

INSTALLATION MANUAL

TITANIUM SERIES



APPLICATION:

T C10 220G (220gph @ 8psi)
T C10 260G (260gph @ 8psi)
Duramax 2500 & 3500

2006-2012



PICKUP



Dear Valued Customer,

“Made in the USA” is not just a slogan at FASS; it’s what we live by! FASS is not only assembled in the USA but 98%+ of the FASS product is manufactured in the USA, helping to employ Americans and strengthen America. At FASS, we scrutinize our suppliers and demand the highest quality American-made components. However, this does come at a price, which is one of the main reasons FASS products are more expensive than the competition. Remember price does not dictate quality but quality does dictate price! Here at FASS, we believe it’s worth the commitment and will continue this practice to support America! Our competition is doing exactly the opposite by using foreign-made components.

Building extremely “High-Quality” fuel products is our business. We concentrate all of our efforts in this arena. No one else is as specialized as FASS in what we do! This is one of the ingredients to insure you are running with the “Highest-Quality” fuel system in the world! We have implemented very rigorous testing procedures to provide the “Highest Quality” we have become known for. Not only is our product superior, but customer satisfaction is #1 at FASS. It is our goal to provide the best service possible. Our confidence is evident in the products we make as each product is backed by an industry leading warranty!

Our R & D department, in conjunction with our Dealer Support department, is continually searching for ways to improve quality, expand our product line, and provide superb support to our network of dealers so our customers’ needs and expectations will be exceeded.

To help insure you receive the proper system and customer support at the local level, FASS has a VIP and Authorized Dealer network representing FASS products. This is one reason you must purchase through a dealer to comply with our warranty policies. **If you do not, there is no warranty!** We recommend you go to www.FASSride.com, click “Find A Dealer”, put in their ZIP code, select the type of dealer, and see if the company you purchased from is listed. If they are not, put their phone number in the field below the ZIP code field to see if they are listed. Below these two fields is a list of “Terminated/Unauthorized” dealers. You may want to review this list. If the company is not listed or is on the “Terminated/Unauthorized” list, we suggest you return the product immediately to that dealer and call FASS. We’ll recommend you to the nearest dealer.

VERY IMPORTANT: Make sure to fill out your product registration form and return the original form to FASS Fuel Systems within 30 days of purchase accompanied with a copy of the purchase receipt. Complying with these guidelines will qualify you for the Extended Warranty!

See the Owner’s Manual for full Limitation of Warranty. 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 receipt, to the place of purchase within thirty (30) days from date of purchase for a full refund less shipping.

The installation of this product indicates that the buyer has read and understands the Limitation of Warranty agreement and accepts its terms and conditions.

!WARNINGS!

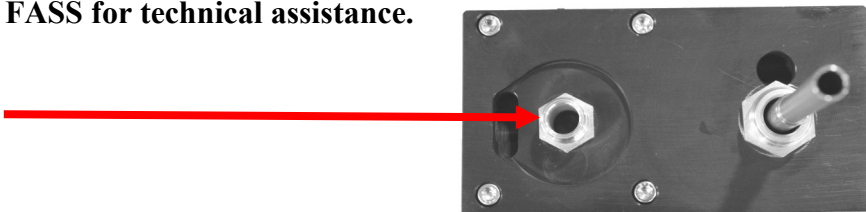
- Read all instructions before starting installation of this product!
- Installing the improper FASS Pump can cause *severe* engine damage.

FASS	Recommended Application
T C10 220G	Duramax 2006-2012 with super extreme horse power modifications
T C10 260G	Duramax 2006-2012 with super extreme horse power modifications

- Secure vehicle from **ROLLING!**
- Use caution when drilling. Steer clear of any electrical wires , air lines or other damageable components.
- Consult vehicle's manufacturers' instructions concerning the electrical system before attempting any electrical connections.
- Be sure that the serial # on this installation manual matches that of the outside of the box.



- Flush and clean all brass fittings and fuel line from debris.
- Keep debris from entering the internals of the system during installation. Getting debris in the water separator nipple can lock up the motor. If the motor does lock up from debris call FASS for technical assistance.



- Wear safety glasses when operating power tools such as drills and grinders or when using a punch or chisel.
- Properly secure lines to prevent chaffing.

