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SF691 A

## Subject: M2 Plus Work Brake

**Models Affected: Specific model years 2024-2025 Business Class  
M2 vehicles manufactured between March 23, 202, through April 9, 2024.**

### General Information

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, is initiating Field Service Campaign SF691 to modify the vehicles mentioned above.

The parameters that control the work brake function do not operate properly.

The work brake parameter will be updated, and the XMC1 X1 Connector Wires moved.

There are approximately 49 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.

Please contact Warranty Campaigns for consideration of additional charges prior to performing the repair.

### Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR261).

### Replacement Parts

There are no replacement parts for this repair.

If our records show your dealership has ordered any vehicle(s) involved in campaign number SF691, a list of the customers and vehicle identification numbers will be available on the DTNA Portal via OWL.

**Table 1** - Replacement Parts for SF691

Campaign Number	Part Number	Part Description	Qty.
SF691 A	WAR261	BLANK COMPLETION STICKER	1 ea

**Table 1**

### Removed Parts

There are no removed parts for this repair.

### Labor Allowance

**Table 2** - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
SF691 A	Parameter update, and moving XMC1 X1 Connector Wires	1.7	996-F218A	12-Repair Recall/Campaign

**Table 2**

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**IMPORTANT:** When the campaign has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the gray completion sticker provided in the field service kit (Form WAR261). 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 field service kit is not required or there is no completion sticker in the kit, write the campaign 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 **Field Service Campaign**.
- In the Campaign field, enter the campaign number and appropriate condition code (**SF691 A**).
- In the Primary Failed Part field, enter **25-SF691-000**.
- 
- In the Labor section, 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**.
- This Field Service Campaign will **terminate on June 30, 2025**. Dealers will be notified of any changes to the termination date via an Important Campaign Information Letter (ICI) posted on the DTNA Portal.

**IMPORTANT:** OWL must be viewed prior to beginning work to ensure the vehicle is involved and the campaign has not previously been completed. Check for a completion sticker before beginning work.

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign. U.S. and Canadian Dealers: All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resaleable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. Canadian Dealers: return kits to your facing PDC. Export Distributors: Excess inventory is not returnable.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via the Warranty Support Center (WSC) located on the DTNA Portal. Export distributors submit a WSC inquiry or contact your International Service Manager.

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## Copy of Notice to Owners

### Subject: M2 Plus Work Brake

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Truck Division, is initiating Field Service Campaign SF691A to modify the vehicles mentioned below. Specific model years 2024-2025 Business Class M2 vehicles manufactured between March 23, 2023, through April 9, 2024.

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, is initiating Field Service Campaign SF691 to modify the vehicles mentioned above.

The parameters that control the Work Brake function do not operate properly.

The work brake parameter will be updated, and the XMC1 X1 Connector Wires moved.

Please contact an authorized DTNA dealer to arrange to have the campaign performed and to ensure that parts are available at the dealership. The campaign will take approximately two hours and will be performed **free of charge**. To locate an authorized dealer, search online at [northamerica.daimlertruck.com/contact-us](http://northamerica.daimlertruck.com/contact-us). Scroll down to "Locate a Dealer," and select the appropriate brand.

This Field Service Campaign will **terminate on June 30, 2025**. Please make sure the campaign is completed prior to this date. Work completed after this date will be done at the customer's expense.

As stated in the terms of your express limited warranty, DTNA will not pay for any damage caused by failure to properly maintain your vehicle. DTNA considers the work necessary under this campaign to be proper maintenance and will, therefore, not pay for any damage to your vehicle caused by your failure to have the repairs that are the subject of this campaign performed in a reasonable time.

