

XOS Technical Service Bulletin

Bulletin No.: TSB- 002-24

Date: 1/10/24

Subject: Updating Vehicle VCU Software

Applicability: All 2021-2022 Xos SV05 Trucks

Service Category: Software and Controls

Section: Vehicle VCU Software

Market: USA and Canada

SOFTWARE VERSION	RELEASE DATE	TSB DOCUMENT REVISION
8.8.0	01/03/2024	
SOFTWARE UPGRADE DESCRIPTION - Improved notifications on cluster for disengaged manual park brake - Improved regeneration strategy for wheel-lock instances - Disabled the current gear on PRND display, and P will be displayed on cluster only after EPB is fully engaged - Display remaining time for charging in hours and minutes, and prevent vehicle charging if manual park brake is disengaged		

Introduction:

To perform a software update on 2021-2022 Xos Step Vans, please refer to the following service instructions.

Vehicle Applicability:

Model Year	Model	Body Application
2021 - 2022	All Step Van Models	Step Van & Armored Truck

INSTRUCTIONS:

Software is included in a zipped package. The software package includes the Service Tool and the relevant software that will be flashed.

Name	Date modified	Type	Size
R8.8.0_RC_TSB	1/3/2024 10:50 AM	Compressed (zipp...	130,243 KB

The package will have to be extracted next. Right click on the compressed folder and click on 'Extract All...'. Select the appropriate destination folder and extract the files in the respective folder.

Name	Date modified	Type	Size
R8.8.0_RC_TSB	1/3/2024 10:50 AM	Compressed (zipp...	130,243 KB

Open

Open in new window

Share with Skype

Extract All...

Pin to Start

Edit with Notepad++

Scan with Microsoft Defender...

Share

Open with...

Give access to

Restore previous versions

Send to

Cut

Copy

Create shortcut

Delete

Rename

Properties

The contents in the folder will appear as follows:

Name	Date modified	Type	Size
Cluster	1/4/2024 4:15 PM	File folder	
Service Tool Installer (0.3.12)	1/4/2024 4:15 PM	File folder	
VCU	1/4/2024 4:15 PM	File folder	

The Service Tool Installer will install the Service Tool which is capable of flashing the software for the Instrument Cluster and the Vehicle Control Unit (VCU).

Double-click on the Service Tool Installer (0.3.12) folder and install the Service Tool by double clicking on the 'setup' icon as shown below.

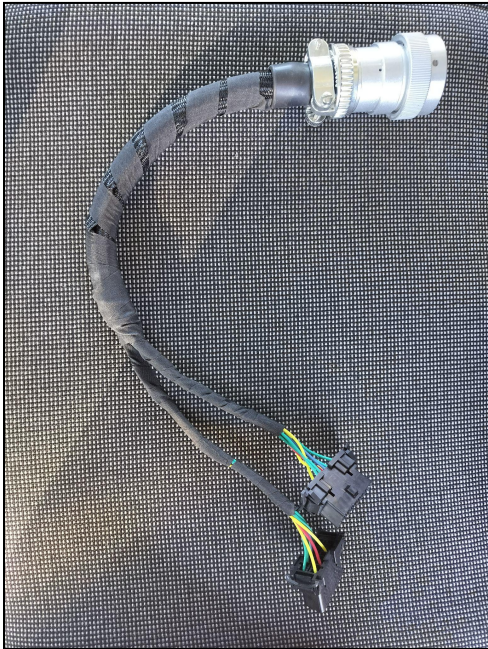
Name	Date modified	Type	Size
ServiceToolInstaller	12/11/2023 2:34 PM	Windows Installer ...	124,579 KB
setup	12/11/2023 2:34 PM	Application	552 KB

The installer will guide you through the installation of the application on your computer. Once installation is completed, you should see the following icon on your desktop.



Double click on this icon to start the Service Tool.

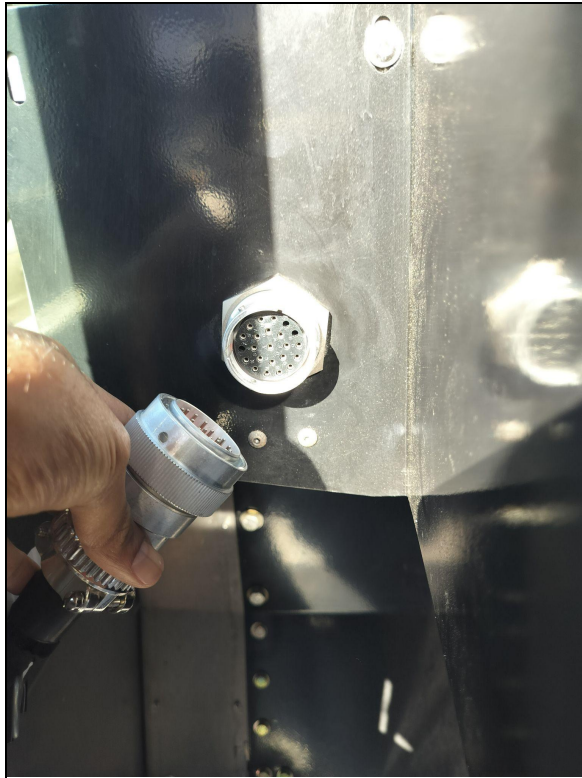
Additionally, please use the tools provided in the XOS Diagnostic Toolkit to connect to the vehicle. The toolkit will include a harness and a ValueCAN OBD adaptor.



