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S.I.L. NO. 01-560-02

SERVICE INFORMATION LETTER

FROM: JetProp LLC

10 Apr 01

SUBJECT: Header Tank Float Switch Retrofit

TO: Owners of JetProp #1 through # 46

Attachment 1 to this Service Information Letter provides guidance for the retrofit of the early header tank auto fuel systems on the JetProp to the improved system we currently install. The improved system uses two float switches to turn the selected wing fuel pump on and off. Compliance with this Service Information Letter is highly recommended. If there are any questions on the retrofit instructions, please contact Rich Runyon in Engineering or Curtis Vandegriffe the chief of maintenance at (509) 535-4401.

Rocket Engineering is dedicated to continuing to improve the JetProp DLX Conversion and to supporting our customers.

Sincerely,

Darwin C. Conrad
President
JetPROP, LLC

Attachment 1. Header Tank Float Switch Retrofit Instructions

Attachment 1
Header Tank Float Switch Retrofit Instructions

- a. Remove the vapor shield over the header tank.
- b. Turn the fuel selector to the off position and drain the header tank.
- c. Mark the forward and aft ends the header tank lid and then remove the lid.
- d. Remove the float sender for the auto fuel system (forward sender) and replace with the float switch shown in Figure 1. Be sure to install the float switch gasket with 8802 B-1/2 sealant to prevent any leaks.

Note

If the float ball is removed during the installation, ensure it is reinstalled with the “NO” toward the top of the header tank and “NC” toward the bottom of the tank.

