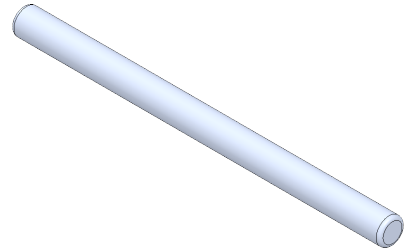





Solar Sidewinder Axles



A. Axle.

Step 1. Click File Menu > New, click **Part Metric**  and OK.


Step 2. Click **Right Plane**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 1**.

Step 3. Click **Circle**  (S) on the Sketch toolbar.



Step 4. Sketch a circle starting at the Origin , **Fig. 2**.


Step 5. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 6. Dimension circle **diameter 3**, **Fig. 2**.

Step 7. Click **Features**  on the Command Manager toolbar.

Step 8. Click **Extruded Boss/Base**  on the Features toolbar.

Step 9. In the Property Manager set:
under Direction 1, **Fig. 3**
End Condition **Mid Plane**
Depth  **42.8**
click OK .

Step 10. Click Zoom to Fit  (F) on the View toolbar.

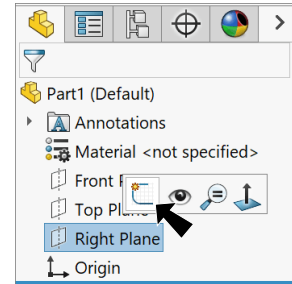


Fig. 1

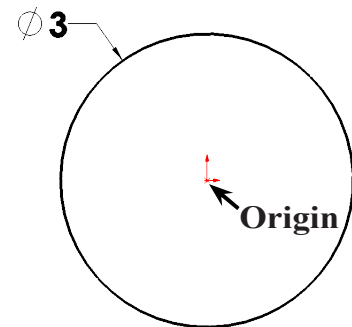


Fig. 2

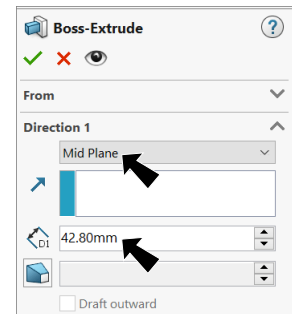


Fig. 3

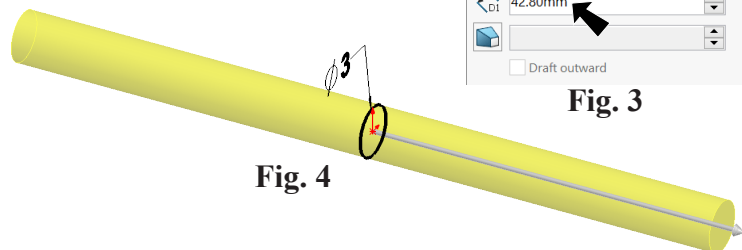


Fig. 4

B. Save as "AXLE".

Step 1. Click File Menu > Save As.

Tip: Create a **Solar Sidewinder** folder in your My Document folder to save your Sidewinder project files. At cudacountry we go a step further, and create a Tech Ed [school year] folder and in that folder we create the Solar Sidewinder folder.
Documents\Tech Ed 24-25\Solar Sidewinder.

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

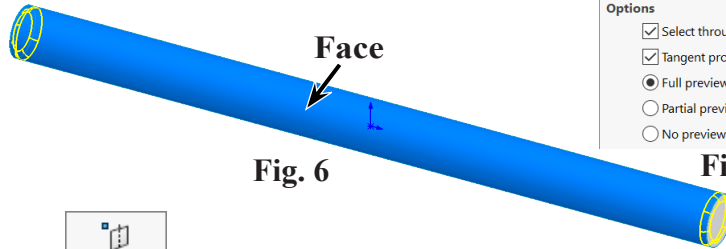
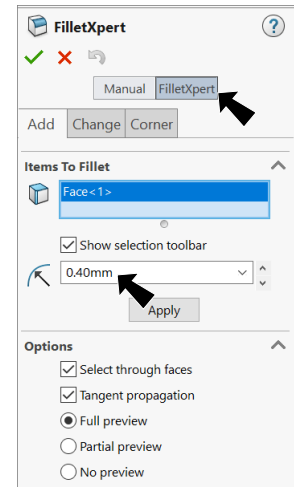
C. Fillet Edges.

Step 1. Click **Fillet**  on the Features toolbar.

Step 2. In the Fillet Property Manager set:
select **FilletXpert**, **Fig. 5**


set **Radius**  **.4**
click **cylindrical axle face**, **Fig. 6**
click **OK** .

Step 3. Save  (Ctrl-S).



D. Mate Reference.

Step 1. Click **Reference Geometry**  on the Features toolbar and **Mate Reference** from the menu.

