9-441-C10x-0905

Deatschwerks 2005-2010 Ford Mustang DW440 Brushless Pump Installation Guide

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Included Parts:

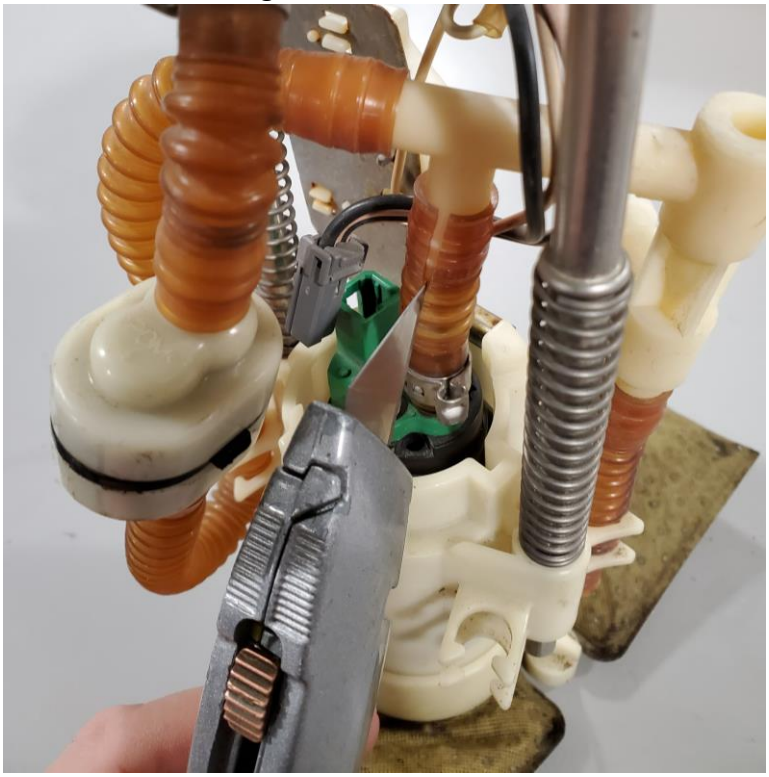
- DW440 Brushless 440LPH Fuel Pump
- 8” Pump Electrical Connector
- Electrical Bulkhead w/Retainer and O-Ring
- Fuel Sock Pump Pre-Filter
- 3” x 3/8” Ethanol Safe Rubber Fuel Hose
- 5/16” Adjustable Hose Clamps (x2)

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.

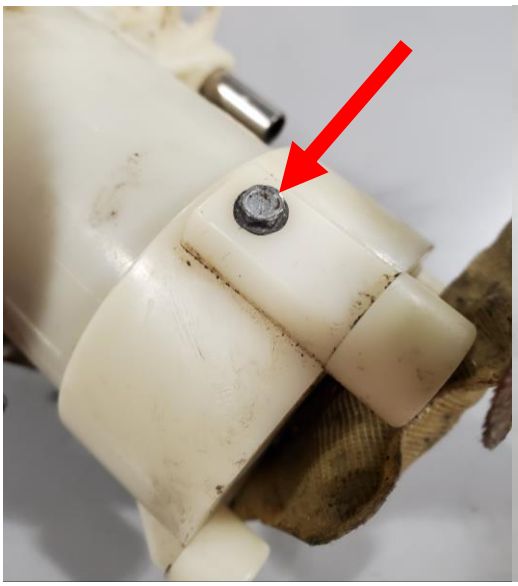
Below is a picture of some suggested tools that will make the installation process easier.

Disassembly of OEM Module

1 – To remove the factory pump you must disconnect the factory hose, this is typically easiest by cutting the tube with a razor knife, take care not to damage the hose barb under the hose.



