Preview Solution CBR-2024-8

Mack Anthem (AN) And Pinnacle (PI) - Bendix ABS Fault SPN 807 FMI 13 Blink code 19-4

Published 20 February 2025

Valid For

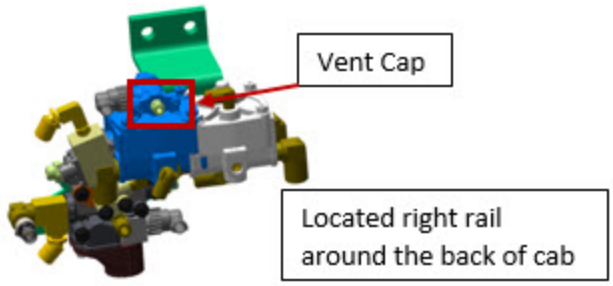
Mack AN, PI models
Built 1 December 2019 to 19 October 2020

The new Central Pressure Control (CPC) system has changed the way that the ABS chuff test is performed. On initial key on the ABS goes through a pneumatic chuff test where it activates the ABS modulators. The second portion of the test activates once the driver applies the service brake. The system then performs a pneumatic and electrical test that monitors system response while activating modulators such as Trailer Pressure Modulator Valve (TPMV). This test is to verify electrical components along with the pneumatic is system pressures and exhaust are working correctly.

There have been a few trucks that have not passed the chuff test due to hose configuration and the software monitors not allowing for system or driver variables. This ABS software and hardware change will address both.

Mack Trucks without Hill Start Assist (HSA)

Relocate the vent by removing the mushroom vent from ATR6 valve control port and run 3/8 line from the valve to any open port in the pass through air manifold mounted on the bulkhead.



Air Line Fitting Part Number Reference	
Fitting Size	**P/N**
1/4 -18 NTF X 3/8	8397700

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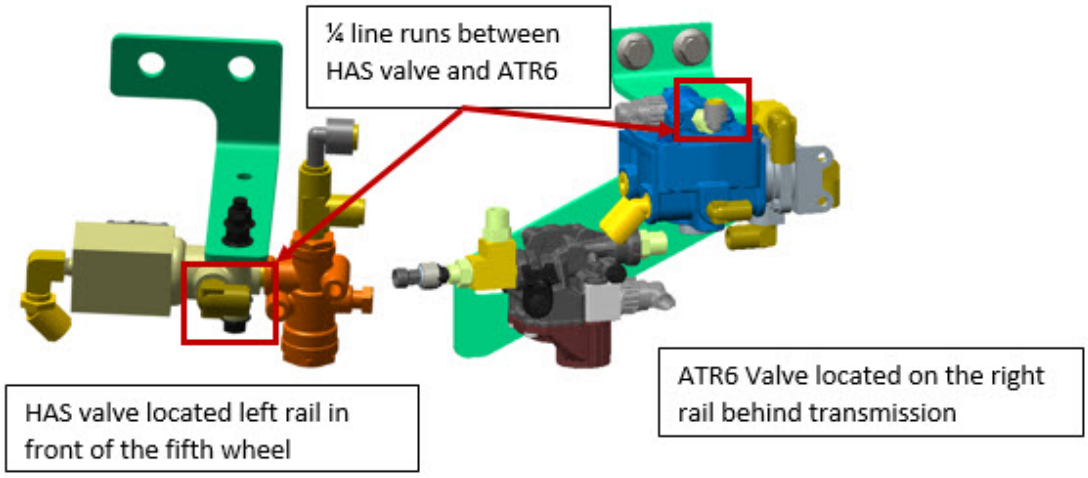
Mack Trucks with Hill Start Assist (HSA)

Remove ¼" airline that runs from ATR6 control port to Hill-start assist valve. See Figures 3 and 4. Replace ¼" line with 3/8".



Air Line Fitting Part Number Reference	
Fitting Size	**P/N**
1/8 - 27 NTF X 3/8	8397698
1/4 -18 NTF X 3/8	8397700

Program ABS controller

Configuration operation found in Tech Tool. The operation will download a configuration file for the connected vehicle and initiate configuration of the ESP feature via the Bendix® Vendor Configuration Program (VCP).

A specific Bendix® VCP package for Tech Tool must be installed on the PC prior to performing an ESP configuration. This software is not installed as part of Tech Tool and therefore must be downloaded and installed separately.

