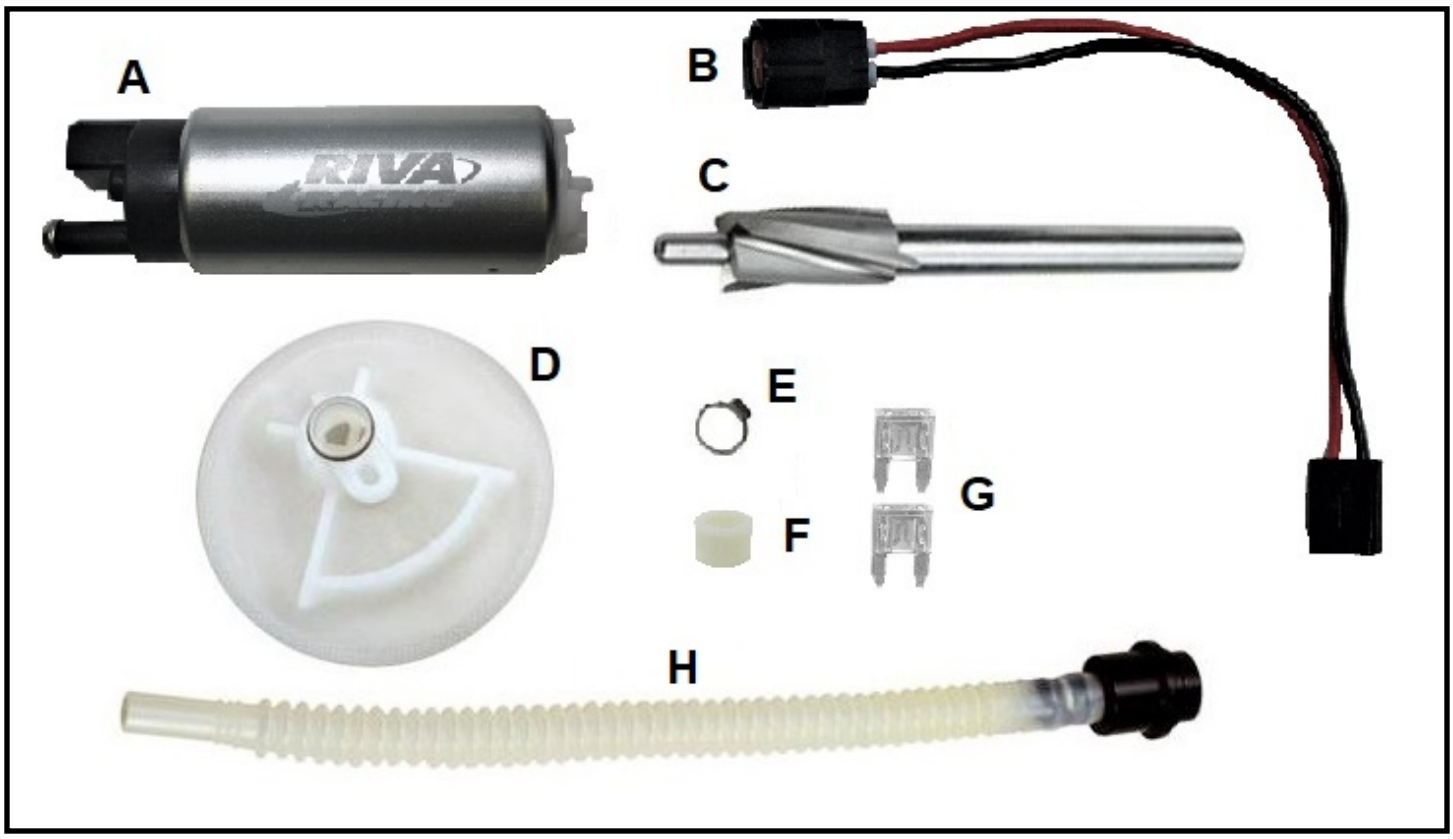
RIVA Yamaha 1.8 L High Volume Fuel Pump Kit

RY12040-340FP-KIT



Applications: Yamaha 1.8L HO, SHO, SVHO

Approximate Installation Time: 3.0 Hrs.

Recommended Specialty Tools:	***Part #***
Oetiker Clamp Installation Tool	C-48550347

Required Materials:	***Part #***

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 *****

RY12040-340FP-KT High Volume Fuel Pump Kit

COMPONENT LIST

Item	Description	RIVA Part #	Qty. Req.
A	Fuel Pump 340LPH,	GSS342	1
B	Wire Harness	YAN-RY12040-FPH	1
C	Pilot Point Boring Bit		1
D	Fuel Filter	ST16	1
E	Oetiker Clamp	1670007	1
F	Plastic Collar	6389K349	1
G	Mini Blade Fuse, (25 AMP)	731.1025	2
H	Fuel Supply hose Assy.		1

