



advanced FLOW engineering

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)**
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.
- 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 |



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.

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Exhaust Manifolds



P/N: 46-40024

Rear Differential Cover



P/N: 46-70012-WL (w/ Oil)
46-70012 (Black)
46-70010 (RAW)

Transmission Pan



P/N: 46-70072 (Black)
46-70070 (RAW)

Intake System "Momentum"



P/N: 50-74001 (LB7)
50-74002 (LLY)
50-74003 (LLY/LBZ)
50-74004 (LMM)

Intake Manifold



P/N: 46-60039-1
(LBZ/LLY/LMM)

Torque Converter



P/N: 43-14011

Transmission Filter



P/N: 44-TF001

Oil Filter



P/N: 44-LF001

Sprint Booster V3



P/N: 77-14003

SCORCHER HD Module



P/N: 77-44005 (LB7)
77-44006 (LLY/LBZ/LMM)

5" Race Exhaust



P/N: 49-44060-B (Blk. Tip)
49-44060-P (Pol. Tip)
(LB7/LLY/LBZ/LMM)

OE Replacement Filter



P/N: 30-10062 (P5R) LB7/LLY
10-10101 (P5R) LBZ/LMM

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 warranted 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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