



Duramax

*GM 6.6L Duramax Diesel
2001-2010 LB7/LLY/LBZ/LMM
(111010000, 111020000)*

User Guide

Maximum performance designed for closed course racing applications.



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!

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PARTS AND ACCESSORIES



- Xcelerator Tuner (1)
- Xcelerator Carrying Case (1)
- OBD II Cable (1)
- Xcelerator Owners Manual (1)
- Warranty Card (1)
- PPE Badge (2)

DISPLAY AND KEYPAD GUIDE



Keypad Functions

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

BEFORE INSTALLING XCELERATOR TUNES

You must read through the owners manual before installing a tune in your vehicle. Failure to follow the instructions properly can result in a damaged or disabled PCM.

User **MUST** ensure that the factory “stock” tune is in the vehicle’s PCM before installing the Xcelerator tune. GM dealer re-flashes are the same as “stock” factory tune.

Serious engine damage can occur if the Xcelerator tune is installed over a **non-factory / aftermarket performance tune** - such as another company’s tuner. Tune “stacking” is not advised.

WARNING

Do not perform any operations on Xcelerator (except live data diagnostics) while vehicle is running. The vehicle must be parked and engine OFF.

PREPARING YOUR VEHICLE FOR TUNE INSTALLATION

- Do not try to install tune on your vehicle if battery voltage is below 14v. Charge your battery if your gauge shows below 14v.
- Turn the headlights off to prevent unnecessary battery drain.
- ALWAYS have ALL of the doors either closed or open the entire time while installing the Xcelerator tunes until the process is complete. DO not open or close the doors during the tuning process.
- All vehicle accessories and electronics using auxiliary outputs must be disconnected PRIOR to connecting the programmer into your vehicle’s OBD II port. (ipod, satellite radio, cell phone charger, GPS, etc.) These devices can cause interference when running through the installation process.
- Do not turn on the radio, A/C, or heater while installing tune.
- Unless instructed by the Xcelerator, never turn the ignition key OFF while the Xcelerator is plugged into the diagnostic port.
- Do not unplug the Xcelerator while it is installing the performance tune.
- If your vehicle is attached to a trailer, make sure the brake light receptacle outlet and plug are disconnected.

FUSE REMOVAL

Remove the fuses corresponding to your vehicle year specified below;

Year	Engine	Pull Fuse	Pull Fuse	Pull Fuse	Pull Fuse	LOCATION
2010	LMM	INFO TMNT	RDO	IPC		CAB/HOOD
2009	LMM	INFO TMNT	RDO	IPC		CAB/HOOD
2008	LMM	INFO TMNT	RDO	IPC		CAB/HOOD
2007.5	LMM	INFO (TMNT)	RDO	IPC		CAB/HOOD
2007	LBZ	**INFO	**RADIO			HOOD
2006.5	LBZ	**INFO	**RADIO			HOOD
2006	LLY2	**INFO	**RADIO			HOOD
2005	LLY	TBC BATT	TBC IGNITION	INFO	RADIO	HOOD
2004.5	LLY	TBC BATT	TBC IGNITION	INFO	RADIO	HOOD
2004	LB7	TBC BATT	TBC IGNITION	INFO	RADIO	HOOD
2003	LB7	TBC BATT	TBC IGNITION	INFO	RADIO	HOOD
2002	LB7	SEO IGNITION	SEO ACC			CAB
2001	LB7	SEO IGNITION	SEO ACC			CAB

***Note:** The INFO TMNT fuse can be found by opening the driver's side door and removing the side panel or it 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!)

