

9-000-7033 and 9-401-7033 DeatschWerks 2015-2023 Ford F-150 X3 Triple Fuel Pump Module Installation Guide



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Included Parts:

- Billet Aluminum F150 X3 Module
- DW400 415 LPH Fuel Pumps (x3) *"401" PN# Only*
- DW400 Pump Electrical Connectors (x3)
- DW300/420 Pump Electrical Connectors (x3)
- Convoluted Tube 12"x 3/8" (x4)
- Convoluted Tube 10"x 3/8-5/16" (x3)
- DW400 Pump Pre-Filter (x3)
- DW300/420 Pump Pre-Filter (x3)
- 3/8" Pinch Hose Clamp (x9)
- 5/16" Pinch Hose Clamp (x4)
- 12-10awg #10 Ring Terminals (x4)
- 16-14awg #10 Ring Terminals (x6)
- 22-18awg #10 Ring Terminals (x4)
- Rubber One Way Valve (x3)
- 39mm Pump Adapters (x3) *"000" PN# Only*

Reused Parts:

- OEM Fuel Level Sensor and Float Arm



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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 an X3 DW400 pump module. The factory manual should supersede any contradiction.

Important Notes: The F-150 X3 module will not work with the 3.0L Diesel, 5.2L Raptor R or Lightning models. You will need to reuse your OEM Fuel Level Sensor with the installation of the DW X3 module. This guide will cover the installation of the 46mm DW400 pumps, or alternatively the 39mm DW100, 200, 300 or 420 pumps. Each applicable step will have an A) and B) version for both pump styles.

Below are some of the suggested tools that will make the installation process easier.



Assembly of the X3 Module

1 – Remove the three M6 bolts around the perimeter of the black metal bucket assembly, these secure the orange pump holder and tophat assembly. Separate the pump holder and tophat assembly and set aside.

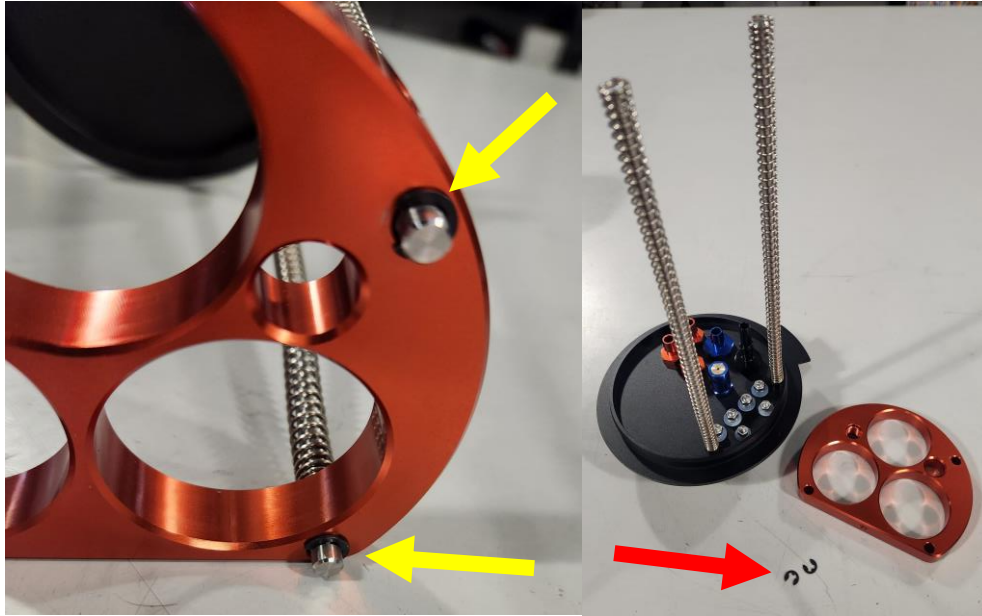


2 – Locate the three rubber one way check valves and install them into the bucket by pulling the center nub through from the inside.



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3 – Separate the pump holder from the tophat assembly by compressing the springs and removing the retaining clips, it may help to use a pair of pliers to grip the clip to keep it from flying across the room.



4a – Locate your DW400 fuel pumps, filter socks, 12-inch(300mm) convoluted tubing and 3/8" hose clamps. The DW400 filter socks are the perfectly round ones. Install the filter socks by pressing them into the opening on the bottom of the DW400, this will take a small amount of force as its only retained by the friction. Install the convoluted tube onto the DW400 and secure it with the 3/8" pinch clamp.



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4b – Locate your 39mm fuel pumps, filter socks, 10-inch(250mm) convoluted tubing, and 5/16” hose clamps. Install the filter socks by pressing the pump inlet and stud into the filter. Install the smaller 5/16” side of the convoluted tube onto the pump and secure it with the 5/16” pinch clamp.



