

---

# **Type Acceptance Report**

**TAR 8/21B/24 – Revision 1**

**CESSNA 170 Series**



## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. AIRCRAFT CERTIFICATION DETAILS</b>	<b>2</b>
<b>3. APPLICATION DETAILS AND BACKGROUND INFORMATION</b>	<b>3</b>
<b>4. NZCAR §21.43 DATA REQUIREMENTS</b>	<b>4</b>
<b>5. NEW ZEALAND OPERATIONAL RULE REQUIREMENTS</b>	<b>5</b>
<b>ATTACHMENTS</b>	<b>7</b>
<b>APPENDIX 1</b>	<b>7</b>



## Executive Summary

New Zealand Type Acceptance has been granted to the Cessna Model 170 Series based on validation of FAA Type Certificate number A-799. There are no special requirements for import.

All models listed under the FAA type certificate have been type accepted in New Zealand. These are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with NZCAR §21.177, 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. 8/21B/24 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. Appendix 1 details which models have been type accepted in accordance with the provisions of CAR Part 21B and which were certificated prior to that under NZCAR Section B.9 and are now type accepted under the transitional arrangements of Part 21 Appendix A(c).

## 2. Aircraft Certification Details

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

Manufacturer: Cessna Aircraft Company

Type Certificate Holder: Textron Aviation Inc. (since July 29, 2015)  
Type Certificate: A-799  
Issued by: Federal Aviation Administration

Production Approval: Delegation Option Manufacturer No. CE-1  
FAA PC No.4

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

(i) **Model:** 170, 170A, 170B

MCTOW: 2200 lb. [998 kg]

Max. No. of Seats: 4

Noise Standard: Not Applicable

**Engine:** Continental C-145-2 or -2H, or O-300-A  
Type Certificate: E-253  
Issued by: Federal Aviation Administration

**Propeller(s):** McCauley 1A170  
Type Certificate: P-857  
Issued by: Federal Aviation Administration

Sensenich 73BR-50 (or any other fixed-pitch wooden)  
Type Certificate: P-170  
Issued by: Federal Aviation Administration

McCauley 2B36C7/78K-2  
Type Certificate: P-889  
Issued by: Federal Aviation Administration

Sensenich M74DR  
Type Certificate: P-886  
Issued by: Federal Aviation Administration

McCauley 1C172/MDM  
Type Certificate: P-910  
Issued by: Federal Aviation Administration

### 3. Application Details and Background Information

The application for New Zealand type acceptance was from Mr P C Waterhouse, dated 14 January 2008. The first-of-type example was a 1950 Model 170A serial number 19878, registered ZK-OCC. The Cessna 170 is a four-seat single-engine high-wing all-metal light aeroplane with a tailwheel undercarriage configuration.

Type Acceptance Certificate No. 8/21B/24 was granted on 12 March 2008 to the Cessna Models 170 and 170A based on validation of FAA Type Certificate A-799. There are no special requirements for import into New Zealand.

Revision 1 to this report was issued to update the format. This was at the request of the type certificate holder, who has provided access to all technical publications.

The 1948 Cessna 170 was basically a four-seat development of the Model 140, using a new two-panel fabric-covered wing of extended span and an enlarged fuselage. The 1949-51 Model 170A introduced an all-metal wing of semi-tapered planform with single lift strut and a dorsal fin. The 1952-56 Model 170B (originally known as the Model 171) was very similar to the 170A, with some refinement of the wing and tail and new slotted flaps. (The first example of the Cessna 170 Series in New Zealand was a Model 170B serial number 25372 registered ZK-AZC in March 1953.)

#### 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-799

FAA Type Certificate Data Sheet no. A-799 at Revision 55 dated July 29, 2015

- Model 170 approved July 12, 1948
- Model 170A approved December 15, 1948
- Model 170B approved September 28, 1950

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Cessna 170 Series is Civil Air Regulations Part 03; at issue dated December 15, 1946 with Amendments 03-1 through 03-3 for the Model 170, and Amendments 03-1 through 03-4 for the Model 170A; and at issue dated November 1, 1949 with Amendments 3-1 and 3-2 for the Model 170B. This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41 and Advisory Circular 21-1A, as CAR 3 is the predecessor of FAR 23, which is the basic standard for Normal Category Airplanes 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:*

See Maintenance Manual

(3) Environmental Certification:

Not applicable.

