




Delta IV Heavy Nose Cone



A. Sketch Lines.

- Step 1. Click File Menu > New, click **Part** and OK.
- Step 2. Click **Front Plane**  in the Feature Manager and click **Sketch**  on the Context toolbar, **Fig. 1**.
- Step 3. Click **Line**  (L) on the Sketch toolbar.
- Step 4. Draw **vertical and horizontal lines aligned** with Origin

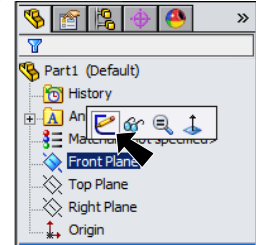

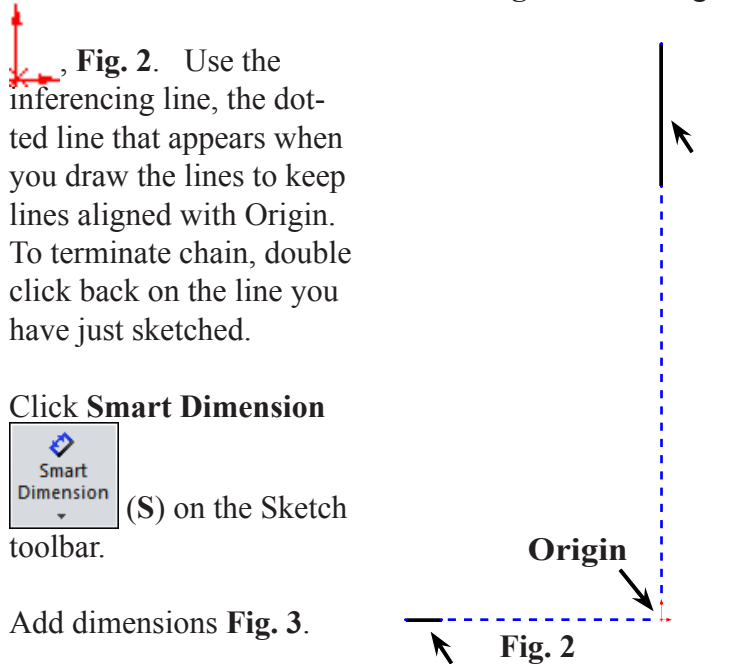



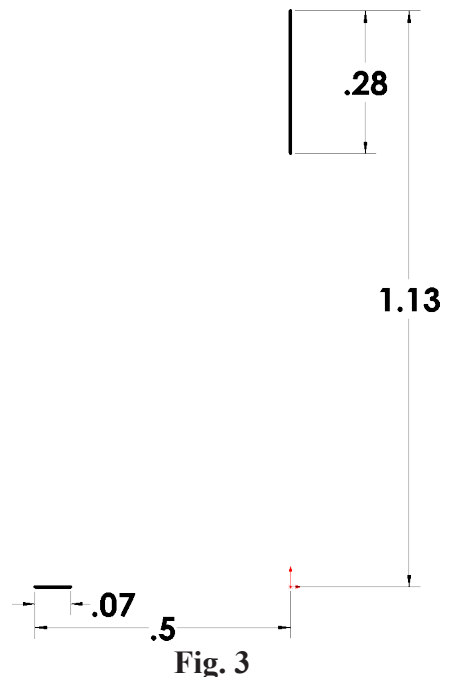
Fig. 1

 **Fig. 2.** Use the inferencing line, the dotted line that appears when you draw the lines to keep lines aligned with Origin. To terminate chain, double click back on the line you have just sketched.



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

- Step 6. Add dimensions **Fig. 3**.



- Step 7. Click Zoom to Fit  (F) on the View toolbar.

B. Save as "NOSE CONE".


- Step 1. Click File Menu > Save As.
- Step 2. Key-in **NOSE CONE** for the filename and press ENTER.

C. 3 Point Arc.

Step 1. Click **3 Point Arc**  on the Sketch toolbar.

Step 2. Draw an arc between the Position 1, Position 2 and Position 3, **Fig. 4**.

Step 3. Click **Smart Dimension**

 (S) on the Sketch toolbar.

Step 4. Add dimensions, **Fig. 5**.

