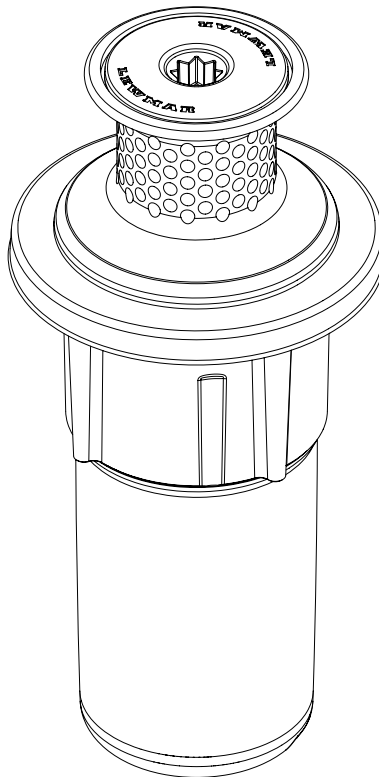


Lewmar VX Capstan

65100068 Issue 1



1. Introduction

Dear Customer,

Thank you for choosing Lewmar. Lewmar products are world renowned for their quality, technical innovation and proven performance. With a Lewmar product you will be provided with many years of outstanding service.

Product support

Lewmar products are supported by a worldwide network of distributors and Authorised Service Representatives. If you encounter any difficulties with this product, please contact your national distributor, or your local Lewmar dealer. Details are available at: www.lewmar.com

CE Approvals

For CE approval certificates contact Lewmar.

Important information about this manual

Throughout this manual, you will see safety and product damage warnings. You must follow these warnings carefully to avoid possible injury or damage.

The type of warnings, what they look like, and how they are used in this manual are explained as follows:



WARNING!

This is a warning against anything which may cause injury to people if the warning is ignored. You are informed about what you must or must not do in order to reduce the risk of injury to yourself and others.



SAFETY SYMBOL

When you see the safety symbol it means: "Do not..."; "Do not do this"; or "Do not let this happen".

2. Safety Notice

IMPORTANT: Read these notes before continuing.



2.1 Windlass general

Classification Societies and Lewmar require that a vessel at anchor must have its chain/rode held by a chain stopper or equivalent strong point at all times

At all times it is the responsibility of the boat operator to ensure that the anchor and rode are properly stowed for the prevailing sea conditions. This is particularly important with high-speed powerboats, because an anchor accidentally deploying while under way can cause considerable damage. An capstan is mounted in the most exposed position on a vessel and is thus subject to severe atmospheric attack resulting in a possibility of corrosion in excess of that experienced with most other items of deck equipment. As the capstan may only be used infrequently, the risk of corrosion is further increased. It is essential that the capstan is regularly examined, operated and given any necessary maintenance.

Please ensure that you thoroughly understand the operation and safety requirements of the capstan before commencing the installation. Only persons who are completely familiar with the controls and those who have been fully made aware of the correct use of the capstan should be allowed to use it. If there is any doubt of how to install or operate this unit please seek advice from a suitably qualified engineer.

- Capstan used incorrectly could cause harm to equipment or crew.
- Capstan should be used with care and treated with respect.
- Boating, like many other activities can be hazardous. Even the correct selection, maintenance and use of proper equipment cannot eliminate the potential for danger, serious injury or death.
- Lewmar Capstans are designed and supplied for control in marine applications and are not to be used in conjunction with any other use.
- Keep limbs, fingers, clothing and hair clear of Capstan, rode and anchor during operation. Severe bodily harm could result.
- Ensure there are no swimmers or divers nearby when dropping anchor.
- Capstans must not be used as the sole means of securing the anchor to the bow fitting especially under storm conditions. Anchors should be independently secured to prevent accidental release.
- Classification Societies require that a vessel lying at anchor must have its anchor rope/chain secured to a chain stopper or other suitable independent strong point.
- A Capstans should never be used as a mooring bollard, the anchor rode **MUST** be secured to a mooring cleat, chain stopper or other designated strong point. Using the windlass to secure the rode will damage the capstan.
- The circuit breaker in this product must never be deactivated or otherwise bypassed, it is intended to protect the motor and cables from overheating and damage.
- Always switch off this windlass at the circuit breaker/isolator when not in use.
- It is the unavoidable responsibility of the owner, master or other responsible party to assess the risk of any operation on the vessel.
- Windlass must not be operated whilst under the influence of alcohol or drugs.

