advanced FLOW engineering

Instruction Manual P/N: 42-12035

Make: **RAM** Model: **Diesel Trucks** Year: 2013-201**8** Engine: **L6-6.7L (td)**
Fuel Pressure: **16-18 psi (relay controlled - replaces factory fuel pump)**
Supported Horsepower: **2000+**

Label	Qty.	Description	Part Number
A	1	Fuel Manifold Assembly	05-60748
B	1	Filter, Fuel	44-FF019
C	1	Bowl, Water Separator	05-60487
D	1	Bracket, Frame; Carbon Steel	05-60677
E	1	Bolt, 3/8"-16 x 3.50"	03-50487
F	1	Washer, 3/8"	03-50488
G	1	Spacer, Aluminum	05-60690
H	1	Locknut, 3/8”	03-50047
I	4	Bolt, M6 x 1.0 x 50mm	03-50443
J	4	Washer, M6 (Fiber)	03-50457
K	4	Washer, M6	03-50444
L	4	Nut, Flanged; M6	03-50445
M	2	Fitting; 3/8" NPT to -6 AN (Straight)	05-60634B
N	1	Harness, Relay	05-60551
O	1	Adapter, Fuse; Add a harness	05-60691
P	1	Hose, Fuel Return	05-60689
Q	18	Ties, Nylon Cable; 12"	05-60167
R	1	Harness, Power	05-60632
S	1	Hose, Fuel Inlet	05-60673
T	1	Hose, Fuel Outlet	05-60681
U	1	Tube, Suction; 12” (with slash cut)	05-60579
V	1	Tube, Return; 12”	05-60570
W	2	Clamp, Spring	05-60578

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.

- 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


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1. Locate the hole in the driver's side frame rail behind the DEF tank and in front of the fuel tank.

