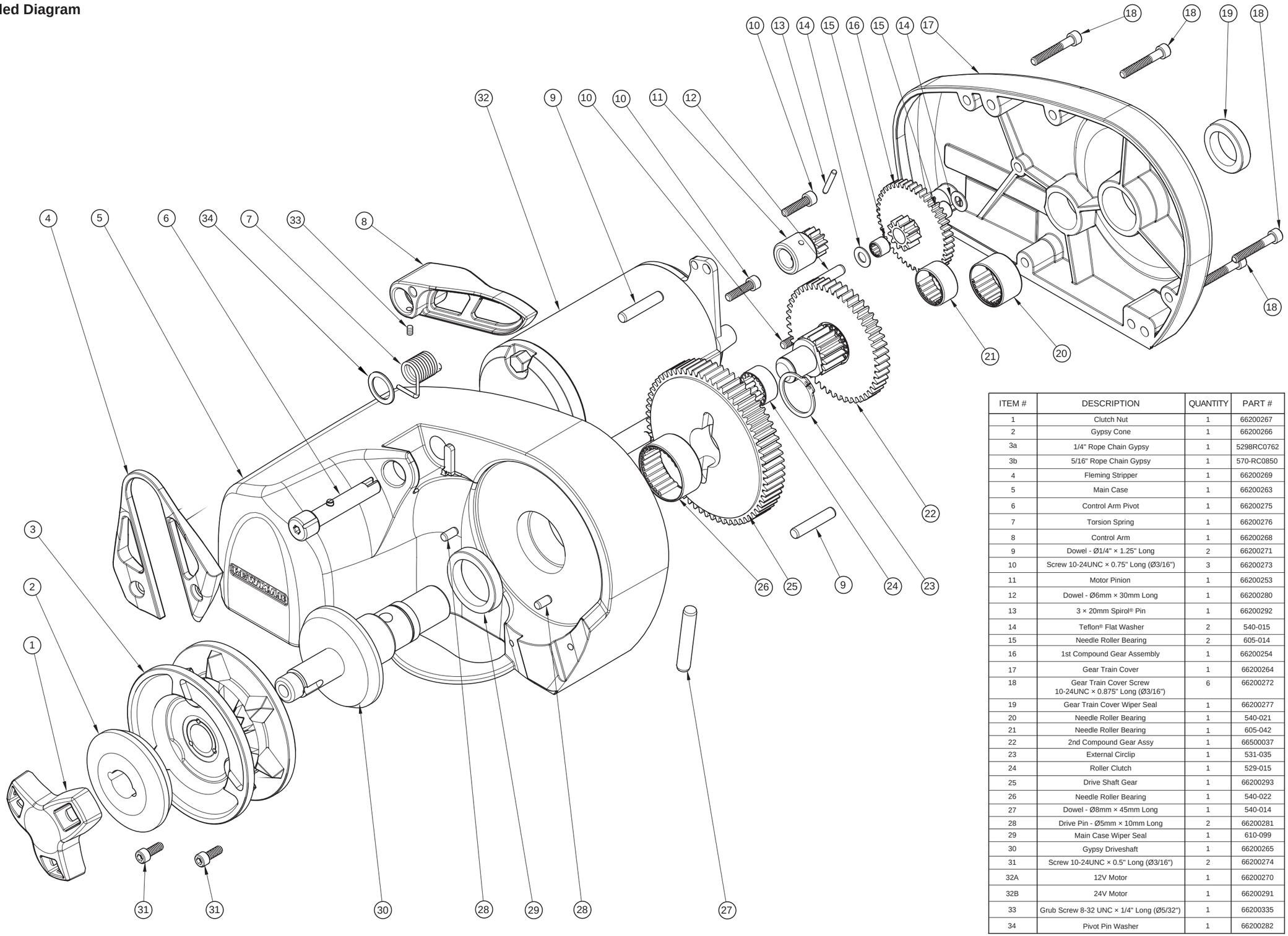
Pro-Series Windlass

Owner's Installation, Operation & Service Manual

Contents

This Manual forms part of the Product and MUST BE RETAINED along with, OR incorporated into, the Owner's Manual for the vessel to which the Windlass is fitted.

1. Exploded Diagram



ITEM #	DESCRIPTION	QUANTITY	PART #
1	Clutch Nut	1	66200267
2	Gypsy Cone	1	66200266
3a	1/4" Rope Chain Gypsy	1	5298RC0762
3b	5/16" Rope Chain Gypsy	1	570-RC0850
4	Fleming Stripper	1	66200269
5	Main Case	1	66200263
6	Control Arm Pivot	1	66200275
7	Torsion Spring	1	66200276
8	Control Arm	1	66200268
9	Dowel - Ø1/4" × 1.25" Long	2	66200271
10	Screw 10-24UNC × 0.75" Long (Ø3/16")	3	66200273
11	Motor Pinion	1	66200253
12	Dowel - Ø6mm × 30mm Long	1	66200280
13	3 × 20mm Spirol® Pin	1	66200292
14	Teflon® Flat Washer	2	540-015
15	Needle Roller Bearing	2	605-014
16	1st Compound Gear Assembly	1	66200254
17	Gear Train Cover	1	66200264
18	Gear Train Cover Screw 10-24UNC × 0.875" Long (Ø3/16")	6	66200272
19	Gear Train Cover Wiper Seal	1	66200277
20	Needle Roller Bearing	1	540-021
21	Needle Roller Bearing	1	605-042
22	2nd Compound Gear Assy	1	66500037
23	External Circlip	1	531-035
24	Roller Clutch	1	529-015
25	Drive Shaft Gear	1	66200293
26	Needle Roller Bearing	1	540-022
27	Dowel - Ø8mm × 45mm Long	1	540-014
28	Drive Pin - Ø5mm × 10mm Long	2	66200281
29	Main Case Wiper Seal	1	610-099
30	Gypsy Driveshaft	1	66200265
31	Screw 10-24UNC × 0.5" Long (Ø3/16")	2	66200274
32A	12V Motor	1	66200270
32B	24V Motor	1	66200291
33	Grub Screw 8-32 UNC × 1/4" Long (Ø5/32")	1	66200335
34	Pivot Pin Washer	1	66200282

