



# User's Manual

## SI Series, Hydraulic 8,000 & 10,000



Throughout this manual, you will find notations with the following headings:



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation or unsafe practice which, if not avoided, could result in injury.



Indicates an unsafe practice which, if not avoided could result in property damage.

The following symbols on the product and in the owner's manual are used.

Read the Winch Users Guide for additional safety symbols.

### WARNING



Read Owner's Manual



Use Hand Saver



Keep Clear of Winch Rope and Hook While Operating



Never Use Winch to Lift People



Never Use Winch to Hold Load In Place

## ***Safety Precautions***

***READ AND UNDERSTAND THIS MANUAL BEFORE INSTALLATION AND  
OPERATION OF YOUR SUPERWINCH***

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# 1. INTRODUCTION

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From all of us at Superwinch, “thank you.” We’ve built this winch to perform and we’ve built this manual to help you get the most from your Superwinch.

Please read and understand this owner’s manual before installing your SI Series winch. Your industrial 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 Hydraulic Industrial winch to minimize this possibility; however, your safety ultimately depends on your caution when using the product.

Pay particular attention to the caution notes preceded with the symbol shown here. The notes contain advice for your safety and protection.

Please Note: The Superwinch SI Series winches are designed for total reliability. This winch is not designed to be used in hoisting applications and Superwinch does not warrant it to be suitable for such use.

## WARNING, CAUTIONS AND NOTES

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These warnings, cautions and notes are given throughout these instructions in the following forms:

**The following symbols on the product and in the owner’s manual are used.  
Read the Winch Users Guide for additional safety symbols.**



## REPAIRS AND REPLACEMENTS

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### **NOTICE**

Before contacting Superwinch or your nearest authorized Superwinch dealer, please have the following information:

Part Number:

Serial Number of the Winch:

## POISONOUS SUBSTANCES

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### **! DANGER**

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

## SYNTHETIC RUBBER

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### **! CAUTION**

Many 'O' ring seals, flexible pipes and similar items, when subjected to fire or heat can become highly corrosive. Handle with seamless industrial gloves only. Should skin contact occur, remove contaminated clothing immediately and obtain medical assistance without delay.

## RECYCLING AND THE ENVIROMENT

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### **! WARNING**

It is illegal to dispose of used oil in the ground, down sewers or drains, or into waterways.

Dispose of used oil through an authorized waste disposal contractor or recycling center. If in doubt, contact your local authority for advice on how to dispose of the oil or disposal facilities.

## 2. GENERAL SPECIFICATION DATA

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Type:	Hydraulic Industrial
Gear Reduction:	Planetary
Gear Ratio:	16:1
Drum:	Steel Drum
Braking:	Integral bi-directional, full load holding, hydraulically released, spring applied brake.
Load Control:	Optional Superblock Load Control Valve provides dynamic brake to give a controlled stop on winch-out, under load. Brake opening also assisted by Superblock.
Freespool:	Operated either by an ergonomically designed handle, a cable system, or by integral pneumatic device. Can be mounted to winch side or top.
Mounting:	Designed to meet most industry standard dimensions, 4 ½" x 10" (254mm x 114.3mm). See 4) Winch Installation section of this manual for more information.
Rope:	

### HYDRAULIC SYSTEM RECOMMENDATIONS

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Note: These parts are listed as minimum expectations for the Superwinch SI Series to perform to its fullest.

System Type	Open system with filtered return line
Relief Valve	Set at winch operating pressure
Pump	A max oil supply of 15 gallons per minute (57 Liters/ per minute) at top motor RPM. The pump must be capable of delivering a pressure of 2320 PSI or 160 bar.
Reservoir	Must be fitted with an oil filler device comprising of a strainer, an air filter, and a dip stick. The capacity of the tank should be at least 15.8 gal (60 L). 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. Typical viscosity rating of 150 – 175 CST at 100 degrees C
Hoses	Hoses should have a working pressure of 2900 psi (200 bar) or greater. Pressure and flow loss is increased as hose length increases and/or bore

sizes decreases. Pressure and return lines in excess of 11.5 ft. (3.5 m) should be compensated with an increase in nominal bore size.

