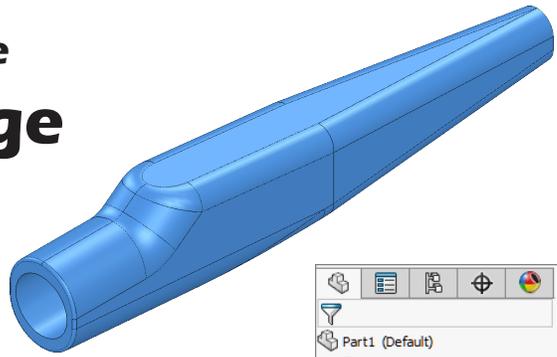


Airplane Fuselage



A. Side Cut.

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**.

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

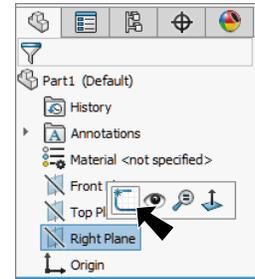


Fig. 1

Step 4. Starting at the Origin  sketch lines in **Fig. 2**. Use the inferencing line, the dotted line that appears when you sketch the lines to keep the top of the motor compartment horizontal. Do not add any extra lines. If you make a mistake, use Undo, **Ctrl-Z**.

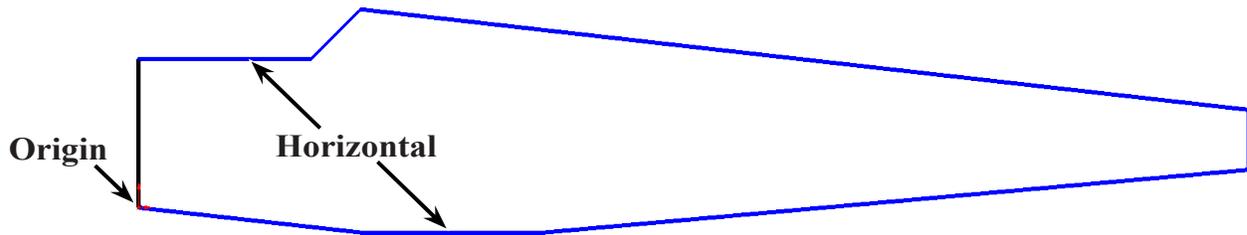


Fig. 2

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

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

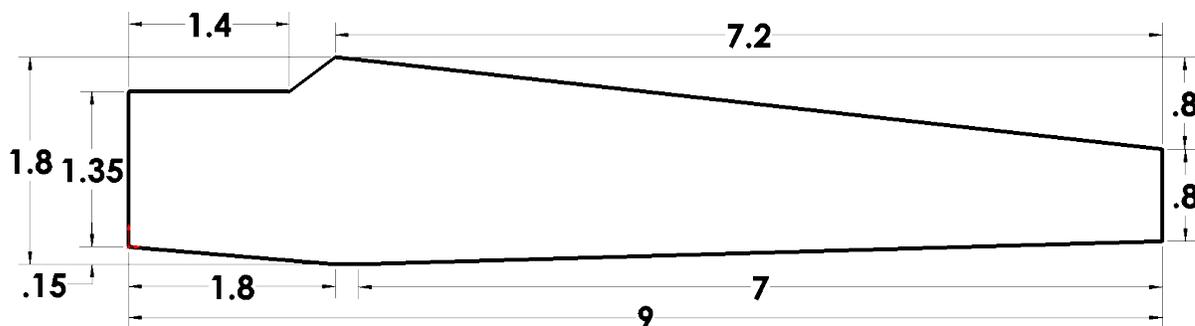


Fig. 3

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

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

Step 9. In the Sketch Fillet Property Manager set:
under Fillet Parameters, **Fig. 4**

Radius  **.3**
click **corner at bottom of windshield**, **Fig. 5**
click OK  twice.