The harness needs to be connected to the diagnostic port of the vehicle which is located on the left hand side of the instrument cluster by the driver seat. Please refer to the image below for context.



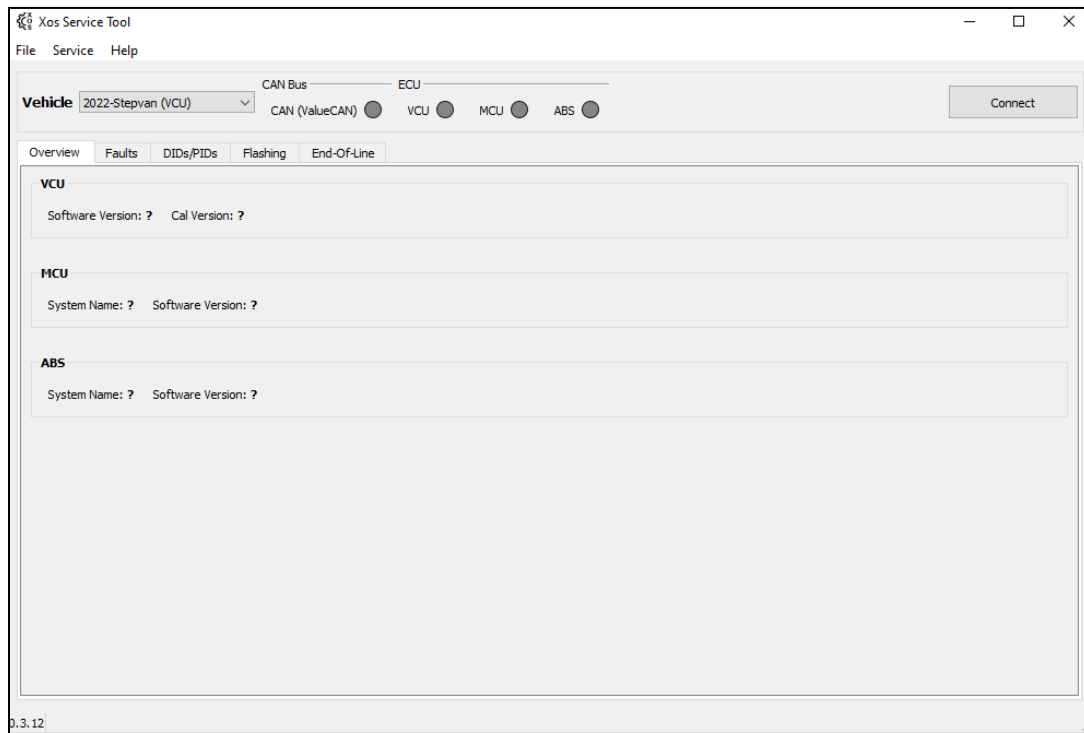
Plug in the harness to the diagnostic port.



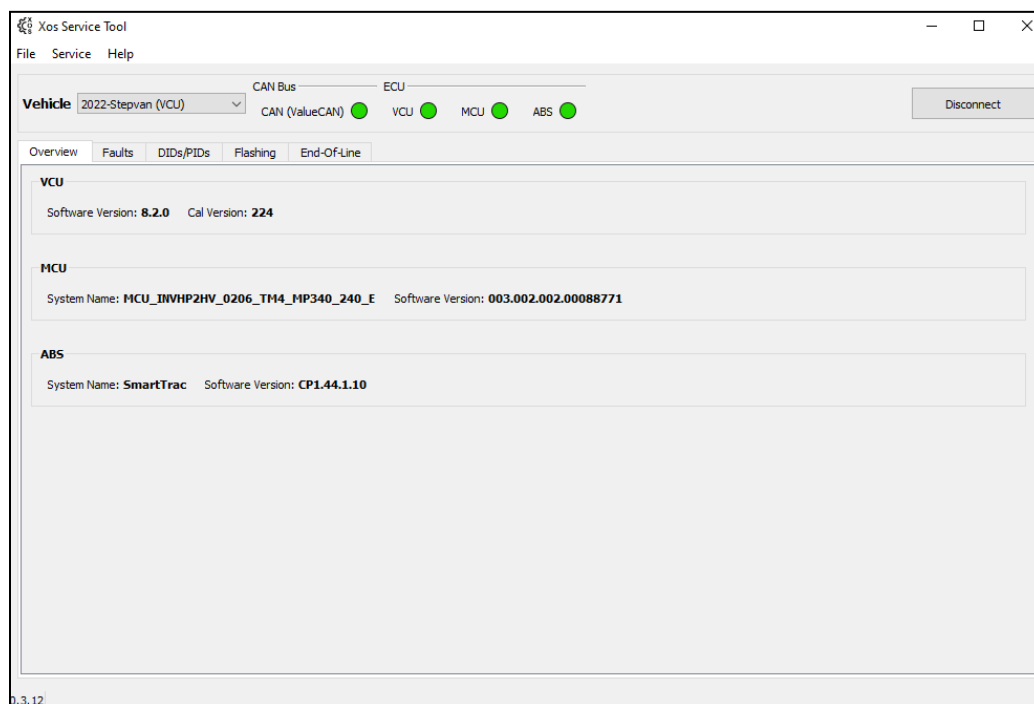
The diagnostic harness splits into two OBD-II connectors. 'Connector 1' will be used for flashing the VCU. Connect the Value CAN adaptor to 'Connector 1' and connect the USB of the Value CAN to the laptop which has the Service Tool installed on it.

