
Type Acceptance Report

TAR 18/21B/4

CESSNA 337 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Cessna Model 337 Super Skymaster Series based on validation of FAA Type Certificate number A6CE. There are no special requirements for import.

All models listed under the FAA type certificate have been type accepted in New Zealand, except for two models: M337B – This was a model produced only for military customers. T337H-SP – This was a special performance version that required a separate Flight Manual Supplement that is no longer available.

1. Introduction

This report details the basis on which Type Acceptance Certificate No.18/21B/4 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 models in New Zealand; and
- (b) Identify any special conditions for import applicable to any models 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:	A6CE
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) **Models:** 337, 337A, 337B, 337C, 337D, 337E, 337F

MCTOW: 4200 lb. [1905 kg] – Models 337, 337A
4300 lb. [1950 kg] – Model 337B
4400 lb. [1995 kg] – Models 337C, 337D, 337E
4630 lb. [2100 kg] – Model 337F

Max. No. of Seats: 6

Noise Standard: Not Applicable

Engine: Continental IO-360-C, -G, -CB, or -GB (front)
Continental IO-360-D, -C, -G, -DB, -CB, or -GB (rear)

Type Certificate: E1CE

Issued by: Federal Aviation Administration

Propeller: McCauley D2AF34C Series

Type Certificate: P5EA

Issued by: Federal Aviation Administration

(ii) **Models:** T337B, T337C, T337D, T337E, T337F

MCTOW: 4300 lb. [1950 kg] – Model T337B
4500 lb. [2041 kg] – Models T337C, T337D
4630 lb. [2100 kg] – Models T337E, T337F

Max. No. of Seats: 6

Noise Standard: Not Applicable

Engine: Continental TSIO-360-A or -AB (front)
Continental TSIO-360-B, -A, -BB or -AB (rear)

Type Certificate: E9CE

Issued by: Federal Aviation Administration

Propeller: McCauley D2AF34C Series

Type Certificate: P5EA

Issued by: Federal Aviation Administration

- (iii) **Models:** T337G, T337H, P337H
- MCTOW: 4700 lb. [2132 kg] – Models T337G, P337H
4630 lb. [2100 kg] – Model T337H
- Max. No. of Seats: 6
- Noise Standard: Not Applicable
FAR Part 36 – 1979 Model T337H and on
- Engine:** Continental TSIO-360-C, -CB, -H or -HB
Type Certificate: E9CE
Issued by: Federal Aviation Administration
- Propeller:** McCauley D2AF34C Series
Type Certificate: P5EA
Issued by: Federal Aviation Administration
- (iv) **Models:** 337G, 337H
- MCTOW: 4630 lb. [2100 kg]
- Max. No. of Seats: 6
- Noise Standard: Not Applicable
FAR Part 36 – 1979 Model 337H and on
- Engine:** Continental IO-360-G or -GB
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 engines and propellers listed above.

3. Application Details and Background Information

The application for New Zealand type acceptance for all the Models of the Cessna 337 Series not previously included in the type acceptance certificate was from the type certificate holder, who has provided access to all technical publications. The Cessna 337 is a strut-braced high-wing all metal six-seat light aircraft with retractable undercarriage and twin-engines in an unusual front tractor and rear pusher in-line configuration.

Type Acceptance Certificate No. 18/21B/4 was granted on 24 August 2017 to the Cessna 337 Series based on validation of FAA Type Certificate number A6CE. There are no special requirements for import into New Zealand.

The twin-boom “centre-line-thrust” Cessna Model 337 was type certificated in 1964. The 337 Series 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 P337xxxx serial numbers. A new Model P337H was introduced in 1978 separate to the T337H.

The first example of the Cessna 337 Skymaster Series in New Zealand was a Model 337C registered ZK-DAQ. This was followed by a Model 337 ZK-DFT and two Model 337G ZK-DRO and ZK-DSC. There has been one Model 337F ZK-TAI, and three examples of the pressurised Model T337G, ZK-FZA, ZK-THL and ZK-TSH.

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 A6CE

FAA Type Certificate Data Sheet number A6CE at Revision 41 dated July 29, 2015

- Model 337 approved October 8, 1964
- Model 337A approved August 11, 1965
- Model 337B approved June 22, 1966
- Model T337B approved October 25, 1966
- Models 337C and T337C approved September 15, 1967
- Models 337D and T337D approved July 23, 1968
- Models 337E and T337E approved August 5, 1969
- Models 337F and T337F approved September 8, 1970
- Model T337G approved February 2, 1972
- Model 337G approved December 18, 1972
- Models 337H and T337H approved September 9, 1977
- Model P337H approved September 9, 1977

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Cessna Models 337 and 337A is Part 3 of the Civil Air Regulations effective May 15, 1956, as amended by 3-1 through 3-8.

For all subsequent Models up to the T337H this was updated to FAR Part 23 effective February 1, 1965, including Amendments 23-1 through 23-3, plus paragraph 23.1559 at Amendment 23-21 for the 1979 P337H and 337H and on. For the T337H and T337H-SP some additional paragraphs of FAR 23 at Amendment 23-16 were also added.

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:*

S/N P3370196, P3370226 and up; 33701449, 33701672 and up:

FAR 23.1545 Airspeed Indicator; FAR 23.1583(a)(1) Operating Limitations – The use of indicated 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 3.

