



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80C2B1  
UNIQUE ID NUMBER: 1GE022  
COMBUSTOR:  
ENGINE TYPE: TF  
BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{eo}$ ): 30.1  
RATED THRUST ( $F_{eo}$ ) (kN): 249.0

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>eo</sub> (g/kN) or SN	15.5	63.1	46.0	8.3
AS % OF ORIGINAL LIMIT	78.9	53.4	45.9	45.2
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			57.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			68.4	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			77.7	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			91.5	

### 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>eo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	2.285	0.08	0.58	28.11	7.1
CLIMB OUT	85	2.2	1.873	0.09	0.55	21.26	4.5
APPROACH	30	4.0	0.616	0.21	2.37	8.83	2.3
IDLE	7	26.0	0.196	9.46	43.22	3.73	3.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			797	2953	13757	10400	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>eo</sub> (g/kN) or AVERAGE SN (MAX)				11.9	55.4	41.8	7.1
SIGMA (D <sub>p</sub> /F <sub>eo</sub> in g/kN, or SN)				1.3	3.0	2.0	1.1
RANGE (D <sub>p</sub> /F <sub>eo</sub> in g/kN, or SN)				10.77-13.2	52.78-57.98	40.17-44.18	5.7-7.6

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4-97.8
TEMPERATURE (K)	287-296
ABS HUMIDITY (kg/kg)	0.0084-0.014

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	15.3

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: CF6 Eval Engineering  
TEST LOCATION: Site IIIC, PTO, Peebles, Ohio  
TEST DATES: 29/05/1985-03/06/1985

### REMARKS

1. Ref GE Report R84AEB152, Addendum 1 (Dec 1986).
2. Engine S/N's 690105 and 690005/2.

Compliance with Fuel Venting requirements:

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