

Chapter 28 Toolpath for Boat

Pocket and Flowline

A. Job Set-Up.

Step 1. MAIN MENU.

Step 2. Toolpaths.

Step 3. Job Setup.

Step 4. Set: **Y = 3 Fig. 1**

X = 9

Z = 1.5

Step 5. Click the Display Stock check box, **Fig. 1.**

Step 6. Click Fit Screen to Stock check box and click OK.

Step 7. Click the left front corner of the stock to move the origin. After you click the corner the red arrow will point to the corner.

Step 8. Click OK.

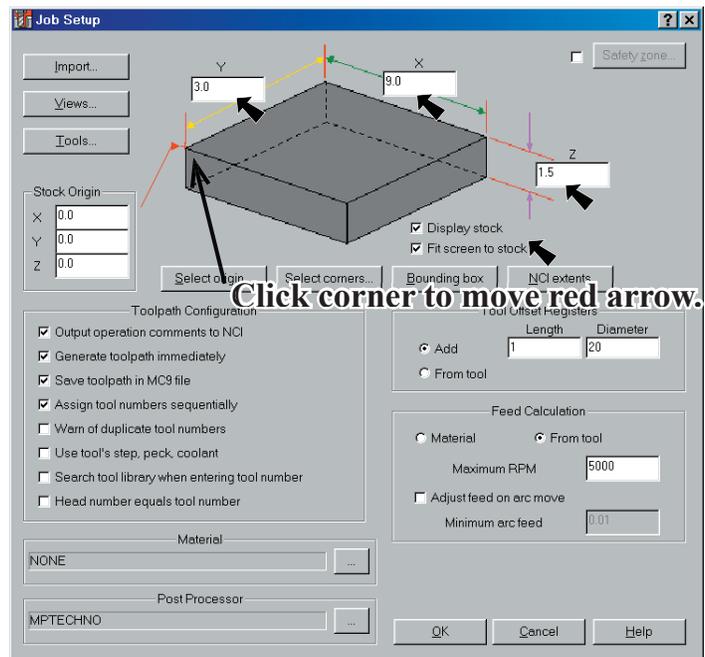


Fig. 1

B. Rough Toolpath.

Step 1. MAIN MENU.

Step 2. Toolpaths.

Step 3. Surface.

Step 4. Rough.

Step 5. Pocket.

Step 6. All.

Step 7. Surfaces.

Step 8. Done.

Fit on Screen ALT-F1 | Delete F5 | Repaint F3 | Zoom In F1 | Unzoom Page Down

Mastercam BOAT TOOLPATH Page 28-1

Pocket and Flowline

Brookside Middle School Tech Ed

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C. Set Tool and Params.

Step 1. **Right click** the large white area and click **Get tool from library...** Fig. 2.

Step 2. Click the Filter Button.

Step 3. Click None Button, Fig. 3.

Step 4. Click Endmill2 Sphere Button (second button top row), Fig. 3 and click OK.

Step 5. Find and click #252 1/4 Ball Endmill and click OK.

Step 6. Set the Feed Rate: **40** Fig. 4

Step 7. Set Plunger Rate: **20**

Step 8. Set Retract Rate: **60**

Step 9. Click the **Surface Parameters** tab at the top of the dialog box.

Step 10. Uncheck Retract.

Step 11. Set Feed Plane: **.1 Absolute** Fig. 5.

Step 12. Set Stock to Leave: **.02**

Step 13. Click the **Rough Pocket Parameters** tab at the top of the dialog box.

