

SETTING UP AND SHARPENING CUTTERS FOR HOLLOWING

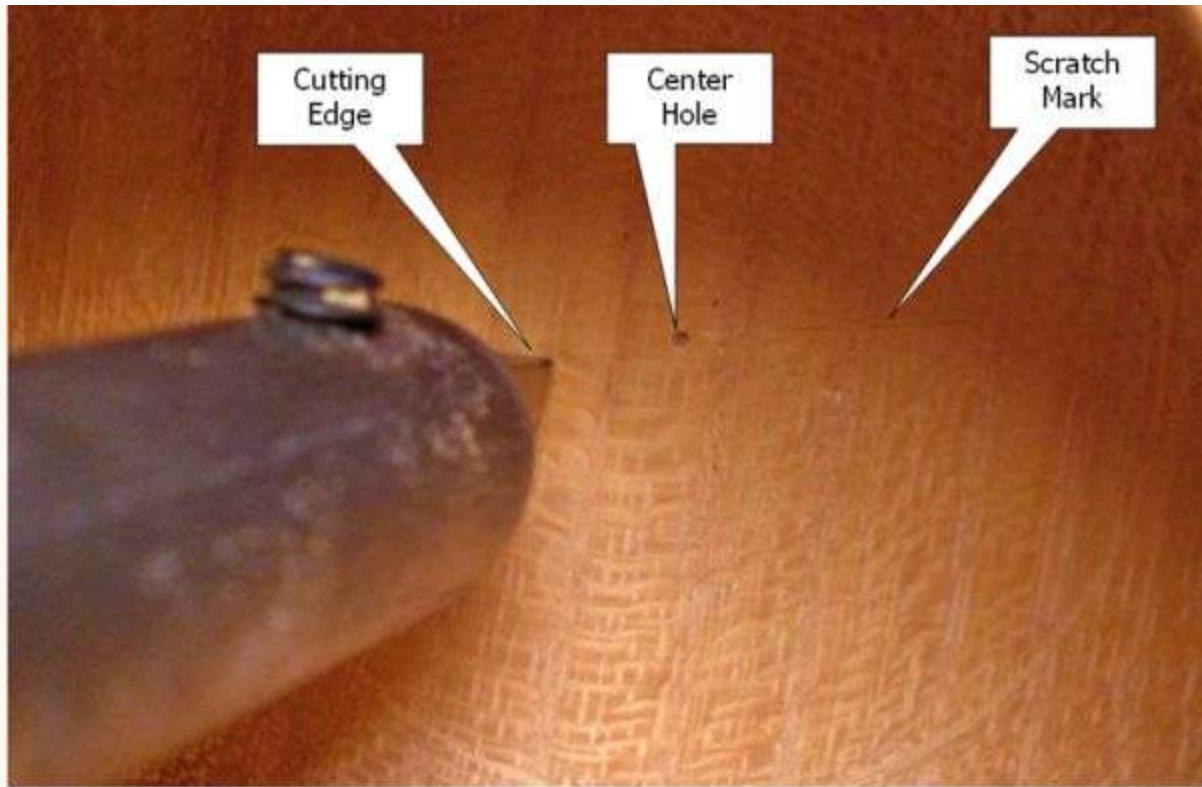
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I recently got an e-mail message from someone who had seen [a tutorial I posted](#) a while back about making boring bars for hollowing. He had questions that I think a lot of us have had at some point about sharpening the cutting bits used for hollowing. Since I'd been asked similar questions in the past, I figured I'd post something I wrote a year or so ago. It deals with setting up the cutter height and sharpening the typical tool bit used

for hollowing tools. There are probably a bazillion ways it can be done, but I figured I'd show how I do it, right or wrong. I'm not trying to describe the whole hollowing process, just how I set up and sharpen the cutting bits.

First, I make sure the cutting edge is exactly on the centerline of the piece. I almost always start my hollowing with a Forstner bit to give me room to work and a place for the initial shavings to go. The point of the bit leaves a nice hole that's exactly at centerline, so it makes a handy reference for setting the tool rest height to get the cutter centered. In this picture, I've already hollowed most of this piece, but you can still see a little dot that's the sign last of the drill bit. To the left of the dot, you can see the top edge of the cutter. To the right of the hole, you can see a scratch that I made with the cutter to draw a line, showing the exact plane that it's traveling. (The lathe was turned off, of course.) You can see the line runs straight to the center hole, showing it's lined up just right.



The cutting tip acts as a small scraper. It's sharpened at the same angle as all my scrapers. (Somewhere between 65 and 70 degrees, but closer to the 70.) It doesn't ride the bevel, but cuts with a burr, just like a scraper. Here's a picture of the cutter touching the surface of the wood. It's the same on the inside, just harder to photograph...



As I mentioned, I sharpen the cutters the same as I do my handled scrapers. To make it easier to see in the pictures, I used a 3/8" cutter. A 3/16" cutter is done exactly the same way, it's just smaller.

This poorly-focused picture shows the angle at which the tool rest is set on my grinder. Like I said earlier, I use an angle of about 70 degrees. Keep in mind that your setup might look a bit different depending on the size of your grinding wheels and the height of the tool rest...



I simply sweep the cutter in an arc, following (or forming) the curve I want in the tip. I hold the cutter down close to the grinding wheel, and sweep the other end in arc as I grind. You'll notice the curved scratches in the tool rest on my grinder. That's from sharpening hollowing bits and bowl scrapers. Here are a couple views.





And one more shot, showing that the angle of the grind stays the same as the bit is swept through the radius...



I don't have any photographs, but I sharpen the teardrop scrapers in the same way, and at the same angle.

Like I said, this is by no means the only (or best) way to set up and sharpen these bits, but it's what works for me. I hope this helps. 😊