



PROTERRA



TECHNICAL SERVICE BULLETIN

ISSUE DATE:	10-6-2022
SERVICE BULLETIN SUBJECT:	Duopower Powertrain Software Update
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-22-120
LABOR OPERATION CODE:	N/A

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

DUOPOWER POWERTRAIN SOFTWARE UPDATE

Description

This procedure updates the Duopower Powertrain software to the latest version for improved powertrain performance.

Summary of Software Changes

Improvements

- Increase RNDL configuration options. Details in SPC-ENG-0127.

Bugs

- Correct SPN for loss of communication with inverter (SPN 2162 & SPN 2161, FMI 9). Relaxed the tolerance of the accelerator pedal sensor rationality diagnostic to align with hardware specifications.
- Updated accel and brake pedal sensor FMI 3 and FMI 4 calibrations for improved fault detection.

Tools/Parts Required

- Customer Service Laptop with Proterra Diagnostic Tool
- Nexiq USB Link2 Device

Parts Required:

- 062845 SOFTWARE, POWERTRAIN, 800V, DuoPower, v2.1.0 1 EA

Connect to the Vehicle to Start the Proterra Diagnostics Tool

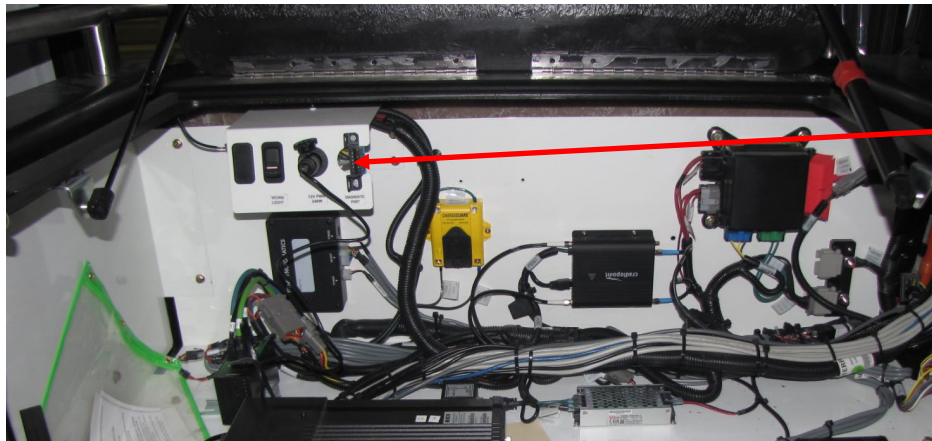
This process will guide the user to connect to the vehicle with the Proterra Diagnostics Tool.

1. Turn on the 12/24V rear Vehicle Master Disconnect located behind the vehicle curbside rear charge port access panel.
2. Turn on the bus “Master Switch” at the Driver's Workplace and ensure the Dash screen is on to display “KEY ACC”.



Master Switch
“ACC”

3. Open the streetside wheel well box to access to the OBDII Port.



OBDII Port

4. Power up (boot) the Proterra-supplied laptop containing the Proterra Diagnostic Tool.
5. Connect the Nexiq USB Link2 device to the laptop and to the appropriate OBDII Diagnostic Port.



