

REFERENCE:	Nova Bus Manuals
SECTION:	05: Rear Axle 08: Pneumatic System
RS N°:	MQR 7621-2871
EFFECTIVE IN PROD.:	N/A
TC RECALL N°:	2024-426
NHTSA RECALL N°:	24V-559

APPLICATION DEADLINES: N/A  
CLAIM REFERENCE NUMBER: SR5620

SUBJECT:	Brake System - Brake Chamber - Rear Axle			
JUSTIFICATION:	Certain Knorr-Bremse brake chambers manufactured on certain dates may have a defect that can cause the drive axle brakes to overheat.			
LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Inspect the rear axle brake chamber.	Nova Bus	Nova Bus	30 min
2	Replace any brake chambers that may be defective.	Nova Bus	Nova Bus	2 h

#### MATERIAL REQUIRED PER VEHICLE

QTY	PART N°	REV.	DESCRIPTION
<b>LEVEL 1</b>			
-	-	-	-
<b>LEVEL 2 (only if required**)</b>			
1 or 2	19517948	-	57 mm Brake Chamber Knorr-Bremse and Nuts, Kit
2 or 4	N8950851	-	O-ring (2 per brake chamber)

Materials will be available within 27 days once your order has been placed.

To order, please contact [novabus.parts@volvo.com](mailto:novabus.parts@volvo.com)

Or by phone for CANADA 1-800-771-6682, for USA 1-877-999-8808

Specify document number, quantity of parts required and shipping address.

\*\*The material identified in Level 2 is to be ordered only for vehicles that meet the criteria defined in Level 1.

#### DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED	RETAINED	* Dispose of the unused parts and the defective parts in accordance with local environmental standards in effect.
	*		
	Yes	-	

#### REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2024NO01	Initial release	Annie St-Jacques

APPROVED BY:

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NQF705003 VERSION 5 **Danna Dupuis** Signature numérique de  
Danna Dupuis  
Date : 2024.11.01 14:28:14 -  
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CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Academy Busline - New Jersey	LD60	—	—			15
Airdrie Alberta	LD26	—	—			2
Airdrie Alberta	LD27	—	—			3
Ann Arbor Area Transportation Authority Michigan - AAATA	LD09	2001				1
Ann Arbor Area Transportation Authority Michigan - AAATA	LD09	2003	2006			4
Barrie Ontario - Metrolinx	LD55	2101	2103			3
Belleville Ontario - Metrolinx	LD69	—	—			4
Brampton Ontario	LC97	—	—			2
Brampton Ontario	LD18	2009				1
Brampton Ontario	LD18	2021				1
Brampton Ontario	LD18	2024				1
Burlington Ontario - Metrolinx	LD86	2101	2105			5
Cape Breton Nova Scotia	LD97	—				1
Capital Area Transportation Authority Michigan - CATA	LD34	719	730			12
Capital Area Transportation Authority Michigan - CATA	LD35	6016	6018			3
CHARM City Baltimore	LD37	1910234	1910239			6
Cornwall Transit - Metrolinx	LD68	—	—			6
Durham Region Transit Ontario - Metrolinx	LD57	6117	6119			3
Durham Region Transit Ontario - Metrolinx	LD91	7104				1
Durham Region Transit Ontario - Metrolinx	LD91	7106	7117			12
Durham Region Transit Ontario - Metrolinx	LD94	9106				1
Grand River Transit Ontario - GRT	LD19	22010				1
Grand River Transit Ontario - GRT	LD19	22015				1
Grand River Transit Ontario - GRT	LD19	22020	22031			12
Guelph Ontario	LD33	281	284			4
Kingston Ontario - Metrolinx	LD65	2101	2105			5
Kingston Ontario - Metrolinx	LD74	2106				1
Maryland Transit Administration - MTA	LC28	20050				1
Maryland Transit Administration - MTA	LC28	20053				1
Maryland Transit Administration - MTA	LC28	20057	20070			14
Maryland Transit Administration - MTA	LD82	21001	21003			3
Maryland Transit Administration - MTA	LD82	21014	21020			7
Milton Ontario - Metrolinx	LD62	2001				1
Niagara Transit Commission - Metrolinx	LD53	2116	2119			4
Niagara Transit Commission - Metrolinx	LD63	2112	2115			4
Niagara Transit Commission - Metrolinx	LD67	2101	2112			12
North Bay Ontario - Metrolinx	LD52	794				1
Oakville Ontario	LD58	—	—			7
Peterborough Ontario - Metrolinx	LD72	—	—			6
Puerto Rico Metropolitan Bus Authority - AMA	LD32	2021-01	2021-10			10

