



## August/September 2013



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I'm getting a little tired here, can somebody help hold this tree up for a while? We just visited Hartwick Pines State Park here in Michigan, where many old growth pines have survived for hundreds of years. This tree was on near the trail.

## TABLE OF CONTENTS

### TIPS & TECHNIQUES

**Topic of the Month:** Grain Issues

### QUESTIONS AND ANSWERS

- Steady Rests
- Size of Shop
- Cleaning up Hollowing Tool Marks
- Shaping, Sharpening, Bluing Turning Tools
- Correction: Fruitwood, Heartwood, Sapwood
- How to Fix Backrest for Lathe Upgrade
- Electric Chain Saw Recommendations
- Cutter Blade Tilt for Sheer Scraping
- Bowl Gouge Purchase Without Handle
- Setting the Angles for Sharpening Bowl Gouges
- Robust Lathe Recommendations

### FEEDBACK

### CALENDAR

### TIPS & TECHNIQUES

**Topic of the Month:** Grain issues

Often I speak about grain and always teach the benefits of grain orientation. I have taught a number of classes lately that confirms that for most turners the grain issue is not a priority and the result makes the process much harder than it needs to be. In the following explanation, I will be using a bowl gouge and only a bowl gouge.

I have said a million times, "Jamieson rule #1 is that it is easier to make a cut into the side of the tree than into the end of the tree". This seems to be a basic principle but many turners continue to turn using the tools going the wrong way to the grain. When we go the easy, correct way, to the grain we make nice shavings, when we go the wrong way we make sawdust. The first place we need this concept to work for us is in the roughing out or truing up process. The first question I ask myself when I pick up my gouge is, "Which way was the tree growing?" There are two basic ways to put a tree on the lathe: 1) With the tree grain running parallel to the bed, as we usually do when turning spindles or hollow forms and 2) with the grain running perpendicular to the bed, as we usually do when turning bowls.

The direction of the cut when the grain is parallel to the bed should be pushing the tool from the large diameter to the small or a better description would be to cut in a direction toward the centerline. With the tool rest parallel to the bed I push the tool forward into the wood. The bevel will follow behind the push cut on a line directly into the wood. The

trick here is to know when to stop. Don't let the wing hit the waste wood from the last cut and stop before you get too far out dangling over the tool rest. I usually use an underhand grip on the gouge and push into the wood by moving my thumb away from me toward the wood. There is no need for a firm grip. If a push cut is done correctly, it is a finesse thing not a strength thing. Let the tools do all the work and we just guide it gently. Each new cut has a new bevel support and will result in a notch or tool mark at the bottom of each cut. We work our way down the tool rest and across the tree, notch after notch. This makes the sharp edge go into the side grain fibers of the tree.

The direction of the cut when the tree grain is perpendicular to the bed is from right to left or left to right. With the tool rest parallel to the bed and the bevel lined up parallel to the tool rest we simply move along the tool rest left or right. This makes the sharp edge cut into the side grain fibers. The pass starts on one side of the tree and continues all the way to the other side of the tree all in one pass. Left-to-right or right-to-left both will be the same.

This same cut direction must be used while roughing out but any other time where you want to get a lot of wood away in a hurry and very effortlessly. What if we go the wrong way? We make sawdust not shavings. The wrong direction produces torn out fibers and a surface that has torn out grain that's not fun to sand away. The correct way is easier on the wood, it is easier on the tool edge, it is easier on the lathe, and it is easier on the body.

The next place the grain direction is critical is when we start making shapes or cutting on a bias to the tree. Again we must separate the rules depending on whether the tree is positioned side grain or end grain. With a side grain orientation to do a bowl we must cut from the bottom of the bowl to the rim and the cut will have supported fibers and go downhill. The opposite direction is needed on the inside of a bowl where we need to make the cut from the rim to the bottom, again supported fibers and downhill.

When we are in an end grain orientation we must cut from the largest diameter to the smaller diameter as we do with spindles or most hollow forms.

I don't know how to express the importance of this. Grain orientation is critical. The right way makes everything easy. The wrong way makes everything hard and has significant unpleasant, if not dangerous, consequences. This is not an easy concept to grasp and introduce to your daily turning methods. It takes new thinking and new methods sometimes to stay in grain integrity. I never go the wrong way, never, no matter what the circumstances. Grain is at the top of all my turning priorities.

## **QUESTIONS AND ANSWERS**

### **STEADY RESTS**

Lyle,

For bowls, 8" - 16", and hollow forms, what steady rest do you suggest?

