

9-401-7030

DeatschWerks 2011-2019 Ford Mustang X2 Dual DW400 Fuel Pump Module Installation Guide



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2011-2019 Mustang X2 Module Installation Guide

Included Parts:

- Billet Aluminum Mustang X2 Center Plate
- Billet Aluminum Mustang X2 Top Hat
- DW400 415LPH Fuel Pump (x2)
- 10" Pump Electrical Connector (x2)
- Convoluted Tube 6"x 3/8" (x2)
- Convoluted Tube 12"x 3/8"
- Convoluted Tube 5"x 1/8" (2011-2014)
- Convoluted Tube 5"x 1/8 & 1/4" (2015+)
- Fuel Sock Pump Pre-Filter (x2)
- 3/8" Hose Clamps (x5)
- 1/8" Hose Clamps (x2)
- 1/4" Hose Clamp
- 12-10awg #10 Ring Terminals (x11)
- Side Mount E-Clip Retaining Rings (x2)
- 6AN ORB to 3/8" Hose Barb Fittings (x3)
- 6AN ORB to 1/8" Hose Barb Fitting
- M5 Stainless Electrical Terminals (x3)
- M4 Stainless Electrical Terminals (x2)
- 39mm Pump Adapter Sleeves (x2)

OEM Parts Reused:

- Lower Module Bucket Shell
- Top Hat Support Spring
- Removeable Venturi Jet (2011-2014 Only)
- Fuel Level Sending Unit

Included Parts Not Used:

- 3/8" Rubber Fuel Hose
- 5/16" 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 X2 DW400 pump module. The factory manual should supersede any contradiction.

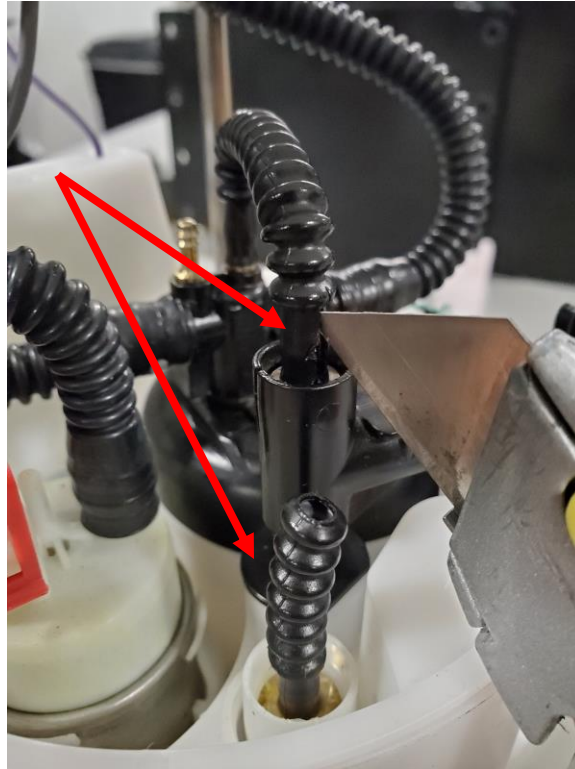
Important Notes: This install guide covers the installation of the DW X2 Module into the 2011-2014 and 2015-2019 Ford Mustang OEM fuel pump module, during the process there are small differences between the two year ranges, there will be repeating steps for these different year ranges.

