



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B58/P2  
UNIQUE ID NUMBER: 01P17GE205  
COMBUSTOR: TAPS  
ENGINE TYPE: TF  
BYPASS RATIO: 9.2  
PRESSURE RATIO ( $\pi_{00}$ ): 37.5  
RATED THRUST ( $F_{00}$ ) (kN): 271.3

### REGULATORY DATA

| CHARACTERISTIC VALUE:                        | HC  | CO   | NO <sub>x</sub> | SMOKE NUMBER |
|--|-----|------|-----------------|--------------|
| D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN | 1.1 | 26.0 | 31.7            | 0.8          |
| AS % OF ORIGINAL LIMIT                       | 5.7 | 22.0 | 27.6            | 4.2          |
| AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )      |     |      | 34.5            |              |
| AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )      |     |      | 38.7            |              |
| AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )      |     |      | 42.9            |              |
| AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )      |     |      | 48.7            |              |

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  
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 (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            | 2.023            | 0.02      | 0.18        | 20.43           | 0.1          |
| CLIMB OUT  | 85                                | 2.2            | 1.668            | 0.02      | 0.93        | 13.27           | 0.1          |
| APPROACH   | 30                                | 4.0            | 0.558            | 0.05      | 2.52        | 9.67            | 0.1          |
| IDLE   | 7                                 | 26.0           | 0.203            | 0.58      | 16.39       | 4.66            | 0.1          |
| LTO TOTAL FUEL (kg) or EMISSIONS (g)                               |                                   |                | 756              | 197       | 5750        | 7426            | -            |
| 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) |                                   |                |                  | 0.7       | 21.2        | 27.4            | 0.6          |
| SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)             |                                   |                |                  | 0.1       | 0.0         | 0.1             | 0.3          |
| RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)             |                                   |                |                  | 0.66-0.78 | 21.12-21.21 | 27.24-27.5      | 0.35-0.97    |

### ACCESSORY LOADS

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

AT All POWER SETTINGS  
AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

|                      |                 |
|----------------------|-----------------|
| BAROMETER (kPa)      | 98.1-98.5       |
| TEMPERATURE (K)      | 295.1-298.8     |
| ABS HUMIDITY (kg/kg) | 0.01189-0.01439 |

### FUEL

|          |       |
|----------|-------|
| SPEC     | Jet A |
| H/C      | 1.89  |
| AROM (%) | 15.4  |

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: General Electric Company  
TEST LOCATION: PTO, Ohio  
TEST DATES: 19/06/2012-21/06/2012

### 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 R2010AE907
2. Engine S/N 956-101/4
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)