

INSTALLATION INSTRUCTIONS

PRODUCT: SUREFLO SENDING UNIT FOR 1991-1998 DODGE w/ CUMMINS

FPE-2021-82
November, 2022

FITMENT: 1991 – 1998 Dodge with Cummins

KIT P/N: FPE-SF-CUMM-9198

ESTIMATED INSTALLATION TIME: 2-3 Hours – Installation completed with the use of a vehicle hoist

TOOLS REQUIRED: 1/4" drive ratchet, 1/4" drive 7mm socket, 1/2" drive impact or ratchet, 1/2" drive 10, 13 and 15mm sockets, 11/16" wrench, strap wrench or MATCO #FTR730, needle nose pliers.

IMPORTANT: SureFlo performance sending units are designed for use in conjunction with an aftermarket externally mounted fuel pump OR as a replacement sending unit for trucks originally equipped without an in-tank low pressure lift pump.

KIT CONTENTS:

Item	Description	Qty
1	SureFlo sending unit assembly	1
2	Fuel float arm	1
3	Fuel tank seal ring	1
4	-8 to 3/4"-16 straight male fitting w/ o-ring (one is optional for the pump return and the second is optional for trucks with a custom soft line to the aftermarket pump)	2
5	5/16" fuel line retainer clip	1
6	3/8" fuel line retainer clip	1
7	90 degree -8AN to 1/2" pushlock hose fitting	1
8	SureFlo adapter pigtail with butt splice connectors	1



WARNINGS:

- All fuel lines and the fuel tank must be clean.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

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IMPORTANT - Verify your existing MOPAR sending unit part number is listed in the table below. If your part number is not shown, then it IS NOT verified to fit. Many trucks have been retrofitted over time to gasoline model tanks and the SureFlo will not fit into a retrofitted tank configuration. For Model Year 1998 trucks equipped with a 12 valve engine - your vehicle may require our 1998.5-2002 SureFlo (FPE-SF-CUMM-9802). These trucks would have been originally equipped with sending unit part number 52102079AB.

You can also verify your proper part number by the resistance range of the level sender on your existing unit.

If your stock sending unit ranges **between 6 – 113 ohms** – use FPE-SF-CUMM-9198

If your stock sending unit ranges **between 20 - 220 ohms** – use FPE-SF-CUMM-9802

IMPORTANT - Verify your OE MOPAR part number in the cross-reference chart:

Model Year	Replaces MOPAR P/N	Previously Superseded P/N's	Fuel Tank Size
1991	52018309	52004838, 52004937	30 Gallon
1992	52018309	52004838, 52004937	30 Gallon
1993	52018309	52004838, 52004937	30 Gallon
1994	4864735	R4864735, 4864735	35 Gallon
1995	4864209	04798293, 52102024, 52127802, R4864209, 4864209	35 Gallon
1996	4798671	04798293, 52102024, 52127802, R4864209, 4864209	35 Gallon
1997	4798671	04798293, 52102024, 52127802, R4864209, 4864209	35 Gallon
1998	4897668AD	0489766AD, 489766AE	26, 34, 35 Gallon

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INSTALLATION PROCEDURE:

STEP 1: With the truck on a hoist, disconnect the fuel filler hose and vent.



STEP 2: Reaching over the top side of the tank, disconnect the fuel lines and electrical connection for the OEM sending unit.



STEP 3: Remove the cross-member located at the front of the fuel tank. There will be (4) - 15mm bolts to remove.

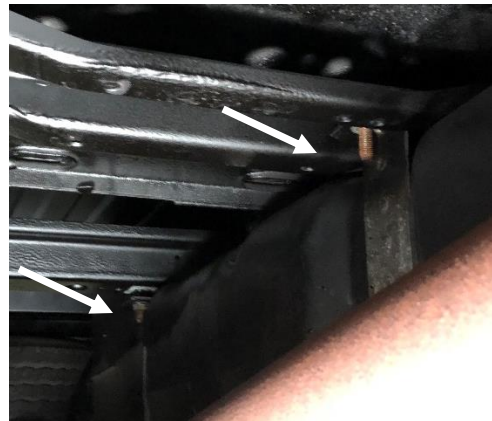


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STEP 4: Secure the tank with a lift or jack to lower the tank down to the ground.



