



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT8D-17  
UNIQUE ID NUMBER: 1PW012  
ENGINE TYPE: MTF

BYPASS RATIO: 1.01  
PRESSURE RATIO ( $\pi_{00}$ ): 17.01  
RATED OUTPUT ( $F_{00}$ ) (kN): 71.17

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	41.0	118.3	62.5	25.5
AS % OF ORIGINAL LIMIT	209.4 %	100.3 %	84.4 %	98.2 %
AS % OF CAEP/2 LIMIT (NOx)			105.5 %	
AS % OF CAEP/4 LIMIT (NOx)			125.0 %	
AS % OF CAEP/6 LIMIT (NOx)			135.9 %	
AS % OF CAEP/8 LIMIT (NOx)			161.0 %	

### DATA STATUS

x PRE-REGULATION  
- CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- 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 (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.245	0.69	0.74	19.2	-
CLIMB OUT	85	2.2	0.997	0.79	1	15.23	-
APPROACH	30	4.0	0.354	1.96	8.54	6.1	-
IDLE	7	26.0	0.147	10.2	31	3.3	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			498	2646	8005	4283	-
NUMBER OF ENGINES				7	7	7	7
NUMBER OF TESTS				8	8	8	8
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				37.2	112.5	60.2	24
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				9.3	12.4	7.2	3
RANGE ( $D_p/F_{00}$ 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)	-
TEMPERATURE (K)	269 - 303
AHS HUMIDITY (kg/kg)	0.0029-0.0093

### FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	-

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: P&WA  
TEST LOCATION: E Hartford, CT, USA  
TEST DATES: FROM Apr 76 TO Mar 77

### REMARKS

1. Smoke fix combustor in production prior to 1/1/84

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

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