



**HYPERCHARGER FOR ROAD STAR**

**9420**

**FITS: '99-'04 ROAD STAR 1600 AND 1700 (EX. WARRIOR)**

<b>PART#</b>	<b>INCLUDED</b>
600163	1 Chrome Hypercharger
909420	1 Mounting Kit Containing the Following Seventeen Items:
200100	3 1/4"-20 Nylock Nut
200150	3 1/4"-20 x 5/8" Socket Head Cap Screw – Patched
200373	1 M6 Serrated Flange Nut
200422	4 M4-.7mm x 10mm Socket Head Cap Screw
200450	2 M6-1.0mm x 30mm Socket Head Cap Screw
200486	2 M6-1.0mm x 16mm Socket Head Cap Screw
401162	3 M6 Tapered Bolt Caps
400086	16" 5/32" Vacuum Line
400859	1 3-Way Barbed "T" Fitting
400325	1 90-Degree Elbow
400598	1 Rubber Intake Duct
400811	1 Barbed Connector, 3/8"
401016	1 Main Support Bracket
401018	1 "Z" Bracket
401019	1 "L" Bracket
401025	1 Idle Adjuster Bracket
401042	1 Lower Mounting Bracket
909820	1 Jet Kit Containing the Following Ten Items:
200027	1 .020" Shim
400602	1 #205 Main Jet
401351	1 1.5 Air Bleed
400889	1 #175 Main Jet
401713	1 #182.5 Main Jet
401693	1 #185 Main Jet
401712	1 #187.5 Main Jet
401711	1 1.3 Air Bleed
401710	1 37.5 Pilot Jet
401697	1 1158j-72W Jet Needle with Clips
309420	1 Installation Instruction

**THANK YOU FOR CHOOSING KURYAKYN!**

**DISCLAIMER - Please Read Before Proceeding:**

Any modifications to a motorcycle's exhaust or intake tract require carburetor re-jetting to achieve maximum performance and maintain drivability. If you are uncomfortable with the process of tuning your carburetor, we recommend that you bring your motorcycle to a qualified motorcycle mechanic to have this kit installed. If you choose to attempt this procedure yourself, refer to the carburetor removal, disassembly, reassembly and installation procedures outlined in your Road Star service manual.

-cont.-

**E-MAIL**  
techsupport@kuryakyn.com  
or call 715.247.2983

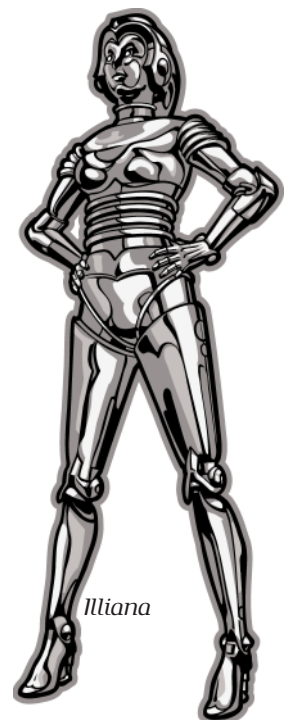
**WARRANTY**  
Kuryakyn™ warrants that any Kuryakyn product sold hereunder, if properly installed, maintained and operated under normal conditions, shall be free from any defects in materials and workmanship for a period of one (1) year from the date the Kuryakyn products are sold to the customer.

**CONSEQUENTIAL DAMAGES:**  
Kuryakyn shall not be liable for any consequential or incidental damages.

**ABOUT OUR CATALOG**  
You'll find all our innovations for H-D, GL and Metric Cruisers in our annual catalogs. Order online today—select the "CATALOGS" icon. Each Kuryakyn™ product comes with a Proof-of-Purchase good for a complimentary catalog. Details in packaging.

Be sure to ask your local dealer about other Kuryakyn products, the motorcycle parts and accessories designed for riders by riders.

©2003 Kuryakyn USA™ All Rights reserved.