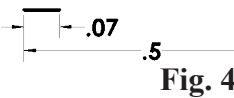
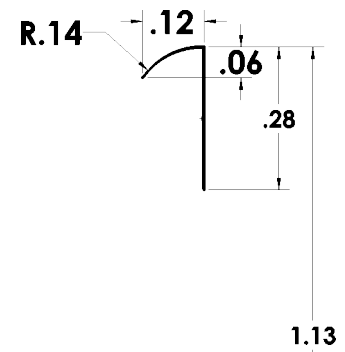
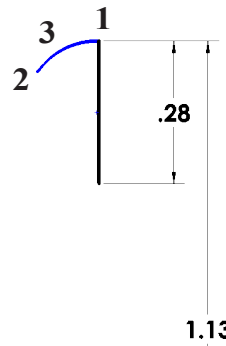


Fig. 4



Fig. 5

D. Style Spline 1.

Step 1. Click **Style Spline**  in the **Spline flyout**  on the Sketch toolbar.

Step 2. Draw a **4 control vertex point Spline**, **Fig. 6**. Start at left endpoint of arc for 1st control vertex point. Click between arc and vertical line to place 2nd control vertex point. Click 3rd control vertex point at left end point of horizontal. Press Escape to end spline.

Step 3. **Ctrl click a arc and style spline** to select both. Release Ctrl key and click **Make Tangent**

 on the Context toolbar, **Fig. 7**.

