



# Technical Service Bulletin

SUBJECT:		No: <b>TSB-15-13-002</b>	
<b>ECM REPROGRAMMING FOR FALSE MIL ILLUMINATION WITH DTC P2097 – REVISED</b>		DATE: <b>March, 2015</b>	
		MODEL: <b>See Below</b>	
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

***This bulletin supersedes TSB-14-13-003, issued July, 2014 to expand the Affected Vehicles to include additional models. For affected 2011 – 2013 models, linear air-fuel sensor (LAFS) replacement is required. Revisions are not indicated as this bulletin has been completely re-written.***

## PURPOSE

This TSB provides a field fix procedure to address false MIL illumination with DTC P2097 (Rear Oxygen Sensor Feedback Control System Monitoring) stored in the ECM. To minimize false MIL illumination, this software update optimizes the target A/F ratio adjustment condition when the accelerator pedal is depressed and released suddenly. For affected 2011 – 2013 models, the linear air-fuel sensor (LAFS) must also be replaced.

## BACKGROUND

During rear oxygen sensor feedback control system monitoring, if the accelerator pedal is depressed and released suddenly, it may cause false MIL illumination due to an improper target A/F ratio adjustment setting.

## AFFECTED VEHICLES

- 2011 – 2014 Lancer/Lancer Sportback equipped with 4B11 (2.0L) or 4B12 (2.4L) engine (non-turbo)
  - built before the end of May, 2014
- 2011 – 2013 Outlander equipped with 4B12 (2.4L) engine
- 2011 – 2014 Outlander Sport/RVR equipped with 4B11 (2.0L) engine
  - CVT equipped vehicles built before approximately June 13, 2014 (first VIN 4A4AR3AU3EE032036)
  - 5 M/T equipped vehicles built before the end of June, 2014

## REQUIRED OPERATIONS

### OVERVIEW

1. Confirm your MUT-III is updated with the latest reprogramming database.
2. For affected 2011 – 2013 models, replace the linear air-fuel sensor.
3. Diagnose (and repair if necessary) the failure condition using the applicable service manual.
4. Reprogram the ECM with the new software. Refer to the ECM Reprogramming Chart for new software information.

**IMPORTANT:** If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated before reprogramming, and DTCs other than described above are listed in ECM memory, diagnose and repair those DTCs per the applicable service manual before 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.

- 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.
- “Engine Compartment/Control Module” label – p/n MSSF024G00.
- MEDIC 3/4 update at M321 or higher.
- For Standalone MUT-III units, MUT-III Reprogramming Database N15021 or higher .

**ECM REPROGRAMMING CHART**

Database No. 15021

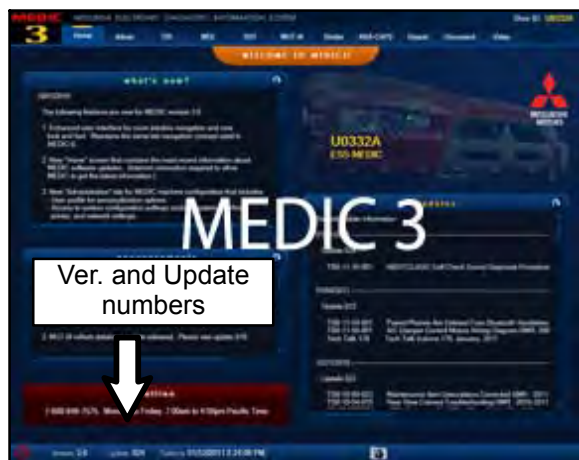
MODEL	CURRENT PART NO.	DATA NO.	DISPLAY ON MUT-III AFTER REPROGRAMMING	
			New Part No.	New S/W Part #
11 Outlander Sport/RVR 4B11 D4 MT	1860B665	1862B951	1860B665	1860B66505
11 Outlander Sport/RVR 4B11 D4 CVT	1860B638	1862B952	1860B638	1860B63806
11 Lancer/Lancer Sportback 4B11 D4 MT	1860B364	1862B953	1860B364	1860B36406
11 Lancer/Lancer Sportback 4B11 D4 CVT	1860B365	1862B954	1860B365	1860B36507
11 Lancer/Lancer Sportback 4B12 D4 MT	1860B458	1862B955	1860B458	1860B45804
11 Lancer/Lancer Sportback 4B12 D4 CVT	1860B459	1862B956	1860B459	1860B45904
11 Outlander 4B12 D4 CVT	1860B461	1862B957	1860B461	1860B46104
12 Outlander Sport/RVR 4B11 D4 MT	1860B744	1862B958	1860B744	1860B74402
12 Outlander Sport/RVR 4B11 D4 CVT	1860B745	1862B959	1860B745	1860B74503
12 Lancer/Lancer Sportback 4B11 D4 MT	1860B730	1862B960	1860B730	1860B73002
12 Lancer/Lancer Sportback 4B11 D4 CVT	1860B731	1862B961	1860B731	1860B73103
12 Lancer/Lancer Sportback 4B12 D4 MT	1860B734	1862B962	1860B734	1860B73402
12 Lancer/Lancer Sportback 4B12 D4 CVT	1860B735	1862B963	1860B735	1860B73502
12 Outlander 4B12 D4 CVT	1860B715	1862B964	1860B715	1860B71503
13 Outlander Sport/RVR 4B11 D4 MT	1860C037	1862B965	1860C037	1860C03702
13 Outlander Sport/RVR 4B11 D4 CVT	1860C038	1862B966	1860C038	1860C03803

