

Repair of rudder bearing - HR312, HR352, HR382

When sailing in waves, the rudder makes a “clonk” by neutral rudder pressure, it is almost certain, that the lower rudder bearing is having a significant wear.

If the boat is standing on land, take a firm grip on the rudder blade and move from side to side.

Visible movement and "clonk" sound are felt and heard.

The reason is that the rudder bearing consists of a bronze bushing. One in the rudder blade and one in the skeg.

Between the bushings there is a stainless-steel dowel or shaft which cannot be lubricated. See FIG. 1.

It is not fixed but can be pushed up into the rudder, in order to release the rudder if it has to be removed.

Thereby, the dowel/shaft will wear on both bushings, the upper and lower bushing and will begin to rattle around in the bushings.

Solution :

By keeping the dowel/shaft fixed straight in one bushing and lubricating the second bushing with grease, the play will be minimized, and the bushings will be lubricated, and will then last many year here after.

What you need:

A set of thread cutting tools M8, 2 x socket screws, one M8 grease nipple and a grease gun.



A hole must be drilled in each hinge part so that the drill hits the middle of the stainless-steel dowel/shaft, once you are through the bronze bushing. See FIG. 2 and FIG. 3.

Both holes should be drilled so deep, that you can feel the drill hitting the stainless-steel.

As I recommend M8 thread, the holes should be drilled with drill $\text{\O}6,5\text{mm}$. Then cut the thread into both holes beginning with the slim nose cutter. When you reach the bottom, unscrew the pin and use the thick nosed tool for cutting threads all the way into the bottom of the hole (into the steel mandrel).

Screw a socket screw into the hole in the upper thread (or in the part of the hinge where you estimates that are most wear).

Tighten the socket screw firmly.

In the second hole, screw in an M8 grease nipple. Now pump grease into the nipple with a grease gun until you see the grease coming out between the bushings.

Unscrew the grease nipple and lightly screw in the other socket screw (just to keep the hole closed and the grease in place). It must not be tightened to the bottom, as you will lock the rudder hinge.

Make a note for yourself, which hole is used for grease and which is the locking screw.

You will now be able to grease the bearings every year or every second year.

Now try to see if the play is eliminated. If you still feel too much play, - your rudder bearings are so worn out, that you should consider replacement.

This little process will take you less than an hour and cost next to nothing.

Do you have any question, feel free to call me on +45 20 85 11 77.