(4) Certification Compliance Listing:

Cessna Report No.802 – Model 170 – Fuselage Analysis

Cessna Report No.804 – Model 170 – Vertical Tail Analyses

Cessna Report No.807 – Model 170 – Landing Gear Analyses

Cessna Report No.880 – Model 171 (170A/B) – Basic Data

Cessna Report No.881 – Model 171 – Wing Analysis

Cessna Report No.882 – Model 171 – Horizontal Tail Load Analysis

Model 170B – Excerpts from Performance Reports



- (5) Flight Manual: Owners Manual for Cessna 170 Publication No. D376-13  
CAA Accepted as AIR 3028
- Owners Manual for Cessna 170A Publication No. P125-13  
CAA Accepted as AIR 3029
- Owners Manual for Cessna 170B Publication No. P213-13  
CAA Accepted as AIR 2874 (1952-55) [s/n 20267 thru 26995]
- Owners Manual for Cessna 170B Publication No. P130-13  
CAA Accepted as AIR 3030 (1956) [s/n 26996 thru 27169]
- (6) Operating Data for Aircraft:
- (i) *Maintenance Manual:*  
Publication D138-1-13 Maintenance Manual Cessna 100 Series 1953-1962
- (ii) *Current service Information:*  
Service Bulletins
- (iii) *Illustrated Parts Catalogue:*  
Publication P106-12 IPC Cessna 1948 Model 170  
Publication P107-12 IPC Cessna 1949-51 Model 170A  
Publication P108-12 IPC Cessna 1952-56 Model 170B
- (7) Agreement from manufacturer to supply updates of data in (5), and (6):  
Textron Aviation Publications are now available through the Textron Aviation  
Technical Publications website at <https://ww2.txtav.com>
- (8) Other information:  
Cessna Models 170-170A-170B Drawing List

## 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.

### CAR Part 26 – Subpart B – Additional Airworthiness Requirements

#### Appendix B – All Aircraft

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
B.1	Marking of Doors and Emergency Exits	<i>To be determined on an individual aircraft basis</i>
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:

### CAR Part 91 – Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
91.505	Seating and Restraints – Safety belt/Shoulder Harness	CAR §3.715
91.507	Pax Information Signs – Smoking, safety belts fastened	Not Applicable – 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) Not Applicable CAR §3.655(a)(2) CAR §3.655(a)(3) CAR §3.672 CAR §3.655(b)(1)(iv) CAR §3.655(b)(1)(ii)
91.511	Night VFR Instruments and Equipment	<i>Operational requirement – Compliance as applicable</i>
91.513	VFR Communication Equipment	<i>Operational requirement – Compliance as applicable</i>
91.517	IFR Instruments and Equipment	<i>Operational requirement – Compliance as applicable</i>
91.519	IFR Communication and Navigation Equipment	<i>Operational requirement – Compliance as applicable</i>
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	<i>Operational Requirement – Compliance as applicable</i> <i>Operational Requirement – Compliance as applicable</i> 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	<i>Operational requirement – Compliance as applicable</i>
91.531	Oxygen Indicators – Volume/Pressure/Delivery	<i>Operational requirement – Compliance as applicable</i>
91.533	Oxygen for non-Pressurised Aircraft	<i>Operational requirement – Compliance as applicable</i>
91.541	SSR Transponder and Altitude Reporting Equipment	<i>Operational requirement – Compliance as applicable</i>
91.543	Altitude Alerting Device – Turbojet or Turbofan	Not Applicable – Not turbo jet or turbofan powered
91.545	Assigned Altitude Indicator	<i>Operational requirement – Compliance as applicable</i>
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

### CAR 135 – Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
135.355	Seating / restraints – Shoulder harness flight-crew seats	<i>Operational requirement – Compliance as applicable</i>
135.357	Additional Instruments (Powerplant and Propeller)	Has all instruments required under FAR §23.1305
135.359	Night Flight	<i>Operational requirement – Compliance as applicable</i>
135.361	IFR Operations	<i>Operational requirement – Compliance as applicable</i>
135.363	Emergency Equipment (Part 91.523 (a) and (b))	<i>Operational requirement – Compliance as applicable</i>
135.367	Cockpit Voice Recorder	N/A – Only for 2-crew helicopters with more than 10 pax
135.369	Flight Data Recorder	Not Applicable – Less than 10 passenger seats
135.371	Additional Attitude Indicator	Not Applicable – Not turbo jet or turbofan powered

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 then and compliance should be checked individually.

**Attachments**

The following documents form attachments to this report:

- Photographs first-of-type example Cessna 170A s/n 19878 ZK-OCC
- Three-view drawing Cessna Model 170
- Copy of FAA Type Certificate Data Sheet Number A-799

**Sign off**

.....  
David Gill  
Team Leader Airworthiness

.....  
Checked – Kavita Vanmari  
Airworthiness Engineer

**Appendix 1**

**List of Type Accepted Variants:**

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
170B	AC 21-1.2/NZCAR Part 21 Appendix A(c)		
170, 170A	P C Waterhouse	8/21B/24	12 March 2008