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

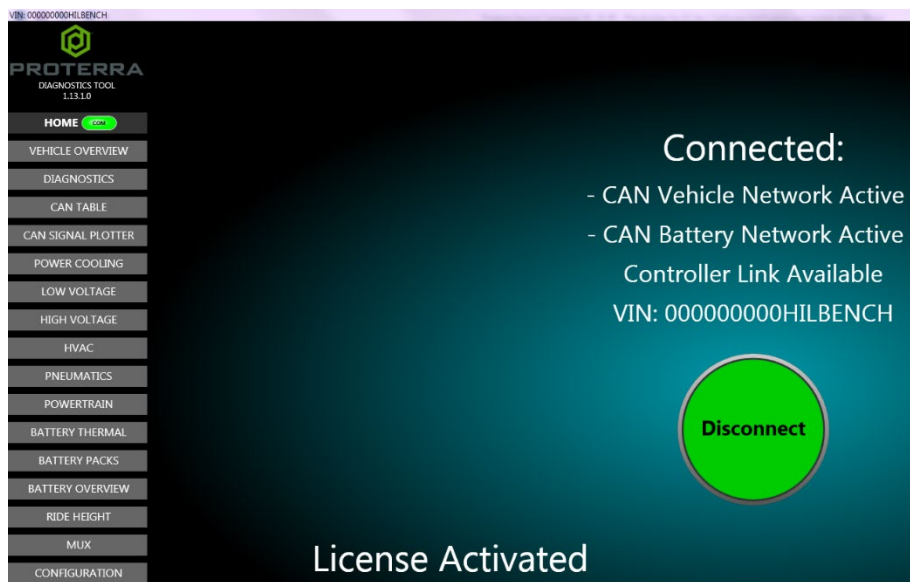


7. When the program opens, read and click “OK” for the prompt.

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



9. 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.

1. Ensure you have the latest software file **062845.hex** in a known location on the service technician's computer (Folder or Desktop).
IMPORTANT! NEVER access the software from a remote server or from a USB memory device. **ALWAYS** copy the software files to your computer hard drive and access the software from this location. It is recommended that you copy the entire "service bulletin files" folder to your local machine in order to more effectively keep track of the software versions you are deploying:
<\\bus.local\files\Engineering\Service Bulletins\Service Bulletin Files for SC-22-120>
2. Turn on the 12/24V rear Vehicle Master Disconnect located behind the vehicle curbside rear upper access panel.
3. Turn on the bus Master Switch at the Driver's Workplace and ensure the dash screen is ACC.

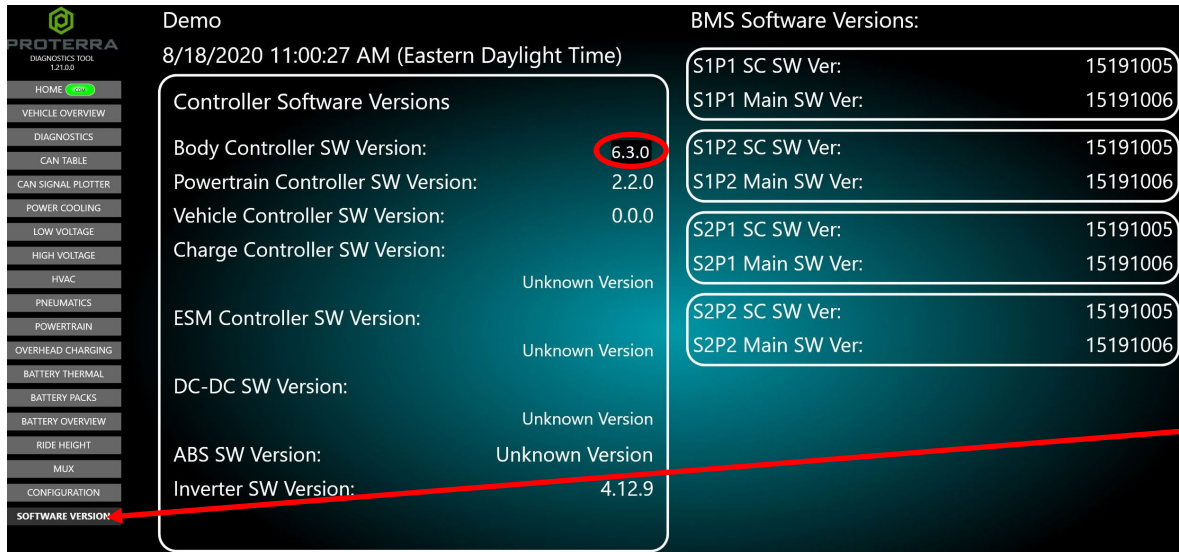


Master Switch "ACC"

4. After connecting to the vehicle using the Proterra Diagnostic tool at the **front OBDII Port (SSWW Box)**, navigate to the "Configuration Tab".
5. Wait at least 10 seconds after starting the tool, then click the "Get Parameters" button at the top of the page.
 - a. **NOTE: This ensures that a backup copy of the original configuration parameters stored in a "zip" file, contained in the C:/Logs folder on your computer in case we need to refer to it later.**

