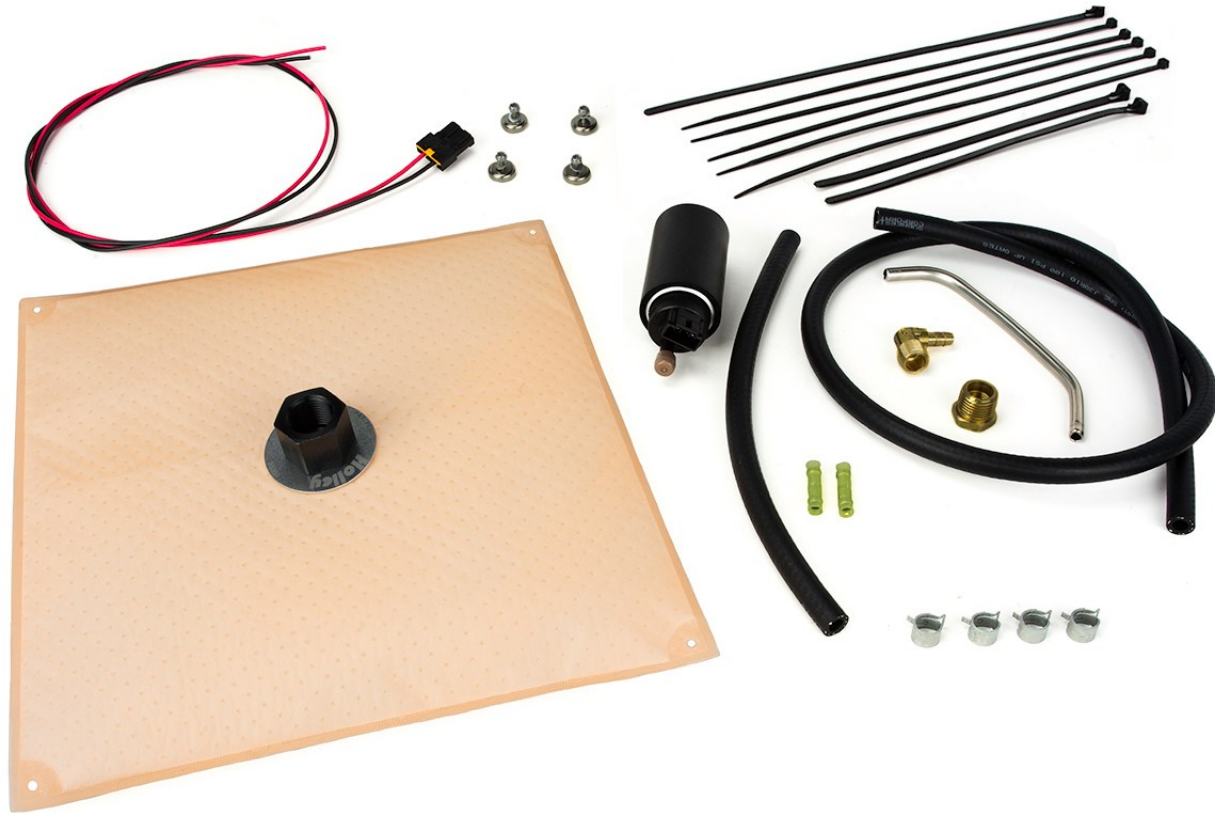


# Z1 FUEL ANTI-STARVE KIT INSTALLATION MANUAL



This Installation Manual is intended for the following models:	
2003-2008	Nissan 350Z
2009-2020	Nissan 370Z
2023+	Nissan Z
2003-2008	Infiniti G35
2009-2015	Infiniti G37

## PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

## WARNING!

Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Motorsports Fuel Anti-Starve Kit, consult with a Professional Mechanic, or contact Z1 Motorsports for more information.

## **PARTS INCLUDED:**

Item	Quantity	Description
1	1	11" x 11" Hydramat
2	1	Hydramat Magnetic Mounting Set
3	1	1/2" NPT to 3/8" NPT Brass Reducer
4	1	3/8" NPT to 5/16" Barb Brass Elbow
5	12"	5/16" Fuel Hose
6	40"	Fuel Hose
7	4	Hose Clamp
8	1	Fuel Pump
9	1	Fuel Pump Fitting
10	1	Fuel Pump Harness
11	5	14" Nylon Zip Tie
12	1	Stainless Steel Tubing
13	2	10-12 AWG Electrical Butt Connector, Yellow
14	2	8" Reusable Tie Strap
15	1	14" Reusable Tie Strap

## **TOOLS REQUIRED:**

- Ratchet
- Ratchet Extension(s)
- Assorted Metric Wrenches
- Assorted Metric Sockets
- Screwdrivers
- Pliers
- Electrical Wire Stripper
- Duct Tape

## **SAFETY REQUIREMENTS:**

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always turn the ignition to the OFF position and disconnect the NEGATIVE battery terminal.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Only operate drivetrain in safe space and well-ventilated areas.

