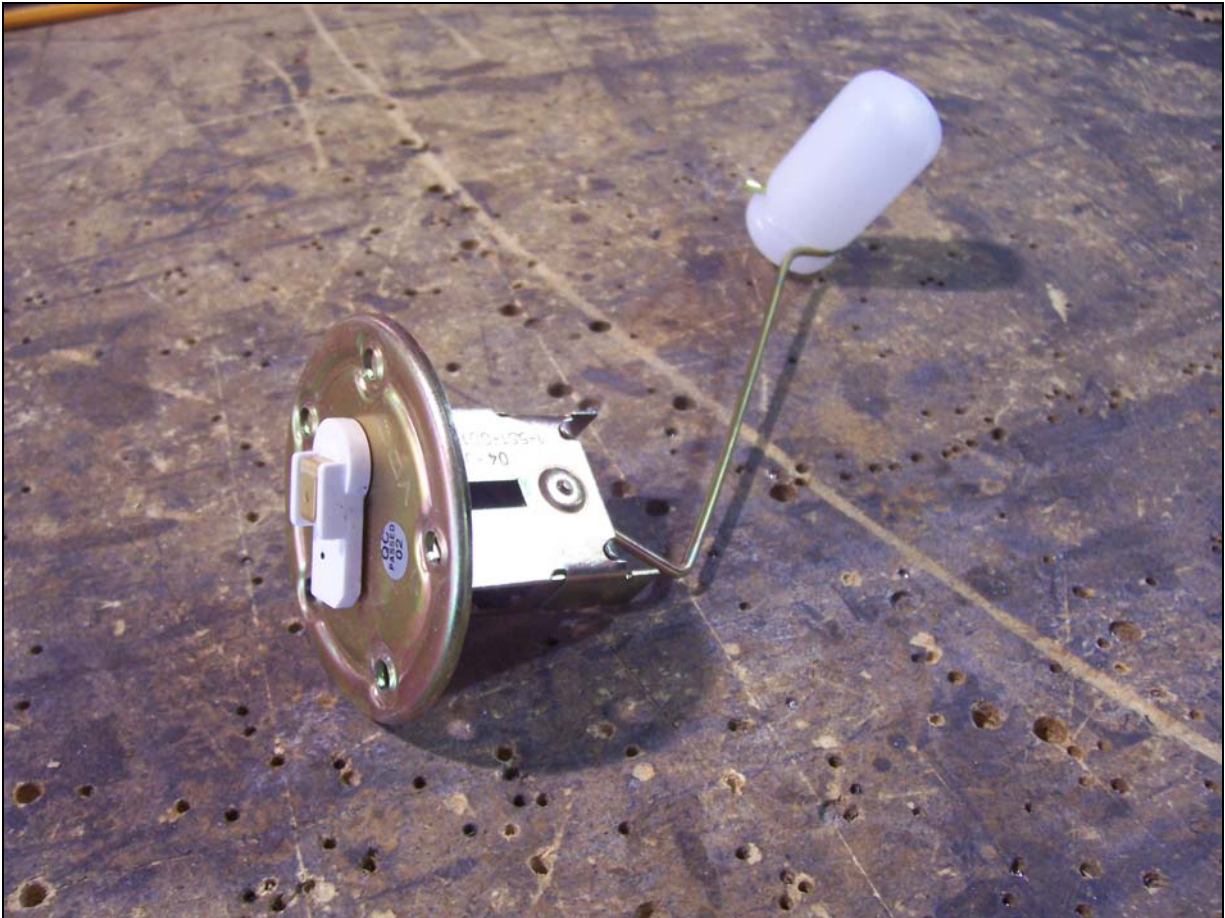


## Section 6-K-1 Fuel Sender Unit Installation



This manual has been prepared for installation of the fuel sender unit. This photo assembly manual is intended as a supplement to the drawings. If there is any discrepancy between this manual and the drawings, the drawings supersede this manual. For more information on building standards and allowable tolerances see "Construction Standards for Zenair Light Aircraft" available from Zenith Aircraft Co.



