Chapter 12

Solar Car

Rubber Band Belt

A. Create Belt.

Step 1. If necessary, open your **SOLAR CAR ASSEMBLY** file.

Step 2. Click **Trimetric** on the Standard Views toolbar.

Step 3. Zoom in around **Pulley and Wheel**, **Fig. 1**. To zoom, place the cursor over the Pulley and Wheel area and spin the wheel on mouse back. While spinning the wheel keep cursor on the area where you want to zoom.

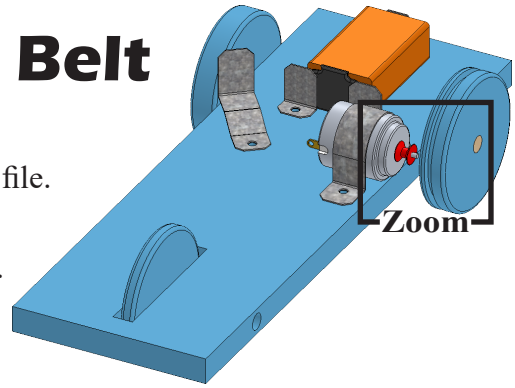

Fig. 1

Step 4. Click Insert Menu > Assembly Feature > Belt/Chain.

Step 5. In the Belt/Chain Property Manager:

under Belt Members, **Fig. 2**

click **cylindrical face of the Pulley** and **bottom cylindrical face of groove in Rear Wheel Groove**, **Fig. 3**

under Properties

check **Engage belt**

check **Create belt part**

click OK .

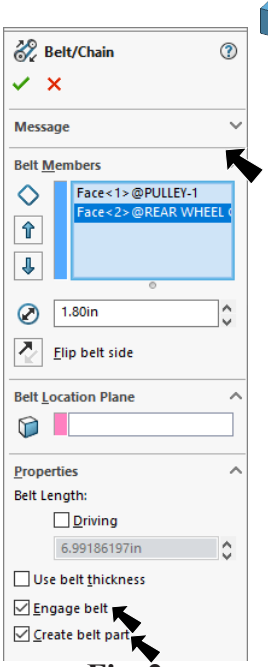

Fig. 2

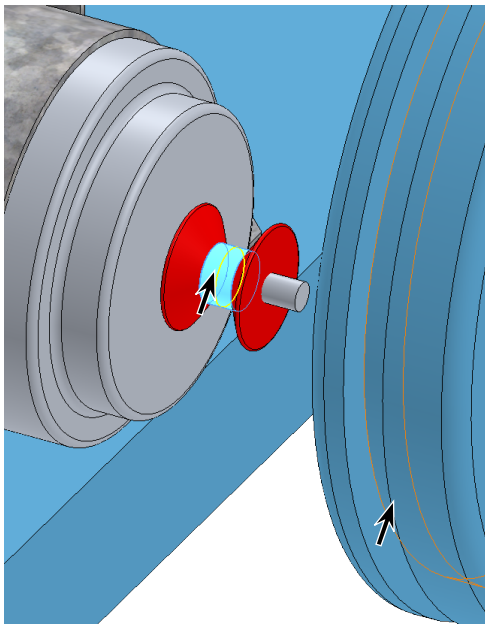

Fig. 3

B. Extrude Belt Part.

Step 1. At the bottom of the Feature Manage expand **Belt1 feature** Belt1 and click **Belt1** Belt1 **part**, then click **Open Part**, **Fig. 5**.

