



Technical Service Bulletin

DISCHARGED AUXILIARY BATTERY		No: TSB-24-54-002	
		DATE: April 2024	
		MODEL: 2023-24 Outlander Plug-in Hybrid	
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY PROCESSOR	<input checked="" type="checkbox"/> SALES MANAGER

PURPOSE

This reprogramming of the ECU is to change the auxiliary battery charge stopping conditions under low State of Charge (SOC) conditions of the drive battery when the vehicle turns off. Additionally, the configuration update of the IPDM E/R and BCM increases the charging amount while reducing the discharge amount from the auxiliary battery while the vehicle turns off.

On a customer complaint basis, please reprogram the PHEV-ECU with the latest one and update the configuration (C/U setup) of IPDM E/R and BCM.

AFFECTED VEHICLES

2023-2024 Outlander Plug-in Hybrid, VIN Cut-off: JA4T5VA98RZ050396 (built prior to 2/8/2024)

REPAIR PROCEDURE

When battery capacity test is performed, please refer to (4) Electrical & Power Control section in TSB-24-42-001 (Service Manual Revision) for information regarding removing battery cable before voltage measurement.

CAUTION DURING REPROGRAMMING

- Turn off all electrical devices to minimize the vehicle's electrical load. Also use an external power source to ensure that the vehicle battery maintains the specified voltage during reprogramming.
The low voltage of the auxiliary battery may cause the incompleteness of reprogramming and once it happens, ECU must be replaced to brand new one.
- Write down all the customer's electrical device settings such as A/C and radio before reprogramming and restore them after reprogramming.
- Connect the MUT-3 to an AC power source to prevent internal battery discharge.
- Before using, make sure the USB cable and MUT-3 main harness are not damaged.
- Do not perform maintenance work in the engine room during reprogramming.
The cooling fan may operate while reprogramming.
- **Turn ignition off for 10 seconds** before checking the All DTC after reprogramming and erase them if any.

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REPAIR PROCEDURE (Continued)

NOTE: If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated before reprogramming, and DTCs are listed in the ECU memory, save the ALL-DTC results and then erase the codes prior to reprogramming. If hard codes are present that are applicable to the target ECU and won't clear, diagnose and repair these codes first and then proceed with reprogramming.

1. Open the tailgate and engine hood. Do not close until the program update is completed.
2. Turn the power mode of the power switch on and hold the power switch for 5 seconds or longer.
3. Turn the power mode of the power switch on and do not turn off until the control program update is completed.
4. Update the control program with MUT3-SE.

EQUIPMENT

- The following equipment is needed to reprogram the ECU:
- VCI (Vehicle Communication Interface) or VCI Lite - MB991824 or MB992744
- MEDIC Laptop/Tablet with A/C power adapter - 520924, or FZG1MK2
- MUT III Main Harness "A" (blue connector at the DLC end) - MB991910 or MB992745
- USB 2.0 Cable - MB991827 or MB992747
- MEDIC 3.5/4 update at **862** or higher
- For Standalone MUT III units, MUT3-SE Reprogramming Database **SDBN N240201NR** or higher

ECU REPROGRAMMING CHART

Model	Data No.	New HW Part No.	New SW Part No./Ver.	Target HW Part No.	Target SW Part No./Ver.	Remarks
Outlander PHEV	237P8W90.6PN	-	237P8W906P	237P0WW01P 237P0W009P	237P0WW01P 237P8W009P 237P8W902P	NAFTA With QC
Outlander PHEV	237P8W03.4PN	-	237P8W034P	237P0W013P 237P0W021P	237P8W009P 237P8W902P	NAFTA With QC
Outlander PHEV	237P8W90.7PN	-	237P8W907P	237P0W000P 237P0WW10P	237P0W000P 237P8W010P 237P8W903P	NAFTA Without QC
Outlander PHEV	237P8W03.5PN	-	237P8W034P	237P0W014P 237P0W022P	237P8W014P 237P8W022P	NAFTA Without QC

SOFTWARE/MEDIC VERSION VERIFICATION

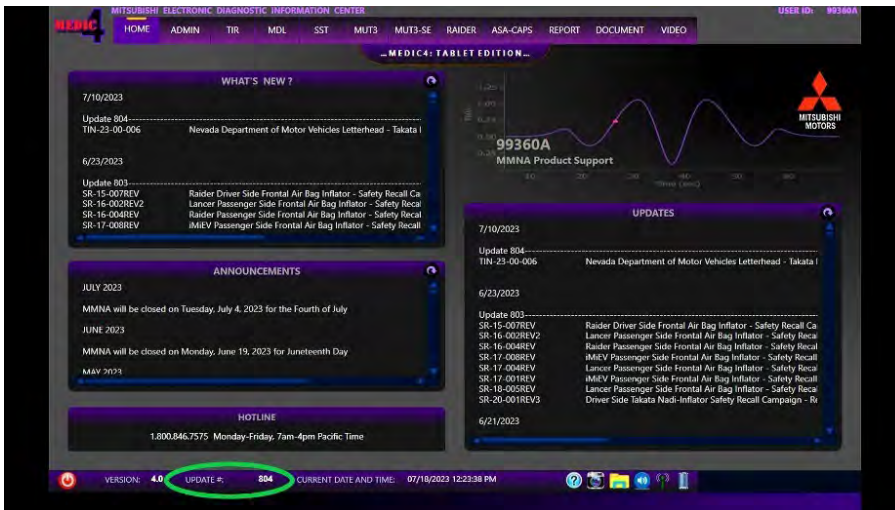
1. Verify that the ECU has not already been updated to the latest S/W number in the table above. If the ETACS ECU is at the latest level, reprogramming is not necessary.

NOTE: Reprogramming the ETACS ECU with the latest database (e.g., **SDBN N240201NR**) includes all past and current reprogramming for TSBs of affected vehicles. It is not necessary to reprogram the ECU for each previous TSB.

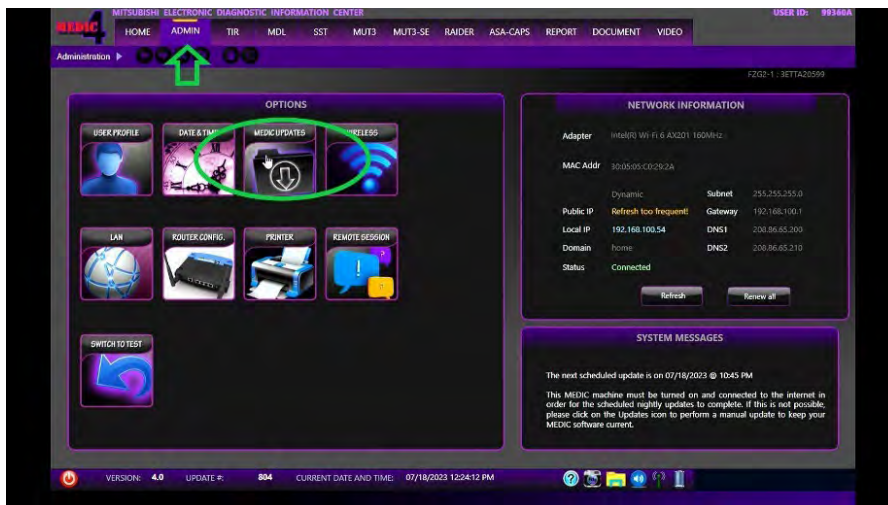
For MEDIC 3.5/4 users only: (MUT-III SEV users go to step 5)

2. Verify the MEDIC 3.5/4 is at version 3.5 and at update **862** or higher.

If your **MEDIC 3.5/4 update is at least 862**, continue with the Reprogramming Procedure. If your **MEDIC 3.5/4 update is below 862**, update your MEDIC as follows.



