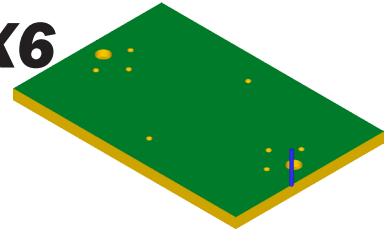


SolidWorks 12 to Mastercam X6




A. Open File in Mastercam X6.

Step 1. If necessary, save your **BASE** file in SolidWorks.

Step 2. In Mastercam X6, click File Menu > Open.

Step 3. In the Open dialog box set **Files of type** to **SolidWorks Files**, select your **BASE** file and click **Options**, Fig. 1.

Step 4. In the SolidWorks File Params dialog box, check **Edge curves** and click **OK** . Click **OK** in Open dialog box.

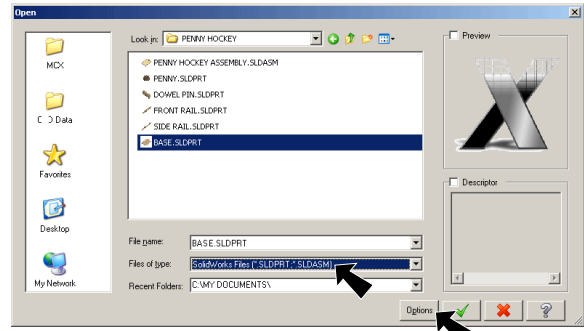



Fig. 1

Step 5. Change to the Isometric View. Use  or **Alt-7**.

Step 6. Click **Fit**  or use **Alt-F1** to fit, Fig. 3.

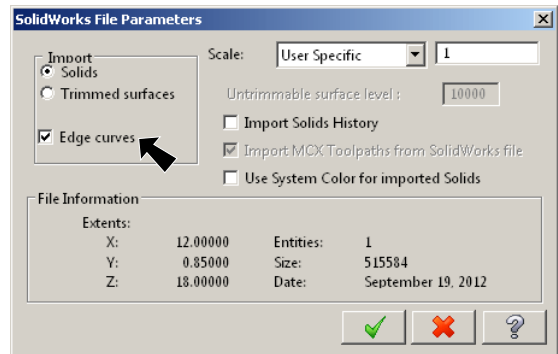


Fig. 2

B. Confirm Units are Inches.

Step 1. Confirm in the bottom right corner of the display the units are **Inch**, Fig. 3.

C. Save Your File.

Step 1. Click File Menu > Save As.

Step 2. Key-in **BASE** for the filename and press **ENTER**.

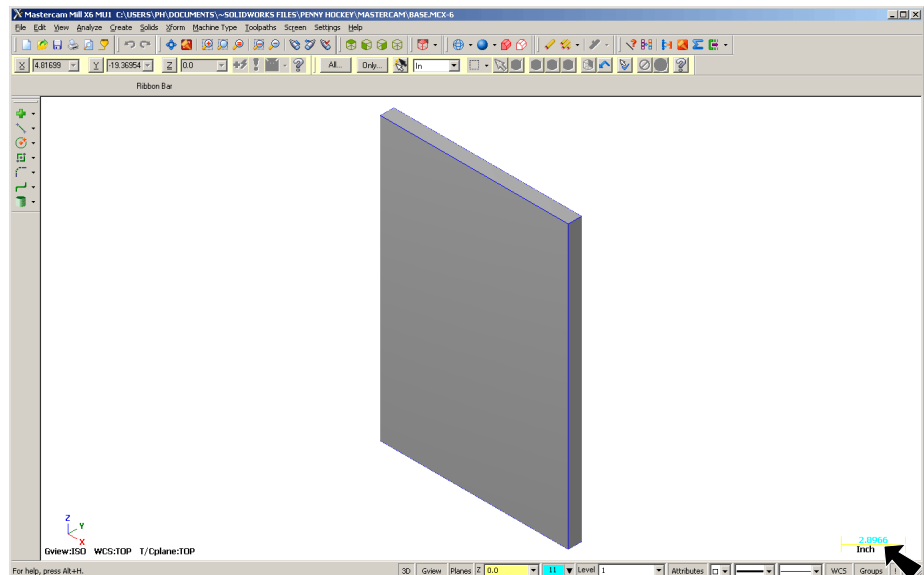


Fig. 3

D. Rotate Body Around Axes.

Step 1. Click the down arrow of the Set Planes button

 in the toolbar and click **Top (WCS)**, Fig 4.

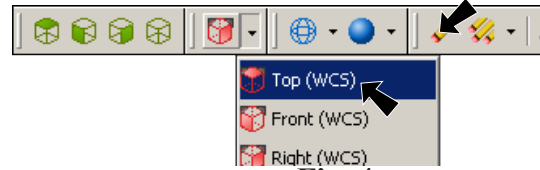


Fig. 4

Step 2. Click Xform Menu > Rotate.





Step 3. Click the All  in the General Selection ribbon bar, Fig. 5.



Fig. 5

Step 4. Click **All Entities** button Fig. 6.

Step 5. Press **ENTER** to except all entities.

Step 6. Set: **Move** 
1 for Number of Steps # 
-90 for Rotation Angle 
 Click **Apply** , Fig. 7 and Fig. 8.

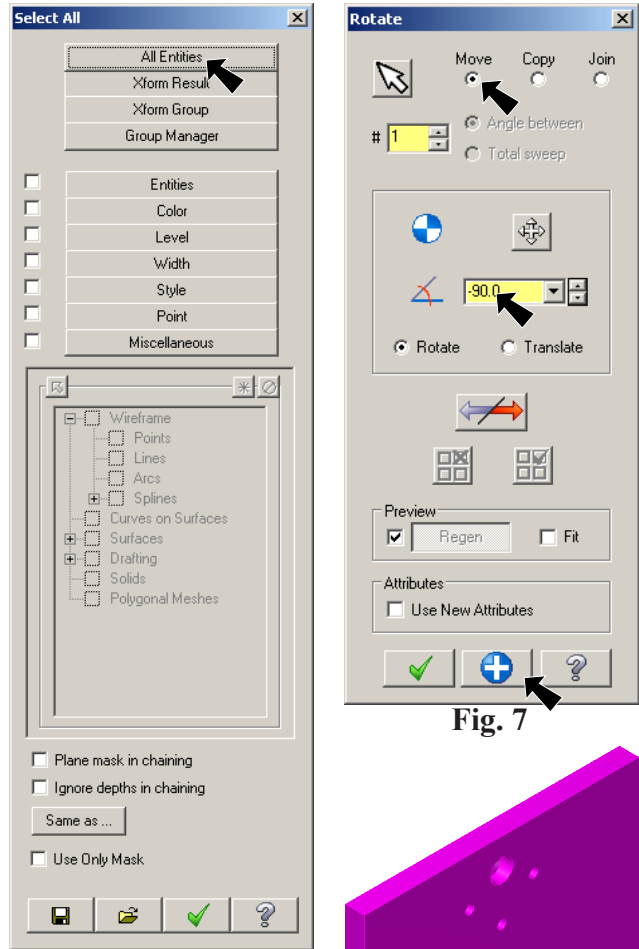



Fig. 7

Step 7. Click the down arrow of the Set Planes button  in the toolbar and click **Front (WCS)**, Fig 9.

Step 8. Click the All  in the General Selection ribbon bar, Fig. 5.

Step 9. Click **All Entities** button, Fig. 6.

Step 10. Press **ENTER** to except all entities.

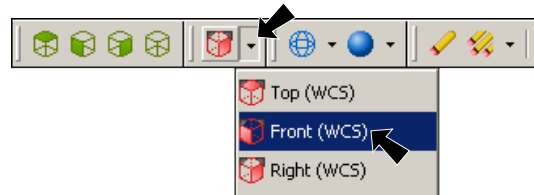





Fig. 9



Fig. 8

Step 11. Set: **Move**  **90 for Rotation Angle** , **Fig. 10.**
Click OK  in the Rotate dialog box.

