

9-442-C102-0909

DeatschWerks 2003-2013 Chevrolet Corvette C5/C6 DW440 Brushless Pump Installation Guide



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Included Parts:

- DW440 Brushless 440LPH Fuel Pump
- 12" Pump Electrical Connector
- Electrical Bulkhead w/Retainer and O-Ring
- 12" x 3/8" Convoluted Fuel Tube
- 16" x 1/4" & 1/8" Convoluted Fuel Tube
- 13.3mm Hose Clamp (x2)
- 8.7mm Hose Clamp
- 6.1mm Hose Clamp
- 2" Round Fuel Sock Pre-Filter

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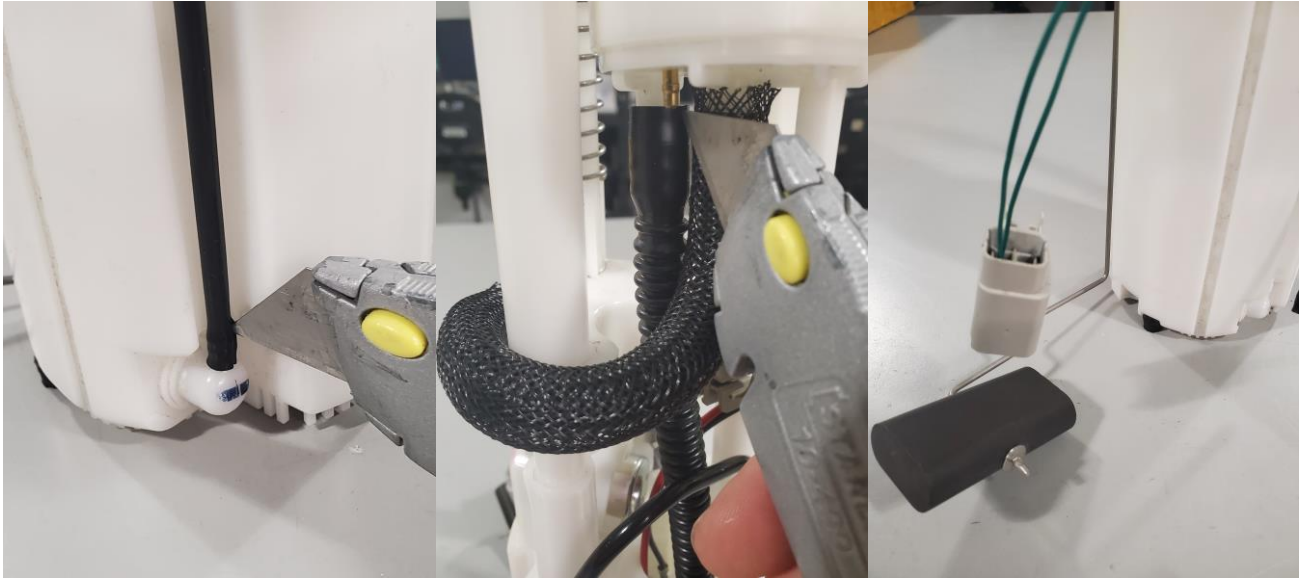
PLEASE READ: This guide is intended to aid in the installation of our products. It is recommended that factory manuals or instructions are followed to remove the fuel pump assembly from the vehicle. Instructions in this guide are generic and are intended to aid in the installation of a DW440 Brushless fuel pump. The factory manual should supersede any contradiction.

Below is a picture of some suggested tools that will make the installation process easier.

