



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1130G-JM  
UNIQUE ID NUMBER: 18PW124  
COMBUSTOR: TALON X  
ENGINE TYPE: TF

BYPASS RATIO: 11.6  
PRESSURE RATIO ( $\pi_{00}$ ): 38.1  
RATED THRUST ( $F_{00}$ ) (kN): 147.3

REGULATORY DATA \*\* DATA SUPERSEDED \*\* SEE FOLLOWING UID FOR REVISED DATA: 01P18PW155

| CHARACTERISTIC VALUE:                        | HC  | CO   | NO <sub>x</sub> | SMOKE NUMBER |
|--|-----|------|-----------------|--------------|
| D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN | 0.4 | 26.9 | 33.6            | 16.7         |
| AS % OF ORIGINAL LIMIT                       | 2.1 | 22.8 | 29.0            | 78.4         |
| AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )      |     |      | 36.2            |              |
| AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )      |     |      | 40.4            |              |
| AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )      |     |      | 44.8            |              |
| AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )      |     |      | 50.8            |              |

### 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 (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

| MODE   | POWER SETTING (%F <sub>00</sub> ) | TIME (minutes) | FUEL FLOW (kg/s) | HC   | CO    | NO <sub>x</sub> | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|------|-------|-----------------|--------------|
| TAKE-OFF   | 100                               | 0.7            | 1.023            | 0.02 | 0.23  | 25.46           | 15.2         |
| CLIMB OUT  | 85                                | 2.2            | 0.839            | 0.05 | 0.22  | 19.84           | 13.9         |
| APPROACH   | 30                                | 4.0            | 0.278            | 0.02 | 3.44  | 9.40            | 0.5          |
| IDLE   | 7                                 | 26.0           | 0.099            | 0.26 | 24.06 | 5.31            | 1.0          |
| LTO TOTAL FUEL (kg) or EMISSIONS (g)                               |                                   |                | 375              | 48   | 3971  | 4736            | -            |
| NUMBER OF ENGINES  |                                   |                |                  | 3    | 3     | 3               | 3            |
| NUMBER OF TESTS  |                                   |                |                  | 9    | 9     | 9               | 9            |
| AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX) |                                   |                |                  | 0.4  | 24.9  | 31.3            | 15.2         |
| SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)             |                                   |                |                  |      |       |                 |              |
| RANGE (D <sub>p</sub> /F <sub>00</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)      | 100.9-103       |
| TEMPERATURE (K)      | 266.2-298.7     |
| ABS HUMIDITY (kg/kg) | 0.00036-0.01437 |

### FUEL

|          |           |
|----------|-----------|
| SPEC     | Jet A     |
| H/C      | 1.86      |
| AROM (%) | 15.1-16.6 |

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: X7 Test Stand, East Hartford, CT  
TEST DATES: 02/03/2017-19/09/2017

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

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

### REMARKS

1. Data from Certification Report PWA-11521, 3 engines tested, block C combustor
2. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
3. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)