

DV-2 Valve Disassembly, Cleaning and Inspection, and Assembly

Disassembly (See Fig. 1)

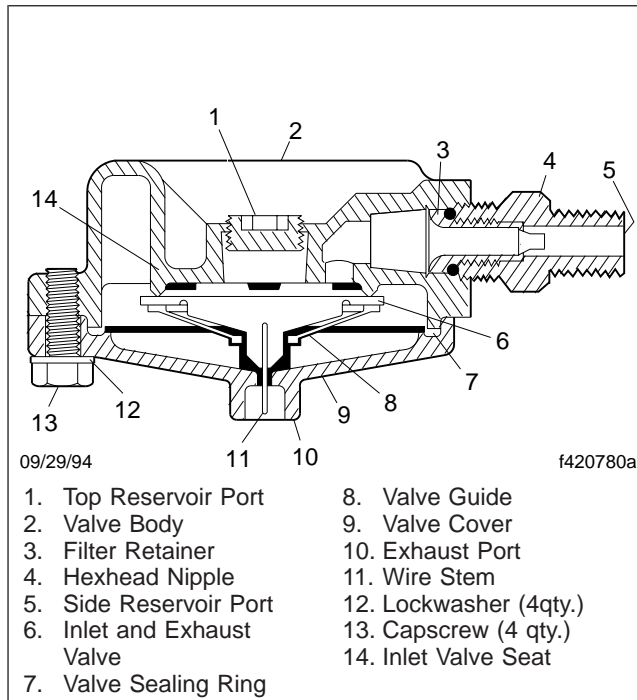


Fig. 1, DV-2 Valve, Cutaway View

IMPORTANT: Before working on or around air brake systems and components, review [Safety Precautions 100](#).

1. Remove the drain valve following the instructions under [Subject 120](#).
2. Remove the four capscrews (Ref. 13) that hold the valve cover (Ref. 9) to the valve body (Ref. 2).
3. Remove the valve cover (Ref. 9) and sealing ring.
4. Remove the valve guide (Ref. 8) and the inlet and exhaust valve (Ref. 6) from the valve body.
5. Remove the hexhead nipple (Ref. 4) from the valve body.

Cleaning and Inspection

IMPORTANT: Before working on or around air brake systems and components, review [Safety Precautions 100](#).

1. Wash all metal parts of the drain valve in an approved cleaning solvent. Dry the metal parts of the disassembled moisture ejection valve with compressed air.
2. Wipe all rubber parts clean with a clean cloth. Examine all rubber parts. If any rubber parts are worn, cracked, torn or otherwise deteriorated, replace them with new parts.
3. Examine all metal parts. If any metal parts are worn, cracked, or otherwise damaged, replace them with new parts.
4. Clean and examine the filter. If it will not clean completely, or is torn or damaged, replace it with a new filter.

CAUTION

Do not reassemble the drain valve with a dirty filter; to do so could result in failure of the drain valve in service.

Assembly (See Fig. 1)

IMPORTANT: Before working on or around air brake systems and components, review [Safety Precautions 100](#).

Before assembling the drain valve, apply a light film of grease on the inlet valve seat. See Ref. 14.

IMPORTANT: Do not apply oil to the inlet and exhaust valve.

1. Install the valve sealing ring (Ref. 7) into its groove in the valve cover.
2. Install the valve guide (Ref. 8) over the inlet and exhaust valve (Ref. 6).
3. Install the valve guide, and the inlet and exhaust valve as an assembly into the valve cover. The wire stem (Ref. 11) will project through the exhaust port (Ref. 10).
4. Install the valve body on the valve cover and install the lockwashers and capscrews. Tighten the capscrews 72 to 96 lbf-in (820 to 1080 N-cm).
5. Install the hexhead nipple onto the valve body, and tighten it 48 to 72 lbf-in (540 to 820 N-cm).
6. Install the drain valve on the wet tank following the instructions under [Subject 120](#).

Torque Values	
Description	Torque lbf-in (N-cm)
Valve Cover Capscrews	72-96 (820-1080)
Hexhead Nipple (to valve body)	48-72 (540-820)

Table 1, Torque Values

General Description (See Fig. 1)

The Gunite ¹ automatic slack adjuster has two main functions:

- As a lever it converts the straight-line force of the brake chamber push rod to torque on the brake camshaft. Rotation of the camshaft forces the brake shoes against the drum.
- As an automatic adjuster, it maintains the lining-to-drum clearance needed for proper brake chamber push rod stroke.

The slack adjuster is installed between the brake chamber push rod and the brake camshaft. A clevis connects the brake chamber push rod to the top of the slack adjuster. The bottom of the slack adjuster is splined to the brake camshaft. The splines hold the slack adjuster internal gear to the camshaft, so the camshaft turns when the slack adjuster moves. When the brakes are applied, the brake chamber push rod moves outward forcing the slack adjuster and camshaft to rotate. This movement forces the brake shoes against the drum.

The brakes are adjusted when the slack adjuster senses an increase in the lining-to-drum clearance. The slack adjuster's internal worm shaft and ratchet shorten excessive lining-to-drum clearance. This provides maximum leverage for the brake chamber push rod. The automatic slack adjuster adjusts the brakes at the beginning of the brake application.

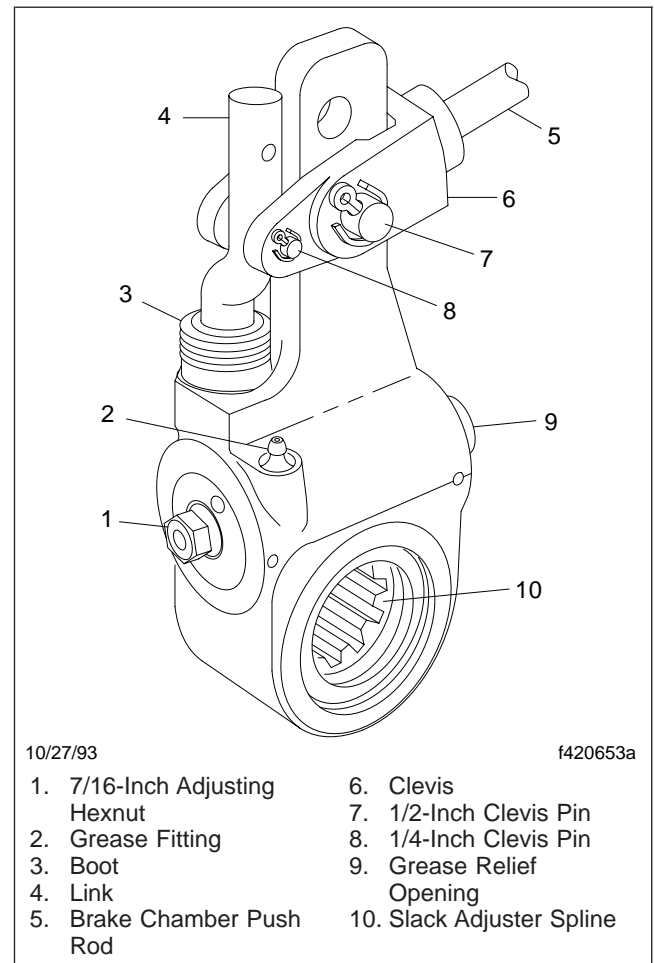


Fig. 1, Gunite Automatic Slack Adjuster

¹ Formerly Kelsey-Hayes

Slack Adjuster Removal and Installation

IMPORTANT: This automatic slack adjuster cannot be rebuilt. If it is damaged or inoperative, replace the unit.

