



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E2A1      BYPASS RATIO: 5.09  
UNIQUE ID NUMBER: 8GE114      PRESSURE RATIO ( $\pi_{oo}$ ): 25.1  
ENGINE TYPE: TF      RATED OUTPUT ( $F_{oo}$ ) (kN): 75.44

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	14.7	112.4	42.1	5.1
AS % OF ORIGINAL LIMIT	75.1 %	95.3 %	46.7 %	19.8 %
AS % OF CAEP/2 LIMIT (NOx)			58.4 %	
AS % OF CAEP/4 LIMIT (NOx)			68.0 %	
AS % OF CAEP/6 LIMIT (NOx)			74.6 %	
AS % OF CAEP/8 LIMIT (NOx)			86.4 %	

### 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	0.769	0.04	0.41	17.98	3.93
CLIMB OUT	85	2.2	0.640	0.05	0.38	15.26	1.68
APPROACH	30	4.0	0.222	0.1	4.46	7.64	0.39
IDLE	7	26.0	0.084	5.44	50.81	3.56	0.85
LTO TOTAL FUEL (kg) or EMISSIONS (g)			301	721	6911	2742	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				9.56	91.61	36.34	3.93
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				9.0-9.9	88.5-93.4	35.8-36.9	3.2-5.0

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.6
TEMPERATURE (K)	294-295
ABS HUMIDITY (kg/kg)	0.00922 - 0.01192

### FUEL

SPEC	Jet A1
H/C	1.92 - 1.93
AROM (%)	18.1 - 19.3

MANUFACTURER: GE Transportation  
TEST ORGANIZATION: Peebles Test Operation  
TEST LOCATION: Site 4D  
TEST DATES: FROM 24 Jul 04 TO 25 Jul 04

### REMARKS

1. GE Reports R2004AE636 and R2006AE173
2. Block 1 Engines
3. Engine 994-110/1

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

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