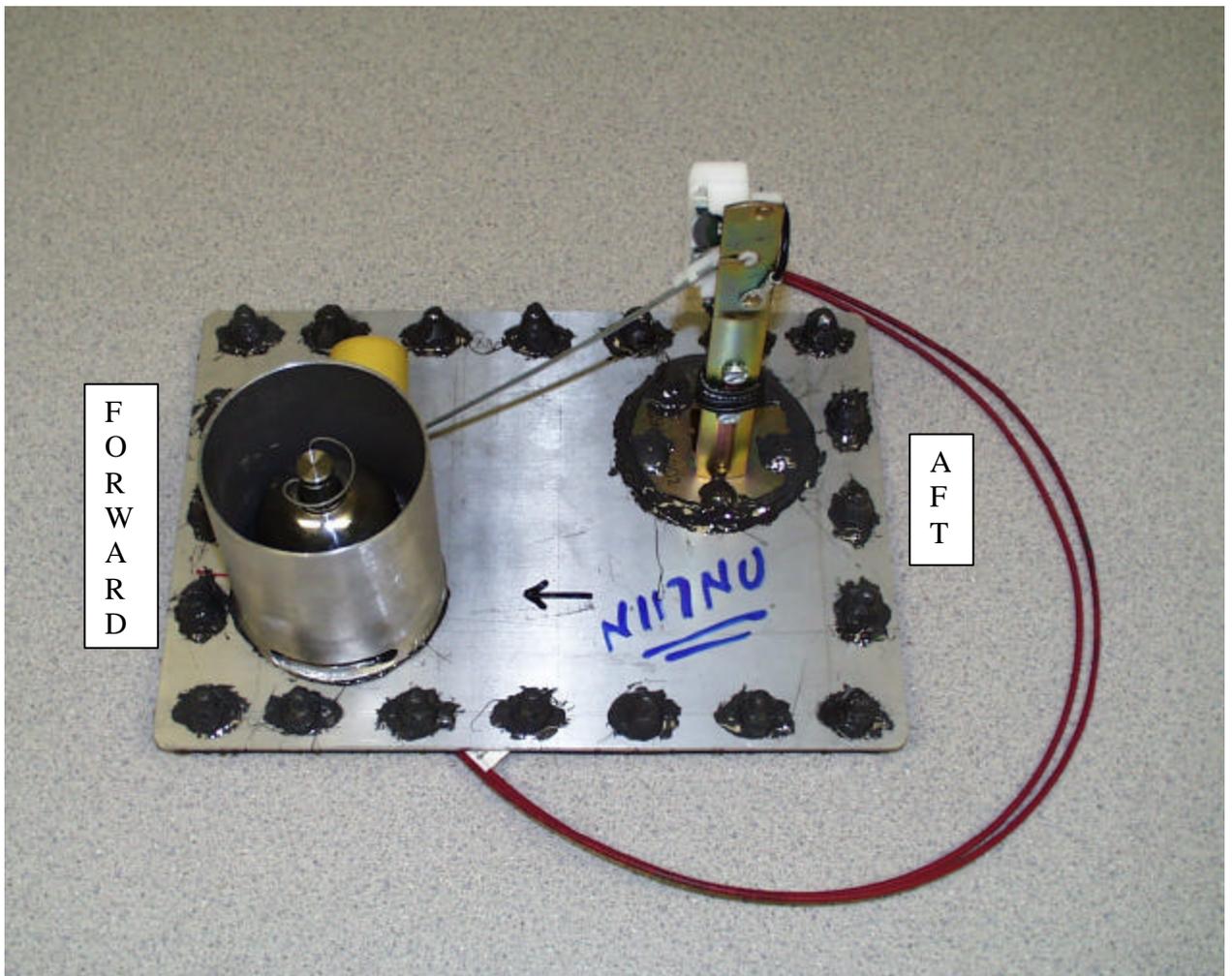


Figure 1
Header Tank Float Switch and Quantity Sender

- e. There are several variations from airplane to airplane on the exact configuration of the vent lines running to the header tank. The configuration of float switch, pressure switch, and pressure check valves shown in Figure 2 below is recommended. We no longer use the 4 psi pressure relief valve in the vent line running from the header tank to the wing tank. Therefore, it should be removed and returned to Rocket Engineering.

