



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-94B
UNIQUE ID NUMBER: 9GE128
ENGINE TYPE: TF

BYPASS RATIO: 8.33
PRESSURE RATIO (π_{00}): 40.82
RATED OUTPUT (F_{00}) (kN): 430.92

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NOx | SMOKE NUMBER |
|----------------------------|--------|--------|---------|--------------|
| D_p/F_{00} (g/kN) or SN | 4.1 | 38.4 | 76.8 | 3.9 |
| AS % OF ORIGINAL LIMIT | 20.7 % | 32.6 % | 63.1 % | 24.7 % |
| AS % OF CAEP/2 LIMIT (NOx) | | | 78.9 % | |
| AS % OF CAEP/4 LIMIT (NOx) | | | 86.6 % | |
| AS % OF CAEP/6 LIMIT (NOx) | | | 95.3 % | |
| AS % OF CAEP/8 LIMIT (NOx) | | | 107.0 % | |

DATA STATUS

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

TEST ENGINE STATUS

- 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 | 3.513 | 0.04 | 0.3 | 51.33 | 3.04 |
| CLIMB OUT | 85 | 2.2 | 2.831 | 0.03 | 0.31 | 40.63 | 1.01 |
| APPROACH | 30 | 4.0 | 0.876 | 0.06 | 1.74 | 15.81 | 0.95 |
| IDLE | 7 | 26.0 | 0.284 | 2.49 | 29.23 | 5.55 | 0.81 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 1175 | 1136 | 13495 | 28540 | - |
| 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) | | | | 2.64 | 31.32 | 66.23 | 3.04 |
| SIGMA (D_p/F_{00} in g/kN, or SN) | | | | 0.25 | 1.11 | 0.53 | 0.85 |
| RANGE (D_p/F_{00} in g/kN, or SN) | | | | 2.47-2.92 | 30.53-32.59 | 65.71-66.76 | 2.27-3.95 |

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-----------------|
| BAROMETER (kPa) | 98.41 - 98.66 |
| TEMPERATURE (K) | 277.2 - 281.3 |
| ABS HUMIDITY (kg/kg) | 0.0015 - 0.0043 |

FUEL

| | |
|----------|-------------|
| SPEC | Jet A1 |
| H/C | - |
| AROM (%) | 15.0 - 16.0 |

MANUFACTURER: GE
TEST ORGANIZATION: General Electric Peebles Test Operation
TEST LOCATION: Site 6A
TEST DATES: FROM 30 Nov 07 TO 08 Dec 07

REMARKS

1. GE Aviation Report R2007AE851
2. Engine serial number 900-505/1
3. Turbomachinery incorporating 3D aero
4. Performance Enhanced Combustor (PEC)
5. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
6. NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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