



Spark Intake Grate Backing Plate Kit ***PART# - RS21130-BPK-RI***

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 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.

APPLICATION(S): Sea Doo Spark, 2up & 3up Models

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

Required Specialty Tools

T30 Torx Bit
Loctite Quick Set Multi Purpose Epoxy

Part#

N/A
N/A

Recommended tools

Sea Doo Service Manual

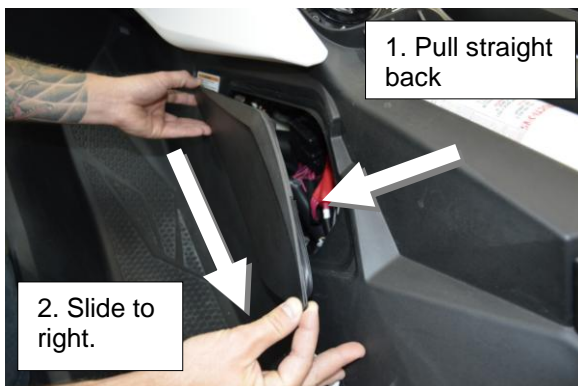
Part#

N/A

- INSTALLATION INSTRUCTIONS -

1. Remove seat.

2. Remove left side access panel by pulling top right side of panel straight out about 1/2". Then slide panel to right.



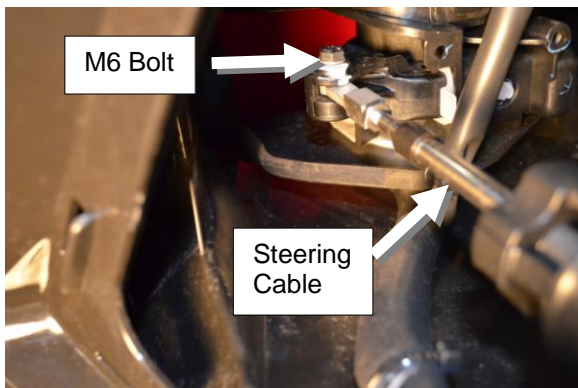
3. Locate steering & gauge wire harness. Disconnect plugs by sliding back red lock tabs on each connector. Push clip lock on each plug & pull plug apart.



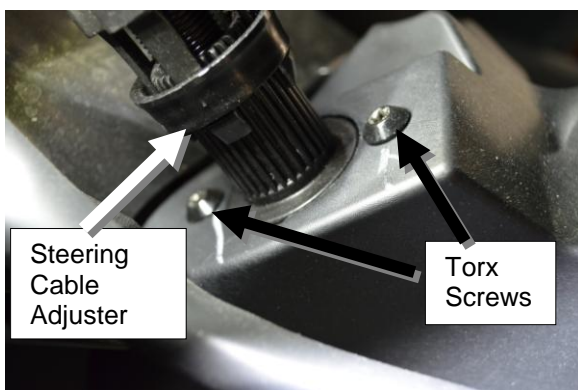
4. Remove left side knee pad by pulling on right side of panel.



5. Locate end of steering cable at steering column. Remove M6 bolt holding steering cable to column & disconnect steering cable.



6. Remove Torx screws (2) holding steering cable to top deck.



7. Remove the five (5) circled self tapping screws at front of top deck. (see illustration below)



8. Remove the eight (8) circled self tapping screws at the rear of the top deck. Remove rear trim pieces by sliding out of position. (see illustration below)



9. Remove the ten (10) circled Torx screws & nuts on the sides of the hull. (see illustration below)



10. Remove three (3) self tapping screws located at the fuel fill cap.



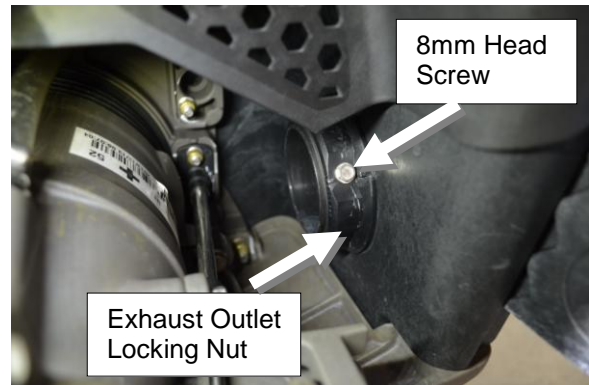
11. With assistance, remove top deck by lifting straight up from lower deck. Guide steering cable through cable access hole in top deck.



