



Technical Service Bulletin

SUBJECT: ENGINE DOES NOT START DUE TO SOFTWARE COMMUNICATION ERROR BETWEEN OSS-ECU/ KOS-ECU		No: TSB-21-54A-001	
		DATE: April 2021	
		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 type="checkbox"/> SALES MANAGER

PURPOSE

This reflash is to correct a communication error that may occur between the One-Touch Start System (OSS) and Engine Control Unit (ECU) **or** the Keyless Operating System (KOS) and Engine Control Unit (ECU), resulting in a no start of the engine.

- When pressing the One-Touch Start System button (OSS), the engine will not start and a warning message "immobilizer system service required" will appear on the multi information display with the following DTCs:
 - B2417 - OSS authenticate error OSS
 - B1139 - KOS authenticate timeout
 - B1136 - Stop light switch

This TSB instructs dealers to conduct the following repairs within the warranty period, or on a customer complaint basis to:

- When "both the B2417 and B1139 DTCs" **or** all three B2417, B1139, and B1136 DTCs" are detected; reprogram the software of the OSS-ECU with the countermeasure software.
- When DTC "B1157"* is detected **along with** B2417, B1139, and B1136; replace the OSS-ECU with a new one in accordance with the workshop manual.

*Check the software version of the new OSS-ECU and if it is not the latest version, reprogram the OSS-ECU with the countermeasure software.

NOTE: If the software of the new ECU is the latest version, no need to reprogram the software.

AFFECTED VEHICLES

2011 - 2021 Outlander Sport / RVR (equipped with OSS / KOS)

NOTE: The software was modified December 18, 2020 and the VIN cut off: JA4APVAU8MU014266.

IMPORTANT

To maximize customer satisfaction with the quality of their vehicle, affected new or used inventory vehicles should be remedied before the vehicle is delivered. Dealers must check their inventory vehicles' VINs on the Warranty Superscreen to verify whether the vehicle is involved in this service bulletin.

REPAIR PROCEDURE

- Confirm your MUT-III SE is updated with the latest reprogramming database.
- Write down all of the electrical device settings such as A/C and radio before reprogramming. The settings should be restored after 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.
- Make sure the USB cable and MUT-III SE main harness are not damaged.
- Connect the MUT-III SE to an AC power source to prevent internal battery discharge.
- **Stay away from the under hood area during reprogramming.** If the connection between the engine ECU and ETACS is lost, the cooling fan operates as fail-safe.

NOTE: If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated before reprogramming, and DTCs are listed in the ECU memory, diagnose and repair those DTCs per the service manual before reprogramming. DO NOT reprogram the ECU until the reason(s) for other DTCs being set has been corrected.

