Exercise 9

Power Select and Power Replace

In this exercise you will learn how to edit manufacturer- and standard parts in an assembly drawing with Power Select and Power Replace.

While you have learned about using Power Select and Power Replace on standard parts in the previous chapters, you will get to know the procedure of the two Power Commands on manufacturer parts.

Power Select can be used to speed up work flows if a different part is to be selected and inserted from the same construction series. However, it is also possible to select the same part with a different value specification or to select the fully specified part.

Power Replace is used, to either replace a selected manufacturer part with another part or with the same part with different dimensions.

Prerequisite

Installation of the Atlanta manufacturer parts or inserting CD 2.

Learning Objective

In this exercise you will get to know the following basic functionalities:

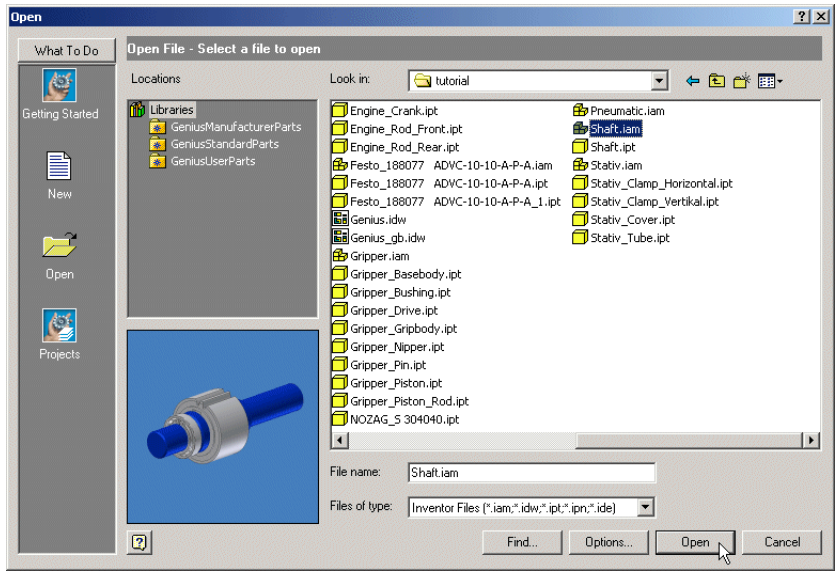
- Using Power Select for the selection of a manufacturer part
- Using Power Replace for the replacement of a manufacturer part

Topics

First Steps

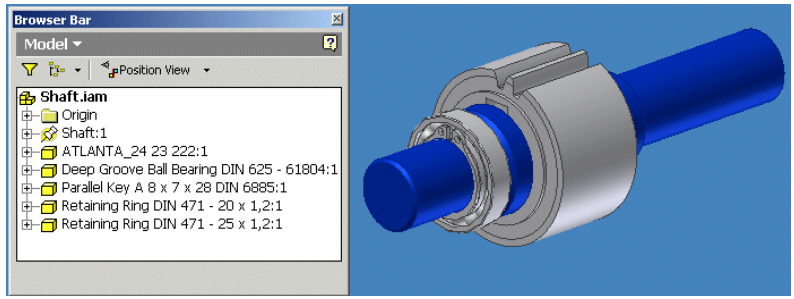
In the first step we want to open a drawing, which contains a manufacturer part that is to be inserted into the drawing again in a different size.

1. Open a new assembly drawing.
2. Open the **File** menu and click **Open**.
3. Select the **Shaft.iam** drawing in the tutorial folder.



4. Press **Open**.

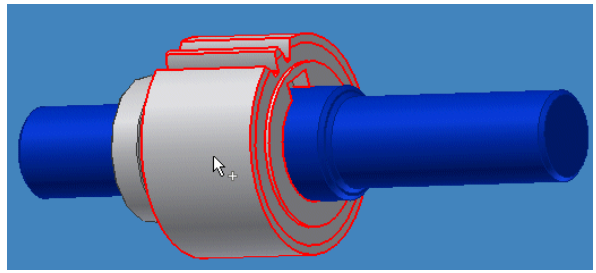
The drawing is loaded. It consists of a shaft with retaining rings, a ball bearing, and a gear wheel with an inside diameter of 25 mm.



Using Power Select

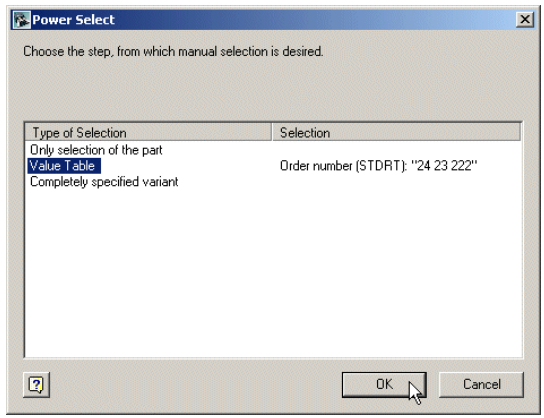
We want to insert an additional gear wheel of the same series with the matching size at the rear shaft section that has a diameter of 20 mm. For this we want to use the existing gearwheel, to insert a gearwheel of the same series with different measurements.