2.2 Fitting

- This equipment must be installed and operated in accordance with the instructions contained in this manual. Failure to do so could result in poor product performance, personal injury and/or damage to your boat.
- Consult the boat manufacturer if you have any doubt about the strength or suitability of the mounting location.

2.3 Electrical

- Make sure that the boat's battery power supply has been switched off before starting the installation.
- This product requires installation by a suitably qualified electrical engineer.

3. Installation

3.1 Basic requirements

Each installation requires the following tools:

Windlass Installation

An appropriate marine sealant and the following:

Wiring Installation

- Crimping Pliers / Wire Stripper
- Suitable electrical cable and crimp terminals

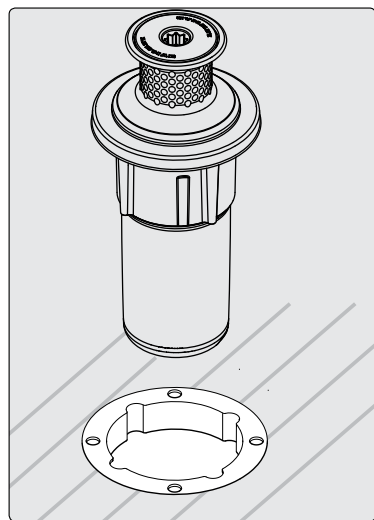
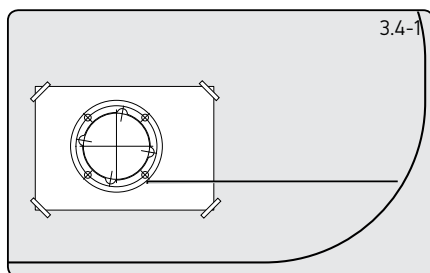
3.2 Accessories

Use only genuine Lewmar parts and accessories to ensure top performance and eliminate the risk of voiding your warranty. For replacement parts, please visit your dealer or www.lewmar.com

3.4 Above deck preparation

IMPORTANT - Plan location carefully and allow for the following:

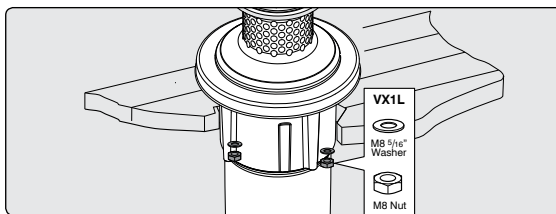
1. Make an accurate drilling template using the product dimensions from the dimension template and decide upon a position for it with reference to the vessel's bow roller and the chain locker below and the rotation of manual operating handle.
If possible, select a flat area of deck.



3.5 VXC Fitting

Using a 10mm ($\frac{3}{8}$ ") diameter drill, make the 4 holes for the mounting studs, 15mm ($\frac{13}{32}$ ") for the gearbox fitting. With a 100mm ($3 \frac{15}{16}$ ") diameter hole saw, make the hole for the main shaft to pass through.

1. When all the holes have been made, remove the template. To help avoid water absorption by the deck, apply an appropriate marine sealant to the freshly cut hole edges.
2. Assemble and tighten studs into base until they bottom out in their holes. Some studs have a flat. Position the flats of the studs nearest the base of the windlass.



4. Electrical wiring

4.1 Electric cable selection

Installation of this product should meet the regulations and standards or codes of practice relevant to the craft to which it is being fitted. As a minimum the installer should conform ISO 10133.

Lewmar recommends the installer use cable with insulation rated at 90°C or higher.

Length = Length of cable from battery '+' terminal and back to battery '-' terminal including breaker and switch gear if fitted

Cable size guide given is for guidance only.

It is the responsibility of the installer to confirm the capacity and voltage drop for the installation. If in any doubt, contact your local marine electrician.

MODEL	CURRENT DRAW AT WORKING LOAD	BREAKER SUPPLIED AMPs	CSA TO MEET ISO 10133 ANNEX A FOR 20 M	AWG TO MEET ABYC E11 FOR L= 66 FEET
VXC	112	90	35	2

4.2 Electric specifications

MODEL	POWER OPTION	MOTOR	TYPICAL MAX. PULL		MAXIMUM LINE SPEED		TYPICAL WORKING LOAD	
	V	W	KG	LB	M/MIN	FT/MIN	KG	LB
VXC	12	800	920	2028	21	63	230	507

*Values tested at +/- 10% on 12/24V system typical of electric systems installed on boats

MODEL	CURRENT DRAW AT WORK LOAD	TOTAL WEIGHT		CIRCUIT BREAKER
	A	KG	LB	A
VXC	58	7.0	15.4	70

4.3 Wiring

Plan the installation to suit the controls and give the operator a full view of the capstan. The wiring system should be of the fully insulated type, which avoids possible electrolytic corrosion problems. We recommend the use of type III stranded, tinned copper wire with copper crimp terminals. Most modern installations are negative return (negative ground) but polarity should be checked.

