

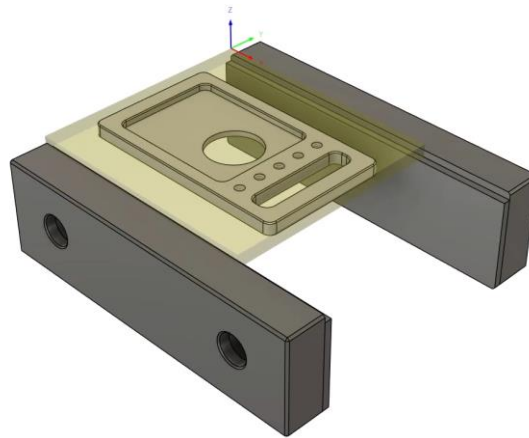
Step-by-step guide

Create a CAM setup

Create and customize an accurate setup that matches your physical machine so you can begin creating toolpaths.

Learning objectives:

- Navigate to the Manufacture workspace.
- Create stock from a body.
- Locate work coordinate system.
- Define post-processor settings.



The completed exercise

1. Continue with the file from the previous video or open the supplied *Cell Phone INCH CAM Setup.f3d* file.

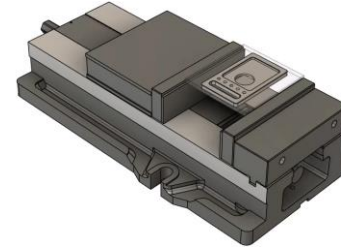


Figure 1. Open the file

2. Note that if you use the supplied file, the link to the external parent file will be broken. If you continue with your file from the previous video, the Main Body will be derived from and linked to the parent file.

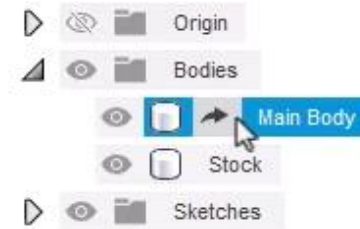


Figure 2. Notice the link to the parent file

3. Use the workspace picker to navigate to the Manufacture workspace. The Manufacture workspace allows you to set up a CAM program and create toolpaths.

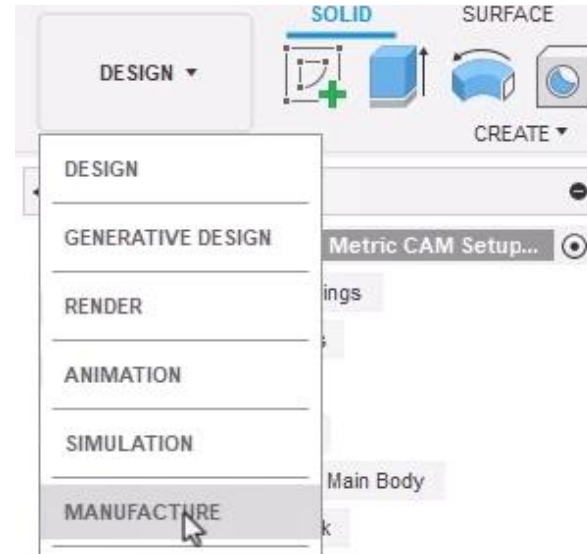


Figure 3. Navigate to the Manufacture workspace

4. Check the Browser and verify the units. Fusion's default selection is set to millimeters unless you have changed your user preferences. Click Change Active Units. Choose the Inch option from the Change Active Units dialog, then OK the dialog.

