



# Technical Service Bulletin

## SB-10057904-1731

SUBJECT:			No: TSB-15-13-001REV
<b>ENGINE STALL/PCV HOSE DISCONNECTION (LOW ENGINE SPEED, HIGH AMBIENT TEMPERATURE)</b>			DATE: July, 2015
			MODEL: 2014-15 Mirage
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input 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 supercedes TSB-15-13-001, issued March, 2015, to add PCV hose disconnection details. Revisions are italicized and indicated by ◀.*

### PURPOSE

Due to a rich air fuel ratio, affected vehicles may experience engine stalling at low engine speed, just prior to stopping or during idling, when operated in high ambient temperature conditions, *which may lead to PCV hose disconnection*. If this condition were to occur, a stalled engine can immediately be restarted.

This TSB instructs dealers to reprogram the ECM with new software that optimizes the air fuel ratio.

### AFFECTED VEHICLES

2014 – 2015 Mirage vehicles equipped with a CVT and built **before** January 19, 2015

### REQUIRED OPERATIONS

#### OVERVIEW

1. Reconnect PCV hose, if disconnected.
2. Confirm your MUT-III is updated with the latest reprogramming database.
3. 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 are listed in the ECM memory, diagnose and repair those DTCs per the 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 **321** or higher.
- For Standalone MUT-III units, MUT-III Reprogramming Database **N15021** or higher.