3. Select the MEDIC 3.5/4 Admin tab and click on "Updates".



4. If the MEDIC update screen advises updates are available, click the "Begin" button. After all updates are complete, **GO TO THE REPROGRAMMING PROCEDURE.**

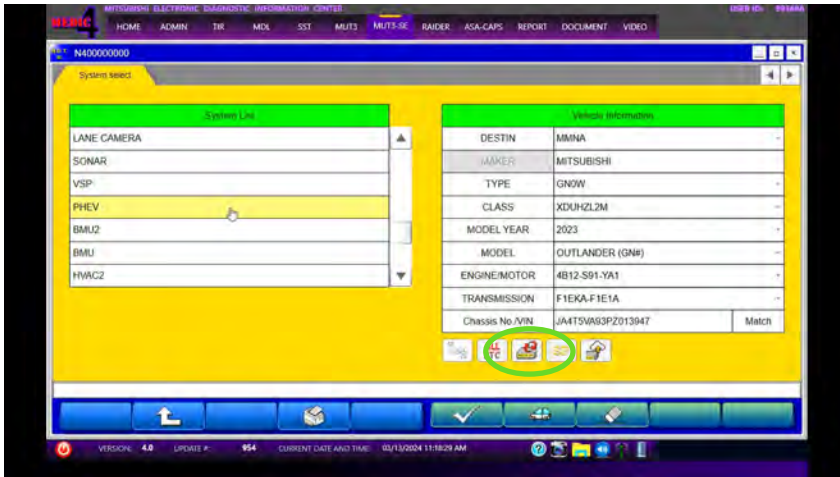


5. STANDALONE MUT-III SE SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3.5 USERS – GO TO THE REPROGRAMMING PROCEDURE). Verify that your MUT-III SE has the most current version of the reprogramming database from the MUT-III SE Main Page.

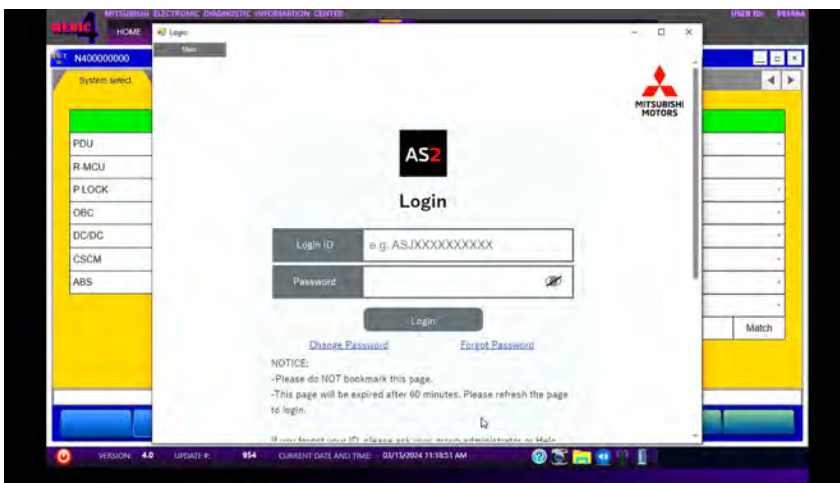
- a. Press the MUT-III SE STV button.



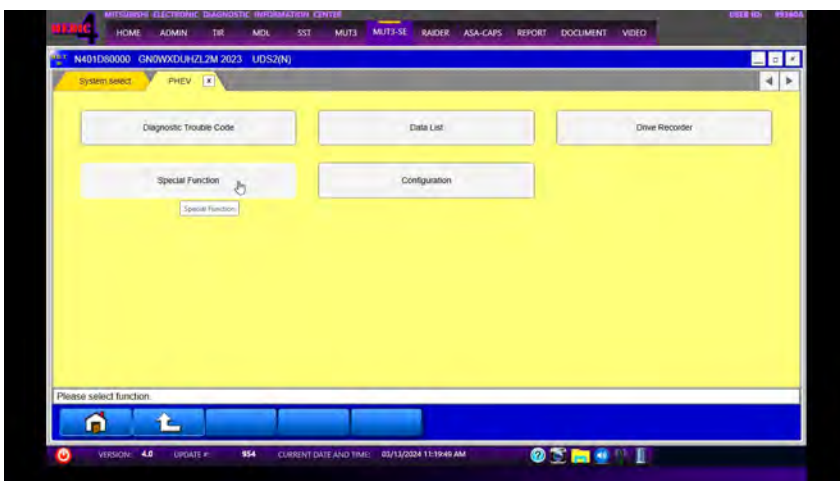
- b. Verify the Vehicle Information and if correct, select PHEV from the System List and press the ECU reprogramming button.



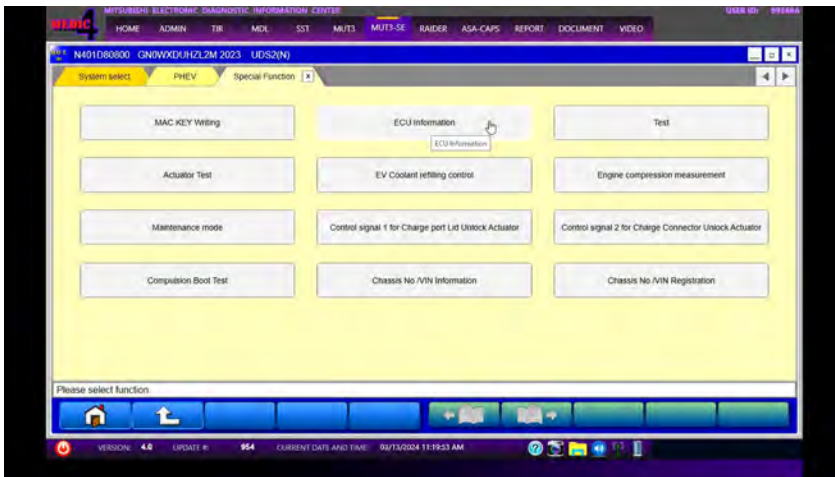
- c. Log-in with AS2 credentials.