Best regards

Erik Jakobsen
Silkeborg
Denmark

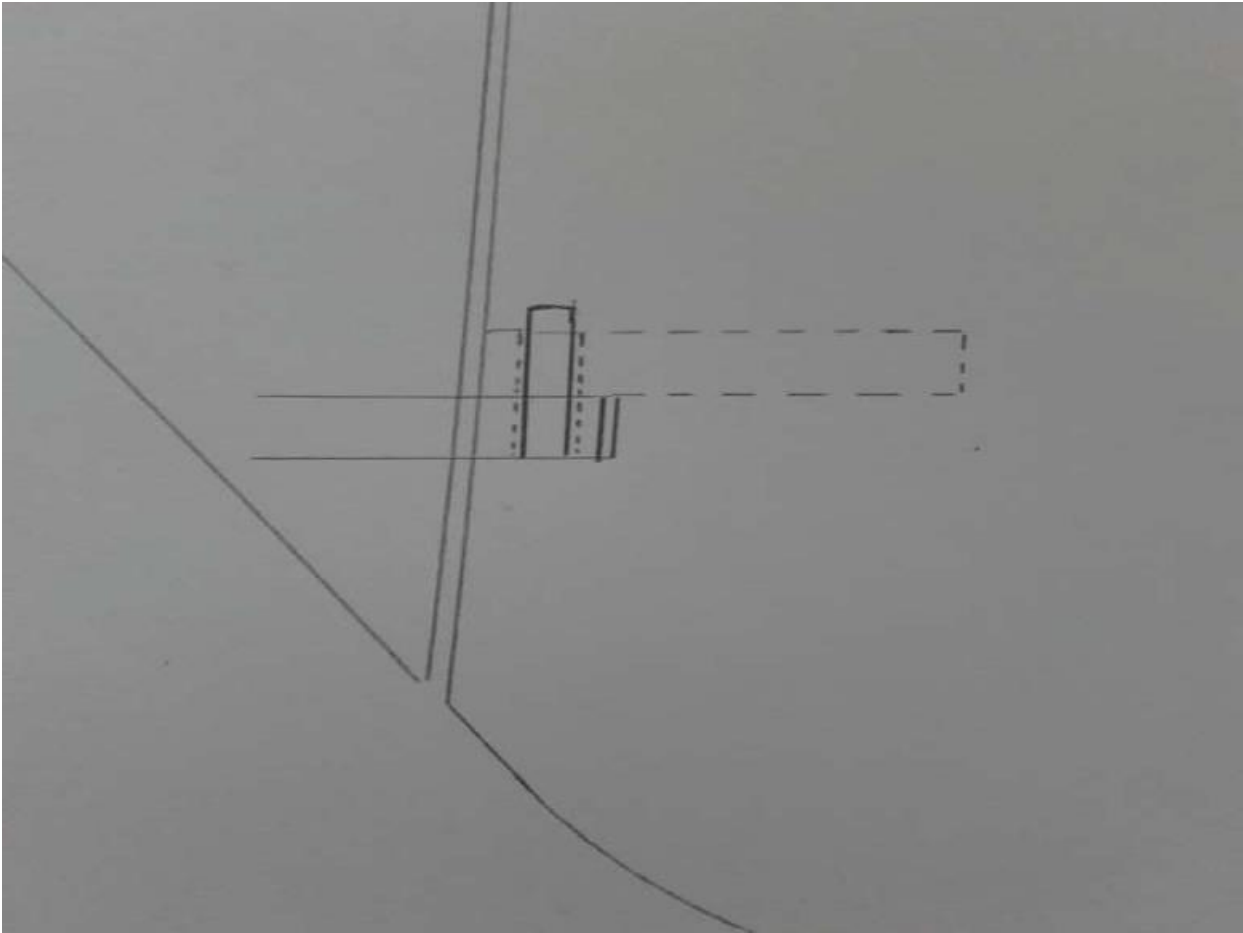


Fig. 1 Rudder bushings and dowel/shaft

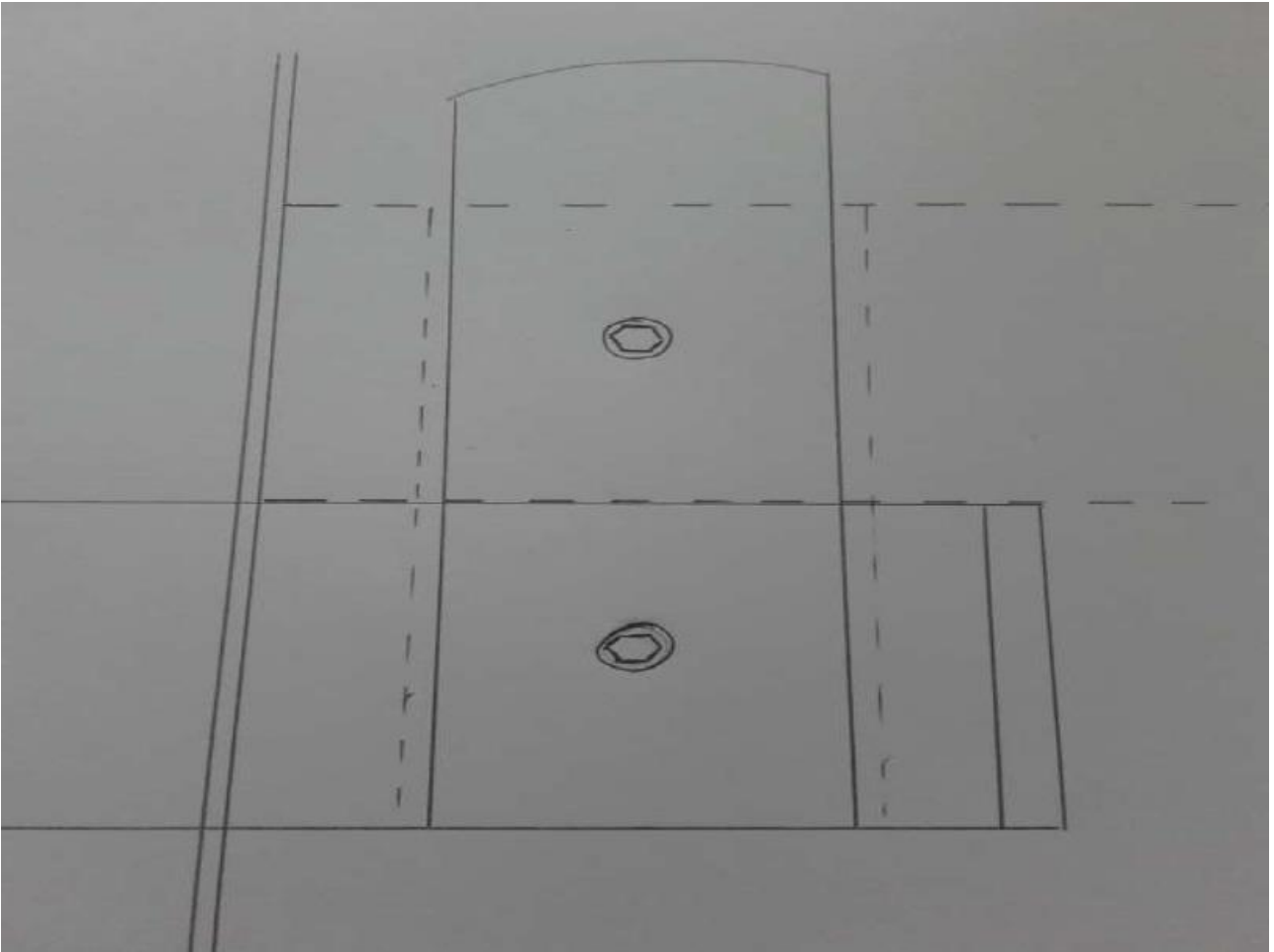


Fig. 2 Rudder hinge with socket screws after drilling and thread cutting.

