

3D Sketch Conversion Training

3D Sketch Conversion_Training.zip



3D Sketch Conversion - Overview

Work on the part with the red circle (1) following instructions by yourself.
The part with the black square (1) is an additional explanation or a reference.

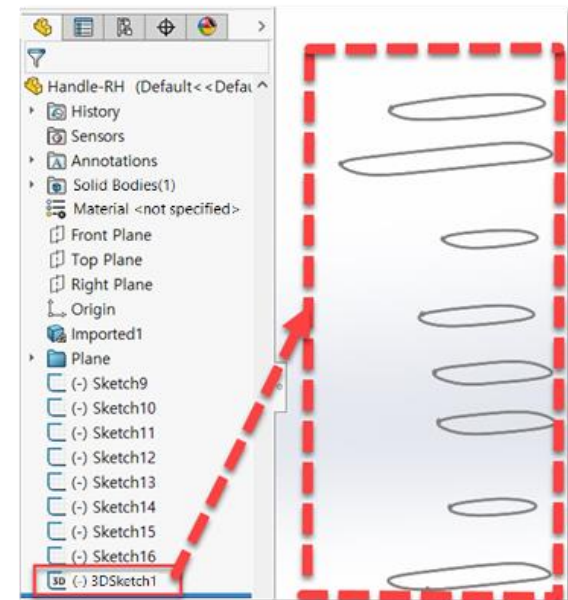
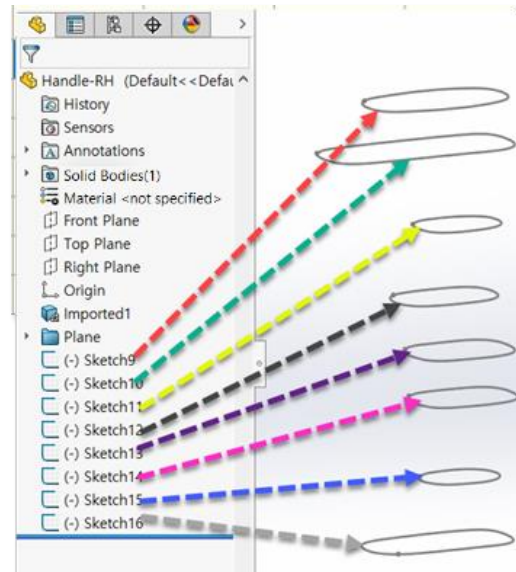
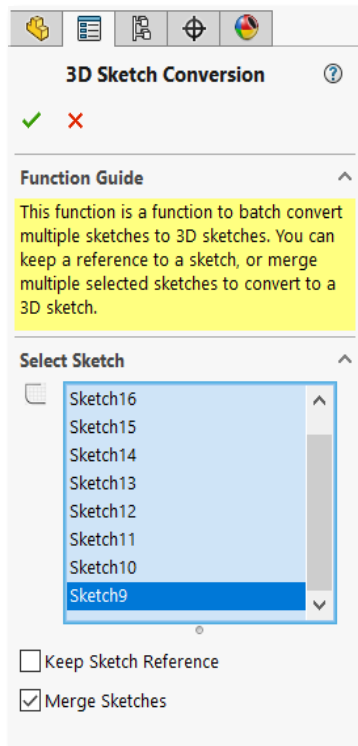
Main Functions

- Merges multiple sketches into a single 3D sketch
- Converts each 2D sketch to individual 3D sketch
- Keeps references of an original sketch

Benefits

- Better management of sketches as merging them
- Helps users to create a new model as referring a sketch of different model
- Creates a complex 3D sketch easily using 2D sketch

Course Objective: Follow instructions through the course and learn how to use 3D Sketch Conversion.

