



Pro-Series ECU

PART# - RY11841-ECU-HFPWC



APPLICATION(S): Yamaha 1.8L Engine Models (SHO/HO)

RIVA/Athena ECU Manager Web Site: www.rivaracing.com/Athena

In order to achieve optimal performance gains you will need to install the following RIVA Performance Products:

Products

RIVA Power Filter

RIVA Supercharger Impeller (SHO models)

RIVA Intake Manifold Upgrade Kit

RIVA Power Cooler Kit (SHO models)

OEM Intercooler Upgrade Kit (SHO models)

RIVA Fuel Pressure Regulator Kit

RIVA Engine Cooling Upgrade Kit *

'R' Series Pump Impeller

*** = Required to provide safe operating parameters for all levels of modification (including stock).**

Along with the above components we recommend many others that will complement the RIVA/Athena ECU providing improved performance in acceleration, handling and top speed. Please visit www.rivaracing.com/kits to review the complete list.

Required tools

Cut-off Wheel or Small Saw

Part#

N/A

Recommended tools

Service Manual

Part#

Please Call

- INSTALLATION INSTRUCTIONS -

Remove seats and rear storage bin.

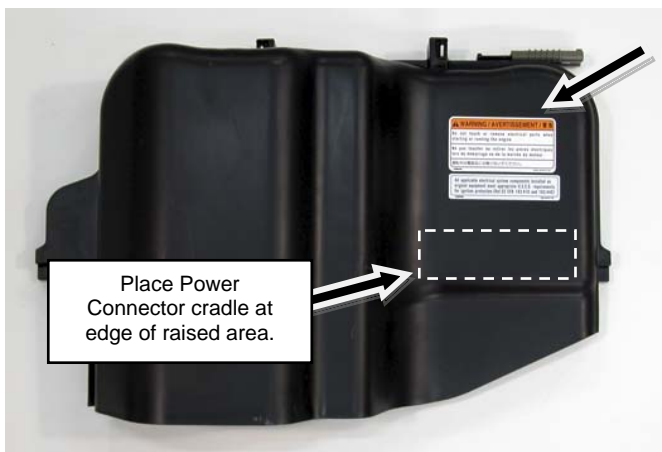
Disconnect battery cables. **NOTE: Negative (black) first. Positive (red) second.**

Remove rear grab handle/seat support if equipped.

Remove electrical box cover (2 locking tabs at top).



Remove only the upper most warning sticker on electrical box cover. Clean area with a non-residual cleaner.

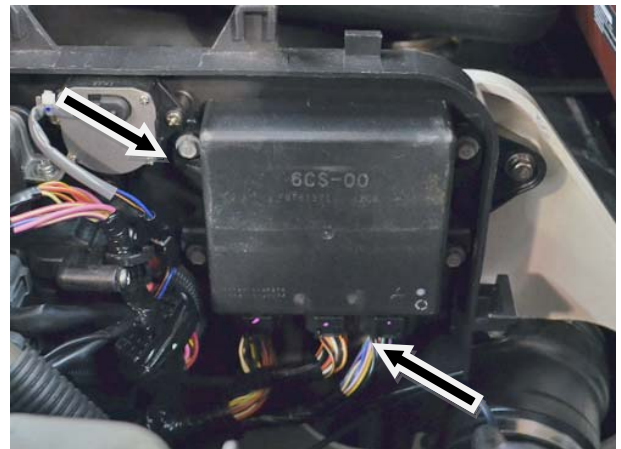


Install supplied stainless steel cradle onto outside of electrical box cover just below remaining warning sticker. Secure using supplied hardware. **NOTE: Install bolts (2) from inside and nuts on outside of electrical box cover. Do not over tighten.**

Cut a slot in the electrical box cover using a cut-off wheel or small saw. **NOTE: Sand edges so they are smooth.**



Disconnect stock ECU (3 electrical connectors at bottom). **NOTE: Document order of connectors.**



Remove stock ECU (4 bolts). Retain stock hardware.

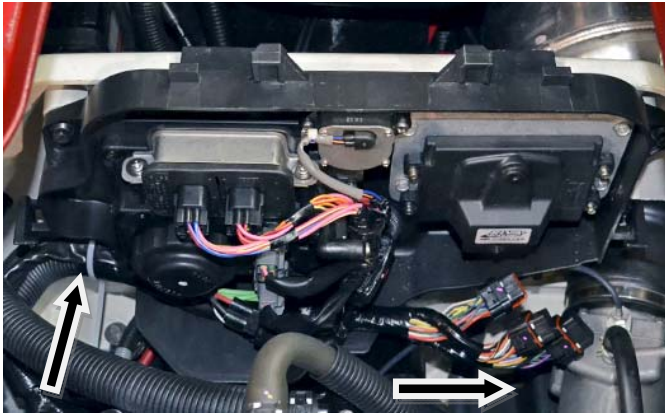
2010~08 FX-SHO models only:
Proceed to page 5 and follow steps through completion of installation.

