



## **"E-SERIES VAN FUEL BOWL DELETE" REGULATED RETURN FUEL SYSTEM KIT**

**Fits 99-03 7.3L PSD E-Series Van – Eliminates Stock Filter Bowl**



## **Installation Guide**



**INSPECT CONTENTS OF THIS KIT  
THOROUGHLY **BEFORE** STARTING  
THE INSTALLATION PROCESS!**

**IF YOU FIND A PROBLEM WITH YOUR PACKAGE:**

- **KEEP ALL OF THE PARTS & PACKAGING TOGETHER**
- **DO **NOT** ATTEMPT INSTALLATION OF THE PRODUCT**
- **PROMPTLY NOTIFY YOUR SELLING DEALER**
- **PROVIDE DEALER WITH PHOTOGRAPHS IF REQ'D\***
- **WAIT FOR FURTHER INSTRUCTIONS FROM DEALER**

**\*WE RESERVE THE RIGHT TO REQUEST  
PHOTOGRAPHS OF PACKAGING OR PARTS  
IN ORDER TO PROPERLY ADDRESS ANY  
SITUATION INVOLVING EITHER DAMAGED  
OR MISSING ITEMS.**

**THANK YOU FOR YOUR COOPERATION!**

**T**hank You for purchasing the Driven Diesel Fuel Bowl Delete Regulated Return fuel system kit for your E-SERIES VAN! **Please read and familiarize yourself with this manual fully before proceeding with the installation of the kit.** Also, always work safely. Make sure that there is plenty of light and adequate ventilation, and allow yourself several hours to complete the installation. After reading these instructions, if you feel that the installation is beyond your capability, please have this kit installed by a qualified mechanic.

**NOTE:** This kit **DOES NOT INCLUDE EVERYTHING NEEDED FOR INSTALLATION!** Removal of the fuel filter bowl **REQUIRES** that adequate filtration be restored to the system, you may need to purchase other products from Driven Diesel or source them locally, depending on your specific fuel system configuration and needs. These instructions will point out where additional components are required, you must determine what items fit your configuration best. If you are unsure if additional components are needed to complete your installation, please call us to discuss your setup.

Finally, the installation of this kit requires exposing the fuel system. Diesel fuel is flammable, and its vapor is explosive; therefore, common sense dictates that there be no smoking or open flame within 50 feet of the workspace. If any fuel spills, contain it and wipe it up immediately. Do not let the fuel stand on any painted surfaces of your vehicle, or damage to the finish may occur. We HIGHLY RECOMMEND having an appropriate fire extinguisher close by!

## Driven Diesel 7.3L E-Series Fuel Bowl Delete Regulated Return Kit Contents

Please use the following parts list and pictures to become familiar with this kit. ALL of the parts listed below should be contained in your kit. We will refer to the different fittings by their part number throughout the installation.

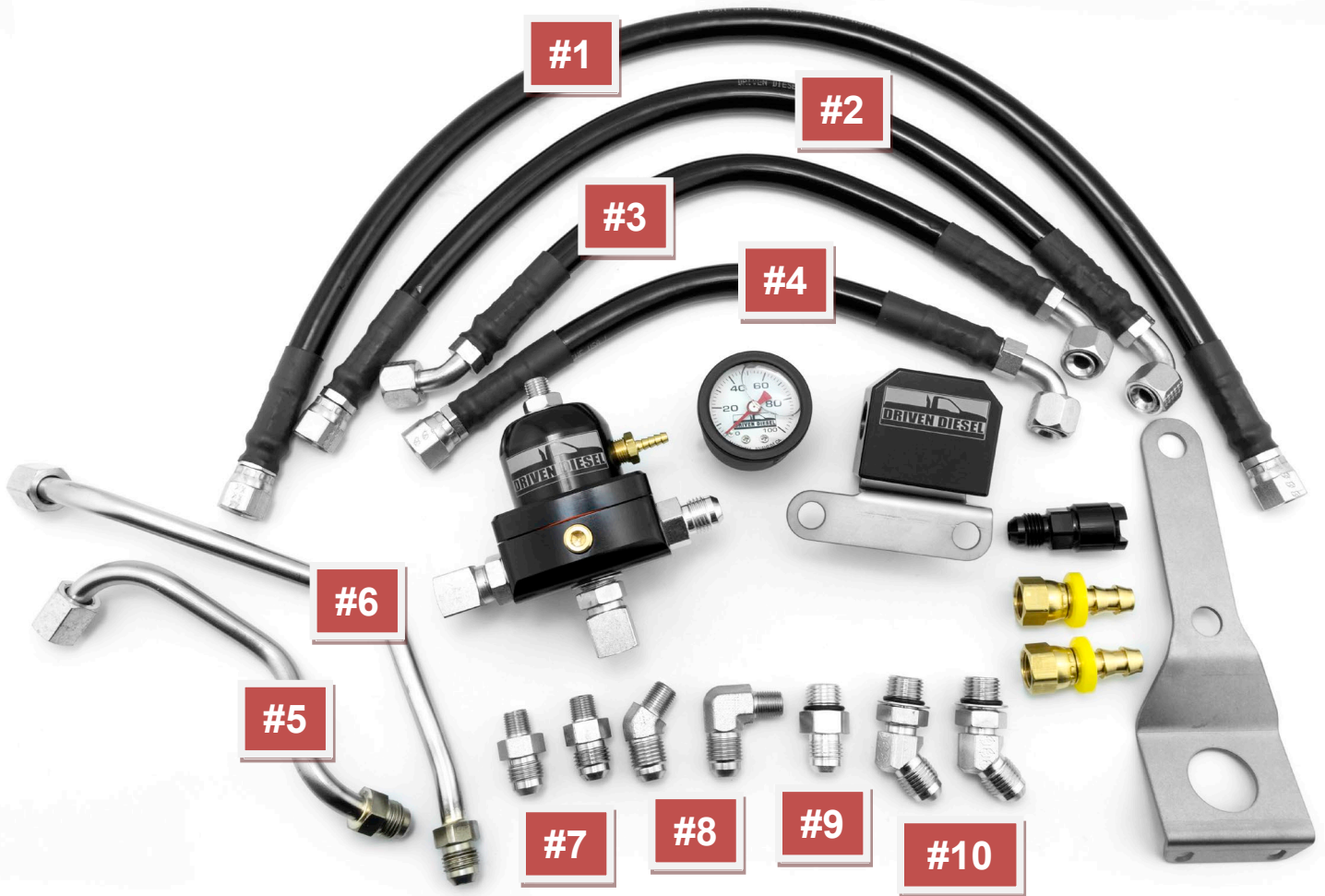
<b><u>Qty:</u></b>	<b><u>Part Number:</u></b>	<b><u>Description:</u></b>
1	73FS-OBS-DSR-TUBE	Driver Side Return (Rear) Tube Assembly
1	73FS-OBS-DSR-HOSE	Driver Side Return (Rear) Hose Assembly
1	73FS-PSR-TUBE	Passenger Side Return (Rear) Tube Assembly
1	73FS-OBS-PSR-HOSE	Passenger Side Return (Rear) Hose Assembly (3 <sup>rd</sup> longest hose)
1	73FS-EVFBF-DSF-HOSE	Driver Side Bowl Delete Feed Line (hose with 45° & 90° fittings)
1	73FS-EVFBF-PSF-HOSE	Passenger Side Bowl Delete Feed Line (hose with 90° fitting)
1	73FS-FBD-BLOCK-ASSY	Driven Diesel Fuel Bowl Delete Block and Bracket Assembly
1	73FS-FBDREG-ASSY	Regulator Assembly (with Fittings)
10'	73FS-BLOWDOWN	Regulator Blowdown Line
10'	-6 HOSE	-6 (3/8") 30R7 Fuel Line (cut to fit)
1	Gauge	Liquid Filled Fuel Pressure Gauge
1	Bracket	Driven Diesel Regulator Mounting Bracket