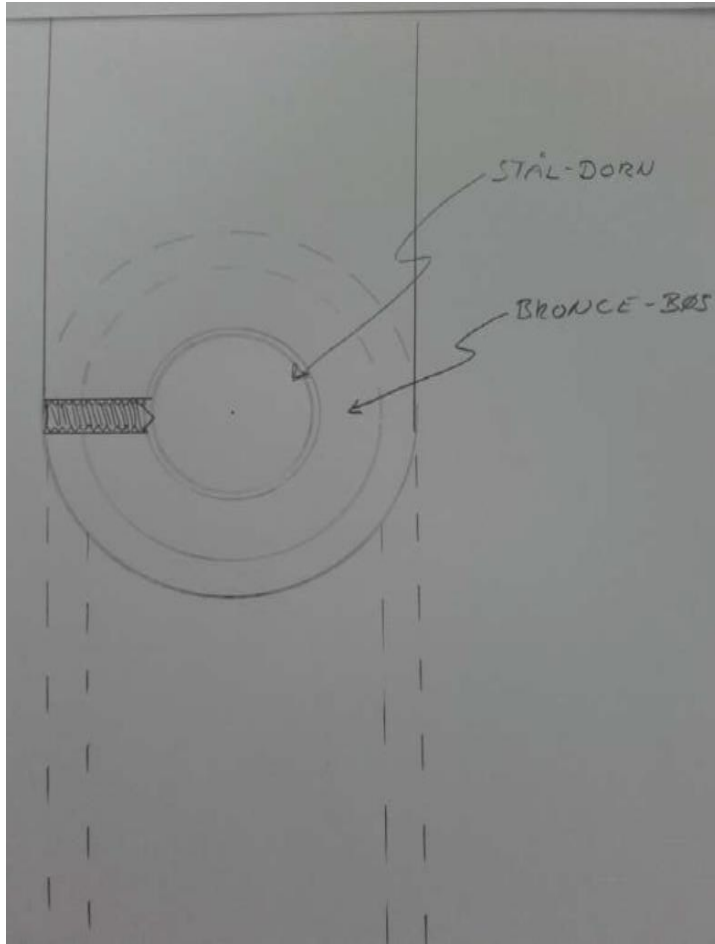


Fig. 3 Rudder hinge from an axial look. The dowel/shaft in the middle, surrounded by the bushings. The socket screw is tightened into the dowel/shaft and by that, locking the dowel/shaft.