



RIVA RACING
PERFORMANCE PRODUCTS & ACCESSORIES

Yamaha FX Pro-Series Steering System

RY20170



Applications: 2022+ Yamaha FX (All Models)

Approximate Installation Time: 1.5 Hrs.

Recommended Specialty Tools:

None

Part #

N/A

Required Materials:

Red Loctite

Blue Loctite

Part #

N/A

N/A

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Prior to installation, go to the RIVA Racing online Instruction Library to download the latest version of these instructions:

<https://rivaracing.com/instructions>



Yamaha FX Pro-Series Steering System

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NOTES / PRECAUTIONS

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. Read through instructions entirely before performing installation. Please follow these step-by-step instructions and illustrations carefully.

***** ALLOW ENGINE TO COOL COMPLETELY BEFORE PERFORMING INSTALLATION *****

***** NO SMOKING *** NO SMOKING *** NO SMOKING *****

CAUTION: Whenever using electric or battery operated tools inside the hull be sure it is well ventilated and no fumes are present. Failure to do so could result in a fire, or explosion and serious personal injury or death.

COMPONENT LIST

ITEM	DESCRIPTION	PART #	QTY REQ'D	COMMENTS
A	RIVA BILLET STEERING SHAFT	RY20170-U	1	
B	RIVA BILLET HANDLEBAR CLAMP		1	
C	RIVA BILLET STEERING ARM		1	
D	RIVA BILLET STEERING COVER PLATE (L)		1	
E	RIVA BILLET STEERING COVER PLATE (R)		1	
F	M8 X 25 SHCS	.8C25SCHS	4	
G	M8 X 55 SHCS	.8C55SCHS	1	RED LOCTITE PRE-APPLIED
H	M8 LOCK WASHER	.8NMLWS	1	
I	M8 FLAT WASHER	.8NWTFS	1	
J	M6 X 16 FHCS	823078	4	
K	M5 X 10 BHCS	098.5.10	1	
L	#10 FLAT WASHER	10NWTFS	1	
M	ANTI-SLIP TAPE	N/A	2	

Your kit was inspected and verified before being carefully packaged by our staff. Please check package contents before beginning assembly. If you have a question about missing or damaged items please contact RIVA Technical Support directly at (954) 247-0705 or by e-mail at tech_support@rivaracing.com.

- INSTALLATION INSTRUCTIONS -

Remove steering pad covers (11 bolts) and discard to expose handlebars and steering. (See figure 1)



Figure 1

Remove right and left OEM control switch covers (2 bolts per side). Set aside for use later. (See figure 2)

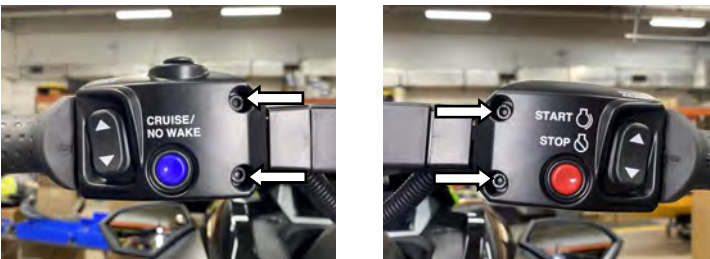


Figure 2

Remove right and left throttle controls (2 bolts/1clamp per side). Set aside for use later. (See figure 3)

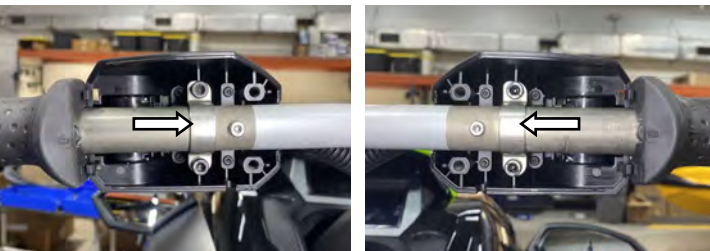


Figure 3

Remove handlebars (4 bolts) and discard. (See figure 4)

