



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-7B18
UNIQUE ID NUMBER: 3CM029
COMBUSTOR:
ENGINE TYPE: TF

BYPASS RATIO: 5.5
PRESSURE RATIO (π_{00}): 21.6
RATED THRUST (F_{00}) (kN): 86.7

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F ₀₀ (g/kN) or SN | 9.7 | 64.4 | 46.4 | 13.8 |
| AS % OF ORIGINAL LIMIT | 49.5 | 54.6 | 55.8 | 56.1 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 69.7 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 85.8 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 97.0 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 118.4 | |

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 | 0.854 | 0.10 | 0.60 | 19.20 | 10.7 |
| CLIMB OUT | 85 | 2.2 | 0.714 | 0.10 | 0.40 | 16.60 | 6.4 |
| APPROACH | 30 | 4.0 | 0.260 | 0.10 | 3.60 | 9.10 | 0.0 |
| IDLE | 7 | 26.0 | 0.097 | 3.50 | 28.30 | 4.30 | 0.0 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 344 | 549 | 4566 | 3472 | - |
| 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) | | | | 6.3 | 52.5 | 40.0 | 10.7 |
| SIGMA (D _p /F ₀₀ in g/kN, or SN) | | | | | | | |
| RANGE (D _p /F ₀₀ in g/kN, or SN) | | | | | | | |

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-------------|
| BAROMETER (kPa) | 97.8-98 |
| TEMPERATURE (K) | 294-297 |
| ABS HUMIDITY (kg/kg) | 0.01-0.0157 |

FUEL

| | |
|----------|-----------|
| SPEC | Jet A |
| H/C | 1.86-1.97 |
| AROM (%) | 16.9-17.7 |

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56-7B Eval Engineering
TEST LOCATION: Peebles Test Operation (PTO), Peebles, Ohio
TEST DATES: 01/07/1996

REMARKS

1. FAA Certification Report CR-997, Dec 96.
2. Engine S/N 874-101/01

Compliance with Fuel Venting requirements:

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