

9-442-0901

DeatschWerks 2020+ Toyota Supra A90 DW440 Brushless Pump Installation Guide

(9-441-0901 Supersession)



Table of Contents

Included Parts	Page 2
Important Notes	Page 3
Suggested Tools	Page 3
Disassembly OEM Module	Page 4
Modifcations to the Module	Page 6
DW440 Pump Install	Page 7
DW440 Pump Wiring	Page 10
Flushing and Priming	Page 11

Included Parts:

- DW440 Brushless 440LPH Fuel Pump
- 26" Pump Electrical Connector
- Fuel Sock Pump Pre-Filter
- OE Filter Adapter Fitting
- 8" x 3/8" Convoluted Tube
- 6" x 1/4" Convoluted Tube (x2)
- 6" Adapter Convoluted Tube
- 1/4" Y Fitting
- 1/4" Hose Clamps (x6)
- 5/16" Hose Clamps (x2)
- 3/8" Hose Clamps (x3)
- 1cc Packet SuperLube

2020+ Toyota Supra DW440 Brushless 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 DW440 Brushless fuel pump. The factory manual should supersede any contradiction.

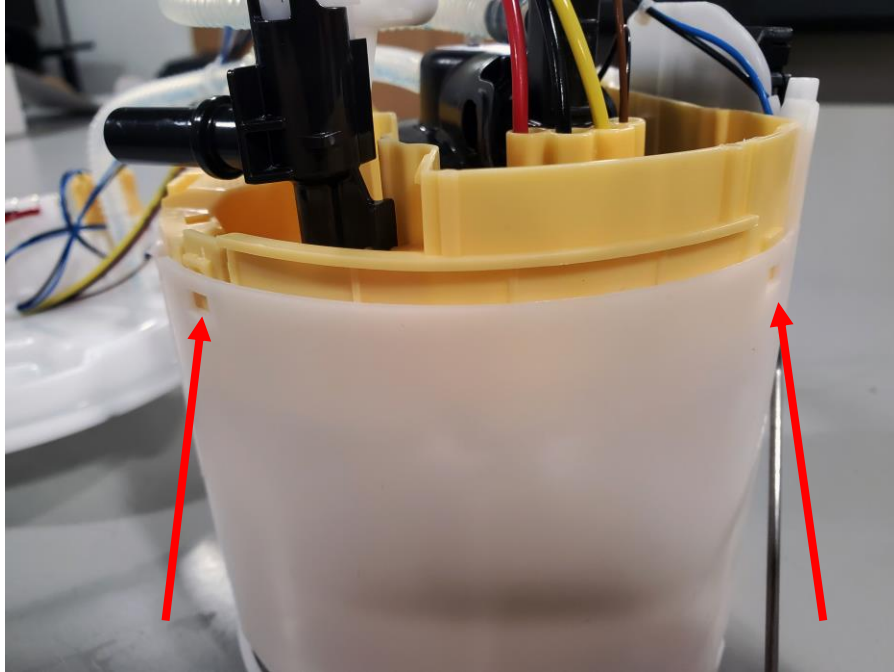
Note: The OEM Supra fuel pump controller needs to be reprogrammed. From the factory the minimum duty cycle is too low for the DW440 Brushless pump, the minimum duty cycle should be set to 45%.

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

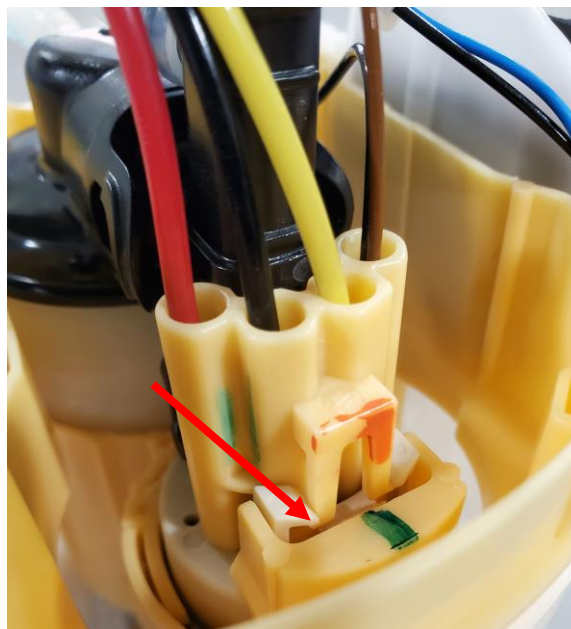


Disassembly of OEM Module

1 – Separate the module center section from the lower bucket by lightly prying away the four locking tabs located around the edge of the bucket. It's typically easier by using 2-4 pick or pocket screwdriver style tools to slide between the bucket and center section, leaving 2-3 of them in place, while gently pulling the center out of the bucket.