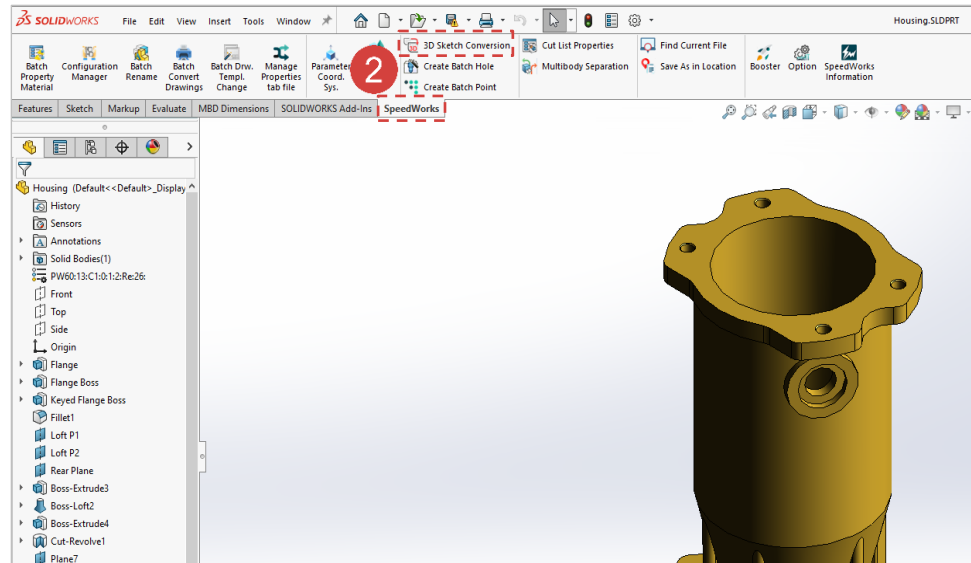
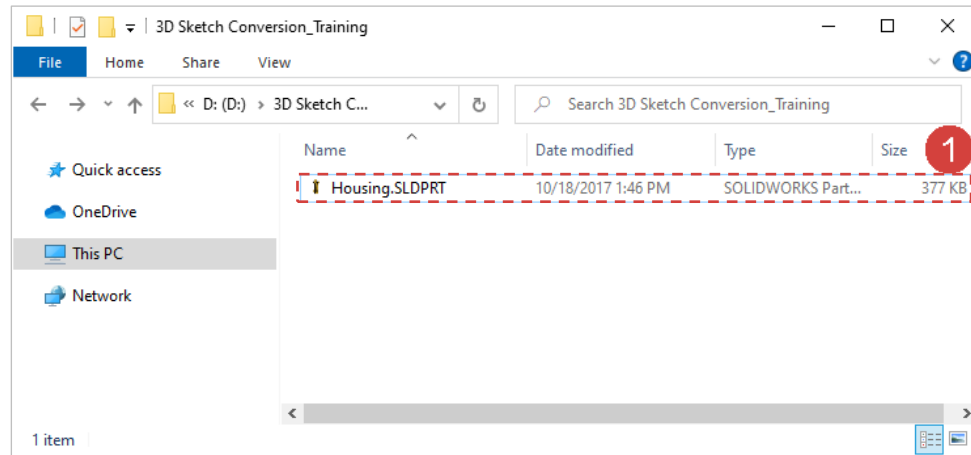


3D Sketch Conversion - Execute

Work on the part with the red circle (1) following instructions by yourself.
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1 Execute **Housing.SLDPRT** file among example files.

2 Click **[SpeedWorks]tab - [3D Sketch Conversion]** button to run the tool.



※ You can download example files at Support page in SpeedWorks Homepage(<http://speedworks.info>).

