

Quick Start Instructions for Doctor Preload®

FOR USE WITH DOCTOR PRELOAD TOOLS FOR DRIVE AXLES



R SPINDLES

TEMPER AXLE PRODUCTS CORPORATION
ALL PRODUCTS INVENTED AND MADE IN USA!
WWW.DOCTORPRELOAD.COM

NOTE: USE DOCTOR PRELOAD ONLY WITH CONVENTIONAL WHEEL ENDS. REMOVE ALL BEARING SPACERS FROM PRE-ADJUSTED HUB ASSEMBLIES BEFORE ADJUSTING WITH DOCTOR PRELOAD. DO **NOT** ATTEMPT TO ADJUST A UNITIZED HUB ASSEMBLY USING THE DOCTOR PRELOAD SYSTEM. **USE DOCTOR PRELOAD ONLY WITH TEMPER-LOC® SPINDLE NUTS.**

Before Starting Bearing Adjustment:

Inspect all wheel end components. Repair any damage to the spindle threads so that the Temper-Loc spindle nut is able to thread completely onto the spindle.

Prepare the Wheel End for Bearing Adjustment:

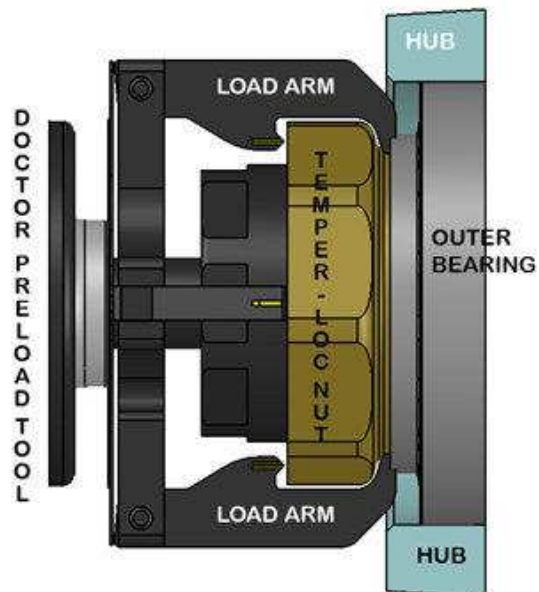
Always be sure the hub is fully seated before adjusting with Doctor Preload. Thread the correct size Temper-Loc nut onto the spindle. Using a bar and socket, tighten the Temper-Loc nut to drive the hub solidly against the axle. Loosen the nut one half turn. Finally, hand tighten the nut until it first touches the face of the outer bearing.

Six Simple Steps:

- 1) **ATTACH DOCTOR PRELOAD TO THE END THREADS OF THE SPINDLE:** Using a downward sweeping motion, guide the two spring-loaded load arms around two flats of the nut (not over any of the "points" of the nut) while engaging the keyway locator in the keyway. Use the end tabs on the load arms to control the load arms. Engage the spindle adapter thread on the spindle with three turns of the star-handle.

Check to be sure the tips of the load arms are properly located around the edge of the backface of the Temper-Loc nut and that they make contact with the outer bearing cone. See the diagram below.

Top View of Spindle with Doctor Preload Mounted and Properly Aligned.

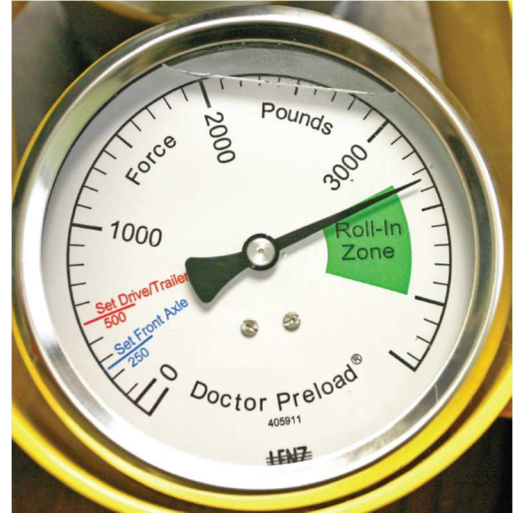


(Continue Instructions on Reverse Side)