## **BEFORE YOU BEGIN:**

Remove contents from the Z1 Motorsports Fuel Anti-Starve Kit and verify that ALL necessary hardware is present.

It is recommended to do this install with the Fuel Tank as close to empty as possible.

## **FUEL PUMP/LEVEL SENSOR REMOVAL:**

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Disconnect the (-) **NEGATIVE** Battery Terminal.
3. Remove the OE Fuel Pump Assembly and OE Fuel Level Sensor Unit. This will vary depending on your vehicle, a general outline is listed below:
  - a. Open Fuel Fill Lid to release Pressure within the Fuel Tank.
  - b. Remove the Covers of the Pump/Level Sensor in the rear of the vehicle. In coupes, these are behind the Front Seats. Sedans will be under the Rear Seats. *Figure 1.*

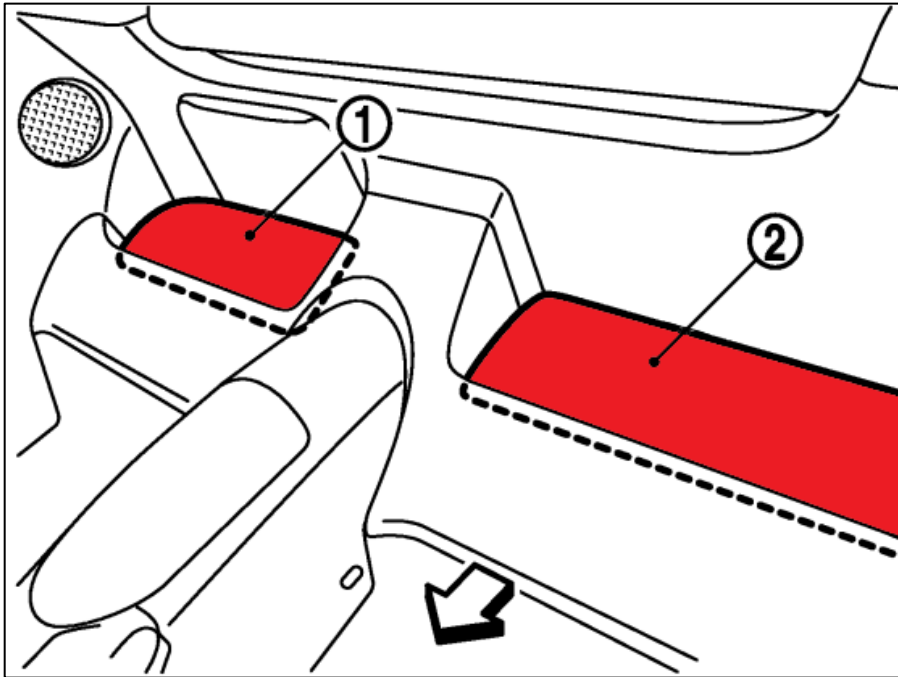
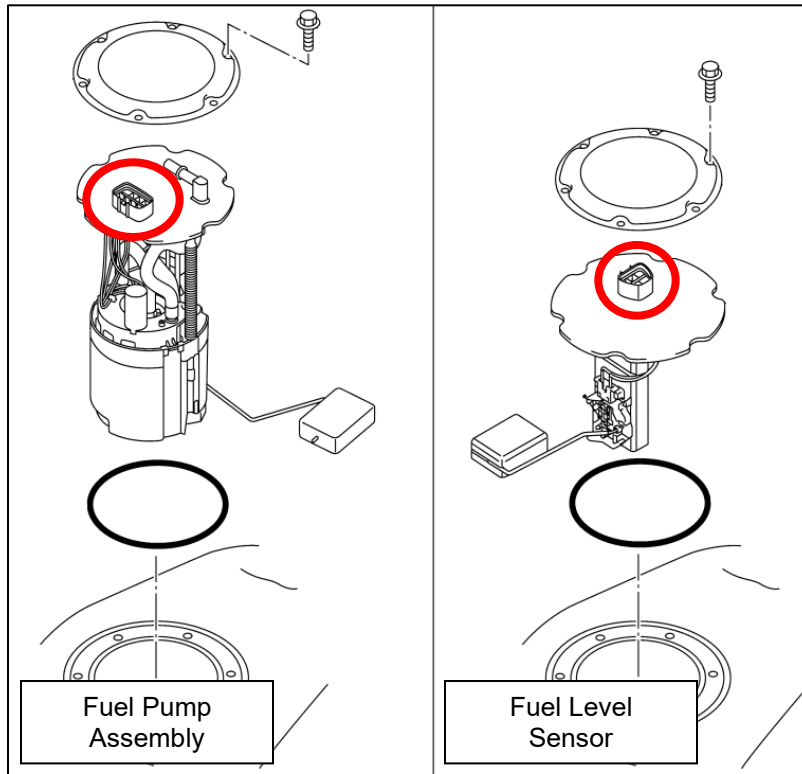


