HENLEYS® SHAFT SEALS

1/12/2026

PARTS LIST

H1 – H3 KIT INCLUDES:

- **2205 SS HENLEYS Shaft Seal** assembled with:
- Hose *(either bellows or reducer style).*
- (4x) hose clips.
- (1x) Thordon SXL guide bush.
- (1x) LUP Flexi-Seal.
- (1x) circlip.
- (1x) hose tail (10mm / 3/8" hose).

- **Parts supplied loose in kit**:
- (1x) bellow clamp hose clip *(this is to be fitted only when replacing the LUP Flexi-Seal in the water and should be removed once you have finished servicing the seal).*
- (1x) ball valve tap.
- (2x) hose tail (10mm / 3/8" hose).

H4 – H8 KIT INCLUDES:

- **2205 SS HENLEYS Shaft Seal** assembled with:
- Hose *(either bellows or reducer style).*
- (4x) hose clips.
- (1x) Thordon SXL guide bush.
- (1x) LUP Flexi-Seal.
- (1x) circlip.
- (1x) hose tail (10mm / 3/8" hose).

- **Parts supplied loose in kit**:
- (1x) bellow clamp hose clip *(this is to be fitted only when replacing the LUP Flexi-Seal in the water and should be removed once you have finished servicing the seal).*
- (1x) ball valve tap.
- (2x) hose tail (10mm / 3/8" hose).

H9 – H12 KIT INCLUDES:

- **2205 SS HENLEYS Shaft Seal** assembled with:
- Hose *(either bellows or reducer style).*
- (6x) hose clips.
- (1x) Thordon SXL guide bush.
- (1x) LUP Flexi-Seal.
- (1x) circlip.
- (2x) hose tail (10mm / 3/8" hose).

- **Parts supplied loose in kit**:
- (1x) bellow clamp hose clip *(this is to be fitted only when replacing the LUP Flexi-Seal in the water and should be removed once you have finished servicing the seal).*
- (1x) ball valve tap.
- (1x) "Y" section fitting (10mm / 3/8").
- (2x) hose tail (10mm / 3/8")

OPTIONAL EXTRAS:

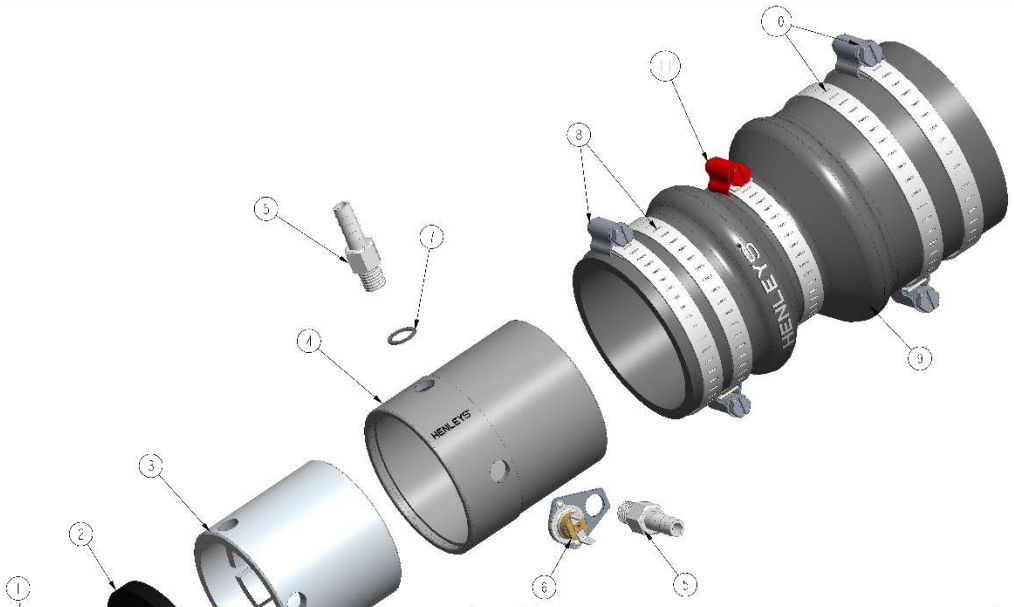
- **Spare LUP Flexi-Seal kit**, includes:
- (1x) LUP Flexi-Seal.
- (1x) circlip.
- (1x) plastic protective sheath.
- (2x) cable ties.

