
Type Acceptance Report

TAR 98/18 – Revision 7

TEXTRON 200/300 KING AIR Series

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Executive Summary

New Zealand Type Acceptance has been granted to the Textron Model 200/300 series Super King Air based on validation of FAA Type Certificate number A24CE. To comply with New Zealand operating rules under §91.535 the aircraft must be fitted with a cabin altitude warning pressure switch which activates at 10,000 ft AMSL.

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 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 State-of-Design Type Certificate Data Sheet.

1. Introduction

This report details the basis on which Type Acceptance Certificate No.98/18 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:

Manufacturer: Textron Aviation Inc.
(effective 12/10/2016, serial numbers BB2019, BL171, BZ2, BY276, FL1080, FM63 and after)

 Beechcraft Corporation
(effective 12/4/2013, serial numbers BB2019-2021, BL171, BZ1 and BY173-249, FL846-1012, FM55-62)

 Hawker Beechcraft Corporation
(effective 26/03/07, serial numbers BB1978-2018, BL152-170, FL-424, FL521-FL523 and FL526-845, FM14-FM54)

 Raytheon Aircraft Corporation
(effective 15/4/96, serial numbers BB1532-1977, BN5-9 and BL141-151, BT39-BN46, FL137-423 and FM9-13, FN-2 and up)

 Beech Aircraft Corporation

Type Certificate: A24CE
Issued by: Federal Aviation Administration

Production Approval: PC8 (Beechcraft Corporation)
 PC4 (Textron Aviation)

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

(i) **Model:** 200 and 200C (Super King Air)

MCTOW: 12,500 lb. (5670 kg)

Max. No. of Seats: 15

Noise Standard: FAR Part 36 through amendment 36-10

Engine: Pratt & Whitney Canada PT6A-41
Type Certificate: E-12
Issued by: Transport Canada

Propeller: Hartzell HC-B3TN-3G or N/T10178 Series blades
Type Certificate: P15EA
Issued by: Federal Aviation Administration

 McCauley 3GFR34C702/100LA-2
Type Certificate: P60GL
Issued by: Federal Aviation Administration

- (ii) **Models:** B200 and B200C (Super King Air)
- MCTOW: 12,500 lb. (5670 kg)
- Max. No. of Seats: 15
- Noise Standard: FAR Part 36 through amendment 36-10
- Engine:** Pratt & Whitney Canada PT6A-42
 Type Certificate: E-12
 Issued by: Transport Canada
- Propeller:** Hartzell HC-B3TN-3G or N/T10178 Series blades
 Type Certificate: P15EA
 Issued by: Federal Aviation Administration
- McCaughey 3GFR34C702/100LA-2
 Type Certificate: P60GL
 Issued by: Federal Aviation Administration
- Hartzell HC-E4N-3G/D9390SK-1R
 Type Certificate: P10NE
 Issued by: Federal Aviation Administration
- McCaughey 4HFR34C771/94LA-0
 Type Certificate: P3NE
 Issued by: Federal Aviation Administration
- (iii) **Models:** B200GT and B200CGT (Super King Air)
- MCTOW: 12,500 lb. (5670 kg)
- Max. No. of Seats: 15
- Noise Standard: FAR Part 36 through amendment 36-20
- Engine:** Pratt & Whitney Canada PT6A-52
 Type Certificate: E-12
 Issued by: Transport Canada
- Propeller:** Hartzell HC-E4N-3G/D9390SK-1R
 Type Certificate: P10NE
 Issued by: Federal Aviation Administration
- Note: MT-Propeller MTV27-1-E-C-F-R(P)/CFR225-55f
 can be fitted under FAA STC SA03209NY

- (iv) **Models:** 300 and 300LW (Super King Air)
- MCTOW: 14,000 lb. (6350 kg)
12,500 lb. (5700 kg) – 300LW
- Max. No. of Seats: 15
- Noise Standard: FAR Part 36 through amendment 36-10
- Engine:** Pratt & Whitney Canada PT6A-60A
Type Certificate: E-12
Issued by: Transport Canada
- Propeller:** Hartzell HC-B4MP-3B/M10476K, NK or NSK blades
Type Certificate: P56GL
Issued by: Federal Aviation Administration
- (v) **Models:** B300 and B300C (King Air 350/C)
- MCTOW: 15,000 lb. (6804 kg)
16,500 lb. (7484 kg) – 350ER (commercial) variant [aircraft with Drawing 130M000030 or Kit Drawing 130-4014] and B300C aircraft modified by Drawing 130M000009
- Max. No. of Seats: 17
- Noise Standard: FAR Part 36 through amendment 36-15
- Engine:** Pratt & Whitney Canada PT6A-60A
Type Certificate: E-12
Issued by: Transport Canada
- Pratt & Whitney Canada PT6A-67A
Type Certificate: E-21
Issued by: Transport Canada
- Propeller:** Hartzell HC-B4MP-3C/M10476K series blades
Type Certificate: P56GL
Issued by: Federal Aviation Administration
- Hartzell HC-E4A-3M/E10478SK blades [with PT6A-67A]
Type Certificate: P10NE
Issued by: Federal Aviation Administration

Notes: 1. Refer to FAA TCDS A24CE 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

The application for New Zealand type acceptance of the B200 was from Aeromotive Limited dated 3 June 1998. Five aircraft were imported as multi-engine trainers for the RNZAF and initially placed on the Civil Aircraft Register. They were later de-registered and placed under military airworthiness control, but are maintained and supported under civil contract. The first example was serial number BB-1054 registered as ZK-KAB.

