

10/19/2023
CAL WS 42-002

**Subject: 6-Inch Slack Adjusters Causing the
Brakes to Over-Adjust and Drag**

**Models Affected: 49X vehicles built from May 12, 2022, through
August 1, 2023.**

Our records indicate that you are the owner of certain vehicles and therefore DTNA has decided to share the following documentation with you.

Please see the attached communication in this email. We hope you find this information helpful.

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General Information

Certain vehicles built with 6-inch slack adjusters with the 5-1/2 inch chamber bracket have the issue of parts not being paired properly. It is advised to replace the 6-inch slack adjusters with 5-1/2 inch slack adjusters (TDA R803109). If the slack adjusters are not replaced, at some point, the alignment between the slack adjuster and brake chamber could lead to issues including premature wear or misalignment. The engineering team has concluded that switching to 5-1/2 inch slack adjusters is the quickest correction alleviating all misalignment concerns.

When the 5-1/2 inch slack adjusters are installed to the chamber bracket, the slack adjuster linkage is aligned within a certain range of perpendicularity to the brake chamber face. This value varies by slack length and chamber type, but each combination will have different allowable angles. Aftermarket has a setup tool to aid in the installation. The parts have been setup so that when they are paired correctly, they can be assembled without those tools or guides.

Figure 1 shows the unhandled Meritor automatic slack adjuster (ASA).



Fig. 1, Unhanded Meritor ASA

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Work Instructions

Removal

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Remove the slack adjuster. For instructions, see **Section 42.12, Subject 110** of the 47X & 49X *Workshop Manual*.

Installation

1. Coat the camshaft splines and the splines of the slack adjuster gear with chassis line grease, 48-00109-001 or equivalent.
2. Position the slack adjuster such that the adjuster actuator rod is on the side away from the chamber, with the slack adjuster arm just clear of the clevis. Install the automatic slack adjuster on the camshaft spline.
3. Always install the slack adjuster so that the adjusting pawl cap screw is accessible, perpendicular to the axle.
4. Install the shims next to the slack adjuster. Two thick shims are always required, add thin shims if needed.
5. Install the thick washer next to the snap ring. See [Fig. 2](#).

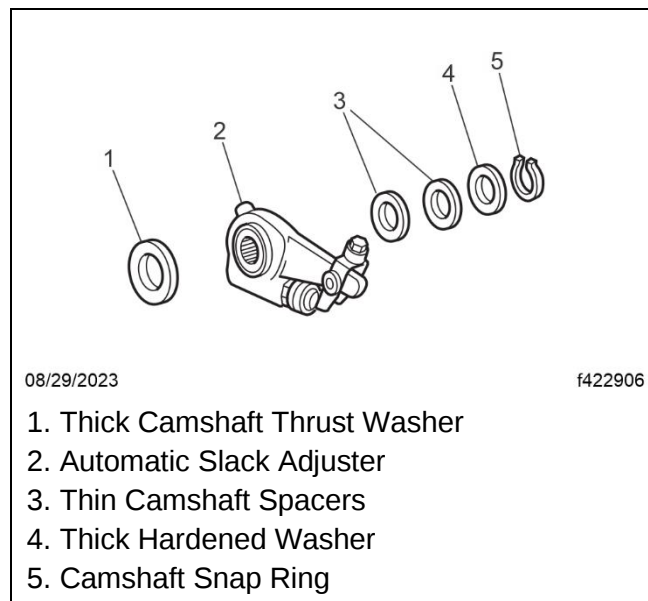


Fig. 2, Automatic Slack Adjuster Assembly

6. Install the snap ring to secure the slack adjuster to the camshaft. Make sure that the snap ring is properly seated in the snap ring groove of the camshaft. Verify axial endplay meets DTNA maximum end play specification of 1/32 inch (0.8 mm) and minimum endplay of 1/64 inch (0.05 mm) along the camshaft. Adjust the shims as required to meet the end play specification.

NOTE: During removal, the parking brake was released and caged. Prior to making this measurement, make sure the brake chamber is fully released and no air is in the chamber.

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7. Measure the distance from the chamber face to the centerline of the 1/2-inch diameter clevis pin, as shown in [Fig. 3](#). This distance should be $2\text{-}1/4 \pm 1/8$ inch for long stroke air chambers and $2\text{-}3/4 \pm 1/8$ inch for standard stroke air chambers. See [Table 1](#).