2. Gently pull the hard lines off the frame rail. Be careful not to bend or kink the hard lines.

3. Place the supplied carbon steel frame bracket between the frame and the hard lines.

4. Line up the carbon steel frame bracket with the hole located in Step 1.

5. Install the supplied 3/8”-16 x 3.50” bolt through the carbon steel frame bracket and the frame rail.

6. Install the supplied aluminum spacer onto the 3/8”-16 x 3.50” bolt.

7. Using the supplied 3/8 locknut and 3/8” washer, tighten the bracket on to the frame rail.

8. Re-install the hard lines onto the frame rail.

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

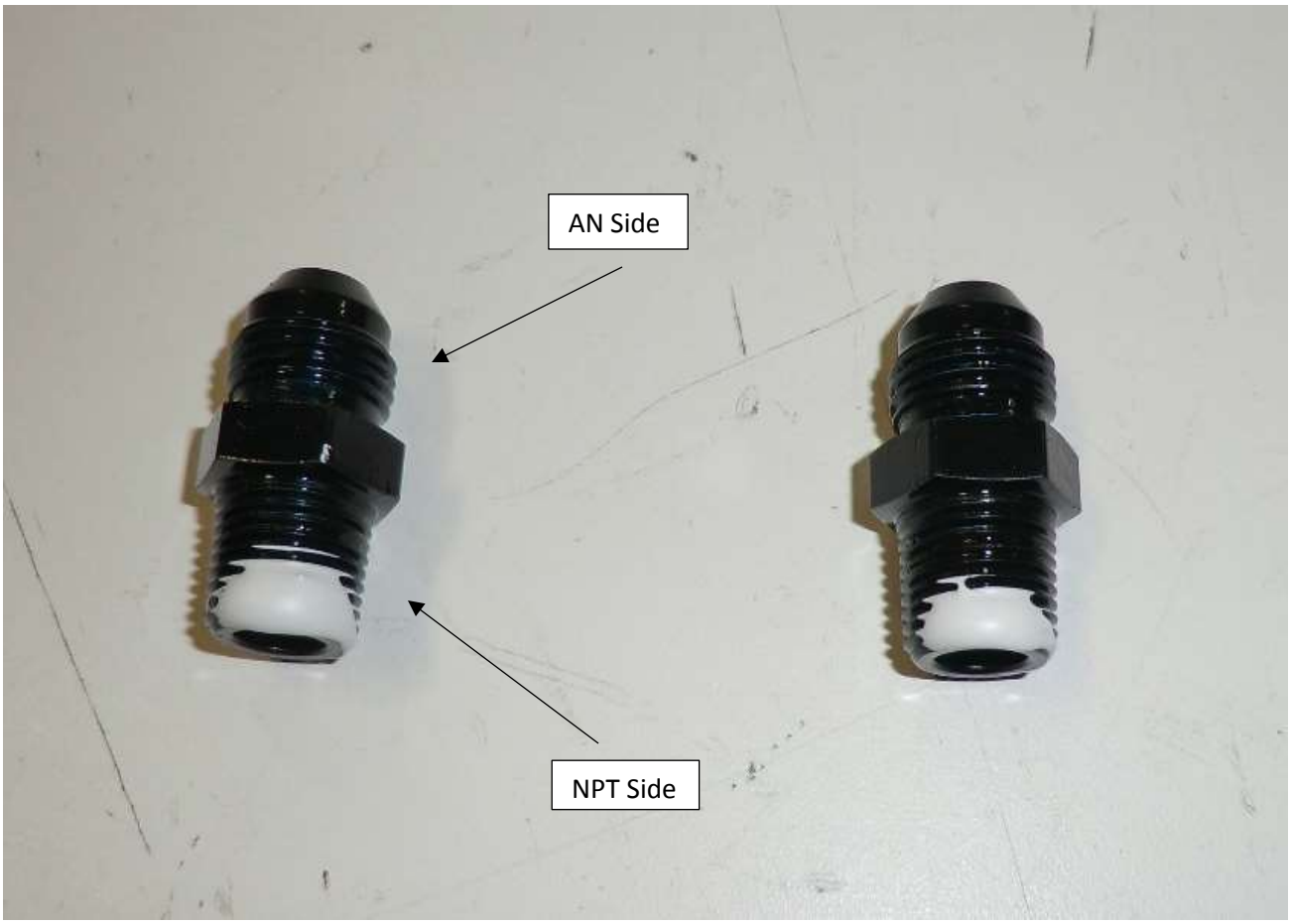
    - (x4) M6x1.0 x 50mm bolts
    - (x4) M6 washers
    - (x4) M6 fiber washers
    - (x4) M6 flanged locknuts

Note: The fiber washers go between the fuel manifold assembly and the carbon steel bracket.

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

Note: The pump should look like the picture above.

11. 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.



