



Gen 5 Camaro Twin Pump Fuel Module

P/Ns 12-351

NOTE: Please read all instructions before proceeding with the installation of your new drop in fuel cell pump hanger. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury, or death. If these instructions are not fully understood an installation should not be attempted. In this case please contact Holley's tech service department or a qualified mechanic.

Parts Included	
Qty	Description
1	Fuel Pump Hanger Assembly
2	HydraMat Filters
1	4 Wire Pump Power Vehicle Harness
1	2 Wire Level Sender Harness
1	Level Sender Arm
1	90° Swivel 8AN ORB to 6AN Male Flare
1	Wiring Connections Bag

Parts Required for Installation:

- **Post Pump Filter:** Each of the Hydramat Pre-Filters that come with the module are 10 Micron filters making the use of post filters optional, not required.
- **Relay Kit (30A Min) – Holley P/N 12-759** or equivalent
 - 2 relay kits needed, one for each pump.
 - Additional wire and connectors may be necessary.
- **Fuel Hose and Fittings**
 - **NOTE:** These pump assemblies are not designed to use a standard conical seat style union for the fuel out or fuel return. Using this type of fitting will restrict flow and will lead to poor performance and potential pump failure. The only correct fitting to use is a contoured port fitting with an O-ring seal. These are commonly referred to as ORB fittings.



Pump Module I/O:

- **Fuel Outlet** – 8AN ORB (Fitting to factory 3/8 quick connect included)
- **Fuel Return** – 8AN ORB (90° Swivel 8AN ORB to 6AN Male Flare fitting included)

NOTE: If fittings other than the ones that are included are required for your installation, they must be purchased separately. Earl's has a full line of ORB fittings.




Installing the Pump Module:

1. Drive the vehicle until the level in the tank is at or below 1/8 of a tank. To make tank removal and reinstall as easy as possible, the lower the fuel level the better.

2. Remove the fuel tank from the vehicle.
 - a. The QR code below will link to a Haynes Manuals video on how to remove the tank. If the link is broken for any reason, please contact our customer service department and they will be able to provide you with the video.



3. Remove the factory fuel pump module from the tank.

<p>a. Remove the factory pump feed line from the module by removing the locking tab and then pulling the hose end off of the quick connect.</p>		
<p>b. Using a lock ring removal tool, such as the ARES 71158 shown, remove the pump module retaining lock ring.</p>		
<p>c. Slowly remove the factory pump module, making sure not to spill any fuel in the process.</p>		
<p>d. Remove the crossover line quick connect fitting at the base of the module by pressing on the green sections on either side and then pulling it off.</p>		
<p>e. Clean and inspect the module O-ring gasket. If it is in good condition, it may be reused. If it is torn or looks worn, then it is recommended that it be replaced.</p>		

4. Install the Holley Module into the Tank.

a. With the crossover line held out of the tank, start by inserting both pumps into the module opening in the tank.



b. Once both pumps have been inserted, connect the crossover line fitting onto the quick connect on the Holley module jet pump assembly.



c. Press the back end of both Hydramat filters into the module opening, then rotate the module counter clockwise until the jet pump assembly and crossover fitting can be inserted into the module opening.



d. Rotate the module back clockwise until the level sensor card is in the approximate location shown below and the level sensor arm can be inserted into the module opening.



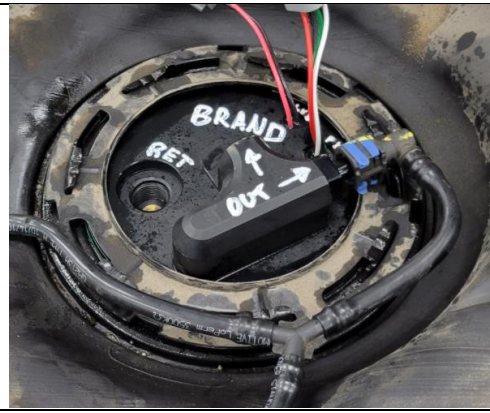
e. Using a small pair of needle nose pliers, install the level sensor arm onto the level sensor card.

1. The short end of the bent wire should be inserted into the pivot hole on the sensor card and then clipped into the plastic arm as shown below.



f. Finish inserting the module into the tank making sure that the tab on the flange lines up with the molded in alignment mark on the tank.

g. Using the same lock ring tool, re-install the factory lock ring to retain the module to the tank



Plumbing the Pump Module:

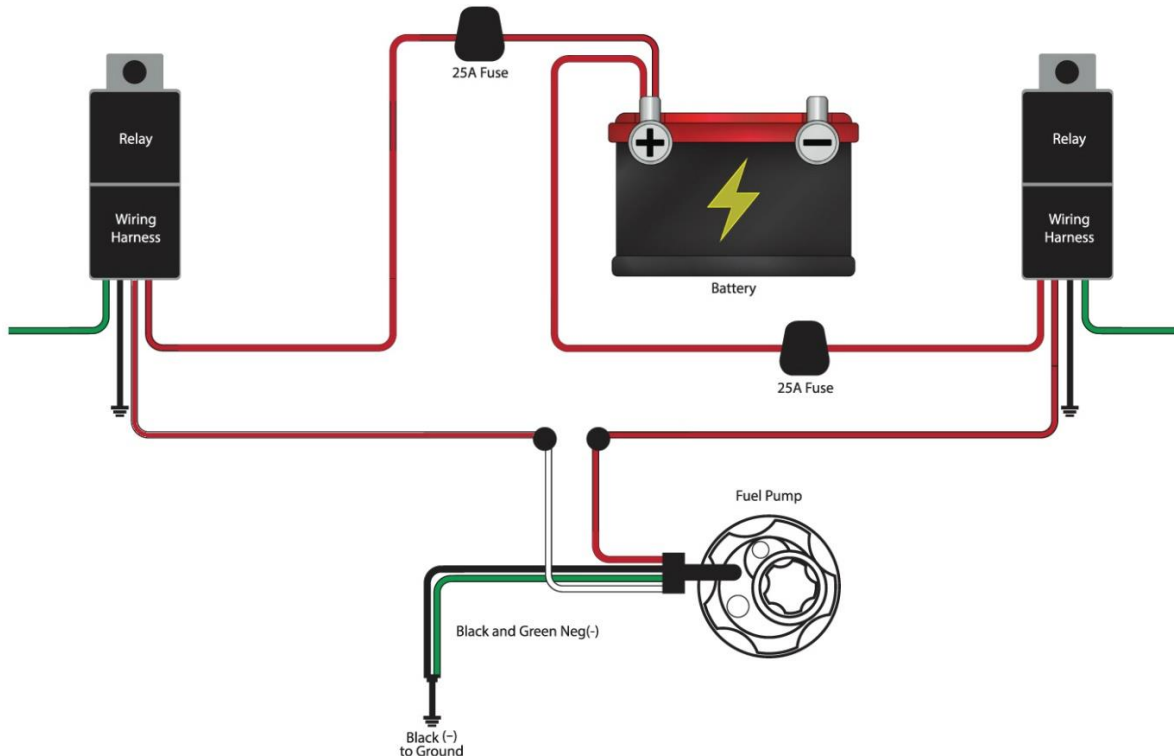
1. Feed Line Options
 - a. Reusing the factory feed line
 1. The module has been designed to retain the factory pump feed line and comes pre-installed with a 3/8 quick connect fitting conveniently located in the factory location. The factory line has been proven to support power levels well into the 4 figures on E85, so in most cases it is recommended that it be reused.
 - b. AN plumbing
 1. There is a secondary 8AN ORB port located on the module outlet block which comes plugged from the factory. This plug can be removed and installed onto the primary outlet. Then with the use of a straight 8AN ORB to AN male flare and a 45-degree hose end an AN feed line can be plumbed.
2. Return Line – The module is return style meaning that a return line is required. In most cases an 6AN line is all that is needed and is the easiest to route. For this reason, a 90° swivel 8AN ORB to 6AN male flare fitting is included. If you would like to run an 8AN return line, Earl's fitting part number 949008ERL or AT949008ERL must be purchased.

Wiring your Fuel Pumps:

WARNING! USE A MINIMUM OF 12 GAUGE WIRE. BE SURE TO CRIMP OR SOLDER ALL CONNECTORS SECURELY AND CLEAN ANY AREA WHERE GROUND LEADS WILL BE FASTENED. FAILURE TO USE THE MINIMUM WIRE GAUGE COULD RESULT IN PUMP MALFUNCTION AND/OR ELECTRICAL FIRE, RESULTING IN PROPERTY DAMAGE, SERIOUS INJURY, AND/OR DEATH.

1. Disconnect the cables from the battery.
2. Mount relay/relays in convenient location away from exhaust heat.
3. Plug the fuel pump relay harness into the relay, until it locks into place.

NOTE: Be sure to route all electrical wires clear of any moving suspension or drivetrain components and any exhaust components! Protect wires from abrasion and road obstructions or debris.



The module has two connectors – a four pin and a two pin the four-pin connector is the power and ground for both pumps on the module and the two-pin connector is the resistance reading for the level sender.

