



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR700-715A1-30 BYPASS RATIO: 4.68
UNIQUE ID NUMBER: 4BR005 PRESSURE RATIO (π_{oo}): 28.75
ENGINE TYPE: MTF RATED OUTPUT (F_{oo}) (kN): 83.23

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.5	50.1	46.6	5.6
AS % OF ORIGINAL LIMIT	2.5 %	42.5 %	47.8 %	22.4 %
AS % OF CAEP/2 LIMIT (NOx)			59.7 %	
AS % OF CAEP/4 LIMIT (NOx)			70.3 %	
AS % OF CAEP/6 LIMIT (NOx)			78.7 %	
AS % OF CAEP/8 LIMIT (NOx)			91.8 %	

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	0.831	0.05	0.66	20.97	4.33
CLIMB OUT	85	2.2	0.686	0.06	0.63	16.43	3.96
APPROACH	30	4.0	0.240	0.02	4.05	8.75	0.77
IDLE	7	26.0	0.100	0.11	19.72	3.95	0.11
LTO TOTAL FUEL (kg) or EMISSIONS (g)			339	25	3390	3340	-
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)				0.32	40.83	40.17	4.33
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				0.03-0.66	40.21-41.37	39.09-41.16	3.85-4.74

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)