The Bendix® VCP installation can be found on the Trucks Dealer Portal website.

- This installation file may be updated at any time and should be downloaded only from the **Trucks Dealer Porta**l website.

Download Instructions:

1. Login to Trucks Dealer Portal (TDP)

2. Under the INFORMATION tab select Software Downloads.

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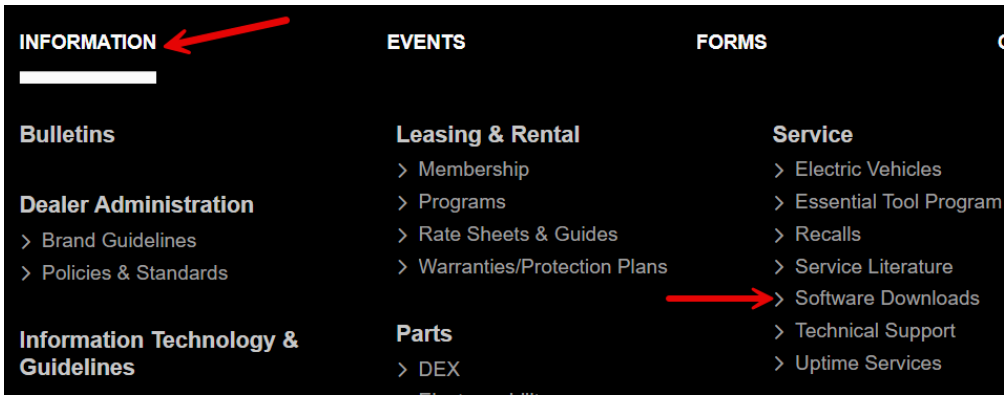
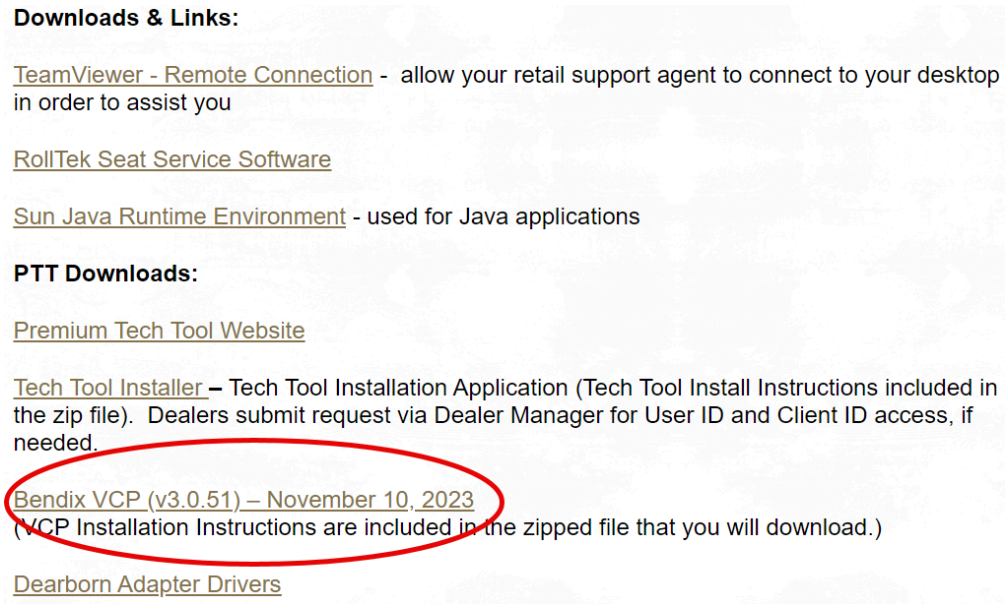


3. Select Bendix VCP link to download the latest installation



4. Save the .zip file in a location on the PC that is easy to find - for example, "C:\Temp" or the Desktop.

Software Installation

CAUTION
If the **Bendix® Vendor Configuration Program** or **ABS6 Vendor Configuration Program** is already installed on PC - it must be removed prior to installing a new version.

Removal Instructions:

1. Go to the 'Control Panel' in Windows – double click on 'Add or Remove Programs'.

2. In the list of currently-installed programs find **Bendix® ABS6 Vendor Configuration Program** or **Bendix® vendor configuration Program** - right click and

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select 'Remove/Uninstall'.

3. Follow the prompts through the uninstall process.- Once the old version has been removed – the new version can be installed.