STEP 5: Remove 15 mm nuts that retain the fuel tank straps at the front and rear of the tank. Remove the tank straps.



STEP 6: Slowly lower the tank.



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STEP 7: SENDING UNIT REMOVAL

With the tank on the ground, make note of the orientation of the OEM sending unit in the tank. The SureFlo sending unit will be oriented in the same manner during installation.



Using a strap wrench, or MATCO tool [#FTR730](#), rotate the sending unit's retaining ring (OE P/N: 52005389) counterclockwise. MATCO tool shown at right for reference. Remove the retaining ring and remove the sending unit assembly from the tank. Have a bucket nearby to catch fuel from the OE unit when removed.



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STEP 8: Remove and discard the original sealing gasket from the tank. Clean the area around the sealing surface of any debris. Check the fuel tank for debris and clean the tank if any is observed.



STEP 9: Once the area is clean, install the new seal ring included in the kit into the fuel tank.



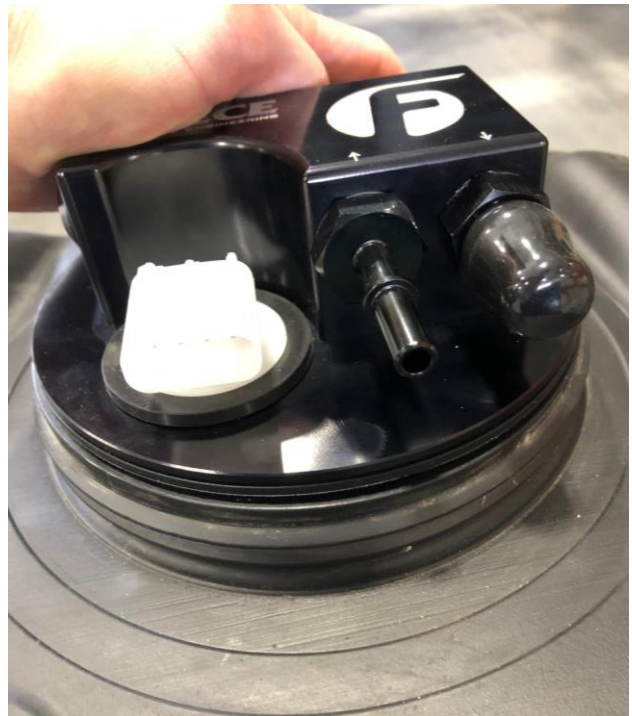
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STEP 10: Install the fuel level float arm onto the SureFlo sending unit by gently clipping the arm into the fuel level sensor.

STEP 11: Install the SureFlo assembly into the tank. Check that the gasket is fully seated.

NOTE: Use caution when installing the SureFlo to not damage the float arm. DO NOT rotate the pump once installed in the tank, you may damage the float arm or sending unit – align it before you place it into the tank.

STEP 12: Ensure proper orientation of the SureFlo by matching the orientation of the original sending unit. Reinstall the retaining ring and tighten using MATCO tool [#FTR730](#) or a strap wrench by rotating it clockwise to the fully engaged position.



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STEP 13: Remove the protective shipping caps from the fittings and install the new fuel line locking tab that is included in your kit onto the return side fitting.



STEP 14: For aftermarket pumps that have a fuel return from the pump: remove the hex plug located on the side of the sending unit cap and install the -8 to 3/4-16 O-ring fitting and 90 degree push-lock fitting. This will allow you to run your injector return fuel and pump return fuel directly to the SureFlo bucket, ensuring optimal performance. This step must be performed AFTER the retaining ring is in place. Alternatively, you may run your injector return fuel and pump return fuel together prior to the SureFlo head port, thereby requiring the use of only one port. In that case, you will not remove the hex cap.

If your truck has an aftermarket pump previously installed and is returning fuel to the filler neck from the pump, it is required that you re-route this to the pump return fitting on the SureFlo.

