

1998.5-2002 Dodge Cummins 5.9L 24 Valve Edge Products EZ Module Installation Instructions & Manual

P/N's: 30200 / 30201



READ IMPORTANT SAFETY INFORMATION IN THIS MANUAL

California Air Resources Board Executive Order D-541 (30200 98-99 Only)



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Manual Version 7

IMPORTANT SAFETY INFORMATION

SAFETY TERMS

Throughout this User Guide (hereafter referred to as User Manual or Manual) you will see important messages regarding your safety or the protection of your vehicle. These messages will be designated by the words WARNING or CAUTION.

warning indicates a condition that may cause serious injury or death to you, your passengers or others nearby. Pay careful attention to these Warning messages, and always comply with them. They could save a life.

CAUTION indicates a condition that could cause damage to your vehicle. It is important to install and operate your EDGE product in conformance with instructions in this Manual. Caution messages alert you to particularly important things to watch for to keep your vehicle operating the way you want it to.

The Edge product you have bought is a high-performance product. As such, it does present some risks of which you should be fully aware. Do not use this product until you have carefully read all the following safety information and the Owner Agreement.



Misapplication or misuse of this product could lead to a serious or fatal accident. Comply with all safety information below, and in your vehicle owner's manual. Follow safety, installation and operating instructions in this User Manual to assure proper use.

SAFETY GUIDELINES

- Do not exceed legal speed limits on public roadways. Use any enhanced speed capabilities of this product only in closed circuit, legally sanctioned racing environments expressly for this purpose. Loss of control from speeding on a public road could seriously injure you, your passengers, or others on the roadway.
- Select a position on the windshield or dashboard to mount the device where it will not impair your view. You must be able to see the road, traffic, and pedestrians without interference. Be sure your mounting location meets state and local laws regarding placement of devices on the windshield or dashboard.
- 3. Do not operate the device while driving. Perform all adjustments or changes while stopped. Changing a setting while under way can interfere with your attention to roadway conditions.
- 4. "Stacking" performance-enhancing devices or other improper installation could cause powertrain failure on the road. Other products may have features incompatible with your Edge device. Follow all installation and operating instructions, and don't stack products.
- 5. Some modifications may affect other parts of your vehicle. For example, if you remove/adjust the speed limiter in your vehicle, be sure your tires and other components are rated for the increased speeds they will have to withstand. Not doing so can lead to loss of vehicle control. Modify the speed limiter only for use in closed circuit, legally sanctioned racing environments, not for use on public roadways.
- 6. Do not use the Performance Tests feature to break any traffic laws. Perform these tests only where they are legal and safe.

7. Some features may not function on all vehicle models. Check a newly-installed device for all features you intend to use. Do not rely on their working without checking first.

NOTE: Dispose of this product consistent with local codes. Return to your electronics supplier for proper handling.

PRODUCT REGISTRATION

Please take the time to register your product. To register your product, follow the instructions at this link. http://www.edgeproducts.com/product_registration.php

Benefits of product registration:

- Your Safety registering your product allows us to know exactly which product you have and provide important product updates to you that improve the quality and/or safety of the product
- Enhanced Features almost all Edge products are easily updated via the internet. We are constantly adding new features and improvements to our product that we know you will want to enjoy
- **Confirmation of Ownership** provides a record in case of product loss, theft, or required warranty work. When you call us for support our team will already have much of the information they need to help you!
- Improved Product Development helps us better understand you (our customers) and design products that meet your needs
- Special Offers allows us to inform you about special offers on accessories and/or new products that fit your vehicle and enhance your driving experience
- AND...
- Extended Warranty Plan Opportunity within the first 90 days of ownership, Edge offers the option to buy a 1-year warranty extension to all customers who register their product!

