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I. General

1. Type/Models: PW308A, PW308C

2. Type Certificate Holder:

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

3. Manufacturer: Pratt and Whitney Canada Corp.

4. Certification Application Date:

PW308A	PW308C
10 August 1999	8 November 2000

5. EASA Certification Reference Date:

PW308A	PW 308C
13 April 1999	13 April 1999

6. EASA Certification Date:

PW308A	PW308C
20 December 2002	20 December 2002

EASA Type Certification for the PW308A/308C engine models is granted, in accordance with article 2 paragraph 3 (a)(i) of EU Commission Regulation EC 1702/2003, based on a German validation letter issued following the JAA Validation Recommendation on 01 August 2002.

II. Certification Basis

1. Transport Canada Certification Basis: See Transport Canada TCDS E-31

2. EASA Certification Basis:

According to Article 2a 1.(a)(i) of (EC) 375/2007, the EASA Certification Basis for each model is taken over from the JAA Joint Validation Basis as shown below.

2.1 Airworthiness Standards:

2.1.1 PW308A

- JAR-E change 9 dated 21 October 1994 plus Orange Paper E/96/1 dated 8 August 1996 and Orange Paper E/97/1 dated 30 December 1997, NPA-E-20 dated 3 December 1999, E745 of JAR-E Change 10.

2.1.2 PW308C

- JAR-E change 9 dated 21 October 1994 plus Orange Paper E/96/1 dated 8 August 1996 and Orange Paper E/97/1 dated 30 December 1997, E790 of JAR-E Change 10, E745 of JAR-E Change 10.

2.2 Special Conditions:

2.2.1 PW308A

- SC1 - Inclement Weather

2.2.2 PW308C

none

2.3 Deviations:

2.3.1 PW308A

- JAR-E 570(a)(3) Oil System -oil pump inlet strainers

2.3.2 PW308C

- JAR-E 570(a)(3) Oil System -oil pump inlet strainers

2.4 Equivalent Safety Findings:

2.4.1 PW308A

- JAR-E 890 Thrust Reverser Endurance Tests

2.4.2 PW308C

- JAR-E 890 Thrust Reverser Endurance Tests

2.5 Environmental Standards:

2.5.1 PW308A:

- CS-34 Issue dated 23.10.2003 in accordance with
- ICAO Annex 16, Volume II, Third Edition including Amendment 6. The NOx Standard is in accordance with Part III, Chapter 2, § 2.3.2, d) (CAEP/6)

2.5.2 PW308C:

Build Spec 1047:

- CS-34 Issue dated 23.10.2003 in accordance with
- ICAO Annex 16, Volume II, Third Edition including Amendment 6. The NOx Standard is in accordance with Part III, Chapter 2, § 2.3.2, d) (CAEP/6)

Build Spec 1289:

- CS-34 Amendment 1 Issue dated 29.01.2013 in accordance with
- ICAO Annex 16, Volume II, Third Edition including Amendment 7. The NOx Standard is in accordance with Part III, Chapter 2, § 2.3.2, e) (CAEP/8)

III. Technical Characteristics

1. Type Design Definition:

PW308A: Engine Assembly Parts List No. A30C2000-01
PW308C: Engine Assembly Parts List No. A30C3205-02 for Build Spec 1047
A30C3205-03 for Build Spec 1289

2. Description:

Dual spool turbofan engine consisting of a 4-stage axial and single stage centrifugal high pressure compressor driven by a two stage high pressure turbine. The single stage wide chord fan is driven by a 3-stage low pressure turbine, annular combustion chamber, accessory gearbox and Full Authority Digital Engine Control (FADEC).

3. Equipment:

Approved Equipment is included in the type design definition.

4. Dimensions:

	PW308A	PW308C
Overall Length	2,183m	2,184m
Overall Diameter	1,299m	1,299m

5. Dry Weight:

PW308A: 622,3 kg PW308C: 623,5 kg, excluding all fluids and buyer furnished equipment .

6. Ratings:

Rating		PW308A	PW308C
Thrust, daN	Take-off (5 minutes)	3071	3115
	Maximum Continuous	3071	3113

Take off ratings quoted valid up to 37°C (PW308A); 38°C (PW308C), maximum continuous ratings to 28°C (PW308A); 32°C (PW308C)

7. Control System:

Engine control system comprises an Dual Channel FADEC

8. Fluids

8.1 Fuel:

For approved fuel types refer to relevant Maintenance Manual.