## ECM REPROGRAMMING CHART

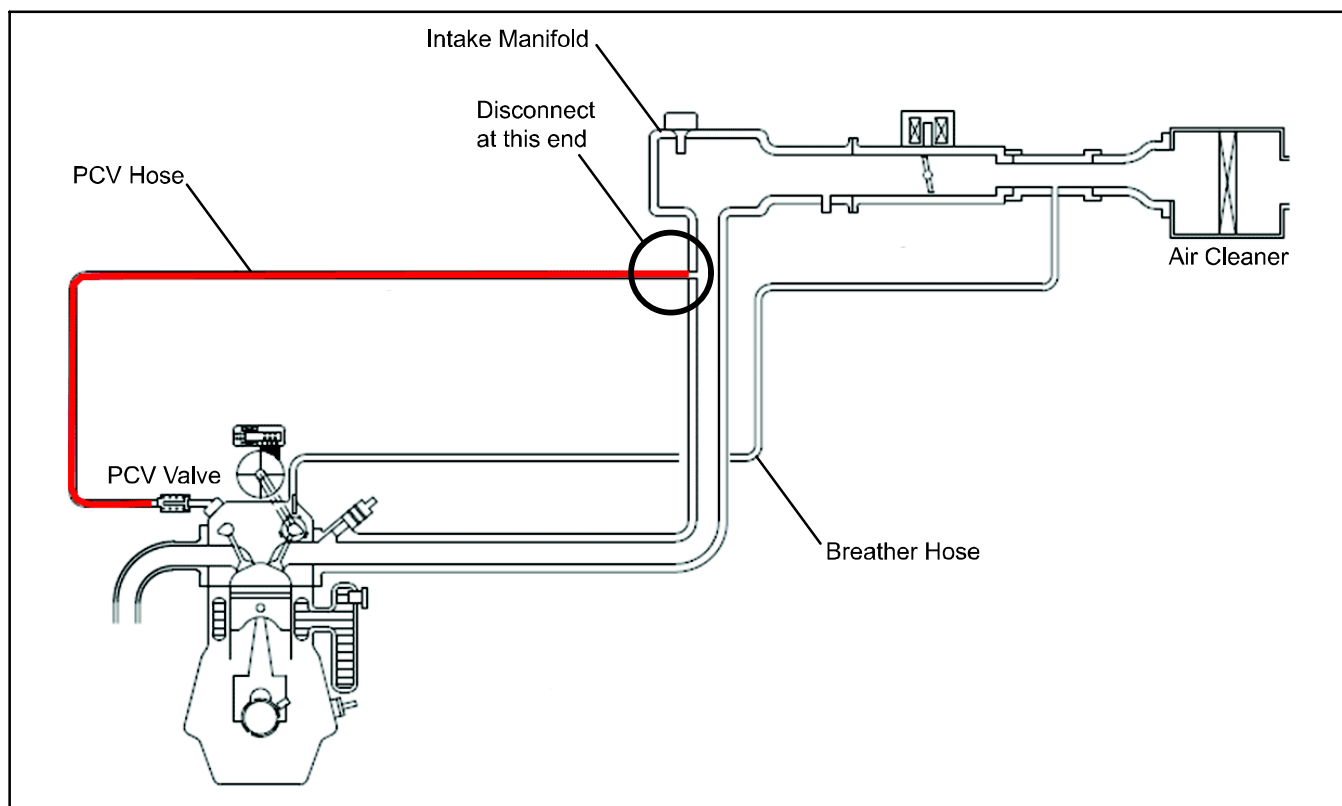
Database No. 15021

MODEL	CURRENT PART NO.	DATA NO.	DISPLAY ON MUT-III AFTER REPROGRAMMING	
			New Part No.	New S/W Part #
2014 – 2015 Mirage w/CVT built before Jan. 19, 2015	1860C142	1862C033	1860C142	1860C14202

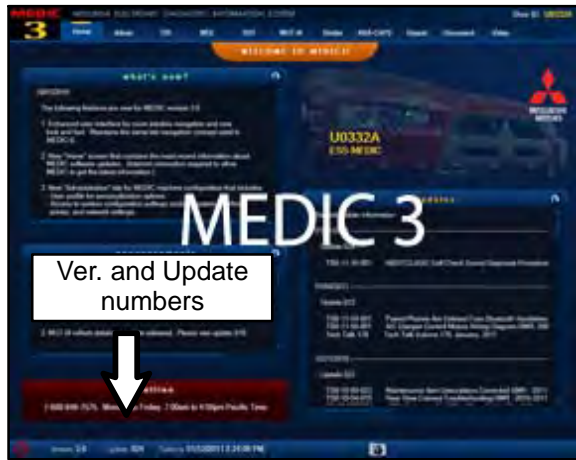
## REPAIR PROCEDURE

**NOTE:** Reprogramming the ECM with 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. If the PCV hose is detached at either end (usually at intake manifold end), and is not damaged, reconnect it (red hose in illustration). Only replace the hose if it is damaged.



2. 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.

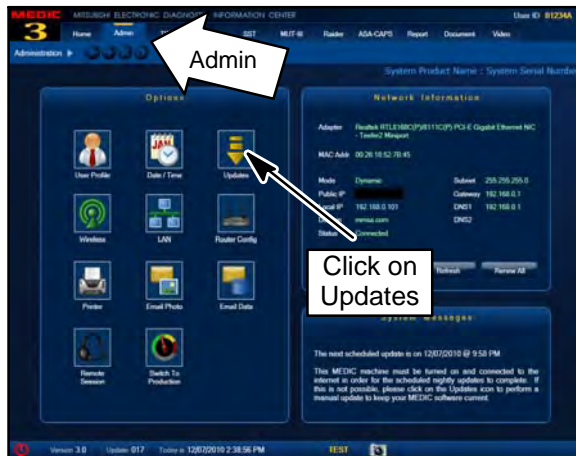


**For MEDIC 3/4 users only: (MUT-III users go to step 5)**

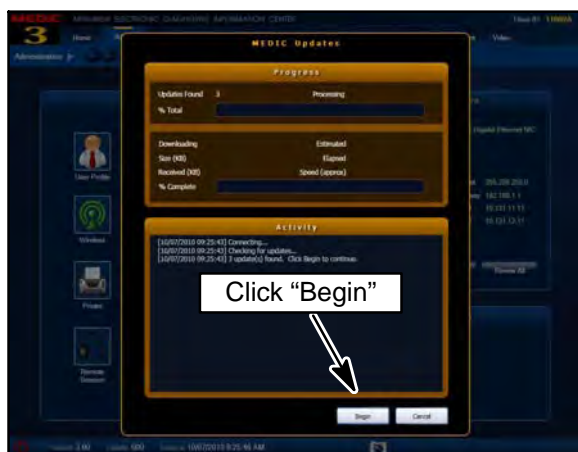
3. Verify the MEDIC 3/4 is at version 3.2 and at update **321** or higher.

