

**BARRY GRANT**

**TRIPLE  
INDUCTION**  
*DESIGNED, DYNOED and DRIVEN*

**BAD MAN™**



PN 7600 & 7603  
for 1955-1986 Small-Block Chevy Engines  
With Conventional Cylinder Heads

## **BadMan Instruction Manual**

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

**BARRY GRANT**

**BAD MAN™**

**Thank you for the purchase of your new American-made Badman Inline  
4 Barrel Induction System!**

This manual will help you set up, install and fine tune your Badman System.

This kit is designed for small-block Chevrolet engines with conventional (non-Vortec) bolt pattern cylinder heads. It will not work with raised runner heads. If you are uncertain as to whether this kit is right for your application, please contact our technical department directly by phone (706) 864-8544 or by fax (706) 864-2206 or by the email link at [www.barrygrant.com](http://www.barrygrant.com).

**Please read and obey all safety warnings for your safety and optimum performance.**

**WARNING:** To preserve your warranty and insure a trouble-free installation, please read and understand all instructions thoroughly and completely BEFORE installation. Should you have any questions, please contact our technical offices before installing this induction system at (706)864-8544, Fax (706)864-2206, or Email [tech-sales@barrygrant.com](mailto:tech-sales@barrygrant.com)

**WARNING:** Do not install this Badman Induction System on an engine that is not in proper running condition.

**WARNING:** Fuel is extremely flammable. Always work in a well-ventilated area, keep a fire extinguisher at hand, and, if possible, have an assistant.

**WARNING:** Do not attempt to use a carburetor on which the linkage binds in any way.

**WARNING:** Do not make any adjustments to your carburetor until you have tested the system on your vehicle. All carburetors have been flow tested and preset at the factory for initial start-up.

**WARNING:** Do not attempt to use a carburetor that is leaking in any manner.

**NOTE:** It is mandatory to use an in-line fuel filter. Absence of such voids any and all carburetor warranties.

**NOTE:** This system is not designed to meet US exhaust emission requirements.

Barry Grant, Inc.  
1450 McDonald Rd.  
Dahlonega, GA 30533  
Phone: (706) 864-8544  
Fax (706) 864-2206  
Email: [tech-sales@barrygrant.com](mailto:tech-sales@barrygrant.com)  
[www.barrygrant.com](http://www.barrygrant.com)

## Table of Contents:

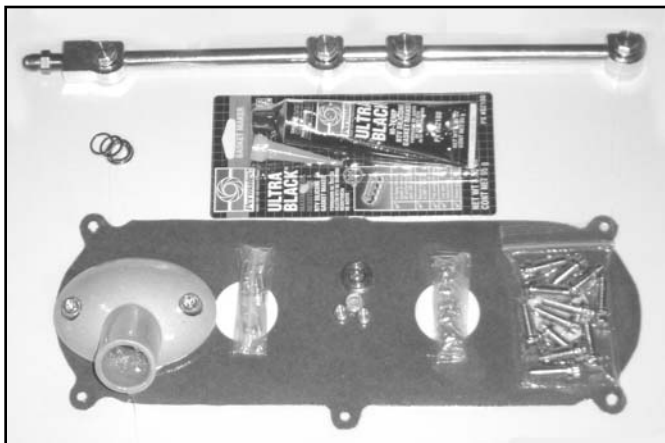
1) Application Guidelines for Badman Induction Systems.....	4
a) What is Included.....	4
b) Other Items Required but not Included.....	4
2) Identification .....	4
3) Pre-installation.....	4
4) Installation.....	4
a) Installing the Intake Manifold.....	4
b) Installing the Thermostat Housing.....	5
c) Carburetor Setup.....	5
d) Bolting the Carburetor onto the Manifold.....	5
e) Connecting the Throttle Linkage.....	5
f) Connecting the Fuel Rail.....	6
g) Connecting Vacuum Lines.....	6
h) Installing the Distributor.....	6
i) Fuel pressure.....	6
5) Initial Start Up.....	7
6) Initial Tuning .....	7
a) Check for Leaks.....	7
b) Float Levels.....	7
c) Initial Ignition Timing.....	7
d) Setting Idle Speed.....	8
e) Idle-Eze™.....	8
f) Setting Idle Mixture.....	9
7) Fine Tuning .....	9
a) Changing Jets & Pod Removal.....	9
b) Air Bleeds.....	10
c) Squirter Replacement.....	10
d) Sleeve & Booster Replacement.....	10
8) Maintenance.....	11
9) Tuning Parts.....	11
10) Badman Carburetor Specifications.....	11
11) Troubleshooting.....	12-13
Notes.....	14
Warranty Information.....	15
Return Address & Contact information .....	16

## 1. Guidelines for Badman Induction Systems

The Badman is suggested for use in vehicles with camshaft durations of up to 260 degrees duration @.050" lift, manual or automatic transmission and initial ignition timing of 14 to 16 degrees. These recommendations are general only. Other factors in the combination can affect or change them. Please call the tech line at (706) 864-8544 for more specific recommendations.

