Kurt's clinic

Kurt Hertzog answers readers' questions

Woodturning tools are so expensive. Whether I buy new or used, how long can I expect them to last?

You are correct that woodturning tools can be pricey. How long will they last? There are many factors that will determine any tool's lifetime. First point I would make is the quality of the tools you are buying, whether new or used. The very inexpensive tools using the least expensive steels available will likely have a shorter lifetime than the higher-quality steels.

Not trying to get you to spend more than you need to, but suffice to say that high-speed steel, like the many other steels used in woodturning tools, is made everywhere in the world. The chemistry should be within the specifications set for each alloy but the steels that are commodity, especially those poured in third world countries, may be less to spec than others. Over the years, I've seen many of the 'no name' or very economy brands nearly disintegrate as they are ground. Don't get hung up on paying the top buck, but certainly be aware of buying good value.

PHOTOGRAPHY BY KURT HERTZOG

A

B

A Sharp tools and the ability to 'freshen' an edge are key to good cutting. It is a skill needed by all woodturners unless they use exclusively carbide tools
B It only takes a moment to touch up an edge and keep tools sharp. Letting tools get dull produces poor cuts and consumes steel unnecessarily
C A key piece of equipment in any woodturner's shop is a tool grinder set up for woodturning tools and having the appropriate accessories

With decent tools, you can expect them to last a lifetime, unless you are a full-time pro whose tools are used all day long making a living. That said, you or anyone can ruin tools or make their usable lifetime far shorter with poor sharpening techniques. Perhaps a poor analogy might be how long will a tank of fuel last in your car? It largely depends on how often you drive, how far you go, how efficient your vehicle is and how you drive. Obviously, jack rabbit starts and stops along with excessive speeds and loads will use up your fuel far faster than less abusive use.

The best advice I can offer for tool lifetime, in addition to buying quality tools, is to learn to sharpen properly, touch up tools often rather than bringing them back from dull, use the same grinder if possible or at least the same wheel diameter, and avoid reshaping if possible. A light touch-up requires minimal grinding, so get into that habit rather than unnecessarily grinding away much more steel. Using different wheel sizes and reshaping will cause you to excessively waste steel. It is helpful to have a tool shaped the way you want in your kit rather than continuing to reshape tools as needed.

Virtually every tool in my kit is an original. While I never used my tools every day to make a living turning, they are all well used, with many of them nearly 30 years old. Until I learned to sharpen properly, I'm certain I wasted a lot of life on many of my original tools. Even with that, my go-to spindle gouge still has an inch of fluting left having been purchased new in the late '90s. Look at your tool purchases as a lifetime investment. Properly used and sharpened, you'll get many years of use and still have life left in them for the next owner. Should you ever have need to sell them, quality used tools in reasonable shape can bring about 50% of current market pricing.

How can I use abalone sheet material (cut, use laser, other) in woodturning objects? I was looking to apply a simple circle on top of a shaving brush.

I've always cut my abalone (Ablam) with a scrollsaw using a sacrificial piece of flat stock as backing. A very fine blade is in order. I usually don't use that as my finished edge. I bond my cut piece in place, always flat since Ablam or other piece-ups don't flex well, using epoxy. My final cut to finished dimension is done on the lathe using the long point of a very thin skew chisel. It is the one time that an oval skew has some value to me.

If you intend to have the abalone sit in a pocket of sorts, you'll need to have that cut prior to gluing in the abalone sheet. Obviously, your circular cut will need to be a finished cut prior to placing, so the edges and dimension will be critical. I could envision cutting a circular piece of abalone with adhesive backing or Ablam by temporarily fastening it to a simple wooden faceplate and cutting the circular piece on the lathe prior to fastening it on to the brush. Not helpful for circular shapes but I've used a bird's beak and jeweller's saw to cut other irregular shapes that were inlaid into turned or flat pieces.

I hope I understood the question and have been helpful. Be cautious when cutting shell, stone, eggshell of items with dust. You should be certain to have proper PPE to prevent inhaling any of the dust.

I'm worried that my lathe will rust being in the garage. What should I use on my lathe to prevent that?

There are corrosion inhibitors that you can put on the bed of the lathe to reduce the likelihood of rusting. One that comes to mind is Boeshield. It is a spray-on, wipe-off product developed many years ago by Boeing. Pricey, but works well. There are many others, including simple paste wax. Nearly any of the automotive waxes will perform this function.

My recommendation is to avoid putting anything on the lathe. Cast iron and even stainless steel will build a surface corrosion in almost any atmosphere with moisture and higher temperatures. A bit of surface rust helps by making the clamping of the tailstock and banjo less likely to slip. This reduces the amount of clamp force you need on the eccentric cam. Believe it or not, in many environments, corrosion can help prevent corrosion. That is, a surface that has some surface rust on it will be less likely to continue to rust if it isn't in a wet situation.

