

Woodturner's Tool Tuning (aka Setup, Maintenance and Repair for Woodturners)

by Hank Marien – Nov 6, 2010

Definitions:

Setup – What must be done before you can start work. Deciding whether or not you have the competence, tools, and confidence to complete a task. Determining the desired outcome for a task.

Maintenance – Actions required to facilitate and continue successful completion of tasks.

Repair – What you do when you fail to achieve a desired outcome, when something gives out warning signs or when something breaks.

Professionals know how to achieve a desired result even when things go wrong or break!

Woodturner

“I believe if you spend as much attention on yourself as you do on the wood you're working with, good things are bound to happen.” David Ellsworth

Typical woodturner problems – Ignorance of correct techniques, Unnecessary risks, Lack of concentration – Tiredness

Setup: Rested, alert, stretched out and flexible - comfortable
Knowledgeable, practiced, and ready for the task ahead
Good lighting is key to producing good work
Dust and noise are the enemies of the woodturner
Protect yourself
Sharp tools are a must – Learn how and when to hone
Practice twice – sharpen once
Practice moving your body – torso, legs and feet – in order to effectively move your tools – stay balanced

Maintenance: Warm up - take breaks – stretch and relax
Avoid critical tasks late in the day
Experiment with better lighting, body position, and work height
Take a class, visit someone's shop, or teach to maintain and improve skill sets

Warning Signs: Distraction
 Frustration – Apprehension
 Unusual smell, noise and/or vibration
 Minor injury

Repairs: Stop and assess – come back tomorrow
 Ask for help – retrain if necessary
 Stretch, exercise and rest – sometimes physical therapy is needed

Lathe

Setup: Level – no twist, feet have uniform weight
Correct height for user
Power is adequate - correct voltage and sufficient amperage
Good light sources –preferably two
Headstock and tailstock centered
Chucks and accessories correctly assembled, lubricated and torqued

Maintenance: Keep area around lathe clean of debris
Smooth and wax tool rest – use mill file and 600 grit sandpaper
Clean and wax ways
Vacuum and dust motor, headstock and tailstock
Adjust belt(s) for correct tension
Clean and sharpen spur and other drives
Clean and lubricate chucks
Clean morse tapers – no oil or dirt

Warning Signs: Vibration
 Clicking noise
 Drive slippage
 Unusual tool performance
 Screeching noise with or without smoke
 Odor or hot motor housing

Repairs: Stop and assess – ask for help
 Belts
 Bearings
 Warpage of ways
 Motor

Sharpeners

Setup: Correct height and comfortable position
Assembled and aligned correctly
Correct grit for wheels
Good lighting
Easy access to mount and use all accessories
Adequate power
Eye and hand protection
Practice twice before turning power on

Maintenance: Wheel dressed level and balanced
Area around sharpener clean of grit and debris
Motor clean
Accessories clean and adjusted

Warning Signs: Vibration
 Unusual performance
 Crack in grinding wheel
 Smell of smoke
 Hot motor housing

Repairs: Stop and assess – ask for help
 Tool rest or accessory repair or replacement
 Wheel replacement
 Switch or motor replacement

Bandsaws

Setup: Level
 Good light
 Power adequate – voltage and amperage
 Alignment of wheels, blade, guides and table
 Blade tension correct for size and type of blade
 Drive belt adjusted for correct tension
 Guards in place and adjusted
 Dust control
 Blade tension and adjustment

Maintenance: Clean table, blade, guides and wheel tires periodically
 Vacuum and dust frame and wheels
 Change blades, sharpen and adjust tension
 Vacuum clean motor and compartment
 Adjust drive belt tension

Warning signs: Blade wanders
 Vibration
 Screeching noise
 Smoke
 Loss of power

Repairs: Stop and assess – ask for help
 Blade replacement
 Guide repair/replacement
 Wheel tire replacement
 Tension spring replacement
 Drive belt replacement
 Bearing replacement
 Motor replacement

Resources

Repair Shops: Rocking R Hardware McFarland's Mill, Inc
 1030 S. High Street 587 Round Hill Road
 Harrisonburg, VA Winchester, VA
 540 434 9967 540 667 2272

Products: Top Saver System by Empire
 Rust Free, Blade & Bit Resin, Gum & Pitch Remover, and Boeshield T-9
 by PMS Products, Inc
 Formula 2050 Blade & Bit Cleaner by CMT
 Pitch Rx by Around The Shop, Inc
 Old standbys: WD-40, Goo Gone, Goof Off, Johnson & Johnson Paste
 Floor Wax and Butchers Bowling Alley Wax

Old Time Tips For Tool Care

Taking good care of your wood lathe tools makes a big difference in how easy it is to produce quality results. Clean, sharp well maintained tools will make your work much easier and your projects will turn out better. Here's a few tips on where to get started caring for your tools.

- . **Always keep your tools sharp.** This will extend their lifetime and give the best results when carving. Dull tools can catch and snap your spindle, so make sure they are always sharp and check for nicks and chips too. This is something a lot of beginners ignore or are simply afraid to do.
- . **Keep you tools organized.** A place for everything and everything in it's place. This will prevent you from having to search around for your tools in the middle of a project, and encourage you to use the right tool instead of the tool you can find! I prefer to keep my tools in a nice wood box, or just hang them on the wall.
- . **Store you tools in a cool dry place.** If you leave your tools in a moist or humid environment they can rust which will have negative effects on their strength and integrity. Never use rusty tools, they'll make bad cuts and it can be dangerous if a chisel breaks while turning.
- . **Keep your tools clean.** Clean them after every use, and your tools will always be ready next time you need them. This includes the handles of your tools, don't forget to wipe them down after use, especially if your hands sweat a lot like mine!
- . **Keep your tools in oiled sawdust** if you're not using them for an extended period. This will keep your tools sharp and prevent rusting. You'll have to clean your tools before use, so don't bother with this if you use your tools regularly.