



Subject: Transmission ECU Recovery Procedure – UltraShift®*PLUS* and Fuller Advantage® Automated

Document Number: TAIB-0886

Date: July 11, 2022

Updated: April 12, 2024

Issue Description:

Customers are reporting various no start complaints and ServiceRanger is unable to connect to the transmission. The following vehicle observations have been noted:

- Turn key on, solid transmission service light, engine will not crank.
- Turn key on, solid transmission service light and ** in the gear display, engine will not crank.
- ServiceRanger connects to the vehicle but is unable to communicate with the TECU.

These symptoms may be observed after one of the following has occurred:

- TECU with incorrect J1939 baud rate configuration was installed. TECU software download has failed and now ServiceRanger is unable to communicate with the TECU.

Affected Models/Population:

- UltraShift *PLUS*
- Fuller Advantage Automated

Field Strategy:

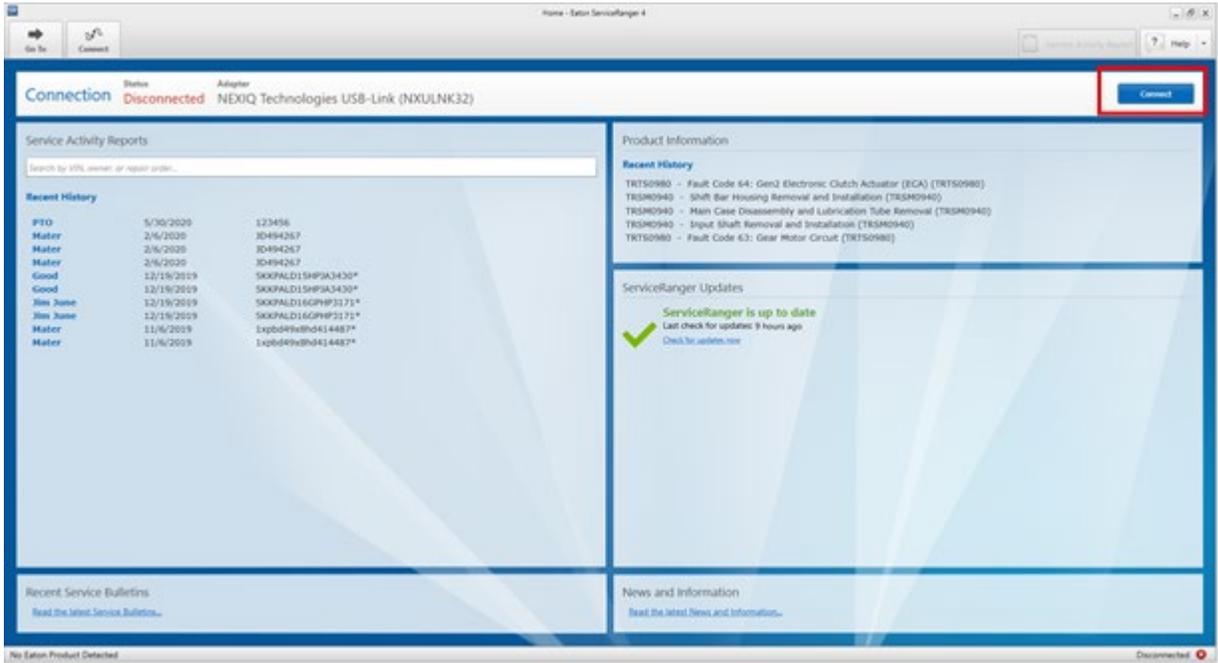
Transmission ECU Reset and Recovery Procedure:

Note: ServiceRanger 4, Software Version 4.9.1108.0 or greater is required.

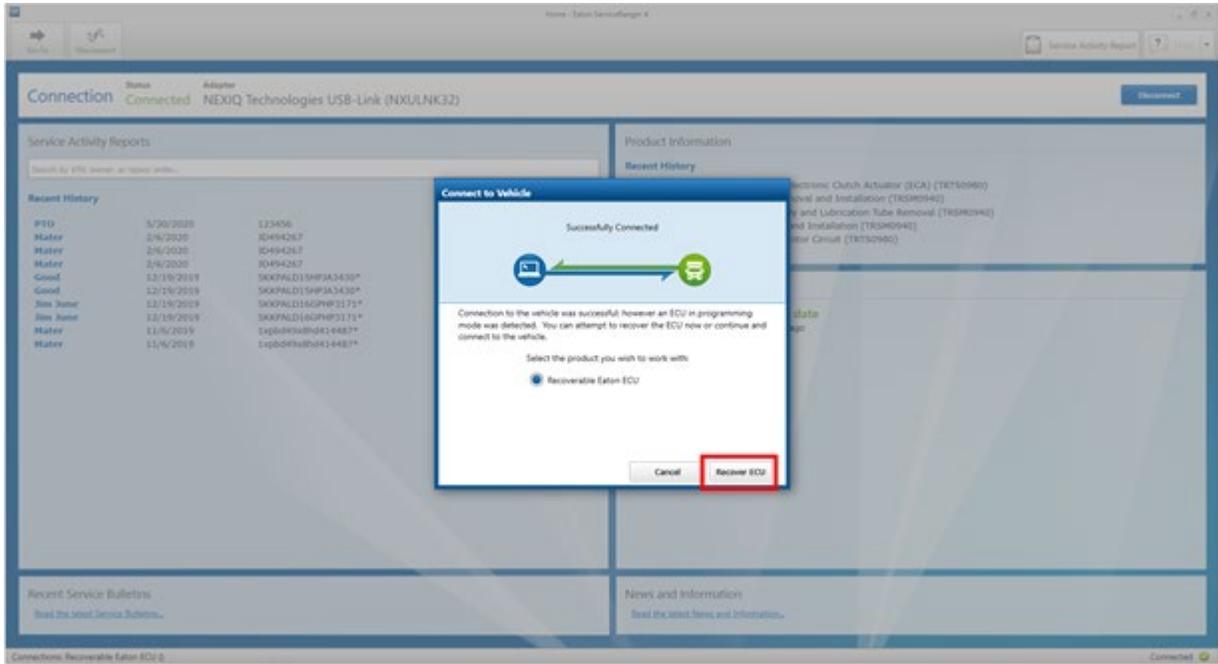
1. Key off. Let vehicle ECUs power down for 5 minutes.