### Hardware Pack Contents:

1	02MP-06MJ45	1/8" Male Pipe to -06 Male JIC – 45° Fitting
1	02MP-06MJ90	1/8" Male Pipe to -06 Male JIC – 90° Fitting
2	02MP-06MJ	1/8" Male Pipe to -06 Male JIC – Straight Fittings
1	06MB-06MJ	#6 Male O-Ring to #6 Male JIC Fitting
2	06MB-06MJ45	#6 Male O-Ring to #6 Male JIC 45° Fitting
1	644113	5/16" Quick Disconnect to #6 Male AN Adapter Fitting (black)
2	06NC-06FJX + PC10	-06 Push-Lok Hose End (Straight) with Green PC10 Clamp
1	WGW-12SS	Worm Gear Hose Clamp
2	M10-1.5 Nylok	M10 Nylok Nuts

## FUEL SYSTEM PARTS

(not all parts pictured – see complete list on previous page)



Hoses: 73FS-OBS-DSR-HOSE – #1

73FS-OBS-PSR-HOSE – #2

73FS-EVFBD-DSF-HOSE – #3

73FS-EVFBD-PSF-HOSE – #4

Tubes: 73FS-PSR-TUBE – #5

73FS-OBS-DSR-TUBE – #6

Fittings: 02MP-06MJ – #7

02MP-06MJ45 & 02MP-06MJ90 – #8

06MB-06MJ (installed in top of bowl delete) – #9

06MB-06MJ45 (x2 – installed in sides of bowl delete) – #10

06NC-06FJX – Brass Hose Ends (x2)

644113 – Black Aluminum Fitting

Use the above diagram to identify the different hoses and fittings in the kit

## Some of the Basic Tools Needed for Installation:

Standard Combination Wrench Set  
3/8" Drive Metric Socket Set  
T-27 Torx Driver or Bit  
Screw Driver Set  
"Allen" Wrench Set

Metric Combination Wrench Set  
1/4" Drive Metric Socket Set  
1/2" Drive Breaker Bar  
Anti-Seize  
Penetrating Oil

