
Type Acceptance Report

TAR 17/21B/26

CESSNA F337 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Cessna F337 Series based on validation of FAA Type Certificate number A23EU. There are no special requirements for import.

All models listed under the FAA type certificate have been type accepted in New Zealand.

1. Introduction

This report details the basis on which Type Acceptance Certificate No. 17/21B/26 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.

2. Aircraft Certification Details

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

Type Certificate Holder: Cessna Aircraft Company (since December 11, 2006)
Type Certificate: A23EU
Issued by: Federal Aviation Administration
Production Approval: Not Applicable

(b) Other State-of-Manufacture Type and Production Certificates:

Manufacturer: Reims Aviation S.A.
Original TC: Certificat de Navigabilite de Type Numero 50
(Fiche de Navigabilite Numero 124)
Issued by: DGAC France

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

(i) **Models:** F337E, F337F

MCTOW: 4400 lb. [1995 kg] – F337E
4630 lb. [2100 kg] – F337F or F337E with STC SA11EU

Max. No. of Seats: 6

Noise Standard: Not Applicable

Engine: Continental IO-360-C

Type Certificate: E1CE
Issued by: Federal Aviation Administration

Propeller: McCauley D2AF34C Series

Type Certificate: P5EA
Issued by: Federal Aviation Administration

(ii) **Models:** FT337E, FT337F

MCTOW: 4630 lb. [2100 kg]
4700 lb. [2132 kg] – with STC SA11EU

Max. No. of Seats: 6

Noise Standard: Not Applicable

Engine: Continental TSIO-360-A

Type Certificate: E9CE
Issued by: Federal Aviation Administration

Propeller: McCauley D2AF34C Series

Type Certificate: P5EA
Issued by: Federal Aviation Administration

(iii) **Models:** FT337GP, FT337HP
MCTOW: 4700 lb. [2132 kg]
Max. No. of Seats: 5
Noise Standard: Not Applicable
Engine: Continental TSIO-360-C
Type Certificate: E9CE
Issued by: Federal Aviation Administration
Propeller: McCauley D2AF34C Series
Type Certificate: P5EA
Issued by: Federal Aviation Administration

(iv) **Models:** F337G, F337H
MCTOW: 4630 lb. [2100 kg]
Max. No. of Seats: 6
Noise Standard: Not Applicable
Engine: Continental IO-360-G
Type Certificate: E1CE
Issued by: Federal Aviation Administration
Propeller: McCauley D2AF34C Series
Type Certificate: P5EA
Issued by: Federal Aviation Administration

NOTE: See Advisory Circular AC21-1 Appendix 2 for the New Zealand type acceptance status of the engines and propellers listed above.

3. Application Details and Background Information

The application for New Zealand type acceptance was from Twenty Twenty Four Limited, dated 22 May 2017. The first-of-type example was serial no. 0045, registered ZK-SVY. The Cessna F337 Series is a strut-braced high-wing six-seat light aircraft with retractable undercarriage and twin-engines in a front tractor and rear pusher in-line configuration.

Type Acceptance Certificate Number 17/21B/26 was granted on 30 August 2017 to the Cessna F337 Series based on validation of FAA Type Certificate A23EU. There are no special requirements for import into New Zealand.

Reims Aviation was a French company that manufactured US-designed Cessna aircraft under license, using a kit of parts supplied by Cessna. These included the F150, F152, F172, F177RG, F182, F337, F406 and their variants. These aircraft were identical to the US-built aircraft, but because they were produced in France they were given DGAC Type Certificates. Following the bankruptcy of Reims Aviation Cessna assumed responsibility for all the license-built models except the F406, and the DGAC type certificates were transferred back to the FAA as State-of-Design.

The twin-boom “centre-line-thrust” Cessna 337 Skymaster was type certificated in 1964. The 337 followed the typical Cessna annual model evolution of gradual improvements over the years. A turbocharged version was produced from 1967 through to 1971, and reintroduced from 1978. A pressurised version was available from 1973 through to the end of production, though confusingly it was initially known as the T337G with P337xxxxx serial numbers. A new Model P337H was introduced in 1978 separate to the T337H.

Reims-produced models had the same designation as the Cessna model, except for the addition of an F prefix. In the case of the pressurised Skymasters, Reims also added a P suffix. There was one major difference with Reims 337 aircraft. In production Reims fitted some aircraft with the Robertson STOL modification under their kit No. CES-RA-337-172, which was a production version of FAA STC SA11EU. They were known as the “ADAC” variant (Avions à Atterissage et Décollage Court) and the type designation was changed by changing the model prefix to FA or FTA. The ADAC kit consisted of a recontoured wing leading edge cuff (with optional de-ice boots), wing stall fences, conical cambered wing tips, aileron centering springs, an interconnect mechanism to droop the ailerons when flaps are selected, an Automatic Trim spring connect to the elevator, vortex generators on the rear fuselage, vertical fin fairings, and a new heated pitot system with recalibrated ASI.

The FA and FTA versions are not listed on the FAA TCDS, because the re-designation is authorised under the STC. All other Reims-Cessna F337 models are covered under the FAA Type Certificate, with the exception of the FTB337G and GA, which are covered by EASA Specific Airworthiness Specification SAS.A.115 (these were the “milirole” versions with four underwing hardpoints, used by the Portugese and some other Air Forces.)

