



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-80E1A1
UNIQUE ID NUMBER: 1GE032
ENGINE TYPE: TF

BYPASS RATIO: 5.1
PRESSURE RATIO (π_{00}): 32.44
RATED OUTPUT (F_{00}) (kN): 281.5

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NOx | SMOKE NUMBER |
|----------------------------|--------|--------|---------|--------------|
| D_p/F_{00} (g/kN) or SN | 15.7 | 61.9 | 59.1 | 11.4 |
| AS % OF ORIGINAL LIMIT | 80.1 % | 52.5 % | 56.3 % | 63.8 % |
| AS % OF CAEP/2 LIMIT (NOx) | | | 70.4 % | |
| AS % OF CAEP/4 LIMIT (NOx) | | | 82.2 % | |
| AS % OF CAEP/6 LIMIT (NOx) | | | 92.6 % | |
| AS % OF CAEP/8 LIMIT (NOx) | | | 107.5 % | |

DATA STATUS

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

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
- 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

MEASURED DATA

| MODE | POWER SETTING (% F_{00}) | TIME minutes | FUEL FLOW kg/s | EMISSIONS INDICES (g/kg) | | | SMOKE NUMBER |
|---|-----------------------------|--------------|----------------|--------------------------|-----------|-----------|--------------|
| TAKE-OFF | 100 | 0.7 | 2.702 | 0.05 | 0.38 | 37.87 | 9.7 |
| CLIMB OUT | 85 | 2.2 | 2.199 | 0.07 | 0.34 | 27.11 | 6.9 |
| APPROACH | 30 | 4.0 | 0.714 | 0.14 | 1.7 | 9.84 | 0 |
| IDLE | 7 | 26.0 | 0.226 | 9.68 | 43.24 | 4.47 | 0 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 928 | 3463 | 15678 | 15429 | - |
| NUMBER OF ENGINES | | | | 2 | 2 | 2 | 2 |
| NUMBER OF TESTS | | | | 3 | 3 | 3 | 3 |
| AVERAGE D_p/F_{00} (g/kN) or AVERAGE SN (MAX) | | | | 12.07 | 54.36 | 53.74 | 9.7 |
| SIGMA (D_p/F_{00} in g/kN, or SN) | | | | 5 | 8.8 | 1.1 | 2.7 |
| RANGE (D_p/F_{00} in g/kN, or SN) | | | | 7.5-16.4 | 46.7-62.3 | 52.4-54.5 | 7.4-12.3 |

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-------------|
| BAROMETER (kPa) | 97.66-97.99 |
| TEMPERATURE (K) | 292 - 296 |
| ABS HUMIDITY (kg/kg) | .012-.015 |

FUEL

| | |
|----------|-------|
| SPEC | Jet A |
| H/C | 1.89 |
| AROM (%) | 16.4 |

MANUFACTURER: GE Aircraft Engines
TEST ORGANIZATION: CF6 Evaluation Engineering
TEST LOCATION: Sites IIIC & IIID, Peebles Test Facility
TEST DATES: FROM 08 Jun 92 TO 04 Aug 92

REMARKS

1. Ref GE Report R90AEB188.
2. Engine S/N's 810-101/1 and 810-104/1.

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

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