



BULLY DOG

#1 IN PERFORMANCE

INSTALLATION MANUAL



Vehicle Application	Part#
Cummins ISX, ISM '04-'07 (W/O DPF)	46510





TROUBLESHOOTING:

If you have questions during the installation of this product, please visit www.bullydogbigrig.com

The latest version of these instructions can be found at the same location. Technical support is available by calling: 888-844-6260.

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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

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 adds up to 15% more power or about 75 horsepower to the wheels (85 flywheel hp) on the largest Cummins ISX engine. See our conversion charts on the following pages to look up horsepower results for all Cummins ISX and ISM engines 2004-2007. This product produces fuel economy improvements that will save loads of fuel.

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 twenty four hours a day.

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: 8am to 5pm mountain standard time.

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.*

POWER CHARTS

The chart in this section illustrates the improvements in power with an ISX and ISM engine.

Cummins ISX Power Chart

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

Stock advertised ratings on this chart are from Cummins and represent power produced at the flywheel. Power ratings displayed in use with the Bully Dog Power Pup are estimated based on a 15% gain in power as seen in during in-house testing performed by Bully Dog Technologies.

Cummins ISM Power Chart

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

BILL OF MATERIALS/ BUTTON NAVIGATION

BILL OF MATERIALS

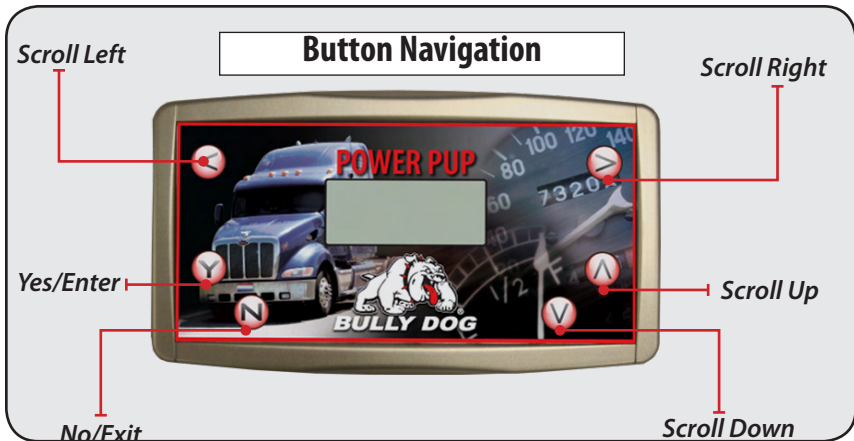
1. Power Pup Downloader
2. Data Port Cable (Used for Installation)
3. USB Cable (Used for Internet Updates)
4. Update Agent Software Installation CD

TOOLS NEEDED

Fuse Puller



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



INSTALLATION RECOMMENDATIONS: (VERY IMPORTANT)

It is important that before downloading to take some precautions. These recommendations will help ensure that downloads are successful every time.

1. Only install during Bully Dog's hours of operation. (Monday-Friday 8am-5pm mountain standard)
2. 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 customer should a download fail.
3. Allow up to 5 hours for installation. The download process can take a considerable amount of time. Make sure to allocate up to 3 hours for the engine reading process and up to 2 hours for the downloading process.
4. Before downloading 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.
5. Before downloading always make sure that the batteries have a full charge. It is even a good idea to have a battery charger near by in case the batteries start draining.
6. 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.

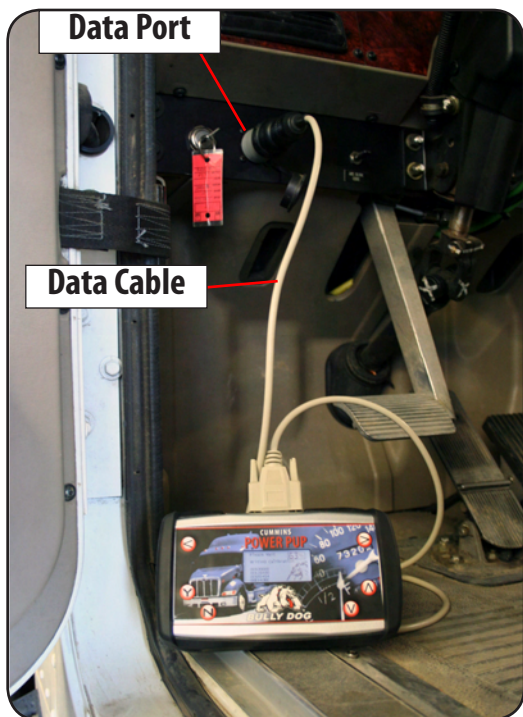
The information above is extremely important to successful use of the Power Pup

INSTALLATION INSTRUCTIONS

To begin installation have the Power Pup and the data cable in hand. Be sure that the vehicle's batteries are fully charged and do not run any other electronic devices off the battery.

