

Sea-Doo 4-Tec Supercharger

Rebuild Instructions

SBT offers the necessary tools needed to rebuild your supercharger. The part # for the tool kit is 80-113. Customers will need to supply blue thread locking agent, shop towels, vise, and a Torque wrench in ft-lbs and inch- lbs. A metric socket set and mallet will be required. It is extremely important to work in a clean environment and take your time when performing this task.

1). Mount the Supercharger on a mounting plate and place in a vice.



2). Unbolt the Supercharger halves and remove the turbine impeller, **NOTE: This has a left handed thread.** Remove the o-ring behind it and the step collar. Tap shaft out of the Supercharger housing.



3). Use the 4 pin spanner socket to remove the retaining disk and push the bearing that is located behind the disk out of the housing. It pushes out towards the disk you removed.



4). Clean off any old gasket material and dirt that is on the housing sealing surfaces before re-assembly.

5). Install the new oil seal (8) into the retaining disk.



6). Install one of the new bearings into the supercharger housing using the bearing install tool, then screw the retaining disk (9) back into the housing. Torque this part to 22 ft-lbs.

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7). Remove the Supercharger body from mounting plate so you can use the plate to install the bearing (10) onto the compressor shaft.



(8). Tap the shaft lightly with a block of wood and a mallet to seat the bearing down and into position.

(photo below)



9). Re install the Supercharger housing back onto support plate to continue.

10). Slide thrust washer (13) down over the compressor shaft, then slide spacer (12) down over the shaft. Coat everything with a light coat of motor oil then install back into the housing. Gently tap down with a block of wood and mallet as needed.



11). Install the step collar (7) and o-ring (5) to the inside section of the Supercharger. (photo below)



12). Install impeller turbine, then washer (4) and cap nut (3) –use blue thread lock agent torque to 22ft lbs. **Note: This is left handed threads.** You can hold the shaft from turning temporarily installing the new locking washer on the other end of the shaft and holding it with

the retaining wrench.



13). Use black high temp sealant to re seal the housing halves and blue thread lock on the bolts holding the housing together. Torque to: **89 inch-pounds not ft pounds.**

14). There are two steel washers (14 & 16) that will be used in place of original ceramic ones from the factory. This is an upgrade from SBT to our customers to help reduce the risk of future engine failures.

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15). Install the larger steel washer (14) first then apply a thin layer of the provided grease (22) to the shaft. This will act as an adhesive to hold the needle bearings (15) to the shaft as you install all 40 of them (count them 40).

16). Install the gear (1) onto the shaft and over the needle bearings; (take your time).



17). Slide the other steel washer (16) up over the shaft, then install the locking washer (17) with the two flat spots for the wrench to hold.



19) Install the 5 spring washers (18) as shown in the photo.



20). Install the L-ring (19) and hex nut (20) (use blue locking agent). Torque nut to **22ft-lbs.**- make sure to hold the locking washer with the retaining wrench provided in the Supercharger tool kit.

21). Check the gear for proper slippage. Use the gear holding wrench and hold the gear while turning the hex nut at the end of the shaft with a torque wrench. A new clutch kit **will slip around 60-inch pounds** and one that is broken will slip around 44 inch-pounds.



22). The 3 washers that have not been used up till this point are used as spacers between the Supercharger and the motor when re-installing the unit.