

# Chapter 9

## Glider Clay


### A. Open Assembly File.

Step 1. Open your GLIDER ASSEMBLY file.

### B. New Component Part.

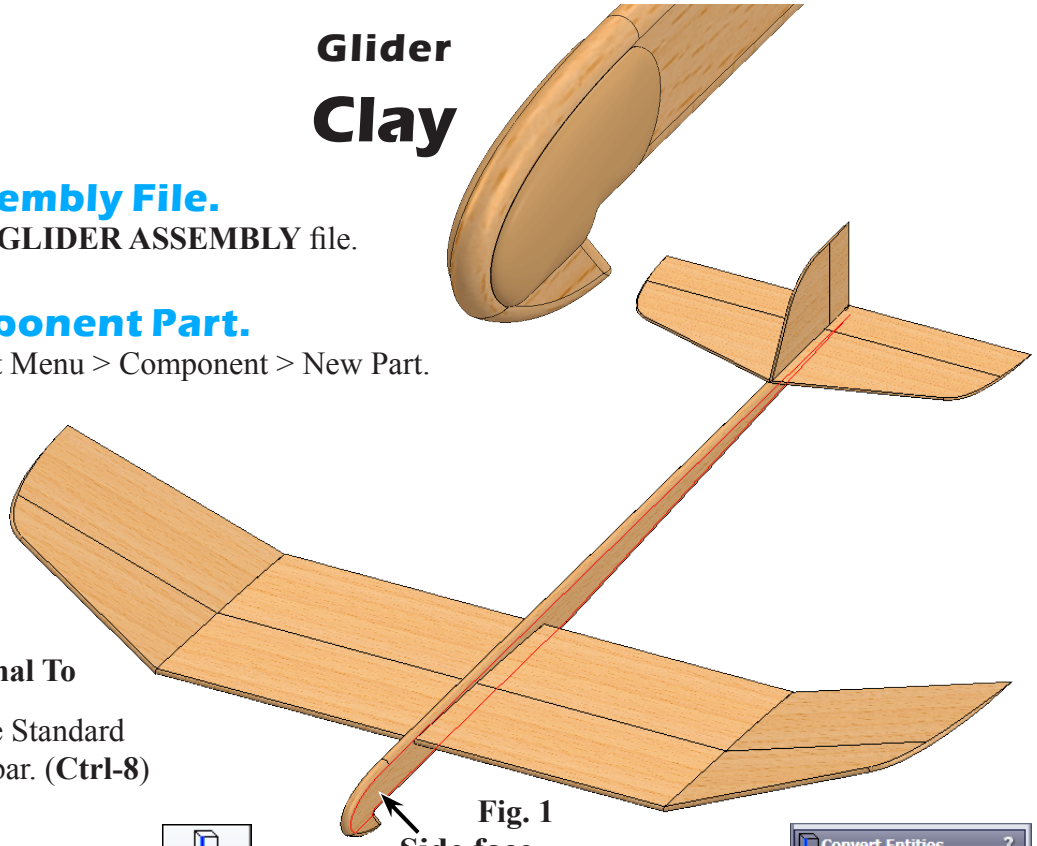
Step 1. Click Insert Menu > Component > New Part.

Step 2. Click the **side face** of the Fuselage, **Fig. 1**.

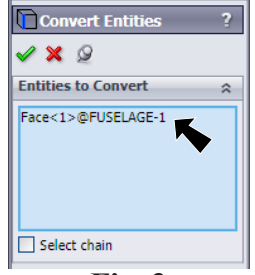
Step 3. Click **Normal To**  on the Standard Views toolbar. (**Ctrl-8**)

Step 4. Click **Convert Entities**  on the Sketch toolbar.

