



## advanced FLOW engineering

DFS780 Fuel System - Boost Activated

**Instruction Manual** P/N: 42-13052

Make: **Ford** Model: **F-250/F-350** Year: **2017-2019** Engine: **V8-6.7L (td) Power Stroke**

Fuel Pressure: **8-10 psi (boost operated)**

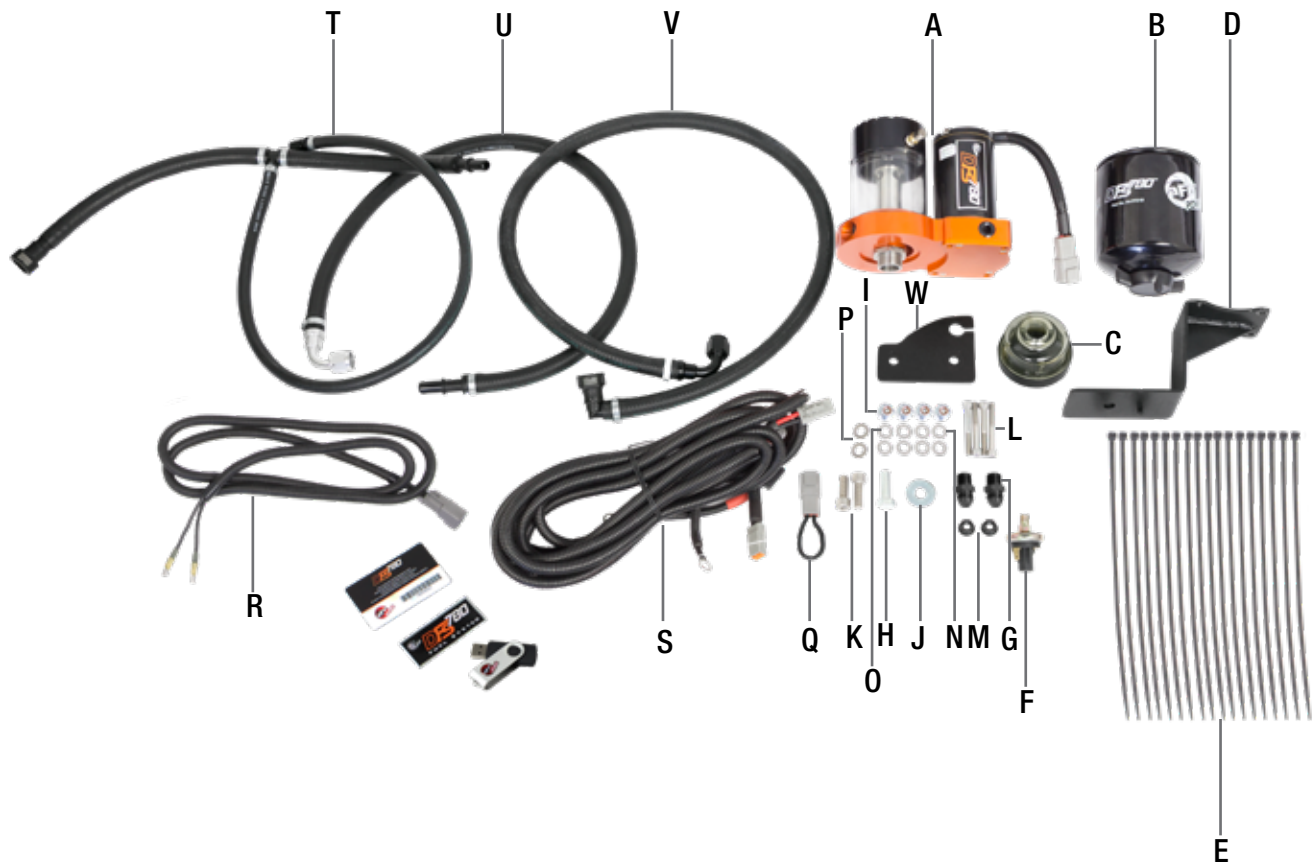
Supported Horsepower: **2000+**



- 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	05-60478
B	1	Filter, Fuel	44-FF018
C	1	Bowl, Water Separator	05-60786
D	1	Bracket, Frame; Carbon Steel	05-60801
E	18	Ties, Nylon Cable: 12"	05-60167
F	1	Switch, Pressure: 1/8" NPT	05-60542
G	2	Fitting, 3/8" NPT to -8 AN (Straight)	05-60685
H	1	Screw, Cap: 1/2"-13 - 1-1/2" Zinc	03-50464
I	4	Nut, Flanged Nyloc: M6 Zinc	03-50445
J	1	Washer: 1/2"	03-50494
K	2	Screw, Socket Hd Cap: 3/8" -16 x 1.00"	03-50443
L	4	Screw, Socket Hd Cap: M6	03-50229
M	2	Nut, Flanged Serrated: 3/8"-16 GR 8	05-40103
N	4	Washer, AN 1/4"	03-50444
O	4	Washer, Fiber: 1/4"	03-50457
P	2	Washer, Flat: 3/8" AN	03-50230
Q	1	Jumper, Priming	05-70004
R	1	Harness, Pressure Switch	05-60701
S	1	Harness, Power	05-60523
T	1	Hose, Fuel Return	05-60843
U	1	Hose, Fuel Inlet	05-60844
V	1	Hose, Fuel Outlet	05-60845
W	1	Bracket, E-Brake	05-60823

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





**Step 1:** On the driver's side of the truck, under the driver's door, you will see a hole in the transmission crossmember mount. Use this hole to mont the bracket to the frame (as shown above).



**Step 2:** Mount the supplied bracket to the frame using the supplied 1/2"-13 x 1.50" bolt, and 1/2" washer and tighten.



**Step 3:** Remove the parking brake cable from its mount on the frame.



**Step 4:** Mount the supplied E-Brake bracket to the frame mount for the factory parking brake cable with the supplied hardware and tighten (as shown above).