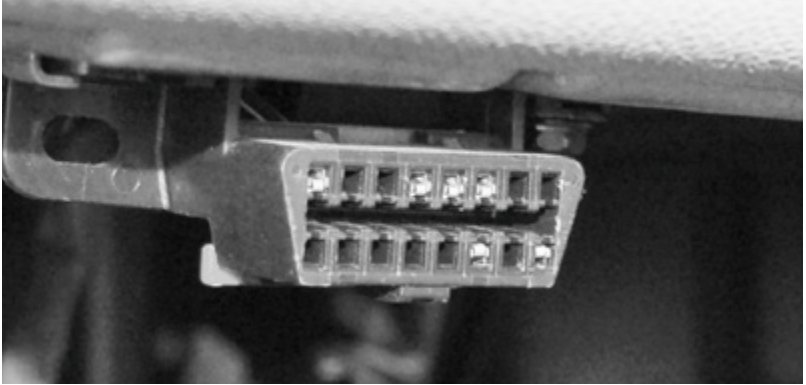
IMPORTANT!

****2006-2007 LLY/LBZ ONLY:**

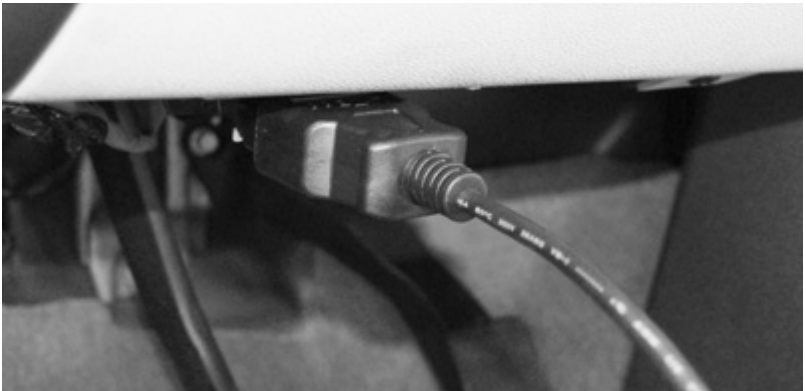
Pull the fuses if you get a "No Communication" error while installing your Xcelerator.

OBD II PORT LOCATION

Driver side, centered underneath dash.



Plug in OBD II cable as shown below.



XCELERATOR POWER LEVELS

<i>Duramax Economy Xcelerator</i>		
POWER LEVEL	HP INCREASE	TORQUE INCREASE
3	120	200
2	90	160
1	40	97

<i>2001-2005 Duramax Standard Xcelerator</i>		
POWER LEVEL	HP INCREASE	TORQUE INCREASE
5	225	335
4	160	240
3	120	200
2	90	160
1	40	97

<i>2006-2010 Duramax Standard Xcelerator</i>		
POWER LEVEL	HP INCREASE	TORQUE INCREASE
4	225	335
3	160	240
2	90	160
1	40	97

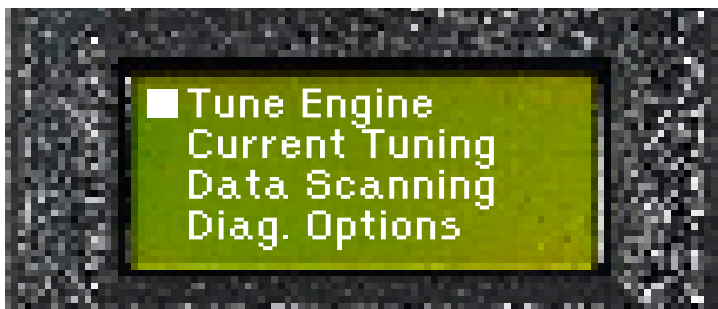
INSTALLING TUNE INTO VEHICLE PCM

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

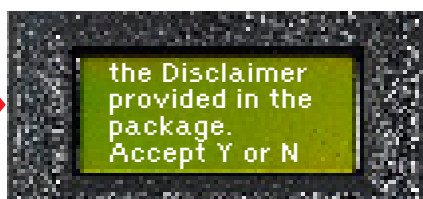
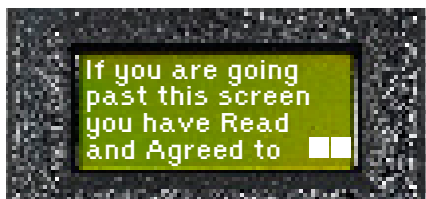
Connect the Xcelerator into the vehicles diagnostic port. When prompted, turn the ignition key to the RUN position (**DO NOT start engine**). The Xcelerator will load through a series screens and stop. The main menu will load as shown:



STEP 3

The selection arrow will be on the "Tune Engine" option. Select **YES** on the keypad.