All Edge modules and programmers are built to operate with OEM calibrations. When you take your vehicle to a service center they may, by your request or otherwise, update your vehicles calibrations. Therefore it is important that you return your vehicle to stock before taking it in for service. Edge updates its active products (i.e. those currently being manufactured) to work effectively with updated OEM calibrations. However, this process can take some time as Edge is not always made aware of calibration changes made by the OEM. In the case of <u>discontinued products</u>, Edge cannot ensure that your unit will work effectively if you take your vehicle to a dealership and you are given, by your request or otherwise, a new calibration.

If you have used another tuner/programmer on your vehicle, you will need to program back to stock and remove the device before using the Edge Products Device. Failure to return to stock may result in PCM failure or engine damage.

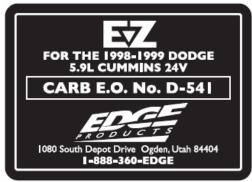
Because the Power Edge EZ module is a high performance product, it is strongly recommended that EGT gauges and Boost gauges be installed with the use of this product.

Programming your vehicle may expose existing defects in your vehicle's PCM that could disable your vehicle. It is advised that you do not program your vehicle in remote locations in case of vehicle failure.



CARB/EPA Compliance

This E.O. number <u>only applies to the Edge PN 30200 for model years 1998-1999</u> and indicates the installation of this product meets the emissions compliance requirements of the California Air Resources Board and Federal Environmental Protection Agency and is legal for sale and use on pollution-controlled vehicles operated on public streets and highways. It must be installed and operated according to the instructions provided in this user's manual. Included with this product is a sticker like the one pictured below for you to retain with your vehicle.



You can either apply it somewhere on the vehicle (e.g., the inside end of driver's door) or simply retain it in your glove box. The purpose of the sticker is to inform anyone who may have questions regarding the use of your Edge product and how it affects emissions. For example, it would be something to show an emissions technician if questioned when taking your vehicle in for an emissions check to let him/her know the product is CARB emissions compliant.

About the Dodge EZ

<u>Introduction</u>

Thank you for purchasing the *Edge EZ* Module for the Dodge Cummins® Diesel. The *Edge 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.

• The *Edge EZ* Module is an add-on Engine Control Module (ECM) for the Cummins® Engine that offers additional features not available on a stock engine. 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.

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

The first thing you will probably notice is improved performance, especially if this is your first time driving a diesel truck with a performance module. You will experience more power, better throttle response, better passing and acceleration, and even better fuel economy. Power level one is specifically designed to maximize fuel economy improvements.

Power Level 1 and 2

AWARNING Towing: Do not exceed your vehicle's max GVWR as outlined in the vehicle's owner's manual. Doing so may result in loss of vehicle control and cause bodily injury.

These settings will provide additional engine performance. These levels are appropriate for most towing situations.

Power Level 3

This setting will provide the highest engine performance for your vehicle. You should see an improvement in fuel economy as well as added horsepower and torque. Due to the high performance nature of this setting, towing or hauling heavy loads is not recommended.

Towing

The *Edge EZ Module* and all the other Edge® power modules were made for towing. That is why Edge built them, and why we keep making them better. Let's assume that in a stock truck you would pull your 5,000lb load up the grades in 3rd gear. Your EGT (Exhaust Gas Temperature) may run at about 1200° F. With the EZ module on level 2, you have effectively increased the horsepower by 35, and the torque by 77 Foot-pounds. That is like adding a fifth horse to pull a four horse carriage. That is representative of how much your power has increased. That means you will be running at a lower rpm and your EGT has decreased. And best of all you are going faster and the truck may have already shifted into 4th gear.

Power level 3 is designed to match fueling with any additional upgrades you may have done to your vehicle. Level 3 should never be used while towing. Level 3 is designed to take advantage of the built-in safety margins the manufacture needs to add in order to make sure your vehicle can operate at its maximum capacity. 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.

