



ISSUE DATE:	07/13/2023
SERVICE BULLETIN SUBJECT:	ZX5.A02 Spring Software Release and Shutdown Override Momentary Switch Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-23-109
LABOR OPERATION CODE:	PE47Z
LABOR TIME	2.5 Hours

ZX5.A02 Spring Software Release and Shutdown Override Momentary Switch Retrofit

Description:

The procedure describes the process of performing updating the vehicles software along with a hardware change to improve the vehicles experience and diagnostics.

Summary of Software Changes:

ATC Disable Switch Support:

New feature deliverable for buses configured with an ATC disable switch enabling ABS mud and snow mode below 15 mph for stuck in snow scenarios

Dash initialization fix for key off charging:

Fix for Black/green screen and correctly populating charging screen messages from wakeup during plug in from key off charging

Charge port light support:

Supports lighting charge port light on buses equipped with the hardware while plugged in and remains lit for a customer configurable amount of time after vehicle key off

LVD functionality absorbed by the Body controller:

The Body Controller is now able to support BRIT requirement of 35 min ITS accessory on time after key off as well as supporting CMTA charge port light 5 min on time after key off. Body monitors 24V voltage and request vehicle off rather than LVD cutting power.

Aux Heat Improvements:

Fixed bug that got command stuck in a loop and resulted in Aux Heat never turning on

Shutdown Override Switch Improvements

Improvements to prevent accidental triggering of shutdown override switch.

Requires Hardware swap to implement.

SW NOT compatible with old Hardware (leads to un-intuitive operation)

Coolant Pump Diagnostic Fix

Calibration change to prevent erroneous diagnostic setting during changes in pump speed that affected buses equipped with WP120 pumps. Code is backward compatible with WP29 pump.

TCM Diagnostics Improvements

Updated descriptions

Robustness improvements

Fault set time optimizations

Increased Buzzer Volume

Change to the Dash Buzzer to increase volume greater than 80 dB

HVIL Diagnostic Robustness Fix

Improved robustness to signal noise to prevent false failures

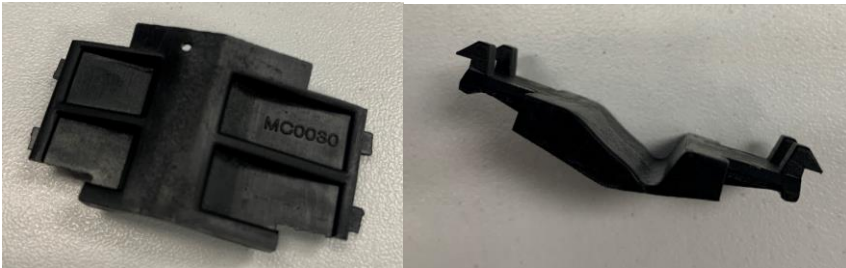
Tools/Parts Required:

Tools and Supplies Required:

Proterra Diagnostic Tool	1
USBLink Nesiq	1
Flat Head Screwdriver	1
LVD Flash Harness	1
GIGAVAC LVD Configurator Program	1
T30 Bit	1
Laptop	1

Kit Parts Required:

064518	SERVICE RETROFIT KIT, CAN BANK MOMENTARY SWITCH	
188-6122	JOINT, CAN BANK, CAM, MOMENTARY, TOP	1

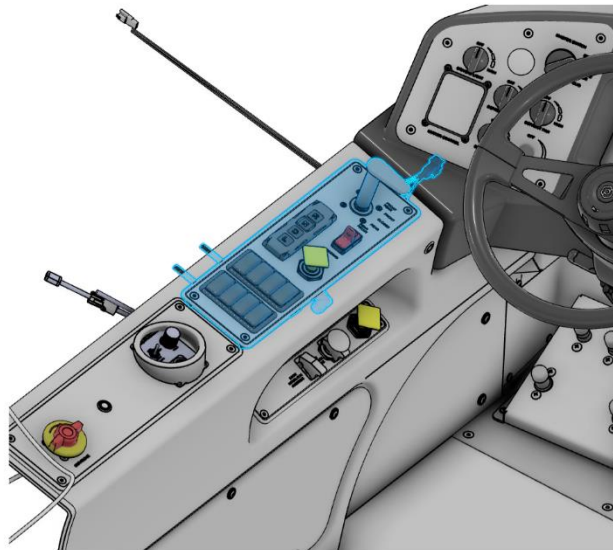


Procedure:

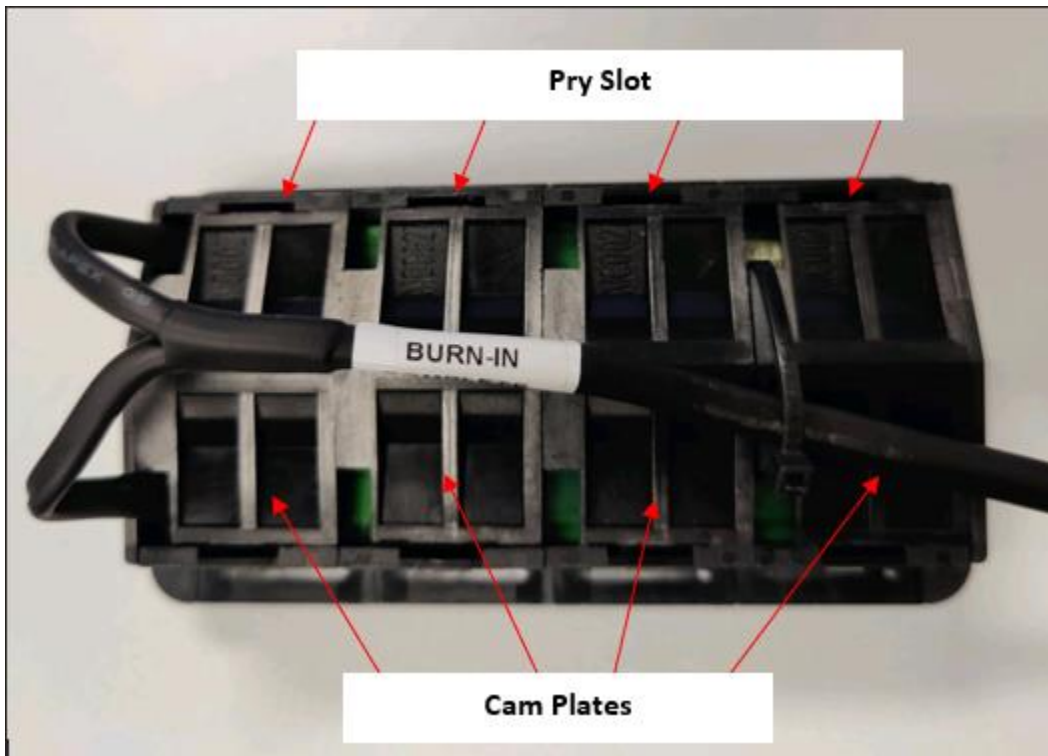
1. Use the Proterra approved Lockout/Tagout procedure to make the bus safe for work.

Shutdown Override Momentary Switch Retrofit (PN 188-6122):

2. Locate the switch panel to the left of the driver's seated position.
3. Remove the forward switch plate by removing the four flat head screws using a screwdriver, then disconnect any wiring harness.



4. Remove the current CAM plate allocated to the Shutdown Override button. Use a flat head screwdriver inserted into the pry slot to pry out the cam plate. If required, remove the zip tie securing the electrical pigtail.



5. Install the Momentary cam plate PN 188-6122 (MC0030) at the Shutdown Override location by pressing it into place. Verify orientation of the cam plate such that the front of the button is raised. See picture below.

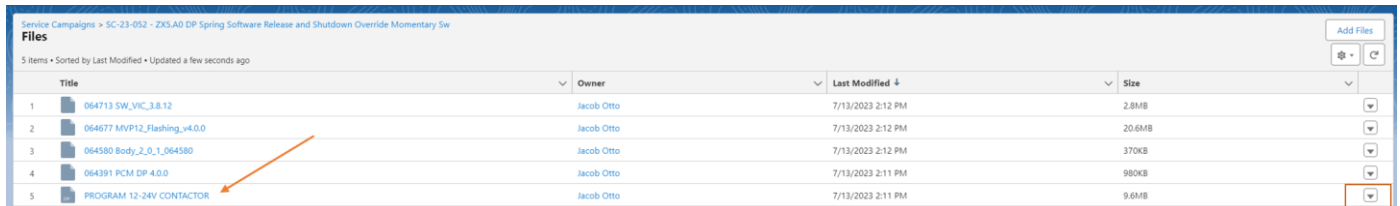


6. Reconnect harness and reinstall switch plate using a flat head.
7. Remove LOTO Equipment.

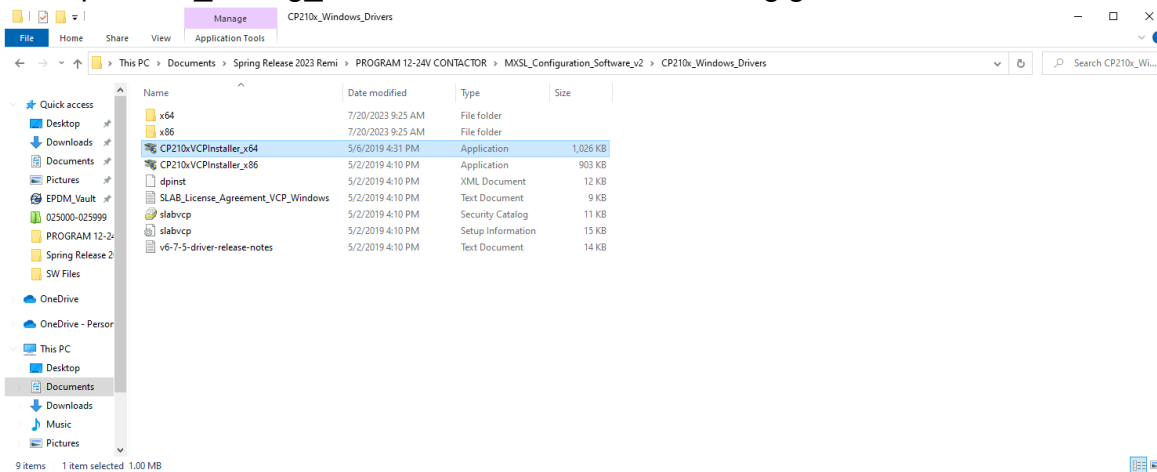
Flash Procedure for Low Voltage Disconnect (LVD PN 036155):

LVD Specs	Values
Shut Off	15.0
Delay	200
Alarm	15.25

8. Download GIGAVAC programming tool from the ServiceMax campaign files. Or on the network “\\bus.local\files\Public\Manufacturing\Kenny Raval\PROGRAMMING INFO\PROGRAM 12-24V CONTACTOR”

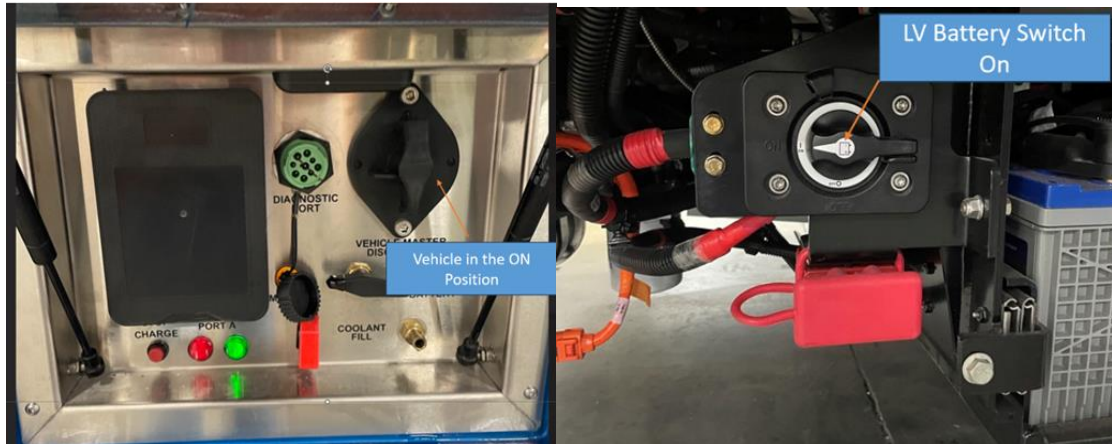


9. Unzip folder and open the MXSL_Configuration_Software_v2 folder then select CP210X Drivers folder and run the x64 application, then go back to the MXSL Config folder and run the “Setup MXSL_Config_R3” file. This will download the gigavac tool.



NAME	TYPE	COMPRESSED SIZE	PASSWORD PROTECTED	SIZE	DATE MODIFIED
CP210x_Windows_Drivers	File folder				7/13/2023 2:08 PM
MXSL_Config_R3	Application	187 KB	No	415 KB	56%
SetupMXSL	Windows Installer Package	312 KB	No	602 KB	49%

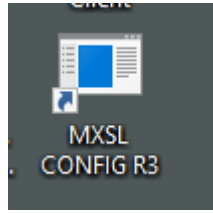
10. Turn vehicle ON at the CS charge port and the battery switch ON. The Master switch remains off at the dash.



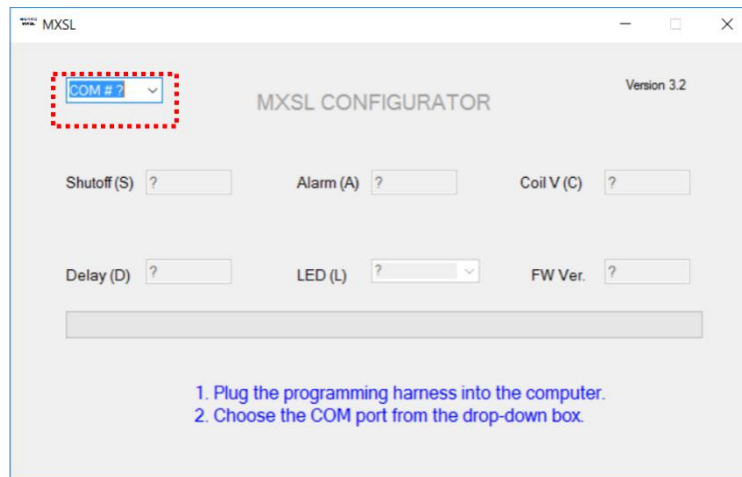
11. Remove rear access panel using a T30 to gain access to the LVD.
12. Remove connector that is plugged into the LVD contactor and plug in the programming harness.



13. Insert LVD programming harness USB into the laptop then open the program MXSL Config R3 on your desktop or search for it in your tool bar. **Note you should only have one USB installed on the laptop while programming.**



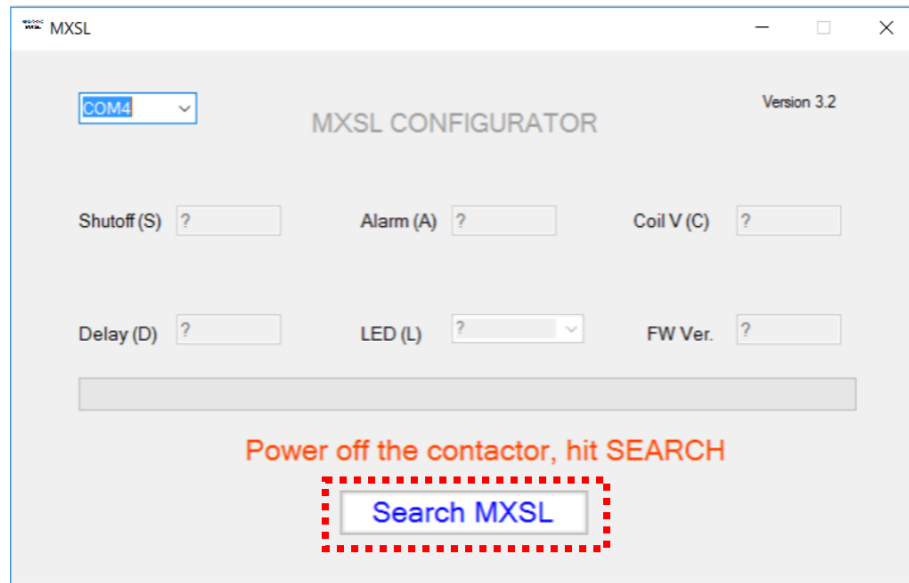
14. Select Comport, there should only be one drop down available for the USB installed.



15. Acknowledge how to gain power for programming attach alligator clips to positive 24 and ground to the locations below.

