



## Twin Pump Hanger Universal Pump Hanger Installation Instructions

P/N 12-173 & 12-174

**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
4	24" Long Foam Spacer Strips
2	Outlet/Return fittings (8AN ORB to 8AN Male)
1	Vent Fitting (6AN ORB to 5/16 Barb)
1	Vent Plug (6AN ORB Plug)
2	11mm Pump Filter Socks

Tools Needed
4" Metal Cutting Hole Saw
Drill
Tape Measure
5/32" Hex Wrench
1/8" Hex Wrench

Possible Tools Needed
Vise/Locking Pliers
1/4" Open End Wrench

### **Parts Required for Installation:**

- **Post Pump Filter:** Holley Dominator filter or equivalent rated for 200+ GPH of flow. EFI systems should have a 10 micron or finer filter while carbureted systems should have a 40 micron or finer filter.
- **Relay Kit (30A Min) – Holley P/N 12-753** 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 8AN male flare included)
- **Fuel Return – 8AN ORB** (Fitting to 8AN male flare included)
- **Vent – 6AN ORB** (Fitting to 5/16 barb and plug included)

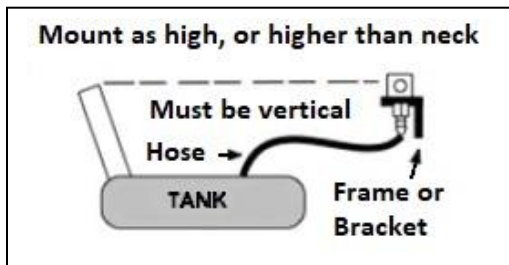
**NOTE:** If fittings other than the ones that are included are required for your installation, they must be purchased separately. Earl's has a full line of ORB fittings.

**Rollover Valve:** If you wish to vent the tank via the vent port on the flange, a rollover valve must be purchased to ensure that in the case of a vehicle rollover, gasoline can not exit the tank. This can be accomplished in one of two ways. The first is via an external rollover valve such as **Holley P/N 19-174**, and the other is via an in-tank rollover valve such as **Holley P/N 12-874**. For the latter, thread sealant with PTFE will also be needed. Earl's sells this under **P/N D024ERL**.

**NOTE:** If applicable, the tank vent should be reconnected to the existing charcoal canister system on the vehicle.

#### External Valve Install:

- Install the included vent fitting into the vent port on the flange of the module. It is recommended to lubricate the O-ring with a silicone-based O-ring lubricant before installing.
- Mount the **Holley 19-174** so that it is above the highest point of the filler neck. Be sure that the valve is vertical. See the Diagram below for proper mounting:



- Connect the barb on the pump module to the barb on the rollover valve with a piece of 5/16" fuel line. The vent line cannot have a dip in it where fuel or condensation can get trapped in the line. If fuel becomes trapped in the line, your tank will then build pressure or vacuum until there is enough pressure to purge the vent, which will cause gas and/or odor to come from the vent line. If enough pressure builds up, damage could be caused to your tank.

- Use hose clamps on either end of the hose to retain the hose to the barbs.

#### • Internal Rollover Valve Install:

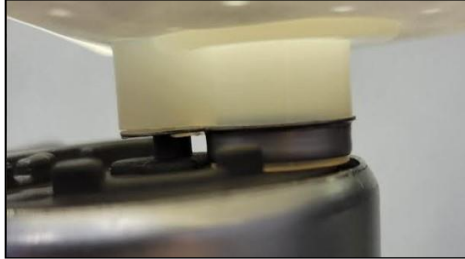
- Apply PTFE thread sealer to the threads of the 12-874, and install it into the open 1/8 NPT port on the bottom side of the fuel pump flange.
- Install the included vent fitting into the vent port on the flange of the module. It is recommended to lubricate the O-ring with a silicone-based O-ring lubricant before installing.
- Using a piece of 5/16" fuel line run the vent either to charcoal canister or to another vent source. Be sure to use clamps both ends of the fuel line to retain it to the barbs.

**NOTE:** If your tank is already vented (either via the fill cap or another method) and you do not wish to use the venting capabilities of the Holley module, then a 6AN plug is also included to plug the vent port.

