



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR700-715C1-30
UNIQUE ID NUMBER: 4BR007
COMBUSTOR: Improved fuel injector
ENGINE TYPE: MTF
BYPASS RATIO: 4.5
PRESSURE RATIO (π_{00}): 32.2
RATED THRUST (F_{00}) (kN): 95.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	0.3	41.8	55.8	6.3
AS % OF ORIGINAL LIMIT	1.4	35.4	53.5	26.1
AS % OF CAEP/2 LIMIT (NO _x)			66.9	
AS % OF CAEP/4 LIMIT (NO _x)			78.2	
AS % OF CAEP/6 LIMIT (NO _x)			88.2	
AS % OF CAEP/8 LIMIT (NO _x)			102.5	

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 ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	0.984	0.01	0.80	27.92	4.9
CLIMB OUT	85	2.2	0.805	0.06	0.64	20.05	4.3
APPROACH	30	4.0	0.272	0.02	3.23	9.23	1.1
IDLE	7	26.0	0.105	0.06	17.85	4.28	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			377	18	3236	4588	-
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)				0.2	34.0	48.1	4.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)				0.02-0.34	33.51-34.63	46.96-49.29	4.62-5.28

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.9-101.3
TEMPERATURE (K)	294.4-297.2
ABS HUMIDITY (kg/kg)	0.0072-0.0075

FUEL

SPEC	AVTUR
H/C	1.93
AROM (%)	16.6

MANUFACTURER: Rolls-Royce Deutschland
TEST ORGANIZATION: BMW Rolls-Royce GmbH
TEST LOCATION: Dahlewitz
TEST DATES: 29/06/1999

REMARKS

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

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)