



**advanced FLOW engineering**

**DFS 780**

**Instruction Manual** P/N: 42-13031

Make: **Ford** Model: **F-250/F-350** Year: **2008 - 2010** Engine: **V8 6.4L (td)**  
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	05-60565
B	1	Filter, Fuel	44-FF019
C	1	Bowl, Water Separator	05-60487
D	1	Bracket, Frame; Carbon Steel	05-60554
E	1	Bolt, 1/2"-13 x 1.50"	03-50464
F	2	Washer, 1/2"	03-50494
G	1	Nut, Hex Nylon Lock: 1/2"	03-50495
H	4	Screw, Socket Head Cap M6x1.0x50mm	03-50443
I	4	Washer, M6 (Fiber)	03-50457
J	6	Washer, M6	03-50444
K	5	Nut, Flanged Nyloc: M6	03-50445
L	2	Fitting: 3/8" NPT to AN -8 (Blk Straight)	05-60685
M	1	Harness, Relay	05-60551
N	1	Connector, Add a harness & fuse	05-60583
O	1	Hose, Fuel Return	05-60706
P	18	Ties, Nylon Cable, 12"	05-60167
Q	1	Harness, Power	05-60523
R	1	Hose, Fuel Inlet	05-60704
S	1	Hose, Fuel Outlet	05-60705
T	1	Bracket, Parking Brake Cable	05-60702
U	4	Washers, M8	03-50065
V	2	Nut, Hex Nyloc M8	03-50244
W	2	Screw, Socket Head Cap M8x1.25x25mm	03-50231
X	1	Screw, Socket Head Cap M6x1.0x20mm	03-50241





Figure 1

**Step 1:** You will need to loosen the bed or drop the fuel tank to begin installation of the DFS780 Fuel pump.

**Step 2:** On the driver's side of the truck, under the rear door, you will see three different sized holes. One is an oval, one is a triangle, and the other is a circle. The oval hole is the hole you will use to mount the bracket to the frame (as shown above).



Figure 2

**Step 3:** Mount the supplied bracket to the frame using the supplied  $\frac{1}{2}$ "-13 x 1.50" bolt, two (2)  $\frac{1}{2}$ " washers &  $\frac{1}{2}$ "-13 lock nut.



Figure 3

**Step 4:** Remove the bolt holding the emergency brake cable guide from the truck.

**Figure 4**

**Step 5:** Install the new relocation tab for the emergency brake with the supplied hardware and tighten (as shown above).

- (1) M6 x 1.0 x 20mm bolt
- (2) M6 washers
- (1) M6 flanged nut
- (2) M8x1.25x25mm bolts
- (4) M8 washers
- (2) M8 nyloc nuts



Figure 5

**Step 6:** Connect the manifold to the bracket using the four (4) supplied M6x1.0 x 50mm bolts, M6 washers, fiber washers and M6 flange nuts. The fiber washers go between the manifold and the bracket.

**Step 7:** Tighten the manifold to the bracket.





Figure 6

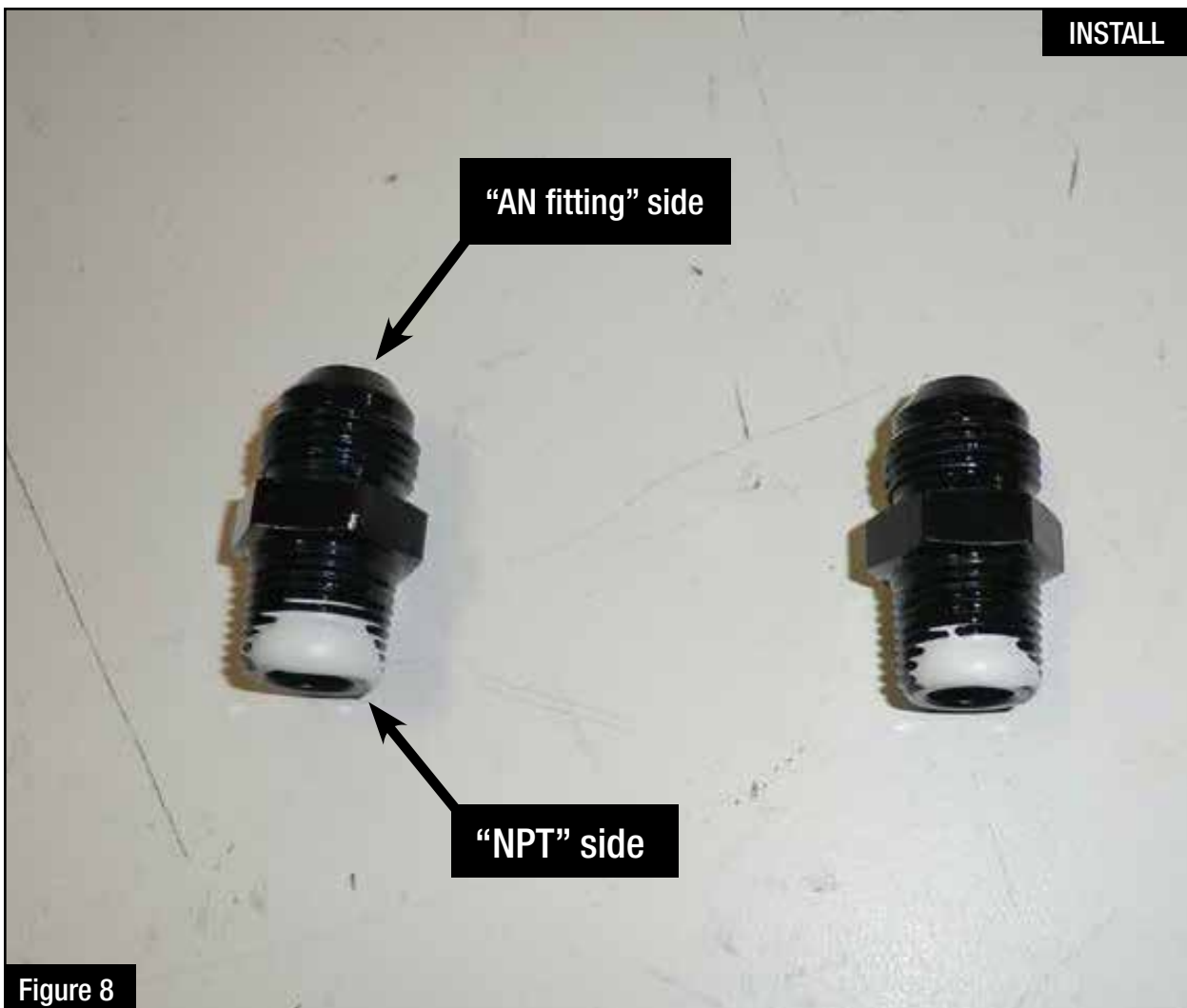
**Step 8:** Turn the sight glass to the desired angle and using a 1-1/4" wrench, tighten the center nut under the DFS780 manifold.