If your **MEDIC 3/4 update is at least 321**, continue with the Reprogramming Procedure on page 5.

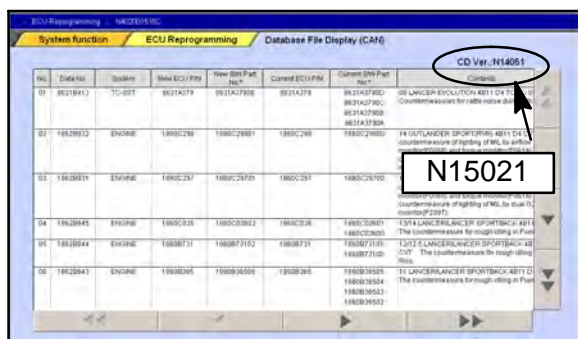
If your **MEDIC 3/4 update is below 321**, update your MEDIC as follows.



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



5. 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.**



6. **STANDALONE MUT-III SCAN TOOL VIEWER (STV) ONLY: (MEDIC 3 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 5.
  - (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.

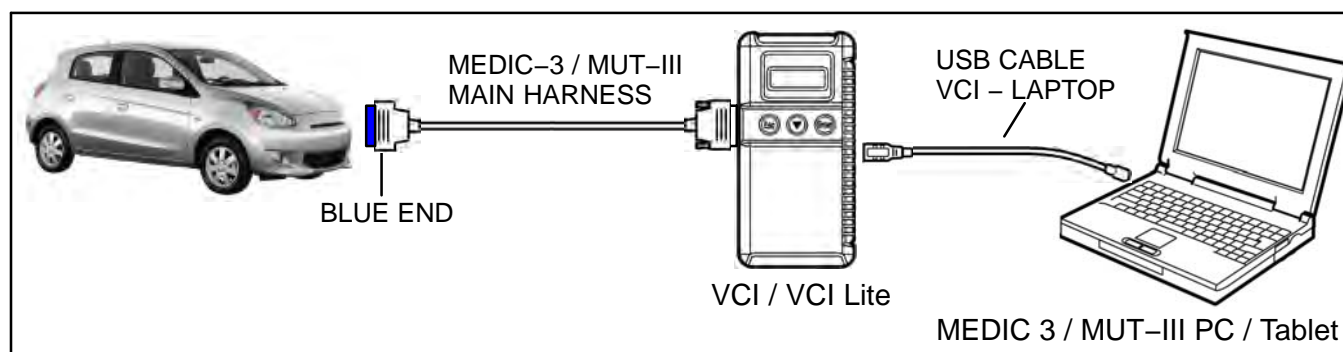
## REPROGRAMMING PROCEDURE

### 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:



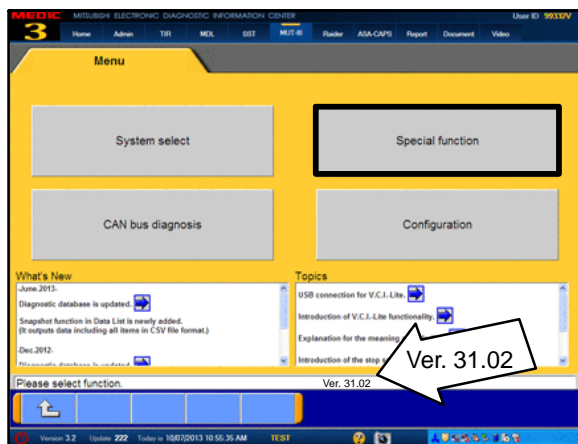
**NOTE:** VCI and MEDIC 3 Laptop shown for illustration purposes only

- 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 that reprogramming be completed with the A/C power adaptor connected.
- Connect the USB cable to the VCI/VCI Lite.
- When the laptop/tablet displays the MUT-III main screen, connect the USB cable to the device.
- Connect the MUT-III main harness with the blue DLC connection to the VCI/VCI Lite.
- Connect the blue connection of the MUT-III main harness to the vehicle's data link connector.
- Turn the VCI power switch ON . Verify that the indicator lamp in the upper right corner of the screen is green.