Bendix (VCP) Installation:

1. Go to the location where the .zip was saved

2. Open the zip file and double - click the **BendixSoftware.exe** file.

- **Note:** It may be necessary to extract the file to a temporary location before running the .exe file.

3. Right lick on the .zip file and "extract" it to a temporary location.

4. Go to the temp location, find the Bendix Vendor Configuration Program VM.exe file and double- click it.

5. Follow the installation instructions used in the default settings. (Additional components used by **Bendix® VCP** will be installed if they are not on the PC)

- **Note:** A message will be shown if an additional required component is not installed on the PC. [see figure 2]

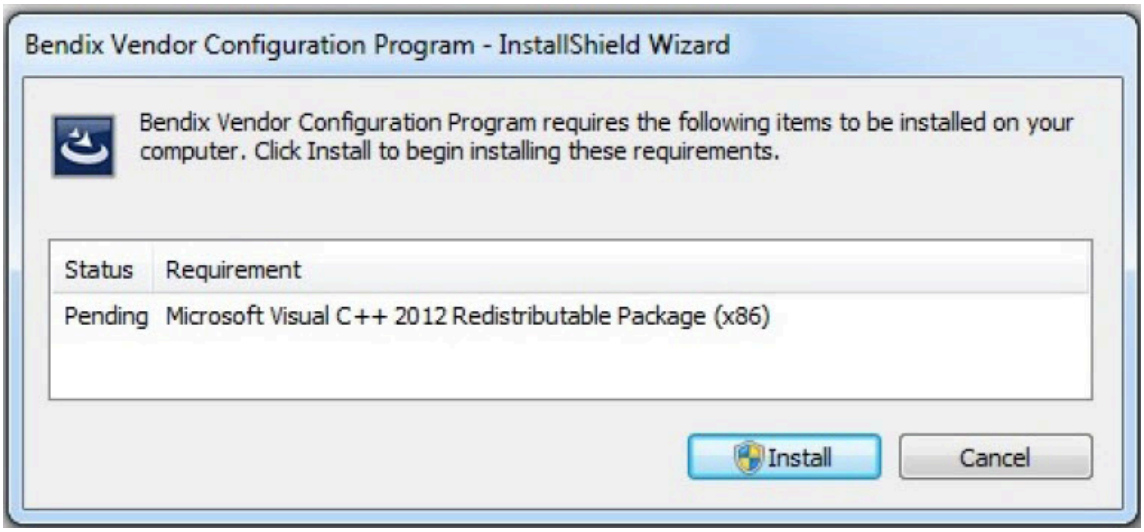

Figure 2

6. Click 'Install' to **install** the component; selecting **'Cancel'** will abort the installation.

7. When the component installation finishes, the installation will continue. Click **'Next'** to proceed. [see figure 3]

