



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR700-715B1-30
UNIQUE ID NUMBER: 4BR006
ENGINE TYPE: MTF

BYPASS RATIO: 4.6
PRESSURE RATIO (π_{oo}): 30.58
RATED OUTPUT (F_{oo}) (kN): 89.68

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.4	45.2	51.2	5.9
AS % OF ORIGINAL LIMIT	1.8 %	38.3 %	50.6 %	24.1 %
AS % OF CAEP/2 LIMIT (NOx)			63.2 %	
AS % OF CAEP/4 LIMIT (NOx)			75.1 %	
AS % OF CAEP/6 LIMIT (NOx)			85.1 %	
AS % OF CAEP/8 LIMIT (NOx)			99.8 %	

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)
x OUT OF PRODUCTION (DATE: -)
- 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	0.910	0.03	0.72	24.28	4.56
CLIMB OUT	85	2.2	0.750	0.06	0.63	18.27	4.13
APPROACH	30	4.0	0.257	0.02	3.59	9.01	0.96
IDLE	7	26.0	0.103	0.07	18.6	4.14	0.07
LTO TOTAL FUEL (kg) or EMISSIONS (g)			360	20	3300	3958	-
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)				0.23	36.85	44.14	4.56
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				0.03-0.45	36.28-37.42	43.00-45.23	4.16-5.00

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.9-101.3
TEMPERATURE (K)	294.4-297.2
ABS HUMIDITY (kg/kg)	.0072-.0075

FUEL

SPEC	AVTUR
H/C	1.93
AROM (%)	16.6

MANUFACTURER: BMW Rolls-Royce GmbH
TEST ORGANIZATION: BMW Rolls-Royce GmbH
TEST LOCATION: BMW Rolls-Royce GmbH, Dahlewitz, Germany
TEST DATES: FROM 29 Jun 99 TO -

REMARKS

1. Data from certification report E-TR346/99 (FR) ISS00.
2. Incorporating improved fuel injector.

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

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