ISSUE DATE:	11/17/2023
SERVICE BULLETIN SUBJECT:	ZX5.A02 PCM V5.1.0 Limited Release
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-23-154
LABOR OPERATION CODE:	PE49Z

NOTICE! It is expected that this process may require up to .5 hour per bus. Please schedule appropriately to minimize vehicle downtime.

ZX5.A02 PCM V5.1.0 Limited Release

Description:

The procedure describes the process of updating the PCM to latest Software.

Notice: Service Bulletin SC-23-109 - ZX5.A02 PHX Spring Software Release and Shutdown Override Momentary Must be Performed before installing Software or past.

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Tools/Parts Required:

Tools and Supplies Required:

Proterra Diagnostic Tool	
USB Nesiq	
T30 Bit	

Kit Parts Required:

Kit PN		Kit Name	
	065772	SOFTWARE, POWERTRAIN, 800V, PHOENIX, REMINGTON, V5.1.0	

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PRODRIVE 2.0 POWERTRAIN SOFTWARE UPDATE PROCEDURE

Software Files Required / Preparation:

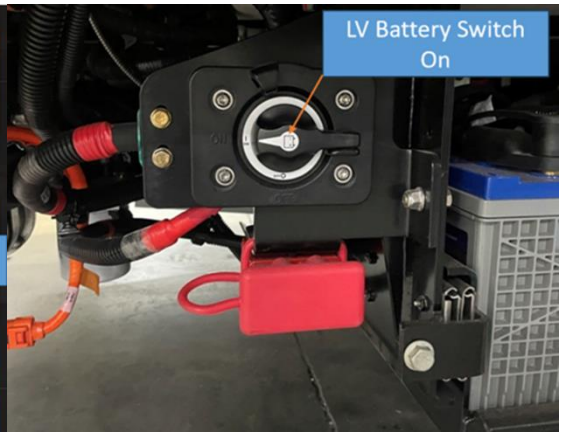
IMPORTANT! NEVER access the software from the USB memory device, ALWAYS copy the software files to your computer hard drive and access the software from this location. Secure the bus with the Vehicle Master Disconnect in the rear ON.

Component	Part Number	Version
PCM PD	065772	5.1.0

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.

1. 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.



2. 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**.**

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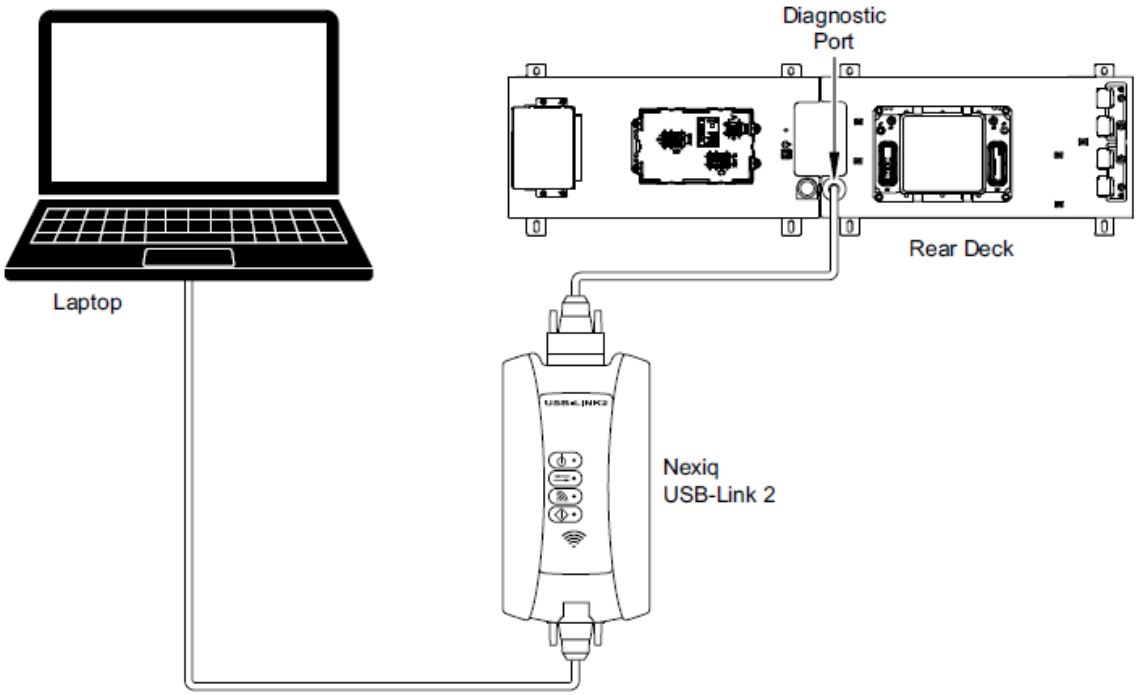
3. Access the Rear Deck above the rear window and remove the protective cap.