The jets included in this kit were selected based on test results with various combinations of components that we felt would represent the majority of the customers purchasing this kit (see Addendum I). However, no two motorcycles are exactly alike. Depending on the individual case, additional jets may need to be purchased from an outside source. Küryakyn warrants the parts included in this kit to be free of defects in materials and workmanship, but makes no claim whatsoever in regard to costs associated with installation or tuning.

## NOTE

Please read each step of the instruction before proceeding with the installation.

## TOOLS SUGGESTED

Standard and Metric hex keys, 7/16" wrench, 12mm wrench, 10mm wrench, 10mm socket and ratchet, #1 Phillips screwdriver, knife or scissors, and a factory service manual for exact year and model in question.

## PROCEDURE

**STEP 1** Remove the seat, fuel tank, and OEM air cleaner assembly. Disconnect the hoses connected to the air cleaner while leaving them connected to the motorcycle. Save the clamp that secures the air duct to the carburetor and the OEM fasteners used to secure the stock air cleaner assembly to the motorcycle as some will be reused.

**STEP 2** Remove the carburetor according to the section in your Road Star factory service manual that outlines procedures for carburetor removal, disassembly, reassembly and installation.

Now is a good time to proceed with re-jetting the carburetor. We have supplied jets to cover many common configurations. For jet locations and jetting recommendations with various exhaust combinations see Addendum I. Since the OEM screws retaining the float bowl are easily damaged, we have included replacement M4 socket head cap screws to replace them, if necessary.

**STEP 3** Insert the rubber intake duct into the main support bracket as shown in [PIC.1](#). The rubber nipple should be pointing toward the longest leg of the bracket.

**STEP 4** With a 1/8" hex key, remove the four button head screws securing the trap door (round cover) to the face of the Hypercharger then remove the trap door and its gasket.

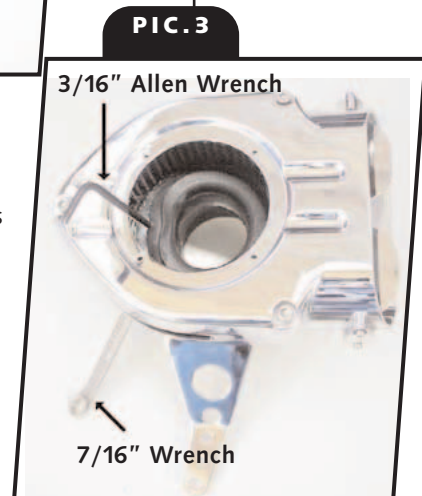
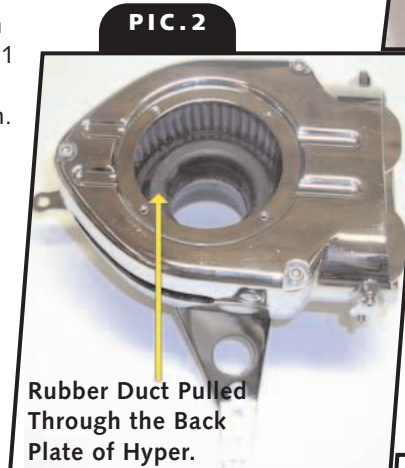
**STEP 5** Insert the rubber intake duct into the Hypercharger in the same fashion it was installed in the main support bracket. See [PIC.2](#). You may need to use a screwdriver to help "poke" the flange of the Rubber Intake Boot into position inside the Hypercharger.

**STEP 6** Line up the three holes in the back plate of the Hypercharger and the three holes in the flange of the rubber intake duct with the three holes in the main support bracket. Insert the three supplied 1/4"-20 X 5/8" socket head cap screws from inside the Hypercharger and secure on the back side of the main support bracket with the 1/4"-20 thin nylock nuts. You will need to pull back the inner flange of the rubber intake duct to access the holes. Hold the nylock nuts with a 7/16" wrench as you tighten the socket head cap screws with a 3/16" hex key. Be careful not to over tighten and cause the rubber intake duct to pucker around the nylock nuts. See [PIC.3](#).

