Set-Right® Hub Rebuild Kits

The Timken NP Bearing Difference - NP bearings used in pre-adjusted wheel ends are different than bearings used in manually adjusted wheel ends.

Advantages

- Helps increase fuel efficiency and performance
- Simplifies wheel end rebuilds – promoting uptime
- Promotes consistent wheel end adjustment and more accurate wheel end assembly
- Can provide longer bearing life
- Reduces inventory
- Offers a wide range of part numbers

With Set-Right Kits all the components are in one box, helping to ensure you use the correct NP part numbers. This shop-friendly solution promotes consistency, saves time and helps extend the useful life of the application.

Timken strongly recommends that you replace the bearing cone (inner race) and bearing cup (outer race) together. If the inboard or outboard bearing is damaged, it is possible that debris has contaminated or damaged the other bearing.



Timken NP Bearing Part Numbers

NP bearings used in pre-adjusted wheel ends are not the same as bearings used in manually-adjusted wheel ends. Timken NP bearings are manufactured with 1/5 the width tolerance (from outer race backface to inner race frontface) of bearings used in manually-adjusted wheel ends (Fig. 1). This narrower tolerance helps simplify adjustment.

We created unique NP part numbers (i.e. NP840302) to clearly differentiate them from traditional bearings (i.e. 580) and to help reduce the chance of improper installation.

NP Bearing Adjustment

The traditional RP 618 method of bearing adjustment does not apply to pre-adjusted wheel ends. Pre-adjusted wheel ends use a spacer and tightly controlled tolerances among the bearings, spacer and hub to create the bearing setting.

Nut torque is used to retain the wheel end, not for setting bearings in pre-adjusted wheel ends. For proper retention in a single nut arrangement the torque specification is 300 ft-lb. In a two-piece jam nut arrangement, the inner nut specification is 300 ft-lb and the outer nut specification is 200 ft-lb.

Skill Level: Easy | Special Tools: None

Spacer

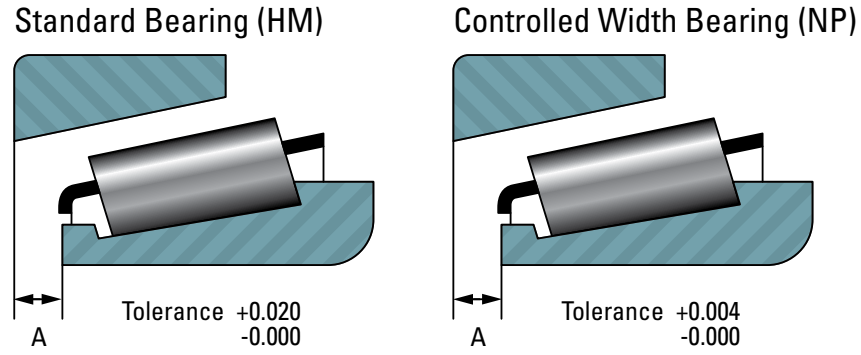


The spacer, located between the bearing cones (inner race), is a valuable system component found in pre-adjusted wheel ends and is precisely engineered to maintain an exact distance between the bearings. The spacer is not a crush sleeve, and the width should not change during normal bearing adjustment. Spacers are not matched to the bearings and can be reused regardless of whether one or both of the bearings are changed.

Common spindles, including steer, drive and trailer, have specific shapes and lengths. Spacer sizes are consistent across axle and vehicle manufacturers.

Spacer wear could occur if the bearing cone (inner race) turns against the spacer, creating a burr on the softer spacer. The spacer should always be replaced, or the bearing system may have excessive preload.

Fig. 1



⚠WARNING
Failure to observe the following warnings could create a risk of death or serious injury.

Never spin a bearing with compressed air. The components may be forcefully expelled.
Proper maintenance and handling practices are critical. Always follow installation instructions and maintain proper lubrication.
A bearing/component should not be put into service if its shelf life has been exceeded.

CAUTION
Failure to follow these cautions may result in property damage

Use of improper bearing fits may cause damage to equipment.
Do not use damaged bearings.

TechTips is not intended to substitute for the specific recommendations of your equipment suppliers.

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, belts, chain and related mechanical power transmission products and services.

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