Control Valve	4- way, 3- position self-centering with ports A & B to tank in the neutral position and built in relief valve. The relief valve must be set at the winch operating pressure. The valve should be mounted as close to the winch as possible.
Load Control Valve	A load control valve provides dynamic braking to give a controlled smooth stop on winch-out under load.
Hydraulic Motor	1/2" SAE O-ring boss ports
Oil Suction Strainer Rating	Approx. 250 microns
Return line Filter Rating	10 to 40 microns

### 3. HYDRAULIC SYSTEM INSTALLATION

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#### INSTALLATION

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It is vital that all hose lengths are kept to a minimum. Pressure and flow loss is increased as hose length increases and/or bore size decreases. Pressure and return lines in excess of 11.5 ft. (3.5m) should be compensated with an increase in bore size.



As a general rule: All installation work on a hydraulic system should prioritize cleanliness and accuracy to insure the hydraulic system functions properly.

#### HYDRAULIC CIRCUITS

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## WITH LOAD CONTROL

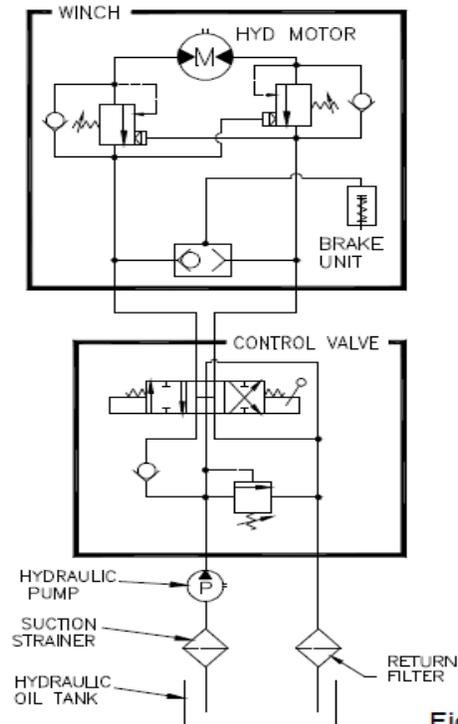


Fig. 2a

## 4. WINCH INSTALLATION

### MOUNTING

The figures below show the mounting dimensions for the Hydraulic Superwinch SI 8,000 & 10,000. The Superwinch SI Series can be mounted foot down (see below) or in a traditional foot-forward stance.

Due to the rating of these winches:

- Insure mountings are secure.
- Use only included hardware: M12 X 1.25 Grade 8 high tensile steel bolts
- Remember that the winch is only as strong as the plate and hardware it is mounted to.

