

OWNER'S MANUAL H8P-PRO / H10P-PRO



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Owner's Manual

5050-PRO, H8P 5060-PRO, H8P 5170-PRO, H10P 5172-PRO, H10P



These instructions cover kits from 01/01/2010

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For all your requirements please contact your Superwinch agent



Thank you for purchasing a Superwinch Pro. It has been designed and manufactured to meet BS EN 14492-1, Power Driven Winches Standard, and provide years of trouble-free operation.

Please read and understand this Owner's handbook before using your winch. Your winch is a very powerful machine. If used unsafely or improperly, there is a possibility that property damage or personal injury can result. We have included several unique features in the winch to minimize this possibility, however, your safety ultimately depends on your caution when using the product. Correct installation of your winch is a requirement for correct operation. Pay particular attention to the winch installation section in this handbook.

Congratulations on your choice.

These instructions are designed to assist skilled technicians in the efficient installation of a Superwinch, using the appropriate trade tools. Superwinch reserve the right to alter model specification without prior notice.

PLEASE RETAIN THIS HANDBOOK WITH THE WINCH

WARNINGS, CAUTION AND NOTES

These are given through these instructions in the following form:



WARNING: Procedures which must be followed precisely in order to avoid the possibility of personal injury.



CAUTION: This calls attention to procedures which must be followed to avoid damage to components.



NOTE: This calls attention to methods which make a job easier or gives helpful information.

USAGE OF WINCH

This winch is designed for use in applications such as Pulling, Hauling, and other associated uses.

IMPORTANT: Superwinch winches are not to be used to lift, support or otherwise transport personnel. Any such use shall be considered to invalidate the warranty and Superwinch shall not be responsible for any claims arising from such use.

REPAIRS AND REPLACEMENTS

Before you contact Superwinch or your nearest Dealer please have ready the following information: Kit No, Serial No, and Part No. required

POISONOUS SUBSTANCES

Many liquids and other substances used should under no circumstances be consumed, and should be kept away from open wounds. These substances include (amoung others) hydraulic oil.

SYNTHETIC RUBBER

Many 'O' ring seals, flexible pipes and similar items, when subjected to fire or heat can become highly corrosive. Handle with seamless gloves only. Should skin contact occur, remove contaminated clothing immediately and obtain medical assistance without delay. Meanwhile, wash the affected area with copious amounts of cold water or limewater for 15 to 60 minutes.

RECYCLING AND THE ENVIRONMENT

It is illegal to dispose of used oil in the ground, down sewers or drains or into waterways. Dispose of used oil through authorised waste disposal contractors. If in doubt contact your local Authority for advice on disposal facilities.

GENERAL DESCRIPTION

The winch is hydraulically driven from a hydraulic system. See Hydraulic Installation section. The drum can be disengaged, to enable the rope to be pulled out easily and quickly. The winch is equipped with an adjustable free-spooling damper to help alleviate the possibility of wire rope over-run on the drum.

The automatic disc brake is housed in the planetary gearbox. The brake will activate automatically to prevent the load from causing the winch to 'back-drive'. The brake itself is self adjusting for wear and is oil immersed for optimum heat dissipation. The brake lining are of high performance non-asbestos material.

The winch is reversible with 'power-in' and 'power-out' via a directional control valve mounted on the vehicle. The standard unit is supplied with, counter-clockwise drum rotation on 'winch-in' when viewed from the gearbox end. The winch can be used in both 'over-wound' and 'under-wound' conditions.

SPECIFICATION DATA

Gear Reduction: High efficiency planetary for optimum reliability.

Drum: Fabricated steel mounted on maintenance free plain bearings.

Braking: Full Load Holding.

Mounting: Designed to most industry standard dimensions, this winch can be side,

foot or angle mounted, flat bed or low mount.

Pneu. Freespool Supply Pressure: 5.5 bar.

Load Limiter: Hydraulic system relief valve on vehicle (installers responsibility).

Labelling: Rating Plate showing 1st layer and top layer figures.

Roller Fairlead warning label.





