

The background features a large, stylized, 3D-rendered mechanical part in shades of orange and yellow, set against a light gray grid. A faint, large circular arc is visible in the upper left quadrant.

AUTODESK[®] INVENTOR[®] Trial Projects

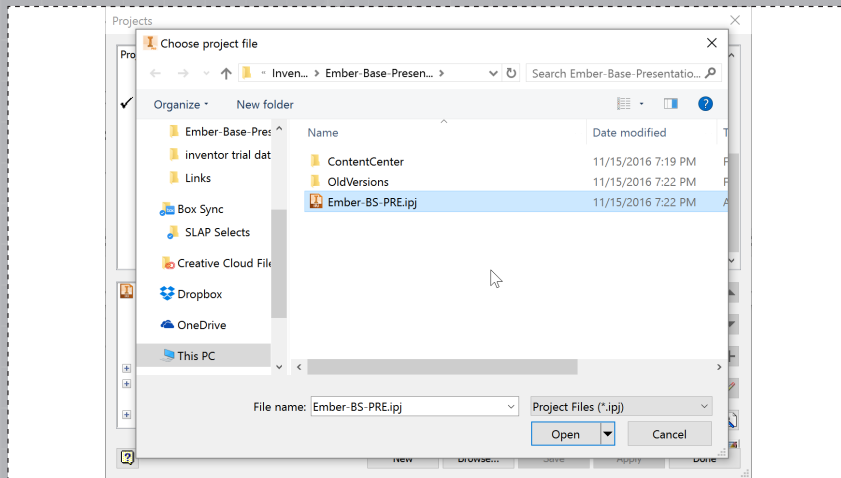
Exploded Views and Animation

Build technical documentation

PART 1: POSITIONING COMPONENTS

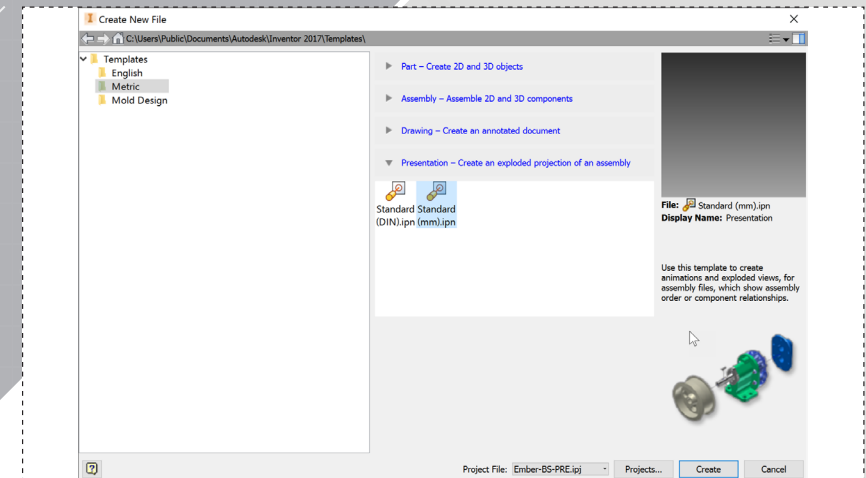
page: 2

1.



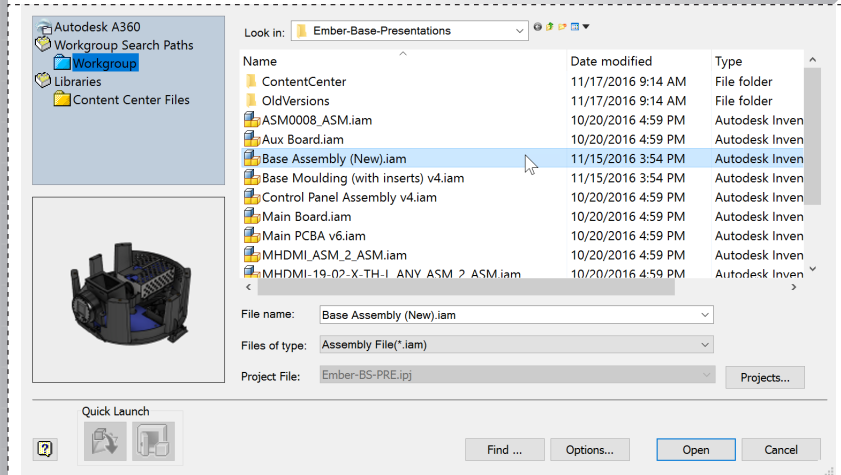
After starting Inventor, click the 'Projects' icon in the ribbon. Navigate to where you saved the project files and select **Ember-BS-PRE.ipj**.

2.



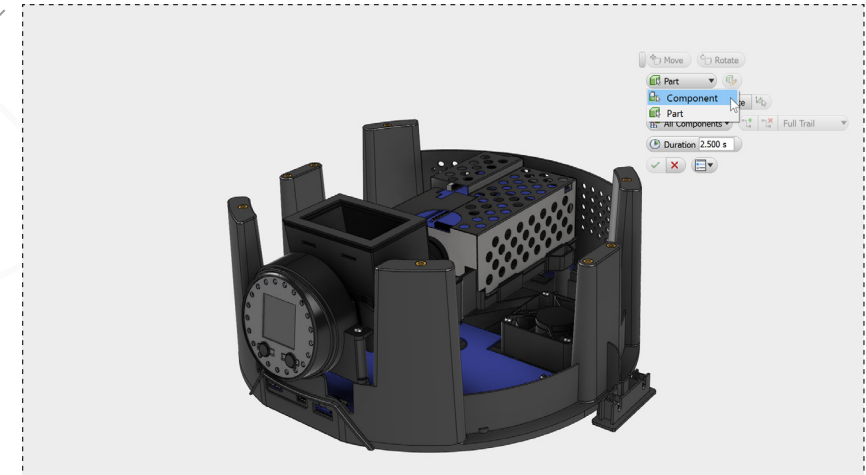
In the ribbon, select 'New'. Select the 'Metric' folder and create a new file using the 'Standard (mm).ipn' template.

3.



Choose **Base Assembly (New).iam** as the assembly file to import.

4.

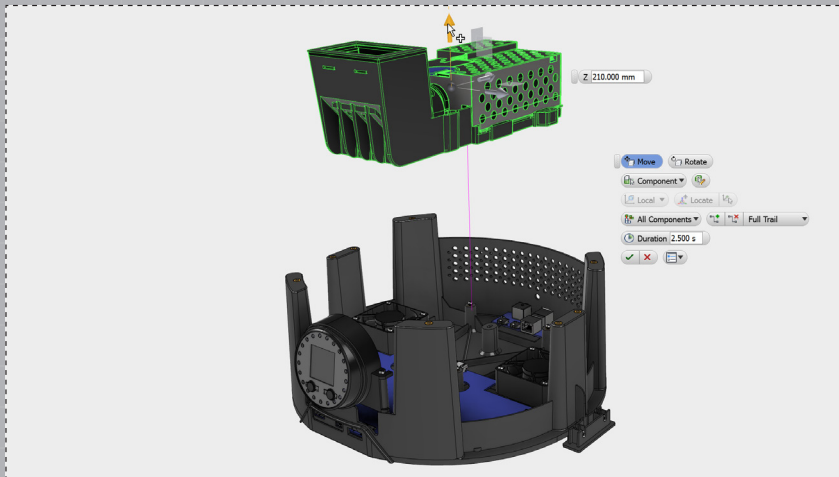


In the model window, right click to bring up the marking menu. Select 'Tweak Components'. Change the selection option to 'Component'.

