

FREEDOM

AUTOMATIC ROPE/CHAIN ANCHOR WINCH

**FREEDOM 800
FOR 5/16" ACCO HIGH TEST
CHAIN SPLICED TO 5/8"
NYLON LINE**

****CAUTION**** NO WINDLASS WILL
PUSH SLACK CHAIN. MAKE SURE
ANCHOR IS SELF-LAUNCHING TYPE
OR IS DEPLOYED OFF BOW ROLLER
BEFORE POWERING DOWN.

MAXWELL

CAPSTANS

WINCHES

WINDLASSES

FREEDOM

AUTOMATIC ROPE/CHAIN ANCHOR WINCH

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Manual Printed

17 NOV 1999

Introduction

Congratulations on your purchase of a Maxwell Freedom Rope/Chain Winch. Its innovative and sleek design has been engineered to provide superior performance.

Please read the following information to enable you to correctly install, operate, and maintain your winch to ensure continued trouble free operation.

Failure to adhere to the correct application, installation, operation or to carry out the maintenance service as described herein, could jeopardise your safety and invalidate the warranty.

Rope / Chain Selection Guide

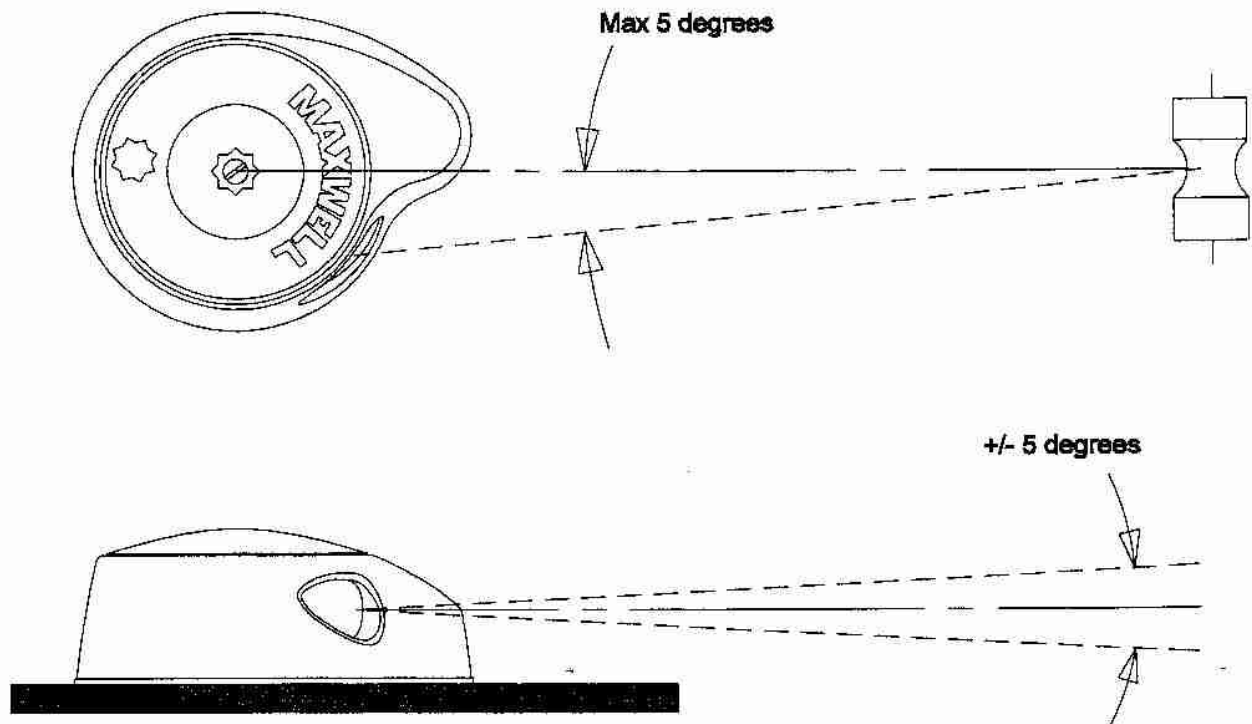
Chain Type	Rope Type					
	12mm 3 Strand Rope	1/2" 3 Strand Rope	1/2" 8 Plait Rope	14mm (9/16") 3 Strand Rope	16mm (5/8") 8 Plait Rope	16mm (5/8") 3 Strand Rope
1/4" Acco G40 SL 7mm MacDuff	Freedom 500	Freedom 500	Freedom 500	✗	✗	✗
6mm PWB Grade L 6mm Bradlink SGC	Freedom 500 M	Freedom 500 M	Freedom 500 M	✗	✗	✗
6mm Serafini Grade L 6mm DIN 568	Freedom 500 MA	Freedom 500 MA	Freedom 500 MA	✗	✗	✗
5/16" Acco G40 SL 5/16" Weisenfels	✗	Freedom 800 *	Freedom 800 *	Freedom 800	Freedom 800	Freedom 800 *
8mm PWB Grade L 8mm MacDuff 8mm Bradlink 8mm DIN 766 8mm Beaver	✗	Freedom 800 M	Freedom 800 M	Freedom 800 M	Freedom 800 M	✗

Important Safety Notes

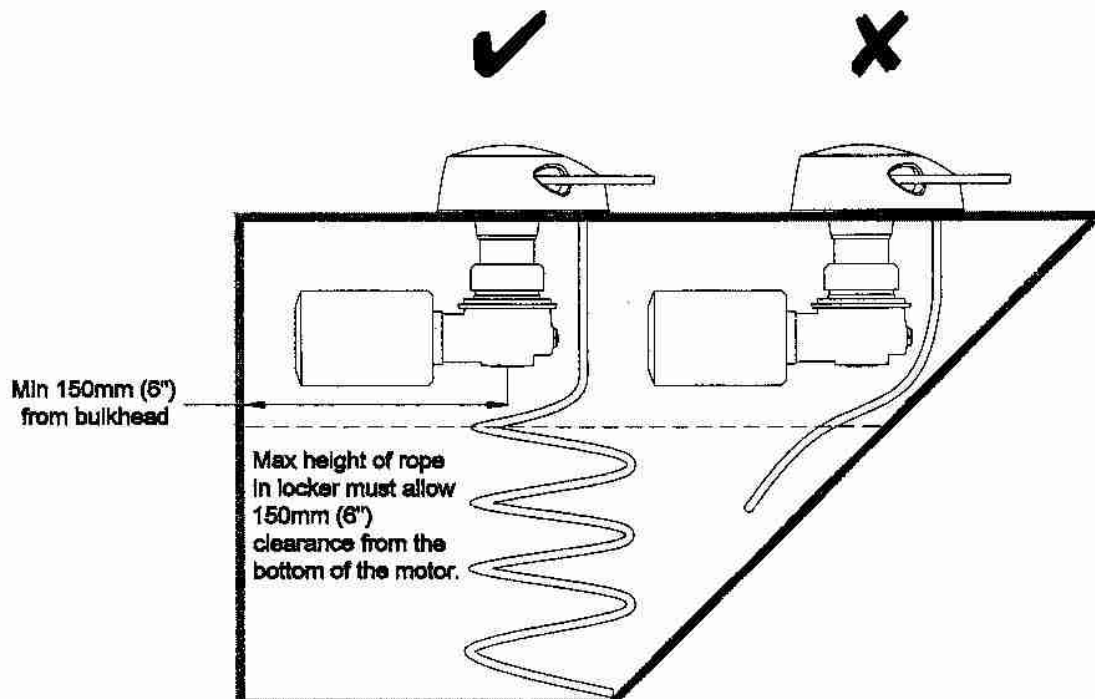
- Keep hands, feet, loose clothing and hair well clear of the winch and rope/chain during operation.
- Never operate the winch from a remote station without a clear view of the winch.
- Run the boat's engine whilst raising or lowering the anchor. Not only is this a safety precaution, it also helps minimise the drain on the batteries.
- Do not use the winch as a bollard. When anchored, secure the anchor warp directly to a bollard or deck cleat.
- Secure the anchor with a rope or fastener pin when motoring particularly at high speed or in heavy weather.
- Always turn the isolator switch "OFF" when winch is not in use and before leaving the boat.
- Keep rope in good condition and free from twists, knots, heavy abrasions, and salt build up. In the event of rope slipping or jamming - reverse winch & check rope for damage.
- **The winch is not designed to lift people.**

Location & Installation

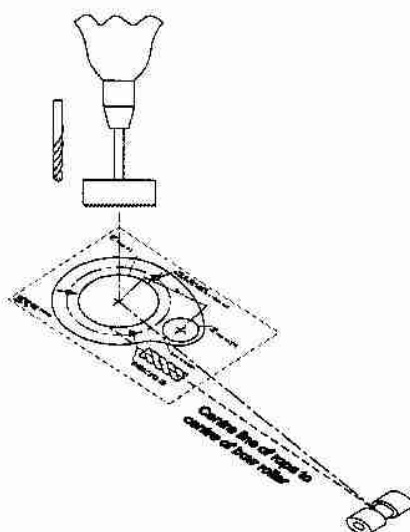
1. Ensure centreline of rope/chain aligns with the bow roller and the angle of the rope/chain does not exceed that shown.



