
Type Acceptance Report

TAR 1/21B/15 – Revision 4

Cessna 182 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Cessna Model 182 Series based on validation of FAA Type Certificate number 3A13. There are no special requirements for import.

All models listed under the FAA type certificate have been type accepted in New Zealand, which 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. 1/21B/15 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: Textron Aviation Inc. (s/n T18209101 and on)
(s/n 18282369 and on)
Cessna Aircraft Company (up to July 29, 2015)

Type Certificate: 3A13
Issued by: Federal Aviation Administration

Production Approval: Delegation Option Manufacturer No. CE-1
FAA Production Certificate No.4
DOA-100129-CE (Model T/182T)

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

(i) **Model:** 182, 182A, 182B, 182C, 182D

MCTOW: 2550 lb. [1156 kg] – Model 182
2650 lb. (1202 kg) – Model 182A through 182D

Max. No. of Seats: 4

Noise Standard: Not Applicable

Engine: Continental O-470-L
Type Certificate: E-273
Issued by: Federal Aviation Administration

Propeller: Hartzell HC82XF-1/8433-2
Type Certificate: P-878
Issued by: Federal Aviation Administration

Hartzell HCA2XF-1 or BHCA2XF-1/8433-2
Type Certificate: P-908
Issued by: Federal Aviation Administration

McCauley 2A36C1-U, 2A36C18 or 2A36C29/90M-8
Type Certificate: P-880
Issued by: Federal Aviation Administration

McCauley 2A34C50/90A-8 or 2A34C66/90AT-8
McCauley 2A34C203/90DCA-8
Type Certificate: P3EA
Issued by: Federal Aviation Administration

Hartzell BHC-C2YF-1/8468-2
Type Certificate: P-920
Issued by: Federal Aviation Administration

(ii) **Models:** 182E, 182F, 182G, 182H, 182J, 182K, 182L

MCTOW: 2800 lb. (1270 kg)

Max. No. of Seats: 4

Noise Standard: Not Applicable

Engine: Continental O-470-L or O-470-R
 Type Certificate: E-273
 Issued by: Federal Aviation Administration

Propeller: Hartzell HC82XF-1/8433-2
 Type Certificate: P-878
 Issued by: Federal Aviation Administration

Hartzell HCA2XF-1 or BHCA2XF-1/8433-2
 Type Certificate: P-908
 Issued by: Federal Aviation Administration

McCauley 2A36C1-U, 2A36C18 or 2A36C29/90M-8
 Type Certificate: P-880
 Issued by: Federal Aviation Administration

McCauley 2A34C50/90A-8 or 2A34C66/90AT-8
 McCauley 2A34C203/90DCA-8
 Type Certificate: P3EA
 Issued by: Federal Aviation Administration

Hartzell BHC-C2YF-1/8468-2
 Type Certificate: P-920
 Issued by: Federal Aviation Administration

(iii) **Models:** 182M, 182N, 182P

MCTOW: 2800 lb. (1270 kg) – Model 182M
 2950 lb. (1338 kg) – Models 182N through 182P

Max. No. of Seats: 4

Noise Standard: Not Applicable

Engine: Continental O-470-R or O-470-S
 Type Certificate: E-273
 Issued by: Federal Aviation Administration

Propeller: McCauley 2A34C66/90AT-8 blades
 Type Certificate: P3EA
 Issued by: Federal Aviation Administration

McCauley 2A34C201/90DA-8 or 2A34C203/90DCA-8
 Type Certificate: P3EA
 Issued by: Federal Aviation Administration

- (iv) **Models:** 182Q, 182R
- MCTOW: 2950 lb. (1338 kg) – Model 182Q
3100 lb. (1406 kg) – Model 182R
- Max. No. of Seats: 4
- Noise Standard: FAR Part 36
- Engine:** Continental O-470-U
Type Certificate: E-273
Issued by: Federal Aviation Administration
- Propeller:** McCauley C2A34C204/90DCB-8 blades
Type Certificate: P3EA
Issued by: Federal Aviation Administration
- (v) **Models:** R182, TR182, T182
- MCTOW: 3100 lb. (1406 kg)
- Max. No. of Seats: 4
- Noise Category: FAR Part 36
- Engine:** Lycoming O-540-J3C5D (R182)
Lycoming O-540-L3C5D (TR182, T182)
(Turbocharged per Cessna Drawing No. 2250065)
Type Certificate: 1E4
Issued by: Federal Aviation Administration
- Propeller:** McCauley B2D34C214, 217, 218 or 219/90DHB-8
Type Certificate: P7EA
Issued by: Federal Aviation Administration
- McCauley B3D32C407/82NDA-3
Type Certificate: P58GL
Issued by: Federal Aviation Administration
- (vi) **Models:** 182S, 182T, T182T
- MCTOW: 3100 lb. (1406 kg)
- Max. No. of Seats: 4
- Noise Category: FAR Part 36
- Engine:** Lycoming IO-540-AB1A5 (182S/T)
Type Certificate: 1E4
Issued by: Federal Aviation Administration

