

*BG 220 Pro Series  
Fuel System  
#170012*



**INSTALLATION AND TUNING INSTRUCTIONS**

The BG 220 Pro Series Pump is a completely rebuildable electric fuel pump providing 220 gallons of fuel per hour at 15 psi. **READ THE INSTRUCTIONS THOROUGHLY** and follow them to insure maximum performance from your BG Fuel System. **THIS PUMP IS DESIGNED FOR COMPETITION USE ONLY. ANY USAGE IN STREET DRIVEN VEHICLES IS STRICTLY PROHIBITED.**

**PUMP INSTALLATION**

**Mounting**

The best location for mounting your BG220 Pro 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 a chassis, in a vertical position; motor on top. A mounting bracket comes with the fuel pump. If desired, an optional band clamp kit (part number 170030) is available. Do not allow the motor housing to touch any metal parts on the vehicle. 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 BG5000 (part number 170018) fuel filter should be installed before the pump as it will prolong pump life and does not restrict flow. Plumbing kit (number 152287) has all the necessary parts including a pump to filter adapter fitting (part number 140019).

**Outlet**

The outlet side of the pump, going to the regulator, should be a single #8 or equivalent line. BG fitting #140014 will adapt a #8 line to the pump outlet.

**Bypass**

The return line should be plumbed with a single #8 or 1/2" line. The return should expel the bypassed fuel into the liquid rather than into the air space of the fuel cell. This will prevent aeration of the fuel. 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...YOUR SAFETY DEPENDS ON IT!**

**Wiring**

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

Your BG220 Pro Series Fuel Pump should be connected to a fully charged 12 or 16 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 or 16 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

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

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 is 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!!**

### TUNING AND ADJUSTMENT

Be sure the tank is full and fuel is at pump inlet before attempting to run the pump. The pump should not be operated dry for extended periods. Pressure to the regulator is controlled by the bypass valve screwed into the outlet side of the fuel pump. Loosen the check nut on the bottom and the top barrel will turn clockwise or counter clockwise. Clockwise will increase pressure and counter clockwise will decrease pressure. Pressure can be checked at the pump from the 1/8" NPT tapped hole in the pump body.

13 to 16 PSI is usually sufficient for a hard leaving, front-mounted fuel cell cars. Make sure to tighten the check nut after adjusting the fuel pressure. Check for leaks to insure your safety.

**NOTE: BARREL SHOULD NOT BE MORE THAN 4 1/2 TURNS FROM SEATED (CLOCKWISE) POSITION OR LEAKAGE WILL OCCUR.**

### MAINTENANCE

The following tips should be followed to insure maximum performance from your BG220 Pro Series Fuel Pump:

1. Fuel pressure to the regulator and after the regulator should be checked before every racing event to assure proper fuel system operation.
2. 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. The system may also be drained and the pump lubricated with a light oil spray to extend life.

3. 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. **Remember, when sending in parts for service, please include a description of the problem, a return address, and a day time phone number.**

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### WARRANTY

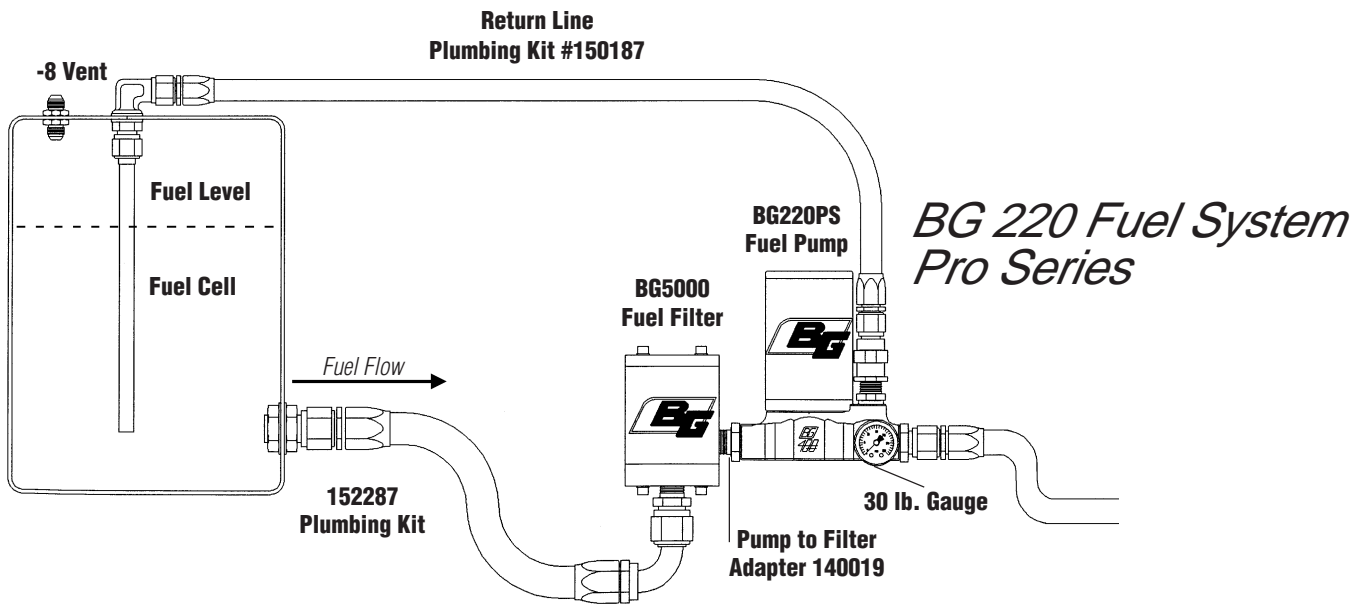
All Barry Grant, Inc. Products are covered by a limited warranty for 90 days from the date of purchase. Proof of purchase must be included with all returns and must include date of purchase. In the event of a defect in workmanship or material of the product, Barry Grant, Inc. will repair or replace the 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.

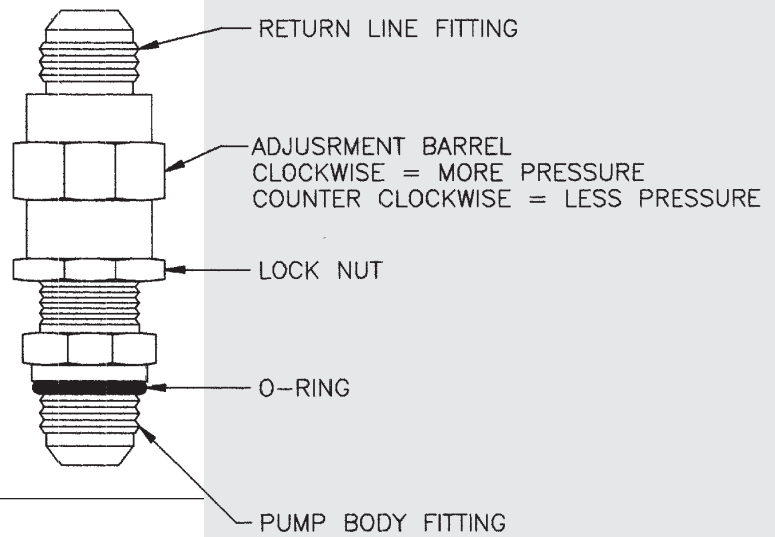
The maximum liability of Barry Grant, Inc. in connection with this warranty shall not under any circumstances exceed the contract price of the product claimed to be defective.

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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**Bypass  
Adjustment**



**Pump/Relay  
Wiring**

