

Hobie Cat

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Dear TriFoiler Customers,

I am very sorry to have to do this again, but there a couple of items that need imediate attention. This repair is more complicated and if you are not comfortable with the work that needs to be done then we would be very appreciative if you could take your TriFoiler to your Hobie Dealer or to a reputable fiberglass repair shop to have the work done.

There are 3 items that need attention;

- 1) The main hull needs to be reinforced just under the main beam.
- 2) The bows of the amas need to be reinforced.
- 3) The roll pins in the foil lock down hook may need to be replaced.

Main Hull repair in General

The main hull needs to be reinforced on the vertical surface just beneath the main beam to prevent cracks to appear. Basically we want to get more glass inside the hull near the beam where the vertical sides of the hull turn into the horizontal deck of the hull. The new glass should have a nice radius of about 1/2" where it turn from the vertical surface to the horizontal surface so we would like to put some putty into the corner and then put the glass over the putty. The putty will also help the glass lay down without air bubbles.

In the enclosed video we have shown how to cut a hole in the deck directly under the main beam to gain axis inside the hull to do the work. If you do not mind cramped space, it may be quicker to crawl inside the hull through the cockpit. Since we discovered the problem we have done all the boats at the factory this way which is quicker. It is necessary to remove the steering pedals and it is desireable to turn the hull up side down.

Main hull repair Details

- 1) Remove the center portion of the main beam from the main hull by removing the 4 screws in the deck.
- 2) Using the supplied template drill 4 - 1/4" holes in the glass under the beam. Using the drill make the holes oval shaped so that a hack saw blade will fit through the hole. Use the hack saw blade to conect all four holes and make a rectangular hole. Cover the edges of the hole with tape to cover the sharp edges and protect your arm as you are doing work inside.
- 3) Use the coarse sand paper to sand inside the hull. The area to be glassed is shown in the drawing. Sand the area so that the new glass will stick well and also make sure that there is nothing sticking up that would prevent the new glass from laying flat. There may be a bead of

glue that may be very difficult to remove. If this is the case then we will deal with it in the next section, but it will be too difficult to sand away.

Sand the inside of the hull around the hole opening so that the glue will stick well when glue the lid onto the hole when we are through.

4) Next we will put in the putty. Remove about 20% of the putty from the can and put it in a cup to be used later to glue on the lid. To catalyze the putty put about 40 drops of catalyst into the can of putty and stir thoroughly. With rubber gloves on your hands get the putty into the corners. If there is a bead of glue in the area, put some putty around the bead so that the glass can go over the bead with out trapping air next to the bead.

Cover the hull and the main sheet with paper or plastic.

5) On a piece of card board or plastic wet out two pieces of glass and stack them on top of each other. Pick up both pieces of glass and place them inside the hull in the corner just forward or aft of the beam. (**OPTION** you may want to roll the hull on it's side at this point so that gravity will help keep the glass down). The difficulty will be to remove your hand with out pulling the glass away. The trick is to get all of the edges of the glass to lay down. If an edge begins to peel away the whole piece may fall off. If you are where it is warm and drafty the resin on your hands will get sticky faster and the glass will not pull away as easy. Take care not to get strings on your hands as the string may pull the glass away from the hull. Pad the glass lightly with your fingers to get all the air out. Feel carefully with your fingers to make sure that the glass is down everywhere. Repeat the process for the remaining three corners of the beam area.

6) The repair is done and it is time to fix the hole in the hull. Catalyze the remaining putty and put some putty on the edge of the fiberglass cap where it will over lap with the hull. Remember to sand the hull where the cap is going to bond with the hull. With putty on the cap let the cap down into the hull. Turn it 90 degree and draw it up into position with the string. The notches in the cap should be on the back so that the 6 control lines go through the notches. *Be carefull not to get any putty on the control lines.* To pull the cap up tight and hold it put a stick through the string and twist it. Twist the string until it is tight and then space the stick up so that the string is quite tight. Scape off the excess putty.

7) With the putty cured cut off the string and scrape off any putty that may interfere with the beam. Because glass maybe covering the bottom of the 4 screw holes it may be necessary to drill through the glass. Use a 1/4" drill bit to drill through the glass. If you have a 5/16-18 tap you can cut threads in the glass, but the screw will be able to make it's own threads if you turn in the screw. Put some silicone on the two holes for the string in the cap and then put some silicone on the threads of the screws before you reinstall the main beam.

Ama Bow Reinforcement

We would like to reinforce the bow of the amas. The stress that we are concerned about is the back end of the sensor arm pushing down on the deck of the ama near the bow. Ideally we would like to transmit this compresive load down to the bottom of the hull. To do this we would like to fill the bow of the amas with foam.

1) Completely drain the ama of water and make sure that the bow area is dry.

- 2) Remove the short stubby stainless steel pin from the deck of the ama with a pliers or vise grips. Make sure that the hole goes all the way through into the hull.
- 3) Pour equal amounts of component A into 2 cups and then equal amounts of component B into two cups. All four cups should have equal volume of material in them. Be sure everything is ready before you begin to mix the two components as you will need to work very fast once the components are mixed. Mix the components quickly and thoroughly and pour them into the baker's bag. Put the tube into the hole in the deck of the ama near the bow and squeeze the contents into the hull. Hold the top of the bag tightly with one hand so that the contents are pushed out the bottom. Make sure that the bag is not twisted at the bottom so that the contents are free to flow through the tube.
- 4) Reinstall the steel stud in the hole. The urethane foam will make a good glue to hold the screw in.

Sincerely;

Greg Ketterman Ext. 203e