A second -8 to 3/4-16 straight male fitting w/ O-ring is supplied for installations that are not using the stock fuel lines to feed the pump.

IMPORTANT NOTE: There is a spring and poppet located under the hex cap. These components must remain installed when using the port as a secondary return.

Remove the hex cap to allow for pump return fuel to feed the bucket



Pump return

Injector return

Feed to pump

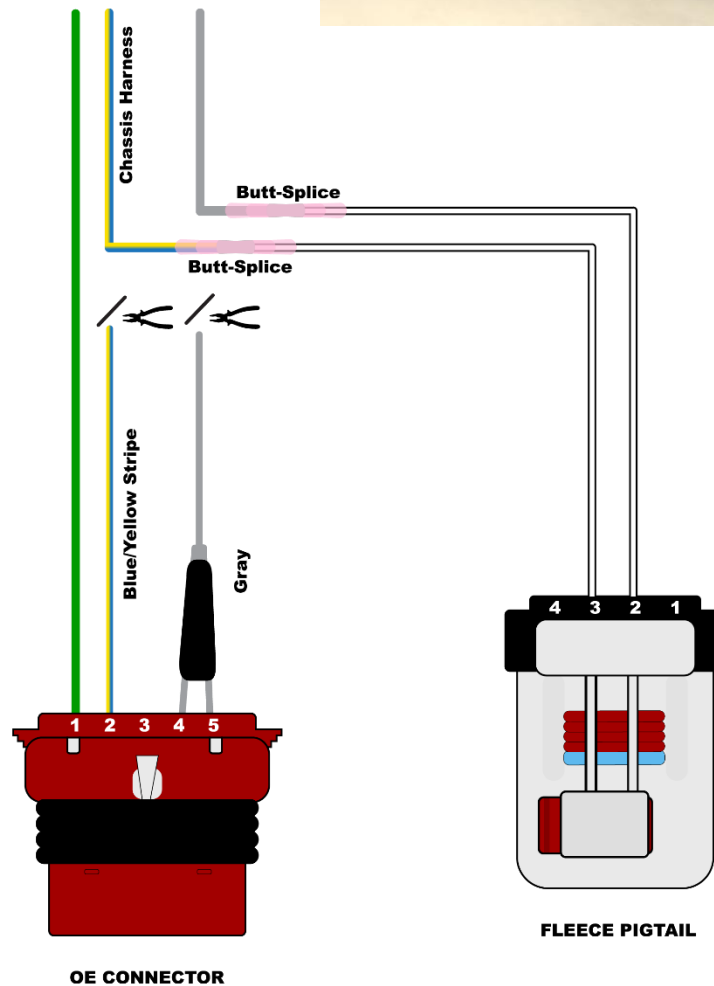
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ELECTRICAL CONNECTION FOR MODEL YEARS 1991-1993

Locate the OE sending unit connector and the wires in pin locations #2 and #4/5. The wire in pin location #2 will be blue with a yellow stripe (gauge input), the gray wires in pin locations #4 and #5 are tied together in the harness and will be for the signal ground.