Exhaust Gas Temperature

Now let's talk about the different power levels and the Exhaust Gas Temperature (EGT) readings, and what they mean. As mentioned earlier the EGT tells you how hot the exhaust gases are in the exhaust manifold coming from the engine. This is important because you shouldn't let them run for long periods above 1350 F. The higher the level, the more fuel is fed to the engine, and potentially, the higher the EGT's. Since towing is harder on the engine and the transmission, we recommend that you tow in level 1 for a heavy load, or, on a light load level 2. This will protect you from putting too much stress on the engine and transmission. Level 2 is a good all-around mode, allowing for better economy and better performance, while not stressing the engine and transmission. We recommend that you run your truck in level 2 or lower for your normal daily activities.

EZ Installation Instructions

IMPORTANT: Read all Safety, Warranty, and Installation Instructions before installing this product. Read through these instructions completely so that you understand each step prior to installation.

Tools Required:

Pliers

Flat tip Screwdriver 1/2" Wrench 3/8" Drive Ratchet & Sockets 1/4" Socket 5/16" Socket 7/16" Deep Well Socket

Supplied Items:

- 1. Edge EZ Module
- 2. Three Wire Ties
- 3. Two Velcro Strips
- 4. One Hose Clamp
- 5. One 90° Brass Fitting
- 6. 3 Position Toggle Switch

The Edge EZ Module:

This picture shows the Edge EZ Module with the harness cable (**Note:** *Harness shown is for years 1998.5-2000. 2001+ is slightly different*)

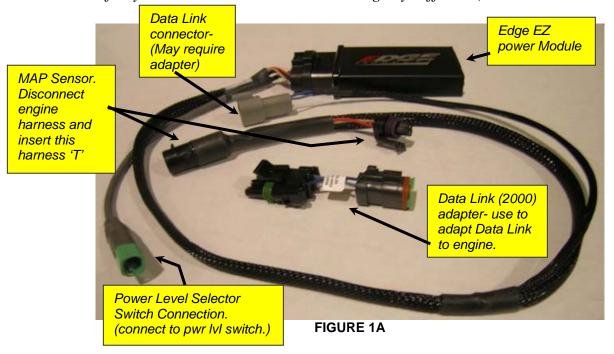




FIGURE 1B

Module Installation

The *Edge EZ Module* can mount on the flat 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.

Harness Connector

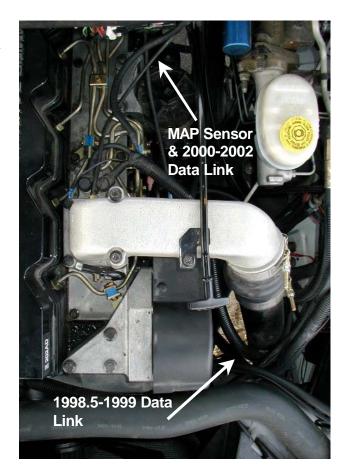
Your EZ module is equipped with a harness that can be disconnected at the EZ module itself (*See figure 1C*). It is important to make sure that your EZ module is always connected to the harness when the wiring harness is connected to the truck, otherwise the truck may not run properly, or may trip engine "codes."



