1987 MK 1 Catalina 34 Aft Cabin Spare Parts Storage

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NOTE - Before doing any projects, I highly recommend that you first go through the "Critical Upgrades" list and verify that your boat has all of the applicable items addressed. There is a link on the Message Board (copied here) entitled <u>"CRITICAL UPGRADES – DO THESE OR ELSE!!!"</u> that will take you to them. A good way to both learn your boat and make sure it is safe.

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Storage

I purchased my 1987 MK 1 Catalina 34, hull #493 in April 2015. A great boat, but usable storage from the factory is limited. Photo (1) shows the aft cabin and the two OEM removable hatches located there when the cushions are removed. I just completed a project creating a isolated compartment to store my tools under the small rectangular cover. That write up is also in the Tech WIKI in the "Storage" section.



Spare parts storage separate from the living area lockers is a priority for me. The rectangular cover on the boat centerline under the aft cabin shown in photo (1) above, would be a good location for a spare parts locker. Access under the mattress is good, and I don't expect to be looking for spare parts very often. The problem is there aren't any bulkheads to keep things dry, in one place, and away from the propeller shaft. That's what this project is about.

Materials Used

West System #105 Epoxy Resin. West System #205 Fast Hardener. West System #27 Episize Biaxial Tape 4" x 10 foot roll. West System Six10 Thickened Epoxy Adhesive. ¹/₂" Plywood sanded both sides. ¹/₄" Plywood sanded both sides. 1x10" Pine boards. SST piano hinge. 2 x 2" galvanized angle straps. 2 x A23 galvanized Simpson Strong-Tie. 16 x #8 x 2" long SST flat head screws. $3 \times #8 \times 1 \frac{1}{2}$ " long SST flat head screws. 4 x #8 x 1 1/4" long SST flat head screws. $28 \times \#8 \times \frac{1}{2}$ " long SST pan head screws. DAP white adhesive sealant silicone caulk. White KILZ primer sealant paint. White Interlux Bilgekote (YMA102) paint. 3×-5 lb cinder blocks

Making the Spare Parts Locker

The locker needs to be removable when complete access for major work is needed. For regular maintenance tasks, it should also have a means to open the ends without removing the entire locker. This would provide access to the propeller shaft, packing gland, shaft log, and strut bolts.

Locating the mounting feet in the right place, with good contact to the shape of the hull is important for a good solid bond, and being able to match the mounting feet to the bottom of the locker. To correctly locate the mounting feet, I decided to make the locker first. Then I could attach the feet to it with screws and epoxy bond the whole assembly to the hull ensuring a matched fit.

The outside port/starboard width dimension of the locker is slightly less than the inside width of the opening in the boat. The outside fore and aft length dimension of the locker is from the inside edge of the aft opening to just aft of the shaft log. This allows access to see/touch the propeller shaft and packing gland for a visual check. With the length and width defined, creating the locker is a simple construction so I do not have detailed photos of the build process. The sides and ends are made from the 1x10" pine boards. The bottom is made from the $\frac{3}{4}$ " plywood, and the partitions are made from the $\frac{1}{4}$ " plywood. The partitions slide into pieces of pine blocks cut from pine board that I had in the garage. The groove for the partitions to slide in was cut with a table saw at a depth set about half the thickness of each block. See Photo (2).



So the ends can move out of the way in case I needed to get to the propeller shaft, packing gland, or strut bolts, I attached the ends to the locker bottom with pieces of SST piano hinge I had from a previous project. The piano hinges allow the ends to rotate freely. (When the ends of the locker are rotated open, they defined where the partitions would be located). To hold the top of the ends in place when not rotated out of the way, I screwed 2" galvanized angle straps to each corner. For a belt and suspenders feature, I screwed one 90 degree galvanized Strong-Tie strap to each end of the locker to act as a stop. See Photo (3).



The last safety feature was adding a cleat to the underside of the locker bottom. It rests against the aft mounting feet and will take some load off the 8 SST screws used to attach the locker to the mounting feet The cleat helps position the locker when installing, and will also keep the locker from sliding into the propeller shaft if for some reason the screws to the mounting feet break. See Photo (4).



(4)

Attaching Mounting Feet To The Hull

The mounting feet are made from four 2x4's cut about 8" long. They were attached to the bottom of the now complete locker then set in place to use as a template. I outlined the perimeter of each foot on the hull so I could see where to sand the hull to bare fiberglass. Then each area was sanded to bare fiberglass. See Photo (5).



(5)

The next step was to vacuum the area clean, then wipe with acetone to ensure a clean surface. To keep the locker from sliding out of place, I put 2 cinder blocks at the forward end of where the locker will be when complete. The blue painters tape was used to keep the thickened epoxy that squeezed out when the locker assembly was put in place from sticking to the hull. See Photos (6) and (7).





I then applied the West Systems Six10 to each foot, and lowered the locker into place. I laid a third cinder block into the locker to provide additional weight to ensure a good epoxy bond between the mounting feet and the hull. See Photo (8).



When the thickened epoxy hardened, I applied 4" strips of fiberglass tape to all sides of each of the mounting feet to add additional strength to the wood to hull joints. The top of the 2x4's were coated with thinned resin to act as a barrier to moisture in addition to the paint that will be applied next. See Photo (9).



Painted Mounting Feet and Hull

Photo (10) shows the mounting feet that have been epoxied and fiber glassed into the boat then painted with white BilgeKote.



Removable Locker Installed

Photo (11) shows the new removable locker installed in the boat onto the mounting feet.



Photo (12) shows the new removable locker installed with three of the four screws attaching the 2" galvanized angles removed. By removing three screws on each angle, the angle can be rotated out of the way instead of removed altogether. With the angles rotated out of the way, the fore and aft ends can now be folded down and out of the way for complete access propeller shaft, packing gland, and coupling, and strut bolts.



(12)

Photos (13) and (14) show the view of the propeller shaft, packing gland, and coupling with the forward locker end folded down out of the way. On the left side of the photo you can also see the Strong-Tie on the port side of the locker.



(13)



Photos (15) and (16) show the view of the propeller shaft strut bolts with the aft locker end folded down out of the way. In Photo (15) you can see the Strong-Tie on the starboard side (left side in the photo) of the locker.



Removable Locker Filled

With removable locker complete, the last step was to fill it up. To access the spare parts, I stand the starboard mattress half on its edge and lean it against the starboard hull. Then I lift the center edge of the port mattress section up about 18", and slide the wood lid out of the way.

Photo (18) shows the locker filled up. Plumbing parts in the aft, electrical in the middle, and mechanical (raw water pump, alternator, foot pump, etc.) in the forward compartments.



Photo (19) shows the cover reinstalled.



(19)

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