



# Technical Service Bulletin

SUBJECT:			No: <b>TSB-13-13-005</b>
<b>ECM REPROGRAMMING FOR FALSE MIL (P2100) OR HARD TO START WITH ENGINE COLD</b>			DATE: <b>March, 2013</b>
			MODEL: <b>2010-2012 Outlander</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

## PURPOSE

Some affected vehicles may display an illuminated Malfunction Indicator Lamp or be hard to start after being parked during sub-freezing weather. Nearby residual EGR gas freezes the Electronic Throttle Valve (ETV) at cold ambient temperatures (approximately 23° F / -5° C). The frozen throttle valve causes MIL illumination for P2100 detection.

This TSB provides field fix information on hard-to-start engine conditions or DTC P2100 detection (P2100: Disconnection on throttle valve control servo circuit). New ECM software modifies the EGR intake air activation temperature to avoid freezing the ETV and false P2100 detection.

## AFFECTED VEHICLES

2010-2012 Outlander w/6G31 3.0L, AT, 2WD/4WD

## REQUIRED OPERATIONS

**IMPORTANT:** If an affected vehicle has a Malfunction Indicator Lamp (MIL) illuminated before reprogramming and DTCs other than described above 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.

## OVERVIEW

1. Confirm your MUT-III is updated with the latest reprogramming database.
2. Diagnose (and repair if necessary) the failure condition using the service manual.
3. If diagnosis determines a component must be repaired or replaced, **DO NOT** reprogram the ECM.  
**REPROGRAM THE ECM ONLY IF THE CONDITION MAY HAVE BEEN CAUSED WHILE THE VEHICLE WAS PARKED DURING SUB-FREEZING WEATHER AND YOU DO NOT FIND A REPAIRABLE CAUSE (E.G. FAULTY PART OR ELECTRICAL CIRCUIT, ADJUSTMENT, ETC.).**
4. Perform "Erase and Read All DTCs."
5. Perform a test drive to confirm DTCs do not return.

## EQUIPMENT

**The following equipment is needed to reprogram the ECM.**

- MEDIC laptop computer with A/C power adaptor – 520924, or MIT547708.
- VCI (Vehicle Communication Interface) – MB991824.
- MUT-III main harness 'A' (blue DLC connector) – MB991910.
- USB 2.0 cable – MB991827.
- "Engine Compartment/Control Module" label – p/n MSSF024G00.
- Reprogramming Database N13021 or higher
  - MEDIC 3 update at 176 or higher.
  - Standalone MUT-III laptop with Reprogramming CD 01/13 installed.

Continued

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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](http://www.mitsubishitechinfo.com)).

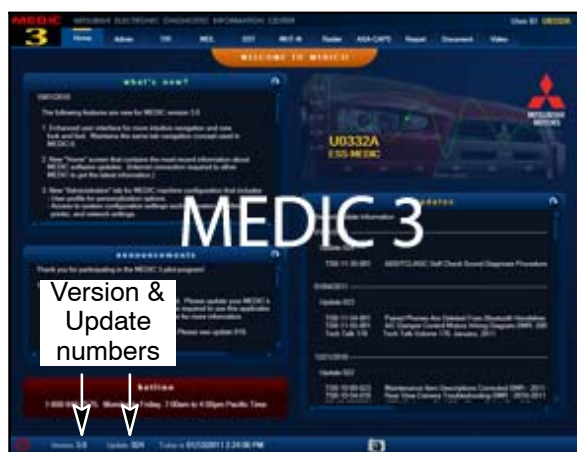
## ECM REPROGRAMMING CHART

MODEL POWER TRAIN DESTINATION	CURRENT PART NO.	DATA NO.	DISPLAY ON MUT-III AFTER REPROGRAMMING	
			New Part No.	New S/W Part No.
10 Outlander 6G31 V6, AT, 2WD / 4WD US (FED), Canada	1860B275	1862B602	1860B275	1860B27501
10 Outlander 6G31 V6, AT, 2WD / 4WD CAL	1860B276	1862B603	1860B276	1860B27601
11 Outlander 6G31 V6, AT, 2WD / 4WD NAS	1860B539	1862B604	1860B539	1860B53902
12 Outlander 6G31 V6, AT, 2WD / 4WD NAS	1860B767	1862B605	1860B767	1860B76701

## REPAIR PROCEDURE

**NOTE:** Reprogramming the ECM with the latest database (i.e.N13021) 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.