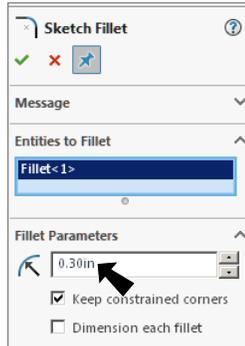


Fig. 4

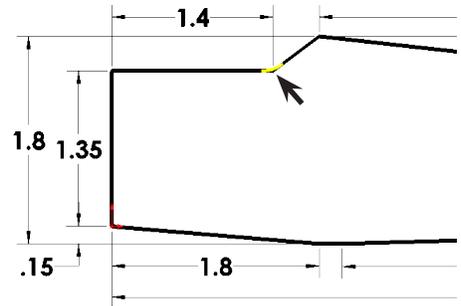
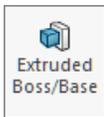


Fig. 5

Step 10. Click **Features**  on the Command Manager toolbar.

Step 11. Click **Extruded Boss/Base**



on the Features toolbar.

Step 12. In the Boss-Extrude Property Manager set:
under Direction 1, **Fig. 6**

End Condition **Mid Plane**
Depth  **1.2**
click OK .

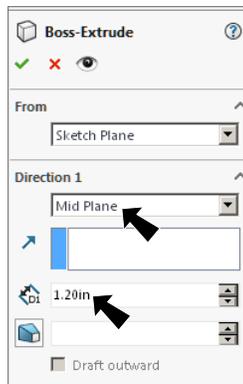


Fig. 6

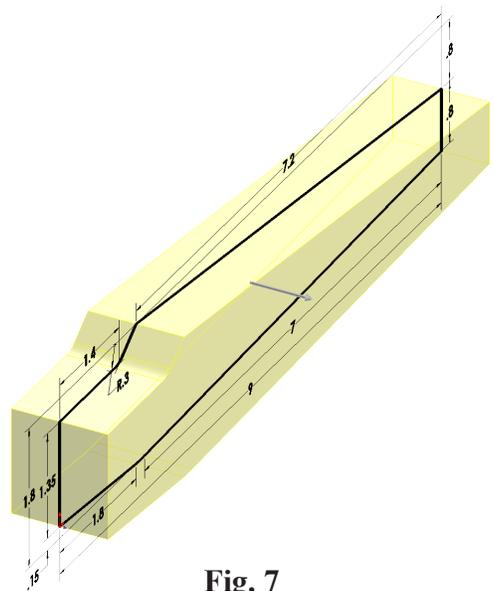


Fig. 7

B. Save as "FUSELAGE".

Step 1. Click File Menu > Save As.

Step 2. Key-in **FUSELAGE** for the file-name and press ENTER.

C. Top Cut.

Step 1. Click **Top Plane**  in the Feature Manager and click **Sketch**  on the context toolbar, **Fig. 8**.

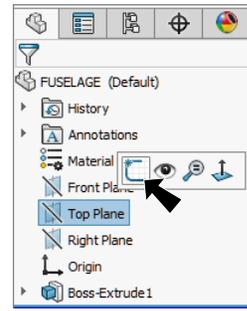


Fig. 8

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

Step 3. Click **Centerline**  in the **Line flyout**  on the Sketch toolbar.

Step 4. Starting at the Origin  sketch vertical centerline up thru part, **Fig. 9**.

Step 5. Click **Line**  (L) on the Sketch toolbar.

Step 6. Sketch two lines, **Fig. 10**. Start line at top endpoint of centerline, **Position 1**. Extend line part way across rear edge to **Position 2**. Sketch a second line from **Position 2** down to side edge to **Position 3**.

Centerline

Origin

Fig. 9

Step 7. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 8. Dimension **double distance .6** and add **4°** dimension, **Fig. 11**. To double distance dimension, click centerline and then left endpoint of horizontal line, move the cursor to right of centerline and click. Key-in **.6** in the Modify box and press ENTER.

