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|---------------------|--------------------|---|
| REFERENCE: | Nova Bus Manuals | APPLICATION DEADLINE: 2022DE31 CLAIM REFERENCE NUMBER: WB-5182 |
| SECTION: | 08: Braking system | |
| RS N°: | MQR 7621-1987 | |
| EFFECTIVE IN PROD.: | LD08 (2021AU) | |

| | |
|----------------|--|
| SUBJECT: | Braking system |
| JUSTIFICATION: | Brake chambers may fail and cause the drive axle brakes to overheat. |

| LEVEL | DESCRIPTION | DIRECT CHARGES | | TIME |
|-------|-----------------------------|----------------|----------|---------------------|
| | | LABOUR | MATERIAL | |
| 1 | Replace the brake chambers. | Nova Bus | Nova Bus | 3h |
| 2 | Replace damaged parts. | Nova Bus | Client* | see table on page 8 |

* The cost of the material will be reimbursed when claiming for this service document.

MATERIAL

| QTY | PART N° | REV. | DESCRIPTION |
|------------------------------------|-----------|------|---|
| LEVEL 1 | | | |
| 1 | N77859 | – | MGM brake chamber T22/24, left |
| 1 | N77860 | – | MGM brake chamber T22/24, right |
| 4 | 444002 | – | Adapter (Prv # 501309) |
| 4 | 2271619 | – | Elbow 90 M-FL45-8, M-NPT-6 |
| LEVEL 2 (only if required*) | | | |
| 4 | N38045 | – | ELBOW 90 ° MALE M22X1.5 FL45-8 |
| 2 | N95702-13 | – | Hose assembly (QR1-C to chambers) Parking brake |
| 2 | N95702-10 | B | Hose assembly (R14 to chambers), Service brake |
| 1 | N8902138 | – | Brake lining kit (1 per axle) |
| 1 | N8895746 | – | R14 Relay Valve |
| 2 | N8907581 | – | ABS modulator |
| 1 | N8908326 | – | Caliper LS |
| 1 | N8908325 | – | Caliper RS |
| 1 | N8900426 | – | Caliper LS |
| 1 | N8900425 | – | Caliper RS |
| 2 | N8911106 | – | Brake disc |

Materials will be available within 73 days once your order has been placed. To order, please contact Prevost Parts :
 For CANADA 1-800-463-8876 or prevostparts.commandes@volvo.com
 For USA 1-800-621-5519 or fonction.prevostparts.orders@volvo.com.
 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 | 2021SE20 | Initial release | André Pelletier |

APPROVED BY:

Jean-Nicolas Fournier

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 Date: 2021.09.29 13:13:54 -04'00'

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NQF772001 VERSION 3

| CLIENT | ORDER | ROAD NUMBER | | VIN (2NVY/4RKY...) | | QTY |
|----------------------------------|-------|-------------|------|--------------------|---------------|-----|
| | | FROM | TO | FROM | TO | |
| New York City Transit - New York | LA73 | 8504 | 8507 | L82J8J9776445 | L82J8J9776476 | 4 |
| New York City Transit - New York | LA76 | 8508 | 8633 | L82J9J9776924 | L82J8K9777144 | 125 |
| New York City Transit - New York | LB78 | 8526 | 8526 | L82J3K9776984 | L82J3K9776984 | 1 |
| New York City Transit - New York | LC32 | 8634 | 8754 | L82JXK9777145 | L82J5K9777277 | 121 |

**WARNING**

Follow your internal safety procedures.

PROCEDURE

- 1.1. Park the vehicle on an even surface with the transmission on neutral.
- 1.2. Set the master control switch to the **stop** position.
- 1.3. Disconnect the starting circuit on the control box at the rear of the vehicle and set the battery disconnect switch in the battery compartment to the **off** position.
- 1.4. Block the vehicle's wheels and release the parking brake

**CAUTION**

For information on hoisting and towing of the vehicle, see section 18: *HOISTING AND TOWING* in the Nova Bus maintenance manual. Use appropriate hoisting equipment for your protection and to prevent damage to the vehicle.