There are two separate stages to complete the installation of the Power Pup on the Cummins motor: Stage 1 is the engine read and stage 2 is the download.

1. Attach the data cord to the top of the Power Pup.
2. Locate the data port inside the vehicle cab, usually located on the driver's side of the vehicle.
3. 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 in our package both plug types are included.
4. 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.



Important: before downloading make sure that the batteries are fully charged. Be certain that there are no other electronic devices running off of battery power while performing a read or a download.

INSTALLATION INSTRUCTIONS CONTINUED

- 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. The engine read can take as long as two hours.



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

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

ECONOMY: Select this engine tune to improve fuel economy only.

STOCK: This option will return the stock vehicle programming/file to the engine computer.



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

- 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. 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.

TROUBLE SHOOTING 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.

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 trouble shooting 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 out by taking a nice long drive and then send us a testimonial please!

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 Engine tuning selection 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. 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.

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 2003 and a high speed internet.



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



BULLY DOG

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THE UPDATE AGENT & MICROSOFT .NET FRAMEWORK INSTALL 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.

INTERNET UPGRADES/UPDATE AGENT

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.



WARRANTY TERMS AND CONDITIONS

PLEASE READ THESE WARRANTY TERMS AND CONDITIONS (THE “AGREEMENT”) CAREFULLY BEFORE USING AND/OR INSTALLING THE BIG RIG POWER PUP (THE “PRODUCT”). BY USING AND/OR INSTALLING THE PRODUCT, YOU (THE “PURCHASER”) ARE CONSENTING TO BE BOUND BY THIS AGREEMENT.

- Limited Warranty.** Bully Dog Technologies, LLC, and its parent companies, subsidiaries and affiliates, and each of its and their respective shareholders, directors, officers, employees, contractors, and agents (collectively, “Bully Dog”) warrants to the Purchaser of the Product that the Product will, for one (1) year from date of purchase by the original Purchaser (as defined below), be free from defects in material and workmanship, limited solely to the parts contained within the Product kit (the “Warranty”). The Warranty is limited to replacement of the Product, or, at Bully Dog’s sole and absolute discretion, with substantially similar product if the Product is not reasonably available. The Product must be returned, prepaid, to Bully Dog, together with proof of date of purchase, to the following address: 2839 Highway 39 American Falls, ID 83211. This Warranty shall only be extended to the original Purchaser (the first purchaser of the Product, exclusive of Seller). “Seller” shall include Bully Dog distributors, jobbers, and dealers. All Warranty claims are subject to approval by Bully Dog, and the Warranty may not be transferred in whole or part.
- Installation.** [Installation of the Product should only be conducted by a licensed Bully Dog dealer.] The Product should not be installed while Purchaser has cargo en route (i.e., a “hot load”); or outside of normal business hours for Bully Dog Technologies. Without limitation, this Warranty does not apply to and there is no Warranty for: (i) installation; or (ii) failure of the Product due to improper installation, misuse, abuse, mishandling or accident.
- Purchaser Responsibilities.** Purchaser is responsible for: (i) using the Product in an application for which it was designed in accordance with Bully Dog’s published technical and promotional materials; (ii) refraining from misuse or unauthorized modifications to the Product; (iii) use of the Product only in conjunction with Class 8 vehicles; (iv) notifying Bully Dog of any defect promptly and in any event within fifteen (15) days of discovering the defect; (v) returning any nonconforming covered Product to Bully Dog or any other site designated by Bully Dog at Purchaser’s expense, in compliance with the terms of Section 1 hereof; and (vi) conformance with the installation requirements] set forth in Section 2 hereof. FAILURE OF PURCHASER TO COMPLY WITH ANY OF THE FOREGOING RESPONSIBILITIES SHALL VOID THE WARRANTY.
- Additional Limitations.** Bully Dog shall not be responsible for: (i) any use of the Product which, in the sole judgment of Bully Dog, is improper; (ii) attachments, accessory items and parts not manufactured by Bully Dog; (iii) abuse, neglect, alteration, accident, act of God, vandalism, and/or improper repair and/or installation; (iv) damage or equipment failure caused by failure to provide reasonable and necessary maintenance to a vehicle or the Product; (v) normal wear and tear; or (vi) any expense or travel time incurred, labor charged, or third party claim incurred in the course of a diagnosis for defects, removal, installation or reinstallation of the Product, or any other contingent expenses. This Product is not intended to be used to break the law; never exceed recommended vehicle or tire top speed ratings. This is a performance product, to be used at Purchaser’s own risk.
- Disclaimer and Release.** THE WARRANTIES, OBLIGATIONS AND LIABILITIES OF BULLY DOG AND SELLER AND THE REMEDIES OF PURCHASER SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE AND IN SUBSTITUTION FOR, AND PURCHASER HEREBY WAIVES, RELEASES AND RENOUNCES ALL OTHER WARRANTIES, OBLIGATIONS AND LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, WITH RESPECT TO THE PRODUCT (INCLUDING BUT NOT LIMITED TO ANY NONCONFORMANCE OR DEFECT IN THE PRODUCT), INCLUDING BUT NOT LIMITED TO: (A) ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; (B) ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, USAGE OR TRADE; (C) ANY OBLIGATION, LIABILITY, RIGHT, CLAIM OR REMEDY IN TORT, WHETHER OR NOT ARISING FROM THE NEGLIGENCE OF BULLY DOG OR SELLER (WHETHER ACTIVE, PASSIVE OR IMPUTED); AND (D) ANY OBLIGATION, LIABILITY, RIGHT, CLAIM OR REMEDY FOR LOSS OF OR DAMAGE TO THE PRODUCT, A VEHICLE OR ANY EQUIPMENT.

