

SAFETY RECALL

Mack Trucks Inc.
Greensboro, NC USA



Date	Number	Release	Page
09.2015	SC0392	01	1 (23)

Disc Brake Caliper, Replacement CXU

SAFETY RECALL INFORMATION:

(September 2015)

Some MACK CXU trucks built 08/03/2012 through 02/18/2014, and equipped with Meritor air disc brakes may have the washers securing the brake chamber to the caliper inadvertently installed in the incorrect position on the front steer axle and/or drive axles. The improperly installed washers may enable water intrusion of the disc brake caliper and brake chamber causing loss of brakes at the wheel end. An inspection of the disc brake caliper and brake chamber is conducted to determine if the washers (part number 994883) are located in the correct position. If the washers are in the correct position, no further action is required. If the washers are not located in the correct position, replacement of the disc brake caliper, brake chamber, and the addition of two washers per brake assembly is required. Follow the inspection and repair instructions outlined in this Safety Recall.

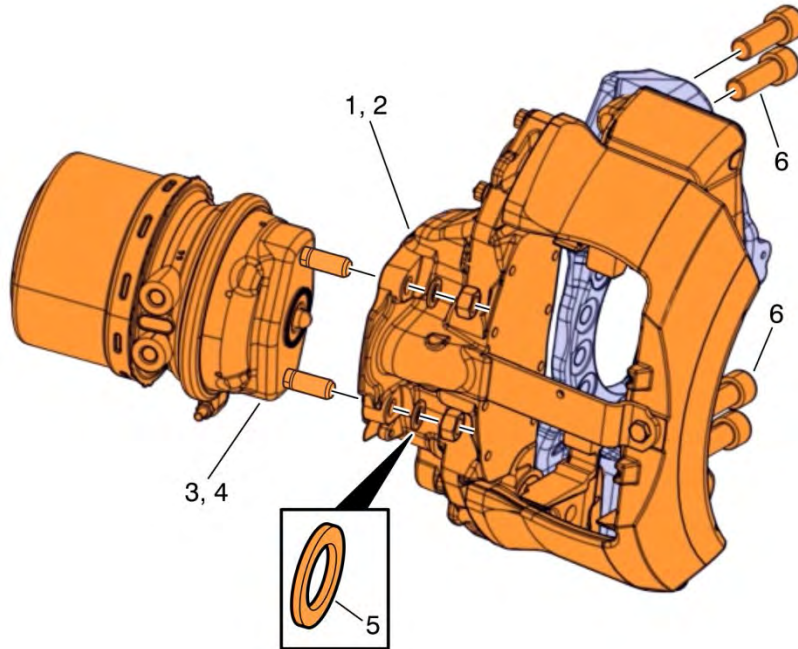
MACK Trucks has received no reports of personal injury as a result of this condition. Therefore, MACK considers this as a proactive measure to protect the public and MACK's customers from the potential risk associated with this defect.

VEHICLES AFFECTED:

Certain MACK CXU model trucks manufactured with Meritor air disc brakes from October 03, 2012 through February 18, 2014.

VEHICLE IDENTIFICATION NUMBERS (VIN):

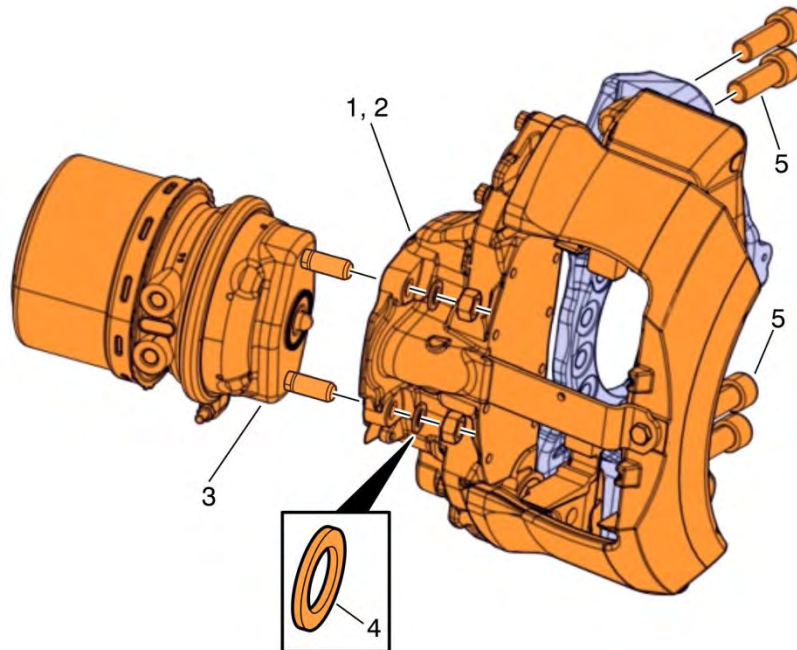
The number of vehicles affected by this recall is 79 (79 USA only).



REQUIRED PARTS:

To order parts call (877) 986-5862. The Vehicle Identification Number (VIN) is required for ordering parts.

