

June 2016
FL705A
NHTSA #16V-206
Transport Canada #16-176

Subject: Bendix Rear Brake Calipers

Models Affected: Specific Freightliner 108SD, 114SD, Business Class M2, and Columbia vehicles manufactured January 6, 2010, through February 29, 2016, equipped with Bendix rear brake calipers.

General Information

Daimler Trucks North America LLC, on behalf of its Freightliner Trucks Division, has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

There are approximately 747 vehicles involved in this campaign.

On certain vehicles, the rear disc brake calipers may contact the spring suspension due to incorrect caliper orientation. This may result in uneven wear of the brake pads, extended stopping distance, and reduced brake effectiveness, which could lead to a vehicle crash.

The rear disc brake calipers will be inspected for incorrect orientation, and repaired as required.

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 available for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be available for any progressive damage that results from 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

Replacement parts are now available and can be obtained by ordering the part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicles involved in campaign number FL705A, a list of the customers and vehicle identification numbers will be available in OWL. Please refer to this list when ordering parts for this recall.

Table 1 - Replacement Parts for FL705A

Campaign Number	Part Number	Part Description	Qty. per Vehicle
FL705A	23-13315-110	SCREW HX, SCKTHD, M16-2X110, 12.9	12 ea
	Per PartsPro (Caliper replacement expected on less than 10% of vehicles)	REAR BRAKE CALIPERS	2 ea

Table 1

Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

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Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL705A	Inspect rear brake calipers	0.2	996-0978A	06-Inspect
	Inspect and swap rear brake caliper	2.5	996-0978B	12-Repair Recall/Campaign
	Inspect and replace rear brake caliper (expected to be less than 10% of vehicles)	4.4	996-0978C	12-Repair Recall/Campaign

Table 2

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 (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim type is **Recall Campaign**.
- In the Campaign field, enter the campaign number and appropriate group (**FL705-A**).
- In the Primary Failed Part field, enter **25-FL705-000**.
- In the Parts section, enter the appropriate part number(s) as shown in the Replacement Parts Table or PartsPro if caliper replacement is required (expected to be less than 10% of vehicles).
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours.
- The VMRS Component Code is **013-001-028** and the Cause Code is **A1 - Campaign**.
- **U.S. and Canada -- 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.)
 - Submit an OWL Recall Pre-Approval Request for a decision.
 - Attach the documentation to the pre-approval request.
 - If approved, submit a based on claim for the pre-approval.
 - Reimburse the customer the appropriate amount.

IMPORTANT: OWL 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.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department from 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, via Web inquiry at AccessFreightliner.com / Support / My Tickets

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and 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. Export distributors, submit a Web inquiry or contact your International Service Manager.

U.S. and Canadian Dealers: 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. Export Distributors: Excess inventory is not returnable.

The letter notifying U.S. and Canadian 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. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

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Copy of Notice to Owners

Subject: Bendix Rear Brake Calipers

For the Notice to U.S. Customers: This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. **For the Notice to Canadian Customers:** This notice is sent to you in accordance with the Canadian Motor Vehicle Safety Act.

Daimler Trucks North America LLC, on behalf of its Freightliner Trucks Division, has decided that a defect that relates to motor vehicle safety exists on specific Freightliner 108SD, 114SD, Business Class M2, and Columbia vehicles manufactured January 6, 2010, through February 29, 2016, equipped with Bendix rear brake calipers.

On certain vehicles, the rear disc brake calipers may contact the spring suspension due to incorrect caliper orientation. This may result in uneven wear of the brake pads, extended stopping distance, and reduced brake effectiveness which could lead to a vehicle crash.

The rear disc brake calipers will be inspected for incorrect orientation, and repaired as required.

Please contact an authorized Daimler Trucks North America dealer to arrange to have the Recall performed and to ensure that parts are available at the dealership. To locate an authorized dealer, search online at www.Daimler-TrucksNorthAmerica.com / Contact Us / Find a Dealer. The Recall will take approximately two to four hours and will be performed at no charge to you.

