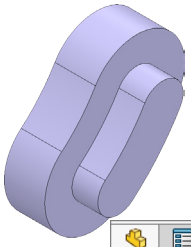
Wind Up Car

Left Pinion Guide



A. Extrude Slot.

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 **Centerline** in the **Line flyout** on the Sketch toolbar.

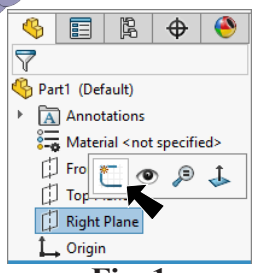


Fig. 1

Step 4. Sketch **centerline from Origin** down and to the left, **Fig. 2**.

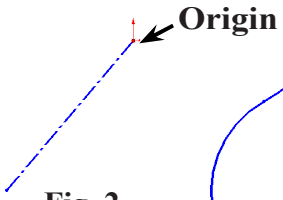


Fig. 2

Step 5. Click **3 Point Arc Slot** **(S)** in the **Straight Slot flyout** on the Sketch toolbar.

Step 6. Sketch a 3 point arc slot starting at the Origin and across to the endpoint of the centerline, **Fig. 3**.

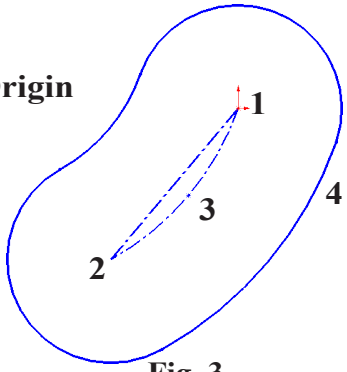


Fig. 3

To sketch slot, click Origin for start endpoint of arc. Move cursor to lower left endpoint of centerline and then click. Move cursor down and to the right for third point of arc and click. Move cursor out for width of slot and click.

Step 7. Click **Smart Dimension** **(S)** on the Sketch toolbar.

Step 8. Add dimensions, **Fig. 4**. To dimension angle to imaginary line, click cemterline and an endpoint, then click the **bottom vertical crosshair** and place dimension.

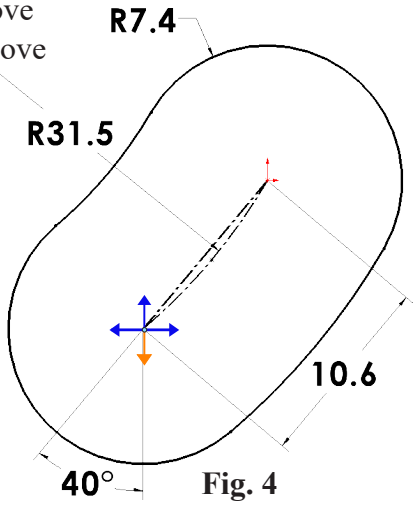


Fig. 4

Step 9 . Click **Features** on the Command Manager toolbar.

Step 10. Click **Extruded Boss/Base** on the Features toolbar.

Step 11. In the Boss-Extrude Property Manager set:
under Direction 1, **Fig. 5**

Depth **6.3**

click OK .

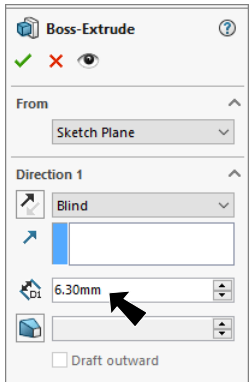


Fig. 5

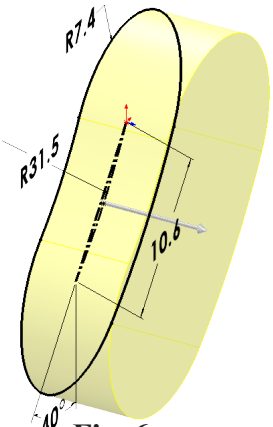


Fig. 6

B. Save as "Left Pinion Guide".

Step 1. Click File Menu > Save As.

Step 2. Key-in **LEFT PINION GUIDE** for the filename and press ENTER.

