



SOLIDWORKS 2024 to Mastercam 2025

A. Open File in Mastercam 2025.

Step 1. If necessary, save your **Body** file in SOLIDWORKS.

Step 2. In Mastercam 2025, click File Menu > Open .

Step 3. In the Open dialog box:
navigate to your Shell Car folder, **Fig. 1**
set **Files of type** to
SOLIDWORKS Files
select your **BODY** file
click **Options** button.

Step 4. In the File Parameter dialog box:
uncheck **Import hidden entities**,
Fig. 2.
click OK .

Step 5. Back in the Open dialog box click
Open, **Fig. 1**.

Tip: If SOLIDWORKS file will not open in Mastercam, save your SOLIDWORKS file as a Parasolid Binary (*.x_b), then open in Mastercam as Parasolid Binary file.

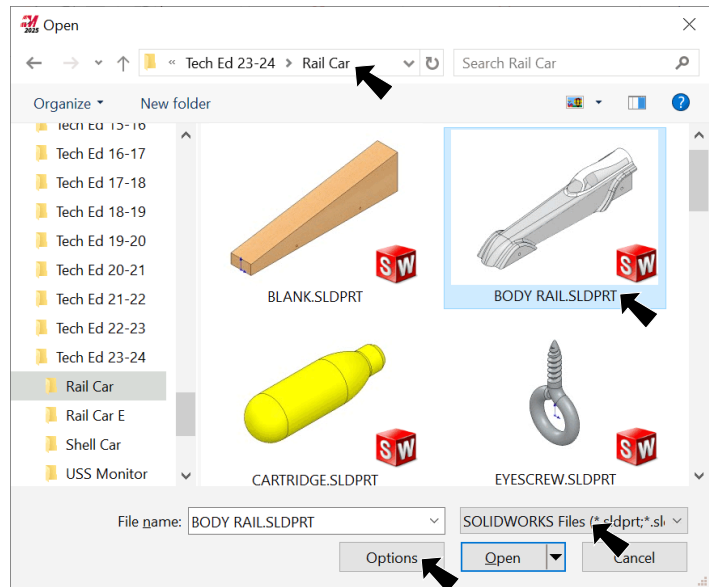
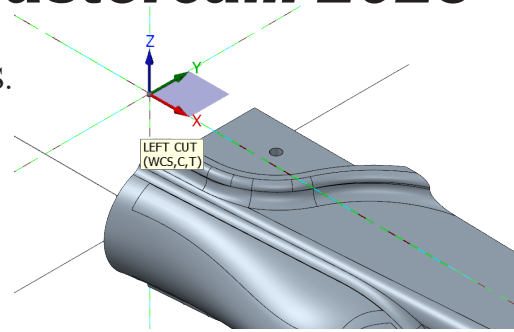