## Let The Fun Begin!

1. Drain Fuel Filter Bowl into a suitable container using the drain valve located on the cowl.
2. Disconnect the negative cable from both batteries. Don't forget the one mounted on the frame on the passenger side! TIP: Write down your radio stations first.
3. Remove the air box lid. You will need to loosen the 8mm clamp on the intake hose.
4. Remove the lower airbox assembly. You will need to remove the (3) 8mm bolts in the center of the lower airbox and along the cowl.
5. Disconnect the intake hose from the resonator box (see Fig 2) and from the Crankcase Vent Adapter by loosening 2 hose clamps.
6. Remove the bolts holding the washer bottle fill neck, sensors and wiring channel to the top of the cowl. There may also be a "Christmas tree" pin on the passenger side.
7. Disconnect the main engine connector by loosening the 10mm center bolt until the connector separates completely. See figure 3.
8. Disconnect both cables connected to the alternator as well as the electrical connector to the air conditioning compressor.
9. Carefully pull the cowl harness forward and locate the connectors shown in Figure 4. Disconnect these connectors.
10. Using bungee cords, carefully pull the cowl harness up and out of the way to make more room to work. See figure 5.
11. Inside the vehicle, remove the "doghouse" engine cover.
12. Remove the (2) 10mm bolts holding the turbocharger heat shield in place and remove the heat shield. See figure 6.
13. Remove the turbo inlet hose (see fig 7) by loosening the hose clamp at the turbocharger end, removing the (2) bolts that attach the crankcase vent (CCV) adapter to the bracket and removing the hose clamp where the CCV hose attaches to the CCV housing on top of the valve cover. Removing the CCV hose from the CCV housing will require cutting or spreading the factory clamp, which is generally easier when done from the front of the vehicle. We have supplied a replacement clamp that will be used during re-assembly.
14. Remove the 8mm bolt holding the Intake Resonator Box to the bracket (see fig 8). The resonator box can be pulled out over the top of the exhaust downpipe. You may need to loosen and rotate the downpipe clamp for clearance.

15. NOT REQUIRED – Locate the ¼" hose that is attached to the front of the aluminum intake Y. This hose supplies a boost pressure signal to the MAP sensor. Inspect this hose for dry-rot or cracking and replace if necessary as a failure of this hose can cause performance issues.
16. Using a ½" drive breaker bar in the belt tensioner (see fig 9), remove the accessory drive belt from the Alternator and the Air Conditioning Compressor. This is a good time to inspect the belt for signs of wear or cracking and replace if necessary.
17. Remove the (3) bolts retaining the alternator and remove the alternator from the vehicle.
18. Locate the 13mm CENTER BOLT of the accessory belt tensioner. This bolt will be at the center of the tensioner...below the pulleys, NOT the center of one of the pulleys. Remove the center bolt and then remove the belt tensioner.
19. Locate and Remove the (4) 13mm bolts that hold the alternator bracket to the front of the engine. Remove the bracket from the engine. See fig 10.
20. Open the retainer clips for the air conditioning compressor hoses (see fig 11).
21. Remove the (4) bolts holding the A/C compressor to its mounting bracket and set the A/C compressor off to the side (passenger). Be careful not to kink the hoses when moving the compressor. It is a good idea to cover the battery terminals to prevent shorting. See fig 12.
22. There are (5) 13mm bolts holding the A/C compressor bracket to the front of the engine (see fig 13). Locate the BOTTOM bolt and loosen it (do not remove). Locate and REMOVE the remaining (4) bolts (one of them is behind the vacuum pump). At this point, the bracket should be able to rotate toward the driver side a little bit to expose the front fuel line, but the weight should still be supported on the bottom bolt.
23. Remove the (2) 13mm nuts holding the wiring harness bracket to the top of the high pressure oil reservoir. See fig 14.
24. Using Fig 15 & 16 as a guide, locate and loosen the nuts that secure the Glow Plug Relay bracket. The bracket is slotted, so you don't need to remove the nuts, just loosen them both.
25. Lift the Glow Plug Relay bracket up off the mounting studs to expose the fuel bowl fuel lines below it.
26. Disconnect the now exposed fuel lines shown in fig 17 from the fuel filter canister. These lines have rubber "donut" seals so you will probably feel some resistance while loosening the nuts.
27. Locate the fuel supply and fuel return lines that are attached to the driver side of the fuel filter canister (see fig 18). Disconnect these lines from the fuel filter. These lines have the same rubber "donut" seals, so you will probably feel the same resistance as the others you just removed.
28. If the water drain line is still attached to the filter canister, disconnect it, along with the "water in fuel sensor" wiring harness. Both of these are located on the back of the canister.
29. The fuel filter canister is attached to the high pressure oil reservoir with 2 long 13mm bolts that pass through the front of the reservoir. Locate and remove these bolts. The fuel filter canister should now be free and can be removed. BE CAREFUL, there is still fuel in it!
30. Using figures 19 & 20 as a guide, locate the fuel ports in the cylinder heads. The Drivers Front and Passengers Rear will have a steel fuel line attached to a fitting. The Passengers Front and Drivers Rear will have square head plugs. CLEAN THOROUGHLY around these fuel ports BEFORE you remove the plugs/fittings and expose the fuel rails.

31. Using 2 wrenches, hold the fittings that are installed in the head while loosening the nuts on the fuel lines. Remove the fuel lines that connected the fuel rails to the filter canister, they will not be reused.

**IF YOU ARE READING THESE INSTRUCTIONS AHEAD OF TIME, IT CAN BE HELPFUL TO SOAK THE FUEL LINE FITTINGS MENTIONED IN THE NEXT 2 STEPS WITH PENETRATING OIL THE NIGHT BEFORE YOU PERFORM THIS INSTALLATION.**

32. Next, remove the fuel line fittings from the head. These fittings are OLD and there have been cases of breakage during removal. Be careful not to put excessive side load on the fitting when trying to break it free.
33. The square head fuel rail plugs can be tricky to remove. They have been installed a long time and they are generally stubborn to break free. The most important point that can be made here is that you need to use a tool that fits these TIGHTLY. Using an open end wrench that has some side to side play can result in rounding the head. A 9/32" square head socket fits this plug perfectly, but isn't always easy to find. We've had good luck using a CLOSED end 12-point wrench (which will grab all 4 corners of the plug) or even an adjustable wrench tightened onto the plug so you can't pull it off without loosening the adjuster.
34. Locate the factory fuel supply and return lines that you disconnected from the stock fuel filter canister in a previous step. Follow these lines down the front of the engine. They will transition to a flexible hose that jumps over to the frame, then one of them will end at the fuel pump outlet (supply) and the other will end along the frame near the tank (return). These lines are no longer needed and can be removed by disconnecting the flexible section from the pump outlet or metal line on the frame, using a fuel line quick disconnect tool. DO NOT damage or remove the metal return line on the frame, we will be reusing it in a later step!

