Testing the Lyle Jamieson Boring Bar and Laser Wall Thickness Gauge

by Fred Holder

Over the last few years, I've sort of been pushed into turning hollow vessels. The first event occured when Dave Thompson asked me to document his laser pointing device for measuring wall thickness when turning hollow vessels. That was November 1999.

At that time, I had known Lyle Jamieson and his magic with his boring bar for some time. Lyle was quick to recognize the merits of this method of measuring wall thickness and adopted it to work with his boring bar. I had also observed Frank Sudol with his large boring bar using a tiny light inside the vessel to judge wall thickness. This was what prompted Dave Thmpson to develope his laser pointing device for measuring wall thickness.

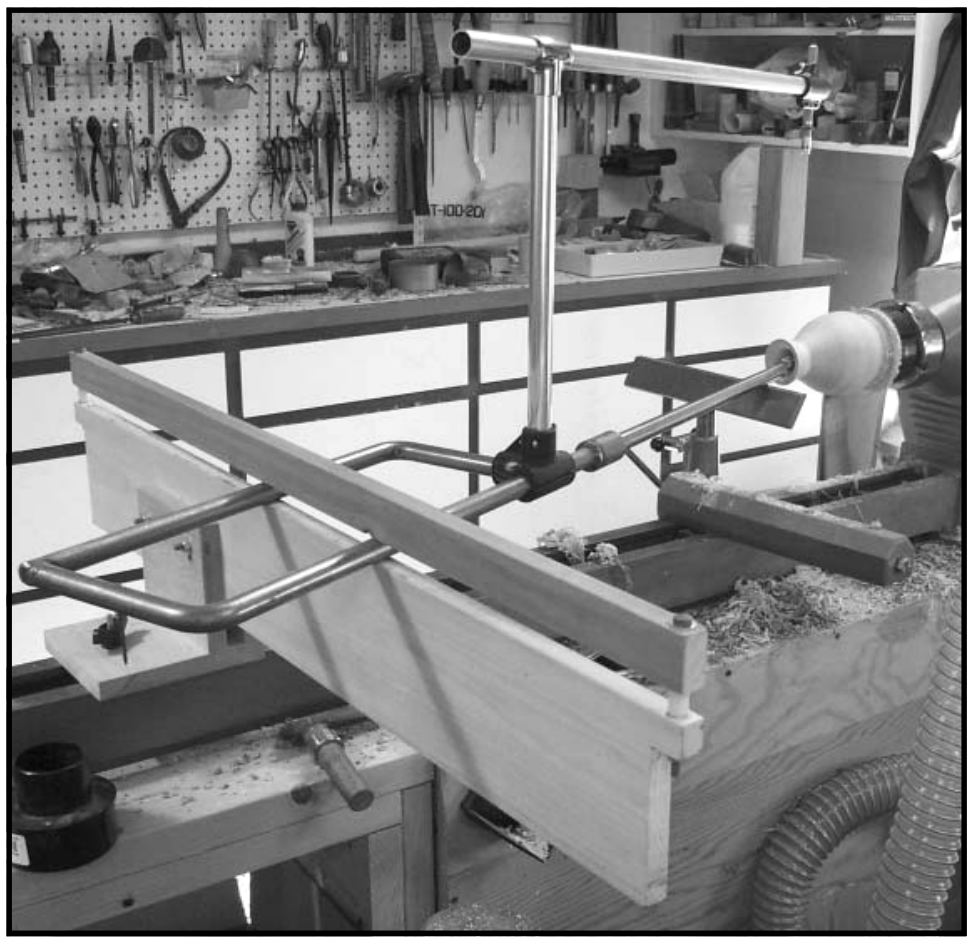
Then, Kel McNaughton sent me a set of his hollowing tools to photograph for his ad in late 2000. When I was done photographing them, I asked where he wanted me to send the tools. His answer, keep them and do a review. I turned my first hollow vessel, the first one right through the wall. I bought some calipers and the secnd one came out ok. But I still didn't care to do hollow vessels.