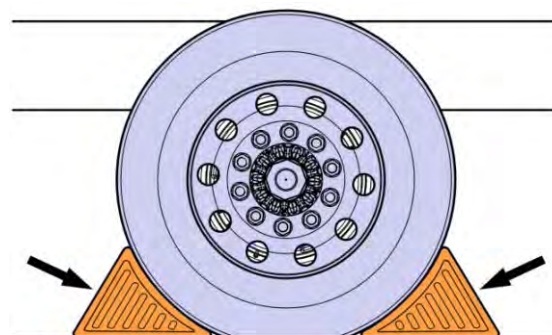
Disc Brake Caliper, Replacement Parts (Front Steer Axle)			
Item	Part Number	Description	Qty
1	21977435	Disc Brake Caliper, LH	1
2	21977436	Disc Brake Caliper, RH	1
3	21977347	Brake Chamber, LH	1
4	21977348	Brake Chamber, RH	1
5	994883	Flat Washer	8
6	984206	Brake Caliper Mounting Bolt	8



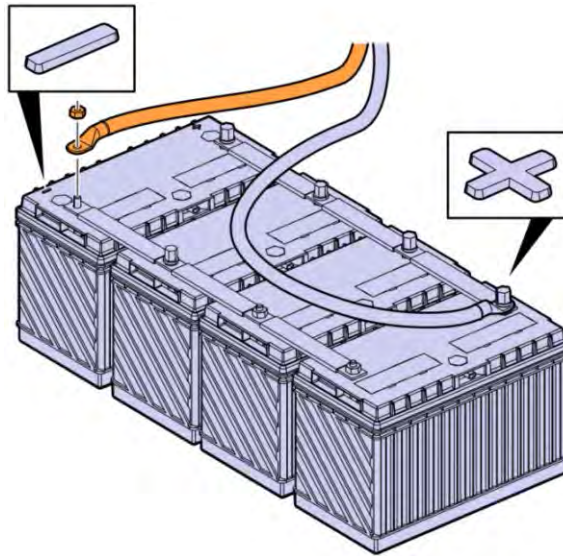
Disc Brake Caliper, Replacement Parts (Rear Drive Axles)			
Item	Part Number	Description	Qty
1	21977435	Disc Brake Caliper, LH	2
2	21977436	Disc Brake Caliper, RH	2
3	21977350	Brake Chamber	4
4	994883	Flat Washer	16
5	984206	Brake Caliper Mounting Bolt	16

DECOMMISSIONING THE TRUCK FOR INSPECTION OR REPAIR:

1. Secure the vehicle for service by parking on a flat and level surface, applying the parking brake, chocking the rear wheel, and placing the transmission in neutral.



2. Disconnect the cable from the battery's negative (ground) terminal.



DISC BRAKE CALIPER INSPECTION:

NOTE

The Illustrations shown in this document are used for reference only and may differ slightly from the actual vehicle being serviced. However, the replacement procedure is represented as accurately as possible.

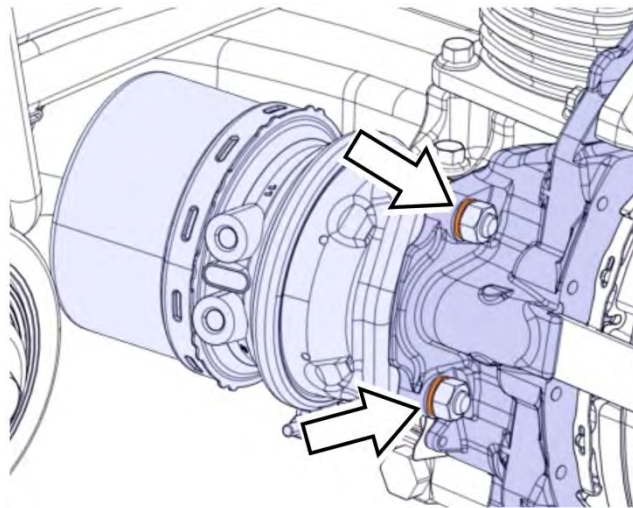
NOTE

The right side is shown for instructional purposes.

1. Inspect the brake caliper for washers located under the nuts securing the brake chamber to the disc brake caliper. The illustration below shows the correct location for the washers.

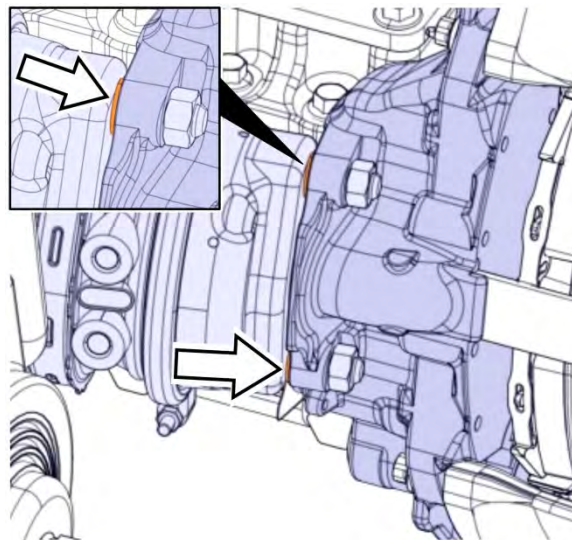
NOTE

If washers (part number 994883) are located in the correct position, no further action is required. Proceed to page 21 (**Commissioning the Truck for Operation**).



2. Inspect the brake caliper washers. If the washers are not located under the nuts securing the brake chamber to the disc brake caliper, they are in the incorrect position. The illustration below shows the incorrect location for the washers.

NOTE
If washers (part number 994883) are in the incorrect position, replacement of the disc brake caliper, brake chamber, and an addition of two washers per brake assembly is required. Proceed to page 6 (Disc Brake Caliper Replacement, Caged and Uncaged) .



DISC BRAKE CALIPER REPLACEMENT (CAGED AND UNCAGED):

NOTE
The left side, rear drive axle is shown for instructional purposes.

1. Lift the axle with a jack, place the truck on jack stands, and remove the jack.
2. Remove the wheel nuts.
3. Remove the wheel.