Darrel

Hi Darrel, From Kansas,

I seldom use a steady rest. I don't need one usually and I don't want one most of the time. See my DVDs for all the info on chucking methods stability issues and vibration elimination. The only time I use a steady rest is when I turn my torso figures, often I have more than 200 pounds on my lathe. My steady rest is home built to handle the big work I need do. In the typical scale most people work in the steady rest is an obstacle. I prefer to prevent the vibration instead of putting the band aid of a steady rest that causes the domino effect of more troubles down the road. If I were to buy a steady rest I'd look for one with 4 wheels. Four wheels are needed for heavy work, and why use a steady rest on light work? What lathe do you have? This is a generalized answer, so let me know if you want me to be more specific.

### SIZE OF SHOP

Lyle,

I may have missed the mention but, what is the sq. ft. of your shop area? Great practical tip on managing the tools needing sharpening.

Thank you.

Mark S. from YouTube

Hi Mark, Location unknown,

My shop is bigger then I need because I have six lathes for teaching and I store and ship my tools from there. It is 24' X 40'. The nicest thing I believe is the 10 foot ceiling. My turning "cubicle" is smaller than a one car garage.

### CLEANING UP HOLLOWING TOOL MARKS

Lyle,

I went back and checked the instructions again. Yes, I did wax everything. I am going to send a couple of images of a small Pencil Pot that I turned and hollowed using your system. I seem to be doing fine except that I have difficulty smoothing the hollow form sides so that there are no ripples. I probably need a technique clue.

Thanks again! Hugh



Hi Hugh, Location unknown,

Great piece, nice job! The tool marks will get better with some practice. See the DVD again for tips. The laser gets it uniform to start and the wide brush of the left side of the cutters' sharpened edge will clean up all the

ridges. The wax on the boring bar, back rest, and handle gives you the fingertip control to clean it up leaving little or no sanding.

### **SHAPING, SHARPENING, BLUING TURNING TOOLS**

Lyle,

I'm burning tools badly, and would like some info about wheels and grinders. When I ordered your bowl and spindle gouges, we chatted a little about the Wolverine jig with regular VariGrind, and I got those.

My old grinder is a 6" running at 3450 rpm, and I got Norton white (Al Ox) wheels in 100 and 150 grit. So far, I've only used the 100 grit wheel, and before I ruin a good tool, I've tried to learn the mechanics of grinding by working on tools from a set I bought from Harbor Freight. They are almost impossible for me to reshape without turning them blue.

Do I need different wheels? Different grinder? Different speed? More diligent practice?

BTW, I'm pretty sure I did a good job setting the new wheels up to minimize wobble, and then dressing them true.

Thanks, Joe

Hi Joe, Location unknown,

Great question, there is a lot of misunderstanding on this issue. The grinder and wheels you have are fine. No need to buy any more equipment but if you do, I would get a slow speed grinder with 60 and 80 grit wheels. The 100 and 150 are on the fine side. The 100 is OK for sharpening but will not work well for shaping. The 150 is too fine for much of anything.

The burning or bluing of the edge of the tools is not a cause for concern. As long as you are using HSS tools the bluing will not take away the temper or hardness. Even red hot HSS is around 700 degrees and HSS will not be damaged until 1700 degrees and I doubt that you are even getting to red hot 700. If the old HF tools you are using for practice are carbon steel and not HSS than the bluing will damage them. You need to keep them cool and carbon steel tools are no longer used in turning because they do not hold an edge long enough.

OK, with that background information how do I shape and sharpen with the grinder you have. First, let's look at the original shaping. This will just take some patience. Go slow and keep the tool tip as cool as possible. I do not usually recommend quenching the tip in water with HSS but for shaping only, that will be the way to keep it cool. Grind a little shape and quench, grind a little shape and quench. Keep the grinding wheel dressed for sharp particles to do cooler cutting. Once the shape is done then you need to be slow and gentle when you sharpen. The fast speed grinder will take more metal off than you need, and heats up easily, so slow down with a very light touch against the spinning grinding wheel. At this point we just want to dress the bevel lightly and the edge will get sharp. The jig setup will keep the angle the same as the last time you sharpened, so it only takes a light touch now. It's all about repeatability, when you go back at exactly the same angles, you will take off very little metal. At this stage the tool will stay cool and not blue any more.

### **CORRECTION: FRUITWOOD, HEARTWOOD, SAPWOOD**



Hi Lyle,

Good newsletter as usual.

I question your use of the word fruitwood, from a forester's point of view! Fruitwood is defined as any wood from a tree that produces fruit-pear, cherry, apple, etc.

