



Type Certificate Data Sheet

Number: E-37
Issue No.: 3
Approval Date: Refer Below
Issue Date: April 7, 2009

This data sheet, which is part of Type Certificate No. E-37, prescribes the conditions and limitations under which the product(s) for which the type certificate was granted meet(s) the standards of airworthiness required by the Canadian Aviation Regulations.

| Type Certificate Holder: | Models |
|--|----------|
| Pratt & Whitney Canada Corp. 1000 Marie-Victorin Longueuil, Québec Canada J4G 1A1 | PW617F-E |

1. MODEL PW617F-E Approved September 9, 2008

| Type | Twin spool turbofan engine | | | | | |
|--------------------------------------|-----------------------------|---|------|--|------|--|
| Ratings (See NOTES 1, 2 and 7) | | Thrust | | Ambient Limit | | Indicated Turbine Temperature (ITT) |
| | | daN | lb. | °C | (°F) | |
| | Maximum | 809.6 | 1820 | 15 | (59) | 845 °C |
| | Take-off | 749.5 | 1695 | 25 | (77) | 830 °C |
| | Maximum Continuous | 710.8 | 1598 | 20 | (68) | 830 °C |
| Engine Limits | | Low Pressure Spool <u>N₁ rpm</u> | | High Pressure Spool <u>N₂ rpm</u> | | Indicated Turbine Temperature (ITT) |
| | Maximum : | 19,845 (100%) | | 40,200 (100.4%) | | |
| | Transient : (20 seconds) | 20,043 (101%) | | 40,840 (102%) | | 862 °C |
| | Starting : | | | | | 950 °C |



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Air Bleed Refer to Section 2 of Installation Manual.

Fuel Refer to Section 7 of Installation Manual for fuel pressure and temperature. Refer to Maintenance Manual for approved fuel types and additives.

Oil Refer to Installation Manual Table 2-1 for oil pressure and temperature. Refer to Maintenance Manual for approved oil types and brand.

Oil Capacity

| | <u>Litres</u> | <u>Imp. gallons</u> | <u>U.S. gallons</u> |
|----------|---------------|---------------------|---------------------|
| Total: | 3.79 | 0.83 | 1.00 |
| Useable: | 0.89 | 0.20 | 0.24 |

Equipment Full authority digital engine control system comprising fuel metering unit (FMU) with integral fuel pumps and integral permanent magnetic alternator (PMA), electronic engine control with integral ambient pressure sensor and dedicated power source (PMA in FMU), bleed valve actuator, and engine harness with integral low pressure spool speed sensor and inlet temperature probe electrically de-iced using airframe supplied power; dual igniters and dual channel ignition exciter using airframe supplied power; fuel oil heat exchanger with fuel and oil filters and associated bypass indicators and oil system chip detector collector; and air cooled oil cooler are standard equipment as itemized in the engine bill of material.

Refer to the Installation Manual for accessory drives specifications; principal dimensions; weights, inertias and centre of gravity locations; and additional information on provisions and connections for airframe provided vibration, oil pressure and temperature, and fuel flow sensors.

Electrical System Refer to Section 8 of the Installation Manual for HIRF & Lightning qualification and conformance. Refer to Electrical drawing appended to Installation Manual and Interface Control Document for functional and electrical descriptions.



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Basis of
Certification
(See NOTES
3 and 4)

- a) Canadian Airworthiness Manual, Chapter 533 at Change 8 (which is equivalent to FAR 33 all amendments up to and including Amendment 33-20).
- b) Subchapter B of Canadian Airworthiness Manual 516 at Change 516-07, "Aircraft Engine Emissions" which refers to ICAO Annex 16 Volume II, (Compliance with FAR 34 all amendments up to and including Amendment 34-3 has also been shown).

Application date for Type Certificate:

PW617F-E 9th November 2005

Type Design
Definition

PW617F-E Engineering Assembly Drawing 35C3100 Rev. J and subsequent revisions.

Approved
Publications

- a) PW617F-E Installation Manual ER 6331
- b) PW617F-E Control System Interface Control Document ER 6370
- c) Airworthiness Limitation Manual P/N 3072699 (See NOTE 6)

Instructions for
Continued
Airworthiness

PW617F-E Line Maintenance Manual P/N 3072696
PW617F-E Maintenance Manual P/N 3072162
PW617F-E Overhaul Manual P/N 3072163

NOTE 1

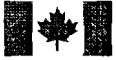
The engine ratings are based on dry sea level static ICAO standard atmospheric conditions, no external accessory loads and no airbleed. The quoted ratings are obtainable on a test stand with the specified fuel and oil, and using the exhaust duct and intake bellmouth specified in the Installation Manual.

NOTE 2

The take-off ratings that are nominally limited to 5 minutes duration may be used for up to 10 minutes for one engine inoperative operations without adverse effects upon engine airworthiness. Such operations are anticipated on an infrequent basis (as engine failure events during take-off are uncommon) and no limits or special inspections have been imposed.

NOTE 3

Refer to Section 1 of Installation Manual for Safety analysis assumptions.



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- NOTE 4 The software contained in the Electronic Engine Control has been designed, developed, tested and documented in accordance with the provisions of the Critical Category, Level A of RTCA/DO178B.
- NOTE 5 The electronic engine control has not been fire tested and therefore must not be installed in a designated fire zone.
- NOTE 6 The PW617F-E Electronic Engine Control is approved with Time Limited dispatch (TLD) limitations. Aircraft considerations are contained in the Installation Manual. The dispatch criteria and time limits are contained in the Airworthiness Limitations Manual P/N 3072699.
- NOTE 7 The PW617F-E includes provision for automatic power increase. The limitations stated for Normal Take-off are to ensure that the Maximum Take-off limitations are not exceeded in the event of an automatic power increase to Maximum Take-off Power. Refer to the Installation Manual.
- NOTE 8 The PW617F-E is approved for multiple engine installations only.
- NOTE 9 Reserved

- END -

J.D. Turnbull
Chief, Project Management
National Aircraft Certification
for Minister of Transport