



advanced FLOW engineering

DFS780 Fuel System - Full-time Operation

Instruction Manual P/N: 42-13011

Make: **Ford** Model: **Diesel Trucks** Year: **1999-2003** Engine: **V-8 7.3L (td)**

Make: **Ford** Model: **Excursion** Year: **2000-2003** Engine: **V8 7.3L (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.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty	Description	Part Number
A	1	Fuel Manifold Assembly	05-60478
B	1	Filter, Fuel	44-FF019
C	1	Bowl, Water Separator	05-60487
D	1	Bracket, Frame; Carbon Steel	05-60554
E	1	Bolt, ½" -13 x 1.50"	03-50464
F	2	Washer, ½"	03-50494
G	1	Nut, Hex Nylon Lock: ½"	03-50495
H	4	Screw, Socket Head Cap M6x1.0x50mm	03-50443
I	4	Washer, M6 (Fiber)	03-50457
J	4	Washer, M6	03-50444
K	4	Nut, Flanged Nyloc: M6	03-50445
L	2	Fitting; 3/8" NPT to AN -6 (Black, Straight)	05-60634B
M	1	Harness Relay	05-60551
N	1	Connector, Add a harness	05-60583
O	1	Hose, Fuel Return	05-60696
P	18	Ties, Nylon Cable, 12"	05-60167
Q	1	Harness, Power	05-60632
R	1	Hose, Fuel Inlet	05-60697
S	1	Hose, Fuel Outlet	05-60698

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.





Picture 2 (-8)

1. You will need to loosen the bed or drop the fuel tank to begin installation of the DFS780 Fuel pump.
2. On the driver's side of the truck, under the driver's 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).



Picture #3 (-18)

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 & $\frac{1}{2}$ " locknut.



Picture 4(-24)

4. 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.
5. Tighten the manifold to the bracket.



Picture 5 (-30)

6. 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.



Picture 6 (-33)

7. 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.



Picture 7 (-124)

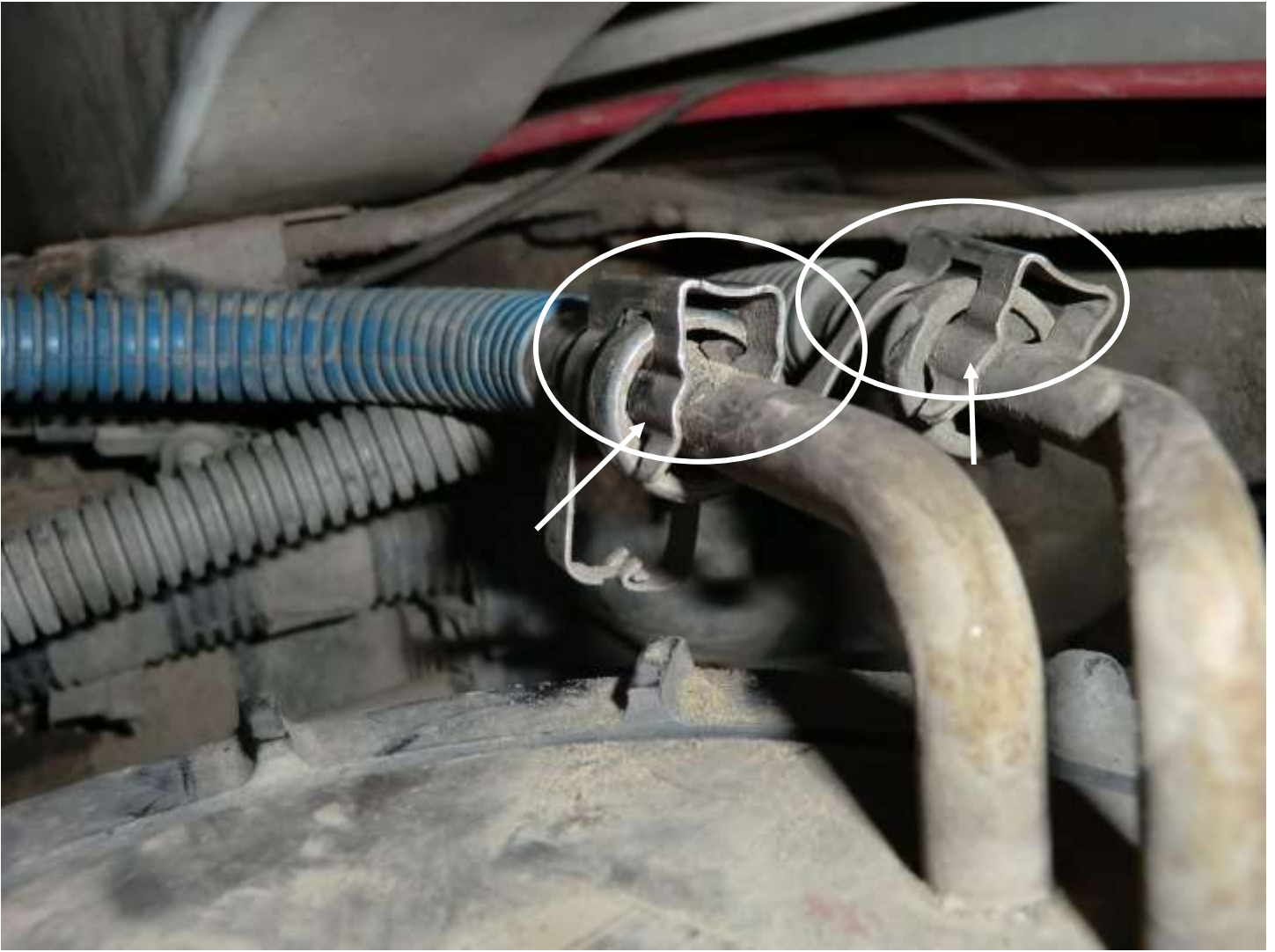
8. Apply Teflon tape with PTFE or Teflon paste with PTFE to the 2 x 3/8" NPT to -6 AN fittings.