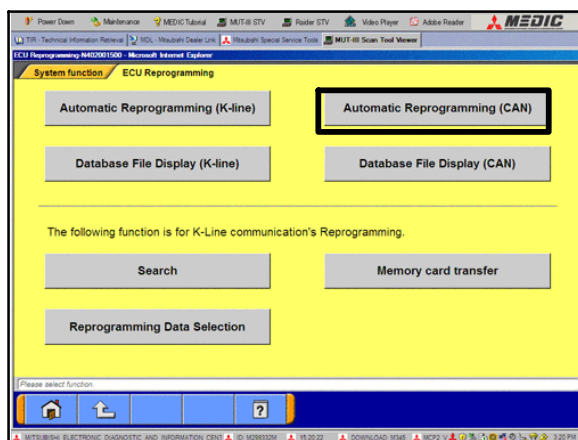
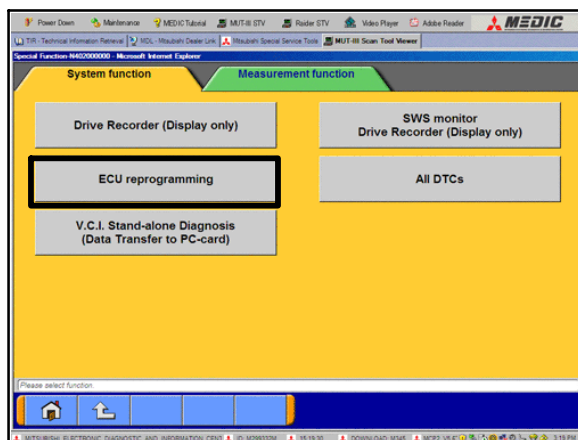
## ECU Reprogramming

### CAUTION

**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.**

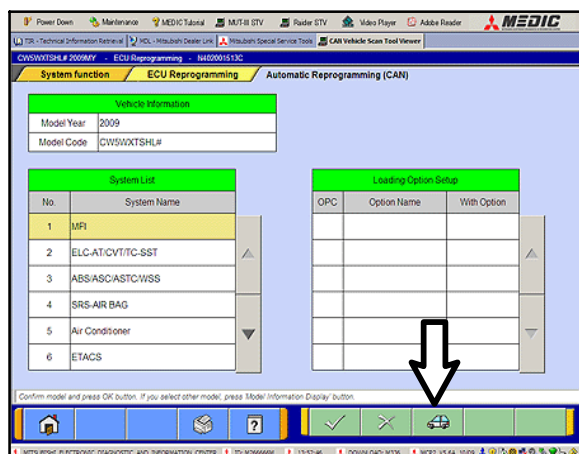


1. Conduct the following steps to reprogram the ECM.
  - a. Turn the ignition switch to the ON position. If the vehicle is equipped with the F.A.S.T. System, the transmitter must remain in the vehicle for the entire procedure.
  - For vehicles equipped with OSS, press the START/STOP button twice without 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.”

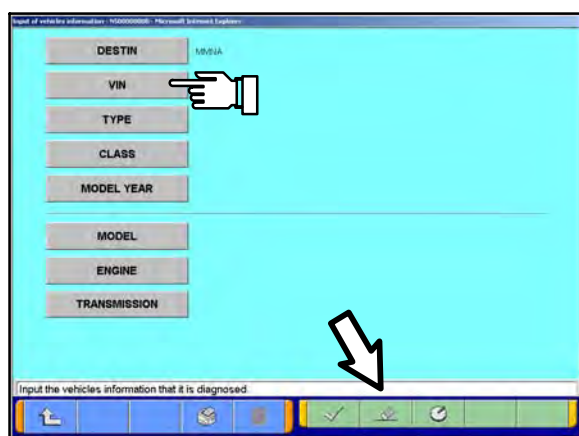


- e. Select “Automatic Reprogramming (CAN).”



