

COMP

***1998.5-2002 Dodge Cummins 5.9L®
Edge Comp Module
Installation Instructions & Manual***

P/N's: 30300, 30301



READ IMPORTANT SAFETY INFORMATION IN THIS MANUAL



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Manual Revision 5

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.



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

1. 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.
2. 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 discontinued products, 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 *Comp* 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.

About the Dodge Comp

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.*

Congratulations on purchasing the *Comp* by Edge Products, LLC, the leader in truck performance and power gain technology. The following manual contains information and instructions on the proper use of the *Comp*.

The Edge *Comp* module maximizes engine efficiency by monitoring the RPM, timing, turbo boost pressure and fueling parameters of your Cummins engine. The *Comp* module uses this information to determine and control both fueling and timing enhancements for the Bosch fuel injection pump.

The Edge *Comp* features five power levels with power gains from 40-120 horsepower. Each of the levels has five independent adjustable sub-levels to control low boost fueling, providing a total of 25 levels of adjustability! The responsiveness settings enable you to dial-in the optimum balance between responsiveness and low boost smoke control no matter what additional power modifications have been made to the engine. The *Comp* module is fully adjustable on-the-fly and mounts inside the cab.

EGT

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 engine will continue to make power as more fuel is added. As more fuel is added, heat will be generated until the engine 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 engine is, since temperature fluctuations in exhaust gas are almost instantaneous. 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.

Towing Performance



WARNING *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.*

Level 1 and 2 will modify the fuel timing and fuel injection strategies to improve the performance of your vehicle. You should see an improvement in fuel economy as well as added horsepower and torque. When towing a heavy load such as a boat or camper, we recommend you use these settings.

Due to the high performance nature of level 3 through 5, towing or hauling heavy loads is not recommended.

Power Gains

The following power gains are representative of an actual test vehicle. These gains were measured on a Mustang Dynamometer 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 *Edge Comp* module. Power gains may vary between trucks and atmospheric density and different geographic settings. An optional Hot Unlock is available (See Hot Unlock)

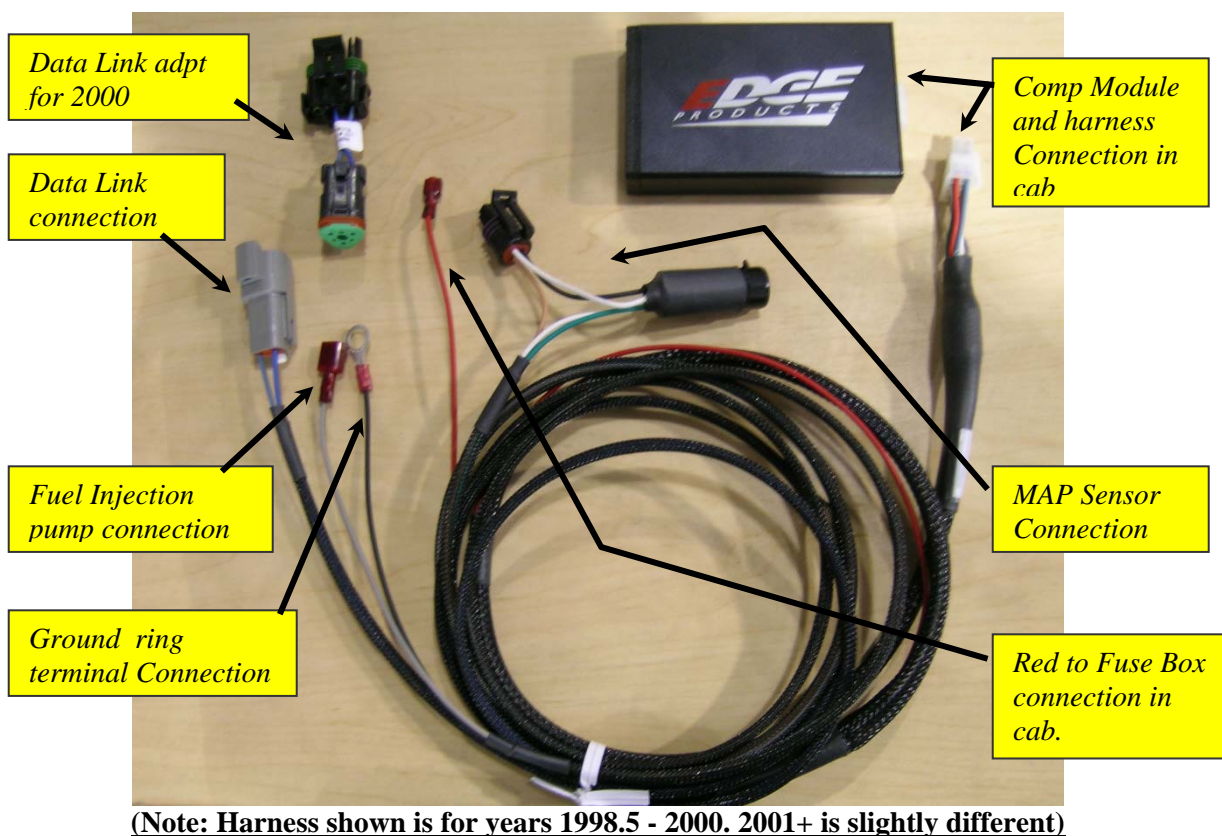
| POWER LEVEL | TOTAL HP GAIN | TOTAL TQ GAIN |
|-------------|---------------|---------------|
| Level 1 | 40 | 150 |
| Level 2 | 60 | 200 |
| Level 3 | 80 | 250 |
| Level 4 | 100 | 300 |
| Level 5 | 120 | 350 |

