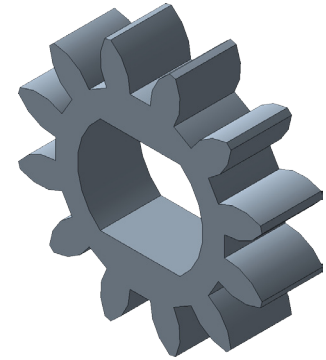




Chapter 5

Circuit Cubes All Terrain Sprocket 12T 1M



A. Toolbox New Part Spur Gear 12T.

Step 1. Click **Design Library** tab  in the Task Pane, **Fig. 1**.

Step 2. Expand the **Toolbox**  **Toolbox**
Expand **ANSI Metric** folder  **ANSI Metric**
Expand **Power Transmission** folder  **Power Transmission**
Click **Gears** folder  **Gears**

Step 3. In the lower pane, **right click Spur Gear**  and click **Create Part** from menu, **Fig. 1**.

Step 4. In the Component Property Manager set:
under Properties, **Fig. 2**

Module: 1

Number of Teeth: 12

Pressure Angle: 20

Face Width: 3.4

Hub Style: None

Nominal Shaft Diameter: 2

Keyway: None

click OK .

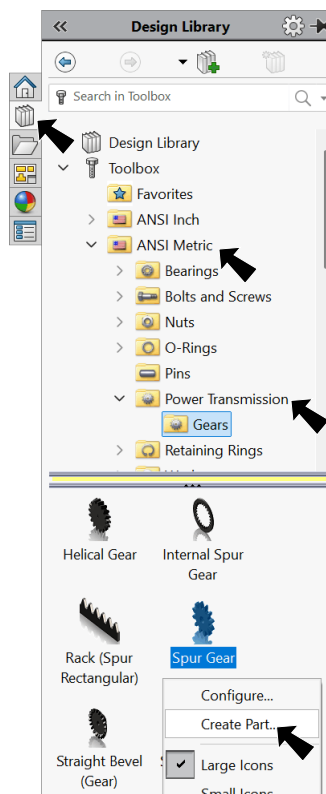


Fig. 1

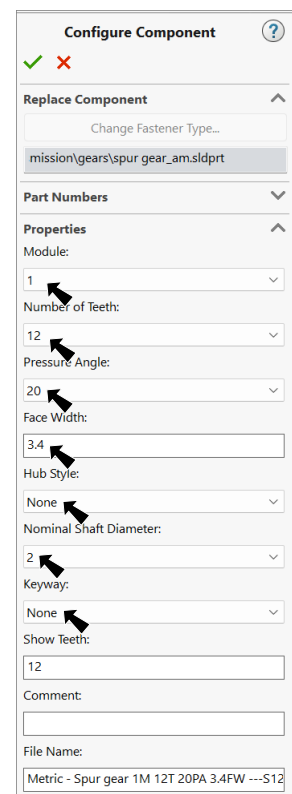


Fig. 2

B. Save as "SPROCKET 12T 1M".

Step 1. Click File Menu > Save As.

Step 2. In the Save As dialog box:
key in **SPROCKET 12T 1M** for
file name.

Navigate to your **My Documents/**
Tech Ed 25-26/CCAT folder
click **Save**, **Fig. 4**.

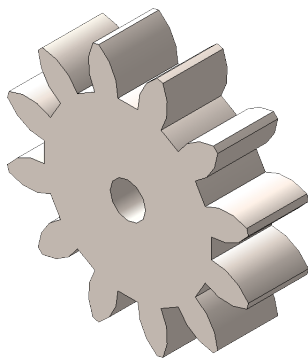


Fig. 3

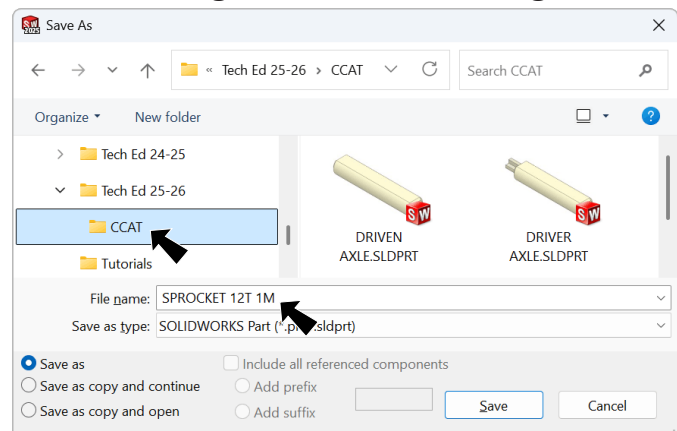


Fig. 4

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C. Change Bore.

