advanced FLOW engineering

Instruction Manual P/N: 42-14011

Make: **GM** Model: **Diesel Trucks** Year: **2001-2010** Engine: **V8-6.6L (td) Duramax**
Fuel Pressure: **8-10 psi (relay controlled)** Supported Horsepower: **2000+**

- **Please read the entire instruction manual before proceeding.**
- **Ensure all components listed are present.**
- **If you are missing any of the components, call customer support at 951-493-7100.**
- **Ensure you have all necessary tools before proceeding.**
- **Do not attempt to work on your vehicle when the engine is hot.**
- **Disconnect the negative battery terminal before proceeding.**
- **Retain factory parts for future use.**

Label	Qty.	Description	Part Number
A	1	Fuel Manifold Assembly	05-60565
B	1	Filter, Fuel	44-FF019
C	1	Bowl, Water Separator	05-60487
D	1	Bracket, Frame; Carbon Steel	05-60655
E	1	Bolt, M8 x 1.25 x 25mm	03-50442
F	1	Washer, Flat: 24mm ODxM8 ID	03-50065
G	1	Nut, Hex Nylon Lock: M8 x 1.25	03-50244
H	4	Screw, Socket Head Cap M6x1.0x50mm	03-50443
I	4	Washer, M6 (Fiber)	03-50457
J	4	Washer, M6	03-50444
K	4	Nut, Flanged Nyloc: M6	03-50445
L	2	Fitting: 3/8" NPT to AN -8 (Black)	05-60685
M	1	Harness Relay	05-60551
N	1	Connector, Add a harness & Fuse	05-60583
O	1	Hose, Fuel Return	05-60689
P	12	Ties, Nylon Cable, 12"	05-60167
Q	1	Harness, Power	05-60523
R	1	Hose, Fuel Inlet	05-60673
S	1	Hose, Fuel Outlet	05-60681

Note: Legal in California for use on race vehicles only. The use of this device on vehicles used on public streets or highways is strictly prohibited in California and others states that have adopted California emission regulations.

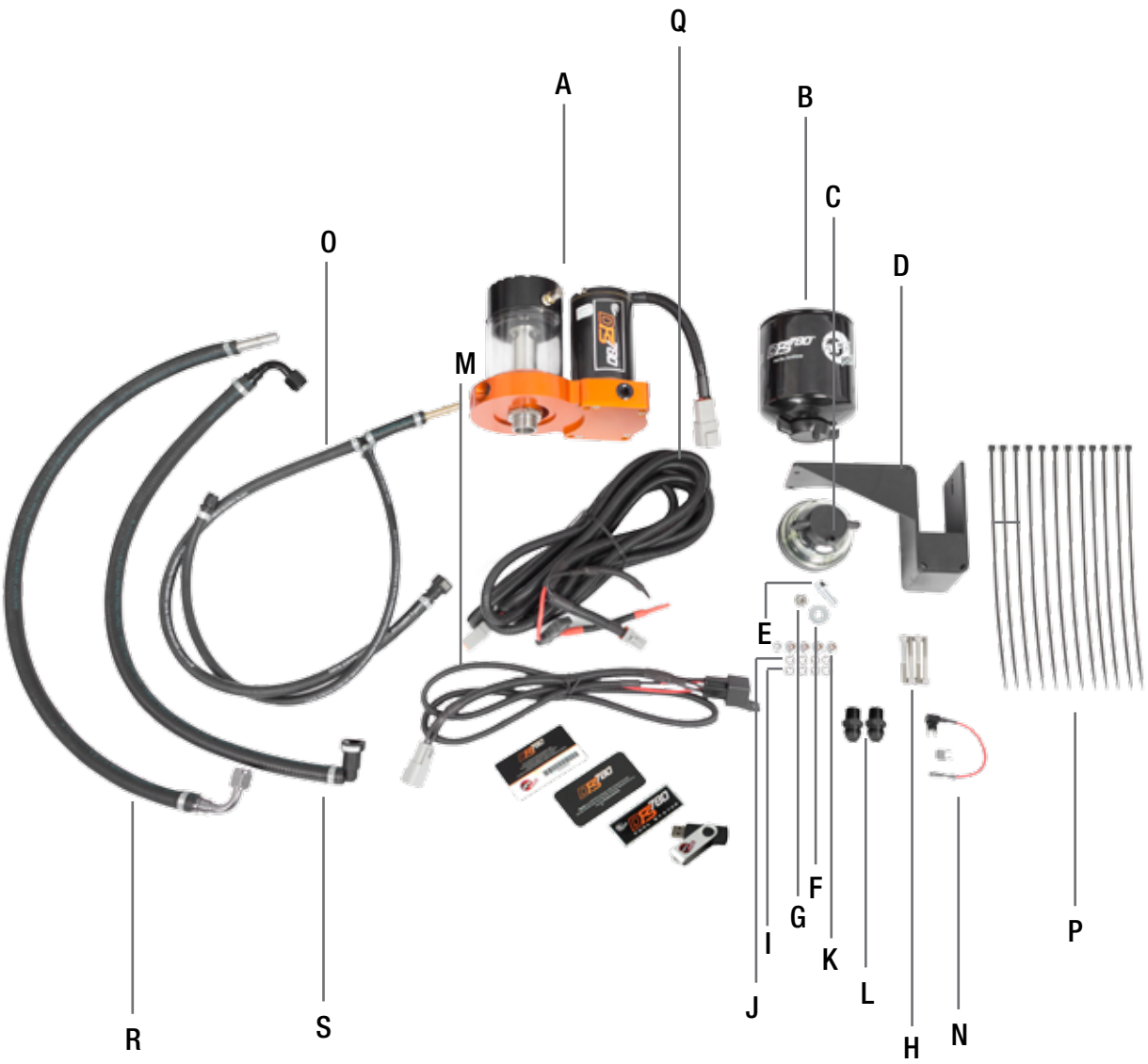
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Figure 1

Step 1: Looking at the driver's side of the truck, on the inside of the frame rail, you will see two hard lines. These are the fuel supply and return lines for the engine. They are held in place by plastic retainers that are bolted to the frame (shown above).
Step 2: Locate the retainer that is below the driver's side door (labeled as "2" above).
Step 3: Remove the nuts from the backside of the three (3) stock fuel line retainers (leave the fuel lines in their retainers.