**NOTICE**

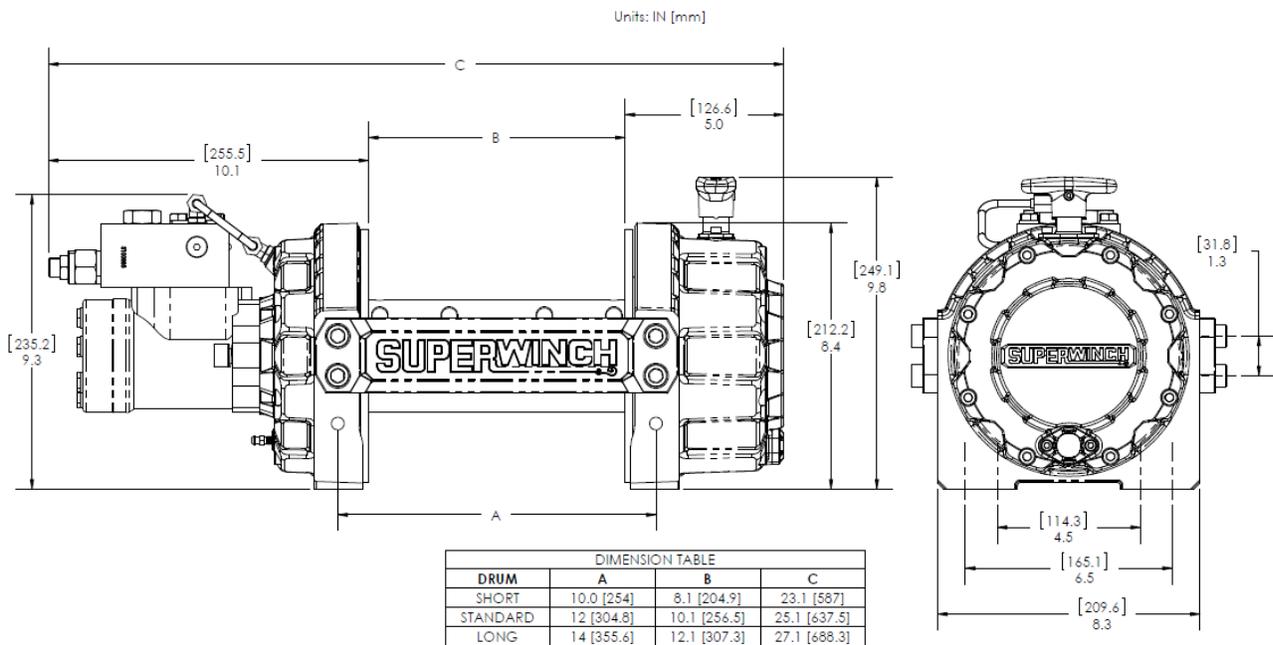
**Important: All eight mount holes should be used.** Use only the threaded holes provided, DO NOT drill and tap new holes in the winch. DO NOT weld the winch or any parts of the winch to the mounting plate.



### Precautions for foot down mounting

1. The winch must be bolted to at least a 1/4" (6mm) steel plate.
2. All four mounting holes in the bottom of each supporting casting must be used.

### MOUNTING DIMENSIONS



### After Mounting Check

After mounting and tightening all mounting bolts, place the winch in freespool and check the drum rotation. If the winch is mounted incorrectly, it may bind causing poor freespooling and decreased winch performance.

**Binding drum?** If the drum does bind, loosen all mounting bolts and rotate the drum once again to see if it free rotates. Tighten the bolts one at a time, slowly, checking the drum rotation until the winch is securely fastened. If the drum continues to bind, it could be that one or more of the mounting system's holes are out of position.

## 5. ROPE SELECTION/INSTALLATION

### SELECTION:

If your winch came without rope, please refer to the chart below on the diameter and length of cable/rope minimum and maximum requirements:

<b>SI 8,000</b>	<b>STANDARD DRUM</b>		<b>WIDE DRUM</b>		<b>NARROW DRUM</b>	
Model Designation	<b>SI- 8K Hydraulic Standard Drum J706</b>	<b>SI- 8K Hydraulic Standard Drum EN</b>	<b>SI 8K Hydraulic WIDE Drum J706</b>	<b>SI 8K Hydraulic WIDE Drum EN</b>	<b>SI 8K Hydraulic NARROW Drum J706</b>	<b>SI 8K Hydraulic NARROW Drum EN</b>
Part Number	S100419	S100428	S100425	S100434	S100422	S100431
Recommended Rope Diameter	3/8" / 9.5mm	3/8" / 9.5mm	3/8" / 9.5mm	11mm	3/8" / 9.5mm	11mm
Drum Capacity Maximum	169' / 51.5m	169' / 51.5m	202' / 61.5m	51.7m	135' / 41.1m	51.7m
Drum Diameter	3.5" / 88.9mm	3.5" / 88.9mm	3.5" / 88.9mm	99mm	3.5" / 88.9mm	99mm