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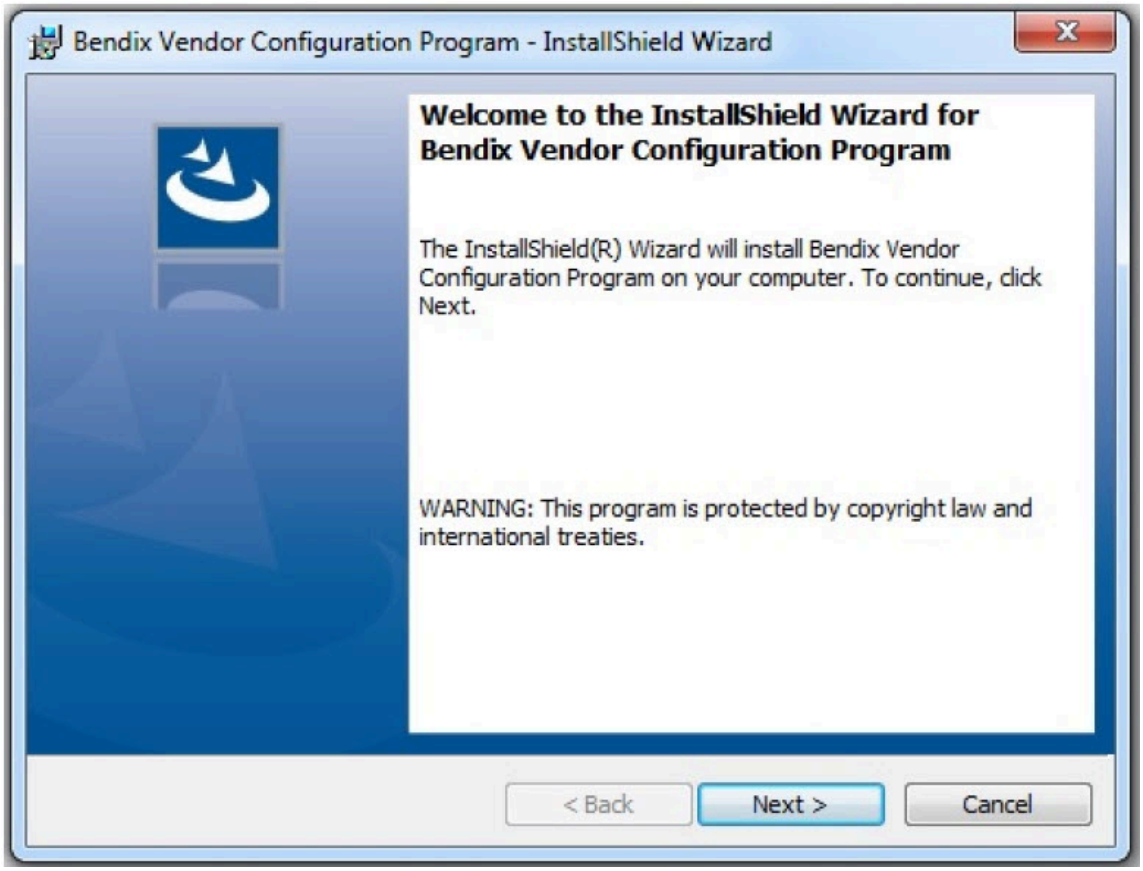

Figure 3

Network Connection at the Vehicle

In order to perform the ESP Control Unit Configuration operation, it must be possible to connect to the vehicle and the Central Systems at the same time. Therefore, it must be possible for the PC to have a network (LAN or Wi-Fi) connection while also connected to the vehicle's diagnostic connector.

Performing ESP Control Unit Configuration

After performing the actions outlined in the Preparation section above, connect the PC to the vehicle's diagnostic connector and complete the vehicle identification process displayed in Tech Tool's **'PRODUCT'** tab.

- Make sure that the PC is able to connect to Central Systems via a network/internet connection.

Select the "Calibrate" tab and expand group '5 – Brakes' and open the 'ESP Control Unit Configuration' operation. [see figure 4]

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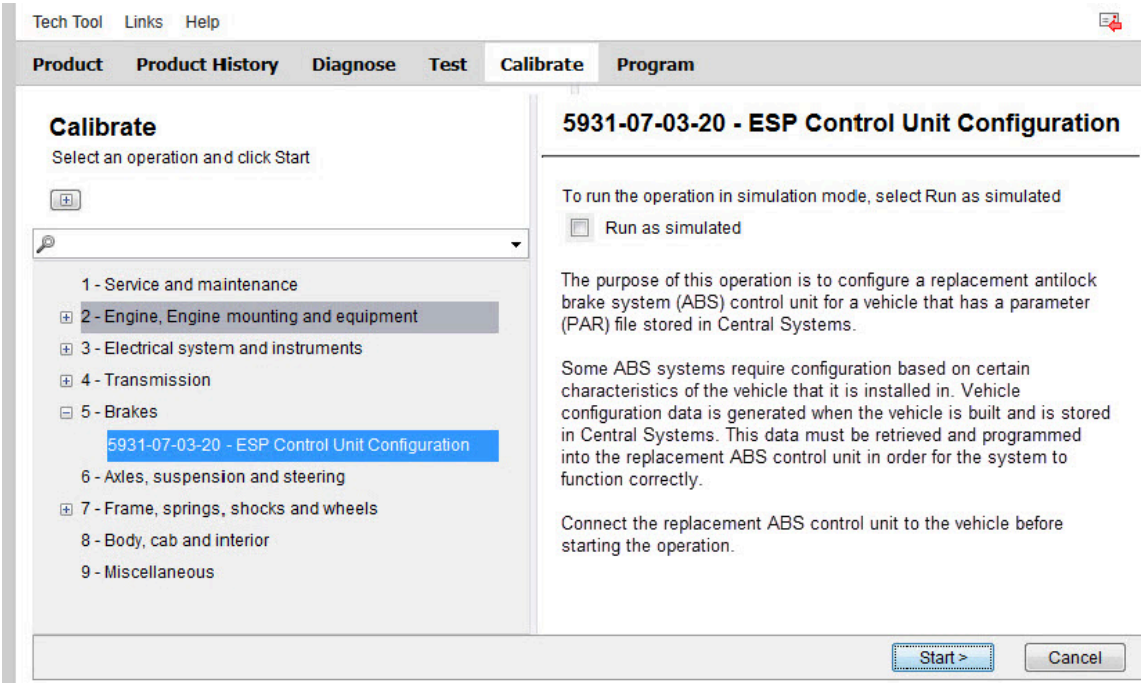