12. Remove the Torx screws on rear deck panel. (see illustration below) Remove rear deck panel & rear flotation foam.



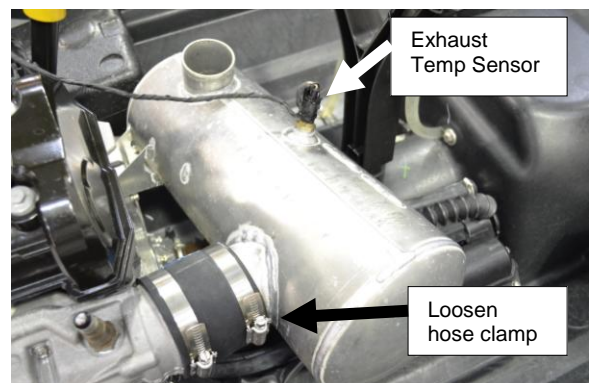
13. Remove 8mm head screw on exhaust outlet locking nut. Remove exhaust outlet locking nut.



14. Loosen hose clamp on water box outlet hose and remove exhaust resonator box from hull.



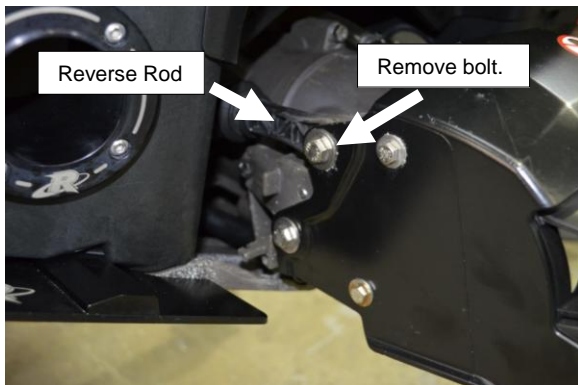
15. Cut cable tie holding wire to exhaust temp sensor. Lift safety clip on temp sensor & disconnect. Loosen hose clamp on waterbox & remove waterbox.



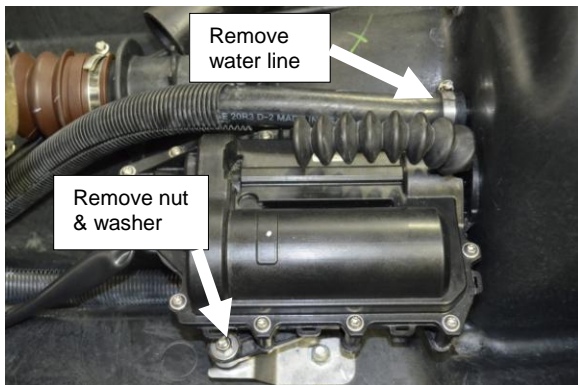
IBR Models: Continue following instructions.

Non IBR Models: proceed to step 18.

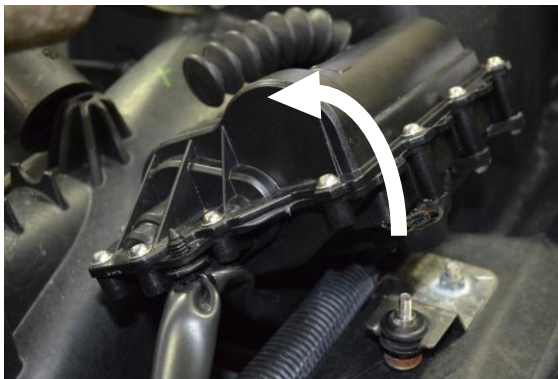
16. Disconnect reverse rod from reverse gate.