EQUIPMENT

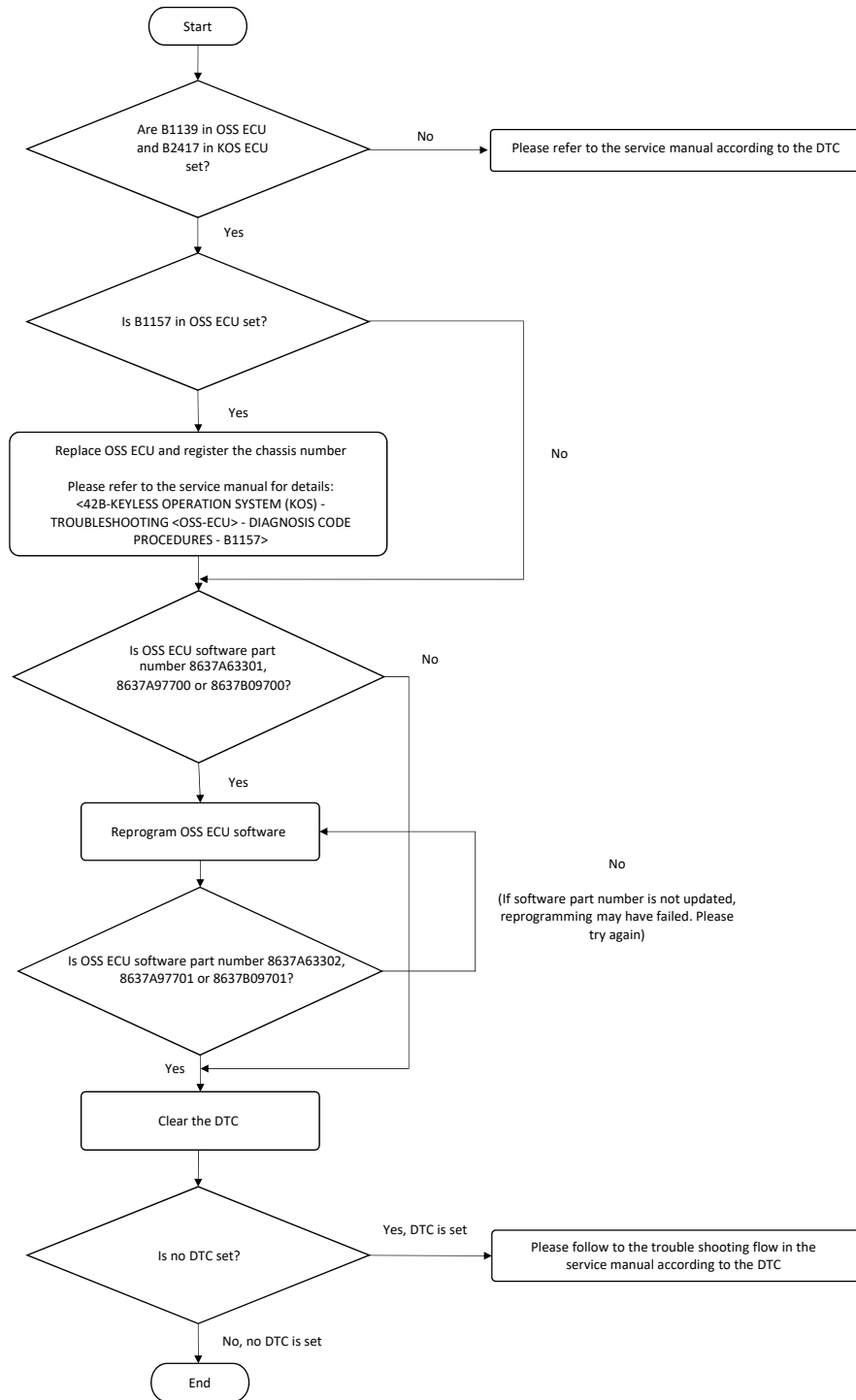
The following equipment is needed to reprogram the ECU:

- 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 **681** or higher.
- For Standalone MUT III units, MUT3-SE Reprogramming Database **N201201** or higher.

ECU REPROGRAMMING CHART

Model Year	Data Number	New HW Part Number	New SW Part Number/Version	Old HW Part Number	Old SW Part Number/Version
2011-12	8637C874	8637A633	8637A63302	8637A633	8637A63301
2013	8637C875	8637A977	8637A97701	8637A977	8637A97700
2014-21	8637C875	8637B097	8637B09701	8637B097	8637B09700

Outlander Sport OSS-ECU Troubleshooting

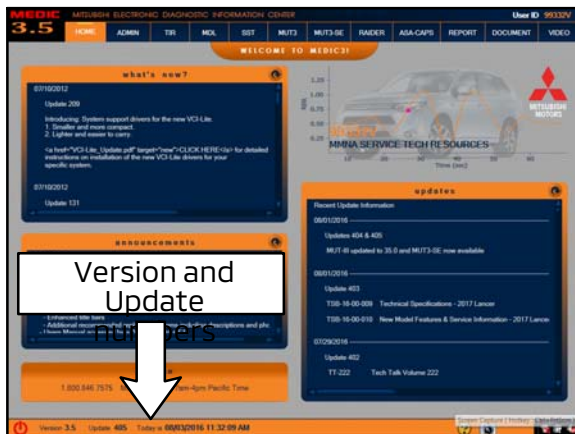


REPAIR PROCEDURE

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 Engine ECU is at the latest level, reprogramming is not necessary.

