



# **SAFETY RECALL BULLETIN**

## **NHTSA RECALL 21V930**

### **AUTOCAR, LLC SAFETY RECALL ACX-2107**

January, 2022

#### **ATTENTION:**

Service Managers / Parts Managers.

#### **SUBJECT:**

Autocar, LLC has determined that a defect regarding a potential stall/hesitation may exist on certain Xpeditor® vehicles during launch, when operated from the right-side stand-up position with the hydraulic system engaged.

#### **SAFETY RECALL INFORMATION:**

This document provides work instructions to install a Hill Start Aid system.

#### **VEHICLES AFFECTED:**

There are 46, 2019-2020 model year Xpeditor® chassis manufactured between June 7, 2018 and November 25, 2019 with non-sequential serial numbers in the range of 228128 through 232658. To determine if a vehicle is affected by this Recall, log in to the Autocar Warranty Management System at [www.autocartruck.com](http://www.autocartruck.com). From the main menu, select "View Recalls/Service Programs" and look for the Autocar Recall number above. An excel file will be accessible with the VIN list of affected vehicles. Alternatively, to determine if a single vehicle is affected, select "VIN Profile" from the main menu in the Autocar Warranty Management System. In the "Chassis Number" field, enter the last 6 of the VIN. Once the VIN profile is displayed, scroll down to the "Recall/Service Program Information" section to determine if the Recall is open.

#### **SERVICE RESPONSIBILITY:**

Service sites must perform this Recall on affected vehicles at no charge to the owner regardless of vehicle mileage, age, or ownership. If a vehicle affected by this Recall is taken into or is currently in your vehicle inventory, or at your center for service, you must perform this Recall before the vehicle is sold or released to the owner.



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### REQUIRED PARTS:

- (1) S7442003K002 Service kit
  - (1) 3083117 Bulkhead coupler
  - (1) 8096211 PRV
  - (1) A7441052-001 AT-3 solenoid
  - (1) 80" GZ170005-138 3/8 Green air line
  - (2) 10" GZ170005-338 3/8 Red air line
  - (3) GZ200041-064 3/8" X 1/4" 90 degree fitting
  - (1) GZ200041-062 3/8" X 1/8" 90 degree fitting
  - (1) GZ200042-064 3/8" X 1/4" 45 degree fitting
  - (1) GZ200095-066 Y union fitting
  - (1) S7440003-001 Bracket
  - (1) S7440004K001 Hardware kit
    - (14) 980464 Cable tie
    - (4) FE286225BW01 1/4" locknut
    - (2) FE286250BW01 1/2" locknut
    - (4) FE410125AW22 1/4" bolt
    - (2) FE410150AW14 1/2" bolt
  - (1) S7470002-002 Harness HSA

Paste or liquid pipe thread sealant, obtained locally.

### CLAIM CODING INFORMATION:

Repair Number (Op Code)	Time Allowance (SRT)	Description
59301-0-19	3.0 HR	Hill Start Aid

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### SAFETY NOTICES:



### WARNING

Allow the vehicle's engine and cooling system to cool to ambient temperature before performing the repair procedure. A hot engine or cooling assembly may cause burns or other personal injury.



### WARNING

Never rely on the hydraulic pressure to hold the cab in an open position. Always use the safety pin in the cab tilt lock tube to prevent serious personal injury or death.



### WARNING

To prevent eye injury, always wear eye protection when performing vehicle maintenance, service or inspection.



### WARNING

Before working on a vehicle, set the parking brake, place the transmission in neutral and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

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### Working on CNG/LNG Trucks

## SAFETY INSTRUCTIONS

If you store or dispense Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG), or if you work on CNG or LNG trucks, your location must be fully compliant with applicable codes, regulations and standards, including National Fire Protection Associate (NFPA) codes, Society of Automotive Engineers (SAE) standards, American National Standards Institute (ANSI) Natural Gas Vehicle (NGV) standards, the United States Code of Federal Regulations (CFR) and your state and local fire and other applicable codes (including, for example, the California Code of Regulations and the Texas Administrative Code).

Contact your local fire department for guidance and additional compliance information.

Technicians working on Autocar trucks with CNG or LNG engines must be trained in the proper repair of CNG and LNG trucks and engines and the safe storage and dispensing of CNG and LNG.

### Working on CNG Fuel Systems



## WARNING

CNG fuel systems include a high pressure (3600 psi) system for fuel storage and a low pressure system (125 psi) for consumption by the engine. Understanding the characteristics of CNG and how the fuel system works will prevent injury and damage to persons and property.

Attempting to operate or maintain any CNG fuel system without proper training is dangerous. Complete training and consult instructional bulletins from the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, *Safely Working on CNG Fuel Systems*.

### Welding and Hot Work Near CNG and LNG Trucks



## WARNING

Welding, grinding, and other "hot work" can be safely performed on or near a CNG or LNG vehicle, but certain precautions must be followed. Understand and perform the necessary precautions provided by the CNG system suppliers, such as Agility Fuel Systems' Field Service Bulletin, *Welding and Hot Work Precautions Near CNG and LNG Vehicles*.



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#### CNG Cylinders



### WARNING

CNG fuel containers must meet Federal Motor Vehicle Safety Standard (FMVSS) 304 (Compressed Natural Gas Fuel Container Integrity) and/or ANSI/CSA NGV2 (Basic Requirements for Compressed Natural Gas Vehicle Fuel Containers). Both standards specify a detailed visual examination every three years.

Truck owners are required to complete all necessary inspections, in accordance with the applicable standards and other resources, such as the Clean Vehicle Education Foundation and NGV America's Compressed Natural Gas (CNG) Container Visual Inspection Advisory.

FMVSS 304 also requires that cylinders not be used after the end of life (EOL) date provided on the tank label. The EOL date is also displayed in the engine compartment and at the fueling connection of each truck. If there are any question as to proper decommissioning of a cylinder, contact the manufacturer, whose name and address is also required to be on the label.

