



Technical Service Bulletin

SUBJECT: PCM REPROGRAMMING FOR DTC P2181 – COOLING SYSTEM PERFORMANCE			No: TSB-13-13-004
			DATE: February, 2013
			MODEL: 2007 Raider
CIRCULATE TO:	☐ GENERAL MANAGER	☐ PARTS MANAGER	☒ TECHNICIAN
☒ SERVICE ADVISOR	☒ SERVICE MANAGER	☒ WARRANTY PROCESSOR	☐ SALES MANAGER

PURPOSE

Some affected vehicles may display the MIL (Malfunction Indicator Lamp), with DTC P2181 – Cooling System Performance recorded in PCM memory.

This TSB provides a procedure to correct this condition by reprogramming the PCM with new software.

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

AFFECTED VEHICLES

2007 Raider with 3.7L V6 engine

REQUIRED OPERATIONS

Perform diagnosis and repairs for P2181 using procedures outlined in the service manual. When completed, reprogram the PCM.

1. Confirm MEDIC 3/MUT-III has been updated with the latest reprogramming database.
2. Reprogram the ECM with new software per the Reprogramming Procedure.
3. Perform “Erase and Read All DTCs.”
4. Perform a test drive to confirm DTCs do not return.

THE FOLLOWING EQUIPMENT IS NEEDED TO REPROGRAM THE PCM.

- Battery Charger
- Laptop computer – 520924 or MIT547708
- VCI (Vehicle Communication Interface) – MB991824
- MUT-III main harness A (blue) – MB991910
- USB 2.0 cable – MB991827
- “Engine Compartment/Control Module” label – p/n MSSF024G00
- MEDIC 3 update at 171 or higher.

OR

Standalone MUT-III laptop with version 28.0 installed.

RAIDER PCM (ECU) REPROGRAMMING CHART

Year	Specification	New S/W Part #
2007	3.7L CA (3.7L 4A/T 2WD or 4WD)	05094540AJ or higher
	3.7L FED (3.7L 4A/T 2WD or 4WD)	05094539AJ or higher

continued

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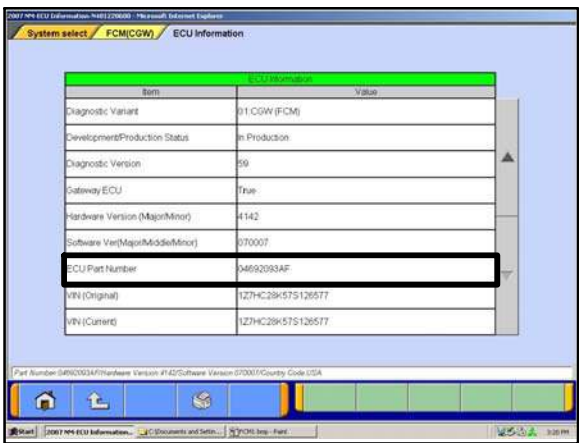
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The information contained in this bulletin is subject to change. For the latest version of this document, go to the Mitsubishi Dealer Link, MEDIC, or the Mitsubishi Service Information website (www.mitsubishitechinfo.com).

REPAIR PROCEDURE

NOTE: Reprogramming the ECM with the latest database includes all past and current reprogramming for TSBs on affected vehicles. You do not need to reprogram the ECM for each TSB.

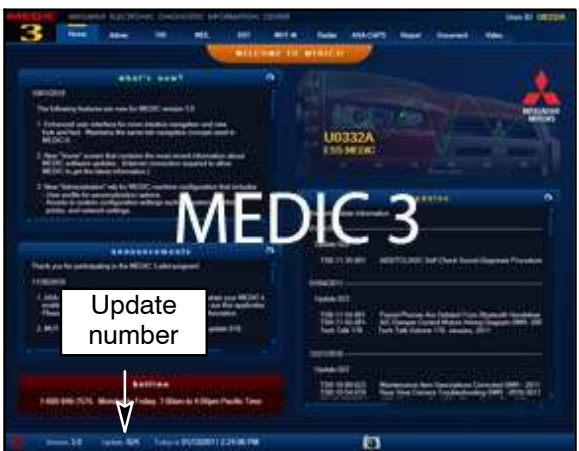
1. Check the underside of the hood to verify there is no “Authorized Modification” label previously installed to indicate this reprogramming has already been completed. If a label is present and the “ROM ID #” on the label matches the “New S/W Part No.” in the chart on page 1 of this bulletin, the ECM is at the latest level and reprogramming is not necessary.