FLASHING VCU

Select the 'Vehicle' dropdown, and select the option '2022 - Stepvan (VCU)' from the menu. You will see the following window.

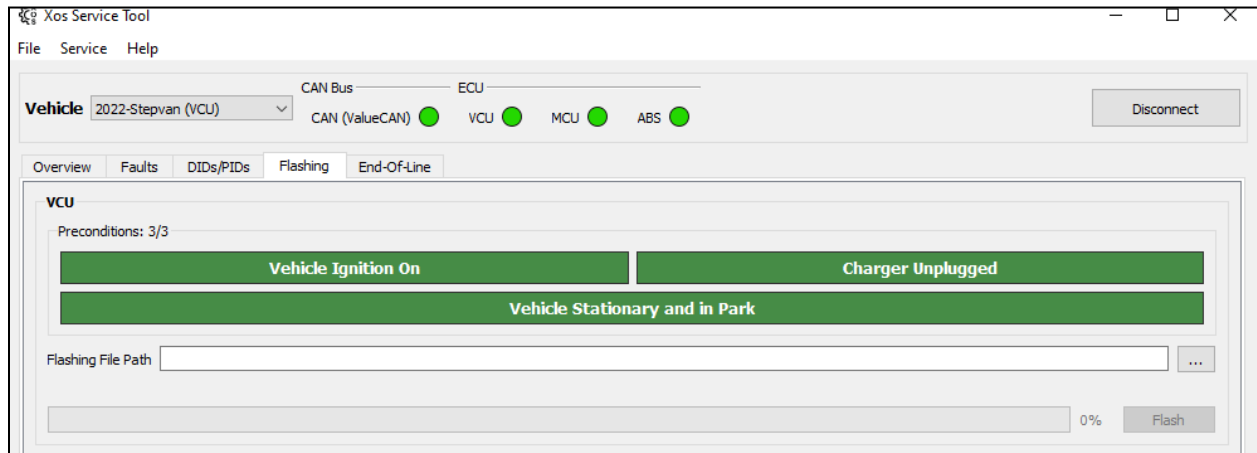


On pressing 'Connect' on this window, the Service Tool will connect to the vehicle and you should see the following controllers active for the vehicle.



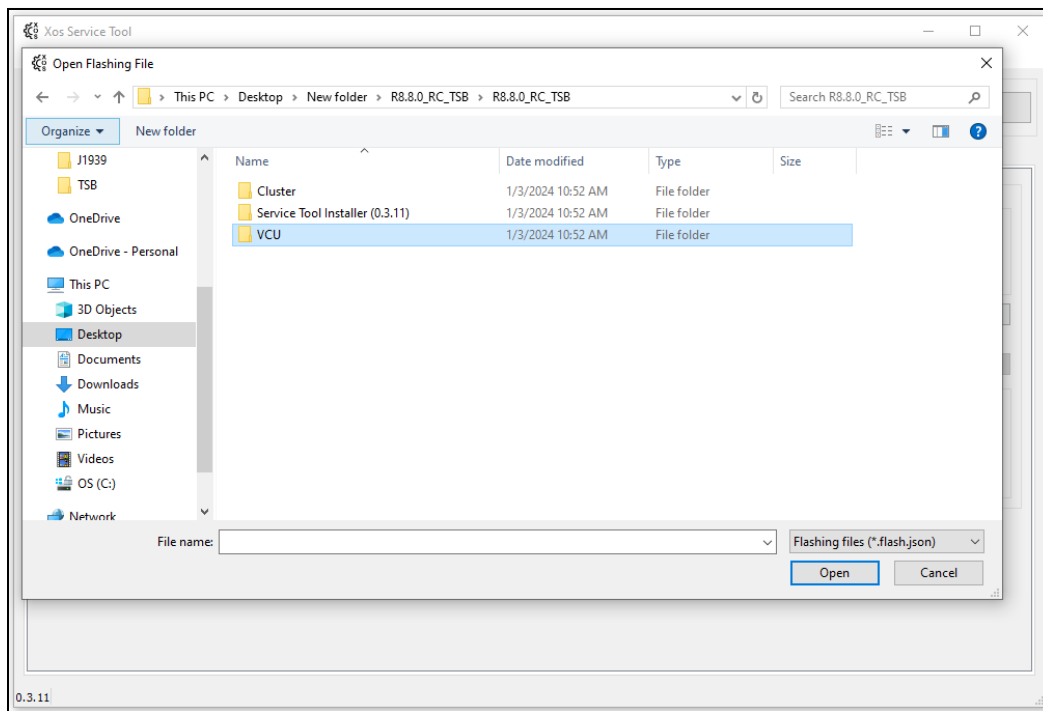
All controllers should appear in green on the Service Tool. Please check the harness connection if any of the controllers appear in red. Make sure that you are connected to 'Connector 1'.

