



# RIVA RACING

PERFORMANCE PRODUCTS & ACCESSORIES

## Sea•Doo Power Cooler Kits **PART# RS1750-PC & RS1750-PC-001**

We strongly recommend the use of a Sea•Doo service manual to familiarize yourself with the various engine components and procedures involved with this installation. Please note that some of the original clamps, hoses and hardware removed in the disassembly process will be used in the installation process. These instructions have been written in point form and refer to illustrations (see illustration #). Please follow these step-by-step instructions and illustrations carefully.

**APPLICATION(S):** Sea•Doo RXP / RXT / '05~07 GTX-SC Limited

### **Required Specialty Tools**

Medium size Vise-Grips® (short/rounded jaws)  
15+” x 3/8” drive wobble extension  
T-25 Star Hex Bit (for Torx® screws)  
1/4” Nut Driver or socket  
5/16” Nut Driver or socket

### **Part#**

N/A  
N/A  
RS35187 (10-pc set)  
N/A  
N/A

### **Recommended Specialty Tools**

Sea•Doo Service Manual

### **Part#**

219 100 211

## **- INSTALLATION INSTRUCTIONS -**

**Prior to installing this kit you are required to install two other RIVA Performance Products: RIVA O.P.A.S. Block-off Kit first (part# RS29050-1) and RIVA Rear Exhaust Kit second (part# RS15050). We also recommend the use of a RIVA Power Filter Kit (part# RS13050-06) as well as the other products listed in our Stage Kits to ensure you obtain our claimed & documented performance results.**

1. Remove D.E.S.S. lanyard.
2. Unclip engine coolant overflow tank and remove from mounting location. Take care not to tip overflow tank allowing coolant to drain.
3. **RXP MODELS:** Remove engine compartment cowling by first removing the two forward-most M10 socket head cap bolts and rear-most M10 socket head cap bolt completely. Loosen the two remaining M10 socket head cap bolts on lower inside rear edge of engine compartment cowling. (see illustrations 1 & 2) Cowling can now be removed. Remove and discard air intake duct attached to bottom of seat.  
**RXT / GTX-SC LTD MODELS:** Completely loosen the four M8 bolts holding engine compartment cross section in place. Remove both top and bottom halves of engine compartment cross-section support. Remove and discard air intake duct attached to bottom half. (see illustrations 3 & 4)
4. Remove OE connecting hose joint between supercharger outlet and throttle body. (see illustration #5) If using a RIVA Blow-off Valve Kit (part# RS1750-BV) remove discharge tube (with valve) and vacuum line completely. A longer vacuum line (supplied) will be installed later.
5. Disconnect the two waterlines connected to stock intercooler fittings at front of the intake manifold. (see illustration #6) Disconnect Line 1 at front of exhaust manifold and remove completely. Disconnect Line 2 at pump transom and remove completely. **NOTE:** Retain both lines for use when installing Power Cooler.
6. At front of intake manifold remove collar securing forward end of intercooler core to intake manifold housing. (see illustration #6) Retain collar for use later during installation process.

