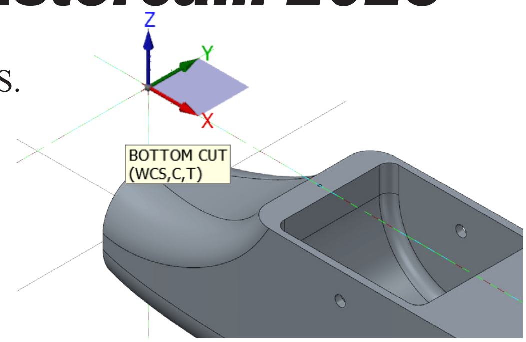
CO2 Shell Car

SOLIDWORKS 24 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.

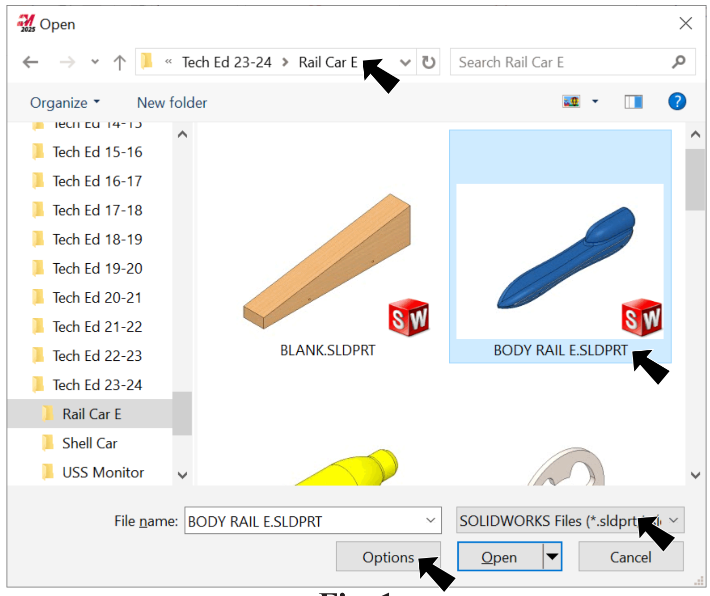


Fig. 1

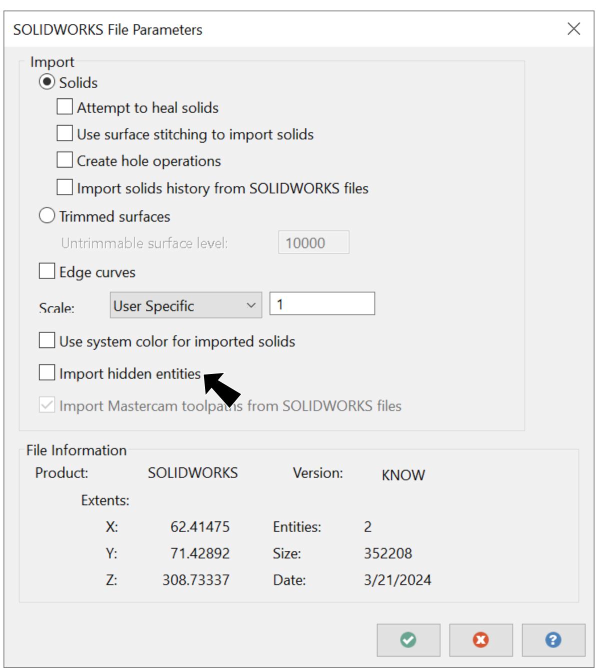


Fig. 2

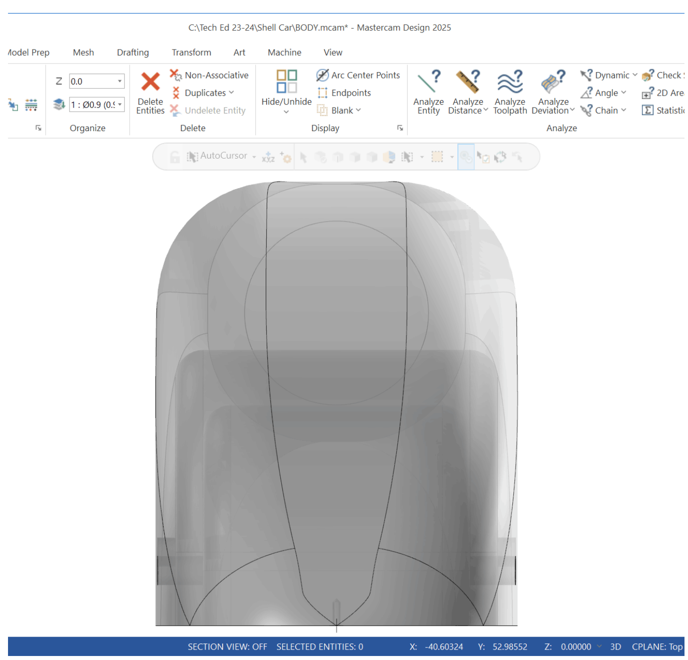
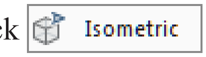


