



SERVICE CAMPAIGN BULLETIN

SUBJECT: ENGINE ECU REPROGRAMMING FOR MIL-ILLUMINATION ON 2022-2023 OUTLANDER WITH AWD		No: SC-23-001	
		DATE: June 2023	
		MODEL: 2022-2023 Outlander	
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 bulletin provides instructions to reprogram the Engine ECU software for MIL illumination on 2022-2023 Outlander with AWD.

BACKGROUND

MIL illumination occurs due to disconnection of an electrical wire inside of the exhaust temperature sensor while the vehicle is being driven under a high-load condition such as towing and pressing hard on the accelerator pedal. The heat load of the electrical wire inside of the exhaust temperature sensor exceeds allowable value under the high-load condition and the electrical wire breaks down. Please reprogram the Engine ECU.

AFFECTED VEHICLES

2022-2023 Outlander with AWD/Exhaust Gas Temperature Sensor

- US VIN Cut-off: JA4J4UA84PZ038335
- PUERTO RICO Cut-off: JA4J4VA87PZ039713
- CANADA Cut-off: JA4J4UA85PZ611839

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 campaign.

CUSTOMER NOTIFICATIONS

A letter will be sent to all owners of affected vehicles requesting they schedule an appointment with their local Mitsubishi dealer. *A sample copy of the customer notification letter appears at the end of this bulletin.*

REQUIRED OPERATIONS

Before starting this campaign procedure, CHECK THE WARRANTY SUPERSCREEN to verify if the vehicle is an affected VIN for this campaign and that this campaign procedure has not already been completed.

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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).

IMPORTANT

If MIL is on and any of the following DTCs listed below appear (before reprogramming Engine ECU), proceed with reprogramming. DTCs will be erased automatically by the reprogramming.

NOTE: It is not necessary to replace the exhaust gas temperature sensor.

DTC	DESCRIPTION
P159F-00	ACTIVE GRILLE AIR SHUTTER A
P2081-00	EXHAUST GAS TEMPERATURE SENSOR CIRCUIT INTERMITTENT
P0544-00	EXHAUST GAS TEMPERATURE SENSOR CIRCUIT
P0545-00	EXHAUST GAS TEMPERATURE SENSOR CIRCUIT LOW
P0546-00	EXHAUST GAS TEMPERATURE SENSOR CIRCUIT HIGH

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	237616VN.5AN	-	237616VN5A	237034PM2A	237614PN5C 237614PN5D 237614PN5E	22MY
	237616VN.2AN		237616VN2A		237614PN2C 237614PN2D 237614PN2E	
	237616VN.3AN		237616VN3A		237614PN3C 237614PN3D 237614PN3E	
	237616VM.7BN		237616VM7B		237616VM7A	23MY
	237616VM.8BN		237616VM8B		237616VM8A	
	237616VM.9BN		237616VM9B		237616VM9A	

PROCEDURE

Outline of Procedure

Engine ECU is reprogrammed and learned. Since the learning conditions of IDLE AIR VOLUME LEARNING requires that water temperature to be at 70°C/158°F or higher, proceed with the procedure as soon as a customer vehicle arrives. If the vehicle is not reprogrammed upon arrival perform a warm-up drive.

Reprogramming Operation Steps:

- Engine ECU reprogramming
- ACCELERATOR PEDAL RELEASED POSITION learning
- THROTTLE VALVE CLOSED POSITION learning
- IDLE AIR VOLUME learning (learning condition: water temperature of 70°C/158°F or higher)
- EGR VOLUME CONTROL VALVE CLOSED POSITION learning

PROCEDURE (Continued)

If MIL is on with any of the DTCs below; proceed with reprogramming

P159F-00:ACTIVE GRILLE AIR SHUTTER A
P2081-00:EXHAUST GAS TEMP SENSOR 1 B1
P0544-00:EXHAUST GAS TEMP SENSOR 1 B1
P0545-00:EXHAUST GAS TEMP SENSOR 1 B1
P0546-00:EXHAUST GAS TEMP SENSOR 1 B1

