

October 2016  
FL718A-D  
NHTSA #16V-634  
Transport Canada #16-419

## **Subject: Front Axle Hub Rating**

**Models Affected: Specific Freightliner 108SD, 114SD, Business Class M2, Cascadia, and Coronado vehicles; and Western Star 4700, 4800, and 5700 vehicles manufactured April 29, 2013, through July 29, 2016.**

### **General Information**

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

There are approximately 313 vehicles involved in this campaign.

On certain vehicles, the front configuration is rated higher than the maximum capacity of the hub. If the axle load exceeds the maximum capacity of the hub, there is an increased risk of hub fatigue, which could lead to the separation of the wheel. Separation of the wheel from the front axle could increase the risk of a crash.

The front axle hubs will be replaced with hubs of higher capacity.

#### **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 FL718A-D, 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.

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**Table 1** - Replacement Parts for FL718

Campaign Number	Part Description	Part Number	Qty. per VIN
FL718A (162 VINs)	HUB-FF HPI147D16V A X268A450R	CM 10041634	2 ea
	HUB CAP GASKET	CHR 453869 8	2 ea
	SCREW-HEX,SOCKET HEAD,M16-2X110,12.9	23-13315-110	12 ea
	Completion Sticker	WAR260	1 ea
FL718B (124 VINs)	HUB-FF HPI147D16V A X214S450R	CM 10041633	2 ea
	HUB CAP GASKET	CHR 453869 8	2 ea
	SCREW-HEX,SOCKET HEAD,M16-2X110,12.9	23-13315-110	12 ea
	Completion Sticker	WAR260	1 ea
FL718C (22 VINs)	HUB-FF HPI147I16K A X214S450R	CM 10019908	2 ea
	HUB CAP GASKET	CHR 453869 8	2 ea
	SCREW-HEX,SOCKET HEAD,M16-2X110,12.9	23-13315-110	12 ea
	Completion Sticker	WAR260	1 ea
FL718D (5 VINs)	HUB-FF-HPI147I16K-A-X268S450R	CM 10019909	2 ea
	HUB CAP GASKET	CHR 453869 8	2 ea
	SCREW-HEX,SOCKET HEAD,M16-2X110,12.9	23-13315-110	12 ea
	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.

**Labor Allowance**

**Table 2** - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL718A-D	Replace both front axle hubs	2.8	996-0987A	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**.
- In the FTL Authorization field, enter the campaign number and appropriate condition code (e.g. **FL718A, FL718B, etc.**).

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- In the Primary Failed Part Number field, enter **25-FL718-000**.
- In the Parts field, enter the appropriate part number(s) as shown in the Replacement Parts Table.
- 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.
- For OWL, the VMRS Component Code is 018-001-001 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 for this recall.)
  - Submit a Campaign Pre-Approval inquiry to the Warranty Campaigns Department for a decision and authorization number.
  - Include the approved amount on your claim in Other Charges section.
  - In the claim story, first note the authorization number and that the claim includes a reimbursement.
  - 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:** 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.

U.S. and Canadian Dealers: For questions 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](http://AccessFreightliner.com/Support/MyTickets) 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: Front Axle Hub Rating

**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, has decided that a defect that relates to motor vehicle safety exists on specific Freightliner 108SD, 114SD, Business Class M2, Cascadia, and Coronado vehicles; and Western Star 4700, 4800, and 5700 vehicles manufactured April 29, 2013, through July 29, 2016.

On certain vehicles, the front configuration is rated higher than the maximum capacity of the hub. If the axle load exceeds the maximum capacity of the hub, there is an increased risk of hub fatigue, which could lead to the separation of the wheel. Separation of the wheel from the front axle could increase the risk of a crash.

The front axle hubs will be replaced with hubs of higher capacity.

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](http://www.Daimler-TrucksNorthAmerica.com) / Contact Us / Find a Dealer. The Recall will take approximately one hour 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](mailto: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](mailto: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: Front Axle Hub Rating

**Models Affected:** Specific Freightliner 108SD, 114SD, Business Class M2, Cascadia, and Coronado vehicles; and Western Star 4700, 4800, and 5700 vehicles manufactured April 29, 2013, through July 29, 2016.

### Hub Replacement Procedure

1. Check the base label (Form WAR259) for a completion sticker for FL718 (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 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. For typical wheel end and axle assemblies, see [Fig. 1](#)
3. Raise the front of the vehicle until the tires clear the ground. Then place safety stands under the axle.

