

Subject: Haldex Life Seal Brake Chambers

Models Affected: Specific Freightliner 108SD, 114SD, 122SD, Argosy, Business Class M2, Cascadia, and Coronado vehicles and Western Star 4700 and 4900 vehicles manufactured September 17, 2014, through February 20, 2015.

General Information

Daimler Trucks North America LLC, on behalf of its Freightliner Trucks Division and 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 6,400 vehicles involved in this campaign.

Certain vehicles with Haldex Life Seal Brake Chambers may have a diaphragm that is not seated properly. This may lead to brake drag or spring brake application. Unintended application of a spring brake on one wheel while traveling at highway speeds may impede control of the vehicle, increasing the risk of a crash.

The brake chambers will be inspected and replaced as necessary.

NOTE: The Julian date code and part number of each suspecte brake chamber will be required on the payment claim (see Claims for Credit section).

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 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 FL676A-N, 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.

Recall Campaign

Daimler Trucks
North America LLC

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

Table 1 - Replacement Parts for FL676A-N

Campaign Number	Part Description	Part Number	Qty. per Part
FL676-A (879 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-2 ea
FL676-B (733 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-4 ea
FL676-C (385 vehicles)	BRAKE CHAMBER - G2430	HDX GC2430XLCW	0-2 ea
FL676-D (23 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-6 ea
FL676-E (3 vehicles)	2430 COMBINATION	HDX GC2430XL	0-2 ea
FL676-F (2,232 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-2 ea
FL676-G (1,374 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-4 ea
FL676-H (691 vehicles)	BRAKE CHAMBER - G2430	HDX GC2430XLCW	0-2 ea
FL676-J (70 vehicles)	BRAKE CHAMBER,WELD CLEVIS LS 225	HDX GC3030LCW	0-6 ea
FL676-K (7 vehicles)	CHAMBER-BRAKE,W/CLEVIS,300,NC100,045,135	HDX GC3030L	0-2 ea
FL676-L (6 vehicles)	2430 COMBINATION	HDX GC2430XL	0-2 ea
FL676-M (2 vehicles)	CHAMBER-BRAKE,W/CLEVIS,300,NC100,045,135	HDX GC3030L	0-4 ea
FL676-N (1 vehicle)	BRAKE CHAMBER-GS 3036L,WELDED CLEVIS	HDX S1373036002	0-1 ea
FL676A-N	Completion Sticker	WAR260	1 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.

Recall Campaign

Daimler Trucks
North America LLC

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL676A, C, E, F, H, K, L & N	Inspect brake chambers on 1 axle (no replacement necessary)	0.2	996-0947A	06-Inspect
FL676B, G & M	Inspect brake chambers on 2 axles (no replacement necessary)	0.3	996-0947B	06-Inspect
FL676D & J	Inspect brake chambers on 3 axles (no replacement necessary)	0.4	996-0947C	06-Inspect
FL676A-N	Inspect all and replace 1 brake chamber	0.6	996-0947D	12-Repair Recall/Campaign
FL676A-M	Inspect all and replace 2 brake chambers	1.0	996-0947E	12-Repair Recall/Campaign
FL676B, D, G, J & M	Inspect all and replace 3 brake chambers	1.4	996-0947F	12-Repair Recall/Campaign
	Inspect all and replace 4 brake chambers	1.8	996-0947G	12-Repair Recall/Campaign
FL676D & J	Inspect all and replace 5 brake chambers	2.2	996-0947H	12-Repair Recall/Campaign
	Inspect all and replace 6 brake chambers	2.6	996-0947I	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 (e.g. **FL676-A, FL676-B, etc.**).
- In the Primary Failed Part field, enter **25-FL676-000**
- **In the Repair Details field, enter the Julian date code and part number of each suspect brake chamber (this information will be required on the campaign payment claim). To help the claims processors locate these numbers, please list them first thing, prior to the repair story.**
- In the Parts section, enter the appropriate part number(s) as shown in the Replacement Parts Table.
- 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 **013-010-034** 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.)

September 2015

FL676A-N

NHTSA #14V-758 and #15V-158

Transport Canada #14-548

- 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 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.