It is not necessary to replace the Exhaust Gas Temperature Sensor (MQ719744)



Caution

General

- Each time the ignition is switched on and off in vehicles equipped with power seats, the seats will automatically move.
- Confirm if there are any scratches on exterior and interior of the vehicle before starting the procedure. In case there is a scratch, confirm with the customer before starting the procedure.
- Confirm the ignition switch is off. The ignition switch automatically turns off about 10 minutes after it is turned on to save the battery.
- Confirm every electrical device is off before starting learning process. The learning process will not be completed if electrical devices are on such as A/C, headlamps, rear window defroster and wiper defroster.

ECU reprogramming

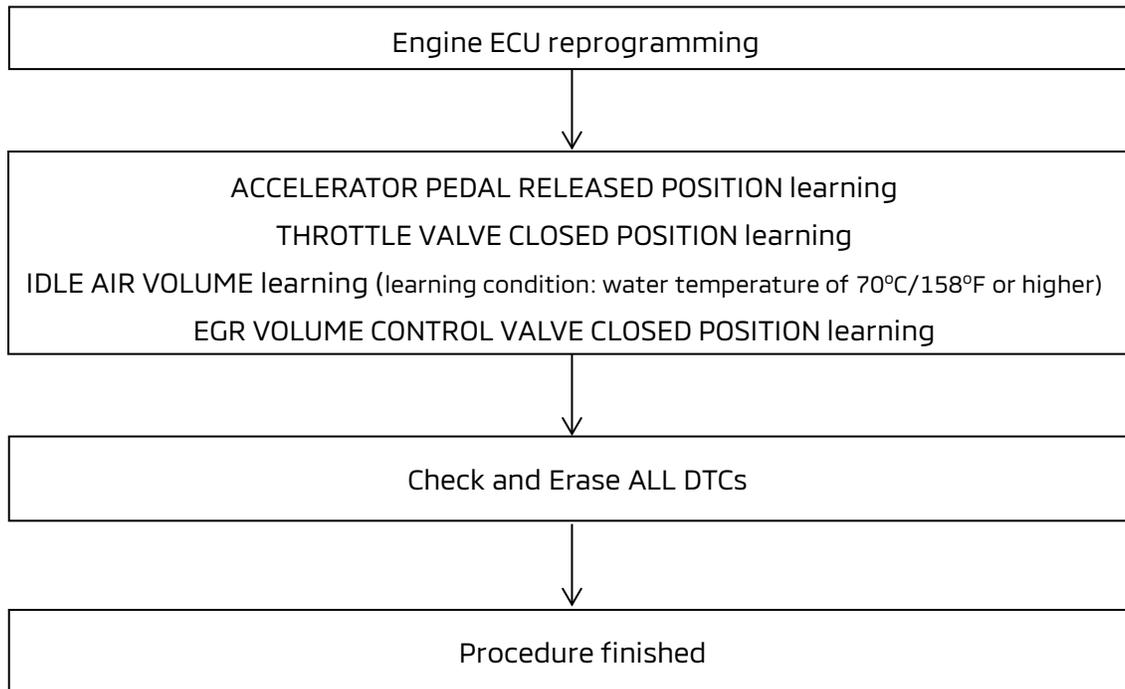
- Be sure to connect with battery charger for back-up power source. During ECU reprogramming, the cooling fan works due to fail safe mode. The low voltage of the auxiliary battery may cause incompleteness/failure of the reprogramming and if this happens, the ECU must be replaced with a brand new one.

ECU Learning

- Be sure to proceed with the learning process after ECU reprogramming to prevent secondary malfunction such as unstable idling.

PROCEDURE(Continued)

PROCEDURE FLOW CHART



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 incompletion 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 and erase All DTCs after reprogramming.