Figure 2

Step 4: Gently pull the fuel lines/retainers off of the frame rail. Be careful not to bend or kink the fuel lines.

Step 5: Place the supplied carbon steel frame bracket between the frame and the stock fuel line retainer located in Step 2.

Step 6: While making sure the carbon steel frame bracket is sitting on the bottom of the frame, reinstall and tighten the factory nuts removed in Step 3.
- (1) M8 x 1.25 x 25mm bolt
- (1) M8 washer
- (1) M8 locknut

NOTE: If the fuel line retainers are not there please use the supplied hardware to attach the bracket to the frame.

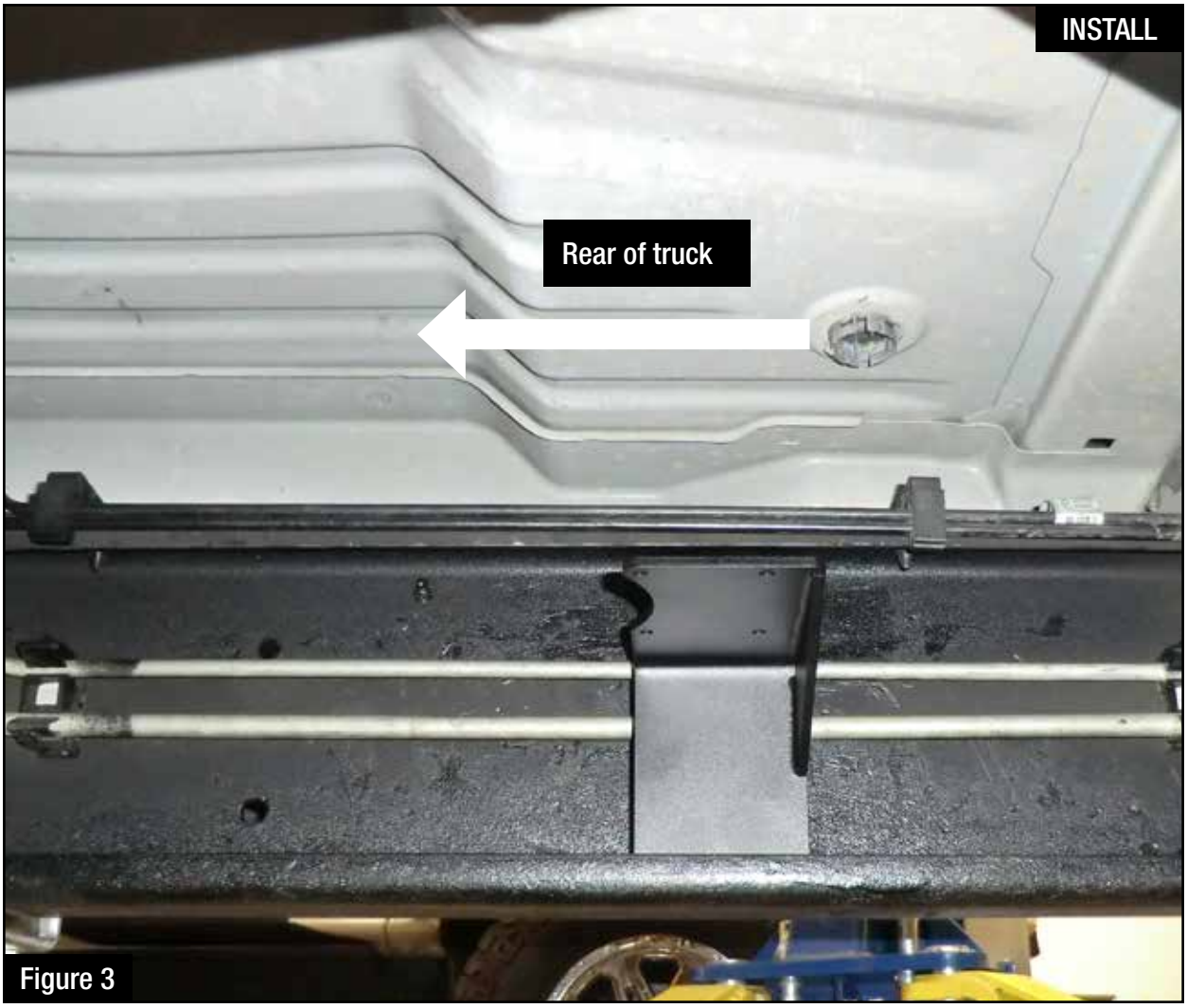

Figure 3

NOTE: This is what the bracket looks like when installed correctly.

Figure 4

Step 7: Mount the supplied fuel manifold assembly to the carbon steel frame bracket using the supplied hardware and tighten.

- (4) M6x1.0 x 50mm bolts
- (4) M6 washers
- (4) M6 fiber washers
- (4) M6 flanged locknuts

NOTE: The fiber washers go between the fuel manifold assembly and the carbon stee bracket.

Figure 5

Step 8: Turn sight glass to the desired angle and using a 1-1/4" wrench, tighten the center nut under the fuel manifold.

NOTE: The pump should look like the picture above.

Figure 6

Step 9: Using a light oil, lube the gasket on the supplied fuel filter and install on the fuel manifold assembly. Thread the supplied water separator bowl onto the fuel filter.

