



advanced FLOW engineering

DFS 780

Instruction Manual P/N: 42-14024

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

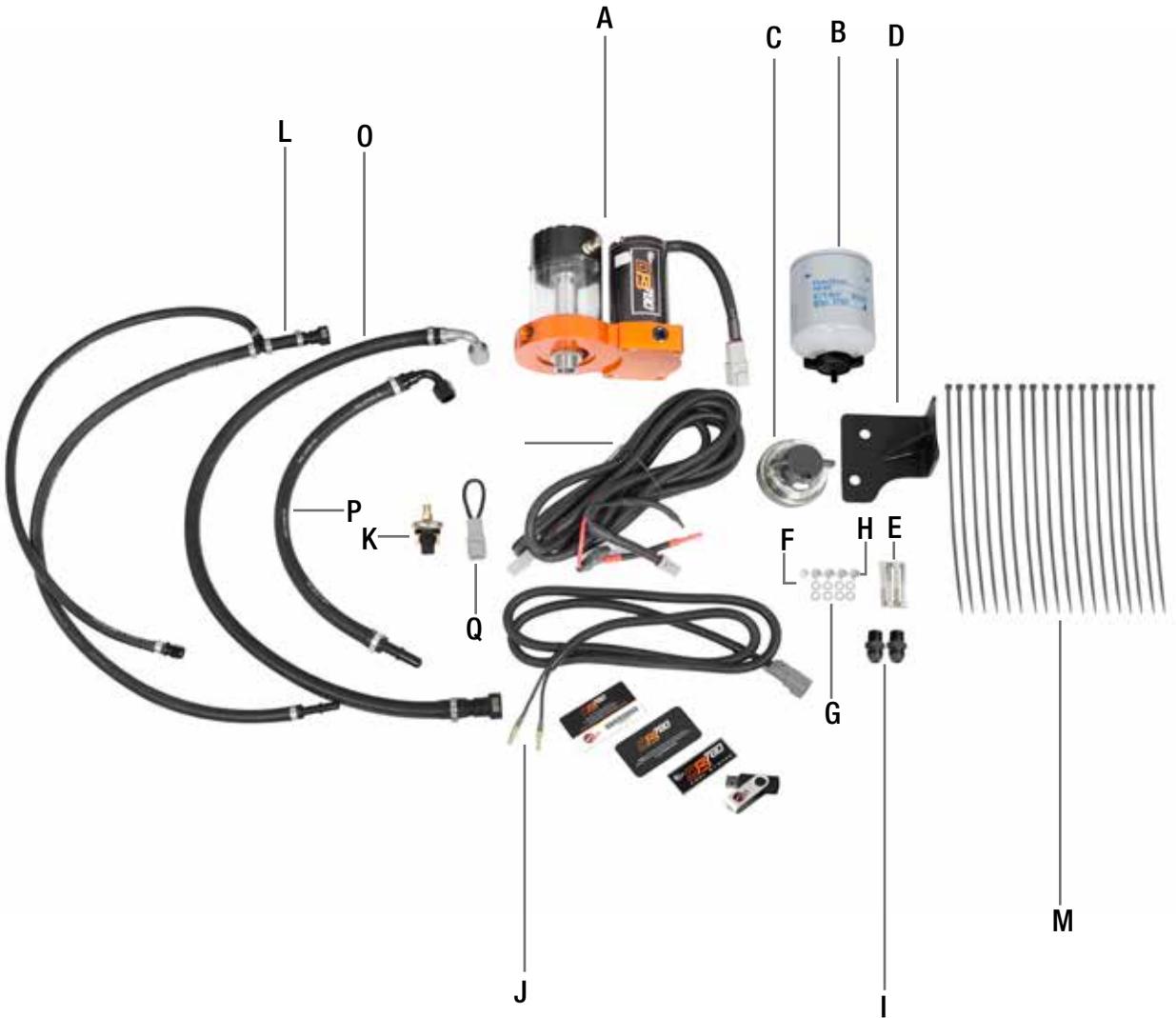


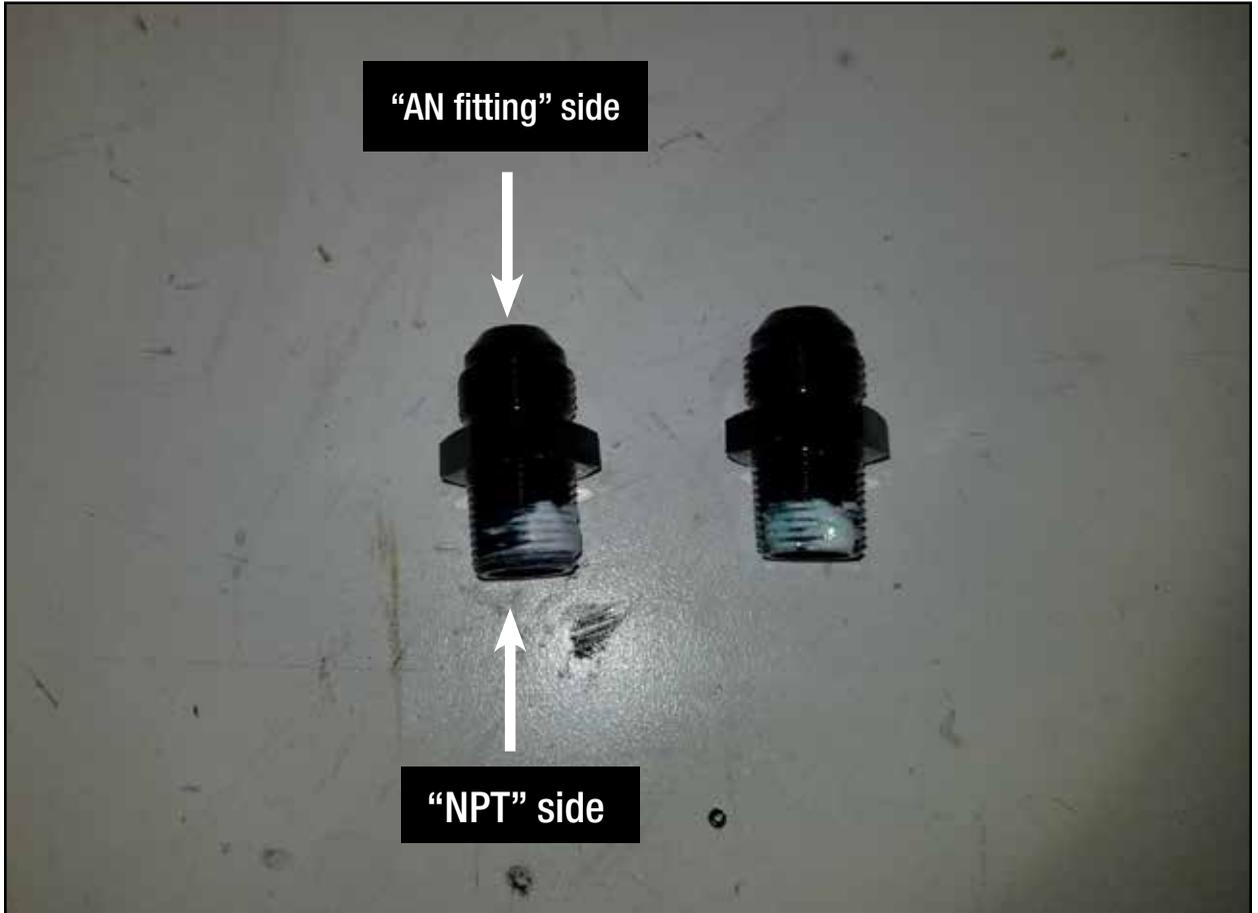
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine 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, Pressure Switch	05-60701
K	1	Switch, Pressure	05-60542
L	1	Hose, Fuel Return	05-60794
M	18	Ties, Nylon Cable, 12"	05-60167
N	1	Harness, Power	05-60523
O	1	Hose, Fuel Inlet	05-60792
P	1	Hose, Fuel Outlet	05-60793
Q	1	Jumper, Priming	05-70004

- 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

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 transfer case (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).

