



advanced FLOW engineering

DFS 780

Instruction Manual P/N: 42-13051

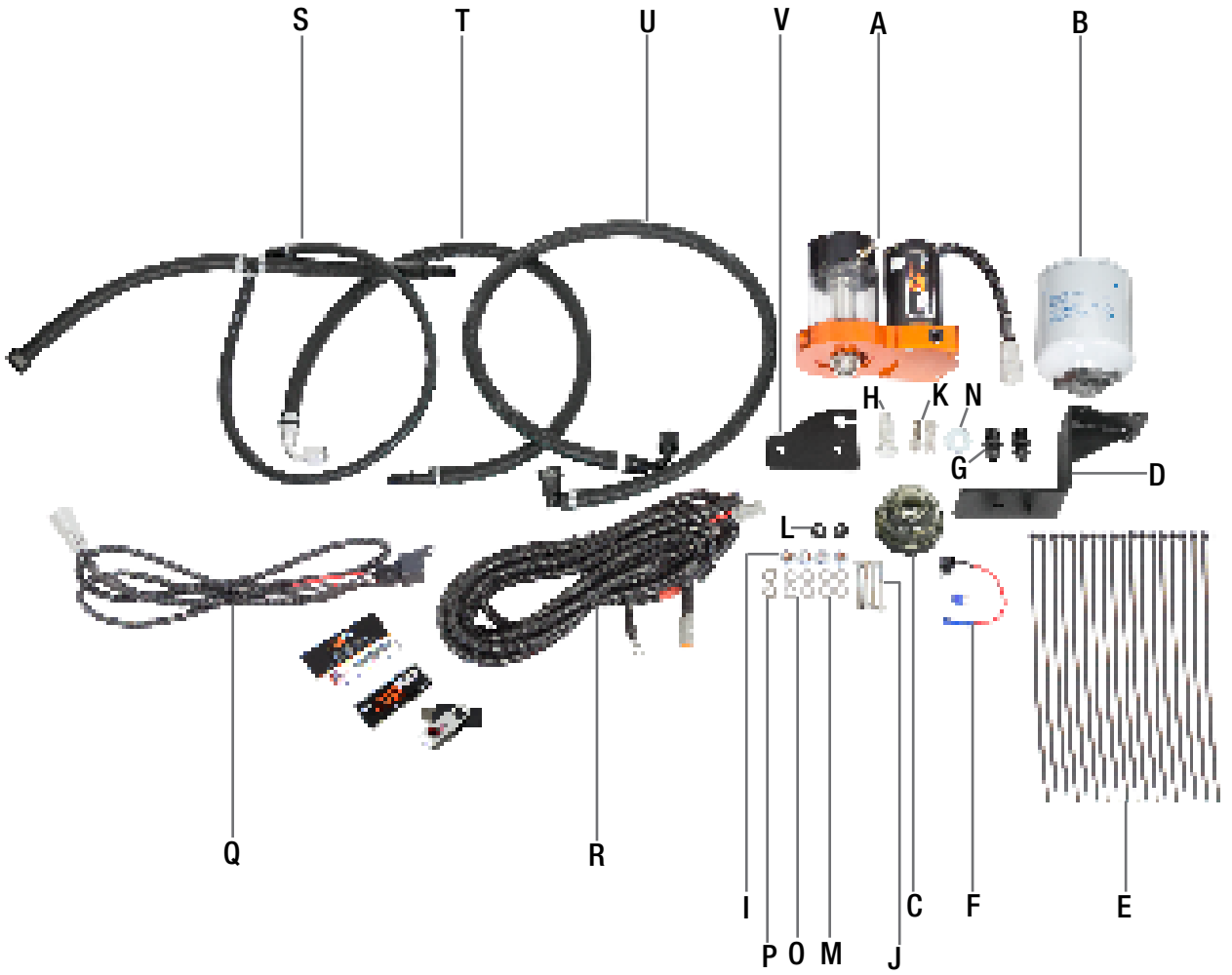
Make: **Ford** Model: **F-250/F-350** Year: **2017-2018** Engine: **V8-6.7L (td) Power Stroke**
Fuel Pressure: **8-10 psi (relay controlled)**



- 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	Adapter, Fuse; Add a Harness	05-60691
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	4	Screw, Socket Hd Cap: M6	03-50443
K	2	Screw, Socket Hd Cap: 3/8"-16 x 1.00"	03-50229
L	2	Nut, Flanged Serrated: 3/8"-16 GR 8	05-40103
M	4	Washer, AN 1/4"	03-50444
N	1	Washer: 1/2"	03-50494
O	4	Washer, Fiber: 1/4"	03-50457
P	2	Washer, Flat: 3/8" AN	03-50230
Q	1	Harness, Stand Alone Relay	05-60551
R	1	Harness, Power	05-60523
S	1	Hose, Fuel Return	05-60843
T	1	Hose, Fuel Inlet	05-60844
U	1	Hose, Fuel Outlet	05-60845
V	1	Bracket, E-Brake	05-60823

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 (1 of 2)

Step 1: Locate the transmission crossmember below the driver's door.