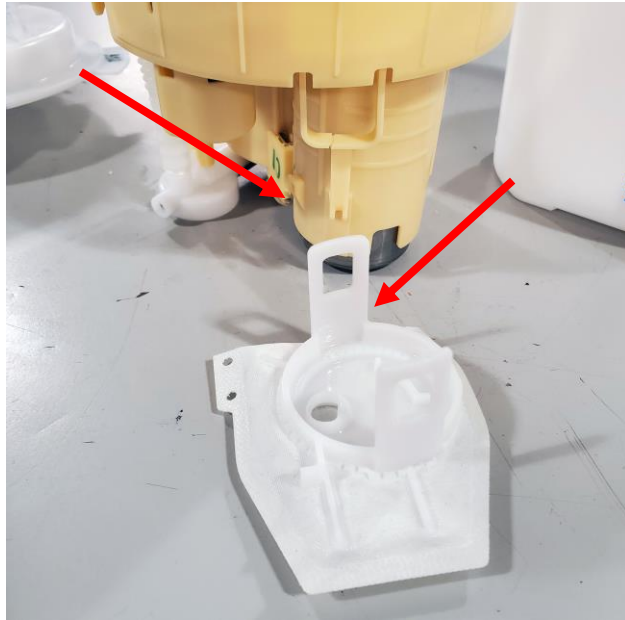


2 – Disconnect the wiring harness from the factory brushless fuel pump and pry off the ground ring terminal from the filter stud.

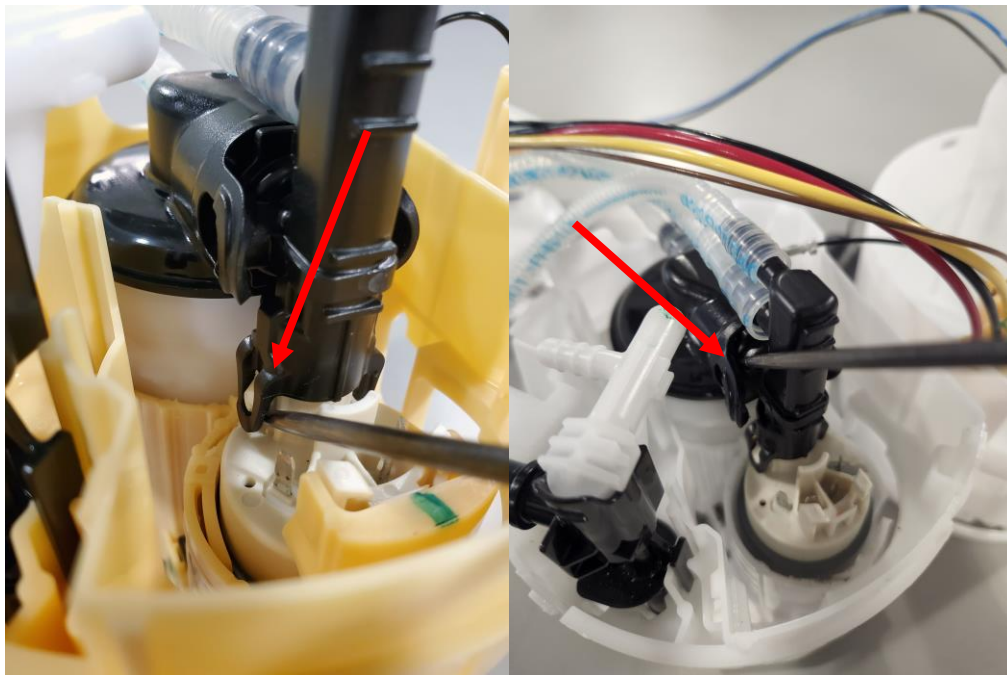


2020+ Toyota Supra DW440 Brushless Installation Guide

3 – Remove the factory pre-filter sock from the module by gently prying out the lock tabs on either side of the pump holder once they are out of the way pry away from the bottom of the fuel pump gently to remove.