Packed with pride by:_____

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@rivamotorsports.com

- INSTALLATION INSTRUCTIONS -

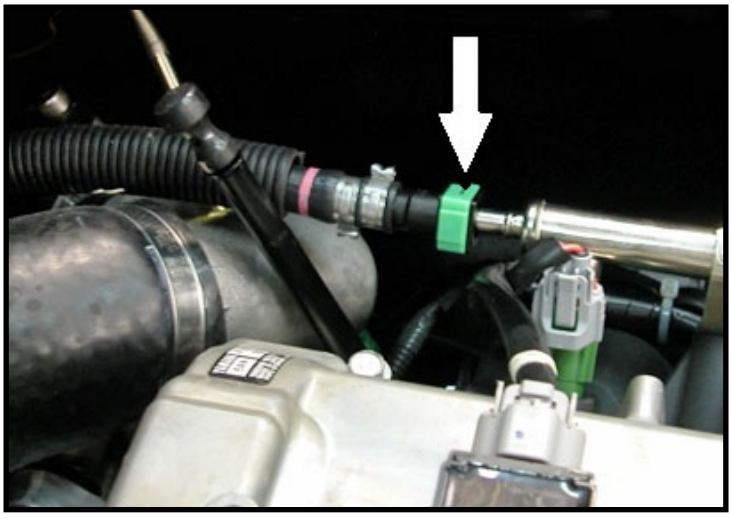
Installation of this fuel system upgrade kit requires installation of the appropriate RIVA Rising Rate Fuel Pressure Regulator for your model.

Remove seat(s) and plastic engine cover.

Drain fuel tank completely.

While holding a heavy shop rag under fitting disconnect fuel supply hose from front of engine fuel supply rail. **NOTE: Fuel system is under pressure. Use care when disconnecting. (**Figure 1)

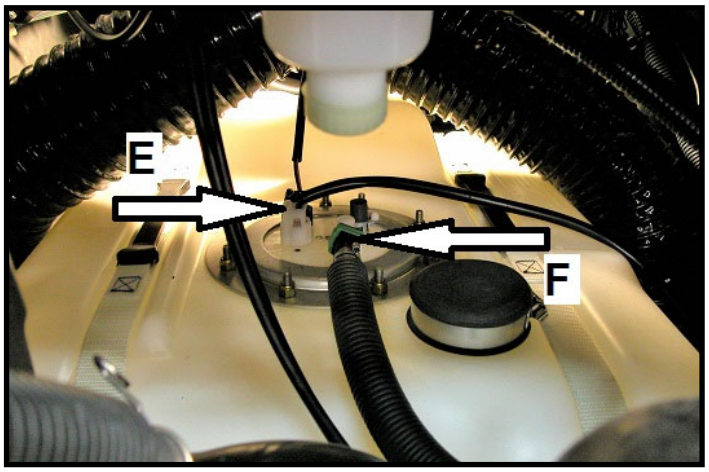
Figure 1



Refer to OEM service manual to gain access to fuel tank for your model ski.

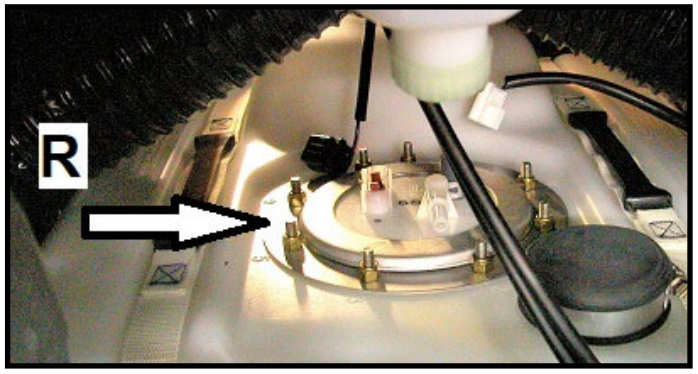
At top of fuel tank disconnect electrical connectors (2) (E in figure 2) and fuel supply hose (F in figure 2).

Figure 2



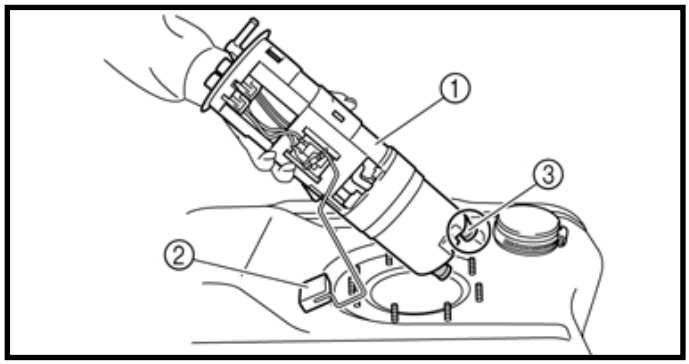
Remove the brass nuts (9) securing fuel pump to fuel tank. Remove stainless retainer ring (R in Figure 3).

Figure 3



Note front of fuel pump in relation to bow of craft. Fuel pump must be tilted toward its front as you lift upward so as not to damage fuel gauge float.

