
# advanced FLOW engineering

DFS780 Fuel System - Boost Activated

## **Instruction Manual** P/N: 42-13052

Make: **Ford** Model: F250/F-350 Year: **2017** Engine: **V-8 6.7L (td)**

Fuel Pressure: **8-10 psi (boost operated)**

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.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

| Label | Qty | Description | Part Number |
|---|---|---|---|
| A | 1 | Fuel Manifold Assembly | 05-60478 |
| B | 1 | Filter, Fuel | 44-FF018 |
| C | 1 | Bowl, Water Separator | 05-60786 |
| D | 1 | Bracket, Frame; Carbon Steel | 05-60801 |
| E | 18 | Ties, Nylon Cable, 12" | 05-60167 |
| F | 1 | Switch, Pressure | 05-60542 |
| G | 2 | Fitting: 3/8" NPT to -8 AN (Straight) | 05-60685 |
| H | 1 | Bolt, 1/2”-13 - 1.50" | 03-50464 |
| I | 4 | Locknut, Flanged: M6 | 03-50445 |
| J | 1 | Washer, 1/2" | 03-50494 |
| K | 4 | Screw, Socket Hd Cap M6x1.0x50mm | 03-50443 |
| L | 2 | Screw, Socket Hd Cap: 3/8”-16 x 1” | 03-50229 |
| M | 2 | Nut, Flanged Serrated, 3/8”-16 | 05-40103 |
| N | 4 | Washer, M6 | 03-50444 |
| O | 4 | Washer, M6 (Fiber) | 03-50457 |
| P | 2 | Washer, Flat: 3/8 AN | 03-50230 |
| Q | 1 | Jumper, Priming | 05-70004 |
| R | 1 | Harness, Pressure Switch | 05-60701 |
| S | 1 | Harness, Power | 05-60523 |
| T | 1 | Hose, Fuel Outlet | 05-60845 |
| U | 1 | Hose, Fuel Inlet | 05-60844 |
| V | 1 | Hose, Fuel Return | 05-60843 |
| W | 1 | Bracket, Parking Brake Cable | 05-60823 |

***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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1. Locate the transmission crossmember below the driver's door.

2. Mount the supplied carbon steel frame bracket to the frame using the supplied ½”-13 x 1.50” bolt & ½” washer and tighten.

3. Remove the parking brake cable from its forward mount on the frame (under the drivers door).

4. Mount the supplied parking brake cable bracket to the forward mount for the factory parking brake cable with the supplied hardware and tighten.

- (2) 3/8” x 16 x 1” socket head cap screw
- (4) 3/8” AN flat washers
- (2) 3/8” flanged serrated nut

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

- (4) M6x1.0 x 50mm socket head cap screws
- (4) M6 washers
- (4) M6 fiber washers
- (4) M6 flanged locknuts

