



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E2A1  
UNIQUE ID NUMBER: 01P08GE203  
COMBUSTOR: SAC  
ENGINE TYPE: TF  
BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{00}$ ): 25.1  
RATED THRUST ( $F_{00}$ ) (kN): 75.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (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 (NO <sub>x</sub> )			58.4	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			68.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			74.6	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			86.4	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### 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 (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	0.769	0.04	0.41	17.98	3.9
CLIMB OUT	85	2.2	0.640	0.05	0.38	15.26	1.7
APPROACH	30	4.0	0.222	0.10	4.46	7.64	0.4
IDLE	7	26.0	0.084	5.44	50.81	3.56	0.9
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 <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				9.6	91.6	36.3	3.9
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				9-9.9	88.5-93.4	35.8-36.9	3.2-5

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT All POWER SETTINGS  
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 A-1
H/C	1.92-1.93
AROM (%)	18.1-19.3

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: Peebles Test Operation  
TEST LOCATION: Site 4D  
TEST DATES: 24/07/2004-25/07/2004

### REMARKS

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

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)