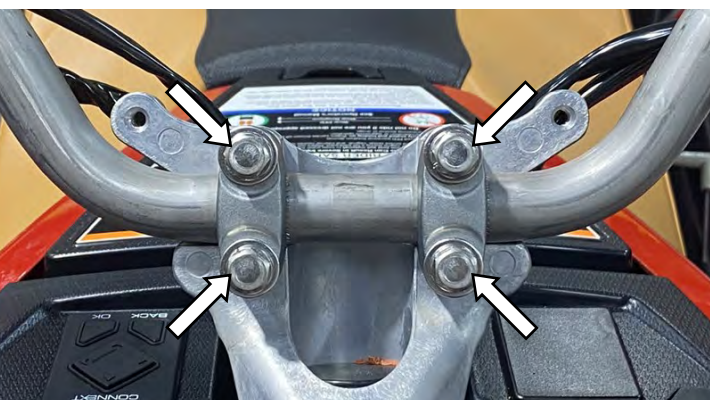


Figure 4

Inside front storage compartment, remove screws/rivets (4) securing bulkhead to hull. Set aside for use later. (See figure 5)

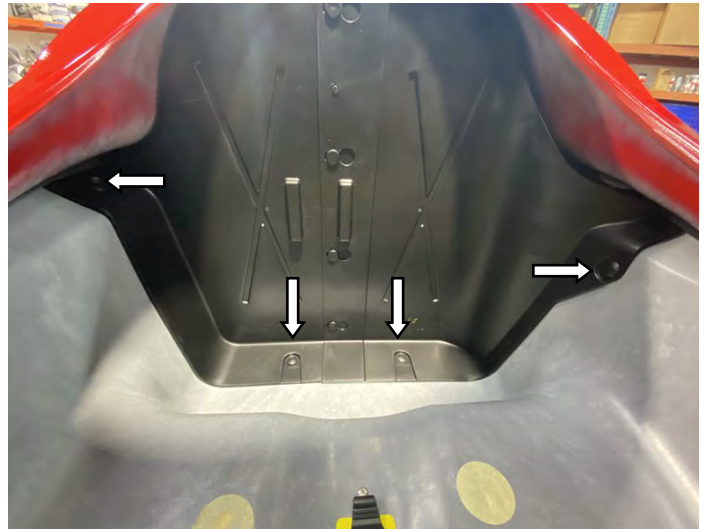


Figure 5

Separate bulkhead along center vertically. Remove both sections of bulkhead and set aside for use later.

Working inside hull, disconnect steering cable from ball joint on steering arm (A). Pry tabs (3) away from head of bolt securing steering arm to steering shaft (B). Remove bolt and steering arm completely. (See figure 6)

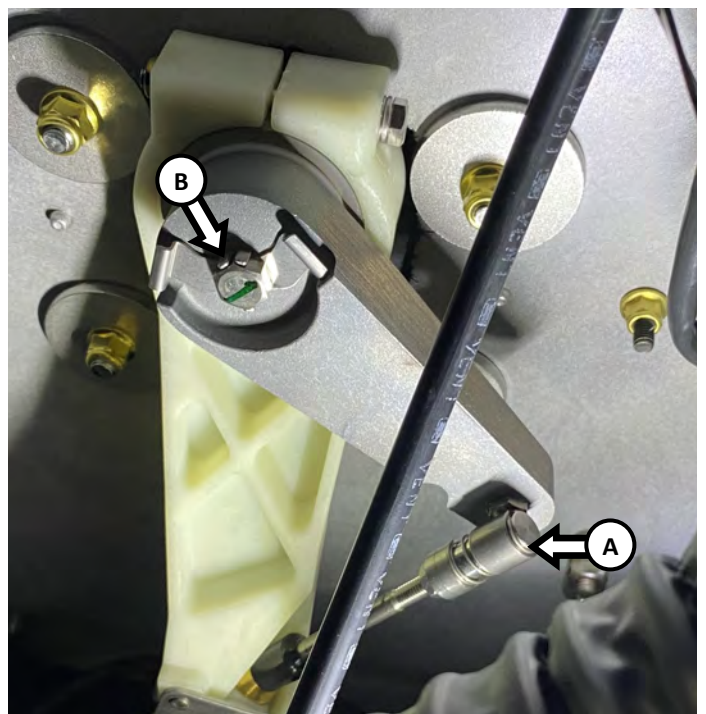


Figure 6

- INSTALLATION INSTRUCTIONS -

Remove ball joint from OEM steering arm, discarding nut. Install ball joint into supplied RIVA Billet Steering Arm. (See figure 8) **NOTE: Apply red Loctite to threads. Torque to 5.2lb-ft/7N-m.**