Overload protection, in the form of the circuit breaker/fuse supplied, must be built into the capstan wiring circuit.

Circuit breaker supplied:

90A (Part No 68000349)

 **WARNING!**

NOTE: The circuit breaker should be positioned close to the battery in a dry, readily accessible place.

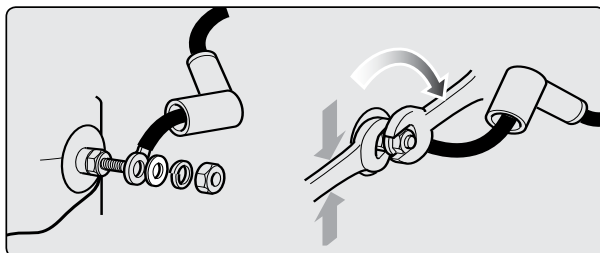
The breaker must be manually reset should an overload occur that causes it to trip to the off position.

If you are not sure you understand these guidelines, seek professional help. Ensure that the installation complies with USCG, ABYC, NMMA or other local regulations.

4.4 Electric motor terminal connections

- ▶ When wiring Lewmar electric motor into the ship's electrical system the following caution must be taken.
- ▶ When tightening the front nut hold the back nut with a separate wrench to make sure the back nut does not turn. If the back nut turns, serious damage will occur, voiding Lewmar's warranty on the electric motor.

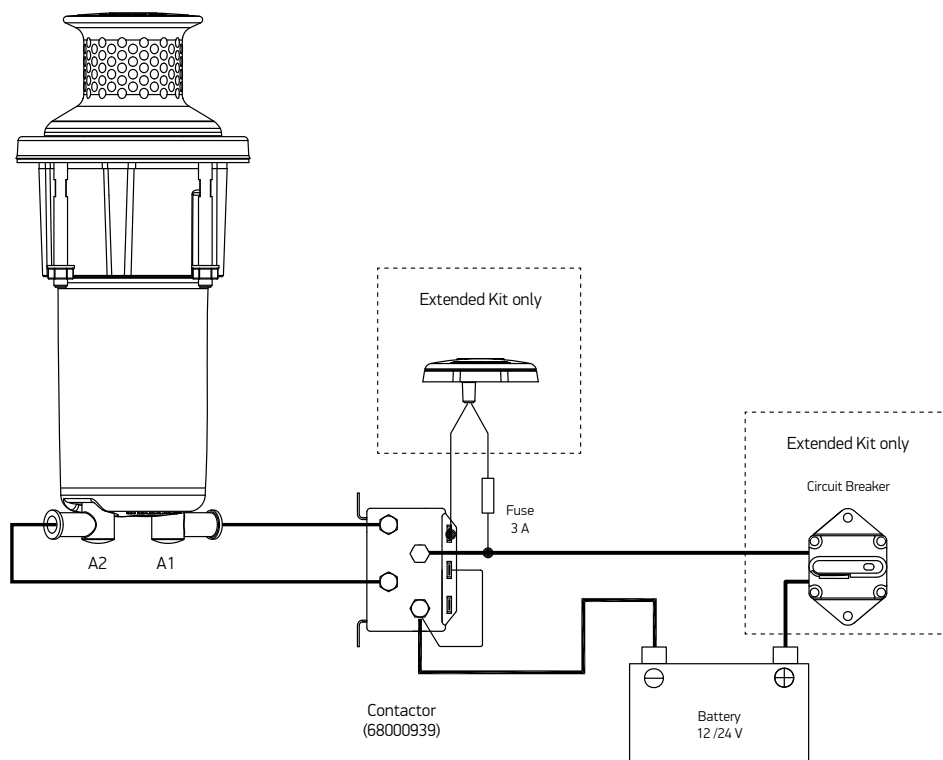
DO NOT overtighten electric motor terminal nuts.