- **Heat sensor kit**, includes:
- (1x) 50°C thermal switch on mounting plate (12V & 24V compatible).
- (1x) alarm sounder with warning light (12V OR 24V specific).

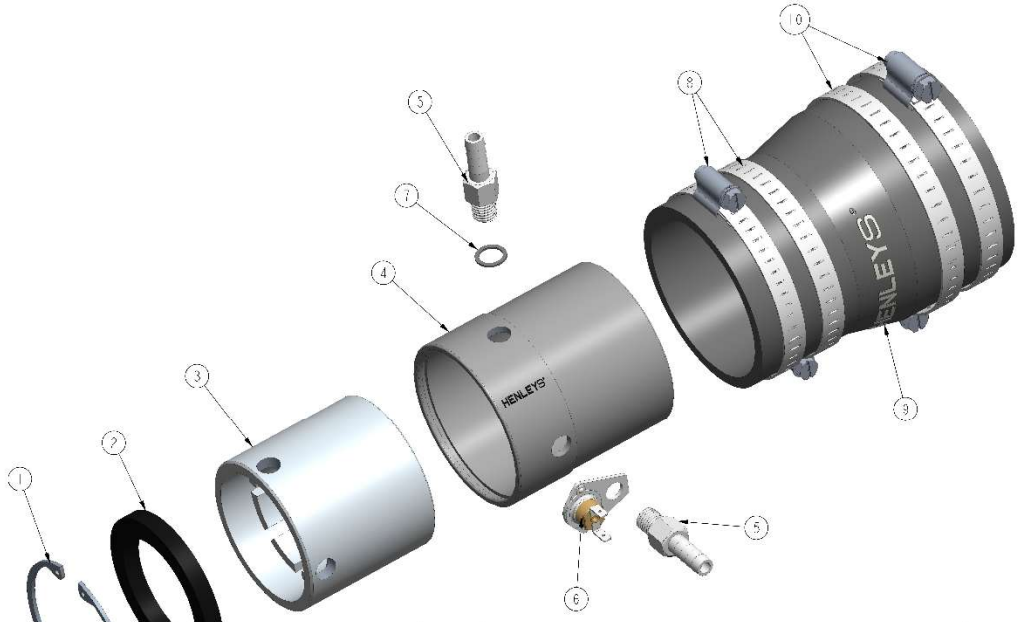
- **Guide bush kit**, includes:
- (1x) Thordon SXL split guide bearing.
- (1x) puller handle.

NOT INCLUDED:

- **You will need to source these parts**:
- **H1 – H12** Coolant supply hose with hose tail and clips to suit 10mm / 3/8" hose tail (& vented loop hardware).
- "T" section fitting for water cooling feed from engine raw water line.
- 7mm socket for hose clips.
- Detergent/ liquid soap.
- Packaging tape (or similar).
- Very fine sandpaper (400 to 600 grit).
- Bucket (for waterflow rate test).
- Insulation tape or similar to hold the spare LUP Flexi-Seal and circlip in place on the shaft.
- Marine grade wiring for the heat sensor thermal switch to the dash mounted alarm/ light.



	Henley Seal Assembly - Bellow - Dual Water Feed	
1	Circlip	316 SS
2	LUP Flexi-Seal	Marine Specific
3	Guide Bearing	Thordon SXL
4	Housing	2205 SS
5	Water Feeds	316 SS
6	Temp Sensor/Mount	Ceramic/316SS
7	Washer	316 SS
8	Housing Hose Clips	316 SS
9	Bellow Hose	Reinforced Silicone
10	Stern Tube Hoseclips	316 SS
11	Shaft Clamp Hose Clip	316 SS



	Henley Seal Assembly - Reducer - Dual Water Feed	
1	Circlip	316 SS
2	LUP Flexi-Seal	Marine Specific
3	Guide Bearing	Thordon SXL
4	Housing	2205 SS
5	Water Feeds	316 SS
6	Temp Sensor/Mount	Ceramic/316SS
7	Washer	316 SS
8	Housing Hose Clips	316 SS
9	Reducer Hose	Reinforced Silicone
10	Stern Tube Hoseclips	316 SS

INSTALLATION INSTRUCTIONS

READ THOROUGHLY BEFORE INSTALLING THE SHAFT SEAL

Fitting the HENLEYS Shaft Seal with the boat out of the water:

1) Unbolt the shaft coupling from the gearbox output flange, remove the coupling from the shaft and the key from the shaft keyway.
2) Slide the shaft AFT far enough to fit the shaft seal unit and remove the old seal if fitted. If the shaft seal unit is too long, then the hose can be shortened with a sharp blade. When cutting, ensure that the straight section of hose at either end is still long enough to fit the hose clips provided (approx. 15.5mm per clip).
3) If you have an existing cutless style bearing in the forward end of the stern tube – check that it is still to the manufacturer's tolerances, if within tolerance then progress to step #5. If a bearing is not in place or the existing bearing is worn:
    - Clean and measure the ID of the stern tube. Measurements should be taken with an inside micrometer to 2 decimal places for metric and 3 for imperial.
    - Contact your local HENLEYS distributor for a Thordon cutless style bearing.
    - Install the bearing following the instructions provided.
4) Clean the shaft with a very fine sandpaper (400 to 600 grit).
5) Tape over the keyway to prevent cutting of the LUP Flexi-Seal.
6) Lightly lubricate the LUP Flexi-Seal and shaft with soapy water, then fit the HENLEYS Shaft Seal over the shaft. Slide the seal unit AFT (do not fit to the stern tube until step #13).
7) If you have purchased a spare seal kit then slide the LUP Flexi-Seal onto the shaft first, followed by the spare circlip. Then cover the seal and circlip with the plastic sleeve provided, cable tie the ends to seal (do not fully tighten the cable ties as you will need to move it to the final position on the shaft in step #12).
8) Slide the shaft forward. Remove the tape from the keyway and reinstall the key.
9) Re-install the shaft coupling on the shaft and slide the shaft and coupling back up to the gearbox flange. Go through the alignment procedure checking that the flanges are within true alignment. Vertically, horizontally and in angle face to face (within .002" / 0.05mm) with a feeler gauge. Adjust the engine mounts as required to achieve correct alignment then bolt the two flanges back together. (see. note B).
10) To check that the shaft is running through the center of the stern tube, measure from the outside of the tube to the shaft on the four quadrants, 12, 3, 6, 9 o'clock.
11) Now slide the seal unit AFT until the hose is seated on the stern tube. Orientate the seal so that the heat sensor and hose tail are positioned near the top.
12) Ensure the hose clips are correctly aligned as a mirror image and both are positioned over the stern tube. Tighten the hose clips at the stern tube end of the hose, then check the hose clips at the SS nose cone end are also tight.
13) Position the spare LUP Flexi-Seal and circlip in a suitable area on the shaft. Fully tighten the cable ties, trim ends then wrap in insulation tape to hold firm on the shaft.




NOTE (A): The engine should be mounted on correctly spec'd engine mounts that hold the engine to within 2.5mm of axial and lateral movement under maximum thrust load. This is especially important when fitting a shaft seal with the shorter reducer type hose. Engine mounts should be inspected for condition during the shaft seal installation process. If your mounts are incorrectly spec'd or need replacement, then we would recommend fitting well engineered polymer core mounts such as Isoflex.

NOTE (B): Shaft alignment cannot be done off a flexible disc coupling – one MUST work directly off the gearbox output flange to the half coupling flange. If this is not possible then a metal disc spacer should be made to be used for the alignment procedure.

Now that the shaft seal is in place, the water feed can be fitted for cooling/ lubrication.

14) Assemble the ball valve tap with the 2x hose tails provided.
15) "T" off the pressure side of the engine raw water pump (see note C). Run a 10mm / 3/8" hose from the "T" to the same size hose tail on the ball valve tap (see note D)
16) **H1 – H3**: Run a 6mm / 1/4" hose from the ball valve tap to the hose tail on the HENLEYS Shaft Seal.
    H4 – H8: Run a 10mm / 3/8" hose from the ball valve tap to the hose tail on the HENLEYS Shaft Seal.
    H9 – H12: Run a 10mm / 3/8" hose from the ball valve tap to the tail on the "Y" section, then 2x hoses to the HENLEYS Shaft Seal.

NOTE (C): the coolant water must be sea temperature (cold). Warm water from the engines cooling system will corrode even marine grade stainless steel shafts & affect bearing tolerances.

NOTE (D): Some installations may require a loop & vent in the coolant line to prevent gravity/ vacuum feed of raw water into engine ports when the engine is cooling after shutdown. This should be considered by the installer when the engine(s) sit near the waterline. If cross feeding in the case of twin installations, you should fit a non-return valve in each pump to seal supply line.