Next, click on the 'Flashing' tab on the Service Tool, where you will see the following window.

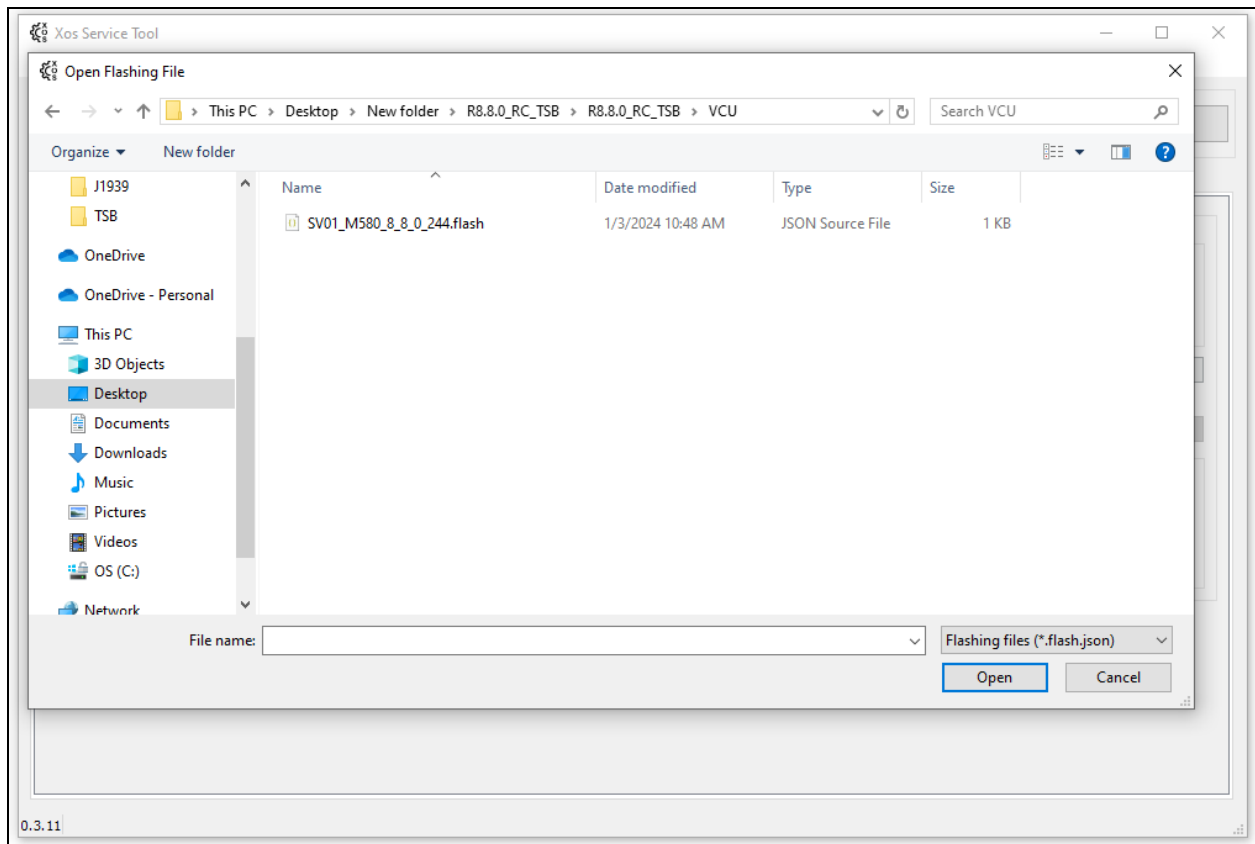


Click on '...' next to the flashing tab to direct towards the flashing file.

Navigate to the extracted folder and open the VCU folder as shown below, by double clicking on it.