Type Acceptance Certificate No.98/18 was granted on 6 July 1998 to the Beech Model B200 based on validation of FAA Type Certificate A24CE, and includes the PT6A-42 engine based on Transport Canada Type Certificate E-12. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand.

There have been three previous examples of the B200 in New Zealand. BB-866 was first imported in 1981 as ZK-PBG by James Aviation for corporate use by Watties Industries, until replaced by a Beech 300 in 1986. ZK-RGA and ZK-WIL were also operated here but were de-registered in 1987 and 1988 respectively. Data on the aircraft was not current and the type was not listed in AC 21-1.2 as having a type acceptance certificate in force.

This report was raised to Revision 1 to include the Models 200 and 200C. The application was from the importer, Garden City Helicopters Ltd, and the first-of-type example was serial no.BL-31 registered ZK-FDR. Type Acceptance was granted on 29 September 2009.

Revision 2 was issued to add the two Models B300 and B300C, after application by the manufacturer. The first-of-type example was serial number FL-727 registered ZK-MMM. Type acceptance was granted on 19 January 2011. (There have been previous examples of the original Model 300 in New Zealand, ZK-KSL and ZK-MGP, but all were de-registered prior to 1995 and type acceptance had lapsed.)

Revision 3 to this report added the later Model B200 production serial number range, which are fitted with the Collins Pro-Line 21 Electronic Flight Instrument System. (As is now fitted to all the current C90A and B300 models as well.) The first-of-type was serial number BB-1847 registered ZK-KHP. Type acceptance was granted on 1 August 2012.

The Model 200 Super King Air (originally designated the Model 101) was derived from the A100 by the addition of a new centre wing section with strengthened and extended outer wings, new aft fuselage and tailcone with a T-tail, 850 shp PT6A-41 engines, and increases in MTOW and pressurisation differential up to 6.0 psi. The B200 was a development of the Model 200 incorporating the PT6A-42 engine. (Static ratings for the engines are the same but the -42 has new compressor first-stage blades and vanes, new DS compressor turbine blades and a modified exhaust case inner exit ramp.) These changes improve cruise performance above 15,000 feet. Other airframe changes include 6.5 psi cabin pressure differential and approval for operation at up to 35,000 feet for the B200T and B200CT models; double width pedestal; 11,000 lb. zero fuel weight; and maximum flap extension speed increased to 155 knots for the B200/C models. (The x200C version has a large cargo door, while the x200xT is a special version with additional fuel capacity, which can also be certificated in the Restricted category at higher gross weights.)

The Model 300 was a further development of the B200 with some airframe aerodynamic improvements and more powerful engines (PT6A-60A, rated at 1050 shp) installed in redesigned nacelles (known as "pitot cowlings" due to the reshaped engine air intakes), with MTOW increased to 14,000 lb (6,300 kg). Because not all countries would then allow an aircraft of this type to be certified at an MCTOW greater than 12,500 lb (5,700 kg), the Model 300LW was also developed at the same time, limited to the lower MCTOW.

By 1988, Beechcraft had begun work on the replacement for the 300. The fuselage of the 300 was stretched by nearly three feet with two extra cabin windows on each side and winglets added to the wingtips to create the Model B300, introduced in 1990 and initially marketed as the Super King Air 350. MCTOW was further increased to 15,000 lb (6,750 kg). The 350C variant features a 132 x 132 cm (52 x 52 in) freight door. The Model 350 is also available in a range of special mission and military variants. (The 'Super' prefix was dropped from the King Air name in 1996.) B300/C aircraft are now fitted with a range of STCs during production, which add such features as RVSM capability, FMS and GPS, and a High Definition Audio Visual display unit. Raisbeck dual aft body strakes and wing lockers are also fitted as standard. The latest version (marketing name "350i") indicates a new interior upgrade, which includes re-styled seating with integral life vest stowage, use of LED lighting technology, new cabinetry and in particular installation of the Rockwell Collins Cabin Management System (CMS). The latter supports use of a range of electronic devices, while also controlling the various environmental functions. Another factory option is installation of extended range fuel tanks, which are fitted in place of the wing lockers. This version is sold as the "350ER".

Revision 4 to this report added the two B200GT models. The applicant was the aircraft manufacturer and the first-of-type example was serial number BY-57 registered ZK-VMF. Type acceptance was granted on 14 August 2014, and included the PT6A-52 engine.

