



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR700-710A1-10
UNIQUE ID NUMBER: 3BR001
ENGINE TYPE: MTF

BYPASS RATIO: 4.2
PRESSURE RATIO (π_{00}): 24.31
RATED OUTPUT (F_{00}) (kN): 65.61

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	6.6	73.5	45.6	14.2
AS % OF ORIGINAL LIMIT	33.7 %	62.3 %	51.5 %	53.4 %
AS % OF CAEP/2 LIMIT (NOx)			64.3 %	
AS % OF CAEP/4 LIMIT (NOx)			72.6 %	
AS % OF CAEP/6 LIMIT (NOx)			78.0 %	
AS % OF CAEP/8 LIMIT (NOx)			88.4 %	

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)
x OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE

MEASURED DATA

MODE	POWER SETTING (% F_{00})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.707	0	0.52	17.07	11.03
CLIMB OUT	85	2.2	0.588	0.03	0.66	13.93	8.69
APPROACH	30	4.0	0.220	0.04	4.24	8.2	0
IDLE	7	26.0	0.089	1.98	26.09	4	0.17
LTO TOTAL FUEL (kg) or EMISSIONS (g)			299	279	3913	2576	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{00} (g/kN) or AVERAGE SN (MAX)				4.29	59.85	39.32	11.03
SIGMA (D_p/F_{00} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{00} in g/kN, or SN)				3.83-5.03	57.89-63.69	38.09-40.51	10.18-11.87

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.5-102.1
TEMPERATURE (K)	291.2-300.3
ABS HUMIDITY (kg/kg)	.0074-.0087

FUEL

SPEC	AVTUR
H/C	1.94
AROM (%)	16.5

MANUFACTURER: BMW Rolls-Royce GmbH
TEST ORGANIZATION: BMW Rolls-Royce GmbH
TEST LOCATION: BMW Rolls-Royce GmbH, Dahlewitz, Germany
TEST DATES: FROM 05 Jun 96 TO 06 Jun 96

REMARKS

Data from certification report E-TR403/96-(FR) ISS02

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

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