



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: RB211-524G
UNIQUE ID NUMBER: 1RR010
COMBUSTOR:
ENGINE TYPE: MTF

BYPASS RATIO: 4.3
PRESSURE RATIO (π_{00}): 32.1
RATED THRUST (F_{00}) (kN): 253.0

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	2.8	28.8	96.9	5.0
AS % OF ORIGINAL LIMIT	14.2	24.4	93.0	27.3
AS % OF CAEP/2 LIMIT (NO _x)			116.2	
AS % OF CAEP/4 LIMIT (NO _x)			136.1	
AS % OF CAEP/6 LIMIT (NO _x)			153.4	
AS % OF CAEP/8 LIMIT (NO _x)			178.4	

DATA STATUS

- PRE-REGULATION
- CERTIFICATION
x 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	2.620	0.39	0.59	58.71	3.0
CLIMB OUT	85	2.2	2.080	0.27	0.43	40.54	3.6
APPROACH	30	4.0	0.700	0.37	1.01	9.56	1.8
IDLE	7	26.0	0.260	0.89	13.74	4.63	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			958	540	5926	21075	-
NUMBER OF ENGINES				2	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				2.1	23.5	83.6	3.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	0.3	1.4	0.4
RANGE (D _p /F ₀₀ in g/kN, or SN)				1.87-2.44	23.13-23.81	82.34-85.08	3.7-4.3

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101
TEMPERATURE (K)	283-286
ABS HUMIDITY (kg/kg)	0.006

FUEL

SPEC	AVTUR
H/C	1.91
AROM (%)	20

MANUFACTURER: Rolls-Royce plc
TEST ORGANIZATION: Rolls-Royce Ltd
TEST LOCATION: SINFIN-Derby
TEST DATES: 01/04/1987-01/10/1992

REMARKS

1. HC data remeasured.

Compliance with Fuel Venting requirements:

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