

June 2022
FL930AB
NHTSA #22V-299

Subject: Western Star Brake Caliper Mounting Bolts

Models Affected: Specific model years 2022-2023 Western Star 47X and 49X vehicles manufactured December 6, 2021, through February 9, 2022.

General Information

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

On certain vehicles, insufficiently torqued caliper mounting bolts may not provide adequate clamping force between the brake caliper and brake anchor plate, potentially resulting in reduced brake effectiveness, which could increase the risk of a crash.

The caliper mounting bolts will be torqued and replaced as needed.

There are approximately 15 vehicles involved in this campaign.

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 kit and/or part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number FL930, a list of the customers and vehicle identification numbers will be available on DTNAConnect. Please refer to this list when ordering parts for this recall.

Table 1 - Replacement Parts for FL930

Campaign Number	Kit Number	Part Description	Part Number	Qty. per Caliper
FL930AB	N/A	BOLT (M20X2.5X60)	N210931 020001	6 ea
		WASHER-FLAT,STEEL,HARDENED,3/4 IN	23-09114-004	6 ea
		BLANK 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.

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Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL930AB	Inspect torque on both rear axles; replace bolt(s) if needed.	2.0	996-R154A	12-Repair Recall/Campaign
	Inspect torque on additional rear axles; replace bolt(s) if needed. (Add SRT for additional rear axle)	1.1	996-R154B	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 condition code (**FL930-A** or **FL930-B**).
- In the Primary Failed Part Number field, enter **25-FL930-000**.
- In the Parts field, enter the appropriate kit or part number(s) as shown in the Replacement Parts Table.
- In the Labor field, first 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 **F99-999-005** 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.
 - Include the approved amount on your claim in the Other Charges section.
 - 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.

U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNACONNECT.COM/WSC, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

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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: Western Star Brake Caliper Mounting Bolts

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 requirements of the Motor Vehicle Safety Act. This is to inform you that your vehicle may contain a defect that could affect the safety of a person.

Daimler Truck North America LLC (DTNA), on behalf of its wholly owned subsidiary Western Star Truck Sales, Inc., has decided that a defect that relates to motor vehicle safety exists on specific model years 2022-2023 Western Star 47X and 49X vehicles manufactured December 6, 2021, through February 9, 2022.

On certain vehicles, insufficiently torqued caliper mounting bolts may not provide adequate clamping force between the brake caliper and brake anchor plate, potentially resulting in reduced brake effectiveness, which could increase the risk of a crash.

The caliper mounting bolts will be torqued and replaced as needed. Repairs will be performed by Daimler Truck North America authorized service facilities.

Please contact an authorized Daimler Truck North America dealer to arrange to have the Recall performed and to ensure that parts are available at the dealership. The Recall will take approximately two hours, depending on the repair, and will be performed at no charge to you. To locate an authorized dealer, search online at <https://northamerica.daimlertruck.com/contact-us/>. Scroll down to "Locate a Dealer," and select the appropriate brand. You may also confirm your vehicle's involvement in this recall at this URL: <https://dtna-dlrinfo.prd.freightliner.com:48518/VinLookup/vin-module/getVinLookupPage>.

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 in the postage-paid envelope with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days. If you are a subsequent stage manufacturer, Federal law requires that you forward this notice to your distributors and retail outlets within five working days. If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. Please see the reverse side of this notice for details.

If you 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@daimlertruck.com. **For the Notice to U.S. Customers:** 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.nhtsa.gov>. **For the Notice to Canadian Customers:** If you wish to submit a complaint about this recall, you can contact Transport Canada road safety, 80 rue Noel, Gatineau, Quebec J8Z 0A1 or call (800) 333-0510.

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

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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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 Truck 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 Truck North America LLC dealer.

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

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Work Instructions

Subject: Western Star Brake Caliper Mounting Bolts

Models Affected: Specific model years 2022-2023 Western Star 47X and 49X vehicles manufactured December 6, 2021, through February 9, 2022.

General Information

See [Table 3](#) to determine the type of caliper installed on the vehicle and the page number for the instructions. The work instructions shall be carried out on the **rear calipers only**.

Campaign Number	Caliper Type	Page Number
FL930A	Bendix Axial	6
FL930B	Meritor Axial	11

Table 3, Caliper Type and Instruction Page Number

Rear Caliper/Carrier Assembly Torque and Replacement - Bendix Axial Mounted Calipers

1. Check the base label (Form WAR259) for a completion sticker for FL930 (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 for FL930, 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.

WARNING

Never work around or under a vehicle that is supported only by a jack. Always support the vehicle with safety stands. Jacks can slip, allowing the vehicle to fall, which could result in serious injury or death.