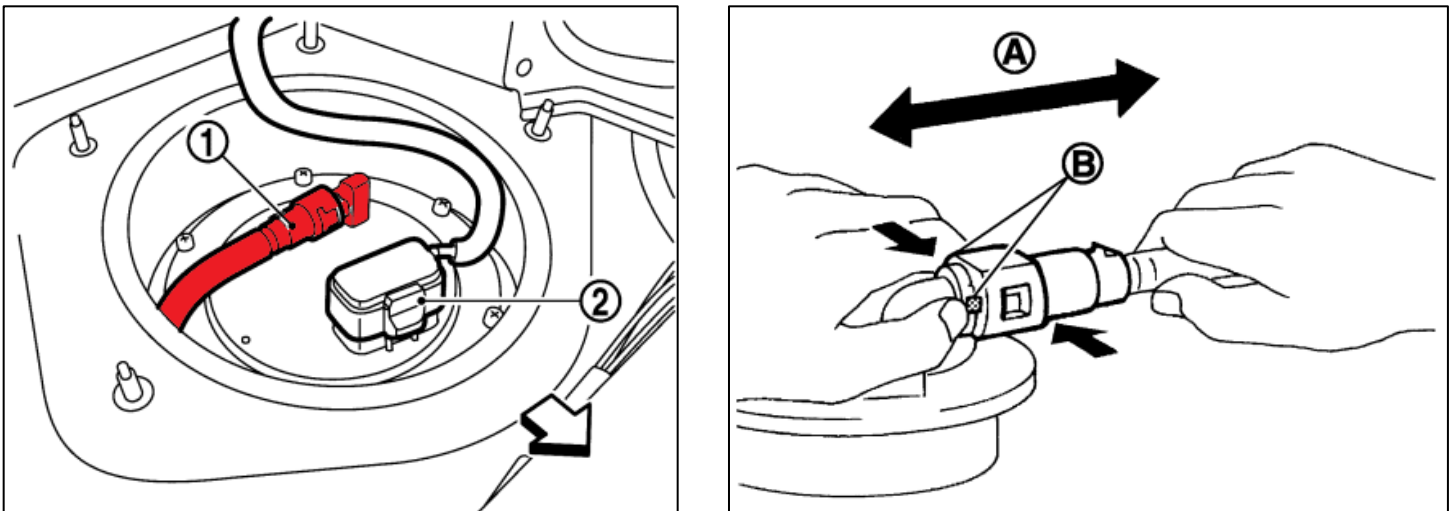
Figure 1

c. Disconnect the Electrical Connectors on the top of the Pump/Level Sensor. *Figure 2.*



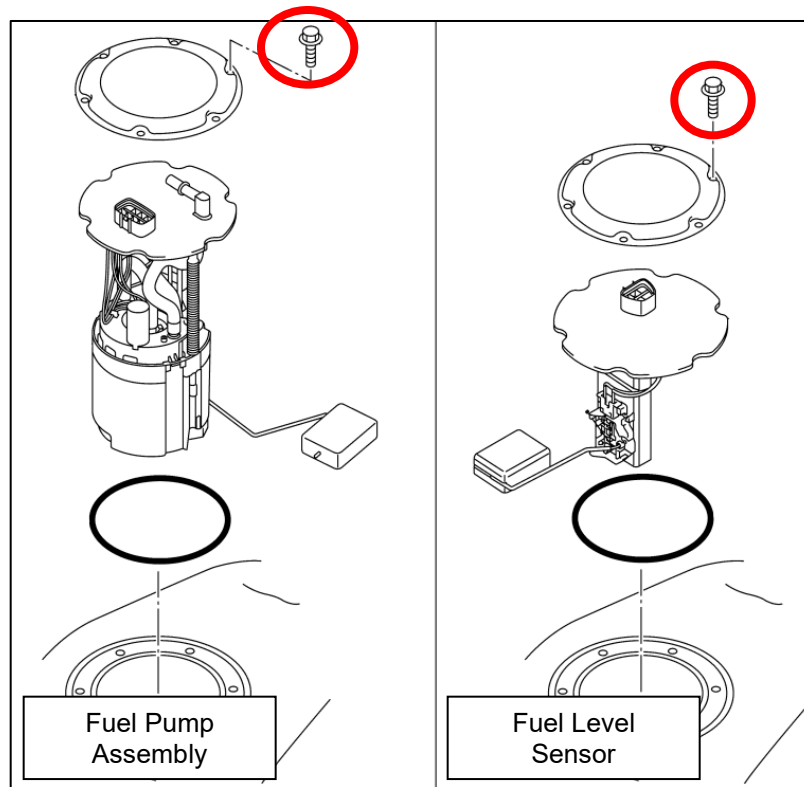
*Figure 2*

d. Disconnect the Fuel Feed Tube to the top of the Fuel Pump Assembly. *Figure 3.*



*Figure 3*

- e. Remove the Bolts securing the Retainers to the Vehicle and remove the Retainers. *Figure 4.*



*Figure 4*

- f. Carefully remove the Fuel Pump and Level Sensor Units from the vehicle.

