



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-77B
UNIQUE ID NUMBER: 3GE059
ENGINE TYPE: TF

BYPASS RATIO: 8.6
PRESSURE RATIO (π_{00}): 35.2
RATED OUTPUT (F_{00}) (kN): 363.42

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	6.2	63.0	62.1	11.2
AS % OF ORIGINAL LIMIT	31.6 %	53.4 %	56.3 %	67.4 %
AS % OF CAEP/2 LIMIT (NOx)			70.3 %	
AS % OF CAEP/4 LIMIT (NOx)			80.2 %	
AS % OF CAEP/6 LIMIT (NOx)			89.5 %	
AS % OF CAEP/8 LIMIT (NOx)			102.6 %	

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_{00})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.840	0.07	0.09	45.53	0
CLIMB OUT	85	2.2	2.320	0.06	0.13	35.68	0
APPROACH	30	4.0	0.770	0.8	6.39	12.46	0
IDLE	7	26.0	0.300	3.83	43.32	5.73	9.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1071	1938	21173	21308	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{00} (g/kN) or AVERAGE SN (MAX)				5.33	58.21	58.62	10.2
SIGMA (D_p/F_{00} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{00} in g/kN, or SN)				4.58-5.92	55.7-60.1	57.5-60.5	9.4-10.2

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.38-98.59
TEMPERATURE (K)	274-299
ABS HUMIDITY (kg/kg)	.001-.0073

FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.2

MANUFACTURER: GE
TEST ORGANIZATION: GE90 Eval Engineering
TEST LOCATION: Site IVD & 6, PTO, Peebles, Ohio, USA
TEST DATES: FROM 24 Feb 95 TO 28 Jul 95

REMARKS

- GE Report TM95-17.
- Engine S/N 704/223 & 704/234
- DAC I combustor

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

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