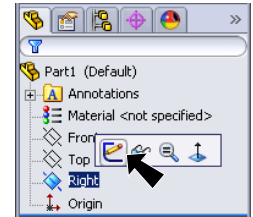


**A. Spacer.**

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

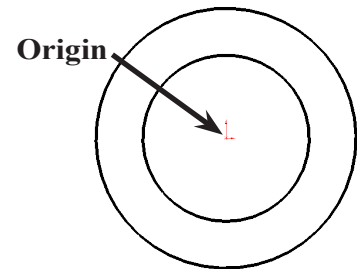
Step 2. Click **Right** (plane) in the Feature Manager and click **Sketch** from the Content toolbar, **Fig. 1**.



**Fig. 1**

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

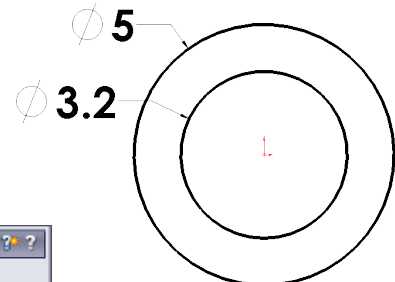
Step 4. Draw two circles starting at the Origin, **Fig. 2**.



**Fig. 2**

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

Step 6. Dimension circle **diameters 3.2 and 5**, **Fig. 3**.



**Fig. 3**

Step 7. Click **Features** on the Command Manager toolbar.

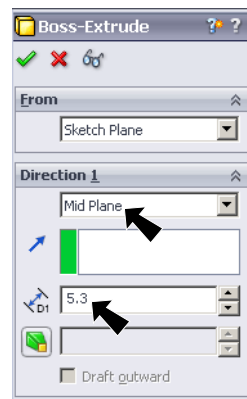
Step 8. Click **Extruded Boss/Base** on the Features toolbar.

Step 9. In the Property Manager, under **Direction 1** set:

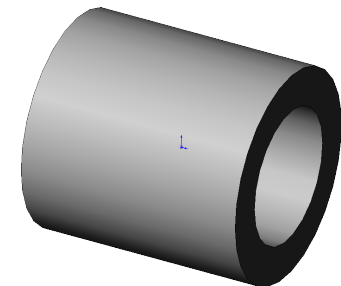
End Condition to **Mid Plane**

**Depth** to **5.3**

click OK, **Fig. 4** and **Fig. 5**.



**Fig. 4**



**Fig. 5**

Step 10. Click Zoom to Fit (F) on the View toolbar.

**B. Save as "FRONT SPACER".**

Step 1. Click File Menu > Save As.

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

### C. Mate References.

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

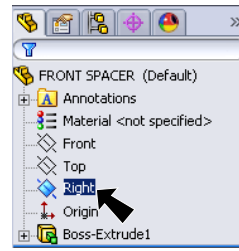
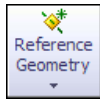


Fig. 6

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** to **Coincident**

under **Secondary Reference Entity**

click in Entity box

and click **inside cylindrical face**, **Fig. 8**

click **OK**.

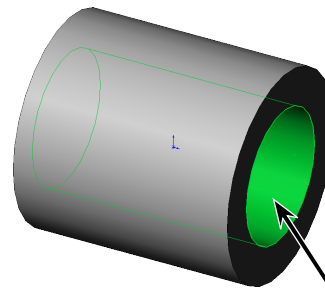
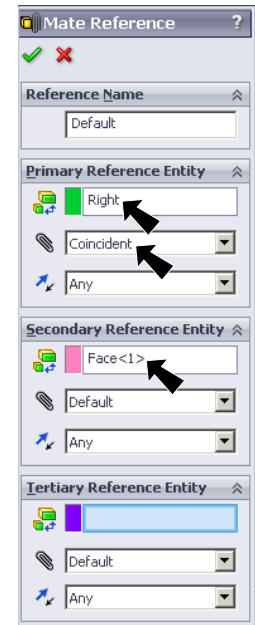


Fig. 8

Face

Fig. 7



### D. Material Nylon.

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



Step 2. **Expand Plastics** in the material tree and select **Nylon 101**, **Fig. 10**. Click **Apply** and **Close**.

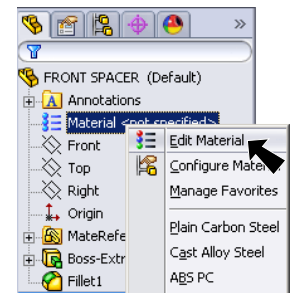


Fig. 9

### E. Save as "REAR SPACER".

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

Step 2. Click **File Menu > Save As**.

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

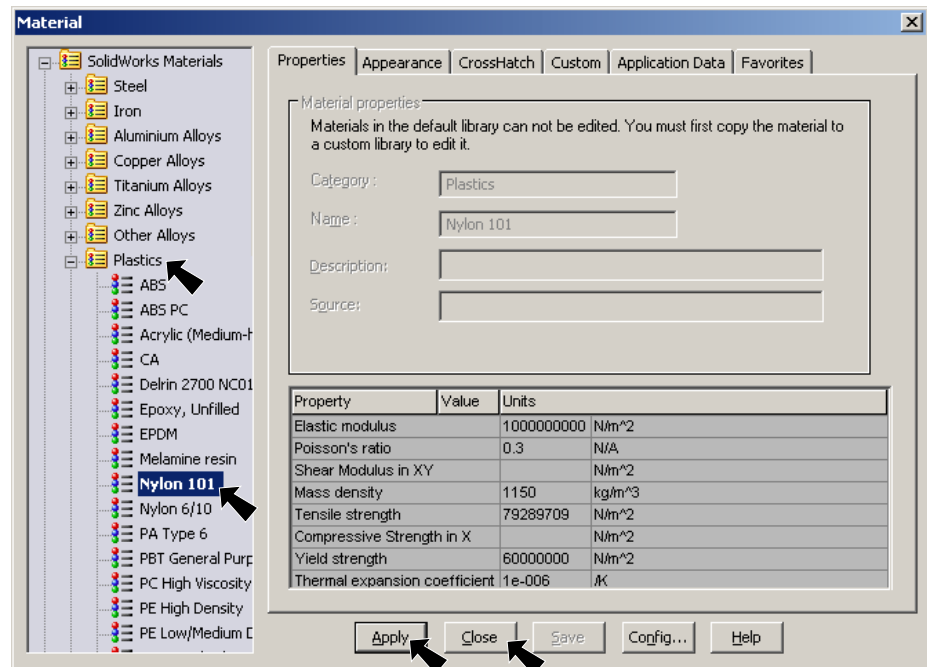




Fig. 10

## F. Change Extrude Depth.

Step 1. Click **Boss-Extrude1** in the Feature Manager and click **Edit Feature**  in the menu, **Fig. 11**.

Step 2. Change **Depth**  **D1** to **2.5** click **OK** , **Fig. 12**.

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

You should have 2 spacers:  
**FRONT 5.3**  
**REAR 2.5**