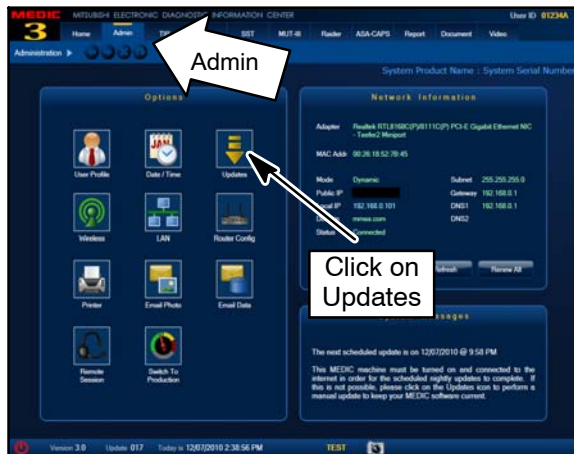


### **For MEDIC 3 users only: (MUT-III users go to step 5)**

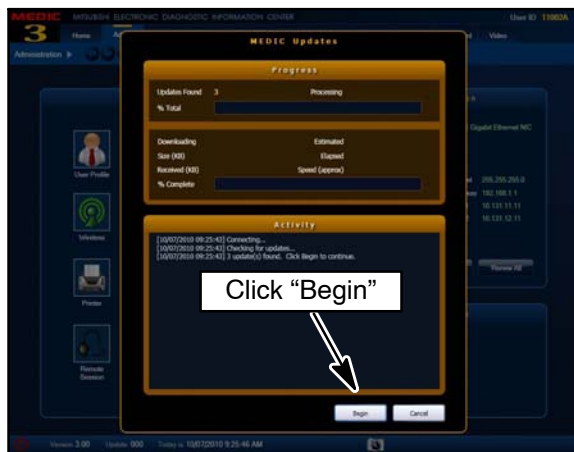
2. Verify the MEDIC 3 is at version 3.1 and at update 176 or higher.

If your **MEDIC 3 update is at least 176**, continue with the Reprogramming Procedure on page 4.

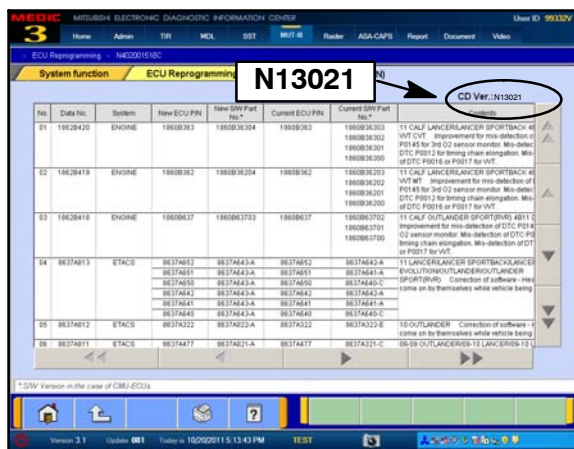
If your **MEDIC 3 update is below 176**, update your MEDIC 3 as follows.



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.**



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 **N13021 or higher.**

(1) If the database number displayed on your MUT-III is N13021 or greater, continue to the Reprogramming Procedure on page 4.