### **INSTALLATION TIME!**

**NOTE: The (4) fittings that get installed into the ports in the cylinder heads are MALE PIPE THREAD. These fittings require the use of a sealant like the Loctite provided in the kit. Make sure that both the male threads of the fitting and the female threads of the port have been cleaned and are dry. Evenly apply sealant to the smaller male threads, making sure to get it all the way around the fitting.**

**When installing Pipe Thread fittings...DO NOT OVERTIGHTEN THEM (especially the drivers front and the passengers rear ports) as doing so can crack the cylinder head. For the straight fittings, just tighten them until you feel a significant resistance. For the angled fittings, tighten them until you feel a significant resistance, then position them as directed (you may have to turn them counter-clockwise) and allow the sealant to cure. They should be snug enough to require the use of a tool to reposition them.**

35. Install the 02MP-06MJ90 fitting in the driver side rear port. The fitting needs to be oriented over the top of the bolt head as shown in figure 21. This is easiest with the up-pipes completely removed as shown in our image, but can be done with them installed as well. If the up-pipes are installed, the v-band clamp may need to be removed and the bolts at the exhaust manifolds loosened so they can be leaned back and the fitting rotated into place.
36. Install one of the 02MP-06MJ fittings in the passenger side rear port. See fig 22.
37. Install the other 02MP-06MJ fittings in the driver side front port. See fig 23.

38. Install the 02MP-06MJ45 fitting in the passenger side front port. The fitting should point at about a 45° angle toward the rear of the vehicle, with the ability to rotate is toward the rear a bit more if needed. See figure 24 for reference.
39. Assemble the fuel bowl delete block using the 06MB-06MJ and (2) 06MB-06MJ45 fittings. Use figure 25 as a reference for fitting orientation. The top fitting can be tightened completely. Leave the side fittings loose for now.
40. Mount the fuel bowl delete block in place of the factory fuel filter bowl, using the original filter bowl mounting bolts and (2) M10-1.5 Nylok Nuts. See figure 26 for reference.
41. Using figure 26 as a reference, install the 73FS-FBDPSF-HOSE. Attach the 90° end to the 45° fitting on the driver side of the bowl delete block, and route the other end to the 45° fitting at the front of the passenger side head. Leave the hose ends loose for now. You may need to rotate the fitting in the head further back to make a clean connection.
42. Install the 73FS-FBDDSF-HOSE by connecting the 45° end to the fitting at the front of the driver side cylinder head. Leave the hose end loose for now. See figure 27.
43. Using figure 28 as a reference, install the other end of the 73FS-FBDDSF-HOSE onto the passenger side fitting of the bowl delete block. Leave the hose end loose for now.
44. Orient the 45° fittings in the bowl delete block as seen in figure 28 and tighten the jamb nuts. Then orient the 90° hose ends and tighten them completely. Finally, make sure that the cylinder head ends of these 2 hoses are tight.
45. Attach the regulator bracket to the fuel pressure regulator, using (2) allen head screws, (2) lock washers and (2) flat washers. The bottom 90° fitting on the regulator can be positioned to point straight to the right when looking at the regulator from the front, and the jamb nut tightened. The left hand 90° fitting can be positioned to point back and slightly up when looking at the regulator from the front. Leave this fitting loose enough to move if necessary.
46. If removed, reinstall the alternator mounting bracket and set the alternator in place, starting the single inside bolt so it can't fall off the bracket.
47. Lay the regulator mounting bracket over the top of the (2) outside alternator mounting holes and install the alternator mounting bolts. See figure 29. Reconnect any alternator electrical connections that were previously disconnected.

**NOTE: You may need to adjust the transmission dipstick tube bracket to lift the dipstick tube up and provide clearance for the fuel pressure regulator.**

48. Install the 73FS-OBS-PSR-HOSE, placing the 90° end onto the left hand 90° fitting of the fuel pressure regulator as shown in figure 29.
49. Install the 73FS-PSR-TUBE onto the fitting at the passenger side rear head port. Connect the straight end of the hose installed in step 48. Once the connections are made and the hose routed tighten all of the connections. See figures 30 and 31.
50. Install the 73FS-OBS-DSR-TUBE as shown in figure 32.
51. Install the 73FS-OBS-DSR-HOSE to the tube installed in step 50. Route the hose using figures 33 and 34 as a guide, and connect the other end to the straight fitting on the right side of the fuel pressure regulator. Once the connections are made and the hose routed properly, tighten all of the connections.

