



FREQUENTLY ASKED QUESTION SERIES

ELECTRIC FUEL PUMP SELECTION

7.3L & 6.0L Powerstroke Diesel



Proper fuel pump selection has become one of the most time consuming discussions we have with customers calling us for fuel system advice. There is a TON of "misinformation" being spread by the internet and vendors that just want to make a sale, and it has caused many people to spend money on products that were not right for their application. We have always prided ourselves on basing ALL of our product selection advice on a "big picture" approach, we don't just want to know your horsepower goals and budget, we want to know how you intend to actually use your truck on a daily basis. We're not afraid to tell our customers that we think their horsepower goals and their intended use are in conflict with each other...we actually feel that it's our responsibility to make sure they consider every angle before making important purchase decisions. We would rather talk a customer out of purchasing a product than get angry phone calls or e-mail messages because we sold them a product that wasn't right for their needs.

This article is written from the "how do you use your truck?" and "what are your priorities?" perspectives. It may seem silly since we're just discussing electric fuel pumps, but the answers to these questions are the best way to determine which product best fits your needs. We will primarily cover products that are sold by Strictly Diesel in this article, but a few that we do not sell will be touched on as well.

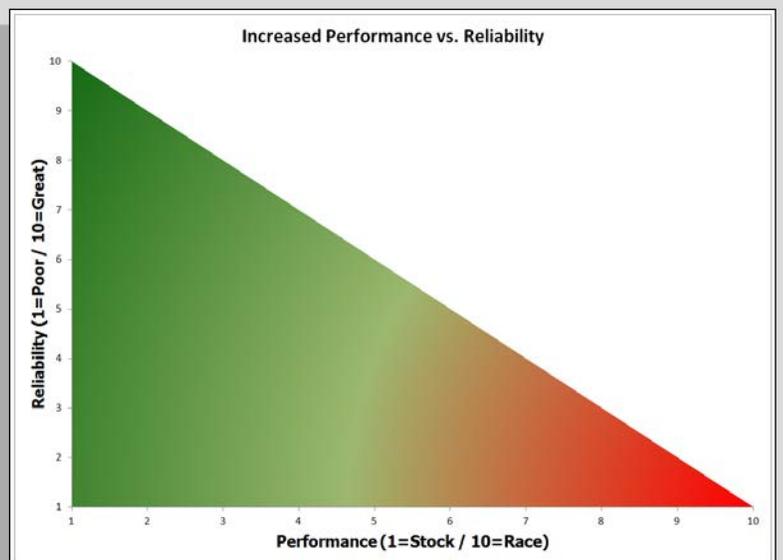
Please don't hesitate to contact us should you still have any questions.

HOW DO YOU USE YOUR TRUCK? The answer to this question is a key factor in determining the priorities for modifications to the truck. Trucks that are relied upon as "Daily Drivers", particularly when used for work...or trucks that are used for travel and towing long distances from home, usually have a higher priority placed on **RELIABILITY**. Trucks that are used for competition or fun, that are not the primary daily vehicle or not relied upon for work purposes may have more priority put on **POWER**. Only you can decide what your priorities are.

The graph below is **NOT** scientific, it is simply used to illustrate the very real relationship between **Performance** and **Reliability**. There are **MANY** factors that are not accounted for in this graph (driving style, maintenance, etc)...but it's still an effective visual.

On the left is **RELIABILITY**, and across the bottom is **PERFORMANCE**.

We are simply trying to illustrate that as you move from from stock to race (left to right along the bottom of the graph), you come down from high reliability to lower reliability. This is by no means a guarantee of any kind, OEM parts can and do fail...but the simple fact is that "Race" level parts are not engineered for the same level of reliability as OEM parts because they don't have to support an OEM level warranty or expectations.



DO YOU NEED A LARGER THAN STOCK FUEL PUMP?:

We have spent a great deal of time on the phone or answering e-mail messages from customers wanting to purchase a larger fuel pump without knowing whether they really needed it. Some of them were calling because they had seen a fuel pump advertisement in one of the diesel magazines, some had seen the pumps we offer on our website and just assumed that "bigger is better", a few had even purchased an aftermarket pump from a competitor only to be confused by conflicting information on the internet or installation issues. A vast majority of them did NOT need to purchase a large, aftermarket fuel pump.