#### CNG Fuel Container Pressure Relief Devices (PRDs)



### WARNING

PRDs must be properly maintained and positioned for safe operation of a CNG fuel system. Missing vent caps can allow moisture into PRDs and vent lines, which can freeze and damage these safety components. Debris which clogs the PRDs and/or vent lines can prevent proper function.

PRDs must be positioned to vent upward, not outward, from a vehicle.

Ensure that every truck owner completes periodic inspections of the PRDs and vent lines and systems, in accordance with guidance provided by the system component suppliers.

#### Alert First Responders to CNG and LNG



### DANGER

In the event of a fire or other emergency, alert first responders to the presence and location of CNG fuel systems, tanks and dispensers. Ensure that emergency personnel are aware of proper precautions, such as those provided in Agility's *First Responder Guide: CNG and LNG Vehicle Fuel Systems*.

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### LOCKOUT/TAGOUT PROCEDURES:



## CAUTION

Before entering the vehicle or vehicle body, read and follow OSHA regulations concerning entry and working in “CONFINED SPACE” OSHA 1910.146 and “LOCKOUT/TAGOUT” OSHA 1910.147. Follow OSHA regulations while performing any work on the vehicle. The vehicle must be disabled by the following steps before performing any work on the vehicle:

1. Place the transmission in NEUTRAL.
2. Set the parking brake.
3. Shut the engine OFF.
4. Lock cab doors, keep the key in your pocket. Block the wheels before entering the body or performing any work on the vehicle.
5. Turn the battery disconnect switch OFF, if equipped.
6. Completely drain the air from the primary/A system and secondary/B system by opening the drain valves on the air tanks themselves or by using the drain manifold if supplied. When draining the air tanks, do not look into the area where air is draining. Dirt or sludge particles may be expelled in the air stream and can cause eye injury.
7. Place magnetic “DANGER” signs on both cab doors before entering the body or performing any work on the vehicle.
8. Take proper precautions before working under the vehicle. Use ramps approved for the weight of your vehicle, or use floor jacks and stands. Never work under a vehicle supported by jacks alone. Always use jack stands to support the vehicle.

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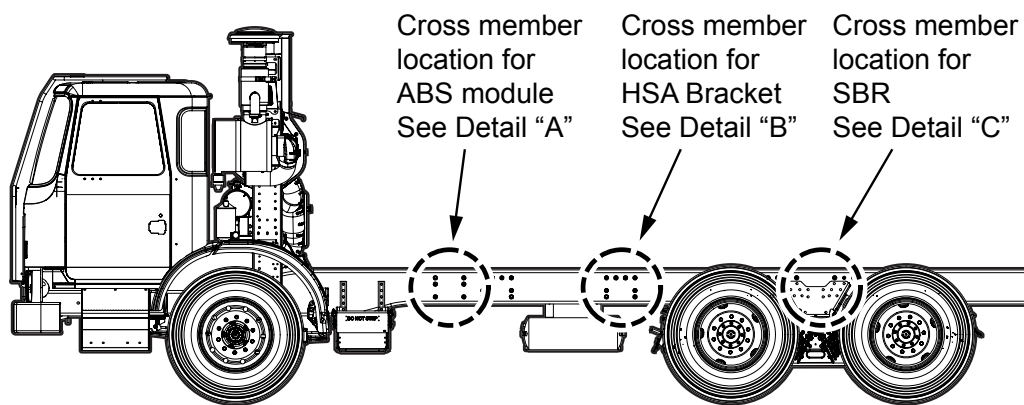
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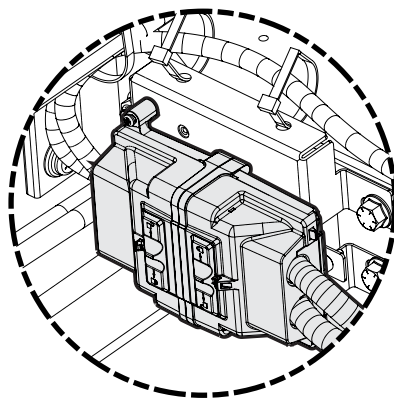
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#### Hill Start Aid (HSA) Installation Instructions.

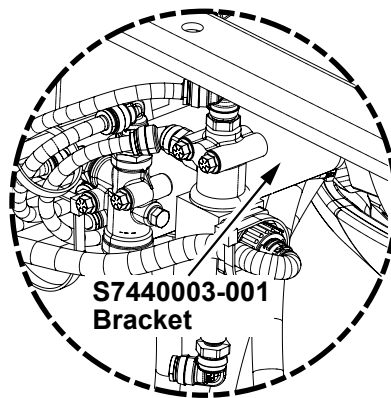
1. Follow all lockout/tagout procedures and verify the battery disconnect switch is in the "OFF" position. If the unit is not equipped with a battery disconnect switch, disconnect the battery cables beginning with the negative cables, followed by the positive cables.
2. Locate the first cross member forward of the drive axle (see *Figure 1 Detail "B"*).



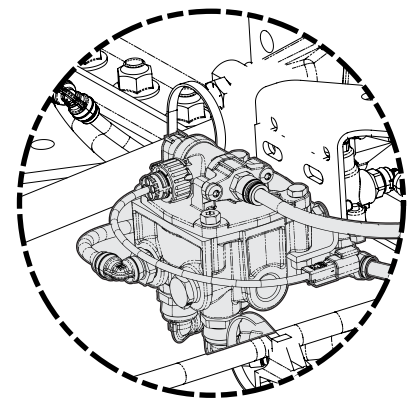
**Figure 1**



**Detail "A" ABS Module**



**Detail "B" HSA Bracket**



**Detail "C" SBR**



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3. Install the S7440003-001 bracket to the right side of the cross member using (2) FE286250BW01 1/2" locknut's and (2) FE410150AW14 1/2" bolts and tighten to 90 lbs. ft. of torque (see Figures 2, 3 and 4).