WELCOME

Congratulations on becoming a proud owner of a LEWMAR® Windlass. You can take confidence in being among men and women who have depended on our products for over 50 years. LEWMAR® is known throughout the World as *Manufacturers of Quality Marine Equipment.* Our factory manufactured anchoring components, anchor rodes, bow rollers and anchors, are specifically engineered to compliment one another. To ensure that we serve you in the best manner possible, we offer a complete range of anchoring systems to meet all of your needs. Please take the time to register the purchase of your new windlass. This can be done on-line at **www.lewmar.com/pro-series/register** or by posting the registration card supplied.

For Your Safety
Read Before Installing and Operating Your Windlass

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

At all times it is the responsibility of the boat user 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 falling in the water while under way can cause considerable damage. An anchor windlass 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 windlass may only be used infrequently, the risk of corrosion is further increased. It is essential that the windlass is regularly examined, operated and given any necessary maintenance.

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2. PLANNING the INSTALLATION

2.1 Gypsy Suitability

Gypsies fitted to the Pro-Series range of windlasses are ideally suited to handling our factory made Rope/Chain combination rodes, which consist of rope spliced to a chain tail.

Model	Gypsy	Chain	Rope
700	RC0762	¼" High Test G-4 ISO (7 mm)	½" 3 strand medium lay or ½" 8 plait nylon
1000	RC0850	5/16" BBB 8MM	9/16" 3 strand medium lay or 5/8" 8 plait nylon

Ropes used must be windlass grade, medium lay nylon. Ropes from different manufacturers have wide variations in stretch and consistency in diameter. Therefore, rope and chain from other manufacturers may require some experimentation to determine the optimum size. Should you have difficulty in matching a gypsy to your chain please consult your local agent or our international network of Lewmar distributors worldwide.

2.2 Package Contents

Windlass
Intelligent Mounting Studs, Washers and Nuts
All-in-one Installation Wrench & Clutch Lever
Base Gasket Seal
Safety Instructions
Mounting Template
Instruction Booklet
Warranty Registration Card
Breaker/Isolator
Control Switch (Pro-Series 700 only)
Guarded Rocker Switch (Pro-Series 1000 only)
Contactor (Pro-Series 1000 only)

2.3 Additional Requirements

Each installation requires:

WINDLASS INSTALLATION

a. The following tools:
   3/8" (10 mm). Drill
   3" (75 mm). Hole Saw
b. An appropriate marine sealant

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

2.4 Electric Cable Selection

To achieve the best performance and safeguard your electrical system it is essential that any electrical windlass be fitted with sufficiently large diameter cable to cope with the current draw imposed upon it and to keep the voltage drop within acceptable limits. In any circumstance voltage drop due entirely to cable resistance should not exceed 10%.

The following table gives recommended cable sizes. The recommendations are based on total length of cable required, from the battery, following the route of the cables.

Total length of cable run is from the battery to the windlass, and from the windlass back to the battery.

DO NOT confuse cable Length with the length of the vessel!

Pro-Series 700 Cable Selection

Volts	Cable Length (ft.)	Cable Length (m)	Size (AWG)	Size (mm^2)
12	0-40	0-12	8	10
	41-60	12.5-18	6	10
	61-80	18.5-24	6	16

Pro-Series 1000 Cable Selection

Volts	Cable Length (ft.)	Cable Length (m)	Size (AWG)	Size (mm^2)
24	0-60	0-18	10	6
	61-100	18.5-30.5	8	10
12	0-50	0-15	4	16
	51-70	15.5-21	4	25
	71-100	21.5-30.5	2	35

In Multi Station installations 14 AWG wire (1.5 mm^2 cross sectional area, 21/0.30 PVC covered) is used to connect the switches to the reversing control box.

3. ACCESSORIES

Use only genuine Lewmar parts and accessories to ensure top performance and eliminate the risk of voiding your warranty. For replacement parts, please see page 3 or visit your dealer or the Lewmar web site.

