TYPE-CERTIFICATE
DATA SHEET

No. IM.E.035

for
PW307 series engine

Type Certificate Holder

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

For Models:

PW307A
PW307D
Intentionally left blank
TABLE OF CONTENTS

I. General ............................................................................................................................ 4
   1. Type/ Model .................................................................................................................... 4
   2. Type Certificate Holder ............................................................................................... 4
   3. Manufacturer ............................................................................................................. 4
   4. Date of Application .................................................................................................... 4
   5. EASA Type Certification Reference Date ................................................................ 4
   6. EASA Certification Date ............................................................................................. 4
II. Certification Basis ......................................................................................................... 4
   1. State of Design Authority Certification Basis ......................................................... 4
   2. EASA Certification Basis .......................................................................................... 4
       2.1 Certification Specifications: ................................................................................... 4
       2.2 Special Conditions: ............................................................................................. 4
       2.3. Environmental Protection Requirements: ......................................................... 5
III. Technical Characteristics............................................................................................... 5
   1. Type Design Definition ............................................................................................... 5
   2. Description ................................................................................................................ 5
   3. Equipment ................................................................................................................. 5
   4. Dimensions ............................................................................................................. 5
   5. Dry Weight .............................................................................................................. 5
   6. Ratings ..................................................................................................................... 5
   7. Control System ......................................................................................................... 5
   8. Fluids (Fuel, Oil, Coolant, Additives) ....................................................................... 5
IV. Operating Limitations ..................................................................................................... 6
   1. Temperature Limits .................................................................................................. 6
   2. Speed Limits ........................................................................................................... 6
   3. Pressure Limits ....................................................................................................... 6
       3.1 Fuel Pressure .......................................................................................................... 6
       3.2 Oil Pressure ........................................................................................................... 6
   4. Bleed Air: ................................................................................................................ 6
   5. Oil capacity limit ...................................................................................................... 6
V. Operating and Service Instructions .................................................................................. 6
VI. Notes ............................................................................................................................... 7

SECTION: ADMINISTRATIVE ........................................................................................... 8
I. Acronyms and Abbreviations ......................................................................................... 8
II. Type Certificate Holder Record ................................................................................... 8
III. Change Record ............................................................................................................. 8
I. General

1. Type/ Model
   Type: PW307 / Models: PW307A, PW307D

2. Type Certificate Holder
   Pratt & Whitney Canada Corp.
   1000 Marie-Victorin Blvd.
   Longueuil, Quebec
   Canada J4G 1A1

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

4. Date of Application
   PW307A: 27 May 2002
   PW307D: 30 October 2014

5. EASA Type Certification Reference Date
   see also Canadian TCDS No. E-33
   30 January 2002

6. EASA Certification Date
   23 Feb 2007 – PW 307A
   27 April 2016 – PW 307D

II. Certification Basis

1. State of Design Authority Certification Basis
       see Canadian TCDS E-33

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:
CS-34 Amendment 3 as implemented by ED Decision 2019/014/R (29th July 2019); ICAO Annex 16 Volume II, Amendment 9 (1st January 2018) as implemented into EU legislation 11/09/2018; NOx levels in compliance with Part III, Chapter 2, paragraph 2.3.2e) (CAEP/8) of the above mentioned Annex. Maximum nvPM mass concentration levels in compliance with Part III, Chapter 4, paragraph 4.2.2 (CAEP/10) of the above mentioned Annex.

III. Technical Characteristics

1. Type Design Definition
The Engine Type Design is defined in Engine Assembly Parts List No. A30P0100-01 (PW307A) and A30P3300-01 (PW307D).

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 Electronic 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
(PW307A/PW307D): 551 kg (dry weight including standard equipment)

6. Ratings

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

8. Fluids (Fuel, Oil, Coolant, Additives)
Approved fuel and oil types are listed in the Maintenance Manual.
IV. Operating Limitations

1. Temperature Limits

<table>
<thead>
<tr>
<th></th>
<th>PW307A</th>
<th>PW307D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>920</td>
<td>920</td>
</tr>
<tr>
<td>Max. Cont.</td>
<td>920</td>
<td>920</td>
</tr>
<tr>
<td>Starting</td>
<td>950</td>
<td>950</td>
</tr>
<tr>
<td>Transient (20sec.)</td>
<td>930</td>
<td>945</td>
</tr>
</tbody>
</table>

Fuel Temperatures: Min.: -40°C (Kerosene Type) Max.: +57°C (starting and normal operation up to 20,000ft) - for details refer to chapter 2.4 of the relevant Installation Manual

Oil Temperatures: Engine Operation: 25°C to 141°C Starting: -40 °C for details refer to Table 2-1 of the relevant Installation Manual

2. Speed Limits

<table>
<thead>
<tr>
<th></th>
<th>PW307A/PW307D:</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>11110 (101%)</td>
</tr>
<tr>
<td>N2</td>
<td>28500 (100%)</td>
</tr>
<tr>
<td>Min. N2</td>
<td>17100 (60%)</td>
</tr>
</tbody>
</table>

3. Pressure Limits

3.1 Fuel Pressure

Max. at pump inlet: 241 kPa
Min: 34,5 kPa above true vapour pressure (normal operation) For details refer to relevant Installation Manual, Section 6.

3.2 Oil Pressure

Engine Operation: 241 to 1000 kPa for details refer to relevant Installation Manual, Table 2-1.

4. Bleed Air:

Refer to relevant Installation Manual, Section 2.

5. Oil capacity limit

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>total oil capacity:</td>
<td>7,1 l</td>
</tr>
<tr>
<td>usable oil capacity:</td>
<td>2,19 l</td>
</tr>
</tbody>
</table>

V. Operating and Service Instructions

4. FADEC Interface Control Document: ER5220 (PW307A) ER8652 (PW307D)
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 Installation Manual.

3. The PW307A and PW307D Engines are 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 engines are approved for operation with a Thrust Reverser P/N F7XC782140020 which is not part of the engine Type Design.

7. The PW307A and PW307D engines are approved with Time Limited Dispatch (TLD) Limitations. The dispatch criteria are contained in the Airworthiness Limitations section of relevant Maintenance Manuals.
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

n/a

III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue 01</td>
<td>23 Feb 2007</td>
<td>Initial Issue</td>
<td>Initial Issue, 23 Feb 2007</td>
</tr>
<tr>
<td>Issue 02</td>
<td>05 June 2007</td>
<td>Introduction of FADEC Interface Control Document ER 5220</td>
<td></td>
</tr>
<tr>
<td>Issue 03</td>
<td>03 Jan 2013</td>
<td>Emissions requirements according to ICAO annex 16</td>
<td></td>
</tr>
<tr>
<td>Issue 04</td>
<td>27 April 2016</td>
<td>Model PW307D added</td>
<td>27 April 2016</td>
</tr>
<tr>
<td>Issue 05</td>
<td>12 December 2019</td>
<td>Introduction of CAEP/10 for nvPM compliance</td>
<td>(EASA Major Change approval 10072018)</td>
</tr>
</tbody>
</table>

-END-