52. Using figure 35 as a guide, locate the factory return line on the frame just in front of the fuel tank (you disconnected a flexible line from this location in step 34). In our picture, it has the black aluminum adapter fitting already installed.
53. Locate the black aluminum adapter and unscrew the flat end cap from the back of the fitting.
54. Lightly lubricate the exposed end of the factory metal return line with diesel fuel and then push the now open end of the black aluminum adapter fitting onto it, twisting back and forth until the fitting stops against the step in the tube.
55. Slide the removed end cap over the tube and thread it into the back of the adapter fitting and snug with 2 wrenches to secure the adapter fitting to the tube.
56. Locate the 10' length of Gates LOC-6 hose, 2 brass hose ends and 2 green hose clamps.
57. Slip one of the clamps up the hose 2-3" and then fully install one of the hose ends. The hose should contact the yellow stop disc if properly seated. Place the clamp over the hose where the fitting is installed.
58. Connect the end of the hose you just made to the 90° fitting on the bottom of the fuel pressure regulator. This fitting should be pointing straight at the driver side of the van. Make sure that the lock nut of the 90° fitting is tight, and tighten the hose end to the 90° fitting.
59. There are several ways to route the return hose. The most important thing to remember is to avoid getting it too close to extremely hot surfaces like exhaust manifolds, or letting it rest on something that is sharp and will rub through the hose. We prefer to route the hose down the front of the engine, behind the A/C compressor, the same way the OE fuel supply and return lines are routed. Figure 36 shows both the supply and return hoses of our install subject van exiting from this location, we have covered our hoses in convoluted loom for protection.
60. Once you choose how you want to route your return hose from the engine to the frame, you will need to carefully route it along the frame back to the black aluminum adapter fitting we installed in step 55...leaving a little slack in the hose up at the regulator and along the frame.
61. Install the 2<sup>nd</sup> brass hose end onto the black adapter fitting so you can lay the return hose next to it and determine where the hose needs to be cut. After you cut the hose to length, remove the brass hose end from the adapter, install the green hose clamp and finally the brass hose end onto the end of the hose like step 58 and securely reconnect the return hose back to the black aluminum adapter fitting.
62. Secure the return hose along the frame with cable ties.

**You are now left with needing to make the connection to the fuel supply port. Fuel supply (from your fuel pump) will enter the top of the Driven Diesel Fuel Bowl Delete block. This kit was designed to work with the Driven Diesel Pre/Post Fuel Filter Kit seen in Figure 37 of this document. This kit moves your stock fuel pump to a bracket that also mounts both a PRE-PUMP filter with water separator as well as the necessary POST-PUMP 2 micron fuel filter, all in a the small space constraints of the E-Series van.**

**If you are not using the Driven Diesel Pre/Post Fuel Filter Kit mentioned above, we've supplied a #6 Male JIC fitting and recommend using a hose with a 90° end to make the cleanest connection. You may need to source some of your own hose and fittings to make the necessary connections.**

63. Once you've connected your fuel supply and return lines to their respective locations (pump to bowl delete and regulator to fuel tank), proceed with the steps below.

### **YOU'RE ALMOST DONE!**

Before proceeding, it's time to DOUBLE CHECK **EVERY** fitting and bolt for proper tightness. Carefully go over each fuel line at both ends, checking both the line and the fittings for tightness. Once you've verified all of the fuel lines and fittings, check any bolts that have been removed and reinstalled up to this point. Once reassembly is complete, some of these fittings and hoses will not be easily accessible should you miss one and leave it loose!

64. Now we need to check for leaks. Start by reconnecting the batteries and then turning the key to the "on" position (do not crank or start the engine) and let the fuel pump run until it shuts off. When the fuel pump shuts off, turn the key to the "off" position.

65. Repeat the above 8-10 times to refill the fuel lines and rails and purge them of air.

66. Now, cycle the key to the "on" position and adjust the fuel pressure by turning the set screw in the middle of the regulator CLOCKWISE (in) until the pressure reaches 60-70psi. You may have to loosen the locknut on the regulator in order to turn it far enough and you may have to cycle the key more than once if the pump shuts off before you have it set.

67. Cycle the key to the "on" position and check each fitting and hose for leaks. The system is under pressure now so they should be pretty apparent. You may have to cycle the key several times to inspect every fitting and hose connection...take your time, this is important!

68. If any leaks are found, resolve them before proceeding. It's much easier to address them now than when everything is back together later.

69. Locate the 73FS-BLOWDOWN line. Connect the line to the brass nipple in the top half of the fuel pressure regulator. Route and secure this line, avoiding heat sources that could damage it, so that the other end is under the vehicle and is pointing down at the ground. See #2 on the Troubleshooting Page for details.

70. Starting with step 25, reverse the disassembly steps and reinstall the components that were removed or relocated to gain access and perform the installation.

71. Start the engine and allow it to idle. While it's idling, thoroughly inspect for leaks one more time as everything is once again under pressure and flowing constantly. Any remaining air in the system will also be purged during this time.

72. If any leaks are detected, shut the truck off and resolve them before proceeding. Come back and perform another leak check (step 71) and proceed once the problem has been resolved.

73. Once the system is leak free and the van has had a few minutes to purge any remaining air and start to build some engine heat, adjust the fuel pressure and tighten the fuel pressure lock nut. We recommend starting with the pressure in the **65psi** range at operating temperature.

