



Technical Service Bulletin

SUBJECT: LOUD ELECTRIC COMPRESSOR SOUND WHILE USING HEATER		No: TSB-23-55-007	
		DATE: November 2023	
		MODEL: See below	
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 reflash corrects the rotational speed of the electric compressor to reduce a loud high-frequency operating noise during use of the heater when a vehicle is stationary.

BACKGROUND

The heat pump and air conditioner operate an electric compressor to raise the water temperature. When the water temperature is low, the electric compressor operates at high speed, which can temporarily increase the operating noise.

Upon customer complaint, please reprogram the PHEV A/C amplifier control program (HVAC2) with the countermeasure software to reduce the loud high-frequency noise.

AFFECTED VEHICLES

2023-2024 Outlander Plug-in Hybrid

REPROGRAMMING CAUTIONS

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 with a 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.
- Check the All DTC after reprogramming and if any, erase them.

Copyright 2023, Mitsubishi Motors North America, Inc.

The information contained in this bulletin is subject to change. For the latest version of this document, go to the Mitsubishi Dealer Link, MEDIC, or the Mitsubishi Service Information website (www.mitsubishitechinfo.com).

EQUIPMENT

- The following equipment is needed to reprogram the **HVAC2**
- 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 **830** or higher
- For Standalone MUT III units, MUT3-SE Reprogramming Database **N230901NR** 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	27531W01.1PN		27531W011P		27531W002P	23-24MY

REPAIR PROCEDURE

SOFTWARE/MEDIC VERSION VERIFICATION

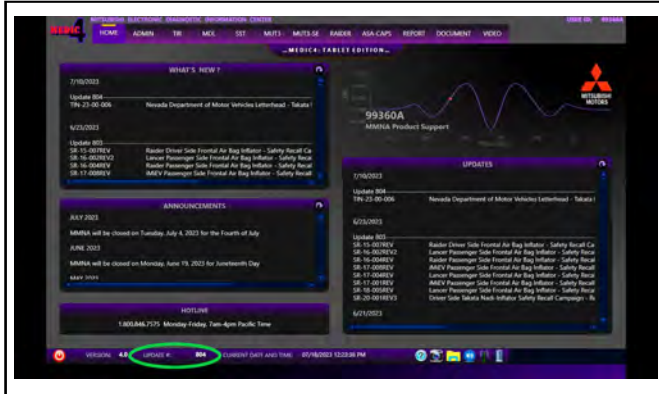
1. Verify that the **HVAC2** has not already been updated to the latest S/W number in the table above. If the **HVAC2** is at the latest level, reprogramming is not necessary.

NOTE: Reprogramming the target **HVAC2** with the latest database (e.g., **N230901NR** includes all past and current reprogramming for TSBs of affected vehicles. It is not necessary to reprogram the **HVAC2** for each previous TSB.

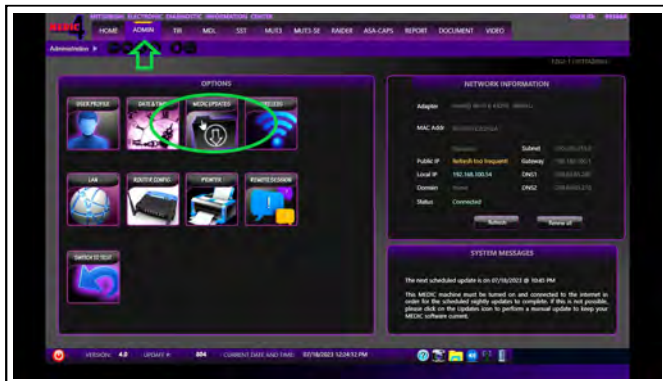
For MEDIC 3.5/4 users only: (MUT-III SE users go to step 5)