Lycoming TIO-540-AK1A (T182T)
Type Certificate: E14EA
Issued by: Federal Aviation Administration

Propeller:

McCauley B2D34C235/90DKB-8 (182S/T)
Type Certificate: P7EA
Issued by: Federal Aviation Administration

McCauley B3D36C431/80VSA-1 (Model 182S/T)
McCauley B3D36C442/80VSB-1 (Model T182T)
Type Certificate: P58GL
Issued by: Federal Aviation Administration

- NOTES: 1. See the FAA TCDS for applicability of engine and propeller models.
2. See Advisory Circular 21-1 Appendix 2 for the New Zealand type acceptance status of engines and propellers.

3. Application Details and Background Information

There have been many examples of the Cessna 182 in New Zealand prior to 1995 when Part 21 was introduced, and those particular model years or serial number ranges were therefore deemed to have a type acceptance certificate under the transitional arrangements of Part 21 Appendix A(c). The first application for New Zealand type acceptance under Part 21B was for the Model 182S, from the manufacturer dated 20 October 1996. The first-of-type aircraft were serial numbers 18280054 and 18280125, registered ZK-MGO and ZK-SKL respectively. Type Acceptance was granted on 10 July 1997. The Cessna 182 is a high-wing all-metal four-seat touring aircraft with fixed undercarriage.

The application for type acceptance of the Model 182E was from the importer, Mr Sutherland of Phoenix Aviation, dated 12 August 1999. Although the CAA held a full set of type data on the 182E there is no record of there having been any previous examples on the NZ Civil Aircraft Register. The first-of-type example was serial number 182-53823 registered ZK-WKK. Type Acceptance was granted on 11 October 1999.

The application for type acceptance of the Model 182D was from the importer, Mr M J Price dated 9 January 2001. The first-of-type example was serial number 18253552 registered ZK-MJP. Type Acceptance was granted on 12 February 2001.

The application for New Zealand type acceptance of the Model T/182T was from the manufacturer dated 9 March 2001. The first-of-type example was serial number T18208069 registered ZK-TBO. Type Acceptance Certificate No.1/21B/15 was granted on 7 June 2001, following publication and supply of the Pilot's Operating Handbooks, based on validation of FAA Type Certificate number 3A13. Specific applicability is limited by the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

This report was raised to Revision 1 under to include the NAV III avionics option, which uses a new Flight Manual. The application was from the manufacturer dated 2 March 2004 and type acceptance was granted on 6 July 2004.

This report was raised to Revision 2 to include the 182B, after application from the importer Mr H H Ross dated 6 October 2006. The opportunity was also taken to update to the latest format and to consolidate all previous Cessna 182 reports into the one document. Type acceptance of the 182B was granted on 6 December 2006. The first-of-type example was serial number 52323 registered ZK-BHP.

Revision 3 added the include Block Point Change 2007 to the T/182T Models, under which the KAP140 autopilot has been replaced with the Garmin GFC 700 AFCS and use a different Flight Manual. The application was from the manufacturer. The first-of-type example was serial number 18281923 registered ZK-JRY.

Revision 4 to this report added all the other variants and model years of the 182 Series not previously included. This was at the request of the type certificate holder, who has provided access to all technical publications.

The Cessna Model 182 was a development of the Model 180 with a change to tricycle undercarriage. It was first introduced in 1956, and has had the typical Cessna model

evolution since then. The swept tail was introduced on the Model 182C in 1963, and the cut-down rear fuselage with back windows first appeared on the 182E. The first example of the Model 182 in New Zealand was serial number 33690 registered ZK-BRI.

The R182 was a retractable version of the 182, which was marketed as the 182RG. The TR182 was turbocharged, using a turbocharger fitted to the engine by Cessna. The T182 used the same engine in a standard fixed undercarriage airframe.

The re-start 182S was essentially similar to the last production Model T182, the first model to use the Lycoming engine, except for detail changes and an extended propeller shaft.

