

9-301-7050

DeatschWerks 2008-2021 Subaru Impreza X2 Dual Fuel Pump Module Installation Guide

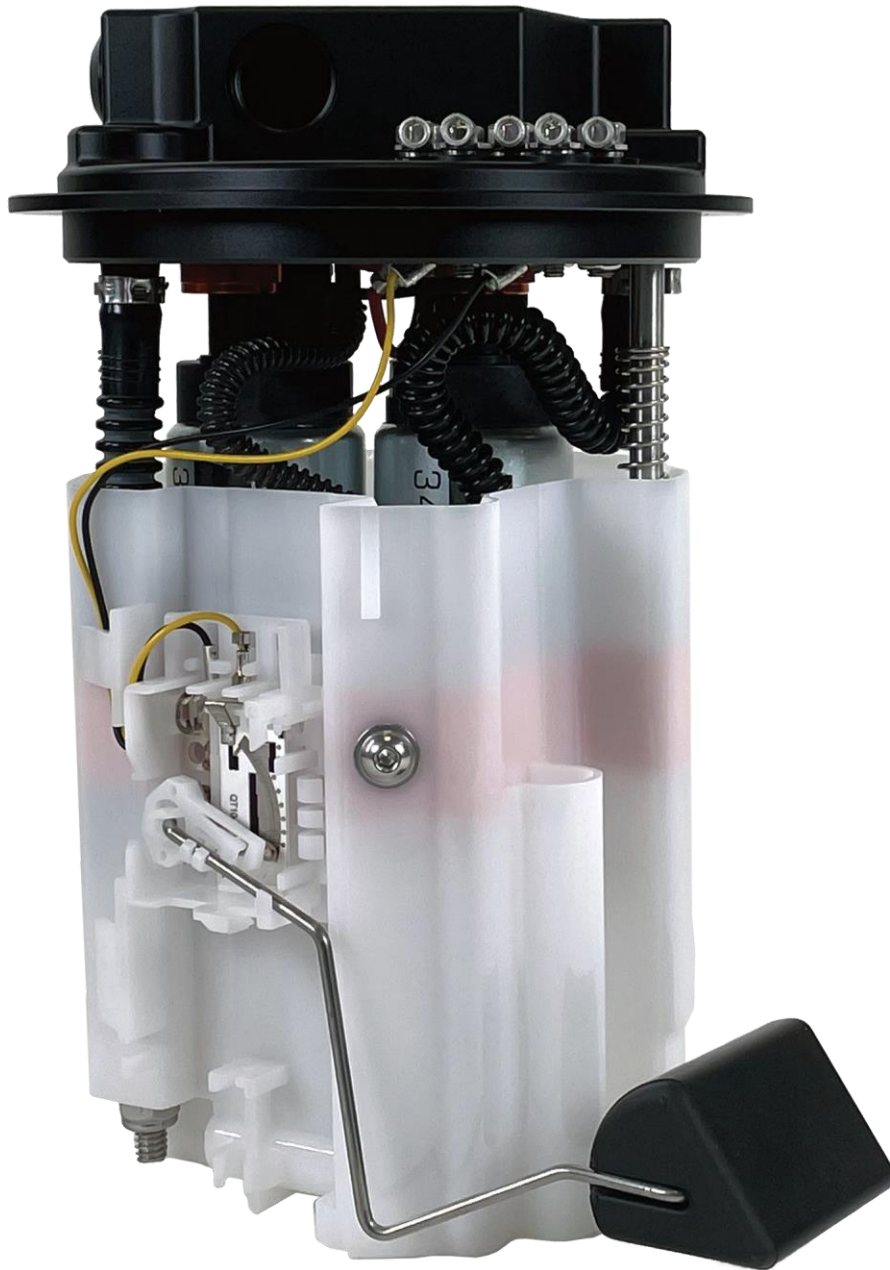


Table of Contents

Included Parts	Page 3
Important Notes	Page 4
Suggested Tools	Page 4
Assembling the X2 Module	Page 5
DW X2 Module Wiring	Page 13

This module is designed to fit the following applications:

- 2008-2021 Subaru Impreza (All Trim/Models)
- 2008-2018 Subaru Forester (All Trim/Models)
- 2005-2009 Subaru Legacy (All Trim/Models)
- 2005-2009 Subaru Outback (All Trim/Models)

Included Parts:

- Billet Aluminum Subaru X2 Module
- DW300 340 LPH Fuel Pumps (x2)
- 10" Pump Electrical Connectors (x2)
- Convoluted Tube 6" x 5/16"
- Convoluted Tube 10" x 5/16"
- Convoluted Tube 5" x 1/8"
- Fuel Sock Pump Pre-Filter (x2)
- 5/16" Pinch Hose Clamp (x4)
- 6mm Hose Clamp (x2)
- 12-10awg #10 Ring Terminals (x11)
- 6AN ORB to 5/16" Hose Barb Fitting (x2)
- 6AN ORB to Fuel Pump Adapter Fittings (x2)
- 4AN ORB to 5/16" Hose Barb Fitting (x2)
- 4AN ORB to 1/8" Hose Barb Fitting (x2)
- M5 Stainless Electrical Terminals (x3)
- M4 Stainless Electrical Terminals (x2)
- OEM Style Plastic Bucket Assembly
- OEM Style Fuel Level Sensor
- OEM Style Rubber One Way Valve
- Module Support Springs
- M5 Flange Head Allen Bolts (x3)
- 1/4"-20 Flange Head Allen Bolt
- 1/4"-20 Nyloc Nut

DeatschWerks
2008-2021 Subaru Impreza X2 Module Installation Guide

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 DW300 pump module. The factory manual should supersede any contradiction.

Important Notes: The Subaru Impreza X2 module is intended to be used with Standard 39mm DW100, 200, 300 fuel pumps. The kit includes OEM replacement components, these are required for fitment into the 2015-2021 Subaru WRX and 2014-2018 Forester XT models.

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



Assembly of the X2 Module

1 – Remove the E-clips and remove the center plate. Loosen the 6AN to Pump Adapter fitting retaining nut and remove along with the O-rings. Slide the nut and O-ring on to the DW300 fuel pumps. Install the pumps back into the fittings and tighten.



2 – Install the supplied longer 10" x 5/16" convoluted tube onto the return fitting and secure with the supplied 5/16" pinch clamp. Slide the center plate over the pumps and return tube, reinstall the e-clips, cut the return hose flush with the bottom of the return plate when its fully extended.

Note: Save the remainder of the hose you cut off, it will be used for a later step.

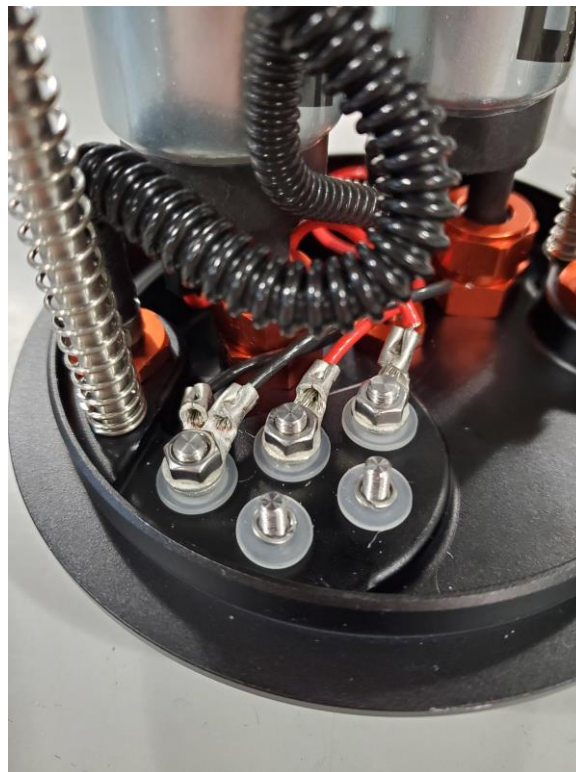


2008-2021 Subaru Impreza X2 Module Installation Guide

3 – Install the two supplied fuel filter socks onto the bottoms of the pumps, be sure to remove the clear plug from the filter sock, and the red cap from the fuel pump.

