



NUMBER: 18-010-04

GROUP: Vehicle Performance

DATE: March 2, 2004

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THIS BULLETIN IS BEING PROVIDED IN ADVANCE. THE SOFTWARE FOR DR VEHICLES WILL BE AVAILABLE ON TechCONNECT MARCH 2, 2004. THE SOFTWARE FOR HB VEHICLES WILL BE AVAILABLE ON StarSCAN™ SOFTWARE UPDATE CD RELEASE 4.06, MARCH 15, 2004.

SUBJECT:

Flash: MIL Illumination Diagnostic Trouble Codes (DTC's) P0403, P0404, P0405, P0406

OVERVIEW:

This bulletin involves selectively erasing and reprogramming the Powertrain Control Module (PCM) with new software.

MODELS:

2004 (DR) Ram Truck
2004 (HB) Durango

NOTE: This bulletin applies to DR and HB vehicles equipped with a 5.7L engine (sales code EZA) built on or before February 29, 2004 (MDH 0229XX).

SYMPTOM/CONDITION:

The vehicle operator may experience a MIL illumination. Further diagnosis may determine that the MIL was caused by one or more of the following DTC's:

P0403-EGR CONTROL CIRCUIT

P0404-EGR POSITION SENSOR PERFORMANCE

P0405-EGR POSITION SENSOR LOW

P0406-EGR POSITION SENSOR HIGH

DIAGNOSIS:

Using a Scan Tool (DRBIII®) with TechCONNECT or the appropriate Diagnostic Procedures Manual, verify all engine systems are functioning as designed. If DTCs are present record them on the repair order and repair as necessary before proceeding further with this bulletin.

If the vehicle operator describes or experiences the Symptom/Condition, perform the appropriate Repair Procedure.

NOTE: There are three separate Repair Procedures. One for DR vehicles and two for HB vehicles.

NOTE: There are two methods to download flash files to StarSCAN. The first method is to download the flash files from the StarSCAN Software Update CD. The second method (NEW) is to download the flash files to the StarSCAN from the internet.

SPECIAL TOOLS/EQUIPMENT REQUIRED:

DR VEHICLES	
NPN	Battery Charger
CH2002	General Purpose Interface Bus Cable Assembly
CH6000A	Scan Tool (DRBIII®)
CH7000A/7001A	J1962 Cable with red DRBIII® connector
	TechCONNECT Workstation

NOTE: An updated J1962 cable has been released. This cable has a red colored connector at the DRBIII® connection. Use this cable whenever a flash is being performed.

HB VEHICLES	
NPN	Battery Charger
CH9401	StarSCAN Tool
CH9404	StarSCAN Vehicle Cable
CH9409	StarSCAN Documentation Kit
CH9410	StarSCAN Ethernet Cable, 12 ft.
CH9412	StarSCAN Software Update Device Kit
	TechCONNECT PC or equivalent
	StarSCAN Software Update CD

REPAIR PROCEDURE FOR DR VEHICLES:

NOTE: Whenever a controller is programmed, the software in the DRBIII®; must be programmed with the latest revision level available.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted and then follow the directions on the DRBIII®.

1. Before beginning the reprogramming procedure, remove any old flash reprogramming files from the DRBIII® memory. To clear the memory from the MAIN MENU:
 - a. Simultaneously press the “MORE” and “YES” keys.
 - b. A screen will appear requesting a “COLD BOOT”.
 - c. Follow the on screen instructions by selecting the “F4” key.
 - d. When the DRBIII® reboots to the MAIN MENU, proceed to (STEP #2)