Contact the Warranty Campaigns Department at (800) 547-0712, 7 a.m. to 4 p.m. Pacific Time, M-F, e-mail address: [dtna-war-campaigns@daimlertruck.com](mailto:dtna-war-campaigns@daimlertruck.com), or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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## Work Instructions

### Subject: M2 Plus Work Brake

**Models Affected: Specific model years 2024-2025 Business Class  
M2 vehicles manufactured between March 23, 2024, through April 9, 2024.**

## Enabling the Work Brake Feature

### Updating the Single Signal Detect and Actuation Module (sSAM02T) and Extension Module Controller (XMC02T) Parameters

1. Check the base label (Form WAR259) for a completion sticker for SF691 (Form WAR261), 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 completion sticker is present, no work is needed. If a completion sticker is not present, proceed to the next step.
2. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
3. Connect an RP1210B-compliant vehicle diagnostic adaptor to the diagnostic connector on the vehicle.
4. Connect the other end of the RP1210B-compliant vehicle diagnostic adaptor to the laptop.
5. Open DiagnosticLink®.

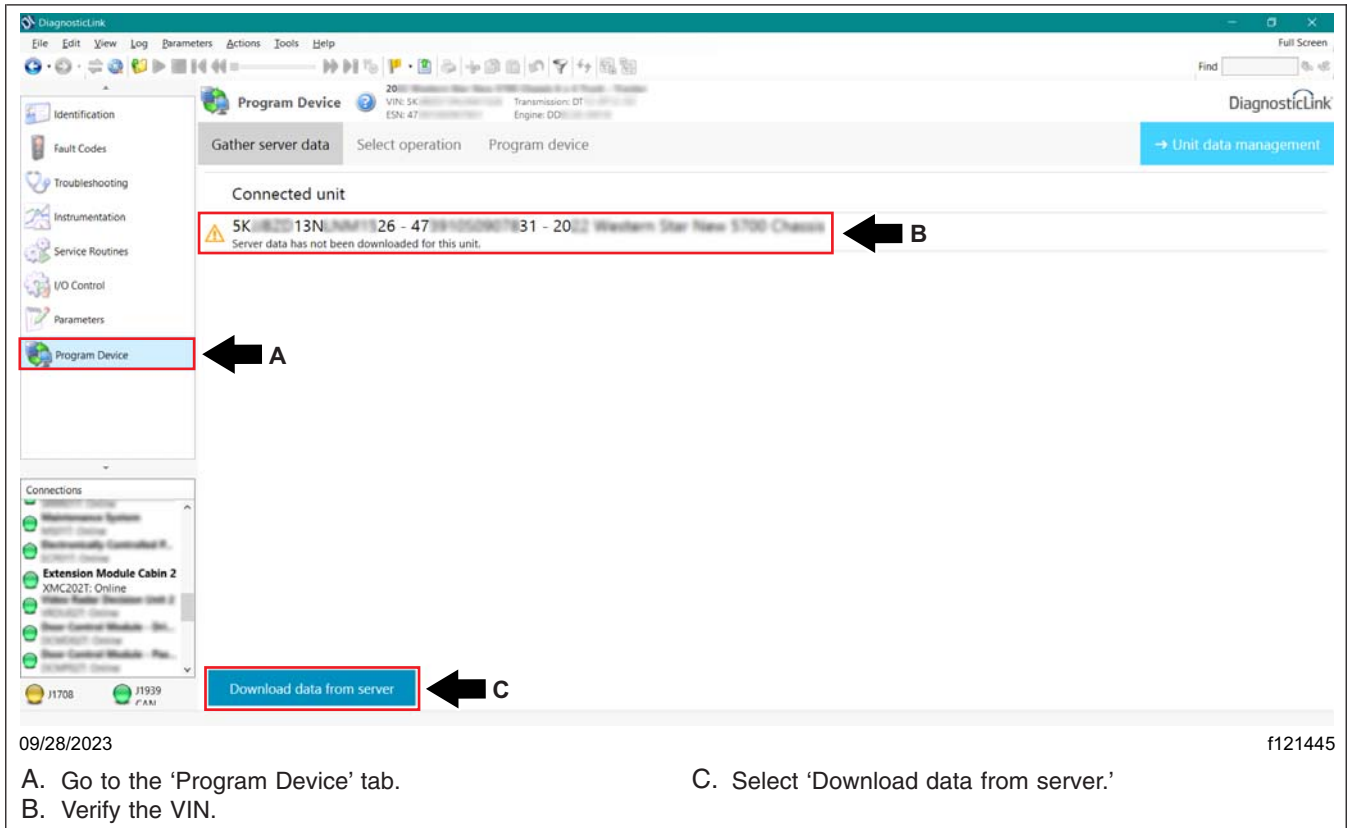
**IMPORTANT:** Make sure that DiagnosticLink is updated to the latest version (8.20 SP1 at the time of publication, or newer) before programming the vehicle.