2. Position winch so that rope/chain has maximum drop.

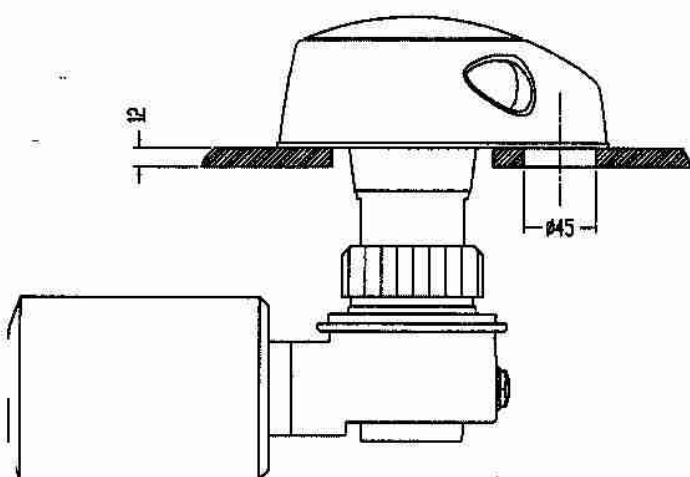


3. Use template supplied as a guide to position the winch on deck and drill the holes. Use template No.4283 if fitting winch to a deck 1/2" (12mm) in thickness or LESS. Use template No.4582 if fitting winch to a deck 1/2" (12mm) in thickness or MORE in conjunction with the performance plate supplied.



Installation Detail

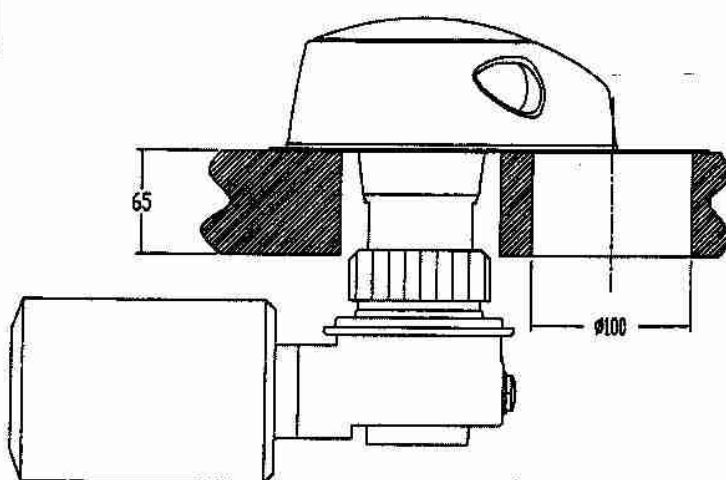
Deck Thickness Up To 1/2" (12mm)



Refer To Instructions

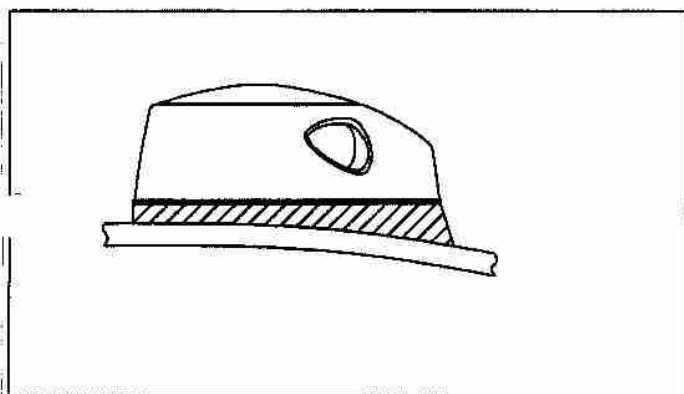
Installation Detail

Deck Thickness 1/2" (12mm) - 2 1/4" (65mm)
With Performance Plate

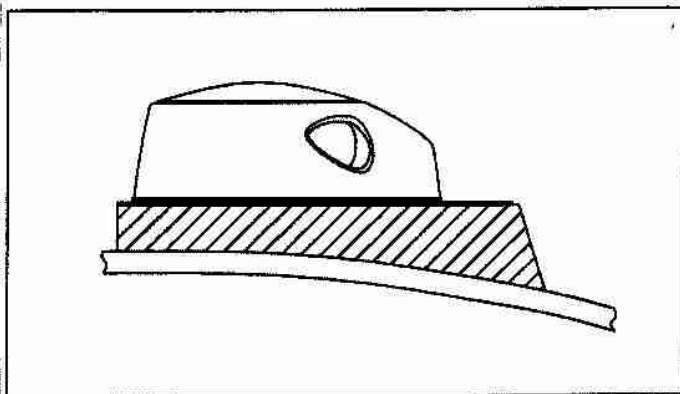


Refer To Instructions

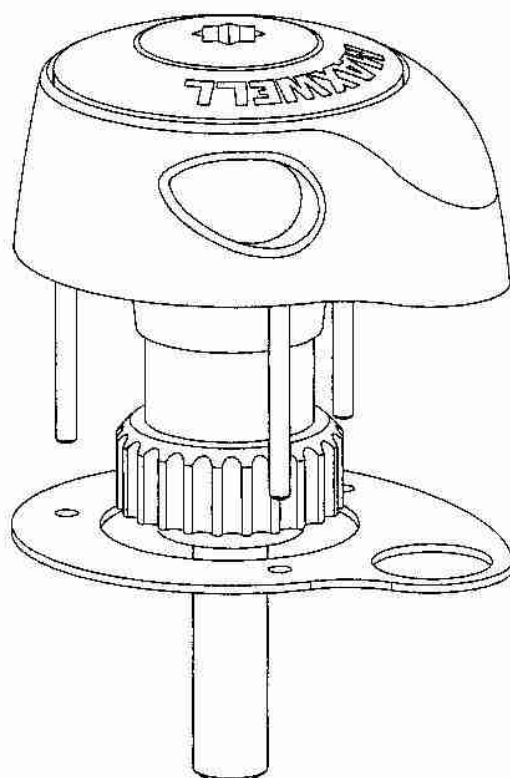
4. Use mounting pad if deck is not flat.
1/2" (12mm) installation shown.



Performance plate installation shown.