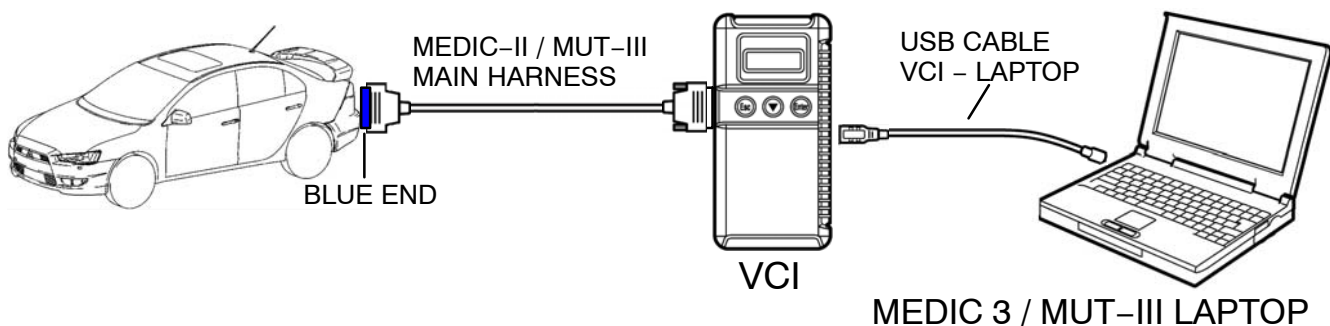
(2) If the database number displayed on your MUT-III is lower than N13021, locate the Yellow MUT-III Reflash CD 01/13 and follow the instructions on the CD label to update your MUT-III.

## 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:

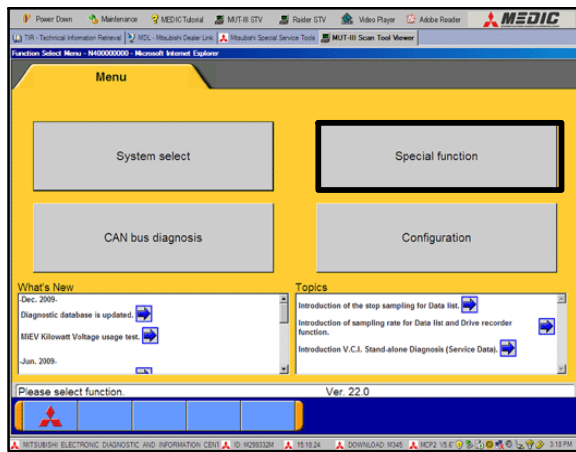


- Turn the laptop computer on. If you're running on battery power and the charge indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the laptop battery be charged prior to beginning, or that reprogramming be completed with the A/C power adaptor 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 DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.**

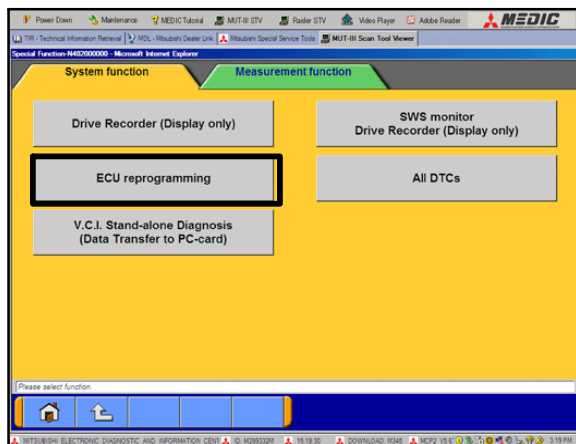
## ECM Reprogramming



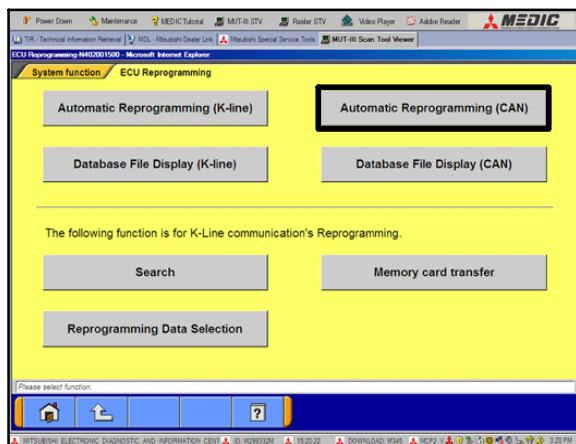
1. Conduct the following steps to reprogram the ECM.
  - a. Turn the ignition switch to the ON position. If the vehicle is equipped with the F.A.S.T. System, the transmitter must remain in the vehicle for the entire procedure.