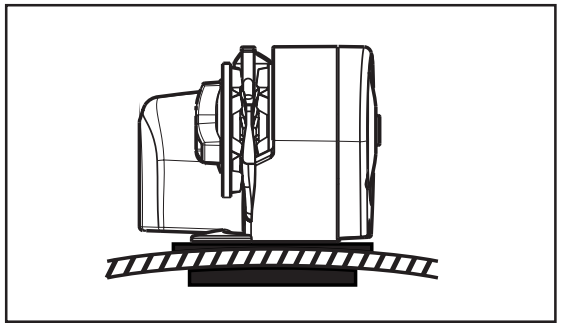
4. SPECIFICATION

Typical Working Figures

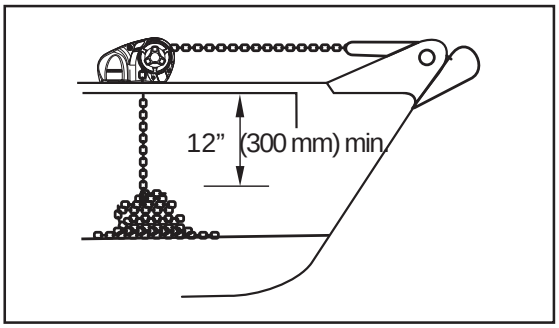
Pro-Series 700	**Pro-Series 1000**
Maximum Pull 700 lb (320 kg)	Maximum Pull 1000 lb (454 kg)
Maximum Line Speed 105 ft/min (32 m/min)	Maximum Line Speed 105 ft/min (32 m/min) 12 V 115 ft/min (35 m/min) 24 V
Typical Working Load 175 lb (80 kg)	Typical Working Load 250 lb (114 kg)
Normal Line Speed 88 ft/min (27 m/min)	Normal Line Speed 88 ft/min (27 m/min) 12 V 98 ft/min (30 m/min) 24 V
Boat size up to 35 ft (10.7 m)	Boat Size up to 45 ft (13.7 m)

5. INSTALLATION

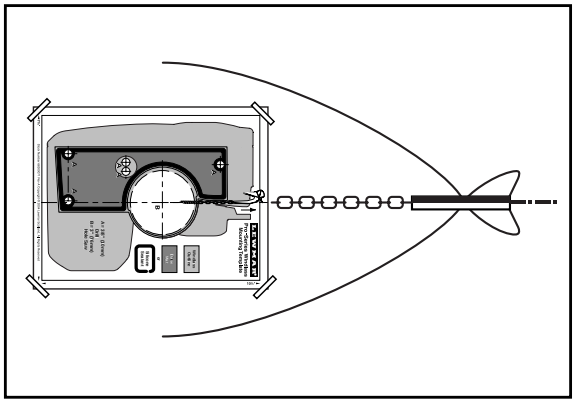
5.1 Fitting the Windlass to the Deck



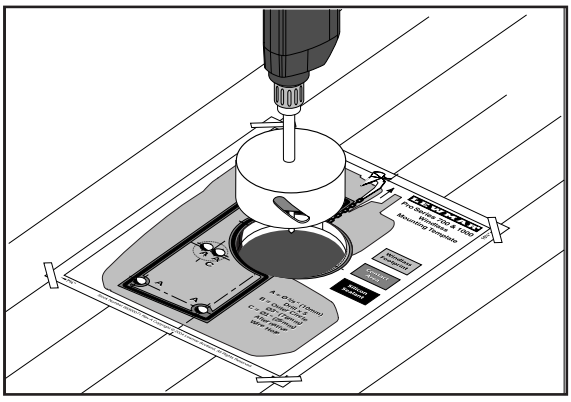
If the deck is not flat, a suitable mounting pad may be required to take up camber or sheer. Decks that are thin, or of foam or balsa laminate construction, will require reinforcement in order to spread the loads that will be applied to the deck while the windlass is in use. The standard 5/16" threaded mounting studs supplied suit deck and packing thickness of up to 3" (76 mm). These are adequate for most installations.



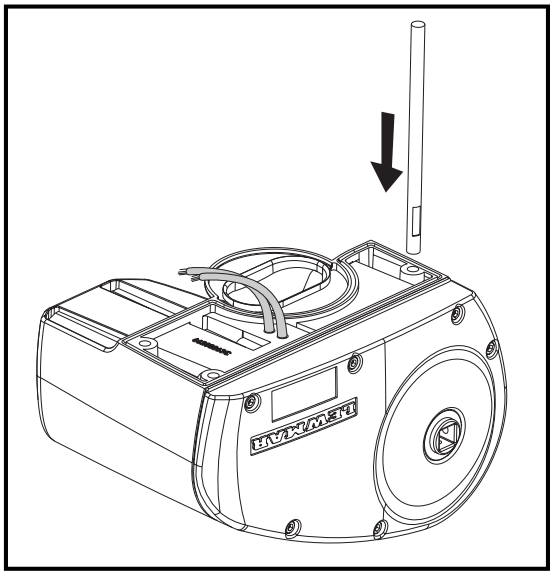
Place the windlass on the deck and decide upon a position for it with reference to the vessel's bow roller and the chain locker below. Rode lead from the roller should ideally be fed horizontally back to the top of the gypsy and along its centerline. There must be sufficient vertical fall for the chain or rope, even with a full locker, to draw the rode from the gypsy when hauling in.



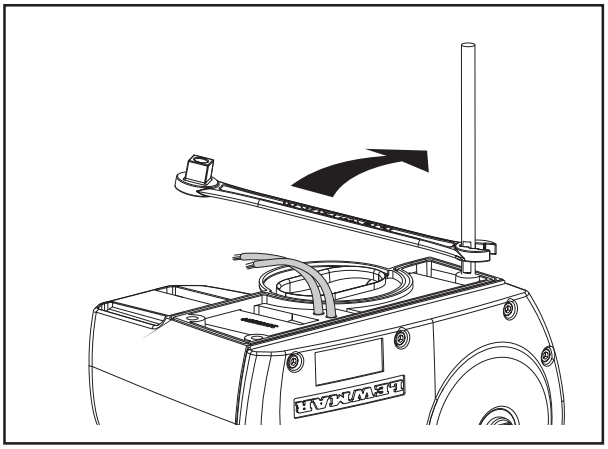
Place the mounting template on the deck or mounting pad in the desired position for the windlass and hold it in place using adhesive tape.



