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Service Tips and Best Practices

Best Practices: Rear Solid Axle Bearing Repair

Brand	Supreme	Product	Wheel Bearings	Date	August 2021
Part Number(s)	Various				

Some solid axle applications feature a cylindrical cartridge-style bearing that uses the rear axle tube as the inner race. The rolling elements of the bearing essentially revolve around the axle itself. **See Figure 1**.

If the Professional Technician determines this type of bearing is out of specification, it should be replaced immediately. A worn bearing could potentially create a 'groove' on the axle, due to the rotation of chipped and/or pitted rolling elements. In some cases, even an excessively worn or damaged seal may eventually abrade the axle. **See Figure 2** for an illustration of this wear pattern.

If 'grooved' wear is discovered during a bearing repair, it is typically recommended to replace the axle.

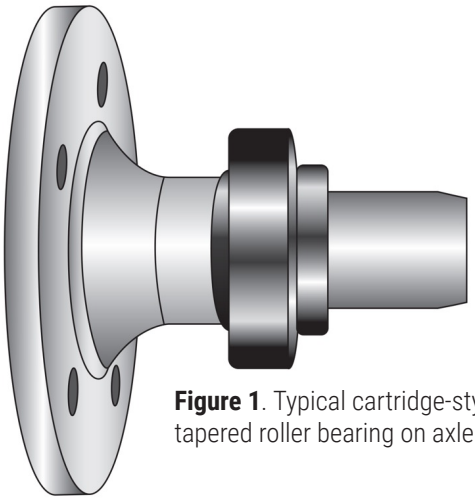


Figure 1. Typical cartridge-style tapered roller bearing on axle shaft

To avoid premature and/or repeated bearing failure and for a successful repair outcome, it is important to adhere to the following:

- After removing the old bearing, carefully and thoroughly inspect the portion where the old bearing rode on the axle for metallic particles or debris.
- Remove all rust and corrosion from the affected area.
- Once more, carefully and thoroughly inspect the axle for surface imperfections and other indications of wear. This includes pitting, spalling, scoring and/or scorching. Discoloration of the metal on the race portion of the axle is a sign of overheating and excessive wear.
- Do not reuse an axle that does not pass inspection or is out of specification. Reusing an excessively worn axle may lead to premature bearing and/or bearing seal failure.

Always reference the original factory service manual for proper diagnostic, removal and replacement procedures, as well as for all related specifications and values. Use only a calibrated torque wrench for final fastening.

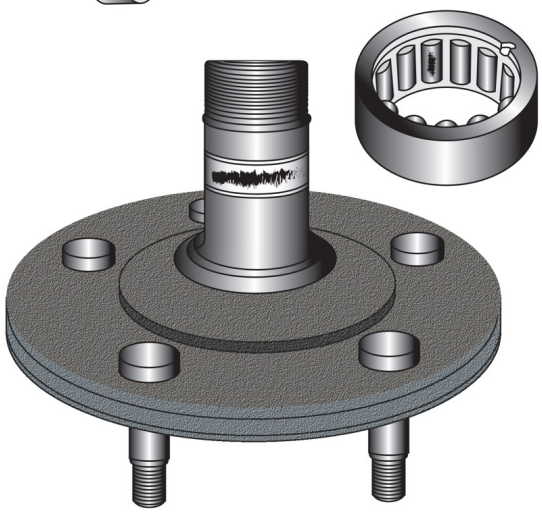


Figure 2. Damaged bearings and worn rolling elements may wear a groove onto axle shaft

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