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

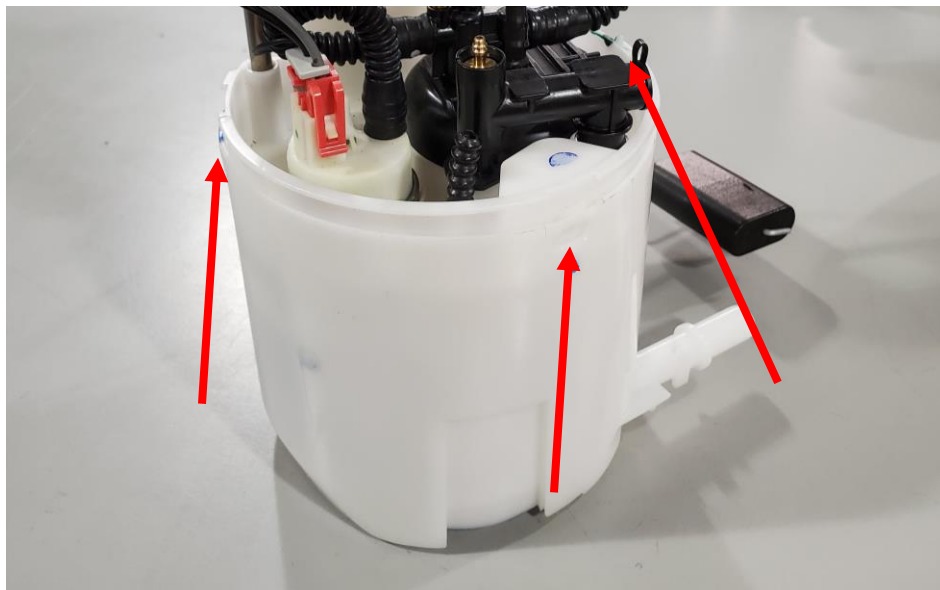


Disassembly of OEM Module

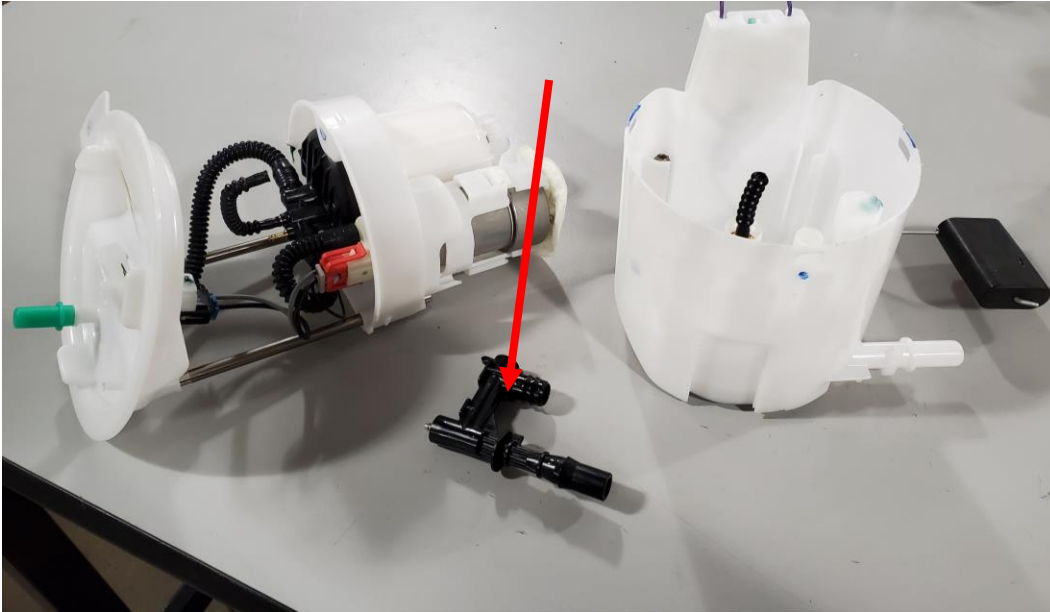
1 – Cut the small 1/8" venturi hose that runs from the pump down through the center section of the module. **2011-14** models it runs from the filter to the bucket, and **2015-19** models it runs directly from the fuel pump. Cut only the hose, this will allow you to separate the module.



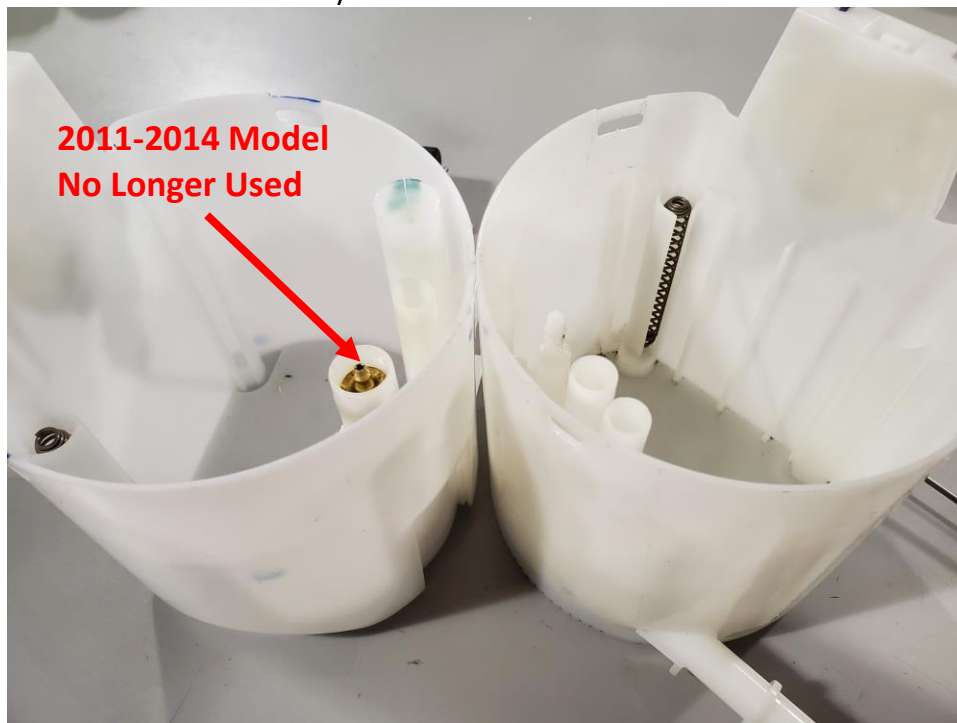
2 – Locate and pry apart the 3 lock tabs around the edge of the bucket, and separate the top hat, pump, filter and center section from the bucket assembly.