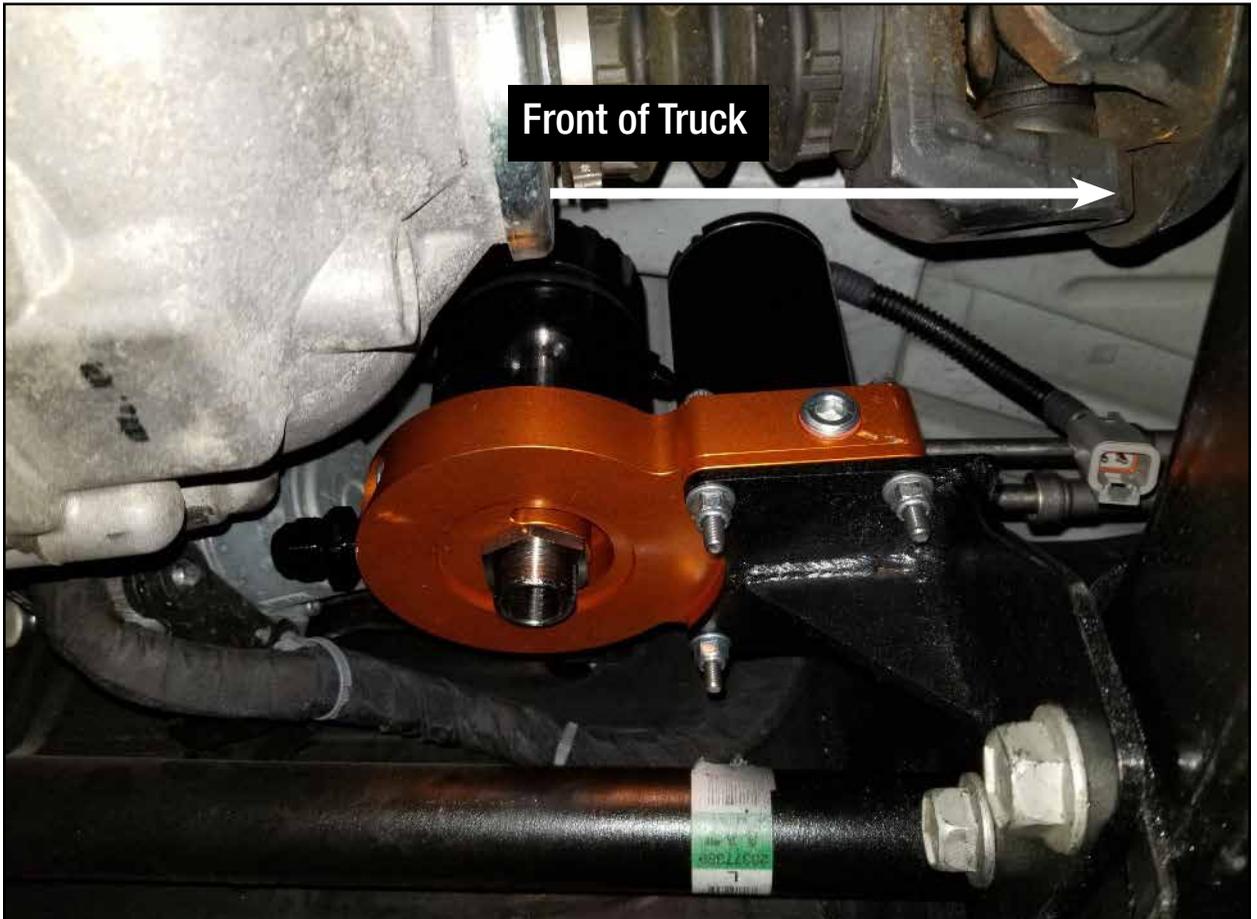


Step 6: Remove the factory transfer case skid plate (if applicable). Save hardware and skid plate for reinstallation.



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 DFS pump and bracket (previously assembled) to the rear side of the transmission cross member.

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



Proper position for the tank valve.

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 male -4 AN fitting on the top of the sight glass cover.





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 onto the fuel filter.



