



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B54/P1
UNIQUE ID NUMBER: 12GE148
ENGINE TYPE: TF

BYPASS RATIO: 9.4
PRESSURE RATIO (π_{00}): 35.1
RATED OUTPUT (F_{00}) (kN): 255.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	2.0	38.6	25.2	9.8
AS % OF ORIGINAL LIMIT	10.1 %	32.7 %	22.9 %	53.5 %
AS % OF CAEP/2 LIMIT (NOx)			28.6 %	
AS % OF CAEP/4 LIMIT (NOx)			32.7 %	
AS % OF CAEP/6 LIMIT (NOx)			36.5 %	
AS % OF CAEP/8 LIMIT (NOx)			41.8 %	

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_{00})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.893	0.02	0.34	15.72	0
CLIMB OUT	85	2.2	1.569	0.02	1.43	9.71	0
APPROACH	30	4.0	0.536	0.08	4.09	8.13	1.7
IDLE	7	26.0	0.195	1.02	23.61	4.11	0.01
LTO TOTAL FUEL (kg) or EMISSIONS (g)			719	326	8018	5556	-
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)				1.28	31.4	21.76	7.6
SIGMA (D_p/F_{00} in g/kN, or SN)				0.08	0.68	0.05	2
RANGE (D_p/F_{00} in g/kN, or SN)				1.20-1.37	30.78-32.13	21.71-21.80	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
ABS 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)