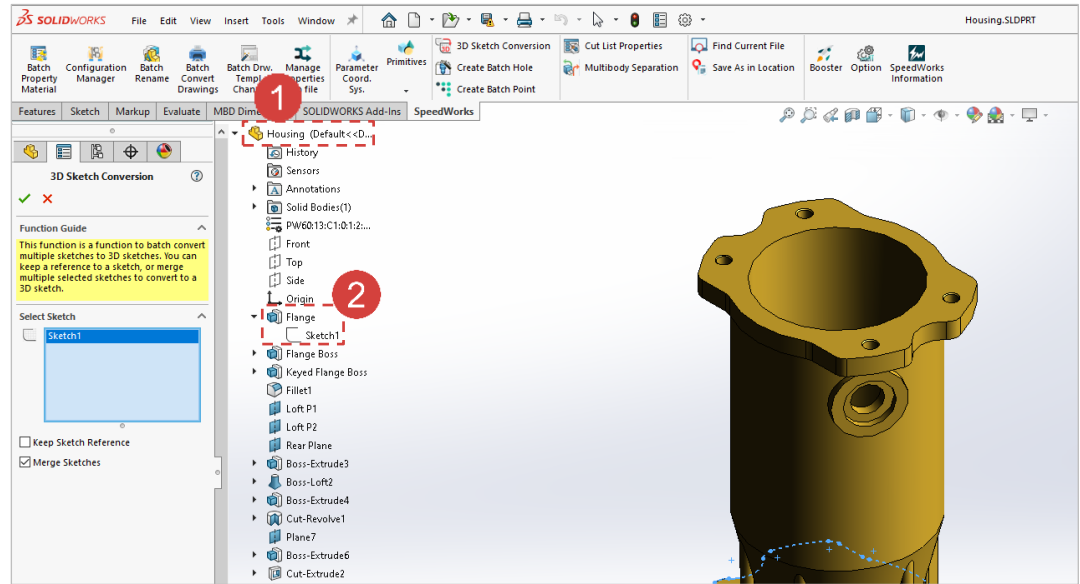
3D Sketch Conversion - Merge Sketches

Work on the part with the red circle (1) following instructions by yourself.
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1 Click '▼' button at the left side of **[Flyout Feature Manager]** to unfold details.

2 Click '▼' button at the left side of **[Flange]** to unfold details and select **[Sketch1]**.

1 **[Sketch1]** is added at **[Select Sketch]** as follows.

