
Type Acceptance Report

TAR 8/21B/25 – Revision 2

Beech 95/55/56/58 Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Beech Models 95/55/56/58 Travel Air and Baron Series based on validation of FAA Type Certificate number 3A16. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Appendix 1, 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.) Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(c).

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/25 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 also notes the status of all models included under the foreign type certificate which have been granted type acceptance in New Zealand. Models covered by the type acceptance certificate issued under Part 21B are listed in Section 2 of this report. Models which were accepted prior to that under NZCAR Section B.9 are listed in Appendix 1.

2. Aircraft Certification Details

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

Manufacturer: Textron Aviation Inc.
(from 12 October 2016 [serial number TH-2443 and up])

Beechcraft Corporation
(from April 12, 2013 [serial number TH-2369 to TH-2442])

Hawker Beechcraft Corporation
(from March 26, 2007 [serial number TH2178 to TH-2368])

Raytheon Aircraft Company
(from April 15, 1996 [serial number TH1780 to TH2177])

Beech Aircraft Company

Type Certificate: 3A16
Issued by: Federal Aviation Administration

Production Approval: PC8 (up to serial number TH-2442)
PC4 (Serial number TH-2443 and on)

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

(i) **Models:** 95, B95, B95A, D95A, E95

MCTOW: 4000 lb. [1814 kg] – Model 95
4100 lb. [1860 kg] – Model B95
4200 lb. [1905 kg] – Models B95A, D95A, E95

Max. No. of Seats: 5 – Models 95 and B95
6 – Models B95A, D95A, E95

Noise Standard: Not Applicable

Engine: Lycoming O-360-A1A
FAA Type Certificate: E-286

Lycoming IO-360-B1A or –B1B
FAA Type Certificate: 1E10

Propeller: Hartzell HC-92ZK-2/8447B-12A/12R
FAA Type Certificate: P-892

Hartzell HC-92WK-2/W8447B-12A/12R
FAA Type Certificate: P16EA

- (ii) **Models:** 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B
- MCTOW:** 4880 lb. [2213 kg] – Models 95-55 and 95-A55
4990 lb. [2263 kg] – Models 95-B55A
5000 lb. [2268 kg] – Models 95-B55
5100 lb. [2313 kg] – Model 95-B55B and TC-955 and up or
with Beech Kit Dwg. 55-4014
- Max. No. of Seats:** 6
- Noise Standard:** Not Applicable
- Engine:** Continental IO-470-L
FAA Type Certificate: 3E1
- Propeller:** McCauley 2AF36C39/788F-0 or 78BFM, 2AF36C89/78BFS-0
FAA Type Certificate: P-911
- McCauley 2AF34C55/78FF-0
FAA Type Certificate: P5EA
- Hartzell BHC or DHC-C2YF-2CH(U)(F)/C or FC8465-6
FAA Type Certificate: P-920
- Hartzell PHC-C3Y-2C(H)(U)(F)/C8465-6 or FC7663-2R
FAA Type Certificate: P25EA
- (iii) **Models:** 95-C55, 95-C55A, D55, D55A, E55, E55A
- MCTOW:** 4990 lb. [2263 kg] – Models 95-C55A, D55A, E55A
5300 lb. [2404 kg] – Models 95-C55, D55, E55
- Max. No. of Seats:** 6
- Noise Standard:** Not Applicable
- Engine:** Continental IO-520-C or -CB
FAA Type Certificate: E5CE
- Propeller:** McCauley 3AF32C75/82NB-6
FAA Type Certificate: P22EA
- McCauley 2AF34C55/78FF-0
FAA Type Certificate: P5EA
- Hartzell BHC-C2YF-2C(H)(U)(F)/C or FC8465-6
FAA Type Certificate: P-920
- Hartzell PHC-C3YF-2(U)(F)/C or FC7663-2R
FAA Type Certificate: P25EA
- Hartzell BHC-J2YF-2C(U)F/FC8475-6
FAA Type Certificate: P37EA
- Hartzell PHC-J3YF-2(U)F/FC7663-2R
FAA Type Certificate: P36EA

