

## FUEL STORAGE - DESCRIPTION AND OPERATION

### 1. General

- A. This section covers that part of the system which stores fuel. Fuel tanks, tank sealing, vent system and filler caps are included.

### 2. Description and Operation

- A. An integral fuel tank is located in each wing. The wet-wing cavity starts at WS 53.00, extends outboard to WS 214.30, and fore and aft between the front and rear wing spars. Airplanes 2080001 Thru 20800130 and 208B0001 Thru 208B0089 total capacity of each tank was 167.5 U.S. gallons, with 165 U.S. gallons usable. Airplanes 20800131 and On and 208B0090 and On and airplanes incorporating SK208-52, external wing tank sumps have been installed and the total capacity of each tank is 167.8 U.S. gallons, usable fuel remains at 165 U.S. gallons. The tank consists of upper and lower skins, with bonded stringers, ribs, front and rear spars and access panels on top and bottom skins. The tanks contain fuel drains, strainers, fuel quantity transmitters, and low fuel level switches. A filler cap is located adjacent to WS 214.30; an inboard filler cap may also be located near WS 64. Clean caps regularly with Stoddard solvent to ensure proper sealing.

### 3. Fuel Drain Tank (PT6A-140)

- A. At engine shutdown, fuel is returned to the drain tank from the flow divider/dump valve. Fuel in the tank lifts the float and unseats the float valve from the orifice. At the next start, fuel from the HMU flows through the ejector pump. The Venturi effect of the ejector pump creates a pressure drop. This unseats the non-return valve and draws the fuel from the drain tank back to the fuel heater. When the drain tank is empty, the float valve drops and closes the orifice. The non-return valve will prevent fuel from filling the drain tank through the float orifice when the engine is not running.