ISSUE DATE:	2/1/2023
SERVICE BULLETIN SUBJECT:	ZX5AO1 Body Controller Software Update
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SB-23-13
Labor Operation Code:	EN60Z

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

ZX5A01 BODY CONTROLLER SOFTWARE UPPDATE

Description:

This procedure describes the process for updating the Body Controller software to the latest version.

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Summary of Software Changes:

Vehicle Controller:

- Added Pedestrian Turn Warning Disable Switch Software Config.
- Software uses global variables for real vehicle speed (kph and mph).
- AuxHeatInstalled is now mapped to a CAN signal.
- Right cornering light is not dependent on speed.
- Aux Heat Discrete Fuel Levels are now displayed on the dash

  .

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Tools/Programs Required:

Tools Required:

- Laptop Computer
- Nexiq USB-Link 2

Programs Required:

- Proterra Diagnostics Tool

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
Body Controller	063751	1.5.0

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-23-13

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VEHICLE SOFTWARE UPDATE PROCEDURE

Description:

This document contains the necessary information to update the Proterra Vehicle Integration Controller. This controller provides the electrical integration of ancillary systems on 800V models. It owns the vehicle operational state control, startup and shutdown, steering, pneumatics, thermal management, and brake interlock controls.

Tools/Programs Required:

Tools Required:

- Laptop Computer with cvFlash software installed
- VN1610 CAN Interface
- CAN Breakout Harness
- cvFLASH License Key Dongle

Programs Required:

- cvFLASH Software

Software Files Required / Preparation:

It is recommended that you download any files local to your machine. To program the vehicle controller, you will need a *.cvfpack data file. This file will contain memory address and data information that will be written to the controller in order to update the user code space. This will not update the boot loader or other firmware files.

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.

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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 buy turning on high-voltage or place the bus on a low-voltage charger for the duration of the process.

Connecting to the Vehicle:

1. Ensure that the vehicle is powered off in the Driver's Workplace.

2. Connect the CAN Breakout harness to the diagnostic port in the Driver's Workplace.

3. Connect the Vector VN1610 CAN interface to the PCAN DB9 connector on the CAN Breakout Harness.

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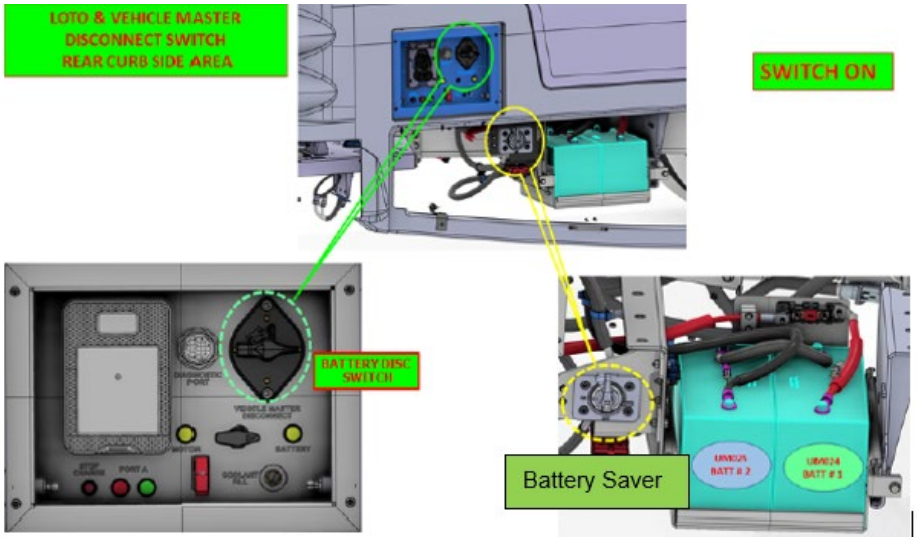
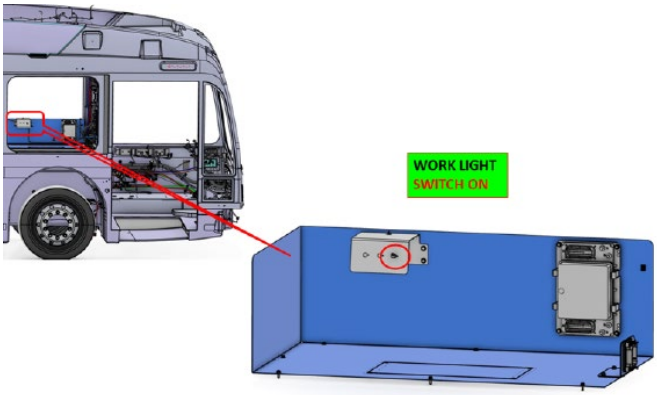
4. Insert the cvFLASH License Key dongle into an open USB port on the laptop computer.