- 1.5. Lift and secure the vehicle so that the wheels can be removed.
- 1.6. Remove the vehicle drive axle wheels.
- 1.7. Unscrew the release bolt until it comes out completely to "cage" the brake chambers.

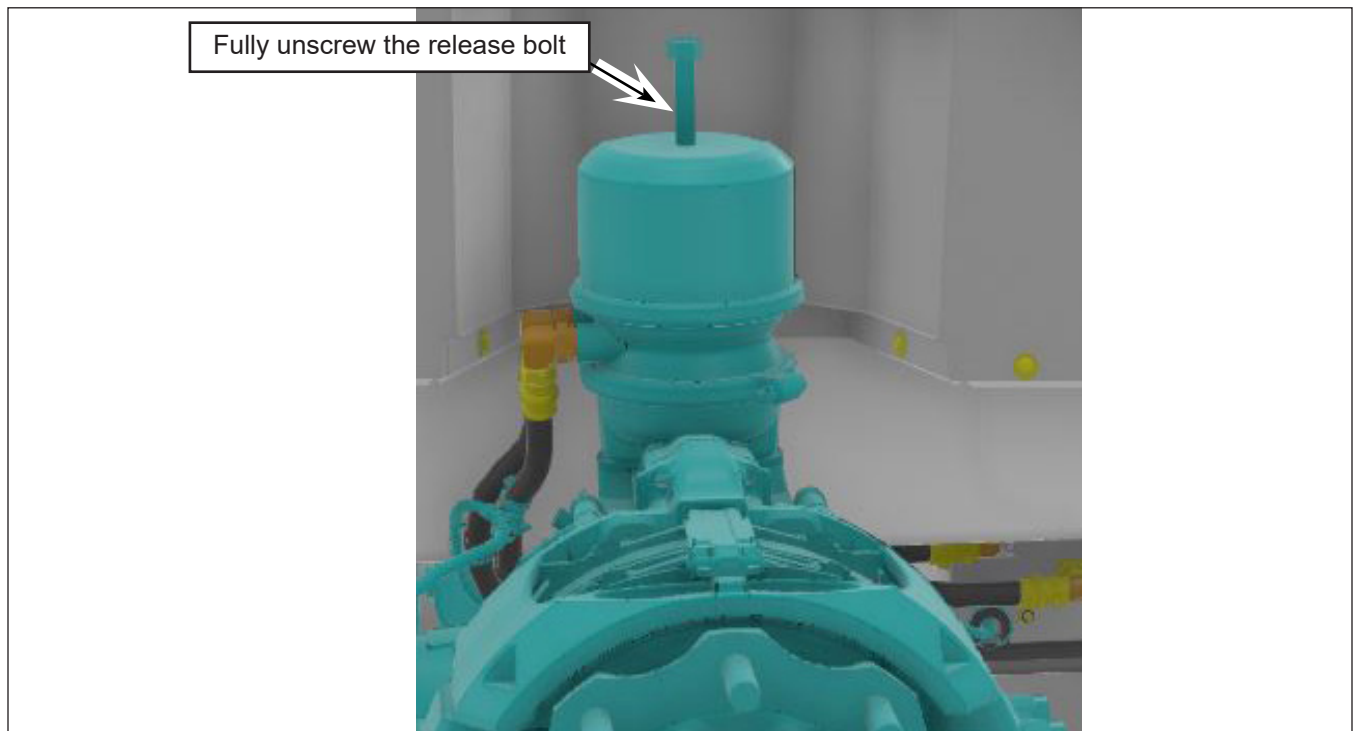


Figure 1 - Fully Unscrew the Release Bolt

**CAUTION**

Before attempting any work on pneumatic system components, and to prevent injury, release air pressure from the system by opening the discharge valves from all air reservoirs.