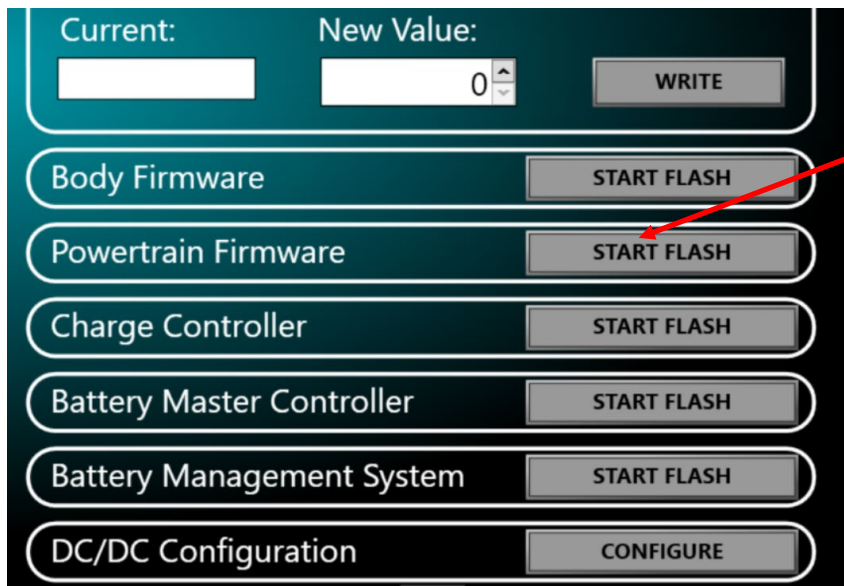
Body Parameters			IMPORT PARAMS	GET PARAMETERS
Name	Access Level	Value		
High Voltage Connection S	1	3		
Daylight Savings Time Acti	1	1		
Fire Detection System Lock	1	0		
Pnumatic Leakage Rate Au	4	0		
Main Electronics Pump Run	4	127		
Lower Battery Pump Run Ti	4	0		
Air Compressor Run Timer	4	0		
Pnumatic Leakage Rate Pri	4	0		
D CDC Enable Swap	1	1		
Electric Doors Detected	1	0		
Collision Alert System Data	1	1		

6. Click on the “SOFTWARE VERSION” button at the bottom left of the screen. Verify that the Body Controller Software is version 6.3.0. or later.



Click Software Version

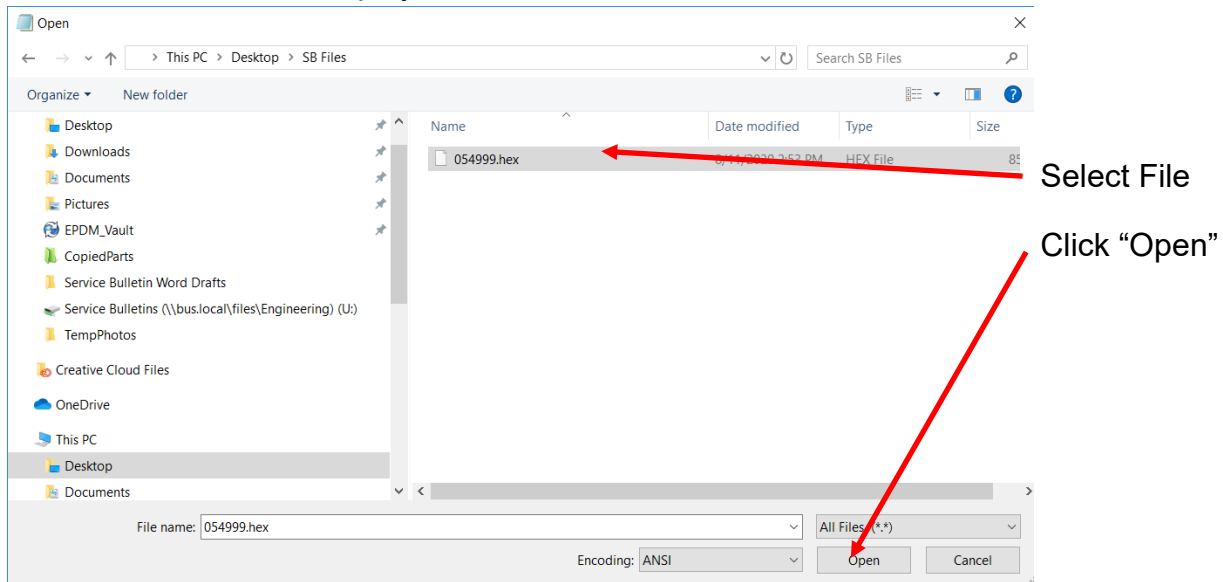
7. Next, click the Powertrain Firmware “Start Flash” button.