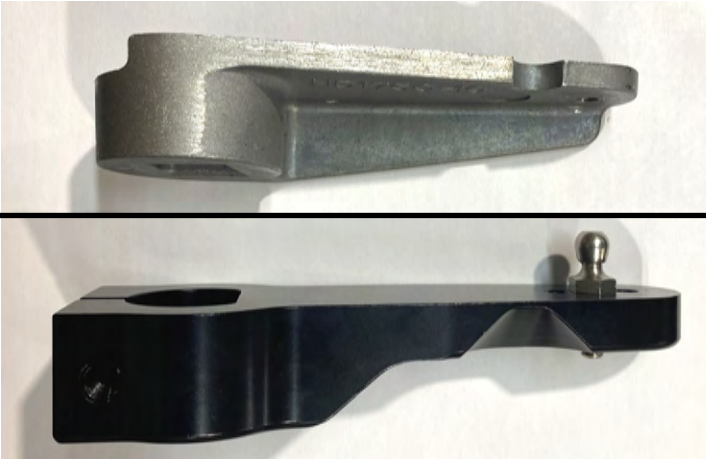


Figure 8

TIP: Three positions are provided for installation. Center position duplicates OEM steering rate. Installing ball joint closer to steering shaft enables faster steering response with less leverage. Installing ball joint farther away from steering shaft enables slower steering response with more leverage.

Remove OEM steering shaft by rotating right (or left). Then, pull up and out of carrier. (See figure 9)



Figure 9

TIP: Take care not to allow lower steering shaft bushing to fall into engine compartment! Remove bushing and set aside for use later. (See figure 10, next page)



Figure 10

Remove steering shaft sensor magnet from OEM steering shaft. Discard screw. Install steering shaft sensor magnet onto supplied RIVA Billet Steering Shaft using supplied M5x10 BHCS & M5 flat washer (A). (See figure 11) **NOTE: Apply blue Loctite to threads. Torque to 2.6lb-ft/3.5N-m.**

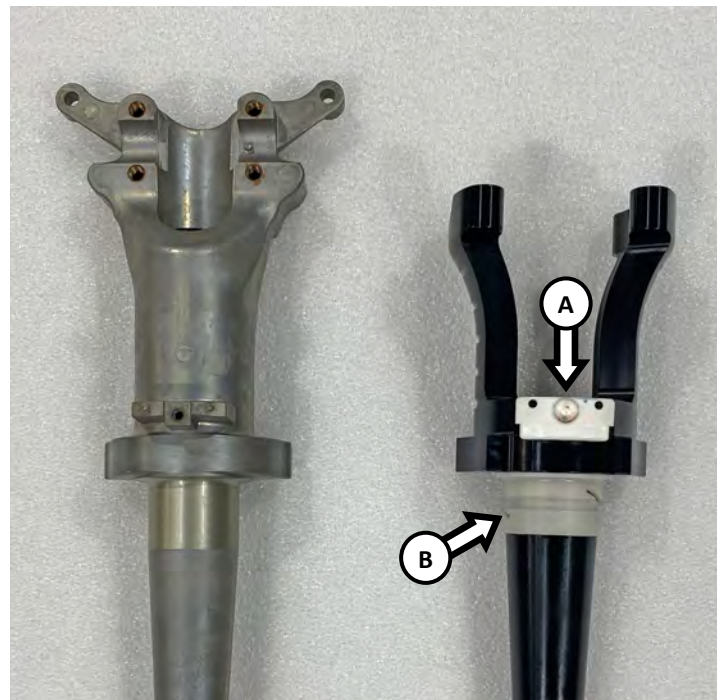


Figure 11

Transfer upper steering shaft bushing from OEM steering shaft to supplied RIVA Billet Steering Shaft (B). (See figure 11) **NOTE: Apply waterproof grease liberally to RIVA Billet Steering Shaft and outside of bushing.**

- INSTALLATION INSTRUCTIONS -

Install RIVA Billet Steering Shaft opposite of removal of OEM steering shaft.

