

Hunter 34 Windlass Installation

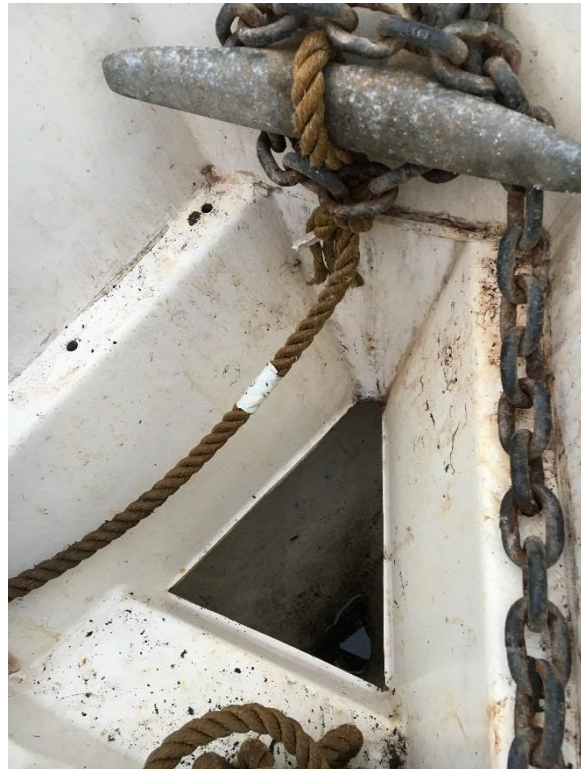
The Hunter 34 was not designed to allow easy installation of a windlass, the anchor locker is too shallow for required minimum drop and there were no factory provisions for mounting. I couldn't find many examples online of how others have solved this dilemma so I've decided to document my project here.

I did find Claude Augers writeup on this site, he did a great installation and documented his project in the forums. I pretty much followed his example in concept. The idea is to cut the lid in half and add a metal plate under the front half which is then mounted to the fiberglass walls of the anchor locker with through bolts and a backing plate.

The shallow anchor locker in my boat was already modified by a previous owner by cutting out the bottom. The factory had a drain in the bottom and a hose connection to a drain through the hull on the starboard side. My boat has a small drain on each side which tells me they modified something down below as well. The existing drains however were only $\frac{1}{4}$ " ID so I enlarged them using $\frac{1}{2}$ " thru-hull fittings and added some epoxy fill to ensure complete drainage.



The project begins



Bottom of anchor locker cut out

I made a cardboard template to locate the center of the hole at the bottom of the locker. Then made a drawing following Claude's example and sent it off to a machine shop to get pricing. They came back at around \$1700 for parts and still left some cutting and all the drill and tapping to me so I came up with a different approach. Claude built the plate and ledgers separately using fairly heavy stock and bolted everything together. I realized there was room for a $\frac{1}{4}$ " plate to sit on the ledge inside the lid and decided to mount the plate there, weld mounting flanges to the underside of the plate and then attach to the locker walls.

I used aluminum since I can cut it with carbide blades. I bought $\frac{1}{4}$ " plate and $\frac{1}{4}$ " x 2" flat bar for the ledgers. If doing it again I would use 3" bar for the ledgers just for more room to make the bolted

connection at the locker wall. I also put a 1-1/4" angle crossmember under each end at the windlass mounting bolts to reinforce. I cut the plate on a table saw and the angles/flat bar on a compound mitre saw. The angles have angled cuts in 2 axis so that was the perfect tool. I paid \$140 for the metal and another \$130 to have it welded up.



Test fit for the plate



Bolts and jig to hold in place for welding

With the plate sitting in place I scribed the fiberglass to locate and transferred marks to the lid. I also scribed a line on the underside of the plate to locate the line of locker walls. Using those marks I cut and assembled the flat bar and angles. The bow tapers at 16.5° and the locker walls slope at 20° so there was a lot of measuring and intricate cuts. I fastened the cover to the frame with bolts at the windlass mounting holes, then made a wood jig to hold it in place then took it to a local shop to be welded. Had them weld both sides of the flange and all around where the angles intersected. The welds on the outside were a bit large but they machined easily so I ground them to match the radius at the locker wall. Another test fit showed good alignment all around.



Welding complete



Test fit after welding

Next came modifications to the lid. The bottom of the plate needs to sit flush with the lid flange and some the wood core buildup on the inside of the lid had to be removed so I clamped a piece of wood over the flanges and setup a router to hog out the excess material then cleaned it up with a belt sander.



Holes transferred to lid, test fit to locate cut



Remove lid material to allow plate to sit flush

I located the cut as close as I could to the back of the windlass to make the opening as large as possible. The plate extends $\frac{3}{4}$ " beyond the cut to provide a support for the operable lid. In hindsight I should have moved everything forward a couple inches, I think the rode would still fall correctly and a larger operable hatch with more spread on the hinges would be better.