Recall Campaign

Daimler Trucks
North America LLC

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

Copy of Notice to Owners Subject: Haldex Life Seal Brake Chambers

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 and wholly owned subsidiary, Western Star Truck Sales, Inc., has decided that a defect that relates to motor vehicle safety exists on specific Freightliner 108SD, 114SD, 122SD, Argosy, Business Class M2, Cascadia, and Coronado vehicles and Western Star 4700 and 4900 vehicles manufactured September 17, 2014, through February 20, 2015.

Certain vehicles with Haldex Life Seal Brake Chambers may have a diaphragm that is not seated properly. This may lead to brake drag or spring brake application. Unintended application of a spring brake on one wheel while traveling at highway speeds may impede control of the vehicle, increasing the risk of a crash.

The brake chambers will be inspected and replaced as necessary.

This is the second of two notices you will have received regarding this subject. The final repair is ready and parts have been secured. 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 thirty minutes to three hours depending on the repair, 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

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.

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

Work Instructions

Subject: Haldex Life Seal Brake Chambers

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Safety Precautions

General Safety Precautions

When working on or around a vehicle, observe the following precautions.

- Park the vehicle on a level surface and apply the parking brakes. Shut down the engine and chock the tires.
- If the vehicle is equipped with air brakes, make certain to drain the air pressure from all reservoirs before beginning any work on the vehicle. Depleting air system pressure may cause the vehicle to roll. Keep hands away from brake chamber piston rods and slack adjusters, which may apply as air pressure drops.
- Disconnect the batteries.
- Never connect or disconnect a hose or line containing compressed air. It may whip as air escapes. Never remove a component or pipe plug unless you are certain all system pressure has been released.
- Never exceed recommended air pressure. Always wear safety glasses when working with compressed air. Never look into air jets or direct them at anyone.
- Do not remove, disassemble, assemble, or install a component until you have read and understand the service procedures. Some components contain powerful springs, and injury can result if they are not properly disassembled. Use the correct tools and observe all precautions pertaining to use of those tools.
- Replacement hardware, tubing, hose, fittings, etc., should be the equivalent size, type, length, and strength of the original equipment.
- Make sure when replacing tubes or hoses, that all of the original supports, clamps, or suspending devices are installed or replaced.
- Replace devices that have stripped threads or damaged parts. Repairs requiring machining should not be attempted.
- Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.

Asbestos and Non-Asbestos Safety



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.

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.

Brake Chamber Inspection and Replacement

1. Check the base label (Form WAR259) for a completion sticker for FL676 (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 is present, no work is needed. If there is no sticker, proceed with 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 brake chamber date code.

The Julian date is on the stamp-side of the brake chamber. See **Fig. 1**.

The first three digits indicate the Julian calendar day of the year. The fifth and sixth digits indicate the last two numbers of the year. In the example shown, the Julian date is 302 of 2013 (October 29, 2013).

If the date code is within the Julian dates of **09 through 301 of 2014**, (January 9, 2014, through October 28, 2014), the brake chamber needs to be replaced. Write down the Julian date code and part number of each suspect brake chamber (this information will be required on the campaign payment claim), then proceed with step 4.

If the date code is not within the suspect date, no further work is needed. Clean a spot on the base label (Form WAR259). Write the campaign number, FL676, on a blank red completion sticker (Form WAR260) to indicate the work has been completed and attach it to the base label.

Recall Campaign

Daimler Trucks
North America LLC

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

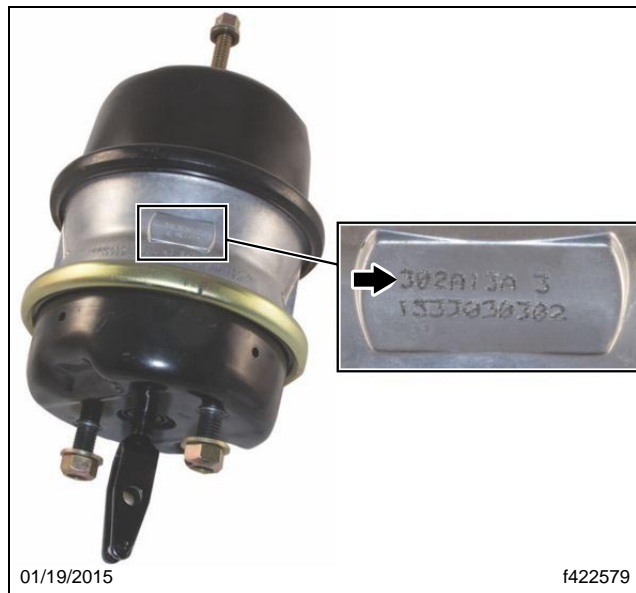


Fig. 1, Date Code

DANGER

Do not attempt to remove the factory-sealed parking brake clamp ring, shown in Fig. 2, for any purpose, at any time. The parking/emergency brake section is not intended to be serviced. Serious injury or death may result from the sudden release of the power spring.