Working inside hull again, insert lower steering shaft busing into steering housing (over end of RIVA Billet Steering Shaft). (See figure 13) **NOTE: Apply waterproof grease liberally to inside and outside of bushing.**



Figure 13

Install supplied RIVA Billet Steering Arm onto end of RIVA Billet Steering Shaft completely. Thread supplied M8x55 SHCS with M8 flat washer and M8 lock washer (A) into Billet Steering Arm, but do not tighten completely. (See figure 14)

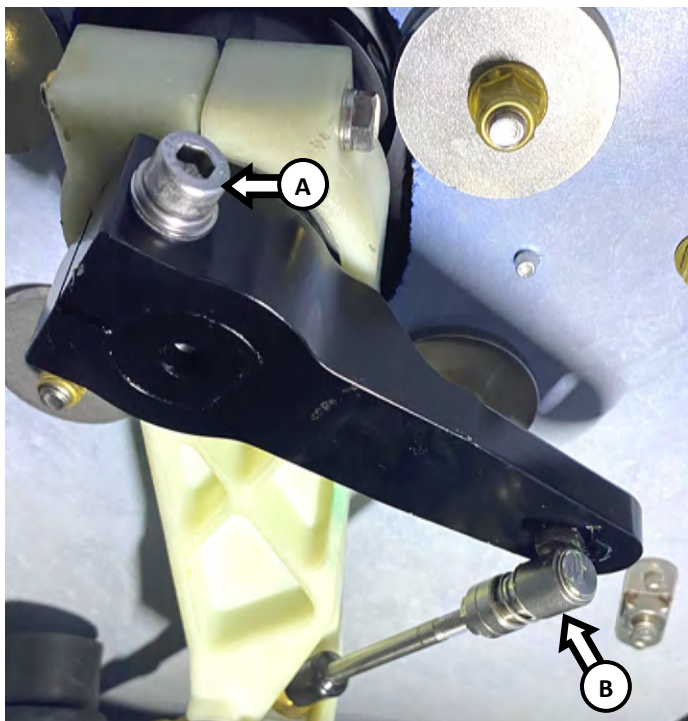


Figure 14

Confirm there is no vertical play (up & down) in steering shaft. **TIP:** While holding steering shaft down at top, tap steering arm with dead blow hammer 2~3 times. **Torque M8 SHCS to 15lb-ft/20N-m.**

Apply waterproof grease to ball joint on end of Billet Steering Shaft and attach steering cable ensuring locking collar (B) is properly seated. (See figure 14)

Replace front storage compartment bulkhead and secure using screws/rivets (4) previously removed.

Remove screws (4) securing OEM steering boss cover and discard. Install supplied RIVA Billet Steering Cover Plates (2) and secure using supplied M6x16 FHCS (left side first, then right). (See figure 15) **NOTE: Apply blue Loctite to threads. Torque to 0.66lb-ft/0.9N-m.**



Figure 15

Installation of your RIVA Billet Steering System is now complete!

Install aftermarket handlebars with cross-bar pad and secure using RIVA Billet Handlebar Clamp and supplied M8x25 SCHS. **NOTE: Apply red Loctite to threads. Torque to 15lb-ft/20N-m.**

Install aftermarket grips. **TIP:** See next page for handlebar and grip recommendations.

Apply one (1) strip of supplied anti-slip tape to inside of each metal clamp that secures throttle controls to handlebars. (See figure 17) Secure controls using OEM bolts previously removed. **NOTE: DO NOT apply thread locking agent. Torque bolts to 1.3lb-ft/1.8N-m.**



Figure 17

Install right and left OEM control switch covers (using OEM hardware). **NOTE: DO NOT apply thread locking agent. Torque bolts to 2.5lb-ft/3.4N-m.**

Check bilge for tools, rags, etc. Run craft on a flush kit to check for proper operation.

- INSTALLATION INSTRUCTIONS -

RIVA Racing Handlebar Options:

RIVA PRO-BAR 30" Runabout Bars
Item #: [RY205BK-BAR-2](#)

RIVA PRO-BAR 32" Runabout Bars
Item #: [RY204BK-BAR-2](#)

RIVA Racing Grip Options:

ODI Rogue Lock-On Grips, 130mm, No Flange, Black
Item #: [L31RGB-S](#)

ODI Ruffian Lock-On Grips, 130mm, No Flange, Black
Item #: [L32RFB-S](#)

RIVA ODI Grip End Cap & Clamp Kits
Item #: [RY206-COLOR](#)

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@rivaracing.com.

Limited Warranty

RIVA 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.