



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

**\*\* DATA SUPERSEDED \*\* SEE SHEET: 1GE016**

ENGINE IDENTIFICATION: CF6-80C2A2      BYPASS RATIO: 5.1  
UNIQUE ID NUMBER: 1GE015      PRESSURE RATIO ( $\pi_{oo}$ ): 28  
ENGINE TYPE: TF      RATED OUTPUT ( $F_{oo}$ ) (kN): 233.35

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	18.0	70.1	45.9	7.6
AS % OF ORIGINAL LIMIT	92.0 %	59.4 %	47.8 %	40.6 %
AS % OF CAEP/2 LIMIT (NOx)			59.7 %	
AS % OF CAEP/4 LIMIT (NOx)			71.9 %	
AS % OF CAEP/6 LIMIT (NOx)			81.7 %	
AS % OF CAEP/8 LIMIT (NOx)			97.0 %	

### 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	2.117	0.14	0.58	27.9	6.5
CLIMB OUT	85	2.2	1.745	0.11	0.56	20.71	4
APPROACH	30	4.0	0.580	0.25	3.04	9.52	2.3
IDLE	7	26.0	0.189	10.74	46.65	3.91	3.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			753	3239	14358	9729	-
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)				13.86	61.53	41.7	6.5
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				1.25	3.08	0.42	1
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				12.42-14.60	57.97-63.34	41.31-42.14	5.4-7.3

### 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 R85AEB486.
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)