



Slack Maintenance

PRODUCT BULLETIN: Recommendation for Greasing TSE ASA and S-ASA Slack Adjusters

TSE Automatic Slack Adjusters (ASA) and Self-Setting Automatic Slack Adjusters (S-ASA) are designed and manufactured with internal and external protection against corrosion. Internal corrosion is a leading cause of product failure as the components will seize due to rust and not function properly or most likely not at all.

TSE provides a product that:

- Has a heat treated housing and then is given a protective paint finish
- Seals our Control Unit with high quality gaskets to prevent water ingress
- Protects both the Front and Rear Covers with O-rings to prevent water ingress
- During the assembly process each slack is pre-packed with EP grade 2 grease specially formulated to:

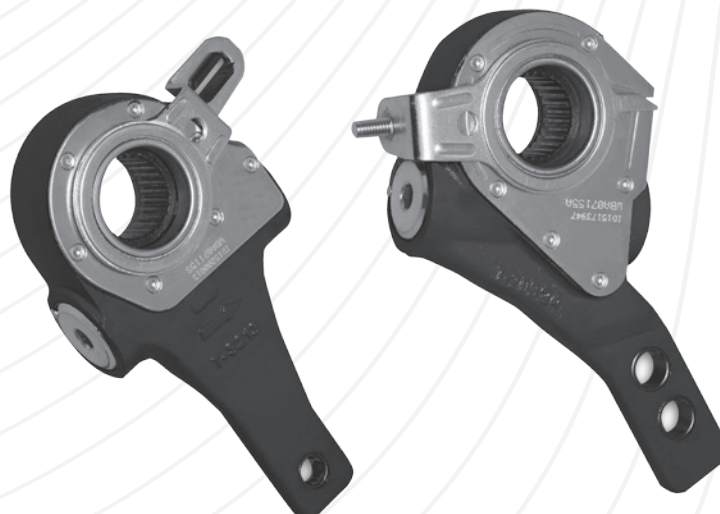
- ✓ Adhere to all metal surfaces
- ✓ Repel water from polished surfaces
- ✓ Condition the internal components during initial performance
- ✓ Be compatible with regular chassis grease for ongoing lubrication

The TSE ASA includes a Pressure Release Valve (PRV) in the rear cover. This gives protection for the Control Unit gasket and prevents over-greasing. The TSE S-ASA mechanism allows for better sealing of the Control Unit and does not require a PRV.

All TSE ASA and S-ASA are fitted with lubrication point or blanked plug for an auto-lube system.

For standard service on-highway applications we recommend to grease at 12 month intervals For heavy duty, off-highway or city transit applications we recommend to grease at 3 month intervals For applications where vehicle has extended period of inactivity we recommend to grease before parking

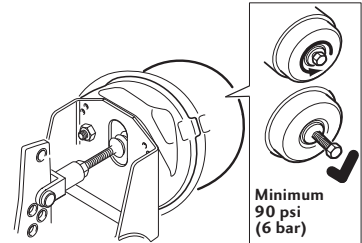
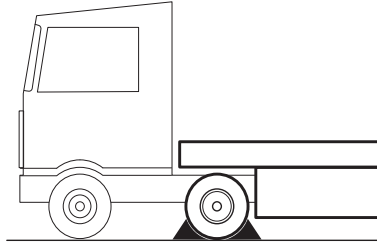
⚠ Caution: Use of Molybdenum (Molybdenum-Disulphide) Grease or oil is not recommended. Use of these will affect the adjustment function and void the warranty.





Slack Maintenance (Continued)

Always ensure the vehicle is securely chocked before releasing the parking brake. Cage the spring brake or use a minimum hold off pressure of 90 psi (6 bar).



Replace Adjuster



Lubricate



Listen for clicking



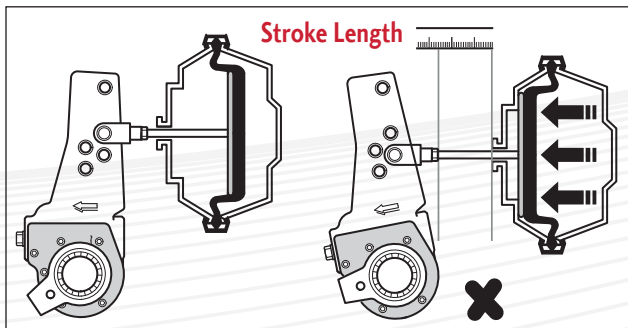
Apply brakes

Regular Check (Regular Service Intervals)

Automatic Slack Adjusters should maintain a constant stroke of the actuator.

