

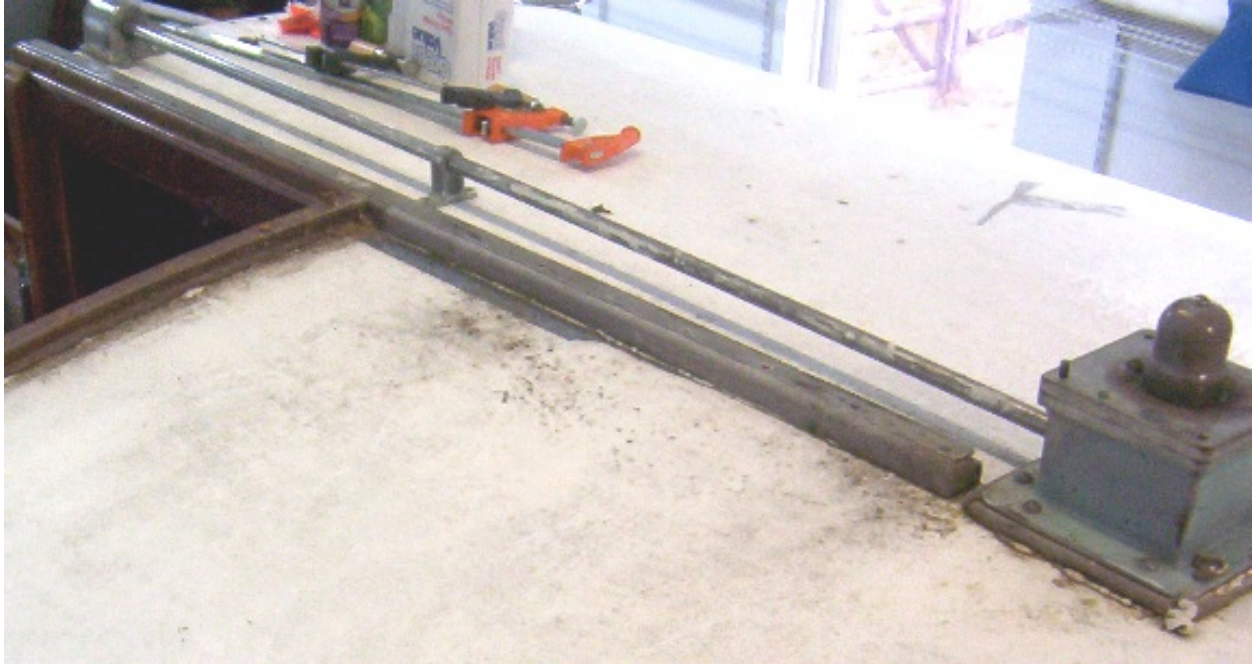
**Centerboard
(Preliminary)
(6/1/2010)**

The centerboard is a solid bronze plate weighing about 500 lbs. The goal is to inspect the pivot pin and the lifting mechanism (hoist). I'd like to remove the board, but it seems impractical to do so. The board is about 2 ft. deep and the boat is currently only 16" off the floor. Therefore, I would either need to dig a pit under the boat (garage has a concrete floor) or raise the boat another 8" or so - scary!

The pivot pin goes through the lead keel. I got the approximate location from the plans. Scraping some paint away reveals the cover plate. The screws came out easy enough, but I can't pull the plate. I think I'll have to drill a hole in the plate to extract it. Then we'll see ...



