

# STOL CH 801 WING ASSEMBLY

## SECTION 13

### “INSTALLING FUEL TANKS”

### AND

### “RIVETING THE WING SKINS CLOSED”

#### **Compass Check**

1. Measure the location of the tank outlets.
2. Install supports.
3. Cut the holes in the skin and ribs for the tank outlets.
4. Apply cork padding and install tank.
5. Make electrical and plumbing fittings.

**If installing the extended range fuel tank option, consult assembly manual for the extended range fuel tank option first.**

# STOL CH 801 WING ASSEMBLY

## SECTION 13

### “INSTALLING FUEL TANKS”

AND

### “RIVETING THE WING SKINS CLOSED”

#### Helpful Building Tips

1. Study this entire section prior to starting the task.
2. Double check the layout of the outlet holes before drilling the skin.
3. Keep the padding snug but not overly tight.

If installing the extended range fuel tank option, consult assembly manual for the extended range fuel tank option first.

## SECTION 13: INSTALLING FUEL TANKS AND RIVETING THE WING SKINS CLOSED



file V300-2

Photo V14-1

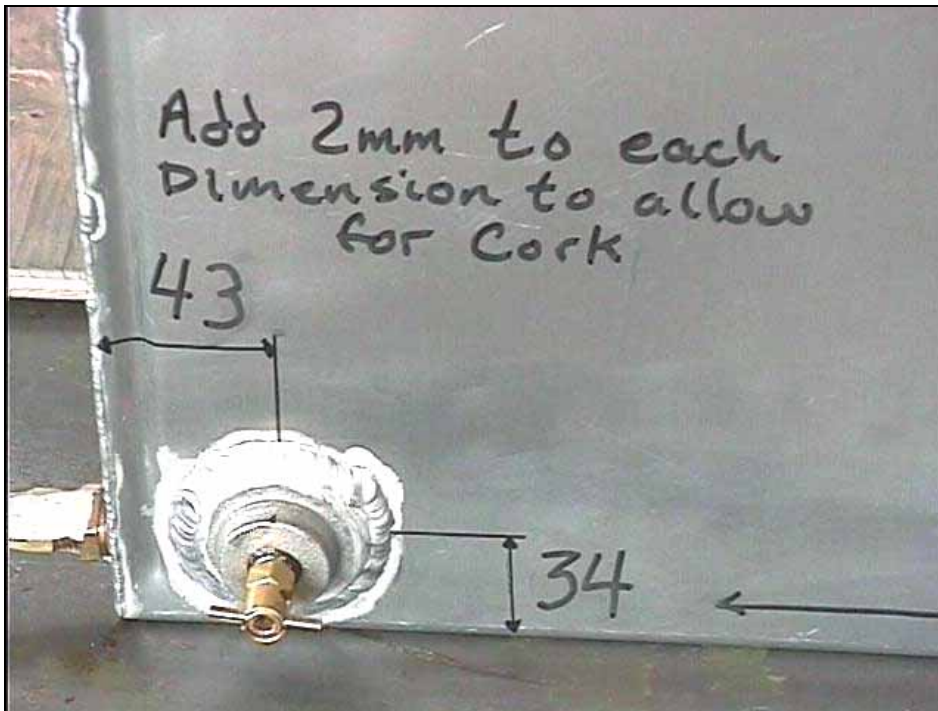
Filler cap is on the outboard side.  
Fitting at rear is the outlet.  
Fitting at front top is for systems requiring a fuel return line.  
Fitting at lower front is not used.



file V300-3

Photo V14-2

Tank will be installed with large flat side next to back side of spar between rib # 1 & 2.