NOTE: Reprogramming the Engine ECU with the latest database (e.g., **N201201**) includes all past and current reprogramming for TSBs of affected vehicles. It is not necessary to reprogram the ECU for each previous TSB.



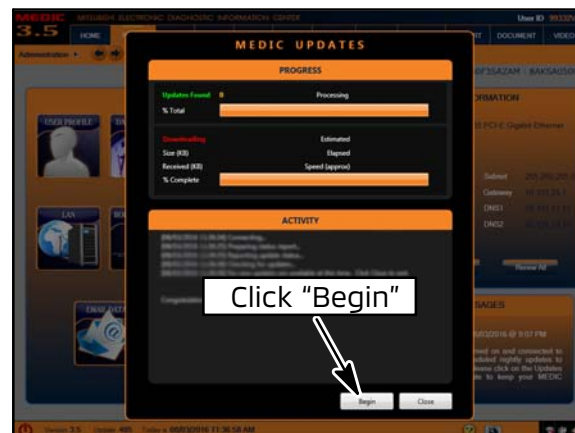
For MEDIC 3.5/4 users only: (MUT-III SE STV users go to step 5)

2. Verify the MEDIC 3.5/4 is at version 3.5 and at update **681** or higher.

If your **MEDIC 3.5/4 update is at least 681**, continue with the Reprogramming Procedure. If your **MEDIC 3.5/4 update is below 681**, update your MEDIC as follows.



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

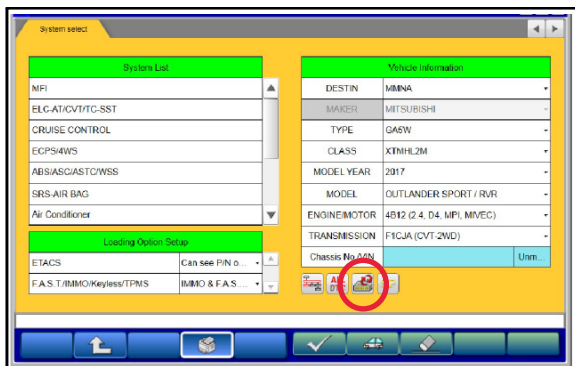


4. If the MEDIC update screen advises updates are available, click the "Begin" button. After all updates are complete, **GO TO THE REPROGRAMMING PROCEDURE.**



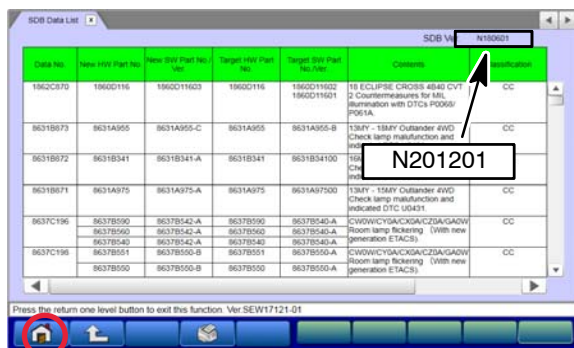
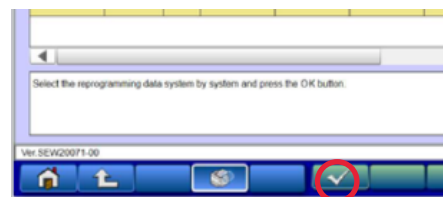
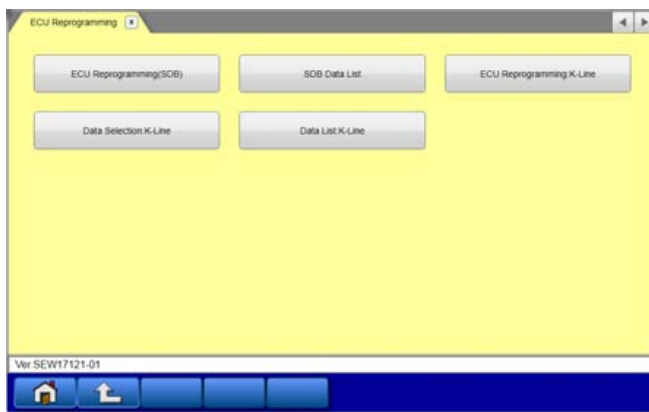
5. STANDALONE MUT-III SE SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3.5 USERS - GO TO THE REPROGRAMMING PROCEDURE). Verify that your MUT3-SE has the most current version of the reprogramming database: From the MUT3-SE Main Page:

a. Click "STV."



b. Click the "ECU Reprogramming" button.

c. Click "SDB Data List, select the reprogramming data system and press the OK button"



d. Confirm that the database number displayed in the upper right above the chart is **N201201 or higher**

- If the database number displayed on your MUT3-SE is N201201 or greater, continue to the next section.
- If the reprogramming database number displayed on your MUT3-SE is **lower** than **N201201**, then the MUT3-SE database needs to be updated. Once database number is confirmed, hit the Home button to go back to the System Select screen.

e.

REPROGRAMMING PROCEDURE

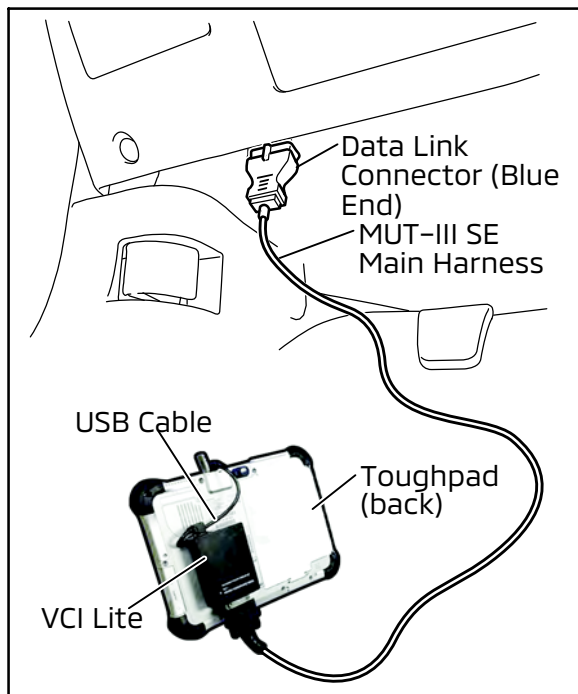
⚠ CAUTION

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 (p/n MB991824): Turn the VCI power switch ON. Verify that the indicator lamp in the upper right corner of the screen is green.

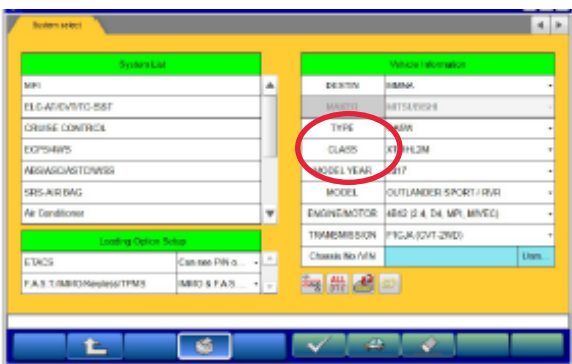
⚠ CAUTION

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.

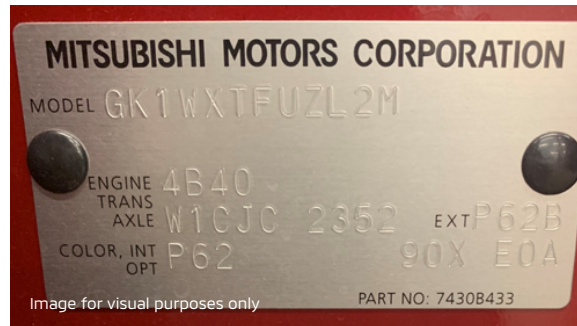
2. Turn the ignition switch to the "ON" position.