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



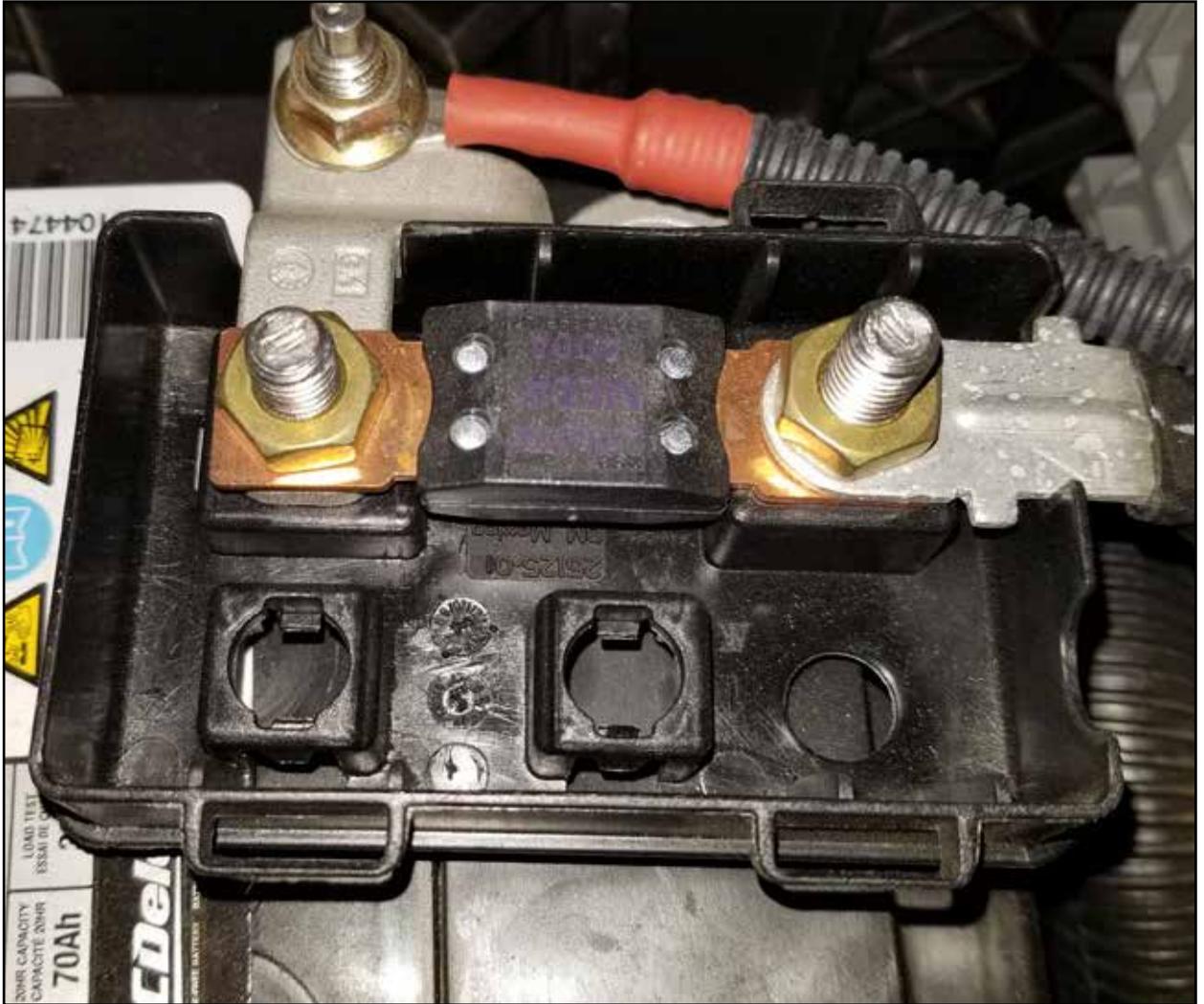
Step 28: From the inside of the frame, plug the Deutsch connector on the supplied power harness into the mating connector on the fuel pump motor.

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: Install the supplied pressure switch into the intake manifold (1/8" NPT).

NOTE: This step will require you to drill and tap a 1/8" NPT hole.
Use Caution: Do NOT! allow any metal chips to enter the engine.



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



Step 36: Make sure that all fittings are tight. Install the priming jumper onto the Deutsch 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.

Step 37: 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.



Step 38: Plug the pressure switch harness onto the Deutsch connector on the power harness.

Step 39: Organize any of the loose wire harnesses and secure with the remaining nylon cable ties.



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

Step 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.

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.



advanced FLOW engineering, inc.
252 Granite Street Corona, CA 92879
TEL: 951.493.7100 • TECH: 951.493.7100 x23
E-Mail: Tech@aFepower.com