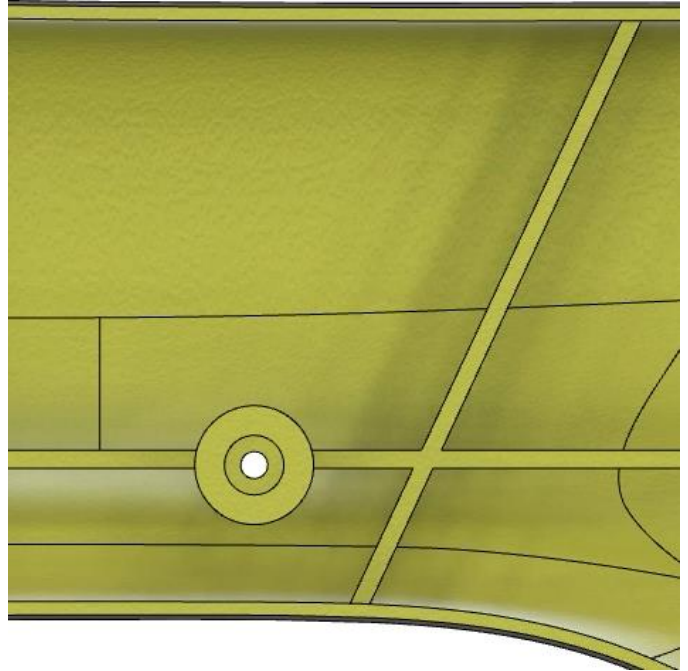


Move and rotate features with direct modeling

In this module, you'll use Fusion 360's direct modeling tools to modify a casing's internal geometry.

Learning objectives:

- Use Press Pull.
- Use Move/Copy.
- Use Delete.



The completed exercise

1. Continue with the *saw handle casing.f3d* file from the previous module.

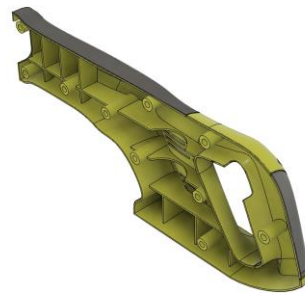


Figure 1. Continue with the file from the previous module

2. In the previous module you adjusted the casing's fence; in this module, you'll use direct modeling tools to adjust the internal rib structure. Click Modify > Press Pull.



Figure 2. Open the Press Pull tool

3. Select the two faces shown in the image on the right as the dialog's Faces selection.

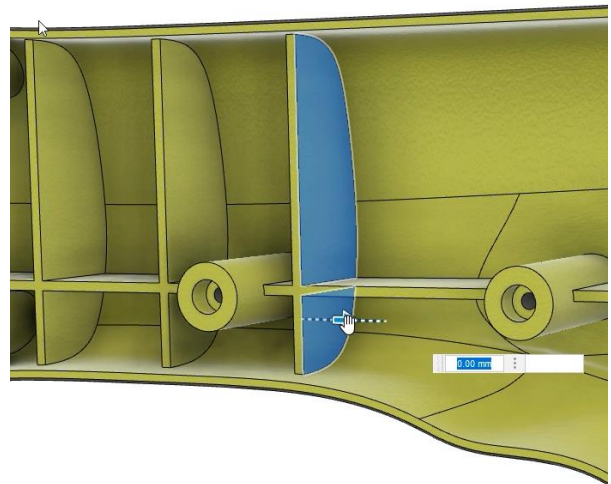


Figure 3. Select the faces

4. Drag the on-screen manipulator and notice that Fusion 360 is able to adjust the internal geometry to match the casing's curvature. However, the rib is getting thicker instead of moving. Cancel the Press Pull dialog.