### WARNING

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

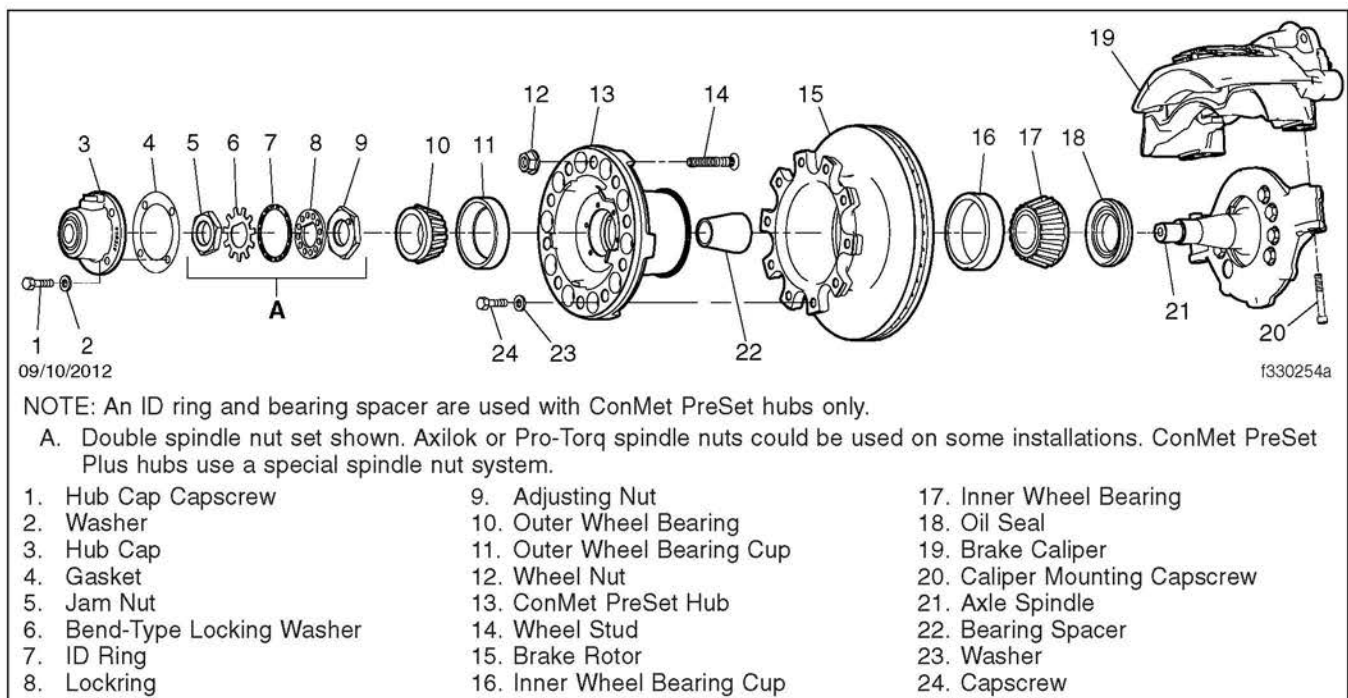
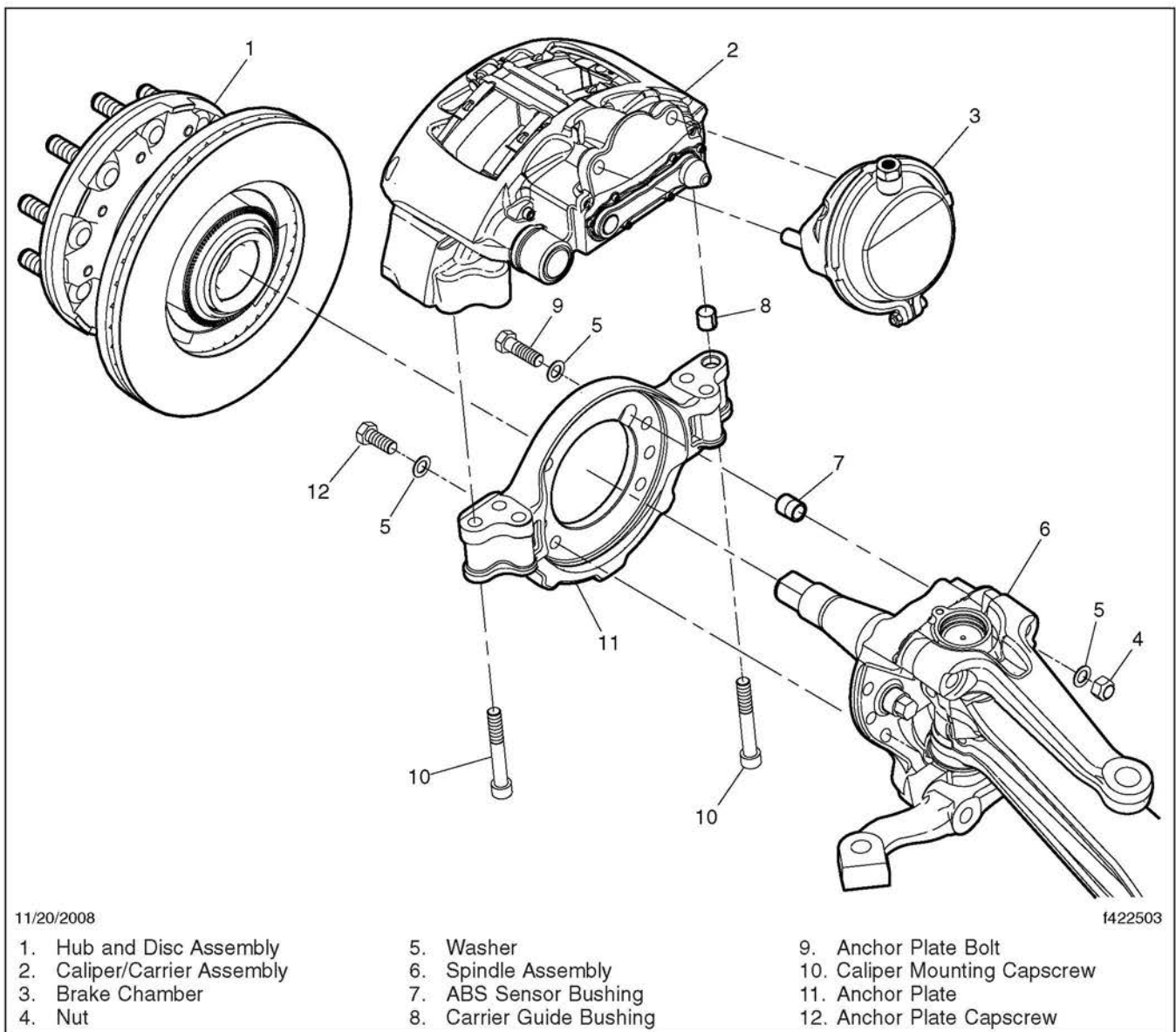


