

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET E00071EN	TCDS NUMBER E00071EN Revision 4 DATE: June 6, 2016 PRATT & WHITNEY CANADA MODELS: PW307A PW307D
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E00071EN) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificate Regulations, provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

TYPE CERTIFICATE (TC) HOLDER: Pratt & Whitney Canada Corp.
 (Formerly Pratt & Whitney Canada, Inc.)
 1000 Marie-Victorin
 Longueuil, Quebec
 Canada J4G 1A1

I. MODELS	PW307A	PW307D				
TYPE	Twin-spool axial flow turbofan propulsion engine incorporating a single-stage fan, multi-stage axial-centrifugal compressor, annular combustor, two-stage high pressure turbine, and three-stage low pressure turbine.					
RATINGS	POUNDS THRUST / SEE NOTE 4					
Normal takeoff (5 minutes)	6,405	6,725				
Maximum takeoff (5 minutes)	---	---				
Maximum continuous	6,405	6,725				
FUEL TYPE	For PW307A: Refer to Maintenance Manual P/N 30P0422. For PW307D: Refer to Maintenance Manual P/N 30P3242.					
OIL TYPE	For PW307A: Refer to Maintenance Manual P/N 30P0422. For PW307D: Refer to Maintenance Manual P/N 30P3242.					
EQUIPMENT/COMPONENTS	For PW307A: Fuel pump; fuel filter, oil cooled oil cooler, electrical fuel impending bypass and bypass indicator; control system-dual channel FADEC with dedicated power source; oil pressure sensor, oil temperature sensor, electrical oil impending bypass and bypass indicator, vibration sensor, N1 speed sensor, N2 speed sensor, P3 pressure transducer, BOV solenoid, variable vane actuator, fire detector, P1/T1 probes, fuel temperature sensor, fuel pressure switch and provision for fuel flowmeter are standard equipment as shown in the Approved Parts List. Required equipment also includes a chip detector or other metallic debris-detecting device. For output drive specification, accessory drives, principal dimensions, weights, inertias, and center of gravity (CG) locations, refer to the Installation Manual. For additional information, refer to the Installation Manual or to the Parts List. For PW307D: As per PW307A, with the exception of the fuel temperature sensor which is deleted.					

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LEGEND: "-" INDICATES "SAME AS PRECEDING MODEL"
"---" NOT APPLICABLE
NOTICE: ALL PAGES ARE REFORMATTED. SIGNIFICANT CHANGES ARE BLACK-LINED IN THE LEFT MARGIN.

CERTIFICATION BASIS

14 CFR Part 33 effective February 1, 1965, and Amendments 33-1 to 33-20.

The following models comply with 14 CFR Part 34, Amendment 5A, effective October 23, 2013, and 40 CFR Part 87, effective July 18, 2012. See note 23 for the certification basis for the fuel venting and exhaust emissions: PW307A and PW307D.

Type Certificate E00071EN Issued/Revised

<u>MODEL</u>	<u>DATE OF APPLICATION</u>	<u>DATE TC ISSUED OR REVISED</u>
PW307A	4/21/2005	8/10/2005
PW307D	10/30/2014	11/20/2015

IMPORT REQUIREMENTS

To be considered eligible for installation on U.S. - registered aircraft, each engine to be exported to the United States shall be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting cognizant civil airworthiness authority and containing the following language:

- (1) This engine conforms to its United States type design (Type Certificate Number E00071EN) and is in a condition for safe operation.
- (2) This engine has been subjected by the manufacturer to a final operational check and is in a proper state of airworthiness.

Reference 14 CFR Section 21.500, which provides for the airworthiness acceptance of aircraft engines or propellers manufactured outside of the U.S. and for which a U.S. type certificate has been issued.

Additional guidance is contained in FAA Advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers and Related Products, Imported into the United States.

NOTES

I. MODELS

NOTE 1.

Low rotor speed (N1) maximum

High rotor speed (N2) maximum

NOTE 2.

Normal takeoff (5 minutes)
 Maximum takeoff (5 minutes)
 Maximum continuous
 Starting transient (5 seconds)

NOTE 3.

ENGINE ROTOR SPEED LIMITS (RPM)						
	11,110 101%	11,110 101%				
	28,500 100%	28,500 100%				
ENGINE INTERTURBINE TEMPERATURES LIMITS (°C/°F)						
	920/1688	920/1688				
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	920/1688	920/1688				
	950/1742	950/1742				
Reserved						

NOTE 4.

