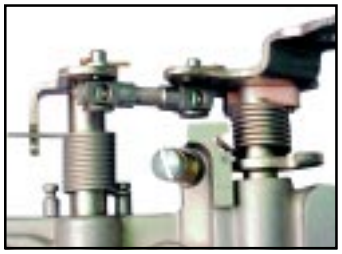
NEW PRODUCTS 2006



BLP ADJUSTABLE SECONDARY THROTTLE KIT

43601B-BLP Linkage Kit is designed to work with the most popular Holley progressive "slip type" secondary throttle linkage used on 390-850 high performance carburetors. This kit replaces the 43R601 slip wire link and enables you to choose 1:1 or progressive ratio.

CONTENTS INCLUDE:

(2) Links
(1) Threaded rod .500 long
(1) Threaded rod .625 long
(1) Threaded rod .750 long
(2) Clevis pins
(2) Cotter pins
(2) .040 thick washers

RATIO APPLICATION:

390 Carburetor
1:1 ratio uses a .625 long rod
Progressive ratio uses a .500 long rod

600-850 Carburetors
1:1 ratio uses a .750 long rod
Progressive ratio uses a .500 long rod

FABRICATED ALUMINUM VALVE COVERS

At BLP Products, Inc., only the finest fabricated aluminum valve covers are permitted to leave our building. There are no "sportsman series" or "economy models" offered by BLP, only one version; the best we can build! Whether you race at Daytona or Eldora, in Pro Stock or APBA, in Super Stock or supercharged funny car, every valve cover produced by BLP Products incorporates the same exacting tolerances and quality.

STANDARD FEATURES INCLUDE:

- .500" Thick CNC machined billet rail with gasket retention
- Additional internal clearance for aftermarket valve-train
- 3-D CAD designed billet rail and outer skin shape
- TIG-welded inside and out on proprietary weld fixtures
- Stainless steel flange bushings used at each mounting bolt hole

APPLICATIONS:

- Small & Big Block Chevy
- SB-2.2 & Splayed Valve
- GM DRCE
- Dodge SB Wedge
- Dodge SS Hemi
- BAE Hemi
- Ford 289-351W
- Ford 351C & Yates
- And more

OPTIONS:

- Valve Spring Oiling
- (Ventilator) Crankcase Check valves
- Oil Fill Inlets
- AN Fittings
- Breather Vent Tubes

VALVE SPRING OILING

The valve spring oiling system remains a necessary component on all racing engines. Offered as an option on all BLP valve covers, the spring oiling system can also be installed into any aluminum valve cover.

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VENTILATOR

The same size as a normal breather tube, the Ventilator is a one way check valve that is fully adjustable to regulate crankcase vacuum. A Ventilator can also be used as a pop-off valve by reversing the poppet/spring assembly. Numerous mounting methods are available. Various AN fittings are also available with the same mounting methods as the Ventilator.

PISTON OILING SYSTEM

Patent Number: 5,896,656

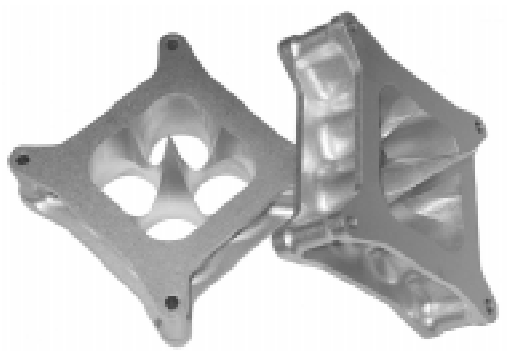
This engine block modification is a highly proven method of supplying pressurized lubrication to the wrist pin area of racing pistons and also provides additional cooling to the pistons. As piston cooling is now a recognized necessity for racing engines, our system offers the most efficient method available.

Other markets realizing the benefits of piston cooling and wrist pin lubricating include supercharged, turbocharged and nitrous oxide assisted engines.

NOTE: This oiling system can be produced for nearly any engine combination. Please call for further information.

