**TRAILER HITCH FOR VICTORY VISION**

# Trailer Hitch Installation Instructions

**READ ALL INSTRUCTIONS BEFORE YOU START**

**ATTENTION INSTALLER: THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER!!!**

**VICTORY MOTORCYCLES, POLARIS INDUSTRIES, AND/OR ANY AFFILIATE OR**

**SUBSIDARY HAS NEITHER APPROVED OR ENDORSED *BUSHTEC* MFG. & SALES**

**INC., ITS PRODUCTS, TRAILERS OR HITCHES. USE OF A TRAILER OR TRAILER**

**HITCH ON ANY MOTORCYCLE COULD VOID YOUR WARRANTY AND MAY INCREASE YOUR CHANCES OF INJURY OR DEATH IN AN ACCIDENT SITUATION.**

Important information is distinguished by the following notation:

***NOTE:*** Provides key information to make procedures easier and clearer.

***CAUTION:*** Indicates special procedures that must be followed to avoid damage to the motorcycle, trailer or accessories.

***WARNING:*** Indicates special procedures that must be followed to avoid serious injury and/or death to a motorcycle operator or others.

***WARNING:* THIS HITCH SYSTEM HAS BEEN EXCLUSIVELY DESIGNED FOR USE ONLY**

**ON A STOCK VICTORY VISION WITH STOCK EXHAUST. IT WILL NOT WORK ON ANY**

**OTHER MOTORCYCLE. ANY MODIFICATION TO ANY PART OF THIS HITCH,**

**INCLUDING BUT NOT LIMITED TO ALTERING THE SUPPLIED HARDWARE OR IMPROPER INSTALLATION COULD CAUSE INJURY OR DEATH AND IMMEDIATELY VOIDS ANY AND ALL WARRANTIES.**

***WARNING:*** **INSTALLATION OF THE HITCH SYSTEM SHOULD BE**

**PERFORMED BY A QUALIFIED MECHANIC. THESE INSTALLATION PROCEDURES ARE ONLY A GUIDE AND SHOULD BE USED IN CONJUNCTION WITH THE FACTORY SERVICE MANUAL AND THE NECESSARY MECHANICAL SKILLS.**

***WARNING:*** **THE END USER OF THIS PRODUCT ASSUMES ALL LIABILITY AND**

**RESPONSIBILITIES THAT MAY ARISE DUE TO BUT NOT LIMITED TO, NEGLIGENCE FROM IMPROPER INSTALLATION OR USE, INCLUDING OVERLOADING, EXCEEDING THE RECOMMENDED LOAD LIMITS AND IMPROPER MAINTENANCE.**

***WARNING:*** **ALL HITCH HARDWARE SHOULD BE CHECKED PRIOR TO EACH USE.**

 **FAILURE TO DO SO COULD RESULT IN INJURY OR DEATH.**

HITCH SYSTEM CONTENTS FOR VICTORY VISION

1 Left Side Arm Hardware Package Including:

|  |  |
| --- | --- |
| 1 Right Side Arm  | 4 8mm-1.25 x 30mm Hex Bolt  |
| 1 Center Section  | 2 8mm-1.25 x 35mm Hex Bolt  |
| 1 Strut Mount Plate  | 2 8mm-1.25 Nylock Nut  |
| 2 Struts 108 (flat)  | 4 ¼” Flat Washer  |
| 2 Short Support Struts  | 2 3/8”-16 x ¾” Hex Bolt Gr. 8  |
| 2 Z Tabs (flat stock with 90 degree  | 10 3/8”-16 x 1” Hex Bolt Gr. 8  |
|  tabs on each end)  | 2 3/8”-16 x 1 ¼” Hex Bolt Gr. 8  |
| 1 Vertical Receiver Hitch Head with  | 12 3/8”-16 Nylock Nut  |
|  EITHER 1 7/8 inch SS ball OR  | 1 85” Relay Power Wire Extension  |

 Pin and Lock (16 Ga. Red and Black Wires)

1 Receiver Lock 1 Yellow Butt Connector

1 EC Electronic Relay Isolator 7 Blue Butt Connector Package with Universal Subharness

**Recommended for installation (not included):**

**5 foot Bike Side Harness**

***CAUTION:* THESE STEPS MUST BE PERFORMED IN THE FOLLOWING ORDER. A SECOND PERSON SHOULD BE PRESENT TO ASSIST WITH SEVERAL OF THE FOLLOWING STEPS, INCLUDING BUT NOT LIMITED TO REMOVAL OF TRUNK.**

***NOTE:* DUE TO THE QUANTITY OF HARDWARE TO BE REMOVED, IT IS**

**RECOMMENDED THAT HARDWARE BE BAGGED AND LABELED AS REMOVED TO ASSURE ITS PROPER REINSTALLATION. USE OF A DIGITAL CAMERA IS ALSO RECOMMENDED TO ASSIST WITH PROPER REASSEMBLY OF COMPONENTS.**

1. Place motorcycle on level ground on side stand.
2. Empty both saddlebags and trunk of any contents and set aside.
3. Open left saddlebag and inflate rear suspension to 70 psi. This will allow maximum clearance between tire and installed components.
4. Remove panel between front of seat and dash. Refer to owner’s manual.
5. Remove two (2) Allen head bolts and washers securing seat at front. Carefully remove seat by lifting front and pulling forward. If equipped with heated seat, unplug harness at rear of seat before lifting seat away. Refer to owner’s manual.
6. Remove license plate from mount and remove two (2) Allen head screws securing license plate mount. Set aside.
7. On touring model, remove trunk. Unplug trunk wiring harness under rear of seat forward of cast trunk base. Remove two (2) small Allen head screws securing plastic cover to front of trunk below passenger backrest to access additional plugs. Note proper

Connection points on switches. If equipped with CB, unplug additional harnesses to allow for removal of trunk.

