



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-3A1
UNIQUE ID NUMBER: 1GE035
ENGINE TYPE: TF

BYPASS RATIO: 6.25
PRESSURE RATIO (π_{00}): 19.7
RATED OUTPUT (F_{00}) (kN): 41.01

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	11.8	100.4	32.2	28.2
AS % OF ORIGINAL LIMIT	60.0 %	85.1 %	40.6 %	93.3 %
AS % OF CAEP/2 LIMIT (NOx)			50.7 %	
AS % OF CAEP/4 LIMIT (NOx)			53.2 %	
AS % OF CAEP/6 LIMIT (NOx)			54.5 %	
AS % OF CAEP/8 LIMIT (NOx)			58.9 %	

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
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.407	0.06	0	11.61	21.9
CLIMB OUT	85	2.2	0.334	0.06	0	10.14	9.2
APPROACH	30	4.0	0.119	0.13	1.9	6.86	3.1
IDLE	7	26.0	0.050	3.95	42.6	3.82	3.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			167	313	3350	1137	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{00} (g/kN) or AVERAGE SN (MAX)				7.63	81.8	27.8	21.9
SIGMA (D_p/F_{00} in g/kN, or SN)				0.2	3.25	1.61	0.25
RANGE (D_p/F_{00} in g/kN, or SN)				7.41-7.78	79.2-85.5	26.0-29.0	21.7-22.2

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.6-102.9
TEMPERATURE (K)	275.5-281.1
ABS HUMIDITY (kg/kg)	.0016-.0039

FUEL

SPEC	JP-5
H/C	1.92
AROM (%)	20.3

MANUFACTURER: GE Aircraft Engines
TEST ORGANIZATION: GE Aircraft Engines, Lynn, MA
TEST LOCATION: Lynn Cell 121
TEST DATES: FROM 21 Mar 91 TO 23 Mar 91

REMARKS

1. Ref GE Report R91AEB051 (1/92 rev).
2. Engine S/N 807-005.
3. LEC II combustor.
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. 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:

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