



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

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

BYPASS RATIO: 9.4  
PRESSURE RATIO ( $\pi_{00}$ ): 35.1  
RATED THRUST ( $F_{00}$ ) (kN): 255.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (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 (NO <sub>x</sub> )			28.6	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			32.7	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			36.5	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			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)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	1.893	0.02	0.34	15.72	0.0
CLIMB OUT	85	2.2	1.569	0.02	1.43	9.71	0.0
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	0.0
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 <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				1.3	31.4	21.8	7.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.1	0.7	0.1	2.0
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				1.2-1.37	30.78-32.13	21.71-21.8	5.26-8.96

### ACCESSORY LOADS

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

AT All POWER SETTINGS  
AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4-98.6
TEMPERATURE (K)	280.5-299
ABS HUMIDITY (kg/kg)	0.00345-0.00716

### FUEL

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

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: General Electric Company  
TEST LOCATION: PTO, Ohio  
TEST DATES: 29/09/2009-03/10/2009

### NO<sub>x</sub> REGULATION PARAGRAPH

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

### 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. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

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