Figure 4

The ESP Control Unit Configuration operation is structured as a checklist of actions, similar to control unit software programming operations. [see figure 5]

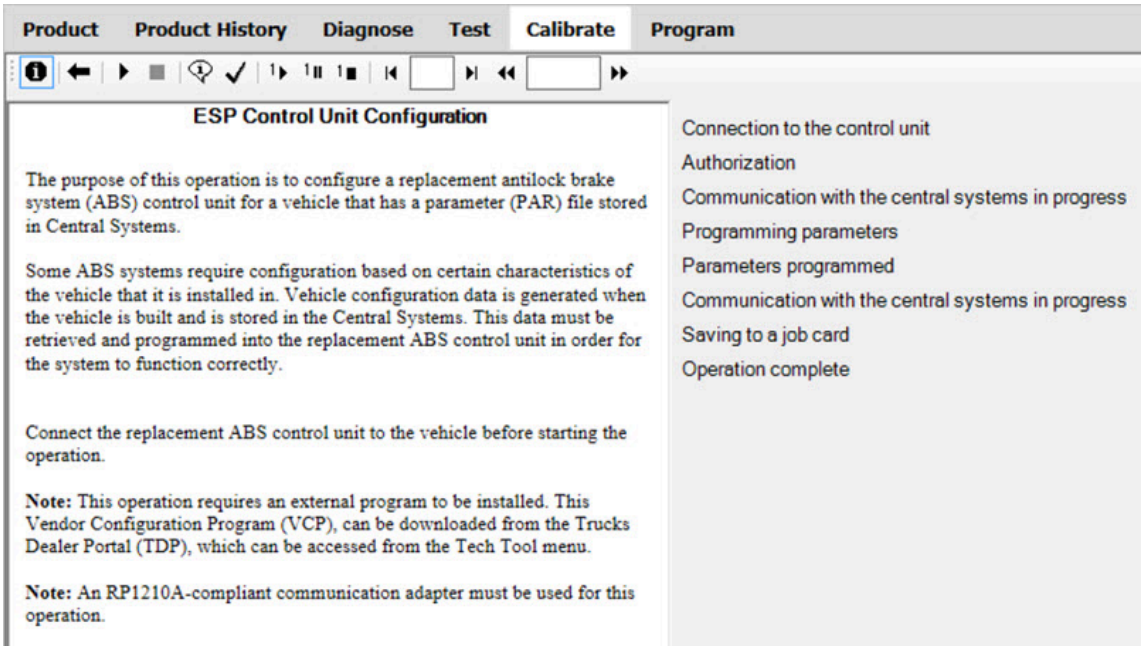

Figure 5

Start the operation by clicking the start button in the toolbar. After the conditions are confirmed, the operation will read data from the vehicle. A connection to Central Systems will be made in order to download the ESP system configuration file for the connected vehicle.