Later I purchased one of Kel's hollowing rigs, which is a stabilized system and is available with the laser pointer. I managed to turn several hollow vessels without going through the wall, of course, and wrote a story on its performance.

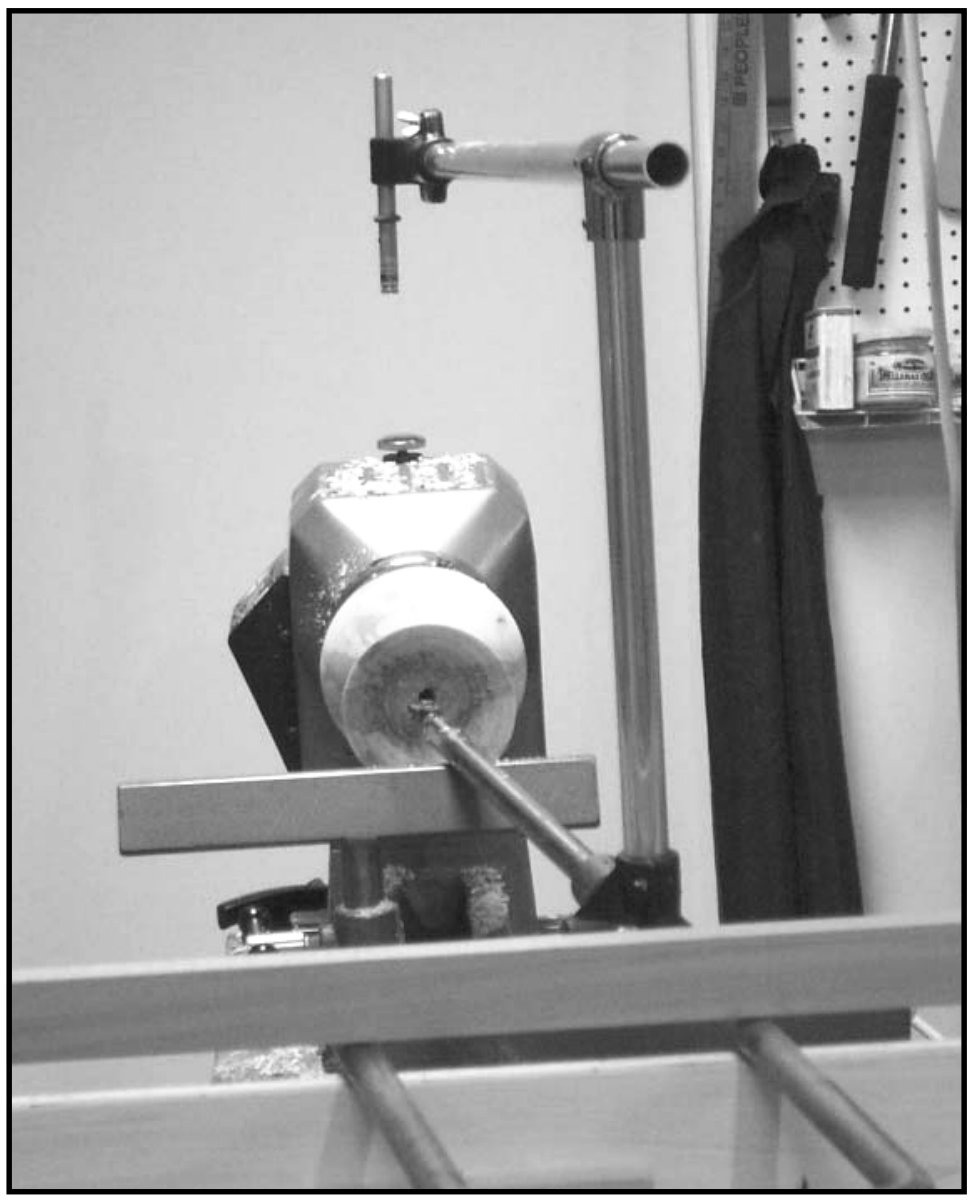
I didn't turn any hollow vessels for some time, until about a year ago. At that time Turningways, makers of the Articulating Laser Pointer mounting for boring bars, came out with their Mini-O-Bar, a lovely little boring bar for lathes with a 10" swing. I tried it out on Mildred's 1018 Oneway lathe and found it a joy to use. It was light, accurate, and worked great. Mildred adopted it right away and has turned a number of hollow vessels using it. Turningways was so impressed with my review of the Mini-O-Bar that they asked me to test their Mighty-O-Bar. This is the big brother to the Mini-O-Bar, but I had to extend the bed of my Nova DVR 3000 before I could test it. It simply takes up more lathe bed to use it.