1. Open the **Genius Productivity** panel.
2. Click the **Power Select** option.
3. Select the gear wheel in the drawing.



After the selection of the gear wheel the Power Select dialog box is opened.

4. Since we want to insert the same gear wheel with different values, select the **Value Table** option in the **Power Select** dialog box.

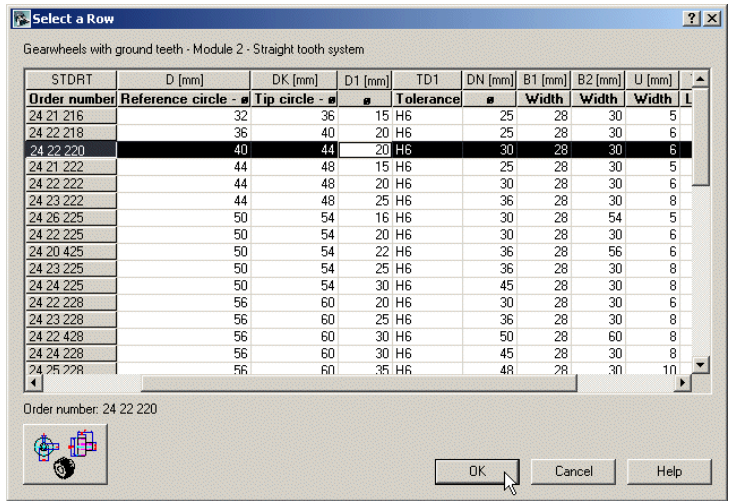


5 Click **OK**.

Note

If the ATLANTA manufacturer parts should not be installed locally on your computer, you are asked to insert the corresponding CD into the drive.

6 Select the gear wheel with the order number 24 22 220 in the value table dialog. This gear wheel has an inner diameter (D1) of 20 mm and matches the rear shaft section.



7 Click **OK**.

8 Pick an arbitrary point in the drawing, to insert the gear wheel into the drawing.

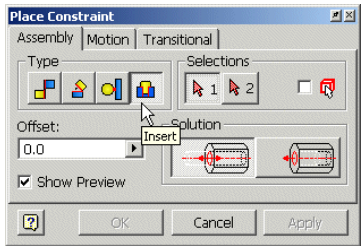
9 Then press the right mouse button and select the **Done** option from the context menu.

Placing the Gear Wheel on the Shaft

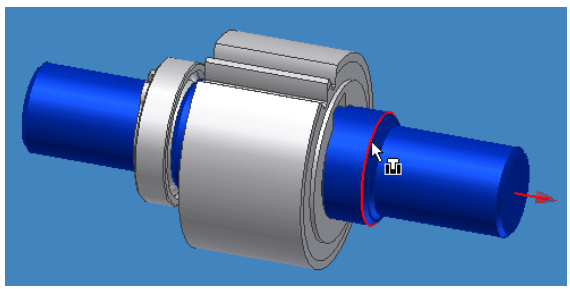
In this step we want to use the Inventor functionality to place the gear wheel on the shaft.

1 From the **Assembly Panel** select the **Constraint...** option.

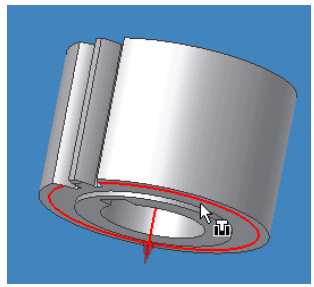
2 In the **Place Constraint** dialog select **Insert** as the Assembly Type.



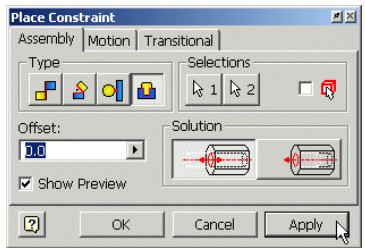
3 Select the edge of the shaft section, on which the gear wheel is to be located.



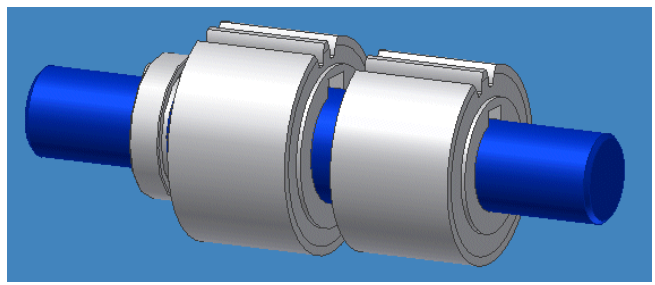
4 Then select the edge of the gear wheel.



