

9-442-C10x-0902

DeatschWerks 2016-2019 Chevrolet Camaro DW440 Brushless Pump Installation Guide



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Included Parts:

- DW440 Brushless 440LPH Fuel Pump
- 8" Pump Electrical Connector
- Electrical Bulkhead w/Retainer and O-Ring
- Pump Outlet Spacer
- 11.5mm OD O-Ring (x3)
- 14.5mm OD O-Ring
- 6" x ¼" Convoluted Fuel Tube
- 8.7mm Hose Clamp (x2)
- 1cc Super Lube

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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.

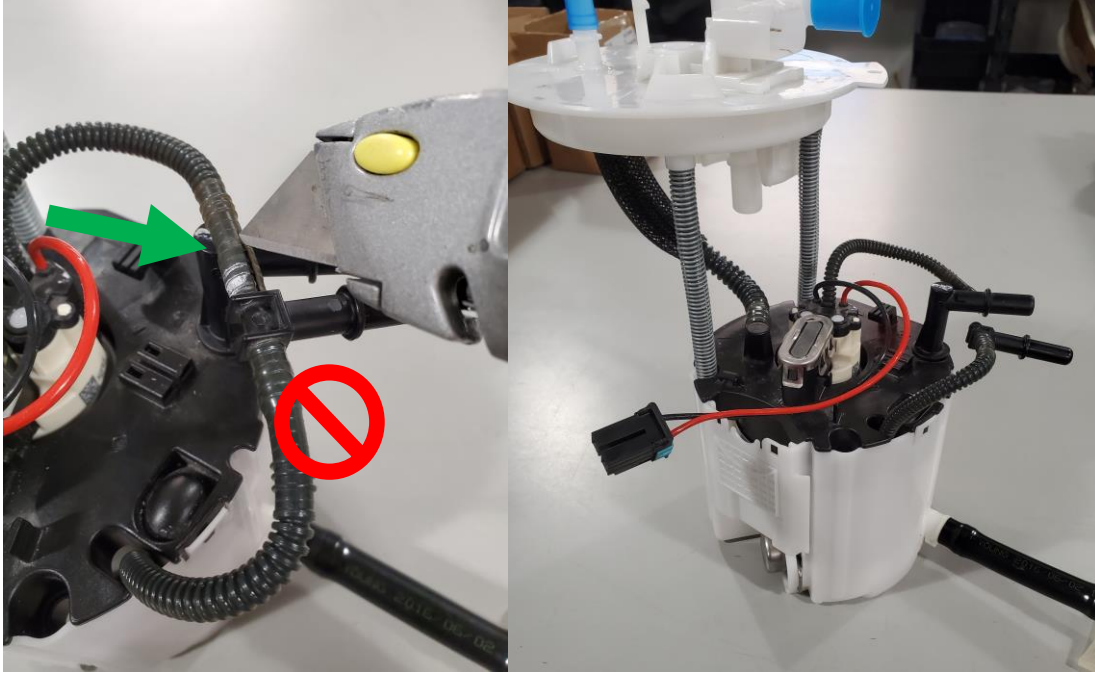
Note: The 2016-2019 Camaro assembly uses a OEM specific fuel sock filter, in order to install the DW440 pump you must reuse the OEM filter, if yours is damaged or too dirty you will need to source a new one.