3 – Once separated, you can set the top hat, pump, filter and OEM center section aside. **2011-14** models remove and keep the black plastic venturi jet pictured below; you will need to reuse this to retain the saddle tank fuel suction system.



4 – Remove the remnants of the factory venturi hose from the OEM bucket assembly. The **2011-14** model will not be reusing this venturi inlet; it is only responsible for keeping the bucket full, with the addition of the return fuel flow into the bucket it is no longer needed. The **2015-19** models will reuse the venturi inlet, it provides power to the saddle tank suction system.

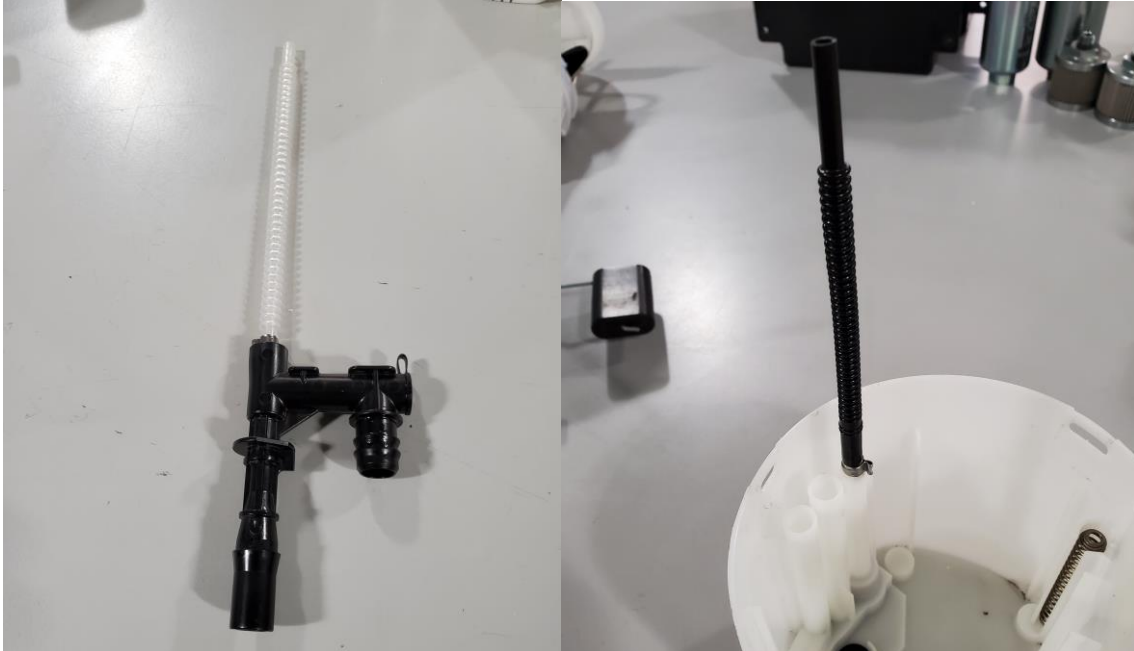


