


MEDIC
UPDATE
TECHNICAL SERVICE BULLETIN

SUBJECT:		No: TSB 08-13-007	
ENGINE CONTROL MODULE REPROGRAMMING FOR DTCS P0300 - P0306 AND ROUGH IDLE		DATE: March, 2008	
MODEL: 2007-08 Outlander			
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input 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 customers of affected vehicles may complain about a rough idle during start-up when the engine temperature is approximately 50 deg. F (10 deg. C). They may also complain that the malfunction indicator is illuminated. A technician may find a diagnostic trouble code for a misfire (P0300 - P0306) stored in the ECM memory. The condition may be caused by inferior quality fuel that is commonly available during summer months.

This Technical Service Bulletin advises the steps to reprogram the ECM to change the parameters associated with the air/fuel mixture when a rough idle is detected.

AFFECTED VEHICLES

2007-08 Outlander built prior to the following VIN sequence numbers (last 8 of the VIN).

<u>U.S. VEHICLES</u>		<u>CANADA VEHICLES (ALL FED SPECIFICATION)</u>	
Specification	VIN Sequence	Specification	VIN Sequence
Federal 2WD	8Z015619	2WD	N/A for 2008 M.Y.
Federal 4WD	8Z015439	4WD	8Z604214
California 2WD	TBD	N/A	N/A
California 4WD	8Z016930	N/A	N/A

REQUIRED OPERATIONS

The following equipment is needed to reprogram the ECM.

- VCI (Vehicle Communication Interface) - MB991824
- Laptop computer with A/C power adaptor - 520924, 528535 or 547708
- MUT-III main harness 'A' (blue connector at the DLC end) - MB991910
- USB 2.0 cable - MB991827
- "Engine Compartment/Control Module" labels - p/n MSSF-024G-00
- MEDIC-II Download at M210 or higher.

If an affected vehicle has a Service Engine Soon (SES) lamp illuminated and DTCs listed in the ECM memory (before reprogramming), follow diagnostic instructions for the applicable DTCs per the service manual information. Do not reprogram the ECM until the reason for DTCs being set is corrected.

IMPORTANT!!!

PRIOR TO BEGINNING REPROGRAMMING OF THE ECM, ENSURE THAT THE TRANSMISSION CONTROL MODULE (TCM) IS AT THE LATEST REPROGRAMMING LEVEL.. REFER TO THE INSTRUCTIONS THAT FOLLOW TO DETERMINE THE PROGRAMMING LEVEL.

IF THE TCM IS NOT TO THE LATEST REPROGRAMMING LEVEL, FOLLOW THE INSTRUCTIONS IN THIS TSB TO REPROGRAM THE ECM, THEN REFER TO TSB-07-23-006 TO REPROGRAM THE TCM. WHEN APPLICABLE, ALWAYS REPROGRAM THE ECM PRIOR TO REPROGRAMMING THE TCM.

Determining Current TCM Programming Level

From the main menu, click System Select, and ensure "From2006MY" is selected at the right side of the screen. Click on the car icon at the bottom of the screen and input the correct VIN. Then select "ELC-AT/CVT/ C-SST". When the screen changes, select "Special Function", then select "ECU Information." Scroll to find "Software Part Number 01" and match it to "S/W Part No." in the following chart.

Model	Part No.	ROM ID	S/W Part No.	VENDOR NO.
07 Outlander 6B31 2WD/4WD	8631A084	TJF000-37	8631A0840E	3106_1XM1A (JATCO) G1T33071 H4(MELCO)

If the "S/W Part No." displayed on the MUT-III is 8631A0840A, **B, C, or D** then the TCM must be reprogrammed AFTER completing the reprogramming of the ECM