***NOTE:* IF CB COAXIAL CABLE CAN NOT BE DISCONNECTED, USE SLACK TO SET TRUNK ALONG SIDE OF BIKE, FORWARD OF RIDER FLOORBOARD. THIS MAY REQUIRE CUTTING WIRE TIES TO FREE CABLE. CHECK THIS BEFORE REMOVING BOLTS SECURING TRUNK.**

Open trunk lid and remove snap panel in floor of trunk. Remove four (4) Hex head bolts securing cast trunk base to frame. Carefully lift and set out of the way.

On the Street model, remove the cover over the trunk mount. Refer to owner’s manual.

***CAUTION*: HAVE A SECOND PERSON ASSIST WITH TRUNK REMOVAL TO ASSURE THAT ALL PLUGS ARE REMOVED AND THAT THE TRUNK DOES NOT HIT ANY OTHER PARTS OF THE MOTORCYCLE TO AVOID DAMAGE.**

1. Open the left and right saddlebags. Remove the plastic panel surrounding the taillights. This panel is held in place by locking tabs at the corners and in the middle of each section. There are four (4) tabs on each outer edge, three (3) in between the taillights with two (2) at the top and one (1) at the bottom. Support the panel around the tab and pull up firmly. Refer to service manual.

***CAUTION:* DO NOT PULL ON THE EDGE OF PANEL WHEN DISENGAGING THE TABS**

**WITHOUT SUPPORTING THE PANEL AROUND THE TAB. THIS CAN RESULT IN BREAKING OF THE TAB OR THE TAB LOCK AND DAMAGE TO THE PANEL REQUIRING REPLACEMENT.**

1. Remove the silver panel at the rear of the bike between the exhaust and below the taillights. This is held in place by six (6) Allen head screws (one (1) to the outside of each taillight, one (1) above each muffler on the side, and two (2) on the underside of the panel behind the tire).
2. Open the right saddlebag and remove the six (6) Hex bolts securing the saddlebag lid to the hinges, three (3) front and three (3) rear. Set aside. Open the left saddlebag and remove the six (6) Hex head bolts securing the saddlebag lid to the hinges, three (3) front and three (3) rear. Set aside.
3. Remove the two (2) plastic rivets behind the rear cylinder exhaust securing the left and right halves of the brushed under seat panel together. Pull out on the center post and then pull the rivet out of the hole. Remove both rivets and set aside. Remove the right side of the brushed under seat panel. Pull out on the rear where the tab passes through a grommet in the forward portion of the inner saddlebag. Pull out at the front where the tab on the upper motor mount passes through a grommet on the panel. Pull out on the brushed panel to disengage the lower tabs from the lower saddlebag panel while supporting the lower saddlebag panel. Remove and set aside. Repeat for the left side panel and set aside. Refer to service manual.
4. Remove the right side lower saddlebag panel that sits just above the right muffler. Remove the five (5) Allen head screws along the top edge of the panel. Disengage the three (3) tabs (one (1) at front- pull back and out, one (1) at rear- pull out, and one (1) just below the back edge of the front saddlebag lid hinge- pull out) by supporting the panel from behind and pulling outward. Set aside. Repeat for the left side. Set aside.
5. Along the bottom of the right inner saddlebag, remove the two (2) Nylock nuts, large flat washers, and rubber grommets securing the muffler hangers. Remove the four (4) Hex head bolts securing the inner saddlebag to the taillight surround plastic. Remove the one (1) Hex head bolt at rear of inner saddlebag just below the bottom bolt previously removed- it is in a small recess. Remove two (2) Hex head bolts just behind the rear hinge. Remove the one (1) Allen screw rearward of the pushbutton release for the saddlebag lid securing the plastic under the passenger handle to the inner saddlebag. Remove the two (2) Hex head bolts securing the pushbutton and the two (2) Hex head bolts securing the latch. Remove the pushbutton and latch and set aside. Do not disconnect the cable. Remove the two (2) Hex head bolts at the top of the inner saddlebag below the passenger handle- these were previously hidden by the push button and latch. Remove the two (2) Hex head bolts in the recess pocket at front of the inner saddlebag. Remove the one (1) Hex head bolt just forward of the front saddlebag lid hinge. Remove one (1) Hex head bolt from inside of inner saddlebag cavity. Remove the wire clip at the front securing the wire harness to the inner saddlebag. Pull the inner saddlebag away from the frame at the front and remove the two (2) Hex head bolts securing the relays to the inside front of the inner saddlebag. Slide forward, pull out and remove the inner saddlebag and set aside. Remove the two (2) remaining rubber grommets and flat washers on the muffler hanger studs.