13 Outlander 4B12 D4 CVT	1860C041	1862B967	1860C041	1860C04102
13-14 Lancer/Lancer Sportback 4B11 D4 MT	1860C035	1862B968	1860C035	1860C03502
13-14 Lancer/Lancer Sportback 4B11 D4 CVT	1860C036	1862B969	1860C036	1860C03603
13-14 Lancer/Lancer Sportback 4B12 D4 MT	1860C039	1862B970	1860C039	1860C03902
13-14 Lancer/Lancer Sportback 4B12 D4 CVT	1860C040	1862B971	1860C040	1860C04002
14 Outlander Sport/RVR 4B11 D4 MT	1860C297	1862B931	1860C297	1860C29701
14 Outlander Sport/RVR 4B11 D4 CVT	1860C298	1862B932	1860C298	1860C29801

## REPAIR PROCEDURE

**NOTE:** Reprogramming the ECM using the latest database (i.e. N15021) includes all past and current reprogramming for TSBs of affected vehicles. It is not necessary to reprogram the ECM for each previous 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 described condition.
2. If the affected vehicle is a 2011 – 2013 model, replace the linear air-fuel sensor. Refer to the applicable service manual, Group 15: Intake and Exhaust > Exhaust Pipe and Main Muffler (2.0L Engine Non-turbo, 2.4L Engine) > Removal and Installation.
3. Before beginning this reprogramming procedure, disconnect the negative (—) battery terminal for 60 seconds or more to erase the learned value. Then reconnect it.

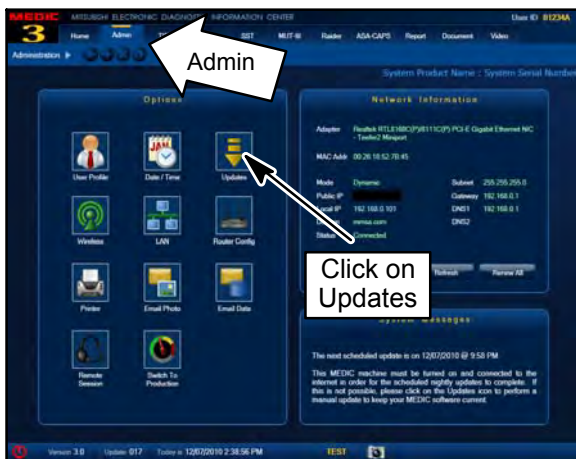


### For MEDIC 3/4 users only: (MUT-III users go to step 5)

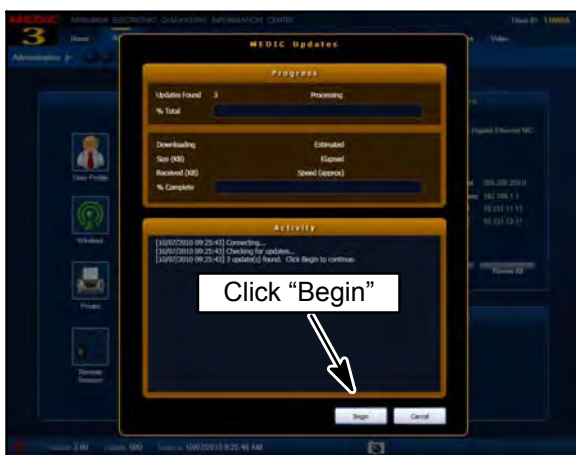
4. Verify the MEDIC 3/4 is at version 3.2 and at update **321** or higher.