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 A23EU

FAA Type Certificate Data Sheet number A23EU at Revision 7 dated July 31, 2012

- Models F337E and FT337E approved March 24, 1970
- Models F337F and FT337F approved April 28, 1971
- Model F337G approved May 11, 1973
- Model FT337GP approved June 22, 1973
- Models F337H and FT337HP approved May 22, 1978

These supersede the original type certificate:

DGAC Certificat de Navigabilité de Type Numéro 50 – Reims/Cessna 337

DGAC Fiche de Navigabilité No. 124 – Reims-Cessna F337 et dérivés

FAA STC SA11EU issued to Reims Aviation S.A. June 4, 1973

Addendum to STC SA11EU dated 4 June 1973

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the F337 Series is FAR Part 23 effective February 1, 1965, including Amendments 23-1 through 23-6. This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41, because FAR Part 23 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 and Exemptions:*

Nil

(iii) *Equivalent Level of Safety Findings:*

(1976 Models onwards)

FAR §23.1545 and §23.1583(a)(1) Operating Limitations – The use of indicated airspeed instead of calibrated airspeed was accepted provided the approved calibration data presented in the POH is available to the pilot. ASI calibration data must be predicated on flight test.

(iv) *Airworthiness Limitations:*

See TCDS Note 4.

(3) Aircraft Noise and Engine Emission Standards:

Not Applicable

(4) Certification Compliance Listing:

The DGAC type certificate was issued on the basis of the FAA type certificate for the identical type design, so no separate certification process was followed.

(5) Flight Manual:

<i>AIR No:</i>	<i>Reims Model:</i>	<i>Cessna P/N:</i>	<i>Publication Title:</i>
AIR 3433	F 337E	D759-13	1970 Skymaster Owner's Manual
AIR 3434	F T337E	D760-13	1970 Turbocharged Skymaster OM
AIR 3435	F 337F	D859-13	1971 Skymaster Owner's Manual
AIR 3436	F 337F	D910-13	1972 Skymaster Owner's Manual
AIR 3437	FT 337F	D861-13	1971 Turbocharged Skymaster OM
AIR 3438	F 337G	D1500-13	1973 Skymaster Owner's Manual
AIR 3439	F 337G	D1512-13	1974 Skymaster Owner's Manual
AIR 3440	F 337G	D1516-13	1975 Skymaster Owner's Manual
AIR 3441	F 337G	D1534-13	1976 337G Pilots Operating Handbook
AIR 3442	F 337G	D1538-13	1977 337G Pilots Operating Handbook
AIR 3443	FT 337GP	D911-13	1973 Pressurised Skymaster Owners Manual
AIR 3444	FT 337GP	D1513-13	1974 Pressurised Skymaster Owners Manual
AIR 3445	FT 337GP	D1517-13	1975 Pressurised Skymaster Owners Manual
AIR 3446	FT 337GP	D1535-13	1976 T337G Pilots Operating Handbook
AIR 3447	FT 337GP	D1539-13	1977 T337G Pilots Operating Handbook
AIR 3448	F 337H	D1554-13	1978 337H Pilots Operating Handbook
AIR 3449	FT 337HP	D1556-13	1978 P337H Pilot's Operating Handbook

(6) Operating Data for Aircraft:

(i) *Maintenance Manual:*

Cessna 337 (1965-1973) Service Manual – Publication D2500-13

Cessna 337/T337 (1974-1980) Service Manual – Publication D2506-13

Cessna P337 (1973-1980) Service Manual – Publication D2516-13

(ii) *Current service Information:*

Service Bulletins

(iii) *Illustrated Parts Catalogue:*

Cessna 337/T337 (1965-1969) Parts Catalog – Publication P443-12

Cessna 337/T337 (1970-1972) Parts Catalog – Publication P492-12

Cessna 337 (1973-1980) Parts Catalog – Publication P607-12

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

Cessna publications are now available through the Textron 1View website at <https://ww2.txtav.com> or for some older manuals at <http://techpubs.cessna.com/>

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	<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

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	FAR §23.785
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	FAR §23.1303(a) N/A – No Mach limitations FAR §23.1303(b) FAR §23.1303(c) FAR §23.1305(a) FAR §23.1305(d) FAR §23.1305(b)
		(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 fitted FAR §23.1305(c) FAR §23.1305(h) FAR §23.1305(f) FAR §23.699(a)(2) FAR §23.729(e) FAR §23.1351
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>

Civil Aviation Rules Part 135

Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
135.355	Seating and Restraints – Shoulder harness flight-crew seats	FAR §23.785
135.357	Additional Instruments (Powerplant and Propeller)	FAR §23.1305
135.359	Night Flight	Landing light, Pax compartment
135.361	IFR Operations	Speed, Alt, spare bulbs/fuses
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 that date and should be checked individually.

Attachments

The following documents form attachments to this report:

- Three-view drawing Reims Cessna Model F337
- Copy of FAA Type Certificate Data Sheet Number A23EU
- Copy of FAA STC and Addendum SA11EU

Sign off

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David Gill
Team Leader Airworthiness

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Checked – Gaetano Settineri
Airworthiness Engineer

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
F337 Series	Twenty Twenty Four Limited	17/21B/26	30 August 2017