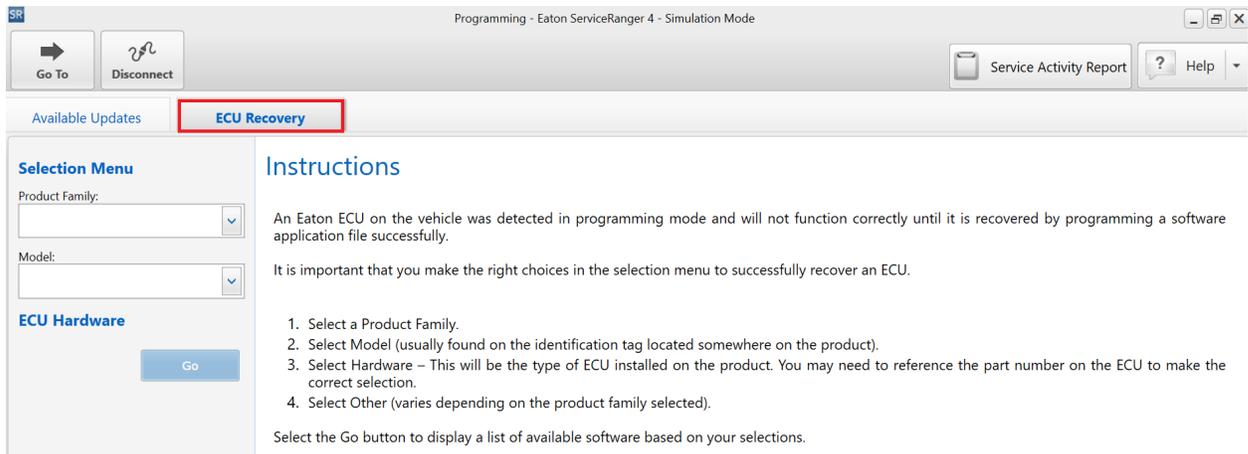
Service Bulletin – Product

- Click on "Connect" in ServiceRanger then within 10 seconds Key- On the vehicle ignition.



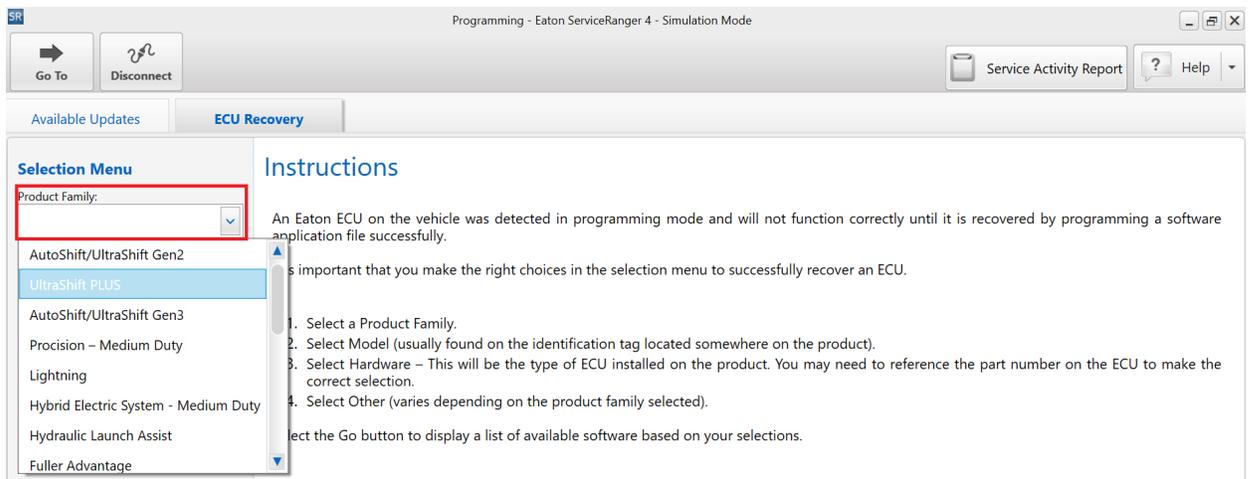
- Select "Recover ECU".





6. Once on the ECU Recovery tab, select the appropriate transmission product family, UltraShift PLUS or Fuller Advantage, from the “Product Family” dropdown.

Caution: Selecting the incorrect Product Family will result in Active fault codes and improper transmission operation. Reference Service Manuals TRSM0940 and TRSM0980 to identify transmission.