Factory-installed brake chambers have welded clevises on the pushrod. See **Fig. 1**. On a replacement brake chamber, the clevis is threaded onto the pushrod, and has a jam nut installed. See **Fig. 2**.

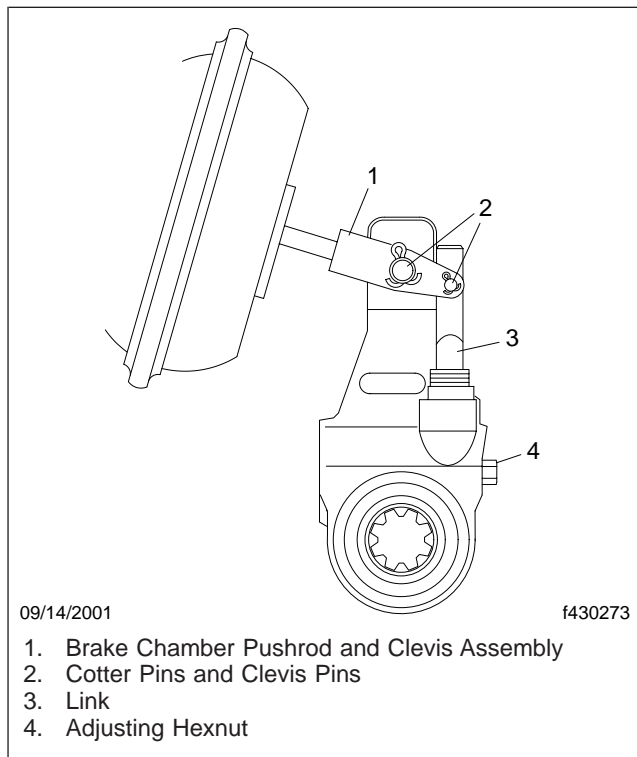


Fig. 1, Slack Adjuster (attached to welded clevis)

Removal

1. With the vehicle parked on a level surface, chock the tires. If you are removing a rear slack adjuster, cage the parking brake power spring. For instructions, refer to the applicable brake chamber section in this group.
2. Remove the cotter pins and clevis pins.
3. Rotate the adjusting hexnut counterclockwise until the slack adjuster clears the clevis.
4. Remove the snap ring from the brake camshaft, then slide the slack adjuster off the camshaft.

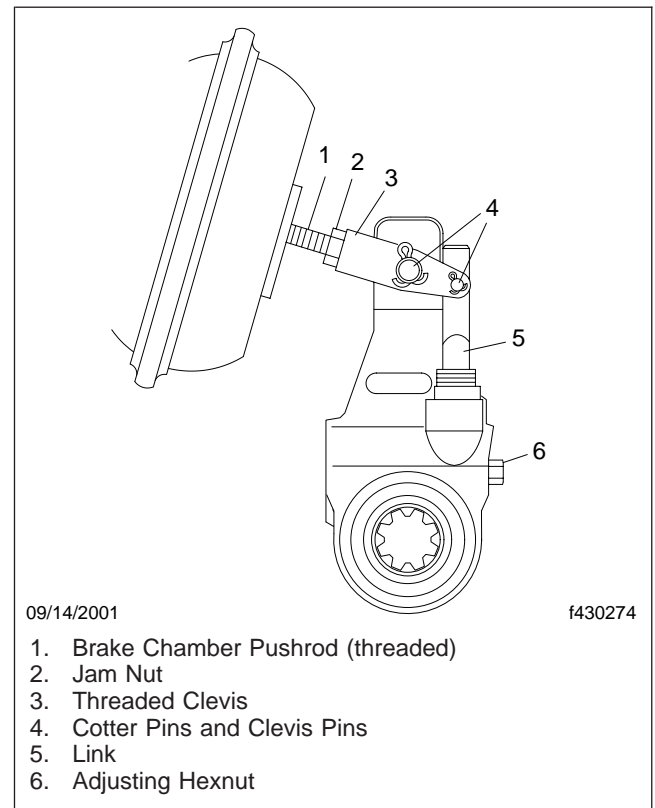


Fig. 2, Slack Adjuster (attached to threaded clevis)

Installation

NOTE: For brake chambers that have pushrods with threaded clevises, measure the pushrod length before installing the new slack adjuster. With the brakes fully released, and no air pressure to the chamber, check the dimension between the chamber face and the centerline of the 1/2-inch clevis pin hole. It should be 2.25 inches (57 mm) for long stroke chambers, and 2.75 inches (70 mm) for standard stroke chambers.

1. Coat the camshaft splines, and the splines of the slack adjuster gear with an anticorrosive grease.
2. Using the old snap ring, install the automatic slack adjuster on the brake camshaft.
3. Turn the adjusting hexnut clockwise to rotate the slack adjuster toward the brake chamber until the holes line up.

Slack Adjuster Removal and Installation

4. Install the clevis pins and cotter pins.

 **WARNING**

Manually adjusting an automatic slack adjuster to bring the pushrod stroke within legal limits is likely masking a mechanical problem. Adjustment is not repairing. Before adjusting an automatic slack adjuster, troubleshoot the foundation brake system and inspect it for worn or damaged components. Improperly maintaining the vehicle braking system may lead to brake failure, resulting in property damage, personal injury, or death.

5. If the pushrod has a threaded clevis, use the gauge supplied with the new slack adjuster to check the adjustment of the clevis, as follows. See [Fig. 3](#).