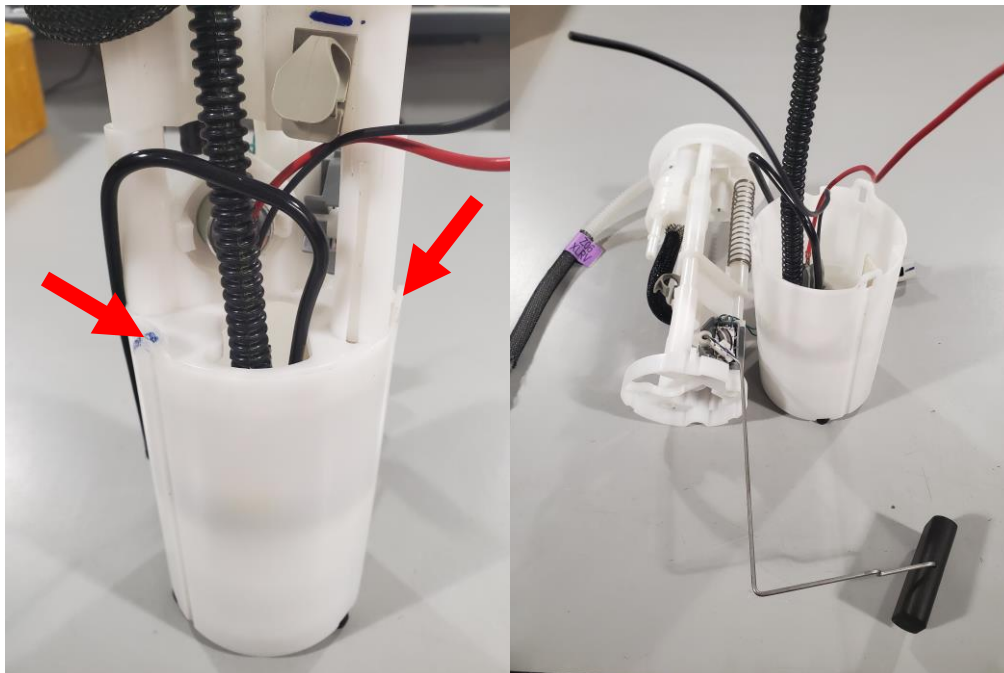


Disassembly of OEM Module

1 – Cut and remove the factory venturi hose from the side of the module, also cut and remove the factory pump feed hose from the top hat of the module, unplug and remove the factory pump and sending unit wiring, it may be necessary to cut or de-pin the factory pump wiring.

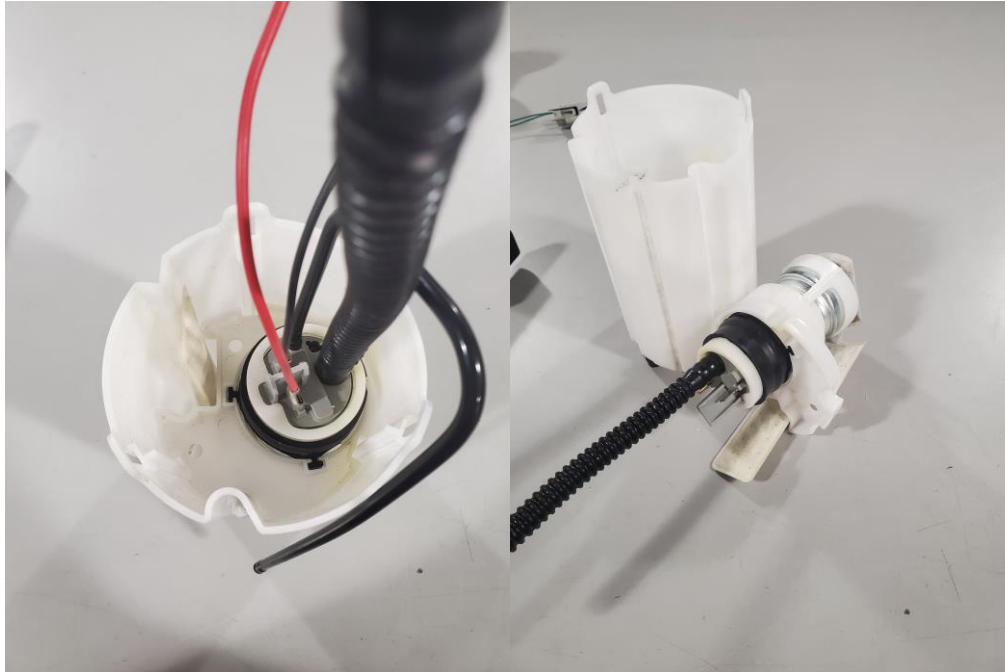


2 – Separate the bucket from the center section by unlatching the clips around the edge of the bucket. Slide the module apart.

