



# Service Bulletin

## INFORMATION

**Subject:** Information for Identifying Non-GM ECM Calibration Use and Power-Up Hardware Detection in Duramax™ Diesel Engines — Photograph Tech 2® Calibration IDs, Calibration Verification Numbers (CVNs) and Transmission Data Screen

**Models:** 2006-2013 Chevrolet Express, Kodiak, Silverado  
2006-2013 GMC Savana, Sierra, TopKick  
Equipped With Duramax™ Turbocharged Diesel Engine RPO LB7, LBZ, LLY, LML, LMM, or LGH

**Attention:** In order to process an engine/transmission/drivetrain hard part WARRANTY CLAIM, YOU MUST photograph the required Tech 2® screen information BEFORE disassembly or removing the engine/transmission/drivetrain components from the vehicle. Please, always refer to the GM Service Policy and Procedures Manual — Article: 1.2.2.12 for the latest GM Policy and Procedures Information.

*This bulletin is being revised to add additional text to the “Attention” statement and to advise the Service Department Personnel that they must always refer to the GM Service Policy and Procedures Manual Article: 1.2.2.12 for the latest GM Policy and Procedures Information. Please discard Corporate Bulletin Number 08-06-04-006J (Section 06 – Engine/Propulsion System).*

General Motors is identifying an increasing number of engine, transmission, diesel oxidation catalyst (DOC) and exhaust particulate filter failures that are the result of non-GM (**aftermarket Power-Up Kits**) engine and transmission control calibrations being used. When alteration to the GM-released engine or transmission control calibrations occurs, it subjects powertrain and driveline components, such as the engine, transmission, transfer case, driveshaft, universal joints and the rear axle to stresses that were not tested by General Motors. It is because of these unknown stresses, and the potential to alter reliability, durability and emissions performance, that GM has adopted a policy that prevents any UNAUTHORIZED dealer warranty claim submissions to any remaining warranty coverage to the powertrain and driveline components whenever the presence of a non-GM calibration is confirmed, even if the non-GM control module calibration is subsequently removed.

Warranty coverage is based on the equipment and calibrations that were released on the vehicle at the time of first sale, or subsequently updated by GM or its dealers with approved calibrations. That's because GM testing and validation matches the calibration to a host of criteria that is essential to assure reliability, durability and emissions performance over the life of the warranty coverage and beyond. Stresses resulting from calibrations different than those tested and released by GM can damage or weaken components, leading to poor performance and or shortened life. Additionally, non-GM issued engine control modifications do not meet the same emissions performance standards as GM issued calibrations. Depending on state statutes, individuals who install engine control module calibrations that put the vehicle outside the parameters of emissions certification standards may be subject to fines and/or penalties.

This bulletin outlines procedures to identify the presence of non-GM (aftermarket) calibrations. GM recommends performing this check whenever a hard part failure is seen on internal engine, transmission, transfer case or rear axle components, and **before** disassembly, repair or replacement of an engine, transmission, transfer case or rear axle assembly under warranty. It is also recommended that the engine calibration verification procedure be performed whenever diagnostics indicate that an exhaust aftertreatment system component replacement is necessary.

**Notice:** BEFORE authorizing any Duramax™ diesel engine or transmission replacement, the Calibration Group will require digital photographs in the .jpg file format of the following Tech 2® screens:

- For RPOs LLY and LBZ: Retrieve the Calibration ID Numbers and Verification Numbers from the Vehicle Information screen.
- For RPOs LGH, LML and LMM: Retrieve the Calibration ID Numbers and Verification Numbers from the Vehicle Information screen and also the Programming History screen.

- For RPOs LGH, LML and LMM: Retrieve the information from the Transmission Data screen containing the Max. Transmission Calc. Engine Torque parameter.

### Symptoms Caused by an Aftermarket Power-Up Kit

Some customers may have reprogrammed the engine control module (ECM) with a non-GM released calibration. The Power-Up Kit engine calibration changes fueling and timing parameters and likely contributes to the following vehicle conditions:

- Poor performance.
- Driveability concerns.
- Increased emissions.
- Black smoke from the exhaust. This symptom is not valid for the Duramax™ diesel engine RPO LGH, LML or LMM equipped with the diesel particulate filter (DPF). The DPF will trap black exhaust smoke unless it is cracked, melted or has been removed from the exhaust system.
- Knocking noise.
- Engine damage. Refer to the latest version of Corporate Bulletin Number #06-06-01-007F: Information on Identifying Duramax Diesel LB7, LLY, LMM, LBZ Overpower Engine Breakdown/Non-Function Due to Aftermarket Power-Up Devices vs Non Overpower Engine Non-Function of Pistons, Cylinders for additional information.