REPAIR PROCEDURE

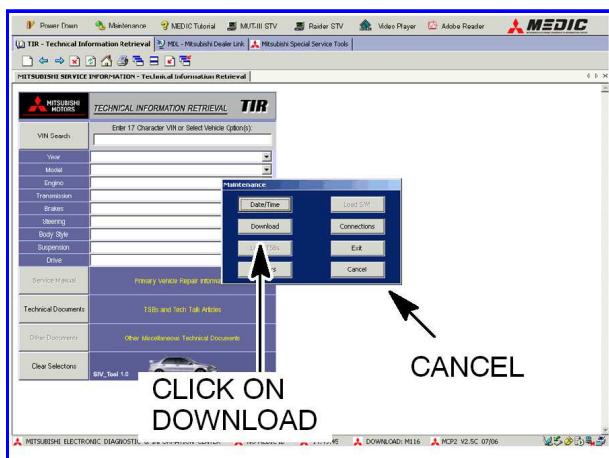
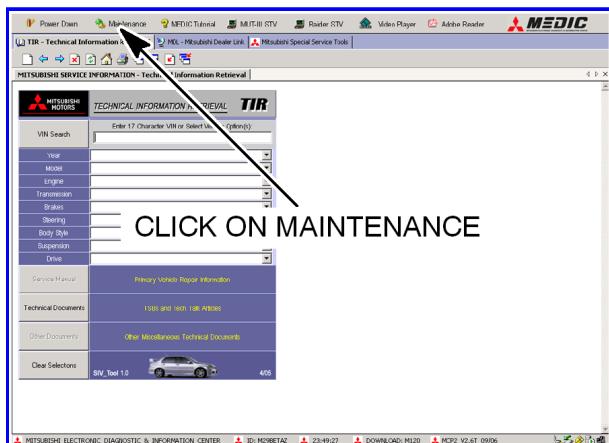
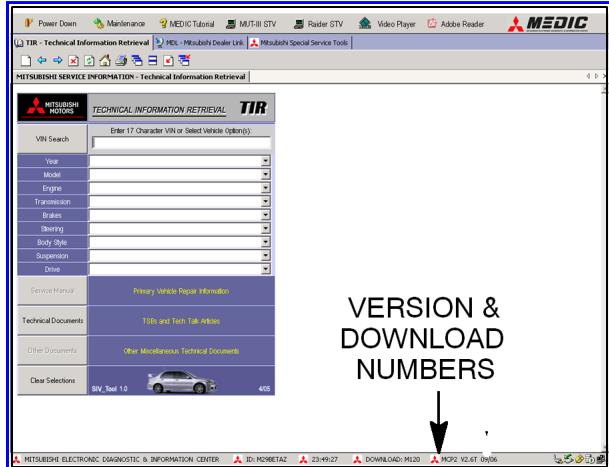
1. Check the underside of the hood to verify that there is no label previously installed to indicate that this reprogramming has already been done.

NOTE: The software for this reflash is the same as the software for TSB-08-55-002REV which modifies the software for poor heater performance at low speeds and/or idle. THE ECM WILL NOT ALLOW YOU TO REPROGRAM WITH THE SAME NEW S/W PART #. A SECOND TIME. Check the underside of the hood for a reprogramming label. If the ROM ID on the label matches the New Software No. listed in the previous chart, then the vehicle's software is to the latest specification and reprogramming is not necessary.

For MEDIC II users only: (MUT III users go to step 5)

2. Verify that the MEDIC-II is at version 4.5 and at download M210 or higher.

If your **MEDIC-II Download is below M210**, update your MEDIC II as follows.



3. On the MEDIC-II main screen, click on "Maintenance".

4. Click on "Download". After the download completes, click on "Cancel" to exit the "Maintenance" window.

GO TO THE REPROGRAMMING PROCEDURE ON PAGE 4.

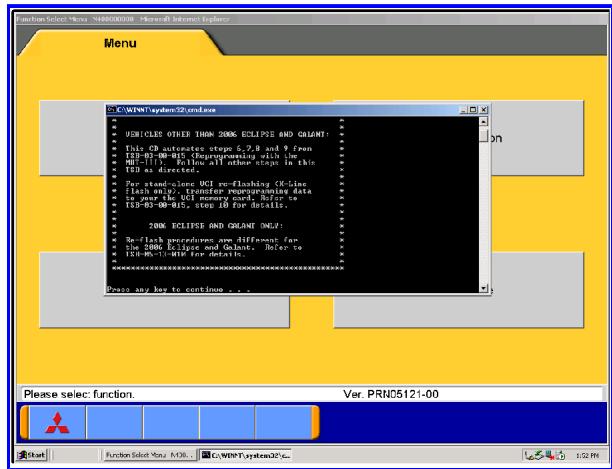
5. Scan Tool Viewer (STV) ONLY (MEDIC-II USERS go to the Programming Procedure on

page 4). Verify that your MUT-III has the most current version of the reprogramming database:

- a. Select "Special Function", then select "ECU Reprogramming."
- b. Select "Database File Display." The database version is displayed in the top right corner of the screen. Make sure the database version is **N08032 or greater**.
- c. If the database version is **N08032 or greater**, reprogram the ECM as described in the **Programming**

Procedure beginning on page 4.

d. If the database version is less than N08032, you must transfer the new reprogramming data from the Reflash Update CD 03/08 to the MUT-III hard drive as follows:



1. Install **Reflash Update CD 03/08** into the PC's DVD-ROM drive.
2. Follow the instructions on the screen. The system will automatically transfer the reprogramming data onto the PC's hard drive.
3. Continue to the Reprogramming Procedure on page 4.

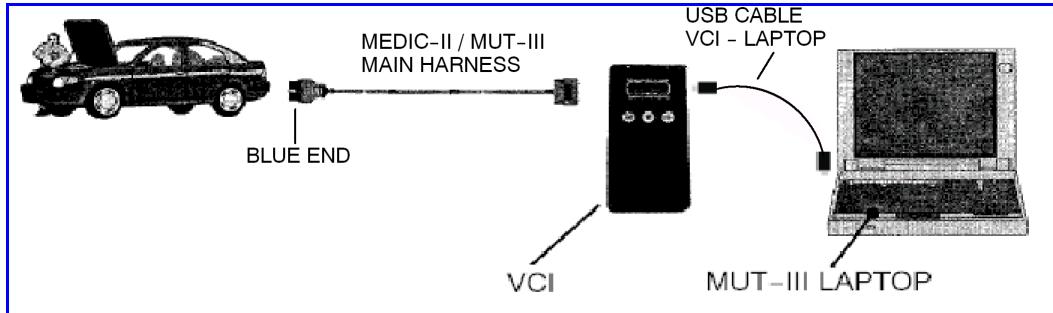
REPROGRAMMING PROCEDURE

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. DURING REPROGRAMMING, A BATTERY CHARGER SHOULD BE CONNECTED TO THE VEHICLE'S BATTERY DURING THE REPROGRAMMING PROCEDURE. DO NOT ALLOW THE BATTERY CHARGER TO TIME OUT.

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 the battery 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.

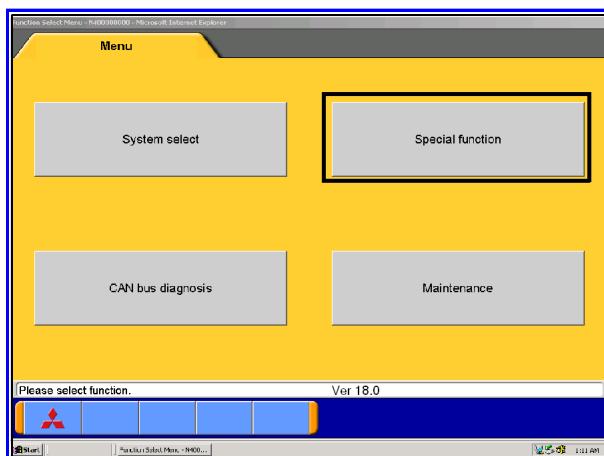


CAUTION

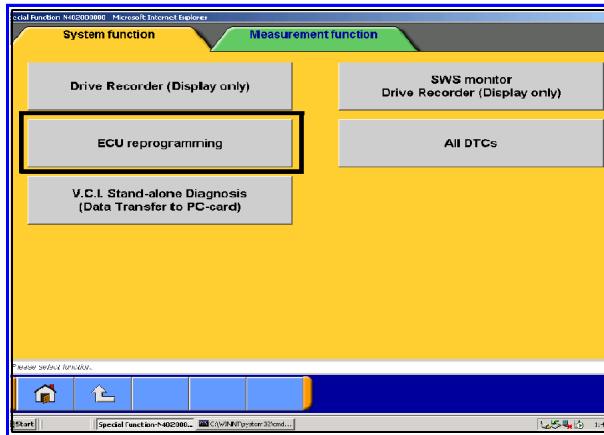
DO NOT DISTURB THE HARNESS CABLES OR CONNECTIONS. INTERRUPTION DURING THE REPROGRAMMING PROCESS COULD CAUSE THE CONTROL UNIT TO LOSE DATA OR PREVENT FUTURE REPROGRAMMING. IF THE USB CABLE IS DISCONNECTED DURING THIS PROCEDURE, A WARNING MESSAGE WILL DISPLAY.

