

KC Kendall's Notes on Bowls from Alan Lacer

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- Bowls:
 - Sharpen bowl gouge like fingernail gouge
 - Angles:
 - Detail/fingernail gouge – 25-30°
 - Bowl gouge – 55 to 60°
 - Second bowl gouge to get through “dead man’s curve” - 75°
 - Irish grind – long wings to do shear scraping, fairly steep angle – at least 60° up to 75° to avoid need for second gouge.
 - Scraper – low angle – at least 20°. Alan’s scraper is 45°. He sharpens, hones the top of the scraper to remove the (jagged) burr, and then burnishes. Hold the burnisher at no more than 5° off of vertical and lightly run along the edge.
 - Faceplate – most secure way to mount the bowl, along with support from tail stock
 - Don’t use wood screws, drywall, deck screws. Use #12 sheet metal screws or ¼” lag screws for really big bowls. A new screw is a spax (German) screw that is saw toothed. Also tap con screws for drilling into concrete work well. Go for a minimum of ½” penetration, not counting the tip.
 - Make sure the entire blank clears the tool rest by spinning by hand. Do a “bump start” - press start and off buttons in sequence just to make sure all is OK. Start at slow speed and add speed as you are comfortable.
 - Use pulling cut with handle held low and flute toward the outside of the bowl to remove wood and work toward the desired outside shape. When getting close to the rim cutting from the bottom of the bowl, stop the cut and cut in from the top to join the two cuts in order to avoid break out at the top of the bowl.
 - Use a scraper to clean off the bark and the cambium layers. These are very tough/abrasive and will dull your gouge. Make the base of the bottom flat to slightly concave. Mount the face plate. If planning to do a twice turned bowl, be sure to align two screw holes with the grain direction. These will not move as the bowl shrinks through drying and will be used as the starting point for remounting the face plate.
 - Alternate mounting methods – glue a waste block with medium viscosity super glue, or use good double faced tape. Suggest putting a layer of tape on each side at 90° to each other and putting together. Can use solve to release the tape when done.
 - If using a face plate, don’t remove material right up to the edge of the face plate. You can get this later when reverse chucking.
 - Level off the top of the bowl.
 - Take the face plate off of the top of the bowl and mount on the bottom. OK to use shorter screws – again want minimum ½” penetration not counting the tip.
 - Remount and true up the exterior of the bowl. Use a pull cut rubbing the bevel with the handle held low. Then raise the tool rest and do a shear scraping cut with the lower flute of the gouge higher up toward the top of the piece, again with the handle held low. Then use a shear/skew scraper for a finishing cut. Polish the top of the skew scraper. Don’t need a lot of speed for this cut. Hold the scraper at a 45° angle or higher.
 - Remove the pith. Use a scraper to smooth off the top of the bowl.
 - Drill out the middle of the bowl with a large bit – ½ to 5/8”. Must know how deep the screws are. Drill to slightly less than desired depth of the bowl. Allow 3/8 – ½” for finishing. Can use a drill bit with a #2 morse taper (find at flea markets). MSC is a good

source. Freud has carbide tipped forstner bits.