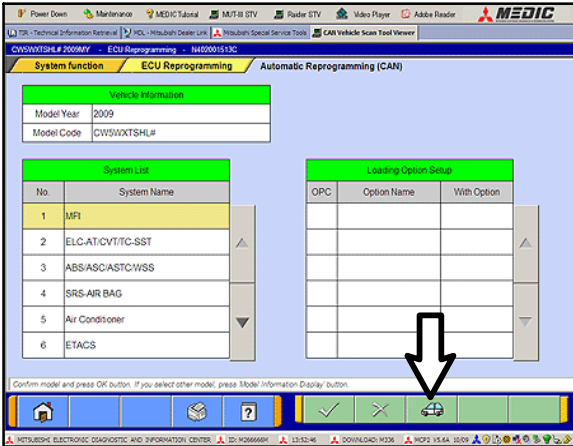
For vehicles equipped with OSS, press the START/STOP button twice without applying the brake. The LED in the button should be green.

- b. If using MEDIC 3, from the main page, click the MUT-III STV icon at the top center of the screen.
  - c. From the MUT-III Main Menu, select "Special Function."
  - d. Select "ECU reprogramming."

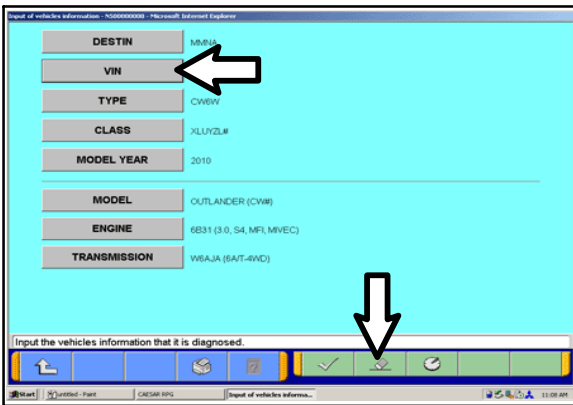


- e. Select "Automatic Reprogramming (CAN)."



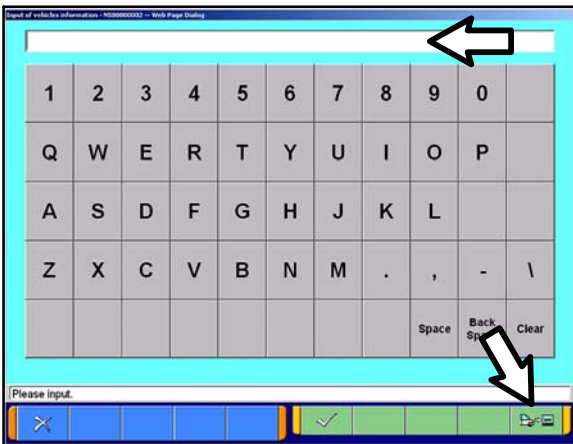


f. Click on the car icon at the bottom of the page.



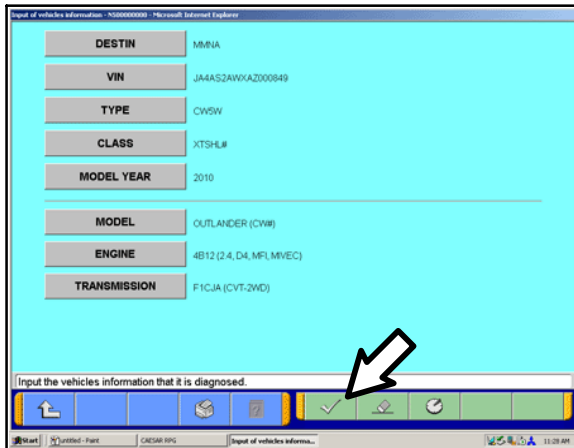
g. If the VIN or vehicle description displayed does not match the vehicle you are working on, click on the eraser icon at the bottom of the page.

Select VIN by clicking on the VIN button.

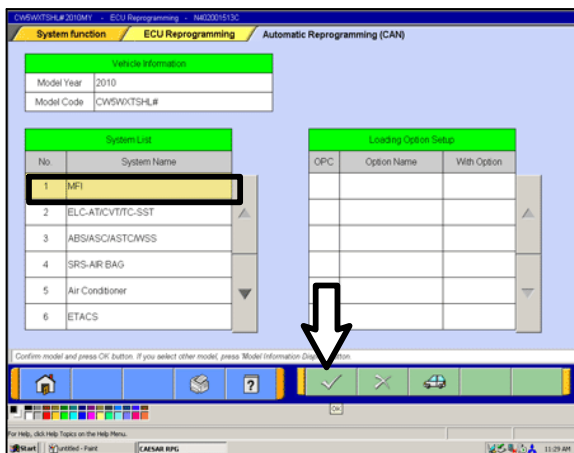


h. Click on the icon in the lower RH corner of the screen to have MUT-III automatically read the VIN. If a message appears saying that the VIN cannot be input automatically, manually type the 17 digit VIN into the VIN field at the top of the page.