12. Apply Teflon tape with PTFE (or Teflon paste with PTFE) to the supplied fittings.

- (x2) 3/8” NPT to -6 AN

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

13. Install the 3/8” NPT to -6 AN fittings into the fuel manifold assembly (as shown above).

14. Remove the fuel tank from the vehicle.

15. Clean the area around the fuel lines to prevent dirt and debris from going into the tank.

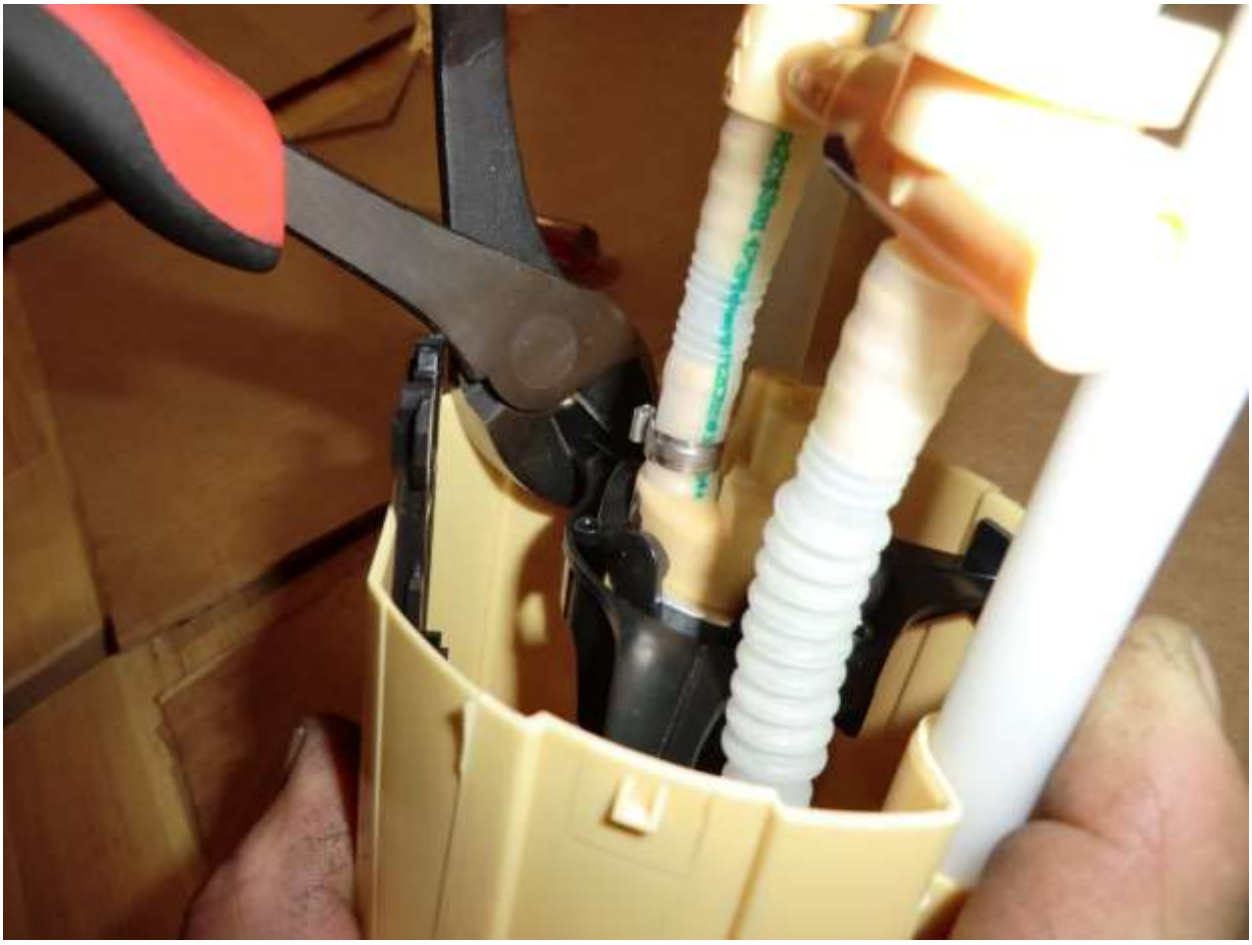
16. Remove the lock ring and the stock fuel sender assembly.

17. Unplug the electrical connector at the top of the fuel sender assembly.

18. Unplug the two wires connected to the stock fuel pump.

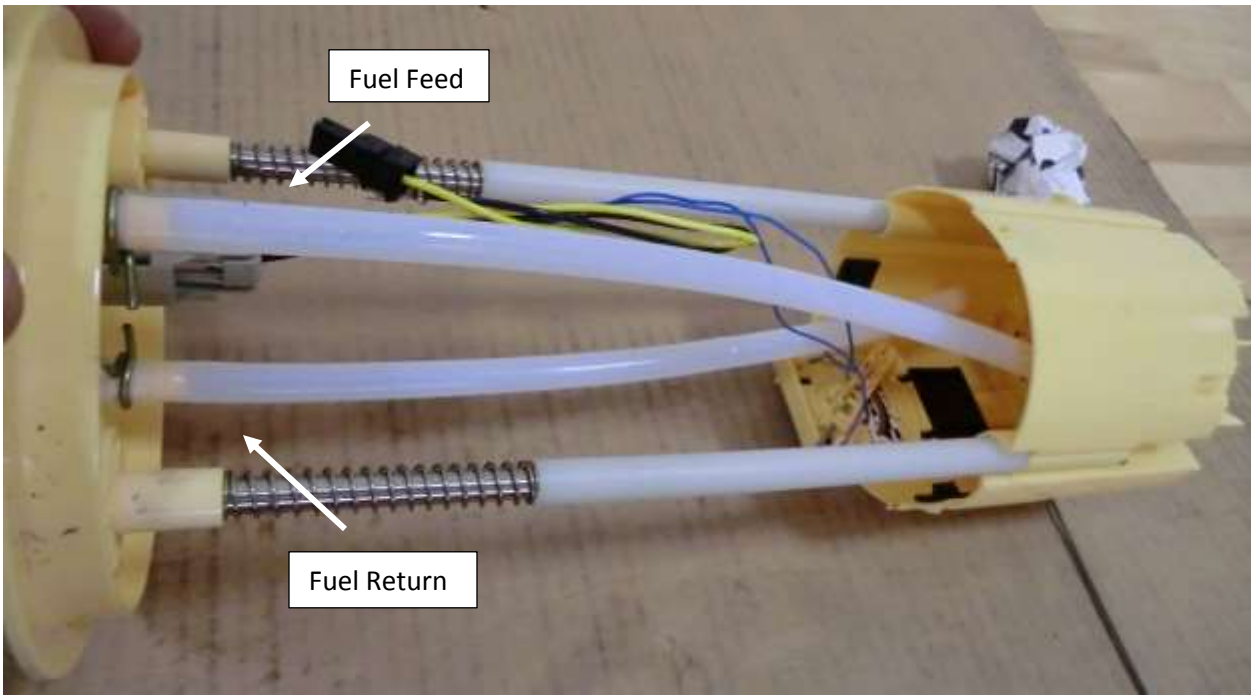
19. Carefully cut the suction and return lines and disconnect them from the top of the fuel sender assembly.

