

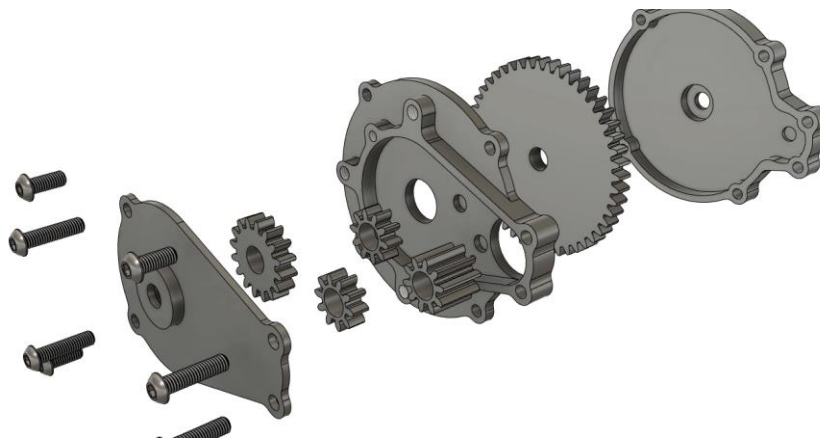
Step-by-step guide

Create a simple exploded view animation

Explode an assembly's various components using Fusion 360's animation tools.

Learning objectives:

- Create a new storyboard.
- Create an auto-explode.
- Use Transform Components.



The completed exercise

1. Upload and open the supplied *Simple Exploded View.f3d* file.

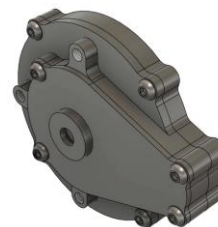


Figure 1. Open the supplied file

2. Exploded views can be created to illustrate how a part assembles. Exploded views can also be used in detailed drawings. If you want to make exploded views, you need to have components in your Browser. Fusion 360 needs to be able to track each component's origin in relation to each other; bodies do not have separate origins that Fusion 360 can track.



Figure 2. Notice the Browser's components

3. To begin creating an exploded view, navigate to the Animation workspace.

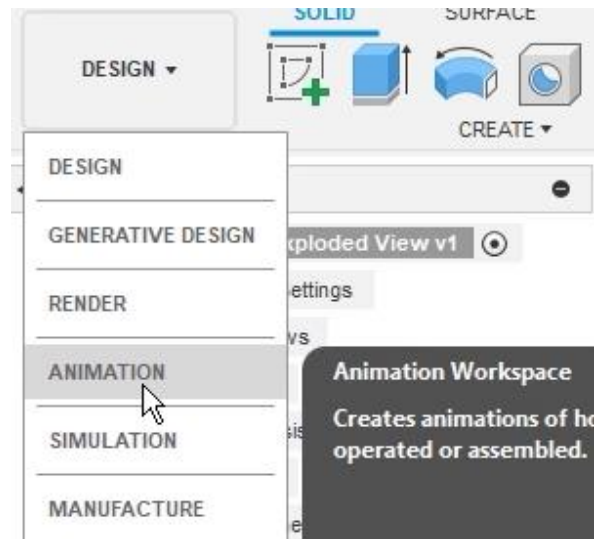


Figure 3. Navigate to the Animation workspace

4. Notice that a different timeline is added to the bottom of the screen. This timeline tracks camera movements, component placement, component visibility, and component appearances.

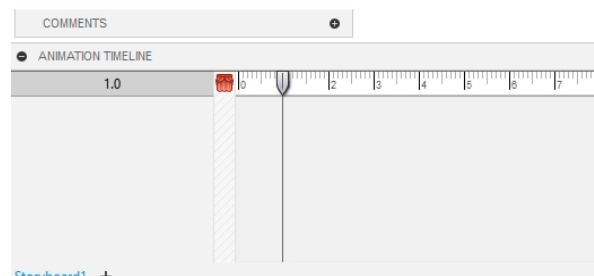


Figure 4. Notice the timeline

5. The play head's default position is the one second mark. Click and drag the play head onto the red curtain icon. This area is called the Scratch Zone. Moving the play head to the Scratch Zone allows you to reorient the model without recording the movement.

