

Dennis Belcher - July 2023

MultiAxis Disc Sequence of operations

1. Blank should be a minimum of 1 7/8"
2. Waste block should be exactly the same thickness as the blank and approximately the same width.
3. Cut grocery sack into strips
4. Glue waste block to blank being careful to align the waste block with the side of the blank. Use Elmer's School Glue (white)
5. Use Rubber Cement to glue the template to the blank. Take care to align the template on the blank
6. Drill 3/8 inch hole through waste block into blank to the appropriate spot on the template.
7. Cut the blank (with waste block attached) to the rough cut line on the template.
8. Mount the sawn blank on the lathe. Mounting can be vacuum chuck, face plate with waste block, or Jumbo jaws. Bring up the tailstock and center the center point on the template with the center point of the live center.
9. True up the edge of the blank
10. Mark each side of the 3/8" hole with a pencil line the length of the waste block
11. Draw a third line centered between the 2 lines drawn in 10.
12. Form the first face creating a curve from the blank center to the outside line drawn in step 10.
13. Capture the curve of the face with a finger gauge. This will be used in creating a matching curve on the second face.
14. Use a large sanding block to detect and remove any ridges and valleys on the face.
15. Remove from the vacuum chuck and switch sides.
16. Center the blank and check by rotating. Bring up the tool rest to aid your eye in centering.
17. Form the second face creating a curve from the center to the outside line drawn in step 10.
18. Use the finger gauge to verify that the two faces have a similar curve.
19. Use the large sanding block to remove any valleys and ridges.
20. Marry the two faces to the line drawn in step 12.
21. Remove from the lathe
22. Use a chisel to "pop" off the waste block
23. Clean up residual glue with water and non woven abrasive.
24. Mount a chuck with a screw chuck and "Stiffener" if available.
25. Screw the disc onto the screw chuck
26. Sand both sides to the appropriate grit
27. Mark a small line 1 1/4 inches down from the top of the disc.
28. Form the mouth. Be sure to increase speed as the mouth is cut.
29. Periodically check that the disc is amounted true. Adjust low side with a sandpaper shim under low side if necessary.
30. Mouth should stop at at line from #27
31. Mount a drill chuck in tailstock
32. Drill to depth remembering to clear the chips frequently.
33. Check depth of hole with actual test tube before removing from the lathe.