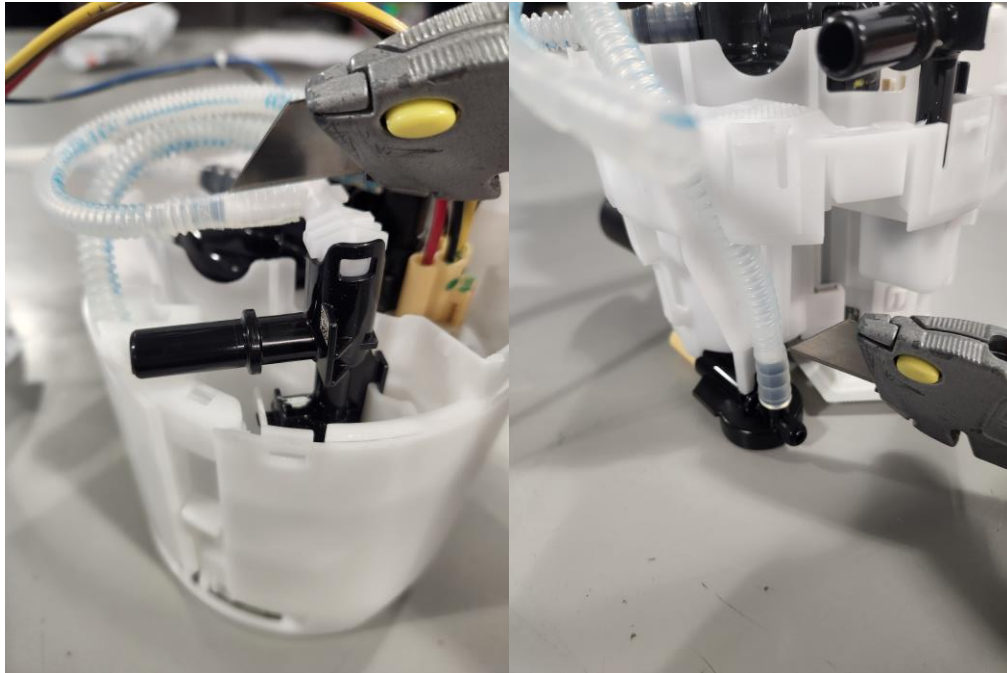


4 – Remove the factory pump and filter adapter from the module by gently prying out the lock tabs on either side of the pump outlet, once they are out of the way push down on the pump to remove it and pull the adapter out of the filter.



2020+ Toyota Supra DW440 Brushless Installation Guide

5 – Remove the factory 1/4" and 5/16" venturi hoses from the saddle tank and bucket pickup venturi jets.

