

Tapered Bearing Installation and Maintenance

- Commonly referred to as standard bearing
- General purpose axles
- TN bearing spec



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Aim: To achieve correct installation and Maintenance of bearings and thus maximum bearing life

- Insure adequate and Proper Lubrication of wheel end and bearings
- Insure proper adjustment and end float of bearings
- Insure correct seating of seals



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Basic Tool requirements



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Common Workshop Tools

- Torque Wrenches
- Axle Nut Tools
- Seal Installer (If required)
- Dial Indicator
- Hammer, Socket set, Pliers Etc



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It is important to follow each manufacturers instructions however the following is a basic guideline on how to adjust standard tapered bearings

- Install inner nut with Dowel facing outwards, Torque nut to 270Nm (200lb/ft) while rotating hub in both directions
- Back off nut one full turn
- Re-torque nut to 68Nm (50lb/ft) while rotating hub in both directions
- Back off NUT ¼-1/3 turn. Do not include socket back lash
- Install lock washer over the dowel insuring the lock is aligned with key way in the spindle. If holes do not align remove the washer, reverse and re-install
- Install lock tab and outer spindle nut and torque to 405-540Nm and fold 2 opposite tabs over the spindle nut
- Check the hub rotates freely
- **Use dial indicator to check end float acceptable range is 0.025-0.127mm (0.001-0.005")**
- **The above procedures are recommended practices however the it is paramount that the above end float setting is achieved.**
- Once correct bearing adjustment is achieved install hub cap gasket and hub cap and tighten bolts to approx 20Nm or 15lb/ft



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Service Intervals

Follow specific manufacturers guidelines however the following is a basic guide to service intervals

- 10,000 klms: Check for any lubricant leaks and check end float setting
- 100,000 klms: Verify and adjust wheel bearings, repack or replace lubricant if necessary. If bearings or hub is removed replace with a new seal. Check all other axle and brake components and replace if required, Insure braking system is functional with all plumbing and valving operating correctly.
- The above are guidelines only if vehicle is operating under extreme duties and conditions service intervals should be adjusted accordingly.



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Important considerations

- Bearing life can is commonly reduced by the following factors
- Inadequate or contaminated lubrication (This can be the result of contaminants ingressing through either the seal or hub cap gasket or both) contaminants include moisture, dust or dirt particles for example or incorrect volume of lubricant such as grease or oil
- Incorrect bearing adjustment (Remember bearings that are too tight will contribute to premature failure as much as bearings that are too loose).
- Incorrectly fitted or damaged seals



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Recommendations

- Use correct installation and maintenance tools and follow installation guidelines supplied. Follow seal installation and bearing installation guidelines
- Adapt service intervals to suit relevant applications and load conditions.
- Insure good condition of components such as seals and gaskets as the failure of these parts will cause failure of the wheel end.
- Insure care is taken when using high pressure cleaners and chemicals as this is a common way of causing lubricant contamination.



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