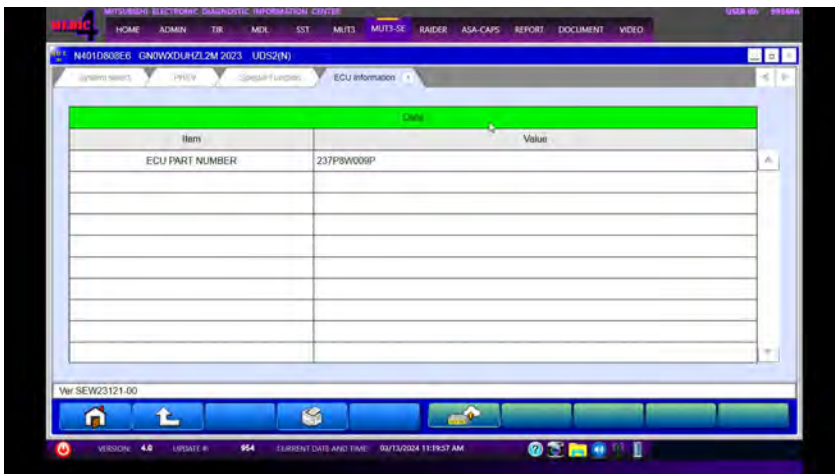
- d. Press the Special Function button.



e. Press the ECU Information button.



f. Refer to the Reprogramming Chart and verify the ECU Part Number. If correct, proceed to the Reprogramming Procedure.



REPROGRAMMING PROCEDURE

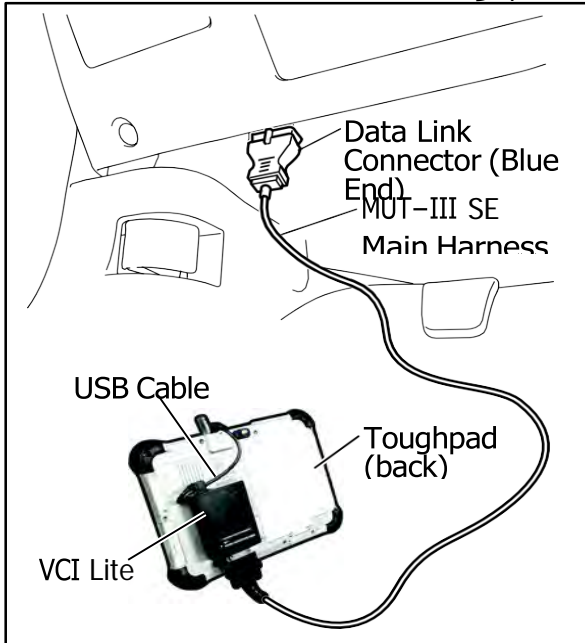
⚠ CAUTION

To ensure that the vehicle battery maintains 12V during the procedure, hook- up a battery charger to the vehicle during the procedure.

NOTE: VCI Stand-alone reprogramming is not available for this procedure. The laptop/tablet and the VCI must remain connected for the entire procedure.

1. Connect the equipment as follows:

NOTE: VCI Lite and MEDIC 4.0 Toughpad shown for illustration purposes only.



- Turn the MEDIC PC/tablet on. If the battery indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the battery be charged prior to beginning or be used with the A/C power adaptor connected.
- Connect the USB cable to the VCI/VCI Lite. When the laptop/tablet displays the MUT-III SE main screen, connect the USB cable to the device.
- Connect the MUT-III SE main harness with the blue DLC connection to the VCI/VCI Lite. Connect the blue connection of the MUT-III SE main harness to the vehicle's data link connector.
- For VCI only: Turn the VCI power switch ON. Verify that the indicator lamp in the upper right corner of the screen is green.

⚠ CAUTION

DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS DURING THE REPROGRAMMING PROCESS AS IT COULD CAUSE THE CONTROL UNIT TO LOSE DATA. IF THE USB CABLE IS DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.

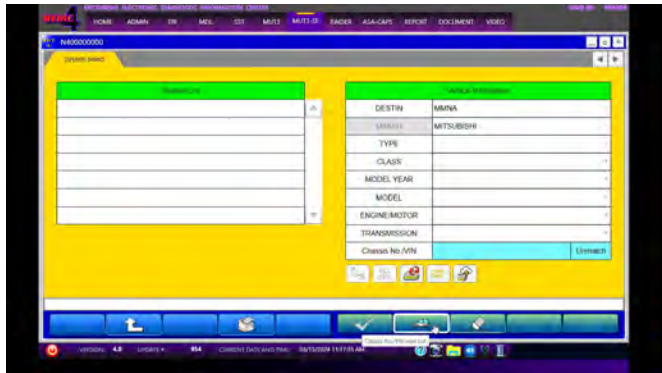
NOTE: Due to limited space it may be easiest to connect battery charger cable onto ground point.



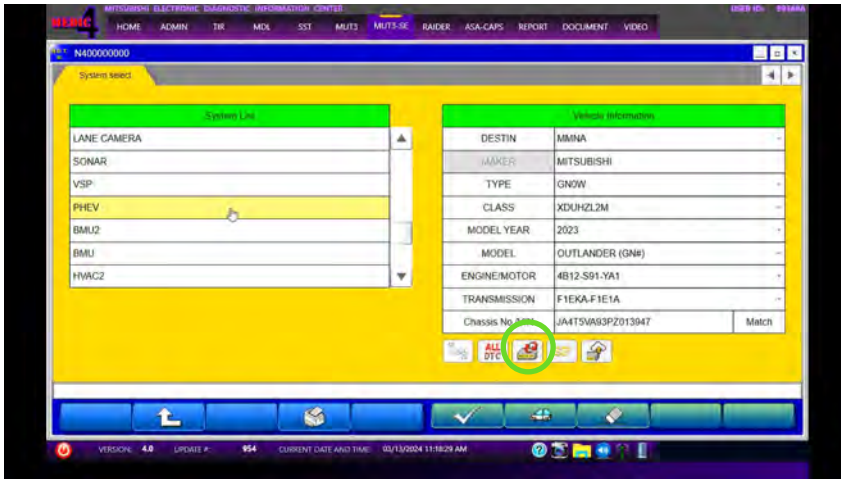
2. Turn the ignition switch to the "ON" position.
3. Turn on flashers to prevent vehicle from shutting/powering down.
4. Press the MUT-III SE STV button.