I wanted to have the new edges of the lid look better than just a cut section so I decided to fill them and finish the ends. I took off a little extra material in the cut to allow for epoxy buildup and gel coat.

The lid has a smooth gel coat border around the non skid and I wanted to match this detailing so I clamped a guide across the top and removed the non-skid texture with a router along the cut edges. I beveled this area slightly to transition the finishes.

This was my first attempt at fiberglass work so there was a lot of learning curve involved, especially when I got to the gel coat phase. There are a lot of imperfections that are noticeable if you zoom in but all in all, I was pleased with the results.



Lid cut in two with nonskid removed at joint



lid bolted to plate, ready for epoxy fill

On the operable lid I made a form and filled with epoxy to create a solid ledge 1/4" above the lid flange to rest on the plate.



formwork for ledge on operable lid section

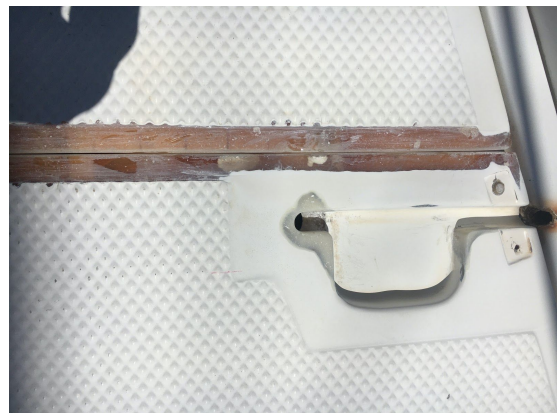


Epoxy fill at support ledge

I also wanted to repair previous fiberglass damage caused by stepping on the handle in the open position. I removed the damaged material and beveled the edge then filled with a thickened epoxy. It took several applications with filing and sanding to get a smooth surface for the gel coat.



Fiberglass damage at latch



Epoxy fill repair at latch

The strike side of the latch had also suffered damage so I did a similar epoxy fill repair and included a stainless tube to create a socket for the slide bolt.



Repair with epoxy fill and stainless tube insert



Strike repair complete



Gel coat complete

To mount the aluminum frame on the boat I marked the hole locations and made a backing plate from $\frac{1}{4}$ " aluminum and tapped holes for $\frac{5}{16}$ " bolts. I dropped a couple stings on each side and fished up the backing plates from through the opening in the bottom of the locker. To make the bolting easier I fastened the backing plates with a countersunk screw before setting the windlass in place. It was still a challenge to get everything aligned but it worked. I put T-gel on all the threaded connections.



Finished edge at operable lid



Backing plate located for countersunk screw



Bolted connections complete

For the electrical supply I located the breaker in the aft wall of the galley with the contactor directly behind it. From there I fished #2 wire and a switch conductor in the starboard valance of the cabin, through the head, into the V berth and from there into the anchor locker. I used a sectional fiberglass fish tool, similar to tent poles and it went pretty easy once I figured out I had to push the fish tool from bow to stern rather than vice versa.



Breaker installed in Galley



Contactor installed in starboard locker

To complete the electrical I installed a 2 pole insulated stud connector on the underside of the aluminum plate to connect the Lewmar factory leads to the #2 feeders. I installed a wired remote at the anchor locker and another switch at the cockpit for good measure.

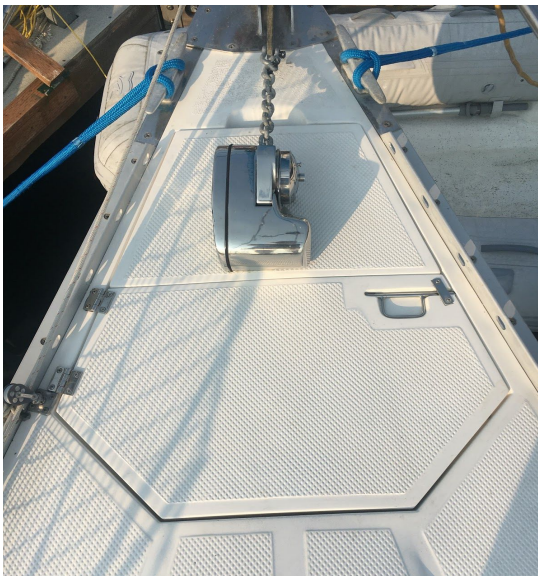


#2 Wire and switch installed at locker



Electrical connection below support plate

I found a deal on 110 feet of chain and had originally planned to go with that. Loaded everything up for a test and found as I feared lowered the bow more than I liked so I cut the chain in half, went with 55' chain and it rides much better. If you think the windlass looks a bit crooked, you're right! I rotated the layout 4 degrees to aim straight for the anchor roller.



Finished installation



55 ft of chain and 250' of 8 plait rode

I put off this project for a long time because I was afraid of the fiberglass work. Now I find myself looking at other little fiberglass repairs needed on the boat and thinking "I can fix that".