The "Bigger is Better" thought process couldn't be further from reality when it comes to fuel pumps, and one of the first things we always try to explain is that "Better" is a relative term. Determining what is BEST for your application starts with considering the information in the "How do you use your truck" box on the previous page. Having a realistic goal for your build, including an understanding of the effect "race parts" have on overall reliability, should guide the entire build process.

If you are working on a truck that is being setup for higher power levels, one that will be using larger fuel injectors and race level tuning, you **may** need a fuel pump that is larger than the OE fuel pump that came in your truck. If you determine that you actually need a larger than stock fuel pump, there are several on the market to choose from...each different style having its own unique mounting and plumbing requirements.

Generally speaking, we follow the guidelines below for determining whether someone "needs" a larger than stock fuel pump. Factors like the aggressiveness of the programming and how the truck is used can play into this decision as well. For instance, a truck with injectors at the level shown below (or larger), but with very mild tuning and "normal" driving may have no problems with continuing to use a stock pump.

- 7.3L Trucks – 160cc+ w/modified nozzle and using Aggressive Tuning
- 6.0L Trucks – 190cc+ w/modified nozzle and using Aggressive Tuning

IMPORTANT POINT: Because I have had to make this specific point so many times over the phone, I just want to take a minute and highlight it very clearly here. **IF YOU ARE RUNNING STOCK INJECTORS (7.3L) OR ANY INJECTORS THAT ARE SMALLER THAN 190cc (6.0L), YOU DO NOT "NEED" A LARGER THAN STOCK FUEL PUMP TO SUPPLY YOUR POWER LEVEL.**

AFTERMARKET FUEL PUMP OPTIONS & CONSIDERATIONS:

While it's not feasible to cover every possible aftermarket fuel pump configuration in this document, the following information should help you to determine what will work best for your needs. One very important point to be made about some of these higher volume fuel pump configurations is that most of them require a larger supply line, from the fuel tank to the pump inlet, than the factory plumbing provides. Depending on your personal preference, this may include requiring the use of a larger than stock tank pickup tube or an aftermarket fuel tank sump (addressed later in this document). Also, in the case of a 94-97 "OBS" truck, this inevitably means that the fuel tank selector valve needs to be eliminated and the engine run solely off of one fuel tank.

- **DUAL 7.3L FORD OE FUEL PUMPS:** The stock Ford fuel pump in 99-03 7.3L Powerstroke trucks is built by Bosch, is extremely durable and has been used in a "Parallel/Dual" configuration by many people with great success. This is a somewhat expensive setup if you don't already have a good working factory pump, but it does retain the great reliability of the OEM pump while delivering double the fuel volume. This configuration is accomplished by mounting the pumps "side by side" and splitting the inlet and outlet connections with a "Y" block or similar type of fitting. We highly recommend the use of 5/8" supply line up to the "Y" block, and 3/8" hose from the "Y" to each pump in order to prevent suction side restriction from causing cavitation and damaging one or both pumps. This will require the use of a 5/8" fuel tank pickup or an aftermarket fuel tank sump with a 5/8" outlet. The pressure side of the pumps can be plumbed in 3/8" hose, using another "Y" to merge the flow and a single 3/8" hose all the way to the engine.

Proper PRE-PUMP and POST-PUMP fuel filtration will need to be considered with this setup. The pre-pump filter will need to flow enough to not present a significant suction side restriction to the pumps. Post-pump filtration can be either the factory filter bowl or an aftermarket setup such as the Driven Diesel Post-Pump Fuel Filter Kit we offer.

NOTE: You will NOT find a more reliable higher volume fuel pump setup than this. The OE Bosch pumps are almost bulletproof, which is why we so frequently recommend that customers NOT replace them with other pumps unless absolutely necessary. It's worth pointing out that, in the event of a pump failure (particularly away from home), an OE direct replacement for this pump can be purchased from just about any Ford dealer in the country...and in a pinch, one of the cheap off-shore auto parts store pumps (which we don't normally recommend for reliability reasons) can even be used to get you home.