The 182T is a straightforward development of the 182S. The main changes are in the area of drag reduction, comprising modified or re-profiled antennae, lights, fairings, wing strut cuffs and steps, plus improved engine baffles. The T182T is exactly the same except for a new turbocharged engine variant. Both models offer the 2001 model range avionics installations (particularly the Honeywell KMD 550 multifunction display) and full-leather interior option. The NAV III option (Garmin G1000 ICS) approved in June 2004 consists of the two LCD GDU 1040 Primary Flight (PFD) and Multifunction (MFD) displays and the GMA 1347 Digital Audio Panel. Non-electric back-up instruments are provided for airspeed, altimeter, vacuum attitude gyro, and non-stabilised magnetic compass.

The first example of the Cessna 182 Skylane in New Zealand was serial number 33690 registered ZK-BRI in September 1956.

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:

(1) State-of-Design Type certificate:

FAA Type Certificate Number 3A13 issued March 2, 1956

FAA Type Certificate Data Sheet No. 3A13 at Revision 72 dated Sept. 11, 2015

- Model 182 approved March 2, 1956
- Model 182A approved December 7, 1956
- Model 182B approved August 22, 1958
- Model 182C approved July 8, 1959
- Model 182D approved June 14, 1960
- Model 182E approved June 27, 1961
- Model 182F approved August 1, 1962
- Model 182G approved July 19, 1963
- Model 182H approved September 17, 1964
- Model 182J approved October 20, 1965
- Model 182K approved August 3, 1966
- Model 182L approved July 28, 1967
- Model 182M approved September 19, 1968
- Model 182N approved September 17, 1969
- Model 182P approved October 8, 1971
- Model 182Q approved July 28, 1976
- Model R182 approved July 7, 1977
- Model TR182 approved September 12, 1978
- Model T182 approved August 15, 1980
- Model 182R approved August 29, 1980
- Model 182S approved October 3, 1996
- Models 182T and T182T approved February 23, 2001

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Model 182 Series up to the Model 182R is Part 3 of the Civil Air Regulations dated November 1, 1949, as amended by 3-1 through 3-12 and Paragraph 3.112 as amended October 1, 1959 for the 182E and on. Two FAR 23 paragraphs were added for 1979 and later serial numbers of the 182Q/R models. For the T182, R182 and TR182 Model some additional paragraphs of FAR Part 23 were added, as noted on the TCDS.

The certification basis of the Models 182S and 182T/T182T was upgraded to FAR Part 23 effective February 1, 1965, as amended by Amendments 23-1 through 23-6, except for later amendment dates for particular paragraphs as noted on the Type Certificate Data Sheet. For aircraft with the Garmin G1000 Integrated Cockpit System (ICS) the certification basis was further updated for specific paragraphs, as detailed on the TCDS, and Special Condition Number 23-146-SC was applied for Protection from HIRF. Some further additions were made for aircraft fitted with the GFC-700, again as detailed on the TCDS.

This is an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41 because CAR 3 was the predecessor of FAR 23, which is the basic standard for Normal Category aircraft called up under CAR 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:*

182S/T NAV III Avionics:

23-146-SC – Installation of the Electronic Flight Instrument System and the Protection of the System from High Intensity Radiated Fields (HIRF) – Defines the HIRF environment for which no adverse effect on critical function performance must be demonstrated. This may be by test, analysis, models or similarity, or any combination of these.

(iii) *Equivalent Level of Safety Findings:*

1976 182P and 182R:

CAR 3.757 Airspeed Indicator; CAR 3.778(a) Operating Limitations – The use of indicated instead of calibrated airspeed was accepted provided the approved calibration data given in the POH is available to the pilot. ASI calibration data must be predicated on flight test.

182R:

CAR 3.430 Fuel System – The fuel system must be arranged so no pump can draw fuel from more than one tank at a time, which is not complied with when the selector is on both. This was accepted because the fuel system has design provisions to prevent introducing air into the system.

182S/T:

Induction System Icing Protection – The induction system does not feature induction heat as required by FAR §23.1093 at Amendment 23-43. Similarly as for the Model 172R Cessna showed compliance by flight test showing safe operation of the engine in the event of loss of impact tube reference due to icing. The fuel injector impact tubes were closed off and the engine induction filter blocked over 50% of the area to simulate ice. Stabilised flight was achieved for at least 30 minutes. Appropriate procedures were added to the POH. (The IO-540 engine in the 182S with a higher fuel flow required a vent hole in the fuel metering device.)

Throttle and Mixture Controls – FAR §23.1143(g) and §23.1147(b) at Amendment 43 specifies attachments must be designed so the flight can continue and land if the controls separate (Usually a spring device is used.), to account for poor reliability. The same factors were accepted as for the 172R: “compensating elements included control attachment features which are not likely to separate in flight; establishment of mandatory inspection intervals; and replacement criteria.”

