



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B58/P1
UNIQUE ID NUMBER: 12GE149
ENGINE TYPE: TF

BYPASS RATIO: 9.2
PRESSURE RATIO (π_{oo}): 37.1
RATED OUTPUT (F_{oo}) (kN): 271.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	1.6	34.1	28.5	9.8
AS % OF ORIGINAL LIMIT	8.1 %	28.9 %	25.0 %	54.4 %
AS % OF CAEP/2 LIMIT (NOx)			31.2 %	
AS % OF CAEP/4 LIMIT (NOx)			35.1 %	
AS % OF CAEP/6 LIMIT (NOx)			39.0 %	
AS % OF CAEP/8 LIMIT (NOx)			44.3 %	

DATA STATUS

- PRE-REGULATION
x CERTIFICATION
- REVISED (SEE REMARKS)

TEST ENGINE STATUS

x 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)
- OUT OF PRODUCTION
- 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	2.033	0.02	0.24	18.86	0
CLIMB OUT	85	2.2	1.683	0.02	0.8	11.67	0
APPROACH	30	4.0	0.567	0.07	3.6	8.48	2.6
IDLE	7	26.0	0.200	0.84	21.97	4.22	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			756	278	7548	6673	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				1.02	27.82	24.59	7.6
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.06	0.58	0.03	2
RANGE (D_p/F_{oo} in g/kN, or SN)				0.97-1.09	27.29-28.44	24.58-24.63	5.26-8.96

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4 to 98.6
TEMPERATURE (K)	280.5 to 299.0
AHS HUMIDITY (kg/kg)	0.00345 to 0.00716

FUEL

SPEC	JET A
H/C	1.89
AROM (%)	15.3

MANUFACTURER: GE Aviation
TEST ORGANIZATION: GE Aviation
TEST LOCATION: PTO, Ohio, USA
TEST DATES: FROM 29 Sep 09 TO 03 Oct 09

REMARKS

1. Ref. GE REPORT R2010AE595
2. Engine S/N 956-108/2
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

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

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