SE216™
Installation & Removal Guide

Tools Needed:

Sockets
- 1-1/16" socket
- 1/2" socket
- 18mm

Wrenches
- 19mm or 3/4” Wrench

Sealers/ Lubricants
- Water proof grease
- High temp grease
- Silicone sealant

Miscellaneous
- Ratchet
- Pliers
- Torque wrench

Disclaimer

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STEP 1 Removing the old lower unit

1.1 Shift the remote control into neutral. Tilt the drive up enough that the driveshaft will clear the exhaust housing when being removed (about 45 degrees)

1.2 Bend the tabs up on the propeller nut lock tab (see arrow). Place a block of wood between the blades of the propeller and the bottom of the cavitation plate. Remove the nut using a 1 1/16" socket. Remove the propeller and thrust washer.

1.3 If your boat uses the lower unit's pitot (speedometer) pickup, you will need to disconnect the tube. The junction of the upper and lower tubes is found at the lower mount (see arrow). On newer models, a quick connect is used. Push in on the junction, and then pull out on the hose. On older models, the junction is a simple hose barb. On these models, cut off the zip tie and pull the hose off of the barb. The model pictured does not use the drive's pitot pickup.

1.4 Using a ½" socket, remove the bolt holding the trim tab or anode plate. The bolt is accessed through a hole from above (see arrow). Once this bolt is removed, the trim tab or plate drops off of the unit. Under the plate is a mounting bolt which must be removed. Remove it using a 18mm socket.

1.5 Now, the only thing holding the unit on are the four nuts, two along each side (see arrows). Using a 19mm or ¾" wrench, remove the four bolts. Use an alternating pattern. Be careful when removing the last nut as the gearcase will be free to fall off.

1.6 The SEI 216 does not include the pitot tube fitting referenced earlier. If your unit uses the gearcase's pitot, the old pieces need to be transferred to the new SEI 216. The two versions are pictured above. Simply unscrew the pieces from your old unit and install onto the SEI 216. If your outboard is a 1999 or older, the housing into which the fitting screws into will look different; however, the threads are still the same.

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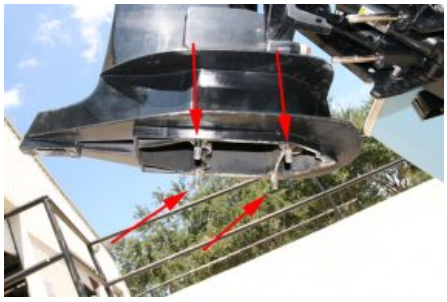
STEP 2 Installing the new SE216

2.1 Make sure the SE216 is in neutral, to match the shift linkage on the boat which was shifted into neutral before removal of the old unit. To check, turn the propshaft of the SE216. It will turn freely when in neutral. If the propshaft will not turn, your unit is in either forward or reverse gear. To get back to neutral, turn the shift shaft (arrow), either clockwise or counterclockwise until you feel the shifter click into the neutral detent, and the propshaft turns freely. To turn the shift shaft, grasp it gently with pliers being sure not to mar the surface.

2.2 Apply a high temp grease to the splines of the driveshaft (arrow). Make sure not to get any grease on the top of the driveshaft.

2.3 Apply a bead of silicone sealant to the top of the filler block (arrow).

2.4 Apply grease to the shift shaft (red arrow). Place the shift shaft coupler (green arrow) on the splines of the shift shaft. Place the larger diameter end towards the lower unit. The coupler may be stuck on the end of the upper shift shaft in the exhaust housing. Otherwise, it will be on the shift shaft of the old unit being replaced.



2.5 Apply grease to the four lower unit mounting studs on the exhaust housing /midsection (arrows).

2.6 Make sure that the water pump guide tube is in place as pictured above (arrow). Apply grease to the orange o'ring.

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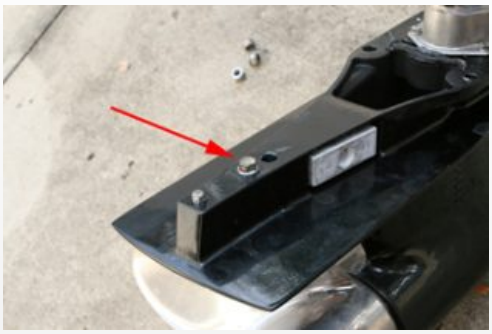
STEP 2 (cont'd)



2.7 Place the trim tab bolt into the rear hole as shown above.

2.8 The SE216 gearcase is now ready to be installed . It is best to have a helper available to assist with the installation from this point onward. Guide the driveshaft into the exhaust housing. Lift the gearcase towards the exhaust housing. Stop when there is a few inches gap between the gearcase and the exhaust housing. If a helper is not available, try to find something tall enough to rest the skeg of the SE216 on which will hold it in position. If your unit is using the gearcase pitot hose, you will need to feed the hose through the exhaust housing, and pull the excess hose through the hole for the shift shaft. Do not try to reconnect it to the top hose at this time. Now, continue to lift the SE216 towards the mounting surface of the exhaust housing. While doing this, you will need to look into the gap and make sure the water guide tube is lined up with the water tube in the exhaust housing. Also, you must align the upper and lower shift shaft. The mounting holes in the gearcase will now be very close to the mounting studs in the exhaust housing. If the water tubes and shift shafts are aligned, but the gearcase will not fit flush; then the driveshaft splines are not aligned with the crankshaft. Have your helper rock the flywheel slightly. This should align them.

2.9 Install a washer and nut on two of the mounting studs, one on each side, and tighten in an alternating pattern, using a 19mm or ¾" wrench until snug. Check to make sure that the shift shaft is not locked up. If it is not, install the other two nuts and washers and torque all four to 55 lb. ft.

2.10 Apply grease to the bolt which was removed from under the trim tab. Using a 18mm socket, tighten the bolt to 45 lb. ft.

2.11 Align the trim tab/anode plate and, using a ½" socket, tighten the bolt through the access hole in the exhaust housing above it (arrow). Tighten to 40 lb. Ft.

2.12 Apply grease to the propshaft. Install the thrust hub followed by the propeller. Next install the continuity washer on the splined washer and install as an assembly. Next, install the tab washer and finally the nut. Torque the nut to 50 lb. ft.

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STEP 2 (cont'd)

2.13 Bend three of the tabs of the lock washer down onto the splined washer. If three of the tabs do not line up, tighten the nut slightly more until they do. Do not loosen the nut to align the tabs.

2.14 Remove the drain plug and fill plug (arrows). Tilt the motor until the cavitation plate is parallel to the ground.

2.15 Install a gear lube pump into the lower drain hole and fill the gearcase until gear lube starts to come out of the upper vent plug (arrow). Reinstall the upper vent plug. Remove the gear lube pump and reinstall the lower drain plug.

2.16 Your SE216 gearcase is now ready to use. Follow the break in procedure which came with the unit.