- (2) 3/8" x 16 x 1" Bolt
- (4) 3/8" Washers
- (2) 3/8" Flanged Nut

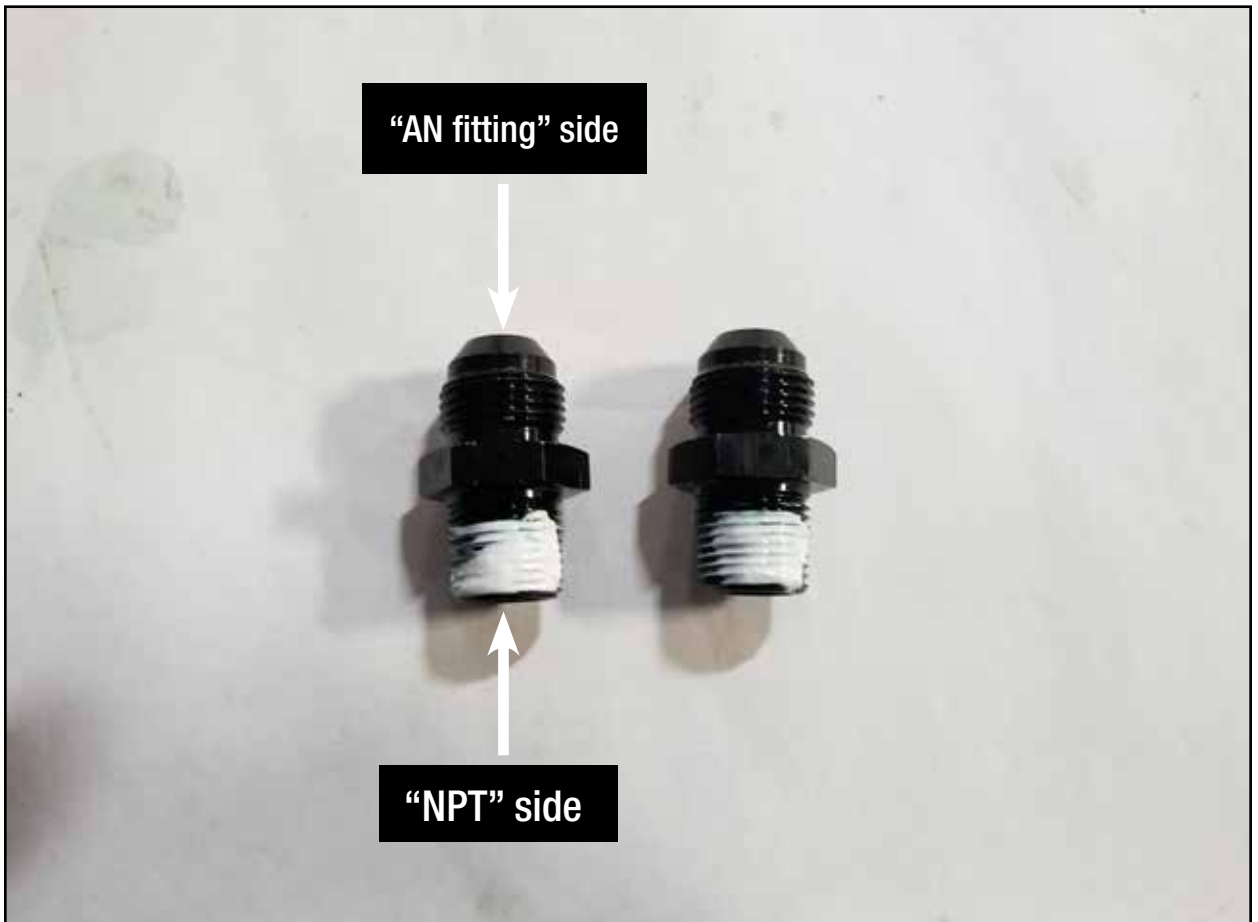


**Step 5:** Mount the supplied fuel manifold assembly to the carbon steel frame bracket using the supplied hardware and tighten.

- (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 6:** 