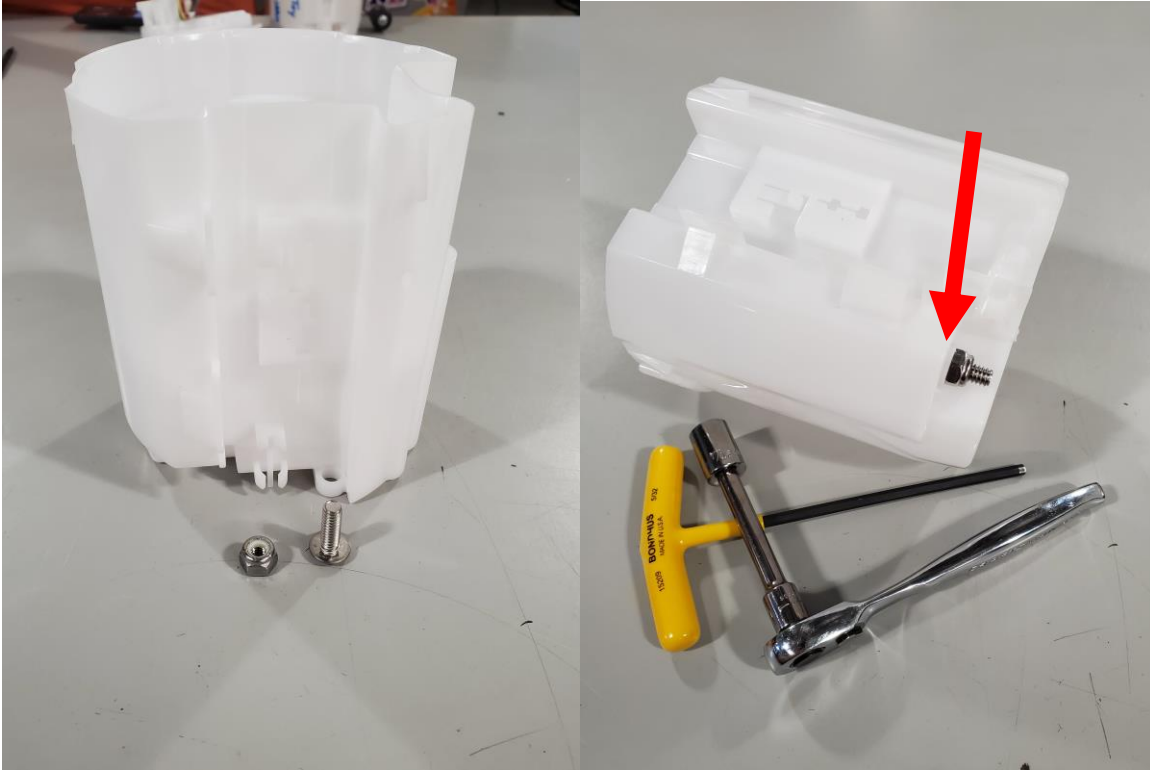


4 – Shorten the supplied wiring harness to approx. 8-inch (205mm) and crimp on the supplied ring terminals. Attach both ground wires to the pump negative terminal and attach each pump power wire to its separate positive terminal. Tuck the remaining wire into the cavity provided above the pumps.

