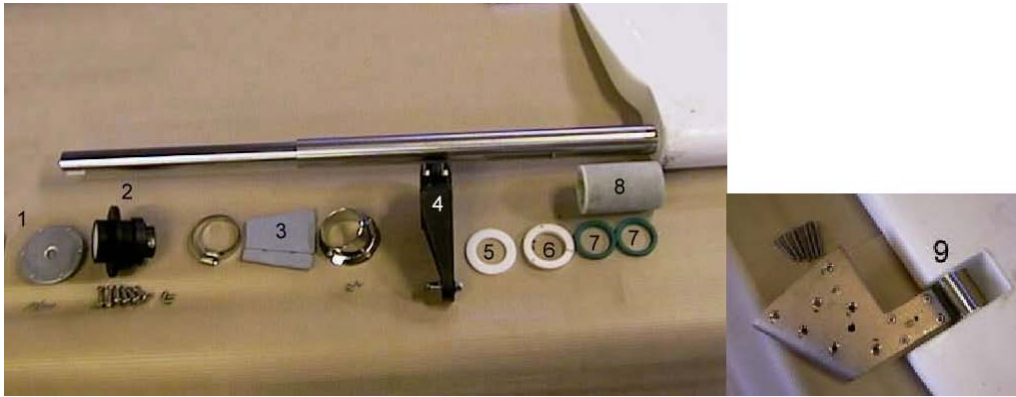
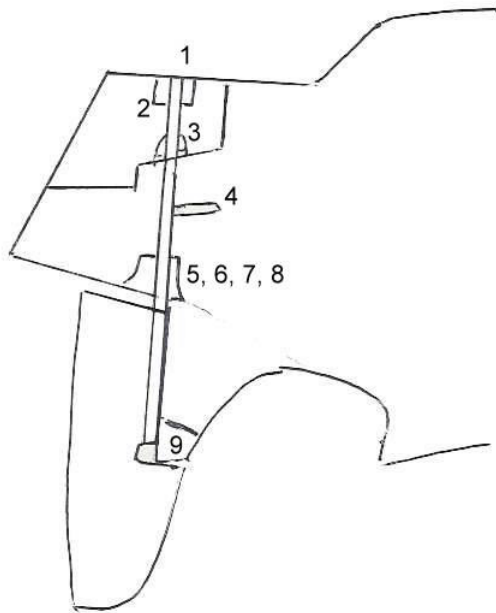


Rudder HR 43

Parts included:



1. Cover Plate deck
2. Upper Bearing with locking screws for shaft
3. Sock
4. Tiller arm for steering
5. Delrin ring.
6. Delrin ring with screw holes
7. 2 Seals
8. Lower rudder bearing
9. Lower bronze fitting on Skeg



In order to change the **2 seals** marked **(7)** you will have to drop the rudder 50-60 cm. make sure you have space enough under the rudder!

1. Secure the rudder shaft with a 12 mm eyebolt. There is a hole at the top of the rudder shaft. (Under the deck **cover plate (1)**) Put a 12 mm Eyebolt and use a turnbuckle or similar in order to drop the rudder.

2. Remove the **tiller arm and rudder stopper arm (4)** from the rudder shaft. No parts including key for tiller arms can be attached to the rudder shaft, as you need to be able to slide the seals on to the shaft.

3. Loosen the **sock (3)** inside the aft lazarette. (2 hose clamps)

4. Remove all laminate and putty that is covering the **lower bronze fitting (9)** The fitting is made in two parts.

5. Loosen the 3 screws that hold the shaft to the **upper bearing (2)** the rudder shaft. This is the fitting that prevent the rudder from falling out. If necessary spray penetrating oil to loosen the sleeve from the shaft. This should be done some days in advance in order to make sure it penetrates between the sleeve and shaft.

6. Lower the rudder with the turnbuckle or similar. You need to lower the rudder about 50-60 cm in order to be able to slide new seals on the shaft.

7. Remove the loose **Delrin plate (5)**

8. Unscrew the 3 screws and **Delrin plate (6)** that hold the **seals (7)** in place. Remove the seals. Have a close look how the seals are installed, as you have to put the new one in the same direction.

9. Install new seals. The feather or O-Ring on the inside of the **seal (7)** should face the sea. Be very careful when you are sliding the new seals on to the shaft. Make sure there are no grades on the shaft that can damage the seals. Especially where the **tiller arm (4)** was fitted. Use a protective paper or similar between the seal and the shaft when sliding the seal on to the shaft. It is easy to cut the new seals.

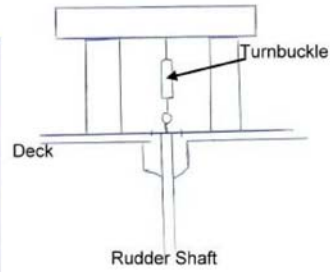
10. Reassemble everything. Make sure that the rudder is going quite light before attaching tiller arms etc.



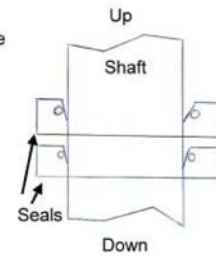
Inside aft lazarette



Lower rudder bearing



Ex. how to secure shaft.



Pos. Seals

Parts needed in order to perform the repair.

2 seals (7)

We also recommend that you have a spare bearing house assembly (2) if it shows it is worn or the sleeve is sticking to hard on the shaft.

21 Mars 2007

Roland Olsson