### **ANTI-STARVE ASSEMBLY:**

1. Locate the Hydramat and the Hydramat Magnetic Mount Set. Mount a Magnet to each corner of the Hydramat and secure with a Nut and Washer. *Figure 5.*



*Figure 5*

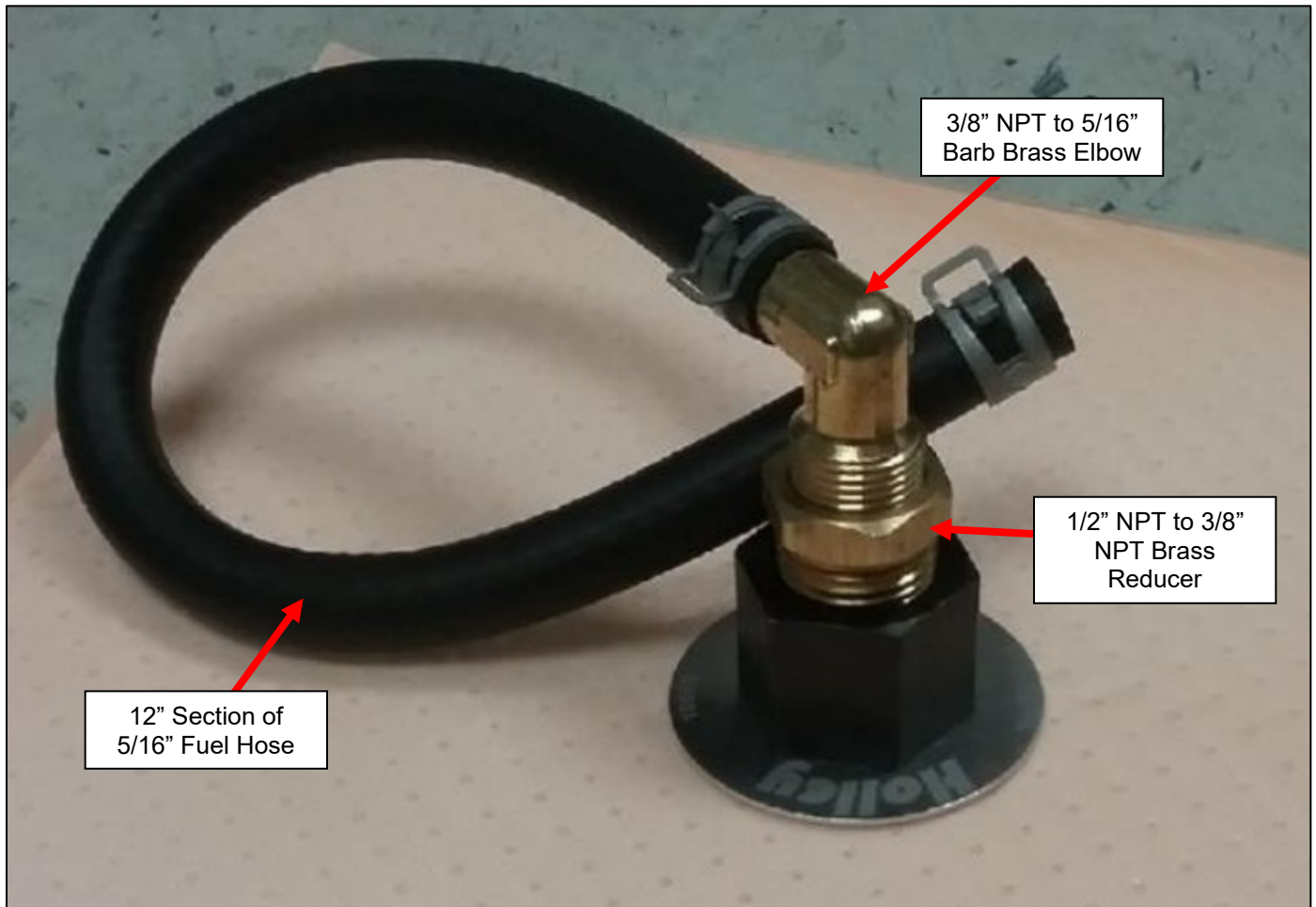
2. Locate the 1/2" NPT to 3/8" NPT Brass Reducer. Thread the Reducer into the Threads of the Hydramat.  
*Figure 6.*

