



RIVA RACING

PERFORMANCE PRODUCTS & ACCESSORIES

Open Loop Cooling Kit

PART# - RS1013-50-1

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 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. Please follow these step-by-step instructions and illustrations carefully. Water routing illustrations are provided as a reference during installation.

APPLICATION(S): 260/255/215hp Sea•Doo Models

***** ALLOW ENGINE TO COOL COMPLETELY BEFORE PERFORMING INSTALLATION *****

Required tools

Utility Cutter (LG)
Oetiker Pliers
E-8 Star Socket
Dremmel Tool
Drain Pan (LG)
Service Manual

Part#

N/A
C-84550347
RS90531 (8-pc set)
N/A
N/A
CALL

NOTE: Water routing is designed for engines running up to 8,650rpm. If engine is run above 8,650rpm water pressure to intercooler must be reduced or restricted to prevent damage.

- INSTALLATION INSTRUCTIONS -

Remove seat(s).

All iS & aS models: You are required to remove the moving deck to perform this installation. Please refer to the OEM Service Manual for this process.

All Year non-iControl Models Only (All 2009 & Newer iControl Models Skip this step.): Remove jet pump following steps outlined in OEM Service Manual to expose pump support. Replace OE water inlet reducer with supplied reducer.



NOTE: Supplied water reducer has a larger I.D.

Closed Loop Cooling System Removal

Drain engine coolant following steps outlined in the OEM Service Manual. *Please recycle or dispose of engine coolant properly!*

RXP-X 260 Models Only:

Unclip engine coolant overflow tank. Disconnect hoses and remove overflow tank.

Remove grab handle. Please refer to the OEM Service Manual for this process.

RXP-X 255/RXP 215 Models Only:

Unclip engine coolant overflow tank. Disconnect hoses and remove overflow tank.

Remove engine compartment cowling (5 bolts).

RXT-X/RXT Fixed Deck Models (all):

Remove coolant overflow tank. Disconnect hoses and remove overflow tank.

Remove engine compartment cross section (4 bolts).

All Models

If using a RIVA Pro-Series Water Box proceed to next step. Otherwise remove exhaust tube between stock water box and thru-hull outlet.

Remove ducting between motor and intercooler.

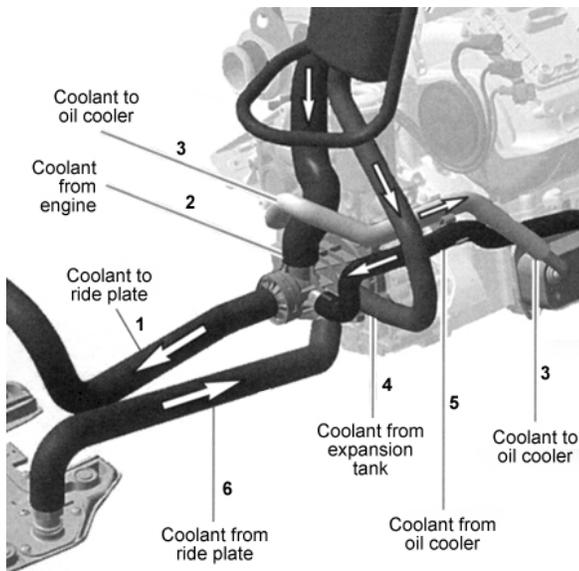
Loosen bolts (4) securing throttle body to intake manifold. Remove throttle body and move forward in engine compartment. Cover opening in intake manifold.

Remove supercharger air inlet ducting.

Standard VTS Motor Equipped Models: Remove VTS motor unit and set aside.

All Models

Disconnect hoses (6) connected to thermostat housing. Completely remove all hoses except for the two connected to oil cooler (#'s 3 & 5). Retain hose clamps.



If a RIVA Performance Ride Plate will be installed proceed to next step. Otherwise, install supplied vinyl caps over stock ride plate fittings and secure using supplied zip ties.