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



Step 3: Remove the parking brake cable from its forward mount on the frame (under the drivers door).



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.

“AN fitting” side



“NPT” side

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.

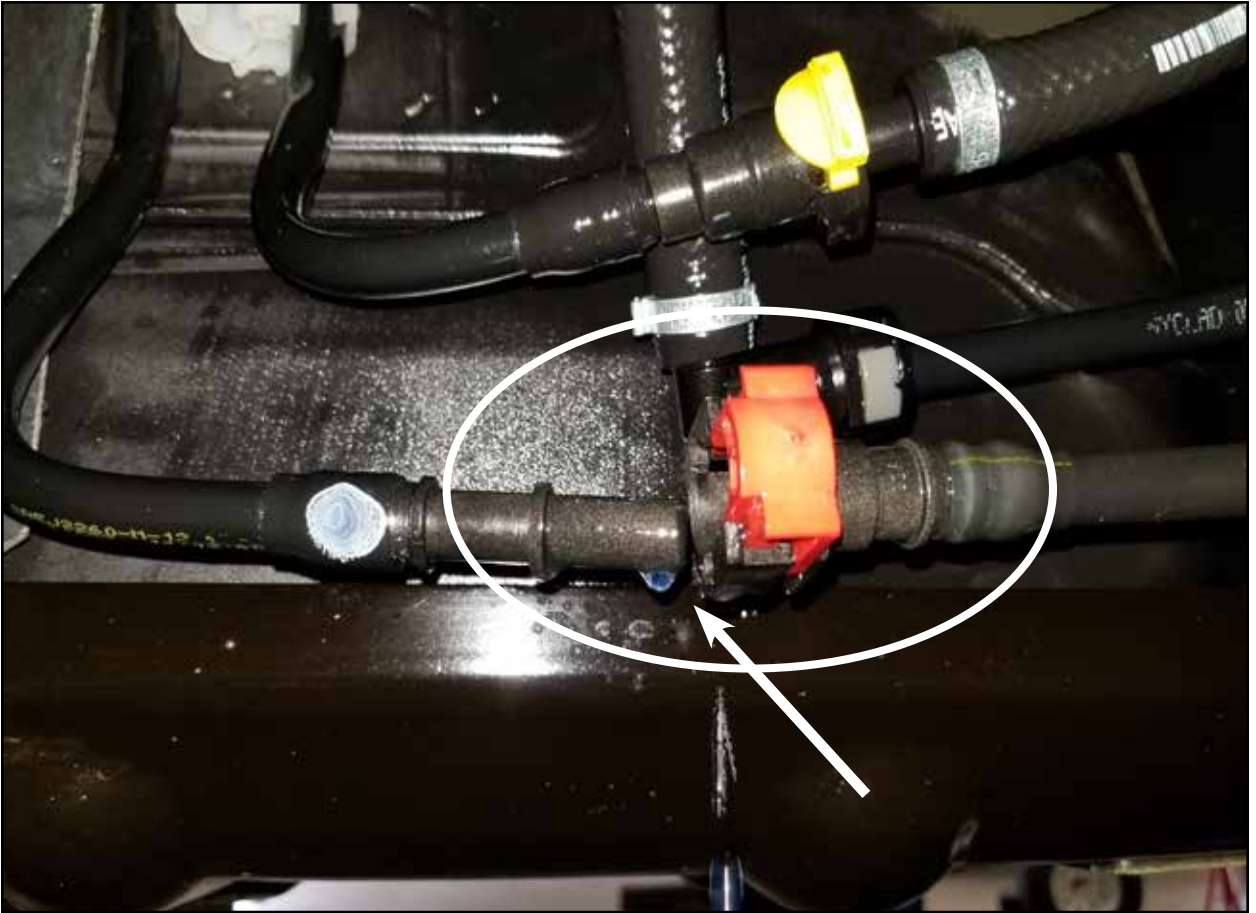
Step 12: Install the straight male quick disconnect fitting on the supplied fuel inlet hose (silver 90° -8 AN fitting - shown below) into the female side of the stock fuel feed line.