Assembly of X2 Module

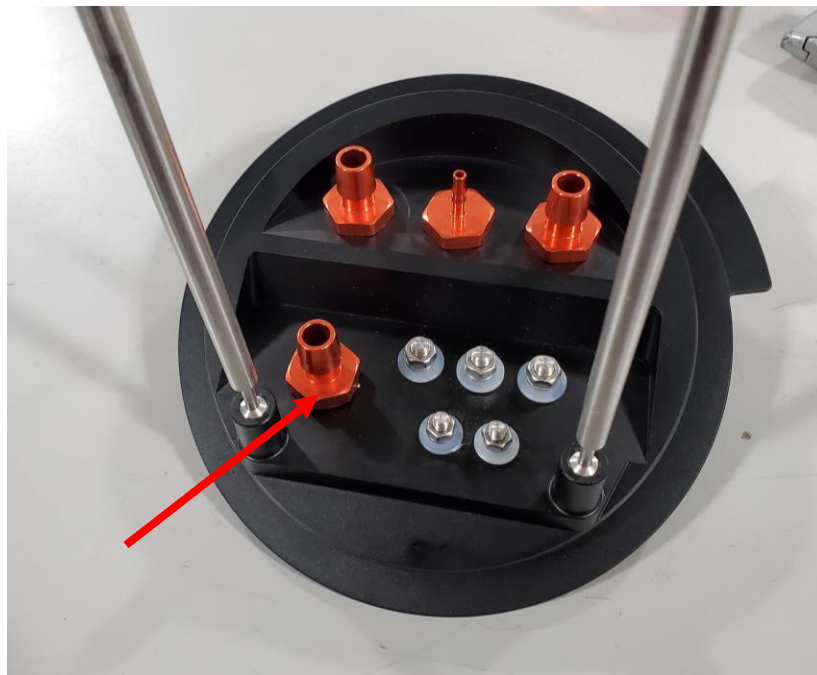
5 – **2011-14** models: Install the supplied 5" long 1/8" ID convoluted tube onto the salvaged removeable venturi jet as shown, secure the hose in place with the supplied 6.1mm pinch type hose clamp.

2015-19 models: Install the 5" inch long 1/4"x1/8" hose onto the 1/4" venturi nipple inside the OEM bucket assembly, secure with the 7mm pinch type hose clamp.

Note: The **2015-2019** model hose has 2 different size ends.



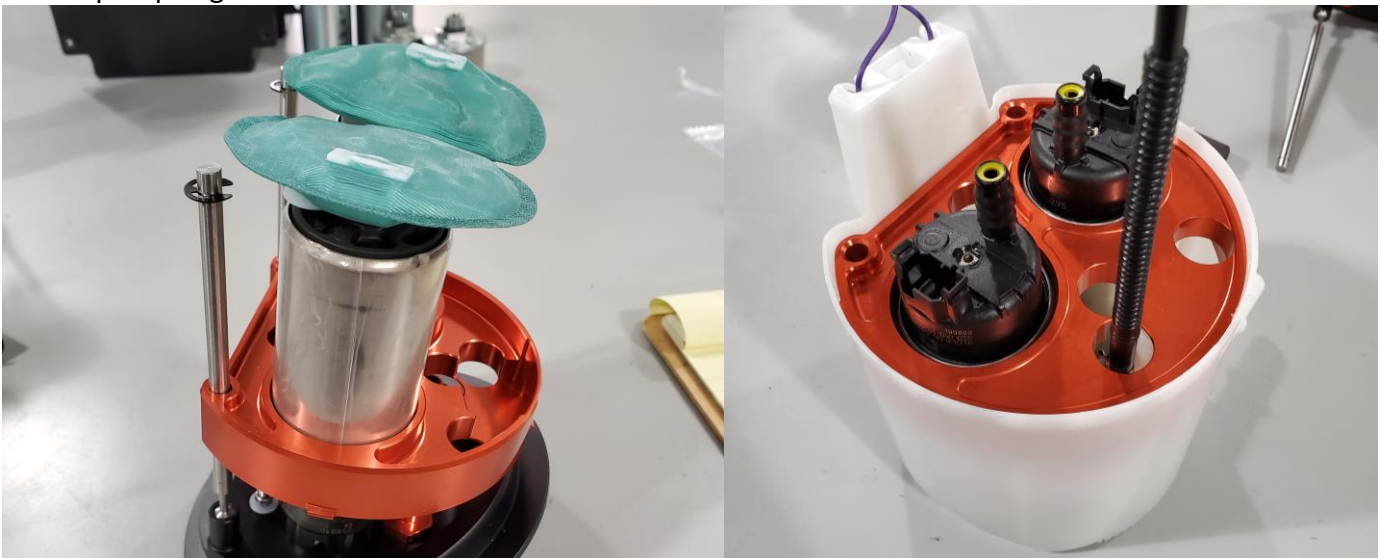
6 – Install the separate 3/8" hose barb to -6 AN O-Ring fitting into the billet X2 top hat, on the bottom side return port.



