

Raytheon Aircraft

Beech Super King Air® 200 & 200C

(Serials BB-2, BB-6 thru BB-733, BB-735 thru BB-792, BB-794
thru BB-828, BB-830 thru BB-853, BB-871 thru BB-873, BB-892,
BB-893, BB-895, BB-912; BL-1 thru BL-36)

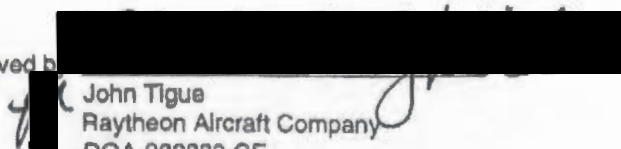
Pilot's Operating Handbook and FAA Approved Airplane Flight Manual

FAA Approved in Normal Category based on 14 CFR PART 23. This document must be carried in the airplane at all times and be kept within reach of the pilot during all flight operations. This handbook includes the material required to be furnished to the pilot by 14 CFR PART 23.

Airplane Serial Number: _____

Airplane Registration Number: _____

FAA Approved by


John Tighe
Raytheon Aircraft Company
DOA-230339-CE

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P/N 101-590010-127 (Supersedes P/N 101-590010-5)
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SYSTEM and/or COMPONENT	VFR DAY				
	VFR NIGHT				
	IFR DAY			ICING CONDITIONS	
	IFR NIGHT				
FUEL					
1. Engine Driven Boost Pump	2	2	2	2	2
2. Engine Overspeed Governor	2	2	2	2	2
3. Firewall Fuel Shutoff System including Annunciators	2	2	2	2	2
4. Fuel Crossfeed System including Annunciator	1	1	1	1	1
5. Fuel Flow Indicator	2	2	2	2	2
6. Fuel Pressure Annunciators	2	2	2	2	2
7. Fuel Quantity Indicating System including Annunciators	2	2	2	2	2
8. Jet Transfer Pump	2	2	2	2	2
9. Motive Flow Valve	2	2	2	2	2
10. Standby Electric Boost Pump	2	2	2	2	2
ICE AND RAIN PROTECTION					
1. Alternate Static Air Source	0	0	1	1	1
2. Engine Auto Ignition and Annunciators	2	2	2	2	2
3. Engine Anti-Ice System and Annunciators	2	2	2	2	2
4. Heated Fuel Vent	0	0	0	0	1
5. Heated Windshield (Left)	0	0	0	0	1
6. Pitot Heat	0	0	2	2	2
7. Pneumatic Pressure Indicator	0	0	1	1	1
8. Stall Warning	0	0	0	0	1
9. Propeller Deice System	0	0	0	0	1
10. Surface Deicer System	0	0	0	0	1
11. Wing Ice Light (Left)	0	0	0	0	1
LANDING GEAR					
1. Emergency Landing Gear Extension System	1	1	1	1	1
2. Landing Gear Aural Warning	1	1	1	1	1
3. Landing Gear Handle Light	1	1	1	1	1
4. Landing Gear Position Indicator Lights	3	3	3	3	3
5. Landing Gear Motor and Gearbox	1	1	1	1	1
LIGHTS					
1. Anticollision Lights System	0	1	0	1	0
2. Cabin Door Annunciator	1	1	1	1	1
3. Cockpit and Instrument Lighting System	0	1	0	1	0
4. Landing Lights	0	1	0	1	0
5. Position Lights	0	3	0	3	0
NAVIGATION INSTRUMENTS					
1. Airspeed Indicator (Left)	1	1	1	1	1
2. Altimeter (Left)	1	1	1	1	1
3. Magnetic Compass	1	1	1	1	1
4. Outside Air Temperature	1	1	1	1	1
OXYGEN					
1. Oxygen System	1	1	1	1	1

- *22. Quick-donning Crew Oxygen Masks - CHECK; Selector Lever - 100% POSITION
- *23. Circuit Breakers - IN
- *24. Pilot's Static Air Source - NORMAL
- *25. Fuel Firewall Valves - CLOSED
- *26. Circuit Breakers - IN
- *27. Standby Pumps - ON (Listen for operation.)
- *28. Battery Switch - ON (FUEL PRESSure Lights - ON)
- *29. Fuel Firewall Valves - OPEN (FUEL PRESSure Lights - OFF)
- *30. Standby Pumps - OFF (FUEL PRESSure Lights - ON)
- *31. Crossfeed - ALTERNATELY LEFT AND RIGHT (FUEL CROSSFEED Light - ON; FUEL PRESSure Lights - OFF)
- *32. Crossfeed - OFF
- *33. Auxiliary Transfer Switches - AUTO
- *34. NO TRANSFER Lights - PRESS TO TEST
- 35. Fuel Quantity - CHECK (Main and Auxiliary)
- 36. DC Volt/Loadmeters - PRESS TO CHECK VOLTAGE (No voltage indicates Current Limiter out.)
- 37. Stall Warning - TEST
- 38. Fire Detectors and Fire Extinguishers - TEST
- 39. Annunciator Lights - TEST
- *40. Landing Gear Handle Lights Test Switch - PRESS TO TEST LIGHTS
- 41. Rotating Beacons Switch - ON

**May be omitted for quick turn-around at pilot's discretion*

USE OF EXTERNAL POWER

CAUTION

NEVER CONNECT AN EXTERNAL POWER SOURCE TO THE AIRPLANE UNLESS A BATTERY INDICATING A CHARGE OF AT LEAST 20 VOLTS IS IN THE AIRPLANE. If the battery voltage is less than 20 volts, the battery must be recharged, or replaced with a battery indicating at least 20 volts, before connecting external power.

