



advanced FLOW engineering

DFS 780

Instruction Manual P/N: 42-14023

Make: **GM** Model: **2500/3500** Year: **2017-2019** Engine: **V8-6.6L (td) Duramax**
Fuel Pressure: **8-10 PSI (Relay Controlled - supplements factory fuel pump)**

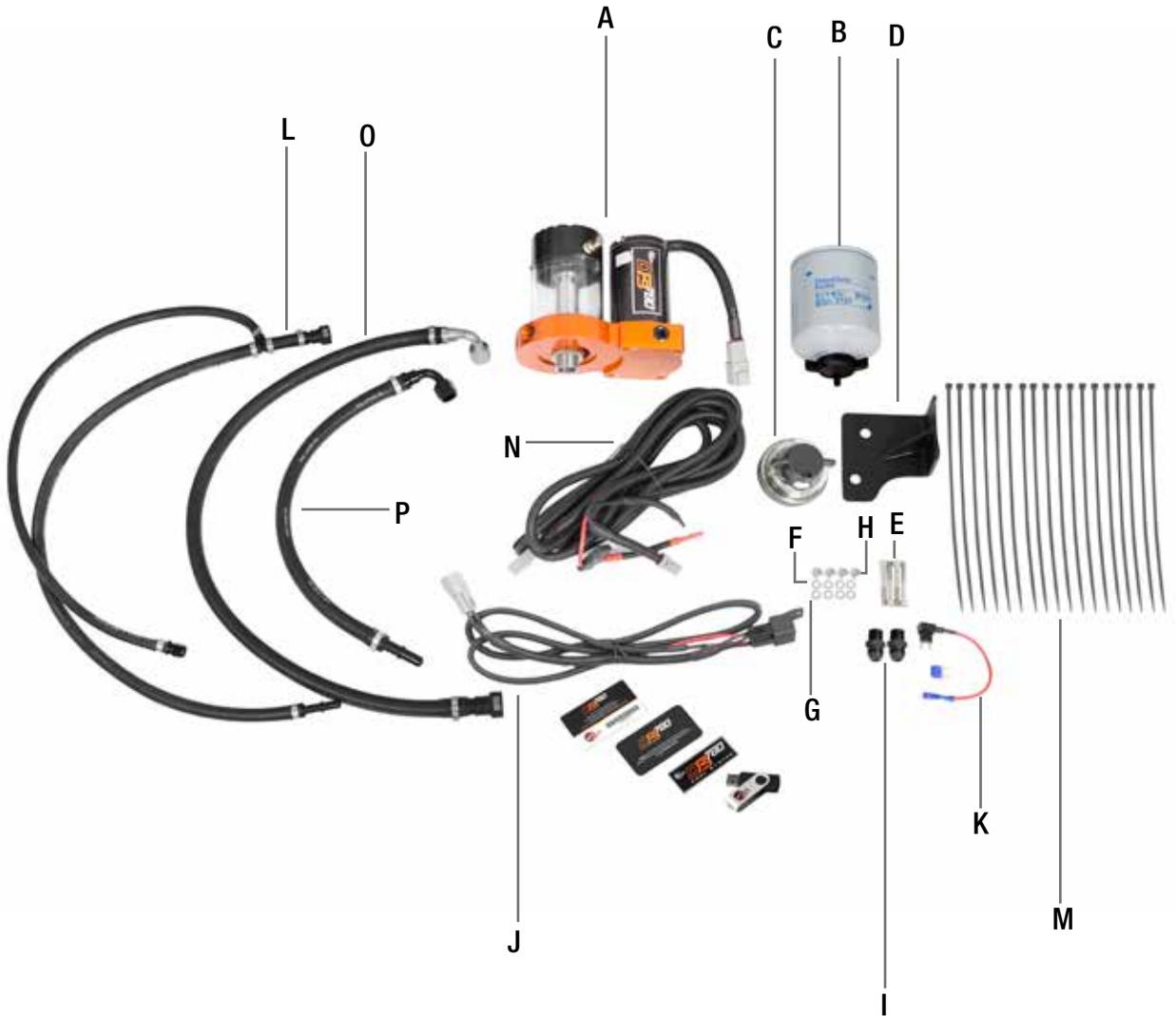


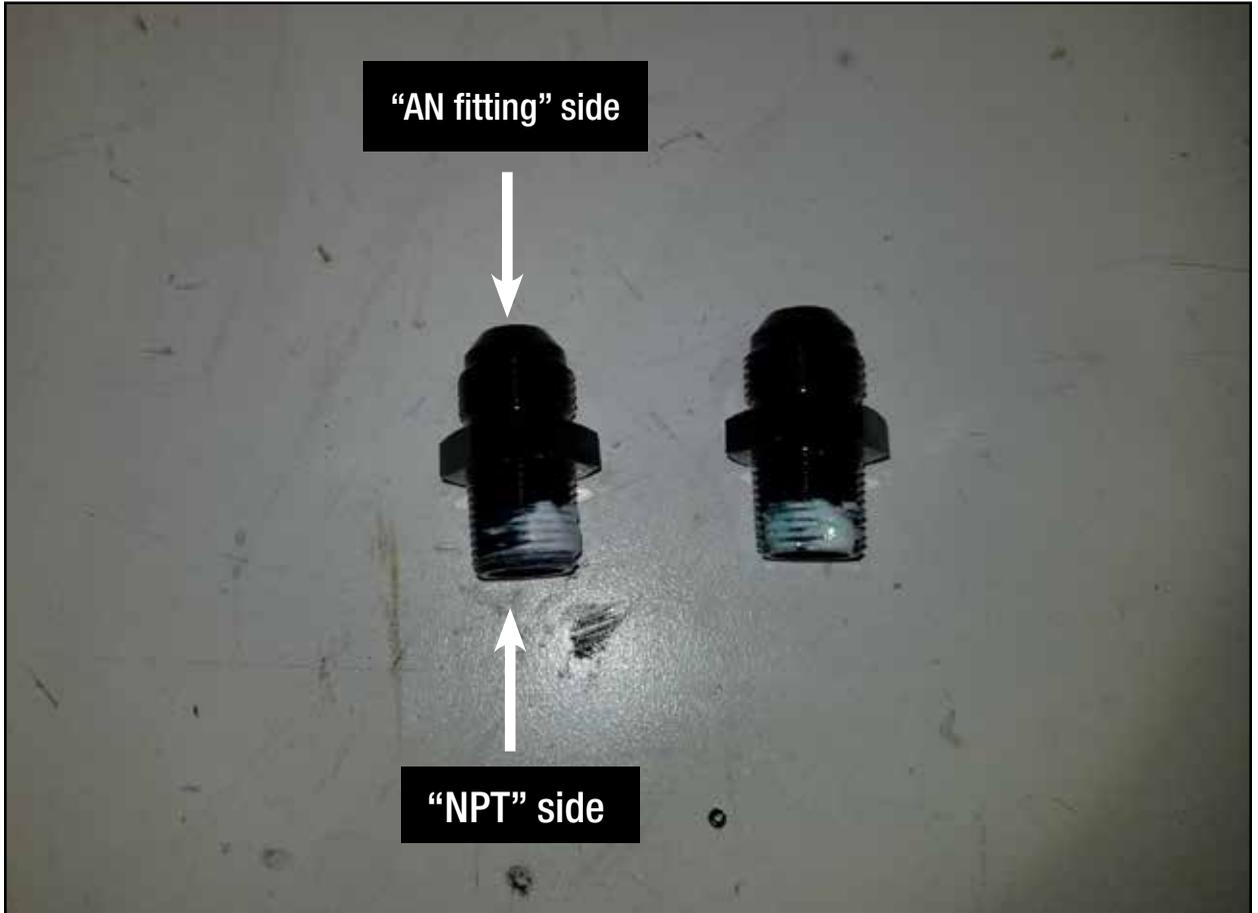
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine 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	05-60748
B	1	Filter, Fuel	44-FF018
C	1	Bowl, Water Separator	05-60786
D	1	Bracket, Frame; Carbon Steel	05-60788
E	4	Bolt, M6 x 1.0 x 50mm	03-50443
F	4	Washer, M6 (Fiber)	03-50457
G	4	Washer M6	03-50444
H	4	Locknut, Flanged; M6	03-50445
I	2	Fitting; 3/8" NPT to AN -8 (Black, Straight)	05-60685
J	1	Harness, Relay	05-60551
K	1	Adapter, Fuse; Add a harness	05-60583
L	1	Hose, Fuel Return	05-60794
M	18	Ties, Nylon Cable, 12"	05-60167
N	1	Harness, Power	05-60632
O	1	Hose, Fuel Inlet	05-60792
P	1	Hose, Fuel Outlet	05-60793