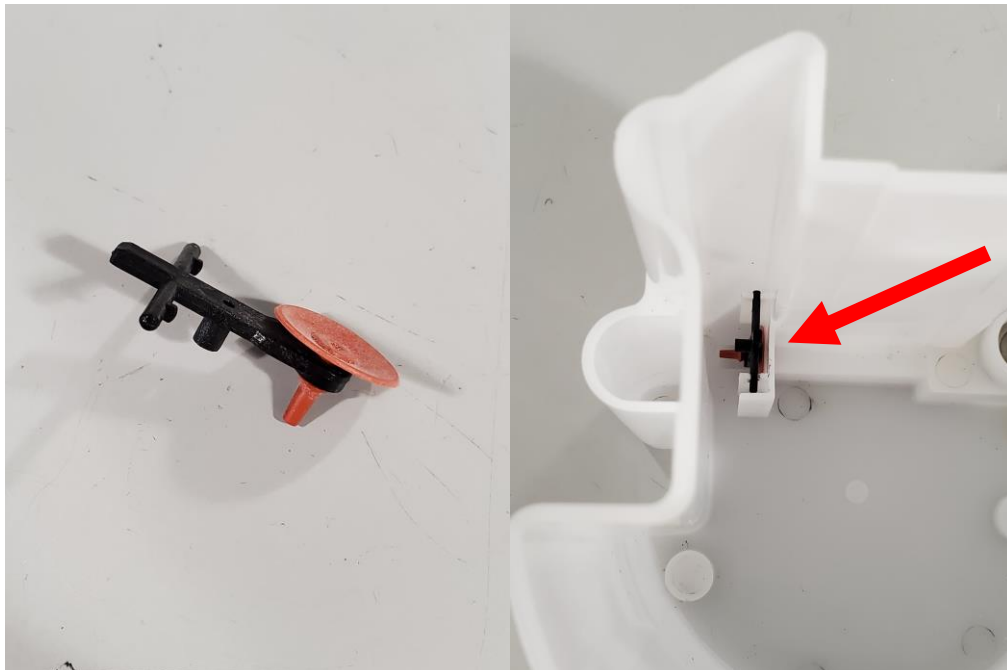


DeatschWerks
2008-2021 Subaru Impreza X2 Module Installation Guide

5 – Using the supplied 1/4" Allen bolt and nut, install them into the bucket at the location shown, this is important, or the return fuel flow will exit the bucket instead of helping keep it full.

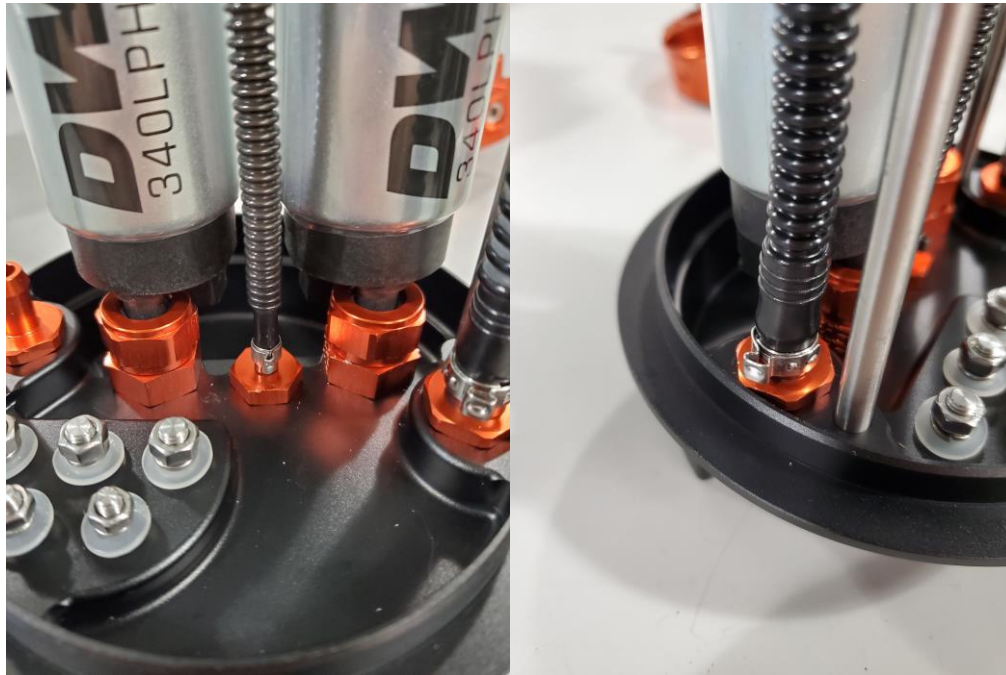


6 – Assemble and install the rubber one way valve into the bottom of the bucket. Once it snaps into place it should pivot freely.