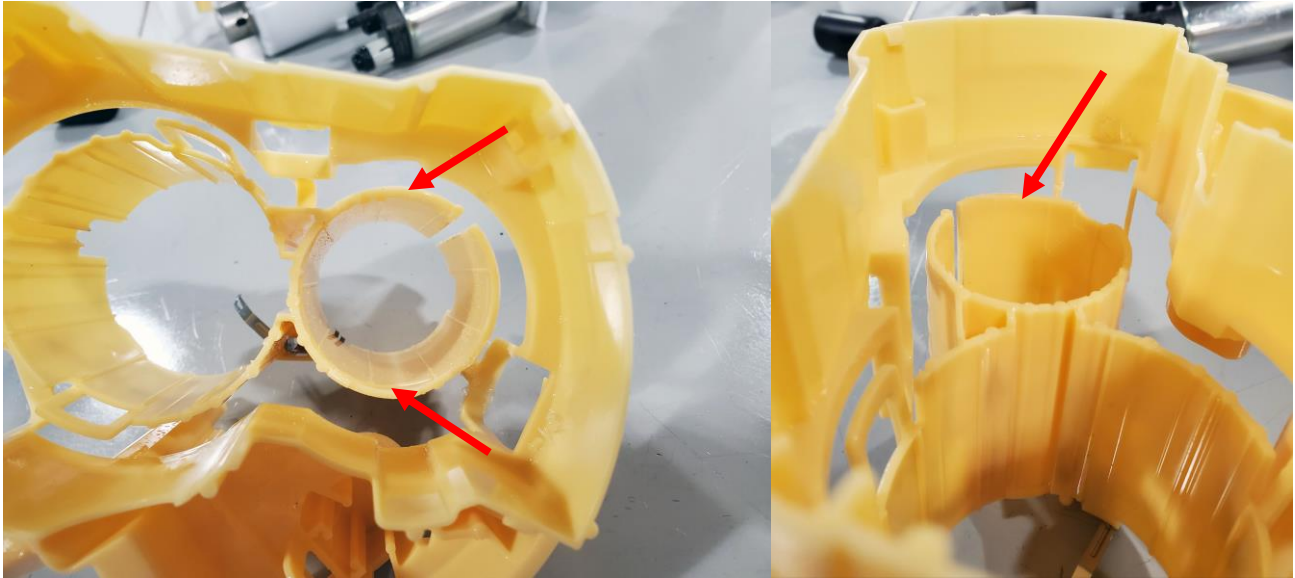


Modifications to the Module

6 – Due to the larger diameter of the DW440 Brushless pump the sleeve that holds the factory pump in place must be modified to accommodate the new pump. The modifications are simple, using a hacksaw or Dremel style tool, make a slice all the way down one side of the module, refer to the picture for optimal placement.



7 – Carefully remove the OEM connector guide, and the small arms that limit how high the pump can insert, this will allow the DW440 pump to orientate itself correctly.



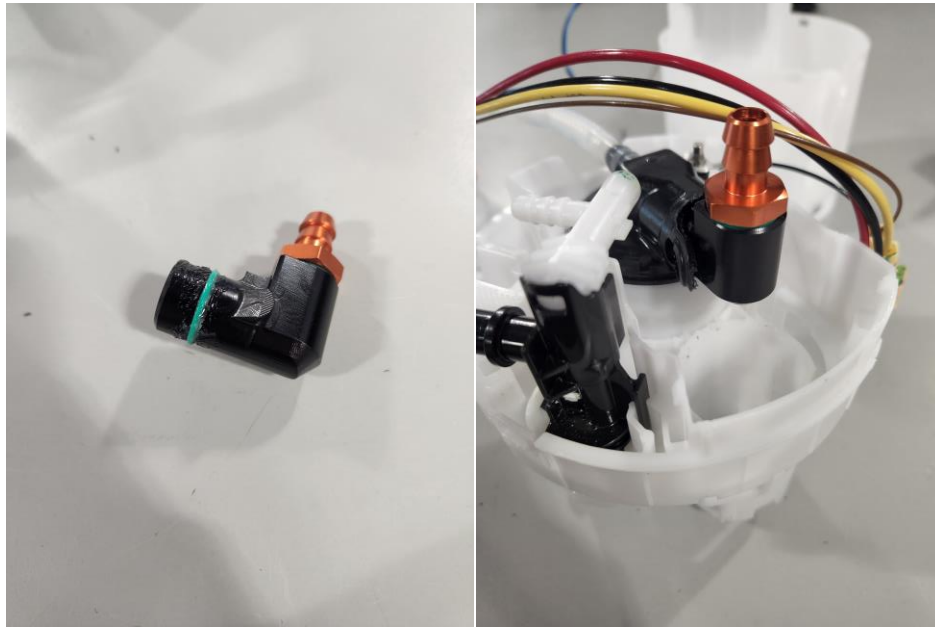
Installation of the DW440 Pump

8 – Install the supplied pre-filter sock, 3/8" and 1/4" hose onto the pump, secure the hoses with a 3/8" and 1/4" clamp.