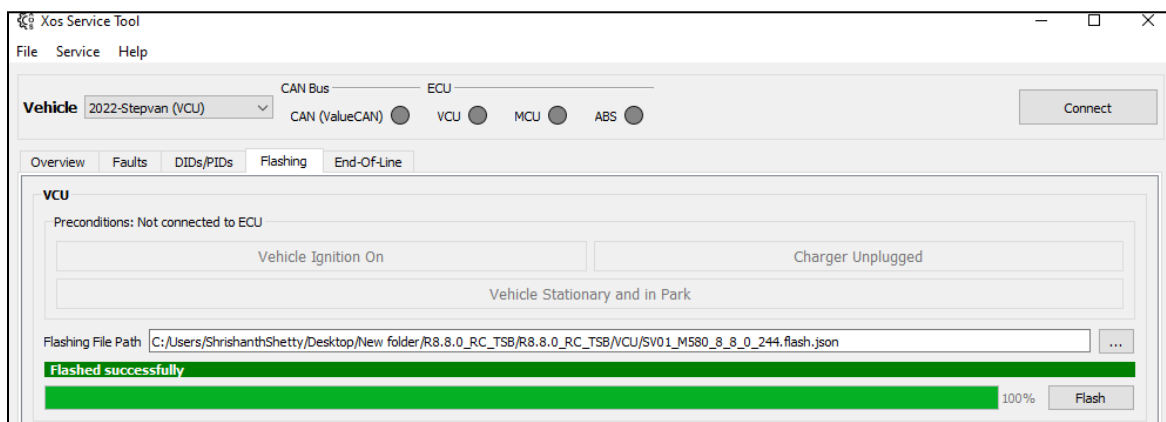


Select the following file within this folder and click on 'Open'.



Once the flashing file path appears, the 'Flash' button on the Service Tool will be enabled. Click on 'Flash' to start flashing the VCU, the Service Tool will require a verification before starting the flashing process. Once verified the tool will start the flashing process, and it might also show if there are any errors during the process.

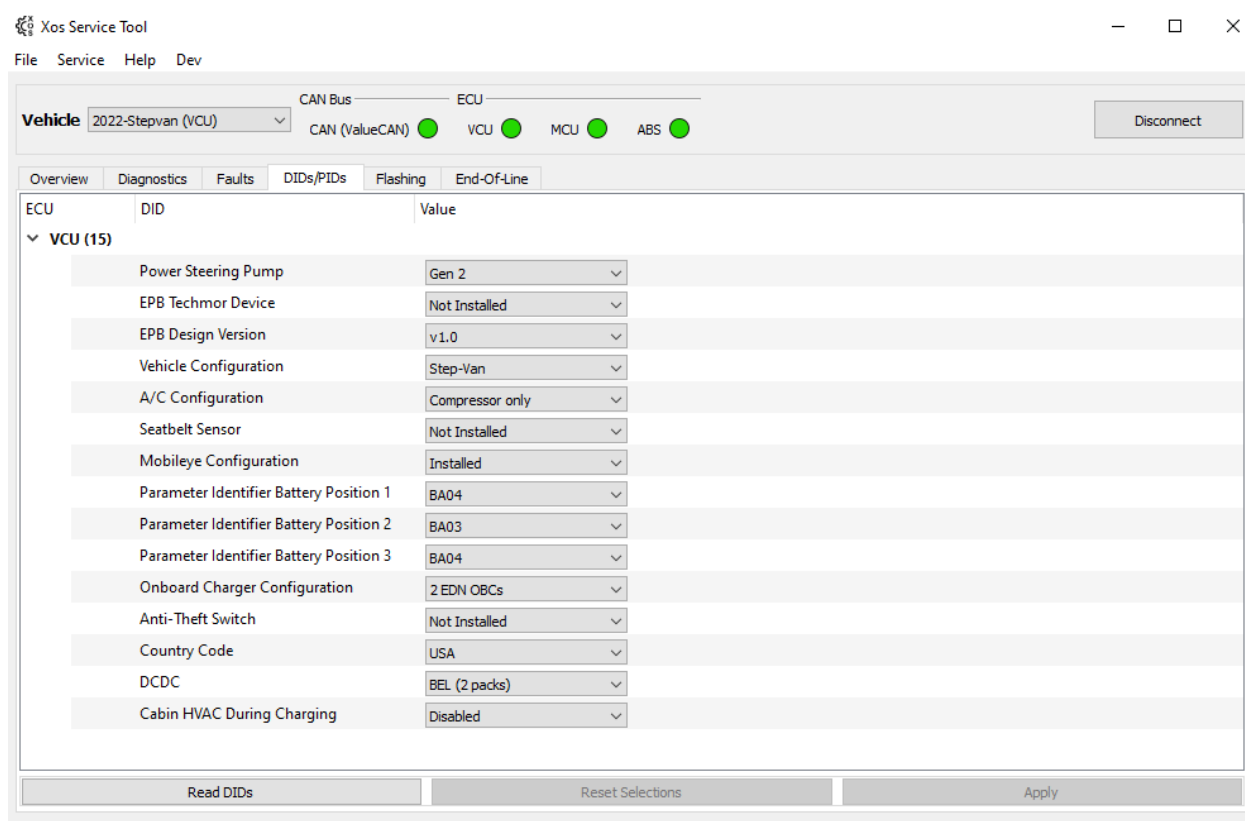
Installing the VCU file will approximately take 10 minutes. Once the vehicle is flashed, you will see the following screen. Additionally, the vehicle will also start doing a 'High Voltage System Check' to verify all the high voltage components are communicating.



In order for the vehicle to be drivable again, you will need to verify all the DIDs/PIDs configured in the vehicle. This can be done by clicking on the 'DIDs/PIDs' tab on the Service Tool.

Click on the 'Connect' button once again, and click on 'Read DIDs' to read the current configuration of the vehicle. After flashing, if there is any DID that is reading as 'unconfigured', it will stop the vehicle from being driven.