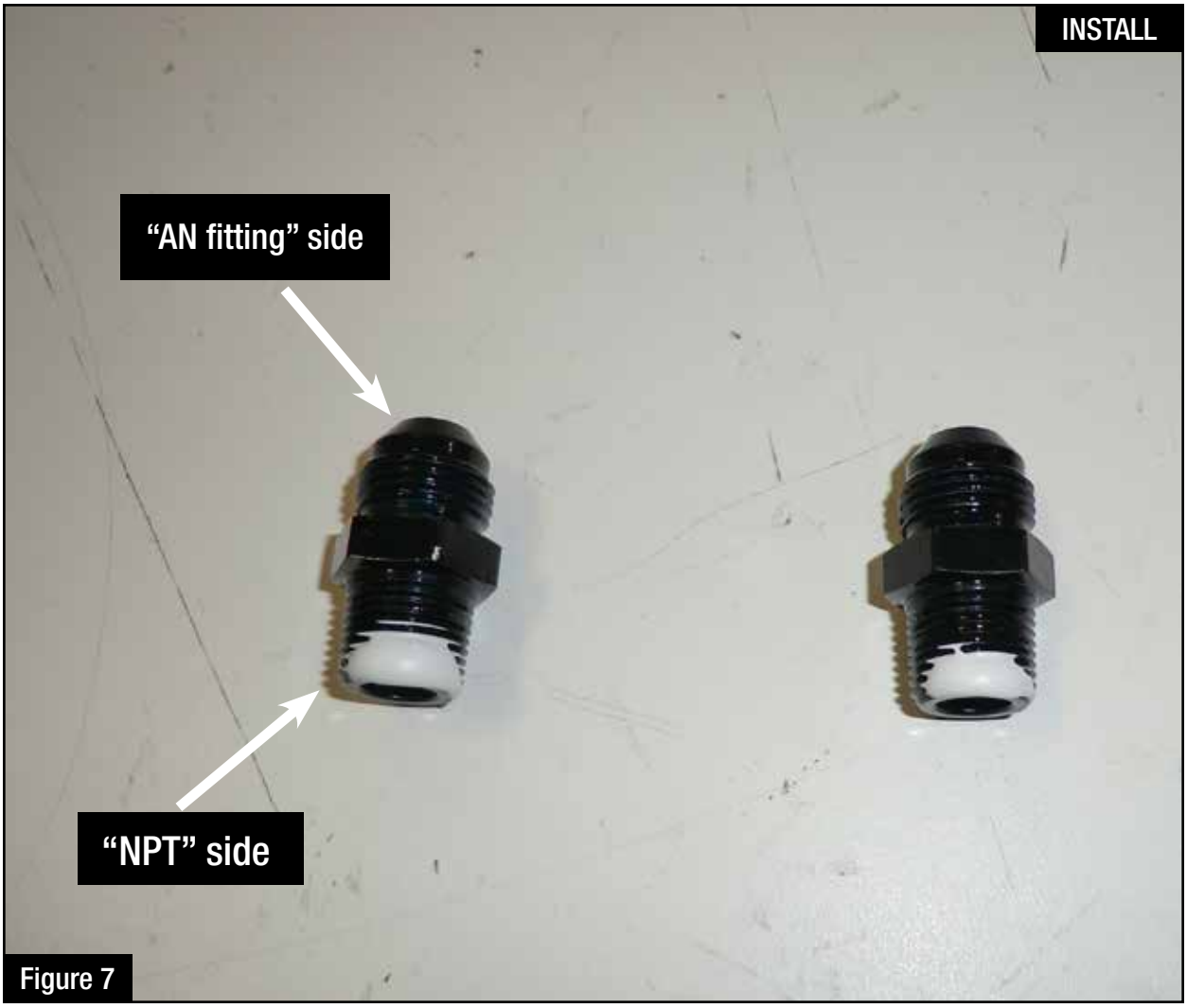

Figure 7

Step 10: Apply Teflon tape with (PTFE) or Teflon paste with (PTFE) to the 2 x 3/8" NPT to -8 AN fittings.

NOTE: Only apply Teflon to the NPT side of the fitting.

Figure 8

Step 11: Install the 2 x 3/8" NPT to -8 AN fittings into the fuel manifold assembly (as shown above).