<b>SI 10,000</b>	<b>STANDARD DRUM</b>		<b>WIDE DRUM</b>		<b>NARROW DRUM</b>	
Model Designation	<b>SI- 10K Hydraulic Standard Drum J706</b>	<b>SI 10k Hydraulic Standard Drum EN</b>	<b>SI 10K Hydraulic WIDE Drum J706</b>	<b>SI 10k Hydraulic WIDE Drum EN</b>	<b>SI 10K Hydraulic NARROW Drum J706</b>	<b>SI 10k Hydraulic NARROW Drum EN</b>
Part Number	S100420	S100429	S100426	S100435	S100423	S100432
Recommended Rope Diameter	3/8" / 9.5mm	11mm	3/8" / 9.5mm	11mm	3/8" / 9.5mm	11mm
Drum Capacity Maximum	169' / 51.5m	51.7m	202' / 61.5m	51.7m	135' / 41.1m	51.7m
Drum Diameter	3.5" / 88.9mm	99mm	3.5" / 88.9mm	99mm	3.5" / 88.9mm	99mm



Use caution when selecting/installing/using winch line. Incorrect selection/installation can lead to part damage. Follow these instructions.

Wire Rope: Wire rope must have a steel core.

Synthetic Rope: Superwinch recommends certified Dyneema synthetic ropes.

## INSTALLATION:

1. Unwind the rope from the spool and lay it out along the ground with the tapered end nearest to the winch. **NEVER** wind the rope straight onto the drum from a coil.
2. Disengage the freespool
3. Insert the tapered end of the rope into the cross-hole in the end of the drum and secure by tightening the setscrew. Synthetic rope only: insert tapered end of rope into the cross-hole and run across drum. Tape rope down and spool 5-6 wraps over the taped rope end.
4. Re-engage the freespool.
5. Carefully run the winch in the “Winch In” direction. Keeping tension on the rope. Spool 5 or 6 wraps of rope neatly onto the drum.
6. Apply moderate tension (approx. 1,500 lbs. or 680 kg to the rope). Carefully run the winch in the “Winch In” direction. Ensure the layers are neatly wrapped onto the drum. This will minimize damage to the lower layers of rope when a load is applied.

## PULLING OUT THE ROPE

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Insure no load is on the winch line then disengage the freespool. With a pair of gloves on, pull out the rope and secure it to an anchor or load. Check that there are at least 5 turns of rope remains on the drum. Re-engage the freespool.

## 6. FREESPOOL OPERATION

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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 cable.

**NOTE:** The winch is designed such that it cannot be freespoiled when the drum is under load.

## MANUAL FREESPOOL OPERATION

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Insure no load is on the winch line. Note: Always use gloves when working with winch rope.

1. To disengage the freespool (if engaged) pull up and rotate the clutch level to the “Disengaged” position as shown below. If there is a load on the winch, the clutch lever

may not turn easily. **DO NOT FORCE THE CLUTCH LEVER.** Release tension on the winch, by winching out hydraulically.

2. Pull the cable out by hand, but leave at **least** 5 wraps on the drum.
3. Engage the freespool by rotating the clutch lever to the “Engage” position, see the figure below.



**DO NOT ATTEMPT to pull a load until the drum is properly engaged.**

4. Attach the load
5. Operate the winch.

## 7. TIPS FOR EXTENDING THE LIFE OF YOUR WINCH

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### 1. KEEP A TIGHTLY WOUND ROPE DRUM

Do not allow the wire rope to become loosely- wound. A loosely-wound drum allows the rope, under load, to work its way down into the layers of rope, cause it to bind and possibly damage the rope.

### 2. USE A PULLEY BLOCK AND SHACKLET FOR HEAVY LOADS

To maximize the winch and rope life, use a pulley block and shackle to double line heavier loads.

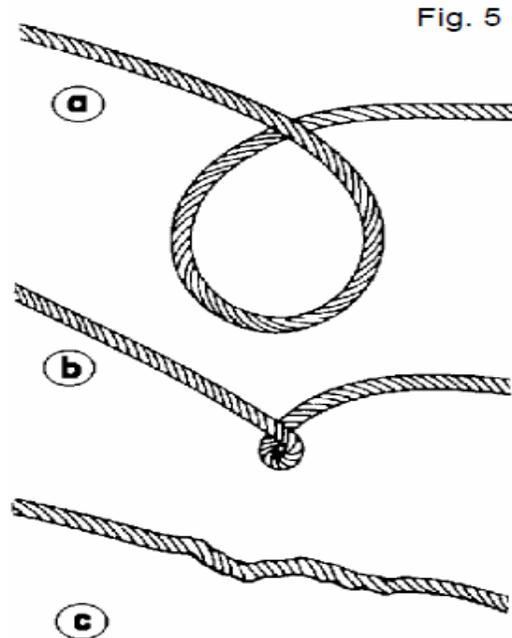
3. The pull required to start a load moving is often must greater than the pull required to keep it moving. **AVOID FREQUENT STOPPING AND STARTING** during a pull.