To update DiagnosticLink, from the menu bar, select 'Tools,' then select 'Update' from the drop-down menu.

6. Use the DTNA Portal credentials to connect DiagnosticLink to the server.

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- Go to the 'Program Device' tab, and make sure that the vehicle identification number (VIN) that appears is correct. Select 'Download data from server.' See Fig. 1.



**Fig. 1, Downloading Data from the Server**

- After the server data download is complete, go to the 'Parameters' tab.
- Select and expand the 'SSAM02T – Single SAM' folder.
- Select and expand the 'ASC Horn Alert' sub-folder.
- Select the 'PASC\_Alert\_Hrn\_Enabled' parameter, and make sure the parameter value is already set to 'Enabled,' as shown in Fig. 2.



**Fig. 2, PASC\_Alert\_Hrn\_Enabled Parameter Value Set to Enabled**

- Select and expand the 'VAC Vehicle Alert Controls' sub-folder.

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13. Select the 'PVAC\_WorkBrk\_Hrn\_Enabled' parameter, and make sure the parameter value is already set to 'Enabled,' as shown in **Fig. 3**.

VAC Vehicle Alert Controls		
PVAC_Panic_Alert_Config		
PVAC_WinchBrk_Hrn_Enabled		
PVAC_BrkHld_Hrn_Enabled		Disable
PVAC_DrvDoor_Hrn_Alert		Enabled
PVAC_PassDoor_Hrn_Alert		Enabled
PVAC_WorkBrk_Hrn_Enabled		Enabled
05/28/2024		f121545

**Fig. 3, PVAC\_WorkBrk\_Hrn\_Enabled Parameter Value Set to Enabled**

14. Select and expand the 'XMC02T – Extension Module Cabin' folder.
15. Select and expand the 'FSC Input Config' sub-folder.
16. Select the 'PFSC\_AFnc0002\_mode' parameter, and make sure the parameter value is already set to 'Volt\_0\_6,' as shown in **Fig. 4**.

FSC Input Config		
PFSC_AFnc0001_mode		Res_0_100k
PFSC_AFnc0002_mode		Volt_0_6
05/28/2024		f121546

