



**RIVA YAMAHA GPR
MECHANICAL TRIM-TAB SYSTEM
PART # (RY2820)**

APPLICATIONS: 2000-2002 GP1200R
2001-2002 GP800R

NOTICE :

This system has been upgraded with a new heavy-duty pivot rod that features welded on push rod arms and cable activator arms.

Please disregard instruction steps that refer to attachment of push rod arms and cable activator arm to pivot rod



P/N # RY2820

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Riva Yamaha GPR Mechanical Trim Tab System

Applications: All 2000-2001 Yamaha GP1200R

List of Parts

<u>Qty.</u>	<u>Description</u>	<u>Qty</u>	<u>Description</u>
1	Pivot Rod	1	Lever
1	Cable Activator Arm	2	Ball Ends
1	Left Push Rod Arm	1	Trim Cable
1	Right Push Rod Arm	2	Nuts (Non Locking)
2	Flap Arms	2	Hex Push Rod (With Heim Joints)
1	Left Tab and Flap	8	Self-Taping Screws
1	Right Tab and Flap	4	Flat Head Machine Screws
9	6mm Flat Washers	2	6 mm x 25 mm Hex Bolts
2	8mm Small Flat Washers	1	6 mm x 35 mm Hex Bolt
1	8mm Large Washer	1	6 mm x 30 mm Hex Bolt
1	Lock Washer	4	6 mm Locking Nuts
1	Spring Hook	6	5 mm x 19 mm Hex Bolts
1	Cable	1	Ride Plate
1	Spring		

**** NO SMOKING WARNING! DISCONNECT BATTERY AND TURN FUEL OFF BEFORE PERFORMING WORK.**

It is recommended that a trained watercraft technician perform this installation only. See your local Dealer.

Note: This is a racing component. It is designed for competition use only. The Yamaha limited warranty does not cover possible failures caused by this component.

This kit removes the stock trim system and manual adjustment of the trim nozzle. It is recommend to be used with the Riva GPR Auto Trim Nozzle (RY23AT-155-66V) and Bilge Pump Kit (RY1016D).

READ INSTALLATION INSTRUCTIONS FULLY BEFORE ATTEMPTING TO INSTALL THIS KIT!

1. Turn fuel off and remove the battery box assembly, OEM trim system, Trim tabs, and Ride plate. When removing OEM trim cable note routing, as the new supplied cable will be positioned from the handle bars to the back thru-hull hole and fitting in hull. Do not discard any parts, some will be used later.
2. Remove the OEM plastic thru-hull fitting from the OEM trim cable. With thru-hull fitting removed, install OEM rubber washer over the supplied cable (threaded end). Slide the cable through the OEM white plastic thru-hull fitting, followed by the OEM rubber grommet. Using the supplied small washers, one small nut, and the OEM washer, screw the small nut all the way onto the supplied trim cable's threaded end. Next install the OEM white plastic nut and supplied large stainless steel washer, and secure the plastic nut in place using the supplied lock washer and second small nut. With plastic nut secure, screw the white OEM plastic nut onto the OEM thru-hull (do not over tighten). Take the cable's opposite end and rout the cable from the outside and through the thru-hull hole (in boat). Now slip the OEM plastic nut over cable and rout cable to handle bars in safe manner not to interfere with other moving parts, secure thru-hull fitting in place using plastic nut, making sure not to over tighten. **Note:** *Illustration #1 shows assembly of parts and descriptions. Apply a generous amount of silicone to the rubber grommet and thru-hull hole before installing in place (avoid getting silicone into inner cable) to prevent leaks.*

