

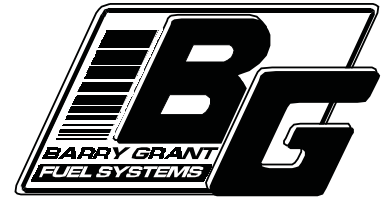
## BG Fuel Systems Heat Sink

#178000 6" Long (-8AN by -8AN)

#178001 6" Long (-10AN by -10AN)

#178002 10" Long (-8AN by -8AN)

#178001 10" Long (-10AN by -10AN)



*The Powerfuel Systems!*

- Safety
- Contents
- Installation
- Operation
- Maintenance

**VITAL INFORMATION BELOW— PLEASE READ SAFETY AND OPERATING INSTRUCTIONS BEFORE FIRST USE OF THIS PRODUCT**



For answers to your questions concerning this product please contact the BG Fuel Systems Technical Department at (706) 864-8544 from 8:00 AM until 6:00 PM, Monday till Friday (Eastern Standard Time) or visit the Barry Grant, Inc. website at [www.barrygrant.com](http://www.barrygrant.com)

### SAFETY INSTRUCTIONS

Warning: When using fuel systems designed for performance and racing vehicles, basic safety precautions must always be followed to reduce the risk of fire and serious injury. The installer and operator are responsible for following the warnings and instructions in this manual. Please read the entire instruction manual before using this product. Restrict the use of this product to only those who are familiar with the installation and operating instructions.

- Fuel is combustible; therefore, be careful not to drip any fuel on a hot engine or hot components.
- Inspect all fittings and connections prior to use and make sure they are tight and leak-free. Your safety depends upon it.

### CONTENTS OF THIS BOX

- 1 - BG Heat Sink
- 1 - Owner's Manual

### INSTALLATION and OPERATION

The BG Fuel Systems' Heat Sink is a fuel cooler designed for use with flow-through-style fuel pumps. It is a re-circulating bypass equipped with a one-way check valve that is particularly effective in cooling fuel and fuel pumps that operate continuously. The fins of the cooler dissipate heat from the fuel system, allowing the pump to run cooler and prolonging its life. It can also be used with other styles of pumps inline by removing the check ball and spring from behind the blue fitting (8AN heat sinks only). With the check ball and spring removed it can either be used inline in the fuel feed, return, or both if desired. To remove the check ball & spring simply unscrew the blue fitting, remove them and then reinstall the blue fitting.

### MOUNTING

The end with the integral fitting (same color as the heat sink) is the inlet; the end with the blue fitting is the outlet. Mount the BG Heat sink on a frame rail or in an area where air will pass over it. Make sure it is not exposed to direct heat (exhaust) or to moving components (driveline). As the heat sink contains a one-way check valve (situated in the outlet end on part #178000 & 178002 only) ensure it is mounted as instructed in the plumbing directions, allowing fuel to flow through it in the correct direction.

### PLUMBING

There are several ways to plumb the heat sink: inline or in-loop (See diagrams on following page). Carefully choose the method that suits your fuel system best.

#### IN-LOOP CARBURETED APPLICATIONS:

See Diagram # 1. When using a flow-through-style fuel pump such as the BG Mighty Enduro or King Enduro, and a deadhead-style fuel pressure regulator, use the Heat sink

in loop on the fuel pump. Once the pump has been mounted as instructed, remove both the spare inlet and outlet plugs from the fuel pump. From the outlet port of the pump, run a fuel hose to the inlet end of the heat sink (the end colored the same as the body). From the outlet end of the heat sink (blue fitting), run a fuel hose to the inlet port of the fuel pump. When plumbing to a BG Mighty or King Enduro fuel pump, use BG Heat Sink P/N 178000 or 178002, which employ a -8AN hose. They have a check ball and spring inside.

#### INLINE CARBURETED APPLICATIONS:

See diagram #2. Use this arrangement with a flow-through-style fuel pump coupled to a diaphragm bypass and a fuel return line to the cell. Remove the check ball & spring behind the blue fitting before installing the heat sink. Once you've mounted the pump as instructed, plumb the Heat Sink into the fuel line between the fuel pump and the carburetor(s). When plumbing to the BG Mighty Enduro fuel pump, use Heat Sink P/N 178000 or 178002, which employ a -8AN hose; when plumbing to the King Enduro fuel pump, use Heat Sink P/N 178001 or 178003, which employ a -10AN hose.

