

Subject: SISU Axles Rear Drive Axle Slack Adjusters

Models Affected: Specific Western Star 4900 and 6900 vehicles manufactured between January 2005 and January 2007 with certain SISU rear drive axles.

General Information

Daimler Trucks North America LLC, on behalf of its wholly owned subsidiary, Western Star Truck Sales, Inc., has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

There are approximately 90 vehicles involved in this campaign.

Certain slack adjusters on SISU rear drive axles may have been machined with a counter-bore in the slack adjuster housing that reduced the material thickness between the worm wheel opening and the worm shaft opening. Under normal service, a crack may develop in this area, rendering the slack adjuster inoperable and reducing brake effectiveness. Reduced brake effectiveness may result in a possible a vehicle crash.

Affected slack adjusters will be replaced.

Additional Repairs

Dealers must complete all outstanding recall and field service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from its failure to complete campaigns within a reasonable time after receiving notification.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR260).

Replacement Parts

If our records show your dealership has ordered any vehicles involved in campaign number FL518A-C, a list of the customers and vehicle identification numbers will be available on AccessFreightliner.com. Please refer to this list and ServicePro when ordering parts for this recall.

Replacement kits are now available and can be obtained by ordering the appropriate kit number(s) listed in **Table 1** directly from Fabco Automotive Corporation. Kits will be shipped at no charge to the dealership.

IMPORTANT: Advance arrangements are required for this recall. Replacement parts must be ordered in advance and on hand before scheduling a vehicle this for recall.

Ordering Instructions

- Submit a "Zero Cost Purchase Order" by e-mail to Sales@FabcoAutomotive.com or by fax to (925) 454-9501.
- List the VIN or vehicle serial number.
- List the recall kit numbers and quantity of each needed (refer to the list below).
- Include the shipping address and any individual contact information needed.
- On the Purchase Order, note that the order is for DTNA Recall FL518.

Recall Campaign

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NOTE: Fabco will ship kits pre-paid ground freight.

The following kit combinations are needed for each group of vehicles in this recall:

- FL518A (76 vehicles)
 - 1 kit - 25-FL518-000
 - 1 kit - 25-FL518-001
 - 1 kit - 25-FL518-002
 - 1 kit - 25-FL518-003
- FL518B (7 vehicles)
 - 3 kits - 25-FL518-000
 - 3 kits - 25-FL518-001
- FL518C (4 vehicles)
 - 2 kits - 25-FL518-000
 - 2 kits - 25-FL518-001

Table 1 - Replacement Parts for FL518

NOTE: See the list above for the kits and quantities needed for each repair.

Campaign Number	Kit Number	Part Description	Part Number	Qty. per Kit
FL518 A, B, C	25-FL518-000	RH Slack Adjuster	SIS 546 530 3112	1 ea
		Completion Sticker	WAR260	1 ea
FL518 A, B, C	25-FL518-001	LH Slack Adjuster	SIS 546 530 3122	1 ea
		Completion Sticker	WAR260	1 ea
FL518 A	25-FL518-002	RH Slack Adjuster	SIS 546 530 2012	1 ea
		Completion Sticker	WAR260	1 ea
FL518 A	25-FL518-003	LH Slack Adjuster	SIS 546 530 2022	1 ea
		Completion Sticker	WAR260	1 ea

Table 1

Removed Parts

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Damage Code
FL518 A and C	Replace 4 slack adjusters - tandem axles	9.4	996-0743B	000-Modifiedx
FL518 B	Replace 6 slack adjusters - tridem axles	14.1	996-0743C	000-Modifiedx

Table 2

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IMPORTANT: When the recall has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the red completion sticker provided in the recall kit (Form WAR260). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a recall kit is not required or there is no completion sticker in the kit, write the recall number on a blank sticker and attach it to the base completion label.

