Type Acceptance Report

TAR 18/21B/41

PIPER PA-14

TABLE OF CONTENTS

Executive Summary

New Zealand Type Acceptance has been granted to the Piper PA-14 based on validation of FAA Type Certificate number A-797. There are no special requirements for import.

Applicability is to all aircraft covered by the type certificate, which are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with NZCAR §21.191, subject to any outstanding New Zealand operational requirements being met. (See Section 5 of this report for a review of compliance of the basic type design with the operating Rules.)

NOTE: The information in this report was correct as at the date of issue. The report is generally only updated when an application is received to revise the Type Acceptance Certificate. For details on the current type certificate holder and any specific technical data, refer to the latest revision of the State-of-Design Type Certificate Data Sheet referenced herein.

1. Introduction

This report details the basis on which Type Acceptance Certificate No. 18/21B/41 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; and

(c) Identify any additional requirements which must be complied with prior to the issue of a NZ Airworthiness Certificate or for any subsequent operations.

The report covers all models included on the State-of-Design type certificate which have been granted type acceptance in New Zealand in accordance with the provisions of CAR Part 21B.

2. Aircraft Certification Details

(a) State-of-Design Type and Production Certificates:

Manufacturer:	Piper Aircraft Corporation
Type Certificate Holder:	FS 2002 Corp.
Type Certificate:	A-797
Issued by:	Federal Aviation Administration
Production Approval:	Not applicable

(b) Models Covered by the Part 21B Type Acceptance Certificate:

(i) **Model:** PA-14

MCTOW:	1850 lb. [839 kg]
Max. No. of Seats:	4
Noise Standard:	Not Applicable
Engine:	Lycoming O-235-C1 Type Certificate: E-223 Issued by: Federal Aviation Administration
Propeller:	Sensenich FP-76RM39 (or any other eligible fixed pitch wooden propeller, as specified on the TCDS) Type Certificate: P-170 Issued by: Federal Aviation Administration McCauley 1C90-LM Series Type Certificate: P-842 Issued by: Federal Aviation Administration Sensenich M76AM Series Type Certificate: 1P2 Issued by: Federal Aviation Administration

3. Application Details and Background Information

The application for New Zealand type acceptance of the Piper PA-14 Family Cruiser was from the importer Argus Helicopters Ltd, dated 11 June 2018. The first-of-type example was serial number 14-132, registered ZK-BZL. The PA-14 is a single-engine four-seat high-wing light aircraft with fixed undercarriage and conventional steel-tube and fabric construction.

Type Acceptance Certificate No. 18/21B/41 was granted on 31 August 2018 to the Piper Model PA-14 based on validation of FAA Type Certificate A-797. There are no special requirements for import into New Zealand.

The PA-14 was essentially a wider four-seat development of the PA-12 Super Cruiser with flaps. Around 240 were built before it was replaced by the PA-16 Clipper, which was simpler and less expensive to manufacture.

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) State-of-Design Type certificate:

FAA Type Certificate Number A-797

FAA Aircraft Specification number A-797 at Revision 11 dated March 30, 2001 – Model PA-14 approved August 26, 1948

(2) Airworthiness design requirements:

(i) Airworthiness Design Standards:
The certification basis of the PA-14 is CAR 3 (no date specified). This is an acceptable certification basis in accordance with NZCAR Part 21B paragraph §21.41 and Advisory Circular 21-1A, as CAR 3 is the predecessor to FAR 23, which is the basic standard for Normal Category Airplanes called up under Part 21 Appendix C and Advisory Circular 21-1. 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:
Nil

(3) Aircraft Noise and Engine Emission Standards:

(i) Environmental Standard:
Not Applicable.

(4) Certification Compliance Listing:

Piper Report 743 – Type Inspection Report Dated Sept. 1, 1947 (Partial copy)

(5) Flight Manual: C.A.A.-Approved Airplane Flight Manual Piper Model PA-14 dated March 10, 1948 – Piper Report 582 – CAA Accepted as AIR 3855 *[applicable to s/n 14-1 to 14-489]*

C.A.A.-Approved Airplane Flight Manual Piper Model PA-14 dated December 16, 1948 – Piper Report 582a – CAA Accepted as AIR 3856 – *[applicable to s/n 14-490 and up]*

(6) Operating Data for Aircraft:

(i) Maintenance Manual:
(There is no published Maintenance Manual. Piper recommends FAA AC 43.13-1 for standard repair procedures.) Inspection intervals are found in Report 230 3000.