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



Step 29: Secure the relay harness using a supplied nylon cable tie.



Step 30: Run the power wire down the fender well to the bottom of the body. Locate the rubber isolator in the floor pan on the passenger side. This is where the wire will enter the cab.



Step 31: Remove the door sill cover by pulling it straight up (shown above).

Step 32: Remove the kick panel cover by pulling straight back.



Step 33: Pull the carpet up and locate the rubber isolator plug.

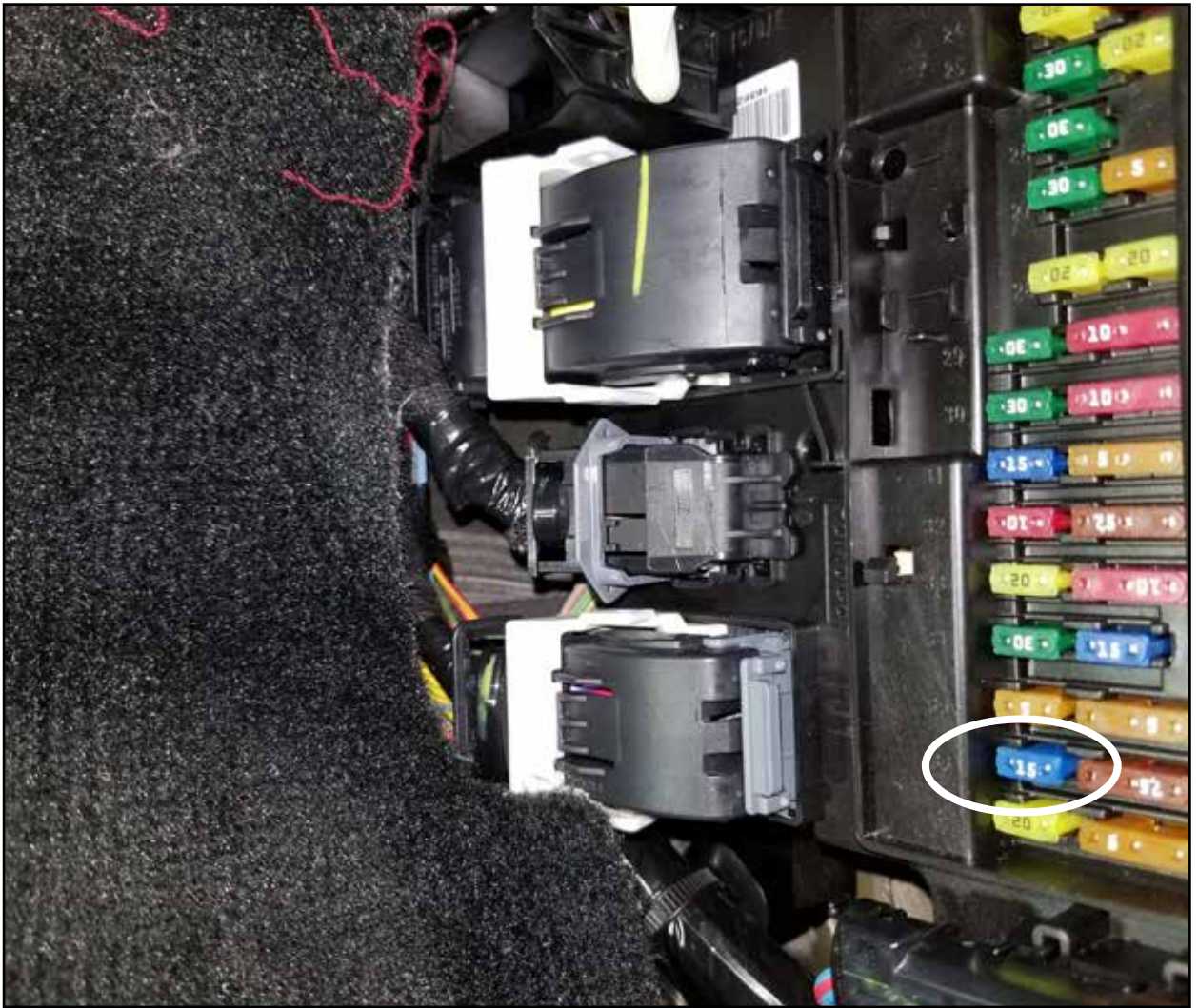
Note: You made need to cut a small hole in the isolator to allow for the wire to come through.