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.



**Step 7:** Install the 2 x 3/8" NPT to -8 AN fitting into the DFS 780 (as shown above).



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

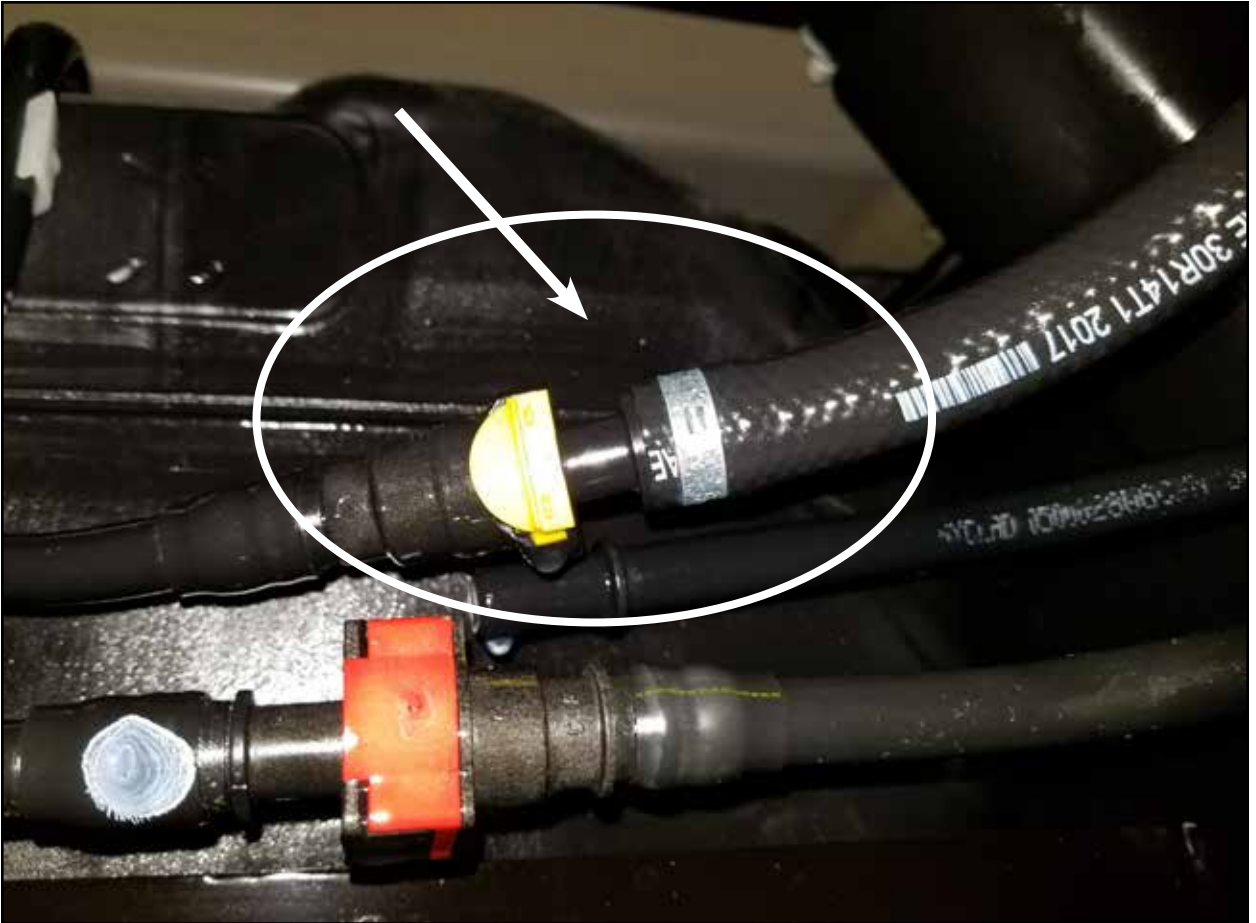
**Note:** The pump should look like the picture above.



