



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80E1A2  
UNIQUE ID NUMBER: 1GE033  
COMBUSTOR:  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{00}$ ): 33.1  
RATED THRUST ( $F_{00}$ ) (kN): 287.0

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	15.3	61.9	62.1	11.6
AS % OF ORIGINAL LIMIT	78.2	52.4	58.5	65.5
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			73.1	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			84.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			95.3	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			110.3	

### 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)  
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	2.767	0.05	0.38	39.29	9.9
CLIMB OUT	85	2.2	2.245	0.07	0.34	28.02	7.2
APPROACH	30	4.0	0.724	0.14	1.61	9.91	0.0
IDLE	7	26.0	0.228	9.37	42.67	4.53	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			942	3384	15602	16203	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				11.8	54.3	56.4	9.9
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				4.8	6.2	1.3	2.8
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				7.4-16	46.3-57.3	54.7-57.3	7.5-12.7

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.7-98
TEMPERATURE (K)	292-296
ABS HUMIDITY (kg/kg)	0.012-0.015

### FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	16.4

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: CF6 Eval Engineering  
TEST LOCATION: Sites IIIC & IIID, Peebles Test Facility  
TEST DATES: 08/06/1992-04/08/1992

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

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

### REMARKS

1. Ref GE Report R90AEB188.
2. Engine S/N's 810-101/1 and 810-104/1.
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

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