- If there is an underhood label indicating a different TSB number, check the ECU part number using the MUT-III.
 - Turn the ignition to the ON position. Do not start the engine.
 - Open RAIDER STV.
 - Click **System Select**.
 - Click **PCM (NGC 4 Engine)**.
 - Click **ECU Information**.
 - Confirm the **ECU Part Number**.
 - Turn the ignition to the OFF position.

If the part number shown is listed in the **Raider PCM (ECU) Reprogramming Chart** shown on page 1, the PCM is already at the current level and this TSB does not apply. Disconnect the MUT-III and diagnose using the service manual.

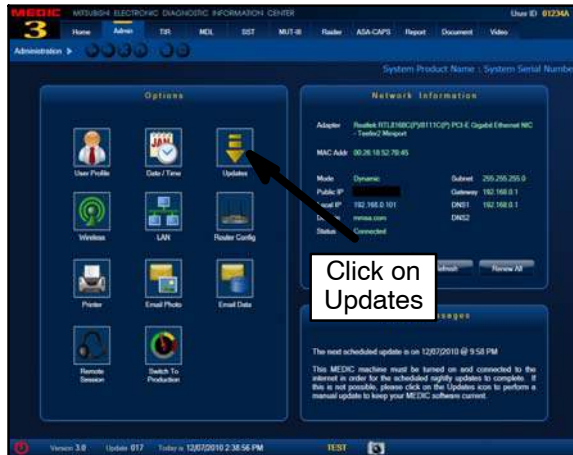
For MEDIC 3 users only: (Stand alone MUT-III users go to step 6)



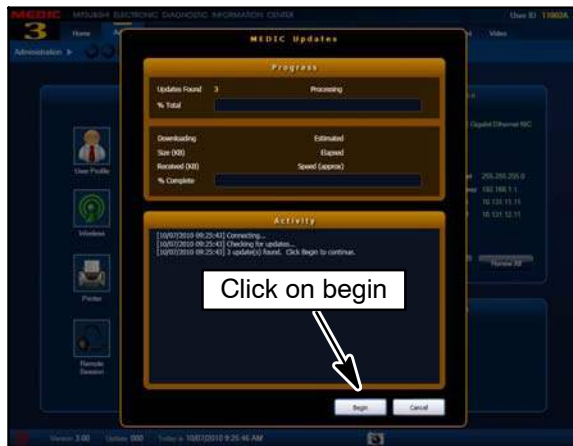
- Verify the MEDIC 3 is at update **171** or higher.

If your **MEDIC 3 update is at least 171**, continue with the Reprogramming Procedure on page 4.

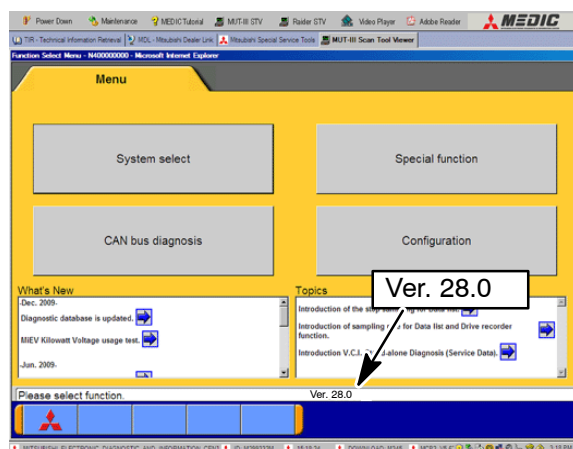
If your **MEDIC 3 update is below 171**, update your MEDIC 3 as follows.



4. Select the MEDIC 3 “Admin” tab. Click on “Updates.”



5. If the MEDIC Updates screen advises updates are available, click the “Begin” button. After the updates are complete, **GO TO THE REPROGRAMMING PROCEDURE ON PAGE 4.**



6. **Standalone MUT-III Scan Tool Viewer (STV) ONLY: (MEDIC 3 USERS go to the Programming Procedure on page 4).** Verify that your MUT-III has the most current version of the reprogramming database:

- a. Confirm MUT-III (NOT Raider STV) is at Version 28.0.

If MUT-III is at Version 28.0, close MUT-III and proceed to the **Reprogramming Procedure** on page 4.

