Timken® Spherical Roller Bearing Handling Guide

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To help ensure reliable bearing performance and extend component life, it is essential to follow proper handling practices when receiving a Timken® spherical roller bearing. Preventing bearing damage begins before a bearing is placed into operation.

Caution: Proper care must be used when inspecting and handling a bearing so the rolling elements and race surfaces are not damaged.

1. Visually check to see if the box has been mishandled. If the box is in satisfactory condition, remove the bearing. If not, contact your local Timken representative.

2. Remove the tire wrap while the bearing remains inside the box.

3. Spray a light coat of oil onto the outer race before lifting the bearing out of the box. When possible, W45 plates should be used to restrict movement. If W45 plates are not available, lift the bearing from a horizontal to vertical position using a nylon sling. Loop the end of the sling into a choke. The single end of the strap should be attached to a lift or hoist. A choke will restrict movement of the inner assembly and outer race.

   Scuffing may occur if the sling is looped around the bearing with both ends attached to a lift or hoist. This causes the inner assembly to swing open and close, potentially scuffing the rollers and outer race.

4. When the bearing is in a vertical position, carefully place it onto a clean surface. Move the bearing slowly since the bottom few rollers carry the full weight of the inner ring and roller assembly.

Once the bearing is on the floor and the outer race is chocked into position, slowly swing the inner ring and roller assembly open.

Open the assembly by rotating the inner ring and roller assembly on its axis while misaligning the bearing with respect to the outer ring. This method will minimize the likelihood of damage to the rollers and raceway while opening the bearing. Make sure there is adequate oil on the outer race before swinging the inner assembly open.

Visually inspect the bearing, beginning with the rollers. Wipe each roller individually with a clean rag. Do not remove the oil with a cleaner, which may promote corrosion. Visually check for debris or damage and then re-oil.

To reduce the possibility of scuffing during inspection, keep the contact points of the outer race and rollers well oiled. Minimize the amount of rotation of the complete inner ring and roller assembly in the outer race of the bearing.

Superficial scratches on the internal surface of the bearing found during inspection can be removed using a fine grade synthetic steel wool or crocus cloth. This type of scratch is not considered detrimental to bearing performance. Notify maintenance management if you find any scuffs or scratches that cannot be removed.

When the visual inspection is complete, either store or mount the bearing. When closing the bearing, use caution to prevent scuffing the rollers and outer race. Always keep a proper amount of oil on the outer race and rollers, restrict movement of the inner roller assembly and lift the rollers into position. Make sure the outer race is free of any contaminants, such as dirt, grit or metal.

Large spherical bearings with heavy rollers (most 32 series above 320 mm bore) should be closed by two operators. The rollers on the bottom half of the inner roller assembly will drop out of position in the cage pocket. These rollers should be hand guided and lifted back into position as the bearing is slowly closed. If the force and weight of the inner roller assembly closing into the outer race pushes the rollers into position, the roller surface will scuff or even brinell.

To store the bearing for future use, isolate the rollers with the o-ring and properly oil and tire wrap the bearing.

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