



INSTALLATION

HYPERCHARGER for YAMAHA

9420

PARTS INCLUDED

- 1 Hypercharger Including:
- 1 Dual Velocity Ring (**not used**)
- 1 Round Hyper Filter
- 1 Yamaha Roadstar Mounting Kit Including:
 - 3 1/4"-20 Nylock Nut
 - 3 1/4"-20 x 5/8" Socket Head Cap Screw — Patched
 - 1 M6 Serrated Flange Nut
 - 4 M4-.7mm x 10mm Socket Head Cap Screw
 - 2 M6-1.0mm x 30mm Socket Head Cap Screw
 - 2 M6-1.0mm x 16mm Socket Head Cap Screw
 - 3 M6 Tapered Bolt Caps
 - 1 16" 5/32" Vacuum Line
 - 1 3-Way Barbed "T" Fitting
 - 1 90-Degree Elbow
 - 1 Rubber Intake Duct
 - 1 Barbed Connector, 3/8"
 - 1 Main Support Bracket
 - 1 "Z" Bracket
 - 1 "L" Bracket
 - 1 Idle Adjuster Bracket
 - 1 Lower Mounting Bracket
- 1 Jet Kit Containing:
 - 1 .020" Shim
 - 1 205 Main Jet
 - 1 1.5 Air Bleed
 - 1 175 Main Jet
 - 1 182.5 Main Jet
 - 1 185 Main Jet
 - 1 187.5 Main Jet
 - 1 1.3 Air Bleed
 - 1 37.5 Pilot Jet
 - 1 1158j-72W Jet Needle with Clips
- 1 Installation Instructions

NOTE: NOT ALL OF THE ABOVE PARTS WILL BE USED.

Please read and understand entire instructions before starting installation.

THANK YOU FOR CHOOSING KÜRYAKYN!

IN ORDER TO PROTECT YOU AND OTHERS FROM POSSIBLE INJURY AND/OR PROPERTY DAMAGE OR LOSS, PLEASE PAY CLOSE ATTENTION TO ALL INSTRUCTIONS, WARNINGS, CAUTIONS AND ATTENTION NOTES REGARDING THE USE AND CARE OF THIS PRODUCT.

WARNING! THIS INDICATION ALERTS YOU TO THE FACT THAT IGNORING THE CONTENTS DESCRIBED HEREIN CAN RESULT IN POTENTIAL DEATH OR SERIOUS INJURY.

ATTENTION! This indication alerts you to the fact that ignoring the contents described herein may negatively affect product performance and functionality.

CAUTION! This indication alerts you to the fact that ignoring the contents described herein can result in potential injury or material damage.

TOOLS SUGGESTED

Set of Metric and Standard Hex Wrenches, Set of Metric Combination Wrenches, Phillips Screwdriver, Metric Socket Set and Ratchet



CUSTOMER SERVICE

877.370.3604 (toll free)

INSTALLATION QUESTIONS

techsupport@kuryakyn.com
or call 715.247.2983

LIMITED WARRANTY

Kuryakyn warrants that any Kuryakyn products sold hereunder, shall be free of defects in materials and workmanship for a period of one (1) year from the date of purchase by the consumer excepting the following provisions:

- Kuryakyn shall have no obligation in the event the customer is unable to provide a receipt showing the date the customer purchased the product(s).
 - The product must be properly installed, maintained and operated under normal conditions.
 - Kuryakyn makes no warranty, expressed or implied, with respect to any gold plated products.
 - Kuryakyn shall not be liable for any consequential and incidental damages, including labor and paint, resulting from failure of a Kuryakyn product, failure to deliver, delay in delivery, delivery in nonconforming condition, or for any breach of contract or duty between Kuryakyn and a customer.
- Kuryakyn products are often intended for use in specific applications. Kuryakyn makes no warranty if a Kuryakyn product is used in applications other than intended.
- Kuryakyn electrical products are warranted for one (1) year from the date of purchase by the consumer. L.E.D.'S contained in components of Kuryakyn products will be warranted for defects in materials and workmanship for 3 years from the date of purchase where as all other components shall be warranted for one(1) year. This includes, but is not limited to; control modules, wiring, chrome & other components.

• Kuryakyn makes no warranty of any kind in regard to other manufacturer's products distributed by Kuryakyn. Kuryakyn will pass on all warranties made by the manufacturer and where possible, will expedite the claim on behalf of the customer, but ultimately, responsibility for disposition of the warranty claim lies with the manufacturer.

ABOUT OUR CATALOG

For purchasing Kuryakyn® products, you can receive a complete catalog free of charge.