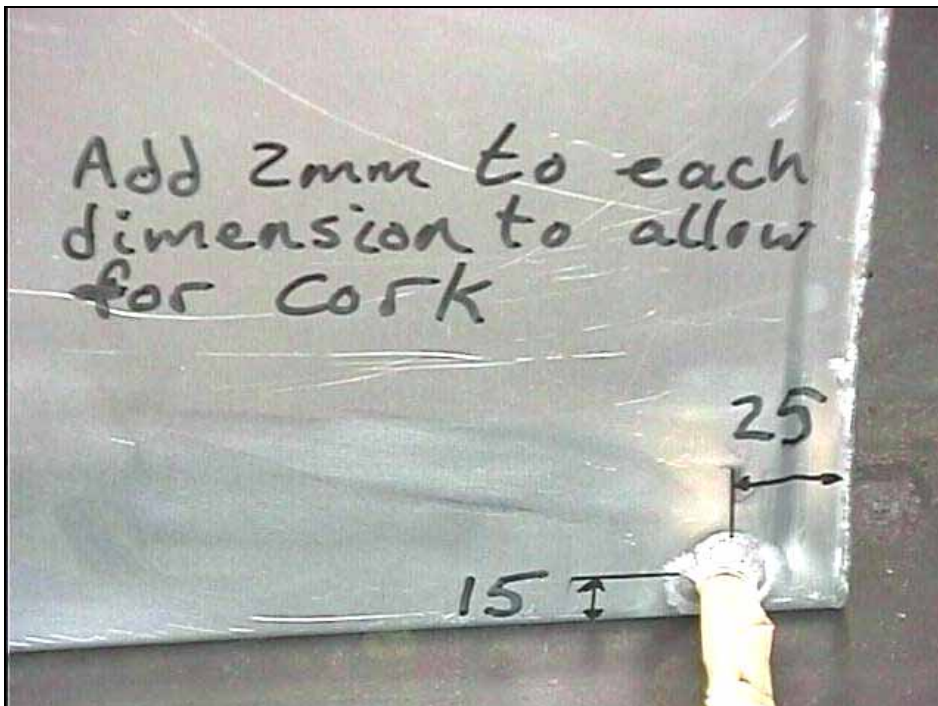
file V2-3

Photo V14-3

Note: Do not use the dimension shown in these photos - They may vary 1 - 2mm on your tank. However add the 2mm to your measurements as indicated in the photo.

Photo shows fuel tank drain.

Measure the center distances of all the outlets to the edge of the tank. Record these sizes of your tanks for future reference.



file V2-2

Photo V14-4

Photo shows fuel tank vent.



file V300-5

Photo V14-5

Photo shows fuel tank outlet.



file V2-16

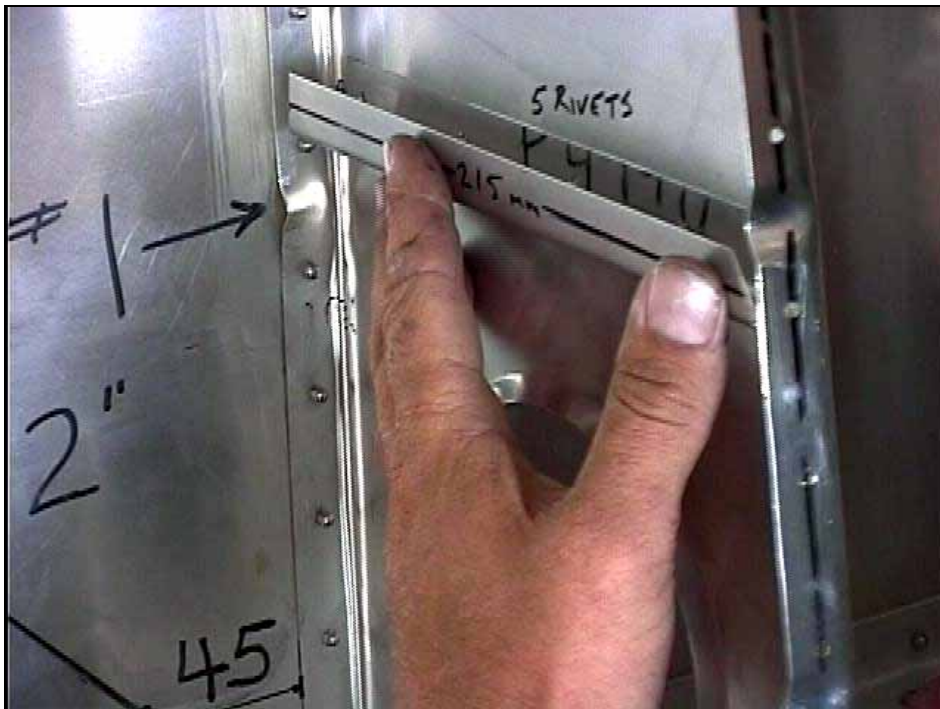
Photo V14-6

The fuel tank support next to the spar is 8V11-2. Install it with the small flange against the rib. See photo V14-10. The two U channel supports are 8V11-3.