### a) What is Included

- 1-AeroRam intake manifold
- 1-Inline 4 barrel carburetor
- 1-Water neck with bolts and gasket
- 1-Intake manifold gasket set
- 1-Intake manifold bolt set
- 6-Carburetor to intake mounting bolts & washers
- 1-Carburetor to intake manifold gasket
- 2-Pipe Plugs 1/8"NPT
- 1-Pipe Plug 1/4"NPT
- 1-Pipe Plug 3/8"NPT
- 1-Fuel rail assembly consisting of:
  - 2 long fuel tubes
  - 1 short fuel tube
  - 4 banjo fittings with o-rings
  - 4 banjo bolts
  - 8 banjo bolt washers
- 1- 1/4"NPT x 6AN fuel inlet fitting
- 1-Tube of RTV Sealer



### b) Other items required but not included

- Distributor with small diameter points-style cap
- Distributor hold-down clamp
- Thermostat
- Bracket to secure throttle and kickdown cables
- Air cleaners are not supplied with this kit, but are available separately. See page 11 for more info.

## 2) Identification

This system is supplied with one inline 4 barrel carburetor in either a 675 cfm (Green Sleeves) or 775 cfm (Red Sleeves)

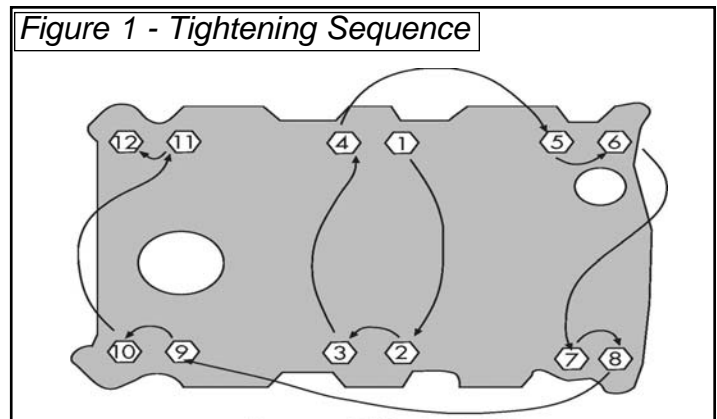
## 3) Pre-installation

Before installing this system, inspect all the components to insure they are free of shipping or handling damage. Check the throttle linkage to make certain it moves freely on the carburetor. Sweep the carburetor linkage through the arc of travel from the idle position to fully open and back to idle. Test fit the intake before any modifications such as polishing, chroming or powder coating are done.

## 4) Installation

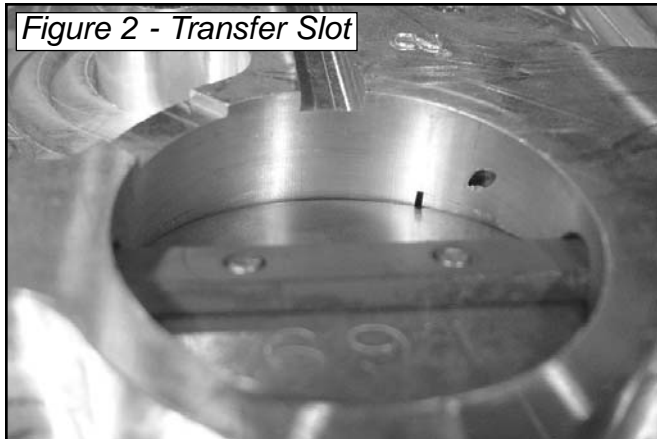
### a) Installing the intake manifold (figure 1)

First, make sure your intake manifold is clean and free of debris, especially in the intake runners, on the cylinder heads, and in the lifter valley. Using the RTV silicone supplied, apply a thin bead around each of the water jackets on the cylinder heads and on the ends of the valley. Then install the intake gaskets on each cylinder head. Apply a thin bead of RTV around the water jackets and also on the gasket. If the intake gasket that you are using is embossed with silicone already then adding the extra RTV is not necessary. Next, install the rubber gaskets onto each end of the valley. Now you can install the intake manifold on the engine, taking care not to disturb the gaskets. With the intake manifold in place, install the bolts and washers through the intake into the cylinder heads and hand tighten them. Following the sequence specified, tighten the intake manifold to the cylinder heads, using 35 ft-lbs of torque in increments of 5 ft-lb.



### b) Installing the Thermostat Housing

Install a thermostat, (not supplied), with the correct heat-rating for your application. Remember, a thermostat that allows the engine to operate at temperatures too cold or too hot impairs performance. Apply a small amount of RTV silicone to the gasket and place it over the thermostat. Place the water neck housing over the thermostat and gasket and secure it using the bolts supplied. Connect any other hoses or sensors at this time. Fill the radiator and check for leaks.



### c) Carburetor Setup (figure 2)

Check the throttle butterflies before installing the carburetor on the engine. With the carburetor upside down, check to ensure that the butterflies are set so that they expose no more than .020" of the transfer slots. The transfer slots are the thin slots milled into the baseplates that are approximately 5/16" in length. With .020" showing, the transfer slots will give the appearance of little squares situated below the butterflies. If adjustment is required, use the idle stop adjustment screw on the left side linkage to open or close the throttle plates as needed to achieve this setting. Note: After installation, Idle-Eze™ will be used as an aid to adjusting idle speed.

### d) Bolting the Carburetor onto the Manifold

Place the carburetor base gasket onto the intake manifold top plate, followed by the carburetor, making sure that it does not rock or move. If the carburetor rocks, do not proceed until it is steady and flush fitting. Install the 6 carburetor bolts and washers supplied through the 6 mounting holes in the baseplate of the inline 4 barrel carburetor and then into the intake manifold top plate. These need only be hand tight at first. Ensure the carburetor body and linkage does not interfere with the intake manifold. Now you can torque down the carburetor base bolts to approximately 7 ft lbs, do not over tighten the baseplate as damage will result. Once secure, rotate the carburetor throttle plates from the idle position to fully open and back to idle, making sure they operate freely without binding or hanging. Your safety depends on this.