Note: Only apply Teflon to the NPT side of the fitting.



Picture 8 (-32)

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



Picture 9 (-132)

Note: If you have a 1999 - 2000 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 get this tool at your local parts store.



Picture 10 (-35)

Note: This is what the connections look like on the 2001-2003 truck.



Picture 11 (-27)

10. Clean the area around the fuel lines to prevent dirt and debris from going into the lines.

Note: 2001- 2003 model shown in the pictures



Picture 12 (-43)

11. Disconnect the fuel supply and the fuel return line.

Note: 2001- 2003 model shown in the pictures



Picture 13 (-49)

12. Install the supplied fuel return line to the male side of the stock return fuel line on the tank and lock the fitting.

Note: 2001- 2003 model shown in the pictures



Picture 14 (-55)

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



Picture 14-1

Note: 2001- 2003 model shown in the pictures



Picture 15 (-61)

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



Picture 15-1

Note: 2001- 2003 model shown in the pictures



Picture 16 (-70)

15. Install the supply fuel line (90° silver “AN” fitting) onto the fuel inlet port of the DFS780.



Picture 17 (-74)

16. Install the feed fuel line (90° black “AN” fitting) onto the fuel outlet port of the DFS780.



Picture 18 (-80)

17. Install the supplied return line (-4 AN fitting) onto the top of the DFS780.



Picture 19 (-65)

18. Using the supplied nylon cable ties, tie the new hoses down (as shown above).

Note: 2001- 2003 model shown in the pictures



Picture 20 (-94)

19. Using the supplied nylon cable ties, tie the new hoses down (as shown above).



Picture 21 (-96)

20. From the inside of the frame, plug the Deutsch connector of the supplied wiring harness into the mating connector on the DFS780.
21. Route the supplied wiring harness along the frame towards the front of the vehicle.
22. Organize the wire harness and fuel lines and secure with the supplied nylon cable ties.



Picture 22 (-100)

23. Run the other end of the supplied wiring harness along the frame to the engine compartment. Secure using supplied nylon cable ties.



Picture 23 (-101)

24. 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.



Picture 24 (-103)

25. Connect the black wire ring terminal to the negative side on the battery.



Picture 25 (-106)

26. Secure the supplied relay using a supplied nylon cable tie.



Picture 26 (-105)

27. Plug the supplied relay harness into the Deutsch connector on the power harness.
28. Organize any of the loose wire harness and secure with the remaining nylon cable ties.