You may be liable for any progressive damage that results from your failure to complete the Recall within a reasonable time after receiving notification.

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.

For the Notice to U.S. Customers: If you have questions about this Recall, 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 DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357 after normal business hours. If you are not able to have the defect remedied without charge and within a reasonable time, you may 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>. **For the Notice to Canadian Customers:** If you have questions about this Recall, 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 DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357 after normal business hours.

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

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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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 Daimler Trucks North America 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 Daimler Trucks North America LLC dealer.

Please speak with your Daimler Trucks North America LLC authorized dealer concerning this matter.

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Work Instructions

Subject: Bendix Rear Brake Calipers

Models Affected: Specific Freightliner 108SD, 114SD, Business Class M2, and Columbia vehicles manufactured January 6, 2010, through February 29, 2016, equipped with Bendix rear brake calipers.

Safety Precautions

General Safety Precautions

When working on or around brake systems and components, observe the following precautions. • Wear protective equipment (safety goggles, ear and respiratory protection, etc.). • Do not use compressed air or other high-pressure devices when cleaning the brake or vehicle. Doing so could cause personal injury, as well as damage to rubber components of the brake. • Perform a final roller stand test after completing repairs. If a roller test stand is not available, conduct a test drive with brake application tests. • Do not perform full braking (with the exception of emergency braking) during the first 31 miles (50 km) after new brake pads are installed. Avoid continuous braking over longer periods. Ensure that the driver of the vehicle is informed.

Asbestos and Non-Asbestos Safety

WARNING

Wear a respirator at all times when servicing the brakes, starting with the removal of the wheels and continuing through assembly. Breathing brake lining dust (asbestos or non-asbestos) could cause lung cancer or lung disease. Occupational Safety and Health Administration (OSHA) has set maximum levels of exposure and requires workers to wear an air purifying respirator approved by Mining Safety and Health Administration (MSHA) or National Institute for Occupational Safety and Health (NIOSH).

Because some brake linings contain asbestos, you should know the potential hazards of asbestos and the precautions to be taken. Exposure to airborne asbestos brake lining dust can cause serious and possibly fatal diseases such as asbestosis (a chronic lung disease) and cancer.

Because medical experts believe that long-term exposure to some non-asbestos fibers could also be a health hazard, the following precautions should also be observed if servicing non-asbestos brake linings.

Areas where brake work is done should be separate from other operations, if possible. As required by OSHA regulations, the entrance to the areas should have a sign displayed indicating the health hazard.

During brake servicing, an air purifying respirator with high-efficiency filters must be worn. The respirator and filter must be approved by MSHA or NIOSH, and worn during all procedures.

OSHA recommends that enclosed cylinders equipped with vacuums and high-efficiency particulate air (HEPA) filters be used during brake repairs. Under this system, the entire brake assembly is placed within the cylinder and the mechanic works on the brake through sleeves attached to the cylinder. Compressed air is blown into the cylinder to clean the assembly, and the dirty air is then removed from the cylinder by the vacuum.

If such an enclosed system is not available, the brake assembly must be cleaned in the open air. During disassembly, carefully place all parts on the floor to minimize creating airborne dust. Using an industrial vacuum cleaner with a HEPA filter system, remove dust from the brake drums, brake backing plates, and brake parts. After vacuuming, any remaining dust should be removed using a rag soaked in water and wrung until nearly dry. Do not use compressed air or dry brushing to clean the brake assembly.

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If grinding or other machining of the brake linings is necessary, other precautions must be taken because exposure to asbestos dust is highest during such operations. In addition to the use of an approved respirator, there must be local exhaust ventilation such that worker exposure is kept as low as possible.

Work areas should be cleaned by industrial vacuums with HEPA filters or by wet wiping. Compressed air or dry sweeping should never be used for cleaning. Asbestos-containing waste, such as dirty rags, should be sealed, labeled, and disposed of as required by EPA and OSHA regulations. Respirators should be used when emptying vacuum cleaners and handling asbestos waste products.