5. Working at the curbside rear of the bus, power on the “Master Disconnect” Switch and the “Battery Saver” Switch shown in the following illustration.



6. Working inside the bus at the streetside wheel well box, turn on the “Work Light” Switch.



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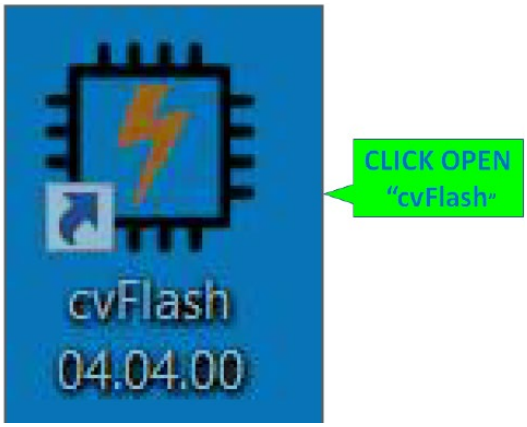
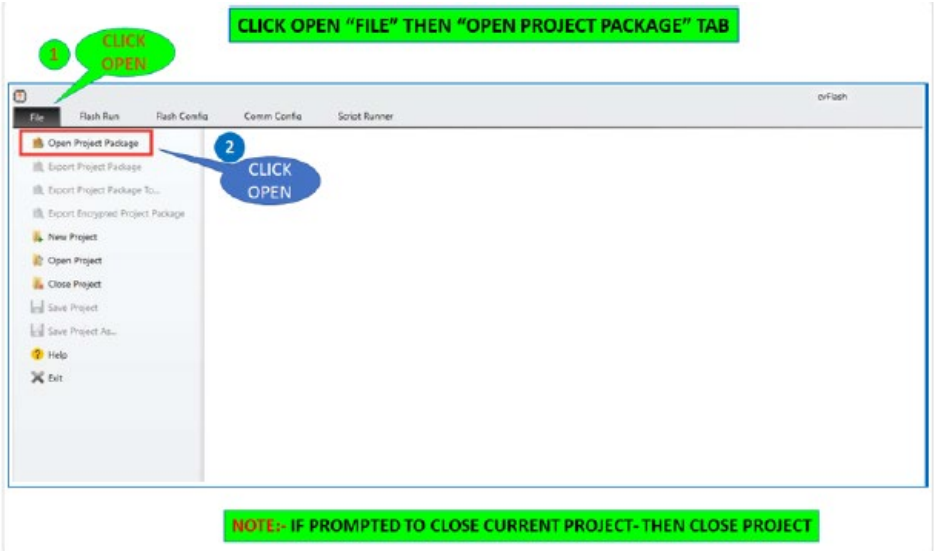
7. Start the cvFLASH software on the laptop.

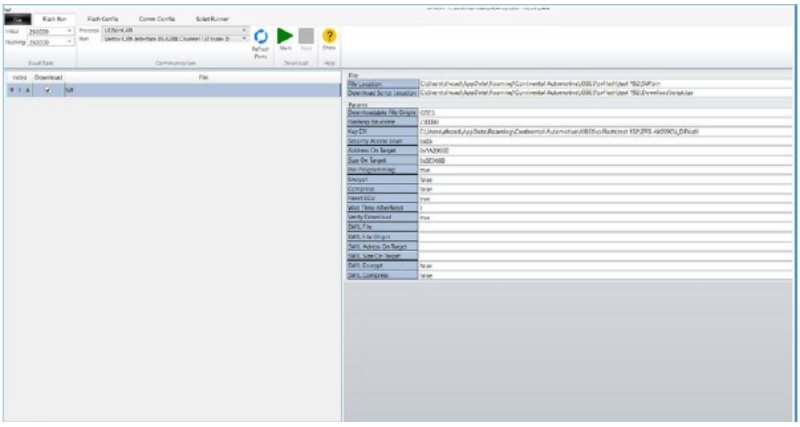


8. Click “File” then click “Open Project Package” as shown in the following illustration.



9. Navigate to the location where the files were downloaded to the laptop. Select the file named “Body_1_5_0_063751.cvfpack” to load.