7. **RXP ONLY:** Disconnect ignition coils (spark plug caps) and ECU connectors and move aside. Remove the seven (7) M6x25 Torx® screws securing intake manifold housing to engine. (see illustration #7) **NOTE:** If you are using a RIVA Power Filter Kit it will be necessary to remove the filter element prior to performing steps 8 & 9. Be sure to cover Power Filter tube inlet to prevent debris from entering supercharger. Carefully pry top of manifold housing away from engine by moving top portion towards right side of craft. (see illustration #8) **NOTE: You are not to remove housing completely. Do not lift or pull upward on intake manifold housing. Take care not to dislodge oil dipstick tube.**
8. Pull stock intercooler core forward towards front of craft to remove. (see illustration #9)
9. **RXP ONLY:** Allow intake manifold housing to relax against engine. Replace the seven (7) M6x25 Torx® screws previously removed and torque to 6 N•m (53 lbf•in). **NOTE: Use blue Loc-tite.**
10. Install supplied aluminum block-off (with o-ring) into opening at front of intake manifold housing left when stock intercooler was removed. Secure with collar removed in step 6. **NOTE:** Apply a thin layer of waterproof grease onto o-ring before installing block-off.
11. Install two supplied silicone couplers onto Power Cooler inlet and outlet flanges. Secure using supplied hose clamps. **NOTE: Thoroughly clean flanges with non-residual cleaner. Do not over tighten clamps.**
12. In rear of craft at right side of pump transom remove the two M10 x 45 bolts and washers securing pump support to hull. (see illustration #10) Test fit the Power Cooler mounting bracket to ensure it mounts flush against pump transom. **NOTE:** We have found that some hulls have a raised edge that requires filing/grinding to allow bracket to mount flush against hull.
13. Secure RIVA Power Cooler to supplied mounting bracket. (see illustrations 11~14)
14. Apply silicone to surface of mounting bracket that will be placed against hull. Install and secure Power Cooler/Mounting Bracket assembly using the stock hardware. (see illustration #15) Torque bolts to 61 N•m (45 lbf•ft). **NOTE: Use red Loc-tite.**
15. Using the waterline previously removed from intercooler to exhaust manifold (Line 1 in illustration #6), connect end with distinct bend to water **inlet** fitting on Power Cooler and secure using supplied hose clamp. (see illustration #16) Route loose end towards water inlet fitting at pump transom and secure using supplied hose clamp.
16. Using the waterline previously removed from water inlet fitting at pump transom to stock intercooler, connect one end to water **outlet** fitting on Power Cooler. Route loose end towards left side of engine, then forward and connect to barbed fitting at front of exhaust manifold. Secure using supplied hose clamp. **NOTE: Take care not to kink hoses. It is necessary to trim excess hose for proper fit. Do not over tighten clamps.**
17. If RIVA Blow-off Valve Kit (part# RS1750-BV) was previously installed replace vacuum line at intake manifold with longer vacuum line supplied with RIVA Power Cooler Kit and skip step #24. If not, proceed to next step.
18. Disconnect the two wiring harness connectors from ECU and move aside. Remove ECU module from ECU mounting plate and set aside. Remove ECU module mounting plate and set aside. (see illustration #17) **NOTE:** Take care not to damage wires or throttle cable.
19. Locate the small boss on center intake track next to larger, threaded boss [used to secure the ECU mounting plate]. (see illustration #18) Using supplied 3/32" drill bit carefully and slowly drill straight into end of small boss beside threaded boss. **NOTE: The material you are drilling into is made of plastic. Do not push or force drill bit.**
20. Inspect newly created hole for rough edges or protrusions. Clean any rough edges or filings. Install supplied vacuum line onto newly drilled boss and secure using supplied zip tie. Route vacuum line along wiring harness under ECU towards Power Cooler. **NOTE: Do not over tighten zip tie.**
21. Replace ECU mounting plate, ECU and reconnect wiring harness connectors in reverse order of steps 18~19. **NOTE: Carefully install wiring harness connectors so as not to bend connecting pins. Use blue Loc-tite on threads of bolts securing ECU mounting plate and ECU. Do not over tighten bolts.**
22. Install two remaining supplied silicone couplers onto engine side of supplied discharge tubes completely. **NOTE:** Generously apply glass cleaner inside couplers and onto discharge tubes. Loosely install two supplied hose clamps onto each coupler. (see illustrations 19 & 20)
23. Install Power Cooler side of discharge tubes into couplers previously installed onto Power Cooler. (see illustration #20) Slide engine side couplers onto supercharger and throttle body flanges. (see illustration #21) Secure using supplied hose clamps. **NOTE: Do not over tighten clamps.**
24. Route loose end of blow-off valve vacuum line under connecting tubes for Power Cooler and attach to fitting at top of blow-off valve. (see illustration #21) Secure with supplied zip tie. Secure middle section of vacuum line to OE wiring harness under ECU with supplied zip tie. **NOTE: Do not over tighten zip ties.**

29. Replace engine compartment cowling in reverse order of Step 3. **NOTE: Use BLUE Loc-tite. Do not over tighten bolts.**
30. Replace engine coolant overflow tank. Take care not to tip overflow tank allowing coolant to drain.
31. Installation is now complete. Thoroughly inspect engine compartment and bilge for tools, rags, parts, etc. Run craft on stand using flush kit. After engine cools check all hoses and clamps to make sure they are secure. **NOTE: Do not over tighten clamps.**

**IMPORTANT MAINTENANCE TIP:** To assure optimal performance with this kit extra care must be used with flushing the open loop system after riding. We strongly recommend the use of a salt /deposit remover such as Salt-Away® which can be purchased through RIVA Racing's parts department. When flushing with a salt/deposit remover do not flush with fresh water afterwards. Allow salt/deposit remover to remain in cooling system. This will prevent build up of salt or deposits from water left in cooling system that could clog intercooler core. At the end of your riding season we recommend cleaning your intercooler with CLR® to remove any build up prior to winterizing/storing craft for an extended period of time.

