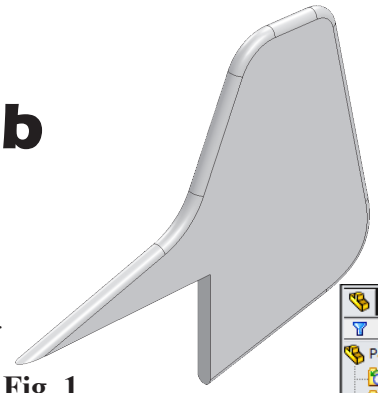
P-51
V Stab



A. Sketch.

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

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

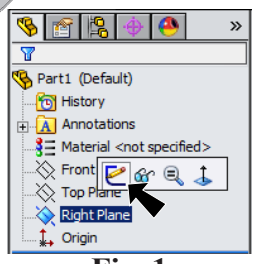


Fig. 1

Step 3. Click **Line** (**L**) on the Sketch toolbar.

Step 4. Draw **two lines**, **Fig. 2**. Draw one line down vertically from Origin. Draw second line **at slight angle up from bottom endpoint of 1st line**.

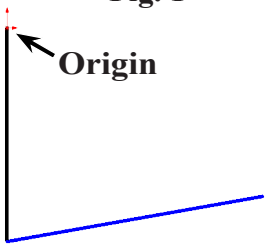


Fig. 2

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

Step 6. Dimension lines .78 and .95 and angle 80, **Fig. 3**.

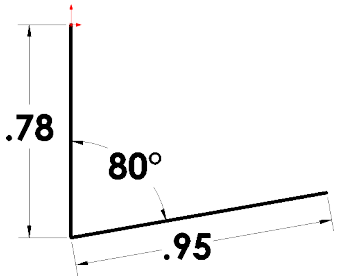


Fig. 3

B. Save as "V STAB".

Step 1. Click File Menu > Save As.

Step 2. Key-in **V STAB** for filename and press ENTER.

C. Second Set of Lines.

Step 1. Click **Line** (**L**) on the Sketch toolbar.

Step 2. Draw **5 lines**, **Fig. 4**. No horizontal or vertical lines.

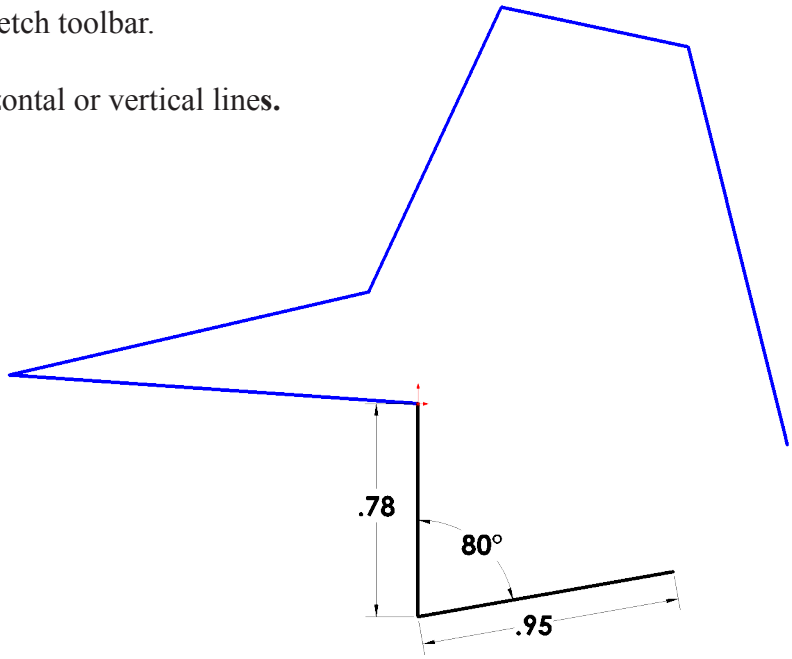
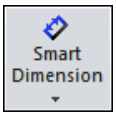


Fig. 4

Step 3. Click **Smart Dimension** 

(**S**) on the Sketch toolbar.

