



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E7  
UNIQUE ID NUMBER: 8GE119  
ENGINE TYPE: TF

BYPASS RATIO: 5.09  
PRESSURE RATIO ( $\pi_{oo}$ ): 27.3  
RATED OUTPUT ( $F_{oo}$ ) (kN): 83.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	11.1	94.3	46.3	9.0
AS % OF ORIGINAL LIMIT	56.4 %	79.9 %	48.9 %	36.3 %
AS % OF CAEP/2 LIMIT (NOx)			61.1 %	
AS % OF CAEP/4 LIMIT (NOx)			72.5 %	
AS % OF CAEP/6 LIMIT (NOx)			81.3 %	
AS % OF CAEP/8 LIMIT (NOx)			95.5 %	

### 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: end 2007 )  
- 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	0.871	0.01	0.52	20.45	7.01
CLIMB OUT	85	2.2	0.720	0.05	0.39	16.88	2.85
APPROACH	30	4.0	0.244	0.06	3.37	8.14	0.48
IDLE	7	26.0	0.088	4.3	44.93	3.72	0.76
LTO TOTAL FUEL (kg) or EMISSIONS (g)			328	601	6430	3341	-
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)				7.18	76.81	39.91	7.01
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				1.1	5.1	1.5	1.2
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				6.8-7.5	74.4-78.4	39.3-40.5	6.0-8.0

### 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
AHS 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)