

***Chevy/GMC Duramax® Diesel LLY
Power Edge LLY EZ
Installation Instructions and Manual***



EDGE
PRODUCTS
INC.
DIESEL PERFORMANCE

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The EZ Module is a high performance product
It is strongly recommended that EGT and boost gauges
be installed when using this product.
USE THIS PRODUCT AT YOUR OWN RISK.

Do not use this product until you have carefully read the following agreement.

This 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 its terms and conditions

DISCLAIMER OF LIABILITY

Edge Products, LLC and its successors, distributors, jobbers, and dealers (hereafter **SELLER**) shall in no way be responsible for the product's proper use and service. THE BUYER HEREBY WAIVES ALL LIABILITY CLAIMS.

The **BUYER** acknowledges that he/she is not relying 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 obligations 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 the 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.

LIMITATION OF WARRANTY

Edge Products, LLC (hereafter "**SELLER**") gives Limited Warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of **SELLER's** product sold herewith. The **SELLER** shall be in no way responsible for the product's open use and service and the **BUYER** hereby waives all rights other than those expressly written herein. This Warranty shall not be extended 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 product's kit. All products that are in question of Warranty must be returned shipping prepaid to the **SELLER** and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Edge Products, LLC

Under no circumstances shall 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.

If the **BUYER** sends back a failed unit that is out of warranty and chooses to buy a refurbished unit, the refurbished unit will only carry a 60 day warranty. If the **BUYER** purchases a new unit at a predetermined discounted rate, it will have the standard 1 year warranty.

Under no circumstances will the **SELLER** be liable for any damage or expenses insured 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, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN SIXTY (60) 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.

Legal in California only for racing vehicles which may never be used upon a highway.

AFTERMARKET PRODUCTS AND YOUR VEHICLE'S WARRANTY

Many of our customers ask, "Will your product void my vehicle manufacturer's warranty?" While the answer is straightforward from a legal standpoint, we also want to educate our customers (and after-market consumers) on some industry realities and offer some common sense precautions to minimize your risk.

Consumers of aftermarket products are protected by The Federal Magnusson-Moss Warranty Act. The Act states that if something breaks on your car and you take it in for warranty repair, the dealer must honor your warranty unless they can prove that whatever modifications you have added to your car actually caused the problem. Please keep in mind that towing in anything higher than level two is not recommended.

While as a consumer, you have strong legal protection with regards to your vehicle's warranty, there is also a practical reality that different automotive manufacturers and dealers have greatly varying views on aftermarket products, in particular those that produce horsepower, such as performance enhancement chips, modified intake manifolds, or aftermarket exhaust systems. There are dealers and manufacturers out there that will use the presence of a horsepower upgrade to void your vehicle's warranty. They will do this regardless of whose product you are using. Any aftermarket company that does not acknowledge this is misleading you.

The bottom line is that while the law protects the consumer and provides for enforcement of the warranty, it is very difficult for most people to hire an attorney and fight a voided warranty. Edge recommends that you **always disconnect and remove your EZ module when you take your vehicle to a dealer for warranty work** in order to not interfere with Diagnostic equipment.

About the Power Edge

Thank you for purchasing the Power Edge LLY EZ Module for the Chevy/GMC Duramax® Diesel LLY. The EZ module has been developed and produced from the highest quality materials available to ensure the best performance for years to come. If you have any questions, please contact Edge Products. We will be very happy to answer your questions about our complete product line (1-888-360-3343).

The EZ Module is an add-on Engine Control Module (ECM) for the Duramax® Engine that offers additional features not available with the factory setup. Since it is an add-on ECM, it uses all the factory data, and then enhances the factory settings to optimize your truck's performance.

These features include:

- Engine temperature monitoring and power increase from the EZ module as engine reaches operating temperature
- Three selectable power level settings that can be changed on the fly
- Smart power control during torque converter lockup to allow a smooth, easy torque converter clutch lock-up

The EZ module offers a large power increase over stock throughout the rpm range, but the power is most noticeable in the midrange rpm's. This greatly improves drivability and towing performance. Transmission downshifting is greatly reduced, especially while passing or towing.

The EZ also regulates power delivery and timing based on engine temperature. This means that while the engine temperature is below 160° F no additional fueling or timing is delivered. At 160° F the module begins delivering fuel and adding timing at 50% of the calculated additional fuel, and the percentage increases as the engine temperature increases, until at full engine temperature (174° F) the EZ delivers 100% of the calculated additional fuel and added timing.

