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## **I. General:**

### **1. Type/Variants:**

Type: PW617F

Variants: PW617F-E

### **2. Type Certificate Holder:**

Pratt & Whitney Canada Corp.  
1000 Marie-Victorin  
Longueuil, Quebec  
Canada J4G 1A1

### **3. Manufacturer:**

Pratt & Whitney Canada Corp.  
1000 Marie-Victorin  
Longueuil, Quebec  
Canada J4G 1A1

### **4. Certification Application Date for EASA Certification :**

January 10, 2006

### **5. EASA Certification Reference Date:** see also Canadian TCDS No. E-37

November 9, 2005

### **6. EASA Certification Date:**

April 23, 2009

## **II. Certification Basis:**

### **1. Transport Canada Certification Basis (see also Canadian TC No. E-37):**

1.1. Airworthiness Standards: AWM Chapter 533 change 8

1.2. Airworthiness Manual, Chapter 516, Change 516-07, subchapter B "Aircraft Engine Emissions" which refers to ICAO Annex 16, Volume II

### **2. EASA Certification Basis:**

2.1 Certification Specifications: CS-E effective 24 October 2003

2.2. Environmental Protection Requirements: ICAO Annex 16, Volume II, Part II, Chapter 2 – Fuel Venting  
ICAO Annex 16, Volume II, Part III, Chapter 2 – Emissions

### **III. Technical Characteristics:**

#### **1. Type Design Definition:**

The Engine Type Design is defined in PW617F-E Engine Assembly Drawing 35C3100 Rev. J and subsequent revisions

#### **2. Description:**

Two Spool Turbofan Engine consisting of a single front fan driven by a single stage fan turbine, 1 stage mixed flow and one stage centrifugal high pressure compressor driven by a single stage high pressure turbine; reverse flow combustor; accessory gearbox and dual channel Full Authority Digital Control System (FADEC).

**3. Equipment:** see Installation Manual

#### **4. Dimensions:**

The maximum diameter of the engine is about 750 mm.  
Engine length is about 1360 mm

**5. Dry Weight:** 172 kg

#### **6. Ratings (see Note 2):**

Take-off (see note 8):	809,6 daN
Normal Take-off:	749,5 daN
Max. Continuous:	710,8 daN

**7. Control System:** The engines are equipped with a FADEC system EEC P/N 35C4812-01 or later approved standard. 35C3890 is the System Component Identification Drawing (SCID) which includes all elements of the control system.

**8. Fluids:** Approved fuel and oil types are listed in the Maintenance Manual.

### **IV. Operating Limitations:**

#### **1. Temperature Limits**

Interturbine Temperature [°C]:

Take-off	845
Normal Take-off	830
Max. Cont.	830
Starting	950
Transient(20sec.)	862

**Fuel Temperatures:** refer to section 7.1 of Installation Manual

**Oil Temperatures:** refer to Table 2-1 of Installation Manual

## 2. Permissible Rotational Speeds [ $\text{min}^{-1}$ ]:

N1	19845 (100%)
Transient(20s)	20043 (101%)
N2	40200 (100,4%)
Transient(20s)	40840 (102%)

## 3. Pressure Limits :

Fuel Pressures: Refer to Installation Manual, Section 7.1.

Oil Pressure: Refer to Installation Manual, Table 2-1

4. **Bleed Air:** Refer to Installation Manual, Section 2.3

5. **Oil Consumption:** Max. allowable oil consumption is 54,4 g/h

total oil capacity: 3,79 L  
usable oil capacity: 0,89 L

## V. Operating and Service Instructions:

1. Line Maintenance Manual: P/N 3072696
2. Maintenance Manual: P/N 3072162
3. Overhaul Manual: P/N 3072163
4. Installation Manual: ER 6331
5. Airworthiness Limitations Manual: P/N 3072699

## VI. Notes:

1. The Critical Parts Life Limits are included in the Airworthiness Limitations Manual P/N 3072699.
2. 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 Intallation Manual.
3. The PW617F-E Engine is approved for multiple engine installation only.
4. HIRF and Lightning conformance and installation requirements are provided in Section 8.3 of the Installation Manual.
5. 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.
6. The engine is not approved for operation with a Thrust Reverser.
7. The Electronic Control Unit has not been fire tested and therefore must not be installed in a designated fire zone.
8. The take-off ratings that are normally limited to 5 minutes duration may be used for up to 10 minutes for OEI operations without adverse effects upon engine airworthiness. Such operations are anticipated on an infrequent basis and no limits or special inspections have been imposed.
9. The PW617F-E Electronic 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.
10. The PW617F-E engine includes provisions 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 Installation Manual.
11. Refer to Section 1 of the Installation Manual for Safety Analysis assumptions.

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