PAGE

2

-cont.-



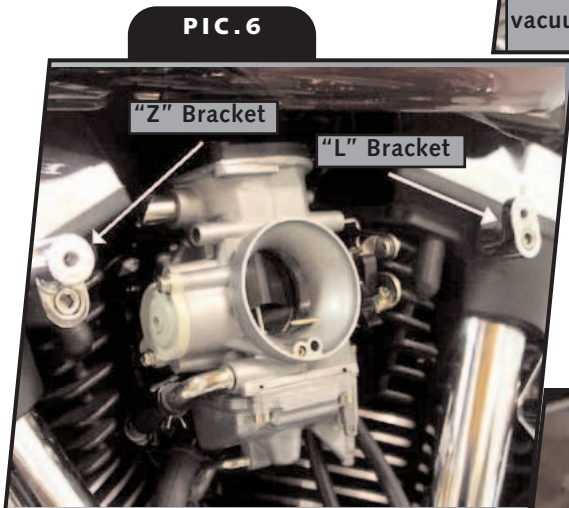
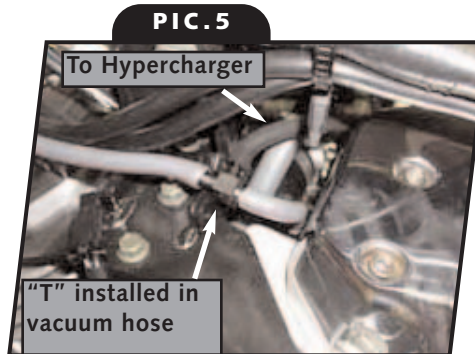
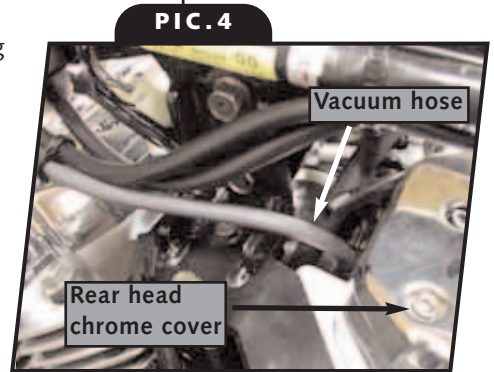
**STEP 7** Reinstall the trap door with its gasket on the Hypercharger.

**STEP 8** Install the supplied 90-degree barbed fitting into on the back side of the Hypercharger. The hole is located on the rearward (tapered) end of the air cleaner. Thread the fitting in until the hex portion of the fitting is about 1/8" from contacting the surface.

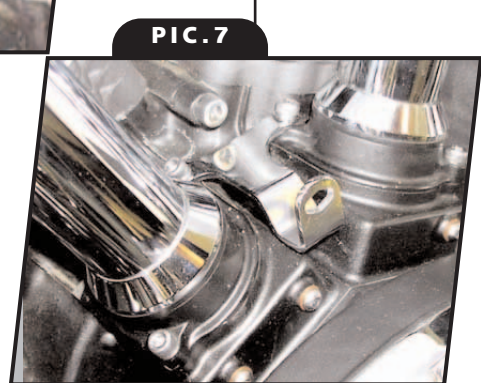
**STEP 9** Tap into the vacuum source by cutting the vacuum line shown in [PIC.4](#). This line comes from the top of the intake manifold near the rear cylinder head on the left side of the bike. Install the supplied "T" fitting as shown in [PIC.5](#). Connect the supplied 16" length of 5/32" vacuum line to the 3rd leg of the "T" fitting. This section of line will be routed to the Hypercharger in a later step.

**STEP 10** Place the OEM clamp removed in [STEP 1](#) on the end of the rubber intake duct in the same manner it was installed on the OEM air duct.

**STEP 11** Loosely install the "Z" Bracket to the rear cylinder head and the "L" bracket to the front cylinder head using the supplied M6 X 1.0 X 30mm socket head cap screws. See [PIC.6](#).



Their position may need to be adjusted slightly when the air cleaner is installed so do not tighten them fully at this time.