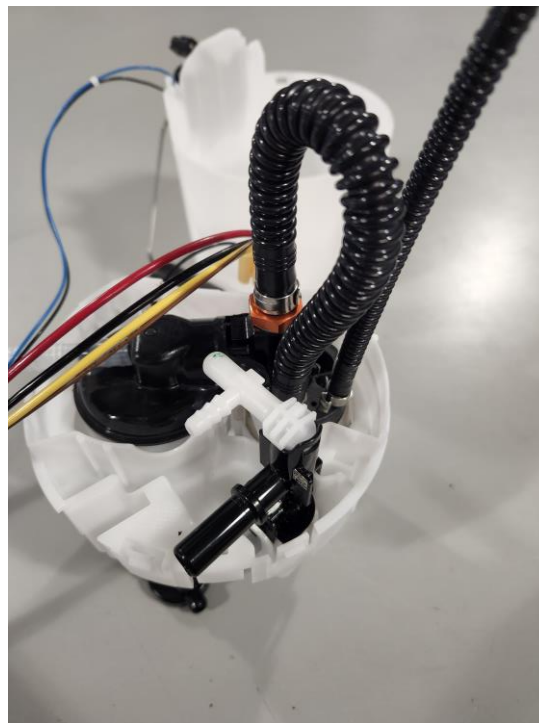


2020+ Toyota Supra DW440 Brushless Installation Guide

9 – Lubricate the O-rings and install the orange fitting into the A90 Filter Adapter Fitting and install the fitting into the OEM fuel filter module.

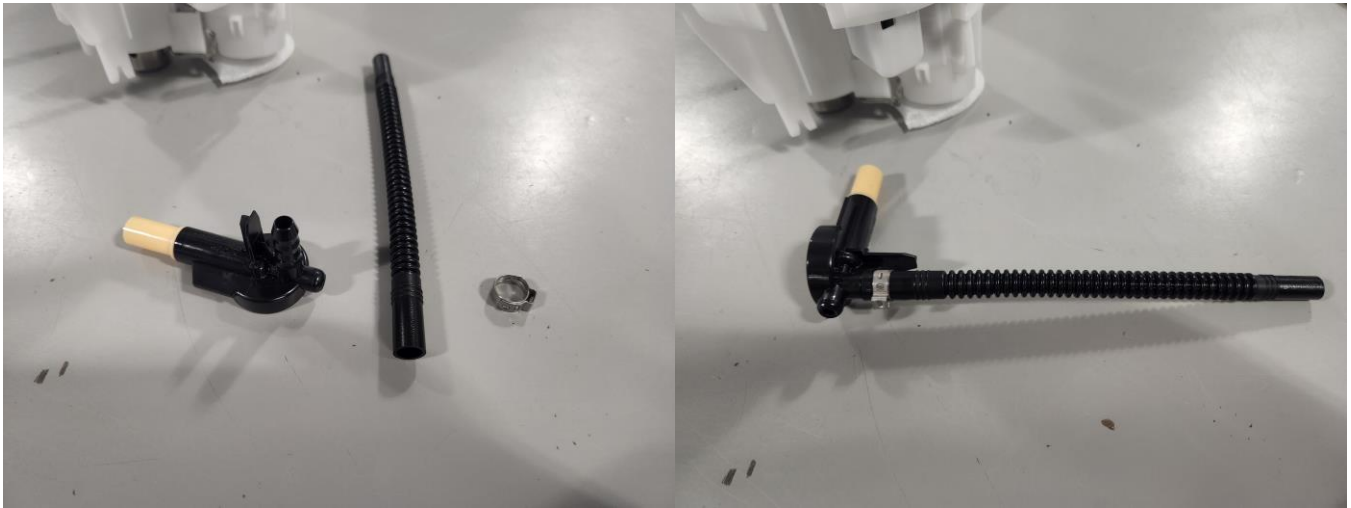


10 – Install the pump into the assembly, attach the free end of the 3/8" hose to the orange adapter fitting, secure it with a 3/8" hose clamp.

