



PACIFIC PERFORMANCE ENGINEERING

2001-2009 Duramax LB7 / LLY / LBZ / LMM Xcelerator

Pacific Performance Engineering, Inc.
www.ppediesel.com

2001-2009 Duramax LB7 / LLY / LBZ / LMM Economy / Standard / Hot



Installation Guide

ATTENTION: Please read instructions carefully before installing the programmer into your vehicle; failure to do so may result in damage to your vehicle's PCM!

DISCLAIMER OF LIABILITY

This is a performance product which increases horsepower above factory specifications. Additional horsepower creates more stress on your vehicle's drivetrain components which may result in drivetrain failure. This product is intended for off-road use only. Use at your own risk!

This agreement sets forth the terms and conditions for the use of this product. The installation of this product indicates that the Buyer has read and understands this agreement and accepts the terms and conditions.

Pacific Performance Engineering Inc., its distributors, employees, and dealers (the "Seller") shall not be responsible for this product's improper use and service. The Buyer hereby waives all liability claims.

The Buyer hereby acknowledges no reliance on the Seller's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof, and the Buyer hereby waives all remedies or liabilities expressed or implied, arising by law or otherwise (including without any obligation of the Seller with respect to fitness, merchantability and consequential damages), or whether or not occasioned by the Seller's negligence.

The Seller disclaims any warranty and expressly disclaims any liability for personal injury or damages. The Buyer acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the Buyer agrees to indemnify the Seller and to hold the Seller harmless from any claim related to the item of equipment purchased. Under no circumstances will the Seller be liable for any damages or expenses by reason of use or sale of any such equipment.

The Seller assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt, contact the manufacturer.

The Buyer is solely responsible for all warranty issues from the manufacturer.

LIMITATION OF WARRANTY

The Seller gives Limited Warranty as to description, quality, merchantability, and fitness for a particular purpose, productiveness, or any other matter of Seller's product sold herewith. The Seller shall not be responsible for the products proper use and service and the Buyer hereby waives all rights other than those expressly written herein. This warranty shall not be extended, altered or varied except by a written instrument signed by Seller and Buyer.

The Warranty is limited to one (1) year from the date of sale and limited solely to the parts contained within the products kit. All products that are in question of Warranty must be returned prepaid to the Seller and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Seller.

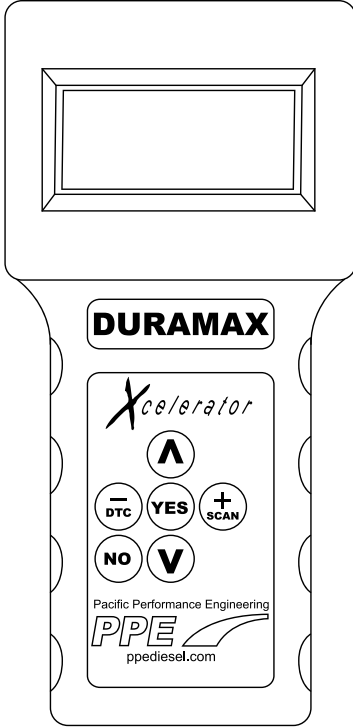
Under no circumstances will the Seller be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or reinstallation of this product or any other contingent expenses.







Under no circumstances will the Seller be liable for any damage or expenses incurred by reason of the use or sale of any such equipment.

In the event that the Buyer does not agree with this agreement; the Buyer may promptly return this product, in a new and unused condition in its original packaging, with a dated proof of purchase to the place of purchase within ten (10) days from date of purchase for a full refund.

The installation of this product indicates that the Buyer has read and understands this agreement and accepts its terms and conditions.

Keypad Guide:



-  - Up Button
-  - Down Button
-  - Scan/Add Button
-  - DTC/Subtract Button
-  - Yes/Enter Button
-  - Exit/Back Button

ATTENTION!

Your vehicle must be parked and engine turned off before connecting the programmer into your vehicle's OBD-II port.

To prevent an unnecessary battery drain turn off headlights.

All vehicle accessories and electronics must be disconnected prior to connecting the programmer into your vehicle's OBD-II port. Disconnect any electronic devices using auxiliary outputs (i.e. cigarette lighter, iPod, etc.)

