



MEMORANDUM FOR RECORD

Beechcraft Baron B55 Pilots Operating Handbook
Section VII - Fuel System

**BEECHCRAFT Baron B55
TC-371, TC-502 thru TC-1607**

**Section VII
Systems Description**

FUEL SYSTEM

The standard fuel tank installation consists of a 22-gallon main tank in each wing leading edge and a 31-gallon auxiliary tank in each wing panel outboard of the nacelle, for a total of 106 gallons of usable fuel with all tanks full. The optional fuel tank installation consists of a 37-gallon main tank in each wing leading edge and a 31-gallon auxiliary tank in each wing panel outboard of the nacelle, for a total of 136 gallons of usable fuel with all tanks full.

A vapor return line from each injector pump returns excess fuel to the tank from which it is being drawn, during either normal or emergency cross-feed operation. Each tank is filled at its own filler neck through an opening in the upper wing surface covered by a flush type filler cap. The fuel system is drained at eight locations, as shown in the accompanying fuel system schematic.

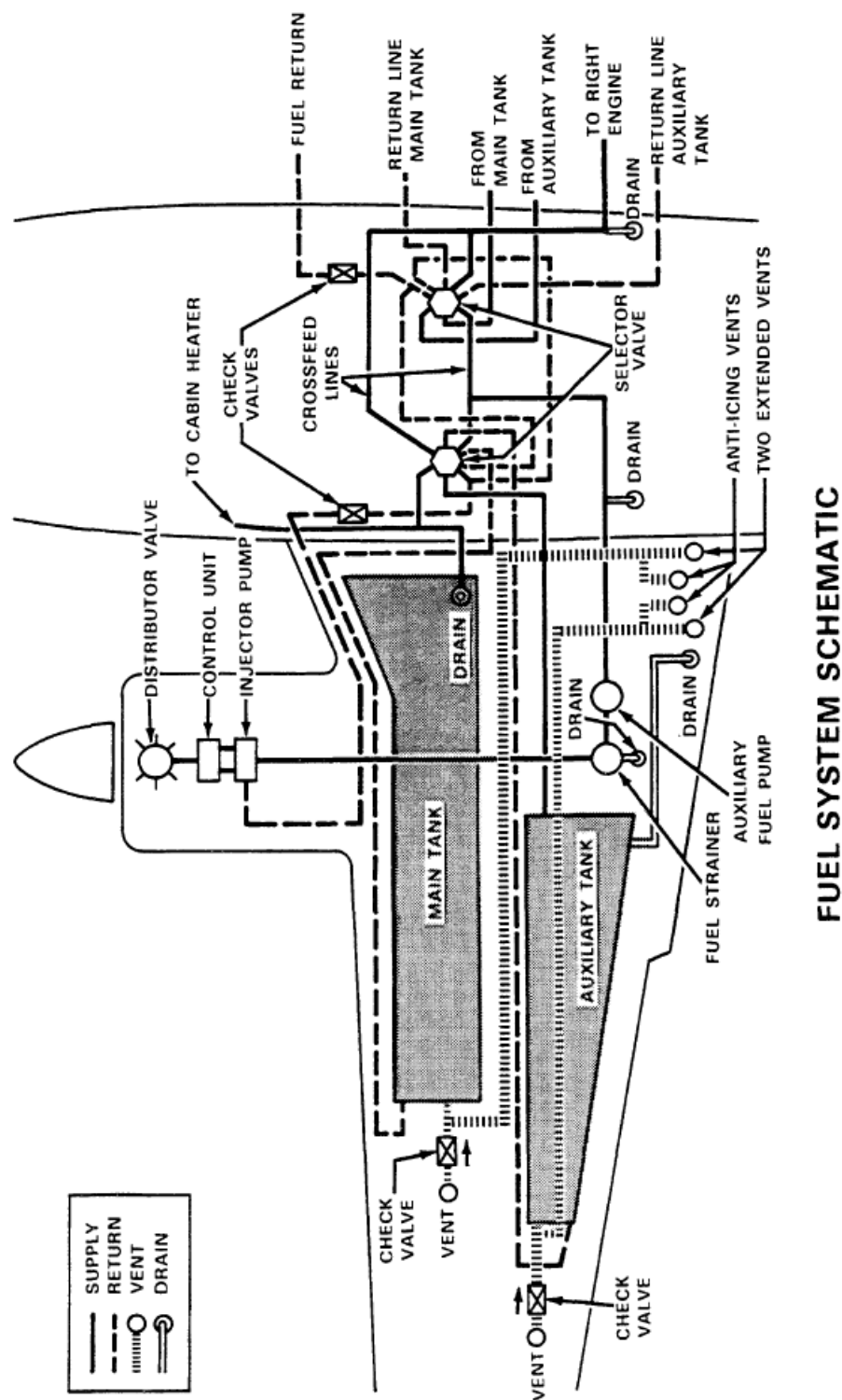
Fuel quantity is measured by float type transmitter units which convey signals to two indicators on the instrument panel. They indicate the amount of fuel in either the main tanks or the auxiliary tanks for their respective wings. A two-position selector switch on the pilot's subpanel, to the left of the control console, determines the tanks, main or auxiliary, to which the indicators are connected.