ECM Reprogramming

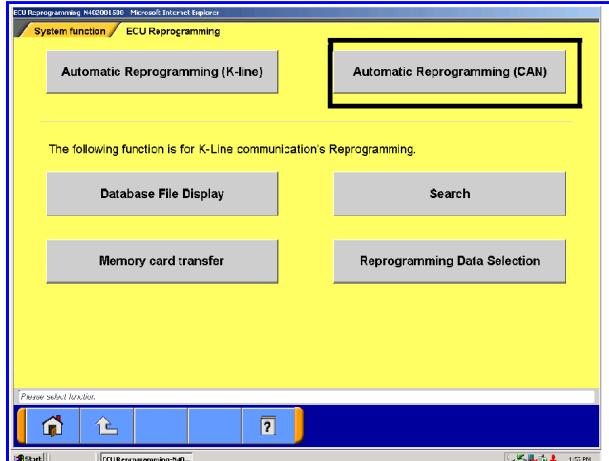
1. Conduct the following steps to reprogram the ECM.
- a. Turn the ignition key or knob (F.A.S.T. equipped) to the ON position. If the vehicle is equipped with the F.A.S.T. System, the fob must remain in the vehicle for the entire procedure.



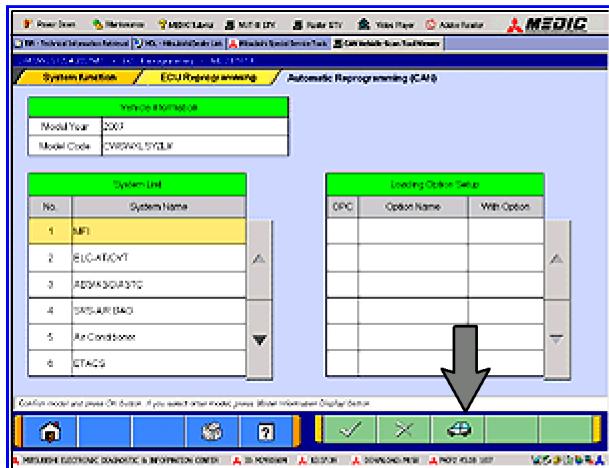
b. Select "Special Function."



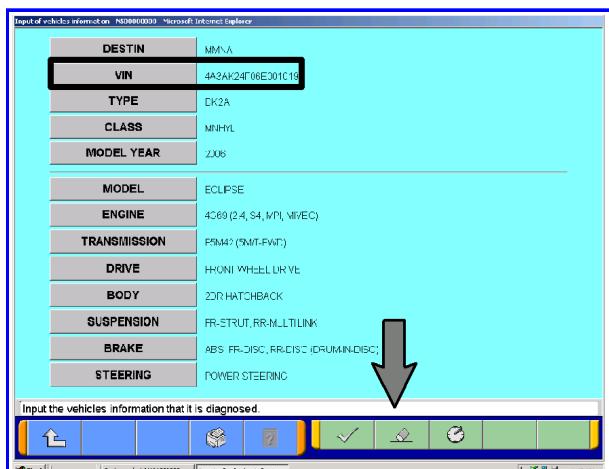
c. Select "ECU reprogramming."



d. Select "Automatic Reprogramming (CAN)."



