



TYPE-CERTIFICATE DATA SHEET

EASA.IM.E.057

for

PW308 Series engines

Type Certificate Holder

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

For Models:

PW308A
PW308C



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I. General

1. Type/ Model

PW308/ PW308A, PW308C

2. Type Certificate Holder

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

3. Manufacturer

Pratt and Whitney Canada Corporation

4. Date of Application

PW308A	PW308C
10 August 1999	8 November 2000

5. Certification Reference Date

PW308A	PW 308C
13 April 1999	13 April 1999

6. EASA Type 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. EASA Certification Basis

1.1. Airworthiness Standards

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.

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.

1.2. Special Conditions (SC)

PW308A

SC1 - Inclement Weather

PW308C

none

1.3. Equivalent Safety Findings

JAR-E 890 Thrust Reverser Endurance Tests

1.4. Deviations

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

1.5. Environmental Protection

Emissions and Fuel Venting: CS-34 Amendment 3 as implemented by ED Decision 2019/014/R (29th July 2019); ICAO Annex 16 Volume II, Amendment 9 (1st January 2018) as implemented into EU legislation 11/09/2018 ; NOx levels in compliance with Part III, Chapter 2, paragraph 2.3.2e) (CAEP/8) of the above mentioned Annex. Maximum nvPM mass concentration levels in compliance with Part III, Chapter 4, paragraph 4.2.2 (CAEP/10) of the above mentioned Annex.



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

For details of equipment included in the type design definition: refer to Installation Manual.

For details of equipment and nacelle hardware supplied by the Airframe TC holder that may be mounted on or driven by the engine: refer to Installation Manual.

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

The ISA sea-level static thrust ratings are:

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 (Fuel, Oil, Coolant, Additives)

8.1. Fuel and Additives

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. Operating Limitations

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. Pressure Limits

2.1 Oil Pressure

Refer to Installation Manual Table 2-1.

2.2 Fuel Pressure

Refer to Section 6 of Installation Manual.

3. 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)

4. Installation Assumptions:

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

5. Time Limited Dispatch:

N/A



6. ETOPS Capability:

N/A

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

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.
2. Life limited parts are listed in the relevant Maintenance Manual, Airworthiness Limitations Section
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.
4. The PW308A and PW308C engines are approved for multiple engine installation only.
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.
6. Lightning protection and electromagnetic interference information are included in the Installation Manual.
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.
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 provide 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.
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.



SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

Pratt and Whitney Canada Corporation

III. Change Record

Issue	Date	Changes	TC issue
Issue 04	05 March 2013	No change, only new format	N/A
Issue 05	12 December 2019	Introduction of CAEP/10 for nvPM compliance (EASA Major Change approval 10072020)	

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