

BG 220HR Fuel System

#170013



INSTALLATION AND TUNING INSTRUCTIONS

The BG 220 Hot Rod Series pump is to be used with the included diaphragm bypass (part #171021). Do not attempt to use this pump with a non-bypassing pressure regulator. **READ THE INSTRUCTIONS THOROUGHLY** and follow them to ensure maximum performance from your pump.

PUMP INSTALLATION

Mounting

The best location for mounting your BG 220 Hot Rod Series fuel pump is as close to the fuel tank as possible. The fuel pump inlet should be level or below the fuel pickups if at all possible.

THE PUMP SHOULD NEVER BE MOUNTED IN THE DRIVER'S COMPARTMENT OR NEAR ANY HOT ENGINE COMPONENTS.

It should be mounted on a solid member, such as the chassis, in a vertical position; motor to the top. A mounting bracket comes with the fuel pump. Do not allow the motor housing to touch any metal parts on the vehicle as this will affect the motor and pump performance.

Inlet

The fuel pump should be fed by a single #10 or equivalent line from the tank. This may require rework of your existing fuel cell. A high flow BG5000 fuel filter should be installed before the pump as it will prolong pump life and does not restrict pump flow. Plumbing kit number 152287 includes all the necessary parts including a pump to filter adapter fitting #140019.

Outlet

The outlet side of the pump (to the engine) should be a single #8 or equivalent line. Plumbing kit number #150288 has all the necessary parts from the pump outlet to a #8 carburetor inlet kit, tee, or Y-block.

Diaphragm Bypass

The inlet line should come from a branch off of the supply line to the engine (via a T or Y fitting) or the exit side of a fuel inlet kit. The bypass should be mounted as close as possible to the carburetor. The return line should be plumbed with a single #10 line. The return line should expel the bypassed fuel into the air space of the

fuel cell. All fuel tanks and cells should have fuel cell foam installed to prevent fuel slosh.

WARNING: DO NOT BLOCK THE RETURN, VENT, OR PUMP FEED. MAKE SURE THAT THE SYSTEM IS LEAK FREE AT ALL CONNECTIONS TO ENSURE ADEQUATE SAFETY.

To set the regulator pressure, loosen the lock nut and turn the pressure adjustment stud. Turning the stud clockwise will increase fuel pressure. Turning the stud counter-clockwise will decrease pressure. Always remember to tighten the lock nut after the desired pressure has been set. Most gasoline engines will operate best between 5 psi and 8 psi. Additional pressure adjustments may be necessary at the track to tune your system for optimal performance.

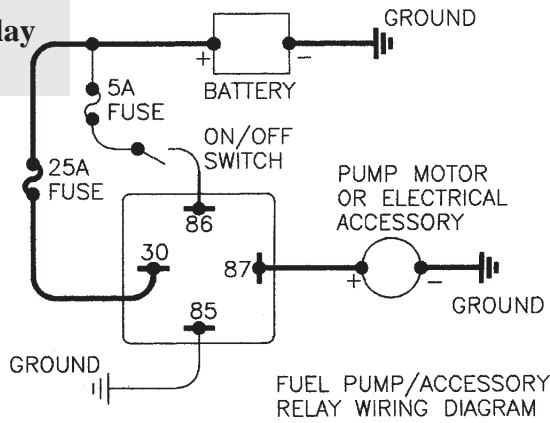
Wiring

Use of wiring kit #171036 will simplify installation and assure proper performance.

BEFORE MAKING ELECTRICAL CONNECTIONS, DISCONNECT THE POSITIVE TERMINAL FROM THE BATTERY.

Your BG220 fuel pump should be connected to a fully charged 12 volt battery. A fuel pump, like any other electrical accessory, will only perform at its best when given adequate voltage. The black wire is a ground (-) and the remaining wire is a switched hot lead from a (+) 12 volt source. If wired incorrectly, the pump will run backwards and will not pump. It is recommended that a relay (part number 171000) be used for best performance and lower current draw from the battery. A 12 gauge wire should be used on the pump power supply and a 16 gauge wire from the switch to activate the relay. For best performance, keep all wiring runs as short as possible. Many electrical boxes now being sold will have circuits and fuses wired for smaller twin pumps, which are adequate if a relay is used. Power wiring to the pump should be capable of handling 25 amps as this will take care of the start up voltage surge. **WARNING: ALL WIRING CIRCUITS SHOULD BE FUSED!!**