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

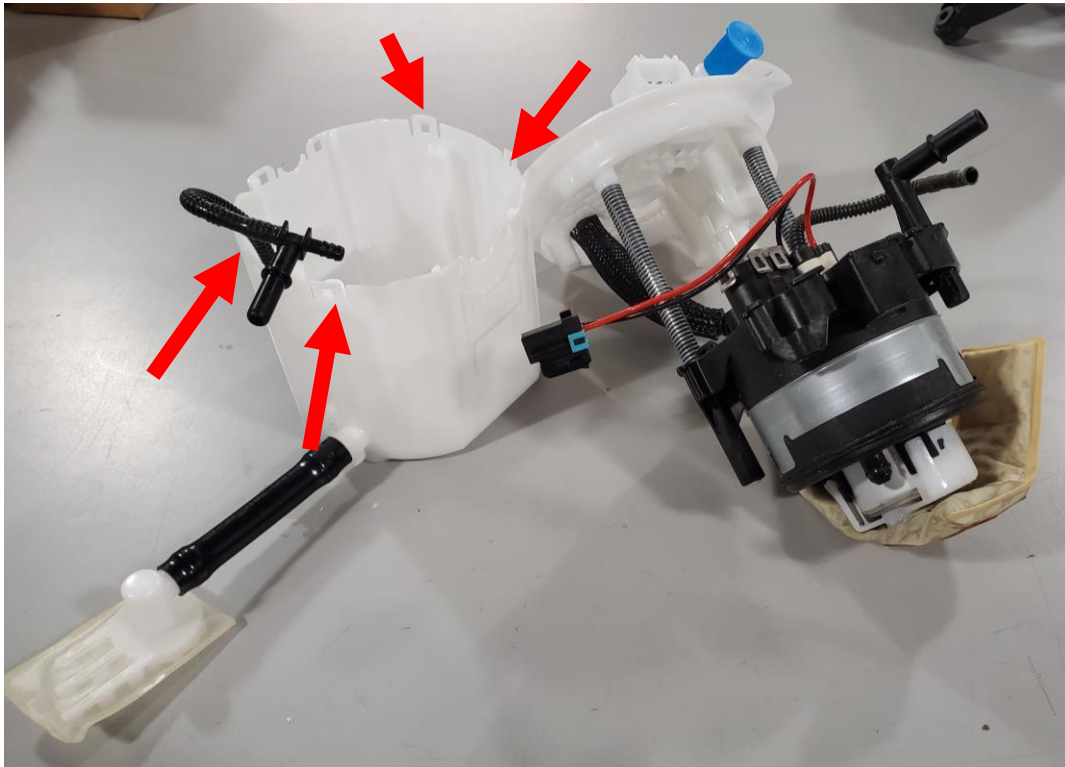


Disassembly of OEM Module

1 – Remove the factory venturi hose on the pump side of the small plastic quick connect fitting, do not remove/cut the hose that goes down into the bucket. Unplug the OEM fuel pump and sending unit wiring also.