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



**Step 10:** Clean the area around the stock fuel lines (located on the driver's side, in front of the tank) to prevent dirt and debris from going into the lines.



**Step 11:** Disconnect the (yellow) fuel supply hose.

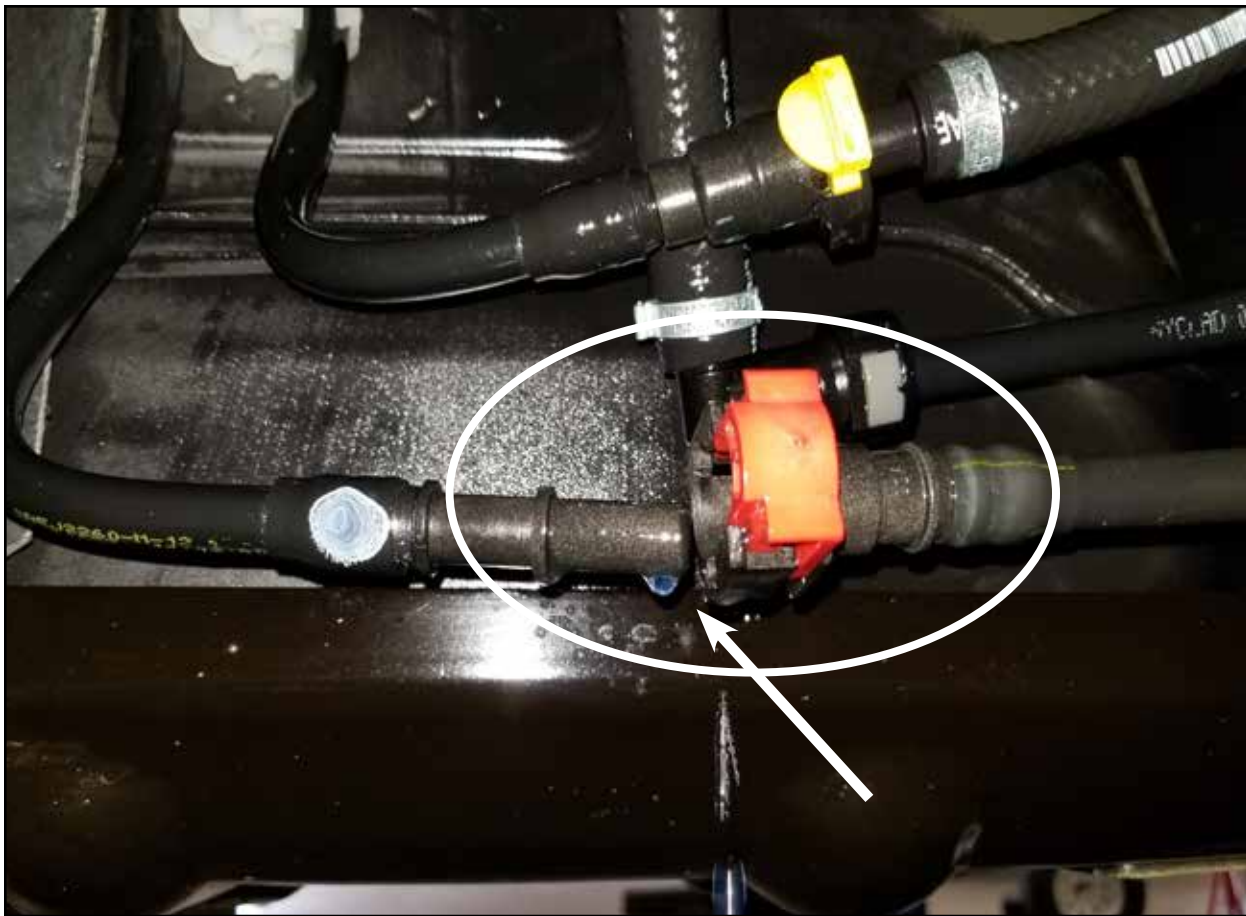
**Step 12:** Install the straight male quick disconnect fitting on the supplied fuel inlet hose (silver 90° -8 AN fitting - shown below) into the female side of the stock fuel feed line.





