

*BG 400
Fuel System
#170001*



INSTALLATION AND TUNING INSTRUCTIONS

You have bought the BG400 - the ultimate in state-of-the-art electric fuel system. It will provide a fuel flow of 400 gallons per hour. This system is different from the one you are accustomed to, so please **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.** A list of related components and accessories is included on the back page of these instructions.

PUMP INSTALLATION

Mounting

The best location for mounting your BG400 Fuel System in the vehicle 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 #12 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 152387 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 #10 or equivalent line. Plumbing kit number 150287 has all the necessary parts from the pump outlet to the BG Regulator inlet.

Bypass

The return line should be fed with a single #8 or 1/2" line. Plumbing kit number 150187 is available for this application. 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 BG400 Fuel system 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

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

run backwards and not move any fuel. 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 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

If the pump does not pickup fuel within 30 seconds, stop and prime the pump. The pump should not be operated dry for extended periods of time. 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. 18 to 20 PSI is usually sufficient for a hard leaving car plumbed as suggested. 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.

The BG400 will provide more fuel volume to the carburetor than other fuel pumps, so your jetting requirements may have changed. Re-jet the carburetor either one size richer or leaner until the car shows either an increase or decrease in performance. Proceed in the direction that shows the most improvement until the performance falls off. Then return to the jet size that gave you the quickest ET and MPH.

MAINTENANCE

The following tips should be followed to insure maximum performance from your BG400 Fuel System:

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.
3. If you suspect any drop in performance from your BG400 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.

WARRANTY

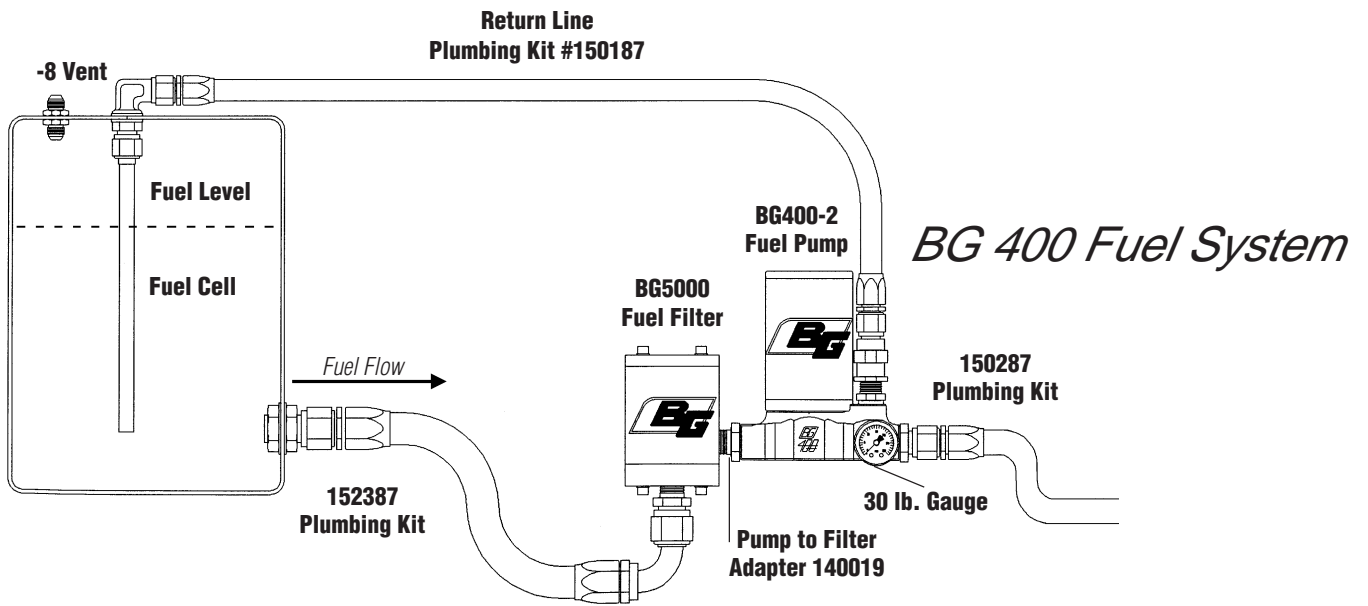
All Barry Grant, Inc. Products are covered by a limited warranty for 90 days from the date of purchase. Proof of purchase must be included with all returns and must include date of purchase. In the event of a defect in workmanship or material of the product, Barry Grant, Inc. will repair or replace the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