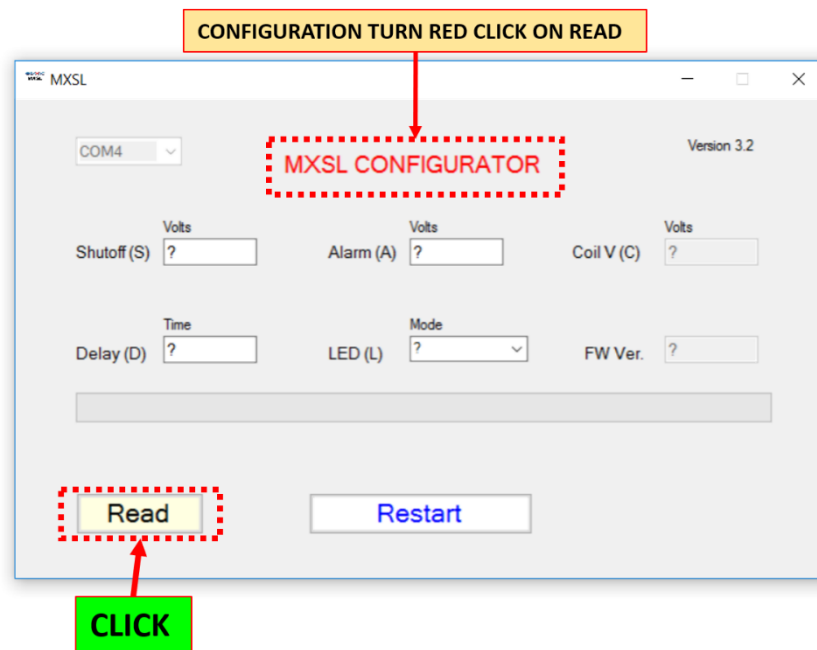


16. Connect to the device. To do this click “Search MXSL” as soon as the progress bar on the program has green, power on the LVD. This connection can be sensitive. If the program times out. Remove power restart program and try again. Focus on providing power right when the progress bar has smallest bit of green.



CLICK ON SEARCH & AT SAME TIME POWER ON

17. Click Read.

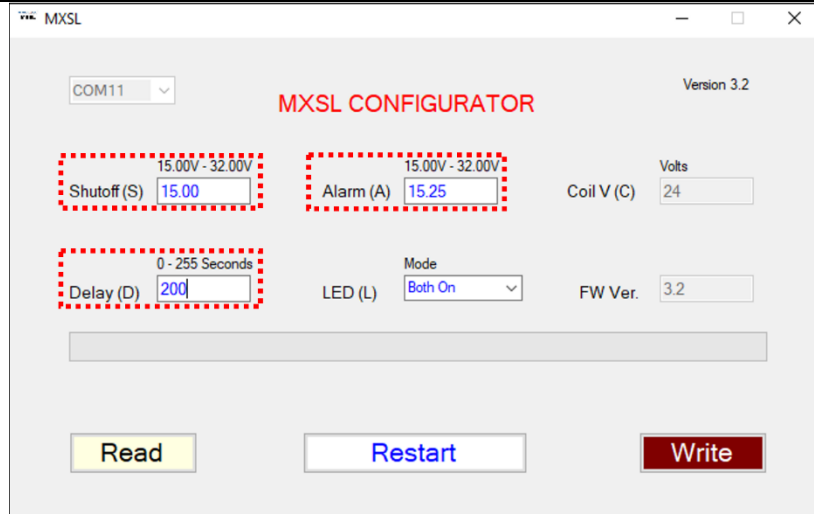


18. Confirm the coil voltage is 24v.



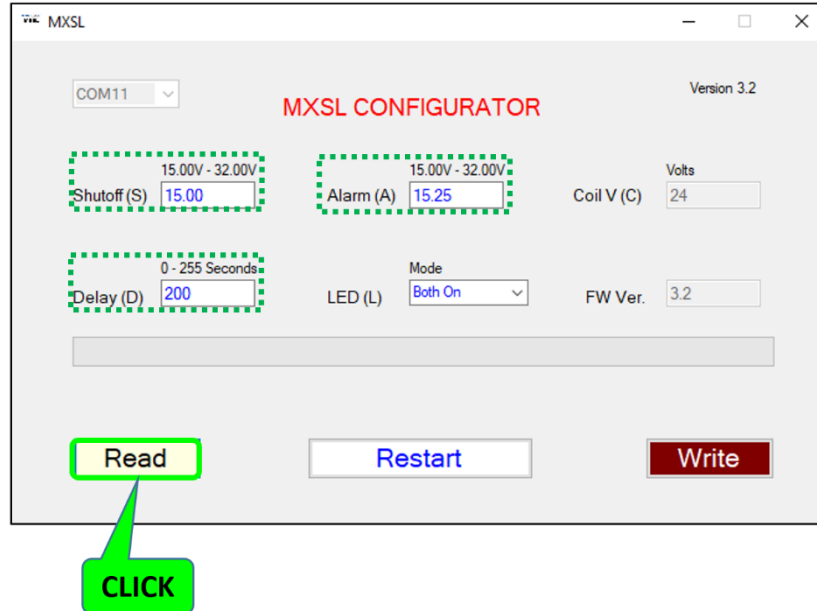
19. Update Shutoff Alarm and Delay in the table below. To save these updates select write.

LVD Specs	Values
Shut Off	15.0
Delay	200
Alarm	15.25



↑
CLICK "WRITE"

20. Verify the updated values are on the device by clicking Read and comparing to the table above.
CLICK ON "READ" TO COMPARE CORRECT VALUE DISPLAY



21. Remove LVD programming harness and reconnect the bus side harness. Reinstall T30 screws to secure the hatch.

VEHICLE SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:



IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

Component	Part Number	Version
Vehicle Controller	065597	3.8.14

Preparing the Vehicle to be Programmed:

When programming a vehicle, it is critical that the low-voltage batteries remain connected throughout the process. Ensure that the LV batteries are fully charged before starting the process. If they are

low, use the vehicle to recharge them by turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

22. Connecting to the vehicle, Power up and login to the Proterra-Supplied laptop or a comparable PC that has the Proterra Diagnostics Tool software installed with a valid license.
23. Turn ON the 12/24V rear Vehicle Master Disconnect located at the curbside rear charge port access panel and the LV Battery Saver Switch near the LV batteries.



24. Connect the Nexiq USB Link2 device to the laptop and to the OBDII Diagnostic Port located in the rear deck above the rear window.



25. Make sure the Master Switch is in the “**OFF**” position and the Hazard Switch is **ON**.
 - a . **NOTE** – Other systems may cause the hazard **lights** to be on. Ensure the Hazard **Switch** is on for flashing purposes.



26. On the laptop, double-click on the Proterra Diagnostics Tool software icon to start the software.



27. When the program opens, read and click “OK” for the high-voltage safety prompt.

28. On the Home tab, select the appropriate device from the drop down and click “Connect”.



29. Once the diagnostic tool has connected to the vehicle, a VIN number and connection status will be displayed on the Home screen, and tabs available to navigate. If you do not see the Home

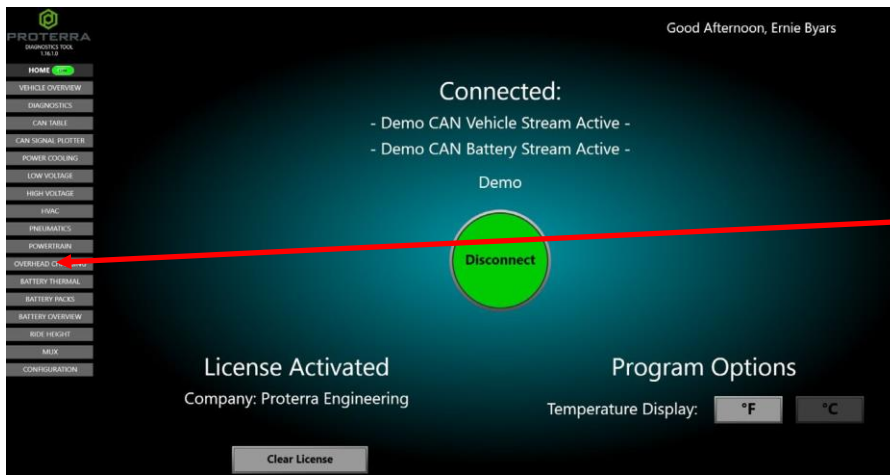
Screen, check that the low-voltage batteries are connected and that the Nexiq tool is plugged in. If there are still errors, try restarting the Proterra Diagnostic Tool application.

NOTE: 800V Proterra vehicles are equipped with an automatic battery disconnect that will protect the low-voltage batteries from a deep discharge

- 30. Before beginning the programming process, check the bus for existing faults by clicking on the “Diagnostics” button below and make a note of any found.

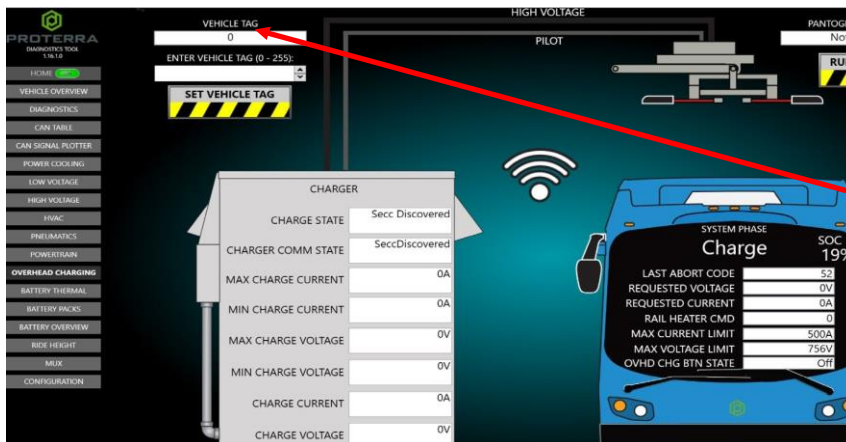
Update Vehicle Controller:

- 31. Click on the “Overhead Charging” button on the left side of the screen
NOTE: If the bus that you are working on is not capable of overhead charging, skip to step 34 below.



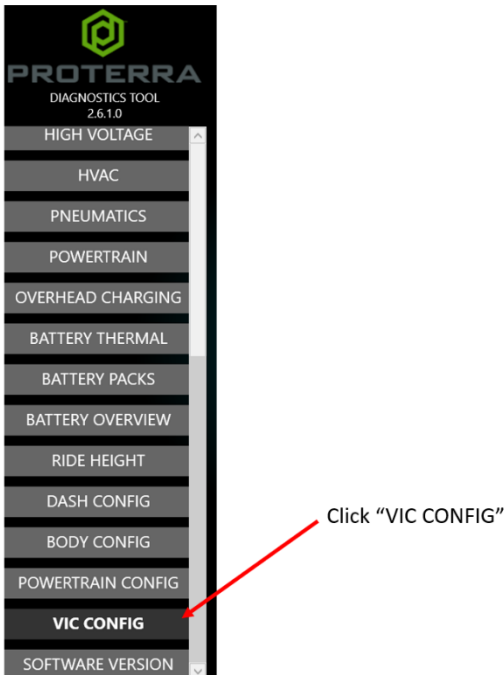
Click “Overhead Charging”

- 32. Record the value displayed in the “Vehicle Tag” data field. This will be re-entered into the controller after the software update.

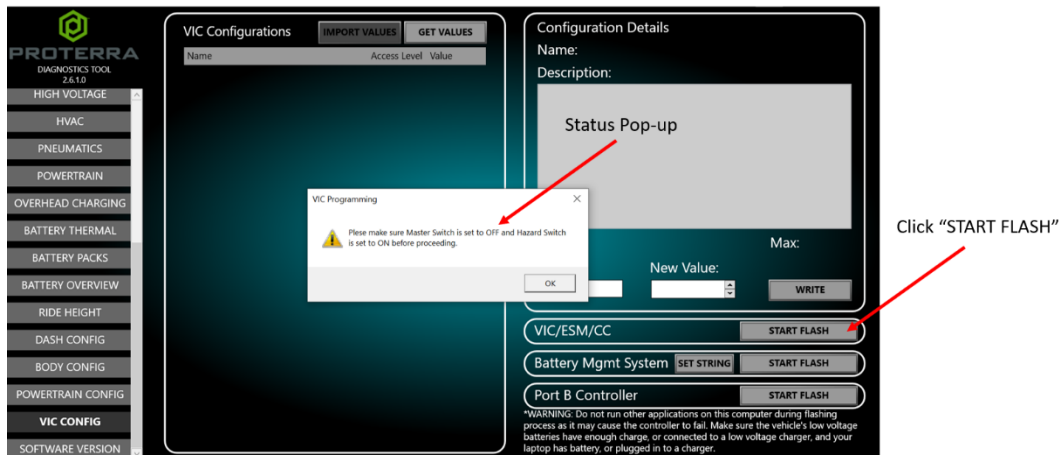


Record Vehicle Tag

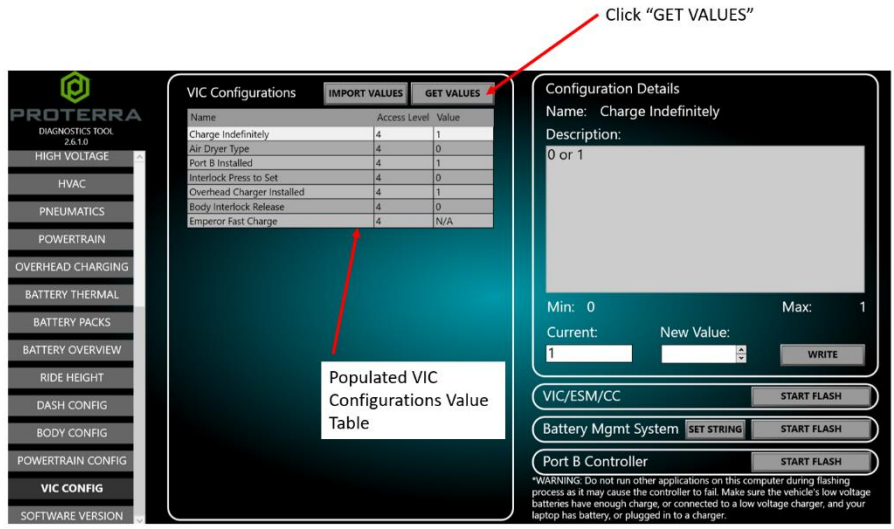
- 33. Navigate to the “VIC CONFIG” tab in the left menu.



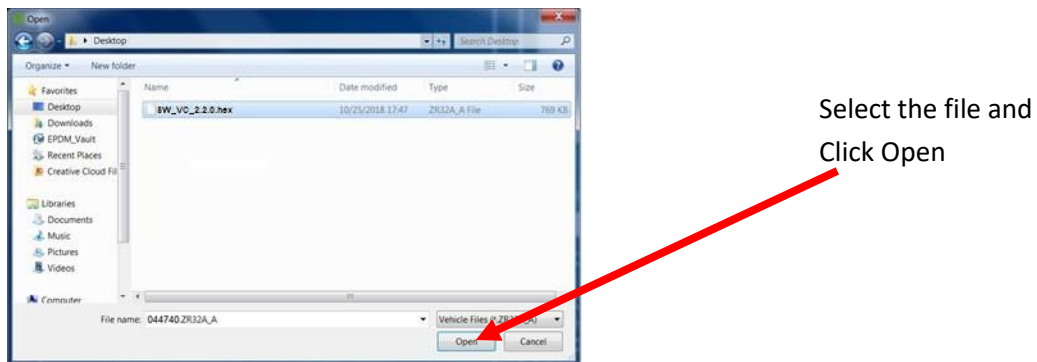
34. Select the option for Vehicle Controller "START FLASH". There will be a status pop-up to confirm that the Master Switch is OFF, and the Hazard Switch is ON.
 NOTICE: The "INITIAL FLASH" button is only for offline programming of the Vehicle Controller with an Offline Programming Kit.



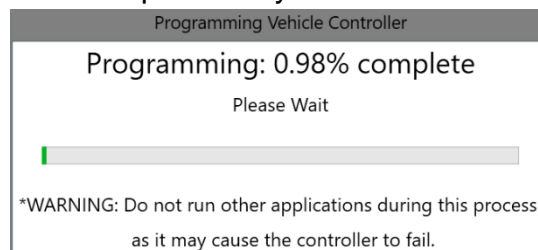
35. After pressing OK, it will prompt you to press the "START FLASH" button again. **BEFORE YOU DO THAT**, press the "GET VALUES" button to get the current controller configuration values. Save these values in case the automatic restore does not work.



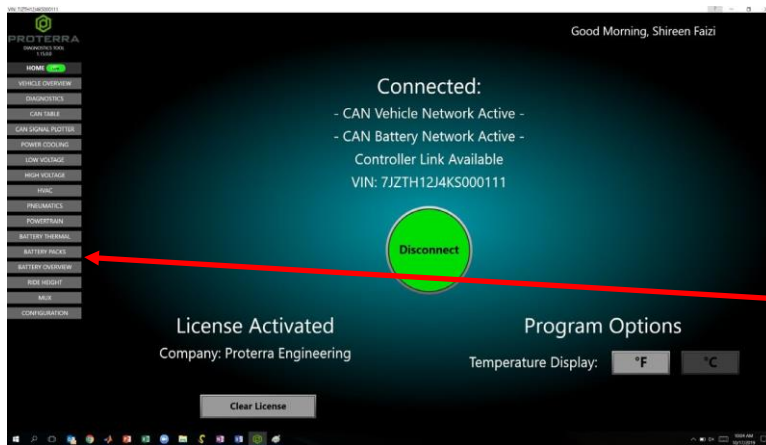
36. Now, press the "START FLASH" button once more and a pop-up window should appear. In the pop-up window, select the software flash file to load the controller. The correct file is named 065597 SW_VIC_3.8.14.hex.