Carefully read the message using **DOWN** arrow on the keypad.



Accept by pressing **YES** on the keypad.

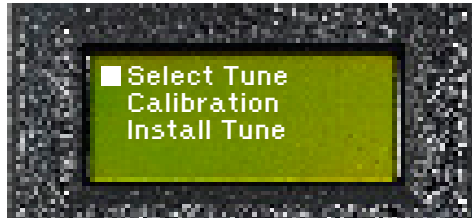
STEP 4

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 download and testing process. (approx 5-10 mins.)

Any interference during the programming process (ie. 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!

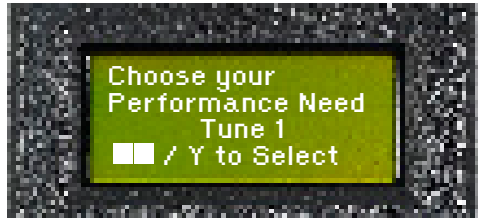
STEP 5

The next menu will show the “Select Tune” option, press **YES** on the keypad.



STEP 6

Use UP and DOWN arrows to browse through power levels.
(Power levels on page 8)
Accept power level by pressing **YES** on the keypad.

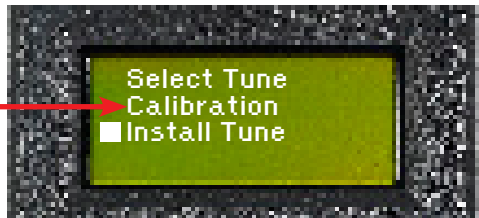


Note: Text may look slightly different depending on the tuner's year/model.

STEP 7

The next menu will show the “Select Tune” screen, press **DOWN** arrow to navigate to “Install Tune” option.

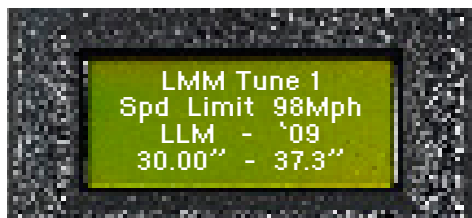
See page 13 to modify Calibration



Press **YES** to install tune.

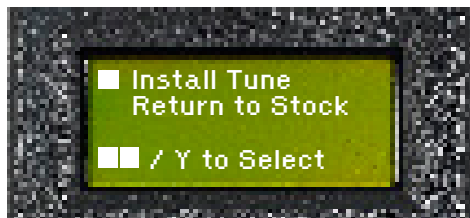
STEP 8

The Xcelerator screen will show you the tune you selected and the settings it will be change. Press **YES** on the keypad to continue to the next screen.



STEP 8 (continued)

The Xcelerator will display the following screen to confirm your installation. You can press **UP** or **DOWN** to select “Install Tune” or “Return to Stock”.



Install Performance tune by pressing **YES** on the “Install Tune” option.

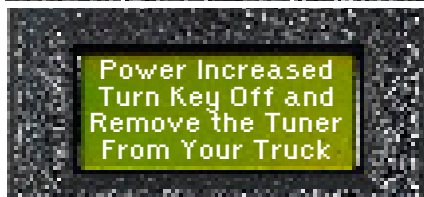
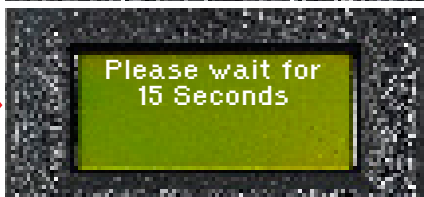
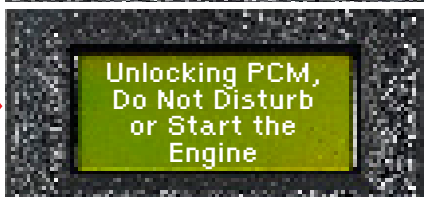
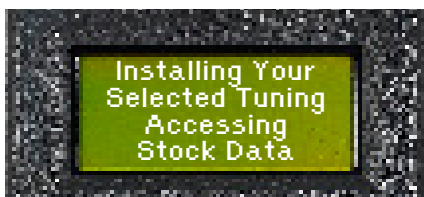
Note: Select “Return to Stock” option if you do not wish to continue with installation and factory settings will be restored.