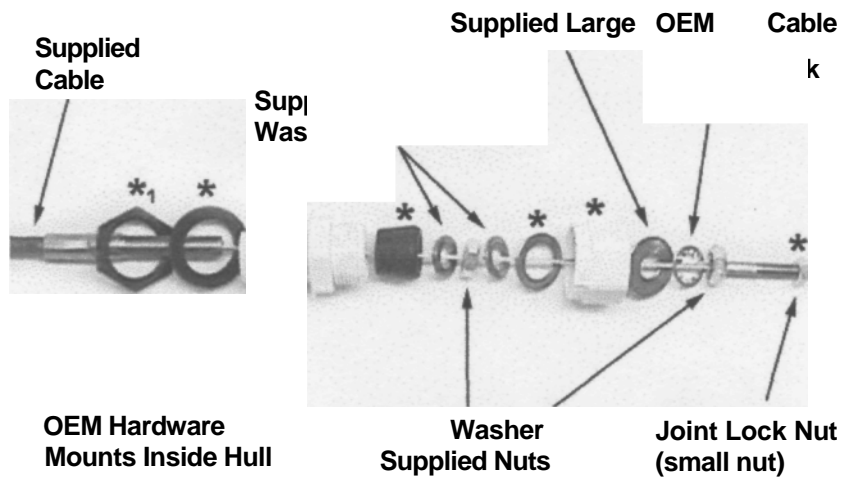


Illustration #1

3. Loosely screw the OEM 6 mm cable nut and cable joint end onto the cable. With trim cable in position, install the supplied handle bar lever, attach cable, and install replacement (not supplied) grip. **Note:** Do not adjust lever, adjustments will be made later.
4. Install the flap arms onto the flaps using the supplied flat head machine screws. Install assembled left and right trim tabs to appropriate locations under hull. **Note:** Trim tabs will fit properly one way only. Use Loctite® 242 on all screws.
5. Loosely install the six 5 mm x 19 mm hex bolts into the left and right push rod arms and the cable activator arm. Now install the ball ends into the 1/2" pivot rod using Loctite®. **Note:** Illustration #2 shows a description of some parts used in this step.

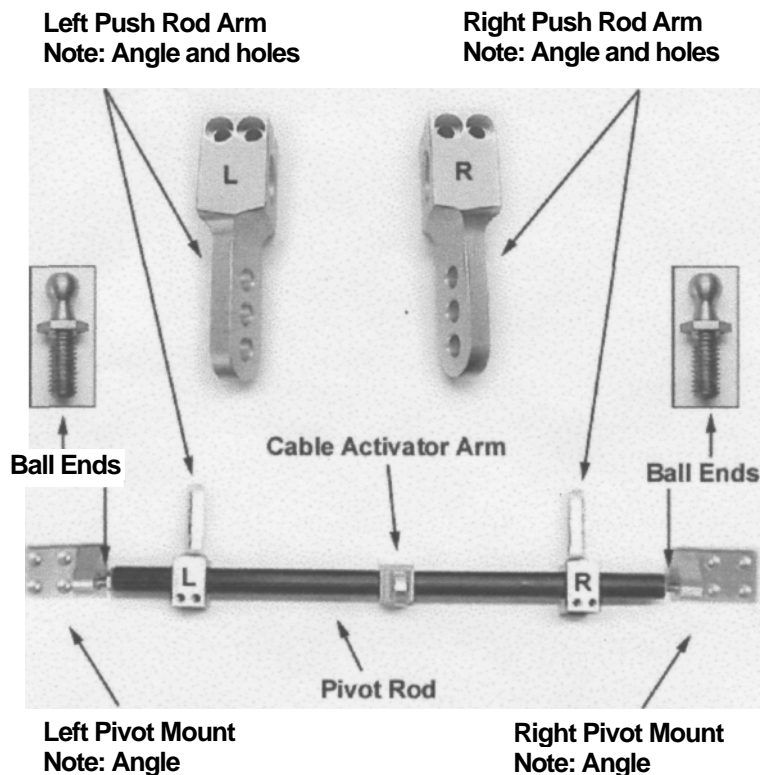


Illustration #2

6. Install the cable activator arm (not angled and with 3 threaded holes) onto the 1/2" pivot rod with the hex head screws facing back. Install the left and right side push rod arms with the bolts facing down and the arms forward toward the front of the boat, and with the cable activator arm in the center pointing upwards (shown in Illustration #2 and 3). Secure arms just enough to hold into position and can be moved by hand. **Note:** The machined angle of the push rod arm matches that of the pump cavity angles. **Tip:** Please take your time, and recheck your work to avoid installation problems during the remainder of the installation.
7. Install the spring over the left pivot ball end (the spring end may need to be slightly opened to fit over the ball end). Align the 1/2" pivot rod level and centered to the back of the boat with the left and right side pivot mounts attached. **Note:** The pivot mounts swoop downward, be sure to position on proper sides. Illustration #2 and 3 give general location positions.