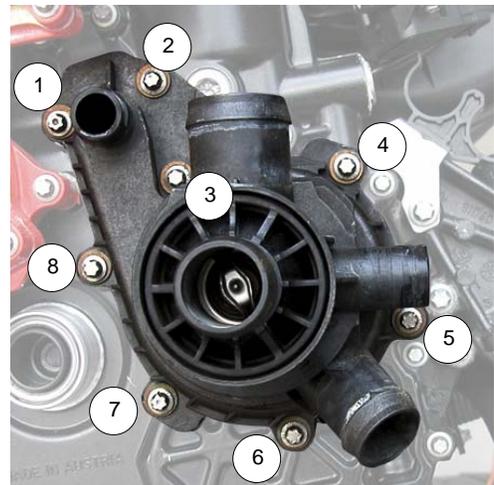


Install supplied sacrificial zinc anode into supplied Billet Water Pump Cover.



NOTE: Apply pipe thread sealant to threads. Do not over tighten.

Remove bolts (8) securing thermostat housing to engine. Remove thermostat housing from engine.



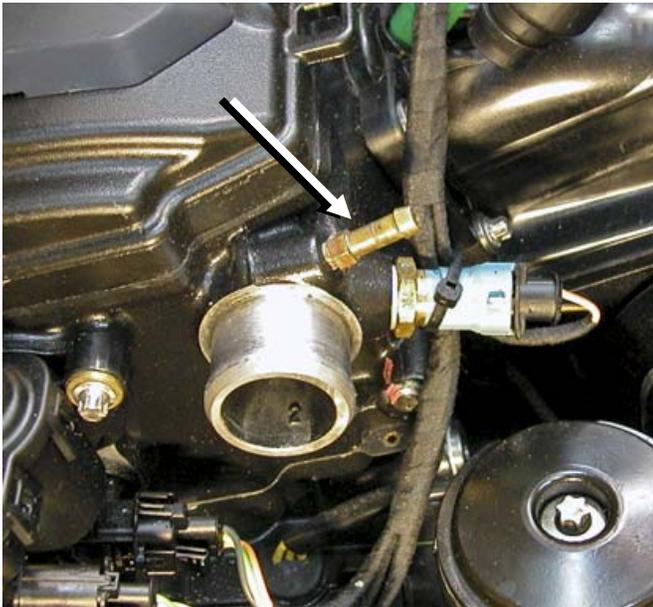
NOTE: Do not remove impeller from engine.

Transfer o-ring from back of thermostat housing to back of Billet Water Pump Cover.

Apply a thin coat of grease to o-ring. Install Billet Water Pump Cover onto engine and secure using stock bolts.

NOTE: Apply blue Loctite to bolts. Torque to 89 lbf•in / 10 N•m.

At rear of cylinder head remove brass fitting for coolant overflow hose. Install supplied stainless steel block-off screw.



NOTE: Apply pipe thread sealant to threads. Tighten screw until head is flush with cylinder head.

Install supplied thermostat unit onto rear of cylinder head. Secure using supplied 47.0 Oetiker.

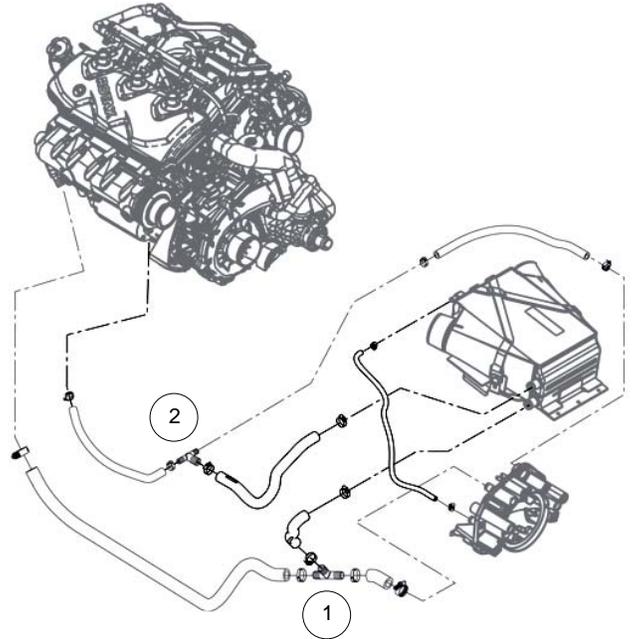


Cooling Line Removal

260/255hp Models Only: Remove all cooling lines (3 - with 'T' fitting) that supply water to intercooler and exhaust manifold¹.