***Remember, the water belongs to everyone. Please ride responsibly!***

### **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](mailto:tech_support@rivamotorsports.com)

### **Limited Warranty**

RIVA Power Cooler Kits carry a 30-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. Corrosion build up in core of intercooler is not covered.

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 must accompany all warranty claims.

Warranted replacement parts will be returned freight collect.

## - INSTALLATION IMAGES -

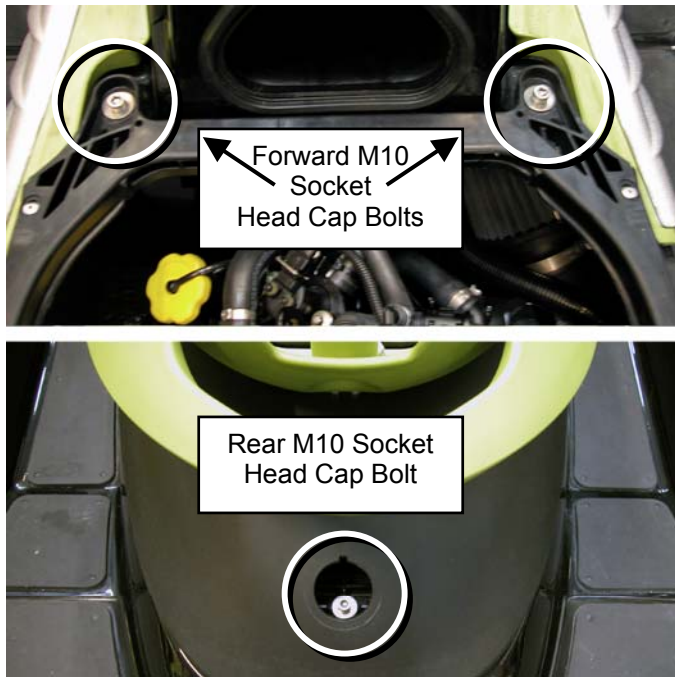


Illustration 1

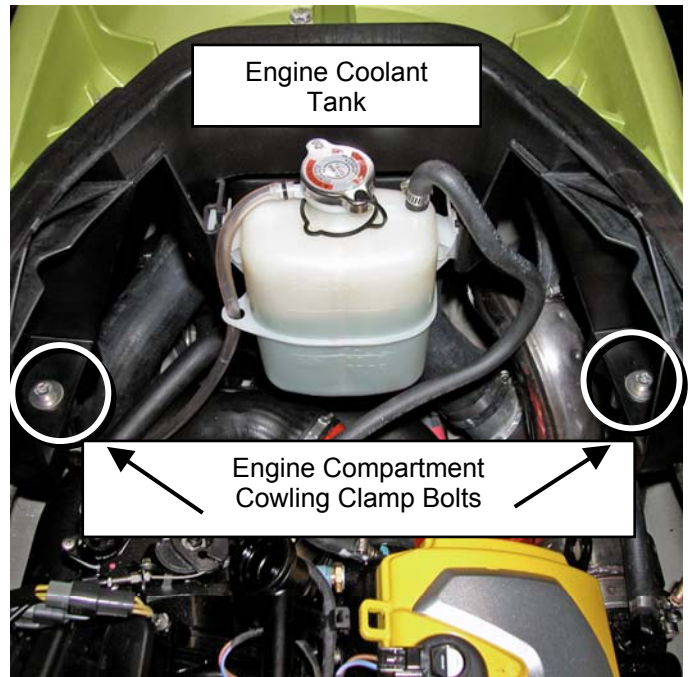


Illustration 2

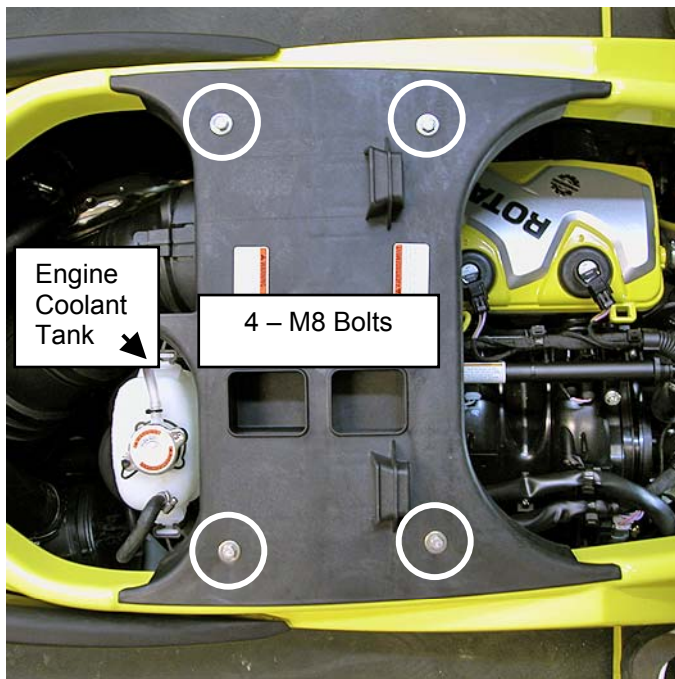


Illustration 3

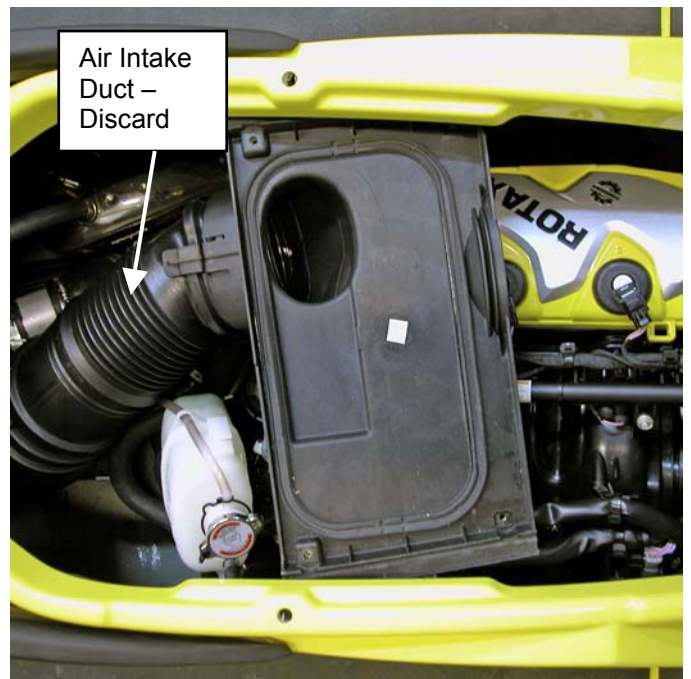


Illustration 4

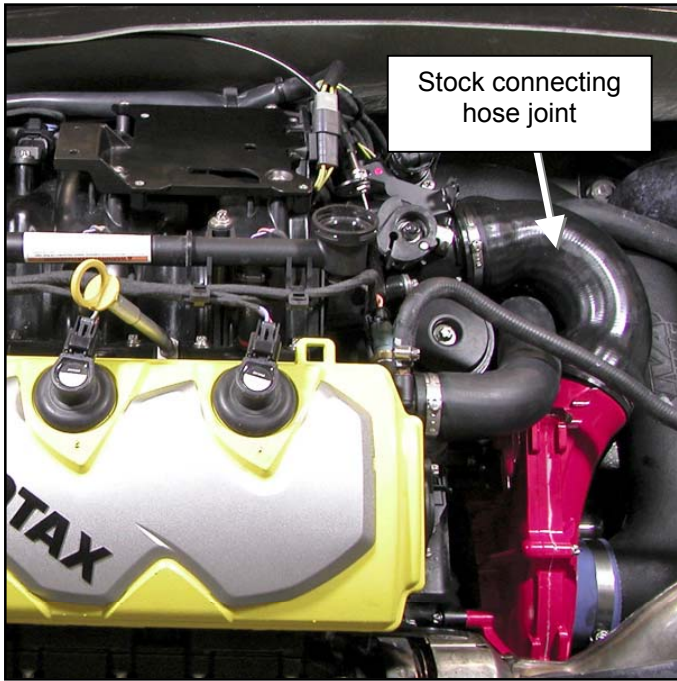


Illustration 5

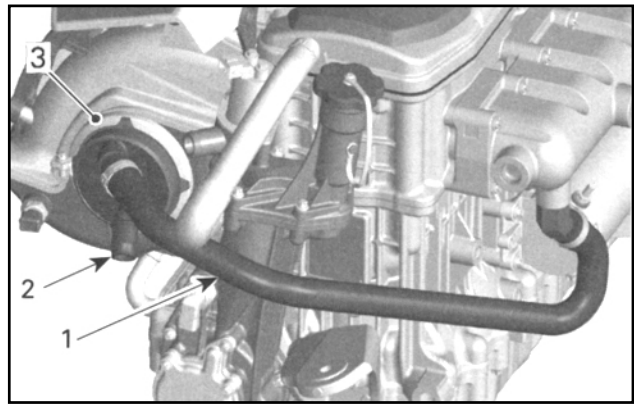


Illustration 6

- 1- IC Inlet from pump
- 2- IC Outlet hose to exhaust manifold
- 3- Gear clamp securing IC to intake manifold housing

