500	68	65	67	65	52	59	62	66	68	61	61	53	54	55	55	63		62	59
630	71	68	69	68	51	56	61	64	64	58	58	50	53	54	55	62		65	61
800	69	67	69	67	49	55	59	63	62	58	57	50	52	52	53	64		66	60
1000	68	68	69	68	46	54	58	61	62	59	57	50	50	51	53	63		65	59
1250	67	67	67	65	44	52	57	60	61	59	57	49	48	51	52	64		65	55
1600	66	64	64	63	43	50	54	57	57	53	51	46	46	48	50	62		64	53
2000	65	65	64	63	44	51	55	58	59	56	54	51	47	48	49	61		64	53
2500	65	64	64	62	41	50	55	57	59	54	53	53	45	47	48	60		62	52
3150	64	64	64	63	41	47	54	55	56	50	50	50	43	45	45	58		60	50
4000	63	64	64	64	38	45	51	51	51	47	45	42	41	43	43	54		57	47
5000	63	65	64	66	35	42	48	48	49	45	43	39	39	41	41	49		52	43
6300	61	63	63	65	33	40	45	44	45	41	40	35	37	38	38	43		45	40
8000	62	64	65	68	34	39	43	41	43	40	39	34	37	37	37	39		40	38
10000	56	58	59	62	34	38	40	39	40	38	38	33	38	38	38	38		38	38
OVERALL	92	90	88	86	83	83	85	85	85	86	84	82	83	83	84	85		84	84

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 8.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-019-600
RUN 04

03 MAR 87

PAGE 2

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP 12 C
BAR PRESS :0.712 M HG
REL HUMID : 90 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	69	72	74	77	69	67	69	77	74	75	70	66	80	79	80	73		69	72
4	75	73	77	75	71	72	69	75	73	74	72	71	79	77	78	79		70	73
5	74	72	73	73	70	72	69	76	72	73	71	68	76	78	77	74		69	72
6.3	75	75	77	75	67	72	73	75	75	73	68	70	78	78	76	79		77	76
8	81	83	81	78	67	72	72	77	74	72	73	71	77	79	79	82		79	80
10	84	84	84	81	65	79	71	76	73	72	76	74	76	79	76	81		79	77
12.5	78	76	80	78	65	76	72	73	72	72	76	76	77	78	80	80		80	79
16	78	77	74	75	63	79	74	74	72	71	79	81	79	81	81	81		80	82
20	79	77	76	74	63	79	74	73	75	73	77	76	77	79	78	75		79	79
25	87	84	82	78	64	79	76	76	75	77	81	78	77	78	79	75		78	80
31.5	90	86	82	76	66	77	74	73	73	75	80	75	75	77	74	80		78	77
40	87	87	83	77	65	73	73	74	71	77	80	73	73	76	74	79		72	72
50	86	83	84	84	76	74	74	78	76	71	75	75	74	78	75	73		76	77
63	87	82	81	81	72	76	73	75	78	69	74	73	72	74	73	76		73	74
80	79	79	79	76	66	66	70	76	71	65	72	70	65	71	67	70		68	69
100	74	77	78	74	68	64	73	72	69	66	64	65	62	70	63	65		66	66
125	76	77	77	74	65	67	73	69	68	64	64	63	59	72	66	63		65	65
160	74	74	75	72	70	63	74	67	64	61	65	62	54	75	68	61		60	61
200	71	72	75	71	67	63	73	65	65	63	66	59	54	77	69	61		58	60
250	66	68	71	69	65	64	71	65	67	64	67	55	57	75	64	61		55	55
315	67	70	72	68	67	64	72	65	67	66	67	59	60	71	59	63		56	57
400	67	70	72	69	64	65	70	68	71	68	68	62	63	67	61	63		58	59
500	70	71	73	68	65	66	72	71	74	66	69	63	60	68	62	64		61	62
630	68	70	71	67	65	62	73	68	71	66	68	64	58	67	61	62		62	62
800	68	70	70	65	64	61	77	66	70	65	69	58	58	65	61	62		62	60
1000	69	71	71	66	62	59	79	65	68	64	67	58	57	64	61	63		61	59
1250	67	79	81	63	59	57	75	63	67	63	66	57	60	67	68	67		64	63
1600	65	76	77	62	57	52	73	60	64	60	63	52	58	64	64	63		62	60
2000	65	75	79	62	56	57	71	67	63	61	60	55	56	62	62	62		60	58
2500	64	75	81	60	53	51	67	61	61	58	57	55	56	63	64	63		62	59
3150	61	73	78	59	48	47	61	57	59	55	54	54	54	61	60	60		59	56
4000	59	71	77	56	44	43	54	53	54	50	49	47	51	57	57	57		56	53
5000	57	67	72	56	40	41	48	51	53	49	48	45	48	52	51	51		50	48
6300	55	60	64	55		38	45	48	49	46	44	43	44	46	44	45		44	43
8000	53	55	58	59		38	45	47	49	45	44	43	41	44	43	43		43	43
10000			50	53	38	38	43	45	46	44	43	43	39	43	43	43		43	43
OVERALL	96	94	94	90	82	88	88	88	87	86	89	87	88	91	90	90		89	89

NO BACKGROUND CORRECTION APPLIED
** NO DATA COLLECTED

TABLE 8.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1 5
TEST DP-0T9-600
RUN 05
03 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT
JB5-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY
TEMP 15 C
BAR PRESS 0 760 M HG
REL HUMID 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3 15	77	82	81	79	63	70	78	79	83	77	72	80	80	80	80	78		75	76
4	80	87	89	87	68	74	77	80	81	75	72	78	78	77	80	76		74	76
5	81	84	83	80	62	70	77	79	81	78	71	80	76	79	79	77		73	76
6 3	74	77	83	79	62	69	76	77	81	75	70	79	76	78	78	78		70	73
8	73	76	81	78	56	65	74	73	81	74	69	75	74	77	80	77		71	72
10	73	75	78	78	58	67	69	74	80	71	66	74	77	79	77	73		68	73
12.5	74	76	80	80	61	64	68	73	78	70	66	71	76	79	78	71		66	69
16	73	75	78	78	55	62	67	72	76	69	64	69	72	76	76	70		65	69
20	76	77	78	78	58	59	68	70	73	68	63	67	68	72	71	68		65	69
25	76	76	78	78	56	58	64	66	72	66	62	68	68	71	69	66		63	64
31 5	74	75	77	77	60	59	64	67	73	67	63	68	67	71	68	66		63	64
40	72	75	74	77	65	58	63	66	70	68	62	71	66	69	68	65		64	66
50	69	71	72	75	66	58	65	66	69	67	60	77	67	69	69	66		64	68
63	68	67	69	74	70	64	59	64	65	63	62	78	64	67	67	64		68	67
80	65	64	66	77	76	59	59	64	65	62	62	80	63	65	64	65		69	63
100	65	64	67	78	73	58	58	66	64	67	62	81	59	62	62	64		75	67
125	63	64	66	77	65	58	57	65	64	64	65	81	57	59	61	63		69	65
160	62	62	64	75	64	55	63	70	67	67	61	80	54	55	60	59		64	63
200	61	60	62	74	57	56	52	66	63	63	59	78	52	53	61	58		63	59
250	58	57	59	76	56	50	60	66	61	60	56	80	51	54	61	60		66	59
315	59	57	60	80	51	51	55	65	60	57	56	81	54	57	62	61		67	61
400	59	58	60	78	47	52	62	66	63	60	58	81	57	61	64	65		66	64
500	56	57	57	79	44	49	58	66	66	56	60	78	56	60	63	63		67	57
630	55	55	57	79	42	47	58	67	72	57	62	76	57	59	62	62		66	58
800	55	55	57	77	41	48	56	69	74	59	63	75	59	59	63	62		65	56
1000	55	54	56	74	39	46	54	68	72	57	63	72	58	58	62	61		63	56
1250	53	52	54	72	37	46	51	64	71	57	65	71	59	61	66	64		62	56
1600	53	51	54	69	34	43	49	61	68	56	62	69	59	61	64	62		60	54
2000	51	48	53	64	34	41	46	54	64	55	61	65	60	60	62	60		60	51
2500	48	47	49	58	34	39	45	50	59	54	60	61	59	60	62	61		60	52
3150	46	46	46	51	32	38	44	46	53	53	59	56	58	59	60	59		58	50
4000	44	44	44	47	30	37	44	45	48	51	55	50	56	56	57	57		57	50
5000	40	39	40	44	29	35	43	43	45	49	51	44	51	51	51	51		52	46
6300				41	29	34	41	41	43	44	43	39	44	44	44	44		46	43
8000				39	29	34	40	41	43	42	36	38	39	40	38	40		42	42
10000					29	34	37	38	41	40	33	38	35	36	34	38		37	39
OVERALL	90	91	93	93	80	79	84	87	90	84	80	92	86	88	88	85		83	84

** NO DATA COLLECTED.

TABLE 8.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(49% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-079-600
RUN 01
03 MAR 87

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	68	67	70	70	63	63	72	69	71	70	69	66	70	72	65	71		64	64
4	68	71	70	66	69	70	71	71	71	71	68	66	71	72	69	69		68	68
5	65	66	67	66	63	63	69	67	67	72	66	64	67	68	65	66		64	65
6.3	63	66	66	64	60	63	68	70	67	68	65	62	67	66	65	64		64	62
8	64	66	65	61	56	59	68	66	67	67	62	60	63	63	64	64		64	63
10	59	62	62	59	57	58	63	64	65	66	60	60	61	59	60	62		61	61
12.5	57	62	61	58	55	57	63	61	63	65	60	58	61	60	58	58		59	60
16	56	58	63	60	55	56	63	61	63	61	60	56	59	58	59	59		60	59
20	62	61	63	61	57	56	61	59	62	60	59	57	59	59	58	57		59	58
25	59	58	60	60	58	57	61	58	62	62	60	58	60	59	59	59		58	60
31.5	61	60	60	61	58	55	62	58	62	62	60	59	63	59	57	57		58	60
40	61	60	62	60	59	54	61	54	61	60	59	61	63	58	59	57		59	60
50	63	62	66	61	60	56	60	55	62	61	58	60	66	58	66	54		56	60
63	64	61	62	62	59	56	59	55	59	62	57	57	63	57	59	58		53	63
80	63	63	63	63	66	52	55	55	59	61	57	54	61	63	58	57		53	64
100	65	64	67	65	64	52	53	55	54	58	58	52	58	60	59	52		52	61
125	70	70	71	70	58	51	52	54	53	58	56	59	54	60	56	49		55	60
160	72	73	72	74	54	50	52	59	51	58	57	55	50	55	55	47		50	56
200	72	72	69	73	50	48	49	57	49	58	52	51	46	49	51	45		48	50
250	67	67	65	73	46	43	45	52	45	56	48	48	45	47	50	44		45	45
315	63	62	64	68	47	45	44	53	46	53	46	45	47	45	46	47		45	44
400	64	61	63	67	47	46	46	56	48	50	43	43	49	47	46	47		47	45
500	60	58	57	60	46	44	44	55	47	47	39	40	47	46	45	45		44	43
630	63	62	60	66	46	44	45	55	50	45	40	39	48	47	47	49		46	47
800	61	61	61	66	45	42	43	54	48	43	40	39	48	48	47	49		46	47
1000	62	63	64	67	43	42	42	52	48	40	40	39	45	47	49	46		45	44
1250	62	62	64	64	41	42	43	49	48	40	38	37	44	47	50	43		42	43
1600	60	59	60	61	41	40	41	47	46	39	40	37	44	46	50	46		42	42
2000	59	60	60	62	39	37	47	45	44	38	41	37	42	44	50	42		40	40
2500	58	61	61	62	38	36	42	43	43	37	38	36	42	43	49	41		40	39
3150	59	62	62	63	38	37	37	42	43	37	35	34	40	42	45	40		39	37
4000	61	63	62	65	38	39	49	45	46	40	36	36	39	40	43	39		38	37
5000	60	63	62	67	35	36	45	42	43	42	37	37	37	38	42	38		38	37
6300	58	61	60	67	34	34	33	38	39	33	31	35	35	37	38	34		34	33
8000	60	62	62	68	35	35	37	39	38	32	31	36	36	36	37	33		33	32
10000	54	56	56	63	35	34	34	37	33	33	32	37	37	37	37	32		32	32
OVERALL	80	81	81	82	74	73	78	77	78	79	75	73	77	77	75	76		74	75

