



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

**\*\* DATA SUPERSEDED \*\* SEE SHEET: 1GE024**

ENGINE IDENTIFICATION: CF6-80C2B1F BYPASS RATIO: 5.1  
UNIQUE ID NUMBER: 1GE023 PRESSURE RATIO ( $\pi_{oo}$ ): 30.13  
ENGINE TYPE: TF RATED OUTPUT ( $F_{oo}$ ) (kN): 254.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	16.2	65.0	46.4	8.3
AS % OF ORIGINAL LIMIT	82.5 %	55.1 %	46.3 %	45.4 %
AS % OF CAEP/2 LIMIT (NOx)			57.8 %	
AS % OF CAEP/4 LIMIT (NOx)			68.9 %	
AS % OF CAEP/6 LIMIT (NOx)			78.3 %	
AS % OF CAEP/8 LIMIT (NOx)			92.1 %	

### 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 (% $F_{oo}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.353	0.08	0.52	28.06	7.1
CLIMB OUT	85	2.2	1.913	0.09	0.52	21.34	4.8
APPROACH	30	4.0	0.632	0.2	2.19	8.97	2.3
IDLE	7	26.0	0.205	9.68	43.71	3.74	3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			823	3157	14493	10718	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				12.43	57.09	42.17	7.1
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				1.3	3.1	2.02	1.1
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				11.31-13.70	54.41-59.98	40.58-44.60	5.7-7.5

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.40-97.82
TEMPERATURE (K)	287 - 296
ABS HUMIDITY (kg/kg)	.0084-.0140

### FUEL

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

MANUFACTURER: GE Aircraft Engines  
TEST ORGANIZATION: CF6 Evaluation Engineering  
TEST LOCATION: Site IIIC, PTO, Peebles, Ohio  
TEST DATES: FROM 29 May 85 TO 03 Jun 85

### REMARKS

1. Ref GE Report R84AEB152.
2. Engine S/N's 690105 and 690005/2.

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

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