INSTALLATION MANUAL

Follow these steps to ensure a simple installation of your new FASS TITANIUM FUEL SYSTEM

1. *Read the installation manual completely before attempting installation. The installation of this product indicates that the buyer has read and understands the limitations of the FASS manufacturers warranty agreement and accepts the responsibility of its terms and conditions.*
2. Inventory the package components. Notify the place of purchase immediately of any parts missing or damaged.
3. The installation recommendations contained herein are guidelines. Use good judgment and take into consideration your vehicles' accessories.
4. For best results in accuracy and efficiency (due to training, communication, and our relationship with our dealer network), we recommend a ViP FASS dealer for the installation. They are prepared to install the FASS fuel pumps with the most efficiency. If a situation/problem arises during the installation, they are the most prepared for that situation/problem. DPPI is not responsible for any installation mistakes.
5. If you have any questions or concerns that can not be addressed with your dealer, email or call FASS.
6. If any installation procedure is uncertain, contact FASS technical support.

Email techsupport@FASSride.com with the following information:

- Your Name, address and daytime phone number
- Model **(T C10 220G or T C10 260G)**
- Serial Number
- Vin Number of Vehicle
- Date of purchase
- Nature of Your Concern

Serial # Found Here....

Call customer service; **636-433-5410** with the following information:

- Model **(T C10 220G or T C10 260G)**
- Serial Number
- Vin Number of Vehicle
- Date of purchase



TITANIUM SERIES

**220 GPH OR 260GPH
10 PSI (APPROXIMATELY)**

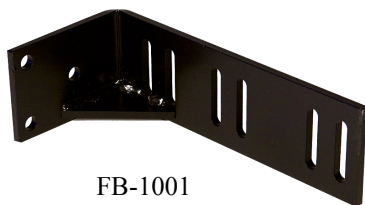
A fuel pressure gauge is highly recommended to identify fuel filter life and to prevent engine damage!



INSTALLATION

- Step 1: Install Electrical Harness
- Step 2: Prepare Suction and Return Lines
- Step 3: Mount Fuel System
- Step 4: Install Fuel Line
- Step 5: Check Installation

CONTENTS



FB-1001



FB-1006



BR-2001

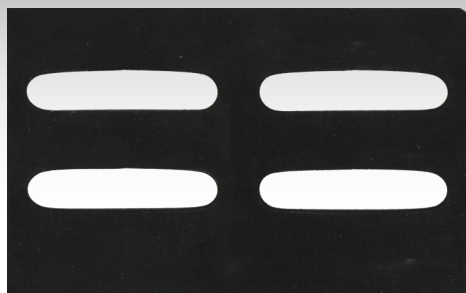


FL-1002 x11'

MOUNTING PACKAGE CONTENTS



BHF-1002



RS-1001



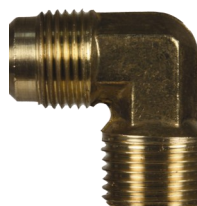
PL-1005



PL-1004



QD-1002



10-301



10-300



LW-1001



BHN-1001



OR-223



HC-1001



Fuse Tap



Flag Terminal



Ring Terminal



ST-1005Px14"