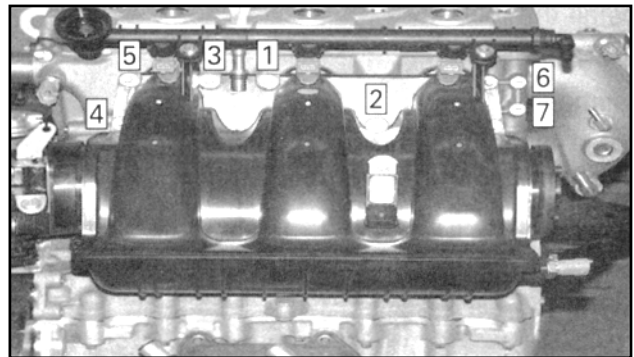


Illustration 7  
**RXP MODELS ONLY**

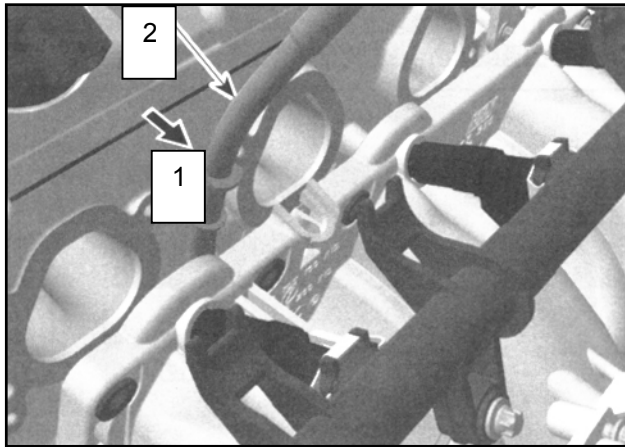


Illustration 8  
**RXP MODELS ONLY**

- 1- Intake manifold housing pried away from engine at top only.
- 2- Oil dip stick tube.

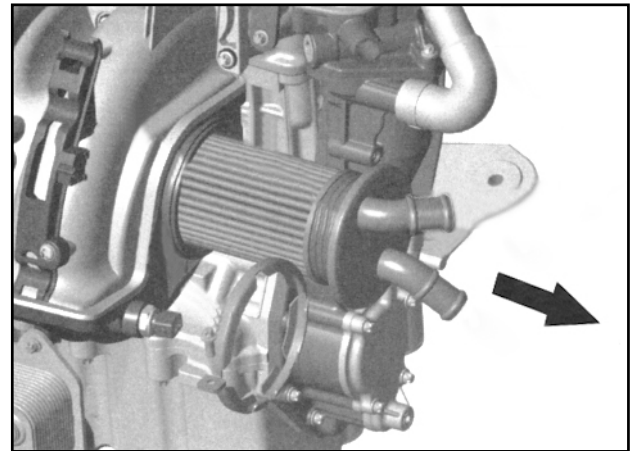


Illustration 9

Pull stock IC forward to remove from intake manifold housing.

Install supplied block-off in its place (see step #/)