Send the Proof-of-Purchase below with your address to: Kuryakyn, P.O. Box 339, Somerset, WI 54025.

Please indicate either Accessories Catalog for Harley-Davidson® or GL & Metric Cruisers.

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

©2005 Kuryakyn USA® All Rights reserved.



STRICTLY OBSERVE THE FOLLOWING GUIDELINES IN ORDER TO USE THE PRODUCT PROPERLY AND AVOID POTENTIALLY DANGEROUS ACCIDENTS.

STEP 1 Read and understand all steps in the instructions before starting the installation. Park the motorcycle on a hard, level surface and turn off the ignition. Let cool.

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. 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.

WARNING! YOU WILL BE WORKING AROUND THE ENGINE AND EXHAUST SYSTEM DURING INSTALLATION. ENSURE THAT THE ENGINE AND EXHAUST SYSTEM HAVE FULLY COOLED TO PREVENT INJURY.

ATTENTION! A factory service manual may be helpful in performing this installation. Do not attempt to perform this installation if you are not confident in your ability to complete all of the steps in the procedure; consult a trained technician.

CAUTION! The installation of any high performance exhaust system can cause a "lean" fuel/air mixture. A "lean" fuel/air mixture can cause engine overheating resulting in severe engine damage. Küryakyn recommends rejetting carbureted bikes.

STEP 2 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.

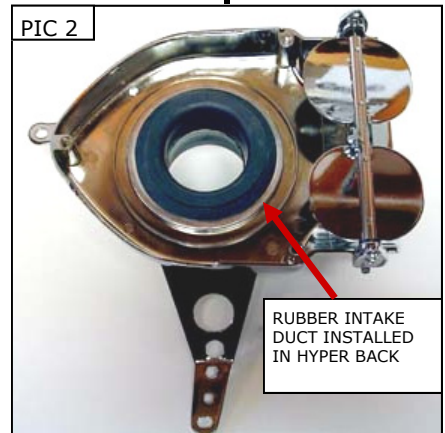
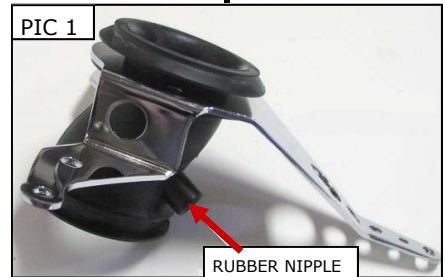
STEP 3 Remove the carburetor according to the section in your Road Star factory service manual that outlines procedures for carburetor removal, disassembly, reassembly and installation.

NOTE: 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.

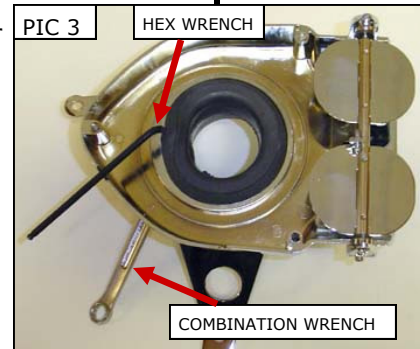
STEP 4 Insert the rubber intake duct into the main support bracket as shown in PIC.1. The rubber nipple should be pointing toward the longest leg of the bracket.

STEP 5 With a hex wrench, 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 6 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.



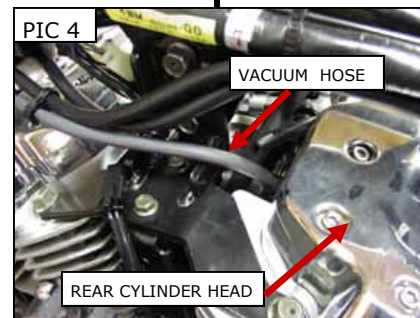
STEP 7 Line up the three holes in the back plate of the Hypercharger and the three holes in the flange of the rubber intake duct with the three holes in the main support bracket. Insert the three supplied 1/4"-20 x 5/8" socket head cap screws from inside the Hypercharger and secure on the back side of 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 an open end wrench as you tighten the socket head cap screws with a hex wrench. **Be careful not to over tighten and cause the rubber intake duct to pucker around the nylock nuts.** See PIC.3.



STEP 8 Reinstall the trap door with its gasket on the Hypercharger.