EQUIPMENT

- The following equipment is needed to reprogram the ECU:
- VCI (Vehicle Communication Interface), VCI Lite and VCI 3
- MEDIC Laptop/Tablet with A/C power adapter
- MUT III Main Harness "A" (blue connector at the DLC end)
- USB 2.0 Cable
- MEDIC 3.5/4 update at **798** or higher
- For Standalone MUT III units, MUT-III SE Reprogramming Database **N406001504** or higher

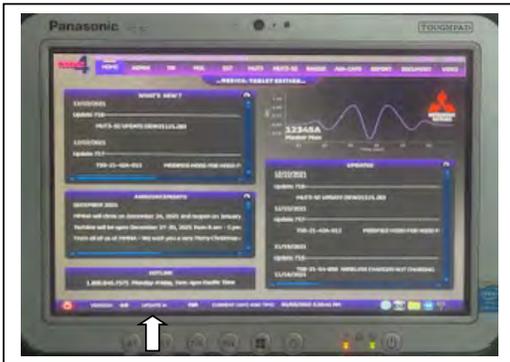
SOFTWARE/MEDIC VERSION VERIFICATION PROCEDURE

1. Verify that the Engine ECU has not already been updated to the latest S/W number (refer to page 11). If the ECU is at the latest level, reprogramming is not necessary.

NOTE: Reprogramming the Engine ECU with the latest database (e.g., **N406001504**) 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 **798** or higher.
If your **MEDIC 3.5/4 update is at least 798**, continue with the Reprogramming Procedure. If your **MEDIC 3.5/4 update is below 798**, 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.**

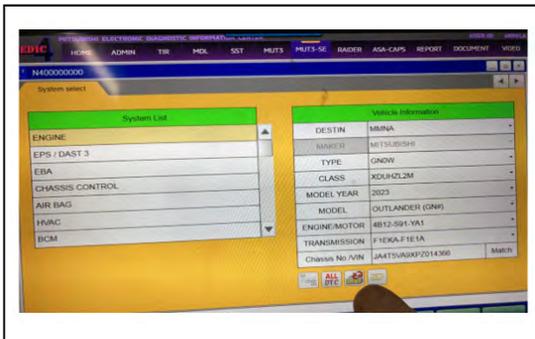


5. STANDALONE MUT-III SE SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3.5 USERS – GO TO THE REPROGRAMMING PROCEDURE). Verify that your MUT-III SE has the most current version of the reprogramming database from the MUT-III SE Main Page.

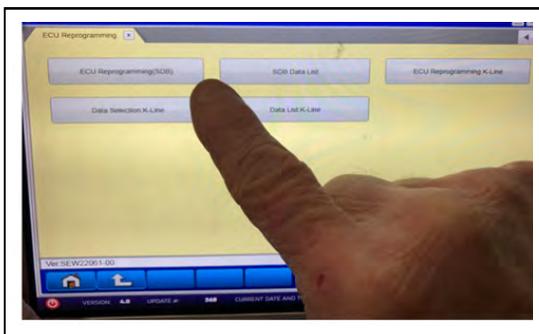
- a. Press the MUT-III SE STV icon.



b. Press the Reprogramming button once the vehicle information is entered.



c. Press "ECU Reprogramming (SDB)" button.



d. Confirm that the database number displayed in the upper right above the chart is **N406001504** or higher.

- i. If the database number displayed on your MUT-III SE is **798** or greater, continue to the next section.
- ii. If the reprogramming database number displayed on your MUT-III SE is lower than **798**, then the MUT-III SE database needs to be updated.
- iii. Once the database number is confirmed, hit the Home button to go back to the System Select screen.