If your **MEDIC 3 update is at least 321**, continue with the Reprogramming Procedure on page 5.

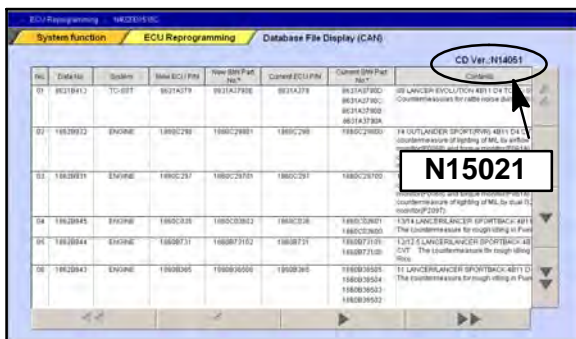
If your **MEDIC 3 update is below 321**, update your MEDIC 3/4 as follows.



5. Select the MEDIC 3/4 Admin tab and click on “Updates.”



6. 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 5.**



7. **STANDALONE MUT-III SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3/4 USERS GO TO THE REPROGRAMMING PROCEDURE ON PAGE 5).** 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 **N15021 or higher**

(1) If the database number displayed on your MUT-III is **N15021** or greater, continue to the Reprogramming Procedure on page 4.

(2) If the reprogramming database number displayed on your MUT-III is lower than **N15021**, locate the reprogramming CD containing database **N15021** and follow the instructions provided with the CD to update your MUT-III.

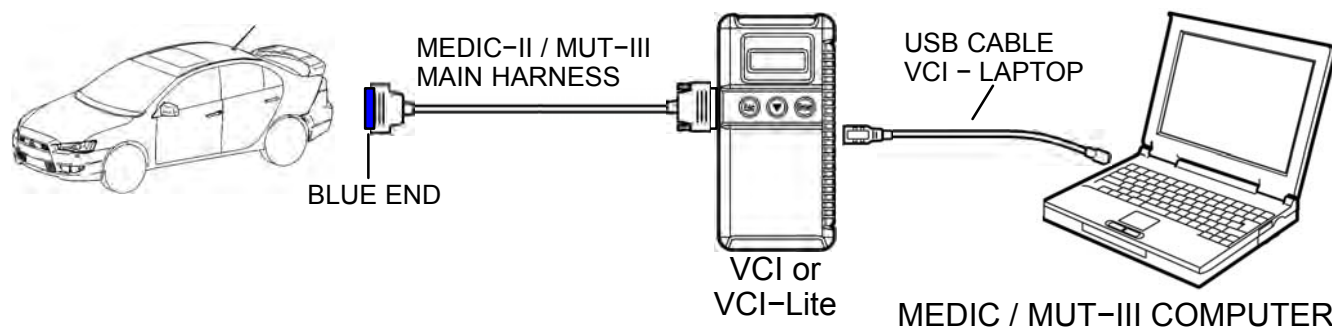
## REPROGRAMMING PROCEDURE

**CAUTION**

**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.**

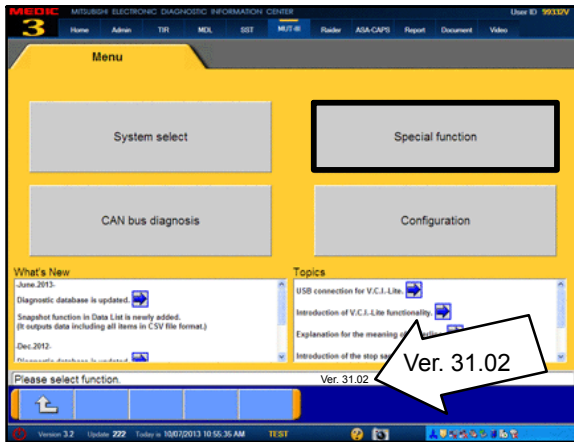
Connect the equipment as follows:



- 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 (or VCI-LITE).
- 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.