Fig. 1, Typical Wheel End Assembly, Front Axle with Disc Brakes

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NOTE: The following steps are for a single axle end. Perform the procedure on both axle ends.

4. Remove the wheel and tire assembly.
5. Remove the brake caliper as follows. Refer to **Fig. 2** for front caliper/carrier removal and installation.
  - 5.1 Drain the air from the air brake system.
  - 5.2 Disconnect the supply and return lines from the brake chamber.
  - 5.3 Cut the zip ties holding the ABS harness to the brake hose as needed.
  - 5.4 Back off the manual brake adjuster 1/4 turn.
  - 5.5 Remove the six brake caliper/carrier assembly retaining bolts, and discard the bolts.



**Fig. 2, Front Caliper and Carrier Assembly Installation**

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- 5.6 Remove the brake caliper/carrier assembly.
- 5.7 Clean and inspect the anchor plate contact area. If damage is found, replace the anchor plate.
- 5.8 Remove the brake pads.

NOTE: Oil will spill as the hub cap and wheel hub are removed. Place a suitable container under the axle spindle to catch any spilled oil. Dispose of the oil properly.

6. Remove the capscrews, washers, and hub cap. Remove and discard the hub cap gasket.

IMPORTANT: The following steps are for removal of ConMet PreSet Plus hub axle nuts. For other types of axle nuts, refer to the vehicle's workshop manual.

7. ConMet PreSet Plus hubs use a special integrated spindle nut designed specifically for PreSet Plus hubs. See **Fig. 3**. Remove the axle nut as follows.

- 7.1 To remove the red locking ring from the spindle nut assembly, compress the tabs and pivot the ring to unlock it from the nut.