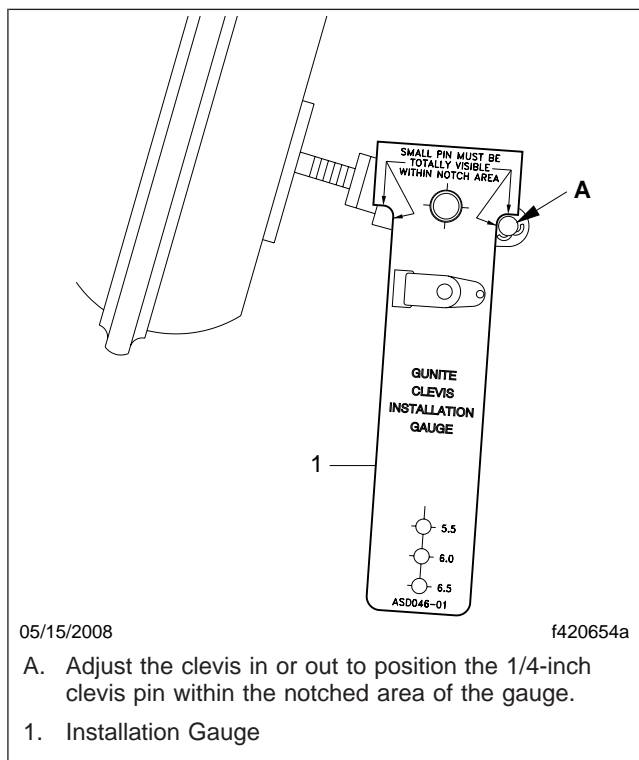


Fig. 3, Checking the Clevis Adjustment

- 5.1 Position the 1/2-inch hole in the gauge over the end of the 1/2-inch clevis pin.
- 5.2 Align the applicable 1/4-inch hole in the bottom of the gauge over the center of the camshaft.

- 5.3 Check that the 1/4-inch pin is visible in the notched area of the gauge. If the pin is not in the right location, back off the slack adjuster and readjust the pushrod length, then repeat this step.

NOTE: Make sure there is clearance between the slack adjuster and other vehicle components when the brakes are applied and the pushrod travels its maximum stroke.

6. Set the initial free-stroke, as follows.
 - 6.1 Turn the adjusting hexnut clockwise until the brake linings contact the drum.
 - 6.2 Turn the adjusting hexnut counterclockwise one-half turn. There should be about 30 lbf-ft (41 N-m) resistance, and a ratcheting sound will be heard.
7. Measure the brake chamber applied stroke, as follows.
 - 7.1 With the brakes fully released, use a ruler to measure the distance from the bottom of the brake chamber to the center of the large clevis pin. See [Fig. 4](#).
 - 7.2 Build air pressure to at least 85 psi (586 kPa). Apply the brakes, then measure the distance from the bottom of the brake chamber to the center of the large clevis pin. See [Fig. 4](#). The difference between the measurements is the brake chamber stroke.
 - 7.3 The brake chamber stroke must be within the range shown in [Table 1](#). If it is not, check the foundation brakes for problems such as worn cams, bushings, pins and rollers, or broken springs. Repair or replace as needed. For instructions, refer to the applicable brake section in this group. Then, repeat the two previous steps.
8. If a rear axle slack adjuster was installed, manually uncage the parking brake. Refer to the applicable brake chamber section in this group for instructions.
9. Apply the parking brakes.
10. Remove the chocks from the tires.
11. In a safe area, check for proper brake operation, as follows.

Slack Adjuster Removal and Installation

- 11.1 Apply and release the brakes several times to check for correct operation of the slack adjusters.
- 11.2 Perform six low-speed stops to ensure correct parts replacement and full vehicle control.
- 11.3 Immediately after doing the above stops, check the drum temperatures. Any drums that are significantly cooler than the others show a lack of braking effort on those wheels.

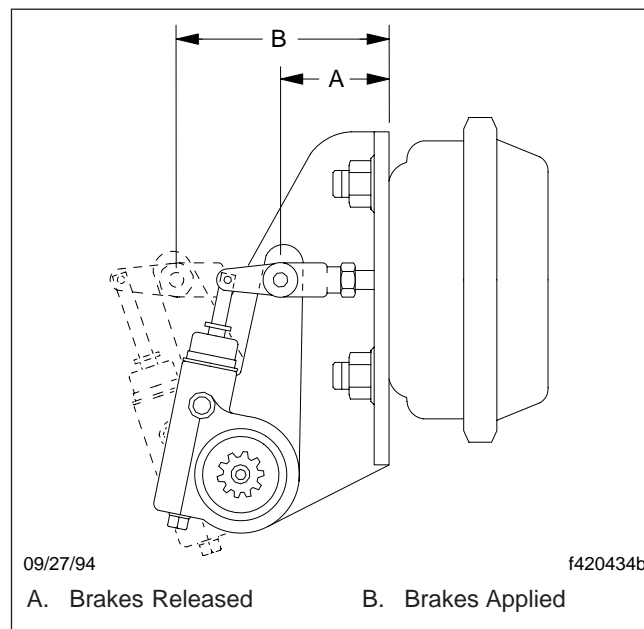


Fig. 4, Stroke Measurements

Brake Chamber Stroke Specifications			
Chamber Type (Size)	Maximum Applied Stroke*: inch (mm)	Free-Stroke: inch (mm)	
		New Brake Installation	In-Service Brake
Long Stroke†			
16 and 20	2-1/2 (64)	5/8 to 3/4 (16 to 19)	1/2 to 5/8 (13 to 16)
24 and 30	3 (76)		

* Specifications are relative to a brake application with 80–90 psi (550–620 kPa) air pressure in the brake chambers.

† Long stroke design is indicated by a tag, or embossing, on the brake chamber.

Table 1, Brake Chamber Stroke Specifications

Approved Lubricants	
Lubricant Type	Temperature
Lubriplate Aero	Above -40°F (-40°C)
Texaco Multifak EP-2 Mobil Grease 77	Above -20°F (-29°C)

Table 1, Approved Lubricants

Maximum Adjusted Brake Chamber Strokes	
Chamber Size	Maximum Chamber Stroke inches (mm)
16 20 24	Less than 1-3/4 (44)
24 * 30	Less than 2 (51)

* Long stroke.