**NOTE: DO NOT** use Teflon Tape or Thread Sealant on the threads of the Reducer.

3. Locate the 3/8" NPT to 5/16" Barb Brass Elbow. Thread the Brass Elbow into the Brass Reducer. *Figure 6.*

**NOTE: DO NOT** use Teflon Tape or Thread Sealant on the threads of the Reducer.

4. Locate the 12" Section of 5/16" Fuel Hose and (2) two Hose Clamps. Place the Fuel Hose onto the Brass Elbow and secure with a Hose Clamp. Place the Hose Clamp onto the other end of the Fuel Hose. *Figure 6.*



*Figure 6*

5. Locate the Fuel Pump. Slide the Insulating Sleeve included with the Fuel Pump over the Fuel Pump. *Figure 7.*
6. Locate the 40" Section of 5/16" Fuel Hose and (1) one Hose Clamp. Install one end of the Fuel Hose onto the Fuel Pump Outlet and secure it with the Hose Clamp. *Figure 7.*
7. Locate the Fuel Pump Harness. Connect the Harness to the Fuel Pump. *Figure 7.*
8. Route the Fuel Pump Harness along the Fuel Hose and secure with (2) two Nylon Zip Ties. *Figure 7.*
9. Strip the end of each wire on the Fuel Pump Harness.
10. Locate the Fuel Pump Fitting. Install the Fuel Pump Fitting onto the Inlet of the Fuel Pump. Secure the Fitting by pressing the Retainer Clip over the Plastic Stud on the Fuel Pump. *Figure 7.*