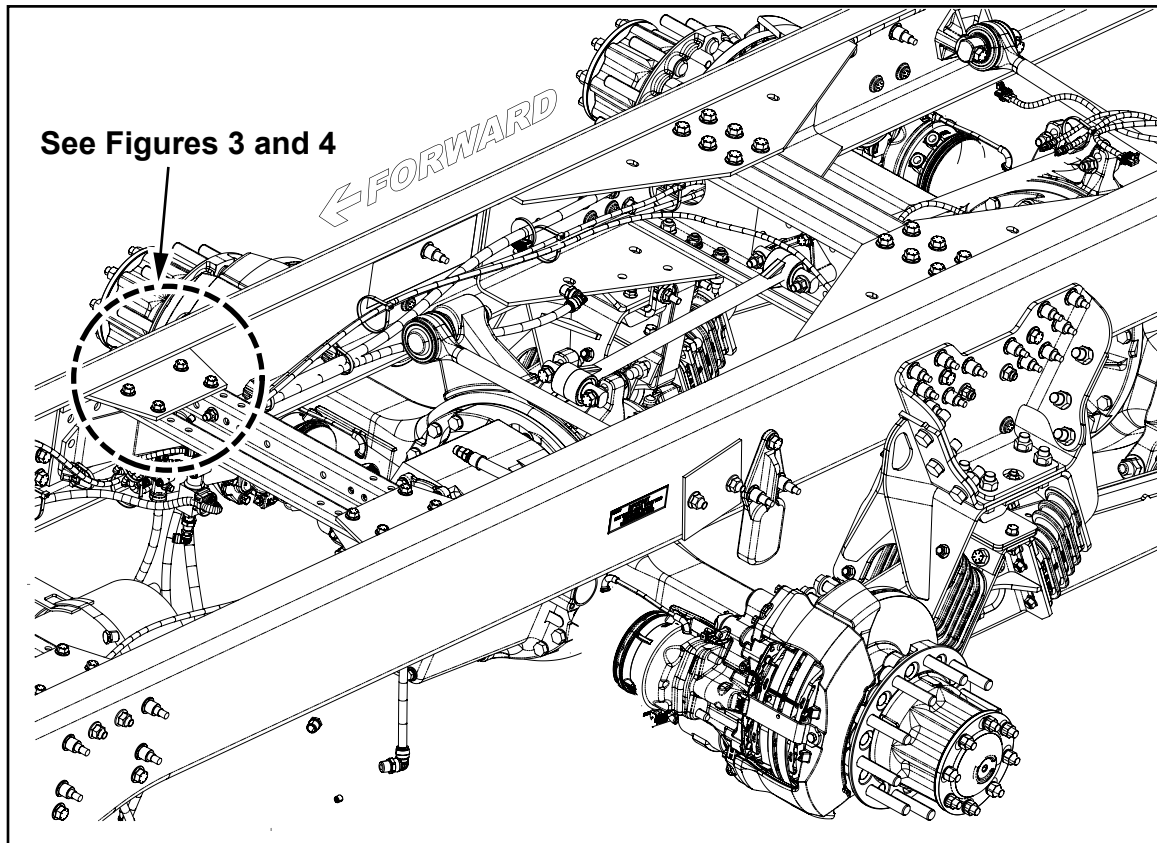


Figure 2



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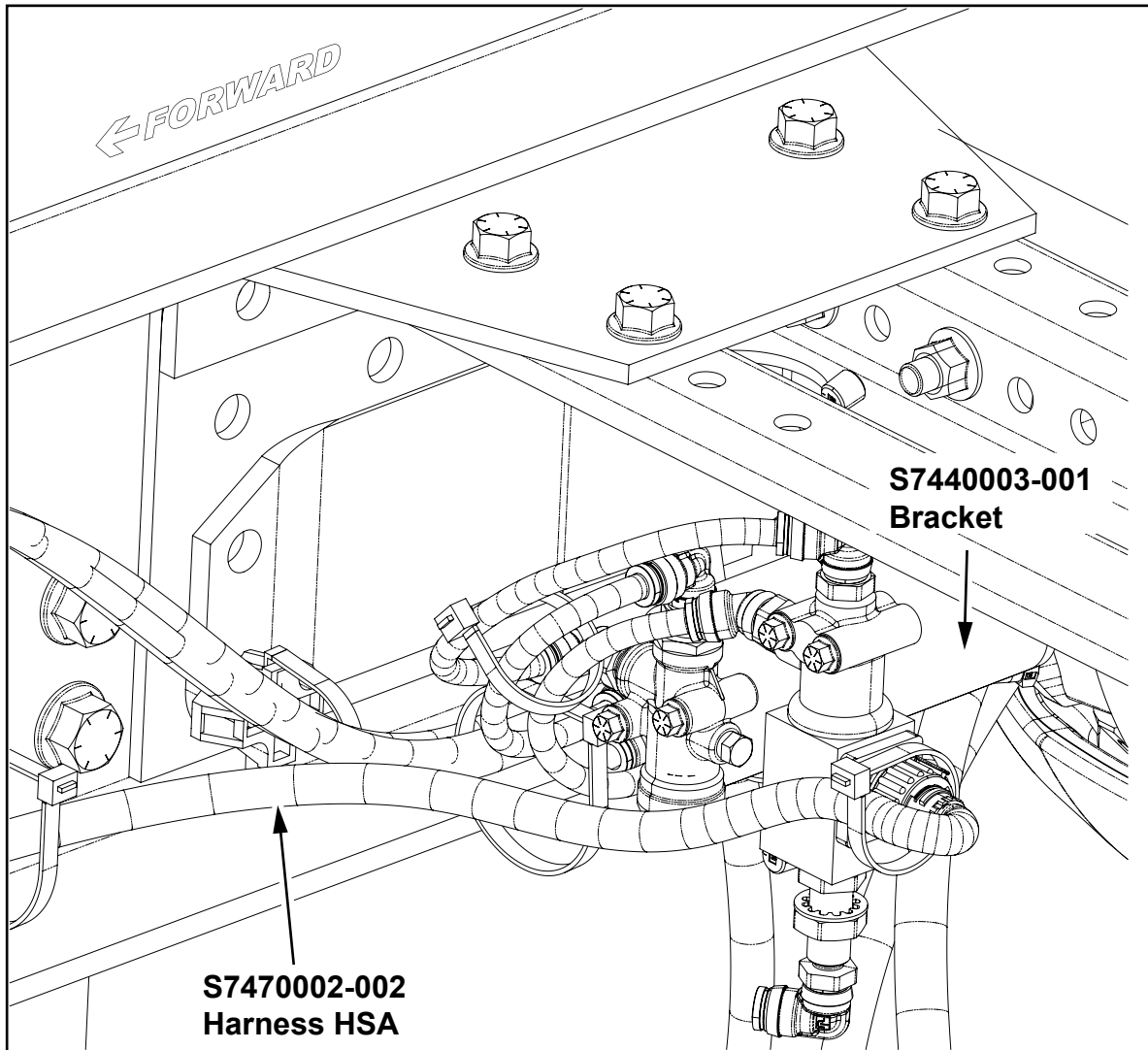