** NO DATA COLLECTED.

TABLE 8.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-600
RUN 03
03 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR (99% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	67	65	64	70	63	70	71	69	68	75	71	66	72	70	74	73		66	68
4	71	72	69	74	71	71	74	72	70	74	71	71	74	73	76	76		72	70
5	66	66	65	69	69	71	73	69	70	73	67	69	68	70	72	73		69	67
6.3	75	74	75	70	66	72	73	74	72	75	65	67	71	70	71	74		72	71
8	78	80	77	74	69	69	75	76	74	75	71	69	70	72	72	79		76	76
10	77	78	79	77	74	71	72	74	72	76	74	71	69	71	71	75		71	71
12.5	73	72	73	72	74	73	73	72	71	75	70	72	72	71	73	75		72	73
16	74	73	70	70	73	76	75	74	72	76	72	74	76	77	77	76		75	76
20	77	73	73	71	75	73	73	73	75	75	75	71	72	74	74	70		75	76
25	84	82	81	77	75	74	74	77	75	76	76	74	73	73	76	70		73	76
31.5	86	83	78	74	71	71	72	75	73	75	75	71	69	71	69	70		74	71
40	83	84	78	74	66	69	73	74	72	70	74	71	68	68	67	71		68	67
50	81	79	78	74	64	68	73	73	73	71	70	70	69	69	68	66		68	69
63	81	77	76	70	65	70	71	70	74	66	70	65	63	64	67	69		65	66
80	74	72	72	68	61	68	65	68	67	64	63	62	57	61	61	62		62	61
100	71	69	70	68	59	60	64	62	66	61	58	57	55	59	58	58		61	61
125	74	72	70	71	57	61	65	61	66	59	58	55	53	54	56	57		60	63
160	73	71	70	73	56	59	60	60	62	55	54	52	49	52	54	53		57	57
200	71	70	68	72	53	57	60	58	59	55	52	50	47	50	51	52		54	54
250	67	67	66	71	50	57	57	55	59	56	51	48	48	49	49	53		51	50
315	67	67	67	70	52	57	57	58	61	58	57	51	51	52	52	60		58	52
400	68	68	68	69	52	59	62	63	67	58	60	54	55	56	55	64		61	56
500	68	65	68	65	52	60	62	67	68	61	62	54	54	56	55	63		62	59
630	71	68	69	68	51	56	61	64	64	58	58	50	53	54	55	63		65	61
800	70	68	69	67	49	55	59	63	62	58	57	50	52	53	53	64		66	60
1000	68	69	69	68	46	54	58	61	62	59	57	50	50	52	53	63		65	59
1250	67	67	67	65	44	52	57	60	61	59	57	49	48	51	52	64		66	55
1600	66	64	65	63	44	51	54	57	58	54	51	46	46	49	50	63		65	53
2000	65	65	64	63	44	51	56	58	59	57	54	51	47	48	49	61		64	53
2500	65	64	64	62	41	50	56	57	59	55	53	53	45	47	48	60		62	52
3150	64	65	64	63	41	47	54	55	56	50	50	50	43	45	45	58		60	50
4000	63	64	64	64	38	45	51	51	51	47	45	42	41	43	43	54		57	47
5000	63	65	64	66	35	42	48	48	48	44	43	39	39	41	41	49		52	43
6300	61	62	63	65	33	39	44	44	45	41	40	34	37	38	38	43		45	39
8000	61	63	64	67	33	38	42	41	43	39	38	33	36	37	37	39		40	37
10000	55	57	58	62	33	38	39	39	39	38	37	33	37	37	37	37		37	37
OVERALL	92	90	89	87	83	84	85	85	85	86	84	82	83	83	85	86		84	84

** NO DATA COLLECTED.

TABLE 8.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 04
03 MAR 87
PAGE 3

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	70	73	74	77	70	67	69	78	74	75	70	67	80	79	80	74		69	72
4	75	74	77	76	72	72	69	75	74	74	72	71	79	77	79	79		71	73
5	74	72	74	73	70	72	69	76	72	73	71	68	76	78	77	74		69	72
6.3	75	75	77	75	67	72	73	76	75	73	68	70	78	78	76	80		77	76
8	82	83	81	78	67	72	73	77	74	73	73	71	77	79	80	83		79	81
10	85	84	84	81	65	79	72	76	74	72	77	74	76	80	77	82		80	77
12.5	78	76	80	78	66	76	72	73	72	73	76	76	77	78	80	80		81	79
16	78	77	74	75	64	79	74	75	72	71	79	82	79	82	82	82		80	82
20	79	77	76	74	64	79	75	74	76	74	77	76	78	79	78	75		79	79
25	87	84	82	78	65	79	76	77	75	77	82	79	77	79	79	75		78	80
31.5	90	87	82	76	66	77	74	73	74	75	80	76	76	77	74	80		78	78
40	87	87	84	78	66	73	73	74	71	77	80	74	73	76	74	79		72	73
50	87	83	84	84	77	74	74	79	77	71	75	75	74	78	75	73		76	77
63	88	82	81	81	72	76	73	75	78	69	75	73	72	74	74	76		73	74
80	79	79	79	77	67	67	70	76	71	66	72	70	65	71	67	71		69	69
100	74	77	78	74	68	64	73	72	69	66	65	65	62	70	63	65		66	66
125	76	78	77	75	65	67	74	69	68	64	64	64	59	72	66	63		65	65
160	75	74	75	72	70	63	74	67	65	62	66	62	54	75	68	61		60	61
200	71	72	75	71	67	63	73	65	65	63	66	59	54	77	69	61		58	60
250	66	68	71	69	65	64	71	65	67	65	67	56	57	75	64	61		55	56
315	67	70	72	68	68	64	72	65	67	66	67	59	60	72	59	63		57	57
400	67	70	72	69	64	65	71	68	71	68	68	62	63	67	61	64		58	60
500	70	71	73	69	65	66	72	72	74	67	69	63	60	68	62	64		61	62
630	68	70	71	67	66	62	74	68	72	66	68	64	59	67	61	62		62	62
800	68	71	71	66	64	61	77	66	70	65	69	58	58	65	61	62		63	60
1000	69	71	72	66	63	59	79	65	68	64	67	58	58	64	62	63		61	60
1250	67	79	81	64	60	57	75	64	67	63	66	57	61	67	68	67		64	63
1600	65	76	77	62	57	52	73	60	64	60	63	52	58	64	64	64		62	60
2000	65	75	79	62	56	57	71	67	63	61	60	55	56	62	62	62		60	58
2500	65	75	82	60	53	52	67	61	61	58	58	55	57	63	64	63		62	59
3150	62	73	78	59	48	47	61	57	59	55	54	54	54	61	60	60		59	56
4000	59	71	77	56	44	43	54	53	54	50	49	47	51	57	57	57		56	53
5000	57	67	72	56	40	41	48	51	52	49	47	45	48	52	51	51		50	48
6300	55	60	64	55		38	45	48	49	46	44	43	44	46	44	44		44	43
8000	52	54	58	58		37	44	46	49	45	43	42	41	44	42	43		42	42
10000			49	52	37	37	43	44	45	43	42	42	38	43	42	42		42	42
OVERALL	96	94	94	91	83	80	80	80	87	86	89	87	89	91	90	91		89	89

** NO DATA COLLECTED.

TABLE 8.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 05
03 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
JB5-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	79	80	81	89	79	69	73	79	82	76	75	90	75	78	78	76		80	76
OASLA	64	64	66	84	60	57	64	74	79	67	72	83	69	70	73	72		73	67
T	1440	1440	1440	480	1440	1440	1440	1440	1142	1440	1440	571	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	56	56	57	72	42	48	56	64	69	60	65	72	62	64	67	66		66	59
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	76	76	78	94	75	70	78	85	88	81	84	95	82	83	87	85		87	81
C	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	0		1	1

** NO DATA COLLECTED.

TABLE 8.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 01
03 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
JB5-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(49% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	79	79	79	81	70	63	67	68	68	70	67	67	70	68	69	65		65	70
OASLA	73	73	74	77	55	52	56	61	57	56	52	52	56	57	59	56		54	55
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	66	66	66	69	46	45	49	54	51	47	44	43	49	49	52	49		47	47
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	88	89	89	92	69	65	74	74	72	71	67	67	69	70	73	69		67	68
C	1	1	1	1	0	0	3	1	1	2	1	1	0	0	0	1		1	0

** NO DATA COLLECTED.

TABLE 8.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR (99% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 03
03 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	89	87	85	83	76	78	79	80	81	79	79	77	76	76	77	78		79	78
OASLA	78	77	78	77	58	64	68	71	72	67	66	61	60	61	62	72		74	67
T	1358	1440	1358	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	71	71	71	70	50	57	61	64	65	60	59	55	53	54	55	65		67	59
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	92	92	92	92	70	77	82	83	85	79	78	77	72	74	74	84		85	78
C	1	1	1	1	0	0	1	1	1	0	0	1	0	0	0	0		0	1

** NO DATA COLLECTED.

TABLE 8.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 04
03 MAR 87
PAGE 4

	ANGLE (DEGREES)																	
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	93	92	92	87	80	83	87	84	84	81	85	82	81	86	83	84		83	83
OASLA	77	85	89	75	71	70	84	75	78	73	75	69	69	76	74	74		72	70
T	1440	404	202	1440	1440	1440	480	1440	1358	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	70	78	81	68	62	60	74	68	70	65	67	61	62	68	66	67		65	64
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	92	100	105	90	83	83	94	91	89	85	86	82	81	90	89	88		85	85
C	0	2	2	1	1	2	0	2	0	0	0	1	0	0	2	1		0	1

** NO DATA COLLECTED.

TABLE 8.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE BOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 05

03 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	89	90	90	89	70	77	82	84	86	81	77	84	83	83	84	82		79	81
8	78	81	86	83	64	72	78	80	86	78	73	81	80	83	83	81		74	78
16	80	81	83	83	63	67	72	77	81	74	70	74	78	81	80	74		70	74
31.5	79	80	81	82	67	63	69	71	76	72	67	74	72	75	73	70		68	70
63	73	73	75	80	77	66	66	70	71	69	66	83	70	72	72	70		72	71
125	68	68	71	82	74	62	65	72	70	71	68	85	62	64	66	67		76	70
250	65	63	65	82	60	58	62	71	66	66	62	85	57	60	66	65		70	65
500	62	62	63	83	50	54	64	71	73	63	65	83	61	65	68	68		71	66
1000	59	59	60	79	44	51	59	72	77	63	68	78	63	65	69	67		68	61
2000	56	54	57	70	39	46	51	62	70	60	66	71	64	65	68	66		65	57
4000	49	48	49	53	35	42	48	49	55	56	61	57	61	61	62	61		61	54
8000				43	34	39	45	45	47	47	45	43	46	46	45	46		48	47
OVERALL	90	91	93	93	80	79	84	87	90	84	80	92	86	88	88	85		83	84

** NO DATA COLLECTED.

TABLE 8.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 01
03 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(49% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	72	74	74	72	70	72	76	74	75	76	73	70	74	76	72	74		70	71
8	67	70	69	66	63	65	72	72	71	72	68	65	69	68	68	68		68	67
16	64	65	67	65	60	61	67	65	67	68	64	62	64	64	63	63		64	64
31.5	65	64	66	65	63	60	66	62	67	66	65	64	67	63	63	63		63	65
63	68	67	69	67	67	60	63	60	65	66	62	62	69	65	67	61		59	67
125	75	75	75	76	65	56	57	61	58	63	62	61	60	64	62	55		58	64
250	73	73	71	77	53	51	51	59	51	61	54	53	51	52	54	50		51	52
500	67	65	66	70	51	49	50	60	53	53	46	46	53	52	51	52		50	50
1000	66	66	68	70	48	47	47	57	53	46	44	43	51	52	54	51		49	50
2000	64	65	65	67	44	43	49	50	49	43	45	41	48	49	55	48		45	45
4000	64	67	67	70	42	42	50	48	49	45	41	41	43	45	48	44		43	42
8000	63	65	65	71	39	39	40	43	42	37	36	41	41	41	42	38		38	37
OVERALL	80	81	81	82	74	73	78	77	78	79	75	73	77	77	75	76		74	75

** NO DATA COLLECTED.

TABLE 8.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 03
03 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MILITARY PWR (99% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	73	73	71	76	73	76	78	75	74	79	75	74	77	76	79	79		74	73
8	82	82	82	79	76	76	78	80	78	80	76	74	75	76	76	81		78	78
16	80	77	77	76	79	79	78	78	78	80	78	78	79	80	80	79		79	80
31.5	89	88	84	80	77	77	78	80	78	79	80	77	75	76	77	75		77	77
63	85	82	81	76	68	74	76	76	77	73	73	72	70	71	71	71		71	71
125	78	76	75	76	62	65	68	66	70	63	62	60	57	61	61	61		65	66
250	73	73	72	76	57	62	63	62	65	61	59	54	54	55	56	61		60	57
500	74	72	73	72	56	63	66	70	71	64	65	58	59	60	60	68		68	64
1000	73	73	73	72	52	59	63	66	67	63	62	54	55	57	58	68		70	64
2000	70	69	69	68	48	56	60	62	64	60	58	56	51	53	54	66		68	58
4000	68	69	69	69	43	50	56	57	58	53	52	51	46	48	48	59		62	52
8000	65	67	67	70	38	43	47	46	47	44	43	38	41	42	42	45		47	43
OVERALL	92	90	89	87	83	84	85	85	85	86	84	82	83	83	85	86		84	84