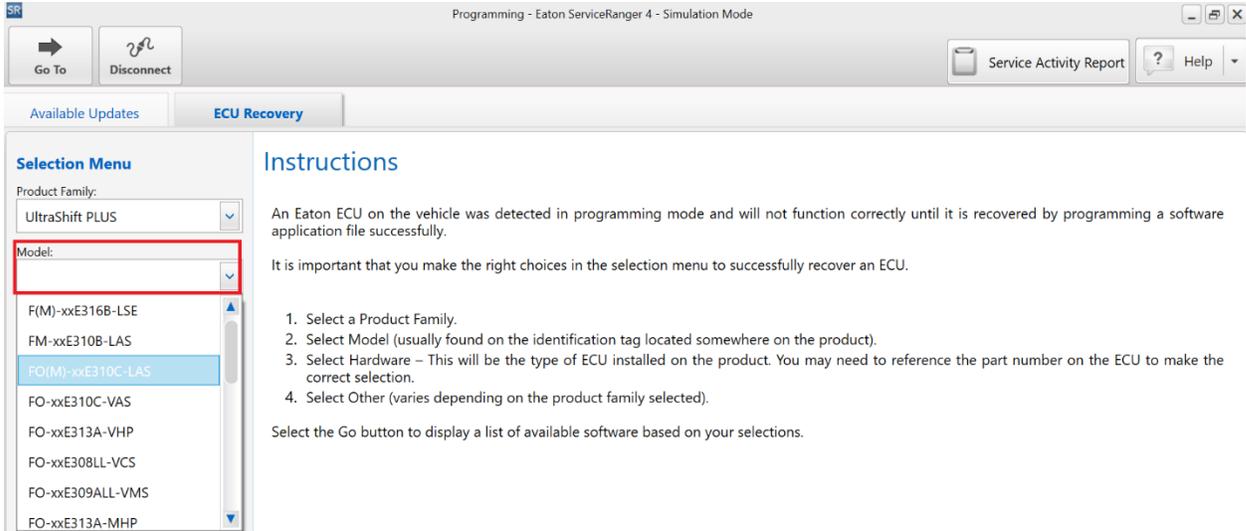


7. Select the appropriate transmission model from the “Model” dropdown.

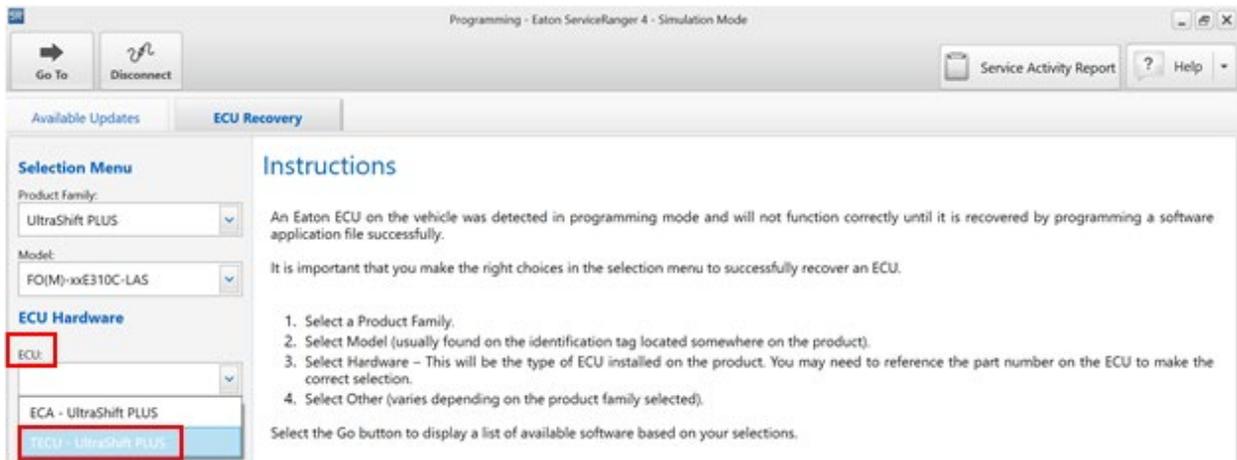
Note: Transmission model designation can be found on the transmission serial tag.

Caution: Selecting the incorrect Transmission Model will result in Active fault codes and improper transmission operation. Reference Service Manuals TRSM0940 and TRSM0980 to identify transmission.

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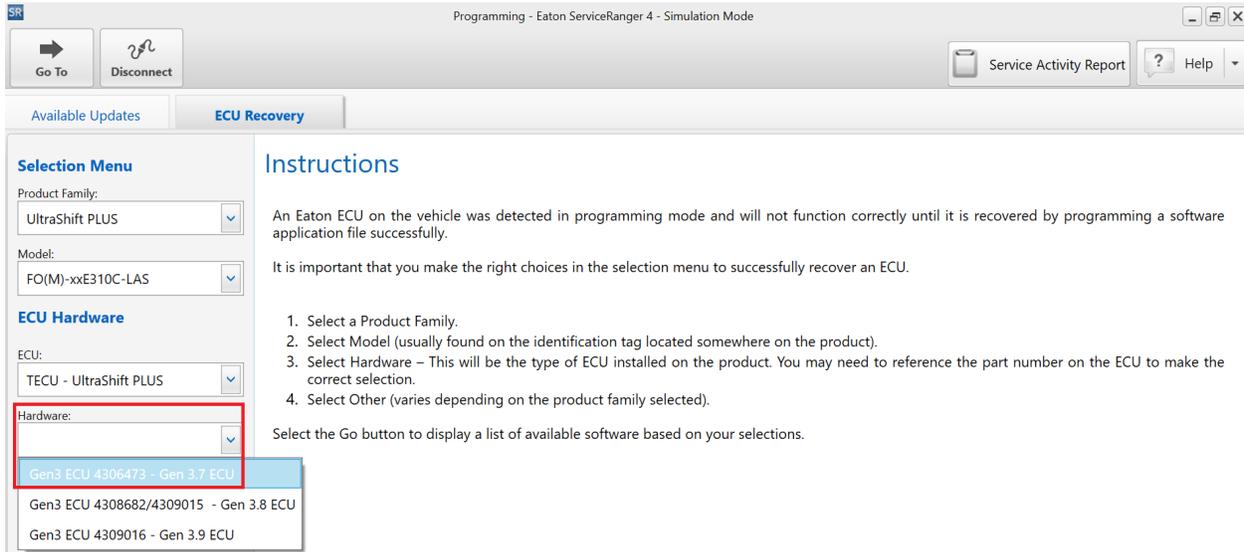
8. Select the “TECU” option from the “ECU” dropdown.



