



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7R4G2  
UNIQUE ID NUMBER: 1PW029  
ENGINE TYPE: TF

BYPASS RATIO: 4.8  
PRESSURE RATIO ( $\pi_{oo}$ ): 26.3  
RATED OUTPUT ( $F_{oo}$ ) (kN): 243.5

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	2.9	20.7	63.2	7.5
AS % OF ORIGINAL LIMIT	14.9 %	17.6 %	68.3 %	40.3 %
AS % OF CAEP/2 LIMIT (NOx)			85.4 %	
AS % OF CAEP/4 LIMIT (NOx)			103.5 %	
AS % OF CAEP/6 LIMIT (NOx)			117.7 %	
AS % OF CAEP/8 LIMIT (NOx)			140.7 %	

### 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	2.429	0.15	0.74	41.3	6.8
CLIMB OUT	85	2.2	1.880	0.14	0.63	29.5	-
APPROACH	30	4.0	0.659	0.18	1.4	8.8	-
IDLE	7	26.0	0.224	1.55	11.82	3.8	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			858	620	4582	14253	-
NUMBER OF ENGINES				5	5	5	3
NUMBER OF TESTS				6	6	6	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				2.6	19.5	60.5	6.8
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)  
STAGE BLEED 0 % CORE FLOW

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	-
TEMPERATURE (K)	271 - 299
ABS HUMIDITY (kg/kg)	-

### FUEL

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

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: P&WA  
TEST LOCATION: E Hartford, CT, USA  
TEST DATES: FROM 26 Oct 81 TO 10 Sep 83

### REMARKS

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

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