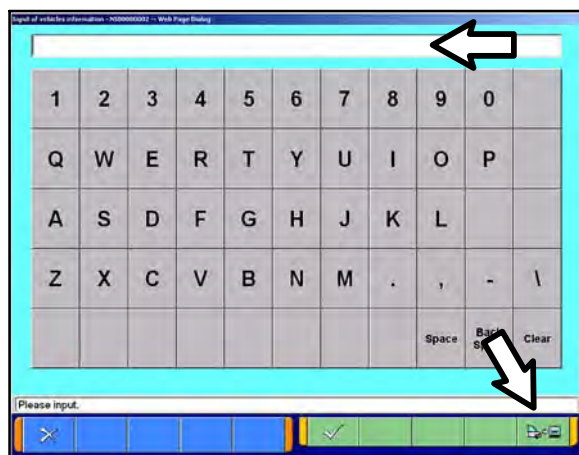


f. Click the car icon at the bottom of the page.



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.

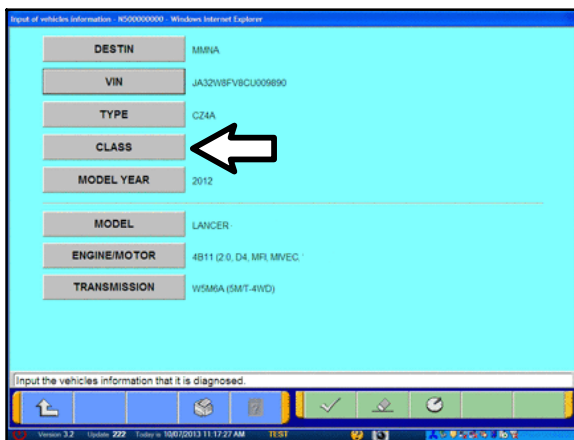
Then click the VIN button.



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.



Input of vehicles information - W00000000 - Windows Internet Explorer

DESTIN	MBRJA
VIN	JA32W8FV8CU009890
TYPE	CZ4A
CLASS	
MODEL YEAR	2012

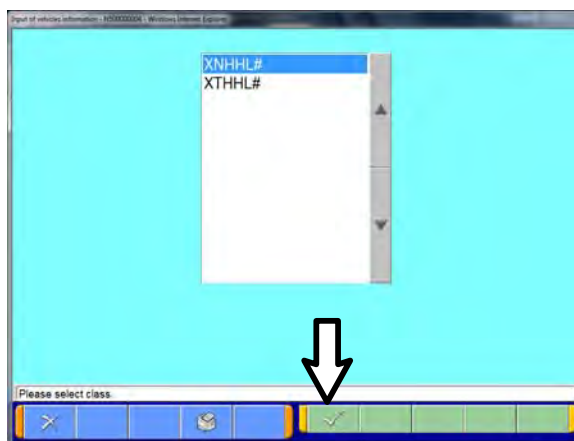
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MODEL	LANCER
ENGINE/MOTOR	4B11 (2.0, D4, MFI, MIVEC)
TRANSMISSION	W5M6A (SMT-4VD)

Input the vehicles information that it is diagnosed.

Version: 3.2 Update: 222 Today: 10/8/2013 11:17:27 AM 10:01

i. Click the CLASS button.



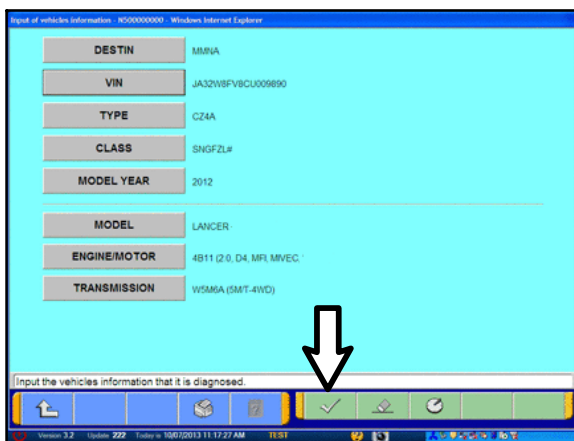
Input of vehicles information - N00000004 - Windows Internet Explorer

XNHHL#  
XTHHL#

Please select class.