### e) Connecting the Throttle Linkage (figure 3)

Connect the throttle linkage from the pedal to the carburetor and recheck the throttle plates, ensuring they rotate freely from idle to fully open but not beyond the vertical position. Use a Pedal Stop to prevent the carburetor's throttle mechanism from being overloaded. The linkage and stop mechanism of a carburetor should never be subjected to the power of the driver's foot.

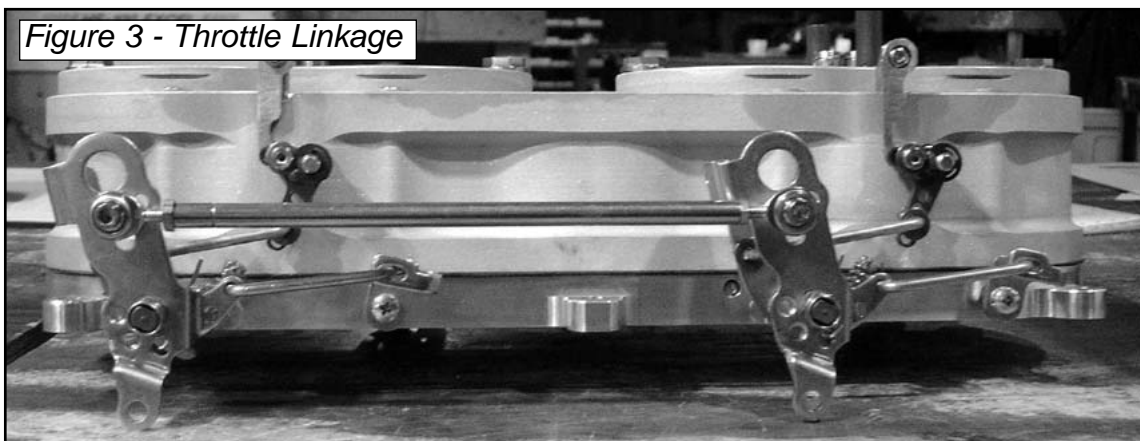
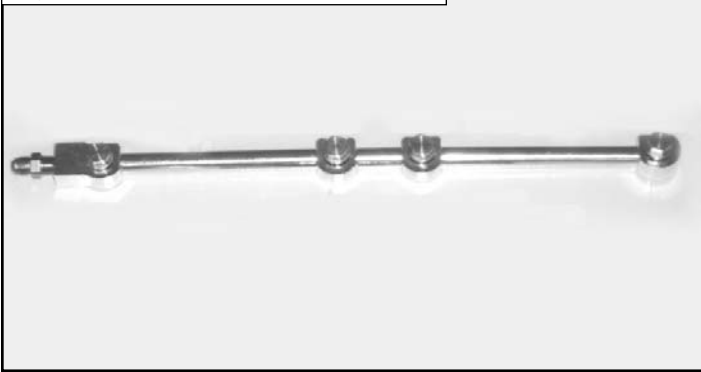


Figure 4 - Fuel Rail Assembly



#### f) Connecting the Fuel Rail (figure 4)

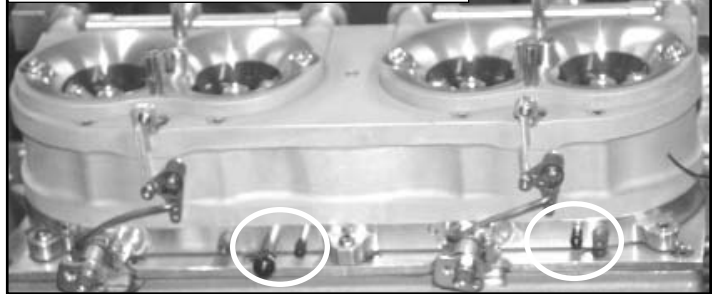
Note: It is mandatory to use an in-line fuel filter. Absence of an inline fuel filter voids any and all carburetor warranties. Make sure to clean out any fuel lines or fittings that have been cut before installing them onto your new carburetor. The Badman fuel rail consists of 2 long fuel tubes, 1 short fuel tube, 4 banjo fittings with o-rings, 4 banjo bolts, and 8 washers. Assemble the fuel rail using a small amount of lubricant on the O-rings. Slide the tubes over the ends of the banjo fittings, being careful not to damage the o-rings. Install a banjo bolt washer onto each of the banjo bolts and insert the bolts through the banjo fittings. Install a second gasket onto each bolt, and screw the bolts into the carburetor hand-tight (see figure 5). Use some lubricant on the threads to prevent them from galling or seizing. Do not use any type of thread sealer on these fuel rail fittings. With the fuel rail in place only a single fuel connection is required. The inlet port of the front banjo fitting is 1/4" NPT. Install the fuel inlet fitting supplied with the kit into the fuel rail using teflon paste.

Figure 5 - Fuel Rail Installed



Once the fuel inlet fitting has been installed, the incoming fuel line can then be connected and then checked for any leaks. The inlet fitting thread size is 6AN. Do not use any thread sealer on the AN threads on this end.

Figure 6 - Vacuum Line Fittings



#### g) Connecting the Vacuum Lines (figure 6)

The carburetor is equipped with one large vacuum fitting (PCV or power brakes) and two small vacuum fittings on the right (passenger) side of the baseplate. The front fitting closest to the radiator is for ported vacuum to run a vacuum advance on the distributor. The second fitting is constant and is for any other accessory requiring constant (manifold) vacuum.