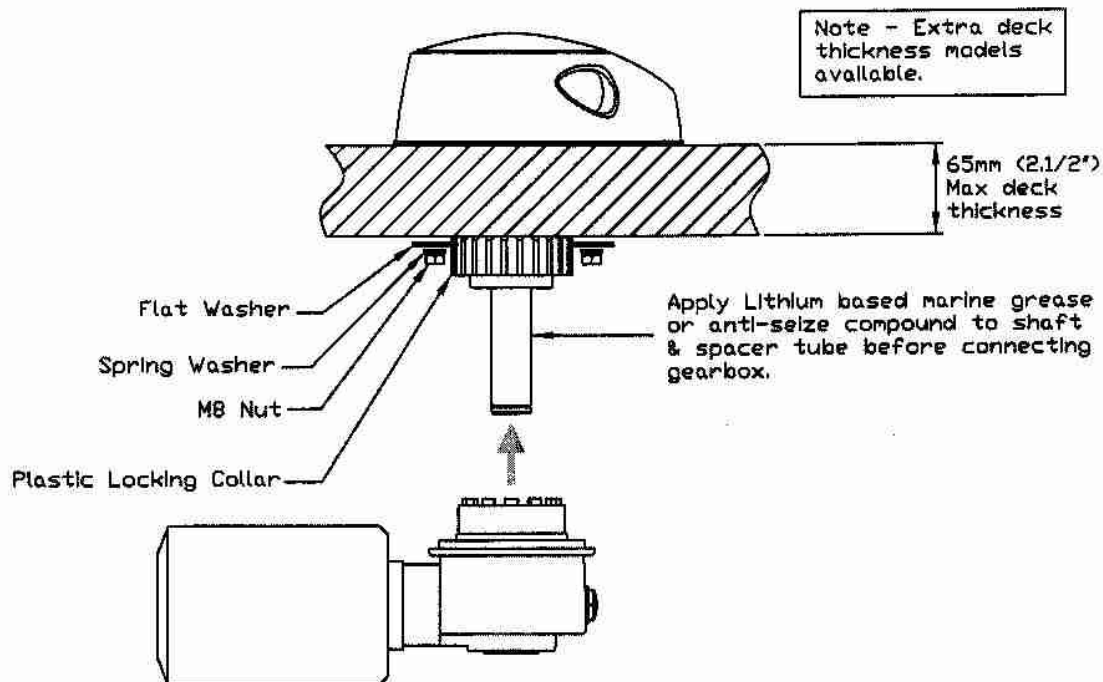


5. Use gasket supplied to seal winch to deck.

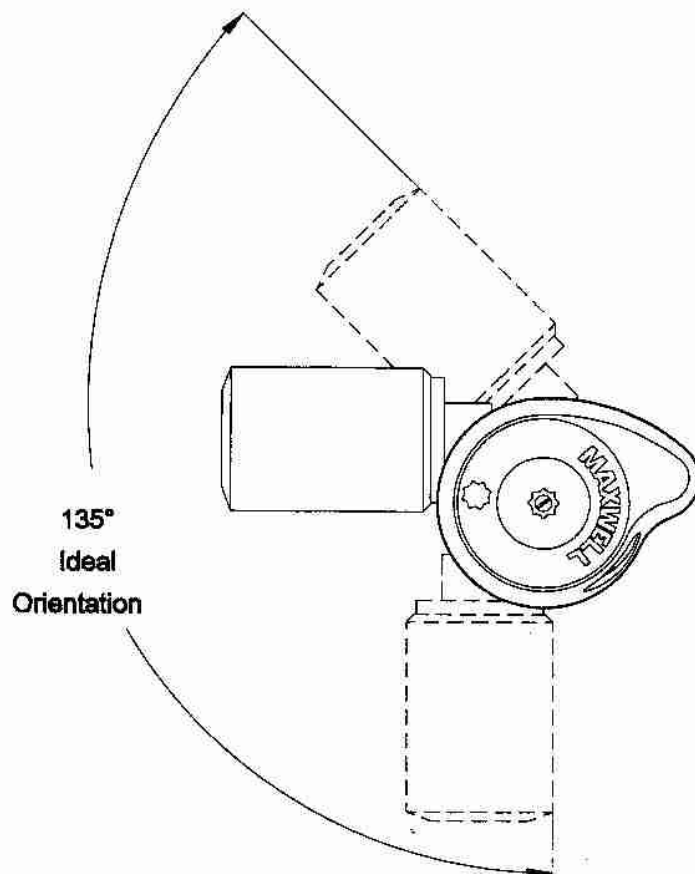


FOR BOATS OF STEEL OR ALUMINIUM CONSTRUCTION
To prevent electrolysis, it is important the deckplate is insulated from the deck with the gasket provided.
The studs, nuts, & washers must also be insulated from the deck.

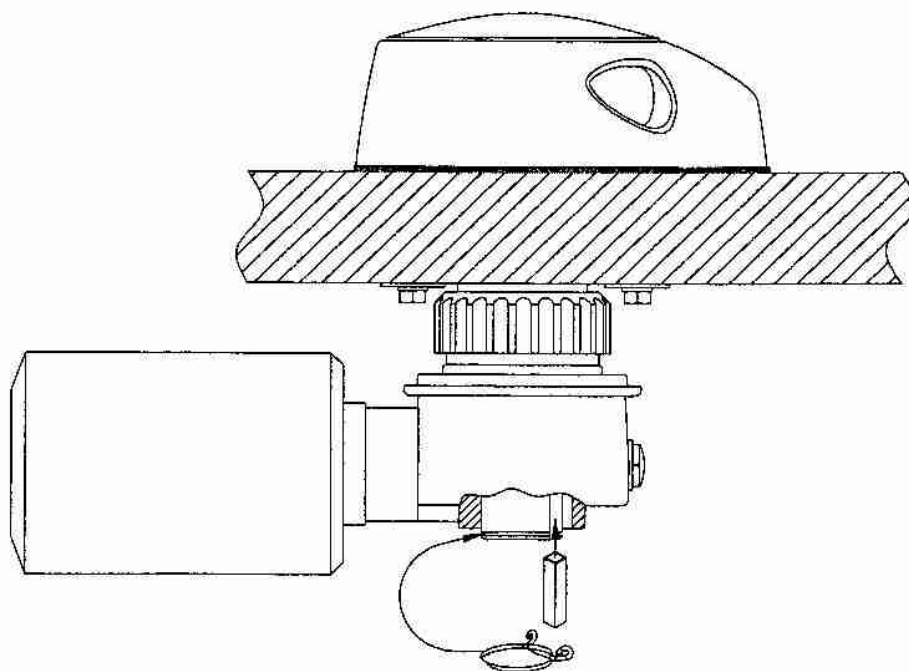
6. Fasten winch to deck using nuts & washers supplied & cut excess thread from studs.
Fit gearbox/motor assembly to bottom of spacer tube & tighten plastic locking collar.



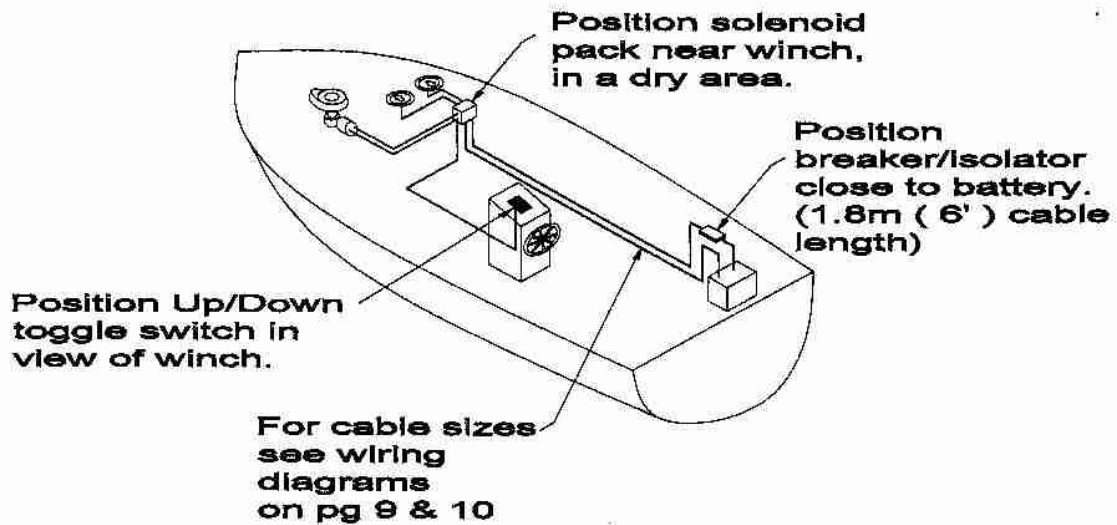
7. Orientate motor as shown.



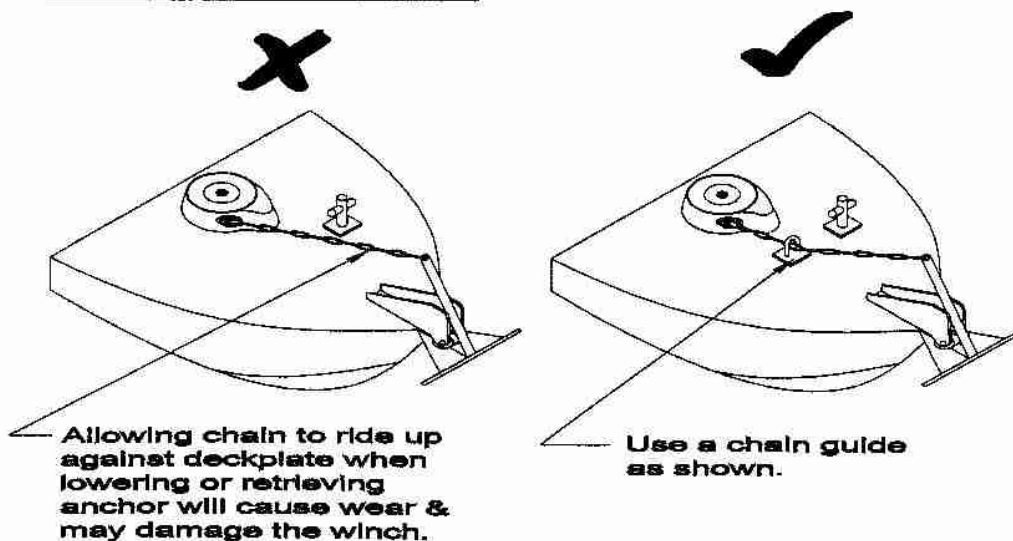
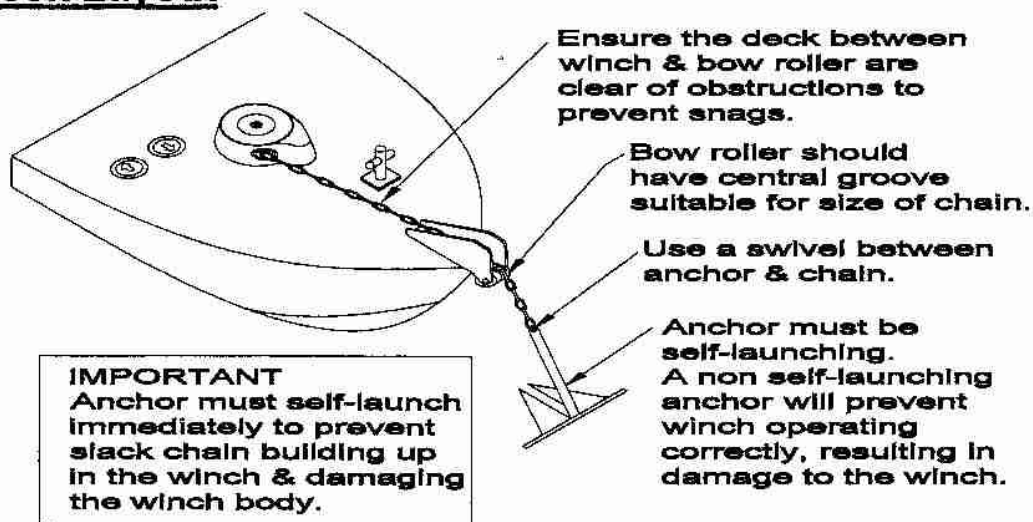
8. Fit key into keyway & quick release clip into groove in bottom of shaft.



