

Beech Sierra C24R POH Notes

One Avco Lycoming engine model IO-360-A1B6. A fuel-injected, direct-drive, air-cooled, horizontally opposed, 4-cylinder, 200-horsepower-rated engine.

Total Capacity: 59.8 Gallons
Total Usable: 57.2 Gallons
Each tank has provisions for partial filling to:
20 gallons each tank : 37.4 gallons usable
15 gallons each tank: 27.4 gallons usable

OIL CAPACITY: 8 Quarts

WEIGHT LIMITS

Maximum Ramp Weight: 2758 lbs
Maximum Take-off Weight: 2750 lbs
Maximum Landing Weight: 2750 lbs
Maximum Zero Fuel Weight: No Structural Limit
Maximum Baggage Compartment Load: 270 lbs

Set 15° Flaps for Takeoff.

Do not take off when Fuel Quantity indicators indicate in the yellow band on either indicator.

Maximum slip duration is 30 seconds.

Always pull the propeller through by hand, opposite the direction of rotation, several times to clear the engine and "limber up" the cold, heavy oil before using the starter.

During the warm-up, exercise the propeller several times to remove cold oil from the pitch change mechanism.

In the standard configuration two adjustable seats and one fixed-bench seat are installed.

To adjust either of the front seats, pull the release knob below the left forward seat corner (pull to the right, then up) and slide the seat forward or aft, as desired.

The control surfaces are operated with conventional cable systems terminating in bell cranks.

Ram air pressure for the airspeed indicator enters through the pitot tube under the left wing

Static air pressure for the altimeter, vertical speed, and airspeed indicator is supplied by a static port on each side of the fuselage, just aft of the baggage area.

The nose-gear maximum travel is 28°

Toe brakes may be used to aid in steering the airplane on the ground.

To retract the flaps, depress the thumb button and lower the handle to the floor. The thumb button does not need to be depressed, nor should it be, to extend the flaps.

The gears are identical except for the pivoting action during retraction and the steering provisions of the nose gear.

Retraction and extension of the gear is accomplished through the use of an electric-driven hydraulic pump and hydraulic system.

Landing gear retraction operation is protected by a time-delay relay which will disengage electrical power to the hydraulic pump motor after 30 seconds of continuous pump operation. If the

landing gear in-transit light remains illuminated, it indicates improper response of the landing gear. The time-delay relay can be reset by moving the landing gear switch handle to the down position. The landing gear and retract system should be checked before the next flight.

To prevent inadvertent retraction of the landing gear on the ground, a safety pressure switch located in the pilot system deactivates the hydraulic pressure pump circuit when the impact air pressure is below 68 to 72 mph, (59 to 63 kts),

With the landing gear retracted, if the throttle is retarded below approximately 12 inches mercury manifold pressure, a warning horn will sound continuously.

The landing gear can be extended by turning the hydraulic pressure bypass valve 90° counterclockwise. The valve is located on the floor in front of the pilot's seat. When the system pressure is released the gear will fall into the down-and-locked position.

Repeated emergency extension of the landing gear may deplete the hydraulic fluid reservoir supply.

To set the parking brakes, pull the control out and pump both toe pedals until solid resistance is felt. Push the control in to release the brakes.

To extend the landing gear, place the landing gear safety system ON-OFF switch in the ON position. The landing gear will be automatically extended when:

- (1) the airspeed is below approximately 115 mph (100 kts) IAS and

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(2) the engine is operating at a throttle position corresponding to approximately 18 inches or less of manifold pressure.

To retract the landing gear, place the landing gear safety system ON-OFF switch in the ON position.

The landing gear will not retract unless:

- (1) the landing gear position switch is in the UP position,
- (2) the airspeed is above approximately 72 mph (63 kts) IAS and
- (3) the engine is operating at a throttle position corresponding to approximately 20 inches or more of manifold pressure.

In the cruise power range the green sectors cover the fuel flow required from 55% to 75% power. The lowest value of a given sector is low lean limit setting and the highest value of the sector is the best-power setting for that particular power range.

The engine oil system is the wet-sump type and has an 8-quart capacity.

Fuel tanks located in each wing have a nominal capacity of 29.9 gallons each for a total of 59.6 gallons. In the filler neck of each tank is a visual measuring tab which facilitates partial filling of the fuel system. When the fuel touches the:
-bottom of the tab it indicates 15 gallons of fuel,
-when filled to the slot in the tab it indicates 20 gallons.

Fuel quantity is measured by float-operated sensors, located in each wing tank system

The electric fuel boost pump controlled by an ON-OFF toggle switch on the pilot's subpanel,

provides pressure for starting and emergency operation.

It's the pilot's responsibility to ascertain that the fuel quantity indicators are functioning and maintaining a reasonable degree of accuracy.

One 24-volt battery. or two 12-volt batteries in series, are located in the aft fuselage.

The alternator maintains its full-rated 60-ampere output at cruise engine rpm and uses a voltage regulator to adjust alternator output.

Since the alternator is not self-exciting, dual switches are required to activate the circuit. The switch placarded BATTERY & ALT when placed in the ON position will only activate the battery circuit. When this switch is on and the ALT (FIELD) switch is placed in the ON position the alternator is excited by power from the airplane battery. When the BATTERY & ALT switch is in the OFF position, the alternator will be off regardless of the ALT (FIELD) switch position. On airplanes MC-643 through MC-673 (and airplanes MC-449, MC-452 through MC-642 with installation of Beech Kit No. 23-3009-1 S) the alternator circuit is protected by an alternator-field circuit breaker on the right subpanel, and an alternator-output current limiter on the firewall.

A self-exciting feature provides for activation of the alternator independent of battery power when the engine reaches a speed of 1200 to 1500 rpm.

The landing light should be used for approach only, and the taxi lights should be used for ground maneuvering only.

Air for warming the cabin and defrosting the windshield enters through an intake on the forward engine baffle, passes through the heater and into a mixer box where it is blended with cold air to obtain the desired cabin temperature.

The knob marked CABIN AIR regulates the quantity of air entering the cabin through the firewall outlet.

Pull out the CABIN HEAT knob for heated air and push it in for fresh air.

Pull out the DEFROST knob for maximum defrost.

Fresh air for the cabin enters through two grill-type inlets immediately forward of the windshield and a scoop-type inlet on the dorsal fin.

The pistons move to compensate for lining wear, therefore the brakes require no adjustment.