

Making a woodturning tool handle

Why ?

1. You can make a handle to suit YOU rather than be stuck with what the manufacturer thinks may suit everybody. If you have large hands, or small hands, or prefer a longer or shorter handle you can please yourself. If you like manufacturer A's tools but don't like their handles you can buy just the blades and copy a handle that you DO like.
2. You can save a bit of money by buying just the blades and making a handle, about £3 to £5 per tool. Maybe not much as a proportion of the total cost if the tool is a big expensive bowl gouge but more for less expensive tools.
3. It is a good project, especially for any relatively new turner. Apart from drilling the hole for the tool, it is a fairly straightforward project but still presents a modest challenge to achieve a really good shape. It is also nice to make something that you will use again and again.

What do you need ?

Wood – obviously. Ash is the classic wood for handles of all sorts and is an excellent choice. Beech would be fine as long as it is NOT spalted. Spalted woods will have lost much of their strength. Many other straight grained hardwoods may also be suitable. Avoid pieces with short or cross grain that could be weak. A blank split from a log may be preferable to a sawn blank as the grain will be continuous. I would avoid using any of the exotics and any wood known to cause dermatitis or similar effects.

A Ferrule, which you can buy for about 50p to £1 from most of the usual suppliers depending on size, or you can use a bit of copper water pipe or a bit of chrome pipe sold to make towel rails. The size of ferrule needed depends on the size of the tool where it enters the handle. Obviously the ferrule must be large enough to go over the tool tang, and with a bit to spare, say about 1/8" (3mm) all round.

I've assumed you've got the tool !! If not, blades can be bought from the usual suppliers in person or by mail order (go to the club website for links) or at a woodworking show.

Design

The easiest thing to do is to copy an existing handle that works well and that you like. The length and diameter of the handle needs to be in proportion to the size and type of tool. For example Sorby handles in my tool collection vary from 6" long, 1" max. diameter to 14" long and over 1 1/2" max diameter. Different manufacturers have very different ideas of what makes a good handle - compare the same size bowl gouge made by Robert Sorby and Henry Taylor. The Sorby handle is much longer, slimmer and more elegant. I don't think the Henry Taylor handle is long enough to give good control when you are well over the tool rest inside a deep bowl.

If you are designing your own handle shape bear in mind that you need some strength behind the ferrule area to support the tang, then a waist area to suit your hand, and a definite end. Some people like a ball at the end. Draw a quick sketch including the lengths and maximum and minimum diameters.

Making

Now you know the dimensions, you can select your wood. If the blank is square, it may be easiest to drill the hole for the tool first. If the blank is not square, maybe it has been split from the log, mount between centres with the tool end at the tailstock and rough to round. Square off at the tailstock end.

The hole for the tool can be drilled using any of the methods that we covered in January i.e.

Jacobs chuck and drill in the headstock, push workpiece onto it

Jacobs chuck and drill in the tailstock, workpiece in chuck, or held between drive centre and drill, advance tailstock quill to drill the hole

drill the hole off the lathe, either by hand or using a drill press.

The size of the hole needs a bit of thought. If the tool tang is round then the hole just needs to be a tight fit, you can always secure the tool with CA or epoxy. If the tang is square the hole needs to be a bit smaller than the square so that the edges dig in to the hole when you fit the tool.

If the tang is flat and tapered, such as a parting tool or scraper then things are a bit more complicated. Measure across the tang at the point where the tool will enter the handle (A), and again half way between this point and the end of the tang (B). Drill a hole, diameter (A), depth half the length of the embedded tang. Drill the rest of the hole, diameter (B), depth the rest of the length of the embedded tang. See Turning Wood with Richard Raffan, chapter 3.

Once you've drilled the hole, remount on the lathe with the hole at the tailstock end, with a revolving centre running in the hole. Turn the workpiece to the maximum diameter required. Set a pair of external callipers to the internal diameter of the ferrule. Use a parting tool at the tailstock end and part in to this diameter. Stop the lathe, hold the workpiece in place against the drive centre, then wind back the tailstock and check if the ferrule fits. It needs to be a good tight fit. Note that a bought ferrule may have a slight chamfer on the internal edge at one end. This end goes onto the handle first. When you have a good fit, mark the length of the ferrule and use further parting tool cuts to form the full length for the ferrule. Fit the ferrule and leave it in place while you turn the rest of the handle if you wish, but take care that you don't accidentally scratch it.

Measure and mark the full length of the handle. Part in at the headstock end to less than the final diameter at this end, leaving sufficient wood to support and drive the work. Form the overall shape of your handle using a spindle roughing gouge, always working 'downhill'. Finish with fine cuts with a skew chisel. Aim for smooth flowing curves with no flat spots or sudden changes of direction. Decorate with a few V-cuts or black lines burnt with a wire if desired. This can help you identify different tools when the blades are buried in shavings !

Take precautions against dust. Smooth the surface with abrasives, starting with 120grit, then 180grit, 240 grit, 320grit. This will probably be fine enough. Sand with the lathe running to start with and finish with the lathe off, working along the grain. Check carefully for any circular or other scratches looking from several directions in a good raking light. Remove all dust.

Quickly brush on a coat of cellulose sanding sealer making sure it flows into all the grain but doesn't form runs. Allow to dry hard (5 minutes) then cut back with 320grit along the grain with the lathe stopped. Remove dust. Using a cloth, rub on a couple of coats of cellulose melamine lacquer. Buff to a satin sheen using a cloth with the lathe running.

Part off at the headstock end and finish the end by hand off the lathe. Fit the ferrule if you haven't already done so. Insert the tool and seat firmly either by tapping the end on the lathe bed (protect the end of the handle) or by tapping the end of the tool with a soft faced mallet. Glue if necessary using CA or epoxy. When you want to replace the tool either glue bond can be broken by heating the old tool using a hot air gun or soldering iron.

Enjoy using your new handle !!!

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