Fig. 3

http://www.cudacountry.net email:cudacountry@hotmail.com

B. Confirm Metric Units.

Step 1. Change to the Isometric View. **Right click** in the graphics window and click 

(**Alt-7**).

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

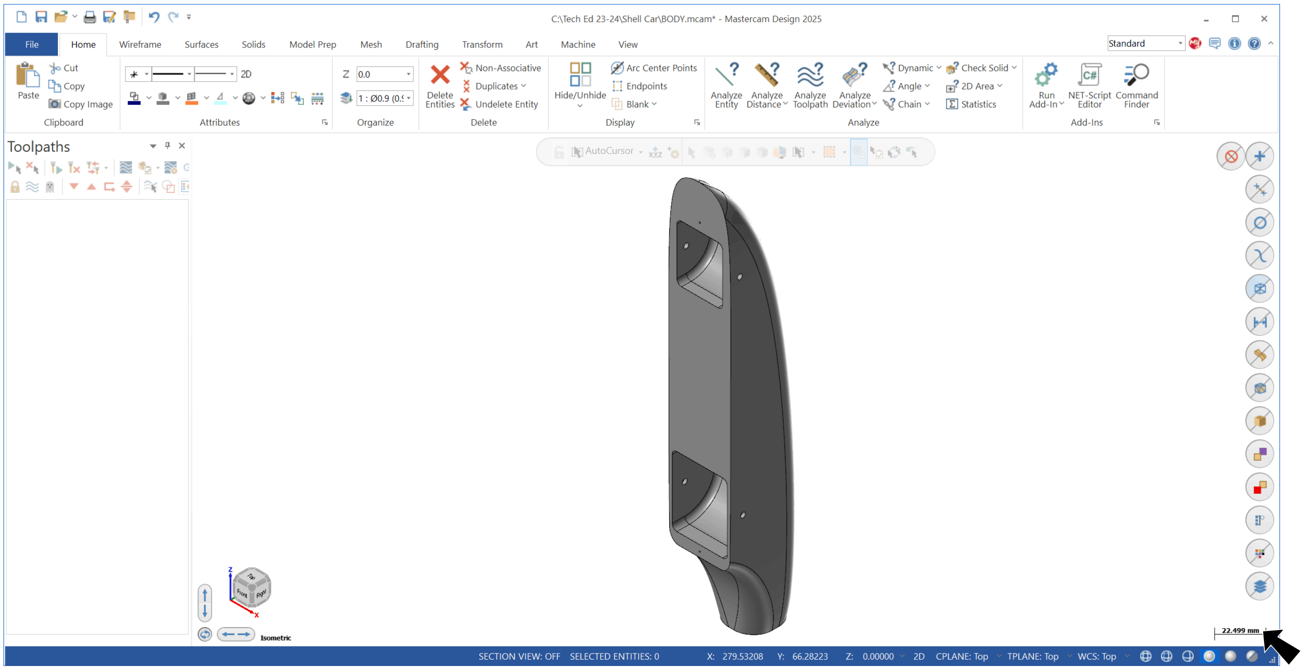


Fig. 4

C. Save Your File.

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

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

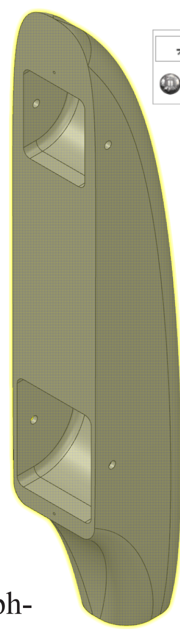


Fig. 5

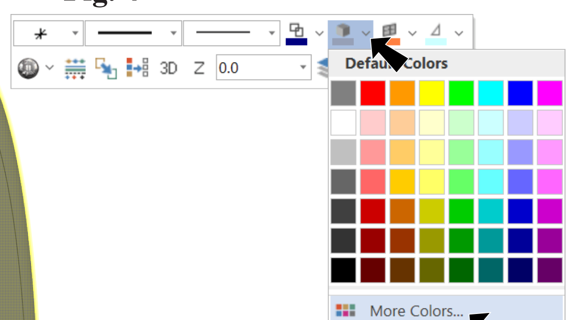


Fig. 6

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 dialoge box key-in **111** for ID number in the current color text box, **Fig. 7**.