When an auxiliary power source is used, ascertain that the polarity of the APU is the same as that of the airplane. If polarity of the APU is unknown, use a voltmeter to assure correct polarity before connecting it to the airplane.

The battery switch must be ON when starting engines with auxiliary power and the generators should be OFF until the auxiliary power has been disconnected.

After the second engine has been started, disconnect the auxiliary power source and secure the access door.

1. AVIONICS MASTER PWR Switch (pilot's left subpanel) - OFF
2. GENERator 1 and GENERator 2 Switches - OFF
3. BATtery Switch - ON (The battery will tend to absorb transients that are present in some auxiliary power units.)
4. Volt/Loadmeter (overhead panel) - DEPRESS SWITCH on face of either meter, and read battery voltage.
5. Auxiliary Power Unit Output Voltage - SET AT 28.25 $\pm$.25 VOLTS
6. Auxiliary Power Unit - TURN OFF before connecting to airplane

CAUTION

Only use an external power source fitted with an AN-type plug. If uncertain of the polarity, check it with a voltmeter to ensure that it is a negative-ground plug. Connect the positive lead to the larger center post of the receptacle, and connect the negative-ground lead to the remaining large post. The small post is the polarizing pin; it must have a positive voltage applied to it in order for the external power relay to close.

GROUND CONTROL

Direct linkage from the rudder pedals allows for nose wheel steering. When the rudder control is augmented by a main wheel brake, the nose wheel deflection can be considerably increased.

The minimum wing-tip turning radius, using partial braking action and differential engine power, is 39 feet 10 inches.

FLAPS

Two flaps are installed on each wing. Power is delivered from an electric motor to a gearbox mounted on the forward side of the rear spar. The gearbox drives four flexible driveshafts which are connected to jackscrews, one of which operates each flap. The motor incorporates a dynamic braking system, through the use of two sets of motor windings. This feature helps prevent overtravel of the flaps. A safety mechanism is provided to disconnect power to the electric flap motor in the event of a malfunction which would cause any flap to be three to six degrees out of phase with the other flaps.

The flaps are operated by a sliding switch handle on the pedestal just below the condition levers. Flap travel, from 0% (full up) to 100% (full down) is registered on an electric indicator on top of the pedestal. A side detent provides for quick selection of the APPROACH position (40% flaps). From the UP position to the APPROACH position, the flaps cannot be stopped in an intermediate position. Between APPROACH and DOWN, the flaps can be stopped anywhere by moving the handle to the DOWN position until the flaps reach the desired position, then moving the flap-switch handle back to APPROACH. The flaps can be raised to any position between DOWN and APPROACH by raising the handle to UP until the desired setting is reached, then returning the handle to APPROACH. Selecting the APPROACH position will stop flap travel anytime the flaps are deflected more than 40%.

The flap-motor power circuit is protected by a 20-ampere flap-motor circuit breaker placarded FLAP MOTOR, located on the left circuit breaker panel below the fuel control panel. A 5-ampere circuit breaker for the control circuit (placarded FLAP CONTROL) is also located on this panel.

Lowering the flaps will produce these results:

Attitude – Nose Up
Airspeed – Reduced
Stall Speed – Lowered
Trim – Nose-Down Adjustment Required
to Maintain Attitude

LANDING GEAR

A 28-volt split-field motor, located on the forward side of the center-section main spar, extends and retracts the landing

gear. The landing gear motor is controlled by the switch placarded LDG GEAR CONT - UP - DN on the pilot's right subpanel. The switch handle must be pulled out of a detent before it can be moved from either the UP or the DN position. The motor incorporates a dynamic braking system, through the use of two motor windings, which helps prevent overtravel of the gear.

Torque shafts drive the main gear actuators, and duplex chains drive the nose gear actuator. A spring-loaded friction-type overload clutch incorporated into the gearbox prevents damage to the structure and to the torque shafts in the event of mechanical malfunction. An overload protection circuit, located on the landing gear panel forward of the main spar under the center floorboard, protects the system from electrical overload.

The Beech air-oil type shock struts are filled with compressed air and hydraulic fluid. Spring-loaded linkage from the rudder pedals permits nose wheel steering. When the rudder control is augmented by a main wheel brake, the nose wheel deflection can be considerably increased. As the nose wheel retracts after lift-off, it is automatically centered and the steering linkage becomes inoperative.