Once the boat is back in the water. Set the waterflow rate using the ball valve tap.

17) Take the coolant hose off the shaft seal housing and plug the hose tail to stop water entering the bilge (if required).
18) Close the ball valve tap.
19) Start the engine (leave out of gear) and increase engine speed to cruise RPM.
20) Using a stopwatch timer and the measured bucket, adjust the ball valve tap until the flow is within the upper and lower limits in the table below.
21) Once set, reconnect.

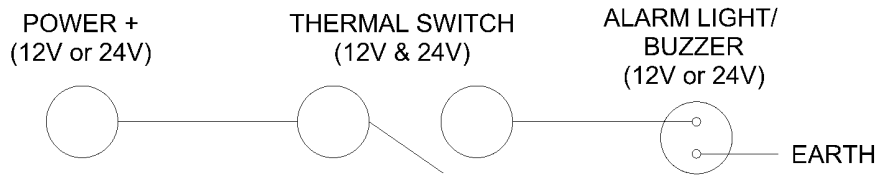
WATER FLOW CHART

Housing	min L/min	max L/min	Housing	min L/min	max L/min
H1	2.5	4.0	**H7**	6.0	10.0
H2	3.0	5.0	**H8**	6.5	11.0
H3	3.5	6.0	**H9**	7.0	12.0
H4	4.5	7.0	**H10**	8.0	13.0
H5	5.0	8.0	**H11**	9.0	14.0
H6	5.5	9.0	**H12**	10.0	15.0

NOTE (E): Burp the seal: on every relaunch following the initial installation, remove the hose from the hose tail on the shaft seal housing until sea water flows out, then refit the hose and tighten the hose clip. This is to relieve any trapped air in the housing.

Install the heat sensor.

22) Follow the wiring diagram below to connect the thermal switch and the alarm light/ buzzer to power.



NOTE (F): The thermal switch on your shaft seal is always open and set to close/ alarm at 50°C. After alarming, the switch will reset (open) once the temperature has dropped to 30°C. If the switch will not reset, then try applying an ice pack to bring the temperature down.

NOTE (G): The system is set to alarm BEFORE the seal and guide bearing condition is compromised so that one can immediately place vessel in neutral, check the shaft seal (which may be hot to touch) and check the water coolant feed. If nothing can immediately be done, then one can safely reduce vessel speed to approx. 5 - 7 knots. This will enable the seal to cool down while the vessel heads for the nearest port to undertake inspection of the shaft seal, bearings, stern tube, shaft, and vessel cooling system.

ROUTINE MAINTENANCE & SERVICING

- LUP Flexi-Seal's should be routinely replaced every 7 years OR 10,000 engine hours (whichever comes first).
- The shaft seal should be visually inspected every time the vessel is used. This means checking the bilge for any water and a visual inspection of the LUP Flexi-Seal itself. This should be included in a list of other standard procedures followed before and after the vessel goes to sea.
- The internal guide bush should be visually inspected whenever the shaft is pulled. If it looks worn then you can contact Henleys for the max allowable tolerance, then measure.

LUP Flexi-Seal REPLACEMENT (in water)

If you have a spare LUP Flexi-Seal fitted to the shaft, then this can be done while the vessel is still in the water.

1) Shut down the engine(s) and place a note on the throttle - "remove shaft seal bellow clamp before start up".
2) Fit the bellow clamp hose clip provided to the center of the bellows and tighten on the shaft (do not over tighten).
3) Check that the spare LUP Flexi-Seal and circlip are positioned correctly on the shaft with the circlip sitting forwards of the LUP Flexi-Seal (towards the bow). Cut off the cable ties and plastic sheath.
4) Remove the old circlip and LUP Flexi-Seal from the shaft seal housing.
5) Cut the old LUP Flexi-Seal and circlip off the shaft.

(For guide bush replacement – start steps here)

6) Lubricate the shaft and new LUP Flexi-Seal with detergent then slide into the housing (take care to push evenly around the seal to keep it square) then install the new circlip. When installing the circlip, you will need to open the clip in the housing (reverse set) using circlip pliers. This is due to being 316 SS for superior corrosion resistance they do not have as much spring as a standard 304 SS circlip.
7) Remove the center bellow clamp hose clip from the hose.