**STEP 12** Install the chrome lower support bracket as shown in [PIC.7](#) using the OEM hardware. If necessary, tweak the bracket upward slightly so it does not contact the engine case.

**STEP 13** Hold the Hypercharger and support bracket assembly up to the bike.

- Slip the rubber intake duct with the OEM clamp onto the carburetor.
- Loosely fasten at the top two legs of the "Y" bracket to the "Z" and "L" brackets. Use the supplied M6 X 1.0 X 16mm Socket Head Cap Screws and the supplied Tapered Bolt Caps as seen in [PIC.8](#).

-cont.-

- Loosely fasten the lower leg of the "Y" bracket and idle speed adjuster bracket using the supplied Tapered Bolt Cap and the M6 serrated nut with the OEM fastener. See [PIC.9](#).

It may be necessary to slightly adjust the position of the "Z" and "L" brackets in order to line up all mounting points.

**STEP 14** Once all fasteners are in place, fully tighten the lower leg of the main mounting bracket, the two fasteners that hold the "Z" and "L" brackets to the cylinder heads, and the two fasteners that hold the main mounting bracket to the "Z" and "L" brackets. Tighten the OEM clamp securing the rubber intake duct to the carburetor.

**NOTE** To tighten the "L" bracket to the front cylinder head, it may be necessary to momentarily remove the main mounting bracket from the "L" bracket to allow access to the M6 x 1.0 x 30mm socket head cap screw securing the "L" bracket to the head.

**STEP 15** Connect all hoses. You may need to refer to the Yamaha Road Star factory service manual.

- The 3/8" I.D. hose is your crankcase breather hose. Insert one end of the 3/8" barbed connector into this hose and then plug it into the large rubber nipple on the bottom of the rubber intake duct.
- Connect the float bowl vent hose from the carburetor to the plastic 90-degree fitting you installed in STEP 8.
- Route the vacuum line connected to the "T" fitting installed in STEP 9 to the vacuum nipple located at the bottom of the vacuum pod on the back of the Hypercharger.

**STEP 16** Reinstall fuel tank and seat.

**STEP 17** Start it up! The butterflies should be completely open when the bike is not running, closed and fluttering when the bike is idling and will open momentarily then close again if the throttle is blipped with the bike in neutral.

## **ADDENDUM I**

The jets included in this kit were selected based on test results with various combinations of components that we felt would represent the majority of the customers purchasing this kit. However, no two motorcycles are exactly alike. Depending on the individual case, additional jets may need to be purchased from an outside source. The following recommendations are intended as a starting point and should work well in the majority of cases. Individual bikes may need additional tuning to achieve maximum performance. If the exact combination is not listed, choose the listing that most closely resembles the configuration of the motorcycle. These baselines were established at 700 feet above sea level.

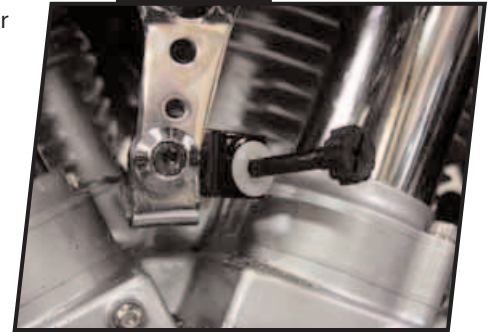
### **SETTING THE PILOT MIXTURE SCREW**

While the carburetor is removed for re-jetting, remove the pressed-in plug covering the pilot mixture screw and as a starting point, set the PMS two turns out from lightly bottomed.

Once the bike is completely reassembled, start it and allow the engine to reach normal operating temperature. The engine should idle on its own without the enrichener. Search for the highest idle speed by slowly turning the PMS inward and outward; there will be a small range where idle speed is maximized. Once the highest idle speed has been located, turn the PMS inward ever so slowly until the idle begins to drop then back it out just enough to make the idle speed pick back up. You have now located the ideal PMS setting.