Step 4. Add dimensions, **Fig. 5**. Dimension the angles first. **Tip**: After selecting line to dimension, move cursor until preview indicates the parallel dimension type, then **right click to lock** position.

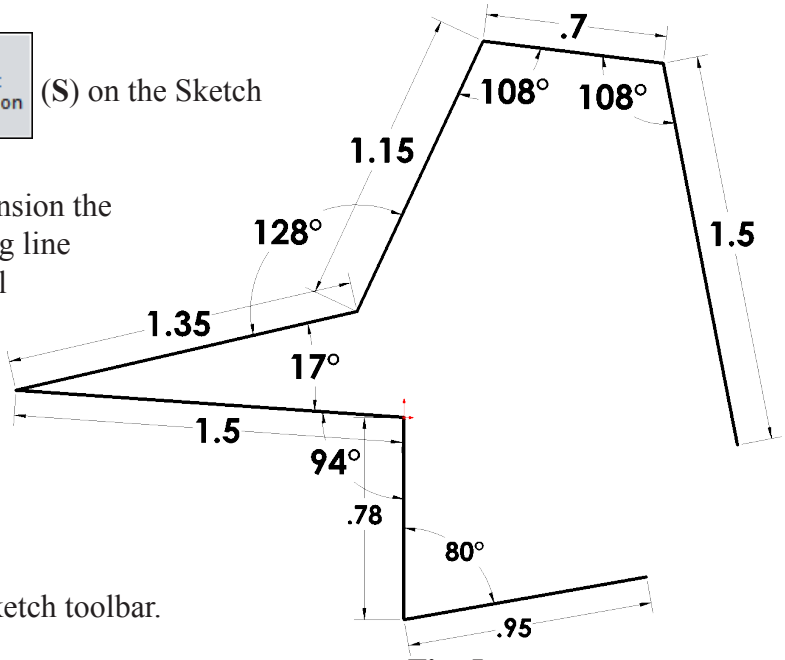


Fig. 5

D. Style Spline.

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

Step 2. Draw a **3 control vertex point Spline**, **Fig. 6**. Press Escape to end spline.

Step 3. **Ctrl click** the **right control polygon segment** and **line** to select both. Release Ctrl key and click **Make Collinear**  on the Context toolbar, **Fig. 7**.