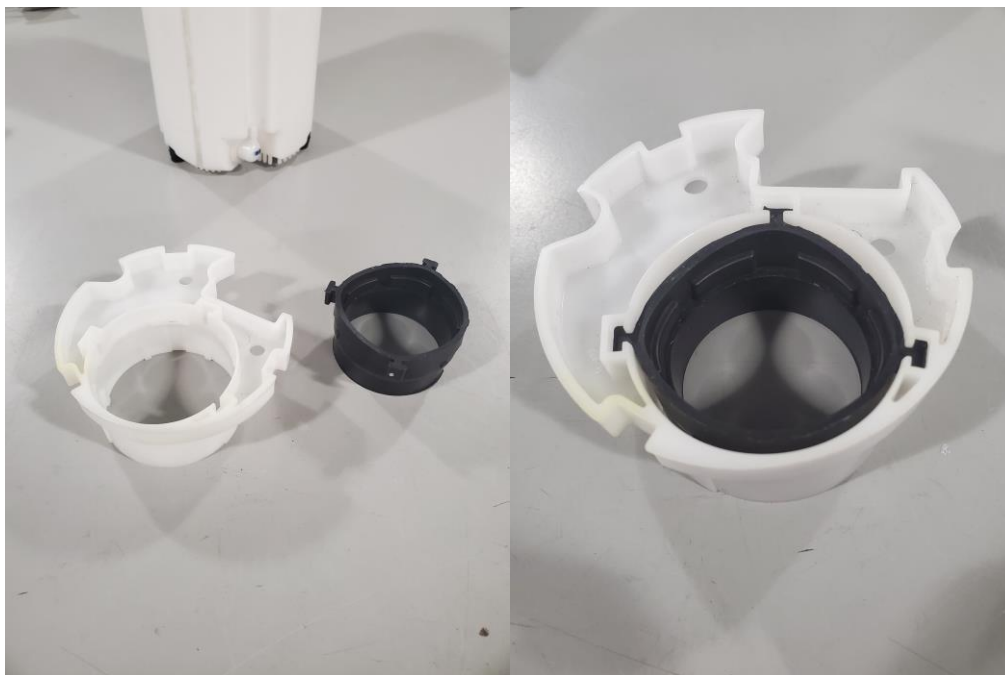


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3 – Remove the factory pump, filter, and wiring harness by prying/pulling up on the plastic piece the pump is sitting in. This part can be difficult, being unable to reach down inside the module to get a good grasp can be tricky.



4 – Remove the pump, pre-filter sock and plastic pump retaining pieces from the pump assembly, you will be reusing the rubber portion and the larger outside plastic portion. (See Picture)



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Installation of the DW440 Pump

5 – Prep your DW440 pump by installing both of the supplied convoluted fuel hoses, the 12" long 3/8" hose will go on the main outlet and be secured with one of the 13.3mm hose clamps, the smaller hose will go on the smaller venturi port. The venturi hose has two different sized ends, the larger 1/4" end will attach to the pump and is secured with the 8.7mm hose clamp.

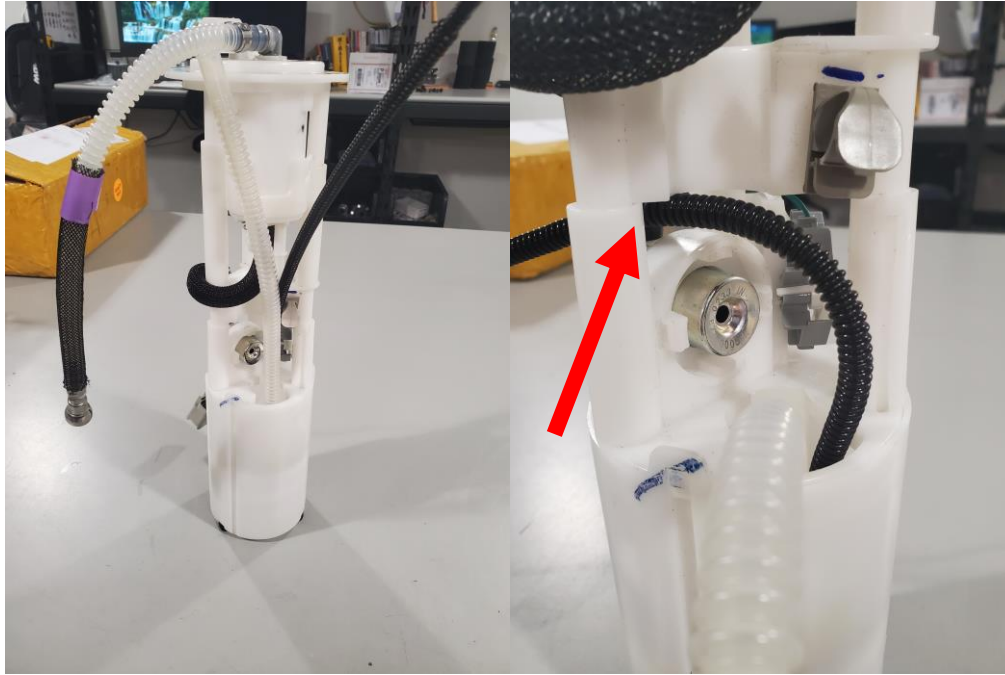
Note: Convoluted tubing can be easier to install if heat is applied to the cuff only portion of the hose, never use an open flame around gasoline.



