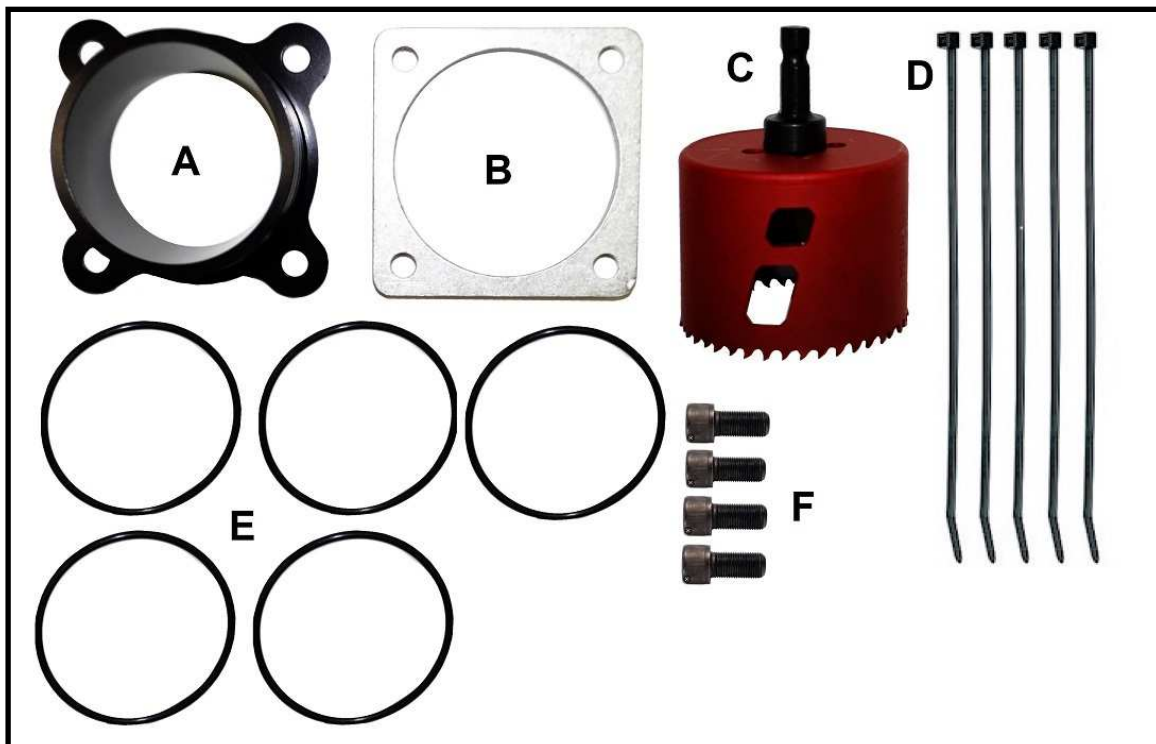




## Yamaha TR-1 Intake Manifold Upgrade

RY12090-IMUK



### COMPONENT LIST

| Item | RIVA Part #       | Description                    | Qty. |
|------|-------------------|--------------------------------|------|
| A    | QCA-RY 12090-IMUK | Billet Intake Manifold Upgrade | 1    |
| B    | FSM-RY 12080-IMUK | Template                       | 1    |
| C    | 116442            | Hole Saw                       | 1    |
| D    | TY24MX            | Zip Tie                        | 5    |
| E    | 9464K142          | O-Ring                         | 5    |
| F    | .8C25SHCS         | SHCS M8 x 16                   | 4    |

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](mailto:tech_support@rivaracing.com).

**Applications:** Yamaha TR-1 1050 3 Cylinder Engines 2016+

**Approximate Installation Time:**

**Recommended Specialty Tools:**

**Required Materials:**

Blue Loctite

**Part #**

N/A

**Part #**

N/A

#### GET THE LATEST UPDATES!

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

<https://rivaracing.com/instructions>

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.**

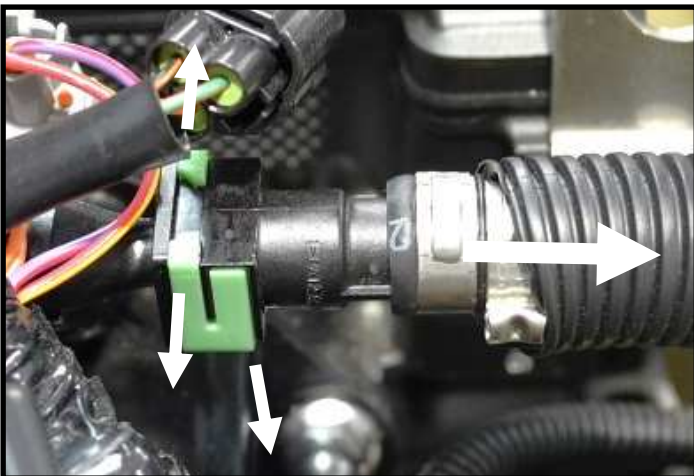
**This kit is not intended for use on pollution controlled vehicles. Installation on pollution controlled vehicles may constitute a violation of state or local statutes.**

### **- INSTALLATION INSTRUCTIONS -**

Remove seat(s), engine cover, and/or other body work required to access top and right hand side of engine. (Refer to OEM service manual if needed.)