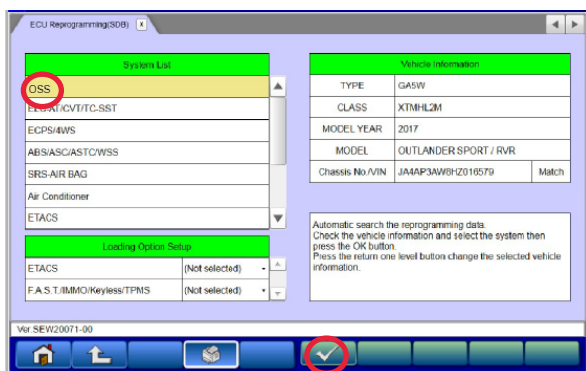
- Using MEDIC, from the main page, click the "MUT3-SE" icon at the top center of the screen to open MUT-III SE. Click the STV button.



- 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.



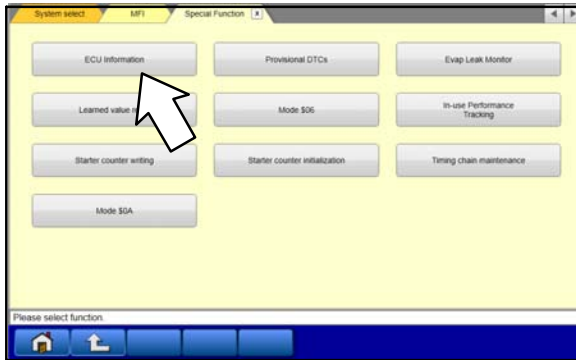
- Verify that the ECU has not already been updated to the latest S/W number shown in the **"ECU Reprogramming Chart"** in this TSB. If the ECU is at the latest level, reprogramming is not necessary.



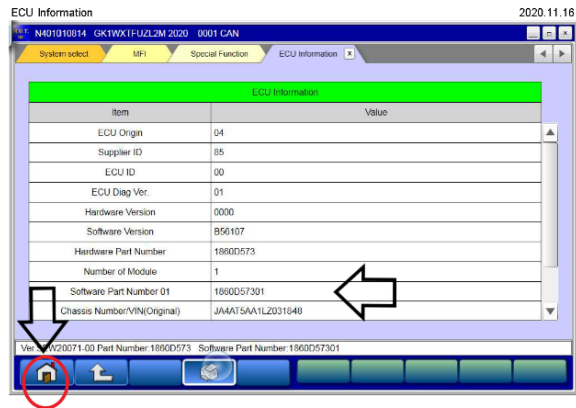
- Select "OSS" from the System List, then click on the check mark at the bottom of the screen.



b. Select "Special Function."



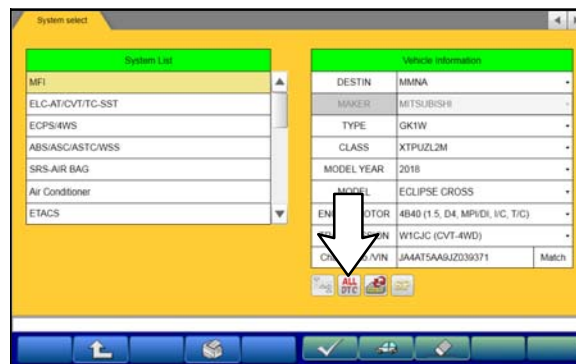
c. Select "ECU Information."