Figure 3

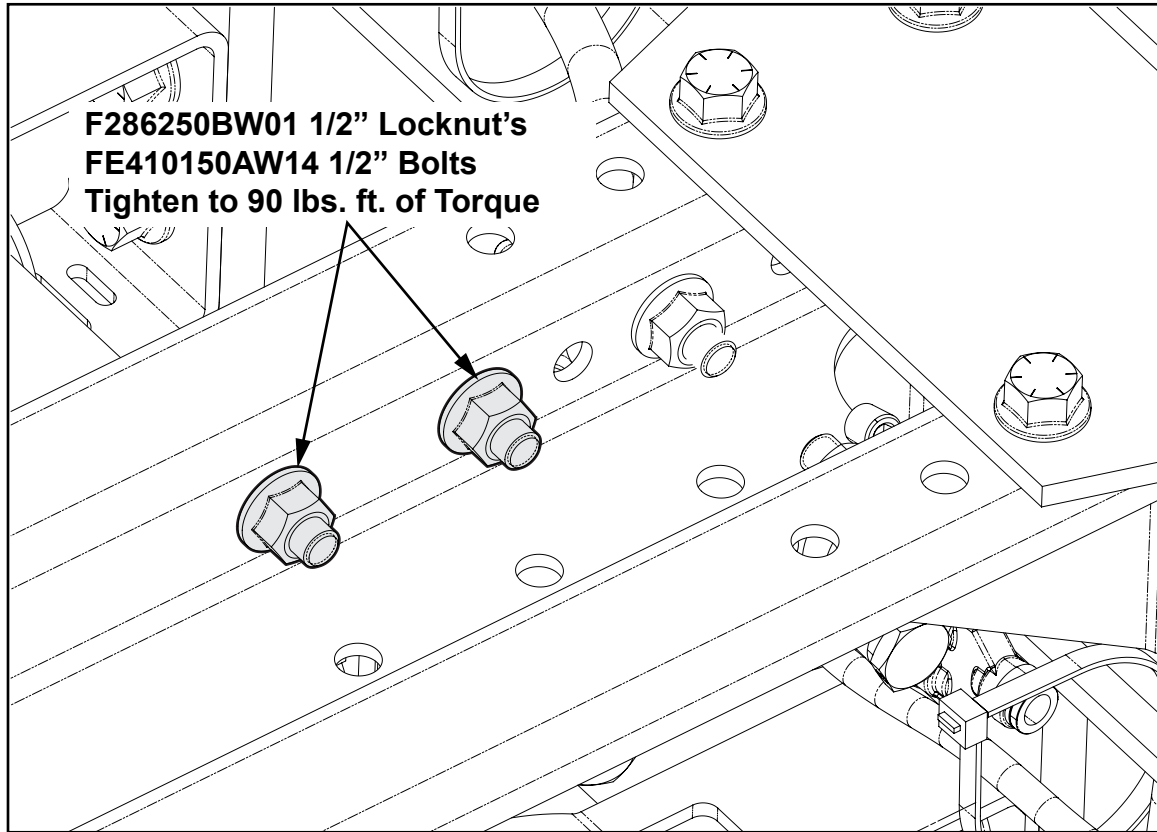
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**Figure 4**

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4. Install (3) GZ200041-064 3/8" X 1/4" 90 degree fittings, (1) GZ200041-062 3/8" X 1/8" 90 degree fitting and (1) GZ200042-064 3/8" X 1/4" 45 degree fitting. Apply paste or liquid pipe thread sealant to the exposed threads (obtained locally). Locate the 3083117 Bulkhead fitting, remove and discard the nut and lock washer. Apply paste or liquid pipe thread sealant to the exposed threads (obtained locally), install the 3083117 Bulkhead fitting and tighten to 15 lbs. ft. of torque (see Figure 5).
5. Using (4) FE286225BW01 1/4" locknut's and (4) FE410125AW22 1/4" bolts, install the valve assembly to the S7440003-001 bracket (see Figure 5).

