



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80E1A4  
UNIQUE ID NUMBER: 4GE080  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{00}$ ): 34.5  
RATED OUTPUT ( $F_{00}$ ) (kN): 297.44

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	16.3	53.1	66.7	11.8
AS % OF ORIGINAL LIMIT	83.1 %	45.0 %	61.2 %	67.4 %
AS % OF CAEP/2 LIMIT (NOx)			76.5 %	
AS % OF CAEP/4 LIMIT (NOx)			87.8 %	
AS % OF CAEP/6 LIMIT (NOx)			98.2 %	
AS % OF CAEP/8 LIMIT (NOx)			112.8 %	

### 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  
- OUT OF SERVICE

### MEASURED DATA

MODE	POWER SETTING (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
TAKE-OFF	100	0.7	2.904	0.06	0.34	43.15	10.09
CLIMB OUT	85	2.2	2.337	0.07	0.3	30.3	8.06
APPROACH	30	4.0	0.744	0.18	1.33	10.13	0
IDLE	7	26.0	0.227	10.35	38.09	4.62	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			963	3726	13860	18055	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				12.52	46.58	60.69	10.09
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-

### 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 Evaluation Engineering  
TEST LOCATION: Site IIIB, PTO, Ohio  
TEST DATES: FROM 13 Jan 95 TO 17 Jan 95

### REMARKS

- GE Report TM95-17.
- Engine S/N 704/233 & 704/234
- Standard combustor 3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16, Volume II.
- NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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