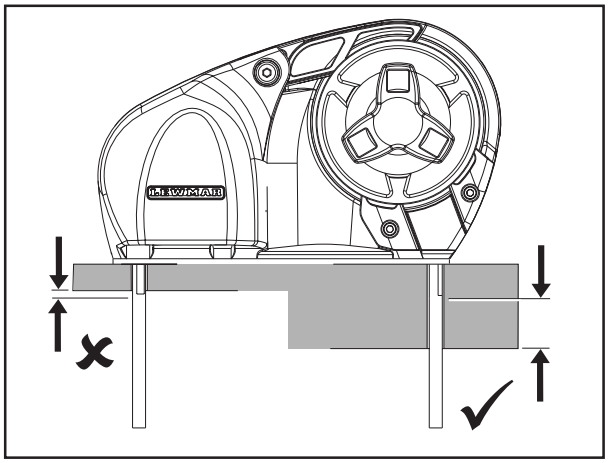
Using a 3/8" (10 mm) diameter drill, make the three holes for the mounting studs and two for the motor wires. With a 3" (76 mm) diameter hole saw, make the hole for the rode to pass through. When all the holes have been made, remove the template. To help avoid water absorption by the deck, apply an appropriate marine sealant to the freshly cut hole edges.



Fully screw the three mounting studs into the base of the windlass. This can be done, quite simply, using the multi-tool wrench supplied. Screw the studs into the base finger tight, with the flats towards the base as shown.



Next, using the wrench on the flats, tighten the studs until they bottom out in their holes. Do this to each of the studs in turn.



Place the base mat in position on the deck, optionally, apply a suitable sealant (DO NOT use a permanent adhesive/sealant, e.g., 5200) to the base of the windlass, any mounting pad and around the studs. **DO NOT get CAULK or SEALANT under the GEARTRAIN COVER (19)** as it makes it difficult to remove. Secure the windlass firmly to the deck from below, using the nuts and washers supplied.
As a rule of thumb, if the flats on the studs are visible below deck, the deck and/or any packing is likely to be too thin to offer adequate support when the windlass is under load.
Notes: If using silicone or other rubbery type sealant, it is advisable to allow curing of the sealant before final tightening of the mounting nuts. Trim the studs back to ¼" (6 mm) below the fully tightened nuts.

5.2 Wiring

Plan the installation to suit the controls and give the operator a full view of the windlass. The wiring system should be of the two cable fully insulated return 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. If necessary add a grounding strap between the mounting studs and an earthing point.

In a Pro-Series 1000 installation, the contactor must be sited in a dry location. **DO NOT install the contactor in the anchor locker.** If a contactor is installed in an anchor locker it is exposed to harsh conditions it is not designed to withstand. Furthermore this type of installation will void your warranty.

Overload protection, in the form of the circuit breaker/isolator supplied, must be built into the windlass wiring circuit. This protects the wiring and prevents undue damage to the windlass motor, in the event of its being stalled by an excessive load in service.

It is advisable to site the circuit breaker/isolator in a dry, readily accessible place. The Breaker/ Isolator supplied must be manually reset should an overload occur that causes it to trip to the **off** position.
Note: Crimp terminals should be used on all wire ends wherever possible for good electrical contacts.

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.

5.3 Control Switch Installation

Follow the mounting instructions supplied with the switch. Remember, in a Multi Station installation all switches must be wired in a parallel circuit.

5.4 Electromagnetic Compatibility

It is essential that this product does not cause any electromagnetic disturbance to any other electrical or electronic equipment installed in the vessel. This will be achieved if the windlass is connected to the same battery as the vessel's starter motor and not to the service battery to which other equipment is connected. In addition, the run of the wiring, from the battery to the windlass, should be kept as far apart from the other wiring on the vessel as possible. For instance, if the main wiring loom is to starboard, fit the windlass wiring to port. It should be noted that there is no evidence to indicate that windlass installations do cause magnetic interference but the installer is advised to carry out checks when the installation is complete.

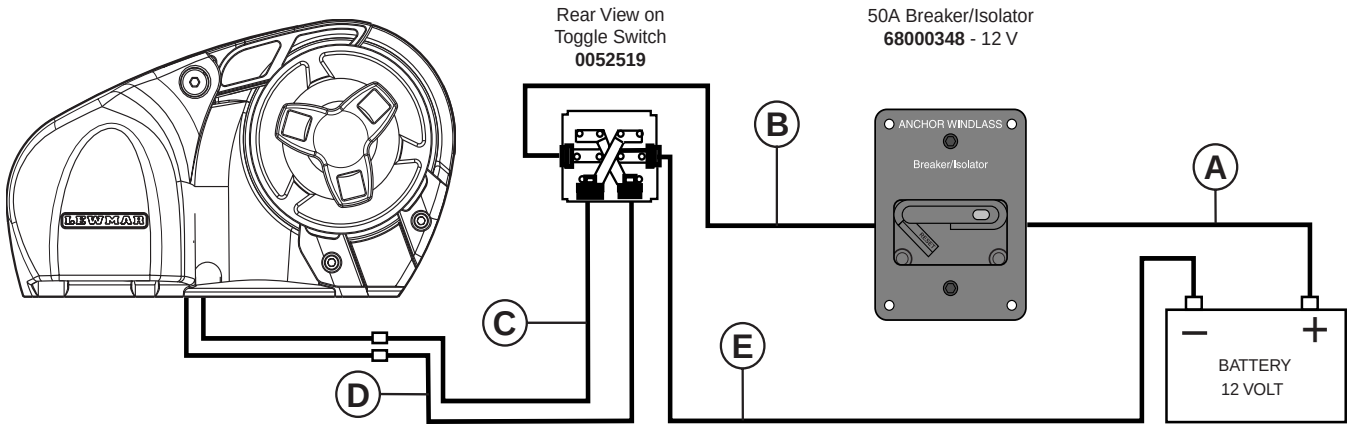
Choice of cable thickness depends on total cable length;

A + **B** + **C** + **D** + **E** =

Battery to windlass, windlass to battery.

