



BA-2020-XX – BIG AIR KIT (BAK) YAMAHA ROAD STAR

CAUTION! We Strongly recommend that a qualified technician install this kit if you do not completely understand the instructions prior to the install.

INCLUDED IN THE KIT:

(1) Chrome Billet BAK Cover	(1) Black BAK Backing Plate
(1) Re-usable Performance Air Filter	(1) BAK Filter Raincoat
(1) Baron Power Cone	(3) M5 Chrome Button Head Screws
(3) Numbered Stainless Steel Mounting Arms	(3) M6 Chrome Screws
(3) M5 Chrome Washers	(1) ¼-28 x 1 5/8" Stainless Button Head Screw
(1) ¼ -28 x 1 13/16" Zinc Hex Bolt	(3) M6 Chrome Washers
(2) ¼" Aluminum Filter Spacers	(1) ¼" Lock Washers
(1) ¼" Flat Washers	(1) Baron Jet Kit (BA-2420RD)

TOOLS REQUIRED:

3, 4 & 5 mm Allen Wrenches	10 & 12mm Sockets
10mm Open-End Wrench	Phillips & Flat Screwdrivers
Pliers (Std. & Needle-nose)	Factory Service Manual

INSTRUCTIONS:

NOTE: We recommend the use of blue Loctite on all fasteners and mounting hardware.

The following directions will provide the information necessary to properly install Baron's Big Air Kit, provided our Jet Kit (BA-2420-RD included) has already been installed according to our instructions. With your tank removed you can begin the installation process as outlined below

1. The Baron Big Air Kit (BAK) comes unassembled. First, attach the Power Cone to the inside of your BAK cover with supplied double-stick adhesive tape. Next, place your Performance Air filter in the groove on the cover; make sure the filter seats properly to make a complete seal. Place the supplied ¼ -28 x 1 13/16" Hex Bolt, ¼ "lock washer & ¼ " flat washer in the backing plate in the top center mounting hole (closest to the carb opening). The stainless button head screw is used in the bottom mounting hole. Insert one aluminum filter spacer on each of these bolts. Now install the backing plate onto the air filter. Again, align the filter with the groove in the backing plate and tighten the mounting hardware.
2. Take the three (3) supplied mounting arms and attach them to Baron backing plate in the correct position as indicated by stamped numbers on the arms and corresponding numbers on the backing plate. Use the supplied 5mm x 10mm screws to attach mounting arms to the backing plate and tighten firmly (be sure to use blue Loctite on each screw). NOTE: mounting arm stamped #2 rests on top of lower button-head screw in backing plate.
3. Remove rubber grommets and washer inserts from the plastic mounting arms of the stock Yamaha air box. Install these parts in the chromed mounting arms in your Baron kit. It is easier to install grommets if you remove washer inserts first. Once the grommets are installed, push washer inserts in from the rear so washer will be against the engine mount points.

(continued on reverse)



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CONTINUED:

4. Remove metal hose clamp from stock air box's rubber carb intake connector. Slip clamp over BAK's rubber intake boot, but do not tighten at this time. Make sure to install clamp with screw head facing rear of the bike. Take the BAK assembly with mounting arms attached and place it into position between the cylinders. Install crankcase vent hose on small male vent fitting located on rear of backing plate. The carb vent hose that was originally routed to a bracket on the rear of the stock airbox should be shortened slightly and allowed to vent to the atmosphere. Route this hose in such a manner as to make it inconspicuous from view, ensuring that it will not get pinched or blocked in any way.
5. Install BAK assembly onto carburetor and insert chrome bolts and washers into each mounting arm and tighten (we recommend using blue Loctite).
6. Slide carb boot clamp up against carburetor and tighten.

Check all linkages for interference, check all hoses for kinks, check all bolts and hardware for tightness, and then check throttle action for smooth operation. You are ready to ride. Perform final idle mixture screw adjustments per instructions supplied with your Baron Jet Kit.

Our install guides provide a basic outline on the proper installation of our products. Further tuning and/or fitment may be required. Baron bears no responsibility on installation costs associated with this product.

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Jet Kit Installation

Yamaha XV1600/1700 Road Star ('99~'07)

Please read **ALL** of the instructions **BEFORE** installing beginning the installation.

CAUTION: We strongly recommend that a qualified Yamaha technician install this kit since the carburetor must be removed from the motorcycle. Always perform internal carburetor work in a clean area.

