

CO₂ Rail Car Front Rim Spokes

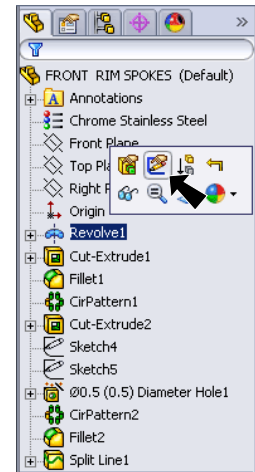


A. Save As.

Step 1. If necessary, open your **REAR RIM SPOKES** file.


Step 2. Click File Menu > Save As.

Step 3. Key-in **FRONT RIM SPOKES** for filename and click Save, **Fig. 1**.

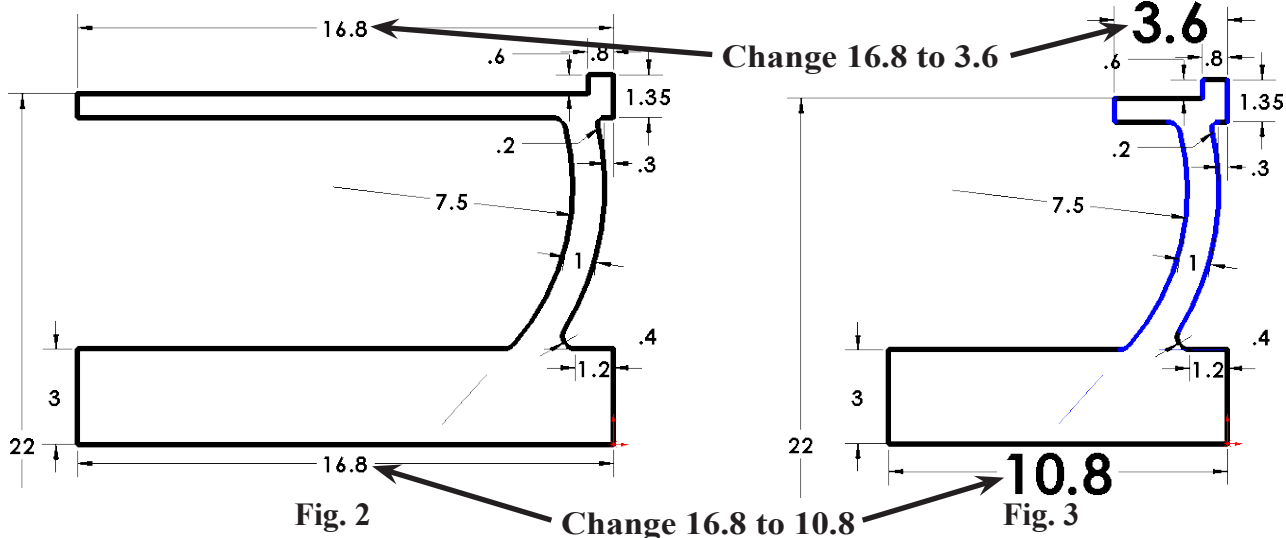


B. Edit Revolve Sketch.

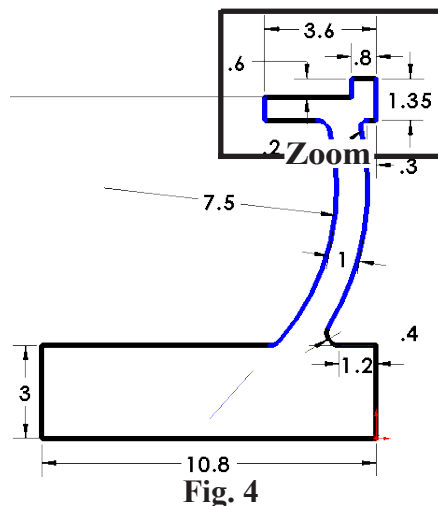
Step 1. Click **Revolve1** in the Feature Manager and **Edit Sketch**  from the Content toolbar, **Fig. 1**.

Step 2. Click **Normal To**  on the Standard Views toolbar. (**Ctrl-8**)

Step 3. Change dimensions: **top 16.8 to 3.6**
bottom 16.8 to 10.8 **Fig. 2 and Fig. 3**



Step 4. Zoom in around **top of rim**, **Fig. 4**. To **zoom**, hold down **Shift** key and drag with middle mouse button (wheel). To **pan**, hold down **Ctrl** key and drag with middle mouse button (wheel).



Step 5. **Delete two lines**, Fig. 5. To delete, Ctrl click the two lines and press Delete key. Click Yes to delete.

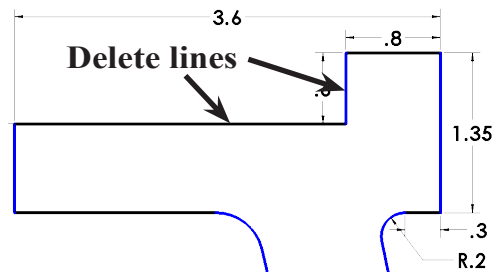


Fig. 5

Step 6. Click **Trim Entities**  (S) on the Sketch toolbar.