***CAUTION:* THE INNER SADDLEBAG SHOULD REMOVE WITH LITTLE OR NO RESISTANCE WHEN ALL BOLTS ARE REMOVED. IF THE INNER SADDLEBAG DOES NOT REMOVE EASILY, CHECK FOR ANY MISSED BOLTS AND REMOVE.**

1. Along the bottom of the left inner saddlebag, remove the two (2) Nylock nuts, large flat washers, and rubber grommets securing the exhaust hanger. Remove the four (4) Hex head bolts securing the inner saddlebag to the taillight surround plastic. Remove the one (1) Hex head bolt at rear of inner saddlebag just below the bottom bolt previously removed- it is in a small recess. Remove two (2) Hex head bolts just behind the rear hinge. Remove the one (1) Allen screw rearward of the pushbutton release for the saddlebag lid securing the plastic under the passenger handle to the inner saddlebag. Remove the two (2) Hex head bolts securing the pushbutton and the two (2) Hex head bolts securing the latch. Remove the pushbutton and latch and set aside. Do not disconnect the cable. Remove the two (2) Hex head bolts at the top of the inner saddlebag below the passenger handle- these were previously hidden by the push button and latch. Remove the two (2) Hex head bolts in the recess pocket at front of the inner saddlebag. Remove the one (1) Hex head bolt just forward of the front saddlebag lid hinge. Remove one (1) Hex head bolt from inside of inner saddlebag cavity. Remove the wire clip at the front securing the wire harness to the inner saddlebag. Pull the inner saddlebag away from the frame at the front and remove the nut securing the air fitting to the inner saddlebag. Pull fitting through inner saddlebag. Pull wire harness and grommet in forward pocket of inner saddlebag through hole toward frame. Slide forward, pull out and remove the inner saddlebag and set aside. Remove the two (2) remaining rubber grommets and flat washers on the muffler hanger studs.

***CAUTION:* THE INNER SADDLEBAG SHOULD REMOVE WITH LITTLE OR NO RESISTANCE WHEN ALL BOLTS ARE REMOVED. IF THE INNER SADDLEBAG DOES NOT REMOVE EASILY, CHECK FOR ANY MISSED BOLTS AND REMOVE.**

1. Locate the two (2) Hex head bolts on the trunk mounting pad area of the rear frame above the taillights. Remove these bolts and replace with two (2) supplied 8mm-1.25 x 35mm Hex head bolts and two (2) 1/4 inch flatwashers. Install with green or blue threadlock and tighten to factory specifications. Refer to service manual.
2. Install strut mount plate on underside of rear frame using the two (2) 8mm-1.25 x 35mm

Hex head bolts installed in step 15, two (2) additional 1/4 inch flat washers and two (2) 8mm-1.25 Nylock nuts and tighten until snug. The strut tab holes should be offset toward the rear of the motorcycle.

***NOTE:* PRIOR TO INSTALLING THE RIGHT SIDE ARM, BUSHTEC RECOMMENDS**

**RUNNING THE ELECTRICAL HARNESS THROUGH THE TUBE ALLOWING**

**ENOUGH SLACK TO PLACE THE HARNESS PLUG END IN THE MIDDLE OF THE CENTER SECTION AND ACCESSIBLE NEAR THE HITCH HEAD. YOU CAN ADJUST FOR SLACK ONCE THE INSTALLATION IS COMPLETE.**

1. Locate the forward casting on the right side that supports the passenger board mount and tipover pad. Just behind this are two (2) Hex head bolts with flat washers. Remove these bolts and remove the flat washers. Install the factory flat washers onto two (2) of the supplied 8mm-1.25 x 30mm Hex head bolts. Place the right side hitch arm with the long arm running parallel to and just above the muffler and the short arm toward the front of the motorcycle pointing upward. The holes in the plate on the short arm should align with the holes that the bolts were removed from previously. Install the two (2) 8mm-1.25 x 30mm Hex head bolts with flat washers to secure the right side hitch arm. Do not tighten.

***NOTE:* A RAG MAY BE USED TO SPACE THE ARM OFF OF THE MUFFLER AND AVOID SCRATCHING THE FINISH.**

***NOTE:* IT MAY BE NECESSARY TO CUT FLAT SIDES ON THE WASHERS TO CLEAR THE GUSSET WELDS. THE WASHER MUST SIT FLUSH AGAINST THE BRACKET BEHIND THE BOLT HEAD.**

1. Locate the forward casting on the left side that supports the passenger board mount and tipover pad. Just behind this are two (2) Hex head bolts with flat washers. Remove these two (2) bolts and remove the flat washers. Install the factory flat washers onto two (2) of the supplied 8mm-1.25 x 30mm Hex head bolts. Place the left side hitch arm with the long arm running parallel to and just above the muffler and the short arm toward the front of the motorcycle pointing upward. The holes in the plate on the short arm should align with the holes that the bolts were removed from previously. Install the two (2) 8mm-1.25 x 30mm Hex head bolts with flat washers to secure the left side hitch arm. Do not tighten.

