



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7R4E4, -E1 (H)  
UNIQUE ID NUMBER: 1PW028  
COMBUSTOR:  
ENGINE TYPE: TF

BYPASS RATIO: 5.0  
PRESSURE RATIO ( $\pi_{co}$ ): 24.2  
RATED THRUST ( $F_{oo}$ ) (kN): 222.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (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 (NO <sub>x</sub> )			89.1	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			109.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			124.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			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 (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	2.218	0.15	0.67	36.90	4.3
CLIMB OUT	85	2.2	1.829	0.13	0.67	29.70	
APPROACH	30	4.0	0.640	0.22	1.46	8.50	
IDLE	7	26.0	0.221	3.35	16.00	3.50	
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 <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				5.7	27.4	60.3	4.3
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>oo</sub> 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: East Hartford, CT  
TEST DATES: 26/10/1981-10/04/1983

### REMARKS

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)