All other Yamaha 1.8L models, proceed to page 3.

Install RIVA/Athena ECU into electrical box and secure using stock bolts (4). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



At lower, right side of electrical box loosen zip securing wiring harness to electrical box. Extend wiring harness towards left side of electrical box.



Connect Power Connector to ECU. **NOTE: Do not force connector into ECU. Once inserted use locking arm to complete connection and secure.**



OPEN / UNLOCKED



CLOSED / LOCKED

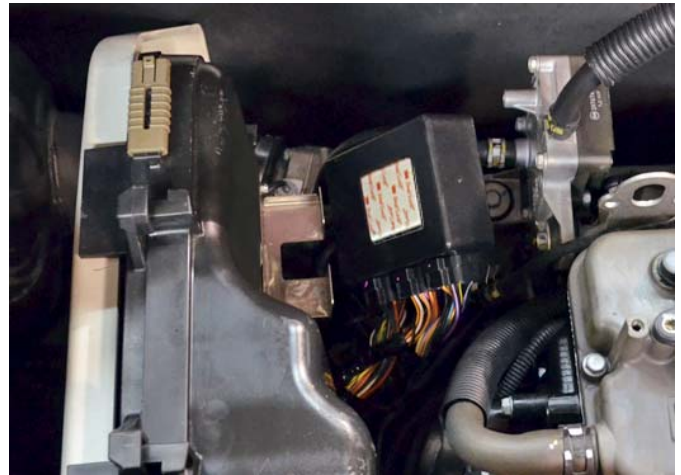
Place Power Connector box on top of exhaust pipe. Extend stock ECU connectors (3) towards motor.

Replace electrical box cover. Carefully slide into place so that wiring harnesses fit into cut out.

Secure electrical box cover (2 locking tabs at top).

Connect stock ECU connectors (3) to Power Connector. **NOTE: Do not force. Verify order/location. Listen/feel for click when locked in place.**

On back of Power Connector remove adhesive backing on Dual Lock. Carefully place Power Connector into cradle on electrical box cover. Use Power Connector to attach Dual Lock to electrical box cover.



At lower, right side of electrical box tighten zip tie securing wiring harness to electrical box.

Inside front storage compartment remove rivets (5) securing service lid in place. **NOTE: Press pin at center inward.**

Remove service lid and locate remote control sensor.



Disconnect electrical connector and install supplied block-off into wiring harness connector. **NOTE: Make sure block-off 'snaps' into place.**



NOTE: If a RIVA/Vi-PEC ECU was previously installed you must swap the black block-off with the supplied blue block-off.

Secure bypass module to OEM wiring harness using supplied zip tie.

Replace service lid and secure using stock rivets.

Replace rear grab handle/seat support if removed

Reconnect battery cables. **NOTE: Positive (red) first. Negative (black) second.**

NOTE: ECU is equipped with our Stage 3 Base Map. Verify required parts to run this map safely or download others by going to www.rivaracing.com/Athena, click on Yamaha and then 'Base Maps' in the left navigation.

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

IMPORTANT:

The following documents, in order, are provided on the RIVA/Athena ECU Manager Web Site. Please go to 'www.rivaracing.com/Athena -> Yamaha -> Downloads' to obtain the following files.

1. **PC Software (Maya)** – Install before proceeding.
2. **Installing Maya** – PDF file outlining Maya installation process.
3. **Using Maya** – PDF file outlining how to use Maya.
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***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.

Limited Warranty

RIVA/Athena Pro-Series ECU's 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.

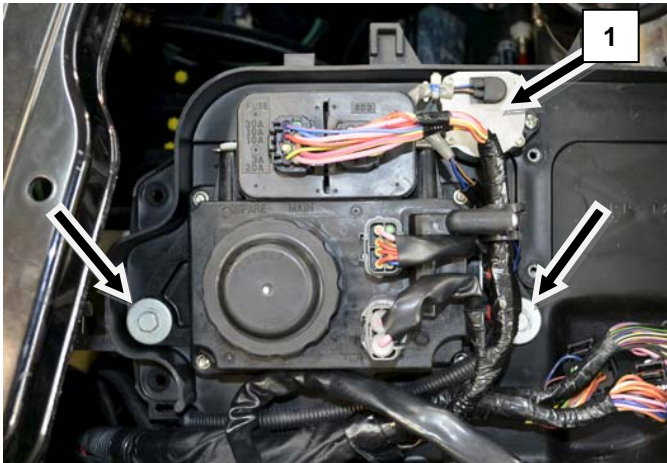
Warranted replacement parts will be returned freight collect.