3. Raise the rear axle and support it on jack stands. For detailed instructions, see **Section 00.06** of the *47X & 49X workshop manual*.
4. Remove the rear wheel assembly.

NOTE: In all steps that require a torque wrench, use a snap-on torque wrench ATECH4RS600, or an equivalent, with a center to handle length of 47 inches (119 cm).

5. Set a torque wrench to 350 lbf-ft (475 N·m) and tighten the caliper mounting bolts. If they do not turn, go to step 13. If they turn, go to step 6. Due to limited caliper bolt access, it may be necessary to use tool DDC DSNCHA018005 referenced in tool letter 18TL18. If the tool is needed, use tool DDC DSN-CHA018005 only and no other tools. See [Fig. 1](#) for a 47 in (119 cm) long wrench, see [Table 4](#) for torque specifications.

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Fig. 1, DDC DSNCHA018005 30mm Air Disc Brake Caliper Brake Bolt Torque Adaptor

Torque Check with 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005			
Angle View	Extension Angle (degrees)	Target Torque [lb·ft (N·m)]	Tool Setting [lb·ft (N·m)]
<p>0° 11/28/2016 f422613</p>	0	350 (475)	296 (401)
<p>45° 11/28/2016 f422614</p>	45		310 (420)
<p>60° 11/06/2018 f422668</p>	60		320 (434)
<p>90° 11/28/2016 f422615</p>	90		350 (475)
<p>120° 11/06/2018 f422669</p>	120		386 (523)
<p>135° 11/28/2016 f422616</p>	135		402 (545)

Table 4, Torque Check with 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005

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WARNING

When replacing brake pads, shoes, rotors, or drums, always replace components as an axle set.

- Always reline both sets of brakes on an axle at the same time.
- Always replace both rotors/drums on an axle at the same time.
- Always install the same type of linings/pads or drums/rotors on both axle ends of a single axle, and all four axle ends of a tandem axle, at the same time. Do not mix component types.

Failure to do so could cause uneven braking and loss of vehicle control, resulting in property damage, personal injury, or death.

6. Remove the retainer pin, cotter pin, and brake pad retainer. Inspect the brake pad hardware to ensure it is in good condition. If it is, reuse the brake pad hardware. If the brake pad hardware is not in good condition, replace brake pad sets on both ends of the axle.
7. Remove the brake pads.
8. Remove caliper bolts.

IMPORTANT: The caliper/carrier assemblies are left and right handed. Ensure that the correct assembly (left or right) is installed on each side of the vehicle.

9. Align the caliper/carrier assembly with the rotor by pushing the caliper against the shelf on the torque plate, then install the caliper/carrier assembly using new caliper mounting bolts. See [Fig. 2](#).
10. Tighten the carrier mounting bolts in two steps as follows.
 - 10.1 Start on one side of the caliper and tighten all three bolts 20 to 60 lbf-ft (27 to 81 N·m), beginning with the inner-most bolt and moving to the outer-most bolt. Then tighten the three bolts on the other side of the caliper 20 to 60 lbf-ft (27 to 81 N·m), beginning with the inner-most bolt and moving to the outer-most bolt. See [Fig. 3](#).
 - 10.2 Repeat this process, increasing the torque value to 350 to 400 lbf-ft (475 to 542 N·m). If tool DDC DSNCHA018005 referenced in tool letter 18TL18 is used, see [Table 5](#) for torque specifications.