9. Go to the TECU and record the Hardware Rev. number. See example below.

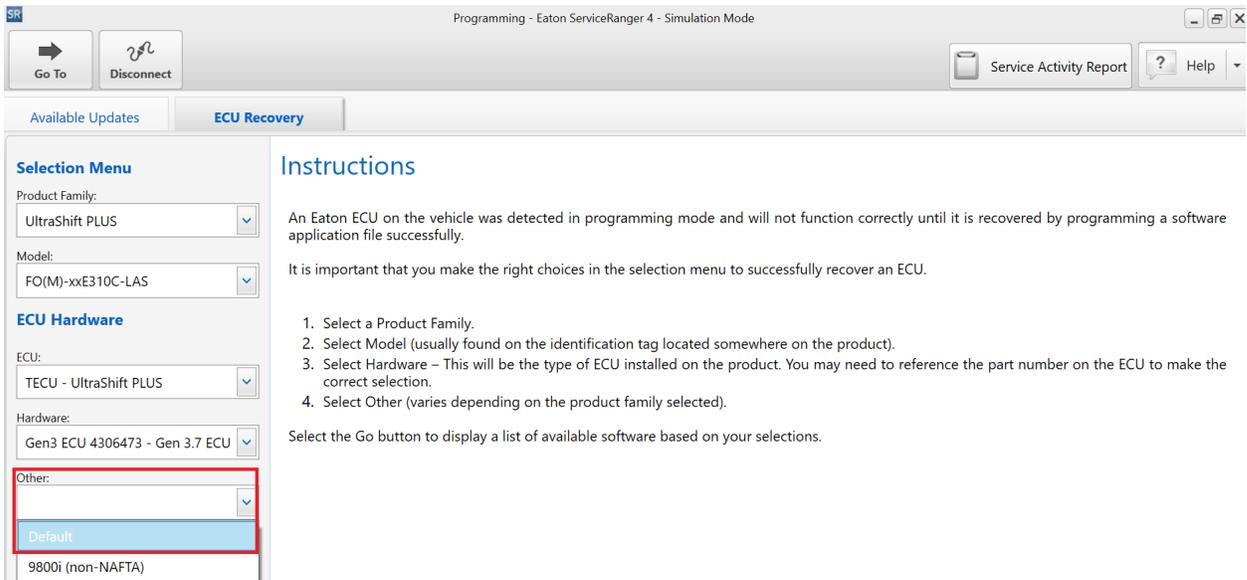


10. Based on the Hardware Rev. number recorded in Step 9, select the appropriate transmission hardware version from the “Hardware” dropdown.

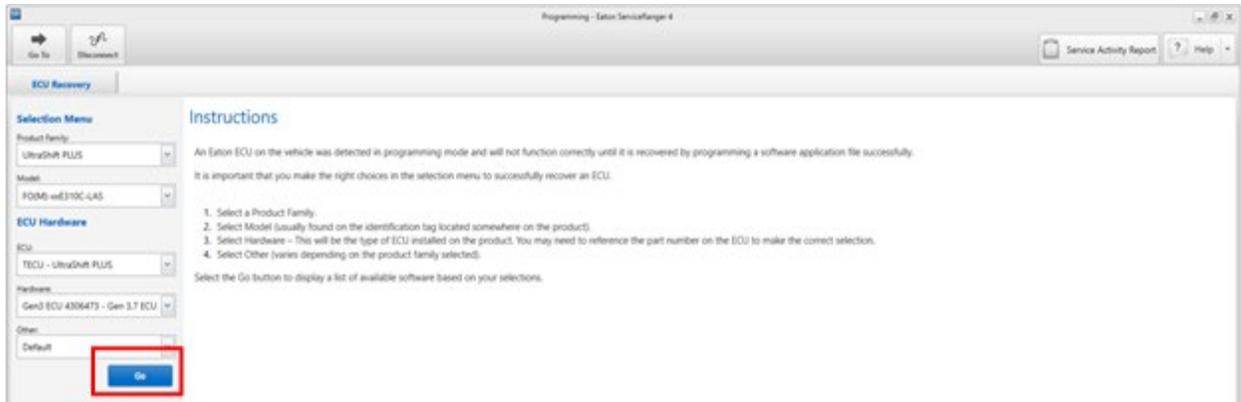


11. Select “Default” from the “Other” dropdown.

Note: If running an older version of ServiceRanger this drop down may show as “0” or “1”, Choose “0”.