V13-5

Install the tank support brackets on the rib #1 as shown in photo. Spacing is not critical. The rear most bracket (not shown in this photo, see photo V14-19) is not installed until after the tank is in place.



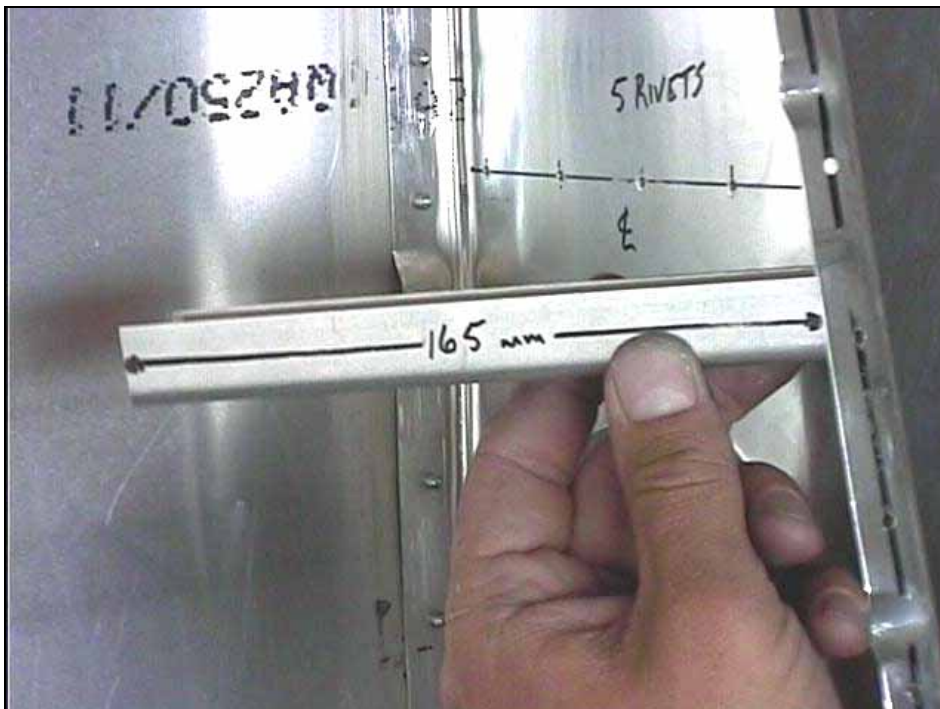


file V2-14

Photo V14-7

Lengths of 8V11-3.

Cut to desired length. Install with A4 rivets.



