SB-10053648-8968

Technical Service Bulletin

SUBJECT:	No:	**TSB−13−13−007**
ECM REPROGRAMMING FOR MISDETECTION, DTC P2096/P2097 POST CATALYST FUEL TRIM SYSTEM	DATE:	**October, 2013**
	MODEL:	**2014 Outlander V6**

CIRCULATE TO:	[ ] GENERAL MANAGER	[X] PARTS MANAGER	[X] TECHNICIAN
[X] SERVICE ADVISOR	[X] SERVICE MANAGER	[ ] WARRANTY PROCESSOR	[ ] SALES MANAGER

PURPOSE

Some affected vehicles may display an illuminated Malfunction Indicator Lamp (MIL) with DTC(s) P2096 or P2097 (Post Catalyst Fuel Trim System too lean/rich). The system monitors linear air fuel sensor (LAFS) and O2 sensor output, and an improper threshold value may cause false failure detection.

This TSB provides instructions for technicians to first diagnose DTC P2096/P2097 as per the service manual. If no repairable problems are found, the technician is to reprogram the ECM with new software. The new software includes a new OBD function threshold value to avoid false failure detection

AFFECTED VEHICLES

2014 Outlander V6 built prior to July 9, 2013

REQUIRED OPERATIONS

OVERVIEW

1. Diagnose (and repair if necessary) the failure condition using the service manual.

   If diagnosis determines a component must be repaired or replaced, **DO NOT** reprogram the ECM.

2. Confirm your MUT−III is updated with the latest reprogramming database.

3. Reprogram the ECM if diagnosis does not determine a repairable condition.

IMPORTANT: If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated <u>before reprogramming</u> and DTCs other than described above are listed in the ECM memory, diagnose and repair those DTCs per the service manual <u>before</u> reprogramming. **DO NOT** reprogram the ECM until the reason(s) for other DTCs being set is corrected.

EQUIPMENT

The following equipment is needed to reprogram the ECM.

● MEDIC laptop computer with A/C power adaptor − 520924, or MIT547708, or MIT540031.

● VCI (Vehicle Communication Interface) − MB991824 **or**
  VCI LITE − MB992744

● MUT−III main harness 'A' (blue DLC connector) − MB991910 **or**
  VCI LITE main harness (blue DLC connector) − MB992745

● USB 2.0 cable − MB991827 **or**
  VCI LITE USB 2.0 cable − MB992747.

● "Engine Compartment/Control Module" label − p/n MSSF024G00.

● MEDIC−3 update at 225 or higher.

● For Standalone MUT−III units, MUT−III Reprogramming Database N13101 or higher.

ECM REPROGRAMMING CHART

MODEL POWER TRAIN DESTINATION	CURRENT PART NO.	DATA NO.	DISPLAY ON MUT−III AFTER REPROGRAMMING	
			New Part No.	New S/W Part No.
14 Outlander − US/Puerto Rico 6G31 V6, AT, 2WD / 4WD	1860B805	1862B788	1860B805	1860B80501
14 Outlander − CANADA 6G31 V6, AT, 2WD / 4WD	1860C221	1862B789	1860C221	1860C22101

REPAIR PROCEDURE

NOTE: Reprogramming the ECM with the latest database (i.e.N13101) includes all past and current reprogramming for TSBs of affected vehicles. You do not need to reprogram the ECM for each TSB.

1. Check the underside of the hood to verify there is no "Authorized Modification" label (see page 11 for example) previously installed to indicate this reprogramming has already been completed. If a label is present and the "ROM ID #" on the label matches the "New S/W Part No." in the table above, the ECM is at the latest level and reprogramming is not necessary. Conduct normal diagnosis for the subject condition.
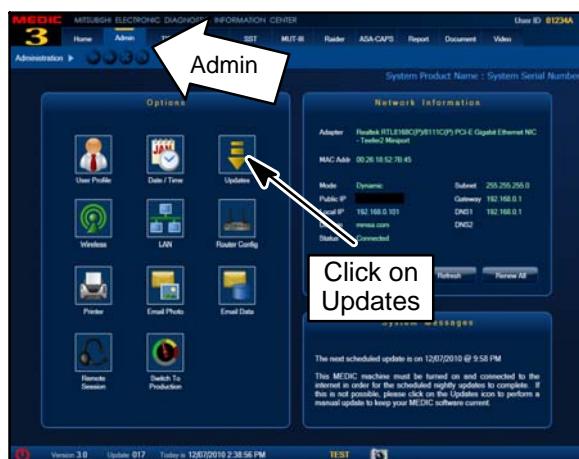