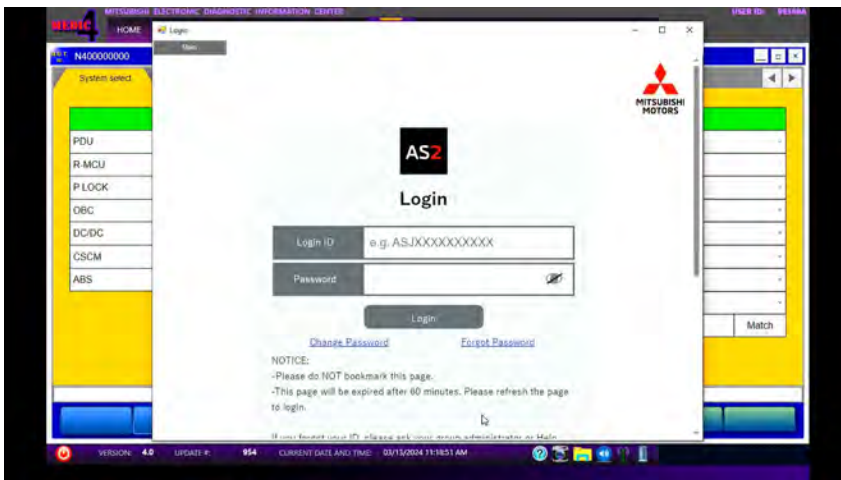
5. Press the Chassis No/VIN read out (car icon) and verify all vehicle information. Look at the label on the passenger side B pillar to identify the appropriate class. (See B pillar label below; class is labeled as "model").



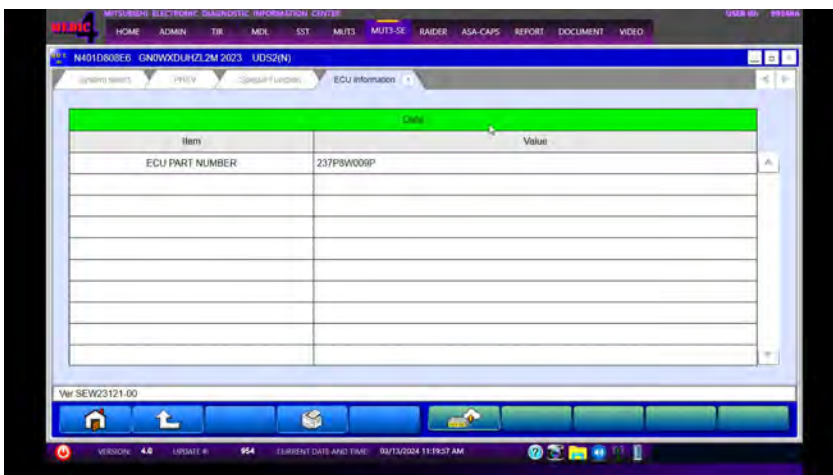
- Verify the Vehicle Information and if correct, select PHEV from the System List and press the ECU reprogramming button.



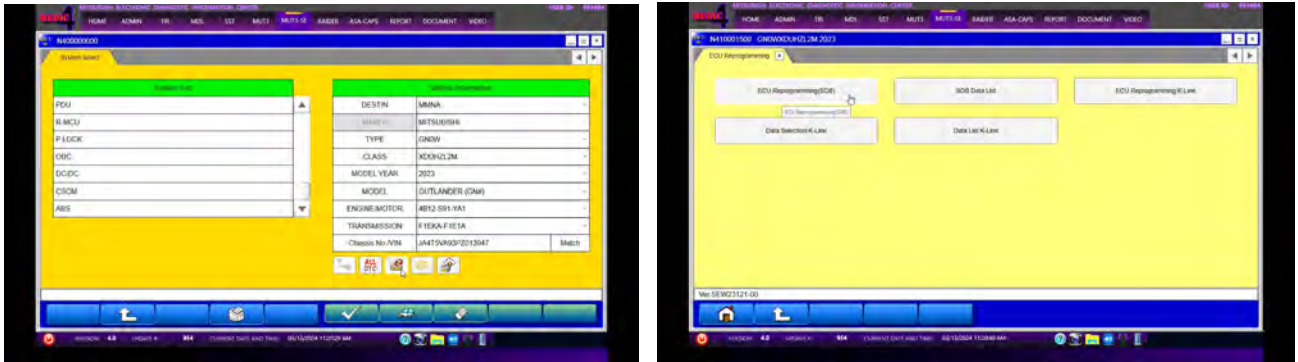
- Log-in with AS2 credentials.



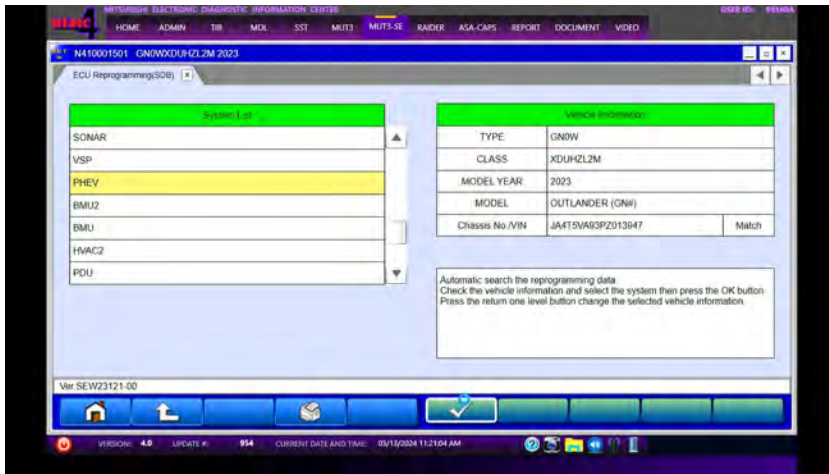
- Refer to the Reprogramming Chart and verify the ECU Part Number.



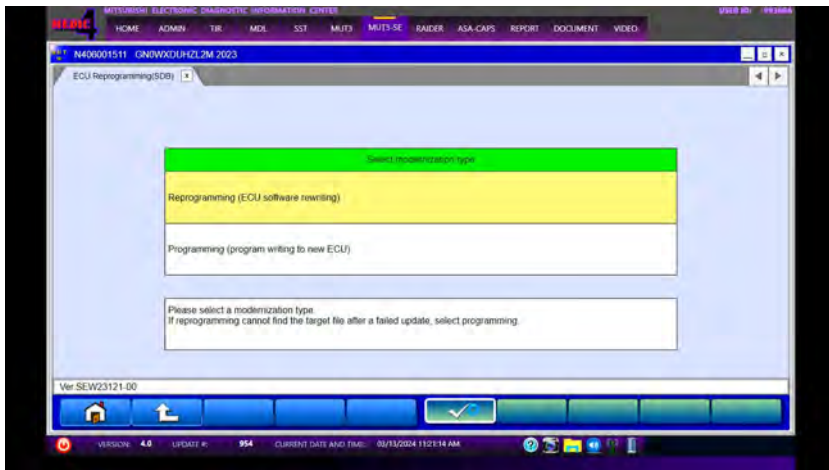
9. Press the ECU reprogramming button.