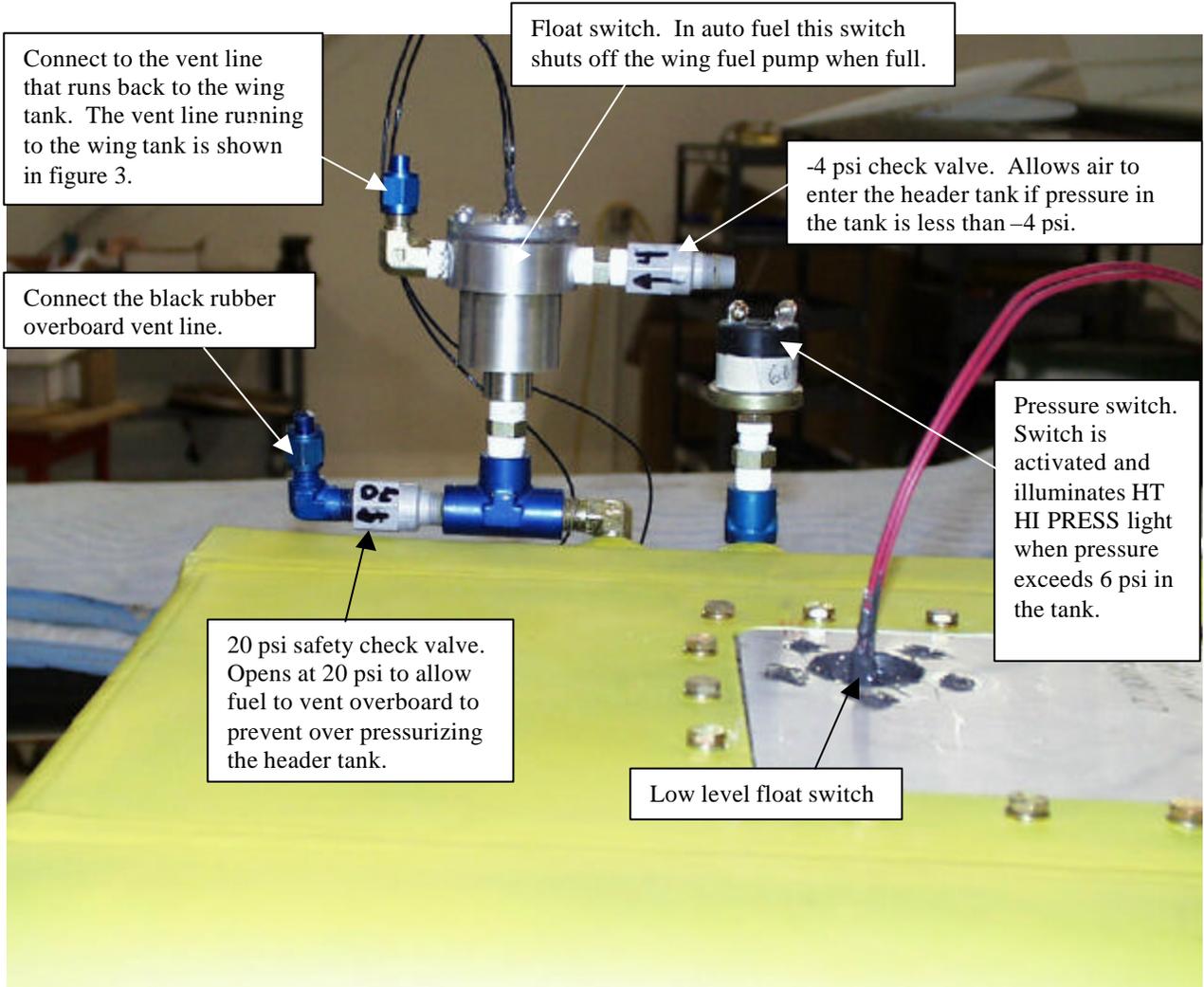


Figure 2
Header Tank Float Switch and Quantity Sender

- f. Install the float switch, pressure switch, and pressure relief valve as shown in Figure 2.
- g. Connect the black rubber overboard vent line to the fitting shown above.
- h. You will need to fabricate a 1/4" aluminum vent line to go from the fitting on the float switch to the existing vent line shown in Figure 3.

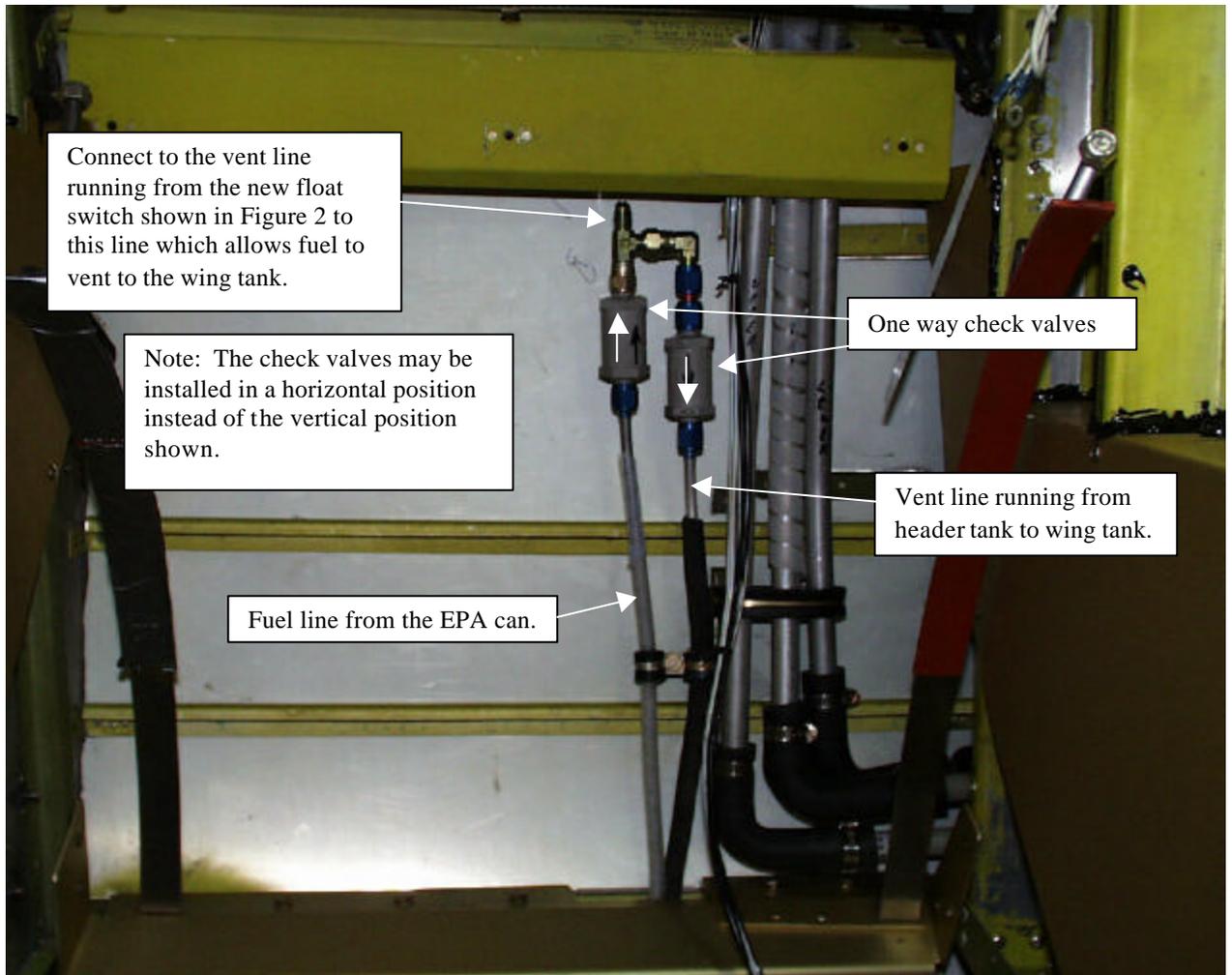


Figure 3 (Mirage)
Header Tank Vent (return) & Check Valve System layout.