The B200GT is the latest variant and evolved from the King Air B200 by the installation of new PT6A-52 engines. The PT6A-52 was derived by mating the turbine section of the 1,050-shp capable PT6A-60A found on the Super King Air 350 with the existing King Air B200 PT6A-42 gearbox. The result is an engine that holds its 850-shp flat rating to a much higher altitude, improving climb and cruise performance under almost all flight conditions. In addition from BY-128 and after Beech is marketing the King Air "250", which is the designation of the B200GT with four STCs embodied: SA3366NM (Raisbeck Ram Air Recovery System); SA01615SE (Boundary Layer Research [BLR] Winglets); SA02130SE (Hartzell Composite Propeller); and SA02131SE (BLR Ultimate Performance Package).

This report was raised to Revision 5 to include some additional serial number ranges not covered by the existing report. The applicant was Skyline Aviation, and the first-of-type example was Model B300 serial number FL-328 registered as ZK-SSH.

Revision 6 was added to include the Models 300 and 300LW. The applicant was Total Entertainments Consultants Ltd, and the first-of-type example was Model 300LW serial number FA-46 registered as ZK-SMC. Type acceptance was granted on 14 June 2016.

Revision 7 was raised to add the later production B300/B300C serial number range. The first-of-type example was Textron B300 serial number FL-1155 registered ZK-VME. Type acceptance was granted on 22 July 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 Number A24CE

FAA Type Certificate Data Sheet no.A24CE at Revision 122 dated April 22, 2019

- Model 200 approved December 14, 1973
- Model 200C approved February 21, 1979
- Model B200/C approved February 13, 1981
- Model 300 approved January 24, 1984
- Model 300LW approved September 30, 1988
- Model B300 approved December 12, 1989
- Model B300C approved September 7, 1990
- Model B200C/GT approved November 16, 2007

Transport Canada TCDS Number E-12 at Issue 20 dated May 23, 2007

DoT Approved Parts List for the first production engine:

- Version PT6A-41 – 21 August 1973
- Version PT6A-42 – 30 August 1979
- Version PT6A-60A – 5 August 1982
- Version PT6A-52 – See EA Dwg. 3072554 Change A or later

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis of the Beech 200 Series is FAR Part 23, effective February 1, 1965, including Amendments 23-1 through 23-9, plus Amendment 23-11, plus some additional paragraphs at a later amendment date applicable to particular models, as specified on the TCDS. One Special Condition was applied, plus another for EFIS installations. Some paragraphs of FAR Part 25 were applied to aircraft approved for operation up to 35,000 feet. Three equivalent safety findings were made, which have been reviewed and accepted by the CAA.

The certification basis of the Beech 300/300LW is FAR Part 23, effective February 1, 1965, including Amendments 23-1 through 23-9, plus SFAR 41C effective September 13, 1982 (Model 300 only), plus some additional FAR 23 paragraphs at later amendment states as noted on the TCDS, the same Special Condition and five paragraphs of FAR Part 25, and SFAR 27 including through Amendment 27-4.

The certification basis of the Beech B300 Series is FAR Part 23, effective February 1, 1965, including Amendments 23-1 through 23-34 (Commuter Category), plus SFAR 27 effective February 1, 1974, including up to Amendment 27-6, plus some additional FAR 23 paragraphs at later amendment states depending on the aircraft serial number and date of production. There were three equivalent level of safety findings, and one exemption. Later FAR 23 paragraph requirements were also applied for aircraft with Collins Proline 21 Avionics and EFIS installation, plus some Special Conditions. (See the FAA TCDS for full details.)

These are an acceptable certification basis in accordance with NZCAR Part 21B Para §21.41 and Advisory Circular 21-1A, as FAR 23 (plus SFAR41 where applicable) is the basic standard for Normal and Commuter 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.

The certification basis of the Pratt & Whitney Canada PT6A Series is FAR Part 33, including Amendments 33-1 to 33-5 inclusive. This is the basic standard for aircraft engines called up under Part 21 Appendix C.

(ii) *Special Conditions:*

All Models up to the B300:

23-47-CE-5 – At the time of the application for type certification of the Model 200, a pressurised turbine-powered aircraft capable of operating up to 33,000 feet, the FAA determined the existing FAR Part 23 did not contain adequate safety standards. A range of special conditions in the areas of propulsion, fuel outlet, fire detection, flight performance, stability and controllability were imposed.

Model 200 Series:

23-ACE-68 – When fitted with EFIS the aircraft must meet some specified Part 23 paragraphs at Amendment 23-41, plus this Special Condition for protection from HIRF for critical systems.

Model B300/300C:

23-ACE-48A – This required protection for systems that perform critical or essential functions from the effects of HIRF and exposure to lightning when an EFIS and autopilot flight director system is incorporated.

23-131-SC – This applies the usual requirements for protection from the effects of HIRF for all systems that perform critical functions. This Special Condition was originally applied separately to Rockwell Collins for when the Proline-21 EFIS was first fitted under an STC.