Fig. 1

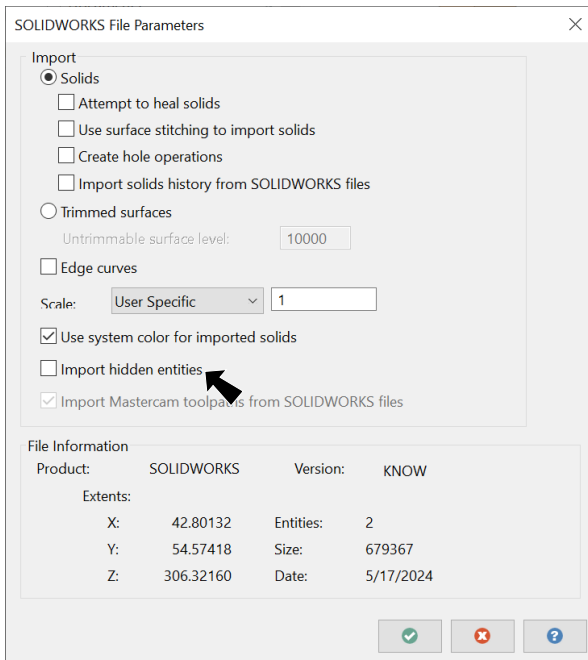


Fig. 2

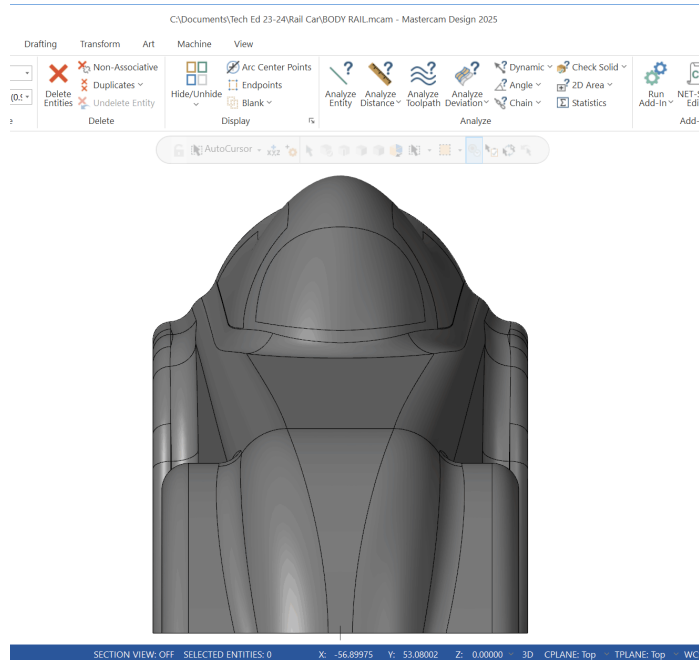


Fig. 3

B. Confirm Metric Units.

Step 1. Change to the Isometric View. **Right click** in the graphics window and click  **Isometric** (**Alt-7**).

Step 2. Confirm in the bottom right corner of the graphics area units are **Metric (mm)**, **Fig. 4**.

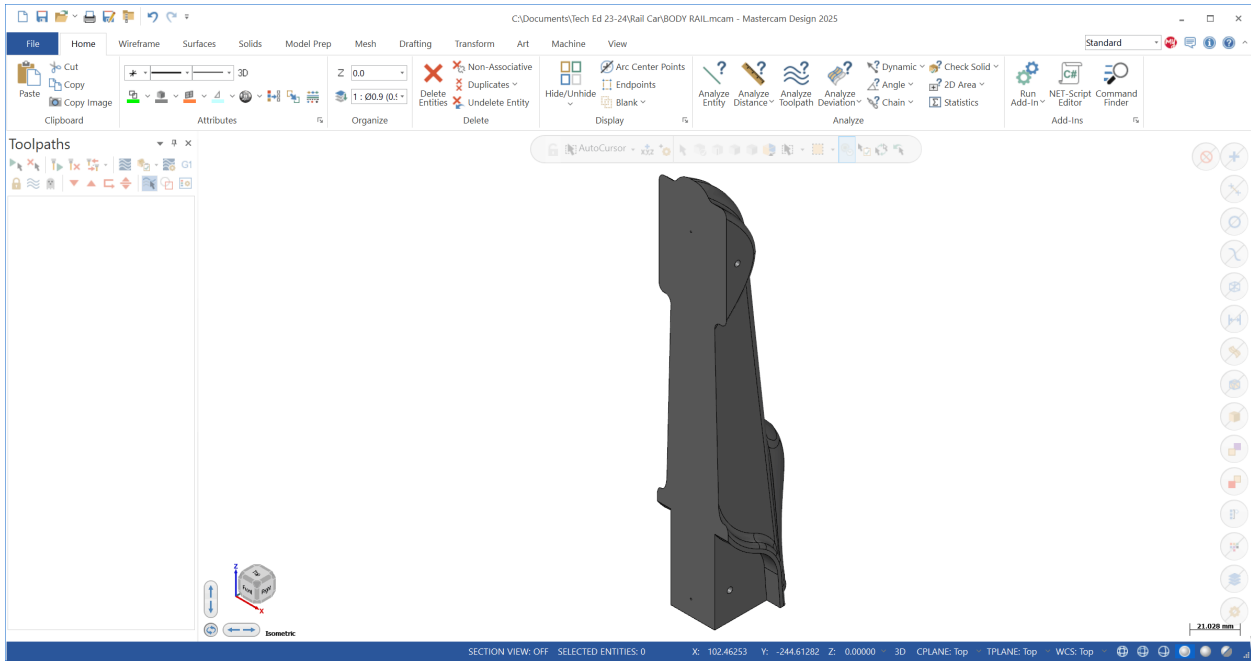


Fig. 4

C. Save Your File.

Step 1. Save As  (**Ctrl-Shift-S**).

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

D. Change Color.

Step 1. Click the solid Body to select, **Fig. 5**. The solid will highlight when selected.