PART 1: POSITIONING COMPONENTS

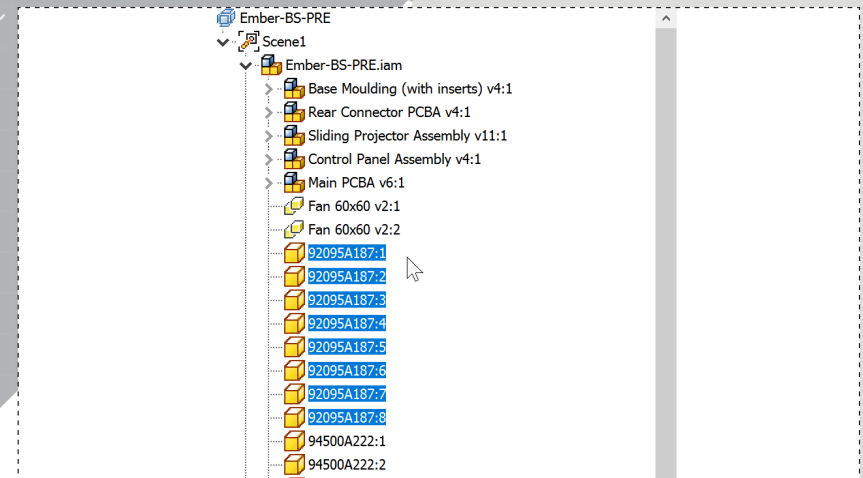
page: 3

5.



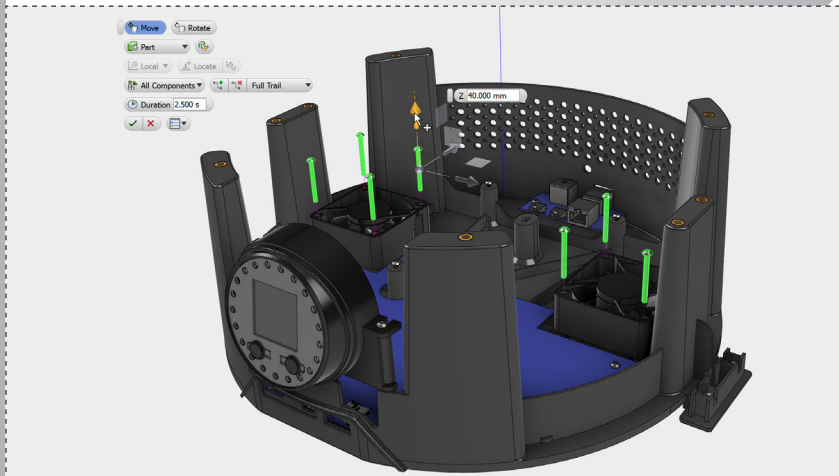
Select the projector subassembly shown and use the arrow pointing up to drag it approximately 210mm from the base. Click the green checkmark to complete the tweak.

6.



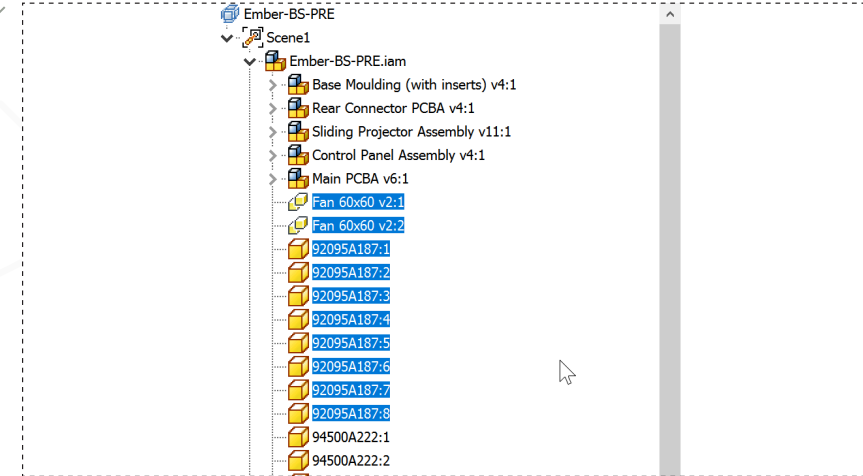
Using the model browser, expand the model tree using the arrows next to 'Scene1' and 'Ember-BS-PRE.iam'. Select the 8 components as shown.

7.



Right click in the model window to open the marking menu and select 'Tweak Components'. Use the arrow pointing up (Z-direction) and move them approximately 40mm.

8.

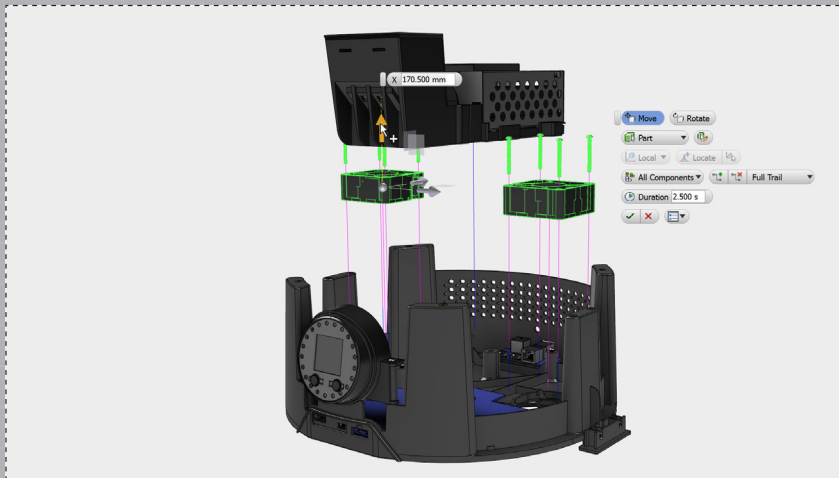


Again using the model browser, select the two fans and the same 8 screws moved in the previous operation.

PART 1: POSITIONING COMPONENTS

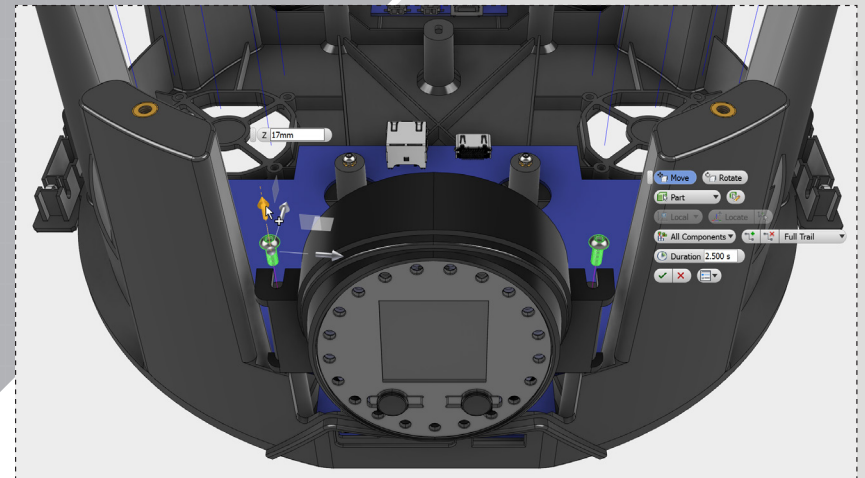
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9.