5 – If you are installing 39mm fuel pumps you will need the included orange adapter sleeves. These will take up the space between the smaller pump and the orange pump holder plate. Applying a small amount of lubrication to the O-rings will ease installation onto the fuel pump.

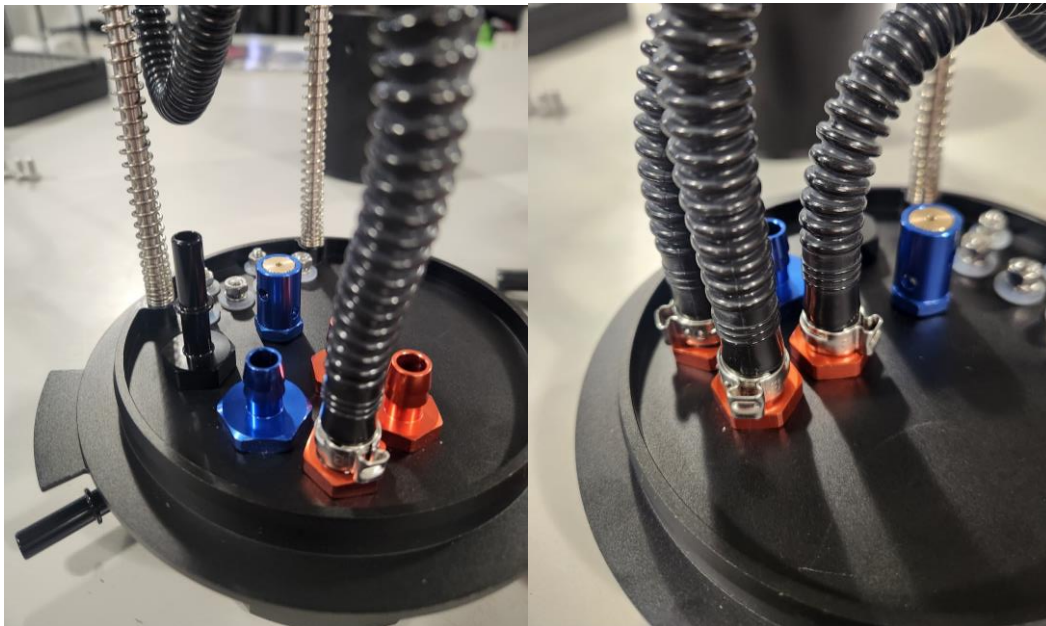


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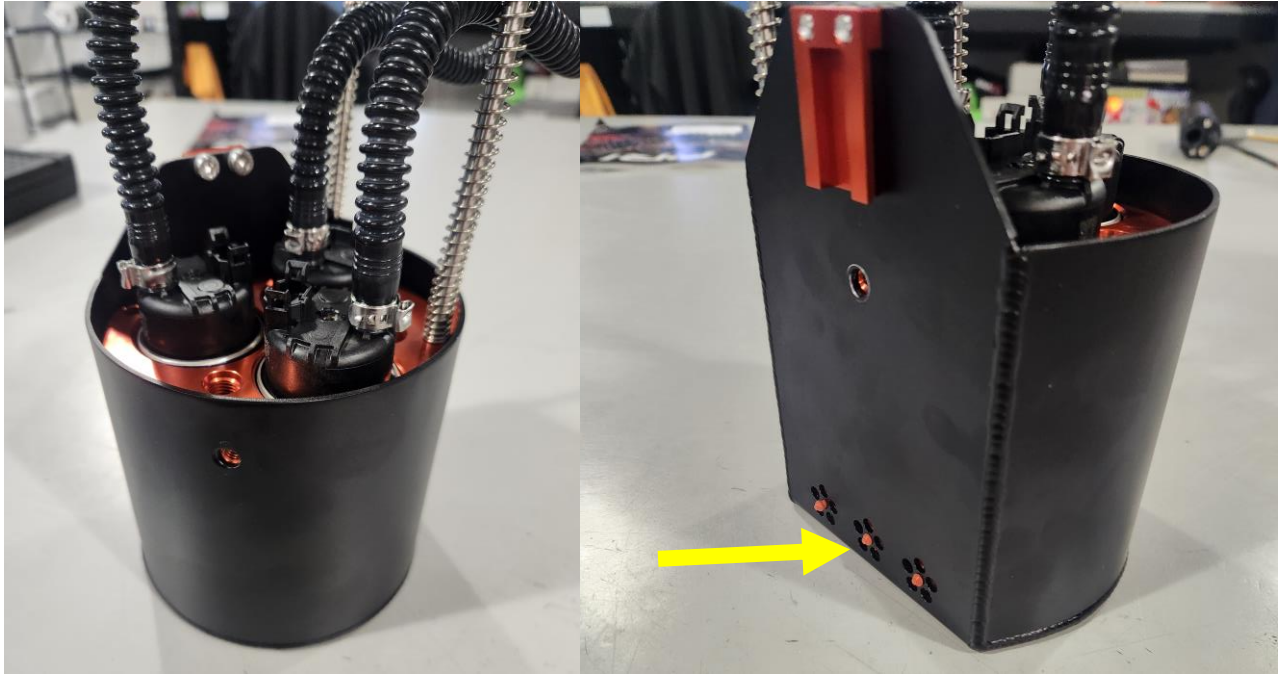
6 – Reassemble the tophat assembly and the pump holder piece as shown below, it should offset from the tophat assembly, and the smaller non-threaded hole should be closer to the tophat. Compress the springs and re-install the retaining clips.