SPLIT GUIDE BUSH REPLACEMENT (in water)

If you have a spare LUP Flexi-Seal fitted to the shaft then this can be done while the vessel is still in the water. You will need to purchase a split type replacement guide bush kit.

1) BEFORE removing the old guide bush check that the new guide bush is pre-drilled through the hose tail mounting hole(s). (M10 for housings H1-H3, M12 for housings H4 and above).
2) Ensure that you have a straight tap on hand for assembly (M10 x 1.25 for housings H1-H3, M12 x 1.25 for housings H4 and above).
3) Follow steps 1-5 in the "LUP Flexi-Seal REPLACEMENT" section above.
4) Remove the hose tail(s) from the housing.
5) Slide the hooked end of the puller handle down one of the water grooves then pull the old guide bearing out.
6) If the old guide bearing is a one piece, then you will need to carefully cut it off the shaft using a saw blade (hack-saw blade will work). Cut through at the base of two opposing water grooves.
7) Fit the two halves of the new guide bearing around the shaft, then orientate the bearing so that the drilled hole(s) line up with the threaded hose tail hole(s) in the housing and slide the new guide bearing into place.

The bush should be a sliding fit by hand. If it is too tight, then you can put the new guide bearing in the freezer or ice for minimum 3 hours (salt ice is best). Heating the SS housing to max 45°C will also help.

8) Run the correct sized tap through the hose tail holes in the SS housing and the pre-drilled holes in the new guide bush. Carefully remove all off the loose guide bush material from the tapping process.
9) Reinstall the hose tail(s) – this will lock the new guide bush in place. The bush will absorb a small amount of water for up to 5 weeks which will further lock it in place.
10) Continue with steps 6-7 in the "LUP Flexi-Seal REPLACEMENT" section above.
Remember to remove the center bellow clamp hose clip from the hose.

GUIDE BUSH REPLACEMENT (on slip)

With the Shaft Seal removed from the shaft the guide bush can be replaced with a standard one-piece bush:

1) Ensure that you have a straight tap on hand for assembly (M10 x 1.25 for housings H1-H3, M12 x 1.25 for housings H4 and above).
2) Remove the shaft seal from the shaft, remove the cir-clip and LUP Flexi-Seal.
3) Remove the hose tail(s) from the housing.
4) Slide the hooked end of the puller handle down one of the water grooves then pull the old guide bearing out.
5) Check that the new guide bush is pre-drilled through the hose tail mounting hole(s). (M10 for housings H1-H3, M12 for housings M4 and above).
6) Fit the two halves of the new guide bearing around the shaft, then orientate the bearing so that the hole(s) line up with the hose tail hole(s) in the housing and slide the new guide bearing into place.

The bush should be a sliding fit by hand. If it is too tight, then you can put the new guide bearing in the freezer or ice for a minimum of 3 hours (salt ice is best). Heating the SS housing to max 45°C will also help.

7) Run the correct sized tap through the hose tail holes in the SS housing and the pre-drilled holes in the new guide bush. Carefully remove all off the loose guide bush material from the tapping process.
8) Reinstall the hose tail(s) – this will lock the new guide bush in place. The bush will absorb a small amount of water for up to 5 weeks which will further lock it in place.
9) Continue with steps 6-7 in the "LUP Flexi-Seal REPLACEMENT" section above.
Remember to remove the center bellow clamp hose clip from the hose.

TROUBLE SHOOTING

Heat sensor has alarmed:

This tells you the shaft seal unit has heated to at least 50°C. In this case you should follow the below steps.

1) Stop the vessel immediately OR as soon as can safely be done.
2) Carefully touch the nose cone to see if it is hot. If below 80°C then the internal guide bush will not have melted, if over 80°C then it is likely the bush has melted and will need to be replaced. See "GUIDE BUSH REPLACEMENT" section above for instructions.
3) Check the water flow line for blockages/ damage.
4) Remove the coolant hose off the Shaft Seal housing and run the engine out of gear to check the water is flowing at the correct rate at cruise RPM (use the chart on page #3). Adjust flow on the tap accordingly then reconnect the line.
5) Inspect the LUP Flexi-Seal for leaks and damage.
6) Allow the nose cone to cool to below 30°C (apply an ice pack to accelerate the cooling).
7) If the alarm sounds again then increase waterflow on the tap. Otherwise, you may not have gotten the sensor cool enough to reset.

If the unit heated to above 80°C, was "squealing" and/or the LUP Flexi-Seal is now leaking then the seal will need to be serviced. See guide bush and LUP Flexi-Seal replacement sections on the previous page for instructions.

