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I. General

1. Type/Models: PT6C-67 / PT6C-67C, PT6C-67E

2. Type Certificate Holder:

**Pratt and Whitney Canada Corp.
Longueuil, Quebec
Canada**

3. Manufacturer: Pratt and Whitney Canada

4. EASA Certification Application Date:

PT6C-67C	PT6C-67E			
17 May 2002 (to ENAC-Italy)	24 March 2008			

5. EASA Certification Reference Date:

PT6C-67C	PT6C-67E			
27 March 1998	02 Nov. 2009			

6. EASA Certification Date:

PT6C-67C	PT6C-67E			
09 June 2003	09 Nov. 2012			

EASA Type Certification for the PT6C-67C engine model is granted, in accordance with Article 2 paragraph 3(a) of EU Commission Regulation EC 1702/2003, based on the ENAC-Italy Type Certificate Mo 127, issued prior to 28 September 2003.

II. Certification Basis

1. Transport Canada Certification Basis Details: see Transport Canada TCDS E-32

2. EASA Certification Basis:

2.1 Airworthiness Standards:

- JAR E Change 9 dated 21 October 1994 (PT6C-67C)
- CS-E Amendment 1 dated 03 December 2007 (PT6C-67E)

2.2 Special Conditions:

- 30-minute Take-off Power Rating (PT6C-67E)

2.3 Deviations:

- None.

2.4 Equivalent Safety Findings:

- None.

2.5 Environmental Standards:

Fuel Venting:

- ICAO Annex 16 Volume II, 2nd Edition, 1993 (PT6C-67C)
- CS-34.1, Fuel Venting (PT6C-67E)

III. Technical Characteristics

1. Type Design Definition:

As defined by the applicable PT6C-67C resp. PT6C-67E Engine Parts List:

PT6C-67C: Manual No. 3045334

PT6C-67E: Manual No. 3072874

2. Description:

Four axial stages and single stage centrifugal compressor, reverse flow annular combustor, single stage high pressure turbine, two stage free power turbine. Single channel Engine Electronic Control System (EEC) with manual back-up for PT6C-67C, dual channel EEC without manual back-up for PT6C-67E. The starter and engine mounts are not part of the engine definition.

3. Equipment:

The engine equipment list is included in the Type Design Definition.

4. Dimensions and Weight:

Model	Overall Length	Overall Diameter	Dry Weight
PT6C-67C	1.50m	0.57m	205 kg
PT6C-67E	1.50m	0.57m	216.8 kg

The Dry Weight includes Pratt & Whitney Canada supplied engine build-up components.

5. Ratings:

The engine ratings are based on dry sea level ICAO standard atmospheric conditions, with no external accessory loads and no air bleed. The quoted ratings are obtainable on a test stand with the fuel, oil, reference intake and exhaust ducts as specified in the relevant Installation Manual.

5.1 All Engine Operative Power (kW)

Model	30 Minutes Power	Take-off Power (5 minutes)	Maximum Continuous Power
PT6C-67C	-	861	815
PT6C-67E	969	969	900

5.2 One Engine Inoperative (OEI) Power (kW)

Model	30 sec. OEI	2½-Minute OEI	2 Minute OEI	Continuous OEI
PT6C-67C	-	1217	-	1064
PT6C-67E	1485	-	1321	1154

6. Control System:

Fuel controls and power management are controlled by an Electronic Engine Control (EEC) with a backup hydro-mechanical control for the PT6C-67C and a dual channel EEC for the PT6C-67E. The hardware and software configuration of this system and the associated engine fuel pump and hydro-mechanical unit (PT6C-67C) or fuel control unit (PT6C-67E) are controlled by the approved engine equipment list for the specific engine model and aircraft application.

7. Fluids

See applicable Engine Maintenance Manual for specific approved oil, fuel and additives.

8. Aircraft Accessory Drives:

Model	Drive	Rotation	Speed Ratio To Gas Generator	Max. Torque Continuous Nm	Max. Torque Static Nm	Max. Moment Overhang Nm
PT6C-67C	Starter Generator	CW	0.29:1	24.0	200.7	28.2
PT6C-67E	Starter Generator	CW	0.29:1	24.0	200.7	28.2

9. Maximum Permissible Air Bleed Extraction:

The maximum permissible air bleed extraction is 5.25% of the engine inlet airflow and nil during start.