** NO DATA COLLECTED.

TABLE 8.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
J85-5(GP) ENGINE
IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-600
RUN 04
03 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	78	78	80	80	75	76	74	81	78	79	76	74	84	83	84	81		74	77
8	87	87	86	84	71	81	77	81	79	78	79	77	82	84	83	86		83	83
16	83	82	82	81	69	83	79	78	78	77	82	84	83	85	85	84		85	85
31.5	93	91	88	82	70	82	79	80	78	81	86	81	80	82	81	83		82	82
63	90	86	87	86	78	78	77	82	81	74	79	78	77	80	78	79		78	79
125	80	81	82	78	73	70	78	75	73	69	70	68	64	78	71	68		69	69
250	73	75	78	74	72	69	77	70	72	70	72	63	63	80	70	67		61	63
500	73	75	77	73	70	70	77	74	77	72	73	68	66	72	66	68		65	66
1000	73	80	82	70	67	64	82	70	73	69	72	62	64	70	70	69		67	66
2000	70	80	85	66	61	59	76	69	68	65	66	59	62	68	68	68		66	64
4000	64	76	81	62	50	49	62	59	61	57	56	55	57	63	62	62		61	58
8000	57	61	65	61		42	49	51	53	49	48	47	46	49	48	48		48	47
OVERALL	96	94	94	91	83	88	88	88	87	86	89	87	89	91	90	91		89	89

** NO DATA COLLECTED.

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APPENDIX G

Far-Field Noise on the F101-GE-102 Engine

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TABLE 9.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
F101-GE-102 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 20 March 1986

Time of Test: 0130 Hrs

Engine Operation

Idle	71 %RPM
Intermediate (Military Pwr)	100 %RPM
Augmented Thrust (Afterburner Power)	100 %RPM

Meteorology

Temperature	0 Deg C
Bar Pressure	0.734 M Hg
Rel Humidity	62 %
Wind - Speed	6 - 10 Knots
- Direction	20 Deg (True)

TABLE 9.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 0 C
BAR PRESS : 0.734 M HG
REL HUMID : 62 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-079-700
RUN 05
11 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					62	62	64	73	73	61	71	65	64	66	56	60		62	63
4					64	63	68	70	72	65	73	62	62	67	57	61		64	64
5					63	64	66	69	76	63	72	64	66	66	53	60		63	62
6.3					64	66	69	71	73	62	69	63	64	64	53	59		64	64
8					59	63	68	71	71	61	67	63	65	64	59	61		65	60
10					59	64	69	70	69	59	70	63	64	64	59	60		65	62
12.5					56	61	70	70	71	60	69	61	62	63	52	56		62	57
16					53	60	66	67	67	58	68	60	59	62	49	55		57	56
20					49	57	65	67	63	55	65	59	59	61	48	52		58	55
25	66	59	55	61	47	54	61	66	59	54	65	57	58	59	49	52		58	55
31.5	63	59	56	59	49	53	59	65	58	52	64	56	56	58	50	52		57	54
40	60	56	53	57	46	50	57	61	55	51	60	53	54	56	50	53		54	52
50	58	56	52	57	47	48	56	51	53	48	57	52	52	54	50	52		53	53
63	61	55	59	60	47	50	54	51	52	51	55	52	50	52	49	52		54	52
80	56	54	52	54	47	47	54	49	51	49	53	48	49	51	51	51		51	50
100	57	58	55	54	46	48	52	49	50	50	54	49	49	51	53	52		53	52
125	55	50	53	51	49	51	50	49	49	49	54	49	47	48	48	48		51	51
160	50	49	46	46	39	43	46	45	45	44	48	42	42	42	42	46		49	47
200	48	48	53	51	38	42	47	47	46	43	46	41	38	40	39	43		40	40
250	45	43	49	45	37	38	42	42	41	41	42	37	36	39	37	42		38	37
315	38	38	41	40	33	35	37	40	37	35	38	34	35	39	36	40		37	37
400	37	37	39	39	35	37	38	40	38	33	37	34	37	40	37	37		36	36
500	34	36	38	41	35	36	39	39	40	34	38	36	38	40	36	37		36	36
630	33	35	38	40	31	33	37	33	38	35	37	35	36	35	34	37		35	34
800	33	37	41	39	29	31	35	32	36	34	35	33	33	33	32	36		34	33
1000	30	33	37	37	25	27	31	30	32	33	33	30	30	31	30	32		31	30
1250	30	33	39	38	25	25	31	29	31	33	33	31	30	31	29	30		29	29
1600	27	31	34	35	23	23	28	28	30	30	31	29	29	30	28	28		28	27
2000	25	27	31	32	23	22	26	28	29	31	30	28	28	28	24	25		27	25
2500	24	26	29	30	22	22	26	28	29	31	29	29	28	29	23	23		26	24
3150	23	25	28	28	22	22	25	29	30	31	29	29	29	29	22	23		24	24
4000	22	23	25	26	23	22	25	30	31	32	30	30	30	31	23	23		23	24
5000	22	22	23	25	23	23	25	31	32	32	32	32	31	32	24	23		24	25
6300	22	21	22	23	24	23	25	32	33	32	32	32	32	33	24	24		24	26
8000	23	22	22	23	24	24	25	33	33	33	33	33	33	33	25	25		24	26
10000	24	23	23	23	25	25	26	34	34	34	34	34	34	34	26	26		26	27
OVERALL	70	66	65	67	71	73	77	80	81	71	80	72	73	74	66	69		73	71

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 9.2	MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND DISTANCE : 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-OT9-700 RUN 01 11 MAR 87 PAGE 2

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
F101 ENGINE IN THE	IDLE POWER	TEMP : 0 C
A/F32T-9 NSS	SINGLE ENGINE GROUND	BAR PRESS : 0.734 M HG
MCCONNELL AFB, KANSAS	RUNUP IN THE A/F32T-9	REL HUMID : 62 %
FAR FIELD NOISE	NSS MCCONNELL AFB	

FREQ (HZ)	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
3.15					61	75	62	75	69	63	67	82	78	70	75	74		77	79
4					62	72	62	77	66	65	67	81	77	72	74	73		78	76
5					58	71	63	74	69	64	68	82	78	74	74	69		76	73
6.3					60	69	60	73	67	63	67	80	77	69	74	69		76	75
8					61	72	63	70	68	62	65	79	73	66	71	66		74	74
10					61	72	61	70	69	63	69	79	72	64	71	65		76	72
12.5					58	70	60	69	65	63	66	78	69	63	67	65		75	71
16					56	68	59	67	63	62	66	77	68	63	68	63		72	70
20					54	65	56	64	61	60	63	75	66	59	65	61		69	68
25	62	62	58	59	53	64	54	66	57	58	61	74	64	59	64	61		68	65
31.5	60	60	58	58	52	60	52	62	57	56	61	71	63	58	63	59		67	64
40	56	55	54	55	48	56	50	59	54	53	59	69	60	56	59	57		64	63
50	55	54	53	54	47	52	51	55	50	52	53	69	56	50	55	53		62	59
63	55	52	53	54	46	50	50	55	49	53	54	66	55	49	53	54		60	55
80	53	53	51	52	42	48	48	52	49	49	50	63	52	48	52	51		57	52
100	56	56	54	54	43	46	46	49	47	51	50	59	50	50	51	51		55	51
125	54	57	57	61	47	51	47	49	48	49	49	57	48	49	51	50		54	51
160	50	50	48	48	40	41	41	44	42	42	42	52	45	42	46	46		50	47
200	49	50	56	51	42	40	39	45	42	42	43	48	42	38	42	46		45	41
250	50	49	50	49	40	39	40	41	43	40	41	45	40	36	38	42		41	39
315	51	51	45	48	37	38	42	42	45	37	37	41	37	35	37	40		41	39
400	43	40	41	41	36	39	41	40	40	36	37	39	39	37	36	38		35	35
500	44	39	43	40	36	36	41	40	42	38	38	39	41	38	36	39		34	35
630	46	48	56	43	31	33	37	37	39	38	36	37	40	36	36	39		36	37
800	48	44	52	43	30	31	38	38	44	39	41	35	38	36	37	39		40	46
1000	40	38	42	42	26	27	31	32	34	33	33	33	33	30	32	34		34	33
1250	41	38	40	43	25	25	30	31	31	32	32	32	31	29	30	34		32	31
1600	36	35	35	39	23	23	29	30	30	30	29	30	31	29	30	32		33	31
2000	37	35	34	35	22	23	30	31	35	32	31	30	29	27	29	31		32	30
2500	50	45	43	37	27	28	41	41	48	42	41	37	33	34	36	37		35	36
3150	37	35	34	31	21	23	29	31	32	31	30	31	29	27	28	29		30	29
4000	40	38	36	30	22	24	33	35	32	33	32	32	30	28	29	30		31	30
5000	43	40	38	31	23	25	33	35	31	33	33	32	31	29	30	31		31	31
6300	35	33	31	28	23	24	27	33	25	32	32	33	31	30	30	31		31	31
8000	35	33	31	28	24	25	27	33	25	33	33	33	32	31	32	32		32	32
10000	32	30	30	29	25	25	26	34	26	34	34	34	33	33	33	33		33	33
OVERALL	67	67	66	66	69	81	71	82	77	73	77	89	84	78	82	79		85	84

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 9.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(100 % RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP 0 C
BAR PRESS 0.734 M HG
REL HUMID 62 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-019-700
RUN 02
11 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					69	71	71	69	72	71	71	73	69	74	76	75		77	73
4					74	75	74	76	75	78	77	80	76	77	77	77		77	75
5					74	75	78	79	74	78	74	77	74	78	76	76		79	79
6.3					74	77	78	77	80	79	76	80	81	81	84	84		83	82
8					82	83	84	84	86	88	83	84	84	84	84	90		85	86
10					85	85	86	84	86	89	86	86	86	87	86	89		87	89
12.5					86	88	88	91	89	92	89	90	91	90	91	94		93	92
16					88	89	92	92	89	94	91	91	87	95	94	94		91	94
20					84	86	87	88	89	90	87	89	87	88	87	84		92	90
25	88	83	84	84	83	85	87	85	87	89	86	86	82	86	89	84		87	89
31.5	86	83	81	82	81	84	87	85	87	87	87	83	81	85	86	92		90	89
40	85	87	82	79	80	83	85	85	85	84	84	81	79	81	85	91		87	89
50	82	78	80	76	76	78	82	82	83	80	80	77	79	81	84	85		86	88
63	84	82	81	74	73	77	81	81	82	83	80	76	77	77	80	84		84	86
80	80	80	76	73	70	76	80	81	80	82	79	74	74	74	77	79		81	82
100	77	79	78	72	67	75	78	77	78	77	75	71	73	73	75	77		80	80
125	75	77	75	70	63	73	75	75	75	77	73	68	68	70	71	74		79	78
160	74	75	73	68	59	71	71	71	73	74	70	64	65	68	70	72		77	78
200	70	76	72	62	59	71	67	68	70	71	66	62	63	64	67	67		76	76
250	66	70	66	58	56	67	63	64	68	68	62	60	60	62	61	64		69	70
315	64	64	61	53	49	61	59	61	65	65	60	57	59	63	61	68		64	65
400	60	58	60	53	45	56	57	57	62	65	60	55	61	66	65	73		63	67
500	57	56	59	50	43	53	55	56	60	64	60	54	62	65	67	73		59	64
630	54	56	58	48	41	52	56	55	56	63	60	53	58	63	65	70		61	65
800	54	55	57	47	40	50	55	56	56	62	60	52	56	60	63	66		64	66
1000	53	56	54	47	39	49	54	55	56	60	59	52	56	61	61	64		64	64
1250	52	54	51	45	39	48	53	54	55	59	58	52	54	59	60	64		63	61
1600	53	55	51	45	39	49	51	53	55	60	56	51	54	57	59	62		61	58
2000	54	55	52	44	38	48	50	52	54	58	54	50	52	55	57	61		58	57
2500	53	53	51	43	38	46	49	50	52	56	53	49	50	54	55	59		56	55
3150	52	51	49	41	39	44	47	49	49	54	51	47	47	52	52	56		54	53
4000	50	50	48	40	40	43	45	46	46	51	48	44	45	48	49	53		52	51
5000	50	49	47	41	41	43	45	45	45	48	46	43	43			50		49	49
6300	51	50	48	41	42	43	45	44	44	46	45	43	43			47			
8000	47	45	45	42	43	43	44	44	44	45	44	43	43						
10000	45	45	44	43	44	44	44	44	44	45	44	44	44	48	47	48		48	48
OVERALL	93	92	90	88	94	95	97	97	97	99	97	97	95	98	98	101		99	100