5 In the **Place Constraint** dialog box select the **Apply** button.



Now the gear wheel is placed on the shaft.



6 Press **Cancel** in the **Place Constraint** dialog box to stop placing constraints.

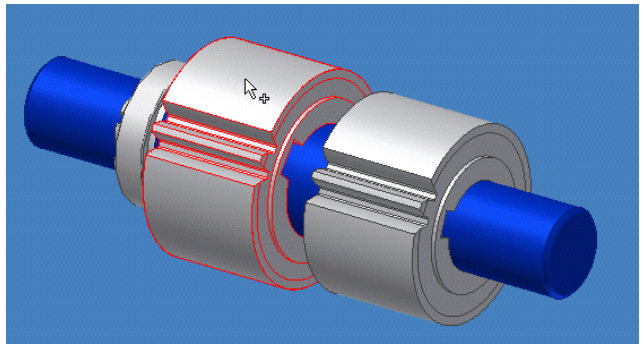
Replacing a Manufacturer Part with Power Replace

The gear wheel on the center shaft section with the order number 24 23 222 is to be replaced with a bigger gear wheel.

1 Open the **Genius Productivity** panel.

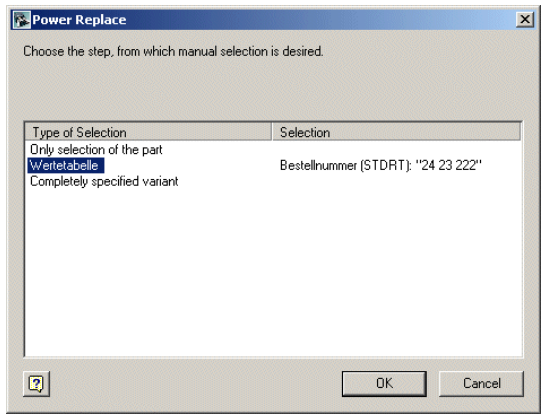
2 Click the **Power Replace** option.

3 Select the gear wheel in the drawing.



After the selection of the gear wheel the Power Replace dialog box is opened.

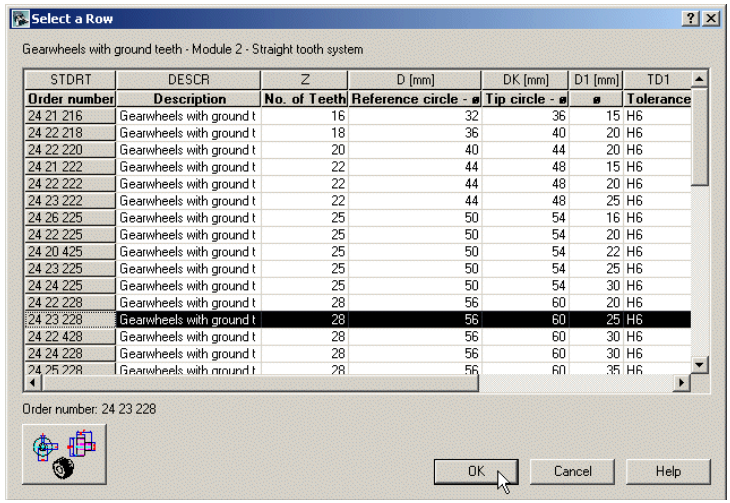
4 Since we want to replace the selected gear wheel with a bigger gear wheel, select the **Value Table** option in the **Power Replace** dialog box.



5 Click **OK**.

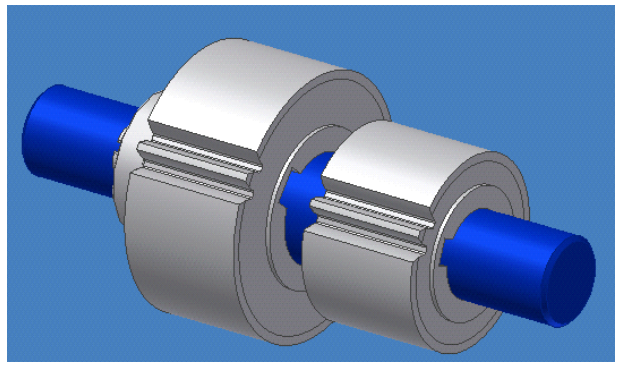
The value table for the gear wheels is opened.

6 Select the gear wheel with the order number 24 23 228.



7 Click **OK**.

The selected gear wheel is replaced with the bigger gear wheel.



That is the end of this exercise. Close the drawing without saving.

Additional Questions

- What is the difference between Power Select and Power Replace?
- On which parts can the Power Select command be used?
- What do you have to do to insert a copy of the selected manufacturer part?