



**NUMBER:** 05-001-08

**GROUP:** Brakes

**DATE:** January 18, 2008

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**THE StarSCAN® FLASH FILES FOR THIS BULLETIN MUST BE RETRIEVED FROM THE INTERNET.**

**SUBJECT:**

Electronic Stability Control Disable Feature For Modified 4WD Vehicles

**OVERVIEW:**

This bulletin involves selectively erasing and reprogramming the Anti-Lock Brake/Electronic Stability Module (ABS), the Cabin Control Node (CCN), and the Totally Integrated Power Module (TIPM) with new software. Once these modules have been reprogrammed (flashed), a sequence of steps will be required to disable or enable the vehicle Electronic Stability Program (ESP).

**MODELS:**

2007 (JK) Wrangler

**NOTE: This bulletin applies to Four Wheel Drive (4WD) vehicles.**

**DISCUSSION:**

Vehicles modified with larger tires and/or suspension lifts may experience early Electronic Stability Program (ESP) activations as compared to a non-modified production vehicle depending on lift size/height, tire size, suspension changes and/or driving habits.

If early ESP activations are experienced while driving with a modified vehicle, the additional ability to permanently turn off ESP is available. This ESP permanently disable feature can be obtained once the ABS, CCN, and TIPM modules have been flashed / reprogrammed with the correct level of software, as described in the Repair Procedure.

After completing reprogramming of the modules, an ignition switch, steering wheel and ESP button maneuver must be performed to permanently disable ESP and to turn off the functionality of the ESP switch. Once the ESP system is placed into permanent disable mode, the ESP Telltale will be illuminated in the instrument cluster, and the vehicle odometer will display a "ESP OFF" message. The ESP permanent disable feature DOES NOT disable the vehicle Anti-Lock Brakes (ABS) or the Brake Assist System (BAS), when the feature is implemented per this Service Bulletin Repair Procedure.

Repeating the ESP permanent disable maneuver procedure will return the system to normal ESP operation and restore ESP switch functionality allowing for ESP "Full", "Partial", or "Off" modes.



**Stick with the Specialists™**

**WARNING:**With ESP in the permanent disabled mode, the enhanced vehicle stability offered by the Electronic Stability Program (ESP) and Electronic Roll Mitigation (ERM) systems is unavailable. In an emergency evasive maneuver, the ESP and ERM systems will not engage to assist in maintaining vehicle stability. This disabled mode is intended for off-road use only. Vehicle modifications requiring the owner to configure the vehicle in the ESP disabled mode, will seriously affect the vehicle roadworthiness, safety, and may lead to loss of control and/or accident resulting in serious injury or fatal injuries.

**CAUTION:** Dealer: Supply a copy of the last page of this Service Bulletin (SB) and review copy with the vehicle owner. Store a copy of the SB last page in the vehicle owners manual.

**PARTS REQUIRED:**

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

**SPECIAL TOOLS / EQUIPMENT REQUIRED:**

NPN	Battery Charger
CH9401	StarSCAN® Tool
CH9404D	StarSCAN® Vehicle Cable
CH9409	StarSCAN® Documentation Kit
CH9410	StarSCAN® Ethernet Cable, 12 ft.
CH9412	StarSCAN® Software Update Device Kit
	TechCONNECT PC or equivalent

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

**NOTE:** Before performing this Repair Procedure, the operating software in the StarSCAN®; must be programmed with software release level 8.04 or higher. The software release level is visible in the blue header at the top of the StarSCAN® screen.

**NOTE:** The StarSCAN® diagnostic scan tool fully supports Internet connectivity. However, to take advantage of this feature you must first configure the StarSCAN® for your dealership's network. Make sure the StarSCAN® is configured to the dealership's network before proceeding. For instruction on setting up your StarSCAN® for the dealer's network refer to either: "DealerCONNECT > Service > StarSCAN and StarMOBILE tools > Online Documentation", or refer to the StarSCAN® Quick Start Networking Guide. The StarSCAN® Quick Start Networking Guide is also available on the [www.dcctools.com](http://www.dcctools.com) website under the "Download Center".

