

NOTE

Other propellers are approved for the Bonanza H35 but not installed as original equipment. These are listed in the FAA Aircraft Specification 3A15 or approved by Supplemental Type Certificate.

Propeller rpm is controlled by a Woodward governor which regulates hydraulic oil pressure to the blades. A push-pull knob on the control console allows the pilot to select the governor's rpm range.

If oil pressure is lost, the propeller will go to the full high rpm position. This is because propeller low rpm is obtained by governor boosted engine oil pressure working against the centrifugal twisting moment of the blades.

FUEL SYSTEM

The airplane is designed for operation on 91/96 grade (blue) aviation gasoline. In the event this grade is not available only a higher rated fuel shall be used.

CAUTION

Before refueling, make certain the airplane and fuel dispensing unit are properly grounded. Failure to do so creates a fire hazard.

FUEL CELLS

Fuel supply is carried in two bladder-type cells with a total capacity of 20 gallons each, located in the wings just outboard of the fuselage. Maximum usable fuel of each 20 gallon main tank is 17 gallons.

Fuel is fed from the cells to a selector valve just forward of the front seat, on the left side, then through a strainer to the fuel pump and the engine. The fuel tank fillers are located in the wing leading edges.

AUXILIARY FUEL CELLS

If installed an additional 19 gallons of usable fuel is available in two auxiliary 10 gallon fuel cells in the wings, outboard of the wheel wells. Both auxiliary cells are connected to a common port in the fuel selector valve, so that both feed simultaneously when the selector valve is set to AUX.

The two optional 10-gallon auxiliary tanks may be filled after removing the pressure-type filler caps, located aft and outboard of the main tank filler caps. Do not overfill the tanks.

Individual liquidometer units in each auxiliary cell transmit fuel quantity information to the auxiliary fuel cell gage. The fuel level of either cell may be read by switching the auxiliary fuel gage selector switch on the left subpanel to Aux position and the Rt/Lt switch to the desired position, R (right) or L (left).

CAUTION

Do not allow the fuel cells to remain completely empty for any length of time, since this may result in cracking and checking of the inner liner of the cell. If fuel cells are to be left empty for longer than a week, a thin coating of light engine oil should be sprayed, flushed or rubbed on the inner liner of the cells.

FUEL QUANTITY

Fuel quantity is measured by float operated sensors, located in each fuel tank. These transmit electrical signals to the indicator through selector switches on the panel that indicate fuel remaining in the tank selected. There are sensors in each fuel tank connected to the switches and indicator.

AUXILIARY (WOBBLE) FUEL PUMP

A manually operated pump incorporated with the fuel selector valve provides pressure for starting and emergency operation if the engine-driven pump should fail. The manual pump is operated by working the handle up and down; the handle telescopes and may be extended to make operation easier.

ELECTRIC PRIMER

The engine is equipped with an electric primer which injects a small quantity of fuel directly into the cylinders, for easier starting. The primer is operated by pressing a push button switch on the control console, which opens a solenoid valve to direct fuel through the primer lines. Fuel pressure must be built up with the hand pump to operate the primer, which should be used in brief shots while turning the engine with the starter until it starts firing. If the primer button is held down, it will flood the cylinders with fuel.

FUEL TANK SELECTION

The fuel selector valve handle is located forward and to the left of the pilot's seat. Take-offs should be made using the left main tank and landings should be made using the main tank that is more nearly full. In no case should a take-off be made if the fuel indicators are in the yellow band or, with less than 10 gallons of fuel in each main tank.

SWITCHING FUEL TANKS

When switching fuel tanks, if one tank is allowed to run completely dry, it may be necessary to place the mixture control to Full Rich position and maintain fuel pressure with the Auxiliary (Wobble) Fuel Pump to aid in restarting the engine. Close the throttle as necessary to prevent engine overspeed on starting. As soon as the engine is running normally, discontinue the Auxiliary (Wobble) Fuel Pump and reset the mixture control.

The pressure type carburetor returns about 3 gallons per hour of excess fuel. Fuel return lines are routed through the selector valve to the left main cell. The auxiliary cells and right main cell return fuel to the left main cell only. To provide space for the returned fuel, the left main cell should be used to approximately half full before switching.

If the engine is allowed to stop firing, due to insufficient fuel, refer to the EMERGENCY PROCEDURES section for the Air Start procedures.

FUEL REQUIRED FOR FLIGHT

It is the pilot's responsibility to ascertain that the fuel quantity indicators are functioning and maintaining a reasonable degree of accuracy, and be certain of ample fuel for a flight. Takeoff is prohibited if the fuel quantity indicators do not indicate above the yellow arc. An inaccurate indicator could give an erroneous indication of fuel quantity. A minimum of 10 gallons of fuel is required in each main tank before takeoff.

The filler caps should be removed and fuel quantity checked to give the pilot an indication of fuel on board. The airplane must be approximately level for visual inspection of the tank. If the pilot is not sure that at least 10 gallons are in each tank, add necessary fuel so that the amount of fuel will be not less than 10 gallons per tank at takeoff. Plan for an ample margin of fuel for any flight.