#### h) Installing the Distributor

Install your distributor and ignition system according to the manufacturer's specifications for your engine. Your distributor may need to be recurved for optimal performance.

#### i) Fuel Pressure

The Badman Inline 4 barrel design operates best between 6 and 7-1/2 PSI of fuel pressure. It can be run on less pressure as long as the fuel system can maintain enough volume at these pressures. Improperly adjusted or inadequate fuel delivery will result in poor performance and possible engine damage.

**DO NOT MAKE ANY ADJUSTMENTS TO YOUR CARBURETOR UNTIL YOU'VE TESTED THE SYSTEM ON YOUR VEHICLE. ALL CARBURETORS HAVE BEEN FLOW TESTED AND PRE-SET AT THE FACTORY FOR INITIAL START-UP.**

## 5) Initial Start Up

To reduce the risks associated with fuel, have a helper standing by while installing the Badman. Begin by priming the carburetor and checking for leaks. Use a fuel primer bottle (BG # 130041) to fill the float area with fuel through the vent tubes. If you do not have a primer bottle, crank the engine over with the ignition disabled by removing the coil wire from the distributor. If your vehicle is equipped with an electric fuel pump, pulse it on and off to fill the bowls. Remember, the float levels must be set when the engine is started and idling. Before starting the engine, depress the accelerator pedal once or twice, then crank the engine. If it does not start after a few attempts, check that fuel is being dispersed from the accelerator pump nozzles (squirters) as the throttle is depressed. Repeat the process until the engine starts. Check for fuel leaks.

**DO NOT ATTEMPT TO USE A CARBURETOR THAT IS LEAKING IN ANY MANNER. YOUR SAFETY DEPENDS UPON IT!**

## 6) Initial Tuning

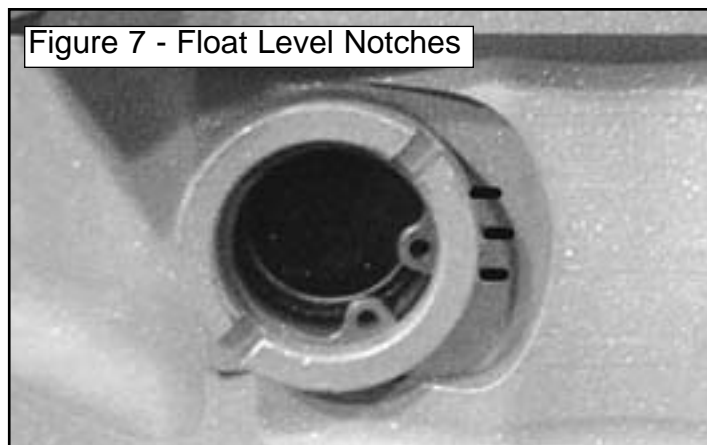
Remember, the initial settings are just a starting point. If your carburetor operates at these settings and there is no evidence of tuning troubles, then no further changes are needed.

Note: If possible, tune with the air cleaner installed as the engine may tune differently without it. Before closing the hood, check to make certain there is sufficient clearance between it and the air cleaners.

### a) Check for Leaks

Once the engine is started, check for fuel leaks around the base of the carburetor, float bowls, and all fuel lines. If no leaks are apparent, it's time to make preliminary adjustments to the carburetor. It may be necessary to increase the idle speed until the engine reaches normal operating temperature.

**DO NOT ATTEMPT TO USE A CARBURETOR THAT IS LEAKING IN ANY MANNER! YOUR SAFETY DEPENDS UPON IT!**



### b) Float Levels (figure 7)

The inline 4 barrel carburetor supplied with the Badman induction package has 4 float adjustment points and 4 sight glasses to view the float level. Final float level settings must be completed with the engine running. While the engine warms, adjust the float level. This must be done with the engine idling. Start by setting the float levels just above the halfway point of the sight-glass windows, marked by the top of the three cast-in notches. To raise a float level, loosen the lock screw on top of the fuel bowl by turning it counter-clockwise. Then turn the adjusting nut counter-clockwise and re-tighten the lock screw. To lower a float level, loosen the lock screw and turn the adjusting nut clockwise and retighten the lock screw.

Note: When adjusting float levels with the engine running, some fuel may seep from the adjuster; have a rag at hand to absorb any fuel.

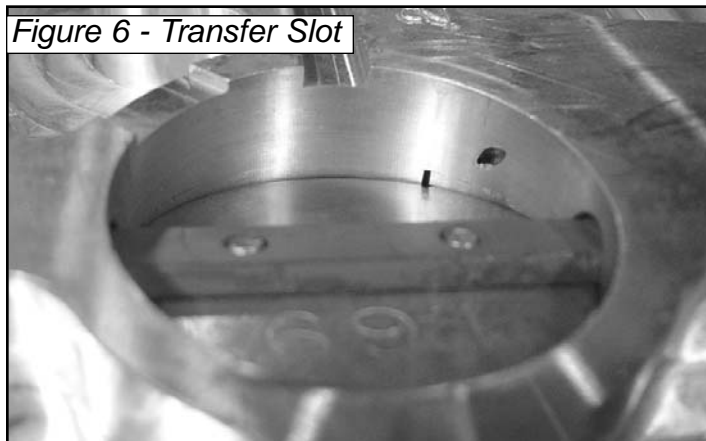
### c) Initial Ignition Timing

With the engine running, check the initial ignition timing. On most engines equipped with a Badman system, 14 to 16 degrees Before Top Dead Center of initial timing is a good starting point. Insufficient ignition timing causes the engine to idle poorly and perform below its potential. Normally, more initial timing provides crisper throttle response and acceleration.