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

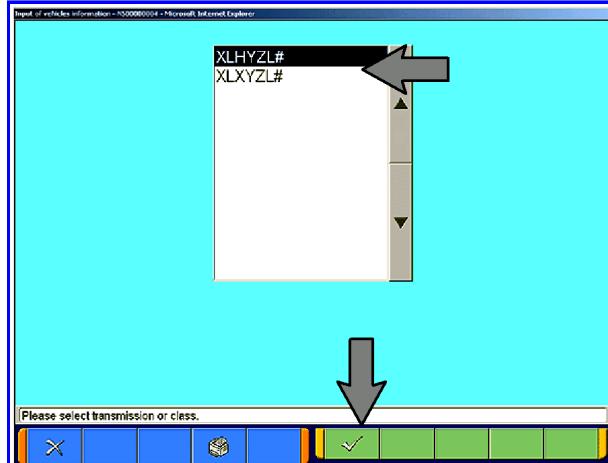
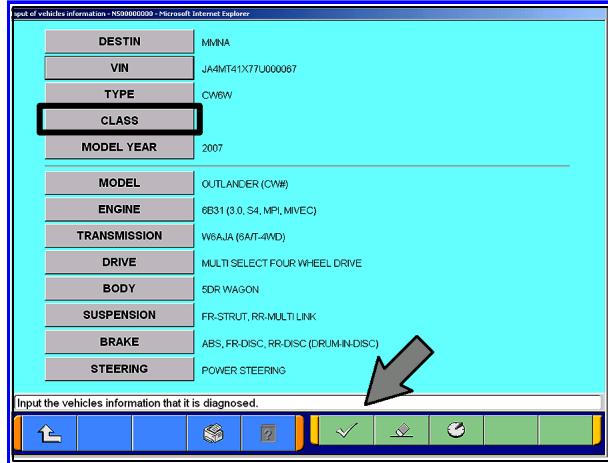
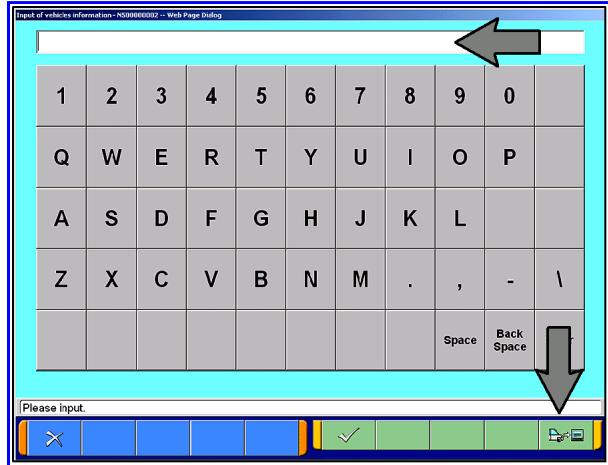


f. If the VIN listed does not match the vehicle you are working on, click on the Eraser Icon at the bottom of the page.

Select VIN by clicking on the button.

g. Click on the icon in the lower RH corner of the screen to have the 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.

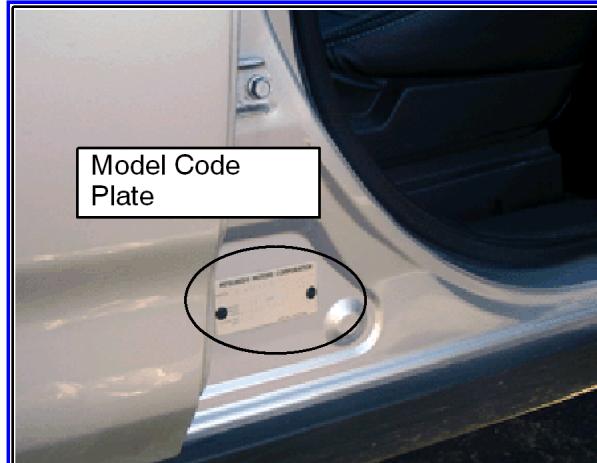
Make sure the VIN is correct and click on the check mark.



h. If it was not completed automatically, input the vehicle class. Click on the CLASS button, select the appropriate class from the menu and then click the check mark at the bottom of the page. Vehicle class can be found on the Vehicle Information Code Plate riveted to the base of the RH b-pillar (see photo below). The class is part of the model code.