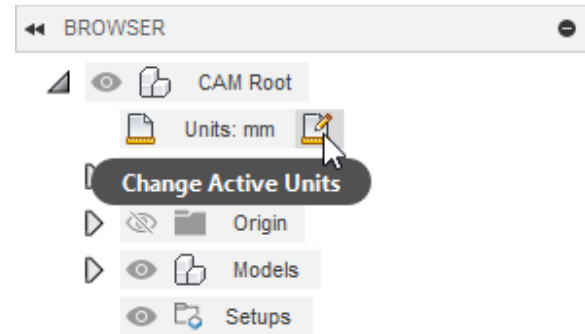


Figure 4. Verify the units

5. Make sure the toolbar's Milling tab is active, then create a new setup by clicking Setup> New Setup.

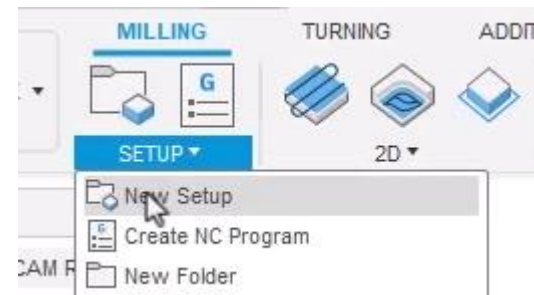


Figure 5. Create a new setup

6. Notice that the gold stock preview is as large as the entire vise setup. This is not correct and needs to be adjusted.

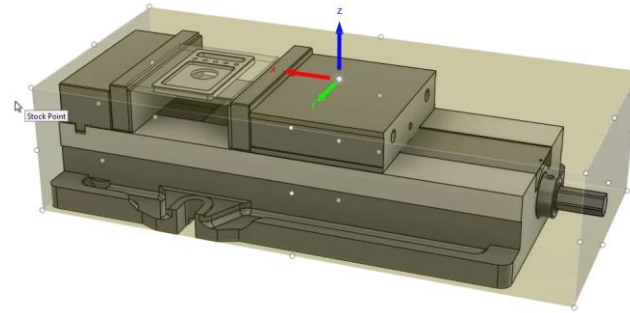


Figure 6. Notice the stock preview

7. For the Setup dialog's Model selection, choose the Main Body shown in the image on right.

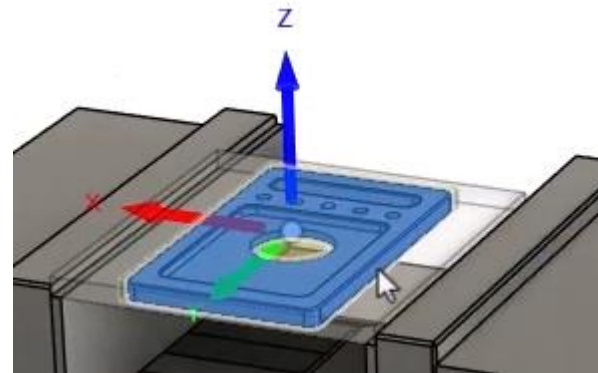


Figure 7. Select the model

8. Continue to the dialog's Stock tab and choose the From solid option in the Mode menu.

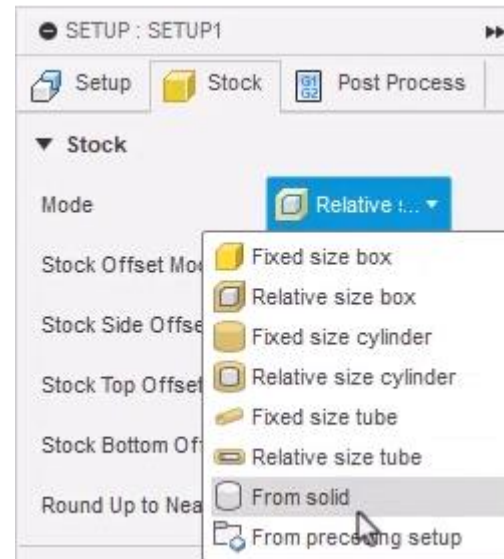


Figure 8. Change the mode type

9. Choose the Stock body as the dialog's Stock Solid selection.

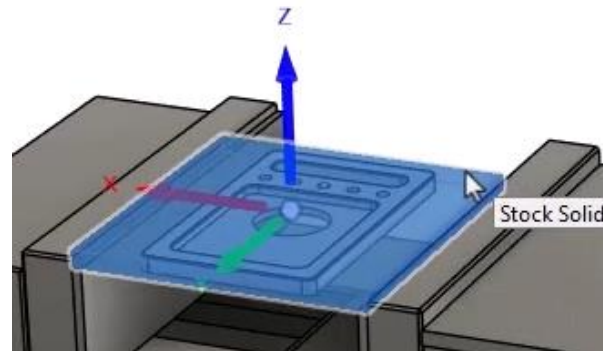


Figure 9. Select the Stock body

10. Return to the dialog's Setup tab and notice the gold stock preview is the appropriate size. Also notice the Z axis is pointing in the correct direction but the WCS might need to be tweaked.