***NOTE:* IT MAY BE NECESSARY TO CUT FLAT SIDES ON THE WASHERS TO CLEAR THE GUSSET WELDS. THE WASHER MUST SIT FLUSH AGAINST THE BRACKET BEHIND THE BOLT HEAD.**

1. Place the center section with the receiver tube between the two hitch side arms with the plates on the center section on top of the corresponding mount plates of the right and left hitch side arms. Install six (6) of the supplied 3/8-16 x 1 inch Hex bolts down through the holes and secure with six (6) each of the Nylock nuts provided. Do not tighten.
2. Install the long flat support strut on the right side from the support bracket on the underside of the frame above the tire to the upper side hole in the center section, outboard of the receiver tube. The strut should sit on the outside of the two mount points away from the rear tire. Use two (2) of the supplied 3/8-16 x 1 inch Hex bolts and two (2) 3/816 inch Nylock nuts. Do not tighten. Repeat for the left side.
3. Install one end of the short support strut to the threaded boss on the right side hitch arm using one (1) 3/8-16 x ¾ inch Hex bolt using green or blue thread lock.

Place one (1) 3/8-16 x 1 ¼ inch Hex bolt through the lower hole in the center section, outboard of the receiver tube and below the flat strut mount from inside out, then through the other end of the short support strut, then through the end of the Z tab with 3/8 inch hole and secure with one (1) 3/8-16 inch Nylock nut provided. End of Z Tab not secured should face toward muffler and will be secured in next step. Do not tighten. Repeat for the left side.

1. On the right side, remove the Hex bolt securing the inside of the muffler at rear to the factory rear support plate below the taillight assembly. Install factory bolt through hole in Z Tab and thread into muffler. Do not tighten. Repeat for the left side.

***NOTE:* REASSEMBLY MAY BE MADE EASIER BY LEAVING THE Z TAB OFF**

**UNTIL REASSEMBLY OF THE MOTORCYCLE IS COMPLETE. THE Z TAB MAY CAUSE THE FACTORY REAR SUPPORT PLATE TO SHIFT AND MAKE ALIGNMENT OF HOLES FOR THE SADDLEBAGS MORE DIFFICULT.**

1. Once all parts are in place, center the receiver tube on the rear tire and tighten in the following order (it is recommended that a helper hold the receiver tube on the center of the tire while you tighten the hardware);

 Two (2) 8mm-1.25 x 35 Hex bolts and Nylock nuts securing Strut plate to underside of rear frame



 Four (4) 8mm-1.25 x 30mm Hex bolts, two (2) each side securing left and right hitch side arms to frame



 Six (6) 3/8-16 x 1 inch Hex bolts and Nylock nuts securing center section to side arms



 Four (4) 3/8-16 x 1 inch Hex bolts and Nylock nuts securing top and bottom of long flat struts



Two (2) 3/8-16 x ¾ inch Hex bolts securing short strut to hitch side arm





Two (2) 3/8-16 x 1 inch Hex bolts and Nylock nuts securing short strut and Z tab to center section

 Two (2) factory Hex bolts securing Z tab and factory rear support plate muffler.



Installation of the trailer hitch is now complete. Refer to service manual for reassembly procedure and torque specifications.

***CAUTION:* REFER TO SERVICE MANUAL FOR TORQUE SPECIFICATION DURING REASSEMBLY. DO NOT OVERTIGHTEN BOLTS AS PARTS CAN BE BROKEN REQUIRING REPLACEMENT.**

