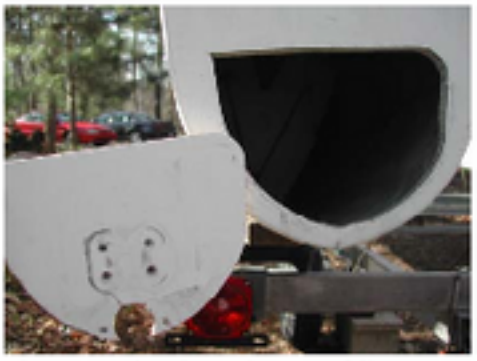
Transom repair on H-18

The port transom was cracked around the lower gudgeon. It flexed when the rudder was pushed and pulled. This explained why 4-5 gallons were dumped after every 2-3 hour sail. The extra ballast proved to be helpful one day when sailing in 23-knot wind and 4-6 foot waves; but long-term this is not good for performance. A repair had to be made.

I decided to cut out a large opening and make the repair from the outside, instead of trying an inside repair through an access port. Adding ports can weaken the hull's deck, and can leak water into the hull. Here's what I did:

Removed all hardware. Drew a line for the cut. The line started at the lower tangent of the drain hole, followed the hull shape upwards to a place where the transom was solid, extended to the other side, and then back to the drain hole. The line left enough "lip" (about 1 inch from the edges), so the cut would leave a flange for attaching reinforcement blocks. It was big enough to easily get my hand into the hull. There is a ¼" X 2" X 2" chunk of steel sandwiched in the transom for mounting the lower gudgeon. I imagine there is a similar chunk for the upper gudgeon too. Mark locations of the drain hole, drain plug base mounting holes, and the gudgeon hole alignment (2 ways). Make these marks on the hull's sides.



Cut the transom section out with a coarse-bladed reciprocating saw. Save the piece to put it back in later. Be careful to retain the steel plate in its original location, so the gudgeon screws will line up again.

Repaired the transom section. It had delaminated. Clean all surfaces including the plate, with acetone. Some can be poured through he layers. Always wear gloves and safety glasses. Mix epoxy (West 105 resin, 205 hardener) with 407 filler: and add 1/16th to ¼" cuttings of fiberglass for extra strength. I made up the composite slurry in a small plastic drinking cup. I could use the cup's molded-in ribs as measuring marks I had pre-determined with using water and a marker. I usually made enough epoxy composite to fill the cup about 1/3rd to ½ full. Carefully lift the transom layers, and use a tongue depressor or equivalent to lather in the epoxy/glass, thick gooey paste. The goal is to make the cutout the same thickness as original.