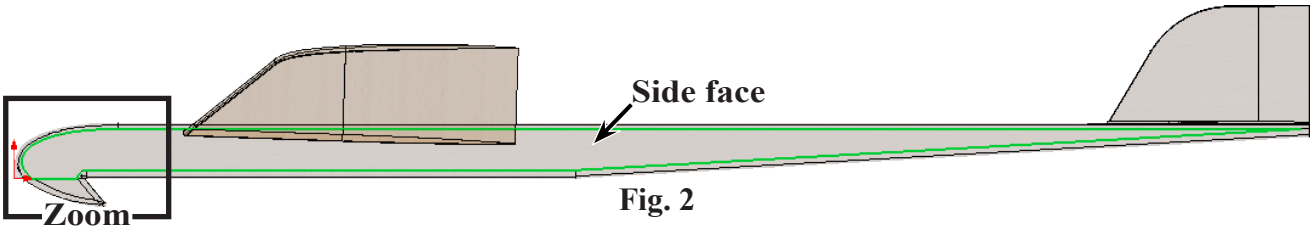
Step 5. In the Convert Entities Property Manager:  
click **side face**, **Fig. 3**  
click OK  twice, **Fig. 3**.



**Fig. 1**  
Side face



**Fig. 3**



**Fig. 2**

Step 6. Zoom in around **front of Fuselage**, **Fig. 3**. To **zoom**, hold down **Shift** key and drag with middle mouse button (wheel). To **pan**, hold down **Ctrl** key and drag with middle mouse button (wheel).

### C. 3 Point Arc.

Step 1. Click **3 Point Arc**  (S) in the Arc flyout  on the Sketch toolbar.

Step 2. Draw an arc across the Fuselage. To draw arc, click Point 1 for start point and Point 2 for ending point, then Point 3 for third point, **Fig. 4**.

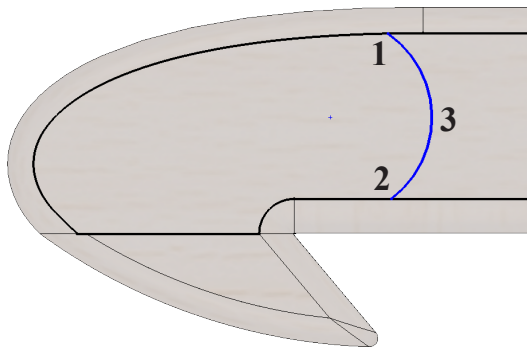



Fig. 4

Step 3. **Right click drawing and click Select** from menu to unselect 3 Point Arc.

Step 4. **Ctrl click center point of arc and both end-points** to select all three points, **Fig. 5**. Release **Ctrl key** and click **Make Vertical**  on the Content menu.

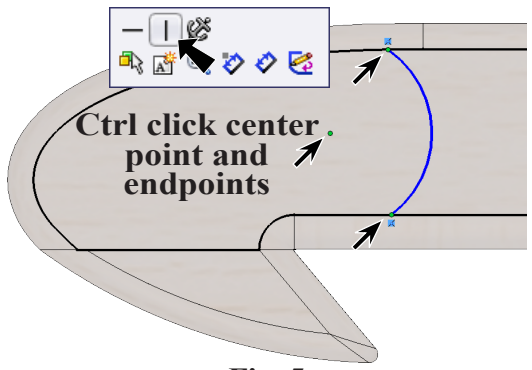


Fig. 5

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

Step 6. Add the **.2** dimension, **Fig. 6**.

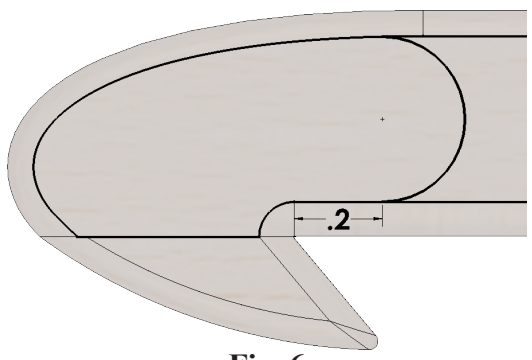


Fig. 6

### D. Trim.

Step 1. Click **Trim Entities**  on the Sketch toolbar.

Step 2. In the Property Manger select:

**Trim to closest** , **Fig. 7**

Trim away the line to right of arc, **Fig. 8**.

Click segments to remove (trim).

Click OK .