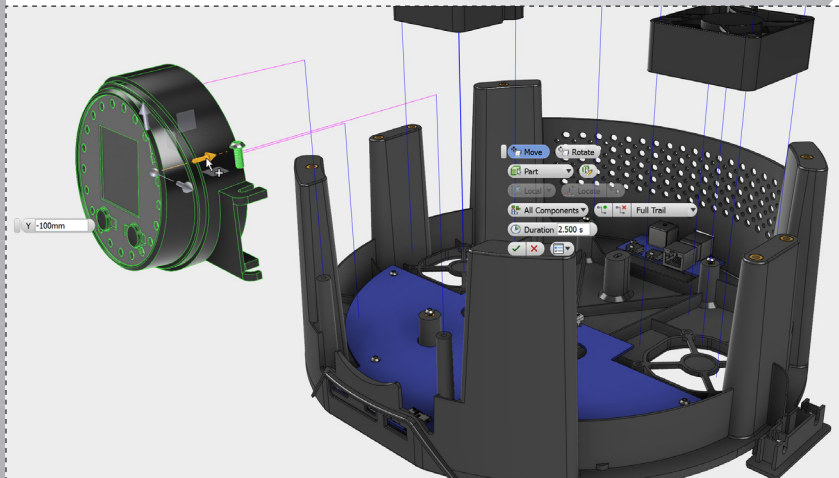
Restart the 'Tweak Components' command from the marking menu. Move the screws and fans 170mm up in the Z-direction. Click the green checkmark to complete the command.

10.



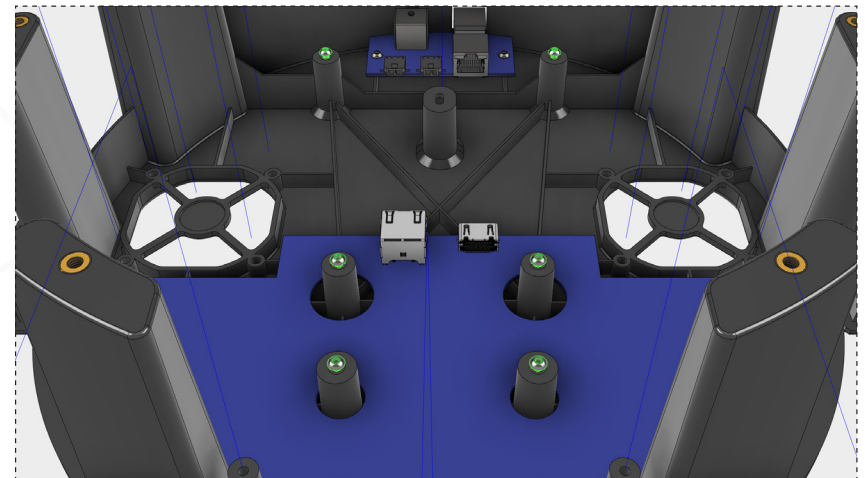
Select the two mounting screws for the control panel subassembly, and then restart 'Tweak Command' to drag them up about 17mm.

11.



Select the same two screws and 'Control Panel Assembly v4' in the model tree and restart 'Tweak Components'. Use the arrows to move them up (Z-dir) 100mm and away (Y-dir) -100mm.

12.

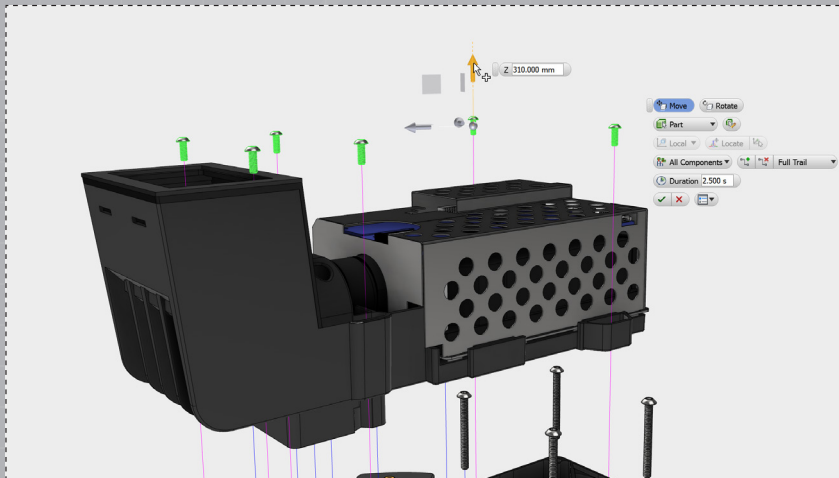


Select the 6 screws that are used to hold down the projector assembly as shown.

PART 1: POSITIONING COMPONENTS

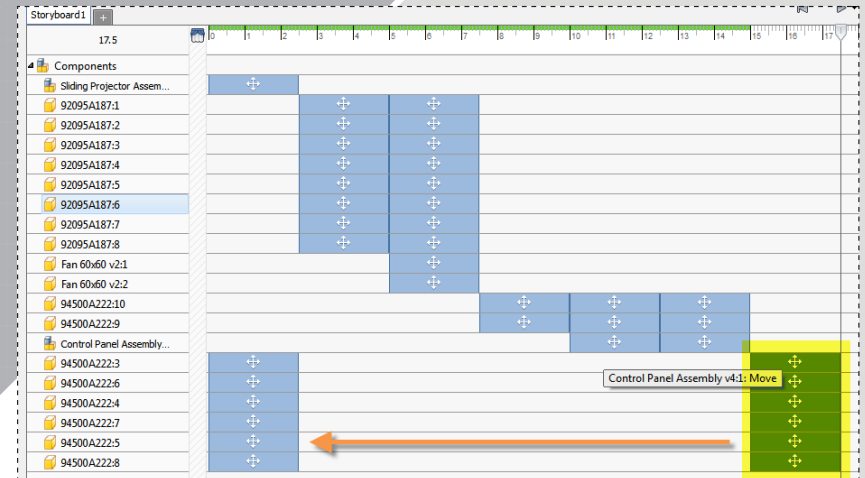
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13.



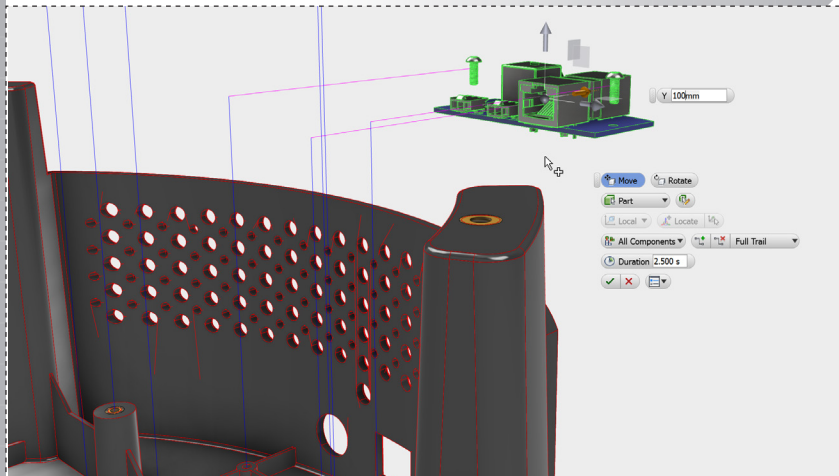
Restart 'Tweak Components' and move the screws up 310mm, above the projector assembly.

