ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION:	BR700-715A1-30	BYPASS RATIO:	4.7
UNIQUE ID NUMBER:	4BR002	PRESSURE RATIO (π_{oo}):	29.0
COMBUSTOR:			
ENGINE TYPE:	MTF	RATED THRUST (F_{oo}) (kN):	84.2

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO$_X$	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.6	40.1	55.1	4.2
AS % OF ORIGINAL LIMIT	3.1	33.9	56.3	16.8
AS % OF CAEP/2 LIMIT (NO$_X$)			70.3	
AS % OF CAEP/4 LIMIT (NO$_X$)			82.9	
AS % OF CAEP/6 LIMIT (NO$_X$)			93.2	
AS % OF CAEP/8 LIMIT (NO$_X$)			108.7	

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 (DATE: -   )

MEASURED DATA

MODE	POWER SETTING (%F$_{oo}$)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg) HC	CO	NO$_X$	SMOKE NUMBER
TAKE-OFF	100	0.7	0.836	0.00	0.78	23.97	3.2
CLIMB OUT	85	2.2	0.690	0.02	0.75	18.65	2.7
APPROACH	30	4.0	0.245	0.01	3.76	11.19	1.0
IDLE	7	26.0	0.096	0.21	16.27	5.37	0.9
LTO TOTAL FUEL (kg) or EMISSIONS (g)			335	34	2753	4002	-
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)				0.4	32.6	47.5	3.2
SIGMA (D_p/F_{oo} in g/kN, or SN)							
RANGE (D_p/F_{oo} in g/kN, or SN)				0.32-0.47	31.93-33.86	47.19-48.08	3.04-3.4

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3-101.9
TEMPERATURE (K)	288.8-294.4
ABS HUMIDITY (kg/kg)	0.0066-0.0079

FUEL

SPEC	AVTUR
H/C	1.89
AROM (%)	17.7

MANUFACTURER:	Rolls-Royce Deutschland
TEST ORGANIZATION:	BMW Rolls-Royce GmbH
TEST LOCATION:	Dahlewitz
TEST DATES:	07/05/1998-08/05/1998

REMARKS

     1. Data from Certification Report E-TR484/98 (FR) ISS00

Compliance with Fuel Venting requirements: -   ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)