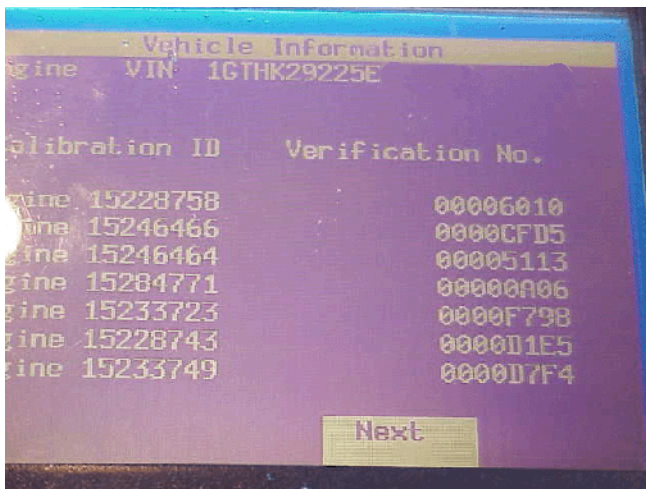
### 2005-2008 RPO LLY and LBZ Instructions for Confirming Calibration Verification Numbers (CVNs) — Power-Up Kit Detection

**Notice:** When sending an e-mail to the Calibration Group for engine RPO LBZ or LLY, the Tech 2® pictures, usually two pictures in the .jpg file format when all calibrations have been recorded, MUST be attached in the BODY of the e-mail, along with the complete VIN, mileage, R.O. number and the Dealer BAC in order to properly validate the calibration. E-mails that are sent without this information may be returned to the sender with a request for the missing information. The Max. Trans Calc. Engine Torque parameter is not available on engine RPO LBZ or LLY. Please remember to review your e-mail replies for further information.

**Notice:** In order to process an engine/transmission/drivetrain WARRANTY CLAIM, YOU MUST photograph in the .jpg file format the required Tech 2® screen information BEFORE disassembly or removing the engine/transmission/drivetrain components from the vehicle.

1. Go to TIS2WEB.
2. Select: Calibration Information (SPS Info).
3. Enter the VIN.
4. Select: Get Cal ID.
5. Select: ECM Engine Control Module.
6. Select: Next.
7. Select: Complete History.
8. Print.
9. Take the printout to the vehicle along with the Tech 2®.
10. Plug in the Tech 2®.
11. Go to diagnostics and build the vehicle.
12. Select: Powertrain.
13. Select: Engine.
14. \*Select: Engine Control Module.
15. \*Select: Module ID Information or I/M Information System if Module ID Information selection is not available.
16. \*If: I/M Information System was selected in step 15, it may be necessary to select: Vehicle Information in order to display the calibration information.  
\*Steps may vary by engine controller.
17. Compare the Calibration ID and Calibration Verification Number (CVN) to the CVN shown on the TIS2WEB printout. Although the part numbers will be the same for each, it is the CVN that will determine if the calibration is GM issued. The CVNs should be the same.
  - ⇒ If the CVN information is displayed as “N/A” , it will be necessary to contact the **TCSC** to obtain the CVN information.
  - ⇒ If the part numbers match and **ANY CVNs DO NOT** match the printout, it is likely that a non-GM certified calibration has been installed.
  - ⇒ If **ALL** of the CVNs are **EXACTLY** the same the calibration is GM issued.

### Vehicle Information Screen



18. Take clear digital picture(s) of the Tech 2@ Vehicle Information screen(s) showing the complete VIN, the Calibration IDs and the Verification Numbers. Retain the printout information and the Tech 2@ screen photographs with the repair order.

18.1. E-mail copies of the digital pictures to tacsnapshot@gm.com. In the **subject** line of the E-mail include the phrase "Duramax™ diesel", the complete VIN and Dealer BAC. In the **body** of the E-mail include the complete VIN, mileage, R.O. number and Dealer BAC. Include a brief description of the customer concern and cause of the concern.

**Notice:** The dealer will receive an e-mail reply from the Calibration Group after the calibrations have been validated. The e-mail reply will advise the dealer if the calibrations are OEM. At this time the Calibration Group will also update the current TAC or PQC case with the calibration information. Dealers located on the West Coast may experience a longer response time than two hours, if the calibrations were sent after 05:00 Eastern Standard Time. The response may be delayed until the next business day.

18.2. Allow two hours for the Calibration Group to review and update the case details.

⇒ If the Calibration Group determines that the calibrations **ARE** aftermarket calibrations, **DO NOT** contact GM Technical Assistance to discuss warranty concerns on the aftermarket calibrations. **ALL** questions and concerns about warranty should be directed to the dealer's District Manager Aftersales (DMA) in the United States and in Canada to the District Manager - Customer Care and Service Process (DM - CCSP).

