

MOTIVE FUEL SHUTOFF VALVE - REMOVAL/INSTALLATION (PT6A-140)

1. General

- A. This section gives the removal and installation procedures for the motive fuel shutoff valve for Airplane 208B2197 and Airplanes 208B5000 and On with the PT6A-140 engine installed. For more data related to the PT6A-140 engine fuel system components refer to Chapter 73 of the Pratt and Whitney PT6A-140 Maintenance Manual P/N 3075742 found in the Introduction List of Publications.

2. Motive Fuel Shutoff Valve Removal/Installation

CAUTION: You must be careful with the motive fuel shutoff valve during removal/installation procedures to prevent damage to the valve.

- A. Remove the Motive Fuel Shutoff Valve (MFSOV) (Refer to Figure 401).
- (1) Remove external electrical power from the airplane.
 - (2) Make sure that the BATTERY switch (SC005), found on the circuit breaker switch panel, is set to the OFF position.
 - (3) Remove the upper and lower engine cowling to get access to the MFSOV. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.
 - (4) If necessary to get sufficient access to the MFSOV remove the lower cowl. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.
 - (5) Disconnect the electrical connector from the valve electrical connector.
NOTE: A small quantity of fuel can flow from the fuel line and MFSOV hose when they are removed from the MFSOV. Before you remove the line and tube, put shallow container below the MFSOV to prevent a fuel spill in the cowling and on the parking area.
 - (6) Remove the safety wire from the coupling nuts on the fuel tube and fuel hose connected to the MFSOV.
 - (a) Loosen the fuel tube and hose coupling nuts.
 - (b) Remove the tube from the MFSOV.
 - 1 If necessary to remove the fuel tube from the MFSOV, remove the bolt and nut from the fuel tube clamp and remove the fuel tube from the clamp.
 - (c) Remove the fuel hose from the valve.
 - 1 If necessary to remove the fuel hose from the MFSOV, cut the tie-strap and remove the fuel tube from the clamp.
 - (7) Cap all open fuel lines and fittings.
 - (8) Remove the bolts and nuts that attach the MFSOV to the MFSOV bracket.
 - (a) Remove the shutoff valve from the airplane.
 - (9) Record the installed position of the elbow fitting on the MFSOV.
 - (10) Remove the nut, elbow fitting, backup ring and packing from the removed MFSOV.
 - (a) Keep the elbow fitting, backup ring and nut to install on the new MFSOV.
 - (b) Discard the old packing.
- B. Install the Motive Fuel Shutoff Valve (Refer to Figure 401).
- (1) Install the elbow fitting, backup ring, nut and new packing in the MFSOV and tighten with your hand. Refer to the recorded installation position of the elbow fitting in the MFSOV.
 - (2) Remove the caps from the fuel lines.
 - (3) Support the shutoff valve in its correct position on the bracket.
 - (a) Install the bolts and nuts that attach the MFSOV to the MFSOV bracket and tighten with your hand.
 - (4) Put the fuel tube in its correct position on the MFSOV.
 - (a) Hold the elbow fitting and carefully torque the fuel tube coupling nut to between 90 and 100 inch-pounds.
 - (5) Put the fuel hose in its correct position on the MFSOV.
 - (a) Carefully tighten the fuel hose nut to the MFSOV outlet fitting.
 - (6) Connect the electrical connector to the shutoff valve.

- (a) Tighten the connector with a strap wrench or equivalent tool to make sure that the connector is tight.
- (7) If necessary put the clamp in its correct position on the fuel tube.
 - (a) Install the bolt and nut on the clamp.
 - (b) Torque the nut to between 27 to 30 inch-pounds.
- (8) If necessary install a the tie-strap on the fuel hose.
- (9) Torque the nuts that attach the MFSOV to the bracket to between 36 and 40 inch-pounds.
- (10) Safety the elbow nut, fuel tube nut and MFSOV together with wire. Refer to Chapter 20, Safetying - Maintenance Practices.
- (11) Hold the MFSOV and torque the elbow nut to between 95 and 105 inch-pounds.
- (12) If necessary, remove the container from below the MFSOV.

NOTE: Be careful to not spill fuel that can be in the container and dispose of the fuel using the correct approved procedures.

- (13) Do an engine operational check to make sure there are not fuel line leaks. Refer to Model 208B Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.
- (14) Install the upper and lower engine cowling. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

Figure 401 : Sheet 1 : Motive Fuel Shutoff Valve Installation