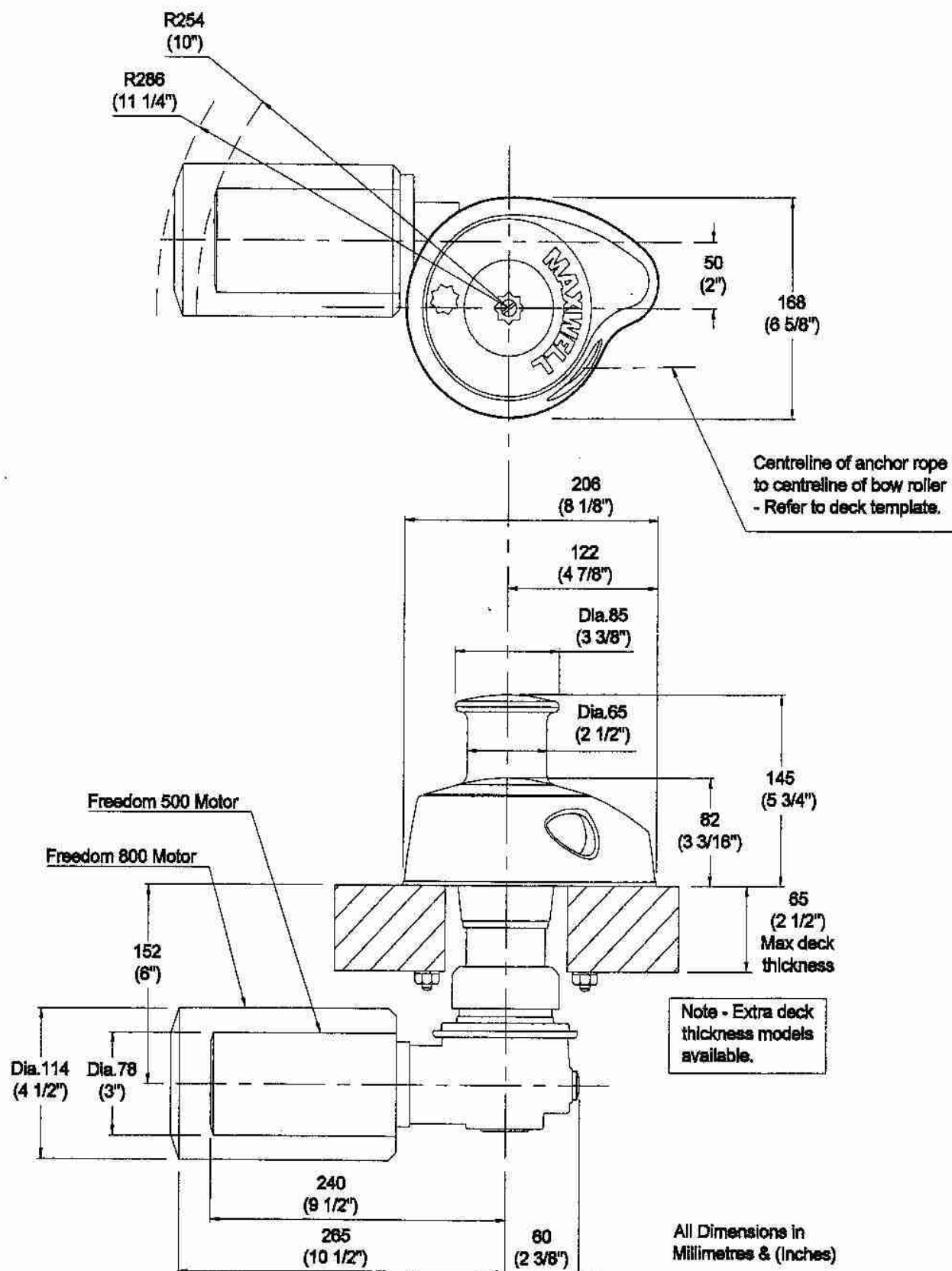
Electrical Component Layout



Foredeck Layout



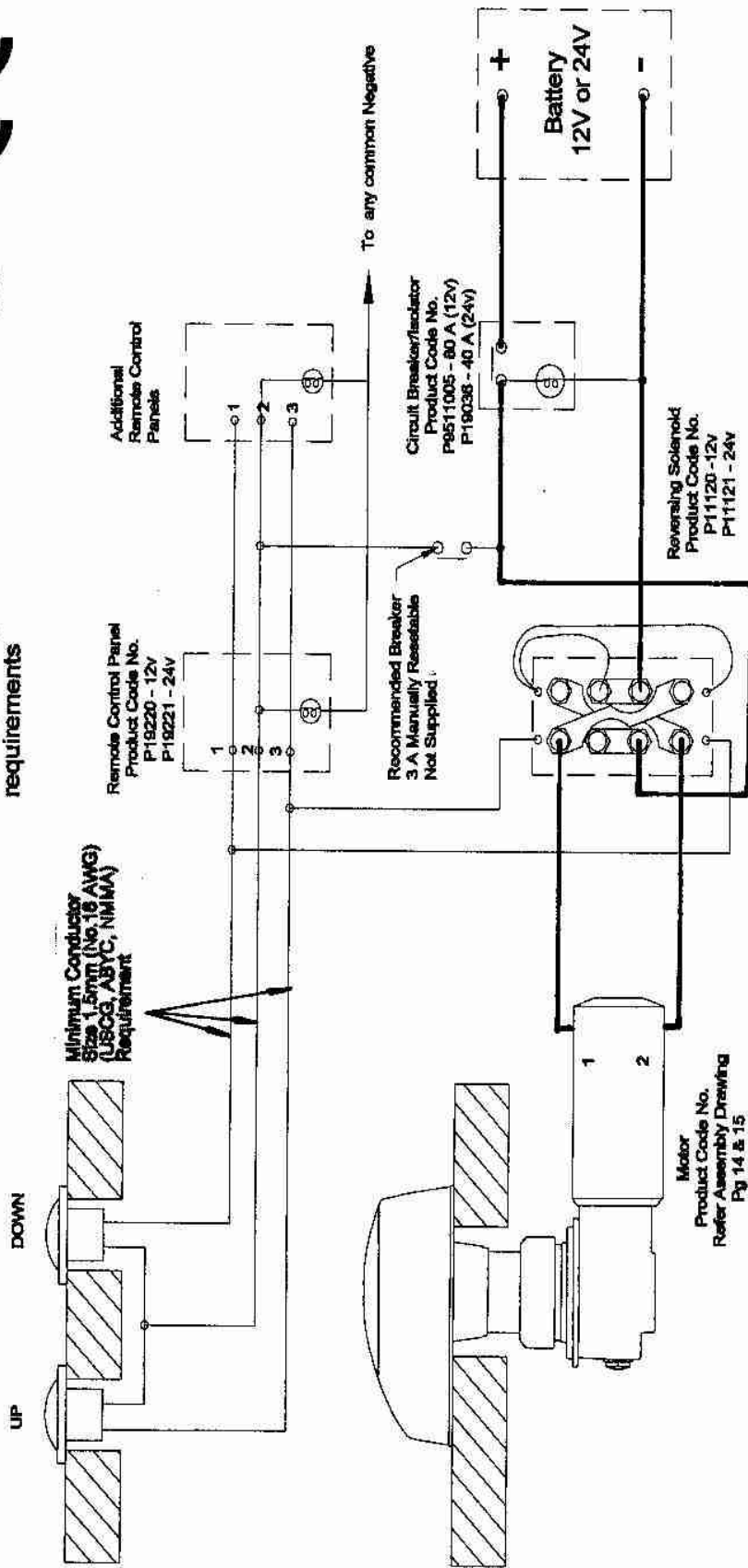
Freedom Dimension Drawing



Freedom 500 Series Wiring Diagram

Optional Foot Switch
Product Code No.
P19001 - Chrome Bezel
P19006/P19007 - Covered, Black/White

All installations should be carried out in accordance with USCG, ABYC, NMMA or other local electrical requirements



Recommended Motor Cable Sizes for Freedom 500 series winches

12V Systems		
Cable Length	Cable Size	
(battery to winch)	mm ²	A.W.G
Up to 5m (15 ft)	15	6
5m - 10m (15 - 35 ft)	25	3
Over 10m (35 ft)	35	2

24V Systems		
Cable Length	Cable Size	
(battery to winch)	mm ²	A.W.G
Up to 10m (35 ft)	8	8
Over 10m (35 ft)	8	8