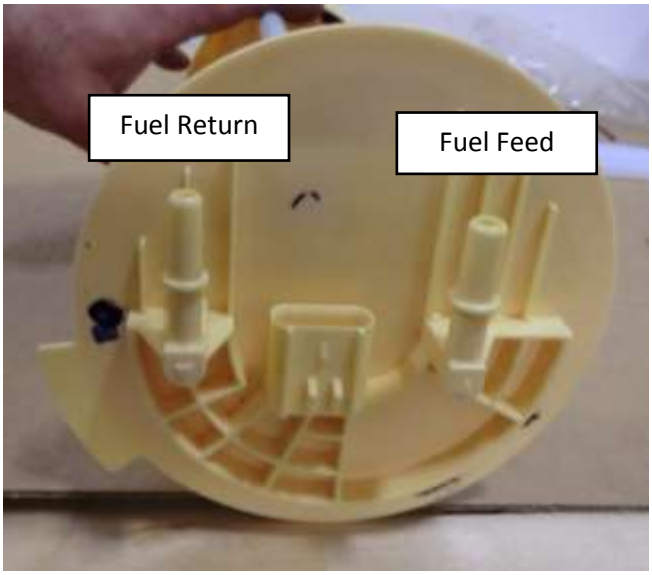
NOTE: It is recommended but not required to remove the fuel level sending unit before performing steps 20 to 23