Ver. and Update numbers
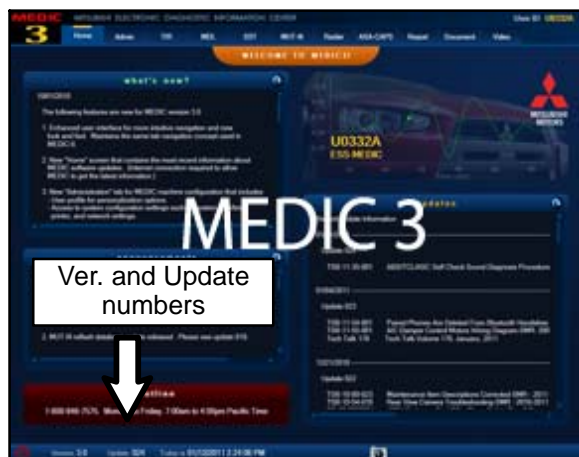
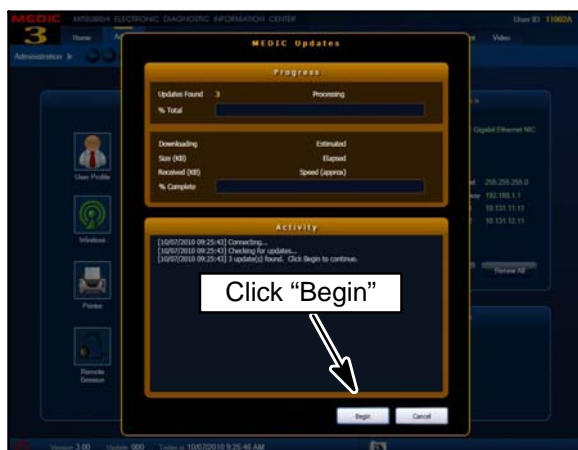**For MEDIC 3 users only: (MUT−III users go to step 5)**

2. Verify the MEDIC 3 is at version 3.2 and at update 225 or higher.

   If your **MEDIC 3 update is at least 225**, continue with the Reprogramming Procedure on page 4.

    If your **MEDIC 3 update is below 225**, update your MEDIC 3 as follows.

Admin

Click on Updates

3. Select the MEDIC 3 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 ON PAGE 4.**

Click "Begin"

N13101
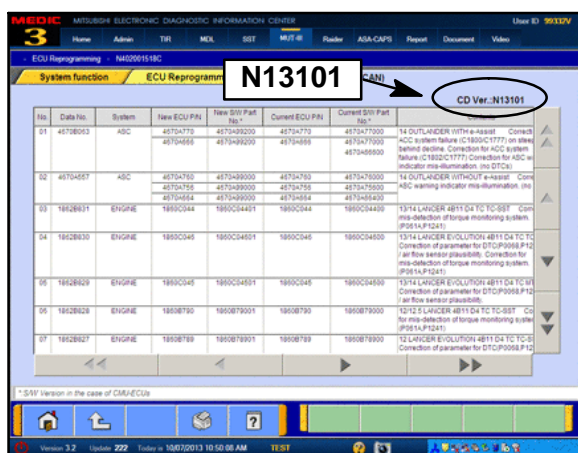
5. **STANDALONE MUT−III SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3 USERS GO TO THE REPROGRAMMING PROCEDURE ON PAGE 4)**. Verify that your MUT−III has the most current version of the reprogramming database:

   a. From the MUT−III Main Page:

   - Select "Special Function"
   - Select "ECU Reprogramming"
   - Select :Database File Display−CAN"
   - Confirm the database number displayed at the top right of the chart is **N13101 or higher**

   (1) If the database number displayed on your MUT−III is **N13101** or greater, continue to the Reprogramming Procedure on page 4.

   (2) If the reprogramming database number displayed on your MUT−III is lower than **N13101**, locate the reprogramming CD containing database N13101 and follow the instructions on the CD label to update your MUT−III.

