



# **RIVA RACING**

**PERFORMANCE PRODUCTS & ACCESSORIES**

## **Pro-Series Steering System**

**PART# - RY20060-U**

We strongly recommend the use of a service manual to familiarize yourself with the various components and procedures involved with this installation. Please note that some of the original hardware removed in the disassembly process will be used in the installation process. These instructions have been written in step-by-step format and refer to illustrations. We suggest reading through the instructions entirely before performing installation. Please follow these step-by-step instructions and illustrations carefully.

**APPLICATION(S):** Yamaha VXR & VXS Models

### **- INSTALLATION INSTRUCTIONS -**

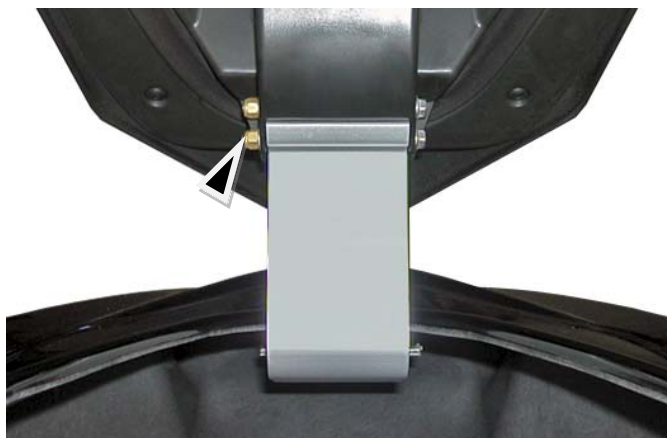
Remove screws (4 medium/2 small) securing front side of handlebar pad cover to back half. Remove front half of cover.



Remove throttle cable from throttle trigger.

Remove screws (2) securing start/stop switch housing to handlebars. Remove start/stop switch housing.

Open front storage hatch. Remove bolts (2) securing hatch to hinge. Remove storage hatch from hinge.

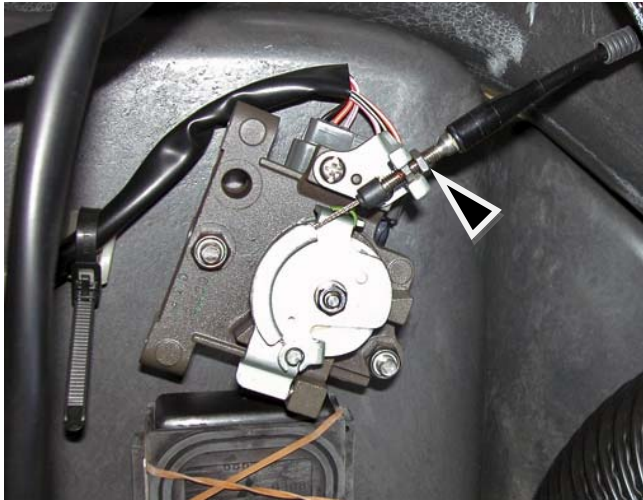


Inside front storage compartment remove service lid (5 rivets).

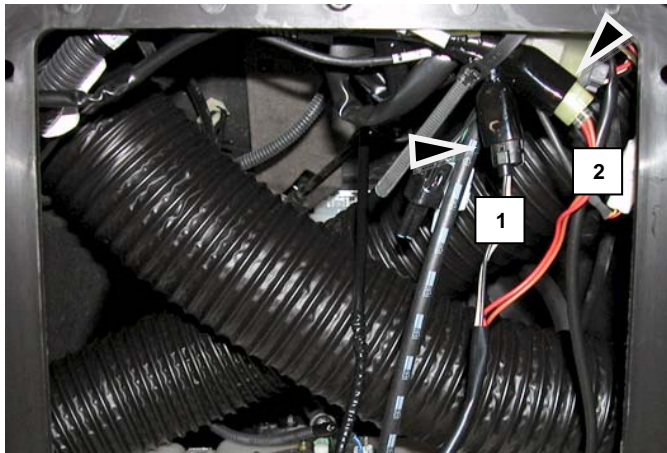


**TIP:** Push center of rivets in to release.

Inside front of craft (right side) disconnect throttle cable and remove from throttle wheel.