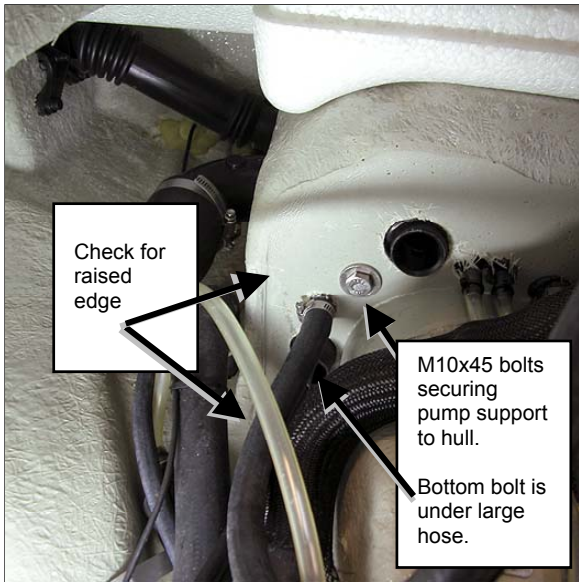


Illustration 10

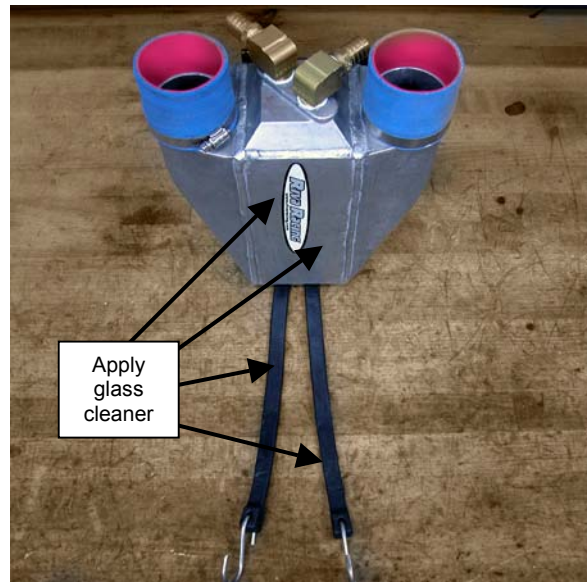


Illustration 11

While standing on end place side of Power Cooler with rubber padding against Power Cooler Mounting Bracket with rubber straps extended towards you. Generously apply glass cleaner to straps and power cooler where shown.

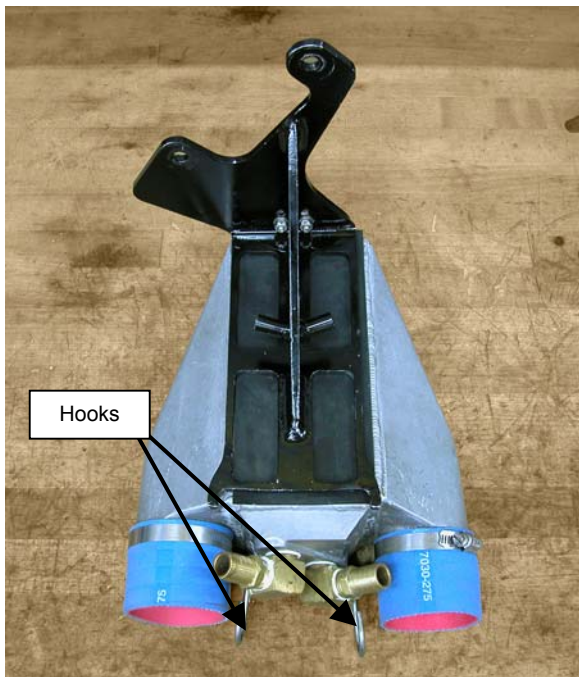


Illustration 12

Roll Power Cooler forward (with mounting bracket) so it lays on top of straps with hooks just beneath brass fittings.

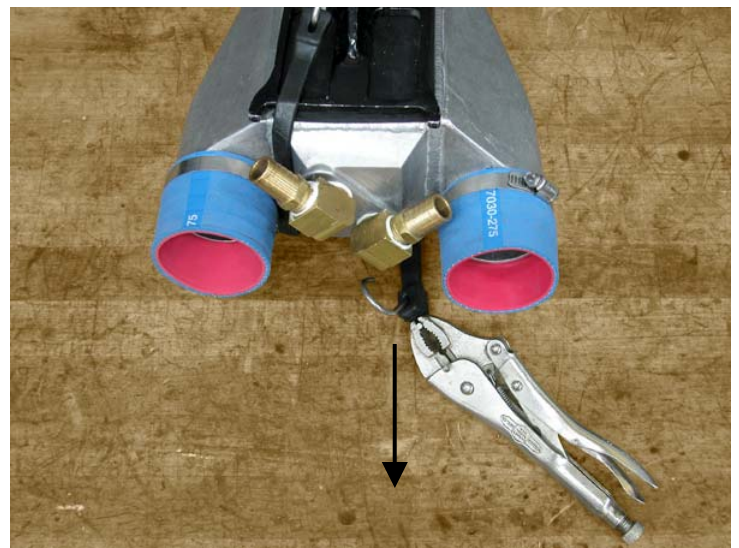
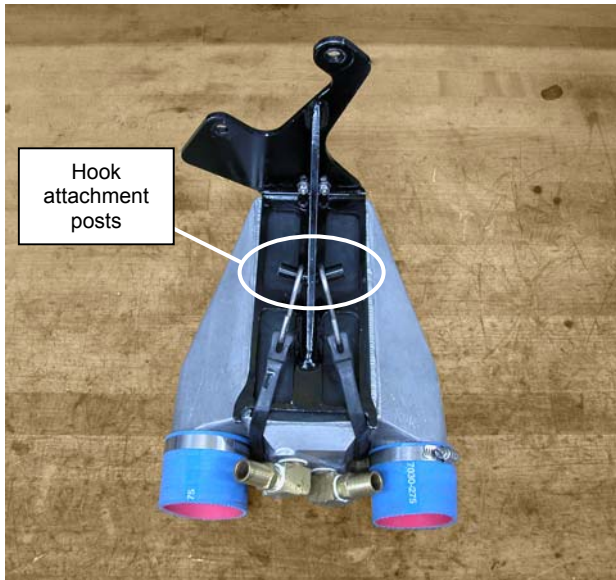