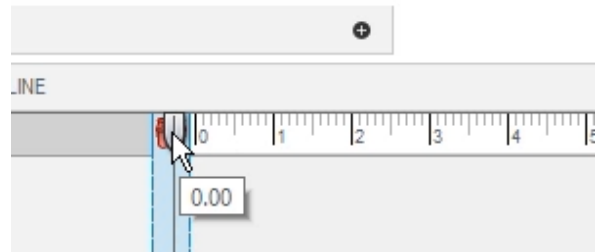


Figure 5. Drag the play head into the Scratch Zone

6. Reorient the model to a new orientation. The animation will begin with your model in this position.



Figure 6. Reorient the model

7. Drag the play head out of the Scratch Zone and place it at the one second mark.

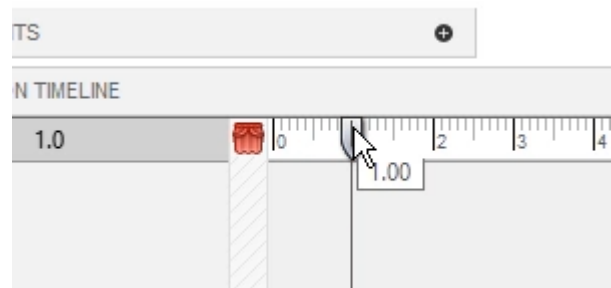


Figure 7. Drag the play head out of the Scratch Zone

8. Reorient the model and notice that Fusion 360 adds an icon to the timeline. Click this icon and press Delete to remove it from the timeline. Notice that the model returns to its original orientation.