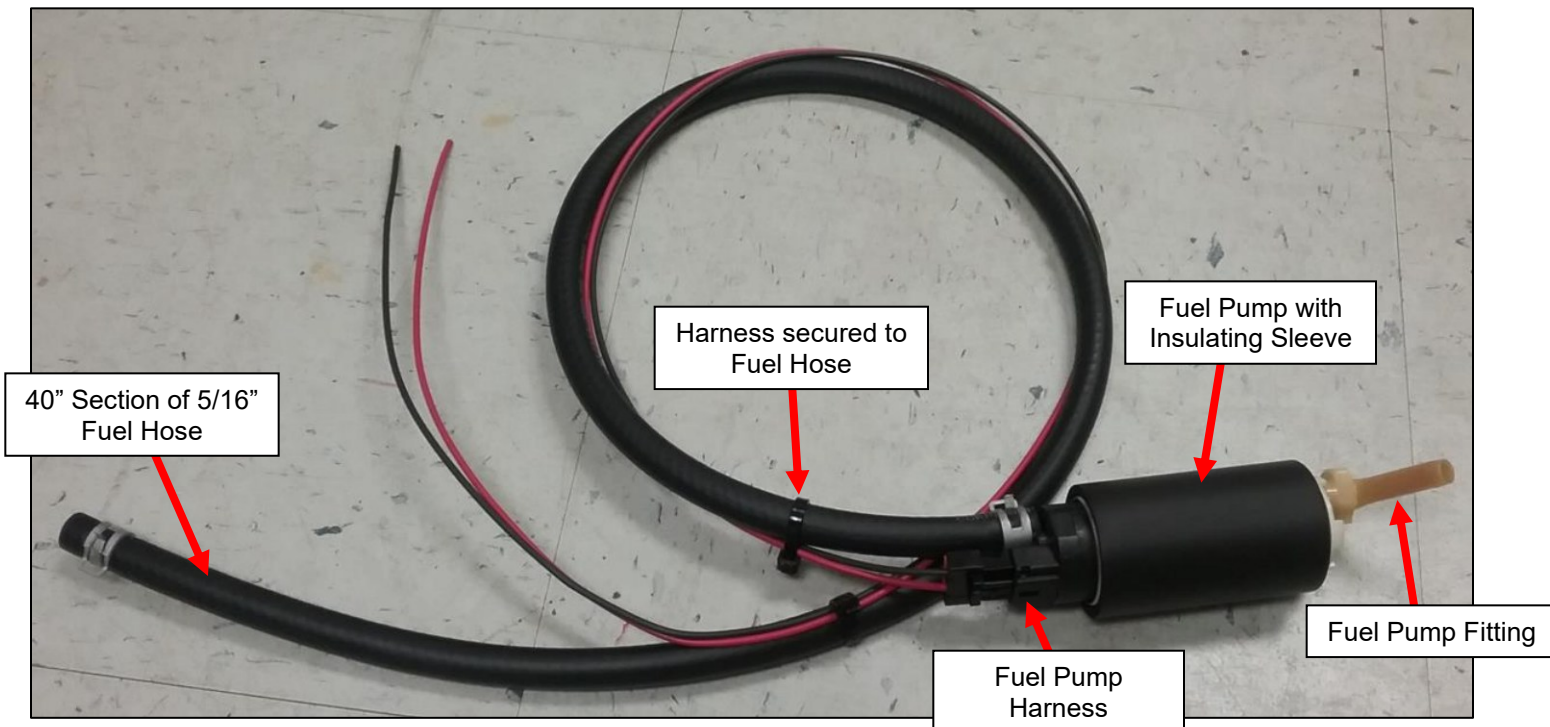


Figure 7

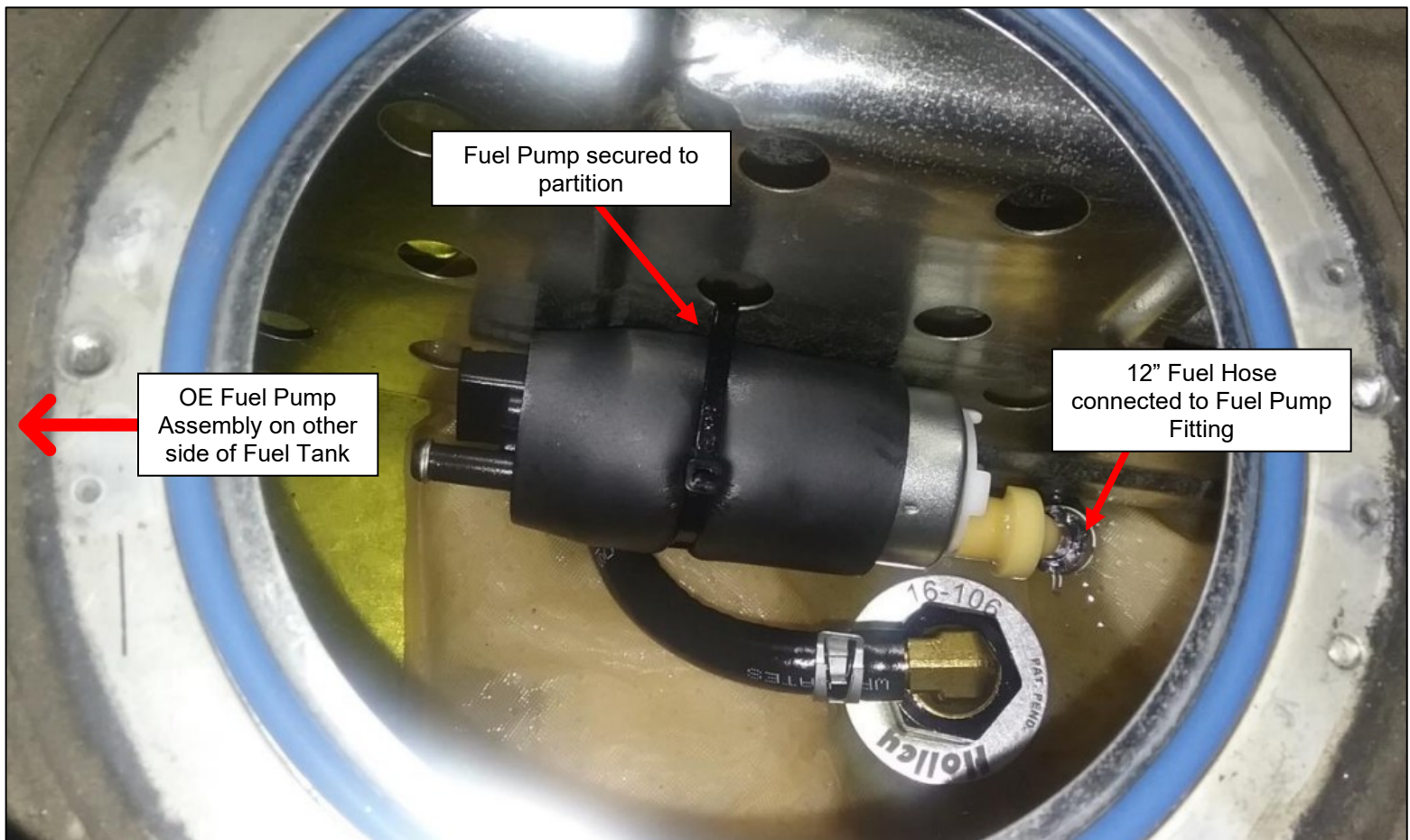
## **INSTALLATION:**

**NOTE:** View *Figure 11* on *Page 11* for a Diagram of the Anti-Starve System.

1. Carefully fold the Hydramat into a Cup shape and insert it through the opening of the OE Fuel Level Sensor and lay it onto the floor of the Fuel Tank. *Figure 8*.

**NOTE:** The Edges of the Fuel Tank opening are sharp. It is recommended to apply duct tape or a similar material to prevent damaging the Hydramat or yourself during install.

2. Position the Anti-Starve Fuel Pump Assembly into the Fuel Tank through the Fuel Level Sensor Opening. Orient the Pump Assembly so that the longer Fuel Hose and Fuel Pump Harness are towards the Fuel Pump (opposite) side of the Fuel Tank. *Figure 8*.
3. Locate the (3) three Reusable Zip Ties. Route the Zip Ties through the holes in the Partition within the Fuel Tank and secure the Fuel Pump at the lowest point of the Partition. *Figure 8*.
4. Install the open end of the 12" Fuel Hose from the Hydramat onto the Fuel Pump Fitting and secure with a Hose Clamp. Orient the Hydramat so the Hose is not kinked. *Figure 8*.