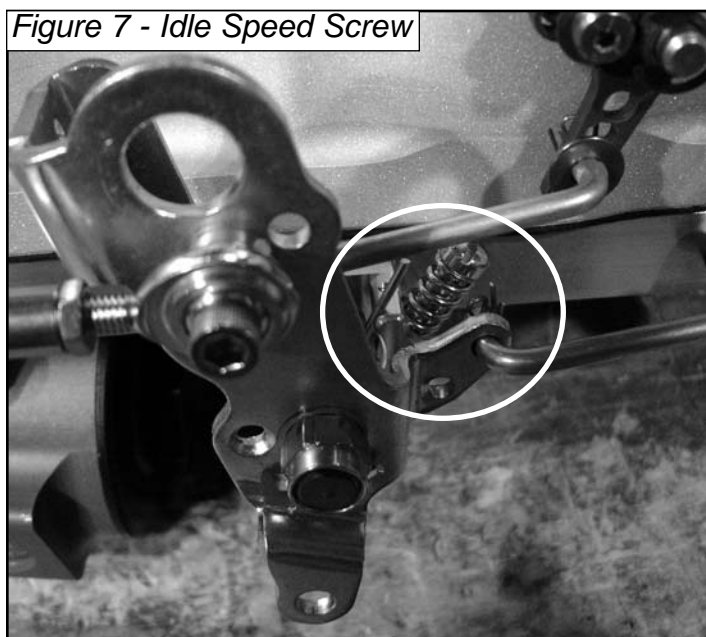
Note: Re-curve the distributor is often necessary to achieve the proper amount of initial and total ignition timing.

#### d) Setting Idle Speed (figures 6 & 7)

The carburetor has been flow tested and pre-set at the factory, and the initial setting of the butterfly position will vary slightly between carburetor models and sizes. Most carburetors will have the butterflies adjusted with a small length (approximately .020", looking like a square) of the idle transfer fuel slot visible below the bottom edge of the butterflies. Primary and secondary butterflies should be open equal amounts, and never seated tightly against the throttle bores in the baseplate.



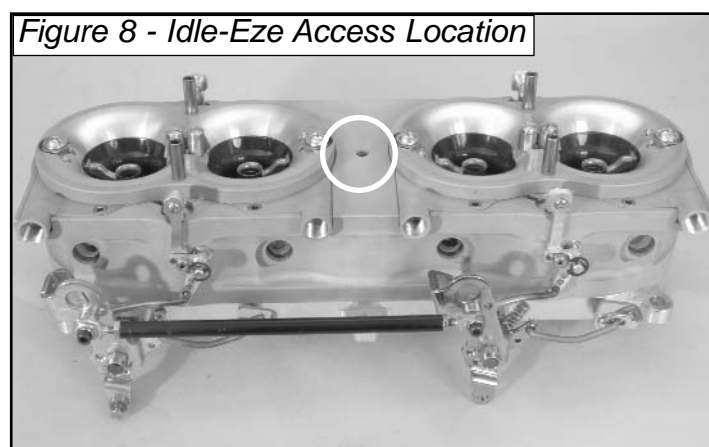
Butterfly position is adjusted using the idle speed screws on the baseplate. (figure 7) Once the engine reaches normal operating temperature, set the idle speed to the desired rpm. Turn the screws clockwise to open the butterflies, or counterclockwise to close them. Be sure to note the adjusted position of your carburetor, as this can be important information used later during fine tuning.



#### e) Idle-Eze™ (figure 8)

In addition to the idle speed screws, the Badman Carburetor features Idle-Eze™. The Idle-Eze™ baseplate allows you to set your idle speed while maintaining the correct orientation of the butterflies with the transfer slots. This provides better control of the idle-mixture screws, and results in a cleaner idle, crisper throttle response, and quicker tuning. Throttle plate (butterfly) positioning is critical at idle. The throttle plates should only be open no more than .020" above the bottom of the transition slots in the throttle bores if the transition circuit is to function properly. If the throttle plates are opened too far at idle, the engine gets the air it wants but also gets unregulated fuel as the slots pull directly from the idle circuit - bypassing the idle mixture screws. In short, having too much transfer slot showing below the plate is like having the idle mixture screws open more than they actually are. Since this adds fuel at idle, the engine runs rich with no way to tune the idle mixture because the screws are rendered useless.

If the car will not idle at the desired rpm with the butterflies set at .020 then the idle-eze needs to be opened further. When you open the Idle-eze you are simulating what would have occurred in the past by drilling holes in the butterflies to be able to close them down for the cleanest idle. With Idle-Eze, drilling of holes is no longer required as a simple turn of the screw produces the same results. Idle speed and idle mixture are dependent upon each other. using Idle- Eze™.



The Idle-Eze™ is closed at the factory. Insert a screwdriver into the air cleaner stud hole to engage it. Turn the screw clockwise to reduce idle speed or counter-clockwise to increase it. It may be necessary to readjust the idle speed after the idle mixture has been set.