REPROGRAMMING PROCEDURE

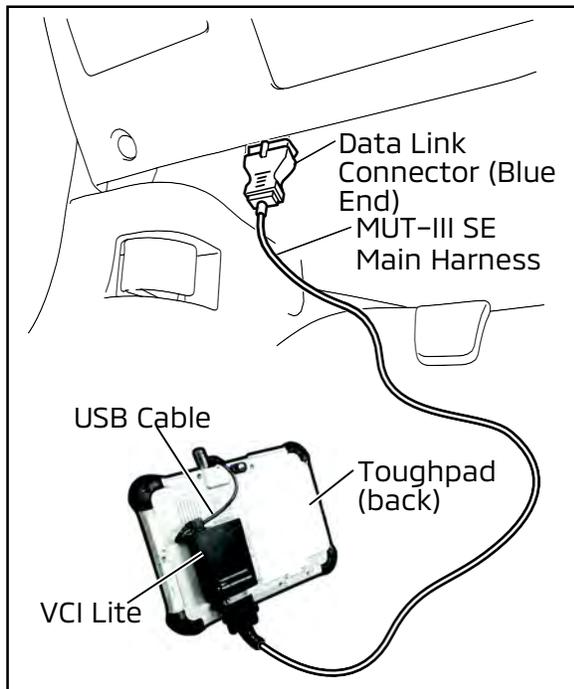


To ensure that the vehicle battery maintains 12V during the procedure, hook-up a battery charger to the vehicle during the procedure.

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.

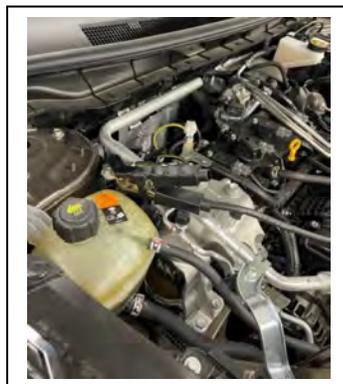


- Turn the MEDIC PC/tablet on. If the battery indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the battery be charged prior to beginning or be used with the A/C power adaptor connected.
- Connect the USB cable to the VCI/VCI Lite. When 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: 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 battery charger cable onto ground point.



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

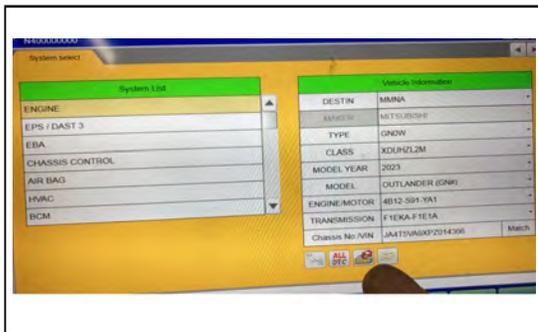
a. Press MUT-III SE STV icon.



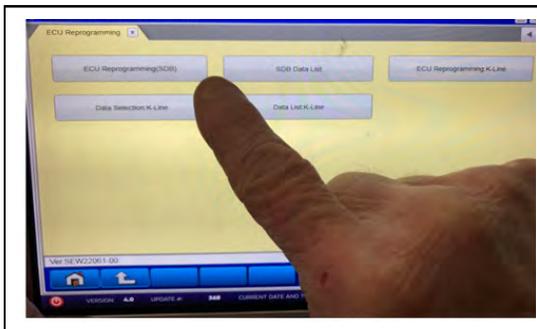
b. Press the model information display button (car icon) and verify all vehicle info is correct.



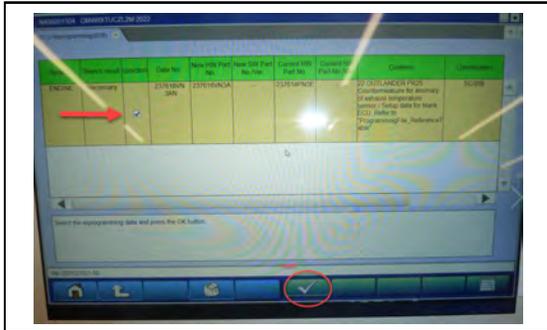
c. Select Engine and press the reprogramming icon button.



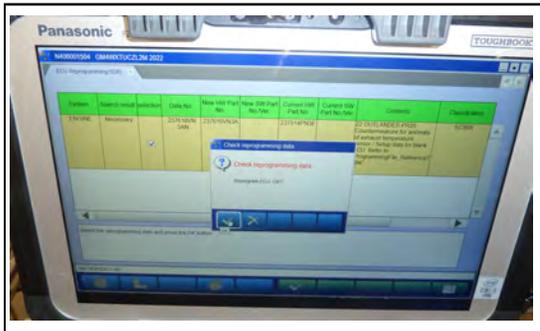
d. Press the "ECU reprogramming" (SDB) button.