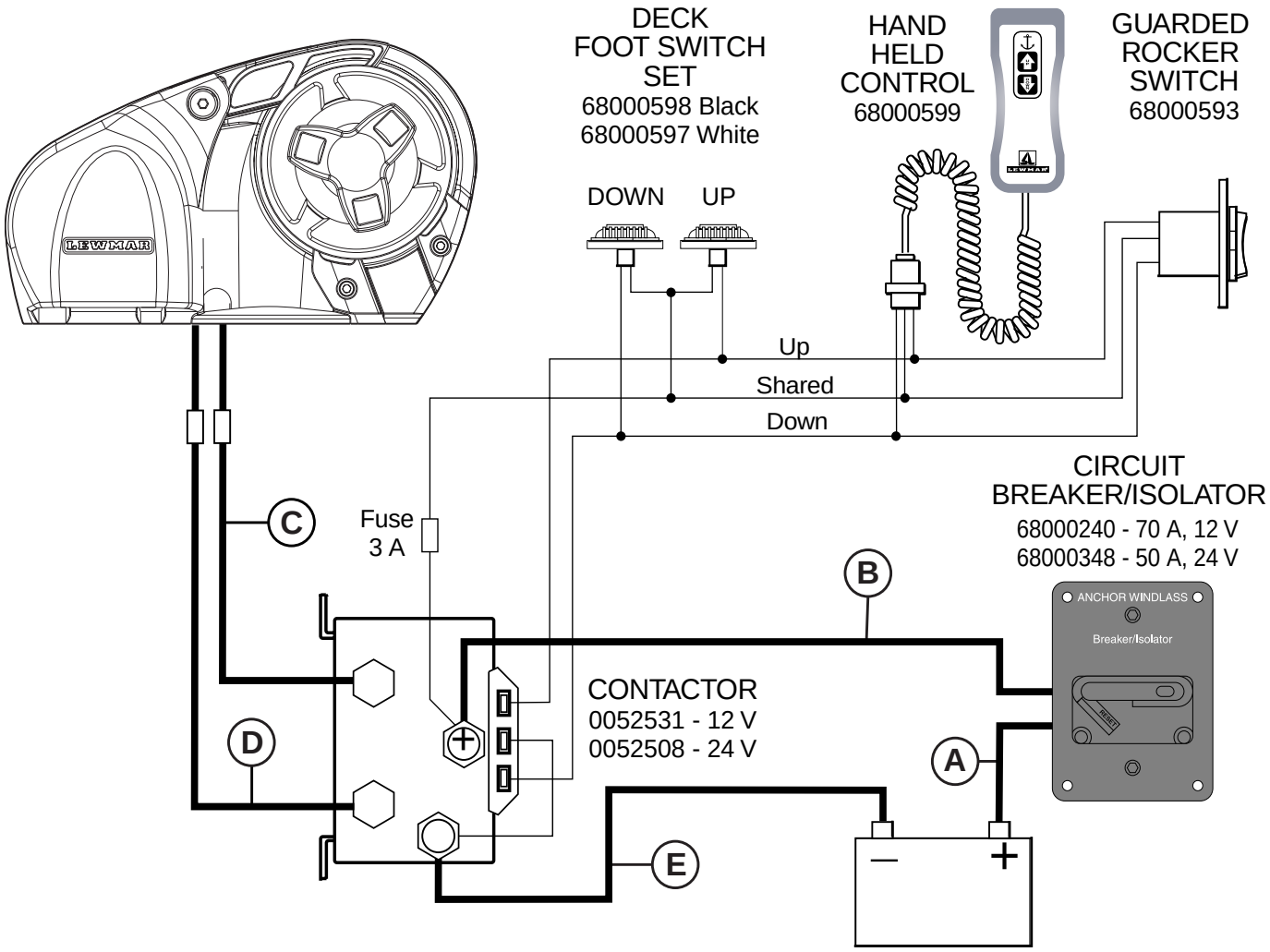
Model	Motor	Breaker / Isolator	Contactor
Pro-Series 700	12 V	50 A (68000348)	-
Pro-Series 1000	12 V	70 A (68000240)	0052531
Pro-Series 1000	24 V	50 A (68000348)	0052508

Pro-Series 700 - 12 V



	A + B + C + D + E =		
	up to 40 ft (12 m)	41 to 60 ft (12.5 to 18 m)	61 to 80 ft (18.5 to 24 m)
Use	8 AWG (10 mm²)	6 AWG (10 mm²)	6 AWG (16 mm²)

Pro-Series 1000 - 12 V & 24 V



	A + B + C + D + E =				
12 V	---	---	up to 50 ft (15 m)	51 to 70 ft (15.5 to 21 m)	71 to 100 ft (21.5 to 30.5 m)
24 V	up to 60 ft (18 m)	61 to 100 ft (18.5 to 30.5 m)	---	---	---
Use	10 AWG (6 mm²)	8 AWG (10 mm²)	4 AWG (16 mm²)	4 AWG (25 mm²)	2 AWG (35 mm²)

6. OPERATING INSTRUCTIONS

As a prudent act of seamanship, anchor recovery operations require the undivided attention of skipper and crew to prevent personal injury or damage to the vessel.

In a typical anchor recovery situation, the windlass will pass through a number of operational phases.