Step 2. **Right click** in the graphics window and on the Mini Toolbar click **Solid Color**  drop down arrow, then click **More Colors**, **Fig. 6**.

Step 3. In the Color dialog box key-in **111** for ID number in the current color text box, **Fig. 7**. Click OK .

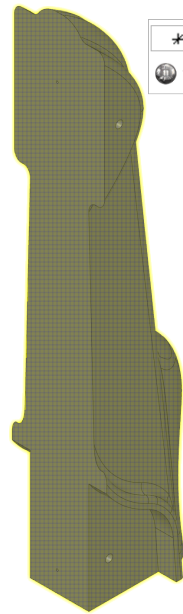


Fig. 5

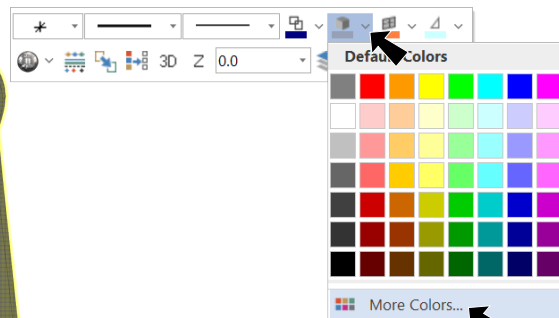


Fig. 6

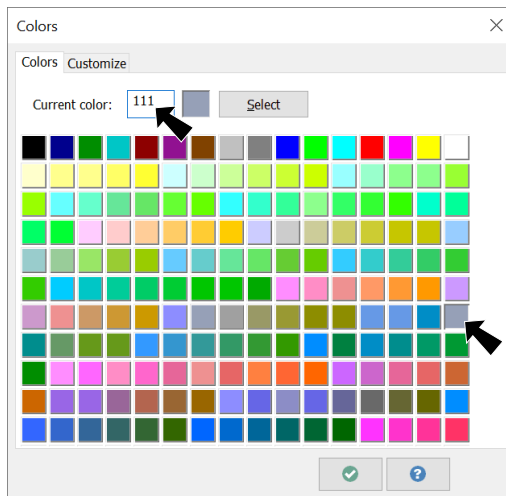


Fig. 7

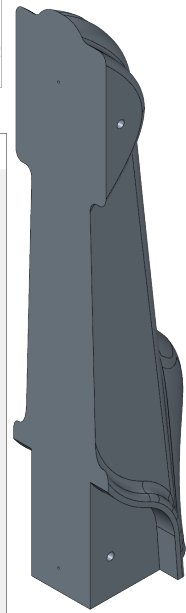


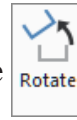
Fig. 8

E. Rotate Body Around Axes.

Step 1. Confirm **Top CPLANE** in Status bar at bottom of the graphics window, **Fig. 9**.



Step 2. On the Transform tab **Transform** click **Rotate**



Step 3. Click the **solid body** to select it, **Fig. 10**. The solid will highlight when selected. Click **End Selection** (ENTER).



Fig. 10

Step 4. In the Rotate function panel:
 under Method, **Fig. 11**
 Select **Move**
Number 1
Angle 180 and press **Tab** key
 Click **OK and Create**
New Operation

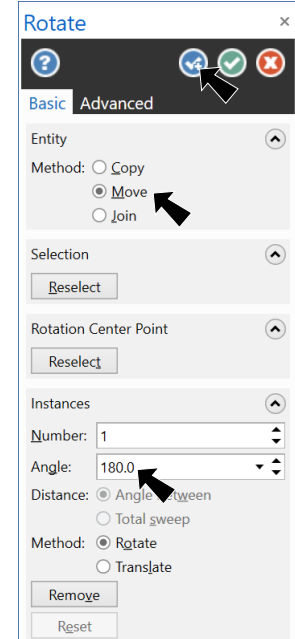


Fig. 11

Step 5. Change **CPLANE** to **Front**, **Fig. 13**. To change, click **CPLANE** in Status bar at bottom of the graphics window and click **Front** from the menu.