- 1.8. Completely drain air from all supply reservoirs. All hoses must be cleared of air.
- 1.9. Disconnect the service and parking brake hoses from the brake chambers. Make sure to mark the hoses positions for the reinstallation.

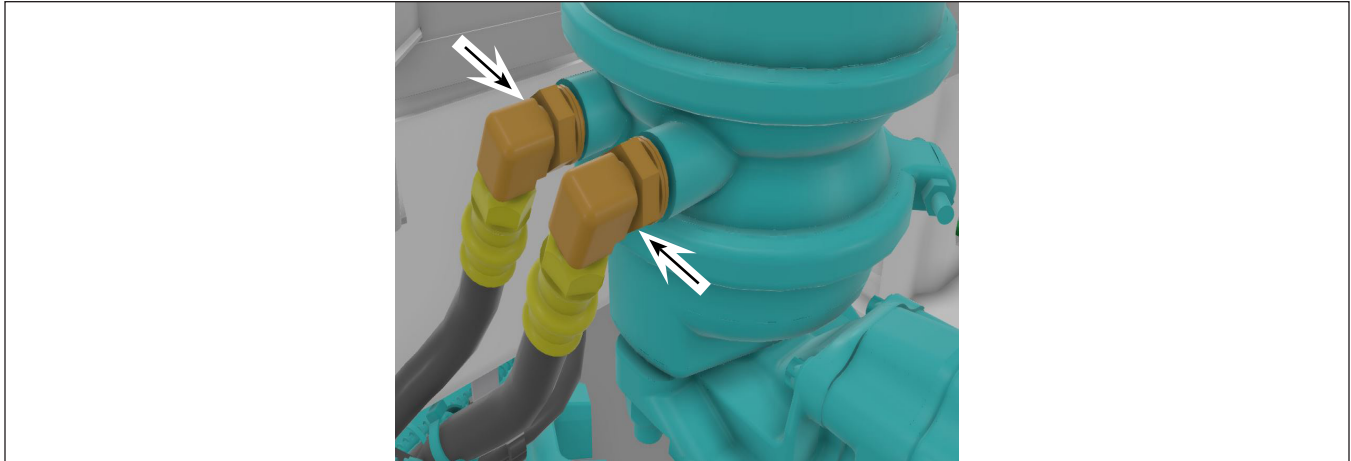


Figure 2 - Disconnect the Hoses

- 1.10. Remove both retaining nuts from the brake chamber.