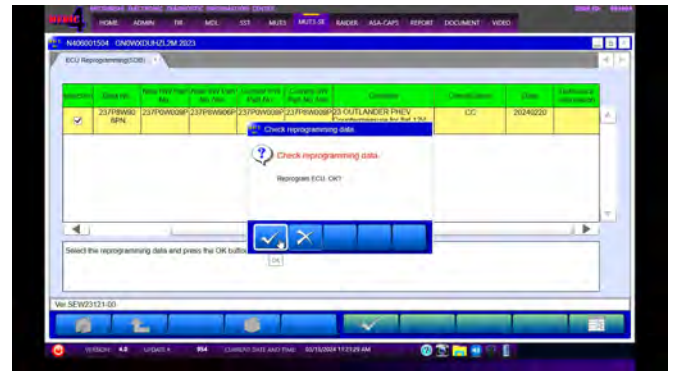
10. Choose PHEV from the System List and press the OK button.



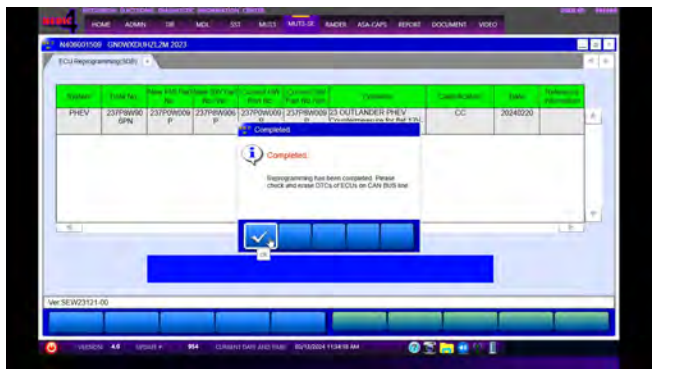
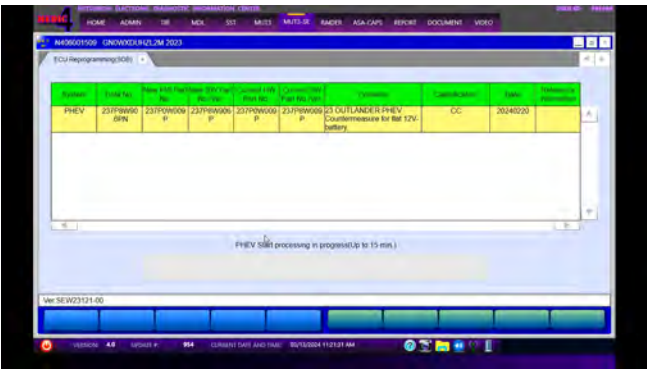
11. Select Reprogramming (ECU software rewriting) for the modernization type and press OK.



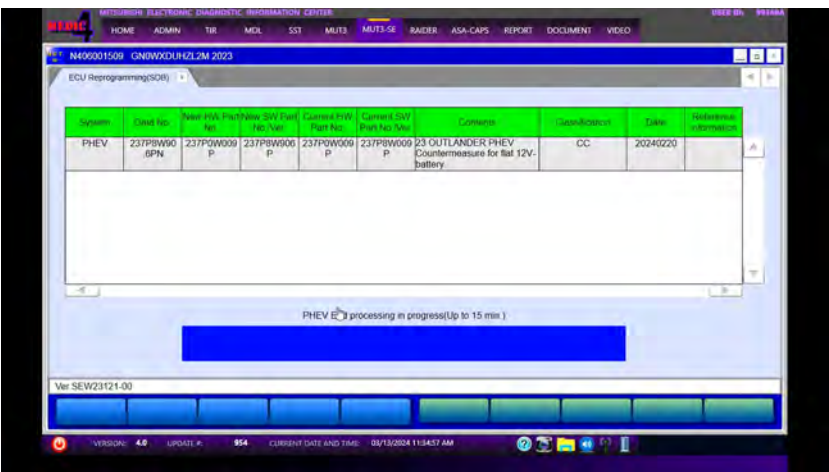
12. Check the reprogramming data and press the OK button.



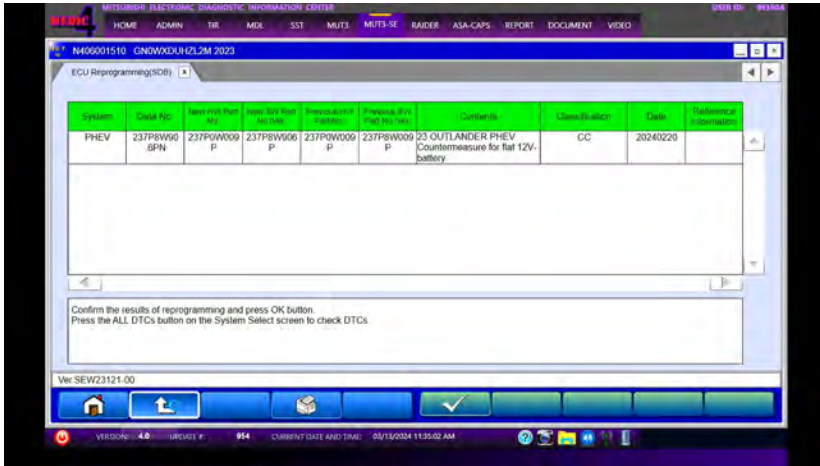
13. A progress status bar will appear. Please allow up to 15 minutes for completion. When completed, press the OK button.



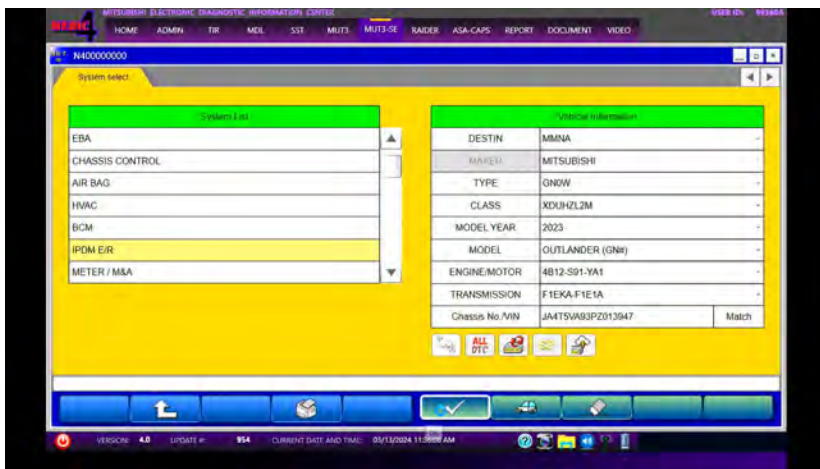
14. PHEV End processing will begin and a process status bar will appear.



