

## C75-RA-2 Rudder Skin



This manual has been prepared for assembly of the Rudder supplied with finished hole size, match drilled parts. 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 information on building standards and tolerances see "Construction Standards for Zenair Light Aircraft" available from Zenith Aircraft Co.



2" (or taller) beams are required to lift the Rudder off the table so the clecos won't dent or damage the thin Skin. Set the beams approximately 400mm apart.



A 1" spacer block is required under the bottom trailing edge to remove twist from the Rudder when installing the Skin.

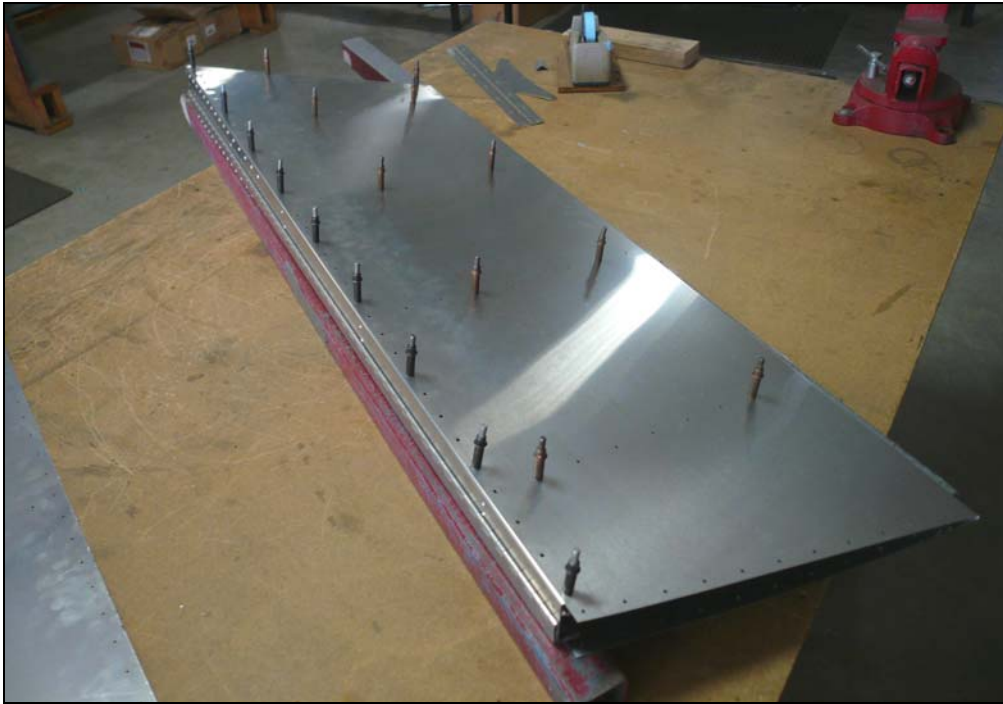


**P/N: C75R3-1**  
Rudder Skin

Deburr the holes in the Rudder Skin with a large drill bit. Also deburr the edges of the Skin.



Set the Skin on the beams and insert the Skeleton between the halves of the Skin. Position the trailing edge of the Skin at the TOP of the beam. Position the 1" spacer at the **BOTTOM TRAILING EDGE** of the Rudder under the beam.



Cleco the Skin to the Skeleton. Flip the Rudder over, remember to reposition the spacer block to remain under the bottom trailing edge corner, and to cleco both sides.



Notice the 1" block under the beams on the trailing edge.



**P/N:** C75R3-2  
Rudder Horn

Deburr the Rudder Horn holes and edges. Cleco the Horn to the Bottom Rib and wait to rivet until the very end.

**Orientation:** The Horn has a slight bend upward at the bolt holes at each end.



**P/N:** C75R3-3  
Rudder Top Cap

Trim Rudder Top Cap and remove the excess material.