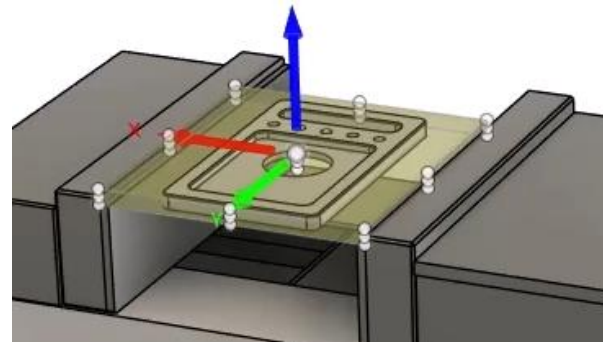


Figure 10. Inspect the stock preview

11. Select the Z axis/plane & X axis option from the dialog's Orientation menu.

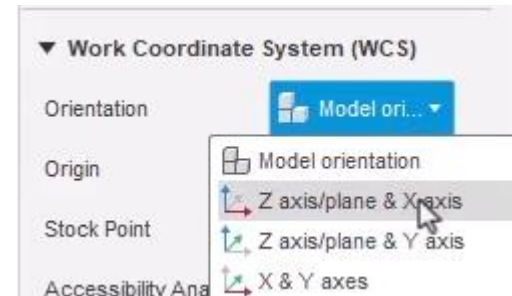


Figure 11. Change the orientation type

12. For the dialog's X Axis selection, choose the edge shown in the image on right.

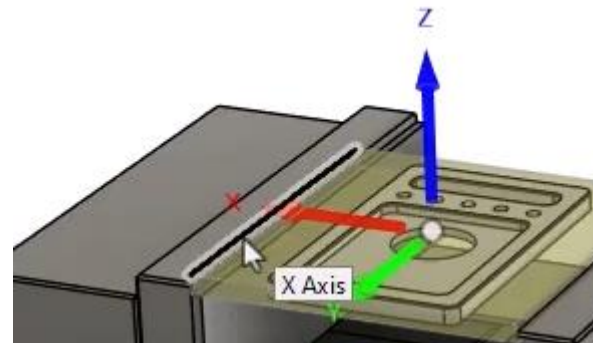


Figure 12. Select the X axis

13. If the X axis direction needs to be flipped, click the red axis arrow or activate the dialog's Flip X Axis option.

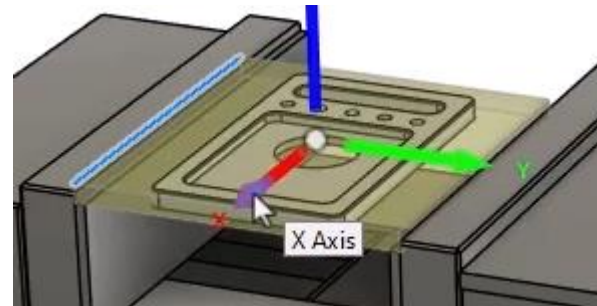


Figure 13. Flip the X axis

14. For the dialog's Stock Point selection, choose the stock's corner shown in the image on right. Your WCS location and orientation should match the image on the right. It is very important to make sure the digital setup precisely matches your physical setup.

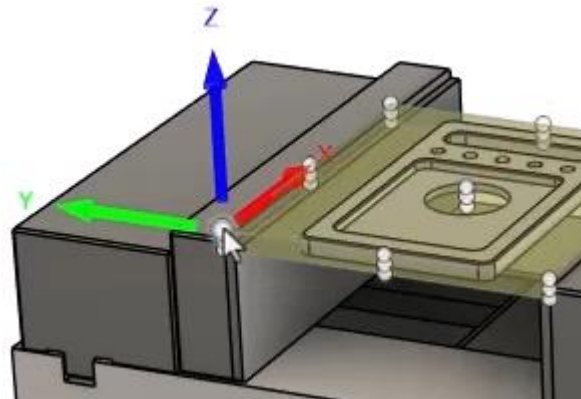


Figure 14. Select the Stock Point

15. For the dialog's Fixture selection, choose the vise jaws and parallels shown in the image on right. Identifying these bodies as the fixture will help Fusion avoid collisions when calculating and simulating the toolpaths.