Warning: Do not stack the Edge LLY EZ with the Edge LLY Juice. It can cause severe damage to the engine.

Power Edge LLY EZ Getting Connected

Supplied Items:

1. Power Edge EZ Module
2. Three Wire Ties
3. Two Velcro Strips
4. Power Adjustment Switch

Required Tools:

None

Please read these instructions completely so that you understand each step prior to installation.

The Power Edge LLY EZ Module

This picture shows the Power Edge LLY EZ Module with the harness cable.



This cable is where the toggle switch that changes power levels gets connected.

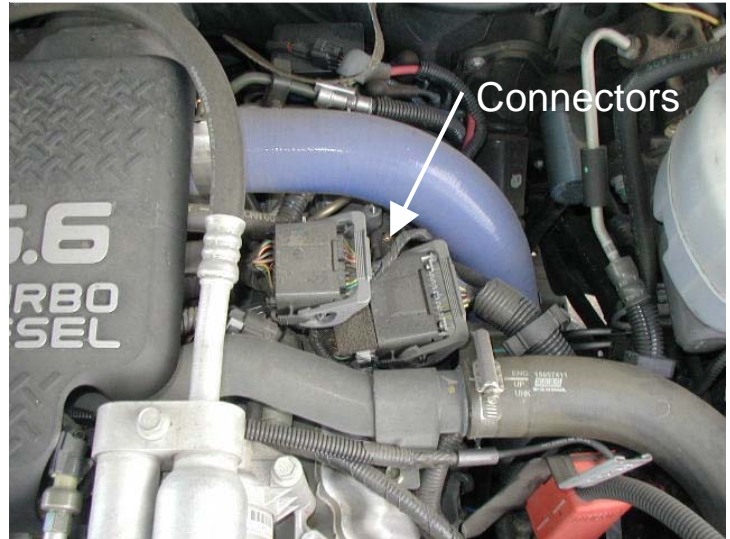
*These two connectors are EGT thermocouple connections. The EZ does not utilize these two wires—they are for the **Juice** product only.*

Installing the EZ Module

1. The Power Edge LLY EZ Module can mount on top of or to the side of the black plastic fuse box cover located on the driver's side fender. Adhere the module using the supplied Velcro, allowing enough harness movement for removal of the cover.

Connecting The Harness

2. Disconnect both stock connectors by squeezing the ears on the backside of the connector and pulling the gray lever.
3. Gently insert the EZ connectors and lock in place with the gray levers, and then gently connect the stock connectors to the other end of the EZ connectors.



Notice: Use caution when inserting connector bodies. If the connector does not slide smoothly, remove the connector, inspect the pins, and retry installation.

Final Inspection

4. Recheck all connections for a properly secure installation. Using the supplied wire ties, secure the wiring harness to prevent possible damage.
5. Start the engine. The engine should start and run like a stock truck. If the engine does not start or run properly, turn off the motor, remove the keys from the ignition, then remove the EZ module and inspect the pins inside both connectors. Straighten pins or clear foreign material from the pins and connector surfaces, then re-install the connectors. If failure conditions still exist, contact your dealer or Edge Products, LLC. When trying to restart, make sure that the key has been turned off for at least 10 seconds before cranking the engine.

Using The Power Edge LLY EZ

Adjusting Power Levels

The EZ has three power levels. The EZ module was designed to allow the user to select any of the three power levels on the fly with the supplied three position switch. Level 3 is with the switch towards the tab.

Power Level Confirmation

To confirm the power level that you have selected with your switch, you can do the following procedure:

1. Place gear selector in Park with your foot off of the accelerator while engine is idling
2. Set the Parking Brake
3. Place gear selector to reverse, neutral, reverse, then back to park. P-R-N-R-P
4. The engine will rev to coincide with the power level selected, revving 3 times for level 3 and so on

Towing

It is recommended that you use the Tow/Haul transmission mode while towing. This provides torque converter lockup in gears 2-5, which reduces transmission heat and also raises the shift rpm threshold to keep the rpm's higher. It is recommended that you maintain engine rpm above 1800 while towing.

While towing, the EZ module allows the engine to pull many grades in the mid rpm's rather than having to downshift and pull them in the high rpm's. This provides for lower EGT (Exhaust Gas Temperature) with the same power output. EGT rises significantly with rpm--especially above 2500. It is highly recommended that you install an EGT gauge while using the Power Edge EZ.