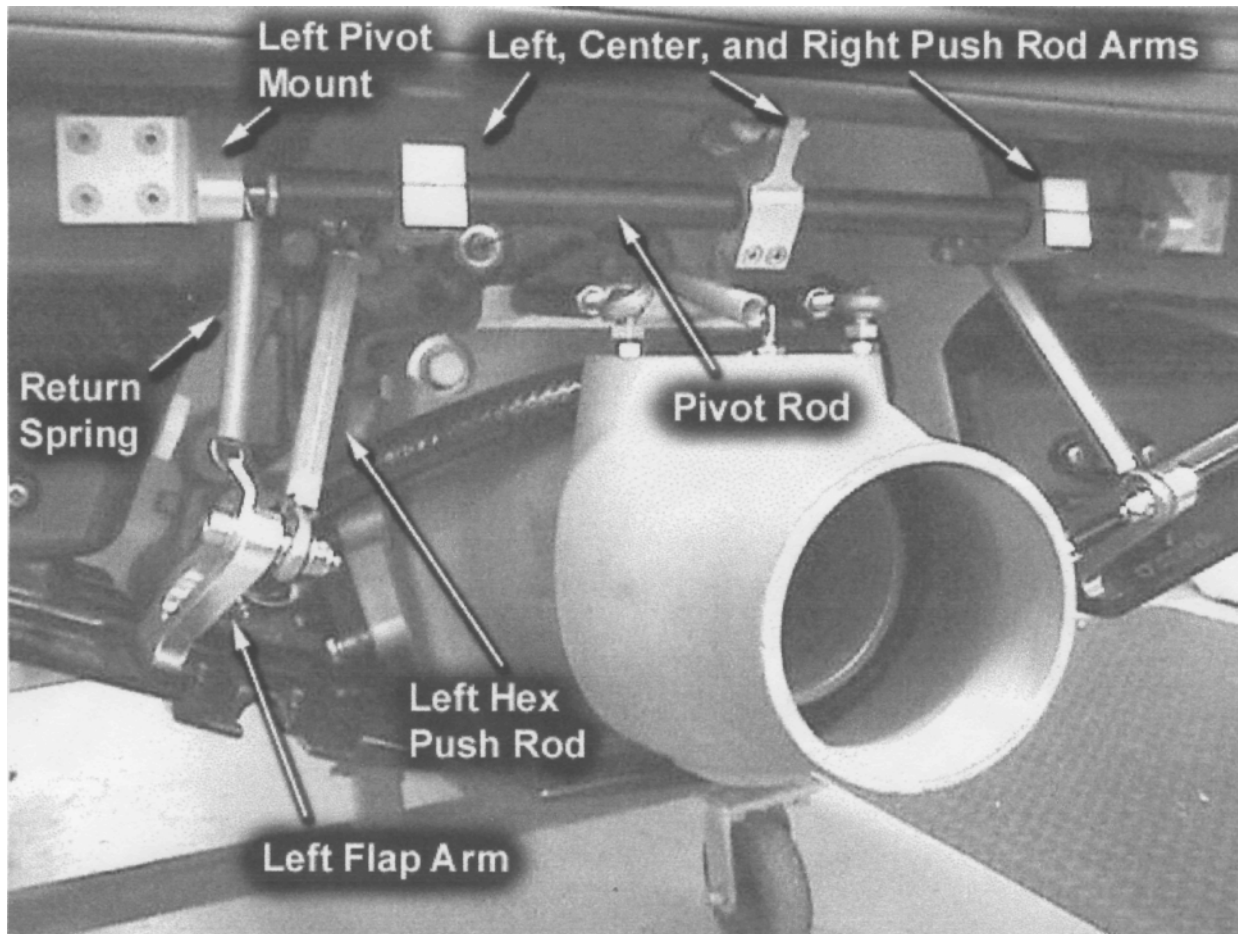


Illustration #3

8. Once aligned, lower the pivot rod assembly so the center of pivot rod ball ends are 2 Yi" down from the underside of the deck. This will put the top of each pivot mount about 1-11/16" down from the bottom underside of the deck (shown in Illustration #4). While holding it in place mark the four mounting holes for each pivot mount. With location holes marked, pre drill all eight holes using a # 46 drill bit. **Note:** Please take your time, and recheck your positions before drilling any holes! The pivot rod should be centered and mounted as high as possible without letting the cable activator arm hit the underside of the deck.

