



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A1/3  
UNIQUE ID NUMBER: 6AL012  
COMBUSTOR: Type 2  
ENGINE TYPE: MTF

BYPASS RATIO: 4.8  
PRESSURE RATIO ( $\pi_{co}$ ): 17.2  
RATED THRUST ( $F_{oo}$ ) (kN): 33.1

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	17.3	86.0	51.4	0.0
AS % OF ORIGINAL LIMIT	88.4	72.9	69.0	0.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			86.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			88.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			89.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			95.0	

### 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 <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.359	0.00	0.00	21.26	0.0
CLIMB OUT	85	2.2	0.300	0.00	0.00	18.62	0.0
APPROACH	30	4.0	0.108	0.21	1.83	6.84	0.0
IDLE	7	26.0	0.045	5.23	32.40	3.29	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			151	372	2317	1465	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				11.3	70.1	44.3	0.0
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.6-99.7
TEMPERATURE (K)	297-301
ABS HUMIDITY (kg/kg)	0.0115-0.0141

### FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16-20

MANUFACTURER: Rolls-Royce Corporation  
TEST ORGANIZATION: Rolls-Royce Corporation  
TEST LOCATION: Indianapolis, Indiana  
TEST DATES: 28/08/2002-29/08/2002

### REMARKS

- For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
- Data in this form for AE3007A1/3 engine fitted with PAB fuel nozzles
- Results based on Rolls-Royce report EDR 19972

Compliance with Fuel Venting requirements:

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