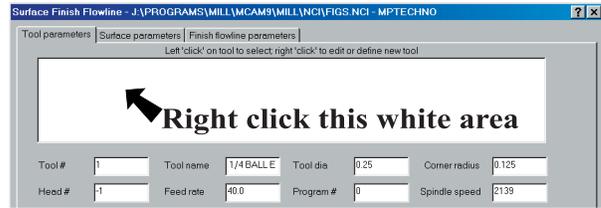


Fig. 2

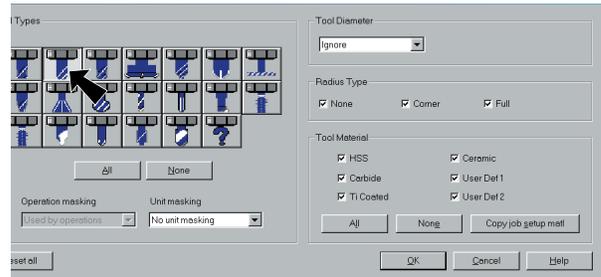


Fig. 3

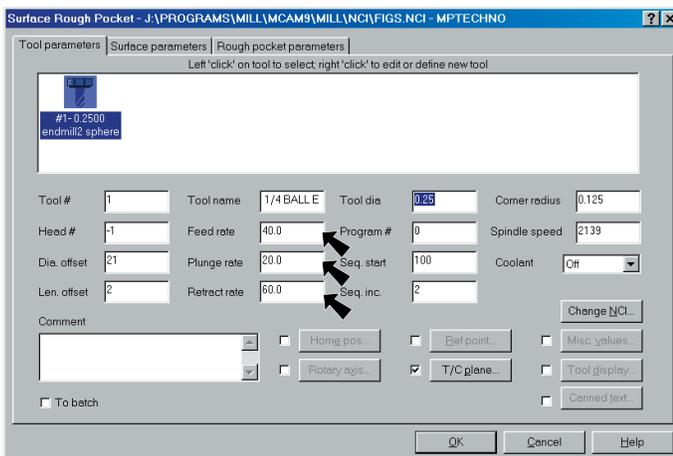


Fig. 4

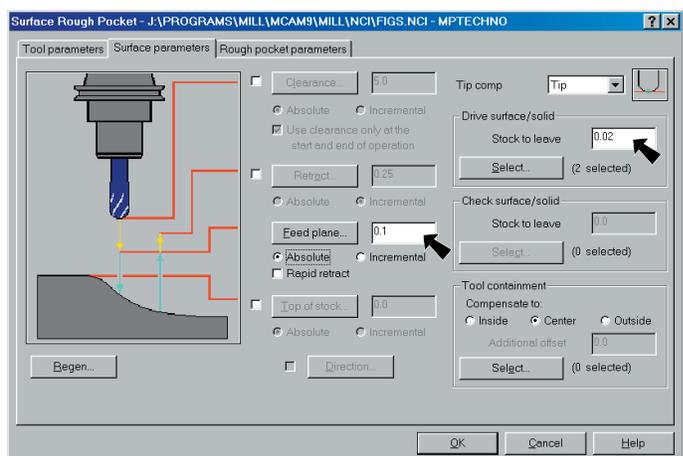


Fig. 5

Fit on Screen ALT-F1 Delete F5 Repaint F3 Zoom In F1 Unzoom Page Down

Step 14. Set Max Stepdown: .15 **Fig. 6**

Step 15. Click the Cuts Depths button.

Step 16. Set Adjustment to Top Cut: .1, **Fig. 7** and click OK.

Step 17. Click OK.