(iv) *Airworthiness Limitations:*

See the Aircraft Maintenance Manual.

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

The Models 182Q and R182 have been certificated for noise under FAR Part 36 including Amendments 36-1 through 36-6. This was updated to Amendment 36-9 for the TR182 and Amendment 36-10 for the T182.

The 182S and 182T were certificated under FAR 36 including Amendments 36-21, while the T182T used Amendment 36-22.

(ii) *Compliance Listing:*

See Advisory Circular 36-1H Appendix 7 and Flight Manuals (Section 4).

Model:	MTOW:	Engine:	Propeller:	RPM:	Noise Levels	
					MdbA	CdbA
182Q	2950	O-470-U	D2A34C203	2400	72.0	69.1
182R	3100	O-470-V	D2A34C203	2400	72.0	69.1
R182	3100	O-540-J3C5D	B2D34C214	2400	72.7	70.7
R182	3100	O-540-J3C5D	B3D32C407	2400	70.3	68.3
TR182	3100	O-540-L3C5D	B2D34C217	2400	73.8	72.6
TR182	3100	O-540-L3C5D	B3D32C407	2400	70.6	69.4
T182	3100	O-540-J3C5D	B2D34C219	2400	73.2	72.5
T182	3100	O-540-J3C5D	B3D32C407	2400	69.5	68.8

Piston-Single Engineering: Model No. T182T – Report No. ET-00-1 24 Jan 2001
Takeoff Noise Level Certification Report – FAA Project AT2524WI-A
(The Noise report for the 182S is also applicable to the 182T.)

Cessna 182S – certificated noise level at 3100 lb is 79.7 dB(A) with 2-bladed propeller and 77.7 dB(A) with 3-bladed propeller – See AFM Section 4

Cessna 182T – certificated noise level at 3100 lb is 77.7 dB(A) per FAR Part 36 Appendix G, or 81.1 dB(A) per ICAO Annex 16 Chapter 10 – See AFM Section 4

Cessna T182T – certificated noise level at 3100 lb is 75.4 dB(A) per FAR Part 36 Appendix G, or 81.1 dB(A) per ICAO Annex 16 Chapter 10 – See AFM §4

(4) Certification Compliance Listing:

Cessna Report No. 7000 – Model 182 Structures – Basic Data – August 15, 1955

DM182D-0 – Model 182D Type Inspection Report –April 6, 1960

DM182E-0 – Model 182E Type Inspection Report –April 10, 1961

Cessna Report No. S-182E-0 – Model 182E Basic –17 March 61

Cessna Report No. S-182E-1 – Model 182E Wing Analysis –29 September 60

Cessna Report No. S-182E-2 – Model 182E Fuselage Analysis –28 Sept. 60

Cessna Report No. S-182E-4 – Model 182E Vertical Tail Analysis –13 Sept. 61

Cessna Report No. S-182E-5 – Model 182E Aileron Analysis –12 January 61

Cessna Report No. S-182E-6 – Model 182E Flap Analysis –12 January 61

Cessna Report No. S-182E-7 – Model 182E Landing Gear Analysis –10 April 61

Cessna Report No. S-182E-9 – Model 182E Control System Analysis –30 Mar 61

Cessna Report No. S-182E-10 – Model 182E Miscellaneous Analysis –4-5-61

Report No. S-182E-12-1 – Model 182E Fuselage Test Proposal –6 October 60

Report No. S-182E-12-2 – Model 182E Fuselage Test Results –5 December 60

Report No. S-182E-13-1/2 – Model 182E Horizontal Tail Test Proposal/Results

Report No. S-182E-17-1 – Model 182E Landing Gear Drop Test Proposal –20-5-60

Report No. S-182E-17-2 – Model 182E Landing Gear Drop Test Results –7-1-61

Report No. S-182E-18-1 – Model 182E Engine Mount Test Proposal –10-10-60

Report No. S-182E-18-2 – Model 182E Engine Mount Test Results –17-12-60

Report No. S-182E-19-1 – Model 182E Control System Test Proposal –28-2-61
Report No. S-182E-19-2 – Model 182E Control System Test Results –18-3-61
Report No. S-182E-20-2 – Model 182E Miscellaneous Test Results –7-1-61
Report No. S-182E-21-1 – Model 182E Seat and Belt Test Proposal –9-12-60
Report No. S-182E-21-2 – Model 182E Seat and Belt Test Results –5-1-61
Report No. S-182E-23-2 – Model 182E Window, Windshield Test Results –6-1-61
Report No. S-182E-26-1 – Model 182E Ground Vibration Test Proposal –31-10-60
Report No. S-182E-26-2 – Model 182E Ground Vibration Test Results –20-4-61
Report No. S-182E-31 – Model 182E Equipment Weight Report –11 October 61
Report No. S-182E-33 – 182E Structures Substantiation Summary – 7 Oct 61

Cessna Airworthiness Report No. 182-96-001
Master Compliance Checklist – Model 182S Skylane

Cessna Airworthiness Report No.182-96-001 Master Compliance Checklist, Model 182S Skylane – Updated to Rev. A to add substantiation data for 182T.