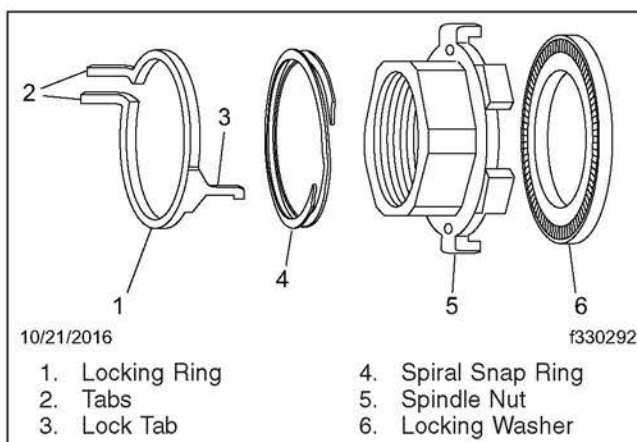
IMPORTANT: Do not exceed 50 lbf·ft (68 N·m) of torque when removing a PreSet Plus hub using the spindle-nut system as a hub puller.

- 7.2 Loosen the spindle nut. As the spindle nut is loosened, it can act as a hub puller. However, if the hub will not come off of the spindle without exceeding 50 lbf·ft (68 N·m) of torque, remove the spiral snap ring (see **Fig. 4**) and then the spindle nut assembly.

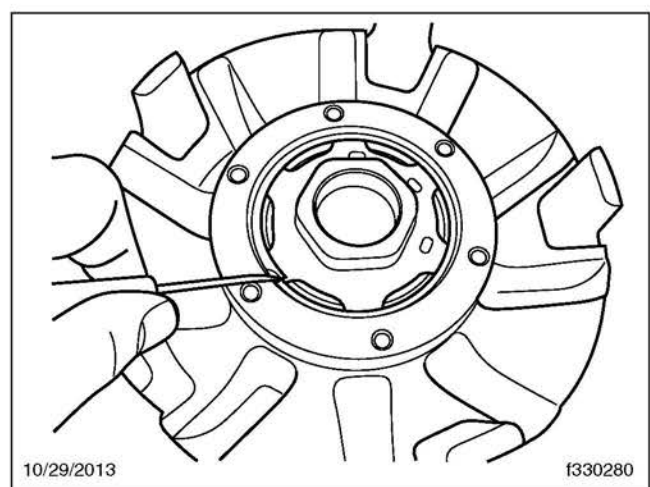
## NOTICE

**Be careful not to let the outer wheel bearing drop from the axle spindle. Dropping the bearing can warp the cage or damage the rollers, ruining the bearing. On vehicles equipped with WABCO ABS, use care when working with the hubs. To prevent damage to the tone wheel, do not drop the hub, or lay it down in a way that would damage the tone wheel.**

- 8. Move the hub about 1/2 inch (13 mm) to jar loose the outer wheel bearing (allow the hub-only assembly to rest on the axle spindle; be careful not to damage the axle spindle threads). Then, carefully remove the outer wheel bearing; handle the bearings with clean, dry hands. Wrap the bearings in either clean oil-proof paper or lint-free rags.
- 9. Remove the hub from the axle spindle. Be careful not to damage the axle spindle threads as the assembly is removed.



**Fig. 3, PreSet Plus Spindle Nut System**



**Fig. 4, Removing a Spiral Snap Ring**

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10. Remove the oil seal from the axle spindle, if not already removed.
11. Using cleaning solvent, remove the old oil from the axle spindle. Allow it to dry, or dry it with clean, absorbent, and lint-free cloth or paper. Wrap a protective layer of friction tape on the axle spindle threads.

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## NOTICE

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**Ensure that both bearing assemblies are coated with fresh oil. Use only fresh oil on the bearing assemblies; old oil could be contaminated with dirt or water (both are corrosives) and could cause damage to both wheel bearing assemblies and the wheel hub.**

12. Coat both bearing assemblies with fresh oil. Install the inner wheel bearings and oil seal. Handle the bearings with clean, dry hands. See [Section 33.02](#) for oil seal installation instructions.
13. Wipe a film of axle oil on the axle spindle to prevent rust from forming behind the inner wheel bearing.
14. If present, remove the temporary plastic bearing cover from the front of the hub.
15. Ensure the tubular spacer is in the PreSet hub.