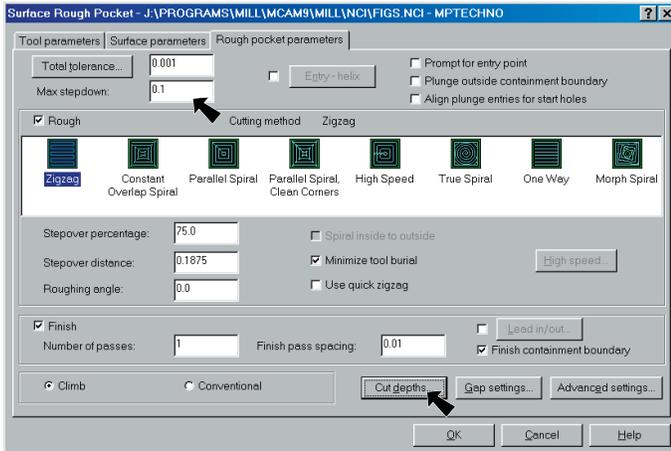


Fig. 6

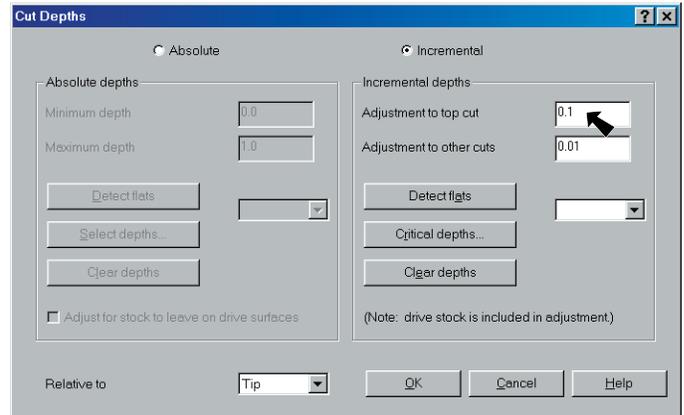


Fig. 7

Step 18. Click the top lines of the block, 1, 2, 3 and 4 in order, **Fig. 8**.

Step 19. End Here.

Step 20. Done.

D. Finish Toolpath.

Step 1. Use **Alt-T** to remove the toolpath display.

Step 2. MAIN MENU.

Step 3. Toolpaths.

Step 4. Surface.

Step 5. Finish.

Step 6. Flowline.

Step 7. Click one surface, **Fig. 9**.

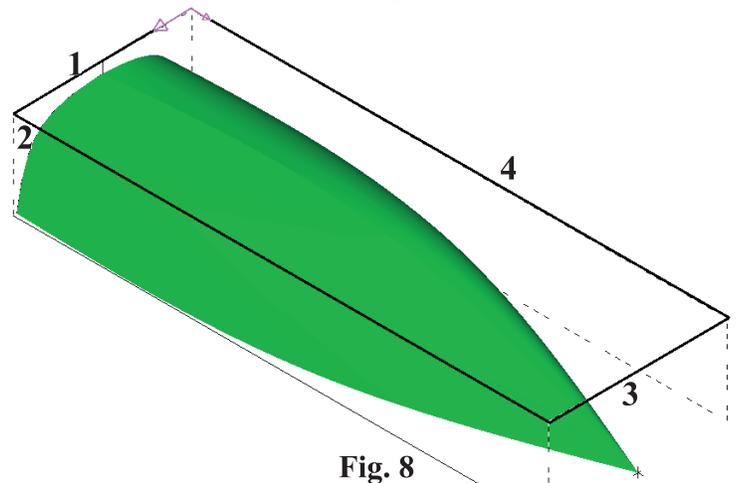


Fig. 8

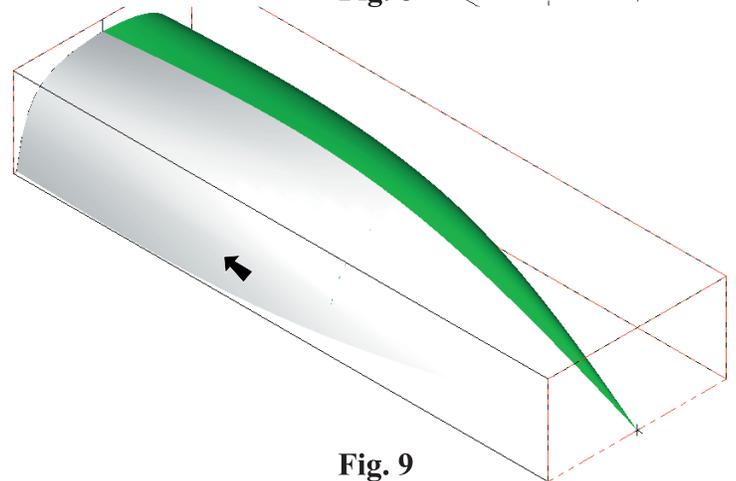


Fig. 9

Fit on Screen ALT-F1	Delete F5	Repaint F3	Zoom In F1	Unzoom Page Down
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Step 8. Done.