## ECU Reprogramming

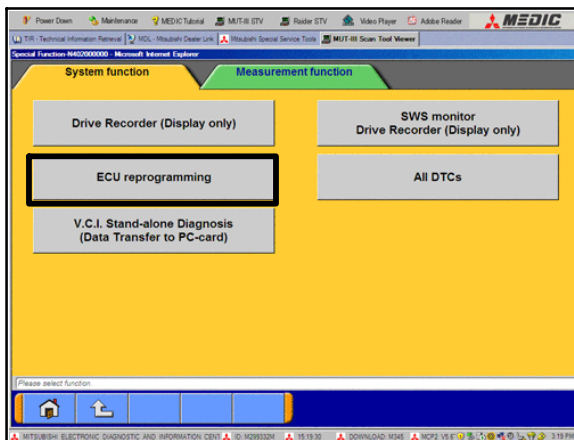
<b>CAUTION</b>	<b>DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS DURING THE REPROGRAMMING PROCESS AS IT COULD CAUSE THE CONTROL UNIT TO LOSE DATA OR PREVENT FUTURE REPROGRAMMING. IF THE USB CABLE IS DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.</b>
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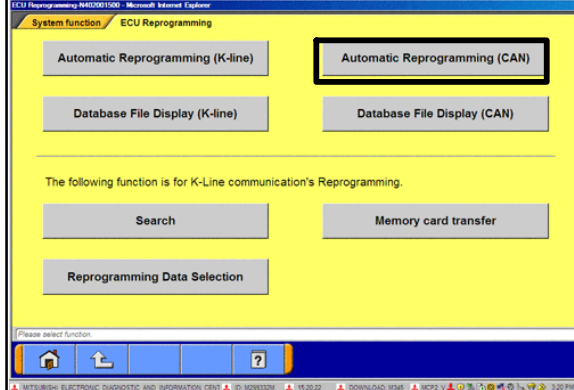
1. Conduct the following steps to reprogram the ECM.
  - a. Turn the ignition switch to the ON position. If the vehicle is equipped with the F .A.S.T. System, the transmitter must remain in the vehicle for the entire procedure.

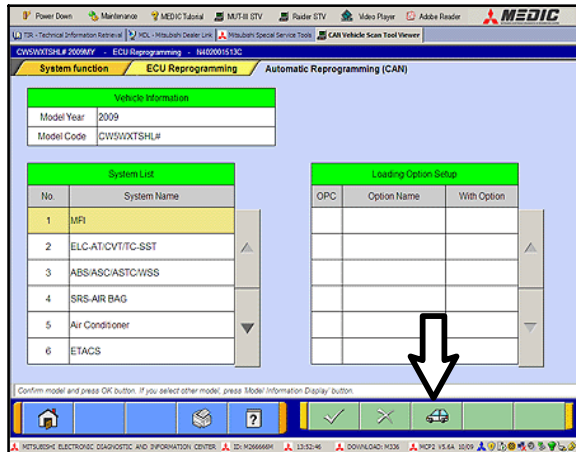
For vehicles equipped with OSS, press the START/STOP button twice without applying the brake. The LED in the button should be green.

- b. If using MEDIC, from the main page, click the MUT-III STV icon at the top center of the screen to open MUT-III.
  - c. From the MUT-III Main Menu, select “Special Function.”
  - d. Select “ECU Reprogramming.”

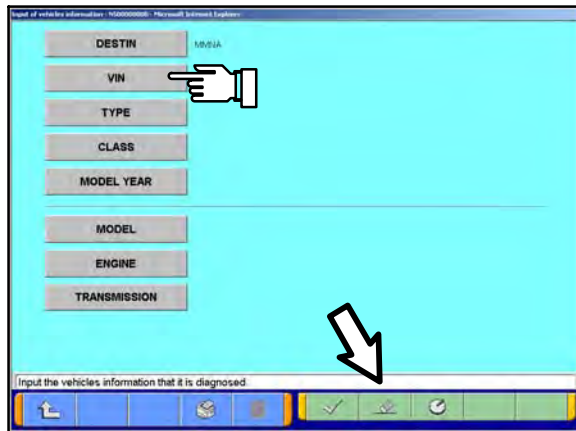


- e. Select “Automatic Programming (CAN).”