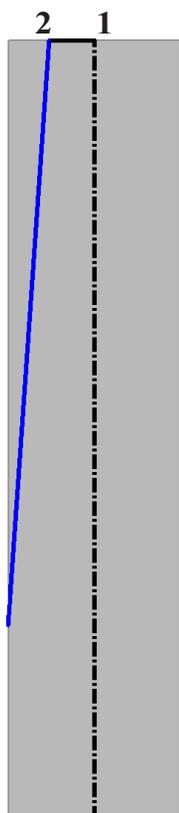


Fig. 10

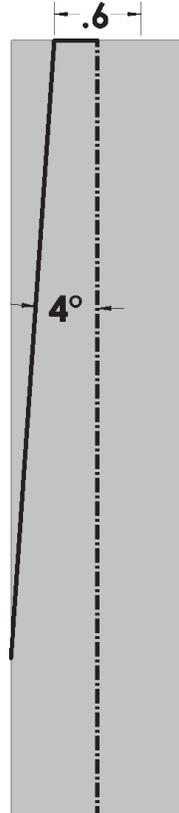


Fig. 11

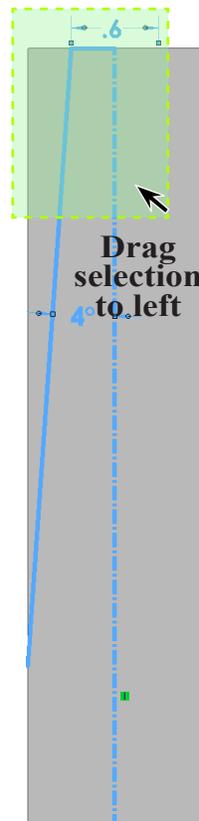


Fig. 12

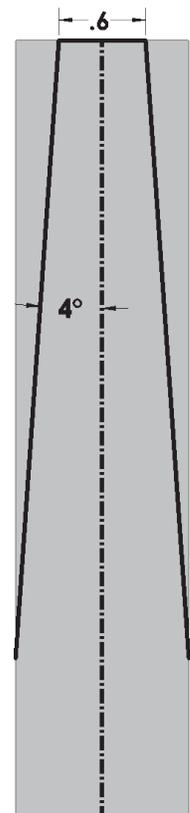
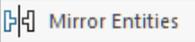


Fig. 13

Step 9. **Right click graphics area and click Select** from menu to unselect Smart Dimension.

Step 10. **Drag a "trend to left - more liberal" selection across centerline and lines, Fig. 12.**

Step 11. Click **Mirror Entities**  on the Sketch toolbar, **Fig. 13**.

Step 12. Click **Features**  on the Command Manager toolbar.

Step 13. Click **Extruded Cut**  on the Features toolbar.

Step 14. In the Cut-Extrude Property Manager set:

under Direction 1, **Fig. 14**

End Condition **Through All**

The **Direction** arrow should

point towards area to be cut away,

Fig. 15. If arrow is pointing in wrong

direction, click **Flip side to cut**. Click

OK .

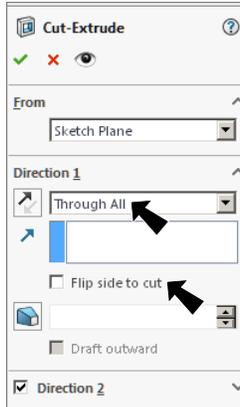


Fig. 14

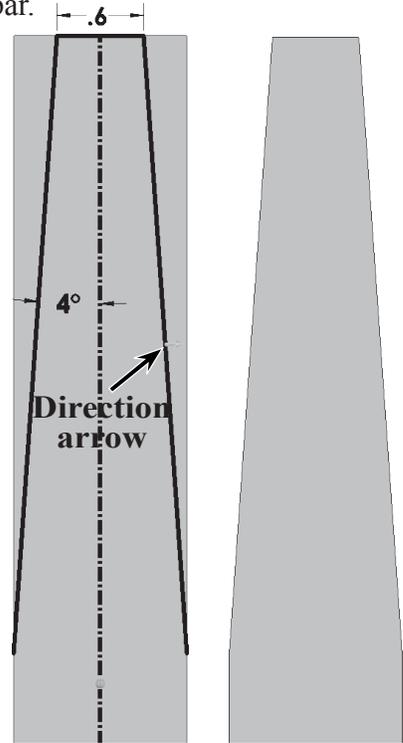


Fig. 15

Fig. 16

Step 15. Save. Use **Ctrl-S**.

D. Fillet Edges.

Step 1. Click **Isometric**  on the Standard Views toolbar.

Step 2. Click **Fillet**  on the Features toolbar.

Step 3. In the Fillet Property Manager set:

select **FilletXpert**, **Fig. 17**

Radius  **.6**

select **Full preview**

click the **four side**

edges around the motor

compartment, **Fig. 18**

click **Apply**.

