

*BG Fuel Systems
Adjustable Fuel Log with
Diaphragm Bypass #170031*



INSTALLATION AND TUNING INSTRUCTIONS



The BG Adjustable Fuel Log with diaphragm bypass is designed to be used with belt driven fuel or hex driven fuel pumps on gasoline or methanol carbureted applications to give variable fuel pressure or block mounted and electric fuel pumps to give a constant fuel pressure. It is designed to fit all Road, Speed, Mighty, Race and King Demon series carburetors, and Holley 4150, 4160 carburetors (with or without bowl extensions) and Holley 4500 Series carburetors. The center-to-center distance on the outlet fittings to the carburetors adjusts from 8-1/2" to 11-1/2". Before installing your BG Adjustable fuel log, **PLEASE READ THESE INSTRUCTIONS THOROUGHLY.**

If you have any questions please contact our technical department at (706) 864-8544

INCLUDED IN THIS BOX

In this box you will find:

- 1- BG Adjustable length Fuel Log with Diaphragm bypass
- 1 - Instruction Manual

INSTALLATION

To mount this log to you carburetor, you will need to install:

-8 AN dual feed bowl female swivel inlet fittings. BG Fuel Systems Part # 140023 fits Holley carburetors with 7/8" - 20 tpi inlets (sold individually)

BG Fuel Systems Part # 140024 fits Demon & Claw carburetors with 9/16" - 24 tpi inlets (sold individually)

DO NOT USE FLEXIBLE FUEL LINES BETWEEN THE LOG AND CARBURETOR.

Install the inlet fittings into the fuel bowls, making sure they are secure. Now adjust the length of the fuel log to fit the carburetor by sliding the two halves closer together or further apart until the male ends on the log line up with the female fittings on the carburetor. Tighten the fittings from the log to the carburetor (tighten equally side-to-side to keep the log from binding)

NOTE: NEVER CARRY A CARBURETOR BY THE FUEL LOG !!!

Make sure the log does not make contact with the intake manifold, valve covers, air pan scoop, carburetor linkage, or any other parts before proceeding. **Note:** Make sure your carburetor goes from closed butterfly position to wide-open throttle, and back to closed idle position without binding or contacting the fuel log before proceeding.

Install the fuel supply and return lines. This log is supplied with a -8 AN inlet fitting on the end. You can purchase a -10 AN fitting if needed (BG Fuel Systems Part # 176031). Install the inlet hose from the fuel pump to this fitting. The diaphragm bypass has a -8 AN fitting next to the inlet and should be plumbed back to the top of the fuel cell.

NOTE: NEVER BLOCK OFF THE VENT ON YOUR FUEL CELL! PROPER OPERATION OF YOUR FUEL SYSTEM DEPENDS ON THIS.

The log has (2) 1/8" NPT ports on the opposite end from the bypass that allows a fuel pressure gauge to be installed to read carburetor fuel pressure and aid in tuning. **NOTE:** Avoid using liquid filled fuel pressure gauges. They can be affected by engine heat giving false fuel pressure

readings. We recommend using a special dampened non-liquid filled gauge like BG Fuel Systems Part # 170124. There is also a 3/8" NPT plug in the end of the log that allows installation of fitting to an external gauge that the driver can see while racing.

FUEL PRESSURE ADJUSTMENT

Idle Fuel Pressure:

NOTE: You will only get variable fuel pressure when using pumps that have a variable in their output pressure based on engine RPM (such as a Belt Drive or Hex Drive Fuel Pump) Most block mounted or electric fuel pumps will not vary their pressure.

When using a Belt Drive or Hex Drive fuel pump there is a standard gasoline carburetor jet inside the inlet fitting of the log. This jet controls the fuel pressure at idle. To increase the idle fuel pressure install a SMALLER jet, conversely to decrease the idle pressure install a LARGER jet.

NOTE: Most alcohol carburetors like to idle between 2- to 4-psi, while most gasoline carburetors like to idle between 5- to 7-psi. (Verify the carburetor's recommended pressure from its manufacturer)

Wide Open Throttle Fuel Pressure:

The Diaphragm controls the Wide Open Throttle (W.O.T.) pressure (using a Belt or Hex Drive Pump) or the constant pressure if using a block mounted or electric fuel pump. To set the pressure raise the engine RPM, loosen the lock nut on the top of the bypass and turn the screw to change the fuel pressure. To increase the W.O.T. pressure turn the Allen screw CLOCKWISE, to lower the W.O.T. pressure turn the Allen screw COUNTERCLOCKWISE. Once you've got the pressure where you want it tighten the lock nut (clockwise). Most alcohol carburetors require 9 to 11 psi at W.O.T., while most gas carburetors require 6 to 8 psi at W.O.T. (Verify the carburetor's recommended pressure from its manufacturer)

NOTE: AS WITH ANY OTHER FUEL SYSTEM COMPONENTS, INSPECT ALL FIT-

TINGS AND CONNECTIONS PRIOR TO USE TO MAKE SURE THEY ARE TIGHT AND ARE NOT LEAKING. YOUR SAFETY DEPENDS ON IT!!!

NOTE: MAKE SURE YOUR CARBURETOR GOES FROM CLOSED BUTTERFLY POSITION TO WIDE-OPEN THROTTLE, AND BACK TO CLOSED IDLE POSITION WITHOUT BINDING OR CONTACTING THE FUEL LOG BEFORE PROCEEDING.

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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.

Barry Grant, Inc.

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

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