EG-07a: Replace Components (Retrieval Crane-Guide Wheel)

SAFETY FIRST

- ☐ Follow all Caterpillar facility safety standards when performing this task.
- ☐ The crane must be powered down during the guide wheel changout.
- ☐ The area beneath the crane is dimly lit; use a flashlight as needed.
- ☐ A tripping hazard exists when working around the rails in the aisle area.

EQUIPMENT

- ☐ flashlight
- ☐ clean shop towels
- ☐ support blocks
- ☐ replacement parts
- ☐ 1 1/2" wrench (two)
- ☐ 7/16" wrench
- ☐ outside caliper (capable of measuring a 7" diameter)
- ☐ cotton gloves
- ☐ bearing grease
- ☐ arbor hand press

RESOURCES

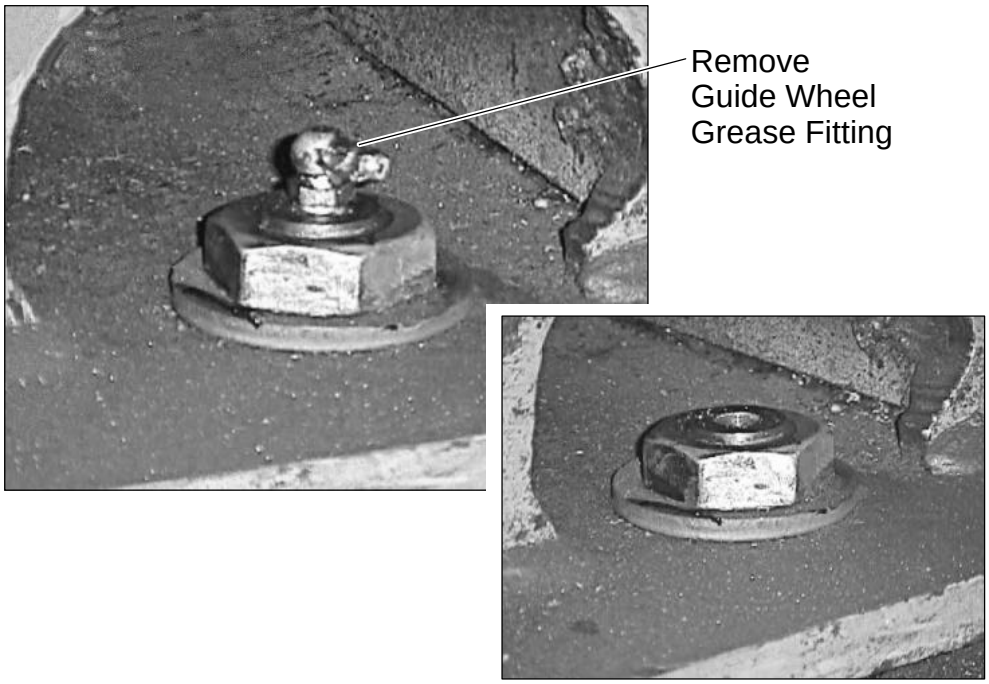
- ☐ parts book

Replace Components (Retrieval Crane-Guide Wheel)

1. Press the Safety Stop and E-Stop to power down the crane.

2. Remove the defective guide wheel assembly.

   - ☐ Note the condition of the guide wheel. A new guide wheel has a diameter of 6 3/4". If a guide wheel has a diameter of 6 1/2" or less, it must be replaced or rebuilt. If the chamfer is worn to less than 45 degrees, the wheel must be replaced.
   - ☐ Using clean shop towels, wipe the grease from underside of the guide wheel.
   - ☐ Using a 7/16" wrench, remove the grease fitting and set aside. See the figure below.



Grease Fitting

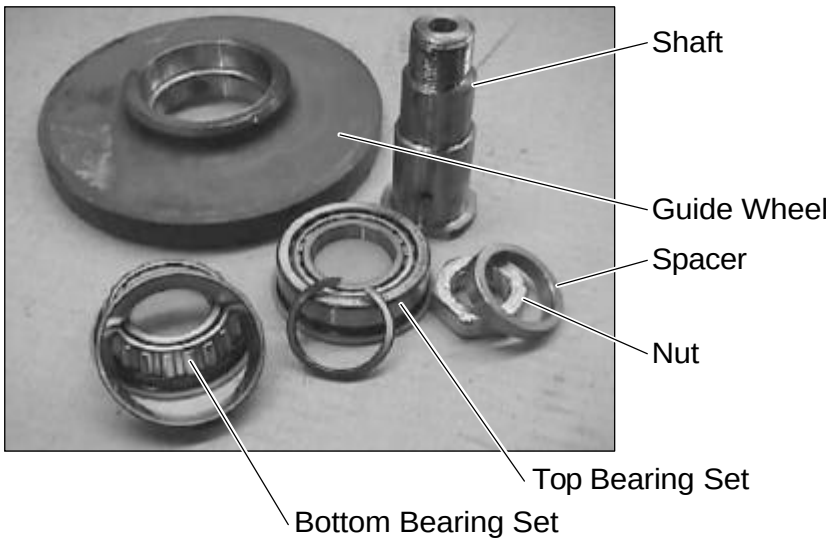
- ☐ Using two 1 1/2” wrenches, remove the lock nut, as shown below. See the figure below.