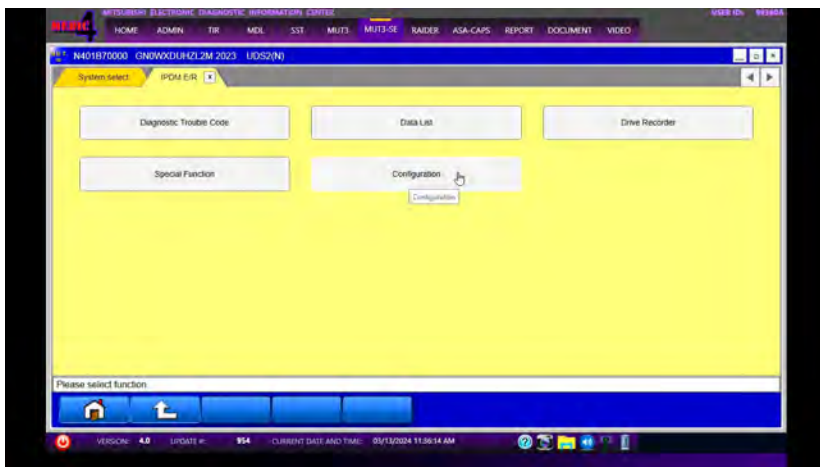
15. Refer to the Reprogramming Chart to confirm the results.



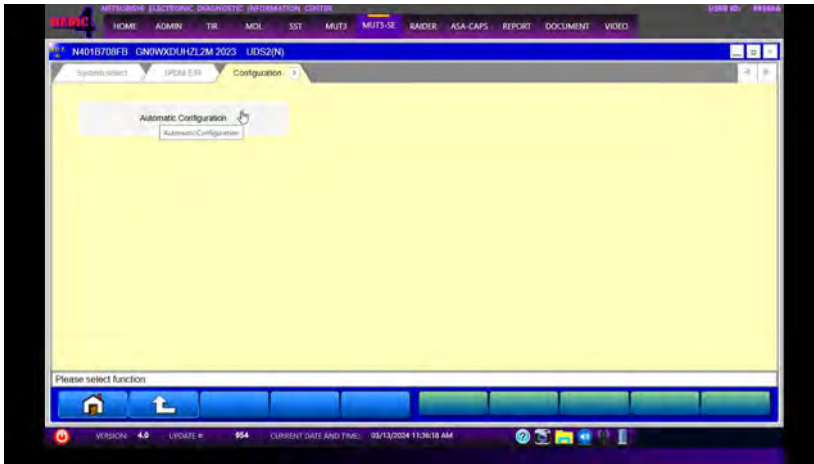
16. Return to the System List under the System Select tab choose IPDM E/R and press the OK button.



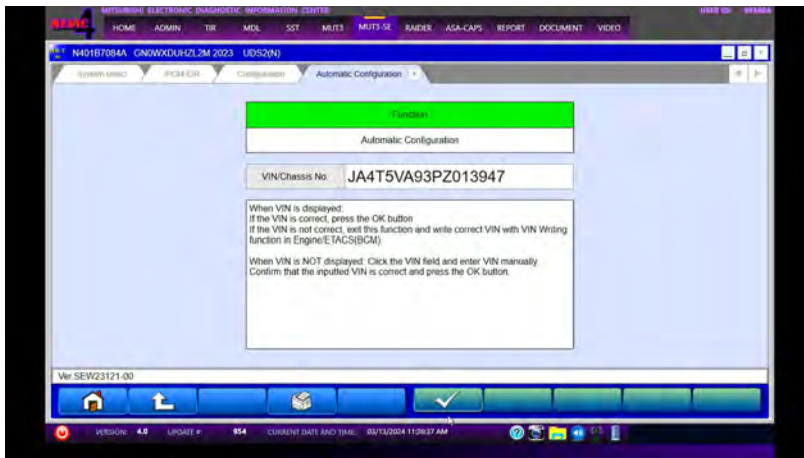
17. Press the Configuration button.



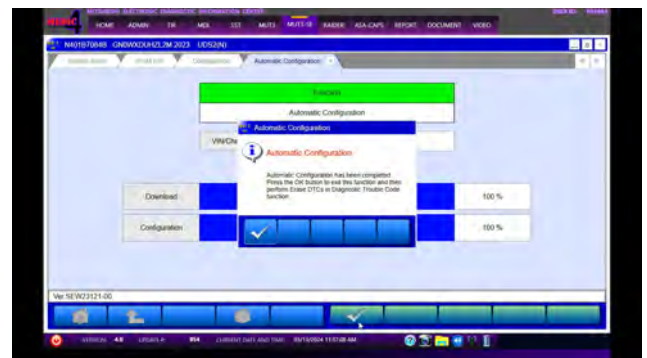
18. Press the Automatic Configuration button.



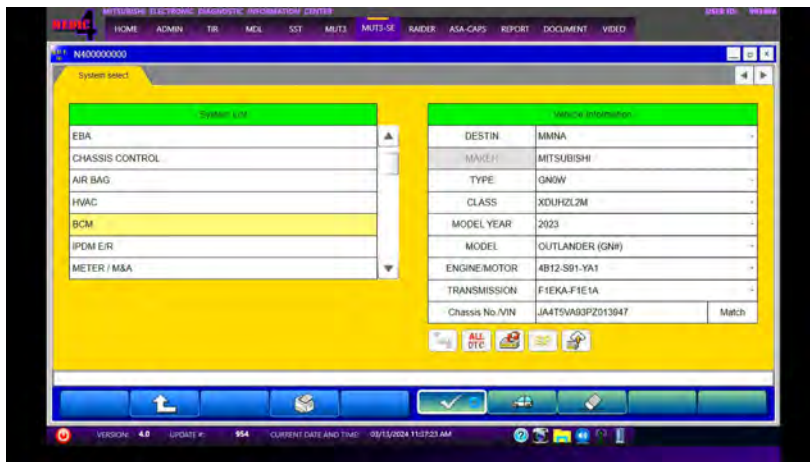
19. Verify the VIN/Chassis Number and press the OK button.



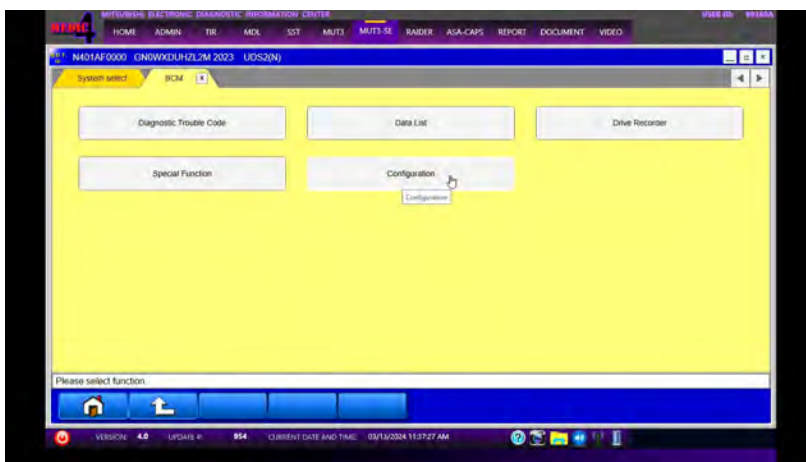
20. Automatic Configuration begins and a status bar will be displayed. Upon completion press the OK button.