20. Carefully cut the three supports holding the factory fuel pump.

21. Remove the factory fuel pump, suction line and return line from the fuel sender assembly.

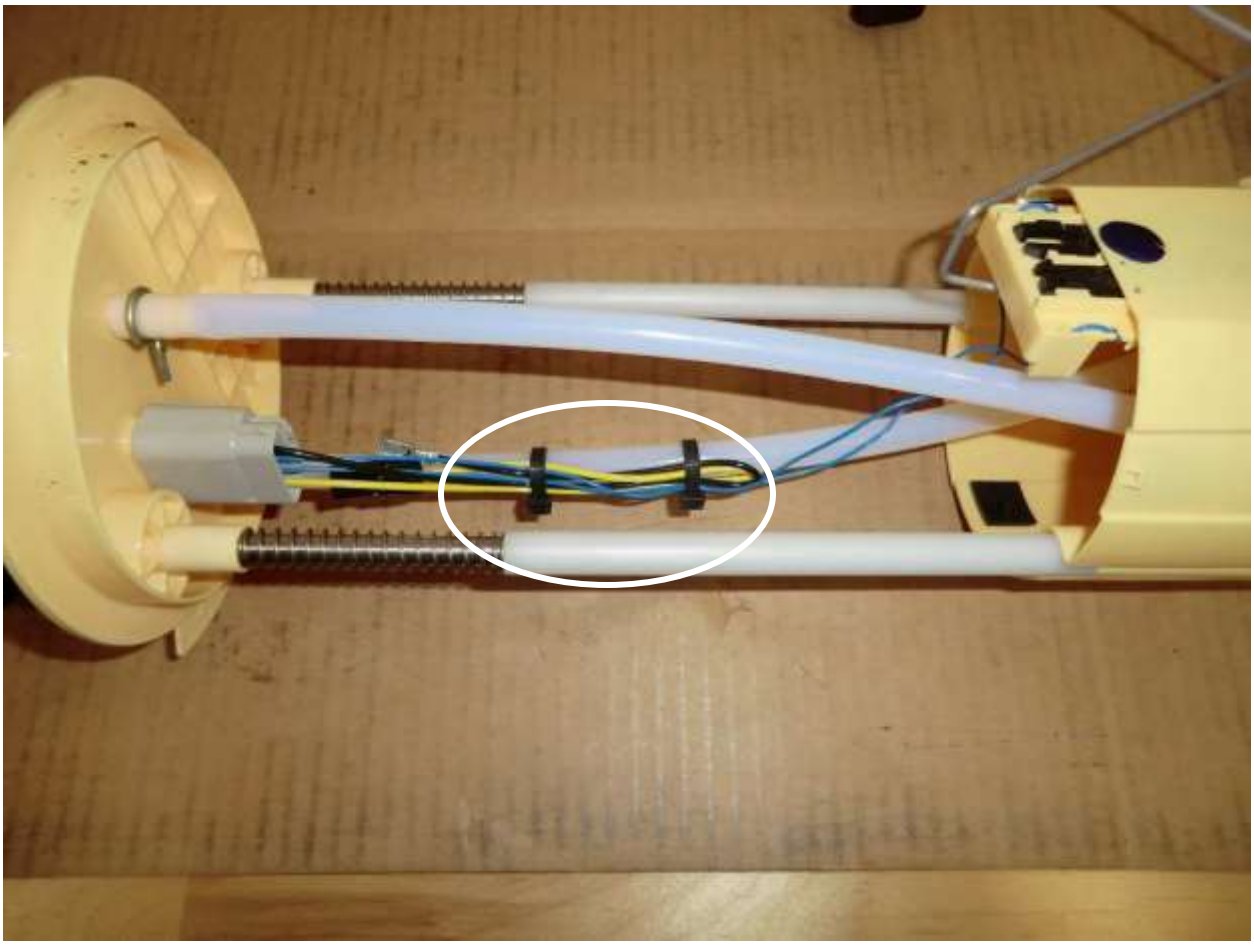




22. Using a supplied spring clamp, install the supplied suction tube (with slash cut) onto the fuel feed side of the fuel sender assembly.

23. Using a supplied spring clamp, install the supplied return tube onto the fuel return side of the fuel sender assembly.