7 Hex Bolt 3/8"-16x 1 1/4"



7 Locking Nut 3/8"

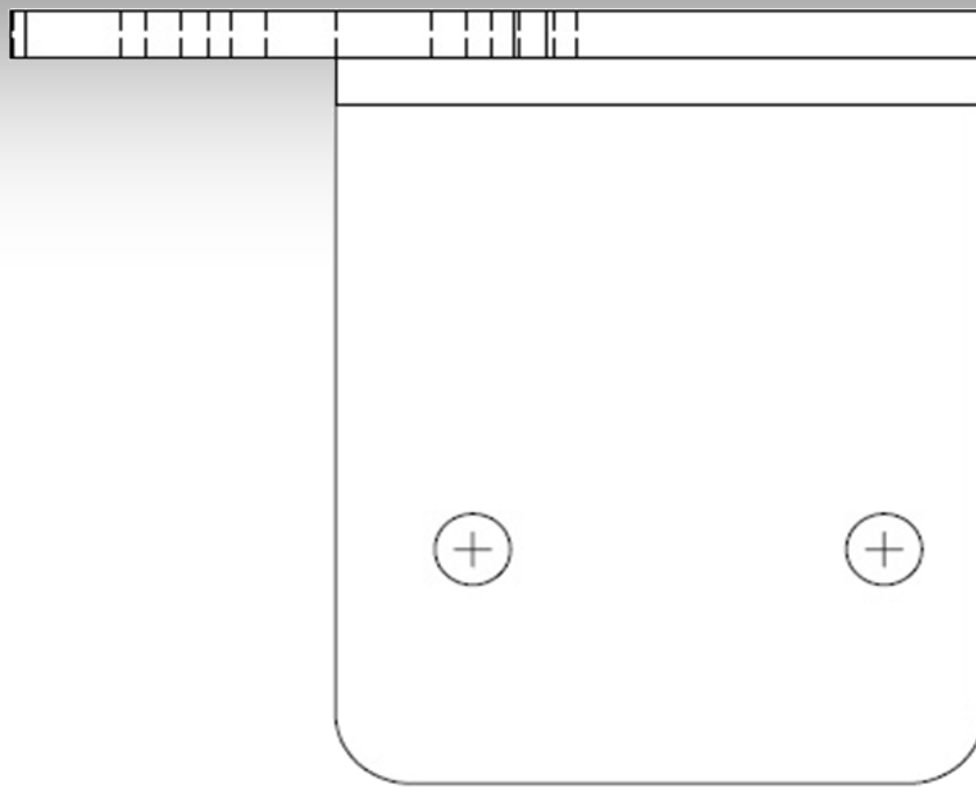


5 Hex Bolt 1/4"-20x1.25"

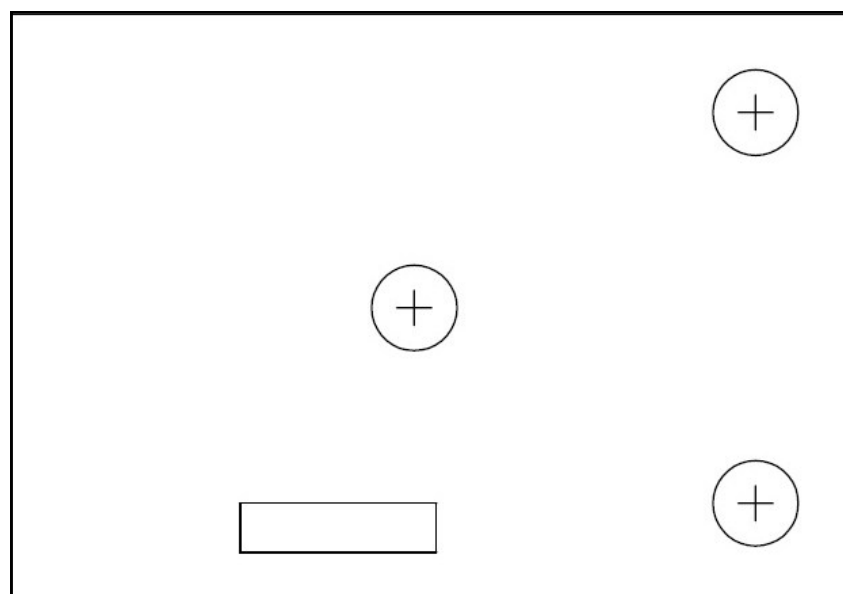


WA-2001

MOUNTING TEMPLATES



FB-1006



FB-1001

STEP 1: INSTALL ELECTRICAL HARNESS

The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes later in the installation.

- A. Crimp the ring terminals to the red and green wires of the WH-1006 Wire Harness. Attach red wire to the positive terminal of the battery and the green terminal to the negative terminal. **The use of a corrosion preventative on electrical connections is recommended.**



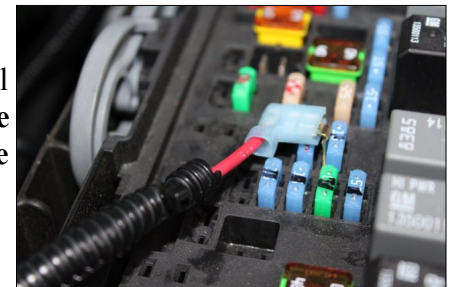
- B. Secure relay and fuse in an upright position, as shown, to prevent moisture from entering.



