

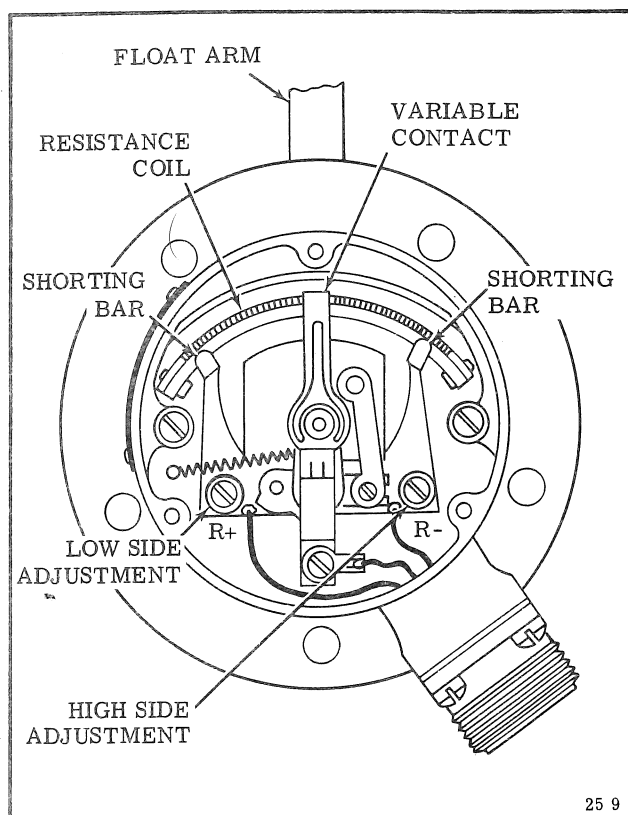


Figure 5-3. Fuel Quantity Transmitter Adjustment

Removal and Installation

- a. Defuel aircraft as outlined in Section II.
- b. Disconnect electrical connector on base of transmitter.
- c. Remove bolts, gaskets and mounting plate.
- d. Remove transmitter from fuel cell.

Installation of the transmitter is reverse of the removal procedure, except for installation of new gaskets when necessary. Torque mounting bolts to 35 (± 5) inch-pounds and safety wire. New transmitters received from the factory are jig set and should require no adjustment other than to ensure full float travel from top to bottom, when installed in the fuel cell. Adjustment of float travel is accomplished by bending the float arm.

Calibration

The fuel quantity transmitter is very reliable; therefore, it is recommended that the indicator and associated electrical circuits be carefully checked before transmitter adjustments are made. When necessary the fuel quantity indicating system is calibrated as follows:

- a. Level aircraft as outlined in Section II.
- b. Defuel aircraft as outlined in Section II.
- c. Fuel aircraft to 140 U. S. gallons.
- d. Connect external power source to aircraft.
- e. Remove access cover from base of transmitter.

- f. Adjust R- (high range) transmitter adjustment screw until fuel quantity indicator reads 135 gallons.
- g. Defuel aircraft; drain fuel sump and vapor separator-filters to assure fuel system is completely drained.
- h. Close sump drain and add 1.5 U.S. gallons of fuel (unusable fuel).
- i. Adjust R+ (low range) transmitter adjustment screw until fuel quantity indicator reads zero gallons.
- j. Add 40 U. S. gallons of fuel in 10-gallon increments. Record indicator reading after adding each 10-gallon increment.
 1. Indicator reading after addition of each 10-gallon increment may indicate up to six gallons less than actual fuel in cells.
 2. Indicator reading shall never read more than usable fuel added to cells.
- k. Add 40 U.S. gallons of fuel. Fuel indicator should read 80 (-6, +2) gallons.
 1. If fuel indication exceeds limits given in step k. the R- adjustment screw may be adjusted if specified tolerance for readings below 80 gallons are not exceeded. Refer to Figure 5-4 and compute tolerance as follows:
 1. Follow up vertical line at 80 gallons until it intersects with horizontal line equal to required adjustment; then follow diagonal line down to horizontal lines at 40 gallons or below.
 2. Follow horizontal line to left of graph and add or subtract amount shown from indicator readings recorded in initial calibration steps.
 3. If high range adjustment causes low range indications to exceed tolerance given in step j. the transmitter must be replaced.
- m. Adjust R- (high range) transmitter adjustment

