



RIVA RACING

PERFORMANCE PRODUCTS & ACCESSORIES

SEA-DOO 300 XXX Supercharger

PART# - RS17140-XXX

Applications: Sea•Doo RXP-X 300,
RXT-X 300 and GTX 300 Models 2016-

Approximate Installation Time:

2.0 hrs.

Recommended Specialty Tools:

Part #

Torx Adapter

529035938

Gear Holder

529036364

Support Plate

529035947

Required Materials:

Part #

Blue Loctite

N/A



Important: Before installing supercharger verify slip moment as shown in Appendix A.

IMPORTANT NOTICE:

☐ Compressor surge can cause impeller to hit housing if a blow-off valve is not used to release excess boost pressure that engine cannot process.

TUNING REQUIREMENTS:

Fuel: Installation of this RIVA Performance Product requires the use of RIVA ECU remap or replacement. Failure to make these modifications will result in engine damage.

Installation of this RIVA Performance Product requires the use of RIVA Fuel Injector Kit (part# VT1100-INJK). Failure to install this part will result in engine damage.

Installation of this RIVA Performance Product requires the use of RIVA Rising Rate Fuel Pressure Regulator Kit (part# RS12050-RRFPR-08) configured with rising rate and static pressure of 58psi. Failure to install this part will result in engine damage.

Use of 91-93 octane fuel is required.

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 *****

- INSTALLATION INSTRUCTIONS -

Important: Before installing supercharger verify slip moment as shown in Appendix A.

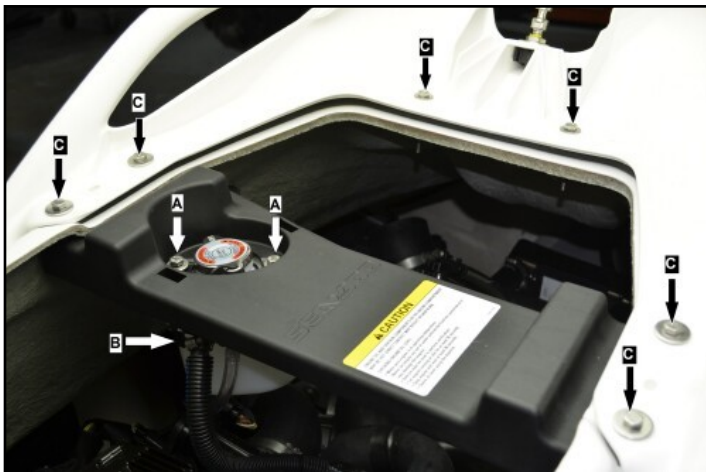
Remove or open seat.

RXT-X and GTX 300:

Remove two bolts holding coolant reservoir to deck beam (A). Pull out on retaining tabs (B) and lower the coolant reservoir away from its mounting location. Lay the reservoir to the starboard side to provide better access to the exhaust.

Remove 4 deck beam bolts and 2 grab rail bolts (C), nuts and washers. Caution: Do not drop nuts and washers into hull. Remove deck beam and grab rail assembly. (Figure 1)

Figure 1



RXP-X:

Remove the two bolts on each side holding the side panels in place and remove the side panels. (Figure 2)

Figure 2



Remove 2 screws (A) and 2 plastic rivets (B) holding vent cover to rear grab handle and remove vent cover (Figure 3).

Figure 3



Remove 2 plastic rivets under side panels removed previously (Figure 4)

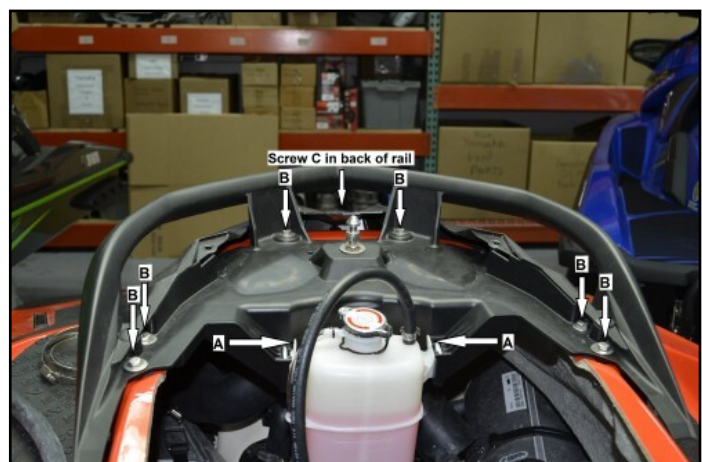
Figure 4



Press the (2) locking tabs (A) on the coolant reservoir towards the reservoir body and lift the reservoir out of its mounting location. Lay the reservoir to the starboard side to provide better access to the exhaust.