18.3. You may call the PQC two hours after submitting the required information for authorization to replace the assembly. This will provide them time to receive, review the information and set up a case on the request. Be prepared to provide all of the usual documentation that is normally required when requesting an assembly authorization from the PQC.

## 2007-2013 RPO LGH, LML or LMM Instructions for Confirming Calibration Verification Numbers (CVNs) – Power-up Kit Detection

**Notice:** When sending an e-mail to the Calibration Group for engine RPO LGH, LML or LMM, the Tech 2@ pictures, usually four pictures in the .jpg file format when all calibrations and the Max. Trans Calc. Engine Torque parameter have been recorded, **MUST** be attached in the **BODY** of the e-mail, along with the complete VIN, mileage, R.O. number and the Dealer BAC in order to properly validate the calibration. E-mails that are sent without this information may be returned to the sender with a request for the missing information. Please remember to review your e-mail replies for further information.

For 2007-2013 applications, an engine control module (ECM) algorithm was implemented that records the engine calibration part number and calibration verification number (CVN) for the last 10 flash programming events. The ECM records the engine calibration part number because it contains the parameters for increasing torque and fueling rates.

If a vehicle comes in for service for a driveability/powertrain concern as a result of a Power-Up Kit installation, the dealership technician can read the last 10 engine calibration part numbers and CVN history using a Tech 2@.

The dealership technician will input each ECM calibration part number into the TIS2WEB/SPS CVN database to confirm the CVN history information. Refer to the following Tech 2@ path table to verify the ECM calibrations.

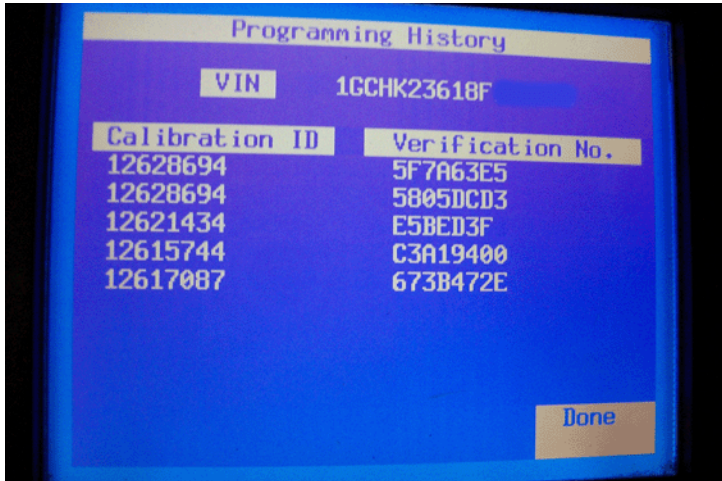
**Notice:** In order to process an engine/transmission/drivetrain **WARRANTY CLAIM**, **YOU MUST** photograph in the .jpg file format the required Tech 2@ screen information **BEFORE** disassembly or removing the engine/transmission/drivetrain components from the vehicle.

1. Build the vehicle with the Tech 2@.
2. Select F0: Engine Control Module.
3. Select F5: Module Identification Information.
4. Select F1: Programming History.
5. Turn On the ignition, with the engine Off.
6. Press the ENTER Key to Continue.

**Notice:** An original production engine operation part number programmed in the ECM from the supplier, which is the last part number shown, would not be in the TIS2WEB/SPS database.

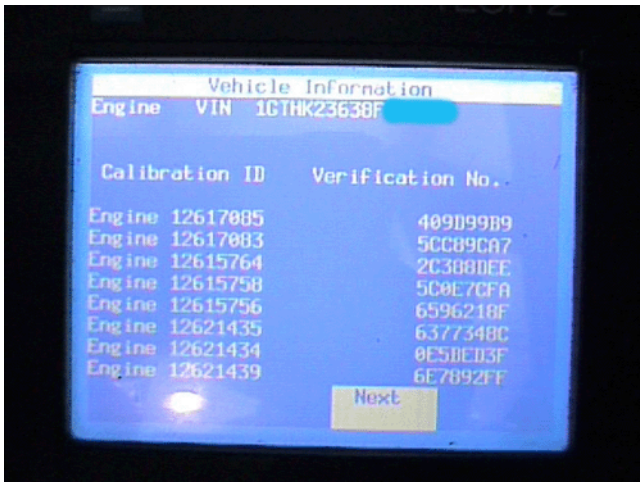
7. Record the Calibration ID Numbers and Calibration Verification Numbers from the Tech 2® Programming History Screen. If the list of Calibration Part Numbers is less than 10, the first Calibration ID Number (bottom of the list) will not be in TIS2WEB/SPS CVN database. In this case, the first Calibration ID Number is programmed at the ECM production factory and is reprogrammed at the vehicle assembly plant.
8. From TIS2WEB/SPS, record the Calibration Part Number into the CVN Database. Get the CVN.
  - ⇒ If the CVN **DOES NOT MATCH** the CVN database, an unauthorized engine calibration part **WAS PROGRAMMED** into the ECM.
  - ⇒ If the CVN **MATCHES** the CVN database, the calibration/s are GM issued and an unauthorized engine calibration part **WAS NOT** used.

