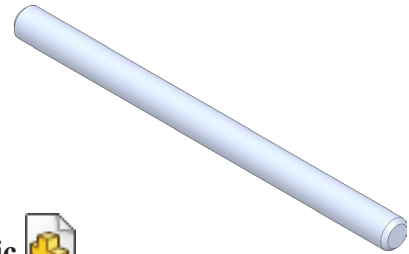


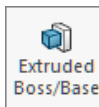


Chapter 2

Solar Train Axle



A. Axle.

- Step 1. Click **New**  on the Standard toolbar, 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.

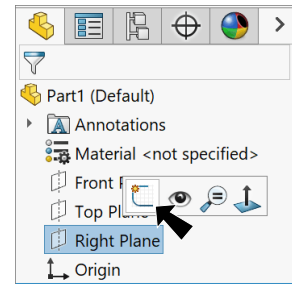


Fig. 1

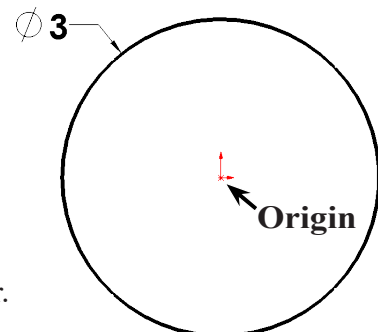


Fig. 2

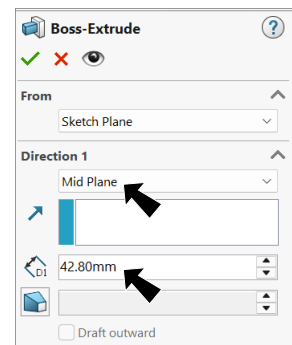
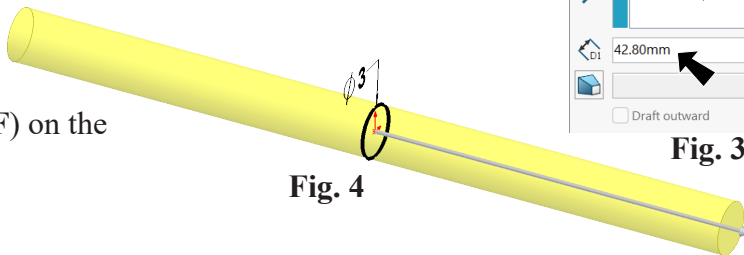


Fig. 3

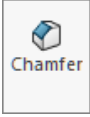
Fig. 4



B. Save as "AXLE".

- Step 1. Click File Menu > Save As.
- Step 2. Key-in **AXLE** for the filename and press ENTER.

C. Chamfer Edges.

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

Step 2. In the Chamfer Property Manager set:
under Chamfer Type, **Fig. 5**

select **Angle Distance** 
under Items To Chamfer
click **both circular edges**, **Fig. 6**
under Chamfer Parameters

Distance  .4
Angle  45°
click OK .

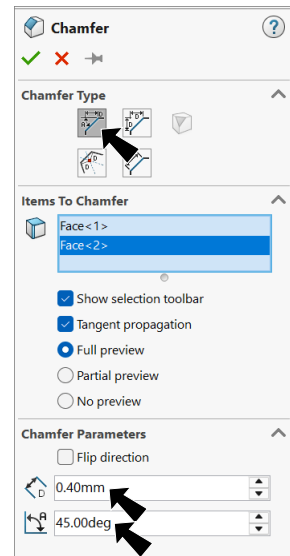
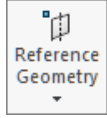


Fig. 5

Step 3. Save  (Ctrl-S).

Fig. 6

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
click **cylindrical face**, **Fig. 8**
click OK .

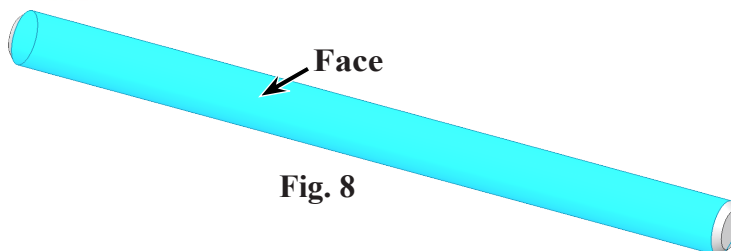


Fig. 8

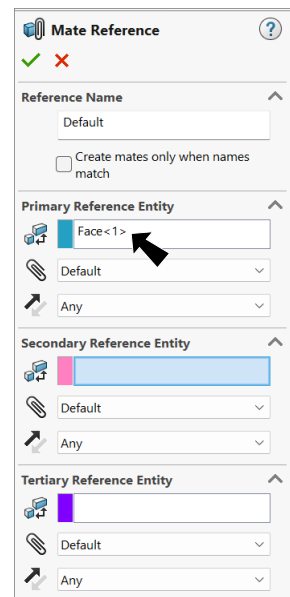
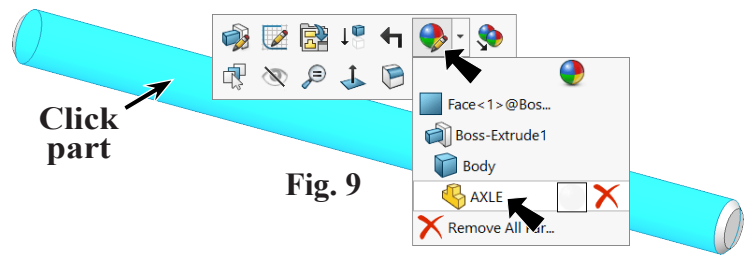


Fig. 7

E. Appearance.

Step 1. Click part to select, click **Appearance Callout**  on the Context toolbar and click **AXLE** , Fig. 9.



Step 2. In the Appearances Task pane, expand **Metal**, click **Aluminum** and in the lower pane select **polished aluminum**, Fig. 10.

Step 3. Click OK  in Property Manager.

Step 4. Save  (Ctrl-S).