Workers should wash before eating, drinking, or smoking, should shower after work, and should not wear work clothes home. Work clothes should be vacuumed after use and then laundered, without shaking, to prevent the release of asbestos fibers into the air.

Inspect Rear Brake Calipers

1. Check the base label (Form WAR259) for a completion sticker for FL705 (Form WAR260) indicating this work has been completed. The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a completion sticker is present, no work is needed. If a completion sticker is not present, proceed to the next step.
2. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
3. Inspect the rear disc brake calipers for proper installation. Correctly installed calipers will have the fixed pin positioned at the bottom of the caliper. See [Fig. 1](#).

If the calipers are not installed correctly, go to the step 4.

If the calipers are installed correctly, no further work is needed. Clean a spot on the base label (Form WAR259). Write the campaign number, FL705, on a blank red completion sticker (Form WAR260), to indicate the work has been completed, and attach it to the base label.

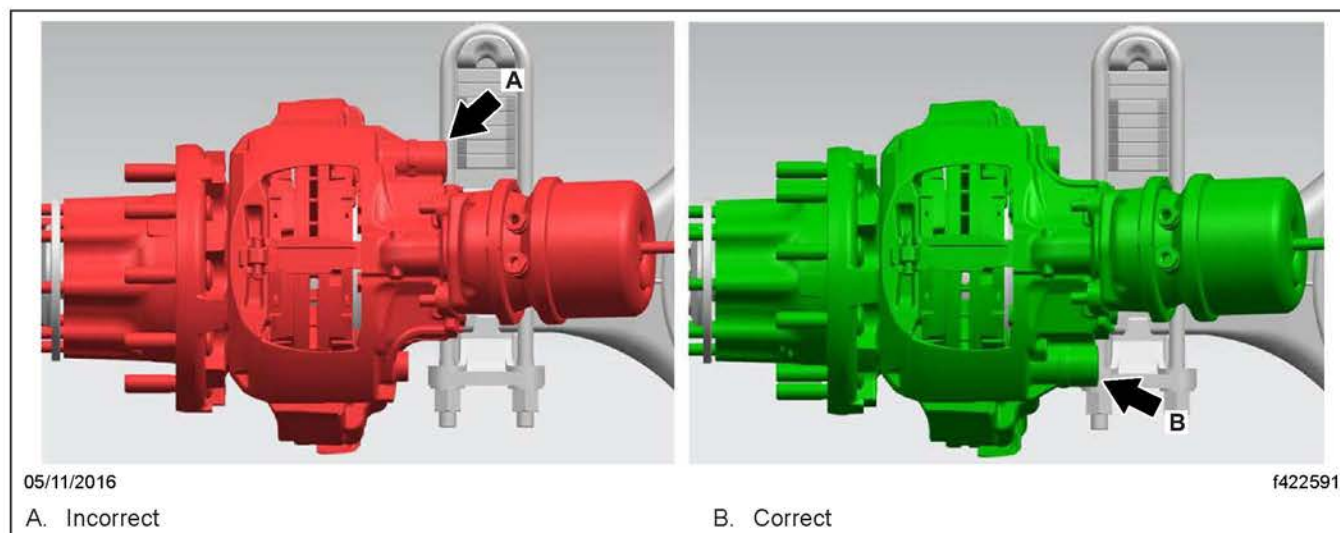


Fig. 1, Inspecting the Caliper Installation

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4. On each axle end, inspect the spring and caliper for evidence of contact. See [Fig. 2](#), [Fig. 3](#), and [Fig. 4](#).

If there is no evidence of contact between the caliper and spring, go to "Caliper Orientation Procedure" on page 9.

If there is evidence of contact between a caliper and the spring, submit an OWL Recall pre-approval. Describe the damage and attach a photo(s) showing caliper to spring contact.

If approved, proceed with "Caliper Replacement Procedure" on page 12.

If denied, proceed with "Caliper Orientation Procedure" on page 9.