- To hollow, start in center and work out toward rim. Watch out for skating. Roll tool over and set the cut with the leading edge. Push the handle well to the right to establish the cut, then move handle back toward center and push gouge inward. Do concave cuts versus cuts that go straight in. A straight cut goes right into end grain – hard to do and can cause a catch.
 - If it is to be a twice turned bowl, leave thickness about 10% of diameter. Put in double paper bag to dry or dilute Anchor seal by 50% with water and coat ends. If you get cracks in a blank, put a wet paper towel on it to see if the crack will close. As it closes run some medium viscosity super glue into the crack and that may hold it together. Mist water on super glue to make it dry faster – it is moisture activated.
 - If going to finished bowl, work on the rim. Look for different treatments of rim: roll like a bead (like spindle turning), cut a cove in the top of the rim, taper in or out, do a sunken rim – round over and cut under, do a double bead on the top, put a rolled external lip.
 - Inside the bottom of the bowl it is easier to remove material with a scraper than with a gouge. Make the final pass with a gouge. Shear scrape from the center out. Want concave curve all the way to the bottom.
 - Net – movement of cut is from small diameter to large on the outside and large to small on the inside. Address end grain by going across it versus head on.
 - Reverse chucking: if you have used a face plate on the bottom, find the center by taking the bowl off the lathe. Then put a morse taper dead center with a point in the headstock. Screw the face plate back on until the bowl contacts the point of the dead center.
 - Create a compression chuck using a #2 more taper end mill holder, a drill rod, a pulley, some MDF glued to the end of the pulley, and some cushioning material (1/8” router mat material).
 - Measure and mark the location of the inside bottom of the bowl on the exterior. Also mark the depth of the faceplate screws. Use an awl to find the depth of the screw holes. The outside bottom of the bowl will fall between these marks.
 - Bring up the tail stock to hold the bowl against the compression chuck, using the center point on the bottom. Adjust the outside shape as needed in order to get to the desired thickness and to flow into the foot. You can only work on about the bottom ¼ of the bowl as the rest will have changed shape. Use a detail gouge to define the side of the foot. Can add a bead. Make a rim on the bottom – don’t make it too narrow of an edge.
 - Alan demonstrated the “trap system” to hold the bowl against a face plate in order to finish off the bottom of the bowl. It is good for doing extensive detailing of the bottom. The trap system has a face plate with holes into which you attach doughnut shaped wood circles to fit to the bottom of the bowl. Use slitted plastic tubing to line the internal rim of the circles. Can have multiple shapes of the circles to fit various sizes of bowls.
- Natural Edge bowl:
 - Logs with unusual shapes, like cedar, make nice natural edge bowls.
 - Can keep the pit area and use it as the waste area into which you screw the face plate.
 - Try to line up the top plane of the high sides of the bowl. Start with the blank between centers. Use a gouge to create a flat place on what will be the bottom of the bowl to put the face plate.
 - Need to have a ‘winter cut’ tree in you want the bark to stay on well. Otherwise, comes off easily.
 - Mount on face plate
 - First cuts with the gouge should come in from the top toward the bottom in order to

preserve the edge. Hold the handle low to rub the bevel. The start from the bottom (small to large) with pull cuts to create the outside shape.

- The more that you pull the curve of the bowl under, the more you get the illusion of an oval bowl.
 - Use a shear scraper on the outside for a finishing cut.
 - Remove the tailstock. Can drill out the center or turn it out.
 - Goal is to have the wall thickness the same all around. Once you establish the wall thickness on the upper edges, go slowly, only taking out the center material for a portion (~1" at a time) to maintain support and integrity for the rest of the bowl. Make sure the wall thickness is consistent as you go through the lower portion of the natural edge. Use a smaller gouge on the interior of the bowl as it has a lower impact. Watch out as you get toward the bottom and round the curve to the bottom. Can hit the top edge of the bowl. Switch to a scraper to do the bottom, or a gouge with a very high angle.
- End grain bowl:
 - If you turn an end grain bowl that has the pith in it, turn the bottom thin and the pith may not crack.
 - Good books:
 - Bruce Hoadley – Understanding Wood, 2000 edition.
 - If you want to do fine detailing on a bowl, must do end grain. Also get a different look of the grain on an end grain bowl. This includes a natural edge bowl that uses the exterior circumference of the tree as the natural edge.
 - Mounting options: Use a metal chuck, or do a jam chuck on a wood face plate. Can jam or glue the blank onto the jam chuck. The jam chuck has to be face grain.
 - Turning the outside of the bowl is spindle turning. Make the shape for the bottom of the bowl near the headstock. Put details on the outside.
 - Face off the top. Drill a hole in the center to about ½" less than the final bowl depth. Use a scraper or a spindle gouge or to hog out the material. Then use a ring tool on the bottom of the bowl and on the portion than transitions to the side. Then use a shear scraper with a light burr on the sides. Point the flute of the hook tool to about 10 o'clock – 11 o'clock at the most.
 - Using the hook tool: sharpening the tool is key. Hone as much as possible. When can't hone to sharpness in a minute or less, then sharpen. Rub the bevel in the center of the bottom to start, pulling the handle low and into the body. Once the bevel starts rubbing, begin to push the handle laterally away from the body, keeping the bevel rubbing. Don't need speed on the lathe to do this – slow the lathe down and slow down the feed rate of the tool. Use the left hand to create a pivot point. Use a ½" scraper to do shear scraping on the inside.