37. The Programming window will come up and may take a few minutes to complete.



38. Click on the "Overhead Charging" button on the left side of the screen.
NOTE: If the bus that you are working on is not capable of overhead charging, skip to step 40.



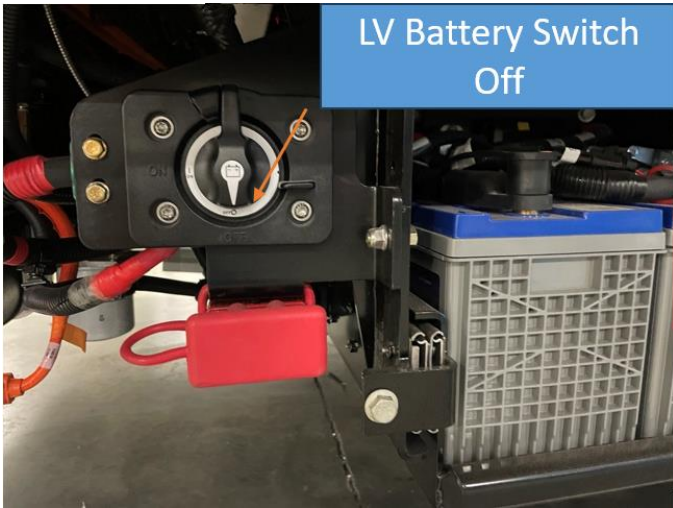
Click "Overhead Charging"

39. The following screen will appear. Enter the "Vehicle Tag" that you recorded previously into the field circled in red below. Click the button under the field. This will populate the "Vehicle Tag" into the field above and into the controller.



Click "Button"

40. Turn the Hazard Switch **OFF**.
41. Turn OFF the 12/24V rear Vehicle Master Disconnect located behind the vehicle curbside rear charge port access panel and the LV Battery Saver Switch near the LV batteries. Wait ten seconds, and then turn both back to ON.



- 42. Close the PDT.
- 43. Verify that the vehicle turns on with no faults and that it is capable of charging.

TRANSMISSION SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:



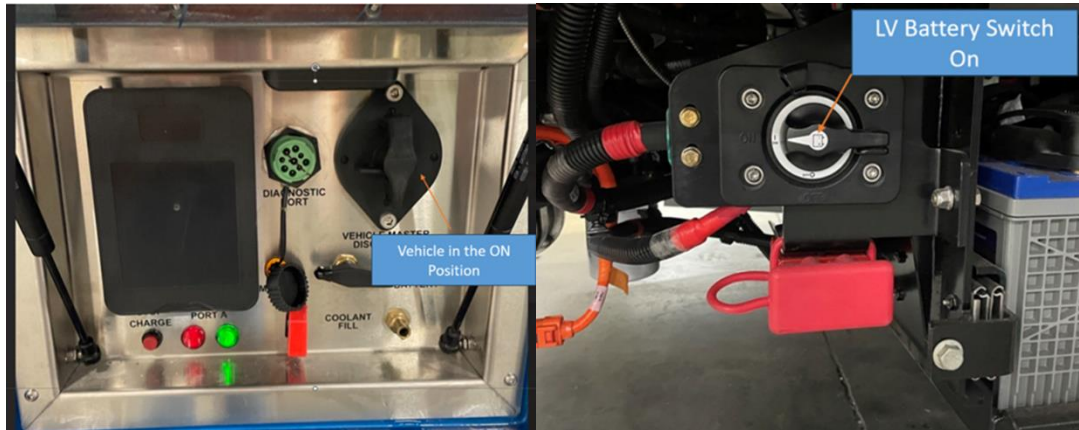
IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

Component	Part Number	Version
TCM PHX	064859	5590524

Preparing the Vehicle to be Programmed:

When programming a vehicle, it is critical that the low-voltage batteries remain connected throughout the process. Ensure that the LV batteries are fully charged before starting the process. If they are low, use the vehicle to recharge them by turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

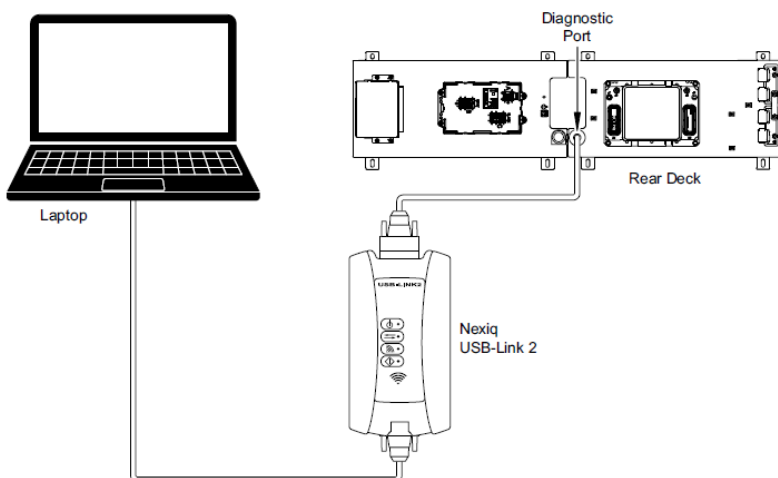
- 44. Turn ON the 12/24V rear Vehicle Master Disconnect located at the curbside rear charge port access panel and the LV Battery Saver Switch near the LV batteries.



45. Turn the Master Switch to the “**DAY RUN**” position and turn the Hazard Switch **ON**.
 - a **NOTE – DO NOT PRESS THE START PB. THIS WILL ENGAGE HV.**
 - b **NOTE –** Other systems may cause the hazard **lights** to be on. Ensure the Hazard **Switch** is on for flashing purposes.



46. Access the Rear Deck above the rear window and remove the protective cap.

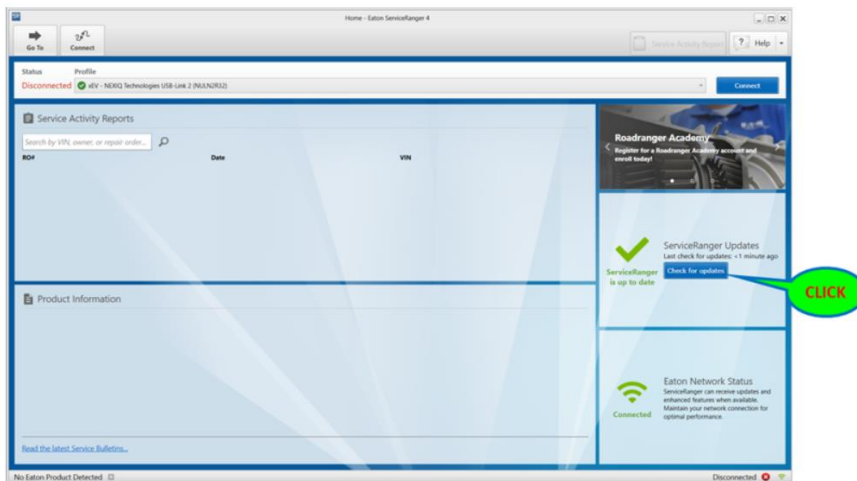


47. Connect to the vehicle using the Nexiq USB Link2.



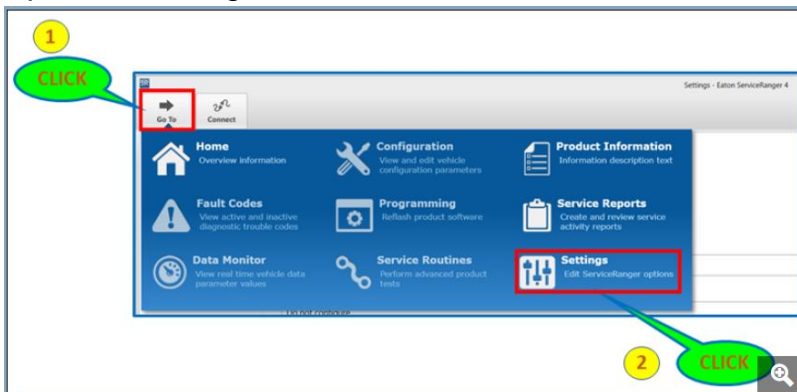
48. On the laptop, double-click on the Eaton Service Ranger software icon to start the software. (Note it might take up to 10 minutes to launch.)

49. Check for updates.

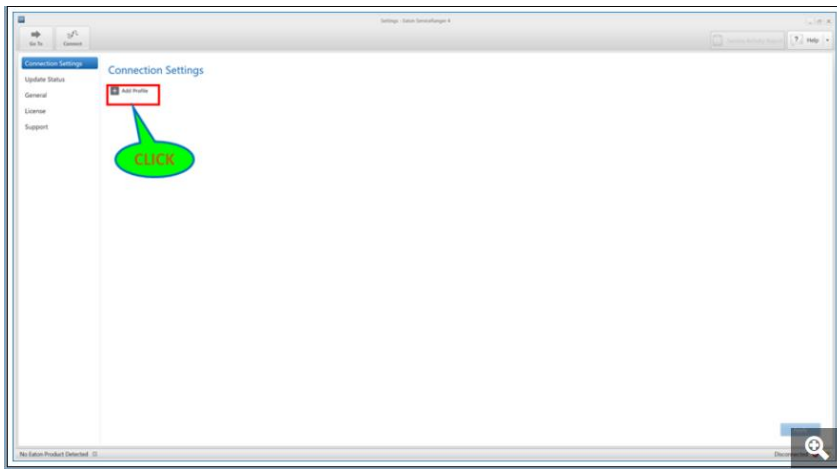


50. If your connection has been setup previously, skip to step 54, otherwise proceed with the next step.

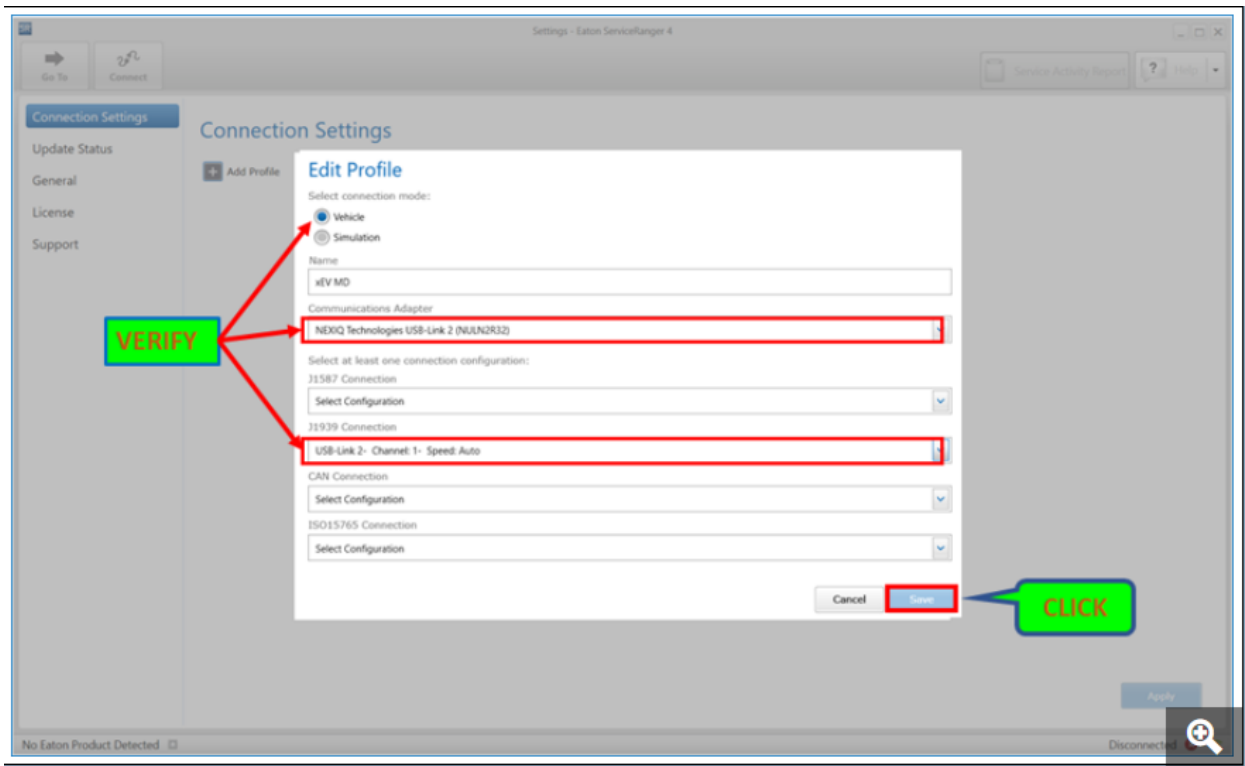
51. Open the Settings.



52. Click Add Profile.



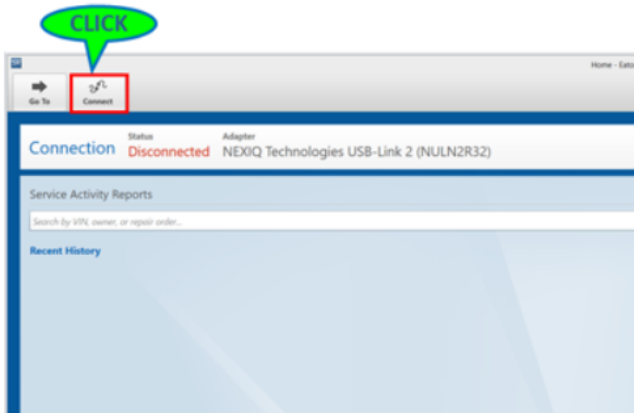
53. Create a connection as below.



Update Transmission Software

This procedure updates the Powertrain software version and maintains the Powertrain parameter configuration data across the flash download of new software.

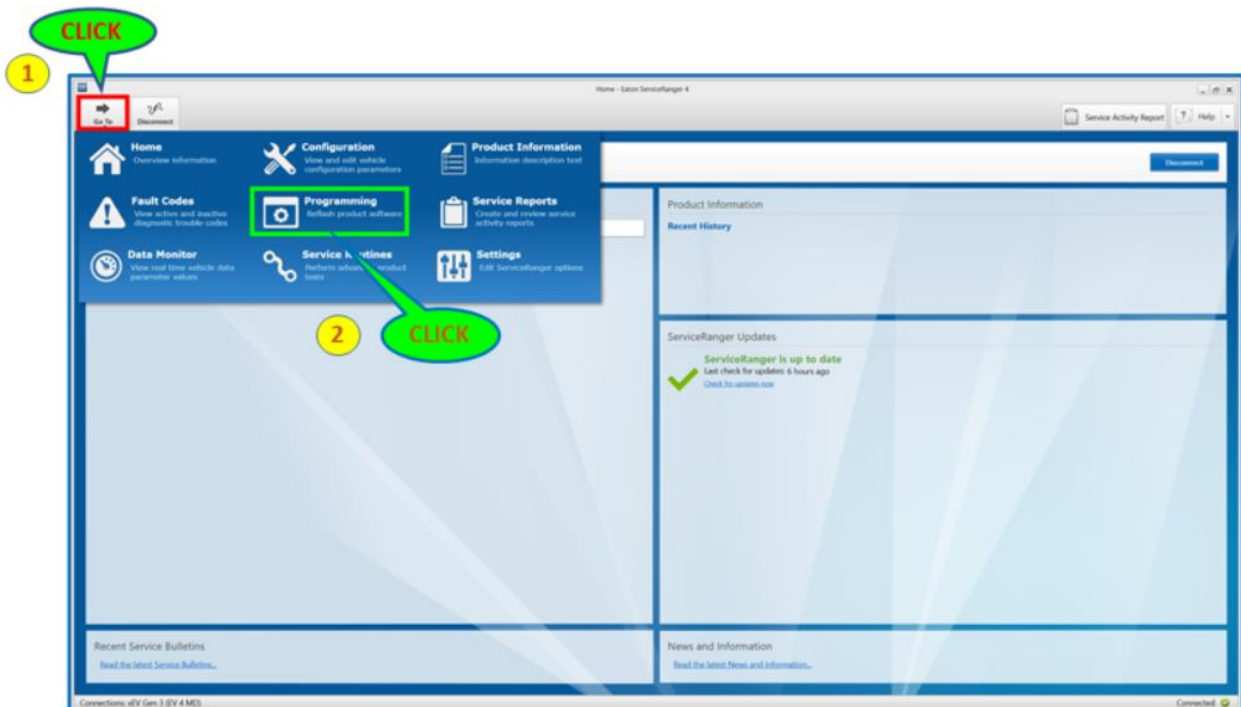
54. Select Connect to begin communication with TCM.



