



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80A3  
UNIQUE ID NUMBER: 1GE013  
COMBUSTOR:  
ENGINE TYPE: TF

BYPASS RATIO: 5.0  
PRESSURE RATIO ( $\pi_{00}$ ): 30.1  
RATED THRUST ( $F_{00}$ ) (kN): 217.8

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	11.6	41.7	64.0	15.6
AS % OF ORIGINAL LIMIT	59.2	35.3	63.9	81.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			79.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			95.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			108.2	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			127.2	

### DATA STATUS

x PRE-REGULATION  
- CERTIFICATION  
x 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	2.254	0.30	1.00	29.60	12.0
CLIMB OUT	85	2.2	1.885	0.37	1.10	26.60	10.0
APPROACH	30	4.0	0.641	0.45	2.80	10.80	2.0
IDLE	7	26.0	0.150	6.28	28.20	3.40	2.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			731	1659	7398	11878	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	1
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				7.5	34.0	55.2	12.0
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				1.0	0.4	2.9	
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				6.87-8.64	33.6-34.3	52.1-57.7	

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.1-99.8
TEMPERATURE (K)	275-277
ABS HUMIDITY (kg/kg)	0.002

### FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	17.1

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: Production Engine Test  
TEST LOCATION: Production Test Cells M35  
TEST DATES: 11/11/1983-12/11/1983

### REMARKS

1. Ref GE Report no R83AEB635.
2. Engine S/N 580214.
3. Smoke from Engine S/N 580005, report R81AEG513.
4. With approval of US FAA, idle power data were only acquired at the engine design setting of 3.69%.

Compliance with Fuel Venting requirements:

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