



BULLY DOG

#1 IN PERFORMANCE

INSTALLATION MANUAL



Vehicle Application

Part#

Caterpillar ACERT C-15 '06-'07 (W/O DPF)

46520

Cummins ISX, ISM '04-'07 (W/O DPF)

46510

Detroit Series 60, DDEC 4 and 5 '98-'07 (W/O DPF)

46530



INTERNET UPDATES, THE UPDATE AGENT:

The Power Pup is Internet updateable through our exclusive Internet update software: The Update Agent. Use the Update Agent free of charge to update the Power Pup. The Power Pup is most commonly upgraded for new vehicle applications and for the addition of new downloader features.

The Update Agent Software CD included with this package contains a free version of the Update Agent. To see the latest version updates for the Big Rig Power Pup visit: www.bullydogbigrig.com



TABLE OF CONTENTS

INTRODUCTION & WARRANTY INFORMATION	PG 3
BILL OF MATERIALS	PG 4
POWER CHARTS	PGS 5-9
INSTALLATION PRECAUTIONS (VERY IMPORTANT)	PG 10
DOWNLOADER NAVIGATION	PG 11
INSTALLATION	PGS 12-13
RETURNING TO STOCK	PG 14
FREQUENTLY ASKED QUESTIONS (FAQ).....	PG 15
TROUBLESHOOTING	PG 16
UPDATE AGENT SOFTWARE CD.....	PG 17
INTERNET UPGRADES	PG 18

INTRODUCTION

POWER CHARTS

INSTALLATION

RETURN TO STOCK

TROUBLESHOOTING
FAQ

UPDATE AGENT

INTRODUCTION

Congratulations on purchasing the Big Rig Power Pup! The Power Pup is the only performance tuning device available for class eight vehicles in the automotive aftermarket. Our rigorous development and testing processes ensure a quality product that produces positive results. The Power Pup improves fuel economy and adds up to 15% more power. See our conversion charts on the following pages to look up horsepower results for all the Caterpillar, Cummins, and Detroit applications (see cover for applications).

This product is extremely easy to install. All installation takes place inside the cab of the vehicle through the data port. For installation questions or guidance contact your local dealer or distributor. You can also contact the Bully Dog tech support group 24 hours a day.

TECH SUPPORT: 888-844-6260

Installation of this product can take up to three hours. We strongly suggest that installation of the Power Pup be done when the vehicle is not carrying a load or when a vehicle has any urgent appointments or deliveries. We highly recommend that this product be installed during normal business hours: Monday-Thursday 8am to 3pm Mountain Standard Time to avoid any inconveniences associated with installation issues. Installation of the program into the vehicle ECM is an easy but delicate process. The download process, if interrupted, can create issues which may add time to complete a successful install.

IMPORTANT: *It is not recommended that this product be used in conjunction with any other electronic module or downloader that is intended to increase horsepower.*

Note: This product is not yet applicable to any 2007 engines that have diesel particulate filter.

WARRANTY INFORMATION:

Warranty information for the Power Pup downloader can be found in the Power Pup package along with this instruction set. Warranty information can also be found on the web at:

www.bullydogbigrig.com

BILL OF MATERIALS

The list and diagram shown below includes all of the hard parts required for installation and updating the product online.

BILL OF MATERIALS	TOOLS NEEDED
<ol style="list-style-type: none"> 1. Power Pup Downloader 2. Data Port Cable (Used for Installation) 3. USB Cable (Used for Internet Updates) 4. Update Agent Software Installation CD 	<p>Fuse Puller</p>
	

POWER CHARTS

The charts in this section illustrate estimated improvements in power for Caterpillar, Cummins, and Detroit engines when coupled with the Bully Dog Power Pup. Each chart shows an engine description along with the Power Pup Part number associated with that application.