Vehicle stereo and equipment must be turned off before performing any installations.

Do not perform any procedures with the programmer while your vehicle is running (except for OBD-II and real-time engine diagnostics).

All programmer operations takes place inside your vehicle's cab; it is recommended that you keep your vehicle's doors closed and windows down.

While performing installation, verify wires are properly connected

Only program your vehicle in a location where you are comfortable in order to avoid potentially stressful situations if programming error(s) occur.

Operating Instructions:

1. Before connecting the programmer:

2001-2002 LB7-Remove the Fuses **SE01**, **SE02** and **RADIO**.

2003-2004 LB7 -Remove the Fuses **TBC IGN1**, **TBC BATT**, **RADIO** and **INFO**.

2004.5-2007 LLY and LBZ-Remove the Fuses **RADIO** and **INFO**.

2007.5-2009 LMM-Remove the Fuses **INFO TMNT** and **RDO**.

*Note: The **INFO TMNT** fuse can be found by opening the driver's side door and removing the side panel or will be in the fuse box under the hood.

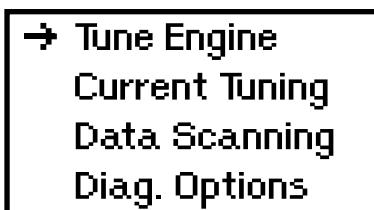
All other fuses are located in the fuse box under the hood (Be sure not to confuse the **RDO** fuse with the **RDO AMP** fuse!)

2. Connect the programmer cord into the programmer and your vehicle's OBD-II port. *The OBD-II port is the diagnostic port located underneath the dash on the driver's side of your vehicle.* Turn the ignition key to the "ON" position but **do not** start the engine.

3. The programmer will show two successive information screens and take you to the main screen.

Main Screen:

There are four options to choose from:



1. **Tune Engine:** Select a tune, adjust speed limiter, tire size, and gear ratio plus other calibrations.

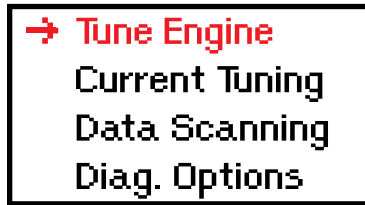
2. **Current Tuning:** View the vehicle's currently loaded tune, calibrations and custom changes.

3. **Data Scanning:** View real-time data for comprehensive engine diagnostics.

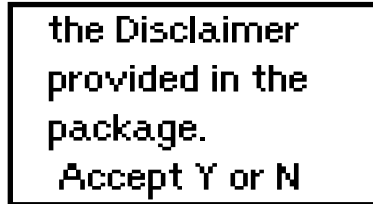
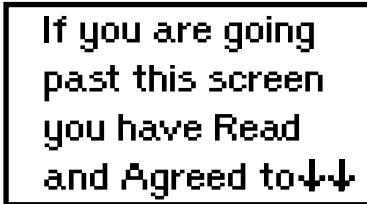
4. **Diagnostic Options:** View Diagnostic Trouble Codes (DTC), transmission reset and quick learn feature, particulate filter regeneration and return vehicle back to stock.

Tune Engine:

From the main menu screen, press **YES** on the keypad when the **Tune Engine** option is selected:



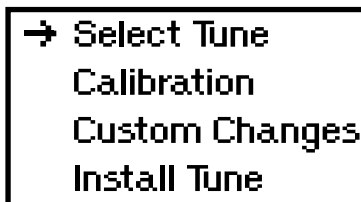
1. Read and understand the disclaimer



2. The programmer will check your VIN #, unlock your PCM and save the vehicle's stock information. **Do not disturb the Xcelerator or start the engine during this process!**

Any interference during the programming process (for example, opening or closing of your vehicle's doors) may cause a communication error with your vehicle's PCM and will result in your vehicle not starting!

There are four options to choose from:



1. **Select Tune:** Select stock or power levels (see table on **page 10**).