(iii) *Equivalent Level of Safety Findings:*

Model 200 Series up to S/N BB-1042:

FAR §23.621 Radiographic Inspection of Critical Castings – Less than 100% inspection was initially permitted subject to tracking of production examples; a higher casting factor applied under BS 256; use of proven design and production principles; and satisfactory service experience.

All Model 200 Series, except A200CT and B200:

FAR §23.997(d) Fuel Filter – In lieu of automatic means to maintain fuel flow due to ice clogging of the filter, the Model 200 fuel system includes a fuel-oil heat exchanger downstream of the 20 micron filter. Further, minimum operating oil temperatures are specified in the Flight Manual, and anti-icing additives are available if those limitations cannot be met due to extremely low OAT.

Model 200/C/T as noted on TCDS:

FAR §23.1443 Oxygen Mask – P/N 101-384102 mask which has been substantiated to FL340 was approved for operation to FL350 on the basis of a Flight Manual limitation to don masks and descend immediately when oxygen is required, and tests to show the aircraft can descend in time.

Model B300/300C:

FAR 23.781(b) Cockpit Control Knob Shape – This was granted for the shape of the propeller RPM control lever knob, which is a full-cylinder shape rather than the segment shown in the applicable requirement, because the basic outline shape is the same, and the natural position of the pilot's hand in grasping the knob will result in an equivalent tactile signal.

FAR 23.1305(g) Powerplant Instruments – The FAA accepted the use of fuel low pressure warning annunciators would provide the required level of safety in lieu of fuel pressure indicators.

FAR 23.1321(d) Instrument Arrangement and Visibility – Basic "T" flight instruments. An evaluation of each cockpit arrangement and layout was required as part of the B300 certification process. FAA confirmed during these reviews that the ASI and/or altitude instruments were within the angle of 10° above to 15° below a horizontal line through the centre of the attitude indicator.

Model B200/B300 with Collins Proline 21 Avionics:

ACE-02-16/17 FAR 23.1305 and 23.1549 – This ELOS provided for the use of digital only oil pressure and temperature, and fuel flow indications, on the basis of satisfactory visibility and location, and because trend information is provided by a colour change of the digital display.

(iv) *Exemptions:*

Model B300/300C:

No. 5077 FAR 23.207(c) – Beech petitioned to permit type certification of the Model B300 with a stall warning beginning at airspeeds greater than 10 knots or 15 percent above the stalling speed, due to a change in FAA policy. Beech contended that there were difficulties in showing compliance with aircraft that have a high power-to-weight ratio, because of the high angles achieved prior to the stall, which can also occur well below the single-engine-failure minimum control speed V_{MCA} . A set of specific criteria was established for defining the stall warning, and a set of normal operating procedures detailed during which the stall warning must not activate.

No. 5599 FAR 23.53(c)(1) – Beech requested the use of ground minimum control speed V_{MCG} for determination of takeoff decision speed V_1 , as is permitted under Part 25 for Transport Category aircraft. This would provide considerable benefit to operators by reducing the required takeoff field length under similar conditions, because the accelerate-stop distance would be less. It was accepted by the FAA on the grounds the earlier decision point would provide a safety benefit, and that flight testing would be carried out to ensure that V_1 to V_R acceleration would still be safe and acceptable.

No. 6405 FAR 23.807(d)(1)(i) – B300 has only one emergency exit in the cabin, in addition to the passenger entrance door, instead of two required by the regulation. This was allowed because it had been FAA policy that two exits were not required for SFAR 41 aircraft with 9 or less passenger seats, and was inadvertently not incorporated in Amendment 23-34 which introduced the Commuter Category. With this exemption the aircraft must be limited to a maximum of nine passenger seats.

(v) *Airworthiness Limitations:*

Airplane Flight Manual Limitations Section – Models 200/200C

Airplane Flight Manual Limitations Section – Models B200/C (1981-1984)

FAA Approved Airworthiness Limitations Manual – Models B200/C (1985 and on)

Super King Air 300/LW Series Airworthiness Limitations Manual 101-590097-161

FAA Approved Airworthiness Limitations Manual 130-590031-211 – Models B300 (FL-1 and after) and B300C (FM-1 and after)

Chapter 4 of B300 Maintenance Manual Supplement 130-590031-67 (FN-1 and up)

SB3002 – Defining Rotor Component Service Lives for the PT6A-38/41/42/45

SB3003 – Defining Operating Time Between Overhauls (TBO) and Hot Section Inspection (HSI) Frequency for the PT6A-38, -41, -42, -42A

SB13003 – Defining Operating Time Between Overhauls (TBO) and Hot Section Inspection (HSI) Frequency for PT6A-52, -60, -60A, -61, -62, -65AR, -65B, -65R

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

The Model 200 Series has been certificated under SFAR Part 27, including up to Amendment 27-4, and FAR Part 36, including Amendments 36-1 through 36-10. (Upgraded to Amendment 36-20 for production aircraft 1993 and later.)

