



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 772
UNIQUE ID NUMBER: 01P14RR102
COMBUSTOR: Phase5
ENGINE TYPE: MTF

BYPASS RATIO: 5.0
PRESSURE RATIO (π_{00}): 36.3
RATED THRUST (F_{00}) (kN): 320.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	3.8	35.8	58.4	2.1
AS % OF ORIGINAL LIMIT	19.5	30.4	51.9	12.4
AS % OF CAEP/2 LIMIT (NO _x)			64.8	
AS % OF CAEP/4 LIMIT (NO _x)			73.4	
AS % OF CAEP/6 LIMIT (NO _x)			81.6	
AS % OF CAEP/8 LIMIT (NO _x)			93.1	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
x CERTIFICATION
x 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	3.139	0.01	0.21	35.56	1.4
CLIMB OUT	85	2.2	2.530	0.01	0.49	26.82	1.8
APPROACH	30	4.0	0.821	0.04	1.56	10.42	0.6
IDLE	7	26.0	0.270	2.46	23.97	4.66	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1085	1048	10606	17668	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				9	9	9	9
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				3.3	33.1	55.2	1.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.8	5.6	2.4	0.7
RANGE (D _p /F ₀₀ in g/kN, or SN)				2.41-3.74	26.8-37.48	53.41-57.9	1.3-2.6

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	95.1-101.3
TEMPERATURE (K)	279.8-293.2
ABS HUMIDITY (kg/kg)	0.00473-0.00886

FUEL

SPEC	
H/C	1.91
AROM (%)	17.7

MANUFACTURER: Rolls-Royce plc
TEST ORGANIZATION: Rolls-Royce plc
TEST LOCATION: Derby
TEST DATES: 16/03/1995-02/06/2014

NO_x REGULATION PARAGRAPH

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

REMARKS

1. Data from Certification Report DNS196860
2. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
3. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)
4. Same results for Trent 772 B and Trent 772C

Compliance with Fuel Venting requirements:

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