

Tides Marine, Inc.

Changing Rudder Lip Seals

Rudder HAS Been Removed From the Boat

Remove the retaining ring (which sits on top of the lip seal) from the body of the bearing housing. The retaining ring resembles two coils of a flat spring. The top corner of the retaining ring is cut away.

Using a small screwdriver, (or other pointed tool), pry the end of the retaining ring out of its groove in the bearing housing.

Grip the end of the retaining ring with pliers, and GENTLY pull upward until the retaining ring is completely out of the bearing housing.

Using a screwdriver or similar tool, lever under the lip of the old lip seal to remove it from the housing. You may also firmly grip the lip of the seal with a pliers and pull upward. Be careful not to scratch the side of the lip seal cavity.

Inspect and clean the inside of the lip seal cavity in the rudder bearing housing. There should be no vertical scratches on the inside diameter of the cavity.



Position the new lip seal over the cavity in the rudder bearing. Tap the new seal into place with a mallet or some other smooth object. Sometimes it is possible to lever the seal into place using the rudder shelf as a lever point. If a Spare Seal Housing is available, position the shoulder of the housing on top of the lip seal and tap the face of the spare seal housing until the new lip seal is seated into the rudder bearing.

You will know when the lip seal is fully seated when the retaining ring groove is fully exposed. Re-install the stainless retaining ring into its groove.

Insert the Red Seal Protector (provided) into the lip seal at the top of the housing. Make certain the Red Seal Protector is fully inserted, covering the lip of the seal completely.

Locate the area of the rudder stock that will contact the lip seal. Using 220 – 300 grit wet/dry sandpaper, polish this area of the rudder stock using a radial motion (around the shaft). Do not use an axial motion (up and down the shaft).

The rudder stock may now be raised into position. Be careful not to dislodge the seal protector.

Finish the job by inverting the Red Lip Seal Protector and placing it on top of the rudder bearing. This should prevent debris from falling onto the lip seal.

Tides Marine, Inc.

Changing Rudder Lip Seals

Rudder HAS NOT Been Removed From the Boat

If the rudder has not been removed, or if the rudder stock has not been lowered below the old lip seal, you can use one of the following three options to remove the old lip seal.

- 1)** Insert a pick (or pointed tool) into the body of the lip seal and pry it out of the housing. Be careful not to scratch the rudder stock
- 2)** Open the jaws of small needle nose pliers about 1/2" (10mm). Push the jaws into the body of the lip seal. Close the jaws and pull up.
- 3)** Thread two self-tapping screws into the body of the lip seal. When they are seated in the lip seal, pull up / pry up on the screws.

Once the old lip seal has been removed, clean the lip seal cavity in the bearing and polish the newly-exposed area of the rudder stock.



Install the new lip seal onto the Red Lip Seal Protector (provided by Tides Marine). Then slide the Red Lip Seal Protector and new lip seal down the rudder stock to the area on the rudder stock that has just been cleaned.

Slide the lip seal off of the Red Lip Seal Protector and down to the top of the bearing.

Position the new lip seal over the cavity in the rudder bearing. Tap the new lip seal into place with a mallet or some other smooth object.

If a Spare Seal Carrier is available, position the shoulder of the housing on top of the lip seal and tap the face of the Spare Seal Carrier until the new lip seal is seated in the rubber bearing.

You will know when the lip seal is fully seated when the retaining ring groove is fully exposed.

Install the retaining ring into it's groove.

Finish the job by inverting the Red Lip Seal Protector and placing it on top of the rudder bearing. This should prevent debris from falling onto the lip seal.