4. Refer to **Fig. 3** for brake chamber parts identification. Manually release the parking brake (cage the power spring).
5. Mark the air lines for later reference. Then carefully disconnect them from the brake chambers.
6. Remove the cotter pins from the clevis pins, then remove the clevis pin(s) from the clevis. Disconnect the clevis from the slack adjuster.
7. Make sure the parking brake has been released manually (the power spring has been caged). Also, make sure that the service brake piston is fully retracted (in the brakes "OFF" position).
8. From each mounting stud, remove any installed nuts and washers, then remove the brake chamber from the mounting bracket.
9. Remove the fittings from the chamber and set them aside.
10. Install a new brake chamber unit as follows:
 - 10.1 First, make sure the power spring is caged (the release bolt is fully extended outward).
 - 10.2 Remove the prevailing torque locknut and hardened flatwasher from each of the mounting studs on the chamber.
 - 10.3 Using approved sealant, install the fittings.
11. Clean the face of the mounting bracket, and install the chamber on the bracket, paying close attention to positioning the chamber air inlet ports for correct alignment to the vehicle air lines.

September 2015
FL676A-N
NHTSA #14V-758 and #15V-158
Transport Canada #14-548

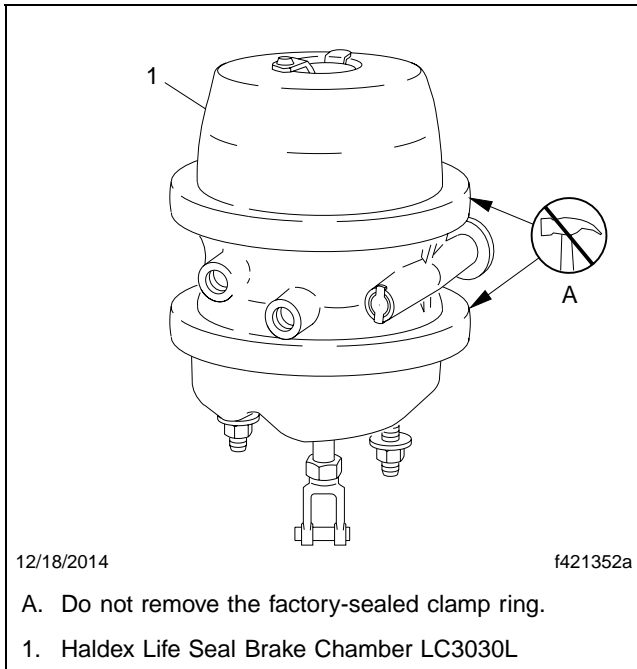


Fig. 2, Brake Chamber

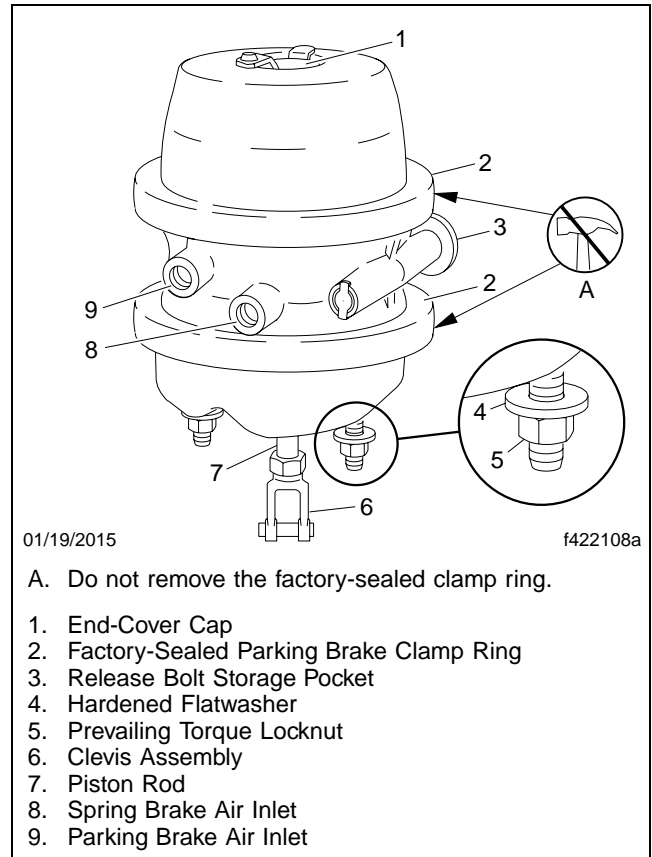


Fig. 3, Haldex Life Seal Brake Chamber

⚠ WARNING

Tighten the mounting nuts with a hand wrench, not an impact wrench. An impact wrench could damage the mounting fasteners, reducing the force of the brakes. This could result in personal injury or property damage.

12. Install one hardened flatwasher and prevailing torque locknut on each mounting stud. Make sure the flatwasher is installed between the locknut and the mounting bracket. Using a hand wrench (*do not use an impact wrench*), tighten the nuts 100 to 115 lbf·ft (136 to 156 N·m).
13. Check mating and alignment with the vehicle air lines, as follows. If alignment is okay, skip this step.

⚠ DANGER

Do not attempt to remove the factory-sealed parking brake clamp ring, shown in Fig. 2, for any purpose, at any time. The parking/emergency brake section is not intended to be serviced. Serious injury or death may result from the sudden release of the power spring.

- 13.1 Using a hand wrench (*do not use an impact wrench*), loosen the clamp nuts on the *service* clamp ring (*do not disassemble the parking brake section*).

Recall Campaign