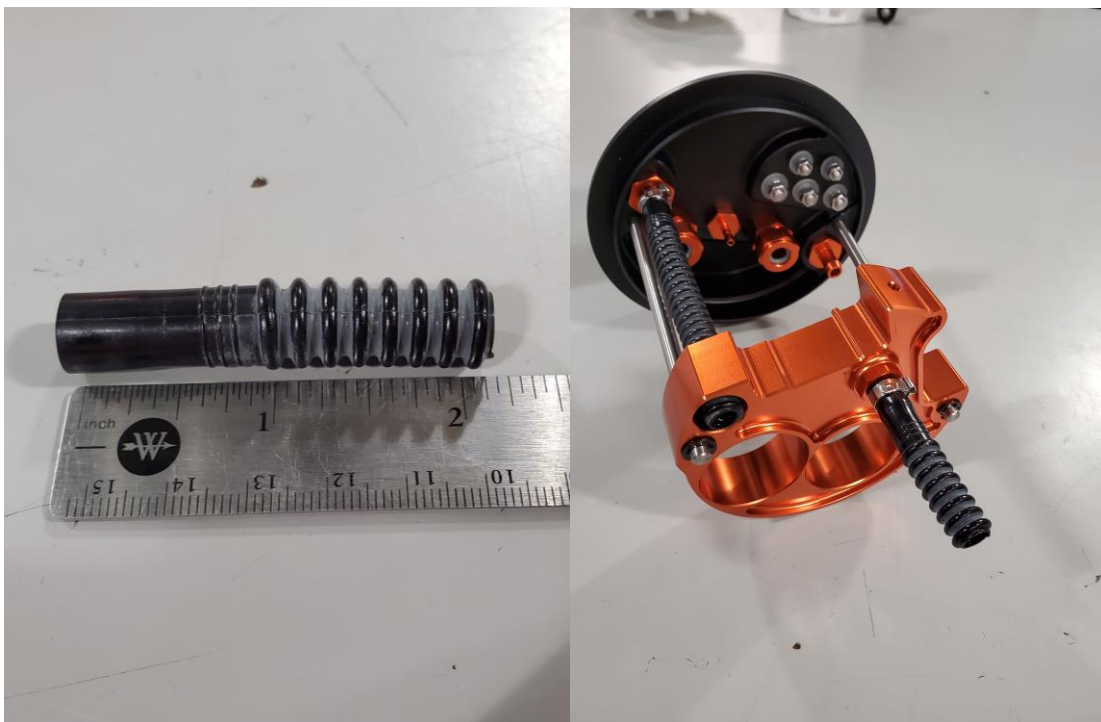
2008-2021 Subaru Impreza X2 Module Installation Guide

7 – Install the supplied 1/8" convoluted hose onto the 1/8" nipple on the billet X2 top hat secure with one of the 6mm pinch clamps. Install the shorter 6" x 5/16" hose onto the Venturi fitting and secure with a 5/16" pinch clamp.



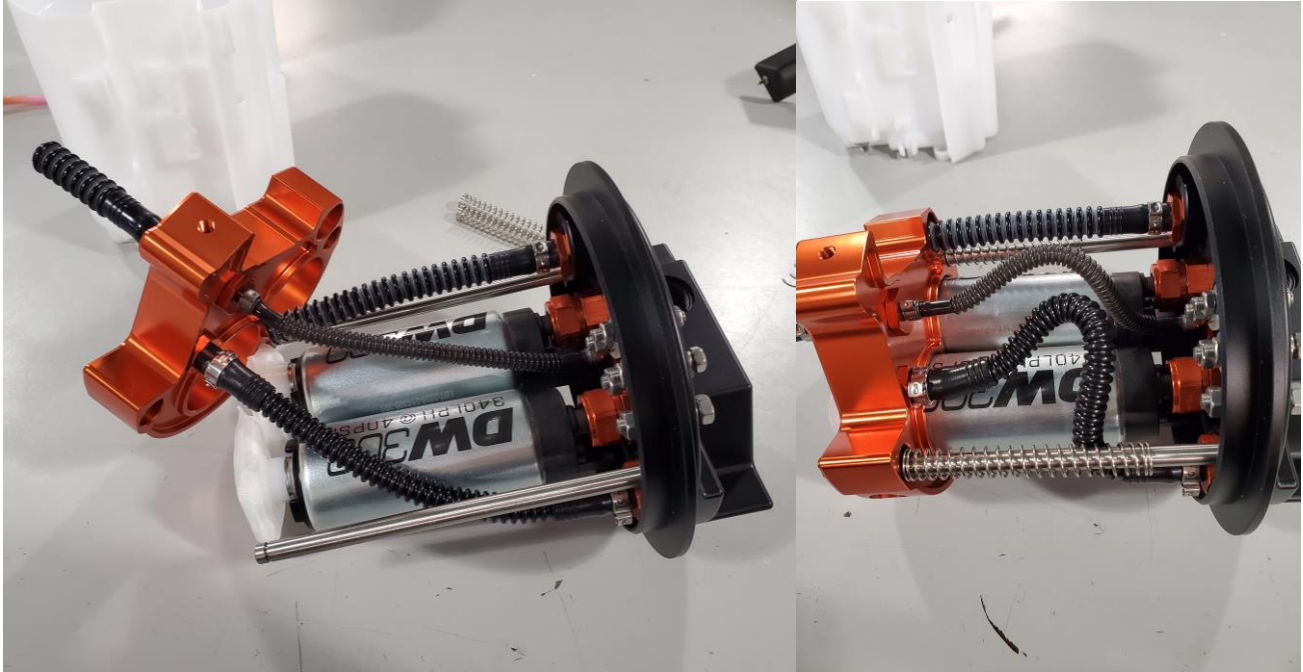
8 – Using the remainder of 5/16" hose from Step 2, cut it down to 2-2.25" (50-57mm) and attach it to the single 5/16" hose barb fitting on the bottom side of the orange center plate, secure with a 5/16" clamp.