Claims for Credit

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in QuickClaim®:

- Claim type is **Recall**.
- In the FTL Authorization field, enter the campaign number and appropriate condition code (e.g. **FL518A, FL518B, etc.**).
- In the Primary Failed Part Number field, enter **25-FL518-000**.
- **Replacement parts will not be included on claims.** They will be shipped directly from the supplier at no charge. Order kits using the instructions in the Replacement Parts section above. Advance arrangements are required for this recall. Replacement parts must be at the dealership before scheduling a vehicle for the recall.
- **Handling Allowance.** An allowance for normal handling on the replacement parts may be included on claims. In the Parts section of the claim, list "ZZ Handling" and the appropriate amount below:
 - FL518 A and C – \$304.56
 - FL518 B – \$456.84
- In the Labor field, first enter the appropriate SRT from the Labor Allowance Table. For administrative time, enter SRT 939-0010A for 0.3 hours.
- **Reimbursement for Prior Repairs.** When a customer asks about reimbursement, please do the following.
 - Accept the documentation of the previous repair.
 - Make a brief check of the customer's paperwork to see if the repair may be eligible for reimbursement. (See the "Copy of Owner Letter" section of this bulletin for reimbursement guidelines for this recall.)
 - Contact the Warranty Campaigns Department for a decision and authorization number.
 - Include the approved amount on your claim in sublet/outside purchases.
 - In the claim story, first note the authorization number and that the claim includes a reimbursement request.
 - Retain the documentation and provide it to Warranty Campaigns or Claims Processing if requested.
 - When your claim is paid, reimburse the customer the appropriate amount.

IMPORTANT: ServicePro® must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

Contact the Warranty Campaigns Department at (800) 547-0712, from 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, Web inquiry at AccessFreightliner.com / Support / Submit an Inquiry, or the Customer Assistance Center at (800) 385-4357, after normal business hours, if you have any questions or need additional information.

To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number.

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The letter notifying vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Also, any lessor is required to send a copy of the recall notification to the lessee within 10 days.

Copy of Letter to Owner

Subject: SISU Axles Rear Drive Axle Slack Adjusters

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. This notice is also sent in accordance with the Canadian Motor Vehicles Safety Act.

Daimler Trucks North America LLC, on behalf of its wholly owned subsidiary, Western Star Truck Sales, Inc., has decided that a defect which relates to motor vehicle safety exists on specific Western Star 4900 and 6900 vehicles manufactured between January 2005 and January 2007 with certain SISU rear drive axles.

Certain slack adjusters on SISU rear drive axles may have been machined with a counter-bore in the slack adjuster housing that reduced the material thickness between the worm wheel opening and the worm shaft opening. Under normal service, a crack may develop in this area, rendering the slack adjuster inoperable and reducing brake effectiveness. Reduced brake effectiveness may result in a possible a vehicle crash.

Affected slack adjusters will be replaced.

Parts are now available for authorized dealers to order. Advance arrangements are needed for this recall. Contact your authorized dealer to arrange to have the your vehicle(s) modified and to have parts ordered prior to your arrival at the dealership. To locate a dealer, search online at www.WesternStarTrucks.com or contact the Warranty Campaigns Department for assistance.

When you contact your dealer, refer to campaign number **FL518A-C**. Once parts are received at the dealership, the Recall will take between approximately 10 and 15 hours depending on the work needed and will be performed at no charge to you.

IMPORTANT: When the Recall has been completed, please ensure that a label has been affixed to your vehicle referencing **FL518A-C**.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Campaigns Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days. If you are a subsequent stage manufacturer, Federal law requires that you forward this notice to your distributors and retail outlets within five working days. If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. Please see the reverse side of this notice for details.

