# Woodturning safety is YOUR responsibility


**Safe, effective use of a wood lathe requires study and knowledge** of procedures for using this tool. Read, thoroughly understand, and follow the label warnings on the lathe and in the owner-operator's manual. Safety guidelines from an experienced instructor, video, or books are good sources of important safety procedures. Please work safely.

**PERSONAL PROTECTION EQUIPMENT**

• **Use a full-face shield** meeting ANSI Z87+ safety standard for all woodturning operations, anytime the lathe is turned on.

• **Wear safety glasses** when doing operations other than on a running Lathe.

• **Use a dust mask**, filtering respirator, or a powered air filtration respirator in conjunction with a dust collection system and proper ventilation. Fine particles from a grinder and wood dust are harmful to your respiratory system. Be especially mindful of dust from many exotic woods, spalted woods, or any wood that gives you a skin or respiratory reaction.

• **Wear hearing protection** during noisy procedures. If a procedure is even moderately noisy and you are doing it for an extended period of time, wear hearing protection.

• **Wear shoes or boots** to protect your feet from falling objects.

**BLANKS AND TURNING MATERIALS**

• **Turning stock should be physically sound** and carefully inspected for cracks, splits, checking, ring shake, and other defects that compromise the integrity of the wood. Always be aware that defects may be present but undetectable through visual inspection.

• **Exercise extra caution when using stock with any known defects**, bark inclusions, knots, irregular shapes, or protuberances. Beginners should avoid these types of stock until they have greater knowledge of working such wood.

• **Frequently stop the lathe and inspect the blank to determine if defects are being developed** or exposed as material is removed. Discard blanks that have significant defects. Adding adhesives in an attempt to "fix" defects in the blank is not advised. **Do not rely on glue to keep a defective blank together.**

**ROUTINE**

• **Check that all locking devices on the tailstock and tool rest assembly (rest and base, often called the "banjo") are tight** before operating the lathe.

• **Frequently check the tightness of chuck jaws throughout the woodturning session.**

• **Remove chuck keys, adjusting wrenches, and knockout bars.** Form a habit of removing them when finished using and checking they are removed before turning on the lathe.

• **Know your capabilities and limitations.** An experienced woodturner is capable of lathe speeds, techniques, and procedures not recommended for beginning turners.

• **Don't overreach**, keep proper footing, and keep your balance at all times.

• **Never leave the lathe running unattended.** Don't leave lathe until it comes to a complete stop.

• **Stay alert and watch what you are doing.** Don't operate machines when you are tired or under the influence of drugs or alcohol. Pay close attention to unusual sounds or vibrations. Stop the lathe to investigate and correct the cause.

**EQUIPMENT**

• **Keep lathe in good repair.** Check for damaged parts, misalignment, binding of moving parts, and other conditions that may negatively affect its operation.

• **Ensure that all guards, belt covers, and other safety features are in place.**

• **Keep the lathe bed, toolrest holder (banjo), and tailstock mating surfaces clean and operating smoothly.** Remove rust or debris that would cause binding.

• **Keep turning tools sharp and clean for better and safer performance.** Don't force a dull tool -- sharpen it. Inspect frequently for cracks or defects. Never use a tool for a purpose that it was not designed or intended for.

**TECHNIQUE**

• **Tie back long hair, bangs, and beards.**

• **Do not wear gloves.**

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• **Do not wear loose clothing, jewelry, or any dangling objects** that may catch on rotating parts.

• **When using a faceplate, be certain the workpiece is solidly mounted** with stout screws (#10 or #12 sheet metal screws as a minimum). Do not use dry wall or deck screws, they are brittle and break easily.

• **Be certain the workpiece is mounted firmly between the headstock drive center and tailstock center** when turning between centers,

• **Before starting the lathe, rotate your workpiece completely by hand to make sure it is clear** of tool rest, banjo, and lathe bed. Be certain that the workpiece turns freely. Ensure the blank is held securely by the drive center, faceplate, or chuck.

• **Always check the speed of the lathe before turning it on. Ensure the lathe speed is compatible with the size of the blank.** Use slower speeds for larger diameters or rough pieces and higher speeds for smaller diameters and pieces that are balanced. Always start a piece at a slower speed until the workpiece is balanced. If the lathe is shaking or vibrating, lower the speed. If the workpiece vibrates, always stop the machine to verify why and correct the problem.

• **Be aware of the red zone or firing zone.** This is the area directly behind and in front of the rotating surface of the workpiece - the areas most likely for a piece to travel if it comes off the lathe. A good safety habit is to step out of this zone when turning on the lathe, keeping your hand on the switch in case you need to turn the machine off. When observing someone else turn, stay out of this zone.

• **Hold turning tools securely on the toolrest,** holding the tool in a controlled but comfortable manner.

• **Always anchor the tool on the tool rest before contacting the wood.**

• **Turn the lathe off before adjusting the tool rest or repositioning the banjo.** Rotate the piece by hand to confirm that no parts of the piece will encounter an obstruction.

• **Always remove the toolrest before sanding, finishing, or polishing operations.**

• **Do not use cloth to apply finishing or polishing materials** if it is intended to contact a rotating object on the lathe. Never wrap polishing materials around fingers or hands.

• **Use spindle locking screws in the faceplate or chuck if turning in reverse.** Also, if your lathe has a brake or when you are turning a heavy piece, the stopping action of the lathe can make the piece come off of the spindle. When running a lathe in reverse, it is possible for a chuck or faceplate to unscrew unless it is securely tightened or locked on the lathe spindle.

**ENVIRONMENT**

• **Don't use a lathe in damp or wet locations or in the presence of inflammable liquids, vapors, or gases.** Always keep a fully charged fire extinguisher close at hand.

• **Guard against electric shock.** Inspect electric cords for damage. Avoid using extension cords. If you have to use an extension cord, make sure it is rated for the amperage of your lathe.

• **Frequently remove shavings from the floor while turning.** Eliminate all slipping or tripping hazards from the floor around the lathe and work area.

• **Keep your work area well-lit and well-ventilated.** Use anti-fatigue floor matting at the lathe workstation.

• **Use a powered dust extraction system to remove wood dust** and other air-suspended particles while sanding or generating any form of dust.

• **Do not be distracted.** Keep pets out of the shop. When the lathe is running, ask family members to enter the shop carefully so you aren't startled and have them wait until you turn off the lathe before trying to get your attention.

# AAW Safety Warning - Fractal Burning Has Killed and Could Kill You

**As of July 2020, we know of almost thirty deaths caused using fractal/Lichtenberg burning.**
The reported cases of fractal burning deaths range from hobbyist woodworkers through professional woodworkers to two electricians with many years' experience working with electricity. Some of those who died were experienced at using the process and some were not. What is common to all of them: fractal burning killed them.

High voltage electricity is an invisible killer; the user cannot see the danger. With fractal burning, one small mistake and you are dead.

There are many ways to express your creativity. Do not use fractal burning. If you have a fractal burner, throw it away. If you are looking into fractal burning, stop right now and move on to something else. This could save your life.