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 9.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-700
RUN 04
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 0 C
BAR PRESS = 0.734 M HG
REL HUMID = 62 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	76	77	76	74	71	74	77	77	75	79	82	79	78	78	75		77	79
4	87	89	88	87	79	75	78	79	80	81	82	85	82	79	82	82		81	82
5	87	85	87	85	82	84	81	85	83	85	84	86	84	82	84	86		85	87
6.3	89	89	90	88	85	84	82	86	86	82	84	88	88	86	91	92		91	90
8	92	92	91	87	89	88	89	90	90	93	92	91	92	92	92	96		92	94
10	92	93	92	89	92	91	90	92	95	96	93	94	95	92	93	98		96	95
12.5	94	96	93	91	93	94	95	96	97	98	98	97	97	95	101	102		100	98
16	96	94	94	94	97	98	100	100	99	102	98	99	98	103	103	104		99	104
20	95	91	92	93	96	95	98	99	98	103	97	99	97	100	98	96		100	100
25	96	92	93	93	95	97	98	98	98	101	99	98	93	98	102	99		100	101
31.5	92	91	93	91	93	95	96	95	97	99	97	93	92	97	99	104		102	100
40	93	93	92	87	89	92	95	93	95	94	94	90	91	93	98	101		98	100
50	97	92	92	89	88	92	94	94	95	91	95	90	93	95	98	99		101	101
63	95	89	89	83	83	90	93	91	93	95	91	88	91	91	94	99		98	98
80	91	87	85	79	77	87	88	89	92	93	89	85	85	87	90	93		93	93
100	89	87	85	77	76	85	86	85	87	87	86	80	82	84	84	88		89	88
125	86	85	83	75	70	82	84	83	85	87	82	78	77	82	81	83		86	85
160	85	84	82	70	67	82	82	80	83	83	81	76	76	79	78	79		82	83
200	81	83	81	70	67	81	79	77	82	83	81	77	77	77	76	78		80	79
250	83	83	80	71	66	78	75	75	80	82	78	78	79	77	77	82		79	81
315	80	77	76	69	61	75	72	72	78	79	75	75	78	79	78	84		82	84
400	78	72	71	65	57	71	70	70	76	77	76	72	77	80	80	86		85	86
500	76	70	69	63	55	70	69	72	74	76	78	72	78	81	83	87		89	89
630	74	68	67	60	53	70	69	71	73	75	79	71	77	80	82	84		86	85
800	75	67	67	60	52	68	69	70	73	77	78	69	73	77	80	81		80	78
1000	75	66	66	59	51	67	68	70	74	77	76	68	72	75	76	79		80	82
1250	73	64	65	58	51	66	67	69	71	76	74	68	71	74	75	79		81	80
1600	72	63	64	56	50	64	65	68	69	73	71	67	70	72	74	77		78	78
2000	70	62	63	55	49	63	64	66	68	70	70	65	67	69	72	75		76	75
2500	69	60	60	53		61	61	64	66	69	67	62	64	67	69	72		73	73
3150	65	58	58	51		59	59	61	63	65	64	58	61	64	66	69		70	70
4000	62	57	56	49		56	56	58	59	61	60			59	61	64		66	66
5000	59	55	54	49		54	54	55	57							60		62	61
6300		54	53	50		53	54	54	55									58	
8000		53	52	51		53	54	54	54										
10000		53	53	53		54	55	55	55		58	58	58	59	59	59		59	
OVERALL	105	103	103	101	103	104	106	106	107	109	106	106	105	108	109	111		110	110

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 9.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-700
RUN 05
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NBS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					62	62	64	73	73	61	71	65	64	66	56	60		62	63
4					64	63	68	70	72	65	73	62	62	67	57	61		64	64
5					63	64	66	69	76	63	72	64	66	66	53	60		63	62
6.3					64	66	69	71	73	62	69	63	64	64	53	59		64	64
8					59	63	68	71	71	61	67	63	65	64	59	61		65	60
10					59	64	69	70	69	59	70	63	64	64	59	60		65	62
12.5					56	61	70	70	71	60	69	61	62	63	52	56		62	57
16					53	60	66	67	67	58	68	60	59	62	49	55		57	56
20					49	57	65	67	63	55	65	59	59	61	48	52		58	55
25	66	59	55	61	47	54	61	66	59	54	65	57	58	59	49	52		58	55
31.5	63	59	56	59	49	53	59	65	58	52	64	56	56	58	50	52		57	54
40	60	56	53	57	46	50	57	61	55	51	60	53	54	56	50	53		54	52
50	58	56	52	57	47	48	56	51	53	48	57	52	52	54	50	52		53	53
63	61	55	59	60	47	50	54	51	52	51	55	52	50	52	49	52		54	52
80	56	54	52	54	47	47	54	49	51	49	53	48	49	51	51	51		51	50
100	57	58	55	54	46	48	52	49	50	50	54	49	49	51	53	52		53	52
125	55	50	53	51	49	51	50	49	49	49	54	49	47	48	48	48		51	51
160	50	49	46	46	39	43	46	45	45	44	48	42	42	42	42	46		49	47
200	48	48	53	51	38	42	47	47	46	43	46	41	38	40	39	43		40	40
250	45	43	49	45	37	38	42	42	41	41	42	37	36	39	37	42		38	37
315	38	38	41	40	33	35	37	40	37	35	38	34	35	39	36	40		37	37
400	37	37	39	39	35	37	38	40	38	33	37	34	37	40	37	37		36	36
500	34	36	38	41	35	36	39	39	40	34	38	36	38	40	36	37		36	36
630	33	35	38	40	31	33	37	33	38	35	37	35	36	35	34	37		35	34
800	34	37	41	39	29	31	35	32	36	34	35	33	33	33	32	36		34	33
1000	30	33	37	37	26	27	32	30	33	33	33	31	31	31	30	32		31	30
1250	30	33	39	38	26	25	31	30	31	33	33	31	30	31	29	31		30	29
1600	27	31	35	36	24	24	29	29	30	31	32	30	30	31	28	29		29	28
2000	26	28	32	33	24	23	27	29	30	32	31	29	29	29	25	26		28	26
2500	26	28	31	32	24	24	27	30	31	33	31	30	30	30	24	24		27	26
3150	25	27	30	30	24	24	27	31	32	33	31	31	31	31	24	25		26	26
4000	25	26	28	29	26	26	28	33	34	35	33	33	33	34	26	26		26	27
5000	26	25	26	28	27	26	28	35	36	35	35	35	35	35	27	27		27	28
6300	27	26	27	28	29	28	30	37	38	37	37	37	37	38	29	29		29	31
8000	30	29	29	30	31	31	32	40	40	40	40	40	40	40	32	32		31	33
10000	32	31	31	31	33	33	34	42	42	42	42	42	42	42	34	33		33	35
OVERALL	70	66	65	67	71	73	77	80	81	71	80	73	73	74	66	69		73	71

** NO DATA COLLECTED.

TABLE 9.3

SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 01
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ	ANGLE (DEGREES)																		
(HZ)	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					61	75	62	75	69	63	67	82	78	70	75	74		77	79
4					62	72	62	77	66	65	67	81	77	72	74	73		78	76
5					58	71	63	74	69	64	68	82	78	74	74	69		76	73
6.3					60	69	60	73	67	63	67	80	77	69	74	69		76	75
8					61	72	63	70	68	62	65	79	73	66	71	66		74	74
10					61	72	61	70	69	63	69	79	72	64	71	65		76	72
12.5					58	70	60	69	65	63	66	78	69	63	67	65		75	71
16					56	68	59	67	63	62	66	77	68	63	68	63		72	70
20					54	65	56	64	61	60	63	75	66	59	65	61		69	68
25	62	62	58	59	53	64	54	66	57	58	61	74	64	59	64	61		68	65
31.5	60	60	58	58	52	60	52	62	57	56	61	71	63	58	63	59		67	64
40	56	55	54	55	48	56	50	59	54	53	59	69	60	56	59	57		64	63
50	55	54	53	54	47	52	51	55	50	52	53	69	56	50	55	53		62	59
63	55	52	53	54	46	50	50	55	49	53	54	66	55	49	53	54		60	55
80	53	53	51	52	42	48	48	52	49	49	50	63	52	48	52	51		57	52
100	56	56	54	54	43	46	46	49	47	51	50	59	50	50	51	51		55	51
125	54	57	57	61	47	51	47	49	48	49	49	57	48	49	51	50		54	51
160	50	50	48	48	40	41	41	44	42	42	42	52	45	42	46	46		50	47
200	49	50	56	51	42	40	39	45	42	42	43	48	42	38	42	46		45	41
250	50	49	50	49	40	39	40	41	43	40	41	45	40	36	38	42		41	39
315	51	51	45	48	37	38	42	42	45	37	37	41	37	35	37	40		41	39
400	43	40	41	41	36	39	41	40	40	36	37	39	39	37	36	38		35	35
500	44	39	43	40	36	36	41	40	42	38	38	39	41	38	36	39		34	35
630	46	48	56	43	31	33	37	37	39	38	36	37	40	36	36	39		36	37
800	48	44	52	43	30	31	38	38	44	39	41	35	38	36	37	39		40	46
1000	41	39	42	42	26	27	31	32	34	33	33	33	33	30	32	34		34	33
1250	41	38	40	44	25	26	30	31	32	32	33	32	32	30	31	34		32	31
1600	37	36	36	40	24	24	30	31	31	31	30	31	31	29	30	32		33	31
2000	38	36	35	36	23	24	31	32	36	33	32	31	30	28	30	32		33	31
2500	52	47	45	39	28	30	43	43	49	44	42	38	34	36	37	39		36	37
3150	39	37	36	33	23	25	31	33	34	33	32	33	31	29	30	31		32	31
4000	43	41	39	33	25	28	36	38	35	36	35	35	33	31	32	33		34	33
5000	47	44	41	34	26	28	37	38	34	37	36	36	34	33	34	35		35	34
6300	40	38	36	33	28	29	32	38	30	37	37	37	36	35	35	36		36	36
8000	41	39	37	35	31	32	33	40	32	40	40	40	39	38	38	38		39	38
10000	39	38	37	37	32	33	33	42	33	42	42	42	41	41	41	41		41	41
OVERALL	67	67	66	66	69	81	71	82	77	73	77	89	84	78	82	79		85	84

** NO DATA COLLECTED.

TABLE 9.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 02
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(100 % RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15					69	71	71	69	72	71	71	73	69	74	76	75		77	73
4					74	75	74	76	75	78	77	80	76	77	77	77		77	75
5					74	75	78	79	74	78	74	77	74	78	76	76		79	79
6.3					74	77	78	77	80	79	76	80	81	81	84	84		83	82
8					82	83	84	84	86	88	83	84	84	84	84	90		85	86
10					85	85	86	84	86	89	86	86	86	87	86	89		87	89
12.5					86	88	88	91	89	92	89	90	91	90	91	94		93	92
16					88	89	92	92	89	94	91	91	87	95	94	94		91	94
20					84	86	87	88	89	90	87	89	87	88	87	84		92	90
25	88	83	84	84	83	85	87	85	87	89	86	86	82	86	89	84		87	89
31.5	86	83	81	82	81	84	87	85	87	87	87	83	81	85	86	92		90	89
40	85	87	82	79	80	83	85	85	85	84	84	81	79	81	85	91		87	89
50	82	78	80	76	76	78	82	82	83	80	80	77	79	81	84	85		86	88
63	84	82	81	74	73	77	81	81	82	83	80	76	77	77	80	84		84	86
80	80	80	76	73	70	76	80	81	80	82	79	74	74	74	77	79		81	82
100	77	79	78	72	67	75	78	77	78	77	75	71	73	73	75	77		80	80
125	75	77	75	70	63	73	75	75	75	77	73	68	68	70	71	74		79	78
160	74	75	73	68	59	71	71	71	73	74	70	64	65	68	70	72		77	78
200	70	76	72	62	59	71	67	68	70	71	66	62	63	64	67	67		76	76
250	66	70	66	58	56	67	63	64	68	68	62	60	60	62	61	64		69	70
315	64	64	61	53	49	61	59	61	65	65	60	57	59	63	61	68		64	65
400	60	58	60	53	45	56	57	57	62	65	60	55	61	66	65	73		63	67
500	57	56	59	50	43	53	55	56	60	64	60	54	62	65	67	73		59	64
630	54	56	58	48	41	52	56	55	56	63	60	53	58	63	65	70		61	65
800	54	55	57	47	40	50	55	56	56	62	60	52	56	61	63	66		65	66
1000	53	56	54	48	39	49	54	55	57	60	59	52	56	61	61	64		64	64
1250	52	54	51	46	39	49	53	54	56	59	58	52	55	60	61	65		63	61
1600	53	55	52	45	39	50	52	53	55	60	56	52	54	58	59	63		61	59
2000	55	56	53	45	39	49	51	53	55	59	55	51	53	56	58	62		59	58
2500	54	55	52	44	40	47	51	52	54	58	54	51	52	55	57	61		58	57
3150	54	54	51	44	41	46	49	51	52	56	53	49	49	54	54	58		56	55
4000	54	53	51	43	43	46	48	49	49	54	51	47	48	51	52	56		55	54
5000	53	53	51	44	44	46	48	49	49	52	50	47	47			54		53	52
6300	56	55	53	46	47	48	50	49	49	51	50	48	48			52			
8000	54	52	51	49	49	50	50	51	50	52	51	50	50						
10000	53	53	52	51	52	52	52	52	52	53	52	52	52	55	55	56		56	56
OVERALL	93	92	90	88	94	95	97	98	97	99	97	97	95	98	98	101		100	100