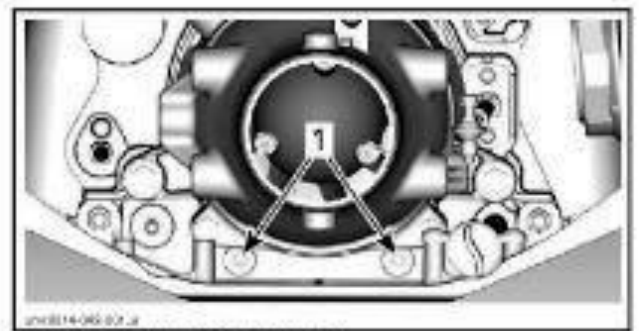
17. Remove nut & washer holding IBR actuator to hull. Disconnect cooling line from bulkhead & set aside.



Carefully rotate IBR actuator counter clockwise.

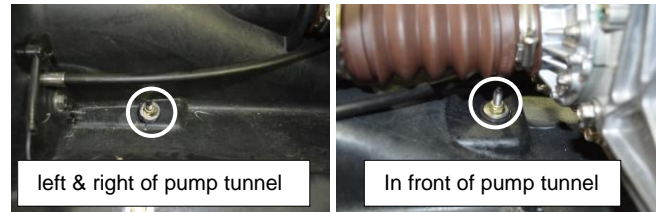


18. Using a long socket extension, remove the two rear inlet grate self tapping screws (8mm head) located just under jet pump.

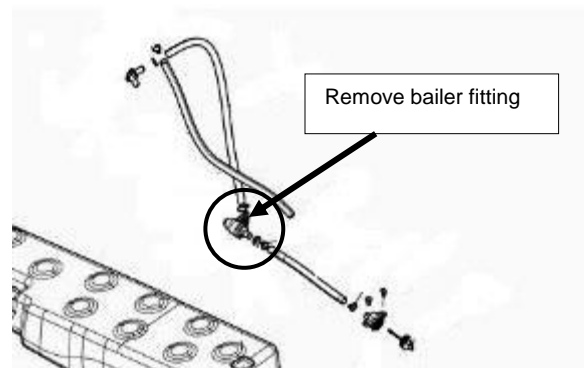


REAR VIEW - UNDER JET PUMP
1. Rear inlet grate screws

19. Remove bolts, nuts & washers (3) securing the intake grate to the hull. (see illustration below) and remove intake grate.



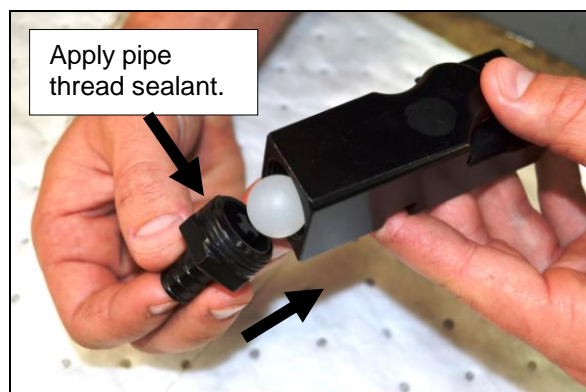
20. On the right side of the pump tunnel, remove plastic bailer fitting on hull drain line.



Unthread cap on bailer fitting and remove ball float.



Install ball float in right side bracket. Apply pipe thread sealant (or equivalent) on threads & install fitting into bracket.

