



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT8D-219  
UNIQUE ID NUMBER: 1PW019  
ENGINE TYPE: MTF

BYPASS RATIO: 1.7  
PRESSURE RATIO ( $\pi_{oo}$ ): 20.27  
RATED OUTPUT ( $F_{oo}$ ) (kN): 96.52

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	15.2	41.1	73.4	18.7
AS % OF ORIGINAL LIMIT	77.8 %	34.8 %	91.1 %	78.1 %
AS % OF CAEP/2 LIMIT (NOx)			113.9 %	
AS % OF CAEP/4 LIMIT (NOx)			142.7 %	
AS % OF CAEP/6 LIMIT (NOx)			162.1 %	
AS % OF CAEP/8 LIMIT (NOx)			201.5 %	

### 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	1.354	0.27	0.73	27	14.3
CLIMB OUT	85	2.2	1.085	0.42	1.2	20.8	-
APPROACH	30	4.0	0.382	1.59	4.07	9.13	-
IDLE	7	26.0	0.134	3.48	12.63	3.6	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			501	951	3234	6106	-
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)				9.9	33.5	63.3	14.5
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)