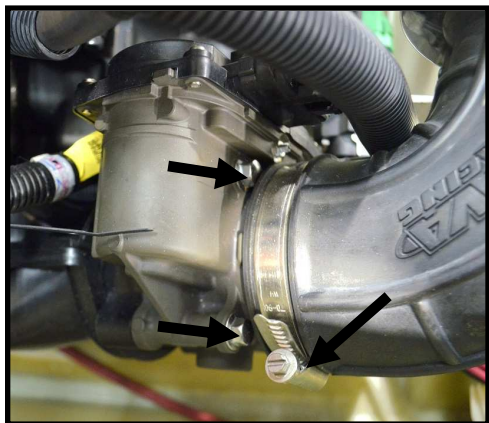
Disconnect fuel line from fuel rail. Spread the ends of the green retainer clip and slide the clip away from the connection. Then pull the line off the fitting. (Figure1) **Notes: Make sure engine is cool before removing fitting. Wrap an absorbent rag around fitting during removal to catch fuel.**

**Figure 1**

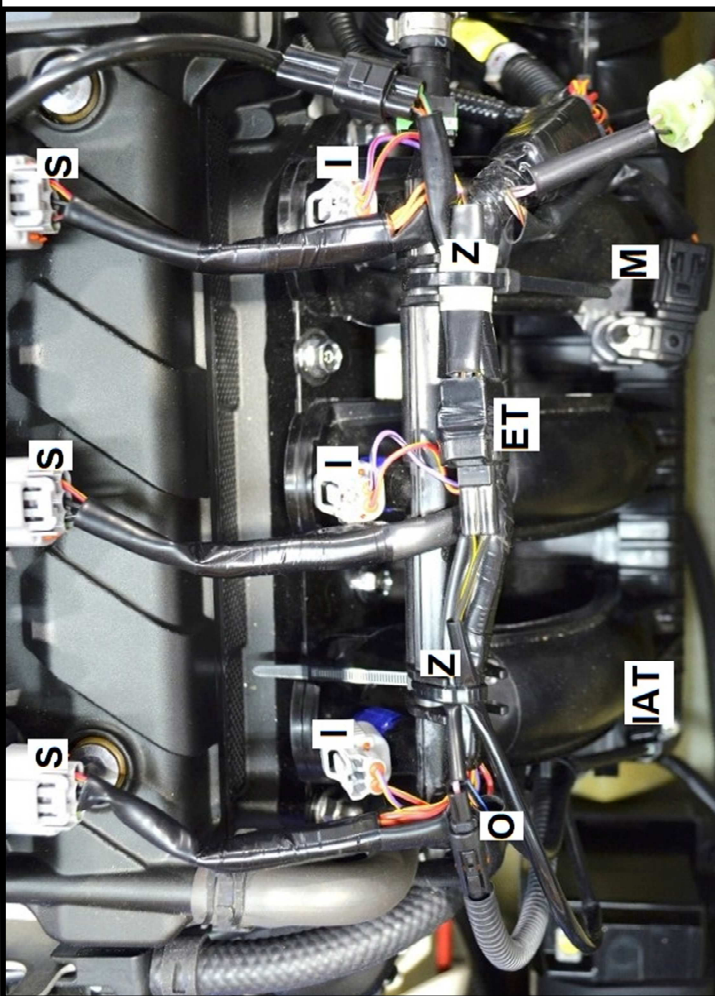


Loosen clamp and remove intake hose from throttle body. Remove bolts (4) securing throttle body to manifold and remove throttle body from intake manifold. (Figure 2)

**Figure 2**



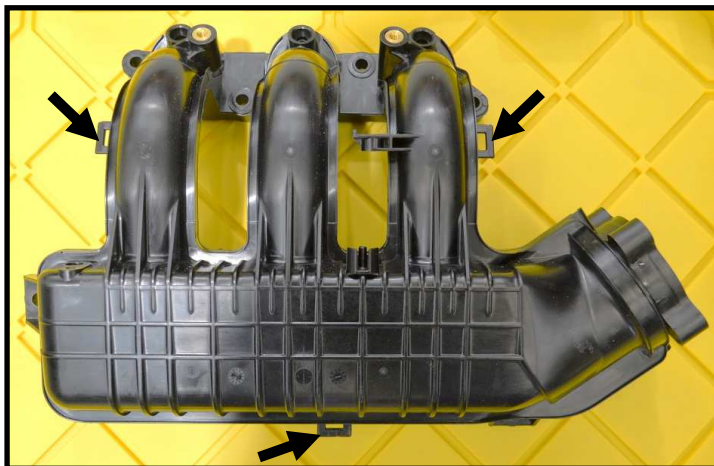
Disconnect the following items: ignition coils (3) (S), fuel injectors (3) (I), intake air temp (IAT), MAP sensor (M), oil pressure sensor (O). Cut zip ties (2) securing wire harness to fuel rail (Z). Unwrap and disconnect engine temp sensor (ET). (All references to Figure 3)