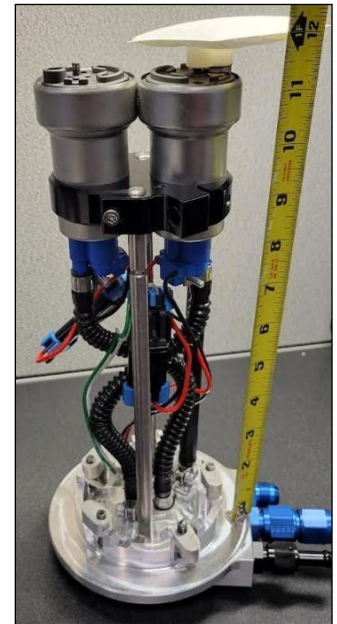
#### **Installing the Pump Module:**

1. Disconnect the negative battery terminal and slowly release any pressure from the fuel lines.
2. Carefully remove the fuel tank from the vehicle being sure to disconnect any fuel lines and electrical components that are connected to the tank. **NOTE: In some cases, a section of the exhaust may need to be removed in order to remove the fuel tank. NOTE: Drain the tank (if possible) before removal.**
3. If the tank was not able to be drained before removal, it must be drained and flushed with water at this point before continuing with the installation.
4. Determine the best area on the fuel tank surface to drill the 4" diameter hole by:
  - a. Identifying where the chassis frame rails contact the fuel tank
  - b. Evaluating the position & path of the fuel level sender float – we recommend removing the existing unit to determine float arm path and direction before cutting new mount hole.
  - c. Locating any internal vent line routing
  - d. Avoiding any internal fuel bowl or baffles
5. Determine the best routing for positioning the applicable:
  - a. Supply Hose
  - b. Return Hose
  - c. Wire Harness
  - d. Vapor Vent Hose
6. After following the above determinations, drill the 4" diameter hole using a hole saw. Be sure to deburr the inside and outside edges of the hole once drilled. Also, be sure to remove any debris that may have fallen into the tank at this point.

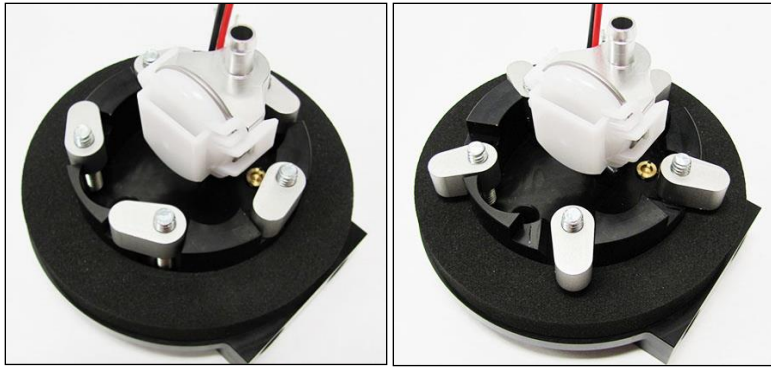
- a. **NOTE:** The foam ring gasket can compensate for ribbed tank surfaces up to .28" deep. Deeper ribs or more perpendicular ribbed walls will require an additional sealant, such as Dow Corning® 730 fluorosilicone RTV between the foam ring gasket and the tank surface.
7. Once the hole is drilled, take a measurement from the highest surface on the tank floor to the highest surface on the tank, and note that measurement.
  - a. **NOTE:** The MIN depth for the Holley Module is 7" – the MAX depth for the module is 12".
8. Install the included pump filter socks onto the pumps. Be sure that the sock outlet fully seats onto the pump inlet and is fully retained on the pump post. Below is an example photo of what that should look like:



9. Remove the foam gasket from the module and raise or lower the pump clamp, so that the measurement from the base of the flange to the bottom of the filter sock matches the one taken in step 7. This will set the bottom of the mat at the bottom of the tank.
  - a. To raise or lower the pump use a 5/32" hex wrench to loosen the two screws used to clamp the pump mount onto the two stainless steel guide rods.
  - b. If the filter sock or pump comes in contact with the guide rods, but you still need the pump to go lower in order to have your two measurements match, then the guide rods must be removed and broken at one of the break points that are milled into them.
    - i. Remove the guide rods from the pump flange.
      1. Loosen the two screws that retain the pump mount to the guide rods with a 5/32" hex key and slide the pump mount and pump assembly off of the rods.
      2. Using a 1/4" wrench or an adjustable wrench, unscrew the guide rods from the pump flange via the two flats at the base of the rods
      3. Either using a vice or locking pliers, break the rods at the desired break point.
        - a. If it is difficult to break the rods, then it may be necessary to get some extra leverage on the rods.
      - ii. Rebuild the pump assembly in the reverse order that it was taken apart and then continue matching the two measurements.
    - c. Once the desired pump height is reached, retighten the two 5/32" drive screws to clamp the pump mount back onto the rods.
  10. A return tube will be pre-installed onto the module, which may also need to be trimmed. This tube should be at least an inch above the floor of the tank, which is roughly the same level as the pump inlet.
    - a. If the tube is not long enough to be matched to the pump inlet, then just use the full-length tube.
  11. Re-install the foam gasket, and then insert the module into the hole drilled in step 6. Once installed, rotate the module to the desired orientation determined in step 5.
    - a. **NOTE:** Before inserting the module, be sure that the swing out mounting lugs are in the closed position like in the photo below. If any are in the open position, rotate them until they are closed. Then, tighten the screw so that they sit on the shelf designed for them.