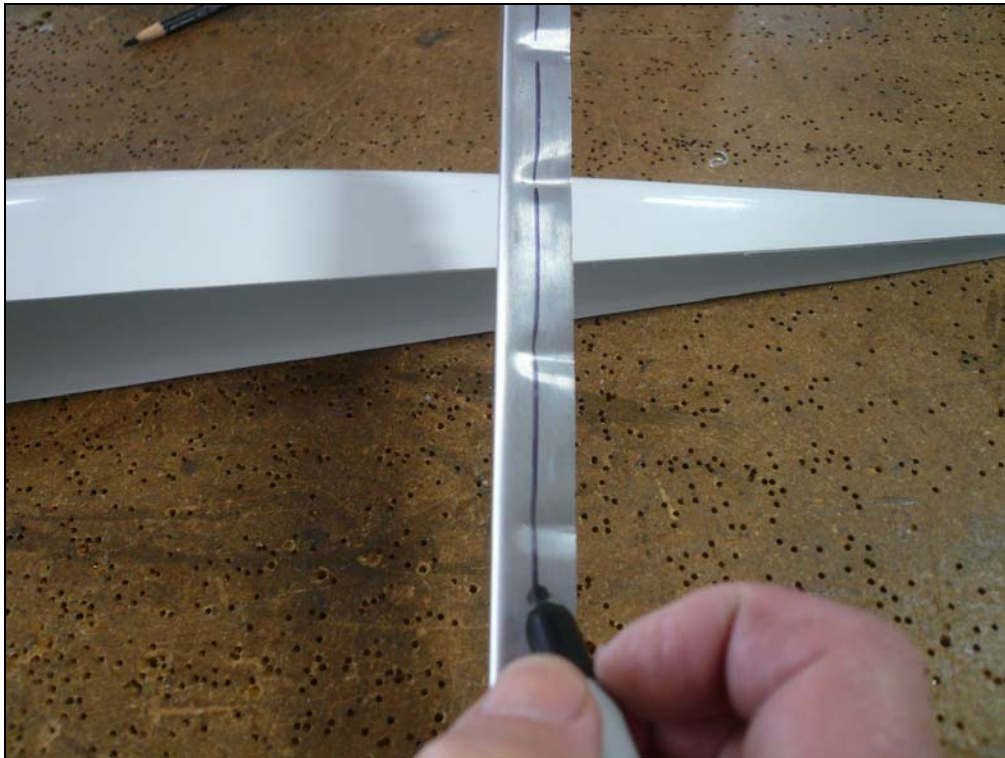
Measure out 95mm from the top of the Rudder Cap down and mark a line.



On the trailing edge measure from the top down 24mm and mark a line.  
Connect the two marks from front to back and do the same on the other side.



Using the snips, trim the line all the way around on the marked line.

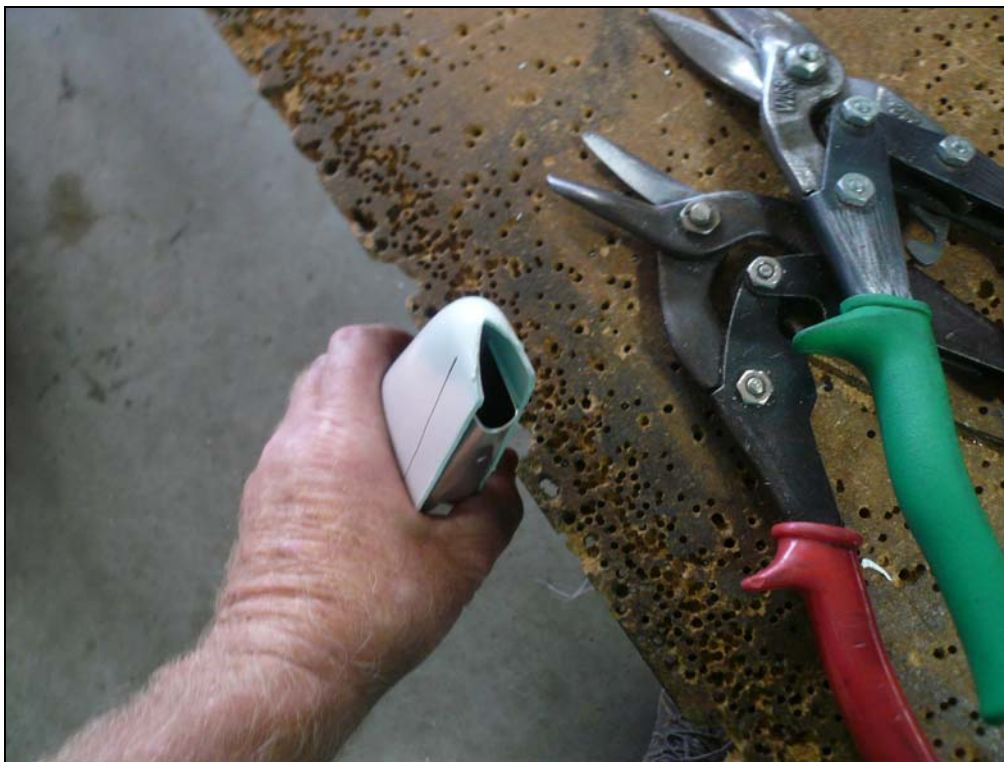


**P/N:** C75R1-1  
Top Rudder Tip Rib

Mark a 10mm line on the Top Rudder Tip Rib on both sides.