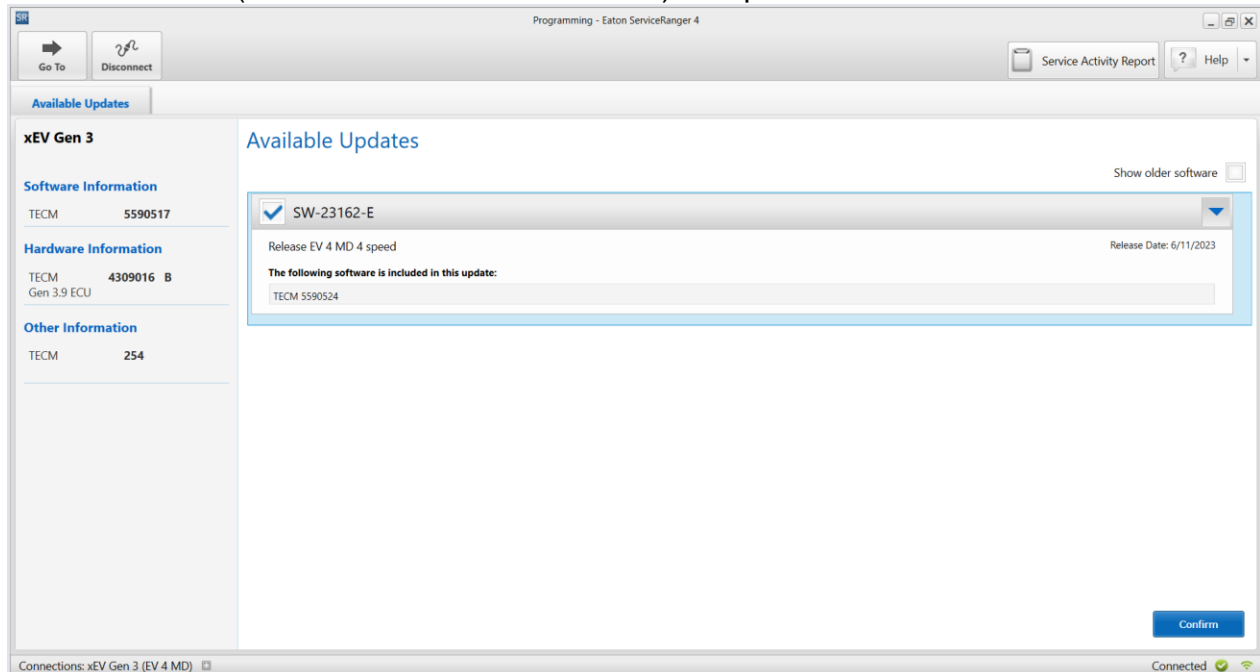
55. Select Ok to proceed once connection established.



56. Select programming from the Go To menu.

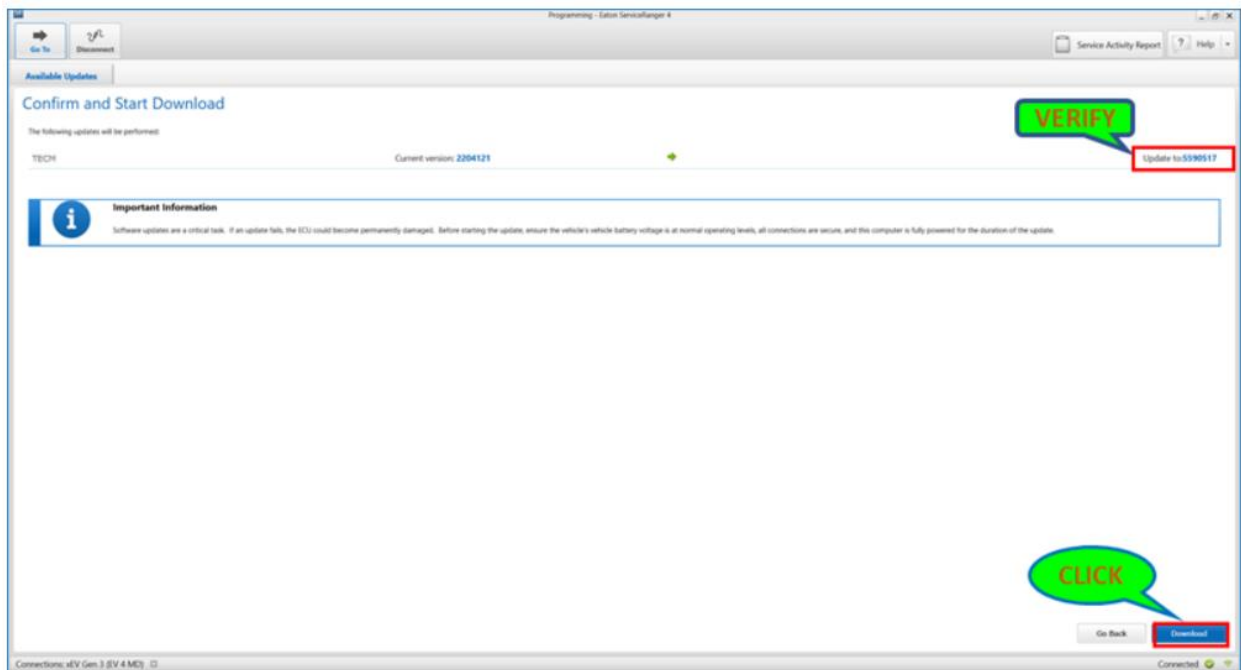


57. Select software (SW-23162-E TECM 5590524) and press confirm.



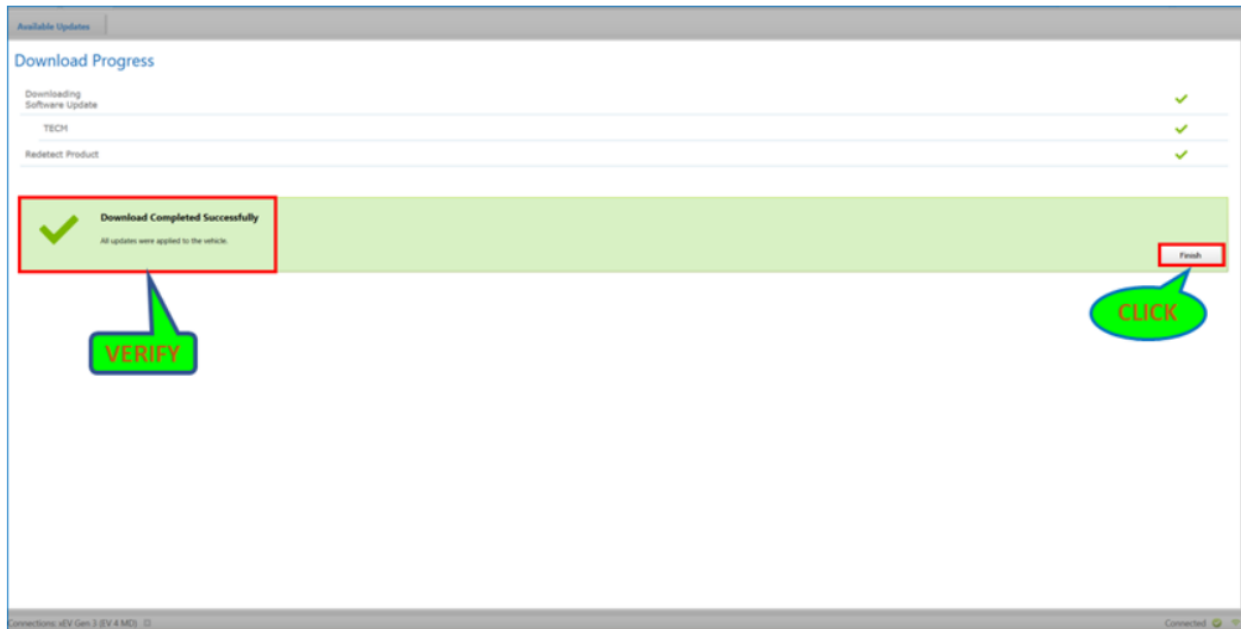
58. Verify the available update is 5590524.

59. Select download to begin programming.

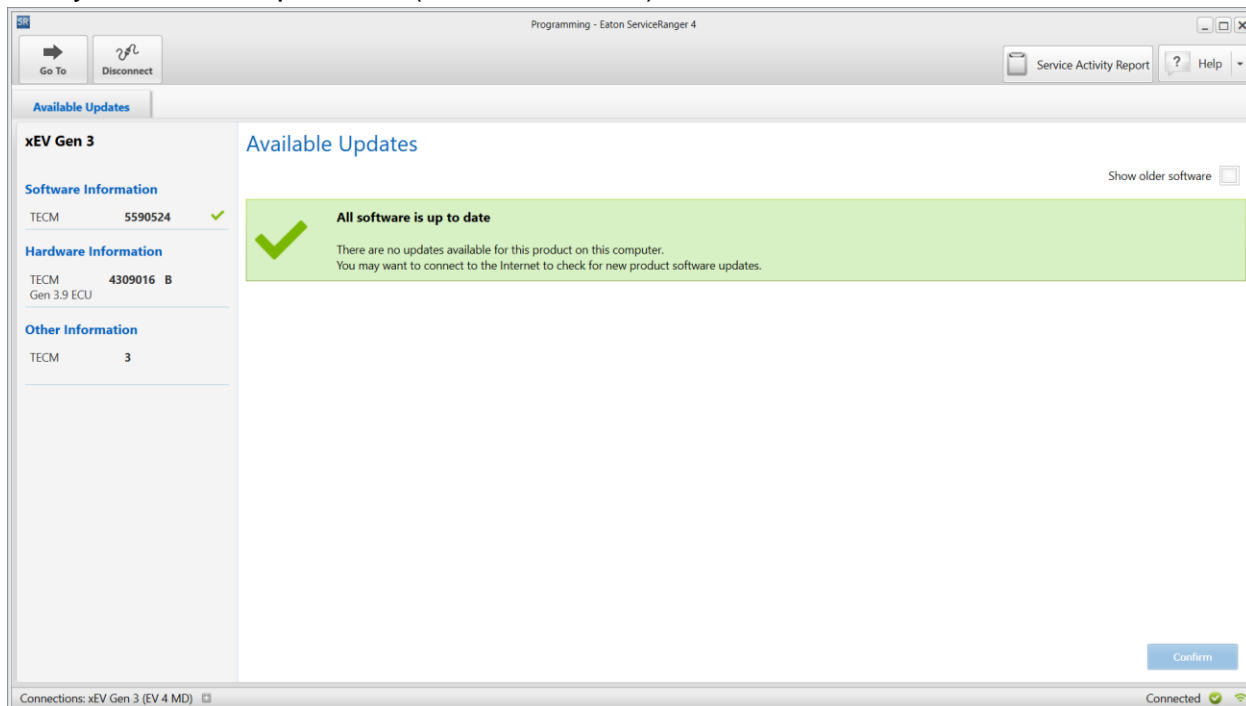


60. Follow prompts to turn off ignition, and then turn on ignition (cycle driver's switch from on to off).

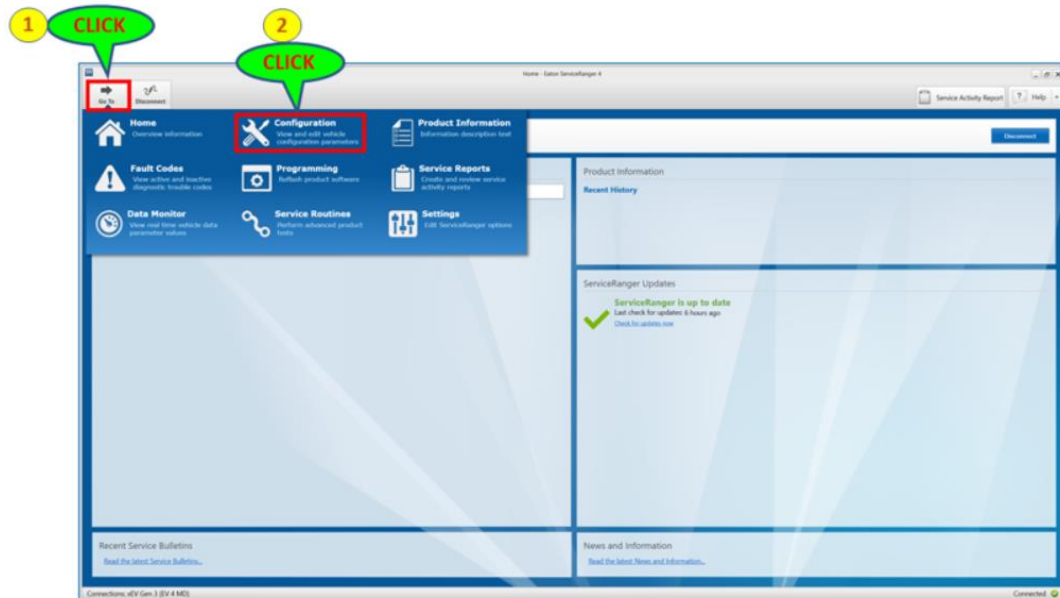
61. Select finish once the process completes.



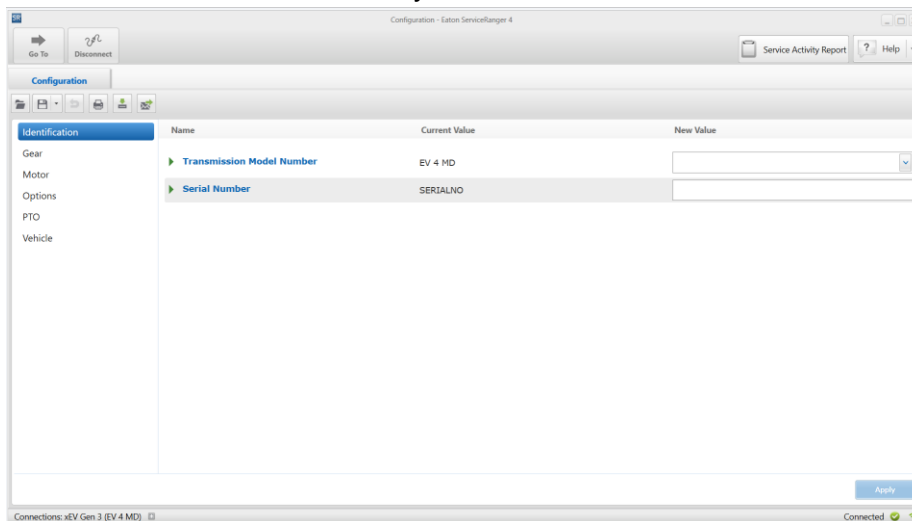
62. Verify software is up to date (TECM 5590524) use numbers below.



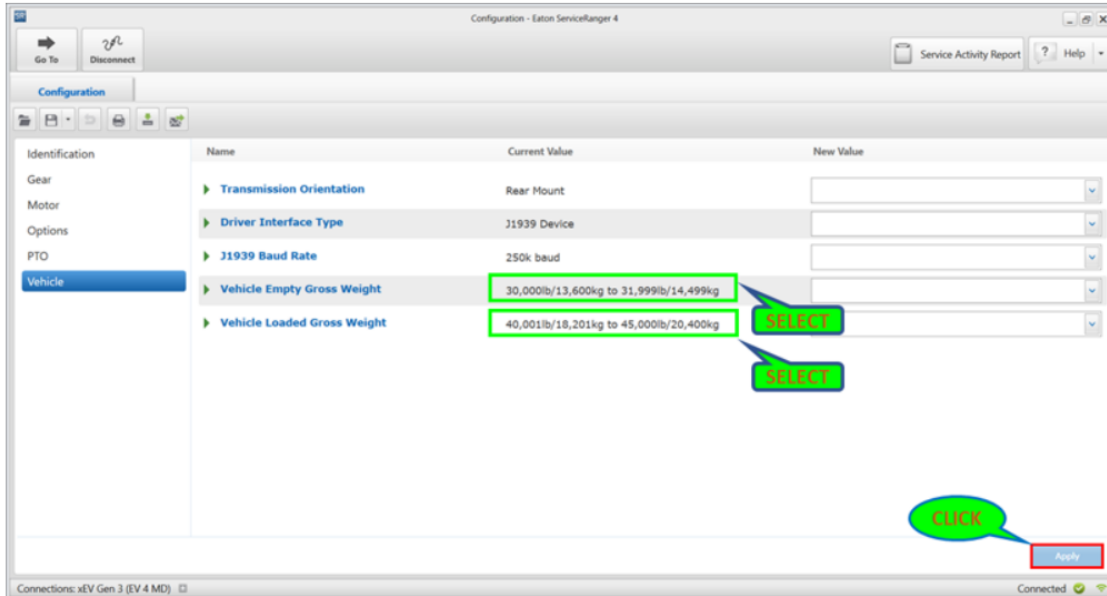
63. Select configuration from Go To menu. If values must be updated save one section at time.