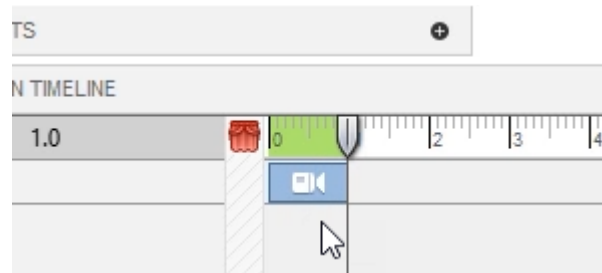


Figure 8. Reorient the model

9. Expand the Browser and select the Hardware component.

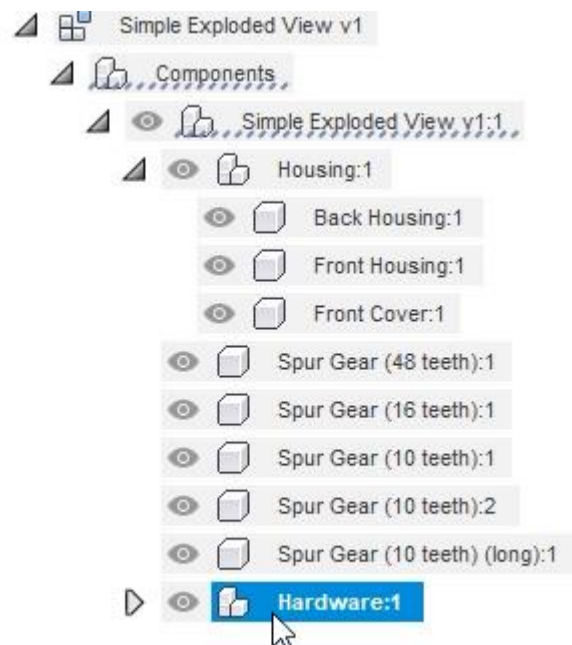


Figure 9. Select the Hardware component

10. Click Transform> Auto Explode - All Levels.

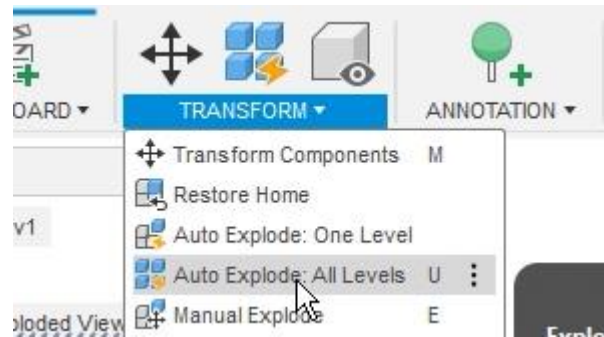


Figure 10. Explode the selected component

11. Notice that Fusion 360 does not explode the component you selected. OK the dialog.

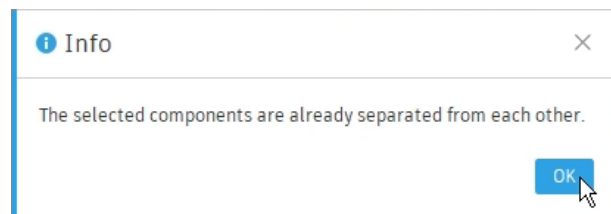


Figure 11. OK the dialog

12. Select the Housing and Hardware components, then click Transform> Auto Explode - All Levels.

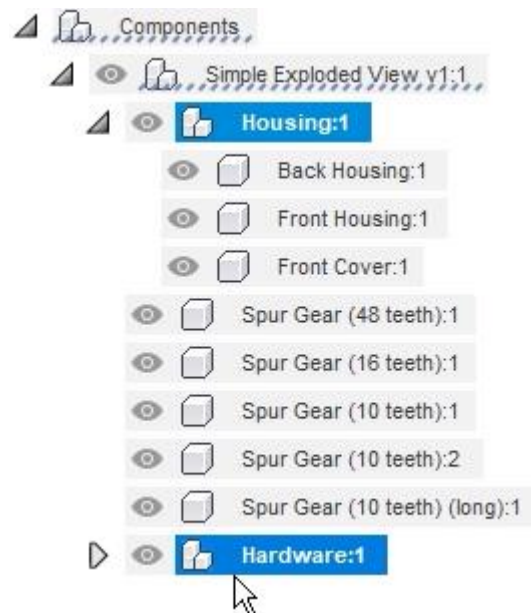


Figure 12. Select multiple components, then open the Auto Explode - All Levels tool

13. Fusion 360 explodes the components.

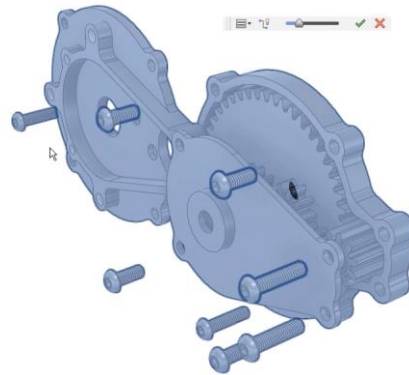


Figure 13. Inspect the explode

14. You can drag the slider to customize how far the components are exploded. Notice that the components' explode directions are not necessarily ideal.

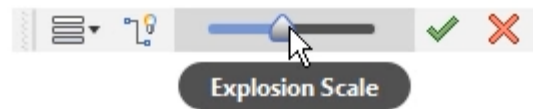


Figure 14. Drag the Explosion Scale slider

15. Cancel the Auto Explode after you finish exploring it.



Figure 15. Click Cancel

16. Click Transform > Transform Components.

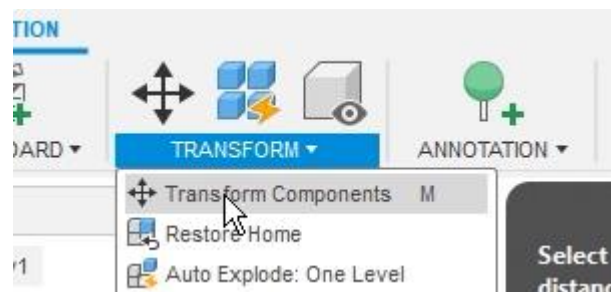


Figure 16. Open the Transform Components tool

17. Choose the Hardware component as the dialog's Components selection, then use the on-screen manipulator to drag them away from the housing. Click in the Canvas area to deselect the Hardware component.