1. On the left side, reinstall the two (2) flat washers and rubber grommets, one (1) each on the muffler hanger studs. Slide the left inner saddlebag into position leaving out at front away from frame. Pull wire harness and grommet through hole in forward pocket of inner saddlebag. Mount plug and secure grommet in hole. Place rear suspension air fitting through hole in saddlebag, aligning with bosses on backside. Secure with large nut, being careful to not over tighten. Secure wire harness to inner saddlebag with wire clip at front. Position inner saddlebag against frame, checking fit around plastic panel under passenger handle. You will install all bolts before tightening to allow for adjustment. Install one (1) Hex head bolt from inside of inner saddlebag cavity. Install one (1) Hex head bolt just forward of the front saddlebag lid hinge. Install two (2) Hex head bolts in the recess pocket at front of the inner saddlebag. Install two (2) Hex head bolts at the top of the inner saddlebag below the passenger handle- these are behind the push button and latch when installed. Install the one (1) Allen screw, rearward of the pushbutton release for the saddlebag lid securing the plastic under the passenger handle to the inner saddlebag. Install two (2) Hex head bolts just behind the rear hinge. Install one (1) Hex head bolt at rear of inner saddlebag just below the bottom bolt previously removed- it is in a small recess. Install four (4) Hex head bolts securing the inner saddlebag to the taillight surround plastic. Along the bottom of the inner saddlebag, install one (1) each of the rubber grommets and flat washers on the muffler hanger studs and secure with one (1) of the Nylock nuts. Once all bolts are in place and aligned start at the top of this step and tighten each bolt in order. Position the push button and latch at the top of the saddlebag, over the two (2) large Hex bolts. Install the two (2) Hex head bolts securing the pushbutton and the two (2) Hex head bolts securing the latch. Recheck all bolts for proper torque.
2. On the right side, reinstall the two (2) flat washers and rubber grommets, one (1) each on the muffler hanger studs. Slide the right inner saddlebag into position leaving out at front away from frame. Secure relays to inside front of inner saddlebag per photo. Note that the rear relay will reinstall as normal and forward relay will reinstall horizontally with wire plug facing forward at rear bolt position along with rear relay. Reposition wire clip and secure excess harness with same bolt to ensure harness can not be damaged by moving parts. Bolt should pass from outside through wire clamp, forward relay sitting horizontal, rear relay sitting vertical, then into nut plate in inner saddlebag. Tighten bolt until snug but do not over tighten. Secure wire harness to inner saddlebag with wire clip at front. Position inner saddlebag against frame, checking fit around plastic panel under passenger handle. You will install all bolts before tightening to allow for adjustment. Install one (1) Hex head bolt from inside of inner saddlebag cavity. Install one (1) Hex head bolt just forward of the front saddlebag lid hinge. Install two (2) Hex head bolts in the recess pocket at front of the inner saddlebag. Install two (2) Hex head bolts at the top of the inner saddlebag below the passenger handle- these are behind the push button and latch when installed. Install the one (1) Allen screw, rearward of the pushbutton release for the saddlebag lid securing the plastic under the passenger handle to the inner saddlebag. Install two (2) Hex head bolts just behind the rear hinge. Install one (1) Hex head bolt at rear of inner saddlebag just below the bottom bolt previously removed- it is in a small recess. Install four (4) Hex head bolts securing the inner saddlebag to the taillight surround plastic. Along the bottom of the inner saddlebag, install one (1) each of the rubber grommets and flat washers on the muffler hanger studs and secure with one (1) of the Nylock nuts. Once all bolts are in place and aligned start at the top of this step and tighten each bolt in order. Position the push button and latch at the top of the saddlebag, over the two (2) large Hex bolts. Install the two (2) Hex head bolts securing the pushbutton and the two (2) Hex head bolts securing the latch. Recheck all bolts for proper torque.

***NOTE:* THE RELAYS LOCATED INSIDE THE FRONT OF THE RIGHT INNER**

**SADDLEBAG CONTROL THE TAILLIGHT. WHEN A TURNSIGNAL IS**

**ACTIVATED, THE MIDDLE BULB IN THE TAILLIGHT IS TURNED OFF. THIS**

**FUNCTION IS CONTROLLED BY THESE RELAYS, ONE FOR EACH SIDE. THIS RELAY IS NOT AFFECTED BY CHANGING ITS ORIENTATION OF INSTALLATION.**

1. Install the right side lower saddlebag panel that sits just above the right muffler. Engage the three (3) tabs (one (1) at front- push forward and in, one (1) just below the back edge of the front saddlebag lid hinge- push in, and one (1) at rear- push in,) by supporting the face of the panel, align the tab with the hole and push firmly. Do not hit. The panel should engage by hand. Install the five (5) Allen head screws along the top edge of the panel. Tighten after all screws are started and panel is aligned. Repeat for the left side.
2. Install the left side brushed under seat panel by aligning tabs in bottom edge with slots in lower saddlebag panel and push in to lock while supporting upper edge of lower saddlebag panel. Align grommet and tab at front and rear on inside of panel and push in to engage, rear first where tab on inside of panel engages grommet in front of inner saddlebag, then front where tab on upper motor mount passes through grommet on inside front of panel. Repeat for the right side panel. At the front of the two panels where they are secured with the plastic rivets, the left side cover should fit over the right side cover. Align the holes in the covers and install the outer portion of the two (2) plastic rivets through the holes in the left and right side brushed under seat panels behind the rear cylinder exhaust securing the left and right halves together. This should sit flush against the surface of the left side cover. Insert center posts and push on the rivet heads until the center post seats into the hole. The rivet head will not sit flush with the outer portion of the rivet.
3. Position the right saddlebag lid and align the holes in the hinges with the holes on the inside of the lid. Install the six (6) Hex bolts securing the saddlebag lid to the hinges, three (3) front and three (3) rear, tighten until almost snug. Close the lid and check fitment. Adjust and tighten bolts. Repeat for the left side.
4. Position the silver panel at the rear of the bike between the exhaust and below the taillights, aligning the screw holes. Install the six (6) Allen head screws (one (1) to the outside of each taillight, one (1) above each muffler on the side, and two (2) on the underside of the panel behind the tire) and tighten until snug. Do not over tighten.
5. Open the left and right saddlebags. Install the plastic panel surrounding the taillights. This panel is held in place by locking tabs at the corners and in the middle of each section. There are four (4) tabs on each outer edge, three (3) in between the taillights with two (2) at the top and one (1) at the bottom. Align the tabs with the holes and press firmly on the surface of the panel directly over the tab. The panel should install easily. Do not hit the panel to engage- if panel is difficult to install, recheck alignment of tab to hole. Refer to service manual.
6. On the Touring model, you will now reinstall the trunk. Have a second person carefully lift trunk and position over mount base. Be careful not to set trunk on any wires, cables, or plugs. Open trunk lid and align holes in cast trunk base and frame. Install and secure the (4) Hex head bolts securing cast trunk base to frame. Tighten until snug, check alignment, and then tighten to factory specifications. Reconnect trunk wiring harness under rear of seat forward of cast trunk base and any wires for CB and controls previously disconnected. Reinstall plastic cover to front of trunk below passenger backrest using two (2) small Allen head screws. Reroute wires per factory installation and secure replacing any wires ties cut previously.

