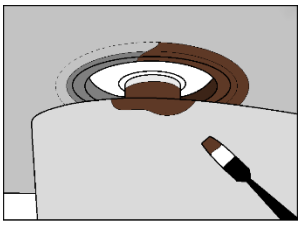
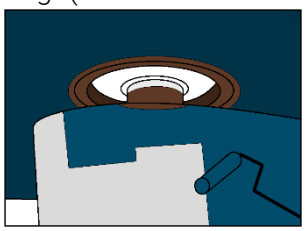
JEFA RUDDER service tip – self-aligning bottom bearing getting stiffer in time

When your JEFA rudder bearing is getting stiffer in time, there could be two possible causes.

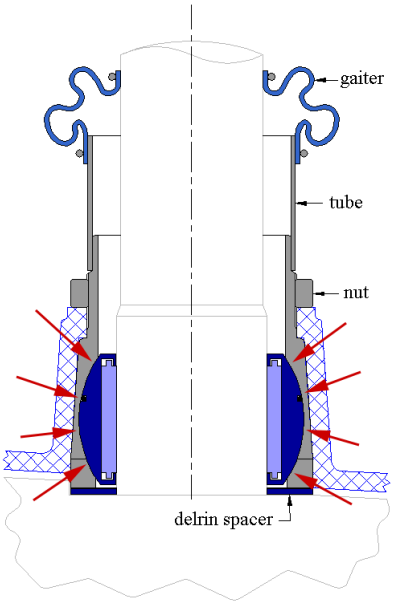
1. Corrosion between the aluminium outer housing and the bearing ball:



Due to corrosion on the surface, the volume of the outer housing increases and pushes the bearing ball harder on the rudder shaft creating friction and making the steering stiffer and stiffer. In most cases this is caused by using metal consisting anti-fouling too close to the bearing housing. It's very important to use nonmetallic anti-fouling (like used on sail drives) on area's close to the rudder shaft and rudder bearing. A separate extended manual on this subject is available at the rudder – maintenance section of our document server.



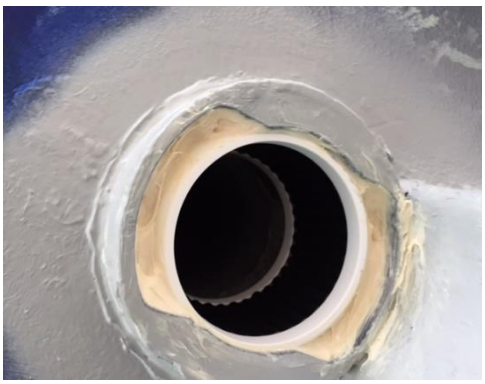
Please click this link to open the special anti-fouling manual.



2. Calcium residue (lime) between the outer housing and the bearing ball.

On some boats the bottom bearing is continuous "kissing the water". As the gap between the outer housing and the bearing ball is very small, water could be sucked up by capillary action. Normally the grease between the ball and housing will prevent this, but after some time of use, heating up and cooling down many times, the grease will run out this area.

The water will evaporate, leaving the calcium residue (lime) and salt behind. In time, the layer will build up in thickness compressing the ball with rollers more and more against the rudder shaft. This will add friction and cause the steering to get stiff. To resolve this, one can replace the outer housing for a new one, or use some acid and a brush to dissolve the calcium (be careful to use acid only for a few minutes, as it will also damage the aluminium in time). The inner spherical surface can also be sanded with very fine sanding paper. When the ball with rollers is still in good shape, it can be placed back, but carefully watch for cracks which could grow in time and cause rollers to fall out. If cracks are present in the top or bottom of the bearing ball, it should be replaced by a new one. Please contact our service staff (info@jefa.com) for these parts. Also make sure you carefully clean all dirt between the rollers before you put the ball back.



To prevent water entering the area between the bearing ball and outer housing, one can fill this up with a stiff grease. A good grease for this is Lanacote. Any synthetic grease will do the job, as long as it is as sticky and hard as butter. Please make absolutely sure no grease gets on, or between the rollers!

When you have any questions, please don't hesitate to contact our service staff.

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