Report No.182-99-001 Master Compliance Checklist, T182T Turbo Skylane

Report No.182-04-001 MCC, NAV III (G1000 EFIS), 182T/T182T Skylane

Delegation Option Manufacturer Flight Test Report No.DM182T-29 Addendum No.1 – Approval of Garmin G1000 Integrated Cockpit System in Model 182T

Delegation Option Manufacturer Flight Test Report No.DMT182T-29 Addendum No.1 – Approval of the G1000 Integrated Cockpit System in T182T

Cessna Certification Plan CP-053391 – 182T/T182T Garmin GFC-700 AFCS

Compliance Check Sheet Report – Model B3D36C442/80VS[X] dated 19/9/00
Compliance Check Sheet Report B2D34C235/90DK[x]
Statement of Compliance TC P7EA dated 23/2/96; SoC PC-P3 dated 23/2/96
FAA Statement of Approval - Addition of B2D34C235
FAA 8110-3 dated 14/6/96 (Vibration Approval);
FAA 8110-3 23/2/96 (Approval Basis)
Compliance Check Sheet Report B3D36C431/X-80VS

Statement of Compliance TC P58GL dated 21/2/97; SoC PC-P3 dated 21/2/96
TC Application - Addition of B3D36C431/80VSA
FAA 8110-3 21/2/97 (182S Vibration Approval);
FAA 8110-3 21/2/97 (Approval Basis)

McCauley Statement of Compliance, Production Certificate No.3 dated 19/9/00
8110-3 Statement of Compliance with FAR 21 and 35 dated 91/9/2000
8110-3 Statement of Compliance FAR 23.907 Vibration Approval – 12/1/01
McCauley Memorandum – Approval Basis – B3D36C442/80VS – 19/9/2000
McCauley Memorandum – Vibration Approval B3D36C442/80VS[X] Model Propeller on the Cessna Aircraft Company T182T – dated 12/1/2001

(5) Flight Manual:

CAA AIR Number:	Cessna Publication:	Title:
AIR 3679	P134-13	Model 182 (1956) Owner's Manual
AIR 2886	D139-13	Model 182A (1957-1958) Owner's Manual
AIR 2981	P171-13	Model 182B (1959) Owner's Manual
AIR 3680	P189-13	Model 182C (1960) Owner's Manual
AIR 2717	P230-13	Model 182D (1961) Owner's Manual
AIR 2671	D130-13	Model 182E (1962) Owner's Manual
AIR 3681	D161-13	Model 182F (1963) Owner's Manual
AIR 2321	D219-13	Model 182G (1964) Owner's Manual
AIR 2798	D282-13	Model 182H (1965) Owner's Manual
AIR 2799	D348-13	Model 182J (1966) Owner's Manual
AIR 2800	D439-13	Model 182K (1967) Owner's Manual
AIR 2801	D548-13	Model 182L (1968) Owner's Manual
AIR 3682	D647-13	Model 182M (1969) Owner's Manual
AIR 2007	D754-13	Model 182N (1970) Owner's Manual
AIR 2620	D855-13	Model 182N (1971) Owner's Manual
AIR 2284	D906-13	Model 182P (1972) Owner's Manual
AIR 2283	D1003-13	Model 182P (1973) Owner's Manual
AIR 2618	D1021-13	Model 182P (1974) Owner's Manual
AIR 2619	D1041-13	Model 182P (1975) Owner's Manual
AIR 2005	D1062-13	Model 182P (1976) Pilot's Operating Handbook
AIR 3683	D1087-13	Model 182P (1977) Pilot's Operating Handbook
AIR 2464	D1114-13	Model 182Q (1978) Pilot's Operating Handbook
AIR 2716	D1141-13PH	Model 182Q (1979) Pilot's Operating Handbook
AIR 2468	D1176-13PH	Model 182Q (1980) Pilot's Operating Handbook
AIR 2472	D1196-13PH	Model 182R (1981) Pilot's Operating Handbook
AIR 2185	D1215-13PH	Model 182R (1982) Pilot's Operating Handbook
AIR 3684	D1233-13PH	Model 182R (1983) Pilot's Operating Handbook
AIR 2225	D1254-13PH	Model 182R (1984) Pilot's Operating Handbook
AIR 2475	D1275-13PH	Model 182R (1985) Pilot's Operating Handbook
AIR 3685	D1298-13PH	Model 182R (1986) Pilot's Operating Handbook
AIR 2045	D1115-13	Model R182 (1978) Pilot's Operating Handbook
AIR 2662	D1142-13PH	Model R182 (1979) Pilot's Operating Handbook
AIR 3686	D1177-13PH	Model R182 (1980) Pilot's Operating Handbook
AIR 2153	D1198-13PH	Model R182 (1981) Pilot's Operating Handbook
AIR 3687	D1217-13PH	Model R182 (1982) Pilot's Operating Handbook
AIR 3688	D1235-13PH	Model R182 (1983) Pilot's Operating Handbook
AIR 3689	D1256-13PH	Model R182 (1984) Pilot's Operating Handbook
AIR 3690	D1277-13PH	Model R182 (1985) Pilot's Operating Handbook
AIR 3691	D1299-13PH	Model R182 (1986) Pilot's Operating Handbook
AIR 2230	D1143-13PH	Model TR182 (1979) Pilot's Operating Handbook
AIR 3692	D1178-13PH	Model TR182 (1980) Pilot's Operating Handbook
AIR 2347	D1199-13PH	Model TR182 (1981) Pilot's Operating Handbook
AIR 3693	D1218-13PH	Model TR182 (1982) Pilot's Operating Handbook