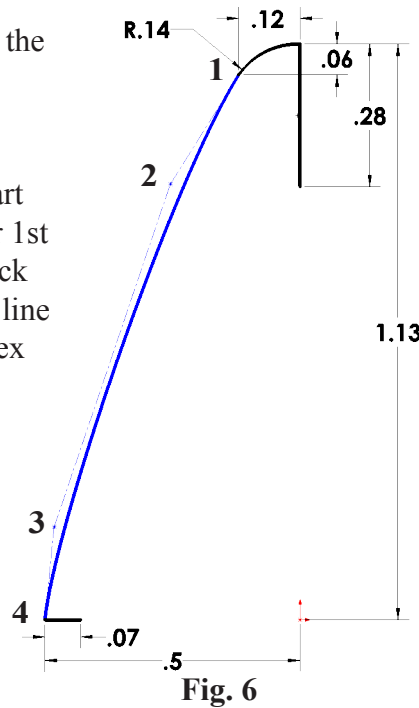


Fig. 6

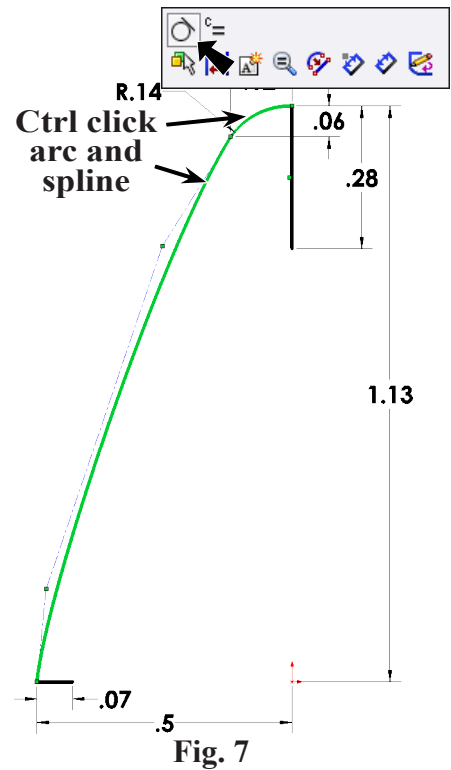






Fig. 7

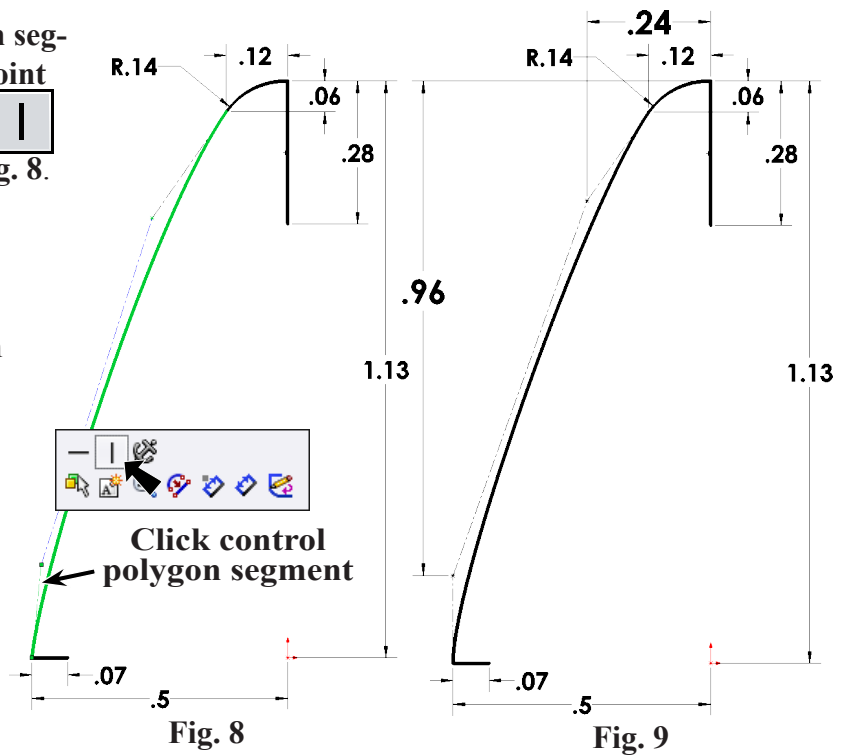
Step 4. Ctrl click **control polygon segment at bottom vertex point** and click **Make Vertical**  on the Context toolbar, **Fig. 8**.

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


Step 6. Add dimensions, **Fig. 9**.

E. Style Spline 2.

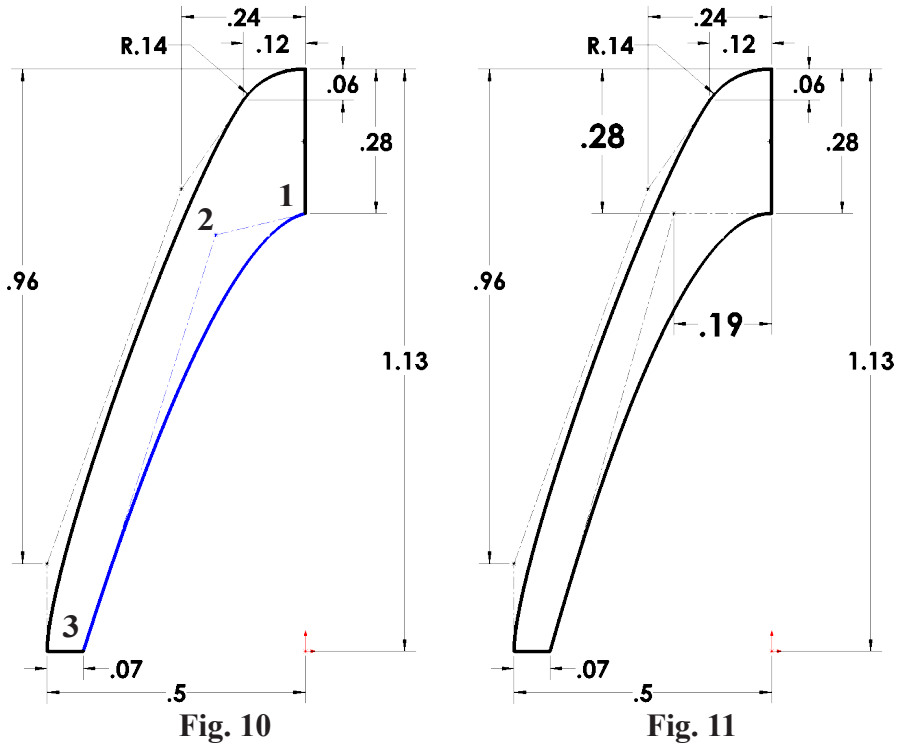
Step 1. Click **Style Spline**  in the **Spline flyout**  on the Sketch toolbar.



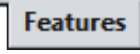
Step 2. Draw a **3 control vertex point Spline** between bottom endpoint of vertical line and right endpoint of horizontal line, **Fig. 10**. Press Escape to end spline.

