# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-6D
UNIQUE ID NUMBER: 1GE001
ENGINE TYPE: TF

BYPASS RATIO: 5.9
PRESSURE RATIO ($\pi_{oo}$): 24.7
RATED OUTPUT ($F_{oo}$) (kN): 174.8

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NOx | SMOKE NUMBER |
|---|---|---|---|---|
| $D_p/F_{oo}$ (g/kN) or SN | 36.7 | 93.3 | 68.9 | 4.3 |
| AS % OF ORIGINAL LIMIT | 187.4 % | 79.1 % | 77.1 % | 20.9 % |
| AS % OF CAEP/2 LIMIT (NOx) | | | 96.4 % | |
| AS % OF CAEP/4 LIMIT (NOx) | | | 117.8 % | |
| AS % OF CAEP/6 LIMIT (NOx) | | | 133.8 % | |
| AS % OF CAEP/8 LIMIT (NOx) | | | 161.5 % | |

DATA STATUS

x PRE-REGULATION
- 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 ($\%F_{oo}$) | TIME minutes | FUEL FLOW kg/s | EMISSIONS INDICES (g/kg) HC | CO | NOx | SMOKE NUMBER |
|---|---|---|---|---|---|---|---|
| TAKE-OFF | 100 | 0.7 | 1.736 | 0.3 | 0.5 | 40 | 4 |
| CLIMB OUT | 85 | 2.2 | 1.431 | 0.3 | 0.5 | 32.6 | 3 |
| APPROACH | 30 | 4.0 | 0.484 | 0.7 | 6.5 | 11.4 | 3 |
| IDLE | 7 | 26.0 | 0.173 | 21 | 54.2 | 4.5 | 4 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 648 | 5821 | 15496 | 11611 | - |
| NUMBER OF ENGINES | | | | 7 | 7 | 7 | 7 |
| NUMBER OF TESTS | | | | 7 | 7 | 7 | 7 |
| AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX) | | | | 33.3 | 88.7 | 66.4 | 4 |
| SIGMA ($D_p/F_{oo}$ in g/kN, or SN) | | | | 3.5 | 6.9 | 2.3 | 2.2 |
| RANGE ($D_p/F_{oo}$ in g/kN, or SN) | | | | - | - | - | - |

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

| | |
|---|---|
| BAROMETER (kPa) | 99.15-100.46 |
| TEMPERATURE (K) | 280 - 301 |
| ABS HUMIDITY (kg/kg) | .003-.015 |

FUEL

| | |
|---|---|
| SPEC | Jet A |
| H/C | 1.93 |
| AROM (%) | 18.7 |

MANUFACTURER: GE Aircraft Engines
TEST ORGANIZATION: Production Engine Test
TEST LOCATION: Production Test Cells M34 & M35
TEST DATES: FROM 16 Aug 79 TO 19 Nov 79

REMARKS

1. Ref Report no FAA-EE-80-27 (GE Report R80AEG420)

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0 ('x' if complies, PR if pre-regulation)