



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A1
UNIQUE ID NUMBER: 6AL006
COMBUSTOR: Type 2
ENGINE TYPE: MTF

BYPASS RATIO: 4.8
PRESSURE RATIO (π_{eo}): 18.0
RATED THRUST (F_{eo}) (kN): 34.9

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F _{eo} (g/kN) or SN | 16.2 | 83.7 | 53.3 | 0.0 |
| AS % OF ORIGINAL LIMIT | 82.6 | 70.9 | 70.2 | 0.0 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 87.8 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 90.3 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 91.5 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 97.9 | |

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)
x OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

| MODE | POWER SETTING (%F _{eo}) | TIME (minutes) | FUEL FLOW (kg/s) | HC | CO | NO _x | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|------|-------|-----------------|--------------|
| TAKE-OFF | 100 | 0.7 | 0.383 | 0.00 | 0.12 | 22.41 | 0.0 |
| CLIMB OUT | 85 | 2.2 | 0.318 | 0.00 | 0.01 | 19.58 | 0.0 |
| APPROACH | 30 | 4.0 | 0.113 | 0.18 | 1.36 | 7.20 | 0.0 |
| IDLE | 7 | 26.0 | 0.046 | 5.04 | 32.59 | 3.19 | 0.0 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 157 | 367 | 2383 | 1607 | - |
| NUMBER OF ENGINES | | | | 1 | 1 | 1 | 1 |
| NUMBER OF TESTS | | | | 3 | 3 | 3 | 3 |
| AVERAGE D _p /F _{eo} (g/kN) or AVERAGE SN (MAX) | | | | 10.5 | 68.2 | 46.0 | 0.0 |
| SIGMA (D _p /F _{eo} in g/kN, or SN) | | | | | | | |
| RANGE (D _p /F _{eo} 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) | 99.6-99.7 |
| TEMPERATURE (K) | 297-301 |
| ABS HUMIDITY (kg/kg) | 0.0115-0.0141 |

FUEL

| | |
|----------|-------|
| SPEC | Jet A |
| H/C | 1.9 |
| AROM (%) | 16-20 |

MANUFACTURER: Rolls-Royce Corporation
TEST ORGANIZATION: Rolls-Royce Corporation
TEST LOCATION: Indianapolis, Indiana
TEST DATES: 28/08/2002-29/08/2002

REMARKS

- For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
- Data in this form for AE3007A1 engines fitted with PAB fuel nozzles
- Results based on Rolls-Royce report EDR 19972

Compliance with Fuel Venting requirements:

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