Chapter 2

Tank
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**.

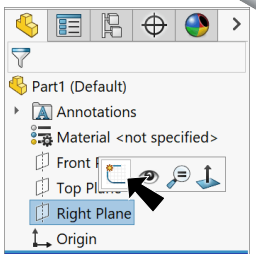

Fig. 1

Step 3. Click **Circle** on the Sketch toolbar.

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

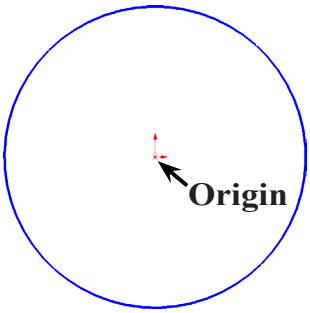

Fig. 2

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

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

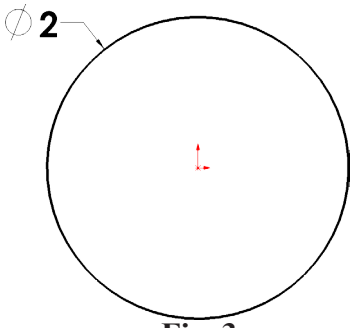

Fig. 3

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. 4**
End Condition **Mid Plane**
Depth **37**
click OK .

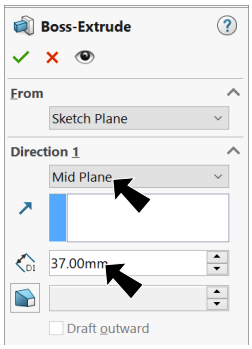

Fig. 4

B. Save as "FRONT AXLE".

Step 1. Click File Menu > Save As.

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

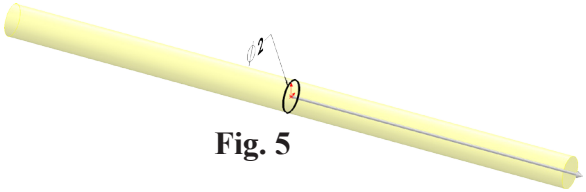
Fig. 5

C. Appearance: Polished Aluminum.

Step 1. Click part, click **Appearance Callout** on the context toolbar and click **FRONT A...**, **Fig. 6**.

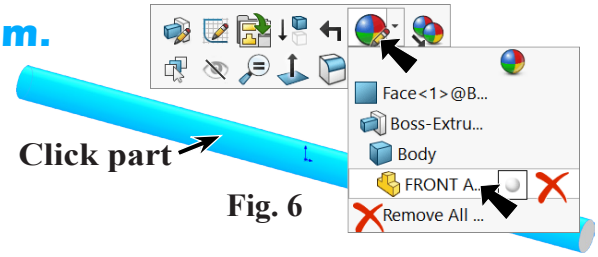

Fig. 6

Step 2. In the Appearances Task pane, expand **Metal**, click **Aluminum** and in the lower pane select **polished aluminum**, **Fig. 7**.

Step 3. Click OK in the Appearances Property Manager, **Fig. 8**.

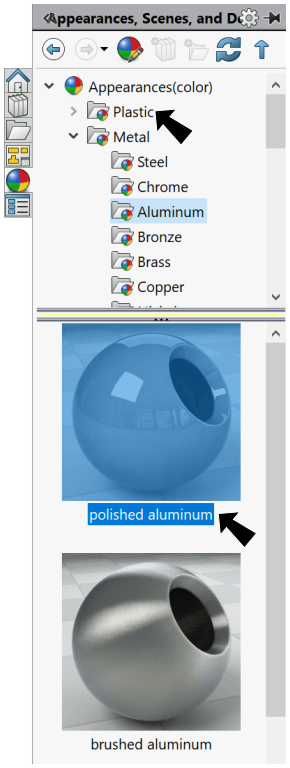

Fig. 7

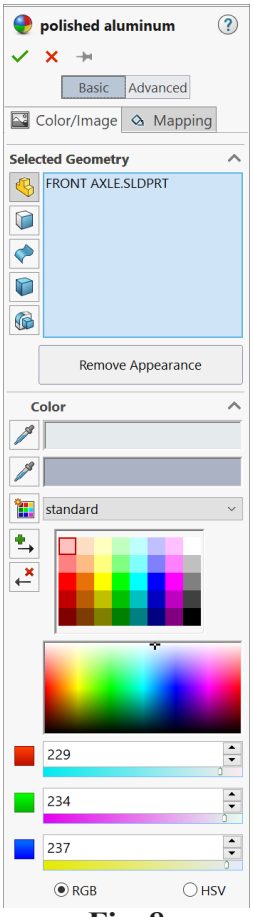

Fig. 8

D. Save As "REAR AXLE".

Step 1. Save. Use **Ctrl-S** to save FRONT AXLE.

Step 2. Click File Menu > Save As.

Step 3. Key-in **REAR AXLE** for the filename and press ENTER.
You now have two axle files, FRONT and REAR. Next, we change length of REAR axle.

E. Change Extrude Depth.

Step 1. Click **Boss-Extrude1** in the Feature Manager and click **Edit Feature** in the content toolbar, **Fig. 9**.

Step 2. In the Property Manager set:
under Direction 1, **Fig. 10**
change **Depth** to **100**
click OK .

Step 3. Save (**Ctrl-S**).

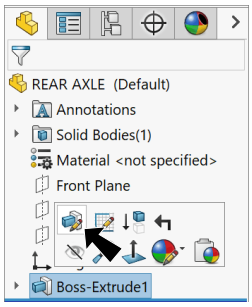

Fig. 9

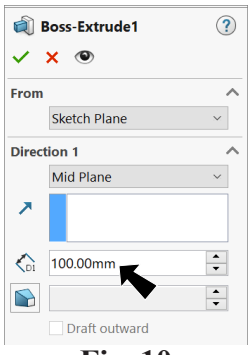

Fig. 10

You should have 2 axles:
FRONT 37
REAR 100

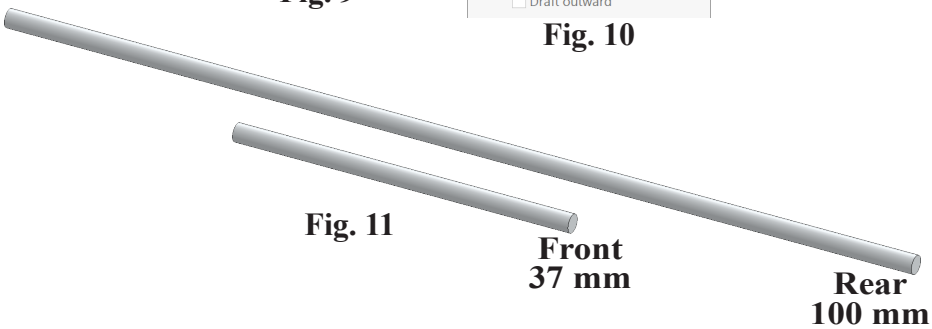
Fig. 11

Front 37 mm

Rear 100 mm