



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-2-C5
UNIQUE ID NUMBER: 1CM003
COMBUSTOR:
ENGINE TYPE: TF
BYPASS RATIO: 6.0
PRESSURE RATIO (π_{00}): 23.5
RATED THRUST (F_{00}) (kN): 97.9

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F ₀₀ (g/kN) or SN | 6.0 | 82.5 | 46.3 | 7.7 |
| AS % OF ORIGINAL LIMIT | 30.4 | 69.9 | 53.2 | 32.4 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 66.5 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 81.7 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 92.9 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 113.0 | |

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 (DATE: -)

MEASURED DATA

| MODE | POWER SETTING (%F ₀₀) | TIME (minutes) | FUEL FLOW (kg/s) | HC | CO | NO _x | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|----------|-----------|-----------------|--------------|
| TAKE-OFF | 100 | 0.7 | 0.985 | 0.04 | 0.90 | 18.50 | 6.0 |
| CLIMB OUT | 85 | 2.2 | 0.819 | 0.05 | 0.90 | 16.00 | 3.0 |
| APPROACH | 30 | 4.0 | 0.311 | 0.08 | 4.20 | 8.20 | 2.6 |
| IDLE | 7 | 26.0 | 0.128 | 1.83 | 30.70 | 4.00 | 2.2 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 424 | 378 | 6578 | 3906 | - |
| 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) | | | | 3.9 | 67.2 | 39.9 | 6.0 |
| SIGMA (D _p /F ₀₀ in g/kN, or SN) | | | | 0.4 | 4.1 | 0.6 | 0.8 |
| RANGE (D _p /F ₀₀ in g/kN, or SN) | | | | 3.4-4.15 | 63.5-71.7 | 39.4-40.5 | 5.4-6.9 |

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-------------|
| BAROMETER (kPa) | 96-97.5 |
| TEMPERATURE (K) | 279-286 |
| ABS HUMIDITY (kg/kg) | 0.002-0.009 |

FUEL

| | |
|----------|-------|
| SPEC | Jet A |
| H/C | 1.93 |
| AROM (%) | 16 |

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: Peebles Site IVD
TEST DATES: 11/11/1983-14/11/1983

REMARKS

1. Ref GE Report R83AEB631.
2. Engine S/N 692441.

Compliance with Fuel Venting requirements:

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