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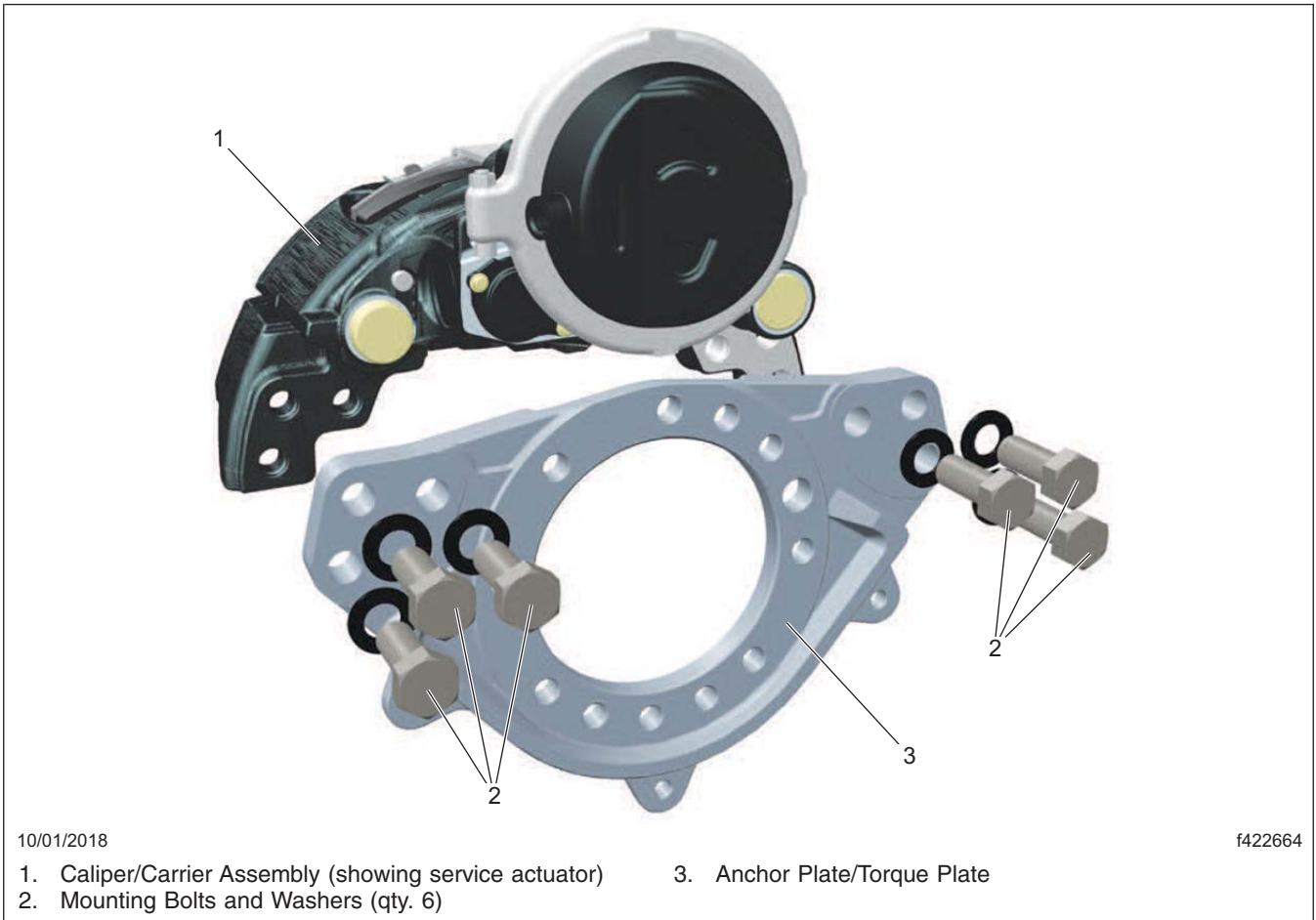


Fig. 2, Bendix Axial Mounted Caliper



Fig. 3, Tightening Pattern, Rear Bendix Axial Caliper

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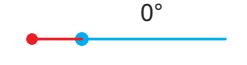

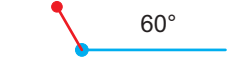



Bendix/Wabco Installation with a 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005			
Angle View	Extension Angle (degrees)	Target Torque [lb·ft (N·m)]	Tool Setting [lb·ft (N·m)]
 <p>0° 11/28/2016 f422613</p>	0	375 (508)	317 (430)
 <p>45° 11/28/2016 f422614</p>	45		332 (450)
 <p>60° 11/06/2018 f422668</p>	60		343 (465)
 <p>90° 11/28/2016 f422615</p>	90		375 (508)
 <p>120° 11/06/2018 f422669</p>	120		413 (560)
 <p>135° 11/28/2016 f422616</p>	135		431 (584)

Table 5, Bendix/Wabco Installation with a 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005

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.

11. Install the brake pads. Provided it is in good condition, use the brake pad hardware removed earlier.
12. Back off the adjuster nut three clicks.
13. Install the rear wheel assembly.
14. Raise the rear axle, remove the jack stands, then lower the rear axle. For detailed instructions, see **Section 00.06** of the *47X & 49X workshop manual*.

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15. 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.

16. In a safe area, check for proper brake operation, as follows, before putting the vehicle in service.
- 16.1 Apply and release the brakes several times to check for air leaks and proper operation.
 - 16.2 Perform six low-speed stops to ensure proper parts replacement and full vehicle control.
 - 16.3 Immediately after doing the above stops, check the rotor temperatures. Any rotors that are significantly cooler than others indicate a lack of braking effort on those wheels. Inspect and repair as necessary. For instructions, see **Group 40** of the *47X & 49X workshop manual*.
17. Clean a spot on the base label (Form WAR259). Write the recall number, FL930, on a completion sticker (Form WAR260), and attach it to the base label to indicate this recall has been completed.