Fig. 2, Contact Area



Fig. 3, Contact Area

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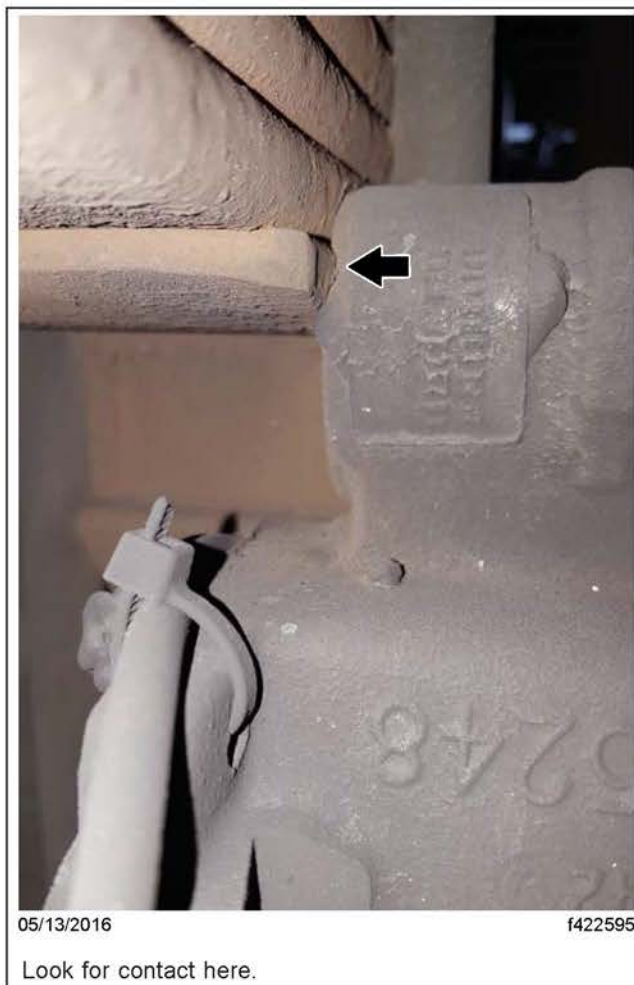


Fig. 4, Contact Area

Caliper Orientation Procedure

1. Drain all the air pressure from the air brake system.
2. Raise the back of the vehicle and support it with jack stands.
3. Remove the wheels.

WARNING

When work is being done on the spring chamber, carefully follow the service instructions of the chamber manufacturer. The sudden release of a compressed spring can cause serious personal injury or death.

4. Cage the rear brake chambers so that the springs cannot actuate during disassembly.
5. Disconnect the supply and return air lines from the brake chamber.
6. Back off the manual brake adjuster 1/4 turn and remove the brake caliper assembly.

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7. Remove the brake pads.

NOTE: The brake assemblies are left and right handed.

8. Switch the brake caliper assemblies from one side of the vehicle to the other. Hand tighten the bolts.

9. Slide the caliper inboard and outboard. If the caliper does not slide with the mounting bolts loose, replace the brake caliper assembly. Follow the procedure in "Caliper Replacement" on page 12. Reference PartsPro to find the necessary part numbers.

If the caliper slides freely continue with the procedure.

10. Align each caliper with the rotor by pushing the fixed pin side of the caliper against the shelf on the torque plate. See **Fig. 5**.

NOTE: The tightening pattern will always start on the short (floating) pin side, with the bolt that passes through the sheer sleeve.

11. Tighten the carrier mounting bolts in two steps, using the pattern shown in **Fig. 5**. Initially tighten all six bolts 40 to 50 lbf-ft (54 to 68 N·m). Perform the final torque spec of 180 to 200 lbf-ft (244 to 271 N·m).