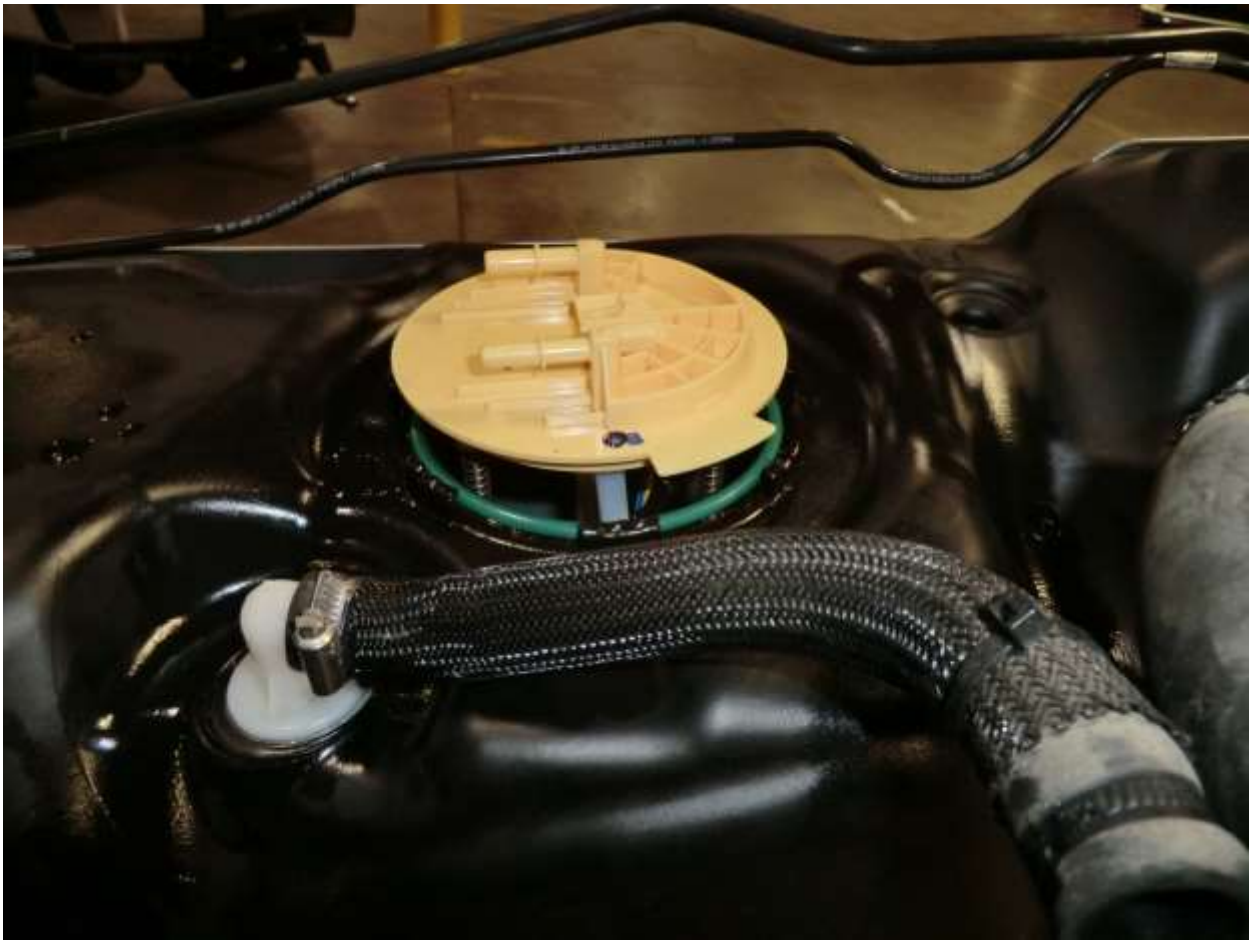
NOTE: Be careful to not kink the fuel suction and return tubes during installation



NOTE: If the fuel level sending unit was removed, reinstall it at this time.