** NO DATA COLLECTED.

TABLE 9.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 04
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	76	77	76	74	71	74	77	77	75	79	82	79	78	78	75		77	79
4	87	89	88	87	79	75	78	79	80	81	82	85	82	79	82	82		81	82
5	87	85	87	85	82	84	81	85	83	85	84	86	84	82	84	86		85	87
6.3	89	89	90	88	85	84	82	86	86	82	84	88	88	86	91	92		91	90
8	92	92	91	87	89	88	89	90	90	93	92	91	92	92	92	96		92	94
10	92	93	92	89	92	91	90	92	95	96	93	94	95	92	93	98		96	95
12.5	94	96	93	91	93	94	95	96	97	98	98	97	97	95	101	102		100	98
16	96	94	94	94	97	98	100	100	99	102	98	99	98	103	103	104		99	104
20	95	91	92	93	96	95	98	99	98	103	97	99	97	100	98	96		100	100
25	96	92	93	93	95	97	98	98	98	101	99	98	93	98	102	99		100	101
31.5	92	91	93	91	93	95	96	95	97	99	97	93	92	97	99	104		102	100
40	93	93	92	87	89	92	95	93	95	94	94	90	91	93	98	101		98	100
50	97	92	92	89	88	92	94	94	95	91	95	90	93	95	98	99		101	101
63	95	89	89	83	83	90	93	91	93	95	91	88	91	91	94	99		98	98
80	91	87	85	79	77	87	88	89	92	93	89	85	85	87	90	93		93	93
100	89	87	85	77	76	85	86	85	87	87	86	80	82	84	84	88		89	88
125	86	85	83	75	70	82	84	83	85	87	82	78	77	82	81	83		86	85
160	85	84	82	70	67	82	82	80	83	83	81	76	76	79	78	79		82	83
200	81	83	81	70	67	81	79	77	82	83	81	77	77	77	76	78		80	79
250	83	83	80	71	66	78	75	75	80	82	78	78	79	77	77	82		79	81
315	80	77	76	69	61	75	72	72	78	79	75	75	78	79	78	84		82	84
400	78	72	71	65	57	71	70	70	76	77	76	72	77	80	80	86		85	86
500	76	70	69	63	55	70	69	72	74	76	78	72	78	81	83	87		89	89
630	74	68	67	60	53	70	69	71	73	75	79	71	77	80	82	84		86	85
800	75	67	67	60	52	68	69	70	73	77	78	69	73	77	80	81		80	78
1000	75	66	66	59	52	67	69	70	74	77	76	68	72	75	76	79		80	82
1250	73	64	65	58	51	67	68	69	72	76	74	68	72	74	76	79		81	80
1600	72	64	65	57	51	65	66	68	70	74	72	67	70	73	74	78		79	79
2000	71	63	64	56	50	64	65	67	69	71	71	66	68	70	73	76		77	76
2500	70	62	62	54		63	63	65	68	70	69	64	66	68	71	74		75	75
3150	67	60	60	53		61	61	63	65	68	66	60	63	66	68	71		72	72
4000	65	60	59	52		59	59	61	63	65	64			63	65	67		69	69
5000	63	59	58	53		57	58	59	60							64		65	65
6300		59	58	55		58	58	59	59									63	
8000		60	59	58		60	61	61	61										
10000		61	61	61		62	63	63	63		66	66	66	66	66	66		66	
OVERALL	105	104	103	101	103	104	106	106	107	109	106	106	105	108	109	111		110	110

** NO DATA COLLECTED.

TABLE 9.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 05
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	68	64	64	65	57	61	67	69	66	60	68	62	62	64	59	60		63	61
OASLA	47	47	50	49	42	43	46	48	48	48	48	47	47	48	44	45		45	44
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	34	36	39	40	32	33	36	38	39	38	39	37	38	38	35	36		35	35
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	60	61	64	63	54	56	58	62	62	61	62	61	60	61	56	57		57	57
C	0	1	1	1	1	1	0	1	1	0	0	1	0	0	1	0		0	0

** NO DATA COLLECTED.

TABLE 9.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 01
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEORDLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)															**		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	65	65	65	65	38	67	60	68	64	63	66	77	68	63	68	65		72	70
OASLA	57	55	58	53	42	44	49	50	53	50	49	51	48	47	47	49		49	50
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	50	47	50	44	33	34	42	42	45	42	42	40	40	38	39	41		40	41
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	76	73	72	68	56	58	67	68	72	68	67	68	63	62	64	66		65	66
C	4	3	3	2	2	2	4	3	4	3	3	2	1	2	2	2		2	4

** NO DATA COLLECTED.

TABLE 9.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 02
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(100 % RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	91	90	88	85	87	89	92	91	92	93	91	90	88	91	92	95	**	94	95
OASLA	70	71	69	63	59	67	68	69	70	73	69	65	67	71	72	77		74	75
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	59	60	59	51	46	54	57	58	60	64	61	56	59	63	64	69		65	65
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	87	88	86	79	74	83	85	85	86	88	85	80	82	84	85	90		89	90
C	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0

** NO DATA COLLECTED.

TABLE 9.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-700
RUN 04
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	102	99	98	95	97	100	102	101	102	104	102	100	99	102	104	107		106	106
OASLA	85	81	80	72	67	80	80	80	83	86	85	79	83	86	87	91		91	92
T	404	807	960	1440	1440	960	960	960	571	339	404	1142	571	339	285	143		143	120
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	77	69	69	62		70	70	72	75	77	77			77	79	82		83	83
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	101	97	96	90	84	96	97	97	99	100	99	94	96	99	101	104		106	106
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1	1

** NO DATA COLLECTED.

TABLE 9.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:

OMEGA 1.5
TEST DP-0T9-700
RUN 05

11 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4					60	60	71	76	79	68	77	69	69	71	61	65		60	60
8					66	69	73	75	76	66	74	60	69	69	62	65		69	67
16					58	65	72	73	73	63	72	64	65	67	55	59		64	61
31.5	60	63	60	64	52	57	64	69	62	57	60	60	61	63	55	57		61	59
63	64	60	60	63	52	53	59	55	57	54	60	56	55	58	55	57		58	57
125	59	59	57	56	51	53	55	52	53	53	57	52	52	53	54	54		56	55
250	50	50	55	52	41	44	48	49	47	46	48	43	41	44	42	46		43	43
500	40	41	43	45	39	41	43	43	43	39	42	40	42	43	41	42		41	40
1000	36	40	44	43	32	33	38	36	38	38	39	36	36	36	36	38		37	36
2000	31	34	38	39	29	28	33	34	35	37	36	34	34	35	31	32		33	31
4000	30	31	33	34	30	30	33	38	39	39	38	38	38	39	31	31		31	32
8000	35	34	34	35	36	36	37	45	45	45	45	45	45	45	37	37		36	38
OVERALL	70	66	65	67	71	73	77	80	81	71	80	73	73	74	66	69		73	71

** NO DATA COLLECTED.

TABLE 9.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
IDLE POWER
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-700
RUN 01

11 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4					65	78	67	80	73	69	72	86	82	77	79	77		82	82
8					65	76	66	76	73	67	72	84	79	72	77	72		80	78
16					61	73	64	72	68	66	70	81	73	67	72	68		77	75
31.5	65	65	62	62	56	66	57	68	61	61	65	77	67	63	67	64		71	69
63	59	58	57	58	50	55	55	59	54	57	57	71	59	54	58	58		65	61
125	59	60	59	62	49	52	50	53	51	54	53	62	53	52	55	54		58	55
250	55	55	57	54	45	44	45	48	48	45	46	50	45	41	44	48		48	45
500	49	49	56	46	40	41	45	44	45	42	42	43	45	42	41	44		40	41
1000	49	46	53	48	32	33	39	40	45	41	42	39	40	38	39	41		42	46
2000	52	48	46	43	30	32	43	43	50	44	43	40	37	37	39	40		39	39
4000	49	46	44	38	30	32	40	42	39	40	40	39	38	36	37	38		38	38
8000	45	43	42	40	35	36	38	45	37	45	45	45	44	43	43	43		44	44
OVERALL	67	67	66	66	69	81	71	82	77	73	77	89	84	78	82	79		85	84

** NO DATA COLLECTED.

TABLE 9.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
INTMD POWER(100 % RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS = 0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-700
RUN 02

11 MAR 87

PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4					78	79	80	81	79	81	79	82	78	81	81	81		82	81
8					87	88	89	88	90	92	88	89	89	90	90	93		90	91
16					91	92	95	95	94	97	94	95	93	97	96	97		97	97
31.5	91	90	88	87	86	89	91	90	91	92	91	89	86	89	92	95		93	94
63	87	85	84	79	78	82	86	86	87	87	84	81	82	83	86	88		89	91
125	81	82	81	75	69	78	80	80	80	81	77	73	74	76	77	79		84	84
250	72	77	73	64	61	73	69	70	73	73	68	65	66	68	69	71		77	77
500	62	62	64	56	48	59	61	61	64	69	65	59	65	70	70	77		66	70
1000	58	60	59	52	44	54	59	60	61	65	64	57	60	65	66	70		69	69
2000	59	60	57	50	44	54	56	57	59	64	60	56	58	61	63	67		64	63
4000	58	58	56	48	48	51	53	54	55	59	56	53	53	56	56	61		60	59
8000	59	58	57	54	54	55	55	56	55	57	56	55	55			57			
OVERALL	93	92	90	88	94	95	97	98	97	99	97	97	95	98	98	101		100	100

** NO DATA COLLECTED.

TABLE 9.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-700
RUN 04
11 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
F101 ENGINE IN THE
A/F32T-9 NSS
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
AFTERBURNER PWR(100% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	90	91	90	89	84	84	83	86	86	87	87	89	87	85	87	88		87	88
8	96	96	96	93	94	93	93	94	96	98	96	96	97	96	97	101		98	98
16	100	99	98	98	100	101	103	103	103	106	102	103	102	105	106	107		105	106
31.5	99	97	97	96	98	100	101	101	102	104	102	100	97	101	105	106		105	105
63	100	95	94	90	89	95	97	96	98	98	97	93	95	97	100	102		103	103
125	92	90	89	80	77	88	89	88	90	91	88	83	84	87	87	89		91	91
250	86	87	84	75	70	84	81	80	85	87	84	82	83	82	82	87		85	87
500	81	75	74	68	60	75	74	76	79	81	82	76	82	85	87	91		92	92
1000	79	71	71	64	56	72	73	75	78	81	81	73	77	81	83	85		85	85
2000	76	68	68	61	53	69	69	72	74	77	75	71	73	76	77	81		82	82
4000	70	65	64	57		64	64	66	68	69	68			68	69	73		75	74
8000		65	64	63		65	66	66	66									68	
OVERALL	105	104	103	101	103	104	106	106	107	109	106	106	105	108	109	111		110	110

** NO DATA COLLECTED.

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APPENDIX H

Far-Field Noise on the F108-CF-100 Engine

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TABLE 10.1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS
F108-CF-100 ENGINE IN THE A/F32T-9 NOISE SUPPRESSOR SYSTEM
McCONNELL AFB, KANSAS

Date of Test: 16 April 1986

Time of Test: 1530 Hrs

Engine Operation

Flight Idle	35.4 %RPM
Max Cont Power	88.6 %RPM
Take-Off Power	89.4 %RPM

Meteorology

Temperature	16 Deg C
Bar Pressure	0.727 M Hg
Rel Humidity	47 %
Wind - Speed	7 - 9 Knots
- Direction	120 Deg (True)