Sapwood is the wood below the cambian layer that provides for water flow and extends to the heartwood. Sapwood is usually lighter in color than heartwood-walnut being a good example, but not always.

Here is a little more technical information if you really want to be bored: "Sapwood is the living, outermost portion of a woody stem or branch, while heartwood is the dead, inner wood, which often comprises the majority of a stem's cross-section. You can usually distinguish sapwood from heartwood by its lighter color.

But, color in wood can be very misleading; not all heartwood is dark and not all dark-colored wood is heartwood. And, the relative amounts of sapwood and heartwood in any stem can vary greatly among individuals, species, and growing conditions. So, for a more accurate – and less specious – distinction, we need a more complete understanding of what wood is and how both sapwood and heartwood form. This won't hurt. All wood starts as sapwood. It is formed just under the bark by a thin layer of living cells known as the cambium, which produces bark cells to the outside and wood cells to the inside. Tree stems increase in girth during each year of growth because a new layer of wood cells is added inside the cambium. In good growing years, this new layer of wood can be many cells thick, and in poor years, it is relatively thin. Regardless of thickness, when any such growth occurs, the cambium moves outward to accommodate the new layers of wood forming inside. Sapwood – this newly formed, outermost region of wood – contains a variety of cell types, most of which are living and physiologically active. This sapwood is where water and dissolved minerals are transported between the roots and the crown of the tree and, to a lesser extent, where energy reserves are stored.

In young trees and young parts of older trees, all of the wood in the stem is sapwood. But as the tree gets older and its trunk increases in diameter, things change. No longer is the entire cross-section of the trunk needed for conducting sap. This, combined with an increased need for structural support, causes significant changes in the wood. The cells nearest the center of the trunk die, but they remain mostly intact. As these older sapwood cells age and die, they become heartwood. That is, they are altered to accommodate a shift in function. As residues of the once-living cells and additional chemical compounds from elsewhere in the plant accumulate in the heartwood, those cells cease to transport water or store energy reserves."

Keep making shavings!

Steve, from Michigan

Thanks Steve for the correct definitions and details.

### **HOW TO FIX BACK REST FOR LATHE UPGRADE**

Hi Lyle,

I purchased your hollowing system a couple of years ago, and I am now upgrading my lathe from a Nova DVR XP (16" swing) to a Magma-Titan

400 that has a 31" swing. The height from the base to the centerline is 400mm or 15.75".

Do I need to order a completely new backrest or can I purchase just the base plate section?

Cheers,  
Larry

Hi Larry from Washington State,

Nice to hear from you, "WOW!" and congratulations on the new lathe upgrade. That's a big lathe! There are a number of ways to upgrade the backrest to fit. First, is a riser block and long bolt to hold it on the new bed. This can be made out of wood or plywood that would be a pretty thick block and long bolt to raise it up another 8 inches. Second, you can go down to your local welding shop and have them remove the post from the horizontal safety bars and weld a longer  $\frac{3}{4}$  inch cold rolled post on it for you. Third, you can send me the old back rest and I can have a new one built for your lathe. I normally do not charge people to do this as long as they pay shipping, but your lathe is bigger than the standard models I have back rests made for and I would have to get a custom made rest made to fit your lathe. I get them made in large batches so there could be a wait and a significant cost involved.

With all that said there is another issue involved. What size hollow forms do you want to turn? My basic system is designed with the limitations of a 24-25 inch swing in mind and my jumbo boring bar will only do about 16-17 inches hanging over the tool rest without vibration. Your lathe sounds like it is capable of exceeding these measurements by a long way. Both the sizes capable and the likelihood of you putting too much weight on the lathe means my basic system will be dangerous to use for big things you are capable of turning. A hundred pound chunk of wood will not stop in a heartbeat if something goes wrong. People have been seriously injured with small pieces even killed; can you imagine the damage a large piece could do? Please sneak up on size and learn the safe way to handle it as you go. If you are intending to do bigger and bigger turning, you need a stronger hollowing system. I have built them for other big lathes; both the boring bars and back rest need to be beefed up to carry the loads. If you look at the Giant Hollowing System on my web site store you can see what I mean. Everything is bigger and stronger. I have had 200-300 pounds of wood on my 44 inch swing lathe, but it is built to take that workload with a two inch diameter spindle and I have a live center that is pressed on my tailstock quill that has a  $\frac{3}{8}$  inch diameter bolt for a center pin. The process is much different to do it safely. Be careful!