Included in this kit:

- (4) Mikuni main jets, (1) titanium needle, (2) clips,
- (4) cap-head Allen screws, (1) drill bit, (1) sheetmetal screw

Main Jet Settings

'99~'03 Models

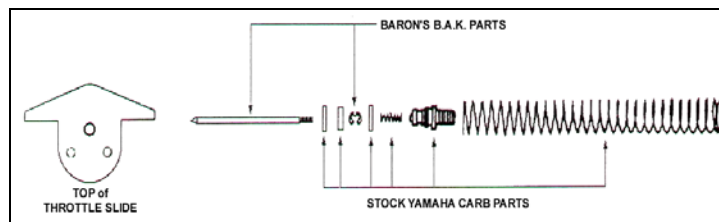
- 167.5 Stock pipes
- 170 Pipes w/ baffles
- 172.5 Pipes w/o baffles

'04~'07 Models

- 170 Stock pipes
- 172.5 Pipes w/ baffles
- 175 Pipes w/o baffles

To install this jet and needle kit:

1. Remove the vacuum slide from the carburetor.
2. Remove the OEM needle, spacer and washers, noting order of assembly.
3. Counting from the top to the bottom, install the new **Baron needle clip on groove #4** of the replacement Baron adjustable needle. The top is the blunt end of the needle.
4. Reinstall the OEM spacer and washers as shown in the figure below.



5. Reinstall the vacuum slide along with the diaphragm spring.
6. Reattach the diaphragm cover back and tighten its screws.

Note: Verify that the slide maintains its full range of movement!

7. Drain the fuel from the float bowl and remove the bowl cover.
8. Remove the OEM main jet and replace it with a Baron's genuine Mikuni main jet. Install the correct main jet as indicated in the chart in the upper right corner of the page.
9. Thoroughly clean the inside of the float bowl prior to reinstalling it.
10. Reassemble the carburetor by reversing the order of step #1 through step #10. Use the new cap head Allen screws in place of the OEM Phillips head screws.

Important! Extra jets have been included in your kit. These will help you fine-tune the carburetors for changing conditions. These conditions include climate and weather patterns in your area as well as exhaust equipment on your motorcycle. Barons determines the jet and clip recommendations that best suit your average riding conditions based upon information supplied to us at the time of your order. Changes in weather, altitude or modifications to your exhaust system may require jets other than those supplied.

11. Locate the fuel mixture screw - it will either be a screw head or a brass plug. If it is a screw head, skip to step #11c. If you see a brass plug with a small hole in the center, proceed as follows:
 - a. With the drill bit, carefully and slowly drill through the fuel mixture plug.

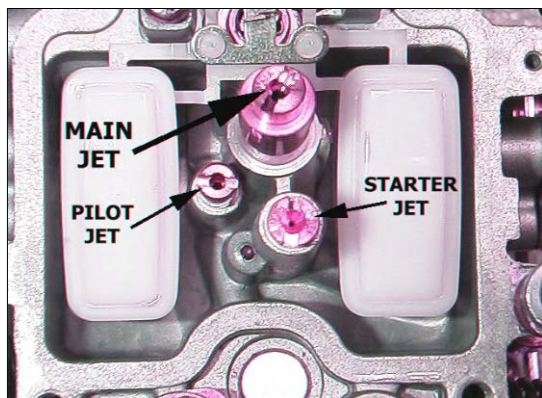
CAUTION: The fuel mixture screw is located directly beneath this plug. Be prepared to stop the drill and remove the bit **the instant** you break through the plug.

- b. Insert the self-tapping sheet metal screw into the drilled hole and remove the plug.
 - c. With air/fuel screw now accessible, use a flat blade screwdriver to turn the screw clockwise until it seats, then carefully turn it counter-clockwise **3 1/2 turns**. Refer to step #16 for assistance in fine-tuning the setting of the air/fuel adjustment screw.
12. Reinstall the carburetor. We strongly suggest that you attach the throttle cables prior to mounting to intake manifold.
13. Reconnect the fuel line, ensuring the clamp is firmly in place.
14. Reinstall all vent hoses and electrical connectors that were previously removed, checking for any obstructions or blockage.
15. Reinstall the OEM air filter assembly or, if you are installing our Big Air Kit (BAK), follow the instructions that accompany that kit and then continue with step #16.

When a BAK is installed, the vent hose that terminated on the rear of the OEM airbox can be located in any safe position that does not kink or pinch it.

Note: It is important to verify proper throttle operation before starting the engine.

16. Verify that the air/fuel adjustment screw has been set to a starting position as described in step #11c, and that the clip has been installed as detailed in step #3. Check the engine at idle speed for any popping or back firing. For best results, we recommend that the engine be adjusted on an Exhaust Gas Analyzer (EGA) to a CO reading between 2% and 3%. If your bike emits black smoke when revving the engine (indicating an over-rich condition), Barons suggests adjusting the carburetor's accelerator pump to a leaner setting by loosening the pump's lower locknut and turning in the adjusting screw one turn. We have found the accelerator pump's factory setting to be too rich on many Road Stars. Refer to Yamaha's shop manual for this adjustment procedure.



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