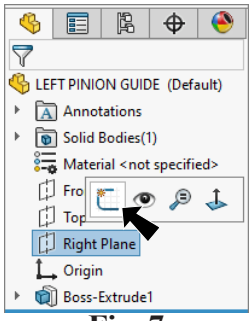


Fig. 7

C. Cut Slot on Inside.

Step 1. Click **Right Plane** in the Feature Manager and click **Sketch** on the context toolbar, **Fig. 7**.

Step 2. Click **Offset Entities** 

on the Sketch toolbar.

Step 3. In the Offset Entities Property Manager set:
under Parameters, **Fig. 8**
Distance 4
click **side face**, **Fig. 9**
check **Reverse**
click OK .

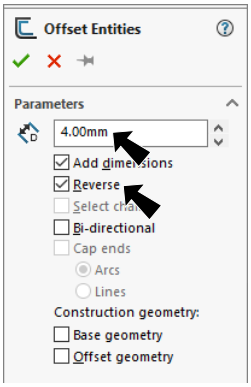


Fig. 8

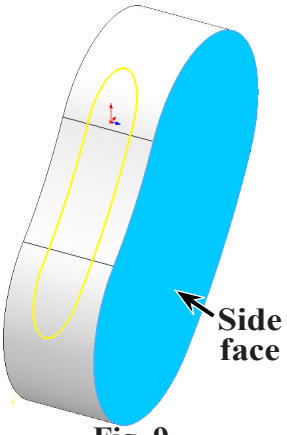
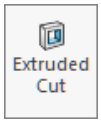


Fig. 9

Step 4. Click **Features** 

on the Command Manager toolbar.

Step 5. Click **Extruded Cut** 

on the Features toolbar.

Step 6. In the Cut-Extrude Property Manager set:
under Direction 1, **Fig. 10**
Depth 5
Reverse Direction
click OK .

Step 7. Save (**Ctrl-S**).

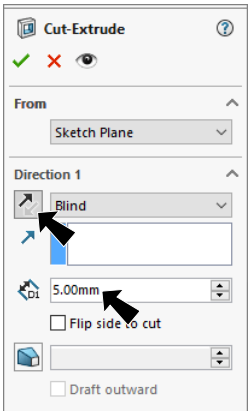


Fig. 10

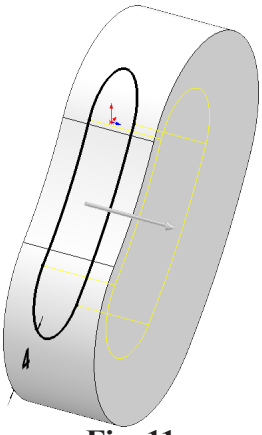


Fig. 11

D. Extrude Slot to Outside.

Step 1. Click the **side face** and click **Sketch** on the context toolbar, **Fig. 12**.

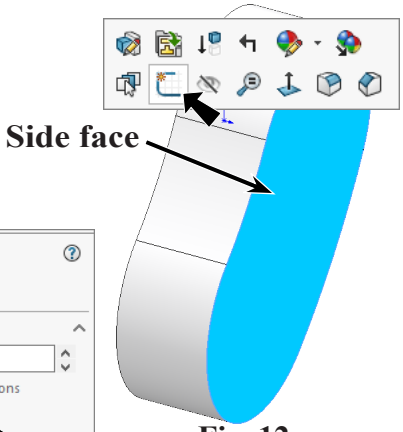


Fig. 12

Step 2. With the **side face** still selected click **Offset Entities** Offset Entities on the Sketch toolbar.

Step 3. In the Offset Entities Property Manager set:
under Parameters, **Fig. 13**

Distance **4.2**
check **Reverse**
click OK .

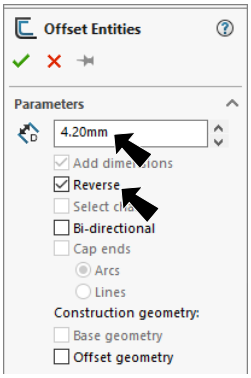


Fig. 13

Step 4 . Click **Features** Features on the Command Manager toolbar.

Step 5. Click **Extruded Boss/Base** Extruded Boss/Base on the Features toolbar.