- e. The Automatic ECU Reprogramming (SDB) database screen will display. Press the OK button.
- Verify the correct software is listed in the table.

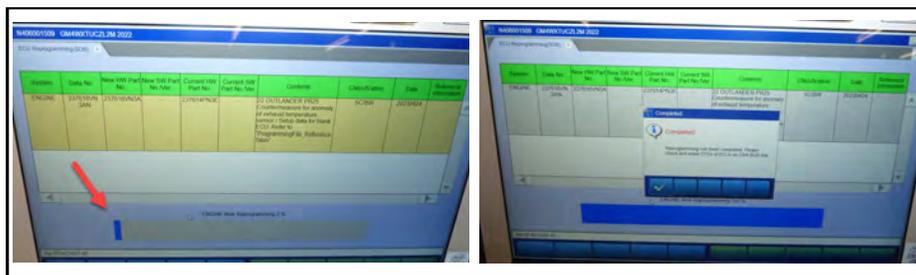


- f. Press the OK button and type AS2 account information to start the reprogramming.

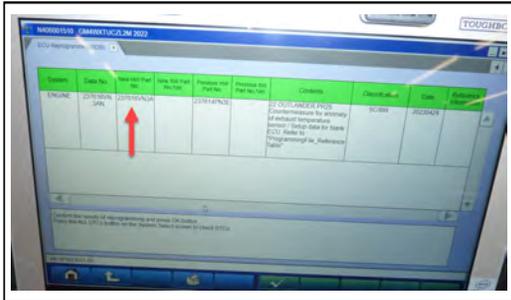


Note: Do not disturb the cable or turn off the ignition during reprogramming to prevent damage to the ECU.

- g. Once the reprogramming is initiated the screen (shown below) will indicate the reprogramming progress. It may take up to 10 minutes to complete.



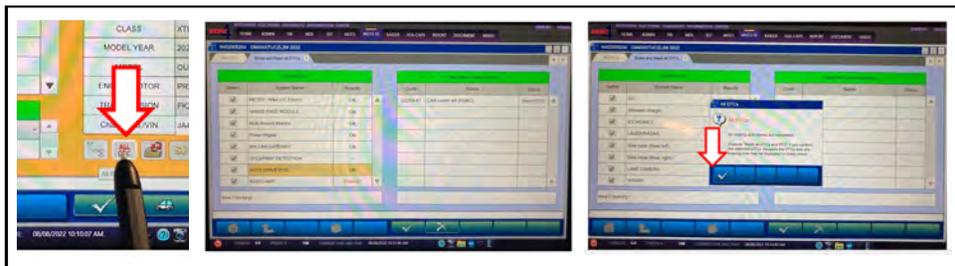
h. Verify that the software version has been updated to the new data number.



MODEL	DATA NO.	NEW HW PART NO.	NEW SW PART NO./VER.	TARGET HW PART NO.	TARGET SW PART/VER.	REMARKS
Outlander	237616VN.5AN	-	237616VN5A	237034PM2A	237614PN5C 237614PN5D 237614PN5E	22MY
	237616VN.2AN		237616VN2A		237614PN2C 237614PN2D 237614PN2E	
	237616VN.3AN		237616VN3A		237614PN3C 237614PN3D 237614PN3E	
	237616VM.7BN		237616VM7B		237616VM7A	23MY
	237616VM.8BN		237616VM8B		237616VM8A	
	237616VM.9BN		237616VM9B		237616VM9A	

i. Press "ALL DTC" button to initiate the "Erase and Read all DTCs". Press OK when complete.

IMPORTANT: The "Erase and Read all DTCs" must be performed since DTCs may be generated and stored.



j. Proceed with ECU learning procedure.