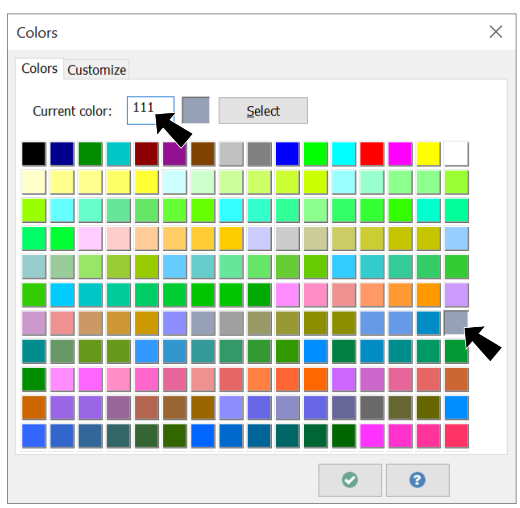


Fig. 7

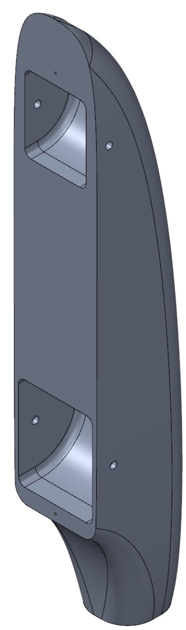


Fig. 8

E. Rotate Body Around Axes.

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

Fig. 9

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

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

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.

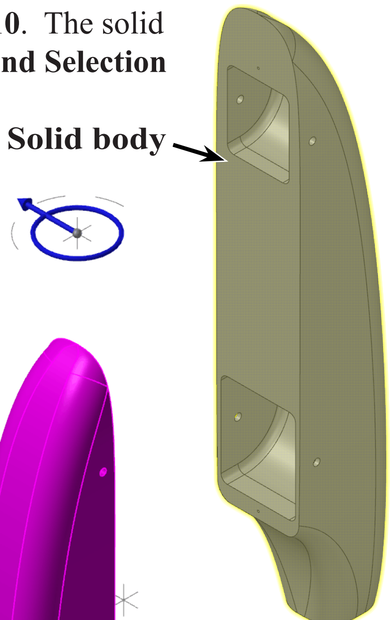


Fig. 10

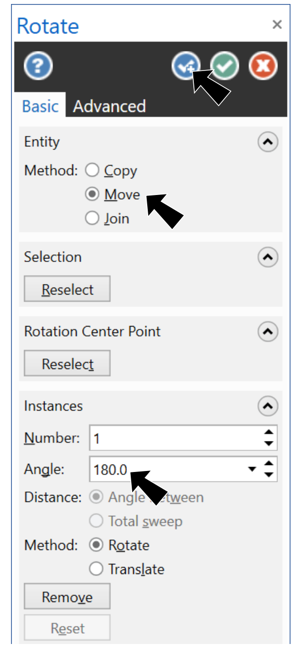


Fig. 11

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

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

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

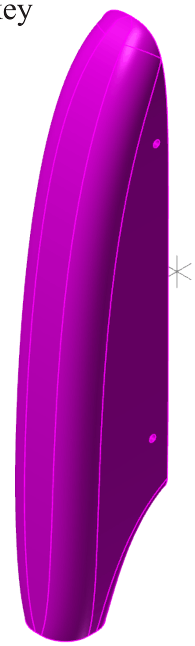


Fig. 12

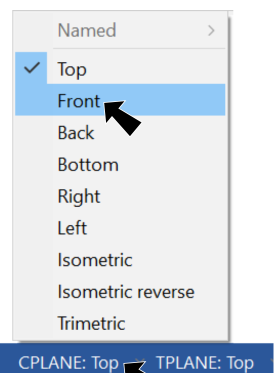


Fig. 13

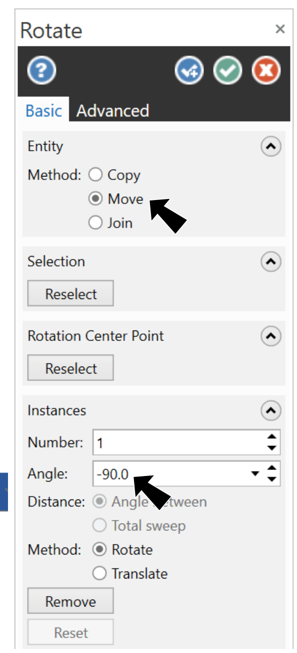


Fig. 14

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

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

Step 10. Save **(Ctrl-S)**.

