



RECALL

R21BC - Hydraulic Brake Electronic Control Unit (ECU) Programming

Models Affected: Certain MY2021-2022 BBCV and T3FE with Hydraulic Brake and Electronic Stability Control (ESC)

Issue: Certain Blue Bird buses with Hydraulic brakes and Electronic Stability Control (ESC) may not have the ECU programmed to vehicle specific parameters

Corrective Action: Replace the ECU modulator assembly with a pre-programmed, VIN specific replacement part

WARNING: Always follow all Federal, State, Local and Shop safety standards and use proper safety equipment, and thoroughly read and understand all instructions before performing these procedures.

Park bus on level surface, apply parking brake, turn off ignition key, and chock wheels.

Required hardware/software to perform this repair:

Prior to beginning the repair, ensure you have TOOLBOX PLUS installed along with necessary drivers to properly connect to and calibrate the vehicle.

1. Laptop with TOOLBOX PLUS software version 13.2 or most recent version
2. A RP1210 communication device supported by the TOOLBOX PLUS tooling software
 - a. Blue Bird recommended RP1210 communication device: Dearborn DPA-5 USB

Reference Documentation and Link:

https://www.wabco-auto.com/americas_en/Get-in-touch/Literature

Applicable literature available on WABCO website:

MM1543	SmartTrac Hydraulic ABS (WABCO maintenance manual)
TP19060	TOOLBOX PLUS Software Installation Instructions
MM19047	TOOLBOX PLUS™ Diagnostic Software User Guide

Replacement Parts:

As the Hydraulic ABS module is vehicle specific, a replacement module will be provided for each unit with body number identifier on the box and on the module assembly. Once the module assembly is replaced, bleeding the system and calibration of the system is required for completion of the campaign. The modulator assemblies will be shipped to each dealer, **there will be no need to order from recall parts or return the original modulator assembly.**

SMARTTRAC™ HYDRAULIC ANTI-LOCK BRAKING SYSTEMS

MAINTENANCE MANUAL



WABCO

Modulator Removal:

NOTE: Refer to the WABCO maintenance manual MM1543 and review section 5.1.4 thru 5.2.4 prior to repair.

The manual can be found by clicking on the link above located under “**Reference Documentation and Link**”.

1. Locate the Hydraulic ABS modulator assembly inside the left-hand frame rail, rear of the transmission (Illustration 1, item 4)
2. Disconnect the negative terminal of the battery
3. Disconnect the chassis wire harness's electrical connector on the ECU
4. Label each line on the modulator assembly for later installation. Reference Illustration 2, as needed
5. Using a catch pan to collect any brake fluid, remove each line on the modulator assembly, take care not to twist the line.
6. Remove the mounting fasteners securing the modulator assembly to the frame rail and retain (items 1 and 2)
7. Lower and set aside the modulator assembly.
8. Remove the protective lip rubber from the bracket flange and retain (item 3).

Modulator Installation:

IMPORTANT: Confirm the body number on the ECU matches the unit being repaired.

1. Place new modulator assembly inside the frame rail, correctly oriented and loosely install the top bolt (1) and washer (2) thru the frame to hold the assembly in place
2. Line up and install the remaining bolts and washers (items 1 and 2), tighten until snug
3. Torque the fasteners to 140 FT-LBS
4. Install protective lip rubber (item 3) previously removed, using black silicone to retain in place
5. Connect the brake lines per Illustration 2, observe torque specifications

IMPORTANT: Do not twist the lines when tightening

6. Connect the electrical harness to the ECU
7. Connect the negative battery terminal

Bleeding Instructions:

1. Reference WABCO manual MM1543, section 5.2.4 for bleeding instructions

Calibration Instructions:

1. Reference WABCO manual MM1543, section 5.3 for calibration instructions

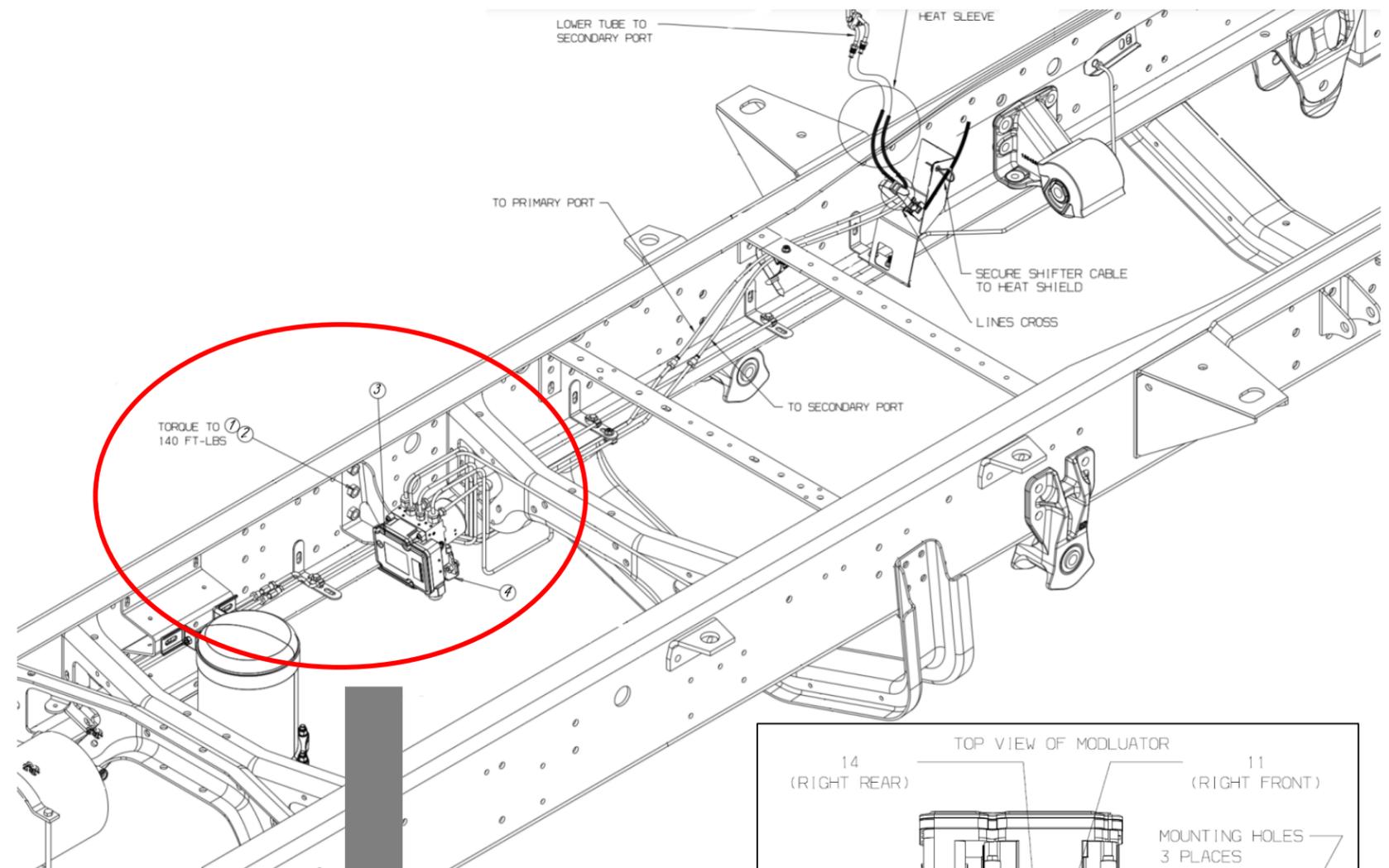


Illustration 1

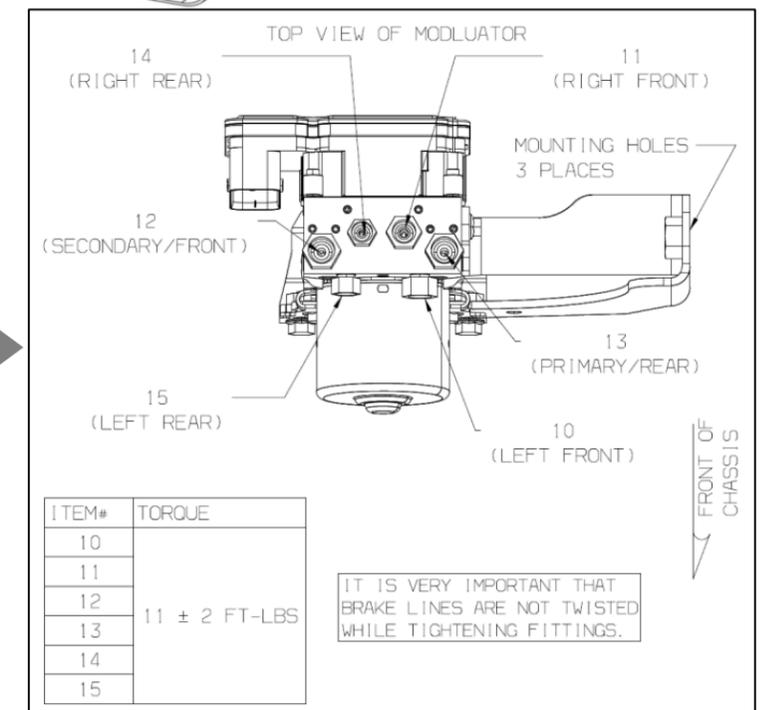


Illustration 2

Connecting to vehicle:

Connect the RP1210 compliant device to the vehicle J1939 diagnostic connector (Photo 1)

If the vehicle is Cummins powered, the use of BB tool adapter #10049528 is **REQUIRED**

If the vehicle is Ford powered, no tool adapter is necessary.



Photo 1