Model Designation	H8P Standard Drum	H8P Long Drum	H10P Standard Drum	H10P Long Drum
Part No:	5050PRO	5060PRO	5170PRO	5172PRO
Weight (Less Rope):	42 kg	45 kg	42 kg	45kg
Recommended Rope Diameter:	10 mm	10 mm	11 mm	11mm
Drum Capacity:	27 M	36 M	20 M	26 M
Drum Diameter (10:1 D:d ratio):	90mm	90mm	101.6mm	101.6mm
Line Speed (1st Layer, No Load):	14.7 M/min	14.7 M/min	10.0 M/min	10.0 M/min
Line Pull (Bottom Layer):	34.9 kN	34.9 kN	42.16 kN	42.16 kN
Maximum Oil Pressure:	150 bar	150 bar	120 bar	120 bar
Maximum Oil Flow:	60 L/min	60 L/min	60 L/min	60 L/min
Freespool	Manual	Manual	Manual	Manual

To ensure that winches are compliant with the European standard, BS-EN14492-1 Superwinch recommends that wire ropes should be as follows:

10mm dia for H8P winch with a tensile grade of 1960 and a min break figure of 7,119kg (69.8kN) 11mm dia for H10P winch with a tensile grade of 1960 and a min break figure of 8,608kg (84.4kN)

HYDRAULIC SYSTEM

System Type: Open system with filtered return line

Relief Valve: IMPORTANT - Set at winch operating pressure

Pump: With a maximum oil supply of 60 l/min at top motor rpm. The pump must be capable of delivering a pressure of 170 bar.

Reservoir: Must be fitted with an oil filter device comprising strainer and air filter and a dip stick. The capacity of the tank should be at least 60 litres (16 U.S. gal). Note: Do not fill the tank to the top, since there must be space for expansion in the tank. Suitable hydraulic oil is Castrol CRML or equivalent (150 LHM 32 - 68). Typical viscosity rating of 150 - 175 cSt at 100°c.

Hoses: Should have the minimum following dimensions:

Pump inlet line: 32 - 38mm (1 1/4" - 1 1/2")

Nominal Bore (N.B.) (reservoir to pump)

Return line: 25mm (1") N.B. (control valve to reservoir) Pressure hoses: 13mm (1/2") N.B. (control valve to load control valve)

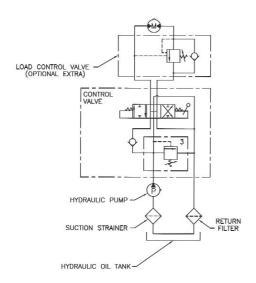
Pressure and flow loss is increased as hose length increases and/or bore size decreases. Pressure and return lines in excess of 3.5 meters should be compensated with an increase in nominal bore size.

Control Valve 4 - way, 3 - position with spring centred, open centre (ports A & B open when in centre position) and built in relief valve. The relief valve must be set to the winch operating pressure. The valve should be mounted as close to the winch as possible

Load Control Valve: A single overcentre valve is fitted to the winch to give smoothly controlled winch out when under load and to provide full dynamic braking.

Oil Suction Strainer Rating: Approximately 250 microns

Return Line Filter Rating: 10 - 40 microns



INSTALLATION

As a general rule:

Bigger Nominal Bore Hose = Better Winch Performance

In all installation work on a hydraulic system, cleanliness and accuracy are essential so that the hydraulic system functions properly.

All winch systems must be protected by an efficient Emergency Stop system, hydraulic winches should be fitted with a highly visible engine kill system to stop the vehicle engine driving the hydraulic system.

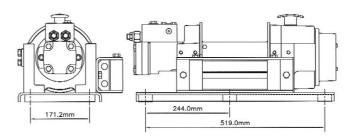
MOUNTING

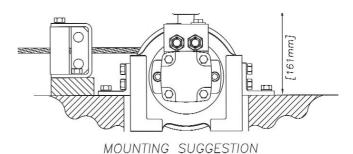
The diagrams on page 6 show the mounting dimensions for the Superwinch $\rm H8$ and $\rm H10P$.

The side and feet mounting hole positions are designed to allow the winch to be interchangeable with the most popular 8000 - 10000 lbs units currently available. The diagram below shows the H8P or H10P mounted on a Superwinch flatbed mounting kit (Part No. 5625), shown with Roller Fairlead. If a Superwinch mounting plate is not used, the surface must be flat within 0.5 mm and sufficiently stiff to prevent flexing. A minimum of 6.0 mm thick steel plate should be used. The thicker the plate, the better the alignment between motor mounting, drum and gearbox housing.

It is important that the winch is mounted securely so that the motor mounting, drum and gearbox housing are accurately aligned. Be sure the winch will not move under load, otherwise you may cause misalignment in the winch, causing the drum to bind up.