Stock advertised ratings on the following charts are from each of the manufacturers: Caterpillar, Cummins and Detroit. Power ratings displayed in use with the Bully Dog Power Pup are estimated based on a 15% gain in power as seen during in-house testing performed by Bully Dog Technologies. Results may vary and at any time Bully Dog may changing power ranges.

Caterpillar C-15 '06-'07 (No/DPF) Power Chart, Power Pup PN: 46520

Advertised Horsepower	Stock Peak Horsepower	Stock Advertised Peak Torque	Horsepower with Power Pup	Torque with Power Pup
435	450	1550	500	1783
435	450	1650	500	1898
475	490	1650	546	1898
475	490	1850	546	2128
500	515	1850	575	2128
550	550	1850	632.5	2128
435 MT	450	1550/1650	500	1783/1898
435 MT	450	1550/1750	500	1783/2013
475 MT	490	1650/1750	546	1898/2013
475 MT	490	1650/1850	546	1898/2128
600	600	1850	690	2128
600	600	2050	690	2358
625	625	2050	719	2358

Cummins ISM '04-'07 (No/DPF) Power Chart, Power Pup PN: 46510

Engine Model	Stock Advertised Horsepower	Stock Advertised Peak Torque	Horsepower with Power Pup	Torque with Power Pup
ISM 410	410	1550	472	1783
ISM 370	370	1450	426	1668
ISM 370	370	1350	426	1553
ISM 350	350	1350	403	1553
ISM 330	330	1350	380	1553
ISM 330	330	1250	380	1438
ISM 310	310	1150	357	1323
ISM 280	280	1150	322	1323
ISM 350 ST	350	1350/1450	403	1553/1668
ISM 330 ST	330	1250/1350	380	1438/1553
ISM 425V	425	1550	489	1783
ISM 385V	385	1450	443	1668
ISM 385V	385	1350	443	1553
ISM 350V	350	1450	403	1668
ISM 350V	350	1350	403	1553
ISM 320V	320	1150	368	1323
ISM 285V	285	1150	328	1323

INTRODUCTION

POWER CHARTS

INSTALLATION

RETURN TO STOCK

TROUBLESHOOTING

UPDATE AGENT

Cummins ISX '04-'07 (No/DPF) Power Chart, Power Pup PN: 46510

Engine Model	Stock Advertised Horsepower	Stock Advertised Peak Torque	Horsepower with Power Pup	Torque with Power Pup
ISX 565	565	1850	650	2128
ISX 530	530	1850	610	2128
ISX 500	500	1850	575	2128
ISX 500	500	1650	575	1898
ISX 475	475	1850	546	2128
ISX 475	475	1650	546	1898
ISX 450	450	1650	517	1898
ISX 450	450	1550	517	1783
ISX 400	400	1650	460	1898
ISX 400	400	1550	460	1783
ISX 400	400	1450	460	1668
ISX 500 ST	500	1650/1850	575	1898/2128
ISX 475 ST	475	1650/1850	546	1898/2128
ISX 450 ST	450	1450/1650	517	1668/1898
ISX 400 ST	400	1450/1650	460	1668/1898
ISX 385 ST	385	1450/1550	443	1668/1783
ISX 465V	465	1650	535	1898
ISX 435V	435	1450	500	1668

Detroit Series 60 12.7L DDEC 5 '02-'07 (No/DPF), Power Pup PN: 46530 (also works on DDEC 4)

Advertised Maximum Horsepower	Advertised Maximum Torque	Horsepower with Power Pup	Torque with Power Pup
390	1350	449	1553
380	1350	437	1553
380/390	1350	449/437	1553
445	1450	512	1668
435	1450	500	1668
425	1450	489	1668
425/445	1450	489/512	1668
455	1550	523	1783
450	1550	518	1783
445	1550	512	1783
445/455	1550	512/523	1783

INTRODUCTION

POWER CHARTS



INSTALLATION

RETURN TO STOCK

TROUBLESHOOTING
FAQ

UPDATE AGENT

Detroit Series 60 14.0L DDEC 5 '02-'07 (No/DPF), Power Pup PN: 46530 (also works on DDEC 4)