**Note:** Verify orientation as indicated in Figure 5.

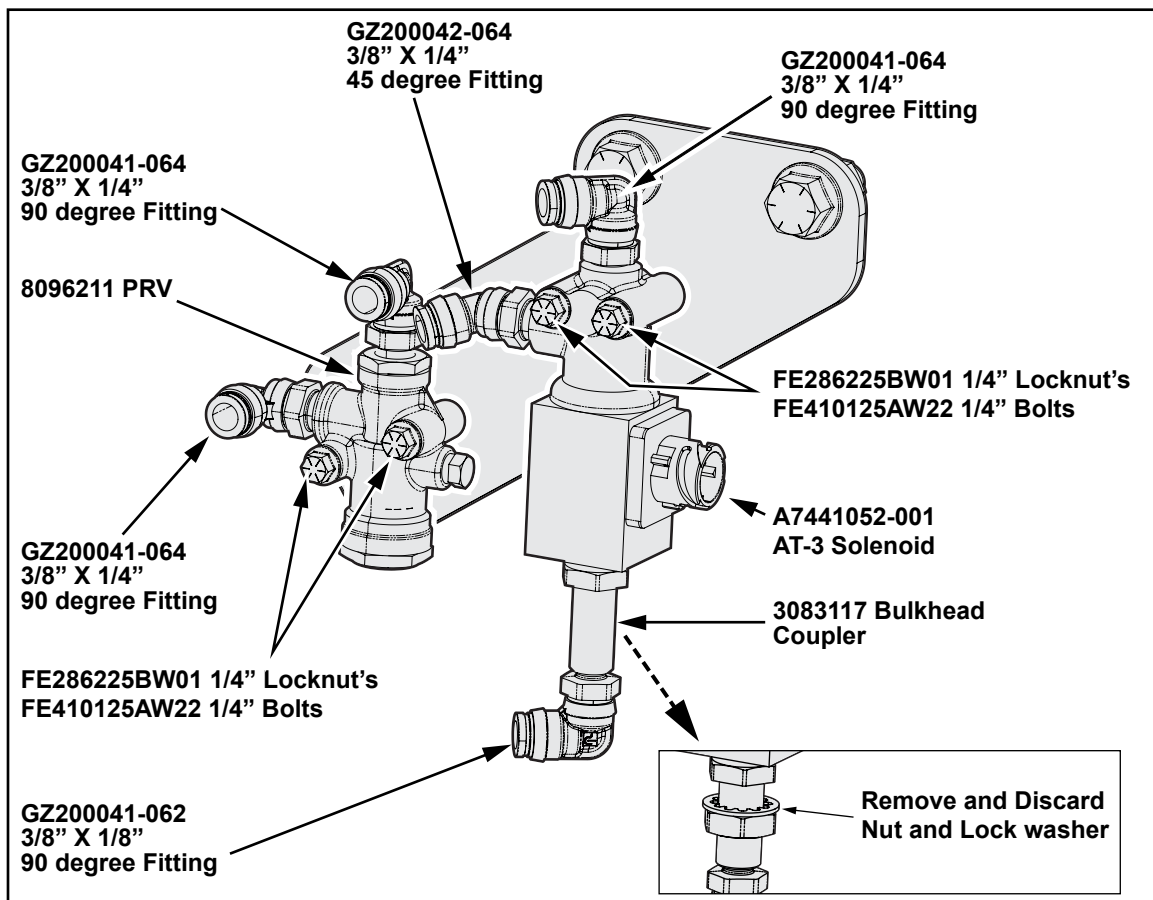


Figure 5

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6. Locate the Double Check Valve (DCV) behind the Service Brake Relay (SBR) on the right rearward side of the suspension cross member. Disconnect the service brake signal 3/8" green air line, at the Double Check Valve (DCV).

**Note:** Verify the service brake signal line originates at the chassis manifold, port 1. The optional LWB signal line passes directly through the cab, bypassing the chassis manifold (see Figure 6, 7 and Detail "C").