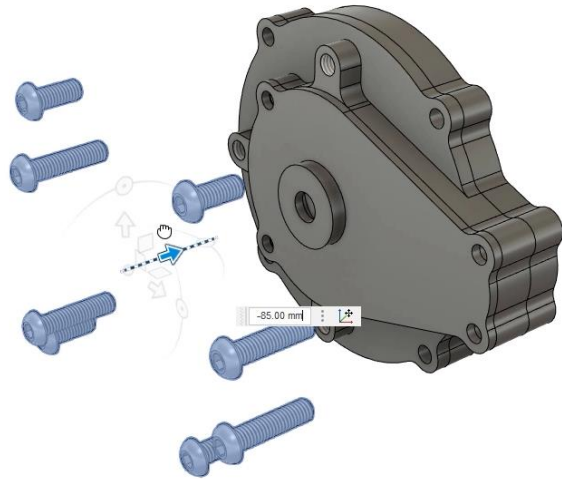


Figure 17. Explode the Hardware component

18. Notice that Fusion 360 adds an icon to the timeline. Because the play head was at the one second mark, this explode takes one second to animate.

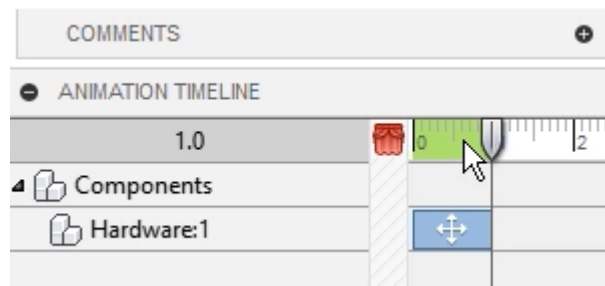


Figure 18. Inspect the timeline

19. Drag the play head to the three second mark.

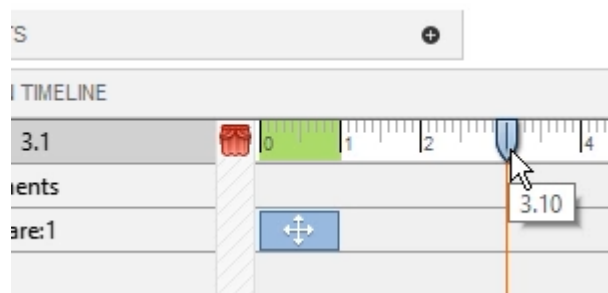


Figure 19. Move the play head

20. Select the Front Cover component and use the on-screen manipulator to drag it away from the housing. Click in the Canvas area to deselect the component.

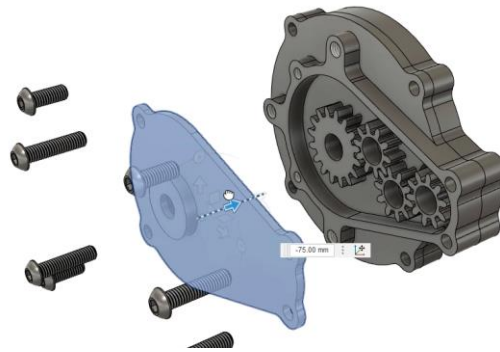


Figure 20. Move the Front Cover component

21. Notice that Fusion 360 records the movement and adds it to the timeline. Move the play head to the five second mark.

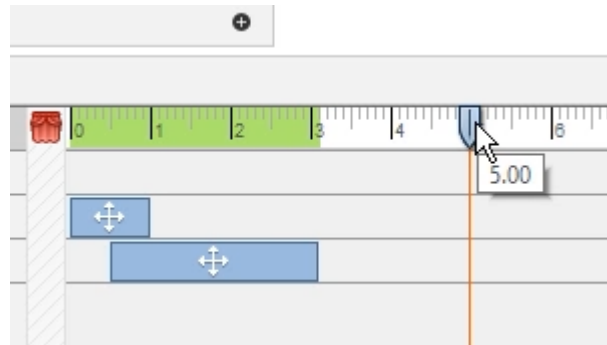


Figure 21. Move the play head

22. Select the Back Housing component and move it away from the Front Housing component. Click in the Canvas area to deselect the component.