4. Release the park brake.
5. If applicable, cage the park brake chamber.

NOTE

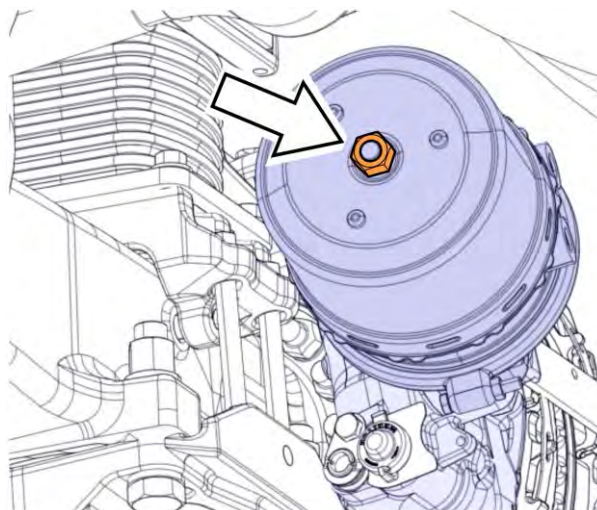
This step applies to **Caged Axles** only.

! WARNING

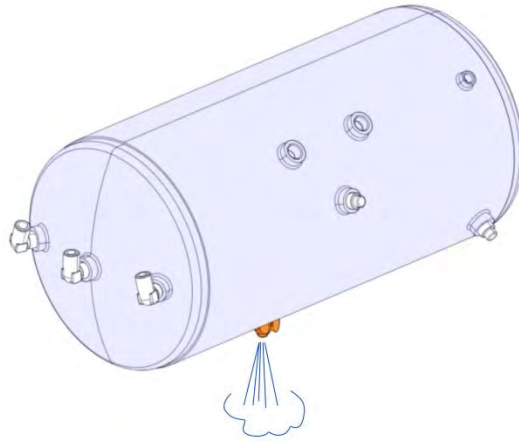
Do not attempt to mechanically release or cage the spring on any brake chamber if there are signs of structural damage, significant corrosion or any other damage.

NOTE

When the service push rod stops moving, and the release tool bolt torque reaches 47 Nm (35 ft-lb) or the release tool extends beyond the nut more than 83 mm (3.25 in), stop tightening the release tool nut.



6. Drain the air system.



7. Remove the adjuster cap from the brake caliper to de-adjust the brakes.

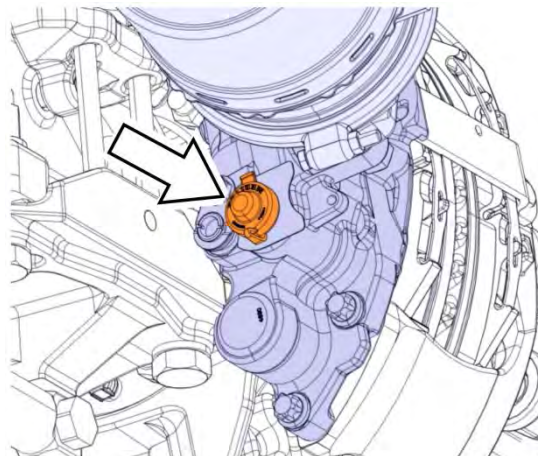
NOTE

De-adjusting the brake caliper requires more force than adjusting the brake caliper.
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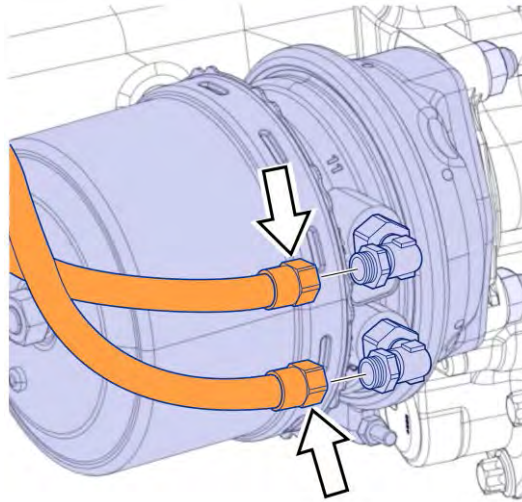
8. Using a 10 mm (0.39 in) wrench, rotate the brake caliper adjuster stem **(COUNTERCLOCKWISE)** until it stops rotating.

NOTE

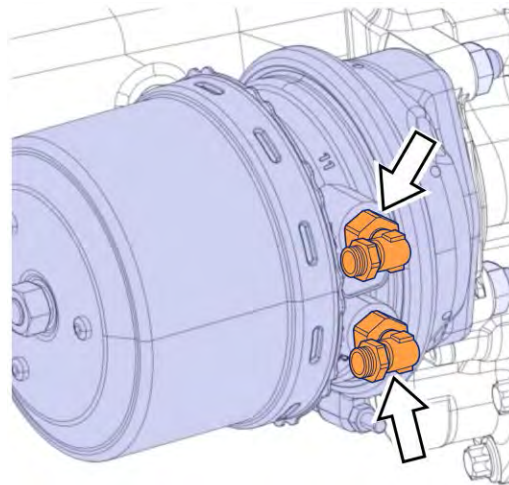
Do not exceed 40 Nm (30 ft-lb) of torque when rotating the brake caliper adjuster stem clockwise or counterclockwise.



