

Rudder Post Insert Fitting

I have replaced 3 rudder post fittings in the 95's. This is not an easy project. If I were to rate the difficulty of this project I would give it a 3-4 with 5 being the most difficult. Rating some projects:

- Changing fully assembled rigs in a 65 or 95, 1
- Assembling a new rig for a 65 or 95, 2 to 3
- Changing a rudder servo in a 65 or 95, 2 to 3

I will share with you some notes. First check the SIDE movement of your current rudder at the very bottom (not the twist). Some of the original fittings are pretty tight and side to side movement will be less than 1/8". If the rudder movement is 1/8" inch or less I would leave the rudder "as is". The sloppy ones will have 1/4" of movement or more. These need to be replaced. The new fittings will have movement of about 1/16" or less.

What you will need:

- New Rudder Post Insert Fitting
- Glue – I am using waterproof Epoxy. I **would not** recommend CR glue (supper glue)

Removal of the Old Fitting:

- 1) Remove the rudder.
- 2) Remove the old rudder post fittings (Top and Bottom). The original rudder post fitting is in two pieces. It is glued in place with what appears to be Plastic Cement, an acetone based glue. Chuck LeMahieu recommends applying a CA Remover around the black top and bottom fitting, allow to sit for a few minutes, and then slide a small screwdriver under the lip and carefully pry around the edges. This works in his video however, here is what I have found. If the glue is Plastic Cement the CA Remover does nothing to break down the glue, and eventual prying around the edges will overpower the glue and allow the fitting to break free. This is a method, but I have used the following method on three different hulls:

Because I have seen two hulls in the past need to have their rudder post fittings re-glued after a collision, I was able to determine the rudder post fittings came loose from sudden side loads placed on the rudder and rudder post fittings. This side load can be duplicated easily by inserting a thin screwdriver or nail into the rudder post fitting and rotating side load circles around each piece (top and bottom). I was able to remove all three rudder post fittings quite easily with this method. No CA Remover used.

- 3) Clear residual glue from hull around old rudder post fittings. I was able to scrape away with a small X-Acto knife. Be sure to clear any glue that might be in the shaft area. (I do not feel CA glue remover broke down the glue at all.)

Installing the New Rudder Post Fitting:

- 1) First assemble the three pieces together and place on your rudder shaft. It should look like the picture.
- 2) Pre-fit new rudder post fitting in place. This is a tricky part. Try first each piece in place by itself. All three hulls I worked on were not original hulls, but replacement hulls. Pre-fitting the new parts in place were VERY SNUG. So snug it was very difficult to remove for gluing once both top and bottom pieces were in place so you may not want to actually have both top and bottom pieces in place until glue is applied. (I'd be interested in knowing if an original hull is as snug of fit.)



NOTE: There is a top and bottom piece. The bottom piece has a greater angle. In this picture the metal tube is fully inserted. You may notice the metal tube is much larger than the rudder shaft. This is normal as the fit of the rudder shaft into the fully assembled pieces is a good fit.

After you are comfortable with the proper fitting you are ready to glue. Mix a small amount of epoxy. With a toothpick place a SMALL amount around the area the parts will be seated. Add a small amount into the HULL SHAFT, as this will provide for some lube to slide pieces together. Slide the bottom and top pieces together in place. Be sure the metal tube has been inserted. Check for proper seating for both pieces (I have found a fair amount of pressure is needed.) They should be flush with the deck and the bottom hull. Check the rudder slides into place. Remove rudder and let dry. Once all assembled check the side to side rudder movement. (I am seeing about 1/16" or less at the bottom of the rudder.)