Advertised Maximum Horsepower	Advertised Maximum Torque	Horsepower with Power Pup	Torque with Power Pup
490	1550	564	1783
455	1550	523	1783
455/490	1550	523/564	1783
515	1550	592	1783
490	1550	564	1783
455	1550	523	1783
455/515	1550	523/564	1783
515	1650	592	1898
490	1650	564	1898
470	1650	541	1898
470/515	1650	541/592	1898
470	1650	541	1898
470/515	1650	541/592	1898
490	1650	564	1898
470	1650	541	1898
470/490	1650	541/592	1898

INTRODUCTION

POWER CHARTS

INSTALLATION

RETURN TO STOCK

TROUBLESHOOTING / FAQ

UPDATE AGENT

INSTALLATION PRECAUTIONS: (VERY IMPORTANT)

It is important before downloading to take some precautions. These precautionary steps to installing the Power Pup will help ensure that downloads are successful.

1. Before installation always update the Power Pup using our Update Agent. The Update Agent is an online program that loads the latest vehicle programs from our website to the Power Pup. The Update Agent is also included in the Power Pup package.
2. Only install during recommended install time. (Monday-Thursday, 8am-3pm Mountain Standard Time)
3. Do not install while transporting a shipment in case something does go wrong during the installation of the product. This is a precaution that will alleviate you from upsetting customers should a download fail.
4. Allow a considerable amount of time for installation. See the Estimated Install Time Chart below to identify the specific amount of time needed to allocate towards installation on a particular engine make.
5. Before installation, always make sure that the batteries have a full charge. It is even a good idea to have a battery charger nearby in case the batteries start draining.
6. Before installation, always pull all recommended fuses seen in the install section.
7. While performing a download to the engine using the Power Pup it is very important that the Power Pup is not disrupted. If the download is disrupted, the vehicle may not start and the download process must be restarted or the Power Pup may have to be used to recover the vehicle which takes more time.

The information above is extremely important to successful use of the Power Pup

Estimated Install Time by Engine Make

Engine Type	Cummins	Caterpillar	Detroit
Power Pup Read Time	Up to 2 hours	NA	5 minutes
Power Pup Download Time	Up to 2hours	30 min	5 minutes

POWER PUP SCREEN NAVIGATION

The diagram below demonstrates the button navigation. Button navigation is consistent throughout the installation of the downloader.



INSTALLATION INSTRUCTIONS

Important: Before installing pull all of the fuses mentioned below for the duration of the download. After download is complete the mentioned fuses can be replaced.

Also make certain that the batteries have a full charge, and that there are no electronic devices running off of the batteries while the Power Pup is installing on the vehicle.

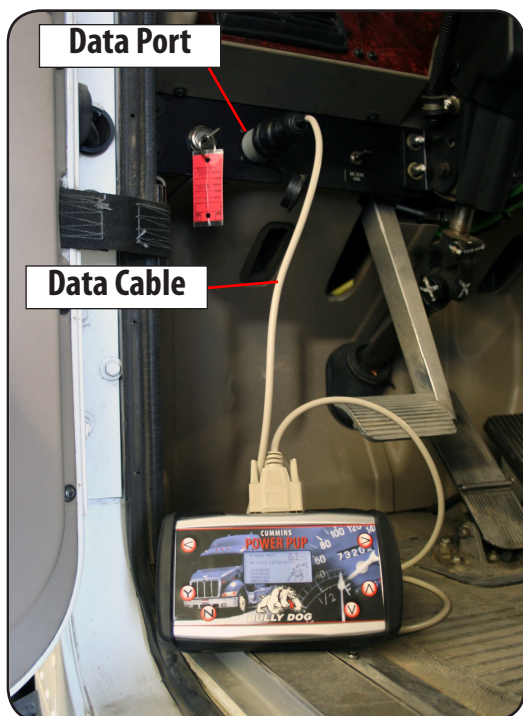
There are five stages to complete the installation of the Power Pup. All stages must be followed exactly for proper installation to take place.