**Fig. 4, Setting the PFSC\_AFnc0002\_mode Parameter Value to Volt\_0\_6**

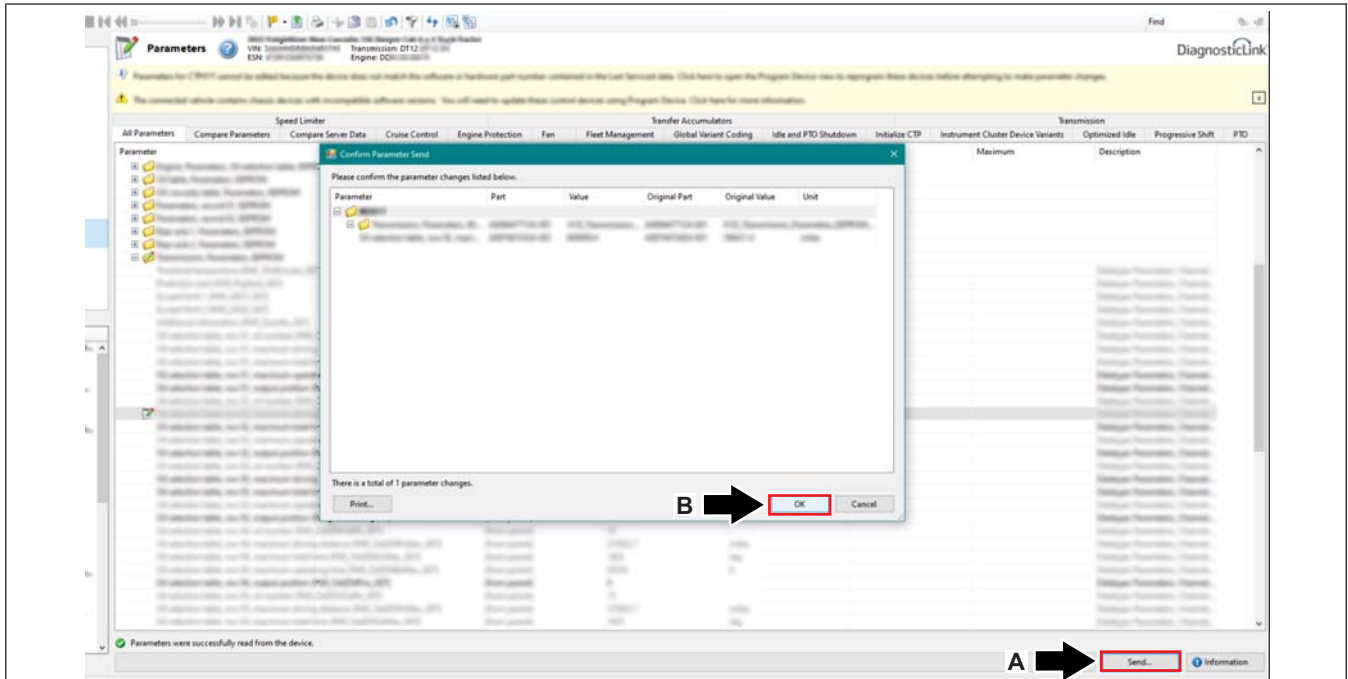
17. Select and expand the 'Work Brake Diagnostics' sub-folder, and make sure all the parameter values are already set, as shown in **Fig. 5**.

Work Brake Diagnostics		
PFSC_SvcOut_WorkBrake_Fb_sel	ConfigurableAnalogInp...	
PWBC_WorkBrk_PlausCheck	5.0	s
PWBC_sens_out_rmg_lo_cntl_sensor	0.100	V
PWBC_sens_out_rmg_hi_cntl_sensor	4.900	V
PWBC_LowVLimit_cntl_sensor	0.500	V
PWBC_HighVLimit_cntl_sensor	4.400	V
PWBC_WorkBrk_MaxOn_SecWrm_Time	360.0	s
PWBC_WorkBrk_MaxOn_FirstWrm_Time	120.0	s
PWBC_WorkBrk_VehSpdWrm_Thrhd	5.0001	mph
PWBC_filter_time_cntl_sensor	0.5	s
PWBC_WorkBrk_AirCntrlHigh_Thrhd	70.2	psi
PWBC_WorkBrk_AirCntrlActv_Thrhd	40.0	psi
PWBC_WorkBrk_AirPriLow_Thrhd	29.0	psi
PWBC_StartLim_cntl_sensor	0.0	psi
PWBC_EndLim_cntl_sensor	145.0	psi
PWBC_WorkBrk_Enable	ENABL	
05/28/2024		f121547

**Fig. 5, Setting the Work Brake Diagnostics Parameter Values**

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18. Select the 'Send' button to write the parameter changes to the SSAM02T and XMC02T electronic control units (ECUs) in the vehicle. A pop-up window appears asking to confirm the parameter changes. Select 'OK.' See Fig. 6.



09/28/2023

f121456

A. Select the 'Send' button.

B. Select 'OK' to confirm the parameter changes.

Fig. 6, Writing the Parameter Changes to the Vehicle

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19. Once the parameter change is complete, go to the 'Program Device' tab. Select 'Unit data management' in the upper-right corner. See [Fig. 7](#).

The screenshot shows the DiagnosticLink Professional software interface. The 'Program Device' tab is selected in the left-hand navigation pane, indicated by a red box and an arrow labeled 'A'. In the top right corner of the main window, the 'Unit data management' button is highlighted with a red box and an arrow labeled 'B'. The main window displays the 'Program Device' section with a 'Connected unit' section showing a warning icon and the text '5K 13N13M1526 - 47 8105097831 - 20 Western Star New 5700 Chassis'. Below this, there is a 'Download data from server' button. The bottom of the window shows the date '03/23/2022' and the ID 'f121174'. Below the screenshot, there are two instructions: 'A. Go to the 'Program Device' tab.' and 'B. Select 'Unit data management.''