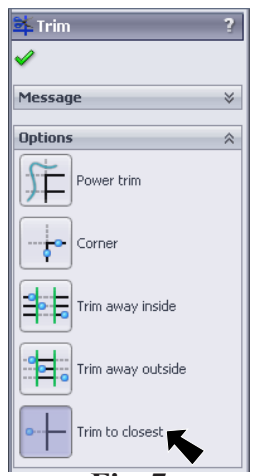


Fig. 7

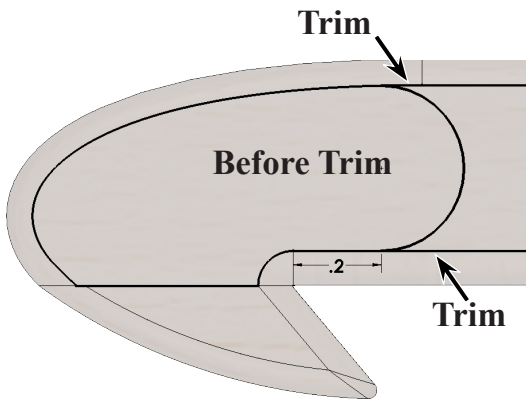


Fig. 8

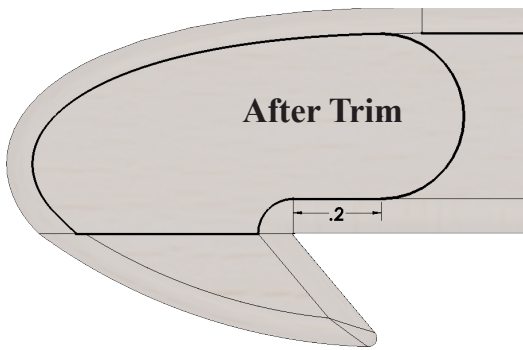
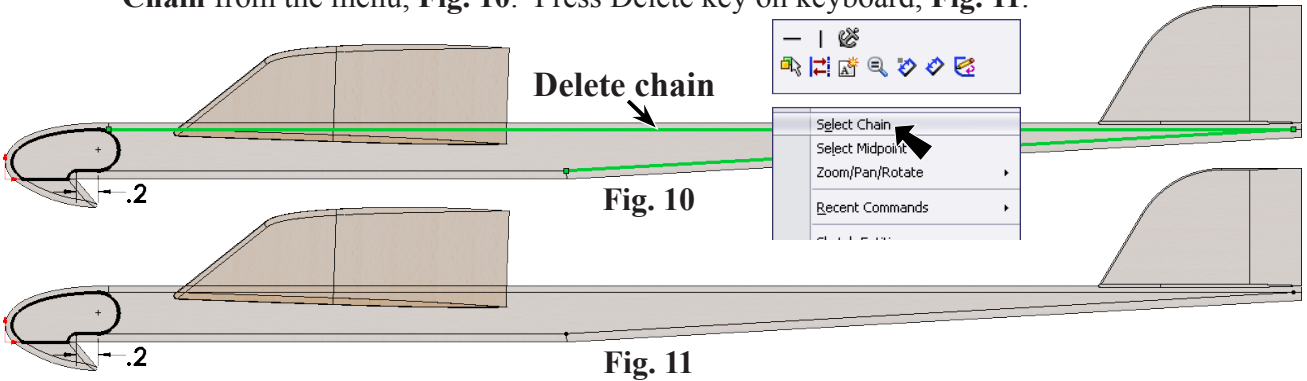


Fig. 9

## E. Delete.



Step 1. **Right click any remaining converted edge to right of the Fuselage and click Select Chain** from the menu, **Fig. 10**. Press Delete key on keyboard, **Fig. 11**.



## F. Sketch Fillet.

Step 1. Click Sketch Fillet  on the Sketch toolbar.

Step 2. In the Sketch Fillet Property Manager set:

**Radius**  **.07, Fig. 12**  
 click both endpoints of horizontal line, **Fig. 13** and **Fig. 14**  
 click OK **twice** .

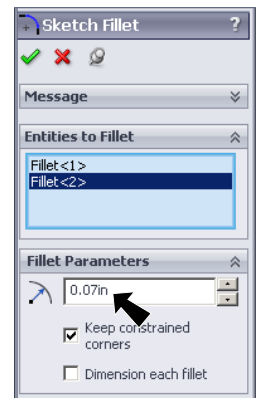


Fig. 12

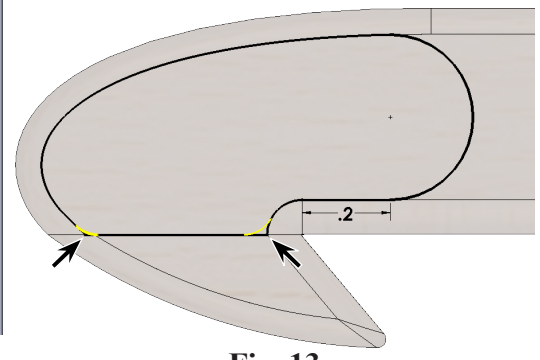



Fig. 13

## G. Fit Spline.

Step 1. **Right click any geometry of the sketch and click Select Chain** from the menu, **Fig. 14**.