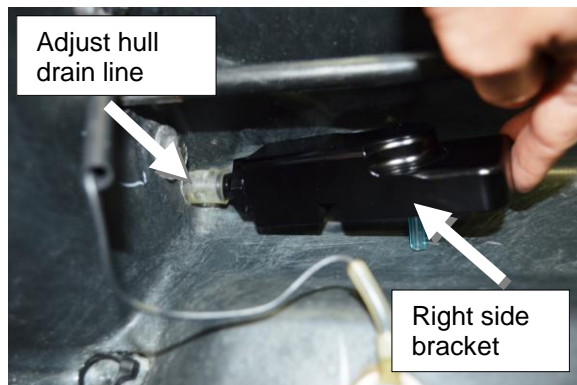


21. Remove all remaining sealant/silicone inside the hull around the intake grate mounting bolts. Prep surface area around the intake grate bolt holes by lightly sanding the hull using 40-80 grit sandpaper. Clean the area of any grease or oil using a non residual cleaner. (brake cleaner)

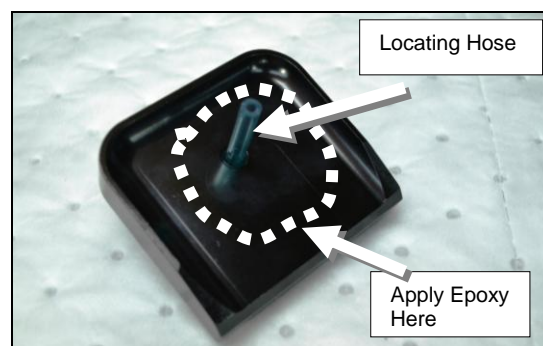
Remove any silicone/sealant around the bolt hole areas of the intake grate & bottom of the hull. Clean the area of any grease or oil using a non residual cleaner. (brake cleaner)

IMPORTANT: Before proceeding, read through the installation process. Familiarize yourself with the install of the brackets & intake grate without the epoxy or sealant. The epoxy set time is roughly 5 minutes. Ensure you have items prepped & in place so installation of the brackets & intake grate goes smooth & will be done within the 5 minute set time of the epoxy.

22. Adjust length of hull drain line so threaded hole on right side bracket will correctly line up with hole in hull. "Dry fit" the right side bracket to ensure length of hull drain line is correct.



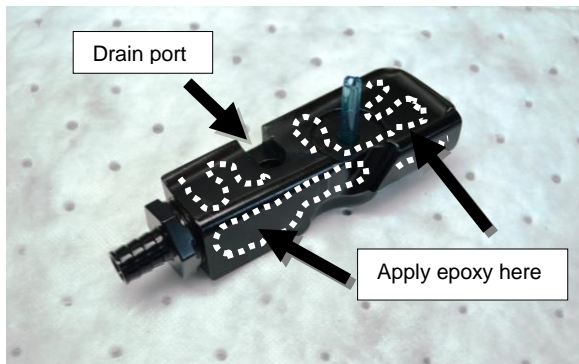
23. Insert the supplied locating hose into the threads of the front insert bracket. Apply suggested Loctite quick set epoxy to the underside of the insert bracket.



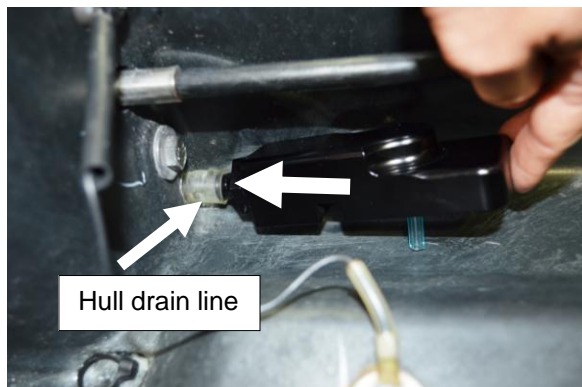
24. Place front bracket in position. Use the locator hose to guide the threaded hole on the bracket in position with the hole in the hull. Press into place.