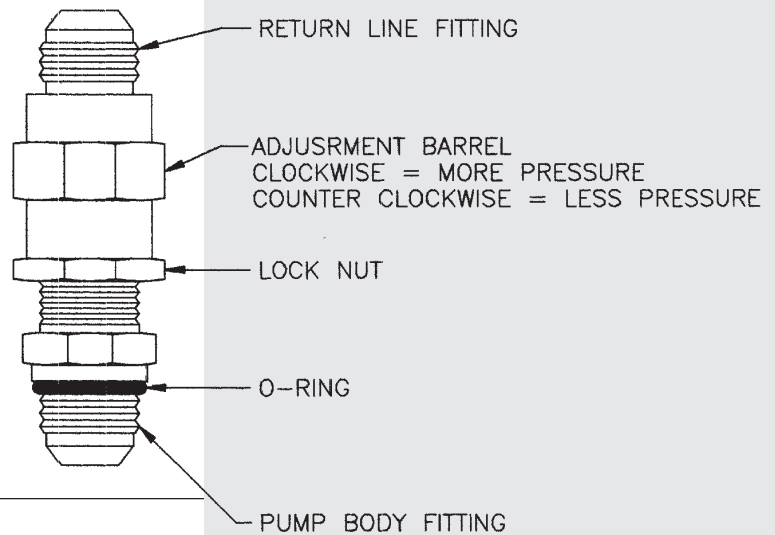
The maximum liability of Barry Grant Inc. in connection with this warranty shall not under any circumstances exceed the contract price of the product claimed to be defective.

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.

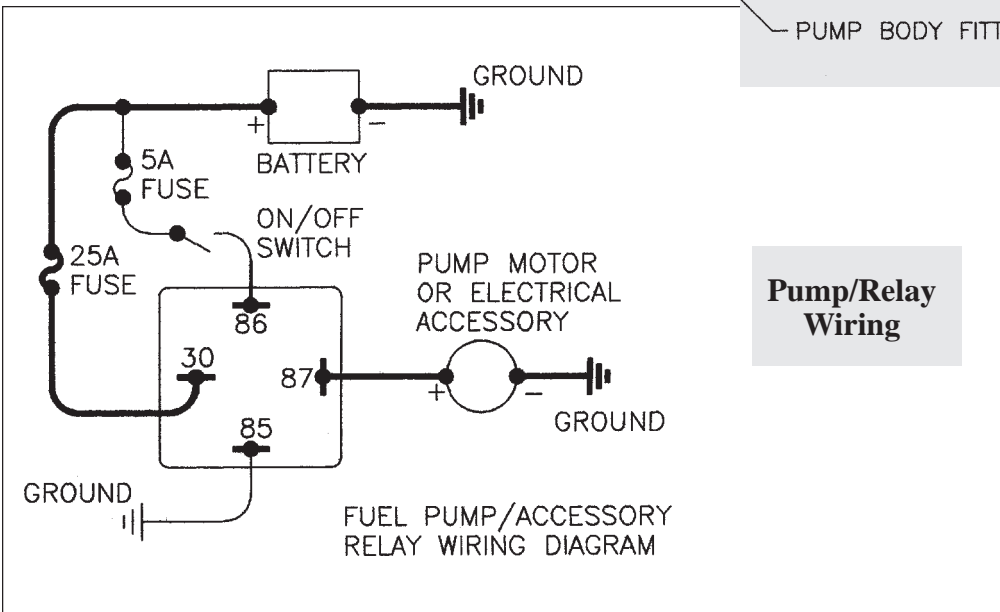
**Barry Grant Inc.
1450 McDonald Road, Dahlonega, Georgia 30533**



**Bypass
Adjustment**



**Pump/Relay
Wiring**



BG 400 FUEL PUMP KIT CONTENTS

- 1 - BG 400 Fuel Pump
- 1 - Standard Mounting Bracket
- 2 - #10 O-Rings

BG 400 FUEL SYSTEM COMPONENTS AND ACCESSORIES

COMPONENTS

- 170001 BG 400 Fuel Pump
- 170018 BG 5000 Filter
- 170023 BG Regulator
- 170024 30 PSI Gauge - Pump
- 170124 15 PSI Gauge - Regulator
- 171000 Electric Fuel Pump Relay
- 171035 Pump Relay w/Harness

PLUMBING KITS

- 150187 Bypass Return Line Kit
- 150287 BG 400 Pump to Regulator Kit
- 151587-6 Regulator to Dual Carb Kit - #6
- 151687-6 Regulator to Single Carb Kit - #6
- 152387 Fuel Cell to Pump Kit - #12

ACCESSORIES

- 140019 Pump to Filter Adapter Fitting
(included with kit #152387)
- 140012 Pump Outlet - Regulator Inlet
Fitting - 10 AN
(included with kit #150287)
- 140014 Pump Outlet - Regulator Inlet
Fitting - 8 AN
- 140025 Pump Inlet Fitting - #12
- 170003 Bypass Valve BG 400
- 170019 Replacement Element - BG Filter
- 170030 Fuel Pump Band Clamp Mounting Kit
- 170036 O-Ring Kit - BG Filter