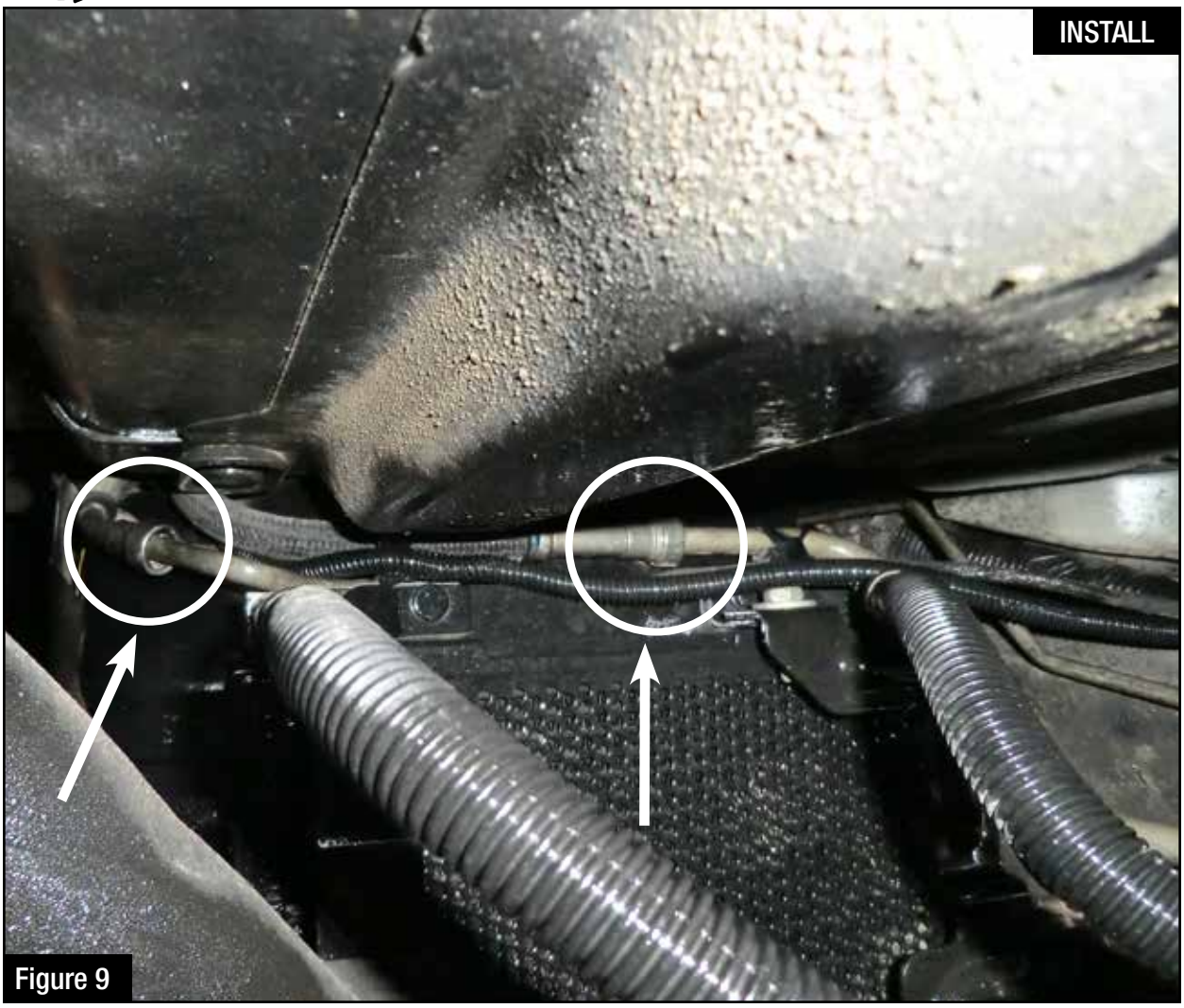

Figure 9

NOTE: If you have a 2001 - 2008 truck and the fittings look like the above picture, you will need a special tool to release the fuel line from the connectors.

You can get this tool at your local parts store.

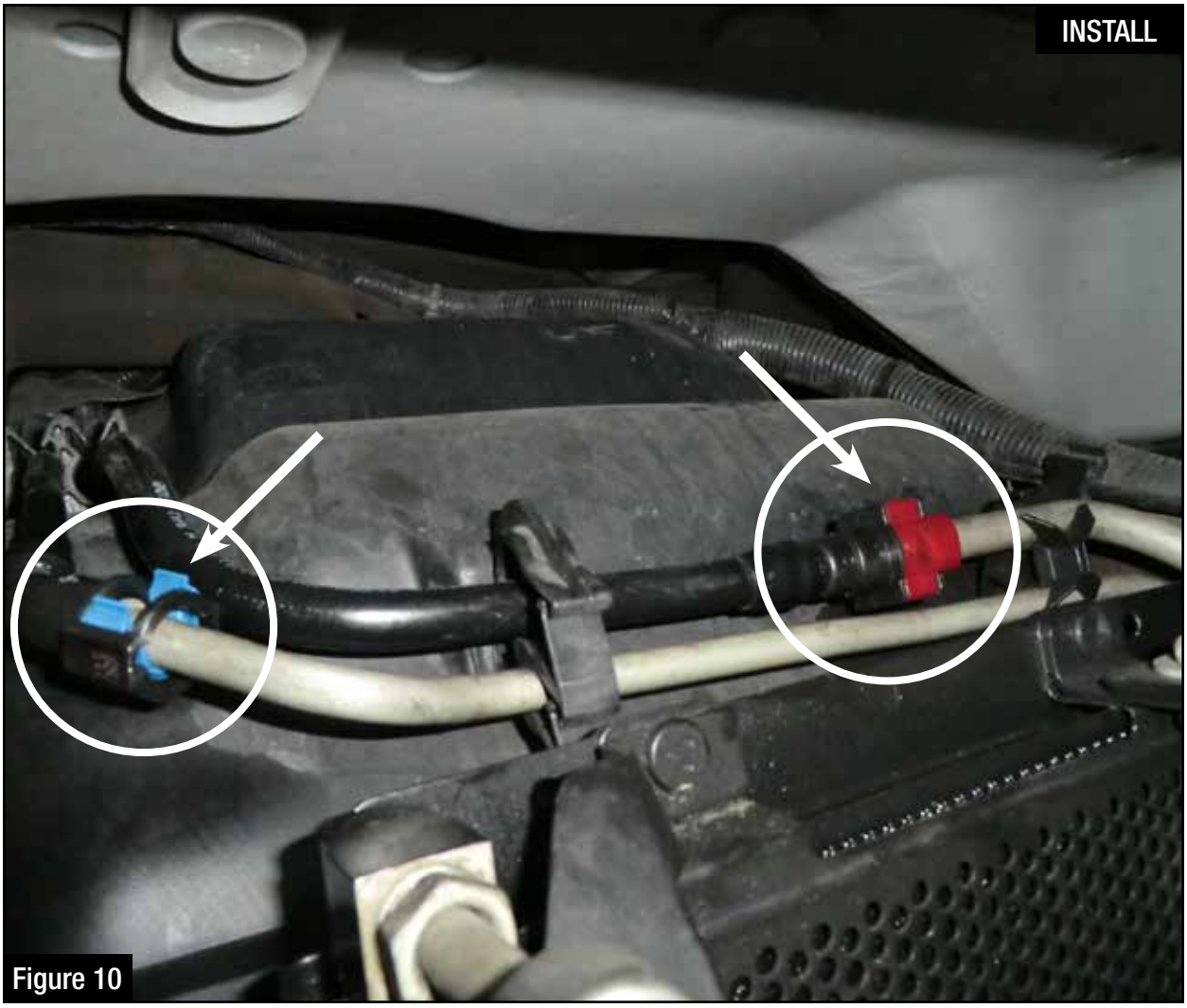

Figure 10

NOTE: This is what the connections look like on the 2009 – 2010 truck.