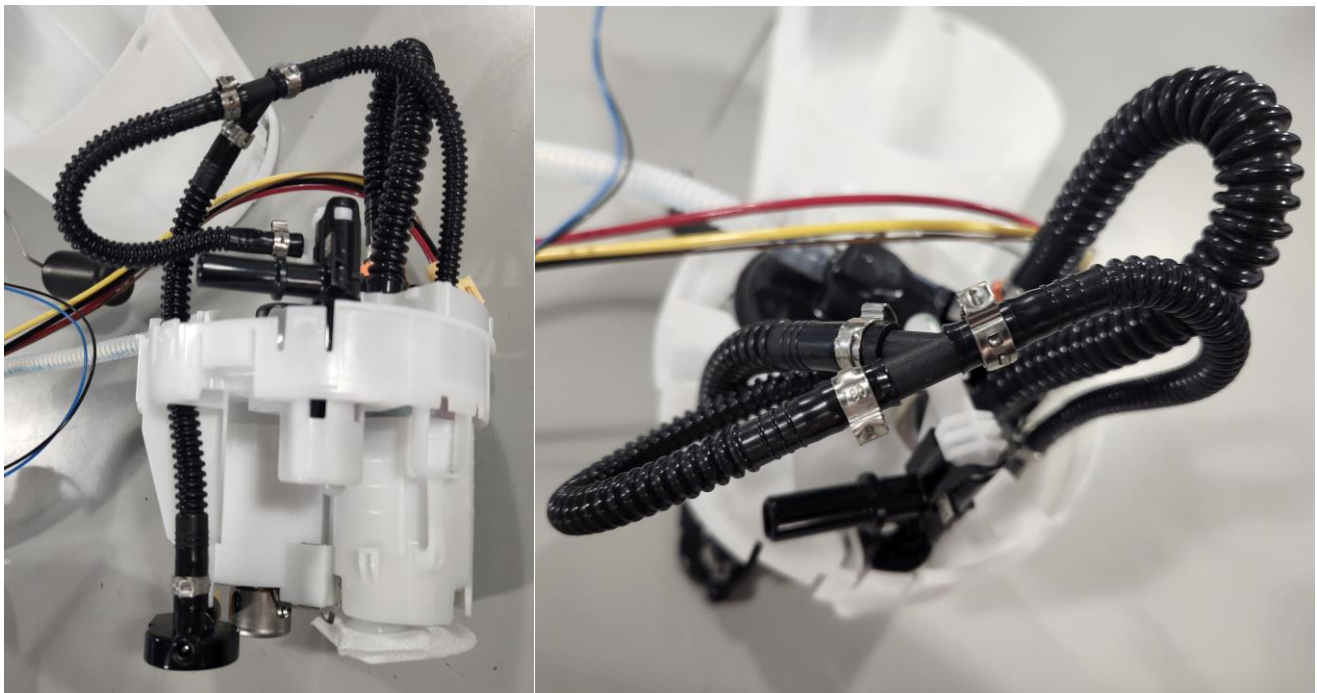


2020+ Toyota Supra DW440 Brushless Installation Guide

11 – Install the special double sized adapter convoluted tubing onto the bucket venturi jet. The 5/16" end goes onto the venturi jet, and the 1/4" end will go to the plastic Y fitting. Secure the 5/16" end with a clamp.



12 – Install the bucket venturi jet back into its place on the bottom of the module center section. Run the hose through the cutout. Using the second 1/4" venturi hose and the plastic Y fitting, connect the 1/4" hose from the DW440 pump to the Y fitting, connect the second hose to the 1/4" Saddle Venturi Jet, and connect all three hoses to the plastic Y fitting, and secure them with the 1/4" hose clamps.

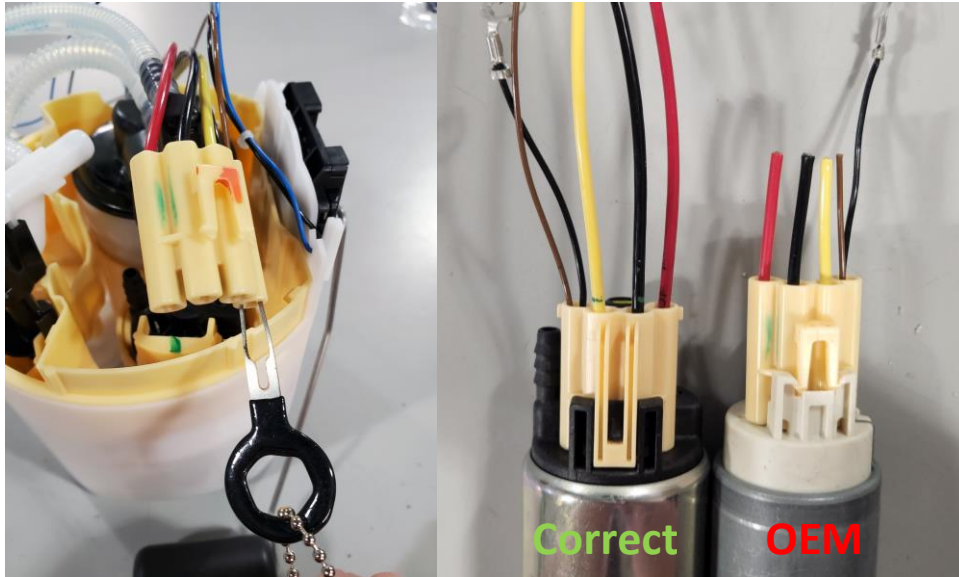


2020+ Toyota Supra DW440 Brushless Installation Guide

13 – The DW440 Brushless pump wiring is reverse from the OEM pump wiring. There are two ways to correct this. We have supplied a connector that can be soldered to the OEM terminals, or the OEM Toyota wiring can be de-pinned and re-pinned into the DW connector.