Table 2, Maximum Adjusted Brake Chamber Strokes

General Description

The Haldex (SAB) automatic slack adjuster serves two main functions:

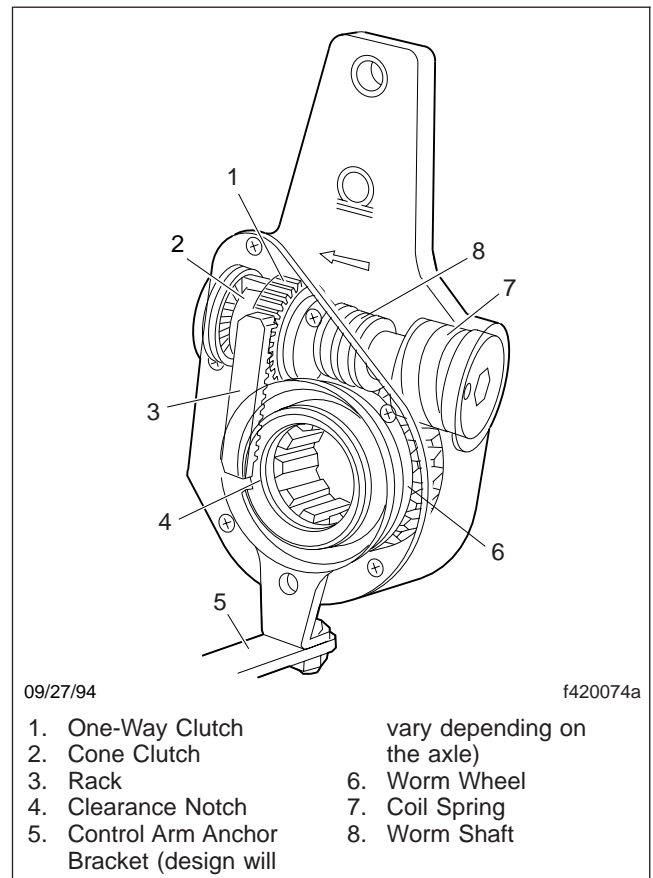
- As a lever, it converts the straight-line force of the air brake chamber push rod to torque on the brake camshaft. Rotation of the camshaft spreads the brake shoes out against the brake drum, applying the brakes.
- As an adjuster, it maintains cam brake chamber push rod stroke and lining-to-drum clearance automatically during normal use.

Principles of Operation

When the brakes are applied, the slack adjuster rotates and moves the shoes into contact with the drum. The clearance notch (Fig. 1, Ref. 4) corresponds to the normal lining-to-drum clearance. Different notches are available to meet the requirements of various vehicles and brake duty cycles. As the brake application continues, the rack (Ref. 3) moves upward and rotates the one-way clutch (Ref. 1) which slips in this direction.

As the brake pressure increases, the torque increase on the slack adjuster causes a relative movement between the body and the camshaft. This motion forces the worm shaft (Ref. 8) over to compress the coil spring (Ref. 7), releasing the cone clutch (Ref. 2). If the brakes are out of adjustment, any further torque will change the position of the one-way clutch in relation to the cone clutch.

When the brake begins its return stroke, the coil spring load returns to normal and the cone clutch is again engaged. The rack is pulled back to its original position in the notch. Any additional travel brought about by brake lining wear causes the rack to turn the locked one-way clutch and rotates the worm shaft through the locked cone clutch. The worm shaft then rotates the worm wheel (Ref. 6) and camshaft, adjusting the brakes.



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|-----------------------|-------------------|
| 1. One-Way Clutch | vary depending on |
| 2. Cone Clutch | the axle) |
| 3. Rack | 6. Worm Wheel |
| 4. Clearance Notch | 7. Coil Spring |
| 5. Control Arm Anchor | 8. Worm Shaft |
| Bracket (design will | |

Fig. 1, Haldex Automatic Slack Adjuster

Slack Adjuster Removal and Installation

Removal

1. With the vehicle parked on a level surface, set the parking brakes, and shut down the engine. Chock the tires.
2. If a rear-axle slack adjuster will be removed, release the parking brakes and cage the power spring of the parking brake chamber. For instructions, refer to the applicable brake chamber section in this group.
3. Remove the anchor bracket fasteners and the anchor bracket. See [Fig. 1](#).

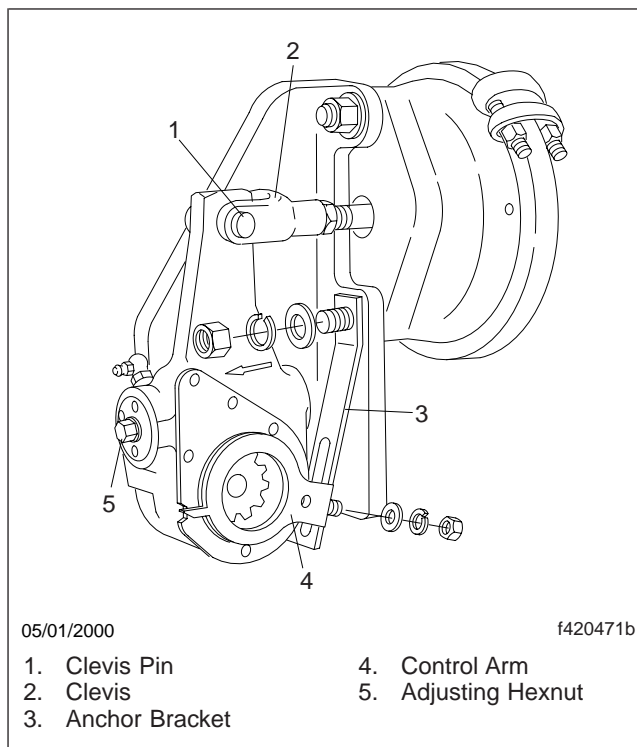


Fig. 1, Anchor Bracket Removal/Installation

4. Remove the cotter pin from the clevis pin. Remove the clevis pin.
5. Remove the snap ring that secures the slack adjuster on the camshaft.

⚠ CAUTION

Do not use an impact wrench on the adjusting hexnut. To do so may damage the slack adjuster or camshaft.

6. Using a 7/16-inch box wrench, turn the adjusting hexnut counterclockwise to move the adjuster arm out of the clevis. A minimum of 13 lbf-ft (18 N-m) is required to overcome the internal clutch. You will hear a ratcheting sound.
7. Remove the slack adjuster from the camshaft.

Installation

NOTE: For brake chambers that have pushrods with threaded clevises, measure the pushrod length before installing the new slack adjuster. With the brakes fully released, and no air pressure to the chamber, check the dimension between the chamber face and the centerline of the 1/2 inch clevis pin hole. It should be 2.25 inches (57 mm) for long stroke chambers, and 2.75 inches (70 mm) for standard stroke chambers.

1. Check that the brake-chamber pushrod is fully retracted.
2. Apply antiseize compound to the camshaft splines.

IMPORTANT: When correctly installed, the brake-chamber pushrod pushes in the direction of the arrow on the slack adjuster housing.