Stage 1: Pull fuses.

Pull all of the following fuses before installing. These fuses must be pulled so that communication between the Power Pup and the vehicle ECM is not disrupted during a download.

- Aftermarket satellite tracking systems
- Fleet monitoring hardware
- Aftermarket gauges
- Automatic Transmission

After the download is successfully complete these fuses can be replaced.



Stage 2: Connect the Power Pup to the Truck.

1. Locate the data port inside the vehicle cab, usually located on the driver's side of the vehicle.
2. Remove the data port cover and identify the number of pins on the data port. The data port will either have six or nine pins. This will determine which plug you use during installation. Notice that the data cord has both plug types at the end.
3. Once you identify the correct plug type for your vehicle application, connect the cable to the top of the Power Pup and then plug the data plug into the vehicle data port.

INSTALLATION INSTRUCTIONS CONTINUED

Stage 3: Engine Read.

Follow the screen prompts on the Power Pup screen to initiate the engine read. The engine read is the process by which the Power Pup reads and saves the stock vehicle settings.

Important: The engine read process may take as long as two hours. (See the Estimated Install Time Chart, page 10)



Stage 4: Select Engine Tune.

Once the engine read is complete, the Power Pup will prompt the user to select an engine tune. The Power Pup will display three different options for the engine tuning:

POWER/ECONOMY: Select this tune for approximately 15% more power to the wheels and improved fuel economy.

ECONOMY: Select this tune to improve fuel economy only.

STOCK: This tune will return the stock vehicle programming to the engine computer.

Important: The engine download cannot be disturbed. Once a download is started it is crucial that the download be completed without disturbance of any kind.



Stage 5: The Download.

Once the desired tune is selected, the Power Pup will initiate the download sequence in which the Power Pup loads the tune onto the vehicle ECM. The Power Pup will indicate that the download is completed. Follow the screen prompts which instruct to cycle the key and press the "Y" button (may take more than one key cycle). Finally, the Power Pup will initialize and it will indicate that it can be unplugged.



Before starting the vehicle, cycle the key to the off position for ten seconds.

Remember to replace fuses once download is complete.

HOW TO RETURN THE VEHICLE TO STOCK

FOLLOW THE INSTRUCTIONS BELOW TO RETURN THE VEHICLE TO FACTORY STOCK. NOTE THAT THIS PROCEDURE DOES NOT NEED TO BE DONE BEFORE VISITING A DEALER.

1. Plug the downloader in and navigate to the Select Engine Tune screen.

2. Use the up/down arrows to highlight the Stock level and then select the Stock level by pressing "Y".

Important: The engine download cannot be disturbed, it is crucial that the started download be completed.



3. The Power Pup will indicate that the download is completed. Follow the screen prompts which will instruct to cycle the key and press the "Y" button (may take more than one key cycle). Finally, the Power Pup will initialize and then it will indicate that it can be unplugged.



4. Before starting the vehicle, cycle the key to the off position for ten seconds to reset all of the electronics.

FREQUENTLY ASKED QUESTIONS:

Q: What do I do if I need to take the vehicle into the dealership for service?

A: No additional steps need to be taken; the download does not need to be removed. After the visit to the dealership simply download the program again as if the truck were stock. If the dealership puts new information on the vehicle that is not recognizable by the Power Pup; the Power Pup will need to be updated online.

Q: What do I do if the Power Pup freezes during the engine read/download process?

A: 1. Turn the key to the off position and unplug the Power Pup from the data port.

2. Try to resume the read where it left off, try up to 3 more times. If problem persists, pull all fuses mentioned in the troubleshooting section for the duration of the read and download process.

Q: What do I do if my downloader does not light up when I plug it into the data port.

