



RIVA RACING

PERFORMANCE PRODUCTS & ACCESSORIES

Sea-Doo High Flow Fuel Rail Kit

RS12050-BFR-BK, BL, RD



Applications: 2023 and earlier Sea-Doo 1503 4 TEC and 1630 ACE with OE intake manifold.

Approximate Installation Time: 1.0 Hr.

Recommended Specialty Tools:

Fuel Hose Disconnect Tool

Part #

529036037

Required Materials:

Blue Loctite

Part #

293800060

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.



Sea-Doo High Flow Fuel Rail Kit

RS12050-BFR-BK, BL, RD

COMPONENT LIST

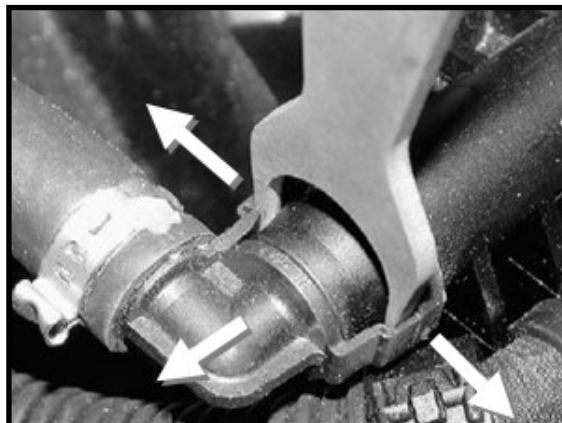
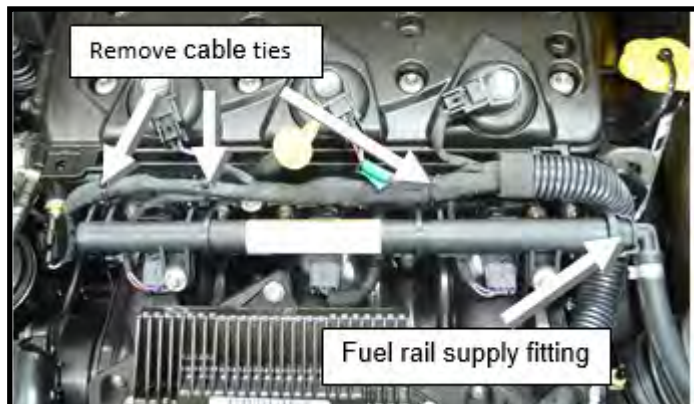
Item	Qty.	Part Number	Description	Notes
A	1	QCA-RS12050-FR	Fuel Rail Body	Part of QCA-RS12050-FR
B	2		Mounts	Part of QCA-RS12050-FR
C	1		Barbed End Fitting	Part of QCA-RS12050-FR
D	1		#10 Port Plug with O-Ring	Part of QCA-RS12050-FR
E	1	220E	3/8" Barbed Fitting	
F	1	109UA	1/8" NPT Counter Sunk Plug	
G	2	16700017	Clamp, Oetiker, 17	
H	1	RY12040-GAUGE	Fuel Pressure Gauge	
I	4	10C125SBCS	10-24 x 1-1/4 BHCS	
J	4	10NWTFS	#10 Flat Washers	
K	2	.6C16SBCS	Bolt, 6MM x 16MM, BHCS	
L	2	.6NWTFS	Washer, Flat 6MM	
M	3	QCA-RS12050-IS	Injector Spacer	
N	2	93125K49	O-Ring	

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

Remove lanyard and disconnect battery cables. **Note: Negative (black) first. Positive (red) second.**
Loosen fuel filler cap to reduce any pressure inside the fuel tank.
Remove cable ties (3) securing engine wire harness to fuel rail.

Place an absorbent shop rag under fuel rail supply fitting at front of intake manifold. Carefully disconnect fitting by releasing (slightly lifting) locks using Sea Doo tool (part#529036037) or similar. (see illustration) **Note: Fuel line is under pressure.**



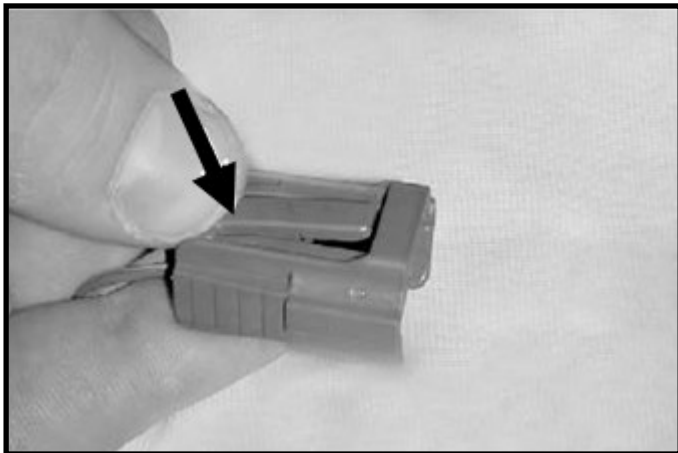
Installation Instructions

Drain the excess fuel from supply line into a small container. **Note: Avoid fuel spilling into the hull.**

Remove retaining screws (2) securing fuel rail to intake manifold.