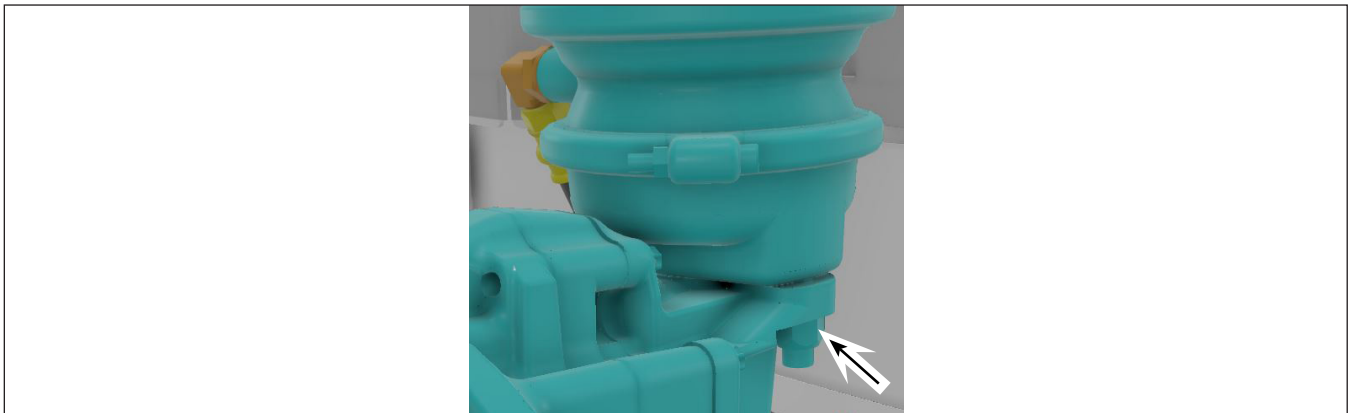


Figure 3 - Remove the Two Mounting Nuts

**WARNING**

Do not open a brake chamber. Disassembling the brake chamber can cause injuries because of the tension on its powerful spring. In order to prevent injuries, all discarded brake springs should be released safely.

- 1.11. Remove the brake chamber and dispose of the defective parts in accordance with local environmental standards in effect.
- 1.12. Before installing the new unit, the sealing surfaces must be cleaned. Apply white grease, such as Renolit HLT2, to the spherical cup in the lever before mounting the replacement unit. See the figure below.