Remove cooling all cooling lines (3 - with 'T' fitting) that bypass water from exhaust manifold and intercooler².

NOTE: Retain hose clamps.

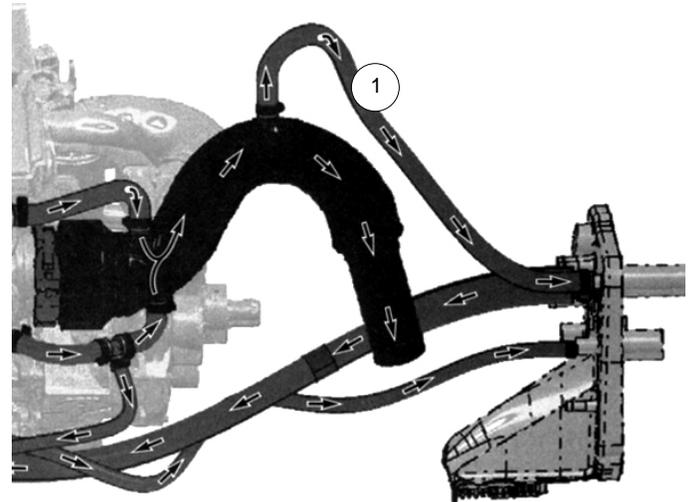


215hp Models Only: Remove cooling line that supplies water to intercooler.

Remove cooling line between intercooler and exhaust manifold.

Remove cooling bypass line between top of 'J' pipe and transom¹.

NOTE: Retain hose clamps.



All Models

Install supplied 3/4" bypass fitting in transom just below bondline. **NOTE: Enough cooling line is provided so that bypass can be installed in transom on either side of jet pump.**

Open Loop Cooling Line Installation

Water Routing Illustrations are provided on the last three pages of these instructions. Locate page for your model and use diagram as a guide when cutting lines to length, installing lines and securing lines. **NOTE: Water routings are provided as references only. Location and length of cooling lines may vary.**

Water Supply to Intercooler

Using Water Routing Illustration for your model install one length of 3/4" cooling line onto water supply fitting from pump and secure. 2011~09 models will need to use supplied 1/2" x 3/4" hose splicer to connect 3/4" line to 1/2" line at iBR.

Install one supplied 3/4" 'Y' fitting into 3/4" line as oriented in diagram and secure with supplied 31.0 Oetiker.

Install short length of 3/4" cooling line between 'Y' fitting and intercooler water inlet fitting. Secure to 'Y' fitting with supplied 31.0 Oetiker. Secure to intercooler using stock hose clamp. **NOTE: Do not over tighten clamp.**

Install short length of 3/4" cooling line onto open side of 'Y' fitting. Secure using supplied 31.0 Oetiker. Install supplied flush kit fitting (female) into open end of 3/4" cooling line. Secure using supplied 31.0 Oetiker. **NOTE: Use only as much 3/4" line as necessary for flush fitting.**

Water Supply to Motor

Install one length of 3/4" cooling line to intercooler water outlet fitting. Secure to intercooler using stock hose clamp. **NOTE: Do not over tighten clamp.**

Route forward towards Billet Water Pump Cover along bottom of hull to drive shaft thru-hull fitting (carbon seal).

Install one supplied 3/4" 'Y' fitting into line as oriented in diagram and secure with supplied 31.0 Oetiker.