#### INLINE FUEL INJECTED APPLICATIONS:

See diagram #3. Use this arrangement with a flow-through-style fuel pump coupled to a diaphragm bypass and a fuel return line to the fuel tank. Remove the check ball & spring behind the blue fitting before installing the heat sink. Once you've mounted the pump as instructed, plumb the heat sink into the fuel line between the fuel pump and the fuel rail(s). When plumbing to the Mighty Sumo fuel pump, use Heat Sink P/N 178000 or 178002, which employ a -8AN hose; when plumbing to the King Sumo fuel pump, use Heat Sink P/N 178001 or 178003, which employ a -10AN hose.

#### Suggestion

Avoid using liquid-filled fuel pressure gauges. They are often affected by engine heat and, consequently, display false fuel pressure readings. Instead, use a special dampened non-liquid-filled gauge like BG Fuel Systems PN 170124.

#### MAINTENANCE

- Frequently inspect rubber hoses for signs of dryness and cracking and braided steel hoses for internal deterioration. Deterioration occurs with aging and can be detected by soft spots while squeezing the fuel lines by hand. Replace suspect fuel lines immediately.
- Periodically, inspect all fittings and connections to ensure they are tight and leak-free.

#### **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

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

*Remember, when returning parts for service, please include a description of the problem, a return address, and a daytime phone number.*

[www.barrygrant.com](http://www.barrygrant.com)

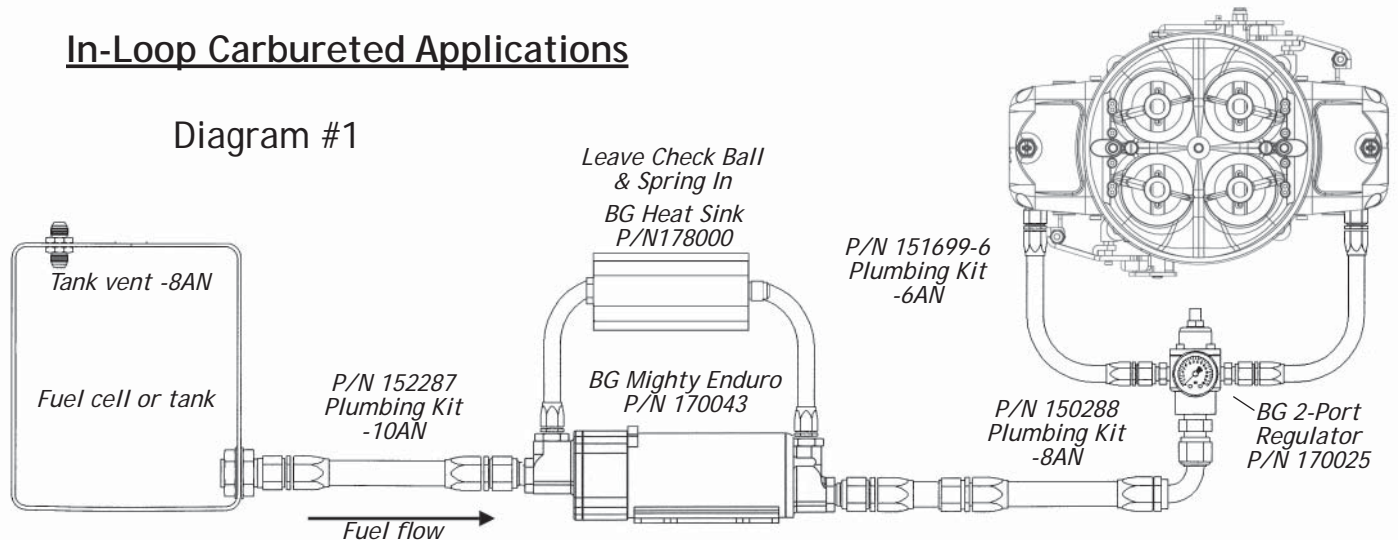
Plumbing options on following page  
June/09