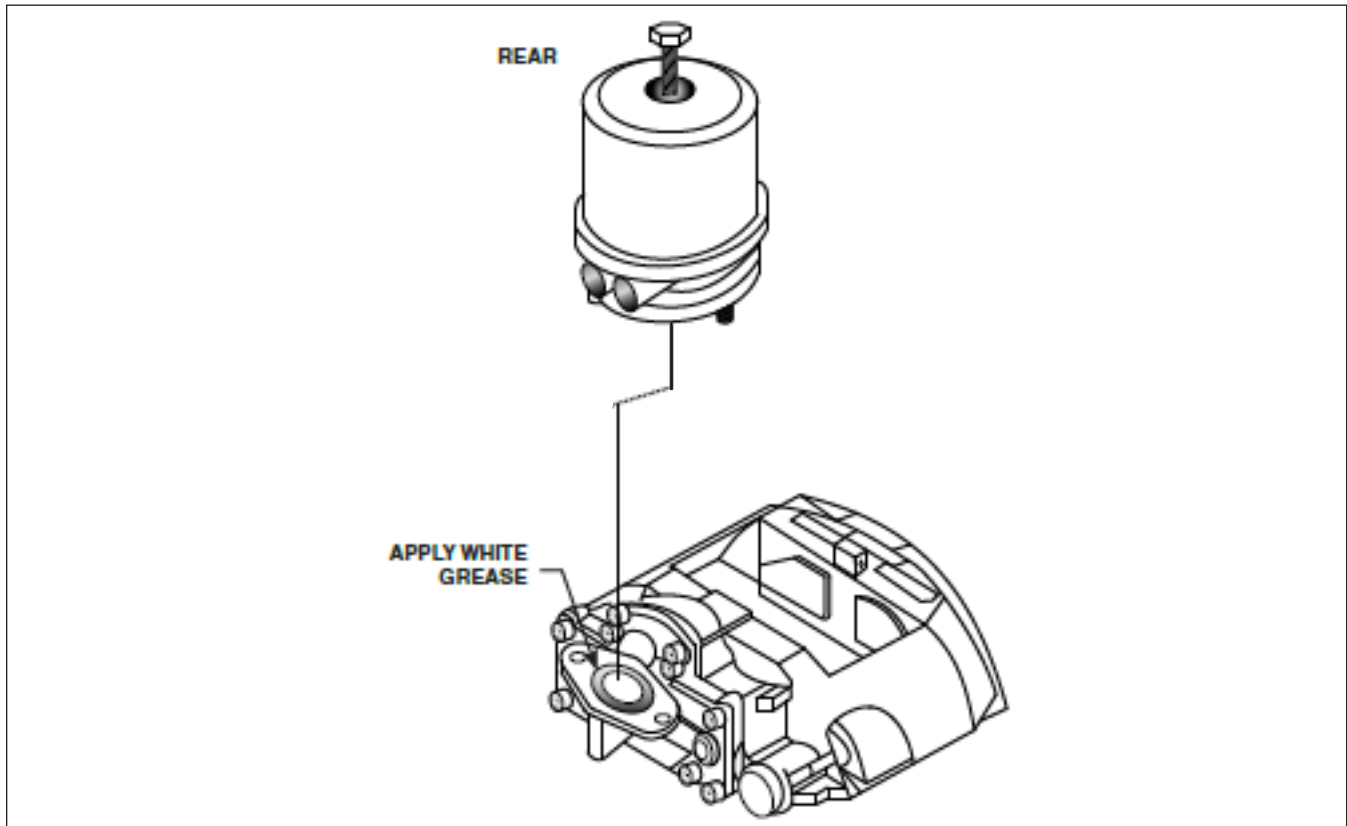


Figure 4 - Apply White Grease



CAUTION

Do not use grease containing molybdenum disulphate.

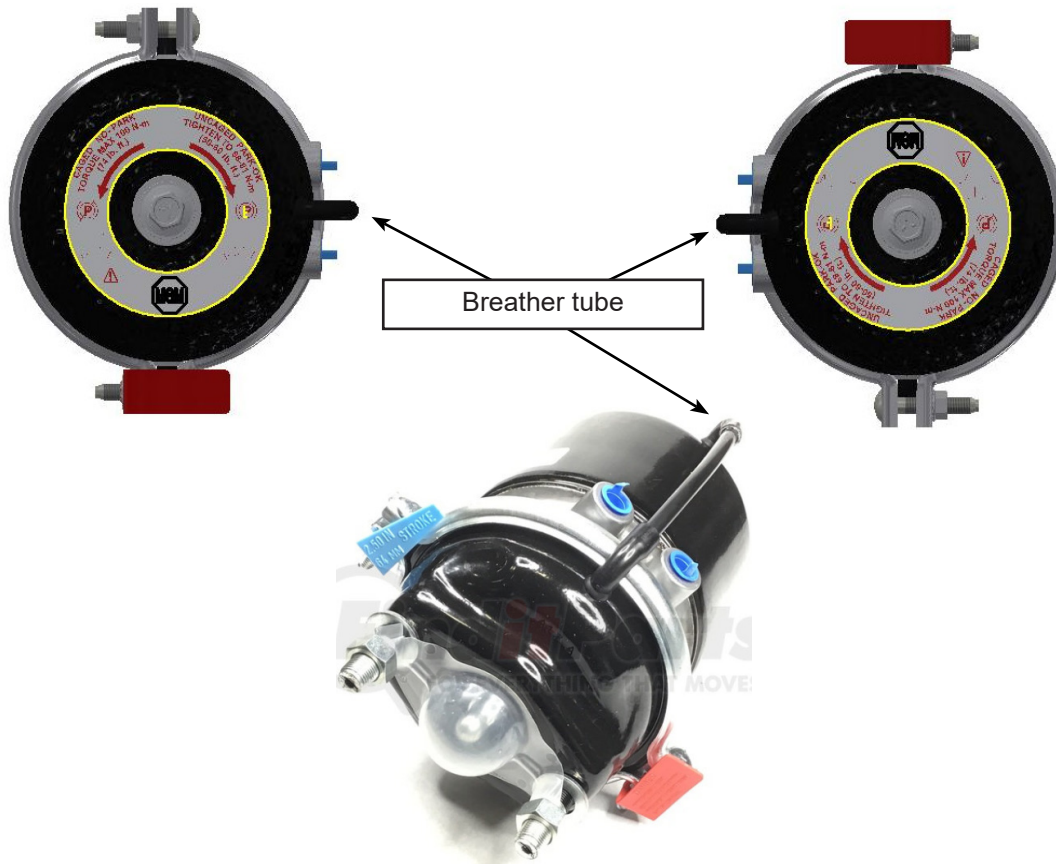


Figure 5 - New Chamber Breather Must Face Inward

- 1.13. Install the brake chamber with new nuts and torque to 139 ± 6 lb-ft. Use hand tools only, do not use an impact wrench. Apply torque seal. See figure 3.
- 1.14. Tightened the new chamber release bolt using a $3/4$ " in. wrench. Use hand tools only, do not use an impact wrench. Torque to 55 ± 5 lb-ft.