APPLICATIONS

- S/B & B/B Chevy with multiple main journal sizes
- S/B Ford with multiple journal sizes
- S/B Dodge with multiple journal sizes



MERGE SPACER

Typical carburetor spacers lengthen and straighten the air/fuel path into the intake manifold by simply raising the carburetor. The “Merge Spacer” is designed to also streamline the path by displacing the void or turbulent area between the throttle bores directly under the carburetor. This creates a smoother transition into the intake manifold plenum area, which increases airflow and enhances fuel distribution. The result is measurable increases in both horsepower and torque.

This "streamlined" carburetor spacer has proven to be a power enhancer to virtually every engine it is tested on. Originally designed in the early 1980's for NASCAR racing, the shape has been altered a few times since then as air-flow technology has improved.

APPLICATIONS

- 390, 650, 750, 850 Holley style carburetors and FI throttle bodies.
- 2", 2.125" and 2.250" throttle-bore sizes for Dominator style carburetors and FI throttle-bodies.

Available for many different carburetor and throttle body configurations.
Please contact BLP for a specific application.

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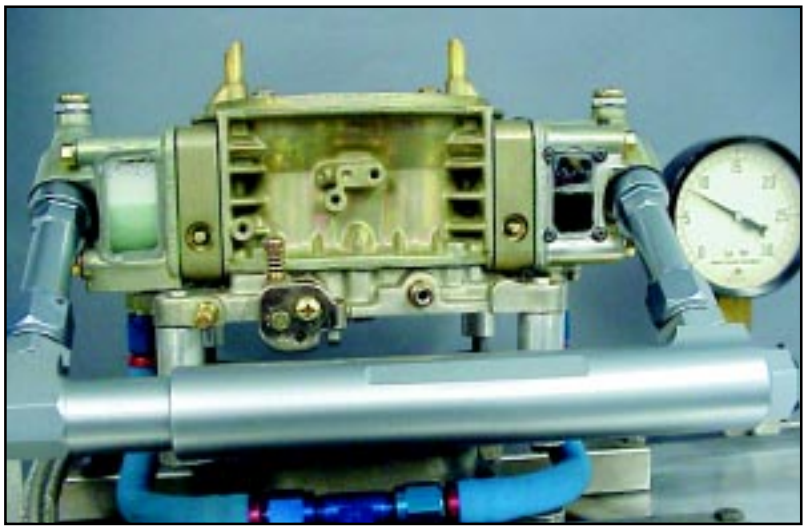
BLP FLOATS AND BOTTOM FEED NEEDLE & SEATS FOR THE HOLLEY® CARBURETORS



The float bowl is a reservoir supplying all of the fuel to the carburetor. The float bowl sounds like a simple part but it performs several functions. The float bowl acts as a fuel reservoir and a venting system to prevent vapors that are trapped in the fuel as it is being pumped from the fuel cell building up pressures in the float bowl. The size or capacity of the bowl is very important! It must be large enough to supply fuel to the metering system until the pump purges vapor and delivers liquid fuel.

The float operates the needle and seat so fuel enters the bowl at the correct time. The float needs to be designed with the right amount of buoyancy to shut the needle once the desired level has been reached. The float needs to be the right weight and buoyancy to react to fuel pressure with a minimum amount of float vibration. The float also must have the right shape to perform properly under certain racing conditions.

The two main float bowl problems are aeration in the float bowls and excessive float vibrations.

From our experience and complaints from our customers we feel there are some problems with the existing floats used in Holley® Performance carburetors. The biggest problem is that the float bracket extends into the float body. These floats have a tendency to become heavy because fuel can seep into the float around this bracket. This is especially prevalent when using methanol for fuel. Also, these brackets may become loose when subjected to the vibration encountered in a racing environment. Furthermore we believe that some floats are too buoyant and actually increase the vibration problem. These floats have to be weighted to respond better to changing levels.

With the help of Custom Plastics Development, Inc., located in Kissimmee Florida, we initiated a project to design and produce our own floats. We considered what problems currently exist with floats and also asked for some input from engine builders and Nextel Cup teams. This was a combined effort and the following is a general outline of the BLP Floats and why we chose the designs.

