



A. Axle.

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

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

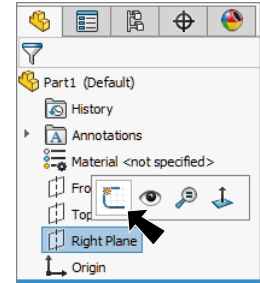


Fig. 1

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

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

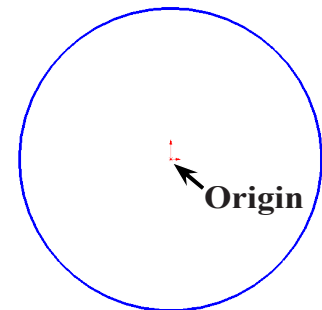


Fig. 2

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

Step 6. Dimension circle **diameter .25**, **Fig. 3**.

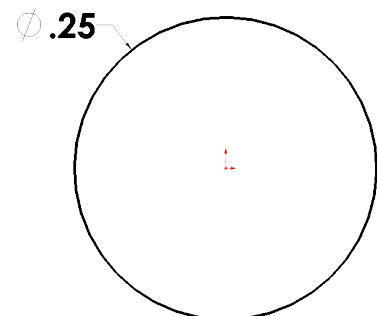
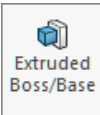




Fig. 3

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  **1**
 click OK .

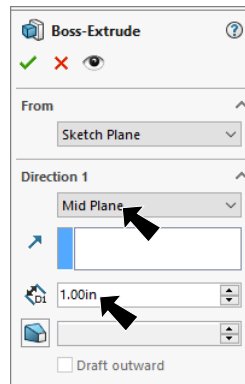


Fig. 4

B. Save as "FRONT AXLE".

Step 1. Click File Menu > Save As.

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

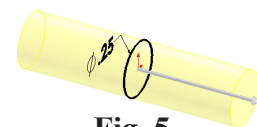



Fig. 5

C. Mate References.

Step 1. Click **Right Plane**  in the Feature Manager to select Plane, **Fig. 6**.

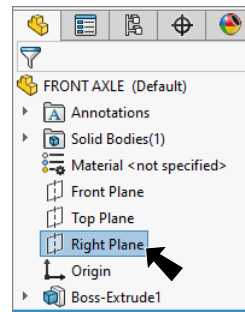





Fig. 6

Step 2. Click **Reference Geometry**  on the Features toolbar and **Mate Reference** from the menu.

Step 3. In the Mate Reference Manager:
 under Primary Reference Entity, **Fig. 7**
 set **Mate Reference Type**  **Coincident**
 under Secondary Reference Entity
 click in Entity box 
 and click **cylindrical face of Axle**, **Fig. 8**
 click OK .

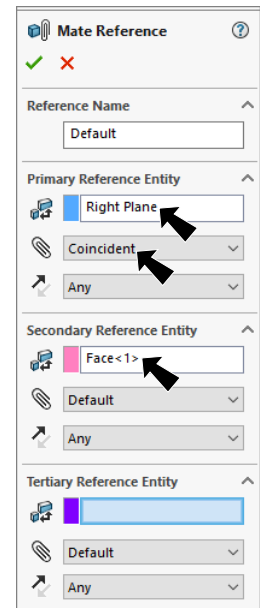


Fig. 7

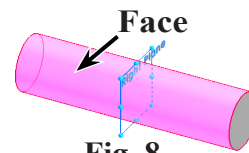



Fig. 8

D. Material Maple.

Step 1. **Right click** **Material**  in the Feature Manager and click **Edit Material**, **Fig. 9**.

Step 2. Expand **Woods** (click ) in the material tree and click **Maple**, **Fig. 10**. Click **Apply** and **Close**.