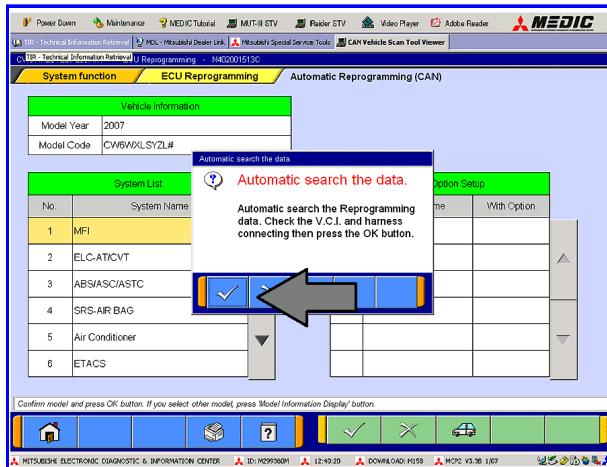
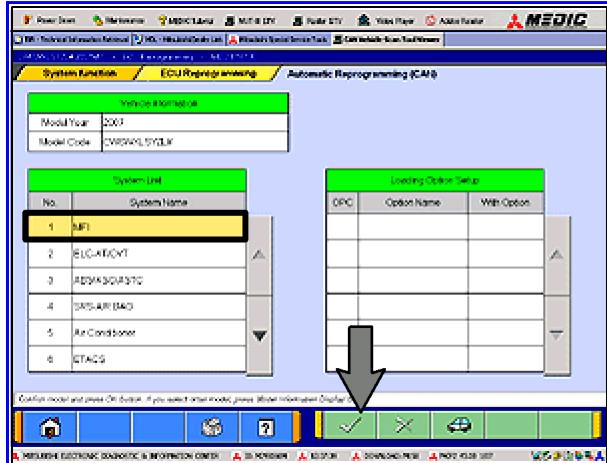
Click the check mark to enter the class.

Confirm that all of the data is correctly entered and click the check mark at the bottom of the page



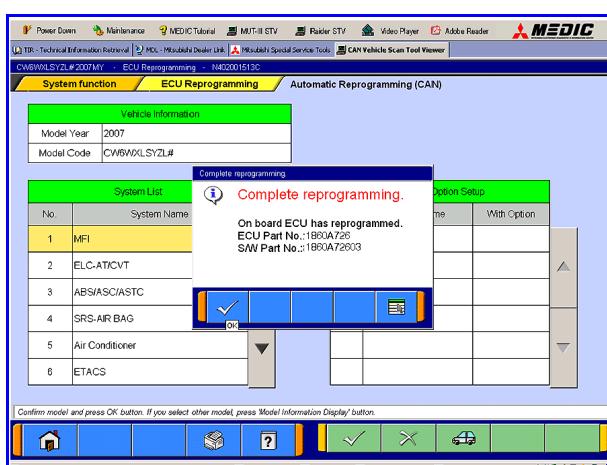
i. MFI should already be highlighted. If not, click on it to highlight it.

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



j. A message will advise you that the system will "Automatic Search the data."

Click on the check mark to continue.



NOTE: If a "Complete Reprogramming" message does not appear, continue with step k.

If a "Complete Reprogramming" message is displayed, the ECM is already reprogrammed for this concern. If this message displays, do not continue with this reprogramming procedure.

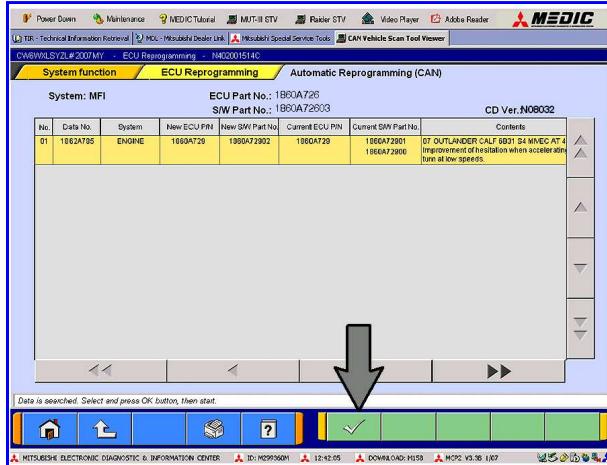
Click the check mark to clear the window, then click on the Home icon at the lower left corner of the screen to return to the System Select main page.

If the TCM was not shown to be at the latest programming level during the initial steps of this TSB, perform TSB-07-23-006 and continue with reprogramming the TCM.

k. The CAN database screen will display.