2. Verify the MEDIC 3.5/4 is at version 3.5/4 and at update **830** or higher.

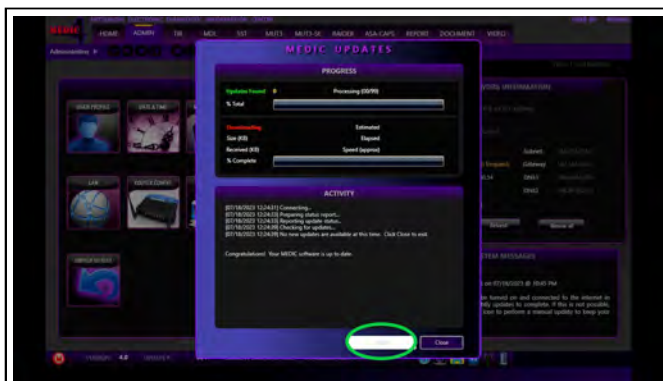
If your **MEDIC 3.5/4 update is at least 830** continue with the Reprogramming Procedure. If your **MEDIC 3.5/4 update is below 830**, update your MEDIC as follows.



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



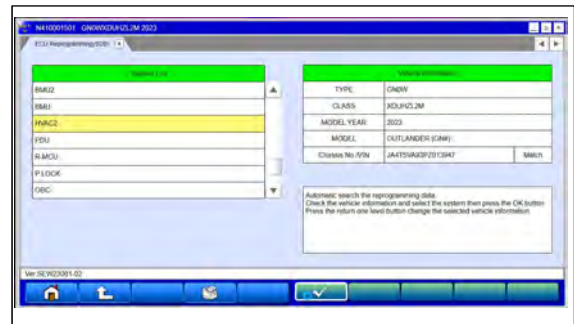
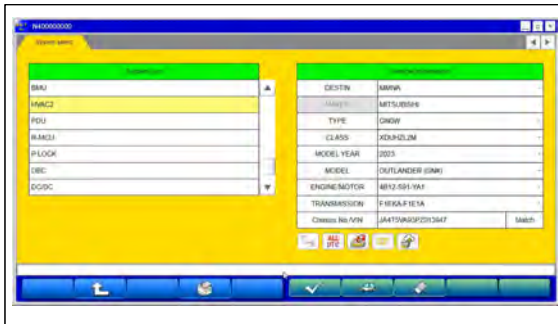
4. If the MEDIC update screen advises updates are available, click the "Begin" button. After all updates are complete, **GO TO THE REPROGRAMMING PROCEDURE**.



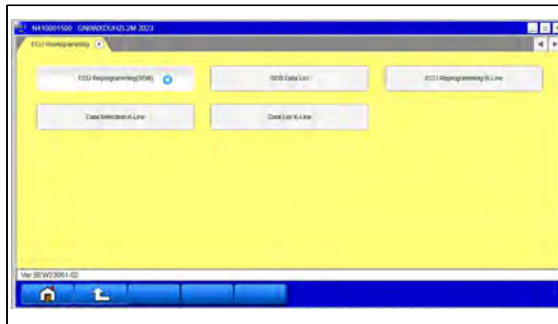
5. Click "STV".



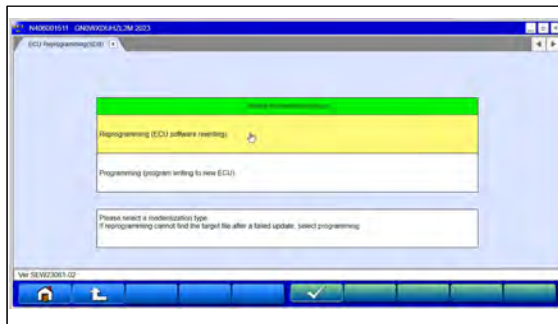
a. Confirm the vehicle information is accurate, select **HVAC2** and click the OK button.



