



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW308C BS 1289  
UNIQUE ID NUMBER: 14PW103  
COMBUSTOR: TALON II  
ENGINE TYPE: MTF

BYPASS RATIO: 4.1  
PRESSURE RATIO ( $\pi_{oo}$ ): 21.1  
RATED THRUST ( $F_{oo}$ ) (kN): 31.2

### REGULATORY DATA

**\*\* DATA SUPERSEDED \*\***

**SEE FOLLOWING UID FOR REVISED DATA:**

**01P14PW147**

| CHARACTERISTIC VALUE:                        | HC  | CO    | NO <sub>x</sub> | SMOKE NUMBER |
|--|-----|-------|-----------------|--------------|
| D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN | 1.1 | 102.8 | 46.3            | 9.1          |
| AS % OF ORIGINAL LIMIT                       | 5.6 | 87.1  | 56.4            | 27.9         |
| AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )      |     |       | 70.5            |              |
| AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )      |     |       | 71.5            |              |
| AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )      |     |       | 72.0            |              |
| AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )      |     |       | 76.3            |              |

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- 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 (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            | 0.370            | 0.00    | 0.50      | 19.10           | 6.6          |
| CLIMB OUT  | 85                                | 2.2            | 0.307            | 0.00    | 0.57      | 14.96           | 6.8          |
| APPROACH   | 30                                | 4.0            | 0.116            | 0.00    | 4.18      | 6.80            | 2.2          |
| IDLE   | 7                                 | 26.0           | 0.049            | 0.39    | 37.05     | 3.53            | 5.7          |
| LTO TOTAL FUEL (kg) or EMISSIONS (g)                               |                                   |                | 160              | 30      | 2961      | 1359            | -            |
| NUMBER OF ENGINES  |                                   |                |                  | 3       | 3         | 3               | 3            |
| NUMBER OF TESTS  |                                   |                |                  | 3       | 3         | 3               | 3            |
| AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX) |                                   |                |                  | 1.0     | 95.1      | 43.7            | 8.2          |
| SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)             |                                   |                |                  | 0.7     | 5.9       | 1.1             | 0.7          |
| RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)             |                                   |                |                  | 0.2-1.5 | 88.4-99.8 | 42.4-44.3       | 7.5-8.9      |

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

|                      |               |
|----------------------|---------------|
| BAROMETER (kPa)      | 98.3-100.7    |
| TEMPERATURE (K)      | 275-278       |
| ABS HUMIDITY (kg/kg) | 0.0024-0.0047 |

### FUEL

|          |           |
|----------|-----------|
| SPEC     | Jet A-1   |
| H/C      | 1.85-1.89 |
| AROM (%) | 17.6-21.7 |

MANUFACTURER: Pratt & Whitney Canada  
TEST ORGANIZATION: PW308 Development Engineering  
TEST LOCATION: Mississauga, Ontario, Canada  
TEST DATES: 31/03/2012-31/05/2012

### NO<sub>x</sub> REGULATION PARAGRAPH

|   |                   |
|---|-------------------|
|   | 2.3.2 c) (CAEP/4) |
| x | 2.3.2 d) (CAEP/6) |
|   | 2.3.2 e) (CAEP/8) |

### REMARKS

1. P&WC ER 7939
2. Engines tested: CF0550/01, CF0551/01, CH0568/01
3. TALON II combustion system
4. PW308C Build Spec 1289
5. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- 6.

Compliance with Fuel Venting requirements:

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