**Step 13:** Install the 90° female quick disconnect fitting on the supplied fuel outlet hose (black 90° -8 AN fitting - shown below) onto the male side of the stock fuel feed line.





**Step 14:** Disconnect the (red) fuel return line.





**Step 15:** Install the straight female quick disconnect fitting on the supplied fuel return line (as shown below) onto the male side of the stock return fuel line.





**Step 16:** Install the male quick disconnect fitting in the supplied fuel return line (as shown below) into the female connection of the stock fuel return line.





**Step 17:** Install the fuel inlet hose (90° silver -8 AN fitting) onto the male -8 AN fitting on the fuel inlet port of the fuel manifold assembly.



**Step 18:** Install the fuel outlet hose (90° black AN fitting) onto the male -8 AN fitting on the fuel outlet port of the fuel manifold assembly.



**Step 19:** Install the supplied fuel return line (-4 AN fitting) onto the top of the sight glass cover.



**Step 20:** Using the supplied nylon cable ties, secure the new hoses (as shown above).



**Step 21:** From the inside of the frame, plug the Deutsch connector on the supplied power harness into the mating connector on the fuel manifold assembly.

**Step 22:** Route the power harness along the inside of the frame towards the front of the vehicle.

**Step 23:** Organize the wire harness and fuel lines and secure with the supplied nylon cable ties.



**Step 24:** Run the other end of the power harness along the inside of the frame into the engine compartment.





**Step 25:** Run the power harness across the front of the engine compartment using the supplied nylon cable ties to secure the harness.



