



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR-700-725A1-12
UNIQUE ID NUMBER: 11BR011
ENGINE TYPE: MTF

BYPASS RATIO: 4.35
PRESSURE RATIO (π_{oo}): 26.16
RATED OUTPUT (F_{oo}) (kN): 75.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	8.1	95.7	39.3	5.8
AS % OF ORIGINAL LIMIT	41.3 %	81.1 %	42.6 %	22.5 %
AS % OF CAEP/2 LIMIT (NOx)			53.2 %	
AS % OF CAEP/4 LIMIT (NOx)			61.7 %	
AS % OF CAEP/6 LIMIT (NOx)			67.9 %	
AS % OF CAEP/8 LIMIT (NOx)			78.3 %	

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
TAKE-OFF	100	0.7	0.789	0	0.4	16.92	4.15
CLIMB OUT	85	2.2	0.650	0	0.32	13.32	4.46
APPROACH	30	4.0	0.221	0	5.93	7.81	0
IDLE	7	26.0	0.085	3	41.9	3.38	0.15
LTO TOTAL FUEL (kg) or EMISSIONS (g)			-	398	5899	2565	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				5.25	77.9	33.9	4.47
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.574	1.645	2.525	0.348
RANGE (D_p/F_{oo} in g/kN, or SN)				4.6 - 5.6	76.1 - 79.2	31.2 - 36.2	4.3 - 4.9

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.5 - 101
TEMPERATURE (K)	294.7 - 297.9
ABS HUMIDITY (kg/kg)	0.0076 - 0.00815

FUEL

SPEC	Def. Stan. 91-92
H/C	1.94
AROM (%)	18

MANUFACTURER: Rolls-Royce
TEST ORGANIZATION: Rolls-Royce
TEST LOCATION: Dahlewitz
TEST DATES: FROM 06 Aug 08 TO 06 Aug 08

REMARKS

1. Data from Certification Report O-TR0053/12-ISS02.
2. Certification in accordance with Part III, Chapter 2, of Amendment 6 of ICAO Annex 16 Vol. II.
3. NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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