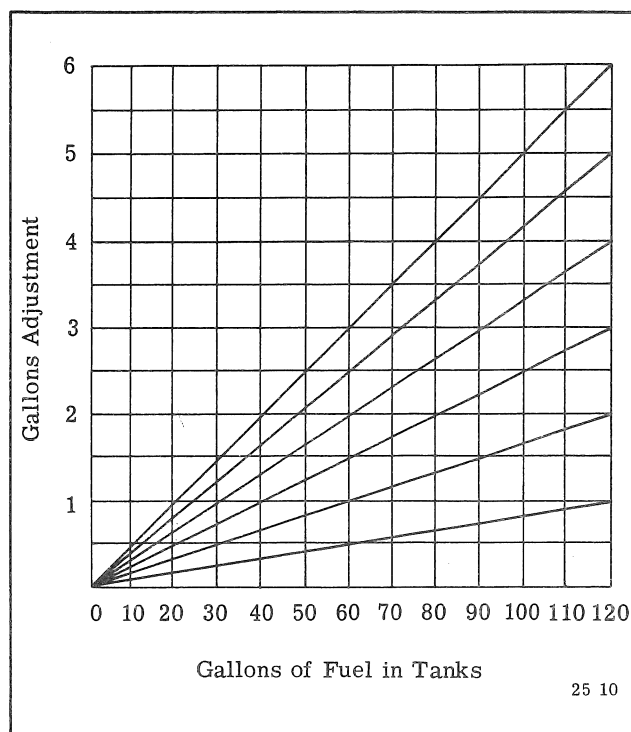
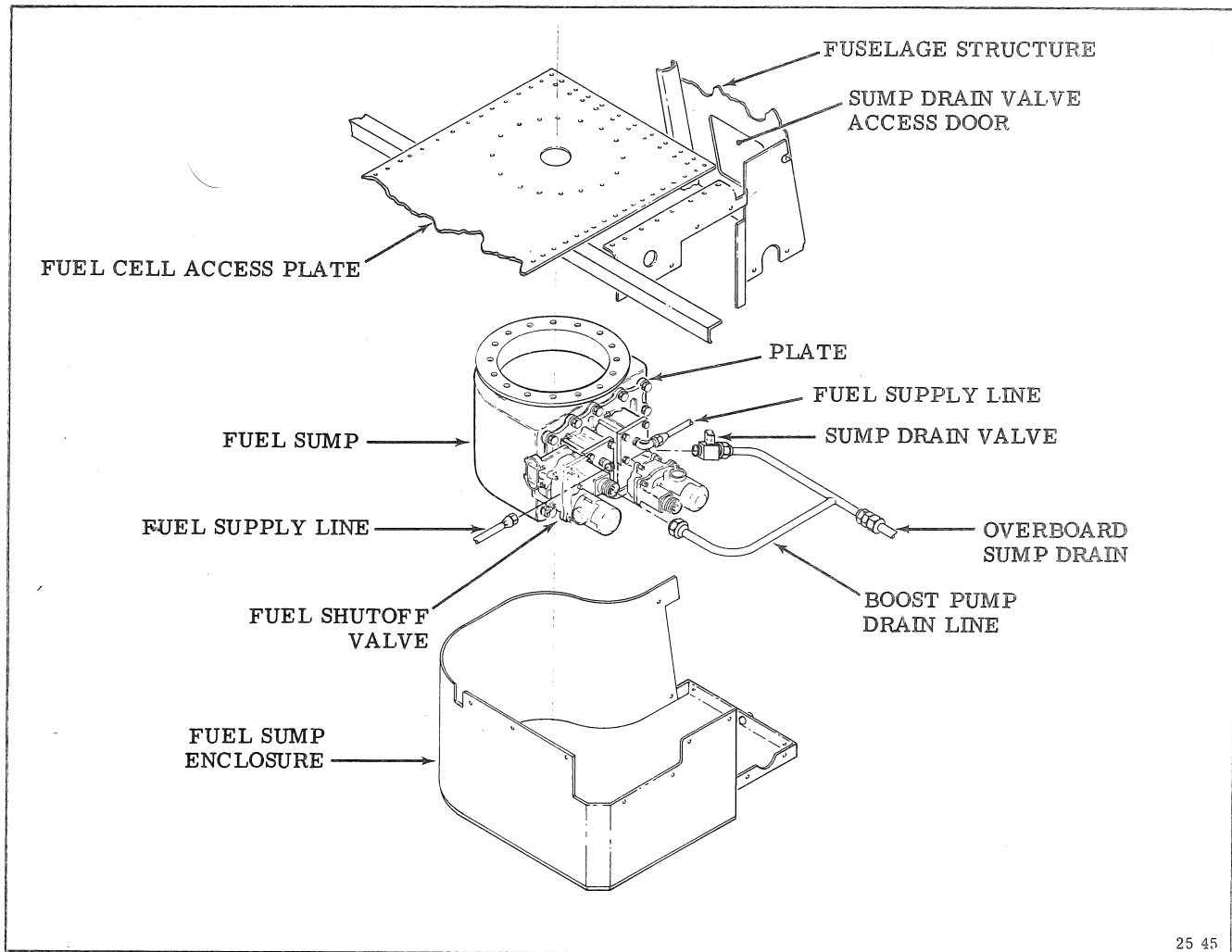


Figure 5-4. Fuel Calibration Graph



25 45

Figure 5-5. Fuel Sump and Sump Enclosure

screw until fuel quantity indicator reads within limits of 80 (-6, +2) gallons.

n. Add 55 gallons fuel to cell. Fuel quantity indicator should read a minimum of 129 gallons and a maximum of 137.

o. Completely fill fuel cells and record total amount of usable fuel. Fuel cells should hold between 150.0 and 159.0 U.S. gallons of usable fuel.

NOTE

Usable fuel is total fuel in fuel cells, less 1.5 gallons.

FUEL SUMP

The fuel sump, containing two submerged fuel boost pumps and externally mounted fuel shutoff valves, is located in the baggage compartment and attached to the bottom of the center fuel cell. The sump serves as a fuel reservoir, to assure uninterrupted fuel flow

to the engine fuel injection system. A fuel sump drain line, installed between the lowest part of the sump and bottom of lower fuselage, facilitates complete draining of the fuel system and provides a means for inspecting the fuel supply for contamination. Access to the fuel sump drain valve is through a door located on the right side of the fuselage. The fuel system should be drained and the sump inspected at intervals prescribed in the scheduled inspection and Maintenance requirements in Section II.

REMOVAL AND INSTALLATION

- Defuel aircraft as outlined in Section II.
- Remove sump enclosure assembly (see Figure 5-5).
- Disconnect electrical connectors at fuel shutoff valves and disconnect fuel boost pump wiring aft of fuselage station 165.00.
- Disconnect engine fuel supply lines at fuel shutoff valves.
- Disconnect fuel sump drains.