 On the Street model, reinstall the cover over the trunk mount. Refer to owner’s manual.

***NOTE:* THERE IS MINIMAL CLEARANCE BETWEEN THE SEAT AND FRAME.**

**WIRING MUST BE ROUTED AS PER FACTORY INSTALLATION TO ENSURE**

**CLEARANCE. FAILURE TO FOLLOW FACTORY ROUTING CAN RESULT IN DAMAGE TO WIRING HARNESSES AND COMPONENTS AND IMCORRECT OPERATION.**

1. Reinstall license plate mount with two (2) Allen head screws and reattach license plate to mount. Reset rear suspension air setting per the chart in the saddlebag.

At this point you will familiarize yourself with installation of the hitch head and complete the installation of wiring.

# RECEIVER HEAD INTALLATION INSTRUCTIONS

(*PIN* AND STAINLESS STEEL BALL)

The Vertical Receiver Hitch for Victory Vision is shipped with a Receiver Lock. If you ordered your hitch for use with a *BUSHTEC* trailer, you will have received a receiver head with 3/4” hole and Hitch Pin Adapter. If you ordered your hitch for use with any other trailer, you will have received your receiver head with ¾” hole along with a **1 7/8”** **Stainless Steel Ball w/ Stainless Steel Hardware.**

***WARNING:*** **MAKE SURE THAT YOUR TRAILER REQUIRES A 1 7/8” BALL. FAILURE TO**

**USE THE APPROPRIATE SIZE BALL WILL ALLOW THE TRAILER TO DISCONNECT AND**

**CAUSE INJURY OR DEATH TO YOU OR OTHERS. ALSO CHECK THE ADJUSTMENT OF**

**THE BALL COUPLER FOR PROPER ENGAGEMENT ON THE BALL. AN IMPROPERLY ADJUSTED COUPLER CAN ALLOW THE TRAILER TO DISENGAGE FROM THE HITCH AND CAUSE INJURY OR DEATH TO YOU OR OTHERS.**

***NOTE:* THESE STEPS WILL FAMILIARIZE YOU WITH THE OPERATION PROCEDURES REQUIRED FOR THIS HITCH AND TO AIDE IN DETERMINING A LOCATION FOR YOUR WIRING HARNESS.**

1. (ALL APPLICATIONS) Off center toward the top of the receiver center section, on the side closest to the tire, there is welded nut with a 3/8”-16 x 1” bolt with a jam nut inserted. Loosen the bolt in the receiver center section to allow installation of the receiver head. The ¾ inch hole in the head should be towards the rear, away from the tire. 2. Remove the Receiver Lock from its package and familiarize yourself with its operation.

1. Insert the box tube on the receiver head upward into the center section aligning the 1/2 inch hole in the hitch head and center section. Insert the pin portion of the receiver lock through the ½ inch hole in both components. Install the lock over the end of the pin and secure per the manufacturer’s instructions, checking that it is secure. Tighten the jam bolt with a 9/16” wrench until snug.

***WARNING:*** **DO NOT OVER TIGHTEN THIS BOLT. IT IS DESIGNED TO STOP ANY PLAY**

**THAT THERE MIGHT BE BETWEEN THE RECEIVER HEAD AND RECEIVER CENTER SECTION. OVERTIGHTENING CAN CAUSE HITCH FAILURE RESULTING IN DAMGE TO YOUR MOTORCYCLE, TRAILER AND/OR INJURY OR DEATH.**

1. Once you have tightened the jam bolt, tighten the jam nut to the receiver center section

(not the bolt head) with a 9/16” wrench. This will keep the jam bolt from coming loose.

1. (*BUSHTEC* Application) Install the hitch pin adapter onto the hitch head with the safety chain bracket on the underside of the hitch head, facing rearward.
2. (All other applications) Install the 1 7/8” stainless steel ball according to the supplied manufactures instructions. You are now ready to wire the motorcycle.

# WIRING INSTRUCTIONS

***NOTE:* IF YOUR TRAILER IS EQUIPPED WITH COMBINED TURN SIGNAL AND**

**BRAKE LIGHTS AND/ OR A 4 PIN HARNESS, A TRAILER LIGHT CONVERTER**

**WILL BE REQUIRED TO COMPLETE THE INSTALLATION. THE TRAILER LIGHT CONVERTER IS NOT INCLUDED AND MUST BE PURCHASED SEPARATELY.**

***NOTE:*  THE ISOLATOR PACKAGE YOU RECEIVE WITH YOUR NEW HITCH**

**COMES WITH GENERIC WIRING INSTRUCTIONS. THE INSTRUCTIONS YOU**

**ARE HOLDING ARE MORE SPECIFIC TO THIS INSTALLATION. DUE TO TIGHT**

**CLEARANCE UNDER THE SEAT IT IS SUGGESTED YOU FOLLOW THESE**

**GUIDELINES AND CHECK THE INSTALLATION FOR CLEARANCE OF THE SEAT AND OTHER COMPONENTS PRIOR TO USE. THESE INSTRUCTIONS ARE A GUIDE THROUGH THE PROCEDURE.**