## f) Setting Idle Mixture (figure 9)

Once the engine's idle speed is established, set the idle mixture by turning the idle mixture screws in or out to obtain the best idle quality. These screws are located on both sides of the inline 4 barrel carburetor. (2 on each side)

Figure 9 - Idle Mixture Screws



Adjust them by one-eighth to one-quarter of a turn at a time, then allow the engine a few seconds to respond. It may be helpful to rev the engine a few times to allow it to consume fuel between adjustments. The objective is to encourage the engine to idle at the highest RPM and vacuum with the throttle plates closed as far as possible. The normal operating range of the idle-mixture screws is between one half-turn and two and one-half turns out from the fully seated position (bottomed). If you adjust your idle-mixture screws too quickly, they will not respond properly. Also, if you can adjust them all the way in, (do not over-tighten), and the engine continues to run or runs acceptably, then you will need to readjust your throttle plates. Adjust the mixture screws in a clockwise manner by starting with the drivers side front. Once you have adjusted all 4 of them you can run back through them for a finer adjustment the second time. You can reset the mixture screws to factory baseline settings by screwing them in until gently seated and then unscrewing them by 1-1/2 turns outward. Note: the idle mixture may change without air cleaner installed.

## 7) Fine Tuning

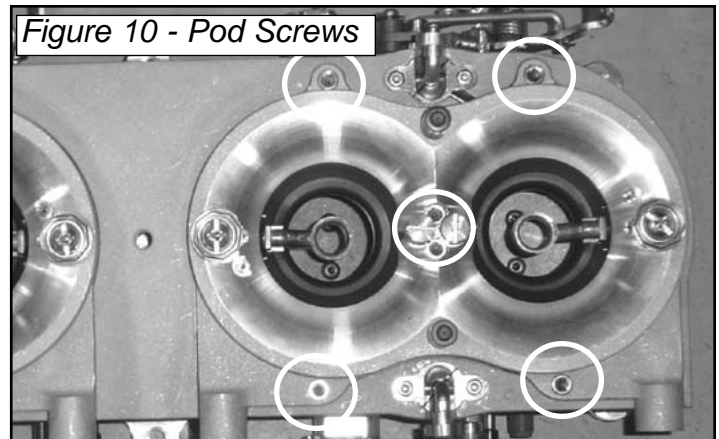
### a) Changing Jets & Pod Removal (figs 10 & 11)

The main metering jets control the amount of fuel that flows through each carburetor while driving. Main jet sizes have little influence on the engine's idle quality. To correct idle mixture troubles, consult sections 6d, e, and f. The best method of tuning main metering jets is by trial and error or by

using an O2 sensor. Use the jet size that achieves best performance at wide open throttle. In order to change the jetting, the pod containing the venturi, booster, metering plate and jet must be removed. Pod removal procedure:

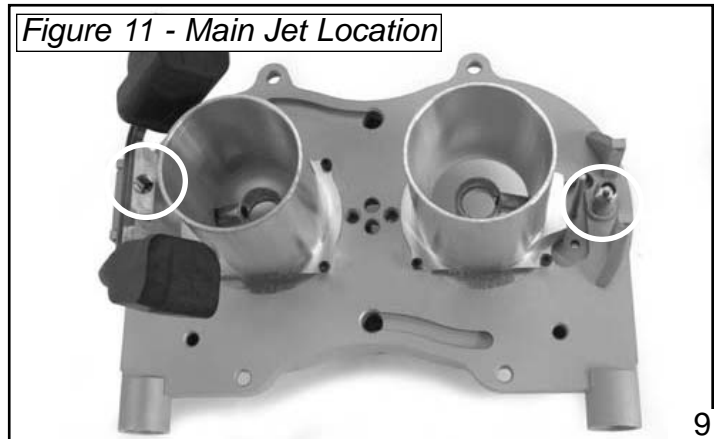
1. Remove the fuel rail assembly
2. Remove the squirter
3. Remove the 6 allen head retaining screws located on top
4. Lift the pod straight up off the main carburetor body.

Inspect the pod gasket to make sure there are no rips or tears. Once the pod has been removed the



jets will be visible and can be removed by using a jet driver (BG #130003) or a large screwdriver. Standard Demon or Holley jets can be used. Install the new jets and then reinstall the pod. Repeat this process with the other pod. Please note that each pod contains both a primary and secondary venturi and jet. The jet toward the front of the engine supplies the primary venturi while the one toward the back supplies the secondary venturi. This applies to both pods. Once the pods are reinstalled, replace the squirter and the fuel rail assembly. Upon restart carefully check for any fuel leaks before going any further.

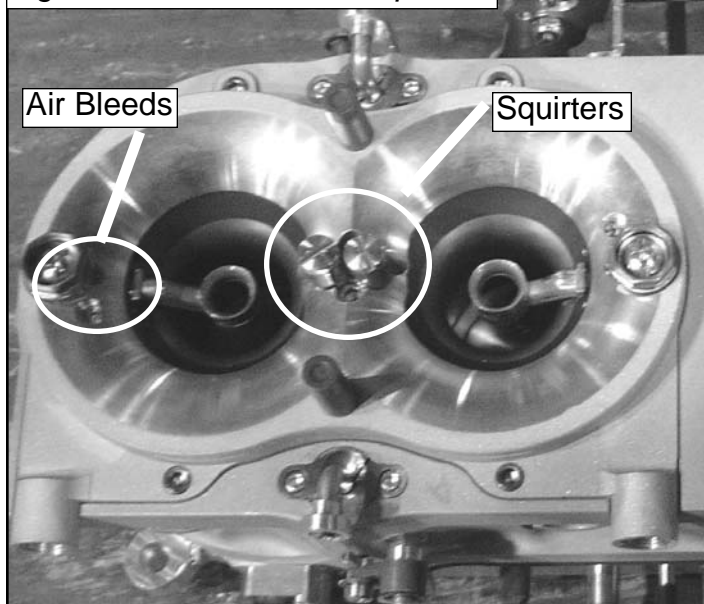
Figure 11 - Main Jet Location



### b) Air Bleeds (figure 12)

Should tuning troubles persist after normal adjustments have been performed, contact the technical support staff at Barry Grant Inc., who may recommend a calibration change. The Badman induction system is equipped with replaceable air bleeds which allow further tuning adjustments to be made. The air bleeds can be removed by using a small flat blade screwdriver. The air bleeds on top are 10-32 thread and there are both idle and high speed bleeds. The air bleed that is directly in line with the booster is the high speed air bleed while the one out to the side is the idle air bleed. Air bleed blanks can be purchased in 10 packs through Barry Grant dealers under part #200082