Step 9. Set the Feed Rate: **40** **Fig. 10**

Step 10. Set Plunger Rate: **20**

Step 11. Set Retract Rate: **60**

Step 12. Click the **Finish Flowline Parameters** tab at the top of the dialog box.

Step 13. Uncheck Flowline Motion for Gouge, **Fig. 11.**

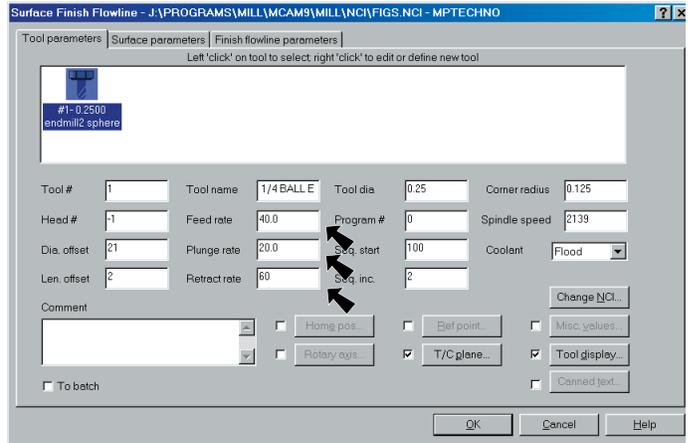


Fig. 10

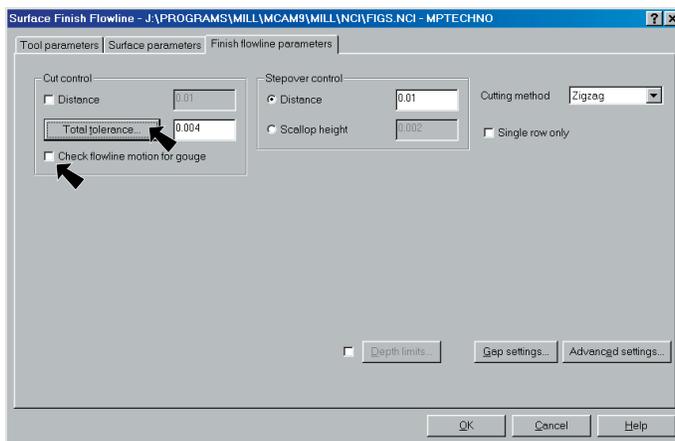


Fig. 11

Step 14. Click the Total Tolerance Button.

Step 15. Set Filter Ratio: **2:1** **Fig. 12**

Step 16. Set Tolerance: **.004**

Step 17. Uncheck Create Arcs to XZ.

Step 18. Uncheck Create Arcs to YZ and click OK.

Step 19. Click OK.

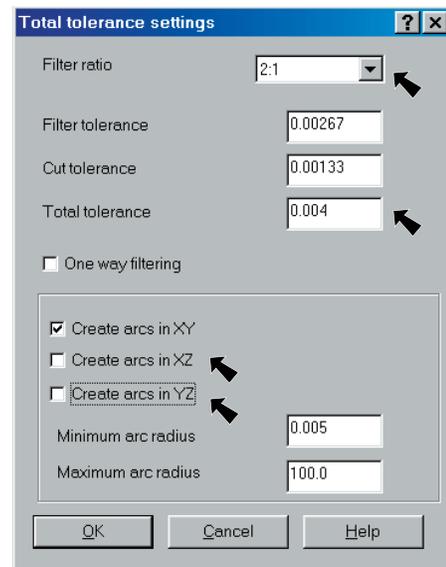


Fig. 12

Fit on Screen ALT-F1	Delete F5	Repaint F3	Zoom In F1	Unzoom Page Down
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Step 20. Click OK to error message.