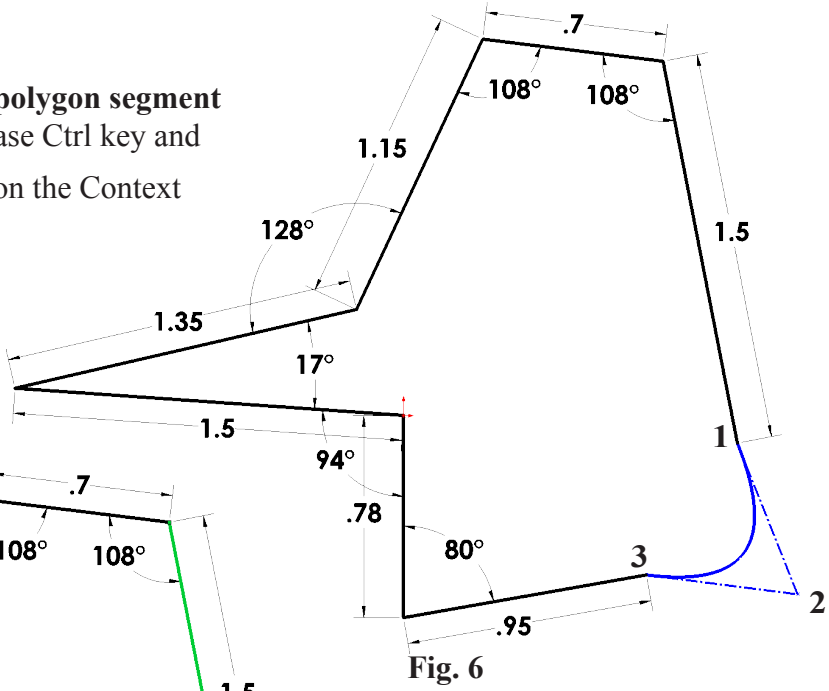


Fig. 6

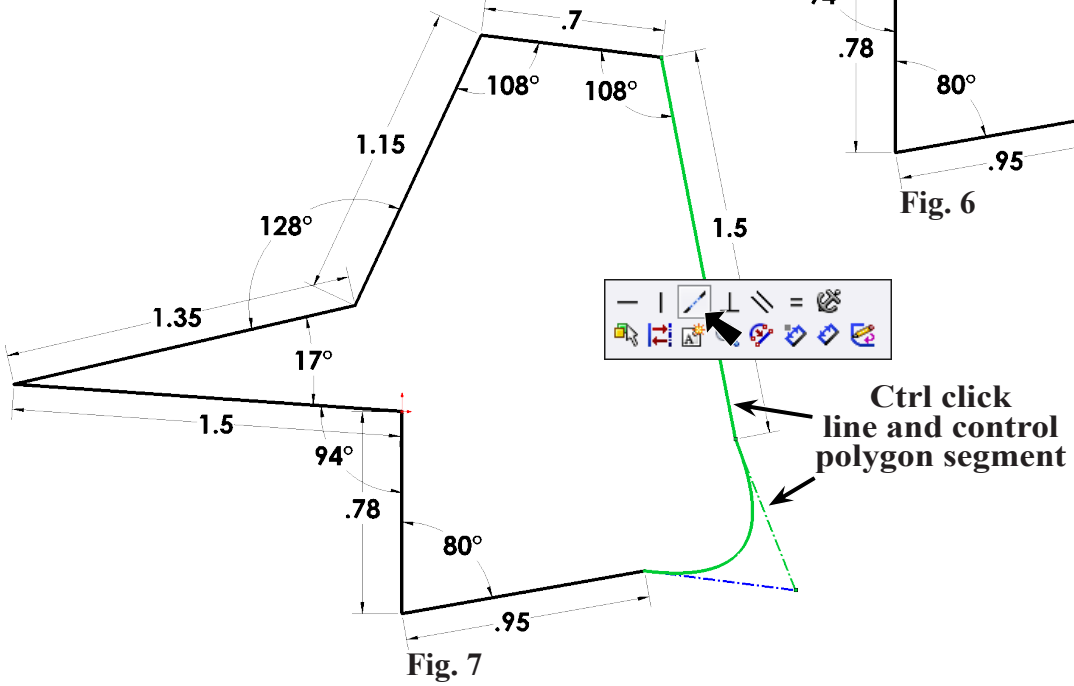


Fig. 7

Step 4. Click **bottom control polygon segment** and **line**. Release Ctrl key and click **Make Collinear** on the Context toolbar, **Fig. 8**.

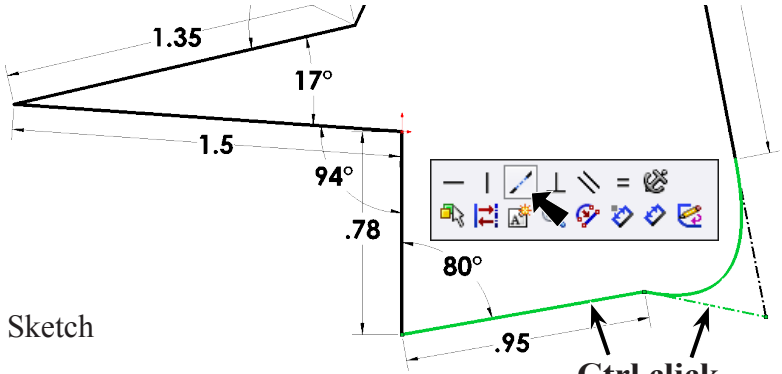


Fig. 8

Ctrl click line and control polygon segment

E. Sketch Fillets.

Step 1. Click **Sketch Fillet** on the Sketch toolbar.

Step 2. In the Sketch Fillet Property Manager set:

under Fillet Parameters, **Fig. 9**

Radius **.4**

click **128° intersection**, **Fig. 10**

click OK

Radius **.3**

click **top front corner, Fig. 11**

click OK

Radius **.2**

click **top rear corner**, **Fig. 11**

click OK **twice**.