The tie bars supplied with the winch must remain attached when the winch is foot mounted. Angle mounting is possible and recommended for maximum flexibility in mounting. These mounts allow the winch to be low-mounted. See the diagram below.





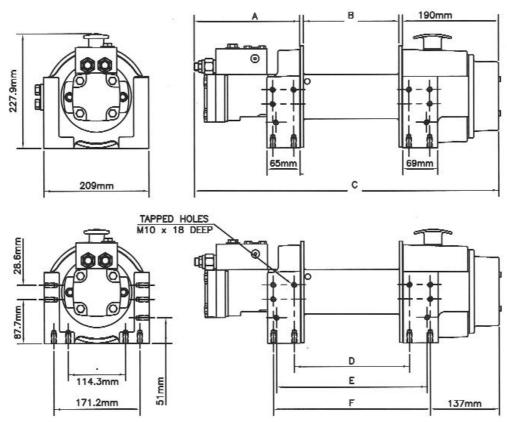
Mounting / Fixing hole details:

M10 thread, depth of full thread: 20mm.

Please ensure depth of thread engagement: 15mm.

WINCH INSTALLATION

VERSION	Α	В	С	D*	E	F*
H8P - 190mm DRUM LENGTH	207.0mm	190.0mm	602.0mm	228.5mm	298.5mm	311.0mm
H8P - 253mm DRUM LENGTH	207.0mm	253.0mm	665.0mm	291.5mm	361.5mm	374.0mm
H10P -190mm DRUM LENGTH	214.0mm	190.0mm	609.0mm	228.5mm	298.5mm	311.0mm
H10P - 253mm DRUM LENGTH	207.0mm	253.0mm	665.0mm	291.5mm	361.5mm	374.0mm



WIRE ROPE SPECIFICATION

The rope must be of good quality, have a steel core and meet the specification detailed on the certificate of conformity.

Avoid pulling a load at more than a 15 degree angle in relation to the winch. This will reduce wear and tear on the winch and the cable.

WIRE ROPE INSTALLATION

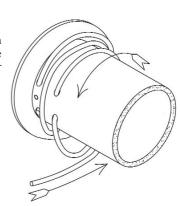
- 1. Remove Rope Drum safety guard.
- 2. Unwind the cable by rolling it out along the ground with the tapered end nearest to the winch. NEVER wind the cable straight onto the drum from a coil.
- 3. Raise the cable tensioner away from the rope drum (if supplied as part of your kit), and lock in position through the corresponding holes in the tensioner frame and bracket using a suitable pin or bolt.
- 4. Rotate the rope drum under power until the rope fixing holes run vertically at the front of the winch.
- 5. Pass the rope end through the roller fairlead, under the drum and back over the top of the drum to pass through the rope hole furthest way from the drum flange. Keep feeding the rope through to wrap around the drum **FOUR TIMES** and into the rope fixing hole nearest the drum flange.

- 6. Tighten the retaining screw ensuring that the rope end is flush with the exit of the hole and not protruding.
- 7. Feed back any excess slack to tighten the four wraps neatly on the drum.
- 8. Remove the locking pin from the cable tensioner to allow the rollers to rest on the rope. Note: This assembly is under tension. Special care should be taken to avoid trapping fingers, clothing etc.
- 9. Apply moderate tension to the rope. Take care to ensure the layers are neatly wrapped, as this will minimise damage to the lower layers of rope when a load is applied.

PULLING OUT THE ROPE

Dis-engage the freespool. With a pair of gloves on, pull out the rope and secure to anchor or load. Re-engage the freespool.

Note: Two wraps illustrated for clarity.

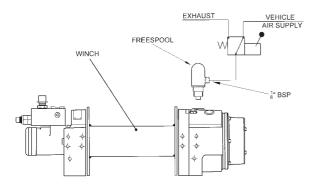


PNEUMATIC FREESPOOL OPERATION

- 1. Dis-engage the drum by operating the pneumatic control valve.
- 2. Pull out the cable by hand, but leave at least 5 wraps on the drum.
- 3. Attach the load.
- 4. Engage the drum by moving the control valve lever to the appropriate position. The freespool mechanism will spring return but the drum will not engage until it has been rotated a little, by hand. Do not attempt to pull a load until the drum is properly engaged.

Note: The mechanism is designed such that it cannot be disengaged when the drum is underload.

5. Operate the winch.



MANUAL FREESPOOL OPERATION

- 1. To dis-engage the freespool (if engaged) pull the knob and turn 90° ensuring that the knob stays out.
- 2. Pull out the cable by hand, but leave at least 5 wraps on the drum.
- 3. Attach the load.
- 4. Engage the freespool by turning the knob 90° and then rotating the drum by hand until the knob springs in.