7 – Slide your pumps into the orange pump holder plate and attach the free end of your convoluted tubing to the three orange 3/8" hose barb fittings on the tophat assembly. Location does not matter since when all pumps merge into the same 10AN Feed port.



8 – Take your tophat and pump assembly and insert it into the bucket assembly. While installing take notice that the filter socks do not pop the rubber valves out of place from Step 2.

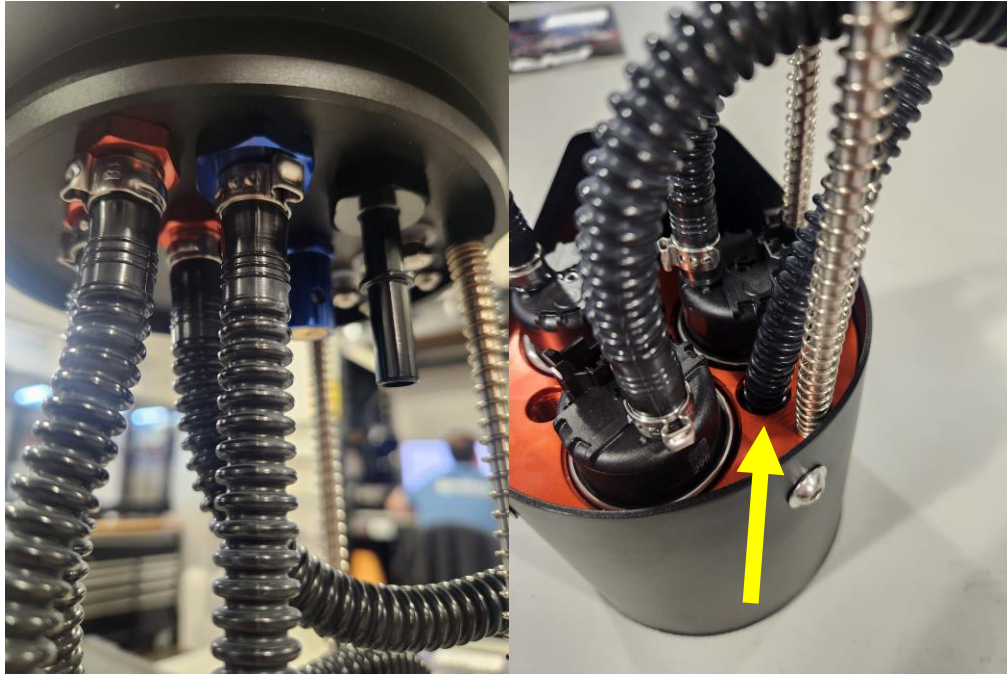


9 – Install the three M6 flange head screws back into the bucket to secure the pump mounting plate and tophat assembly.

