



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-90B
UNIQUE ID NUMBER: 9GE127
COMBUSTOR: PEC
ENGINE TYPE: TF

BYPASS RATIO: 8.4
PRESSURE RATIO (π_{00}): 39.9
RATED THRUST (F_{00}) (kN): 419.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	4.3	39.8	73.7	3.1
AS % OF ORIGINAL LIMIT	21.7	33.7	61.5	19.5
AS % OF CAEP/2 LIMIT (NO _x)			76.9	
AS % OF CAEP/4 LIMIT (NO _x)			84.9	
AS % OF CAEP/6 LIMIT (NO _x)			93.6	
AS % OF CAEP/8 LIMIT (NO _x)			105.5	

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)

x OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	3.380	0.04	0.30	49.21	2.4
CLIMB OUT	85	2.2	2.735	0.03	0.31	39.07	0.8
APPROACH	30	4.0	0.852	0.06	1.88	15.44	1.0
IDLE	7	26.0	0.280	2.59	29.89	5.48	1.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1144	1159	13593	26639	-
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)				2.8	32.4	63.5	2.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	1.1	0.6	0.8
RANGE (D _p /F ₀₀ in g/kN, or SN)				2.59-3.06	31.6-33.63	62.99-64.13	1.56-3.24

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 (% CORE FLOW)

AT All POWER SETTINGS
AT All POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.7
TEMPERATURE (K)	277.2-281.3
ABS HUMIDITY (kg/kg)	0.0015-0.0043

FUEL

SPEC	Jet A-1
H/C	
AROM (%)	15-16

MANUFACTURER: General Electric Company
TEST ORGANIZATION: General Electric Peebles Test Operation
TEST LOCATION: Site 6A
TEST DATES: 30/11/2007-08/12/2007

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

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. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)