**Fig. 7, Selecting Unit Data Management**

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- The information corresponding to the VIN should appear under the 'Unit data for upload.' Select 'Connect to server' to upload the new parameters. See [Fig. 8](#).

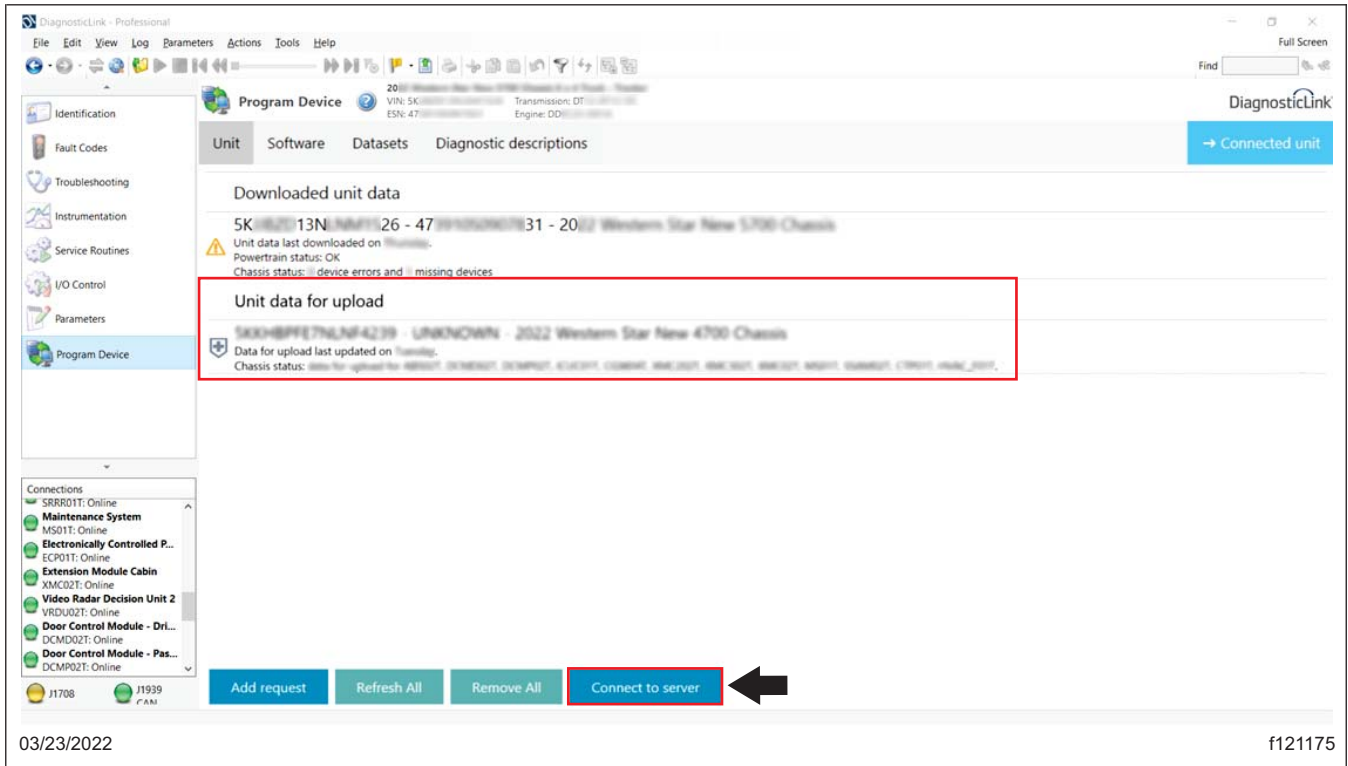


Fig. 8, Uploading the New Parameters

- Once the parameter updates are uploaded to the server, disconnect the vehicle from DiagnosticLink.
- Turn the ignition key to the OFF position.