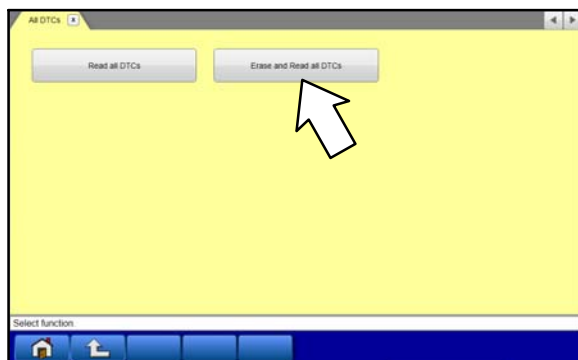
d. If the Software Part Number listed is **not** at the latest level (shown in the **"ECU Reprogramming Chart"** in this TSB), proceed with the next step. Click the Home button to return to the System Select screen.

If the Software Part Number **is** at the latest level, then reprogramming is not necessary.

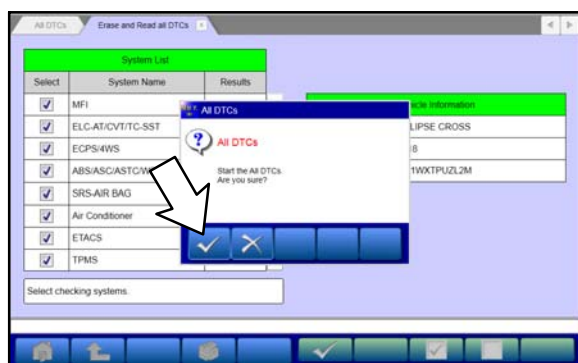
6. Before reprogramming, perform an "Erase and Read All DTCs" to clear any DTCs that may have set.



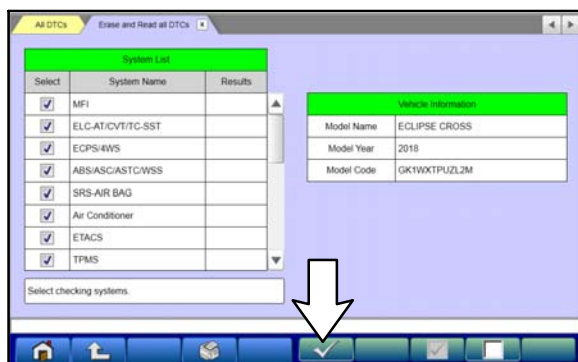
a. On the System Select screen click the "ALL DTC" button.



b. Select "Erase and Read All DTCs."

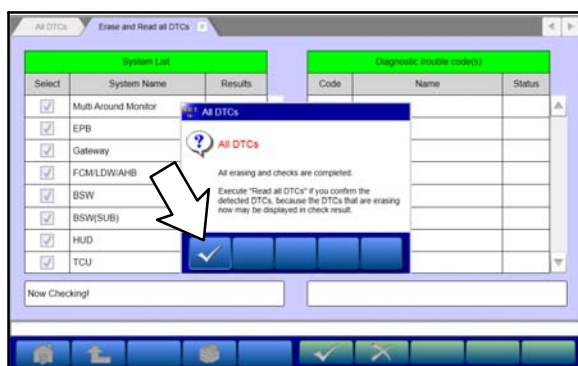


c. A window will pop up asking you to confirm DTC erasing. Click the check mark in the dialog box for DTC erasing and reading to begin.



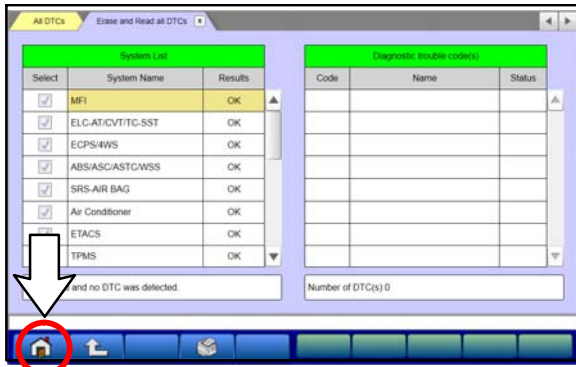
d. The "System List" on the left side of the screen will have all selections checked. Do not change these selections.

e. Click the check mark to continue.

