



# BULLY DOG

**#1 IN PERFORMANCE**

## INSTALLATION MANUAL



### Vehicle Application

### Part#

Rapid Power '96-'98 Volkswagen TDI

44080T

Rapid Power '99-'03 Volkswagen TDI

44100T

Rapid Power '04-'05 Volkswagen TDI

44360T





# STOP!

## **TROUBLESHOOTING:**

If you have questions during the installation of this product, please visit [www.bullydog.com/Product\\_Updates.php](http://www.bullydog.com/Product_Updates.php).

The latest version of these instructions can be found at the same location. Please review the Troubleshooting section on page 9 before calling technical support to cover most common issues. Technical support is available by calling 866-bullydog (866-285-5936).

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## INTRODUCTION

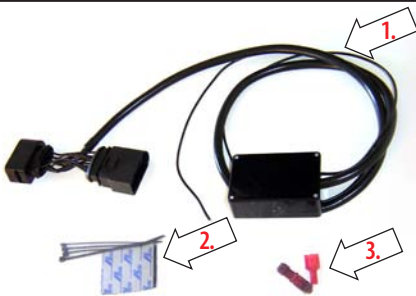
Welcome to the world of increased power, performance and economy brought to you by the leader in performance, Bully Dog Technologies. This instruction set outlines how to install and operate the Volkswagen TDI Rapid Power modules. The Rapid Power modules for the TDI enhance horsepower by changing the parameters for fuel injection. All functions of the motor control remain in full function, measured sensor signals are not changed.

*Note: This instruction set and the module included are made exclusively for the '96-'05 Volkswagen TDI. Notice however that the '96-'03 install differently and the instructions are split into two different sections specific to whether you are installing on a '96-'03 or a '04-'05 TDI. There are two different modules within the '96-'03, but the installation is exactly the same.*

**IMPORTANT:** Performance modules must always be removed before taking the vehicle in for any kind of service, as it may interfere with diagnostic tools.