2010~08 FX-SHO Models ONLY

INSTALLATION INSTRUCTIONS -

Remove ECU electrical box (4 bolts) from hull.

Disconnect Slant Detection Switch¹. Remove electrical system relay box (2 bolts) from electrical box.



Remove relay box backing plate (6 bolts).



Remove electrical box backing plate from hull and set aside.

Remove mounting tab on right side of relay box backing plate.



Install relay box backing plate onto electrical box backing with one original bolt. Push relay box backing plate towards bolt, check to make sure it's level and then secure.



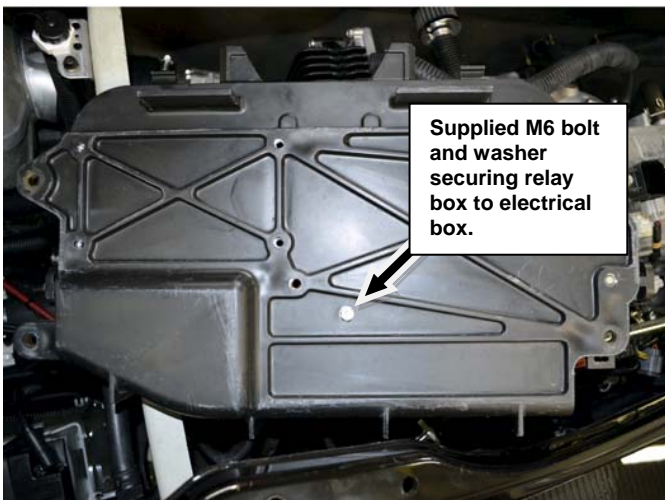
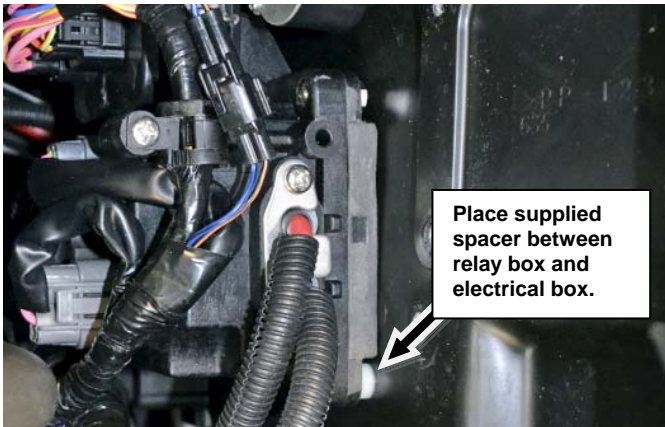
Locate and drill 1/4" hole through electrical box backing plate.

Remove relay box backing plate from electrical box.

Replace relay box backing plate onto relay box using only 5 original bolts. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**



Replace relay box onto electrical box backing plate using one original bolt. At opposite side use supplied M6 bolt, washer and spacer to secure relay box to electrical box. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**

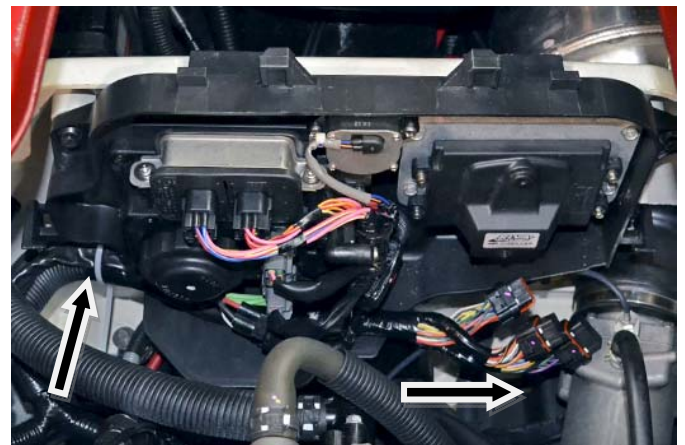


Replace electrical box backing plate (4 bolts) onto hull. **NOTE: Apply blue Loctite to threads. Do not over tighten bolts.**