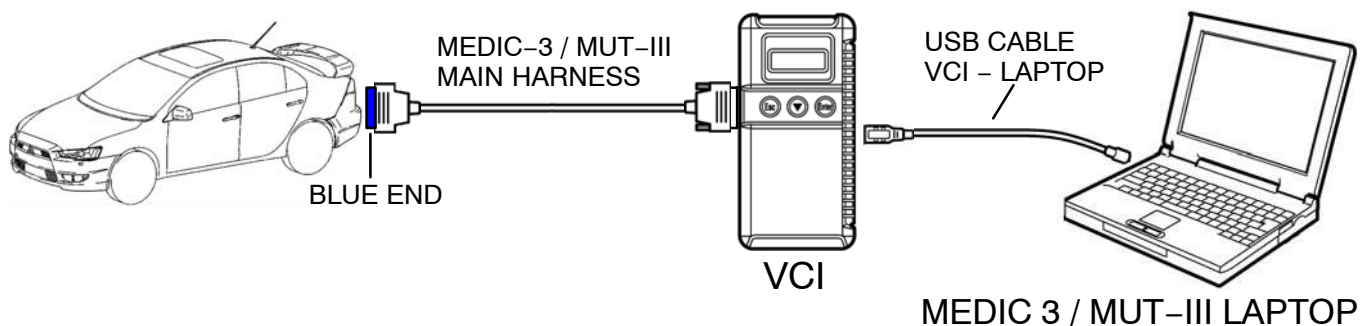
If MUT-III is NOT at Version 28.0, locate your MUT-III Version 28 programming disc and update you laptop.

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:

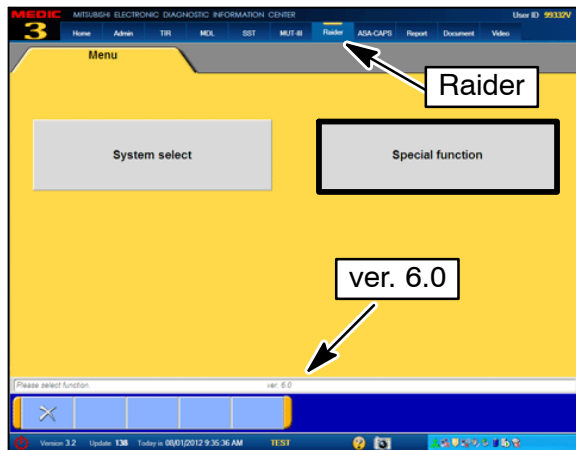


- Turn the laptop computer on. If you're running on battery power and the charge indicator in the lower right hand corner of the screen does not show a full charge, it is recommended that either the laptop battery be charged prior to beginning, or that reprogramming be completed with the A/C power adaptor 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 with the blue DLC connection 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 that the indicator lamp in the upper right corner of the screen is green.

NOTE: If the USB cable is disconnected during this procedure, a warning message will display. Close the message display by clicking on the OK button and begin the reprogramming procedure from the start.

PCM Reprogramming

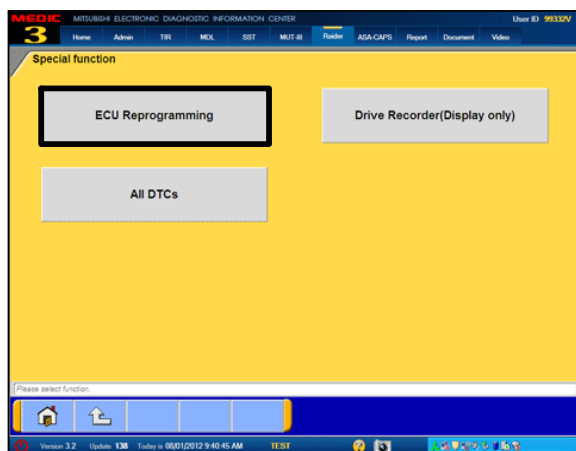
1. Refer to the **Raider PCM (ECU) Reprogramming Chart** at the beginning of this bulletin, or the “**Raider ECU Part Number & ECU Calibration**” chart on the Mitsubishi Dealer Link in the Service Tech Resources page to identify the appropriate calibration for this programming.
2. Conduct the following steps to reprogram the ECM.
 - a. Turn the ignition switch to the ON position. Do not start the engine.