- A. **Re-Pinning:** using a de-pin tool simply insert it into the connector and remove the pins, re-pin the wiring to look like the supplied picture below.

Note: OSOF 21Pcs Auto Terminals Removal Key Tool Set on Amazon



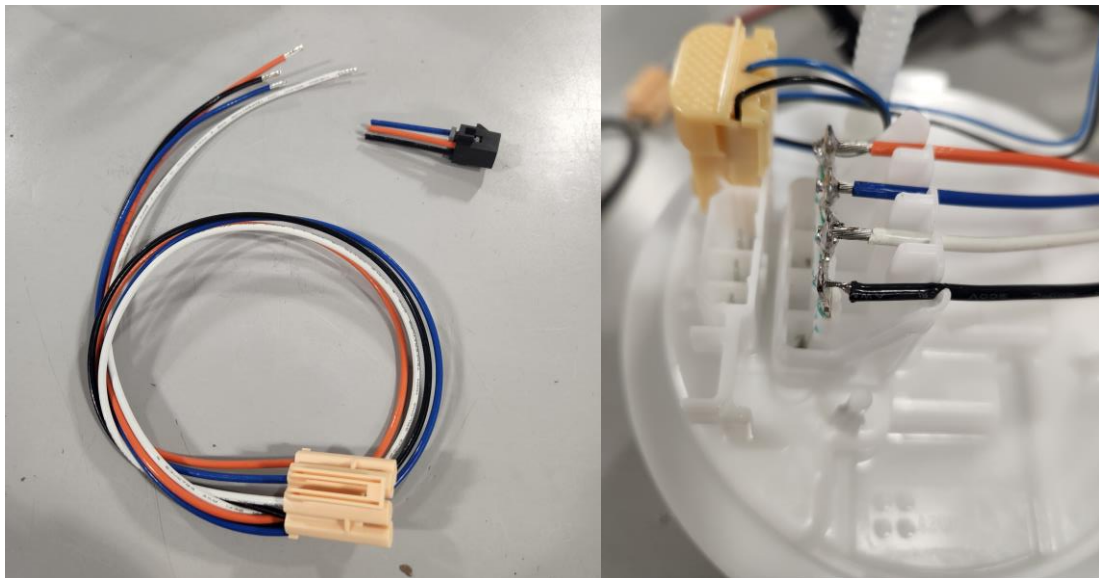
- B. **Cut and Soldering:** cut the Black connector off the supplied harness end, strip the ends of the wires. Unsolder the OEM wiring and resolder the DW wiring in the order below.

Brown to Black

Yellow to White

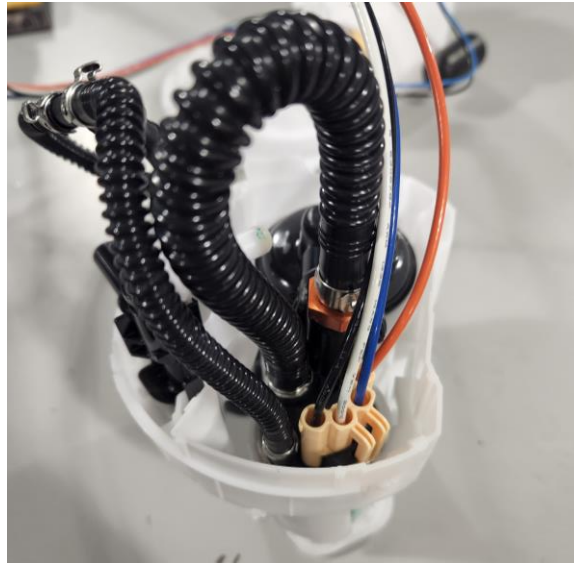
Black to Blue

Red to Orange



2020+ Toyota Supra DW440 Brushless Installation Guide

14 – Plug the connector into the DW440 pump, you may need to rotate the pump to access the connector.



15 – 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. 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.

16 – 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