



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-90B
UNIQUE ID NUMBER: 3GE065
ENGINE TYPE: TF

BYPASS RATIO: 8.36
PRESSURE RATIO (π_{oo}): 39.8
RATED OUTPUT (F_{oo}) (kN): 418.13

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.6	16.1	72.1	0.6
AS % OF ORIGINAL LIMIT	3.1 %	13.6 %	60.3 %	3.8 %
AS % OF CAEP/2 LIMIT (NOx)			75.4 %	
AS % OF CAEP/4 LIMIT (NOx)			83.3 %	
AS % OF CAEP/6 LIMIT (NOx)			91.8 %	
AS % OF CAEP/8 LIMIT (NOx)			103.4 %	

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)
x OUT OF PRODUCTION (DATE: -)
- 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	3.414	0.04	0.15	53.21	2
CLIMB OUT	85	2.2	2.772	0.04	0.15	39.13	1.8
APPROACH	30	4.0	0.899	0.07	0.98	17.47	1.8
IDLE	7	26.0	0.300	0.39	12.7	5.86	1.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1193	218	6231	28459	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				5	5	5	5
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				0.52	14.91	68.08	0
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				0.25-0.84	13.0-16.7	64.1-71.9	0.0-2.03

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.52-98.62
TEMPERATURE (K)	283-301
ABS HUMIDITY (kg/kg)	.0036-.0151

FUEL

SPEC	Jet A
H/C	1.91-1.94
AROM (%)	18.1-19.3

MANUFACTURER: GE
TEST ORGANIZATION: GE90 Eval Engineering
TEST LOCATION: Site IIID, PTO, Peebles, Ohio, USA
TEST DATES: FROM 24 Apr 97 TO 19 Jun 97

REMARKS

- GE Report R96AEB292.
- Engine S/S 900-173, 900-166 & 900-167
- DAC II combustor

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

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