Picture 27 (-109)

29. Run the relay power wire into the cab of the truck.



Picture 28 (-111)

30. Locate the panel under the steering wheel.
31. Remove the panel by twisting the 4 screws $\frac{1}{4}$ " turn.

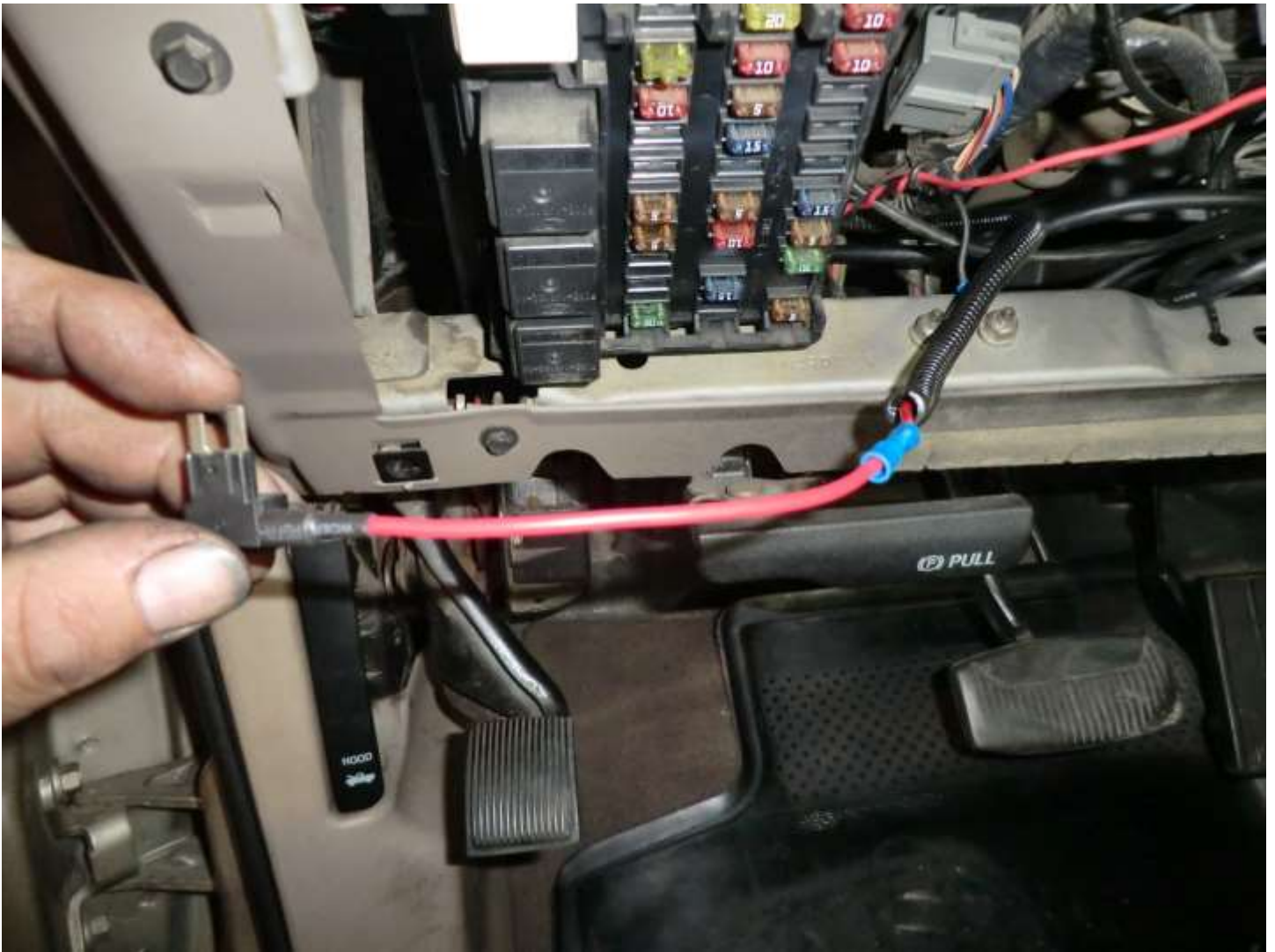
Note: 2001 model shown in pictures



Picture 29 (-113)

32. Locate the under dash fuse box

Note: 2001 model shown in pictures



Picture 30 (-117)

33. Attach the power wire from the relay to the inline fuse adapter.



Picture 31 (-115)

34. 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 (under dash fuse block):

1999 - 2001	#27	Customer Access
2002 - 2003	#29	Customer Access

Note: 2001 model shown in pictures



Picture 32 (-121)

35. Install the fuse removed in Step 34 and insert it into the open location on the fuse adapter B (not in line with the wire).

Note: 2001 model shown in pictures



Picture 33 (-123)

36. Install the inline fuse adapter (with installed fuses) into the 12 volt ignition source inside the fuse box.

Note: 2001 model shown in pictures



Picture 34 (-111)

37. Reinstall the panel.



Picture 35 (-88)

38. 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.

39. 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.

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