



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT8D-209
UNIQUE ID NUMBER: 1PW017
ENGINE TYPE: MTF

BYPASS RATIO: 1.8
PRESSURE RATIO (π_{oo}): 18.3
RATED OUTPUT (F_{oo}) (kN): 85.6

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	18.8	49.8	68.7	14.3
AS % OF ORIGINAL LIMIT	95.9 %	42.2 %	89.7 %	57.8 %
AS % OF CAEP/2 LIMIT (NOx)			112.2 %	
AS % OF CAEP/4 LIMIT (NOx)			140.1 %	
AS % OF CAEP/6 LIMIT (NOx)			158.0 %	
AS % OF CAEP/8 LIMIT (NOx)			196.4 %	

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	1.191	0.35	1.03	22.8	11.1
CLIMB OUT	85	2.2	0.983	0.5	1.4	19	-
APPROACH	30	4.0	0.359	1.69	4.37	8.8	-
IDLE	7	26.0	0.130	4.03	14.1	3.5	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			469	1047	3476	5075	-
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)				12.2	40.6	59.3	11.1
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)	-
TEMPERATURE (K)	275 - 288
ABS HUMIDITY (kg/kg)	-

FUEL

SPEC	Jet A
H/C	-
AROM (%)	19.2

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: P&WA
TEST LOCATION: E Hartford, CT, USA
TEST DATES: FROM 07 Nov 83 TO 30 Nov 83

REMARKS

- All measurements by traverse.
- SCH 46-16B combustor.

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

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