The number one design criteria we required was a mounting bracket that was independent of the internal part of the float body, so under no circumstances could the float body take on fuel. Other considerations were:

MATERIAL

Custom Plastics Development, Inc. has years of expertise on this subject so we asked for their guidance in our design. They recommended an engineered plastic material that is impervious to racing fuels including Methanol, Leaded and Unleaded Racing Gas. In addition to those qualities, the material is very strong and is favorable to sonic welding of the cover and housing to form a leak proof assembly. They contacted their supplier engineers to get this assurance.

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BRACKET

The float bracket is constructed from 316 stainless steel materials and the thickness is .024". The design criterion is for the bracket to be strong and will be molded into the rib support structure of the float body. Because we are now making a bottom exit needle and seat we designed the bracket to flow more fuel past the float lever down into the bottom of the bowl.

SHAPE

When making inquiries one of the complaints we encountered with the current floats was that there is very little clearance between the top of the float and the vent whistle. It is not uncommon for the vent whistle to interfere with the top of the float. This causes a symptom that resembles a leaking needle and seat when it is actually the vent whistle holding the float open. We determined that a notch was needed in the top of the float to clear the vent whistle which we incorporated into our design. Another concern stressed by the Nextel Cup teams was that more clearance was needed between the side of the float and the main jet. This was also incorporated in the new design.

BUOYANCY AND WEIGHT

The float should be designed with enough buoyancy to positively shut the inlet valve when the desired level is reached. We felt that some of the current floats are too buoyant and have to be weighted down to work properly. We took all of this into consideration with our design. Depending on the shape the BLP float weighs from 12.6 to 12.9 grams. The float responds well to level change without overreacting or excessive bouncing. We also offer and recommend a stiffer float bumper spring.

DESIGN

The float is a two-piece unit consisting of a bottom housing that can vary with the shape needed, and a top housing that is common to all 4 shapes. The two pieces are sonic welded together and 100% tested for leaks. The bracket is molded into the side of the float and does not extend into the float body.

AVAILABILITY

The floats are available in 4 shapes.

43701BLP is a primary Circle Track float

43711BLP is a secondary Circle Track float

43721BLP is a Road Race Float

43731BLP is a secondary Drag Float

FUEL BOWL FUEL AERATIONS

Currently the fuel from the fuel pumps exit into the fuel bowls through two windows machined in the needle and seat. The fuel exits through these windows above the fuel level and this causes a severe aeration problem. We have designed a bottom feed needle and seat that exits the fuel below the float level and this eliminates the aeration problem.

These needles and seats are designed to work with the BLP floats but will work with the standard Holley® or Braswell floats. These needles and seats have been tested with very positive results.

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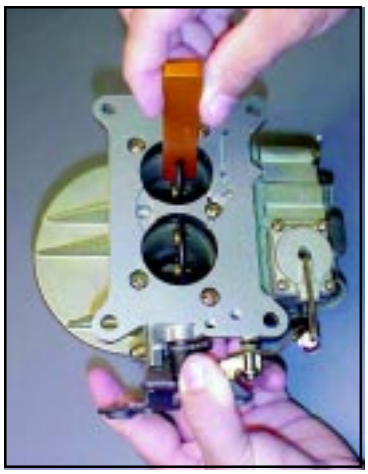
BLP CARBURETOR GAUGES

BLP Products offers gauges to check certain Holley Performance carburetors that are used in racing where the rules dictate a certain part number carburetor must be used. In addition the carburetors must maintain certain Holley published dimensions. These gauges check the Holley published dimensions for the following:

- VENTURI DIAMETER
- BOOSTERS
- THROTTLE BORE DIAMETER
- THROTTLE SHAFT AND THROTTLE PLATE THICKNESS



Our intent is to design these gauges where they are easy to use and to avoid controversial decisions having to be made by the tech inspector. BLP gauges are purposely designed to be on the lenient "side". Example:

BLP 78603 is a gauge to check the venturi diameter on a 0-4412 carburetor. The published Holley specification for this carburetor shows the venturi diameter to be from 1.373" to 1.377" which is a .004" variance from smallest to largest. The BLP 78601 gauge is 1.380" which is .003" larger than the largest Holley dimension. The reason for this is sometimes when a carburetor is checked hot it will check big. This also eliminates any minor discrepancies.

