# Spider Bearing Cam Seal Removal and Reassembly Instructions



#### SAF® Series Drum Brake Axles

#### Introduction

These instructions provide the necessary information to properly remove and reassemble the inner cam seal on the SAF® drum brake axle. Read and understand all of the procedures presented in these instructions before starting work on any SAF® drum brake axle.

We recommend only the use of SAF-HOLLAND® Original Parts.

**NOTE:** A list of SAF-HOLLAND® technical support locations that supply SAF-HOLLAND® Original Parts can be found on our website at www.safholland.us or contact our customer service group at 888-396-6501.

#### Notes, Cautions, and Warnings

These instructions, contain the terms "NOTE", "IMPORTANT", "CAUTION", and "WARNING", followed by useful product information. The terms are defined as follows:

**NOTE:** Includes additional information to enable accurate and easy performance of procedures.

**IMPORTANT:** Includes additional information that if

NOT followed could lead to hindered

product performance.

CAUTION

Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could

result in property damage.

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### **General Safety Instructions**

 Read and observe all Warning and Caution hazard alert messages in this publication. The alerts provide information that can help prevent serious personal injury, damage to components, or both.

**▲**WARNING

Failure to follow all the repair procedures contained in these instructions could cause a hazardous condition to develop which, if not avoided, could result in death or serious injury.

 All SAF® drum brake axle repair and maintenance MUST be performed by a trained technician using proper tools and safe procedures.

NOTE: In the United States, workshop safety requirements are defined by federal and/or state Occupational Safety and Health Act. Equivalent laws may exist in other countries. These instructions are written based on the assumption that OSHA or other applicable employee safety regulations are followed by the location where work is performed.





## **Removal and Reassembly Procedures**

## **Removal and Reassembly Instructions**

These instructions are for the proper removal and reassembly of the inboard cam bearing seal at the axle spider on the SAF® axle. Additional information can also be found in the drum brake axle service manual document number XL-TA10006OM-en-US.

**NOTE:** Before Starting any axle brake service procedures, park the trailer on a level surface. Exhaust the air from the suspension(s), chock the wheels to prevent the trailer from moving and support the trailer and axles(s) with safety stands.



Failure to properly secure the vehicle and axle prior to commencing work could create a crush hazard which, if not avoided, could result in death or serious injury.

- Release the trailer brakes and cage the spring brakes according to the spring brake manufacturer's instructions.
- 2. Remove the cotter pin that secures the brake adjuster/brake chamber clevis pin. Remove the clevis pin.
- 3. Remove the retaining ring and washer that secure the brake adjuster to the S-Camshaft.
- 4. Remove brake adjuster from cam shaft spline.
- 5. Remove the S-Camshaft bearing housing assembly
- Remove the retaining ring and washer from the spider end of the S-Camshaft.
- 7. Using a screwdriver, remove the inboard cam seal (*Figure 1*) and slide it off of the cam.
- 8. Slide the new seal onto the cam with the open side of the seal facing out of the spider (*Figure 2*).
- 9. Slide the washer onto the cam and use a piece of 1-5/8" ID pipe or a 1-5/8" open end wrench (*Figure 3*) to seat the seal into the brake spider (*Figure 4*).

NOTE: Cam seals MUST be installed in the brake spider with the steel shoulder oriented toward the wheel, and the rubber wiper oriented toward the center of the vehicle. This facilitates complete lubrication of the S-Cam bearing while allowing air to purge from the S-Cam bearing away from the brakes (Figure 5).

Figure 1



Figure 2



Figure 3



# **Removal and Reassembly Procedures**

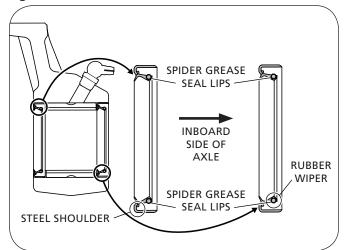


- 10. Reinstall the snap ring to hold the spider washer in place.
- 11. Reinstall the S-Camshaft bearing housing assembly.
- 12. Apply an even coat of anti-seize compound to the splined surface of the S-Camshaft.
- 13. Reinstall the brake adjuster, inboard washer and retaining ring, and the brake chamber clevis pin and cotter pin.
- 14. Grease inboard and outboard cam bearings.
- 15. Adjust the brakes according to manufacturer's instructions.
- 16. Check the brake for proper application and release.

Figure 4



Figure 5





From fifth wheel rebuild kits to suspension bushing repair kits,

SAF-HOLLAND Original Parts are the same quality components used in

the original component assembly.

SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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