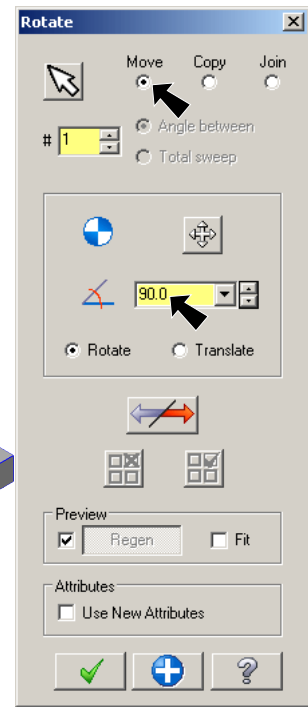



Fig. 10

Step 12. **Right click** the drawing area and click **Clear Colors**  from the menu or use **Alt-R C.**

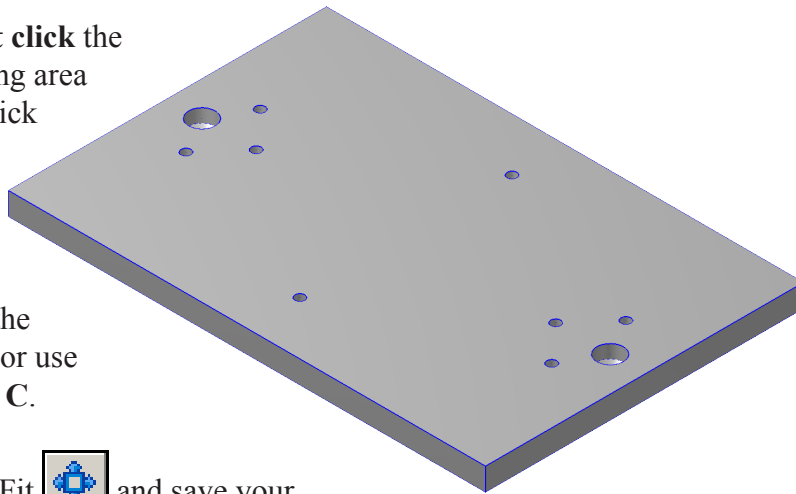


Fig. 11

Step 13. Click **Fit**  and save your drawing. Use **Alt-F S.**

Step 14. **Save** . Use **Alt-F S.**

E. Move to Origin.

Step 1. Display the origin. Use **F9** to show the axes, **Fig. 12.**

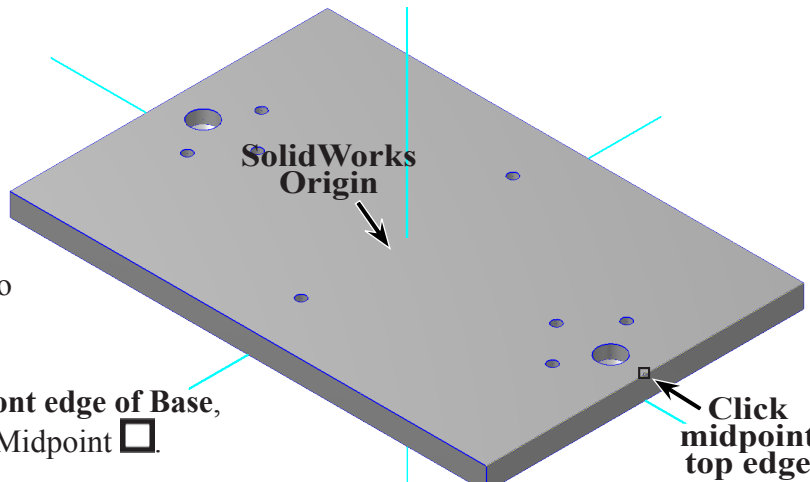





Fig. 12

Step 2. Click **Xform Menu > Move to Origin.**

Step 3. Click **Midpoint**  of **top front edge of Base**, **Fig. 12.** Be sure to snap the **Midpoint** .

Step 4. Click **Fit**  or use **Alt-F1** to fit.

Step 5. **Right click** the drawing area and click **Clear Colors**  from the menu or use **Alt-R C.**

Step 6. **Toggle axes off.** Use **F9.**

Step 7. **Save** . Use **Alt-F S.**

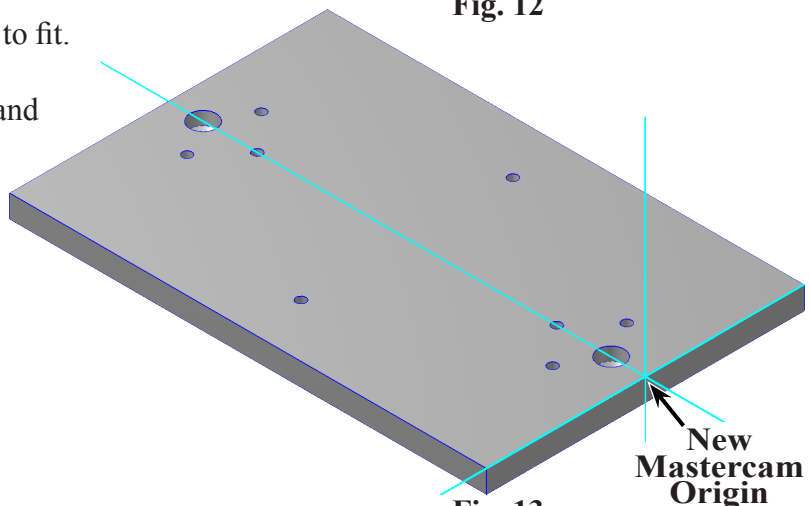


Fig. 13

F. Machine Type and Stock Setup.

Step 1. If necessary, display Operations Manager. Use **Alt-O**.

Step 2. If Machine Group is **not** displayed in the Operations Manager, **Fig. 14**, click Machine Type Menu > Mill > Default.

Step 3. Expand **Properties** (click the +) in the Toolpaths Manager, **Fig. 14**.

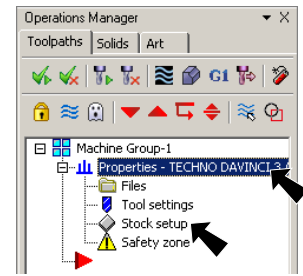


Fig. 14

Step 4. Click **Stock Setup** in the Toolpaths Manager, **Fig. 14**.

Step 5. Click the **right front top corner of the stock** to move the origin, **Fig. 15**. After you click corner the arrow will point to corner.


Step 6. Click **All Entities** button in the Stock Setup, **Fig. 15**.

Step 7. Confirm Stock Origin coordinates are:

X 0

Y -6

Z 0, **Fig. 15**.

Step 8. Click OK  in the Machine Group Properties. The Stock is displayed as red wireframe, **Fig. 16**.

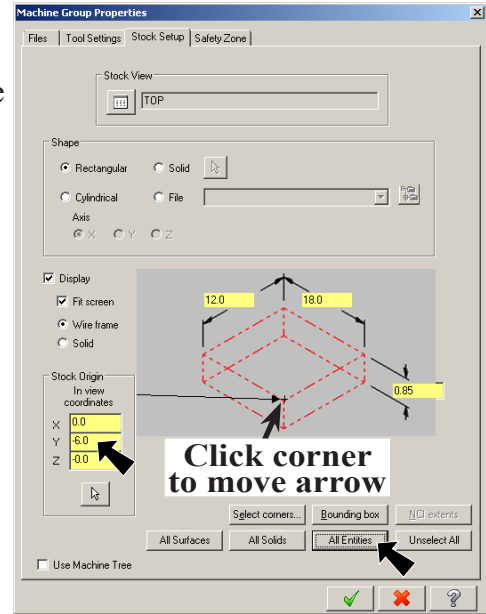



Fig. 15

G. Circle Mill Toolpath.

Step 1. Change to the **Top View**. Use  or **Alt-1**.

Step 2. Click Fit  or use **Alt-F1** to fit.

Step 3. Click Toolpaths Menu > Circle Paths > **Circmill**.

Step 4. Click OK  in the NC name dialog, **Fig. 17**.

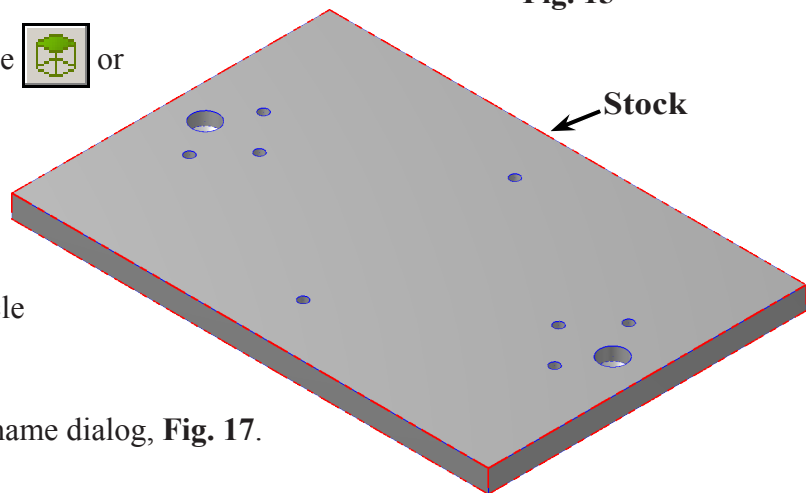


Fig. 16

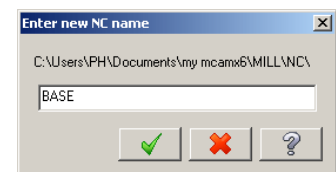


Fig. 17

Step 5. Click the **Entities** button in the Drill Point Selection dialog box, **Fig. 18**.

