

# Hub-Piloted Anti-Indexing Sleeve

## Important Receiving Information



For Support Call 1-800-341-6667

Visually inspect all parts for shipping damage. If you find shipping damage, notify the carrier at once. The carrier is responsible for all costs of replacement or repair caused by shipping damage.

### SAFETY INFORMATION

To avoid personal injury or property damage while using this product, read and follow all **DANGERS, WARNINGS, CAUTIONS, and INSTRUCTIONS** that are attached to, or included with, this product.

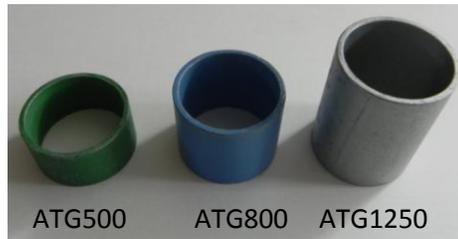
1. Follow the instructions of the tire, wheel and vehicle manufacturers when servicing wheel ends.
2. Follow your companies and the industries requirements for servicing tires, wheels, and wheel ends and Occupational Safety and Health (OSHA) requirements under 29 CFR 1910.177 "Servicing Multi-piece and Single piece Rim Wheels". You will also find a copy of this in the Service Manuals from your respective tire and wheel suppliers.
3. This operating instruction are only for hub-piloted wheel ends with M22 X 1.5 threads per millimeter studs and does not apply to all possible wheel end variations. Contact Tuffy's technical support at 1-800-341-6667 for any questions regarding specific applications or installation instructions.
4. Tuffy Mfg and its suppliers cannot be held responsible for damage, injury or death resulting from unsafe use of this product; lack of maintenance; or incorrect product and system applications.
5. Contact Tuffy when in doubt about safety precautions, sleeve selection, or applications.



**WARNING: Only properly trained technicians using approved tools and processes should perform any form of wheel end maintenance to prevent damage, injury or death**



## Anti-Indexing Sleeves



Anti-Indexing Sleeves are designed to:

- 1) Prevent thread damage to M22x1.5 studs
- 2) Prevent damage to the wheel bolt hole
- 3) Prevent wheel indexing
- 4) ATG500 – Short – Green – Single wheel applications
- 5) ATG800 – Medium – Lt Blue – Dual steel wheel applications
- 6) ATG1250 – Long – Silver – Dual Aluminum wheel applications

### Assembly Instructions:

1. After properly installing the brake drum, seat the drum using mounting (figure 1) tools.



Figure 1

2. Mount the wheel or wheels on the hub aligning them with the mounting tools.
3. Install 4 lug nuts on every other stud, **leave the 1<sup>st</sup> stud clockwise from the valve stem open**, snug the lug nuts to create sufficient pressure to keep the wheel and drum assembly seated against the hub.



**Locate 1<sup>st</sup> stud clockwise from the valve stem; install the first anti-indexing sleeve. If everyone follows this procedure, you will have**

Remove the installation tools.

4. Install the anti-indexing sleeves on every other stud; **begin with the 1<sup>st</sup> stud clockwise from the valve stem** (outside wheel) as indicated by the arrows.



**WARNING:** Selecting an anti-indexing sleeve that is too long may damage the brake drum face and/or interfere with the nut's flange washer producing false or lower torque and clamp load, resulting in the wheel(s) loosening or separating from the vehicle causing; property damage, injury, even death.

5. Install and snug the remaining lug nuts, then torque all lug nuts to the manufacturer's recommended torque value.

**CAUTION:** Selecting the correct anti-indexing sleeve is critical. Anti-indexing sleeve selection is affected by: 1. Wheel configuration (single or dual) and (steel, aluminum, or combo - due to their face thicknesses), 2. Brake drum bolt hole size; standard size bolt holes are 0.930" to 0.940" (anti-indexing sleeve will not enter the brake drum) or large, greater than 1" (the anti-indexing sleeves will free float all the way to the hub face), and 3. Brake drums face thickness. All these together determine which sleeve to use. If the brake drum has the large bolt holes, it may require stacking two anti-indexing sleeves to insure engagement of both the inside and outside wheels in duals. Call 1-800-341-6667 if you have any questions regarding sleeve selection for a specific application.

6. To remove wheels with anti-indexing sleeves; begin by locating the 1<sup>st</sup> stud clockwise from the valve stem (this position will have a sleeve), remove the nut next to it, install a mounting tool to keep the brake drum seated, locate the stud opposite of the mounting tool without a sleeve under it. This is done by counting every other stud beginning with the 1<sup>st</sup> stud clockwise. Following the procedure will always allow you to locate studs that have an anti-indexing sleeve. Remove the nut next to it, and then install the second mounting tool to finish seating (holding the drum in place), remove the remaining wheel nuts and remove the wheel(s).



**WARNING**

**WARNING** All wheel mounting tools must be removed

and nuts fully torqued before vehicle operation. Select the correct sleeves for the application to prevent damage to the brake drum face or interference with the flange washer causing damage and potentially loose wheels. Wheels, studs, nuts and hubs that are not properly installed or maintained may not be safe.

Failure to follow proper installation or maintenance practices may result in injury or death.