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


6. Apply Teflon tape with PTFE or Teflon paste with PTFE to the supplied two (2) 3/8” NPT to -8 AN fittings.

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

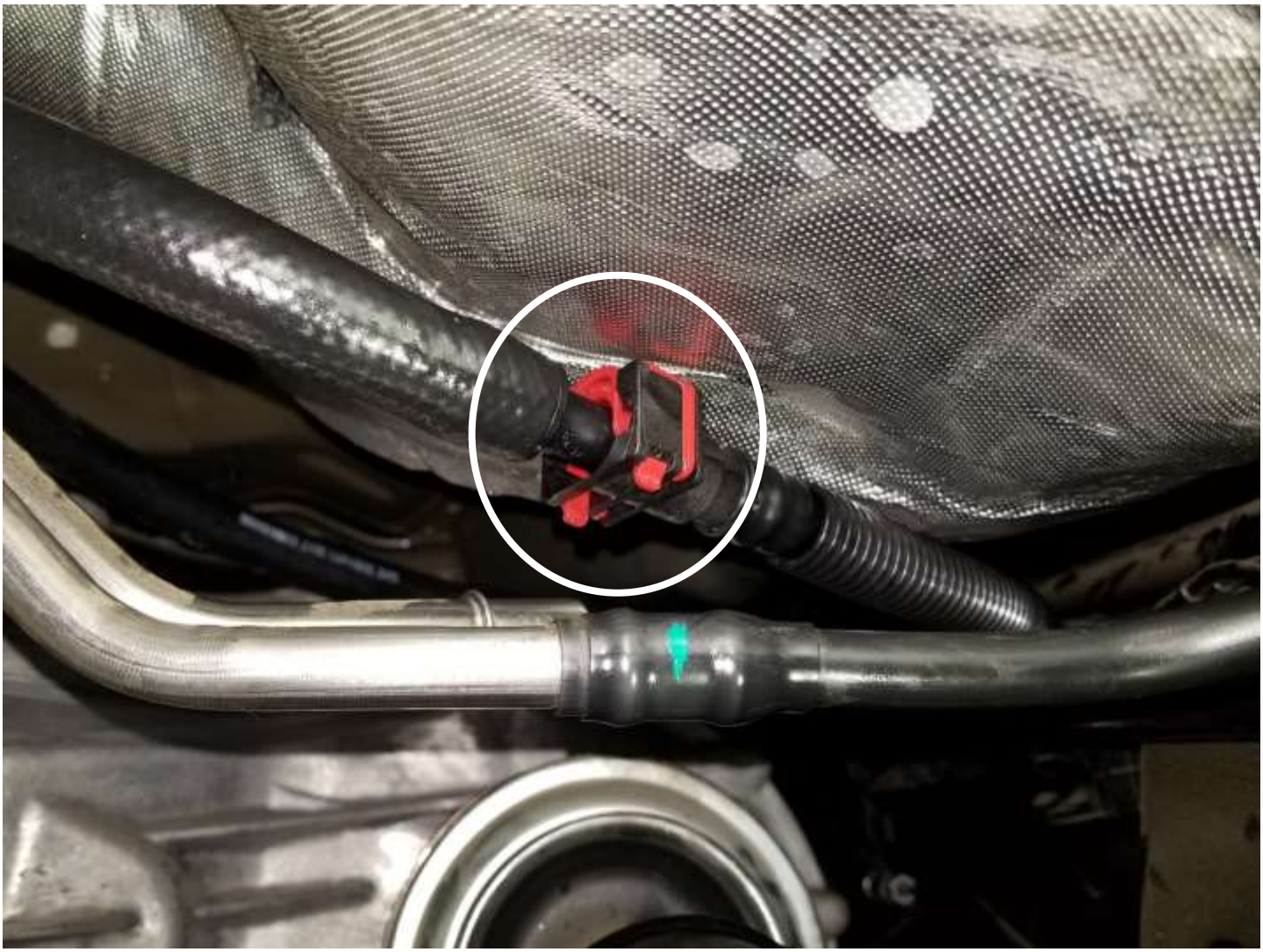
7. Install the two (2) 3/8” NPT to -8 AN fittings into the fuel manifold assembly (as shown above).