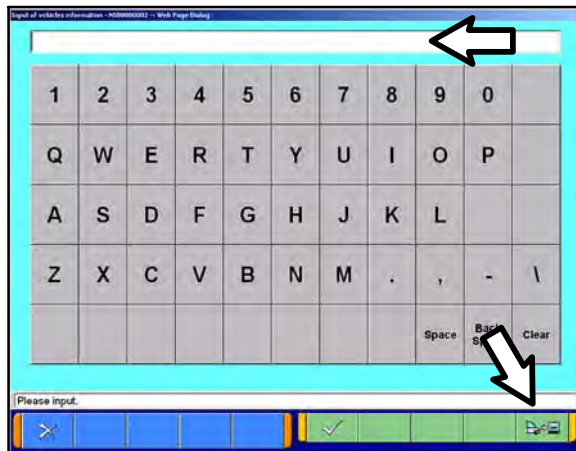




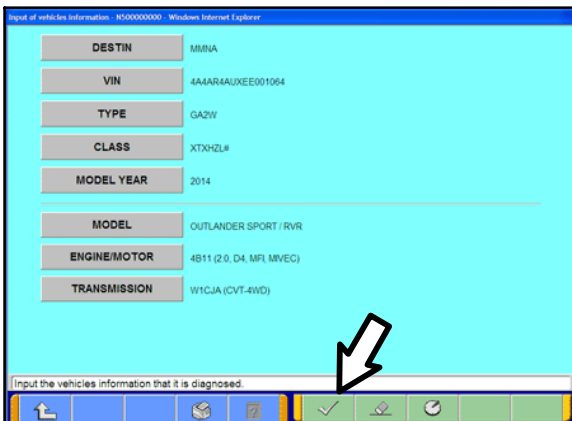
f. Click the car icon at the bottom of the page.



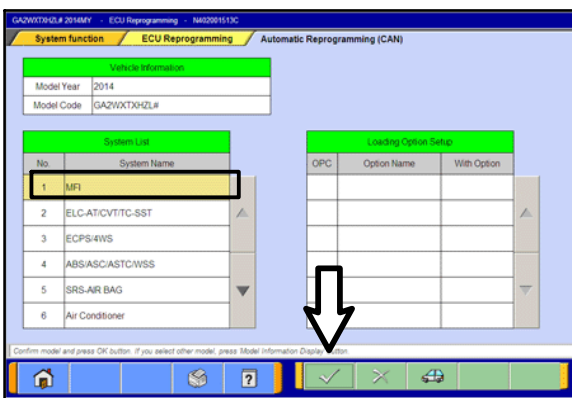
g. If the VIN or vehicle description displayed does not match the vehicle you are working on, click the eraser icon at the bottom of the page to erase vehicle data. Then click the VIN button.



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 enter the 17 digit VIN into the VIN field at the top of the page. Make sure the VIN is correct and click the check mark.

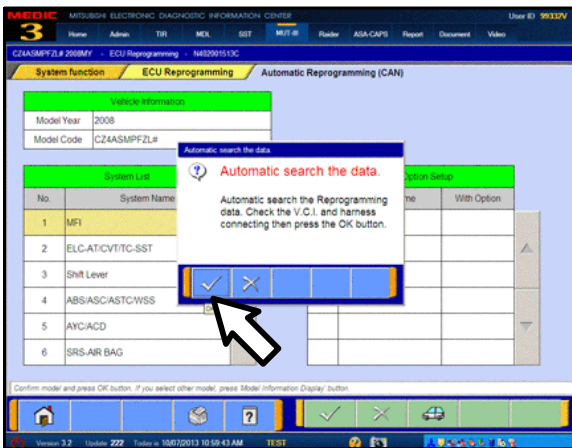


i. Confirm all data matches the vehicle and click the check mark at the bottom of the page.



j. MFI should be highlighted as the default. If not, click 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.



