



SKF @ptitude Exchange



Best Practices for Bearing Handling and Storage

Summary

As manufactured, bearings are supplied as precision machine components and should be respected as such during transport, intermediate handling, storage and installation until the associated machinery is brought into active service. Damage may occur at any point which could reduce the ultimate service of the bearing.

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1. Shipping

Standard packaging is intended to protect the bearing during normal transport and handling activities. If the external packaging is significantly damaged, return the bearing for replacement. Inspect the inner wrapper. If compromised, it's likely the bearing has been contaminated and should not be installed.

2. Storage

Bearings should be stored horizontally in their original, unopened packages until needed. (The objective is to maximize the number of rolling elements in contact with the raceways during storage.) The storage area should be vibration free.

Subsonic vibration from railway spurs and/or truck movement is a common cause of bearing damage on the shelf. Temperature and relative humidity should be reasonably constant. Use the oldest bearings first.

Bearings supplied in housings (pillow blocks, flange units, etc.) should be stored flat on their bases, but the bearing inner rings should be rotated as per the instructions for stationary equipment.

Shelf life of bearings varies with the type of packaging, preservative material, and storage environment. Uncapped bearings can be stored in their original packages for many years, provided relative humidity in the storeroom does not exceed 60 % and there are no great fluctuations in

temperature. Check the packaging: if unbroken and the preservative appears fresh, the bearing should be suitable for use. Bearings pregreased or with closures should be used within five (5) years of the date of manufacture.

Long-term storage (over five years) of capped (sealed or shielded) bearings is not recommended. Potential hazards include:

- Grease separation in pregreased (double shielded or sealed bearings)
- Grease settling to one side of the bearing
- False brinelling damage
- Corrosion



3. Installation

Proper installation practices are crucial to prevent damage during removal and installation. Don't wash new bearings prior to installation unless absolutely necessary for compatibility with in-service lubricants or other process requirements (food grade service, for example.)



4. Post-installation

After the bearing is installed, wrap completed assemblies in plastic, waxed paper, or a clean, dry, lint-free cloth to prevent contamination and corrosion to exposed components. Shafts should be strapped down to prevent false brinelling damage during transportation. Assemblies not expected to be put into service immediately should be lubricated and consideration given to the addition of a long-term corrosion inhibitor. A properly constructed base for completed assemblies may mitigate transportation damage and safety hazards.

Shafts of stored, ready-for-installation assemblies, like electric motors and bearings in housings, should have their shafts rotated several turns on a quarterly basis to reduce the potential for false brinelling damage.

5. In-service

Vibrations and shock loads may brinell bearing raceways and rolling elements. Avoid operating equipment in poor running condition as damage to bearings and other components may result.

6. Temporary shutdowns

Rust preventatives, vapor phase corrosion inhibitors, desiccants, breathers and positive pressure systems are available to protect equipment from corrosion and

particle ingress during shutdown periods. Consult a qualified supplier for assistance. Bearings in standby equipment may be subject to damage from currently operating systems. As operating equipment fails, unwanted vibrations and/or shock loads may be transmitted to standby machinery. The common result is premature failure soon after the standby equipment is brought online. Although removing the vibration source is the ideal solution, vibration isolators may also be effective in preventing bearing damage.