Figure 4

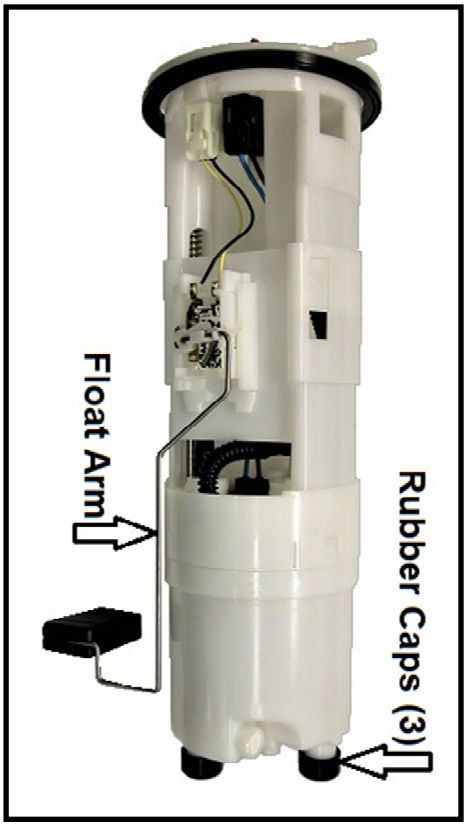


1) Fuel Pump Module 2) Fuel Gauge Arm 3) Rubber Caps

TIP: Twist fuel pump assembly clockwise and tilt towards the right to remove. ***BE PATIENT!!!*** This process requires careful maneuvering to remove fuel pump assembly.

Drain fuel from fuel pump assembly by tipping upside down. Inspect bottom of fuel pump. There should be three rubber caps (one per post – figures 4 and 5). If any are missing they must be removed from fuel tank and replaced on pump module. (Figure 5)

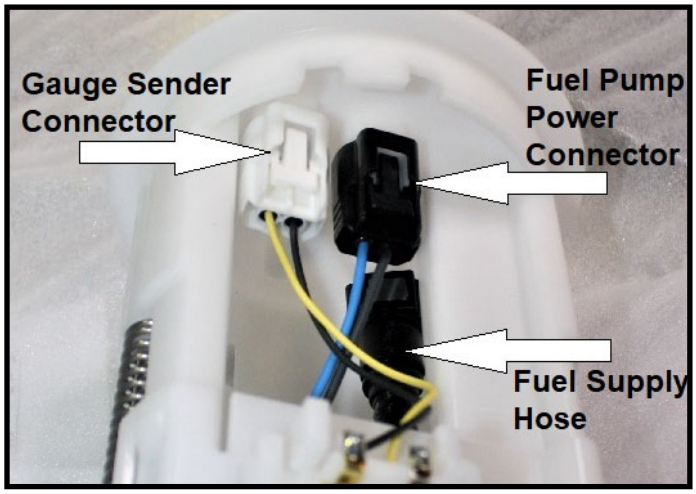
Figure 5



- INSTALLATION INSTRUCTIONS -

Disconnect electrical connectors (2) at underside of top of fuel pump sender. Disconnect fuel supply hose from underside of top of fuel sender. (Figure 6)

Figure 6



Carefully squeeze stopper hooks (#3 in figure 7) together. Push upward to remove stopper. Push in on tabs (b in figure 7) and slide float arm and sender unit up to remove.

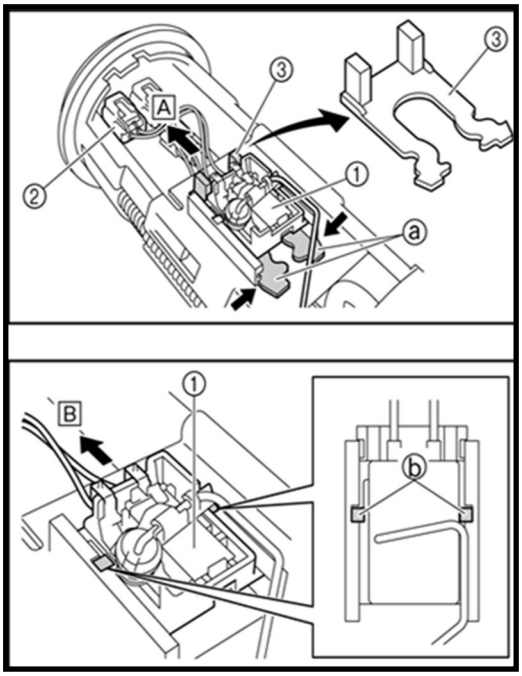
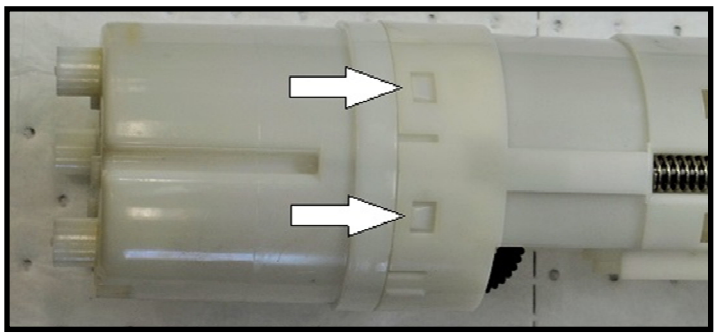


Figure 7

At middle of fuel pump module carefully pry open tabs (4), 2 per side, securing lower section to upper section. (Figure 8)

Figure 8



Pull upper and lower sections apart and separate.