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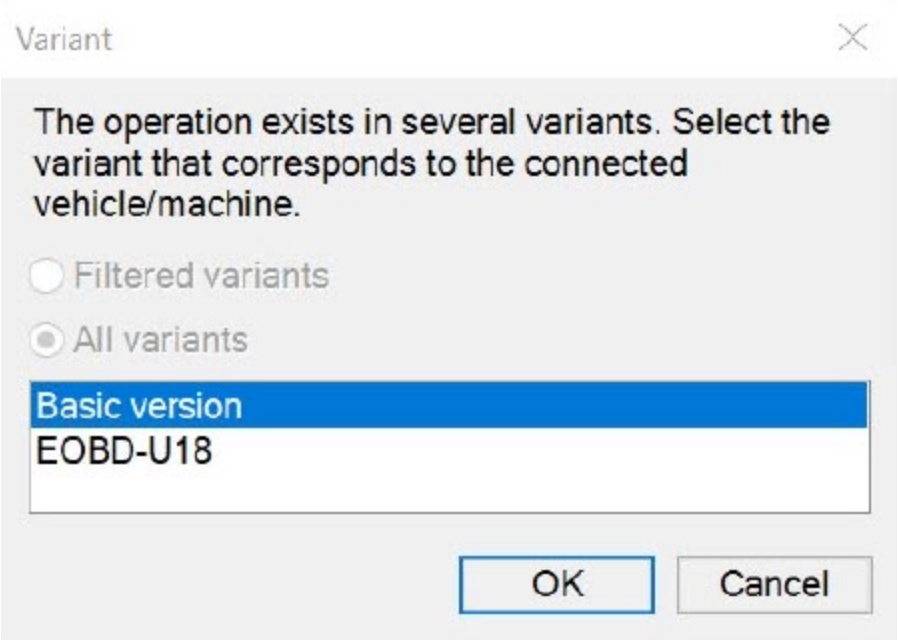
A window may open depending on what version of Tech Tool is being used. Select either option and hit OK.



After the ESP system configuration file is downloaded, a configuration window containing a status bar will appear while the ESP control unit is configured. [see figure 6]

- **Note:** On some occasions, the status bar window may appear blank. Although it appears that no action is occurring, the process is proceeding. In this case, allow the process to continue. The ABS ECU will be restarted and the configuration window will disappear when its task is complete and the process will continue in the main operation window.

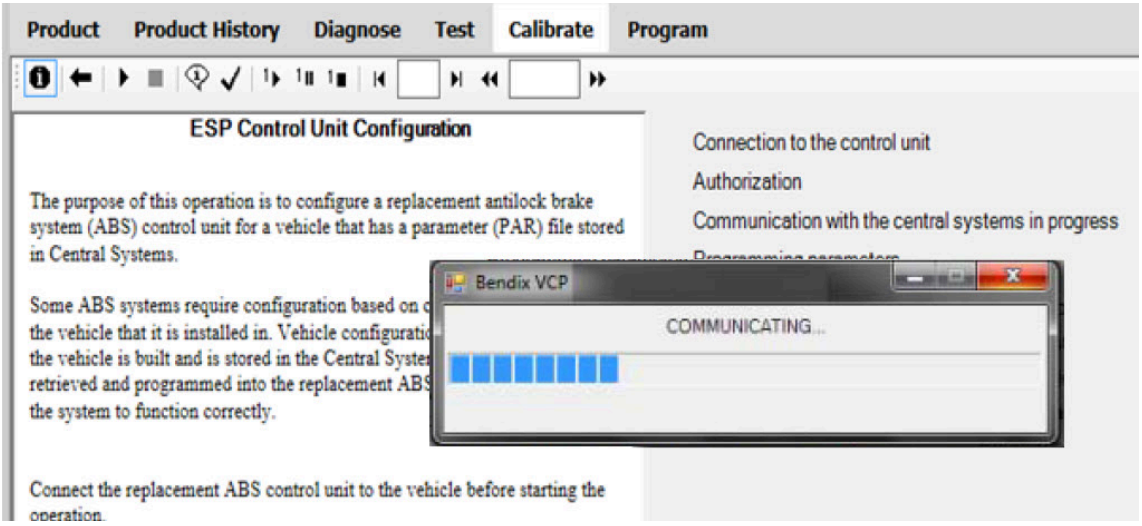


Figure 6

After the configuration is complete, the configuration window will be closed and another connection to Central Systems will be made in order to send a

confirmation that the configuration has been completed successfully.

Once the configuration has been completed verify that the sysyem air is fully charged. Apply ignition power and wait 30 seconds.

1. Use Bendix ACom Pro Diagnostic Software or ACom Diagnostic Software V6.7.2.5 (or higher) to clear the active pressure sensor DTC.

2. Carrying out the demand pressure sensor initialization procedure which involves applying service brakes of 90 psi or greater for three (3) seconds (while stationary).

Once this procedure is carried out successfully, if there are no other active DTCs, the ATC/ESP indicator lamp will no longer be illuminated.

If fault code SPN807 FMI 13 is still present or active after a road test please follow the steps below.