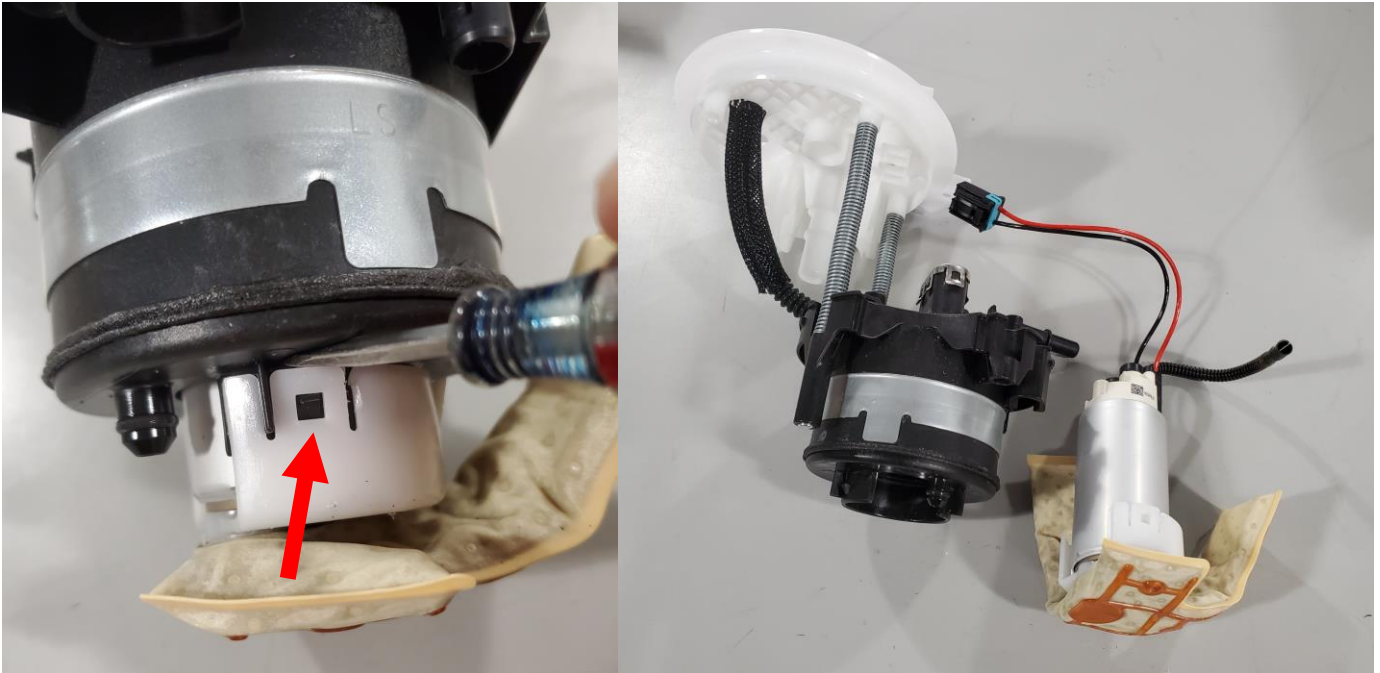


2 – Separate the bucket from the center section by unlatching the four clips around the edge of the bucket.



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3 – Remove the factory pump, filter, and wiring harness by prying the three latches around the filter sock.

**Installation of the DW440 Pump**

4 – Prep your DW440 pump by installing the supplied 14.5mm O-Ring over the inlet on the bottom of the pump, this is needed to seal the pump to the OEM Chevy fuel sock.

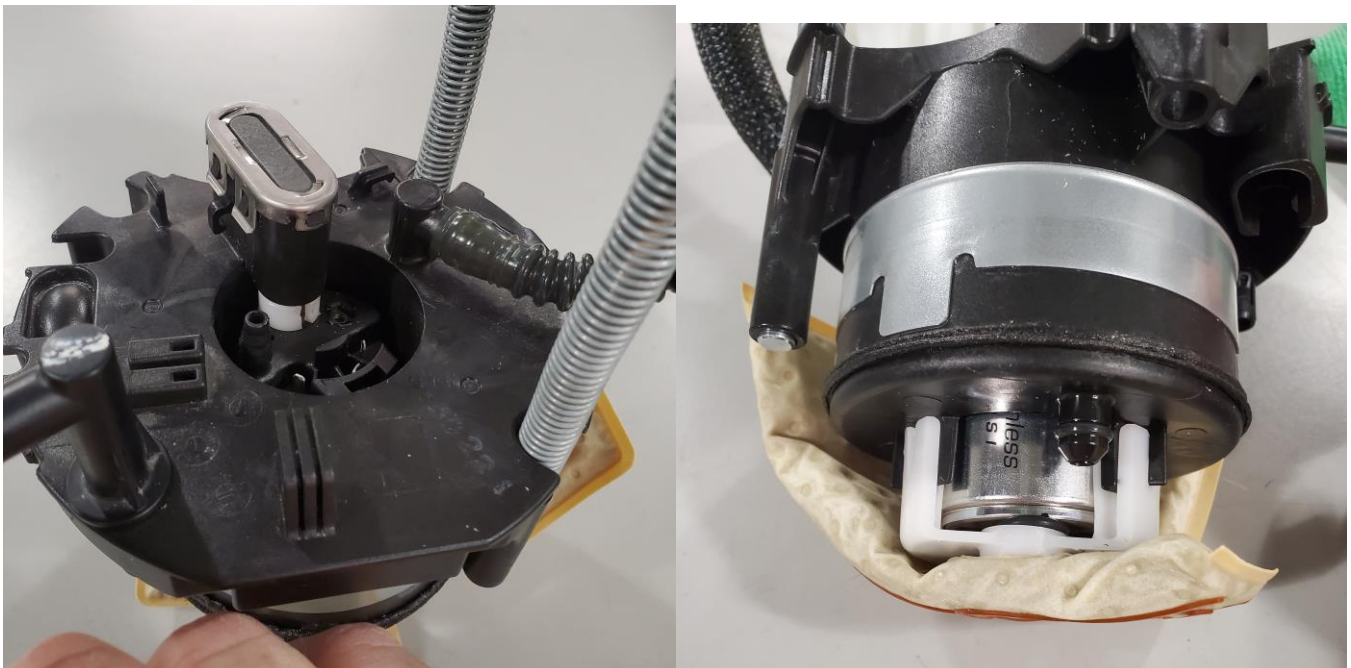


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5 – Prep your DW440 pump by installing the supplied outlet spacer on the pump followed by the three 11.5mm O-rings, use some of the supplied Super Lube to lubricate the O-rings for installation into the pump center section. Install the OEM filter sock onto the bottom of the pump, the O-ring on the bottom of the pump will seal the size difference from the OEM pump inlet to the DW440 inlet.



