Wheel Bearing Installation:

AXLE® SURGEONS of Southwest Virginia

Most manufacturers recommend inspection of wheel end every 100,000 miles or 12 months.

Conmet® Preset® hub assemblies recommended service interval is five years or 500,00 miles for on highway vehicles. In more severe duty applications, this service may be required more often.

1. Pre lube seal and bearings with same lubricant being retained before installation.
2. Inspect the spindle for burs, nicks and other damage before installing the hub.

Notes

- Always inspect the bottom of the spindle where the outer bearing race rides for wear. A good quick check is to see if you can hang a thumbnail on any bearing surface that looks worn. If it hangs a nail, then it's a good idea to measure the spindle with a micrometer. Look for damaged threads or keyway. Check to see that the face of the seal surface is not worn. Never re-use old seals and check for discoloration from overheating.
- Inspect the spindle for weld beads, punch marks, corrosion, pits, spalling, or any deformation. Check closely for any past temporary repairs. Look up inside the spindle for any weld beads.
- Never install a wheel end on a patched spindle.

- Never hammer directly on a seal
- Never hammer directly on a bearing.
- Never spin a bearing with compressed air.
- Never mix old and new bearings and races.
- One cheap bearing or seal can cause a $3,000 breakdown.
- For steel hubs, a hydraulic press works fine.
- Never us a hydraulic press on aluminum hubs.

3. Weld a bead around the face of the bearing cup and allow to cool for 15 minutes then remove the races with the proper tool.

Notes

- Always use proper installation tools to install seals and races.
- Always remove all dirt and debris from inside the hub.
- Always use quality bearings and seals.
- Always follow the proper bearing adjustment procedure by verifying end play with a calibrated dial indicator.

Beware of counterfeit bearings and seals:

Unscrupulous manufacturers are flooding the market with poorly engineered bearings and seals that have been deliberately made to resemble premium quality bearings and seals.

Any of those components failing can cause a total wheel end failure. It is not worth a few dollars saved.

We have taken these bearings and set them in their races. You can actually take a pick and move the rollers in the cage. Some of the rollers were not even touching the race. So, beware of cheap wheel bearings.

Hub Installation Procedure:

AXLE® SURGEONS of Southwest Virginia

a. When installing the hub over the spindle, be sure to align the center of the hub bore to the spindle.

b. Install the outer bearing cone and adjusting nut. Tighten the nut only until it is snug against the bearing cone. Do not use an impact wrench during this part of the procedure. Be sure to support the hub until the adjusting nut is secure. Failure to do so may damage the seal.

c. Initial inner adjusting nut torque 200 ft-lb. Back off inner nut one full turn. Re-torque the adjusting nut to 50 ft-lb while rotating wheels. Back off adjusting nut to attain 0.001 to 0.005 end play.

d. Attach the magnetic base of the dial indicator to the spindle. Push the wheel assembly in and out and read the bearing end play as the total indicator movement.

Notes

- **The acceptable specification is 0.001 to 0.005**
- **We like to see 0.001 to 0.002**
- **Conmet® Preset® hub assemblies are equipped with special half tolerance bearings and a spacer and require a specific bearing adjustment procedure. Use and OEM seal or scotseal plus XL when servicing Preset® hubs.**
- **Wheel bearing end play is the free movement of the wheel assembly along the spindle axis. It is recommended that wheel bearing end play be measured with a dial indicator.**

e. Set the indicator so that the plunger is against the end of the hub where the gasket or axle would go. Ensure the plunger is approximately parallel to the axis of the spindle. Se the dial indicator to zero by rotating the gage face to align the zero with the needle.

f. Grasp the wheel assembly by the 3 and 9 o'clock position. If the tolerance is correct proceed to the next step.

g. Install the jam nut to 250 ft-lb. except for the dowel pin type washer which is torqued to 350 ft-lb.

h. Recheck end play and, if end play is within spec, install the hubcap or axle. If not, remove the jam nut and readjust nut so that end play is to specifications. Fill with appropriate hub oil.

Conmet® Preset® Hubs

- Lubricate the wheel bearing with clean axle lubricant. Never use an impact wrench to tighten or loosen lug nuts during this procedure.
- For one piece spindle nuts, torque the nut to a minimum of 300 ft-lb. Do not back off the spindle nut. Advance the nut until engagement takes place and the nut is locked.
- For double nut systems, torque the inner nut to 300 ft-lb. Do not back off the spindle nut. Install the outer nut with 200 ft-lb of torque. Engage the locking device.
- Conmet® service revision 2011 does not recommend the use of a one piece castellated nut system for use with Preset® hubs.