

Just got home! \$200.00 off craigslist. (July, 5 2009)



Last day in the sun for a while!



New home for now.



View from the stern. All wood was rotted away. Outer FRP skin was carefully removed with a cut off tool and saved as a pattern for replacement wood. Looks bad, but this is the easiest and best way to replace all wood including the sponson areas.



Notice where the stringers once were. Completely gone.



Grind smooth and remove any loose laminates. (dirty job... wear gloves, respirator and coveralls!)



Smooooth....



Smooth and ready for glass work to reinforce the 50 year old hull



Cut all matting in advance to make it easier while applying resin. (Different hull than previous pictures.)



One layer over the entire hull, and extra material along the keel and transom pad. (Different hull than previous pictures.)



Laminated with polyester resin. The first of 18 gallons used on this project. At least now it won't break as I crawl around in there!



Glass work is trimmed and sanded. This hull had no stringers, and no patterns were available. I created them from scratch using thin strips of luan board to find the correct shape. (easier to work with.)



I then transferred those patterns to ¾" plywood, double stacked to make SOLID framework for this little boat.



My favorite wood to work with so far for was baltic birch. It is a good hardwood, and is assembled with outdoor adhesive. The layers are thin and tight, and there are almost no voids in the laminates.



Assembled skeleton. Each stringer is double stacked. 1.5" thick wide each. They are laminated together with 3M 05200 Marine adhesive, and screwed together with stainless steel deck screws.



Install skeleton and trace with a sharpie. Remove skeleton and apply 3M 05200 Adhesive to hull inside the sharpie markings. Reinstall and ensure stringer assy is 1.5" forward of the stern to allow room for the transom.



Clamp and weigh it down into place.



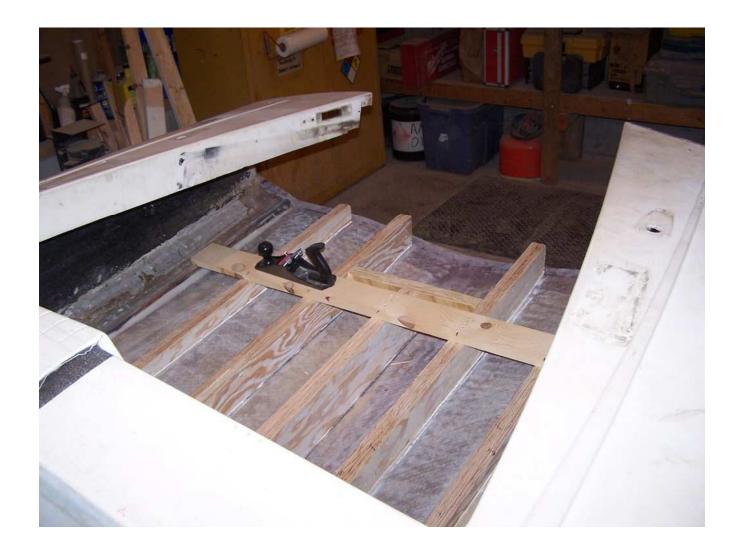
Dry adhesive.... Ready for a new transom!



View with the deck removed. (Different hull than previous pictures.)



Ready for the transom.



Use saved FRP cutout and trace onto 1/2 " plywood. Make 3 of these to achieve the factory 1.5" thickness. Trying to bend ¾" wood is too challenging. Use weight to "bow" each pre-cut piece of transom wood. Hose down with water occasionally over a few days in this position to retain the shape. I had over 100lbs on this piece for about 36 hours. It was perfect!



Install the first layer of plywood. Screw with SS fasteners at bottom into the back of the stringers. Temporarily install blocks of wood inside boat through side (fasten into wing area) and screw transom into this block to retain "curve". Backfill all edges with 3M 05200 Marine Adhesive. Allow to dry fully.