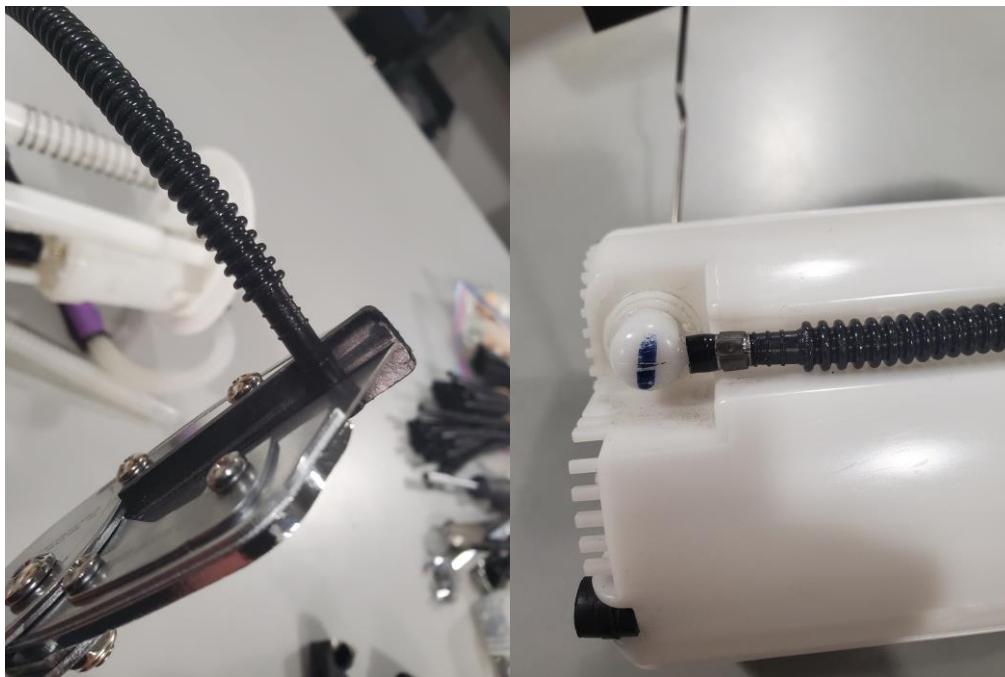
6 – Install the DW440 pump into the rubber bushing and plastic spacer, install the pump assembly into the bucket and click it into place. Be sure the pump is pushed all the way to the bottom of the bucket.



7 – Install the top hat into the center section. Guide the convoluted tubes out through the hole above the pump and route the smaller venturi hose through the passage in the top hat assembly.



8 – Remove the flare off the very end of the venturi hose, and slip on the 6.1mm hose clamp, heat the hose and install it over the factory venturi jet inlet nipple, this can be difficult due to the angle and size of the parts in question.

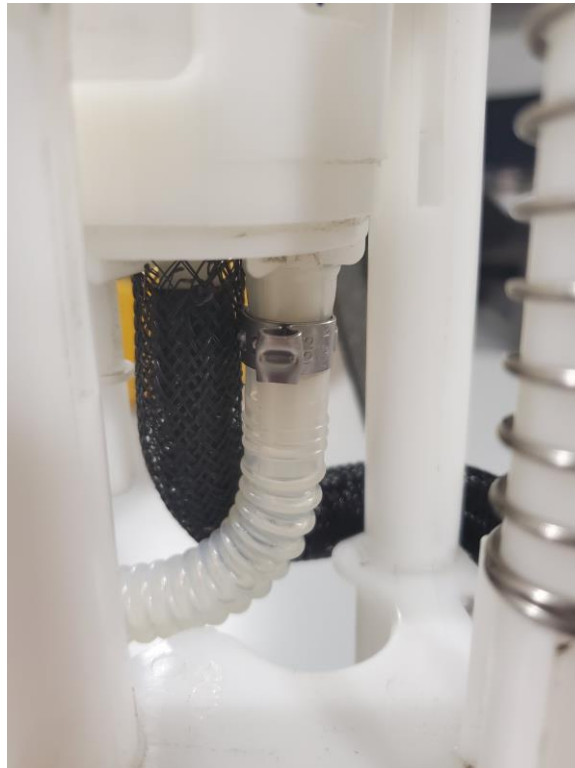


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9 – **(Optional)** The OEM filter in the assembly is not compatible with ethanol and has a service life of 60–80,000 miles. It is recommended that the filter is removed if either the vehicle is higher mileage or ethanol blended fuels will be used. As the filter will be removed, it is recommended that an inline filter is installed somewhere between the pump assembly and the engine. To remove the OE assembly filter, it is located within the canister pictured below and there are 3 tabs that need to be lifted while pulling down.



