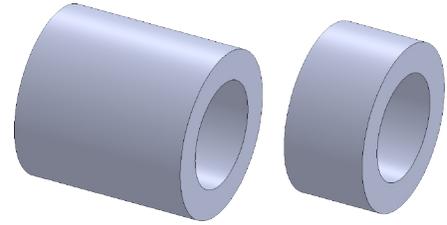**CO2 Shell Car**
Spacers

A. Spacer.

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

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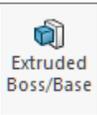   **Sketch** on the context toolbar, **Fig. 1**.

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

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

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

Step 6.   Dimension circle **diameters 3.2** and **5**, **Fig. 2**.

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

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

Step 9.   In the Property Manager set:
   under Direction 1, **Fig. 3**
   End Condition **Mid Plane**

   Depth **5.3**

   click OK .
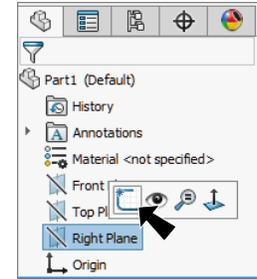
Step 10.   Click Zoom to Fit (**F**) on the
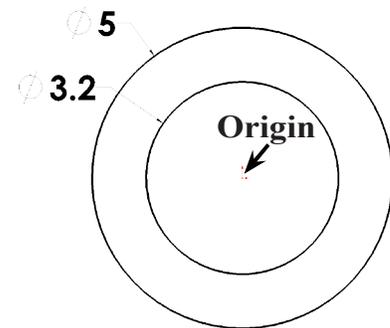   View toolbar.
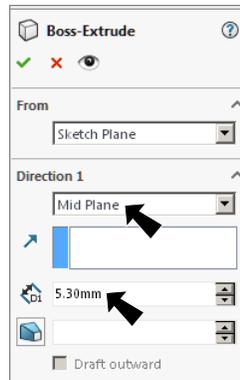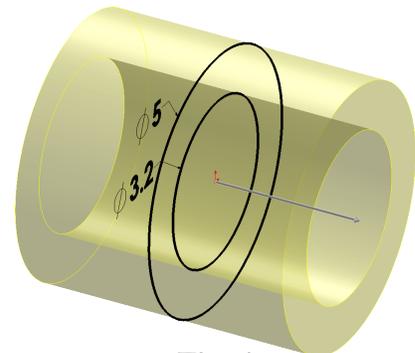
B. Save as "FRONT SPACER".

Step 1.   Click File Menu > Save As.

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

Fig. 1

∅ **5**

∅ **3.2**

Origin

Fig. 2

Boss-Extrude

From
Sketch Plane

Direction 1
Mid Plane

5.30mm

Draft outward

Fig. 3

∅5

∅3.2

Fig. 4

C. Mate References.

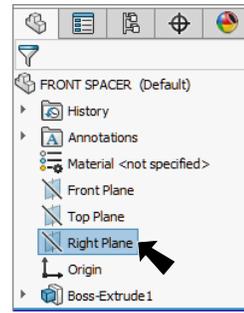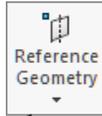Step 1. Click **Right Plane** in the Feature Manager to select Plane, **Fig. 5**.

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

Step 3. In the Mate Reference Manager:

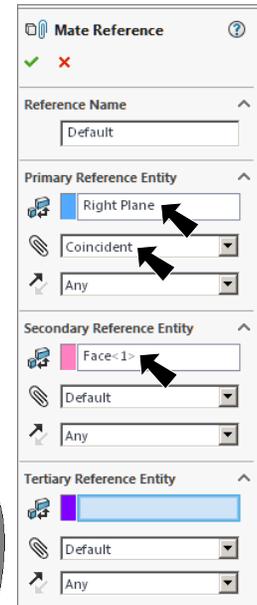under **Primary** Reference Entity, **Fig. 6**

Mate Reference Type **Coincident**

under **Secondary** Reference Entity

click in Entity box

and click a **cylindrical face**, **Fig. 7**
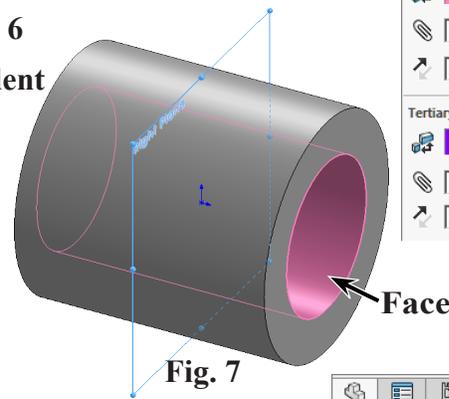
click OK .