- **AFTERMARKET RACE PUMP (FUELAB PRODIGY OR AEROMOTIVE A1000):** These pumps are popular among the high performance crowd. They move a LOT of fuel and will support extremely high power levels. While several of our competitors market these pumps as "daily driver" reliable, we prefer to only recommend them to our customers that are building trucks where the priority is power over reliability. Both of these pumps can be used in street driven trucks, but like anything that is "aftermarket/race", it needs to be understood that some level of reliability is always sacrificed in the search for more power. We have had the best luck with the Fuelab Prodigy fuel pumps (41401 in particular), which is why we offer them to our customers. Both of these pumps **REQUIRE** no smaller than 5/8" supply line from the tank, including a 5/8" pickup tube or sump...anything smaller **WILL** burn the pump up. 3/8" line from the pump to the engine is sufficient, even in race applications. These pumps will also **REQUIRE** a custom wiring harness, such as the Universal Fuel Pump Wiring Harness kit we offer. The stock fuel pump wiring is too small for the current draw of these pumps.

Proper PRE-PUMP and POST-PUMP fuel filtration will need to be considered with this setup. The pre-pump filter will need to flow enough to not present a significant suction side restriction to the pumps. Post-pump filtration can be either the factory filter bowl or an aftermarket setup such as the Driven Diesel Post-Pump Fuel Filter Kit we offer.

NOTE: Aftermarket "Race Pumps" are generally noisier than the OEM pumps. It is recommended that some form of vibration and noise isolation be considered as part of mounting these pumps.

- **HIGH PRESSURE FASS / SIMILAR:** Some of our high performance customers will prefer an “all in one” solution like a FASS Titanium Series, which includes both pre & post pump filtration along with a high volume fuel pump and the FASS air removal technology. We have been testing a 125gph Titanium Series on a modified 7.3L Super Duty and have been very impressed with its performance.

Air removal systems like the FASS (and similar) have caused some customers additional confusion because they have their own fuel pressure management system and fuel return to the tank. These systems should still be thought of as “just a fuel pump” for the purposes of system layout, because they do **NOT** replace or eliminate the need for a proper fuel pressure regulator (stock or otherwise) at the engine. While it is expected that customers seeking to replace their stock fuel pump with a High Pressure FASS will also be using an aftermarket Regulated Return Fuel System kit, these devices will also work with the factory fuel system.

Since the factory fuel system generally operates around 55psi, and most aftermarket Regulated Return systems around 60-65psi, the high pressure FASS (or similar) **MUST** be configured to operate at **70-75psi** to provide the necessary “overhead” to ensure proper fuel pressure at the injectors, regardless of demand. The standard regulator spring in the FASS pumps needs to be replaced by one of our custom Driven Diesel 75psi springs for use in a 7.3L or 6.0L truck.

FASS Titanium Series pumps include the necessary wiring harness as well as the correct hose and fittings to directly replace the stock fuel pump. Applications where custom fuel systems are being used (such as one of our 7.3L Fuel Bowl Delete Regulated Return Kits) may require additional hose and/or fittings, depending on how you wish to plumb the system. Trucks using our “Standard” 7.3L or 6.0L Regulated Return kits should require no additional parts.

NOTE: While this unit comes from FASS with 3/8” hose, we are not comfortable running it through the stock fuel tank selector valve found in the 94-97 “OBS” trucks. The stock selector valve has internal passages that are smaller than 3/8”, which we feel will make the pump work too hard and lead to premature pump failure. Like the larger aftermarket race pumps, we feel that OBS trucks utilizing this pump should operate off of only one fuel tank, with an unrestricted 3/8” (minimum) fuel tank pickup.

- **BOSCH “044” & WALBRO GLS392 FUEL PUMPS:** These fuel pumps are popular among the gas engine tuner crowd (import and domestic). They flow more than the stock 7.3L Super Duty pump, but not as much as the aftermarket “Race Pumps”. The really important consideration with using these pumps is the fact that NEITHER of them is rated or warranted by their manufacturer for use with Diesel Fuel. We have heard of people having good luck with both of these, and we have heard of people having both of them fail in short order. If you decide to use one of these pumps, and it fails, you’re on the hook for the full replacement cost because the manufacturer will NOT support them when used with Diesel Fuel.
- **FINAL FUEL PUMP NOTE:** It is always our intention to offer our customers products that we can sell and support with confidence. We have dropped specific fuel pump lines in the past because our experience with them was so poor that we could no longer trust that they wouldn’t leave our customers stranded on the side of the road. If you don’t see a particular fuel pump or product line on our website, you can bet we’ve got a pretty good reason.