The engine ratings are based on dry sea level static ICAO standard atmospheric conditions. No external accessory loads and no air bleed. The quoted ratings are obtained on a test stand with the specified fuel and oil, without intake ducting and utilizing the exhaust duct and intake defined in the approved Installation Manual.

NOTE 5.

ENGINE AIRBLEED LIMITS
 Refer to the Installation Manual, Section 2

- NOTE 6.** ENGINE OIL TEMPERATURE/PRESSURE LIMITS AND CAPACITY
Refer to the Installation Manual, Table 2-1
Total capacity: PW307A and PW307D; 7.10 liters; 1.56 imperial gallons; 1.88 U.S. gallons
- NOTE 7.** ENGINE FUEL LIMITS
- Pressure Refer to the Installation Manual, Section 6.
- Temperature Refer to the Installation Manual, Section 6.
- NOTE 8.** Reserved
- NOTE 9.** The PW307 series engines are approved for multiple-engine installations only.
- NOTE 10.** The PW307 series engines meet Transport Canada and FAA requirements for operation in icing conditions. These engines also meet the requirements of Canadian Airworthiness Manual 533.27 and do not require external armoring.
- NOTE 11.** Life limits for critical rotating components are published in the airworthiness limitations section of each maintenance manual.
- NOTE 12.** The recommended engine operating time between overhauls and hot section inspection intervals are published in Chapter 5 of each Maintenance Manual.
- NOTE 13.** The PW307 series engines meet fuel venting requirements of 14 CFR Part 34, effective September 10, 1990, including amendments 1 through 3 inclusive.
- NOTE 14.** Reserved
- NOTE 15.** For HIRF and lightning conformance, and installation requirements, refer to the Installation Manual.
- NOTE 16.** The software contained in the Electronic Engine Control system for the PW307 series engines has been designed, developed, tested, and documented in accordance with the provisions of Critical Category Level A of RTCA/DO178B.
- NOTE 17.** Reserved
- NOTE 18.** The PW307 series engines are approved for operation with Time Limited Dispatch (TLD) limitations. The dispatch criteria are contained in the Airworthiness Limitations section of each Maintenance Manual.
- NOTE 19.** The PW307 series engines' bill of materials does not include a thrust reverser. Considerations for the installation of a thrust reverser are contained in the Installation Manual.
- NOTE 20.** Minimum permissible flight idle N2 is 17,100 RPM (60%). It is corrected above 60% (A 60% mechanical stop is built into the software.)

NOTE 21.	Approved Publications	PW307A	PW307D
	Installation Manual	ER5598	P/N 30P3400
	FADEC Interface Control Doc.	ER5520	ER8652
	Engine Assy. Parts List – 1 st Production engine	A30P0100-01	A30P3300-01
	Airworthiness Limitation Section of Maintenance Manual	P/N 30P0422	P/N 30P3242
	Maintenance Manual	P/N 30P0422	P/N 30P3242
	Overhaul Manual	P/N 30P0423	P/N 30P3243

NOTE 22. Service Bulletins, Structural Repair Manuals, Vendor Manuals, Aircraft Flight Manuals and Maintenance Manuals, which contain a statement that the document is Transport Canada approved, is accepted by the FAA and is considered FAA approved. These approvals pertain to the type design only.

NOTE 23. The following emissions standards promulgated in 14 CFR Part 34, Amendment 5A, effective October 23, 2013, and 40 CFR Part 87, effective July 18, 2012, have been complied with for the PW307A and PW307D.

For the PW307A and PW307D:

Fuel Venting Emission Standards: 14 CFR §§ 34.10(b) and 34.11; in addition, 40 CFR §§ 87.10(b) and 87.11 as amended.

Smoke Number (SN) Emission Standards: 14 CFR § 34.21(e)(2); in addition, 40 CFR § 87.23(c)(1).

Carbon Monoxide (CO) Emission Standards: 14 CFR § 34.21(d)(1)(ii); in addition, 40 CFR § 87.23(c)(1).

Hydrocarbons (HC) Emission Standards: 14 CFR § 34.21(d)(1)(i); in addition, 40 CFR § 87.23(c)(1).

Oxides of Nitrogen (NO_x) Emission Standards: 14 CFR § 34.23(b)(1); in addition, 40 CFR § 87.23(c)(3).

In addition to the FAA's finding of compliance based on the certification requirements defined in this TCDS, the engine manufacturer has declared that the ICAO emissions standards identified in Annex 16, Volume II, Third Edition, Part III, Chapter 2, Section 2.2.2 for SN, Section 2.3.2 for CO and HC, Section 2.3.2.e for NO_x (also known as CAEP/8), and Part II Chapter 2 for fuel venting have also been demonstrated.