
Type Acceptance Report

TAR 7/21B/40

Pratt & Whitney Canada PW307A

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Executive Summary

New Zealand Type Acceptance has been granted to the Pratt & Whitney Canada PW307A based on validation of Transport Canada Type Certificate number E-33. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Appendix 1, which are now eligible for installation on a New Zealand-registered aircraft. 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(b).

1. Introduction

This report details the basis on which Type Acceptance Certificate No.7/21B/40 was granted in the Standard Category 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(s) in New Zealand; and
- (b) Identify any special conditions for import applicable to any model(s) covered by the Type Acceptance Certificate.

2. ICAO Type Certificate Details

Manufacturer: Pratt & Whitney Canada Corporation

Type Certificate: E-33
Issued by: Transport Canada

Model: PW307A

3. Type Acceptance Certificate

The application for New Zealand type acceptance was from the manufacturer, dated 31 March 2007. The PW300 series, which is covered by several different type certificates, is a two spool front-fan turbojet available in a range of thrusts from 4600 lb to 7000 lb. The PW307A is fitted to the Dassault Falcon 7X business jet.

Type Acceptance Certificate No. 7/21B/40 was granted on 19 October 2007 to the Model PW307A based on validation of Transport Canada Type Certificate E-33. There are no special requirements for import into New Zealand.

The PW307A is the fourth model in the PW300 Series, and has been re-sized for its 6405 lb thrust rating. A three-stage fan turbine drives a single stage fan on the low-pressure shaft. The high-pressure compressor has four axial and one centrifugal stage (split-type configuration) driven by a two-stage high-pressure turbine. The engine bypass ratio is 4.31.

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 Number E-33

Transport Canada Type Certificate Data Sheet no. E-33 at Issue 3 dated 18.12.06
– Model PW307A approved April 15, 2005

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the PW307A is Canadian Airworthiness Manual, Chapter 533 Change 5 dated 1 December 1999, as amended by NPA-2000-265. This is equivalent to FAR Part 33 effective February 1, 1965, with amendments 33-1 through 33-20. This is the basic standard for aircraft engines called up under Part 21 Appendix C. There are no non-compliances and no special conditions have been prescribed by the Director under §21.23. The engines have also been shown to meet the requirements of JAR-E Change 11.

(ii) *Special Conditions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

Nil

(iv) *Airworthiness Limitations:*

See the Airworthiness Limitations Section of the Maintenance Manual.

(3) Environmental Certification:

The PW307A complies with Airworthiness Manual Chapter 516, Change 516-06, subchapter B “Aircraft Engine Emissions” plus ICAO Annex 16 Volume II, Amendment 4. Compliance with FAR 34 up to Amendment 34-3, February 3, 1999, has also been demonstrated.

(4) Certification Compliance Listing:

PW307A Foreign Validation – Engine Description and Certification Compliance

(5) Flight Manual: N/A

(6) Operating Data for Engine:

(i) *Maintenance Manual:*

PW307A Maintenance Manual P/N 30P0422 (IETM)

(ii) *Current service Information:*

PWC Service Bulletins, Spares Parts Bulletins and Service Information Letters are available on the Pratt and Whitney Canada website.

(iii) *Illustrated Parts Catalogue:*

PW307A IPC P/N 30P0424 (IETM)

(7) Agreement from manufacturer to supply updates of data in (5), and (6):

CAA 2171 from PW300 Senior Project Engineer dated 31 March 07

(8) Other information:

PWC Engineering Report No. 5598 – Installation Manual PW307A Turbofan

PWC Engineering Report No. 5220-01 – Interface Control Document for the PW307A Control System on the Falcon 7X Aircraft – Revision D

Attachments

The following documents form attachments to this report:

Copy of Transport Canada Type Certificate Data Sheet Number E-33

Sign off

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David Gill
Team Leader Airworthiness

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Checked – Beth Coughlan AWE
Date: 19 October 2007

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
PW307A	Pratt & Whitney Canada Corp.	7/21B/40	19 October 2007