TABLE 10.2

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 16 C
BAR PRESS = 0.727 M HG
REL HUMID = 47 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 05
11 MAR 87
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	65	62	67	69	57	64	64	65	75	68	63	58	63	65	68	73		64	62
4	68	70	71	72	67	69	70	70	73	70	70	70	68	70	71	75		69	68
5	63	64	68	69	59	65	66	66	71	66	64	61	62	64	65	68		63	62
6.3	62	62	62	69	59	60	62	61	70	65	63	56	58	62	65	70		63	63
8	58	61	62	65	58	62	62	60	68	62	57	56	59	61	63	69		60	62
10	56	59	60	65	61	59	63	63	66	62	59	55	60	61	63	68		62	60
12.5	55	59	58	64	57	59	61	60	63	60	58	55	56	57	58	64		59	58
16	56	59	57	62	56	58	60	59	63	59	57	54	56	57	58	64		58	58
20	57	61	59	62	55	58	60	62	62	59	57	57	57	58	59	63		59	58
25	57	59	59	62	58	58	60	64	61	59	60	59	59	60	61	61		60	59
31.5	58	59	60	61	63	60	59	63	62	59	61	61	61	62	63	60		61	59
40	56	62	63	60	63	58	60	64	62	61	61	60	60	61	63	62		59	60
50	59	63	57	59	64	60	60	68	60	57	60	60	62	60	59	57		54	60
63	61	61	58	57	62	61	59	68	63	61	61	60	62	60	59	61		56	61
80	59	64	53	54	66	64	61	63	64	66	61	59	59	60	60	59		61	66
100	56	69	54	57	66	64	60	62	68	66	62	65	59	59	58	57		55	57
125	64	67	63	68	65	70	61	67	71	71	67	70	65	63	62	60		58	59
160	63	62	59	64	61	57	54	65	61	59	54	57	57	56	55	53		52	53
200	61	60	55	58	57	54	54	65	60	59	53	54	52	50	48	45		50	49
250	60	61	60	63	57	58	57	66	62	63	52	50	53	50	48	44		52	49
315	55	55	53	53	55	57	60	66	66	71	58	58	58	55	51	50		54	52
400	52	53	50	51	48	49	50	59	53	58	46	46	50	47	44	43		48	47
500	50	54	52	55	53	53	53	62	54	59	49	48	50	48	46	49		49	49
630	48	49	48	50	55	57	58	64	57	59	52	52	53	52	51	55		53	53
800	48	48	48	51	55	56	56	61	56	56	50	49	49	48	48	51		51	49
1000	48	48	49	53	58	58	58	62	58	58	54	50	50	50	49	53		51	49
1250	48	48	49	53	60	60	59	62	60	59	56	51	52	51	51	53		51	50
1600	48	46	46	53	57	60	58	61	57	58	54	48	49	58	47	51		48	47
2000	47	45	44	49	54	58	56	58	55	56	52	45	48	47	45	49		46	45
2500	46	47	45	48	52	55	54	55	53	54	49	44	47	45	43	47		43	43
3150	43	45	43	47	49	50	51	50	51	52	45	41	43	41	39	43		40	41
4000	40	41	35	43	45	45	47	47	49	50	42	38	41	39	38	39		35	37
5000	37	40	31	42	40	40	42	43	44	46	39	34	37	35	33	35		30	33
6300	33	38	28	38	33	35	37	39	39	41	34	32	33	33	33	32		27	29
8000	31	35	28	34	30	33	33	35	33	35	33	32	33	33	33	32		28	29
10000	28	31	28	30	29	33	33	34	30	30	33	33	33	33	33	33		29	29
OVERALL	74	77	76	79	76	76	76	79	81	79	76	75	74	75	76	80		74	74

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 10.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 01
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(35.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 16 C
BAR PRESS = 0.727 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	56	59	73	74	71	73	63	67	63	64	66	67	68	74	73	76		71	68
4	69	72	73	73	73	71	70	70	69	70	71	70	72	76	74	77		73	70
5	61	64	73	71	72	68	64	66	64	64	65	68	66	71	70	76		70	64
6.3	70	65	70	67	69	69	66	67	65	61	63	71	63	69	69	75		70	63
8	70	71	73	71	66	68	66	70	66	65	64	67	64	68	67	74		72	70
10	68	68	72	71	69	68	66	66	67	71	71	70	67	69	69	74		70	67
12.5	66	66	69	67	68	68	64	65	63	68	64	66	66	67	68	69		65	64
16	66	67	70	66	64	67	68	64	64	66	66	67	70	70	71	69		64	67
20	69	65	68	67	64	63	65	66	66	67	65	64	66	66	67	68		67	67
25	76	74	74	71	67	66	68	68	68	68	67	66	64	64	68	65		65	67
31.5	76	75	71	67	74	65	70	62	65	64	65	62	64	61	74	64		64	62
40	64	66	64	61	60	60	61	61	63	63	63	64	63	64	63	62		62	59
50	62	62	63	60	63	60	60	59	63	65	66	62	60	58	58	60		56	57
63	63	61	62	59	65	61	61	59	62	65	62	62	59	61	58	59		55	57
80	63	61	61	58	68	57	58	56	60	61	60	58	57	60	56	59		61	58
100	60	57	59	54	69	60	57	64	63	60	59	62	58	58	56	54		60	54
125	56	55	58	57	65	64	63	65	69	65	65	67	63	62	62	56		61	58
160	56	54	59	60	58	60	55	56	58	57	59	59	58	54	53	49		52	52
200	54	54	57	58	58	63	52	57	57	55	55	56	53	51	50	47		47	49
250	50	51	55	51	54	60	55	60	58	56	51	51	46	47	46	45		45	47
315	50	51	50	52	56	69	61	63	58	66	60	58	52	50	51	50		47	47
400	47	44	44	48	49	57	49	53	54	51	46	46	44	44	45	47		42	43
500	46	45	45	45	50	55	50	54	57	52	48	47	47	46	48	49		46	46
630	46	46	48	47	53	57	52	56	60	55	53	50	50	49	51	51		52	50
800	44	44	47	43	53	55	51	54	59	50	49	47	47	46	50	48		48	48
1000	44	43	47	45	55	59	54	55	58	52	52	50	49	49	51	50		52	50
1250	44	42	46	45	54	61	57	57	62	55	55	55	52	52	53	52		55	52
1600	45	42	43	42	53	62	56	54	59	53	54	52	50	50	52	50		52	51
2000	47	44	43	42	50	57	53	52	58	52	52	51	48	47	50	48		49	49
2500	52	49	46	42	48	54	52	50	56	50	52	51	47	46	48	47		47	48
3150	46	43	42	40	45	51	49	48	54	48	49	48	44	43	45	43		43	44
4000	44	40	38	35	43	49	47	46	52	44	46	44	42	41	41	39		39	41
5000	48	42	42	37	39	45	44	43	48	40	42	40	38	37	36	35		35	35
6300	40	35	34	33	34	39	37	37	44	36	36	34	33	33	32	33		31	32
8000	38	34	33	35	33	34	34	35	40	33	33	33	33	33	32	33		32	33
10000	38	33	33	34	34	33	33	34	35	34	33	33	33	33	33	34		33	34
OVERALL	82	81	83	81	81	80	78	78	78	79	79	79	78	81	81	84		80	78

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 10.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 02
11 MAR 87
PAGE 2

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MAX CONT PWR(88.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AF

METEOROLOGY:
TEMP = 16 C
BAR PRESS = 0.727 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	79	74	75	70	70	68												
4	78	80	77	78	72	78	75												
5	77	80	77	80	75	77	74												
6.3	80	80	79	78	72	77	77												
8	85	84	82	78	80	81	81												
10	86	84	85	82	83	81	83												
12.5	84	84	83	83	81	82	83												
16	83	86	84	83	84	83	85												
20	84	81	80	81	83	83	84												
25	87	86	86	84	81	82	84	84	86	86	83	82	80	83	84	82		81	82
31.5	88	87	83	83	79	81	85	83	85	86	83	82	80	82	82	85		83	82
40	87	85	82	79	77	79	83	83	83	82	80	78	75	76	79	83		80	81
50	83	82	82	77	72	77	80	80	79	78	77	74	74	77	78	78		78	80
63	85	82	78	74	73	77	78	76	79	76	76	73	73	73	74	79		78	79
80	80	80	76	70	68	73	77	75	74	78	74	68	69	68	71	74		75	77
100	75	76	74	66	65	74	73	68	69	73	71	67	69	67	69	72		74	74
125	73	74	73	65	78	72	72	68	72	69	70	69	67	68	69	69		74	73
160	72	72	71	63	63	70	67	63	66	69	67	63	61	63	64	67		72	71
200	69	71	67	62	62	68	62	63	64	65	63	60	58	62	61	65		71	69
250	66	65	61	60	59	64	61	62	67	64	60	58	55	61	58	62		66	62
315	61	62	59	57	59	62	61	62	69	67	62	57	56	60	59	62		62	61
400	58	59	55	55	51	57	56	57	57	59	55	52	51	61	58	64		63	64
500	56	57	54	52	51	53	55	57	56	59	56	54	53	62	58	64		62	61
630	55	57	55	52	59	52	57	58	58	62	58	57	56	62	59	64		63	61
800	55	56	54	50	58	52	57	57	56	59	56	55	54	61	58	63		64	62
1000	56	56	56	50	61	53	59	60	59	59	56	56	54	60	58	62		62	61
1250	54	53	54	48	61	52	60	61	61	60	58	58	55	60	59	62		61	58
1600	54	52	52	47	58	51	59	60	60	59	56	58	54	57	57	61		58	56
2000	55	54	52	48	55	50	56	57	58	58	54	56	52	54	55	59		57	56
2500	56	54	52	51	53	48	54	54	55	57	52	52	51	51	53	58		55	54
3150	59	58	56	54	51	48	54	53	53	54	49	48	47	47	49	55		53	52
4000	56	55	53	51	48	45	51	50	50	51	46	45	44	44	46	52		50	50
5000	53	52	51	48	44	43	47	46	46	47	41	40	41	41	43	49		47	47
6300	52	50	49	46	38	39	44	42	42	43				40	41	45		43	43
8000	48	47	46	42		37	40		38	41				40	41	42		39	38
10000	45	44	44		38	38	38			41				41	41	42			
OVERALL	96	95	94	92	91	92	93	89	90	91	88	86	85	87	88	89		88	89

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 10.2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 03

11 MAR 87

PAGE 2

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
TAKE-OFF PWR (89.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 16 C
BAR PRESS = 0.727 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	73	74	81	69	71	72	72	76	69	70	70	73	73	76	77		76	75
4	79	79	77	78	76	76	76	74	80	75	79	77	77	75	84	79		74	76
5	79	77	77	78	78	76	78	76	81	75	76	74	72	73	80	79		75	77
6.3	81	81	81	79	74	75	80	78	79	77	75	78	77	78	80	81		81	81
8	83	85	80	79	80	78	82	81	82	84	83	79	82	81	82	87		83	84
10	82	86	84	81	81	80	81	84	84	85	85	82	83	83	81	88		85	83
12.5	83	87	83	83	83	82	85	88	86	85	86	86	86	87	87	88		88	86
16	85	86	83	80	84	84	87	89	88	88	86	85	82	90	88	89		86	89
20	84	82	82	79	83	83	83	84	85	85	82	84	82	85	84	82		86	87
25	88	86	84	82	82	82	84	84	85	85	82	82	77	81	83	80		81	83
31.5	87	87	84	81	82	84	84	84	85	87	82	80	77	81	82	85		84	82
40	86	87	82	78	78	80	83	83	82	83	79	77	75	77	80	84		79	83
50	84	83	81	77	74	78	79	81	80	79	77	75	75	77	79	80		81	81
63	86	82	80	74	74	79	79	78	79	78	77	73	74	74	77	80		79	80
80	81	81	78	71	70	74	79	76	76	79	75	70	69	70	73	76		76	78
100	75	77	77	68	66	75	75	71	71	74	71	66	67	68	71	73		75	75
125	73	75	76	68	66	75	73	70	74	70	70	68	66	68	71	72		75	74
160	73	72	72	66	61	71	70	65	66	69	68	63	60	64	66	70		74	73
200	71	71	69	64	59	70	68	63	64	65	64	61	58	61	64	66		72	71
250	68	67	65	61	56	67	65	62	64	64	61	59	55	58	60	63		66	67
315	65	64	62	59	58	65	63	66	72	68	60	56	58	57	60	63		63	63
400	62	61	60	58	52	60	58	58	60	61	55	52	51	59	62	66		65	64
500	62	60	58	57	57	59	57	56	60	61	55	54	52	60	61	66		63	61
630	62	59	59	57	61	61	60	60	63	63	56	58	53	60	61	65		63	63
800	64	58	59	56	57	59	57	58	59	60	55	55	53	59	59	64		65	64
1000	63	59	59	56	61	61	59	61	60	60	58	56	55	60	59	64		63	63
1250	61	58	58	56	62	62	60	62	61	60	60	55	55	61	60	63		61	61
1600	60	57	57	54	60	59	59	60	59	59	59	55	53	59	59	62		60	59
2000	59	57	56	54	56	56	56	58	57	58	58	56	52	57	57	60		59	58
2500	59	56	55	53	53	53	55	56	56	57	56	53	50	56	55	59		58	57
3150	60	58	57	52	50	51	55	55	54	55	53	49	47	53	52	56		55	54
4000	57	56	55	48	47	48	52	53	52	53	49	46	45	49	50	54		53	53
5000	54	53	52	46	42	45	49	49	49	50	45	43	43	46	48	52		50	50
6300	52	50	50	44	38	41	46	46	45	46	43	41	41	43	44	48		47	47
8000	48	47	47	43		38	44	44	43	44	42	42	42	42	43	45		44	44
10000	44	44	44	43	38	38	43	43	43	43	43	43	43	43	43	43		43	43
OVERALL	96	96	93	91	92	92	94	95	95	95	93	92	91	94	94	96		95	95

NO BACKGROUND CORRECTION APPLIED.
** NO DATA COLLECTED.