1. Pull ECU80 ACOM report (HTML Format) and attach to SR case
2. Chock the truck so there is no concern about rolling.
3. Hook up ACOM and clear DTC's: SPN 807 FMI 13
4. Run the chuff test two times and check to see if fault code SPN 807 FMI 13 comes active

Chuff Test:
a. Key on and let the traditional chuff test complete.
b. Make a moderate brake application and release. No need to release the parking brake
5. If a fault becomes active proceed to step 6. If the fault does not reoccur proceed to step 7
6. Remove anything connected to the ATR-6 control port so it is open right at the ATR-6.
a. Trucks built with HSA, pulling the tube out of the fitting should suffice. HSA will not pneumatically function, but it is not activated during the chuff test so the open tubing will not blast air during this procedure.
b. Trucks built without HSA, remove the vent "mushroom cap" fitting to be taken out in case it is not venting properly.
7. Hook up ACOM and pull up a pressure test monitor PS1 and PS2 sensors while running tests.
8. Apply service brake and watch both sensors to see that the pressure rise and fall simultaneously
9. Perform and record Chuff Test and include it into SR case
10. PS2 sensor should be slightly delayed of PS1 during this test. If PS2 is holding pressure Check to see if the air is present by adding a pressure gauge tee in line with the PS2 sensor and watching to see if the pressure drops off at the gauge.
11. Make sure the added gauge and the ACOM PS2 gauge pressures rise and fall at the same time. The gauges may or may not match pressures but they both should be near

zero after the chuff test.

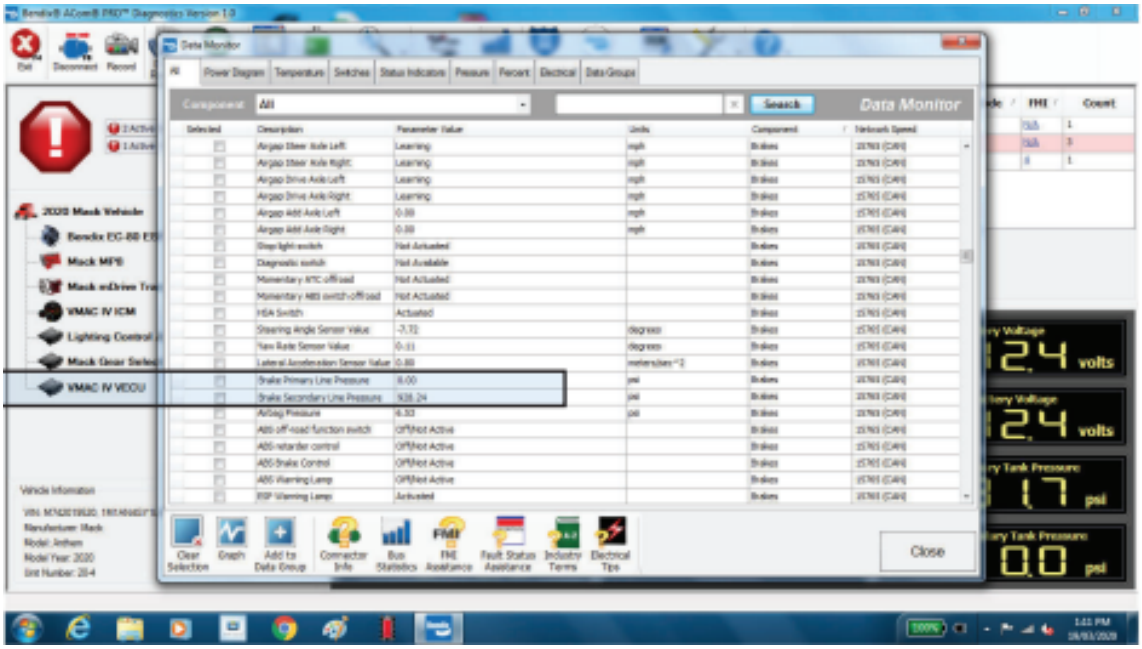
1**2.** Checking PS2 Sensor: If ACOM shows that there is still a pressure check PS2 and the added gauge shows zero. Check the sensor to see if wires are pulled tight against the senor sideloading the sensor wire seals at the connector, verify that terminals are not spread. Verify that the circuits do not contain any cuts or abrasions. Replace sensor and calibrate by applying service brakes of 90 psi or greater for three (3) seconds (while stationary)

13. Checking HSA and ATR6 Piping: If both the added gauge and the ACOM PS2 sensor show pressure dropping at the same time, perform step 6.