6.1 Safety First

To avoid personal injuries ensure that limbs, fingers and clothing are kept clear of the anchor rode and windlass during operation. Always ensure that there are no swimmers or divers nearby when dropping your anchor.

6.2 Use of Clutch

To tighten the clutch - using the Installation Tool & Clutch Lever supplied, rotate the clutch nut (**1**) clockwise, this will grip the gypsy, effectively locking it to the windlass geartrain.
To slacken the clutch - turn the nut anti-clockwise, this will free the gypsy allowing it to turn independently of the windlass geartrain.
Always remove the handle after use.

6.3 Letting Go Under Gravity

Insert the clutch lever into the clutch nut (**1**) and turn it clockwise to ensure that the clutch is tight. Release any independent anchor locks. If it is safe to do so, pull back on the clutch lever until the anchor and rode begin to pay out. Control the rate of decent of the anchor by pushing the clutch lever forwards. When sufficient rode has been paid out, fully tighten the clutch nut once again.

6.4 Letting Go Under Power

Release any independent anchor locks.
If it is safe to do so, let go under power by operating a **down** control. Release the control when sufficient rode has been paid out.

6.5 Lying to Anchor Safely

Vessels at anchor will snub on the rode and this can cause slippage or apply excessive loads to the windlass.
For maximum safety and to prevent damage, the windlass must not be left to take the entire force from the anchor rode while at anchor. The rode should be made fast directly to a bollard, sampson post or cleat.

6.6 Hauling In

Untie the bridle or replace the rode in the gypsy. If it is safe to do so, operate an 'Up' control. Having retrieved the anchor, ensure it is independently secured to prevent its accidental release.

6.7 Manual Recovery

Insert a standard ½" drive ratchet into the socket on the end of the driveshaft (30). Using the ratchet, turn the driveshaft clockwise.

6.8 Operating Tips

When anchoring, it is best to power the rode out, allowing the vessel to take up stern way before full scope is let out. This helps prevent the rode from becoming tangled on top of your anchor on the seabed.

To aid anchor recovery, we recommend that the vessel's engine be used to assist by moving the vessel towards the anchor. We do not recommend that the vessel be motored over and beyond the anchor, as this can cause the rode to damage your topsides.

As the anchor approaches the stemhead, the last few feet of rode should be inched in by judicious use of controls to avoid damage to the vessel.

Having retrieved the anchor, ensure it is independently secured to prevent accidental release. It is strongly advised to use an anchor safety strap (Part No. **66840011**), or a chain stopper.

When mooring stern to, at a suitable distance from the jetty, deploy the anchor to prevent the bow from swinging. Gently pay out the rode under the influence of the stern way of the vessel as it approaches the jetty. Make fast your vessel with warps from the stern.

7. JOINING ROPE TO CHAIN

When splicing rope to chain, select a length of chain that will avoid having the splice positioned

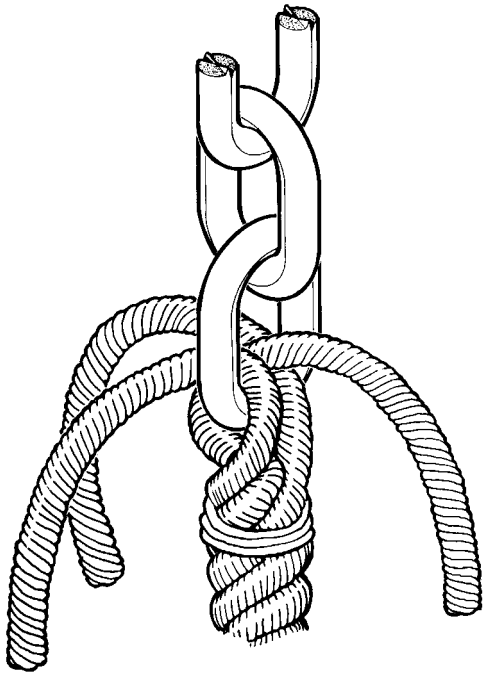
in the gypsy when the anchor comes over the stemhead. Furthermore, ensure that the splice is no tighter than the rope. A hard splice is not desired.

With whipping twine or similar, seize your rope 8” from the rope’s end and unlay the strands.

Pass one strand through the chain link from one side and the other two strands from the opposite side.

Remove seizing and complete a back splice in the normal manner for four full tucks.

With a hot knife pare down the three strands by



one half of their diameter and continue with two further tucks.

With a hot knife, carefully melt the ends back into the line. Because of wide variations in rope type and construction some experimentation may be required.

Whip the line with permanent whipping at the beginning of the taper.

The above method of joining is designed to minimize chafe between the rope and chain but as a matter of prudent seamanship the splice should be checked regularly and remade if there is any evidence of wear.

8. MAINTENANCE

General Recommendations

- Isolate the windlass electrically, before carrying out any maintenance work.
- After the first two or three anchor recoveries, check the mounting nuts to ensure that the windlass is still fastened tightly to your deck, as it should now be **bedded-in**.
- Regularly wash down the exterior of your windlass with fresh water.
- Examine all electrical connections for possible corrosion, clean and lightly grease as necessary.
- Anchor rode splice should be checked regularly and remade if there is any evidence of wear.
- The Gypsy should be examined on a regular basis, because it is a high wear item. The Gypsy is designed for short scopes of chain and will last longer if properly used.