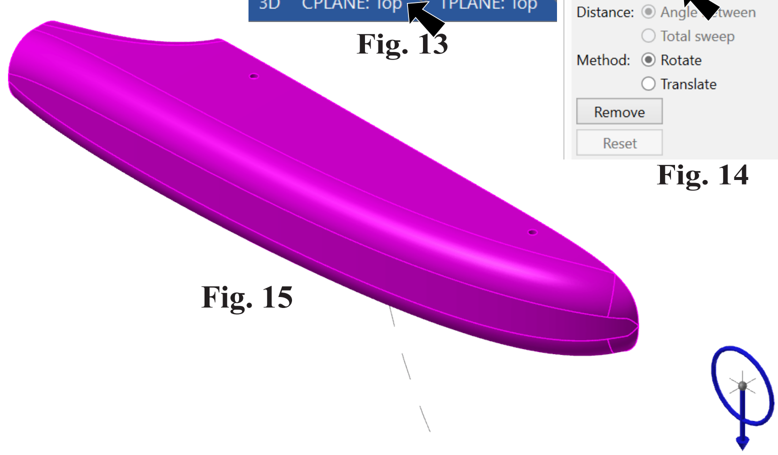


Fig. 15

F. Move to Origin.

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

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

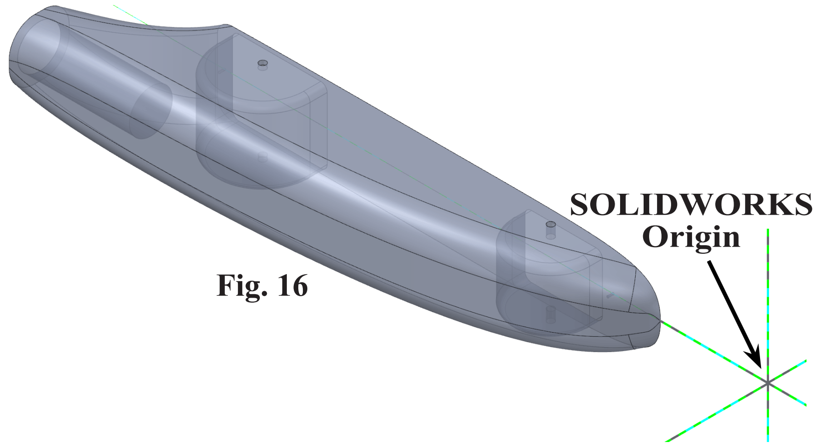


Fig. 16

Step 3. On the Transform tab Transform click **Move to Origin** 

.

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

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.

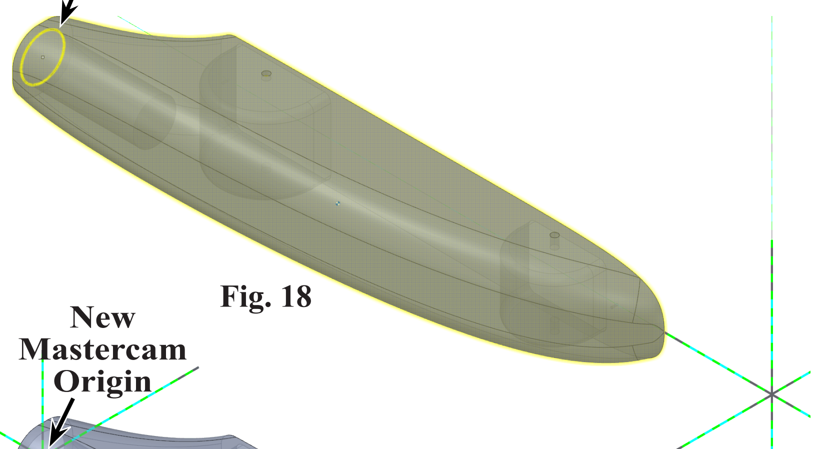
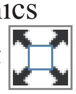
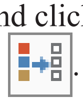