10 – Install the pump feed hose onto the nipple under the filter and secure it with the remaining 13.3mm clamp.

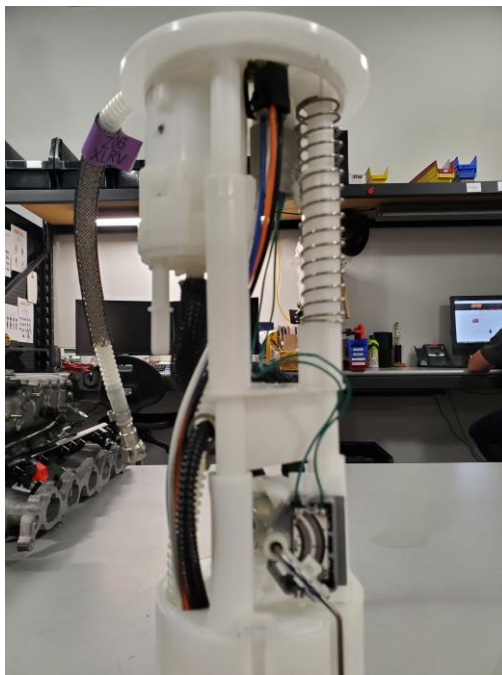


Installing the Bulkhead

11 – The DW440 pump comes with its own 4 wire bulkhead to power the pump. Locate a position on the top hat that has no obstructions on the bottom side and drill a 10.3mm or 13/32" hole for the bulkhead. The bulkhead uses an O-Ring to seal and a metal push style retainer on the bottom. The metal retainer also acts as a latch for the electrical connector, make sure the latch is facing the pins of the bulkhead (see Picture). Due to the webbing on the bottom side of the top hat, it is necessary to remove the webbing around the bulkhead retainer, this can be done with a Dremel style tool or a file and sandpaper.

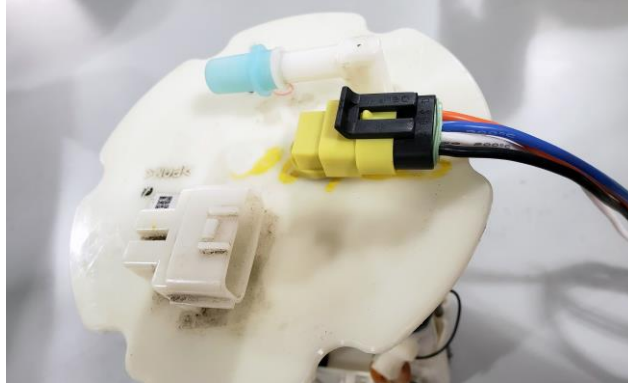


12 – The factory fuel pump power and ground wires can be removed or covered so they will not short on the module. Attach the supplied Brushless pump harness to the bulkhead and the DW440 pump. Re-attach and connect the fuel level sending unit wiring and sensor to the module.



Wiring the Controller and Pump

13 – Plug the 4-wire harness from the controller into the bulkhead wiring connector.



14 – Plug the 3-wire pigtail harness into the controller.



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Wiring the Two Speed High/Low Version (PN# 9-441-C102-09xx)

15a – The Two Speed version of the DeatschWerks Brushless controller, gives you the ability to run two staged pumps in one. A low flow pump for idle and light duty driving, and a high flow pump for maximum performance.

Note: To bypass the Low Speed setting permanently ground the White wire, when power is applied to the controller, this will permanently switch the pump to the full 440LPH High Speed mode. (This is the same function as the discontinued C101 part number)

- Attach the **Red** wire on the controller to a known solid +12v key on switched power source.
- Attach the **Black** controller wire to a known solid clean ground source.
- Attach the White wire to a switched ground to activate the High flow mode.
 - You can activate this many ways, popular solutions would be a pressure activated switch like a “Hobb switch”, a second fuel pump output on your ECU, or a RPM/WOT switch could also be used to trigger the high flow mode. All options should be switched ground.
 - Low flow mode is 68% duty cycle outputting 265 LPH at 40psi.
 - High flow mode is 100% duty cycle outputting 440 LPH at 40psi.



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- 16 – Reinstall the assembly into the fuel tank and attach a length of hose to the outlet of the pump assembly allowing it to drain into a fuel safe container and prime the fuel pump assembly
- 17 – Cycle the key to the on position as many times as required to prime the pump assembly and evacuate the air introduced during the pump installation process
- 18 – Attach supply line to the outlet of the pump assembly

