ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION:	SPEY Mk511	BYPASS RATIO:	0.6
UNIQUE ID NUMBER:	1RR015	PRESSURE RATIO (π_{oo}):	19.9
COMBUSTOR:			
ENGINE TYPE:	MTF	RATED THRUST (F_{oo}) (kN):	50.7

REGULATORY DATA   ** DATA SUPERSEDED **   SEE FOLLOWING UID FOR REVISED DATA: 8RR043

CHARACTERISTIC VALUE:	HC	CO	NO$_X$	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	232.4	395.8	71.0	77.9
AS % OF ORIGINAL LIMIT	1185.5	335.4	89.0	273.1
AS % OF CAEP/2 LIMIT (NO$_X$)			111.2	
AS % OF CAEP/4 LIMIT (NO$_X$)			120.6	
AS % OF CAEP/6 LIMIT (NO$_X$)			125.7	
AS % OF CAEP/8 LIMIT (NO$_X$)			138.9	

DATA STATUS

- x   PRE-REGULATION
- −   CERTIFICATION
- x   REVISED (SEE REMARKS)

TEST ENGINE STATUS

- x   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)			SMOKE NUMBER
				HC	CO	NO$_X$	
TAKE-OFF	100	0.7	0.889	0.98	1.81	23.27	
CLIMB OUT	85	2.2	0.726	1.32	2.06	19.18	
APPROACH	30	4.0	0.279	7.23	20.30	7.94	
IDLE	7	26.0	0.119	56.73	97.96	1.48	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			386	11179	19810	3513	−
NUMBER OF ENGINES				14	14	13	10
NUMBER OF TESTS				15	15	14	10
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				217.0	382.0	69.1	66.2
SIGMA (D_p/F_{oo} in g/kN, or SN)				82.8	66.5	7.4	7.2
RANGE (D_p/F_{oo} in g/kN, or SN)				109-360	233-522	52.5-81.4	50.4-71.3

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	
TEMPERATURE (K)	
ABS HUMIDITY (kg/kg)	0.0035-0.0126

FUEL

SPEC	DERD 2494
H/C	1.94
AROM (%)	20

MANUFACTURER:	Rolls-Royce plc
TEST ORGANIZATION:	Rolls-Royce Ltd
TEST LOCATION:	Derby
TEST DATES:	23/05/1985-28/05/1985

REMARKS

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

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