Step 1. Click **Bore**  in the Feature Manager and click **Edit Sketch**  on the context toolbar, **Fig. 5**.

Step 2. Click **Normal To**  on the Standard Views toolbar. (**Ctrl-8**)

Step 3. Change **diameter dimension to 7**, **Fig. 6**.

Step 4. Click **Line**  (**L**) on the Sketch toolbar.

Step 5. Sketch **two horizontal lines across circle**, **Fig. 7**. Double click to terminate chain.

Step 6. **Unselect Line tool**. To unselect, right click graphics area and click **Select**  from menu.

Step 7. **Drag selection to right to select both lines** and click **Make Equal**  on the context toolbar, **Fig. 8**.

Step 8. Click **Smart Dimension**  (**S**) on the Sketch toolbar.

Step 9. Add **5.4 dimension**, **Fig. 9**.

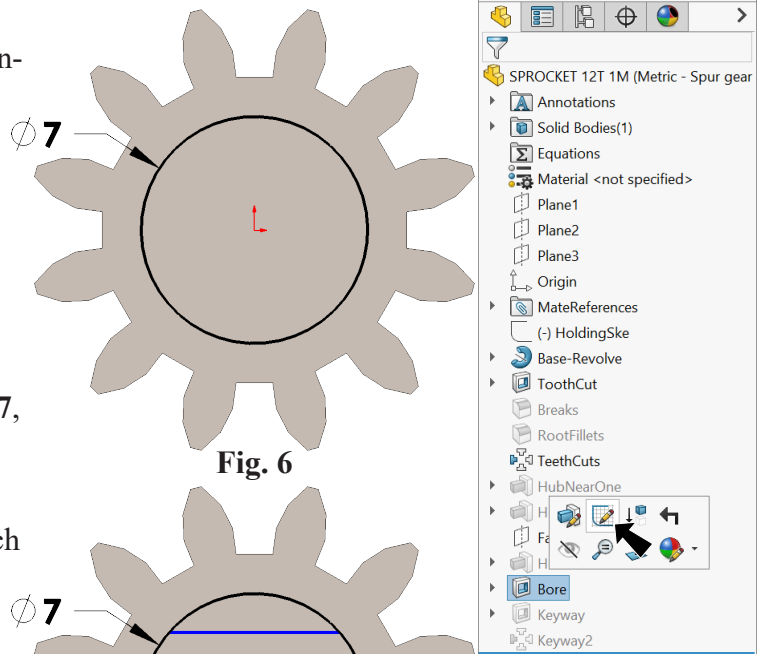


Fig. 5

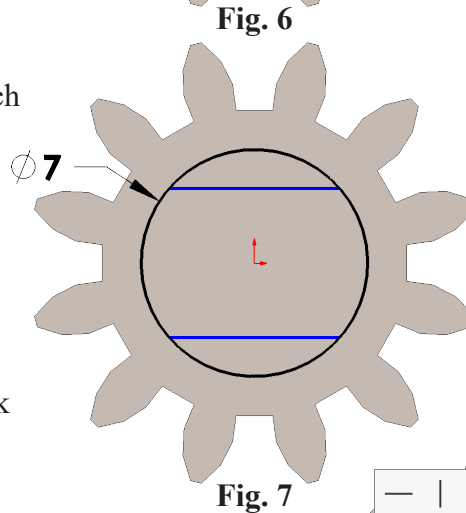


Fig. 7

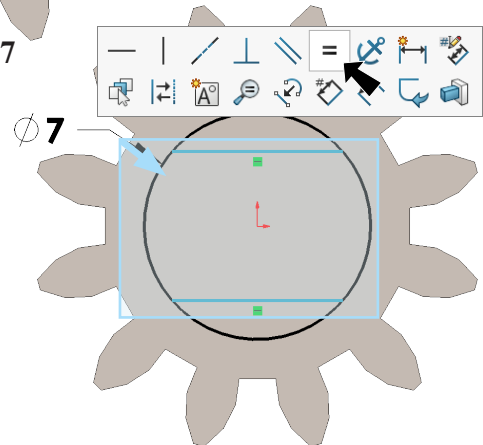


Fig. 8

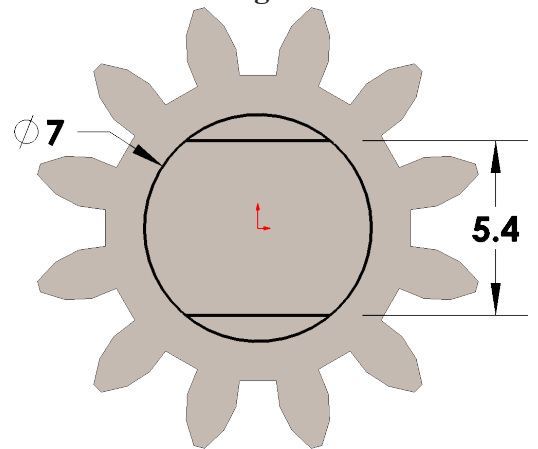


Fig. 9

Step 10. Click **Trim Entities**  (S) on the Sketch toolbar.

Step 11. In the Trim Property Manger:

select **Trim to closest** , **Fig. 10**

Trim the two segments of circle outside the lines, **Fig. 11**.

Click segments to trim.

Results shown in **Fig. 12**.

Click OK  when done.

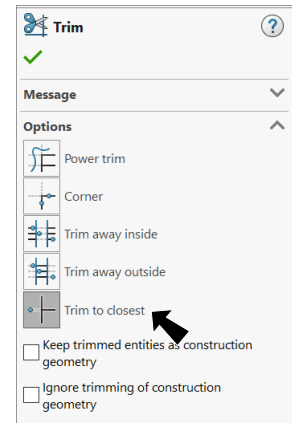


Fig. 10

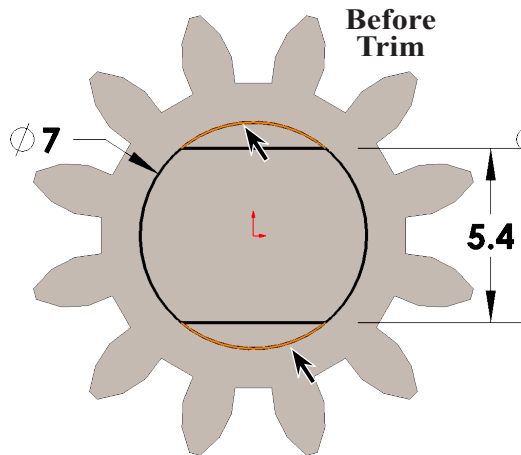


Fig. 11

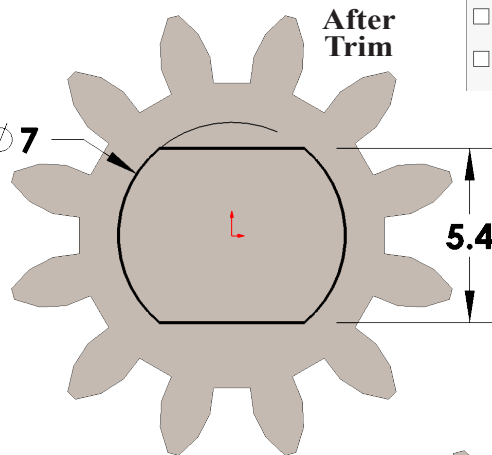


Fig. 12

Step 12. Click **Exit Sketch**  on the Sketch toolbar, **Fig. 13**.

Step 13. Save  (Ctrl-S).