Shaft seal is leaking:

Firstly, read through the installation instructions again on pages 2 and 3 to ensure all steps were followed correctly. Below are the common causes for a leaking seal.

1) Unit has over heated due to a water coolant supply failure causing the internal guide bush to overheat and increase ID tolerance outside of the allowable for the LUP Flexi-Seal:

- If you have a heat sensor fitted, then it should have alarmed, and you need to follow the steps in the “heat sensor has alarmed section” above.
- If you do not have a sensor fitted then follow steps 3, 4, 5 in the “heat sensor has alarmed section” above. Then if a coolant supply issue was found proceed to guide bearing and LUP Flexi-Seal replacement sections on the previous page.

2) Shaft to gearbox misalignment is point loading the LUP Flexi-Seal:

- Check that the gearbox to shaft alignment is within tolerance (see step #10 on installation instructions section).
- In this instance the seal will often leak in situ and while underway.

3) Bent shaft:

- Put a dial gauge on the shaft and rotate to check for runout. Doing this in the boat gives an indication but the shaft should really be removed, checked on a table and straightened accordingly.
- In this instance the seal will often leak only while underway.

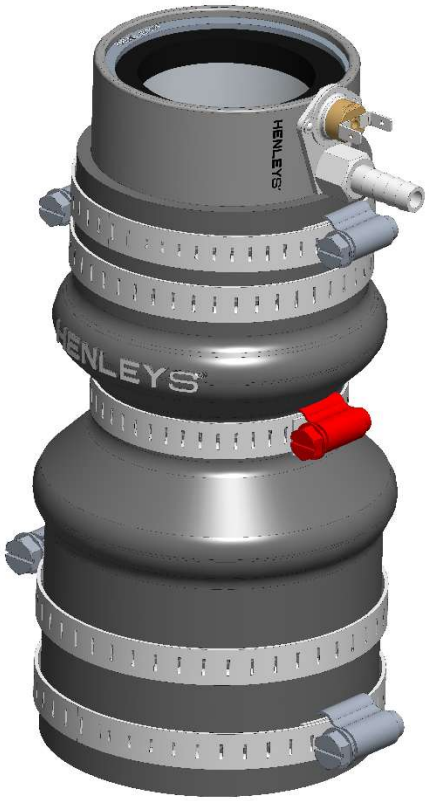
4) Engine mounts.

- Check your engine mounts for damage/ failure. If they are allowing for excessive engine movement under max thrust load, then the unit will leak much more at higher RPM as the thrust load increases.
- Engine mounts have settled due to age – causing misalignment of the drive train which wears the internal guide bearing oval resulting in excessive compression of the LUP Flexi-Seal.
- The engine mounts are too soft allowing the shaft attached to a down angle gearbox to move forward and upward under thrust. If the AFT engine bracket moves forward under thrust by more than 3mm then with a down angle gearbox the shaft will be running with a bend that will point load the LUP seal. The Axial engine movement will be mirrored by the wear pattern in the guide bearing.

5) LUP Flexi-Seal damage:

- Foreign matter has made its way into the internal guide bearing in the SS nose cone to overheat and increase ID tolerance outside allowable for LUP Flexi-Seal.

WARRANTY



This LIMITED WARANTY covers defects in workmanship and materials for a period of three years from the date of purchase (invoice date).

During the warranty period Henleys (Henley Engineering Limited) will replace or repair, at its sole discretion. To claim warranty, the damaged/ faulty HENLEYS Shaft Seal must be returned to Henleys by the vessel owner or one of our distributors/ dealers for assessment.

The warranty does not cover damage that has resulted from abuse, accident, misuse or any vessel issues such as but not limited to; lack of coolant water, excessively worn bearings, shaft misalignment, sterntube misalignment, bent shaft, substandard OR worn engine mounts, propeller out of class or balance which may cause excessive vibration.

All Shaft Seals must be fitted with strict adherence to supplied fitting instructions, any deviation from instruction may void the warranty.

This warranty gives you specific legal rights which may vary from country to country. Henleys responsibility for defects in material and workmanship shall be limited to repair and/ or replacement as set forth in this warranty. All express and implied warranties and warranties of merchantability or fitness for a particular purpose are disclaimed.

We do not accept liability for incidental or consequential damages for any third-party claims for damages against this product.