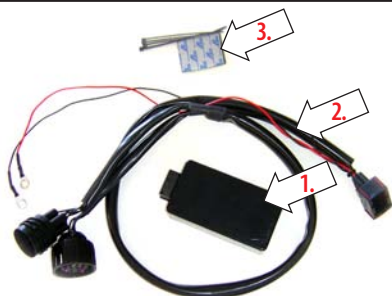
### BILL OF MATERIALS '96-'03

1. Rapid Power Module & Harness
2. Velcro Pad & Zip Ties
3. Spade Connector & Wire Tap



### BILL OF MATERIALS '04-'05

1. Rapid Power Module
2. Harness
3. Velcro Pad & Zip Ties

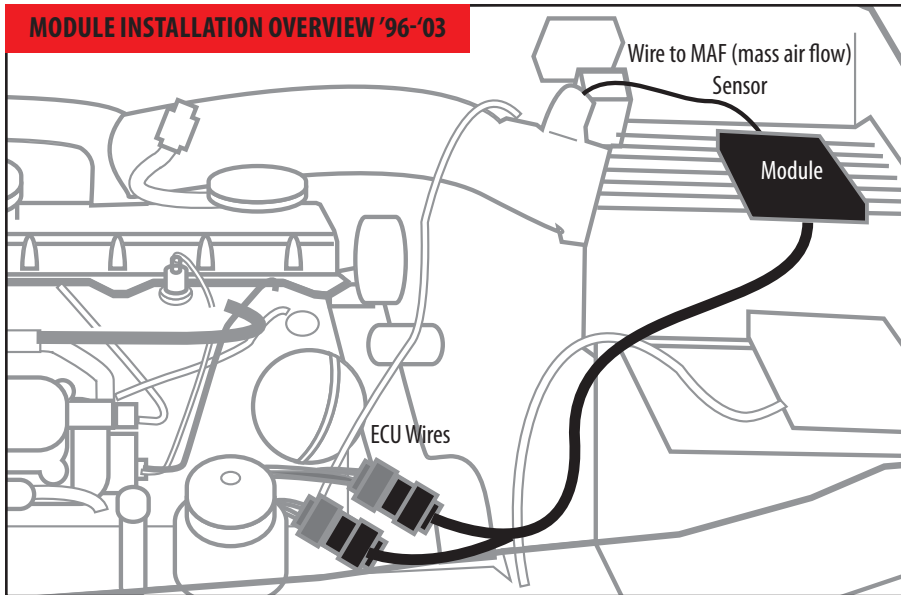


### TOOLS NEEDED

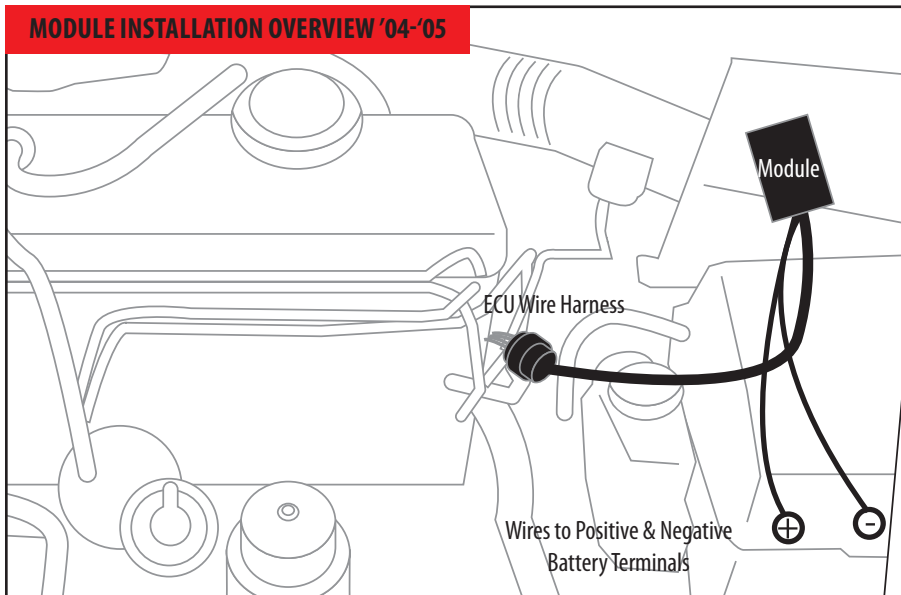
- 10 mm wrench or socket
- Crimping Tool or Pliers
- Phillips Screw Driver
- Flat Head Screw Driver

# INSTALLATION STEPS

## MODULE INSTALLATION OVERVIEW '96-'03



## MODULE INSTALLATION OVERVIEW '04-'05



Introduction

Installation Steps

Operating Instructions

Troubleshooting

Warranty

## INSTALLATION INSTRUCTIONS TDI '96-'03

**IMPORTANT:** Skip the steps on this page if your TDI is not an '96-'98 or '99-'03. These steps are exactly the same for '96-'98 TDI's. The difference is in the harness plug which is an 8 pin on the '96-'98 models vs. the 10 pin on the '99-'03 models.



1. Remove the 10 mm bolts that hold the engine cover on for easy access to the ECU/Injection Harness Plug located between the engine and the fuel pump.

2. Separate the connector that lies between the motor control unit (ECU) and the injection pump and plug in the harness connections from the Rapid Power Module.

3. Notice the single black cable coming out of the Rapid Power module. This is the reference wire. The reference wire will need to tap into the mass air flow sensor. Prepare the wire by crimping the spade connector provided onto the end of the pre-exposed reference wire with a crimping tool or pliers.

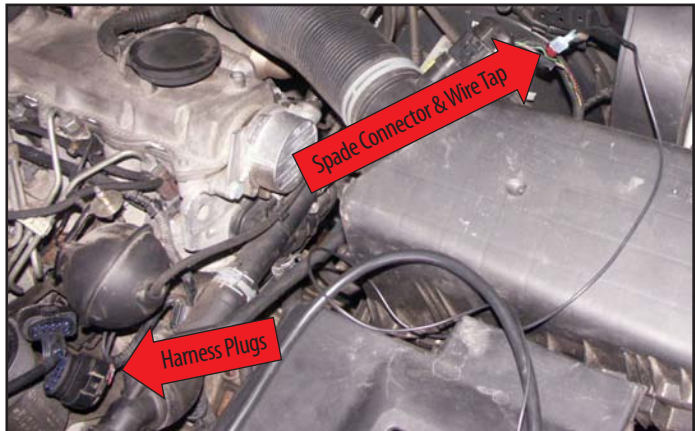
the spade connector provided onto the end of the pre-exposed reference wire with a crimping tool or pliers.