**Step 26:** 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.



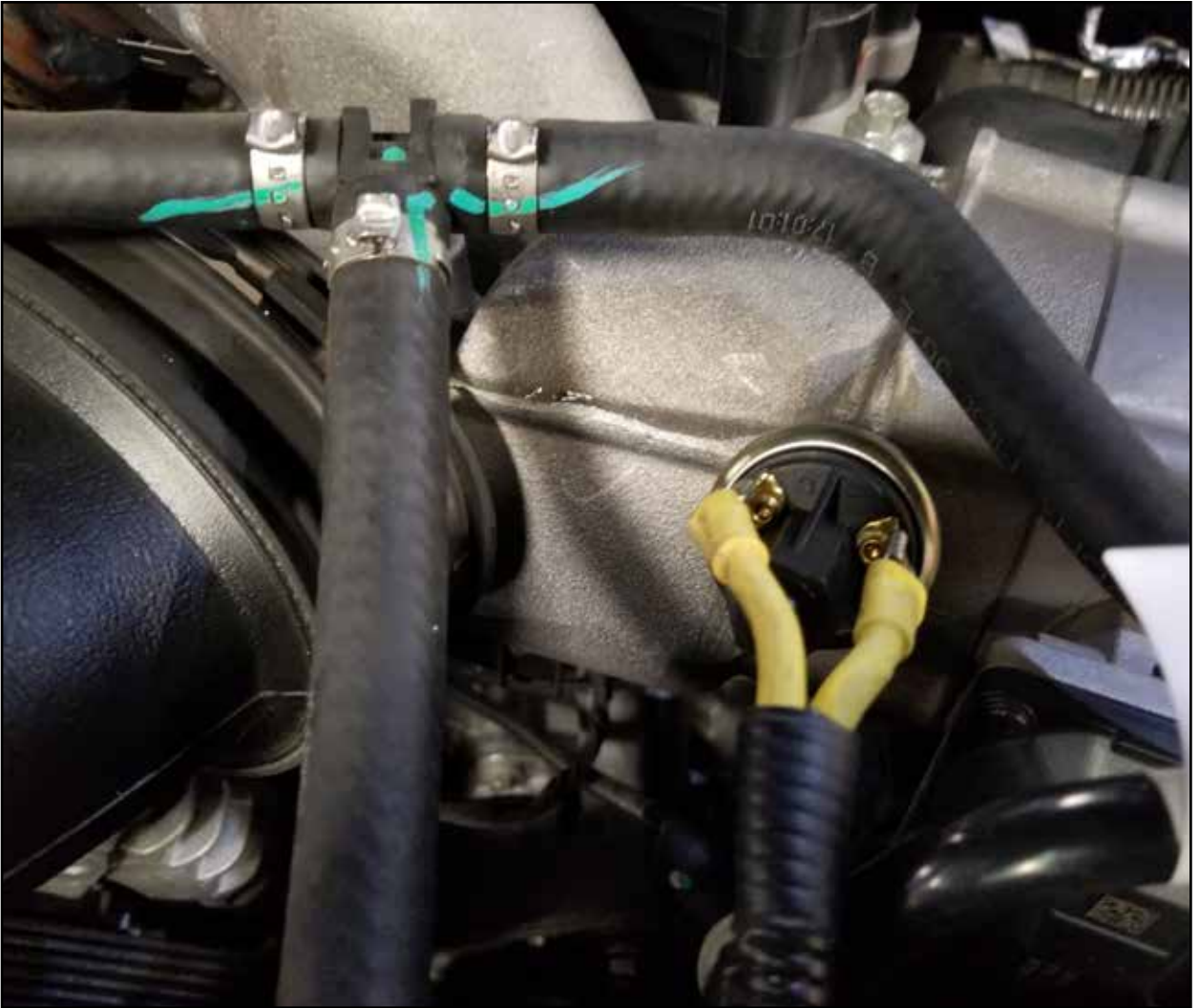
**Step 27:** Connect the black wire ring terminal on the power harness to the ground strap bolt located on the fender wall near the passenger side battery.



**Step 28:** Install the supplied pressure switch into the intake manifold (1/8" NPT).

**Note:** This step may require you to drill and tap a 1/8" NPT hole.

**Use Caution:** DO NOT allow any metal chips to enter the engine.



**Step 29:** Connect the supplied pressure switch harness to the pressure switch (either wire can be attached to either terminal).



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



**Step 31:** Make sure that all fittings are tight. Install the priming plug onto the Deutsch connector on the power harness. The DFS780 will turn on. 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 sight glass) to release trapped air which will allow the DFS780 sight glass to fill. If the DFS780 sight glass still does not fill, try starting the engine. Check for any leaks.

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

**NOTE:** Failure to remove the priming jumper will result in the DFS780 continuing to run, even with the vehicle shut off. This could result in a dead battery.



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

**Step 34:** Start the truck and let idle while checking for any leaks.

**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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