Remove (6) bolts (B), nuts and washers holding rear grab rail in place and remove grab rail. Caution: Do not drop nuts and washers into hull. (Figure 5)

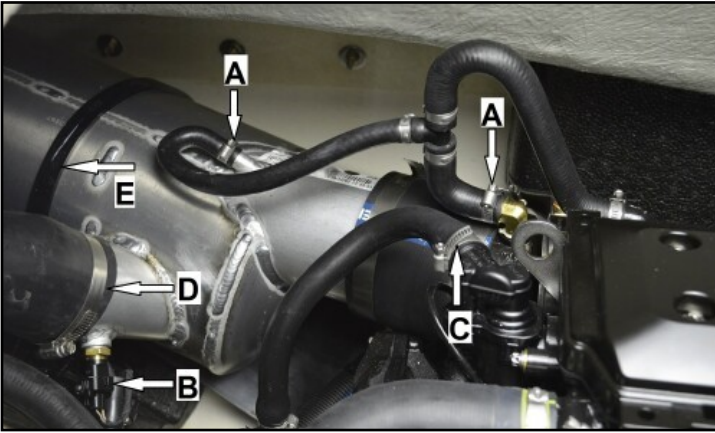
Figure 5



- INSTALLATION INSTRUCTIONS -

Disconnect exhaust outlet hose from water box (D).
Remove rubber strap around waterbox (E).(Figure 6)

Figure 6



At exhaust clamp loosen t-bolt nut enough to allow end ('T') to be removed from band clamp. Remove exhaust clamp. (Figure 7)

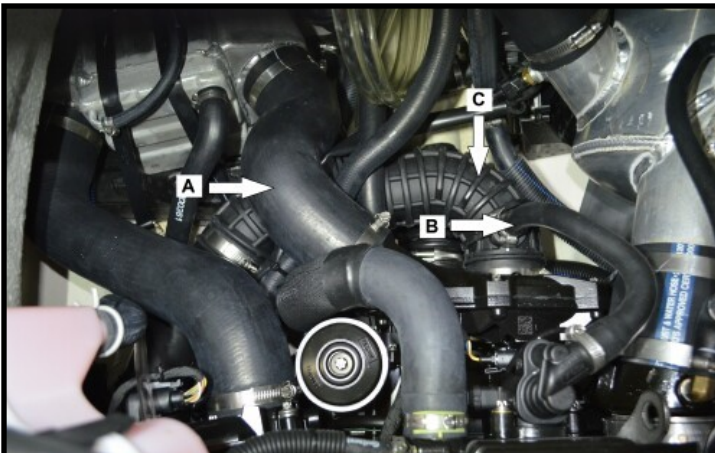
Figure 7



Pull water box to rear to allow clearance for supercharger to be removed.

Remove hose (A) from supercharger to intercooler. Remove breather hose (B) from intake pipe and intake pipe (C) from supercharger. (Figure 8)

Figure 8



To remove the supercharger the jet pump must also be removed. If not, the supercharger hits the floating ring.

Remove the six screws (A) holding the guard covering the iBR gate to the hull. Remove the guard. Set aside the guard and screws for reinstallation later. (Figure 9)

Figure 9



Remove the nut and bolt (B) holding the steering cable to the steering nozzle. Set aside for reinstallation later. (Figure 9)

Use iBR override function to align the openings in the iBR gate with the screws holding the iBR Support Bracket:

Note: Remove any foreign object that may obstruct iBR actuator movement.

1. Press the START/STOP button.
2. Install the tether cord.

NOTE: Do not start the engine. The tether cord must be installed to ensure the information center will not shut off all indications after its self test function. Briefly press the START/STOP button to reactivate the electrical system when required.