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Regina Saskatchewan	LD78	—	—			2
San Antonio Texas - VIA	LD13	747				1
Sarnia Ontario - Metrolinx	LD56	201	202			2
Stratford Ontario - Metrolinx	LD66	—	—			4
Strathcona County Transit - Alberta	LD20	2031	2035			5
Sudbury Ontario - Metrolinx	LD71	910	919			10
Trimet Portland Oregon	LD14	4501				1
Whitehorse Yukon	LD31	—	—			2
Whitehorse Yukon	LD50	—	—			2
Worldwide Chauffeured Transportation - RMA	LC98	—	—			3

**WARNING**

FOLLOW YOUR INTERNAL SAFETY PROCEDURES.

## PROCEDURE

### LEVEL 1: INSPECT INSTALLED BRAKE CHAMBERS

- 1.1. Park the vehicle on an even surface with the transmission on neutral.
- 1.2. Apply the parking brake and set the master control switch to the **stop** position.
- 1.3. Set the battery disconnect switch in the battery compartment to the **off** position.
- 1.4. Lift the vehicle.

**NOTE**

For information on lifting and towing the vehicle, see *Section 18: Lifting and Towing of your Nova LFS Maintenance Manual*.

- 1.5. Remove the wheels from the drive axle.
- 1.6. Locate the 2 brake chambers installed on the drive axle (street side and curb side). Identify the stamped model number (Figure 1) and follow the action to take as indicated in Table 1.

Model Number	Model	Action to Take
K038830N00	57 mm	Continue with the Level 1 inspection procedure.
K038830N08	57 mm	Continue with the Level 1 inspection procedure.
K234368N00	64 mm	The brake chamber does not need to be replaced. If both chambers do not need to be replaced, continue with step 1.8 of Level 1 procedure.

Table 1 - Brake Chamber Model Identification



Figure 1 - Stamped Informations on the Brake Chamber

1.7. On both brake chambers, identify the stamped manufacturing date code and follow the action indicated in Table 2.

Date Code	Action to Take
From 16361 to 18455	The brake chamber needs to be replaced. <b>Continue with the Level 2 replacement procedure.</b>
From 20461 to 20525	The brake chamber needs to be replaced. <b>Continue with the Level 2 replacement procedure.</b>
All Other Date Code	The brake chamber does not need to be replaced. If both chambers do not need to be replaced, continue with the Level 1 procedure.

Table 2 - Brake Chamber Manufacturing Date Code Information

1.8. Install the wheels.



**NOTE**

**For information on wheels and tires, see Section 06: Wheels and Tires of your Nova LFS Maintenance Manual.**

1.9. Lower the vehicle.

1.10. The vehicle can be returned to service.

## LEVEL 2: REPLACE THE BRAKE CHAMBERS



### CAUTION

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Both brake chambers on the same axle **MUST** be of the same model (57 mm or 64 mm).



### NOTE

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Replace only the brake chamber found to be defective.

Depending on the situation, one or both brake chambers may need replacing.

## BRAKE CHAMBER REMOVAL

- 2.1. Release the parking brake.
- 2.2. Completely remove the bolt on the top of the brake chamber (Figure 2).
- 2.3. Bleed the air from the air system.



