

Woodturning Tool Sharpening Tips

References:

Alan Lacer "Learn to Sharpen-Progressively" Part1 - Fall 2003 issue of AAWJournal, Part2 -Winter 2003 available on line at "alanlacer.com"

Sharpening Woodturning Tools -Video- Produced by The American Association of Woodturners and **in the club library** this is a must see.

The complete guide to sharpening "Leonard Lee", Taunton Press -Fine Woodworking
Oneway videos for wolverine grinding jig--- www.oneway.on.ca/multi-media.htm

Sharpening Tools:

Necessities:

Bench Grinder (any speed) (any size)
friable wheel 54 to 90 grit
Grinding platform table
Wheel dresser
Eye Protection

Niceties:

Grinding jig
Dressing jig to true wheel
Diamond Hones
Protractor or angle measuring card
Balancing system

Alternatives:

Narrow belt sander

Wet/dry systems

Grind to shape, hone to sharpen

Some tips from Greg

KISS (Keep It Simple)

When learning to sharpen, make notes on the angles you use so you can duplicate or make changes.

Free hand sharpening is ok when you have mastered tool control and can easily compensate for variations in the profile.

Learning to use a tool and sharpening go hand in hand ie you can't use it if it isn't sharp
If you can't grind the profile you cant learn to use it.

Some tips from Russ Fairfield

1. You can't cut wood with dull tools. The corollary is that the sharper the tool is, the better it cuts.
2. **Consistency** is more important than the actual profile of the cutting tool. Otherwise we are using a different tool after every trip to the grinder.
3. It doesn't matter what the grinding wheel is made of, how fast it spins, whether the tool is held in a jig or freehand, or if we use a belt sander or a rock, so long as **the same edge profile is repeated every time we use it.**
4. The speed of the grinding wheel doesn't matter. They all remove metal. The faster wheel removes it faster. There is some justification for the new woodturner to use the slower wheel.
5. It doesn't matter what color grinding wheel is used. It can be pink, gray, white, violet, blue, green, or whatever color. It can be made from Aluminum Oxide, Silicone Carbide,

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sandpaper, or a rock. They all remove metal. Some may be softer and require dressing more often to make them flat again. Others, like the hard gray wheels that came with grinder, will require dressing more often to remove the glaze of embedded metal and "sharpen" the wheel.

6. The color of the grinding wheel has no meaning. While all white wheels may be Aluminum Oxide, not all Aluminum Oxide wheels are white. They also come in a pale green, violet, pink, blue, and yellow, depending on the manufacturer and the dyes they use in the binders that hold the abrasive particles together.
7. There is no truth to the myth that the gray wheels will damage the steel.
8. A cheap grinding wheel is a cheap grinding wheel, whatever color it is. Good quality is more expensive. Lacking any other knowledge and specifications, the price is a good indicator of quality.
9. A 46-grit is a coarse wheel, and a 120-grit is a fine wheel. Take your pick for those in between. There isn't enough difference between 60, 80, and 100-grit to worry about it.
10. Getting HSS to turn blue or even red-hot while grinding is not a problem. But, if you do, let it cool in the air. Don't shock it by submerging it in cold water because that can start micro-cracks in the thin cutting edge.
11. Getting carbon steel hot enough to turn blue can be a problem. That temperature allows the Carbon to move around in the steel and it loses its temper. All is not lost when this happens, just get it hot again, immediately dip it in cold water, and then grind away the blue steel, keeping it cool this time with frequent dipping in cold water.