Type Acceptance Report

TAR 11/21B/11

Pratt & Whitney Canada PW206/7 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Pratt & Whitney Canada PW206/7 series based on validation of Transport Canada Type Certificate number E-23. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Appendix 1. Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(c).

1. Introduction

This report details the basis on which Type Acceptance Certificate No.11/21B/11 was granted in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

(a) Specify the foreign type certificate and associated airworthiness design standard used for type acceptance of the model in New Zealand; and

(b) Identify any special conditions for import applicable to any model covered by the Type Acceptance Certificate.

The report also notes the status of all models included under the foreign type certificate which have been granted type acceptance in New Zealand. Models covered by the type acceptance certificate issued under Part 21B are listed in Section 2 of this report and summarised in Appendix 1.

2. ICAO Type Certificate Details

Manufacturer:	Pratt & Whitney Canada Corp		
Type Certificate:	E-23		
Issued by:	Transport Canada		
Models:	PW206A	PW206B	PW206B2
	PW206C	PW206E	PW207C
	PW207D	PW207D1	PW207D2
	PW207E	PW207K	

3. Type Acceptance Details

The application for New Zealand type acceptance was from the type certificate holder, Pratt & Whitney Canada Corp dated 15 October 2010.

Type Acceptance Certificate No. 11/21B/11 was granted on 16 November 2010 to the PW206/7 series based on validation of Transport Canada Type Certificate E-23. Specific

applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

The PW206/7 series are two-spool, fixed geometry 600 – 750 SHP turboshaft engines intended for installation in helicopters. They have a single stage centrifugal compressor and a compressor turbine mounted on the same shaft, a power turbine and an axial exhaust. The power turbine is connected to the front mounted gearbox by a shaft passing inside the compressor shaft. The gearbox contains a two stage speed reduction, output drive shaft, and accessory drives for a starter-generator, fuel control and engine oil pumps. There is a single channel electronic engine control with a hydromechanical backup.

In general there is a separate model for each OEM helicopter type the engine is installed in. One model on the type certificate, the PW206D, does not have any applications and is not included under this type acceptance certificate.

4. NZCAR §21.43 Data Requirements

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents, or were already held by the CAA:

(1) ICAO Type certificate:

Transport Canada Type Certificate E-23 dated November 21, 2008

Transport Canada Type Certificate Data Sheet E-23 Issue 26 dated June 22, 2010

Model PW206A approved December 23, 1991
Model PW206B approved March 8, 1996
Model PW206B2 approved June 4, 2001
Model PW206C approved December 21, 1995
Model PW206E approved August 29, 1997
Model PW207C approved March 16, 2005
Model PW207D approved November 13, 1998
Model PW207D1 & D2 approved November 21, 2008
Model PW207E approved February 11, 2000
Model PW207K approved September 30, 2003

(2) Airworthiness design requirements:

(i) Airworthiness Design Standards:
The certification basis of the PW206A is:

Transport Canada Airworthiness Manual (AWM) Chapter 533 change 533-2 (equivalent to FAR Part 33, up to and including at amendment 33-12) plus Additional Airworthiness Requirement 533.101 “Electronic Engine Control Systems”.

The certification basis of the PW206B, PW206C and PW206E is:

Transport Canada Airworthiness Manual (AWM) Chapter 533 change 533-3 (equivalent to FAR Part 33, up to and including at amendment 33-14) plus

Additional Airworthiness Requirement 533.101 “Electronic Engine Control Systems”.

The certification basis of the PW206B2, PW207D, PW207C, PW207E and PW207K is:

Transport Canada Airworthiness Manual (AWM) Chapter 533 change 533-3 (equivalent to FAR Part 33, up to and including at amendment 33-14) plus Additional Airworthiness Requirement 533.101 “Electronic Engine Control Systems”, plus FAR Part 33, amendment 33-18.

The certification basis of the PW207D1 and PW207D2 is:

Transport Canada Airworthiness Manual (AWM) Chapter 533 change 533-3 (equivalent to FAR Part 33, up to and including at amendment 33-14) plus Additional Airworthiness Requirement 533.101 “Electronic Engine Control Systems”, plus FAR 33, amendment 33-18, plus FAR Part 33.83 at amendment 33-17.

These are an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41 and Advisory Circular 21-1A, as AWM 533 is equivalent to FAR 33, which is the basic standard for engines called up under Part 21 Appendix C. There are no non-compliances and no additional special conditions have been prescribed by the Director under §21.23.

(ii) Special Conditions:
Nil

(iii) Equivalent Level of Safety Findings:
Nil

(iv) Airworthiness Limitations:
Airworthiness Limitations Section of the respective maintenance manual.

(3) Certification Compliance Listing:

Certification Compliance Plan PW206A	TN 0873
Certification Compliance Plan PW206B	TN 1000
Certification Compliance Plan PW206B2	ER 4966
Certification Compliance Plan PW206C	ER 3467
Certification Compliance Plan PW206E	ER 3895
Certification Compliance Plan PW207C	ER 4939
Certification Compliance Plan PW207D	ER 4478
Certification Compliance Plan PW207D1/2	ER 6506
Certification Compliance Plan PW207E	ER 4915
Certification Compliance Plan PW207K	ER 4976

(4) Operating Data:

(i) Maintenance Manual:

PW206A/E PW207E Maintenance Manual	3038324 *
PW206B/B2 Maintenance Manual	3039732 *
PW206C PW207C Maintenance Manual	3043322 *

PW207D Maintenance Manual	3043612 *
PW20D1/D2 Maintenance Manual	3071602 *
PW207K Maintenance Manual	3053372 *

(ii) Current service Information:

PW200 Service Bulletins **
PW200 Spare Parts Bulletins **
PW200 Service Information Letters **

(iii) Illustrated Parts Catalogue:

PW206A/E Illustrated Parts Catalog	3038326 *
PW206B Illustrated Parts Catalog	3039724 *
PW206B2 Illustrated Parts Catalog	3054928 *
PW206C Illustrated Parts Catalog	3043324 *
PW207C Illustrated Parts Catalog	3054927 *
PW207D Illustrated Parts Catalog	3049724 *
PW207D1/D2 Illustrated Parts Catalog	3071604 *
PW207E Illustrated Parts Catalog	3049725 *
PW20K Illustrated Parts Catalog	3053374 *

(5) Agreement from manufacturer to supply updates of data in (4):

CAA 2171 dated 5 Nov 2010 signed by Fadi Saffah, PW200 Program Manager.
Website subscription to PW206/7 series publications provided.

* Interactive Electronic Technical Manual (IETM) on CD

** Available on the applicable engine model CD or via the website www.pwc.ca

Attachments

The following documents form attachments to this report:

Cutaway drawing of PW206A engine
Copy of Transport Canada Type Certificate Data Sheet E-23

Sign off

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Peter Gill Checked – Owen Olls
Airworthiness Engineer Airworthiness Specialist

Appendix 1

List of Type Accepted Variants:

Models:	*Applicant:*	*CAA Work Request:*	*Date Granted:*
PW206B/B2	Eurocopter International Pacific Ltd	99/21B/13	25 November 1998
PW206A, PW206C PW206E, PW207C PW207D, PW207D1/D2 PW207E, PW207K	Pratt & Whitney Canada Corp	11/21B/11	16 November 2010