### **ELECTRIC CHAIN SAW RECOMMENDATION**

Do you recommend an electric chainsaw? I'm in the market to buy one for roughing blanks. Do they have enough power and what brand do you recommend? Thanks. Great video series!

YouTube generated question, location unknown

You can buy a good one that will last the rest of your life. Big brand names will cost \$200-300. Or you can do as I do; I consider it disposable and buy a cheap model for \$60-\$70 from a big box store or Sears.

Knowing it will only last a few years but I use it a lot.  
Thanks for the feedback.

### **CUTTER BLADE TILT FOR SHEER SCRAPING**

Lyle,

I recently bought a Sorby RS222 Scraper blade for my hollowing system. Should I use this blade flat on the boring bar or should I rotate the tool holder to use it more like a shear scraper?

We LOVE our Jamieson system! Got it from you about 18 months ago at the Symposium in Gainesville, GA and have turned at least one hollow form per month since then.

Thanks!

Hi Ron, From Georgia,

Thanks for your feedback, great to know you are having fun. I do not sell or use the teardrop scraper. What do you expect it to do for you? It can get you in trouble because it takes too much wood at a time. I use the left hand side of the 3/16 inch scraper or the carbide cutter to clean up tool marks. With the wax, I have the fingertip control; I need to make perfect shapes inside the hollow form.

With that said, if you use the larger scraper you should use it parallel to the floor as the other cutters are set up. Do not tilt it on an angle and try to sheer scrape inside the vessel. You will set yourself up to get a nasty catch and possible blow the piece up. If you tilt one side down to sheer scrape the other side is tilted up and will violate the 90 degree rule of scraping. This concept is taught in my Bowl Basics DVD but applies to scraping of all kinds, as inside a hollow form.

I have assumed here that you have taken advantage of the many resources I offer to understand the hollowing process. If this is not clear to you, give me a call and we can chat about the details needed to be safe with it.

### **BOWL GOUGE PURCHASE WITHOUT HANDLE**

Hi Lyle,

Could I order your Jamieson grind bowl gouge without a handle and would I save a few dollars?

**(JAMIESON GRIND BOWL GOUGE \$89.00, 5/8" diameter HSS Sheffield high quality English steel).**

By the way, your carbide cutter that I bought a few months back works like a champ! Another happy turner!

Thank you, Jon

Hi Jon location unknown,

Thanks for the feedback. The bowl gouge comes with the handles already pressed on from Crown. They can be knocked off to use the Thompson or other handles if you want. Sorry no discounts are available, the handles are only worth a couple bucks and I have no use for handles alone.

### **SETTING THE ANGLES FOR SHARPENING BOWL GOUGES**

Hello Lyle,

I've got to tell you that I think your videos are top-notch! I have enjoyed them and have learned an enormous amount from them as well. I have a



question regarding your sharpening section.

In that section of your video you use a bowl gouge that is already set to your preferred angle to set the basket distance and the jig angle to get the desired grind angle at both the tip and the side of the gouge. It acts as a sort of template. However, what is one to do when one has a bowl gouge sharpened at a *different* angle? I'd like to give your 62\*-65\* angle a try, and I have a protractor to set the angle at the tip. The protractor sits in the bottom of the flute. As I can't rest it there when checking the sides, how can I check the angle at the sides to determine if I need to move the basket?

Thanks,

Regards, Glen

Hi Glen from Texas,

Thanks for the feedback on my teaching. Great question, the side grind angle is not measurable. There is no way to use the inside of the flute because it is rounded and besides the angle changes from the tip to the corner of the wing, so it is a moving target. The side angle is important to allow you to do all four cuts the way I show them used in my "Bowl Basics" DVD.

How do you get there? You need to see it or borrow one from another club member to set your jig correctly. My side angles are tilted in on a slight slant. It is next to impossible to capture in a photo too. David Ellsworth and I use the same jig set up. So find a Jamieson grind or Ellsworth grind bowl gouge to use as a template to set your jig. I grind mine different than David but the angles are the same. I grind David's hump off.

Short of physically having a gouge to set your jig, you can come close with most grinders by setting the basket, or pivot position, about 7 inches away from the grinding wheel. Put a ruler on the grinding wheel parallel to the floor and sight down into the basket (sliding arm position) and move it in or out until it is 7 inches away. All grinders will be slightly different but this will be a close starting point. Then go back and re-set your tip angle by adjusting the jig arm as I show in the DVD and YouTube clip.