FIGURE 1C

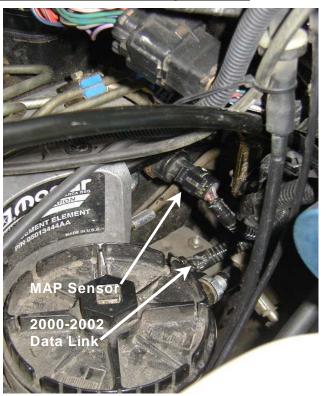
Data Link Connection

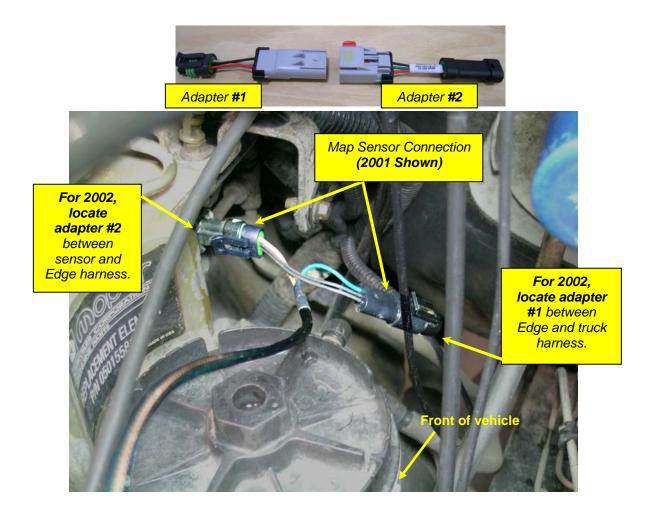
- 1. The Data Link connector is located in different locations based on the year of the truck:
- 98.5-99 the triangle shaped connector is located on the drivers side of the engine in the wiring harness near the power steering pump
- 2000-2001 the three prong flat connector is located on top of the fuel lift pump that is located on the driver's side of the engine directly below the MAP sensor, note: on some 2001 truck's the connector is located on the drivers side of the engine in the wiring harness near the power steering pump
- 2. A plug is installed in the data link connector on the truck to resist corrosion, remove this and install the supplied connector.



MAP Connection

Connect the supplied MAP sensor wiring harness to the supplied main wiring harness in the engine compartment. Disconnect the stock wiring harness at the boost sensor located to the rear of the fuel filter housing near the top of and on the engine block. Plug the supplied MAP sensor connector into the stock engine boost sensor and the stock engine wiring harness connector into the supplied MAP sensor connector. The MAP sensor shown in the image is for a 2001, the 1998.5-2000 are a different sensor but in the same location.





Attach and Install the 3 Position Switch

1. Attach the 3-position switch cable with the green connector to the mating green connector on the harness (*see Figure 1A and 1B*) and pass it through or around the rubber boot in the driver side firewall behind the battery. (*see Figure 2*)

After routing the switch under the dash, mount the switch to the lower dash panel at the left of the steering column. (**Note:** *The cable and switch may also be routed around the outside door pillar and placed on the dash.*)

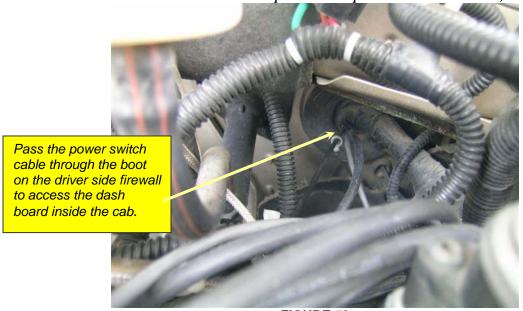


FIGURE #2

2. Using a 1/4 inch drill, carefully drill a hole through the lower plastic dash panel. Insert the switch through the hole and secure in order: the tab ring, internal star washer and then tightening the nut. **Caution:** Make sure the location you select to drill the hole does not drill into wires or other critical components.

Boost Elbow Installation (Optional)

The installation of the brass elbow permits turbo boost pressures of greater than 20 psi without the wastegate opening. The *Edge EZ Module* will operate equally well with or without this installed. (The turbo is located on the passenger side of the engine compartment.)

1. Using the 5/16" socket, loosen the two clamps securing the air induction hose to the air filter housing and the turbo inlet. Remove the hose and set it aside.



- 2. Using the pliers, remove the crimp style clamp from the hose on the brass fitting located on the now exposed lower front side of the turbocharger. Remove the hose from the brass fitting and dispose of the crimp style clamp.
- 3. Using the 7/16" wrench, unscrew the stock brass fitting out of the turbocharger housing. Using the 7/16" wrench, install the supplied brass fitting, tighten-be careful not to over-tighten. Slip the supplied hose clamp onto the stock hose, install the stock hose onto the supplied brass fitting and tighten the hose clamp with the ¼" socket. Reinstall the stock air hose onto the air filter housing and turbocharger inlet. Using the 5/16" socket, tighten both clamps securely.
- 4. Using the 7/16 deep socket tighten all of the intercooler hose clamps on the air intake.