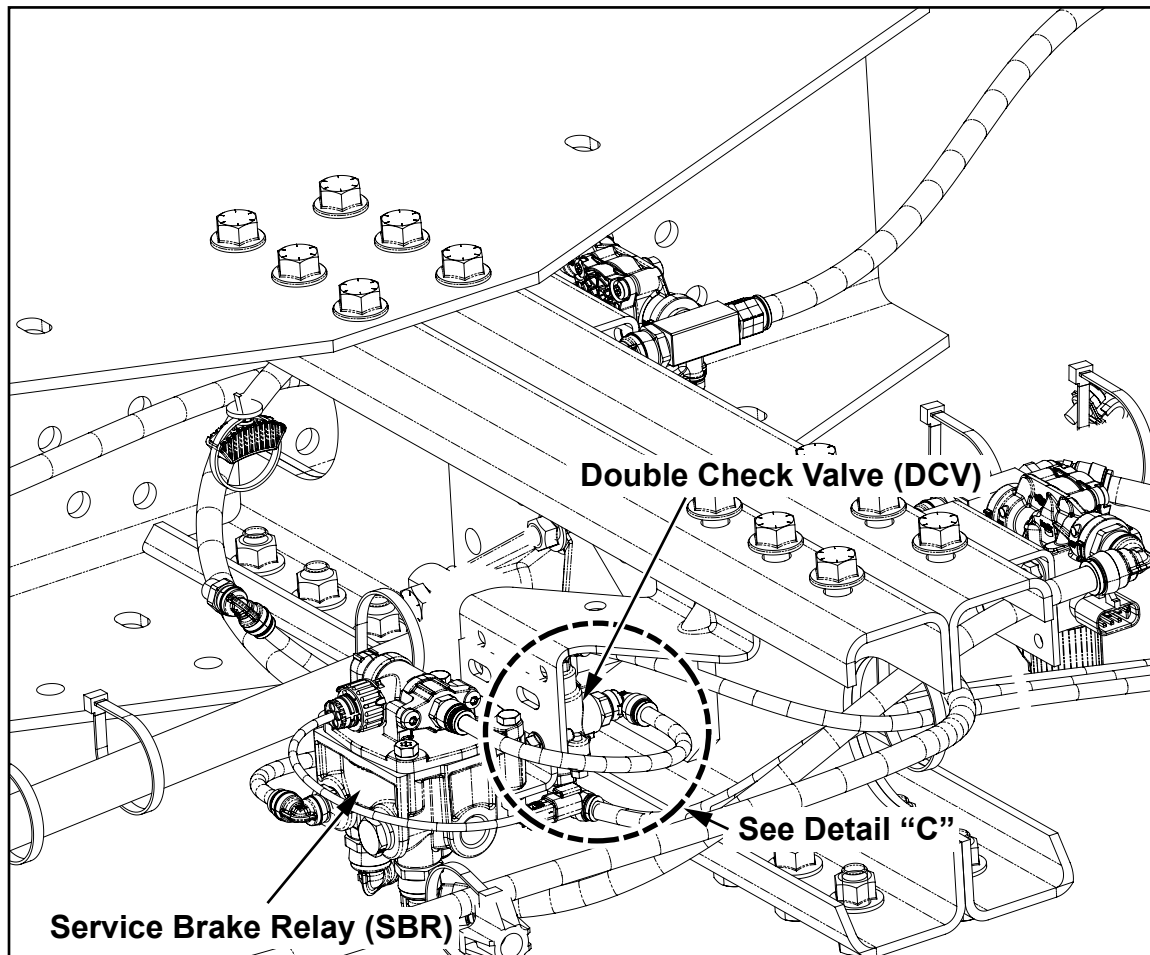


Figure 6

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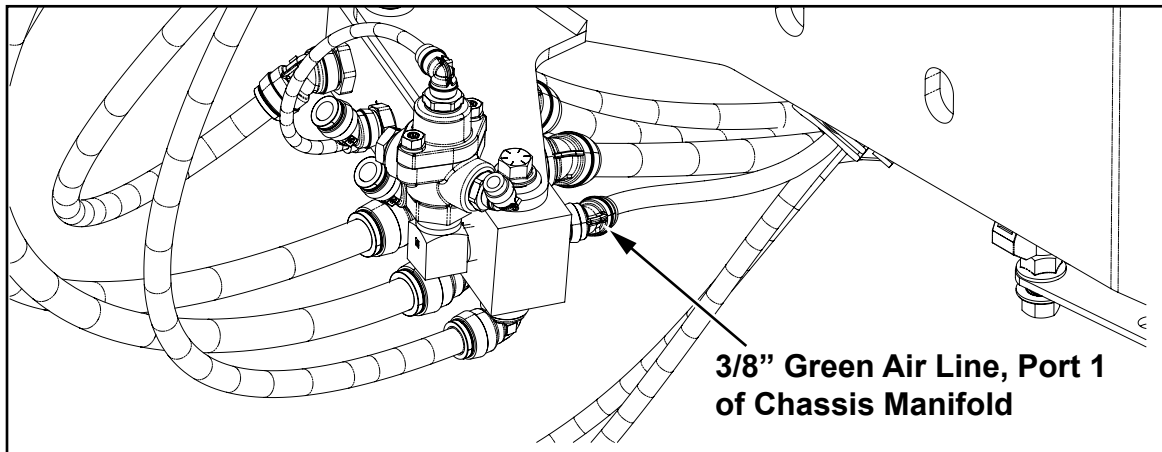
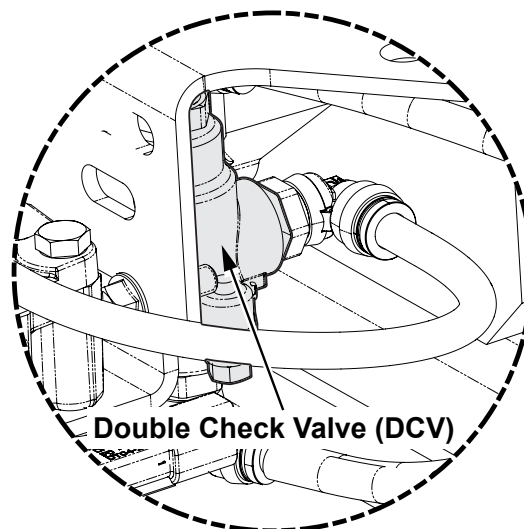


Figure 7



Detail "C"

**Note:** The Lever Work Brake (LWB) is optional. If the unit is not equipped with LWB, the DCV will not be present. For units without this option, use the line plumbed into the control port of SBR for step 6.

**Note:** To verify the correct air line is selected at the DCV, disconnect the SBR signal from port 1 of the cab manifold and apply shop air.

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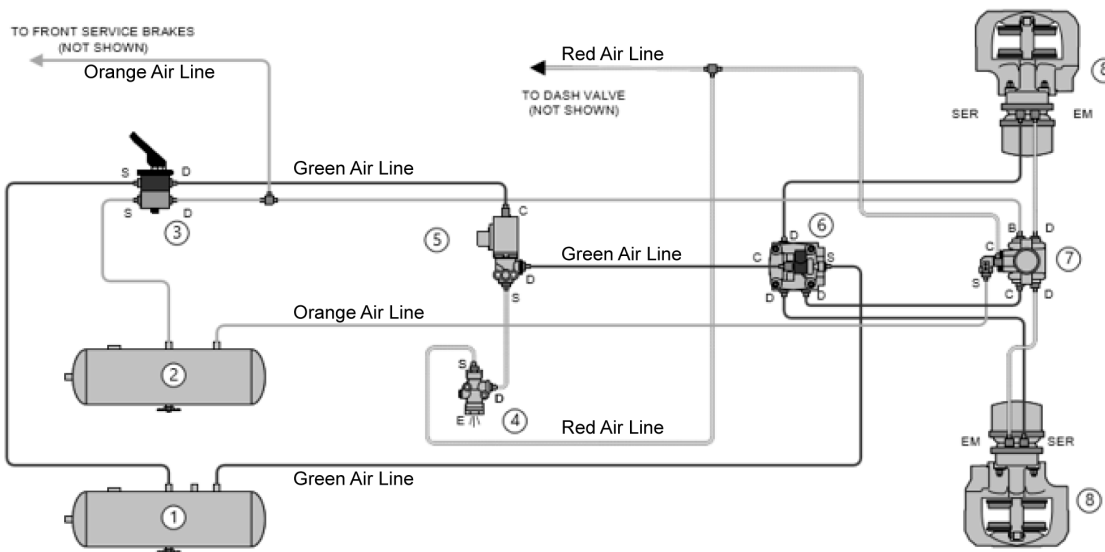
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7. Connect the service brake signal 3/8" green air line to the control port of the Hill Start Aid (HSA) solenoid (see Figure 8).
8. Install the GZ170005-138 3/8" green air line, connect the delivery port of the HSA solenoid to the DCV (disconnected in Step 6) (see Figure 8).
9. Locate the 3/8" red park brake signal line at the Park Brake Relay (PBR). Cut the 3/8" red park brake signal line near the PBR and install the GZ200095-066 Y Union. Install the GZ170005-338 3/8" red air line into the open port of the Y union and connect to the supply port of the Pressure Reducing Valve (PRV) (see Figure 8).
10. Install the GZ170005-338 3/8" red air line into the delivery port of the PRV. Install the GZ170005-338 3/8" red air line into to the supply port of the HSA solenoid (see Figure 8).