ECU LEARNING



- For vehicles equipped with power seats, seats move every time the ignition switch is turned on and off.
- Confirm the ignition switch is off. The ignition switch automatically turns off about 10 minutes after it is turned on to save the battery.
- Confirm every electrical device is off before starting learning process. The learning process will not be completed if electrical devices are on such as A/C, headlamps, rear window defroster and wiper deicer.

1. ACCELERATOR PEDAL RELEASED POSITION LEARNING

MUT-IIISE is not used for this procedure (Be sure to turn the ignition switch off):

- a. Confirm if the position of the accelerator pedal is fully closed position.
- b. Turn the ignition switch on, and wait at least 2 seconds.
- c. Turn the ignition switch off, and wait at least 10 seconds.
- d. Turn the ignition switch on, and wait at least 2 seconds.
- e. Turn the ignition switch off, and wait at least 10 seconds.

2. THROTTLE VALVE CLOSED POSITION LEARNING

MUT-IIISE is used for this procedure:

- a. Turn the ignition switch on.
- b. Select "STV" from the top screen of MUT-IIISE.
- c. Select "ENGINE" from the list of System select.
- d. Select "Special Function".
- e. Select "Learning".
Select "1:CLSD THL POS LEARN" from "Selected Command".
- f. Start learning to push "OK" button. Follow the instructions displayed on the MUT-IIISE.
- g. After "Completed" is displayed, turn the ignition switch off and wait at least 10 seconds.

3. IDLE AIR VOLUME LEARNING (learning condition: water temperature of 70°C/158°F or higher)

 **Caution**

- The learning condition is water temperature of 70°C/158°F or higher. Carry out warm up driving if the water temperature is below 70°C/158°F.



<Rough indication of 70°C/158°F at water temperature gauge>

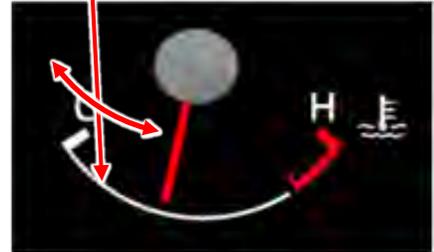
[Classic mode]

12.3" Full Digital Driver Display



[Enhance mode]

Rough indication of water temperature



7.0" Multi-information Display

NOTE: Turn the engine on. This procedure must be performed while the vehicle is idling.

A. Confirm all these conditions before starting the procedure. **The learning process will not be completed without all of these conditions:**

- Voltage of battery : 12.9 V or higher (when idling)
- Water temperature : 70-105°C / 158-221°F
- Position of the select lever : P or N
- Electrical equipment switch : OFF
- Position of the steering wheel : Center position (straight ahead direction)
- Vehicle speed : 0 km/mph

B. IDLE AIR VOLUME LEARNING

1. Keep the engine on in order to adequate coolant temperature.
2. Select "IDLE AIR VOL LEARN" from the display of "Special Function".

C. Push OK button. The process will be completed.

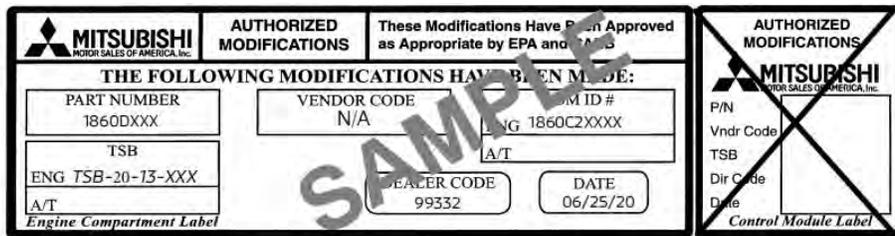
 **Caution**

If the learning process does not complete within 3 minutes, stop the procedure and refer to the Service Manual (IDLE AIR VOLUME LEARNING), and then retry.