CAUTION: *On a stock truck, it is possible to overstress the engine and transmission while driving in levels three, four, and five.*



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 leading to a serious or fatal accident.*

Dodge Cummins 5.9L Comp Installation



Supplied Items:

1. Power Edge Comp Module
2. Main Wiring Harness
To Engine Compartment- Black to Ground; Gray to Fuel Injection Pump; Map Sensor Connection; Data Link Connection.
Inside Cab - Red to Fuse Box connection
3. Hardware kit including: Leaded Fuse Link, Wire Ties, Velcro Strips, Hose Clamp, and 90° Brass Fitting.

Tools Required:

Knife
2-3 ft. of wire (to help fish harness)
Pliers (needle nose)
Phillips Screwdriver
Flat tip Screwdriver
3/8" Drive Torque Wrench

1/2" Wrench
3/8" Drive Ratchet & Sockets
1/4" Socket
5/16" Socket
7/16" Deep Well Socket
10 mm Socket
13 mm Socket

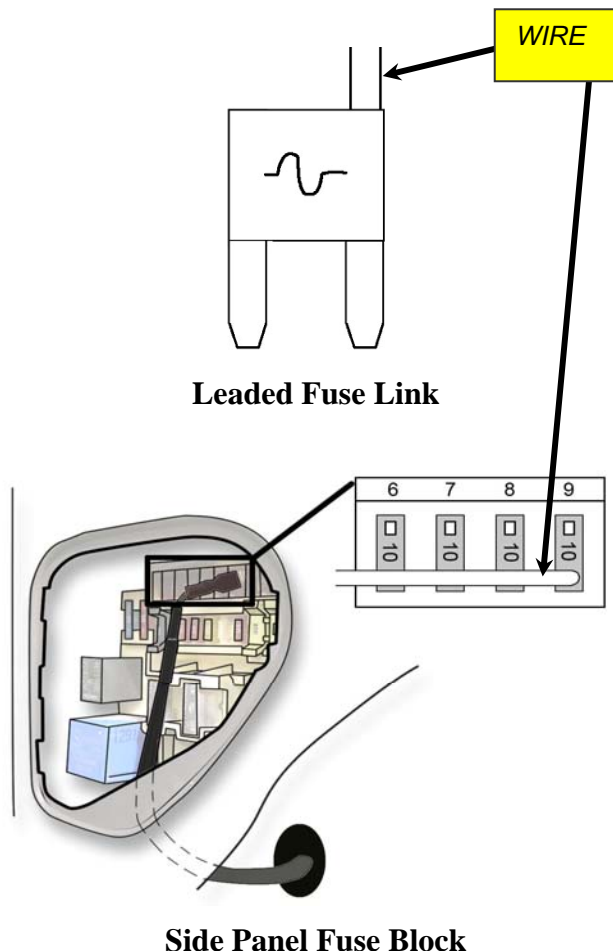
Power Edge Comp Getting Connected

Connecting In-cab to the Fuse box



WARNING *An electrical charge or battery acid can burn you. Battery gas can explode or ignite. Take care when working around the battery. Follow instructions in the vehicle owner's manual for disconnecting and reconnecting a battery.*

1. Using the ½" wrench, loosen both negative battery cable clamp fasteners, remove cables from the battery posts and set each to the side.
2. Route the Red wire (with the red female connector end) into the fuse block located on the side panel of the dash.
3. In the side panel fuse block, locate and remove the 10 amp "Fuse 9".
4. Insert the Leaded Fuse Link in its place. The leg with the wire soldered to it needs to plug into the "HOT" side of the fuse location. Orient the fuse exactly as shown in the fuse box picture below.
5. Plug the routed wire (routed in step 2) into the leaded fuse link connection.



Caution: *DO NOT reconnect the batteries until installation is complete. Connecting power may cause fault code in the ECM, which only an authorized dealer can remove.*

1. Using the Phillips screwdriver, remove the three screws from the bottom of the knee bolster. Pull the bottom back towards you until it pops loose, remove it and set aside. This gives better firewall access.
2. Routing the Supplied Main Wiring Harness. Cut a ¾" slit in the grommet. Automatics- easy access is the clutch hole grommet located to the left of the firewall brake hole. Manuals or Automatics- Use the large vehicle wiring harness grommet in the firewall. Fish the supplied harness through the slit from the engine compartment into the cab under the dash. Leave about 18" of the supplied wiring harness inside of the cab (white 6-wire connector end plus the red wire.)