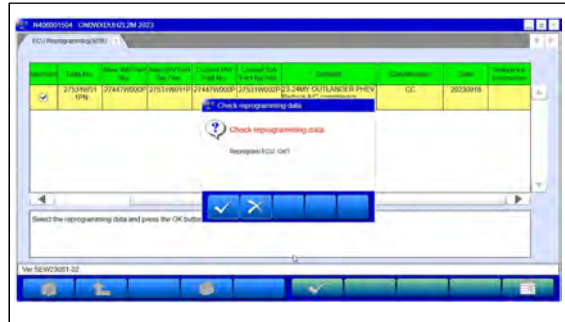
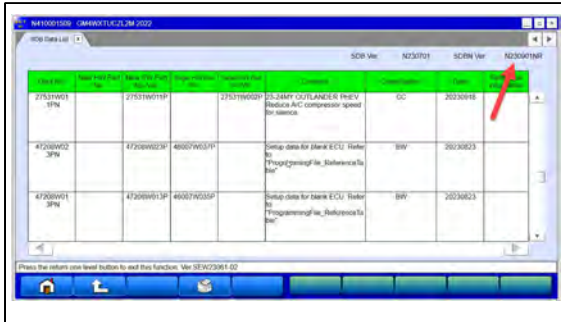
b. Click "ECU Reprogramming (SDB) and press the OK button".



c. Select "Reprogramming (ECU software rewriting)" click the OK button.



- d. Confirm that the database number displayed is **N230901NR** or higher.
- i. If the database number displayed on your MUT3-SE is **N230901NR** or greater, continue to the next section.
 - ii. If the reprogramming database number displayed on your MUT3-SE is lower than **N230901NR**, then the MUT3-SE database needs to be updated.
 - iii. Confirm the New HW Part No., click in the selection box and press the OK button.



REPROGRAMMING PROCEDURE

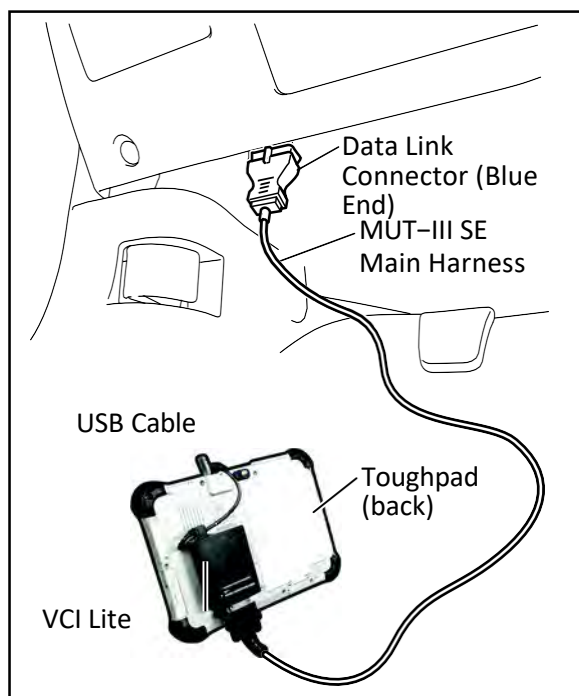


To ensure that the vehicle battery maintains 12V during the procedure, hook- up a battery charger to the vehicle during the procedure.

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.

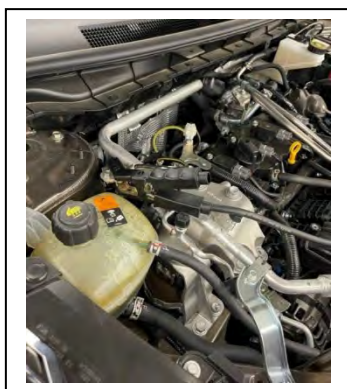
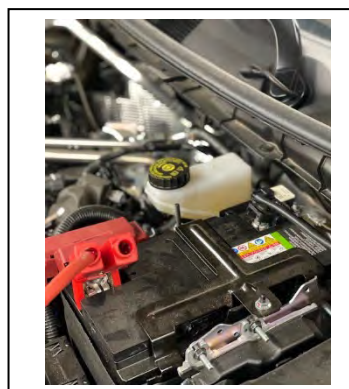


- Turn the MEDIC PC/tablet on. If the battery indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the battery be charged prior to beginning or be used with the A/C power adaptor connected.
- Connect the USB cable to the VCI/VCI Lite. When 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 (p/n MB991824): Turn the VCI power switch ON. Verify that the indicator lamp in the upper right corner of the screen is green.