Remove clip securing stock fuel pressure regulator (if in use). Carefully lift up to remove fuel pressure regulator. (Figure 9)

Figure 9

Disconnect electrical lead from top of fuel pump and set aside. (Figure 10) **Hint: Depress tab with a screwdriver and pry upward to remove lead.**

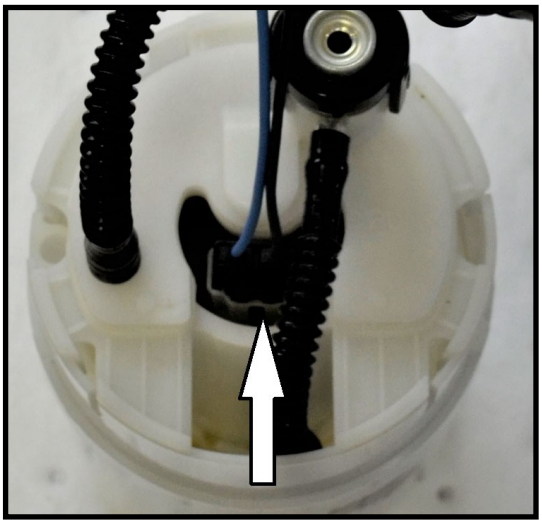
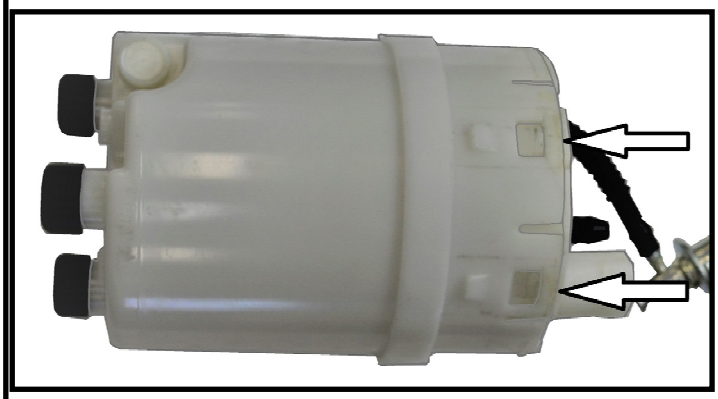


Figure 10

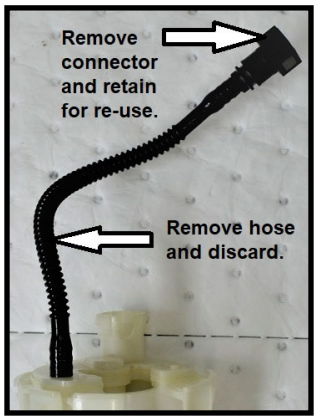
At top of lower section of fuel pump module carefully pry open tabs (4), 2 per side, securing outer cover of lower section to fuel pump housing. (Figure 11)

Figure 11



Remove connector from top end of OEM fuel supply hose and retain. Remove OEM fuel supply hose and discard. (Figure 12)

Figure 12



Remove outer cover to expose inner fuel pump housing. Remove stock fuel pump fuel filter and discard.

- INSTALLATION INSTRUCTIONS -

At bottom of fuel pump housing carefully pry open tabs (3) to remove cap securing fuel pump. (Figure 13)

Figure 13

Remove stock fuel pump from fuel pump housing by pressing down at top (at electrical connection).

Yamaha Fuel Pump modules produced up to early 2017 have a different fuel pump than later modules. Early OEM pumps are approximately the same size as the supplied RIVA High Volume fuel pump. Late OEM pumps are shorter that early OEM or RIVA pumps. (Figure 14)

Figure 14

If your module has an Early OEM Pump:

Remove rubber spacer at inlet end of OEM pump. Remove rubber sleeve and plastic collar at supply end of OEM pump. **NOTE: If rubber sleeve is not present on supply end of fuel pump remove from cavity inside fuel pump housing.**

Transfer rubber sleeve and plastic collar removed from OEM pump to supplied RIVA High Volume fuel pump. (Figure 15)

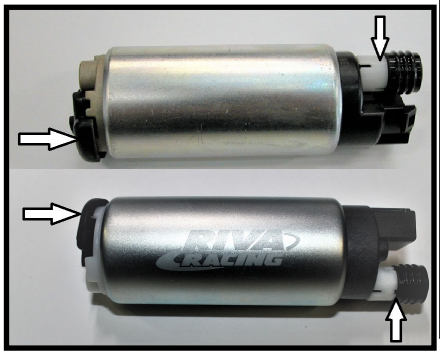


Figure 15

If your module has a Late OEM Pump:

Remove plastic pump extension (A) from supply outlet of OEM pump. (Figure 16)