### CAUTION

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**Completely remove air pressure from the system before disconnecting any components. Pressurized air can cause serious personal injury.**

**For information of bleeding the air system, see *Section 08: Pneumatic System* of your Nova LFS Maintenance Manual.**

- 2.4. Locate the 2 air hoses on the brake chamber and note their position and orientation. Disconnect the hoses to this end only.
- 2.5. Unscrew and remove the two 90° fittings installed on the brake chamber. Retain the fittings.
- 2.6. Unscrew the nuts under the brake chamber and remove the chamber from the vehicle. Discard the brake chamber and its nuts.
- 2.7. On the brake caliper lever, clean any dirt or dust from the brake chamber mounting surface (Figure 3).

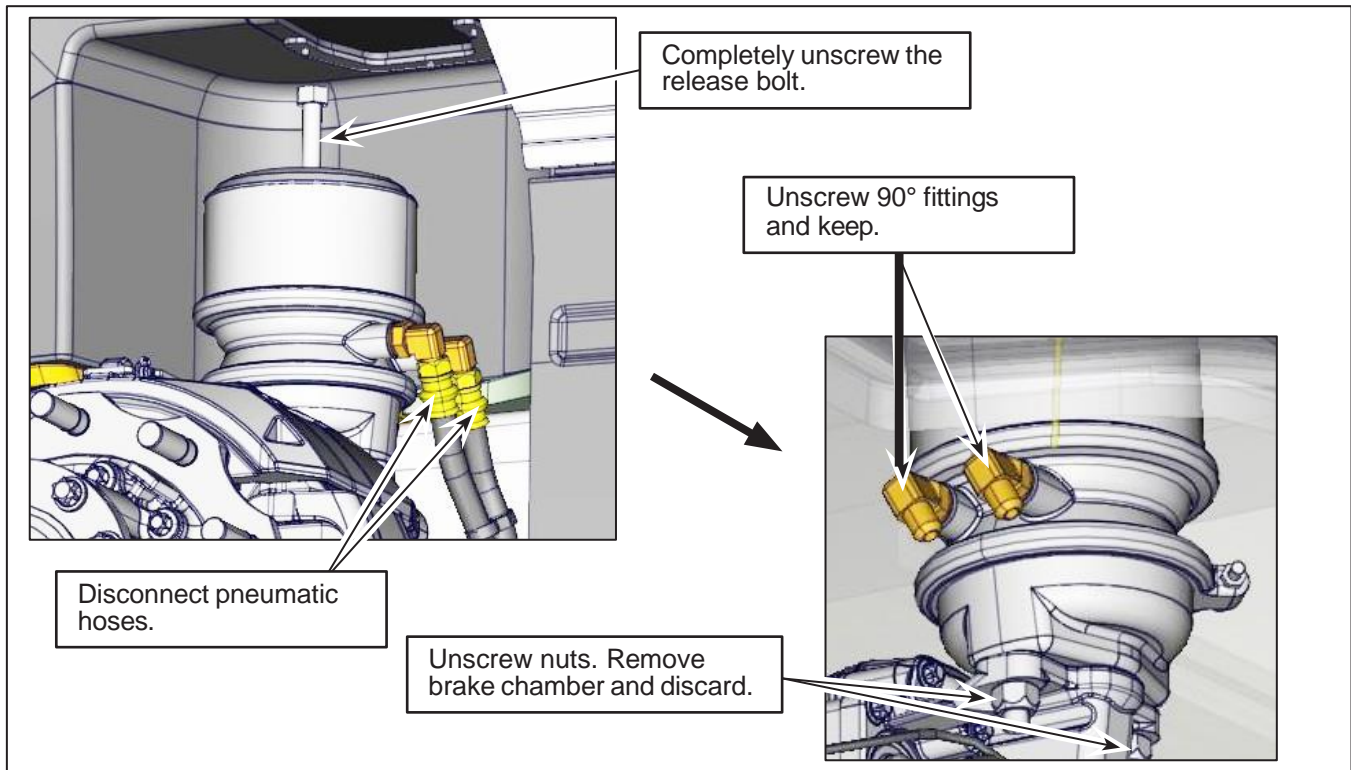


Figure 2 - Brake Chamber Street Side

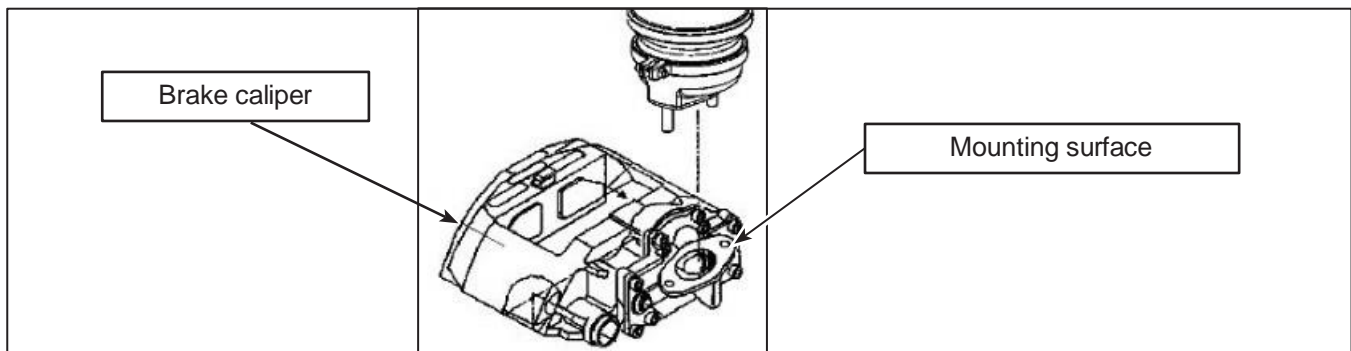


Figure 3 - Surface Mount on the Brake Caliper

## NEW BRAKE CHAMBER INSTALLATION

- 2.8. Take a new 57 mm brake chamber p/n: 19517948. Check its date code against Table 2 to determine if it is compliant. If it is not, discard the brake chamber and take a new one.
- 2.9. On the concave part of the mounting surface for the brake chamber, apply Renolit HLT2 white grease or an equivalent (Figure 3). **Note: do not use grease containing molybdenum disulfide.**

- 2.10. Install the new brake chamber in place with the new nuts provided in the kit and tighten to  $144 \pm 11$  lb-ft ( $195 \pm 15$  N•m ) (Figure 5). Apply torque seal. **Note: do not use impact tools, only hand tools.**
- 2.11. Tighten the release bolt of the new brake chamber using a **hand wrench** to a torque of  $44 \pm 4$  lb-ft ( $60 \pm 5$  N•m ) (Figure 4). Apply torque seal.
- 2.12. For the two 90° fittings previously removed, remove their O-ring and discard them. Install a new O-ring N8950851 on the fittings.
- 2.13. Install the two 90° fittings on the new brake chamber, respecting the angle of the original installation and tighten to  $30 \pm 4$  lb-ft ( $40 \pm 5$  N•m ) (Figure 5). Apply torque seal.