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## NOTICE

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**On vehicles equipped with WABCO ABS, use care when installing the hubs.**

- To prevent damage to the tone wheel, do not drop the hub or lay it down in a way that would damage the tone wheel.
  - Do not remove the outer wheel bearing once the hub is installed on the axle. Removing the outer bearing could cause the oil seal to become misaligned, which could cause damage to the wheel bearings, the hub, and the axle spindle.
16. Mount the hub assembly on the axle spindle.
  17. Remove the friction tape.
  18. Install the spindle nut as follows.

NOTE: The following instructions are for installing a PreSet Plus spindle nut. In some cases, the spindle nut components will have been removed along with the hub; in other cases, they will have been already installed in the hub. Use the pertinent instructions for your installation.

- 18.1 If the red locking snap ring is locked into the spindle nut, compress the tabs and pivot the ring to remove it from the nut. See [Fig. 3](#).
- 18.2 If needed, install the PreSet Plus spindle nut components as shown in [Fig. 3](#).  
Ensure that the spiral snap ring fully seats into the groove in the hub. See [Fig. 5](#) and [Fig. 6](#).
- 18.3 Tighten the spindle nut 300 lbf-ft (407 N·m) while rotating the hub. Do not back off the spindle nut.

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## NOTICE

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**When bending the locking ring, be careful not to deform it permanently. If the locking ring is damaged or bent, replace it with a new one.**

- 18.4 Install the locking ring.  
One of the holes in the face of the spindle nut will line up with a hole in the washer. Insert the lock tab of the locking ring through aligned holes.  
Using the handle tabs, seat the locking ring in the machined grooves of the spindle nut.
19. Place the hub cap and a new gasket in position, then install the washers and capscrews. In a star pattern, tighten the capscrews 15 lbf-ft (20 N·m).

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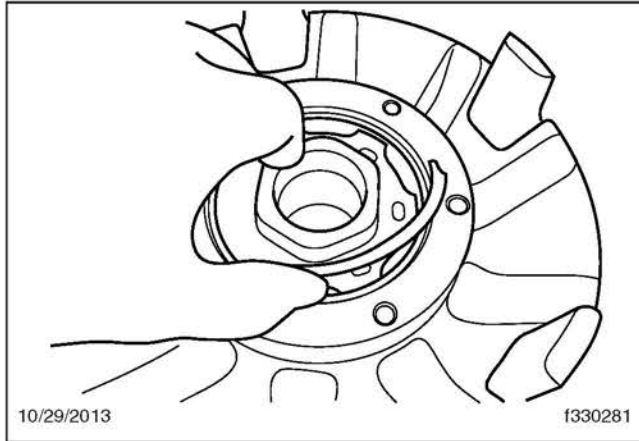


Fig. 5, Installing a Spiral Snap Ring

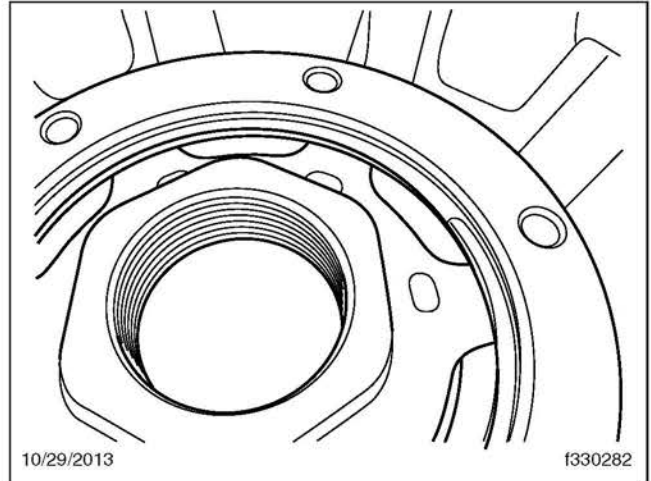


Fig. 6, Fully Seated Spiral Snap Ring

## WARNING

Failure to add oil to the wheel hub after the hub has been serviced will cause the wheel bearings to overheat and seize during vehicle operation. Seized bearing rollers can cause sudden damage to the tire or axle, possibly resulting in personal injury and property damage.