Just before we went to New Zealand, this last spring, Lyle Jamieson asked me to do a test on his boring bar and laser pointer device. We agreed that he would send me one for testing in May of this year. All of this rambling leads up to my test of Lyle's boring bar and laser pointing rig.

Prior to sending the actual rig to test, Lyle came out with his video on the use of the boring bar to do hollow vessels. I wrote a pretty glowing report on the video, because I was very impressed with its detailed instructions for using the boring bar and for using the laser pointer to measure wall thickness. Lyle gives Dave Thompson credit for inventing this measuring



Here the Lyle Jamiesn boring bar with laser pointer attachment is shown set up on my Nova DVR 3000. I had to add a bed extension to make my lathe long enough to use the rig. Lyle sells the boring bar and laser attachment and you make or buy the rear tool rest. I'm using the one that came with my boring bar from Turningways.



This view cleans up the background a bit and gives a better view of the laser pointer and its mounting fixture.

The finished vessel. Not a masterpiece, but it is hollowed nice and even throughout.

process. It is an excellent video and I highly recommend it for anyone wishing to use a boring bar to turn hollow forms.

Now, after knowing about Lyle's boring bar for several years, I was getting an opportunity to try one out in my own shop without any supervision. Lyle doesn't sell the second tool rest to support the boring bar and keep it from rotating, but he said that the one that came with the Mighty-O-Bar would work just fine.

One safety feature Lyle has added to his bar is a hole in the center of the cross bar at the rear. You simply drop a nail through the hole. This keeps you from accidentally pulling the bar free from the rear tool rest when hollowing deep within a vessel.

Lyle has also made the cutting head on his bar so that it can be rotated to meet the changing needs for cutting the inside of various shaped vessels. See close up photo on the next page just opposite this discussion. I found this very handy to use and easy to adjust. But I do recommend that you be careful to determine where you will be cutting so that the laser pointer can be set at a safe distance from the cutting edge at the point where you will be cutting. I made an error in judging this and cut through the side of the first vessel I tried with it. So the laser pointer is not fool proof, unless it is set properly.

This rig should be set up as shown in the two photos on the left. The cutter should be set to cut at center line of the vessel, at least that is where I set it and the cutter worked fine. When you know where you are going to cut, use a business card with two lines drawn on it. One line should be about 1/4" in from one long edge and the other should be perpendicular to the first line and clear across the narrow dimension of the card. The perpendicular line is the line of sight for how you will be cutting and the other line is