Step 34: Locate the passenger side fuse box (located on the passenger side behind the kick panel removed in Step 32).



Step 35: Attach the power wire from the relay harness to the supplied add a harness fuse adapter



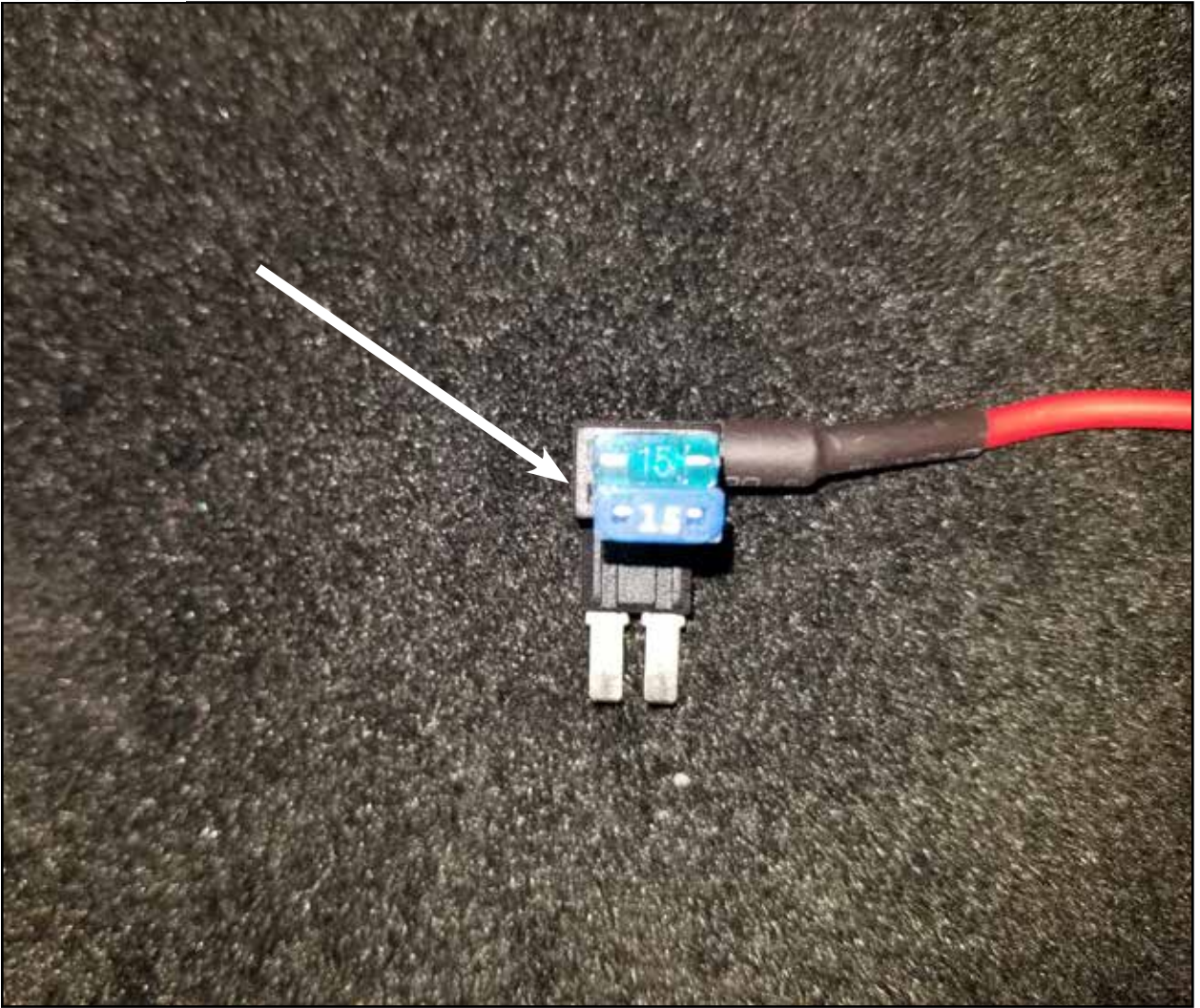
Step 36: Locate a 12-volt ignition source inside the fuse box that only comes on with the key in the “run” position. Once a 12-volt source is located, pull the fuse from the fuse box.