Step 2. Click Tools Menu > Spline Tools > Fit Spline.

Step 3. In the Fit Spline Manager set:  
 uncheck **Delete geometry**, **Fig. 15** and **Fig. 16**  
 click OK .

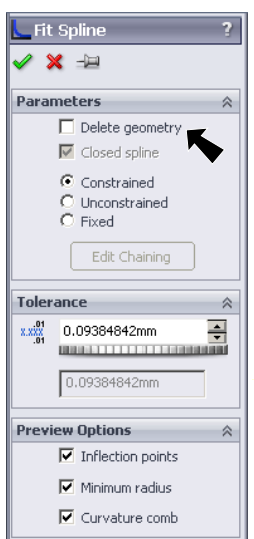


Fig. 15

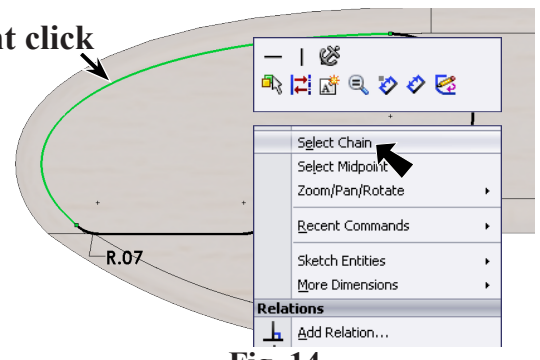


Fig. 14

The Fit Spline tool fits selected entities to a spline. The Fit Spline geometry will improve the look of the Dome feature we will add.

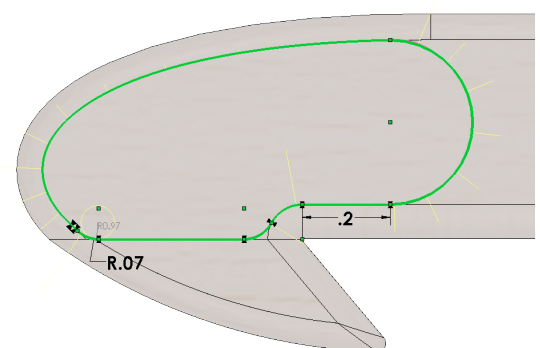
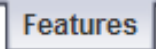


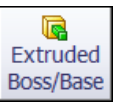
Fig. 16

## H. Extrude.



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

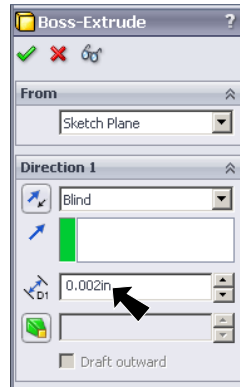
Step 2. Click **Zoom to Selection**  (Q) on the View toolbar to zoom to sketch.

Step 3. Click **Features**  on the Command Manager toolbar.

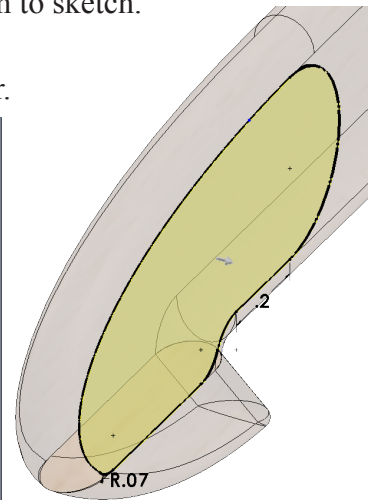
Step 4. Click **Extruded Boss/Base**  on the Features toolbar.