Note: On 2001 auto's turbos, the wastegate is a solid line and does not have a brass elbow to be replaced

Final Inspection and Operation

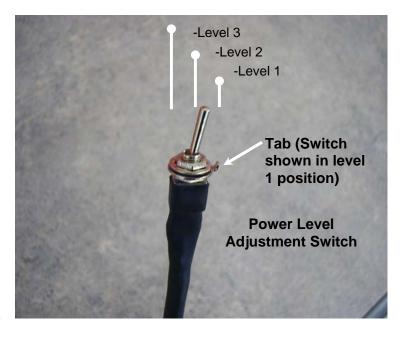
- 1. Recheck all connections, fittings and fasteners for a properly secure installation.
- 2. Using the supplied wire ties, secure the wiring harness from possible damage.

Using the EZ and Power Level Adjustment

Power Levels

The *Edge EZ Module* offers 3 levels of power beyond stock. The power from the *Edge EZ Module* begins by plugging the module into your truck. The power levels are adjusted by changing the "in cab" switch position to the level you need. Level 3 is switch position farthest from the Tab. Adjusting power levels on an EZ module has never been EZier!

Refer to the power level switch picture for position and power level selection.



WARNING Do not combine, or "stack" chips (modules) to gain more horsepower. The chips could be incompatible and result in powertrain failure or create dangerous conditions (such as adverse running conditions, high idle, DTC codes, etc.) leading to a serious or fatal accident.

Power Gains

The following power gains are representative of an actual test vehicle. These gains were measured on a Super Flow 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 Evolution. Power gains may vary somewhat on a different vehicle or in different geographic settings.

Horsepower Torque

Level 1: 20 45 (Timing Only)

Level 2: 35 77 Level 3: 65 180

Warranty Information

LIMITED 1 YEAR 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 Inc.

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 90 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.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE **BUYER** HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.

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 THIRTY (30) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND.

IMPORTANT INFORMATION ABOUT YOUR VEHICLE'S WARRANTY

Many of our customers ask, "Will your product void my vehicle's manufacturer's warranty?" While the answer is straightforward from a legal standpoint, it's important to educate our customers (and all aftermarket consumers) on some industry realities and offer some common sense precautions to minimize your risk. Edge is committed to providing quality products that are safe to use. Our products do not cause damage to a vehicle when used as intended. *Please keep in mind that towing in anything higher than the towing level and hard driving in race or extreme performance levels is not recommended.*

Consumers of aftermarket products are protected by the Federal Magnusson-Moss Warranty Act. The Act states that if something breaks on your vehicle and you take it in for warranty repair, the dealer must honor your warranty unless whatever modifications you have added to your vehicle actually caused the problem in question.

However, the reality is that many dealerships have been known to void warranties on vehicles that use aftermarket products as a matter of policy. This applies in particular to those aftermarket products that produce horsepower, such as performance enhancement "chips," modified intake manifolds, or aftermarket exhaust systems, regardless of product brand.

You have strong legal protection as a consumer in regard to your vehicle's warranty. However, Edge strongly recommends you always disconnect and remove your module/programmer and monitor when you take your vehicle to a dealer for warranty work. In addition, leaving the product connected may affect dealer diagnostic analysis and CAN tool functions. Edge makes every effort to produce product that can be easily removed. **NOTE:** Even if you disconnect your unit, your dealer can detect the use of any programmer—even if the unit has been removed.

Thank you for purchasing the Power Edge *EZ* Module by Edge Products, LLC for the Dodge 24 Valve Cummins®. 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 concerns or questions, please contact us.

Note: This warranty is void for any new products purchased through auction websites. Warranty is valid only for new products purchased through Authorized Dealers (proof of purchase required for all warranty claims).

<u>Technical Support:</u> 888-360-3343

To expedite your support call, please have your Vehicle Information, Part Number, Serial Number, and Date of Manufacture ready prior to calling Technical Support. The *Edge Products* information is found on the label located on the bottom of the device.