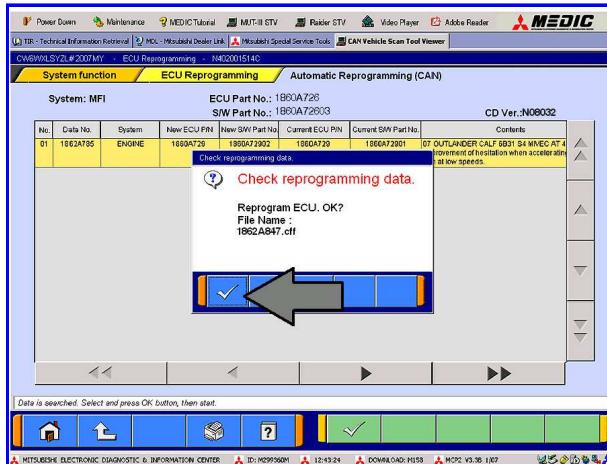
(If more than one row is displayed in the table, select the appropriate ECM part number for your vehicle.)

Click on the check mark to continue.



I. Click on the check mark to begin reprogramming.

NOTE: It will take up to 5 minutes to complete the reprogramming.



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.

m. This message will display when the ECM reprogramming is successfully completed. Record the S/W (Software) Part No. displayed and compare it to the "New S/W Part No." in the table in attachment 1 at the end of this TSB.

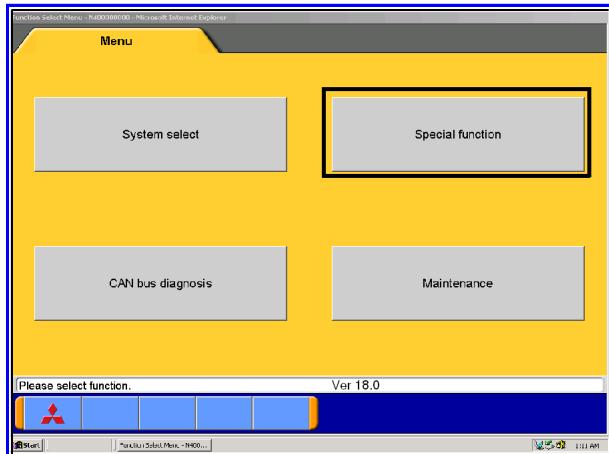
Turn the ignition key/knob to the OFF position, wait approximately 10 seconds, then turn it back on.

Click the checkmark and you will be returned to the "ECU Reprogramming" page.

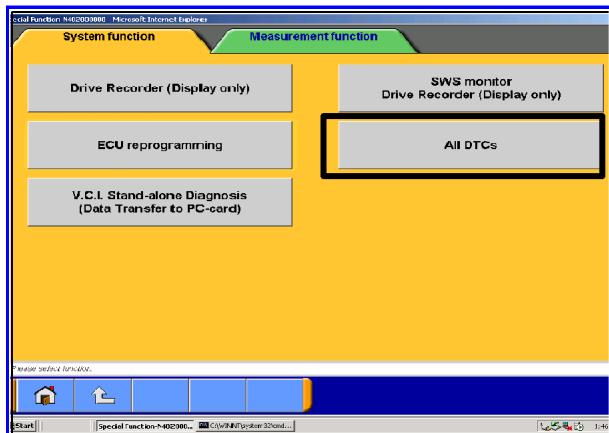
Click the "Home" icon at the bottom left side of the screen.

NOTE: If the TCM was not shown to be at the latest programming level during the initial steps of this TSB, perform TSB-07-23-006 and continue with reprogramming the TCM.

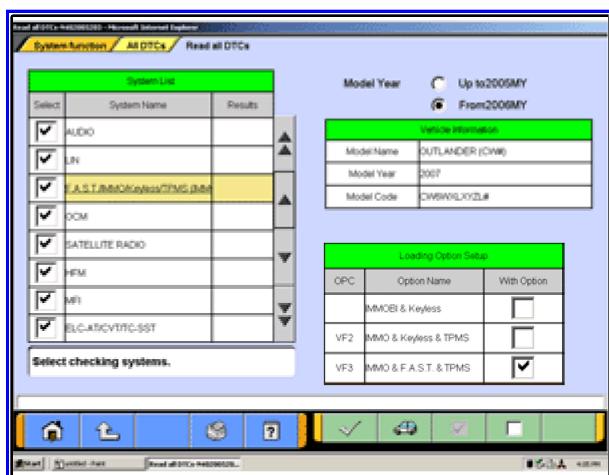
2. Using the MUT-III, check and erase ALL DTCs from all systems as follows.



a. Select "Special Function."



b. Select "All DTCs," then select ERASE AND READ ALL DTCs.