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

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

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6. When the program opens, read and click “OK” for the prompt.

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

8. 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.

9. Ensure you have the latest software file 065772.hex on the computer's hard drive.

10. Click on the “Powertrain Config” tab on the left-hand side of the screen.

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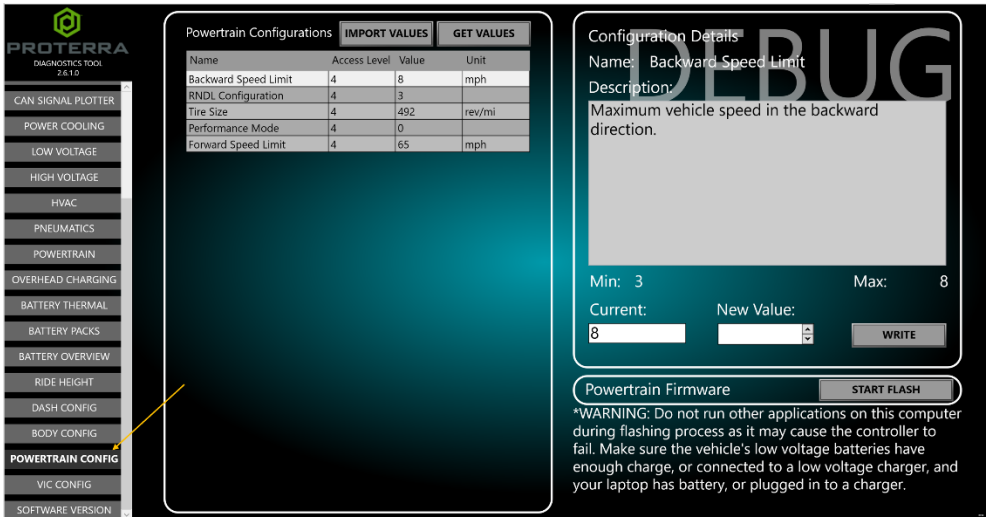
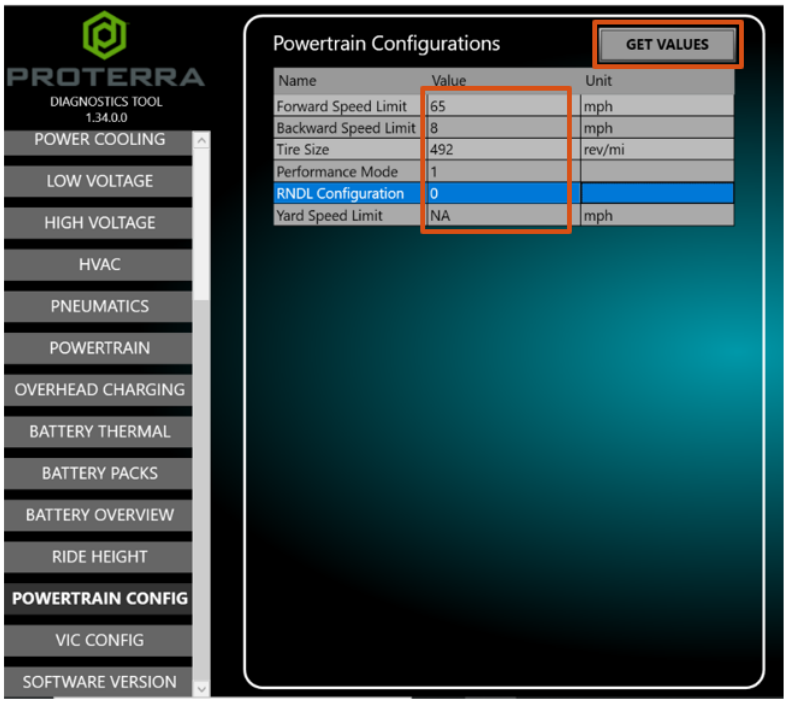


11. On the Powertrain Configurations tab, Click on “Get Values”

12. 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.



