



advanced FLOW engineering

DFS780 PRO

Instruction Manual P/N: 42-24011

Make: **GM** Model: **Diesel Trucks** Year: **2001-2016** Engine: **V8-6.6L (td) Duramax**

Fuel Pressure: **8-10 psi (relay controlled)**



- 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	05-60584
B	1	Filter, Fuel	44-FF019
C	1	Bracket, Frame; Carbon Steel	05-60795
D	4	Washer, M6 (Fiber)	03-50457
E	4	Washer, M6	03-50444
F	4	Nut, Flanged Nyloc: M6	03-50445
G	4	Screw, Socket Head Cap M6x1.0x50mm	03-50443
H	3	Rivet, Nut Open End: 3/8"-16	03-50569
I	1	Screw, Hex Hd cap: 3/8"-16 x 1-1/2"	03-50046
J	3	Nut, Flanged Serrated 3/8"-16	05-40103
K	3	Washer, Flat: 3/8" AN	03-50230
L	12	Ties, Nylon Cable, 12"	05-60167
M	1	Connector, Add a harness, ATM	05-60583
N	1	Connector, Add a harness, "Micro 2"	05-60691
O	3	Screw, Hex Hd Cap: 3/8"-16 x 1"	03-50124
P	1	Fitting, 1/2" Push-On to AN -8 (Straight) Blk	03-50549B
Q	1	Clamp, Spring; 7/16"	05-60578
R	1	Fitting, 1/2" Push-On to AN -8 (90 Deg) Blk	05-60683B
S	1	Harness, Power	05-60632
T	1	Harness Relay	05-60551
U	1	Hose, Fuel Inlet/Outlet	05-60846
V	1	Hose, Fuel Return	05-60847
W	1	Nut, 3/8"-16	05-50568
X	1	Washer, Flat: 3/8" ID, 1.25 OD.	03-50488
Y	2	Fitting: 3/8" NPT to AN -8 (Black)	05-60685



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

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.



Step 1: Mount the supplied fuel manifold assembly to the supplied 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 2: Install the two (2) supplied 3/8" NPT to -8 fittings to the DFS780 Pro fuel pump assembly using thread sealant.

Note: Installing the fuel filter loosely will give you an idea of the overall assembly size when looking for a mounting location.

Step 3: Mount the DFS780 Pro fuel pump assembly to the truck. When looking for a location to mount the assembly, please make sure you take into account the length of hose that was supplied as well as the orientation of the inlet and outlet ports.

Step 4: If you are using the supplied rivet nuts, you will need to drill three (3) 17/32" holes into sheet metal with a minimum thickness of 5/32" (0.156"). Otherwise, you will need to drill three (3) 3/8" holes into sheet metal with a minimum thickness of 3/16" (0.188").



Note: Be careful when drilling. Check behind where you are drilling for anything that might get damaged and move it before drilling.

Step 5: If installing the rivet nuts, use the supplied 3/8"-16 x 1-1/2" bolt, 3/8"-16 nut and 3/8" flat washer to make the installation tool (as shown below).





Note: This is what the connections look like on the 2009-2016 truck.

Step 6: Using the tool assembled in Step 5, attach the nut to the drilled material by holding the bolt steady and turning the nut clockwise. This will force the rivet nut to collapse and tighten onto the drilled material.

Step 7: Install the DFS780 Pro fuel pump assembly to the frame and tighten using the supplied hardware and tighten:

- (3) 3/8" - 16 x 1" bolts
- (3) 3/8" AN washers
- (3) 3/8"- 16 flanged nuts (if not using the rivet nuts)

Step 8: Install the supplied fuel filter and tighten.

Step 9: Find the factory fuel supply lines. They are located in front of the factory fuel tank.



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 purchase this tool at your local parts store.

- Step 10: Disconnect the factory fuel supply line. Attach the male quick disconnect fitting (straight fitting) on the supplied inlet/outlet hose to the factory female quick disconnect fitting on the factory fuel supply line. Route the hose to the inlet port on the DFS780 Pro fuel pump, making sure not to kink the hose or allow it near moving parts. Carefully mark and then cut the hose to the correct length.
- Step 11: Using the other end of the hose you just cut, attach the female quick disconnect fitting (90 degree fitting) to the factory male quick disconnect fitting on the factory fuel supply line. Carefully route this hose to the outlet port on the DFS780 Pro fuel pump, making sure not to kink the hose or allow it near moving parts. Carefully mark the hose and then cut and remove any excess.
- Step 12: Using a small amount of lightweight oil on the barbed ends, install the supplied 1/2" push-on to AN -8 fittings to the cut ends of the hoses (determine which fitting works best for both the inlet and outlet port). Make sure both fittings fully seat into the hoses. Note that these fitting are "self-locking" and do not require a clamp.



Step 13: Attach the fittings to the inlet & outlet ports of the DFS 780 Pro fuel pump. Make sure all connections are tight.



Step 14: Disconnect the factory fuel return line. Using the supplied fuel return hose, attach the male and female quick disconnect fittings to the mating fittings on the factory fuel return line.



Step 15: Carefully route the 1/4" hose to the DFS780 Pro fuel pump, making sure not to kink the hose or allow it near moving parts. Carefully mark and then cut the hose to the correct length. Using the supplied 7/16" spring clamp, attach the hose to the nipple on the top of the air chamber on the DFS 780 Pro fuel pump assembly.



- Step 16: Plug the Deutsch connector on the end of the supplied power harness into the mating connector on the fuel pump motor.
- Step 17: Route the power harness along the inside of the frame and into the engine compartment.
- Step 18: Organize the power harness and secure with the supplied nylon cable ties.
- Step 19: 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 20: Connect the black wire ring terminal on the power harness to the negative side of the battery.
- Step 21: Plug the supplied relay harness into the Deutsch connector on the power harness.
- Step 22: Secure the relay harness using a supplied cable tie.
- Step 23: Remove the fuse box cover. Locate 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, remove the fuse from the fuse box.

Locations for 12 volt fuse (under hood fuse block):

2001:	#15
2002:	#53
2003-2006:	SEO IGN (marked on the cover of fuse panel)
2007-2008:	#42
2009-2016:	#40



- Step 24: Select the correct style of the supplied add-a-harness fuse connector: 2001-2014 “ATM” style fuse, 2015-2016 “Micro 2”.
- Step 25: Attach the power wire from the relay harness to the correct add-a-harness fuse connector.
- Step 26: Insert the fuse removed in Step 23 into the open location on the add a harness fuse connector (not in line with the wire).
- Step 27: Insert the add a harness fuse connector (with installed fuses) into the 12 volt source location from Step 23.
- Step 28: Carefully route the power wire outside the fuse box and reinstall the cover (making sure not to pinch the wire).
- Step 29: Organize the wire harnesses and secure with the remaining nylon cable ties.
- Step 30: Turn the key to the “Run” position and wait for 30 seconds. Start the engine.
- Step 31: Installation is now complete. Make sure that all fittings are tight and that fuel is not leaking from any of the connections made during installation.

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.

Page left blank intentionally



PAGE LEFT BLANK INTENTIONALLY

PAGE LEFT BLANK INTENTIONALLY



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