Step 6. Drag a select around all holes(arcs). Start in the upper left outside the holes(arcs) to surround holes(arcs), **Fig. 19**.

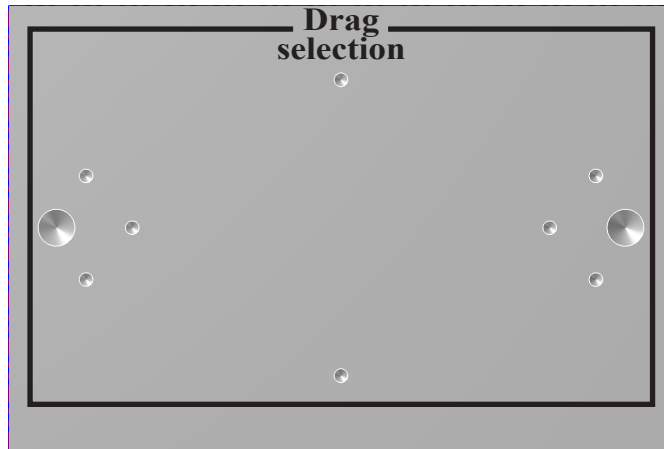


Fig. 19

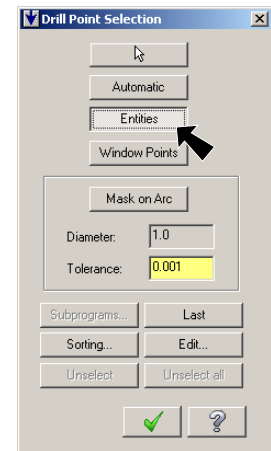


Fig. 18

Step 7. Click OK  in the Drill Point Selection dialog box, **Fig. 18**.

Step 8. Select **Tool** from the tree control and:

Click **Select library tool** button, **Fig. 20**.

Step 9. Click the **Filter** button, **Fig. 21**.

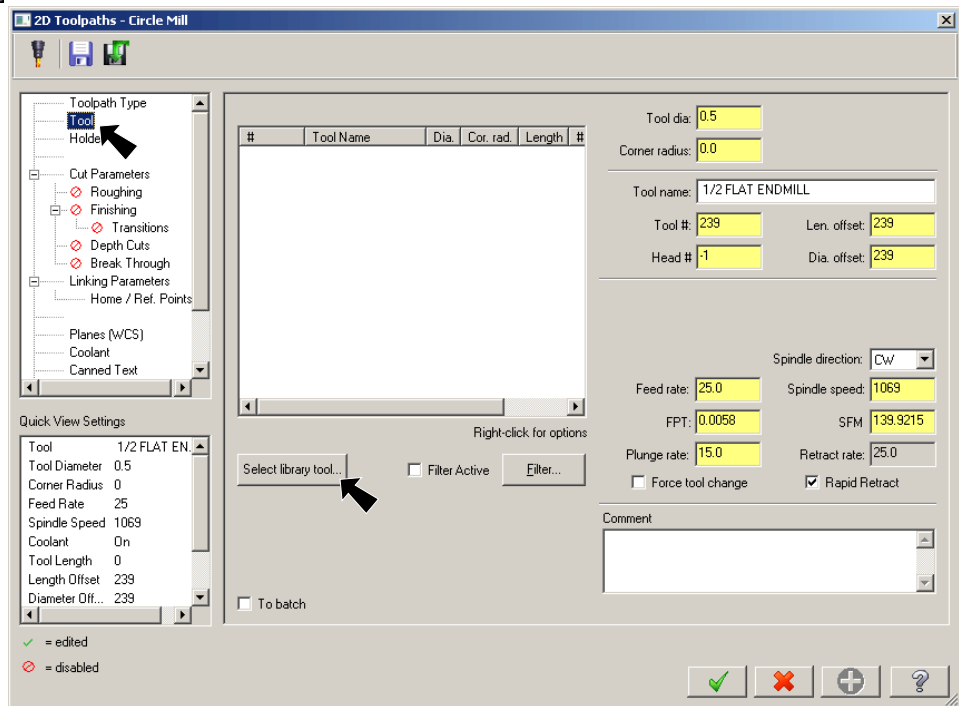


Fig. 20

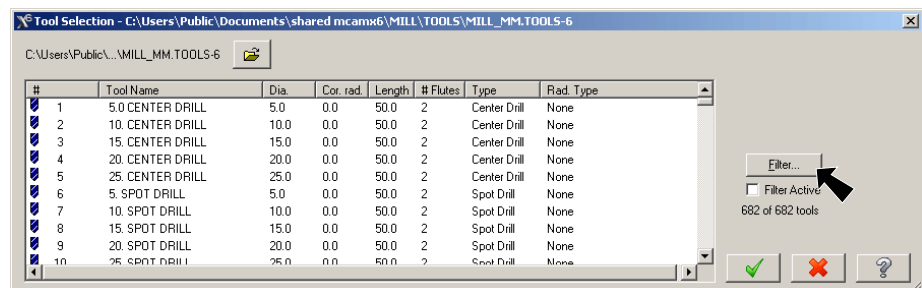


Fig. 21

Step 10. Click **None** button under **Tool Types**, Fig. 22.

Step 11. Click **Endmill1 Flat** button (first button top row), Fig. 22 and click OK.

Step 12. Click **235 1/4 Flat Endmill**, Fig. 23 and click OK.

Step 13. Back in **Tool** page set:

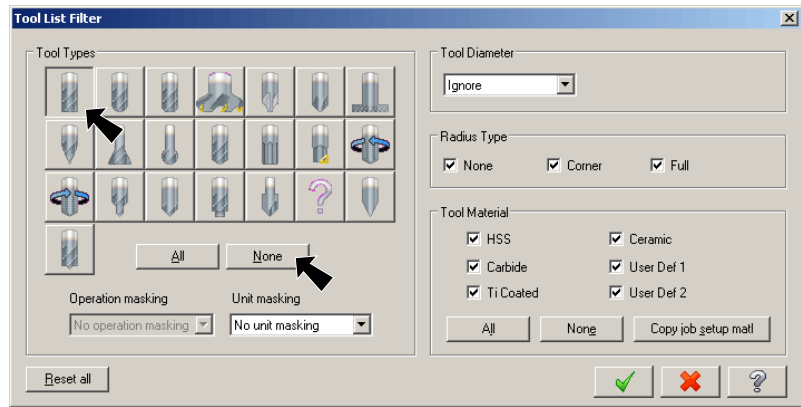


Fig. 22

Tool # 1

Head # 1

Feed rate 60

Plunge rate 30

Fig. 24.