If you purchased this hitch with a new *BUSHTEC* trailer, you will have received a bike side wire harness with the trailer- however, this bike side harness at 36 inches is not sufficiently long enough to run to the back of the motorcycle. You will need to extend the harness’ length or order a 5 foot harness. If you need a new harness, they are available for purchase from the BUSHTEC Dealer or we can sell you one. If you are using this hitch with anything other than a *BUSHTEC* trailer, you will need to purchase the appropriate plug and sufficient length of wiring to reach the isolator package from your local parts store or your trailers manufacturer. The wiring harness can be run inside of the right side hitch arm for a clean and protected installation.

1. (*BUSHTEC* APPLICATION) Attach the plug body of the bike side harness within 2-3 inches of the hitch pin using wire ties, electrical tape or a fastener of your choice.
2. (ALL OTHER APPLICATIONS) Attach your plug body in a suitable location that, once connected to the trailer, allows sufficient movement in the trailer harness. If the harness is too long or too short, the harness will drag the ground or not engage completely.

***NOTE:* LOCATE THE PLUG SO THAT IT IS ACCESSIBLE BUT CAN NOT MOVE AROUND AND GET CAUGHT IN ANY MOVING PARTS.**

***CAUTION:*** **MAKE SURE THAT THE HARNESS DOES NOT RUB ANY PAINTED PANELS WHEN IN USE. THIS CAN CAUSE DAMAGE TO THE PAINTED FINISH.**

1. Adjust the harness that you ran through the right side tube to remove or add slack to allow proper location of the plug body. Secure harness to center section of hitch so that it does not interfere with the movement of the trailer, exhaust pipe, or rear tire.
2. Plug the supplied sub harness into the supplied relay package using the 4 pin connectors. The four wires from the sub harness will connect to the motorcycle’s harness wires at the 8 pin plug. This plug is located at the top front of the right side inner saddlebag. It will be necessary to cut the shielding back to expose the individual wires.
3. Find a suitable location for the relay to sit that will be clear of any moving components and the seat when installed. Use wire ties and or double stick adhesive to secure the relay.
4. Connect the four wires from the subharness installed in step 4 as follow:

**Function Relay Sub harness Victory Harness**

Brake Blue White with Light Red Stripe

Left Turn Brown Solid Blue

Right Turn Yellow Blue with Red Stripe

Running Light Green Green with Light Red Stripe

These connections are made by placing the Red T-tap connector around the wire and snapping closed. This will require a pair of pliers. Once you have located the relay, route the sub harness wires to the area of the plug, trim to length, strip back the shielding and install a fully insulated male disconnect with a crimping tool. Plug the fully insulated male disconnect into the corresponding T-tap per the table above.

***NOTE:* DO NOT USE THE ACCESSORY CIRCUIT FOR 12V CONNECTION OF THE TRAILER RELAY BLOCK. IT IS NOT CAPABLE OF HANDLING THE LOAD.**

***NOTE:* REMOVE THE 30 AMP MAIN FUSE FROM THE FUSE HOLDER PRIOR TO ESTABLISHING BATTERY CONNECTIONS.**

1. The relay is equipped with two black wires exiting the module. These are both ground wires, with one needing to be connected to the negative terminal of the battery and the other connected to the ground feed for the trailer harness. It does not matter which wire is used for which connection but it is easiest to compare cut length and run the black wire that is similar in length to the red wire to the battery. Refer to the service manual to remove the shelter console (containing radio display and control buttons). Using the supplied wire, one (1) yellow butt connector and one (1) blue butt connector, extend the red and black wires that will be run to the battery. Route the large red and black wires to the battery under the shelter console and down along the main harness in the left cavity to the left fairing support tube. Connect the black wire to the battery ground terminal using the supplied eyelet connector. Connect the free side of the fuse holder to the red wire from the relay block using the crimp connector supplied in the relay bag. Next, connect the supplied fuse holder to the battery positive terminal.
2. (*BUSHTEC* APPLICATION) The *BUSHTEC* harness contains a Sixth wire (the black wire), which operates the interior light. *BUSHTEC* recommends combining the black wire with the green running light wire so that the interior light operates only when the running lights are functioning, otherwise you may drain your battery if the light is left on. If you wish to be able to operate the interior light at any time without turning on the ignition, you will need to connect the black wire of the trailer harness directly to the positive (+) terminal of the battery with the appropriate inline fuse (not supplied).

***NOTE:* DO NOT CONFUSE THE BLACK WIRE OF THE TRAILER HARNESS WITH THE BLACK WIRE OF THE ISOLATOR PACKAGE.**

1. Connect the *BUSHTEC* Trailer harness to the isolator package using the supplied blue butt connectors as follows using the supplied blue butt connectors:

**Function Isolator Output Bushtec Harness**

Brake Blue Blue

Left Signal Brown Brown

Right Signal Yellow Yellow

Running Light Green Green

Interior Light (refer to step# 12) Black

Ground Black White

1. (ALL OTHER APPLICATIONS) Connect your harness to the isolator package using the above solid colored outputs to the appropriate wires of your harness.