REPROGRAMMING PROCEDURE

> **CONNECT A BATTERY CHARGER TO THE VEHICLE'S BATTERY DURING THE REPROGRAMMING PROCEDURE. DO NOT ALLOW THE BATTERY CHARGER TO TIME OUT. BATTERY VOLTAGE (AS MEASURED AT THE BATTERY POSTS WITHOUT ELECTRICAL LOAD) MUST BE KEPT AT 12.4V OR HIGHER IN ORDER TO REPROGRAM THE ECM. MEASURE THE BATTERY VOLTAGE AND CHARGE AS NECESSARY.**

> **NOTE:** VCI Stand−alone reprogramming is not available for this procedure. The laptop and the VCI must remain connected for the entire procedure.

Connect the equipment as follows:

MEDIC−II / MUT−III MAIN HARNESS

BLUE END

USB CABLE VCI – LAPTOP

VCI

MEDIC 3 / MUT−III LAPTOP
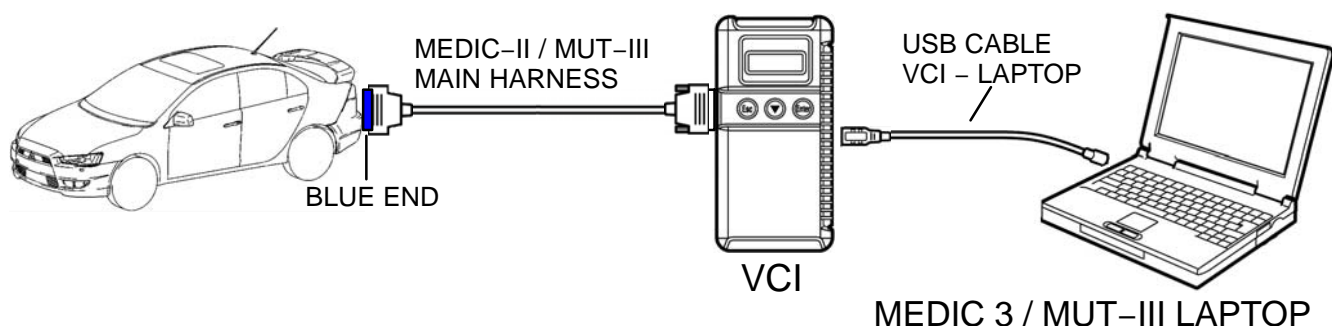
- Turn the laptop computer on. If you're running on battery power and the charge indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the laptop battery be charged prior to beginning, or that reprogramming be completed with the A/C power adaptor connected to the laptop.

- Connect the USB cable to the VCI.

- When the laptop displays the MUT−III main screen, connect the USB cable to the laptop.

- Connect the MUT−III main harness (blue DLC connector) to the VCI.

- Connect the blue connector of the MUT−III main harness to the vehicle's data link connector.

- Turn the VCI power switch ON. Verify the indicator lamp in the upper right corner of the screen is green.

| ⚠ CAUTION	DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS. INTERRUPTION DURING THE REPROGRAMMING PROCESS COULD CAUSE THE CONTROL UNIT TO LOSE DATA OR PREVENT FUTURE REPROGRAMMING. IF THE USB CABLE IS DISONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.

ECU reprogramming
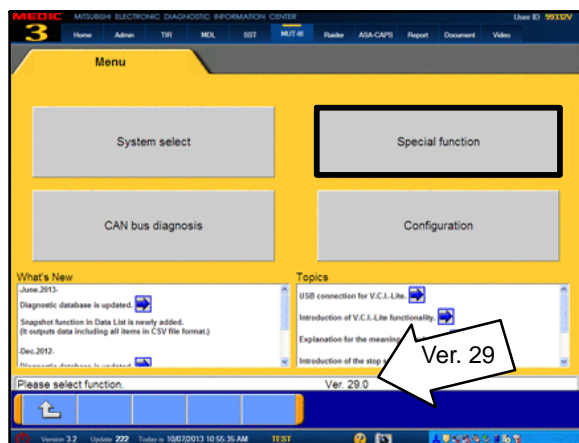
1. Conduct the following steps to reprogram the ECM.

   a. Turn the ignition switch to the ON position. If the vehicle is equipped with the F.A.S.T. System, the transmitter must remain in the vehicle for the entire procedure.