Daimler Trucks
North America LLC

September 2015

FL676A-N

NHTSA #14V-758 and #15V-158

Transport Canada #14-548

13.2 Reposition the air inlet ports, as needed, to mate with vehicle air supply lines.

Alternately tighten each clamp nut in increments of 60 to 120 lbf·in (678 to 1356 N·cm) while constantly rechecking the alignment of mating parts.

If realignment is needed, loosen the nuts again, and repeat this substep.

13.3 Firmly tap around the circumference of the service clamp ring with a rubber mallet to ensure full seating of the clamp. Tighten the nuts to a final torque of 25 to 30 lbf·ft (34 to 41 N·m).

14. Install the slack adjuster.

15. Inspect the piston rod to be sure it is working free, not binding, and is square with the chamber bottom within $\pm 3^\circ$ in any direction from zero to full stroke. If there is misalignment, make corrections by loosening the locknuts and repositioning the chamber on the mounting bracket, or by shimming the slack adjuster to the right or left on the camshaft.

16. Make sure the air hose fittings are free of grease, dirt, and other debris. Then, apply Loctite[®] 242 sealant, or an equivalent, to the fittings, and install, as referenced earlier. Using a hand wrench (*do not use an impact wrench*), tighten the fittings 25 lbf·ft (34 N·m).

17. Using the vehicle system air, charge the parking brake with full line pressure, at least 100 psi (690 kPa). Using only soapy water (*never any type of oil*, which could deteriorate rubber parts) or an ultra sonic leak detector, check for air leaks at the air lines and fittings. If bubbles or leaks appear, tighten the fittings slightly, but not over 30 lbf·ft (41 N·m).

18. With air pressure now exhausted from the service brake chamber, but held on the parking brake, reset the parking brakes by uncaging the power spring, and snap the end-cover cap in place.

19. Adjust the brakes at the slack adjuster.

IMPORTANT: After replacing any brake chamber, check the piston rod stroke and actuating alignment to ensure correct installation and foundation brake adjustment. No foundation brake adjustments, parking brake or service brake, can be made at the chamber, and all "stroke" adjustments must be made at the slack adjuster. For instructions, refer to the applicable slack adjuster section in the vehicle workshop manual.

20. Clean a spot on the base label (Form WAR259). Write the campaign number, FL676, on a blank red completion sticker (Form WAR260) to indicate the work has been completed and attach it to the base label.