3.5 GPM FUEL PUMP
P/N 12-270
Installation Instructions 199R12422

WARNING! **THESE INSTRUCTIONS MUST BE READ AND FULLY UNDERSTOOD BEFORE BEGINNING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN POOR PERFORMANCE, VEHICLE DAMAGE, PERSONAL INJURY, OR DEATH. IF THESE INSTRUCTIONS ARE NOT FULLY UNDERSTOOD, INSTALLATION SHOULD NOT BE ATTEMPTED. PLEASE CONSULT HOLLEY TECH SERVICE OR A QUALIFIED MECHANIC.**

NOTE: Compatible with Pump Gas, Race gas, Diesel, or E85. The 12-270 fuel pump is rated for use with ethanol-blended fuels, (E85/E90) and all types of gasoline, but pump life will be diminished if used with 100% ethanol fuels.

PARTS REQUIRED FOR INSTALLATION:

- Pre-Filter & Post-Filter (162-572 & 162-570)
- Two Relay Kits (30amp minimum) – Holley P/N **12-759** or equivalent
- Fuel hose & fittings
- Wire & connectors
- Mounting hardware

NOTE: These pumps are not serviceable in the field. Contact Holley tech service for fuel pump service.

INTRODUCTION:

Congratulations on your purchase of the **Holley 12-270 Fuel Pump.** This instruction sheet contains all the information needed to assemble and install this fuel pump. Please read all the **WARNINGS** and **NOTES**. They contain valuable information that can save you time and money. Holley Performance Products cannot and will not be responsible for any alleged or actual engine or other damage, or other conditions resulting from misapplication of the fuel pumps and fuel pressure regulators described herein. However, it is our intent to provide the best possible products for our customer; products that perform properly and satisfy your expectations. Should you need information or parts assistance, please contact Technical Service at 1-270-781-9741, M-F, 8 a.m. to 6 p.m. & Sat. 9 a.m. to 3 p.m. CST. Please have the P/N ready when calling.

NOTE: A screen type pre-filter (100 micron), a top-quality post fuel filter (10 Micron for EFI and 40 Micron for Carb), fuel hose and clamps, 12-gauge wire, fuel fittings, assorted terminals, relay kit (12-759) is required to complete the installation of the Holley 12-270 fuel pump. These parts are not included with the fuel pump.

NOTE: These Holley fuel pump requires the use of a bypass style fuel pressure regulator (Part number 12-847 for carbureted applications and 12-846 for EFI applications).

NOTE: The Holley fuel pump utilizes O-ring sealed inlet/outlet ports. The 12-270 utilizes a 3/4-16 O-ring (8AN) inlet and outlet port. These ports are not pipe thread, therefore **do not use thread sealant.**

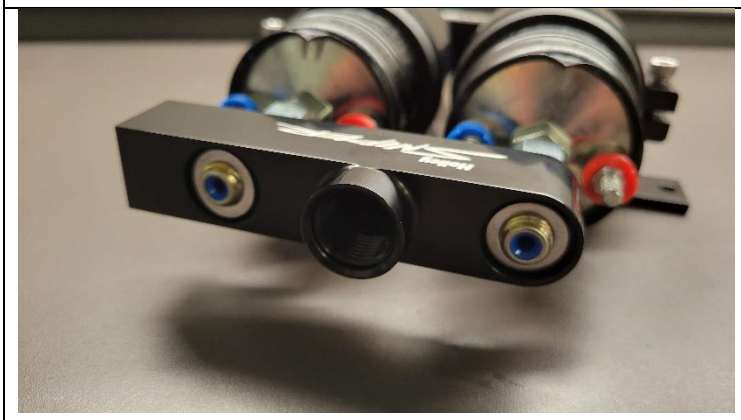
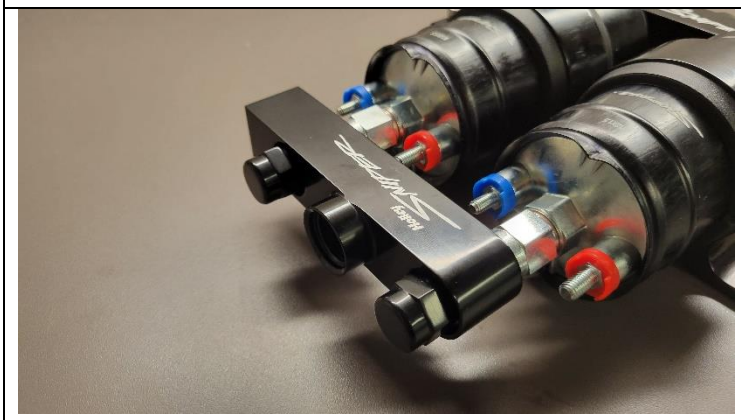
TOOLS REQUIRED:

The following tools are recommended for the assembly of your Holley fuel pump:

- Ft-Lb Torque Wrench
- 5mm hex wrench
- 15/16 Socket
- 11/16 Socket
- Blue Thread Locker

PUMP ASSEMBLY:

	Lay the components of the pump out on your workspace and ensure that they are all there. There should be the following: • (x2) Fuel Pumps • (x1) Fuel Pump Clamp • (x1) Fuel Inlet Manifold • (x1) Fuel Outlet Manifold • (x2) Inlet Banjo Bolts • (x2) Outlet Acorn Nuts • (x4) Large Inlet Crush Washers • (x4) Small Outlet Crush Washers • (x1) Inlet Fitting (8 ORB to 10AN Male) • (x1) Outlet Fitting (8 ORB to 8AN Male) • (x2) Slim 8 ORB Plugs • (x1) 3/8 Hex Wrench (For ORB plugs) • (x2) Wiring Kits (Not Pictured)
	Remove the inlet plug and outlet cap from each of the two fuel pumps. These will not be needed. They are added after the pump has been flow tested to reduce the amount of test fluid that escapes before the pumps are packed.
	Loosen the two screws on the pump clamp with a 5mm hex wrench, and insert the pumps into the clamp. It is recommended that the pumps be inserted from the inlet (M18) side of the pump. Slide each pump in until the clamp is about centered on the body of the pump. **NOTE: Do not tighten the clamp screws at this time.**
	Install two of the larger crush washers onto the inlet banjo bolts, and insert each in the inlet manifold. Install the other two large crush washers onto the bolts on the other side of the manifold. **NOTE:** The bolts can be inserted on either side of the manifold, depending on which inlet port will be used and which orientation best suits your setup.

	Apply a small drop of blue thread locker to the threads of each bolt then hand tighten each banjo bolt onto the inlet of each pump. **NOTE: Do not tighten the bolts at this time.**
	Install two of the smaller crush washers onto the outlet of each pump, and install the outlet manifold onto each outlet followed by the other two small crush washers. **NOTE:** The manifold can be installed from either side, depending on which inlet port will be used and which orientation best suits your setup.
	Apply a small drop of blue thread locker to the threads of each nut, and hand tighten the two acorn nuts onto each pump outlet. **NOTE: Do not tighten the clamp screws at this time.**
	Tighten all of the hardware: • Tighten the clamp screws with the 5mm hex wrench. • Tighten the two inlet banjo bolts with a 15/16 socket – Torque to 20 ft-lbs. • Tighten the two outlet acorn nuts with a 11/16 socket – Torque to 15 ft-lbs. Install the included inlet and outlet fittings in the desired locations. It is recommended that the 10AN male be used on the inlet side and the 8AN be used on the outlet. Larger fittings can be purchased, if necessary. Install the ORB plugs into the unused ports on each manifold using the included 3/8 hex wrench.