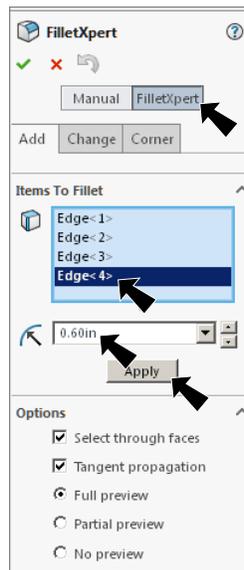


Fig. 17

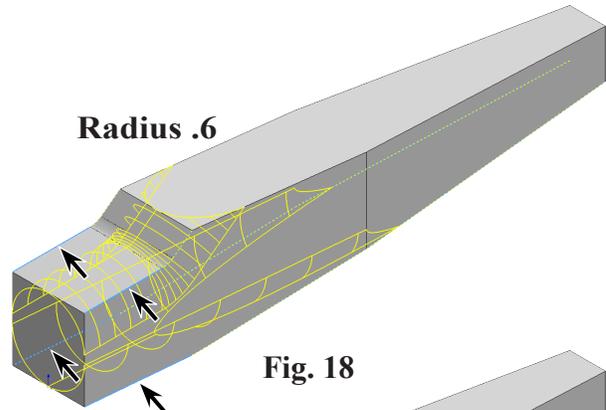


Fig. 18

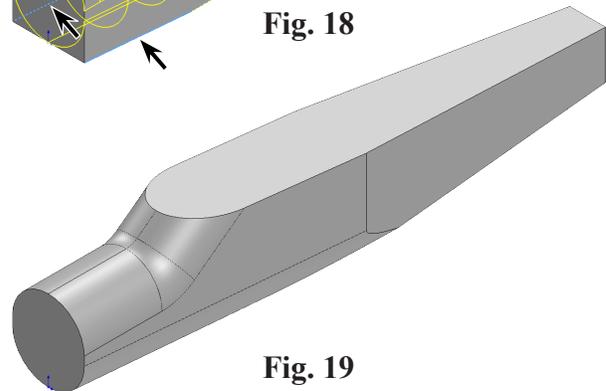
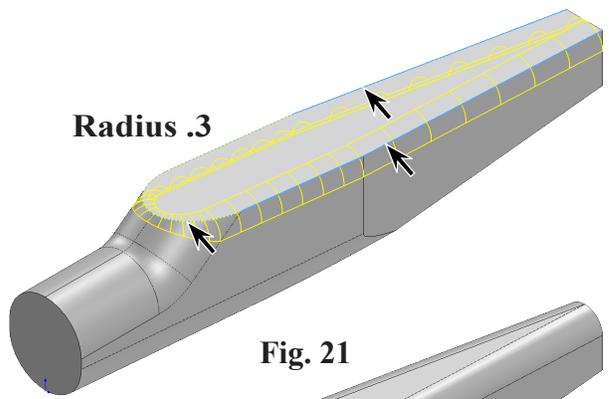
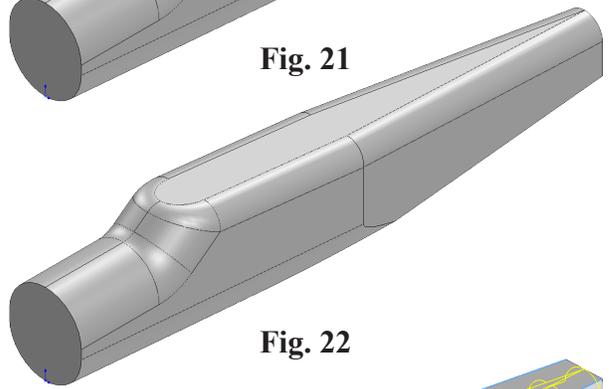
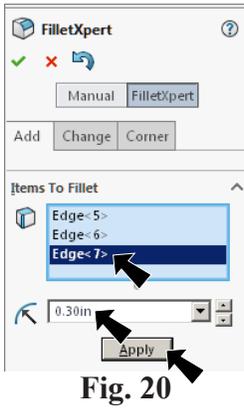


Fig. 19

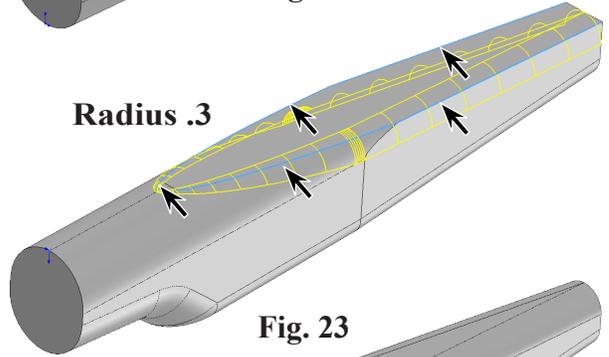
Step 4. Set **Radius**  **.3**
 click the **3 edges of the top face**, **Fig. 21**
 click **Apply**