   For vehicles equipped with OSS, press the START/STOP button twice without applying the brake. The LED in the button should be green.

   b. If using MEDIC 3, from the main page, click the MUT−III icon at the top center of the screen.

   c. From the MUT−III Main Menu, select "Special Function."

   d. Select "ECU Reprogramming."
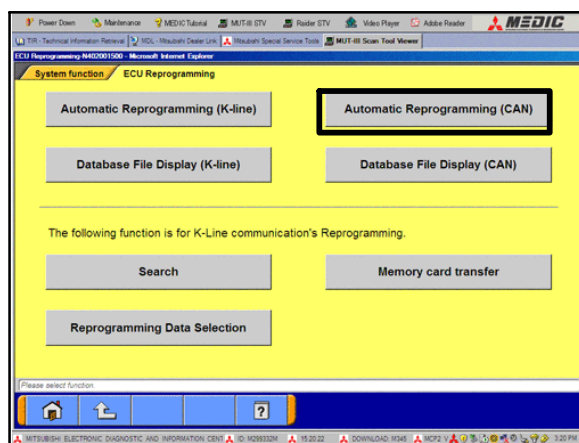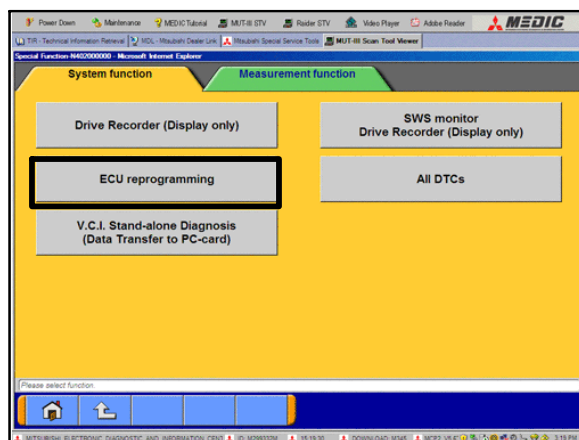
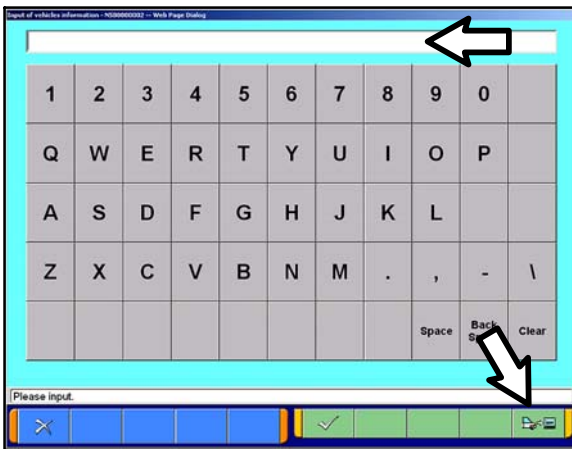
   e. Select "Automatic Reprogramming (CAN)."
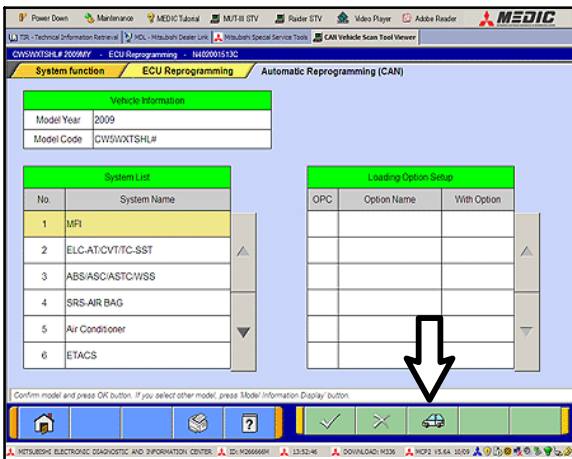
f. Click on the car icon at the bottom of the page.
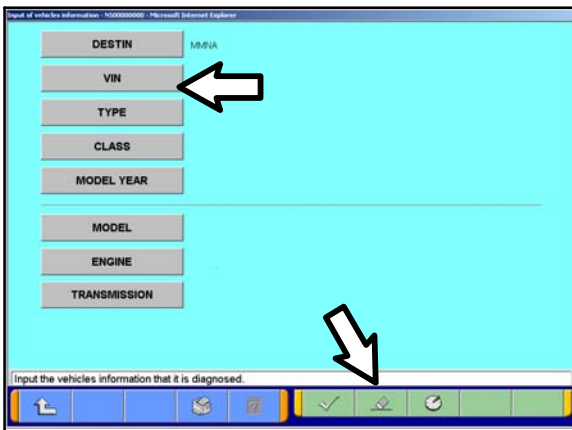
g. If the VIN or vehicle description displayed does not match the vehicle you are working on, click on the eraser icon at the bottom of the page to erase vehicle data.