At top edge of service opening disconnect electrical connectors (2) for start/stop switch.



**TIP:** Trace wires from the end of steering shaft (inside hull) to their connection points.

Disconnect steering cable from steering arm.



Locate bolt securing steering arm to main shaft.



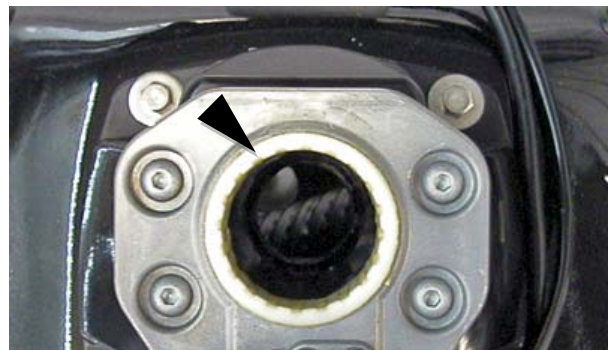
Pry locking tabs away from head of bolt. Remove bolt completely.

Pull down on steering arm to remove from end of steering shaft. Completely remove and set aside.

Remove stock steering assembly by pulling upward.



Inspect steering column for plastic collar (bearing). If it is not present remove from steering shaft and install into column.





Remove bolts (4) securing instrument gauge to hood cowling.



Remove bolts & nuts (4) securing front of hood cowling to front of craft.



Remove bolts (2) securing reverse lever handle. Remove handle and set aside.



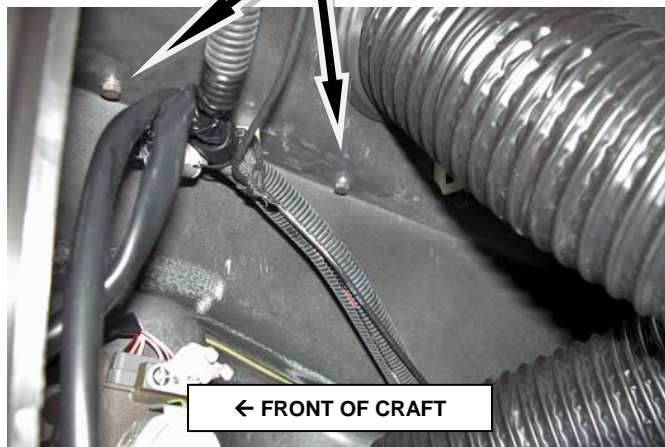
Remove bolts (2) securing hood cowling to reverse lever assembly.



Remove bolts & nuts (1 set per side) securing lower rear sides of hood cowling to hull.



Inside front of hull remove bolts (2 per side) securing hood cowling to hull.





Remove hood cowling and set aside.

On top of steering column remove buzzer <sup>1</sup> (4 bolts) and OTS sensor <sup>2</sup> (2 bolts).

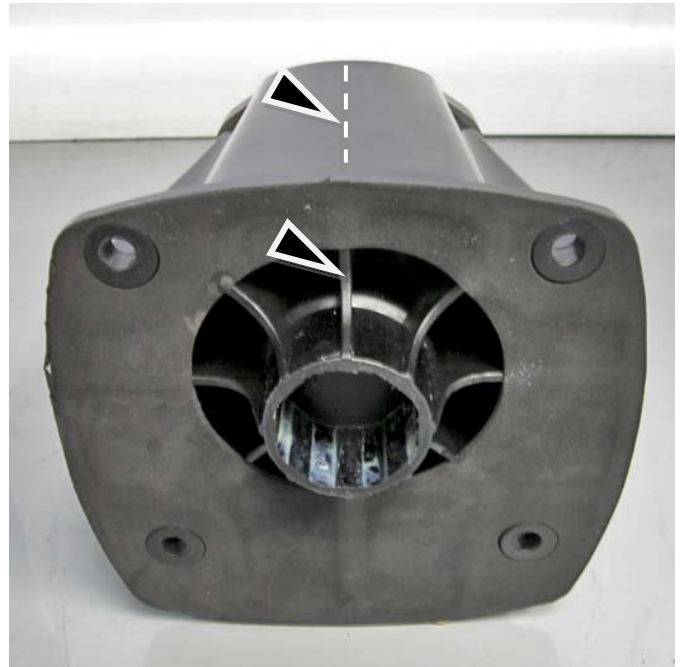


At base of steering column remove bolts (4) securing column to hull.