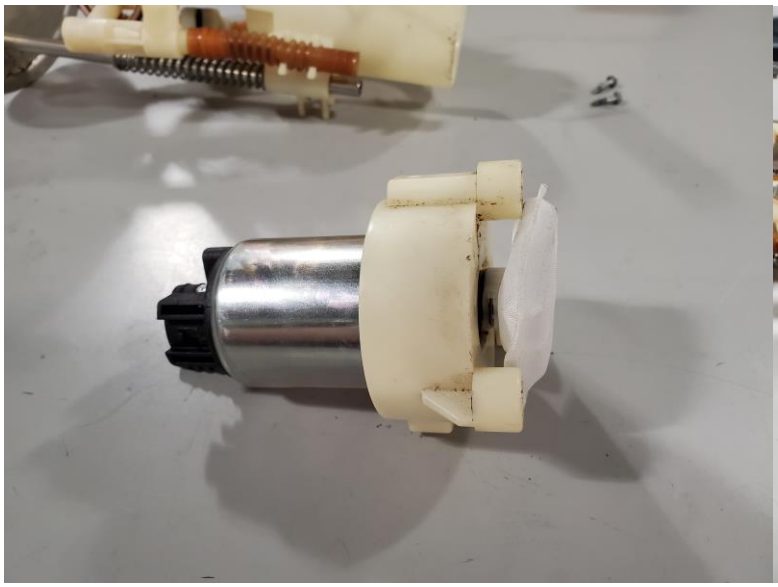
2 – Remove the two screws that hold the lower pump retainer onto the module, take care not to damage the ground wire for the level sending unit. Remove the pump, filter sock, hose and lower retainer from the rest of the module.



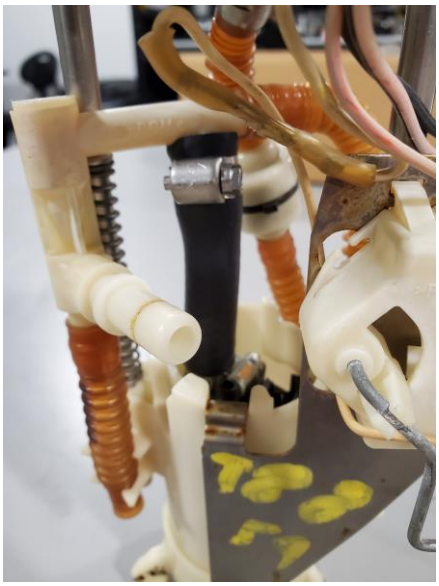
3 – Separate the filter sock from the pump and the lower pump retainer, you can discard the pump and filter sock, keep the plastic lower retainer.

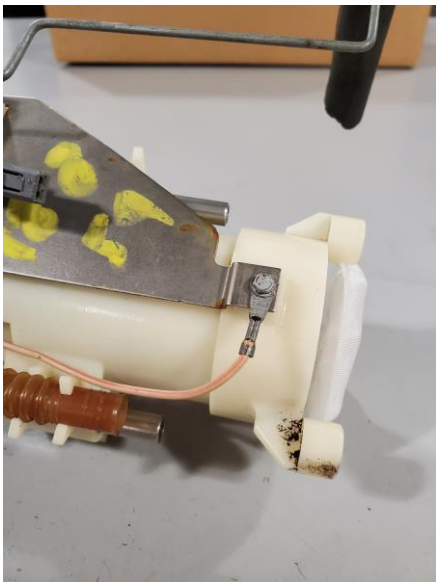
Installation of the DW440 Pump

4 – Install the supplied fuel safe submersible rubber hose onto the DW440 brushless pump and secure it with one of the supplied adjustable hose clamps, also install the lower pump retainer and the supplied filter sock.



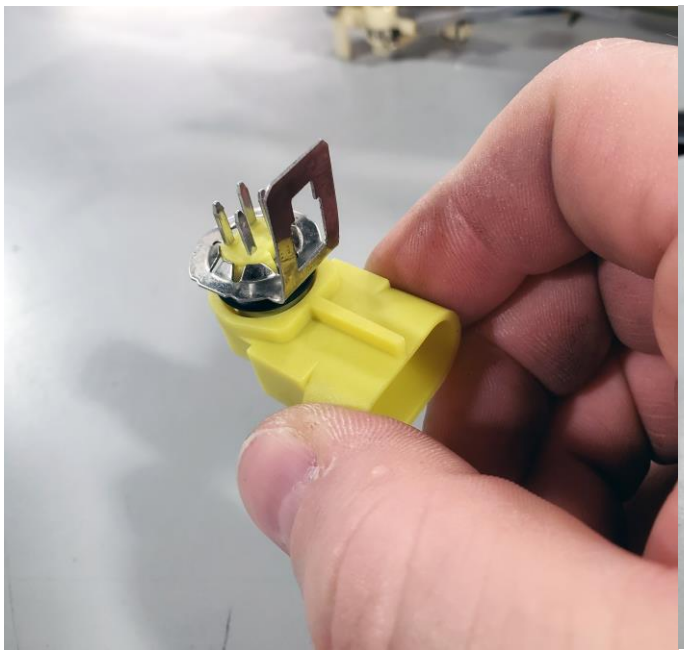
5 – Install the pump unit back into the module, connect the 3/8” hose to the module and secure with the remaining adjustable hose clamp. Re-install the two screws into the module, don’t forget to re-attach the ground wire for the level sender.