Note: The length of this hose is extremely important, it needs to be long enough, so it stays submerged but short enough it doesn't bend and kink during installation. If you run into fuel starve issues at 1/2 tank, check this hose.

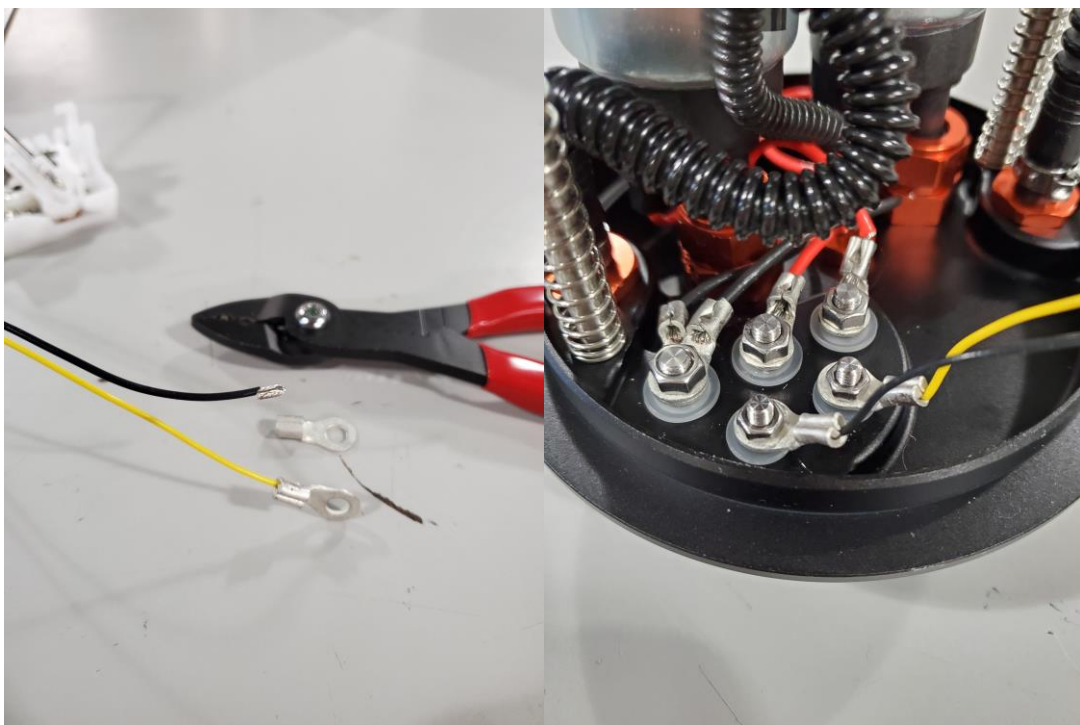


2008-2021 Subaru Impreza X2 Module Installation Guide

9 – Attach the free end of the 1/8" and 5/16" hoses to the orange center plate. Add the support springs to the top hat rods and slip the center plate over the return hose and top hat rods. Compress slightly and add the e-clips. Secure both hoses with a 6mm and 5/16" pinch clamp.