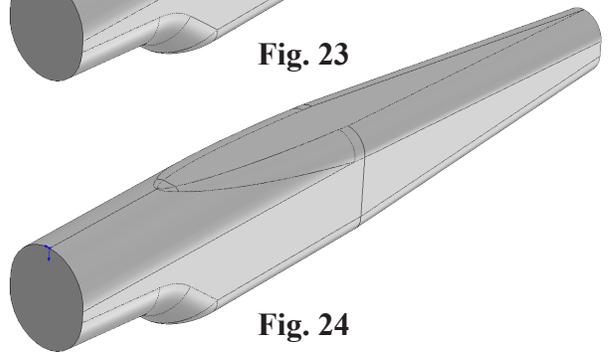
Step 5. Rotate view to view **underside of fuselage**, **Fig. 23**. To rotate view, hold down middle mouse button (wheel) and drag.



Step 6. Set **Radius**  **.3**
 click the **5 edges of the bottom face**, **Fig. 23**
do not select the rear edge
 click **Apply**.

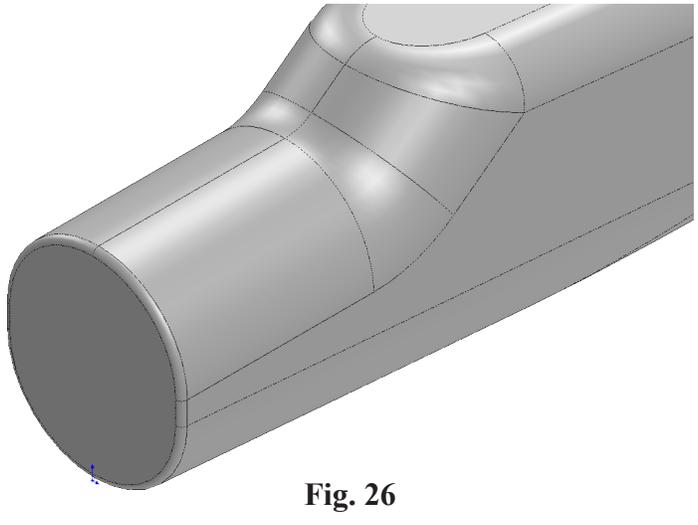
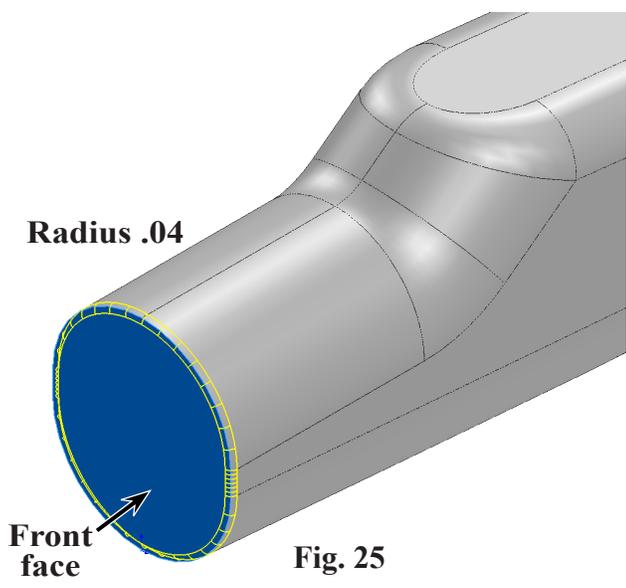


Step 7. Click **Isometric**  on the Standard Views toolbar. (**Ctrl-7**)



Step 8. Set **Radius**  **.04**
 click **edge of front face of fuselage**, **Fig. 25**
 click **OK** .

Step 9. Save. Use **Ctrl-S**.



E. Hole for Motor.

Step 1. Click **front face of fuselage** and click **Sketch**  on the context toolbar, **Fig. 27**.

Step 2. Click **Normal To**  on the View toolbar.

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

Step 4. Sketch circle on front face, **Fig. 28**.

