



MAINTENANCE MANUAL

FUEL DISTRIBUTION – DESCRIPTION AND OPERATION

1. General

- A. Fuel is supplied to the engines by an independent fuel system from each wing tank. A cross flow line interconnects the left and right wing tanks providing a means for supplying either engine with fuel from either tank.
- B. Two collector tanks located at the inboard end of each fuel tank remain full at all times by gravity flow inward. A hopper tank between the collector tanks is kept full at all times by a jet transfer pump system. Two fuel boost pumps contained in the hopper tank supply fuel through the fuel supply line to the engine. Fuel is routed through a shutoff valve in the supply line.



Fuel Distribution Figure 1



SA227 SERIES COMMUTER CATEGORY



MAINTENANCE MANUAL

FUEL – DESCRIPTION AND OPERATION

1. General

- A. The fuel system has a usable capacity of 648 U.S. gallons (2452.68 liters). Fuel is equally contained in integral left and right wing fuel tanks.
- B. Each engine is supplied fuel by an independent fuel system. An interconnecting cross flow line is installed for balancing the fuel quantity and for supplying either engine with all available fuel. Fuel crossflow is controlled by a shut off valve in the cross flow line.
- C. Each integral fuel system includes:
 - (1) A jet transfer pump system for supplying fuel to the boost pumps.
 - (2) Two boost pumps for supplying fuel to the engines.
 - (3) Three check valves; one from each boost pump to the fuel line and one in the jet transfer pump inlet line.
 - (4) A fuel shutoff valve in the fuel line.
 - (5) A fuel vent system that allows air to enter fuel tanks to displace used fuel.
 - (6) A separate capacitance type quantity indicating system.
 - (7) An indicator mounted on the instrument panel that displays the fuel quantity in pounds.
 - (8) Magna sticks to provide mechanical indication.
- D. A transfer pump warning light on the annunciator panel is illuminated when jet transfer pumps fail to maintain the hopper tank at full capacity.





COMMUTER CATEGORY 0

SA227 SERIES

MAINTENANCE MANUAL

FUEL – MAINTENANCE PRACTICES

1. Inspection/Check - Fueling Aircraft

- A. Refuel aircraft IAW Chapter 12.
- B. Defuel aircraft using crossflow drain as follows:

NOTE: A quick release drain valve is installed in the crossflow line to allow for rapid single point defueling.

- (1) Position aircraft at least fifty (50) feet from any potential source of ignition.
- (2) Static ground both aircraft and ground defueling equipment to each other and to ground.
- (3) Remove access panel inbd of R/H W.S. 27 center wing section.
- (4) Open crossflow valve (switch located on pedestal). Locate fuel drain fitting with red dust cover attached.
- (5) Remove dust cover by depressing end cap and pulling straight out.
- (6) Remove fuel filler caps.
- (7) Install fuel drain tube assembly. Defuel aircraft as required.
- (8) After defueling operation, install fuel filler caps.
- (9) Disconnect drain hose and replace with dust cover.
- (10) Install access panel.
 - **NOTE:** Residual fuel may be drained at four (4) sump drains. Sump drains are located between nacelle and wing center section lower panel and at main spar outboard of nacelle.



Figure 201

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