At regular service intervals, appropriate to the application, the following checks should be made:

Apply the brake. Observe the stroke length of the actuator.

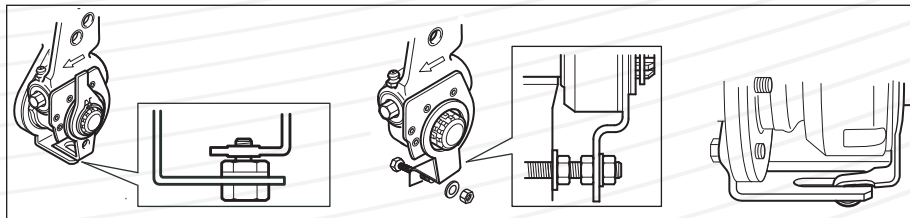


The stroke should not exceed $\frac{2}{3}$ of the maximum stroke of the actuator. If the stroke is more than $\frac{2}{3}$ of maximum stroke, carry out the annual check.



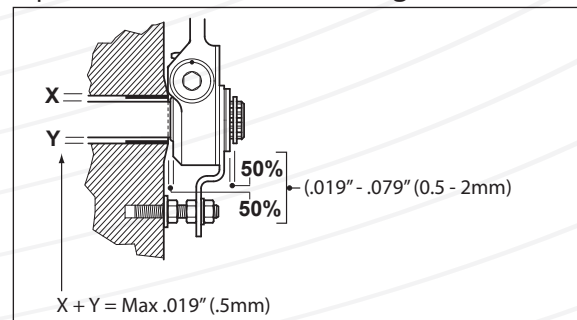
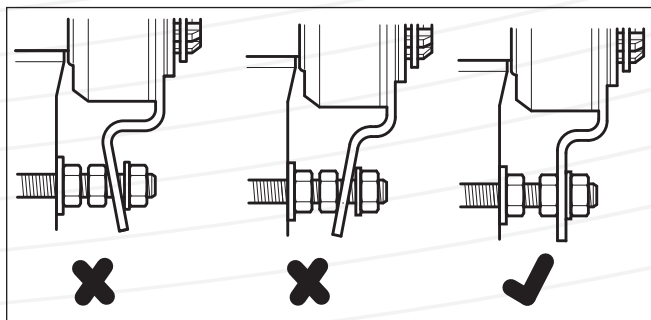
Examine the foundation brake system for seized brake shoes and cam rollers. If no other causes of excess stroke are found, replace the slack adjuster.

Check the anchor point and the condition of the control arm. If the anchor point is loose, re-fit it.



If the control arm is bent or cracked replace the slack adjuster.

Check the condition of the camshaft journal and bushing. If there is more than .019" (0.5mm) gap replace the camshaft and bushing.



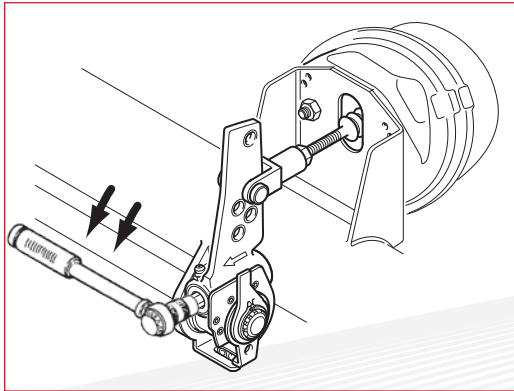
TSE Automatic and Self-setting Automatic Slack Adjusters should be lubricated every 6,214 miles (10,000 km).



Slack Maintenance (Continued)

Annual Check (Quarterly or Annually)

The following check should be made annually for truck and trailer applications. For city bus applications it should be carried out every quarter.



