

# INSTALLATION INSTRUCTIONS

## ULTIMATE™ SERIES

### STEP 1:

Remove all burrs from hub bore and spindle. Thoroughly clean wheel cavity and spindle. Apply light coat of lubricant to the spindle surfaces.

*NOTE: Amsted Seals recommends using a .320 emery cloth to clean spindle and wheel cavity. Do not apply any sealant to the spindle shoulder or hub bore.*

### STEP 2:

With hub in the horizontal position, pre-lube the inner bearing with the same type of oil used in the hub and place it into the bearing cup. If using grease, pack the inner bearing and place into the inner bearing cup.

### STEP 3:

Identify on the Amsted Seals box the correct installation tool that should be used to install the wheel seal. The FLAT SIDE of the seal driver plate must be used for installing the Ultimate Series seal in order to avoid damage to the seal in the seating process. Lubricate the hub bore and the O.D. of the Ultimate™ Series seal with the wheel end lubrication.

Place the seal on the recommended Amsted installation tool so that the words Air Side face the installation tool. With the seal mounted in the hub bore, place the tool over the seal and hub bore. Using a 3 to 5 pound hammer, drive the seal into the hub bore until a tone change is heard or the seal tool recoils. Apply a thin layer of wheel end lubricant to the I.D. of the seal.

The Ultimate™ Series wheel seal can also be installed by hand. Lubricate the hub bore and the O.D. of the Ultimate™ Series wheel with the wheel end lubricant. Press the seal into the hub bore evenly. To ensure the seal is bottomed out in the hub, tap seal around the face of the seal with a flat plate and hammer. Always make sure seal is bottomed out 360 degrees in hub bore. Apply a thin layer of wheel end lubricant to the I.D. of the seal.

### STEP 4:

Carefully align the seal hub bore with the spindle. Do not use excessive force when mounting the hub back onto the spindle shoulder. The seal will slide into place on the spindle shoulder after properly torquing the bearings. Using excessive force could damage the seal. **CAUTION:** If using a wheel dolly, make sure seal and hub are aligned properly before mounting hub back onto spindle; the seal and/or bearing can be damaged very easily with a wheel dolly that is misaligned. Once hub is in place on the spindle fill hub cavity with lubricant per the TMC recommended practice. Coat the outer bearing with lubricant and place it on the spindle and into the bearing cup. If using grease, follow TMC RP 631 Recommendations for Wheel End Lubrication for proper hub fill. Pre-pack the outer bearing before placing into the hub. TMC RP 624 Lubricant Fundamentals can be referenced for more information on this topic.

## **STEP 5:**

Amsted recommends following TMC Wheel and Bearing Adjustment Procedures. If using a locking nut that is not listed in the TMC RP618, follow the locking nut manufacturer's guidelines for torquing procedures.

## **STEP 6:**

Install hubcap with new gasket. Refer to Amsted Seals website for torquing and installation procedures on hubcap bolts. Fill hubcap cavity with oil until proper oil level is indicated on window. For drive-axles be sure differential oil is filled to the OEM-recommended level to ensure oil flow through the axle tube to hub and bearings. It is recommended to jack one side of the truck up at a time until oil starts to flow to the hub. After installing axle shaft, fill differential to OEM recommended level. *Make sure vent is not plugged as this will cause seal failure.*

