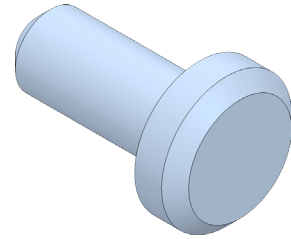




Bike and Trailer Bike Axle



A. Extrude1.

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 at Origin** , **Fig. 2**.

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

Step 6. Dimension **diameter 4.8**, **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 Boss-Extrude Property Manager set:
 under Direction 1, **Fig. 3**
 End Condition **Blind**
 Depth  **1.5**
 click OK .

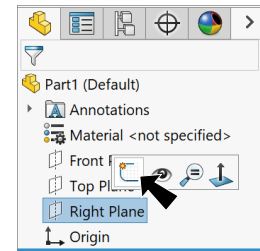


Fig. 1

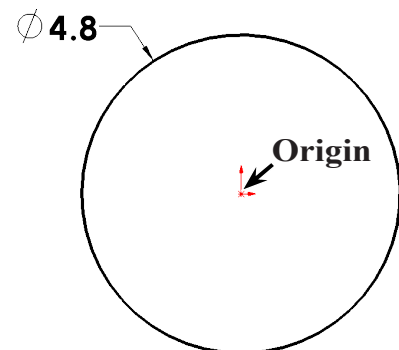


Fig. 2

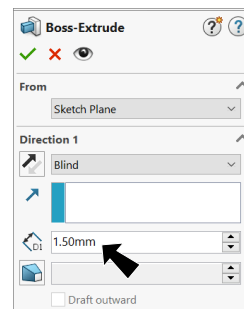


Fig. 3

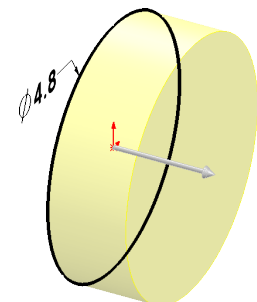


Fig. 4

B. Save as "BIKE AXLE".

Step 1. Click File Menu > Save As.

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

C. Extrude2.

Step 1. Click **Right**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 5**.

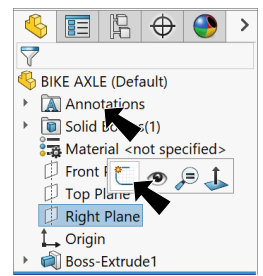



Fig. 5

Step 2. Click **Normal To**  on the Standard Views toolbar. **(Ctrl-8)**

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

Step 4. Sketch circle at Origin , **Fig. 6**.

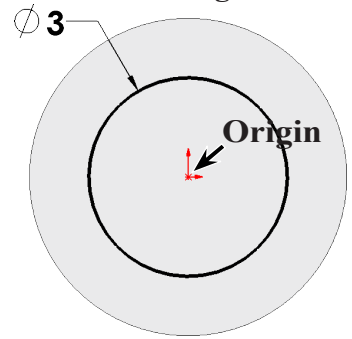


Fig. 6

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

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

Step 7. Click **Offset Entities**  on the Sketch toolbar.

Step 8. In the Offset Entities Property Manager set:
under Parameters, **Fig. 7**

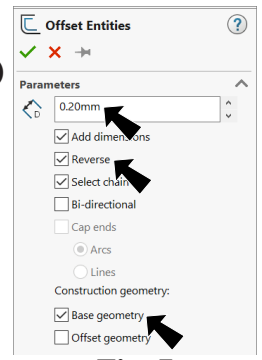




Fig. 7

Distance  **.2 (clearance of Axle)**
check **Reverse**
under Construction geometry
check **Base geometry**
click **circle, Fig. 8**
Yellow offset circle on inside -base geometry (construction) on outside
click OK .

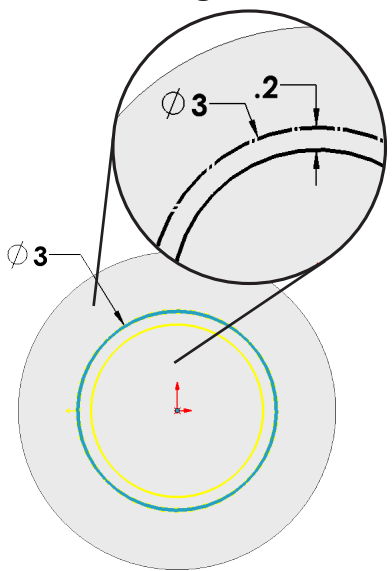

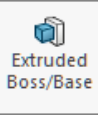


Fig. 8

Step 9. Click **Isometric**  on the Standard Views toolbar. **(Ctrl-7)**

Step 10. Click **Features**  on the Command Manager toolbar.

Step 11. Click **Extruded Boss/Base**  on the Features toolbar.

Step 12. In the Boss-Extrude Property Manager:

under Direction 1, **Fig. 9**
End Condition **Blind**

Depth  **6**

Reverse Direction 

click OK .