- ☐ Drop the guide wheel assembly from the base frame of the elevator. See the figure below.

Wheel Removal

3. Assemble a new guide wheel.

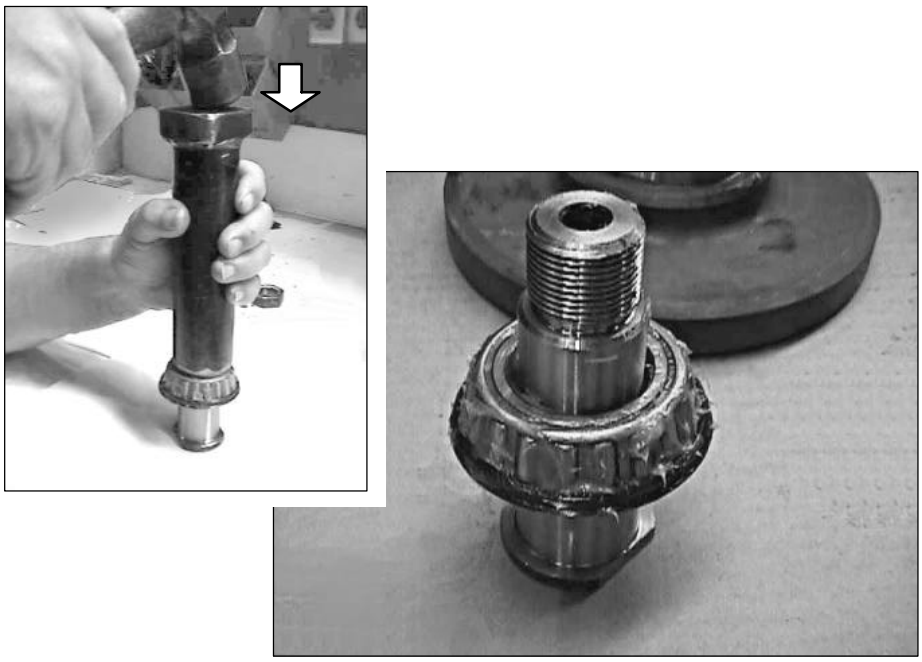
- ☐ Refer to the Parts Manual, as needed, to obtain part information.
- ☐ The assembly includes the shaft, tapered bearing set, spacer, nut, wheel, Keep the upper raceway with the upper bearing and the lower raceway with the lower bearing, to help ensure a proper fit. See the figure below.



Guide Wheel Components

- ☐ Remove the cap plugs from the bearings.
- ☐ Using bearing grease, hand-grease the bearings. Force grease into the bearing until the grease begins to work out of the side of the bearing. This ensures that there is an adequate amount of lubricant inside the tapered bearings. See the figure below.

- ☐ Lubricate the outside surface of the shaft.
- ☐ Install the bottom bearing on the shaft. Using an arbor hand press, drive the bearing down until seated on the shaft, as shown below.