Figure 11

Step 12: Clean the area around the fuel lines to prevent dirt and debris from going into the lines.

NOTE: 2009-2010 model shown in the pictures.

Figure 12

Step 13: Disconnect the 1/2" fuel feed line.

NOTE: 2009 -2010 model shown in the pictures.

Figure 13

Step 14: Install the straight male quick disconnect fitting on the supplied fuel inlet hose (silver 90° -8 AN fitting - shown below) into the female side of the stock fuel feed line.

NOTE: 2009 - 2010 model shown in the pictures.

Figure 14

Step 15: Install the 90° female quick disconnect fitting on the supplied fuel outlet hose (black 90° -8 AN fitting - shown below) onto the male side of the stock fuel feed line.

NOTE: 2009 - 2010 model shown in the pictures.

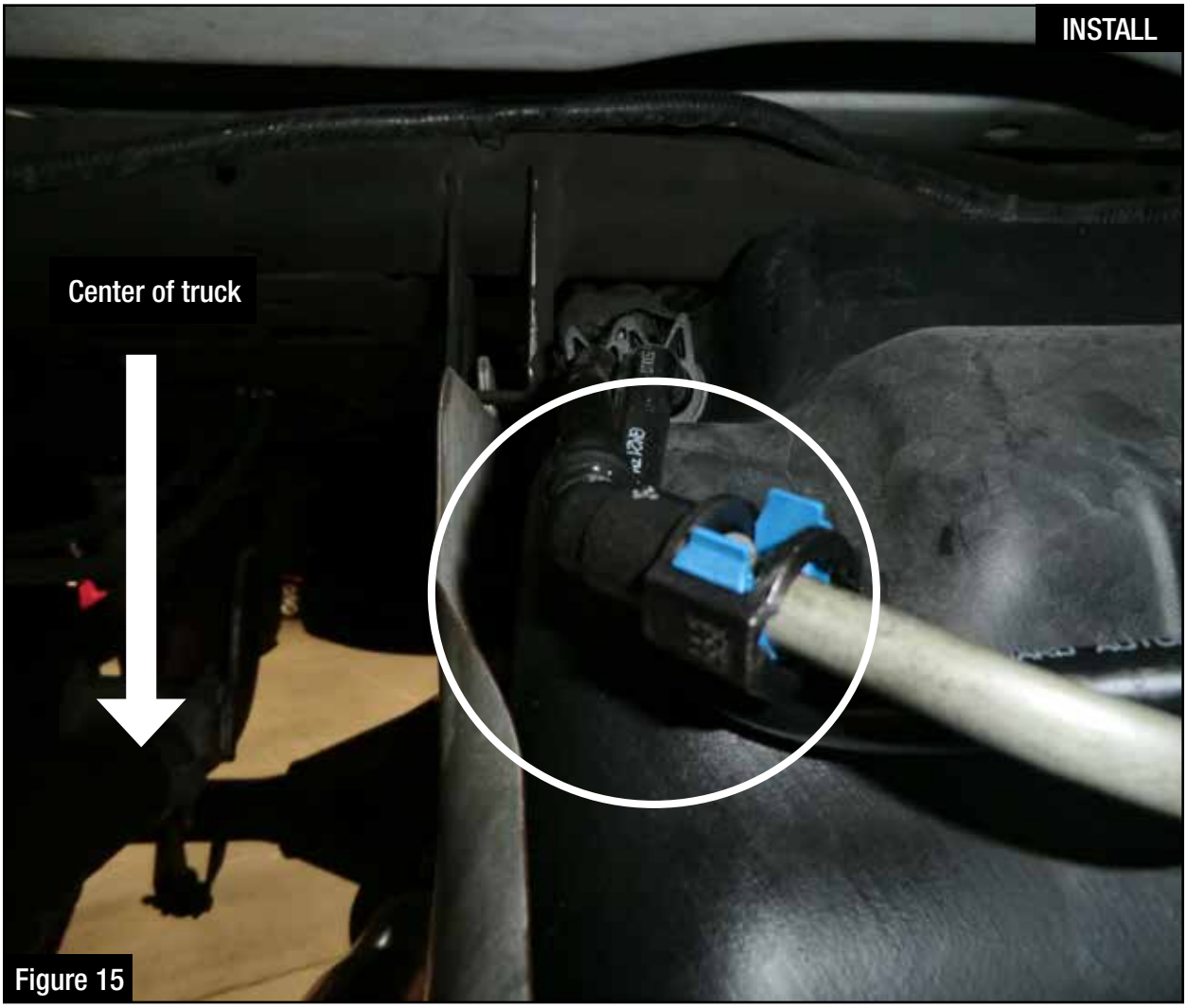

Figure 15

Step 16: Locate the factory fuel return line. It is located at the front of the fuel tank near the center of the truck.

NOTE: 2009 - 2010 model shown in the pictures.

Figure 16

Step 17: Disconnect the stock fuel return line.

NOTE: 2009 - 2010 model shown in the pictures.

Figure 17

Step 18: Install the straight male quick disconnect fitting on the supplied fuel return hose (shown below) into the female side of the stock fuel return line.

NOTE: 2009 - 2010 model shown in the pictures.