25. Insert the supplied locating hose into the threaded hole of the right side insert bracket. Apply suggested Loctite quick set epoxy to the bottom and side of the insert bracket. (as shown in the illustration below) **Do not apply epoxy near drain port.**



26. Fully insert fitting on end of bracket into hull drain line.



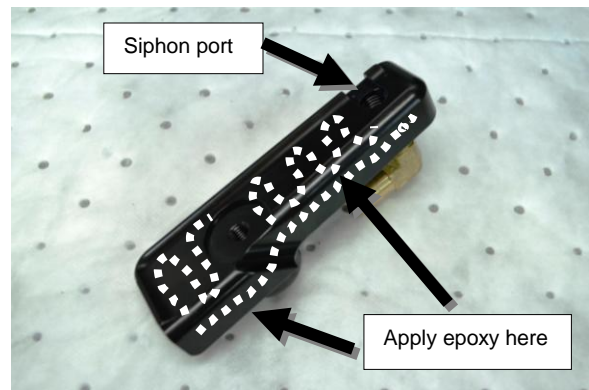
Use the locator hose to guide the threaded hole on the bracket in position with the hole on the hull. Be careful not to allow any of the epoxy into the drain port on the bracket. Press into place.

Non IBR Models – continue to step 28.

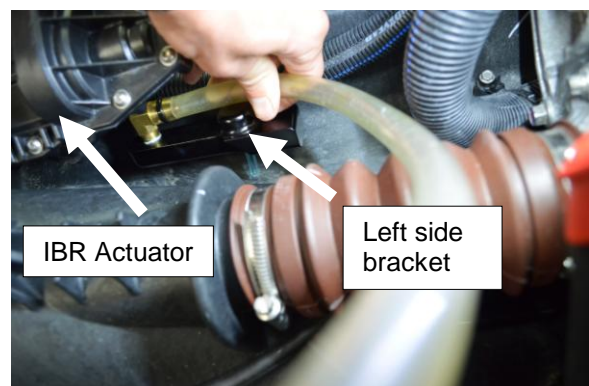
27. - **IBR Models:** Connect siphon hose to brass fitting on left side bracket. Secure hose to fitting with supplied zip tie.

Insert the supplied locating hose into the threaded hole of the left side insert bracket.

Apply suggested Loctite quick set epoxy to the bottom and side of the insert bracket. (as shown in the illustration below) **Do not apply epoxy near siphon port.**



While holding the siphon tube & the bracket off the hull, carefully position the bracket under the IBR motor. Use the locator hose to guide the threaded hole on the bracket in position with the hole on the hull. Be careful not to allow any of the epoxy into the siphon port on the bracket. Press into place.

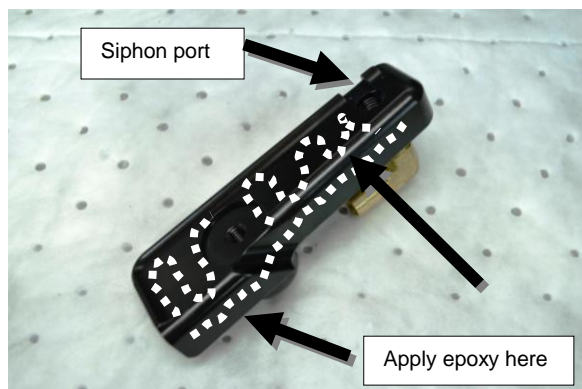


IBR Models – continue to step 29.

28. - **Non IBR Models:**

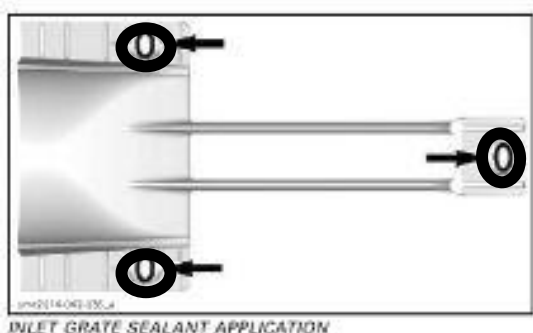
Insert the supplied locating hose into the threaded hole of the left side insert bracket.

