



## **TEMPER AXLE PRODUCTS CORPORATION**

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*Leading the world in bearing adjustment technology*



### **Instructions for Wheel-End Bearing Adjustment**

## **Temper<sup>®</sup>-Loc Premium Axle Spindle Nut**

The Technology and Maintenance Council (TMC) RP 618A is one standard for bearing adjustment procedure, and requires use of a calibrated torque wrench and some means of verifying endplay setting. The procedure stated here follows the requirements of RP 618A.

Temper Axle Products Corporation offers the Temper EMT (Endplay Measuring Tool) with special wrenches for adjusting to TMC recommended endplay settings. This tool makes bearing adjustment faster and more accurate than can be achieved with torque wrenches alone.

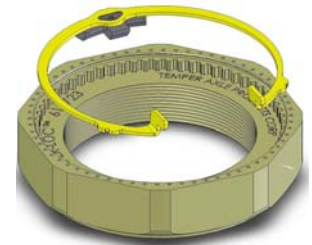
The Society of Automotive Engineers (SAE) recommends light preload settings per SAE Recommended Procedure J2535 for best possible wheel end life. For adjusting to preload, we recommend using Doctor Preload<sup>®</sup> bearing adjustment tools and procedures.

### **1- REMOVE THE RETAINER**

Be sure you have the correct nut for the axle thread of your installation.

Remove the yellow retainer ring. Disengage the locking tabs from the nut groove by depressing the finger tabs, one at a time.

Save the yellow retainer ring for re-installation later.



### **2- INSTALL THE NUT**

Thread the nut onto the spindle until it is up against the outer bearing.

### **3- SEAT THE BEARING ROLLERS**

Tighten the Temper-Loc Nut to 200 ft-lb torque, while spinning the wheel hub.

***Note that at least 200 ft-lb of torque is required in order to properly seat the bearing rollers.***

Loosen the nut by turning back ONLY one-half turn.

Re-tighten the Temper-Loc Nut to an adjusting torque of 100 ft-lb torque, while spinning the wheel hub.

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#### 4- ADJUST THE ENDPLAY SETTING

Turn-back (loosen) the Temper-Loc Nut by the amount in the following table, depending upon the size of the axle spindle, to adjust to an approximate target value of .002" endplay.

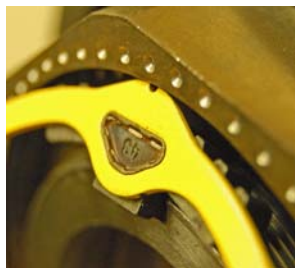
<u>Spindle Size</u>	<u>Degrees of Turn-back</u>	<u>Approx. Revolution</u>
TN (Std. Trailer)	66°	1/6 turn
TP (Propar trailer)	44°	1/8 turn
FF (Steer axle)	52°	1/8 turn
R (Drive axle)	84°	1/4 turn

#### **ENDPLAY ALWAYS MUST BE MEASURED TO VERIFY THE ADJUSTMENT SETTING.**

The TMC RP618A recommends achieving a verifiable endplay condition of .001" to .005" endplay (0.025mm to 0.127mm). **NOTE:** The turn-back values recommended in this procedure are not guaranteed to achieve the correct setting. The actual setting is dependent upon variations in torque due to spindle thread surface characteristics and calibration of torque wrenches, among other factors. **Always measure the endplay whenever the bearing setting is adjusted.**

#### 5- INSTALL THE RETAINER

After satisfactory adjustment is verified, re-install the yellow retainer ring. Insert the EasyView center tab into the groove of the nut by holding the retainer at an angle to the nut while engaging the key in the axle keyway. Next, squeeze each end finger tab to engage the notched end tabs into the nut groove, one at a time. The EasyView notches of all three tabs must be completely hidden in the nut groove to be sure of correct retainer engagement. Check that the EasyView tabs and the locking teeth of the key are fully seated in the nut.



EasyView Tab **NOT** Engaged



EasyView Tab Engaged



EasyView Tab **NOT** Engaged



EasyView Tab Engaged

#### **INSPECT THE INSTALLATION:**

Failure to inspect installation could result in component failure and bodily injury.