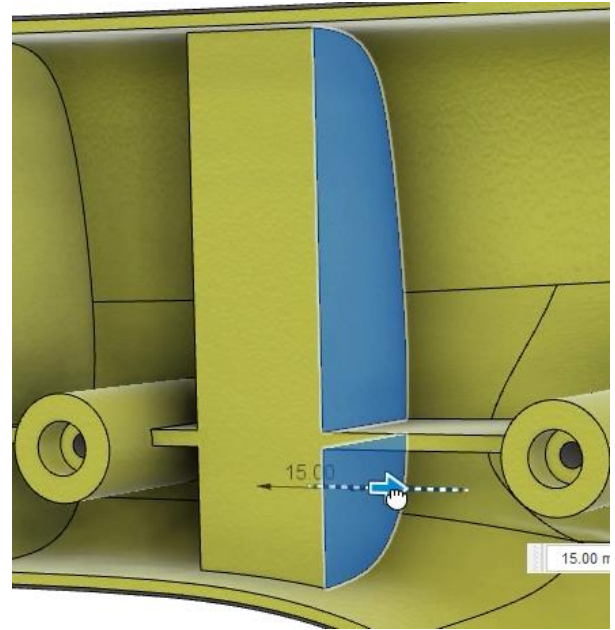


Figure 4. Move the selected faces

5. Click Modify > Move/Copy.



Figure 5. Open the Move/Copy tool

6. Choose the Faces option from the dialog's Move Object menu.

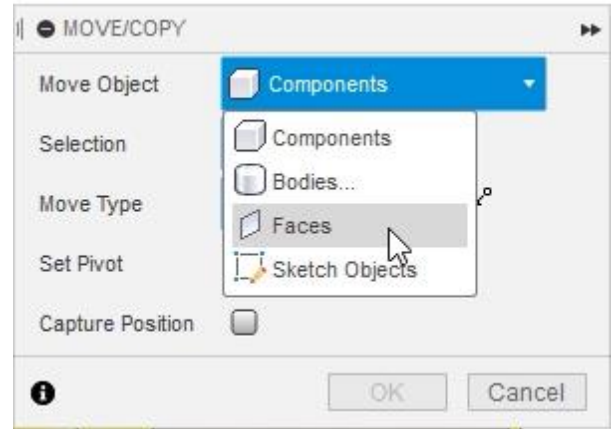


Figure 6. Choose the object type

7. Select the four faces shown in the image on the right, two on each side of the rib.

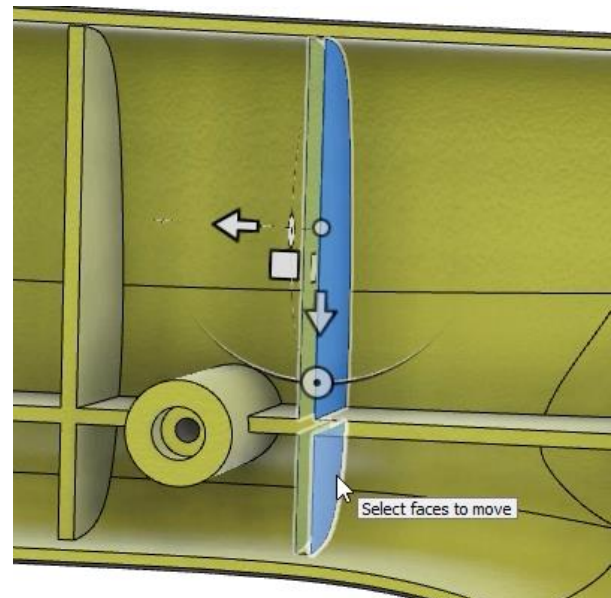


Figure 7. Select the faces

8. Navigate to the Front view and notice that the pivot point is oriented normal to the first face you selected. However, the pivot point can be moved. Click the dialog's Set Pivot option.