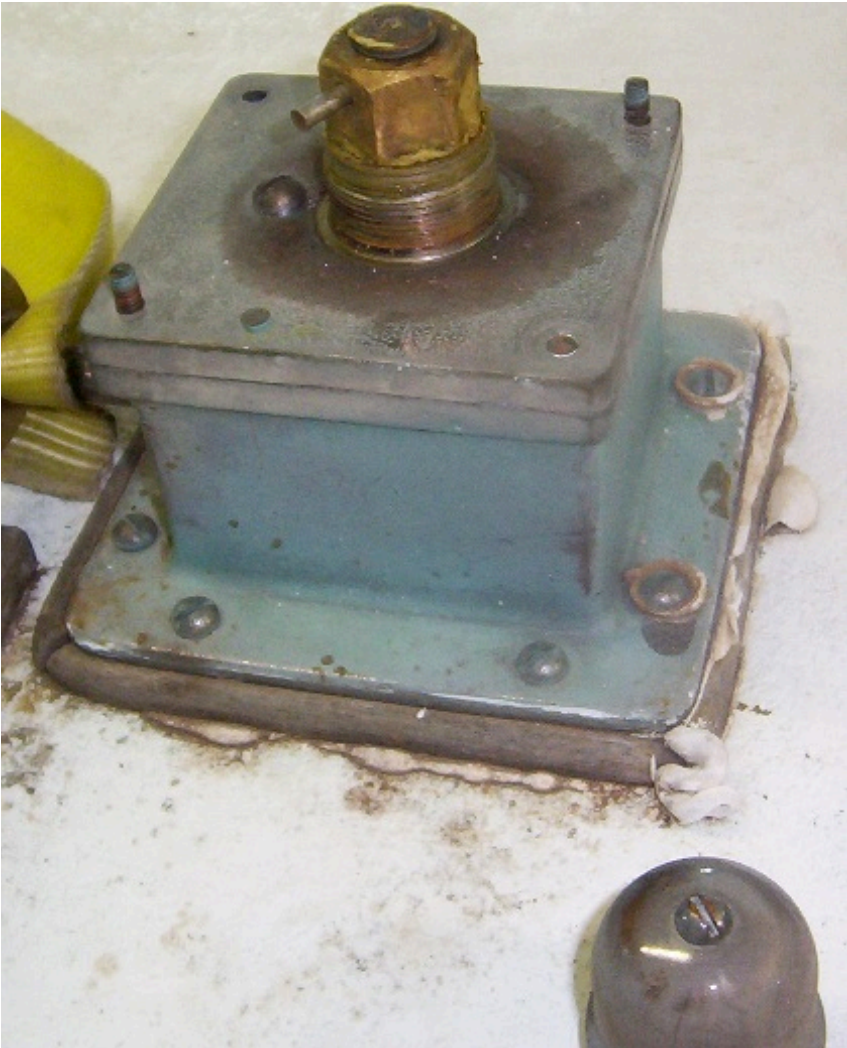
The details of the centerboard hoist are not shown on the plans, so I'll have to do some exploring. Here is a view of the hoist mechanism on the deck. The bronze box on the right is a gear box housing a pair of bevel gears. The long shaft goes from the box to a fitting for a winch handle to the left of the companionway. The crew can thus raise/lower the board from the cockpit.



This pic shows a closeup of the gearbox with the cap removed, revealing a large bronze nut.



Removing the nut allows the cover plate to be removed, but first a taper pin must come out.



With the cover removed, we can see the two bevel gears.



The bevel gear in the foreground is connected to a long threaded shaft.



This threaded shaft screws into mating piece below decks. So let's take a look below.



Below we have a large chrome plated bronze tube which is bolted to the centerboard trunk.



Removing these bolts and lifting the tube shows the lift mechanism.



The solid rod in the center connects to the centerboard with two bronze cheek pieces. Unfortunately, the pin connecting the cheek pieces to the centerboard is not accessible from here. Evidently, the board has to be lowered almost completely to access this pin. This might have to wait until the boat is on the Travil Lift. The construction of this hoist is very "beefy" so I'm not concerned about its condition.

As you can see from the pic, the tube is fastened to the trunk with 8 bolts. What you can't see from the pic, is 7 of the 8 bolts are through bolts. This is fine for the 6 bolts on the sides where you have easy access to both sides of the flange. But the 2 bolts on the centerline are a different story. The board has to be lowered to insert them from underneath! One of these 2 bolts was

replaced at some point by a larger diameter bolt that is threaded into the flange from the top. I'm not sure why the other one wasn't, but I'll be changing that one as well. In the mean time note the two small clamps holding a shiny plate. The plate is wedged against this screw. Without the plate, the screw would fall into the centerboard well, and would be a real pain to recover.



Lifting the tube also allows us to remove the gearbox from the tube. This can only be done after lifting the tube since the gearbox is threaded on the tube and recesses into a square hole in the cabin top.

I will eventually have to remove the tube completely to refinish it. This will also allow me to inspect the piece that mates with the threaded shaft. To do this, I'll need to remove the cabin-top framing - at least the blocking in the way of the gear box. After this inspection, I'll refasten the tube to the centerboard trunk with a new gasket.