LARGE PICKUP TUBE VS SUMP:

Many of the high volume fuel pump configurations that we have discussed in this document REQUIRE a larger than stock fuel supply line from the fuel tank to the pump. The current trend in the diesel performance community would seem to suggest that fuel tank sumps are better than large pickup tubes (sometimes called "drawstraws"), but there are some important factors to consider in making this decision. Just because every diesel performance shop makes and sells a sump, doesn't mean that they are the best or right solution for your fuel system needs.

Fuel tank sumps were originally developed to resolve the "quarter tank" problem that became associated with large pickup tubes. In reality, most of the quarter tank issues were created by the improper installation of the pickup tube in the fuel tank, if the tube was cut too short, and the bottom of the tube wasn't close enough to the bottom of the fuel tank, the quarter tank issues would arise. We have sold and used large fuel tank pickup tubes for years without any significant quarter tank problems being reported by our customers.

The advantage of an aftermarket sump is that it becomes a "low point" in the fuel tank, essentially a cup with straight sides that is full of fuel that can't easily "slosh away" from the pickup point under low fuel level braking or cornering conditions. This will certainly eliminate the "quarter tank" issue, and may even allow you to continue running the truck for a period of time after the fuel level gauge has reached EMPTY. It should be noted that running the tank this low is NOT RECOMMENDED because a significantly low fuel level in the tank coupled with fuel slosh and a high volume pump can lead to the sump being drained and the pickup point being uncovered.

Unless the fuel pump is mounted BELOW the sump outlet, there are no other advantages to using a sump. There is a misconception that using a sump makes it easier for your fuel pump to pull fuel from the tank, or that using a sump "fixes" the problems with some aftermarket pump failures. If you have mounted your fuel pump along the centerline of the frame rail, then a good portion of the fuel in the tank is below the inlet of the pump. This means that your pump will still be drawing fuel against gravity any time the fuel level is lower than the inlet of the pump. Another common method for mounting aftermarket fuel pumps is to put them between a pair of filter heads. Since the filter heads with filters installed are relatively tall, this method tends to locate the pump much closer to the floor of the truck than the centerline of the frame, placing it above more of the fuel in the tank and further negating the supposed "gravity feed" advantage of using a sump. In a nutshell, the "ease of suction" advantage of a sump diminishes more as the level of the pump inlet rises.

There are some disadvantages to running a sump configuration that also need to be carefully considered. Your goals and how you use the truck will be as important to this decision as they were in selecting the fuel pump. Trucks that are driven daily, spend a lot of time on the highway or spend a lot of time "off-road" may want to consider the risk involved with having an aluminum sump attached to a plastic fuel tank with a large diameter fuel supply hose...all hanging down under the middle of the truck where it can get hit by debris. A fuel leak on the bottom of the fuel tank, particularly considering the size of the hole in the tank and the size of the fuel line normally used with a sump, would be a very significant concern! Best case scenario, you might just be left stranded on the side of the road with an empty fuel tank and a broken hose. Worst case, consider what might happen if a large amount of fuel were to dump under your tires or those of another motorist at highway speed. These are obviously not situations that occur regularly, but they are realistic possibilities that need to be considered based on reliability concerns and how you use your truck.

Large fuel tank pickup tubes still remain the safest way to properly plumb a high volume fuel pump into one of these trucks. Because they are mounted on top of the tank, and the fuel line is located above the tank and along the frame rail of the truck, the pickup and fuel line have much better protection from anything that might get kicked up on the road or encountered on the trail. If you have significant concerns about "quarter tank" issues, a large pickup tube can be combined with a sump to give you the best of both worlds. The current Driven Diesel 5/8" Fuel Tank Pickup Tube is produced with enough extra length to allow it to be fitted over the middle of a fuel tank sump so that it is always picking up fuel from the lowest point in the tank. FASS also makes a very nice Sump Kit that includes a 5/8" flexible pickup tube that picks up in the bottom of the sump. There would still be a risk of something on the road or trail catching the sump, but there would be no hoses along the bottom of the tank that could be easily damaged.