10. The following screen appears.



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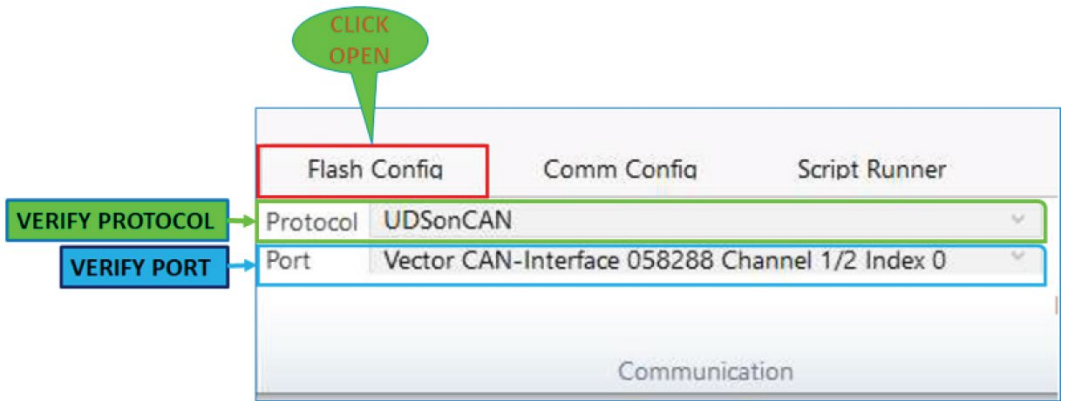
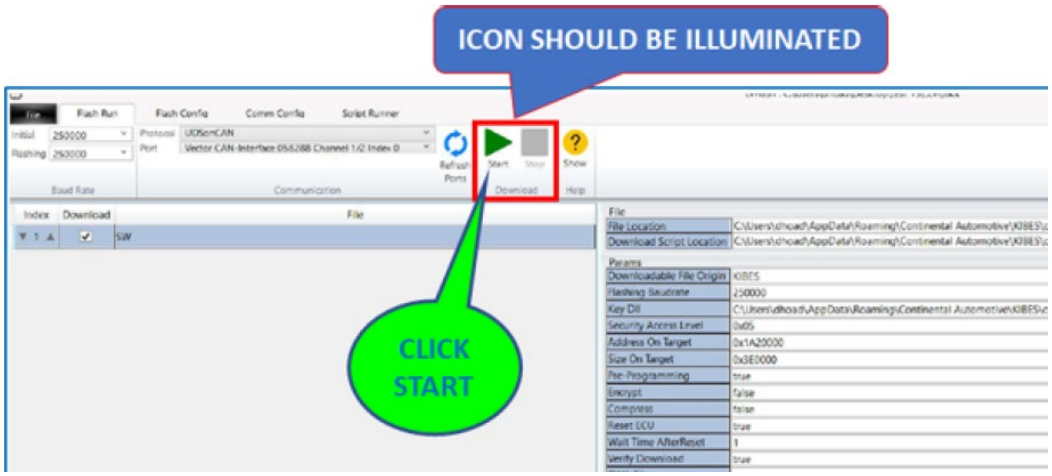
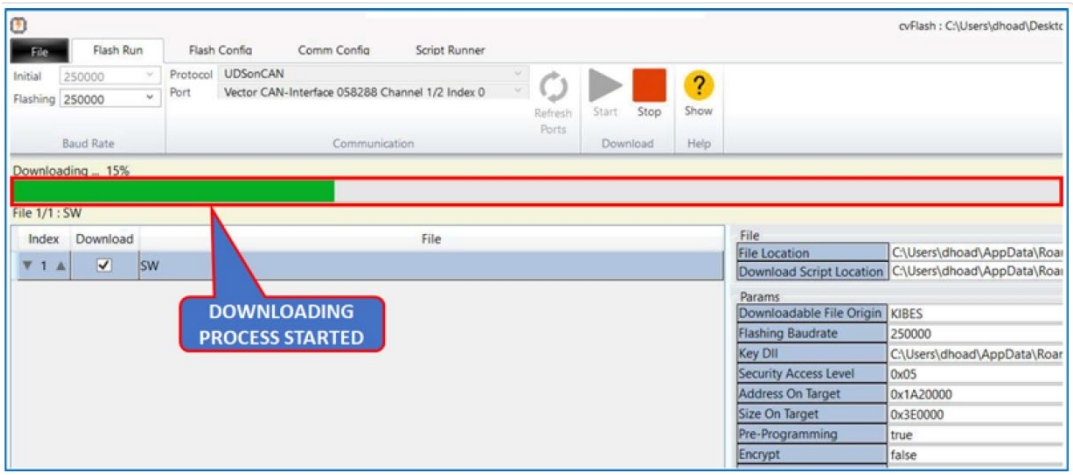
11. Verify that the software is configured as shown in the following illustration.