PUMP MOUNTING AND INSTALLATION:

The best location for mounting any electric fuel pump is the rear of the vehicle, near the fuel tank and in a position even with or below the bottom of the tank, allowing the fuel to be gravity fed to the pump. ***The pump should be mounted on a solid member, such as the chassis, with the pump outlet pointing forward or upward.*** Avoid exposure of the pump and fuel lines to moving parts and to any hot areas, such as the exhaust manifold. The pump should not be mounted in an enclosed area, such as the vehicle's trunk. Follow the steps below for mounting the pump.

WARNING! **THE PUMP MUST BE PLACED WHERE INTERFERENCE BETWEEN THE VEHICLE'S BODY AND ITS CHASSIS MOVEMENT IS AVOIDED. THE PUMP AND ITS CONNECTING HOSES MUST NOT BE SUBJECTED TO LOW GROUND CLEARANCE, WHERE ANY FLYING ROCKS OR ROAD DEBRIS CAN CAUSE DAMAGE. FAILURE TO AVOID THESE HAZARDS WILL LEAD TO PUMP DAMAGE, WHICH COULD RESULT IN FIRE AND/OR PROPERTY DAMAGE, SERIOUS INJURY, AND/OR DEATH.**

1. Select a mounting site as close as possible to the fuel tank and away from possible sources of heat as detailed previously.

2. Use the pump as a template to drill (x2) ¼" holes.

3. Mount the pump (outlet pointing forward) using (x2) ¼ bolts (bolts not included).

NOTE: To ensure pump life and flow efficiency, a 100-micron pre-filter must be installed between the tank and the pump inlet. The filter should be supported in such a manner that it does not hang from the fuel lines. Pre and Post filters can be mounted directly to the pump if space allows (Holley P/N 162-572).

4. Install the recommended AN fuel fittings. An 10AN inlet and 8AN outlet or larger lines are recommended.

WARNING! **This pump is not designed to use a standard conical seat style union in the inlet or outlet of the pump. Use of this style fitting will block flow and WILL lead to poor performance and pump failure. The ONLY correct fitting to use is a contoured port fitting with an O-ring seal such as: P/N AT985008ERL (12-270).**

5. Connect the fuel supply line from the tank to the pre-filter and then **to the inlet port of the pump**. Connect the main fuel feed line to the outlet port of the pump, then to the post filter. See **Figures 1a and 1b.**

NOTE: Avoid unnecessary restrictions, such as sharp bends and undersized fuel fittings and hoses. Avoid routing fuel lines in areas that would cause chafing. All fuel line connections must be leak proof.

WARNING! **IF SPLICING INTO EXISTING FUEL LINES, USE EXTREME CARE TO AVOID CONTAMINATING THE LINE WITH RUBBER OR METAL SHAVINGS, AS THIS WILL DAMAGE THE PUMP. IF THE FUEL LINE HAS BEEN CUT, IT IS ESSENTIAL THAT IT BE CLEANED TO ENSURE THAT NO METAL OR RUBBER PARTICLES ENTER THE FUEL SYSTEM. THIS IS PERFORMED BY BLOWING THE LINE CLEAN WITH COMPRESSED AIR. HOLLEY DOES NOT RECOMMEND THE PROCEDURE WHERE THE COIL WIRE IS DISCONNECTED, THE ENGINE IS CRANKED, AND THE FUEL IS COLLECTED IN A CONTAINER. SPARKING CAN OCCUR DURING THIS PROCEDURE, WHICH MAY RESULT IN A FIRE AND/OR EXPLOSION.**

USING A FUEL PRESSURE REGULATOR WITH A FUEL PUMP:

NOTE: A return style fuel pressure regulator is required for use with the 12-270 fuel pump. Refer to figures 1a and 1b for recommended plumbing scenarios.

NOTE: Refer to the installation instruction included with the fuel pressure regulator for steps on mounting and adjustments.