Do not attempt to pull a load until the drum is properly engaged.

5. Operate the winch.

RUNNING IN, MAINTENANCE & SERVICING

For optimum performance all hydraulic motors need running in. Run for approximately 1 hour at 30% of maximum oil pressure.

LUBRICATION

Freespool Handle (manual freespool version) lubricate regularly with light oil.

Drum Bearings - These are self-lubricating but are lubricated with molydisulphide loaded bearing grease when assembled.

Gearbox - The gearbox is prefilled with BP Energol GR-XP 150 or equivalent at the factory, this is suitable for temperate climate use. If the winch is to be used in a different ambient temperature range then please consult the list below and select and use the appropriate grade

ROUTINE SERVICE INSPECTIONS

IMPORTANT - Ensure your winch has been filled with oil before

The following inspections should be carried out during routine vehicle servicing:

- 1. Check the oil level in planetary gear box. Oil level should be maintained. The oil specification recommended is BP Energol GR-XP150 or equivalent, using approximately 0.5 litre.
- Check the tightness of mounting bolts and all hydraulic connections; remove any dirt or corrosion that may have accumulated. Check the winch for operation in both directions.
- 3. Repairs should be carried out by authorised Superwinch repair centres only. Do not attempt disassembly of the gearbox. Disassembly will void warranty.

LUBRICATION

CLIMATE	TEMPERATURE	PLANETARY GEARBOX
Arctic	-20°C to 25°C	Energol GR-XP100
Temperate Tropical	5°C to 40°C 13°C to 65°C	Energol GR-XP150 Energol GR-XP220

SERVICING

Before you contact Superwinch or your nearest Dealer for parts, please have ready the following information:

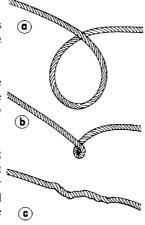
* Kit No. * Serial No. of Winch * Part No. Required

When ordering spare parts from these lists, always quote the winch serial number and the part number **not** item number of the spare part required. This will ensure the correct part is despatched to you. The serial number of your winch is located on the data plate on the motor support casting.

MAINTENANCE & USE

TIPS FOR EXTENDING THE LIFE OF YOUR WINCH

- 1. Note: Installing the wire rope is not included in the running-in period. Check tightness of all mounting bolts after running-in period.
- 2. Keep a tightly wound rope drum. Do not allow the windings on the drum to become loosely wound. A loosely wound spool allows a rope under load to work its way down into the layers of the wire rope on the drum. When this happens, the lower layers become damaged and the rope may become wedged within the body of the windings. To prevent this problem, keep tension on the rope at all times. A good practise is to rewind the rope under tension after each use.
- 3. Prevent kinks before they occur. time, the rope should be straightened.
 - b) The rope was pulled and the loop has tightened to a kink. The now permanently
 - c) The result of kinking is a considered and pulls a different throughout the strands under reduce load capacity of the wire rope.



- 4. Use a snatch block for heavy loads. To keep wear to a minimum, use a snatch block to double line heavy loads. Double lining reduces the work required of the gears by one half which in turn reduces wear.
- 5. The pull required to start a load moving is often much greater than the load to keep it moving. Try to avoid stopping and starting during a pull.

FRICTION PLATE ASSEMBLY REPLACEMENT

- 1. Drain gearbox oil.
- 2. Remove two screws, Item 7, in Clutch Cover, Item 5.
- Replace with two screws, M5 x 0.8 pitch x 40mm long, shortened to 38mm long.
- Unscrew six screws, Item 10, and remove Clutch Cover, Item 5 complete with Clutch Plate, Item 3.

Do not remove clutch plate from clutch cover.

- 5. Slide Friction Plate Assembly, Item 2, from Input Shaft.
- 6. Replace Friction Plate Assembly, Item 2, ensuring that boss is facing away from gearbox.

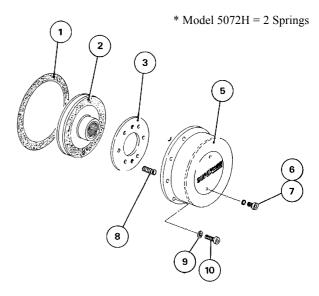
Ensure Roll Pins in Clutch Housing Cover (Item 5), align holes in clutch plate.

