

Shear Scraping Safely with a Bowl Gouge

I could call this “Part 2” or “Redux” because I recently discussed “Scraping Safely” in the recent August MCW Newsletter ‘Be Safe’ column. What I didn’t cover there was the use of a bowl gouge for shear scraping. There are some dangers here. Let’s take a look.

The Problem: **WHAM!! Rats!**



Don’t you just hate that sound? This happened to me recently when I thought I was doing a “safe” shear scrape with a bowl gouge to remove that thin, raised edge you can see a remainder of at the rim of a dry, roughed-out, quilted silver-maple bowl form. Nasty, frustrating, and potentially dangerous! So let’s talk a bit about that. There are right ways and other ways. I’m putting this article here in the Safety column, rather than in YMMV, because things like this are not just bad for the wood – they can lead to injuries, as well. Luckily, I didn’t get hurt doing this to the bowl [but I did as a result of a delayed reaction – I scraped (there’s that word again) my hand a bit later because I was so mad and was putting my stuff away carelessly]. No good deed goes unpunished.

This article should be helpful for people who are not familiar (or not totally familiar) with the technique of shear scraping with a bowl gouge and as a review for people who, like me, know it but may have begun to drift away on some of the subtle but important details.

The Technique

Very briefly, here’s the way you shear scrape with a bowl gouge. First, the shape of the gouge is important – it has to have relatively long, nearly straight wings, because that’s the part you use for this, not the tip. Second, freshly sharpen the gouge. This is primarily a finishing cut, and you’re not going to remove a lot of material. Usually the goal is to smooth out tool marks left when using the gouge for pull or push cuts so you don’t have to do a lot of sanding. Third, this is usually done on the outside (convex or straight part) of a form. It can be done on the inside (concave) if you know exactly what you are doing and are extremely careful, but if you’re reading this article, you probably shouldn’t try it. Use a round-nose or box scraper instead – it’s a lot safer (if you follow the guidelines listed in the August article).

Now for the technique. Lower the tool rest down as far as it will go. Put the gouge on the tool rest with the horizontal direction of the shaft nearly parallel with the surface of the wood you intend to cut, with the flute facing the wood (yes, like upside down), handle a bit low. You are going to let the razor-sharp bottom wing touch the wood while you keep the top wing very slightly away from the wood. Too far away, and it could grab. The cutting edge, the wing, should be angled up at an angle of around 20 – 45 degrees from the horizontal (as a result of the handle being low) – it’s this angle that makes it “shearing”. A shear scrape is a pull cut with the handle leading the way, so start with the cutting edge as far in the direction of the business end of the tool as you intend to go

on that particular cut, gently move the lower wing edge onto the wood, and with a feather light touch, slowly pull the tool back in the direction of the handle. The resulting shavings should be super fine, like hair. Try to cut “downhill” – that’s a confusing term that means you should move the cutting edge in a direction such that the wood grain fibers you are cutting are supported underneath by longer uncut fibers. With a side-grain orientation (grain perpendicular to the lathe ways), on a convex surface, that means going from the center to the rim, and from the rim to the center on a concave surface. If the piece is mounted in the end-grain orientation (grain parallel to the lathe ways), these are reversed.

You can push a shear scrape away from you if you’re careful and know what you’re doing, but it’s generally not a good idea – it is more prone to digging in. Hand, arm, and body position are important, so don’t try to do too much in one long cut. Move the tool rest as needed. Repeat as necessary to achieve the desired result. Do NOT try to use this approach to remove a lot of material in one cut. If you have some relatively deep tool marks, you might want to try making a better standard cut first, or you may prefer to scrape or shear scrape with a round-nose scraper before using this bowl gouge shear scrape as a final preparation of the surface prior to sanding.

So What Happened?

Working on that rim edge, I got caught in what I call “Technique Drift”. I believe this is something that can happen to us casual, hobby turners. We don’t practice all the techniques every day or every week or even every month. When we approach the lathe, it may be with the cocky feeling something like “Yeah, I’ve done this before, so it’s not a problem.” Well if it was several months ago, it may be a problem, because it’s not fresh in your mind or muscles. Plus, you may be turning for fun but having nagging thoughts about finances, personal problems, world peace, what’s for supper, ... you know the kind of stuff. When turning wood, it’s important to think about what you’re doing, or it may bite you.

I don’t remember exactly what I was thinking at the time of the above “event” -- I do know that it was a “last cut” (aren’t they always?) because my light was fading (always bad), and it was time to clean up and eat. But I can tell you exactly what I was thinking right after that, when I saw the result as in the above photo. It wasn’t pretty or repeatable here.

We are taught to reenact the crimes, lest they be repeated. There’s no time like the present, right after a big catch, to run through what you were doing, *with the lathe turned off*. Clearly you were doing something wrong (the proof is in the pudding). Clearly you don’t want to do that again! So the onus is on us to stop and figure out exactly what happened right then while whatever shreds of it are still fresh in our minds. Usually, you can look at the damage and actually see the start of a dig in and follow it around. In this case, the catch was bad enough that the bowl came askew in the chuck, and I’m guessing that a lot of damage to the brittle, dry edge of the bowl rim was from it running against the tool rest until I got to the “off” switch. I couldn’t find the initial problem location.

So I put my body and my tool back to the scene of the crime and figured out that I had probably gotten the top wing too far off the wood and my gouge *tip* too high, too far off the tool rest, at too steep an angle, too close to the edge of the bowl I was working on, and, worst of all, involved in the cut – which it’s not supposed to be. Remember, you do this with the wings, not the tip. I’m guessing the inside end of the gouge flute may have been pulled into the spinning edge of the bowl. That’s just not a good idea.

I consulted with my WoodCentral friends to hear what they might have to say about it, and then, the next day, got right back on the horse. I turned the lathe on and did another shear scrape on that same edge, just to prove to myself that I could do it safely. *This time, I kept the tool relatively flat, made sure I was using the wing (not the tip), kept the top edge of the flute very close to the wood (but not touching), and got a nice shear scrape, just as planned.* No problem. Case closed. I cut off the damaged raggedy part, making the bowl a little shorter, and continued with shaping the rim of the inner bowl. It looks nice now, but I'll always remember what that rim looked like, and try not to duplicate it in the future.



The end result will be presented as an entry in the Chapter Challenge, with its quilted top dyed scarlet and partly sanded back to emphasize the figure. "Not brown."

Turning is multi-sensory -- we have to constantly think, watch, listen, and feel. One of the "interesting" things about woodturning is that there's such a fine line between casual success and scary disasters. Extremely small changes in angles give very different results. We have to keep that in mind every time we touch a tool and make a cut. Think first. If in doubt, run through it with the lathe turned off. You can catch (pardon the expression) potential problems that way – instead of with the dreaded WHAM of the other kind of catch.

As CA Savoy likes to say, "Happy and safe turning!"