Then click on the VIN button.

h. Click the icon in the lower RH corner of the screen to have MUT−III automatically read the VIN. If a message appears saying the VIN cannot be input automatically, manually type the 17 digit VIN into the VIN field at the top of the page.

Make sure the VIN is correct and click on the check mark.

i. Confirm all data matches the vehicle and click the check mark at the bottom of the page.

j. MFI should be highlighted as the default. If not, click on it to highlight it.

Click the check mark at the bottom of the page.

k. A message will advise the system will "Automatic search the data."

Click the check mark to continue.
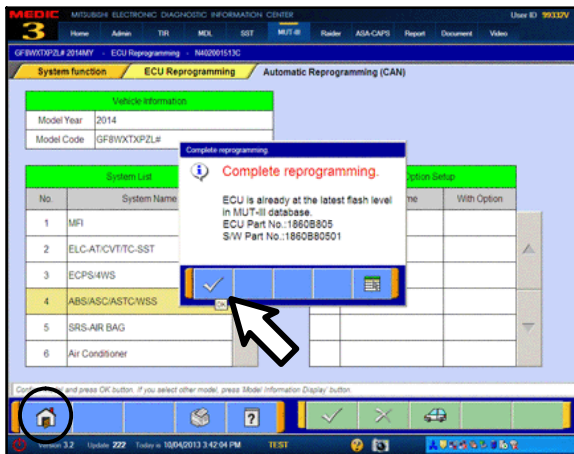
ECM TO LATEST VERSION

If a "Complete Reprogramming" or "Unnecessary Reprogramming" message **does not** appear, continue with step l.

If the message seen at left is displayed, the ECM software is already at the most current level. Do not continue with the reprogramming procedure. This TSB does not apply.

Click the check mark to clear the window, then click the Home icon at the lower left corner of the screen to return to the System Select main page.

Turn the ignition switch to the OFF position and disconnect the MUT−III. Turn off and disconnect the battery charger. Conduct normal diagnosis per the service manual.
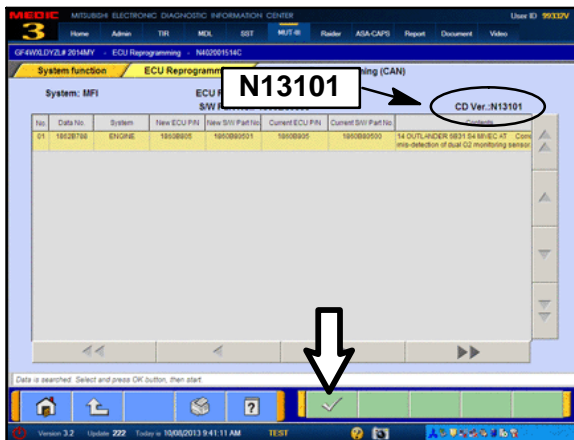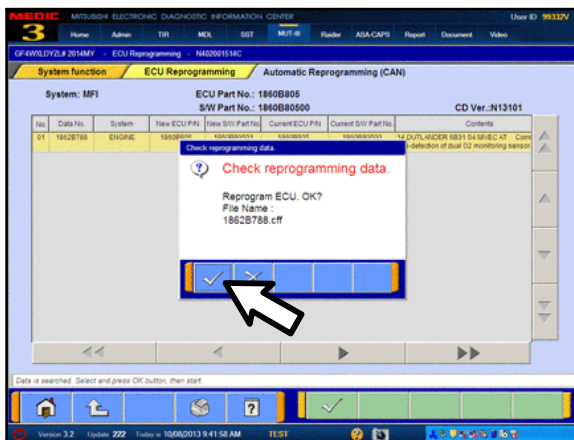

l. The Automatic Reprogramming(CAN) database screen will display.

Confirm the database number at the top right of the table is **N13101** or higher.