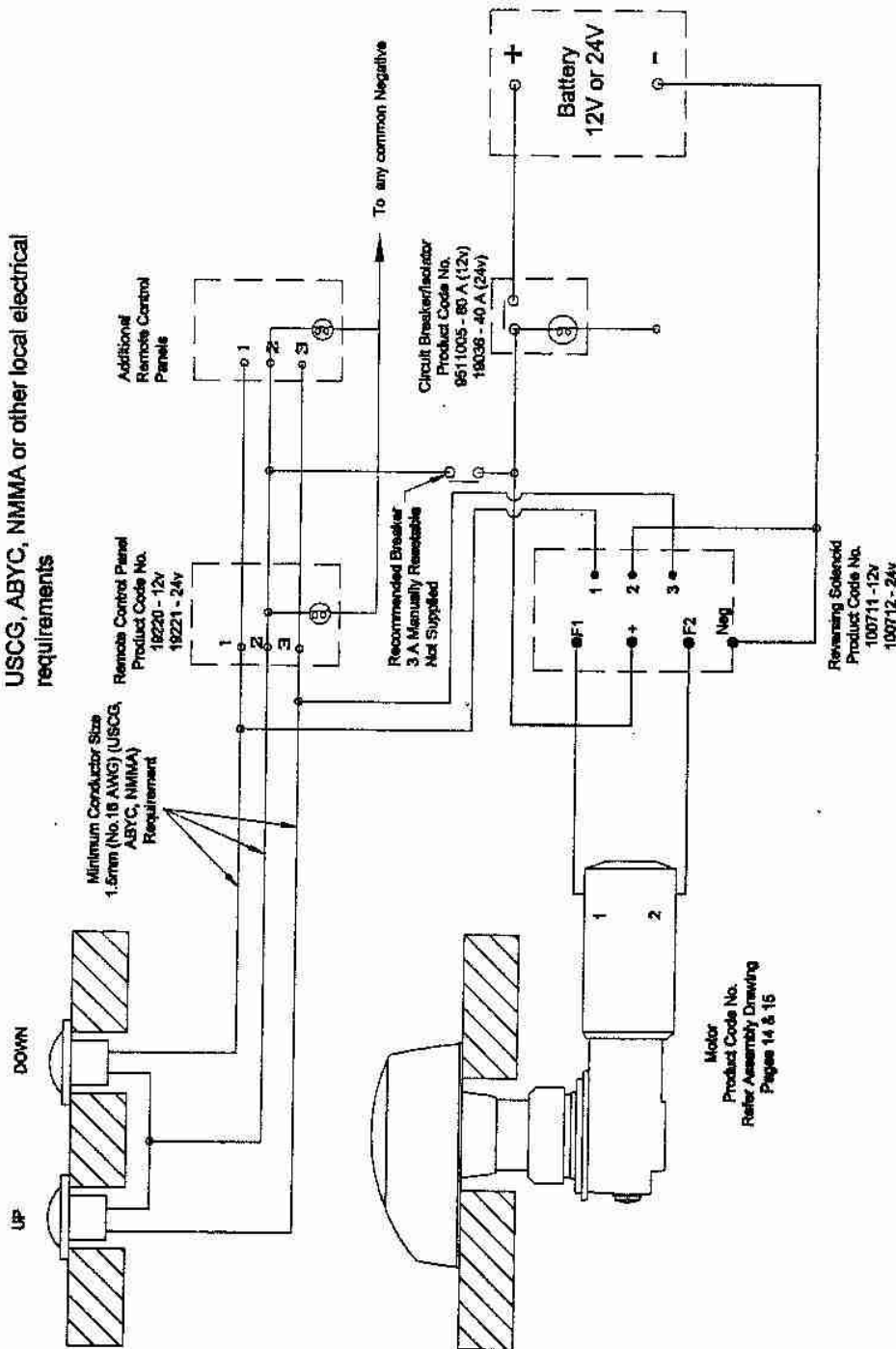
Freedom 500 Series Wiring Diagram

For Use With Reversing Solenoid Part Numbers
100711 & 100712.



Optional Foot Switch
Product Code No.
19001 - Chrome Black
19002/19007 - Covered, Black/White

All installations should be carried out in
accordance with
USCG, ABYC, NMMA or other local electrical
requirements



Recommended Motor Cable Sizes for Freedom 500 series winches

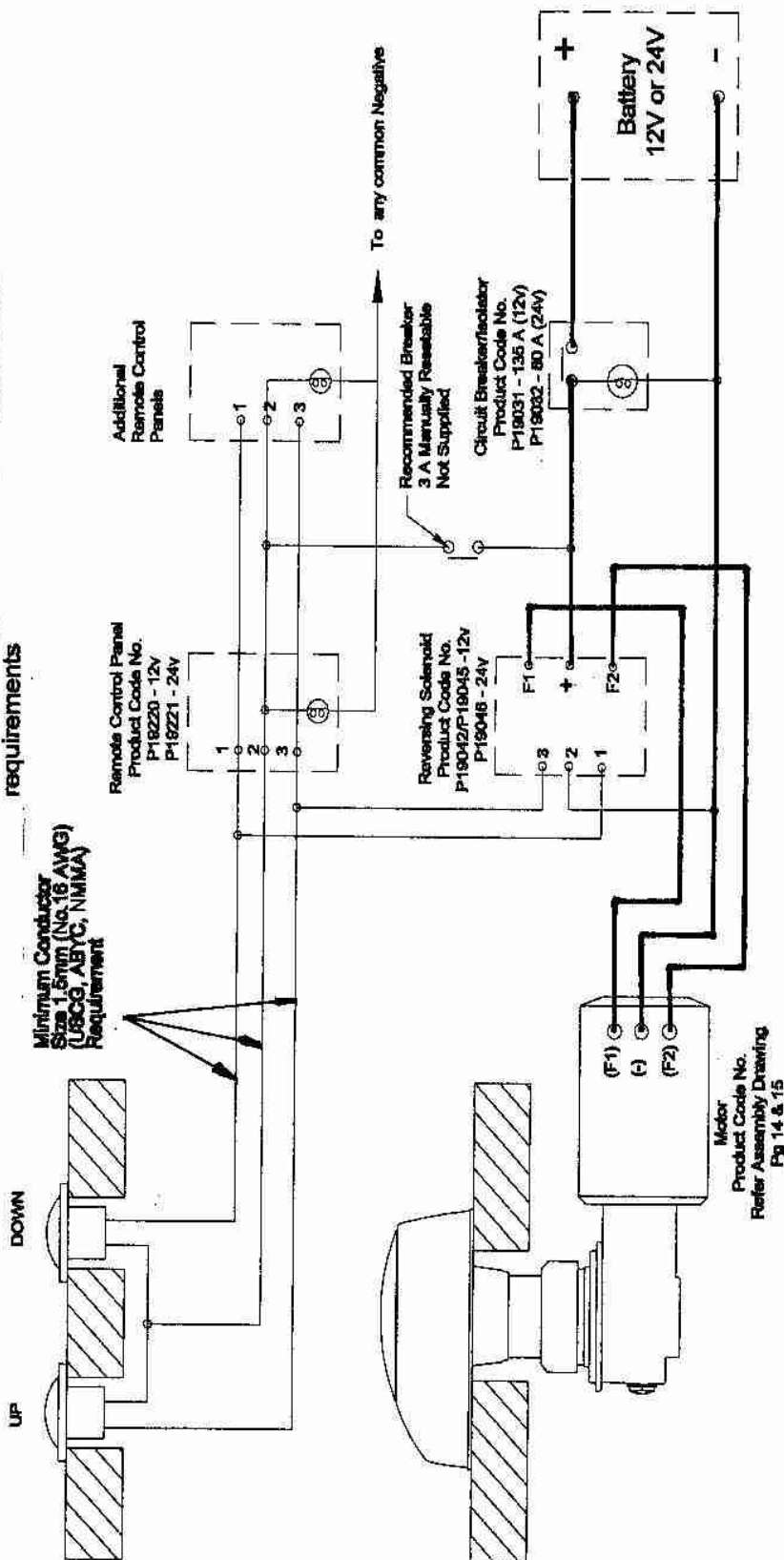
12V Systems	
Cable Length	Cable Size
(battery to winch)	mm ² A.W.G.
Up to 5m (15ft)	15 6
5m - 10m (15 - 35ft)	25 3
Over 10m (35ft)	35 2

24V Systems	
Cable Length	Cable Size
(battery to winch)	mm ² A.W.G.
Up to 10m (35ft)	8 8
Over 10m (15 - 35ft)	8 8

Freedom 800 Series Wiring Diagram

Optional Foot Switch
Product Code No.
P18001 - Chrome Bazel
P18008/P18007 - Covered, Black/White

All installations should be carried out in accordance with USCG, ABYC, NMMA or other local electrical requirements



Recommended Motor Cable Sizes for Freedom 800 series winches

12V Systems		
Cable Length	Cable Size	
(battery to winch)	mm ²	A.W.G
Up to 6m (20 ft)	25	3
6m - 10m (20 - 35 ft)	35	2
10m - 15m (35 - 50 ft)	50	0
Over 15m (50 ft)	70	00

24V Systems		
Cable Length	Cable Size	
(battery to winch)	mm ²	A.W.G
Up to 10m (35 ft)	15	6
Over 10m (35 ft)	20	4

Operation of the Winch

Loading the Rope / Chain

- Release the clutch nut (approx. 1/2 turn anti-clockwise).
- Fold the end of the rope to create a 100mm (4") doubled thickness.
- Feed folded end of rope into the winch, with the short end to starboard, through rope/chain entry hole.
- Manually turn the winch with the clutch handle in the outer bi-square and the rope will be fed into your locker.
- Snug down, but do not over tighten the clutch nut.
- **Make sure you fasten the end of the rope securely to the boat**

Lowering the Anchor

- With the main circuit breaker/isolator panel "ON" the winch may be operated by either the Remote Control toggle switch or foot switch (if fitted).
- Press the toggle switch down to pay out sufficient rope/chain to set the anchor.
- Watch as rope/chain is being fed out, as a pile up on the foredeck may cause a jam, resulting in damage to the winch.