## **- INSTALLATION INSTRUCTIONS -**

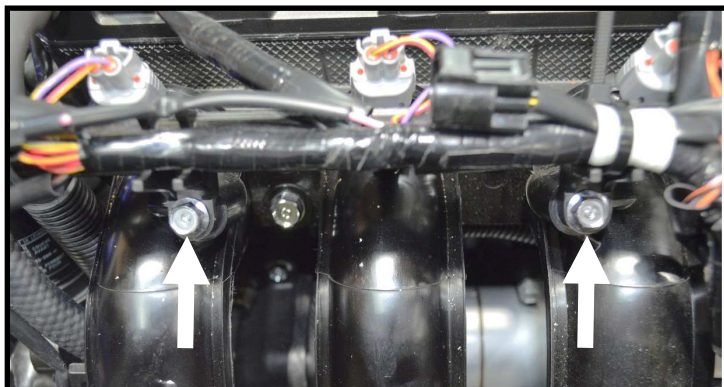
Cut zip ties (3) securing harness and battery cable to intake manifold at locations shown. (Figure 4)

**Figure 4**



Remove bolts (2) securing fuel rail to intake manifold. (Figure 5)

**Figure 5**



Remove fuel rail with injectors. **Note:** Be sure that injector seals do not drop into hull.

Remove bolts (4) and nuts (2) securing intake manifold to engine. (Refer to torque sequence diagram Figure 9, page 4 for fastener locations.)

Remove intake manifold from hull.

Using supplied M8x16 SCHS (4) fasten aluminum template to intake manifold inlet.

**Note: Do not over tighten bolts.** Position manifold in a bench vice and using supplied hole saw carefully cut flame arrestor from intake manifold. **Notes: Use low speed and verify alignment of hole saw with intake manifold inlet. Do not cut over 1-1/8" (29 mm) deep.** (Figure 6)

**Figure 6**



Remove hole saw and template. **Note: If flame arrestor will not fall out insert a screw into the ribbon and use pliers to pull it out of the manifold.**

Use sandpaper to remove burrs and smooth the inner surface of the intake manifold inlet. **Note: Thoroughly clean inside of intake manifold after removal.**

Install supplied o-rings (4) into grooves on the outside of the billet intake manifold upgrade. (Figure 7)

**Figure 7**



Insert billet upgrade into intake manifold inlet. **Note: This is a tight fit. Proceed slowly and use plenty of foaming glass cleaner to lubricate the inside of the manifold and the o-rings.** If o-rings roll out of place, remove billet upgrade and begin again. Make sure bolt holes in upgrade are aligned with threaded holes in manifold. Install remaining supplied o-ring into groove in face of billet upgrade. (Figure 8)

**Figure 8**

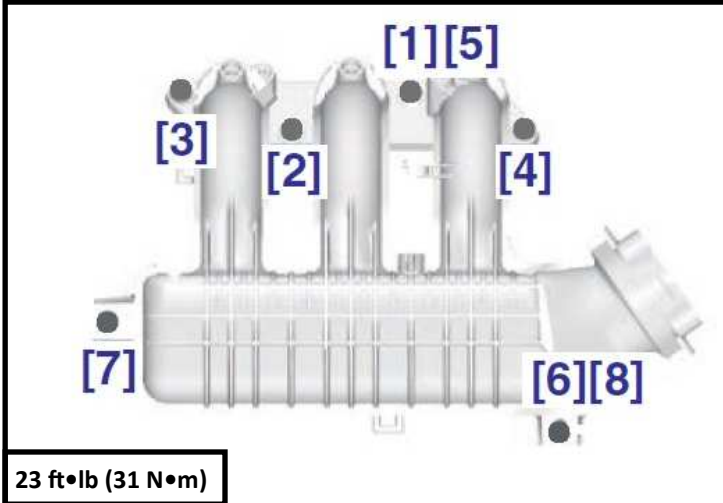


Reinstall the intake manifold onto the engine using OEM bolts and nuts.

Tighten in two steps to 23 lb•ft (31N•m) in sequence indicated. **Notes: Verify intake seals are installed in manifold mating surface with cylinder head prior to installation. Use blue Loctite on bolt threads.** (Figure 9, Page 4)

## - INSTALLATION INSTRUCTIONS -

Figure 9



Reassemble in reverse order of disassembly. **Notes: Verify that o-ring between billet upgrade and throttle body is completely in the groove before installing throttle body. Use blue Loctite on bolt threads. Verify that injector seals are in place in manifold before installing injectors and fuel rail. Lubricate injectors with a light coat of engine oil before installing in manifold or fuel rail. Secure wire harness to fuel rail, and harness and battery cable to intake manifold, with supplied zip ties (5).**

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

Replace engine cover, bodywork and seat(s) previously removed.

***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](mailto:tech_support@rivaracing.com).

### Limited Warranty

RIVA Intake manifold Upgrade Kits 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.