Apply suggested Loctite quick set epoxy to the bottom and side of the insert bracket. (as shown in the illustration below) **Do not apply epoxy near siphon port.**



Use the locator hose to guide the threaded hole on the bracket in position with the hole on the hull. Be careful not to allow any of the epoxy into the siphon port on the bracket. Press into place.

29. Apply a generous bead of Loctite 5900 or equivalent around the bolt holes on the topside of the intake grate. (see illustration below)



30. Place the intake grate in position over the locating hoses. The locating hoses should be through the bolt holes of the intake grate.

One at a time, remove the locating hoses & install the intake grate bolts. **Note:** Hand tighten the bolts. Do not fully tighten the bolts yet.

Tip: Have someone hold the insert brackets in place before removing the locating hose & while installing the bolts.

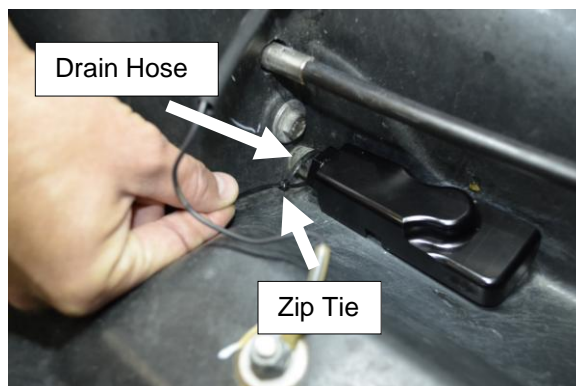
Reinstall the two rear inlet self tapping screws located just under jet pump. (refer to step 18) Torque to 22 inch pounds.

Tighten & torque the intake grate bolts (3) to 19 ft. lbs.

Tip: Have someone hold the insert in place when tightening the intake grate bolts.

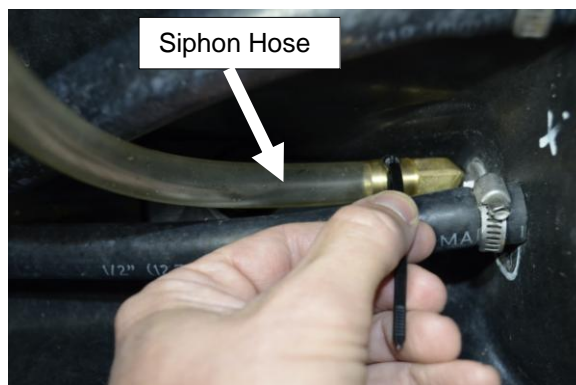
31. Ensure no epoxy is blocking the siphon or drain ports on the insert brackets.

32. Secure drain hose to right side bracket fitting using supplied zip tie.



IBR Models – Continue to step 34.

33. **Non IBR Models** – Secure siphon hose to brass fitting on left side insert bracket. Secure in place with supplied zip tie.



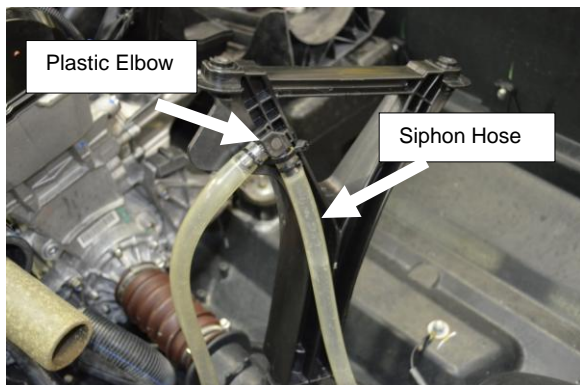
Non IBR Models – Continue to step 35

34. **IBR Models** - Rotate the IBR motor clockwise back in position. (refer to step 17) Guide bolt through mounting hole on IBR motor. Reinstall nut & washer on bolt & secure in position. **Do not over tighten.** Reinstall waterline on bulkhead & secure using existing hose clamp. **Do not over tighten clamp.**

35. Reinstall waterbox & temp sensor connector. (refer to step 15) **Do not over tighten clamp.**

36. Reinstall exhaust resonator, outlet locking nut & screw. (refer to step 13 & 14) **Do not over tighten clamp.**

37. Make sure siphon hose is properly secured to rear deck support. (see illustration below)



Important: The plastic elbow needs to be higher than the water line. Otherwise water will siphon back in the hull.