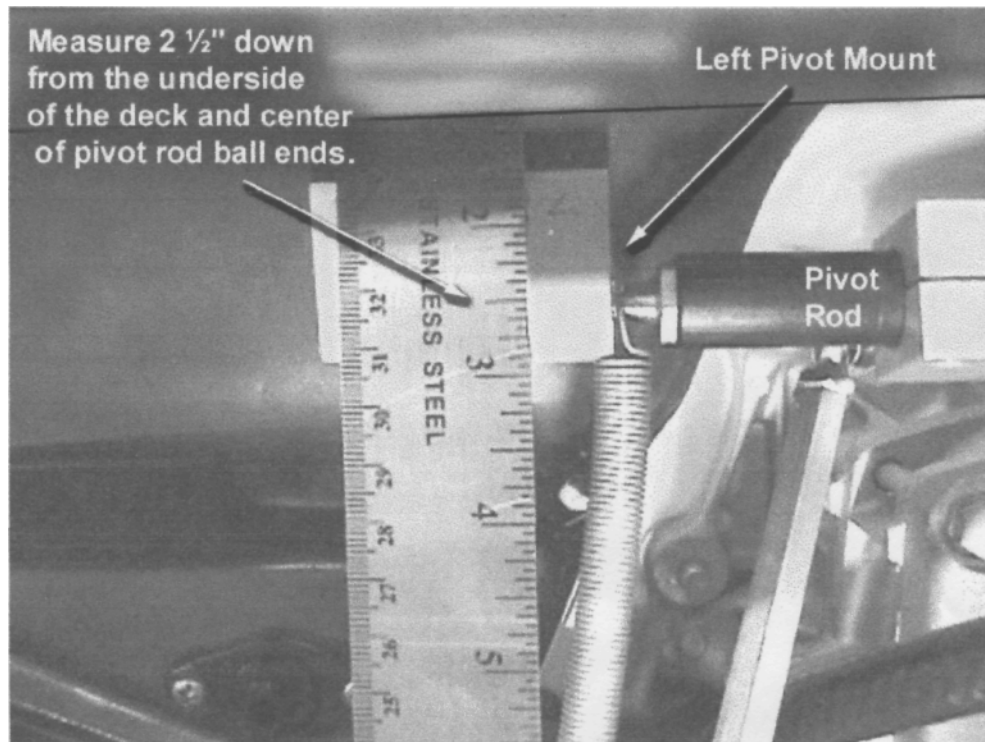


Illustration #4

9. Apply a generous amount of silicone around the eight newly pre-drilled holes, grease each ball joint before installing the complete pivot rod assembly and secure pivot mounts with eight supplied self-tapping screws. Tighten the pivot mounts in place and wipe off excess silicone. **Note:** Do not over tighten screws. Check pivot rod arms and pivot mounts are correct before securing (arms can be loose, just make sure they are not backwards and pivot mounts are on correct side before securing to the hull, otherwise you will need to remove it and end up weakening the mounting holes.). Please take your time and recheck pivot mounts and arms before securing!
10. Screw the heim joints into the hex push rods as far as they will go but do not tighten nuts. **Note:** There is a right and a left-hand thread on each.
11. Install the hex push rods onto left and right push rod arms and trim tab flap arms. Two 6 mm x 25 mm hex head bolts go to the left and right push rod arms and hex push rods. The one supplied 6 mm x 30 mm hex head bolt goes to the right side trim tab flap arm and hex push rod. The one supplied 6 mm x 35 mm hex head bolt goes to the left side flap arm and hex push rod. Use supplied 6 mm flat washers on each side of heim joints before securing with supplied lock nuts. Attach the spring to the left side flap arm bolt using supplied spring hook and last 6 mm flat washer and lock nut.
12. Choose one of the three positions on the cable activator arm (closer to the pivot rod will drop the flaps further) and install the OEM ball joint end using the hardware from original trim ring. Adjust the cable joint end and lever adjustment on the handlebars so the cable has greatest amount of slack possible. Adjust cable activator arm back so slack is almost removed when arm is back and against hull's inside bond rail and tighten actuator hex head screws. **Note:** Make sure the arm is centered on the pivot rod so the cable will pull straight.
13. Using a straight edge on the bottom of the left flap and cast mount pad, adjust the left push rod arm so the flap is slightly upward and making sure the cable activator arm is against the stop (against the back of the bond rail). When this adjustment is made, be sure the push rod arm has about 1/4" clearance from the hull and tighten the push rod arm. Repeat this step for the right side. **Note:** Make sure the arms are even in position.
14. With arms secure, using a straight edge now adjust the hex push rods (shown in Illustration #3) so the flaps are level with the cast mount pads and tighten the jam nuts.