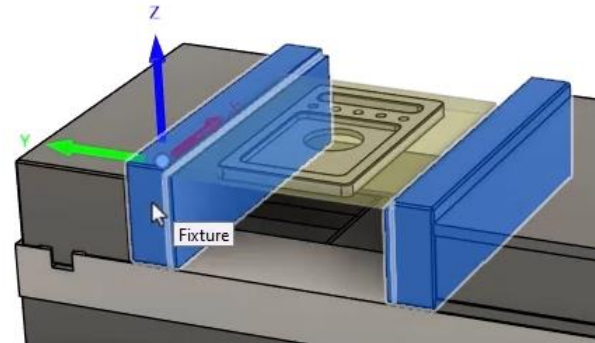


Figure 15. Identify the fixture

16. Return to the Setup tab and notice that you could select the specific machine that will cut this part. This would allow you to see a 3D version of your machine during Fusion's simulation.

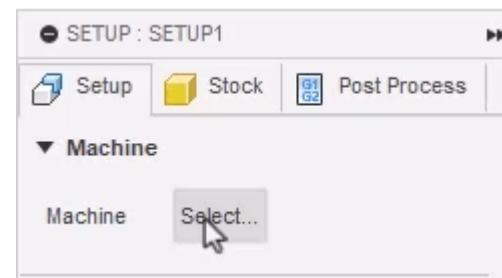


Figure 16. Notice that you could select a machine

17. Continue to the Post Process tab and enter **50005** into the Program Name/Number box, then enter **Stand INCH** into the Program Comment box. This information will be included in the NC program and G-Code you create.

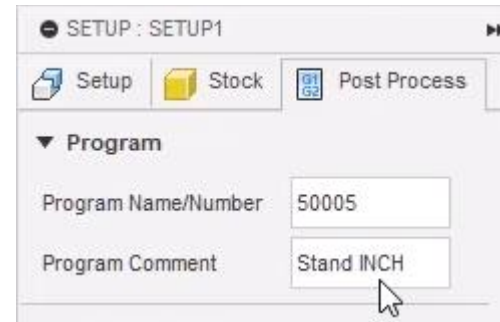


Figure 17. Configure the Post Process information

18. For machines that use FANUC controllers, entering **1** into the WCS Offset box identifies a G54 work location. It is important to understand how this WCS Offset value corresponds to your specific machine so you can enter the proper value. OK the dialog.

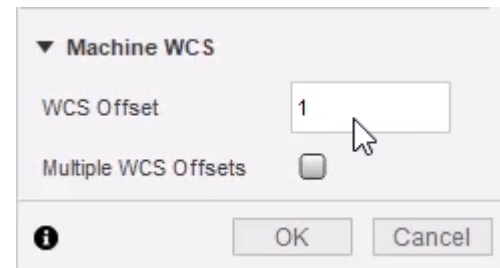


Figure 18. Enter the WCS Offset value

- 19.** Notice that Setup1 is added to the Browser's Setups folder. Selecting Setup1 will show the gold stock preview in the Canvas area.

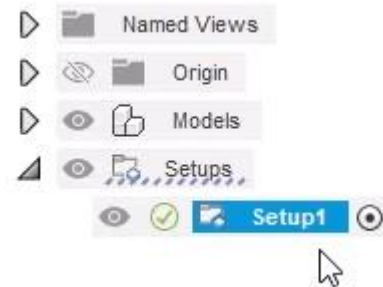


Figure 19. Inspect the Browser

- 20.** The screen's preview shows the stock, the model, and all the bodies you selected as the fixture. Save the project.

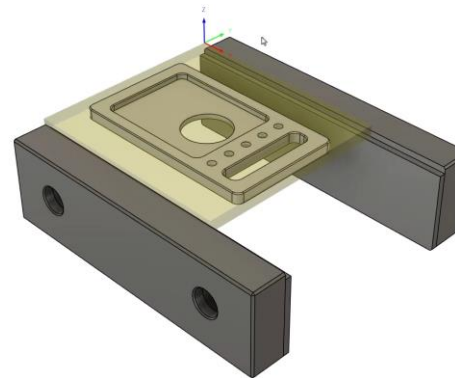


Figure 20. Inspect the setup