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# **Type Acceptance Report**

**TAR 8/21B/1**

**Pratt & Whitney Canada PW308 Series**



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## Executive Summary

New Zealand Type Acceptance has been granted to the Pratt & Whitney Canada PW308 Series based on validation of Transport Canada Type Certificate number E-31. There are no special requirements for import.

Applicability is limited to the Models and/or serial numbers detailed in Appendix 1, which are now eligible for installation on a NZ-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. 8/21B/1 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-31

Issued by: Transport Canada

Model(s): PW308A, PW308C

## 3. Type Acceptance Certificate

The application for New Zealand type acceptance of the PW308A and PW308C was from the manufacturer, dated 25 June 2007. The PW300 series is a two spool front-fan turbojet available in a range of thrusts from 4600 to 7000 lb, intended for business jet applications.

Type Acceptance Certificate No. 8/21B/1 was granted on 18 October 2007 to the Models PW308A and 308C based on validation of Transport Canada Type Certificate E-31. There are no special requirements for import into New Zealand.

The PW308 is the fourth model in the PW300 Series, and the 308A was selected to power the Hawker 4000 Horizon. Rated at 6,900 lb. the engine has a 39% higher thermodynamic thrust over the original PW305, achieved through an increase in fan diameter and an upflowed/upscaled compressor. The PW308C version was developed for the Falcon 2000EX aircraft and is rated at 7002 lb. maximum takeoff thrust.

#### 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-31

Transport Canada Type Certificate Data Sheet No. E-31 at Issue 5 dated 31.08.07

– Model PW308A approved November 29, 2000

– Model PW308C approved November 29, 2001

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the PW308 Series is Canadian Airworthiness Manual, Chapter 533 Change 5 dated 1 December 1999. 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 9, dated October 21, 1994 plus OP's E/96/1 and E/97/1. The PW308 Series also comply with the Bird Ingestion requirements detailed in NPRM 98-19 (reference proposed FAR 33.76 b and c) and NPA-E20, and Transport Canada and FAA requirements for operation in icing conditions.

(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 PW308 Series complies with Airworthiness Manual Chapter 516, 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:

PWC Engineering Report No.3947 – PW308A Series Engine Civil Certification Compliance Plan – November 2000

PWC Engineering Report No.5051 – PW308C Engine Civil Certification Compliance Plan – October 2001

(5) Flight Manual: N/A

(6) Operating Data for Engine:

(i) *Maintenance Manual:*

PW308A Maintenance Manual P/N 3043622 (IETM)

PW308C Maintenance Manual P/N 30C3882 (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:*

PW308A IPC P/N 3043624 (IETM)

PW308C IPC P/N 30C3884 (IETM)

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

CAA 2171 from PW300 Senior Project Engineer dated 25 June 2007

## Attachments

The following documents form attachments to this report:

Copy of Transport Canada Type Certificate Data Sheet Number E-31

## Sign off

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David Gill  
Team Leader Airworthiness

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Checked – Chris Thomson AWE  
Date: 18 October 2007

## Appendix 1

### List of Type Accepted Variants:

| <i>Model:</i>  | <i>Applicant:</i>            | <i>CAA Work Request:</i> | <i>Date Granted:</i> |
|----------------|------------------------------|--------------------------|----------------------|
| PW308A, PW308C | Pratt & Whitney Canada Corp. | 8/21B/1                  | 18 October 2007      |