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

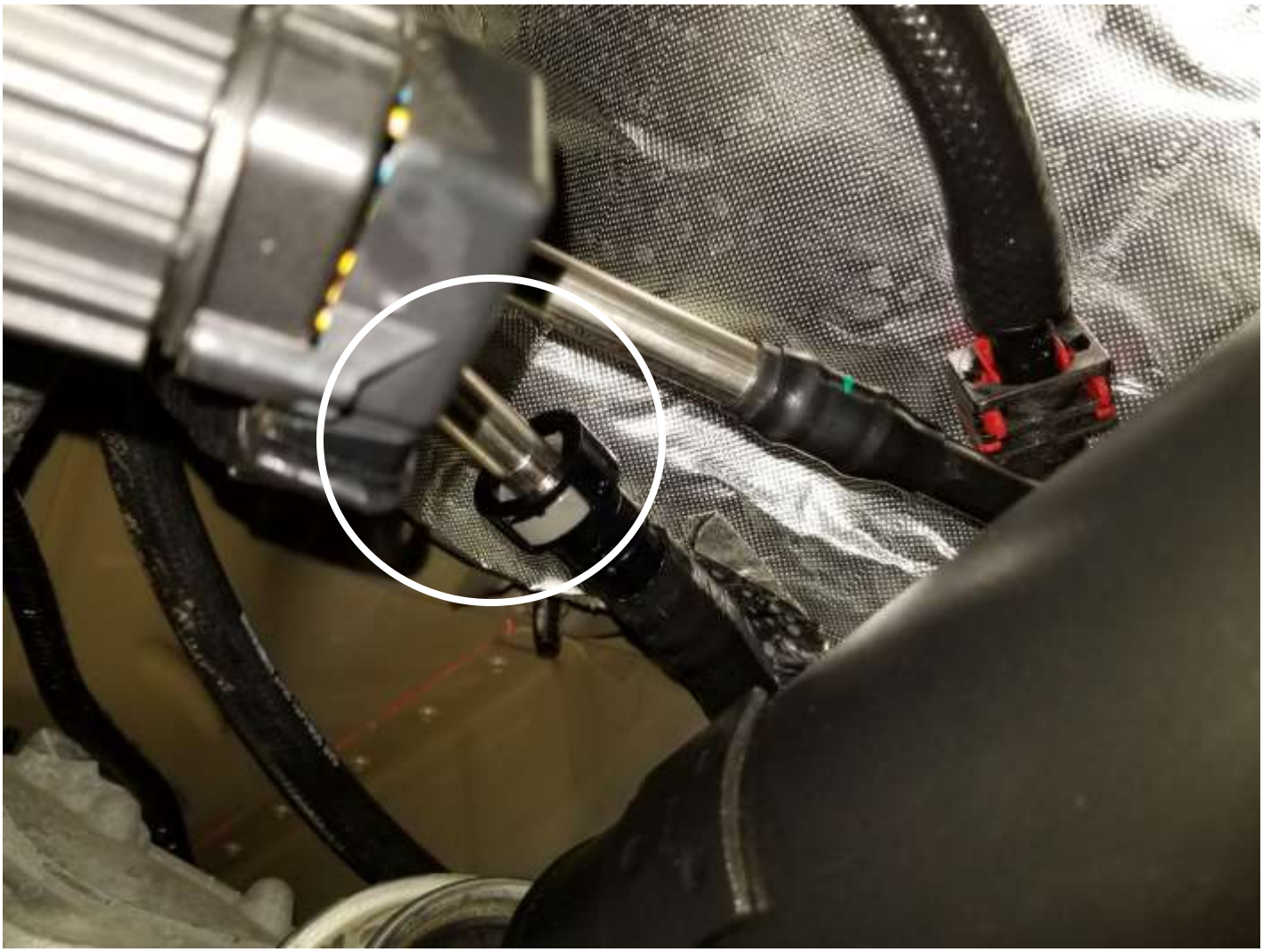
***Note: The pump should look like the picture above.***

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 into the fuel filter.

10. Clean the area around the stock fuel lines (located on the driver's side, above the transmission crossmember) to prevent dirt and debris from going into the lines.