The Model 300 Series has been certificated under SFAR Part 27, including up to Amendment 27-4, and FAR Part 36, including Amendments 36-1 through 36-10.

The Model B300 Series has been certificated under SFAR Part 27, including up to Amendment 27-6, and FAR Part 36, including Amendments 36-1 through 36-15.

(ii) *Compliance Listing:*

200/C – FAR 36 Flyover Noise Level 79.2 dB(A) – see AFM Section IV

B200/C – Flyover noise level: 79.2 dB(A) [Hartzell] or 75.4 dB(A) [McCauley]

300/300LW – Flyover noise level: 72.07 dB(A) – see AFM Section IV

Hawker Beechcraft Corporation Engineering Structural Dynamics Report – Takeoff Noise Test Report Model B300 – 300E290 Rev.5

B300/C – FAR 36 Appendix G take-off noise level: 72.9 dB(A) [ICAO Annex 16 Chapter 10 take-off noise level: 76.5 dB(A)]

B300/C Heavy Weight Aircraft – FAR 36 Appendix G and ICAO Annex 16 Chapter 10 take-off noise level: 81.45 dB(A)

Hawker Beechcraft Corporation Engineering Acoustics Report - Noise Certification – Model B200GT – 200E273045 Rev 2

B200GT/B200CGT – FAR 36 thru Amdt 36-28 take-off noise level: 81.24 dB(A)

B200GT/B200CGT with High Flotation Gear (HFG) – FAR 36 thru Amendment 36-28 take-off noise level: 81.14 dB(A)

(4) Certification Compliance Listing:

FAA Airworthiness Requirements Compliance – Super King Air – Model 200

Beech Engineering Structures Report 101E430 SGS – dated January 1, 1974
Beech Structural and Flight FAA Substantiation Program for the Model 200

Beech Report 101E415D Rev.B – Structural Life Summary – Model 200

Beechcraft Type Inspection Report 200-1B – Certification of the Model 200
Includes – Part I – Ground Inspection, Part II – Flight Test Report

Beechcraft Type Inspection Report 200-48A – FAA Certification Models
B200, B200C, B200T, B200CT – dated February 13, 1981

Minutes Final Type Certification Board Meeting B200 series, Jan 29, 1981
Check Off List for FAA Approval under Delegation Option Procedures
Document No, 90-34849A-1 – dated 26 January 1981

Beech Engineering Structures Report 101E1361 S – dated December 22, 1980
Structural Justification for Models B200, B200C, B200CT and B200T

Beech Aircraft Corporation Engineering Report 300E214 – FAA Requirements Compliance Checklist for the Beech King Air 350 Model B300

BAC Engineering Report 300E256 – Compliance Checklist Model B300C

Beech Aircraft Corporation Engineering Report 101E3054 – FAA Certification Compliance Collins EFIS-84 Installation – Model B200

Beech Aircraft Corporation Engineering Report 101E3058 – FAA Certification Compliance Collins EFIS-84 Installation – Model B200 (2-Tube)

Hawker Beechcraft Report 200E267407 – Engineering Certification Plan – Model B200GT/B200CGT – DOA Project No. B200-50 – FAA Project No. AT4700WI-A

Engineering Report 101E1631 – FAA Requirements Compliance – Model 300 (As a sub-model, no separate report was produced for the Model 300LW.)

Pratt & Whitney Canada Engineering Report No. 6659 – PT6A-52 Compliance Plan Requirements Documents Summary

(5) Flight Manual:

Beech Super King Air B200 & B200C – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590010-147 – CAA Accepted as AIR 2626
(applicable to BB-734, 793, 829, 854-870, 874-891, 894, 896-911, 913-1438, 1440-1443 and BL-37 thru BL-138)

Beech Super King Air 200 & 200C – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590010-127 – CAA Accepted as AIR 3094
(applicable to BB-2, 6-733, 735-792, 794-828, 830-853, 871-873, 892, 893, 895, 912 and BL-1 thru BL-36)

Hawker Beechcraft Super King Air 350, 350i & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-235 – CAA Accepted as AIR 3170
(applicable to FL-493, FL-500 and After; FM-14 and After)[with Proline 21 Avionics]

Hawker Beechcraft Super King Air 350ER, 350ERi & 350CER – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-245 – CAA Accepted as AIR 3171 – *(applicable to FL-493, FL-500 and After; FM-14 and After, Heavy Weight Aircraft (16,500 lb) with Extended Range Fuel Tanks) [with Proline 21 Avionics]*

Beech Super King Air B200 & B200C – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590010-307 – CAA Accepted as AIR 3224
(applicable to BB-1439, BB-1444 thru BB-1842, except BB-1463 and 1834; BL-139 thru BL-147; BW-1 thru BW-29)

Beech Super King Air B200GT & B200CGT – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590168-1 – CAA Accepted as AIR 3291
(applicable to BY-1 and BZ-1 and After, and airplanes with Kit 101-9113)

Beech Super King Air B200/B200C – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590010-425 – CAA Accepted as AIR 3314
(applicable to BB-1834, BB-1843 thru BB-1977, BB-1979 thru BB-1987, BL-148 thru BL-151)[with Proline Avionics]