3. Install the slack adjuster on the camshaft, with the adjusting hexnut pointing away from the brake chamber. See [Fig. 2](#).
4. Using a snap ring, secure the slack adjuster on the camshaft. Use at least one inner washer and enough outer washers to allow no more than 0.060-inch (1.52-mm) movement on the shaft.

IMPORTANT: Never pull the pushrod out to meet the slack adjuster or push the slack adjuster into position. Always turn the adjusting hexnut for positioning.

5. Using a 7/16-inch box wrench, turn the adjusting hexnut clockwise until the slack adjuster hole is aligned with the pushrod clevis hole. See [Fig. 2](#).
6. Apply antiseize compound to the clevis pin, and insert the pin in the clevis hole. Do not install the cotter pin at this time.

Slack Adjuster Removal and Installation

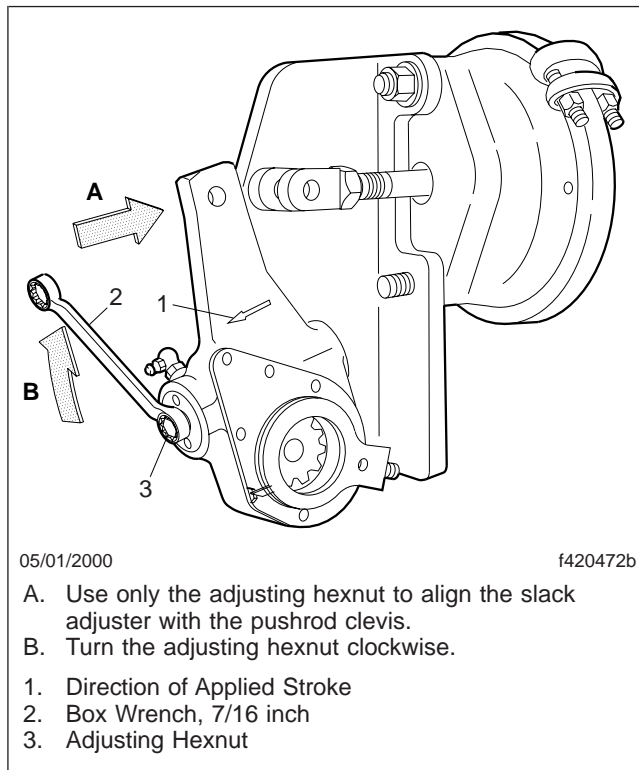


Fig. 2, Slack Adjuster Installation

CAUTION

Never hammer the control arm. Hammering may damage the slack adjuster or camshaft splines.

7. Rotate the control arm away from the adjusting hexnut toward the brake chamber until it comes to a definite internal stop. Make sure the installation indicator is in the center of the indicator notch on the slack adjuster. See Fig. 3.

IMPORTANT: If the installation indicator is not aligned with the indicator notch, the brakes will be too tight.

NOTE: The anchor bracket and slack adjuster housing design will vary, depending on the axle. The anchor bracket mounting location is determined by the length of the control arm.

8. Install the control-arm anchor bracket, as follows. See Fig. 1.
 - 8.1 Tighten the anchor bracket fastener at the control arm 10 to 15 lbf-ft (14 to 20 N·m),

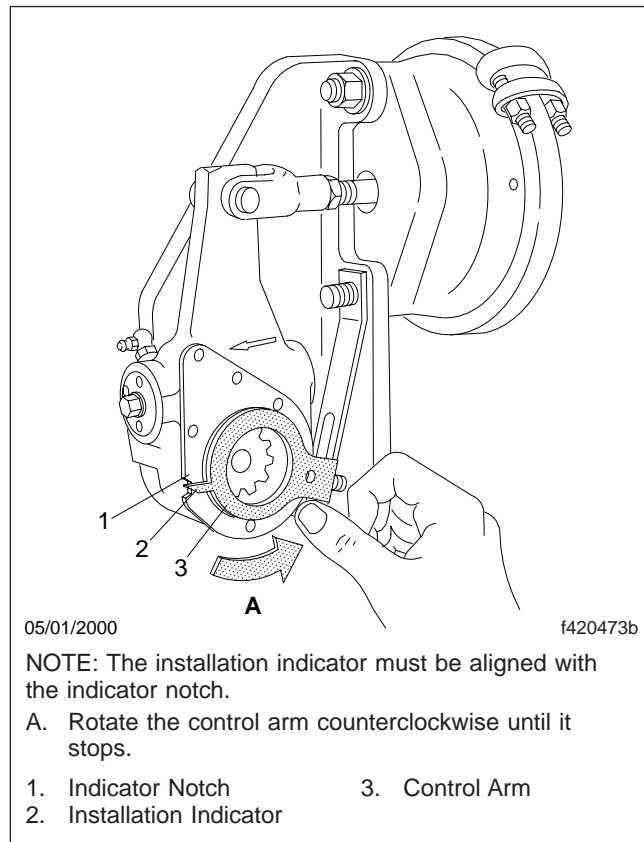


Fig. 3, Aligning the Control Arm

making sure the control arm does not move from its position.

- 8.2 Tighten the fastener at the brake chamber mounting stud according to the brake chamber manufacturer's specifications.
9. Adjust the brakes. See "Brake Adjustment".

Brake Adjustment

NOTE: A properly working self-adjusting slack adjuster does not require manual adjustment while in service.

WARNING

Manually adjusting an automatic slack adjuster to bring the pushrod stroke within legal limits is likely masking a mechanical problem. Adjustment is not repairing. Before adjusting an automatic slack adjuster, troubleshoot the foundation brake

Slack Adjuster Removal and Installation

system and inspect it for worn or damaged components. Improperly maintaining the vehicle braking system may lead to brake failure, resulting in property damage, personal injury, or death.

1. Adjust the brake lining clearance by manually turning the adjusting hexnut clockwise until the brake lining contacts the brake drum, then back off the hexnut counterclockwise 1/2 turn. You will hear a ratcheting sound.

IMPORTANT: Incorrect installation can cause dragging brakes.

2. Make sure the brakes are still fully released, then check the position of the installation indicator on the control arm. It must be within the indicator notch on the slack adjuster.

If the indicator is out of position, loosen the control arm fasteners and repeat the control-arm adjustment procedure. Then, tighten the bracket fasteners.

 **WARNING**

Install and lock a new cotter pin in the clevis pin. Failure to do so could allow the pushrod to disengage from the slack adjuster, causing a loss of braking ability that could result in personal injury and property damage.

