



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A2
UNIQUE ID NUMBER: 10AL026
ENGINE TYPE: MTF

BYPASS RATIO: 4.79
PRESSURE RATIO (π_{oo}): 20.2
RATED OUTPUT (F_{oo}) (kN): 42.23

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	5.3	90.0	49.9	0.0
AS % OF ORIGINAL LIMIT	27.1 %	76.2 %	62.0 %	0.0 %
AS % OF CAEP/2 LIMIT (NOx)			77.6 %	
AS % OF CAEP/4 LIMIT (NOx)			81.7 %	
AS % OF CAEP/6 LIMIT (NOx)			83.8 %	
AS % OF CAEP/8 LIMIT (NOx)			90.8 %	

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)
- OUT OF PRODUCTION
- 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	0.466	0	0.71	18.61	0.01
CLIMB OUT	85	2.2	0.388	0	0.74	15.99	0.01
APPROACH	30	4.0	0.138	0	4.08	7.9	0.01
IDLE	7	26.0	0.055	1.71	34.17	4.39	0.01
LTO TOTAL FUEL (kg) or EMISSIONS (g)			189	146	3095	1817	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				3.45	73.29	43.03	0.01
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				-	-	-	-

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3
TEMPERATURE (K)	294
ABS HUMIDITY (kg/kg)	0.009-0.012

FUEL

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

MANUFACTURER: Rolls-Royce Corporation
TEST ORGANIZATION: Rolls-Royce Corporation
TEST LOCATION: Indianapolis, Indiana, USA
TEST DATES: FROM 09 Jun 01 TO 11 Jun 01

REMARKS

1. For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
2. Data in this form for AE3007A2 engine fitted with reduced emissions combustor & AB fuel nozzles
3. Results based on Rolls-Royce report EDRs 19587 and 22949
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements:

- ('x' if complies, PR if pre-regulation)