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

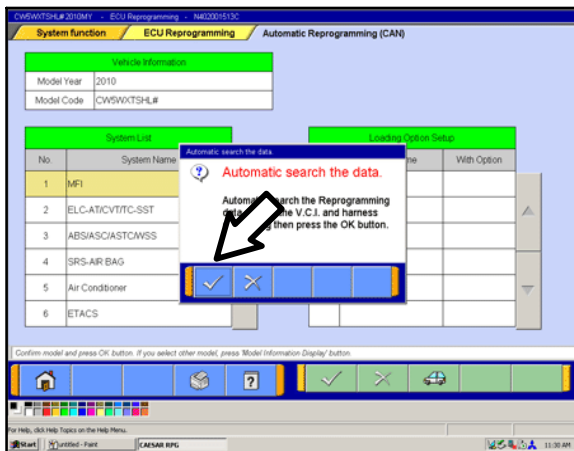


i. Confirm that all data matches the vehicle and click the check mark at the bottom of the page.



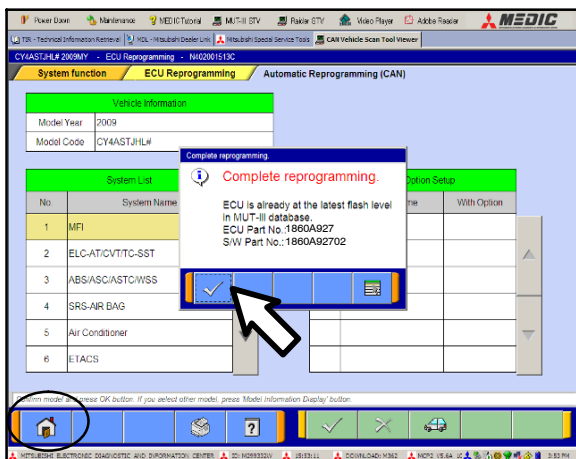
j. MFI should be highlighted as the default. If not, click on it to highlight it.

Click on the check mark at the bottom of the page.



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

Click on the check mark to continue.



## ECM TO LATEST VERSION

If a “Complete Reprogramming” message **does not** appear, continue with [step 1](#).

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

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

Turn off the ignition switch and disconnect the MUT-III. Turn off and disconnect the battery charger. Conduct normal diagnosis.

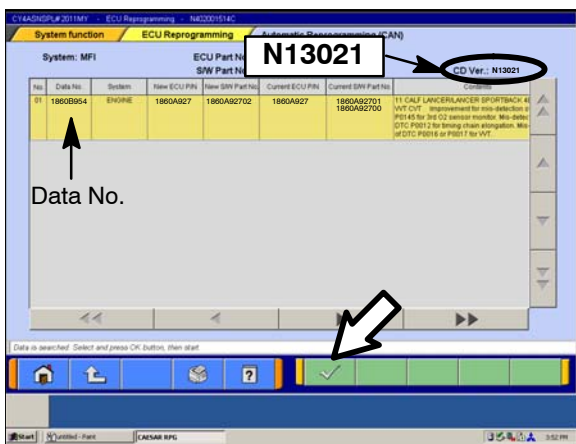
- l. The Automatic Reprogramming(CAN) database screen will display.

Confirm the database number at the top right of the table is **N13021** or higher.

If more than one row is displayed in the table, refer to the ECM Reprogramming Chart on page 2 to select the proper Data No. for this procedure and select the appropriate row.

Click on the correct row to highlight it.