- 7. Replace gasket, Item 1, and Clutch Cover Assembly.
- Tighten six screws, Item 10.
- remove two screws securing the Clutch Plate to Clutch Cover, and replace two screws, Item 7, complete with seals.

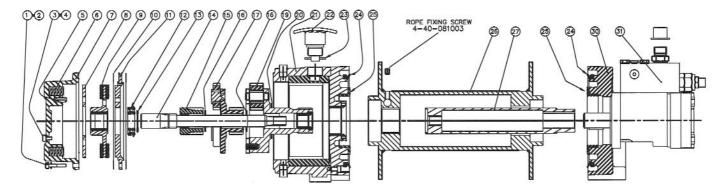
CLUTCH SPRING REPLACEMENT/REMOVAL

- 1. Follow steps 1 to 4 under the procedure for Friction Plate Assembly Replacement, described above.
- Slacken the two Clutch Plate holding screws, carefully. Remove the Plate, Item 3, to reveal six springs, Item 8.
- 3. Replace springs.
- Replace Clutch Plate, Item 3, ensuring roll pins, Item 4, align with holes in Clutch Plate.
- Replace the two Clutch Plate holding screws, tighten to draw plate down on the springs, ensuring roll pins align with holes in Clutch Plate.
- 6. Follow steps 7 to 9 under the procedure for Friction Plate Assembly Replacement, described above.

Item	Qty	PART No.	Description
1	2	10063	Gasket
2	1	10028	Friction Plate Assembly
			Drawn Cup Clutch
3	1	10002	Clutch Plate
5	1	50-90622-01	Clutch Cover Assy
6	2	4-23-063	Thread Seal
7	2	4-36-0601022	Cap Head Screw M6 x 10
8	6*	4-31-1403030403	Spring
9	6	4-51-0623	Spring Washer M6
10	6	4-36-0603022	Cap Head Screw M6 x 30



H8P / H10P SERIES WINCHES, GENERAL ASSEMBLY, WITH LOAD CONTROL VALVE



Item	Description	Part No.	Qty.
1	Cap Hd Screw	4-36-0603022	6
2	Spring Washer	4-51-0623	6
3	Cap Hd Screw	4-36-0601022	2
4	Screw Seal	4-23-063	2
5	Roll Pin	4-56-802003	3
6	Spring	4-31-1403030403	6
7	Brake Housing	50-90622-01	1
7	Brake Housing, (5052Gg, only)	50-25160	1
8	Pressure Plate	10002	1
9	Friction Plate Assy	10028	1
10	Gasket	10063	2
11	Bearing Plate & Ball Bearing	50-95074	1
12	Ball Bearing	Part of 50-95074	1
13	Snap Ring	4-26-2517123	1
14	Drive Shaft	50-50056	1
15	Sun Gear	50-54013	1
16	Thrust Washer	10006	2
17	1st Stage Carrier Assy	10061	1
19	2nd Stage Carrier Assy	10011	1
20	Thrust Washer	10051	1
21	Gear Housing Assy	50-90547	1
22	F / Spool Assy, Manual	10076	1
22	F / Spool Assy, Air	5603	1
22	No F / Spool Plug	10280	1
23	Washer	10295	1
24	Face Seal	4-22-140161123	2
25	Drum Bearing	10049	1
26	Drum Assy, 190mm (H8P)	50-90684	1
26	Drum Assy, 253mm (H8P)	50-90685	1
26	Drum Assy, 190mm (H10P)	50-90708	1
26	Drum Assy, 253mm (H10P)	50-90688	1
27	Coupling Tube, 190mm	50-90014	1
27	Coupling Tube, 253mm	50-90015	1
30	Support Housing	50-90424	1
31	Motor / Block Assembly (H8P)	50-90425	1
32	Motor / Block Assembly (H10P)	50-90604	1
n/s	Tie Bar, 190mm	50-52006	2
n/s	Tie Bar, 253mm	50-52007	2

OPTIONAL ACCESSORIES

Optional accessories, designed by Superwinch exclusively for the H8 and H10P:



Roller Fairlead Part No. 5600 Standard Drum 190 mm Drum Length

Roller Fairlead Part No. 5610 Long Drum 253 mm Drum Length



Cable Tensioner Part No. 5606 Short Drum 190 mm Drum Length

Cable Tensioner Part No. 5607 Long Drum 253 mm Drum Length





Part No. 50-30171, Standard Drum Part No. 50-30172, Long Drum



Winch accessory kit Part No. 0505

Stowage Bag (nylon) Pulley Block Nylon Sling Bow Shackles x 2

Pair of Leather Gloves (Heavy Duty)





