# Work Instruction Drum Brake Axles



## **Cam Bearing Seal Replacement**

December 2014

These instructions are for the removal and reassembly of your cam bearing seals at the axle spider on your SAF® axle. Additional information can also be found in our 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 axle(s) with safety stands.

#### **▲**WARNING

Failure to properly support the vehicle and axles 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. Remove the trailer tires from the axle you will be performing service on to access the hub and drum.
- 2. Remove the drum from the hub using a support device such as a drum dolly. It will be necessary to retract the brake shoes to allow the brake drum to clear the brake shoes during the brake drum removal.

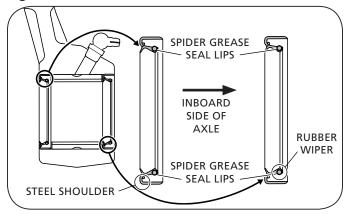
#### **A**CAUTION

Failure to support weight during installation or removal of brake drum could create a crush hazard which, if not avoided, could result in minor to moderate injury.

- 3. Unhook both the brake retaining springs from the brake shoes.
- 4. Press down on the lower brake shoe to disengage it from the anchor pin. Move the lower shoe to the side of the anchor bracket and lift the upper and lower shoes to remove them.
- 5. Remove the hub.
- 6. Remove the cotter pin that secure the brake adjuster/brake chamber clevis pin. Remove the clevis pin.
- 7. Remove the retaining ring and washer that secure the brake adjuster to the S-Camshaft.
- 8. Remove brake adjuster from cam shaft spline.
- Remove the retaining ring from the spider end of the S-Camshaft.
- 10. Remove the S-Camshaft and guide plate by sliding the cam shaft out of the bearing housing and bearings. It might be necessary to tap the end of the shaft with a soft mallet to release it from the bearings.
- 11. Remove the cam seals from the brake spider.
- 12. Install the new cam seals on the bearing housing of the brake spider.

**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 1*).

Figure 1



- 13. Reinstall guide plate and S-Camshaft by sliding it through the S-Camshaft bearing in the brake spider. Once through the brake spider, reinstall the washer and snap ring to the end of the brake spider. Apply grease to the bearing at the grease fitting.
- 14. Apply an even coat of anti-seize compound to the splined surface of the S-Camshaft.
- 15. Re-install the brake adjuster.
- 16. Re-install the hub and add proper lubricant.
- 17. Re-install the brake shoes.

### **▲**CAUTION

Failure to control spring pressure during the brake shoe installation could create a pinch hazard which, if not avoided, could result in minor to moderate injury.

18. Re-install the drum to the hub.



Failure to support weight during installation or removal of brake drum could create a crush hazard which, if not avoided, could result in minor to moderate injury.

- 19. Re-install the tires per manufacturers instructions.
- 20. Adjust the brakes per manufacturers instructions.





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