7 – Install the X2 billet center section onto the X2 top hat support rods, and secure with the provided e-clips.



8 – Install the provided pump pre-filters onto the DW400 pumps and install the pumps into the X2 center section. Install the assembly into the bucket. Lubrication can aid in installation of the pumps. See picture for filter and pump alignment.



9 – **2011-2014** models install the removeable venturi jet into the center section, make sure it is pushed into place firmly, it should be flat with the orange anodized X2 center assembly.



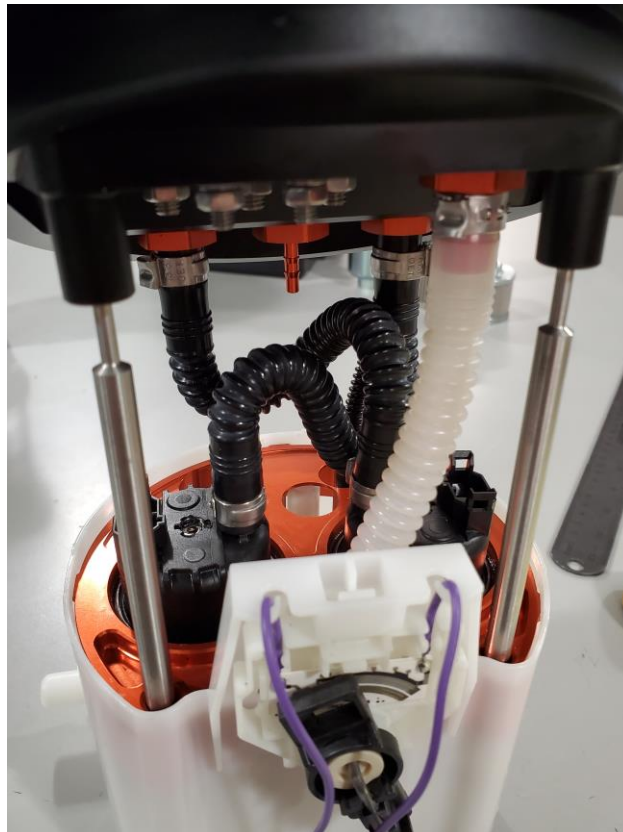
10 – Cut the supplied 12" long 3/8" ID convoluted tube down to 7" inch long and install onto the return fitting on the bottom side of the X2 top hat, secure with one of the 13.3mm pinch type hose clamp. This return hose should be routed through the hole centered at the back between the DW400 fuel pumps.



11 – Attach the supplied 6" long 3/8" ID hoses to the DW400 fuel pumps and secure with the 13.3mm pinch type hose clamps.