9. DISMANTLING PROCEDURES

9.1 Gypsy Replacement

Remove the Clutch Nut (**1**), anti-clockwise using the clutch operating lever. Withdraw the Gypsy Cone (**2**), carefully set aside the two Stainless Steel Drive Pins (**28**). Pull the Control Arm (**8**) into the upright position. Remove the Screws (**31**) that retain the Stripper (**4**) using a $^{5}/_{32}$" (4 mm) Allen Wrench. Remove the Gypsy Assembly. Remove the stripper from the Gypsy. To replace the Gypsy, reverse the above procedure.

9.2 Control Arm Replacement

To remove the Control Arm (**8**) rotate it to the vertical position. Unscrew the Grub Screw (**33**) using a $^{5}/_{64}$" (2 mm) Allen Wrench by $^{1}/_{8}$". Allow the Control Arm to return to its normal position. Withdraw the Control Arm Pivot (**6**) using a $^{5}/_{32}$" (4 mm) Allen Wrench. The Allen Wrench should be used initially to push the Control Arm Pivot in towards the centerline of the windlass. On doing this the Torsion Spring (**7**) will tend to turn the Control Arm Pivot and Allen wrench clockwise. Allow it to travel clockwise as far as it can and, using some side force on the wrench, withdraw the Pivot. Remove the Control Arm, Pivot Pin

Washer (**34**) and Torsion Spring from the maincase. Reverse this procedure to replace the Control Arm. Place the Torsion Spring in the hole, ensuring that the outer tang is aligned parallel to the ridge on the maincase and the dog leg is parallel to the deck. Place the Pivot Pin Washer in board of the flange and offer up the Control Arm such that it is pointing at the two o'clock position. Pick up the Pivot Pin, align the groove on its head also to the two o'clock position. Insert it through the hole on the maincase and engage the spring with its slot. Holding the Control Arm in position, use the Allen wrench to push the Pivot Pin in. Then turn it anti-clockwise as far as it will go. Using side force again, pull the wrench out until the head of the Pivot Pin sits slightly proud of the case. Rotate the control arm to the vertical and, applying a spot of **Loctite® 2701 Threadlock**, fully retighten the Grub Screw.

9.3 Gypsy Drive Shaft Replacement & Lubrication Service

Note: Lubrication and internal parts will not fall out when the windlass is disassembled.
The geartrain and its bearings have been lubricated for you with **SFG 100** grease and should require no regular attention. SFG is a white synthetic grease containing PTFE. Use grease of a similar specification throughout. It is recommended that the external Drive Shaft components be stripped, cleaned and re-greased at least annually. To do this, the Gypsy (**3**) and Stripper (**4**) should be removed as detailed above. Inspect the Main Case Wiper Seal (**29**) for signs of wear. If the seal is found to be unserviceable, the Gypsy Drive Shaft (**30**) will have to be withdrawn and seal replaced.
Remove the Geartrain Cover (**17**) using a $^{5}/_{32}$" (4 mm) Allen Wrench. **Do not use a screwdriver or sharp edged tool to pry the Geartrain Cover open. If there is sealant present, use a razor blade to cut through it.** Withdraw the 1st Compound Gear Assembly (**16**), taking care not to lose the Teflon™ Flat Washers (**14**). Remove the 2nd Compound Gear Assembly (**22**), NOTE rotate this gear assembly as you pull on it, eventually this action will orientate a flat on its washer and allow the assembly to pass the Drive Shaft Gear (**25**). Remove the External Circlip (**23**) and withdraw the Drive Shaft Gear (**25**). Gently tap the Drive Roller (**27**) through the Drive Shaft. The Drive Shaft can now be withdrawn with or without the Gypsy Assembly attached, provided the Stripper is no longer attached to the Case. Remove the Seal and replace it with a new one. Clean the stripped down components in kerosene, dry them and inspect them for wear. To reassemble, reverse the above procedure. Rebuild the windlass applying generous amounts of grease.

9.4 Electric Motor Replacement

Isolate the windlass electrically!
Disconnect the Motor Cables from the vessel's wiring loom. Remove the Gear Train Cover (**17**) using a $^{5}/_{32}$" (4 mm) Allen Wrench as detailed above. Remove the 1st Compound gear Assembly (**16**) and Teflon™ Flat Washers (**14**). Using a $^{5}/_{32}$" (4 mm) Allen Wrench remove the Motor Screws (**10**). Withdraw the motor from the Main Case. Note that silicone is used to seal the holes in the case where the motor wires pass through. Be careful not to strip the insulation from the Motor Wires when pulling them through the Main Case. Replace the Motor by reversing the above procedure, using fresh silicone to seal the wire holes in the case. Use **Loctite® 2701 Threadlock** on the Motor Screws.

10. TROUBLESHOOTING

10.1 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 Clutch Nut (**1**) being slack. Tighten the clutch nut using the tool provided and always secure the anchor rode independently of the windlass whenever it is not being deployed or recovered.

10.2 Electrical Troubleshooting

As with most electrical marine equipment the majority of problems that arise are electrical in nature. Therefore it is essential that the proper voltage be maintained. The proper voltage on a 12 volt system is 13.5 volts. (Constant low voltage will destroy the motor). Ensure that electrical cable size is large enough to handle the current draw imposed upon it and to keep the voltage drop within acceptable limits. In any circumstance voltage drop due entirely to cable resistance should not exceed 10%.

Follow the charts to troubleshoot the problem.

Failure to Operate (Pro-Series 700 only)

Troubleshooting Chart: Reversing Toggle Control Switch (#0052519)

Is there voltage at the input terminal (positive) to the control switch? **Yes ⇓ No ⇒**	If no voltage is present the battery isolation switch is **off**, the breaker is tripped or a fuse has blown. The battery may also have be dead or disconnected.
Check voltage at the output terminals of the control switch with the switch on forward then reverse. Is there voltage at either output terminal for forward then reverse? **Yes ⇓ No ⇒**	Control switch is defective.
Replace the motor.	