Slack Adjuster Size	$\pm 1/8$ -Inch BSAP	Long Stroke
5-1/2 Inch	2-3/4 Inch	2-1/4 Inch

Table 1

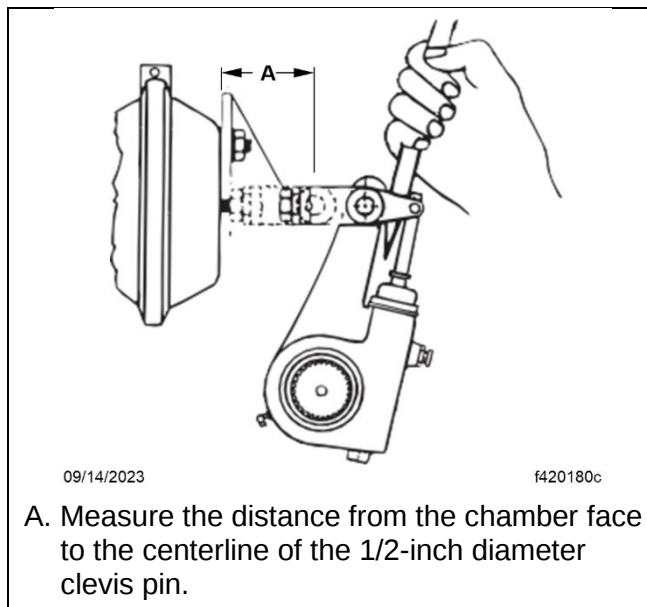


Fig. 3, Measuring the Stroke

8. If the clevis needs to be adjusted, after loosening the jam nut and adjusting the clevis to the proper location, make sure to index the clevis so that the slack adjuster can be slid into the clevis. Tighten the 5/8–18 thread jam nut 25 to 50 lbf·ft (34 to 68 N·m).
9. Lube the slack adjuster through the grease fitting until the lubricant is forced out through the pawl slot or through the gear splines around the inboard snap ring.
10. Disengage the pull pawl by carefully prying up on the pawl cap. Leave the tool wedged in this position until the adjustment is complete. See [Fig. 4](#).

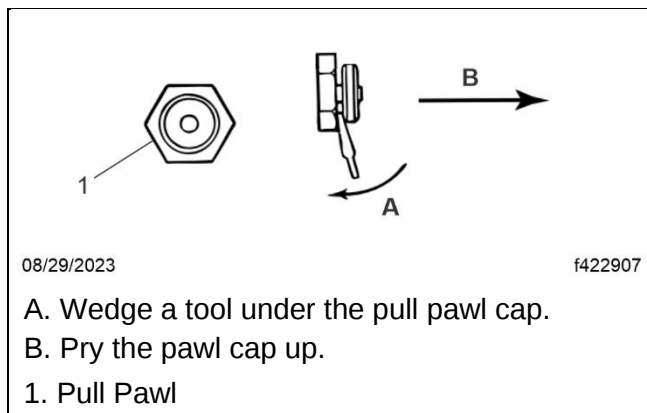


Fig. 4, Disengaging the Pull Pawl

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11. Turn the manual adjusting nut on the bottom of the automatic slack adjuster with a 5/16-inch wrench until the adjuster arm rotates into the clevis with the large holes in the adjuster arm and the clevis aligned. See [Fig. 5](#). Damage will occur if the nut is rotated without the pull pawl being disengaged.