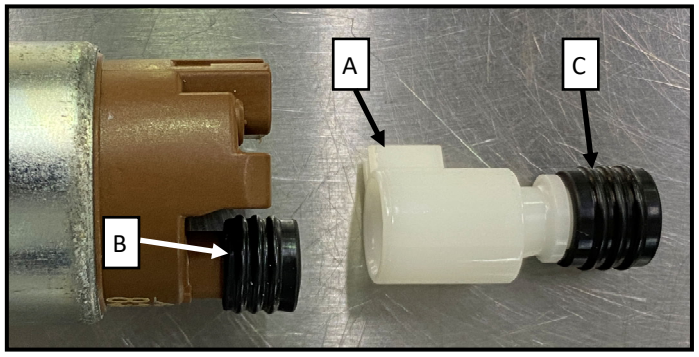


Figure 16

Discard OEM pump with short rubber sleeve (B) on supply outlet. **NOTE: If rubber sleeve is not present on supply outlet of fuel pump this is ok.** Remove taller rubber spacer (C) from end of plastic extension.

Install supplied plastic collar and taller rubber sleeve (C) onto supply outlet of supplied RIVA pump. (Figure 17)

Figure 17

Using a utility knife or similar remove the raised plastic tab at the location shown in Figure 18 from the supplied RIVA pump. **NOTE:** ***Do not remove other tabs!***

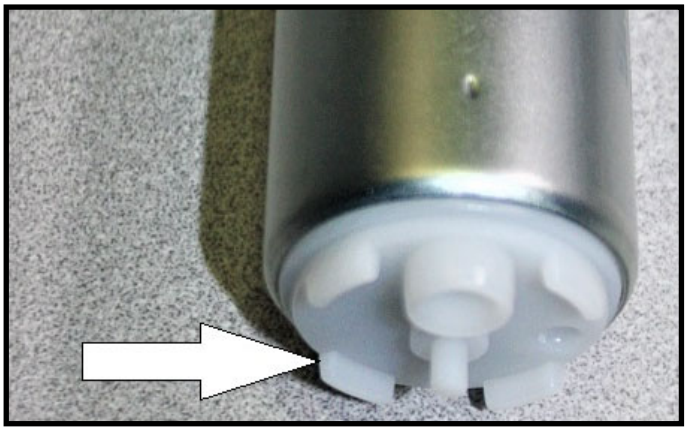


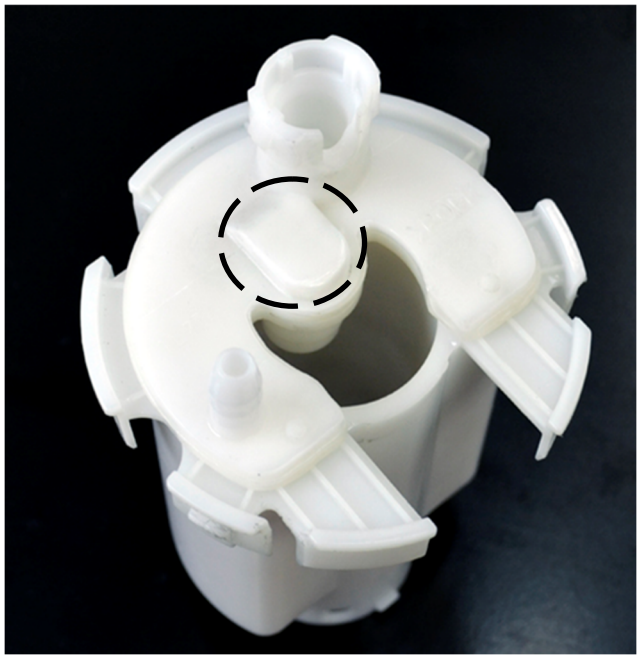
Figure 18

- INSTALLATION INSTRUCTIONS -

All models:

Locate raised flat landing on top of inner shell. (Figure 19)

Figure 19



Using a sanding wheel or file grind down only the raised flat landing to expose opening below. (Figures 20 and 21

Figure 20

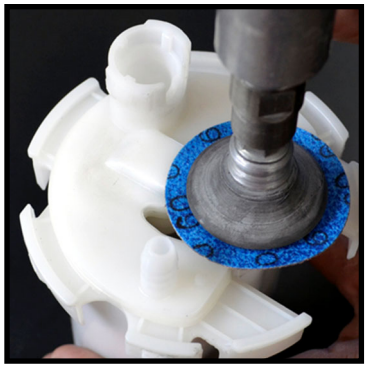


Figure 21

Using supplied pilot point boring bit and a drill press open top of inner shell at center. **NOTE: While using a drill press apply steady, gentle pressure. Do not force!** (Figures 22 and 23)