12. Select “Go”.

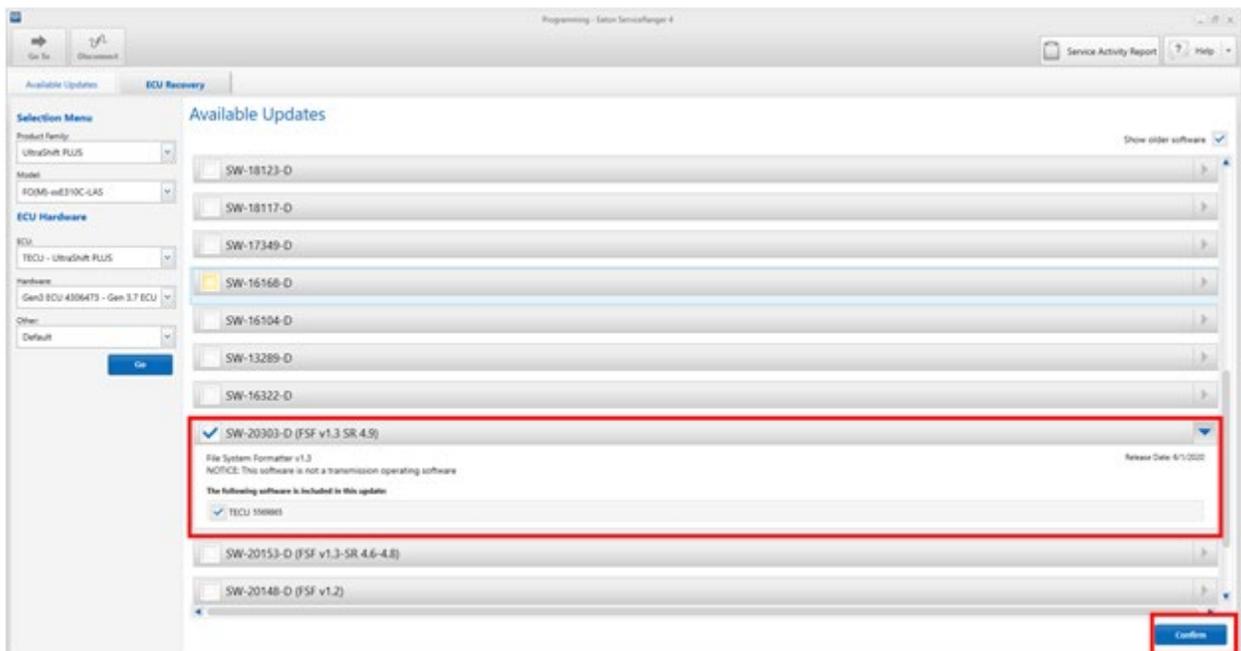


13. Select “Show older software”

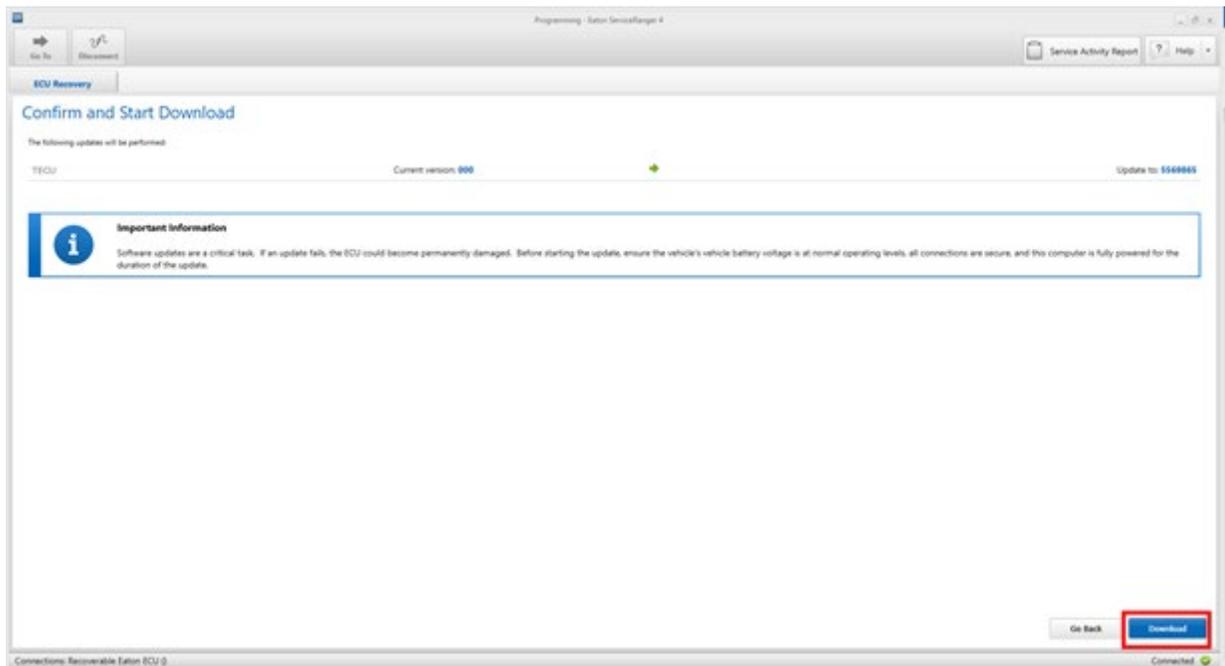


14. Select “SW-20303-D (FSF v1.3 SR 4.9)” TECU 5569865 Update and select “Confirm”.

Note: It may be necessary to scroll down the list to find the software update.



15. Select “Download”

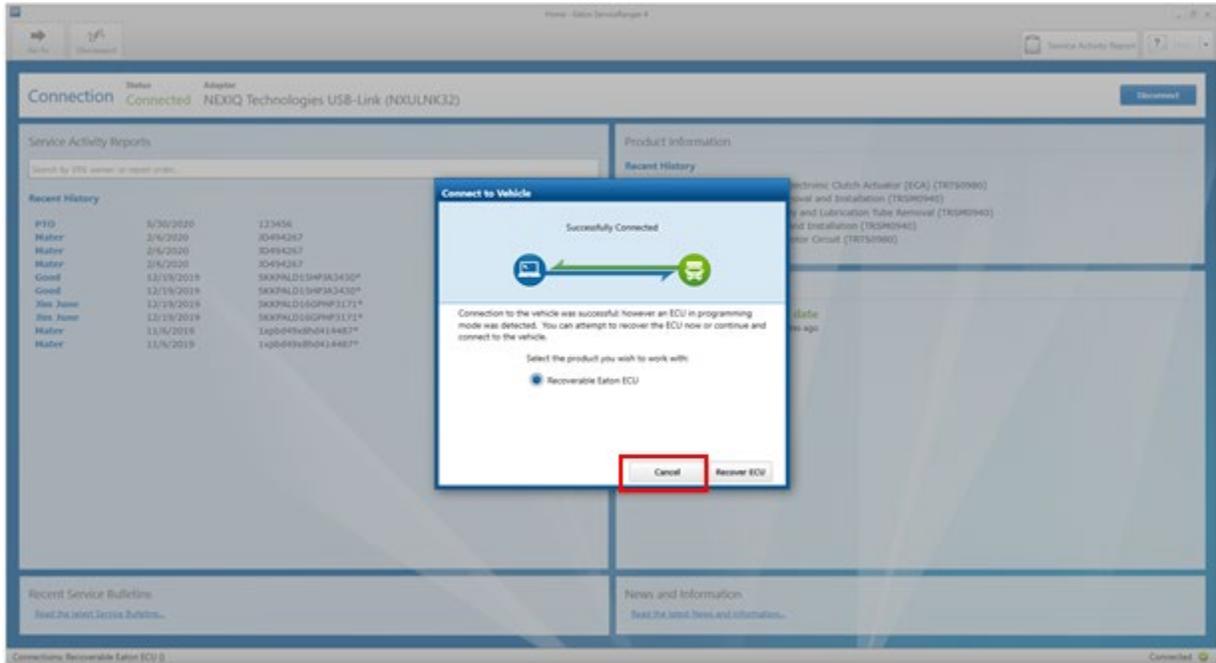


16. Once the Download is complete, Select “Finish”.



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17. After selecting “Finish”, ServiceRanger will ask you to recover the TECU, select “Cancel”.