24. Reconnect the electrical connector on the top of the fuel sender assembly.

25. Secure the loose wires to the fuel return tube, making sure the exposed electrical connectors do not touch.



26. Reinstall the fuel sender assembly into the fuel tank.

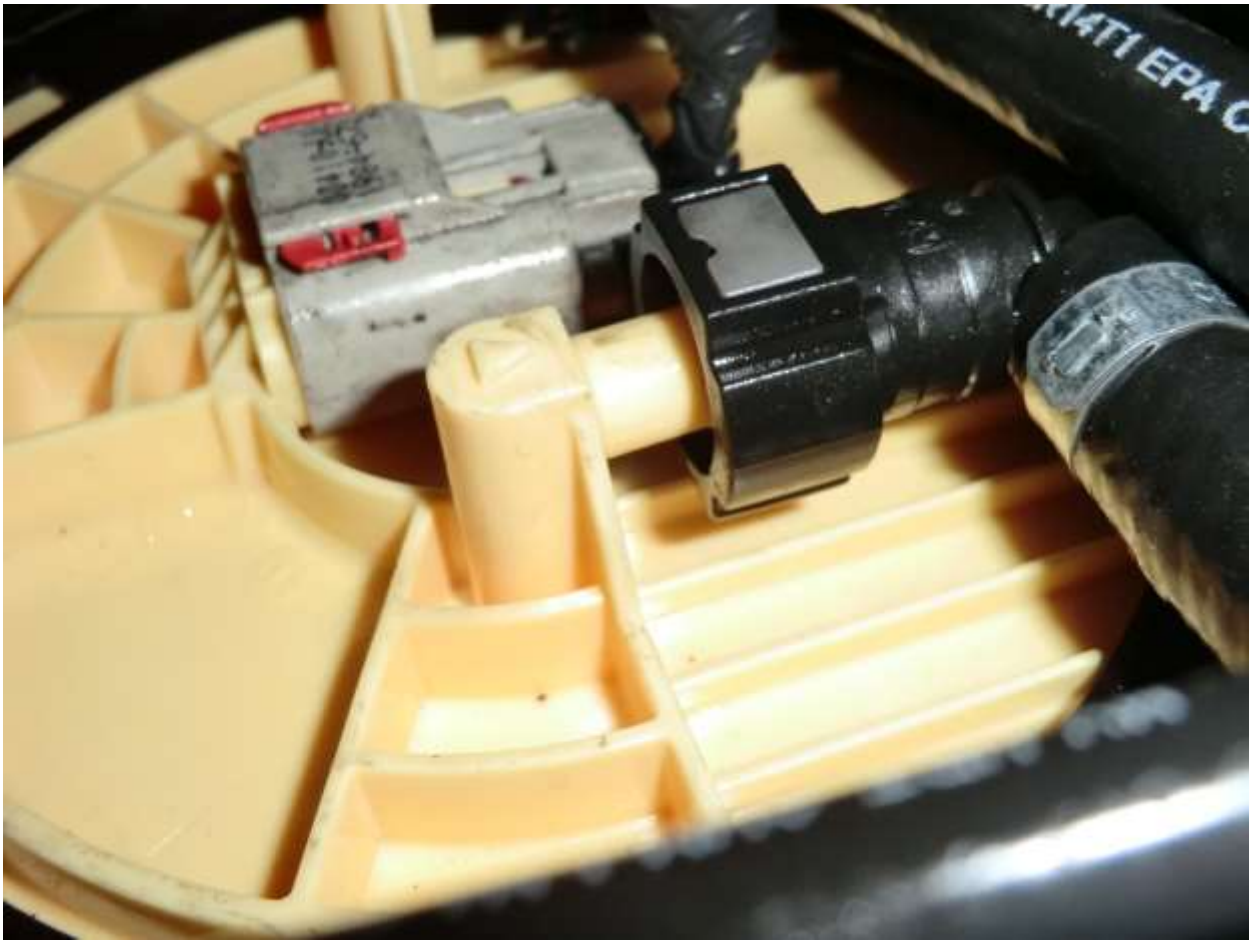
27. Reinstall the fuel tank into the vehicle, but do not reconnect the fuel feed and return lines.

28. Install the straight male quick disconnect fitting on the supplied fuel outlet hose (black 90° -6 AN fitting - shown below) into the female side of the stock fuel feed line.

29. Install the female side of the ”T” quick disconnect fitting on the supplied fuel return hose (shown below) onto the male fuel return connection on the top of the fuel sender assembly.

30. Lock the fitting

31. Install the factory female fuel return line onto the male side of the ”T” quick disconnect fitting on the fuel return hose (shown below).



32. Install the 90° female quick disconnect fitting on the supplied fuel inlet hose (silver 90° -6 AN fitting as shown below) onto the male fuel feed connection on the top of the fuel sender assembly.

33. Route the new hoses as shown and secure with the supplied nylon cable ties.

34. Route the new hoses along the DEF fill tube, between the fuel tank and the fuel tank heat shield. Secure with the supplied nylon cable ties (as shown above).

35. Install the fuel inlet hose (silver 90° -6 AN fitting) onto the male -6 AN fitting on the fuel inlet port of the fuel manifold assembly.

36. Install the fuel outlet hose (black 90° -6 AN fitting) onto the male -6 AN fitting on the fuel outlet port of the fuel manifold assembly.

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

38. Route the hoses as shown and secure with the supplied nylon cable ties.

39. From the inside of the frame, plug the weatherproof connector on the supplied power harness into the mating connector on the fuel pump motor.