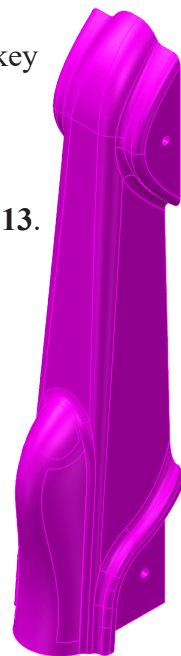
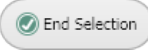


Fig. 12

Step 6. Click the **solid body** again to select it and click **End Selection** (ENTER)



Step 7. In the Rotate function panel:
 under Method, **Fig. 14**
 Select **Move**
Angle -90 and press **Tab**
 Click **OK**

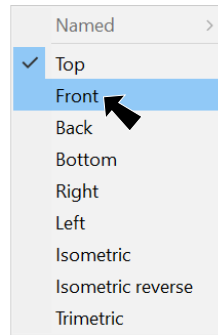


Fig. 13

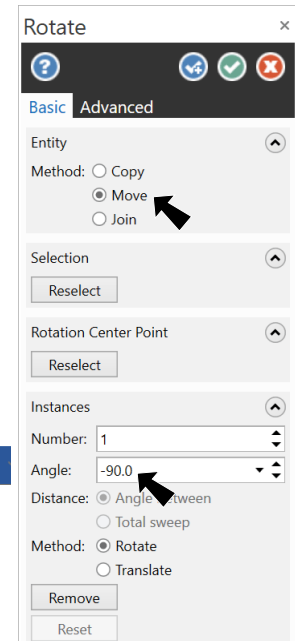


Fig. 14

Step 8. **Right click** the graphics window and click **Fit** (Alt-F1).



Step 9. **Right click** the graphics window and click **Clear Colors**

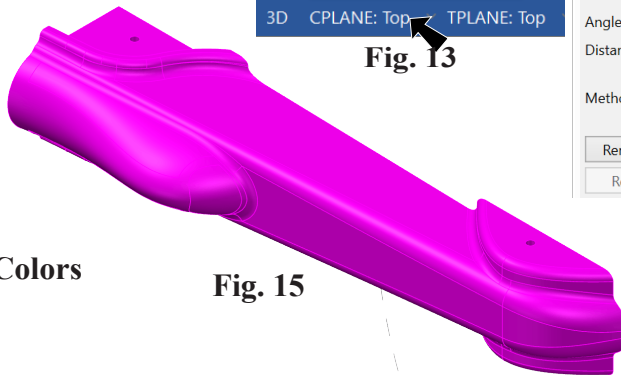


Fig. 15

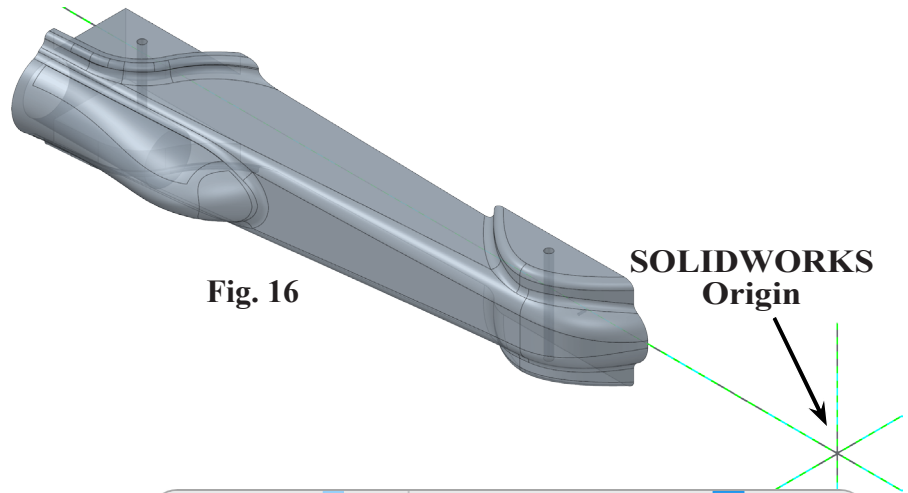
Step 10. Save (Ctrl-S).



F. Move to Origin.

Step 1. Use **Ctrl-T** to toggle **Translucency**.

Step 2. Display the Origin.
Use **F9** to toggle axes,
Fig. 16.