14.



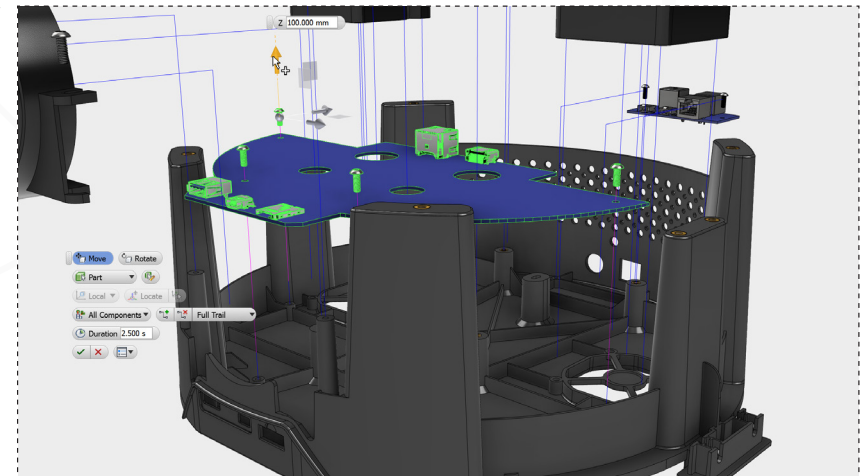
Using the Storyboard panel at the bottom of the screen, move the 6 tweaks shown to the beginning of the timeline so they are in the correct assembly sequence.

15.



Using the same methods from Steps 11 and 12, offset the Connector PCB and its mounting screws, up and away 100mm each from the assembly as shown.

16.

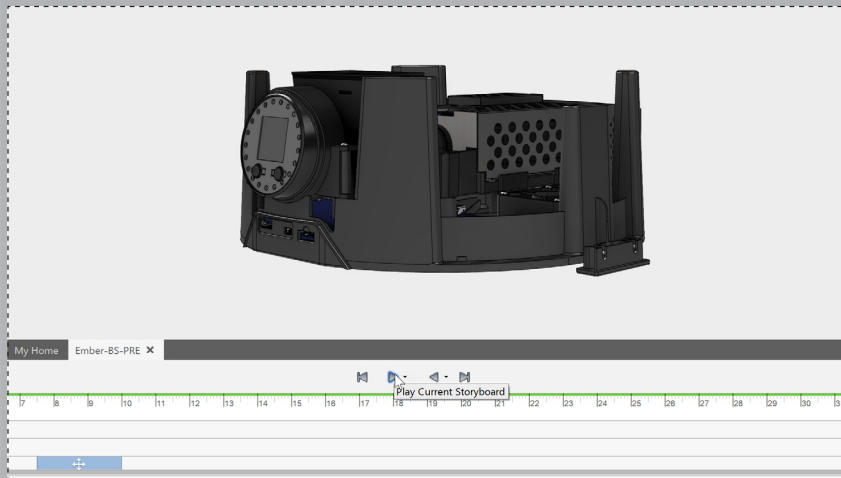


The final step is to move the main PCB board and its attachment screws using the same approach.

PART 1: POSITIONING COMPONENTS

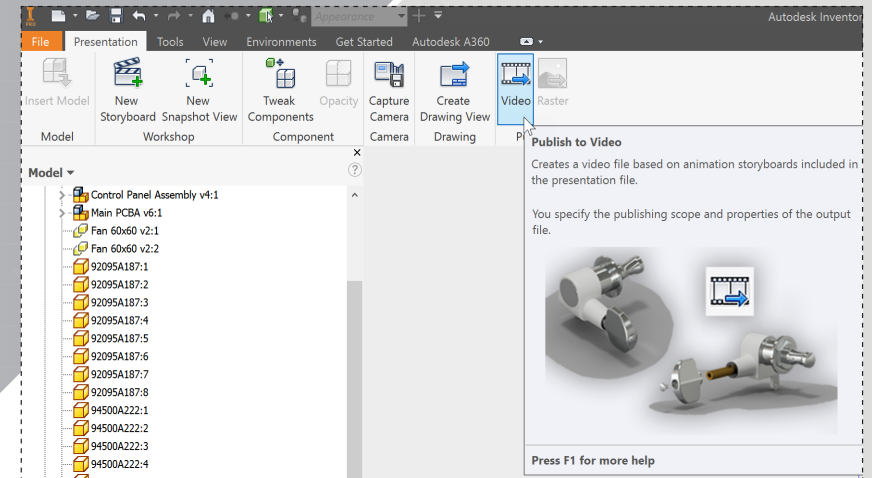
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17.



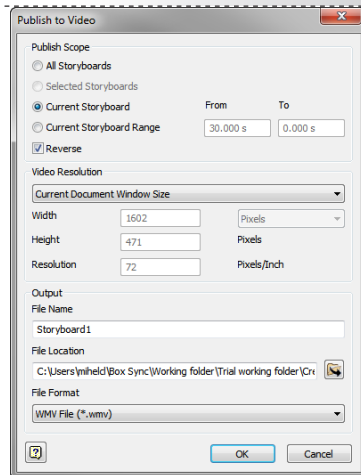
At the top of the Storyboard panel, press the 'Play Current Storyboard' button to review the assembly sequence.

18.



In the 'Publish' section of the ribbon, pick 'Video'.

19.

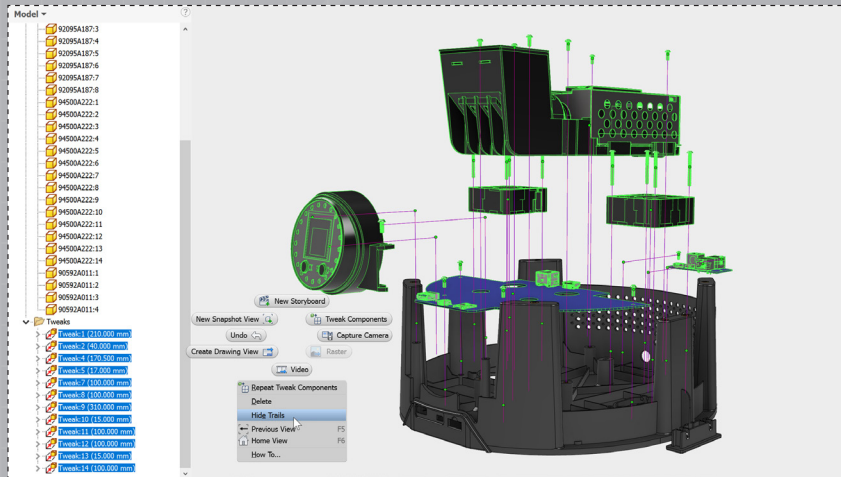


In the publish dialog, select the box next to 'Reverse' to publish the video in the order of assembly (rather than disassembly) and then select OK to create the video.