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Warranty Information available at: <https://afepower.com/contact#warranty>





Step 1: 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.



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



Step 3: 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 steel bracket.



Step 4: Locate the fuel lines on the driver side near the transmission cross member (shown in picture).



Step 5: Remove the fuel lines from the factory bracket and remove the black line holders from the factory fuel lines (shown above).



Step 6: Remove the factory transfer case skid plate (if applicable). Save hardware and skid plate for reinstallation.



Step 7: Support the transmission cross member with a jack.

Step 8: Remove the driver's side hardware from the transmission cross member and save for reinstallation.



Step 9: Install the fuel manifold assembly and bracket (previously assembled) to the rear side of the transmission crossmember.

Step 10: Make sure to install the factory hardware from the rear of the transmission cross member to the front of the transmission crossmember.



Step 11: Turn the sight glass to the desired angle and using a 1-1/4" wrench, tighten the center nut under the fuel manifold assembly.



Step 12: 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.





Step 13: 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.





Step 14: Disconnect the factory fuel feed line using a quick disconnect tool.

NOTE: Tool is available at your local parts store.



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





Step 16: Install the male quick disconnect fitting on the supplied fuel outlet hose (black 90° -8 AN fitting shown below) into the female side of the stock fuel feed line.





Step 17: Disconnect the factory fuel return line using a quick disconnect tool.

NOTE: Tool is available at your local parts store.



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





Step 19: 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: Make sure that the line does not kink while making connections.





Step 20: Install the fuel return hose (-4 AN fitting) onto the male -4 AN fitting on the top of the sight glass cover and tighten.





Step 21: Using the supplied nylon cable ties, secure the new hoses (as shown above).



Step 22: Reinstall the factory fuel line retainer bracket.

Step 23: Clip the plastic hose clip into the bracket (circled above).

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



Step 25: Using the supplied nylon cable ties, secure the new hoses (as shown above).



Step 26: 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.



Step 27: Reinstall the factory transfer case skid plate using factory hardware.