Another option, of course, would be to buy my bowl gouge and get it set up right from the get-go. ☺

## **ROBUST LATHE RECOMMENDATIONS**

Lyle,

I am a retired professor who has been woodworking for many years. I just started turning a few months ago. I began by turning pens. My website is <http://www.thepenprofessor.com/>.

I started turning small bowls a few weeks ago. It's great fun. So far, I have sold ONE. I have collected several DVDs, by Glenn Lucas, Tobias Kaye, Mike Mahoney, Richard Raffan, David Ellsworth and so on. I find your DVDs to be the most informative BY FAR. The others are excellent, but amount mostly to watching their technique, which is nice. However, your DVD's explain the principles behind turning, which is much more helpful for someone just starting out. (I guess my 43 years of teaching shows through here.)

Anyway, thanks for making these DVDs.

By the way, a great source for gloves is Lee Valley's anti-vibration gloves. Link is below. They are CHEAP and I find them very nice for both turning and bike riding.

<http://www.leevalley.com/en/wood/page.aspx?p=31205&cat=1,42207>

Finally, I am using a Delta 46-460 midi lathe, which I like a lot. However, I am thinking of investing in a full size lathe. I am leaning toward Robust-either the American Beauty (25 inch swing) or the Liberty (16 inch swing). Before spending 8-10K on a lathe, do you have an opinion on these two lathes? I promise to keep your comments to myself. I don't see myself turning massive hunks of wood, but I hate to limit myself to 16 inches when I don't really know what's in my future. Any thoughts on that?  
Steve

Hi Steve location unknown,

Thanks for your comments on my DVDs, glad you enjoyed them.

On the lathe question, go for the best, and that is the Robust American Beauty. I will publish this in my newsletter so I don't mind if people see my opinion. I have shared it many times before. My advice is to buy the best and biggest lathe you can afford. Most people upgrade many times as they grow in skill level, so why not start off with a good lathe and be done with it. The Robust has become the best in the turning world by using the best components, superior engineering, excellent fit and finish, and it is made in USA! As far as the swing capacity, even if you don't plan to do big turnings the swing will help when it comes to natural edge pieces, or rounding up square work, or doing multi axis turning. It's really nice to have space for the banjo to get under the work piece.

You are worth it! It's all about the fun and you can have more fun on a good lathe. What's the worst case scenario, you decide to take up fishing and turning is not fun anymore (not likely). You can sell a good lathe like that for about what you pay for it.

## FEEDBACK

Nice video Lyle! Thanks for posting I think I will subscribe, I like your videos and the way you explain things, thanks.

Erik, From YouTube, Location unknown

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This is a great video in a series of great videos. You probably save newbie turners like myself serious injury with your instruction. Strong work, Lyle.

Thank you! Clif, From YouTube, Location unknown

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Your system arrived today and is already set up per your instructions.

Started horsing around with a piece of scrap and all I can say is "WOW!"

Thanks, Steve, Location unknown

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Mr. Jamieson,

I will no doubt be making purchases in the future but I am still working my way through the newsletter archives and watching and re-watching all of the YouTube video. We share a belief of doing whatever is necessary to

turn out the best possible result but avoid working harder than necessary to achieve that best result. That focus of purpose and your very clear and carefully explained procedures are a great help to a beginning wood turner!

Thank you for all of your efforts, both teaching and creating tools and equipment, to make wood turning an easier process for all of us.

Hu, Location unknown

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FYI-I am experienced in spindle turning and new to bowls, thus recently picked up the Delta midi lathe, a bowl turner in my area spent some time with me and loaned me your DVD on bowl turning. I liked it so much I decided I wanted my own copy! A well done video!

Thanks, Charlie from Massachusetts

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Great video Lyle! Since I'm still a 'newbie' turner, I'm always looking for new and better ideas and you've convinced me I'm on the right track. I watch and learn from the professionals and "make some shavings"!!! :>) Thanks so much for your videos and sound advice! Safe turning to you! Sender unknown from YouTube

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WOW! We just finished watching "Bowl Basics". Being new to turning, we learned more in 4 hours plus than we have in the last year. I am looking forward to watching the hollow forms videos.

YouTube note location unknown

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## **CALENDAR**

Check out my website calendar for more specifics.

(<http://www.lylejamieson.com/information/calendar.asp>)

August, 2013 – Texas

September, 2013 – Georgia

October, 2013 – Ohio, Wisconsin

November, 2013 – North Carolina

February, 2014 – Tennessee

March, 2014 – New York

April, 2014 – Georgia

June, 2014 - Arizona

August, 2014 – Illinois