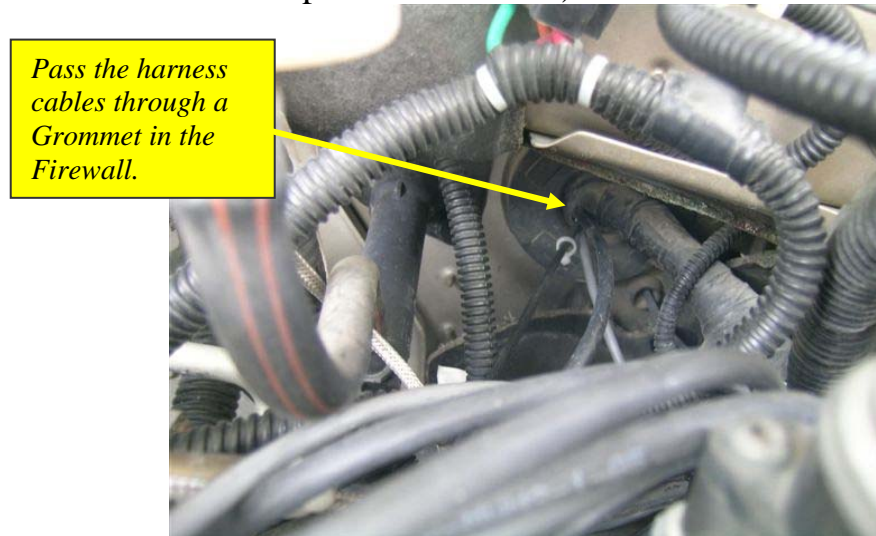
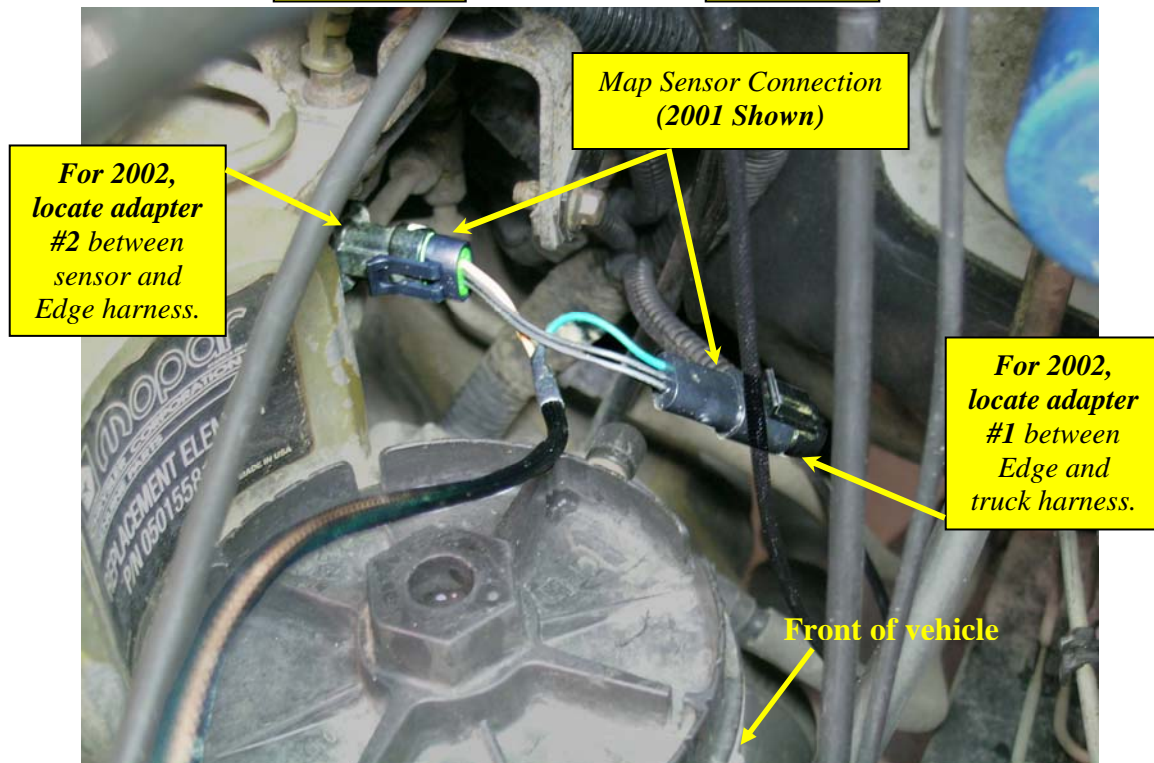


Figure 4

3. Route the supplied red wire up into the fuse panel. Connect the female spade to the male fuse tap connector installed in a previous step. Reinstall the fuse panel cover.
4. Reinstall the knee bolster. Align clips on bolster to holes in lower panel and push. Insert and tighten the three screws in the bottom of the bolster.
5. Mount the Power Edge *Comp* within your reach and to suit your preference. A good location is on the knee bolster – either side of the steering column. Use the two supplied Velcro strips to attach.