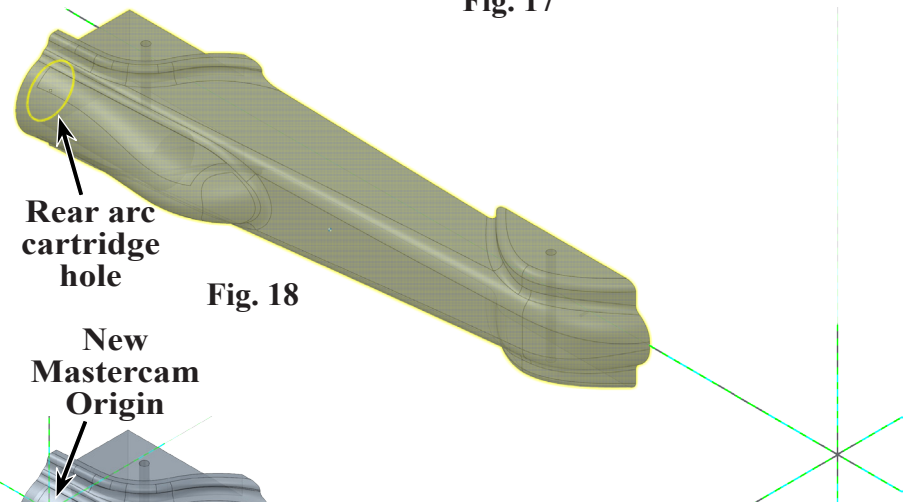
Step 3. On the Transform tab
Transform click




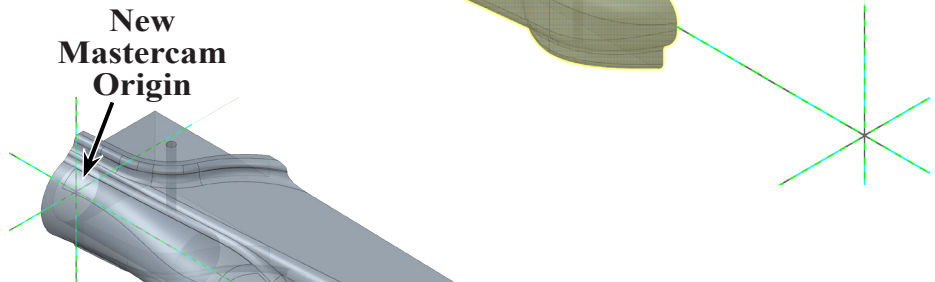
Step 4. Press the **C** key on keyboard to configure Auto Cursor behavior of your cursor to snap to **Arc Center**, **Fig. 17**.



Step 5. Click **arc of rear edge of cartridge hole** as point to translate from, **Fig. 18**. Be sure to select arc of hole.



Step 6. **Right click** the graphics window and click **Fit** (Alt-F1). 



Step 7. **Right click** the graphics window and click **Clear Colors** .

Fig. 19

Step 8. Confirm **center of cartridge hole at rear of car** as new position of Origin, **Fig. 19**.

Step 9. Save  (**Ctrl-S**).

G. Confirm Origin.

Step 1. **Right click** in the graphics window and from the menu click **GView > Left**.

Step 2. Confirm Origin is in **center of cartridge hole**, **Fig. 20**.

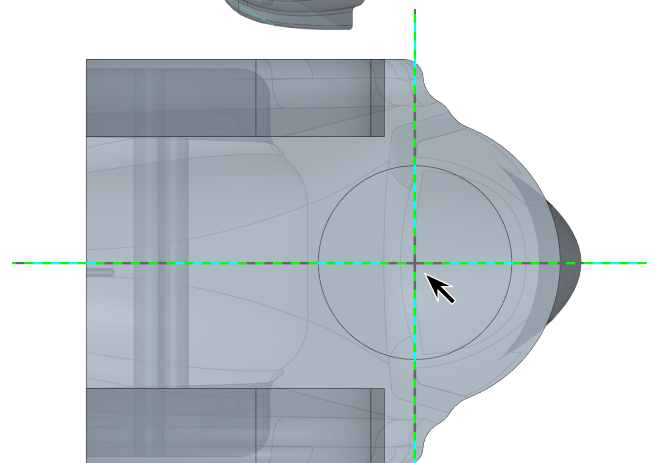


Fig. 20

H. Create Check Rectangle.

Step 1. Change to the Isometric View. **Right click** in the graphics window and click  **Isometric** (Alt-7).

Step 2. Use **Ctrl-T** to toggle **Translucency**.

Step 3. Toggle axes off. Use **F9**.

Step 4. Change **CPLANE** to **Right**, **Fig 21**. To change, click **CPLANE** in Status bar at bottom of the graphics window and click **Right** from the menu.