15. Install supplied ride plate. The ride plate is notched out for the trim tab flap, be sure there is at least 1/16" clearance in this area. If needed grind ride plate for proper clearance. Recheck all bolts and nuts for tightness and trim tabs for free movement. No binding should occur.
16. Remove cable slack by adjusting lever adjuster and/or cable joint. **Note:** *When removing cable slack it is very important that the activator arm is against the bond rail or cable damage may occur when riding. The cable should not act as the return stop.*
17. Reinstall battery box assembly and any components temporally removed to aid in installation, check bilge area for tools and / or parts. Your installation is now complete. **Note:** *Check hull for leaks before leaving boat in water for long periods of time.*

IMPORTANT: Technical Support

For answers to questions about installation, trouble shooting RIVA Yamaha GPR Mechanical Trim Tab Kit, contact:
RIVA Yamaha @ (954) 247-0705 (ask for Tech Support)
Or you're local Riva Performance Dealer <http://www.rivayamaha.com>
Tech e-mail: bubbak@rivayamaha.com

RIVA Yamaha GPR Mechanical Trim Tab Kit ***Limited Warranty***

RIVA Yamaha Yamaha GPR Mechanical Trim Tab Kits are warranted for the 90 Days of the original purchaser for materials only. This is limited to defects in the billet aluminum parts. Hardware, cable, lever and heim joints are not covered under this warranty. Also understand that this warranty does not cover any parts on a watercraft. Modified RIVA Yamaha GPR Mechanical Trim Tab Kits will be void of warranty.

Riva Yamaha's liability is expressly limited to the repair or replacement of the billet aluminum components contained within this trim system. RIVA Yamaha agrees to repair or at Riva's option, replace any defective unit without charge, if product is returned to Riva freight prepaid within the warranty period. Any equipment returned which Riva's opinion has been subjected to misuse, abuse, and/or accident shall not be covered by this warranty. Riva Yamaha shall have no liability for special, incidental, or consequential damages or injury to persons or property from any cause arising from the sale, installation, or use of this product.

No other warranty, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, applies. Various states do not allow for the limitation of incidental, or consequential damages and, therefor, the above exclusion or limitation may not apply to you. Warranty does not include expenses related to freight or transportation of parts, or compensation for any inconvenience or loss of use while being repaired.

A copy of the original invoice must accompany all warranty claims.
Warranted replacement parts will be returned freight collect.