

GETTING FRAMED IS NO FUN (BECAUSE IT IS HARD WORK) BY SHERWOOD HEGGEN

Before we get into the topic of this Gadgets and Kinks, let's have a story about stupid boat restoration practices so all can learn what not to do.

It was a bright and sunny day when this beautiful antique runabout came into my shop. The owner had just purchased the boat and had noticed the keel had a couple of soft spots. That was a little odd as the boat had reportedly just had a new 5200 bottom put on it a couple of years previously. I explained to the owner that the boat would have to be turned over to cut away the garboard planks and the adjacent inner plywood planking to get the keel out. It was agreed to proceed with the work. It was odd that the keel should be bad if all new planking and inner planking had been installed. As work proceeded, I noticed the frame screws in the garboard planks were not coming out. Rather, they were spinning in their holes. Certainly they couldn't all be broken.

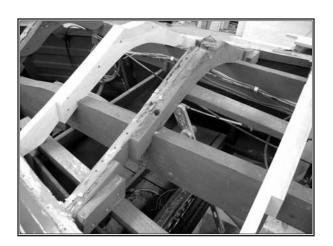
Now curiosity took over where it should have been in the first place. Why was there a soft keel in this recently re-planked bottom, and, what else was soft below the handsome paint job in the bilge? I crawled inside the upside down hull with a sharp chisel and started probing. To my surprise, every frame I poked at was soft! It was no wonder the screws were spinning in their holes! A few of the screws were extracted. They were oversized screws, so someone knew the frames were soft. Why was there a brand new bottom and inner planking on these frames!? These were the original frames! Not only did this boat need a new keel; it needed new frames and keel. Amazingly, new chines had been installed. But wait! Another surprise! The inner planking was cabinet grade plywood, not BS1088 rated plywood, and it was delaminating! It was obvious the new bottom planks would have to be removed to be able to replace all of the rotten frames. Disassembly began and it was noticed that the frames had been removed, probably cleaned and then reassembled, glued, re-screwed and painted. In other words the old frames were in hand and new ones could have been made to replace the questionable original frames with only a little more effort. But now, for the lack of effort on someone's part, all of the new bottom planks would

have to be removed and replaced. Since everything was glued together with 3M 5200, nothing could be disassembled without destroying it. The bottom and frames would have to be cut apart with a router and a Sawzall and all new parts would have to be made.

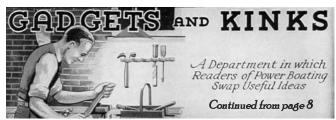
I think the lesson is obvious here. If a part is questionable while things are taken apart, replace it!

Now on with the topic that was inspired by this fiasco: how to make new frames.

First, we should understand what a bad frame is. If a boat is fifty or sixty years old, or even less, and it has original frames, more than likely the frames should be replaced. Why? Because they have been affected for a few decades by anything that can destroy wood, and in the bilge of a boat, there is a lot. Inspection of the frames revealed cracks, oil soak, splitting by the bottom screws, and wood that could easily be pared away with a chisel like hard cheese. Once removed from the hull, some frames broke in two in my hands. These were bad frames. Take a look at a bad frame in the picture below.







Taking the frames out is usually a pretty basic job, but if you should run into a boat that is glued together, as this one was, more than a good screw driver will be necessary. A saber saw was used to remove the bottom planks. A chisel and a mallet was used to remove the remaining wood glued to the frames. The picture below shows that a Sawzall was used to cut the knees and the stringer/frame carriage bolt to get the frames out. Because both the frame and bolt will be replaced, it was the quickest way to remove it. The frame was cut in two to allow clearance to remove the frame.



Additional tools required to clear out all of the 3M5200 and remaining frame wood and will be a heat gun to soften 3M5200, a chisel and mallet, planes, and whatever tools you can find to get the frames clear of debris.

With the keel removed, the frames can now be removed. If a number of frames will be replaced, choose to replace an auxiliary frame first. They are the onew that sit between the frames that are attached to the side frames. Doing so will allow correct alignment with the main frames that presumably are still in the correct position. Be sure to check that they have not shifted from their original position. If they have for some reason, do what would be necessary to correct the condition before installing the new auxiliary frame.

Assuming new lumber is available for the new frames, trace the shape of the old frames on the lumber. The old frame might have rough or missing spots, so draw a fair line over the rough or void areas. Now using a band saw or saber saw, accurately cut out both frame halves to the line. Cut the bottom joiner oversize so that it can be trimmed to perfect size to the frames which will be explained later. If the new frames are a match to the old ones in shape, place them in their respective positions and clamp them in place.



Use a fairing batten, check that the new frames maintain a fair line with the existing frames. If there is any inconsistency with the fair line, correct it as close as possible. Final fairing will take place after everything is bolted in place. Now take the new bottom joiner that was cut oversize and clamp it in position against the new frames. Secure it with a couple of screws through each frame half. Also, outline the frame on the joiner with a pencil. This will help reposition the pieces after you have taken them apart to apply glue before reassembly. Remove the frame and trim the excess material from around the frame with a band saw or saber saw and then trim it flush with a router and laminate trim bit. See the pictures below.





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Position the frame in place again to be sure all is right including the keel notch. It too should have a fair line from frame to frame. If all is well, glue, bolt and screw the new frames and joiner together.

That is the basics of replacing frames. Proceed using your good judgment as to what needs to be done according to the conditions present. It is not an easy job but can be done by anyone with some woodworking skills, some decent tools and determination.

I hope this gives you courage and incentive to try to restore your own boat. What is important in restoring a boat is that you do it correctly. What was done with this beautiful, very expensive boat in the true story above was shameful. Sure, it looked good, but seaworthy – I think not. I could show you a garboard plank I removed from the keel without removing any screws. I am sure the bilge pump, which was lying loose in the bilge, was running a lot.

Don't destroy it; restore it and do it correctly. It is as easy as doing it wrong; it just might take a little more time and money but it will be worth it in the long run.

As always, if you have any questions regarding the restoration of your boat, I am here waiting to answer them.

You can reach me at 715-294-2415 or Heggensj@Centurytel.net.

THANKS to Rental Research

A big BSLOL THANKS to Rental Research Services and Paul Mikkelson and son Lee Mikkelson. Their office conference room has been the home to BSLOL Board of Director and miscellaneous meetings for the past decade. They recently made a move and no longer have a large conference room. We are super grateful for the free use of their facility all these years. It is truly appreciated!

Want to WIN a Boat?

Here is your chance to win a boat! BSLOL is raffling off a newly built OUTERBANKS DORY. The sixteen-foot wooden boat was built by students at the North House Folk School in Grand Marias, Minnesota several years ago. BSLOL member Scott Hawkinson of Hawkinson Wooden Boats finished the rowing boat and donated it to BSLOL. As a fund raiser, we are selling raffle tickets. The drawing for the winner will be held at the Minneapolis Boat Show on Sunday, January 27, 2008. The winner will get a one of a kind Dory, typical of what was used by Coastal Fisherman in New England in the nineteenth century.

The winner does not need to be present to win. The winner must pick up the boat in the Twin Cities Metropolitan area. A trailer is NOT included. Must be 18 years or older to purchase tickets. Cost is \$5.00 per ticket or three tickets for \$10.00.

A ticket is printed on the back cover in this issue of the magazine. If sending a ticket(s) and payment (checks made out to "BSLOL"), make certain it is sent no later than January 21, 2008.

See the Boat on the Inside Cover



Look for this Ticket on the Back of the Mailing Jacket to Register to Win