If you are not able to have the defect remedied without charge and within a reasonable time, which is not longer than 60 days after you tender the vehicle for repair, please contact the Warranty Campaigns Department at (800) 547-0712, 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, e-mail address WarrantyCampaigns@freightliner.com, or the Customer Assistance Center at (800) FTL-HELP or (800) STL-HELP, after normal business hours. You may also wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 327-4236 (TTY: 800-424-9153); or to <http://www.safercar.gov>. If your vehicle is involved in the Canadian portion, you may wish to notify Transport Canada, ASFAD, Place de Ville Tower C, 330 Sparks Street, Ottawa, ON K1A 0N5, or phone (800) 333-0510.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

Recall Campaign

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Reimbursement to Customers for Repairs Performed Prior to Recall

If you have already **paid** to have this recall condition corrected you may be eligible to receive reimbursement.

Requests for reimbursement may include parts and labor. Reimbursement may be limited to the amount the repair would have cost if completed by an authorized Freightliner LLC dealer. The following documentation must be presented to your dealer for consideration for reimbursement.

Please provide original or clear copies of all receipts, invoices, and repair orders that show:

- The name and address of the person who paid for the repair.
- The Vehicle Identification Number (VIN) of the vehicle that was repaired.
- What problem occurred, what repair was done, when the repair was done.
- Who repaired the vehicle.
- The total cost of the repair expense that is being claimed.
- Proof of payment for the repair (such as the front and back of a cancelled check or a credit card receipt).

Reimbursement will be made by check from your Freightliner LLC dealer.

Please speak with your Freightliner LLC authorized dealer concerning this matter.

Work Instructions

Subject: SISU Axles Rear Drive Axle Slack Adjusters

Models Affected: Specific Western Star 4900 and 6900 vehicles manufactured between January 2005 and January 2007 with certain SISU rear drive axles.

Recall Kit Ordering Instructions

- Submit a "Zero Cost Purchase Order" by e-mail to Sales@FabcoAutomotive.com or by fax to (925) 454-9501.
- List the VIN or vehicle serial number.
- List the recall kit numbers and quantity of each needed (refer to the list below).
- Include the shipping address and any individual contact information needed.
- On the Purchase Order, note that the order is for DTNA Recall FL518.

NOTE: Fabco will ship kits pre-paid ground freight.

Kit Combinations and Quantities by Recall Group

- FL518A (76 vehicles)
 - 1 kit - 25-FL518-000
 - 1 kit - 25-FL518-001
 - 1 kit - 25-FL518-002
 - 1 kit - 25-FL518-003
- FL518B (7 vehicles)
 - 3 kits - 25-FL518-000
 - 3 kits - 25-FL518-001
- FL518C (4 vehicles)
 - 2 kits - 25-FL518-000
 - 2 kits - 25-FL518-001

Slack Adjuster Replacement

NOTE: This procedure should be performed by two people. There are different configurations for the forward rear axle and the rear rear axle, but the procedure is the same for both. The figures shown are of the rear rear axle.

1. Check the base label (Form WAR259) for a completion sticker for FL518 (Form WAR260) indicating this work has been done. The base label is usually located on the passenger-side door about 12 inches (30 cm) below the door latch. If a sticker for FL518 is present, nothing further needs to be done. If no sticker is present, go to the next step.
2. Park the vehicle on a level surface. Shut down the engine, set the parking brake, and chock the tires.

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3. Release the parking brakes and cage the power spring of the parking brake chamber for each axle end that will be worked on. See "Manual Compression (Parking Brake Release)" below for the complete procedure.
4. Raise the axle end to be worked on and secure it on a jackstand.
5. Remove the tires and wheels.
6. Remove the brake drum.
7. Remove the cotter pin from the clevis pin that connects the brake chamber pushrod to the slack adjuster. Remove the clevis pin. See Fig. 1.
8. Remove the nut from the anchor bracket.
9. Remove the snap ring that holds the slack adjuster to the camshaft. See Fig. 2.

CAUTION

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

10. Turn the adjusting hexnut counterclockwise to move the adjuster arm out of the clevis.
11. Spread the brake shoes enough to remove any pressure on the S-cam.