**Figure 8, Rear Brakes Chambers**

- |                                  |                                  |
|----------------------------------|----------------------------------|
| 1. Primary (A Tank)              | 5. Hill Start Aid Solenoid (HSA) |
| 2. Secondary (B Tank)            | 6. Service Brake Relay (SBR)     |
| 3. Foot Valve                    | 7. Park Brake Relay (PBR)        |
| 4. Pressure Reducing Valve (PRV) | 8. Rear Brake Chambers           |



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11. Locate the ABS module and disconnect the X3 connector (see Figure 9).

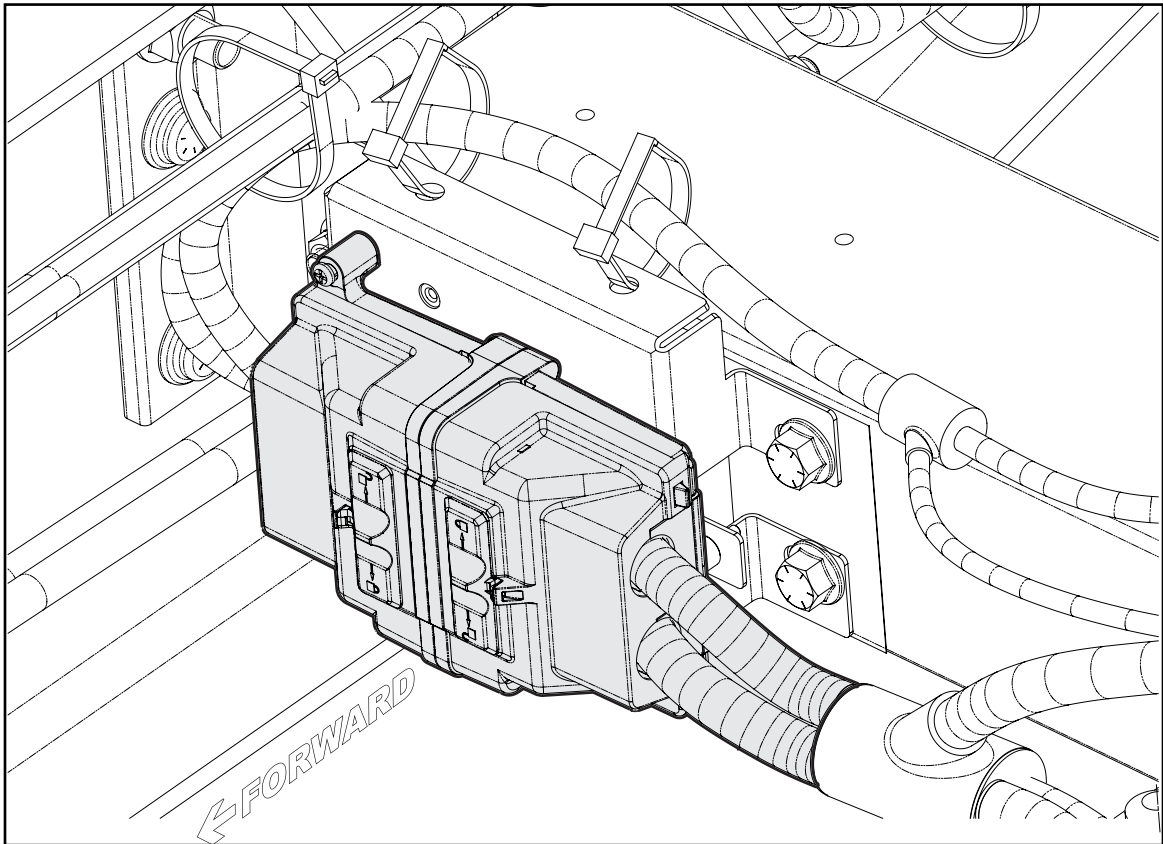


Figure 9

12. Remove and discard two plugs from the X3 connector, cavity 8 and 14. Install the S7470002-002 Harness HSA, wire number 783 into cavity 8 and wire number 784 into cavity 14 of the X3 connector and reinstall the X3 connector into the ABS module (see Figure 10).

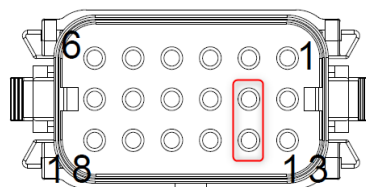


Figure 10, ABS X3 Connector



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13. Install the S7470002-002 Harness HSA into the right frame rail following proper routing and clipping techniques and connect to the HSA Solenoid (*see Figure 3*).
14. Secure any harnesses that were displaced during the repair process and confirm that no chafing or rubbing can occur. Re-connect any air lines, other plumbing or electrical items that were disconnected. Turn on the battery disconnect switch or re-connect all battery terminals beginning with the positive connections, followed by the negative connections.
15. Start the truck and fully charge the air system. Shut off the engine and using soapy water, check for any air leaks at new plumbing connections.

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### This Section Contains Instructions for Testing the Parking Brake System.

**Note:** Steps 16 through 20 are verifying the “A” system and Steps 24 through 27 are verifying the “B” system.

16. Start the engine to charge the air system fully to governor cut-out and shut the engine off.
17. Push the yellow Parking Brake button to confirm that it will not remain depressed or release the parking brake (see Figure 11).



**Figure 11**

**Note:** The yellow Parking Brake button should return to the out or parking brake applied position.

18. While firmly pressing the service brake pedal, push the yellow Parking Brake button.

**Note:** The yellow Parking Brake button should remain depressed or in the parking brake released position.

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19. Drain the “A” (primary) system.