STEP 9

The Xcelerator will now run through a series of screens.

Any interference during the programming process (such as 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!

(approx 5-10 min.)



Turn ignition key off. Unplug the tuner from the OBD II port. Re-install the fuses.

Installation complete, you can now operate your truck.

RESTORING FACTORY/STOCK TUNE

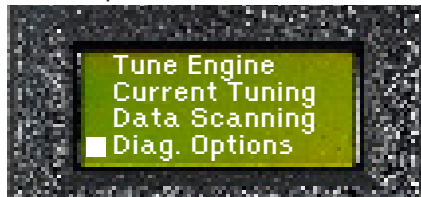
- We recommend restoring the factory stock tune whenever the vehicle goes in for service. Because they WILL re-flash your vehicle and that will overwrite your PPE tune.
- The stock tune can be installed at any time using the “Back to Stock” feature. This feature will remove the PPE tune and reset the vehicle ECM (Engine Control Module) to the factory/stock settings.
- It is recommended to return the Xcelerator back to stock when doing a software update.

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

Connect the Xcelerator to the port. When prompted turn the ignition key to the RUN position (**DO NOT start engine**). The Xcelerator will load through a series of screens and stop. The main menu will load as shown:



STEP 3

Selection arrow will be on the “Tune Engine” option. Press **DOWN** on the keypad to go down to “Diag. Options”(Diagnostic Options) press **YES**.

STEP 4

From the “Diagnostic Options” menu press **DOWN** on the keypad to go down to “Back to Stock” and press **YES**.

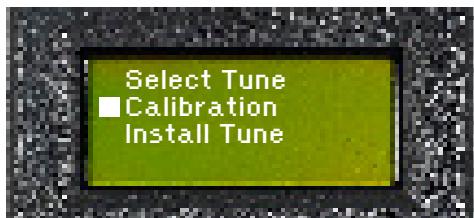
STEP 5

The Xcelerator will now display “Return truck Back to Stock” press **YES** on the keypad. The Xcelerator will display a series of screens, please wait.

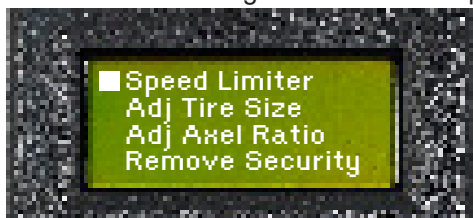


CALIBRATION

Calibrations can be modified after selecting the power level when installing a tune. Modify speed limiter, adjust tire size, adjust axle ratio, and remove security. Press **DOWN** to go to “Calibration”. Press **YES** to see the calibration menu options.



Use **UP** and **DOWN** to browse through the calibration options.



Choose option and press **YES** to change.

SPEED LIMITER

You can adjust your vehicle's speed limiter from 40mph to 200mph in 1mph increments.

Press UP or DOWN to increase/decrease speed limiter. Press **YES** once desired limit is set. (Note: Pressing **YES** will take you back to calibration menu)

ADJUST TIRE SIZE

Adjust for your vehicle's tire size from 25" to 44.75" diameter in .25" increments.

Press **UP** or **DOWN** to increase/decrease tire size. Press **YES** once the desired size is set. (Note: Pressing **YES** will take you back to the calibration menu)

ADJUST AXLE RATIO

Adjust your vehicle's gear ratio from 2.73 to 5.13 (ie. or 2500 HD gear ratio is 3.73)

Press UP or DOWN to increase/decrease tire size. Press **YES** once desired size is set. (Note: Pressing **YES** will take you back to the calibration menu)

REMOVE SECURITY

“Remove security” is used for applications where the OEM steering column and the key security system is not used. (ie. engine swaps into custom vehicles/marine)

After all the calibrations are set press **NO** to go back to the “Select Tune” menu.