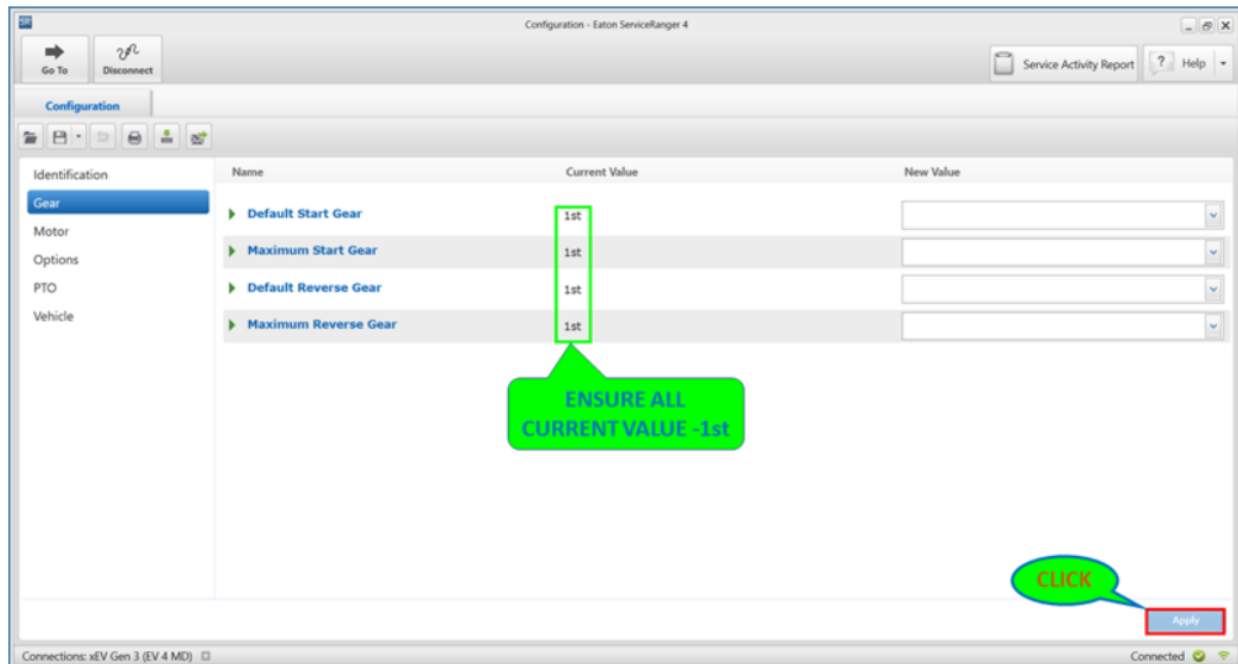
64. Select Identification and verify that Transmission Model Number is EV 4 MD



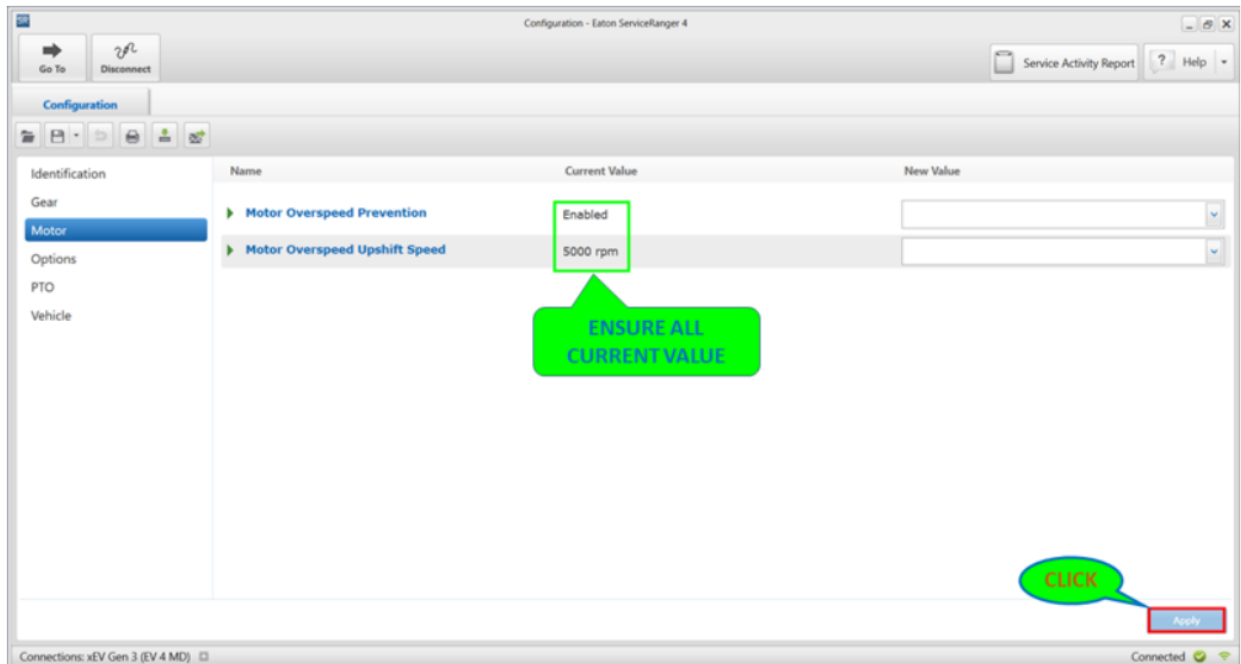
65. Select vehicle and select the following options for weight. Note that you may need to update Vehicle Loaded Gross Weight first, then update Vehicle Empty Gross Weight. See image below for values.



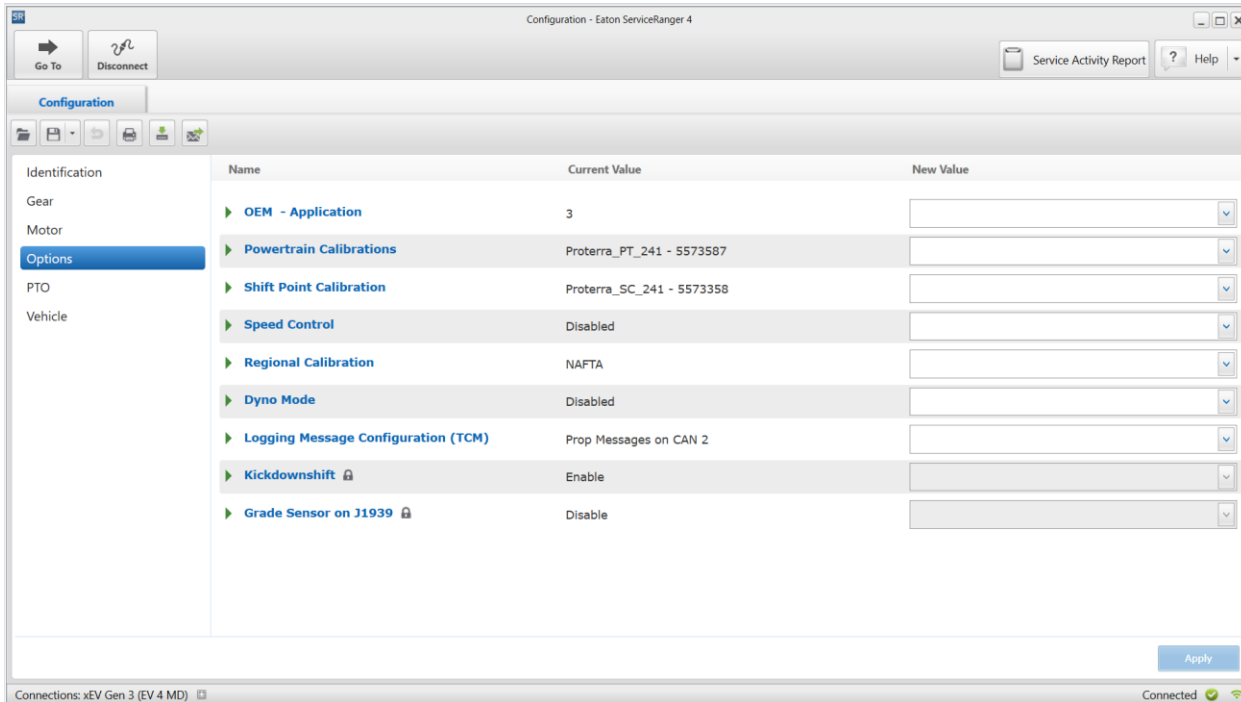
66. Select Gear and verify all values are 1st.



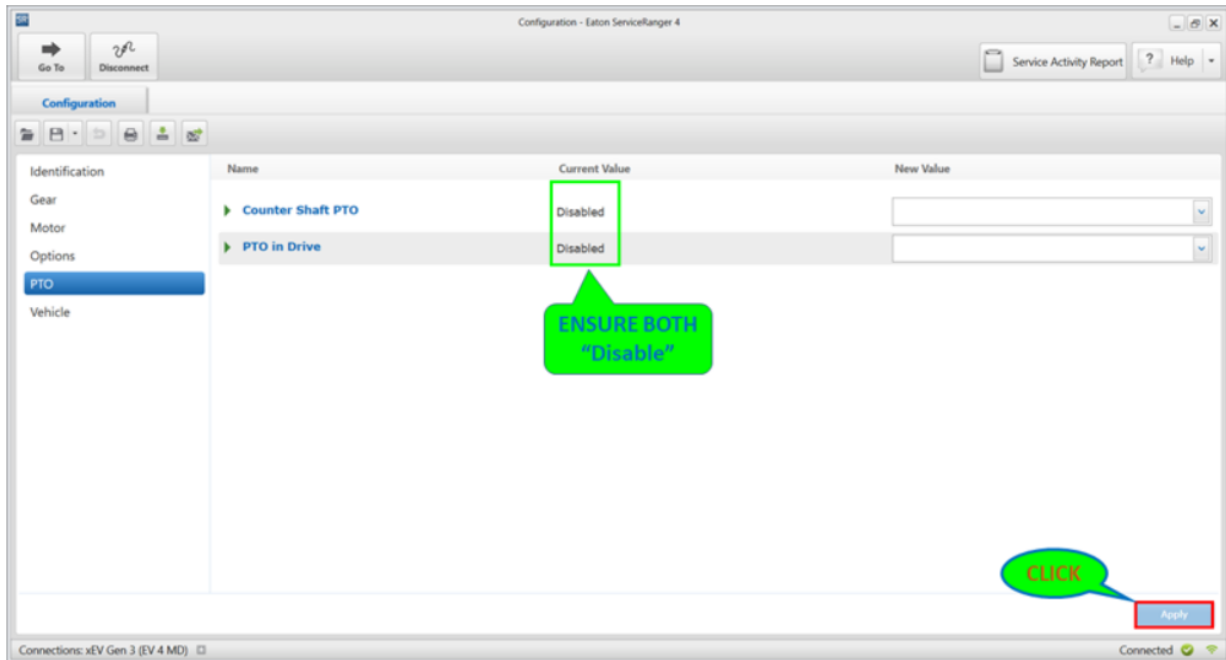
67. Select motor and verify the following values.



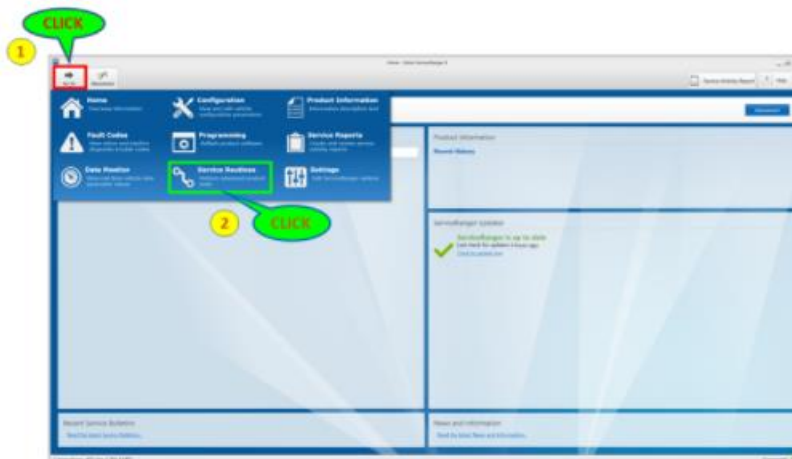
68. Select Options and set the following values. This is done by selecting the desired setting from the drop down and then hitting apply.



69. Select PTO and verify the following options.



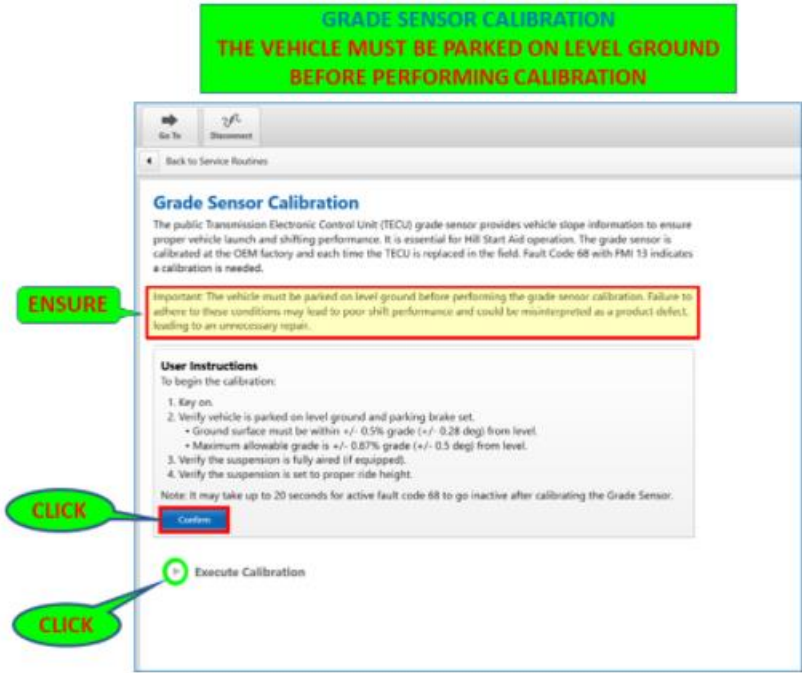
70. Power off the bus at the driver's workplace switch and wait for 3 minutes.
71. Power on the bus at the driver's workplace and verify all configurations set correctly per the above values.
72. Place the bus on a flat surface and make sure ride height is correct for driving.
73. Select service routines from the go to menu.



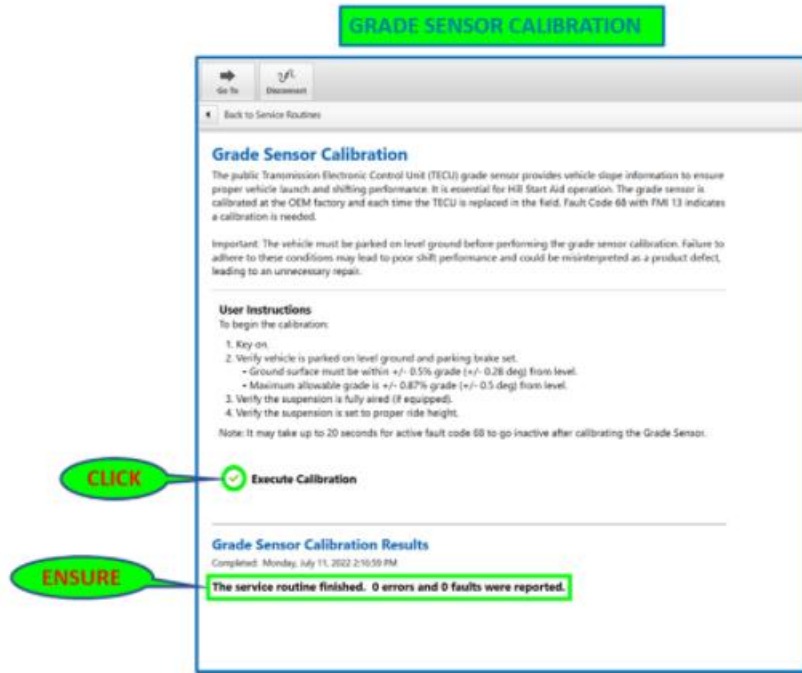
74. Start grade sensor calibration.



75. Confirm on the service ranger tool to start calibration.

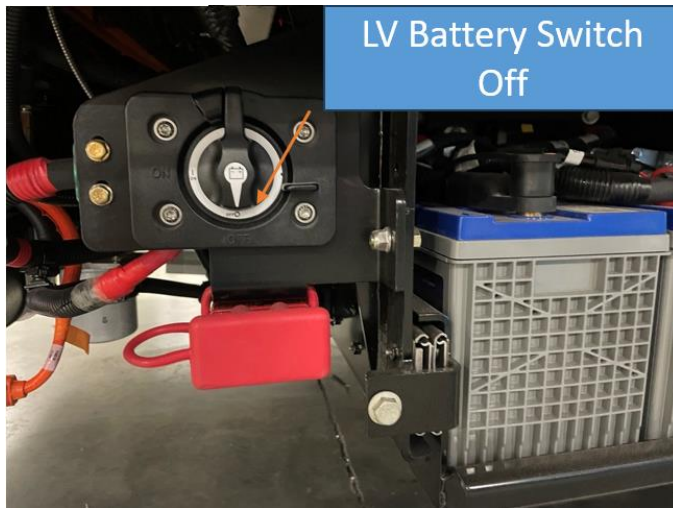


76. Verify successful calibration.



77. Turn off bus at driver's workplace switch and wait for 3 minutes.

- 78. Turn on bus at driver's workplace switch and use PDT to verify no faults.
- 79. Turn Vehicle off at the Drivers workplace then turn off Curbside Master Switch and battery saver switch.