Beech Super King Air B200/B200C – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590010-479 – CAA Accepted as AIR 3315
(applicable to BB-1978, BB-1988 and After; BL-152 and After)[with Proline Avionics]

Beech Super King Air 350 & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-1 – CAA Accepted as AIR 3316
(applicable to FL-1 thru FL-110; FM-1 thru FM-8; and FN-1)

Beech Super King Air 350 & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-71 – CAA Accepted as AIR 3317
(applicable to FL-111 thru FL-382, Except FL-381; FM-9 thru FM-11; FN-2 and after) [with Proline 21 Avionics]

Beech Super King Air 350 & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-181 – CAA Accepted as AIR 3318
(applicable to FL-381, FL-383 thru FL-499, except FL-493; FM-12 & FM-13) [with Proline 21 Avionics]

Beech Super King Air 350i, 350iER, 350C & 350CER – Pilot's Operating Handbook and FAA Approved AFM – P/N 130-590031-499 – CAA Accepted as AIR 3319 – *(applicable to FL-679, FL 770, FL-938 thru FL-1030, except FL-954, 1010; FM-36-FM-38, FM-41, FM-43, FM-52, FM-53, FM-56 thru FM-65; Heavy Weight Aircraft With Or Without Extended Fuel Capabilities)*

Beech Super King Air 300 – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590097-3 – CAA Accepted as AIR 3355 – *(applicable to Serials FA-2 and after)*

Beech Super King Air 300LW – Pilot's Operating Handbook and FAA Approved AFM – P/N 101-590097-107 – CAA Accepted as AIR 3356 – *(applicable to Serials FA-2 & after when modified per Kit 101-5093-7)*

Beech Super King Air 350 & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 434-590169-0003 – CAA Accepted as AIR 3933
(applicable to Model B300 and B300C FL-954, FL-1010, and FL-1031 and after; FM-66 and after)

Beech Super King Air 350 & 350C – Pilot's Operating Handbook and FAA Approved AFM – P/N 434-590170-0003 – CAA Accepted as AIR 3934
(applicable to Model B300 and B300C FL-954, FL-1010, and FL-1031 and after; FM-66 and after. Heavy Weight Airplanes With Or Without Extended Fuel Capabilities)

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

(i) *Maintenance Manual:*

Beech B200/T Wiring Diagram Manual AF101-0010-161

Beech B/200C/T Wiring Diagram Manual AF101-0010-133

Beech Super King Air 200 Series Maintenance Manual AF101-0010-19

Super King Air 300 and 300 LW Wiring Diagram Manual 101-590097-15

Super King Air 300/LW Series Maintenance Manual 101-590097-9

Super King Air 350/C Wiring Diagram Manual 130-590031-7

Beech B300/C Avionics Wiring Diagram Manual for Pro Line 21 130-590031-197

Super King Air 350i (B300) Wiring Diagram Manual (Interiors) 130-590031-317

Super King Air 350/C Maintenance Manual 130-590031-11 (B300 [FL-1 thru FL-953, FL-955 thru FL-1009, FL-1011 thru FL-1030]; B300C [FM-1 thru FM-65])

Super King Air B300/B300C Fusion Maintenance Manual 434-590169-0009 (B300 [FL-954, FL-1010, FL-1031 and on]; B300C [FM-66 and on])

Super King Air 350ER/CER (for Extended Range Tanks) Maintenance Manual and Wiring Diagram Manual Supplement 130-590031-247

Beech King Air Component Maintenance Manual 101-590097-13

PT6A-38/41/42/42A Maintenance Manual – Part Number 3021442

PT6A-38/41/42/42A Overhaul Manual – Part Number 3021443

PT6A-60A/60AG/61 Maintenance Manual – Part Number 3034342

PT6A-60A/60AG/61 Overhaul Manual – Part Number 3034343

PT6A-52 Maintenance Manual – Part Number 3072862

PT6A-52 Overhaul Manual – Part Number 3072863

(ii) *Current service Information:*

Service Bulletins and Service Letters for Beech Model 200 Series

Service Bulletins and Service Letters for Beech Model 300/LW Series

Service Bulletins and Service Letters for Hawker Beechcraft Model B300/C

PT6A-41/42/52/60A Service Bulletins

(iii) *Illustrated Parts Catalogue:*

Beech B200 IPC AF101-0010-159

Super King Air 300 IPC 101-590097-7

Super King Air 350/C IPC 130-590031-9

Super King Air 350i/C IPC 130-590031-315

Super King Air 350ER/CER IPC Supplement 130-590031-247

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

All Flight Manual amendments currently provided by Raytheon to CAA.

Fax from Hawker Pacific confirming Revision Service ordered.

