THIS DOCUMENT PROVIDED BY THE ABBOTT AEROSPACE
TECHNICAL LIBRARY
ABBOTTAEROSPACE.COM

ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent XWB-84
UNIQUE ID NUMBER: 14RR075
ENGINE TYPE: (TF)

BYPASS RATIO: 9.0
PRESSURE RATIO (π_{oo}): 41.1
RATED OUTPUT (F_{oo}) (kN): 379.0

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	1.5	29.3	58.7	11.6
AS % OF ORIGINAL LIMIT	7.4 %	24.9 %	48.1 %	70.9 %
AS % OF CAEP/2 LIMIT (NOx)			60.1 %	
AS % OF CAEP/4 LIMIT (NOx)			65.9 %	
AS % OF CAEP/6 LIMIT (NOx)			72.4 %	
AS % OF CAEP/8 LIMIT (NOx)			81.2 %	

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) HC	CO	NOx	SMOKE NUMBER
TAKE-OFF	100	0.7	2.819	0	0.39	45.48	5.8
CLIMB OUT	85	2.2	2.306	0	0.39	34.53	6.4
APPROACH	30	4.0	0.801	0	1.2	11.46	6.6
IDLE	7	26.0	0.291	0.94	20.66	4.73	1.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1069	424	9760	20243	-
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)				1.12	25.75	53.41	9.93
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.02	2.34	0.32	3.004
RANGE (D_p/F_{oo} in g/kN, or SN)				1.11 - 1.11	24.1 - 27.4	53.18 - 53.64	7.8 - 12.1

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.5 - 101.3
TEMPERATURE (K)	280 - 295
ABS 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)