***Match this measurement to the one taken in step 7.***



Closed

Open

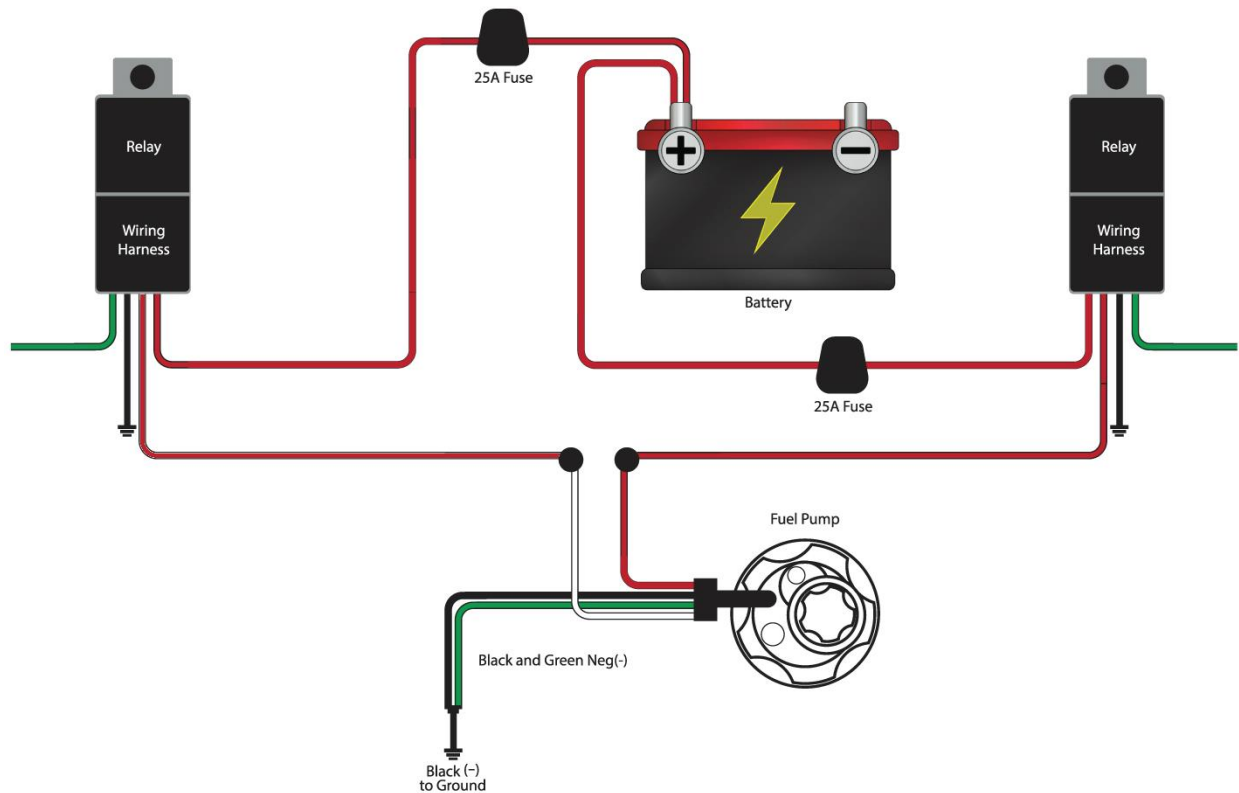
12. Compress the flange against the tank surface and tighten the (x5) lug screws in a clockwise motion using a 1/8" hex wrench to swing out the mounting lugs into the open position like in the above picture. Once this is done, gradually torque the (x5) screws in a crisscross pattern until a torque of 40-60 in-lbs is achieved for all (x5) screws.
  - a. **NOTE:** In order to get the lugs to swing out, it may be necessary to slightly rotate the (x5) lug screws counter clockwise to slightly get them off their shelf before rotating them clockwise so that they can swing out.

#### ***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.
4. Connect the black wire of the harness to ground.

**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.



#### ***Tank Re-Installation:***

Once the install of the module into the tank has been completed, the tank must be reinstalled into the vehicle. To account for the flange thickness of approx. 1", the kit contains (x4) strips of 1/2" adhesive backed foam, which can be stacked on top of one another to provide extra clearance between the tank and the floor of the vehicle.

#### ***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.**

**Technical Service: 1-866-464-6553**

**Phone: 1-270-781-9741**

**For online help, please refer to the Tech Service section of our website: [www.holley.com](http://www.holley.com)**

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**199R12318**

**Revision Date: 4-24-23**