



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 768
 UNIQUE ID NUMBER: 14RR070
 ENGINE TYPE: MTF

BYPASS RATIO: 5.2
 PRESSURE RATIO (π_{oo}): 34.5
 RATED OUTPUT (F_{oo}) (kN): 304.2

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (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 (NOx)			61.6 %	
AS % OF CAEP/4 LIMIT (NOx)			70.7 %	
AS % OF CAEP/6 LIMIT (NOx)			79.0 %	
AS % OF CAEP/8 LIMIT (NOx)			90.8 %	

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	2.907	0	0.35	32.01	1.5
CLIMB OUT	85	2.2	2.375	0.01	0.49	24.9	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_{oo} (g/kN) or AVERAGE SN (MAX)				4.28	37.51	50.66	1.91
SIGMA (D_p/F_{oo} in g/kN, or SN)				1.01	6.51	2.19	0.65
RANGE (D_p/F_{oo} in g/kN, or SN)				3.12 - 4.9	30.3 - 42.94	49.18 - 53.18	1.2 - 2.5

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

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

FUEL

SPEC	-
H/C	1.91
AROM (%)	17.7

MANUFACTURER: Rolls-Royce
 TEST ORGANIZATION: Rolls-Royce
 TEST LOCATION: Derby
 TEST DATES: FROM 16 Mar 95 TO 02 Jun 14

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