

Hazards of an Untidy Shop

Wells Shoemaker, February 12, 2024

When I joined the Santa Cruz Woodturners, we were a small group. Among our 20+ regulars, we boasted our senior founders and masters, a number of ambitious intermediate turners, and a few hopeful beginners. **One of the things that punctuated every meeting was the emphasis upon safety.**

I remember one meeting with deep clarity, talking about dust back when few of us had 2-3 hp dust collectors. John Wells mentioned something nobody else in the room had thought about: **Spark hazards in the collection compartment of the table saw.**

Turns out, lots of casual woodworkers use a table saw sporadically...and they don't empty that reservoir of tinder. Hit an embedded nail with a sawtooth and send a spark into the fluff below...and you can lose your shop. Worse, it may smolder until late at night or even a couple days, and *then* burn down your shop...and maybe your house.

I went home that day and opened mine, and I was pretty horrified.



Spark hazards for airborne particles. I was historically aware of the danger of a spark when there is a threshold level of fine, airborne, combustible particulates. It used to be a hazard in bakeries, and floating motes of sawdust can do the same thing. Explosions and incendiary death became an OSHA priority, beyond the risk of slower deaths from lung damage from particle inhalation.

This was getting serious...and close to home!

Today, smarting from the disappointments of yesterday's athletics, I decided to do a "penance day" in the shop. Sure enough, the table saw once again needed serious policing.

I had also noticed a **fine layer of dust on horizontal surfaces**, and that was new over the last few weeks. My Black Hole seemed less effective than I remembered, meaning there was fine dust in the air. My **cyclonic dust collector** bag was half full, and the pleats were clogged despite the usual flapper interventions. Fixed that! I also found a small leak in rear of the heavy plastic collection bag where I never look, and I fixed that, too. Big difference right away!



Dirty

New

I use my **ceiling-mounted Jet air filter** for trapping sanding dust away from the lathe or saws with their fixed collection ports. Sure enough: Replaceable external units (above photo) and permanent internal filters were both miserably clogged. Ugh.

The **filters on both of my shop vacs** were clogged, including the one dedicated for the band saw...which has an after-market cyclonic trap. Fixed those. What a difference in suction, not to mention calmer sounding motors!

By then, just like sushi, I was on a roll.

A number of my cushioned **floor mats** had accumulated fine chips where they met, raising an edge that could trip an old guy with his arms full. Fixed that—the mats, that is, not the “old” thing.

I looked up high, something I apparently don’t do enough, and there were a number of objects that could dislodge in an earthquake. Some of them were sharp. That’s a work in process. I know it will be dusty up there.



Lighting Fixtures: I love my LED illumination. However, those horizontal fixtures collect some of that airborne dust on top...and it adds up. It’s a potential fire hazard, especially if the bargain electronics overheat. In addition, when I pull the chain, it likely sprinkles bits of dust after carefully coating a lovely platter with varnish.

Time to get the ladder....

Ladders. Most turners over the age of 60 have lost height. (Non-turners, too.) You really notice that if you weren't too tall in the first place. Most of us need ladders to reach some of our "stuff" in the shop. News flash: A ladder is probably the most dangerous place for a senior to go. Not so swell for juniors, either! (I know ER's....)

If you use an **old and rickety ladder**...regard that as an open jackknife in your front pocket. Put that relic on the curb with a "free" sign...or make kindling. Take a crumpled Benjamin to a high quality hardware or lumber yard and buy a sturdy, 6' fiberglass, folding ladder rated at 300 pounds. Don't weigh 300? Get that one anyway. It will cost an extra \$20-30. The thickness and rigidity of the treads and bracing infrastructure, quality of moving parts, size and grip of the feet, and conveniences on the upper platform are worth it. It will last the rest of your days...and may there be many of them!

Make sure that the place you plant the feet of the ladder...and expect to dismount with your personal feet...is free of debris and clutter. Never mount a ladder that wiggles. You are in harm's way as soon as one foot leaves the floor. Don't do it if you're tired.

Clutter. "Stuff" you just can't throw away tends to accumulate. (Confession of a pack rat.) I know we all suspect that the very day after we discard it...we'll need it. I know Murphy's Law all too well, and this is one of the famed corollaries. I now accept that risk. De-cluttering is doing more toward domestic harmony than flowers, even 2 days shy of Valentine Day. (Do both....)

Obstructions. Make sure there are clear pathways for all of your movements. At a certain age (for example: any human being over 10 months old), a small stumble can be life changing. I'm learning, reluctantly but without many alternatives, to make 2 controlled trips rather than one overloaded or blind one.

Ice skating in the shop. Here's another one just for turners. Most of us are using modified garages or repurposed spaces to turn. Back in the last century, some concrete garage floors were expertly finished to a smooth surface. Those floors were easy to sweep! However, those older floors get really slippery with fine dust...and worse.

Turners who purchase commercially sealed blanks or who use **wax-based sealers**, generally turn off the wax layer early in the roughout. Those fine particles of wax go everywhere...and they turn that smooth concrete floor into a nearly frictionless ice skating rink. The solutions are fairly obvious, and it's one of the multiple reasons I use a PVA-based sealer instead of wax.

Noise: My cyclonic dust filter as well as the shop vacs are obnoxiously loud, and my old compressor created an avalanche-provoking 90-100 decibel thunder clap. Not everybody can isolate these appliances outside or house them in noise-reducing framing. Ear protection is essential, really...but spend the \$30-40 to get really good ones. Trust me, modern hearing aids cost 100 times that much.

I also switched out my compressor for a quiet one. It's not a top end California Air Tools model, but it's whispering along nicely for over 3 years. (\$200 +/-) Love it!

Vibrations: A lathe really shouldn't vibrate much! If it does, there may be an uneven foot, especially if it has "walked" from a steady placement to one with a gap. Other causes include loosened bolts, misaligned head and tailstock centers, or, for an older lathe, worn out bearings. Periodically, take the time to go through all the strategic fasteners on your lathe and make sure they're tight. An old mentor called this ritual "wrenching" his truck. You'll probably have at least one surprise if it's been a while.

Even with those things fixed, if your left hand is pegged against a tool rest while holding a cutter against chattering wood for hours, it will have an effect. Most important: nerve injuries to the portion of your hand against the rest. A glove on that vulnerable hand can protect it from splinters, and some padding against the tool rest can mitigate the pressure effects. (BTW: white knuckling the gouge is bad turning technique, and it's also more likely to aggravate all the pressure effects.)

Our Club website has some fine safety references!

For interest in **dust management**, not a lot has technologically changed in 4 years, but our membership has expanded! Check out:

[Microsoft Word - Takeaways from SCW Dust Survey 4-20.docx \(scwoodturners.org\)](#)

Safety Hacks. For interest in general safety, learn from your comrades for "hacks," which occupied one entire meeting back in the pandemic. There are some profound ingenuities in the collection, but at least a third of them relate to safety.

Check out: [scw chapter meeting 6-20-2020 comp 6-17-20.pdf \(scwoodturners.org\)](#)



Wells

Stay safe, and turn for many more happy years.