NOTE: **Depending on your application, choose one of the following examples:**

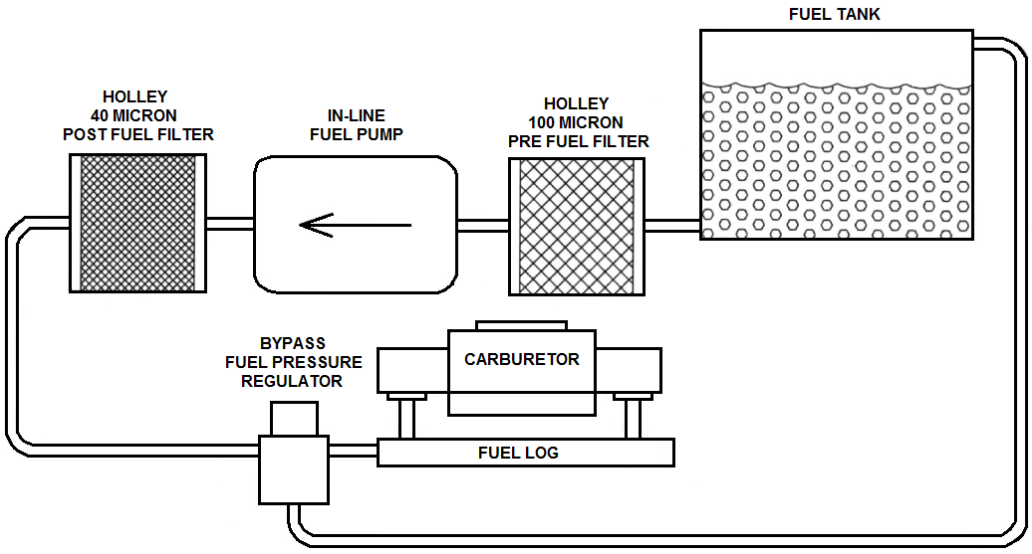


Figure 1a (Carb applications only)

