



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80C2A5  
UNIQUE ID NUMBER: 1GE020  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{oo}$ ): 31.58  
RATED OUTPUT ( $F_{oo}$ ) (kN): 267.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	14.5	59.6	54.2	9.1
AS % OF ORIGINAL LIMIT	73.8 %	50.5 %	52.5 %	50.6 %
AS % OF CAEP/2 LIMIT (NOx)			65.6 %	
AS % OF CAEP/4 LIMIT (NOx)			77.2 %	
AS % OF CAEP/6 LIMIT (NOx)			87.2 %	
AS % OF CAEP/8 LIMIT (NOx)			101.7 %	

### DATA STATUS

- 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

### 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	2.581	0.07	0.52	34.38	7.8
CLIMB OUT	85	2.2	2.082	0.08	0.52	22.86	5.4
APPROACH	30	4.0	0.687	0.2	1.93	9.11	2.3
IDLE	7	26.0	0.207	8.99	41.65	3.79	3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			871	2966	13967	12735	-
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)				11.12	52.35	49.25	7.8
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				1.3	3.03	2.23	1.3
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				10.02-12.49	49.73-55.20	46.22-49.73	6.1-8.4

### 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)