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I. General

1. Type/Variants: PT6C-67C

2. Type Certificate Holder:

**Pratt and Whitney Canada Inc
Longueuil, Quebec
Canada**

3. Manufacturer: Pratt and Whitney Canada

4. EASA Certification Application Date: 17 May 2002 (to ENAC-Italy)

5. Validation Reference Date: 27 March 1998

6. EASA Certification Date: 09 June 2003

EASA Type Certification for the PT6C-67C engine models 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.

2.2 Environmental Standards :

Emissions and Fuel Venting : ICAO Annex 16 Volume II, 2nd Edition , 1993.

III. Technical Characteristics

1. Type Design Definition:

As defined by the applicable PT6C-67C Engine Parts List

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. 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:

Overall Length	Overall Diameter	Dry Weight
1.50m	0.57m	205 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, the reference intake and exhaust ducts as specified in the relevant Installation Manual.

5.1 All Engine Operative Power (kW)

Take-off Power (5 minutes)	Maximum Continuous Power
861	815

5.2 One Engine Inoperative (OEI) Power (kW)

2½-Minute OEI	Continuous OEI
1217	1064

6. Control System:

Fuel controls and power management are controlled by an Electronic Engine Control (EEC) with a backup hydromechanical control. The hardware and software configuration of this system and the associated engine fuel pump and hydromechanical unit are controlled by the approved engine equipment list for the specific engine model and aircraft application.

7. Fluids

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

8. Aircraft Accessory Drives:

Drive	Rotation	Speed Ratio To Gas Generator	Continuous Nm	Static Nm	Overhang Nm
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	
2½-Minute OEI	835
Continuous OEI	775
Take-off (5 minutes)	775
Maximum Continuous	735
Starting (2 seconds)	1100
Transient (10 seconds)	847

1.2 Maximum Oil Inlet Temperature Range (°C):

Minimum for starting	-50
Minimum for continuous operation	10
Maximum for continuous operation	140

1.3 Fuel Inlet Temperature (°C):

The minimum fuel temperature at the pump inlet shall be that equivalent to a viscosity of 12 centistokes. Refer to the relevant installation Manual for the recommended additives.

Minimum for starting	- 50 - 34 - 30	for JP4, Jet B fuel types for Jet A, A-1 fuel types For JP5 fuel type
Maximum	50	All fuel types

2. Maximum Permissible rotor Speeds:

2.1 All Engine Operative

Rotor Shaft	Take-off (5 Minutes)	Maximum Continuous	Transient 10 seconds
Output Shaft	21420	21420	23310
Gas Generator	39100	38200	40900
Power Turbine	21420	21420	23310

2.2 One Engine Operative

Rotor Shaft	2½ Minute OEI	Continuous OEI
Output Shaft	21420	21420
Gas Generator	40500	39100
Power Turbine	21420	21420

100% reference speeds: Power Turbine: 21000 RPM
Gas Generator: 38200 RPM

3. Maximum Permissible Torque Limits (Nm):

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

4. Pressure Limits:

4.1. Fuel Pump Inlet pressure:

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

Fuel Type	
Jet A, Jet A1 JP5	22.8
JP4	49.0

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

Maximum pressure: 308.2 kPa

4.2 Oil Pressure Limits:

Maximum for starting: 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	
Engine Maintenance Manual	3045332
Engine Overall Manual	3045333
Installation and Operating Instruction Manual	ER 4218

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 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-E790(c) and JAR-E800.

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

Note 5: Despatch is not permitted with faults in the EEC or in any engine-associated equipment unless it is included in an approved MMEL. Aircraft despatchability 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 requirement for operation in icing conditions within the envelope defined in JAR 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.

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