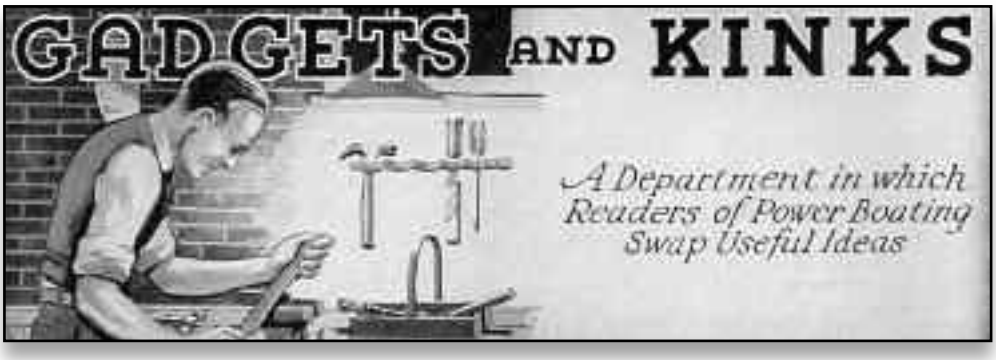


Extracting the Broken Screw Or Mining for Brass

By Sherwood Heggen

There are some very aggravating things that can happen while restoring a boat. New topside planks might not fit well, dust gets in the varnish, wood dries up and seams open up, but, my all time favorite aggravation is breaking off a screw while trying to remove it. Why is that a problem? It is because the screw that is still in the hole is where you want to put a new screw, and it is buried deep and in the way. The common principle comes to mind that no two objects can occupy the same space at the same time. When such items as hardware and ceiling boards have predetermined hole locations, there is only one place a new screw can go. Sometimes you can put the new screw in at an angle such as when rescrewing planking, but doing that with deck hardware is a no-no. The screw will hold down the hardware, but, it will obviously be sitting at an odd angle to the hardware. So what to do – what to do? The answer is: remove the broken screw, and, here is how.

First, do not lose track of where a broken screw is. It is important to mark its location with a marker, tape, or some kind of log of broken screw locations. If you don't, it will come back to haunt you when you are trying to button everything up after the fresh varnish. When you bottom out that new screw with the old one still in place you will wish you had taken the advice. Get the tools out and go after the little irritants.

What tools should you use. Actually the tools are very simple and there are at least a couple of ways you can go about it.

If the remainder of the screw is visible, it is pretty obvious that you can grab it with pliers and turn it out. But, when it is buried deep in wood, it is necessary to go digging for it. The objective in this first method is to expose it to get a grip on it with pliers to turn it out. The tools are pliers, a drill motor, a plug cutter, and a guide for the cutter such as is shown in the picture below.

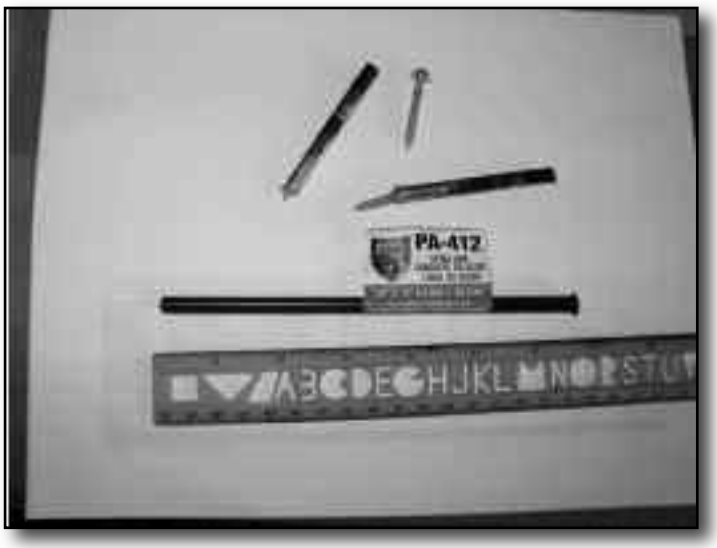
Plug Cutter in Drill

The broken screw is exposed by drilling past the screw with the plug cutter and then removing the waste wood from around it. Use the guide to start the hole accurately over the screw hole. When the broken screw is exposed, use a needle-nose pliers to back the screw out.

Needle-Nose Pliers

There is an obvious hole created with this method. Fill that hole with a plug made using another plug cutter of the size that would fit the hole. Fill the hole completely and glue it well with Titebond III or epoxy. When the glue is set, cut the plug flush to the surface with a chisel and some sandpaper on a block.

Another method is contributed by a regular reader of the BSLOL website articles ACBS member John Justice of Pittsboro, NC. He uses a piece of brake line tubing fashioned into a tool that doesn't give the broken screw a chance. The inside diameter of the tubing must a bit smaller than the diameter of the screw being extracted. He cuts a piece to useable length and files some teeth into one end. Then with a guide similar to the previous method and using a drill motor in the reverse direction, he steers the tubing over the screw. When the tubing reaches the screw, it will grab onto the inside of the tubing and back its way out. Here, too, a plug will be necessary to fill the hole and then dressed flush.



Brakeline Extractor

Aggravating problems often have simple solutions and I think this one is simple. It just takes time and an understanding of what to do, but it is time invested well in doing quality work.

Your questions and ideas are always welcome regarding restoring our wonderful woodies.

Feel free to call me at 715-294-2415
or email me at Heggensj@Centurytel.net

I would love to hear what you have to share or how I can help you work through a problem.

As always, don't destroy it; restore it! Now, go work on your boat.

Ray Littlefield Eagan, MN

Donald Nelson Annandale, MN