At the end of the day, any of these solutions (if properly installed) will do a fine job of supplying your new high volume fuel pump. We are not intending to make a case for or against any of these solutions, as we do offer all of them to our customers. We just want you to be aware of the potential issues with each of them so that you can make an informed decision that isn't based on the "latest fad" or "internet hype".

OVERLY LARGE HOSE FROM PUMP TO ENGINE: We have talked to a number of customers that were planning to run very large (1/2" or larger) fuel line all the way up to the fuel rails in the cylinder heads. Please, save yourself the time and money...this is not necessary. This is another one of those "bigger is not always better" situations. We are feeding 400cc injectors in our race engine with 3/8" hose starting at the outlet of the fuel pump...and NO fuel pressure drop at Wide Open Throttle.

DISCLAIMER: This FAQ document is based entirely on our experience building and installing Powerstroke Diesel fuel systems (since 2001). We recognize that there may be differing opinions on some of the items we covered above, particularly from competitors wishing to sell products that we either don't recommend for your application...or don't recommend at all. We certainly hope that you will choose to use our Driven Diesel fuel system products when it comes time to upgrade your truck. In the end, whether you purchase your fuel system products from us or one of our competitors, we sincerely hope that you found the information in this FAQ document helpful in your decision making and project planning processes.

S DIESEL, LLC (dba STRICTLY DIESEL AND/OR DRIVEN DIESEL*) WARRANTY AND LIABILITY POLICY

MANY OF THE PRODUCTS SOLD BY S DIESEL, LLC, ARE DESIGNED TO INCREASE VEHICLE PERFORMANCE...USE AT YOUR OWN RISK!

Do not install or use any product(s) purchased from S DIESEL, LLC ("S DIESEL") until you have carefully read the following Warranty and Liability Policy (the "Warranty").

PRODUCT WARRANTY POLICY

Subject to the limitations, exclusions, and qualifications set forth below, the product or the products made and sold by S DIESEL (the "S Diesel Product" or "S Diesel Products") are warranted to Buyer as set forth in this Warranty. The installation of the S Diesel Products indicates that Buyer has read, understands and agrees to the terms and conditions of this Warranty. Any warranty on products that are made by another manufacturer which are resold by S DIESEL to Buyer is made to Buyer by the manufacturer of such products in accordance with and subject to all conditions and limitations of the manufacturer's warranty in effect on the date of the purchase by Buyer. S DIESEL makes no warranties to Buyer, express or implied, with respect to such products that are made by another manufacturer.

LIMITED WARRANTY

The S Diesel Products (except S Diesel Products specified to have different warranty terms) are warranted to be free from defects in material and workmanship, under normal use and service for a period (the "Product Warranty Period") of ninety (90) days from date of delivery to Buyer, unless S DIESEL performs the work installing the S Diesel Products, in which case the Product Warranty Period shall be extended to equal the Service Warranty Period (as defined below under "SERVICE WARRANTY POLICY"). S DIESEL's liability under this Warranty is limited to repair or replacement at its option, subject to the provisions set forth herein, of any S Diesel Products which upon examination S DIESEL are found to be defective. Buyer shall prepay cost of transportation of defective S Diesel Products to S DIESEL for inspection.

S DIESEL shall not have any responsibility under this Warranty unless (1) the defect in an S Diesel Product results in a claim arising within the Product Warranty Period, measured from the date of delivery to Buyer, (2) the S Diesel Product, if installed by an installer other than S DIESEL, was properly installed, (3) the S Diesel Product was normally maintained and not subject to misuse, negligence or accident, and (4) the S Diesel Product, system components and/or accessories were not repaired or altered in such a way that in the judgment of S DIESEL the S Diesel Product's performance or reliability was adversely affected.

EXCLUSIONS

Any of the above warranties by S DIESEL shall not apply if Buyer's vehicle is in an accident, misused, neglected, altered from the S Diesel Product's manufacturer original designs or specifications or serviced in connection with a warranty claim hereunder without prior written approval of S DIESEL.

REMEDIES EXCLUSIVE

Repair or replacement of defective S Diesel Products in accordance with the Limited Warranty above shall be Buyer's exclusive remedy for and shall constitute satisfaction of any and all liabilities of S DIESEL with respect to any defect in any S Diesel Product whether based in warranty, contract, tort, negligence, strict liability or otherwise.