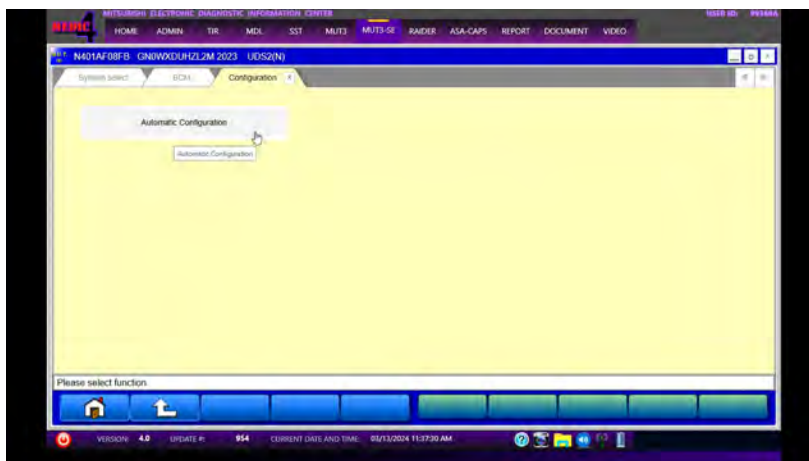
21. Return to the System List under the System Select tab, choose BCM and press the OK button.



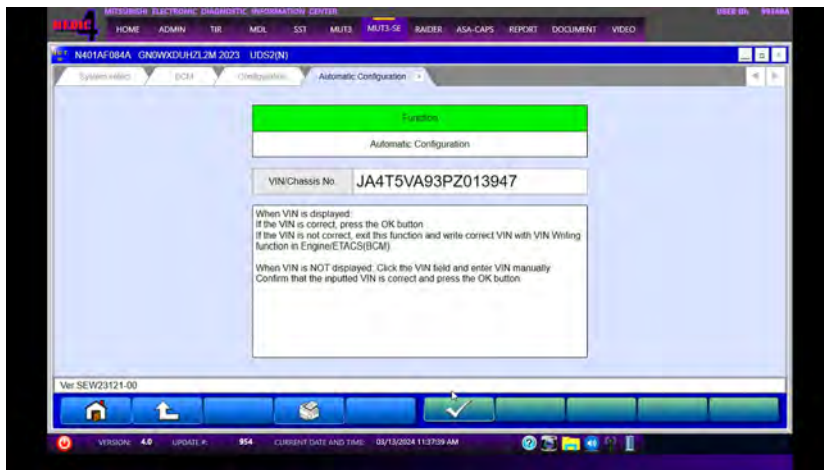
22. Press the Configuration button.



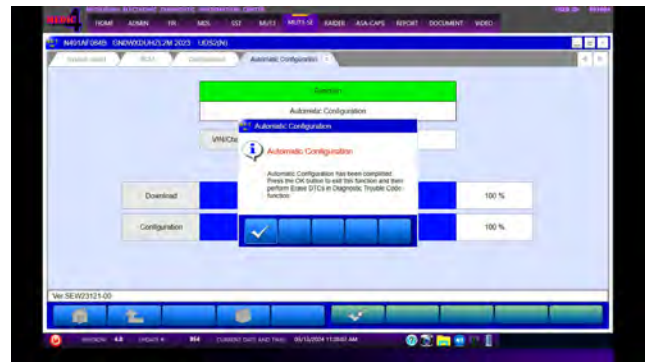
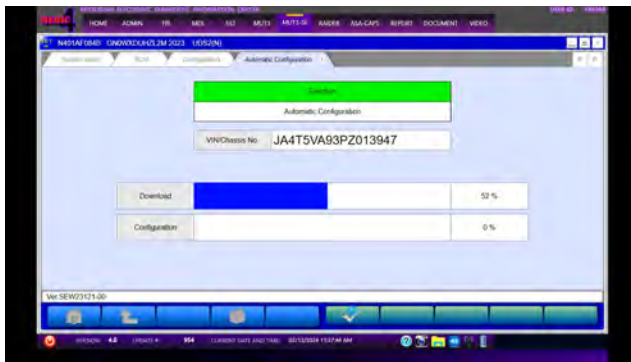
23. Press the Automatic Configuration button.



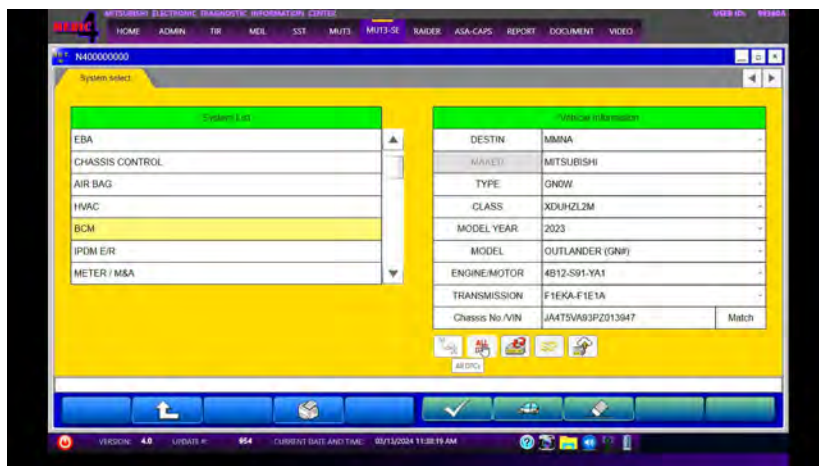
24. Verify the VIN/Chassis Number and press the OK button.