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.

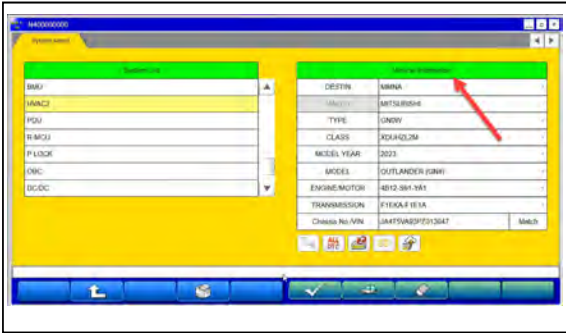
NOTE: Due to limited space it may be easiest to connect cable onto negative ground post and ground strap as shown below.



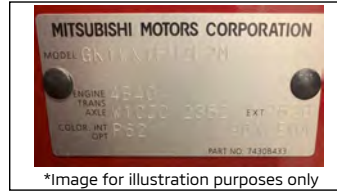
2. Turn the ignition switch to the "ON" position.



3. Using MEDIC, from the main page, click the "MUT3-SE" icon at the top center of the screen.



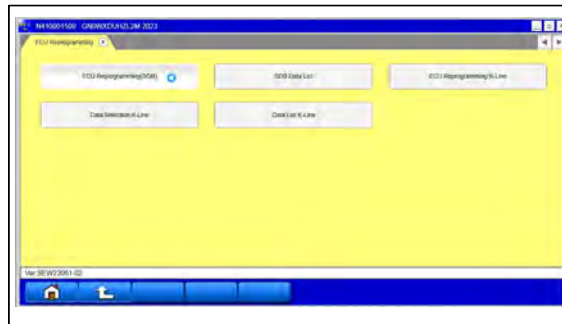
4. The System Select screen opens and populates with some basic information from the vehicle. Look at the label on the passenger side B pillar to identify the appropriate class. (See B pillar label below; class is labeled as "model"). If necessary, select the correct class from the drop-down list.



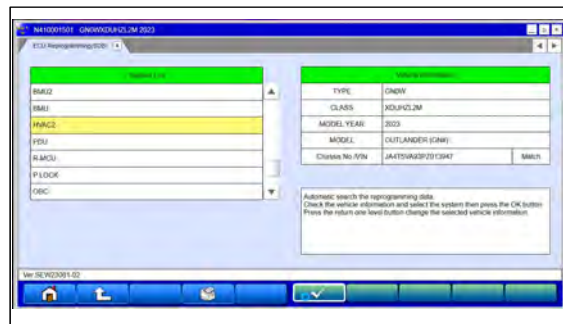
*Image for illustration purposes only

5. Verify that the ECU has not already been updated to the latest S/W number shown in the "ECU Reprogramming Chart" in this TSB. If the ECU is at the latest level, reprogramming is **not** necessary. If reprogramming is necessary, proceed with the following steps.

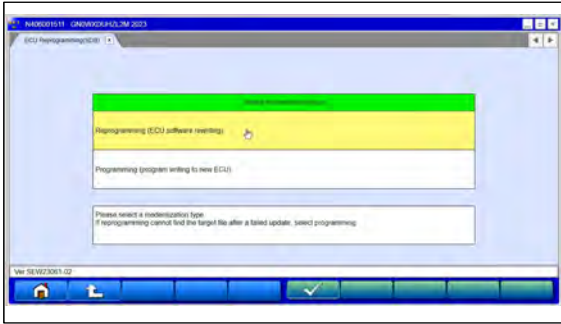
a. Select ECU Reprogramming (SDB).