CURRENT VEHICLE TUNING

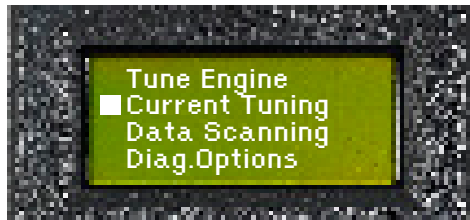
Current tuning option will show the current tune installed into your vehicle.

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

Connect the Xcelerator into the vehicle's diagnostic port. When prompted, turn the ignition key (two clicks forward) to the RUN position (**DO NOT start engine**); the Xcelerator will go through a series screens and stop.
The main menu will display as shown:



STEP 3

Selection arrow will be on the "Tune Engine" option. Press **DOWN** on the keypad to go down to "Current Tuning" the press **YES**.

A screen will load showing your vehicles current tune and calibrations.

Press **NO** on the keypad to go back to the main menu.

DATA SCANNING

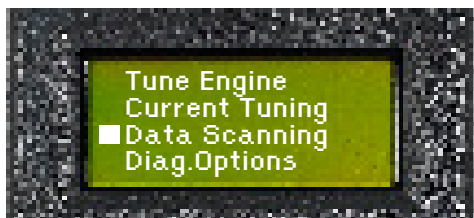
View the real-time engine data while the vehicle is running.

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

Connect the Xcelerator into the vehicle's diagnostic port. When prompted turn the ignition key to the RUN position (**DO NOT start engine**); the Xcelerator will load through a series of screens and stop. The main menu will load as shown:



STEP 3

Selection arrow will be on the "Tune Engine" option. Press **DOWN** on the keypad to go down to "Data Scanning" then press **YES**.

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

Press **NO** on the keypad to go back to the main menu.

GET DIAGNOSTIC TROUBLE CODES (DTCs)

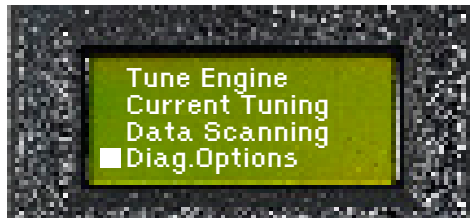
View and clear the vehicle's Diagnostic Trouble Codes.

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

Connect the Xcelerator into the diagnostic port. When prompted turn the ignition key to the RUN position (**DO NOT start engine**). The Xcelerator will run through a series of screens and stop. The main menu will display as shown:



Selection arrow will be on the "Tune Engine" option. Press **DOWN** on the keypad to go down to "Diag. Options"(Diagnostic Options) press **YES**.

STEP 3

Selection arrow will be on the "Get DTC's" option. Press **YES** on the keypad to get your vehicles Diagnostic Trouble Codes.



If there are no DTC codes, you will see the following screen, press **YES** to go back.



Getting a code and want to know what it means? DTC codes can be referenced online at **PPEpower.com**

(Note: Pressing **YES** will clear DTC's and take you back to the "Diag. Options" menu)

TRANSMISSION RE-LEARN PROCEDURE

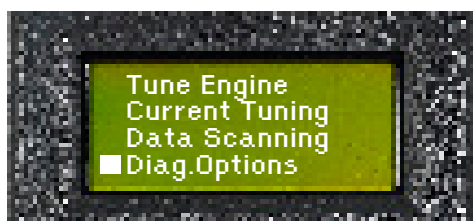
- Allows vehicle to reset the transmission and rapidly adjust to new power levels.
- Recommended after installing a new power level.
- Recommended after installing any transmission upgrades (ie. Clutches, Torque Converter, and Shift Kit).
- The transmission feels like it is not shifting properly

STEP 1

Locate the OBD II diagnostic port on your vehicle.
(See page 7 for reference pictures)

STEP 2

Connect the Xcelerator into the port and turn the ignition key to the RUN position (**DO NOT start engine**). The Xcelerator will run through a few screens and stop at the main menu as shown:



The selection arrow will be on the “Tune Engine” option. Press **DOWN** on the keypad to go down to “Diag. Options” (Diagnostic Options) press **YES**.