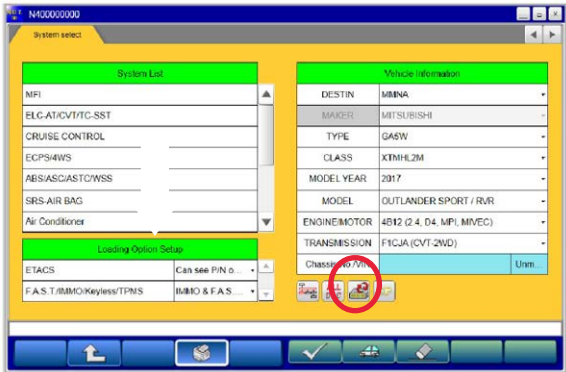


7. When DTC erasing is completed, click the check mark in the pop-up message that reads "All erasing and checks are completed."

a. If any DTCs return after erasing is completed, click the check mark to clear the window. Diagnose and repair per the Service Manual.

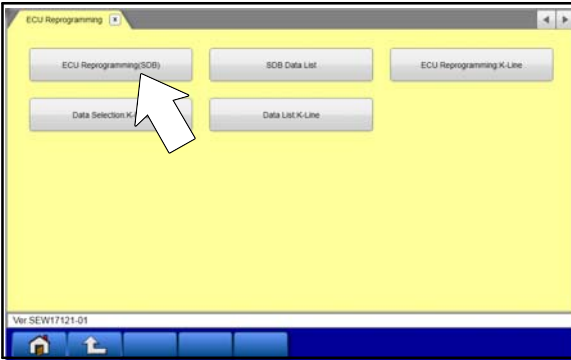


- b. If DTCs do not return, click the check mark to clear the window, then click the Home icon in the lower left to return to the System Select menu.

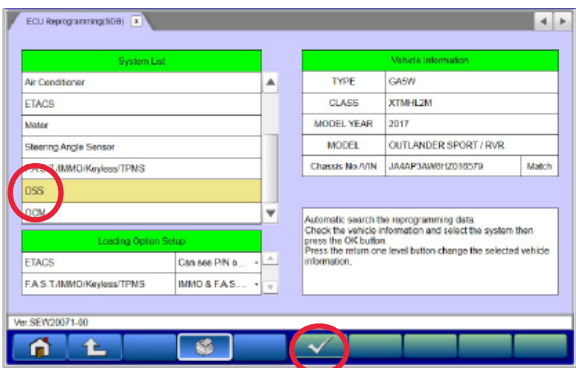


- 8. Reprogram the ECU following the steps below.

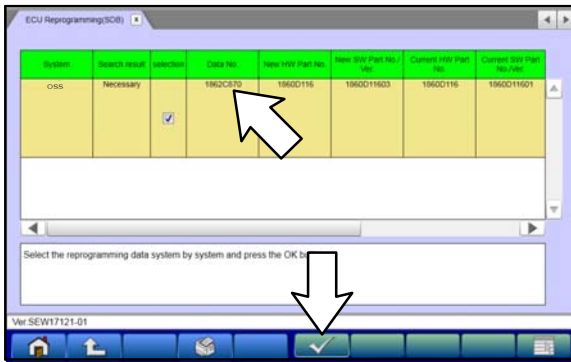
- a. On the System Select page, click on the Reprogram button.



- b. Select "ECU Reprogramming (SDB)."

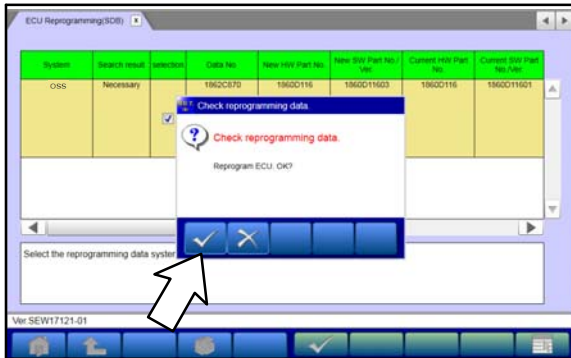


- c. Select "OSS" in the System List, then click the check mark.



d. Verify that the correct data file listed in the table matches the one in the **"ECU Reprogramming Chart."**

e. Click the check mark at the bottom of the page to initiate reprogramming.



f. Click the check mark in the "Check reprogramming data" dialog box.