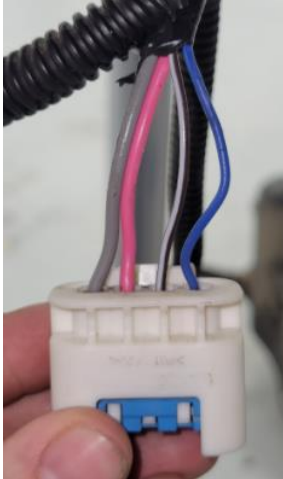


Four Pin Connector Wiring Colors

1. Red – Pump 1 Power
2. White – Pump 2 Power
3. Black – Pump 1 Ground
4. Green – Pump 2 Ground





Two Pin Connector Wiring Colors

1. Red – Resistance 1
2. Black – Resistance 2

Wiring the two-pin connector:

<p>1. On the factory connector, there will be a dark blue wire and a brown wire with a white stripe. These are the two wires that need to be spliced into.</p>	
<p>2. Shorten the included 2 wire level sensor harness to the appropriate length – only a few inches are needed.</p>	
<p>3. Peel back the factory corrugated wiring loom to expose the two wires listed in step 1.</p>	
<p>4. Cut and strip the wires, being sure to leave enough wire on the factory connector end so that it may be reused later if needed.</p>	
<p>5. Using two of the included step-down butt connectors connect the following wires together:</p> <ol style="list-style-type: none">a. Red – Dark Blueb. Black – Brown	
<p>6. The factory connector will no longer be used. It can either be removed or left.</p>	

Wiring the four-pin connector:

<p>1. Drill a small hole in the wiring grommet between the interior of the car and the tank area.</p>	
<p>2. Lubricate the four wires on the pump power vehicle harness and insert them through the hole that was created in the first step.</p> <p>a. NOTE: It is recommended that the four wires be electrical taped together before inserting through the hole in the grommet.</p>	
<p>3. Loosen the lower part of the rear seat.</p> <p>a. Move the passenger's seat to the forward most position to gain access to the rear seat area. (The seat may be removed for easier access as well.)</p> <p>b. Pull up on the center section of each cushion until it snaps loose.</p>	
<p>4. Pull the wires through the grommet until the 4-pin connector is around the same length as the factory connector.</p>	
<p>5. Wire the Black and Green wires to a solid battery or chassis ground.</p> <p>a. The battery for the car is located in the trunk. Here there is a 10mm nut that retains the main negative battery cable to the battery terminal. This is the ideal place to ground the pumps.</p>	
<p>6. The White and Red wires should be connected to either pump relay per the wiring diagram above.</p>	

Wiring the switching circuit for the relays:

1. Under the rear seat, peel back the wiring loom to expose the factory power and ground wires for the fuel pump.
 - a. The factory pump power wire will be a heavy gauge Grey or Red wire
 - b. The factory ground wire will be a heavy gauge Pink or Black wire.
2. Cut and splice both wires.
3. Using the included step-down heat shrink butt connectors, connect both of the black wires from the relay wiring harnesses to the factory ground wire.

4. Relay trigger (green wire connections) – One of the green wires from the relay wiring harnesses should be wired directly to the factory pump power wire. This will be the primary pump that is on all of the time. The other green wire should be wired in one of the following ways:
 - a. Both pumps on all of the time – Wire the other green trigger wire from the relay wiring harness to the factory pump power wire.
 - b. Trigger via Hobbs switch for Boosted applications – connect the green trigger wire to one end of the Hobbs switch. The other end should be connected to the factory pump power wire.

Wiring the relay positive battery connection – If you lift the cover exposing the factory positive battery terminal, you will find a 10mm nut. This is the ideal place to connect each of the fuse holders. The other end of the fuse holders should be connected to the relay harness following the wiring diagram above.



Tank Reinstallation: Once all wiring and plumbing connections have been made, the tank can be reinstalled in the reverse order that it was removed, making sure to connect both the four pin and two pin connectors.

General Notes:

1. It is recommended that a minimum of a ¼ tank of fuel be maintained if the vehicle is going to be used for racing purposes.
2. For general driving, the module has been tested to deliver stable fuel pressure until the low fuel light is illuminated. At this point, it is recommended that you add fuel to the tank to ensure proper operation of the system.

Plumbing Safety Instructions:

Once the feed and return plumbing connections have been made, be sure to follow the following instructions to ensure there are no leaks.

1. Once all fuel line connections have been made, re-connect the battery, fill the tank with gas, energize the unit, and check for fuel leaks. If any leaks are found, immediately de-energize the unit and repair them.
 - a. **NOTE: Do not attempt to start the car at this point.**
2. When all leaks have been repaired, cycle the key between the on and off positions a few times to build system pressure. At this point, ensure that the regulator is set to the desired pressure. If not, set the pressure regulator to the desired pressure.
3. Check for leaks once again. If none are found, start the vehicle and take it for a test drive.
4. Check for leaks one last time and correct any if found. If none are found, the installation is complete.

CAUTION: Any fuel that is spilled during any part of this installation should be immediately soaked up with shop towels/rags and removed from the vicinity of the vehicle.

Holley Performance Products
Toll Free Technical Service: 1-866-464-6553
Technical Service: 1-270-781-9741

For online help, please refer to the Technical Information section of our website: www.holley.com

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