Locations for inline fuse adapter plug in:

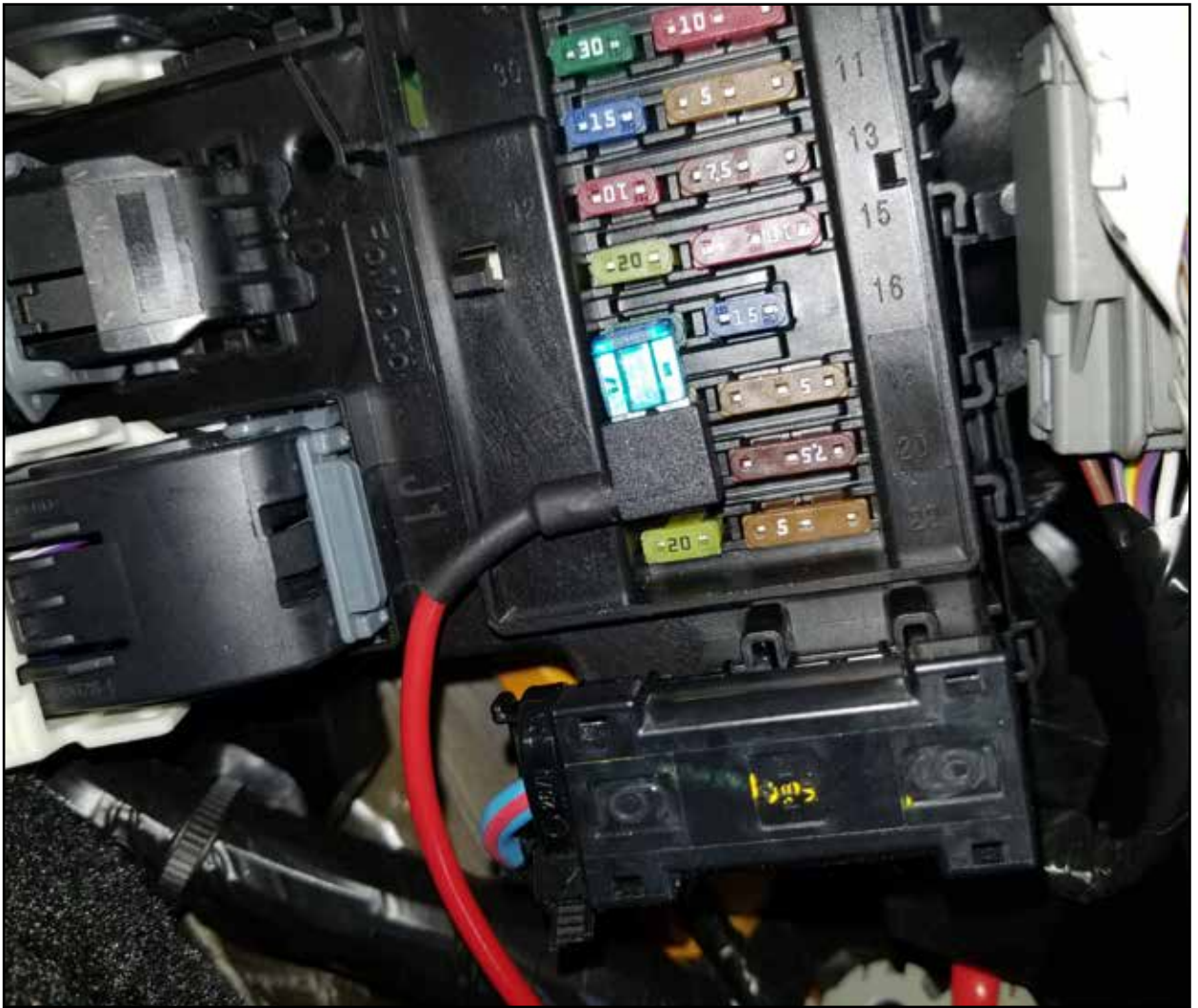
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Lane Keeping system etc....



Step 37: Install the fuse removed in Step 36 and insert it into the open location on the add a harness fuse adapter (not in line with the wire).



Step 38: Install the add a harness fuse adapter (with installed fuses) into the 12-volt ignition source location chosen in Step 36.



Step 39: Lay the carpet back down.

Step 40: Reinstall the Kick panel.

Step 41: Reinstall the door sill.



Step 42: 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 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.

Step 43: 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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