As a carburetor tech inspector the first thing you have to realize is that these units are massed produced and many of the parts are assembled as cast. A lot of the parts are die cast and these parts cannot hold the tolerance that machined parts do nor can they maintain the same cosmetic appearance as machined parts. These units are very fairly priced considering the amount of design and workmanship required. It is impressive to us that Holley is able to maintain the consistency in dimensions. What we are trying to get across to you, is that these units are not a "rocket science" part and consideration to a common sense approach is advised.

Professional prepared "Blueprinted" Holley carburetors are common place today and are a very inexpensive cost to the racer that can enable them to receive maximum performance from their engine. A race carburetor builder, out of responsibility to their customer, should build each unit as close to the rules as possible, without the threat of violations. The majority of gains achieved in a "Blueprinted Carburetor" is by improving the "fuel curve" for that particular engine. The carburetor builders that understand how the fuel curve relates to the engine produce the best carburetors. This has nothing to do with airflow and if the gauges are used correctly then no one would have an advantage with airflow.

The following suggestions are intended only to help you as a Carb Tech Inspector and how you view these suggestions is your decision. These suggestions are based on years of experience in building both gauge kits and complete "Blue Printed" type carburetors.

VISUAL INSPECTIONS

Try and avoid having to make visual decisions if possible. There are no arguments if the carb does not pass the gauge test. There can be many arguments if the inspector takes the "Well it does not look right" approach. Too much emphasis is placed on the cosmetic appearance of the carburetor. If you can positively see where someone has ground or machined on a part then kick it out; if not then let it go. There are many methods used by both the manufactures and professional carburetor builders to make the parts smooth and look good. Everyone does it to make their product more appealing to the buyer. There is no "magic" or gain to be had by making it look good when it helps to sell the product. No one has this fantastic machine that you can put the parts in and pick up 10 to 20 horsepower.

METERING BLOCKS

As a general rule most tracks leave the metering blocks open as long as it is a Holley part. However if you want the carburetor to retain the original metering blocks then publish a casting number for the correct metering block. Metering block rules should be open for 2 reasons. First of all, this is how the fuel curve is tailored and second, but most important, is that you don't want to have to check the size in every hole in the metering block. This would take forever and really create a bad situation.

If you allow methanol to be used then we suggest that any metering block can be used.

COLORING PARTS AND REBUILDING

When you clean and tumble Holley parts the coloring (Dichromate) is removed. This coloring or Dichromate process protects the zinc metal from oxidizing. The parts normally have a gold color and there can be many variations of this gold color. The color depends on how clean you get the parts and how long you dip them in the chemical. This has to be considered as a normal process. In the past we have had carburetors turned down because the coloring was too shiny. To make the carburetors pass tech we would recolor them and intentionally leave them dull then they would pass. These are the type situations you want to avoid.

Be aware that when carburetors are rebuilt there are certain machining operations necessary such as surfacing the metering block side of the main body.

WHEN TO INSPECT THE CARBURETORS

It is always better to inspect the carburetors before the race. That way if a carburetor is not right the competitor has time to change it before racing. Then inspect the first 3 to 5 cars after the race or how many you deem necessary. When the competitor removes the carburetor it can be checked really fast with the BLP gauges. Plus if your track has the reputation of checking all carburetors before the race you will deter "cheated up" carburetors.

BASE PLATE ASSEMBLIES

The throttle shaft thickness gauge will detect thinned throttle shafts but you do need a visual inspection for tapered throttle plates. All throttle plates usually have a 3 digit number from Holley.

NOTE: Over the years on certain model carburetors the throttle shaft thickness has varied. This is especially true on the 0-4779 and some of the newer HP models. Some even have a slightly thinner primary to secondary shaft thickness. To avoid a lot of possible controversy we have selected a specific throttle thickness gauge to check these models. We have selected the thinnest possible combination Holley could have and designed the gauge to check this size. This gauge is a BLP 78624 and it is used in several of the kits. To make it convenient for you, we use this gauge on both the primary and secondary throttle shaft. This is a very lenient gauge and if it goes over a throttle shaft then the carburetor is definitely wrong.

This takes a lot of record keeping responsibility away from you and simplifies the checking procedure.