Fig. 18

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

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

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

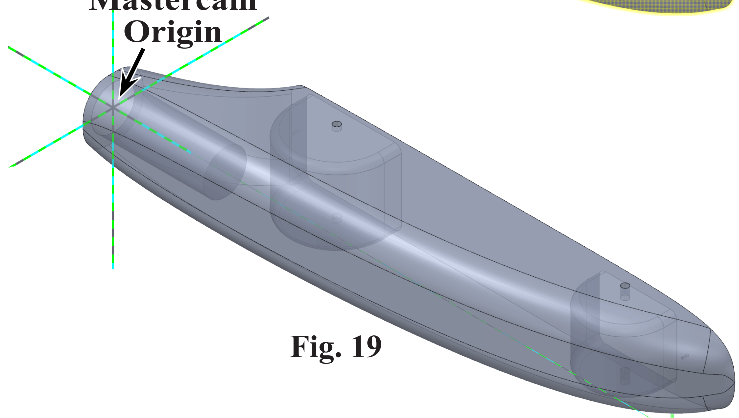
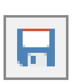


Fig. 19

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**.

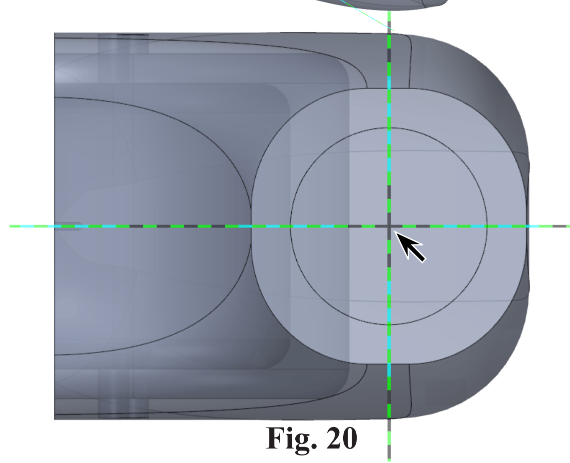


Fig. 20

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.

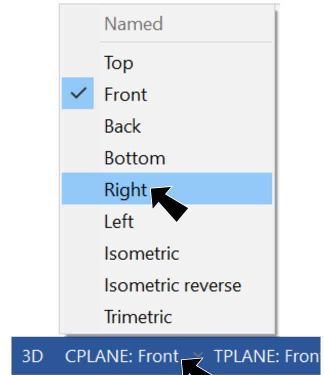


Fig. 21

Step 5. On the Wireframe tab Wireframe click Rectangle 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 .

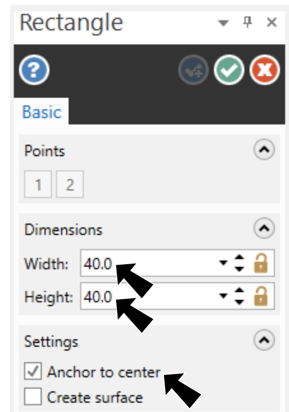


Fig. 22

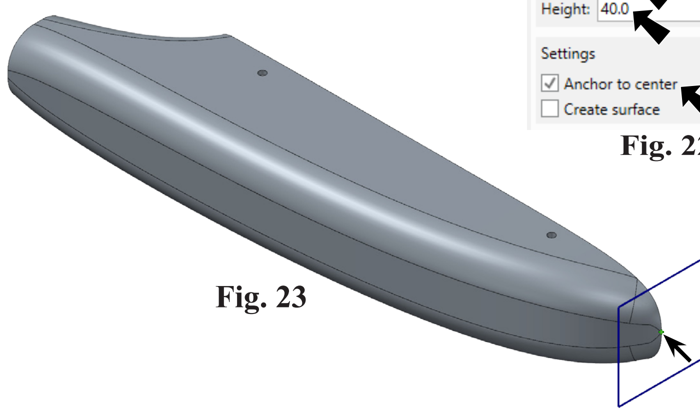


Fig. 23

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)**.