file V2-15

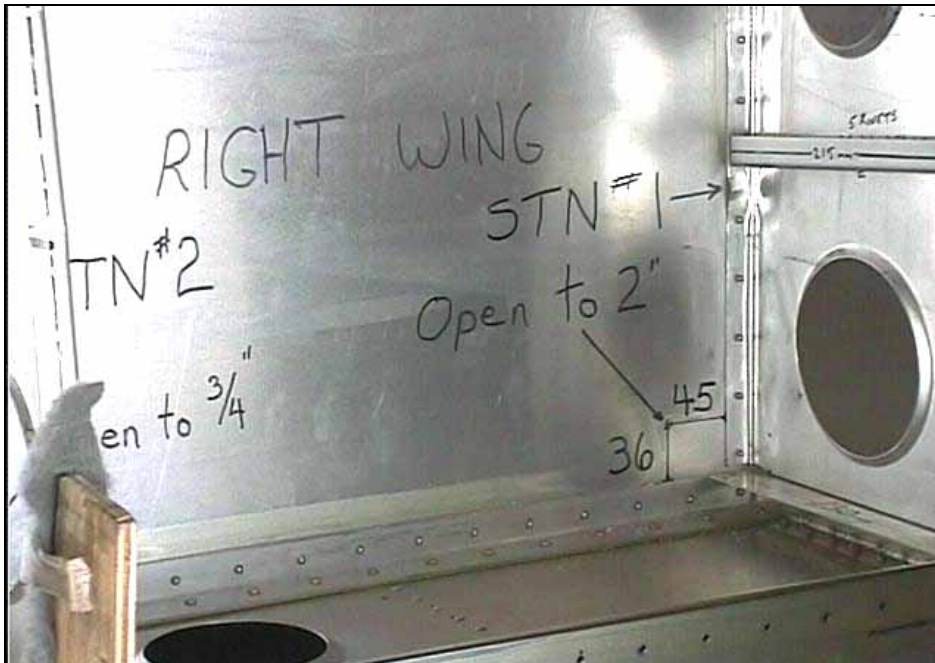
Photo V14-8



file V2-10

Photo V14-9

A piece of std "L" is the forward tank support at rib #2. It is riveted to the rib in the same manner, as was 8V11-2 on rib #1. The flat surface of rib #2 provides the support for the right side of the tank.

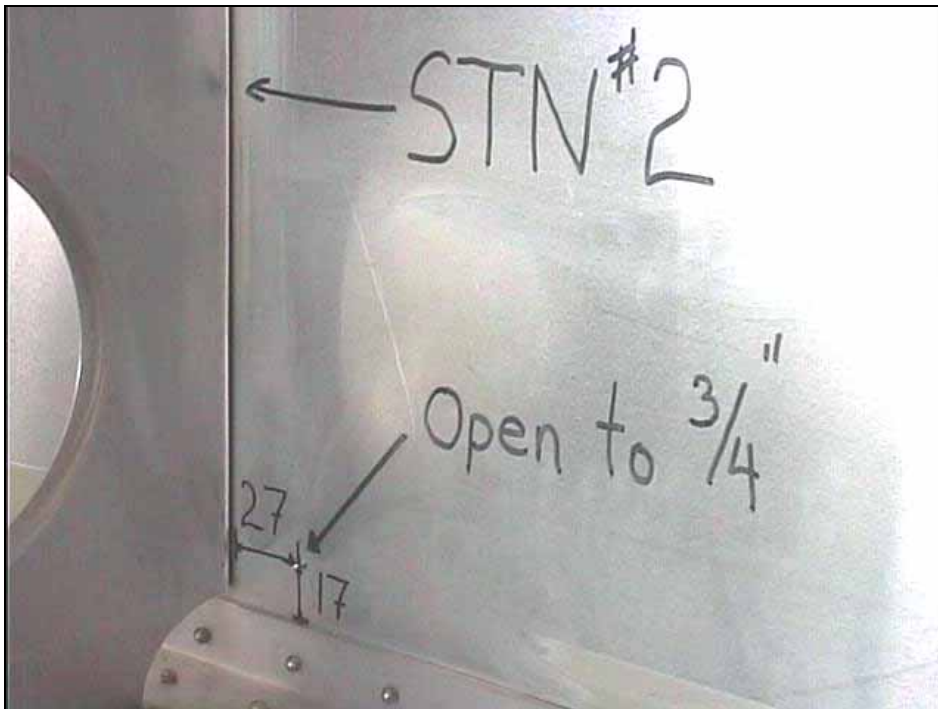


file V2-9

Photo V14-10

Make sure the 2mm for cork padding has been accounted for.

Layout all the holes to be drilled in the lower skin to accommodate vent tubes, drains and outlets.