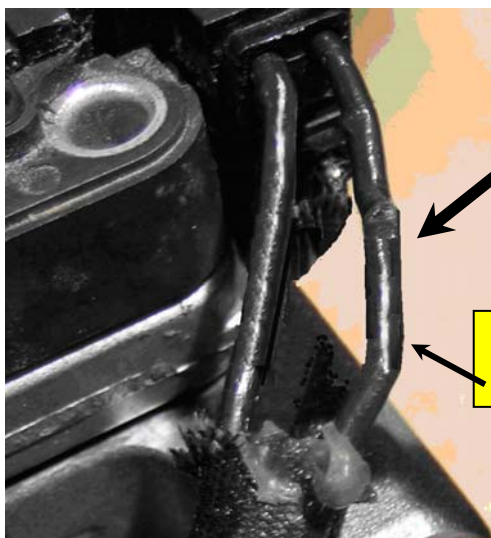
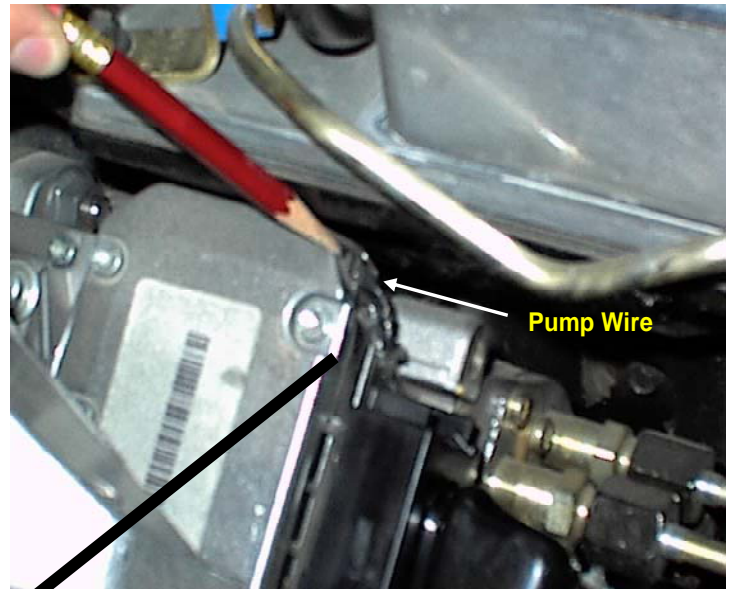
MAP Connection

6. 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.



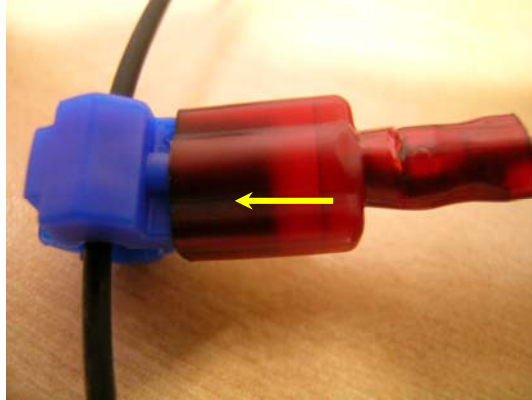
Injection Pump Wire Connection

7. Using the 13 mm socket, remove the three bolts securing the throttle bracket assembly on top of the Fuel Injection pump. Move it towards the driver's side battery.
8. Using the 10 mm socket, remove the four bolts securing the air intake and the bolt securing the oil dipstick tube. Using the 7/16" socket, loosen the clamp and rotate the air intake assembly counterclockwise to expose the Fuel Injection Pump stock wiring harness.
9. The stock wiring harness is located by following it from the center of the six fuel supply tubes up to the top rear of the pump. Slide the protective covering downward to expose these upper two wires.
10. Install the wire tap-in connector lower half with metal trough onto the wire closest to the engine block; (this is the top inner wire). Hold the wire in this trough while folding over the upper half of the tap-in connector onto the lower half. Use pliers to squeeze the two halves fully together.



NOTE: Important-while the connector halves are being seated together the wire is not to be rotated. The stock wiring harness that plugs into the injection pump may be disconnected for better access to the wire.