Version: 3.2 Update: 222 Today: 10/8/2013 11:17:27 AM 10:01

j. Look at the label on the passenger side B-pillar to identify the appropriate class. Select it and click the check mark at the bottom of the page.



Input of vehicles information - W00000000 - Windows Internet Explorer

DESTIN	MBRJA
VIN	JA32W8FV8CU009890
TYPE	CZ4A
CLASS	SNGFZL#
MODEL YEAR	2012

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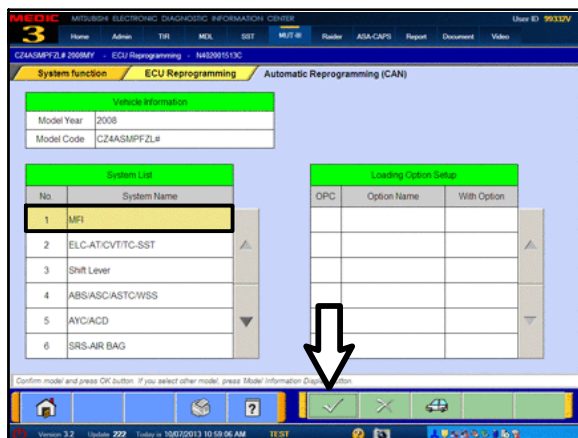
MODEL	LANCER
ENGINE/MOTOR	4B11 (2.0, D4, MFI, MIVEC)
TRANSMISSION	W5M6A (SMT-4VD)

Input the vehicles information that it is diagnosed.

Version: 3.2 Update: 222 Today: 10/8/2013 11:17:27 AM 10:01

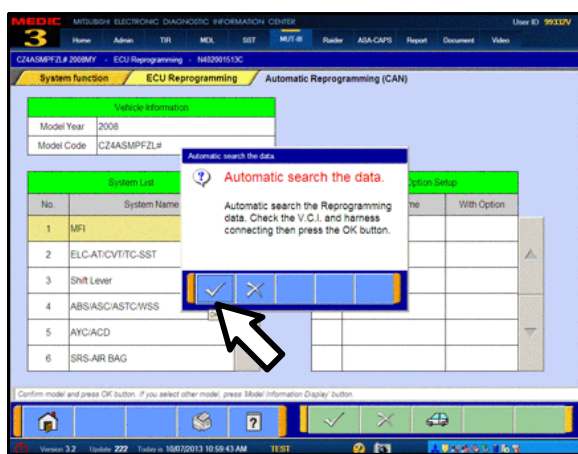
k. Confirm all data matches the vehicle and click the check mark at the bottom of the page.





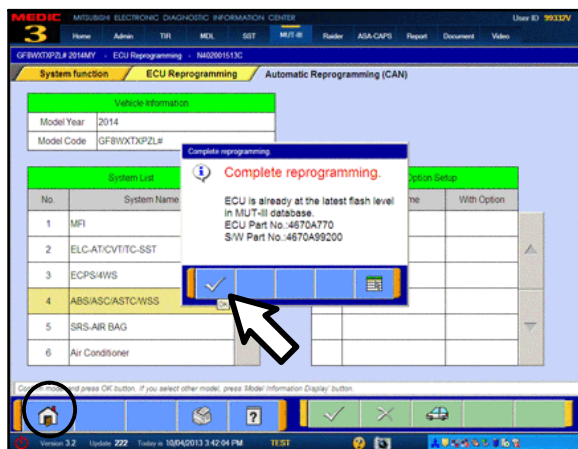
l. MFI should be highlighted as the default. If not, click it to highlight it.