*Figure 8*

5. Locate the OEM Fuel Pump Assembly. Cut the (2) two Electrical Wires from the Fuel Pump to the Bulkhead at the mid-point. After cutting, strip each open end of the wires (4 ends total).

**NOTE:** OEM 350Z/G35 Wires are **BLACK** and **RED**. OEM 370Z/G37 Wires are **BLUE** and **BLACK**. Aftermarket Fuel Pumps may have different colors.

6. Twist the open leads of the Anti-Starve Fuel Pump Harness with the lower open leads of the OEM Fuel Pump. Connect the wires in the order for your vehicle below:

- **350Z/G35: BLACK to BLACK, RED to RED**
- **370Z/G37: BLACK to BLACK, BLUE to RED**

7. Locate the Electrical Butt Connectors. Slide (1) one Butt Connector over each twisted wire leads and crimp with Pliers to secure them together. *Figure 9.*

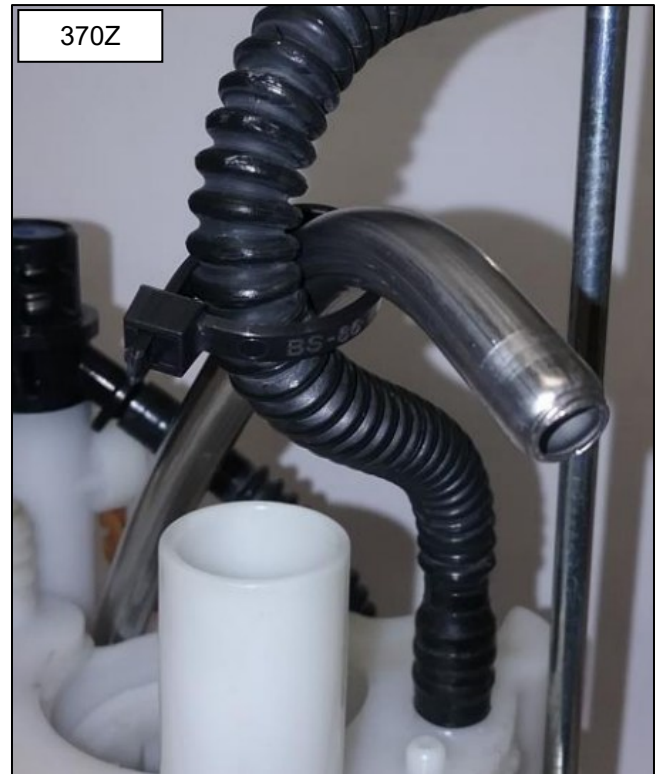
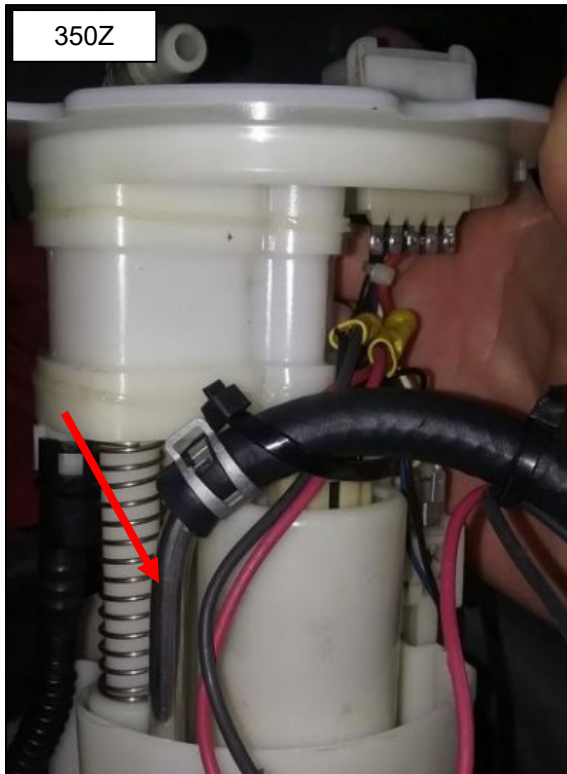
**NOTE:** Make sure the wires are not loose after crimping. If the wires are loose and not secure, the Fuel Pumps will not work properly.