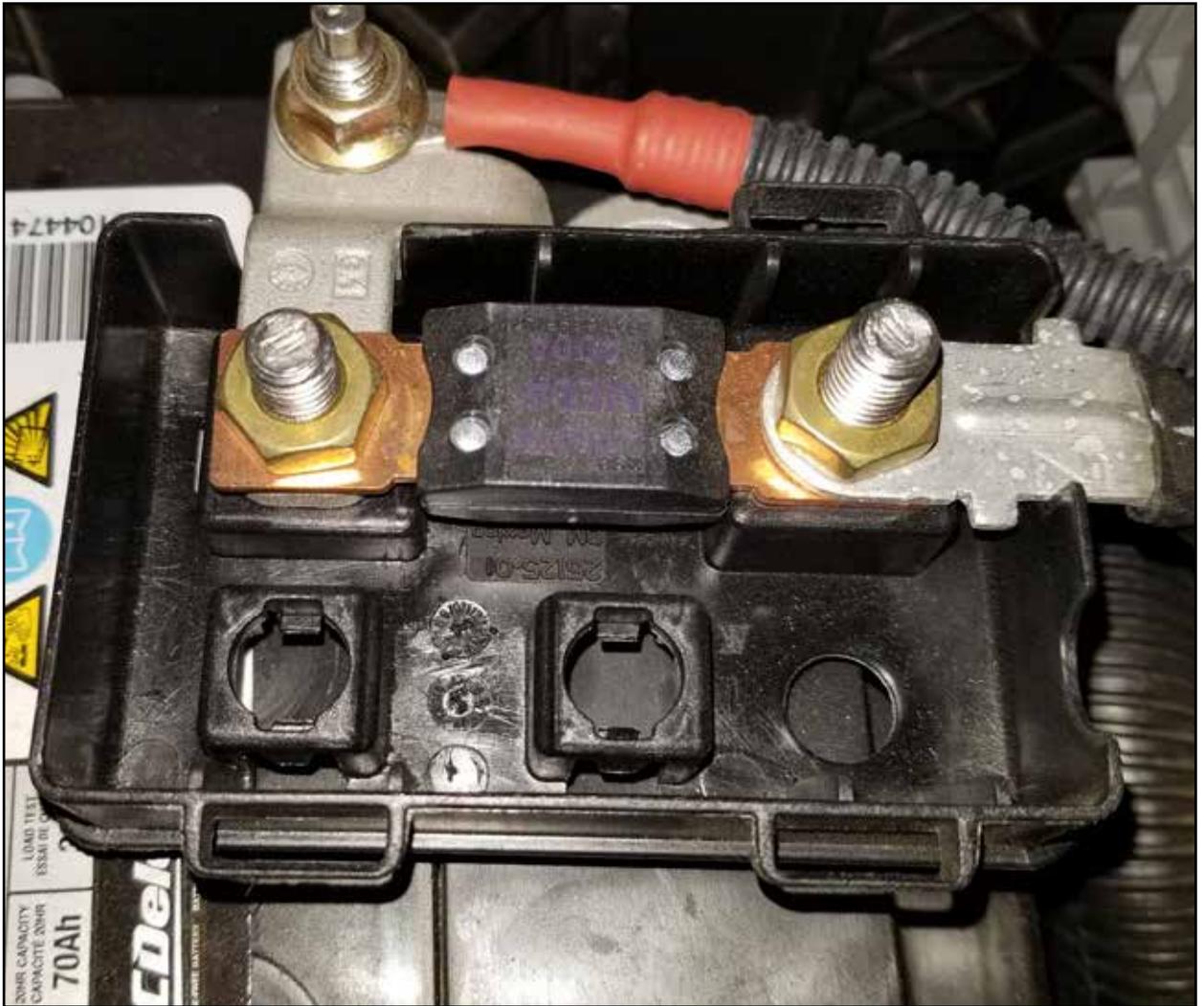
Step 28: From the inside of the frame, plug the Deutsch connector on the supplied power harness into the mating connector on the fuel pump motor.

Step 29: Route the power harness along the inside of the frame towards the front of the vehicle.

Step 30: Organize the power harness and secure with the supplied nylon cable ties.



Step 31: Run the other end of the power harness along the inside of the frame into the engine compartment.



Step 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.



Step 33: Connect the black wire ring terminal on the power harness to the negative side of the battery.



Step 34: Plug the supplied relay harness into the Deutsch connector on the power harness.



Step 35: Secure the relay harness using a supplied cable tie.



Step 36: Attach the power wire from the relay harness to the add a harness fuse adapter.



Step 37: Remove the fuse box cover.

Step 38: 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.