Build Knee Braces if desired after the first layer of transom is secure. This way, they can be mechanically secured to the transom prior to the addition of layers 2 and 3 of transom wood. Ensure they are not too high and will not interfere with the splashwell.



Installed knee braces.



Clean up adhesive on edges, and dress rough edges on exposed SS fasteners. (Knee Braces) and remove screws that went into the temporary blocks. (and remove blocks.) Adhesive around edge will hold the curve once cured even with the blocks removed.



Notice the proper curve of the transom and the 1.5" setback of the first of 3 layers. Layer 3 will be flush.



Apply 3M 05200 with a notch trowel to the entire surface. (don't worry about the goofy colors shown below.... the store only had one tube of white and had to settle for some burgundy also!



Use ¾" SS deck fasteners to solidly screw the next layer into place, and backfill edges with 05200 adhesive. Repeat this process for layer 3 and allow to dry thoroughly. Finished product should look like this! Be mindfull to not place screws where you may drill later... (Engine mounting, ski / tow hooks etc.)



Finished Transom (structurally anyway!)



Identify position for splash well. (I am glassing it in permanently for improved strength and more of a fast-back look.)

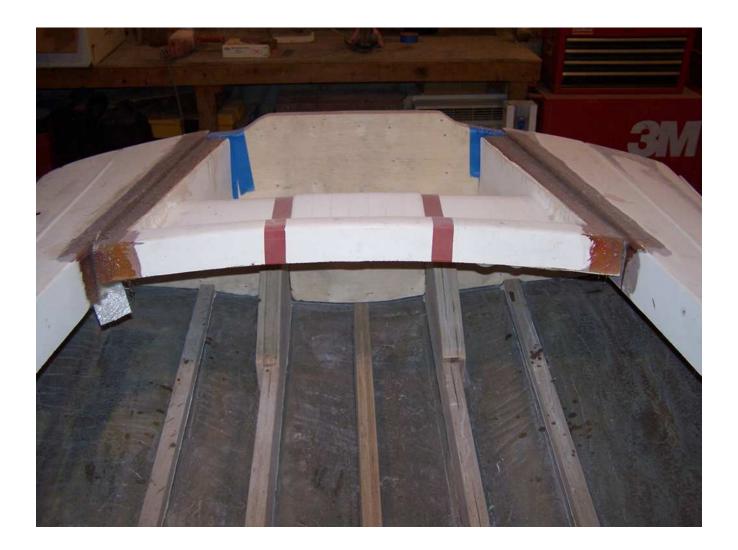


In position...





Glassed in... from the top anyway.



Deck removed and ready to start on sponson wood. (I confirmed that it was rotten when the transom was off. Much easier to fix it now that the boat is stronger again. It would have been too floppy to cut it all apart at once.



Old wood carefully removed with a small reciprocating saw and a flexible blade.



New panels cut and glassed on the inside to prevent future rotting.



Cracks repaired from the inside with matting and resin. Will fix from the outside also for extra strength.



Made new sponson support wood. Fastened it into place from the outside to allow attachment of the inner panel on the boat.



Once attached, the outer trim screws are again removed and the complete assembly can be taken out.



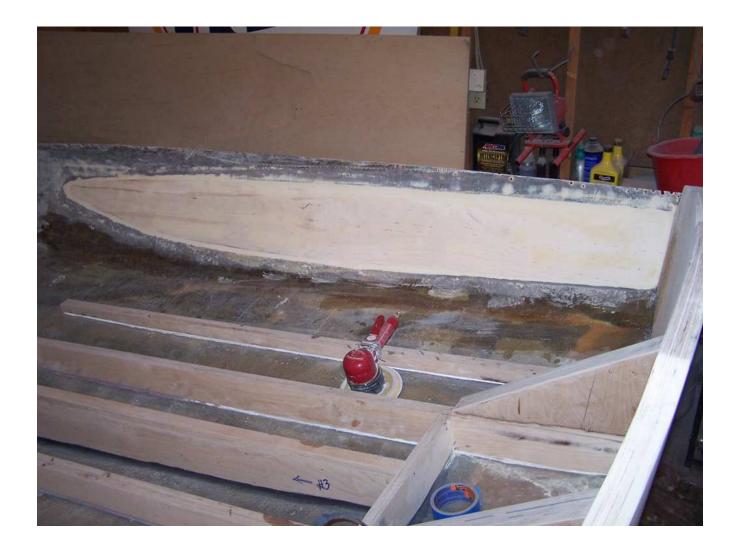
Left and right sides.



