



GADGETS & KINKS

EXPERT ADVICE STRAIGHT
FROM THE VOICE OF
EXPERIENCE

THE BELT SANDER—DEVIL OR ANGEL

By Sherwood Heggen

The belt sander in the boat restoration world has a reputation which hasn't always been complimentary. You hear of boats that have "restoration damage" caused by a belt sander. The words "someone took a belt sander after her" are heard when looking at a screwed up refinish job, meaning damage has occurred at the hands of the inexperienced. The belt sander is thought of in some "get it done quick" circles as the tool to use, but in the hands of one who doesn't know how to use it, the negative reputation persists.

In my shop, I use the belt sander often and am finding more uses for it all the time. After hearing all of the negatives, I stayed away from using it for some time. Then, frustrated from having to hand sand with that tiresome back and forth motion for hours, I decided to see what can speed up the process with a lot less effort. Yes, there are other power sanding tools, but for really getting the job done quickly, the belt sander is hard to beat.

One of the most useful tasks for the belt sander is fairing out a boat. In this process, it is first important to understand that the belt sander has a flat sole. That makes it easy to use on a flat or convex surface, but on concave surfaces, not so much. New or stripped wood on decks and transoms can be faired well with a belt sander. The technique described below to

do the fairing will overcome the bad reputation. It is easy to understand that when the flat sole of the belt sander is caused to work flat against the surface it touches, it will produce a smooth, flat surface. Rocking the sander side to side while it is running can cause the edge of the sole to dig. That will cause a groove that will be difficult to eliminate. The same holds true for the roller on the front and back of the sander. Touching the surface with just the roller,

whether it is just the end or the whole surface, will cause a gouge that, too, will be hard to eliminate. The sole of the sander must run flat on the surface.

Here are the secrets for successfully fairing a deck and transom with a belt sander. Always start by placing the sander flat against the surface. You will understand that the first time you try doing this. Now, here is a "don't": When starting the sander, don't hold the sander in place and squeeze the start switch. The sander will lurch forward like a drag racer and you will lose control and probably mar the surface. Begin by drawing the sander toward you before squeezing the start switch. This will give you a feel of it being flat to the surface and will take away that initial lurch forward. Right after you begin to draw the sander toward you, squeeze the start switch to start sanding, keeping the sander in motion all the time it is running. This process takes all of about half a second in time. The favored motion with a belt sander is to move it in a long, very narrow, long oval pattern. This will keep the sander from stopping at the end of the sanding stroke which can cause uneven sanding marks. Also, as the sander moves sideways in the turn-around, concentrate on keeping the sander flat or with very slight pressure on the sole to the outside edge of the direction of motion. This will prevent the leading edge from digging into the surface which would leave a deep gouge.

The use of a belt sander to fair a



deck can bring good results quickly if you know what you are doing. Here is a typical process I use. First, draw lines back and forth across the deck to show sanding progress as wood is sanded away. Then, get in a comfortable position to allow control of the sander while working it. Start the sander as described and start sanding as if with a typical sanding board used for fairing. Allow the sander to “float” across the work rather than pressing it to the work. The sander can be used across the grain or with the grain of the wood according to what area needs to be faired. Final sanding should be with the grain to eliminate cross grain scratches and the motion of the belt should also with the grain. To best understand the process, practice with some fine grit paper on the sander to minimize damage if you mess up. Once you feel confident of the feel of the sander, go to the coarse paper (50 to 80 grit) and start to fair in earnest. I should mention here that if the deck or hull has new bungs installed, the sander can bring the chiseled end of the bung down to the surface with very little effort. Just pull the sander into the proud bung and it will go away – flush to the surface

Now being comfortable with sanding/fairing a horizontal surface, try a vertical surface – the transom. There will be a totally different feel because the weight of the sander will fight being flat to the surface. This is where drawing the sander back just before you squeeze the start switch is important. By doing so, you will be able to feel that the sole of the sander is flat to the surface. Then, as the sander is running, maintain the same position and pressure as the sander does its work. Being seated on a shop stool with rollers gives a great advantage of being able to move the sander steadily across broad areas without having to start and stop frequently “mid-stream”.

The real test of belt sander skills comes with sanding the topsides of a boat. From stem to stern there will likely not be

a consistent surface in shape. The aft end might be flat to slightly convex and the forward end might likely be the shape of a hyperbolic paraboloid. Huh? Basically, that is the shape of a single unit which consists of a convex shape and concave shape at a right angle to each other – the shape of a Pringles potato chip. Look at the forward end of a Chris Craft, and you will see a hyperbolic paraboloid.

But, back to the sander. Using the sander on a concave surface is admittedly limited but is still useable if the area between the sander and the surface to be sanded is understood. Place the sander against the surface. If it rocks on two opposite ends, i.e., forward right and aft left, turning on the sander will only cause two deep grooves in the surface. If the sander is placed on the surface where only the opposite edges touch, there is a good chance that light sanding can be done. However, the sander must be moved side to side, not to and fro. Lightly and carefully will do the trick, and only in slightly concave surfaces. If a proud surface needs to be removed, one edge of the sander can be used to do the job considering the sander belt lays over the edge of the sole of the sander. When using this method, always use the trailing edge of the sole to do the sanding.

Give the belt sander a try, but know your skill limit with this “dangerous” tool. There is no question that there are better tools in some of the extreme areas of sanding, as is a concave surface. However, it can do the roughing work and then finish up with the slower but more correct tool.

I hope this speeds someone’s work up some and gives them an advantage they never knew existed. As you “play” with this tool, you will find many uses for it.

If you have a question about restoration, I will be glad to answer. Just email me at Heggensj@Centurytel.net or call 715-267-2415. Life is too hard and short to figure everything out on your own.