### 4. PREVENT KINKS IN THE WIRE ROPE BEFORE THEY OCCUR

(Fig. 5a) This is the start of a kink. At this time, the wire rope should be straightened.

(Fig. 5b) The wire rope was pulled and the loop has been tightened to a kink. The wire rope is now permanently damaged and must be replaced.

(Fig. 5c) This is a result of kinking at different points, in each strand under a great load. This will reduce the load capacity of the wire rope. The wire rope must be replaced.



## 8. MAINTENANCE & SERVICING

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### LUBRICATION

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**Freespool Handle** (manual freespool version) - No need for lubrication, check to make sure the freespool handle and shaft are free of debris.

**Drum Bearings** – Drum bearings are self-lubricating, no need for lubrication.

**Gearbox** – The gearbox is pre-lubricated from the factory. No need for lubrication

### MAINTENANCE

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#### After the first pull of the winch:

Check the tightness of the mounting bolts and hydraulic connections.

#### Monthly and Annually:

Check the mounting bolts of the winch and the hydraulic connections. Make sure all connections and bolts are tight. Check the cable for any kinks and breaks in the cable, if any are found, replace cable before use.

### SERVICING

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Superwinch recommends factor-approved servicing only. Contact Superwinch for authorized service centers.

## 9. HYDRAULIC SYSTEM TROUBLESHOOTING

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Most hydraulic system failures follow the same pattern- a gradual or sudden loss of pressure or flow with a resulting loss of power. Any one of the systems' components may be at fault. By following this step- by -step procedure, the trouble can be isolated in a short time.

<u>Condition</u>	<u>Possible Cause</u>	<u>Operation</u>
<b>System Inoperative</b>	No Oil in system	Fill system and check for leaks
	Insufficient oil in system	Fill system and check for leaks
	Wrong oil in the system	Refer to manufacturers' specifications of the hydraulic pump
	Filter dirty or clogged	Drain oil and replace filter. Check for leaks
	Oil Line restriction. Oil lines dirty or collapsed.	Replace damaged hoses. Change oil
<b>System Operates Erratically</b>	Leakage	Check all components, particularly the relief valve, for proper settings.
	Air in the system	Check the suction side of the system for leaks. Repair
	Cold Oil	Allow System to warm- up period
	Dirty or damaged components	Clean or repair as necessary
<b>System Operates Slowly</b>	Restriction in filters or lines	Clean and/or replace elements or lines
	Oil viscosity is too high or cold oil	Allow oil to warm up before operating or change oil to a proper viscosity.
	Low Pump drive speed	Increase engine speed, refer to the pump owner's manual
	Low Oil Level	Check reservoir and add oil as necessary
	Improper adjustments and Oil Leaks	Check relief valves, etc. Adjust per manual of pump. Tighten all fittings.

**Overheating of Oil in the system**

Oil is passing through the relief valve for an excessive amount of time

Return control valve to neutral when not in use, allow to cool down

Incorrect oil, low oil, dirty oil.