2. With the ignition switch in the "RUN" position, determine the original part number of the PCM currently in the vehicle. Using the DRBIII® select:
 - a. "DRBIII® Standalone"
 - b. "1998 - 2004 Diagnostics"
 - c. "All (Except Below)"
 - d. "Engine"
 - e. "Module Display"
 - f. Record the "PCM part #" on the repair order for later reference.
3. Connect the DRBIII® to TechCONNECT. Open TechTOOLS and verify that the "DRBIII® Status: Connected" message is in the upper right corner of the TechTOOLS screen.
4. Enter the "PCM part #" recorded in (STEP #2) in the "Parts Criteria" area and select "Show Updates". TechTOOLS will populate the appropriate calibration.
5. Select the calibration.
6. Select the "DRBIII" radio button which is next to the "Download/Update" button.
7. Select the "Download/Update" button.
8. Monitor the "Flash Download/Update Progress" window on the TechCONNECT and follow the instructions on TechCONNECT. When the flash process is complete, proceed to (STEP #9).
9. **Disconnect the DRBIII® from TechCONNECT.**
10. Open the hood, install a battery charger and verify battery state is above 12.5 volts.
11. Connect the DRBIII® to the vehicle.
12. Download the flash from the DRBIII® to the vehicle. Using the DRBIII® select:
 - a. "Vehicle Flash"
 - b. Follow the directions on the DRBIII® screen. When the flash process is complete, select OK.

NOTE: Due to the PCM programming procedure, a DTC may be set in other modules (TCM, BCM, MIC, SKIM, etc.) within the vehicle, if so equipped. Some DTC's may cause the MIL to illuminate. Check all modules using "Module Scan", record the DTC's, and erase these DTC's prior to returning the vehicle to the customer. Erase any DTC's in the PCM only after all other modules have had their DTC's erased.

NOTE: The following step is required by law.

13. Type the necessary information on the "Authorized Modification Label" p/n 04275086AB and attach near the VECI label (Figure 1).

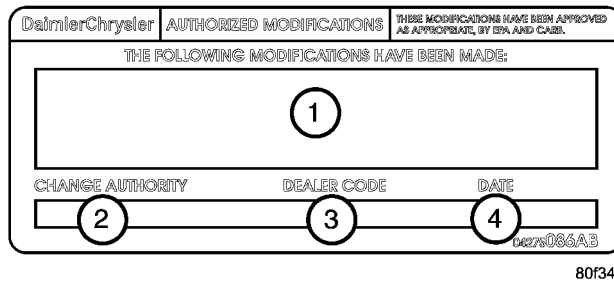


FIGURE 1 - AUTHORIZED MODIFICATION LABEL

1-	POWERTRAIN CONTROL MODULE P/N (INSERT P/N) USED
2-	CHANGE AUTHORITY: TSB XX-XXX-XX
3-	DEALER CODE: XXXXX
4-	DATE: XX-XX-XX

REPAIR PROCEDURE FOR HB VEHICLES USING SOFTWARE UPDATE CD TO RETRIEVE THE FLASH FILE:

NOTE: Before flashing this module, make sure the StarSCAN is operating at the latest level and this is the latest flash file available from the StarSCAN update CD. To determine the latest StarSCAN software version level available refer to www.dcctools.com website under the "Latest News" link.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

NOTE: For detailed information on the operation of the StarSCAN, refer to the Quick Reference documentation provided in the StarSCAN documentation kit. In addition, more recent information may also be available at the www.dcctools.com website. Look under "Training Aids" and also under "Download Center > Frequently Asked Questions" for more help.

1. Retrieve the old PCM part number. Using the StarSCAN at the "Home" screen:
 - a. Select "ECU View"
 - b. Touch the screen to highlight the PCM in the list of modules.
 - c. Record the "Part Number", displayed on the "ECU Overview" screen, for later reference.
2. Insert the USB Key, into the USB port on the TechCONNECT or equivalent PC (Figure 2).
3. Insert the StarSCAN Software Update CD into the TechCONNECT or equivalent PC. The StarSCAN Software Update CD will start automatically.
 - a. Select "Controller Flash".
 - b. Follow the on screen instructions.
4. At the "**Select the type of information you wish to enter.**" screen:
 - a. If the old "Part Number" was recorded in (STEP #1), proceed to (STEP #5).