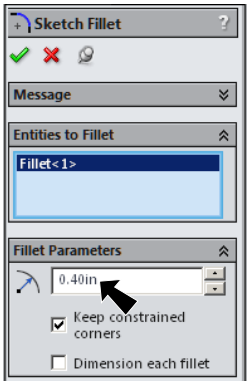


Fig. 9

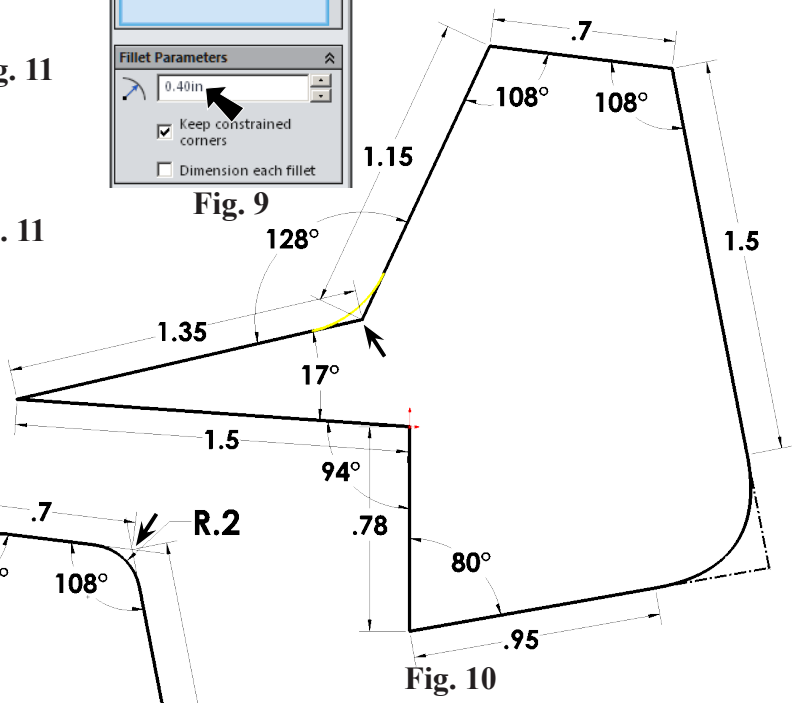


Fig. 10

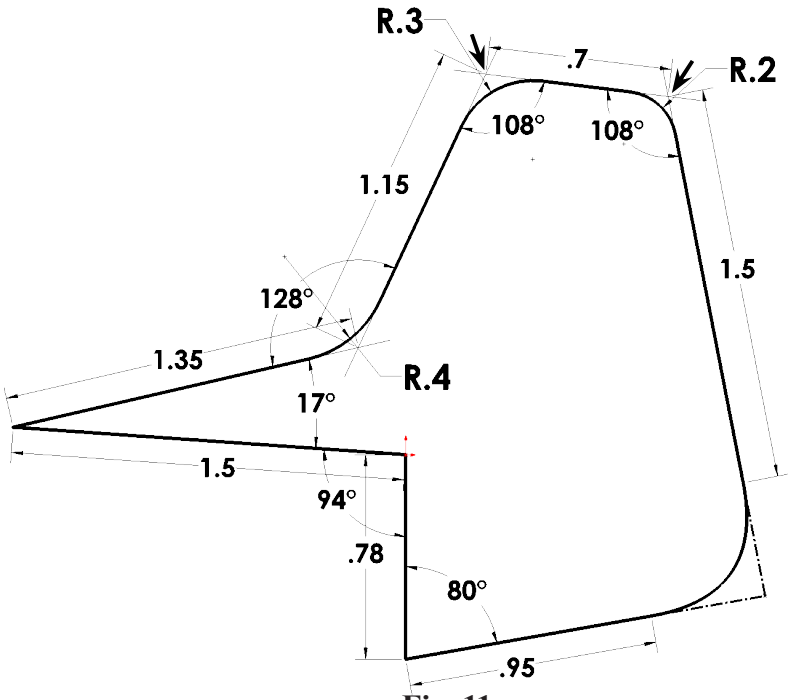


Fig. 11

F. Extrude.

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

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

Step 3. In the Property Manager set:
under Direction 1, **Fig. 12**
End Condition **Mid Plane**
Depth  **.1**
click OK  .

