

**Sanding 101**  
**Brad Adams – World of Woodturners - May 21, 2019**

I power sand using an angle drill to start. I usually sand with 3" discs on the outside and 2" on the inside.

For most turners I recommend starting with 80 grit.

Run the lathe around 500 rpm in reverse so you are bending up and fibers that were bent down in the turning process. Run the drill in the opposite direction of the lathe. Start with a hard pad.

Sand until there is no noticeable tearout or any concentric marks. Stop the lathe and grind out any tearout if necessary.

**IMPORTANT:** Only use one light source to check for scratches or tear out.

You can't see a scratch, you can only see the shadow at the bottom of the scratch. If you have multiple light sources you don't get a shadow and therefore can't see the scratch. That's why when you carry that perfectly sanded piece out of the shop into direct sunlight all the scratches magically appear.

Once all tear out is gone increase the sanding grit by 50%. That means if you started with 80 grit jump to 120. Before you jump to 120 make sure you have no concentric marks of any kind and that all the 80 grit scratch marks arc in one direction. Use an air compressor to get rid of the dust and any loose grit before you move on.

Conventional wisdom says "Sand with the next grit until all the scratch marks of the previous grit are gone". That all sounds good but how do you tell a 80 grit scratch from a 120 grit scratch. The answer is to switch sanding methods each time you switch grits.

I can't tell you how important this is.

If you have a reversible lathe, change lathe direction and drill direction. If your 80 grit scratches were arcing left, sand with 120 until all the scratches are arcing right. If you don't have a reversing lathe, don't power sand but instead just hold the sandpaper in your hand while sanding with 120 until all the scratches are concentric again and none are arcing.

Up the grit another 50% to 180, change the method or direction of sanding again. Sand until all the 120 grit scratches are gone.

At 220 grit I always hand sand until I only have concentric scratches. Once I think I'm good at 220, I take a paper towel and burnish the piece. You know how you think a piece is sanded perfectly until you put the first coat of finish on. Then the scratches jump out at you. Burnishing sort of does the same thing. After burnishing check for any arcing scratches, if none, you know that any scratches in the piece are 220 grit scratches and you don't ever have to go back to a lower grit.

At 220 grit I raise the grain with a moist paper towel then leave the piece spinning and go check my email while the piece dries.

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I re-sand at 220 grit this time using the drill until none of the 220 grit concentric scratch marks can be seen. This sounds a bit wasteful of time and sandpaper, but so is having to go back a few grits and starting over. It only takes a minute or so and it does make a world of difference.

Then I go through 320, 400, 600, and 800 grits each time changing the direction or sanding method. I've been told by many a turner that going above 400 grit is a waste of time, but I want my bowls to have that supper silky feel when a customer picks it up, and 800 grit is what it takes to get the feel I want.

The only thing else I can think of is to treat sandpaper like toilet paper. Use it once and toss it. Sandpaper is a cutting tool and needs to be sharp to work effectively. I plan on going through 2 discs of each grit on every bowl. I'd much rather waste sandpaper than waste my time.

One more thing to add. If the sandpaper is making the wood shine, the sandpaper is dull. You aren't sanding, you are burnishing. It's time to throw that sandpaper away and use some new, sharp sandpaper.