PART 2: SNAPSHOTS AND DRAWINGS

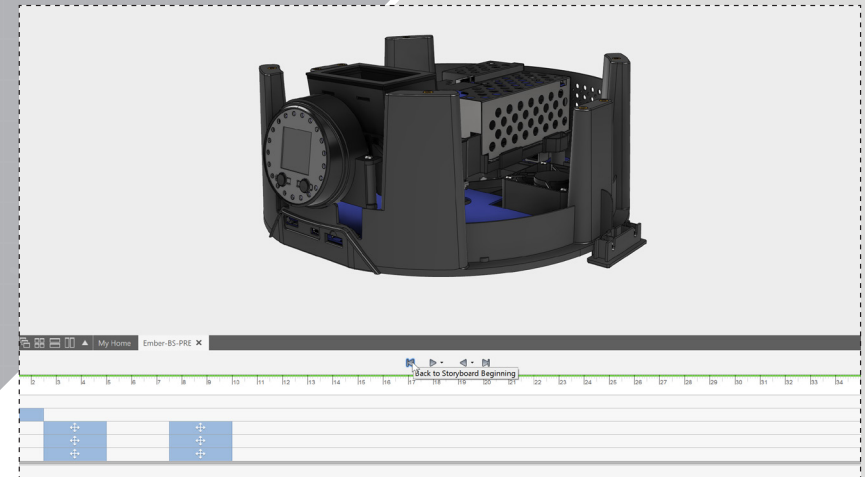
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1.



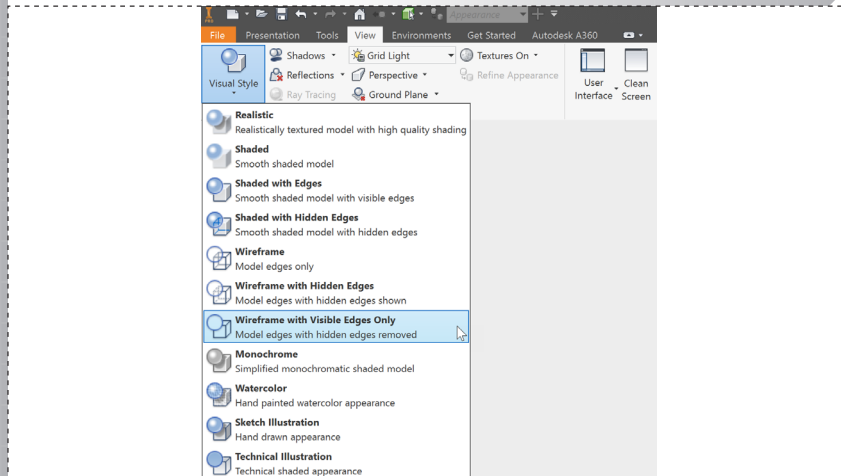
To begin creating assembly instruction views, select all of the Tweaks from the browser, and then select 'Hide Trails' from the marking menu.

2.



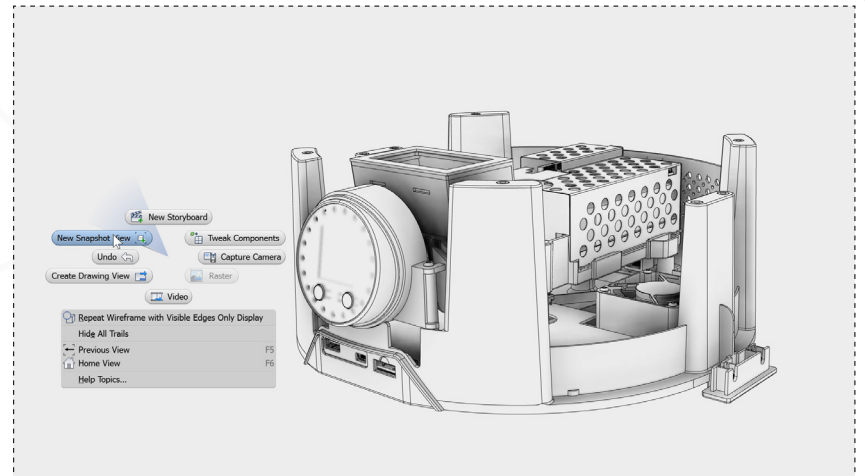
In the Storyboard panel, select the left arrow for 'Back to Storyboard Beginning' and position the assembly in the model window for the first snapshot.

3.



In the ribbon, select the 'View' tab. Click the 'Visual Style' drop down and choose 'Wireframe with Visible Edges Only'.

4.

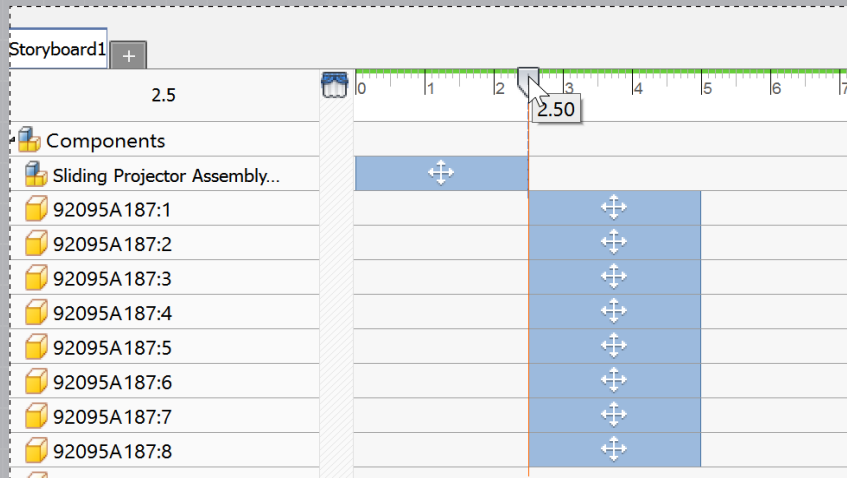


Right click in the model window to open the marking menu, and select 'New Snapshot View'.

PART 2: SNAPSHOTS AND DRAWINGS

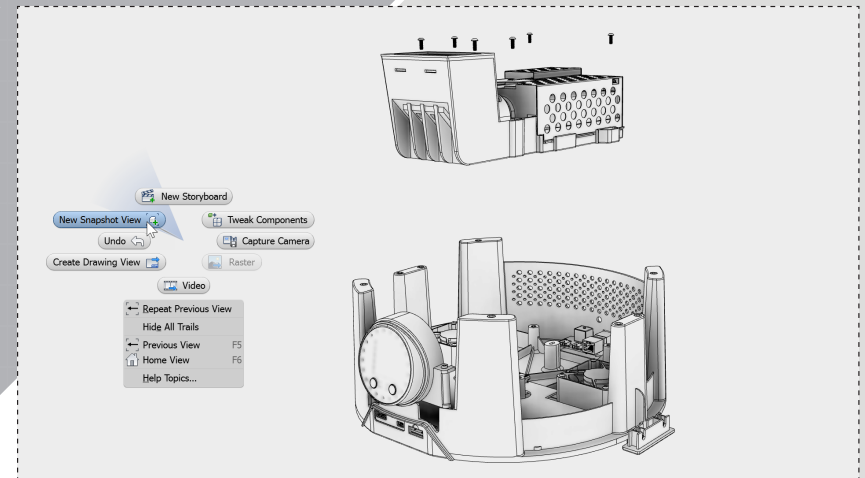
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5.