If flashing from a 8.2.0 or 8.4.0 version of the software, the DID for 'Cabin HVAC During Charging' will read as Unconfigured. In that case, set the 'Cabin HVAC During Charging' DID to Disabled. Then click on 'Apply' to apply the changes and to allow the vehicle to be driven.



Once completed the vehicle should be in READY state. This can be verified by seeing a 'Ready' text above the speedometer on the instrument cluster.

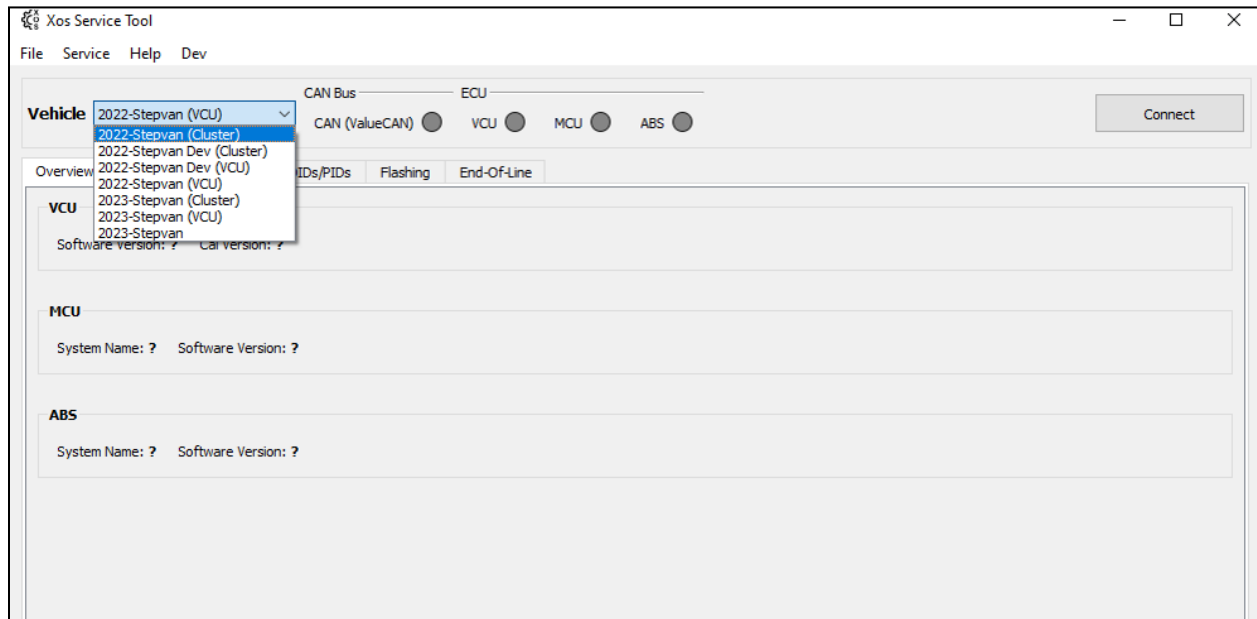
The Service Tool also includes a Faults tab to see any active faults that are present on the vehicle.

Once the flashing has been completed, click on 'Disconnect'.

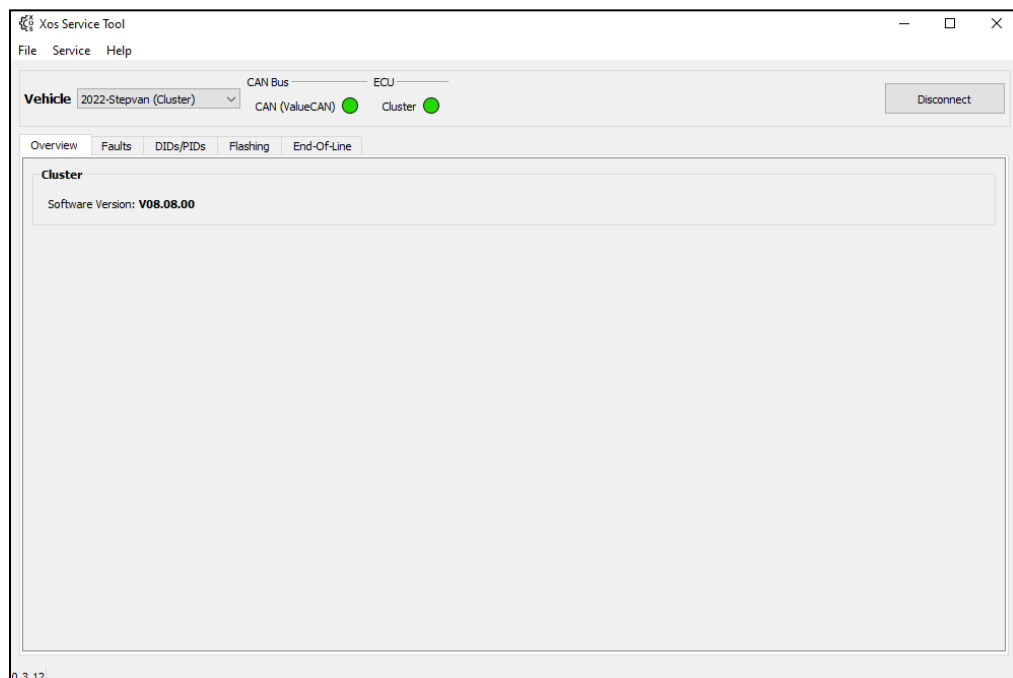
FLASHING CLUSTER

Next step is to flash the instrument cluster of the vehicle. Before proceeding, connect the ValueCAN adapter to 'Connector 2' of the harness.