Install short length of 3/4" cooling line between 'Y' fitting and brass fitting on Billet Water Pump Cover. Secure to 'Y' fitting with supplied 31.0 Oetiker. Secure to fitting on Billet Water Pump Cover using stock hose clamp from thermostat housing. **NOTE: Do not over tighten clamp.**

Install long length of 3/4" cooling line between 'Y' fitting and brass fitting at front of exhaust manifold. Secure to 'Y' fitting with supplied 31.0 Oetiker. Secure to fitting at front of exhaust manifold using stock hose clamp.

NOTE: Do not over tighten clamp.

Oil Cooler Cooling Lines

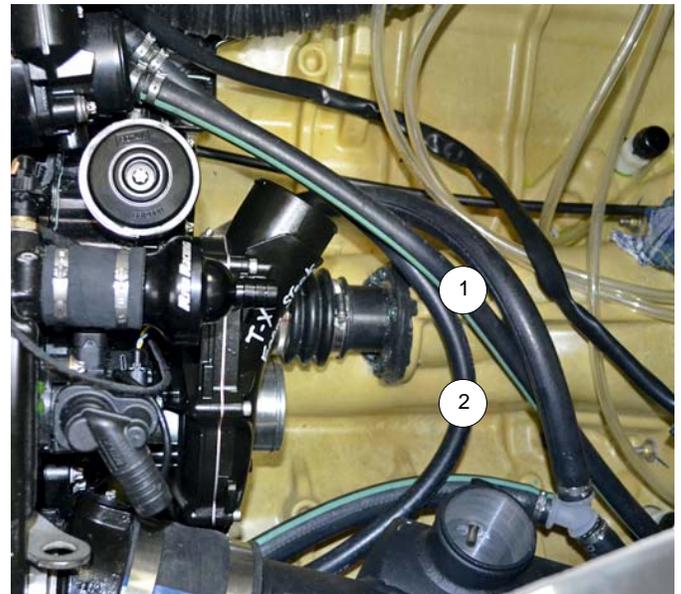
On right side of engine cut oil cooler lines at support bracket¹. Install supplied 1/2" x 5/8" brass hose splicer's into each hose and secure using supplied 25.6 Oetikers.



NOTE: Install larger end of splicer into oil cooler hose.

Install section of supplied 1/2" cooling line between lower cooling line¹ (oil cooler outlet line) and stock transom bypass fitting. Secure to oil cooler line using supplied 21.0 Oetiker. Secure to transom fitting using stock hose clamp.

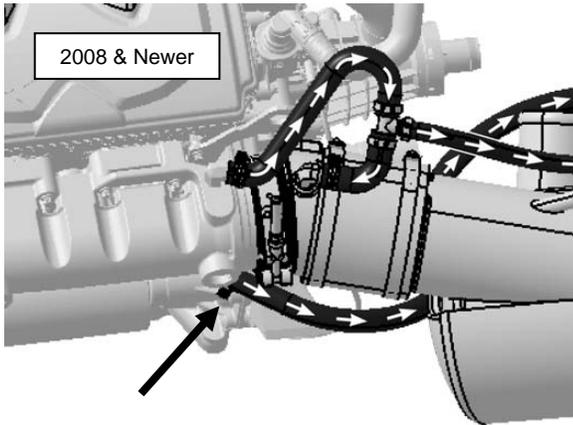
Install section of supplied 1/2" waterline to the upper cooling line² (oil cooler inlet line). Secure to oil cooler line using supplied 21.0 Oetiker.



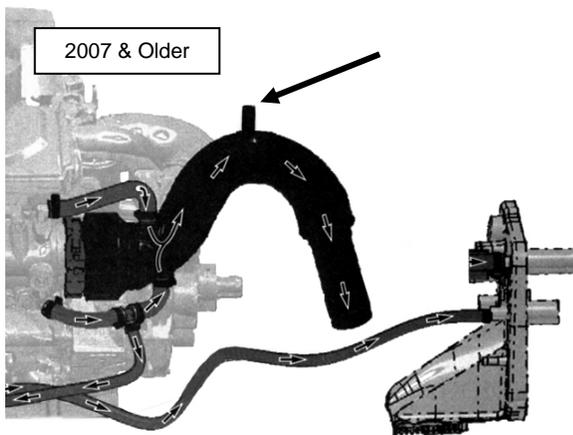
Route cooling line over drive shaft and towards exhaust pipe/water box joint.