3. Install and lock a new cotter pin in the clevis pin.
IMPORTANT: Ensure that the air system has at least 100 psi prior to uncaging the brake chamber. This will aid in the uncaging of the parking brake since the parking brake should be fully released.
4. If a rear-axle slack adjuster was installed, manually uncage the parking brake. For instructions, refer to the applicable brake chamber section in this group.

 **WARNING**

Do not operate the vehicle until the brakes have been adjusted and checked for proper operation. To do so could result in inadequate or no braking ability, which could cause personal injury or death, and property damage.

IMPORTANT: To check the brake adjustment, measure both the applied and free strokes.

NOTE: The location of the measurements is the same for both strokes but the applied stroke is measured with the brakes applied, while a lever is used to manually move the slack adjuster to measure the free stroke.

5. Measure the free stroke, as follows. The free stroke is the distance the slack adjuster has to travel to move the brake shoes against the drum.
 - 5.1 With the brakes released, measure the distance from the bottom of the brake chamber to the far side of the clevis-pin hole. Record the exact distance as measurement A.
 - 5.2 Using a lever, move the slack adjuster until the brake shoes contact the drum. Measure the distance from the bottom of the brake chamber to the far side of the clevis-pin hole. Record the exact distance as measurement B.
 - 5.3 Subtract measurement A from measurement B to determine the free stroke. For new brake installations, the free stroke should be 5/8 to 3/4 inch (16 to 19 mm). For in-service brakes, the free stroke should be 1/2 to 5/8 inch (13 to 16 mm). If it is not in this range, refer to [Troubleshooting 300](#).
6. Measure the applied stroke, as follows.
 - 6.1 With the brakes released (pushrod fully retracted), measure the distance from the bottom of the brake chamber to the far side of the clevis-pin hole. See [Fig. 4](#). Record the exact distance as measurement A.
 - 6.2 Apply and hold an 80 psi (551 kPa) brake application. Measure the distance from the bottom of the brake chamber to the far side of the clevis-pin hole. Record the exact distance as measurement B.
 - 6.3 Subtract measurement A from measurement B to determine the applied stroke. Compare this value to the value in [Table 1](#).
 - 6.4 If the stroke varies or is greater than the maximum allowed length, refer to [Troubleshooting 300](#).
7. Apply the parking brakes.

Slack Adjuster Removal and Installation

8. Remove the chocks from the tires.
9. In a safe area, check for proper brake operation, as follows.
 - 9.1 Apply and release the brakes several times to check for correct operation of the slack adjusters.
 - 9.2 Perform six low-speed stops to ensure correct parts replacement and full vehicle control.
 - 9.3 Immediately after doing the above stops, check the drum temperatures. Any drums that are significantly cooler than the others show a lack of braking effort on those wheels.

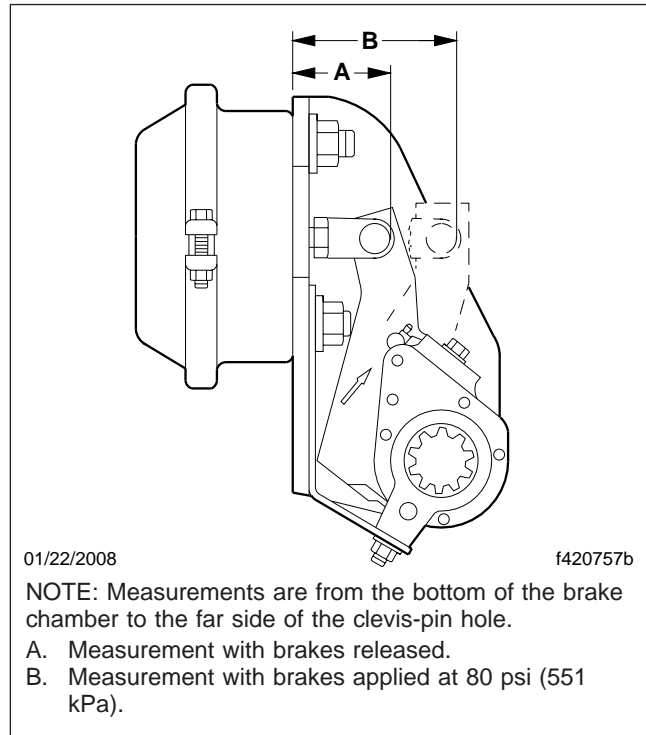


Fig. 4, Brake Applied Stroke Check

Chamber Size	Maximum Applied Stroke: inch (mm)	Free Stroke: inch (mm)	
		New Brake Installation	In-Service Brake Installation
16	1-3/4 (44)	5/8-3/4 (16-19)	1/2-5/8 (13-16)
20			
24	1-7/8 (48)		
30	2 (51)		

Table 1, Brake Chamber Stroke Specifications

Troubleshooting Tables

Problem—Tight or Dragging Brakes

Problem—Tight or Dragging Brakes	
Possible Cause	Remedy
The control arm anchor bracket is not positioned properly.	See instructions under Subject 100 .
System air pressure is too low to fully release the spring brake.	Check that the air governor cuts out at the recommended setting.
A spring brake diaphragm is ruptured or a piston seal is leaking.	Replace the diaphragm or spring brake piston seal.
A return spring in the brake chamber is broken.	Replace the spring brake return spring.
The push rod binds on the chamber housing.	Check for correct alignment and correct chamber mounting bracket. Adjust or replace parts as needed.
The air supply does not exhaust completely.	Test the air system valves for leakage and correct operation.
The brake drums are out-of-round.	Turn the brake drums, if possible. If the maximum allowable diameter of any brake drum has been exceeded, replace the drum. Also, turn or replace the other drum on the axle. For turning the drums, refer to the brake manufacturer's service manual.
Extreme differences exist in lining-to-drum clearances between shoes on the same wheel.	Check for proper operation of the brake mechanism. Lubricate or overhaul as needed.
The wheel bearings are out of adjustment.	Adjust the wheel bearings, or replace them if damaged. For instructions refer to Group 33 and Group 35 .
The brake shoe return spring is broken.	Replace the brake shoe return spring.

Problem—Brake Chamber Push Rod Travel Is Excessive

Problem—Brake Chamber Push Rod Travel Is Excessive	
Possible Cause	Remedy
The control arm anchor bracket is loose, broken, or bent.	Tighten or replace the anchor bracket as required.
There is excessive wear between the anchor bracket bolt and the control arm slot.	Replace the worn parts.
The control arm assembly is damaged or worn, resulting in lateral movement between the control arm and the cover plate.	Replace the slack adjuster.
The camshaft bushings are worn.	Replace the worn camshaft bushings.
The camshaft binds.	Lubricate the camshaft or overhaul the brake mechanism as needed.
The brake chamber mounting is loose.	Tighten the brake chamber mounting fasteners.
The slack adjuster is bound against the camshaft housing. There is no end play.	Check that the correct camshaft and camshaft tube have been used and that they are assembled correctly. Overhaul the brake mechanism as needed.