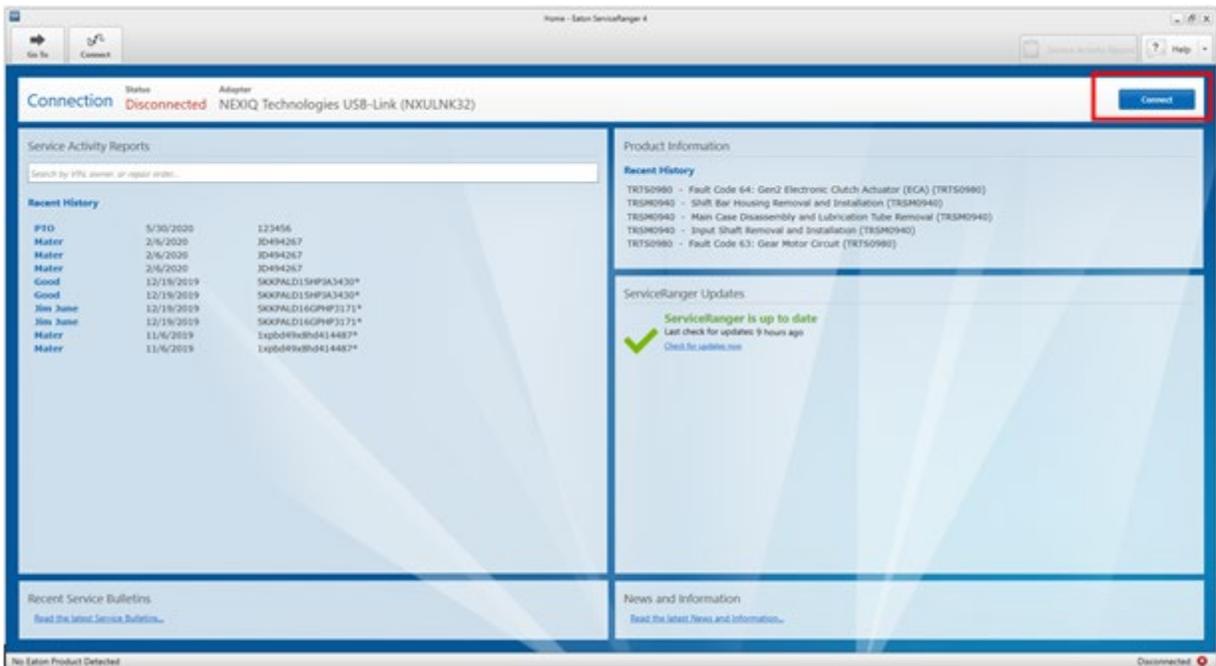


18. Key off.

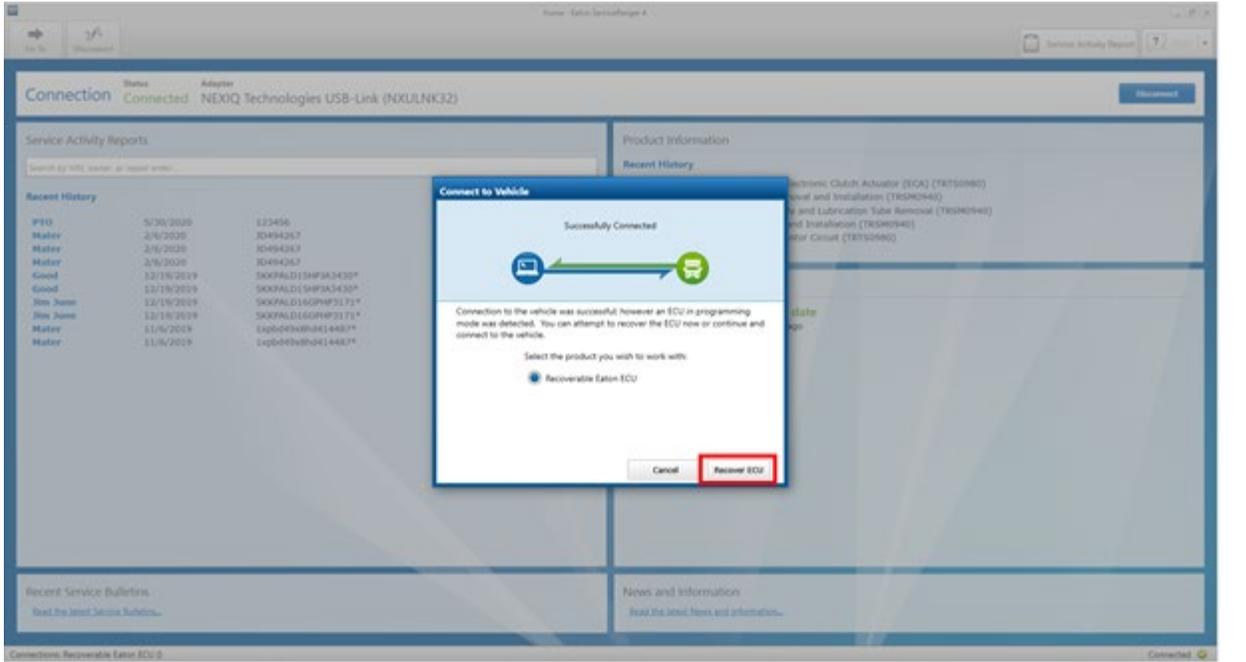
19. Reinstall OEM 30-amp transmission battery voltage supply fuse to the TECU.

20. Key on.

21. Connect ServiceRanger to the TECU.



22. Select “Recover ECU”.



The screenshot shows the Eaton ServiceRanger 4 software interface. A 'Connect to Vehicle' dialog box is open, displaying a 'Successfully Connected' message. Below the message, it states: 'Connection to the vehicle was successful, however an ECU in programming mode was detected. You can attempt to recover the ECU now or continue and connect to the vehicle.' Underneath, it asks to 'Select the product you wish to work with' and shows a radio button selected for 'Recoverable Eaton ECU'. The 'Recover ECU' button is highlighted with a red box.

Below the dialog box, the main interface shows the 'SR' (ServiceRanger) window. The title bar reads 'Programming - Eaton ServiceRanger 4 - Simulation Mode'. The 'Available Updates' section has a red box around the 'ECU Recovery' update. The 'Selection Menu' section has two dropdown menus for 'Product Family' and 'Model', and a 'Go' button. The 'ECU Hardware' section is also visible.

Instructions

An Eaton ECU on the vehicle was detected in programming mode and will not function correctly until it is recovered by programming a software application file successfully.

