



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 768
UNIQUE ID NUMBER: 01P14RR101
COMBUSTOR: Phase5
ENGINE TYPE: MTF

BYPASS RATIO: 5.2
PRESSURE RATIO (π_{00}): 34.5
RATED THRUST (F_{00}) (kN): 304.2

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	5.0	40.6	53.7	2.1
AS % OF ORIGINAL LIMIT	25.5	34.4	49.3	12.0
AS % OF CAEP/2 LIMIT (NO _x)			61.6	
AS % OF CAEP/4 LIMIT (NO _x)			70.7	
AS % OF CAEP/6 LIMIT (NO _x)			79.0	
AS % OF CAEP/8 LIMIT (NO _x)			90.8	

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

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	2.907	0.00	0.35	32.01	1.5
CLIMB OUT	85	2.2	2.375	0.01	0.49	24.90	1.8
APPROACH	30	4.0	0.781	0.04	1.71	10.12	0.5
IDLE	7	26.0	0.259	3.19	26.94	4.46	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1027	1303	11411	15414	-
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)				4.3	37.5	50.7	1.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				1.0	6.5	2.2	0.7
RANGE (D _p /F ₀₀ in g/kN, or SN)				3.12-4.93	30.3-42.94	49.18-53.18	1.2-2.5

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.

Compliance with Fuel Venting requirements:

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