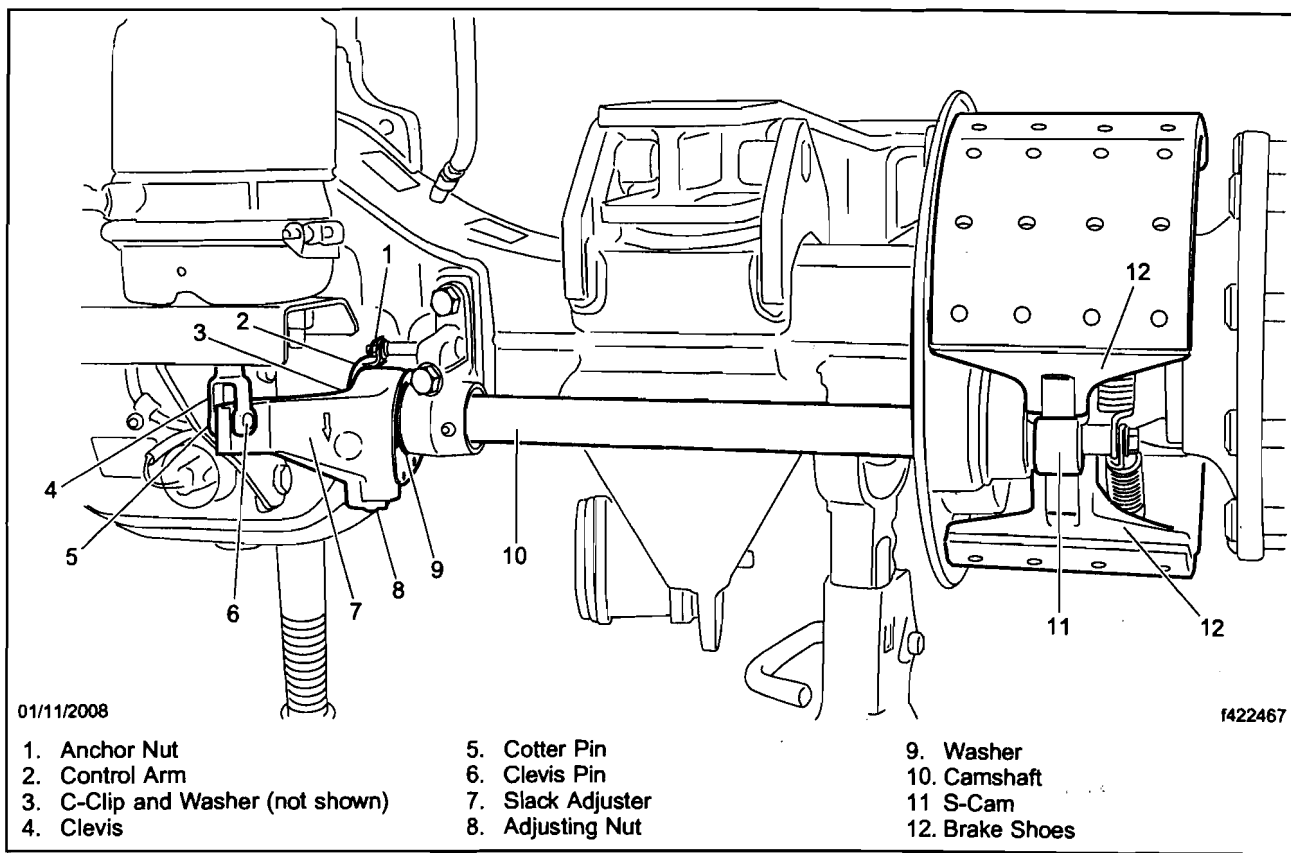


Fig. 1, Slack Adjuster and Camshaft Installation

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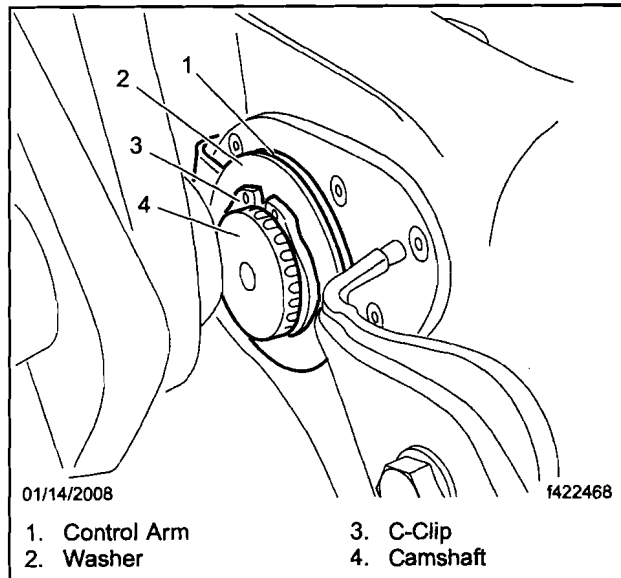


Fig. 2, C-Clip Installation

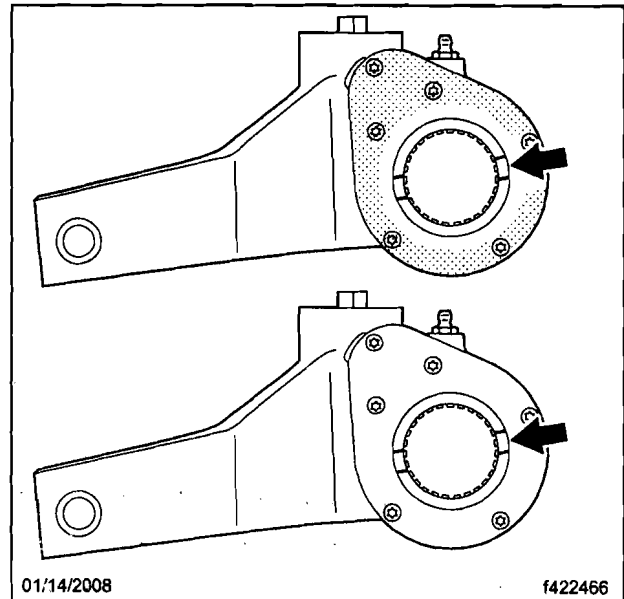


Fig. 3, Aligning the Adjusting Tangs

12. While one person holds the slack adjuster, slide the camshaft out until it is clear of the slack adjuster; approximately 2.5 inches (65 mm).
13. Remove the slack adjuster.
14. On the new slack adjuster, position the adjusting tangs to the same position as on the slack adjuster that was removed. See Fig. 3.
15. Check that the brake-chamber pushrod is fully retracted.
16. Apply antiseize compound to the camshaft splines.
17. Place the inner washer on the end of the camshaft.
- IMPORTANT: When correctly installed, the brake-chamber pushrod pushes in the direction of the arrow on the slack adjuster housing.
18. Position the slack adjuster with the adjusting hexnut pointing away from the brake chamber, and slide the camshaft back into the slack adjuster.
19. Install the control arm and the outer washer on the camshaft. Start the nut on the anchor bracket, but do not tighten it at this time.
20. Install the snap ring on the camshaft.
21. Tighten the nut on the anchor bracket.
22. Install the brake drum.

IMPORTANT: The brake drums have two notches in the perimeter designed to make space for the valve stem. Be sure to align the valve stems with one of these notches.

23. Install the tires and wheels. Tighten wheel nuts 450 to 500 lbf-ft (610 to 680 N·m). See **Section 40.00, Subject 110** of the *Western Star Workshop Manual* for complete wheel mounting instructions.

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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.

24. Turn the adjusting hexnut clockwise until the slack adjuster hole is aligned with the pushrod clevis hole. See Fig. 2.
25. Apply antiseize compound to the clevis pin and insert the pin in the clevis hole. Do not install the cotter pin at this time.
26. 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 1/4 turn.

WARNING

Always use 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.

27. Install and lock a new cotter pin in the clevis pin.
28. Manually uncage the parking brake. See "Manual Reset (Parking Brake Reset)" below for the complete procedure.

