



YAMAHA ROADSTAR
Standard or Silverado Models
Trailer Hitch Installation Instructions

READ ALL INSTRUCTIONS BEFORE YOU START

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

YAMAHA MOTOR CORPORATION INC AND/OR ANY AFFILIATE OR SUBSIDIARY 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 YAMAHA ROADSTAR WITH STOCK EXHAUST AND/OR SILVERADO HARD LEATHER SADDLEBAGS. 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 *BUSHTEC* 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.

YAMAHA ROADSTAR HITCH SYSTEM CONTENTS

1	Hitch Hoop	4	8mm-1.25 x 35mm Bolt
2	Support Struts	2	8mm-1.25 x 60mm Bolt
1	Electronic Relay Isolator Package	2	8mm Flat Washer
1	Stainless Steel Hitch Lock	2	5/16-18 x 3/4" GR8HH Bolt
1	Instructions	2	5/16-18 Nylock Nut
1	Hardware Package to include:		

TOOLS NEEDED FOR INSTALLATION

FACTORY SERVICE MANUAL

1/2" wrench	4mm Allen Head Socket
1/2" Socket	5mm Allen Head Socket
10mm Socket	Ratchet w/Extensions
13mm Socket	Pliers
Loctite 242 or Equivalent Removable Thread Lock	Wire Cutters
Crimping Tool	Wire Ties (optional)
An Assistant	Electrical Tape (optional)

CAUTION: THESE STEPS MUST BE PERFORMED IN THE FOLLOWING ORDER:

1. Place the motorcycle on level ground. Remove left and right side covers secured by (1) one Allen bolt each at rear of cover. Set aside.
2. Remove the (4) four Allen head bolts securing the right saddlebag to the saddlebag frame, with a 4mm Allen head socket and remove the saddlebag from the frame. Set aside and repeat for the other side.
3. On the right side, loosen the front upper saddlebag mount hex bolt securing the saddlebag frame to the fender 2-3 turns. Repeat for other side. **CAUTION: Do not remove the bolt.**
4. On the right side, remove the rear upper saddlebag mount hex bolt securing the saddlebag frame to the fender. Install the end of the strut with the larger 3/8 inch hole between the backside of the saddlebag frame and fender spacer. Secure with



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- provided 8mm-1.25 x 60mm bolt and flat washer, but do not tighten fully. Repeat for other side. **CAUTION: With the forward saddlebag frame bolt loosened and the rear saddlebag frame bolt removed, the fender accents and backrest mounts can move. Hold these parts in place while rear bolt is removed. Only remove the rear saddlebag frame bolt one side at a time.**
5. Remove the (2) two hex head bolts securing the passenger pegs to the main frame on the left and right sides with a 10mm Socket.
 6. Carefully insert the hitch hoop around the rear tire. On the right side the hitch will fit inside the exhaust between the upper and lower muffler. The tabs at the front of the hoop will fit between the main frame and the saddlebag subframe. Install with supplied 8-1.25 x 35mm bolts through the passenger peg, hitch tab, and main frame.
 7. Secure struts to hoop tabs with (2) two 5/16-18x 3/4" bolts and Nylock nuts.
NOTE: The struts should be on the outside of the hoop tabs.

Installation of all the hitch components is now complete. You must tighten all components in this sequence:

1. Tighten the (4) four hex bolts securing each passenger peg and hitch hoop to frame.
2. Tighten the (2) two hex bolts at rear sides of saddlebag frame through fender.
3. Tighten the (2) two hex bolts at front sides of saddlebag frame through fender.
4. Tighten the (2) hex bolts securing struts to the hoop tabs.

Installation of the hitch is now complete. You will reassemble the motorcycle after the following wiring instructions.

WARNING: PLEASE FOLLOW ALL INSTALLATION INSTRUCTIONS ON THE PREVIOUS PAGES AND ABIDE BY ALL NOTES, CAUTIONS AND WARNINGS!

WIRING INSTALLATION

1. Remove the bolt securing the passenger seat. Remove the bolt securing the rider seat.
2. If not already removed, remove the Allen head bolt securing the right side cover with a 5mm Allen wrench.
3. Find a secure location for the relay package that will allow all wires to run from the relay to necessary locations. The red wire and black wire from the relay package will go **DIRECTLY** to the 12V positive and negative terminals of the battery. The four white wires with colored stripe will connect to the rear fender light harness under the rider seat using the supplied T-taps and male disconnects. The green, blue, yellow, brown and



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white wires from the relay are output wires that will connect to the trailer wiring harness supplied separately (with a new trailer).

4. Locate the wiring harness entering the rear fender for lighting. Remove a 2 to 3 inch section of the protective covering. Locate the following color wires and install a T-tap onto each wire identified. **NOTE:** Spread out the connectors so that they do not overlap.

<u>MOTORCYCLE</u>	<u>FUNCTION</u>	<u>RELAY PICKUP</u>
Blue	Running/ Tail Lights	White with Green Stripe
Yellow	Brake Lights	White with Blue Stripe
Green	Right Turn	White with Yellow Stripe
Brown	Left Turn	White with Brown Stripe

Connect the white with striped wires as indicated above using the supplied male disconnects and previously installed T-taps.

5. Route the red wire to the 12V positive battery terminal and the black wire to the 12V negative terminal using the supplied ring connectors to secure to battery terminals.
6. Route the wire harness with plug down to the rear of the hitch near the pin allowing enough slack to attach the trailer. **CAUTION: Secure the harness so that it can not be pulled into the rear wheel of the motorcycle.** Connect the relay outputs to the harness wires as follows:

<u>BUSHTEC HARNESS</u>	<u>FUNCTION</u>	<u>RELAY OUTPUT</u>
Green	Running/ Tail Lights	Green
Blue	Brake Lights	Blue
Yellow	Right Turn	Yellow
Brown	Left Turn	Brown
Black	Interior Light/ Accessory	Green

Bushtec recommends connecting the Interior Light to the running light circuit. If the interior light is left on but the ignition is turned off, the interior light will be turned off.

7. Reinstall the right side cover with the Allen bolt. Reinstall left side cover with Allen bolt.
8. Reinstall the rider seat with the removed bolt. Reinstall the passenger seat with the removed bolt.
9. Reinstall right saddlebag onto saddlebag frame using (4) four Allen bolts using 4mm Allen Socket. Repeat for left side.

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



FINAL TRAILER HOOKUP

1. With motorcycle reassembled, check if trailer is equipped with tongue stand, it is secured in the up position. Place the heim joint down over the hitch pin. Place the lock over the pin in the fully unlocked position. Hold the lock and turn the key ¼ turn. Remove the key. Lift on the lock to ensure it is engaged. Install dust cover.
2. Connect safety chain to link under hitch pin.
3. Place harness over top of chassis neck and connect to bike side harness, aligning the catch and lock. Snap to lock. Check lighting and you are ready to tow.

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 YOU TOW TO INSURE THE PROPER WORKING ORDER OF THIS PRODUCT!

350 LBS. MAXIMUM GVWR

55 LBS. MAXIMUM TONGUE WEIGHT

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