-cont.-

**PIC. 9**



## ROAD STAR 1700 WITH HYPERCHARGER AND STOCK EXHAUST:

Main Jet	185
Needle	1158j-72W (clip in 4th groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

## ROAD STAR 1700 WITH HYPERCHARGER AND COBRA SLIP-ON MUFFLERS:

Main Jet	175
Needle	1158j-72W (clip in 3rd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

## ROAD STAR 1700 WITH HYPERCHARGER AND HARD KHROME STAGGERED STRAIGHTS:

Main Jet	182.5
Needle	1158j-72W (clip in 2nd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

## ROAD STAR 1700 WITH HYPERCHARGER AND COBRA LO-BOYS STAGGERED DUALS:

Main Jet	182.5
Needle	1158j-72W (clip in 2nd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

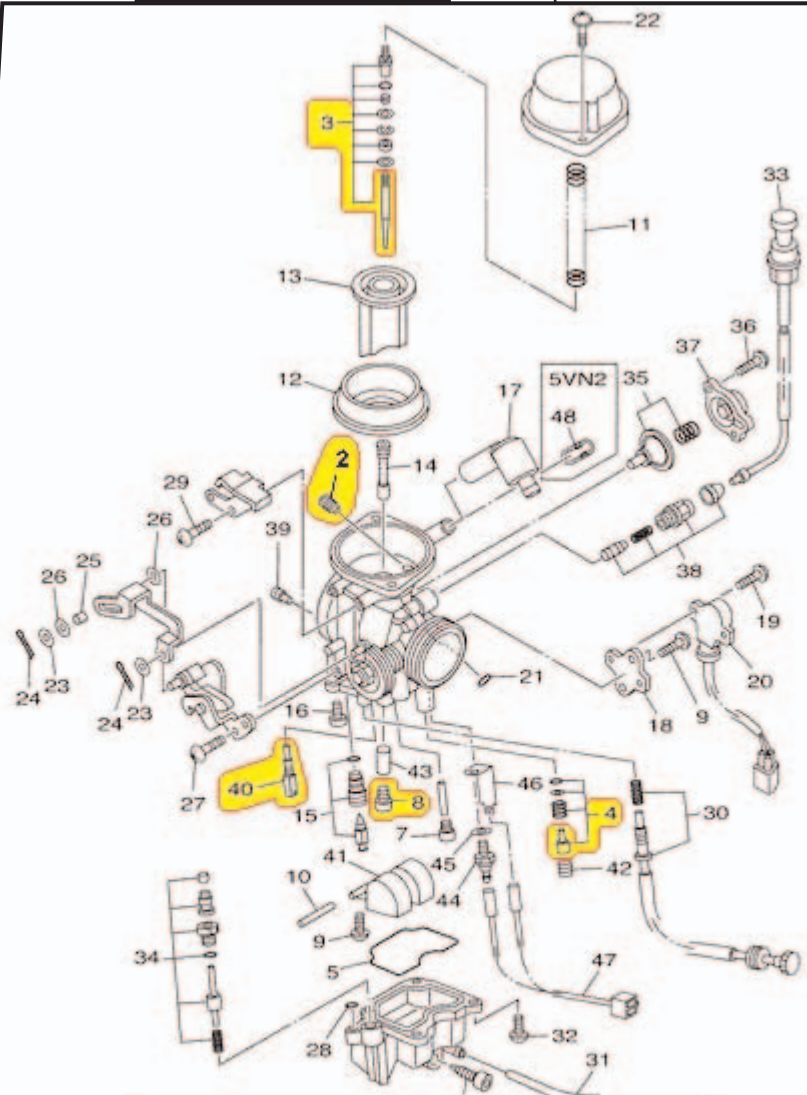
## ROAD STAR 1600 WITH HYPERCHARGER:

(These items are in a separate, small poly bag inside the jet kit)

Main Jet	205
Needle	Add one .020" shim to raise needle
Pilot Air Bleed	1.5

*Ride On!*

FIG. 1



# 2 = Pilot Air Bleed  
 # 3 = Needle  
 # 4 = Pilot Mixture Screw  
 # 8 = Main Jet  
 #40 = Pilot Jet