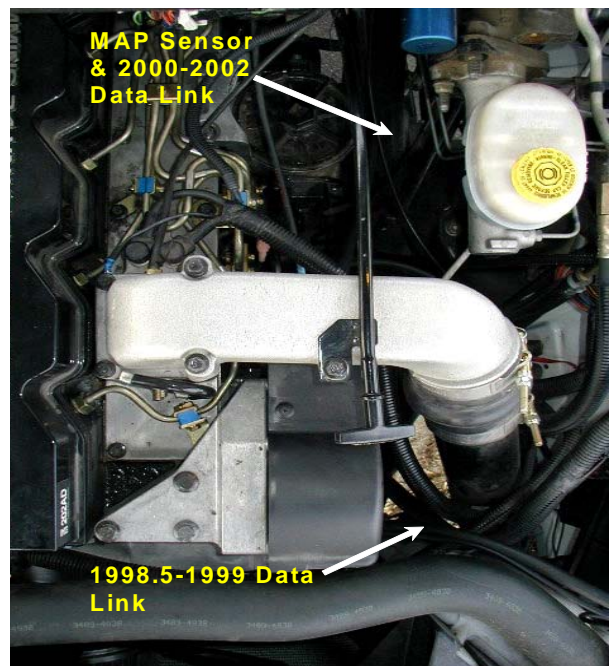
11. Connect the gray wire with the male spade connector on the supplied harness, fully into the side of the wire tap-in connector as shown. Replace the protective covering over the wires.



12. Reinstall the air intake assembly onto the intake manifold using the four bolts. Install the ground wire with the ring connector on the supplied harness onto one of these bolts – preferably the bolt with the large ground wire already attached to it. Using the torque wrench and 10mm socket, torque these bolts to 18 lb./ft. Install and tighten the oil dipstick tube retaining bolt.
13. Reinstall the throttle bracket onto the fuel injection pump using the three bolts. Using the torque wrench and 13mm socket, torque these bolts to 18 lb./ft.

Data Link Connection

14. 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.

15. A plug is installed in the data link connector on the truck to resist corrosion, remove this and install the supplied connector.

NOTE: *For 2000, you will need to use the supplied Adapter . Plug the adapter in between the Edge data link connector and the vehicle connector.*