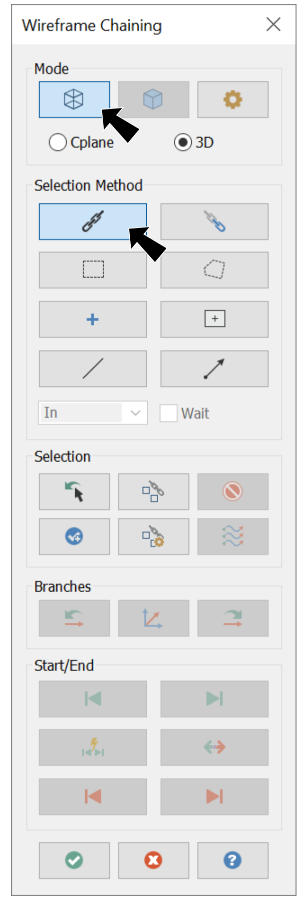


Fig. 24

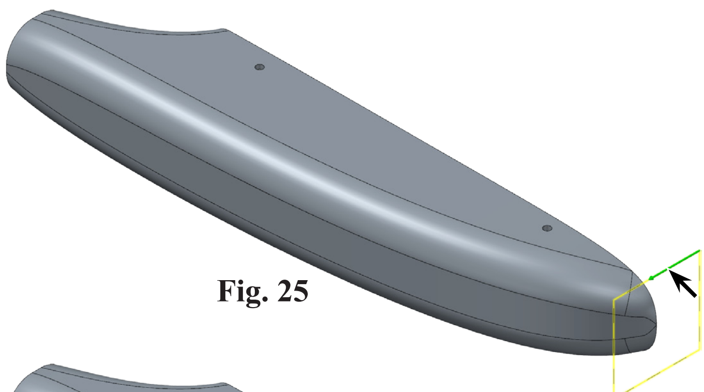
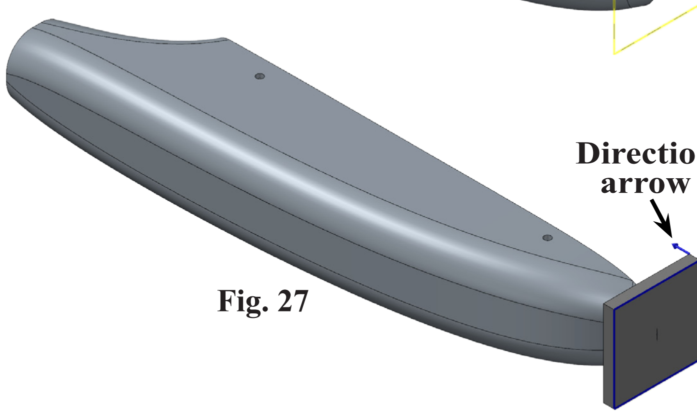


Fig. 25


Direction arrow
Fig. 27

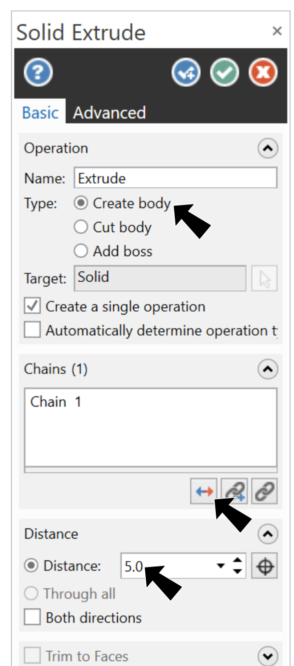


Fig. 26

J. Create LEFT CUT WCS Plane.

Step 1. Toggle axes on. Use **F9**.