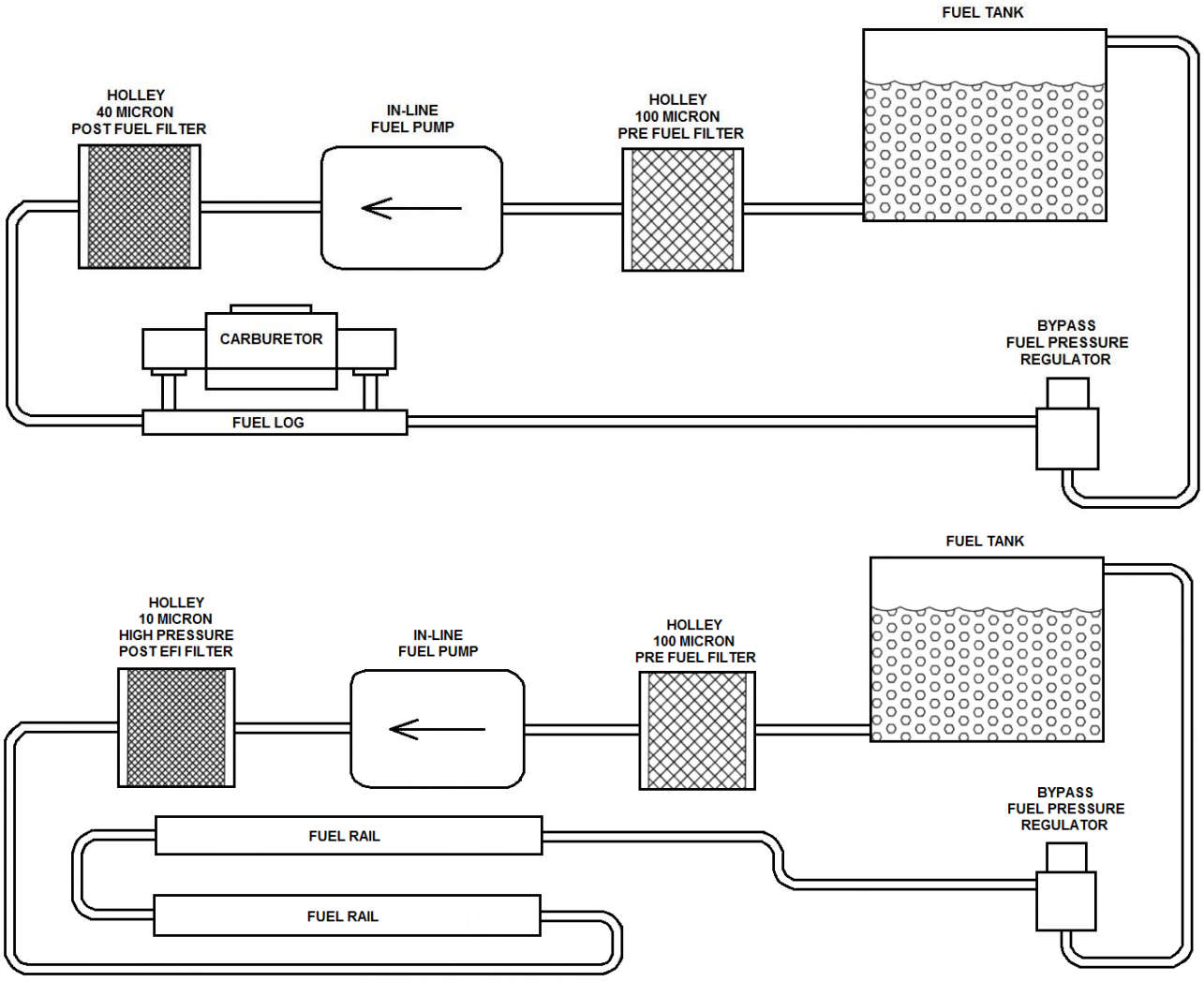


Figure 1b (Both carb & fuel injection applications)

WIRING:

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 A PUMP MALFUNCTION AND/OR ELECTRICAL FIRE, RESULTING IN PROPERTY DAMAGE, SERIOUS INJURY, AND/OR DEATH.**

WIRING THE FUEL PUMP WITH RELAYS:

NOTE: You will need Holley Fuel pump relay kit P/N 12-759 or equivalent 4-wire relay.

1. Disconnect the cables from the battery.

2. Mount relays on firewall of engine compartment or other suitable location using a sheet metal screw.

<u>WARNING</u>! Before punching or drilling a hole in the firewall, make sure you know what is on the other side to avoid puncturing equipment such as heater cores, air-conditioning system equipment, hoses, or wiring.

3. Plug the fuel pump relay harness into the relay, until it locks into place.

4. If using a Holley relays, connect the black wire of each relay harness to a good clean ground using 12-gauge wire.

5. Connect the Green/Black wire of the relay harness to a switched 12V source for the primary pump. The secondary pump should be only triggered when needed via a manual switch, hobbs switch or Holley EFI ECU.

6. Connect one of the red wires of each relay harness to the positive terminal (red terminal) of each fuel pump.

7. Connect the blue terminal of each fuel pump to a good clean chassis ground using black wire and a ring terminal.

8. Attach the in-line fuse holder to the remaining red wire. After attaching the fuse holder, insert a 30A fuse and connect to the positive side of the battery using 12-gauge wire.