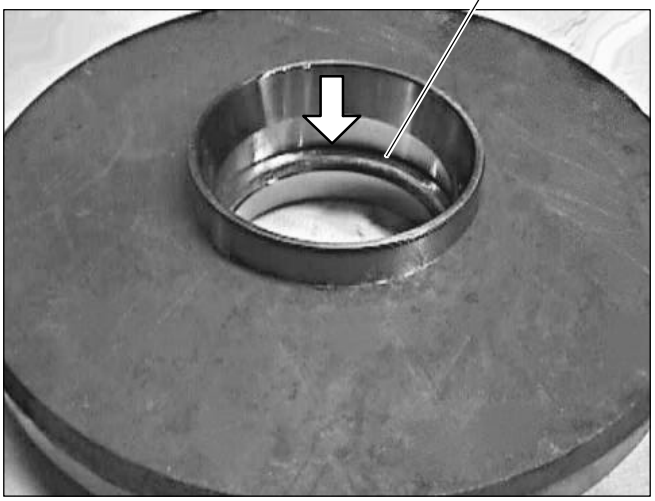


Seat Bearing on Shaft

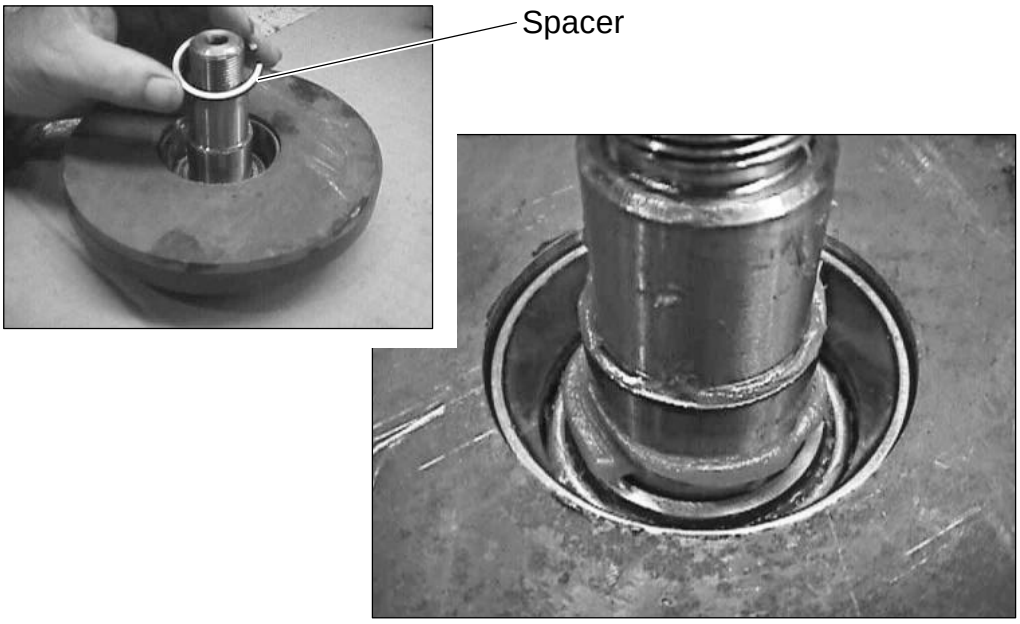
- ☐ Drive the race onto the wheel. See the figure below.

Install Race on Wheel

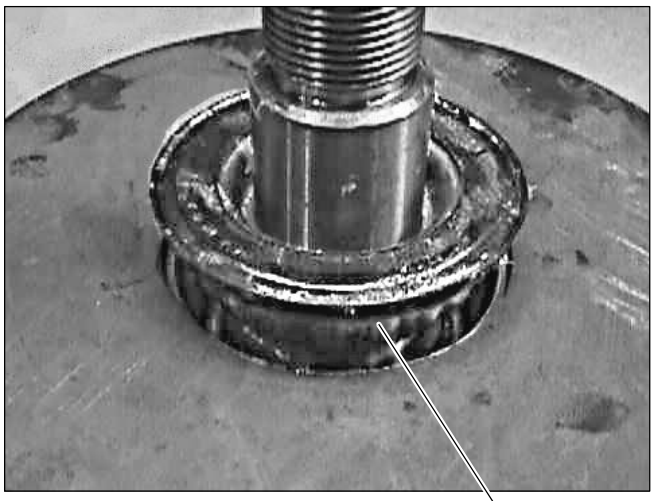
- ☐ Turn the wheel over and drive the other race into the wheel.



- ☐ Install the wheel onto the shaft.
- ☐ Install the spacer. Apply a small amount of grease around the shaft, above the spacer. See the figure below.



- ☐ Tap the top bearing in place. See the figure below.



4. Install the guide wheel assembly.

- ☐ Using shop towels, wipe any dirt and debris from the underside of the frame where the wheel assembly will be installed.
- ☐ Install the shaft through the frame.
- ☐ Install the washer over the shaft.
- ☐ Thread the nut on the shaft. See the figure below.

- ☐ Tighten wrench-tight using a 1 1/2” wrench.

- ☐ Using a 7/16” wrench, install the grease fitting on the wheel assembly.
- ☐ Call for a Lubricator to grease the bearings.
- ☐ Spin the wheel to ensure that it turns.

5. Clean up the work area.

6. Document the work history.