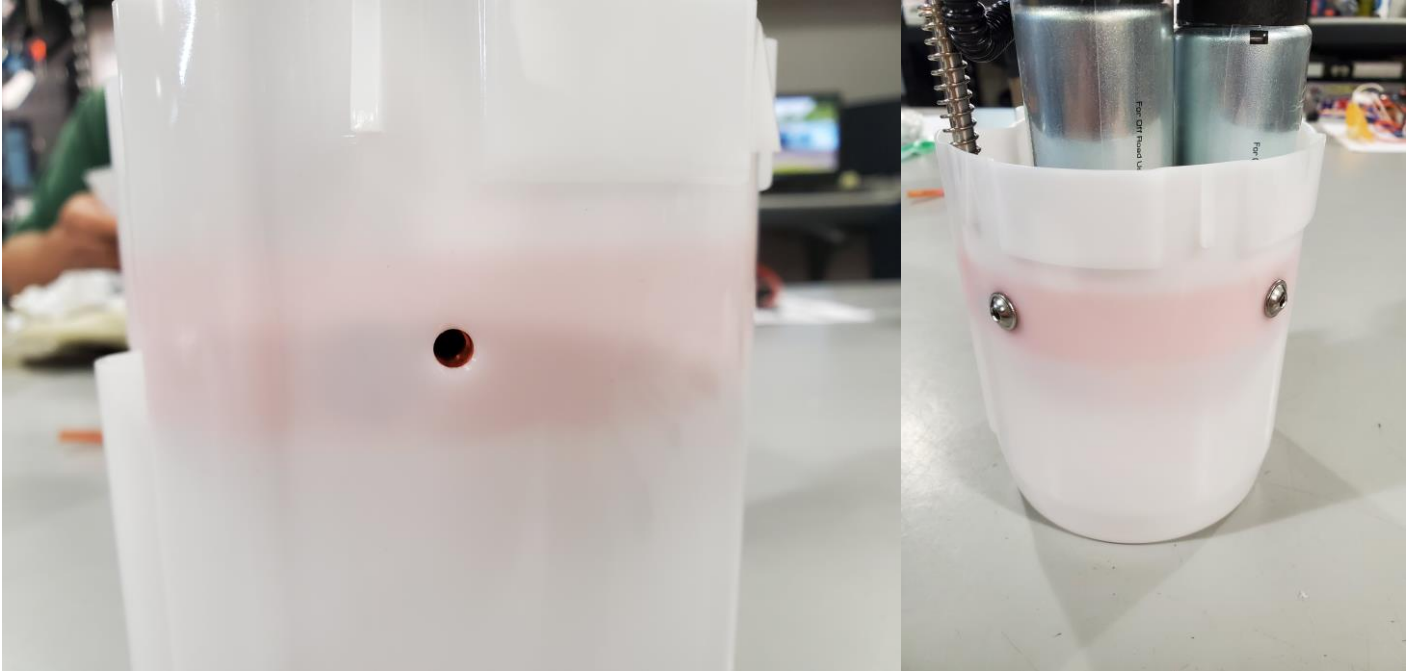
10 – Remove the plastic connector and strip the ends of the provided fuel level sending unit wiring and crimp on the provided ring terminals, it may be necessary to double the wire over due to its small size. Attach the level sending unit wiring to the Level positive and negative terminals.



DeatschWerks
2008-2021 Subaru Impreza X2 Module Installation Guide

11 – Install the completed X2 module into the supplied bucket, it may be necessary to enlarge the pre-drilled holes in the bucket to line up with the threads for the supplied flange head M5 bolts.

Note: Do not over tighten these bolts, they should be tightened but not torqued.



12 – Install the fuel level sending unit onto the bucket, it keys into the bracket then slides to lock into place.



2008-2021 Subaru Impreza X2 Module Installation Guide

13 – Due to the larger top hat design of the DeatschWerks Subaru Impreza X2 module, the module retaining ring will need to be modified. The fin shaped cross brace needs to be removed, this can be cut off or removed by drilling out the factory spot welds.



Wiring the X2 Module

10 – The DW X2 Series Subaru Impreza 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 fuel pump controller, it may be necessary to either turn off the variable voltage/duty cycle options or bypass the FPDM completely. This is done easily 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 FPCM and use a direct battery voltage to run the fuel pumps.

The factory fuel pump positive trigger wire differs based on year and model, below is a list of possible colors. If your application does not match, please consult a factory wiring diagram or contact DW Tech Support, this wire should be cut and used to trigger the relays in the hardwire kit:

Fuel Pump Power Colors: Green/Yellow, Green/Red, or Red/Black

The factory fuel level sending unit wires also change over years and models. The Blue wire should attach to the Fuel Level + (Positive) terminal and the other (Listed Below) should attach to the Fuel Level – (Negative) terminal.

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

Fuel Level Sensor Colors: Black/Red, Black, or Black/Yellow



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