- (iv) **Models:** 56TC, A56TC
- MCTOW: 5990 lb. [2676 kg]
- Max. No. of Seats: 6
- Noise Standard: Not Applicable
- Engine:** Lycoming TIO-541-E1B4
FAA Type Certificate: E10EA
- Propeller:** Hartzell HC-F3YR-2 or -2F/C7479-2R
FAA Type Certificate: P31EA
- (v) **Models:** 58, 58A, G58
- MCTOW: 4990 lb. [2263 kg] – Model 58A
5400 lb. [2449 kg]
5500 lb. [2495 kg] – s/n TH-1389, TH-1396 and up
- Max. No. of Seats: 6
- Noise Standard: FAR 36
- Engine:** Continental IO-520-C or –CB
FAA Type Certificate: E5CE
Continental IO-550-C – s/n TH-1389, TH-1396 and up
FAA Type Certificate: E3SO
- Propeller:** McCauley D2AF34C30/78FFO
FAA Type Certificate: P5EA
McCauley D3AF32C35/82NB-6
FAA Type Certificate: P22EA
McCauley 3AF32C512/82NEA-5
FAA Type Certificate: P57GL
Hartzell BHC-J2YF-2C(U)F/FC8475-6
FAA Type Certificate: P37EA
Hartzell PHC-J3YF-2(U)F/FC7663-2R
Hartzell PHC-J3YF-2UF/FC7391D(K)
FAA Type Certificate: P36EA

- Notes: 1. Refer to FAA TCDS 3A16 for specific applicability of engine and propeller combinations to individual aircraft models.
2. Refer to Advisory Circular 21-1 Appendix 2 for the New Zealand type acceptance status of any engines and propellers listed above.

3. Application Details and Background Information

There have been examples of the Beechcraft Baron 55/58 Series 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 G58, from the importer, dated 3rd March 2008. The first-of-type example was expected to be serial number TH-2146, but this did not eventuate. The Baron is a 6-seat twin-piston-engined all-metal low-wing light twin.

Type Acceptance Certificate Number 8/21B/25 was granted on 25 November 2008 to the Beech Model G58 based on validation of FAA Type Certificate number 3A16. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

The first Model 95 Travel Air in 1957 was a new light twin which was essentially a twin-engined development of the G35 Bonanza with two 180 shp engines. The aircraft has since evolved through many versions with larger cabins, more powerful engines and higher MAUW. The first Baron (Model 95-55) introduced in 1960 was a further development with 260 shp six-cylinder engines, greater all-weather capability and a swept-back fin. Subsequent versions became the Models A55 through E55. (The identical Models with a suffix A are Special Reduced Gross Weight Configuration versions.) The Model 56TC in 1967 was turbocharged, while the Model 58 in 1969 had an extended forward fuselage with new windows and double rear doors. The G58 is the current version of the Baron, with a productionised installation of the Garmin G1000 EFIS previously fitted by STC.

This report was raised to Revision 1 to include later production 1977 and on Model 95-B55 Baron. The first-of-type example was serial number TC-2228 registered ZK-SEB.

Revision 2 was raised to include the 1983 Sales Year Model 58 Baron. The first-of-type was serial number TH-1384 registered ZK-KJV. The opportunity was also taken to add all the other variants and model years of the Beech 95/55/56/58 Travel Air and Baron Series not previously included. This was on the basis that the type certificate holder has provided access to all technical publications. Type Acceptance was granted on 28 February 2019.

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 Data Sheet no. 3A16 at Revision 94 dated October 31, 2017

- Model 95 Travel Air approved June 18, 1957
- Model B95 Travel Air approved November 13, 1959
- Model 95-55 Baron approved November 3, 1960
- Model B95A Travel Air approved March 9, 1961
- Model 95-A55 Baron approved October 9, 1961
- Model D95A Travel Air approved May 17, 1963
- Model 95-B55 Baron approved September 9, 1963
- Model 95-B55B Baron approved August 26, 1964
- Model 95-C55 Baron approved August 18, 1965
- Model 56TC Turbo Baron approved May 19, 1967
- Model D55 Baron approved October 17, 1967
- Model E95 Travel Air approved October 17, 1967
- Models 95-B55A, 95-C55A, and D55A Baron approved October 31, 1968
- Model E55 Baron approved November 12, 1969
- Model A56TC Turbo Baron approved November 12, 1969
- Model 58 approved November 19, 1969
- Model E55A Baron approved June 16, 1970
- Model 58A Baron approved November 10, 1970
- Model G58 approved December 2, 2005

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Beech 95/55/58 Series is CAR Part 3 as amended to May 15, 1956, plus some paragraphs of FAR Part 23 at Amendment 23-12 as noted on the TCDS. For the Model G58 equipped with the Garmin G1000 additional FAR Part 23 requirements were imposed at various Amendment status, again as noted on the TCDS. Three equivalent safety findings were made, which were reviewed and accepted by the CAA. This is an acceptable certification basis in accordance with NZCAR Part 21B paragraph §21.41 and Advisory Circular 21-1, 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:*

Garmin AT Inc. STC SA01614SE included HIRF Special Condition 23-173-SC.