## Moving the XMC1 X1 Connector Wires

- To access the XMC1 module, the dash panels need to be removed. For instructions, see **Section 54.11** of the *Business Class M2 Plus Workshop Manual*.

NOTE: If some other wire is already inserted into pin 1 of the XMC1 X1 connector, both the wires have to be spliced together.

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2. Use the pin removal tool (DK10CHA17002-2 or DK10CHA17002-4) to remove the wire from pin 38 of the XMC1 X1 connector and insert into pin 1 of the same connector. See [Fig. 9](#) and [Fig. 10](#).

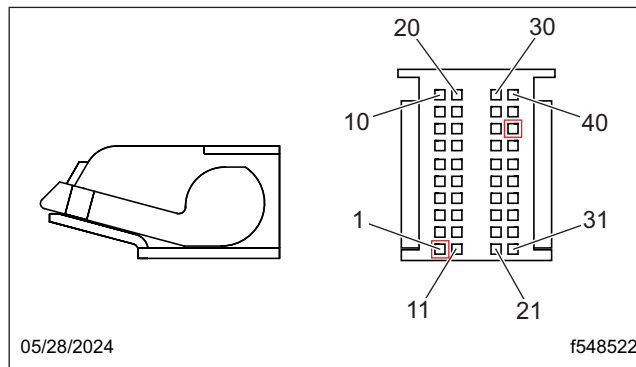
[Figure 11](#) shows the XMC1 X1 connector pin layout.



**Fig. 9, XMC1 X1 Connector**



**Fig. 10, Pin Removal Tool**



**Fig. 11, XMC1 X1 Connector Pin Layout**

## Human-Machine Interface (HMI)/Auto Neutral Test

1. Turn the ignition key to the ON position and start the vehicle.
2. Make sure the primary air pressure is above 80 psi (552 kPa).
3. Release the parking brake.
4. Put the foot on the brake pedal.
5. Put the transmission into drive.
6. Move the vehicle slightly forward.
7. Use the brake pedal to stop the vehicle.

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8. Activate the work brake (brake hold flipper switch).
  - 8.1 The transmission should go to neutral.
  - 8.2 Monitor the instrument cluster (ICU) for a green work brake tell-tale, shown in [Fig. 12](#).



**Fig. 12, Work Brake Tell-Tale on the ICU**

- 8.3 The brake pressure is being applied to the rear brakes.
  - 8.4 Open the door with the work brake activated.
    - The in-cab warning should not sound.
9. Step on the brake pedal.
10. Deactivate the work brake.
  - 10.1 The transmission should return to gear.
  - 10.2 The tell-tale indication on the ICU should disappear.