Front face

Fig. 27

Step 5. **Right click graphics area and click Select** from menu to unselect Circle tool.

Step 6. **Ctrl click centerpoint of circle and Origin**  to select both. Release Ctrl key and click **Make Vertical**  on the context toolbar, **Fig. 29**.

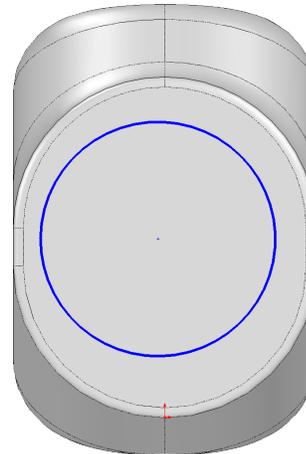


Fig. 28

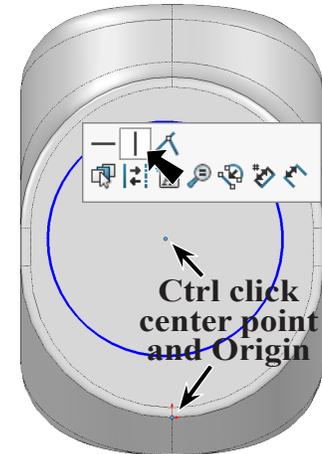


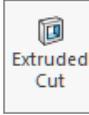
Fig. 29

Step 7. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 8. Add dimensions, **Fig. 30**.

Step 9. Click **Isometric**  on the View toolbar. (Ctrl-7)

Step 10. Click **Features**  on the Command Manager toolbar.

Step 11. Click **Extruded Cut**  on the Features toolbar.

Step 12. In the Cut-Extrude Property Manager set: under Direction 1, **Fig. 31**

Depth  **1.2**
click OK .

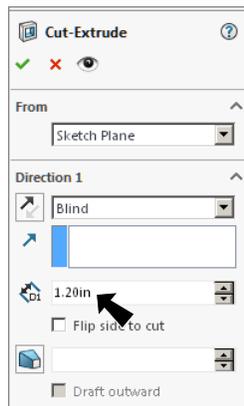


Fig. 31

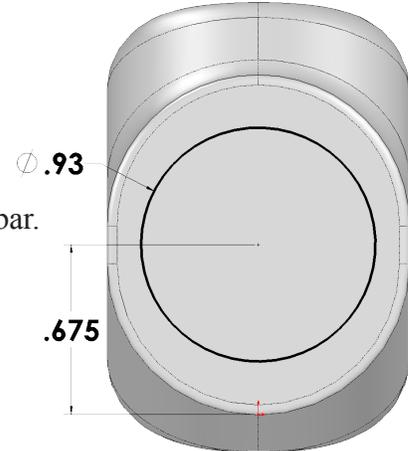


Fig. 30

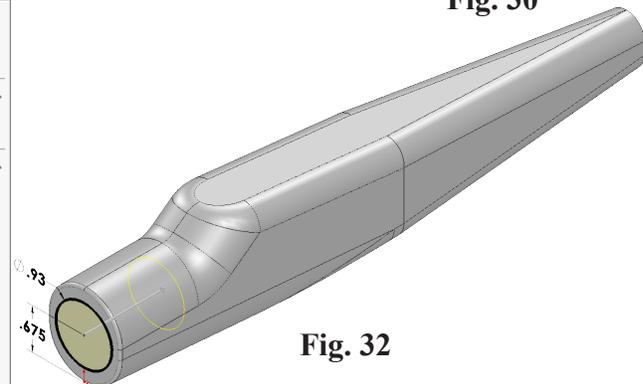


Fig. 32

F. Material PS HI (Polystyrene).

Step 1. Right click Material  in the Feature Manager and click Edit Material, Fig. 33.

Step 2. Expand Plastics in the material tree and select PS HI, Fig. 34.

Step 3. Click Apply and Close, Fig. 35.