Bow Shackles Part No. 0509

Wire Rope, 10mm x 23m Part No. 0561S

Wire Rope, 10mm x 30m Part No. 0563S

Wire Rope, 10mm x 40m Part No. 0582

Wire Rope, 11mm x 23m Part No. 0545





Pneumatic Freespool

Part No. 5603

Flatbed Mount Plate Part No. 5625 with mounting bolts For illustration purposes only



Synthetic Rope 10mm x 30m Part No. 771030 Synthetic Rope, 11mm x 30m Part No. 771230



SUPERWINCH LIMITED WARRANTY VALID WORLD WIDE



Limited Warranty. Superwinch ("seller") warrants the original buyer ("you") all parts and components except wire rope to be free from defects in materials and workmanship for a period of (one) 1 year from the provable date of purchase. Any Superwinch product which is defective will be repaired or replaced without charge to you, upon compliance with these procedures. The warranties set forth herein are exclusive and inlieu of all other warranties, whether oral or written, express or implied.

Limited Warranty Performance Procedure. Upon discovery of a defective Superwinch product, you shall mail to the seller at his factory or any factory authorised service centre written notice of such defect and mail, ship or otherwise deliver the defective Superwinch, postage or shipping prepaid. Repairs or replacements by seller under this Limited Warranty will normally be accomplished within (fifteen) 15 business days after receipt of the defective Superwinch. Seller or its authorised agents may make reasonable charges for parts and labour not covered by this Limited Warranty.

Warranty and Remedy Limitations and Exclusions. Repair and/or replacement of the defective Superwinch or component thereof as provided herein is the exclusive remedy for the buyer. The following exclusions or limitations of warranties and limitations of remedies shall be expressly applicable:

A. Express Warranties. Seller warrants that the Superwinch is as described in the "Superwinch Owner's Manual" provided herein; no other express warranty is made in respect to the Superwinch. If any model or sample was shown to the buyer, such model or sample was used for illustrative purposes only, and shall not be constructed as a warranty that the Superwinch will conform to the sample or model. **Seller makes no express warranty with respect to wire rope incorporated in the product**.

B. Implied Warranties. The implied warranty of merchantability and all other implied warranties shall only extend from the provable date of purchase for (one) 1 year. The wire rope is sold "as is", without any implied warranties. Some States within the USA do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

C. Incidential and Consequential Damages. Subject to seller's Limited Warranty obligations set forth herein, seller shall not be responsible for incidential damages of any kind, or the consequential damages to property, loss of profits and loss of use which may be caused by any defect in, or malfunction, or failure of enclosed Superwinch. Some States within the USA do not allow exclusion or limitation of incidential or consequential damages, so the above limitation or exclusion may not apply to you.

D. Condition of Warranty. Seller shall not be required to comply with its warranty duties provided herein if the defect, malfunction, or failure of the Superwinch was caused by damage (not resulting from defective or malfunctioning components) or unreasonable use by you. Unreasonable use shall includem but it not limited to, installation or use of the Superwinch without compliance with the instructions contained in the Superwinch Owner's Manual for the particular model number. Seller's liability under this warranty or for any loss or damage to the Superwinch product shall not exceed the cost of correcting defects in or replacing the Superwinch product, and upon expiration of the warranty period, all such liability shall terminate. The agents, dealers and employees of the seller are not authorised to make modifications to this warranty, or additional warranties binding on the seller. According additional statements, whether oral or written, do not constitute warranties and should not be relied upon.

Legal Remedies of Buyer. This Limited Warranty gives you specific legal rights, and you may also have other right which vary from State to State within the USA and from country to country. You may also have implied warranty rights. In the event of a problem with Limited Warranty service or performance, the buyer may be able to go to small claims court, a state court or a federal district court in the USA or to appropriate jurisdictions outside the USA.

Inquiries. Any enquires regarding compliance with the warranties provided herein may be addressed in writing to:

Superwinch Ltd. Superwinch Inc.

Union Mine Road, Pitts Cleave Winch Drive, Putnam Tavistock, Devon. PL19 0PW Connecticut 06260 U.S.A.

Tel: +44 (0) 1822 614101 **Tel:** 01 800 323 2031 **Fax:** +44 (0) 1822 615204 **Fax:** 01 860 963 0811

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