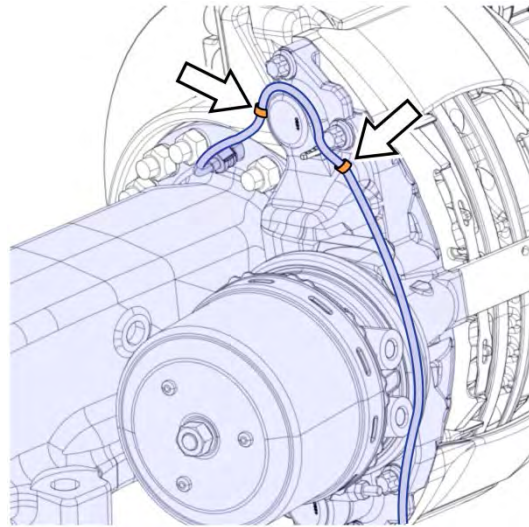
9. Disconnect the air lines from the disc brake chamber.



10. Remove the fittings from the disc brake chamber and store them for reuse.

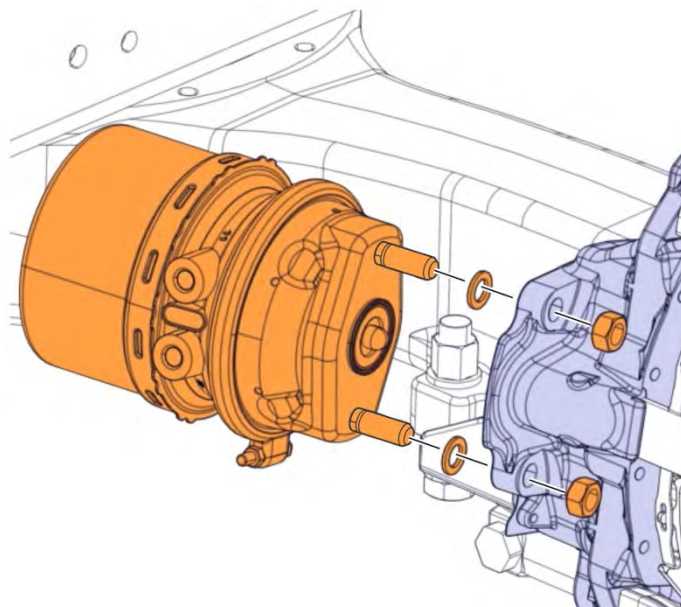


11. Remove the cable ties securing the wheel speed sensor cable to the brake caliper.



12. Remove the fasteners and washers securing the brake chamber.
13. Remove the existing brake chamber and discard.

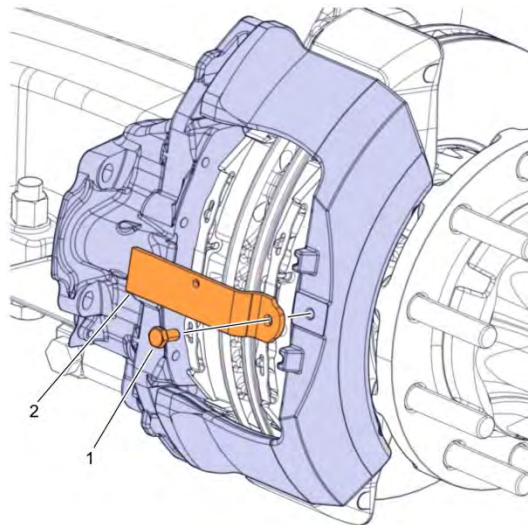
NOTE
Do not reuse the existing brake chamber or fasteners.



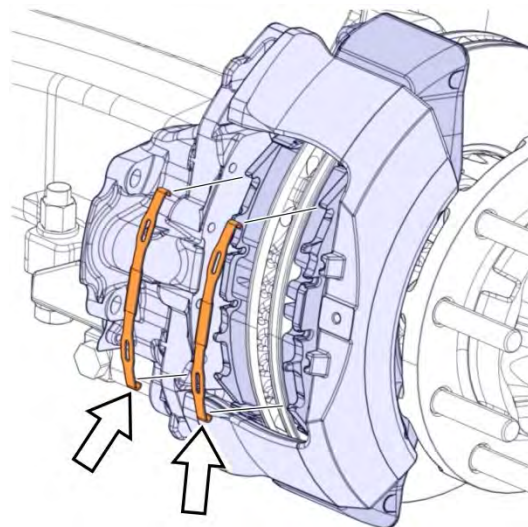
14. Remove the brake pad retainer and brake pad shield.

NOTE

Store the brake pad retainer, hardware and brake pad shield for reuse.



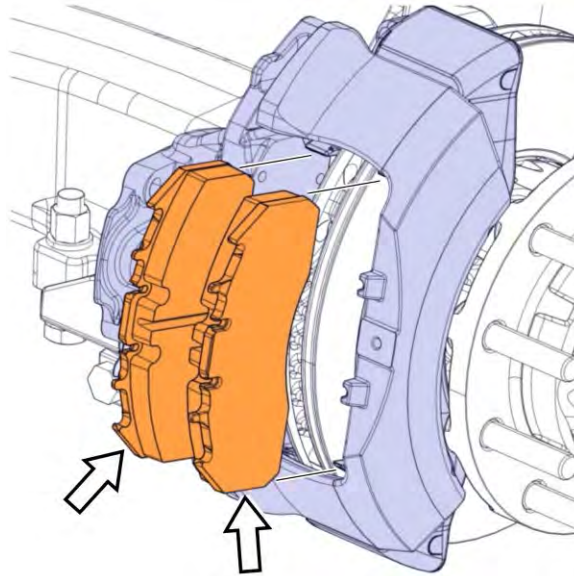
15. Remove the brake pad springs and store for reuse.



16. Remove the brake pads.

NOTE

Clean and store the brake pads for reuse.