A small amount of surface rust, while a bit unsightly, shouldn't inhibit the movement of the banjo or tailstock when you loosen the clamp. Will it take a bit more effort to move them? A small bit, but having the surface slick so they will slide like on ice really isn't necessary. If you need a picture, envision the clamp lever on a lathe where the user has put a piece of pipe to get more clamp force. Why? Every lathe I own has a bit of surface rust on the ways. Even the stainless-steel beds. Doesn't cause a bit of problem and, as noted, it makes the clamp force needed to hold the banjo and tailstock in place far more reasonable.

C

I've heard you talk about lathe alignment. How would I know if I need to do this? How do I go about it?

1 Checking and making alignment adjustments is the same whether a mini or full-size lathe. A mini is used here for illustration

Wood lathes, unlike metal lathes, properly made and handled don't often need alignment. Especially since it is rare that the precision expected from a metal lathe is needed in woodturning. The mechanics also differ, with the sliding tailstock and the method of lock-up much different than that of a metal lathe. The key to alignment is having the centreline axis of rotation of the headstock be in alignment with the centreline axis of rotation of the tailstock.

Variation in position or direction can cause problems. Remember that each time you move your tailstock and lock it in place, the alignment has some variation. The variation is inherent in the design. There is an easy way to check for alignment using a pair of dead centres. Alignment can also be checked with a pair of four spur centres if the points are sharp and not bent out of line. Put your dead centres or spur centres in the headstock and tailstock.

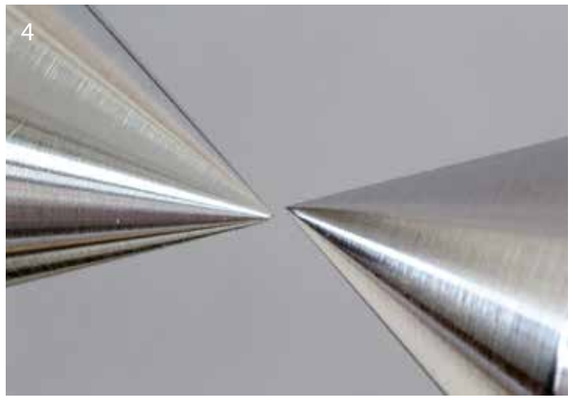
With the tailstock quill retracted, slide the tailstock forward until the points barely touch. Any misalignment will be easily seen. I've not seen much in the way of tail centre adjustments for alignment since the casting usually slides in the ways with sufficient clearance for movement and the clamping is a squeeze of a plate against the bottom of the ways.

Most headstocks do have some adjustability based on their fastening bolts. Many times there is a bit of clearance in the mounting bolt holes to allow for repositioning. Depending on the amount of misalignment, loosening the headstock bolts and moving the headstock to better align before re-tightening will solve the side-to-side misalignment. Up and down or cocking may need additional fiddling. Slight shimming side to side or front to back or simply spacing upwards may solve this. Shim stock can be anything from metal foil to tape, to card or paper stock.

On the rarest of occasions, I've had to file some of the casting that sits between the ways to allow for proper angling of the headstock. A bit of metal removed solved that problem. I caution you to think through the problem and the necessary actions to solve things before you resort to any metal removal.

2 For checking alignment, I like dead centres. Inexpensive and readily available, they work well. Use a dead centre drive to learn skew basics safely

3 Use a dead centre in the head and tailstock. Slide them together carefully until they almost touch

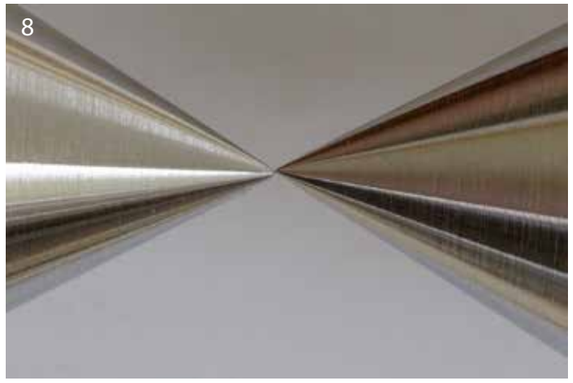


4 Misalignment, top to bottom, side to side, or off axis will be evident. Be certain to check from all angles to determine any potential corrections needed

5 You can also use spur centres provided the points are sharp and not damaged or bent. They work, but I favour the dead centres for the few bucks cost

6 There is no easy alignment adjustment capability on the tailcentre. Because the alignment varies somewhat with each lock up, you get whatever it is

7 Loosen the headstock screws and orient side to side, front to back, or axis shift. Up and down can be shimmed as needed. Open holes or file if required



8 After adjustments are made, check each time before you go too far. Accept the fact that sometimes perfection isn't possible or in reality even needed