Installed. Set in 05200 adhesive. Held in place to dry with trim screws along length of sponson. (factory holes.)



Edges smoothed with body filler to allow for air free laminating. of resin and matting.



Looking good!



Because bigger is better, I replaced the tiny rotten eyelet wood with a piece that connected down to the center stringer. Wicked Strong!



All woodwork is done and ready for laminating.



For resin and matting to lay down properly, all 90° angles must be radiused with a fillet putty or body filler



Close up view of harsh angle. Too much for matting to lay down with out having voids in the laminate.



A custom cut body filler spreader can be helpful in this application. Not much is needed. Too much may crack in time. 3/8" radius is a good goal.



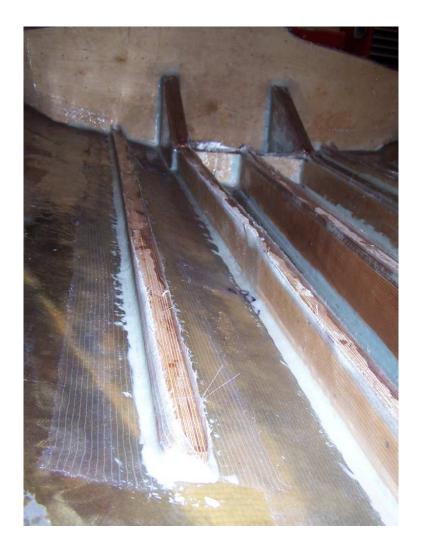
Applied.



Sanded smooth.



Laminated.



All stringers and structural woodwork is now laminated.



Another view.



Dry fit the floor.



Dry fit the floor.



Laminated underside of floor.



A new footrest... Laminated!



05200 adhesive applied to the top of all stringers. Floor installed and screwed into place with 1.25" SS deck screws.



Rough and square edges smoothed off with a grinder, followed by a fiberglass strand reinforced putty applied to the floor to hull joint.



Apply as smooth as possible to minimize sanding time.



Used in all corners.



Sanded smooth.



Floor laminated in glass and resin and the footrest is installed.



Time to work on the deck



Remove all rotten wood. I used a 2.5" cold chisel... sharpened to a fine edge and tapped along the FRP and wood mating surface. This cleanly removed the rotten wood and left a relatively smooth surface.



New wood installed. Held in place with 3M Two Part Epoxy Adhesive.



Putty used to radius all joints prior to laminating.



Woodwork around the stern.



Woodwork around the bow. (note, I laminated the entire surface of the deck on the inside after removed old woodwork, and before installing new wood. I wanted a SOLID deck, not the flimsy factory deck.



Another view.



Radiused and laminated frame-work. Rough edges dressed smooth with a grinder.



Flipped right-side up and all gelcoat removed. Crazed everywhere and not repairable.



Avoid grinding away the body-lines.



Topside glasswork to hold down any crazing / small cracks and beef it up a bit.



Another view prior to laminating.



Almost looks like a woody!



Back to the hull.... Upside down, all Gelcoat removed as it was deemed un-repairable.



Transition between hull and transom glassed in first. Several layers to make her bullet proof!



Other areas of concern fixed now.



Use my original pattern from the removed transom to create patterns in my fiberglass cloth. 3 layers will be applied.



Done!



