



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-77B
UNIQUE ID NUMBER: 9GE125
ENGINE TYPE: TF

BYPASS RATIO: 8.52
PRESSURE RATIO (π_{00}): 35.8
RATED OUTPUT (F_{00}) (kN): 366.75

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	5.5	47.9	61.3	2.0
AS % OF ORIGINAL LIMIT	28.0 %	40.6 %	54.9 %	11.8 %
AS % OF CAEP/2 LIMIT (NOx)			68.7 %	
AS % OF CAEP/4 LIMIT (NOx)			78.0 %	
AS % OF CAEP/6 LIMIT (NOx)			86.9 %	
AS % OF CAEP/8 LIMIT (NOx)			99.3 %	

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_{00})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.830	0.03	0.31	40.83	1.02
CLIMB OUT	85	2.2	2.309	0.03	0.32	32.78	0.82
APPROACH	30	4.0	0.745	0.07	2.71	13.87	1.41
IDLE	7	26.0	0.260	3.16	33.81	5.12	1.51
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1007	1307	14314	19394	-
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)				3.56	39.03	52.88	1.51
SIGMA (D_p/F_{00} in g/kN, or SN)				0.3	1.06	0.71	0.76
RANGE (D_p/F_{00} in g/kN, or SN)				3.36-3.91	38.29-40.24	52.14-53.57	0.86-2.36

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.41 - 98.66
TEMPERATURE (K)	277.2 - 281.3
ABS HUMIDITY (kg/kg)	0.0015 - 0.0043

FUEL

SPEC	Jet A1
H/C	-
AROM (%)	15.0 - 16.0

MANUFACTURER: GE
TEST ORGANIZATION: General Electric Peebles Test Operation
TEST LOCATION: Site 6A
TEST DATES: FROM 30 Nov 07 TO 08 Dec 07

REMARKS

1. GE Aviation Report R2007AE851
2. Engine serial number 900-505/1
3. Turbomachinery incorporating 3D aero
4. Performance Enhanced Combustor (PEC)
5. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
6. NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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