Step 5. In the Property Manager set:

**Depth**  **D1** **.002**  
click OK , **Fig. 17** and **Fig. 18**.



**Fig. 17**




**Fig. 18**

## I. Dome Top Face.

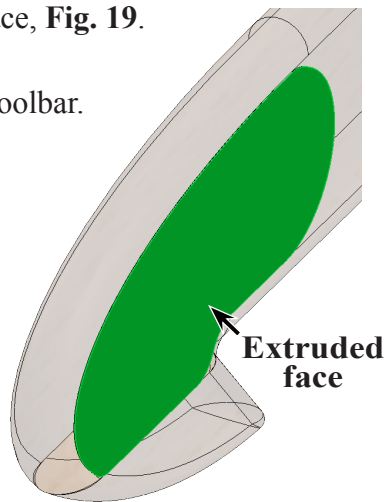
Step 1. Click **side face of the extrude** to select face, **Fig. 19**.

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

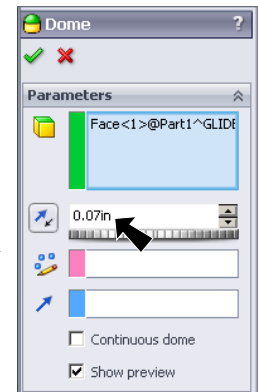
Step 3. In the Dome Property Manager set:

**Distance** **.07**  
uncheck **Continuous dome**  
click OK , **Fig. 20** and **Fig. 21**.

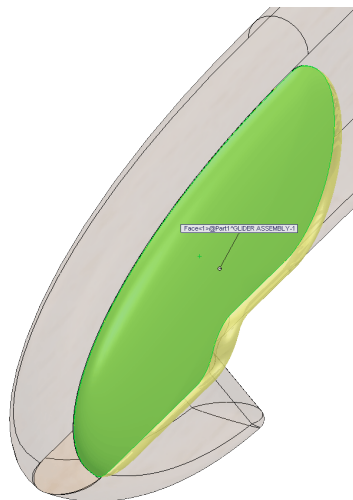
Step 4. Save. Use **Ctrl-S**.



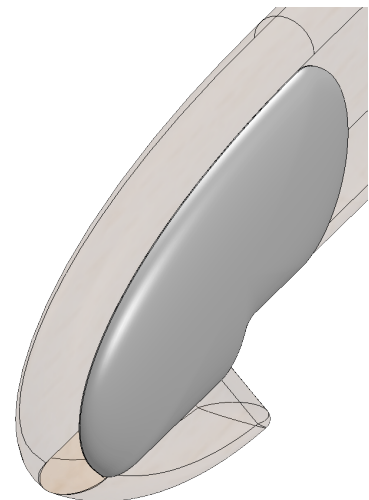
**Fig. 19**



**Fig. 20**




**Fig. 21**



**Fig. 22**

## J. Material Ceramic Porcelain.

Step 1. Right click the Part, click Material and Edit Material  from menu, Fig. 23.

Step 2. Expand Other Non-Metals in the material tree and click Ceramic Porcelain. Click Apply and Close.

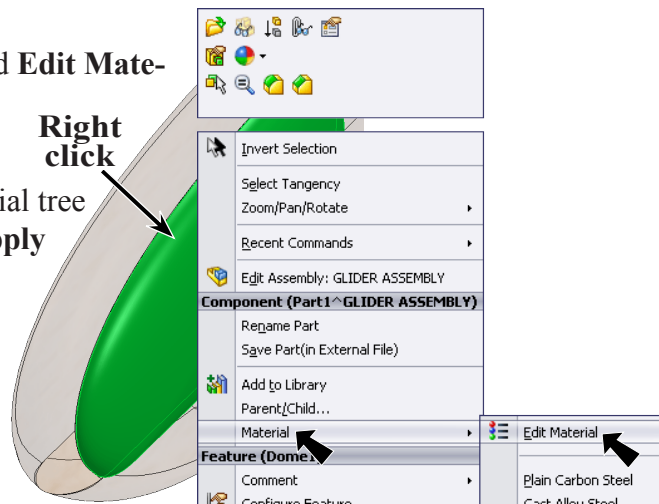





Fig. 23

## K. Appearance Color.

Step 1. Click the Part, click Appearance Call-out  on the Content toolbar and click Part1.. , Fig. 24.

Step 2. In the Appearances Property Manager, Fig. 25

under Color  
set RGB values  
R 224  
G 172  
B 112  
click OK .