Place steering column on a level work bench with front side facing you.

Tilt steering column back to expose underside. Identify support rib running up middle of front side. **TIP:** If you look closely you can see a slight impression of support rib in front of steering column.



Using a straight edge draw a reference line along reinforcement rib on front of steering column.

Mark locations for holes to be drilled (2) for throttle cable and start/stop switch cables.



Drill a pilot hole at 3/4" out from each side of center line 1" down from bottom of small radius. **NOTE: Do not apply heavy pressure when drilling.**

Using a 1/2" drill bit drill finish holes in a 2 step process.

**FIRST:** Drill straight into pilot holes.

**SECOND:** To allow cables to smoothly pass down into steering column elongate holes by tilting drill handle upward while drilling finish holes. **NOTE: Take care not to catch inner walls of steering column with drill bit.**



**TIP:** Use a round file or Dremel tool so smooth edges.



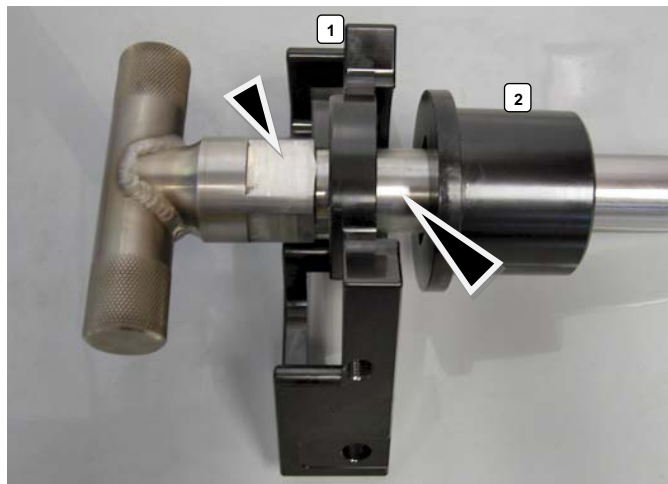
Replace steering column. **NOTE: Apply red Loctite to bolts. Torque to 12.5 ft•lb / 17 N•m.**

Replace OTS sensor. **NOTE: Apply red Loctite to bolts. Torque to 5 ft•lb / 7 N•m.**

Replace buzzer. **NOTE: Apply red Loctite to bolts. Torque to 3 ft•lb / 4 N•m.**

On supplied steering shaft assembly remove steering arm and collar from end and set aside.

Separate steering stop<sup>1</sup> and upper collar<sup>2</sup> from end of steering shaft. Apply generous amount of waterproof grease between components and reassemble.



Apply waterproof grease to outside of upper collar<sup>2</sup>. Insert steering assembly into steering column. **NOTE: Billet steering stop faces rear of craft.**

Apply generous amount of heat to head of bolts (2) securing OTS board springs to stock steering shaft. Apply heat to shaft under bolts as well.



Remove OTS bolts and board springs. **NOTE: If bolts do not loosen easily apply more heat. Take care not to burn yourself. Components will be very hot!**

Allow components to cool completely.



Coat board springs with waterproof grease. Install onto outside of billet steering stop plate. Secure with stock bolts. **NOTE: Apply red Loc-tite to bolts. Torque bolts to 12.5 ft•lb / 17 N•m.**



Install supplied Bar Mount System onto head of steering stem. **NOTE: Apply red Loctite to bolts. Torque evenly to 14 ft•lb / 19 N•m.**



Transfer steering arm ball joint and lock nut from stock steering arm to supplied billet steering arm.



**NOTE:** We have provided three installation options. The center is equal to stock. Inside option will move steering nozzle faster. Outside will move steering nozzle slower. Always check steering cable travel to ensure steering locks on billet steering stop and not the actual cable.

Coat lower end of steering shaft with waterproof grease.



Install small billet collar onto end of steering shaft and into housing assembly.



Coat billet collar and end of steering shaft with waterproof grease.