(iii) *Equivalent Level of Safety Findings:*

CAR 3.663 and CAR 3.757 Airspeed Indicating System – The ASI was approved to be marked in indicated airspeed, in lieu of calibrated airspeed, on the condition the AFM presented both values and all placards to meet certification requirements were consistent with instrument markings.

CAR 3.387 Exits – The emergency exit of the 95/55/56/58 Series intrudes into the prescribed 19” x 26” ellipse minimum size by about ½” at four places. This was accepted because the intrusion was slight, the exit was still larger than required (113%) and only six occupants are carried.

(iv) *Airworthiness Limitations:*

See Maintenance Manual Chapter 5 – Time Limits/Maintenance Checks

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

Certification against noise requirements has been shown for specified serial number ranges of the Beech Models 95-B55, E55, 58 and G58, under FAR Part 36 through Amendment 36-10, as listed on the TCDS

(ii) *Compliance Listing:*

Beech Engineering Structural Dynamics Report Number 58E829 – Flyover Noise Certification of Model 58 and 58A with TCM-IO-550-C Engine and Three-Bladed 3AF32C512/82NEA-5 McCauley Propeller. Certificated Noise Level = 77.4 dB(A) (The G58 was accepted by the FAA as a No Acoustical Change.)

Noise certification is only applicable to the 95-B55 from serial number TC-2285 on. Flyover noise levels established in compliance with FAR 36 were: 78.0 dB(A) [2-bladed propeller] and 74.7 dB(A) [3-bladed propeller].

(4) Certification Compliance Listing:

Model 95-A55 and 95-B55A - Report 71-17: Increase in Take-Off and Landing Weight to 5100 Pounds

Model 95-C55 - Report 71-20: Increase in Take-Off and Landing Weight from 5100 Pounds to 5300 Pounds

Model 95-C55 - Report 71-19: 1966 Baron (95-C55)

Model 55 Report 71-22: 1968 Baron (D55)

Beech Aerodynamic Report 843: Type Inspection Report No. 95-C55 for the Approval of the Model C55 at a Gross Weight of 5300 Pounds

Flight Test Report 206: Type Inspection Report D55 on the Model 95-D55 Baron
Model 55 - Report 71-916: Static Test of the Main Landing Gear

Engineering Flight Test Report: Performance Substantiation- Model 58 Baron
(Report No. FT-R-58-69-6)

Structural Analysis Report 71-27: General Summary- Structural Data Report for Export of the Model 58

Type Inspection Report 58B (FAA Certification of Model 58)

Raytheon Engineering Type Design Summary and Compliance Report 58E57412
Rev 2 – Garmin G1000 Integrated Avionics System with GFC700 Production In-Draw of STC SA01614SE and SA02207CH for Beech Baron Aircraft – Model G58

(5) Flight Manual:

CAA AIR Beech

Number:	Publication:	Model:	Serial Number Range:
3878	95-590014-31	95	TD-2 thru TD-60
3879	95-590014-33	95	TD-61 thru TD-72
3880	95-590014-35	95	TD-73 thru TD-302 except TD-127
3881	95-590014-37	B95	TD-303 thru TD-452 except TD-444
3882	95-590014-51	B95A	TD-453 thru TD-533
3883	95-590014-59	D95A	TD-534 thru TD-707
3884	130741	E95	TD-708 thru TD-721
3885	55-590000-65	95-55/95-A55	TC-1 thru TC-501
2531	96-590011-25	95-B55/A	TC-371, TC-502 thru TC-1607
3886	96-590011-23	95-B55/A	TC-1608 thru TC-2002
3103	96-590011-17	95-B55	TC-2003 and After
2109	96-590010-29B	95-C55/A	TC-350 and TE-1 thru TE-451
		D55/D55A	TE-452 thru TE-767
		E55/E55A	TE-768 thru TE-942 except TE-938
3887	96-590010-31	E55/E55A	TE-938, TE-943 thru TE-1083
3888	96-590010-37	E55/E55A	TE-1197 only
3889	96-590010-17	E55/E55A	TE-1084 and after
3890	96-590003-3	56TC	TG-1 thru TG-68
3891	96-590008-3	56TC	TG-69 thru TG-83
		A56TC	TG-84 and after
244	58-590000-31	58/58A	TH-1 thru TH-772
2327	58-590000-21	58/58A	TH-773 thru TH-1395, except TH-1389
3892	58-590000-35	58/58A	TH-1389, TH-1396 thru TH-1471 (Plus TH-1476, 1487, 1489, 1498)
3893	58-590000-39	58/58A	TH-1472 thru TH-2124 (except 4x above)
3894	102-590000-15	58P/PA	TJ-2 thru TJ-84 except TJ-46, -55 and -63
3895	102-590000-31	58P/PA	TJ-46, TJ-55, TJ-83, TJ-85 thru TJ-168
3896	102-590000-41	58P/PA	TJ-169 thru TJ-443, except TJ-436
3897	102-590000-57	58P/PA	TJ-436, TJ-444 and After
3898	106-590000-5	58TC/TCA	TK-1 thru TK-84
3899	106-590000-19	58TC/TCA	TK-85 thru TK-150, except TK- 147
3900	106-590000-21	58TC/TCA	TK-147, TK-151 and After
3044	58-590000-67	G58	TH-2125 and After