12. The “Start” button will be illuminated as shown in the following illustration.



13. Click on the “Start” button. The following screen will appear showing the download progress.



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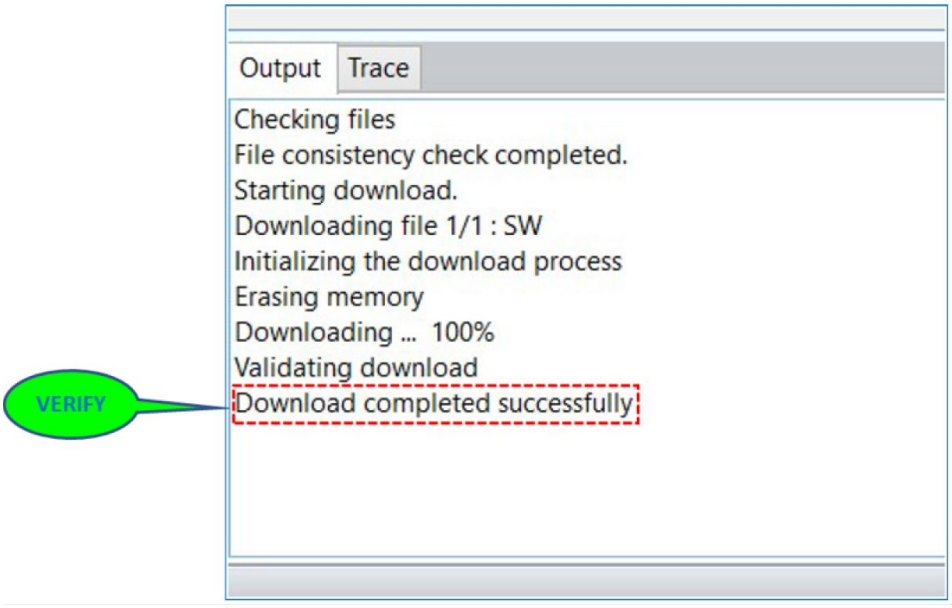
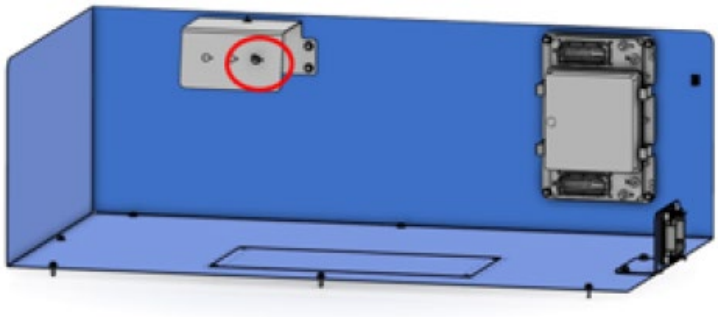
14. When the process is complete, the following screen will appear.



15. Working in the street side wheel well box, power off the “Work Light” switch.



16. Using the “Master Disconnect” and “Battery Saver” Switch, power cycle the bus twice.

17. Using the “Master Disconnect” and “Battery Saver” Switch, power the bus on.

18. Disconnect the Laptop Computer and close the streetside wheel well box.

19. Return the bus to service.

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