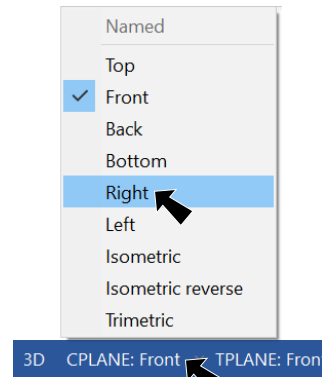


Fig. 21

Step 5. On the Wireframe tab  click **Rectangle** .

Step 6. In the Rectangle function panel:
under Dimensions, **Fig. 22**

Width 40

Height 40

under Setting

Check **Anchor to center**

Click the **most forward vertex** of the Body **Fig. 23**.

Click OK .

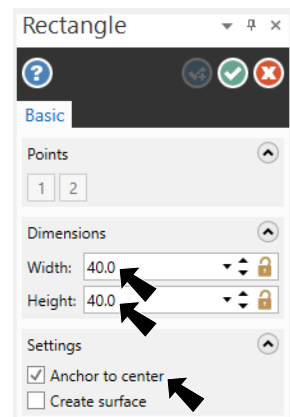


Fig. 22

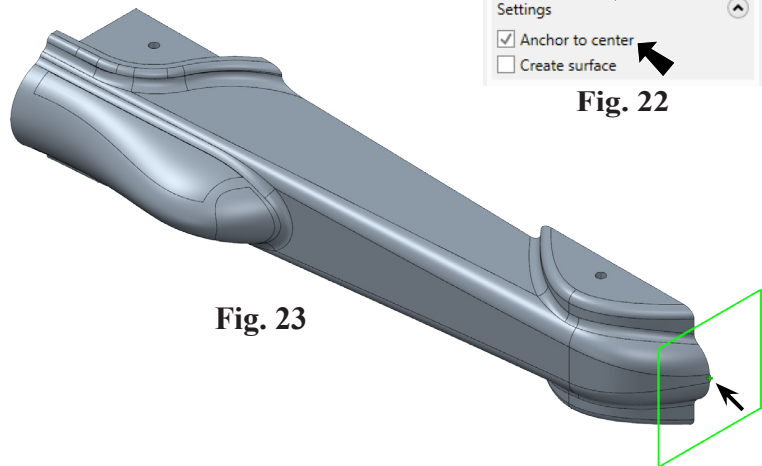
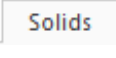
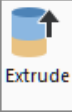



Fig. 23

I. Create Check Solid.

Step 1. On the Solids tab  click **Extrude** .

Step 2. Click Chain  in Chaining dialog box, **Fig. 24**.

Step 3. Click **rectangle** to chain, **Fig. 25**.

Step 4. Click OK  in Chaining dialog box.

Step 5. In the Solid Extrude function panel:

under Operation, **Fig. 26**

Select **Create body**

under Distance

Distance 5 and press **Tab**

The direction arrow should **point to rear**, **Fig. 27**.


If arrow points in opposite direction, click **Reverse All** ,

Fig. 26.
Click OK .

Step 6. Save  (**Ctrl-S**).