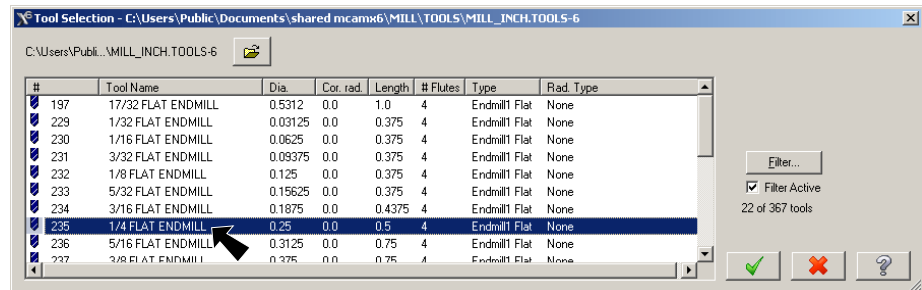


Fig. 23

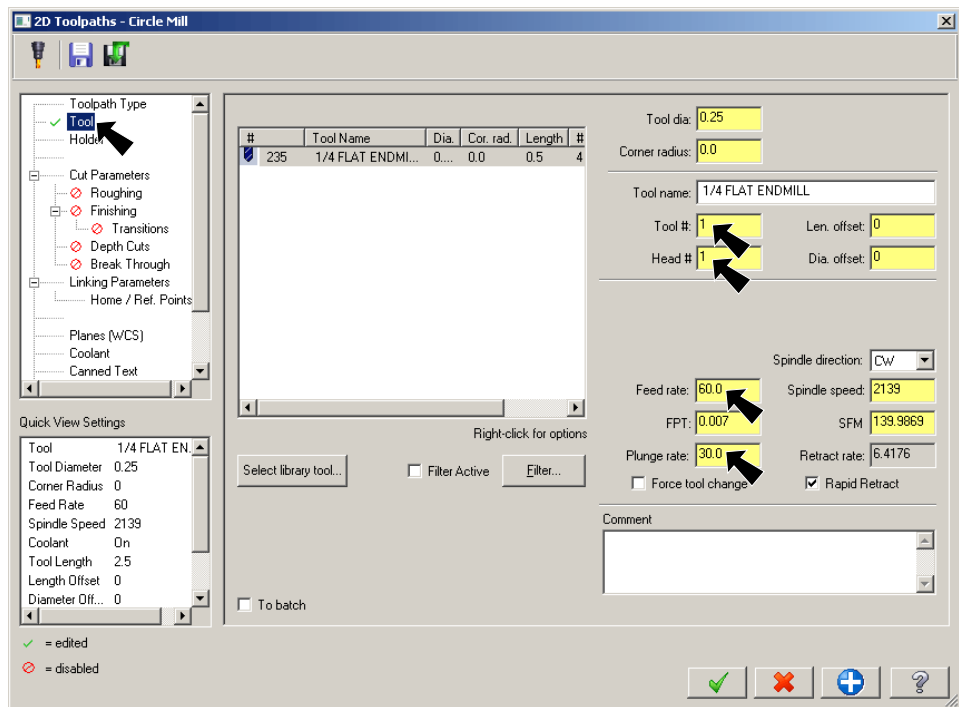


Fig. 24

Step 14. Select **Cut Parameters** from the tree control and set:

Compensation type Computer

Compensation direction Left

Tip comp: Tip

Stock to leave on walls and floors 0

Fig. 25.

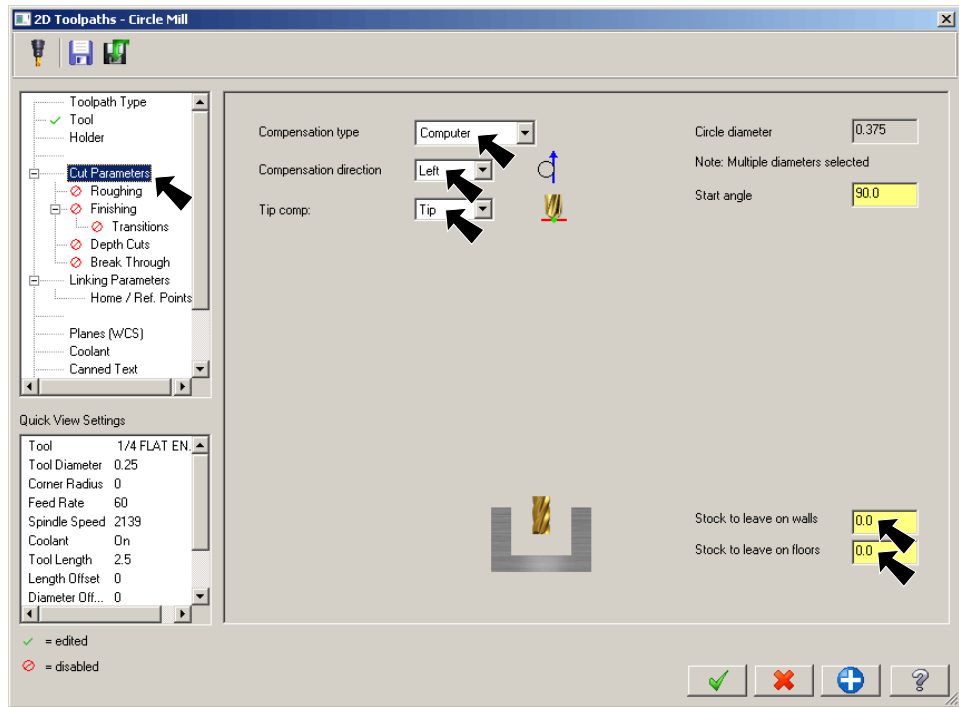


Fig. 25

Step 15. Select **Roughing** from the tree control and set:

Check Roughing

Plunge angle 30

Fig. 26.

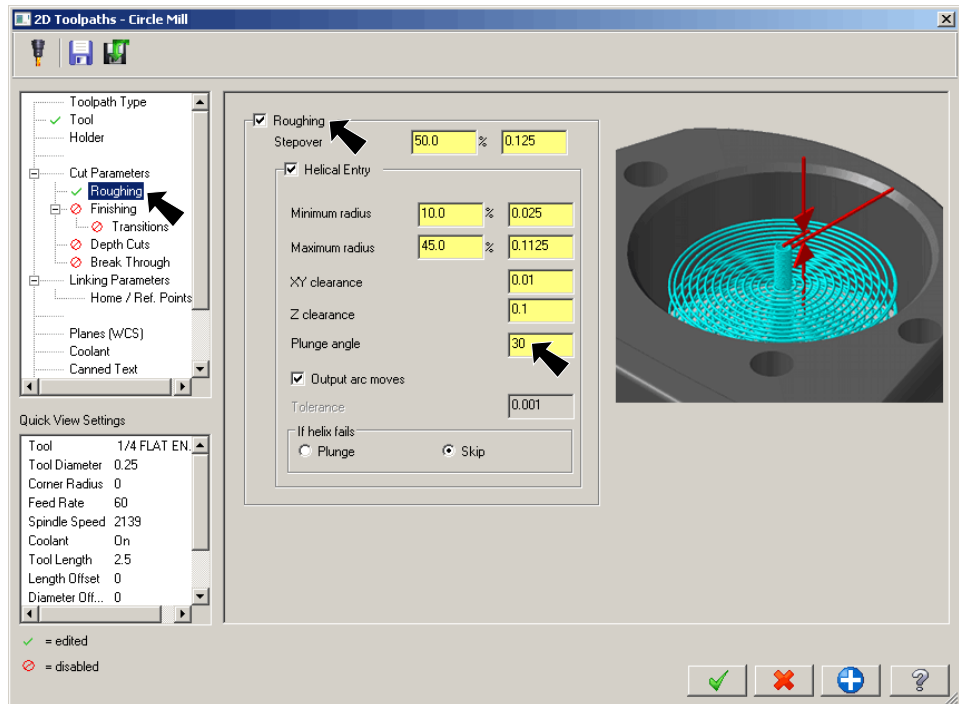


Fig. 26

Step 16. Select **Depth Cuts** from the tree control and set:

Check **Depth cuts**

Max rough step: .2
Fig. 27.

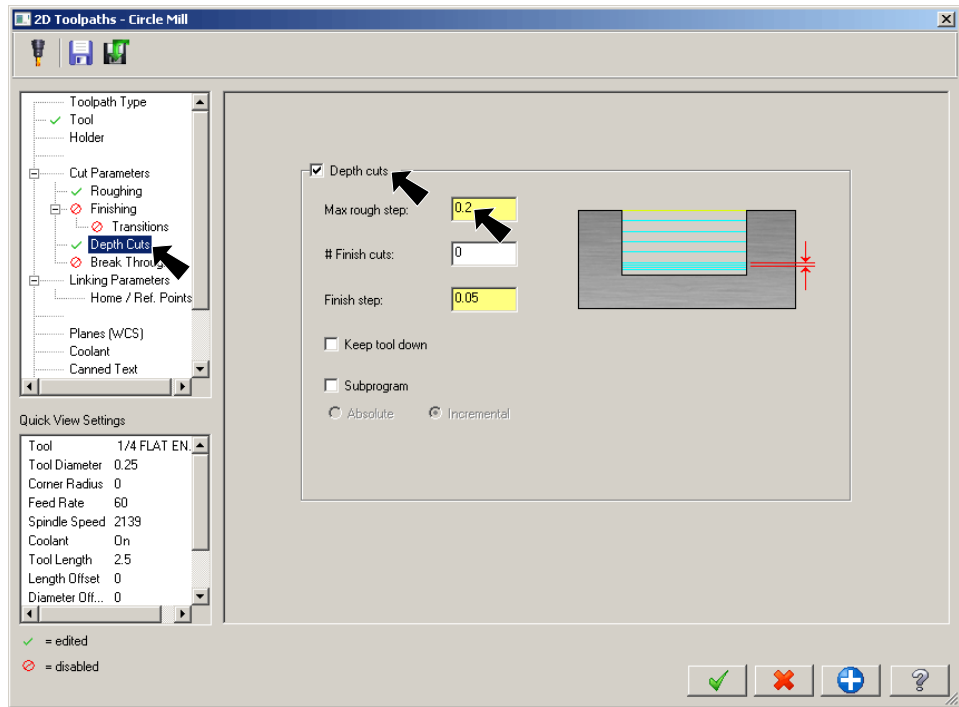


Fig. 27

Step 17. Select **Linking Parameters** from the tree control and set:

Check **Clearance**

Clearance .1

Retract .1

Depth -.5
Fig. 28.