Figure 18

Step 19: Install the straight female quick disconnect fitting on the fuel return hose (shown below) onto the male connection of the stock fuel return line.

NOTE: Make sure that the line doesn't not kink while making connections.

Figure 19

Step 20: Install the fuel inlet hose (silver 90° -8 AN fitting) onto the male -8 AN fitting on the fuel inlet port of the fuel manifold assembly.

Figure 20

Step 21: Install the fuel outlet hose (black 90° -8 AN fitting) onto the male -8 AN fitting on the fuel outlet port of the fuel manifold assembly.

Figure 21

Step 22: Install the fuel return hose (-4 AN fitting) onto male -4 AN fitting on the top of the sight glass cover.

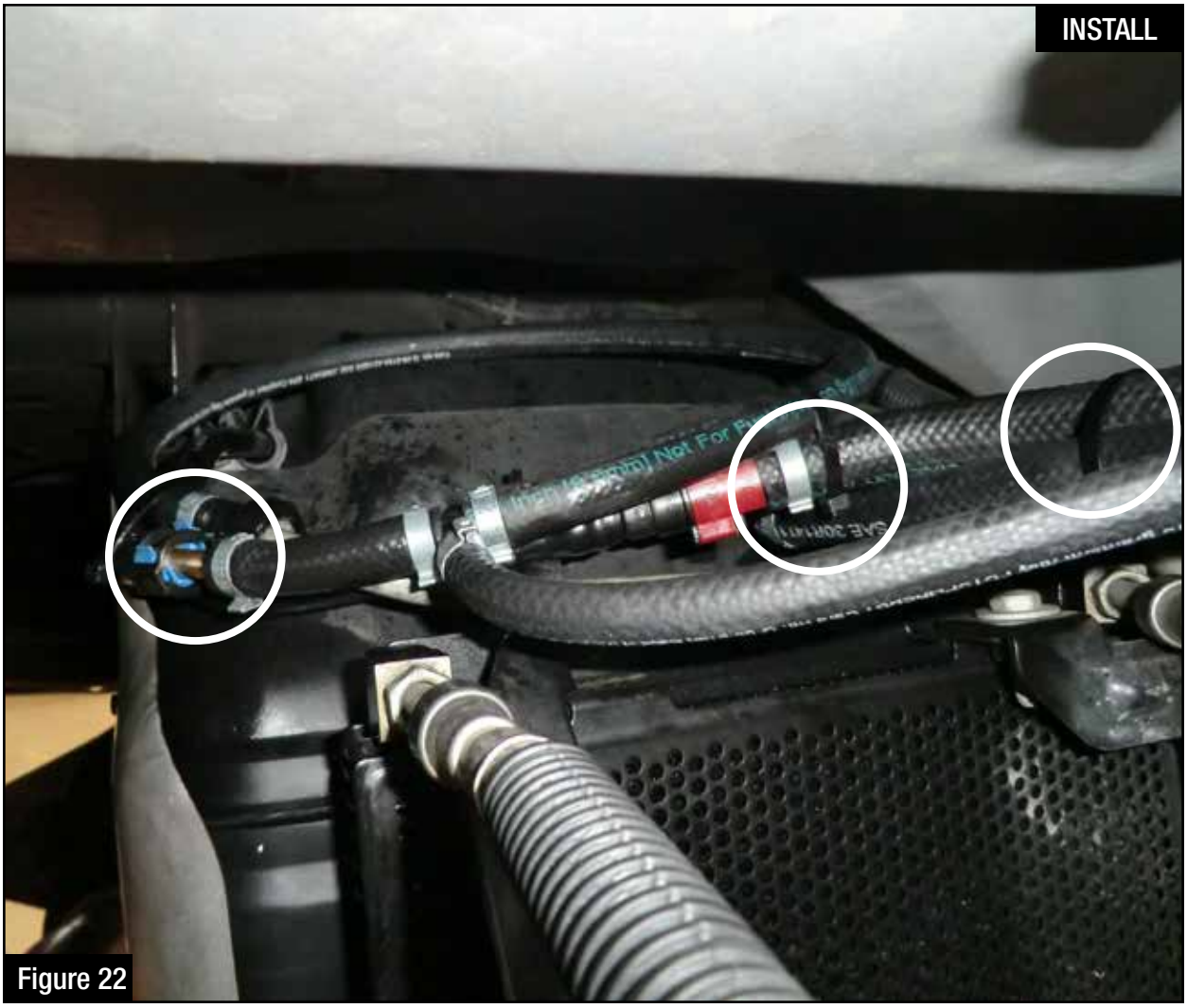

Figure 22

Step 23: Using the supplied nylon cable ties, secure the new hoses (as shown above).

NOTE: 2009 - 2010 model shown in the pictures.

Figure 23

Step 24: Using the supplied nylon cable ties, secure the new hoses (as shown above).

Figure 24

Step 25: From the inside of the frame, plug the Deutsch connector on the supplied power harness into the mating connector on the fuel pump motor.

Step 26: Route the power harness along the inside of the frame towards the front of the vehicle.

Step 27: Organize the power harness and secure with the supplied nylon cable ties.