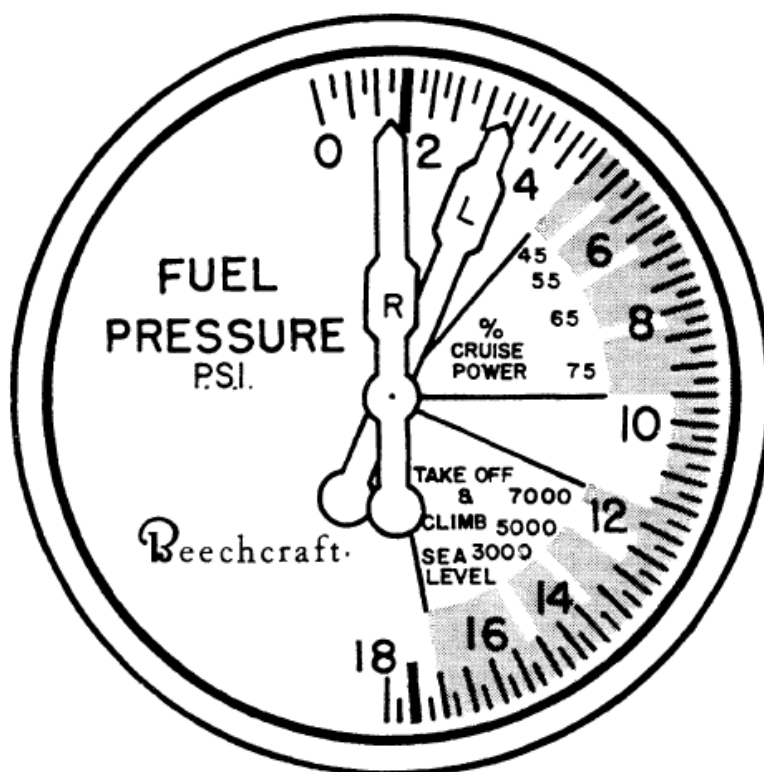
October 1978

7-19

Section VII
Systems Description

BEECHCRAFT Baron B55
TC-371, TC-502 thru TC-1607





FUEL PRESSURE INDICATOR

The fuel pressure indicator registers metered fuel pressure at the fuel injection manifold valve. It does not indicate either engine-driven fuel pump pressure or fuel boost pump pressure. Red radials are placed at the minimum and maximum allowable operating fuel pressures. The green sectors indicate normal operating range. For fuel flow conversions see PERFORMANCE section.

In the cruise power range the green sectors cover the fuel pressure required from 45% to 75% power. The lower edge of each sector is the normal-lean setting and the upper edge is the best power setting for that particular power range.

Section VII
Systems Description

BEEHCRAFT Baron B55
TC-371, TC-502 thru TC-1607

The takeoff and climb range is covered by green sectors for full power at various altitudes. The full power markings represent the maximum performance mixtures for the altitudes shown, permitting leaning of the mixture for maximum power and performance during high altitude takeoffs and full power climbs.

FUEL CROSSFEED

The separate, identical fuel supplies for each engine are interconnected by crossfeed lines. During normal operation each engine uses its own fuel pumps to draw fuel from its respective fuel tank arrangement. However, on emergency crossfeed operations the entire fuel supply of any or all tanks can be consumed by either engine.

A mechanical interlock prevents both fuel selector valves being placed on cross-feed at the same time, as this would cut off the fuel supply for both engines.

The fuel crossfeed system is provided for use during emergency conditions in level flight only. The system is not to be used to transfer fuel from one tank to another or to balance fuel during flight. The procedure for using the cross-feed system is described in the EMERGENCY PROCEDURES section.

FUEL BOOST PUMPS

An individual two-speed electric fuel boost pump is provided for each engine. HIGH pressure, OFF, or LOW pressure is selected with each fuel boost pump switch on the pilot's subpanel. High pressure is used for stabilizing the fuel pressure before start and provides near maximum engine performance should the engine-driven pump fail. In high ambient temperatures, low pressure should be used

for ground operation, take-off, and climb. The location of the fuel boost pumps in the system permits fuel to be drawn from any tank within the system by the pump for the operating engine. The high pressure position should not be selected while the engine is operating except in the event of engine driven pump failure since the high pressure mode supplies a greater pressure than can be accepted by the injector system for a reduced power condition.

FUEL REQUIRED FOR FLIGHT

Flight planning and fuel loading are facilitated by the use of fuel quantity indicators that have been coordinated with the usable fuel supply. 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. A minimum of 13 gallons of fuel is required in each main tank before takeoff. An inaccurate indicator could give an erroneous indication of fuel quantity. If the pilot is not sure that at least 13 gallons are in each main tank, add necessary fuel so that the amount of fuel will not be less than 13 gallons per main tank at takeoff. Plan for an ample margin of fuel for any flight.