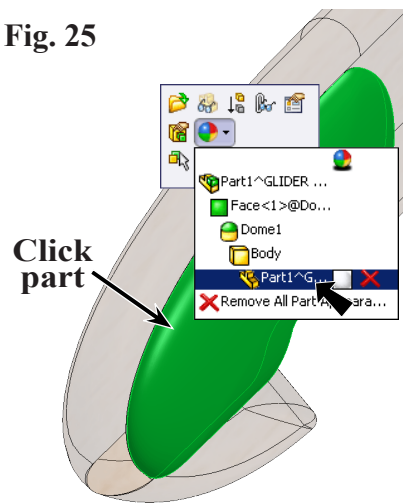


Fig. 24

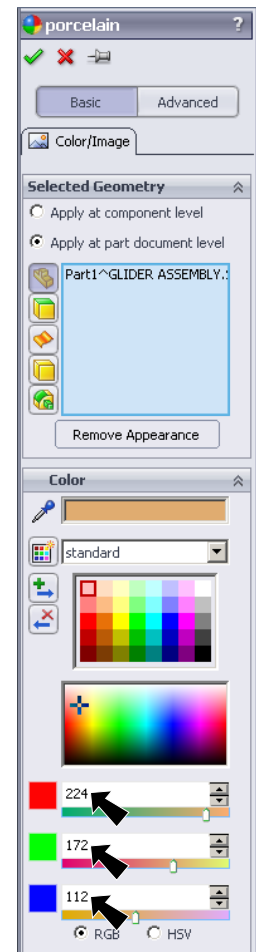


Fig. 25

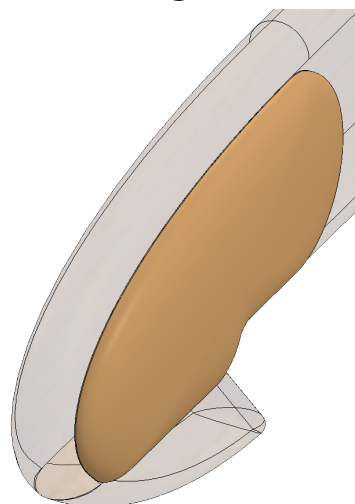
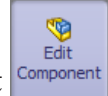


Fig. 26

## L. Rename Part.

Step 1. Click **Edit Component** on the Sketch toolbar to turn off edit component and return to the assembly.



Step 2. **Right click [Part1...** in the Feature Manager and click **Rename Part**, Fig. 27.

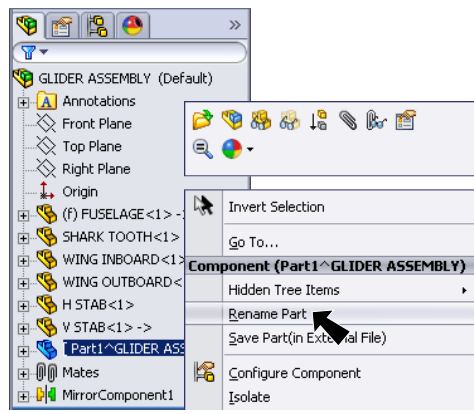


Fig. 27

Step 3. Key-in **Clay** in the Feature Manager and press **ENTER**, Fig. 28.

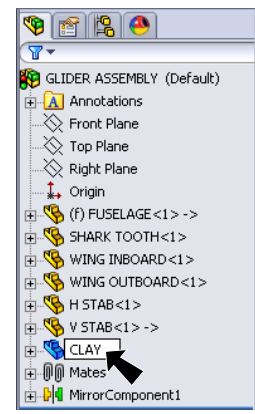


Fig. 28

Step 4. **Right click Clay** in the Feature Manager and click **Save Part(in External file)**, Fig. 29.