TABLE 10.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-079-800
RUN 05
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS : 0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	65	62	67	69	57	64	64	65	75	68	63	58	63	65	68	73		64	62
4	68	70	71	72	67	69	70	70	73	70	70	70	68	70	71	75		69	68
5	63	65	68	69	59	66	66	67	71	66	64	61	67	64	65	68		64	63
6.3	63	62	62	70	59	60	62	61	70	65	64	57	59	62	65	70		63	63
8	58	61	63	65	59	62	63	60	68	62	57	56	60	61	63	69		61	63
10	56	59	60	65	61	59	63	63	66	62	59	55	60	61	63	68		62	60
12.5	55	59	58	64	57	59	61	60	63	60	58	55	56	57	58	64		59	58
16	56	59	57	62	56	58	60	59	63	59	57	54	56	57	58	64		58	58
20	58	61	59	62	55	58	60	62	63	59	58	58	57	58	59	64		59	58
25	57	59	59	62	59	59	61	64	61	59	60	59	59	60	61	61		60	60
31.5	59	59	61	61	63	60	59	63	62	59	61	61	61	62	63	60		61	59
40	56	62	63	60	63	58	60	64	62	61	61	60	60	61	63	62		59	60
50	59	63	57	59	64	60	60	68	60	57	60	60	62	61	59	57		54	60
63	61	61	58	57	62	61	59	68	63	61	61	60	62	60	59	61		56	61
80	59	64	54	54	67	64	61	63	64	67	62	60	59	60	61	59		62	67
100	56	69	54	57	66	64	60	62	68	66	62	65	59	59	58	57		55	57
125	64	67	64	69	65	70	61	67	71	71	67	70	65	63	62	60		58	59
160	63	62	59	65	61	57	54	66	61	59	55	57	58	56	55	53		52	53
200	61	60	55	58	57	54	54	65	60	59	53	54	52	50	48	45		50	49
250	60	61	60	63	57	58	57	66	62	63	52	50	53	51	48	44		52	49
315	55	55	53	53	55	57	60	66	66	72	58	58	58	55	51	50		54	52
400	53	53	51	52	48	49	50	60	54	59	46	46	50	48	45	43		48	47
500	50	54	52	55	53	53	53	63	54	59	49	48	51	49	47	50		49	49
630	48	49	48	50	56	57	58	64	57	60	53	52	53	52	51	56		53	53
800	48	49	48	51	56	56	57	61	56	56	50	49	49	49	48	52		52	49
1000	48	48	50	53	58	59	58	63	58	58	54	50	50	50	50	54		51	49
1250	48	48	49	53	60	61	60	63	60	59	56	52	52	52	51	53		51	50
1600	48	47	46	53	57	61	59	62	58	59	55	49	50	59	48	51		49	47
2000	47	45	44	49	55	58	56	58	56	56	52	46	49	47	45	50		46	45
2500	47	47	46	49	53	55	54	56	54	54	49	44	48	45	43	47		44	44
3150	44	46	43	48	50	51	52	51	51	53	45	42	44	42	40	44		41	42
4000	41	43	36	45	46	46	48	48	50	51	43	39	42	40	39	40		36	38
5000	39	41	33	43	41	42	44	44	46	47	40	36	39	37	35	36		32	34
6300	35	40	30	40	35	37	39	41	41	43	36	34	35	35	35	34		29	31
8000	34	38	31	37	33	36	36	38	36	38	36	35	36	36	36	35		31	32
10000	32	35	32	34	33	37	37	38	34	34	37	37	37	37	37	37		33	33
OVERALL	75	77	76	79	76	77	76	79	81	79	76	75	74	75	76	80		75	75

** NO DATA COLLECTED.

TABLE 10.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 01
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(35.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	56	59	73	74	71	73	63	67	63	64	66	67	68	74	73	76		71	68
4	69	72	73	73	73	71	70	70	69	70	71	70	72	76	74	77		73	70
5	62	64	73	72	72	68	64	66	65	64	65	69	66	71	70	76		70	64
6.3	70	65	70	68	69	69	67	67	65	61	64	71	63	69	69	75		70	64
8	70	71	73	71	66	68	67	70	67	65	64	68	65	68	67	74		72	70
10	68	68	72	71	69	68	66	66	67	71	71	70	67	69	69	74		70	67
12.5	66	66	69	67	68	68	64	65	63	68	64	66	66	67	68	69		65	64
16	67	67	70	66	64	67	68	64	64	66	66	67	70	70	71	69		64	67
20	69	65	68	67	64	63	65	66	66	67	65	64	66	66	67	68		67	67
25	76	74	74	71	67	66	68	68	68	68	68	66	64	64	68	65		65	67
31.5	77	75	71	67	74	65	70	62	65	64	65	62	64	61	74	64		64	62
40	64	66	64	61	60	60	61	61	63	63	63	64	63	64	63	62		62	59
50	63	62	63	60	63	60	60	59	63	65	66	62	60	58	58	60		56	57
63	63	62	62	60	65	61	61	59	62	65	62	62	59	61	58	59		55	57
80	63	61	61	58	68	58	58	57	60	61	60	59	58	60	57	59		61	58
100	60	58	60	54	69	60	57	64	63	60	59	62	58	58	56	54		60	54
125	56	55	58	57	65	64	63	65	69	65	65	67	63	62	62	56		61	58
160	56	54	59	60	58	60	55	56	58	58	59	59	58	54	53	50		52	53
200	54	54	57	58	58	63	52	57	57	55	55	56	53	51	50	47		47	49
250	50	51	55	51	54	60	55	60	58	56	51	51	46	47	46	45		45	47
315	50	51	50	53	56	70	61	63	59	66	60	58	52	51	51	50		47	47
400	47	45	44	48	49	57	50	53	54	51	46	46	44	44	45	47		42	43
500	46	46	45	46	50	56	50	54	58	52	49	47	47	46	48	49		47	46
630	46	46	48	47	54	57	52	56	60	56	53	50	51	50	51	52		52	50
800	44	44	47	43	53	55	52	54	59	50	49	47	48	46	50	48		48	48
1000	44	43	47	45	56	59	55	55	59	52	53	51	50	49	51	50		52	50
1250	44	42	46	45	54	61	57	57	62	55	55	55	52	52	53	53		56	53
1600	45	42	43	42	54	62	57	55	60	54	54	53	51	50	53	51		53	51
2000	47	45	43	42	50	57	54	52	59	53	53	51	49	48	51	49		50	49
2500	52	49	47	43	48	54	52	51	57	51	52	51	48	47	49	47		48	48
3150	47	43	42	41	46	51	50	49	55	48	49	48	45	44	45	44		43	45
4000	45	41	40	37	44	50	48	47	53	45	47	45	43	42	42	40		40	42
5000	49	44	43	39	41	47	45	44	49	42	44	41	39	39	38	37		36	36
6300	43	37	36	35	36	41	39	39	46	38	38	36	35	35	34	35		33	34
8000	41	37	36	38	36	37	37	38	43	36	36	36	36	36	35	36		35	36
10000	42	37	37	38	38	37	37	38	39	38	37	37	37	37	37	38		37	38
OVERALL	82	81	83	81	82	80	78	79	79	79	79	79	78	81	82	84		80	78

** NO DATA COLLECTED

TABLE 10.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 02
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MAX CONT PWR(88.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	79	74	75	70	70	68												
4	78	80	77	78	72	78	75												
5	78	80	77	81	75	77	75												
6.3	80	80	79	79	72	78	77												
8	85	84	82	78	80	81	81												
10	86	84	85	82	83	81	83												
12.5	84	84	83	83	81	82	83												
16	83	86	84	84	84	83	85												
20	84	82	81	81	84	83	84												
25	87	86	86	84	82	82	84	84	86	86	83	82	80	83	84	82		81	82
31.5	88	87	84	83	79	81	85	83	85	86	83	82	80	83	83	85		83	82
40	87	85	82	79	77	79	83	83	83	82	80	78	75	77	79	83		80	81
50	83	82	82	77	73	78	80	80	79	78	77	75	74	77	78	78		79	80
63	85	82	78	75	73	77	78	76	79	76	76	73	73	73	74	79		78	79
80	80	80	76	70	68	73	77	75	74	78	74	69	69	68	71	74		75	77
100	75	77	74	66	65	74	73	68	69	73	71	67	69	67	69	72		74	74
125	73	74	73	65	78	72	72	68	72	69	70	69	67	68	69	69		74	73
160	72	73	71	63	63	70	67	63	66	69	67	63	61	63	64	67		72	72
200	70	71	67	62	62	68	62	63	64	65	63	60	58	62	61	65		71	69
250	66	65	62	60	59	64	61	62	67	64	60	58	55	61	58	62		66	62
315	61	62	59	57	59	62	61	62	69	67	63	57	56	60	59	62		62	61
400	59	60	55	55	51	57	56	58	57	60	55	53	51	61	58	64		64	64
500	56	57	54	52	52	54	55	57	56	59	56	54	53	62	58	64		62	61
630	55	57	55	52	59	52	58	58	58	62	58	58	56	62	59	64		63	62
800	55	56	54	50	58	53	57	58	57	59	56	55	54	61	58	63		64	63
1000	56	56	56	50	62	53	60	61	60	59	57	57	54	60	59	62		62	61
1250	54	53	54	48	61	52	61	61	62	60	58	58	56	60	59	62		61	58
1600	55	53	52	48	59	51	60	60	61	60	56	58	54	58	58	61		59	57
2000	55	54	52	48	56	50	57	57	58	59	55	56	52	55	55	59		57	56
2500	56	55	53	51	54	49	55	55	56	57	52	53	51	52	53	58		56	55
3150	60	58	56	54	52	48	55	54	54	54	50	49	48	48	50	56		53	53
4000	57	56	54	52	49	46	52	51	51	52	47	46	45	45	47	53		51	51
5000	55	53	52	49	45	44	49	47	48	49	43	42	42	43	44	51		49	49
6300	54	52	51	48	41	42	46	44	44	45				42	43	47		45	45
8000	51	50	49	45		40	43		41	44				43	44	45		42	41
10000	49	48	48		42	42	42			45				45	45	46			
OVERALL	96	95	94	92	92	92	94	89	91	91	88	87	85	87	88	90		38	89

** NO DATA COLLECTED.

TABLE 10.3 SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 03
11 MAR 87
PAGE 3