4. The mass air flow sensor can be found on the air intake tube connected to the air intake box. Disconnect the mass flow sensor and check the pin layout. Using the wire tap that is provided, tap into the last wire on the connector which will be either the fifth or sixth pin. Then connect the reference wire into the MAF sensor wire by plugging the spade connector into the wire tap.

5. Use the Velcro pad to mount the Rapid Power module in an area free of extreme heat, moving parts or water. Ensure that the screw faces on the Rapid Power Module so you have access to the power dial. Use the zip ties to secure all wiring away from heat and moving parts and then replace the engine cover.



Rapid Power Connectors Plugged in



## ADJUSTING HORSEPOWER ON TDI '96-'03 MODELS

**IMPORTANT:** Skip the steps on this page if your TDI is not an '96-'03.

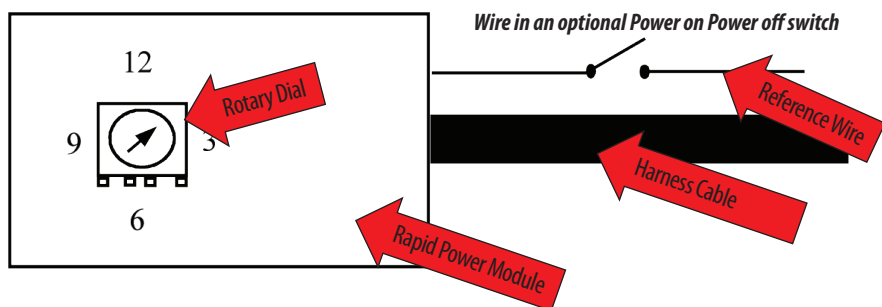
**With the Rapid Power Module an additional 20 to 30 extra horsepower is possible depending on the application.**

To adjust the power levels using the Rapid Power Module, remove the four screws on the faceplate with a Phillips screwdriver. Inside you will notice a small blue rotary dial that allows you to adjust the power. Turning the dial all the way counter clockwise puts the module at its lowest power level. Turning the dial all the way clockwise puts the Rapid Power Module at its highest level.

**Note:** Not every engine will take the highest power level. Use the rotary dial to find the right amount of additional horsepower for you and your vehicle.

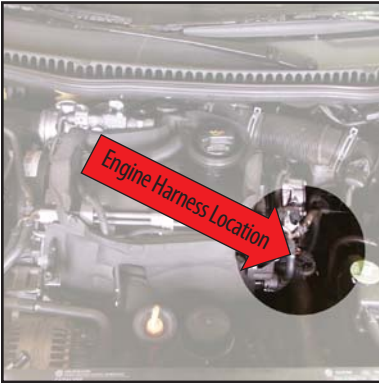
### OPTIONAL FEATURE:

If you would like to be able to switch your additional horsepower on and off easily, a simple switch (not included) can be wired in. Wire the switch into the reference wire. When the switch makes a positive connection, the Rapid Power module will add horsepower. When the switch is turned off and disrupts the signal that the reference wire feeds to the Rapid Power module, the vehicle will revert back to stock horsepower.



## INSTALLATION INSTRUCTIONS TDI '04-'05

**IMPORTANT:** Skip the steps on this page if your TDI is not an '04-'05.



1. Remove the 10mm bolts that holds the TDI engine cover for easy access to the electronic engine harness that is located on the driver's side of the engine.
2. Remove the engine harness plug by sliding the red connector snap outward then loosen the rotary plug counter clockwise and pull it off.

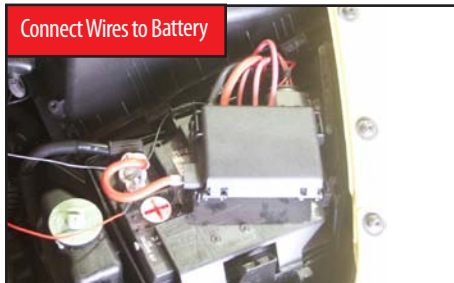


3. Connect the Rapid Power female plug directly into the engine plug and then connect the two remaining plugs together in the same manner. When connecting the Rapid Power female end into the engine plug use the white line as a reference point on the plug to correctly line up the plug.

