

TIDESMARINE

international-UK

TIDES MARINE INTERNATIONAL LTD
UNIT C5, BIRCH COPSE, TECHNOLOGY ROAD,
POOLE, DORSET. BH17 7FH ENGLAND

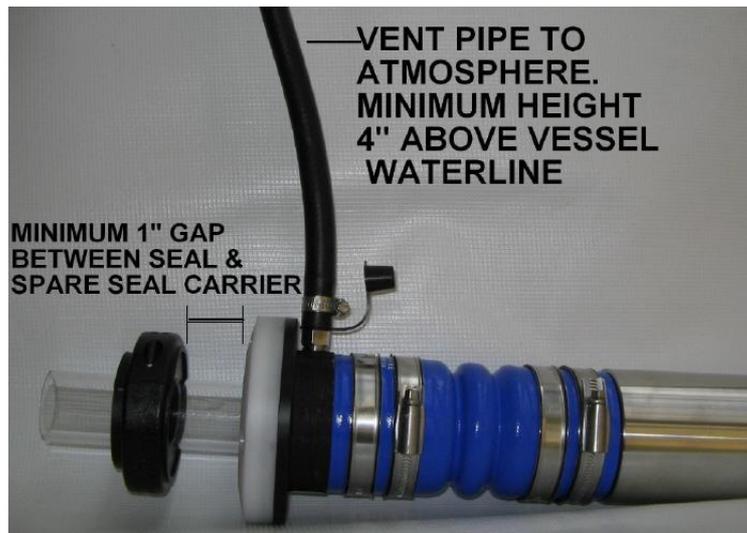
TEL + 44 (0) 1202 656773

FAX + 44 (0) 1202 697503

WEB: www.tidesmarine.com

EMAIL: tmi@tidesmarine.com

'IW' LOW SPEED VENTED SEAL SYSTEM INSTALLATION INSTRUCTIONS



**THIS SEAL SYSTEM IS DESIGNED FOR INLAND WATERWAYS BOATS
FITTED WITH STAINLESS STEEL SHAFTS & NON GREASE FED TUBES.
MAXIMUM BOAT SPEED 8 KNOTS. MAXIMUM SHAFT SPEED 1000rpm**

SEAL INSTALLATION

- 1/ Remove shaft from transmission coupling (Retrofit installation)
- 2/ Disassemble and remove the existing shaft sealing system. (Retrofit installation)
- 3/ Insert the end of the IW seal unit into the flexible hose, and push in as far as it will go.
- 4/ Position the hose next to the stern tube to determine approximately where the lip seal will ride on the shaft. **Allow a 2" (50mm) gap between the seal body and the stern tube.**
- 5/ Examine this area carefully. Be sure that it is free from pitting, nicks or surface imperfections, which could cause leaking. Clean this area thoroughly. Polish the shaft using 300 grit wet/dry paper or emery cloth working **AROUND** the shaft **NOT FORE & AFT**
- 6/ Press the red seal protector into the front of the seal. Make sure that it covers the 'lip' portion of the seal. Slide the hose clamps over the flexible hose.
- 7/ Carefully slide the assembly (hose end first) onto the shaft so that the shaft passes through the red seal protector. **DO NOT USE GREASE or OTHER LUBRICANT!**
- 8/ Slide the assembly down the shaft and onto the stern tube. **ENSURE THAT YOU HAVE LEFT A 2" (50mm) GAP BETWEEN THE SEAL BODY AND THE STERN TUBE.**
- 9/ Separate the two halves of the Spare Seal Carrier by removing the screws.
- 10/ Press the spare lip seal onto the tapered red seal protector (with part number imprint first)
- 11/ Slide the red seal protector and lip seal onto the shaft with the pocket in the lip seal facing the shaft seal unit.
- 12/ Locate the Spare Seal Carrier at least 1" (25mm) away from the face of the shaft seal.

**REGISTERED OFFICE: 12 MILLSTREAM, RINGWOOD, HAMPSHIRE. BH24 3SE
REGISTERED IN ENGLAND AND WALES No. 4445603**

- 13/ Check that the lip seal is correctly positioned and that the part number imprint is facing away from the shaft seal. If so remove the red seal protector.
- 14/ Reassemble the Spare Seal Carrier housing over the lip seal and around the shaft. The long shoulder should face forward away from the seal unit.
- 15/ Reconnect the shaft to the coupling. Make certain that the coupling is firmly secured to the transmission.
- 16/ Space the hose clamps (2 over the shaft seal end & 2 over the stern tube end) and 'snug'. The hose clamp screws should be on opposite sides to distribute the pressure evenly. Confirm that the seal unit is fully inserted into the hose and that you have maintained the 2" (50mm) gap between the seal unit and the stern tube.
- 17/ Tighten all hose clamps.
- 18/ Pull the red seal protector from the seal unit and separate the tabs to split the cone. Remove it from the shaft.
- 19/ Take the black plastic cap off the vent fitting on the body of the seal unit (leave the cap tethered to the fitting) and attach a suitable non-kinking hose to the vent fitting. Secure with hose clamps.
- 20/ Route the vent hose and secure in a position with the top of the hose a minimum of 4" above the standing waterline of the boat. Ensure that the hose is not kinked or pinched as this will prevent the correct venting action and may cause damage to the shaft seal unit.

COMMISSIONING

- 1/ Once the vessel is afloat, remove the vent pipe from the shaft seal vent fitting and check that water flows up the stern tube and out of the vent fitting. If so replace the pipe and tighten the clamps.
DO NOT OPERATE THE VESSEL IF WATER DOES NOT FLOW UP THE STERN TUBE WHEN THE PIPE IS REMOVED!

LIP SEAL REPLACEMENT

This operation can be carried out with the boat in the water.

- 1/ Clean the shaft between the Spare Seal Carrier and the shaft seal housing. Remove the screws and open the Spare Seal Carrier exposing the replacement lip seal.
- 2/ Remove the 5 cap head screws from the front of the housing.
- 3/ Slide the front cap forward passing over the replacement seal.
- 4/ Separate the split retaining washer and remove it from the shaft.
- 5/ Pry out the old lip seal with a flat blade screwdriver working alternately on opposite sides. Cut the old lip seal off the shaft using diagonal pliers.
- 6/ Water will begin flowing through the shaft seal and into the bilge at this point.
- 7/ Carefully slide the new lip seal down the shaft and into the chamfered opening in the front of the seal housing.
- 8/ Water will slow to drips at this point.
- 9/ Twist the split retaining washer until you can put it back on the shaft. Snap the retaining washer back into the recess inside the seal cap. Slide the seal and washer assembly back against the seal housing.
- 10/ Align the holes in the cap with those in the seal body and start the cap screws.
- 11/ Alternately tighten the cap screws in a criss-cross pattern. This action pushes the replacement seal into the housing. The seal is correctly seated when the cap and the housing touch and the cap screws are tight.

TROUBLE SHOOTING AND FAQ's CAN BE FOUND ON THE TIDES MARINE WEBSITE www.tidesmarine.com or CONTACT TIDES MARINE INTERNATIONAL ON 01202 656773 FOR FURTHER ASSISTANCE OR ADVICE.