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

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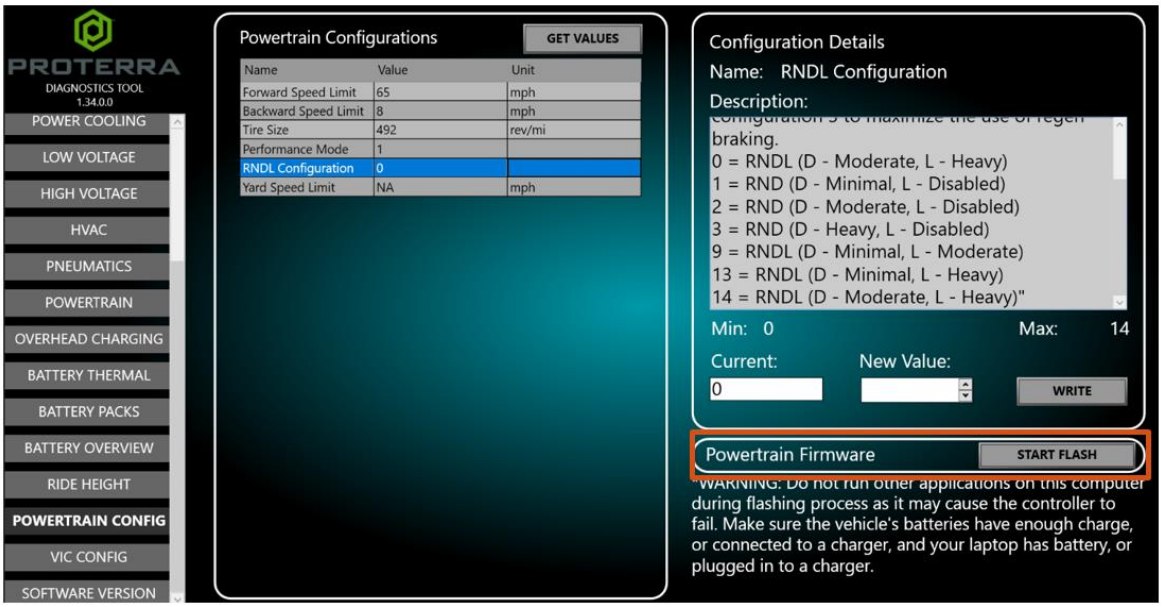
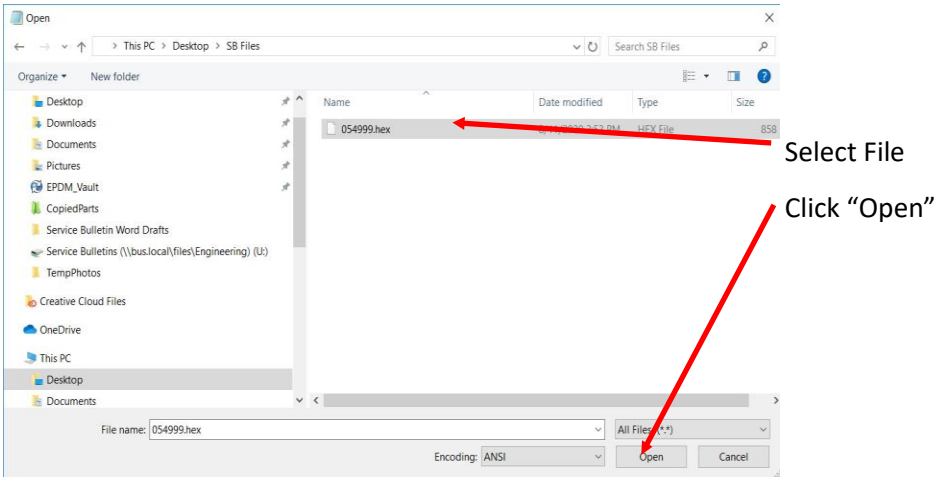


14. The following screen will be displayed. Navigate to the location where you stored the configuration file earlier. Select the software file downloaded previously and click “Open” to load the file