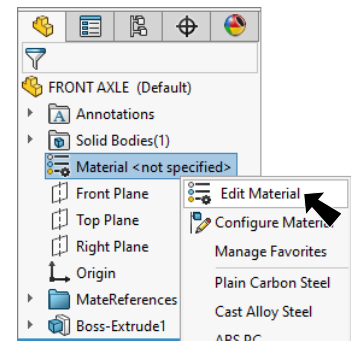


Fig. 9

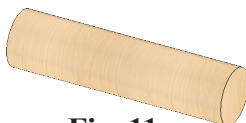


Fig. 11

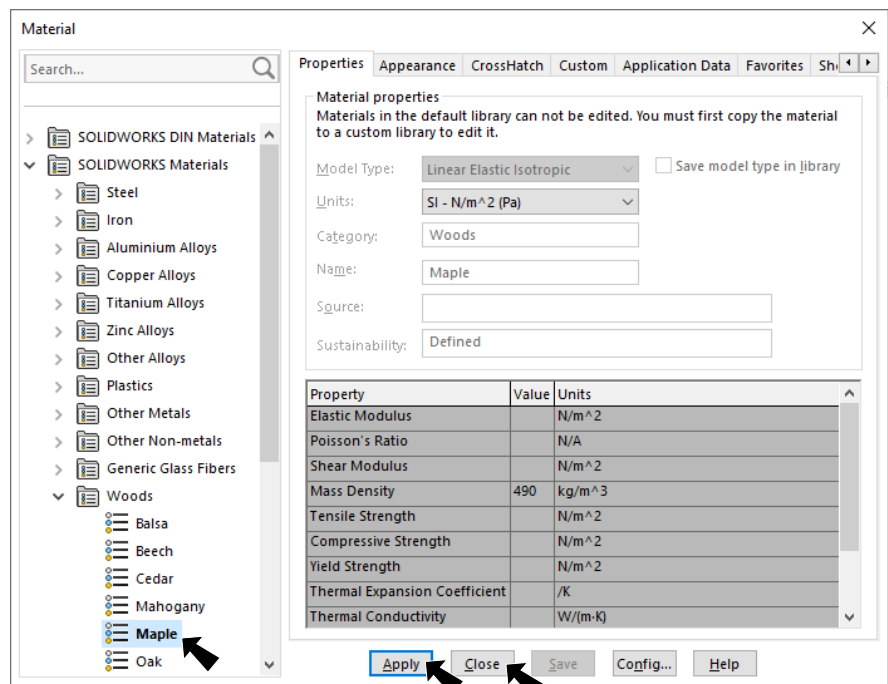


Fig. 10

E. Rotate Mapping.

Step 1. Click PhotoView 360 Menu > Edit Appearance.

Step 2. In the Property Manager:

click **Mapping tab** , **Fig. 12**

under Mapping controls

Rotation 90

click OK .



Fig. 13

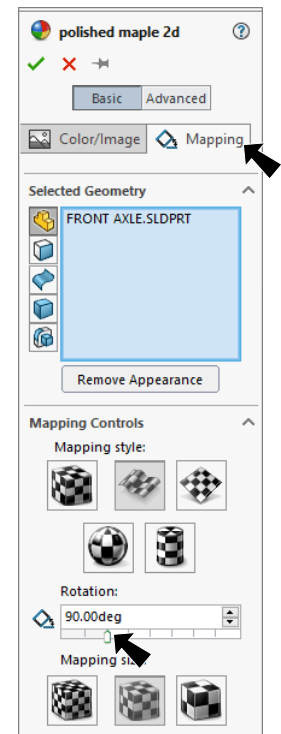


Fig. 12

F. 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.

You now have two Axle files, FRONT and REAR. Next, we change length of REAR Axle.

G. Change Extrude Distance.

Step 1. Click **Boss-Extrude1** in the Feature Manager and click **Edit Feature**  on the context toolbar, **Fig. 14**.

Step 2. In the Boss-Extrude Property Manager set: under Direction 1, **Fig. 15**

Depth  **3.95**

click OK .

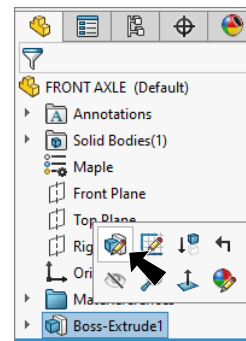


Fig. 14

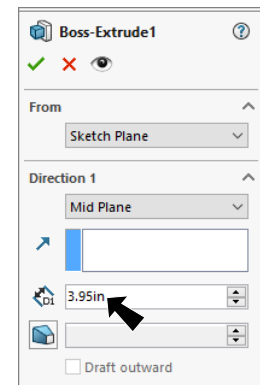


Fig. 15

Step 3. Save. Use **Ctrl-S**.

You should have 2 Axles:

FRONT 1

REAR 3.95

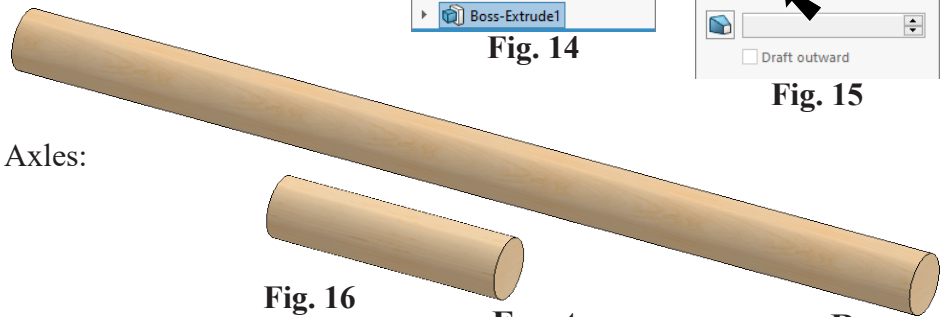


Fig. 16

**Front
1 inch**

**Rear
3.95 inches**