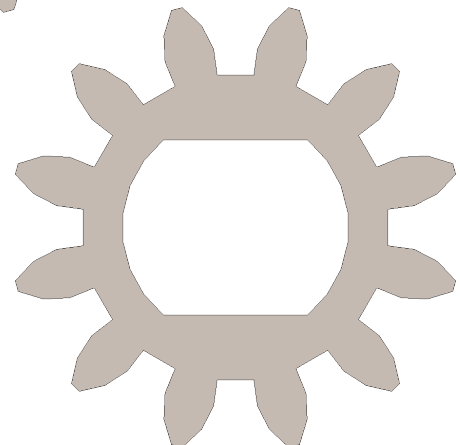


Fig. 13

D. Appearance: Blue Plastic.

Step 1. Click **Isometric**  on the Standard Views toolbar. (Ctrl-7)

Step 2. Click part, click **Appearance Callout**  on the context toolbar and click **SPROCKET 12T 1M** , Fig. 14.

Step 3. In the Appearances Task pane, expand **Plastic**, click **Medium Gloss** and in the lower pane select **blue medium gloss plastic**, Fig. 15.

Step 4. In the Appearances Property Manager set:
under Color, Fig. 16
set RGB values

R 135

G 149

B 163

click OK .

Step 5. Save  (Ctrl-S).

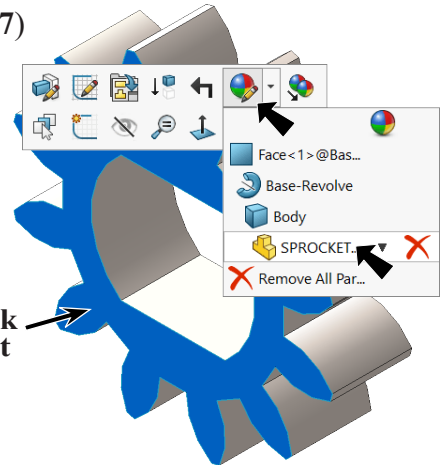


Fig. 14

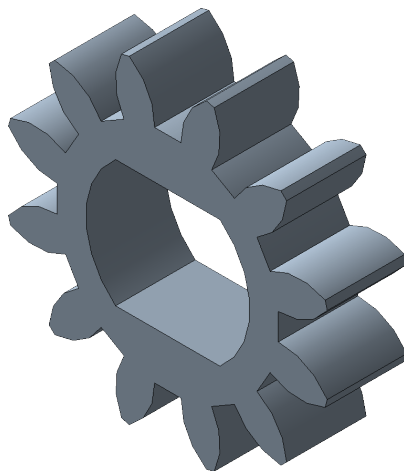


Fig. 16

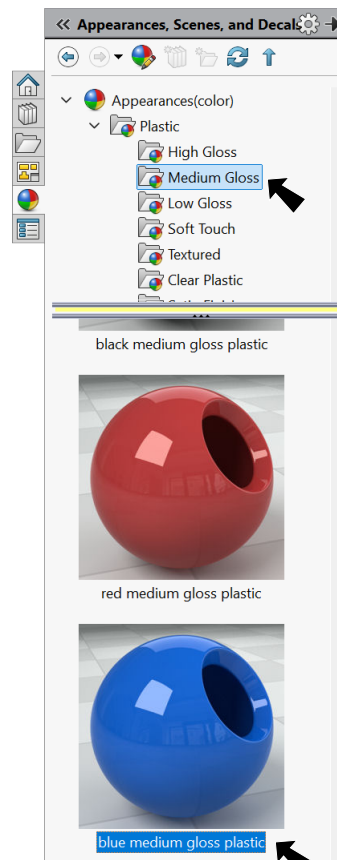


Fig. 14

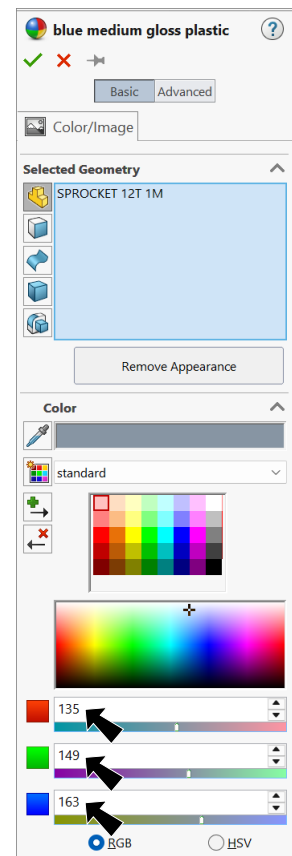


Fig. 25