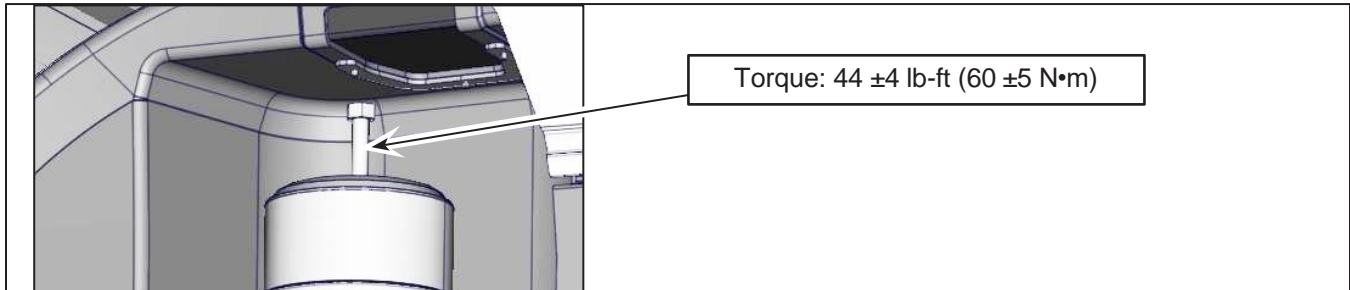


Figure 4 - Screw the Release Bolt

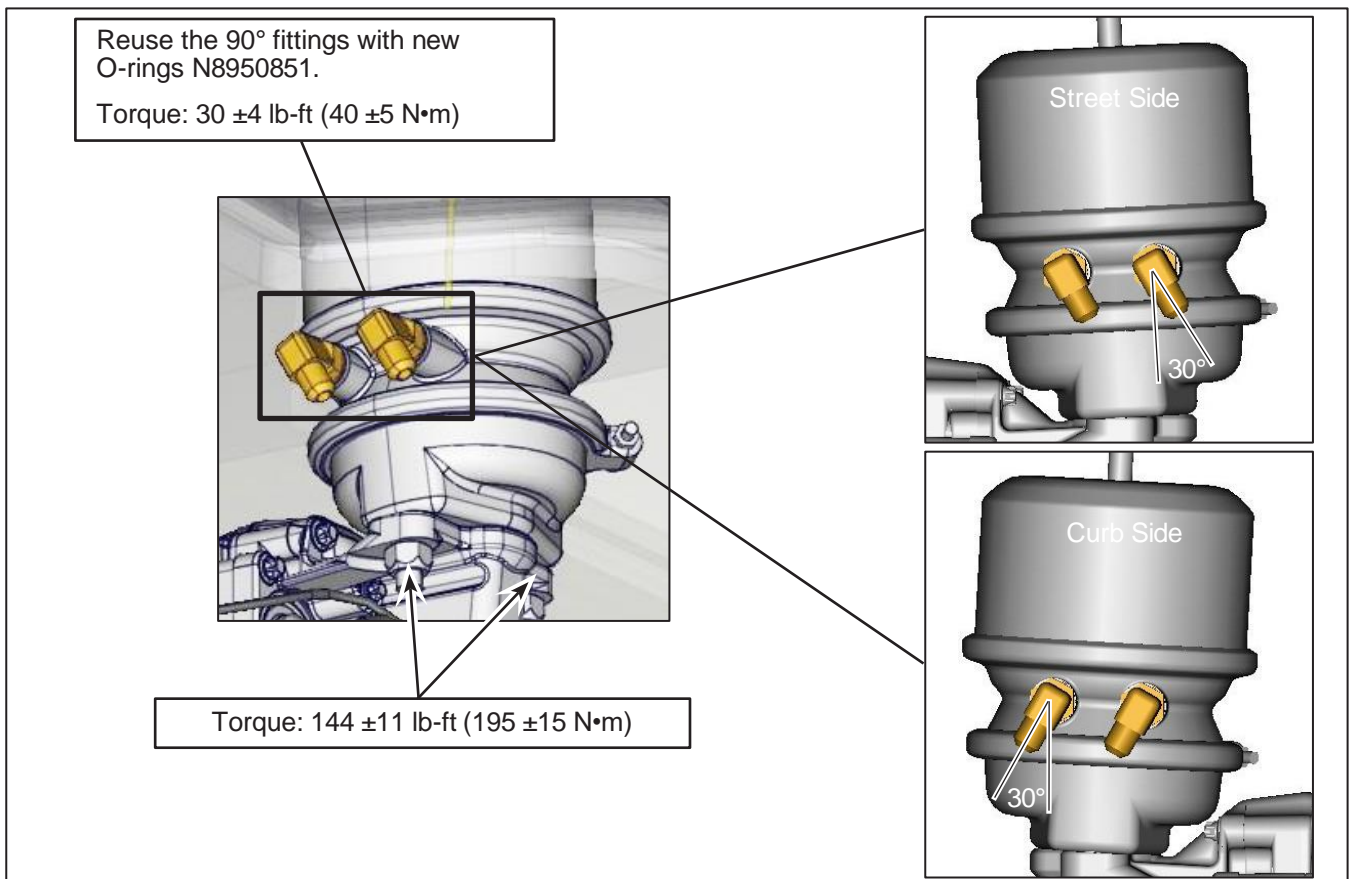


Figure 5 - Brake Chambers and 90° Fittings Installation

- 2.14. Connect the air hoses to the brake chamber fittings. Check for kinks or misbends and tighten to  $26.5 \pm 1.5$  lb-ft ( $36 \pm 2$  N•m ) (Figure 6).
- 2.15. Repeat the installation steps for the second brake chamber to be replaced if applicable.