# Mighty Series Pumps

## BG Heat Sink System - Plumbing Options

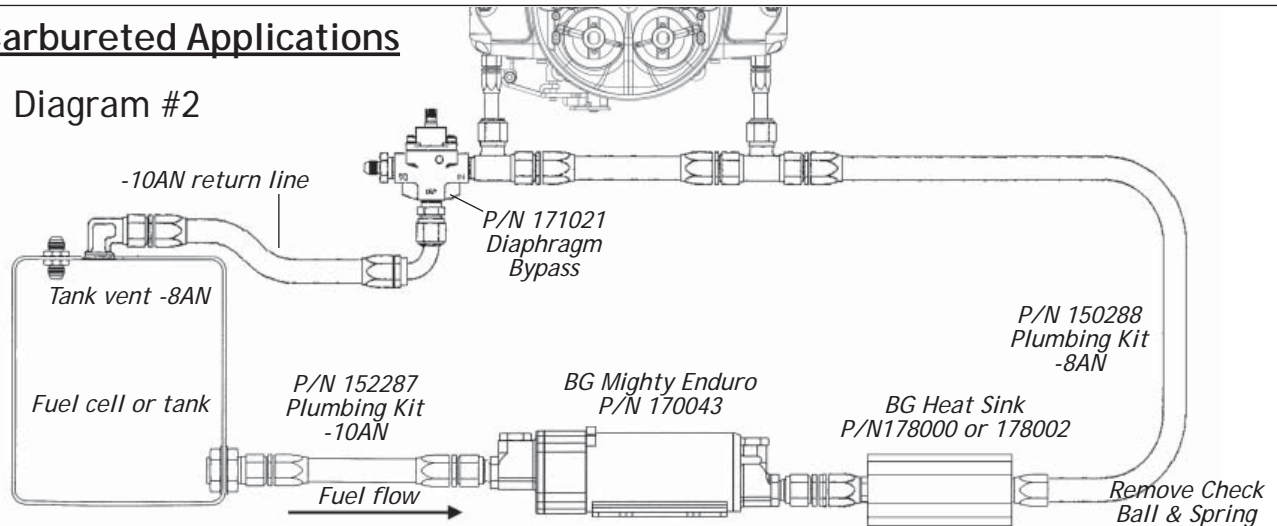
### In-Loop Carbureted Applications

Diagram #1



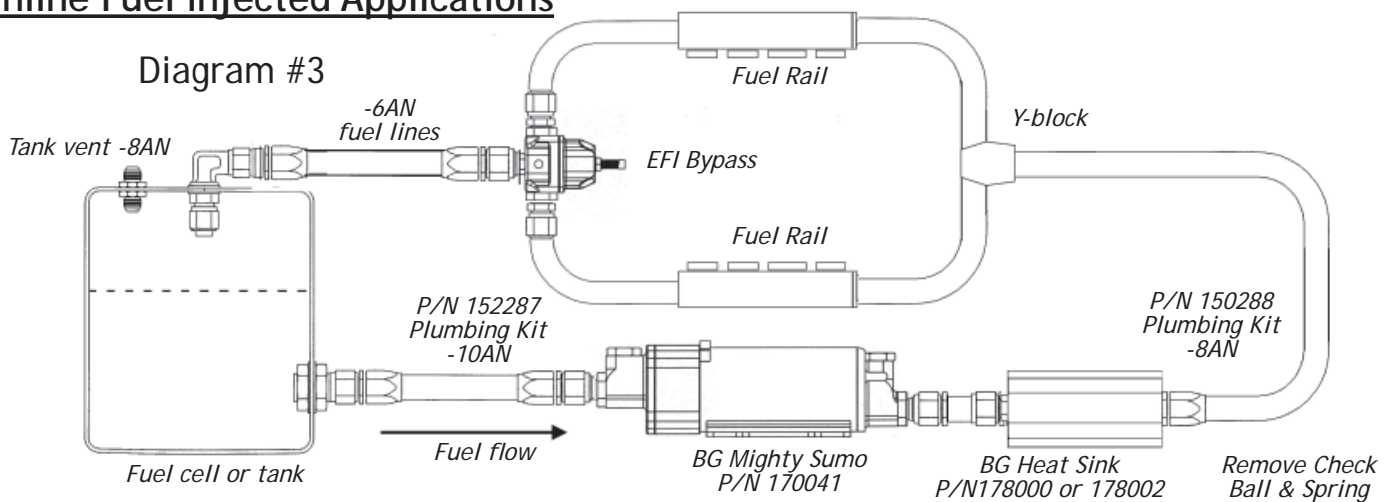
### Inline Carbureted Applications

Diagram #2



### Inline Fuel Injected Applications

Diagram #3