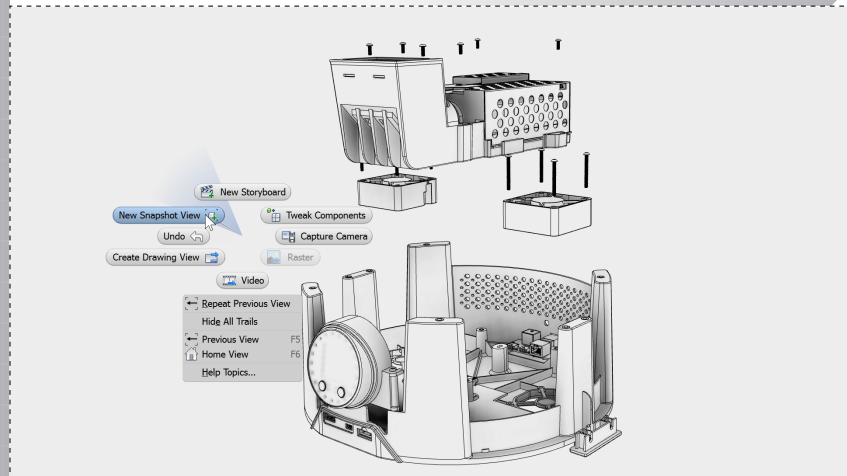
In the Storyboard panel, move the marker forward to 2.5s to setup the snapshot of the first assembly step.

6.



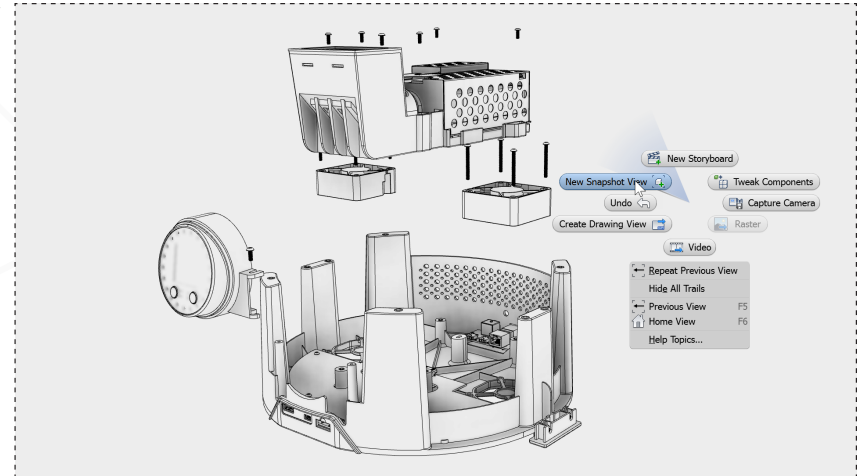
Reposition the model as needed to see the entire exploded view and use the marking menu to create the next snapshot.

7.



Follow the same steps to move the marker in the storyboard panel to 7.5s to capture the fan disassembly and create another snapshot.

8.

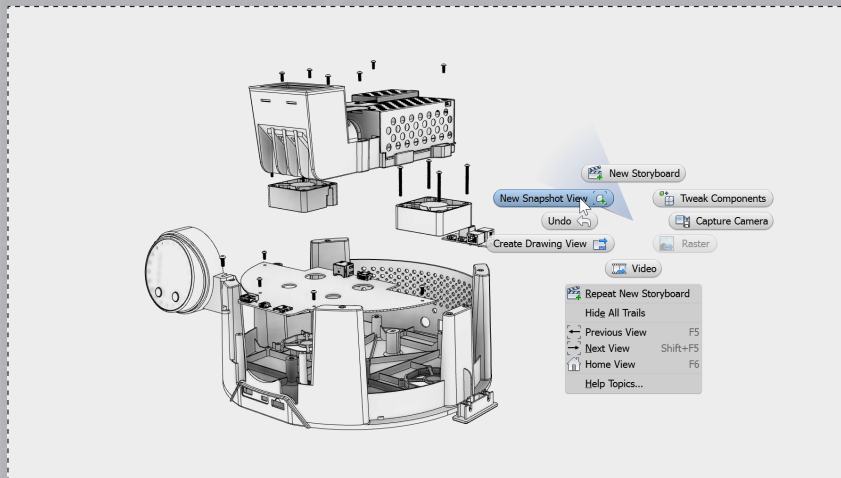


Move the timeline to show the Control Panel Subassembly tweak and create another snapshot.

PART 2: SNAPSHOTS AND DRAWINGS

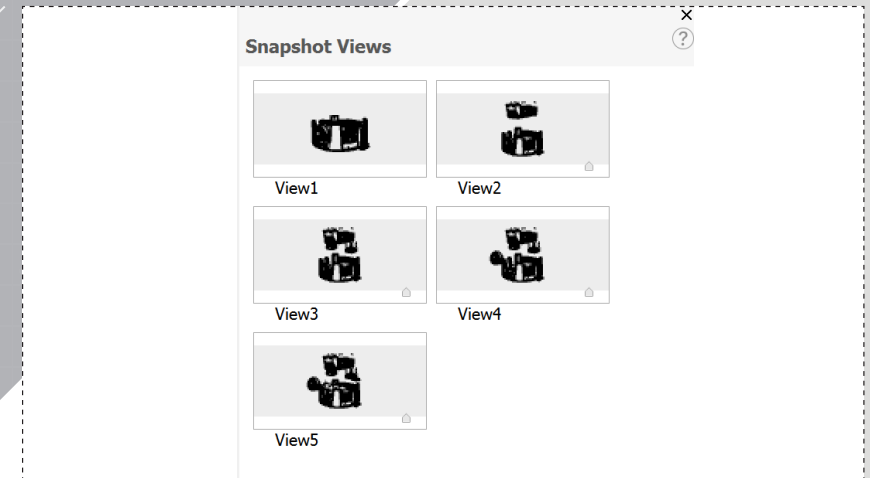
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9.



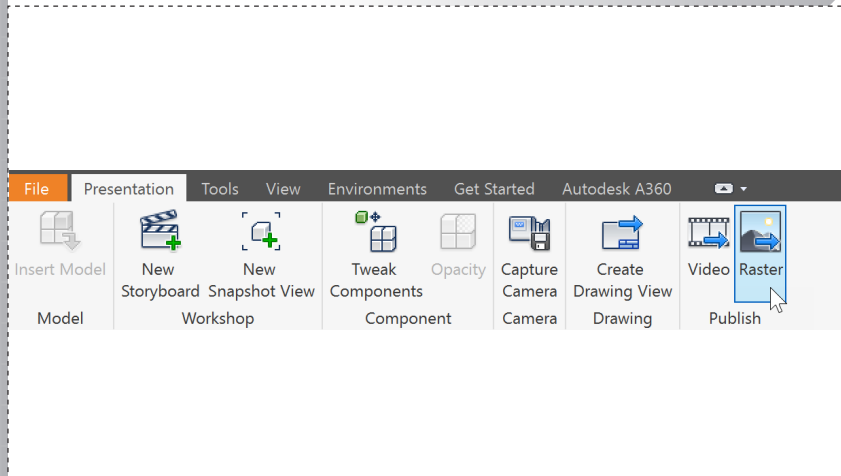
Create the final snapshot at the end of the timeline with the PCBs in their final positions.

10.