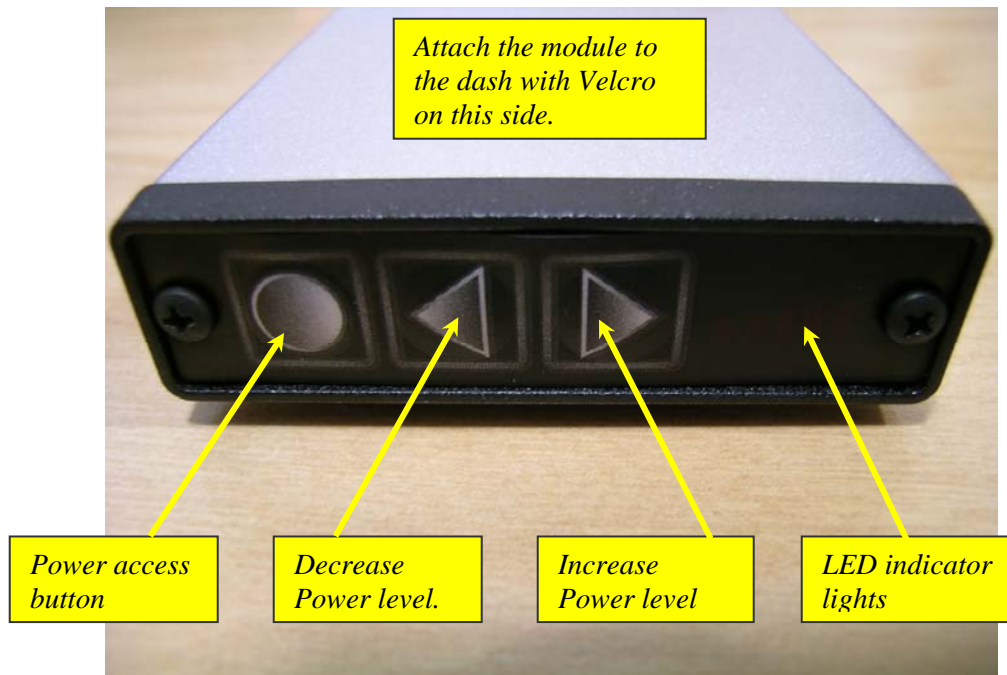
Boost Elbow Installation

16. 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.
17. 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.
18. 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 1/4" socket.
19. Reinstall the stock air hose onto the air filter housing and turbocharger inlet. Using the 5/16" socket, tighten both clamps securely.

Note: *On model year 2001+ with auto transmission, the wastegate is a solid line and does not have a brass elbow to be replaced.*

Final Inspection and Operation

20. Recheck all connections, fittings and fasteners for a properly secure installation.
21. Using the supplied wire ties, secure the wiring harness to wire wall or other engine tie point to protect from possible damage.
22. Reconnect both negative battery cables onto the battery posts. Using the ½” wrench, tighten fasteners securing the cable clamps to the battery posts.
23. Turn the ignition key on. **NOTE: DO NOT START THE ENGINE!** The LED on the Power Edge Comp should light when powered up.
24. With the ignition key on, check for the LED on the module. If the LED is not on, push the gray round button to turn the module on. If the LED is still not on, check for proper connections – ground and 12 volt power. Do not proceed if the LED does not work as desirable. If the check engine light appears, proper connections have not been made to the MAP sensor.
25. If module does not function as described in Step 23 turn ignition key to the off position and disconnect both battery ground cables. Check all connections – pull apart and inspect for bent or broken male terminals. Inspect all stock and supplied connectors thoroughly. If all connectors are good, reconnect insuring each seats tightly. Reconnect battery cables to the battery posts. Repeat steps 22 and 23. If the problem still exists please call Edge Technical support team for technical assistance.
26. To adjust power levels 1-5 on the Power Edge Module, push the corresponding arrow buttons. The left arrow will decrease level and right arrow will increase power level. The levels can be adjusted while the engine is running.