If more than one row is displayed in the table, refer to the ECM Reprogramming Chart on Page 2 to select the correct row.
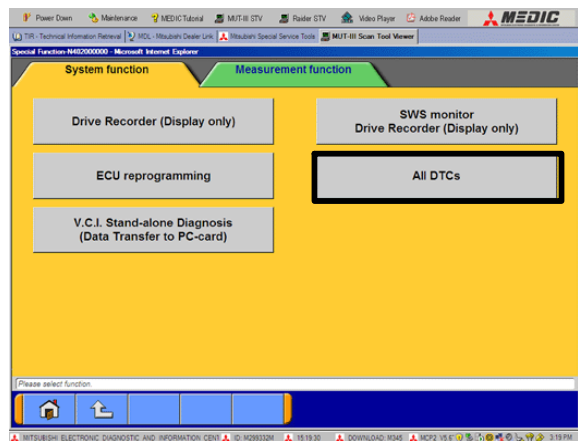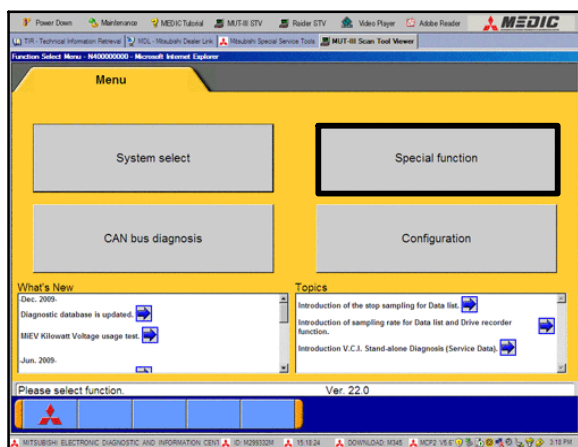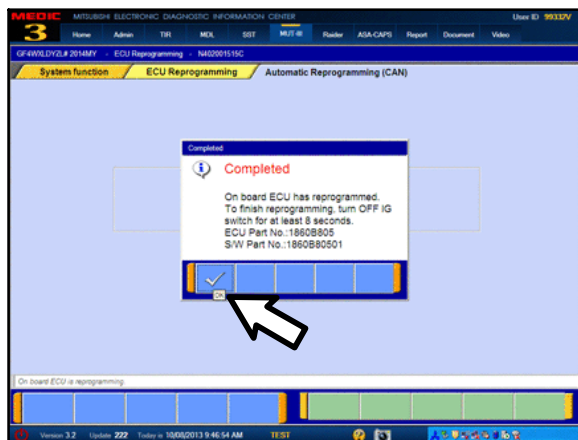
Click on the row to highlight it.

Click the check mark to continue.

m. A message will ask you to "Check reprogramming data."

n. Click the check mark to begin reprogramming.

Reprogramming will take up to 5 minutes to complete.

o. This message will display when ECM reprogramming is successfully completed. Confirm the "New S/W P/N" displayed matches the table at the beginning of this TSB.

p. The message advises you to turn off the ignition for at least 8 seconds. Once the time has passed, turn the ignition on again.

2. Click the check mark in the message to return to the ECM Reprogramming page.

3. Click the home icon at the bottom left corner of the page to return to the MUT−III main page.

4. Using MUT−III, check and erase ALL DTCs from all systems as follows.

   a. Select "Special Function."