file V2-1

Photo V14-11

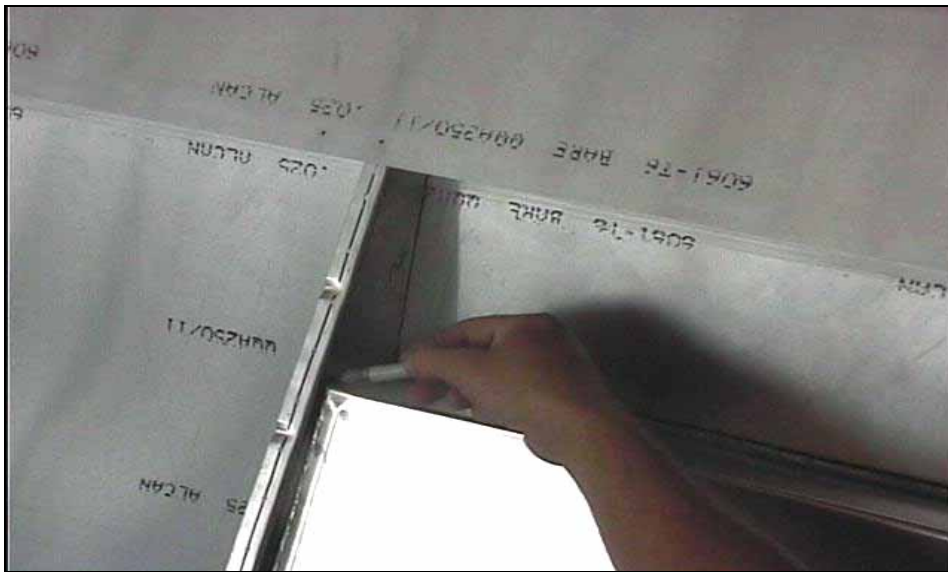


file V300-4

Photo V14-12

Also drill the holes in the ribs to accommodate the outlet line.



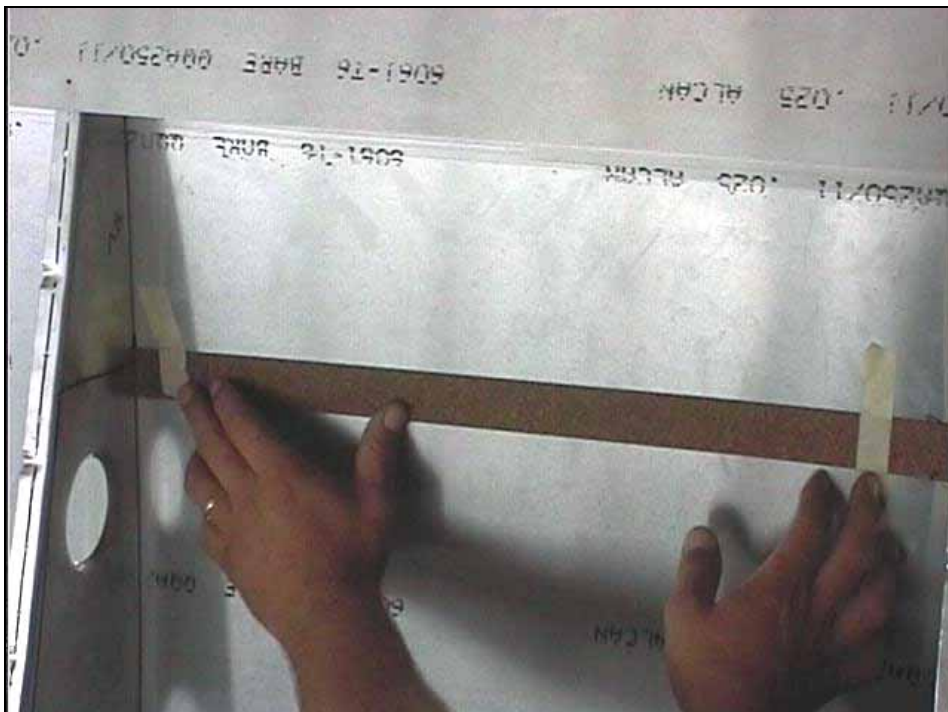


file V2-20

Photo V14-13

Installing the cork padding is next.