6. Exclusion of Consequential and Other Damages. EXCEPT AS EXPRESSLY PROVIDED HEREIN OR WHERE PROHIBITED BY LAW, BULLY DOG AND SELLER SHALL HAVE NO OBLIGATION OR LIABILITY, WHETHER ARISING IN CONTRACT (INCLUDING WARRANTY), TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR OTHERWISE FOR LOSS OF USE, REVENUE OR PROFIT, COST OF CAPITAL, COST OF SUBSTITUTE EQUIPMENT, ADDITIONAL COSTS INCURRED BY PURCHASER (WHETHER BY WAY OF CORRECTION OR OTHERWISE), CLAIMS BY PURCHASER, PURCHASER'S CUSTOMERS OR OTHER THIRD PARTIES FOR DAMAGES RESULTING FROM PERSONAL INJURY OR PROPERTY DAMAGE, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE OR EXPENSE, DIRECTLY OR INDIRECTLY ARISING FROM THE USE, INSTALLATION OR SERVICE OF THE PRODUCT (INCLUDING BUT NOT LIMITED TO ANY NONCONFORMANCE OR DEFECT IN THE PRODUCT).
7. Indemnification. Purchaser agrees to indemnify and hold Bully Dog and Seller harmless from any Claim (defined as any and all liabilities, obligations, claims, debts, demands, suits, judgments, covenants, controversies, costs, attorneys' fees, expenses, levies of execution, and rights of subrogation, contribution or indemnification, actions and causes of action of any kind or nature whatsoever, in law or equity, whether known or unknown, past or present, patent or latent, anticipated or unanticipated) arising out of or related to the Product or use, installation or service thereof.
8. Negotiation. Purchaser acknowledges that all terms and conditions in this Agreement, including but not limited to the Disclaimer and Release and Exclusion of Consequential and Other Damages, were freely negotiated and bargained for with Bully Dog or Seller and that Purchaser has agreed to purchase the Product subject to these terms and conditions. In the event that Purchaser does not agree with the terms and conditions of this Agreement, Purchaser may return the Product within ten (30) days of the date of purchase, in new and unused condition, with a dated proof of purchase to the place of purchase for a full refund. THE INSTALLATION AND/OR USE OF THIS PRODUCT INDICATES THAT THE PURCHASER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.
9. Applicable Law. This Agreement will be governed by the laws of the State of Idaho, excluding the application of its conflicts of law rules. In any action or proceeding to enforce rights under this Agreement, the prevailing party will be entitled to recover costs and attorneys' fees. Venue for any action or proceeding under this Agreement shall be in a federal or state court of competent jurisdiction located in Bingham County, Idaho.
10. Severability. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of this Agreement, which shall remain valid and enforceable according to its terms.
11. Amendment. This Agreement shall not be extended, altered or varied except by a written instrument signed by Bully Dog and Purchaser.

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 LIGHT TRUCK PERFORMANCE PRODUCTS

Downloaders



Intake Systems



Performance Management Tool



Exhaust Systems



See More at: bullydog.com

Doc.# BD46501 v1.0.1



BULLY DOG
For Free Technical Support
Call: 1-888-844-6260