DISCLAIMERS AND LIMITATIONS

THE EXPRESS WARRANTIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND TERMS AS TO QUALITY OR FITNESS OF ALL PRODUCTS SUPPLIED BY S DIESEL TO BUYER, WHETHER WRITTEN, ORAL OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH OTHER WARRANTIES, CONDITIONS AND TERMS ARE HEREBY DISCLAIMED AND EXCLUDED BY S DIESEL. IN NO EVENT SHALL S DIESEL BE LIABLE FOR ANY LOSS OF ACTUAL OR ANTICIPATED PROFITS, LOSS OF ANTICIPATED BUSINESS, COST OF SUBSTITUTE PRODUCTS, LOSS OF USE OR DOWNTIME COSTS OR DELAY CLAIMS (WHETHER DIRECT OR INDIRECT) NOR FOR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR RELATING TO THIS WARRANTY OR THE SUPPLY OF S DIESEL PRODUCTS TO BUYER, WHETHER BASED IN WARRANTY, CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE. BUYER ACKNOWLEDGES THAT (A) THE PRODUCTS PURCHASED FROM S DIESEL WILL BE USED IN CONNECTION WITH ACTIVITIES, UNDER EXTREME CONDITIONS AND/OR SUBJECT TO MODIFICATIONS REQUESTED BY BUYER FOR WHICH THE PRODUCTS MAY OR MAY NOT BE SUITABLE; (B) THE WARRANTY OF SUCH PRODUCTS FOR PERFORMANCE IN CONNECTION WITH SUCH ACTIVITIES, UNDER SUCH EXTREME CONDITIONS AND/OR SUBJECT TO SUCH MODIFICATIONS REQUESTED BY BUYER IS NOT POSSIBLE; AND (C) ANY MANUFACTURER'S WARRANTY MAY BE VOIDED BY USE OF THE PRODUCTS IN CONNECTION WITH SUCH ACTIVITIES, UNDER SUCH EXTREME CONDITIONS AND/OR SUBJECT TO SUCH MODIFICATIONS REQUESTED BY BUYER. BUYER ACKNOWLEDGES THAT THE INSTALLATION OF ANY S DIESEL PRODUCTS THAT ARE NOT LEGAL FOR USE ON POLLUTION CONTROLLED MOTOR VEHICLES IS DONE SOLELY AT THE REQUEST OF BUYER AND ALL RESPONSIBILITY FOR ANY EFFECTS ON THE ORIGINAL VEHICLE MANUFACTURERS WARRANTY, ABILITY TO PASS ANY EMISSIONS INSPECTIONS OR FOR ANY FINES THAT MAY OCCUR DUE TO THE REMOVAL OF FEDERALLY MANDATED EMISSION CONTROL EQUIPMENT IS ON BUYER. No employee or representative of S Diesel has the authority to make any representation, promise or agreement which in any way varies from the terms and conditions of this Warranty. No suit or claim based on any cause of action, regardless of form, arising out of or relating to this Warranty or any of the S Diesel Products supplied by S DIESEL may be brought by Buyer or anyone claiming by, through or under Buyer against S DIESEL more than one year after the date that such cause of action arose.

IN THE EVENT BUYER DOES NOT AGREE WITH THE TERMS AND CONDITIONS OF THIS WARRANTY, BUYER MAY PROMPTLY RETURN THE PRODUCT TO S DIESEL FOR A FULL REFUND. THE PRODUCT MUST BE IN NEW, UNUSED AND RESELLABLE CONDITION, BE RECEIVED WITHIN FIFTEEN (15) DAYS OF THE ORIGINAL PURCHASE AND BE ACCOMPANIED BY A DATED PROOF OF PURCHASE (RECEIPT). PRODUCTS RETURNED IN NEW, UNUSED AND RESELLABLE CONDITION WILL NOT BE SUBJECT TO ANY RESTOCKING FEES.

THE INSTALLATION OR USE OF ANY PRODUCT PURCHASED FROM S DIESEL INDICATES THAT BUYER HAS READ, UNDERSTANDS AND AGREES TO THE TERMS AND CONDITIONS OF THIS WARRANTY.

SERVICE WARRANTY POLICY

Subject to the limitations, exclusions, and qualifications set forth below, the service or services performed by S DIESEL (the "S Diesel Service" or "S Diesel Services") are warranted to Buyer as set forth in this Warranty.