PUMP NOZZLES

The 0-4412 and 0-7448 2-barrel carburetors have a tendency to pull fuel through the accelerator pump nozzle at full throttle. This creates a rich condition that causes tuning problems. Holley has an anti pullover pump nozzle that eliminates most of these issues. However they are not an original part and have to be installed. They are very inexpensive and easy to install. It is our opinion that you allow them but this is your decision to make.

COMMON SENSE APPROACH

It is our opinion that tech inspectors should help competitors get through inspection rather than take the agenda that "I am going to find something". If you find something out of the ordinary, then first of all, decide if this could be a performance advantage and handle it from there. If you have any questions we will be happy to answer them and you can call us at 1-800-624-1358.

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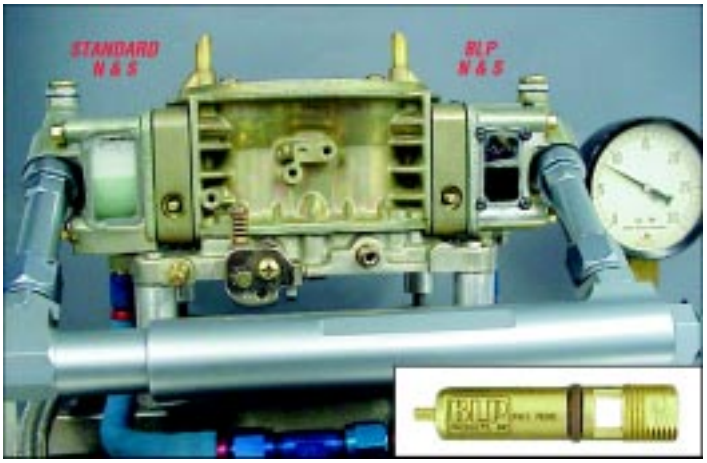
BLP BOTTOM FEED NEEDLES AND SEATS FOR HOLLEY® CARBURETORS

BLP Products, Inc. offers a broad coverage of needle and seats for the Holley® Performance Carburetors. BLP manufactures bottom feed needle and seat as well as a blueprinted conventional dual window design. Currently the fuel from the fuel pumps exit into the fuel bowls through two windows machined in the needle and seat. The fuel exits through these windows above the fuel level and this causes a severe aeration problem. We have designed a bottom feed needle and seat that exits the fuel below the float level and this eliminates the aeration problem. Removing the aeration has a very positive effect on the fuel curve. Early tests have also shown that fuel pressure can be reduced.

Available in Viton or Stainless Steel, please specify when ordering. Custom sizes can be furnished on request.



BLP PART NO.	HOLE DIAMETER	FUEL USED
18135BF-.110 .110	.110	Race Gas
18135BF-.120 .120	.120	Race Gas
18135BF-.128 .128	.128	Race Gas
18135BF-.136 .132	.132	Race Gas
18135BF-.136 .136	.136	Race Gas
18135BF-.140 .140	.140	Race Gas

FLOW TEST COMPARISON between a standard side exit needle and seat vs. a BLP Bottom Feed Needle and Seat. Flow tests are generated using 3 pounds of test pressure and measured in pounds per hour.

EXIT SIZE	STANDARD SIDE EXIT FLOW @ 3 PSI	BLP BOTTOM FEED FLOW @ 3 PSI
.110	189 lbs. per hr	210 lbs. per hr
.120	201 lbs. per hr	239 lbs. per hr
.128	243 lbs. per hr	256 lbs. per hr

CONVENTIONAL STYLE NEEDLES AND SEATS

The housings are machined from high quality brass on a Swiss CNC lathe maintaining a very close tolerance. The seats have a special radius with a burnished finish. The feed holes are all reamed to size. The needle is Viton tipped and a Viton o-ring is used to insure a good seal when using exotic racing fuels. All needles and seats are assembled in-house and individually pressure tested under water. The BLP 18135-.150 uses a needle machined from Titanium, with a special shape to handle higher fuel pressures.

BLP PART NO.	HOLE DIAMETER	FUEL USED
18135BLP-.110	.110	Race Gas
18135BLP-.120	.120	Race Gas
18135BLP-.128	.128	Race Gas
18135BLP-.132	.132	Race Gas
18135BLP-.136	.136	Race Gas
18135BLP-.140	.140	Race Gas
18135BLP-.150	.150	Methanol

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