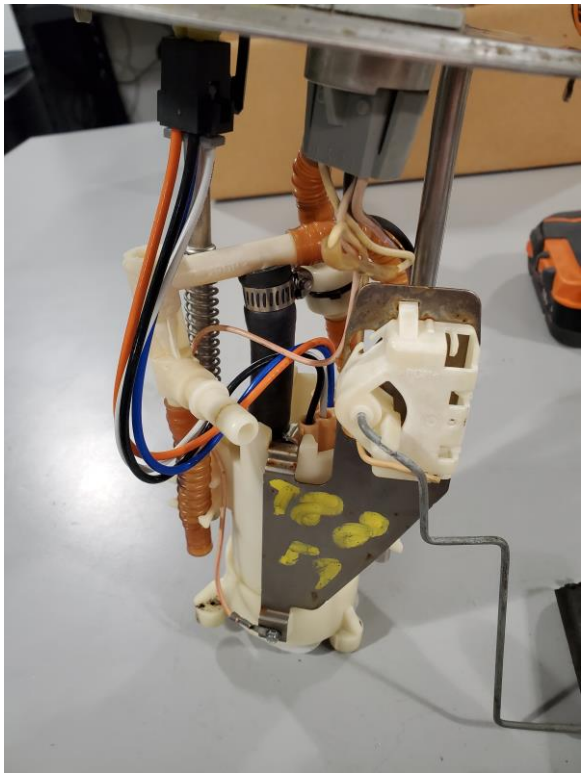


Installing the Bulkhead

6 – The DW440 Brushless pump requires its own 4 wire bulkhead to power the pump. Locate a hole in the top hat that has no obstructions on the bottom side and drill a 10.3mm or 13/32” hole for the electrical bulkhead. The bulkhead uses an O-Ring on the top to provide a seal and a metal push style retainer on the bottom side to secure. 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)

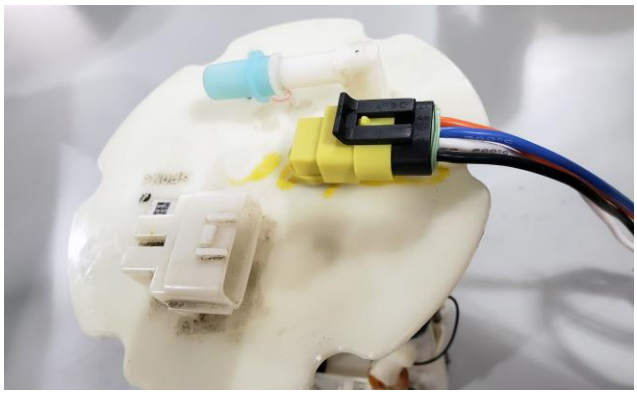


7 – The factory fuel pump power and ground wires can be removed or covered so they will not short on the module. Attach the supplied Brushless pump harness to the bulkhead and the DW440 pump.



Wiring the Controller and Pump

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



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

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

10a – 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.

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

10b – 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 2005 Ford Mustang uses a Blue w/Orange stripe wire from the ECU to the FPDM to control a PWM output.
    - The 2006-2010 Ford Mustang uses a Yellow w/Orange stripe wire from the ECU to the PFDM to control the PWM output.
    - The FPDM is located in the driver's side trunk by the spare tire.

Flushing and Priming the System

11 – 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

12 – 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

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