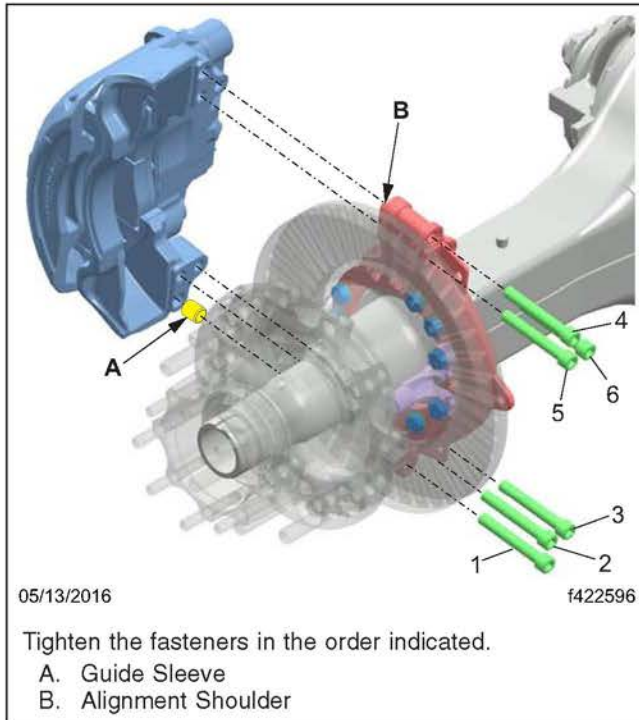
20. If applicable, add fresh oil to the wheel hub to the level indicated on the hub cap.
  21. Rotate the hub to distribute the oil, then check the level at the hub cap. Add lubricant as needed.
  22. Install the brake calipers as follows.
    - 22.1 Align each caliper/carrier assembly with the rotor by pushing the fixed pin side of the caliper against the shelf on the torque plate.
- NOTE: The tightening pattern will always start on the short (floating) pin side, with the bolt that passes through the shear sleeve.
- 22.2 Tighten the carrier mounting bolts in two steps, using the pattern shown in [Fig. 7](#). 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).
  - 22.3 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 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

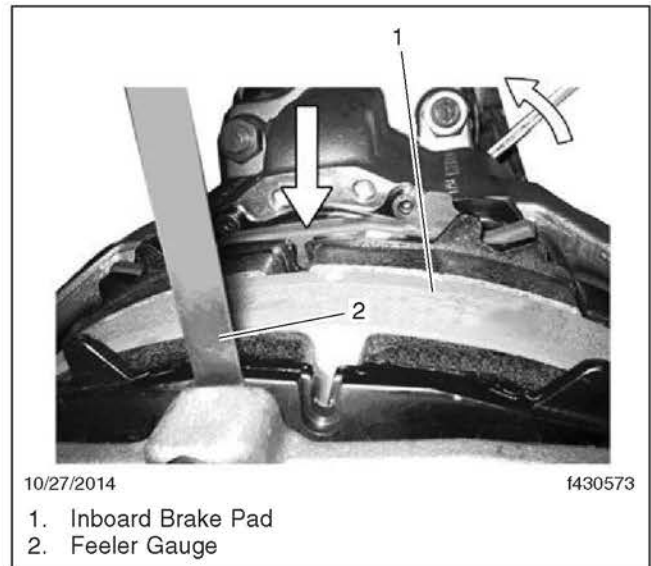
Do not use a motor driven tool to tighten the manual brake adjuster nut, or use excessive force to tighten the nut. Doing so could damage the manual brake adjuster nut.

- 22.4 Install the brake pads.
- 22.5 Using a 0.047 inch (1.2 mm) feeler gauge, adjust the clearance. See the arrow in [Fig. 8](#). Insert the feeler gauge between the brake pad of the rim side and the brake caliper.

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**Fig. 7, Tightening Pattern**



**Fig. 8, Adjusting the Clearance**

- 22.6 Tighten the manual brake adjuster nut until both brake pads bear on the brake disc and there is some resistance on the feeler gauge.
- 22.7 Remove the feeler gauge.
- 22.8 Install the air lines on the brake chambers. Make certain the brake hoses are not twisted and do not rub against other components.
- 22.9 Charge the air system and check for leaks.
23. Install the wheel and tire assembly.
24. Remove the safety stands from under the axle and lower the vehicle.

## **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.**

25. In a safe area, check for proper brake operation, as follows, before putting the vehicle in service.
  - 25.1 Apply and release the brakes several times to check for air leaks and proper operation.
  - 25.2 Perform six low-speed stops to ensure proper parts replacement and full vehicle control.
  - 25.3 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.
26. Clean a spot on the base label (Form WAR259). Write the campaign number, FL718, on a blank red completion sticker (Form WAR260), to indicate the work has been completed, and attach it to the base label.