PRODRIVE 2.0 POWERTRAIN SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:



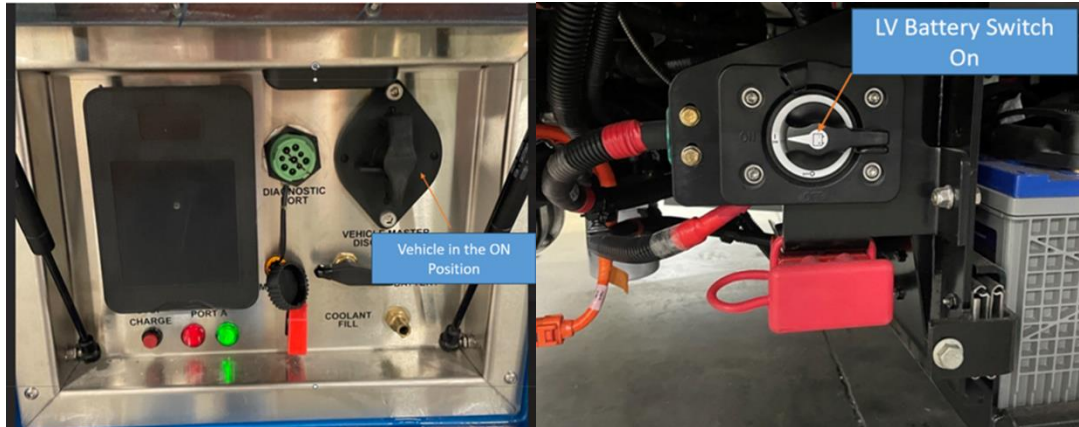
IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

Component	Part Number	Version
PCM PD	064858	5.0.0

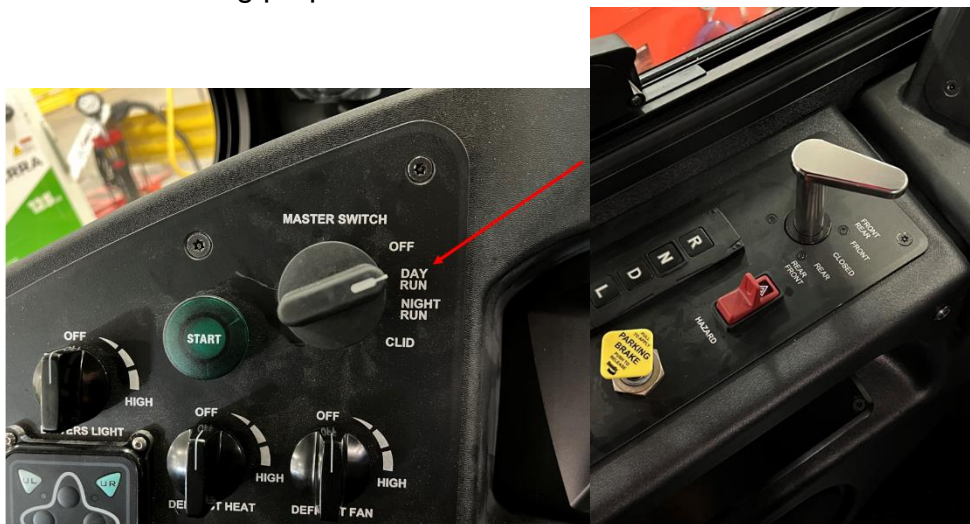
Preparing the Vehicle to be Programmed:

When programming a vehicle, it is critical that the low-voltage batteries remain connected throughout the process. Ensure that the LV batteries are fully charged before starting the process. If they are low, use the vehicle to recharge them by turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

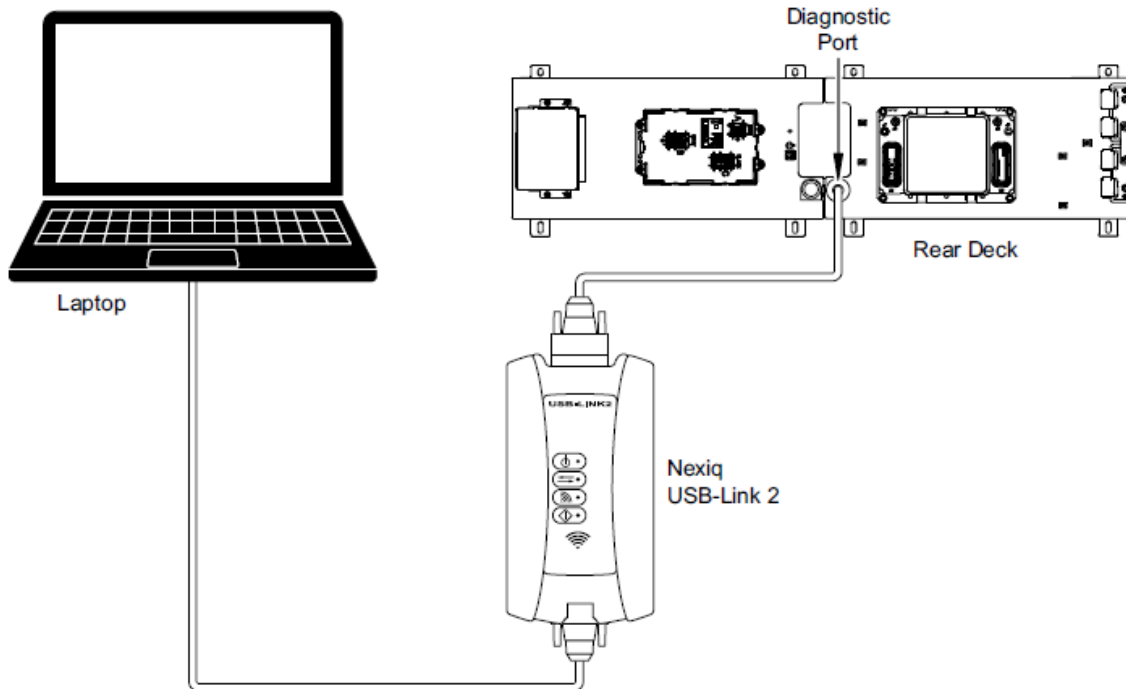
80. Turn ON the 12/24V rear Vehicle Master Disconnect located at the curbside rear charge port access panel and the LV Battery Saver Switch near the LV batteries.



81. Turn the Master Switch to the “DAY RUN” position and turn the Hazard Switch ON.
- a. **NOTE – DO NOT PRESS THE START PB. THIS WILL ENGAGE HV.**
 - b. **NOTE –** Other systems may cause the hazard lights to be on. Ensure the Hazard Switch is on for flashing purposes.



82. Access the Rear Deck above the rear window and remove the protective cap.



83. Connect to the vehicle using the Nexiq USB Link2 and PDT similarly to the steps above in the Vehicle controller flashing procedure.



84. On the laptop, double-click on the Proterra Diagnostics Tool software icon to start the software.



85. When the program opens, read and click "OK" for the prompt.
86. On the Home tab, select the appropriate device from the drop down and click "Connect".



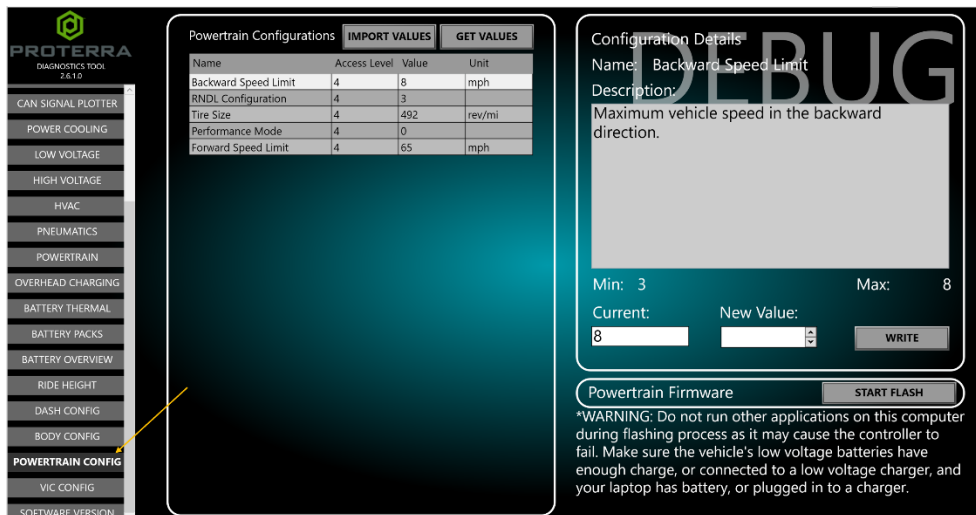
87. Once the diagnostic tool has connected to the vehicle, a VIN number and connection status will appear on the Home screen, along with selectable tabs to navigate.



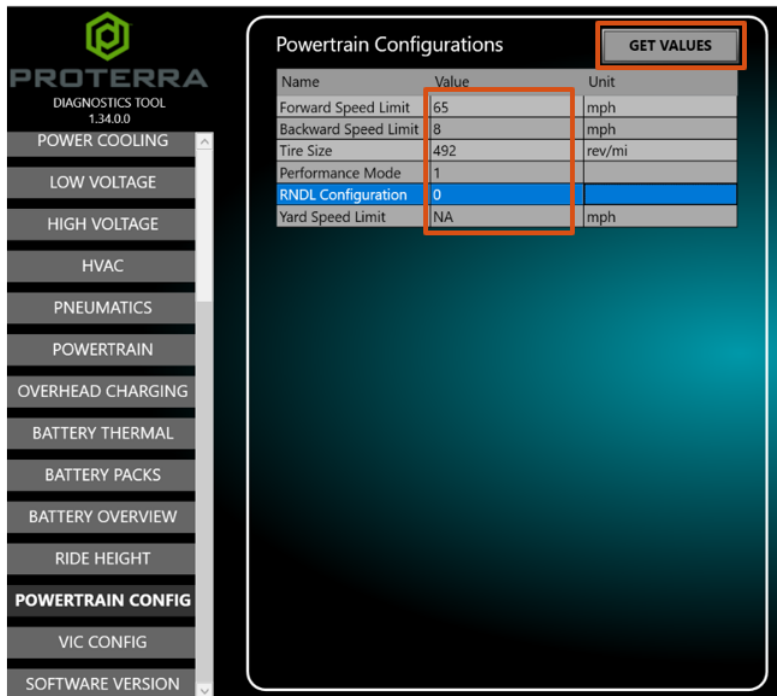
Update Powertrain Software

This procedure updates the Powertrain software version and maintains the Powertrain parameter configuration data across the flash download of new software.

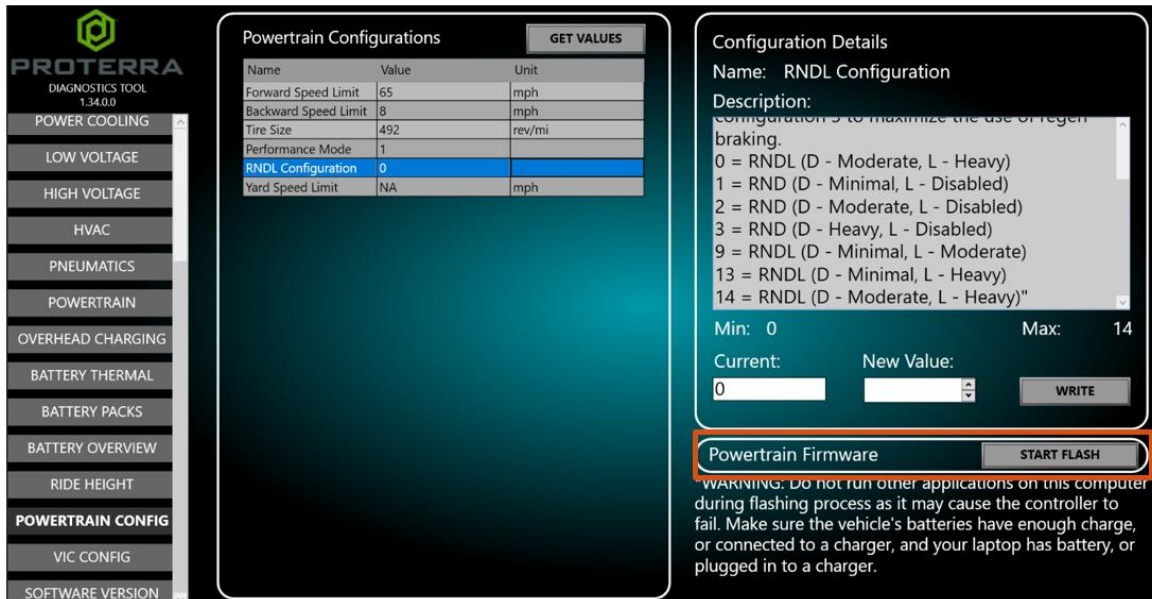
88. Ensure you have the latest software file 064858 PCM PHX 5.0.0.hex on the computer's hard drive.
89. Click on the "Powertrain Config" tab on the left-hand side of the screen.



90. On the Powertrain Configurations tab, Click on “Get Values”.
91. After clicking on Get Values, note down the values set for Forward Speed limit, Backward Speed Limit, Tire Size, Performance Mode, RNDL Configuration, Yard Speed Limit, and Odometer for future reference.

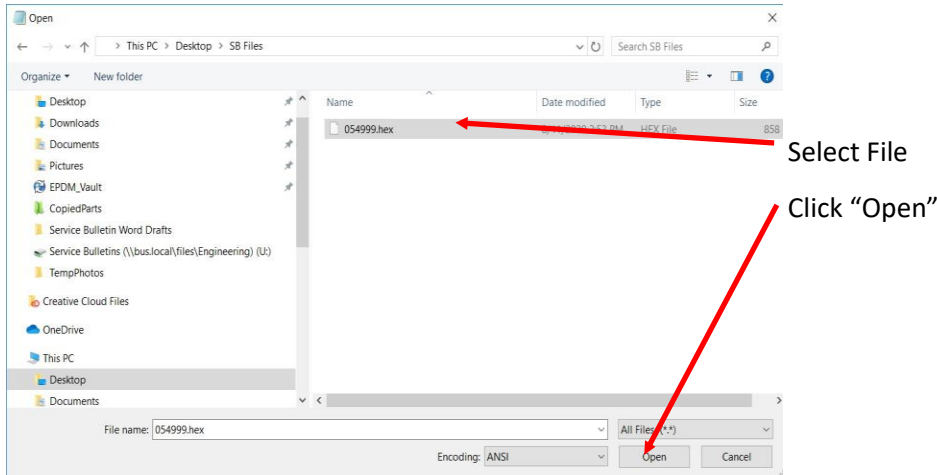


92. Next, click the Powertrain Firmware “Start Flash” button.

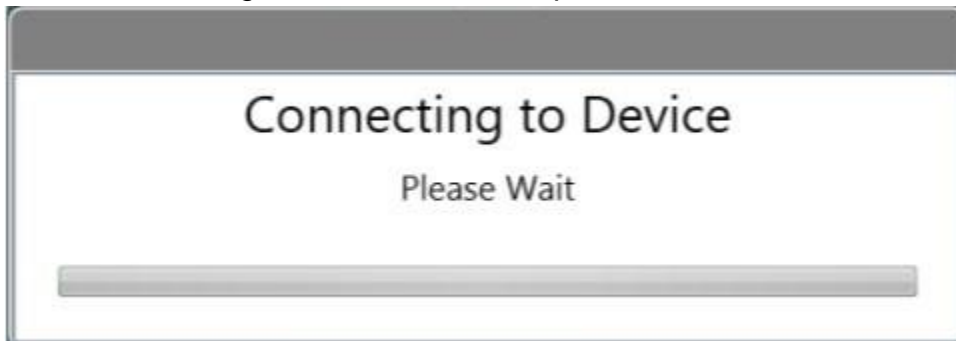


93. The following screen will be displayed. Navigate to the location where you stored the configuration file earlier. Select the software file downloaded previously and click “Open” to load the file

NOTE: The file name displayed should be 064858 PCM PHX 5.0.0.hex



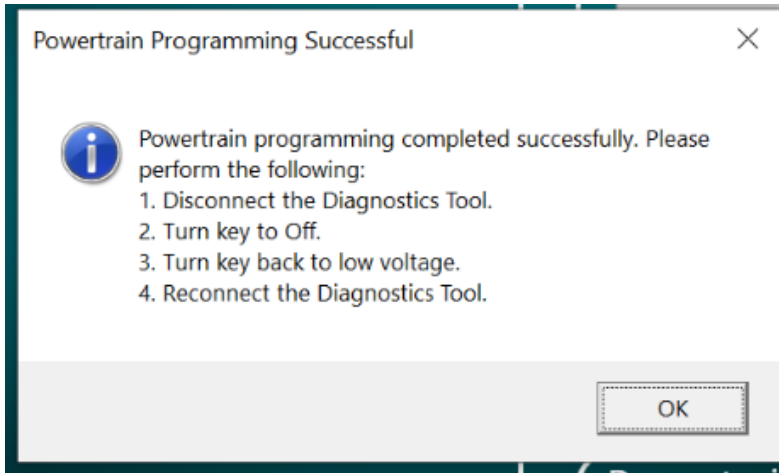
94. The Proterra Diagnostic Tool will attempt to connect to the device.



95. When the software update begins, the following screens will be displayed.



96. The software update may take several minutes to complete. When the update is complete the following will be displayed. Click the “OK” button to complete the update process.



97. Disconnect the diagnostic tool and turn the Master Switch to **OFF**, the Hazard Switch **OFF**, and then turn the Master Switch back to **DAY RUN** and the Hazard Switch back **ON**.