AIR 3694	D1236-13PH	Model TR182 (1983) Pilot's Operating Handbook
AIR 3695	D1257-13PH	Model TR182 (1984) Pilot's Operating Handbook
AIR 3696	D1278-13PH	Model TR182 (1985) Pilot's Operating Handbook
AIR 3697	D1300-13PH	Model TR182 (1986) Pilot's Operating Handbook
AIR 2498	D1197-13PH	Model T182 (1981) Pilot's Operating Handbook
AIR 3698	D1216-13PH	Model T182 (1982) Pilot's Operating Handbook
AIR 3699	D1234-13PH	Model T182 (1983) Pilot's Operating Handbook
AIR 3701	D1255-13PH	Model T182 (1984) Pilot's Operating Handbook
AIR 3702	D1276-13PH	Model T182 (1985) Pilot's Operating Handbook

POH and FAA Approved Airplane Flight Manual Model 182S
Part No.182SPHUS00 – CAA Accepted as AIR 2581

POH and FAA Approved Airplane Flight Manual Model 182T
Part No.182TPHUS01 – CAA Accepted as AIR 2732

POH and FAA Approved Airplane Flight Manual Model T182T
Part No.T182TPHUS01 – CAA Accepted as AIR 2733

POH and FAA Approved Airplane Flight Manual Model 182T NAV III
Avionics Option – Part No.182TPHAUS01 – CAA Accepted as AIR 2869

POH and FAA Approved Airplane Flight Manual Model T182T NAV III
Avionics Option – Part No.T182TPHAUS00 – CAA Accepted as AIR 2870

POH and FAA Approved Airplane Flight Manual 182T NAV III Avionics
– GFC 700 AFCS – Part No.182TPHBUS – CAA Accepted as AIR 3010

POH and FAA Approved Airplane Flight Manual T182T NAV III Avionics
– GFC 700 AFCS – Part No.T182TPHBUS – CAA Accepted as AIR 3016

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

(i) *Maintenance Manual:*

Cessna 100 Series (1953-1962) Service Manual – Publication D138-13
Cessna 100 Series (1963-1968) Service Manual – Publication D637-13
Cessna 182 (1969-1976) Service Manual – Publication D2006-13
Cessna 182 and T182 (1977-1986) Service Manual – Publication D2068-13
Cessna R182 and TR182 (1978-1986) Service Manual – Publication D2069-13

Model 182 Series 1997 and on Maintenance Manual 182SMM
Model 182S Wiring Diagram Manual – Aerofiche 182SWD
182S/182T/T182T Wiring Diagram Manual 182SWD
Single-Engine Structural Repair Manual SESR03AF (Includes T182T)

IO-540-AB1A5 Wide Cylinder Flange Crankcase Parts Catalog PC-615-10
O-540 and IO-540 Operator's Manual P/N 60297-10 3rd Ed. Revised Jan 1997
Overhaul Manual Revisions supplied as part of 172R Type Acceptance

MPC-11 Operator's Manual for C200 (2 blade) and C400 (3 Blade) CS Props
Service Manual 780630 for McCauley C200 Constant Speed Propellers
McCauley Service Manual No. 76101 – C400 Series Constant Speed Propellers