Figure 12 - Air Bleeds & Squirters



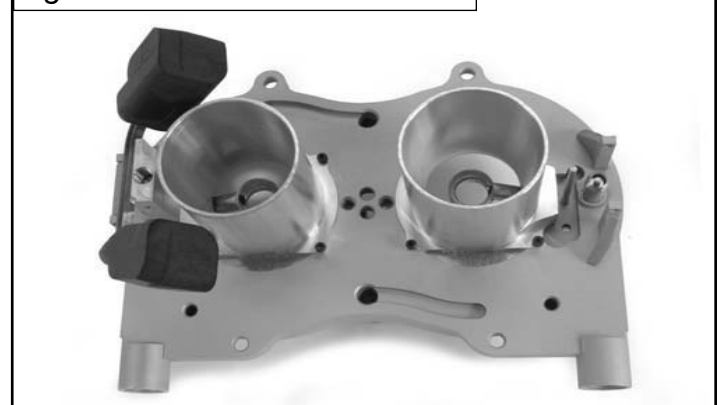
### c) Squirter Replacement

The size of the squirter nozzles determines how quickly the engine receives the additional fuel from the accelerator pump circuit. To install a larger squirter nozzle, remove the screw that holds the squirter in position, place a new gasket on the screw, followed by the larger squirter and another new gasket below the squirter. Then reinstall the assembly into the main body of the carburetor. If, by installing a larger squirter the hesitation diminishes, continue this course of action. However, if the hesitation worsens, try using a smaller squirter. When changing squirters make sure to use the original hollow squirter screw or a similar replacement. Use of a standard squirter screw will make the circuit inoperable.

### d) Sleeve & Booster Replacement (figure 13)

The Badman Inline 4 barrel carburetor is equipped with removable venturi sleeves and boosters. Should the need arise to change the CFM size of the carburetor, different sleeves and boosters can be purchased and installed easily. To remove the sleeves follow the pod removal instructions found in section 7a. Once the pod has been removed turn it upside down. Remove the booster retaining nut using BG booster nut tool #130043. Remove the booster from the pod, then take out the 4 small screws that hold the venturi sleeve in place. Remove the sleeve from the pod. Install the new sleeve into the pod, then reinstall the 4 screws. Slip the new booster through the booster hole and install the booster nut. Contact the Barry Grant technical department for specific recommendations concerning calibrations.

Figure 13 - Boosters & Sleeves



## 8) Maintenance

IMPORTANT! After the engine has completed its initial heat cycles, check the tightness of all the fasteners. Heating and cooling cycles often affect the tightness of fasteners and they should be routinely rechecked during service intervals or oil changes. Ensure the air bleeds are clean. They're located on top of the carburetor, and should be sprayed with carburetor cleaner when the air cleaner is removed. Air bleeds that become restricted or blocked affect the carburetor's air-fuel mixture and, consequently, the engine's operation. Prevent corrosion by cleaning any dirt or debris from the sides of the carburetor, especially the moving parts. Fuel and vacuum lines should also be checked at this time. Should they show signs of cracking or fatigue, replace them immediately. Fuel filters should be replaced every 10,000 miles.

Figure 14 - Tuning Parts



## 9) Tuning Parts (figure 14)

Standard tuning parts for Demon Badman carburetors such as jets and needle-and-seat assemblies will interchange with other manufacturers' parts. Nonetheless, it's advisable to use genuine BG Service Parts from Barry Grant, Inc. to keep your new Badman system operating at its full potential.

### BG Tuning Parts:

2300xx	Main Jets #50 through #100 (pr)
120006	Needle & Seat Assembly (pr)
200082	Blank Screw-in Air Bleeds (10 pk)

## 10) Badman Carburetor Specifications

The following chart contains the baseline specifications for each of the Badman inline 4 barrel carburetors. Use this chart to record any tuning made to the carburetors.

### #7600 Badman 675 cfm Inline 4 Barrel Carburetor Specifications

Idle air bleeds	.059"
Idle fuel restrictors	.036"
High-speed air bleeds-Primary	.039"
High-speed air bleeds-Secondary	.039"
Main jets - Primary	74
Main jets - Secondary	80
Main well exit diameter	.144"
Throttle bore diameter	1.690"
Main venturi diameter	1.280"

### #7603 Badman 775 cfm Inline 4 Barrel Carburetor Specifications

Idle air bleeds	TBA
Idle fuel restrictors	TBA
High-speed air bleeds-Primary	TBA
High-speed air bleeds-Secondary	TBA
Main jets - Primary	TBA
Main jets - Secondary	TBA
Main well exit diameter	TBA
Throttle bore diameter	TBA
Main venturi diameter	TBA

#7651 Air Cleaner



Sold Separately

#7653 Dual Air Cleaners



Sold Separately



Technical Department (706)864-8544

## 11) Troubleshooting

Should you encounter tuning troubles, use the solutions listed on these pages. If the problem persists, please contact our Technical Department at (706) 864-8544 Monday through Friday 8 AM to 6 PM Eastern.

