

# Avoiding bearing failure

## Tech tip

The mileage of vehicles most likely to need wheel bearing replacement is between 80,000 and 118,000 miles. Even so, for maximum safety and reliability, SKF recommends that you inspect the wheel bearings during any brake replacement work regardless of the age of the vehicle.

Most manufacturers recommend lubrication at 24,000 miles for the front wheel bearings on rear wheel drive vehicles. However, many times the bearings are not lubricated until the brakes are replaced, which means that bearings can go almost twice as long as recommended before being re-lubricated.

Always be alert for the early warning signs of worn bearings including any friction noise on wheel rotation or unusual slowness in the turning action of the suspended wheel assembly.

When replacing wheel bearings, SKF recommends that you replace the bearings or hubs on both wheels because both wheels have the same mileage and were subjected to the same wear and road condition. This practice helps assure your customers' safety and helps you avoid costly callbacks.

Whenever brakes are replaced, it's a good practice to check the bearings and replace the seals.

**Handle with care.** Bearings, despite their rugged construction and solid feel, are actually very sensitive machinery components. They must always be handled with extreme care. Even the smallest mishandling during transport, storage or mounting can damage the internal geometry of the bearing which in turn will result in premature bearing failure and potential damage to other related components.

**Dirt is deadly.** When working with bearings make sure that the workplace is as clean as possible. Even tiny particles of dirt or grit entering a bearing will damage the bearing internally and inevitably shorten its operating life.

**The right tools.** An important consideration is the type of tools that are used for removal and installation of the bearings. The right kinds of tools can be one of your best investments, enabling you to do the job better and faster.

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# Avoiding bearing failure – cont.

**Mounting Procedures.** Follow the correct mounting procedure. Always consult the car manufacturer's workshop manuals. In particular, mounting force applied incorrectly to parts of the bearing will produce indentations in the bearing raceways, which in turn will lead to early bearing failure. If the bearing or the seal are in any way damaged during mounting, early failure will occur. You will hear noise from the bearing after only a short time on the road.

## General Recommendations.

1. Work with clean tools in clean surroundings.
2. Always choose the correct grease.
3. Always be sure to check the contact surface for the seal lip. It must be in good condition. Even the smallest mark or rust will damage the seal lip and allow water penetration and eventual corrosion.
4. Never use a hammer to hit directly on the bearing.
5. Do not try to set clearances on Hub units. They are set at the factory with the correct preload. However, tighten the nut to the correct preload as written in the workshop manual.
6. Do not try to set clearances on "set right" arrangements. These bearings are manufactured so that the bearing will have the correct clearance when the locking nut is tightened to the torque specified in the car's shop manual.
7. Always check the condition of the housing and axle when changing wheel bearings. Even the smallest wear will create misalignment, which will result in early failure.
8. Never take a Hub Unit apart before mounting. The raceways and seals will be damaged and the bearings destroyed. The unit will fail prematurely.
9. Do not try to move or adjust the seal on a hub unit. The seal will be destroyed and water penetration will occur, leading to corrosion and premature failure.

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