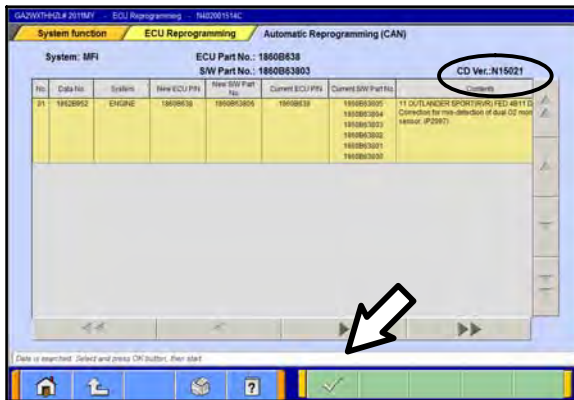
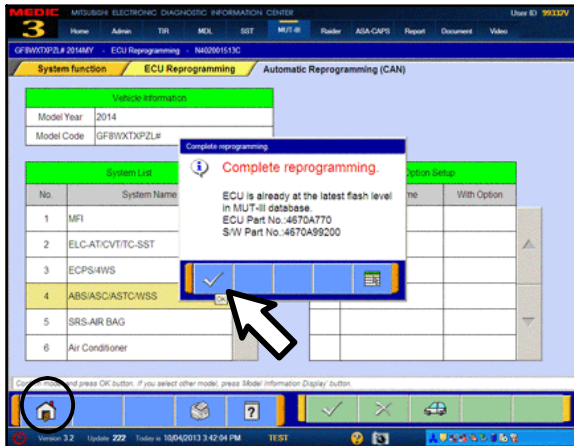
### ECM TO LATEST VERSION

If a “Complete Reprogramming” message **does not** appear, continue with step I.

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.



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

Confirm the database number at the top right of the table is **N15021** 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.

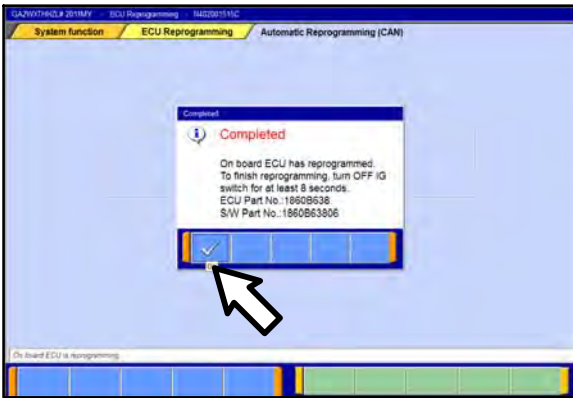
Click on the row to highlight it.

Click the check mark to continue.



m. A message will ask you to “Check reprogramming data.”

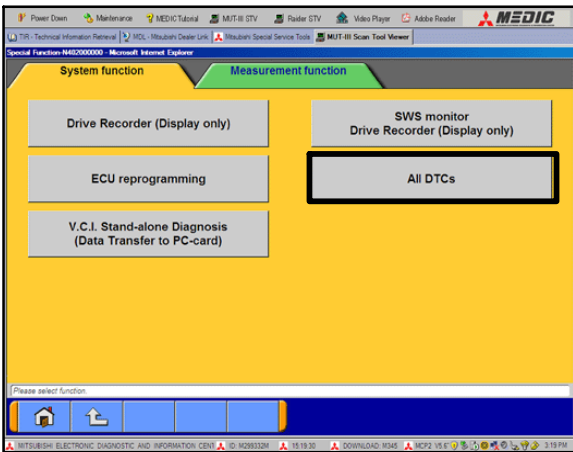
n. Click the check mark to begin reprogramming. Reprogramming will take up to 5 minutes to complete.



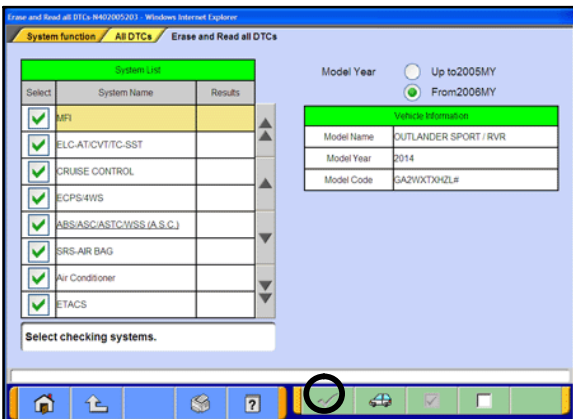
- o. This message will display when ECM reprogramming is successfully completed. Confirm the “New S/W P/N” displayed matches the table at the beginning of this TSB. Then click the check mark to clear the message.
- p. Turn the ignition switch off, wait 8 seconds, then turn the ignition switch on.

