



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

**\*\* DATA SUPERSEDED \*\* SEE SHEET: 6AL021**

ENGINE IDENTIFICATION: AE3007C BYPASS RATIO: 5.3  
UNIQUE ID NUMBER: 3AL001 PRESSURE RATIO ( $\pi_{oo}$ ): 16.2  
ENGINE TYPE: MTF RATED OUTPUT ( $F_{oo}$ ) (kN): 28.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	17.5	77.5	38.2	1.2
AS % OF ORIGINAL LIMIT	89.3 %	65.7 %	52.8 %	3.6 %
AS % OF CAEP/2 LIMIT (NOx)			66.0 %	
AS % OF CAEP/4 LIMIT (NOx)			66.4 %	
AS % OF CAEP/6 LIMIT (NOx)			66.6 %	
AS % OF CAEP/8 LIMIT (NOx)			70.4 %	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
x DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE

### MEASURED DATA

MODE	POWER SETTING (% $F_{oo}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.280	0.29	0.97	16.92	1
CLIMB OUT	85	2.2	0.234	0.33	1.19	14.56	0
APPROACH	30	4.0	0.091	0.83	4.5	6.63	0
IDLE	7	26.0	0.039	5.84	29.88	3.24	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			125	387	1964	991	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				13.46	68	34.73	1
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				-	-	-	-

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3
TEMPERATURE (K)	288
ABS HUMIDITY (kg/kg)	0.0063

### FUEL

SPEC	Jet-A/JP-8
H/C	1.899
AROM (%)	16.5

MANUFACTURER: Allison Engine Company  
TEST ORGANIZATION: Allison Engine Company  
TEST LOCATION: Indianapolis, Indiana, USA  
TEST DATES: FROM 03 Mar 94 TO 19 Apr 95

### REMARKS

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If REVISED, this data supersedes databank UID  
Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)