Oil Cooler Cooling Lines (cont.)

Attach 1/2" cooling line to applicable fitting (see below) and secure using stock hose clamp. Trim excess as needed.



'08 & newer attach to fitting under end of exhaust manifold. Secure using stock hose clamp. Do not over tighten clamp.



'07 & older attach to fitting at top of 'J' pipe (trim excess as needed). Secure using stock hose clamp. Do not over tighten clamp.

Cylinder Head to Bypass

Install long length of supplied 3/4" cooling line between thermostat on cylinder head and 3/4" bypass fitting installed in transom. Trim excess cooling line as needed. Secure to thermostat using supplied 30.1 Oetiker. Secure to 3/4" bypass using stock hose clamp. **NOTE: Do not over tighten clamp.**

Replacement of Original Equipment

Standard VTS Motor Equipped Models: Replace VTS motor unit. **NOTE: Do not over tighten shaft nut.**

All Models

Replace supercharger air inlet ducting. **NOTE: Apply blue Loctite to bolts. Do not over tighten hardware or clamps.**

Replace throttle body and secure using stock bolts (4). **NOTE: Torque bolts to 11 N•m (97 lbf•in) in a criss-cross pattern.**

Replace ducting between motor and intercooler. **NOTE: Do not over tighten bolts.**

If using a stock water box replace exhaust outlet tube. **NOTE: Do not over tighten clamps.**

If a RIVA Performance Ride Plate will be installed continue with instructions included with ride plate. Otherwise replace jet pump, *if necessary*, following steps outlined in OEM Service Manual.

iS & aS models:

Replace moving deck following steps outlined in OEM Service Manual.

RXP-X 260 Models Only:

Replace grab handle. **NOTE: Do not over tighten bolts.**

RXP-X 255/RXP 215 Models Only:

Replace engine compartment cowling (5 bolts). **NOTE: Do not over tighten bolts.**

RXT-X/RXT Fixed Deck Models (all):

Replace engine compartment cross section (4 bolts). **NOTE: Do not over tighten bolts.**

Check bilge for tools, rags, etc. Run craft on flush kit to check for leaks and to ensure smooth operation.

IMPORTANT MAINTENANCE INFORMATION

Flushing: To assure optimal performance with this kit extra care must be used with flushing. The RIVA Open Loop flush connector will be used in place of the stock Sea•Doo flush kit fitting. 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 residual water in cooling system. At end of riding season we recommend "winterizing" craft if it will sit idle for an extended period of time.

Sacrificial Anode: Open Loop Cooling Kit water pump cover is equipped with a sacrificial anode to prevent corrosion from occurring in motor should you "forget" to flush craft. It is not intended to be used as an alternative to flushing craft. Anode will deteriorate over time and should be replaced each season or as needed. Check anode at beginning and end of riding season. When replacing apply pipe thread sealant to threads and do not over tighten. Replacement anodes are available through RIVA Racing's parts department.

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 Open Loop Cooling 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.

