

# TECH TIPS

# TIMKEN

WORLDWIDE LEADER IN BEARINGS AND STEEL

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Promoting safe, proper bearing handling practices for the heavy-duty market

## Lubrication procedures for packing a bearing with grease

**P**roper lubrication is essential in all kinds of bearings. It provides a film that separates the bearing's moving parts, carries away heat and protects bearing surfaces from corrosion.

As a bearing rotates, the mating surfaces of its components create a lubricant film in the bearing that separates components, preventing metal-to-metal contact. This action reduces friction and prevents wear and corrosion.

Too often, customers ignore the issue of lubrication, causing unnecessary maintenance and aggravation. Timken® bearings are carefully protected with a preservative coating during shipment and storage. Some mistakenly believe this protective coating is the lubricant—it is not. You need not wash a bearing before installation because this preservative is compatible with most lubricants, but you must **lubricate the bearing upon installation**.

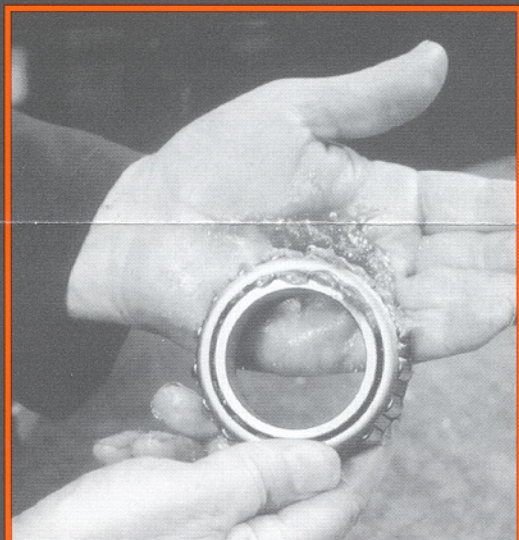
Grease is one of the most popular lubricants. When grease lubrication is used, it should be packed into the bearing so the grease can get between the rollers and cage as illustrated. Forcing grease through the bearing from the large end to the small end will ensure proper distribution.

A typical, commercially available mechanical grease packer forces grease through the bearing, filling the space between the roller and cage. Any excess grease should be smeared on the outside of the rollers.

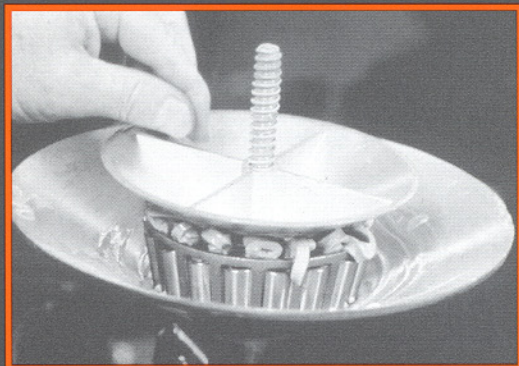
Ample space is essential in the housing to allow room for excess grease to be thrown from the bearing. It is equally important to retain the grease around the bearing. If there is a large void between the bearings, use grease closures to prevent grease from leaving the bearing area. Normally, the housing should be no more than half full of grease during bearing assembly. Too much grease in the housing will cause excess churning of the grease and extremely high temperatures.

### Warning:

Failure to properly lubricate a bearing can result in equipment failure, creating a risk of serious bodily harm.



Timken bearings are shipped and packaged with a protective coating. This coating is not a lubricant. The bearing must be lubricated upon installation.



Any excess grease should be smeared on the outside of the rollers.