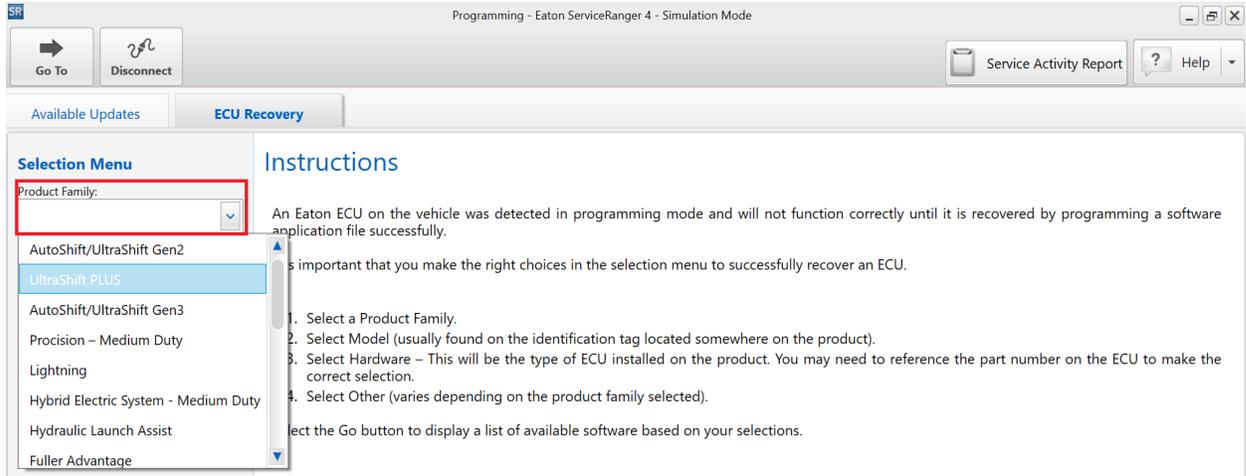
It is important that you make the right choices in the selection menu to successfully recover an ECU.

1. Select a Product Family.
2. Select Model (usually found on the identification tag located somewhere on the product).
3. Select Hardware – This will be the type of ECU installed on the product. You may need to reference the part number on the ECU to make the correct selection.
4. Select Other (varies depending on the product family selected).

Select the Go button to display a list of available software based on your selections.

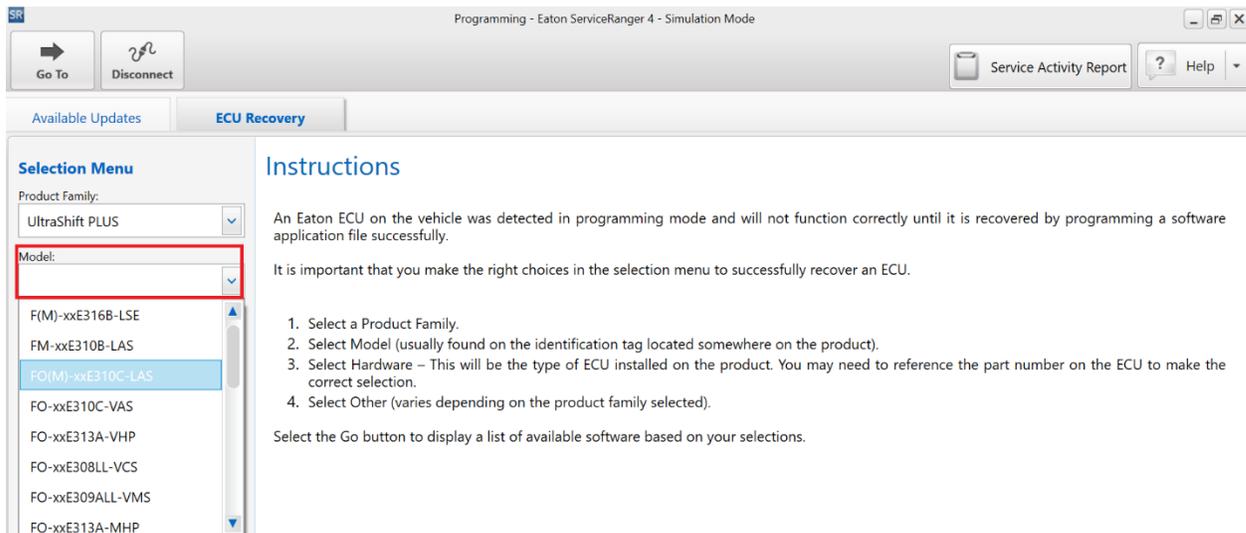
23. Select the appropriate transmission product family, UltraShift PLUS or Fuller Advantage, from the “Product Family” dropdown.

Caution: Selecting the incorrect Product Family will result in Active fault codes and improper transmission operation. Reference Service Manuals TRSM0940 and TRSM0980 to identify transmission.