It is recommended while towing you use power levels 1 or 2 due to EGT and transmission stress

Power Gains

The following power gains are representative of an actual test vehicle. These gains were measured on a SuperFlow Dyno at an altitude of 4400 ft above sea level, and represent power delivered to the rear wheels of the test truck. The only modification made to the test truck was the addition of the Power Edge EZ module. Power gains may vary somewhat on a different vehicle or in different geographic settings.

	Horsepower	Torque
Level 1:	30	80
Level 2:	50	110
Level 3:	65	150

Warning: It is strongly advised that you do not combine, or “stack” chips to gain more horsepower.

Warning: Do not stack the Edge LLY EZ with the Edge LLY Juice. It can cause severe damage to the engine.

Making Sense of it All

This section is designed to help you understand how the additional power will change your driving experience as well as help you figure out what power level will best suit your driving style.

The first thing you will probably notice, especially if this is your first time driving a diesel truck with a performance module, is that this is a whole different animal. You will experience more power, quicker take-offs, better passing and acceleration and possible better fuel economy. Power level one is specifically designed to maximize fuel economy improvements (*if you can put off the little guy on your shoulder telling you to 'step on it hard'*).

If you are towing, the beauty of the extra power the Edge EZ module delivers is that not only will you be able to maintain speed going up a hill, but the added power will also keep you in a higher gear, so your transmission will not keep “hunting” for lower gears. We recommend level 1 or level 2 for towing applications. Only use level two if you are towing a light load. Level 3 should never be used while towing. Level 3 is a great overall driving level. When driven responsibly, and used with an EGT gauge, level 3 will not stress the stock engine or transmission as long as you are not towing.

EGTs: What they mean and why

EGT stands for exhaust gas temperature, and is the single most important indicator of how a diesel engine is performing. Unlike a gasoline motor, a diesel motor will continue to make power as more fuel is added. As more fuel is added, heat will be generated until the motor just gets too hot and things start to melt. This is a situation you want to avoid. Exhaust gas temperature is the ideal measurement of how hot the motor is, since temperature fluctuations in exhaust gas are almost instantaneous. Just so you know, it is possible to generate excessive EGT on a stock truck, particularly if you are towing. This is why we always recommend installing an EGT gauge.

In our experience 1350 degrees is about as high as you want to let your EGTs go. Keep in mind, the stress on your engine created by the heat is a function of both temperature and time. A brief spike to 1400 that lasts a second is not that big a deal. Pulling up a hill for several minutes at 1400 is far worse.

As you drive your truck in the various power settings, keep your eye on the EGTs. Depending on how you drive and where you drive, you may find a particular power level is more suitable to your power needs.

The EZ Module and your Transmission

The automatic transmission has a fluid-filled clutch-like device called a torque converter. This device uses the spinning motion of the motor to drive the transmission which drives your wheels. As the truck speed stabilizes, the torque converter engages a mechanical connection which locks the two halves of the torque converter, so the output shaft is going the same speed as the input shaft. This mechanical linking of the two halves is called ***Transmission Lock-up***. If the motor produces too much power, this mechanical lock-up can start to slip. When this slippage occurs, the EZ module reduces the power output to allow the transmission to function properly. This is a great feature that provides an extra level of protection for your vehicle.

Transmission

The Allison transmission is a “Smart” transmission. That means that it pays attention to how smoothly the transmission is changing gears, and modifies the shifting to improve drivability. When the motor delivers more power (by adding the EZ module), the transmission has to ‘re-learn’ how to shift. After first installing the EZ module, you may notice rough shifting. The best way to re-teach the transmission is to set the truck in the power level you will be using most of the time. Then set out to drive, some city, some highway, varying the driving and the speed. Make sure that you shift through each gear 20 to 30 times. A good rule of thumb would be 100 to 200 miles. Remember that the truck must go through each gear 20 to 30 times. You will notice the shifting becoming better, and your truck responding better to the additional power as you go through the learning cycle.

Edge On Your Side

Edge Products LLC takes a great deal of pride in the quality of our customer service. If you have any questions or concerns about your EZ module, please feel free to call us at 888-360-3343. Our tech support desk is open from 8:00 am to 5:00 pm Mountain time Monday through Friday.

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