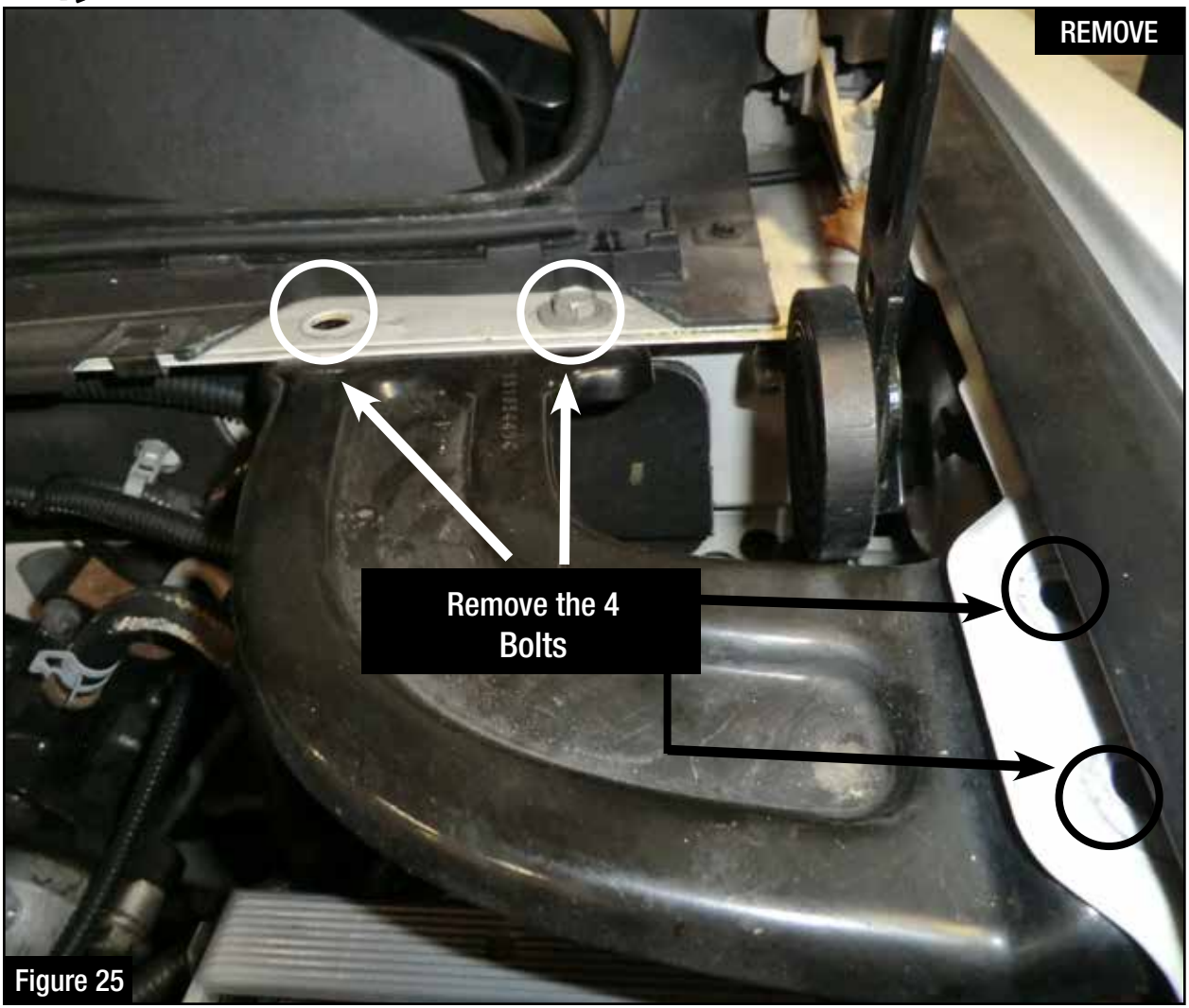

Figure 25

Step 28: Remove the four (4) bolts holding the corner brace in the engine compartment. Remove the brace and hardware and retain for re-installation.

Figure 26

Step 29: Run the other end of the power harness along the inside of the frame into the engine compartment.

Figure 27

Step 30: Connect the red wire ring terminal to the positive side of the battery.

NOTE: Check the fuse to make sure it is already installed in the connector.

Figure 28

Step 31: Connect the black wire ring terminal on the power harness to the negative side of the battery.

Figure 29

Step 32: Plug the supplied relay harness into the Deutsch connector on the power harness.

Figure 30

Step 33: Secure the relay harness using a supplied cable tie.

Figure 31

Step 34: Attach the power wire from the relay harness to the add a harness fuse adapter.

Figure 32

Step 35: Remove the fuse box cover.

Step 36: Find a 12 volt source inside the fuse box that only comes on with the key in the “run” position. Once a 12 volt source is located, pull fuse from the fuse box.

Locations for inline fuse adapter plug in (underhood fuse block):

2001:	#15
2002:	#53
2003-2006:	#SEO IGN (marked on the cover of fuse panel)
2007-2008:	#42
2009-2010:	#40

Figure 33

Step 37: Install the fuse removed in Step 36 into the open location on the add a harness fuse adapter (not in line with the wire).