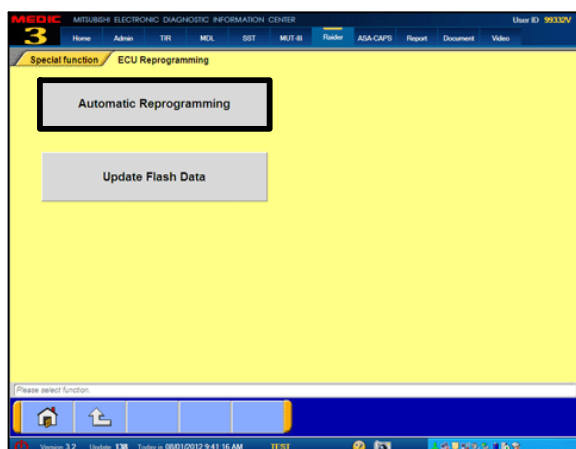
- b. If using MEDIC-3, from the main page, click the Raider tab at the top center of the screen.

If using a standalone MUT-III STV (non-MEDIC laptop), close MUT-III and open Raider STV.

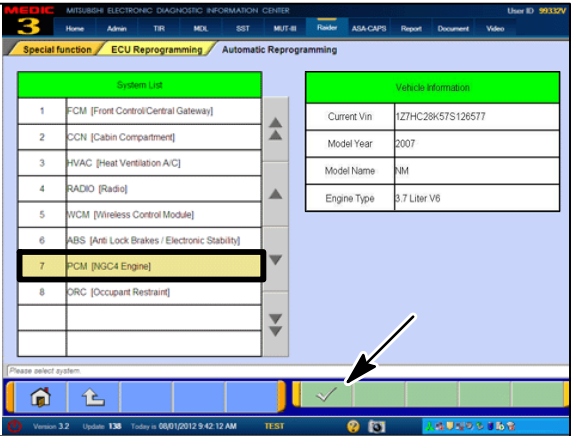
- c. In the Raider main menu, select **Special Function**.



- d. Select **ECU Reprogramming**.

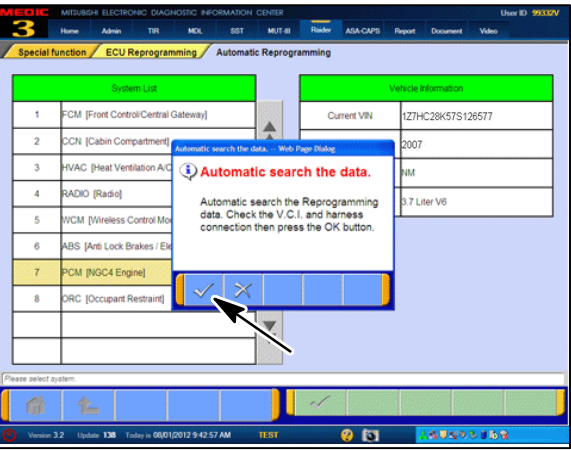


- e. Select **Automatic Reprogramming**.

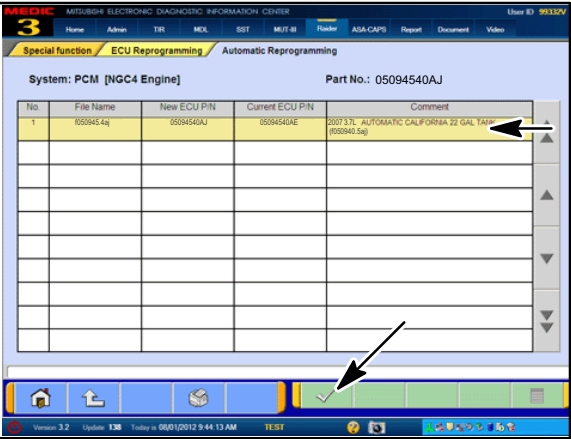


f. Select **PCM (NGC 4 Engine)**.

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

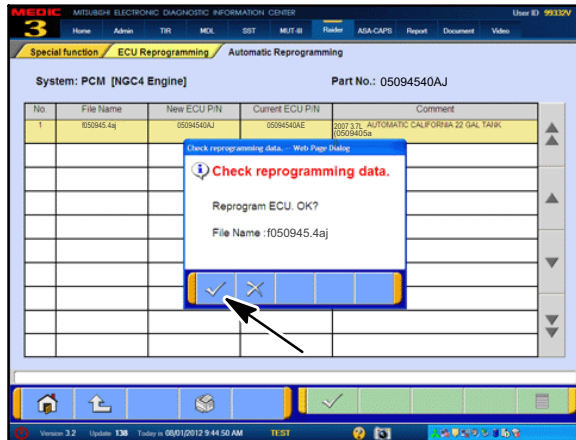


g. This window will pop up advising the program will “Automatic search the data.” Click on the check mark to continue.



h. Select the programming database (calibration) listed in the “New ECU P/N” column that matches the “New S/W Part #” column from the chart on page 1 of this TSB.