3. Pull in the iBR lever;
- 3.1 There will be a beep.
4. Press the VTS UP or DOWN button to move the iBR gate.

Remove the bolt connecting the linkage arm to the iBR gate. Set aside for reinstallation later. (Figure 10)

Figure 10



- INSTALLATION INSTRUCTIONS -

Remove the 4 bolts (A) and 2 nuts (B) holding the iBR support bracket to the jet pump. Remove the iBR gate and support bracket assembly from the ski. Set the assembly and hardware aside for reinstallation later. (Figures 11 and 12)

Figure 11

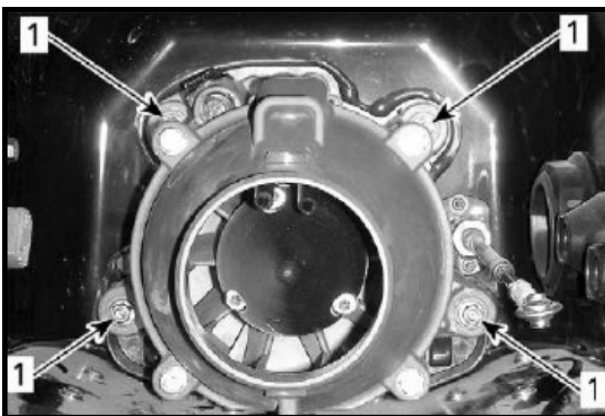


Figure 12



Remove 4 nuts (1) holding jet pump housing to pump support. Figure (13)

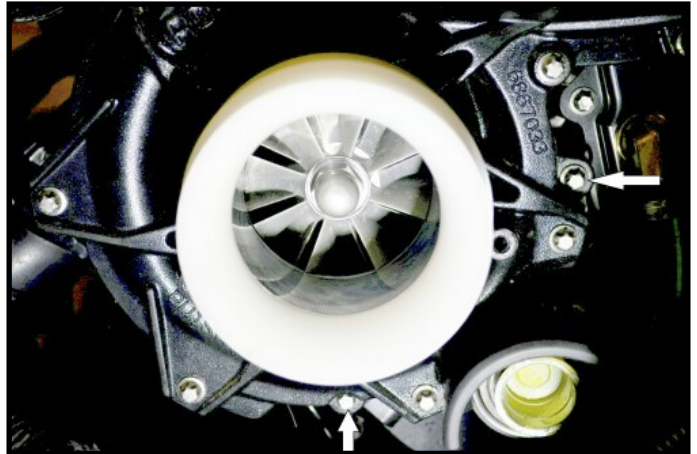
Figure 13



Pull off pump assembly. Lower driveshaft to allow supercharger to be removed.

Remove 2 torx head screws (A) on aft side of supercharger. (Figure 14)

Figure 14



Remove 1 torx head screw on bow side of supercharger using torx adapter 529035938. (Figure 15)

Figure 15

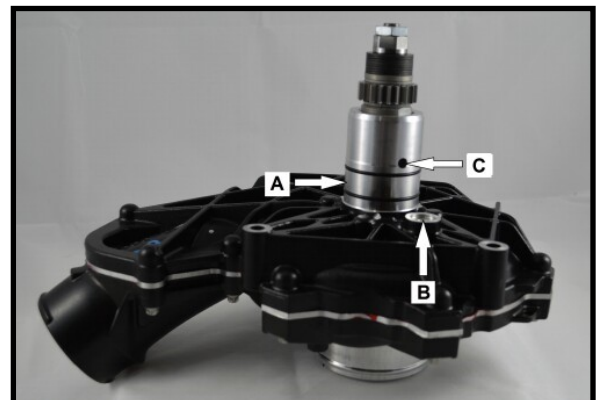


Remove supercharger from engine.

Important: Before installing supercharger verify slip moment as shown in Appendix A.

Transfer oil return bore o-ring from old supercharger to supplied supercharger assembly. Apply waterproof marine grease to journal and o-rings (A) and return bore and o-ring (B). **Note: Do not cover or fill oil return hole (C) with grease.** (Figure 16)

Figure 16



- INSTALLATION INSTRUCTIONS -

Install supercharger into PTO housing. **Note: Do not lose the o-ring around the oil return passage.**

Torque supercharger retaining bolts (3) to 80 inch pounds (1 Nm) **Note: Apply blue Loctite to bolts.**

Reinstall jet pump and iBR parts previously removed reversing removal procedure. **Note: Apply blue Loctite to bolts.** Torque all jet pump and iBR bolts to 19 ft. pounds (24 Nm). Torque steering bolt to 44 inch pounds (5 Nm)

Reinstall exhaust waterbox and air intake hoses reversing removal procedure. **Tip: Lubricate hoses and fittings with glass cleaner to ease installation. Note: Do not over-tighten hose clamps.**

Replace parts applicable to your craft that were removed to access the supercharger. **NOTE: Apply blue Loc-tite to bolts. Do not over tighten bolts.**

Check bilge for tools, rags, etc. Start craft and run using flush kit to check for exhaust leaks at connecting points of exhaust system. Do not run craft out of water for more than two minutes at a time.