Measure and mark a 10mm line on both side.

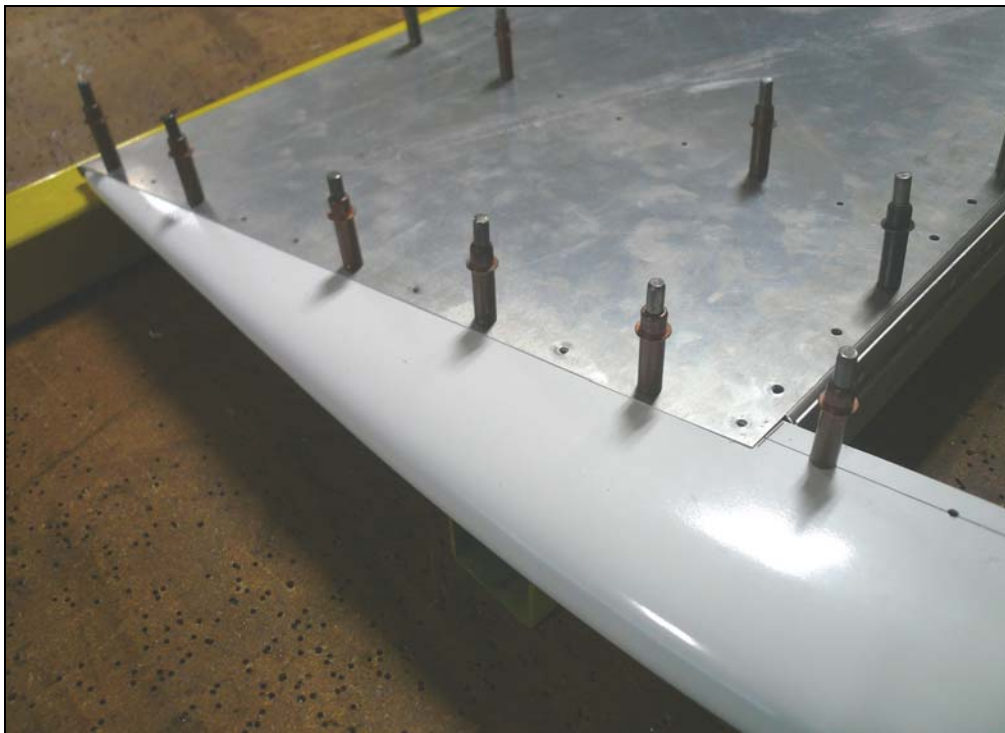


The trailing edge will need to be notch to able to slide the Rudder Top Cap back against Rudder Rear Skin C75R3-1.





Layout 5 evenly spaced holes on the front section. The first hole is position 60mm from the front and last hole is 230mm from front. Then evenly space three hole between the front and back hole. These holes are located in front of the Rudder Spar.



Position the Rudder Top Cap on to the Rudder Section. When the line are visible thru the holes, drill and cleco the skin to the Top Cap.



The upper piano hinge will need to be trimmed to allow room for the Rudder Top Cap.



**P/N:** C75R1-7  
Rudder Tip Angle

Position the Rudder Tip Angle on the top of the Rudder Spar. Make sure the angle is flush with the spar.



Drill and cleco the Rudder Tip Angle and remove the clamps.



Cleco C75R1-1 Top Rudder Tip Rib to the skin and use cut off material from the Rudder Top Cap C75R3-3 to center the Tip Rib on to the spar. Layout two even spaced rivet holes on the Rib to the Rudder Tip Angle that is behind the Rib. You may need to remove the Rudder Tip Rib to locate the center line on the Tip Rib.



Drill and Cleco the Top Rudder Tip Rib to the Rudder Tip Angle from the rivet holes that were marked.



Cleco the Rudder Top Cap back on the Rudder.



Deburr any holes that have not been done . Rivet the Skin to the Skeleton starting on the trailing edge. Remember to change rivet gun nose pieces when changing rivet size. **Don't forget to position the 1" spacer at the Bottom Trailing Edge of the Rudder under the beam.**