Rear Caliper/Carrier Assembly Inspection and Installation - Meritor Axial Mounted Calipers

- 1. Check the base label (Form WAR259) for a completion sticker for FL930 (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 for FL930, 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.

 **WARNING**

Never work around or under a vehicle that is supported only by a jack. Always support the vehicle with safety stands. Jacks can slip, allowing the vehicle to fall, which could result in serious injury or death.

- 3. Raise the rear axle and support it on jack stands. For detailed instructions, see **Section 00.06** of the *47X & 49X workshop manual*.
- 4. Remove the rear wheel assembly.

NOTE: In all steps that require a torque wrench, use a snap-on torque wrench ATECH4RS600, or an equivalent, with a center to handle length of 47 inches (119 cm).

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5. Set a torque wrench to 350 lbf-ft (475 N·m) and tighten the caliper mounting bolts. If they do not turn, go to step 13. If they turn, go to step 6. Due to limited caliper bolt access, it may be necessary to use tool DDC DSNCHA018005 referenced in tool letter 18TL18. If the tool is needed, use tool DDC DSNCHA018005 only and no other tools. See [Fig. 1](#). See [Table 4](#) for torque specifications.

 **WARNING**

When replacing brake pads, shoes, rotors, or drums, always replace components as an axle set.

- Always reline both sets of brakes on an axle at the same time.
- Always replace both rotors/drums on an axle at the same time.
- Always install the same type of linings/pads or drums/rotors on both axle ends of a single axle, and all four axle ends of a tandem axle, at the same time. Do not mix component types.

Failure to do so could cause uneven braking and loss of vehicle control, resulting in property damage, personal injury, or death.

6. Remove the retainer pin, cotter pin, and brake pad retainer. Inspect the brake pad hardware to ensure it is in good condition. If it is, reuse the brake pad hardware. If the brake pad hardware is not in good condition, replace brake pad sets on both ends of the axle.
7. Remove the brake pads.
8. Remove caliper bolts.

IMPORTANT: The caliper/carrier assemblies are left and right handed. Ensure that the correct assembly (left or right) is installed on each side of the vehicle.

NOTE: The Meritor axial mounted caliper is similar to the Bendix axial mounted caliper shown in [Fig. 2](#).

9. Align the caliper/carrier assembly with the rotor by pushing the caliper against the shelf on the torque plate, then install the caliper/carrier assembly using new caliper mounting bolts.
10. Tighten the carrier mounting bolts in two steps as follows.
 - 10.1 Start on one side of the caliper and tighten all of the bolts 40 to 50 lbf-ft (54 to 68 N·m). Then tighten the bolts on the other side of the caliper 40 to 50 lbf-ft (54 to 68 N·m). See [Fig. 3](#).
 - 10.2 Repeat this process, increasing the torque value to 350 to 450 lbf-ft (475 to 610 N·m). If tool DDC DSNCHA018005 referenced in tool letter 18TL18 is used, see [Table 6](#) for torque specifications.

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Meritor Installation with a 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005			
Angle View	Extension Angle (degrees)	Target Torque [lbf·ft (N·m)]	Tool Setting [lbf·ft (N·m)]
 <p>0° 11/28/2016 f422613</p>	0	400 (542)	338 (458)
 <p>45° 11/28/2016 f422614</p>	45		354 (480)
 <p>60° 11/06/2018 f422668</p>	60		366 (496)
 <p>90° 11/28/2016 f422615</p>	90		400 (542)
 <p>120° 11/06/2018 f422669</p>	120		441 (598)
 <p>135° 11/28/2016 f422616</p>	135		460 (624)

Table 6, Meritor Installation with a 47 Inch (119 cm) Torque Wrench and Tool DDC DSNCHA018005

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.

11. Install the brake pads. Provided it is in good condition, use the brake pad hardware removed earlier.
12. Back off the adjuster nut three clicks.
13. Install the rear wheel assembly.
14. Raise the rear axle, remove the jack stands, then lower the rear axle.

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15. 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.

16. In a safe area, check for proper brake operation, as follows, before putting the vehicle in service.
- 16.1 Apply and release the brakes several times to check for air leaks and proper operation.
 - 16.2 Perform six low-speed stops to ensure proper parts replacement and full vehicle control.
 - 16.3 Immediately after doing the above stops, check the rotor temperatures. Any rotors that are significantly cooler than others indicate a lack of braking effort on those wheels. Inspect and repair as necessary. For instructions, see **Group 40** of the *47X & 49X workshop manual*.
17. Clean a spot on the base label (Form WAR259). Write the recall number, FL930, on a completion sticker (Form WAR260), and attach it to the base label to indicate this recall has been completed.