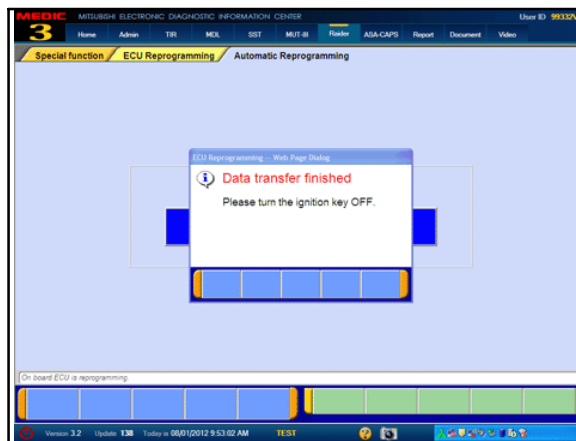
Click on the check mark at the bottom of the screen.



- i. Click on the check mark to continue with reprogramming. It will take up to 10 minutes to complete reprogramming.

DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS. INTERRUPTION DURING PROGRAMMING REQUIRES THE PROCESS TO BE RESTARTED.

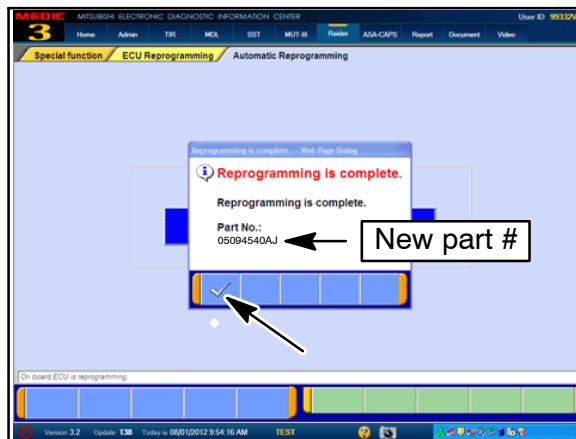
DO NOT SHUT DOWN THE RAIDER STV PROGRAM AT THIS POINT. ECU DAMAGE WILL OCCUR. FOLLOW THE DISPLAYED SCREEN MESSAGES TO RESTART THE PROGRAMMING PROCESS.



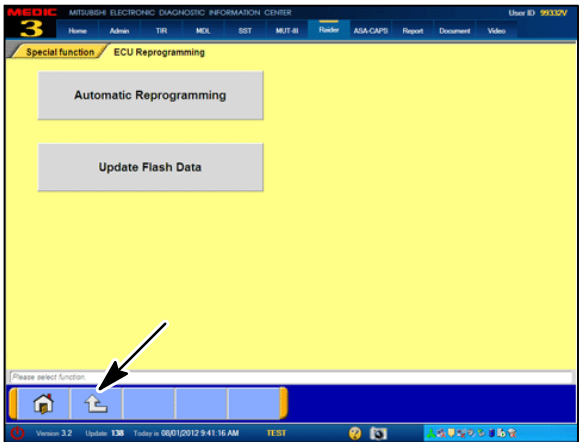
- j. When programming is complete, this screen will display. Turn the ignition key off.

A window will pop up prompting you to turn the key ON within 20 seconds.

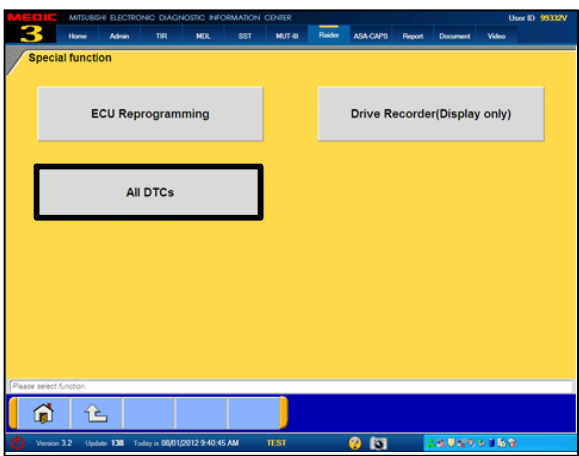
After turning the key ON, you will be taken to the next screen. **Be patient as this takes some time.**



- k. This screen will display. Note the new part number (2007 CA 4 A/T part # shown) and confirm it matches the part number for the vehicle's specification from the chart on page 1 of this TSB.
- l. Click on the check mark in the window to continue.