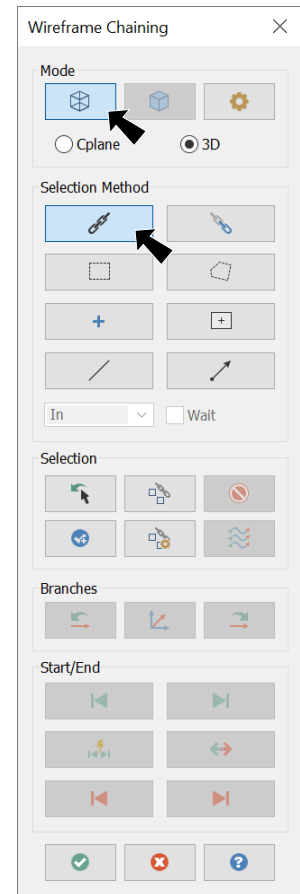


Fig. 24

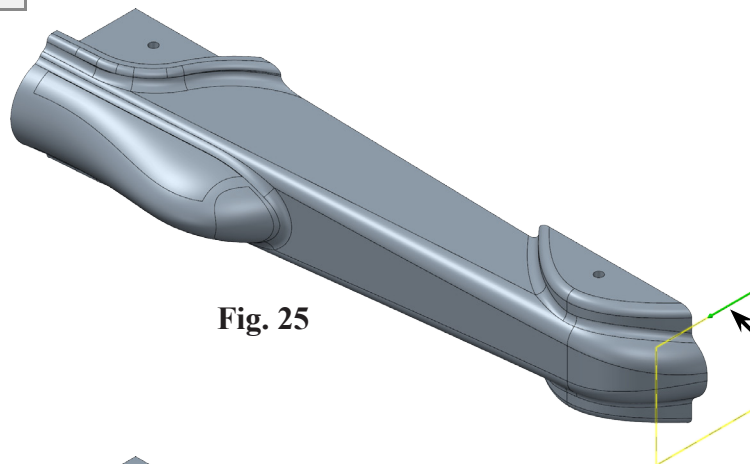


Fig. 25

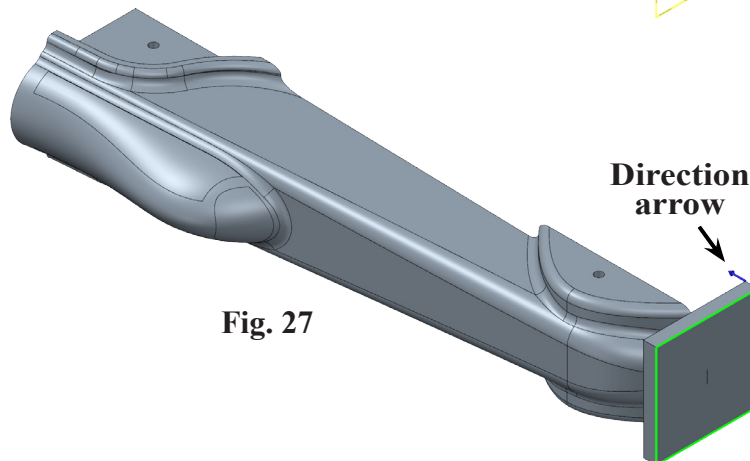


Fig. 27

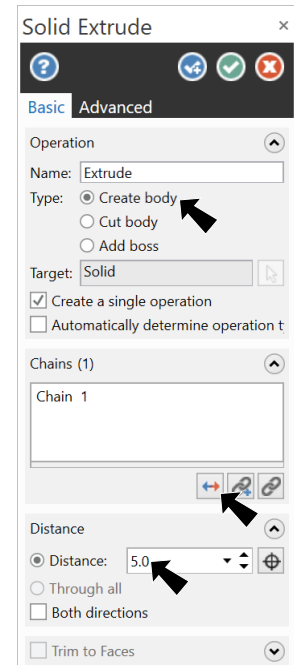




Fig. 26


J. Create WCS LEFT CUT Plane.


Step 1. Toggle axes on. Use F9.

Step 2. Display the **Planes Manager (Alt-L)**.
To display, click **Planes** tab  at the bottom of Ops Manager.

Step 3. In the Planes Manager:

Click **Create a new plane**  drop down and select **Relative to WCS > Top**, **Fig. 28**.

Step 4. In the New Plane function panel:
under Name, **Fig. 29**
Key-in **LEFT CUT** for name
Origin X 0
Origin Y 0
Origin Z 34
Click OK .

Step 5. Back in the Planes Manager:
Click **Set All** , **Fig. 30**
Confirm **Z Origin** is **34**.

Step 6. Confirm **LEFT CUT** Origin, **Fig. 31**.

Step 7. Save  (Ctrl-S).