4. EGR VOLUME CONTROL VALVE CLOSED POSITION LEARNING
 - a. Turn the ignition switch on.
 - b. Select "Learning" from the display of "Special Function".
 - c. Select "5 : EGR control valve closed learning" from "Selected Command".
 - d. Push OK button to start learning. Follow the instructions displayed on MUT-III SE.
 - e. After "Completed" is displayed, turn the ignition switch off and wait at 3 seconds, and then the process will be completed.

5. Perform DTC check:
 - a. Check for DTCs on the vehicle and resolve as appropriate.
 - b. Once there are no DTCs, the procedure may be completed.

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.



Test drive the vehicle to confirm proper operation.

PARTS INFORMATION

No parts required for Engine ECU reprogramming and learning.

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	237616VN.5AN	-	237616VN5A	237034PM2A	237614PN5C 237614PN5D 237614PN5E	22MY
	237616VN.2AN		237616VN2A		237614PN2C 237614PN2D 237614PN2E	
	237616VN.3AN		237616VN3A		237614PN3C 237614PN3D 237614PN3E	
	237616VM.7BN		237616VM7B		237616VM7A	
	237616VM.8BN		237616VM8B		237616VM8A	23MY
	237616VM.9BN		237616VM9B		237616VM9A	

WARRANTY

LABOR OP CODE	OPERATION	LABOR HRS	COMMENTS
C2303R01	REPROGRAM ENGINE ECU + LEARNING (OVERLAPPING WITH SR-23-001)	0.5H	SC-23-001 PERFORMED WITH SR-23-001
C2303R02	REPROGRAM ENGINE ECU + LEARNING (INDEPENDENT FROM SR-23-001)	0.6H	SC-23-001 NOT PERFORMED WITH SR-23-001



MITSUBISHI MOTORS NORTH AMERICA, INC.

PO Box 689040

Franklin, TN 37068

This notice applies to your vehicle, _____.

Date: June 2023

Re: Service Campaign SC-23-001

Dear FIRSTNAME LASTNAME,

Mitsubishi Motors strives to build vehicles with the highest level of quality and to continuously improve that quality with every vehicle built. To help assure your continued satisfaction with your Mitsubishi vehicle, we are recommending that the following product improvement be performed on certain 2022 - 2023 Outlander vehicles equipped with AWD built before February 2, 2023.

Recommended Product Improvement:

The Malfunction Indicator Light (MIL) may illuminate when the vehicle is driven under a high-load condition such as towing and/or when pressing hard on the accelerator pedal. A software update will correct this situation.

What your dealer will do:

Your local Mitsubishi Motors dealer will reprogram the Engine Control Unit (ECU) with modified software. The time needed for the reprogramming is approximately 40 minutes. The dealer may need your vehicle for a longer period of time, but every effort will be made to minimize your inconvenience.

What you should do:

Please contact your local Mitsubishi Motors dealer and schedule an appointment to have the ECU reprogrammed free of charge. When you bring your vehicle in, please show the dealer this letter. If you misplace this letter, the dealer will still perform this repair on your vehicle, free of charge.

There is also a Safety Recall potentially associated with your vehicle, regarding a software error in the Alliance In-Vehicle Infotainment (A-IVI) Display Unit which could cause a black screen to momentarily display during a backing event. If this recall also applies to your vehicle, you should have recently received (or will soon receive) a letter indicating your vehicle is part of this recall. To minimize the inconvenience of making multiple trips to your dealership, the recall remedy and this product improvement can be done during the same visit.

If you experience any problem obtaining this product improvement promptly and/or at no charge, please inform us by calling the Mitsubishi Customer Relations Department at **888-648-7820**. Hours: Monday through Friday 7 a.m. to 4 p.m. (Central Time)

If you previously had your vehicle reprogrammed as a result of this specific condition and have paid for the repair, you may send your original repair order or invoice, **and** original receipt/proof of payment to the following address for reimbursement consideration:

Mitsubishi Motors North America Inc., Customer Relations, P.O. Box 689040, Franklin, TN 37068.

We appreciate your prompt attention to this matter.

Sincerely,

Mitsubishi Motors North America, Inc.

C2303R