Raising the Anchor

- Start the boat's motor(s) and run at sufficient rpm to activate the charge system.
- With the circuit breaker/isolator panel "ON", operate the winch by pressing the toggle switch up or the foot switch (if fitted).
- Motor up to the anchor while retrieving, do not use the winch to pull the boat to the anchor.
- Care should be taken when docking the anchor, retrieve the last metre (36") carefully, seating the anchor home in the bow fitting.

Free-falling the Anchor

- Check that the rope/chain has unrestricted travel over bow roller.
- Standing well clear of the rope/chain, insert handle into clutch nut and loosen by slowly rotating the handle anti-clockwise (approx. 1/2 turn).

Raising the Anchor Manually

- Insert the handle into the clutch nut and loosen by rotating the handle anti-clockwise (approx. 1/2 turn) and remove handle.
- Insert the handle into the outer bi-square hole on the chain wheel and rotate in a clockwise direction to retrieve the line.
- Cleat rope/chain off as necessary.

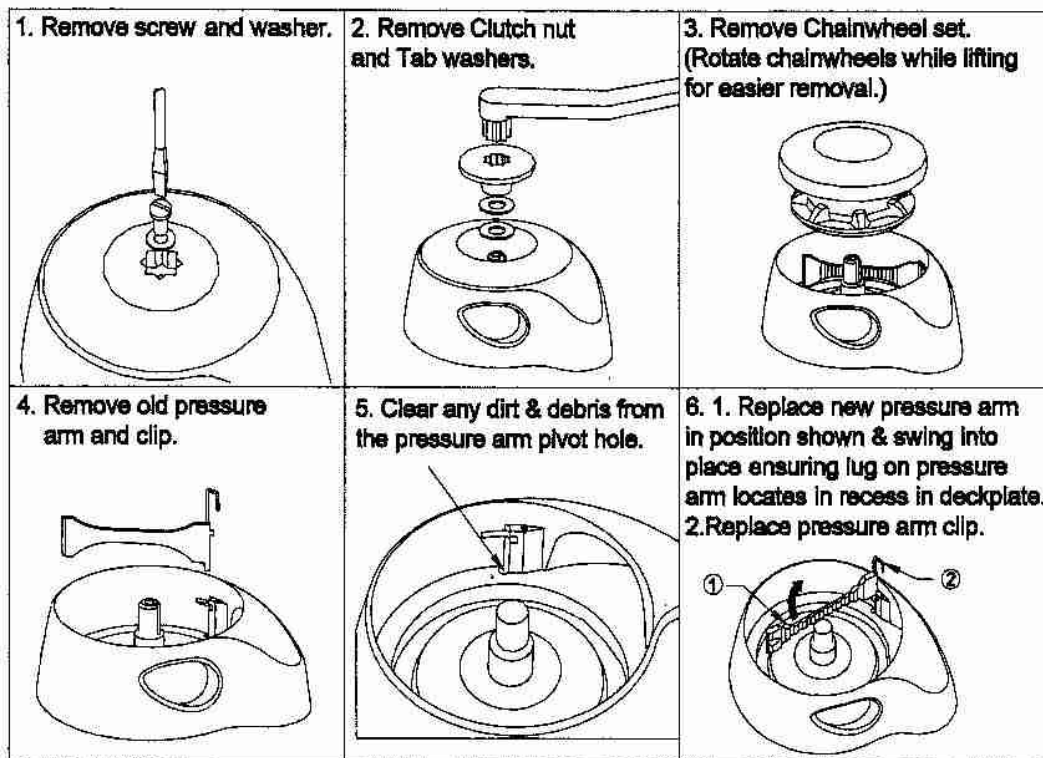
CAUTION

There is no self-locking mechanism to prevent the winch from free-falling during manual operation, the rope/chain must be cleated off before the handle is removed from the outer bi-square and the clutch nut re-tightened.

Inspection / Replacement of Pressure Arm

The Freedom pressure arm is subject to wear during normal operation & needs to be checked periodically (approx. one seasons normal use).

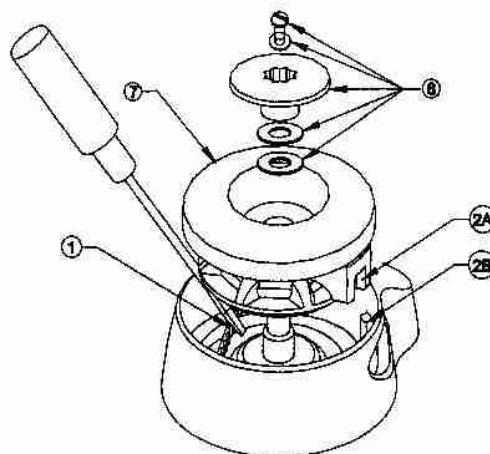
In the event that the pressure arm needs replacing, order the P100019 Freedom Pressure Arm Replacement Kit and follow the diagrams below.



7. To replace chainwheel set.

1. Hold back pressure arm with screwdriver to reinstall chainwheel set.
2. **IMPORTANT!** Ensure recess in stripper (2A) locates on lug in deckplate (2B). Failure to do so may result in damage to the winch.

8. Replace tab washers, clutch nut, washer, & screw in order shown. Retighten clutch nut using handle supplied.



Maintenance

Topworks

The above deck parts of the winch should be washed down with fresh water regularly.

The chain wheel set should be removed (as described on previous page), and the clutch faces lubricated with a marine grease (specified below) annually.

Motor

The motor may be removed from the gearbox without draining the gearbox oil as the gearbox is a sealed unit.

Servicing of the motor should only be carried out by a suitably qualified electrician.

It should be cleaned out annually (or more often in commercial applications).

Gearbox

The gearbox is a totally self contained sealed unit and providing the winch is not abused should give years of trouble free service.

Every three years the gearbox should be removed and serviced by an authorised Maxwell service technician.

Recommended Lubricants

Gearbox Oil: SAE 90 (e.g.: Shell Omala 320, Castrol Alpha SP320 or other approved equivalents.)

Mainshaft, Bearing, & Clutch Surfaces:

Marine grease, Lithium or Lithium complex based
(e.g. Duckhams Keenol or Castrol LMX.)
Do not use soap based grease.

IMPORTANT

Failure to carry out the maintenance and service as described herein will invalidate the warranty.

