



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 772
UNIQUE ID NUMBER: 3RR030
COMBUSTOR: Improved traverse
ENGINE TYPE: MTF
BYPASS RATIO: 5.0
PRESSURE RATIO (π_{00}): 35.8
RATED THRUST (F_{00}) (kN): 316.3

REGULATORY DATA ** DATA SUPERSEDED ** SEE FOLLOWING UID FOR REVISED DATA: 14RR071

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F ₀₀ (g/kN) or SN | 3.2 | 31.9 | 65.3 | 2.6 |
| AS % OF ORIGINAL LIMIT | 16.3 | 27.0 | 58.5 | 15.1 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 73.1 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 83.1 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 92.5 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 105.8 | |

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)
- 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 | 3.200 | 0.00 | 0.20 | 34.38 | 1.9 |
| CLIMB OUT | 85 | 2.2 | 2.580 | 0.00 | 0.16 | 26.44 | 2.0 |
| APPROACH | 30 | 4.0 | 0.850 | 0.01 | 0.89 | 10.30 | 0.7 |
| IDLE | 7 | 26.0 | 0.280 | 1.46 | 17.94 | 4.71 | 0.2 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 1116 | 640 | 8099 | 17784 | - |
| 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) | | | | 2.1 | 26.0 | 56.3 | 2.0 |
| SIGMA (D _p /F ₀₀ in g/kN, or SN) | | | | | | | |
| RANGE (D _p /F ₀₀ in g/kN, or SN) | | | | 1.74-2.37 | 24.2-27.4 | 55-57.4 | 1.6-2.5 |

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|---------------|
| BAROMETER (kPa) | 100.2 |
| TEMPERATURE (K) | 287 |
| ABS HUMIDITY (kg/kg) | 0.0053-0.0089 |

FUEL

| | |
|----------|-------|
| SPEC | AVTUR |
| H/C | 1.95 |
| AROM (%) | 16 |

MANUFACTURER: Rolls-Royce plc
TEST ORGANIZATION: Rolls-Royce plc
TEST LOCATION: SINFIN-Derby
TEST DATES: 01/09/1994

NO_x REGULATION PARAGRAPH

| | |
|---|-------------------|
| | 2.3.2 c) (CAEP/4) |
| x | 2.3.2 d) (CAEP/6) |
| | 2.3.2 e) (CAEP/8) |

REMARKS

1. Data from certification report DNS 19234.
2. Improved traverse combustor.
3. Valid for Trent 772B and Trent 772C.
4. Certification in accordance with Part III, Chapter 2, of Amendment 6 of ICAO Annex 16 Vol. II.
5. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

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