(ii) *Current service Information:*

Cessna Service Bulletins

McCauley Service Bulletins 137H, 154E, 176C, 177B, 192A, 205B

McCauley Service Letters 1973-9 through 1996-11

(iii) *Illustrated Parts Catalogue:*

Cessna 180 (1953-62) and 182 (1956-61) Parts Catalog – Publication P259-12

Cessna 182 & Skylane (1962-1973) Parts Catalog – Publication P515-12

Cessna 182 and T182 (1974-1986) Parts Catalog – Publication P690-12

Cessna R182 and TR182 (1978-1986) Parts Catalog – Publication P701-12

Cessna Model 182 Series 1997 and on Illustrated Parts Catalog – Pub. 182SPC

Parts List PL-7302 for E-7296-A Propeller Model B3D36C431-X/G-80VSA-X

Drawing E-7296 Propeller Assembly – 3-Blade Constant-Oil Filled B3D36C431

Drawing E-7298 Hub Assembly – 3-Blade C. S. – Oil Filled

- Parts List PL-7742: Assembly E-7296-C Model B3D36C442-X/H-80VSB-X
Hub Assembly Drawing – 3 Bld Oil – D-7298, ECN 11554 dated 18/8/2000
Prop Assembly Drawing – 3 Bld Oil – E-7296, ECN 11605 dated 16/11/2000
Hub Drawing – 3 Bld Oil Lc Engine – E-7297, ECN 11609 dated 28/11/2000
Blade Drawing – 80” Basic Dia – 80VSX, ECN 11618 dated 7/12/2000

Parts List PL-7303 for E-7299 Propeller Model B2D34C235-X/B-90DKB-X

Dwg E-7299 Prop. Assembly – 2-Blade Threadless Constant Speed – Oil Filled

Dwg E-7301 Hub Assembly – 2-Blade Threadless Constant Speed – Oil Filled

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

Letter – Administrator, Cessna Engineering Certification, ref: L417-02-01-050

Textron Aviation Publications are now available through the Textron Aviation Technical Publications website at <https://ww2.txtav.com>

Letter – McCauley Propeller Systems Tech Services Engineer – May 1, 2001

(8) Other information:

1996 Model 182S Differences – Details from Letter ref. L417-02-96-108

Cessna Letter with Overview of Model Changes Models 182T and T182T

Dated 3 November 2000, Reference L417-02-00-195

Cessna Letter with Application for Type Acceptance and Certification Data

Models 182T and T182T dated 9 March 2001, Reference L417-02-01-050

Cessna Letter Reference L390-06-3010 – Block Point Change 2007 (BP2007)

5. New Zealand Operational Rule Compliance

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 is a prerequisite for the grant of a type acceptance 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 (for the 182T current production models), except as noted:

