



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent XWB-75
UNIQUE ID NUMBER: 14RR072
ENGINE TYPE: (TF)

BYPASS RATIO: 9.3
PRESSURE RATIO (π_{oo}): 36.8
RATED OUTPUT (F_{oo}) (kN): 334.0

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	2.1	36.4	48.7	11.6
AS % OF ORIGINAL LIMIT	10.9 %	30.9 %	42.9 %	68.4 %
AS % OF CAEP/2 LIMIT (NOx)			53.6 %	
AS % OF CAEP/4 LIMIT (NOx)			60.5 %	
AS % OF CAEP/6 LIMIT (NOx)			67.2 %	
AS % OF CAEP/8 LIMIT (NOx)			76.5 %	

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
- OUT OF SERVICE

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.411	0	0.37	36.59	6.2
CLIMB OUT	85	2.2	1.980	0	0.45	28.5	7.5
APPROACH	30	4.0	0.715	0	1.54	10.51	5.6
IDLE	7	26.0	0.270	1.3	24.36	4.38	1.3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			955	549	10674	14800	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				1.64	31.96	44.31	9.93
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.08	2.38	0.97	3.004
RANGE (D_p/F_{oo} in g/kN, or SN)				1.59 - 1.7	30.28 - 33.64	43.62 - 45	7.8 - 12.1

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.5 - 101.3
TEMPERATURE (K)	280 - 295
AHS HUMIDITY (kg/kg)	0.00248 - 0.00964

FUEL

SPEC	-
H/C	1.86
AROM (%)	17.3

MANUFACTURER: Rolls-Royce
TEST ORGANIZATION: Rolls-Royce
TEST LOCATION: Derby
TEST DATES: FROM Apr 12 TO Jul 14

REMARKS

1. Data from Certification Report DNS197360 Iss 2
2. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
3. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements:

- ('x' if complies, PR if pre-regulation)