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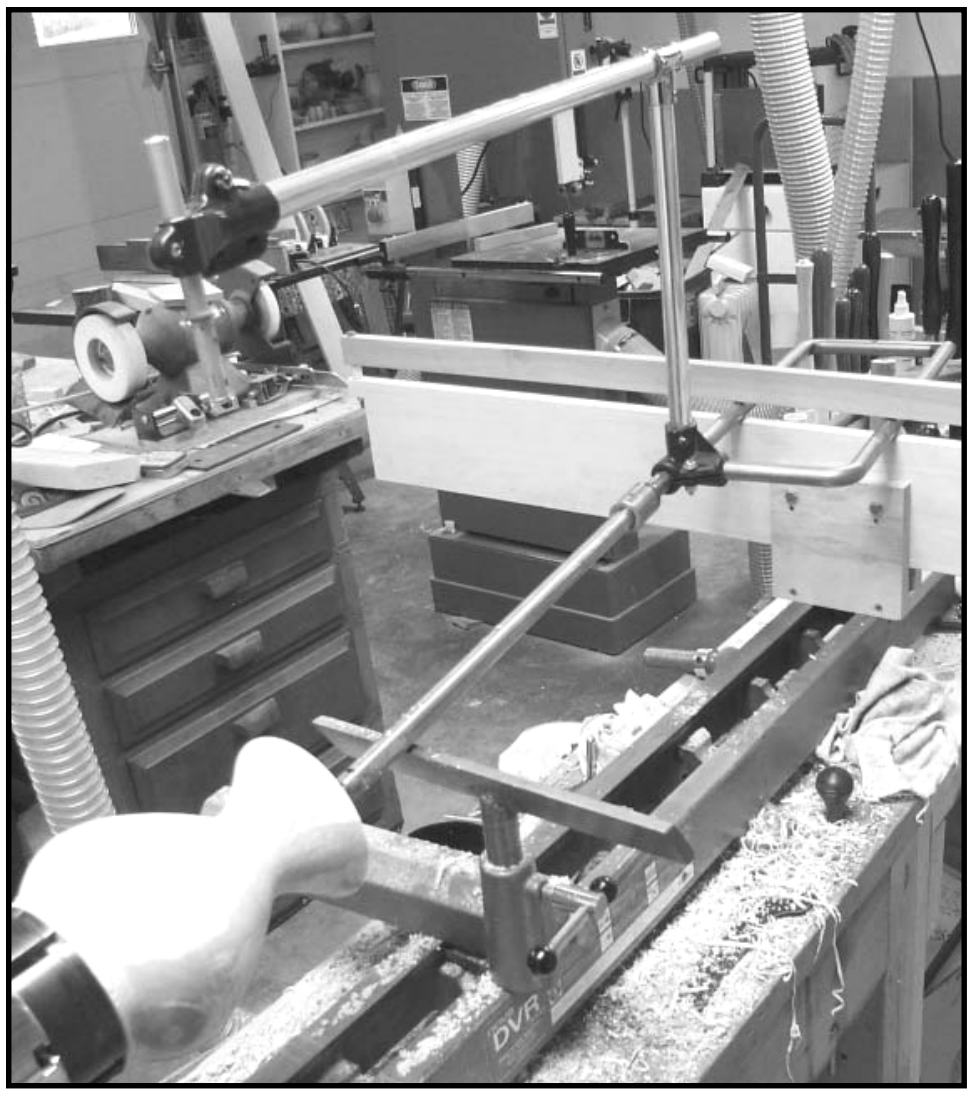
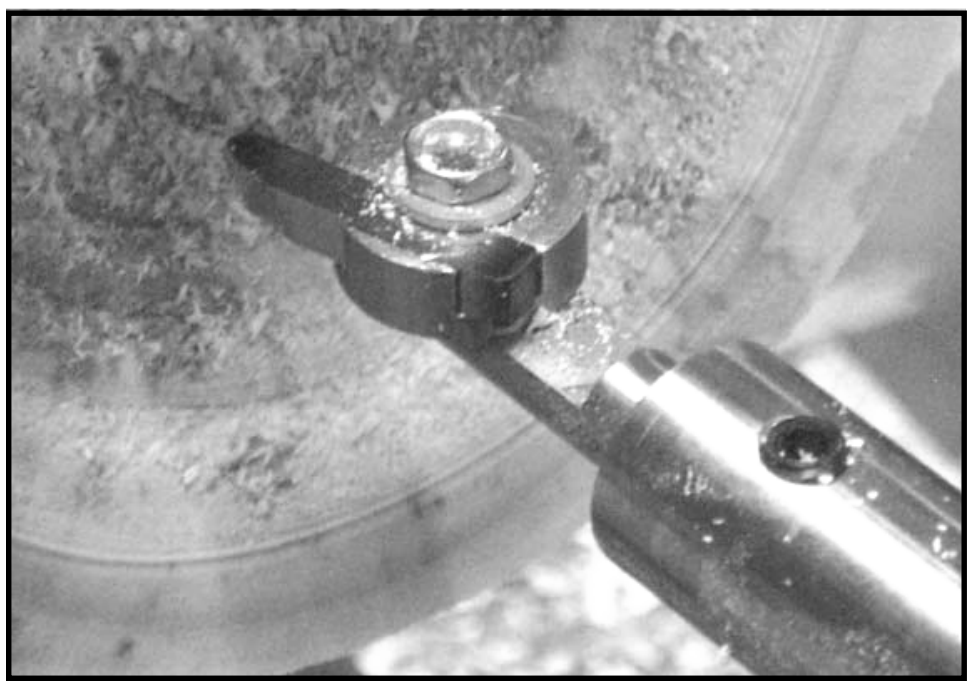