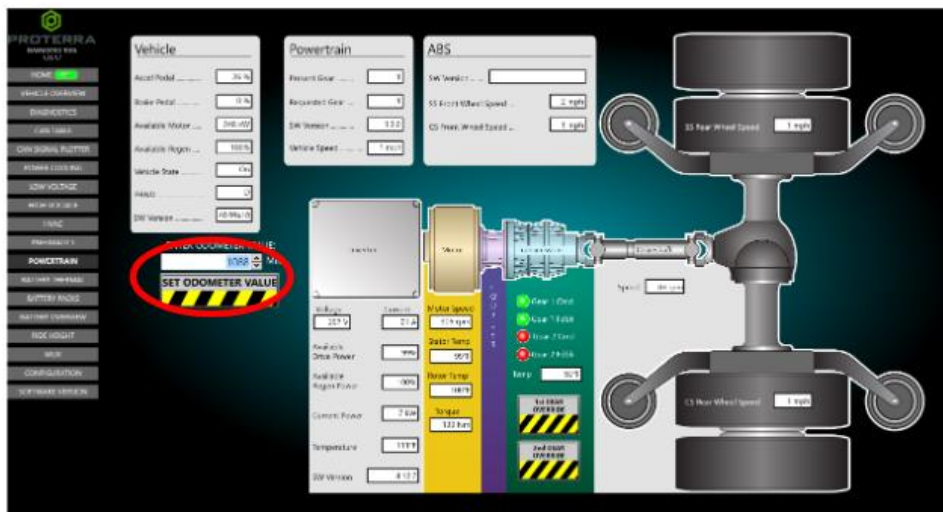


Master Switch Off, Hazards Off

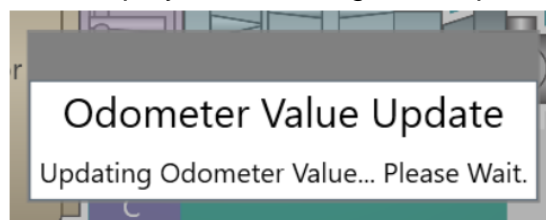


Master Switch Off, Hazards Off

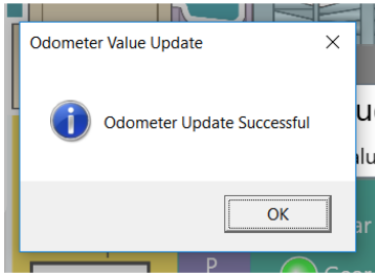
98. Reconnect the Proterra Diagnostic Tool
99. Check the odometer value displayed on the dash, if it doesn't match the recorded value, then proceed to the next step. If it does match the recorded value then proceed to step 103.
100. Navigate to the Powertrain tab and type the recorded odometer value in the Odometer value field, then click "Set odometer value."



101. The Proterra Diagnostic Tool will display the following while updating the odometer value.



102. The Proterra Diagnostic Tool will display the following when the odometer update process completes successfully. If the Proterra Diagnostic Tool displays Failed or Timeout please check for active faults on the Diagnostics tab.



103. Verify that the odometer value displayed on the dash matches the recorded odometer value. Note that it's okay if the new odometer value differs by up to 1 mile. The odometer update process is now complete.

104. Navigate to the "Powertrain Config" tab and click on "Get Values".

105. Verify all the configurations are same as noted in step 91.

NOTE: RNDL configuration = 0 is not a valid configuration. If the configuration on step 109 was 0, then proceed to step 91.

106. If the configurations are same, then the programming process is complete, else go to the next step.

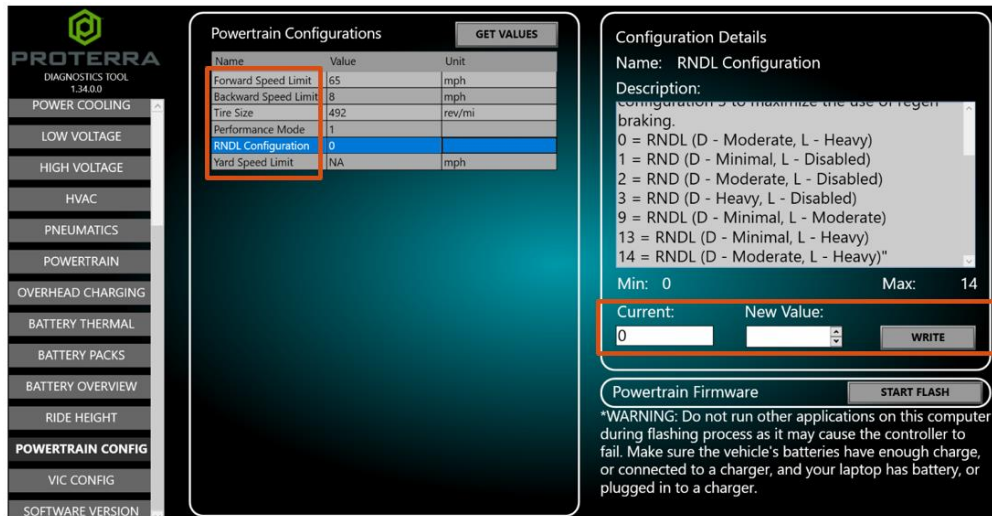
107. Reset the configurations by selecting each configuration parameter individually.

108. Enter the value noted in step 91 in the "New Value" box and click on the "WRITE" button for each parameter.

(NOTE: The RNDL configuration = 0 is not a valid configuration. RNDL configuration 14 has replaced 0. If the configuration on step 91 was 0, replace it with 14, else configure it as previous)

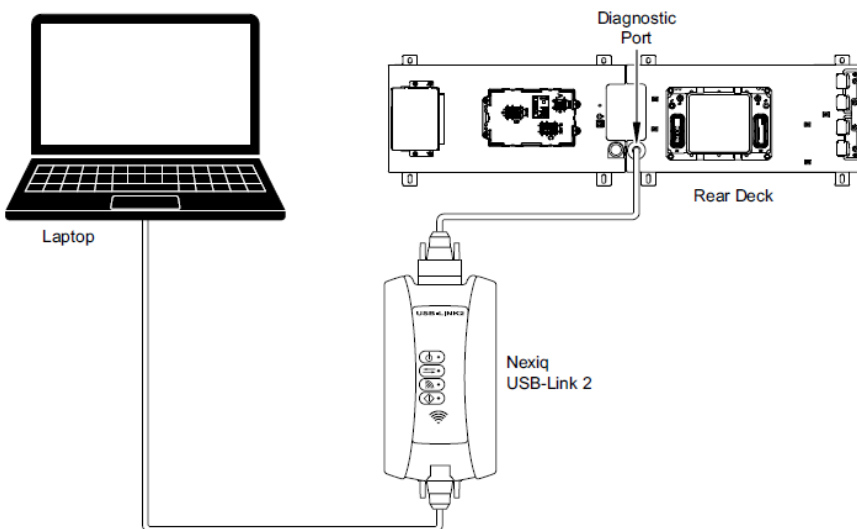
	Powertrain Configurations	
Name	Default Value	CMTA Value
Forward Speed Limit	Step 91 Value or Customer Config	
Backward Speed Limit	Step 91 Value or Customer Config	
Tire Size	Step 91 Value or Customer Config	

Performance Mode	Step 91 Value or Customer Config	
RNDL Config	Step 91 Value or Customer Config	
Yard Speed Limit	65	5
Miami Auto Neutral Feature	0	Default (0)



109. After configuring all the parameters, turn the Master Switch to “OFF” and the Hazard Switch OFF. Then, turn the Master Switch back to “DAY RUN” and the Hazard Switch back to ON.

110. Reconnect the PDT and click on “GET VALUES” inside the “POWERTRAIN CONFIG” tab.



111. Verify the Powertrain Configuration values are the same as in step 54.

112. The flash process is complete.

113. Verify that no DTCs are present and conduct a basic functional check by shifting between RNDL, then performing a short drive.

114. Power off the bus by turning the Master Switch OFF, and turning the Hazard Switch OFF.



115. Power down the bus by opening the main disconnect at the curbside rear of the bus and turning off the Battery Saver switch.

116. Close the PDT.

MVP DASH SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:



IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

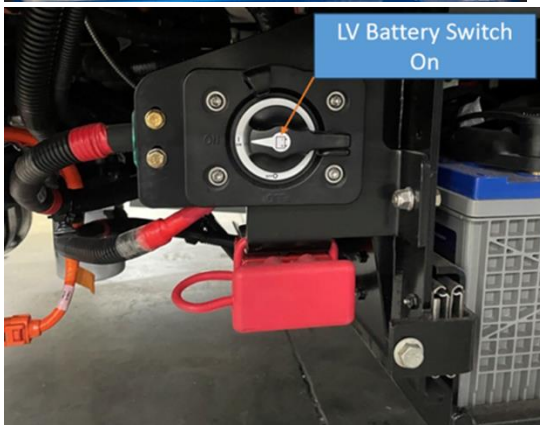
Component	Part Number	Version
MVP DASH	064677	4.0.0

Preparing the Vehicle to be Programmed:

When programming a vehicle, it is critical that the low-voltage batteries remain connected throughout the process. Ensure that the LV batteries are fully charged before starting the

process. If they are low, use the vehicle to recharge them by turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

117. Turn on the 12/24V rear Vehicle Master Disconnect located behind the vehicle curbside rear charge port access panel.

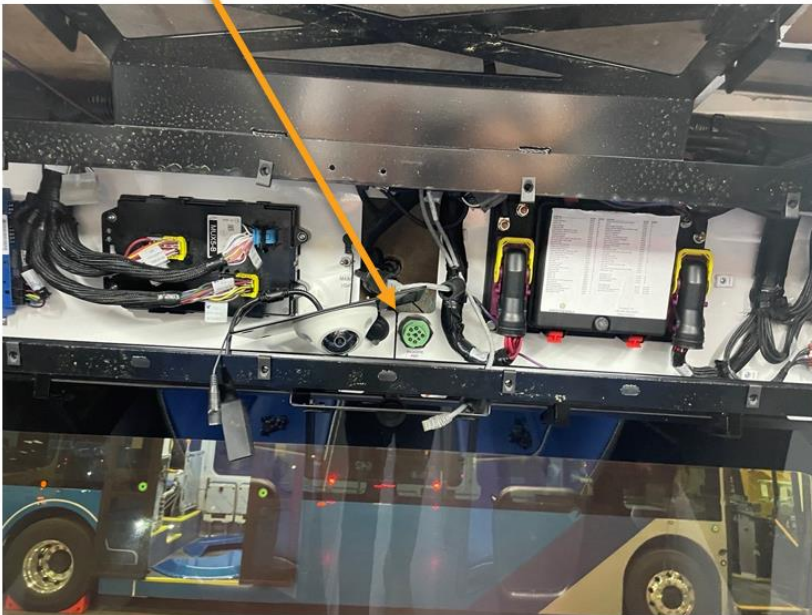


118. Access the dash and record the odometer value to be reinserted to the vehicle.

119. Make sure the Master Switch is OFF and the Hazard Switch is ON.



120. Access the Rear Deck above the rear window and remove the protective cap.



121. Connect to the vehicle using the Nexiq USB Link2 and PDT similarly to the steps above in the Vehicle controller flashing procedure.



122. On the laptop, double-click on the Proterra Diagnostics Tool software icon to start the software.



123. When the program opens, read and click "OK" for the prompt.

124. On the Home tab, select the appropriate device from the drop down and click "Connect".



125. Once the diagnostic tool has connected to the vehicle, a VIN number and connection status will appear on the Home screen, along with selectable tabs to navigate.



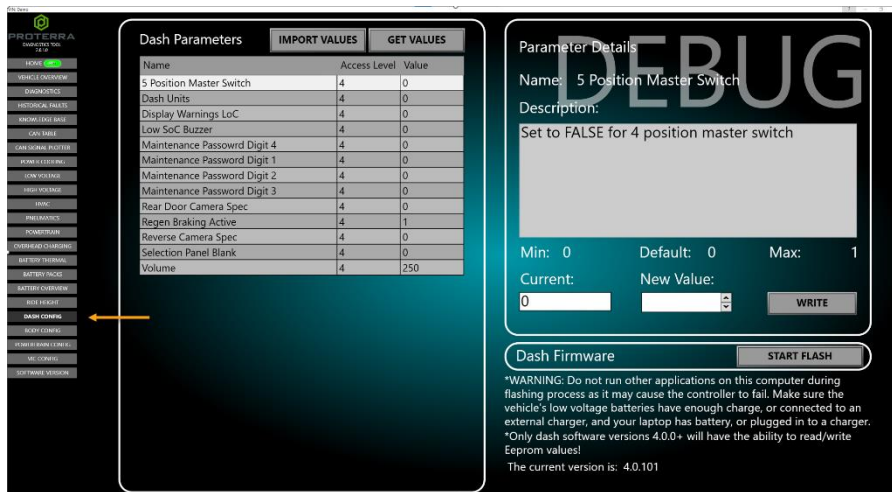
Update MVP Dash Software

This procedure updates the MVP Dash software version and maintains the Dash parameter configuration data across the flash download of new software.

126. Ensure you have the latest software file 064677 MVP12_Flashing_v4.0.0.MVP12_A on the computers hard drive.
127. Make sure the Master Switch is OFF and Hazard Switch is ON, as described in Step 82.

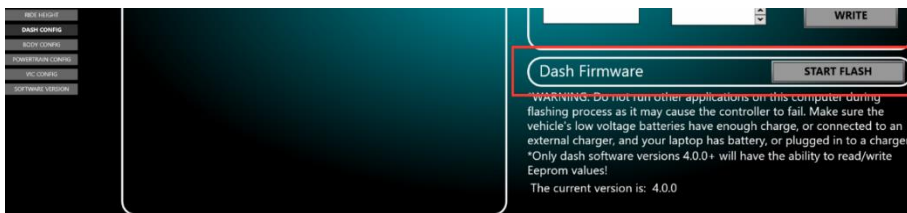


128. After connecting to the vehicle using the Proterra Diagnostic tool at the Diagnostic Port, navigate to the “Dash Config”



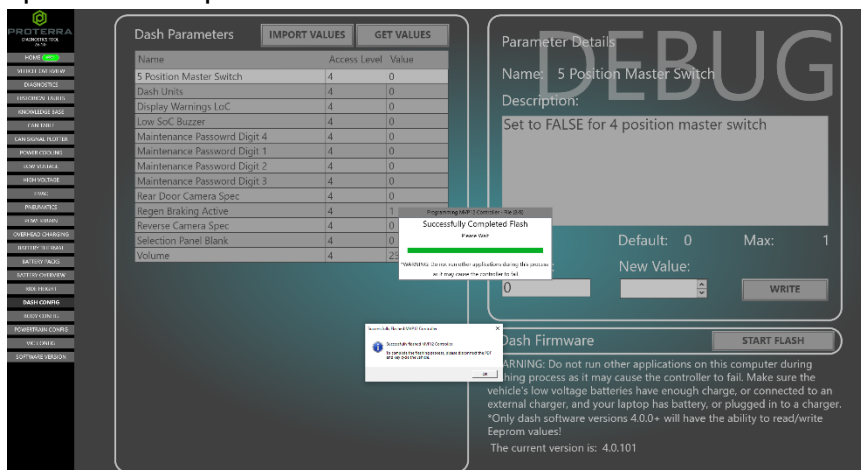
129. Select the Dash Parameter “Get Value” button to save the EEPROMs for later. To access the files later they will save in your C: Drive -> Logs -> UDSConfigs -> MVP12 folder.

130. Select the Dash Firmware “Start Flash” button.



131. When prompted select the file 064677 MVP12_Flashing_v4.0.0.MVP12 from your hard drive.

132. Once you get the pop up below, turn on the working light in the SSWB. Select “OK”. Software update is complete.



133. Power down the bus at the Curbside Rear of the vehicle and at the Battery Saver Switch.

134. Close the PDT.

135. Cycle the vehicle and verify there is no faults on the dash.

BODY CONTROLLER SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:



IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

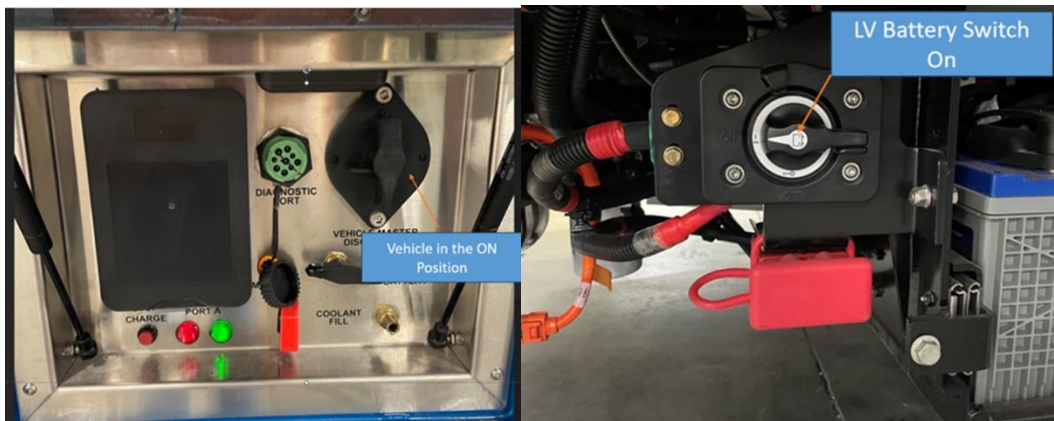
136.