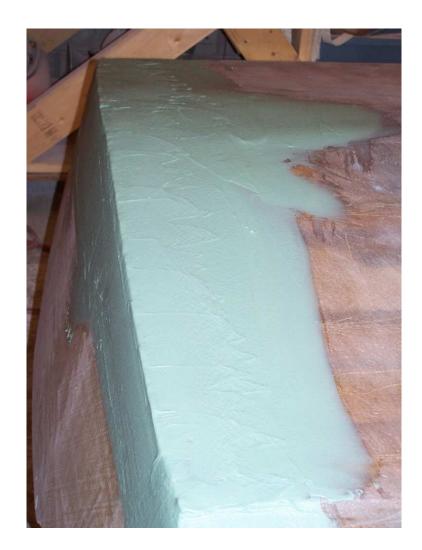
Marine grade body-filler as it is below the water line!



More body work



A closer look after a few coats... getting closer to the correct shape.



Smoothed out nicely!



Body-lines re-created.











Two good coats of vinyl-ester primer surfacer is applied to fill in imperfections and seal the hull. (vinyl-esters are suitable for below the water line.) It is blocked smooth and straight with 180 grit abrasive, and reprimed with two more coats. Final sanded using a DA and 400g abrasive.



From the hard body line down, (or up in this photo) is primed, colored and cleared with marine grade paints.



Cleared and ready to flip back on the now restored trailer.



Cleared and ready to flip back on the now restored trailer.



Back on the trailer, and a nice epoxy gray is applied to the inside of the hull.





My extremely dust garage!



Back to the deck which now has completed body work and has been primed, blocked and reprimed.



I set up a router to re-carve the body-lines back into the deck after burying them with all the glass and body-work. They came out PERFECT!









Deck reinstalled and permanently bonded and bolted to hull for rigidity. (Note, I did not use the factory type molding. It was junk and not replaceable. This method is more work, but stronger!) ¼" x 20 machine screws, countersunk with washers and lock nuts. 4" on center all the way around.



Deck glassed in to the hull at the stern. Provides a much stronger transom and looks more "finished."



Another view.



From behind.



Detail sanding in corners was time consuming!



Ready for a final sand and paint. Application of 3M Dry Guide Coat which is a black carbon powder that sticks to all surfaces. Final sanded with 400g abrasive on a DA sander. Dry Guide Coat that remains during this process may indicate a problem. (pinhole, scratch, etc.) Sand until gone, and fix defects as necessary.



In a spray booth borrowed for a Saturday. (It sure is nice to know people!)



All sanded smooth.



"back-taped" on the hard bodyline.



Underside of hull covered with plastic sheeting and paper.



Thorough cleaning.



Application of a marine grade epoxy primer. I used PPG's DP40LF with DP401LF Catalyst.





Apply accent colors first. Easier to mask off these small areas than mask off the entire boat after it is painted white!





Protect stripes with fine line masking tape and apply main color.





Allow base color to dry thoroughly and remove fine line masking tape. Pull at 180° to reduce slivering and keep crisp edges.



Use a tack rag to final clean dust and tape / paint particles prior to clearcoating.



Cleared and ready to bake.





Back home... all in one long October day. 4 months into the project







Getting backed into the garage for the winter.



Cleaning up the 1964 Evinrude Starflite 90s.



Ready to be bolted on and go!



Installing a modern style rubrail molding. Same dimensions... same look... you wouldn't know it wasn't factory if didn't tell you!



Getting the power trim unit ready.



Looks like a boat! Ready for steering, wiring, fuel and interior.



Magic! It is almost done.. Leaving to get a cover made.



Those standard trailer wheels just won't do....



15" Smoothies finish off the look nicely!



Moment of truth!



Dang, that's a small boat!



At the launch for the first time. Making a few last minute checks and adjustments.



Taking the rope.....



Easy goes it...



Rockin! A success on the first trip out!



38mph the first time out. Not bad... but still working to improve this!



Looks fast just sitting still!





















That's all for now!