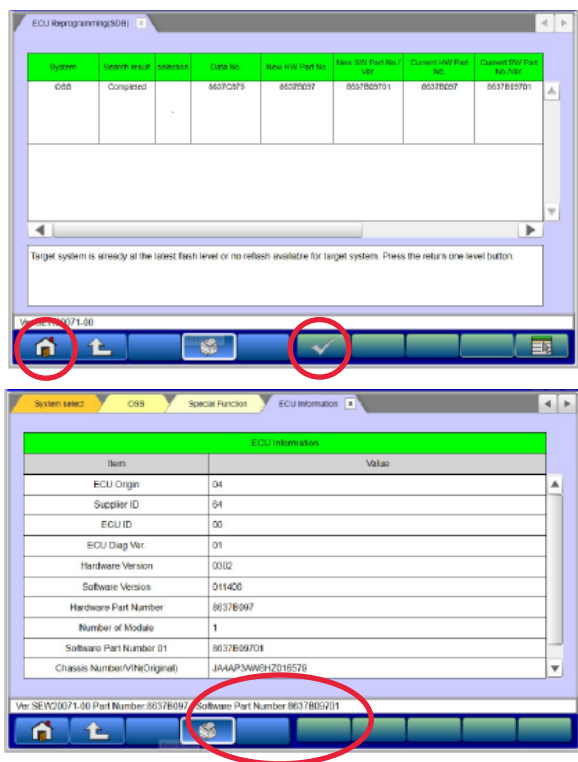


g. Once the reprogramming is initiated, the screen shown will indicate the reprogramming progress.

NOTE: Do NOT disturb the cables or turn off the ignition during reprogramming.



h. Once reprogramming is completed, click the check mark in the "Completed" dialog box.



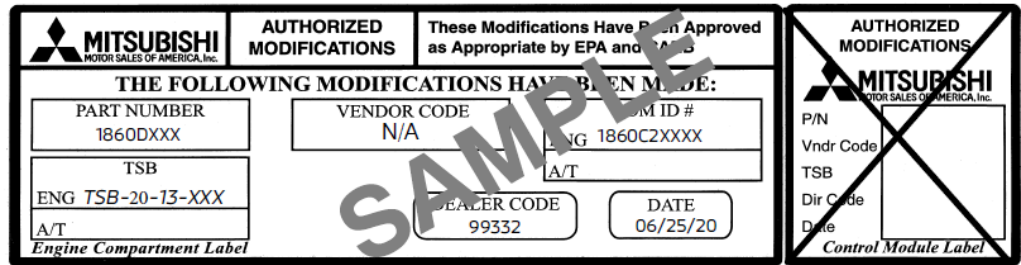
i. Verify the correct information is listed in the table. Click the check mark at the bottom of the page, then click the Home button to return to the System Select screen.

9. Perform an "Erase and Read All DTCs" again to clear any DTCs that may have set. **For instructions, refer to steps 6 and 7 in this TSB.**
10. Confirm the software version has been updated. **For instructions, refer to step 5 in this TSB.**

Confirm "Software Part Number" now matches the NEW one shown in the "ECU Reprogramming Chart" in this TSB.

11. Turn off the ignition switch and disconnect the MUT-III SE. Turn off and disconnect battery charger.

12. 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.



13. Test drive the vehicle to confirm proper operation.

WARRANTY INFORMATION

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 following information below:

Labor Op Code	Operation	Nature Code	Cause Code	Time Allowance
548509 DU	Reprogramming of OSS-ECU	02A	605	0.3 hours
548509 DZ	Replacement of OSS-ECU and Reprogramming of OSS-ECU	02A	605	0.8 hours
548509 EA	Replacement of OSS-ECU	02A	605	0.7 hours