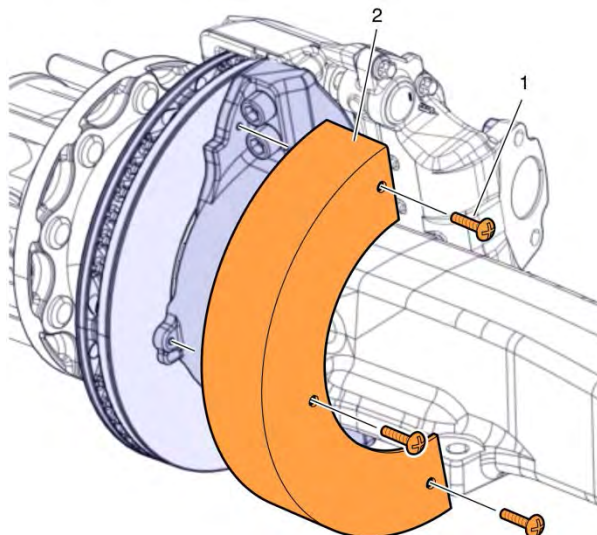


17. Remove the fasteners (1) securing the brake rotor shield (2).

18. Remove the brake rotor shield (2).

NOTE

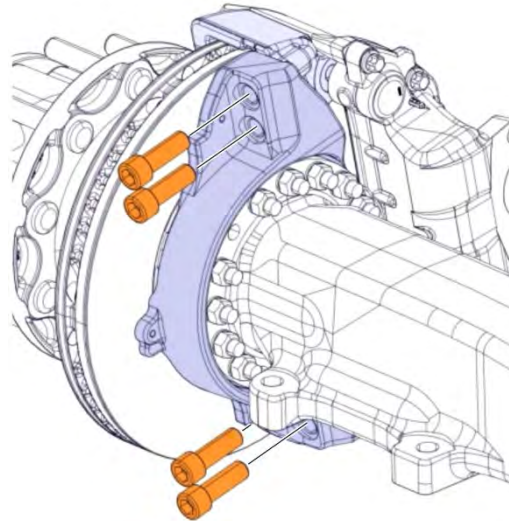
Clean and store the brake rotor shield and fasteners for reuse.



19. Remove the fasteners securing the brake caliper.

NOTE

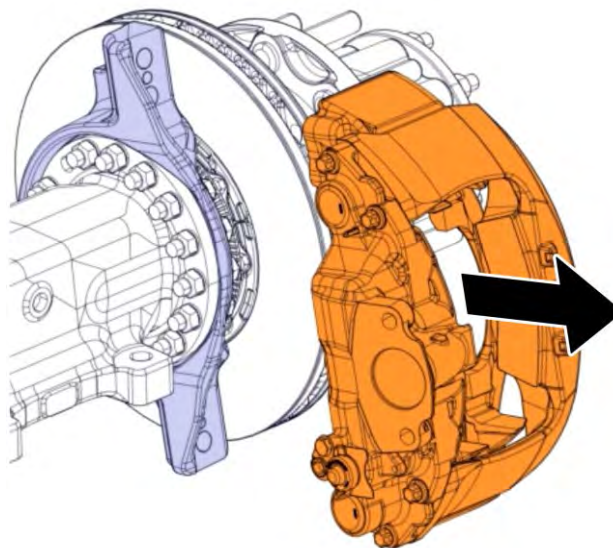
Discard the fasteners securing the brake caliper.



20. With assistance, remove the existing brake caliper.

NOTE

Discard the existing brake caliper.

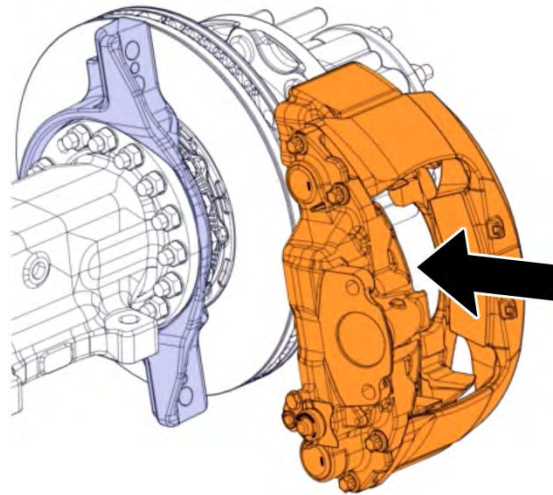


21. Inspect the brake caliper adapter plate and brake rotor for damage or excessive wear.

NOTE

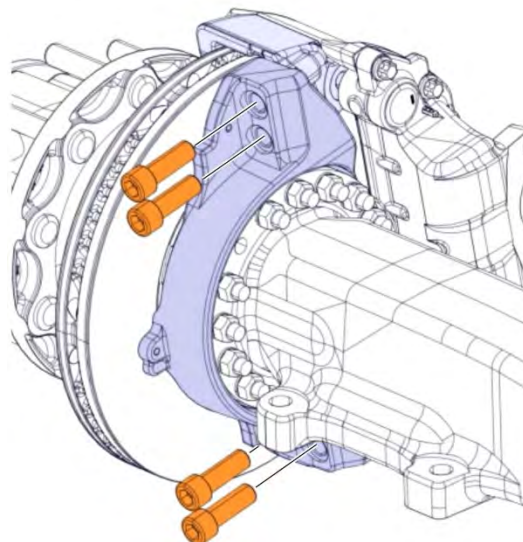
Replace the brake caliper adapter plate and brake rotor as needed.
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22. With assistance, position the replacement brake caliper.