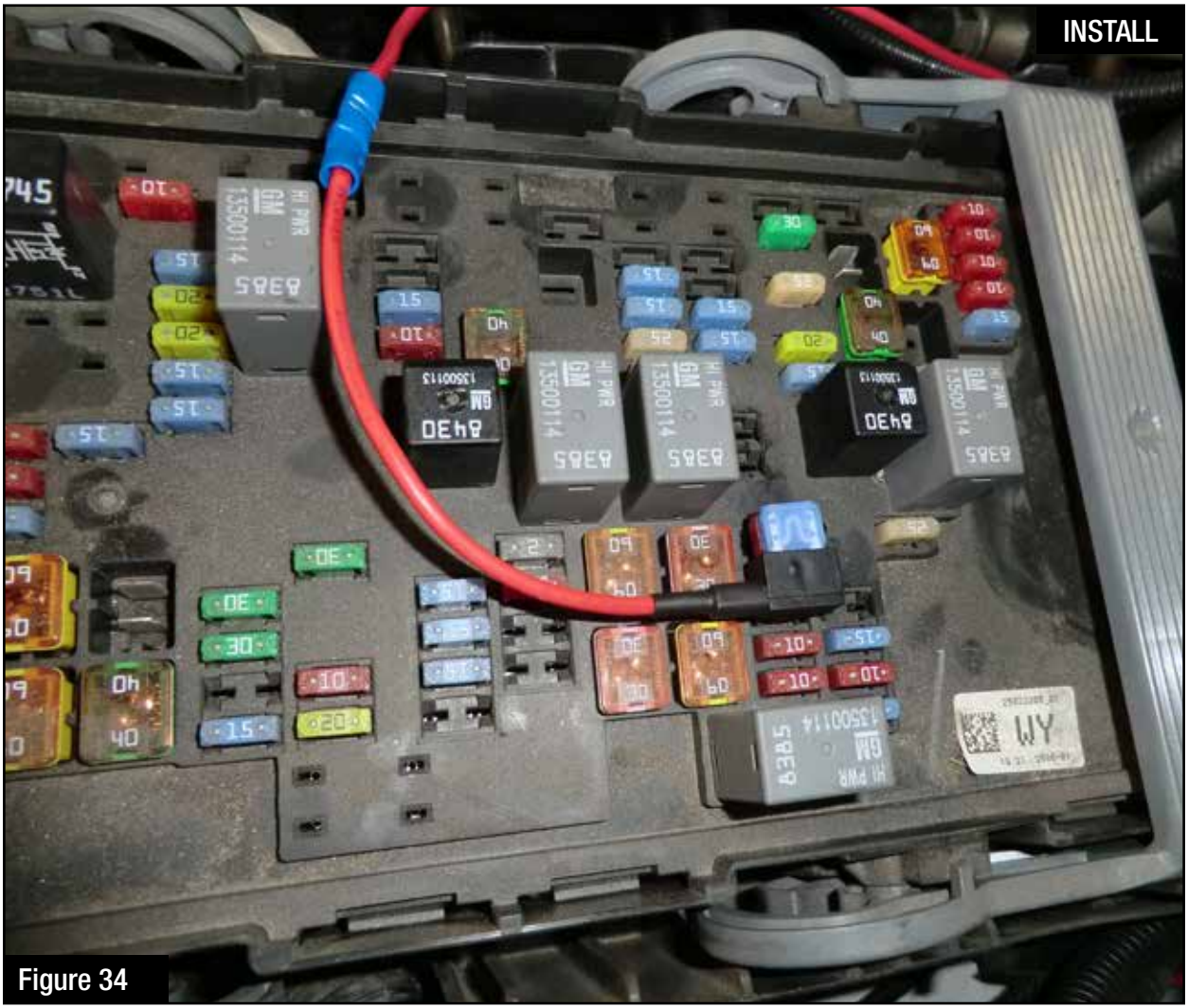

Figure 34

Step 38: Install the add a harness fuse adapter (with installed fuses) into the 12 volt source location chosen in Step 36.

Figure 35

Step 39: Carefully route the power wire outside the fuse box and reinstall the cover (making sure not to pinch the wire).

Step 40: Organize the wire harnesses and secure with the remaining nylon cable ties.

Step 41: Reinstall the corner brace using the hardware removed from Step 28.

Figure 36

Step 42: Turn the key to the “Run” position and watch to see if the sight glass fills with fuel. If the sight glass does not fill with fuel, use the tank valve (on the top of the sight glass cover) to release any trapped air. If the sight glass still does not fill, try starting the engine.

Step 43: Installation is now complete. Make sure that all fittings are tight and that fuel is not leaking from any of the connections made while installing.

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Turbocharger

P/N: 46-60100 (LB7)

Rear Differential Cover

P/N: 46-70012-WL

Transmission Pan

P/N: 46-70242 (Black)
46-70240 (RAW)

Intake System “Momentum”

P/N: 50-74001 (LB7)
50-74002 (LLY)
50-74003 (LLY/LBZ)
50-74004 (LMM)

Intake Manifold

P/N: 46-60039-1
(LBZ/LLY/LMM)

Torque Converter

P/N: 43-14011

Fuel Filter

P/N: 44-FF011

Oil Filter

P/N: 44-LF001

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to aFepower.com.

DFS FUEL SYSTEM
"WORRY FREE" WARRANTY POLICY

Please read this warranty policy before proceeding with the installation of this advanced FLOW engineering, Inc. (aFe) product.

aFe's obligation under the "Worry Free" Warranty is covered for two years from date of purchase. The "Worry Free" Warranty is limited to replacement of the defective or worn-out product with the same (or comparable) product in accordance with this warranty. Under no circumstances will the obligation or liability of aFe exceed the purchase price of the product as indicated on the original bill of sale. Warranties are non-transferable, contain no cash value and are only extended to the owner of the vehicle provided that the ownership has not changed since the installation of the product. This warranty does not apply to products which have been altered, modified, damaged from neglect, abuse or from an accident, misused, improperly installed, contaminated with dirt or other contaminants, or used in applications other than recommended in our printed or digital media. aFe does not provide reimbursements for delay, shipping fees, labor, mileage, or any other costs involved in installation or re-installation of the products in question.

Registration Process:

Simply register your DFS Fuel System product online at http://www.aFepower.com/reg

Claim Process:

To file a warranty claim, customers are required to submit their information using the warranty claim form online at http://afepower.com/inquiries/tech-warranty.php

All Warranty Claims require: 1) Online registration of the product. 2) If item has not been registered online, then a copy of your original purchase receipt is required. 3) An image of the warrantied part. 4) An image showing the serial number on the warranty card or the barcode label on the box. You may be required to return the part for inspection and you may be required to purchase a new replacement part while the warranty claim is being processed. Once the warranty claim has been reviewed and approved, aFe will provide you with a refund of the replacement purchase price. aFe's obligation under the "Worry Free" Warranty is limited to replacement of the defective or worn-out product (excluding finish) with the same (or comparable) product in accordance with this warranty. In addition this warranty does not cover fuel filters, which need to be replaced when worn. Warranty is valid provided aFe instructions for installation were properly followed.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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