



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW308A  
UNIQUE ID NUMBER: 7PW079  
ENGINE TYPE: MTF

BYPASS RATIO: 4.1  
PRESSURE RATIO ( $\pi_{00}$ ): 20.4  
RATED OUTPUT ( $F_{00}$ ) (kN): 30.71

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	17.5	99.6	44.8	17.1
AS % OF ORIGINAL LIMIT	89.3 %	84.4 %	55.4 %	52.3 %
AS % OF CAEP/2 LIMIT (NOx)			69.3 %	
AS % OF CAEP/4 LIMIT (NOx)			70.2 %	
AS % OF CAEP/6 LIMIT (NOx)			70.7 %	
AS % OF CAEP/8 LIMIT (NOx)			74.9 %	

### 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 (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.360	0	0.83	16.74	15
CLIMB OUT	85	2.2	0.299	0	1.06	14.06	15
APPROACH	30	4.0	0.124	0.02	4.08	8.03	2.5
IDLE	7	26.0	0.045	6.62	38.21	3.65	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			154	460	2828	1300	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				14.98	92.08	42.33	15.1
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				14.4 - 15.8	87.17 - 98.01	41.21 - 42.94	15.0 - 15.3

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.42 - 103.00
TEMPERATURE (K)	280 - 296
ABS HUMIDITY (kg/kg)	0.0028 - 0.0090

### FUEL

SPEC	Jet A-1
H/C	1.85 - 1.87
AROM (%)	19.5 - 21.5

MANUFACTURER: Pratt & Whitney Canada Inc  
TEST ORGANIZATION: PW308 Development Engineering  
TEST LOCATION: Mississauga, Ontario, Canada  
TEST DATES: FROM 15 Apr 00 TO 05 Sep 00

### REMARKS

1. P&WC ER 3967
2. Engines E9608/01, E9606/04, E9609/01
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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