Using a torque wrench, rotate the hex nut in anti-clockwise direction:



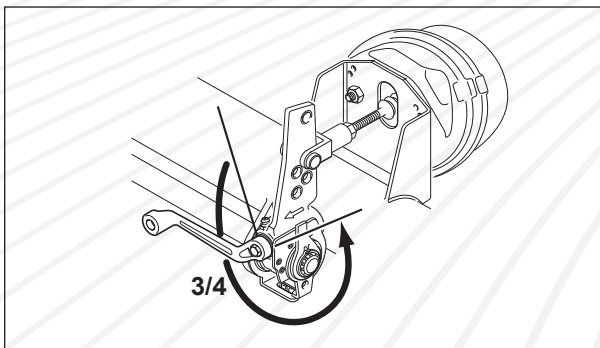
There should be an audible clicking sound.

Repeat the operation to ensure the clutch is engaged. The torque required to turn the hex nut must be 159 in-lbs (18Nm).

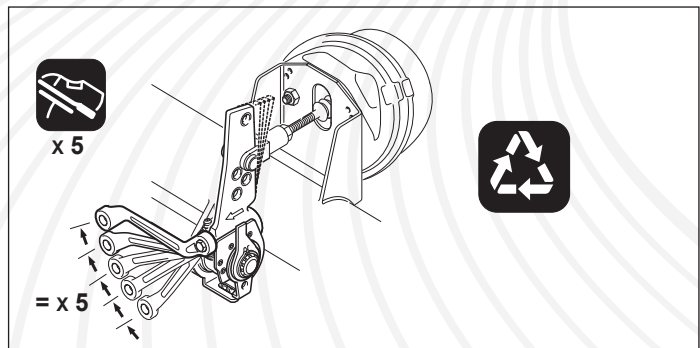


If there is no clicking sound or the torque required is less than 159 in-lbs (18Nm) replace the slack adjuster.

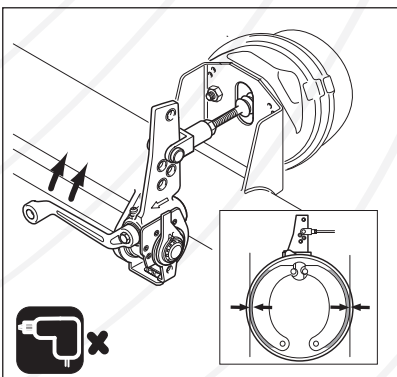
Using a socket wrench or socket mounted indicator, rotate the hex nut 270° in anti-clockwise direction.



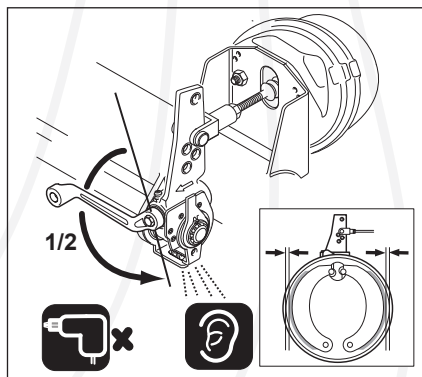
Apply the brake 5 times. The wrench or indicator will move in a clockwise direction on each application of the brake.



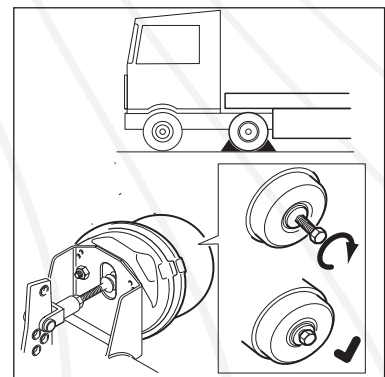
After any service or maintenance, always reset the brake:



Re-set the brake by putting a socket wrench on to the hex nut and turning until the brake linings touch the brake drum.



De-adjust the brake by turning the socket wrench in the opposite direction by 1/2 a turn.



Uncage the spring brake and apply the parking brake prior to removing the chocks from the vehicle.



Slack Maintenance (Continued)

Note that TSE Automatic and Self-setting Automatic Slack Adjusters cannot compensate for other defects within the braking system. Worn or missing return springs, loose wheel bearings, defective actuators, worn camshaft journals, camshaft bushes or camshaft rollers and worn anchor pins must all be rectified for the brake system to function properly.



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