Slide the tank in place and mark its outline as a guide in placing the cork.



file V2-21

Photo V14-14

Cut strips of cork and glue in place as shown in the next photos V14-15, 16, 17.



file V2-22

Photo V14-15



file V2-23

Photo V14-16

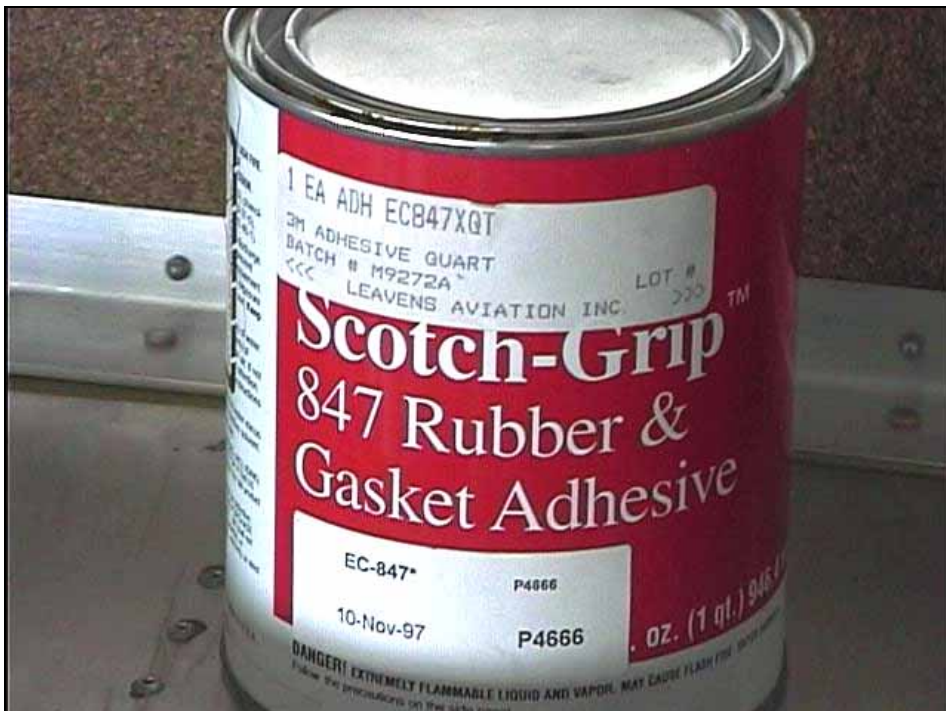
Cork is glued to all surfaces that contact the tank.  
 Build up additional layers if necessary to obtain a snug fit.  
 Don't get the tank so tight that it distorts the ribs.



file V300-6

Photo V14-17

Also glue cork on the top and bottom of the tank.



file V2-24

Photo V14-18

This is the adhesive we've used.

Use a quality fuel resistant adhesive.





file V2-26

Photo V14-19

Cork is also glued to the rear tank supports.

Put the tank in place and install the rear support brackets - part 8V11-2, on rib #1 and std "L" on rib #2. Three A4 rivets are used.



file V300-7

Photo V14-20

Make your hose connections.





file V2-25

Photo V14-21

Scratch the surface of the pad with 80-grit sandpaper to give the glue a grip. Use the glue shown in photo V14-8.

Connect wiring to your fuel sender.

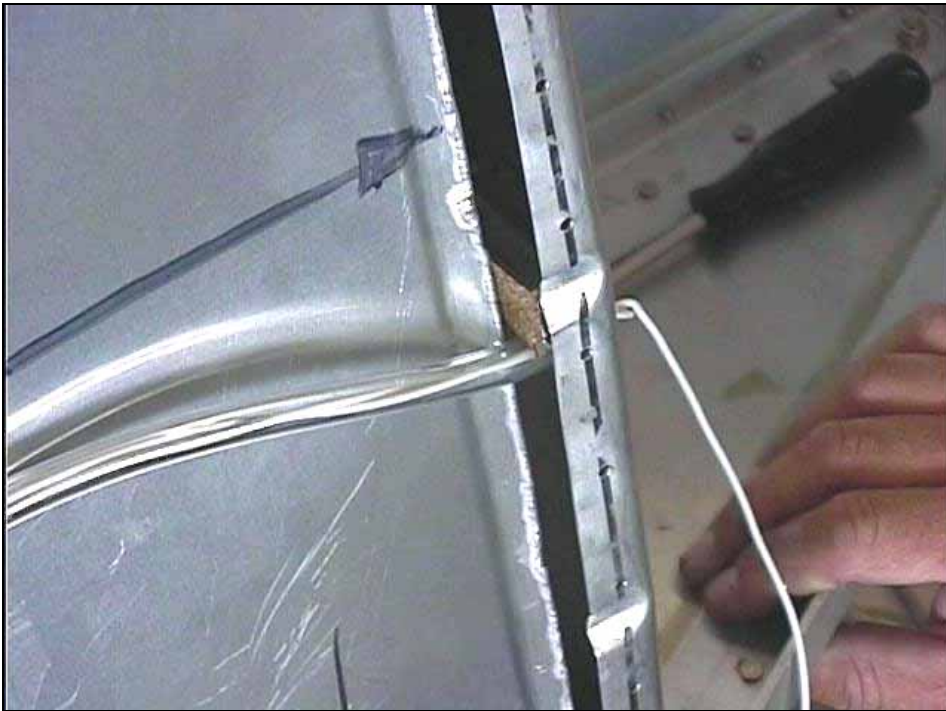
Nylon pad 8V11-4 is glued to the underside of the top rear skin. The pad is to be centered over the fuel sender.

