



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-77B
UNIQUE ID NUMBER: 6GE088
ENGINE TYPE: TF

BYPASS RATIO: 8.52
PRESSURE RATIO (π_{00}): 35.1
RATED OUTPUT (F_{00}) (kN): 363.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	1.0	23.1	63.0	3.7
AS % OF ORIGINAL LIMIT	5.3 %	19.6 %	57.1 %	22.4 %
AS % OF CAEP/2 LIMIT (NOx)			71.4 %	
AS % OF CAEP/4 LIMIT (NOx)			81.5 %	
AS % OF CAEP/6 LIMIT (NOx)			91.0 %	
AS % OF CAEP/8 LIMIT (NOx)			104.4 %	

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	2.806	0.04	0.12	40.91	2.9
CLIMB OUT	85	2.2	2.301	0.03	0.15	32.09	1.8
APPROACH	30	4.0	0.768	0.06	1.55	15.19	2.9
IDLE	7	26.0	0.269	0.52	15.52	5.66	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1026	243	6858	19743	-
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)				0.67	18.85	54.33	2.9
SIGMA (D_p/F_{00} in g/kN, or SN)				0.056	0.47	0.187	0.391
RANGE (D_p/F_{00} in g/kN, or SN)				0.60-0.70	18.30-19.15	54.14-54.52	2.60-3.31

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.3 - 98.2
TEMPERATURE (K)	279.1 - 281.6
AWS HUMIDITY (kg/kg)	.0022 - .0064

FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	17.4

MANUFACTURER: GE
TEST ORGANIZATION: GE90 Eval Engineering
TEST LOCATION: Site IIID, PTO, Peebles, OH
TEST DATES: FROM 09 Jan 00 TO 12 Jan 00

REMARKS

1. Ref. GE Report R97AEB298,
2. Engine S/N 900326
3. Turbomachinery incorporating 3D aero
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 d) (CAEP/6)

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

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