STEP 3

The selection arrow will be on the “Get DTC’s” option. Press **DOWN** on the keypad to go down to “Reset Auto Tran” press **YES**.



STEP 4

Read message and press **YES**.



STEP 5

Please wait while the trans re-learn initializes.



STEP 6

Press **YES** to complete.



STEP 7

You will now be back at the diagnostic options menu.

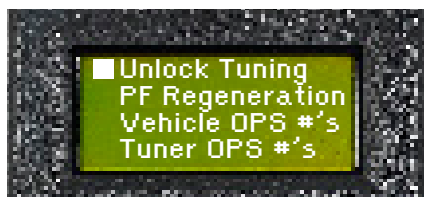
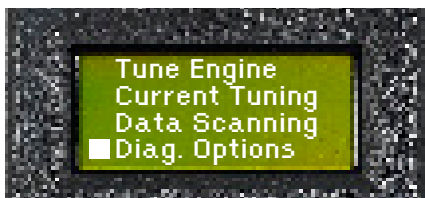


Turn key off and remove the Xcelerator from your vehicle.

Trans Re-learn Complete.

OTHER OPTIONS

From the main menu, go to “Diag. Options” and press **YES**. At the next menu go to “Other Options” and press **YES**.



UNLOCK TUNING

Unlock tuning option is for users who would like to Upgrade the Xcelerator. This menu will show a series of numbers, which we will use in order to build you an Upgrade file. Press **NO** to exit this menu.

PF REGENERATION (only for 2007.5-2010 LMM)

The diesel particulate filter regeneration service is used to clear accumulated soot mass in the particulate filter by burning it at high-temperatures. (See page 21 for procedure instructions)

VEHICLE OPS NUMBERS

View your vehicle OPS numbers.

TUNER OPS NUMBERS

View your tuner OPS numbers

PARTICULATE FILTER REGENERATION

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

Note: You must install a tune onto 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 the 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 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. Applying the brake returns vehicle to idle speed.

The diesel particulate filter regeneration service procedure is as follows:

1. Start vehicle and plug the Xcelerator into OBD-II port.
2. Select **Diagnostic Options -> Other Options -> DPF Regen.**

3. Read the disclaimer and press **YES**; regeneration 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 every time 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 may be blown, check fuse. If 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 (see page 12) and install the tune once again.

Q: I'm taking my vehicle in to the GM dealership for a oil change, should I leave the tune it 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. Cost to reflash tuner is \$150.00.

Q: My Xcelerator programmer is stuck on "Checking stored Vin#"?

A: Check for an after market stereo, trailer brake controller, alarm system, remote starter, radar detector, GPS, CB radio. Power must be disabled for all aftermarket accessories.

DISCLAIMER OF LIABILITY

Performance products can increase horsepower above and beyond factory specifications. Additional horsepower creates more stress on the drive-train components, which could result in drive-train failure.

Note regarding emissions-related, non-E.O.-legal products: THESE PRODUCTS ARE LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES THAT MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR HIGHWAY OR OFF-ROAD USE.

This agreement sets forth the terms and conditions for the use of PPE products. The installation of this product indicates that the Buyer has read and understands this agreement and accepts the terms and conditions. PPE (Pacific Performance Engineering) Inc., its distributors, employees, and dealers (the "Seller") shall not be responsible for the product's proper 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.

Limited lifetime warranty on all PPE cast aluminum products, and PPE Transmission Coolers. Three (3) year limited warranty on PPE Manifolds and Up-Pipes Kits, and OEM-Length Up-Pipes. One (1) year limited warranty on all other PPE products from the date of sale to original buyer 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 re-installation - 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.



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