Step 18. Click OK



Step 19. Save Use **Alt-F S**.

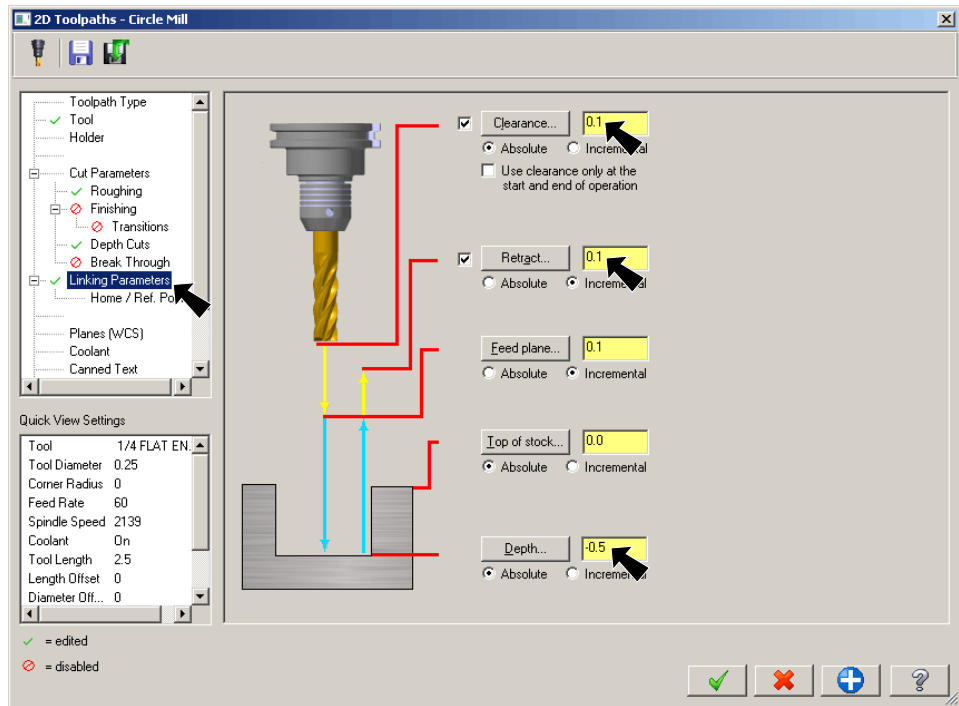


Fig. 28

H. Verify Circle Mill.

Step 1. Change to the Isometric View. Use  or **Alt-7**.

Step 2. Click **Verify**  in the Toolpaths Manager, **Fig. 29**.

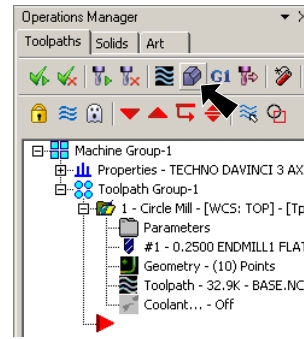



Fig. 29

Step 3. Click **Machine** quickly  in Verify dialog box, **Fig. 30**.

Step 4. Turn on (button depressed) **Simulate tool** .

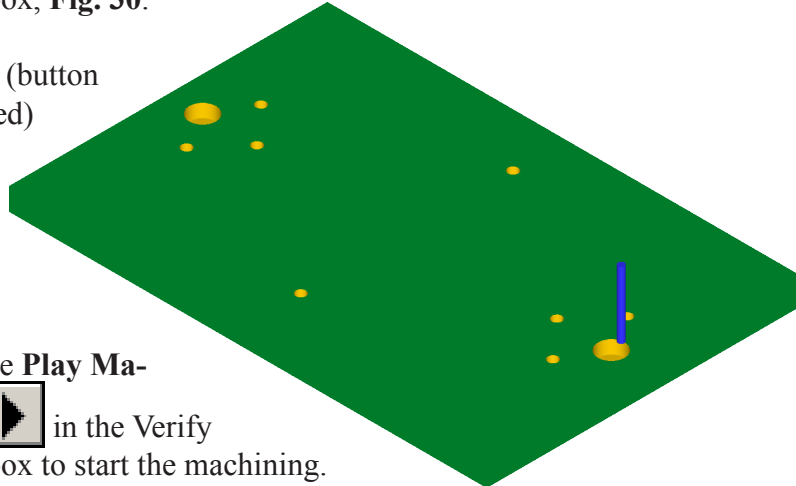


Fig. 31

Step 5. Click the **Play Machine**  in the Verify dialog box to start the machining.

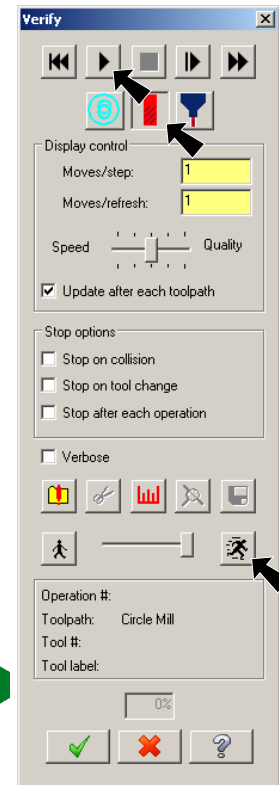


Fig. 30


Step 6. Click **OK**  to close Verify dialog box. Use **Alt-T** to turn off toolpath display.

Step 7. **Save** . Use **Alt-F S**.

I. Contour Toolpath with Tabs.

Step 1. Click Toolpaths Menu > **Contour**.

Step 2. Select **C-plane** in the Chaining dialog box, **Fig. 32**.

Step 3. Click the **Chain** button  (C) in the Chaining dialog box, **Fig. 32**.

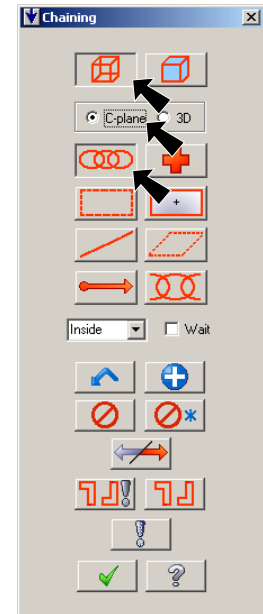
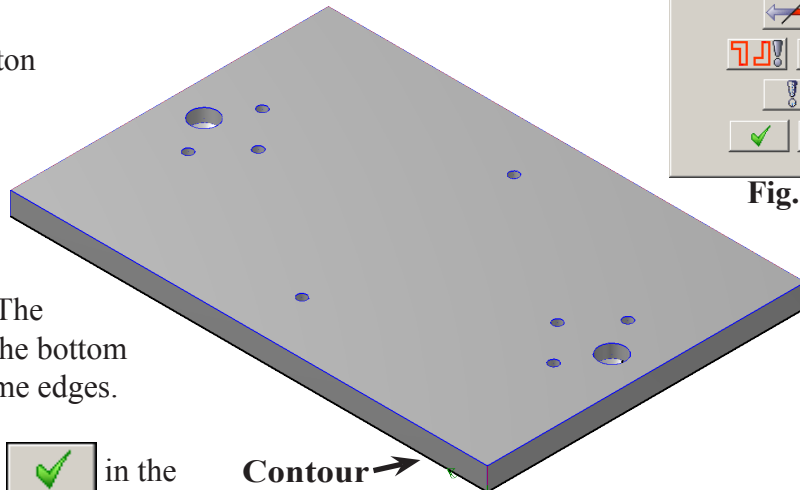



Fig. 32

Step 4. Click a **line on bottom edge**, **Fig. 33**. The chain should select the bottom rectangle of wireframe edges.



Contour chain **Fig. 33**

Step 5. Click the **OK** button  in the Chaining dialog box.

Step 6. Select **Tool** from the tree control and set:

Feed rate 60

Plunge rate 30
Fig. 34.

Step 7. Select **Cut Parameters** from the tree control and set:

Compensation type Wear

Compensation direction Left

Tip comp:
Tip

Stock to leave on walls and floors 0
Fig. 35.