The actual cutting process is underway here. Unfortunately, both hands were on the camera and I couldn't show how I held the boring bar. I grasped the bar between the two tool rests with my left hand and the vertical bar for the laser pointer right near its base with my right hand. I had excellent control with these handholds.



The cutting head may be rotated to any angle that seems appropriate for the particular cutting task.

The San Diego Woodturners came up with this mounting for reverse turning a hollow vessel. I'm not sure whether they are commercially available at this time or not. I purchased one of the overrun that they ordered when getting them made for their club members.

used to judge what the wall thickness will be. When this is all set up, you're ready to start cutting on the inside of the vessel.

I did drill a hole down the center of the vessed before I started to hollow with the boring bar. I've found this to be essential to give the cutting tool a place to start cutting from the center out. Also, if you drill to the maximum depth that you'll be hollowing, you will not have to figure out how to get rid if that little hump in the middle of the bottom.

I began similar the way that Lyle describes in his video, of making a larger hole down the center of the vessel. You don't need the laser pointer at this point; however, as you move on toward the side of the vessel, the laser pointer is a real asset. Would I recommend it, absolutely!

The Lyle Jamieson Boring Bar simply takes the physical stress of hollowing off of your body. The machine absorbs the shocks and twists as the cutter does its job. You simply guide it on its way.

The tool is easy to guide and Lyle recommends making it easier to move by rubbing both tool rests with a candle as well as the bottom and top of the boring bar where it extends through the second tool rest. Use a regular wax candle, not a beeswax candle. Beeswas is a bit sticky, you want that bar to slip freely at your lightest movement.

Even with my somewhat limited experience with doing hollow forms, I find that you quickly develop a feel for where the tool is cutting in the vessel. It is amazing how you can feel the uneven parts and with care make them less uneven.

I found the laser pointer very easy to adjust with adjustments of both lateral movement along the horizontal bar and rotational movement to place the spot exactly where you want it on the card you are using to adjust the beam.

The boring bar gives you a lot of reach for very deep hollowing and stabilizes the tool very well. The adjustable cutter allows you to set the cutter for where you want to cut. Overall it is a very well designed system that I can highly recommend to anyone wishing to do deep hollowing of endgrain vessels.

One thing that I do wish that Lyle would make available with it is a disk scraper similar to those available with the tools from Turningways. I simply couldn't get the finish that I wanted inside the vessel with the cutter that Lyle uses. Perhaps lots of practice would fix that problem.

I finally pulled off the Jamieson rig and slipped on the Mighty-O-Bar with the disk scraper and easily fmoothed out the inside surface of the vessel.

This was really the only negative point that I observed with this rig and I feel that I can highly recommend it for anyone wishing to turn hollow forms with the least physical and emotional stress. Be sure to also purchase the laser pointer attachment it is well worth the money!

This was the vessel that had the top removed with an error in laser setting. I did finish turn it to about 1/8" wall thickness. It also cracked in the bottom. It is shown here soaking in white glue and water. It didn't work, but a liberal application of thin CA glue filled the cracks and stopped further cracking. The hollow form was never sanded inside, but it is still a pretty piece of maple that I couldn't throw away.