Component	Part Number	Version
Body Controller	064580	2.0.1

Preparing the Vehicle to be Programmed:

When programming a vehicle, it is critical that the low-voltage batteries remain connected throughout the process. Ensure that the LV batteries are fully charged before starting the process. If they are low, use the vehicle to recharge them by turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

137. Turn on the 12/24V rear Vehicle Master Disconnect located behind the vehicle curbside rear charge port access panel.



138. Make sure the Master Switch is OFF and the Hazard Switch is ON.



139. Access the Rear Deck above the rear window and remove the protective cap.



140. Connect to the vehicle using the Nexiq USB Link2 and PDT.



141. On the laptop, double-click on the Proterra Diagnostics Tool software icon to start the software.

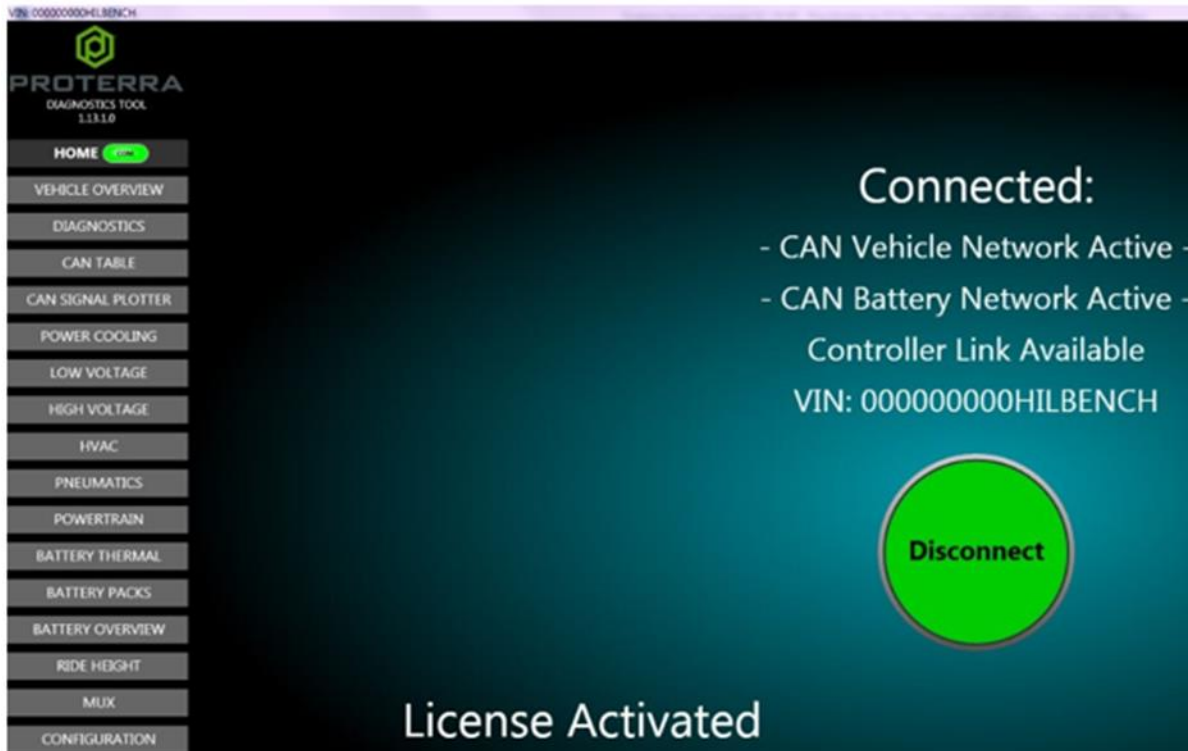


142. When the program opens, read and click "OK" for the prompt.

143. On the Home tab, select the appropriate device from the drop down and click "Connect".



144. Once the diagnostic tool has connected to the vehicle, a VIN number and connection status will appear on the Home screen, along with selectable tabs to navigate.



Update Body Controller Software

This procedure updates the Body Controller software version and maintains the Body Controller parameter configuration data across the flash download of new software.

145. Ensure you have the latest software file Body_2_0_1_064580_PDT.MHX on the computer's hard drive.
146. Make sure the Master Switch is OFF and Hazard Switch is ON, as described in Step 100.



147. After connecting to the vehicle using the Proterra Diagnostic tool at the Diagnostic Port, navigate to the “Body Config” tab.

The screenshot shows the Proterra Diagnostic Tool interface. On the left is a navigation menu with 'BODY CONFIG' selected. The main area is split into two panels. The left panel, titled 'Body Parameters', contains a table with columns 'Name', 'Access Level', and 'Value'. The right panel, titled 'Parameter Details', shows the details for 'NVP_CORE_DaytimeRunning', including a description 'Daytime Running Lights', current value '1', and a 'WRITE' button. A yellow arrow points from the 'BODY CONFIG' menu item to the 'Body Parameters' table.

Name	Access Level	Value
NVP_DOOR_EntranceTimeLimit	4	30
NVP_EXLI_BrakeLightsDuringRegen	4	1
NVP_HVAC_HeatIsoMonitor	4	0
NVP_HVAC_HeatCycleWithCharger	4	0
NVP_DWC_SeatBeltSensor	4	0
NVP_OPTN_BrakeWearLimit_pct	4	10
NVP_CORE_LVIdleTimeLimit_min	4	30
NVP_CORE_HVIdleTimeLimit_min	4	30
NVP_CORE_RearRunHVTimeLimit_min	4	0
NVP_INLK_AntiTheftSecurity_xx	1	0
NVP_INTLI_CleanTime	4	15
NVP_INLK_AntiTheftCANTimeout_min	1	0
NVP_OPTN_TPMSInstalled	4	0
NVP_DOOR_DoorType	4	0
NVP_DOOR_CSFStandStillIRRCrossing	1	0
NVP_INLK_ITSAutoNeutral	1	0
NVP_EXLI_HazardsWhenDoorsOpen	1	0
NVP_DWC_DriverInSeatSensor	4	0
NVP_DWC_FansOffWhenFDoorOpen	1	0
Cornering Lights options	1	0
seconds to leave ADA underseat lights or	1	0
NVP_INTLI_WorkTime	4	30
LVD Time Delay EEPROM	1	5
NVP_EXLI_RampLights	4	2
NVP_EXLI_RHSCLights	4	2
NVP_EBUZ_RampAudible	4	1

148. Select start Flash on the “Body Config” Tab.

This screenshot is similar to the previous one, but the 'BODY CONFIG' menu item is highlighted in the navigation menu. In the 'Parameter Details' panel, the 'START FLASH' button is highlighted with a yellow arrow. The 'Body Parameters' table now lists parameters for 'NVP_CORE_DaytimeRunning'.

Name	Access Level	Value
NVP_CORE_DaytimeRunning	4	1
NVP_INTLI_CSFWalkwayLights	4	3
NVP_EBUZ_AlertDuringKneel	4	1
NVP_EBUZ_AudibleTurnSignal	4	0
NVP_HVAC_FixedCabinSetpoint	4	20
NVP_HVAC_AuxHeaterInstalled	4	0
NVP_HVAC_MinOnlyDieselTime_min	4	60
NVP_HVAC_MinOnlyElectricTime_min	4	10
NVP_HVAC_NoAuxWithCharger	4	0
NVP_HVAC_MaxAuxHeatMainTemp	4	10
NVP_INLK_InterlockOverrideAlarm	4	1
NVP_DOOR_CSFDoorInterlockSetting	4	0
NVP_INTLI_CSRWalkwayLights	4	3
NVP_DOOR_CSRDoorInterlockSetting	4	1
NVP_RHSC_InterlockDuringKneel	4	1
NVP_INLK_SeparateNLKOverrides	4	0
NVP_DOOR_CSFStandStillSpeed_mph	4	3
NVP_DOOR_CSFStandStillOverride	1	0
NVP_RHSC_DrivingHeightEnabled	4	1
NVP_RHSC_ParkBrakeForKneel	4	0
NVP_RHSC_KneelSetting	4	2
NVP_RHSC_FDoorOpenRqrdForKneel	4	0
NVP_RHSC_DisableAutoAdjustwDoors	4	0
NVP_INTLI_SSFWalkwayLights	4	3
NVP_RHSC_DoorsClosedForKneel	4	0
NVP_RAMP_ParkBrakeforRamp	4	0
NVP_RAMP_KneelWhileRampDeploy	4	1

149. As directed above, recognize that you must be plugged into the rear deck port. Then select “OK”.

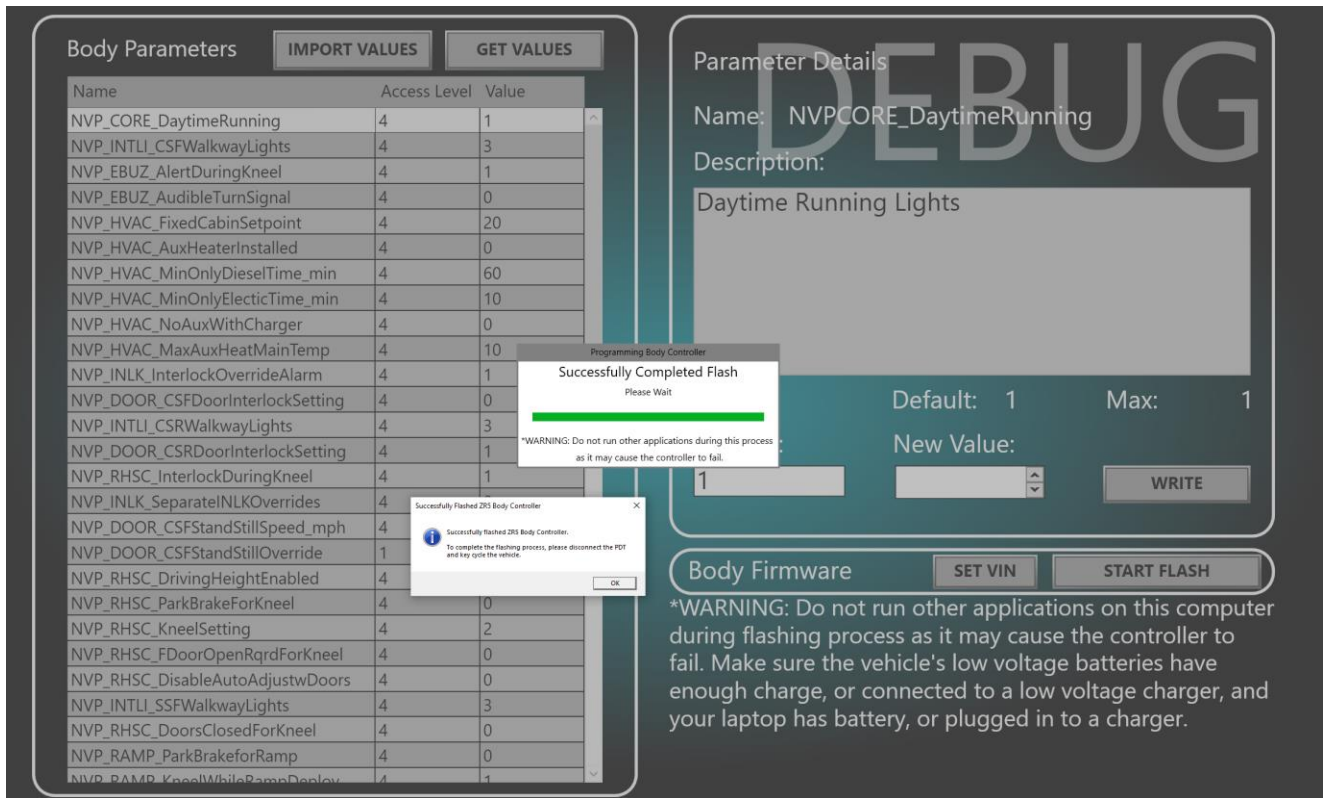
The screenshot shows the PROTERRA software interface. On the left is a sidebar with various system overview options. The main window is divided into two panes. The left pane, titled 'Body Parameters', contains a table with columns for Name, Access Level, and Value. The right pane, titled 'Parameter Details', shows the selected parameter 'NVP_CORE_DaytimeRunning' with a description 'Daytime Running Lights'. Below the description are input fields for 'Min: 0', 'Default: 1', and 'Max: 1', and a 'WRITE' button. A 'Post Connection Warning' dialog box is also visible, indicating that the user must be plugged into the rear deck port.

Name	Access Level	Value
NVP_CORE_DaytimeRunning	4	1
NVP_INTLI_CSFWalkwayLights	4	3
NVP_EBUZ_AlertDuringKneel	4	1
NVP_EBUZ_AudibleTurnSignal	4	0
NVP_HVAC_FixedCabinSetpoint	4	20
NVP_HVAC_AuxHeaterInstalled	4	0
NVP_HVAC_MinOnlyDieselTime_min	4	60
NVP_HVAC_MinOnlyElectricTime_min	4	10
NVP_HVAC_NoAuxWithCharger	4	0
NVP_HVAC_MaxAuxHeatMainTemp	4	10
NVP_INLK_InterlockOverrideAlarm	4	
NVP_DOOR_CSFDoorInterlockSetting	4	
NVP_INTLI_CSRWalkwayLights	4	
NVP_DOOR_CSRDoorInterlockSetting	4	
NVP_RHSC_InterlockDuringKneel	4	1
NVP_INLK_SeparateINLKOverrides	4	0
NVP_DOOR_CSFStandStillSpeed_mph	4	3
NVP_DOOR_CSFStandStillOverride	1	0
NVP_RHSC_DrivingHeightEnabled	4	1
NVP_RHSC_ParkBrakeForKneel	4	0
NVP_RHSC_KneelSetting	4	2
NVP_RHSC_FDoorOpenRqrdForKneel	4	0
NVP_RHSC_DisableAutoAdjustwDoors	4	0
NVP_INTLI_SSFWalkwayLights	4	3
NVP_RHSC_DoorsClosedForKneel	4	0
NVP_RAMP_ParkBrakeforRamp	4	0
NVP_RAMP_KneelMobileRampDeploy	4	1

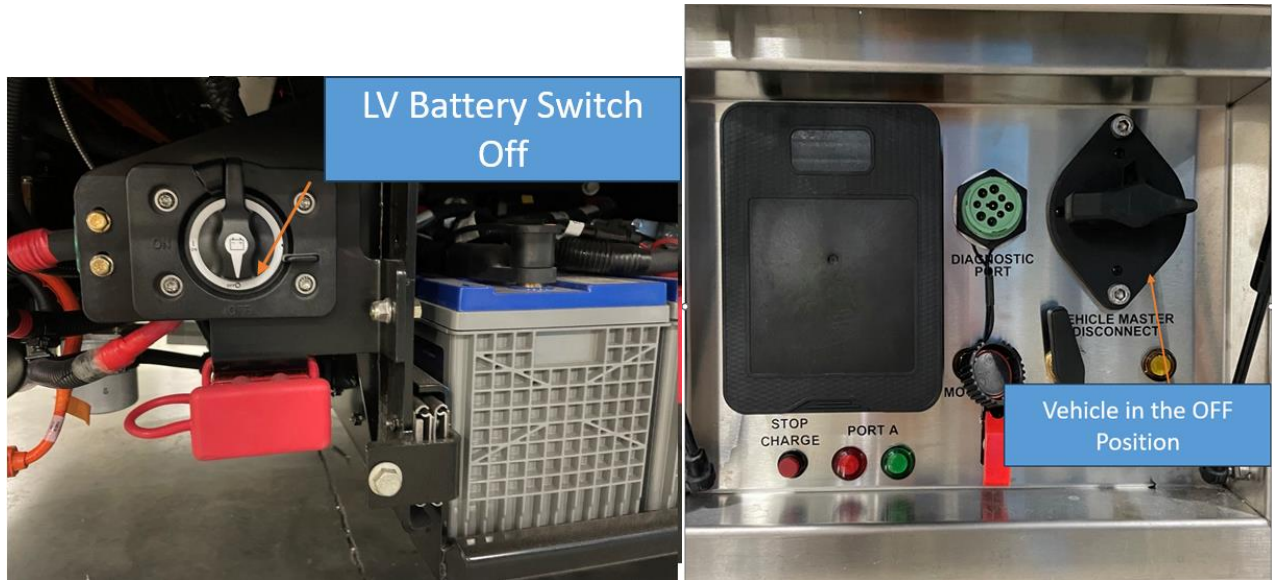
150. Select the Body SW Body_2_0_1_064580_PDT.mhx. The extension type must be .MHX.

This screenshot shows a file explorer window with the file 'Body_2_0_1_064580_PDT.mhx' selected. Below the file explorer, the same 'Parameter Details' window from the previous screenshot is visible, showing the 'NVP_CORE_DaytimeRunning' parameter. The 'WRITE' button is highlighted, indicating the next step in the process.

151. Once the SW is flashed the following screen will pop up. Select “OK”. Then close the PDT and remove connection to the bus.



152. Power down the bus at the Curbside Rear, turn both the Vehicle Master Disconnect and LV Battery Switch to OFF.



153. Wait 2 minutes from powering down the bus, then cycle the vehicle on and verify there is no faults.