### **CONGRATULATIONS!**

**You've just completed the installation of the  
Driven Diesel 7.3L Fuel Bowl Delete Regulated Return Fuel System Kit!**



FIG 1 : Airbox Lid and Lower Air Box



FIG 2 : Intake Hose – Showing Resonator Box Clamp



FIG 3 : Main Engine Harness Connector



FIG 4 : Connectors Behind Cowl Wiring Harness



FIG 5 : Cowl Harness Pulled Up Out of Way



FIG 6 : Dog House Removed – Turbo Heat Shield Shown



FIG 7 : Turbocharger Inlet Hose and Crankcase Vent



FIG 8 : Air Intake Resonator Box



FIG 9 : Belt Tensioner – Lower Center of Photo



FIG 10 : Alternator Bracket Removed

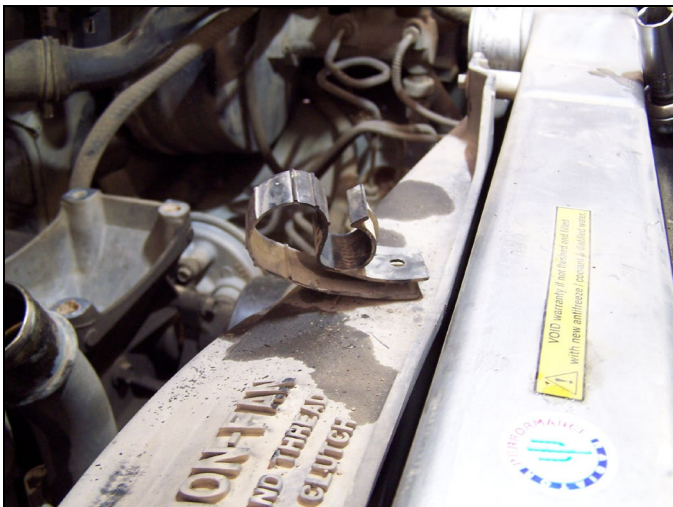


FIG 11 : A/C Hose Retaining Clip



FIG 12 : A/C Compressor Moved Off Engine



FIG 13 : A/C Compressor Bracket

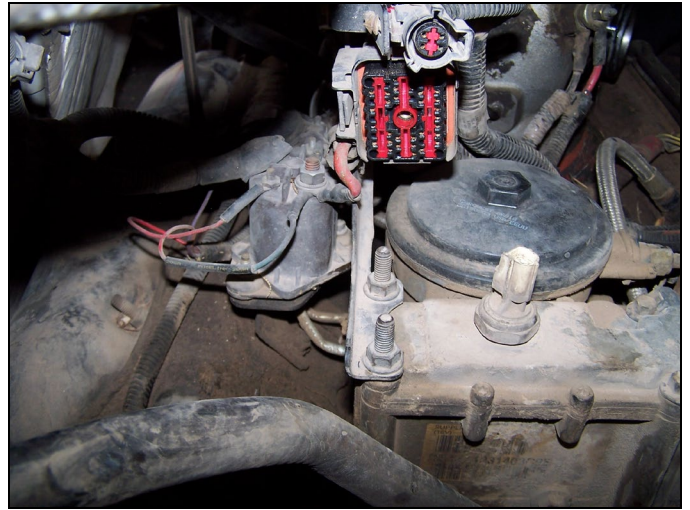


FIG 14 : Wiring Harness Bracket on Reservoir



FIG 15 : Wrench on Front GP Bracket Nut



FIG 16 : Ratchet on Rear GP Bracket Nut



FIG 17 : GP Bracket Moved – Fuel Lines Exposed



FIG 18 : Fuel Filter Canister (from rear)