***NOTE:* THE RED WIRE AND ONE OF THE BLACK WIRES OF THE ISOLATOR**

**SHOULD ALWAYS BE HOOKED UP DIRECTLY TO THE POSITIVE (+) AND**

**NEGATIVE (-) TERMINALS OF THE BATTERY. USE OF A CHASSIS GROUND IS**

**NOT ACCEPTABLE IN ANY APPLICATION. YOUR TRAILERS HARNESS GROUND WIRE WILL NEED TO BE ATTACHED TO ONE OF THE SOLID BLACK WIRE OF THE RELAY PACKAGE.**

1. Insert the supplied 30amp fuse into the fuse holder and check the functions with your trailer plugged in.
2. Secure all the wiring making sure that nothing will affect the reassembly of the motorcycle.
3. Reinstall the seat making sure to reconnect seat heater plugs if so equipped. Engage tongue at rear of seat pan into catch on frame forward of trunk. If the seat does not sit down against the frame check that all wire harnesses are run out of the way and can not be damaged. Secure with two (2) Allen head bolts and flat washers at front. Reinstall the panel between front of seat and dash. Refer to owner’s manual.
4. Reset the rear suspension to proper setting.

**CHECK ALL HARDWARE TO MAKE SURE IT’S TIGHT. CHECK ALL ELECTRICAL CONNECTIONS.**

**YOU ARE NOW READY TO REASSEMBLE YOUR MOTORCYCLE. REFER TO YOUR FACTORY SERVICE MANUAL FOR THE PROPER PROCEDURES.**

**FINAL TRAILER HOOKUP**

1. Install the hitch head into the receiver and secure with lock and jam bolt as described.
2. (*BUSHTEC* APPLICATION) Set the heim joint onto the hitch pin. Place the key into the lock and turn ¼ turn to the right. Place the lock on top the hitch pin and turn the key to the left ¼ turn while holding the lock, then remove key. Lift up on the lock to insure lock is engaged on the hitch pin. Place the black rubber cover over the lock to keep keyway free from debris.

***WARNING:*** **THE KEY IS REMOVABLE REGARDLESS IF THE LOCK IS ENGAGED! CHECK THAT THE LOCK IS ENGAGED BEFORE USE.**

1. Remove the dead plug from the end of the bike harness and plug the trailer in. Hook the safety chain catch to the safety chain bracket below the pin. CHECK ALL TRAILER

CONNECTIONS ONCE AGAIN!

1. (ALL OTHER APPLICATIONS) Attach the trailer to the ball and secure the coupler latch. Check that the trailer coupler is adjusted properly and in excellent working order.

***WARNING:*** ***BUSHTEC* ASSUMES ABSOLUTELY NO RESPONSIBILITY IN THE USE OF**

**ANYTHING OTHER THAN A *BUSHTEC* TRAILER. PROPER USE, MAINTAINENCE, AND ANY AND ALL WARNINGS ASSOCIATED WITH TRAILERING ARE THE**

**RESPONSIBILITIES OF YOUR RESPECTIVE TRAILERS MANUFACTURER. *BUSHTEC’S* TOTAL LIABILITY WILL BE LIMITED TO THE INITIAL PURCHASE PRICE OF THIS PRODUCT OR REPLACEMENT OF THIS PRODUCT AT OUR DISCRETION.**

1. Plug your trailer into the bike harness. Attach your safety chain to the rings on the sides of the receiver tube. **CHECK ALL TRAILER CONNECTION.**

***WARNING:* DUE TO THE NATURE OF TOWING A TRAILER AND THE**

**ENGINEERING INVOLVED WITH THIS HITCH OR ANY MOTORCYCLE HITCH, ALL HARDWARE MUST BE CHECKED BEFORE, DURING AND AFTER USE TO INSURE PROPER WORKING ORDER OF THIS PRODUCT!**

*500 LBS. MAXIMUM GVWR*

***75 LBS. MAXIMUM TONGUE WEIGHT***

All Manufacturers names, model designations, brand names, trademarks, and registered trademarks are the property of their respective holders.

NOTES

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Step 8

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Removal of taillight surround panel

Step11

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Removal of plastic rivets in

 brushed covers.

Step 13 & 14-Hex bolt at rear of inner Step 13 & 14-Removal of pushbutton and saddlebag in recess. Two holes above are latch. two of the four hex bolts securing inner

saddlebag to taillight surround plastic.

Remaining two are straight above.

Step 13 & 14-Removal of bolts behind Step 13 & 14-Removal of bolt inside pushbutton saddlebag and latch. cavity.

Step 13 & 14

-

Removal of wire clip.

Step 15

-

Hex bolts on trunk mounting pad.



Step

-

16

-

Mounting of strut plate to

Step 17 & 18

-

Two bolts just behind casting.

underside of frame.

Right side shown with arm installed.



Step 19-21-Long strut to outside of upper Step 22-Z-tab viewed from rear on right hole in center section, short strut from side. Upper bolt installation blocked by threaded boss on side arm to lower hole on brace plate.

center section, and center section plate on top of corresponding side arm plates.



Step25-Location and orientation of relays for reassembly.