**NOTE: StarMOBILE Desktop Client may also be used to perform this procedure.**

**A). Verify Current ABS, CCN, and TIPM Module Software Levels:**

1. Connect the CH9404D StarSCAN® vehicle cable to the StarSCAN® and the vehicle.
2. From the “Home” screen on the StarSCAN®:
  - a. Select “ECU View”.
  - b. Touch the screen to highlight the ABS Module in the list of modules.
  - c. Select “More Options”.
  - d. Record the part number at the top of the “Flash ABS” screen for comparison and later reference.
3. **Is the ABS module software part number 52126220AC (or higher AD, AE, ...)?**  
The previous (old) ABS software part numbers were 52059883AD, AE, AF, or AG.
  - a. If YES >>> then STOP. The ABS module software DOES NOT require reprogramming to activate the ESP disable feature. Proceed to the next step.
  - b. If NO >>> then the ABS module software will require reprogramming before the ESP disable feature can be activated. Proceed to the next step.
4. Page back to the “ECU View” screen on the StarSCAN®:
  - a. Touch the screen to highlight the CCN Module in the list of modules.
  - b. Select “More Options”.
  - c. Record the part number at the top of the “Flash CCN” screen for comparison and later reference.
5. **Is the CCN software part number 68034990AA (or higher AB, AC, ...)?**
  - a. If YES >>> then STOP. The CCN module software DOES NOT require reprogramming to activate the ESP disable feature. Proceed to the next step.
  - b. If NO >>> then the CCN module software will require reprogramming before the ESP disable feature can be activated. Proceed to the next step.
6. Page back to the “ECU View” screen on the StarSCAN®:
  - a. Touch the screen to highlight the TIPM Module in the list of modules.
  - b. Select “More Options”.
  - c. Record the part number at the top of the “Flash TIPM” screen for comparison and later reference.
7. **Is the TIPM software part number 04692287AA (or higher AB, AC, ...) or 04692173AJ (or higher AK, AL, ...)?**
  - a. If YES >>> then STOP. The TIPM module software DOES NOT require reprogramming to activate the ESP disable feature. Proceed to the next step.
  - b. If NO >>> then the TIPM module software will require reprogramming before the ESP disable feature can be activated. Proceed to the next step.

**B). Download ABS, CCN, and/or TIPM Module Software From DealerCONNECT:**

1. Open the hood and install a battery charger. Using a voltmeter, verify that the charging rate provides 13.2 - 13.5 volts. Set the battery charger to continuous charge. Do not allow the charger to time out during the flash process. Remove the charger from the battery when the flash process is complete.

**NOTE: Do not allow the charging voltage to climb above 13.5 volts during the flash process.**

2. Connect the CH9410 StarSCAN® ethernet cable to the StarSCAN® and the dealer's network drop.

3. If not already performed, connect the CH9404 StarSCAN® vehicle cable to the StarSCAN® and the vehicle.
4. Power ON the StarSCAN®.
5. From “Home” screen select the “Flash Download” button.
6. From the “Download files from DealerCONNECT” screen select the “Next” button.
7. From the “Password” screen select “Next” button.
8. Choose VIN search. Select the “Read Info from connected vehicle” option .
9. From the “Flash Update” screen select the “Finish” button.
10. **As determined earlier, if the ABS module software requires reprogramming:**
  - a. Select “Page Back” button three (3) times to return to the “Home” screen.
  - b. From “Home” screen select the “Flash Download” button.
  - c. From the “Download files from DealerCONNECT” screen select the “Next” button.
  - d. From the “Password” screen select “Next” button.
  - e. Choose VIN search. Select the “Read Info from connected vehicle” option .
  - f. From the “Flash Update” screen select the “Finish” button.
  - g. Highlight the ABS module and select “Download To Scantool”.
  - h. Once the ABS download to the StarSCAN® is complete proceed to the next step.
11. **As determined earlier, if the CCN module software requires reprogramming:**
  - a. Select “Page Back” button three (3) times to return to the “Home” screen.
  - b. From “Home” screen select the “Flash Download” button.
  - c. From the “Download files from DealerCONNECT” screen select the “Next” button.
  - d. Choose VIN search. Select the “Read Info from connected vehicle” option .
  - e. From the “Flash Update” screen select the “Finish” button.
  - f. Highlight the CCN module and select “Download To Scantool”.
  - g. Once the CCN download to the StarSCAN® is complete proceed to the next step.
12. **As determined earlier, if the TIPM module software requires reprogramming:**
  - a. Select “Page Back” button three (3) times to return to the “Home” screen.
  - b. From “Home” screen select the “Flash Download” button.
  - c. From the “Download files from DealerCONNECT” screen select the “Next” button.
  - d. Choose VIN search. Select the “Read Info from connected vehicle” option .
  - e. From the “Flash Update” screen select the “Finish” button.
  - f. Highlight the TIPM module and select “Download To Scantool”.
  - g. Once the TIPM download to the StarSCAN® is complete proceed to the next step.
  - h. Select “Page Back” button three (3) times to return to the “Home” screen.