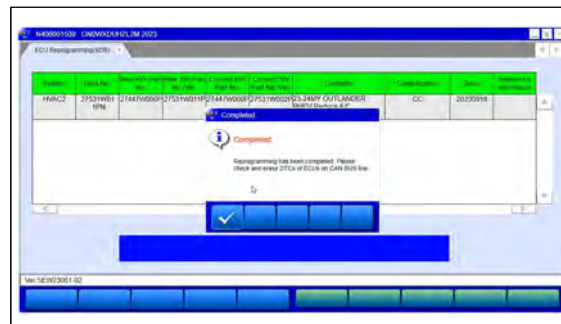
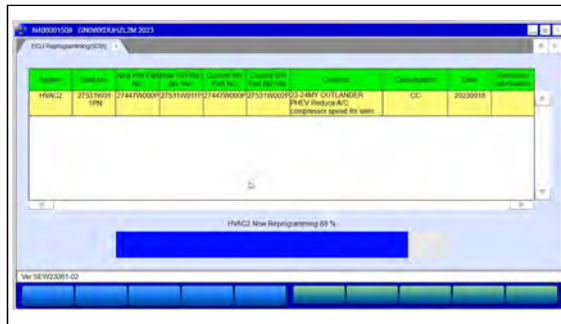
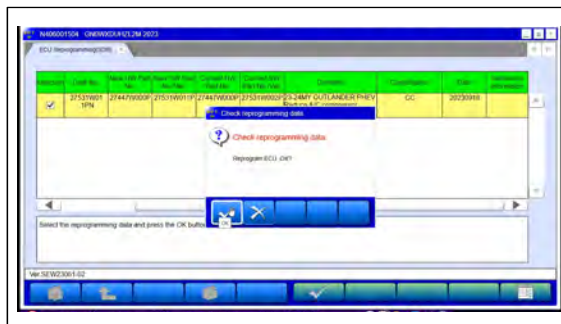
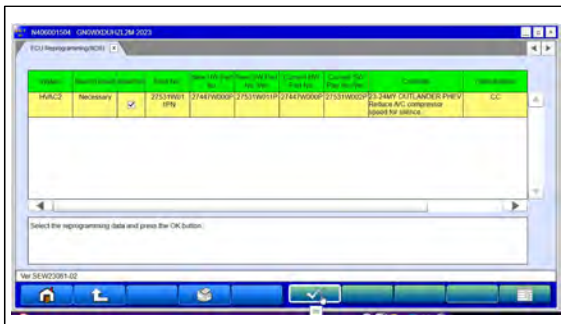
b. Select "HVAC2" in the System List and press the OK button.



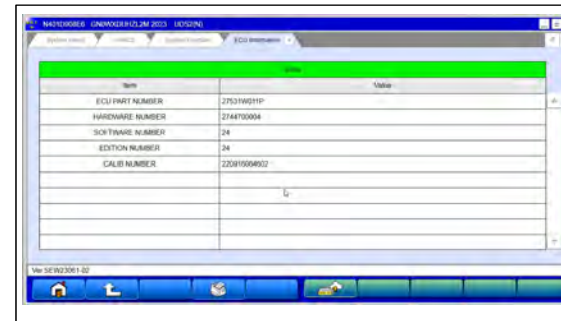
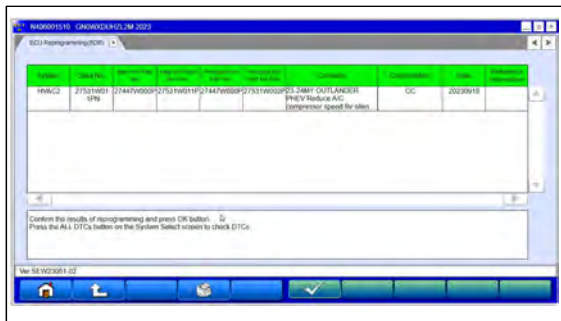
c. Select "Reprogramming (ECU software rewriting)" click the OK button.



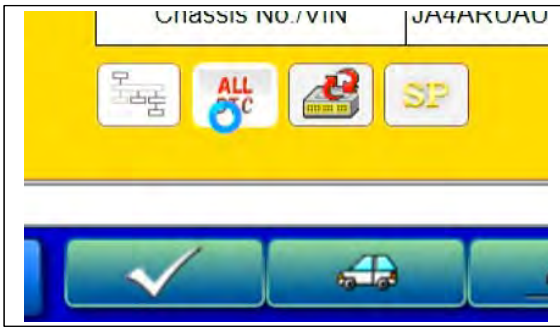
d. Click the selection box and press the OK button. Reprogramming will begin and a progress bar will appear followed by a notification upon successful completion.