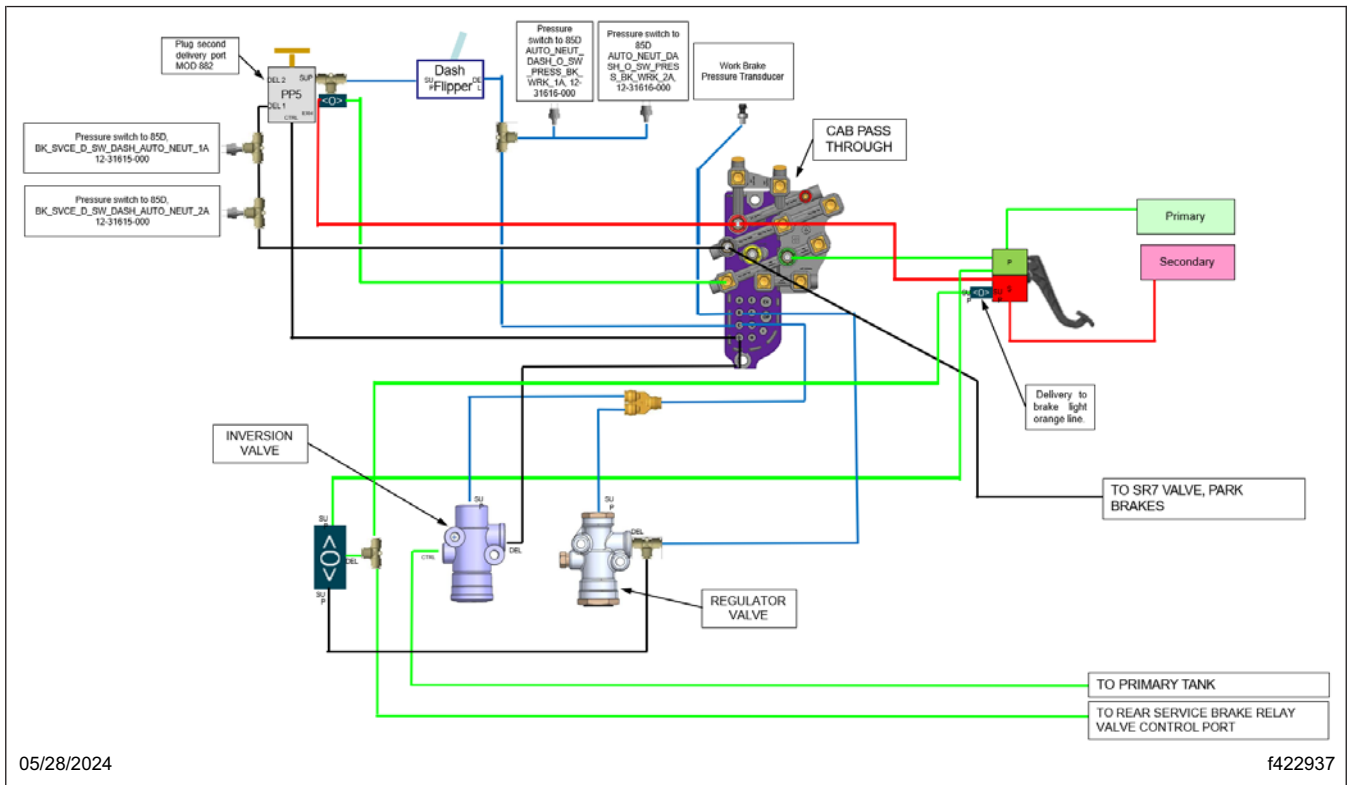
## Horn Alert Test

1. Release the parking brake.
2. Activate the work brake.
3. Put the transmission into drive.
4. Drive through the work brake resistance to 5 mph (8 km/h).
  - 4.1 The city horn alert should sound continuously until the vehicle comes to a standstill.

## Troubleshooting

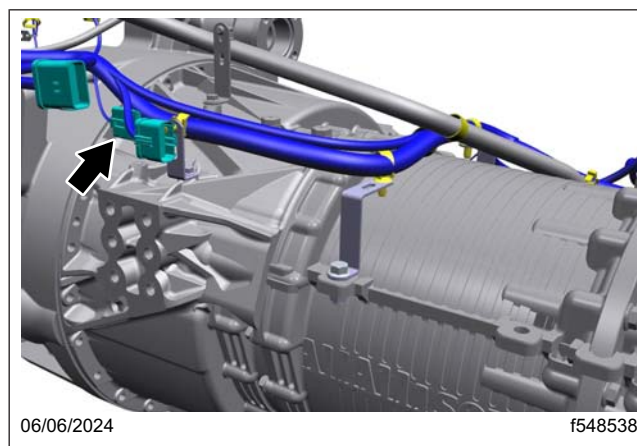
1. The parking brake sets when the work brake is activated.
  - Check the plumbing for an incorrectly plumbed inversion valve. [Figure 13](#) shows the work brake schematic.
  - The inversion valve and the regulator valve are mounted together and can be incorrectly-plumbed.

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**Fig. 13, Work Brake Schematic**

2. The transmission does not go to neutral.
  - Ensure the transmission harness connector is plugged in, as shown in [Fig. 14](#).



**Fig. 14, Transmission Harness Connector**

3. Clean a spot on the base label (Form WAR259), and attach a campaign completion sticker for SF691 (Form WAR261), indicating this work has been completed.