- i. For electrical connections refer to electrical Drawing 560.12.002A/B. Some of the early JetProps have a 4 pin electrical cannon plug for the header tank senders. Later aircraft have an 8 pin electrical cannon plug shown in the drawing.

If the aircraft has the 4 pin cannon plug:

- (1) Remove the old wire to the fuel float from the connector.
- (2) Insert one of the red wires from the new large header tank float switch (in header tank lid) in its place.
- (3) Install a ring terminal to the other red wire and connect the ring terminal to the bolt in the header tank lid that has the ground wire on it.
- (4) If the original auto fuel system used a pressure switch, one wire ran to ground and the other to pin P on the fuel control unit. Replace the pressure switch with the small header tank float switch located just above the header tank. One wire from the small float switch goes to pin P on the fuel control unit and the other to ground.
- (5) If the original auto fuel system did not use a pressure switch, then the fuel control unit located under the floor just in front of the pilots seat will need to be replaced with a new auto fuel control unit. Run a 20 gage wire from the small header tank float switch to pin P on the new auto fuel control unit. Also, run a ground wire from the small header tank float switch to a ground block on the pressure bulkhead.

If the aircraft has the 8 pin cannon plug:

- (1) Remove the two old wires to the fuel float from the connector.
 - (2) Insert the two red wires from the new large header tank float switch (in the header tank lid) in their place.
 - (3) Remove the two wires from the old pressure switch which is no longer used from the connector (Pins 2 & 7) and replace with the two wires from the small float switch located just above the header tank.
- j. After completing the installation of the new float switches but prior to replacing the header tank vapor shield, conduct the following ground test of the system.
 - (1) This test requires two people, one person in the aircraft to operate the pumps and one outside observer to look for leaks and to notify the person in the aircraft if fuel is venting overboard.
 - (2) The first test is to verify the auto fuel system will turn on the wing fuel pump and then turn the wing fuel pump off when the header tank is full. Ensure the fuel quantity in the header tank is 9 gallons or less before starting this test. Check that the fuel selector is in the left or right position and the fuel system switch is in the "Auto" fuel position. When power is turned on, the selected wing fuel pump should activate and can be verified by sound, the caution panel light being illuminated, and a slight increase in fuel pressure. Also, the "HT LOW" annunciator light should be illuminated until the header tank fills to approximately 10 gallons. The header tank should continue to fill until it is full at which time the wing

fuel pump should automatically turn off. It may take a few seconds after the header tank quantity gauge indicates full before the pump actually turns off. The outside observer should be monitoring for leaks or fuel venting overboard during this test.

- (3) The next test is to verify that the “HT HI PRESS” annunciator light is working properly, that fuel will vent overboard if pressure builds up to 20 psi, and that there are no leaks in the fuel system. Place a suitable container under the header tank overboard vent line for this test since fuel will be venting overboard from the header tank when fuel pressure builds up to 20 psi if everything is working properly. If possible, have two people outside the aircraft. One to monitor and notify the person inside if fuel starts venting overboard and one to check for leaks. When everyone is in place and ready, turn on the emergency transfer pump. The fuel pressure will start to increase almost immediately. At approximately 7 psi the “HT HI PRESS” light will illuminate and at approximately 20 psi fuel should start to vent overboard. Turn the emergency transfer pump off as soon as fuel starts to vent overboard and do not exceed 25 psi.

- k. The following sample log book entry for this upgrade is included for your assistance.

N1234SH..SN 4612345..Total Time 345.6..Hobbs Time 123.4..Date 10 Apr 2001

Complied with JetProp LLC Service Letter 01-560-02, Dated 10 Apr 2001, Titled “Header Tank Float Switch Retrofit”. Details are contained in the installation instructions contained within the service letter. This Service Letter is to be maintained as a part of the aircraft’s maintenance records.

Fred Glotz, AP 123456789