## INSTALLATION INSTRUCTIONS CONTINUED TDI '04-'05

**IMPORTANT:** Skip the steps on this page if your TDI is not an '04-'05.

### Connect Wires to Battery



4. The red and black wires coming off of the harness module is for power. Connect the red wire to the positive terminal of the battery terminal, and the black wire to the negative terminal. Temporarily move the auxiliary box under the battery cover to gain easy access to the ground.

### (Optional Step)

5. The short black wire coming off of the Rapid Power wire harness allows you to create a ground wire switch. If desired, connect a switch with a ground to the end of this wire. When grounded, this wire will override the module and the vehicle will revert back to stock horsepower. If you do not wish to add a switch just leave the wire as is and the Rapid Power Module will always add additional horsepower.

6. Connect the Rapid Power Module to the end of the harness. Secure the connection with harness plug snap. Use the Velcro Pad to mount the module in an area free of extreme heat, water or moving parts. Make sure that the screw faces on the modules face upward so that you have access to the power jumper inside.



### Connect Rapid Power Module to Harness

7. Use the zip ties to secure all wiring away from heat and moving parts.

8. Replace the engine cover.



## OPERATING INSTRUCTIONS TDI '04-'05

**IMPORTANT:** Skip the steps on this page if your TDI is not an '04-'05.

**The Rapid Power Module has 4 different horsepower settings. To verify that the module is working and to set the horsepower level, complete the following steps:**

1. Remove the module cover by removing the 4 screws with a Phillips screwdriver.
2. The settings below show the different jumper configuration to achieve different horsepower levels. Place the jumpers in the desired setting.
3. The module must be removed from its harness while changing jumpers for the change to take effect.

**Note:** Inside the module are two LEDs. The green LED, when lit, indicates that the Rapid Power Module is receiving correct signals from the engine control unit (ECU). The green LED can blink at idle rpm, but must stay on at higher revs. The red LED indicates that the module is applying a power increase. The red LED doesn't stay on all the time, but it will light when you produce hard engine accelerations by completely pushing and releasing the accelerator pedal several times.

**Setting #1 Lowest Hp Setting**



**Setting #2 Stock Module Setting**



**Setting #3 More Hp Setting**



**Setting #4 Maximum Hp Setting**



## TROUBLE SHOOTING/FAQ

CONDITION	POSSIBLE SOURCES	ACTION
Green LED does not light correctly	Installation	If the green LED does not stay lit at higher revs and higher loads, then there are faulty connections. Check all the connections.

*For more information on an up-to-date troubleshooting guide, please visit:*  
[www.bullydog.com/Product\\_Updates.php](http://www.bullydog.com/Product_Updates.php)

## WARRANTY & DISCLAIMER

### REMEMBER, THIS IS A PERFORMANCE PRODUCT, USE AT YOUR OWN RISK.

*This product is not intended to be used to break the law.*

Do not use this product until you have carefully read the following agreement. This agreement sets forth the terms and conditions for the use of this product. The installation of this product indicates that the buyer has read and understands this agreement and accepts the terms and conditions. Never exceed recommended vehicle or tire top speed ratings.

### DISCLAIMER OF LIABILITY

Bully Dog Technologies, LLC. Its distributors, jobbers, and dealers (hereafter Seller) shall be in no way responsible for the product's proper use and service. THE BUYER HERBY WAIVES ALL LIABILITY CLAIMS.

The Buyer acknowledges that he is not relying on the Sellers 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 Buyers hereby waives all remedies or liabilities expressed or implied, arising by law or otherwise, (including without any obligation of the Seller with respect 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.

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

### LIMITATION OF WARRANTY

BULLY DOG TECHNOLOGIES, LLC. (Hereafter "Seller") gives Limited Warranty as to description, quality, merchantability, and fitness for any particular purpose, productiveness, or any other matter of Seller's product sold herewith. The Seller shall be in no way 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 be a written instrument signed by Seller and Buyer.

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

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

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

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, 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.

Bully Dog Technologies, LLC is a team built on integrity that is dedicated to leading the vehicle performance industry with an uncompromising code of ethics demonstrated in the soundness of its employees, excellent customer service and superior products.

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