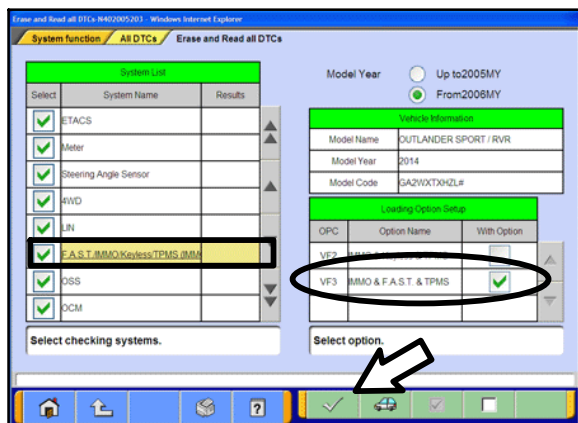
For vehicles equipped with OSS, press the START/STOP button once without applying the brake to turn the vehicle off. The LED in the button should be red. Wait for 8 seconds, then press the START/STOP button twice without applying the brake. The LED in the button should be green.

- 2. Click the UP arrow at the lower left corner of the page to return to the System Function page.
- 3. 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.”

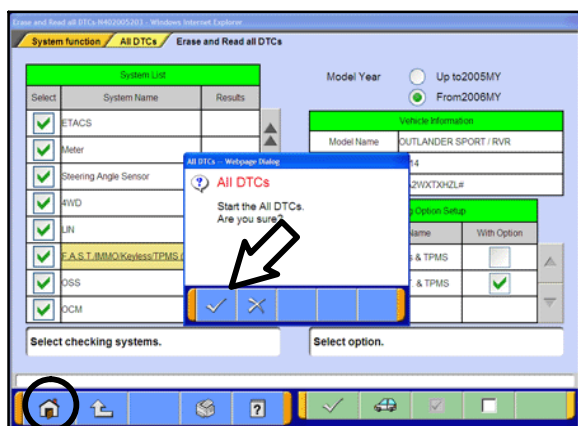


- c. The “System List” on the left side of the screen will have all selections checked. Do not change these selections. DTCs may be set if the vehicle is equipped with options that are unchecked.
- d. If the check mark at the bottom of the screen is highlighted, click it and move ahead to step 4. If not, continue with sub-step e.





- e. In the left column, scroll to and click FAST/IMMOB/KEYLESS/TPMS. In the right column, check the correct option code (VF#) from the Loading Options Setup list. This will activate the check mark at the bottom of the page.
  - Vehicles with regular keyless entry (buttons on a multi-function key), select VF2.
  - Vehicles with F.A.S.T. Key, select VF3.
- d. If the check mark at the bottom of the screen is highlighted, click it and move ahead to step 4. If not, continue with sub-step f.
- f. In the left column, scroll to and select METER. A chart will display. Check the correct display type for the vehicle.  
Click the check mark to continue.



- 4. A window will pop up asking you to confirm DTC erasing. Click the check mark for DTC erasing and reading to begin.
- 5. 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.
  - b. 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.
- 6. Turn off the ignition switch and disconnect the MUT-III. Turn off and disconnect the battery charger.

7. 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-15-13-002), 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.

	<b>AUTHORIZED MODIFICATIONS</b>	These Modifications Have Been Approved as Appropriate by EPA and NHTSA	<b>AUTHORIZED MODIFICATIONS</b>
<b>THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:</b>			
PART NUMBER 1860C297	VENDOR CODE N/A	ROM ID # ENG 1860C29701	
TSB ENG TSB-14-13-003	DATE 07/07/14	A/T	
A/T	DEALER CODE 99332	DATE 07/07/14	
Engine Compartment Label			

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

8. 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.

- 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	Quantity
Label, Engine Compartment	All	MSSF024G00	1
Linear Air-Fuel Sensor	2011-13 Lancer / Lancer Sportback, Outlander, Outlander Sport/RVR	1588A228	1

## 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.

**Submit as Warranty Claim Type 'W':**

### 1) ECM Reprogramming for DTC P2097 (select this operation as the primary operation)

*Nature Code:* 16C

*Cause Code:* 490

*Labor Operation No.:* 138501 13

*Time Allowance:* 0.3 hr.

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

### 2) Linear Air/Fuel Sensor Replacement (2011-2013 Models Only) (enter on the second line of the claim)

Enter this operation on the second line of the same claim.

*Labor Operation No.:* 138321 10

*Time Allowance:* 0.5 hr.

## Required DTC Codes

**Diagnostic Trouble Code**

Each claim requires the observed DTCs to be input on the claim. The claim will not process without the observed DTC(s).

The fields to enter DTCs are located at the bottom of the LABOR entry screen

Delete	DTC Code