



NUMBER: 18-034-05

GROUP: Vehicle Performance

DATE: August 18, 2005

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THE StarSCAN FLASH FILES FOR THIS BULLETIN ARE AVAILABLE VIA THE INTERNET.

THE FLASH FILE WILL BE AVAILABLE ON THE NEXT StarSCAN® UPDATE CD RECEIVED AFTER CD 6.01.

SUBJECT:

Flash: 4.7L Diagnostic Trouble Codes P0420 Or P0430 - Catalyst Efficiency

OVERVIEW:

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

MODELS:

2005 (WK) Grand Cherokee

NOTE: This bulletin applies to WK vehicles equipped with a 4.7L engine (sales code EVA).

SYMPTOM/CONDITION:

The customer may experience a MIL illumination due to Diagnostic Trouble Codes (DTC's): **P0420 - Catalyst 1/1 Efficiency or P0430 - Catalyst 2/1 Efficiency**. This condition may occur more frequently on higher mileage vehicles.

DIAGNOSIS:

Using a Scan Tool (StarSCAN®) with the appropriate Diagnostic Procedures available in TechCONNECT, 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 Repair Procedure.

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



Stick with the Specialists™

PARTS REQUIRED:

| Qty. | Part No. | Description |
|------|------------|--------------------------------|
| 1 | 04275086AB | Label, Authorized Modification |

SPECIAL TOOLS/EQUIPMENT REQUIRED:

| | |
|--------|--------------------------------------|
| 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 |
| | Latest StarSCAN® Software Update CD |

REPAIR PROCEDURE - USING THE INTERNET TO RETRIEVE THE FLASH FILE:

NOTE: The StarSCAN® must be at version 5.02 or higher before the "Using The Internet To Retrieve The Flash File" repair 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: If this flash process is interrupted/aborted, the flash should be restarted.

1. Open the hood, install a battery charger and verify that the charging rate provides approximately 13.5 volts.
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.
4. Power ON the StarSCAN®.
5. Retrieve the old PCM part number. Using the StarSCAN® at the "Home" screen:
 - a. Select "ECU View"
 - b. Touch the screen to highlight the appropriate ECU (PCM) in the list of modules.
 - c. Record the "Part Number", displayed on the "ECU Overview" screen, for later reference.
6. Download the flash file from the internet to the StarSCAN®. Using the StarSCAN® at the "ECU Overview" screen:
 - a. Select "More Options"
 - b. Select "ECU Flash".
 - c. Select "Browse for New File". Follow the on screen instructions.

- d. Select "Download to Scantool".
- e. Select "Close" after the download is complete, then select "Back".
- f. Highlight the listed calibration.
- g. Select "Update Controller".
- h. When the PCM update is complete, select "OK".

NOTE: Due to the PCM programming procedure, a DTC may be set in other modules (TCM, BCM, MIC, SKREEM, etc.) within the vehicle, if so equipped. Some DTC's may cause the MIL to illuminate. From the "Home" screen select "System View". Then select "All DTCs". Press "Clear All Stored DTCs" if there are any DTCs shown on the list.

NOTE: The following step is required by law when reprogramming a PCM and/or TCM.

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

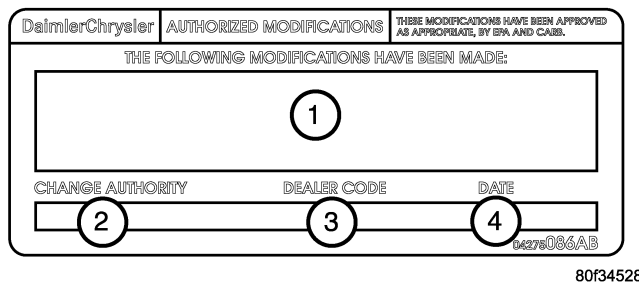


Fig. 1 AUTHORIZED MODIFICATION LABEL

- 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 - USING SOFTWARE UPDATE CD TO RETRIEVE THE FLASH FILE:

NOTE: Before flashing this module, make sure the StarSCAN® is operating at 5.02 or later.

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.