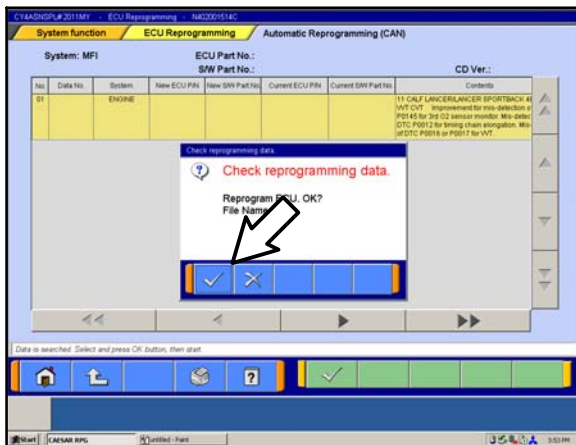
Click on the check mark to continue.



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

- n. Click on the check mark to begin reprogramming.

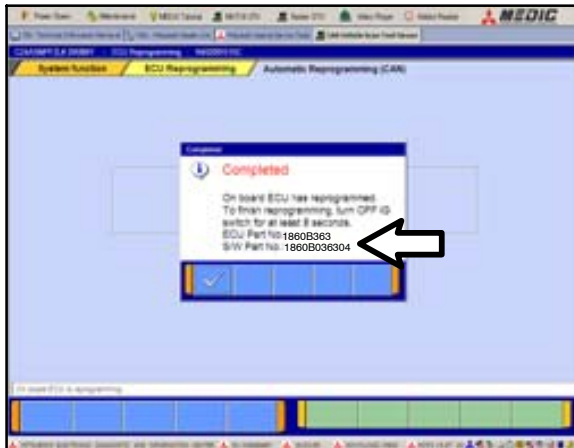
It will take up to 5 minutes for reprogramming to complete.



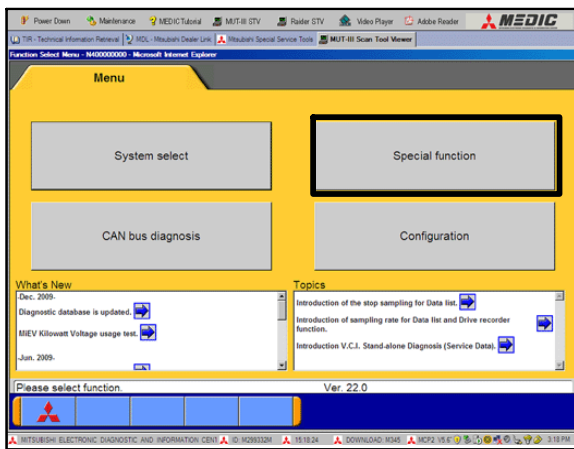
## CAUTION

The Daytime Running Lights and both the engine and condenser fans will automatically be turned on during reprogramming. Care should be taken to insure nothing gets caught in the moving blades. The radio will be turned off and you will also hear a chime in the interior for a short period of time. These are normal conditions.