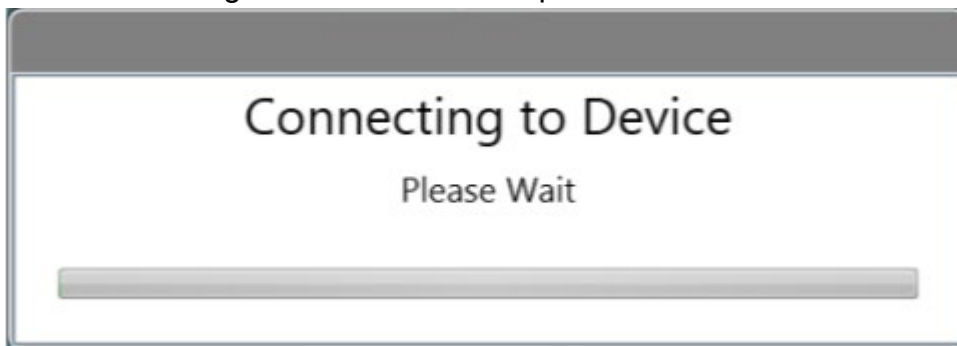
Click Powertrain Start Flash

8. 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.

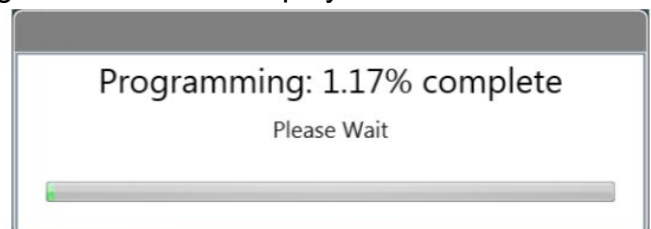
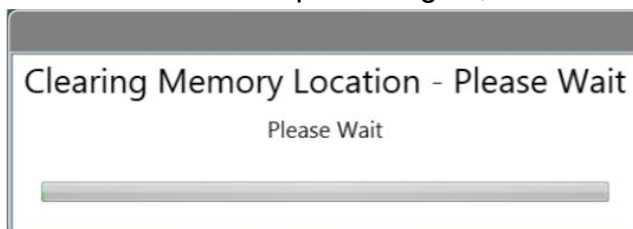
NOTE: The file name displayed should be 062845.hex.



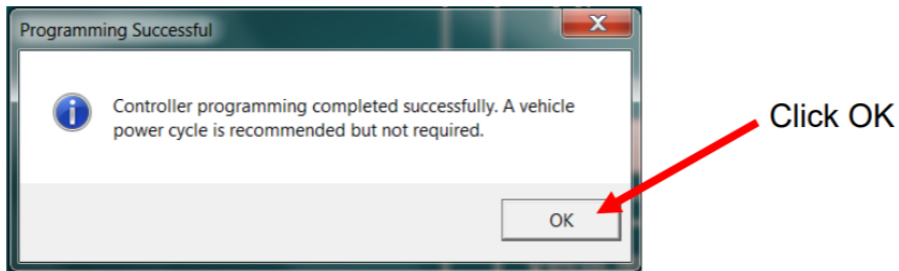
9. The Proterra Diagnostic Tool will attempt to connect to the device.



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



11. 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.



12. Power off the bus by selecting off on the Master Switch.



13. The software update is now complete.

14. Disconnect the cable from the OBD-II port.

15. Close the streetside wheel well box

16. Power down the bus by opening the main disconnect at the Curbside rear of the bus.

17. Turn the main disconnect back on before returning the bus to service.