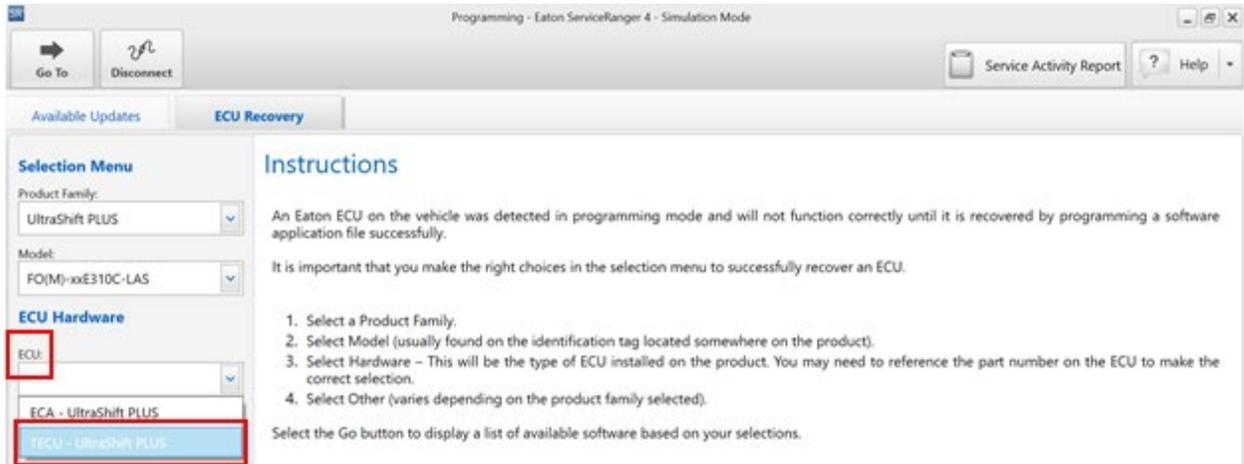


24. Select the appropriate transmission model from the “Model” dropdown.

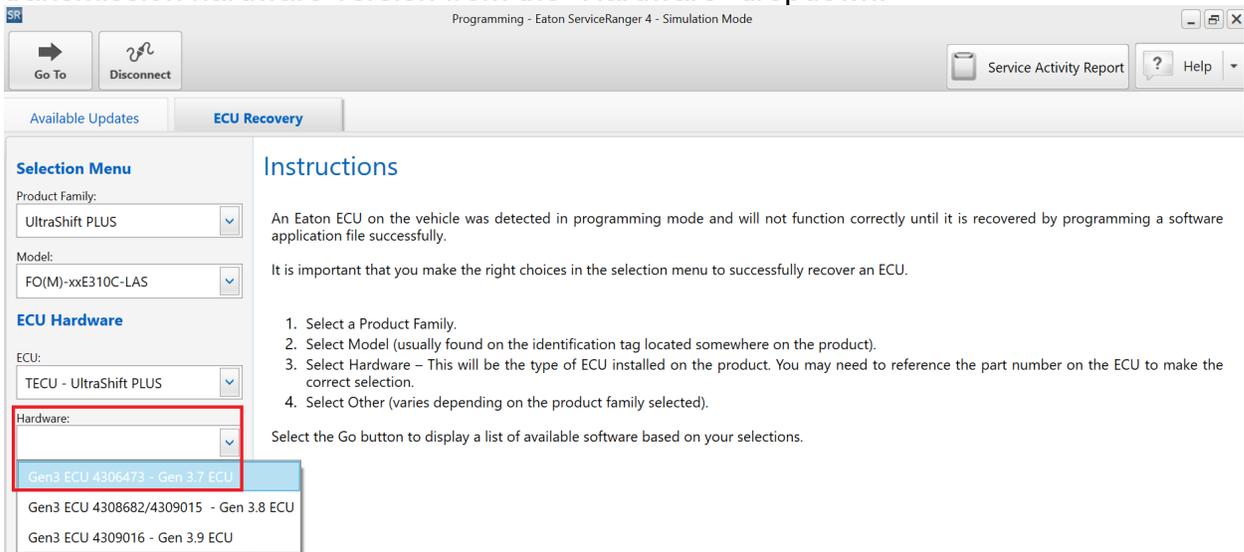
Caution: Selecting the incorrect Transmission Model will result in Active fault codes and improper transmission operation. Reference Service Manuals TRSM0940 and TRSM0980 to identify transmission.



25. Select the “TECU” option from the “ECU” dropdown.

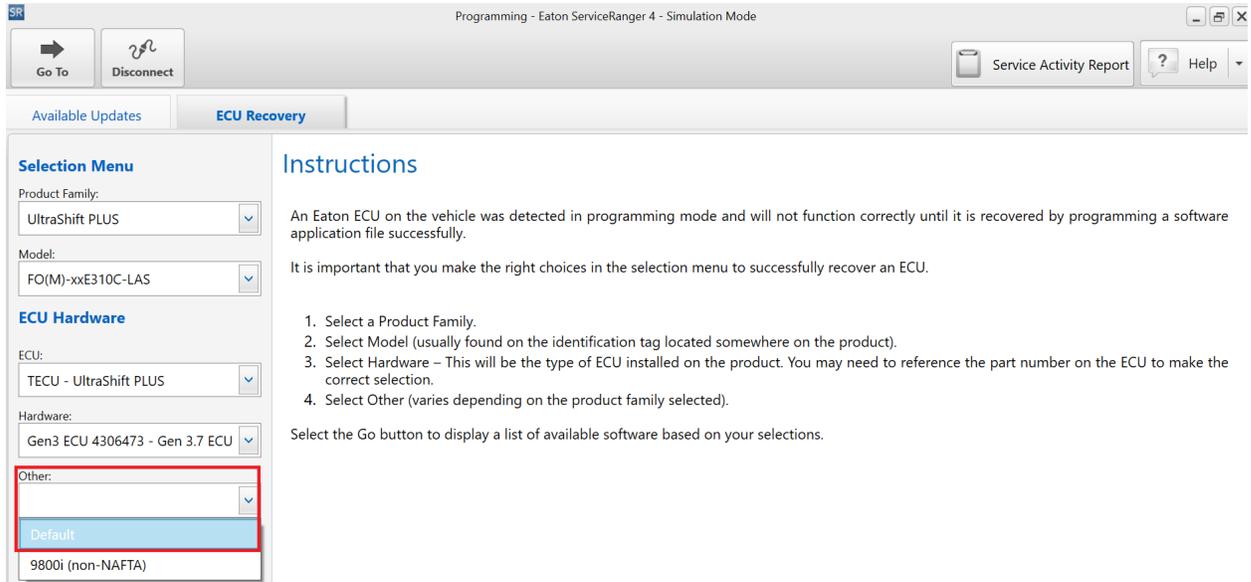


26. Based on the Hardware Rev. number recorded in Step 9, select the appropriate transmission hardware version from the “Hardware” dropdown.



27. Select “Default” from the “Other” dropdown.

Note: If running an older version of ServiceRanger this drop down may show as “0” or “1”, Choose “0”.



28. Select “Go”.



29. Unselect “Show older software” and following the on-screen prompts, program the TECU to the latest available software.



30. Using ServiceRanger, edit vehicle configuration parameters to match the customers preference.

Note: If available, a prior SAR can be used to determine the desired configurations.

Warranty Information:

Warranty Parts:

- No parts should be replaced for this issue

Warranty Labor:

- Diagnostics (up to 0.5 hour)
- Software download (OEM SRT up to 0.5 hour)

Warranty Coverage:

Warranty will not cover proactive repairs without prior approval from both Tech Service and Warranty.

CHANGE LOG

Date	Description
04/08/2024	Added step 9, revised step 10 and added Caution statements to improve clarity.
07/11/2022	Bulletin created.

The material contained in this bulletin is product improvement information. Eaton Corporation is not committed to, or liable for, canvassing existing products. FSUD: 2020-FSUD-4182