Select '2022 - Stepvan (Cluster)' in the dropdown menu.

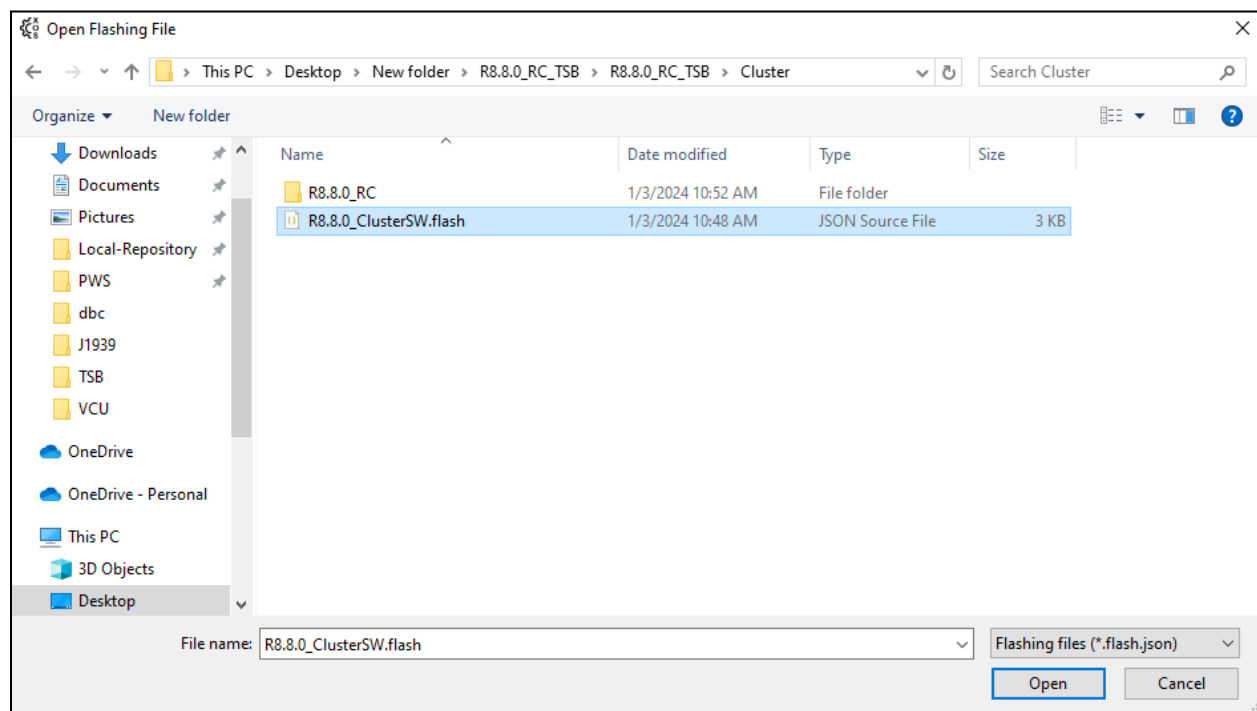
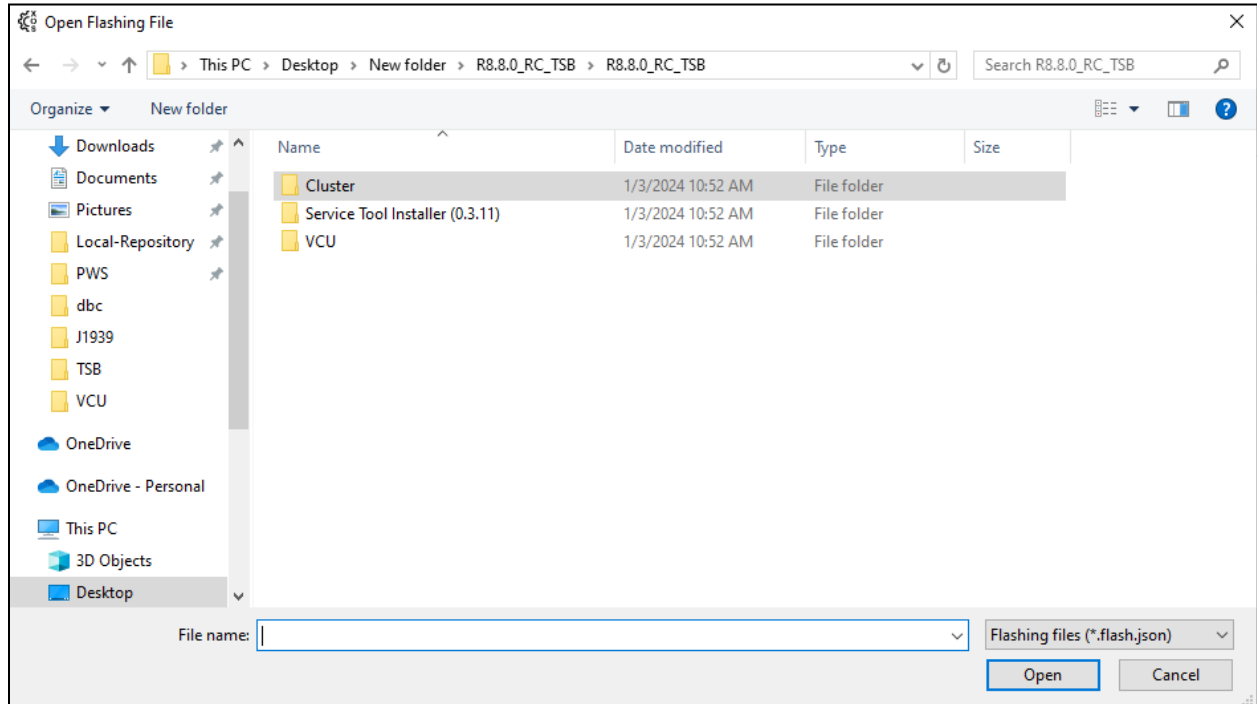