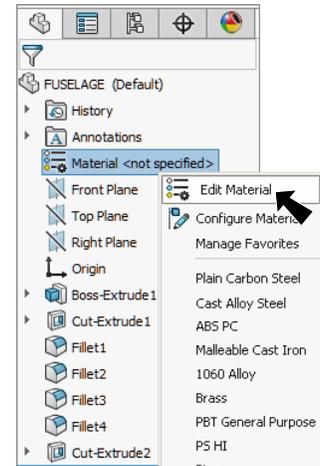


Fig. 33

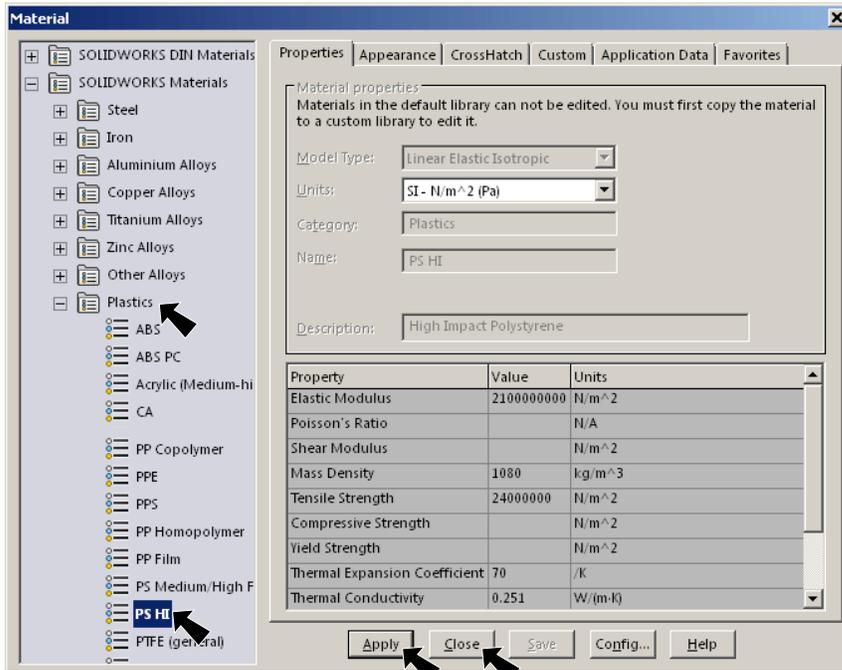


Fig. 34

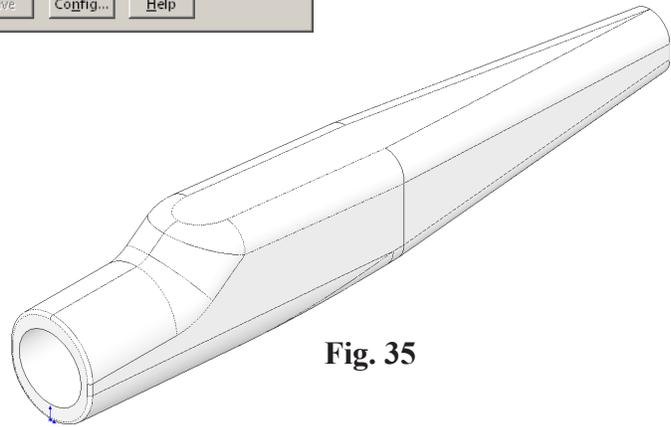
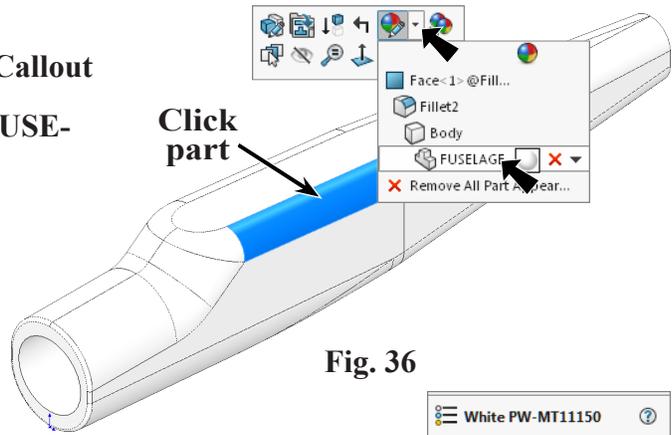


Fig. 35

G. Appearance Color.

Step 1. Click the Fuselage, click **Appearance Callout**

 on the context toolbar and click **FUSELAGE** , **Fig. 36.**



Step 2. In the Appearances Property Manager:

under Color, **Fig. 37**

set **RGB values:**

R 87

G 166

B 255

click OK .

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