A: Check your data port fuses or any associated fuses and replace them as needed.

Q: What do I do when the download is complete?

A: Test the product by taking a nice long drive and keep accurate records on fuel savings!

TROUBLESHOOTING A POWER PUP FAILURE:**If engine read/download fails:**

1. Remove any fuses that may interfere with information transfer to the PCM, such as:
 - Aftermarket satellite tracking systems
 - Fleet monitoring hardware
 - Aftermarket gauges
 - Automatic Transmission
2. **(Replace fuses after download is complete)** Try the download again, at least twice if it continues to fail. Then contact your Bully Dog dealer for technical support.

Unrecognizable Tuning Information (Unknown Vehicle):

During the vehicle read, if the Power Pup does not know what the vehicle is, or if the vehicle does not contain familiar information, the downloader will display on the screen: "Unrecognizable Tuning Information." If this scenario occurs, unplug the downloader from the vehicle and sync the downloader up to the Update Agent online software to search for an update and then try the download again.

THE UPDATE AGENT SOFTWARE CD

The Update Agent Software CD has all of the programs needed to successfully download the Update Agent to a PC. In addition, this CD has instructions, in a PDF format, on how to install the Update Agent. If the CD is lost or gets damaged before installation, an additional CD can be requested or the Update Agent can be downloaded off of our website as seen on the next page. To run the Update Agent at an optimal level, it will need to be installed on a PC with at least Windows XP and high speed internet.



THE DIAGRAM BELOW SHOWS THE INTERFACE FOR THE UPDATE AGENT CD.

START HERE

This CD contains a copy of The Update Agent program. Installation instructions, and the Microsoft .net Framework needed for the operation of the agent software are also included.

The Update Agent

The Update Agent is a software program developed exclusively by Bully Dog to service your electronic Bully Dog parts for internet updates and internet upgrades. The materials on this CD will install The Update Agent on your computer. Please follow these steps to install the update agent on your PC:

1. Open the instructions document for assistance in the installation process.
2. Install the Microsoft .net Framework first.
3. Install The Update Agent.

INSTALL

Instructions

[Click to View Instructions](#)

Instructions are in the PDF format.

Microsoft .net Framework

[Click to Install Framework](#)

When prompted, select 'Run.' Microsoft's .net Framework will then be installed.

The Update Agent

[Click to Install The Update Agent](#)

When prompted, select 'Run.' The Update Agent will then be installed.

FINISH

Once The Update Agent is installed correctly on your PC, it will update itself through your internet connection. It will also deliver the latest product updates right to your PC.

UPDATE AGENT/ INTERNET UPGRADES

Make sure to keep a look out for the latest program features offered at www.bullydogbigrig.com. New vehicle applications and features are added to the Power Pup at no additional charge. Visit Bully Dog's web site www.bullydogbigrig.com/support.php to see the latest version information and product features available for the Power Pup downloader.

The most efficient way of keeping up-to-date with Bully Dog product versions is to use the Update Agent. The Update Agent is a software program developed by Bully Dog Technologies specifically designed to update Bully Dog products. The Update Agent is easy to use, it can be loaded on any windows based PC running Windows XP or newer. Inside the Power Pup packaging is a free copy of the Update Agent on CD. The Update Agent is also attainable free of charge at www.bullydogbigrig.com/support.php.



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.

UNLEASH THE POWER

WITH BULLY DOG INDUSTRIAL and LIGHT TRUCK PERFORMANCE PRODUCTS

Clothing



Rapid Power Tractor Modules John Deere, Case IH



Performance Management Tool Light Truck (pickup)



Fuel Management Systems Monitor Private Fuel Tanks

- Fleets
- Farms
- Construction



See More at: www.bullydog.com
and at www.bullydogbigrig.com

Doc.# BD46520 v1.1.0



BULLY DOG

For Free Technical Support

Call: 1-888-844-6260