There are four options to choose from within the **SELECT TUNE** menu:

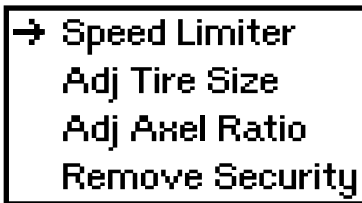
1. **Yes Timing Added**

2. **Yes Fuel Added**

3. **Yes RPM Increase**

4. **No De-Fueling:** Select **YES** for factory laydown in between shifts.
(slower/delayed shifts)

2. **Calibration:** Adjust speed limiter, tire size, gear ratio and remove security features.

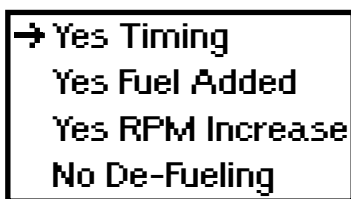


There are four options to choose from:

1. **Speed Limiter:** Adjust your vehicle's speed limiter from 40 mph to 96 mph in 1 mph increments or directly to 200 mph.
2. **Adjust Tire Size:** Use for speedometer corrections for tire sizes from 25" through 44.75" at 1/4" increments.
3. **Adjust Axel Ratio:** Change gear ratio from 2.73 to 5.13 (For example, 2500 HD gear ratio is 3.73)
4. **Remove Security:** Remove security features from your vehicle.

3. Custom Changes:

There are four options to choose from:



Note: Leave default settings for Maximum performance.

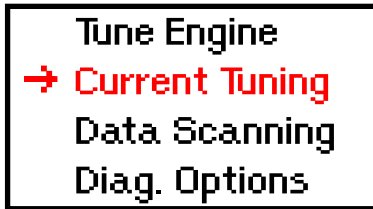
1. **Yes Timing Added**
2. **Yes Fuel Added**
3. **Yes RPM Increase**
4. **No De-Fueling:** Select for factory laydown in between shifts. (slower/delayed shifts)

4. **Install Tune:** Select to install tune, calibrations and custom changes into your vehicle. Press **YES** on the keypad to confirm all settings.



Current Tuning:

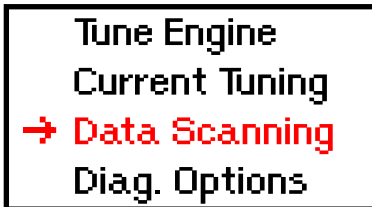
From the main menu screen, press **YES** on the keypad when the **Current Tuning** option is selected to view the vehicle's currently loaded tune, calibrations and custom changes.



Data Scanning:

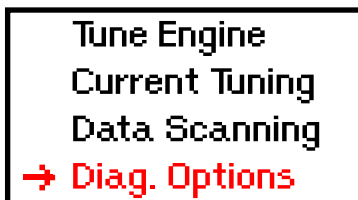
From the main menu screen, press **YES** on the keypad when the **Data Scanning** option is selected:

View real-time engine data for speed mph, engine temperature, engine rpm, air filter intake temperature, intake manifold air temperature, throttle percent, mass air flow, barometric pressure, manifold turbo boost pressure plus more.

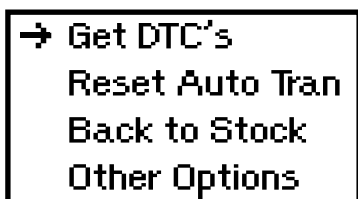


Diagnostic Options:

For the main menu screen, press **YES** on the keypad when the **Diagnostic Options** option is selected:



There are four options to choose from:



1. **Get DTCs:** Display and clear vehicle's Diagnostic Trouble Codes from the vehicle's On-Board Diagnostic System (OBD-II). Codes can be referenced online at www.ppediesel.com

2. **Reset Auto Tran:** Transmission reset and quick learn allows your vehicle to rapidly adjust to new power levels. **IMPORTANT:** A transmission reset should only be used in conjunction with the installation of a new tune.

3. **Back to Stock:** Restore stock files and VIN unlock the programmer for use on other vehicles. **IMPORTANT:** This feature must be used before taking your vehicle in for service.

4. Other Options:

There are four options to choose from:

1. Unlock Tuning

2. **Particulate Filter Regeneration:** Clear accumulated soot mass in the particulate filter. This feature is not available with the *Economy Xcelerator* series.

3. Vehicle OPS #s

4. Tuner OPS #s

Diesel Particulate Filter Regeneration Service Procedure

The diesel particulate filter regeneration service is used to clear accumulated soot mass in the particulate filter by burning it at high temperatures.