Ordering Spare Parts

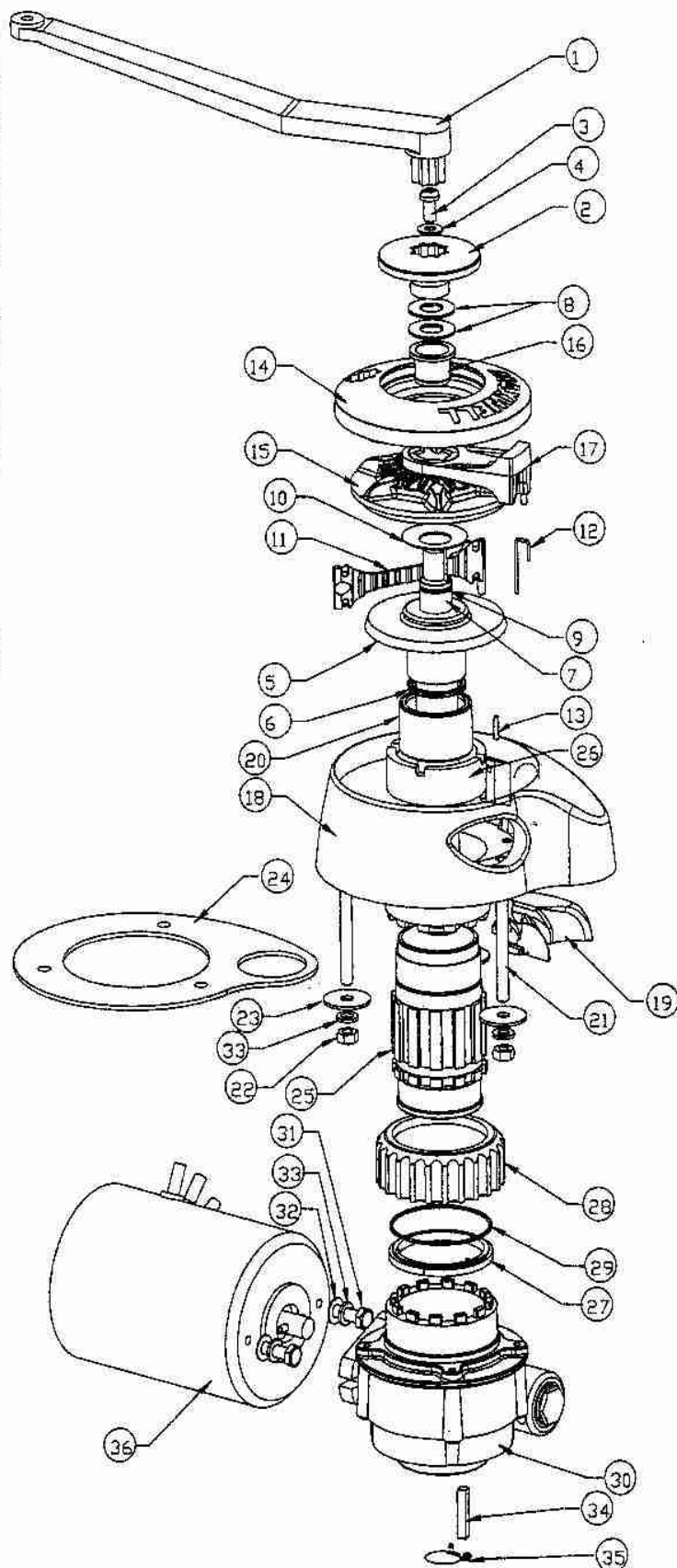
When ordering spare parts, please quote the following;

Freedom Model (marked in chain wheel bi-square e.g. 800M)

Serial Number (Located on Gearbox Housing)

Power Supply 12V or 24V

Part No, Description & Quantity Required (from assembly drawings on pg 14 & 15)



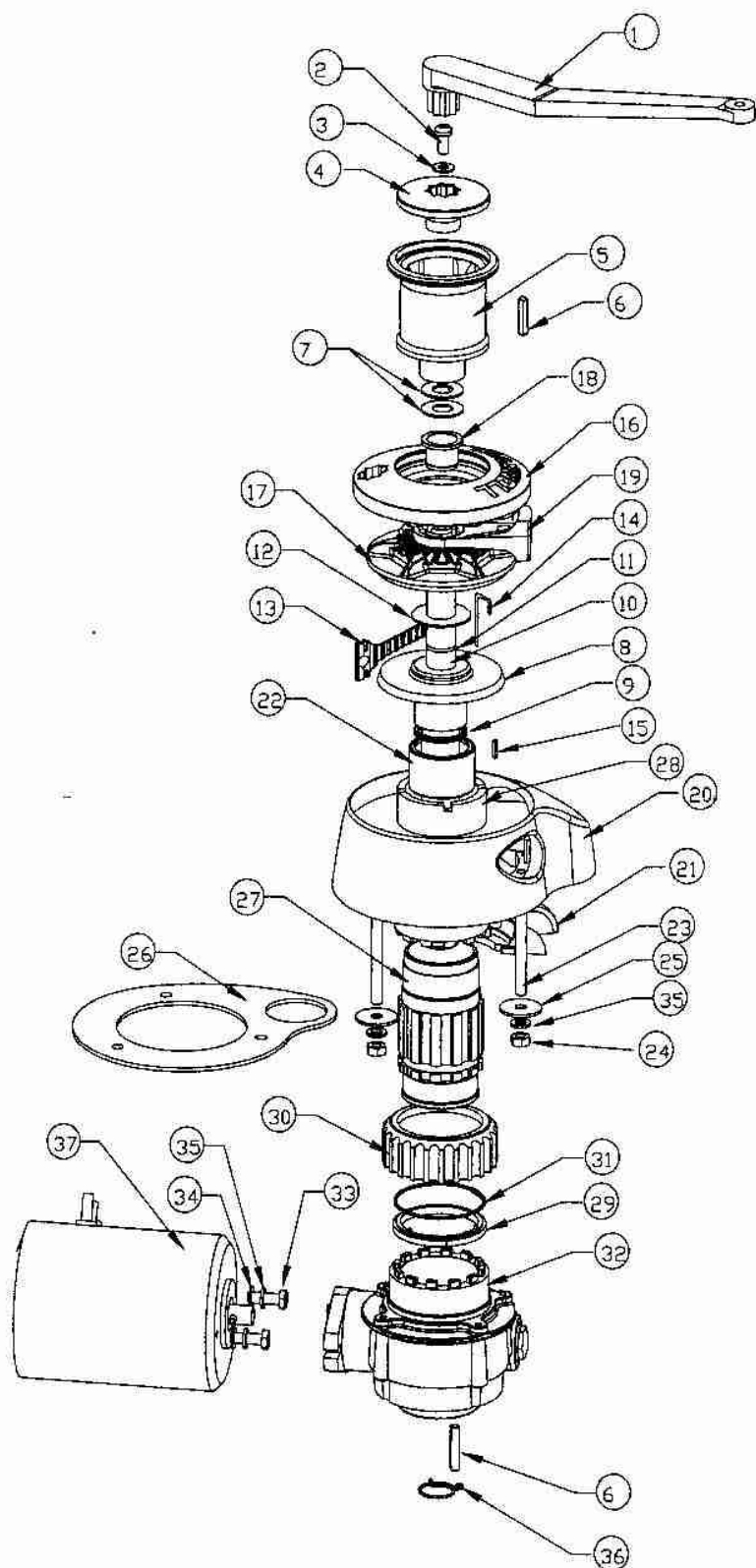
ITEM NO.	QTY.	PART NO.
1	1	0131A Handle
2	1	4376 Clutch nut
3	1	SP0037 M8 x 16 Pan head screw
4	1	SP0428 M8 x 17 Flat washer
5	1	4168 Clutch cone
6	1	SP2758 Quad ring (Q218)
7	1	4379 Mainshaft (154 DMC)
	1	4422 Mainshaft (254 DMC)
8	2	4220R Tab washer
9	1	SP02759 O-ring 18x2
10	1	SP484 Belleville washer
11	1	4167 Pressure arm assembly
12	1	4472 Pressure arm clip
13	1	4255 Clip insulator
14	1	4132 Chain wheel upper (500)
	1	4331 Chain wheel upper (500M)
	1	4355 Chain wheel upper (500MA)
	1	4268 Chain wheel upper (800)
	1	4328 Chain wheel upper (800M)
15	1	4214 Chain wheel lower (500)
	1	4330 Chain wheel lower (500M)
	1	4354 Chain wheel lower (500MA)
	1	4269 Chain wheel lower (800)
	1	4327 Chain wheel lower (800M)
16	1	4282 Snap bush
17	1	4165R Stripper (500)
	1	4274R Stripper (800)
18	1	4423 Deckplate
19	1	4173R Deckplate insert
20	1	4218 Deckplate bearing
21	3	4281 M8 stud
	3	4359 M8 stud (Extra deck clearance)
22	3	SP0366 M8 nut
23	3	3597 M8 x 32 x 2 flat washer
24	1	4169 Gasket
25	1	4424 Spacer tube
	1	4433 Spacer tube (Extra deck clearance)
26	1	4410 Spacer tube retaining collar
27	1	4258R Collar
28	1	4257R Locknut
29	1	SP2751 66 x 2 O ring
30	1	P100900 Gearbox
31	2	SP0288 M8 x 25 bolt
32	3	SP0413 5-16" Flat washer
33	5	SP0467 M8 spring washer
34	1	3462 1/4" key
35	1	4547 Quick release clip
36	1	P10068 12V 600W Perm magnet motor
	1	P10069 24V 600W Perm magnet motor
	1	P11112 12V 1000W Series wound motor
	1	P11114 24V 1000W Series wound motor