- C. Guide the single red wire from the relay through the fire wall grommet to the fuse panel.



- D. Using the fuse tap & flag terminal, connect the red lead to a terminal on the circuit board that is “hot” when the key is on. **Connect the fuse tap to the hot side of the fuse. Use a test probe to locate the “hot side” of the circuit in the fuse block.**



- E. Route WH-1006 wire harness along frame rail to mounting location of pump. **Completion of this step will be addressed in the Mounting Step 3.**

STEP 2: PREPARE SUCTION & RETURN LINES

Some of the photo's are of a different application, procedures are the same.

- A. Before tank is removed or moved, identify ALL areas of clearance between the tank and the truck's bed for the best location to install the BHF assembly. With proper clearance, you want to install it as close to the Fuel sending unit as possible.

Helpful Hint: If more space is required to access the top of the fuel tank, loosen the strap nuts to the end of the stud. This will gain you about 3" more working room.



- B. Remove the 3 bolts holding the fuel cooler to the mounting bracket (2011-2021 models are exempt). The fuel cooler is located in front of the fuel tank.



Note: If necessary, to gain access to the top of the fuel tank, carefully bend the sheet metal down that is covering the side.

- C. Using a fuel line disconnect tool, disconnect the factory suction line located above the fuel cooler. Place the disconnect tool around the fuel tube and slide the tool under the fuel line connection to release the fuel line. Pinch in tabs on 2011-2012.

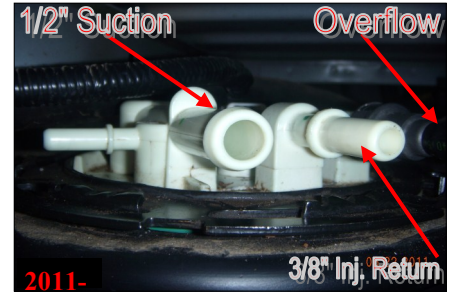
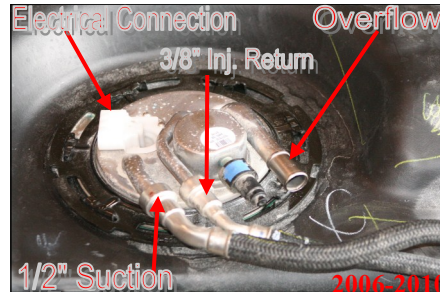


- D. Remove filler neck tube and over-flow tube from the top of the fuel tank by loosening clamp. Some models have an integrated filler neck. If your over-flow is integrated, be careful not to hang up the internal flow tube when lowering the tank.



STEP 2: PREPARE SUCTION & RETURN FUEL LINES

- E. Disconnect electrical harness. Using disconnect tools, remove factory suction & return lines from fuel module. Pinch in tabs on 2011. Disconnect overflow tube. You can now remove the fuel tank. **To gain access to the top of the fuel tank, if necessary, carefully bend the sheet metal down that is covering the side.**



- F. Remove the lock ring on top. Remove Fuel Module. Be careful not to bend the Fuel Level Arm. Now is a good time to find a cap to cover the 3/8" suction port on the Fuel Module. Choose location of BHF assembly



- G. Using a cup, reach inside the tank under the hole location to catch debris. Drill a 1 1/2" hole. Remove debris from top of tank.



- H. Use blocks or similar to support tank during measurement, simulating tank "hanging" by the straps. Failure to do so may result in a short draw tube.



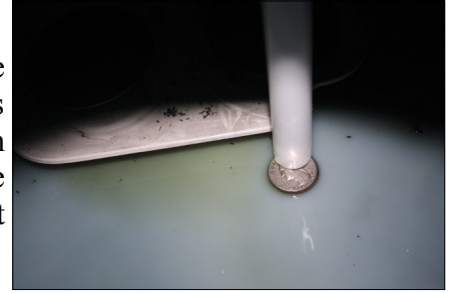
NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings



- I. Assemble the BHF-1002 with the PL-1004's in ports "S" and "R" using thread tape, along with pushing the ST-1005P onto the barb portion of the BHF-1002. Insert O-ring into groove. Torque to 40 ft./lbs.