Note: You must install a tune into your vehicle before using the forced regeneration service. Do not initiate regeneration service procedure if non-diesel particulate filter faults are present on your vehicle.

Caution: Tailpipe outlet exhaust temperature will be greater than 300°C (572°F) during forced regeneration service.

To prevent personal injury or property damage from fire or burns:

1. Park outdoors and keep people, other vehicles and combustible material away from your vehicle
2. Do not leave your vehicle unattended
3. Do not connect any shop exhaust to your vehicle's tailpipe

Notice: Due to elevated engine temperatures, it is imperative to open your vehicle's front hood and to keep the front of your vehicle in an open environment in order to allow proper airflow across the radiator.

Check coolant and oil levels before and after the regeneration service procedure.

Engine and exhaust system damage can occur due to improper use of the regeneration service procedure.

An oil change may be necessary after running the regeneration service procedure.

In case of an emergency, the regeneration service procedure can be interrupted by switching off the ignition. Depressing the break returns the vehicle to idle speed.

The diesel particulate filter regeneration service procedure is as follows:

1. Start vehicle and plug Xcelerator into OBD-II port
2. Select **Diagnostic Options** -> **Other Options** -> **DPF Regeneration**
3. Read disclaimer and press **YES** ; regeneration service procedure will begin

The regeneration service procedure is complete once "Soot Mass" displays 0 grams and engine RPM returns to idle.

Frequently Asked Questions

Q: Do I have to have my vehicle parked everytime I change my tune?

A: Yes, your vehicle must be turned OFF before connecting the tuner.

Q: Do I have to re-install the fuses I removed once my tune is completed?

A: Yes, fuses were temporarily removed and MUST be returned to their original position.

Q: My programmer doesn't turn on once I plug it in?

A: Cigarette lighter fuse is blown, replace the fuse and try again.

Q: I completed the tune and my truck doesn't start?

A: (Don't Panic) Files on the tuner have not installed correctly on the ECM. Return tune back to STOCK and install tune once again.

Q: I'm taking my vehicle in to the GM dealership for a oil change, could I leave the tune in?

A: The GM dealership will typically re-flash your ECM and if your tuner is not turned back to stock your tune will be lost and tuner will lock.

Online Update

The Standard and Hot Xcelerator series includes a Universal Serial Bus (USB) side-plug for easy online updates at www.ppediesel.com/update

Set Stock Tune:

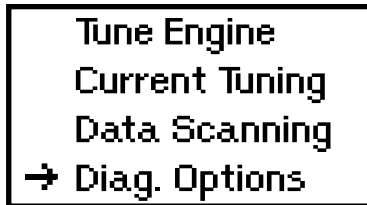
Why set my Xcelerator Programmer Back to stock?

1. Taking in your vehicle to the Dealership for maintenance.
2. Upgrading Xcelerator Tuner version (if applies).
3. Sending PPE your tuner for an upgrade or a reflash.

If tuner is not set back to stock before performing any of the procedures listed above your tuner may **LOCK** and you will be subject to a service fee. If you are unsure or have any questions about this matter please call **PPE** during our normal business hours. **1(714) 985-4825** Mon-Fri 8AM-6PM PST


Main Screen:

There are four options to choose from:



1. Select Diag. Options from the Main tuner screen



2. Select Back to Stock, read the disclaimer and press  .

XCELERATOR Tuner Power Levels

2001-2005 Duramax LB7 and LLY Economy

Power Level	HP Increase	Torque Increase
1	40	97
2	90	160
3	120	200

2006-2007 Duramax LLY and LBZ Economy

Power Level	HP Increase	Torque Increase
1	40	97
2	90	160
3	160	240

2007.5-2009 Duramax LMM Economy

Power Level	HP Increase	Torque Increase
1	40	97
2	90	160
3	160	240

2001-2005.5 Duramax LB7 and LLY Standard

Power Level	HP Increase	Torque Increase
1	40	97
2	90	160
3	120	200
4	160	240
5	220	332

2006-2009 Duramax LLY, LBZ and LMM Standard

Power Level	HP Increase	Torque Increase
1	40	97
2	90	160
3	160	240
4	225	335



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