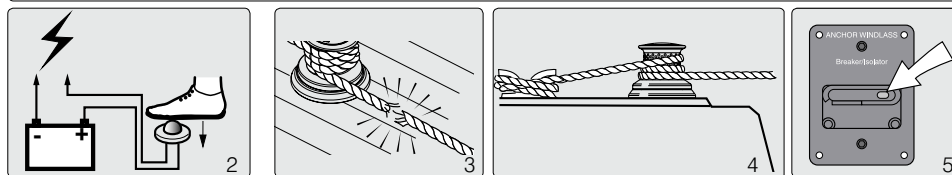
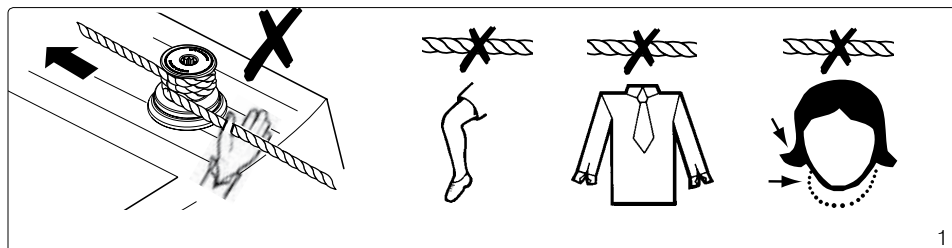
4.5 VXC - Wiring diagram

Installation instructions are supplied separately with any accessories.

Switch wire thickness: **1.5 mm²** (16 AWG)



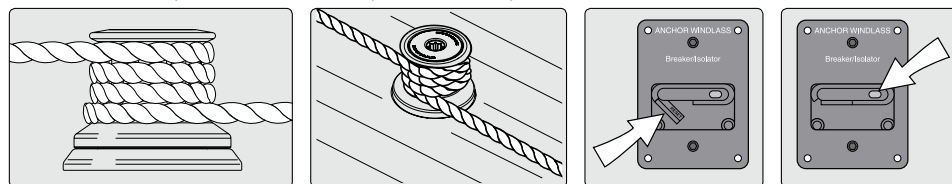
5 - Operation



1. Keep limbs, fingers, clothing and hair clear of capstan.
2. Use footswitch to operate the capstan.
3. Do not overload capstan. Avoid stalling capstan.
4. Secure rope to independent strong point, e.g. cleat, to prevent release.

⚠ WARNING!

5. When not in use, you must isolate the capstan electrically at the circuit breaker/isolator.



Warping

Docking or Anchor warp should be laid onto the drum, three turns in a clockwise direction. The operator should stand in a comfortable position to activate the deck switch whilst tailing the warp behind and into the storage area, if possible.

Apply Tension

Apply a light even tension to the warp before activating the switch. If very heavy pulls are necessary apply power in short bursts of about 10 seconds duration. The speed of hauling depends on the load on the rope.

⚠ WARNING!

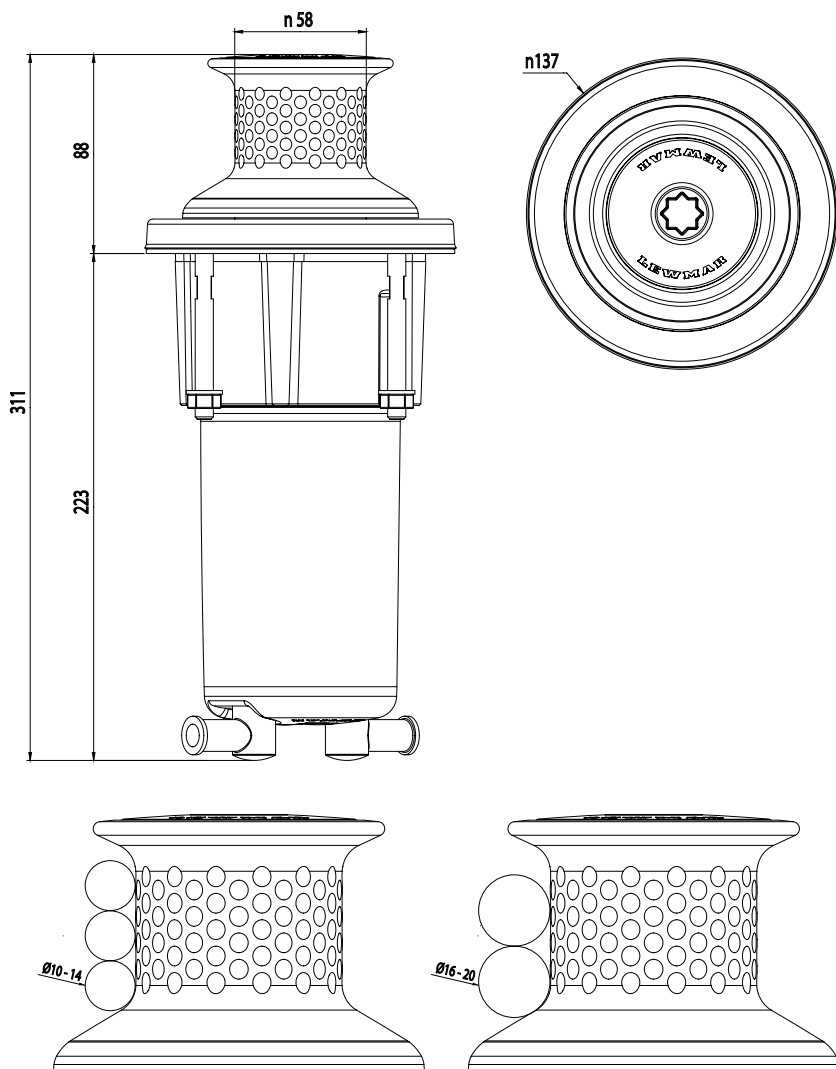
Should the capstan stall, switch off and wait a few seconds before trying again. If the recommended breaker/ isolator has tripped, it will require to be manually reset before the capstan can operate again. It is important to the future, good performance of the capstan's motor that the capstan is not allowed to stall for more than a few seconds and therefore, sensible to avoid stalling your capstan whenever possible.