8.2 Oil:

For approved oil types and additives refer to relevant Maintenance Manual.

9. Aircraft Accessory Drives:

PW308A:

Drive Pad	Rotation Facing Gearbox Pad	Transmission Ratio to N2	Static Torque [Nm]	Static Overhung Moment [Nm]
Hydraulic Pump	CW	0,27	203	10
AC Generator	CW	0,52	316	51
Air Starter	CW	0,45	508	45

CW = Clockwise facing accessory pad

PW308C:

Drive Pad	Rotation Facing Gearbox Pad	Transmission Ratio to N2	Static Torque [Nm]	Static Overhung Moment [Nm]
DC Generator	CCW	0,47	249	34
Hydraulic Pump	CCW	0,36	113	10
Air Starter	CW	0,45	509	45
DC Generator (optional)	CCW	0,37	249	34
Hydraulic Pump (optional)	CCW	0,37	249	34

CW = Clockwise facing accessory pad

10. Maximum Permissible Air Bleed Extraction:

See Installation Manual Section 2

IV. Operational Limits:

1. Temperature Limits:

1.1 Interturbine Temperature (ITT), °C

	PW308A	PW308C
Take-off (5 Minutes) ⁺	875	875
Maximum Continuous	860	860
Starting (5 seconds)	950	950

⁺ limited to 5 minutes and to maximum 10 minutes after one engine having failed.

1.2 Oil Temperature

Refer to Installation Manual Table 2-1.

1.3 Fuel Temperature

Refer to Section 6 of Installation Manual.

2. Maximum Permissible Rotor Speeds:

PW308A / PW308C

	Maximum	Minimum Flight Idle
Low Pressure Rotor N1 rpm (%)	10660 (102,5)	--
High Pressure Rotor N2 rpm (%)	27316 (102,0)	16657 (62,0)

3. Pressure limits:

3.1 Oil Pressure

Refer to Installation Manual Table 2-1.

3.2 Fuel Pressure

Refer to Section 6 of Installation Manual.

4. Installation Assumptions:

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

V. Operating and Service Instructions

	PW308A	PW308C
Engine Installation Manual	ER3973	ER5074
Engine Maintenance Manual	3043622	30C3882
Engine Manual (Overhaul)	3043623	30C3883
FADEC Interface Control Document	ER3971	ER5072
Service Bulletins	As required	As required

VI. Notes

Note 1: The engine ratings are based on dry sea-level static ICAO Standard Atmospheric Conditions, no airbleed and no external accessory loads. The engine ratings specified are obtainable on a test stand with the specified fuel and oil, without intake ducting and using exhaust duct and intake specified in the Installation Manual.

Note 2: Life limited parts are listed in the relevant Maintenance Manual, Airworthiness Limitations Section

Note 3: The software for the Electronic Engine Control has been developed and tested in accordance with provisions of level A as defined in RTCA DO 178B.

Note 4: The PW308A and PW308C engines are approved for multiple engine installation only.

Note 5: The engine definition does not include a thrust reverser. Considerations for the installation of a thrust reverser are contained in the relevant Installation manual. The PW308A engine is approved for use with the NORDAM Thrust Reverser P/N 01ND-78002, the PW308C engine is approved for use with the NORDAM Thrust Reverser P/N 06ND-78002.

Note 6: Lightning protection and electromagnetic interference information are included in the Installation Manual.

Note 7: The PW308A and PW308C engines can be operated with certain detected FADEC faults in accordance with TLD policy. Aircraft considerations are contained in the Installation Manual, and Time Limits are contained in the Airworthiness Limitations Section of the Maintenance Manual.

Note 8: The PW308C engine is designed to be normally used at Take-off thrust (called "normal take-off") of 3113 daN with an ITT limit of 875°C. An automatic power increase to the certified Take-off thrust is provided in the event of one engine inoperative. The limitations stated for "normal take-off" are to ensure that the certified Take-off limitations are not exceeded in the event of an automatic power increase to take-off thrust. Refer to Installation Manual, Table 2-1.

Note 9: The take-off ratings that are normally limited to 5 minutes duration may be used up to 10 minutes for one engine inoperative without adverse effects upon engine airworthiness. Such operations are anticipated on an infrequent basis (as engine failure events during take-off are uncommon). Refer to Engine Maintenance Manual Chapter 05-10-00 for any subsequent maintenance actions.