9. Reconnect the battery cables.

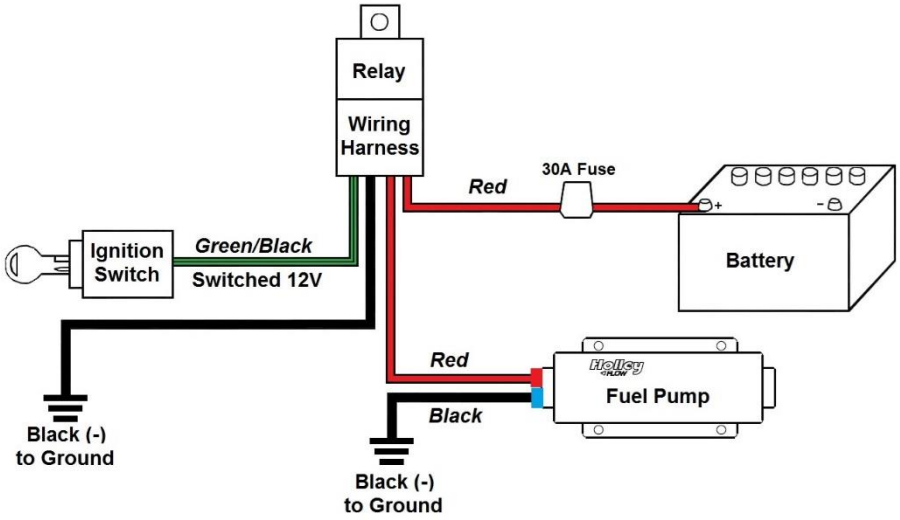
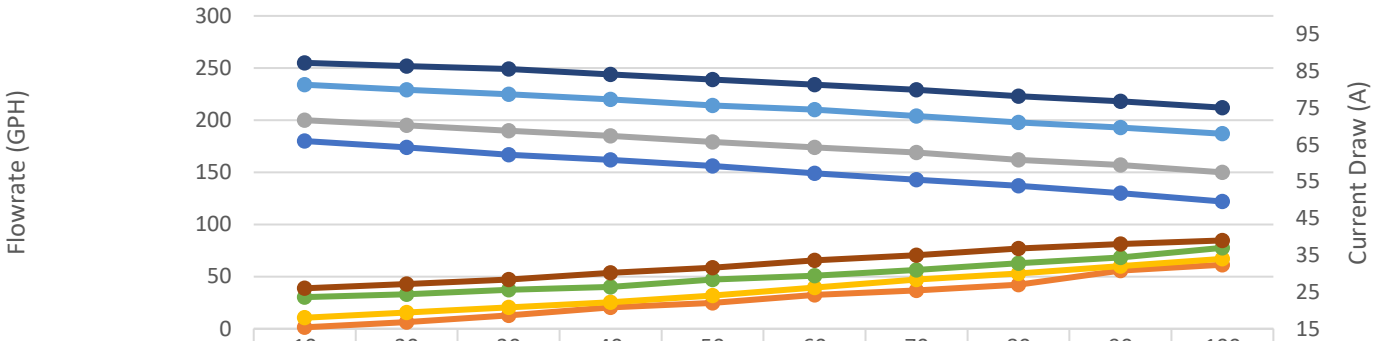


Figure 2

NOTE: Wire each pump via the above diagram. The primary pump should be wired to a switched 12V. The secondary pump should be only triggered when needed via a manual switch, hobbs switch or Holley EFI ECU.

12-270 Flow Chart (Both Pumps)



	10	20	30	40	50	60	70	80	90	100
12V Flow (GPH)	180	174	167	162	156	149	143	137	130	122
13.5V Flow (GPH)	200	195	190	185	179	174	169	162	157	150
16V Flow (GPH)	234	229	225	220	214	210	204	198	193	187
18V Flow (GPH	255	252	249	244	239	234	229	223	218	212
12V Current (A)	15	17	19	21	22	24	25	27	31	32
13.5V Current (A)	18	19	21	22	24	26	28	30	32	34
16V Current (A)	24	24	26	26	28	29	31	33	34	37
18V Current (A)	26	27	28	30	32	34	35	37	38	39

Fuel Pressure (PSI)

Holley Technical Support
Phone: 1-270-781-9741
1-866-464-6553
For online help, please refer to the Tech Service section of our website: www.holley.com

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