Letter from Hawker Beechcraft Ref. 940-2009-05720 dated June 16, 2009

CAA from 2171 from Manager International Certification dated 18 Oct 2010

Access to publications is now provided through <https://1view.txtav.com>

(8) Other information:

Memorandum Report 101E112 – Electrical Load Analysis – Model 200

Engineering Report 300E327933 Rev 1 – Electrical Load and Power Source

Capacity Report for B300 Interior Upgrade – DOA Project No.: B300-58

Engineering Report 101E186388 Rev 1 – Electrical Load and Power Source

Capacity Report for Model B200 with Proline 21 Phase II Options

Hawker Beechcraft Corporation Engineering Report 200E311875 – Electrical Load and Power Source Capacity Report Model B200GT with Aviation Communications and Surveillance Systems TAWS+ Model B200GT – DOA Project No. B200-56

Memorandum Report 101E1997 – Electrical Load Analysis – Model 300

Memorandum Report 101E2239 – Electrical Load Analysis for FA-39

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	Placards – See Flight Manual Section II Limitations
B.2	Crew Protection Requirements – CAM 8 Appdx. B # .35	Not Applicable – Agricultural Aircraft only

Appendix C – Air Transport Aeroplanes – More than 9 Pax

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
C.1	Doors and Exits	FAR §23.807(b) and §23.807(d)(2)
C.2.1	Additional Emergency Exits – per FAR 23.807(b) @ 10.5.93	FAR §23.807(d)(1)(i) at Amendment 23-11 NOTE: Exemption granted by FAA for Model B300
C.2.2	Emergency Exit Evacuation Equipment – Descent means	FAR §23.807(d)(1) – B200 exits less than 2m from ground
C.2.3	Emergency Exit Interior Marking – Size/self-illuminating	To be determined on an individual aircraft basis
C.3.1	Landing Gear Aural Warning – Automatic Flap Linking	FAR §23.729(f) – See Flight Manual page 7-13

Compliance with the following additional NZ operating requirements has been reviewed (for Model B/200/C [POH references]) 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	Shoulder Harness Fitted as Standard – See POH Section 7
91.507	Pax Information Signs – Smoking, safety belts fastened	N/A – Direct pilot communication available to passengers
91.509 Min. VFR	(1) ASI (2) Machmeter (3) Altimeter (4) Magnetic Compass (5) Fuel Contents (6) Engine RPM (7) Oil Pressure	Fitted as Std – See POH 7-10 N/R Fitted as Std – See POH 7-10 Fitted as Std – See POH 7-10 Fitted as Std – See POH 7-34 Fitted as Std – See POH 7-25 Fitted as Std – See POH 7-25
91.511 Night	(1) Turn and Slip (2) Position Lights	Fitted as Std – See POH 7-10 Fitted as Std – See POH 7-37
91.513	VFR Communication Equipment	Operating Rule – Compliance to be determined by Operator
91.517 IFR	(1) Gyroscopic AH (2) Gyroscopic DI (3) Gyro Power Supply (4) Sensitive Altimeter	Fitted as Std – See POH 7-10 Fitted as Std – See POH 7-10 Suction gauge fitted as Std Fitted as Std – See POH 7-10
91.519	IFR Communication and Navigation Equipment	Operating Rule – Compliance to be determined by Operator
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>To be determined on an individual aircraft basis</i> <i>To be determined on an individual aircraft basis</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	Operating Rule – Compliance to be determined by Operator
91.531	Oxygen Indicators - Volume/Pressure/Delivery Visual/aural warning when cabin pressure altitude exceeds 10 000 feet AMSL	FAR §23.449 – Fitted as Standard – See POH Section 7 NOTE: For Model 200 Series the aural warning is given at 12,500 feet – this needs to be changed to 10,000 feet to comply with §91.531(1)(ii). The Model B300 has a pressure switch that actuates at 10,000+500/-0 ft cabin altitude with a white advisory annunciator and cockpit aural warning. It also actuates at 12,000+0/-500 ft cabin altitude with a red warning annunciator and flashing Master Warning annunciator. This was accepted as meeting the requirements of §91.531(1)(ii).
91.535	Oxygen for Pressurised Aircraft (1) Flight Crew Member On-Demand Mask; 15 min PBE (2) 1 Set of Portable 15 min PBE (3) Crew Member - Pax Oxygen Mask; Portable PBE 120l (4) Spare Oxygen Masks/PBE (5) Min Quantity Supplement Oxygen (6) Required Supplemental/Therapeutic Oxygen	See Compliance Table provided by Aeromotive Limited Standard B200 system designed to meet requirements of FAR §23.1441 thru FAR §23.1449 for flight up to 35,000 ft. FAR §23.1443

