

Lesson: Editing non-native imported geometry

In this lesson, you learn what to do with imported or bad geometry. Fusion 360 can be used to edit the model using direct modeling tools to better prepare a file for simulation.



The completed exercise

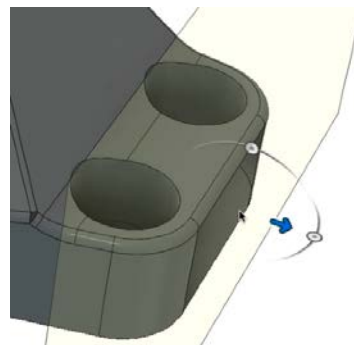
Learning Objectives:

- Edit imported models to form a solid.
- Access the Patch workspace.
- Use direct modeling tools.

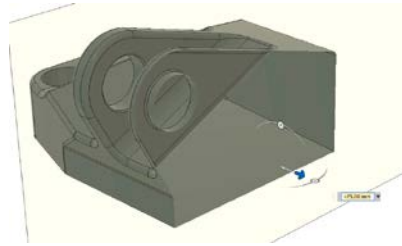
1. Click File>New Design from File then open Tie Down.iges then save the file to your current project. The model in this file is not a solid because it is missing a surface.



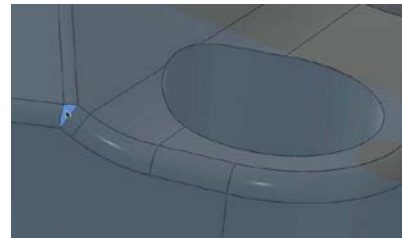
2. From the Inspect pulldown, choose the Section Analysis tool. Select a face to base the plane on.



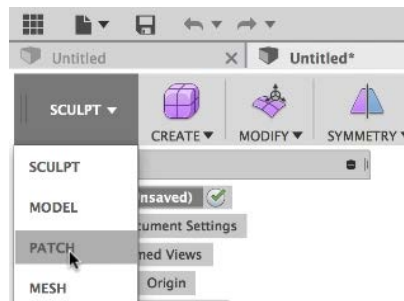
3. Use the arrow icon to drag the plane through the model. This allows you to see that the model is hollow and only made up of surfaces. Press Cancel to leave the Section Analysis tool.



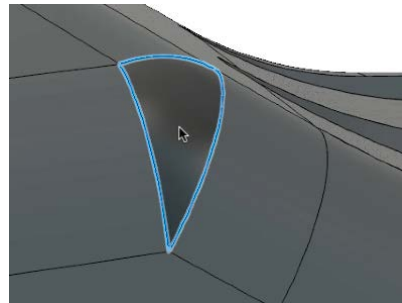
4. Note that one of the surfaces in the fillet is open.



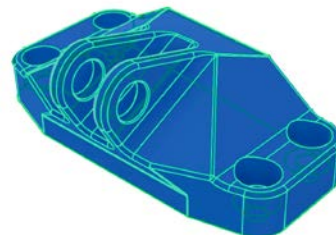
5. To fix this, navigate to the Patch workspace.



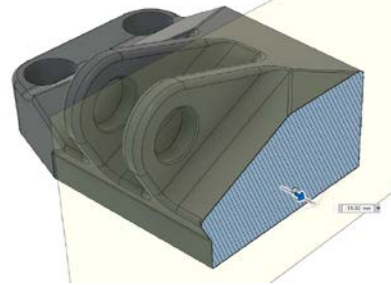
6. Click Patch>Create then in the Patch control panel, disable Edge Chaining. Select the three open edges on the fillet. This will generate a preview of a new feature. Investigate the options in the Continuity dropdown menu to see how they affect the curvature. Select Tangent (G1) and choose New Body for the Operation. Click OK. The new fillet appears on the model.



7. Click Modify>Stitch then box select the entire model. Click OK in the Stitch control panel. This is now a solid model.



8. Repeat steps two and three to verify that this is now a solid model.



9. Sometimes modifying features is beneficial when doing analysis. Despite not having a feature tree, you can turn on Capture Design History. This allows you to add or modify feature and record them in the Timeline.



10. To shallow up the holes, navigate to the Marking Menu and select Press Pull. Select the bottoms of the counterbored holes and raise them 10mm by dragging the arrow icon upwards. Click OK.