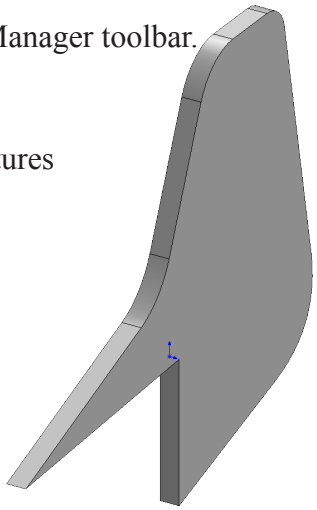


Fig. 13

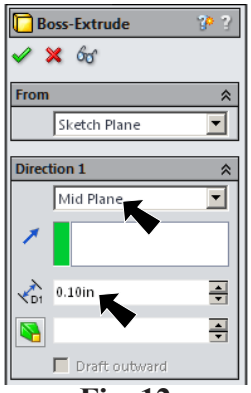
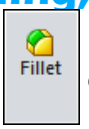


Fig. 12

G. Fillet Leading, Root and Trailing Edges.

Step 1. Click **Fillet**  on the Features toolbar.

Step 2. In the Fillet Property Manager:
select **Manual**, **Fig. 14**
under Fillet Type
select **Full Round Fillet** 
in  **Side Face Set 1**  box
click **side face**, **Fig. 15**

right click to move selection to next selection box

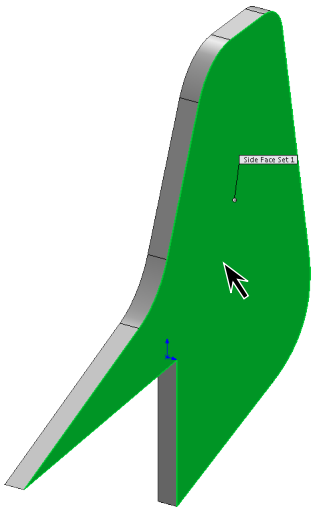


Fig. 15

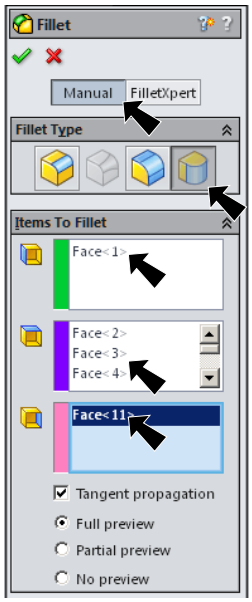


Fig. 14

 **Center Face Set**  box, **Fig. 14**
right click leading edge face and select **Select Tangency** from menu, **Fig. 16**.

Right click to move selection to next selection box.