11. Disconnect the stock fuel feed line with the red clip.
12. 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.



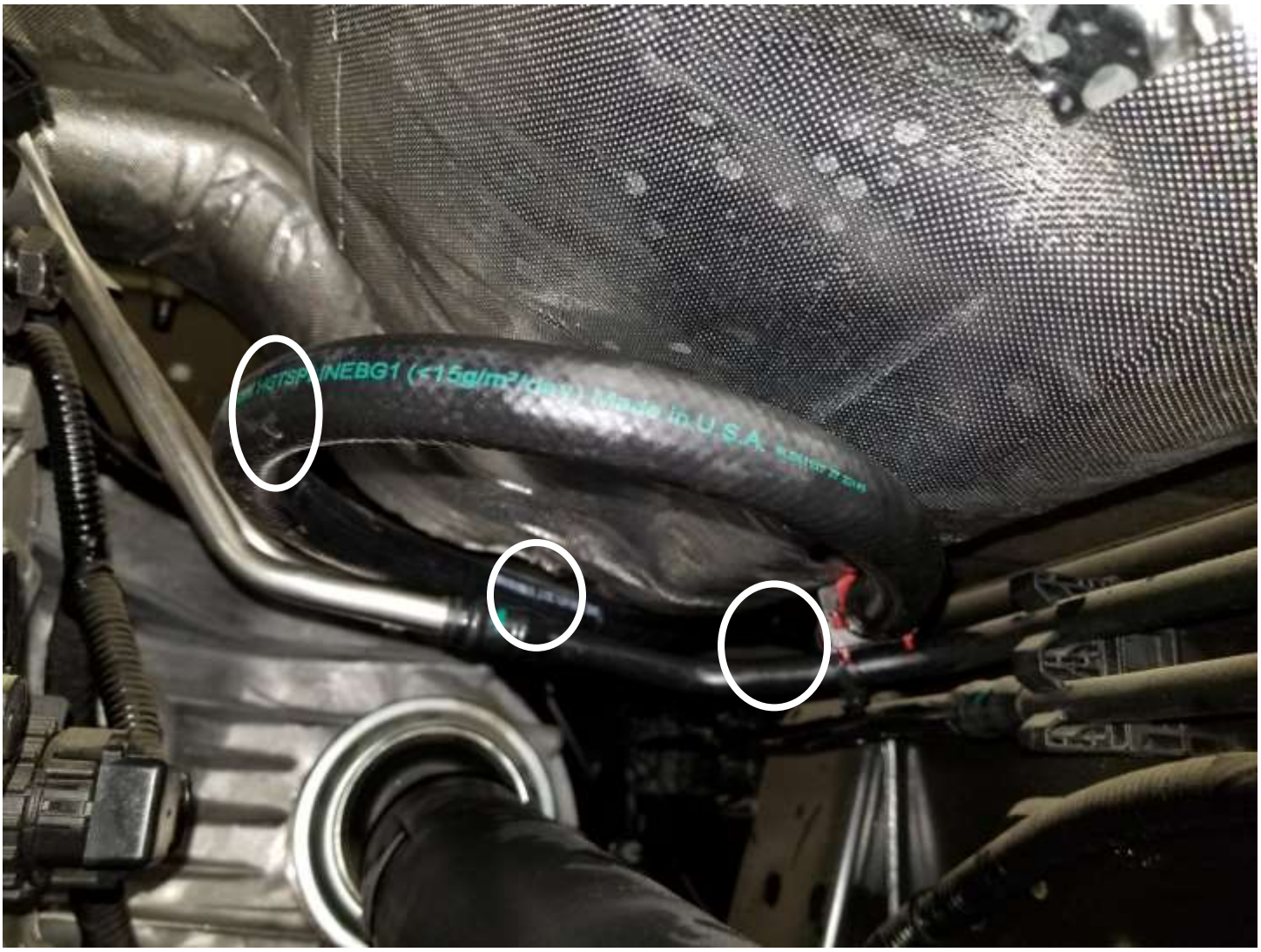
13. Install the female quick disconnect fitting on the supplied fuel outlet hose (black 90° -8 AN fitting - shown below) onto the male side of the stock fuel feed line.