Sluggish Operation

Troubleshooting Chart

Is the windlass overloaded? **Yes ⇓ No ⇒**	Ease the load and ensure the battery is well charged.
Check the voltage across the motor leads with the windlass on. (Proper voltage is 13.5 volts. Constant low voltage will destroy the motor). Is the voltage low? (Below 11.0 volts on a 12 volt system). **Yes ⇓ No ⇒**	There is a severe voltage drop in the circuit. Check for undersized cables, poor connections or corroded connections. Also check for resistance across the battery isolation switch or solenoid. (Feel them to see if they are heating up).
Is the voltage correct? (Above 11.0 volts and anchor is not fouled). **Yes ⇒**	The motor is defective. Replace the motor.

Troubleshooting Chart: Electric Windlass - Failure to Operate

Is there voltage at the input terminals to the contactor and switch(es)? **Yes ⇓ No ⇒**	Check the circuit breaker/isolator switch and any fuses.
Operate a switch. Is there voltage at the positive switch terminal on the solenoid? **Yes ⇓ No ⇒**	The switch (or its wiring), is defective.
Keep the switch activated. Is there voltage at the main output terminal on the contactor? **Yes ⇓ No ⇒**	Check the contactor coil ground circuit. If okay, replace the contactor.
Check the voltage at the motor. If voltage is present, the motor is defective. If you have any questions call Lewmar Inc.	

11. WARRANTY

Lewmar warrants the Pro-Series windlass in normal usage to be free of defects in materials and workmanship for a period of five years from date of purchase by the original purchaser, subject to the conditions, limitations and exceptions listed below. Any part, which proves to be defective in normal usage during that five-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 repair or replacement of the goods or parts defective in materials or workmanship.

ii Determination of the suitability of the material for the use contemplated by the buyer is the sole responsibility of the buyer and Lewmar shall have no responsibility in connection with such suitability.

iii Lewmar shall not be liable in any way for:
- a Failures, loss or damage due to use of products in applications for which they are not intended.
- b Failures, loss or damage due to corrosion, ultra violet degradation, wear and tear or improper installation.
- c Failures, loss or damage due to incorrect maintenance.
- d Failures, loss or damage due to conditions that exceed the product's performance specifications.

iv Product subject to warranty claim must be returned to Lewmar for examination unless otherwise agreed by Lewmar in writing.

v Lewmar shall not be responsible for shipping charges nor installation labor associated with any warranty claim.

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 for marine purposes. Buyers intending to use them for any other purpose should seek advice from Lewmar, and Lewmar shall be under no liability arising from use, which Lewmar has not approved.

B EXCEPTIONS

Warranty is limited to a period of one year from the date of purchase in the case of the following:
- Bow thrusters
- Electric motors and electrical equipment
- Electronic controls
- Hydraulic pumps, valves and actuators
- Weather seals
- Products used in "Grand Prix" racing applications

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 indirect or consequential loss including (without limitation) any loss of anticipated profits, damage to reputation or goodwill, loss of expected future business, damages, costs or expenses payable to any third party or any other indirect losses.
- Any damage to yachts or equipment.
- Death or personal Injury (unless caused by Lewmar's negligence).
- b Lewmar grants no warranties regarding the fitness for purpose, use, nature or satisfactory quality of the goods.

ii Where the laws of the country do not permit a warranty to be excluded, then such warranty, if permitted by that country's law, shall be limited to a period of one year.

D SEVERANCE CLAUSE

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

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

Where the products are sold in the UK under a consumer transaction, the buyer's statutory rights are not affected Lewmar Limited reserves the right to alter design and specification without prior notice.

TERMS AND CONDITIONS OF SALE

All sales are subject to Lewmar's General Terms and Conditions of Sale, which can be obtained from Lewmar Limited Head Office in Havant. The foregoing warranty and the following General Conditions of Sale form part only of, but also supplement, Lewmar's General Terms and Conditions of Sale. In the event of any conflict between the foregoing warranty and the following General Conditions of Sale on the one hand and Lewmar's full General Terms and Conditions of Sale on the other, Lewmar's full General Terms and Conditions of Sale shall prevail.

PRICES

All prices are subject to change without prior notice due to the fluctuating costs of materials and wages. Prices are ex-warehouse and are those ruling at the date of despatch and exclude VAT, which will be charged as appropriate.

QUOTATIONS

Any quotation is open for acceptance for a period of 30 days from the date of quotation. Quotations can only be regarded as firm when they are put in writing. (Verbal estimates are made purely for indicative purposes.)

RETURN OF GOODS

RETURNED GOODS WILL NOT BE ACCEPTED NOR CREDIT ISSUED UNLESS THE RETURN IS AUTHORIZED BY LEWMAR IN WRITING.

An authorization will be issued on approval of return.

All carriage charges on returned goods must be prepaid.

All returned goods accepted and subsequently returned to our stock will be subject to a 15% restocking charge.

Items returned in a damaged condition will not be credited at full value.

Custom fabricated items or parts will not be accepted for return.

CATALOGS

Sales literature and product manuals are available from Lewmar on request. These items can also be ordered from our Web site.

AVAILABILITY

Goods can be obtained from your local boat builder or chandler. We will be pleased to inform you of your nearest supplier.

The models described in this document are subject to a policy of continual improvement. LEWMAR® reserve the right to alter specifications and recommendations without notice. For the latest information regarding any aspect of the windlass please contact our web site, www.lewmar.com, your local agent or: -

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