Fig. 5

Fig. 6

Face

Fig. 7

D. Material Nylon.

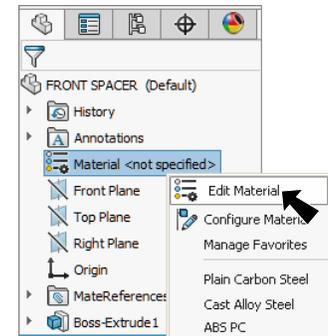Step 1. **Right click Material** in the Feature Manager and click **Edit Material**, **Fig. 8**.

Step 2. **Expand Plastics** in the material tree and select **Nylon 101**, **Fig. 9**. Click **Apply** and **Close**.

Fig. 8

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.
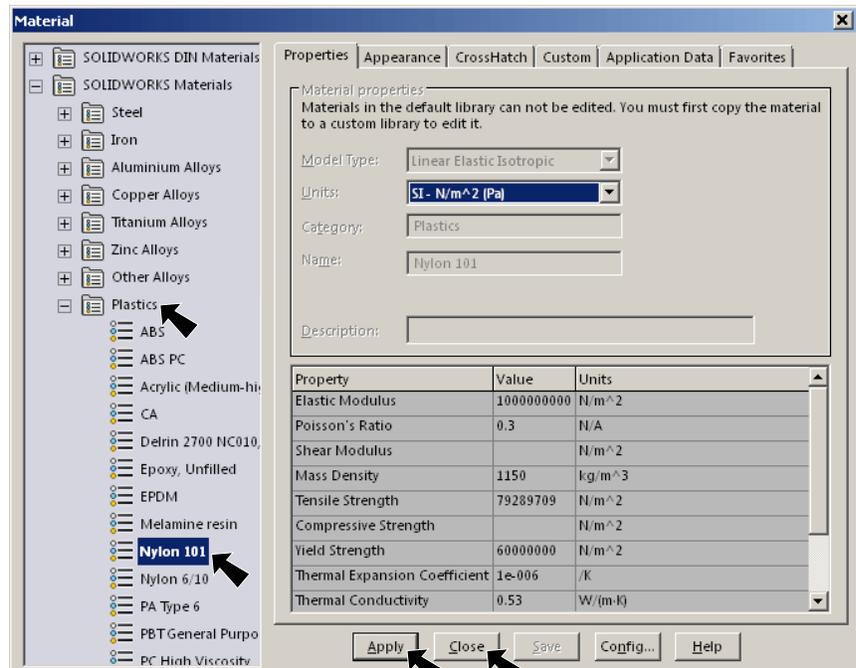
Fig. 9

F. Change Extrude Depth.

Step 1. Click **Boss-Extrude1** in the Feature Manager and click **Edit Feature** on the context toolbar, **Fig. 10**.

Step 2. In the Boss-Extrude1 Property Manager set: under Direction 1, **Fig. 11**
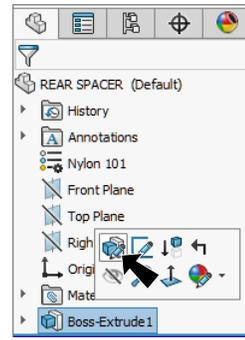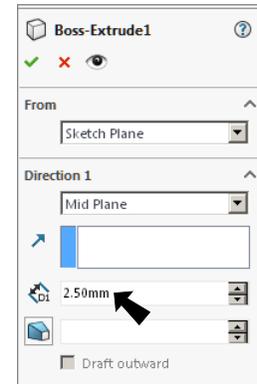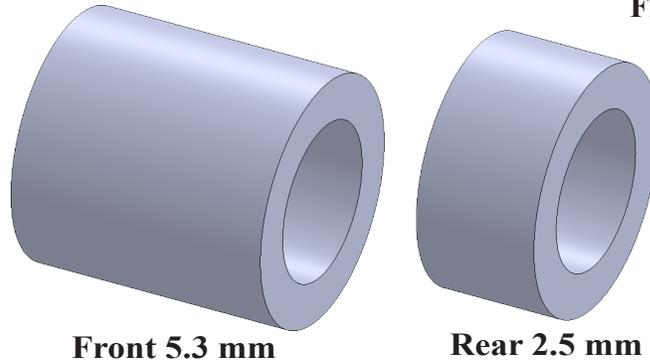
change **Depth** to **2.5**

click OK .

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

You should have 2 spacers:
FRONT 5.3
REAR 2.5

Fig. 10

Fig. 11

Front 5.3 mm

Rear 2.5 mm

Fig. 12