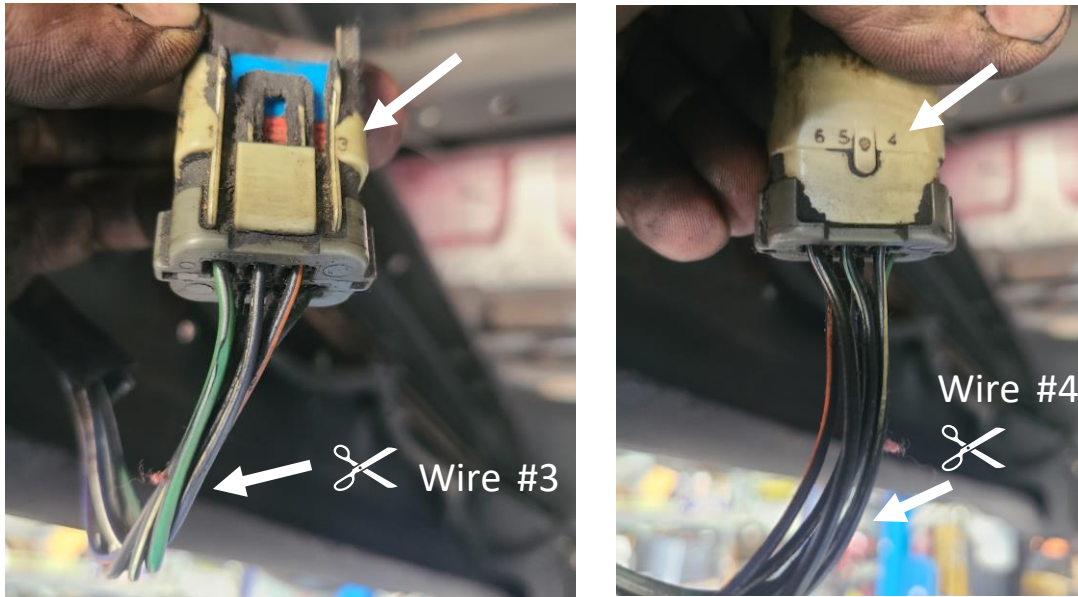
Cut wires #2 and #4/5 approximately 2-3" back from the OE sending unit connector. The chassis wires leading to the gauge panel will be spliced into the new pigtail provided in the kit.

Strip the insulation on these two wires leading to the gauge panel and using the butt splice connectors included in the kit, connect them to the new pigtail leads. There are no polarity requirements – the wires can be connected to either wire on the new pigtail. The OE connector will no longer be utilized and can be tied up out of the way on the vehicle. Use a heat gun to seal the butt splice connector after the connection is securely made.

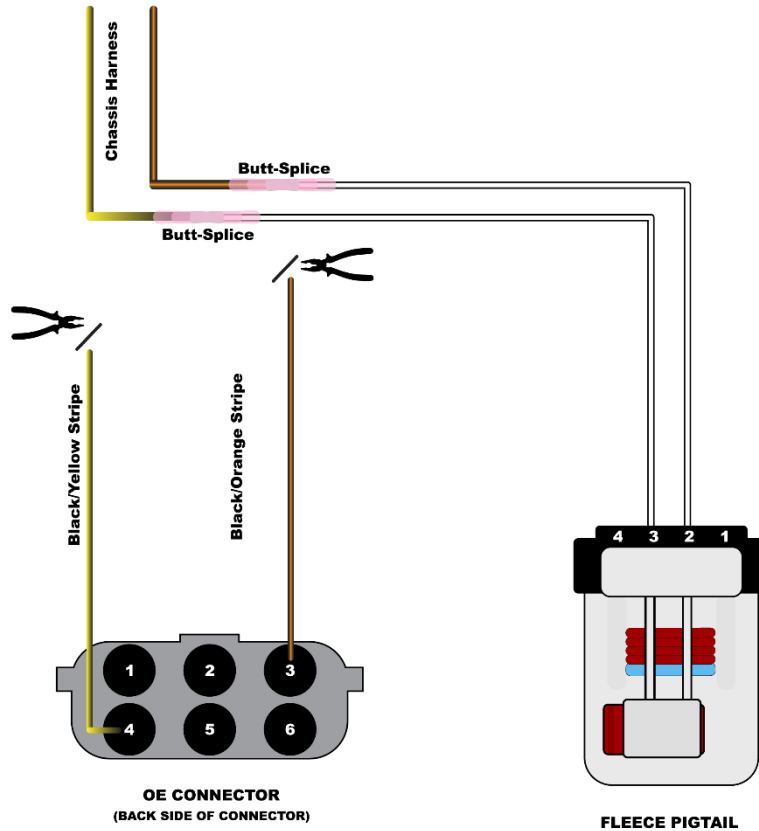


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ELECTRICAL CONNECTION FOR MODEL YEARS 1996-1997 (6-PIN CONNECTOR)