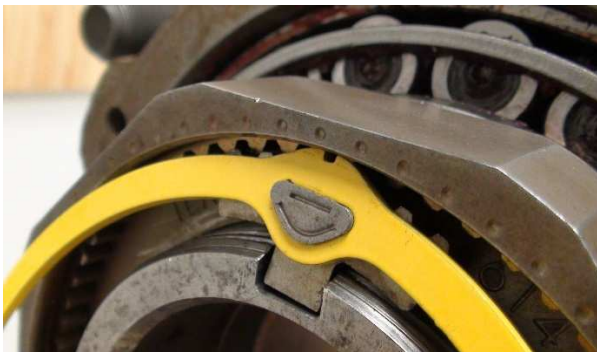
- 2) **SEAT THE BEARING ROLLERS:** Tighten the T-handle by turning it clockwise. Load the bearings until the needle pointer on the Doctor Preload gage reaches the green 'Roll-in Zone.' Spin the hub at least 3 full turns in any one direction to seat the bearing rollers.

The load may drop slightly when rolling in the bearings – this is normal. If the needle pointer drops out of the "Roll-in Zone", tighten the T-handle until it returns to the "Roll-in Zone" and spin the hub three full turns again. Repeat until the needle pointer stays in the "Roll-in Zone." Do not spin the hub again after this step.

The load arms and the keyway locator should NOT be in contact with the Temper-Loc nut or any part of the hub during this step. If this occurs, remove Doctor Preload and start over by fully seating the hub as described in "Prepare Wheel End for Bearing Adjustment" above. **Do not hand tighten the Temper-Loc nut against the bearing while the needle pointer is in the green "Roll-In Zone".** Caution: Applying excess force (moving the needle pointer above the "Roll-In Zone") can damage the Doctor Preload tool.



- 3) **SET THE BEARINGS:** Loosen the T-handle by turning it counterclockwise slowly until the needle pointer on the Doctor Preload gage reaches 'Set Drive/Trailer Axle.' Do not go past the set point; if the set point is overshoot, go back to Step 2 and repeat in order to seat the bearing rollers.
- 4) **LOCK IN THE BEARING SETTING:** Hand tighten the Temper-Loc nut to align the furthest possible index dot with the hash mark on the keyway locator and/or the load arms. When hand tightened, if the hash mark lines up in the space between two dots, loosen the nut a fraction of the space to align the next dot with the hash mark.
- 5) **REMOVE DOCTOR PRELOAD FROM THE SPINDLE:** Completely loosen the T-handle by turning it counterclockwise until the load shown on the gage drops to zero. Hold the gage-guard handle to support the weight of the tool, and then loosen the star-handle by turning it counterclockwise. When the tool is detached from the spindle, gently rotate Doctor Preload until the two load arm tips are positioned over two flats of the nut and pull straight back so that the load arms and keyway locator will slide back around the nut.
- 6) **INSTALL THE RETAINER RING:** First install the EasyView® center tab of the retainer ring in the Temper-Loc nut, engaging the key in the keyway at the same time. See below. Push in on each end finger tab, one at a time, to fit each tab into the nut groove.



Retainer Tab entering groove.



Retainer Tab secured in groove.

ALWAYS INSPECT THE FINAL ASSEMBLY. Ensure that there is a yellow retainer ring inserted in the nut. CHECK THAT ALL THREE EasyView TABS AND THE LOCKING TEETH OF THE KEY ARE FULLY SEATED IN THE NUT. The EasyView notches of all three tabs must be completely hidden in the groove of the nut. Failure to inspect the installation thoroughly could result in component failure and bodily injury.