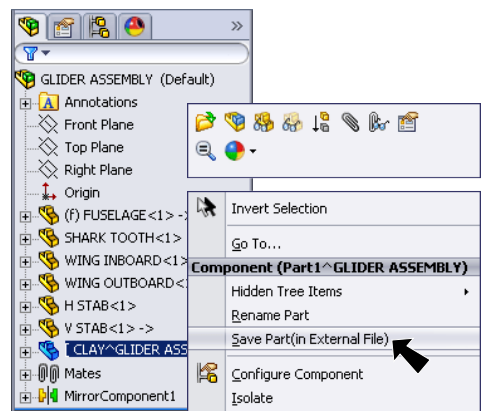


Fig. 29

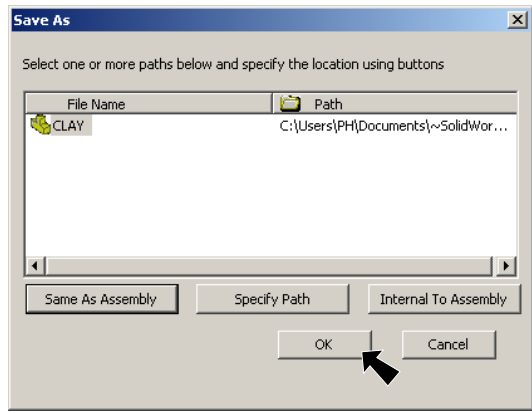


Fig. 30

Step 5. Click **OK** in the Save As dialog box, Fig. 30.

Step 6. Save. Use **Ctrl-S**.

## M. Mirror Clay.

Step 1. **Ctrl** click the **Right Plane**  and **CLAY** in the Feature Manager to select both, **Fig. 31** and **Fig. 32**.

Step 2. Click Insert Menu > Mirror Components.

Step 3. In the Mirror Components Property Manager:

click Next , **Fig. 33**  
under Orient Components, **Fig. 34**  
click **Create opposite hand version**

, **Fig. 35**  
click **OK** .

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

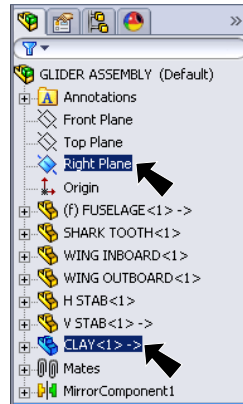


Fig. 31

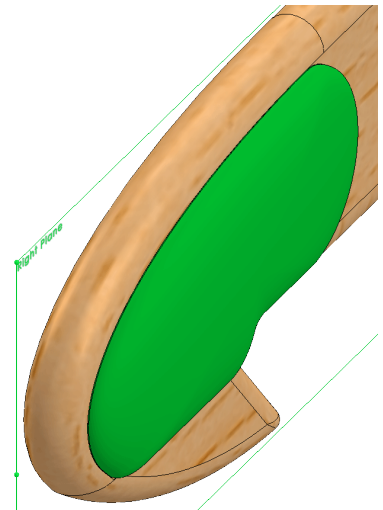


Fig. 32

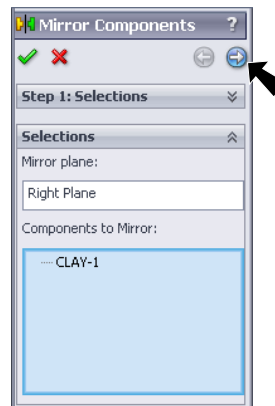


Fig. 33



Fig. 34

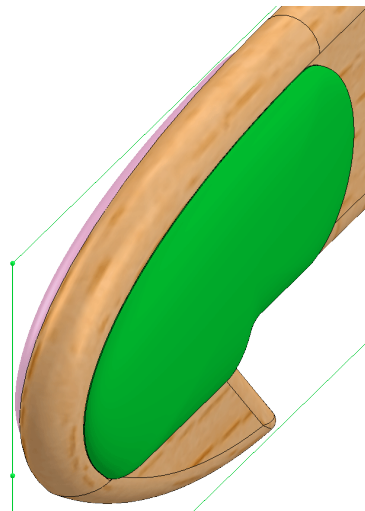


Fig. 35

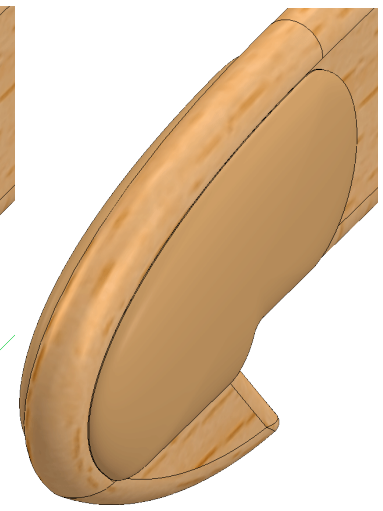


Fig. 36