Figure 22

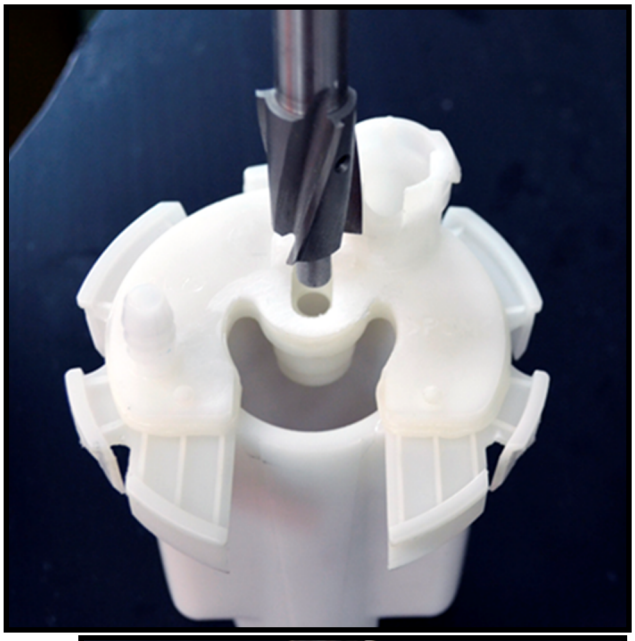
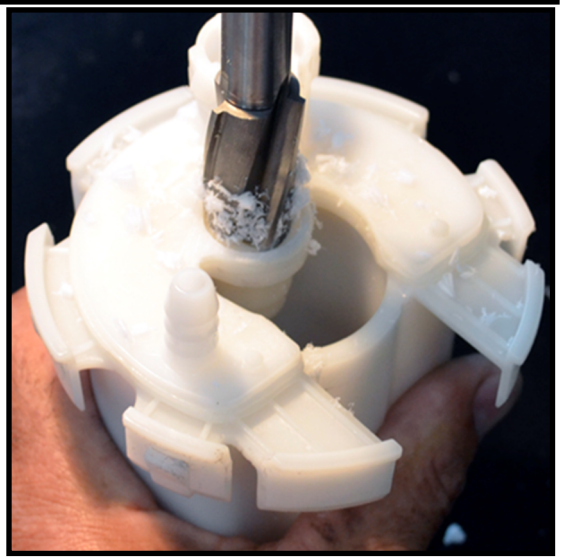
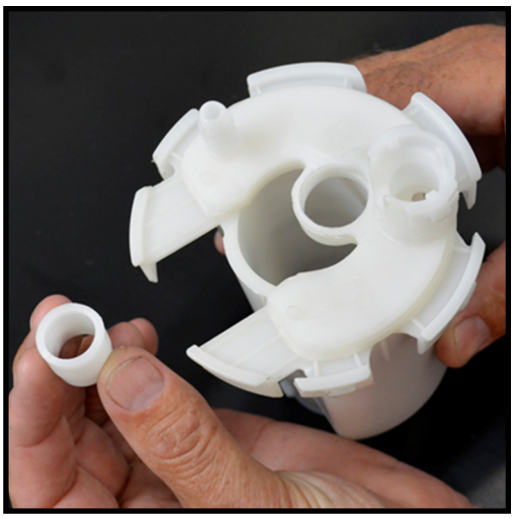


Figure 23



Discard plastic collar that separates from under-side. (Figure 24)

Figure 24



Thoroughly clean fuel pump housing using non-residual carb cleaner.

- INSTALLATION INSTRUCTIONS -

Place open end of supplied fuel supply hose in hot water for several minutes to soften. **NOTE: DO NOT USE AN OPEN FLAME OR HEAT GUN!** (Figure 25)

Figure 25

The following steps must be performed quickly. Review Figures 26-27 before proceeding.

Remove fuel supply hose from hot water.

Slide fuel hose up into fuel pump housing and out through newly created opening.

Place supplied 11.3 Oetiker over open end of fuel supply hose.

Install OE connector completely into fuel supply hose. (Figure 26)

Secure Oetiker clamp over fitting. (Figure 26)

Figure 26

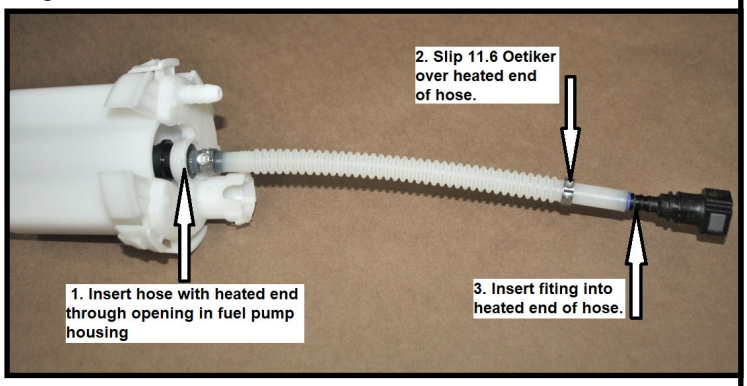
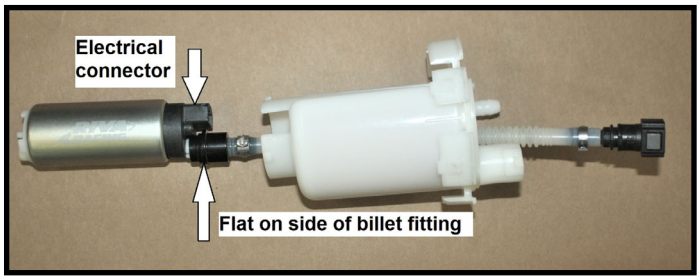