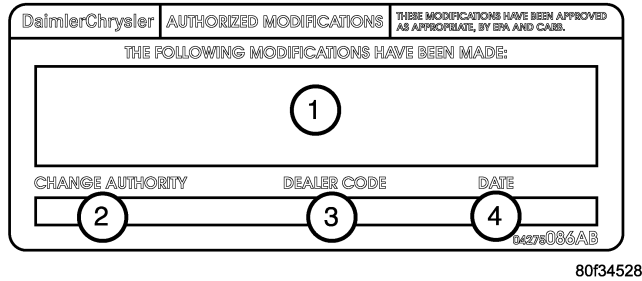
### **C). Reprogram ABS, CCN, or TIPM Modules With New Software (as required):**

#### **To Reprogram the ABS Module:**

**CAUTION: The ABS module may not support “abort - recovery” mode. If this flash process is interrupted/aborted the ABS Module may be damaged beyond repair and may require module replacement. Always verify if the module has truly been damaged beyond repair by attempting to restart the flash process.**

1. From the “Home” screen on the StarSCAN®:
  - a. Select “ECU View”.
  - b. Touch the screen to highlight the ABS module in the list of modules.
  - c. Select “More Options”.
  - d. Select “ECU Flash”.
  - e. Record the part number at the top of the “Flash ABS” screen for later reference.
  - f. Highlight the listed calibration that was downloaded earlier.
  - g. Select “Update Controller”. Follow on screen instructions.

- h. When the update is complete, select “OK”.
  - i. Verify the part number at the top of the “Flash ABS” screen has updated to the new part number.
2. Initialize the ABS module as follows:
- a. Select “Back” 2 times.
  - b. From the ABS Overview screen, select “Misc. Functions”
  - c. Select “Initialize ECU”
  - d. Follow the on screen instructions.
3. 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

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### To Reprogram the CCN Module:

- 4. From the “Home” screen on the StarSCAN®:
  - a. Select “ECU View”.
  - b. Touch the screen to highlight the CCN module in the list of modules.
  - c. Select “More Options”.
  - d. Select “ECU Flash”.
  - e. Record the part number at the top of the “Flash CCN” screen for later reference.
  - f. Highlight the listed calibration that was downloaded earlier.
  - g. Select “Update Controller”. Follow on screen instructions.
  - h. When the update is complete, select “OK”.
  - i. Verify the part number at the top of the “Flash CCN” screen has updated to the new part number.

### To Reprogram the TIPM Module:

**CAUTION: The TIPM module does not support “abort - recovery” mode. If this flash process is interrupted/aborted, the TIPM Module will be damaged beyond repair and will require module replacement.**

- 5. From the “Home” screen on the StarSCAN®:
  - a. Select “ECU View”.
  - b. Touch the screen to highlight the TIPM module in the list of modules.
  - c. Select “More Options”.

- d. Select "ECU Flash".
- e. Record the part number at the top of the "Flash TIPM" screen for later reference.
- f. Highlight the listed calibration that was downloaded earlier.
- g. Select "Update Controller". Follow on screen instructions.
- h. When the update is complete, select "OK".
- i. Verify the part number at the top of the "Flash TIPM" screen has updated to the new part number.

