



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4168  
UNIQUE ID NUMBER: 5PW075  
ENGINE TYPE: TF

BYPASS RATIO: 5.1  
PRESSURE RATIO ( $\pi_{oo}$ ): 31.84  
RATED OUTPUT ( $F_{oo}$ ) (kN): 302.5

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	0.5	27.4	53.3	16.4
AS % OF ORIGINAL LIMIT	2.3 %	23.2 %	51.4 %	93.5 %
AS % OF CAEP/2 LIMIT (NOx)			64.3 %	
AS % OF CAEP/4 LIMIT (NOx)			75.4 %	
AS % OF CAEP/6 LIMIT (NOx)			85.1 %	
AS % OF CAEP/8 LIMIT (NOx)			99.1 %	

### 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)  
- OUT OF PRODUCTION  
- 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	2.884	0	0.1	26.9	12.7
CLIMB OUT	85	2.2	2.363	0	0.2	20.2	11
APPROACH	30	4.0	0.809	0	2.4	12.1	0.6
IDLE	7	26.0	0.250	0.2	15.9	5.2	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1017	78	6741	13936	-
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)				0.3	22.3	46	12.7
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)	101.4 - 102.3
TEMPERATURE (K)	279 - 282
ABS HUMIDITY (kg/kg)	.00210 - .00355

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	15.5

MANUFACTURER: Pratt and Whitney  
TEST ORGANIZATION: Pratt and Whitney  
TEST LOCATION: East Hartford, Conn. USA  
TEST DATES: FROM 10 Apr 00 TO -

### REMARKS

1. Data from Report PWA-7138.
2. TALON II Combustor

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

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