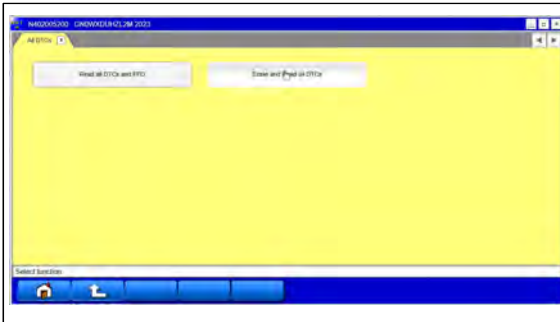
e. Confirm the reprogramming results and press the OK button.



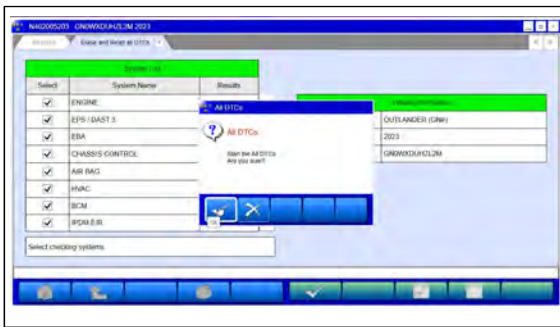
f. Select ALL DTCs.



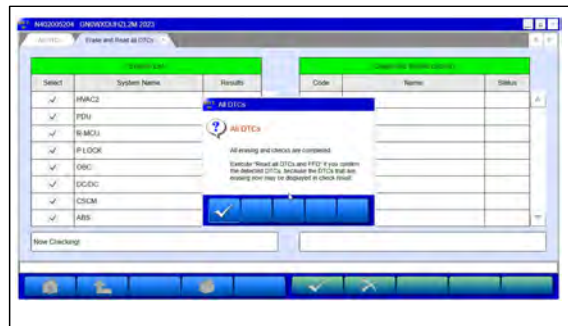
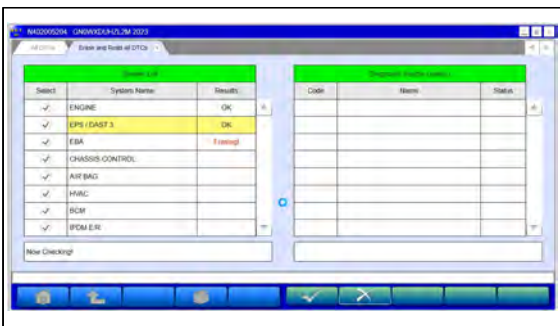
g. Select Erase and Read all DTCs.



h. Click the OK button to begin.



i. Results and a completion notification will be displayed.



j. If an active DTC is found after reprogramming, perform auto-configuration according to the Service Manual, confirm DTC is no longer active and erase DTC's in all systems.

6. 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.

 MITSUBISHI <small>IMPORT SALES OF AMERICA, INC.</small>		AUTHORIZED MODIFICATIONS		These Modifications Have Been Approved as Appropriate by EPA and TMSB	
THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:					
PART NUMBER 1860DXXX		VENDOR CODE N/A		ROM ID # ENG 1860C2XXXX	
TSB ENG TSB-20-13-XXX		A/T		DATE 06/25/20	
A/T <i>Engine Compartment Label</i>		DEALER CODE 99332		 AUTHORIZED MODIFICATIONS  MITSUBISHI <small>IMPORT SALES OF AMERICA, INC.</small> P/N Vndr Code TSB Dir Code Date <i>Control Module Label</i> 	

7. Test drive the vehicle to confirm proper operation.

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.

Labor Op Code	Operation	Quantity	Work Time
558527MG	PHEV A/C amplifier control program update	1	0.3H