

**Subject: Brake System Modulator Valve Evaluation**

**Make: Freightliner**

**Model: New Cascadia**

**Model Year Affected: 2020**

**Build Date Range: Selected Vehicles Built Between 6/25/2020 to 9/1/2020**

Our records indicate that you are the owner of certain vehicles; therefore, DTNA has decided to share the following documentation with you.

We are requesting that owners of certain DTNA vehicles built with modulator valves perform a modulator valve inspection.

Please see the attached communication in this email. We hope you find this information helpful.

## Subject: Brake System Modulator Valve Evaluation

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## Work Instructions

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Open the hood.

**NOTE:** Both the left and right modulator valves are requested for sampling.

3. Locate the modulator valves on the frame. See [Fig. 1](#). Using the flat end of a screwdriver, disconnect the electrical modulator valve connector on the front side of the frame rail above the front axle. See [Fig. 2](#).



**Fig.1, Locating the Modulator Valve**



**Fig. 2, Electrical Connector**

4. Remove the antilock braking system (ABS) zip tie from the modulator mounting bolt. See [Fig. 3](#).
5. Using the special tool NQ307001-1 in kit number NQ307001, disconnect the plastic airline from the modulator valve. See [Fig. 4](#) and [Fig. 5](#).



**Fig. 3, ABS Zip Tie**



Fig. 4, Special Tool NQ307001-1



Fig. 5, Disconnecting the Plastic Air Line

6. Using a 7/8-in wrench, remove the quick connect fitting from the modulator. See [Fig. 6](#).



Fig. 6, Disconnecting the Quick Disconnect Fitting

7. Using a 7/8-in wrench, remove the threaded airline that goes from the modulator to the brake chamber. See [Fig. 7](#).

**NOTE:** The fitting hits the frame rail when it is turned and cannot be removed. However, it is easier to loosen the fitting while the modulator is attached to the vehicle.

8. Using a 23-mm wrench, loosen the brake chamber airline fitting on the modulator valve. See [Fig. 8](#).



Fig. 7, Removing the Threaded Air Line

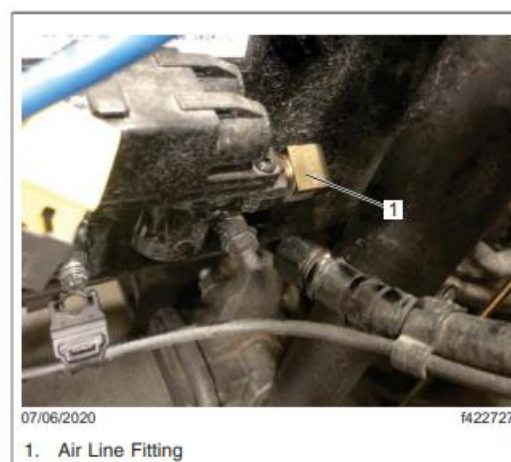


Fig. 8, Loosening the Brake Chamber Air Line Fitting

9. Using a 1/2-in socket wrench, remove the two modulator valve mounting bolts, then remove the modulator valve from the vehicle.

**IMPORTANT:** Please label each valve to include the serial number and mileage of the vehicle, and the respective location of the valve on the chassis. Please document the part number of the replacement valve. Upon removal and labeling, store the valves in a secure location. A DTNA district service manager (DSM) will collect the sample valves and ship them to ZF WABCO for evaluation.