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

1. Open the hood, install a battery charger and verify that the charging rate provides approximately 13.5 volts.
2. Connect the CH9404 StarSCAN® vehicle cable to the StarSCAN® and the vehicle.
3. Power ON the StarSCAN®.
4. Retrieve the old PCM part number. Using the StarSCAN® at the "Home" screen:
 - a. Select "ECU View"
 - b. Touch the screen to highlight the appropriate ECU (PCM) in the list of modules.
 - c. Record the "Part Number", displayed on the "ECU Overview" screen, for later reference.
5. Insert the StarSCAN® Software Update CD into the TechCONNECT or equivalent PC. The StarSCAN® Software Update CD will start automatically.
 - a. Select "Download Controller Flash".
 - b. Follow the on screen instructions.
6. At the "**Select the method for looking up controller flash updates.**" screen:
 - a. If the old "Part Number" was recorded in [Step #4](#), proceed to [Step #7](#).
 - b. If the old "Part Number" is not known, proceed to [Step #8](#).
7. Select "Enter part number".
 - a. Follow the on screen instructions. Enter the "Part Number" recorded in [Step #4](#) when prompted to do so.
 - b. When completed, proceed to [Step #9](#).
8. Select "Enter YME Information".
 - a. Follow the on screen instructions. Select "Next" after each step. Select "Finish" after completing the last step.
 - b. When completed, proceed to [Step #9](#).
9. Using the mouse highlight the appropriate "Calibration".
 - a. Follow the on screen instructions.
10. With the StarSCAN® powered OFF, connect the USB Key and Gender Changer to the StarSCAN® USB port ([Fig. 2](#)).

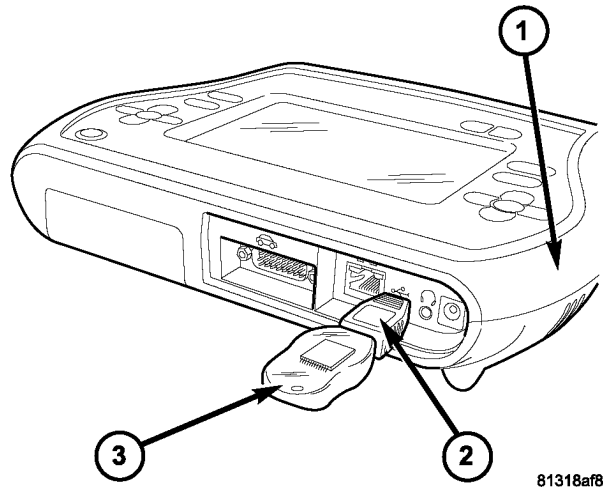


Fig. 2 USB KEY, GENDER CHANGER, AND StarSCAN®; TOOL

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

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11. Connect the StarSCAN® to the vehicle (if not already connected).
 12. Power ON the StarSCAN®.
 13. Reprogram the PCM by downloading 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” and follow the on screen instructions.
 - c. At the “Flash File List” screen, highlight the appropriate ECU “Calibration”.
 - d. Select “Download to Scantool”.
 - e. Select “Close” after the download is complete, then select “Back”.
 - f. Highlight the listed calibration.
 - g. Select “Update Controller”.
 - h. When the PCM update is complete, select “OK”.

NOTE: Due to the PCM programming procedure, a DTC may be set in other modules (TCM, BCM, MIC, SKREEM, etc.) within the vehicle, if so equipped. Some DTC's may cause the MIL to illuminate. From the “Home” screen select “System View”. Then select “All DTCs”. Press “Clear All Stored DTCs” if there are any DTCs shown on the list.

NOTE: The following step is required by law when reprogramming a PCM and/or TCM.

14. Type the necessary information on the "Authorized Modification Label" p/n 04275086AB and attach near the VECI label ([Fig. 1](#)).

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

| Labor Operation No: | Description | Amount |
|---------------------|--|----------|
| 08-19-62-94 | Module, Powertrain Control (PCM) - Reprogram | 0.8 Hrs. |

FAILURE CODE:

| | |
|----|--------------|
| FM | Flash Module |
|----|--------------|