

Re: [LagoonOwners] Sail drive seals – replacement

1. Part by Chris Wild,
2. Part by Jo Frost

I have change the oil seals twice on my SD20. I found the hardest parts getting the end piece off because of the two large oil rings and putting it back on (again due to the large o-rings) Also reseating the bearing in the tail piece. Here is what I remember.

I will refer to the part number from the sail drive parts catalog figure 4.

- 1) take off prop, zincs to expose the two allen bolts (17) holding on the tail piece. drain fluid from drive, remove allen bolts (17)
- 2) using a rubber mallet or hammer and piece of wood, hit the top of tail piece(14) (where the top bolt came out) to rotate the tail piece clockwise (or counterclockwise) in order the expose the back end of that tab.
- 3) using a rubber mallet or hammer and piece of soft wood, knock the tail piece (14) aft until the o-rings (23) are clear of the sail drive lower unit. (once the first o-ring is clear you may be able to pull it off by hand).
- 4) Pull the tail piece out with the shaft(47) and aft bearing assembly(51, etc).
- 5) You need to take out the bolts(26) holding the bearing retainer (12) onto the tail piece(14). NOTE there will be one bolt hole at the bottom with no bolt. remove the shaft, etc and keep clean (I put into a zip lock bag)
- 6) You need to remove the two oil seals(11). I use a screwdriver to knock the seals out (this will damage the seals but you are replacing them anyway - otherwise you can use a seal remover.. There will be one or more spacers between the two seals - NOTE the orientation of the seals - one faces out and one faces in (one to keep water out and one to keep transmission fluid in).
- 7) If you are replacing the two large o-rings(23), remove them.
- 8) seat the new oil seals with the spacer between them. I just push them on by hand. I apply a waterproof grease to oil seals (as per instructions in the saildrive repair manual which of course you have).
- 9) next I seat the aft shaft bearing (51) into the tail piece. THE trick is to be the bearing squared up with the tail piece. Don't seat the bearing all the way in order to have space to fit the bolts (26) into the bearing retainer (12). Once you have all the bolts started, you can finish seating the bearing.
- 10) seat the tail piece with the shaft into the sail drive. I found that greasing the large o-rings and wiggling the tail piece will help you slide the tail piece past the o-rings.
- 11) The hard part is done, put back on everything else, fill the drive.

Take your time and keep things really clean.

Good Luck

Chris Wild

aboard Wildcat Lagoon 380 hull 85

preparing to head south.

Part 2

April 2008, Johannes Frost

Let me add some hints and pictures to the text from Chris.