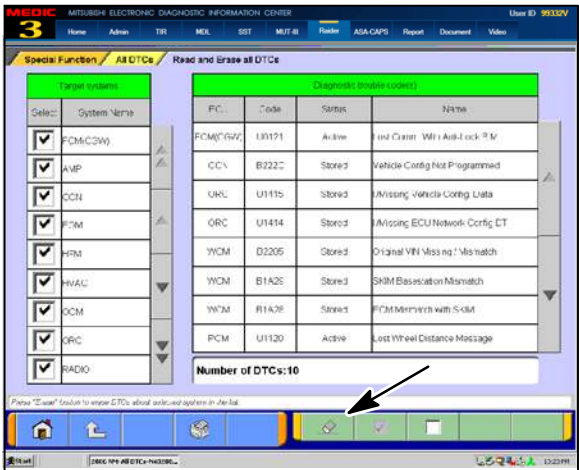


- m. Click on the “UP” arrow at the bottom left of the screen to return to the **SPECIAL FUNCTIONS** menu.



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

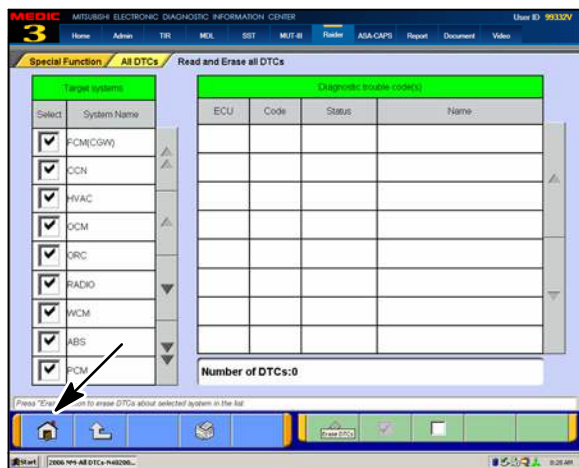
- a. From the Special Functions menu, select “All DTCs.”



- b. If DTCs are listed, click on the erase button at the bottom of the screen.

Any DTCs listed will be erased and rechecked to see if they return.

NOTE: It is not uncommon for DTCs to be set in the PCM or other control units during reprogramming.



- c. Verify **no DTCs** are listed. If there are, diagnose per the Service Manual.

Click on the “Home” icon to return to the main page.

- d. The reprogramming procedure is complete. Turn the ignition to the OFF position and disconnect the VCI and battery charger..

4. Use a permanent ball-point pen to enter the new S/W part number, your dealer code, this TSB number (**TSB-13-13-004**) and the current date on the Engine Compartment / Control Module Label (part no. MSSF024G00).

 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 05094540AJ	VENDOR CODE	ROM ID # ENG A/T
TSB ENG TSB-13-13-004 A/T	DEALER CODE 99332	DATE 02 / 26 / 13
<i>Engine Compartment Label</i>		AUTHORIZED MODIFICATIONS  MITSUBISHI MOTOR SALES OF AMERICA, Inc. P/N Vndr Code TSB Dir Code Date <i>Control Module Label</i>
The Control Module Label is NOT used for this reprogramming. It should be discarded. For Raider models, there is no vendor code or ROM ID to be recorded on the label.		

5. Carefully remove all dirt and oil from a vacant area near the VECI label, and affix the Engine Compartment label.

WARRANTY INFORMATION

This bulletin is supplied as technical information only and is not an authorization to repair. If an affected vehicle is observed with the described condition, diagnose the condition, repair as described in this bulletin and submit a normal warranty claim using the following information.

PCM Reprogramming for DTC P1281 (2007 3.7L V6 Models only)

Nature Code: 51Q

Cause Code: 990

Labor Operation No. 181906K9

Time Allowance: 0.4 hr.

Warranty Coverage: 8 years / 80,000 miles, Emissions Warranty

Special Warranty Information: Normal warranty procedures apply.