Power off

Turn the power isolator OFF after use.

6. Specifications

6.1 VXC Dimensions



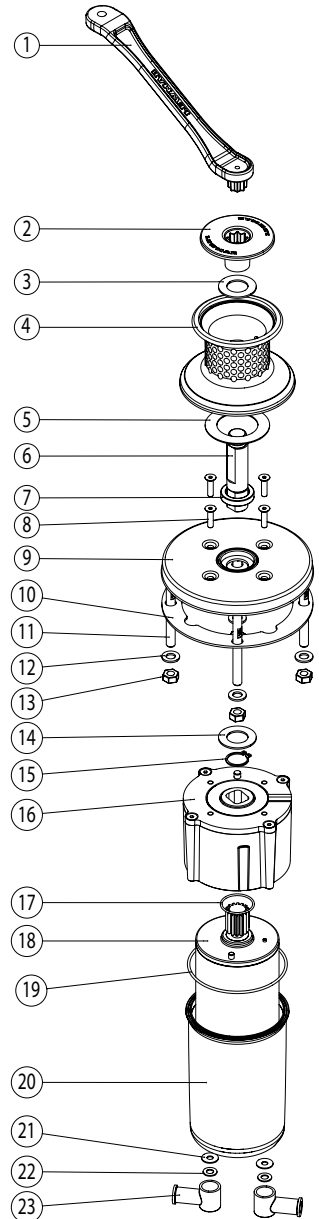
10 - 14 mm ($\frac{2}{5}$ - $\frac{5}{8}$ ") - 3 Strand and 8 Plait

16 - 20 mm ($\frac{3}{8}$ - $\frac{1}{2}$ ") - 3 Strand and 8 Plait

7. Parts List

7.1 VXC Part List

VXC PARTS LIST		
KIT NO.	KIT DESCRIPTION	ITEMS INCLUDED (QTY.)
66000799	WINDLASS HANDLE	1(1)
66100124	VX1 DRUM KIT	2 (1), 3 (1), 4 (1)
66100137	VX 12v M/GBOX ASSY	16 (1), 17 (1), 18 (1), 19 (1), 20 (1), 21 (2), 22 (2)
66100146	VXC BASE UNIT	7 (1), 9 (1)
66100147	VXC MANUAL Q KIT	1 (1), 10 (1), 11 (4), 12 (4), 13 (4)
66100148	VXC DRIVE KIT	5 (1), 6 (1), 14 (1), 15 (1)



9. Trouble shooting

9.1 Electric windlass

1. Anchor rode pays out independently while windlass is not in use.

This problem is a result of not securing the anchor rode combined with the gypsy drive cap being slack. Tighten the gypsy drive cap using the winch handle and always secure the anchor rode independently of the windlass when not in use.

