



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-115B BYPASS RATIO: 7.1
UNIQUE ID NUMBER: 01P21GE217 PRESSURE RATIO (π_{o0}): 42.9
COMBUSTOR: DAC
ENGINE TYPE: TF RATED THRUST (F_{o0}) (kN): 513.9

REGULATORY DATA ** DATA SUPERSEDED ** SEE FOLLOWING UID FOR REVISED DATA: 07P27GE240

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F _{o0} (g/kN) or SN	5.0	42.2	73.0	4.0
AS % OF ORIGINAL LIMIT	25.4	35.8	58.0	26.3
AS % OF CAEP/2 LIMIT (NO _x)			72.5	
AS % OF CAEP/4 LIMIT (NO _x)			78.6	
AS % OF CAEP/6 LIMIT (NO _x)			86.0	
AS % OF CAEP/8 LIMIT (NO _x)			96.1	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

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

MEASURED DATA

MODE	POWER SETTING (%F _{o0})	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	4.600	0.03	0.13	51.07	3.4
CLIMB OUT	85	2.2	3.566	0.02	0.14	36.44	2.2
APPROACH	30	4.0	1.073	0.05	2.16	16.17	1.6
IDLE	7	26.0	0.341	3.64	34.58	5.51	1.3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1453	1964	19039	34114	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				6	6	6	6
AVERAGE D _p /F _{o0} (g/kN) or AVERAGE SN (MAX)				3.8	37.1	66.4	3.4
SIGMA (D _p /F _{o0} in g/kN, or SN)				0.3	1.3	1.1	1.6
RANGE (D _p /F _{o0} in g/kN, or SN)				3.51-4.11	35.36-38.56	64.6-67.83	0.71-4.54

ACCESSORY LOADS

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

AT All POWER SETTINGS
AT All POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.1-98.3
TEMPERATURE (K)	290.7-298.7
ABS HUMIDITY (kg/kg)	0.0051-0.0094

FUEL

SPEC	Jet A
H/C	1.9-1.96
AROM (%)	11.9-16.4

MANUFACTURER: General Electric Company
TEST ORGANIZATION: General Electric Company
TEST LOCATION: PTO, Ohio
TEST DATES: 23/11/2003-26/05/2016

NO_x REGULATION PARAGRAPH

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

REMARKS

- Engine S/N 906-107/01 and ESN 901-007/01, GE Report R2019EA459
- Engine S/N 906-107/01 smoke numbers corrected for fuel aromatics volume, GE Report R2003AE462
- Smoke Number for each LTO mode is average of max SN for test points around that power setting
- Average SN (MAX) is the average of the maximum smoke number point from each run.
- Certification in accordance with Part III, Chapter 2, of Amendment 9 of ICAO Annex 16 Vol. II.

Compliance with Fuel Venting requirements:

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