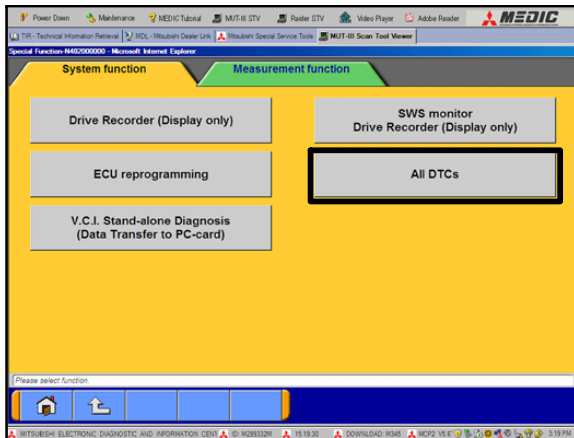




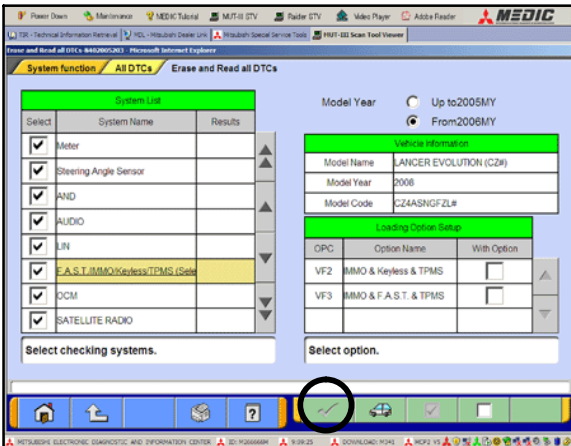
- o. This message will display when ECM reprogramming is successfully completed. Confirm the “New S/W P/N” displayed matches the table at the beginning of this TSB.
  - p. You will be prompted to turn the ignition switch to the OFF position, wait at least 8 seconds, then turn it back on.
  - q. Click the check mark and you will be returned to the “ECU Reprogramming” page.
2. Click the Home icon at the lower left corner of the page to return to the MUT-III main page.



3. Using the MUT-III, check and erase ALL DTCs from all systems as follows.
- a. Select “Special Function.”



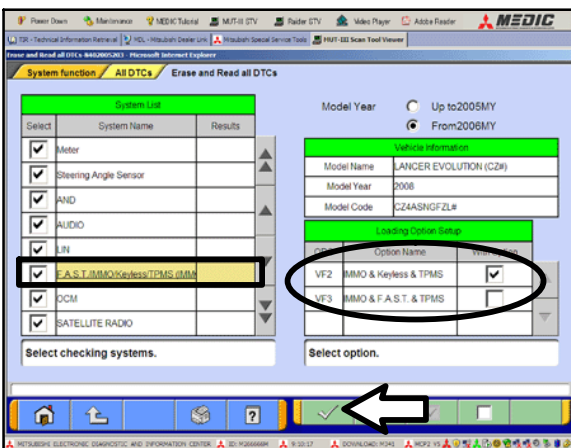
- b. Select “All DTCS,” then select “ERASE AND READ ALL DTCS.”



- c. The “System List” 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.

**NOTE:** The “Loading Options Setup” list on the RH side of the screen appears for Lancer based vehicles. For those models, the check mark at the bottom of the page is not highlighted (inactive) at this time.

- d. If the check mark at the bottom of the screen is highlighted, click it and proceed to step 4. If not proceed to step e.

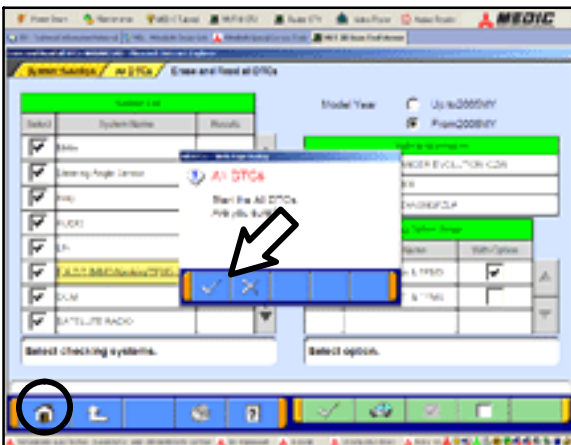


- e. In the left column, scroll to and click FAST/IMMO/KEYLESS/TPMS. In the right column, check the correct option code (VF#) from the Loading Options Setup list. This will activate the check mark at the bottom of the page.

- Vehicles with regular keyless entry (buttons on an integrated key), select VF2.
- Vehicles with F.A.S.T. key, select VF3.


- f. In the left column, scroll to and select METER. A window 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 pop up.
- If DTCs return after reprogramming, click the check mark to clear the window. Diagnose and repair per the Service Manual.
  - If DTCs do not return, click the check mark to clear the window and then click the Home icon in 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.

- 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-13-13-005), 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>THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:</b>					
PART NUMBER 1860A275		VENDOR CODE N/A		ROM ID # ENG 1860B27501	
TSB ENG TSB-13-13-005		A/T		DATE 3/20/13	
A/T		DEALER CODE 99332		DATE 3/20/13	
<i>Engine Compartment Label</i>			<i>Control Module Label</i>		

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

- 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
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.

### Hard to Start/No Start in Cold Ambient Temperature

Use LOTS for claiming repairs as appropriate

### ECM Reprogramming for Hard to Start/DTC P2100 (if Hard/No Start repairs are not claimed)

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.