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## **I. General:**

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

Type: PW307

Variants: PW307A

### **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 :**

27 May 2002

### **5. EASA Certification Reference Date : see also Canadian TCDS No. E-33**

30 January 2002

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

23 February 2007

## **II. Certification Basis:**

### **1. Transport Canada Certification Basis (see also Canadian TC No. E-33):**

- 1.1. Airworthiness Standards: CAM Chapter 533 change 5, dated 1 December 1999 as amended by NPA-2000-265, adopted 5 March 2001.
- 1.2. Airworthiness Manual, Chapter 516, Change 516-06, subchapter B "Aircraft Engine Emissions" plus ICAO Annex 16 Volume II, amendment 4.

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

- 2.1 Certification Specifications: JAR-E Amendment 11  
E570 – Oil System of JAR-E Amendment 12  
E850 of CS-E initial issue – Compressor, Fan and Turbine Shafts  
E890 of CS-E initial issue – Thrust Reverser Tests
- 2.2 Special Conditions: Certification of Programmable Logic Devices (PLDs)
- 2.3. 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 PW307A Engine Assembly Parts List No. A30P0100-01.

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

Two Spool Turbofan Engine consisting of a single front fan driven by a three stage fan turbine, 4 stage axial and one stage centrifugal high pressure compressor driven by a two stage high pressure turbine; annular combustion chamber; 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 1170 mm.  
Engine length is about 2185 mm.

**5. Dry Weight:** 551 kg

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

Take-off:	2849 daN
Max. Continuous:	2849 daN

**7. Control System:** The engines are equipped with a FADEC system EEC P/N 30P0608-04 or later approved standard.

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

## **IV. Operating Limitations:**

### **1. Temperature Limits**

Interturbine Temperature [°C]:

Take-off	920
Max. Cont.	920
Starting	950
Transient(20sec.)	930

**Fuel Temperatures:** refer to chapter 2.4 of Installation Manual

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

### **2. Permissible Rotational Speeds [min<sup>-1</sup>]:**

N1	11110 (101%)
N2	28500 (100%)
Min. N2 Flight Idle	17100 (60%)

### **3. Pressure Limits :**

Fuel Pressure: Refer to Installation Manual, Section 6.

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

**4. Bleed Air:** Refer to Installation Manual, Section 2.

**5. Oil Consumption:** Max. allowable oil consumption is 90,71 g/h.

total oil capacity: 7,9 l  
usable oil capacity: 2,99 l

## **V. Operating and Service Instructions:**

1. Maintenance Manual: P/N 30P0422
2. Overhaul Manual: P/N 30P0423
3. Installation Manual: ER5598
4. PW307A FADEC Interface Control Document ER 5220

## VI. Notes:

1. The Critical Parts Life Limits are included in the Airworthiness Limitations Section of the Maintenance Manual.
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 PW307A Engine is approved for multiple engine installation only.
4. HIRF and Lightning conformance and installation requirements are provided in 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 / EUROCAE ED-12B.
6. The engine is approved for operation with a Thrust Reverser P/N F7XC782140020 which is not part of the engine Type Design.
7. The PW307A engine is approved with Time Limited Dispatch (TLD) Limitations. The dispatch criteria are contained in the Airworthiness Limitations section of Maintenance Manual P/N 30P0422.

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