



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80E1A2  
UNIQUE ID NUMBER: 2GE051  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{00}$ ): 33.1  
RATED OUTPUT ( $F_{00}$ ) (kN): 287.04

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	2.2	25.9	52.9	8.0
AS % OF ORIGINAL LIMIT	11.2 %	21.9 %	49.8 %	44.9 %
AS % OF CAEP/2 LIMIT (NOx)			62.2 %	
AS % OF CAEP/4 LIMIT (NOx)			72.2 %	
AS % OF CAEP/6 LIMIT (NOx)			81.1 %	
AS % OF CAEP/8 LIMIT (NOx)			93.9 %	

### 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

### MEASURED DATA

MODE	POWER SETTING (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.767	0.04	0.05	28.72	6.8
CLIMB OUT	85	2.2	2.245	0.04	0.04	22.01	6.5
APPROACH	30	4.0	0.724	0.11	1.85	12.66	0
IDLE	7	26.0	0.228	1.25	17.37	4.88	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			942	480	6517	13796	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				1.68	22.71	48.07	6.8
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				0.187	1.3	0.574	1.26
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				1.36-1.80	19.0-22.0	45.1-46.4	6.1-8.9

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.61-98.15
TEMPERATURE (K)	279-293
ABS HUMIDITY (kg/kg)	.00457-.00743

### FUEL

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

MANUFACTURER: GE  
TEST ORGANIZATION: CF6 Eval Engineering  
TEST LOCATION: Site IIIB, PTO Peebles  
TEST DATES: FROM 13 Jan 95 TO 17 Jan 95

### REMARKS

1. Ref GE report TM95-17.
2. Engine S/N 704/233 & 704/234
3. 1862M39 combustor

If REVISED, this data supersedes databank UID  
Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)