

The Drip:

Since getting the boat we have talked about replacing some of the removable floor boards in the engine room that had delaminated over time. Recently we bought some plywood for this task and so another typical – never simple- boat project gained a life of its own.

Part 1: I pulled up the removable section and noted that the un-removable section was also delaminated. No problem – just cut back to good wood and make the lift-out section a bit bigger except there was no end to the delamination. In the end pretty much the entire floor near the engine room entry was torn out (causing the release of several trillion mildew spores I'm sure).

Part 2: Clarice has been ruminating for several months about the moisture that collects on top of the tanks that are just under the engine room floor boards. I have seen it and, being in risk management by profession, evaluated that the risk- benefit said to LEAVE It ALONE until about a zillion other projects were taken care of. Clearly this was not going to sink the boat and now that we were putting in new flooring it would be at least a decade until we had more wood delamination to worry about. But there it was, uncovered, staring at the crazy cleaning woman herself. ...Taunting her day after day. Clarice could not accept my explanation that it was likely just condensation water that was making its way happily to the bilge where it would be nicely pumped overboard. We often joke that our homes are often messy but you can always eat off Clarice's floors.

Well, she found the source. A tiny, itty bitty drip from the hydronic water heater preheating chamber. Two drips really, but it matters not. Clarice is like Horton hearing a Who when it comes to drips. "A drip's a drip no matter how small." She will say that she didn't force me to fix the drip at that point but if you have ever slept with an elephant protecting Whoville, you know you might as well just fix it now.

Part 3: So on inspection the drips were coming from the domestic water inlet and outlet of the flash heater that is designed to preheat (more about this pre bit later) [a bit of dramatic foreshadowing] the water going into the hot water tank when either the main engine is creating heat or the diesel furnace is creating heat. At first glance it looked like the connections were a rubber gasket type – simple, as long as the gaskets aren't rock hard a bit of tightening should fix any leak. Nope. Didn't work.

This means that the connections need to come apart and the gaskets be replaced. Nope, not gaskets but rather a metal on metal fitting. These are very reliable but should never have gasket sealant used on them and they were full of rock hard sealant. The sealant came out with a pick from my handy multi-tool but that scratched the metal surface which took a bit of sanding to repair. To get to the fittings meant that the whole pre-heater needed to come out of the 6 inch tall hole next to the floor of the engine room and all 4 fittings taken loose and clean (2 heated water from the hydronic system and 2 domestic water). Finally it is all clean and back in place but one of the fittings still is dripping. I am now sure that I know what type of fitting it is and that the solution is to tighten it until the metal to metal seal doesn't leak. Finally my 2 ft (almost 2/3 meter for the metric folks) pipe wrench does the trick.

Part 4: So now there are no drips and Clarice is happy but my mechanical brain has detected a variance in the "way it should go together". To be sure, I pull the original drawings from the hydronic heater

company and confirm that the pre-heater is designed to PRE –heat the water not Post-heat it. Yet, at some time in her life, Salish Aire’s pre-heater has been put on the outlet of the hot water tank. I ponder how to “make it right” so Scotty and I will sleep better and then head off for some plumbing parts.

After taking the previously discussed fittings back apart (again with a 2 ft pipe wrench (we re-sanded so they went apart the second time much better)) and making a few cuts here and there we were ready to put the mess back together its new way using slip-on pipe fittings I haven’t used before. These things look cool in the store, they are happy connecting to both copper pipe (which is present) on one end and PEX on the other and they can “easily” be taken apart if you make a mistake. I’ve done whole houses with soldered copper piping, I have even owned a pipe threading set for those times when I had to retrofit a house with iron pipe, but PEX and slip fittings are new to me. So we get the whole thing back together and now instead of a drip we have a gusher and we learn that when you are trying to take apart the “easily removable” fittings down in a hole where your hands barely fit – they don’t easily remove. More deburring and adding some silicone grease and the whole thing stayed together and doesn’t leak. Whoowhoo.

Part 5: As the ghost of Scotty and I are dozing off to sleep another puzzle piece falls into place. Since we’ve had the boat I’ve stared at a little switch wire tied on the ceiling and wondered what it did. I asked a previous owner and he couldn’t recall either. Meanwhile, while really studying the hot water tank I decide to look for the wire that feeds the thermostat that is supposed to turn on the diesel furnace if the water is cool. (Friends argue that I’m the only one who looks for a thermostat wire without really needing to, especially when the hunt involves doing boat-yoga to see the back of the hot water tank but Scotty and I know there are many of our kind out there!) I cannot find the wire and then it hits me – the switch has replaced the thermostat sometime during the past decade or so. Sure enough a test demonstrates that this is a correct conclusion. A thermostat from the local hardware and Salish Aire is “right” again.

Part 6: Clarice has been taking the new floor boards out a couple at a time to paint them with bright white floor paint. This makes a huge difference in the environment of the engine room as we have recently finished converting it over to LED lighting and with the gloss white (rather than black rubber) floors it is much nicer to work in.

So in the end: We ended up with a really nice floor, that does NOT have a tiny puddle under it from ANY itty bitty leaks and I can now shower as long as I like with unlimited hot water when the diesel furnace is turned on now that the hot water tank is all happily replumbed and wired!