Appendix 1

Supercharger slip test

This test should be performed before installing the supercharger and every 25 hours thereafter. **Note: Under conditions of extreme stress, such as racing or frequent wave jumping, it may be necessary to test more frequently.**

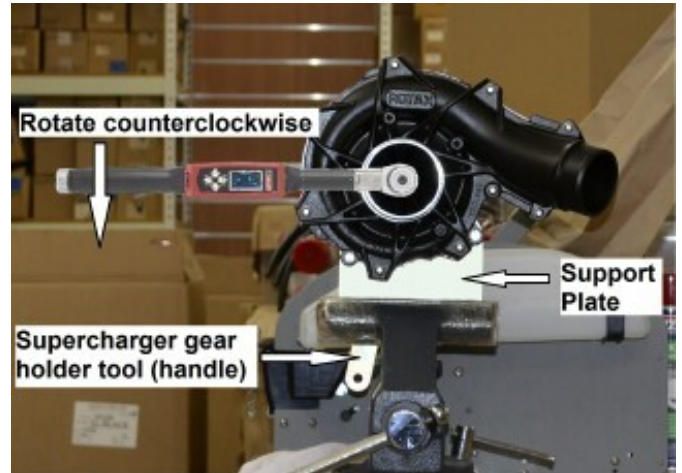
This test should be performed with a digital torque wrench.

Clamp the support plate 529035947 in a bench vise and attach the supercharger to the plate with 6 mm bolts.

Place supercharger gear holder tool 529036364 on the supercharger drive gear. Using a digital torque wrench and a 17 mm socket rotate the supercharger counterclockwise until the supercharger gear holder comes to a rest against a solid surface. While holding the gear holder tool fully engaged on the gear, rotate the supercharger 3 full revolutions in a counterclockwise direction. This is to dissipate grease or oil on the friction clutches. After completing three counterclockwise revolutions test the supercharger slip.

Turn the torque wrench in the counterclockwise direction. Note the torque at which the supercharger begins to slip. (Figure 1A)

Figure 1A



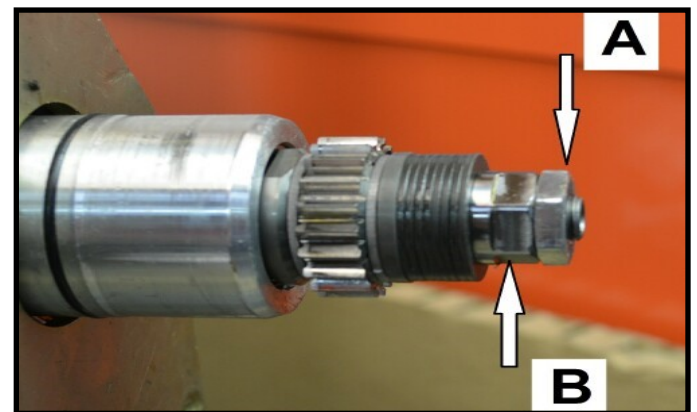
Repeat 2 more times. Average readings for slip.

The proper slip torque for this supercharger is 18 lb.ft.

To adjust the supercharger slip torque:

Hold supercharger gear with gear holder tool (529036364) and loosen outer clutch nut (A). To increase slip moment tighten inner clutch nut (B). Temporarily retighten outer nut (A) while holding inner nut (B) with a wrench. Re-test slip. Re-adjust as necessary. When correct reading is achieved hold inner nut (B). Remove outer nut (A) clean shaft and apply blue Loctite. Then tighten outer nut (A). Torque to 24 lb.ft. / 33NM. (Figure 1B)

Figure 1B



For maintenance purposes, this test can also be performed while the supercharger is installed on the engine. Insert cam locking tool (529035839) into cylinder head and test in the described fashion. If slip needs to be adjusted the supercharger must be removed from the engine.

NOTE: Due to the nature and intended use of this product we do not offer warranty coverage.

***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.

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