(6) Operating Data for Aircraft:

(i) *Maintenance Manual:*

Travel Air 95 Shop Manual P/N 95-590001-1C

Turbo-Baron 56TC and A56TC Shop Manual P/N 96-590003-5B

Baron 55 and 58 Series Maintenance Manual P/N 55-590000-13G

Baron (Model G58) (TH-2125 and After) Maintenance Manual Supplement (Garmin G1000) P/N 58-590001-1C

Bonanza Series and Baron 55 and 58 Series – Structural Inspection and Repair Manual P/N 58-590001-11

(ii) *Current service Information:*
Service Bulletins

(iii) *Illustrated Parts Catalogue:*

Model 58 Illustrated Parts Catalog – Part Number 58-590000-19

Beechcraft Travel Air 95, B95, B95A, D95A – Parts Catalog P/N 95-590018B

Beech Baron 56TC (TG-1 thru TG-8) and A56TC (TG-84 thru TG-94) – Illustrated Parts Catalog P/N 96-590003-7B

Baron 55, A55 and B55 (B55A) (TC1 thru TC-1607); C55 (C55A), D55 (D55A), and E55 (E55A) (TE1 thru TE-937, TE-939 thru TE-942) Illustrated Parts Catalog P/N 96-590010-13B

Baron B55 (TC-1608 and after), E55 (TE-938, TE-943 and after), 58 (TH-1 thru TH-2124), G58 (TH-2125 and after) – Illustrated Parts Catalog P/N 58-590000-19W

Wiring Diagram Manual (G58) (Electrical)

Wiring Diagram Manual (G58) (Avionics)

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

CAA 2171 from Hawker Beechcraft International Certification Engineer 5-6-08

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

(8) Additional Information:

Model 58 Electrical Load Analysis (Report No. 58E228)

5. Additional New Zealand Requirements

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 is a prerequisite for the grant of a type acceptance 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

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	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)
		(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 CAR §3.655(b)(1)(iii) CAR §3.655(b)(2)(v) CAR §3.675 CAR §3.338 CAR §3.359 CAR §3.681
91.511	Night VFR Instruments and Equipment	<i>Operating Rule – Compliance to be determined by operator</i>
91.513	VFR Communication Equipment	G1000 has dual VHF COM as standard
91.517	IFR Instruments and Equipment	G1000 has full AHI on PFD and HSI on MFD as standard
91.519	IFR Communication and Navigation Equipment	G1000 has dual GPS and NAV as standard
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	<i>Operating Rule – Compliance to be determined by operator</i>
91.531	Oxygen Indicators – Volume/Pressure/Delivery	<i>Operating Rule – Compliance to be determined by operator</i>
91.533	Oxygen for Non-Pressurised Aircraft	Not Fitted as Standard
91.541	SSR Transponder and Altitude Reporting Equipment	<i>Operating Rule – Compliance to be determined by operator</i>
91.543	Altitude Alerting Device – Turbojet or Turbofan	Not Applicable – Not turbo jet or turbofan powered
91.545	Assigned Altitude Indicator	<i>Operating Rule – Compliance to be determined by operator</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	<i>Operating Rule – Compliance to be determined by operator</i>
135.357	Additional Instruments (Powerplant and Propeller)	Has all instruments required under 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>Operating Rule – Compliance to be determined by operator</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.
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:

Three-view drawing Raytheon Aircraft Company Model G58
Copy of FAA Type Certificate Data Sheet Number 3A16

Sign off

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David Gill
Team Leader Airworthiness

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Checked – Greg Baum
Airworthiness Engineer

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
95-B55 (TC-502 to TC-1607)	Advisory Circular 21-1.2/NZCAR Part 21 Appendix A(c)		
58 (TH-1 to TH-772)	Advisory Circular 21-1.2/NZCAR Part 21 Appendix A(c)		
G58	J H Smith	8/21B/25	25 November 2008
95-B55 (TC-2003 to TC-2456)	S Bates	10/21B/4	6 November 2009
95/55/56/58 Series	N S Williamson	19/21B/2	28 February 2019