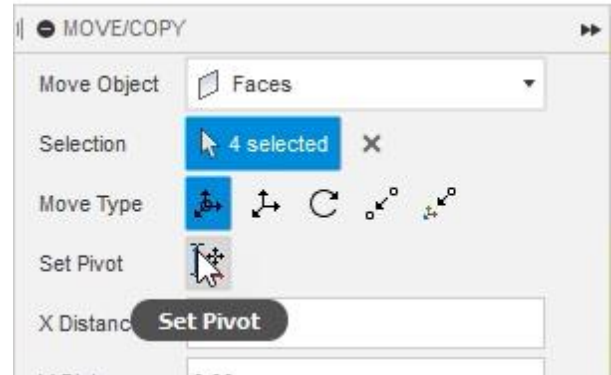


Figure 8. Click the Set Pivot option

9. Choose a point on the model where you want to move the pivot point.

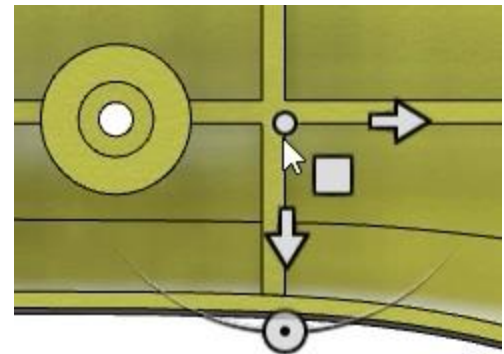


Figure 9. Choose a new pivot point location

10. Click the dialog's green checkmark to accept the new pivot point location.

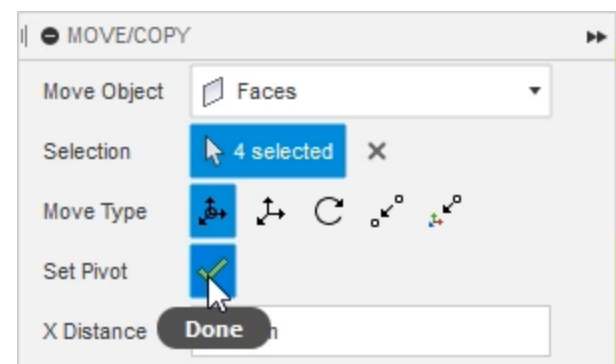


Figure 10. Accept the pivot point location

- 11.** Drag the on-screen manipulator to move the selected faces and notice that the rib's geometry adjusts to match the casing's geometry.

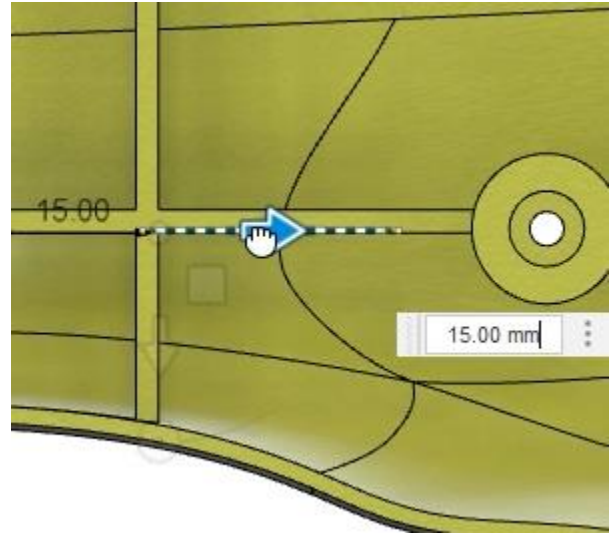


Figure 11. Move the selected faces

- 12.** The on-screen manipulator's rotation handle can be used to rotate the rib to a new angle. OK the Move/Copy dialog after you're satisfied with the rib's new position.

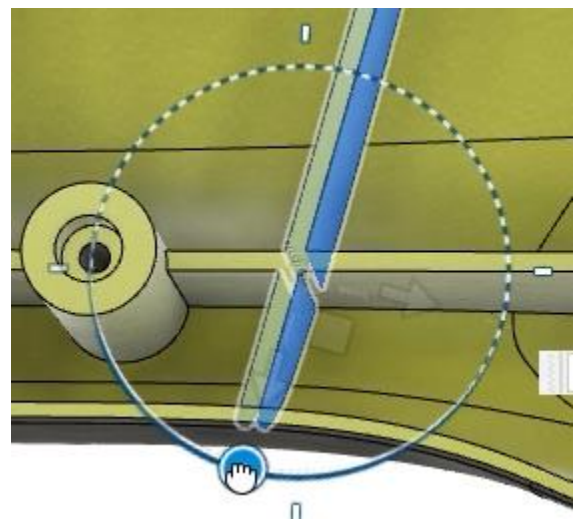


Figure 12. Rotate the selected faces

- 13.** Select the four faces on one of the casing's ribs.

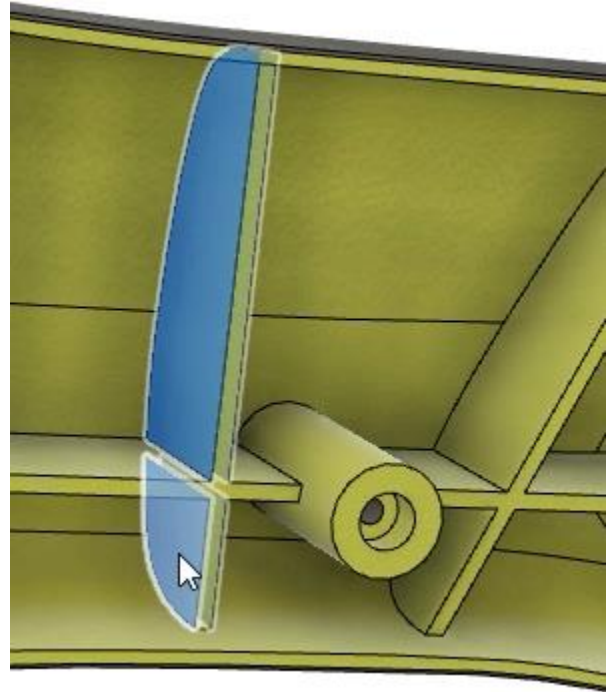


Figure 13. Select the faces

- 14.** Click Modify> Delete or press Delete to remove the selected rib. Notice the rib is removed and Fusion 360 automatically patches the geometry.