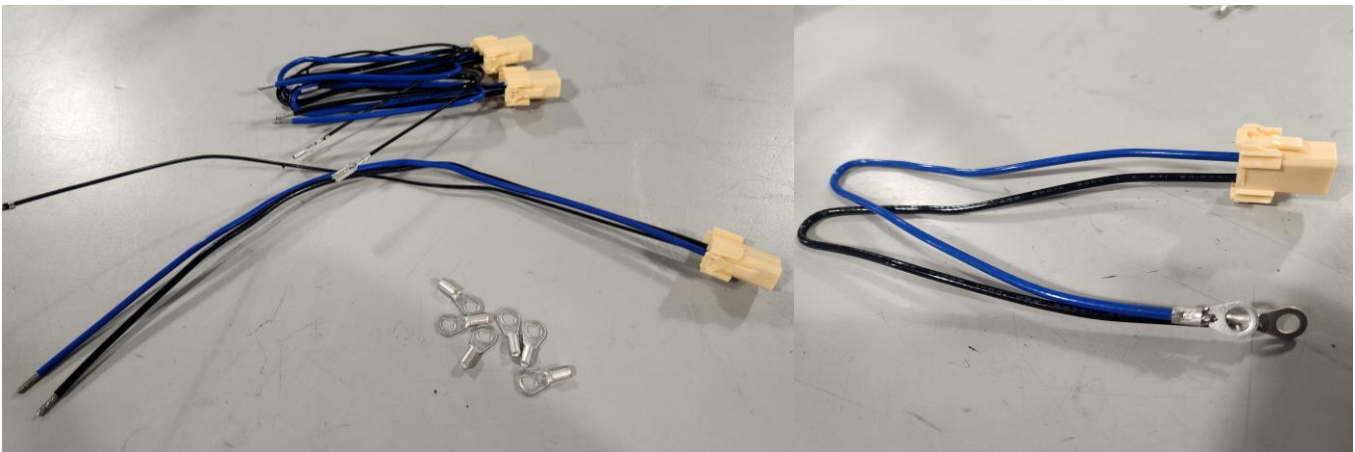


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10 – Locate the remaining 12-inch(300mm) long 3/8" convoluted tube and one 3/8" hose clamp. Install one end of the tube onto the blue hose barb fitting on the underside of the tophat assembly, secure it with the 3/8" hose clamp. Tuck the remaining end into the non-threaded hole in the orange pump holder plate.



11 – Locate the appropriate wiring harnesses for your fuel pumps and the six 16-14-gauge ring terminals. Due to the height of the F150 X3 module it is not necessary to cut down the length of the supplied pigtails. If you are using the DW400 pumps you can remove the smaller black wire from the pigtails, it is not needed for this application. Strip and crimp the ring terminals to the ends of all three pigtails.



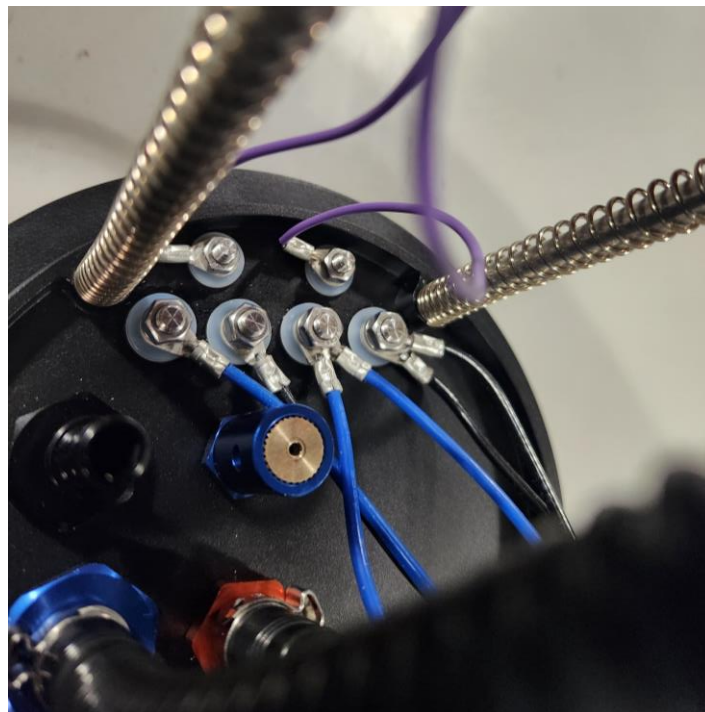
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12 – Remove your OEM fuel level sensor from the OE module, there is a tab on top that allows it to release and slide down and out. Clip the connector off the wiring leaving the wiring as long as possible. Strip and crimp on two of the supplied 22-18-gauge ring terminals.

Note: The 2021+ level sensors look different than the 2015-2020 but interchange the same.



13 – Remove the M5 and M4 nuts and lock washers from the bottom side of the tophat assembly. Attach the Positive and Negative wires for one of the pumps to the Stage1 terminals. Attach both remaining Positive and Negative wires to the Stage2 terminals. This will allow you to run on one pump while cruising and turn on the remaining two pumps when you need them. Attach the two fuel level sending unit wires to the Level Sensor terminals. Replace the lock washers and nuts, tighten appropriately.



Wiring the X3 Module

14 – The DW X3 Series F-150 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 controller, it may be necessary to either turn off the variable voltage/duty cycle options or bypass the Fuel Pump Control Module completely. This can be accomplished with a hardwire kit like the PN# **FPHWK-10-DP** (Fuel Pump Hardwire Kit 10AWG Dual Pump), this will ignore the variable signal delivered by the Fuel Pump Control Module and use a direct battery voltage to run the fuel pumps.

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

The factory fuel level sending unit wires are **Green/Blue** and **Yellow/Purple**



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