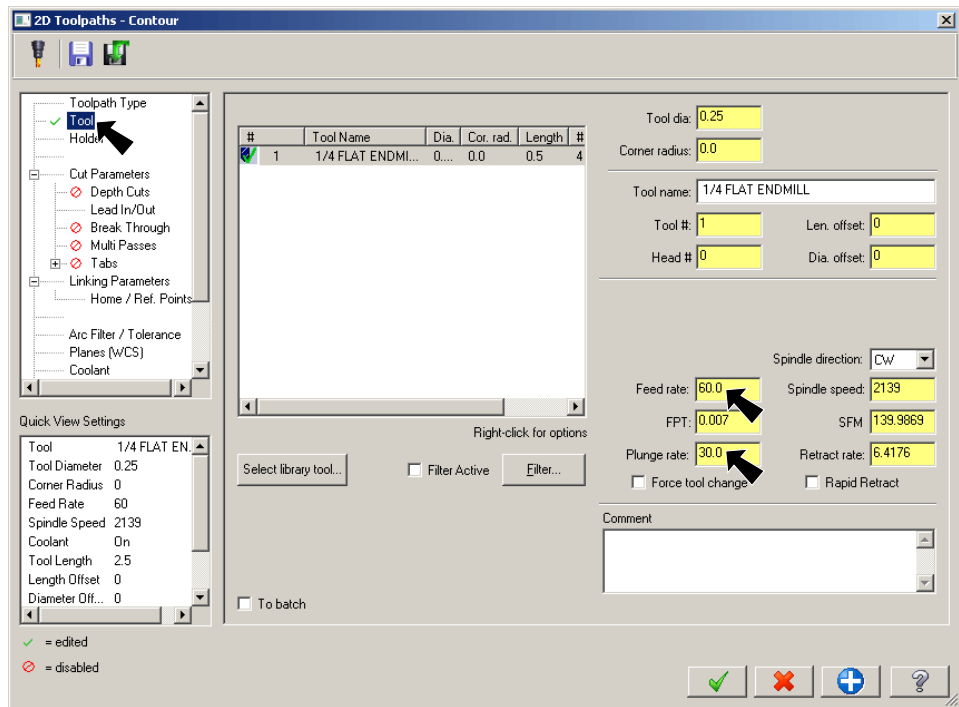


Fig. 34

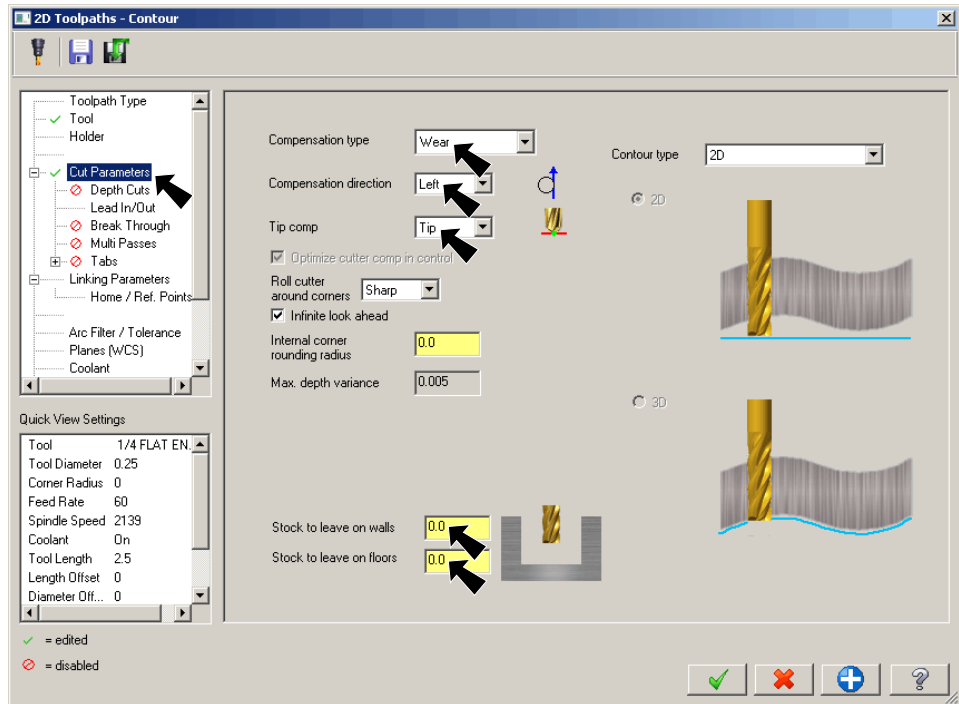


Fig. 35

Step 8. Select **Depth Cuts** from the tree control and set:

Check **Depth cuts**

Max rough step: .2
Fig. 36.

Step 9. Select **Lead In/Out** from the tree control and set:

Uncheck Enter/exit at midpoint in closed contours
Fig. 37.

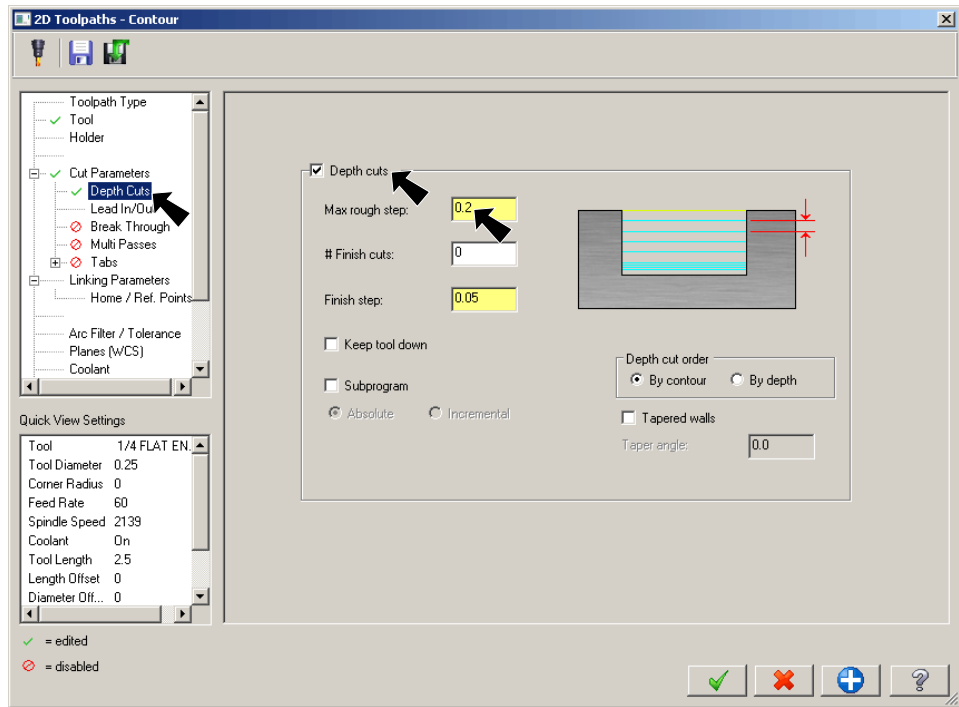


Fig. 36

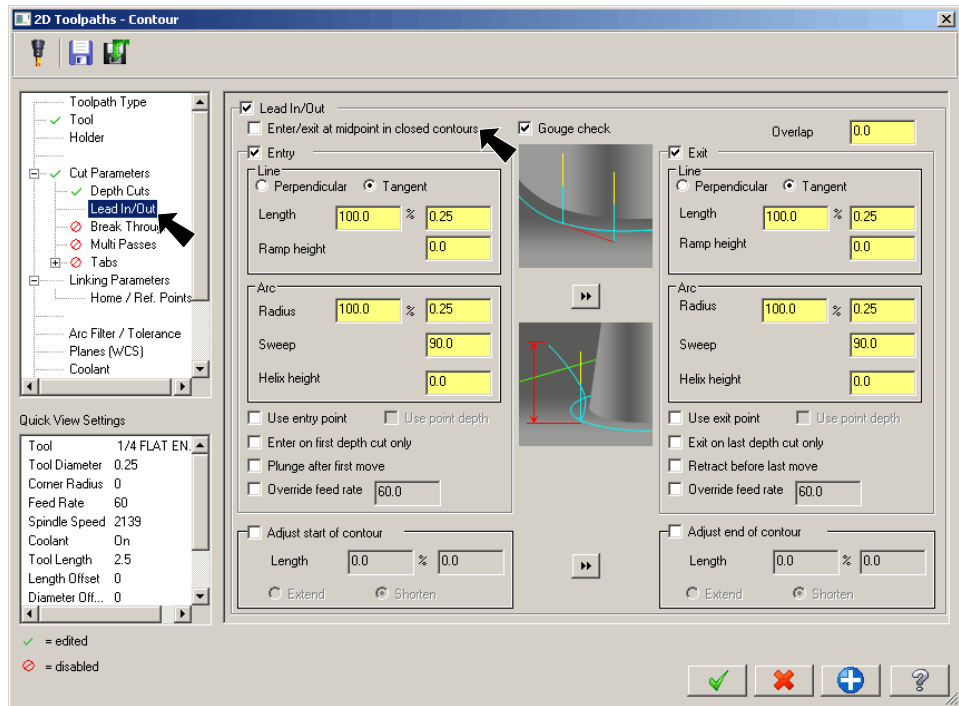


Fig. 37

Step 10. Select **Tabs** from the tree control and set:

Check **Tabs**

Select **Partial**

Select **Ramp moves**
Fig. 38.