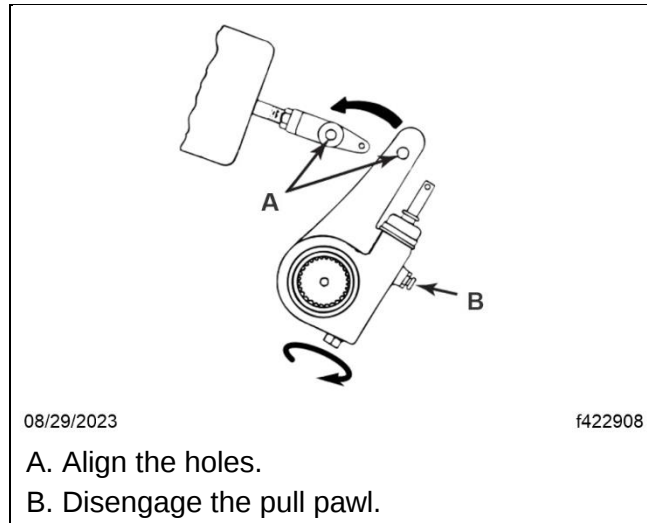


Fig. 5, Rotating the Automatic Slack Adjuster

12. Insert the large clevis pin through the clevis and adjuster arm with the pinhead on the inboard (vehicle centerline) side of the automatic slack adjuster. Insert the large clevis pin retainer clip. See [Fig. 6](#).
13. Align the hole in the automatic slack adjuster actuator rod with the hole in the clevis. Insert the small clevis pin through the clevis and the actuator rod with the pinhead on the inboard (vehicle centerline) side of the automatic slack adjuster. Insert the small pin retainer clip. See [Fig. 6](#).

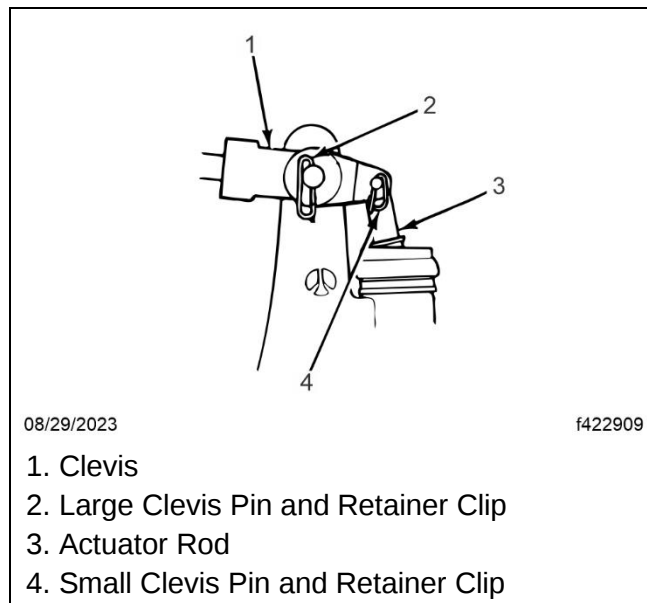


Fig. 6, Clevis Pin Installation

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14. To set free-stroke with the pull pawl still disengaged and the brake drum installed and fully seated, turn the adjusting nut counterclockwise. Tighten the nut 20 to 25 lbf·ft (27 to 34 N·m) as the linings contact the drum. See [Fig. 7](#).
15. Draw a paint pen line across the adjusting nut and on to the slack. Back the adjusting nut off 3/4 of a turn (270 degrees) by turning the nut clockwise. Damage will occur if the nut is rotated without the pull pawl being disengaged. See [Fig. 7](#).

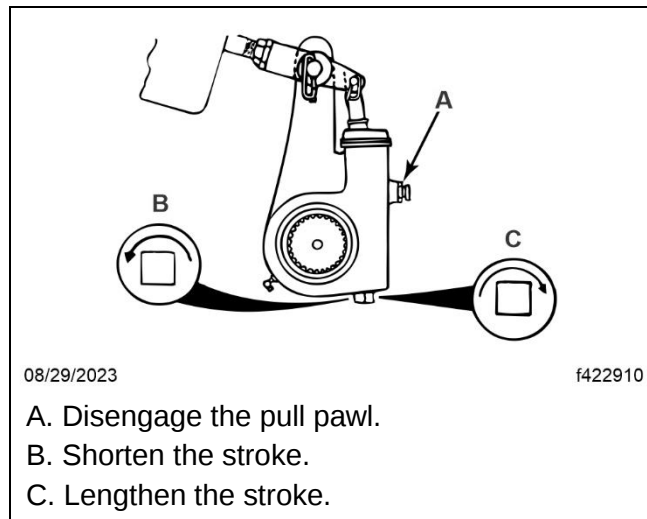


Fig. 7, Setting the Free Stroke

16. When all the adjustments are complete, remove the pry bar from the pawl to re-engage the pawl, and install the cap.
17. Uncage the park-brake chamber.
18. With the air system filled, apply and release the brakes several times to check for proper operation of the slack adjusters.