STEP 2: PREPARE SUCTION & RETURN FUEL LINES

- J. Place the suction tube assembly into hole. Take measurements so the bottom of the suction tube is only 1/8" (no more than 2 quarters stacked) from the bottom of the fuel tank. Before cutting the suction tube, triple check the measurements. It is more efficient to cut the tube too long and then correct to proper length than it would be to cut



- K. With proper length being obtained with the suction tube, de-bur and flush assembly. Slide tube through hole, lock washer, and nut. Make sure O-ring on bottom of bulkhead fitting remains in its groove. With BHF-1002 properly seated against tank, tighten nut.



- L. Carefully re-install pick up module. **Do not bend Fuel Level Arm.**



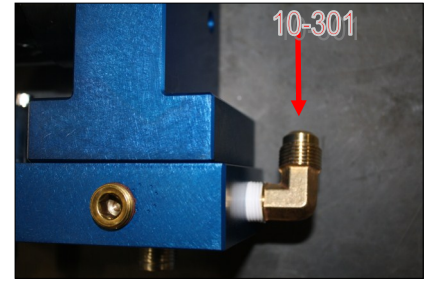
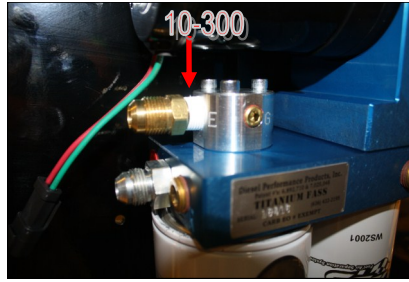
- M. Attach both ends of the fuel line to Push-Lok fittings. Remember to oil the fitting and fuel line. Loop fuel line over frame rail when reinstalling fuel tank. Do not cut at this time.



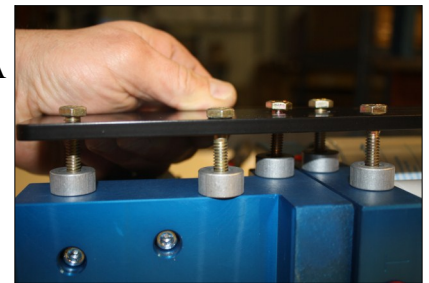
- N. Reinstall fuel tank. Remember to reconnect factory suction line, factory return line, and electrical harness. Torque tank hanger bolts to proper specifications. Reattach filler neck and clamps.

STEP 3: MOUNT FUEL SYSTEM

- A. Using thread tape, install the 10-300 into “E” and the 10-301 into the “T” port (on opposite end). Torque to 40 lb./ft.²



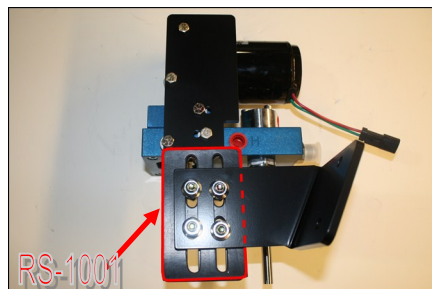
- B. Attach BR-2001 to back of system using five 1 1/4" Hex bolts and WA-2001 spacers. Torque to 10 lb./ft.²



- C. **Choose a bracket that best fits your application:** the FB-1001 is typically used for Short-bed applications, conforms to the bed support bracket, the FB-1006 is typically used for Long-bed applications, conforms to the inside of the leaf spring mount.



- D. Assemble the FASS pump brackets using the RS-1001 spacer between. Hold pump up to the mounting location for rough fitting. Once location is established, use template to accurately mark drill points. FB-1006 shown. Remove FB from the BR-2001



- E. Once location is established, use template to mark drill points.



STEP 3: MOUNT FUEL SYSTEM

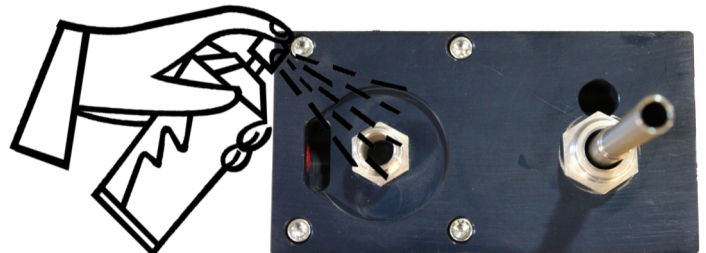
- F. Pre-drill holes. Final drill with 3/8" bit.