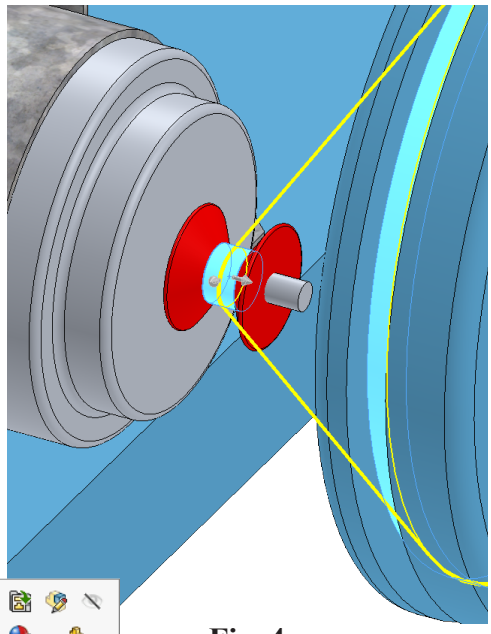

Fig. 4

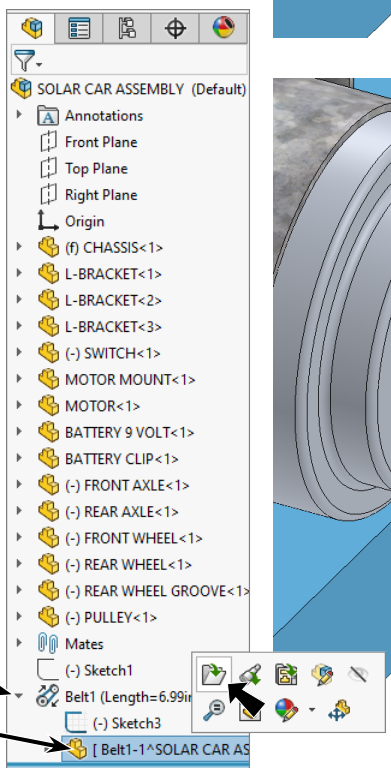

Fig. 5

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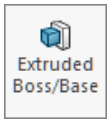
Step 3. Click the **Sketch** at the bottom of the Feature Manager, **Fig. 6** and click **Extruded Boss/Base** 

on the Features toolbar.

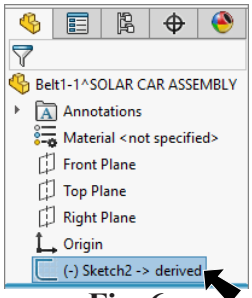


Fig. 6

Step 4. In the Extrude Property Manager set:
under Direction 1, **Fig. 7**
End Condition **Mid Plane**
Depth .08
check **Thin Feature**
under Thin Feature
Thickness .02
click OK ✔ .

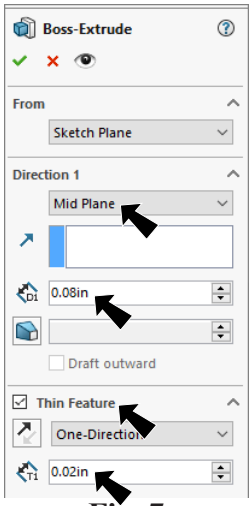


Fig. 7

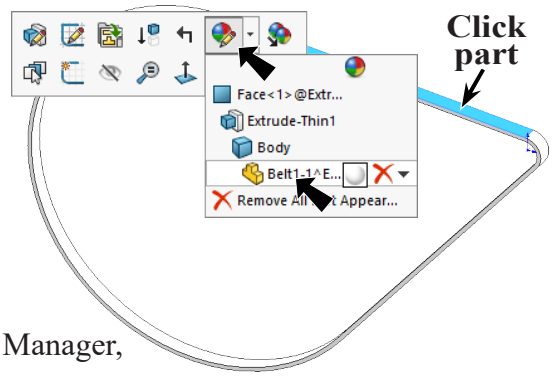


Fig. 8

C. Material Rubber.

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

Step 2. Expand **Rubber** in the material tree and click **Natural Rubber**. Click **Apply** and **Close**.

Fig. 9

D. Appearance Color.

Step 1. Click the part, click **Appearance Callout** on the context toolbar and click **BELT..**, **Fig. 9**.

Step 2. In the Appearances Property Manager,
under Color, **Fig. 10**
click **orange** swatch
click OK ✔ .

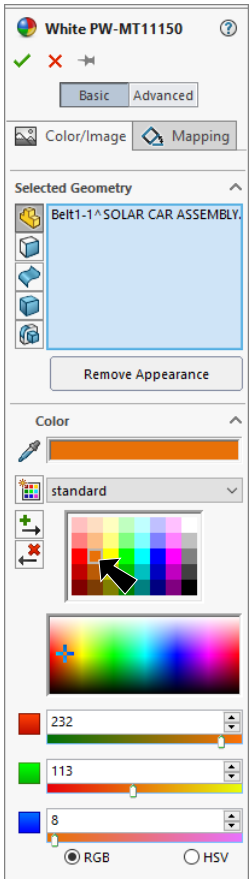


Fig. 10

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

Step 4. Close the Belt part file. Use File Menu > Close.