LIMITED WARRANTY

The S Diesel Services (except S Diesel Services specified to have different warranty terms) are warranted to have been performed in a workmanlike manner and to hold up under normal use and service for a period (the "Service Warranty Period") of twelve months from date the S Diesel Services are performed or twelve thousand miles from the documented odometer reading at the time the S Diesel Services are performed, whichever occurs first. S DIESEL's liability under this Warranty is limited to replication, subject to the provisions set forth herein, of any S Diesel Services which upon examination S DIESEL are found to have not been performed in a workmanlike manner.

S DIESEL shall not have any responsibility under this Warranty unless (1) the defect in an S Diesel Service results in a claim arising within the Service Warranty Period, measured from the date the S Diesel Service is performed, (2) the vehicle upon which the S Diesel Service was performed was normally maintained and not subject to misuse, negligence or accident, and (3) the vehicle upon which the S Diesel Service was performed was not repaired or altered in such a way that in the judgment of S DIESEL the S Diesel Service's durability was adversely affected.

EXCLUSIONS

Any of the above warranties by S DIESEL shall not apply if Buyer's vehicle is in an accident, misused, neglected, or serviced in connection with a warranty claim hereunder without prior written approval of S DIESEL.

REMEDIES EXCLUSIVE

Replication of unsatisfactory S Diesel Services in accordance with the Limited Warranty above shall be Buyer's exclusive remedy for and shall constitute satisfaction of any and all liabilities of S DIESEL with respect to any defect in any S Diesel Service whether based in warranty, contract, tort, negligence, strict liability or otherwise.

WITHOUT LIMITING THE FOREGOING, IN NO EVENT SHALL S DIESEL BE LIABLE FOR ANY LOSS OF ACTUAL OR ANTICIPATED PROFITS, LOSS OF ANTICIPATED BUSINESS, COST OF SUBSTITUTE SERVICES, LOSS OF USE OR DOWNTIME COSTS OR DELAY CLAIMS (WHETHER DIRECT OR INDIRECT) NOR FOR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR RELATING TO THIS WARRANTY OR THE PERFORMANCE OF S DIESEL SERVICES FOR BUYER, WHETHER BASED IN WARRANTY, CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE.

GENERAL PROVISIONS APPLICABLE TO BOTH PRODUCT AND SERVICE WARRANTIES

ASSIGNABILITY OF WARRANTY

This Warranty is for the exclusive benefit of Buyer and is not assignable.

WARRANTY CLAIMS PROCEDURE

Warranty claim forms can be printed from the company websites (<http://www.drivendiesel.com> (Products) and <http://www.strictlydiesel.com> (Services)). A properly completed warranty claim form and a copy of the invoice for any defective Product or Service must be received by the Seller within the earlier of 30 days after the expiration of the Warranty Period or the incident giving rise to the claim. To qualify for an adjustment under this Warranty a defective Product must be returned prepaid to the Seller for inspection and must be accompanied by a dated proof of purchase receipt. In addition, the serial number of the defective Product, if any, must match the serial number on Buyer's invoice. All Warranty claims are subject to approval by the Seller and/or the Product's manufacturer. Buyer must pay all applicable service charges and taxes. Defective Products accepted for warranty compensation become the property of the Seller. To qualify for an adjustment under this Warranty a vehicle upon which S Diesel Services have been performed must be delivered to the Seller during Seller's hours of operation for inspection and must be accompanied by a dated proof of purchase receipt.

WAIVER

Any failure of the part of S Diesel to insist on strict compliance with the Warranty Provisions shall no way constitute a waiver of such right. No claim or rights arising out of a breach of the Warranty Provisions by Buyer may be discharged in whole or in part by a waiver of the claim or right, unless the waiver is in writing signed by an authorized representative of S Diesel. S Diesel's waiver or acceptance of any breach by Buyer of any provisions of the Warranty Provisions shall not constitute a waiver of or an excuse for nonperformance as to any other provision of the Warranty Provisions nor as to any prior or subsequent breach of the same provision.

APPLICABLE LAW

The Warranty shall be governed by the laws of the State of Arizona (excluding Arizona law with respect to conflicts of law).

* Driven Diesel was formerly known as ITP Diesel, LLC and Sinister Diesel, LLC.