**P/N:** 221-012D  
Fuel Sender Unit

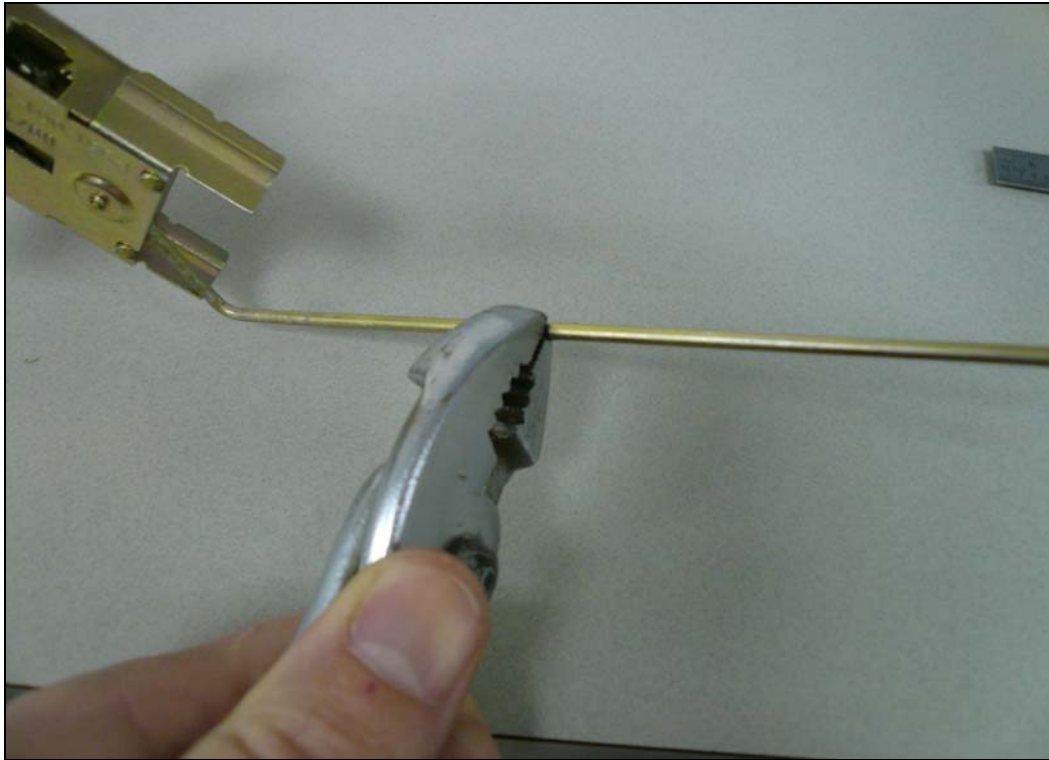
**Note:** Do not adjust the stops on the Sending Unit.

The float arm is in the “empty” position in the photo above.



Remove the plastic float to make it easier to mark the wire on the sending unit. Mark a line 72mm from the inside of the bend on the wire.