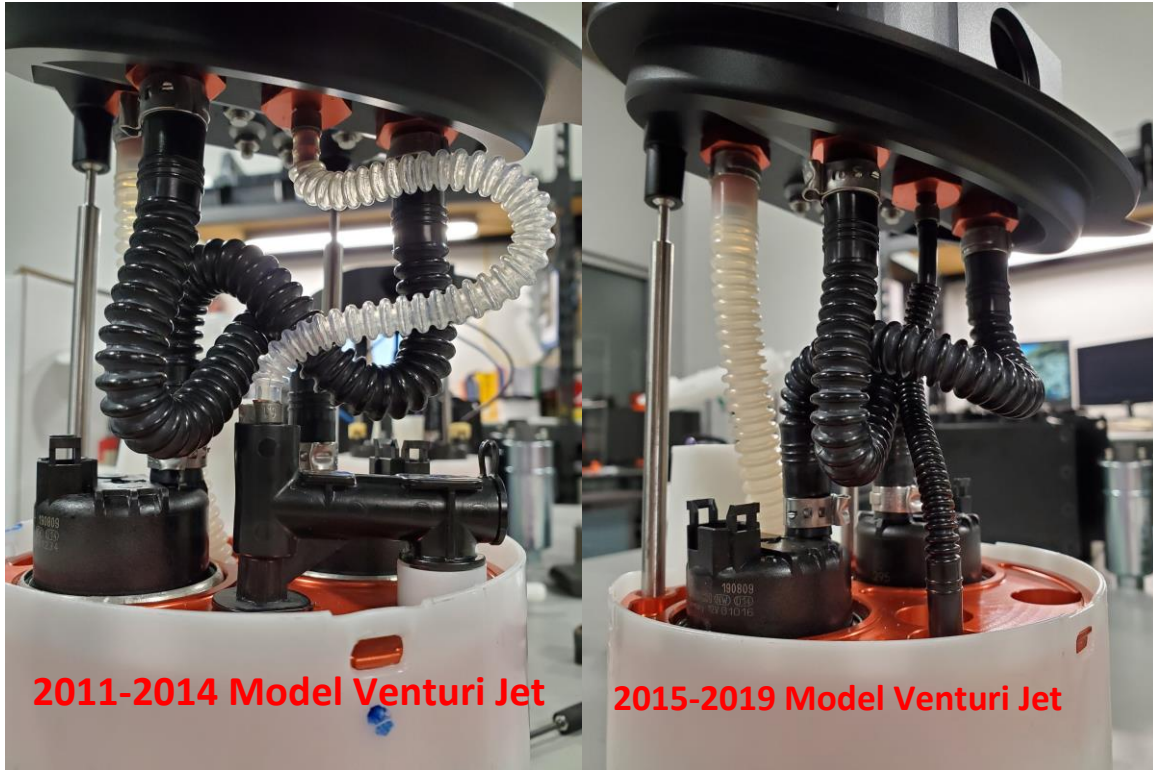


12 – Install the opposite end of the 6" long 3/8" ID hoses onto the remaining 2x 3/8" hose barb fittings on the bottom side of the X2 top hat. The hoses should cross over to provide space for the module to compress. See picture for suggested routing.