Pump/Relay Wiring



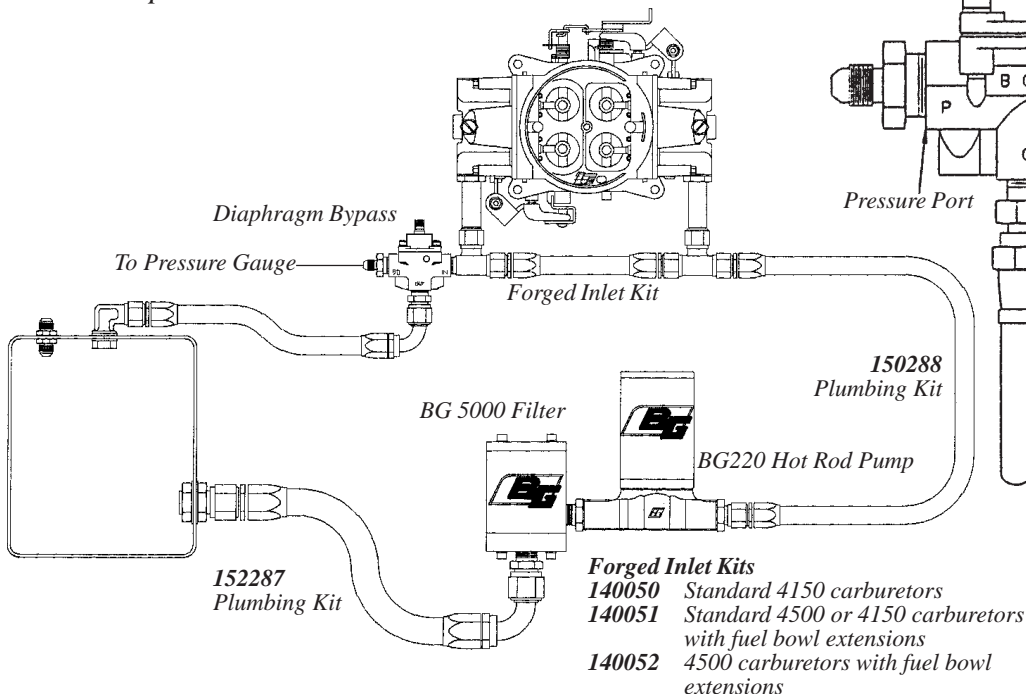
TUNING AND ADJUSTMENT

Be sure the tank is full and fuel is at the pump inlet before attempting to run the pump. The pump should not be operated dry.

MAINTENANCE

If the vehicle is to be stored for long periods, it is recommended that the pump be operated, with fluid flowing, for several minutes weekly to keep fluid passages clean and the bypass working freely. You can also drain the system and lubricate the pump with a light oil spray.

If you suspect any drop in performance from your BG220 pump it is recommended that you return your pump to BG Fuel Systems for a free flow test. If any repairs are needed, the pump can be serviced at this time to return it to optimum operation. **Notice:** When sending in parts for service, please include a description of the problem, a return address, and a daytime telephone number.



WARRANTY

All Barry Grant Inc. Products are covered by a limited warranty for 90 days from the date of purchase. Proof of purchase must be included with all returns and must include date of purchase. In the event of a defect in workmanship or material of the product, Barry Grant Inc. will repair or replace the product, or any defective parts or parts thereof, at the election of Barry Grant Inc. without charge to the consumer for such repair or replacement. The Limited Warranty shall not apply to labor charges, material or other incidentals in connection with removal and/or replacement of such defective product on the Consumer's vehicle.

This Limited Warranty is specifically limited to the original purchaser of the product and is enforceable only by such original purchaser.

The maximum liability of Barry Grant Inc. in connection with this warranty shall not under any circumstances exceed the contract price of the product claimed to be defective.

This Limited Warranty shall *not apply* and shall become fully null and void, in the event of damage to the product resulting from any of the following: Unauthorized repairs; Breakage due to dropping or misapplication; Repair, alteration or modification of the product by anyone other than the manufacturer, or authorized representative thereof; Damage resulting from accidents; Abuse or misuse of the product in any manner whatsoever; Damage resulting from incorrect or improper installation. This Warranty is the only warranty applicable and is expressly in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness for purpose.

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For further questions, please contact our technical department at (706) 864-8544.