25. Automatic Configuration begins and a status bar will be displayed. Upon completion press the OK button.



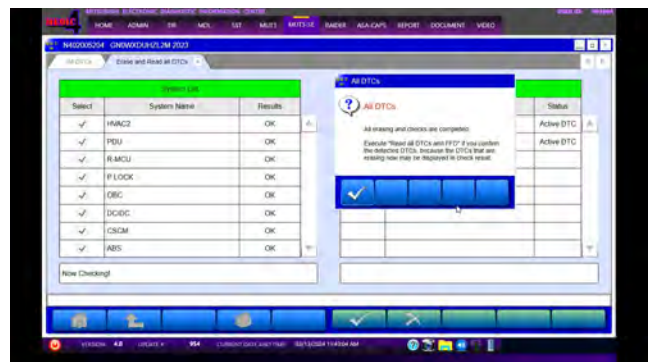
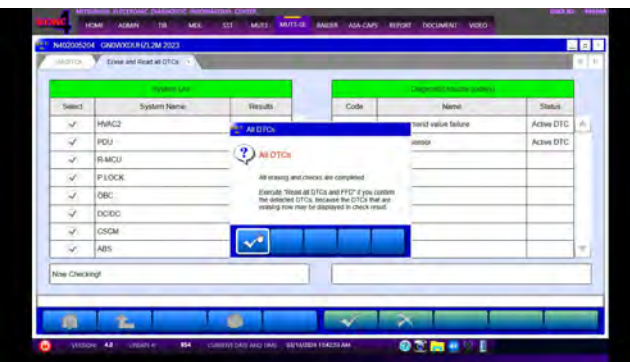
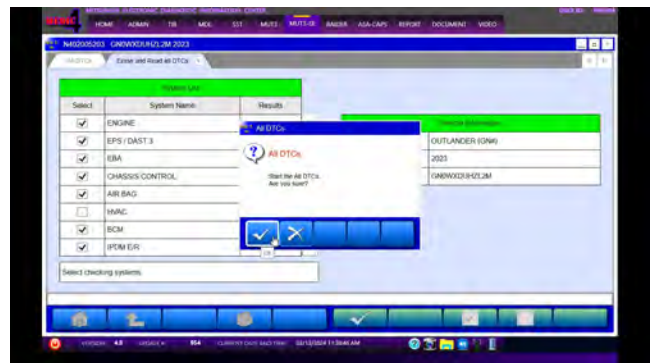
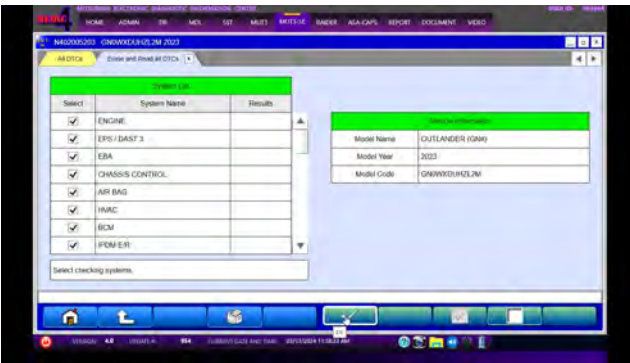
26. Turn the ignition switch OFF for 10 seconds then press the All DTCs button.



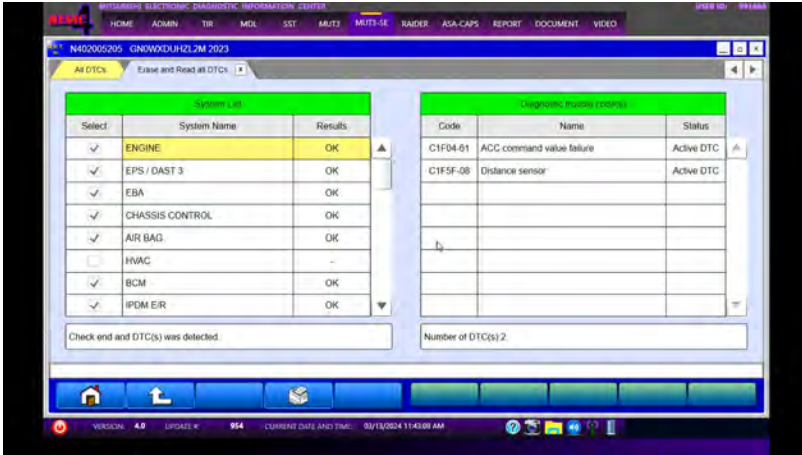
27. Press the Erase and Read all DTCs button.



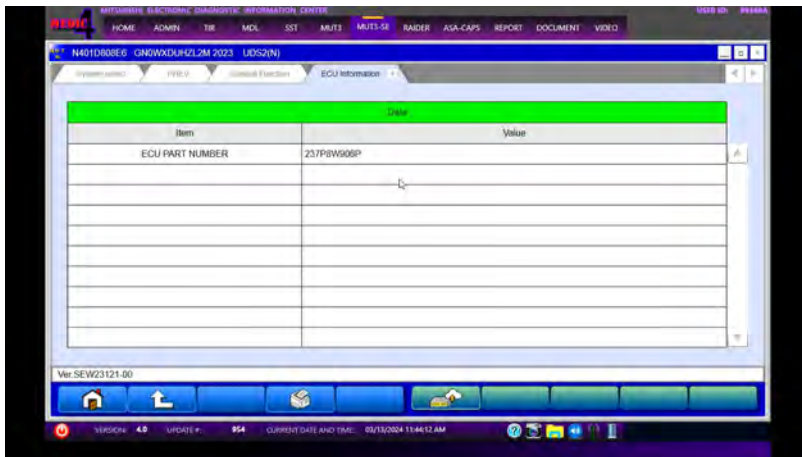
28. Select the systems, press the OK button. To start All DTCs press the OK button.



29. Review results and resolve any Active DTCs.



30. Refer to the Reprogramming Chart to confirm ECU information.



31. Using a ball-point pen, enter the appropriate ECU part number, Software Part Number (ROM ID#), this Technical Service Bulletin number, your dealer code, and the current date on the Engine Compartment/Control Module Label (p/n MSSF024G00). The Vendor Code is not applicable. The label is available from your facing PDC.



32. Test drive the vehicle to confirm proper operation and restore all customer presets if necessary.

SOFTWARE INFORMATION

SOFTWARE REPROGRAMMING CHART

Model	Data No.	New HW Part No.	New SW Part No./Ver.	Target HW Part No.	Target SW Part No./Ver.	Remarks
Outlander PHEV	237P8W90.6PN	-	237P8W906P	237P0WW01P 237P0W009P	237P0WW01P 237P8W009P 237P8W902P	NAFTA With QC
Outlander PHEV	237P8W03.4PN	-	237P8W034P	237P0W013P 237P0W021P	237P8W009P 237P8W902P	NAFTA With QC
Outlander PHEV	237P8W90.7PN	-	237P8W907P	237P0W000P 237P0WW10P	237P0W000P 237P8W010P 237P8W903P	NAFTA Without QC
Outlander PHEV	237P8W03.5PN	-	237P8W034P	237P0W014P 237P0W022P	237P8W014P 237P8W022P	NAFTA Without QC

WARRANTY

This bulletin is supplied as technical information only and is not an authorization to repair. If an affected vehicle is reported with the described condition, diagnose the condition, repair as described in this bulletin and submit a normal warranty claim using the information below.

Operation Code	Operation	Quantity	Work Time
548516PD	<ul style="list-style-type: none"> •Reprogram the PHEV-ECU •Update of BCM/USM 	1	0.5H