NOISE SOURCE/SUBJECT:
F100 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
TAKE-OFF PWR (89.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
3.15	74	73	74	81	69	71	72	72	76	69	70	70	73	73	76	77		76	75
4	79	79	77	78	76	76	76	74	80	75	79	77	77	75	84	79		74	76
5	80	77	77	78	78	76	78	77	81	75	76	75	72	73	80	79		75	77
6.3	82	82	81	79	74	76	80	78	79	77	76	79	77	79	80	82		81	82
8	83	85	80	79	81	78	82	81	82	84	83	80	82	81	83	87		84	84
10	82	86	84	81	81	80	81	84	84	85	85	82	83	83	81	88		85	83
12.5	83	87	83	83	83	82	85	88	86	85	86	86	86	87	87	88		88	86
16	85	87	83	80	84	84	87	89	88	88	86	85	82	90	88	89		86	89
20	84	82	82	79	84	84	83	84	85	85	82	84	82	85	84	82		87	87
25	88	86	84	82	82	82	84	85	85	86	83	82	78	81	83	81		81	83
31.5	88	87	84	81	82	84	84	84	85	87	82	80	77	81	82	85		84	82
40	86	87	82	78	78	80	83	83	82	83	79	77	75	77	80	84		79	83
50	84	83	81	77	74	78	79	81	80	79	77	75	75	77	79	80		81	81
63	86	82	80	74	74	79	79	78	79	78	77	73	74	74	77	80		79	80
80	81	81	78	71	70	75	79	76	76	79	75	70	69	70	73	76		76	78
100	75	77	77	69	66	75	75	71	71	75	71	67	68	69	71	74		75	75
125	73	75	76	68	66	75	73	70	74	70	70	68	66	68	71	72		75	74
160	73	73	73	67	61	71	70	65	66	69	68	63	60	64	66	70		74	73
200	71	72	69	64	59	70	68	63	64	65	64	61	58	61	64	66		72	71
250	68	67	66	61	56	67	65	62	64	64	61	59	55	58	60	63		66	67
315	65	64	63	60	58	65	63	66	72	68	60	56	58	57	60	63		63	63
400	63	61	60	58	53	61	58	58	61	61	55	52	51	59	62	66		66	64
500	62	60	58	57	57	59	58	57	60	61	55	55	52	60	61	66		63	61
630	62	59	59	57	61	61	60	60	63	63	56	58	53	60	61	65		63	63
800	64	59	59	57	58	59	57	58	59	60	55	55	53	59	59	64		65	64
1000	63	59	59	56	61	61	59	61	60	60	58	56	55	60	60	64		63	63
1250	61	58	58	56	62	62	61	62	61	60	60	55	56	61	60	63		62	61
1600	60	57	58	54	60	59	59	60	59	60	60	56	54	59	59	62		60	60
2000	60	57	57	54	56	56	56	58	57	59	58	57	52	57	57	61		60	59
2500	59	57	56	53	53	54	55	56	57	58	57	54	51	56	56	59		58	58
3150	61	59	58	53	51	52	56	56	55	56	54	50	48	54	53	57		55	55
4000	58	57	56	49	48	50	53	54	53	54	50	47	46	50	51	55		54	54
5000	55	54	54	48	44	47	50	51	50	52	47	45	44	48	49	54		52	52
6300	54	53	53	47	40	43	48	48	47	48	45	43	43	45	46	50		49	49
8000	51	50	50	46		41	47	47	46	47	45	45	45	45	46	48		47	47
10000	48	48	48	47	42	42	47	47	47	47	47	47	47	47	47	47		47	47
OVERALL	96	96	94	91	92	92	94	95	95	95	94	93	92	94	95	96		95	95

** NO DATA COLLECTED

TABLE 10.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
BACKGROUND NOISE
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 05
11 MAR 87

	ANGLE (DEGREES)																	
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	71	74	70	73	74	74	71	77	76	77	72	73	71	70	69	69		68	70
OASLA	60	61	59	63	66	68	67	71	68	70	63	61	61	62	58	61		60	59
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	52	53	51	55	58	60	60	63	59	61	55	51	53	53	50	54		51	51
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	74	76	73	78	78	82	80	84	82	85	77	76	75	79	71	74		72	72
C	1	1	1	1	0	2	1	1	1	2	2	2	1	3	1	2		1	1

** NO DATA COLLECTED.

TABLE 10.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

IDENTIFICATION:

OMEGA 1.5
TEST DP-0T9-800
RUN 01

11 MAR 87

PAGE 4

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(35.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	160 **	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	77	76	75	72	76	75	73	73	75	74	73	73	71	71	74	71		70	69
OASLA	59	57	58	57	63	70	65	65	69	65	63	62	60	59	61	60		61	60
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	51	49	50	48	55	61	57	57	62	56	56	54	52	52	53	52		53	52
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	77	74	74	70	77	84	78	78	83	80	79	77	74	73	74	73		74	73
C	2	2	2	0	1	2	1	1	1	2	2	2	1	1	1	1		1	1

** NO DATA COLLECTED.

TABLE 10.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MAX CONT PWR(88.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 02
11 MAR 87
PAGE 4

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	92	91	89	86	85	86	89	87	88	88	86	84	82	84	85	87		86	87
OASLA	70	70	68	64	69	66	69	69	70	70	67	67	64	69	68	72		72	71
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	61	61	59	56	60	56	61	61	61	62	59	58	57	61	60	65		63	62
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	88	86	84	80	86	82	84	83	85	86	81	80	78	81	81	85		85	84
C	0	0	0	0	2	0	0	0	1	1	1	1	1	0	0	0		0	0

** NO DATA COLLECTED.

TABLE 10.4 MEASURES OF HUMAN NOISE EXPOSURE (AFR 161-35, APRIL 82)

DISTANCE - 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 03
11 MAR 87
PAGE 4

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB, KANSAS
FAR FIELD NOISE

OPERATION:
TAKE-OFF PWR (89.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS : 0.760 M HG
REL HUMID : 70 %

	ANGLE (DEGREES)																		
	0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	**	170	180
HAZARD/PROTECTION																			
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR																			
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR																			
LIMITING TIME (T IN MINUTES) FOR TOTAL DAILY EXPOSURE (AFR 161-35, TABLE 5, APRIL 82)																			
NO PROTECTION																			
OASLC	92	91	89	85	85	88	89	89	89	90	87	85	84	87	88	89		89	89
OASLA	73	71	71	67	69	71	70	70	72	71	69	66	64	69	70	73		73	72
T	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440		1440	1440
COMMUNICATION																			
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																			
PSIL	66	63	62	59	61	62	62	63	63	63	61	58	56	62	62	66		65	64
ANNOYANCE																			
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																			
TONE CORRECTION (C IN DB)																			
PNLT	90	88	87	81	82	85	86	85	88	87	83	81	79	83	83	87		87	87
C	0	0	0	0	1	0	1	1	2	1	0	1	1	0	0	0		0	0

** NO DATA COLLECTED.

TABLE 10.5	SOUND PRESSURE LEVEL (DB) OCTAVE BAND DISTANCE : 100 METERS	IDENTIFICATION: OMEGA 1.5 TEST DP-0T9-800 RUN 05 11 MAR 87 PAGE 5

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
F108 ENGINE IN THE	BACKGROUND NOISE	TEMP : 15 C
A/F32T-9 NSS AT	SINGLE ENGINE GROUND	BAR PRESS :0.760 M HG
MCCONNELL AFB,KANSAS	RUNUP IN THE A/F32T-9	REL HUMID : 70 %
FAR FIELD NOISE	NSS MCCONNELL AFB	,

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	71	72	74	75	68	71	72	72	78	73	72	71	70	72	74	78		71	70
8	65	66	67	72	64	65	68	66	73	68	66	61	64	66	69	74		67	67
16	61	65	63	67	61	63	65	65	68	64	62	61	61	62	63	69		64	63
31.5	62	65	66	66	67	64	65	69	67	65	65	65	65	66	67	66		65	64
63	65	68	61	62	70	67	65	72	67	68	66	65	66	65	64	64		63	68
125	67	72	65	70	69	71	64	70	73	72	68	71	67	65	64	62		61	62
250	64	64	62	65	61	62	63	71	69	72	60	60	60	57	54	52		57	55
500	55	57	55	58	58	59	60	67	60	64	55	54	56	54	53	57		55	55
1000	53	53	54	57	63	63	63	67	63	63	59	55	55	55	55	58		56	54
2000	52	51	50	55	60	63	61	64	61	62	57	51	53	59	51	55		51	50
4000	47	49	44	50	52	53	54	53	54	56	48	45	47	45	43	46		42	44
8000	38	43	36	42	39	41	42	44	43	45	41	41	41	41	41	40		36	37
OVERALL	75	77	76	79	76	77	76	79	81	79	76	75	74	75	76	80		75	75

** NO DATA COLLECTED.

TABLE 10.5

SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 01
11 MAR 87
PAGE 5

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
FLIGHT IDLE(35.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	70	73	78	78	77	76	72	73	71	72	73	74	75	79	78	81		77	73
8	75	74	77	75	73	73	71	73	71	72	73	75	70	74	73	79		76	72
16	72	71	74	72	71	71	71	70	69	72	70	71	72	73	74	73		71	71
31.5	80	78	76	73	75	69	72	69	71	70	70	69	68	68	75	69		68	69
63	68	66	67	64	71	65	65	63	67	69	68	66	64	65	62	64		63	62
125	63	61	64	62	71	67	65	68	70	67	67	69	65	64	63	59		64	60
250	57	57	60	60	61	71	63	65	63	67	62	61	56	55	54	53		52	53
500	51	50	51	52	56	61	55	59	63	58	55	53	53	52	53	54		53	52
1000	49	48	51	49	59	64	60	60	65	58	58	57	55	54	56	55		58	55
2000	54	51	50	47	56	64	59	58	63	57	58	57	54	53	56	54		55	55
4000	52	48	47	44	49	54	53	52	58	51	52	51	48	47	48	46		46	47
8000	47	42	41	42	41	43	43	43	48	42	42	41	41	41	41	41		40	41
OVERALL	82	81	83	81	82	80	78	79	79	79	79	79	78	81	82	84		80	78

** NO DATA COLLECTED.

TABLE 10.5 SOUND PRESSURE LEVEL (DB)
OCTAVE BAND
DISTANCE : 100 METERS

NOISE SOURCE/SUBJECT:
F108 ENGINE IN THE
A/F32T-9 NSS AT
MCCONNELL AFB,KANSAS
FAR FIELD NOISE

OPERATION:
MAX CONT PWR(88.6% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP : 15 C
BAR PRESS :0.760 M HG
REL HUMID : 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-0T9-800
RUN 02
11 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	82	85	81	83	78	81	78												
8	89	88	88	85	85	85	86												
16	89	89	87	88	88	87	89												
31.5	92	91	89	87	84	86	89	88	90	90	87	86	84	86	87	88		86	86
63	88	87	84	80	77	81	83	82	82	82	81	78	77	79	80	82		82	84
125	78	80	78	70	79	77	76	72	75	76	74	72	71	71	73	75		78	78
250	72	73	69	65	65	70	66	67	72	71	67	63	62	66	64	68		73	71
500	62	63	60	58	60	60	61	63	62	65	61	60	59	66	63	69		68	67
1000	60	60	60	54	65	57	64	65	64	64	62	62	59	65	63	67		67	66
2000	60	59	57	54	61	55	62	63	63	63	60	61	57	60	61	64		62	61
4000	62	61	59	57	54	51	57	56	56	57	52	51	51	51	53	58		56	56
8000	57	55	54	49	44	46	49		46	50				48	49	51		47	46
OVERALL	96	95	94	92	92	92	94	89	91	91	88	87	85	87	88	90		88	89

** NO DATA COLLECTED.

[illegible] SOUND LEVEL (DB)
[illegible] BAND
[illegible] 100 METERS

[illegible] SOURCE SUBJECT
[illegible] ENGINE IN THE
[illegible] 9 NSS AT
[illegible] AFB.KANSAS
[illegible] FAR FIELD NOISE

OPERATION:
TAKE-OFF PWR (89.4% RPM)
SINGLE ENGINE GROUND
RUNUP IN THE A/F32T-9
NSS MCCONNELL AFB

METEOROLOGY:
TEMP = 15 C
BAR PRESS =0.760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.5
TEST DP-OT9-800
RUN 03
11 MAR 87
PAGE 5

FREQ (HZ)	ANGLE (DEGREES) 0	350	340	330	40	50	60	70	80	90	100	110	120	130	140	150	** 160	170	180
4	83	82	81	84	80	80	81	80	84	79	81	79	80	79	86	83		80	81
8	87	89	87	85	84	83	86	87	87	88	87	85	86	86	86	91		88	88
16	89	91	88	86	88	88	90	92	91	91	90	90	89	92	92	92		92	92
31.5	92	91	88	86	86	87	89	89	89	90	86	85	81	85	86	88		87	87
63	89	87	85	79	78	83	84	84	84	83	81	78	78	79	82	84		84	85
125	79	80	81	73	70	79	78	74	76	77	75	71	70	72	75	77		80	79
250	74	74	71	67	63	73	70	69	74	71	67	64	62	64	67	69		74	73
500	67	65	64	62	63	65	64	63	66	66	60	60	57	65	66	70		69	68
1000	68	63	63	61	65	66	64	65	65	65	63	60	59	65	64	68		68	68
2000	64	62	62	59	62	62	62	63	63	63	63	60	57	63	62	66		64	64
4000	63	62	61	55	53	55	58	59	58	59	56	53	51	56	56	60		59	59
8000	56	55	55	51	44	47	52	52	52	52	50	50	50	51	51	53		52	53
OVERALL	96	96	94	91	92	92	94	95	95	95	94	93	92	94	95	96		95	95

** NO DATA COLLECTED.

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8-87

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