(ii) Current service Information:
Service Aids, Bulletins, Letters and Memos for Piper PA-14 (Consolidated PBLPA published by Univair Corporation, with Supplement Pages dated January 2011

(iii) Illustrated Parts Catalogue:
Piper Model PA-14 Family Cruiser Parts List

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

The Flight Manuals are still at original issue. The type certificate holder advises that the publications available from Univair "*are direct copies of the last Piper documentation produced for this model.*"

5. New Zealand Operational Rule Compliance

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 has been assessed as they are a prerequisite for the grant of an airworthiness certificate.

Civil Aviation Rules Part 26

Subpart B – Additional Airworthiness Requirements

Appendix B – All Aircraft

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
B.1	Marking of Doors and Emergency Exits	***To be determined on an individual aircraft basis***
B.2	Crew Protection Requirements – CAM 8 Appdx. B # .35	Not Applicable – Agricultural Aircraft only

Compliance with the following additional NZ operating requirements has been reviewed and were found to be covered by either the original certification requirements or the basic build standard of the aircraft, except as noted:

Civil Aviation Rules Part 91

Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:		MEANS OF COMPLIANCE:	
91.505	Seating and Restraints – Safety belt/Shoulder Harness		***To be determined on an individual aircraft basis***	
91.507	Pax Information Signs – Smoking, safety belts fastened		N/A – Less than 10 passenger seats	
91.509 Min. VFR	(1) ASI (2) Machmeter (3) Altimeter (4) Magnetic Compass (5) Fuel Contents (6) Engine RPM (7) Oil Pressure	CAR §3.655(a)(1) CAR §3.655(a)(2) CAR §3.655(a)(3) CAR §3.655(b)(1)(i) CAR §3.655(b)(1)(iv) CAR §3.655(b)(1)(ii) CAR §3.655(b)(1)(v)	(8) Coolant Temp (9) Oil Temperature (10) Manifold Pressure (11) Cylinder Head Temp. (12) Flap Position (13) U/c Position (14) Ammeter/Voltmeter	N/A – Air-cooled engine CAR §3.655(b)(1)(iii) N/A – Normally aspirated N/A – Less than 250 h.p. N/A – Not fitted to the PA-14 N/A – Fixed undercarriage CAR §3.687 [Optional equipment]
91.511	Night VFR Instruments and Equipment		***Operating Rule – Compliance to be determined by operator***	
91.513	VFR Communication Equipment		***Operating Rule – Compliance to be determined by operator***	
91.517	IFR Instruments and Equipment		***Operating Rule – Compliance to be determined by operator***	
91.519	IFR Communication and Navigation Equipment		***Operating Rule – Compliance to be determined by operator***	
91.523	Emergency Equipment: (a) More Than 9 pax – First Aid Kits per Table 7 – Fire Extinguishers per Table 8 (b) More than 20 pax – Axe readily accessible to crew (c) More than 61 pax – Portable Megaphones per Table 9		 Not Applicable – Less than 10 passenger seats Not Applicable – Less than 10 passenger seats Not Applicable – Less than 20 passenger seats Not Applicable – Less than 61 passenger seats	
91.529	ELT – TSO C126 406 MHz after 22/11/2007		***Operating Rule – Compliance to be determined by operator***	
91.531	Oxygen Indicators – Volume/Pressure/Delivery		***Operating Rule – Compliance to be determined by operator***	
91.533	Oxygen for non-Pressurised Aircraft		Not Fitted as Standard	
91.541	SSR Transponder and Altitude Reporting Equipment		***Operating Rule – Compliance to be determined by operator***	
91.543	Altitude Alerting Device – Turbojet or Turbofan		Not Applicable – Not turbo jet or turbofan powered	
91.545	Assigned Altitude Indicator		***Operating Rule – Compliance to be determined by operator***	
A.15	ELT Installation Requirements		***To be determined on an individual aircraft basis***	

NOTES: 1. A Design Rule reference in the Means of Compliance column indicates the Design Rule was directly equivalent to the CAR requirement, and compliance is achieved for the basic aircraft type design by certification against the original Design Rule.

2. The CAR Compliance Tables above were correct at the time of issue of the Type Acceptance Report. The Rules may have changed since that date and should be checked individually.

Attachments

The following documents form attachments to this report:

Three-view drawing Piper PA-14 Family Cruiser
Copy of FAA Aircraft Specification Number A-797

Sign off

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David Gill	Checked – Greg Baum
Team Leader Airworthiness	Airworthiness Engineer