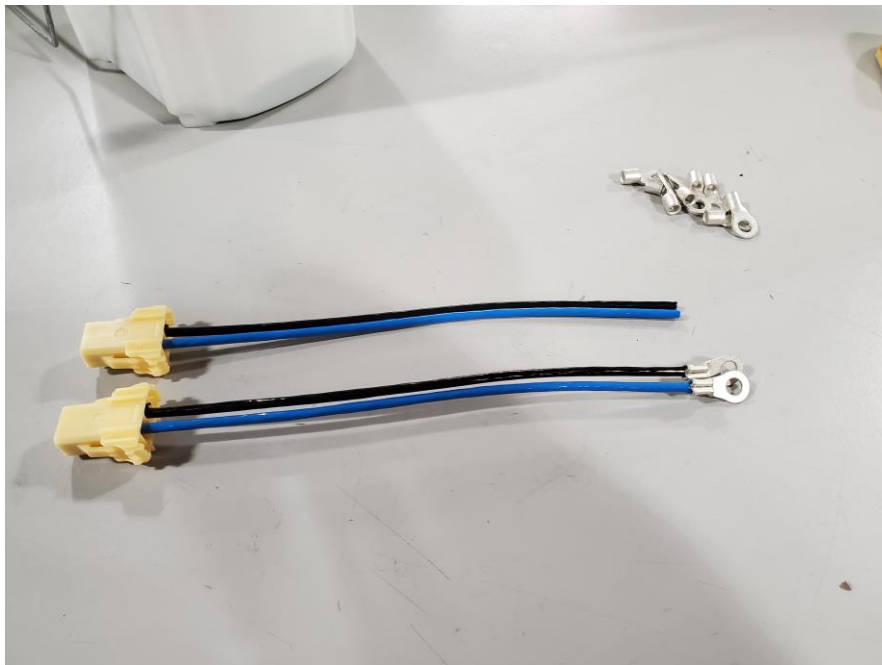


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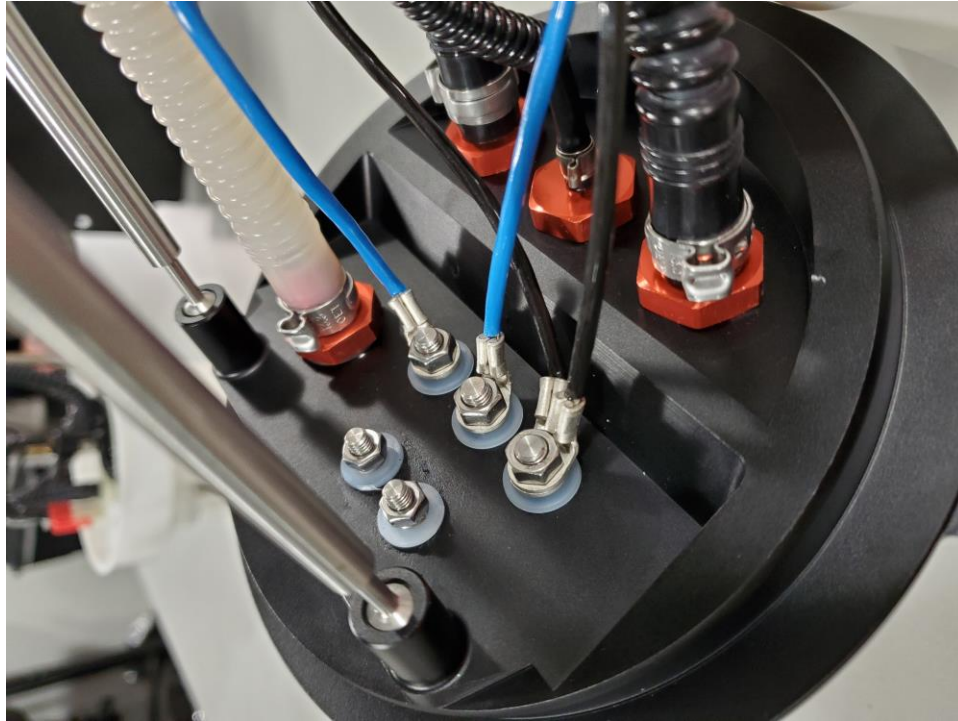
13 –attach the free end of the 5" inch long 1/8" ID venturi jet hose to the 1/8" hose barb fitting on the bottom side of the X2 top hat, secure with the 6.1mm pinch type hose clamp.



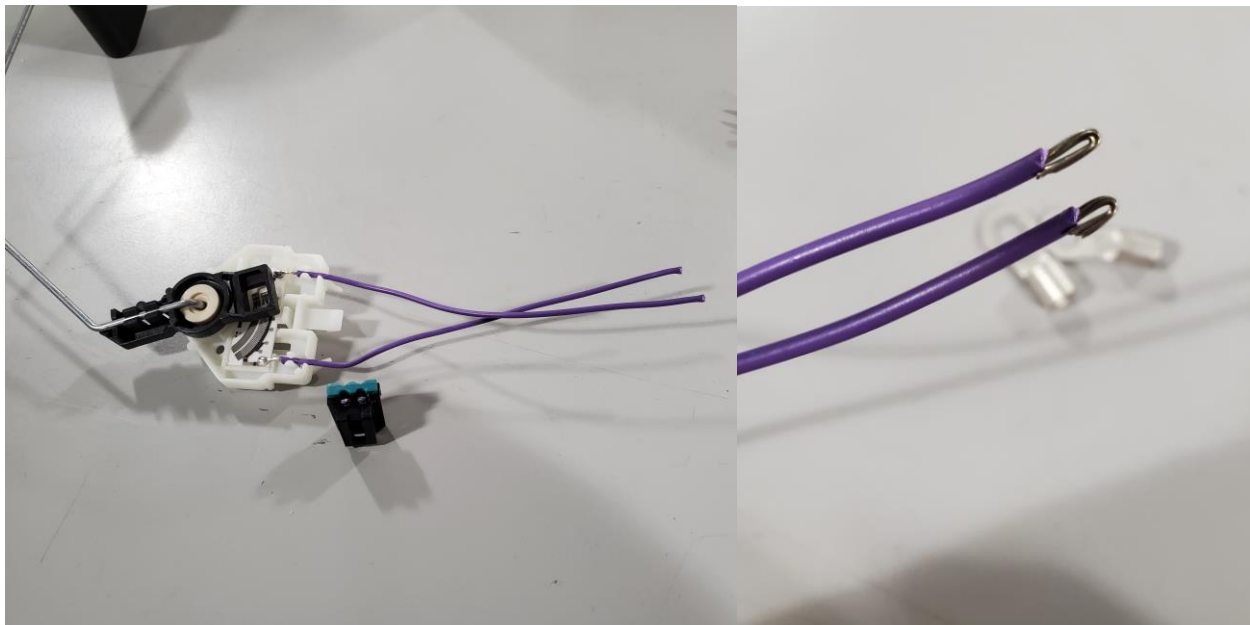
14 – Shorten the supplied DW400 universal wiring harness to approximately 7" long and remove the smaller black static ground, it is not needed for this application. Strip the ends and crimp on the supplied ring terminals. Do this for both DW400 harnesses.