Click the check mark at the bottom of the page.



m. A message will advise the system will “Automatic search the data.”

Click the check mark to continue.



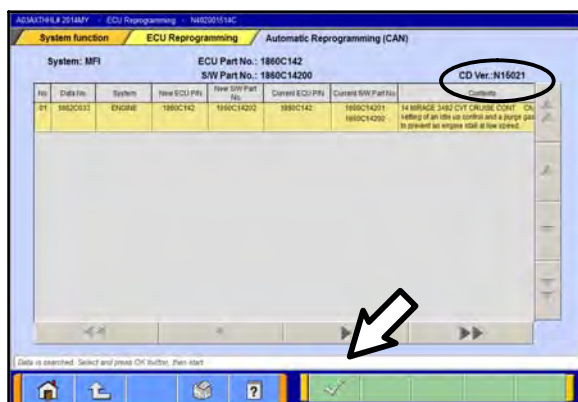
## ECM TO LATEST VERSION

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



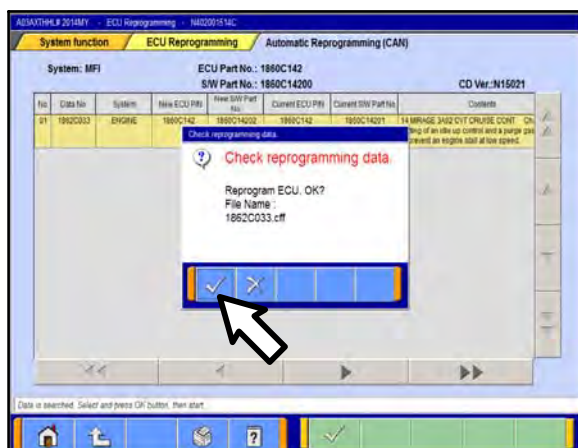
- n. The Automatic Reprogramming (CAN) database screen will display.

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.

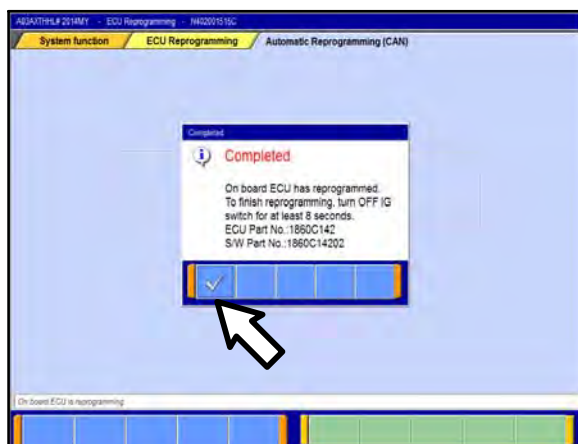
Click the check mark to continue.



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

- p. Click the check mark to begin reprogramming.

Reprogramming will take up to 5 minutes to complete.

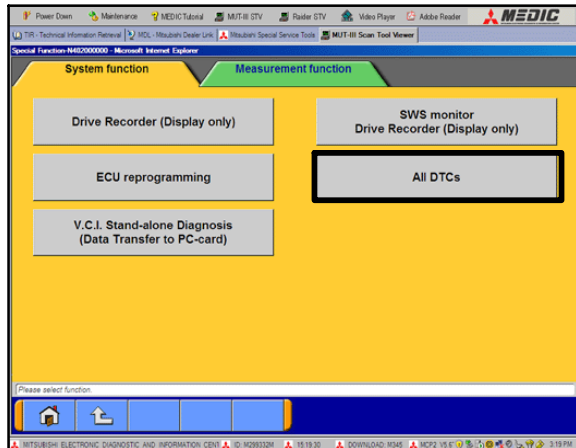


- q. This message will display when ECM reprogramming is successfully completed. Confirm the “New S/W P/N” displayed matches the table at the beginning of this TSB. Then click the check mark to clear the message.

- r. Turn the ignition switch off, wait 8 seconds, then turn the ignition switch on.