8. Connect the matching OE Fuel Pump Wires to the Butt Connectors and crimp to secure the leads together. *Figure 9.*



*Figure 9*

9. Locate the Stainless Steel Tubing. Install the open end of the 40" Fuel Hose onto the Tube and secure with a Hose Clamp.
10. Position the tube into the "Bucket" of the OEM Fuel Pump Assembly. Secure the Tube to the Assembly with a Zip Tie. *Figure 10.*



*Figure 10*

11. Carefully reinstall the OEM Fuel Pump Assembly into the vehicle, making sure not to kink any of the Anti-Starve hose.
12. Reconnect the Fuel Line and Connector on the top of the Fuel Pump.
13. Start the vehicle and look through the opening of the Fuel Level Sensor to confirm that the Anti-Starve Kit is operational.
14. Once confirmed that the Anti-Starve kit is operational, reinstall the OEM Fuel Level Unit. Be careful when reinstalling to not interfere with the Anti-Starve Kit.

A diagram of the Anti-Starve System is on the next page.

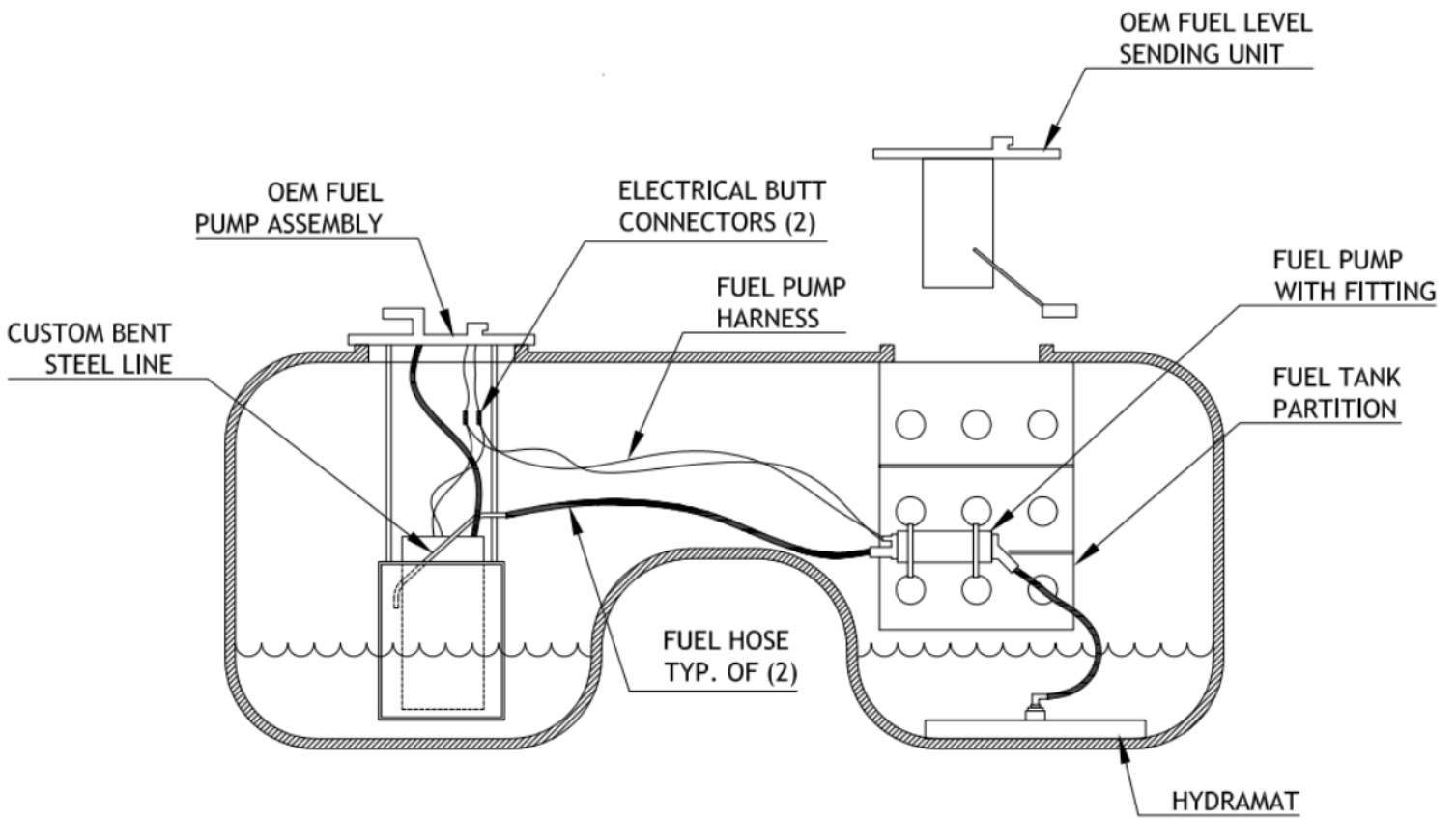


Figure 11

**END**

**Additional Technical Support:**  
 Contact Z1 Motorsports at [info@z1motorsports.com](mailto:info@z1motorsports.com)  
 Or call 770-838-7777 between 9am and 6pm ET