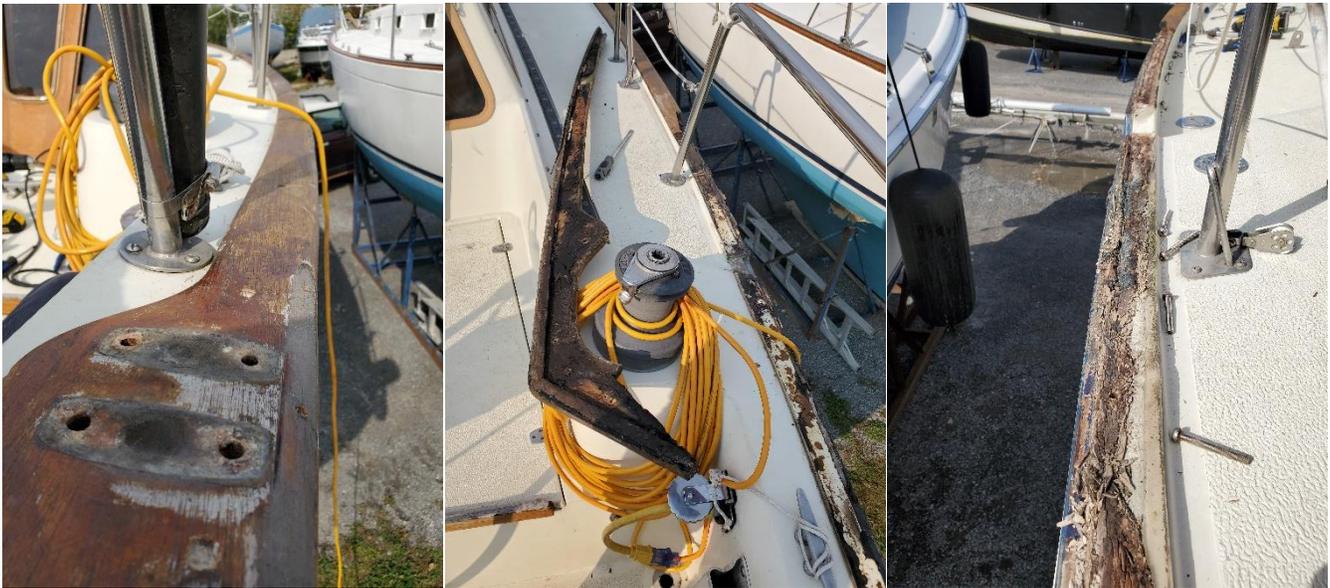


Hull To Deck Re-Sealing

I've had this boat for a year now. I knew there were some rain leaks but I didn't know where. The previous owner thought the large saloon windows leaked and he had this crack seal stuff he would apply now and then. I was looking for a more permanent solution so I started removing and rebedding the windows. They had been leaking but only a bit. I managed to get the leaks to stop but I think new windows may be in my future. I really like the aluminum windows on Circe, they look great (but they look very expensive as well).

A day after I rebedded the starboard windows it rained and it was dry under the windows but I found a pretty bad leak at the back of a cabinet. Further investigation showed it was the hull to deck joint. I discussed this with some FOGgers members and found this is a common problem with these boats. Several people had already resealed the joint and a couple said they needed to do it. The sealant Islander used dried up and just doesn't seal any more. The leak was really bad all along the starboard side; the port side seemed ok. I decided it had to be done so as soon as I hauled out in October I started taking it apart.

The deck hardware on the teak cap rail came off first then I removed the cap rail. The sealant under the cap rail was really dry. The brown flakey stuff shown here was, at one point, sealant.



What I found next was more than a little disturbing. The starboard cap rail had been replaced previously, possibly do to a collision although the hull did not have signs of any major repair so it looks like whatever damage there was, was limited to the cap rail. The problem is how the original cap rail was removed. The factory used #14 wood screws to fasten the hull to deck joint but then through bolted the cap rail with 1/4-20 machine screws and nuts through the cap rail, deck and hull which held it all together very securely. The problem is whoever removed the cap rail couldn't figure out how to remove the machine screws so it appears he used a 1" hole saw to just cut the cap rail around the screws then hacksawed through the screws and left the now headless screws in the hull. I actually found one of these headless screws in August and could not figure out where it came from. Turns out they were all along the starboard joint.

The person who worked on this before did a lot of damage with the hole saw that needed to be patched up. Here you can see some of the headless screws (some were wedged in so I needed to use a jam nut to unscrew them from below) and here is one of the holes in the deck he created with the headless screw still in it.



I got to practice my fiberglass skills. There was one damaged spot on the hull right aft on the starboard side that had been patched with some kind of filler. It was a small area but I ground it out and built it back up with glass and epoxy. The port side appeared to be all original. The trick was getting inside to reach all the nuts. My daughter was working at a restaurant that was shut down in the second wave of COVID-19 so I hired her to help get this job done. She is a hard worker and was a big help. I also got to spend some time with my teenage daughter which doesn't happen often these days :)



The trick I learned from those that travelled this route before me was to open up the joint with some wedges, up to 3/8" in some places, other places would only open up 1/4", then use a rasp in an

oscillating multitool to grind out the sealant. A lot of it was so dry it just flaked out but the oscillating rasp was an invaluable tool for this job (like so many other jobs).



Once it was cleaned out I used 1/8" thick UHMW spacers next to each screw to maintain the gap for the sealant and shot in as much 5200 as I could. I squeezed in a bead at the back of the opening making sure it filled the full height and then squeezed more in to fill the rest of the gap with the nozzle towards the back of the gap using a bit of hydraulic pressure to make sure it filled the entire space.

I've never wanted to use 5200 on my boat before but this is a job I don't ever expect to do again - it is now permanent. A couple days later I removed the spacers and filled the remaining gaps with more 5200. I used 7-1/2 tubes of 5200. I used a manual calking gun but I would suggest a cordless gun, it is hard on the hands.



I didn't take pictures of them but there was quite a large gap between hull and deck for the scuppers at the step up between foredeck and aft. I used thickened West Systems G-Flex epoxy to fill this gap. The thickened version is fairly stiff but will still run a bit. I just used tape to hold it in place until it cured. The G-Flex was fairly easy to work with but it's a bit tricky to trowel it in, it's like thick liquid honey. One 8 oz kit was just enough to fill both sides.

I used plastic drop sheets taped into the cabinets to catch drips, it turns out this was a good idea because I got a bit carried away in some places and there was a fair bit of squeeze out inside.



Where the Islander factory used #14 wood screws through the hull to deck joint, I used stainless $\frac{1}{4}$ -20 x 1.5" countersunk machine screws, flat washers, lock washers and nuts. I haven't decided yet if I will use wood screws or machine screws for the cap rails. Wood screws are much easier but the machine screws weren't bad where they are accessible and are more secure.

It took 5 weekends, about 7 hours per day but it's done now and I hope to have a much dryer boat next summer. My winter project is to refinish the teak cap rails then reinstall them in the spring. While they are off, I will also paint the blue stripe at the top of the topsides.