Click on 'Connect' to connect to the cluster. If the software version for the cluster reads anything other than V08.08.00, the cluster will have to be flashed.

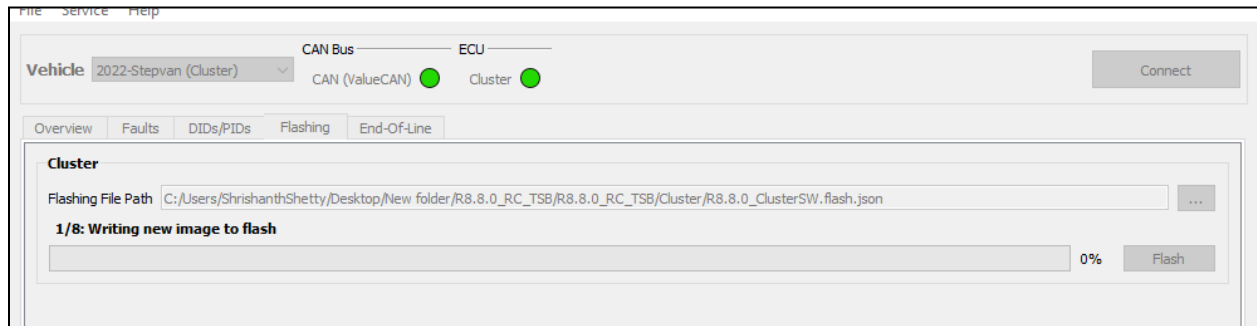


The steps for flashing the cluster are similar to that of the VCU. Navigate to the 'Flashing' Tab next to install the software.

Select the flashing file for the cluster. Please refer to the images below to see where it is located in the software package.

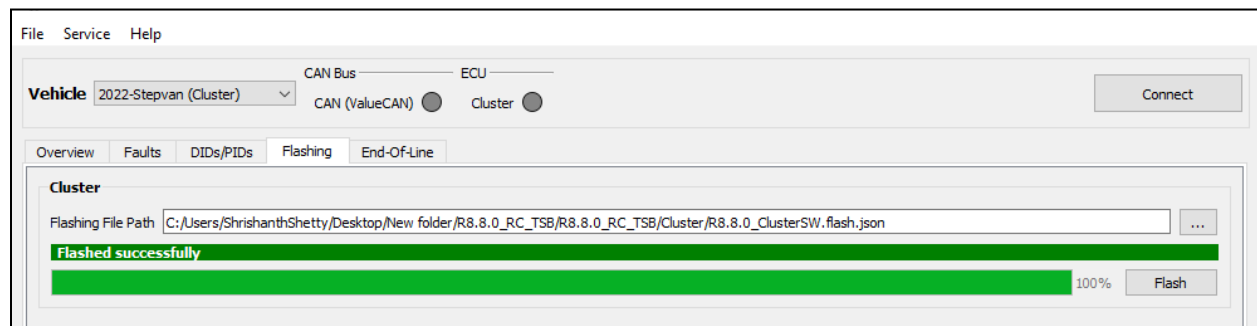


Click on 'Open' and then click on 'Flash' to start the installation. Here is how it will look once it starts the flashing process.



There are 8 distinct files that have to be flashed for the cluster, and it can be seen in the Service Tool as it progresses through all the steps. It will take approximately 25 minutes to finish the installation.

You will see the following message once the flashing is completed.



Once both controllers are flashed, it can be verified if the both controllers have been updated to the latest version by checking the version number for the respective software using the Service Tool.

Additionally, it can be also verified by pressing the second button from the left on the display.

If the VCU Version displays as '8.8.0.244' and the Display version appears as '08.08.00' then both the controllers are flashed successfully. Please refer to the image below for context.