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 stroke is the distance the slack adjuster has to travel to move the brake shoes against the drum. 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.

29. Measure the applied stroke.

- 29.1 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.
- 29.2 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.
- 29.3 Subtract measurement A from measurement B to determine the applied stroke. Compare this value to the value in Table 3.
- 29.4 If it is not in this range, refer to the appropriate **Troubleshooting** subject in the *Western Star Workshop Manual*.

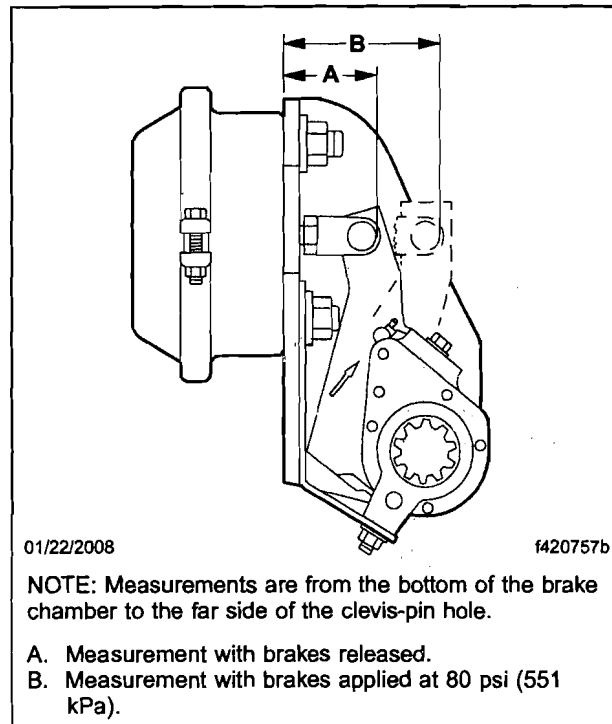


Fig. 4, Brake Applied Stroke Check

MGM Magnum Performance Plus Brake Chamber Stroke				
Chamber Size	Diaphragm OD: in (mm)	Rated Stroke: in (mm)	Maximum Stroke	Recommended Stroke: in (mm)
20	6.5 (165)	3.0 (76)	As short as possible w/out brakes dragging.	2.5 (64)
24	7 (175)			
30	8 (200)			
36	9 (230)			

Table 3, MGM Magnum Performance Plus Brake Chamber Stroke

30. Measure the free stroke.

- 30.1 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.
- 30.2 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.
- 30.3 Subtract measurement A from measurement B to determine the free stroke. The free stroke should be 3/8 to 3/4 inch (10 to 19 mm). If it is not in this range, refer to the appropriate **Troubleshooting** subject in the *Western Star Workshop Manual*.

31. Repeat the above procedure for each slack adjuster that is to be replaced.

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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.

32. Remove the chocks from the tires.
33. In a safe area, check for proper brake operation.
 - 33.1 Apply and release the brakes several times to check for correct operation of the slack adjusters.
 - 33.2 Perform six low-speed stops to ensure correct parts replacement and full vehicle control.
 - 33.3 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.
34. Clean a spot on the base label (Form WAR259) and attach a completion sticker for FL518 (Form WAR260).

Manual Compression (Parking Brake Release)

MGM MAGNUM Performance Plus brake chambers have an integral, dual-thread, release bolt which reduces the travel of the release bolt by a factor of 2.4. For instance, in a 3-inch (76 mm) stroke unit, the parking spring is fully caged when the release bolt is extended approximately 1.3 inches (33 mm) from the normal operating position. See Fig. 5.

WARNING

Do not exceed this length, and do not exceed 50 lbf-ft (68 N-m) torque on the release bolt at any time or damage may occur which could prevent any further correct manual release of the spring brake chamber.

1. Make sure the tires are properly chocked.
2. Release the parking brakes.

DANGER

Do not attempt to cage the power spring if the parking brake chamber is damaged severely enough to lose its structural integrity. If the power spring were to break loose, it could result in death, severe personal injury, or property damage.