23. Using the new fasteners, loosely install the fasteners securing the replacement brake caliper.

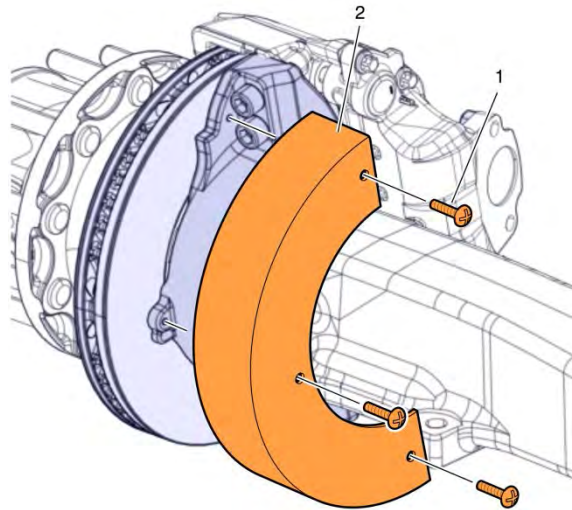
24. Tighten the brake caliper fasteners to 135 Nm (100 ft-lb) and then tighten the fasteners an additional 1/4 turn.



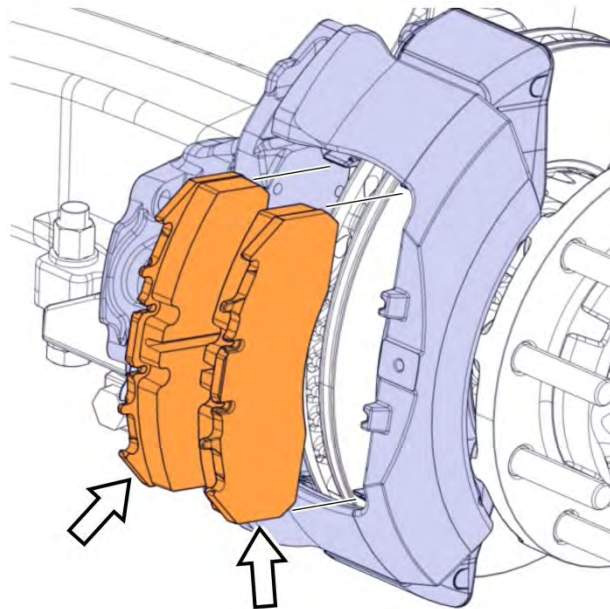
25. Position the brake rotor shield (2).

26. Install the fasteners (1) securing the brake rotor shield (2).

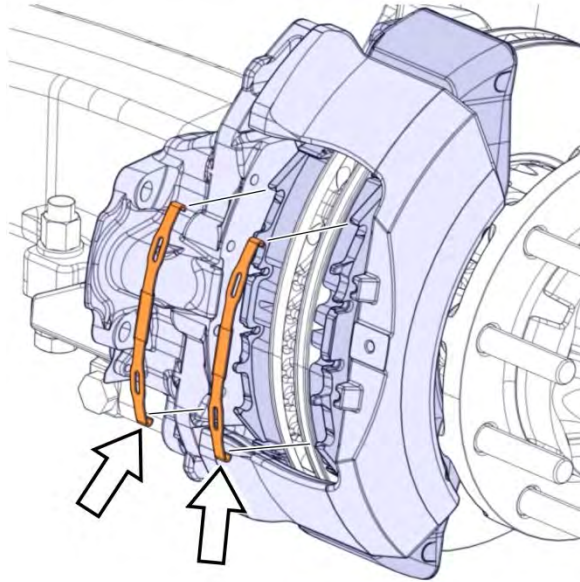
27. Tighten the fasteners to 20.3 Nm (15.0 ft-lb).



28. Install the stored brake pads.



29. Install the stored brake springs.

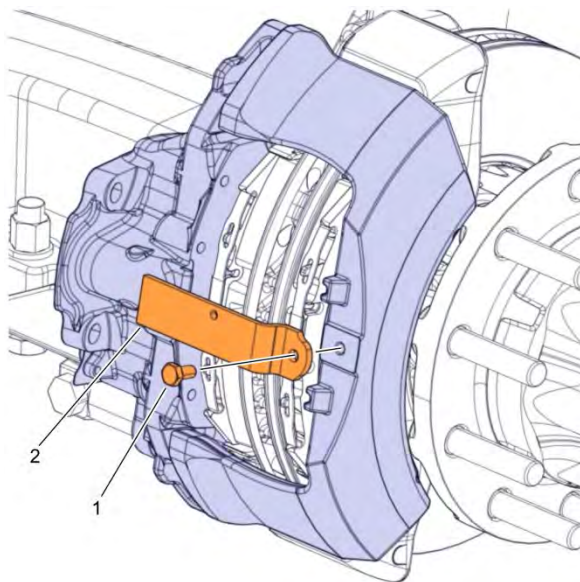


30. Install the stored brake pad retainer and brake pad shield.

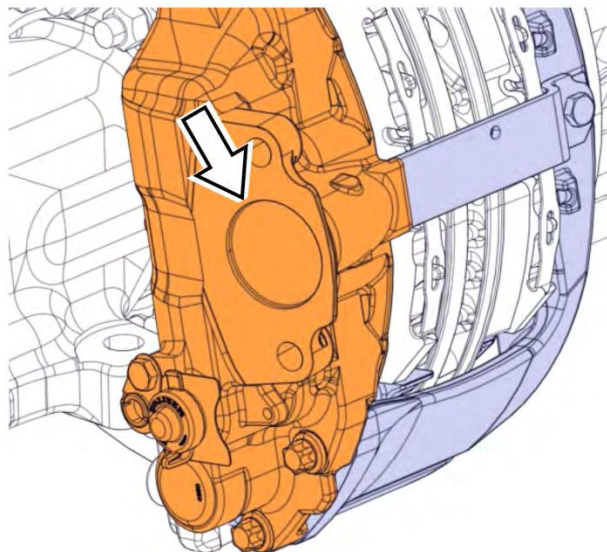
NOTE

Use a new fastener to secure the brake pad retainer and shield.