NOTE: The file name displayed should be 065772.hex



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

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

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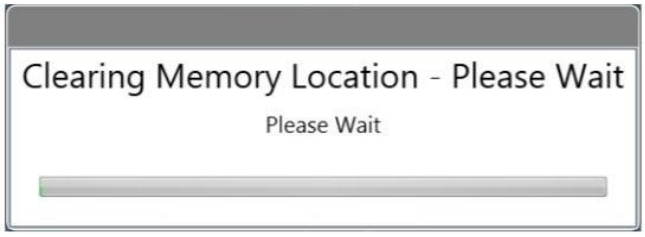
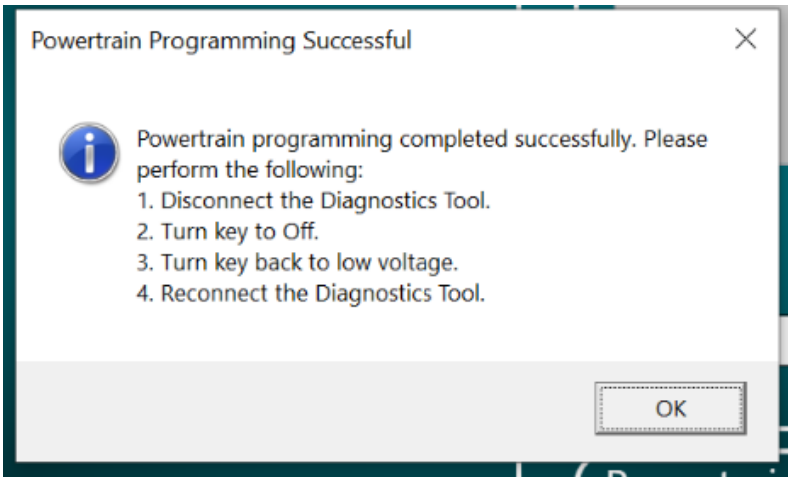


17. The software update may take several minutes to complete. When the update is complete the following will be displayed. Click the “OK” button to complete the update process.



18. 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**

19. Reconnect the Proterra Diagnostic Tool.

20. 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 12.

21. Navigate to the Powertrain tab and type the recorded odometer value in the Odometer value field, then click “Set odometer value.”

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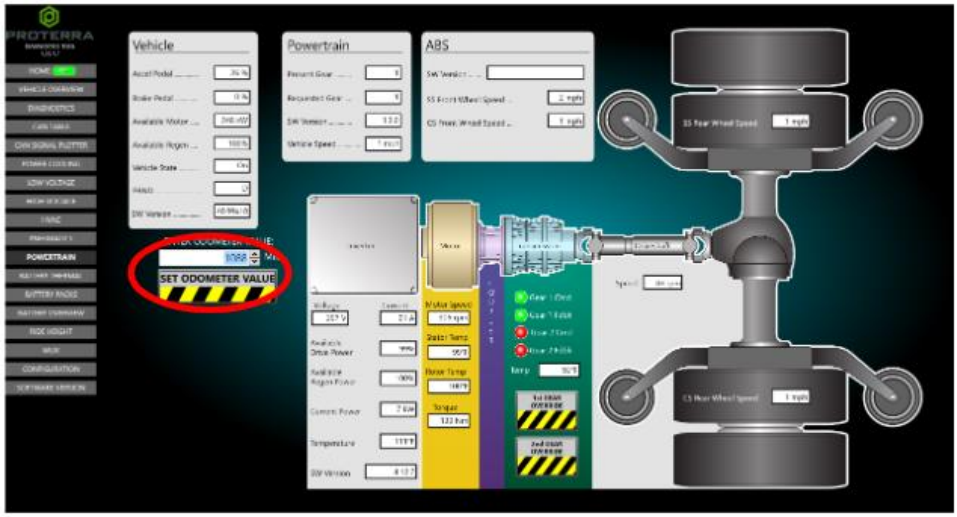
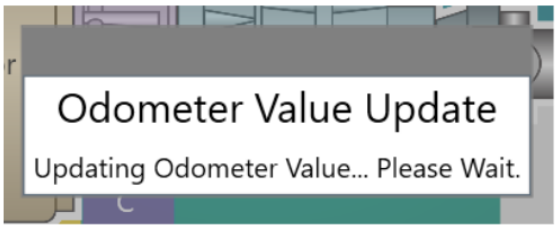
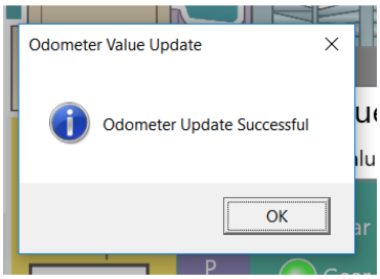


22. The Proterra Diagnostic Tool will display the following while updating the odometer value.



23. 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.



24. 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.

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

    Verify all the configurations are same as noted in step 12. If configurations do not match update each configuration one at a time.

    (**NOTE**: The RNDL configuration = 0 is not a valid configuration. RNDL configuration 14 has replaced 0 else configure it as previously seen on step 12.

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26. 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**.

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

28. Verify the Powertrain Configuration values are the same as in step 12.

29. The flash process is complete.

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

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

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

33. Close the PDT.

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