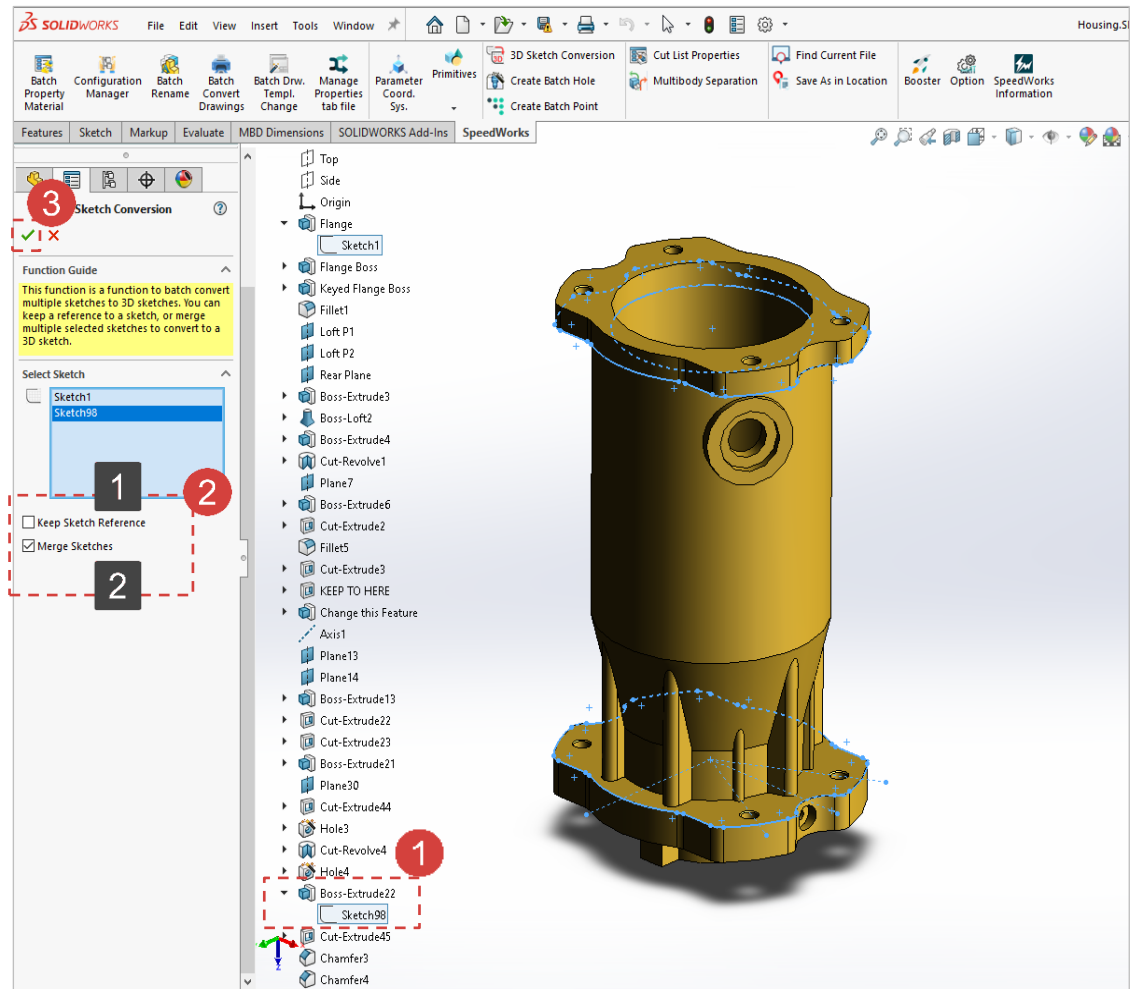


3D Sketch Conversion - Merge Sketches2

Work on the part with the red circle (1) following instructions by yourself.
The part with the black square (1) is an additional explanation or a reference.

- 1 Click '▼' button at the left side of [Boss-Extrude22] to unfold details and select [Sketch98].
- 2 Uncheck [Keep Sketch Reference] and check only [Merge Sketches].
- 3 Click [OK] button to merge sketches as 3D sketch.

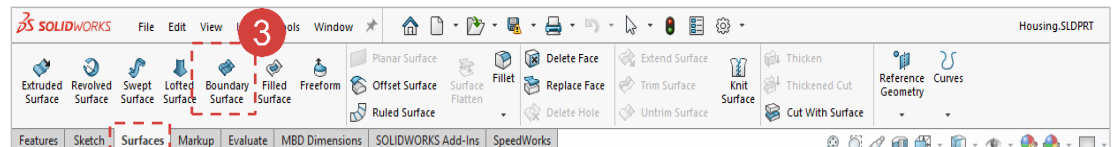
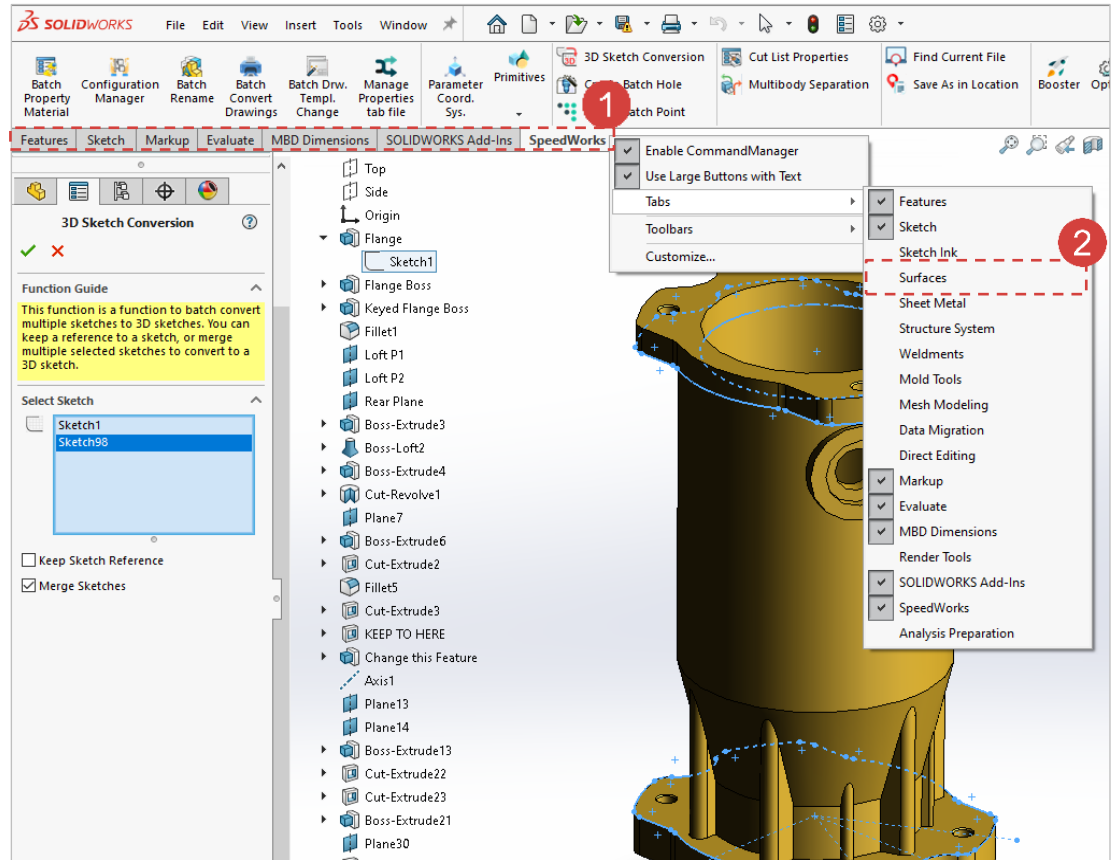
- 1 If [Keep Sketch Reference] is checked, reference relations of each sketch are kept, and the sketches are merged as a single 3D sketch.
- 2 If [Merge Sketches] is not checked, each sketch is copied and created as individual 3D sketch.



