



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10A16  
UNIQUE ID NUMBER: 11GE140  
ENGINE TYPE: TF

BYPASS RATIO: 5.7  
PRESSURE RATIO ( $\pi_{oo}$ ): 25.1  
RATED OUTPUT ( $F_{oo}$ ) (kN): 76.9

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	18.4	111.9	40.6	14.2
AS % OF ORIGINAL LIMIT	93.9 %	94.8 %	45.0 %	55.8 %
AS % OF CAEP/2 LIMIT (NOx)			56.3 %	
AS % OF CAEP/4 LIMIT (NOx)			65.8 %	
AS % OF CAEP/6 LIMIT (NOx)			73.0 %	
AS % OF CAEP/8 LIMIT (NOx)			84.3 %	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
x 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 (% $F_{oo}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.765	0.06	0.49	17.87	11.06
CLIMB OUT	85	2.2	0.632	0.08	0.34	15.04	5.08
APPROACH	30	4.0	0.219	0.14	3.98	7.97	0.11
IDLE	7	26.0	0.083	6.96	52.05	3.45	0.39
LTO TOTAL FUEL (kg) or EMISSIONS (g)			298	919	7014	2696	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				11.9	91.2	35	11.1
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				0.63	1.9	0.41	0.62
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				11.2-12.3	89.4-93.2	34.6-35.4	10.5-11.7

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.2-97.9
TEMPERATURE (K)	296-300
AHS HUMIDITY (kg/kg)	0.0099 - 0.0127

### FUEL

SPEC	Jet A1
H/C	1.92
AROM (%)	16.3% - 17.4%

MANUFACTURER: GE Transportation  
TEST ORGANIZATION: Peebles Test Operation  
TEST LOCATION: Site 4D  
TEST DATES: FROM 05 Sep 06 TO 10 Sep 06

### REMARKS

1. GE Report R2007AE480Engine 994-251/1
2. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
3. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e)

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

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