14. Rerun chuff test. If the pressure is still not dropping at the gauge and ACOM PS2 sensor still shows pressure

15. Check the delivery hose to see if the hose is kinked or pinched.

16. If there is air at the switch identify the source of where the air is not being exhausted. Check Trailer Pressure Modulator Valve to make sure there is no air at DEL port or coming back from the tractor protection valve. Inspect all airlines for sharp bends, pinches, or kinks.



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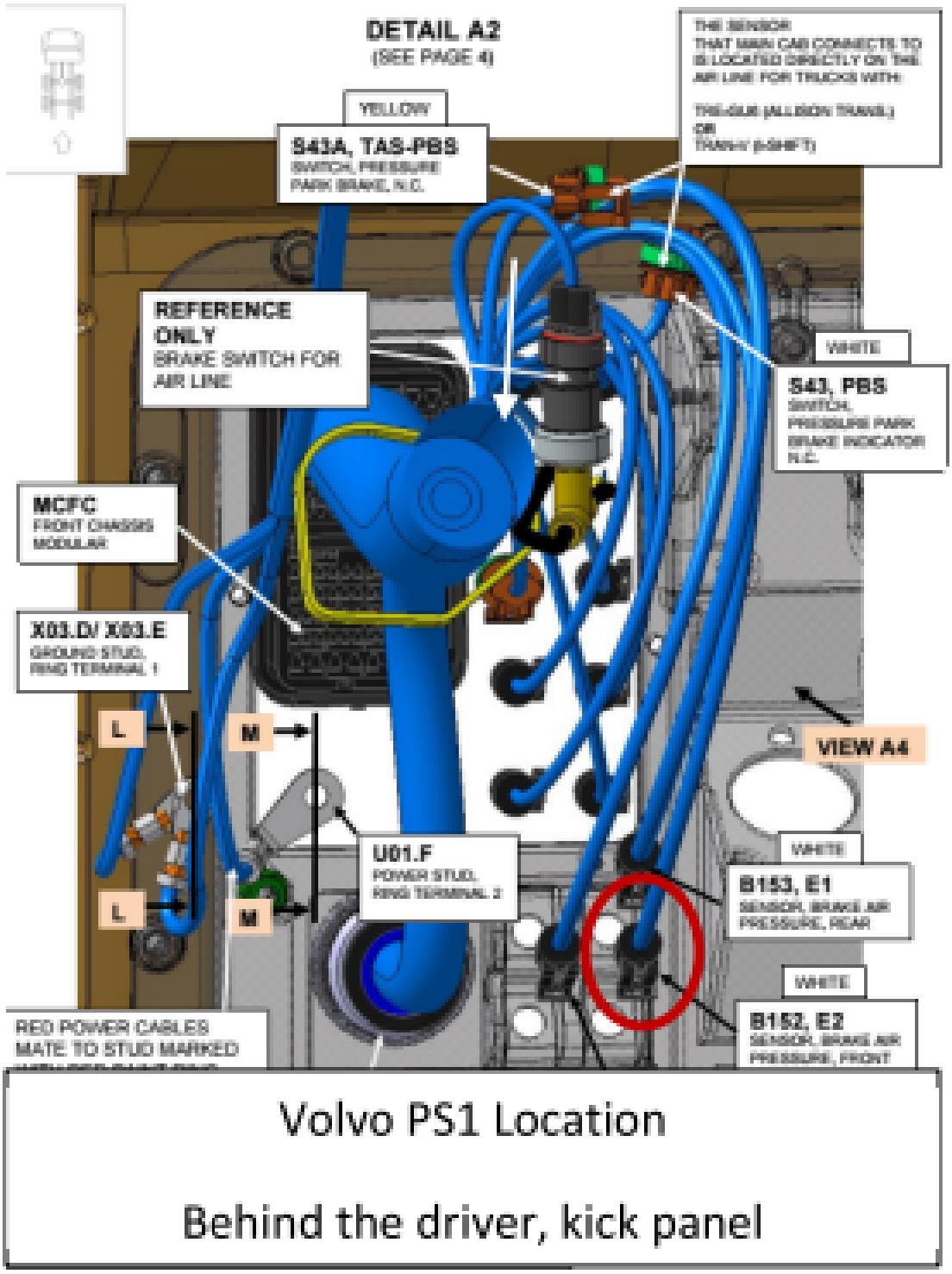

Volvo PS1 Location

Behind the driver, kick panel

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