38. Check bilge for tools, rags, etc. Reinstall rear deck & flotation foam. (refer to step 12) Torque self tapping Torx screws to 5.5 Nm / 49 inch lbs.

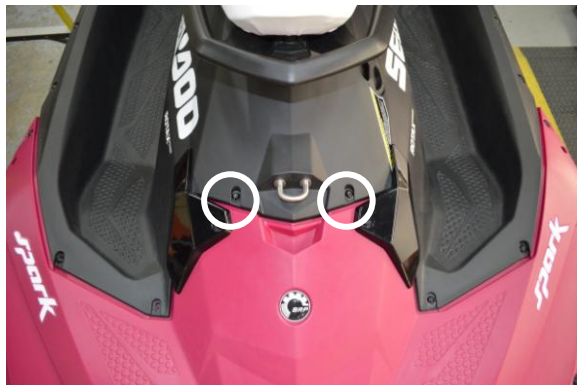
39. Reinstall top deck to lower deck. (refer to step 11)

Guide steering cable through cable access hole on top deck. Use care to ensure the rubber deck seals are properly sealing. Line up screw holes between the top & lower deck.

40. Reinstall bolts, nuts & washers (2) at side alignment tabs first. (circled in illustration below) Torque to 3.5 N.m / 31 inch lbs.



41. Install rear support screws (circled in illustration below) Torque to 5.5 N.m / 49 inch lbs.



42. Install side rail bolts, nuts & washers. (circled in illustration below) Torque to 3.5 N.m / 31 inch lbs.

Note: Sea Doo recommends replacing these M6 side elastic stop nuts. Sea Doo replacement part # is 232561200.

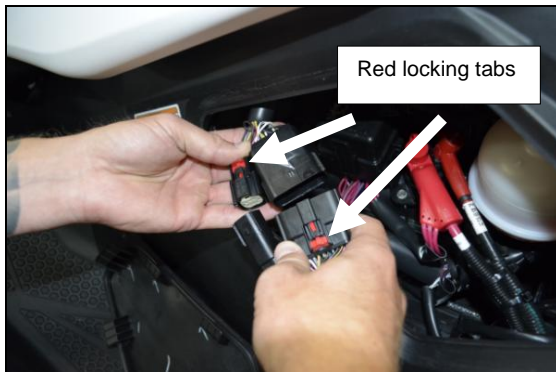


43. Reinstall rear trim pieces (refer to step 8) & reinstall self tapping screws at front & back of hull. (circled in illustration below) Torque to 5.5 N.m / 49 inch lbs.



44. Reinstall self taping screws (3) at gas fill cap. Torque to 4.5 N.m / 40 inch lbs. (refer to step 10)

45. Reconnect the steering & gauge wire harness. Make sure plugs “click” when connected. Lock each plug together by sliding red locking tab.



46. Reinstall self tapping screws (2) holding steering cable adjustment to top deck. (refer to step 6)

47. Reinstall end of steering cable to steering column arm and secure with M6 bolt. (refer to step 5) and reinstall left side knee pad. (refer to step 4)

Non IBR Models – Continue to step 49

48. **IBR Models:** Reconnect reverse rod to reverse gate. (refer to step 16) Ensure the collar that the bolt passes through is in position on the reverse arm.

49. Reinstall left side access panel & seat (refer to step 1 & 2)

Installation is now complete.

Important: Allow 24 hours for the sealant on the intake grate & the epoxy to cure before use.

***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 Racing Intake Grate Backing Plate Kits carry a 90 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.

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.