Figure 6 - Tightened the New Chamber Release Bolt

- 1.15. Apply Teflon to the new elbow fittings and adapters.
- 1.16. Screw the adaptor in the fitting or the elbow while firmly holding the hose-fitting nut with a wrench.
- 1.17. Install the hose to the brake chamber.
- 1.18. Make sure that there are no bends or kinks in the line.
- 1.19. The air hose fittings should be torqued to 25 to 30 lb-ft.
- 1.20. Ensure that the installation position for the fittings is correct.

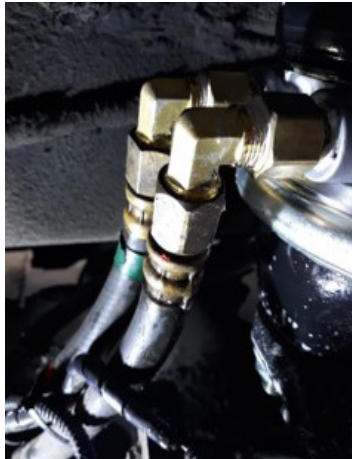


Figure 7 - Install and Position Adapters and Fittings

- 1.21. Repeat the steps for the chamber installation on the other side.
- 1.22. Start the vehicle and recharge the pneumatic system up to a minimum pressure of 100 psi (690 kPa).
- 1.23. Verify the pneumatic system's circuit with the parking brake released.
- 1.24. Apply soapy water and check for leaks, if a leak is found tightened the fittings or replace the affected parts as per the level 2 material list.

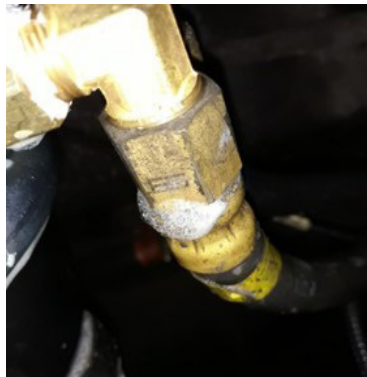


Figure 8 - Inspect for Leaks



NOTE

It is required to test the brakes after each brake change, or as required by local regulations.

- 1.25. If no leak is found, install the wheels as per your manual section 06: WHEELS AND TIRES and notify the shop to perform brake deceleration tests.
- 1.26. After the brake deceleration tests, the vehicle can return in service.

LEVEL 2: PARTS THAT MAY NEED TO BE REPLACED

| PN | Description | Max Qty | Additional Labor in hour (each part) | Justification |
|-----------|---|---------|--|--|
| N95702-13 | Hose assembly (QR1 - C to chambers) | 2 | 0.4 | Replace if leak detected. For LA73, LA76, LB78, LC32. |
| N95702-10 | Hose assembly (R14 to chambers) | 2 | 0.4 | Replace if leak detected |
| N8902138 | Brake lining kit (1 per axle) | 1 | 0.75 | Replace if overheat occured |
| N8895746 | R14 Relay Valve | 1 | 1.5 | Replace if leak detected |
| N8907581 | ABS modulator | 2 | 1.5 | Replace if leak detected |
| N8908326 | Caliper LS | 1 | 2.0 | Replace if overheat occured |
| N8908325 | Caliper RS | 1 | 2.0 | Replace if overheat occured |
| N8900426 | Caliper LS | 1 | 2.0 | Replace if overheat occured |
| N8900425 | Caliper RS | 1 | 2.0 | Replace if overheat occured |
| N8911106 | Brake disc | 2 | 3.0 | Replace if overheat occured |

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