27. Each power level on the Power Edge Comp has a submenu that allows the user to tune in the low boost fueling to eliminate excess smoke. To access the submenu:
- Be in the power level that you want to adjust the low boost fueling for
 - Press and hold the round gray button (power button) for about 2 seconds, release button
 - The LED's will be flashing when in the submenu
 - Use the left and right arrows to adjust the levels 1-5
 - When 1 LED is lit this results in the least responsive setting or lowest smoke, all 5 LED's lit is the most responsive
 - Each power level can store a unique submenu setting
 - When accessing the submenu for the first time the LED's may appear erratically lit, use the right arrow key to light all LED's then set to desired level.
28. If the Power Edge Comp does not function as described above, please call Edge Technical support team for technical assistance

Hot Unlock

Edge Products allows you to upgrade your Comp to include a HOT power level. The Hot level fueling curve increases power in level 5 only. Although there is not a significant increase in peak HP when compared to level 5, the level Hot fueling curve is more aggressive in the bottom and mid range and continues to add more fuel in the high RPM range. **Note:** At 3150 RPM in Hot Unlock, your total gains over previous level 5 power level would be 60 HP and 100 ft-lbs torque.

Note: To unlock the Hot level, you will need to visit www.edgeproducts.com and download the Hot Unlock Form waiver. You can find this form in the sub-menu Hot Unlock Form, located on the home page of the website, or the form can be found by following the link:

http://www.edgeproducts.com/product_images/customer_support_article-pdf-32.pdf

Once you complete the form, you will need to call Technical Support and get an RMA number. You will then ship your Comp with the signed form and your remittance to Edge Products to be modified. The Hot Unlock option costs \$125.00.

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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 Edge *Comp* Module by Edge Products, LLC for the Dodge Cummins® Diesel. The *Comp* 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).*

Technical Support:

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.