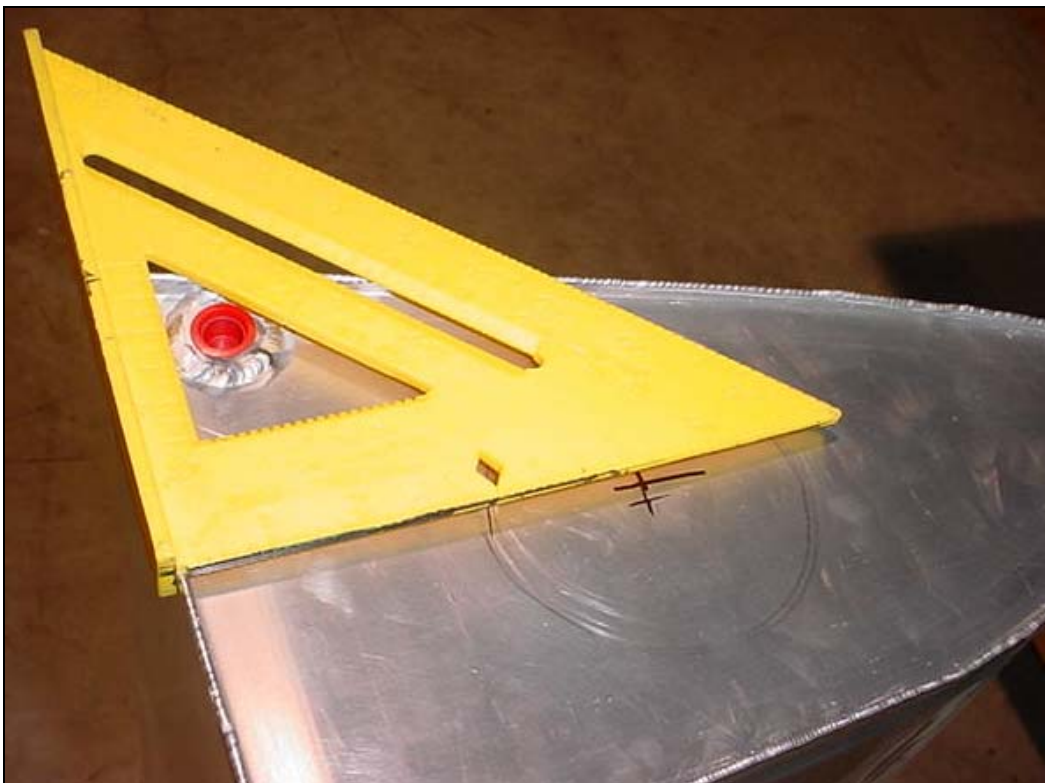
Grab the wire with a pair of pliers so the edges of the jaws are on the line and the pliers are on the Sending Unit side of the line.



Make sure the pliers are perpendicular to the wire and Sending Unit. Bend the wire down (in the opposite direction of the existing bend) to 48 degrees closed (beyond 90 degrees). You may have to adjust the wire to keep it in line and remove any twist.



Place the Fuel Tank in position in the wing. Trace the lightening hole in Nose Rib 3 on the end of the Fuel Tank.



Use a square to mark the a line 135mm from the aft edge of the Tank. Mark a line 74mm up from the bottom of the Tank at the 135mm mark. Check the mark is roughly centered on the lightening hole tracing.



Practice cutting the hole for the Sending Unit in a piece of scrap. The hole should be 59mm diameter after the hole is deburred. There is only approximately 1/8" overlap of the Rubber Gasket and the Tank skin. Use a fly-cutter to cut the hole in the end of the Tank. After cutting the hole make sure to flush the Tank to remove any aluminum chips.



