

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET E00073EN	TCDS NUMBER E00073EN REVISION: 2 DATE: January 16 , 2007 PRATT & WHITNEY CANADA, CORP. MODELS: PW615F-A
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E00073EN) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation 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

MODELS I. TYPE	PW615F-A
	Twin spool controlled by Full Authority Digital Electronic Control (FADEC), a single stage fan driven by a single stage Low pressure Turbine, a high pressure compressor consisting of one mixed flow compressor stage and one centrifugal compressor stage, one stage high pressure turbine, annular reverse-flow fully effusion cooled combustor with internally mounted fuel manifold and a integrated mono case and a Air Cooled Oil Cooler.

THRUST RATING, POUNDS (See NOTE 1)	
Maximum continuous at sea level	1460
Takeoff (5 min.) at sea level (See Note 2)	1460

ENGINE SPEED LIMITATIONS, RPM	
Max steady state low rotor (N1)	21,830 (100%)
Max steady state high rotor (N2)	44,040 (100%)
Transient (20 sec.) low rotor (N1)	22048 (101%)
Transient (20 sec.) high rotor (N2)	44921 (102%)

INTERTURBINE TEMPERATURE (°F/°C)	
Takeoff (5 min.)	1526/830
Maximum continuous	1526/830
Starting (5 sec.)	1584/862
Transient (20 sec.)	1584/862
(Also see Installation Manual/NOTE 7)	

OIL INLET TEMPERATURE (°F/°C)	
Maximum	275/135
Minimum	-40/-40
Transient maximum (90 sec)	286/141
(Also see Installation Manual/NOTE 7)	



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

MAXIMUM ACCESSORY TEMP.	The engine compartment shall be ventilated as necessary to keep the air temperature surrounding accessory components from exceeding the limits defined in the Installation Manual.
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AIR BLEED,	
A. Maximum external bleed air available is:	17 pounds per minute (ppm) at sea level, decreasing linearly to 13.4 ppm at 43,000 ft.
B. During starting:	Bleed air not permitted
C. Bleed air contamination meets:	Para 3.1.2.11.3 of MIL-E-5007E

FUEL	
Fuel Bleed	A motive flow output is provided from the Fuel Metering Unit (FMU) motive flow port. Refer to Installation Manual.
Fuel Pressure	Refer to applicable Installation Manual/ NOTE 7.
Fuel temperature	Maximum fuel pump inlet temperature for starting and operating is 135°F(57°C) for typical wide cut fuels and 190°F(88°C) for kerosene type fuels. at sea level; minimum inlet temperature is -31°F(-35°C), Refer to Installation Manual for additional information.
Fuel type	Fuels and additives conforming to the specifications listed in applicable P&WC Maintenance Manual are approved for use.

OIL PRESSURE (psig)	
Min. at ground idle & flight idle	20
Maximum, Steady State	170
Maximum, Transient	250
See also Installation Manual	
OIL TYPE	Oils conforming to the Specifications listed in the applicable P&WC Maintenance Manual are approved for use.
OIL TANK CAPACITY	
Total capacity	
Liters	4.85
Imperial gallons	1.067
U.S. gallons	1.281
Usable capacity	
Liters	0.74
Imperial gallons	0.163
U.S. gallons	0.195
See also Installation Manual	

ACCESSORY DRIVES	The following apply to the accessory drives, which are provided by the engine and included in the basic engine weight:					
			SPEED RATIO TO TURBINE	MAXIMUM TORQUE (in. - lb.)		MAXIMUM OVERHANG
	DRIVE	ROTATION	SHAFT	CONTINUOUS	STATIC	(in.-lb.)
	DRIVEN BY HIGH ROTOR	CW*	0.0952:1	40	1600	20
	Hydraulic pump	CW*	0.2705:1	200	1600	210
	Starter generator					