Step 11. Expand **Tab** and select **Tab Cutoff** from the tree control and set:

Check **Cutoff operation**

Select **Separate operation**
Fig. 39.

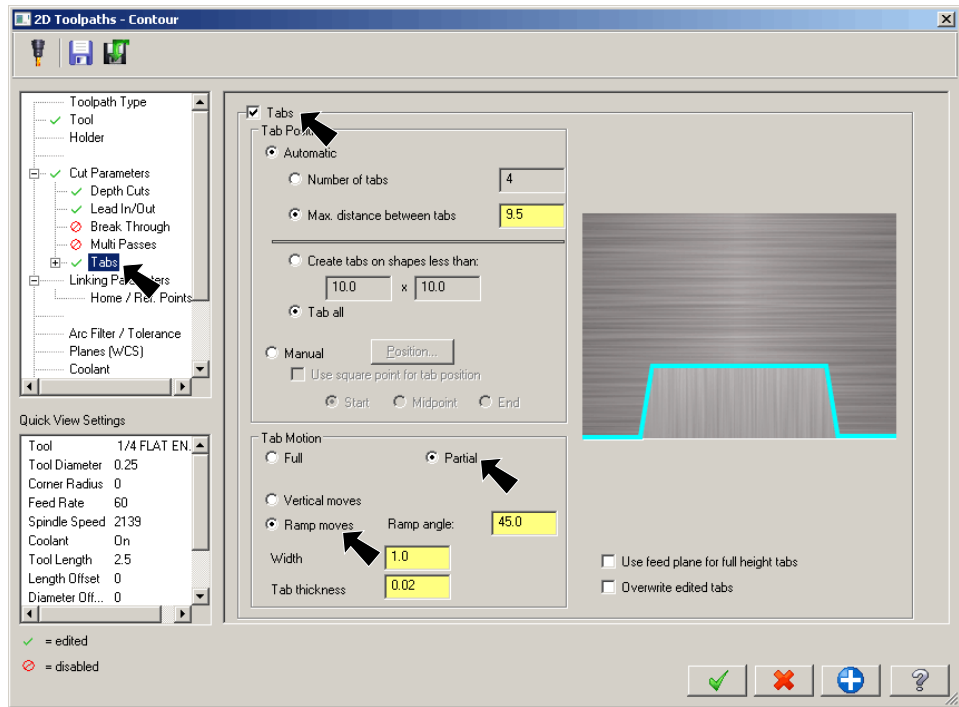


Fig. 38

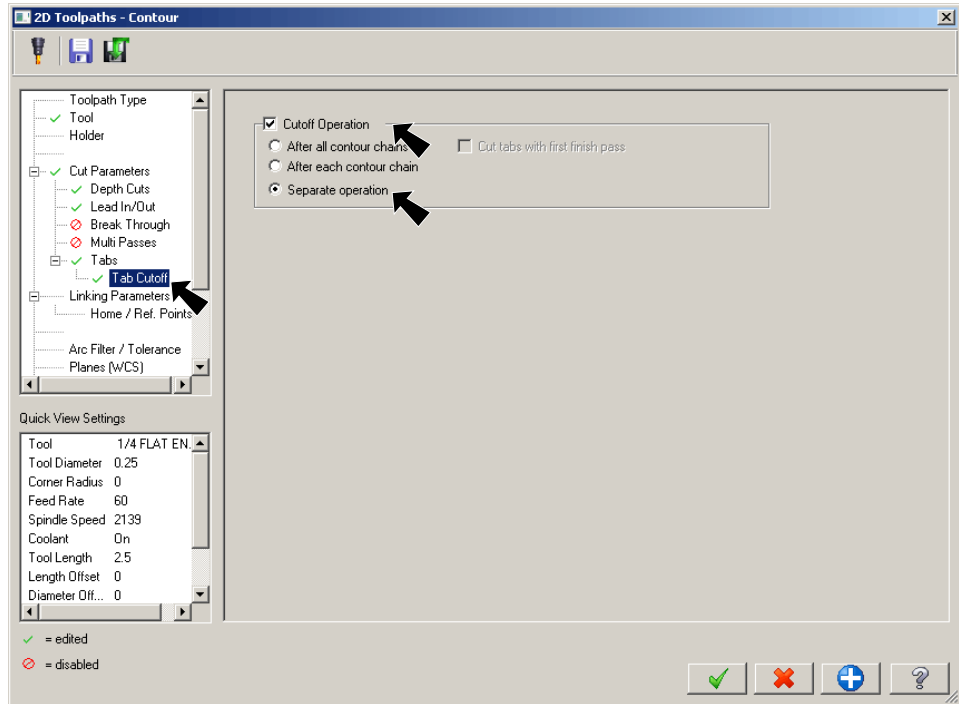


Fig. 39

Step 12. Select **Linking Parameters** from the tree control and set:

Retract .1
Fig. 40.

Step 13. Click OK 

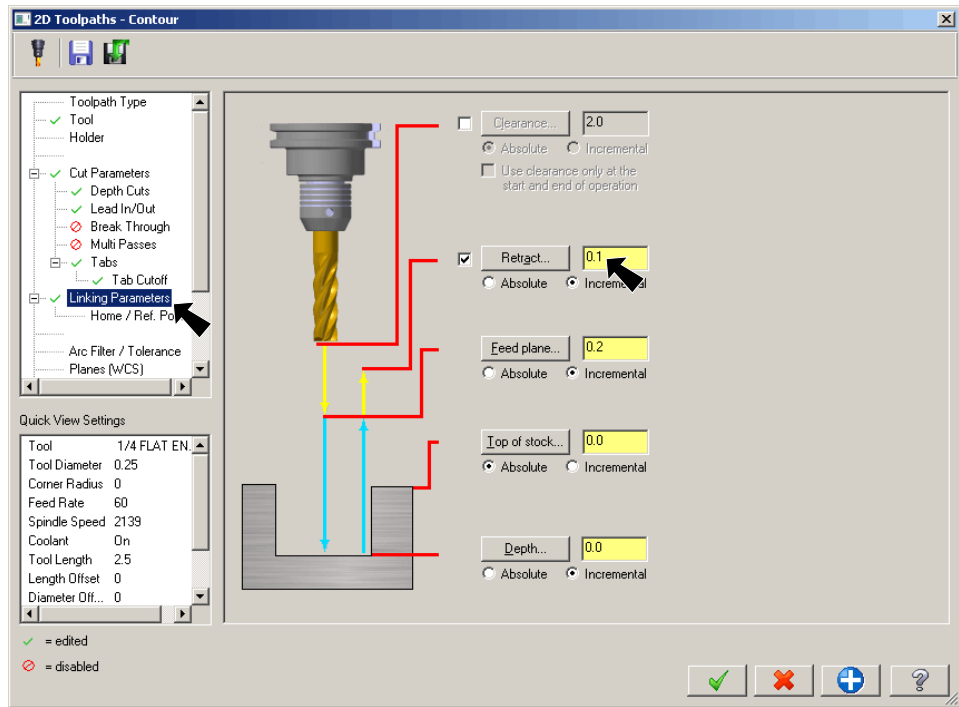


Fig. 40

J. Unselect Leads.

Step 1. In the Toolpaths Manager under **Tab Cutoff toolpath** click **Parameters**, **Fig. 42.**

Step 2. Select **Lead In/Out** from the tree control and set:

Uncheck Lead In/Out
Fig. 43.