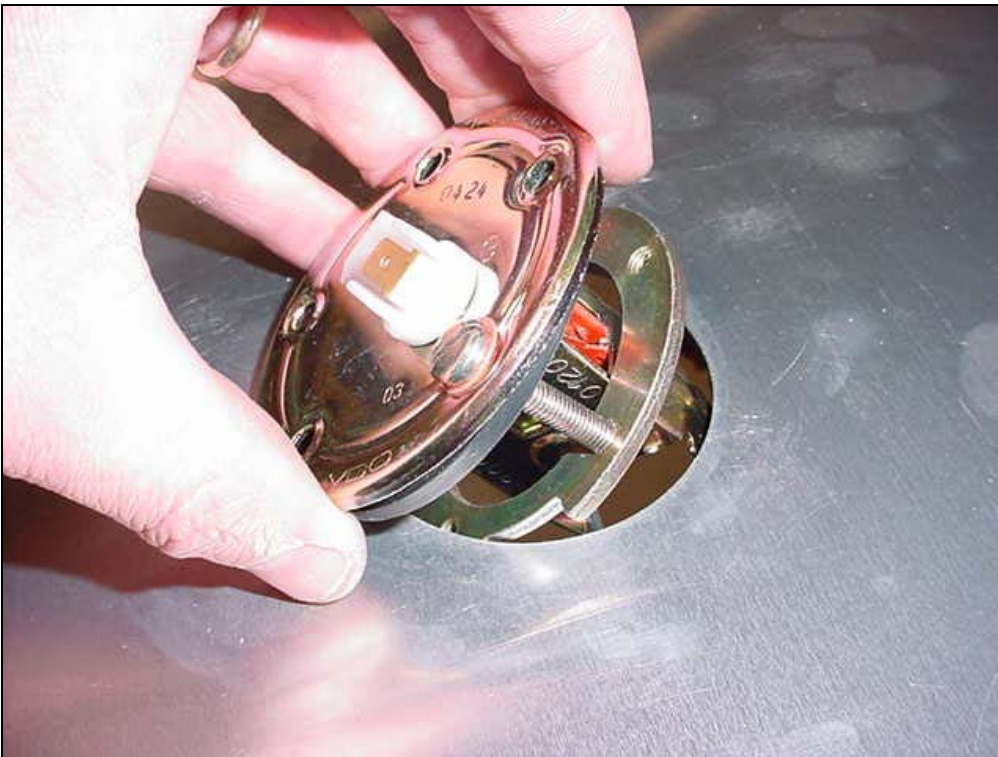
59mm diameter hole cut in the end of the Tank.

**Note:** The photo above is of a STOL CH 701 tank.





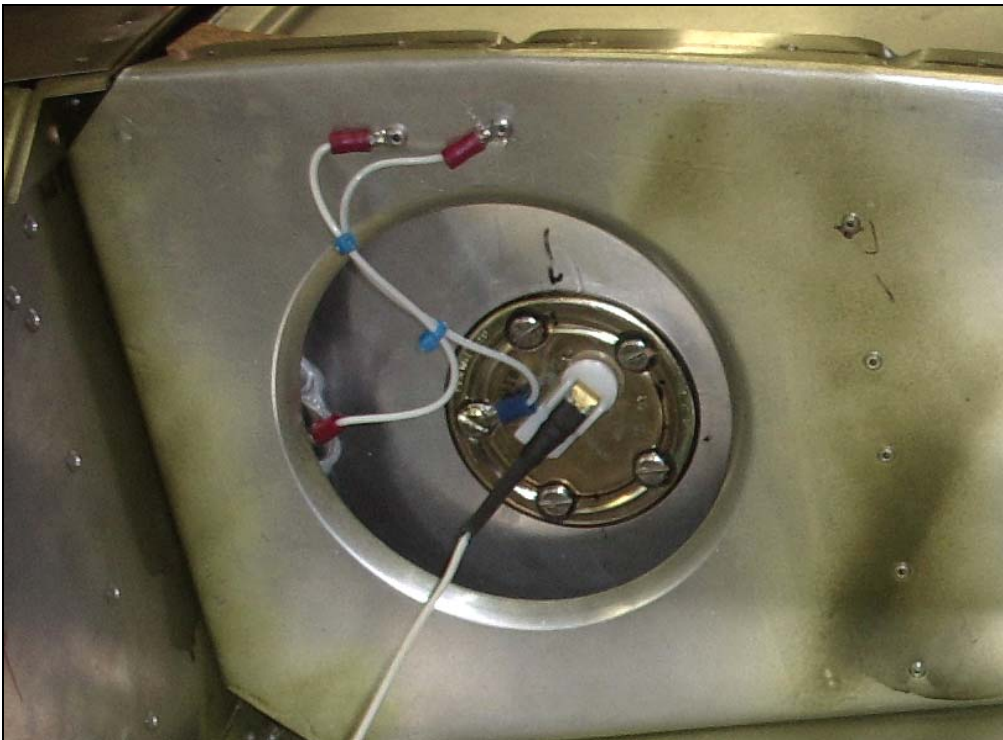
Position the Rubber Gasket between the Sending Unit and the Mounting Ring. Align the holes in the Sending Unit with the holes in the Gasket and the Ring. The pattern is made so the holes will only line up in one orientation. Use the long screw threaded several turns in the Ring to retain the Gasket and Ring to the Sending Unit.