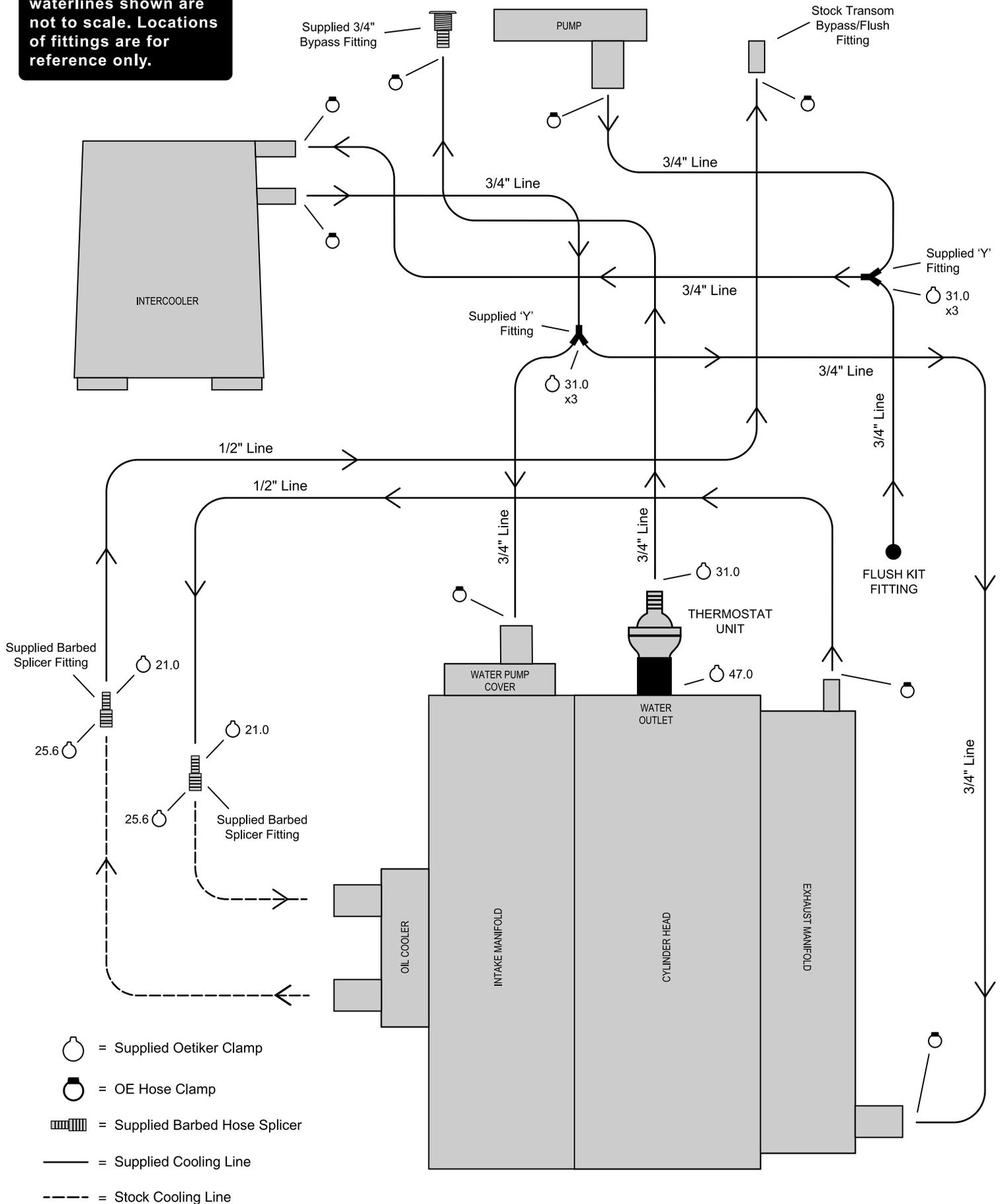
Warranty does not include the expenses related to freight or transportation of parts or compensation for any inconvenience or loss of use while being repaired. A copy of the original invoice and a Return Authorization Number (RA#) must accompany all warranty claims.

Warranted replacement parts will be returned freight collect.

Water Routing Illustration

- `12 & Newer 260 iControl using OEM intercooler or RIVA GEN-3 Power Cooler
- 255 non-iControl using RIVA Intercooler Upgrade Kit
- 215hp GEN-2 Power Cooler Kit