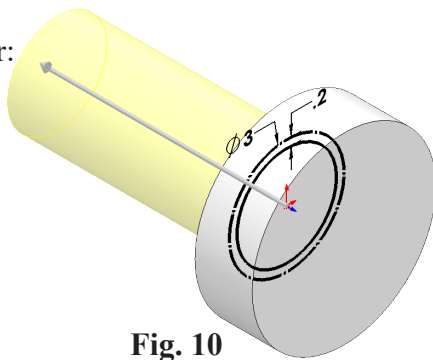


Fig. 10

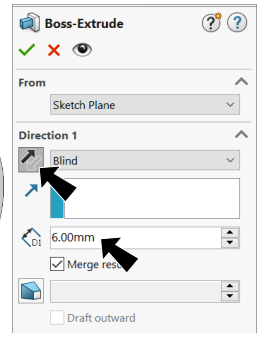


Fig. 9

Step 13. Save  **(Ctrl-S)**.

D. Chamfer.

Step 1. Click **Chamfer**  in the **Fillet flyout**  on the Features toolbar.

Step 2. In the Chamfer Property Manager set:
under Chamfer Type, **Fig. 11**

select **Angle Distance** 
under Chamfer Parameters

Distance  .5

Angle  45°

click **both outside circular edges**, **Fig. 12**

click OK .

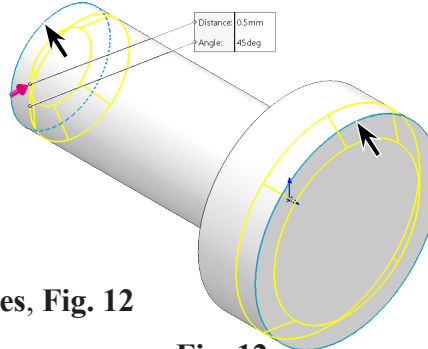


Fig. 12

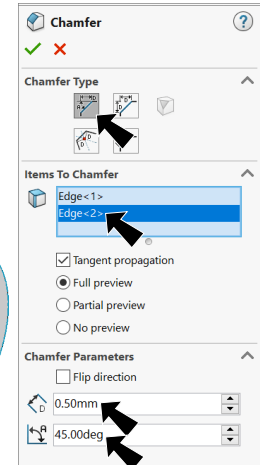




Fig. 11

E. Appearance: Blue Paint.

Step 1. Click the part to select part, click **Appearances**

Callout  on the context toolbar and click **BIKE AXLE** , **Fig. 13**.

Step 2. In the Appearances Task pane, expand **Painted**,
click **Car** and in the lower pane select **gloss blue**, **Fig. 14**.

Step 3. In the Appearances Property Manager set:
under Color, **Fig. 15**

set **RGB values**

R 207

G 229

B 255

click OK .

Step 4. Save  (Ctrl-S).

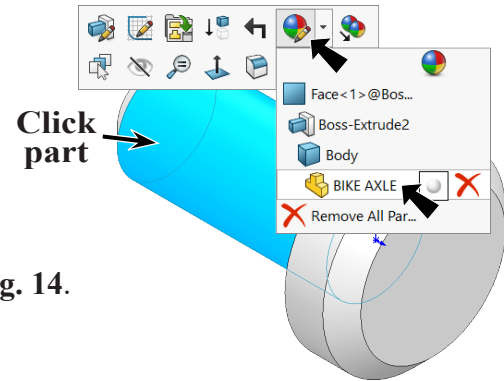


Fig. 13

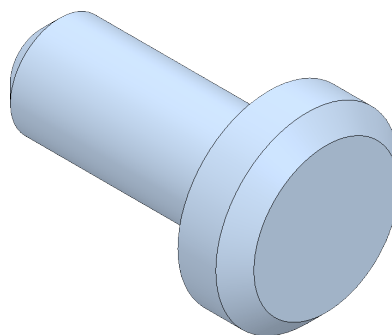


Fig. 16

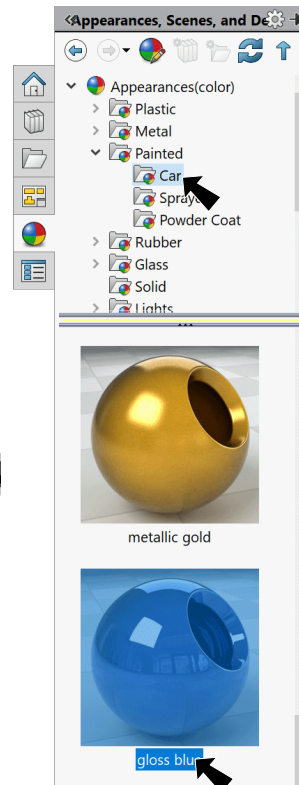


Fig. 14

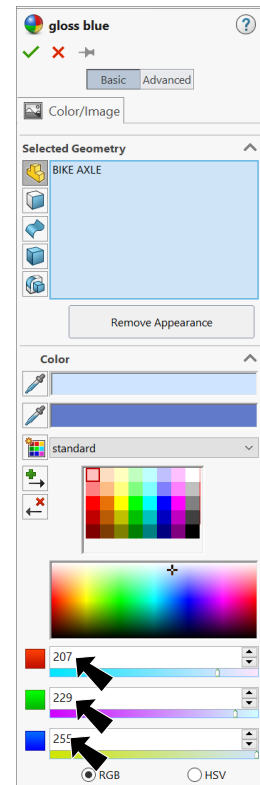


Fig. 15