



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: AE3007A1P BYPASS RATIO: 4.8
UNIQUE ID NUMBER: 6AL016 PRESSURE RATIO (π_{oo}): 17.9
ENGINE TYPE: MTF RATED OUTPUT (F_{oo}) (kN): 34.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	12.4	109.1	44.5	0.0
AS % OF ORIGINAL LIMIT	63.3 %	92.5 %	58.7 %	0.0 %
AS % OF CAEP/2 LIMIT (NOx)			73.4 %	
AS % OF CAEP/4 LIMIT (NOx)			75.2 %	
AS % OF CAEP/6 LIMIT (NOx)			76.5 %	
AS % OF CAEP/8 LIMIT (NOx)			81.8 %	

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)
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	0.381	0.03	0.74	16.1	0.01
CLIMB OUT	85	2.2	0.316	0.03	0.55	14.01	0.01
APPROACH	30	4.0	0.113	0.03	6.79	7.12	0.01
IDLE	7	26.0	0.046	3.86	39.97	4.17	0.01
LTO TOTAL FUEL (kg) or EMISSIONS (g)			157	280	3087	1334	-
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)				8.06	88.88	38.41	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)	98.9 - 99.0
TEMPERATURE (K)	291 - 301
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 AE3007A1P engine fitted with reduced emissions combustor & PAB fuel nozzles
3. Results based on Rolls-Royce report EDR 19587
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: 0 ('x' if complies, PR if pre-regulation)