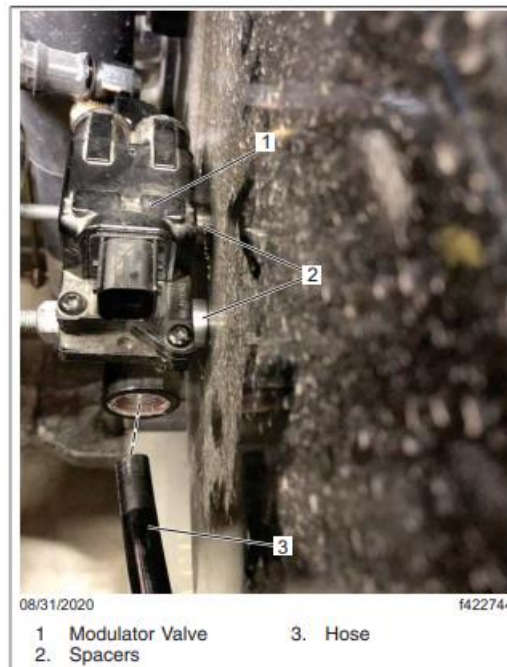
10. Using a 23-mm wrench, remove the brake chamber airline fitting from the modulator valve.

**IMPORTANT:** To avoid internal contamination of the air system, be careful when applying sealant to the threads of the airline fitting.

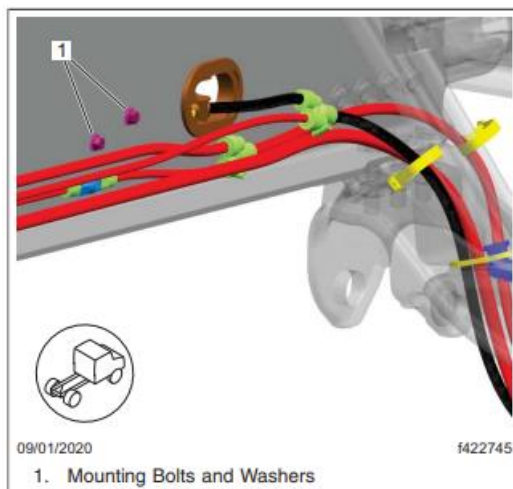
11. Clean any old sealant off of the threads and apply Loctite® 567 on the quick connect fitting.

12. Using a 23-mm wrench, install the brake chamber airline fitting on the new modulator valve.

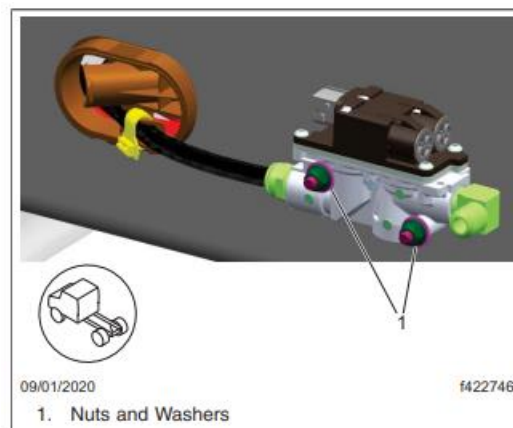
13. Using a 1/2-in socket wrench, tighten the bolts 11 lbf·ft (15 N·m). See [Fig. 9](#), [Fig. 10](#), and [Fig. 11](#).



**Fig. 9, Installing the Spacers**



**Fig. 10, Modulator Valve Bolts and Washers**



**Fig. 11, Modulator Valve Nuts and Washers**

14. Using a 7/8-in wrench, install the threaded airline that goes from the modulator valve to the brake chamber.

**IMPORTANT:** To avoid internal contamination of the air system, be careful when applying sealant to the threads of the airline fitting.

15. Clean any old sealant off of the threads, and apply Loctite® 567 on the quick connect fitting.
16. Using a 7/8-in wrench, install the quick connect fitting on the modulator valve.
17. Trim the plastic airline 1/4 to 3/8 in, as necessary, to remove any damage or scoring from the disassembly process, then attach the plastic airline to the module.
18. Install the ABS zip tie on the modulator mounting bolt (to prevent chafing). See [Fig. 3](#).
19. Connect the electrical modulator valve connector.
20. Repeat the procedure for the modulator valve on the other side of the vehicle.
21. Close the hood.
22. Build air pressure to check for leaks, and perform six full brake applications in the parking lot to verify proper brake performance.