3D Sketch Conversion - Add Surfaces tab

Work on the part with the red circle (1) following instructions by yourself.
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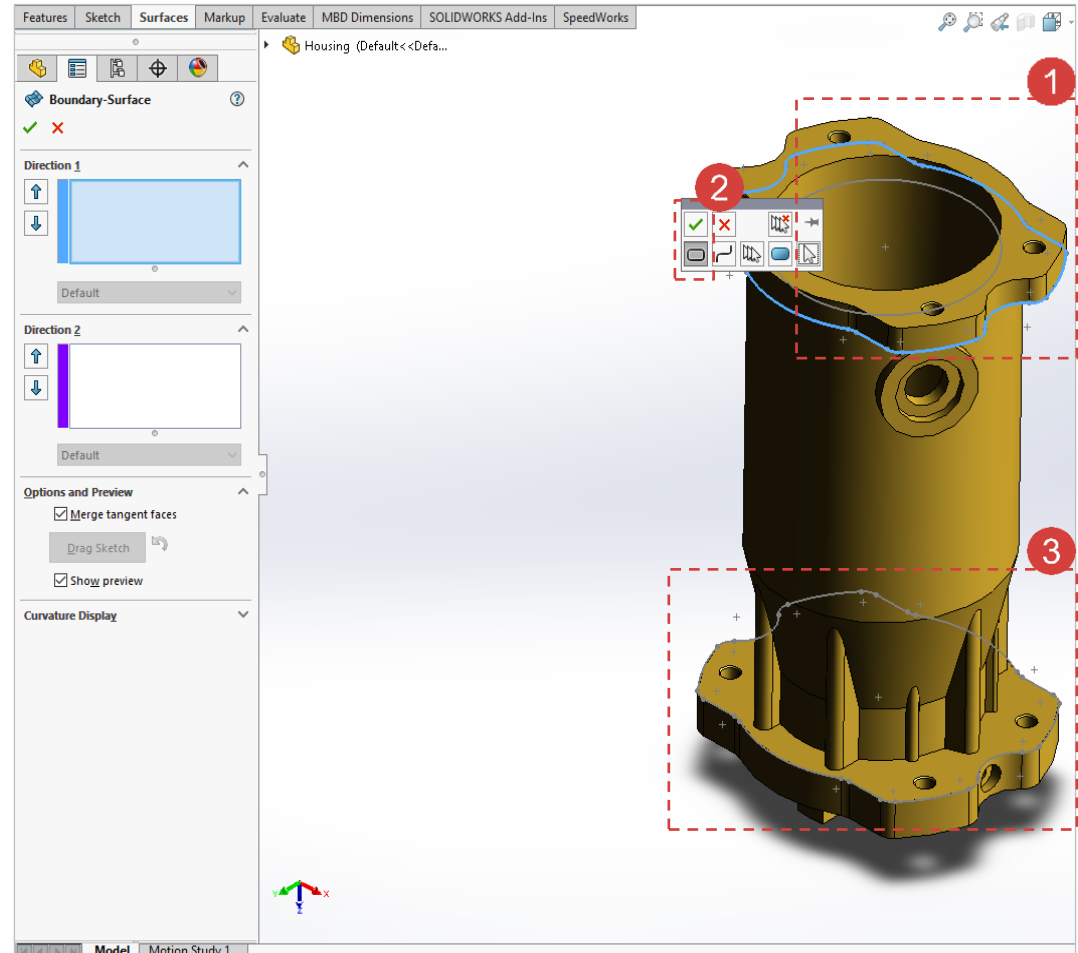
- 1 Right-click around [Command Manager] part.
- 2 Click [Surfaces] besides other options.
- 3 Click [Surfaces] tab – [Boundary Surfaces] button to run the function.



