SE416™
Installation & Removal Guide

Tools Needed:

Sockets
- 14mm Socket
- 12mm Socket

Wrenches
- 14mm Wrench

Sealers/ Lubricants
- Grease
- Gear lube

Miscellaneous
- Ratchet
- Pliers
- 2 x 4 board

Disclaimer

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STEP 1 Removal of the old gearcase

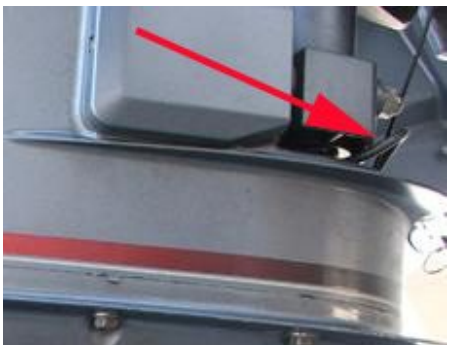
1.1 Start by shifting the remote control into forward gear. Tilt the motor so that there is enough clearance to slide the driveshaft out of the midsection.

1.2 Remove the cotter pin securing the propshaft nut. Place a 2x4 between a prop blade and the cavitation plate. Remove the propnut, propeller and thrust washers.

1.3 (Above) The plug located on the mid-section above the trim tab must be removed to access the trim tab bolt.

1.4 (Above) Using a 12mm socket, remove the bolt holding the trim tab in place. Remove the trim tab.

1.5 (Above) Using a 14mm socket, remove the bolt located under the trim tab.



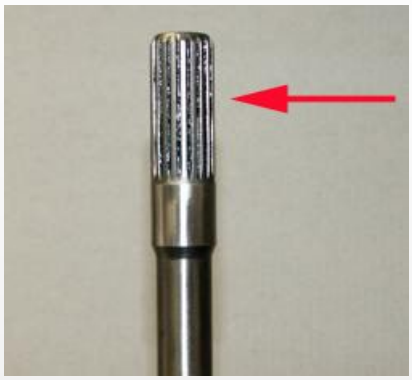
1.6 Disconnect the pitot hose. There is a hose junction near the lower engine mount (arrow). Some boats do not use the pitot pickup in the drive. Therefore there will be no hose to disconnect.

1.7 Using a 14mm socket or wrench, remove the six remaining bolts holding the gearcase on (arrows). There are three on each side. Remove the gearcase.

STEP 2 (cont'd on next page)

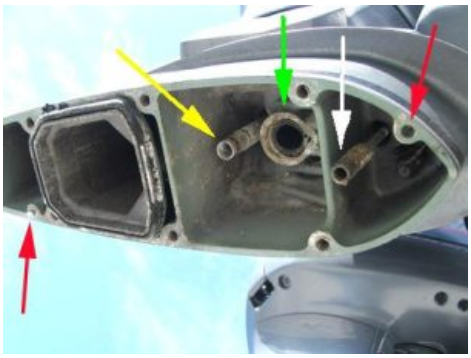
STEP 2 Installation of SE21™

2.1 The gearcase must be shifted into forward gear to match the motor, which was shifted into forward gear before the old gearcase was removed. Using a pair of pliers, turn the shift shaft (red arrow) counterclockwise while turning the propshaft counterclockwise. Turn until the shift shaft stops and the propshaft locks into gear. Be careful not to damage the splines of the shift shaft.



2.2 Apply grease to the upper splines of the driveshaft. Be sure not to get any grease on top of the driveshaft.

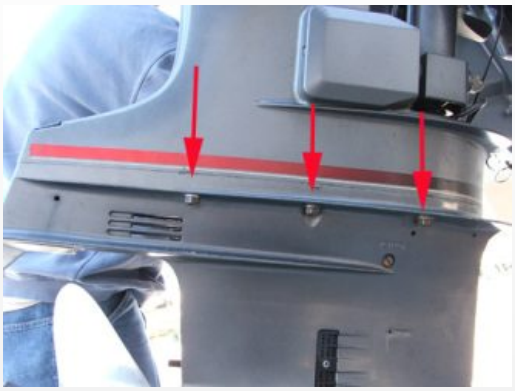
2.3 Apply grease to the splines of the shift shaft (yellow arrow). Smear a small amount of grease into the water tube guide (green arrow). Transfer the pitot nipple from your old drive to the new SE416 gearcase (red arrow). Apply grease to all the bolts used to secure the gearcase to the midsection.



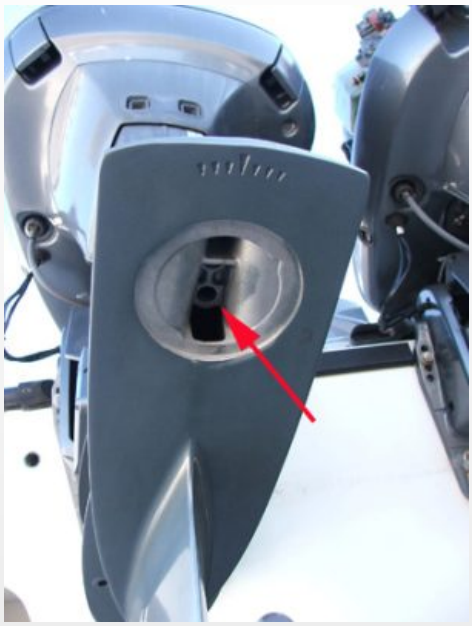
2.4 The new SE416 gearcase comes with new alignment pins already installed. Make sure the old alignment pins are not stuck in the midsection. There are two (red arrows). Insert the driveshaft into the hole in the mid section (green arrow). Raise the gearcase towards the mid section. The water tube in the mid section (yellow arrow) must align with the tube in the water pump. The upper shift shaft (white arrow) must align with the shift shaft in the SE416 gearcase. The splines on the driveshaft must engage with the splines in the crankshaft. If the driveshaft splines will not line up initially, slide a prop on the propshaft and turn the prop counterclockwise until you feel the splines engage. If the shift shaft splines will not initially align, use a pair of needle nose pliers to gently turn the gearcase shift shaft until the splines align.

STEP 2 (cont'd on next page)

STEP 2 (cont'd)



2.5 Insert the six bolts found along both sides of the gearcase. Using a 14mm socket, tighten them evenly in a circular pattern. Torque the bolts to 29 lb ft.



2.6 Install the bolt under the trim tab (arrow). Using a 14mm socket, tighten it to 29 lb ft.

2.7 Insert the trim tab bolt through the access hole. Thread the bolt into the trim tab. Align the trim tab and using a 12mm socket, torque the bolt to 29 lb ft.

2.8 Apply grease to the propshaft. Install the forward thrust washer (1) followed by the prop. Slide the splined washer (2) on and ensure that the splines engage with the propshaft's splines. Install the flat washer (3) and prop nut (4). Torque the nut to 40 lb ft. Secure the nut with the cotter pin (5). If the hole for the cotter pin is covered by the prop nut, tighten until the hole is open. Do not loosen to uncover the hole.

2.9 Remove the drain plug and vent plug. Attach a gear lube pump to the drain plug and slowly pump gear lube into the gearcase. Add gear lube until you see the lube seep out of the upper vent plug. Reinstall the vent plug followed by the drain plug.

2.10 Your SE416 gearcase is now ready to use. Follow the break in procedure which came with the unit.