For future access to the fuel level sender you may want to cut a 95mm diameter hole in the wing skin located above the sender of each tank.

Cover this hole with a 135disc of .025 aluminum. Use 6 - A4 rivets.

Be careful not to drill holes in your tank!

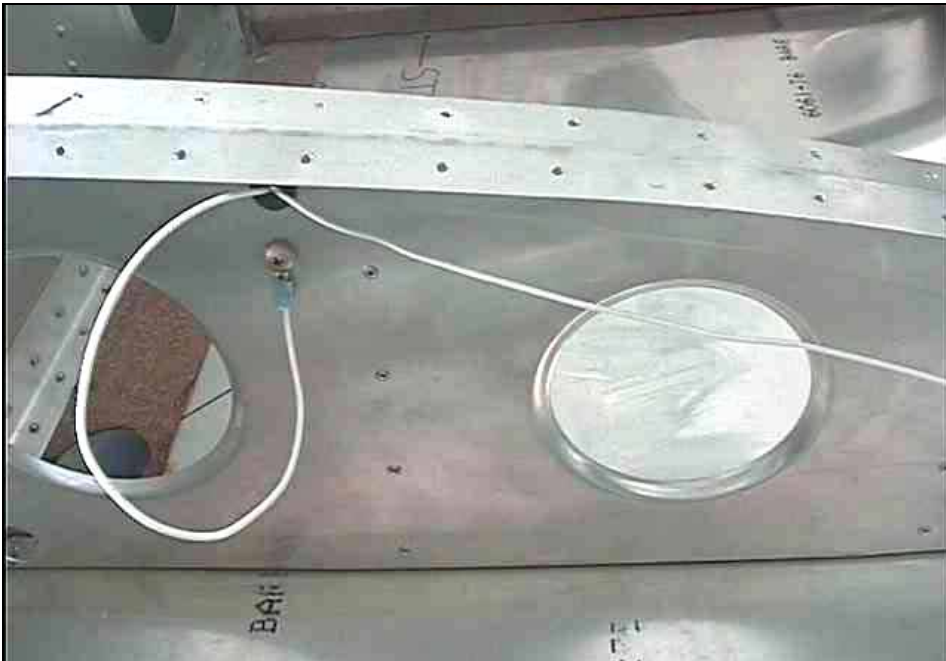
Glue the nylon pad to the underside of the cover.



file V2-27

Photo V14-22

Provide protection for the fuel sender wire.  
Install the fuel tank fittings and run fuel line 200mm past the I/B side of rib #1.



file V300-8

Photo V14-23

Connect the ground wires.



file V300-9

Photo V14-24

This is how things should look before closing the top wing skin.  
Run any electrical wires you will require (nav/strobe lights, etc).

Check everything then proceed to rivet the top skin in place with the exception of Rib # 1. All ribs and the rear spar may be riveted with A4 rivets.

The main spar rivet line is all A5.

Leave the last two rivet holes at either end of the spar unriveted.

I have checked my work and parts list and confirm to myself, that all items listed in this portion of the elevator hinge have been installed.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

**Revision List:**

<b>Revision</b>	<b>Summary</b>	<b>Revised By:</b>	<b>Date:</b>
3.0	Reformat	SH	8/18/1999