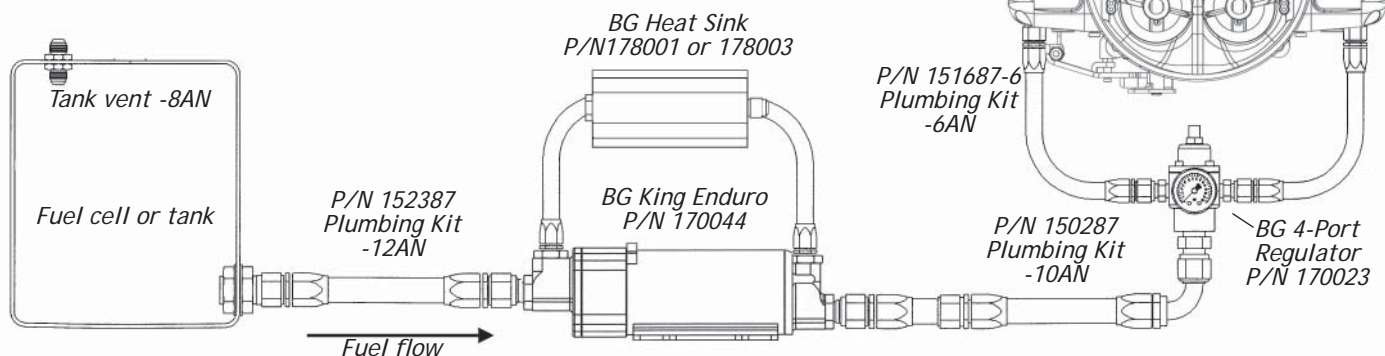


# King Series Pumps

## BG Heat Sink System - Plumbing Options

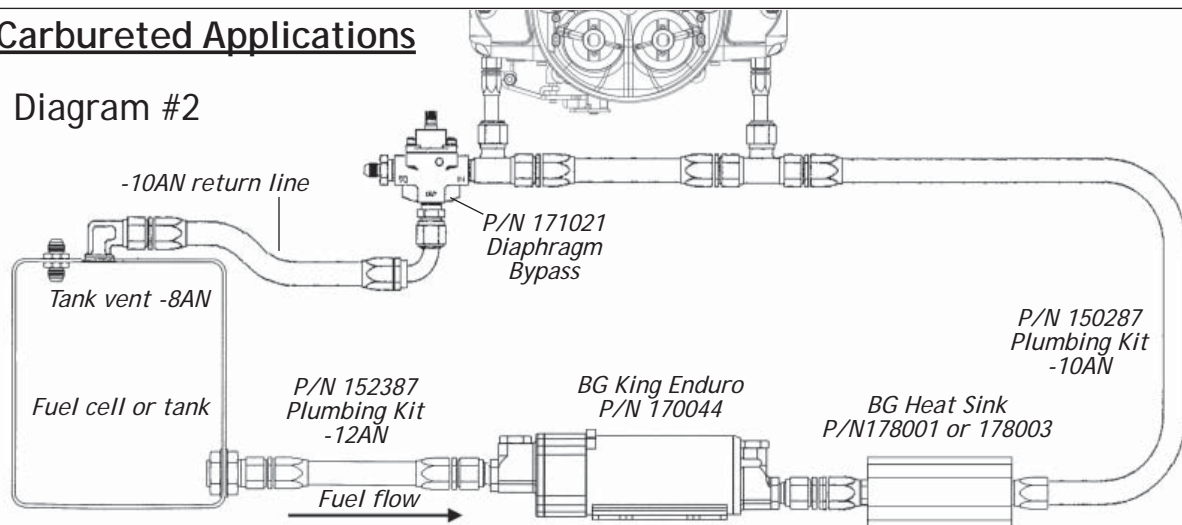
### In-Loop Carbureted Applications

Diagram #1



### Inline Carbureted Applications

Diagram #2



### Inline Fuel Injected Applications

Diagram #3