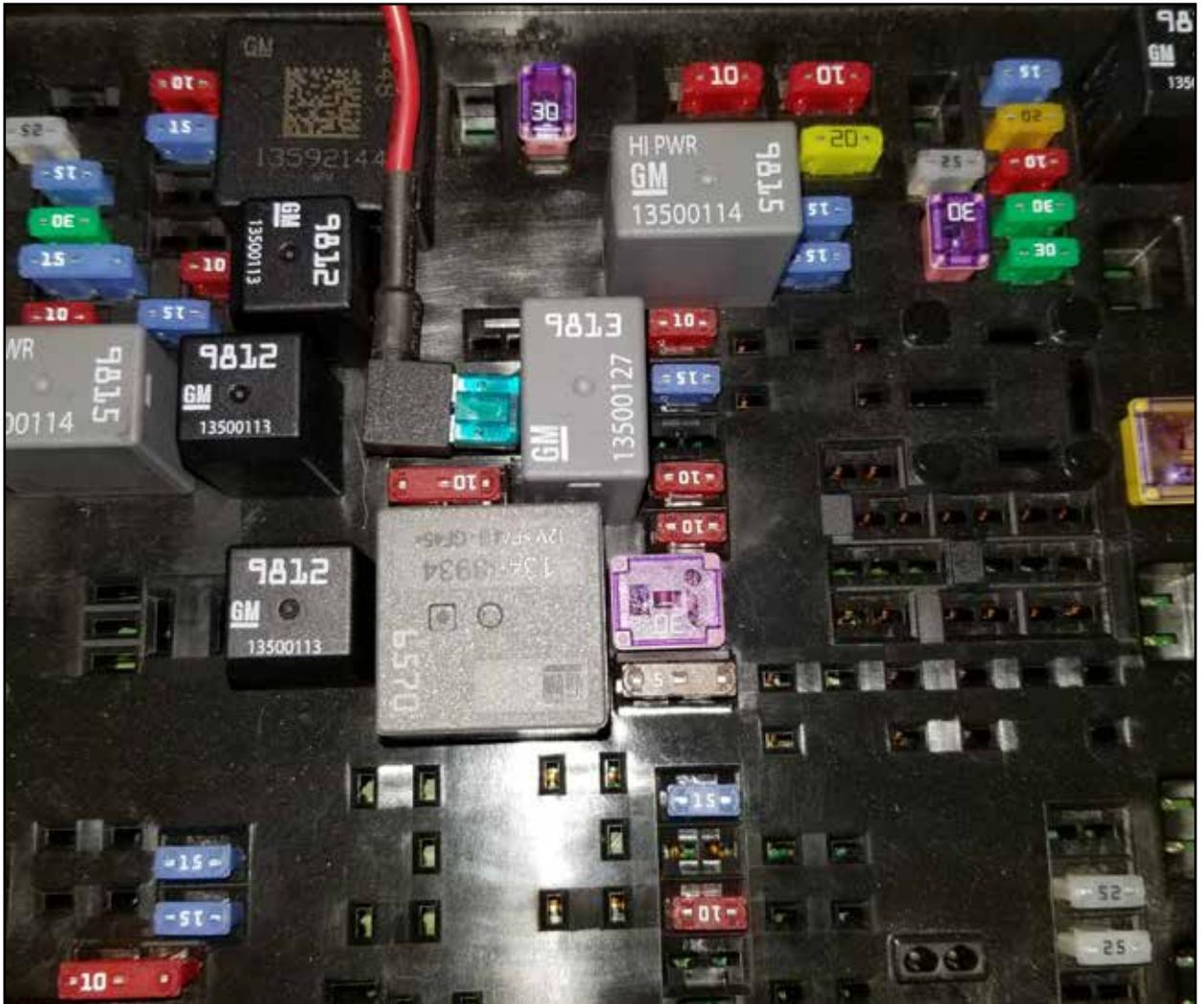
Locations for inline fuse adapter plug in (underhood fuse block):

2017:

Location 41



Step 39: Install the fuse removed in Step 38 into the open location on the add a harness fuse adapter (not in line with the wire).



Step 40: Install the add a harness fuse adapter (with installed fuses) into the 12 volt source location chosen in Step 38.



Step 41: Carefully route the power wire outside the fuse box and reinstall the cover (making sure not to pinch the wire).

Step 42: Organize the wire harnesses and secure with the remaining nylon cable ties.



Step 43: 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 44: 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.

NOTE: Place enclosed CARB EO sticker on or near the device on a smooth/clean surface.

EO identification label is required to pass the smog test inspection.

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