14. Route the fuel inlet hose 180° from the connection and follow the fuel outlet hose over the frame rail to the fuel manifold assembly (fuel inlet hose routing shown above).


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


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

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



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

19. Clean the area around the stock fuel cooler (located on the driver's side frame rail near the engine) to prevent dirt and debris from going into the lines.

20. Disconnect the forward most fuel return line on the factory cooler.

21. Install the 90° female quick disconnect fitting on the supplied fuel return hose (as shown below) onto the male side of the fuel cooler.
22.

23. Install the male quick disconnect fitting in the fuel return hose (as shown below) into the female connection of the stock fuel return line.
24.

25. Install the fuel return hose (-4 AN fitting) onto the top of the fuel manifold assembly.

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

27. From the inside of the frame, plug the weatherproof connector on the supplied power harness into the mating connector on the fuel manifold assembly.

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

29. Organize the wire harness and fuel lines and secure with the supplied nylon cable ties.

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

31. Run the power across the front of the engine compartment using the supplied nylon cable ties to secure the wire.


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

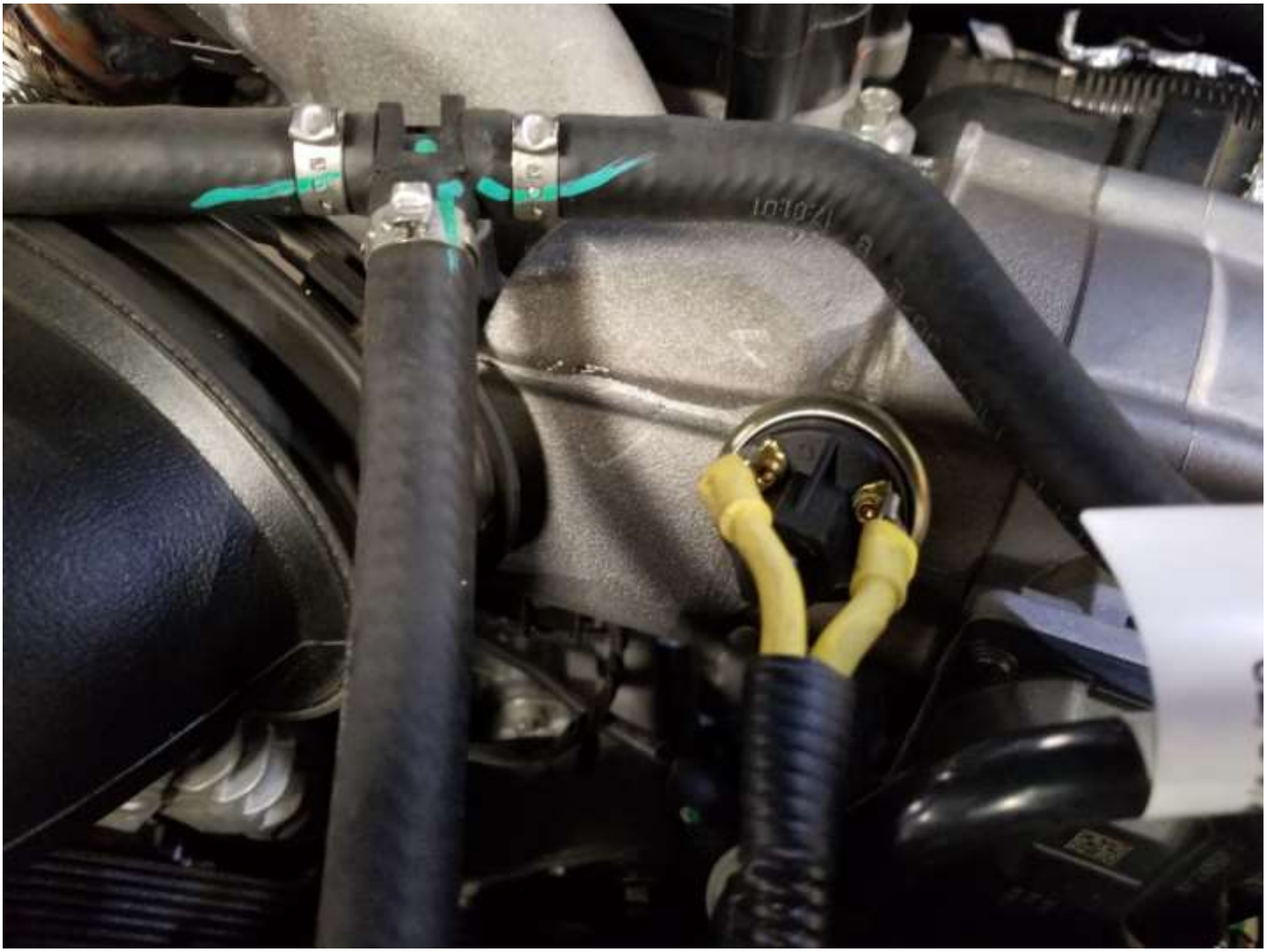
***NOTE: Check the fuse to make sure it is already installed in the connector.***


33. Connect the black wire ring terminal on the power harness to the ground strap bolt located on the fender wall near the passenger side battery.


34. Install the supplied pressure sensor into the intake manifold (1/8" NPT).

***NOTE: This step may require you to drill and tap a 1/8" NPT hole.***

## *Use Caution: DO NOT allow any metal chips to enter the engine*



35. Connect the supplied pressure switch harness to the pressure sensor (either wire can be attached to either terminal).

36. Organize any of the loose wire harnesses and secure with the remaining nylon cable ties.

37. Make sure that all fittings are tight. Install the priming jumper onto the weatherproof connector on the power harness. The fuel pump motor will turn on. 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. Check for any leaks.

38. Once the system is primed, and the truck is running, remove the priming jumper from the power harness and shut the truck off.

***NOTE: Failure to remove the priming jumper will result in the DFS780 continuing to run, even with the vehicle shut off. This could result in a dead battery.***


39. Plug the pressure switch harness into the weatherproof connector on the power harness.

40. Start the truck and let idle while checking for any leaks.

41. 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.

SCORCHER HD Module

P/N: 77-43020

Cold Air Intake

P/N: 50-73006 (P10R)
51-73006 (PDS)

Dynamic Air Scoop

P/N: 54-73006-S

Sprint Booster V3

P/N: 77-13001

DPF-Back Exhaust

P/N: 49-43092-P (Pol. Tips)
49-43092-B (Blk. Tips)

DP-Back Exhaust

P/N: 49-43093 (No Tip)
49-43093-B (Blk. Tip)
49-43093-P (Pol. Tip)

Transmisson Pan

P/N: 46-70182 (Black)
46-70180 (RAW)

Engine Oil Pan

P/N: 46-70322 (Black)
46-70320 (RAW)

Rear Differential Cover

P/N: 46-70022-WL (w/ Oil)
46-70020 (RAW)

4" Race Pipe

P/N: 49-43099NM

OE Replacement Filter

P/N: 10-10139 (P5R)
11-10139 (PDS)

Intercooler Tubes

P/N: 46-20314-B

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


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Updated by D.Kempf
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