Install the Sending Unit in the end of the Tank. There is a notch in the Ring to allow the Ring to be inserted through the hole.



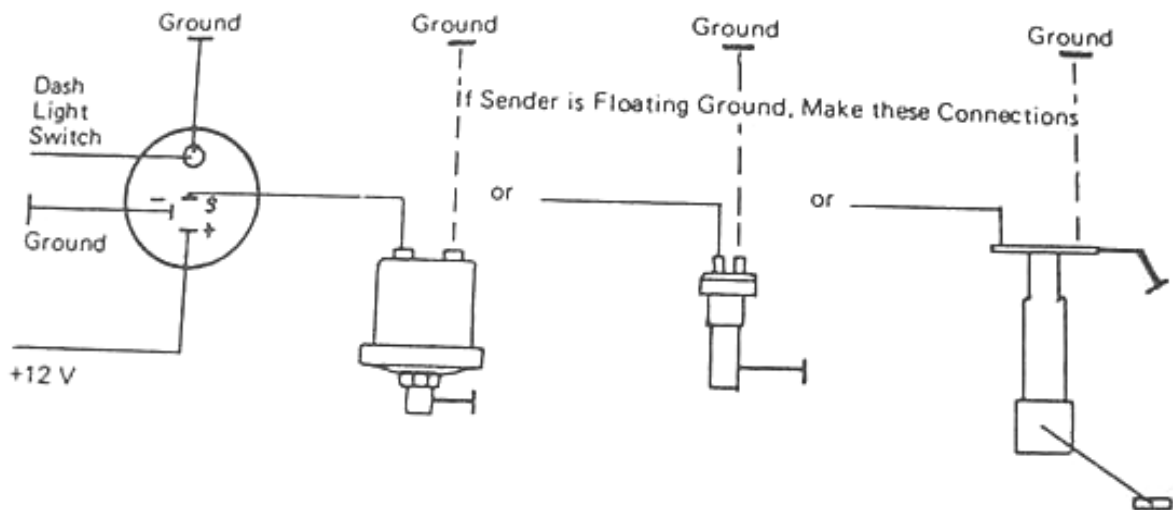
One screw will be used to ground the Sending Unit with ring terminal connector. Use a fuel resistant thread sealer on the screws and install the remaining screws. Check the orientation of the Sending Unit that it will read full when the Tank is full. Tighten the screws.



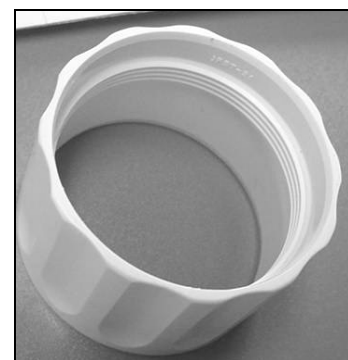
With the Tank installed in the Wing, ground both the Tank and the Sending Unit.

**Note:** Above photo is from a STOL CH 701 wing.





VDO Fuel Gauge  
P/N: 301-020



Use the screw on Mounting Ring to retain the Fuel Gauge to the instrument panel.

Connect a wire to the terminal on the Sending Unit and to the "S" terminal on the back of the Fuel Gauge. Connect the "+" terminal to +12V and the "-" terminal to ground. The two terminals on the black plastic cover are for the internal instrument lighting. Connect one terminal to +12V and one to ground (not required).