31. Tighten the brake pad retainer and shield fastener to 34 - 40 Nm (25 - 30 ft-lb).



32. Before installing the replacement brake chamber, remove the transit plug from the replacement brake caliper chamber seal.



33. Position the replacement brake chamber and fasteners on the caliper as shown in the figure on the next page.

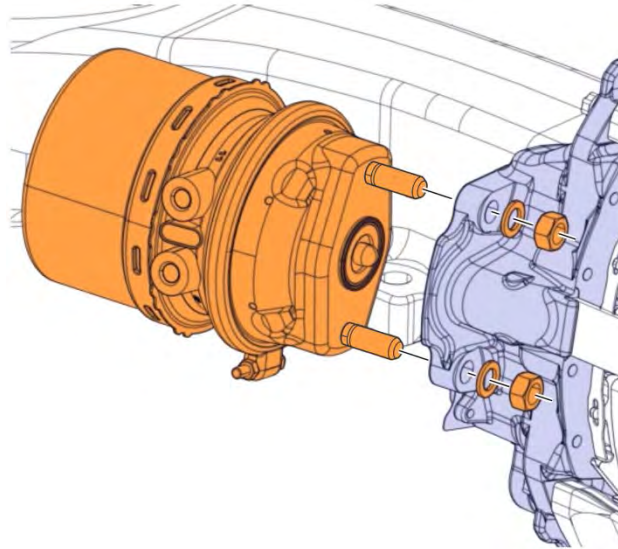
! WARNING

Do not work on the spring brake (brake chamber) from the rear. Always work on a spring brake from the front side to eliminate the risk of personal injury. Brake chambers are under more than 9000 Newtons (2000 lbf) of spring force.

34. Tighten the brake chamber fasteners to 80 - 100 Nm (59 - 75 ft-lb), then tighten them to 180 - 210 Nm (133 - 155 ft-lb).

NOTE

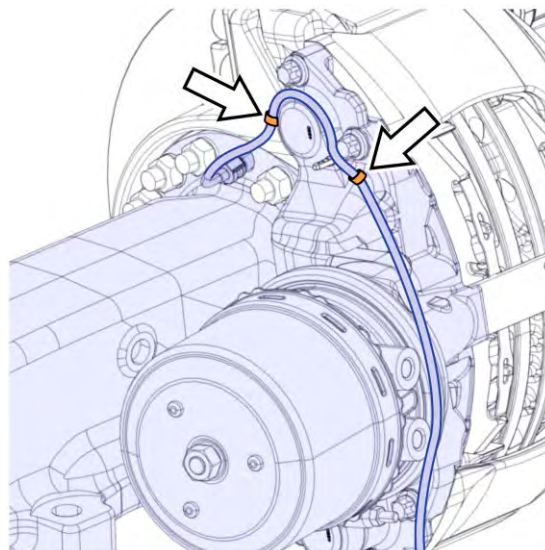
Use hand tools to tighten the switch panel fasteners. Do not over tighten the fasteners.



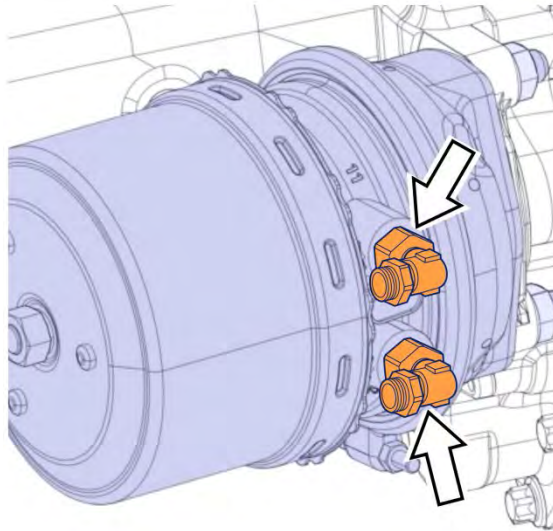
35. Install the cable ties securing the wheel speed sensor to the brake caliper.

NOTE

Leave 30 mm (1.1 in) of cable length between the two cable ties as shown in the illustration.

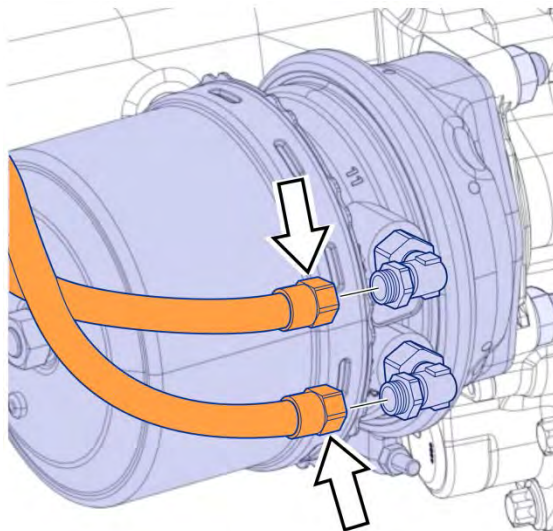


36. Using seal tape, install the stored air line fittings on the replacement brake chamber.



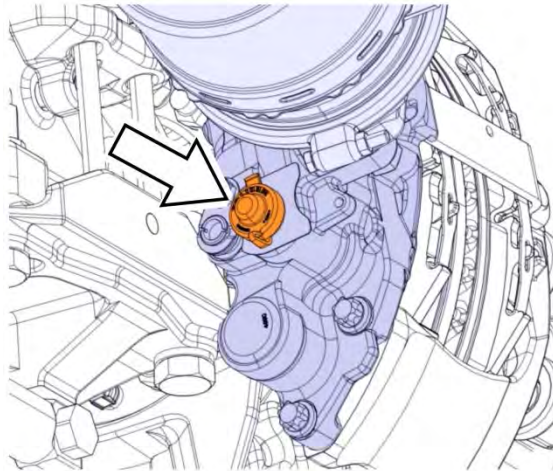
37. Connect the air lines to the replacement brake chamber.