A DAMAGED PARKING BRAKE CHAMBER IS EXTREMELY DANGEROUS! Only qualified service personnel should attempt to remove and disarm a damaged chamber. Using a torch, burn off the piston rod in the space between the clevis and the base of the service chamber.

Remove the chamber carefully from its bracket, and disarm it inside a suitable container. For disarming procedures, consult the MGM service manual.

3. Manually release the parking brake (cage the power spring).
 - 3.1 Apply at least 90 psi (620 kPa) air pressure to the parking brake inlet port (set parking brake in the "release" position).
 - 3.2 Using a 3/4-inch (19 mm) socket wrench (*do not use an impact wrench*), turn the integral release bolt counterclockwise until the power spring is fully caged or compressed. Full cage position requires approximately 22 to 23 turns for 3-inch (76 mm) stroke units. See Fig. 6.
4. Once the power spring has been caged, exhaust the compressed air from the parking brake.

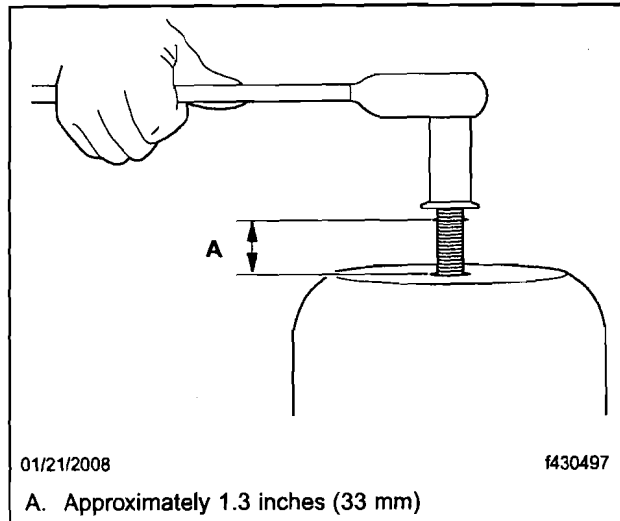


Fig. 5, Release Bolt Fully Extended

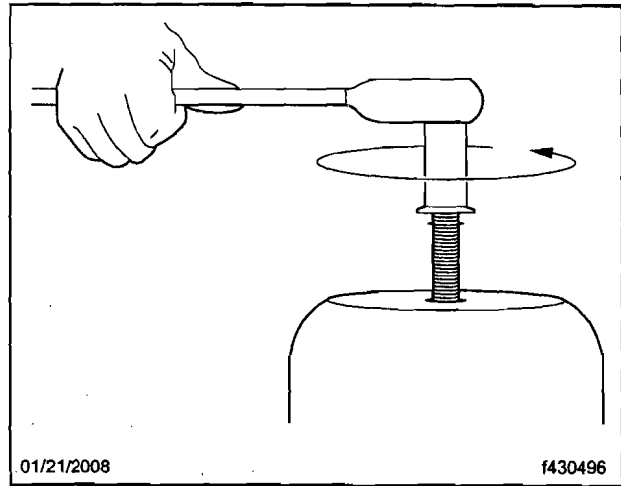


Fig. 6, Release Bolt

Manual Reset (Parking Brake Reset)

1. Apply at least 90 psi (620 kPa) air pressure to the parking brake inlet port (set the parking brake in the "release" position).

NOTE: When the release bolt is properly seated against the head insert, and tightened 35 to 45 lbf-ft (47 to 61 N·m), it ensures that the parking brake will have full stroke capability, and it seals the release bolt threads, keeping out contaminants.

2. Using a 3/4-inch (19 mm) socket wrench (*do not use an impact wrench*), turn the integral release bolt clockwise until the bolt is fully seated in the unit. Tightened 35 to 45 lbf-ft (47 to 61 N·m).
3. Set the parking brakes.