FIG 19 : Passenger Front & Driver Rear Fuel Plug Example



FIG 20 : Driver Front & Passenger Rear Fuel Line Example



FIG 21 : Driver Side Rear Fitting Installed



FIG 22 : Passenger Side Rear Fitting Installed



FIG 23 : Driver Side Front Fitting Installed

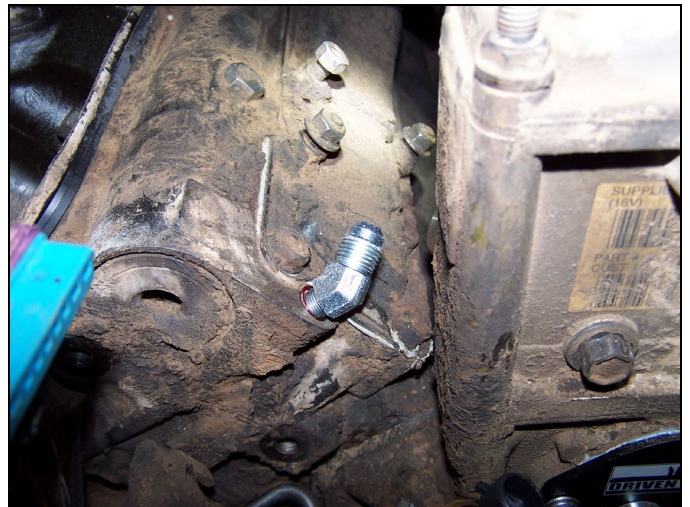


FIG 24 : Passenger Side Front Fitting Installed



FIG 25 : Assembled Fuel Bowl Delete Block

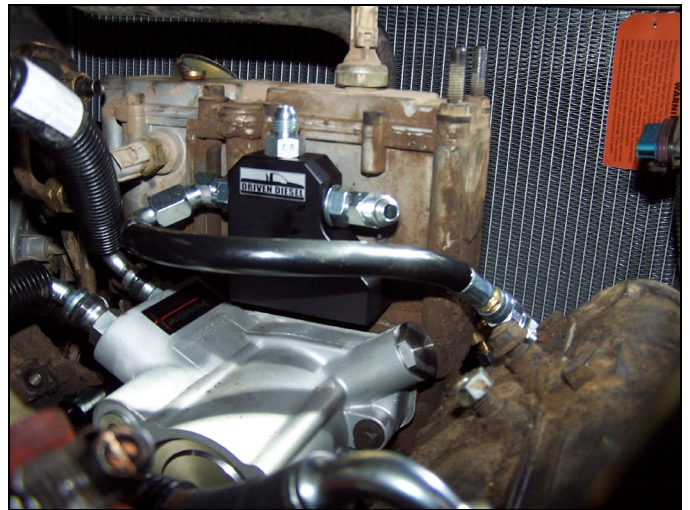


FIG 26 : Fuel Bowl Delete Block Installed



FIG 27 : Drivers Front Feed Line Connected

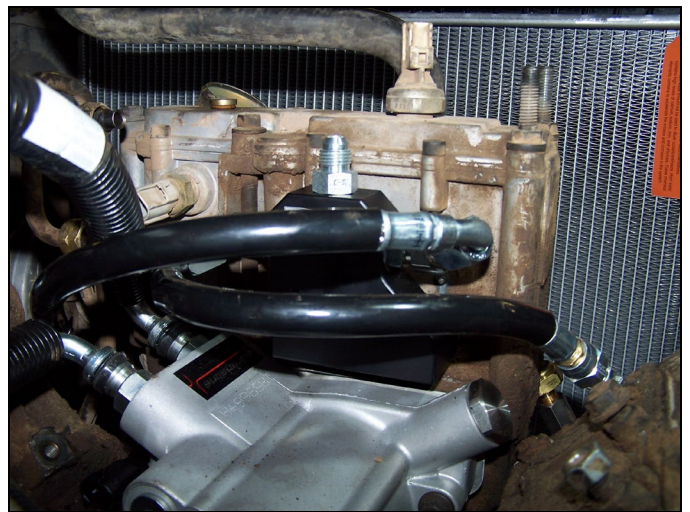


FIG 28 : Line Routing At Bowl Delete Block

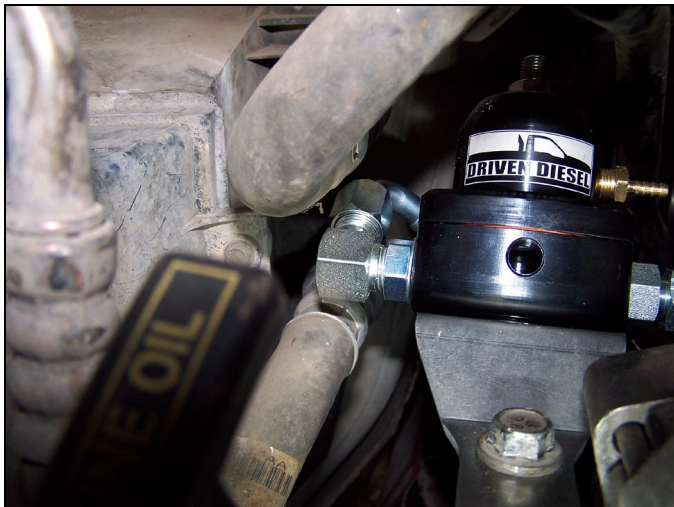


FIG 29 : Regulator Mounted on Alternator

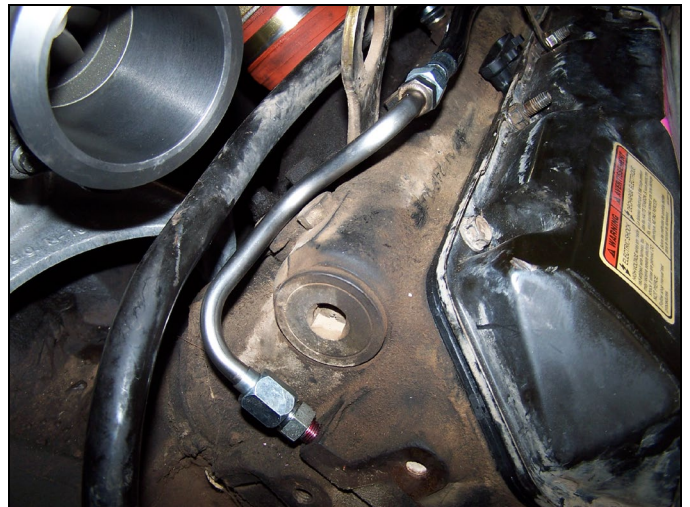


FIG 30 : Passenger Side Return Tube Installed



FIG 31 : Passenger Side Return Hose Installed

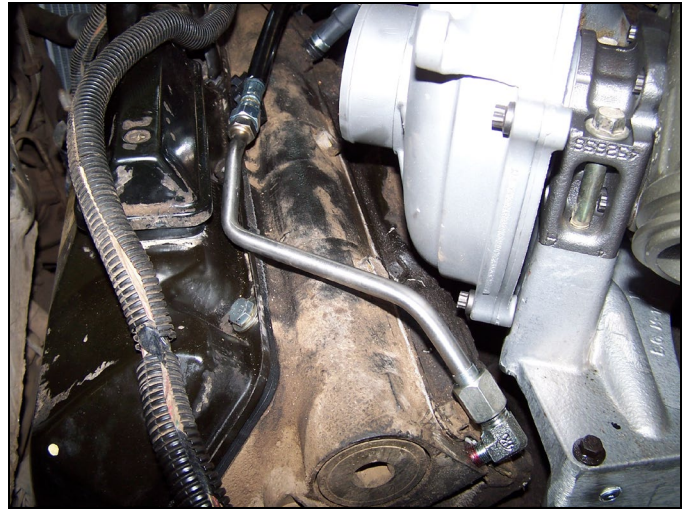


FIG 32 : Driver Side Return Tube Installed

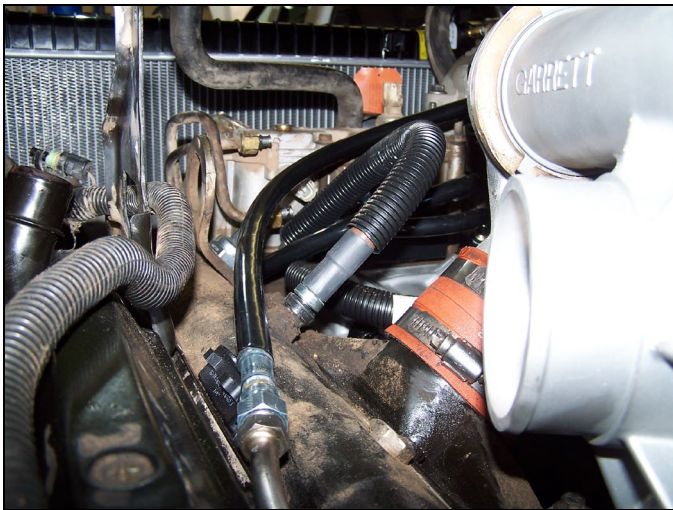


FIG 33 : Driver Side Return Hose Installed



FIG 34 : Driver and Passenger Hoses Connected to Reg



FIG 35 : Return Adapter and Return Hose



FIG 36 : Return Hose Routing



FIG 37 : Driven Diesel Pre/Post Fuel Filter Kit

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## Common Fuel System Issues – Troubleshooting Guide

If you run into any problems after the installation of your fuel system, please check this page for guidance before calling your dealer or Driven Diesel for help. The issues below represent the most common causes for technical support calls.

1. **THE REGULATOR MUST BE BROKEN – PRESSURE IS LOWER THAN DESIRED** – This is a multi-part problem, but the first thing you need to know is that if you don't have fuel spraying out of the hose connected to the brass nipple in the top half of the regulator, the regulator is **NOT** broken and is working fine. The fuel pressure regulator supplied with our kits is extremely simple, and the **ONLY** failure we have ever seen, since we started building fuel systems in 2001, has been a punctured diaphragm...which will leak fuel from the brass nipple. See below for some specific examples of where to look for your fuel pressure problem:
  - a. **AIRDOG II** – If you have an AirDog II/4G/5G pump that has replaced your factory fuel pump, you will need to adjust the fuel pressure at the pump. The ADII pumps are delivered from the manufacturer with the internal regulator set at 55psi. Locate the adjuster screw / jamnut. It is best to adjust the **DRIVEN DIESEL** fuel pressure regulator up (clockwise) several turns past the max pressure, **THEN** have someone adjust the ADII pressure adjuster until the **DRIVEN DIESEL** gauge shows about 70-75psi. Finally, adjust the **DRIVEN DIESEL** regulator down to 60-65psi. This will leave you with about 5-10psi of “overhead” pressure, which will help keep the pressure at the desired level when you are heavy on the throttle and the injectors are using more fuel from the rails.
