



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-8E5A1  
UNIQUE ID NUMBER: 01P08GE198  
COMBUSTOR: LEC  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{00}$ ): 24.1  
RATED THRUST ( $F_{00}$ ) (kN): 62.5

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.4	39.8	44.9	17.6
AS % OF ORIGINAL LIMIT	2.3	33.7	50.9	65.2
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			63.6	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			71.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			75.9	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			85.4	

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

x NEWLY MANUFACTURED ENGINES  
- 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)  
- 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	0.691	0.02	0.71	15.81	13.6
CLIMB OUT	85	2.2	0.563	0.02	0.57	13.15	3.5
APPROACH	30	4.0	0.188	0.06	4.05	11.06	0.0
IDLE	7	26.0	0.066	0.13	17.30	4.70	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			251	18	2026	2419	-
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)				0.3	32.4	38.7	13.6
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)							

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.1-98.1
TEMPERATURE (K)	284-292
ABS HUMIDITY (kg/kg)	0.0047-0.00727

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	18

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: CF6 Eval Engineering  
TEST LOCATION: PTO Site 3B Peebles  
TEST DATES: 27/01/2002-28/01/2002

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE REPORT R2001AE078
2. Engine S/N 193111
3. Data corrected per ICAO Annex 16, Vol 2, Part III, Appendix 3
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e)

Compliance with Fuel Venting requirements:

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