3D Sketch Conversion - Utilize the converted sketch

Work on the part with the red circle (1) following instructions by yourself.
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- 1 Select the 3D sketch added earlier at the previous step while **[Direction 1]** is activated.
- 2 Click **[Select Closed Loop] – [OK]** button as the following window is created.
- 3 Add the bottom sketch in the same way as 2 while **[Direction 1]** is activated.



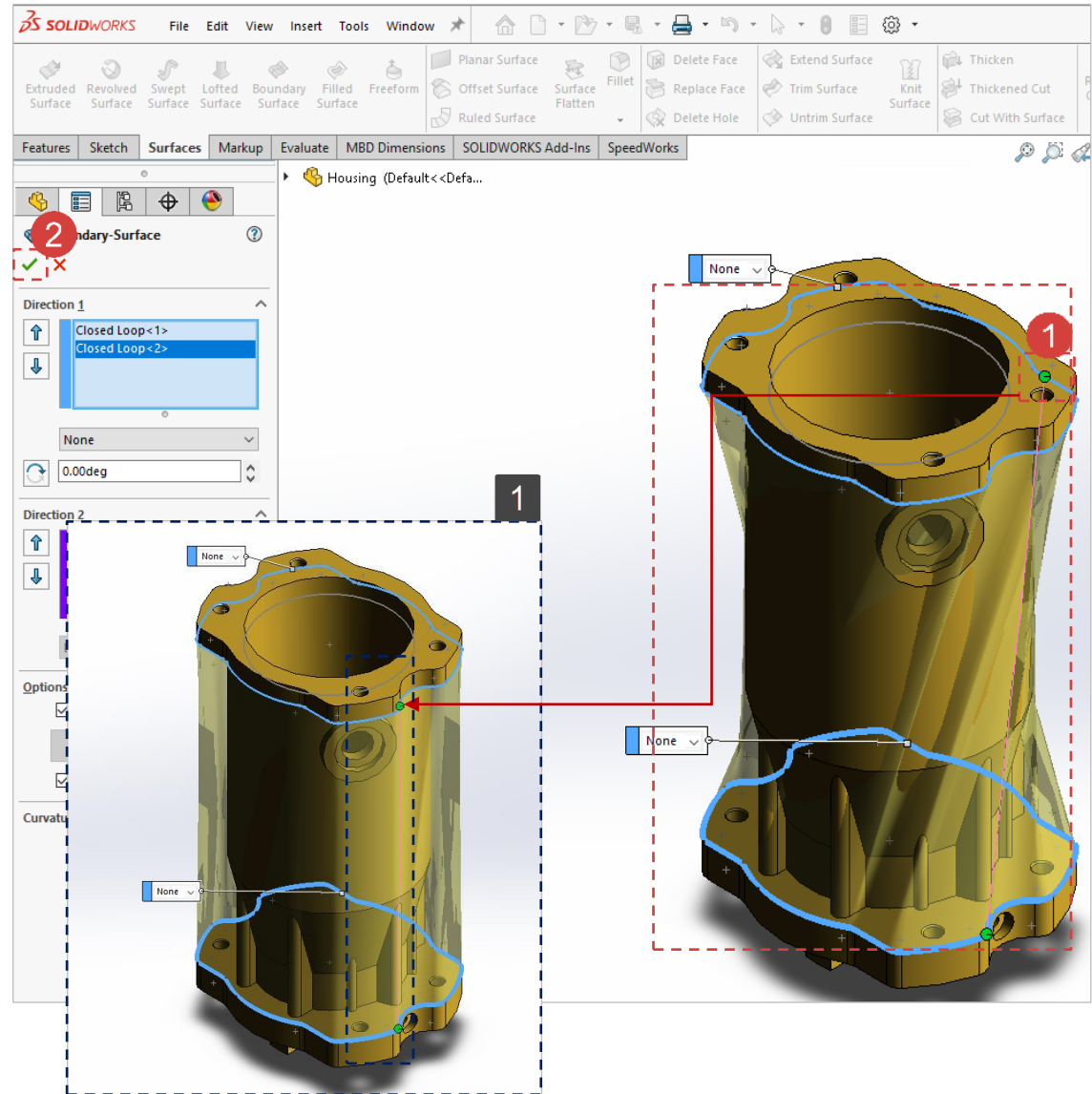
3D Sketch Conversion - Utilize the converted sketch2