Step 3. In the Mate Reference Manager set:
under **Primary Reference Entity**
and click **cylindrical face**, **Fig. 9**
click **OK** .

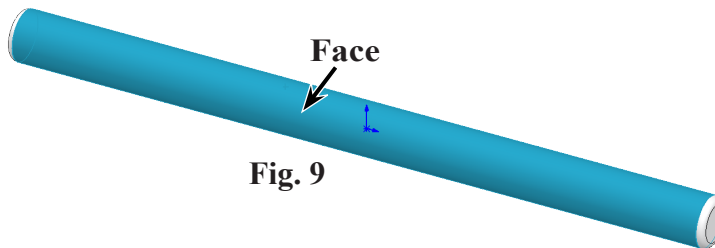
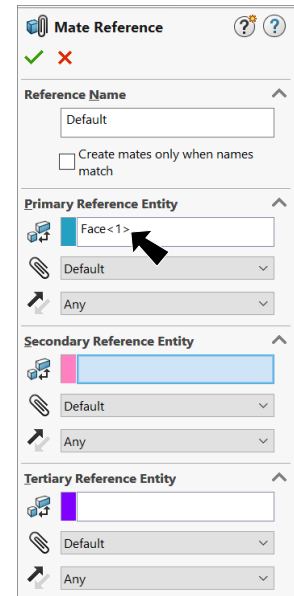



Fig. 8

E. Material Aluminum.

Step 1. Right click Material  in the Feature Manager and click **Edit Material**, Fig. 10.

Step 2. Expand **Aluminum Alloys** in the material tree and select **1060 Alloy**, Fig. 11. Click **Apply** and **Close**.

Step 3. Save  (Ctrl-S).

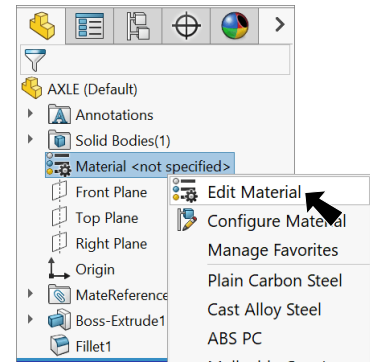


Fig. 10

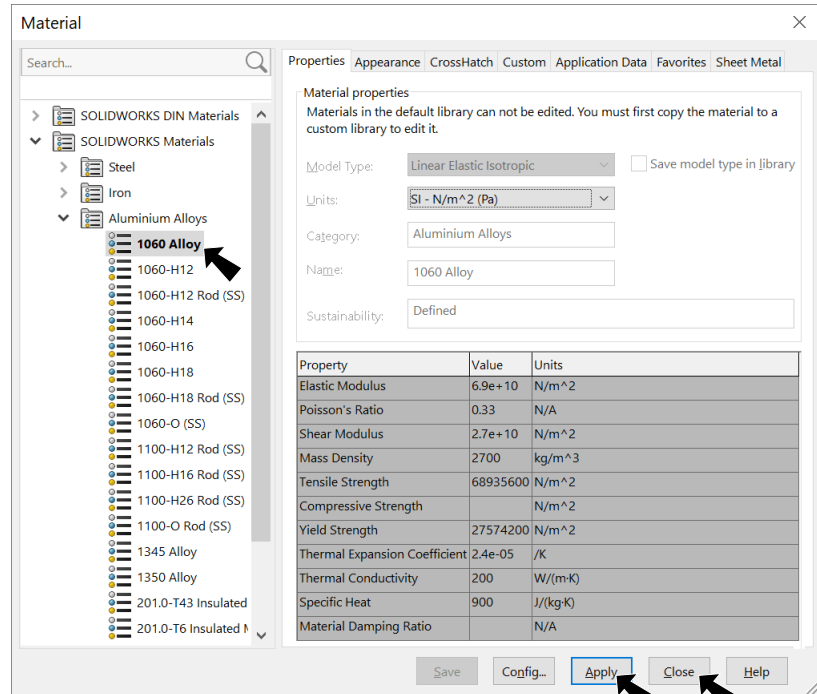


Fig. 11

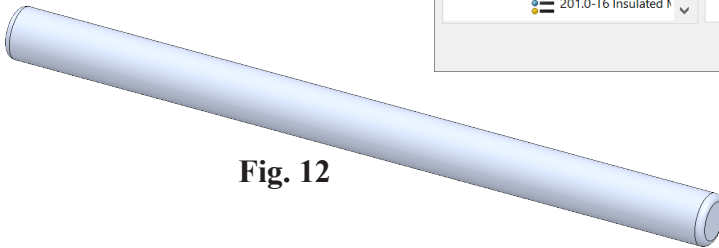


Fig. 12