   b. Select "All DTCs," then select "ERASE AND READ ALL DTCS."
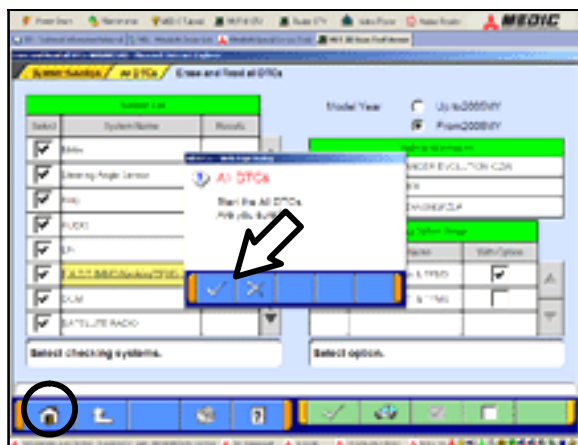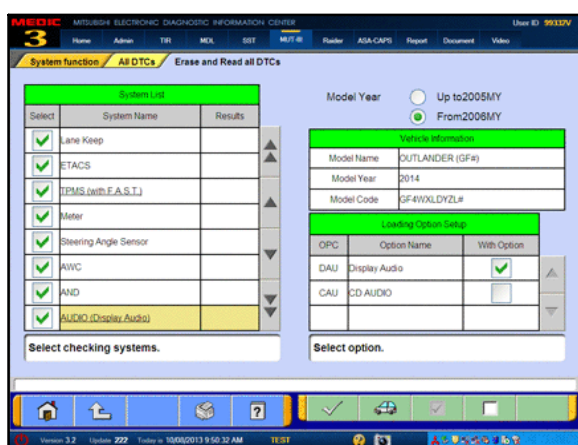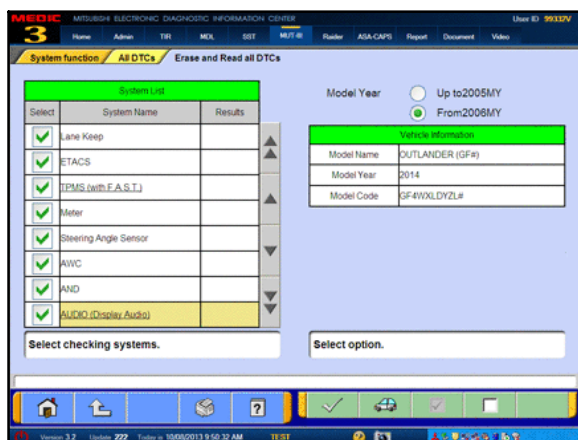
c. The "System List" on the left side of the screen will have all selections checked. <u>Do not</u> change these selections. DTCs may be set if the vehicle is equipped with options that are unchecked.

d. If the check mark at the bottom of the screen is highlighted, click it and proceed to step 5. If not, proceed to step e.

NOTE: A "Loading Options Setup" list on the RH side of the screen must be completed for Outlander models. For these models, the check mark at the bottom of the page is not highlighted (inactive) at this time. It will activate when step e is completed.

e. In the left column, scroll to and click "AUDIO (Display Audio)". In the right column, check the correct option code from the Loading Options Setup list. This will activate the check mark at the bottom of the page.

- Vehicles with DISPLAY AUDIO or MMCS Navigation (touch screen units), select DAU.

- Vehicles with CD AUDIO (no touch screen), select CAU.

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

6. When DTC erasing is completed, a window will display.

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

a. If DTCs do not return, click the check mark to clear the window, then click the home icon at the lower left of the screen to return to the main menu.

7. Turn off the ignition switch and disconnect the MUT−III. Turn off and disconnect the battery charger.

8. Start the engine. Confirm the "Service Engine Soon" light goes out shortly after start up. If it stays lit, diagnose and repair using the service manual.

9. Using a ball−point pen, enter the appropriate Engine Control Module (ECM) part number, Software Part Number (ROM ID#), this Technical Service Bulletin number (TSB−13−13−007), 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 MOTOR SALES OF AMERICA, Inc.	AUTHORIZED MODIFICATIONS	These Modifications Have Been Approved as Appropriate by EPA and CARB

THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:

PART NUMBER 1860B805	VENDOR CODE N/A	ECM ID # ENG 1860B80501

| TSB ENG *TSB−13−13−007* | | A/T |
| A/T N/A | DEALER CODE 99332 | DATE *10/10/13* |

Engine Compartment Label

AUTHORIZED MODIFICATIONS
MITSUBISHI MOTOR SALES OF AMERICA, Inc.
P/N
Vndr Code
TSB
Dir Code
Date
Control Module Label

SAMPLE

The Control Module Label is NOT used for this reflash. It should be discarded.

10. Carefully remove all dirt and oil from a vacant area near the VECI label on the underside of the hood and affix the Engine Compartment Label (LH side, above) to that area.

11. Test drive the vehicle to confirm proper operation and the MIL does not illuminate. Diagnose and correct any DTCs that return.

PARTS INFORMATION

Use only the Genuine Mitsubishi Parts listed below.

Description	Model	Part Number
Label, Engine Compartment	All	MSSF024G00

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.

ECM Reprogramming for DTC P2096/P2097

Nature Code: 025   *Cause Code:* 605

Labor Operation No.: 138501 13   *Time Allowance:* 0.3 hr.

Warranty Coverage: Emissions Coverage – Refer to the Superscreen for individual vehicle warranty coverage terms.

Special Warranty Information: Normal warranty procedures apply.