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

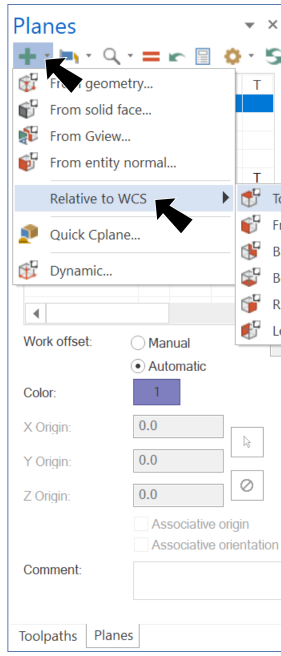


Fig. 28

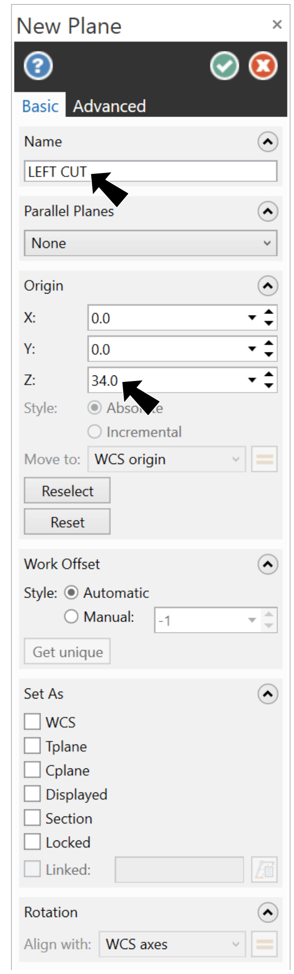


Fig. 29

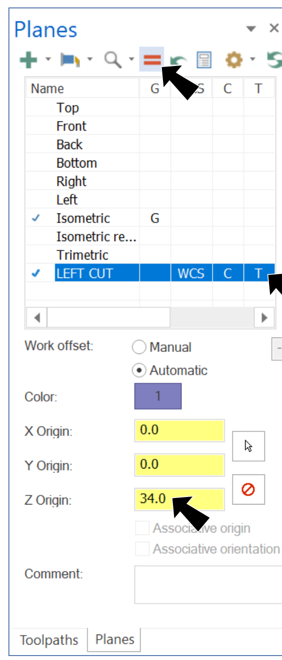


Fig. 30

LEFT CUT Origin

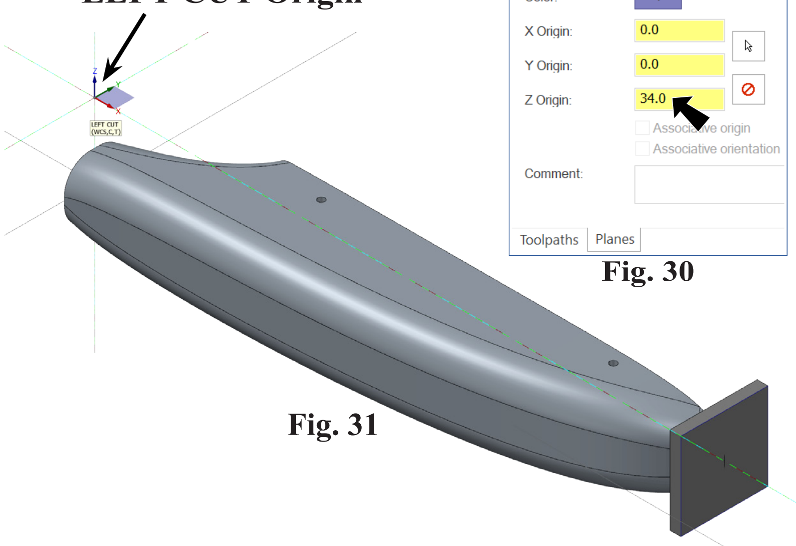


Fig. 31

K. Create BOTTOM CUT WCS Plane.

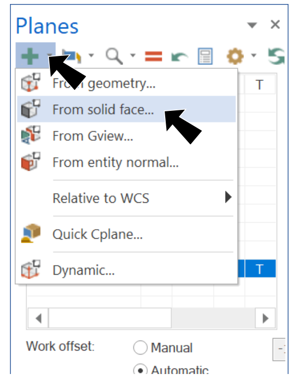


Fig. 32

Step 1. In the Planes Manager:

Click **Create a new plane** [+] drop down and select **From solid face, Fig. 32**.

Step 2. Rotate view to view **bottom face of body**, hold down middle mouse button (wheel) and drag to rotate view, **Fig. 33**.

Step 3. Click **bottom face** of the solid body to select, **Fig. 33**.

Step 4. In the Select plane dialog box, **Fig. 34** select plane until **X axes points to front of body and Y axes to right**, **Fig. 35**. This should be Plane 3. Click OK [✓] in the Select plane dialog box.