**Note:** *The yellow Parking Brake button should remain depressed or in the parking brake released position.*

20. Drain the “B” (secondary) system.

**Note:** *The yellow Parking Brake button should pop out, applying the parking brake automatically at 40psi +/- 3psi.*

21. Start the engine to charge the air system fully to governor cut-out and shut the engine off.

22. While firmly pressing the service brake pedal, push the yellow Parking Brake button.

**Note:** *The yellow Parking Brake button should remain depressed or in the parking brake released position.*

23. Drain the “B” (secondary) system.

**Note:** *The yellow Parking Brake button should remain depressed or in the parking brake released position.*

24. Drain the “A” (primary) system.

**Note:** *The yellow Parking Brake button should pop out, applying the parking brake automatically at 40psi +/-3psi.*

**Note:** *If any portion of the functional test fails, please contact Autocar technical support at 888-218-3611.*

25. The parking brake inspection is complete.

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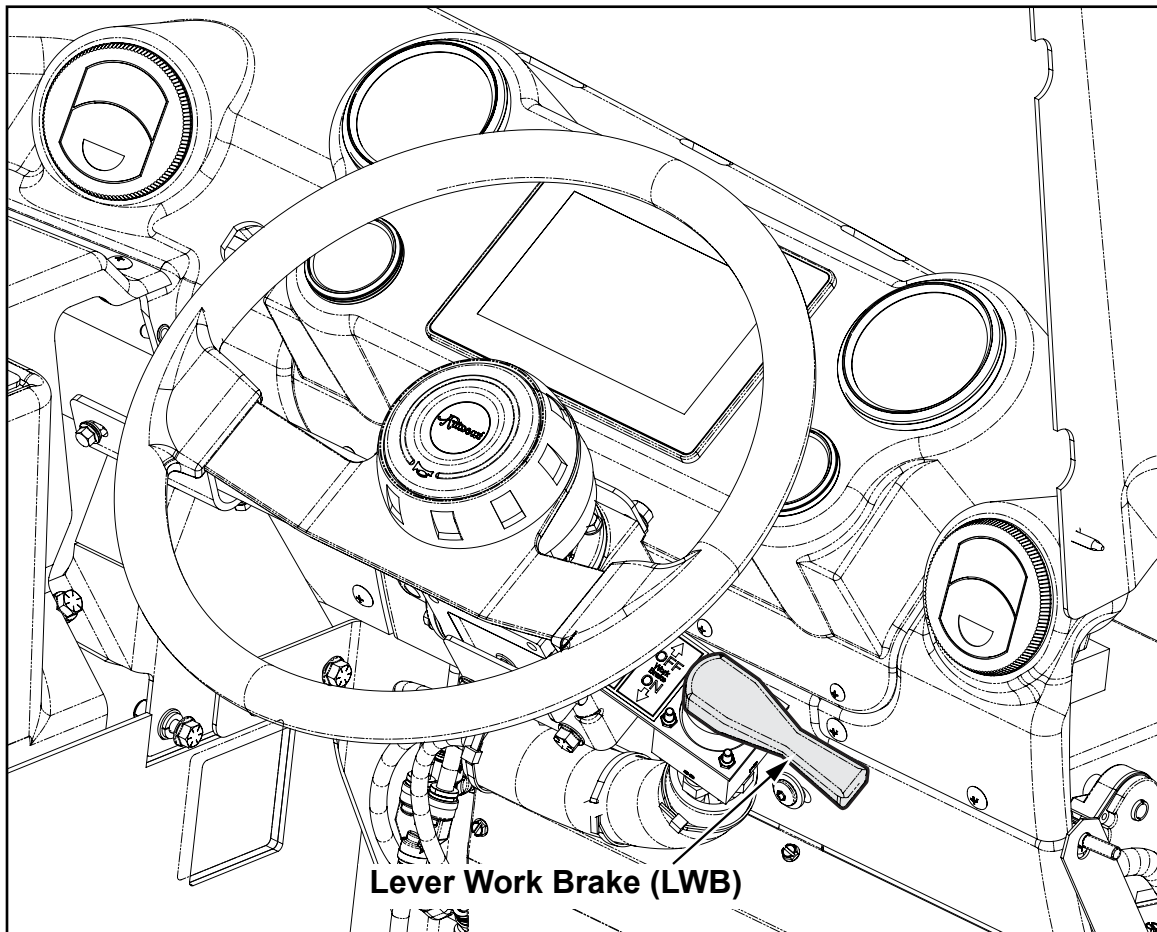
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This Section Contains Instructions for Testing the Lever Work Brake System.



**Figure 12, Lever Work Brake Location**

26. Start the engine to charge the air system fully to governor cut-out.
27. With the brake pedal applied, put the transmission in gear. With the brake pedal still applied, engage the Lever Work Brake (LWB). Once engaged the transmission will go into neutral.
28. Step on the brake pedal and release the LWB. The transmission will go back into gear automatically. If you fail to step on the brake pedal first, the transmission will remain in neutral.

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29. The Lever Work Brake test is complete.

**Note:** *If any portion of the Lever Work Brake test fails, please contact Autocar technical support at 888-218-3611.*

30. Log in to the Autocar Warranty Management System at [www.autocartruck.com](http://www.autocartruck.com). From the main menu, select “View Recalls/Service Programs” and look for the Autocar Recall number above. A PAR file will be accessible. Alternatively, to determine if a single vehicle is affected, select “VIN Profile” from the main menu in the Autocar Warranty Management System. In the “Chassis Number” field, enter the last 6 of the VIN. Once the VIN profile is displayed, scroll down to the “Recall/Service Program Information” section and a PAR file will be accessible, download the PAR file to your computer.

31. Connect your computer to the diagnostic port located under the dash and using Bendix® VEPS software, upload the PAR file to the vehicle. Using Bendix® ACom® diagnostics, verify the functionality of the HSA solenoid by performing the component test.

32. Contact your local Allison Service Center, provide the Vehicle Identification Number and request to have the hill hold interface enabled.

33. Road test the vehicle and verify function of the Hill Start Aid system.

**Note:** *During the road test, it may take up to 1 hour for the Hill Start Aid system to calibrate. If any portion of the functional tests fail or if you have questions regarding this Recall, please contact Autocar Technical Support at 888-218-3611.*

34. Once all functional tests have passed, the Hill Start Aid installation is complete.