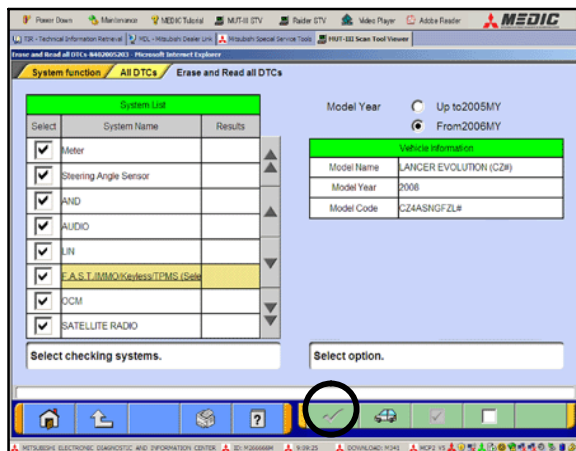
For vehicles equipped with OSS, press the START/STOP button once without applying the brake to turn the vehicle off. The LED in the button should be red. Wait for 8 seconds, then press the START/STOP button twice without applying the brake. The LED in the button should be green.

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

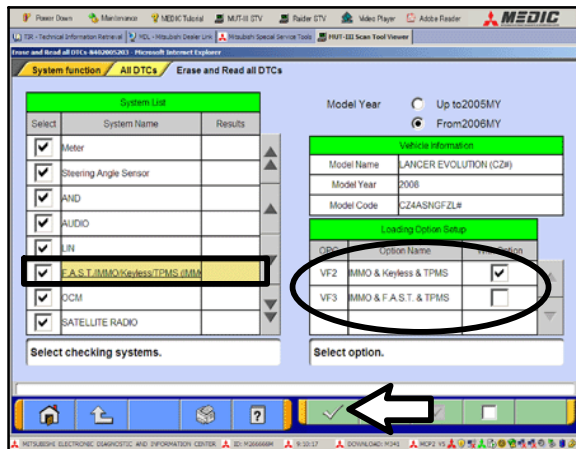


3. Using MUT-III, check and erase ALL DTCs from all systems as follows.

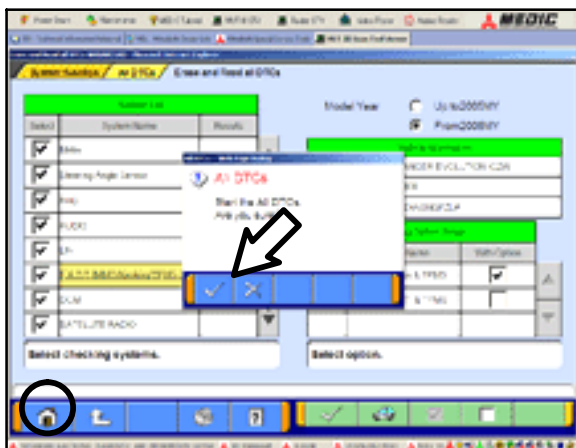
- Select "Special Function."
- Select "All DTCs," then select "ERASE AND READ ALL DTCs."




- 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.
- 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.



- In the left column, scroll to and click FAST/IMMO/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.
- 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-15-13-001), 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>MITSUBISHI</b> <small>MOTOR SALES OF AMERICA, Inc.</small>	<b>AUTHORIZED MODIFICATIONS</b>	These Modifications Have Been Approved as Appropriate by EPA and MAFS
<b>THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:</b>		
PART NUMBER <b>1860C297</b>	VENDOR CODE <b>N/A</b>	ROM ID # <b>ENG 1860C29701</b>
TSB <b>ENG TSB-14-13-XXX</b>	A/T <b>A/T</b>	DATE <b>06/25/14</b>
A/T <b>Engine Compartment Label</b>	DEALER CODE <b>99332</b>	<b>Control Module Label</b>

**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.
9. 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	Part Number	Quantity
Label, Engine Compartment	MSSF024G00	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.

*Nature Code:* 08A

*Cause Code:* 605

*Labor Operation No.:* 13850113

*Time Allowance:* .3 hrs.

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