CAR Part 91 – Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
91.505	Shoulder Harness if aerobatic; >10 pax; flight training	Shoulder harness fitted as standard – see POH Figure 7-4
91.507	Pax Information Signs - Smoking, safety belts fastened	Not Applicable – Less than ten passenger seats
91.509 Min. VFR	(1) ASI FAR §23.1303(a) – Fitted as Std – See POH Figure 7-2 # 7 N/A – No mach limitations (2) Machmeter FAR §23.1303(b) – Fitted as Std – POH Figure 7-2 # 12 (3) Altimeter FAR §23.1303(c) – Std. Fit FAR §23.1305(a) – Fitted as Std – See POH Figure 7-2 # 2 (4) Magnetic Compass FAR §23.1305(d)(e) – Std Fit – See POH Figure 7-2 # 10 (5) Fuel Contents FAR §23.1305(b) – Fitted as Std – See POH Figure 7-2 # 1 (6) Engine RPM (7) Oil Pressure	(8) Coolant Temp N/A – Air-cooled engine (9) Oil Temperature FAR §23.1305(c) – Fitted as Std – See POH Figure 7-2 # 1 (10) Manifold Pressure Fitted as Standard – See POH Figure 7-2 # 53 (11) Cylinder Head Temp. Fitted as Standard – See POH Figure 7-2 # 4 (12) Flap Position FAR §23.699(a)(2) – Fitted as Std – See POH Figure 7-2 # 34 (13) U/C Position N/A – Fixed undercarriage (14) Ammeter/ Voltmeter FAR §23.1351(d) – Both fitted as Std. – See POH Fig.7-2 # 3
91.511 Night	(1) Turn and Slip Std. Fit – See POH Fig.7-2 # 6 (2) Position Lights FAR §23.1385 – POH p. 7-47	(3) Anti-collision Lights FAR §23.1401 – POH page 7-47 (4) Instrument Lighting FAR §23.1381 – POH page 7-48
91.517 IFR	(1) Gyroscopic AH Std. Fit – See POH Fig.7-2 # 9 (2) Gyroscopic DI Std. Fit – See POH Fig.7-2 # 8 (3) Gyro Power Supply FAR §23.1331(a)(3) (4) Sensitive Altimeter Bendix-King KEA 346 std fit	(5) OAT Fitted as std – POH Fig.7-2 # 5 (6) Time in hr/min/sec Fitted as std – POH Fig.7-2 # 5 (7) ASI/Heated Pitot Std. Fit – See POH Page 7-56 (8) Rate of Climb/Descent Fitted as std – POH Fig.7-2 # 11
91.519	IFR Communication and Navigation Equipment	Standard Avionics include Nav/Com with glideslope – Options: Supplement 1 covers Bendix/King KX155A with KI208 Indicator Supplement 6 covers Bendix/King KR 87 ADF Supplement 10 covers Bendix/King KLN89 GPS Supplement 19 covers Bendix/King KLN94 GPS
91.523 Emrgcy Eqpmt.	(a) More Than 10 pax – First Aid Kits per Table 7 – Fire Extinguishers per Table 8 (b) More than 20 pax – Axe readily acceptable to crew (c) More than 61 pax – Portable Megaphones: Table 9	Not Applicable – Less than 10 passenger seats Halon 1211 Fire Ext. fitted as std – See POH Page 7-63 Not Applicable – Less than 20 passenger seats Not Applicable – Less than 61 passenger seats
91.529	ELT - TSO C91a after 1/4/97 (or replacement)	Pointer 3000-11 fitted as standard – See Supplement 4
91.531	Oxygen Indicators – Volume/Pressure/Delivery	Four-place oxygen system standard fit on Model T182T
91.533 Unpress A/c	>30 min above FL100 – Supplemental crew, 10% Pax – Therapeutic for 3% of Pax Above FL100 – Supplemental for all Crew, Pax – Therapeutic for 1% of Pax – 120I PBE for each crew member	50 cubic ft. oxygen cylinder located in the fuselage tailcone Capacity at full pressure (1800 psi) is 1.75 hours for 4 occupants - (See POH Fig 7-10 Oxygen Duration Chart) Cylinder pressure is shown on gauge on overhead console 4 masks provided – partial-breathing type with flow indicators
91.541	SSR Transponder and Altitude Reporting Equipment	Standard Avionics include transponder – Supplement 2 covers Bendix/King KT76C with blind encoder
91.543	Altitude Alerting Device - Turbojet or Turbofan	Not Applicable – Not turbojet or turbofan powered
91.545	Assigned Altitude Indicator	Operational requirement – Compliance as applicable
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

NOTE: Page and Figure references are based on the T182T Pilot's Operating Handbook T182TPHUS.

Civil Aviation Rules Part 135

Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
135.355	Seating / 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	Not Applicable – Less than 10 passenger seats
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.
3. Some means of compliance above are specific to a particular model/configuration. Compliance with Part 91/119 operating requirements should be checked in each case, particularly oxygen system capacity and emergency equipment.

Attachments

The following documents form attachments to this report:

- Photographs First-of-Type example 182B serial number 52323 ZK-BHP
- Photographs First-of-Type example 182D serial number 53552 ZK-MJP
- Photographs First-of-Type example 182E serial number 53823 ZK-WKK
- Photographs First-of-Type 182S serial number 18280125 ZK-SKL
- Photographs First-of-Type 182T (NAV III) serial number 18281365 ZK-DRB
- Three-view drawings Cessna Models 182B, 182D, 182E, 182S and 182T
- Copy of FAA Type Certificate/ Type Certificate Data Sheet 3A13

Sign off

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 David Gill
 Team Leader Airworthiness

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 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>
182A, G, H, J, K, L, N, P, Q, R	AC 21-1.2/NZCAR Part 21 App. A(c)		
R182, TR182, T182	AC 21-1.2/NZCAR Part 21 App. A(c)		
182S	Cessna Aircraft Company	97/21B/11	10 July 1997
182E	W Sutherland	0/21B/2	11 October 1999
182D	M J Price	1/21B/11	12 February 2001
182T, T182T	Cessna Aircraft Company	1/21B/15	7 June 2001
T/182T – NAV III	Cessna Aircraft Company	4/21B/23	6 July 2004
182B	H H Ross	7/21B/11	6 December 2006
T/182T – NAV III/GFC700	Cessna Aircraft Company	8/21B/4	27 July 2007
All other Models	Textron Aviation Inc	18/21B/13	2 October 2018