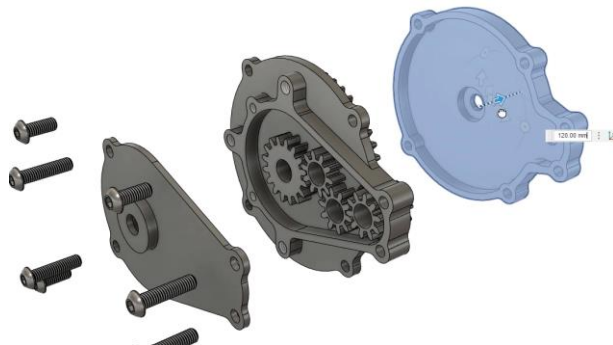


Figure 22. Move the Back Housing component

23. Move the play head to the seven second mark.

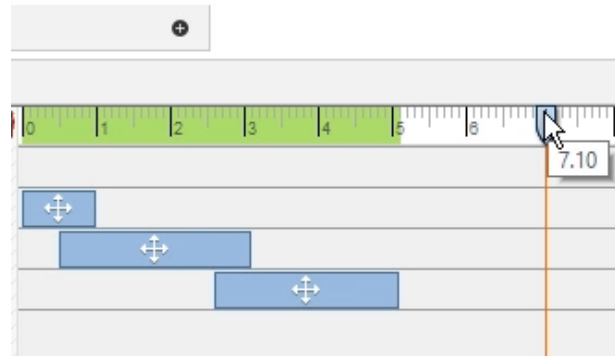


Figure 23. Move the play head

24. Select the Spur Gear (48 teeth) component and drag it away from the Front Housing component.

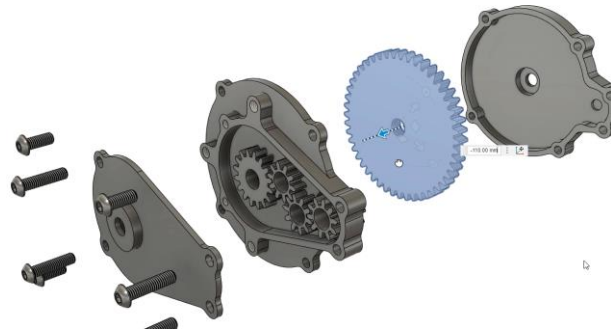


Figure 24. Move the large gear

25. Fusion 360 records the movement and adds it to the timeline. Notice that the timeline's icons overlap each other by 0.5 seconds. This option can be customized by clicking the gear icon at the bottom of the screen. The options in the Recording Mode section can be selected to determine whether all the movements start at the timeline's 0, all of them overlap by 0.5 seconds, or all of them are sequential.

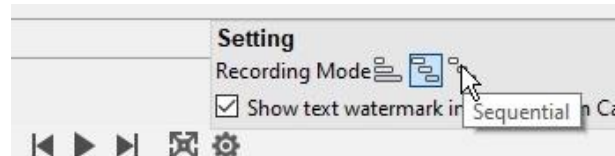


Figure 25. Inspect the timeline's settings

- 26.** Continue to explode the assembly's components. If you want the components' movements to be simultaneous, do not move the play head in between the movements. OK the dialog.

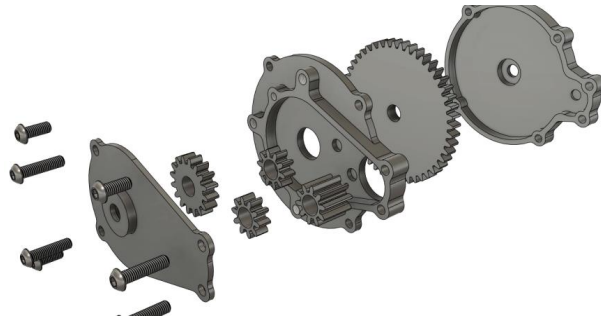


Figure 26. Explode the assembly

- 27.** Click play and watch the animation. Make any adjustments you want, then save the design.



Figure 27. Play the animation