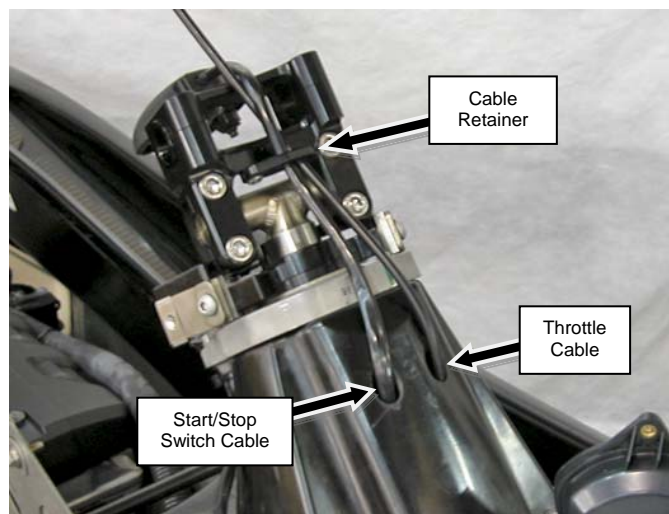
Install supplied billet steering arm onto end of steering shaft. **NOTE:** Arm is machined to fit over billet collar.



Install supplied washer and secure with supplied nut. **NOTE:** Tighten nut until you are no longer able to turn upper portion of steering freely by hand.

Cover ball joint with waterproof grease. Connect steering cable to ball joint. Ensure slide collar covers ball joint completely.

Feed throttle cable and start/stop switch wires through cable retention bracket at front of steering assembly and down into steering column.



Pull throttle cable and start/stop switch wires through bottom of steering column and reconnect.

Set hood cowling in place on craft. Replace instrument gauge. **NOTE: Apply red Loctite to bolts. Do not over tighten bolts.**

Secure hood cowling. **NOTE: Apply red Loctite to bolts. Do not over tighten bolts.**

Replace reverse lever handle. **NOTE: Apply red Loctite to bolts. Do not over tighten bolts.**

Replace front storage hatch. **NOTE: Do not over tighten bolts.**

#### HANDLEBAR INSTALLATION:

The RIVA Pro-Series Steering System accepts both standard 7/8" bars and 1-1/8" bars. Billet spacers are supplied and must be used with 7/8" bars.



**NOTE: Thoroughly clean bars, billet spacers and handlebar clamping surfaces with a non-residual cleaner. Apply red Loctite to handlebar clamp bolts. Torque bolts evenly to 14 ft•lb / 19 N•m.**

Install handlebars, controls and hand grips.

Check steering nozzle alignment and steering cable travel. Adjust as necessary using procedure outlined in your OEM service manual.

Check bilge for tools, rags, etc.

#### ADJUSTMENT NOTES:

Handlebar tilt is adjustable. When final position is achieved remove all bolts loosened one at a time, apply red Loctite and re-torque. Periodically check all bolts to ensure they are properly torqued. If any are loose remove, reapply Loctite and re-torque.

***Remember, the water belongs to everyone.  
Please ride responsibly and respect the environment!***

### **Technical Support**

For answers to questions regarding installation or trouble shooting RIVA Performance Products contact:  
RIVA Technical Support directly at (954) 247-0705 or by e-mail at [tech\\_support@rivamotorsports.com](mailto:tech_support@rivamotorsports.com).

### **Limited Warranty**

RIVA Pro-Series Steering Systems carry a 1-year limited warranty to the original purchaser. They are warranted to be free of defects in materials and workmanship under normal use and service. Customer modified components will be void of warranty. This warranty is limited to defects in the primary components only. Finish and/or wear marks in or on primary components are not covered under this warranty.

RIVA Racing's liability is expressly limited to the repair or replacement of the components contained within or associated with this kit. RIVA Racing agrees to repair or at RIVA's option, replace any defective unit without charge, if product is returned to RIVA Racing freight prepaid within the warranty period. Any equipment returned which, in RIVA's opinion, has been subjected to misuse, abuse, overheating or accident shall not be covered by this warranty.

RIVA Racing 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 therefore the above exclusion or limitation may not apply to you.

Warranty does not include the 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 and a Return Authorization Number (RA#) must accompany all warranty claims.

Warranted replacement parts will be returned freight collect.