



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent XWB-84EP
UNIQUE ID NUMBER: 07P27RR153
COMBUSTOR: Phase5 Tiled
ENGINE TYPE: TF

BYPASS RATIO: 8.8
PRESSURE RATIO (π_{00}): 44.0
RATED THRUST (F_{00}) (kN): 379.1

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	1.2	24.6	58.2	11.3
AS % OF ORIGINAL LIMIT	6.1	20.9	45.5	68.8
AS % OF CAEP/2 LIMIT (NO _x)			56.9	
AS % OF CAEP/4 LIMIT (NO _x)			61.4	
AS % OF CAEP/6 LIMIT (NO _x)			67.0	
AS % OF CAEP/8 LIMIT (NO _x)			74.6	

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)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	2.784	0.00	0.31	49.03	5.9
CLIMB OUT	85	2.2	2.268	0.00	0.37	37.75	6.7
APPROACH	30	4.0	0.740	0.00	0.91	12.43	7.7
IDLE	7	26.0	0.253	1.00	21.29	4.47	1.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			989	394	8724	21007	-
NUMBER OF ENGINES				4	4	4	4
NUMBER OF TESTS				6	6	6	6
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				1.0	23.0	55.4	10.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	2.1	1.1	2.1
RANGE (D _p /F ₀₀ in g/kN, or SN)				0.57-1.29	20.53-24.99	54.47-56.74	7.4-11.9

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.5-102.2
TEMPERATURE (K)	280-295
ABS HUMIDITY (kg/kg)	0.00248-0.00964

FUEL

SPEC	
H/C	1.92
AROM (%)	16.7

MANUFACTURER: Rolls-Royce plc
TEST ORGANIZATION: Rolls-Royce
TEST LOCATION: Derby
TEST DATES: 01/04/2012-30/03/2021

NO_x REGULATION PARAGRAPH

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

REMARKS

- Certification report EDNS01000778911 Iss 1
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

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