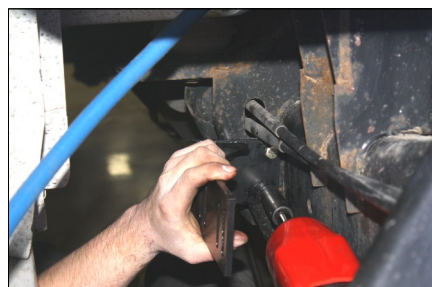
- G. Using the 3/8" bolts and nuts, secure the bracket to the previously drilled location. **It's easier to install the pump assy with the brackets separated.**



- H. Connect factory plug into the FASS harness. Turn key to "on". With pump operating, turn pump over, liberally spray WD-40 (or equivalent) into water separator nipple lubricating the Gerotor.



- I. Using the 3/8" bolts and the RS-1001 spacer, secure FASS to previously installed bracket.



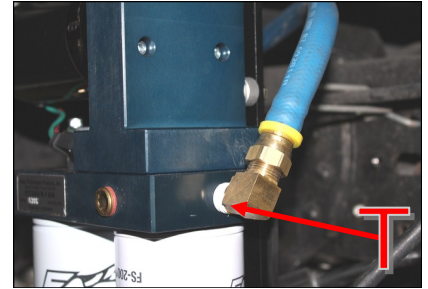
- J. Apply motor oil to gasket located on filters. Attach to system and hand tighten.



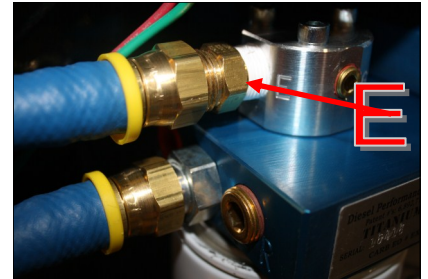
STEP 4: INSTALL FUEL LINES

Do Not use sealant on AN (male flare) fittings. Only use sealant on threads installed into pump assembly.

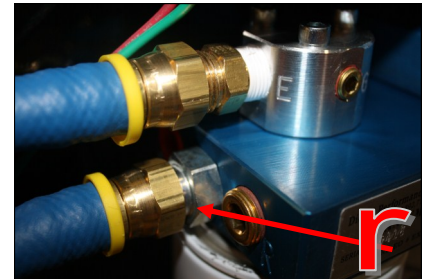
- A. Route suction line from the suction tube assy. to the 'T' port of the FASS pump. Cut FL-1002 to length. (measure twice cut once) Insert PL-1005 using oil. Attach to 10-301. Torque to 18 ft./lbs.



- B. Measure from the factory feed connection from Step 2d to the 'E' port of the FASS system. Cut and insert PL-1005. Connect to the 10-300 in the 'E' port of the FASS system. Torque to 18 ft./lbs.



- C. Using oil, insert a PL-1005 into the remaining fuel line. Connect to the 'R' port fitting on the FASS system. Torque to 18 ft./lbs. Route this line in a **gentle bend** to the Return Manifold. Slide over return tube and secure with HC-1001 clamp.



- D. Cut FL-1002 fuel line to length and install QD-1002 using a HC-1001. Oil O-rings inside QD-1002 and slide onto steel line until you hear a click. Cap or plug factory suction line.



- E. Reattach the 3 bolts holding the fuel cooler to the mounting bracket (2011-2012 models are exempt).



Note: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring!

STEP 5: REVIEW INSTALLATION

- Blow out any open lines/cover any open ports
- Bolts and fasteners properly tightened?
- Electrical harness and fuel lines secured and properly tightened? Reconnect the battery.
- Has the system been primed?
 1. Turn key to the ignition position, turning on the FASS pump for 15 sec..
 2. Crank engine and allow to run for at least 1 minute.
- Check for leaks.
- Start the engine
- Recheck all fluid and filter connections for leaks
- This pump comes with a 1 Year Manufacturer's Warranty based on the date it has been manufactured. To receive your extended Lifetime Warranty, you have 30 days from date of purchase to send the completed warranty information along with a copy of the purchase receipt in to Diesel Performance Products, Inc. Att: Warranty 16240 Hwy O Suite B Marthasville, MO 63357

NOTES