**NOTE: Due to the modules programming procedure, a DTC may be set in other modules 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.**

#### **D). The Permanent ESP Disable Feature:**

**CAUTION: The dealer should instruct the vehicle owner on how to turn ON and OFF the Permanent ESP Disable feature. If the Permanent ESP Disable feature is desired, the customer (not the dealer) should be the responsible party that turns the Permanent ESP Disable feature on.**

**CAUTION: Dealer: Supply the vehicle owner with a copy of the last page of this Service Bulletin as reference and review copy with owner.**

**WARNING:With ESP in the permanent disabled mode, the enhanced vehicle stability offered by the Electronic Stability Program (ESP) and Electronic Roll Mitigation (ERM) systems is unavailable. In an emergency evasive maneuver, the ESP and ERM systems will not engage to assist in maintaining vehicle stability. This disabled mode is intended for off-road use only. Vehicle modifications requiring the owner to configure the vehicle in the ESP disabled mode, will seriously affect the vehicle roadworthiness, safety, and may lead to loss of control and/or accident resulting in serious injury or fatal injuries.**

#### **1. Procedure To Turn ON (or OFF) The Permanent ESP Disable Feature:**

- a. Verify that the automatic transmission selector is in the "Park" position, and that a manual transmission is in neutral gear.
- b. Start the vehicle engine and wait approximately five (5) seconds for the system bulb check to complete.
- c. Shift the transfer case into the 4H range position. Firmly set parking brake.
- d. Turn the steering wheel until it is centered and the wheels are pointed straight ahead.
- e. Turn the steering wheel one-half (½) turn to the right (clockwise). **HOLD** steering wheel in this position.
- f. Press and hold the "ESP OFF" button for 7 seconds. Release the "ESP OFF" button right after 7 seconds. Wait for chime.
- g. Turn the steering wheel back to center, then turn the steering wheel one-half (½) turn to the left (counterclockwise). **HOLD** the steering wheel in this position.
- h. Press and hold the "ESP OFF" button for 7 seconds. Release the "ESP OFF" button right after 7 seconds. Wait for chime.

- i. Turn the steering wheel back to center.
  - j. Press and hold the “ESP OFF” button for 7 seconds. Release the “ESP OFF” button right after 7 seconds. Wait for chime.
  - k. Cycle the ignition switch to the “OFF” position.
2. While the Permanent ESP Disable feature is turned on, the vehicle will display the following:
- a. The ESP telltale in the instrument cluster will be illuminated.
  - b. The vehicle odometer will display a “**ESP OFF**” message.
3. **To Turn OFF The Permanent ESP Disable Feature:**
- a. Repeat the above procedure (in Step 1).

**CAUTION: Dealer: Supply a copy of the last page of this Service Bulletin (SB) and review copy with the vehicle owner. Store a copy of the SB last page in the vehicle owners manual.**

***POLICY:***  
Information Only.

## The Permanent Electronic Stability Program (ESP) Disable Feature:

Vehicles modified with larger tires and/or suspension lifts may experience early ESP activations as compared to a non-modified production vehicle depending on lift size, tire size, suspension changes and/or driving habits. If early ESP activations are experienced while driving a modified vehicle, the additional ability to permanently turn off ESP is available. A steering wheel/ESP button maneuver must be performed to permanently disable ESP and defeat the functionality of the ESP switch. Repeating the procedure will return the system to normal ESP operation and restore ESP switch functionality allowing ESP "Partial" or "Off" modes.

Permanently disabling ESP DOES NOT disable critical vehicle systems like anti-lock brakes (ABS) or brake assist system (BAS).

**WARNING:With ESP in the permanent disabled mode, the enhanced vehicle stability offered by the Electronic Stability Program (ESP) and Electronic Roll Mitigation (ERM) systems is unavailable. In an emergency evasive maneuver, the ESP and ERM systems will not engage to assist in maintaining vehicle stability. This disabled mode is intended for off-road use only. Vehicle modifications requiring the owner to configure the vehicle in the ESP disabled mode, will seriously affect the vehicle roadworthiness, safety, and may lead to loss of control and/or accident resulting in serious injury or fatal injuries.**

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2. While the Permanent ESP Disable feature is turned on, the vehicle will display the following:
  - a. The ESP telltale in the instrument cluster will be illuminated.
  - b. The vehicle odometer will display a "**ESP OFF**" message.
3. **Repeat Step 1 To Turn OFF The Permanent ESP Disable Feature.**