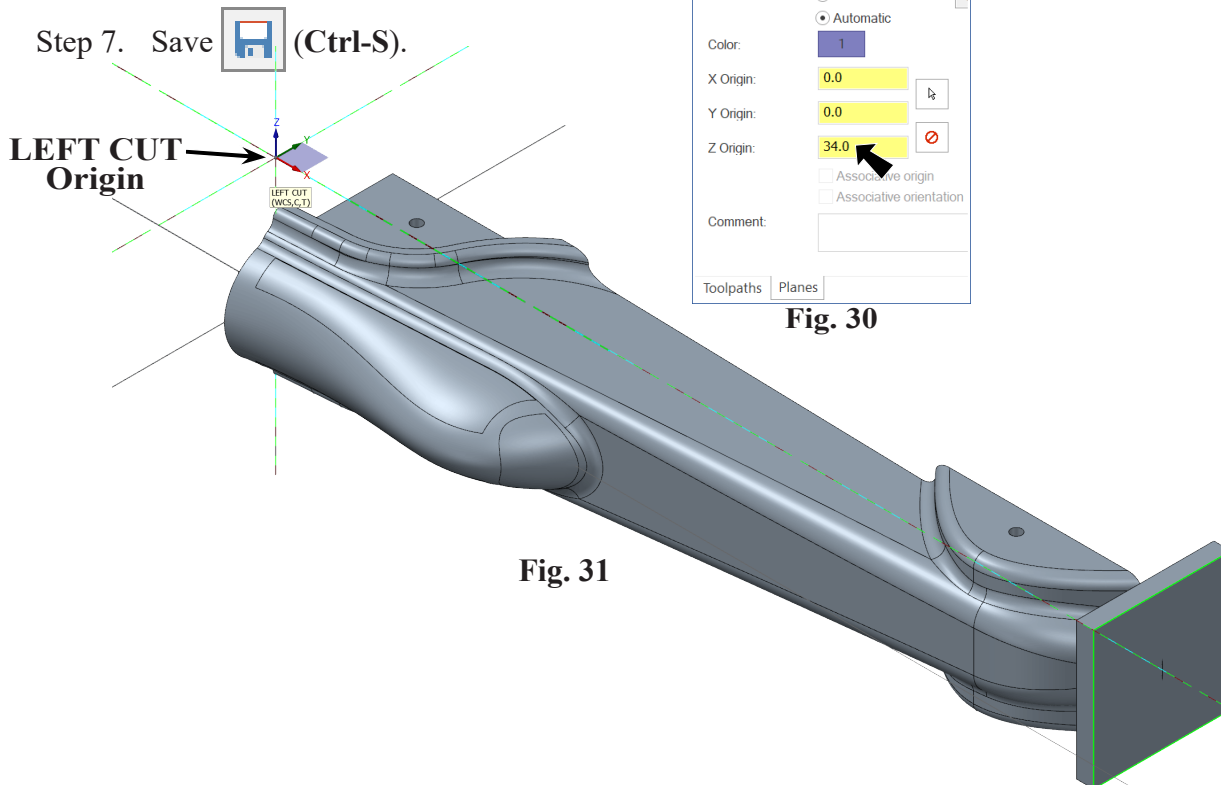


Fig. 31

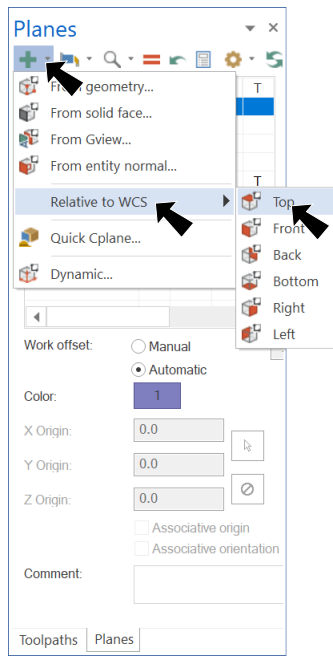


Fig. 28

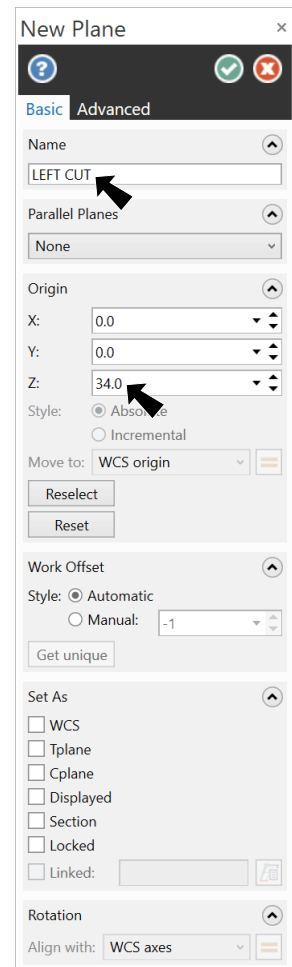


Fig. 29

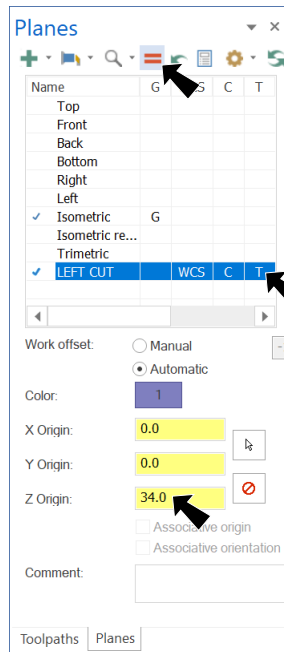


Fig. 30