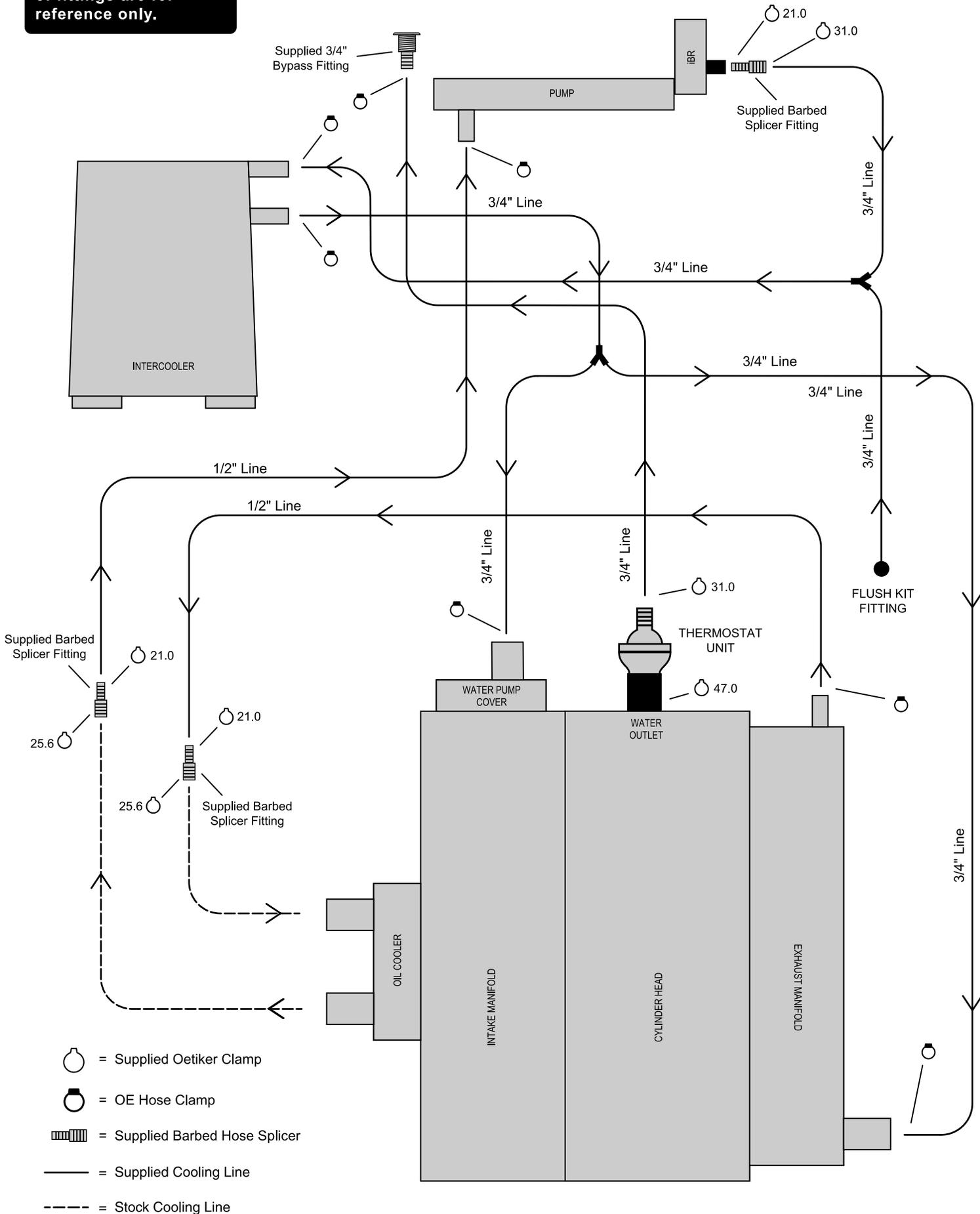
NOTE: Length of waterlines shown are not to scale. Locations of fittings are for reference only.



Water Routing Illustration

2011~09 260/255 using OEM intercooler or RIVA GEN-3 Power Cooler

NOTE: Length of waterlines shown are not to scale. Locations of fittings are for reference only.



NOTE: Length of waterlines shown are not to scale. Locations of fittings are for reference only.

Water Routing Illustration 215hp RIVA GEN-1 Power Cooler Kit