	<p>*CW - Clockwise facing accessory pad.</p> <p>Total accessory power limit is 9.67 hp. at 48.6% N2, increasing linearly to 17.3 hp. at 100% N2. The starter/generator pad for the PW615F-A engine model may be overloaded in an emergency to a torque of 300 in.-lb. for periods up to 5 minutes, subject to total accessory power not exceeding 20.5 hp at 48.6% N2 increasing linearly to 33 hp at Max N2. This shall be considered as recurring at every 100 hours interval. Refer to Installation Manual.</p>
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IGNITION	MODELS PW615F-A	
Exciter	Refer to Assembly Parts List	
Igniter plug	Refer to Assembly Parts List (see Note 7)	

PRINCIPAL DIMENSIONS	Refer to applicable Installation Drawing referenced in approved Installation Manual.
C.G. LOCATION	Refer to Installation Drawing referenced in applicable approved Installation Manual.

MAXIMUM ENGINE DRY WEIGHT	Includes basic bill of material components and sensors required for engine operation and monitoring.
MODEL	
PW615F-A	308.7lb.

CERTIFICATION BASIS:	
Models PW615F-A	FAR 21.29, FAR 33, Amendments 1 through 20 inclusive effective December 13, 2000 and FAR 34, Amendment 3, effective February 3, 1999.

MODEL	TYPE CERTIFICATE NUMBER E00073EN		
	APPLIED FOR	ISSUED/ REVISED	DELETED
PW615F-A	5/7/2003	7/21/2006	

IMPORT REQUIREMENTS:

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

- (1) This engine conforms to its Type Certificate Number 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 FAR Section 21.500, which provides for the airworthiness acceptance of aircraft engines 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

- NOTE 1. The engine ratings for PW615F-A engine model are based on dry sea level static ICAO standard atmospheric conditions. No accessory loads or air bleed.
- The quoted ratings are obtainable on a test stand with specified fuel and oil, and using the exhaust duct and intake bell mouth specified in the Installation Manual.
- NOTE 2. Take-off ratings that are 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 (as engine failure at take-off events are uncommon) and no limits or special inspections have been imposed.
- NOTE 3. Minimum permissible flight idle N2 for PW615F-A is: 25,000 RPM (56.8%)
- NOTE 4. Instructions for Continued Airworthiness are listed in:
Maintenance Manuals - P/N 3059712
Line Maintenance Manual – P/N 3072691
Overhaul Manual P/N 3059713
- NOTE 5. Certain engine parts are life limited. Life limits are listed in Airworthiness Limitation Manuals: P/N 3072698
- NOTE 6. Removed
- NOTE 7. Approved Publications:
Installation Manual ER5829
FADEC Interface Control Document ER6004-02
Airworthiness Limitation Manual P/N 3072698
Assembly Parts List for production engines 35C0510 Revision K and subsequent revision
- NOTE 8. Refer to Installation Manual, ER5829 for accessory drives specifications; principle dimensions; weights, inertias and centre of gravity locations; and additional information on provisions and connections to airframe provided vibration, Oil pressure and temperature and fuel flow sensor
- NOTE 9. Service bulletins, structural repair manuals, vendor manual, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is Transport Canada-approved, are acceptable by the FAA and are considered FAA-approved unless otherwise noted. These approvals pertain to the type design only.
- NOTE 10. The engine is approved for multiple engine installations only.
- NOTE 11. The installation requires an airframe mounted Fuel Shut Off Valve
- NOTE 12. The engine is not approved for use with a thrust reverser.
- NOTE 13. The software contained in the Electronic Engine Control has been designed, developed, tested and documented in accordance with the provision of the critical Category, Level A of RTCA/DO178B. Each Electronic Engine Control channel also includes a simple PLD that meets Level A of RTCA/DO254
- NOTE 14. The Electronic Engine Control Unit has not been fire tested and therefore must not be installed in a designated fire zone.
- NOTE 15. The PW615F-A engine is approved with Time Limited Dispatch (TLD) limitations. The dispatch criteria are contained in the Airworthiness Limitation Manual P/N 3072968.

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