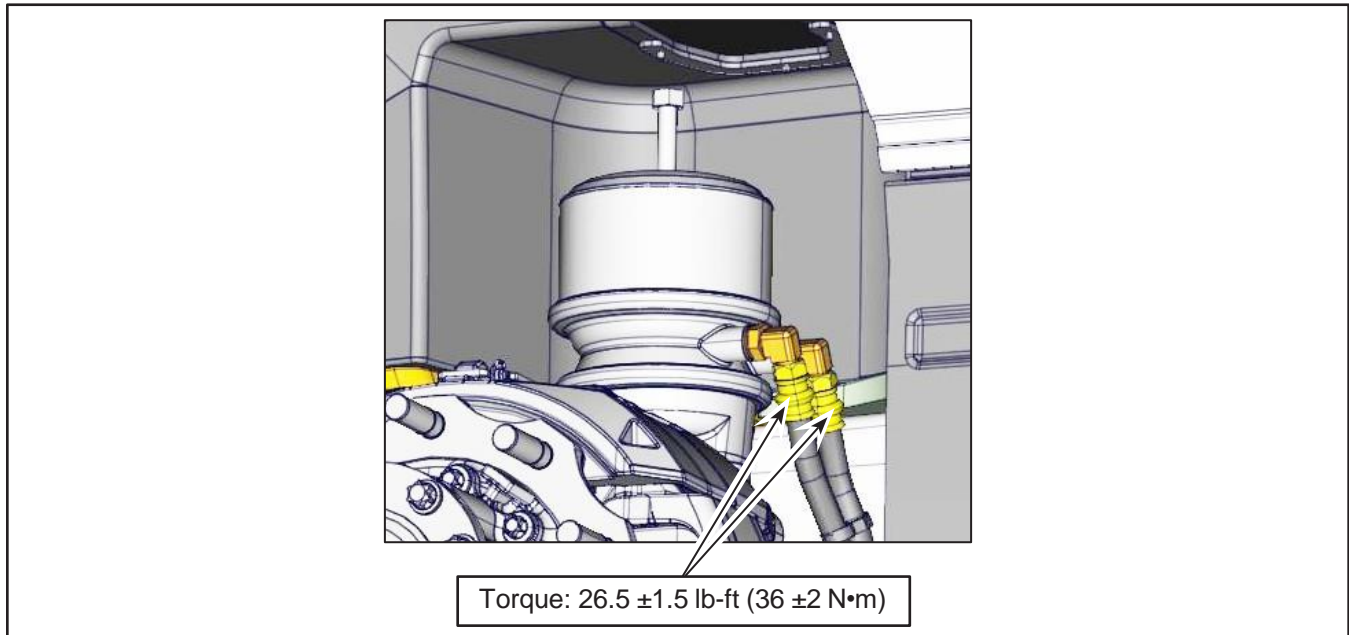


Figure 6 - Pneumatic Hoses Connections

#### CHECK AND DECELERATION TESTS

- 2.16. Start the vehicle and allow the air system pressure to build up.
- 2.17. Check the air connections made for any air leaks. **Note: do the checks with the parking brake released.**
- 2.18. Reinstall the wheels.



**For information on wheels and tire, see Section 06: Wheels and Tires of your Nova LFS Maintenance Manual.**

- 2.19. Perform the required deceleration tests.



**For information on the brake deceleration test, see Section 08: Braking System of your Nova LFS Maintenance Manual.**

- 2.20. The vehicle can be returned to service.