ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: SPEY Mk555   BYPASS RATIO: 1
UNIQUE ID NUMBER: 1RR018   PRESSURE RATIO (π_{oo}):   15.9
ENGINE TYPE: MTF   RATED OUTPUT (F_{oo}) (kN):   44

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	8.3	115.0	69.4	28.4
AS % OF ORIGINAL LIMIT	42.3 %	97.4 %	96.6 %	95.7 %
AS % OF CAEP/2 LIMIT (NOx)			120.8 %	
AS % OF CAEP/4 LIMIT (NOx)			128.8 %	
AS % OF CAEP/6 LIMIT (NOx)			132.5 %	
AS % OF CAEP/8 LIMIT (NOx)			145.1 %	

DATA STATUS

-     PRE-REGULATION
- x   CERTIFICATION
-     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

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	0.735	0.29	0.3	21.9	23.73
CLIMB OUT	85	2.2	0.592	0.15	0.7	16.5	25.33
APPROACH	30	4.0	0.221	0.29	3.7	6.8	17
IDLE	7	26.0	0.096	1.86	29.3	3.7	7.05
LTO TOTAL FUEL (kg) or EMISSIONS (g)			312	315	4648	2880	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				7.1	106.3	65.5	25.8
SIGMA (D_p/F_{oo} in g/kN, or SN)				2.2	16.3	1.7	1.7
RANGE (D_p/F_{oo} in g/kN, or SN)				5.8-9.7	88.7-120.8	64.5-67.5	24.0-27.4

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99-102
TEMPERATURE (K)	280 - 290
ABS HUMIDITY (kg/kg)	0.006-0.010

FUEL

SPEC	DERD 2494
H/C	1.91
AROM (%)	20

MANUFACTURER: Rolls Royce Ltd
TEST ORGANIZATION: -
TEST LOCATION: -
TEST DATES: FROM   Aug 83   TO   Nov 84

REMARKS

1. Ref RR report CRR10145.
2. Transply IIF combustors with H.P. fuel pump.

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0   ('x' if complies, PR if pre-regulation)