38. Tighten the air lines to 34 - 45 Nm (25 - 33 ft-lb).



39. If applicable, uncage the park brake chamber.

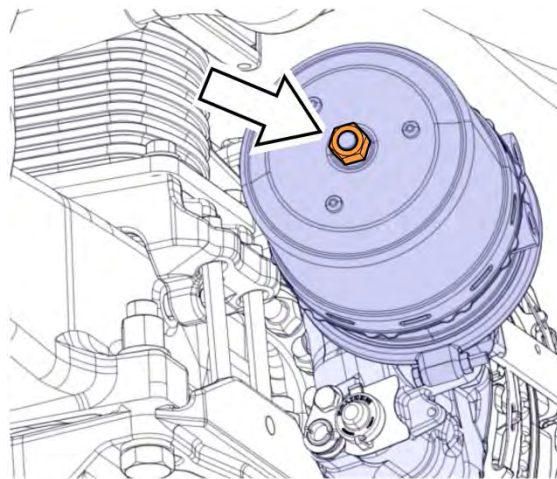
NOTE
This step applies to Caged Axles only.



40. To adjust the brakes, turn the adjuster **CLOCKWISE** to run the tappets fully against the outboard back plate of the disc brake pad.

41. Back the adjuster off approximately 2 clicks for adjustment (between 0.024 and 0.043 inches).

42. Install the adjuster cap.



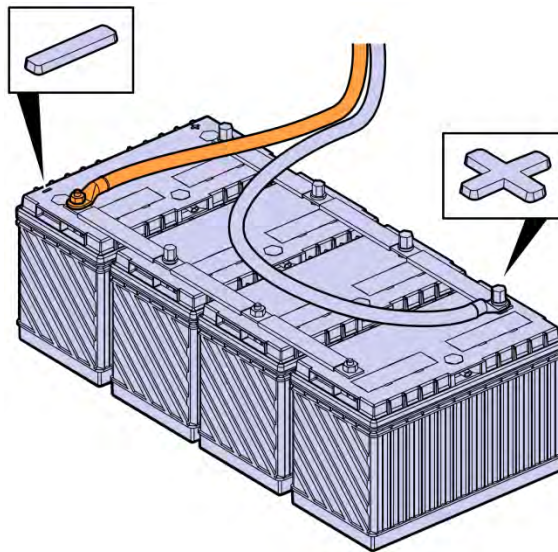
43. Apply the park brake.

44. Install the wheels.

45. Install the wheel nuts.
46. Tighten the wheel nuts to 610 - 677 Nm (450 - 500 ft-lb).
47. Lift the steer axle with a jack, remove the jack stands, and lower the axle.

COMMISSIONING THE TRUCK FOR OPERATION:

1. Connect the battery cable to the negative (ground) terminal.

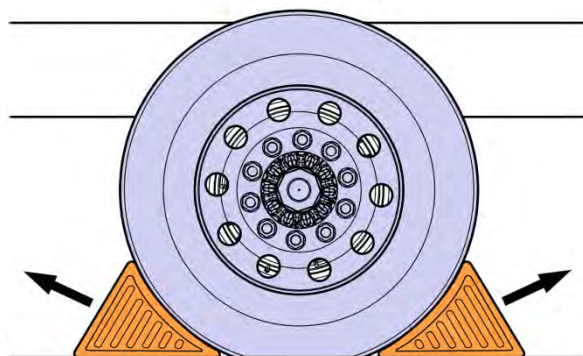


2. Start the truck, check the operation of the air brakes and check for air leaks.

NOTE

Run the engine until the correct pressure for the air brake system is obtained.

3. Remove the wheel chocks.



REIMBURSEMENT:

This repair is covered by an authorized Safety Recall campaign. Reimbursement is obtained through the normal claim handling process.		
	UCHP Reimbursement	eWarranty Reimbursement
Claim Type (Used when uploading from the Dealer business System)	40	40
Recall Status		
Vehicle repaired per instructions		1-Modified per instructions
Labor Code		
Primary Labor Code (Disc Brake Caliper, Inspection) Per Wheel	5000-02-09-01 0.3 hrs	5304A-ZP-95 0.3 hrs
Labor Code (Disc Brake Caliper, Replacement, Wheel on a Caged Axle) Per Wheel	5117-03-09-01 2.1 hrs	5304B-ZP-95 2.1 hrs
Labor Code (Disc Brake Caliper, Replacement, Wheel on an Uncaged Axle) Per Wheel	5117-03-09-02 1.9 hrs	5304C-ZP-95 1.9 hrs
Time to take charge of vehicle and determine campaign status	1700-16-01-01 0.3 hrs	101AA-0A-00 0.3 hrs
Causal Part	21977347, 21977348	21977347, 21977348
Authorization Number	C6561	SC0392

Take-charge time is not included in the labor code for this operation. Take charge may be eligible, but can only be used once per vehicle repair visit. If the vehicle is having other warranty repairs performed, take-charge should be charged to the warranty repair, otherwise take-charge can be charged to this Safety Recall campaign.