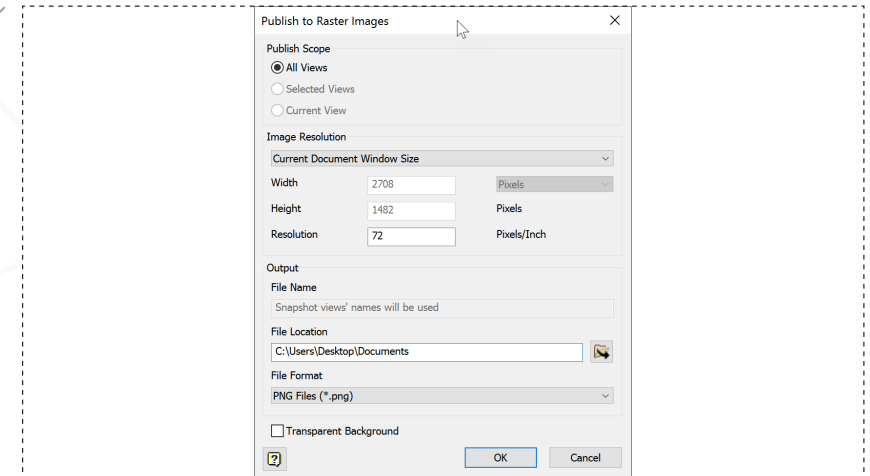
You can now double click on any snapshot in the 'Snapshot Views' panel to change the view in the model window.

11.



In the ribbon, select Raster to bring up the dialog to publish images for use in assembly documentation.

12.

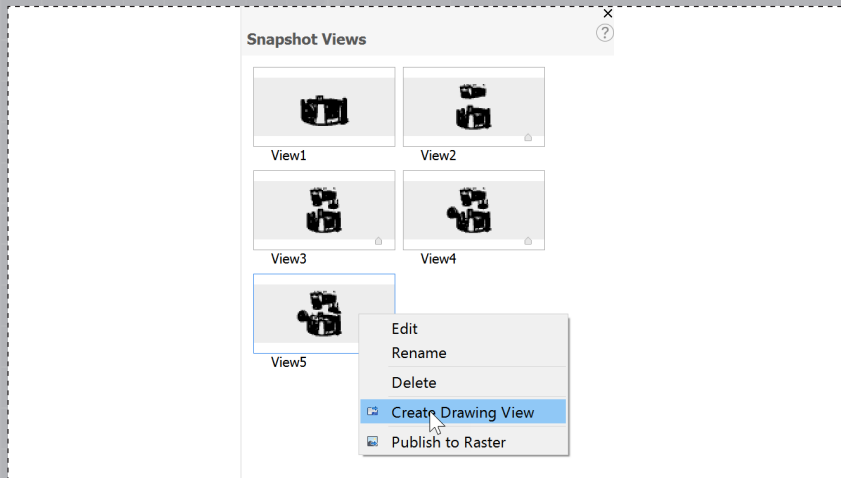


Choose the desired Image Resolution, File Location, and File Format to publish out the snapshots created as images.

PART 2: SNAPSHOTS AND DRAWINGS

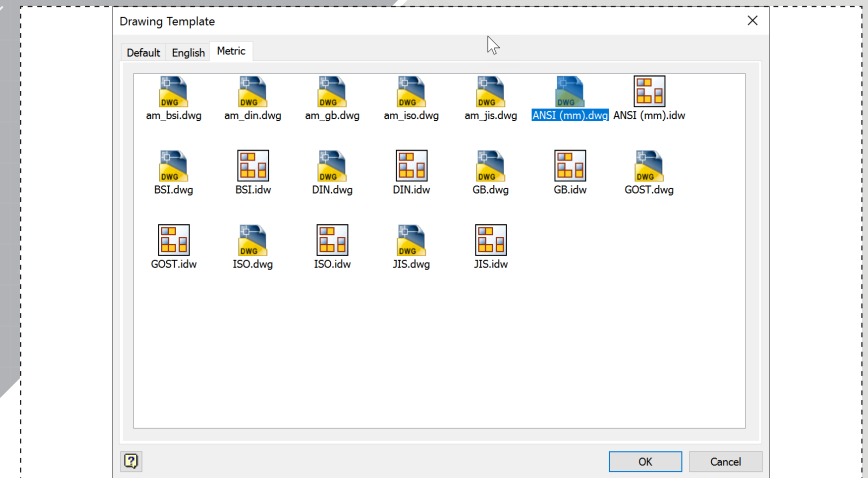
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13.



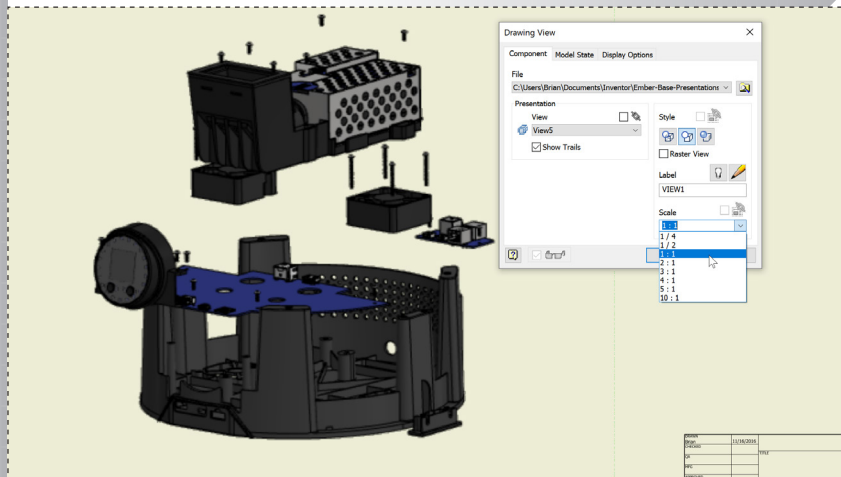
Right click the snapshot of the fully exploded view in the 'Snapshot Views' panel, and choose 'Create Drawing View'.

14.



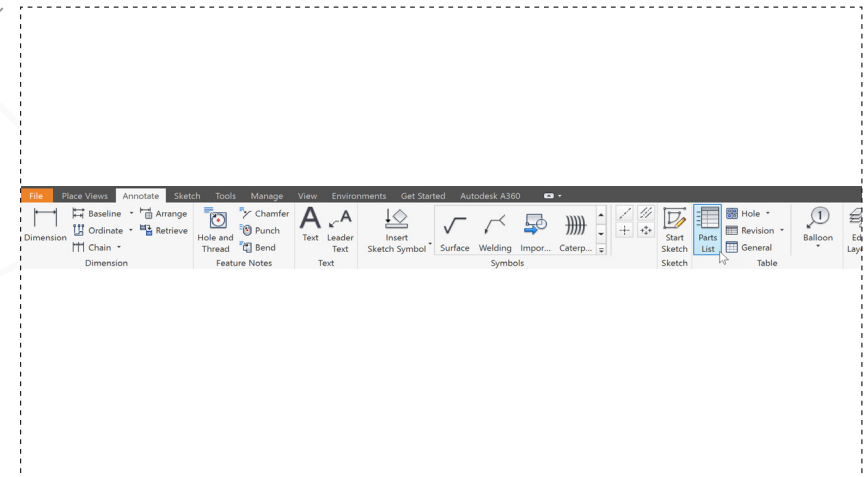
When the 'Drawing Template' dialog appears, select the 'Metric' tab and choose 'ANSI (mm).dwg' as the drawing template.

15.



Change the 'Scale' to 1:1 and drag the view to an appropriate location on the sheet. Click 'OK' to create the view.

16.