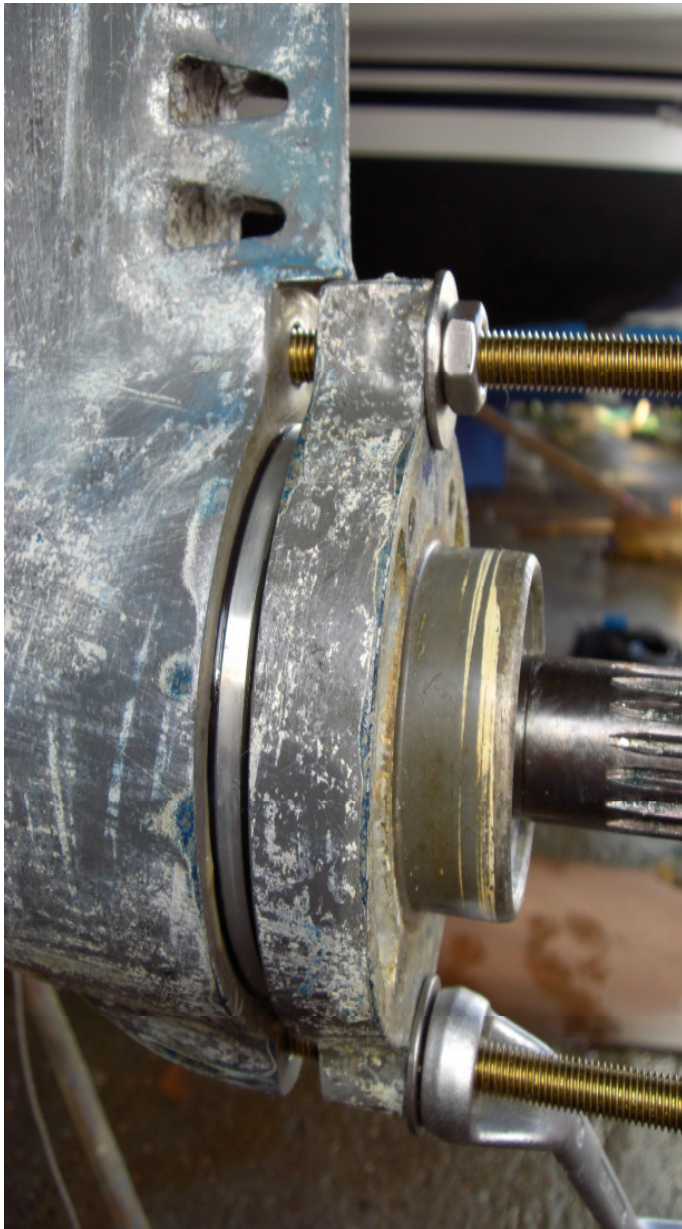


Remove the Zinc anode and get out the Oil. Wonderfull, look at these two different O-rings I found. Replacement is necessary.



Don't mix the drives between Bb and Stb. as the wheels are worn in.

Mark (up) the tail piece to know if it was mounted properly, Chris mentioned the right mounting, were no bearing bolt is down. My dealer was not able to confirm the right mounting ! You might find a wrong mounting ! Mark everything to know what has been removed where.



I used some long bolts to replace the tail piece. Try not to use hammering as this might damage. With an additional plate you can also remove the tail piece with these bolts, in my case the tail piece came off easy. The picture shows the situation by putting it back on.



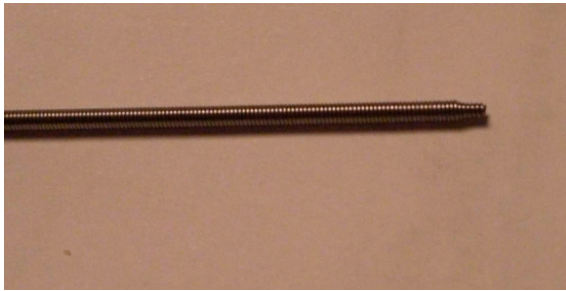
Here you see the bolts which hold the bearing. They will also press out the bearing.



Seal, Niro ring and spacer



Before removing the old seals, save the little Niro-spring-ring, it might be used again. In the picture it is damaged, but you can save it before getting out the seals. Price was 9 Euro for one seal in a non Yanmar store. Check if the little spring ring is niro with a magnetic piece, but there are also niro which is magnetic. It's not easy



This is how the little rings looks like. By twisting the ring you can put it together. Someone has to show you



I cleaned up the shaft with vinegar to remove the calcareous deposit on it as I was not sure this might damage the seals while pushing the shaft through them. Change the position of the spacers if the shaft is worn out. In my picture the shaft looks o.k. You can see the area where the seals are sitting.



For the seals I used an alu-pipe with 50 mm out diameter and 2 mm thickness. That pressed the seals in easily.



Replacing the bearing and lining it up did not work at all (same as Chris), so I put the tail piece in our oven and heated it up to 80 Degree Celsius. This should not damage the seals as oil temperature can raise to 130 Degrees Celsius. The bearing with the shaft I put into our deep freezer, -7 degree ?? I greased the two things a little bit. This worked out perfectly and the thing slipped in smoothly. No hammering at all !! Do not tighten the screws until the expansion (temperature) has gone.

Putting back the tail piece with my two brass bolts became an easy job. After that I felt really good.

I hope the pictures explains the rest.

Finally it is not that difficult until you have an oven and a deep freezer and two long 10 mm thread bolts. (in my case)

Johannes and Angelika, MAGIC CLOUD, Lagoon 410 heading the horizon, temporary baltic seas, www.mitfahrn.de, jodini-kiel@gmx.de

See also my pictures in the gallery.
Sorry for my english