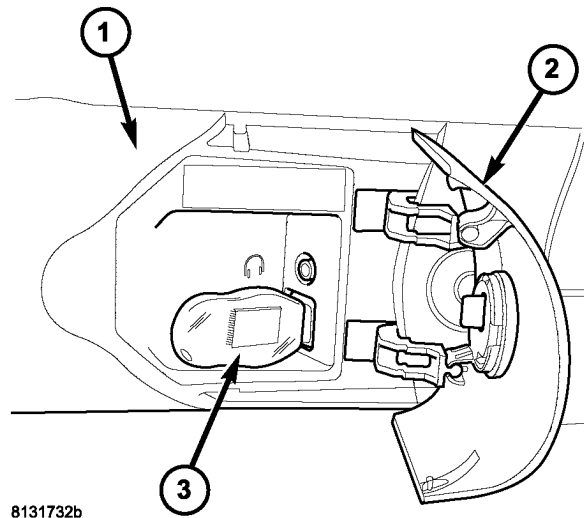


FIGURE 2 - USB KEY AND TECHCONNECT PC

1-	TechCONNECT PC
2-	ACCESS DOOR (ON FRONT OF TechCONNECT PC)
3-	USB KEY IN THE TechCONNECT PC USB PORT

- b. If the old “Part Number” is not known, proceed to (STEP #6).
- 5. Select “Enter part number”.
 - a. Follow the on screen instructions. Enter the “Part Number” (use capital letters) recorded in (STEP #1) when prompted to do so. Follow the on screen instructions. Select “Next” after each step . Select “Finish” after completing the last step.
 - b. Proceed to (STEP #7).
- 6. Select “Enter YME Information”.
 - a. Follow the on screen instructions. Select “Next” after each step. Select “Finish” after completing the last step.
 - b. Proceed to (STEP #7).
- 7. Using the mouse highlight the appropriate “Calibration”
 - a. Select “Save to USB”
 - b. Follow the on screen instructions. Select “Next” after each step . Select “Finish” after completing the last step.
- 8. With the StarSCAN powered OFF, connect the USB Key and Gender Changer to the StarSCAN USB port (Figure 3).
- 9. Open the hood, install a battery charger and verify the battery state is above 12.5 volts.
- 10. Connect the StarSCAN to the vehicle.

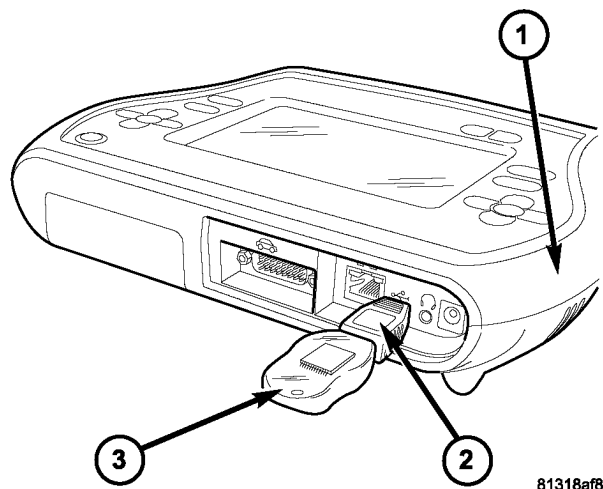


FIGURE 3 - USB KEY, GENDER CHANGER, AND StarSCAN TOOL

1-	StarSCAN® TOOL
2-	GENDER CHANGER
3-	USB KEY

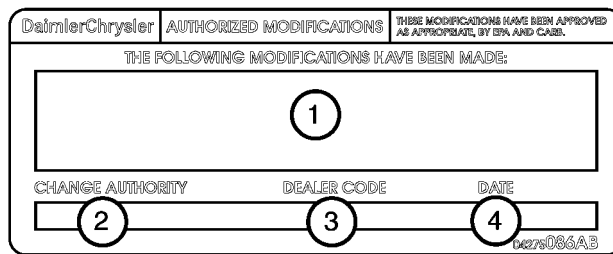
11. Power ON the StarSCAN.
12. Download the file from the USB key to the StarSCAN. Using the StarSCAN at the “Home” screen:
 - a. Select “Flash Download”
 - b. Select “Use USB device”
 - c. Follow the on screen instructions. Select “Next” after each step . Select “Finish” after completing the last step.
 - d. At the “Flash File List” screen, highlight the appropriate PCM “Calibration”
 - e. Select “Download to Scantool”
 - f. When the download is complete, select “Close”
13. Download the file from the StarSCAN to the vehicle. Using the StarSCAN at the “Home” screen:
 - a. Select “ECU View”
 - b. Browse the list of controllers using the scroll arrows. Highlight the PCM.
 - c. Select “More Options”
 - d. Select “ECU Flash”
 - e. Highlight the appropriate PCM “Calibration” from the list.