	Above FL250 – Quick-Donning Crew On-Demand Mask – Supplemental O ₂ Masks for all Pax/Crew – Supplemental Mask in Washroom/Toilet Above FL300 – Total Outlets Exceed Pax by 10% – Extra Units Uniformly Distributed – Automatically Presented Above FL140 – Manual Means of Deploying Pax Masks	Crew provided with diluter-demand quick-donning masks. Five dual oxygen mask and container units provided, plus a second manual outlet and a first aid mask in the rear cabin Yes – Ten outlets for nine passengers Yes – In cabin ceiling FAR §23.1447(e) FAR §23.1447(f)
91.541	SSR Transponder and Altitude Reporting Equipment	Operating Rule – Compliance to be determined by Operator
91.543	Altitude Alerting Device – Turbojet or Turbofan	Not Applicable – Not turbo jet or turbofan powered
91.545	Assigned Altitude Indicator	Operating Rule – Compliance to be determined by Operator
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

CAR 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))	Operating Rule – Compliance to be determined by Operator
135.367	Cockpit Voice Recorder	N/A – Only for 2-crew helicopters with more than 10 pax
135.369	Flight Data Recorder	Not Applicable – Helicopters only
135.371	Additional Attitude Indicator	Not Applicable – Helicopters only

NOTE: When assessing compliance with CAR 135 requirements, which are based on seating configuration, it was assumed the B/200/C/300LW was fitted with 9 passenger seats or less. (The 13 seat capacity on the TCDS under Note.11 appears to be only applicable to the B200 with Mod. 101-000015 – High Density Configuration with External Baggage Pod.) However for compliance with NZCAR §43.54(a)(1)(ii) the 200/B200/C/300LW Series is classified as having a maximum certificated number of passenger seats of more than 10, and therefore must be maintained by a Part 145 Maintenance Organisation.

CAR Part 125 – Subpart F – Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
125.355	Seating and Restraints	FAR §23.785
125.357	Additional Instruments (Powerplant and Propeller)	FAR §23.1305
125.359	Night Flight	Landing light, Pax compartment
125.361	IFR Operations	Speed, Alt, spare bulbs/fuses
125.361	SE IFR Requirements – If Applicable	Not Applicable – Not SEIFR
125.363	Emergency Equipment (Part 91.523 (a) and (b))	Operating Rule – Compliance to be determined by Operator
125.364	Protective Breathing Equipment	Not Applicable – Less than 20 passenger seats
125.365	Public Address and Crew Member Intercom System	Operating Rule – Compliance to be determined by Operator
125.367	Cockpit Voice Recorder – App B.3 requires TSO C84/C123	Not Applicable – Minimum flight crew is one
125.369	Flight Data Recorder – Appendix B.4 requires TSO C124	Only applicable if configured with more than 10 pax seats
125.371	Additional Attitude Indicator	Not Applicable – Not turbo jet or turbofan powered
125.373	Weather Radar – Appendix B.6 requires TSO C63	Operating Rule – Compliance to be determined by Operator
125.375	GPWS – Appendix B.7 requires TSO C92	Operating Rule – Compliance to be determined by Operator
125.377	AEDRS	Not Applicable – Not SEIFR
125.379	Terrain Awareness and Warning System (TAWS) Appendix B.9 requires TSO C151a or b	Operating Rule – Compliance to be determined by Operator
125.381	Airborne Collision Avoidance System (ACAS II) Appendix B.10 requires TSO C118/119a or C119b/c	Operating Rule – Compliance to be determined by Operator

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.

2. Some means of compliance above are specific to a particular model/configuration. Compliance with Part 91/125/135 operating requirements should be checked in each case, particularly oxygen system capacity and emergency equipment.

3. Beech 300 Series comes under CAR Part 125 for Air Transport operations because MCTOW over 5700 kg and Payload less than 3410 kg. (MCTOW = 15,000 lb, Basic Operating Weight = 9920 lb.)

Attachments

The following documents form attachments to this report:

Photographs Beech B200 serial number BB-1087 ZK-KAD (NZ1883)
Photographs Hawker Beechcraft B300 “350i” s/n FL-727 ZK-MMM
Three-view drawing Beech Model B200 Super King Air
Three-view drawing Beech Model B300 King Air 350i
Copy of FAA Type Certificate Data Sheet number A24CE

Sign off

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David Gill
Team Leader Airworthiness

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Checked – Greg Baum
Team Leader Product Certification

Appendix 1

List of Type Accepted Variants:

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
B200/C (1981-92)	Aeromotive Holdings Limited	98/21B/18	6 July 1998
200/C (1974-81)	Garden City Helicopters Limited	9/21B/17	29 September 2009
B300/300C ¹	Hawker Beechcraft Corporation	11/21B/13	19 January 2011
¹ All serial numbers covered by Flight Manuals P/N 130-590031-235 and -245			
B200/C (1992 on)	Hawker Pacific NZ Limited	12/21B/20	1 August 2012
B200GT/B200CGT	Beechcraft Corporation	15/21B/4	14 August 2014
B300/B300C ²	Skyline Aviation Limited	15/21B/20	28 May 2015
² All serial numbers up to aircraft covered by Flight Manual P/N 130-590031-499			
300/300LW	Total Entertainment Consultants Ltd	16/21B/25	14 June 2016
B300 ³	Tasman Aviation Limited	19/21B/32	22 July 2019
³ All serial numbers covered by Flight Manual P/N 434-590169/170-0003			