### Won't Start

- Prime carb with fuel
- Check float level
- Check ignition system

### Backfires Through Carburetor

- Check ignition timing
- Loosen mixture screws
- Raise float levels
- Reset throttle plates
- Increase main jet size

### Backfires Through Exhaust

- Tighten mixture screws
- Lower float levels
- Reset throttle plates
- Decrease size of main jets
- Check ignition timing

### Float Levels Won't Adjust

- Reduce fuel pressure
- Clean needle & seat assemblies
- Ensure floats move freely

### Fuel Shoots From Vent Tube

- Lower float level
- Reduce fuel pressure
- Clean or replace needle & seat assemblies
- Ensure floats move freely

### No Adjustment On Mixture Screws

- Reset throttle plates
- Increase initial ignition timing
- Lower float levels
- Reduce fuel pressure

### Fuel Leaks From Throttle Shaft

- Lower float levels
- Reduce fuel pressure
- Clean or replace needle & seat assemblies
- Reset throttle plates
- Clean air bleeds

### Fuel Drips From Boosters

- Lower float levels
- Reduce fuel pressure
- Reset throttle plates

### Won't Idle Down

- Reset throttle plates
- Check idle mixture screws
- Lower float levels
- Check initial ignition timing
- Check throttle linkage
- Check for vacuum leaks

### Won't Stay Running Below 1500 RPM

- Reset throttle plates
- Check idle mixture screws
- Lower float levels
- Check initial ignition timing

### Won't Stay Running

- Reset throttle plates
- Check idle mixture screws
- Lower float levels
- Check initial ignition timing

### Blackens Spark Plugs At Idle

- Reset throttle plates
- Tighten mixture screws
- Lower float levels
- Reduce fuel pressure
- Clean air bleeds
- Increase initial ignition timing



Technical Department (706)864-8544

### **Rich At Idle**

Reset throttle plates  
Tighten idle mixture screws  
Lower float levels  
Reduce fuel pressure  
Clean air bleeds  
Increase initial ignition timing

### **Smells Rich At Idle**

Reset throttle plates  
Tighten idle-mixture screws  
Lower float levels  
Reduce fuel pressure  
Clean air bleeds  
Increase initial ignition timing

### **Smokes at Idle**

Reset throttle plates  
Tighten idle-mixture screws  
Lower float levels  
Reduce fuel pressure  
Clean air bleeds  
Increase initial ignition timing

### **Surges At Idle**

Reset throttle plates  
Loosen idle-mixture screws  
Raise float levels

### **Surges At Cruise**

Reset throttle plates  
Raise float levels  
Loosen idle mixture screws  
Install larger main jets

### **Smokes Under Acceleration**

Lower float levels, reduce fuel pressure,  
reset throttle plates

### **Hesitates Under Light Acceleration**

Reset throttle plates  
Check accelerator pump squirters  
Raise float levels  
Reset idle mixture screws

### **Hesitates Under Hard Acceleration**

Reset throttle plates  
Raise float levels  
Increase initial ignition timing

### **Doesn't Pull Well At Wide-Open Throttle**

Increase size of main jets  
Raise float levels  
Increase fuel pressure

### **Sluggish At Fully Open Throttle**

Decrease size of main jets  
Lower float levels  
Reduce fuel pressure

### **Blackens Spark Plugs While Driving**

Use smaller main jets  
Lower float levels  
Reset throttle plates

### **Rich While Driving**

Reduce size of main jets  
Lower float levels  
Reset throttle plates

### **Runs-On After Shutoff**

Reset throttle plates  
Lower idle speed  
Check ignition timing



The logo for Barry Grant, featuring the name in a stylized, italicized, bold font.The logo for Bad Man, featuring the name in a bold, blocky, slightly slanted font with a trademark symbol.

## Warranty Information

### Limited Warranty

Barry Grant, Inc., (the Warrantor), hereby warrants its product to the original purchaser thereof, (the CONSUMER), against any and all defects in workmanship and material, under the following terms and conditions:

This Limited Warranty is specifically limited to the original purchaser of the products and is enforceable only by such original purchaser (CONSUMER).

### Coverage of Warranty

In the event of a defect in workmanship or material of the products, the Warrantor will repair or replace the product or any defective parts or parts thereof, at the election of the Warrantor, without charge to the CONSUMER for such repair or replacement. This 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.

### Term of Warranty

This Limited Warranty shall extend for a period of ninety (90) days, commencing from the date of the original purchase by the consumer.

### Procedure to follow in case of defect

In order to obtain performance under this Limited Warranty, the Consumer must do the following:

1. The CONSUMER must retain proof of purchase of the product, in the form of the sales receipt, clearly indicating the date of purchase. This Limited Warranty is not enforceable unless the consumer presents such proof of purchase, clearly indicating the date of purchase, at the time a claim is made under this Limited Warranty.
2. The CONSUMER must ship the product, postage and freight prepaid, together with proof of purchase and a Return Goods Authorization Number (RGA #) to

Barry Grant, Inc.  
1450 McDonald Rd., Dahlonega, GA 30533  
PH: (706) 864-8544 Fax (706) 864-2206

NOTE: NO RETURNS WILL BE ACCEPTED WITHOUT AN RGA (Returned Goods Authorization) number.



Barry Grant, Inc. 1450 McDonald Rd., Dahlonega, GA 30533  
PH: (706) 864-8544 Fax (706) 864-2206  
[www.barrygrant.com](http://www.barrygrant.com)