A safety switch on the right main gear torque knee opens the control circuit when the strut is compressed. The safety switch also actuates a solenoid-operated down-lock hook on the landing gear control switch located on the pilot's right subpanel. This mechanism prevents the landing gear handle from being raised when the airplane is on the ground. The hook automatically unlocks when the airplane leaves the ground and can be manually overridden by pressing down on the red down-lock release button just left of the landing gear control switch handle, in the event of a malfunction of the down-lock solenoid. The landing gear control switch handle should never be moved out of the DN detent while the airplane is on the ground; if it is, the landing gear warning horn will sound intermittently and the red gear-in-transit lights in the landing gear control switch handle will illuminate (provided the MASTER SWITCH is ON), warning the pilot to return the handle to the DN position.

Visual indication of landing gear position is provided by individual green GEAR DOWN indicator lights arranged in a triangle on the pilot's right subpanel. Two red, parallel-wired indicator lights located in the control handle illuminate to show that the gear is in transit or not locked. They also illuminate when the landing gear warning horn is actuated.

LANDING GEAR WARNING SYSTEM

The landing gear warning system is provided to warn the pilot that the landing gear is not down and locked during specific flight regimes. Various warning modes result, depending upon the position of the flaps.

SERIALS PRIOR TO BB-324

With the FLAPS UP and either or both power levers retarded below a certain power level, the warning horn will sound intermittently and the landing gear switch handle lights will illuminate. The horn can be silenced by pressing the WARNING HORN SILENCE button adjacent to the landing gear switch handle; the lights in the landing gear switch handle cannot be cancelled. The landing gear warning system will be rearmed if the power lever(s) are advanced sufficiently.

With the FLAPS in APPROACH position and either or both power levers retarded below a certain power level, the warning horn and landing gear switch handle lights will be activated and neither can be cancelled.

With the FLAPS BEYOND APPROACH position, the horn and landing gear switch handle lights will be activated regardless of the power settings, and neither can be cancelled.

SERIALS BB-324 THRU BB-452

With the FLAPS UP and either or both power levers retarded below a certain power level, the landing gear switch handle lights will illuminate; and if the airspeed is below 140 knots, the warning horn will sound intermittently. The horn can be silenced by pressing the WARNING HORN SILENCE button adjacent to the landing gear switch handle; the lights in the landing gear switch handle cannot be cancelled. The landing gear warning system will be rearmed if the power lever(s) are advanced sufficiently.

With the FLAPS in APPROACH or BEYOND APPROACH position, the landing gear switch handle lights will illuminate; and if the airspeed is below 140 knots, the warning horn will sound intermittently. Neither the horn nor the lights can be cancelled.

SERIALS BB-453 AND AFTER, BL-1 AND AFTER

With the FLAPS in UP or APPROACH position and either or both power levers retarded below a certain power level, the warning horn will sound intermittently and the landing gear switch handle lights will illuminate. The horn can be silenced by pressing the WARNING HORN SILENCE button adjacent to the landing gear switch handle; the lights in the landing gear switch handle cannot be cancelled. The landing gear warning system will be rearmed if the power lever(s) are advanced sufficiently.

With the FLAPS BEYOND APPROACH position, the warning horn and landing gear switch handle lights will be activated regardless of the power settings, and neither can be cancelled.

MANUAL LANDING GEAR EXTENSION

Manual landing gear extension is provided through a separate, manually powered, chain-drive system. Pull the

LANDING GEAR RELAY circuit breaker (on the pilot's right subpanel) and make certain that the landing gear switch handle is in the down position before manually extending the gear. Pulling up on the emergency engage handle (located on the floor) and turning it clockwise will lock it in that position. When the emergency engage handle is pulled up, the motor is electrically disconnected from the system, and the emergency drive system is locked to the gear box and motor. When the emergency drive is locked in, the chain is driven by a continuous-action ratchet, which is activated by pumping the ratchet handle adjacent to the emergency engage handle.

CAUTION

Do not continue pumping the ratchet handle after the GEAR DOWN lights illuminate. Excessive pumping may damage the gear drive mechanism and bind the clutch so that the handle will not release it.

WARNING

After an emergency landing gear extension has been made, do not stow pump handle or move any landing gear controls or reset any switches or circuit breakers until the airplane is on jacks. These precautions are necessary because the failure may have been in the gear-up circuit, in which case the gear might retract on the ground. The gear can not be retracted manually.

After a practice manual extension, the landing gear may be retracted electrically. Rotate the emergency engage handle counterclockwise and push it down. Stow the extension lever, push in the landing gear relay circuit breaker on the pilot's subpanel, and retract the gear in the normal manner with the landing gear switch handle.

BRAKE SYSTEM

The dual hydraulic brakes are operated by depressing the toe portion of either the pilot's or copilot's rudder pedals. Shuttle valves permit braking by either pilot or copilot.

Dual parking-brake valves are installed adjacent to the rudder pedals between the master cylinders of the pilot's rudder pedals and the wheel brakes. A control for the valves, placarded PARKING BRAKE, is located below the pilot's left subpanel. After the pilot's brake pedals have been depressed to build up pressure in the brake lines, both valves can be closed simultaneously by pulling out the parking brake handle. This retains the pressure in the brake lines. The parking brake is released by depressing the pedals briefly to equalize the pressure on both sides of the valve, then pushing in the parking brake handle to open the valve.