2. Failure to operate or sluggish operation.

- The majority of these problems are electrical in nature. It is essential that the proper voltage be maintained. The proper voltage on a 12 Volt system is 13.5 Volts (24 Volt is 26.5 Volts), constant low voltage will damage motor.
- Ensure electrical cable size is large enough to handle the current draw and keep voltage drop within acceptable limits.
- Check control switches, connections, battery condition, isolator switch, fuse and motor for operation failure.

10. Warranty

Limited Warranty and Key Terms of Supply by Lewmar

Lewmar warrants that in normal private pleasure boat usage and with proper maintenance its products will conform with their specification for a period of three years from the date of purchase by the end user, subject to the conditions, limitations and exceptions listed below. Any product, which proves to be defective in normal usage during that three-year period, will be repaired or, at Lewmar's option, replaced by Lewmar.

A CONDITIONS AND LIMITATIONS

- i Lewmar's liability shall be limited to the repair or replacement of any parts of the product which are defective in materials or workmanship.
- ii Responsibility for the selection of products appropriate for the use intended by the Buyer shall rest solely with the Buyer and Lewmar accepts no responsibility for any such selection.
- iii Lewmar shall not be liable in any way for Product failure, or any resulting loss or damage that arises from:
 - a. use of a product in an application for which it was not designed or intended;
 - b. corrosion, ultra violet degradation or wear and tear;
 - c. a failure to service or maintain the product in accordance with Lewmar's recommendations;
 - d. faulty or deficient installation of the product (unless conducted by Lewmar);
 - e. any modification or alteration of the product;
 - f. conditions that exceed the product's performance specifications or safe working loads.
- g. Abuse
- iv Product subject to a warranty claim must be returned to the Lewmar outlet that supplied the product for examination unless otherwise approved by Lewmar in writing.
- v This warranty does not cover any incidental costs incurred for the investigation, removal, carriage, transport or installation of product.
- vi Service by anyone other than authorized Lewmar representatives shall void this warranty unless it accords with Lewmar guidelines and standards of workmanship.
- vii Lewmar's products are intended for use only in the marine environment. Buyers intending to use them for any other purpose should seek independent professional advice as to their suitability. Lewmar accepts no liability arising from such other use.

B EXCEPTIONS

Cover under this Warranty is limited to a period of one year from the date of purchase by the end user in the case of any of the following products or parts of products:

- Electric motors and associated electrical equipment
- Electronic controls
- Hydraulic pumps, valves and actuators
- Hatch & Portlight weather seals
- Products used in "Grand Prix" racing applications
- Products used in commercial or charter applications
- Anchor rode

C LIABILITY

- i Lewmar's liability under this warranty shall be to the exclusion of all other warranties or liabilities (to the extent permitted by law). In particular (but without limitation):

a. Lewmar shall not be liable for:

- Any loss of anticipated turnover or profit or indirect, consequential or economic loss;
- Damages, costs or expenses payable to any third party;
- Any damage to yachts or equipment;
- Death or personal Injury (unless caused by Lewmar's negligence).

Some states and countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you

- b. Lewmar grants no other warranties regarding the fitness for purpose, use, nature or satisfactory quality of the products.

- ii Where applicable law does not permit a statutory or implied warranty to be excluded, then such warranty, if permitted by that state or country's law, shall be limited to a period of one year from the date of purchase by the end user. Some states and countries do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

D PROCEDURE

Notice of a claim for service under this warranty shall be made promptly and in writing by the end user to the Lewmar outlet that supplied the product or to Lewmar Limited at Southmoor Lane, Havant, Hampshire PO9 1JJ, England.

E SEVERANCE CLAUSE

If any clause of this warranty is held by any court or other competent authority to be invalid or unenforceable in whole or in part, the validity of the remaining clauses of this warranty and the remainder of the clause in question shall not be affected.

F OTHER RIGHTS

This warranty gives you specific legal rights, and you may also have other legal rights, which vary from state to state and country to country.

In the case of European States a Consumer customer (as defined nationally) has legal rights under the applicable national law governing the sale of Consumer Goods; this Warranty does not affect those rights.

G LAW

This warranty shall be governed by and read in accordance with the laws of England or the state or country in which the first end user is domiciled at the time of purchase of the product.

H DISPUTES

Any dispute arising under this warranty may, at the option of the end-user, be referred to alternative dispute resolution under the rules of the British Marine Federation or to the Courts of the State whose law shall govern the warranty or to the Courts of England and Wales.

The British Marine Federation may be contacted at Marine House, Thorpe Lea Road, Egham, England, TW20 8BF

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Follow proper safety practices. If in doubt, consult a professional RV technician.