 **Side Face Set 2**
box
click **side face**, **Fig. 17**
click OK  .

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

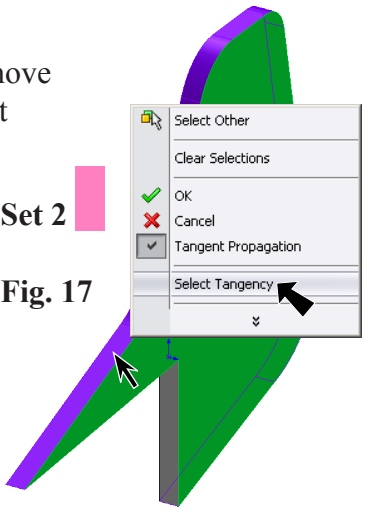


Fig. 16

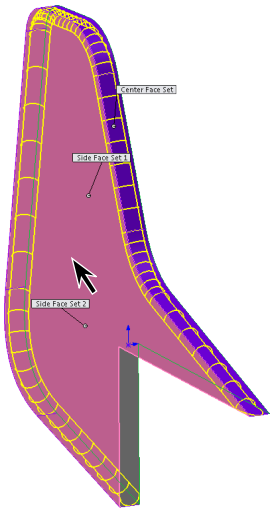


Fig. 17

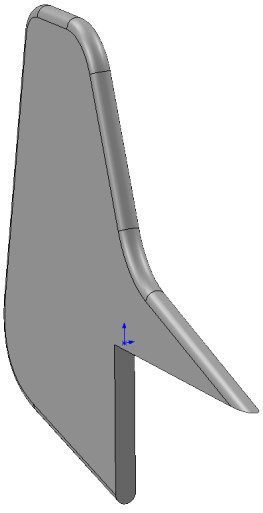


Fig. 18

H. Material PS HI (Polystyrene).

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

Step 2. **Expand Plastic**s (click the +) in the material tree and select **PS HI**. Click **Apply** and **Close**.

I. Appearance Color.

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

Step 2. Click the part, expand **Appearance Callout** on the Context toolbar and click **V STAB**, **Fig. 19**.

Step 3. In the Appearances Property Manager,
under Color, **Fig. 20**
click **White** swatch
click OK .

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

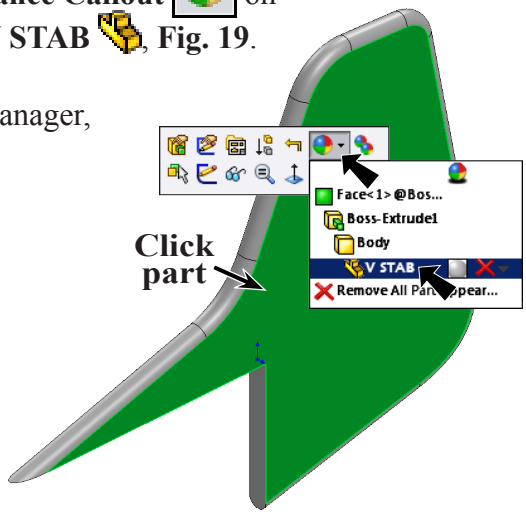


Fig. 19

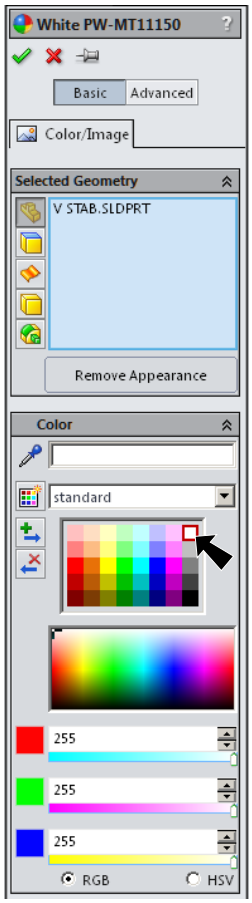


Fig. 20

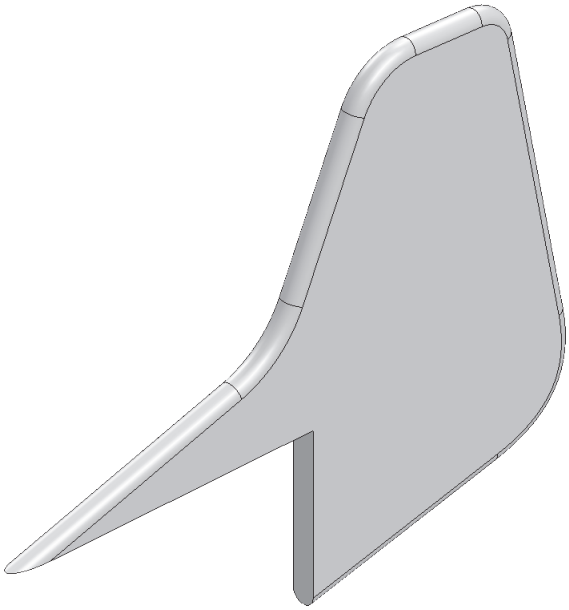


Fig. 21