40. Route the power harness along the inside of the frame towards the front of the vehicle.

41. Organize the power harness and secure with the supplied nylon cable ties.

42. Run the other end of the power harness along the inside of the frame into the engine compartment.

43. Connect the red wire ring terminal on the power harness to the positive side of the battery.

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

44. Connect the black wire ring terminal on the power harness to the negative side of the battery.

45. Plug the supplied relay harness into the weatherproof connector on the power harness.

46. Organize any of the loose wire harness and secure with the supplied nylon cable ties.

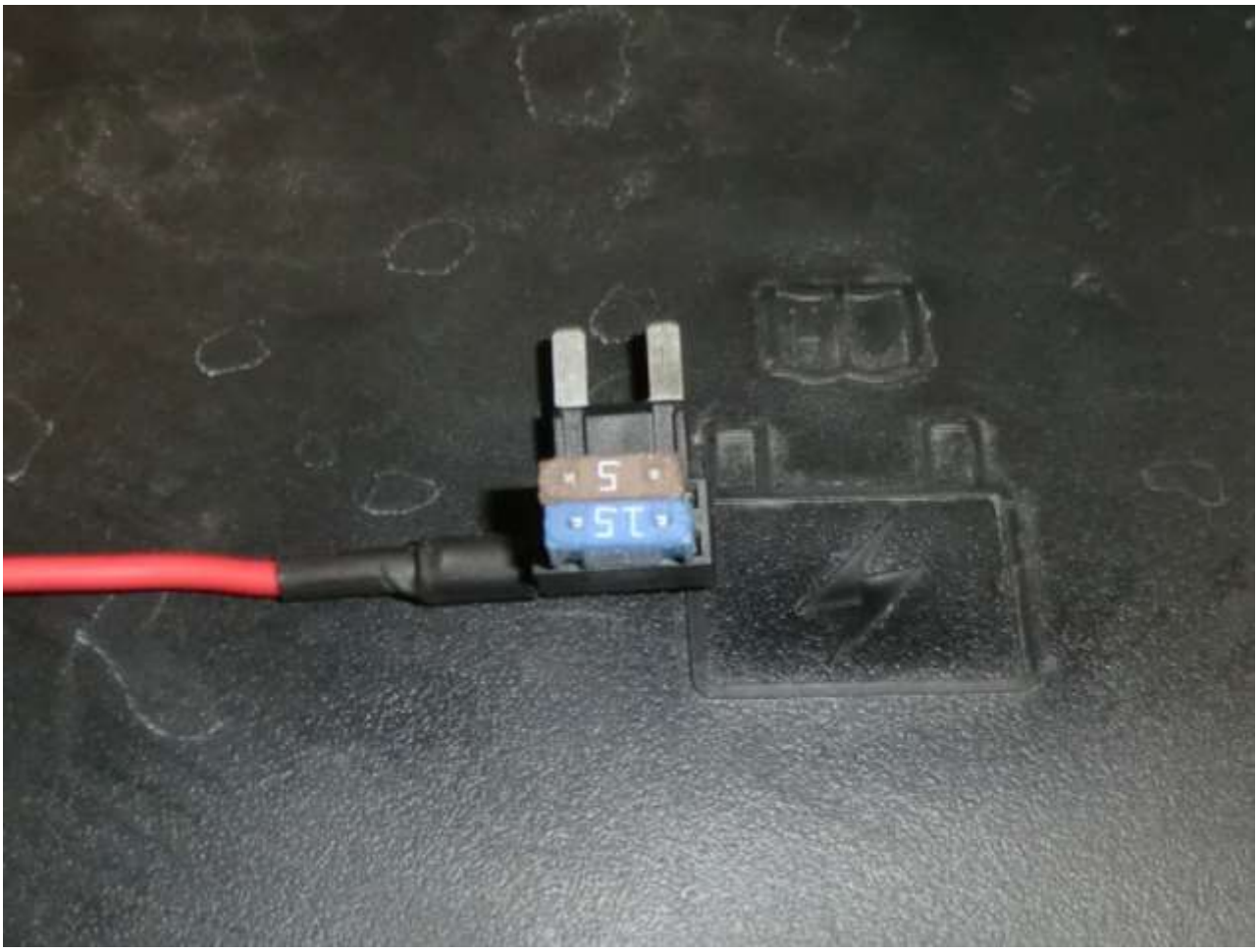
47. Secure the relay harness using a nylon cable tie.

48. Attach the power wire from the relay harness to the supplied add a harness fuse adapter.

49. 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 the fuse from the fuse box.

Locations for inline fuse adapter plug in (under hood fuse block):

2013-2016:	F 51	Ign. Mod.



50. Install the fuse removed on Step 49 and insert it into the open location on the supplied add a harness fuse adapter (not in line with the wire).

51. Install the add a harness fuse adapter (with installed fuses) into the 12-volt source inside the fuse box.

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

53. Organize any of the loose wire harness and secure with the remaining nylon cable ties.

54. 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.

55. 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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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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