- f. Select "Update Controller"
- g. When update is completed, select "OK"

NOTE: Due to the PCM programming procedure, a DTC may be set in other modules (TCM, BCM, MIC, SKIM, etc.) within the vehicle, if so equipped. Some DTC's may cause the MIL to illuminate. Check all modules using "ECU View" from the Home screen, record the DTC's, and erase these DTC's prior to returning the vehicle to the customer. Erase any DTC's in the PCM only after all other modules have had their DTC's erased.

NOTE: The following step is required by law.

- 14. Type the necessary information on the "Authorized Modification Label" p/n 04275086AB and attach near the VECI label (Figure 4).



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FIGURE 4 - AUTHORIZED MODIFICATION LABEL

1-	POWERTRAIN CONTROL MODULE P/N (INSERT P/N) USED
2-	CHANGE AUTHORITY: TSB XX-XXX-XX
3-	DEALER CODE: XXXXX
4-	DATE: XX-XX-XX

REPAIR PROCEDURE FOR HB VEHICLES USING THE INTERNET TO RETRIEVE THE FLASH FILE:

NOTE: The StarSCAN must be at version 4.06 or higher before this procedure can be performed.

NOTE: The StarSCAN diagnostic scan tool fully supports Internet connectivity. However, in order to take advantage of this feature you must first configure the StarSCAN for your dealership's network. For instruction on setting up your StarSCAN for the dealer's network; refer to the StarSCAN Quick Start Networking Guide available on the www.dcctools.com website under the "download center".

NOTE: Make sure the StarSCAN is configured to the dealership's network before proceeding.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

- 1. Retrieve the old PCM part number. Using the StarSCAN at the "Home" screen:

- a. Select "ECU View"
 - b. Touch the screen to highlight the PCM in the list of modules.
 - c. Record the "Part Number", displayed on the "ECU Overview" screen, for later reference.
2. Connect the CH9410 StarSCAN ethernet cable to the StarSCAN and the dealer's network drop.
 3. Connect the CH9404 StarSCAN vehicle cable to the StarSCAN and the vehicle (optional).
 4. Power ON the StarSCAN.
 5. Download the flash file from the internet to the StarSCAN. Using the StarSCAN at the "Home" screen:
 - a. Select "Flash Download"
 - b. Select "Use connected vehicle" (StarSCAN must be connected to the vehicle) **or** "Enter information manually" (connection to the vehicle is not necessary). Press the "Next" button and follow the on screen instructions.
 - c. Select the appropriate calibration.
 - d. Select "Download to Scantool".
 - e. Select "Close" after the download is complete.
 6. Connect the CH9404 StarSCAN vehicle cable to the StarSCAN and the vehicle (if not already connected).
 7. Open the hood, install a battery charger and verify the battery state is above 12.5 volts.
 8. Download the file from StarSCAN to the vehicle. Using StarSCAN at the "Home" screen:
 - a. Select "ECU View"
 - b. Browse the list of controllers using the scroll arrows. Highlight the PCM.
 - c. Select "More Options"
 - d. Select "ECU Flash"
 - e. Highlight the appropriate PCM "Calibration" from the list.
 - f. Select "Update Controller"
 - g. When update is completed, select "OK"

NOTE: Due to the PCM programming procedure, a DTC may be set in other modules (TCM, BCM, MIC, SKIM, etc.) within the vehicle, if so equipped. Some DTC's may cause the MIL to illuminate. Check all modules using "ECU View" from the Home screen, record the DTC's, and erase these DTC's prior to returning the vehicle to the customer. Erase any DTC's in the PCM only after all other modules have had their DTC's erased.

NOTE: The following step is required by law.

- 9. Type the necessary information on the “Authorized Modification Label” p/n 04275086AB and attach near the VECI label (Figure 4).

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
08-19-31-99	Reprogram Powertrain Control Module	0.8 Hrs.

FAILURE CODE:

FM	Flash Module
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