IV.Operational Limits:

1. Temperature Limits:

1.1 Maximum Measured Gas Turbine Temperature Limits (°C):

Rating and Transient	PT6C-67C	PT6C-67E
30 sec. OEI	-	915
2½ Minute OEI	835	-
2 Minute OEI	-	865
Continuous OEI	775	820
30 min Power	-	815
Take-off (5 minutes)	775	815
Maximum Continuous	735	775
Starting (2 seconds)	1100	Per Installation Manual
Transient	847 (10 sec.)	925 (20 sec.)

PT6C-67E:

Rotor Shaft	30 sec. OEI	2 Minute OEI	Continuous OEI
Output Shaft	21000	21000	21000
Gas Generator	41600	40500	39500
Power Turbine	21000	21000	21000

100% reference speeds: Power Turbine: 21000 RPM
 Gas Generator: 37468 RPM

3. Maximum Permissible Torque Limits (Nm):

PT6C-67C :

2½ Minute OEI	Continuous OEI	Take-off (5 minutes)	Maximum Continuous	Transient (10 sec.)
542	475	384	363	597

PT6C-67E :

30 sec OEI	2 Minute OEI	Continuous OEI	30 min Power	Take-off (5 minutes)	Maximum Continuous	Transient (20 sec.)
675	600	525	441	441	410	543

4. Pressure Limits:

4.1 Fuel Pump Inlet pressure:

Minimum pressure at maximum fuel temperature, at Sea Level, kPa

Fuel Type	PT6C-67C	PT6C-67E	
		Aircraft Boost Pumps Operational	Aircraft Boost Pumps Not-Operational
Jet A, Jet A1, JP5	22.8	TVP + 0.29	V/L = 0.48 max up to 15000 ft (4572 m) linearly decreasing to V/L = 0.44 max at 20000 ft (6096 m)
JP4	49.0	-	-

(TVP: True Vapour Pressure, V/L: Vapour to Liquid Ratio)

The minimum required fuel pressure at the engine fuel pump inlet varies with altitude (see the relevant Installation Manual).

Maximum pressure: 206.9 kPa for the PT6C-67C, 276 kPa for the PT6C-67E

4.2 Oil Pressure Limits:

Maximum for starting PT6C-67C & E: 1517 kPa

The minimum and maximum oil pressures during operation vary with the gas generator speed (see the relevant Installation Manual).

5. Installation Assumptions:

The installation assumptions are quoted in the applicable Engine Installation Manual.

6. Dispatch Limitations: see Note 5

There is no Time Limited Dispatch for the EEC of this engine.

V. Operating and Service Instructions

Manuals	PT6C-67C	PT6C-67E
Engine Maintenance Manual	3045332	3072872
Engine Overhaul Manual	3045333	
Installation Manual	ER 4218	ER 6857
Operating Instruction Manual		

Service Bulletins as issued for each engine model.

VI. Notes

Note 1: Lightning protection levels and electromagnetic interference are specified in the Installation Manual, Section 7.

Note 2: The Electronic Engine Control Unit must not be installed in a designated fire zone.

Note 3: The engines are approved to be fitted to rotorcraft only where the installation precludes foreign objects from entering the engine inlet as defined in JAR-E 790(b) and JAR-E 800 (PT6C-67C) resp. CS-E 790(b) and CS-E 800 (PT6C-67E).

Note 4: The life limited parts are listed in Pratt & Whitney Canada Maintenance Manual, Airworthiness Limitations Section.

Note 5: Dispatch is not permitted with faults in the EEC or in any engine-associated equipment unless it is included in an approved MMEL. Aircraft dispatchability with failed engine ITT thermocouple assembly is permitted for one ferry flight only and within the envelope declared in the relevant Installation Manual, Section 2.

Note 6: The uninstalled engine meets the JAR (PT6C-67C) resp. CS (PT6C-67E) requirement for operation in icing conditions within the envelope defined in JAR/FAR/CS-29 Appendix C when installed and operated in accordance with the Installation Manual.

Note 7: The software for the Electronic Engine Control has been developed and tested in accordance with the provisions of Flight Critical category (level A) of RTCA DO 178B.

Note 8: Prior to issue of Transport Canada accepted Overhaul Manual, overhauls are not permitted and engine may be re-manufactured to new production configuration.

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