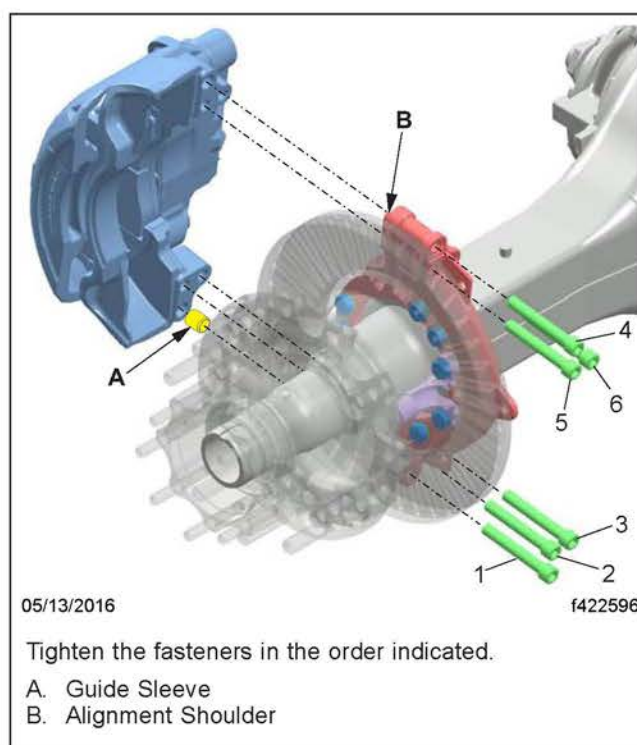


Fig. 5, Tightening Pattern

12. Slide the caliper inboard and outboard, through the center of the chamber or brake. The caliper must have a minimum of 20 mm of travel. If the brake caliper assembly does not move, or requires more than 40 pounds of force to move, the caliper has a binding issue. Inspect the slide and replace the caliper as necessary. Follow the procedure in "Caliper Replacement" on page 12. Use PartsPro to find the necessary part numbers.

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NOTICE

Do not use a motor driven tool to tighten the manual brake adjuster nut, or use excessive force to tighten the nut. Doing so could damage the manual brake adjuster nut.

13. Install the brake pads.

- 13.1 Using a 0.047 inch (1.2 mm) feeler gauge, adjust the clearance. See the arrow in [Fig. 6](#). Insert the feeler gauge between the brake pad of the rim side and the brake caliper.

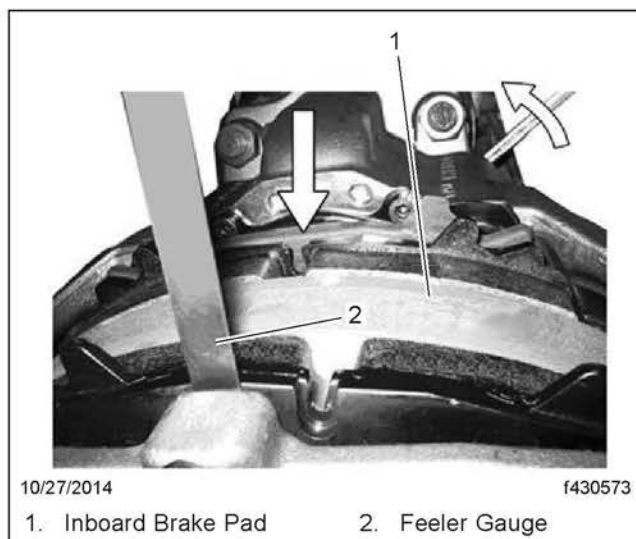


Fig. 6, Adjusting the Clearance

- 13.2 Tighten the manual brake adjuster nut until both brake pads bear on the brake disc and there is some resistance on the feeler gauge.
- 13.3 Remove the feeler gauge.
14. Install the air lines on the brake chambers. Make certain the brake hoses are not twisted and do not rub against other components.
15. Uncage the brake chambers.
16. Install the wheels. For instructions, refer to **Group 40** of the vehicle's workshop manual.
17. Lower the vehicle.
18. Charge the air system and check for leaks.

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.