CREATED BY	KFB
SCALE	1:5
REV NOTES	3.00

MAXWELL
WINCHES LTD.
AUCKLAND, NEW ZEALAND

STANDARD FREEDOM ASSEMBLY

DRG NO	4479	REV	3.00
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ITEM NO.	QTY.	PART NO.
1	1	0131A Handle
2	1	Sp0037 M8 x 16 Pan head screw
3	1	SP0428 M8 x 17 Flat washer
4	1	4376 Clutch nut
5	1	4170 Capstan
6	2	3462 1/4" Key
7	2	1-1/4" x 5/8" Flat Washer
8	1	4168 Clutch cone
9	1	SP2758 Quad ring (Q218)
10	1	4380 Mainshaft (154 DMC)
	1	4381 Mainshaft (254 DMC)
11	1	SP02759 O-ring 18x2
12	1	SP484 Belleville washer
13	1	4167 Pressure arm assembly
14	1	4472 Pressure arm clip
15	1	4255 Clip insulator
16	1	4132 Chain wheel upper (500)
	1	4331 Chain wheel upper (500M)
	1	4355 Chain wheel upper (500MA)
	1	4268 Chain wheel upper (800)
	1	4328 Chain wheel upper (800M)
17	1	4214 Chain wheel lower (500)
	1	4330 Chain wheel lower (500M)
	1	4354 Chain wheel lower (500MA)
	1	4269 Chain wheel lower (800)
	1	4327 Chain wheel lower (800M)
18	1	4282 Snap bush
19	1	4165R Stripper (500)
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20	1	4423 Deckplate
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29	1	4258R Collar
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34	2	SP0413 5-16" flat washer
35	5	SP0467 M8 spring washer
36	1	4547 Quick release clip
37	1	P10068 12V 600W Perm magnet motor
	1	P10069 24V 600W Perm magnet motor
	1	P11112 12V 1000W Series wound motor
	1	P11114 24V 1000W Series wound motor

CREATED BY KFB

SCALE 1:5

REV NOTES

MAXWELL
WINCHES LTD.
AUCKLAND, NEW ZEALAND

FREEDOM ASSEMBLY (CAPSTAN VERSION)

DRG NO

4480

REV

3,00

Specifications

MODEL	FREEDOM 500	FREEDOM 500M	FREEDOM 500MA	FREEDOM 800	FREEDOM 800M
Maximum Pull	500 lb (227 kg)	227 kg (500 lb)	227 kg (500 lb)	800 lb (364 kg)	364 kg (800 lb)
Chain Speed (Normal Working)	62ft/min (19m/min)	19m/min (62ft/min)	19m/min (62ft/min)	108ft/min (33m/min)	33m/min (108ft/min)
Rope Speed (Normal Working)	45ft/min (14m/min)	14m/min (45ft/min)	14m/min (45ft/min)	69ft/min (21m/min)	21m/min (69ft/min)
Power Supply	DC12V/24V	DC12V/24V	DC12V/24V	DC12V/24V	DC12V/24V
Motor (Capacity)	600 watts	600 watts	600 watts	1000 watts	1000 watts
Chain Size/Type (Short link chain only)	1/4" Acco G40 SL 7mm MacDuff	6mm PWB Grade L 6mm Bradlink SGC	6mm Serafini Grade L 6mm DIN568	5/16" Acco G40 SL	8mm PWB Grade L 8mm Beaver 8mm Brad Link 8mm MacDuff 8mm DIN766
Rope Size	1/2" (12mm) 3-Strand or 8-Plait Nylon	12mm (1/2") 3-Strand or 8-Plait Nylon	12mm (1/2") 3-Strand or 8-Plait Nylon	9/16" (14mm) 3-Strand or 5/8" 8-Plait Nylon	14mm - 3-Strand or 1/2" 8-Plait Nylon
Net Weight	27.5 lb (12.5 kg)	12.5 kg (27.5 lb)	12.5 kg (27.5 lb)	16.5 kg (36.3 lb)	16.5 kg (36.3 lb)
Model Number	Standard Model P100000 12V P100050 24V Capstan Model P100002 12V P100052 24V	Standard Model P100010 12V P100054 24V Capstan Model P100014 12V P100056 24V	Standard Model P100028 12V P100058 24V Capstan Model P100025 12V P100059 24V	Standard Model P100001 12V P100051 24V Capstan Model P100003 12V P100053 24V	Standard Model P100011 12V P100055 24V Capstan Model P100015 12V P100057 24V
Chain Wheel Assy No.	P100030	P100031	P100032	P100033	P100034

Troubleshooting guide

Winch does not operate when the toggle switch (or foot switch) is activated.

- Check that the breaker/isolator panel is 'ON'.
- Check the connections & operation of the toggle/foot switches, breaker/isolator, reversing solenoids, and winch motor.
- Check battery condition.

Motor working but the chain wheels do not rotate.

- Check that the clutch nut is tight.
- The chain wheel may be jammed with rope or chain, reverse winch to free jam.
- Check that the key between shaft & gearbox is installed.

Motor working, chain wheels rotating, but the rope does not drive outwards.

- Check that the size & type of rope is correct for the winch model (see page 16).
- The rope may be slipping due to twists or knots jammed in the chain pipe, reverse winch, straighten rope & try again.
- Check the pressure arm for wear (see page 12).
- Stiffened rope due to salt build up.

Motor working, chain wheels rotating, but the rope does not drive inwards.

- Check that the size & type of rope is correct for the winch model (see page 16).
- Check that the rope or anchor is not fouled.
- The rope may be slipping due to twists or knots jammed in the chain pipe, reverse winch to clear jam & try again.
- The rope may be slipping on a worn section, cut out worn rope & re-join with a splice.
- Stiffened rope due to salt build up. Wash in clean water.
- Check the pressure arm for wear (see page 12).

Rope or splice jams frequently.

- Check that the size & type of rope is correct for the winch model (see page 16).
- Rope/splice may be stiff due to salt and/or sun exposure, wash rope with fresh water to remove salt deposits.
- There may be too much rope in the rope locker (see diagram No.2 on page 3).
- The splice may be worn or frayed, re-splice rope to chain.
- The rope or splice may be catching on the hole through the deck. Ensure that hole is free of rough edges.

Chain jams frequently.

- Check that the size & type of chain is correct for the winch model (see page 16).
- The chain may be twisting, install a swivel between the chain & anchor. Too much rope in the rope locker (see diagram No.2 on page 3).
- Chain may be piling up too high in the rope locker.

For further assistance contact your local Maxwell agent.

Please complete the other side of this Warranty
Registration and return as follows.

If your winch/winches or new boat with winch/winches
installed was purchased in either

NORTHERN HEMISPHERE

Return to:

MAXWELL WINCHES INC.,
1606 Babcock Street
Costa Mesa
California, 92627
USA

SOUTHERN HEMISPHERE

Return to:

MAXWELL WINCHES LTD,
P O Box 100-703
North Shore Mail Centre
Auckland 10
New Zealand

Maxwell Winches Ltd
65 View Road, Glenfield
PO Box 100-703 NSMC
Auckland
New Zealand
Ph 64 9 444 7396
Fax 64 9 444 0090

info@maxwell-winchest.co.nz

Maxwell Winches Australia
PO Box 228,
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Queensland
Australia
Ph 617 3245 4755
Fax 617 3245 5906

Maxwell Winches Inc.
1606 Babcock Street
Costa Mesa
California 92627
United States of America
Ph 949 631 2634
Fax 949 631 2846

LIMITED WARRANTY

Warranty: MAXWELL provides a three year limited warranty on all windlasses for pleasure boat usage, and a one year limited warranty for those systems used on commercial or charter vessels. Warranty, service and parts are available around the world. Contact your nearest Maxwell office for a complete list of service centres and distributors.

This warranty is subject to the following conditions and limitations:

1. This warranty will be null and void if
 - (a) there is any neglect or failure to properly maintain and service the products.
 - (b) the products are serviced, repaired or maintained improperly or by unauthorised persons.
 - (c) loss or damage is attributed to any act, matter or omission beyond the reasonable control of MAXWELL or the purchaser.
2. MAXWELL's liability shall be limited to repair or replacement (as determined by MAXWELL) of the goods or parts defective in materials or workmanship.
3. Determination of the suitability of the product and the materials for the use contemplated by the buyer is the sole responsibility of the buyer, and MAXWELL shall have no responsibility in connection with such suitability.
4. MAXWELL shall not be liable for any loss, damages, harm or claim attributed to:
 - (a) use of the products in applications for which the products are not intended.
 - (b) corrosion, wear and tear or improper installation.
 - (c) improper use of the product.
5. MAXWELL shall not be responsible for shipping charges or installation labour associated with any warranty claims.
6. There are no warranties of merchantability, fitness for purpose, or any other kind, express or implied, and none shall be implied by law. If any such warranties are nonetheless implied by law for the benefit of the customer they shall be limited to a period of three years from the original purchase by the user.
7. MAXWELL shall not be liable for consequential damages to any vessel, equipment, or other property or persons due to use or installation of MAXWELL equipment.
8. This warranty sets out your specific legal rights allowed by MAXWELL, these may be varied by the laws of different countries. In addition, the Purchaser may also have other legal rights which vary from country to country.
9. To make a claim under this warranty, contact your nearest MAXWELL Winches office or distributor. Proof of purchase and authorisation from MAXWELL will be required prior to any repairs being attempted.

To be eligible for warranty protection please either complete the form below at the time of purchase and return it to the appropriate above address, or fill out the digital warranty form on our website: www.maxwell-winchest.co.nz

Purchaser

Name:

Address:

Telephone:

Facsimile:

Supplier/Dealer

Name:

Address:

Telephone:

Facsimile:

Winch Model

Serial Number

Date of purchase

Boat type

Name:

L.O.A.

Built by

Winches Supplied

☐

With boat

☐

Fitted by boat yard/dealer

☐

Purchased from dealer/chandler