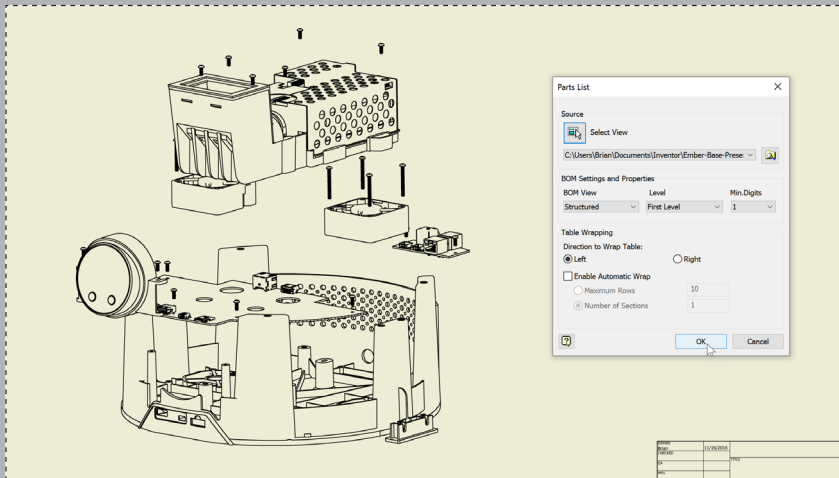


In the 'Annotate' tab in the ribbon, select 'Parts List'.

PART 2: SNAPSHOTS AND DRAWINGS

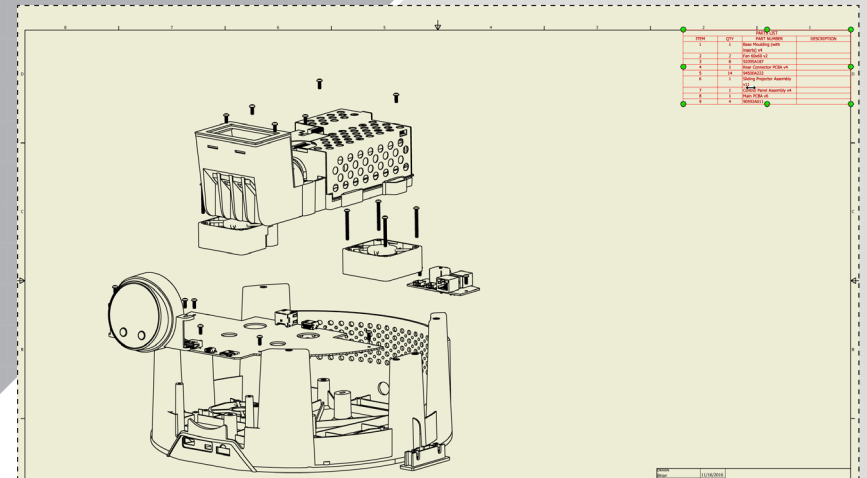
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17.



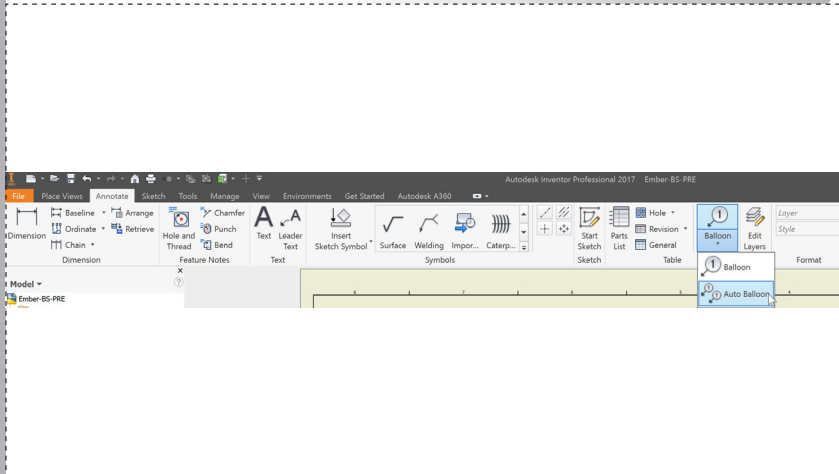
Select the exploded view in the drawing as the 'Source' and click 'OK'.

18.



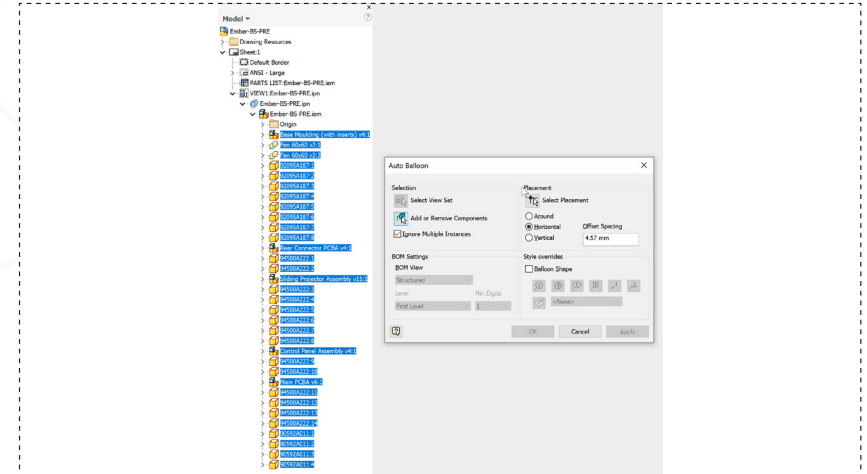
Click to place the parts list in the desired location on the sheet.

19.



In the 'Annotate' tab in the ribbon, select 'Auto Balloon'.

20.

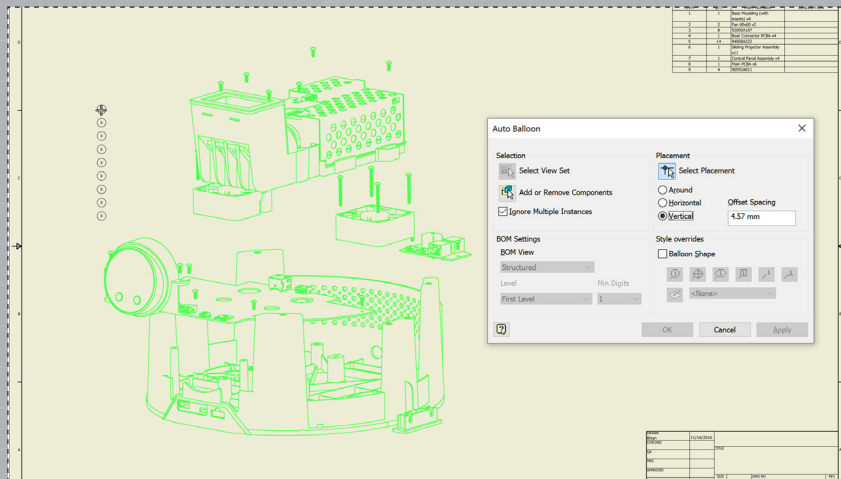


First select the exploded view as the 'Select View Set' and then shift-select all the components in the model browser for 'Add or Remove Components'.

PART 2: SNAPSHOTS AND DRAWINGS

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21.



Click the 'Select Placement' icon, change the alignment to 'Vertical' and choose where the balloons should be located on the drawing. Click 'OK' to finish.



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