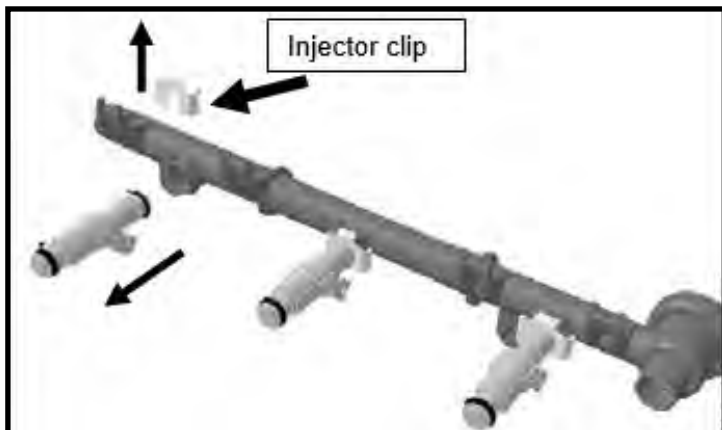
Gently lift up fuel rail side to side (wiggle). Remove fuel rail with injectors. **Note: Lift front of fuel rail upwards to avoid spilling fuel into the hull.**

While holding front of fuel rail upwards, disconnect electrical connectors (3) from fuel injectors. Remove by pressing locking tab on bottom of connector and gently pulling back.



Remove fuel rail. Carefully drain any excess fuel from rail into container.

Remove injector clips (3) from fuel injectors & gently pull fuel injector out of the rail.



Install threaded billet cap on rear of fuel rail. Ensure o-ring is properly seated. **Do not over tighten.**

Install barbed fuel supply line fitting on front of fuel rail. Ensure o-ring is properly seated. **Do not over tighten.**

The RIVA fuel rail can be installed in 2 configurations.

1. Installation with fuel rail block off.



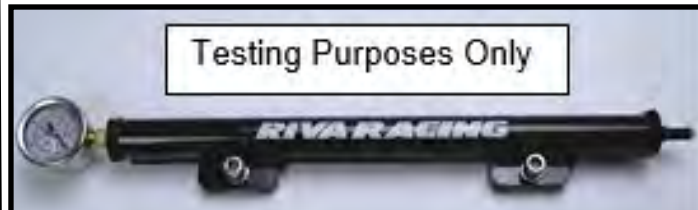
2. Installation with supplied fuel line return fitting.



If installing fuel return line on back of fuel rail, use supplied Oetiker clamp to secure return hose to fitting.

Choose configuration & install fittings. **Note: Use pipe thread sealant on brass threaded fittings.**

Important! The fuel gauge supplied with the kit is for fuel pressure testing purposes only. This is a test gauge and should not be left on the fuel rail.



Inspect o-rings on injectors before reinstallation. Replace o-ring with new one if damaged.

Apply a thin coat of engine oil to the top o-ring on injectors.

Install injectors into fuel rail by slowly turning injector from left to right while pushing in. **Note: Use care not to pinch or damage the injector o-ring.**

Position injectors so electrical connections are facing away from cylinder head.



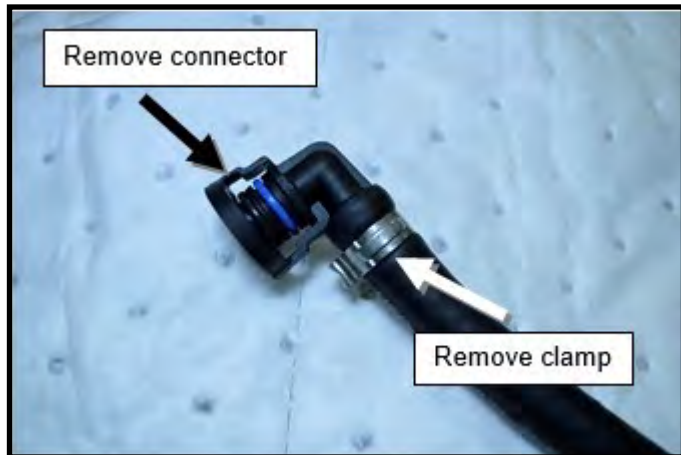
Apply a thin coat of engine oil to the bottom o-ring on injectors.

Install the supplied injector spacers (3) onto each of the injectors. **Note: Use care not to damage o-ring when installing spacers.**



Installation Instructions

Install fuel rail with injectors onto intake manifold.
Secure fuel rail in position using the 2 supplied M6 bolts & washers. **Note: Apply blue Loctite on bolts. Torque to 80 inch lbs. (9 N.m)**
Remove clamp securing OE fuel line connector & remove connector from fuel supply line.



Reinstall fuel supply line onto barbed fitting on front of fuel rail. Secure line to fitting using supplied Oetiker clamp.



Reconnect fuel injector electrical connectors. (3)



Tighten fuel filler cap.
Reconnect battery cables. **Note: Positive (red) first. Negative (black) second.**
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 Fuel Rails carry a 6 month 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.