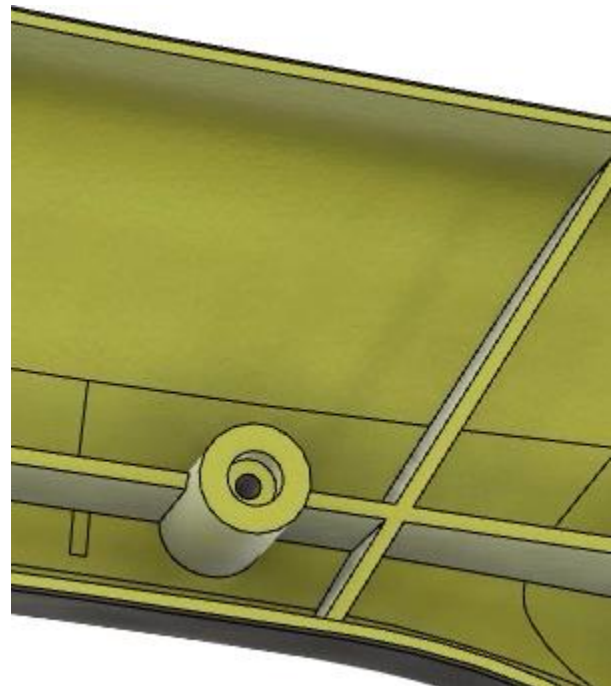


Figure 14. Inspect the result

- 15.** A small face was created after the rib was deleted and the geometry is patched. Select this face and press Delete.

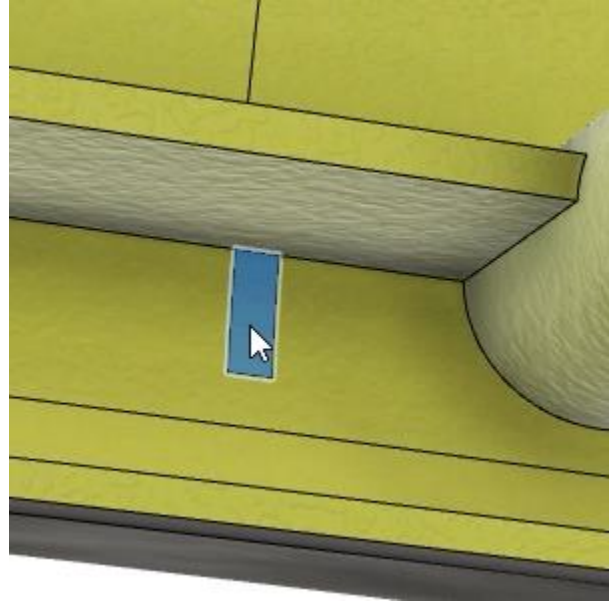


Figure 15. Delete the extra face

- 16.** The face is removed and the geometry is patched. Save the file and continue to the next module.

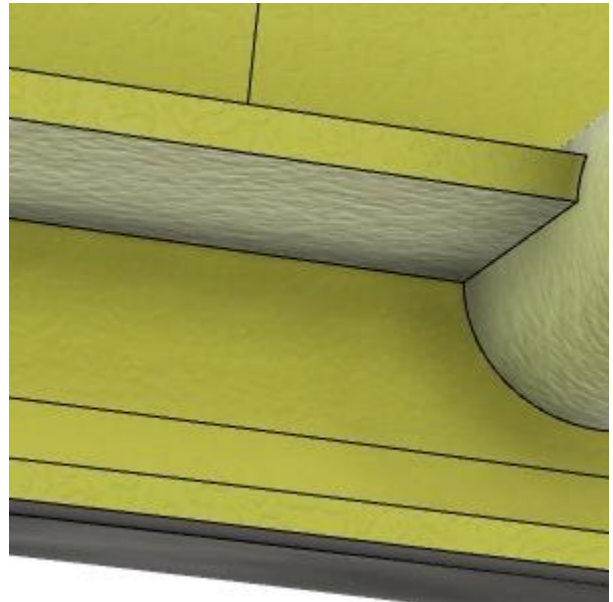


Figure 16. Inspect the result