19. In a safe area, check for proper brake operation, as follows, before you put the vehicle in service.
- 19.1 Apply and release the brakes several times to check for air leaks and proper operation.
- 19.2 Perform six low-speed stops to ensure proper parts replacement and full vehicle control.
- 19.3 Immediately after doing the above stops, check the rotor temperatures. Any rotors that are significantly cooler than others show a lack of braking effort on those wheels.
20. Clean a spot on the base label (Form WAR259). Write the campaign number, FL705, on a blank red completion sticker (Form WAR260) to indicate the work has been completed and attach it to the base label.

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Caliper Replacement

If a caliper is found damaged during the inspection, or if it is not functioning correctly while performing the "Caliper Orientation Procedure", replace it as follows. Some steps may already be completed.

1. Drain all the air pressure from the air brake system.
2. Raise the back of the vehicle and support it with jack stands.
3. Remove the wheels.

WARNING

When work is being done on the spring chamber, carefully follow the service instructions of the chamber manufacturer. The sudden release of a compressed spring can cause serious personal injury or death.

4. Cage the rear brake chambers so that the springs cannot actuate during disassembly.
5. Disconnect the supply and return air lines from the brake chamber.
6. Remove the nuts, and remove the brake chamber from the caliper/carrier assembly.
7. Back off the manual brake adjuster 1/4 turn and remove the brake caliper assembly.
8. Remove the brake pads.

NOTE: The brake assemblies are left and right handed.

9. Confirm each caliper is installed on the correct side (calipers are right handed and left handed).
10. Slide the caliper inboard and outboard. If the caliper does not slide with the mounting bolts loose, replace the brake caliper assembly. Use PartsPro to find the part numbers.

If the caliper slides freely continue with the procedure.

11. Align each caliper with the rotor by pushing the fixed pin side of the caliper against the shelf on the torque plate. See [Fig. 5](#) on page 10.

NOTE: The tightening pattern will always start on the short (floating) pin side, with the bolt that passes through the shear sleeve.

12. Tighten the carrier mounting bolts in two steps, using the pattern shown in [Fig. 5](#) on page 10. Initially tighten all six bolts 40 to 50 lbf-ft (54 to 68 N·m). Perform the final torque spec of 180 to 200 lbf-ft (244 to 271 N·m).
13. Slide the caliper inboard and outboard, through the center of the chamber or brake. The caliper must have a minimum of 20 mm of travel. If the brake caliper assembly does not move, or requires more than 40 pounds of force to move, the caliper has a binding issue. Inspect the slide and replace the caliper as necessary.

NOTICE

Do not use a motor driven tool to tighten the manual brake adjuster nut, or use excessive force to tighten the nut. Doing so could damage the manual brake adjuster nut.

14. Install the brake pads.
 - 14.1 Using a 0.047 inch (1.2 mm) feeler gauge, adjust the clearance. See the arrow in [Fig. 6](#) on page 11. Insert the feeler gauge between the brake pad of the rim side and the brake caliper.
 - 14.2 Tighten the manual brake adjuster nut until both brake pads bear on the brake disc and there is some resistance on the feeler gauge.
 - 14.3 Remove the feeler gauge.

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15. Using new nuts, attach the brake chamber to the caliper/carrier assembly. Tighten 127 to 137 lbf ft (172 to 186 N·m).
16. Install the air lines on the brake chambers. Make certain the brake hoses are not twisted and do not rub against other components.
17. Uncage the brake chambers.
18. Install the wheels. For instructions, refer to **Group 40** of the vehicle's workshop manual.
19. Lower the vehicle.
20. Charge the air system and check for leaks.

 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.

21. In a safe area, check for proper brake operation, as follows, before you put the vehicle in service.
 - 21.1 Apply and release the brakes several times to check for air leaks and proper operation.
 - 21.2 Perform six low-speed stops to ensure proper parts replacement and full vehicle control.
 - 21.3 Immediately after doing the above stops, check the rotor temperatures. Any rotors that are significantly cooler than others show a lack of braking effort on those wheels.
22. Clean a spot on the base label (Form WAR259). Write the campaign number, FL705, on a blank red completion sticker (Form WAR260) to indicate the work has been completed and attach it to the base label.