  - b. **FASS** – If you have a high pressure FASS pump and are unable to get 65psi at the Driven Diesel fuel pressure regulator, you may need to update the regulator in your FASS pump. Older Grey or Black High Pressure FASS pumps were delivered with a 55psi regulator spring. Newer Black FASS pumps (Serial Number S399570 OR HIGHER) have a 65psi regulator spring. **ALL** of them can benefit from our 75psi regulator upgrade, to ensure that you are able to get the proper 65psi at the engine, with pressure overhead for high demand situations. See our website for help determining which upgrade you need.
  - c. **OTHER FUEL PUMP** – If you are running a stock fuel pump, or another “100% Duty Cycle” pump that doesn't have an integrated fuel pressure regulator (Fuelab Prodigy, Aeromotive A1000, etc), and you are still having fuel pressure problems, you need to check your plumbing for restrictions in the inlet line to the fuel pump (causing the pump to not be able to efficiently get fuel from the tank), and you may need to have your fuel pump checked for proper operation. Low fuel pressure is caused by a lack of fuel volume from the pump, you need to determine why the volume of fuel being moved by your pump is not adequate. Pumps like the Fuelab Prodigy and Aeromotive A1000 **REQUIRE** a minimum of 5/8” fuel supply line between the fuel tank and the pump inlet, and any filters on the inlet side of the pump need to support high flow rates with low pressure drop across the filter.

**CONTINUED NEXT PAGE →**

**2. FUEL LEAKING FROM BRASS NIPPLE OR POLY TUBING UNDER TRUCK** – The brass nipple in the top half of the fuel pressure regulator is a “boost reference port”. This is used to increase fuel pressure as boost increases...IN GASOLINE APPLICATIONS! We do NOT use this port in diesel applications because it poses serious risk of a “runaway” situation should the diaphragm in the regulator fail. Instead, we run a long piece of poly tubing from this port to a location under the truck, to make sure that fuel is not sprayed all over the engine in the event of a diaphragm puncture. In the event of a punctured diaphragm, contact us at 623-582-4404 to purchase a replacement.

**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 one (1) year 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 MAY STILL BE SUBJECT TO RESTOCKING/REPACKAGING 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.**

**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.