Figure 27

Apply oil to rubber sleeve on RIVA fuel pump outlet. Install into billet fitting in fuel supply hose. (Figures 28-29) **NOTE: Raised collar has a flat spot. Place opposite from electrical connector when installing pump.**

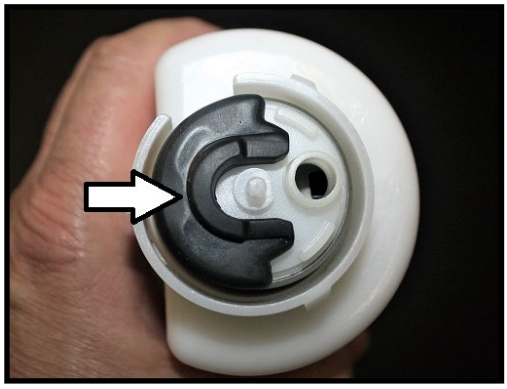
Figure 28

Figure 29



Slide pump fully into fuel pump housing. Ensure billet fitting is fully seated into hole previously created. Place rubber spacer, previously removed from OEM fuel pump, (see Figure 14 page 5) onto bottom of supplied RIVA pump. (Figure 30)

Figure 30

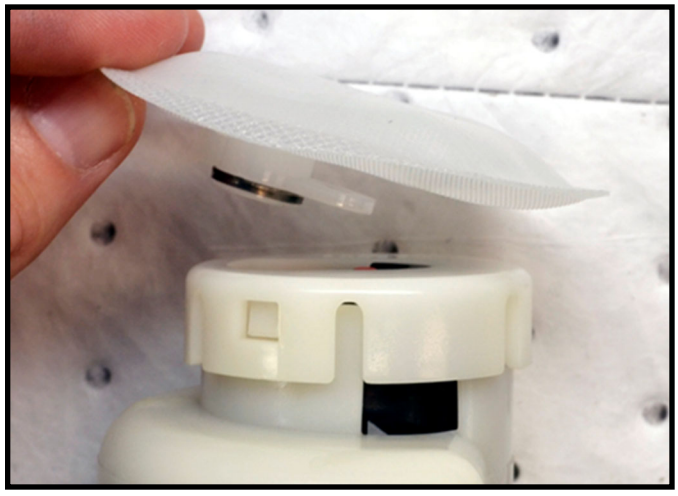


Replace cap securing fuel pump in inner shell. **NOTE: Make sure all clips snap into place securely.** (Figure 31)

Figure 31

Install supplied fuel pump filter onto fuel pump inlet. **TIP: Approach at an angle placing tab over post on base of fuel pump first.** (Figure 32)

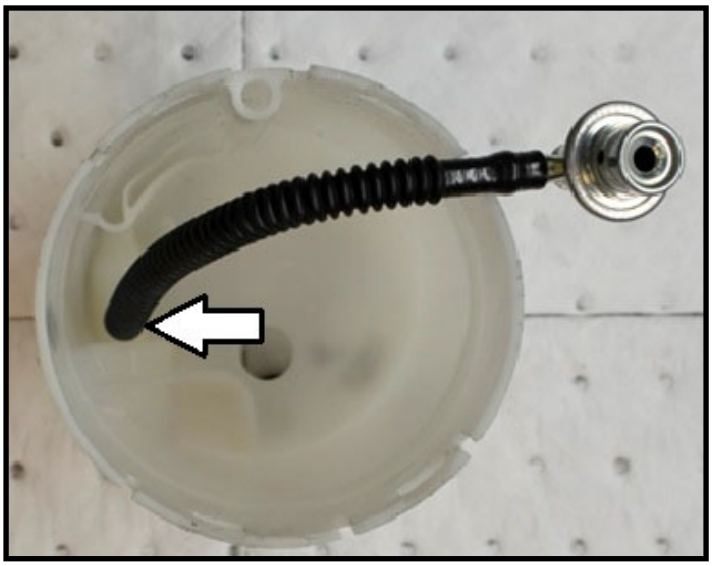
Figure 32



- INSTALLATION INSTRUCTIONS -

Remove OEM fuel pressure regulator and hose from outer cover of lower fuel module housing. (Figure 33)

Figure 33



Insert fuel pump housing with installed RIVA fuel pump and filter into lower section of fuel module. Pump housing will only fit into lower section of module one way. Verify alignment of all four locking tabs. Press evenly until snapped securely into place. Check all four tabs to verify closure. (Refer to figure 11, page 4.)

Install supplied electrical harness onto fuel pump connector. Ensure connector snaps into place securely. (Refer to figure 9, page 4.)

Insert compression spring guide rod into lower section of fuel pump assembly. Align lower section with upper section. Carefully reconnect the two halves by pressing firmly and evenly at both ends until they snap together. **NOTE: Make sure all 4 clips snap into place securely.**

Reconnect fuel supply hose to underside of top of fuel sender making sure connector snaps into place securely. (Refer to figure 6, page 4.)