Step 7. In the Property Manger select:

Corner , Fig. 6

Click vertical line and horizontal to close gap, Fig. 7.

Results shown in Fig. 8.

Click OK .

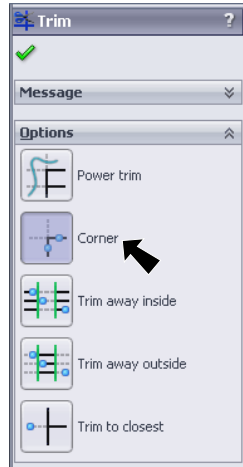


Fig. 6

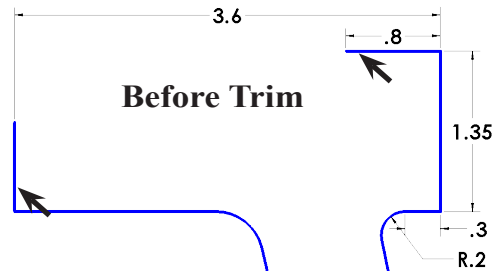



Fig. 7

Step 8. Click **top horizontal line** and click **Construction Geometry**  on the Content menu, Fig. 9.

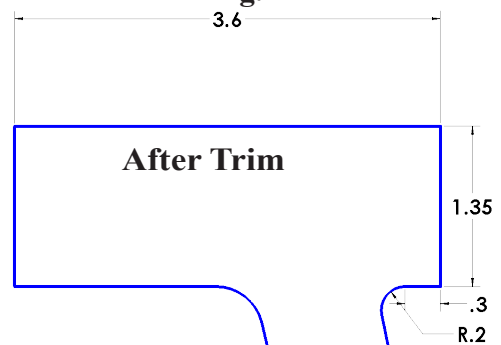


Fig. 8

Step 9. Click **3 Point Arc**  (S) in the Arc flyout  on the Sketch toolbar.

Step 10. Draw an arc between the Position 1, Position 2 and Position 3 in Fig. 10. To draw the arc, first click Position 1, then Position 2. Swing the arc down to Position 3 and click.

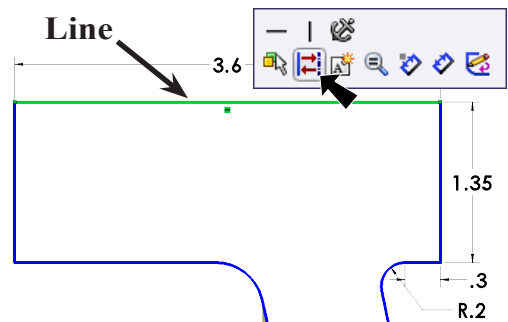


Fig. 9

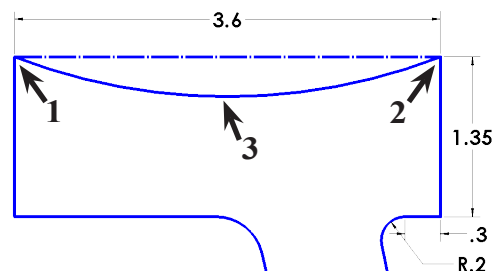



Fig. 10

Step 11. Click **Smart Dimension**  (S) on the Sketch toolbar.

Step 12. Dimension arc **radius 5**, **Fig. 11**.

Step 13. Click **Zoom to Fit**  (F) on the View toolbar.

Step 14. Dimension **radius of rim 13.3**, **Fig. 12**.

Step 15. Click **Exit Sketch**  on the Sketch toolbar.

Step 16. Save. Use **Ctrl-S**.

Step 17. You should now have two rim spoke files: Front and Rear.

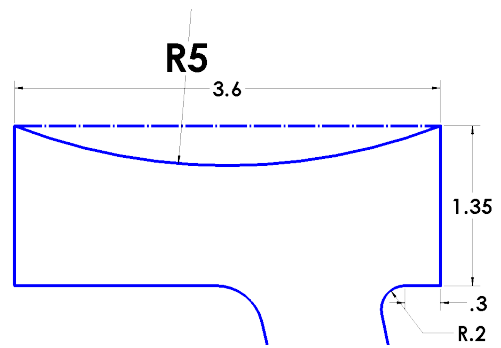


Fig. 11

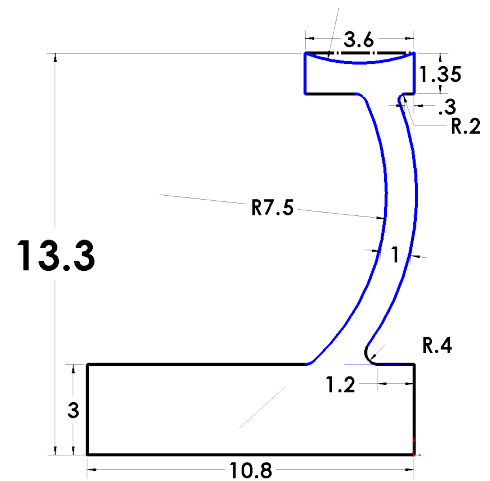


Fig. 12

