Chapter 5

Wheel Assembly

A. Insert Rim and Tire.

Step 1. Click File Menu > New, click **Assembly Metric** and OK.

Step 2. Click **Keep Visible** in the Property Manager, **Fig. 1**.

Step 3. Click **Browse** in the Property Manager, **Fig. 1**.

Step 4. Select your **RIM** file and click Open.

Step 5. Click OK in the Property Manager. This will place Rim origin at the assembly origin and fix the position so Rim cannot move. This fixed component should have a **(f)** before its name in the Feature Manager.

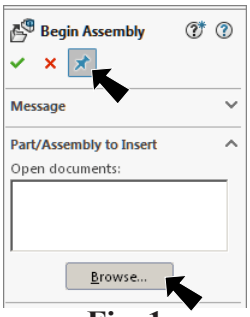


Fig. 1

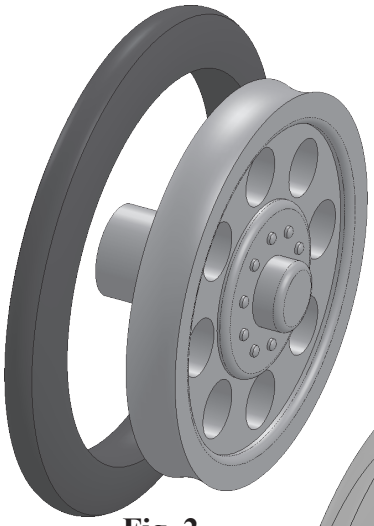


Fig. 2

Step 6. Click **Browse** in the Property Manager, **Fig. 1**.

Step 7. Select your **TIRE** file and click Open.

Step 8. Click approximately where Tire is positioned in **Fig. 2**. Click OK in the Property Manager when done.

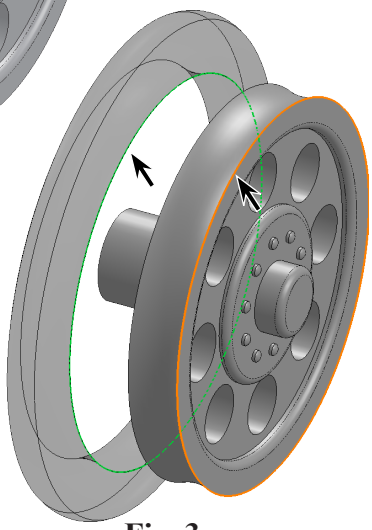


Fig. 3

B. Save as "FRONT WHEEL ASSEMBLY LX".

Step 1. Click File Menu > Save As.

Step 2. Key-in **FRONT WHEEL ASSEMBLY LX** for the filename and press ENTER.

C. Mate: Tire to Rim.

Step 1. Click **Mate** on the Assembly toolbar.

Step 2. Click **edge of Tire** and **edge of Rim**, **Fig. 3**.

Step 3. If you select the wrong entity, **right click** the Mate Selection in the Mate Property Manager and click Clear Selections, **Fig. 4**.

Step 4. Click Add/Finish Mate to add **Coincident** mate and OK in the Property Manager when done.

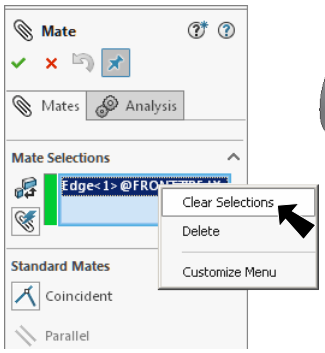


Fig. 4

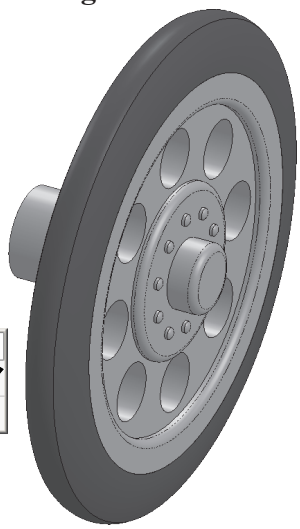
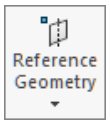


Fig. 5

D. Mate Reference.

Step 1. Rotate view slightly to view **inside of rim**, hold down middle mouse button (wheel) and drag to rotate view, **Fig. 6**.

Step 2. Click the **inside cylindrical face of axle hole** to select it, **Fig. 6**.

Step 3. Click **Reference Geometry** 

on the Assembly toolbar and **Mate Reference** from the menu.

Step 4. In the Mate Reference Property Manager click OK ✔, **Fig. 7**.

Step 5. Save. Use **Ctrl-S**.

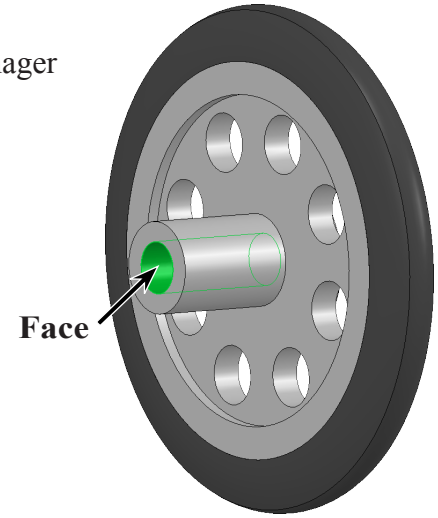


Fig. 6

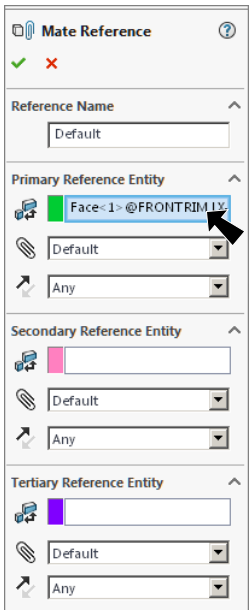


Fig. 7