Locate the OE sending unit connector on the chassis harness. The OE connector will be labeled with the pin locations on the body of the connector. The wire in pin location #3 is black with an orange stripe and wire in pin location #4 is black with a yellow stripe. Cut wires #3 and #4 approximately 2-3 inches back from the OEM sending unit connector. The chassis wires leading to the gauge panel will be spliced into the new Fleece harness. Strip the insulation on these two wires leading to the gauge panel and using the butt splice connectors included in the kit, connect them to the new harness. There are no polarity requirements – the wires can be connected to either wire on the new pigtail. The OE connector will no longer be utilized and can be tied up out of the way on the vehicle. Use a heat gun to seal the butt splice connector after the connection is securely made.



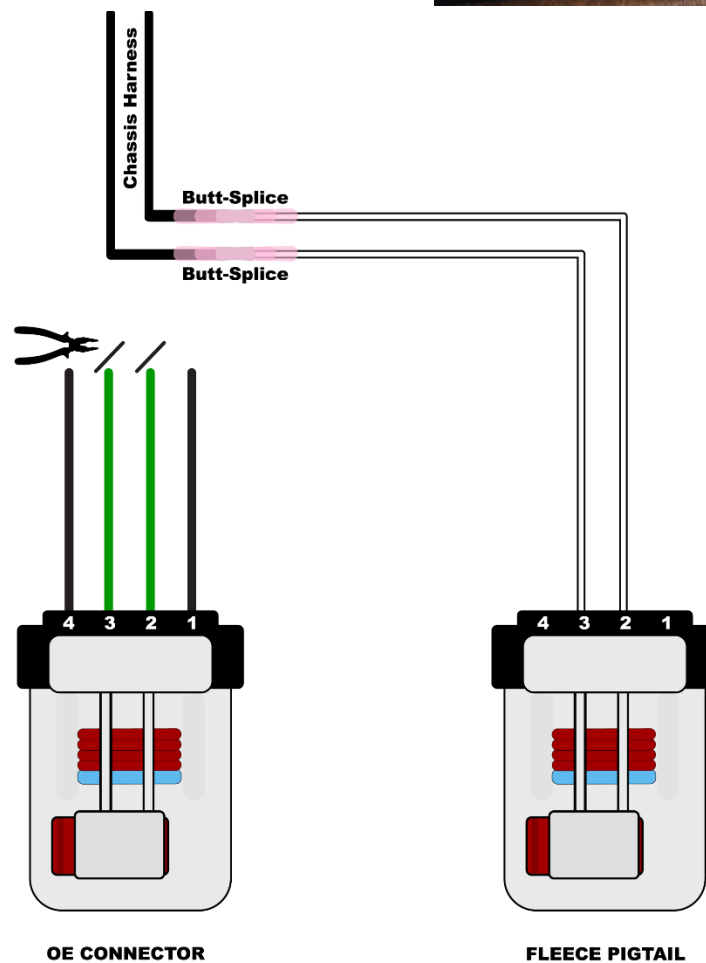
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ELECTRICAL CONNECTION FOR MODEL YEARS 1994, 1995, 1996 AND 1998

The original chassis connector that was connected to the sending unit may be re-used. If the chassis connector is broken or the terminal pins are corroded utilize the new pigtail provided in the kit and install as follows and shown in the graphic below:

ONLY the two inside wires (pins #2 and #3) will be utilized with the new pigtail included in the kit.

Strip the insulation on these two wires and using the butt splice connectors included in the kit, connect the chassis side of the harness to the new pigtail leads. There are no polarity requirements – the wires can be run to either wire on the new pigtail. Use a heat gun to seal the butt splice connector after the connection is securely made.



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STEP 15: Lift the fuel tank into place. Re-install the (2) tank straps that secure the tank with the (2) - 15mm nuts. Install the center support with the (4) - 15mm bolts that were removed.



STEP 16: From the driver's side rear wheel-well, connect the electrical wiring harness to the SureFlo. Key on the vehicle and ensure the fuel level is reading appropriately. Start the engine and check for any fuel leaks before operating the vehicle.



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