Connect fuel pump electrical harness (red & black wires) to underside of top of fuel sender making sure connector snaps into place securely.

Reinstall float arm and fuel sender assembly and retainer clip. Reconnect fuel gauge sender lead. (Refer to figures 7 and 6, page 4.)

If installing on GP 1800, 2012+ FX-HO or SHO, or 2011+ VXR or VXS using RIVA Fuel Pressure Regulator Kit RY12070-RRFPR-6S5:

Locate and install return fitting from regulator kit in top of pump module at this time.

Complete reassembly following instructions in the appropriate RIVA Fuel Pressure regulator kit for your model.

Note: It is not necessary to install the billet block-off supplied with RIVA Fuel Pressure regulator kits if this high volume fuel pump kit is installed.

Connect fuel line to fuel rail and add fuel to tank.

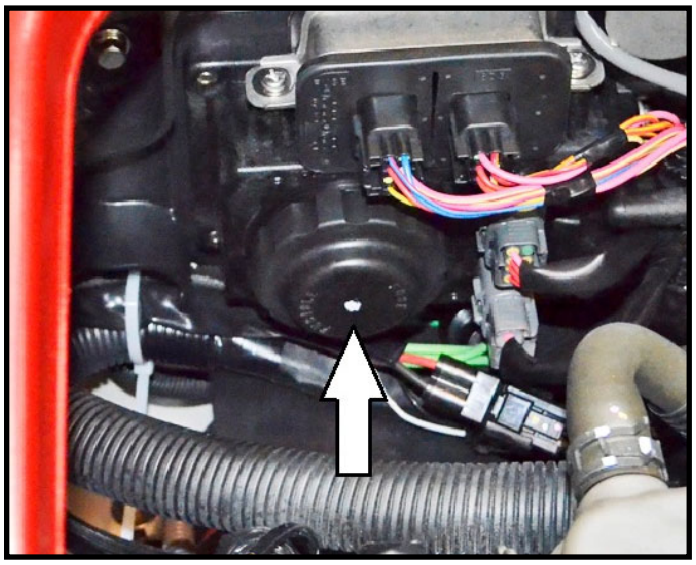
Replace plastic engine cover.

Remove electrical box cover (2 tabs at top).

2008-2016 models:

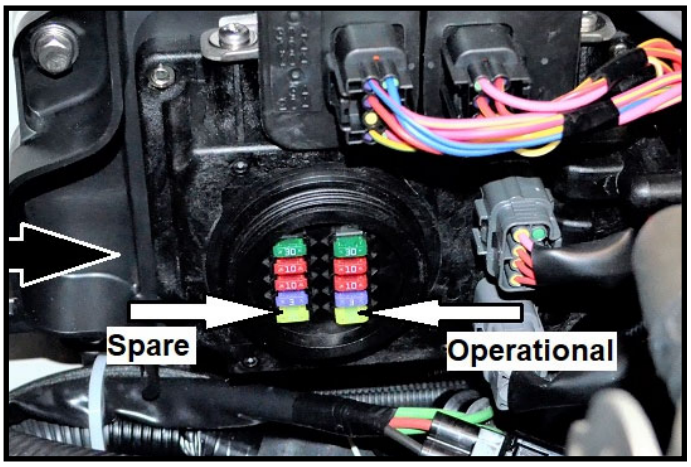
Remove fuse cap. (Figure 34)

Figure 34



Replace OEM 20 amp operational and spare fuses (yellow) with supplied 25 amp fuses. (Figure 35)

Figure 35



2017+ Models:

Replace OEM 10 amp fuse with supplied 25 amp fuse. (Figure 36)

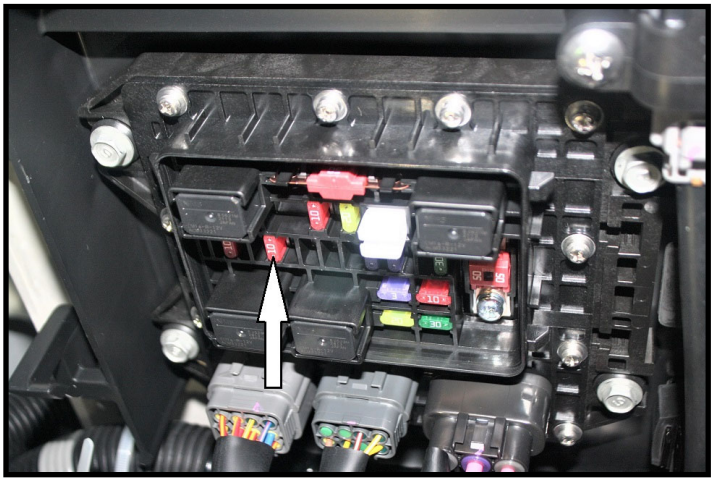


Figure 36

Replace fuse cover and electrical box cover.

Check bilge for tools, rags, etc.

Run craft on a flush kit to check for proper operation.

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 High Volume Fuel Pump Kits carry a 90-day 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.