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Automatic Slack Adjuster, Haldex (SAB)

Troubleshooting

Problem—Brake Chamber Push Rod Travel Is Excessive	
Possible Cause	Remedy
The slack adjuster clutch assembly is worn.	Replace the slack adjuster.

General Description

The Meritor automatic slack adjuster has two main functions:

- As a lever, it converts the straight-line force of the brake chamber push rod to torque on the brake camshaft. Rotation of the camshaft forces the brake shoes against the brake drum.
- As an automatic adjuster, it automatically maintains brake chamber push-rod stroke, which controls lining-to-drum clearance during operation.

With an automatic slack adjuster, brakes are adjusted only when needed. As long as the push-rod stroke doesn't exceed the desired length, no adjustment takes place. Adjustment is made on the return stroke, as air is released and the forces in the gear-set are low. The force to make an adjustment comes directly from the brake shoe return spring and the brake chamber return spring.

Principles of Operation (See Fig. 1)

The externally splined end of the worm fits the internal splines on the actuator. Angled serrations on the spring-held pawl correspond with serrations on the actuator exterior. The serrations are formed to allow free upward movement of the actuator, and to lock in on the actuator serrations on a downward movement.

As the brake is applied, the brake chamber push rod, connected to the end of the clevis, moves outward, forcing the slack adjuster arm to turn on the brake camshaft centerline. The actuator rod is connected to the clevis at one end, and to a small piston at the other end. As the slack adjuster arm moves, the actuator rod is moved upward and outward, pulling the piston upward.

When lining wear becomes excessive, the brake chamber push-rod stroke goes beyond the desired length. The piston then makes contact with the retaining ring and pulls up the actuator. As the actuator moves upward and reaches a preset distance, it slides over one serration on the pawl. When the push rod moves back toward the brake chamber, the actuator is forced downward. Because the serrations in the pawl and actuator are now locked in, the actuator, following the curve of its serrations as it moves downward, turns slightly. This action causes

the worm to turn, advancing the gear and the camshaft to automatically adjust the brake.

General Information

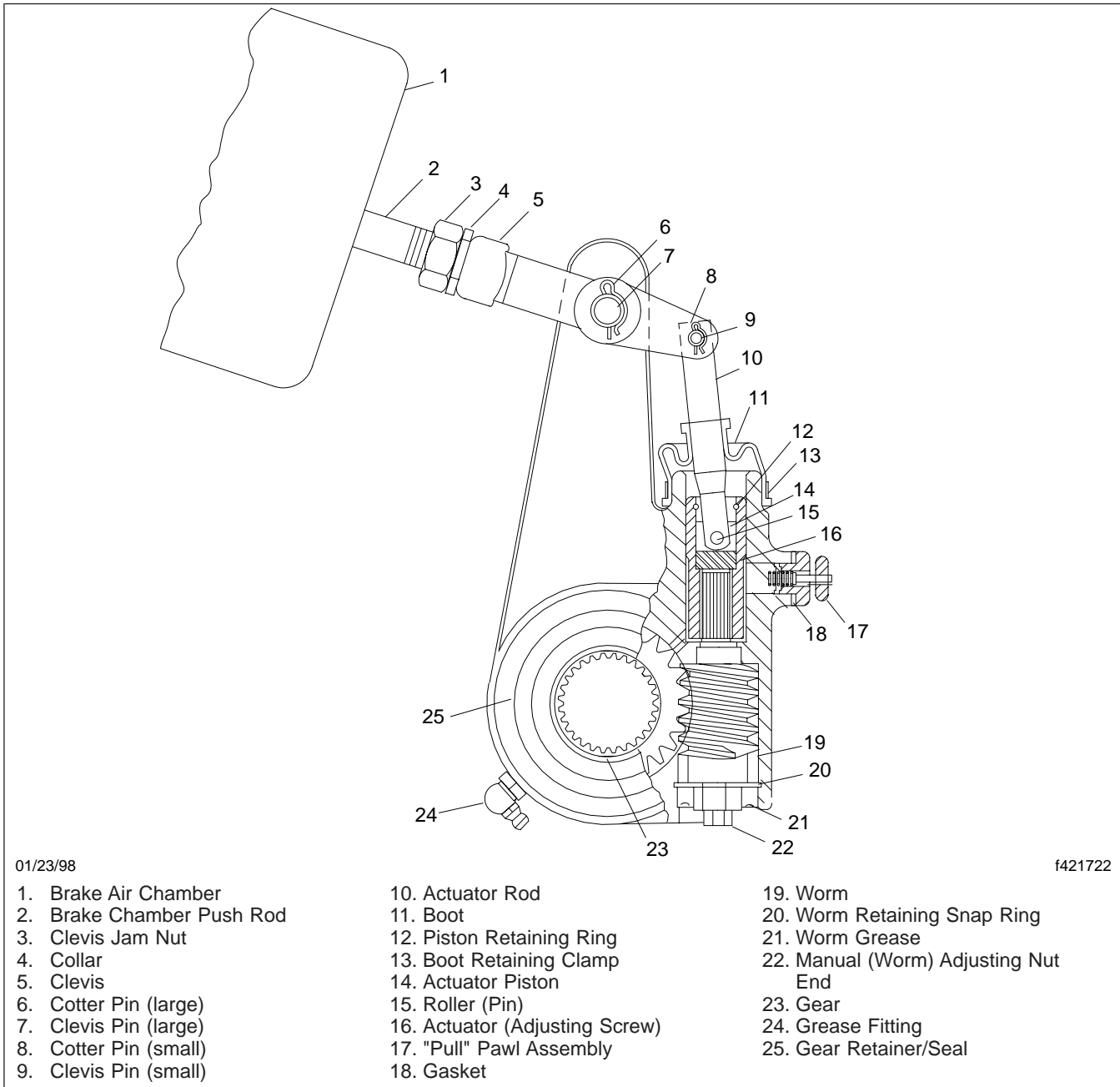


Fig. 1, Automatic Slack Adjuster (sectional view)

Slack Adjuster Removal and Installation

Removal

1. With the vehicle parked on a level surface, set the parking brakes, and shut down the engine. Chock the tires.

 **WARNING**

Manually cage each parking brake chamber power spring in the release (no application) position before continuing. Loss of brake chamber air pressure will cause sudden application of the parking brakes, which could result in personal injury.

