



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7R4E4, -E1 (H) BYPASS RATIO: 5  
UNIQUE ID NUMBER: 1PW028 PRESSURE RATIO ( $\pi_{oo}$ ): 24.2  
ENGINE TYPE: TF RATED OUTPUT ( $F_{oo}$ ) (kN): 222.41

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	6.4	29.1	63.0	4.7
AS % OF ORIGINAL LIMIT	32.7 %	24.7 %	71.3 %	24.9 %
AS % OF CAEP/2 LIMIT (NOx)			89.1 %	
AS % OF CAEP/4 LIMIT (NOx)			109.2 %	
AS % OF CAEP/6 LIMIT (NOx)			124.1 %	
AS % OF CAEP/8 LIMIT (NOx)			150.2 %	

### 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	2.218	0.15	0.67	36.9	4.3
CLIMB OUT	85	2.2	1.829	0.13	0.67	29.7	-
APPROACH	30	4.0	0.640	0.22	1.46	8.5	-
IDLE	7	26.0	0.221	3.35	16	3.5	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			832	1231	5952	13117	-
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)				5.7	27.4	60.3	4.3
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)	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 Apr 83

### REMARKS

-

If REVISED, this data supersedes databank UID  
Compliance with fuel venting requirements: 0 ('x' if complies, PR if pre-regulation)