Work on the part with the red circle (1) following instructions by yourself.
The part with the black square (1) is an additional explanation or a reference.

1 If the loop does not completely cover the model in the preview screen, drag the green dot and adjust the line that connects the upper and the lower green dots so that the line can be vertical to the face.

2 Click [OK] button to create a surface.

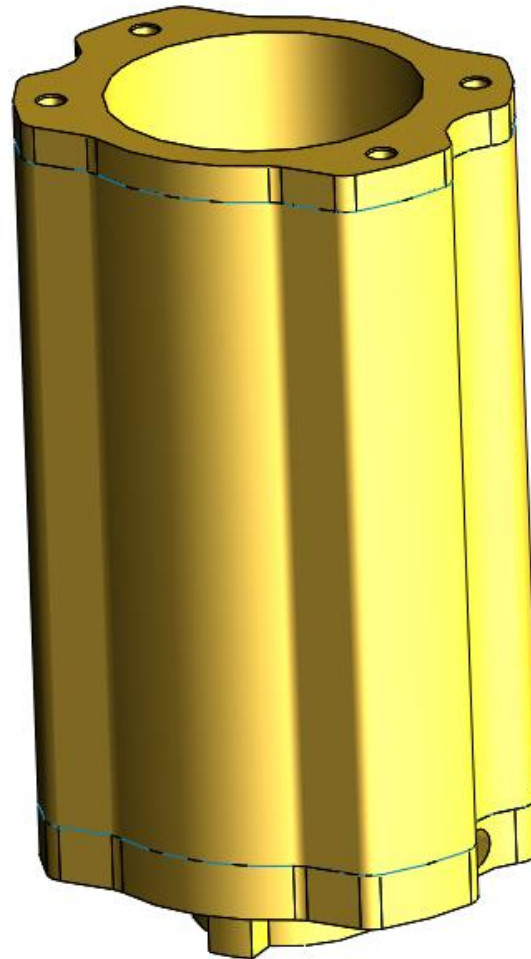
1 It is a preview screen of when the lines that connect green dots are vertical to each face.



3D Sketch Conversion - Utilization Result

Work on the part with the red circle (1) following instructions by yourself.
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1 Outer surfaces that cover the model has been successfully created as follows. You can merge sketches as a single sketch and use it in the same way as we have done in this course.



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