advanced FLOW engineering DFS 780

Instruction Manual P/N: 42-13032

Make: **Ford** Model: **F-250/F-350** Year: **2008-2010** Engine: **V8-6.4L (td)**

- 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-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, Pressure Switch	05-60701
N	1	Switch, Pressure	05-60542
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
Y	1	Jumper, Priming	05-70004


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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 ½"-13 x 1.50" bolt, two (2) ½" washers & ½"-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.

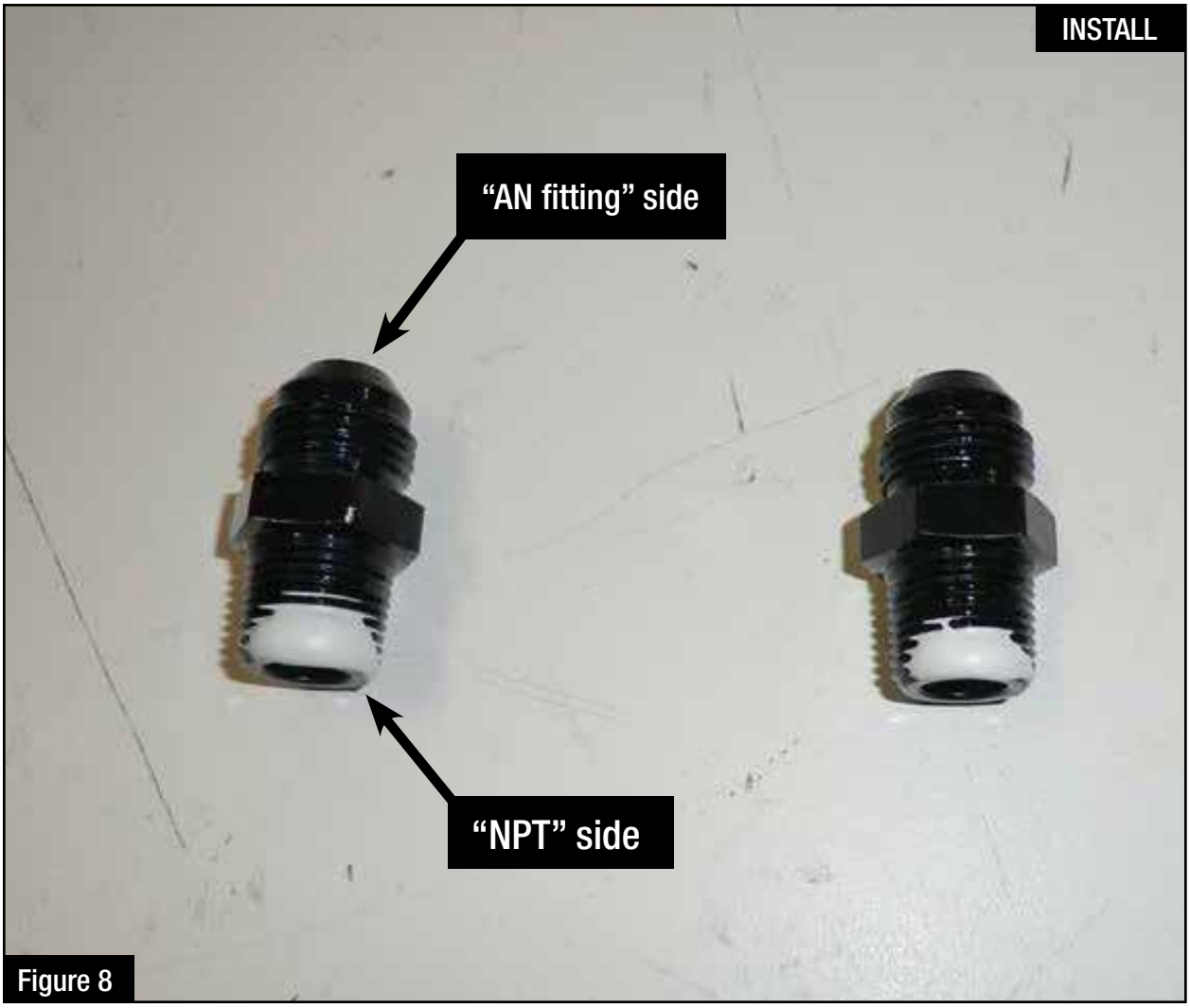

Figure 8

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).

Figure 15

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).

Figure 21

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: Install the supplied pressure sensor onto the intake manifold (1/8” NPT).

NOTE: This step may require you to drill and tap a 1/8” NPT hole.
Use Caution: <u>DO NOT!</u> allow any metal chips to enter the engine.

Figure 27

Step 30: Plug the supplied pressure switch harness into the pressure sensor.

Figure 28

Step 31: Make sure that all fittings are tight. Install the priming jumper onto the Deutsch connector on the power harness. The DFS780 will turn on. Use the Schrader valve (on top of the DFS780) to release trapped air. The DFS780 should fill the sight glass with fuel and prime the fuel system. If the DFS780 does not prime, start the engine. Check for any leaks.

Step 32: Once the system is primed, and the truck is running, remove the priming jumper from the power harness and shut the truck off.

Figure 29

Step 33: Plug the supplied pressure switch harness into the Deutsch connector on the power harness.

Step 34: Organize any of the loose wire harness and secure with the remaining nylon cable ties.

Step 35: 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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