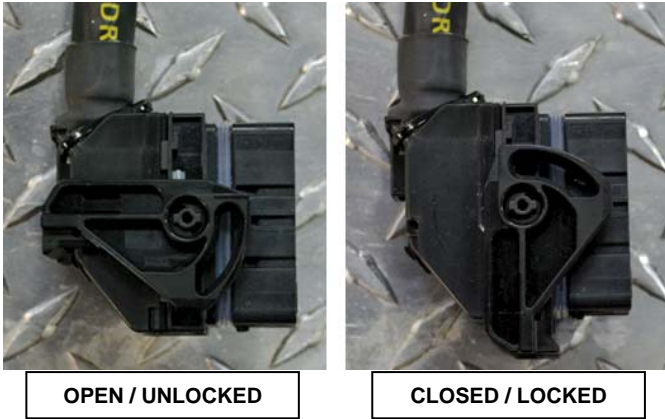
Install RIVA/Athena ECU onto electrical box and secure using stock bolts (4). **NOTE: Apply blue Loctite to bolts. Do not over tighten.**



At lower, right side of electrical box loosen zip securing wiring harness to electrical box. Extend wiring harness towards left side of electrical box.



Connect Power Connector to ECU. **NOTE: Do not force connector into ECU. Once inserted use locking arm to complete connection and secure.**



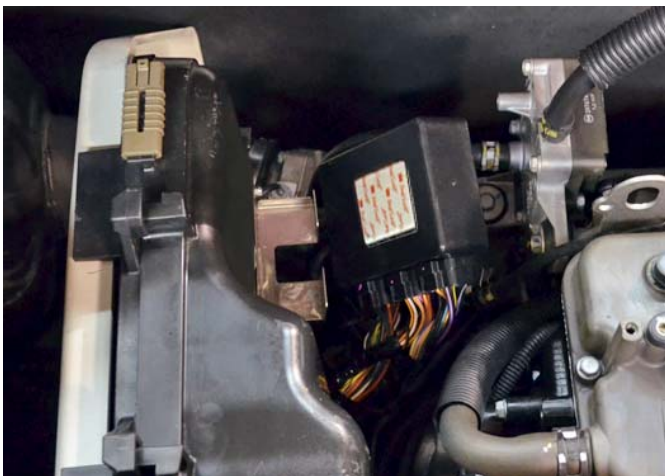
Place Power Connector box on top of exhaust pipe. Extend stock ECU connectors (3) towards motor.

Replace electrical box cover. Carefully slide into place so that wiring harnesses fit into cut out.

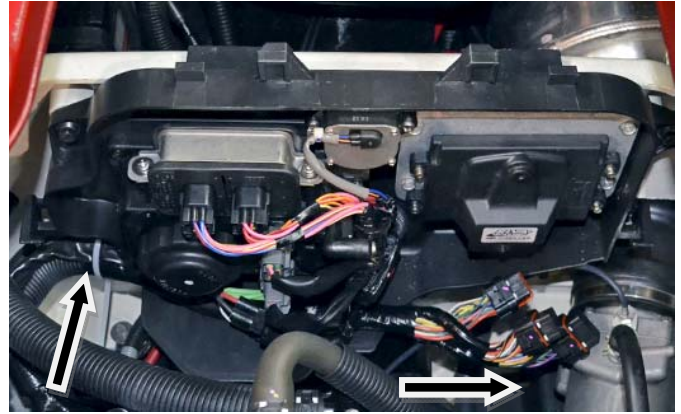
Secure electrical box cover (2 locking tabs at top).

Connect stock ECU connectors (3) to Power Connector. **NOTE: Do not force. Verify order/location. Listen/feel for click when locked in place.**

On back of Power Connector remove adhesive backing on Dual Lock. Carefully place Power Connector into cradle on electrical box cover. Use Power Connector to attach Dual Lock to electrical box cover.



At lower, right side of electrical box loosen zip securing wiring harness to electrical box. Extend wiring harness towards left side of electrical box.



IMPORTANT NOTE: If a RIVA/Vi-PEC V88 ECU was previously installed remove the cable splicer installed inline with black & white wires at lower right side of electrical box and reconnect OEM wires directly.

Inside front storage compartment remove rivets (5) securing service lid in place. **NOTE:** Press pin at center inward.

Remove service lid and locate remote control sensor.



Disconnect electrical connector and install supplied block-off into wiring harness connector. **NOTE: Make sure block-off 'snaps' into place.**



Secure bypass module to OEM wiring harness using supplied zip tie.

Replace service lid and secure using stock rivets.

Replace rear grab handle/seat support if removed

Reconnect battery cables. **NOTE: Positive (red) first. Negative (black) second.**

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