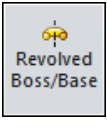
Step 3. Click **Smart Dimension**  (S) on the Sketch toolbar.



Step 4. Add dimensions, **Fig. 11**.



F. Revolve.

Step 1. Click **Features**  on the Command Manager toolbar.

Step 2. Click **Revolved Boss/Base**  on the Features toolbar.

Step 3. In the Revolve Property Manager,
 Axis of Revolution 
 click **vertical line on right side of sketch**, Fig. 13
 click OK .

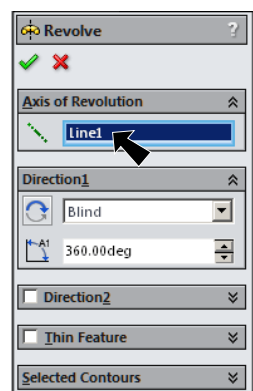


Fig. 12

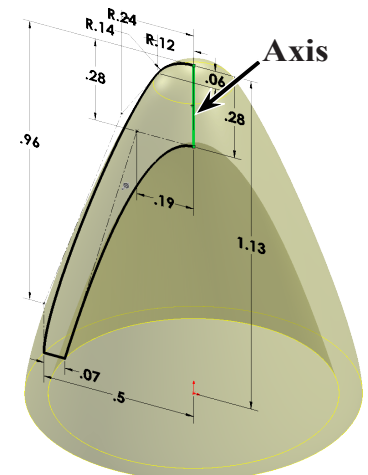



Fig. 13

G. Appearance Color.

Step 1. Click the part, expand **Appearance Callout**  on the Context toolbar and click **NOSE CONE** , Fig. 14.

Step 2. In the Appearances Task pane, expand **Painted**, click **Car** and in the lower pane select **white**, Fig. 15.

Step 3. In the Appearances Property Manager click OK , Fig. 16.

Step 4. Save. Use **Ctrl-S**.

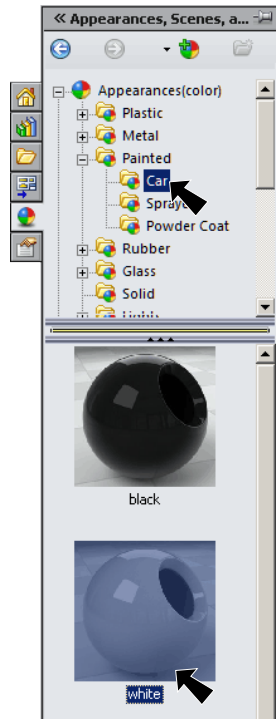


Fig. 15

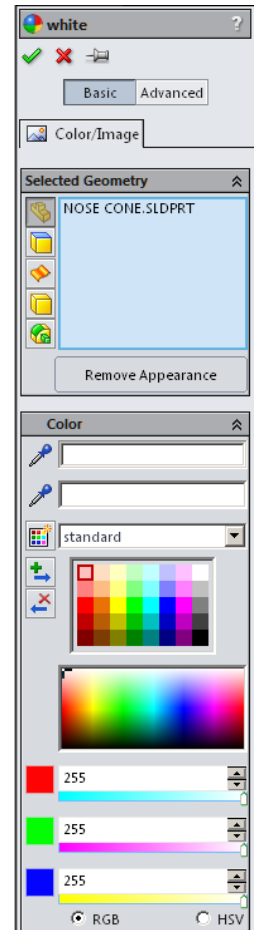


Fig. 16

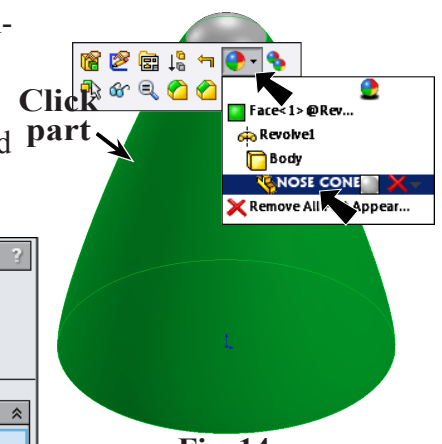


Fig. 14



Fig. 17