Illustration 13

Secure medium Vise-Grips® onto end of hook at rubber strap. **Note angle and position in image above.** While pulling towards you and then upward, guide straps between brass fittings and silicone couplers.



Hook attachment posts

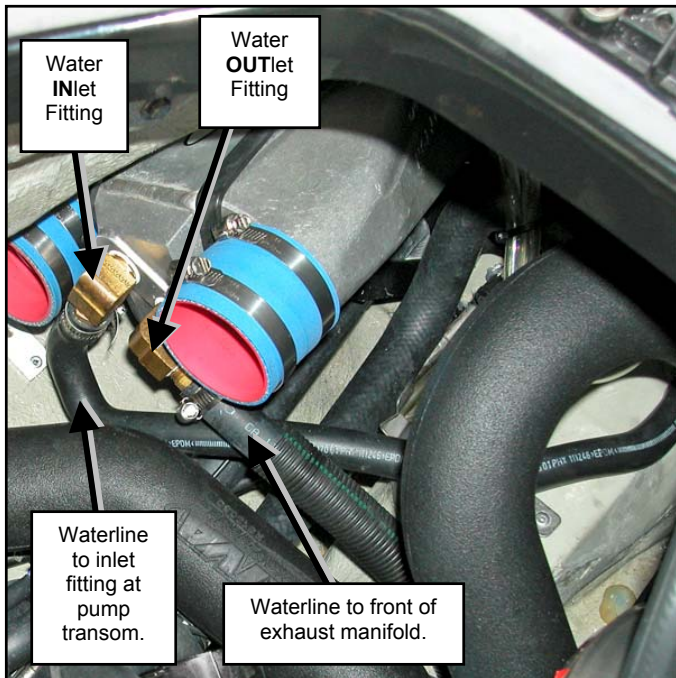
Illustration 14

Attach hooks to posts on mounting bracket support.  
Check alignment of Power Cooler on mounting bracket. It should be centered front to back and side to side.



Apply silicone between bracket and pump transom

Illustration 15



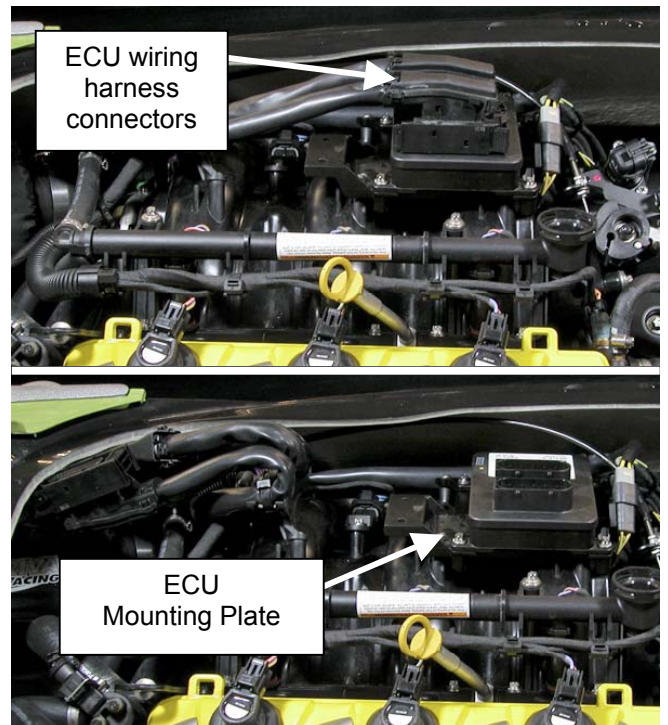
Water INlet Fitting

Water OUTlet Fitting

Waterline to inlet fitting at pump transom.

Waterline to front of exhaust manifold.