2. If the rear slack adjusters will be removed, release the parking brakes, then cage the power spring of the parking brake chamber.
3. Remove the retainer clips from the large and small clevis pins. Remove the clevis pins. See [Fig. 1](#).

 **CAUTION**

Disengage the pull-pawl before turning the manual adjusting nut. Failure to do so could damage the pull-pawl teeth. The brake clearance will not automatically adjust if the pull-pawl is damaged.

4. Using a screwdriver or an equivalent tool, pry the pawl button out about 1/32 inch (0.8 mm). See [Fig. 2](#).
Wedge the tool in place. Pull-pawls are spring-loaded; when the tool is removed, the pull-pawl will engage the teeth automatically.
5. Using a wrench, manually turn the square adjusting nut clockwise to move the slack adjuster away from the clevis. See [Fig. 3](#).
6. Remove the snap ring, washer(s), and seal (if equipped) that secure the slack adjuster in place on the brake camshaft; save them for later installation.
7. Remove the slack adjuster from the camshaft.
8. Note the location and number of any remaining spacing washers on the camshaft. Remove the spacers and seal (LX500 and MX500 series only), and save them for later installation.

Installation

NOTE: For brake chambers that have pushrods with threaded clevises, measure the pushrod length before installing the new slack adjuster. With the brakes fully released, and no air pressure to the chamber, check the dimension between the chamber face and the centerline of the 1/2 inch clevis pin hole. It should be 2.25 inches (57 mm) for long stroke chambers, and 2.75 inches (70 mm) for standard stroke chambers.

1. Inspect the parts and prepare the slack adjuster for installation.
2. Check the brake camshaft splines for wear or corrosion.

IMPORTANT: The following lubricants provide corrosion protection. Do not mix them with other types of lubricants.

3. Coat the camshaft splines and the splines of the slack adjuster gear with Meritor 0-637, Meritor 0-695 (LX500 and MX500 only), Southwest SA 8249496, or an equivalent.
4. Apply the service brake several times. Make sure the return spring retracts the pushrod quickly and completely. Replace the return spring or brake chamber, if needed.
5. Slide the spacing washer(s) on the camshaft.
On LX500 and MX500, install the slack adjuster seal with the lip facing the brake spider.
6. If reinstalling the same slack adjuster:
 - 6.1 Slide the slack adjuster on the camshaft, with the actuator rod on the side opposite the brake chamber.
 - 6.2 On LX500 and MX500, install the orange slack adjuster seal on the camshaft. The lip on the seal must face the snap ring.
 - 6.3 Install the outer washer(s) and snap ring on the camshaft.

 **CAUTION**

Disengage the pull-pawl before turning the manual adjusting nut. Failure to do so could

Slack Adjuster Removal and Installation

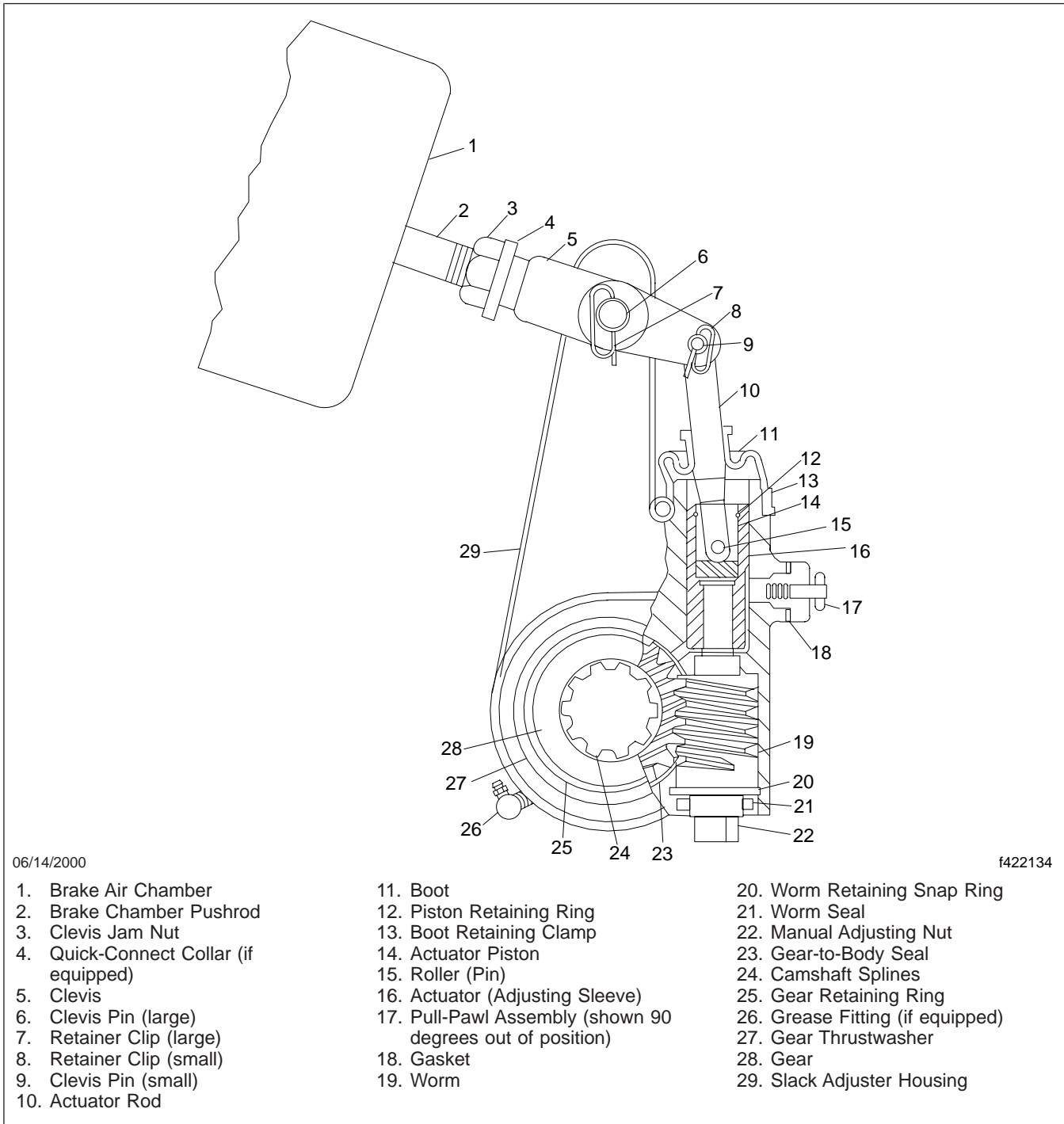


Fig. 1, Meritor Automatic Slack Adjuster