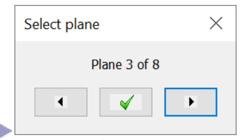


Fig. 34

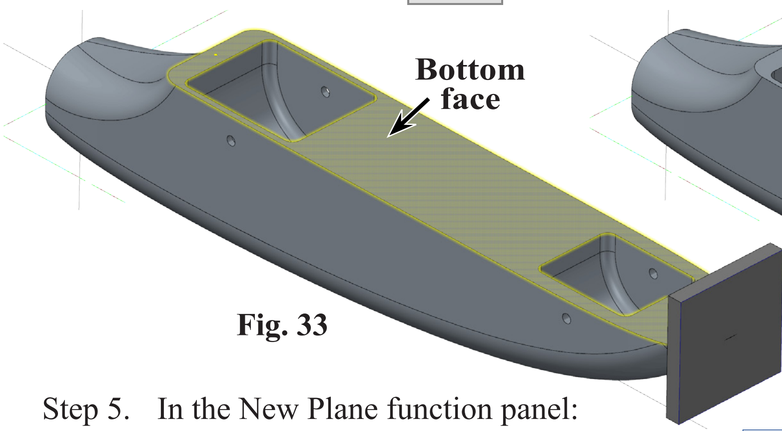


Fig. 33

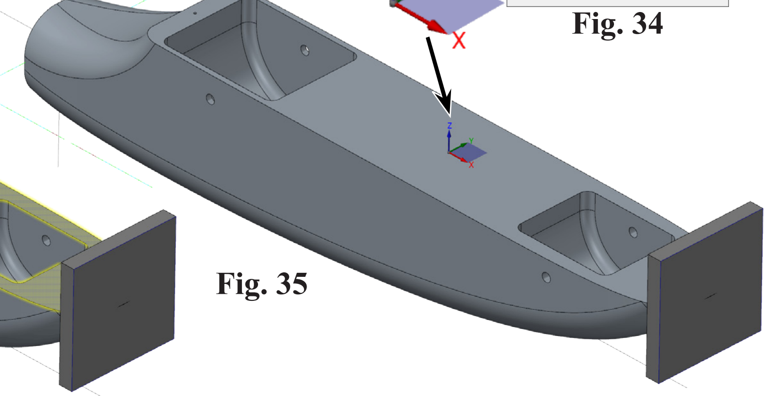


Fig. 35

Step 5. In the New Plane function panel:

Key-in **BOTTOM CUT** for name, **Fig. 36**

Origin X 0

Origin Y 34

Origin Z 0

Click OK [✓].

Step 6. Back in the Planes Manager:

Click **Set All** [=], **Fig. 37**.

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

Step 8. Confirm Origin, **Fig. 38**.

BOTTOM CUT Origin

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

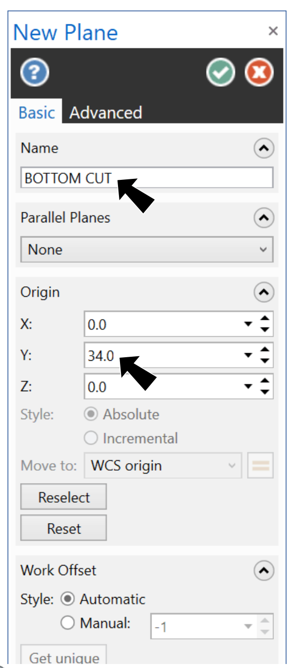


Fig. 36

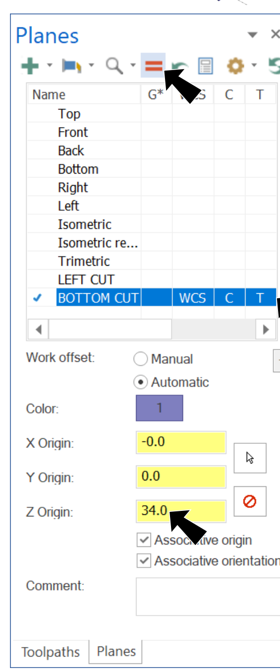


Fig. 37

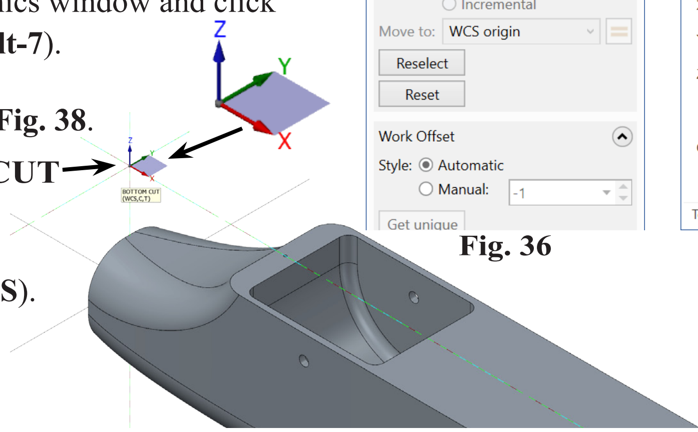


Fig. 38