(3) Aircraft Noise and Engine Emission Standards:

- (i) *Environmental Standard:*
The 1979 and on Models 337H, P337H and T337H have been certificated for noise under FAR Part 36, including Amendments 36-1 through 36-6.
 - (ii) *Compliance Listing:*
Advisory Circular 36-1H
ISA-Corrected A-weighted sound levels for flyovers per Part 36 Appendix F, for a MTOW of 4630 lb and a MLW of 4400 lb at 2600 RPM:
Model 337H (TCM IO-360-C/McCauley D2AF34C) – 79.9 dBA
- (4) Certification Compliance Listing:
- DM 337-0: FAA Engineering Flight Test Report Model 337
Cessna Report S-337-33: Model 337 Structures, Substantiation Summary
Cessna Report S-337-0: Basic Data Model 337
 - DM 337A-0: FAA Engineering Flight Test Report Model 337A
 - DM 337B-0: Certification of 1967 Model at 4300 Pounds Gross Weight
Cessna Report S-337B-33: Model 337B Structures Substantiation Summary
 - DM-T337B-0: Certification of Turbocharged Version of 1967 Model 337B
 - Cessna Report S-337C-0: Basic Data Model 337C
Cessna Report S-337C-33: Structures Substantiation Summary
 - DM T-337C-0: 1968 Model 337C Changes
 - DM 337D-0: 1969 Model 337D Changes
S-337D-33: Substantiation, Critical Loads and Structural Materials Summary
 - DM T337D-0: 1969 Model T337D Changes
 - DM-T337G-0: Certification of the Pressurized Skymaster – Model T337G
-Addendum # 6: Approval of the 1975 Model Changes to the P337G
-Addendum #5: 1974 Model Changes; -Addendum #11: 1977 Model Changes
-Addendum #7: 1976 Model Changes -Addendum #2: 1979 Model Changes
 - DM 337G-0: Certification of 1973 Model 337G Changes
-Addendum #8: 1977 Model Changes -Addendum #4: 1975 Model Changes
-Addendum #2: 1974 Model Changes -Addendum #5: 1976 Model Changes
-Addendum #2: 1979 Model Changes
S-337G-33 (73): Substantiation, Critical Loads, and Structural Materials Summary
 - S-337H-33: Substantiation, Critical Loads, and Structural Materials Summary (Model 337H/T337H)
S-P337H-33: Substantiation, Critical Loads, and Structural Materials Summary (Model P337H)
DM-P337H-0: Certification of the 1978 Model P337H (plus Addendum #3:
Certification of the 1980 Model Changes to the Model P337H)
DM-T337H-0: Original Certification of the Cessna Model T337H (plus Addendum

#3: Certification of the 1980 Model Changes to the Model T337H)
 DM-337H: Certification of the 1978 Model Changes to the 337H (plus Addendum #3:
 Certification of the 1980 Model Changes to the Model 337H)

DM-P337H-0: Addendum 2: Certification of 1979 Model Changes to the P337H
 Cessna Report S-P337H-33 Revisions (for the Models 337H, T337H and P337H)

(5) Flight Manual:

<i>AIR Number:</i>	<i>Cessna Publication:</i>	<i>Title:</i>
AIR 3038	D305-13	Model 337 (1965) Owner's Manual,
AIR 2391	D365-13	Model 337A (1966) Owner's Manual
AIR 3408	D444-13	Model 337B (1967) Owner's Manual
AIR 3409	D553-13	Model 337C (1968) Owner's Manual
AIR 3410	D673-13	Model 337D (1969) Owner's Manual
AIR 3411	D759-13	Model 337E (1970) Owner's Manual
AIR 3412	D859-13	Model 337F (1971) Owner's Manual
AIR 2056	D910-13	Model 337F (1972) Owner's Manual
AIR 3150	D1500-13	Model 337G (1973) Owner's Manual
AIR 3413	D1512-13	Model 337G (1974) Owner's Manual
AIR 3414	D1516-13	Model 337G (1975) Owner's Manual
AIR 3415	D1534-13	Model 337G (1976) Pilot's Operating Handbook
AIR 3151	D1538-13	Model 337G (1977) Pilot's Operating Handbook
AIR 3416	D1554-13	Model 337H (1978) Pilot's Operating Handbook
AIR 3417	D1567-13PH	Model 337H (1979) Pilot's Operating Handbook
AIR 3418	D1578-13PH	Model 337H (1980) Pilot's Operating Handbook
AIR 2449	D911-13	Model T337G (1973 Pressurised Skymaster) OM
AIR 2407	D1513-13	Model T337G (1974 Pressurised Skymaster) OM
AIR 3419	D1517-13	Model T337G (1975 Pressurised Skymaster) OM
AIR 2262	D1535-13	Model T337G (1976 Pressurised Skymaster) POH
AIR 3420	D1539-13	Model T337G (1977 Pressurised Skymaster) POH
AIR 3421	D1556-13	Model P337H (1978) Pilot's Operating Handbook
AIR 3422	D1569-13PH	Model P337H (1979) Pilot's Operating Handbook
AIR 3423	D1580-13PH	Model P337H (1980) Pilot's Operating Handbook
AIR 3424	D445-13	Model T337B (1967) Owner's Manual
AIR 3425	D554-13	Model T337C (1968) Owner's Manual
AIR 3426	D674-13	Model T337D (1969) Owner's Manual
AIR 3427	D760-13	Model T337E (1970) Owner's Manual
AIR 3428	D861-13	Model T337F (1971) Owner's Manual
AIR 3429	D1555-13	Model T337H (1978) Pilot's Operating Handbook
AIR 3430	D1568-13PH	Model T337H (1979) Pilot's Operating Handbook
AIR 3431	D1579-13PH	Model T337H (1980) Pilot's Operating Handbook

(6) Operating Data for Aircraft, Engine and Propeller:

(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 Cessna Model 337 Super Skymaster
Copy of FAA Type Certificate Data Sheet Number A6CE

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>
337, 337A, 337G, T337G All other 337 Models (except M337B, T337H-SP)	AC 21-1.2/NZCAR Part 21 Appendix A(c) Textron Aviation Inc.	18/21B/4	24 August 2017