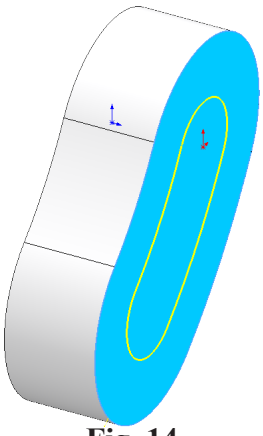


Fig. 14

Step 6. In the Boss-Extrude Property Manager set:
under Direction 1, **Fig. 15**

Depth **4**
click OK .

Step 7. Save (**Ctrl-S**).

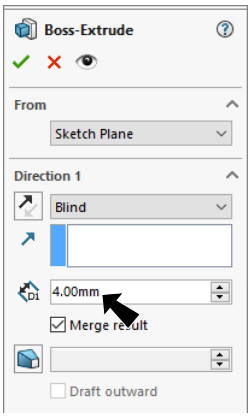


Fig. 15

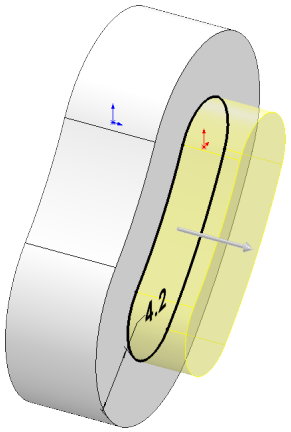


Fig. 16

E. Appearance.

Step 1. Click part, click **Appearance Callout** on the context toolbar and click **LEFT PINI...**, **Fig. 17**.

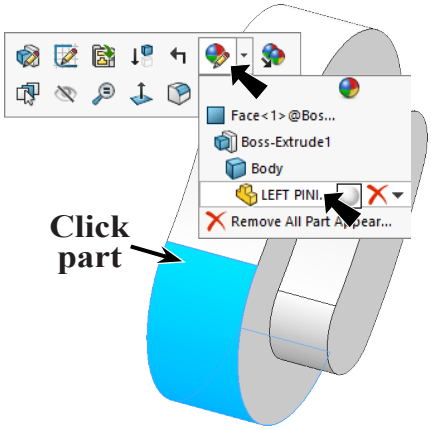


Fig. 17

Step 2. In the Appearances Task pane, expand **Plastic**, click **High Gloss** and in the lower pane select **white high gloss plastic**, **Fig. 18**.

Step 3. In the Appearances Property Manager set:
under Color, **Fig. 19**
set **RGB values**
R 185
G 182
B 227
click OK .

Step 4. Save (**Ctrl-S**).

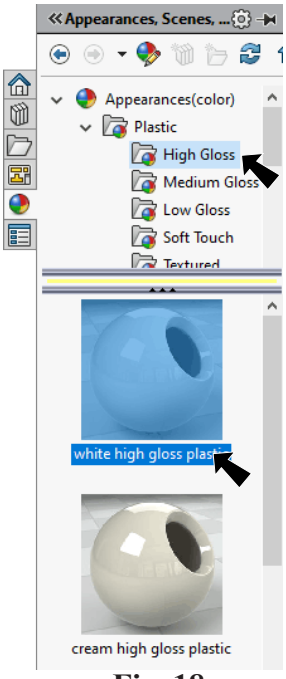


Fig. 18

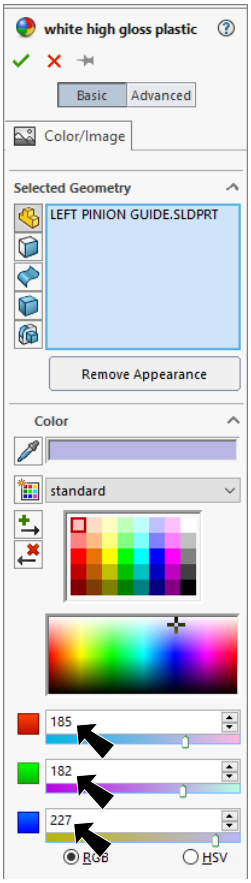


Fig. 19

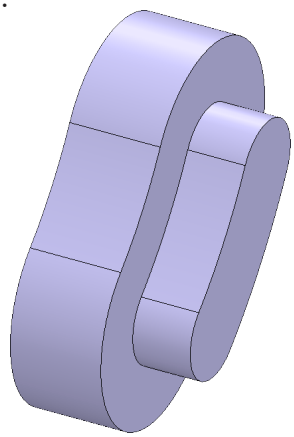


Fig. 20