6 – Install the pump into the center section, all 3 of the O-rings should be seated inside the inlet of the module center section, lock the pump into place by latching the three lock tabs on the filter sock retainer.



7 – Install the center section back into the bucket. Install the supplied ¼" venturi hose onto the DW440 pump and secure it with one of the supplied 8.7mm pinch hose clamps. Install the other end onto the plastic quick connect fitting and secure it with the other 8.7mm hose clamp.



Installing the Bulkhead

8 – 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 Camaro 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.



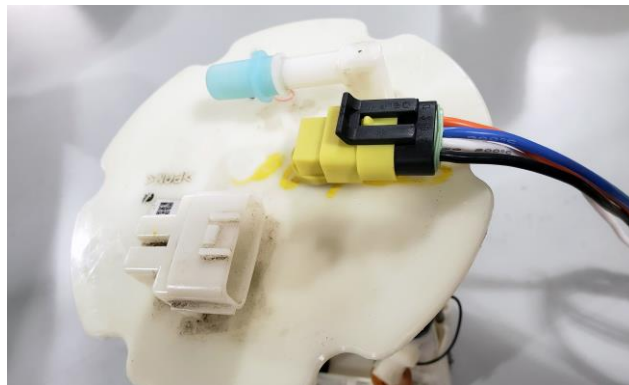
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9 – The factory fuel pump power and ground wires can be removed or covered so they will not short on the module. Attach the supplied Brushless pump harness to the bulkhead and the DW440 pump.



Wiring the Controller and Pump

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



11 – 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)

12a – 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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Wiring the PWM Version (PN# 9-441-C103-09xx)

12b – The PWM version of the DeatschWerks Brushless controller, gives you the ability to use your ECU's Pulse Width output signal to infinitely adjust the pumps output from low to max flow. Wiring the C103 controller can be tricky, knowledge of your cars factory fuel pump wiring system is mandatory. If your car is not factory PWM or your Standalone ECU cannot control a PWM output, you will need to use the C102 controller instead. Most applications will use a ground pulsed signal provided by the ECU or an separate fuel pump control module.

- Attach the **Red** wire on the controller to a known solid non pulsed +12v key on switched source.
- Attach the **Black** controller wire to a known solid non pulsed ground source.
- Attach the **White** wire to the PWM output on your ECU or Fuel Pump Control Module.
 - The DW controller will accept a pulsed ground signal from 50 to 100k hertz.
 - Open is 0% duty cycle, and Ground is 100% duty cycle.
 - Input range is 5% to 95% duty cycle, 0-5% defaults to Off, and 95%+ defaults to 100%.
 - The signal must be pulsed for the pump to activate, the pump will not turn on if you permanently ground the white wire.
 - If your ECU/Control module outputs a pulsed positive signal see **Step 12c** for options to convert the positive signal to a ground signal.

Note: *The DW controller memorizes the last signal it received and will continue flowing at that duty cycle until it receives another signal. Depending on your application the OEM prime function could cause the pump to continue to run on, until either the engine is started and receives a PWM signal or power is cut to the controller.*



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12c – If your ECU outputs a pulsed positive signal it will have to be converted to a ground signal before you can use the DeatschWerks Brushless Controller. Follow the wiring diagram below to install the signal adapter.

Contact DeatschWerks Technical Support for an adapter to install into your pulsed positive signal PWM application at TechSupport@DeatschWerks.com or 1.800.419.6023.

- **Red** wire attaches to the factory positive PWM signal wire from your car.
- **White** wire attaches to the white wire on the DW Brushless controller.
- **Black** wire attaches to ground.



Flushing and Priming the System

13 – 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

14 – 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

15 – Attach supply line to the outlet of the pump assembly



For additional technical support please contact us at: TechSupport@Deatschwerks.com or 405.233.3991