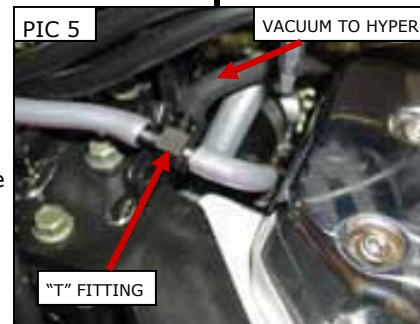
STEP 9 Install the supplied 90-degree barbed fitting into on the back side of the Hypercharger. The hole is located on the rearward (tapered) end of the air cleaner. Thread the fitting in until the hex portion of the fitting is about 1/8" from contacting the surface.

STEP 10 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 (sitting on bike) 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 11 Place the OEM clamp removed in STEP 2 on the end of the rubber intake duct in the same manner it was installed on the OEM air duct.

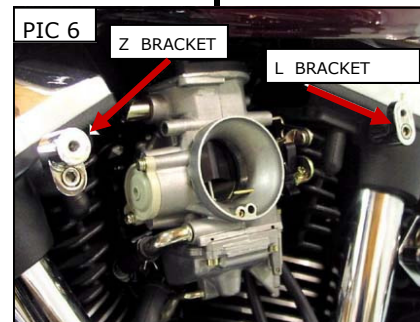
STEP 12 Loosely install the "Z" Bracket to the rear cylinder head and the "L" bracket to the front cylinder head using the supplied M6 x 1.0 x 30mm socket head cap screws. See PIC.6. Their position may need to be adjusted slightly when the air cleaner is installed so do not tighten them fully at this time.



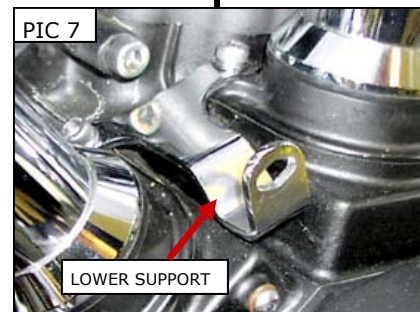
STEP 13 Install the chrome lower support bracket as shown in PIC.7 using the OEM hardware. If necessary, tweak the bracket upward slightly so it does not contact the engine case.

STEP 14 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.
- 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 15 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 16

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 17

Reinstall fuel tank and seat.

STEP 18

Double check the tightness of all related fasteners, check for hose clearance and check throttle for correct operation, making sure it returns properly, before starting bike. 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.



ATTENTION! It is the installer's responsibility to ensure that all of the fasteners (including pre-assembled) are tightened before operation of the motorcycle. Küryakyn will not issue a warranty on components lost due to improper installation. Periodic maintenance may be required.

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.

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

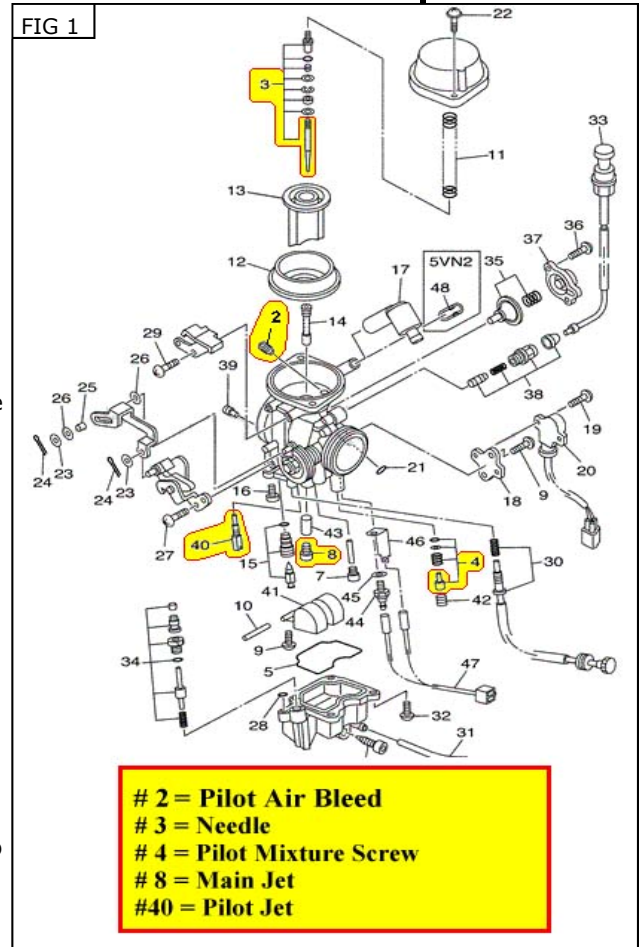
ROAD STAR 1700 WITH HYPERCHARGER AND COBRA SLIP-ON MUFFLERS:

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 LOBOYS 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 (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!