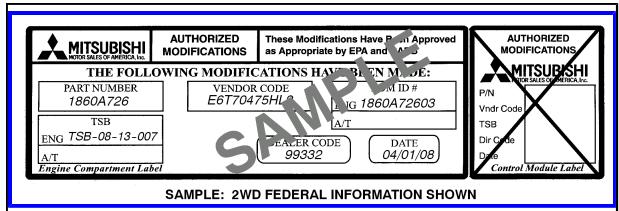


c. Inspect the list on the left side of the screen and ensure that the correct options ONLY are checked. DTCs may be set if the the options are incorrectly entered.

Note that some selections (e.g. ABS/ASC/ASTC) are underlined. Certain models require you to select the correct optional equipment. Click on all underlined items in the System List and check the correct equipment from the Loading Option Setup list (if necessary). Continue clicking the underlined items and selecting the correct Loading Option until the check mark at the bottom becomes active (not "grayed out").

Click the check mark at the bottom of the page for DTC erasing and reading to begin.

- If DTCs remain, diagnose and repair the condition as per the Service Manual. If no additional DTCs are listed, 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.
- Using a ball-point pen, enter the appropriate Engine Control Module (ECM) part number, vendor number, New S/W Part No., this technical service bulletin number (**TSB-08-13-007**), your dealer code, and the current date on the Engine Compartment / Control Module Label (p/n MSSF-024G-00). The label is available from your facing PDC.



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

5. 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.

PARTS INFORMATION

Use only the Genuine Mitsubishi Parts listed below.

Description	Model	Part Number
Label, Engine Compartment	All	MSSF-024G-00

WARRANTY INFORMATION

This bulletin is supplied as technical information only and is not an authorization to repair. Repairs should be performed on a complaint basis only. 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.

NOTE: This reflash software is the same as that used in TSB-08-55-002REV for correcting poor heater performance. The ECM will not allow you to reflash the same software more than once. Therefore, you may only claim for one reflash.

ECM Reflash for P0300 - P0306 and Rough Idle

Nature Code: 03C Cause Code: 605

Labor Operation No.: 13850190 *Time Allowance:* 0.3 hr.

Warranty Coverage: Emission Coverage - Refer to the Superscreen.

Special Warranty Information: Normal warranty procedures apply.

Mitsubishi Motors North America, Inc.

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).

Attachment 1

ECM Reprogramming Chart

	CURRENT		DISPLAY ON MUT-III AFTER REPROGRAMMING	
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MODEL	PART NO.	DATA NO.	New Part No.	New S/W Part #	VENDOR NO.
07 FED Outlander 6B31 S4 MIVEC AT 2WD	1860A726	1862A847	1860A726	1860A72603	E6T70475HL2
08 FED Outlander 6B31 S4 MIVEC AT 2WD	1860A918	1862A850	1860A918	1860A91801	E6T70486H1
07 FED Outlander 6B31 S4 MIVEC AT 4WD	1860A727	1862A848	1860A727	1860A72703	E6T70476HL2
08 FED Outlander 6B31 S4 MIVEC AT 4WD	1860A919	1862A851	1860A919	1860A91901	E6T70487H1
07 CAL Outlander 6B31 S4 MIVEC AT 2WD	1860A728	1862A868	1860A728	1860A72803	E6T70477HL2
07 CAL Outlander 6B31 S4 MIVEC AT 4WD	1860A729	1862A868	1860A729	1860A72903	E6T70478HL2
08 CAL Outlander 6B31 S4 MIVEC AT 2WD	1860A920	1862A869	1860A920	1860A92001	E6T70488H1
08 CAL Outlander 6B31 S4 MIVEC AT 4WD	1860A921	1862A870	1860A921	1860A92101	E6T70489H1