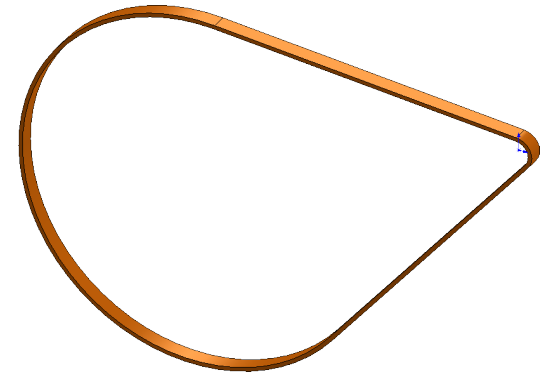


Fig. 11

E. Hide Belt Sketch.

Step 1. Back in the Assembly, click the **Sketch** and click **Hide** on the context toolbar, **Fig. 12**.

Step 2. Save. Use **Ctrl-S**.

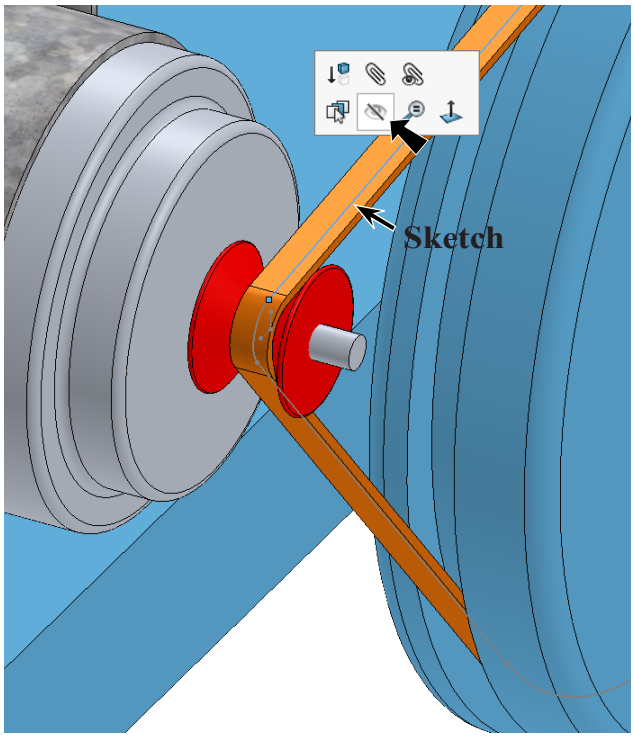


Fig. 12

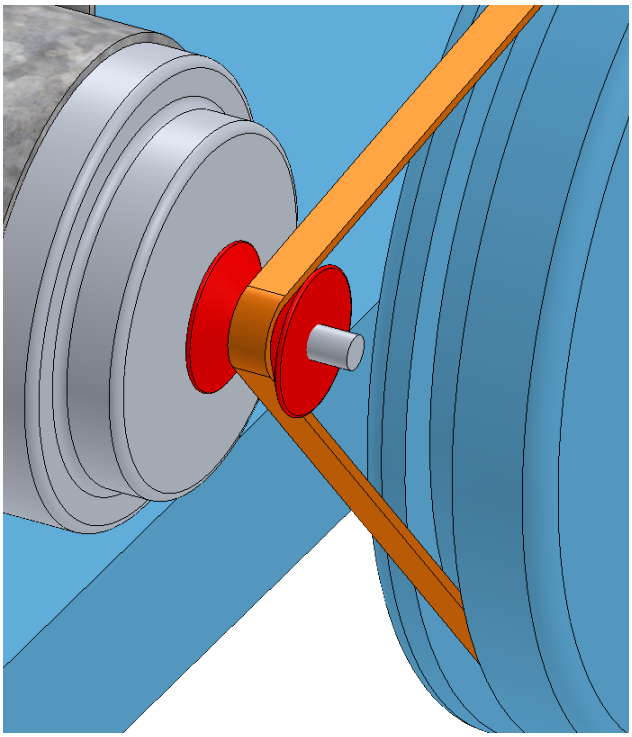


Fig. 13