### Programming History Screen



9. Take a clear digital picture of the Tech 2® Programming History screen showing the complete VIN, Calibration IDs and the CVNs. Retain the printout information and the Tech 2® screen photograph with the repair order.

### Vehicle Information Screen



- 9.1. Take a clear digital picture of the Tech 2® Vehicle Information screen. Retain the printout information and the Tech 2® screen photograph with the repair order.
- 9.2. Take a clear digital picture of the Transmission Data screen that contains the Max Transmission Calc Engine Torque parameter. The path table is outlined in the following **Instructions for Tech 2 Transmission Data Path** section. Retain the Tech 2® Transmission Data screen photograph with the repair order.
- 9.3. E-mail copies of the digital pictures to tacsnapshot@gm.com. In the **subject** line of the E-mail include the phrase "Duramax™ diesel", the complete VIN and Dealer BAC. In the **body** of the E-mail include the complete VIN, mileage, R.O. number and Dealer BAC. Include a brief description of the customer concern and cause of the concern.

**Notice:** The dealer will receive an e-mail reply from the Calibration Group after the calibrations have been validated. The e-mail reply will advise the dealer if the calibrations are OEM. At this time the Calibration Group will also update the current TAC or PQC case with the calibration information. Dealers located on the West Coast may experience a longer response time than two hours, if the calibrations were sent after 05:00 Eastern Standard Time. The response may be delayed until the next business day.

- 9.4. Allow two hours for the Calibration Group to review and update the case details.

- ⇒ If the Calibration Group determines that the calibrations **ARE** aftermarket calibrations, **DO NOT** contact GM Technical Assistance to discuss warranty concerns on the aftermarket calibrations. **ALL** questions and concerns about warranty should be directed to the dealer's District Manager Aftersales (DMA) in the United States and in Canada to the District Manager - Customer Care and Service Process (DM - CCSP).

9.5. You may call the PQC two hours after submitting the required information for authorization to replace the assembly. This will provide them time to receive, review the information and set up a case on the request. Be prepared to provide all of the usual documentation that is normally required when requesting an assembly authorization from the PQC.

## 2007-2013 RPO LGH, LML or LMM — Instructions for Tech 2 Transmission Data Path – Power-up Hardware Detection

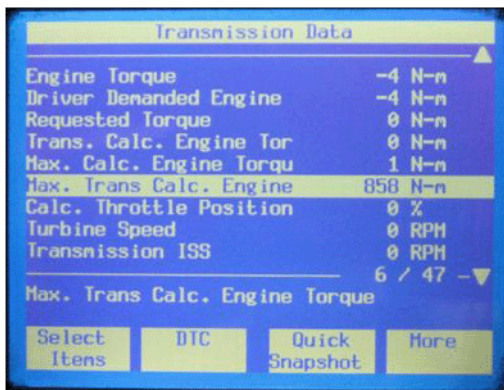
### Transmission Data is ONLY Available With GMC Sierra, TopKick, Chevrolet Kodiak, Silverado

An example of this hardware is a propane injection system.

A transmission control module (TCM) algorithm has been implemented that records a maximum calculated input torque. This information is available via the Tech 2®.

1. Build the vehicle with the Tech 2®.
2. Select F3: Transmission Control Module
3. Select F1: Data Display
4. Select F0: Transmission Data
5. Highlight: Max Transmission Calc Engine Torque

### Transmission Data Screen (Max. Transmission Calc. Engine Torque Parameter)



6. Take a clear digital picture in the .jpg file format of the Tech 2® screen showing the Transmission Data and the Max. Transmission Calc. Engine Torque parameter.
7. Retain the Tech 2® Transmission Data screen photograph with the repair order.

## Warranty Information

- The Dealership Service Management must be involved in any situation that would justify the use of labor operation Z1111.
- Notify the dealer's District Manager Aftersales (DMA) in the United States and in Canada the District Manager - Customer Care and Service Process (DM - CCSP).
- All claims will have to be routed to the Warranty Support Center (WSC) for approval.
- Please refer to Corporate Bulletin Number 09-00-89-016, Labor Operation Z1111 - Suspected Tampering or Vehicle Modifications for important information.

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
Z1111	Suspected Tampering or Vehicle Modifications	0.2 hr

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GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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