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



Figure 7

**Step 9:** Using a light oil, lube the gasket on the fuel filter and install on the manifold. Thread the supplied water separator bowl onto the supplied fuel filter.



“AN fitting” side

“NPT” side

Figure 8

**Step 10:** 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.**



Figure 9

**Step 11:** Install the 2" x 3/8" NPT to -8 AN fittings into the DFS 780 (as shown above).



Figure 10

**Step 12:** Clean the area around the fuel lines to prevent dirt and debris from going into the lines.



Figure 11

**Step 13:** Disconnect the fuel supply and the fuel return lines.



Figure 12

**Step 14:** Install the supplied fuel inlet hose (shown below with silver 90° “AN” fitting) onto the male side of the stock fuel tank connection.





Figure 13

**Step 15:** Install the supplied fuel outlet hose (shown below with black 90° “AN” fitting) onto the female side of the stock feed line.







Figure 14

**Step 16:** Install the supplied fuel return line to the female side of the stock return fuel line (as shown below).





**Step 17:** Install the opposite side of the supplied return line to the male connection on the stock fuel tank connection (as shown below).





Figure 16

**Note: This is what the top of the tank should look like after all the supplied hoses are connected.**



Figure 17

**Step 18:** Install the fuel inlet hose (90° silver “AN” fitting) onto the fuel inlet port of the DFS780.



Figure 18

**Step 19:** Install the fuel outlet hose (90° black “AN” fitting) onto the fuel outlet port of the DFS780.



Figure 19

**Step 20:** Install the supplied fuel return hose (-4 AN fitting) onto the top of the DFS780.



Figure 20

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



**Step 22:** Using the supplied nylon cable ties, secure the new hoses (as shown above).





Figure 22

**Step 23:** From the inside of the frame, plug the Deutsch connector of the supplied wiring harness into the mating connector on the DFS780.

**Step 24:** Route the supplied wiring harness along the frame towards the front of the vehicle.

**Step 25:** Organize the wire harness and secure with the supplied nylon cable ties.



Figure 23

**Step 26:** Run the other end of the supplied wiring harness along the frame to the engine compartment. Secure using supplied nylon cable ties.



Figure 24

**Step 27:** Connect the red wire ring terminal to the positive side of the battery.

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



Figure 25

**Step 28:** Connect the black wire ring terminal to the negative side on the battery.



Figure 26

**Step 29:** Plug the supplied relay harness into the Deutsch connector on the power harness.

**Step 30:** Organize any of the loose wire harness and secure with the supplied nylon cable ties.



**Figure 27**

**Step 31:** Secure the supplied relay using a supplied nylon cable tie.



Figure 28

**Step 32:** Locate the battery junction box in the engine compartment (located at the drivers side rear corner next to the master cylinder under the vacuum pump).



**Figure 29**

**Step 33:** Open the battery junction box and locate the fuses.





Figure 30

**Step 34:** Attach the power wire from the relay harness to the add-a-harness connector.



Figure 31

**Step 35:** Locate a 12-volt ignition 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 :**

2008-2010

F 71

Fuel pump relay coil



Figure 32

**Step 36:** Install the fuse removed in Step 35 and insert it into the open location on the add-a-harness connector (not in line with the wire).



Figure 33

**Step 37:** Install the add-a-harness connector (with installed fuses) into the 12-volt ignition source inside the fuse box.



**Step 38:** Reinstall the cover and the vacuum pump.



**Figure 35**

**Step 39:** Turn the key to the “Run” position and watch to see if the DFS780 sight glass fills with fuel. If the DFS780 sight glass does not fill with fuel, use the Schrader valve (on the top of the DFS780) to release trapped air which will allow DFS780 to fill. If DFS780 still does not fill, try starting the engine.

**Step 40:** 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 E0 sticker on or near the device on a smooth/clean surface. E0 identification label is required to pass the smog test inspection.

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**PROGRAMMER**



P/N: 77-43011

**EGR COOLER**



P/N: 46-90080

**Transmission Pan**



P/N: 46-70122-1 (Black)  
46-70120-1 (RAW)

**Intake System "Magnum Force"**



P/N: 54-41262 (P5R)  
51-41262 (PDS)  
75-41262 (PG7)

**Module**



P/N: 77-13001

**Intercooler Tube**



P/N: 46-20078

**Oil Cap**



P/N: 79-12005

**F3 Torque Converter**



P/N: 43-13061

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to [aFepower.com](http://aFepower.com).

# 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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