Illustration 16



ECU wiring harness connectors

ECU Mounting Plate

Illustration 17

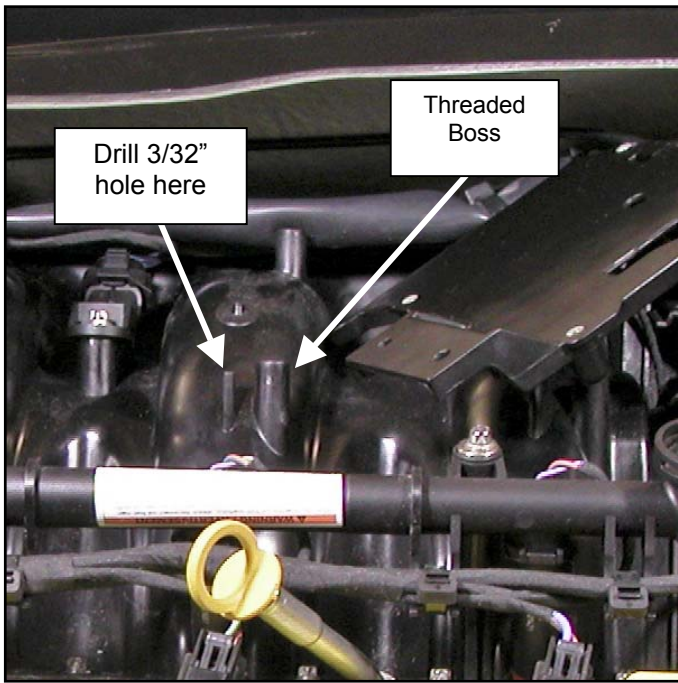


Illustration 18



Illustration 19

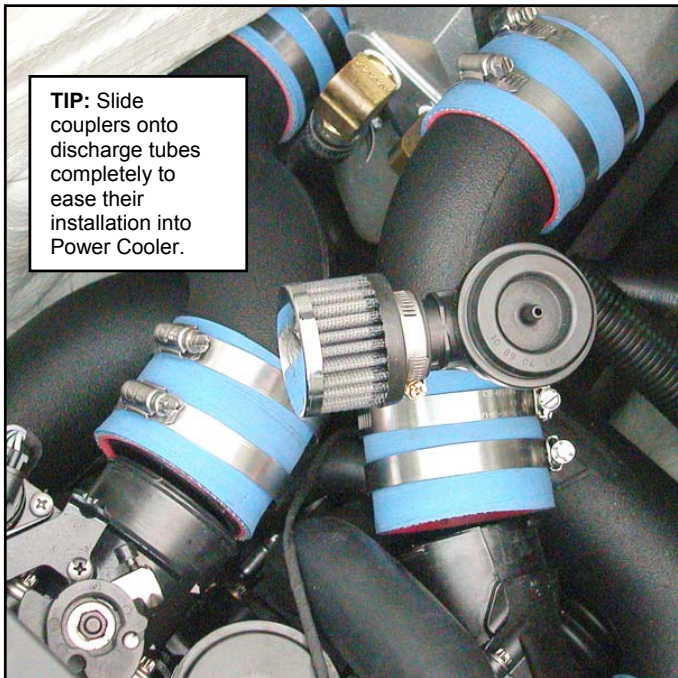


Illustration 20

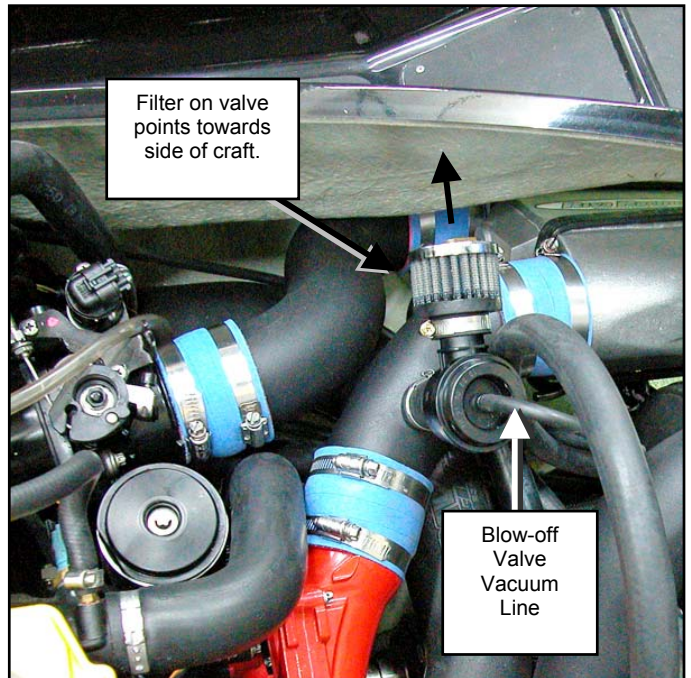


Illustration 21