

wooden boat report

Planking From An Owner's Point of View

ur discussions so far have focused on fungi rot, its causes, identification and the method and extent of the removal or a rot pocket in a plank section. We have discussed the installation of a graving piece. Let's expand our discussion to talk about a few other forms of deterioration and their causes. Situations where damage could be far greater and require a more extensive repair like the renewing of a plank section, or several planks. Split or cracked planks and frames can be caused from a collision. Toredo worm and bug (gribble) damage below the waterline can honeycomb a plank. Nail sickness, which is the rusting away of ferrous metals in the underbody planking. This type of

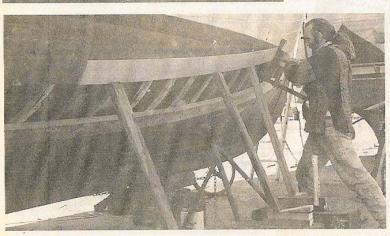
"wastage", as the surveyors call it, turns the wood soft, black and mushy. Sulfur in old bilge oils promotes the deterioration of steel fastenings in the lower hull area. Remember that metals wear out too and weaken over time.

There could be waterline chaffing from the hull rubbing on the pilings or edge of the dock. Chafe and abrasion are demons. Consider also, older boats often have a lot of "repair history". A survey may reveal repaired areas with short planks having butts too close together, which build a structural weakness into the hull. Some of the above forms of deterioration and damage may require plank and/or frame renewal.

For starters, a very thorough inspection should be done to determine the overall damage. A survey-or will usually be called in for this job. Some of the deterioration may be buried deep within the wood

An example of a builtin structural weakness: short planks with numerous clustered butts and a stair-step pattern.





The success of a plank repair is dependent on good planning and good materials.



and its extent may only be revealed after some wood structure has been removed. The "Opening Up" process is always a "process of discovery" and with wooden boat history there is often more damage than less. Repair strategy may need to be adjusted as more deterioration is found. Shipwrighting is not a cutand-dried trade. Surveyors and owners need to be made aware of deterioration or damage as soon as it is found. The surveyor may often be retained to oversee the further discovery and be a resource of advise and counsel. Build yourself a good

Traditional boats are built with carvel planking. We refer to this method as Plank-on-Frame construction. The planking is bent around the ribs and framing of the hull to hold the shape. The planks run fore and aft. The seams where the planks are joined are caulked with cotton and/or oakum.

While most hands-on wooden boat people can learn from the multi-faceted methods of plank renewal, it's best that a professional, experienced shipwright take on the project. Even with experience, good judgment and wisdom, planking repairs can be a challenge to the shipwright and the surveyor.

Let's consider then that we have damaged hull planking on the topsides or underbody. Some problems are very obvious, some are hidden and much is less obvious. The haulout date is scheduled, a surveyor is retained. Already the boat owner has questions. Is the yard equipped with the trained, knowl-

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edgeable wooden boat repairmen? Will the surveyor be experienced enough to talk about the intimate details of the repair? Some yard workers talk a good talk but may be somewhat limited in their repair experience. So, we haul out. The surveyor determines the nature and extent of the problem. The yard manager provides an estimate of the repair costs based on what the surveyor has found or could "see". Estimates are based on what the damage appears to be from the outside. Beware, that after the "opening up", the estimate could change, sometimes significantly.

Based on discussions with those involved, decisions are then made on how to proceed. Here are some questions to consider:

- 1. What specific planks will be removed?
- 2. How long will the new planks
- 3. Will the butt pattern change? What will the butt pattern be with the new planking?
- 4. What about the selection of compatible materials, plank stock, fastenings, etc?

Methods of repair are old and established. The damaged plank removal is done carefully, to avoid damage to adjacent good wood. Planks are swollen tight in place and usually come out in pieces, cut out in small sections with a jib saw and hand chisels. Repairs may not require the entire original plank length be renewed. So, in this case, shorter planks are often installed and a new butt pattern is established.

Sections of planking shorter than five to six feet are not good practice. The shorter planks weaken the hull structure and are harder to fasten. Careful planning is vital to avoid weakening or compromising the vessels integrity. Make new planks as long as possible and fasten them to as many frames as are available. New planks, less than the original length, require a new butt pattern.

A few guidelines are: attempt to space the butts at least four frames between butts on adjacent planks; and carefully locate all original plank ends and butt blocks in the vicinity of the repair before laying out a new butt pattern. Butt blocks are fastened to the plank ends between the frames on smaller yachts with steam bent oak frames. Heavily constructed yachts and work boats have bigger, wider sawn frames and their plank ends are fastened directly to the frames. Avoid diagonal (stair-step) butt alignment and butts clustered together. The proper choice of timber can be a longwinded conversation. Boat lumber is air dried instead of kiln dried. The cut, and direction of the grain is very important to consider in selecting your plank stock. Carefully plan your project. We will continue with this subject next month. Send in your questions and thoughts. Cheers!

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