Step 3. Click OK 

Step 4. Save . Use **Alt-F S.**

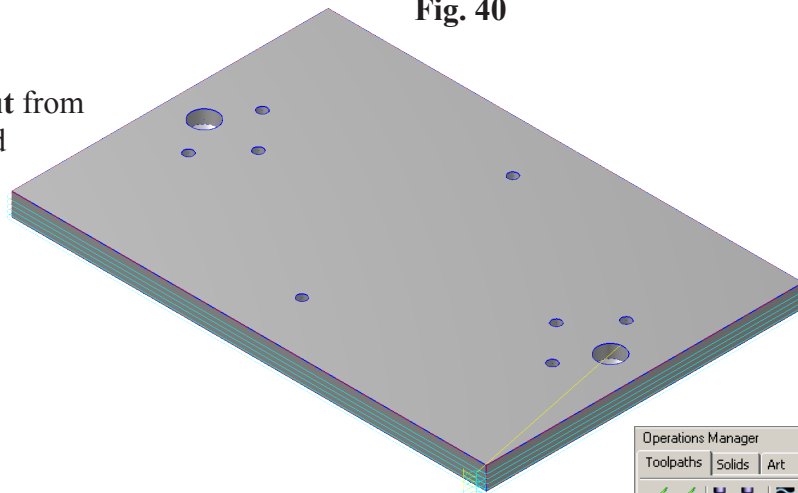


Fig. 41

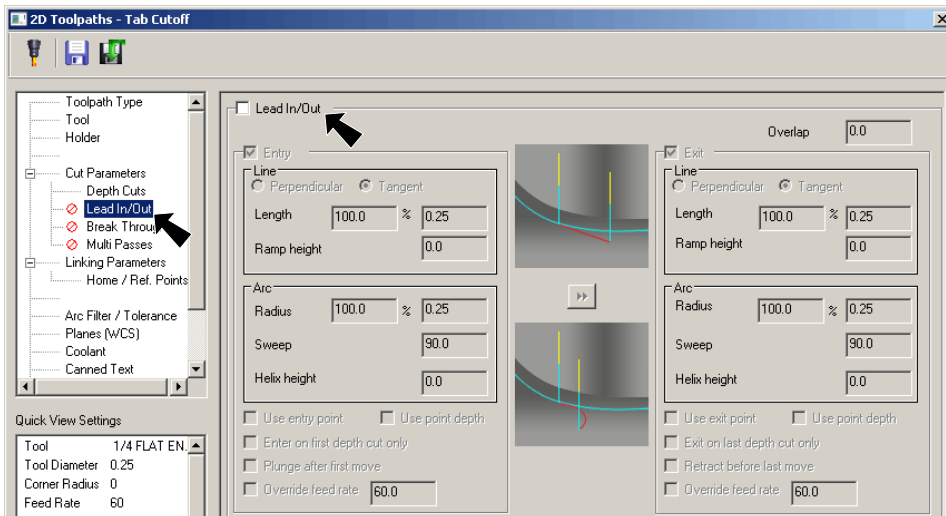


Fig. 43

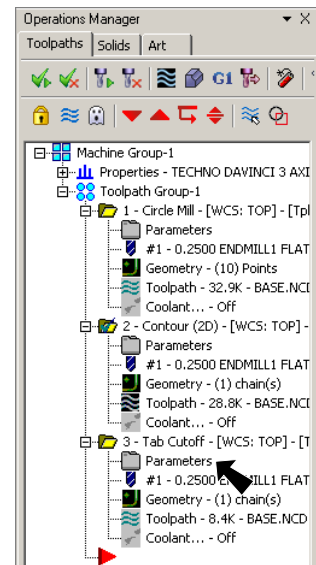


Fig. 42

K. Verify Contour with Tabs.

Step 1. In the Toolpaths Manager, click **Regenerate all dirty operations** , Fig. 44.

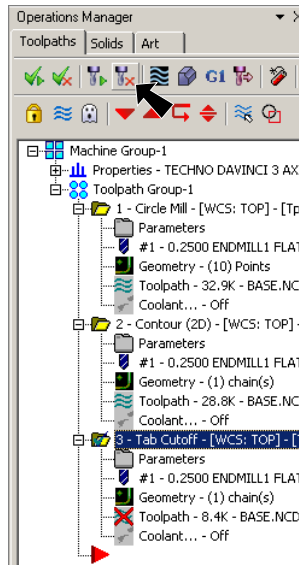


Fig. 44

Step 2. Click the **Toolpath Group-1** to select all **three** toolpaths, Fig. 45.

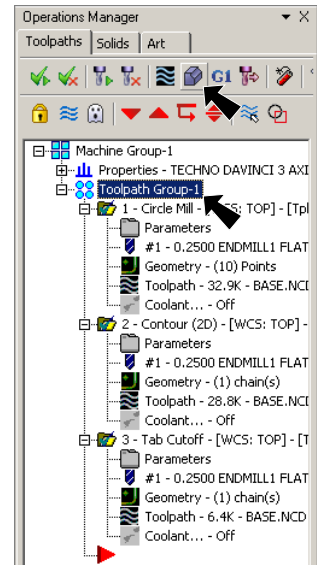




Fig. 45

Step 3. Click **Verify**  in the Toolpaths Manager, Fig. 45.

Step 4. Click the **Play**  in the Verify dialog box to start the machining, Fig. 47.

Step 5. Click **OK**  to close Verify dialog box.

Step 6. Save . Use **Alt-F S**.

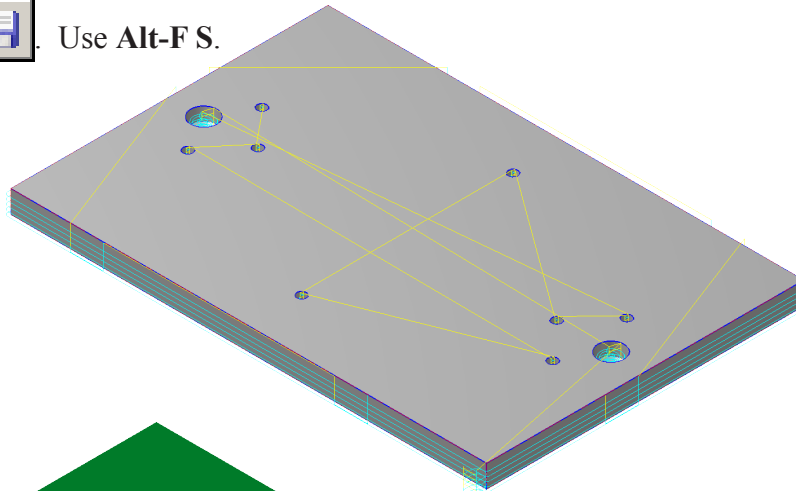


Fig. 46

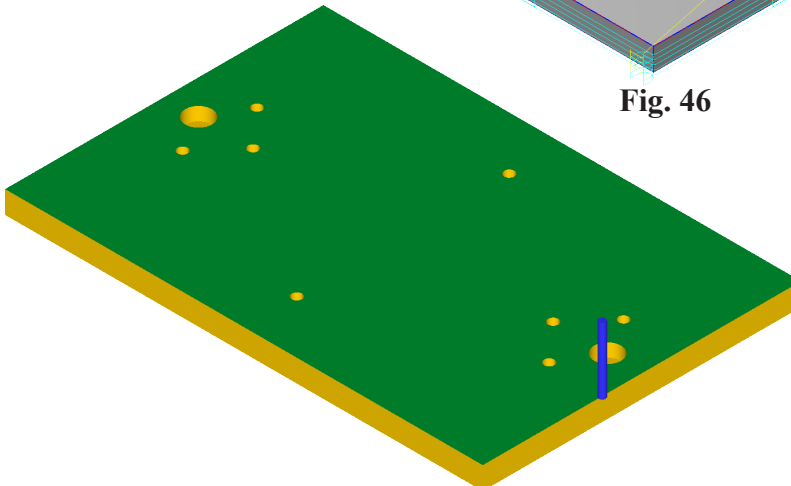


Fig. 48

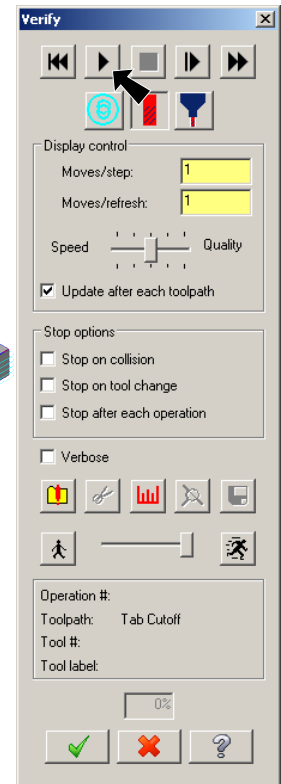


Fig. 47