Step 21. Cut Direction. Click until the gray lines are running parallel to the length of the boat, **Fig. 13**.

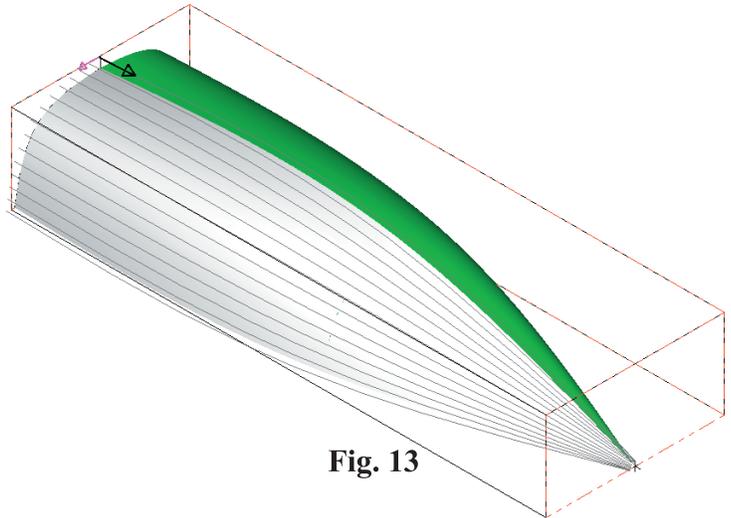


Fig. 13

Step 22. Step Direction. Click until arrow is at top of boat.

Step 23. Click Start. Click until arrow is at top of boat.

Step 24. Done.

Step 25. Finish.

Step 26. Flowline.

Step 27. Click the other surface, **Fig. 14**.

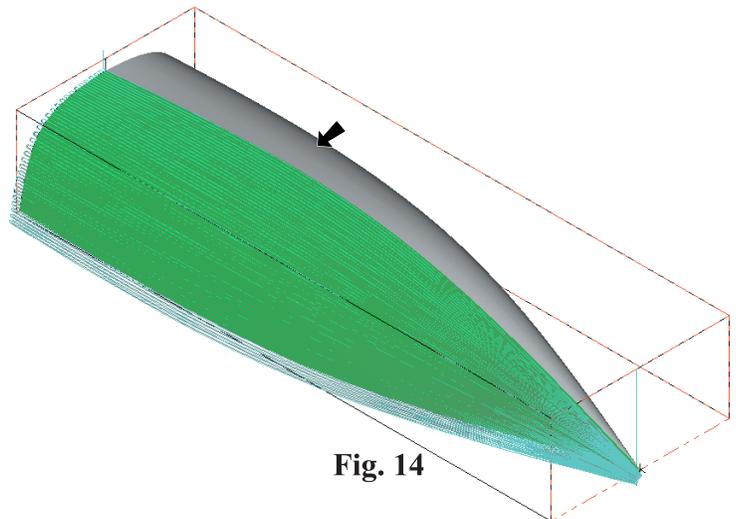


Fig. 14

Step 28. Done.

Step 29. Click OK.

Step 30. Click OK to error message.

Step 31. Done.

Step 32. Backup.

E. Backplotting.

Step 1. Operations.

Step 2. Click Select All button in the Operations Manager

Step 3. Click Backplot button in the Operations Manager.

Step 4. Run.

Step 5. Note the time to run the program displayed at the bottom of the screen.

Step 6. Backup.

F. Verify the Program.

Step 1. Click Verify button in the Operations Manager.

Step 2. Click the Play button in the Verify toolbar to start the machining.

Step 3. Close the Verify toolbar.

G. Creating NC Program (Posting).

Step 1 Backup.

Step 2. Click **Select All** button in the Operations Manager

Step 3. Click Post button in the Operations Manager.

Step 4. Check Save NC file check box.

Step 5. Click OK.

Step 6. Click Save to use same filename.