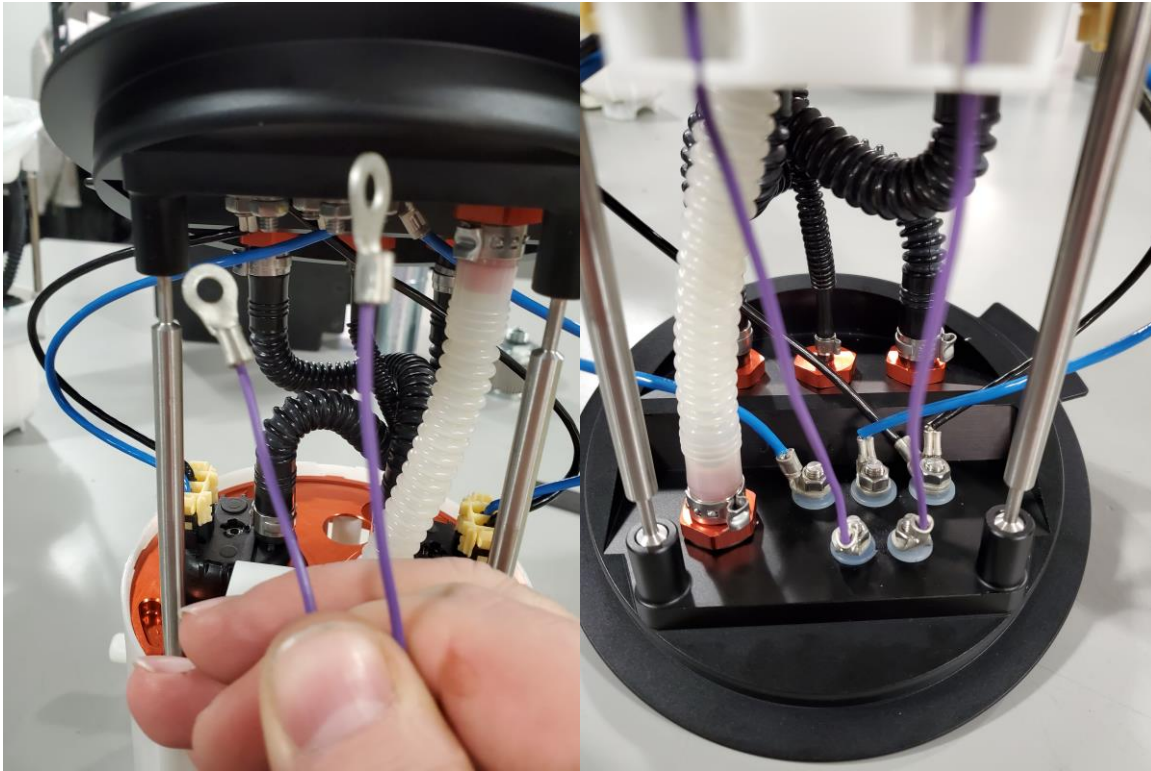
15 – Attach the DW400 pump wiring harnesses to the bottom side of the X2 module top hat. Attach both ground wires to the single M5 ground stud. Attach each power wire to its separate M5 power terminal. This will allow you to stage the pumps and turn one pump on at a time.



16 – Cut the connector off the factory fuel level sending unit, cut as close to the connector as possible to retain the most wire length possible. Strip and double the wire ends over to provide more surface area for crimping.



17 – Crimp two of the supplied ring terminals onto the fuel level sending unit wires, then attach them to the two M4 terminals on the bottom side of the X2 top hat. The wiring should not cross over when bolted down, the right side wire should mount on the right side terminals and vice versa. This will determine which wire you mount on the top side once the module is installed into the car.



Installation of the X2 Module Into the Fuel Tank

Installation: It is recommended that factory manuals or instructions are followed to install the DW X2 fuel pump assembly into the vehicle. Due to the OEM like fitment all OEM procedures should apply to re-installation.

Wiring the X2 Module

18 – The DW X2 Series Mustang module comes with supplied ring terminals, these are designed for up to 10awg wiring. The level sending unit wires should be connected to the factory level sending unit wires. Due to the OEM Ford fuel pump control module, it is necessary to either turn off the variable voltage/duty cycle options or bypass the FPCM completely. This is done easily with a hardwire relay kit like the DW #FPHWK, this will ignore the variable signal delivered by the FPCM and use a direct battery voltage to run the fuel pumps.

The factory fuel pump positive trigger wire is **Yellow w/Brown** stripe, this should be used to trigger the relays in the FPHWK.

The factory fuel level sending unit wires are **Yellow** and **Teal**: The Yellow wire should attach to the Fuel Level + (Positive) terminal and the Teal should attach to the Level – (Negative) terminal.

Note: If fuel level gauge does not work correctly after installation, swap the Level + and – wires.



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