Completing the Bowl

Version 1.0.0

This Tutorial explains the final steps to completing a bowl. It assumes that you now have a bowl mounted on the lathe that is ready be sanded, finished and removed from the lathe.

Part of

The SegMaster Series

The SegMaster Series is a set of short articles provided for woodworkers interested in Segmented Wood Turning. They are short, concise, and filled with tips and techniques that readers may or may not have though of themselves. They maximize photos and illustrations and can be skimmed quickly or read slowly and studied. They can be printed, taken to the shop, and used as tutorials. Please enjoy them and let me know how they can be improved.

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At this point in the series, your bowl is mounted on the lathe and ready for sanding and finishing. After that, we will remove it from the lathe.

Sanding

I hate sanding and I do not like talking about it. One of the reasons I prefer making segmented bowls is that sanding Segmented Bowls is 10 times easier than sanding one piece bowls. You are almost always sanding with the grain and almost never sanding end grain (except on the edges of a single piece base).

I do all my sanding with the bowl still mounted and with the lathe spinning. I usually start with 100 Grit paper and work my way down quickly to 220 or 400.

I do not buy cheap sandpaper (anymore); it is false economy. I only use Norton 3X which lasts 10 x longer than their normal sandpaper or other cheap sandpapers. Norton makes this difficult by constantly changing their names and packaging. It appears that they are trying to trick me into purchase competitive brands.

Finishing

Again, this is up to you. I do not consider myself an expert.

I do most of my finishing with the work still on the lathe. True, I cannot finish the bottom of the bowl when I do it this way but it is easy to do this at the end. I think it is easier to apply the finish with the lathe spinning very slowly. I also let it dry with the lathe spinning very slowly. This helps prevent drips.

One big question I have is “Is it food safe?”. This is a tough one. It seems from what I have read that most clear finishes are OK for food provided they have cured enough that the liquid has fully outgassed. That is what I do, but do not depend on me. Do your own research.

After sanding, be sure to rub the bowl to remove any dust. A tack cloth is also a good idea.

It is also a good idea to sand very lightly but only when the previous coat is fully dry. I sometimes add another coat before it is dry enough to sand if there are no dust spots.

At the end, I often use VERY fine steel wool to go over the bowl lightly. This removes roughness that I feel but do not see.

I have read many articles on finishing. I am currently using the following finishes:

Deft Lacquer

I am currently using Deft Clear Gloss Brushing Lacquer that I ordered from Amazon. I had some trouble getting this the last time I ordered it. It can be viewed as a hazardous chemical. I buy the gloss because my wife likes shiny bowls. I have not tried the satin but I assume it would work as well.

To apply this, I built a special holder from a glass peanut butter jar. I cut a hole in the metal lid and mounted a brush in it using some epoxy paste. It works great. I never have to clean the brush. However, do not rub the brush against the top edge of the jar. This will get lacquer on the threads of the lid and it will become difficult to remove and replace the cover.

I apply this as thinly as I can. Sometimes, I move the bowl manually as I brush on the lacquer. Sometimes I set the bowl spinning slowly. If it is spinning too fast, you can get drips due to centrifugal force. When the lacquer is on as smoothly as I can get it, leave the lathe spinning until the lacquer has stiffened beyond the drip stage. When the lacquer is fully dry, add a second coat. Sometimes I sand lightly between coats; sometimes not

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Bee's Wax and Mineral Oil

A key benefit of this is that I KNOW it is food safe. Also, the bowl can be refreshed by redoing the finish or just rubbing it with oil. I tend to use this more for single piece bowls. I buy edible mineral oil from the pharmacy and order bee's wax on-line. I melt and mix 5 or 6 parts oil to 1 part bee's wax.

I apply this to the slowly spinning bowl with a soft cloth. I then stop the spinning, examine the bowl, and rub the finish into any spots that have not absorbed it well.

One application usually does it.

MINWAX Helmsman Spray Urethane

I buy this at my local hardware store. It is easy to apply and produces a nice clear finish. I have used Satin, Gloss and Semi-Gloss.

I usually do not apply this while it is on the lathe, because I don't want to get the spray finish all over the lathe.

I use at least three coats.

It is available in non-spray cans. I have not tried this because it would probably require brush cleaning.

Cutting Off

I have always been a bit afraid of this stage.

The videos that I have found show parting small pieces that you can hold in your right hand as you are parting with your left. My huge mitts might grab a 6" bowl. Presumable an assistant could be enlisted to let the spinning bowl slide through their hands, but I have not tried that either.

I have developed a method that has worked very well every time I have tried it.

At this point, the waste block assembly are still mounted on lathe. Prepare Cole Jaws with rubber bumpers at the appropriate position. Assemble to Nova Chuck to the live tail stock and attach this to the bowl somewhat tightly. It is best for the bumpers to be on the outside of the bowl so that you can tighten them without fear of ripping the bowl apart. If the bowl is so large that they must be on the inside, or if the bowl curves inward at the top so that the bumpers will not grip the outside, the inside will work, but be careful when tightening.

It is important that the base waste block is on the drive side of the lathe.

Now use a cutting tool to cut through the waste block or the base. Your cutting position will depend upon how thick you want the base. If you want the base to be as thick as you can make it, cut through the waste block. When I do this, I often find that I want a ½" to 5/8" base where I started with a ¾" base. In those cases, I cut through base material. Otherwise, I do the cut in the waste block.

This is where it is good if you put a depression in the waste block (or the bowl base). If you have a 4" base with a 2" diameter depression, then you only have to cut through 1" of material rather than 2".

For cutting off, I like to use a rugged cutoff tool with a long handle. The tool can get caught if you do not make the cut wide enough, especially if you are cutting all the way to the center.

At some point, the cut will free the bowl from the drive spindle. The bowl will quickly stop spinning and will stay where it is.

Stop the lathe. Remove the bowl and the Cole / Nova assembly.

Finish the Bottom

Remove the waste block and mount the bowl onto the drive end of the lathe. Use the Live Spindle to apply pressure to the bottom. If you do have a live tailstock, use a live tailstock center. If you do not have either, make sure you do not cause a “catch” which will send the bowl spinning across the room and onto the floor.

Conclusion

Once you have the bottom of the bowl the way you want it, your bowl is done. Be sure to make the bottom at least slightly concave so that the edge of the bottom supports the bowl. If you intentionally make the bottom concave, you will not end up with a protrusion in the bottom that will cause the bowl to rock.

When the bottom has been sanded, remove it from the lathe and carefully apply the finish.

Your bowl is now done. And so is the sequence of Tutorials. At this point, if there are any Tutorials you have not read, I suggest going back to read them.

Happy Turning