Use recommended oil, fill reservoir, clean oil, replace filter

Excessive component internal leakage

Repair or replace components as necessary. Check system pressure

Malfunctioning oil cooler

Clean or repair

Insufficient heat radiation

Clean dirt and mud from the oil cooler and other components

**Foaming of the Oil**

Incorrect, dirty or low oil

Replace, clean or add oil as needed

Air leaks

Tighten all fittings and check suction line

**Load Moves with Control Valve in Neutral**

Control valve not centering when released

Check for spool binding and repair

Control valve handle is not tight enough

Tighten handle and make sure the valve is centering right

**Control Valve Binding**

Valve linkage misaligned

Repair

Valve Damaged

Replace

**Drum will not rotate at all**

Winch is not mounted squarely

Checking mounting. Refer to WINCH mounting page

Brake not disengaging

Check shuttle valve operation. Check hose for leakage. Check port for blockage. Disassemble & inspect brake

**Winch runs slow**

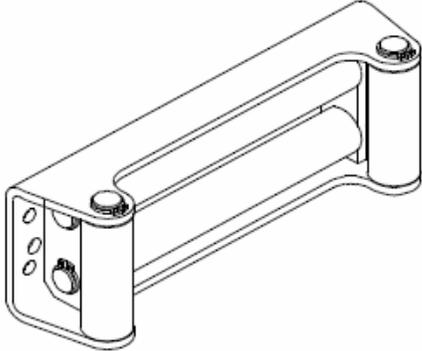
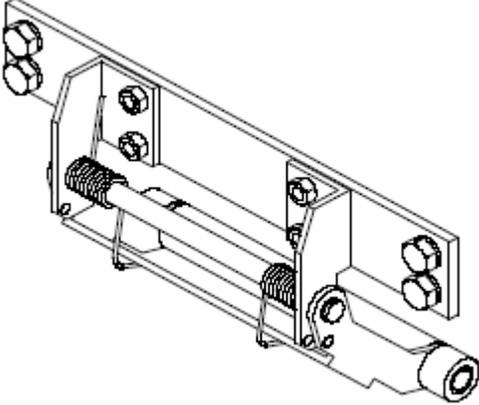
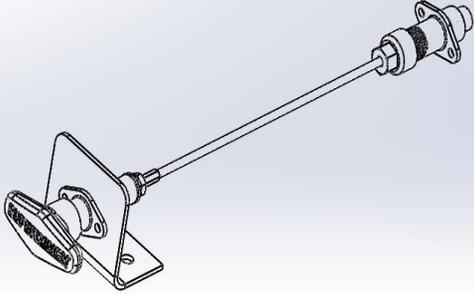
Low flow rate

Check flow rate. See hydraulic systems flow spec page

Brake does not fully disengage

Check to make sure pressures are high enough to release the brake

## 10. ACCESSORIES

 <p><b>Pulley Block</b> Part Number: 7755 Can double pulling power</p>	 <p><b>Roller Fairlead</b></p> <ul style="list-style-type: none"> <li>• Standard Drum P/N: S100506</li> <li>• Short Drum P/N: S100507</li> <li>• Long Drum P/N: S100508</li> </ul>
 <p><b>Cable Tensioner</b> Standard Drum Part Number – S100500 Short Drum Part Number – S100501 Long Drum Part Number – S100502</p>	 <p><b>Cable Clutch</b> 2' Cable Clutch Part Number – S102254 6' Cable Clutch Part Number – S100514</p>
<p><b>Air Clutch</b> Air Clutch Small Frame Part Number – S100512</p>	

## 11. WARRANTY

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### Superwinch Limited Warranty Valid World Wide

**LIMITED WARRANTY.** Superwinch (“Seller”) warrants to 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 in lieu of all other warranties, whether oral or written, express or implied.

**LIMITED WARRANTY PERFORMANCE PROCEDURE.** Upon discovery of a defective Superwinch product, contact the Seller or any Factory Authorized 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 Authorized Agents may make reasonable charges for parts and labor for repairs 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 herewith; 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 construed 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. **Incidental and Consequential Damages.** SUBJECT TO SELLER’S LIMITED WARRANTY OBLIGATIONS SET FORTH HEREIN, SELLER SHALL NOT BE RESPONSIBLE FOR INCIDENTAL DAMAGES OF ANY KIND, OR FOR 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 INCIDENTAL 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 include, but is 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 authorized to make modifications to this warranty, or additional warranties binding on the Seller. Accordingly, 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 rights 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.

**INQUIRES.** Any enquiries regarding compliance with the warranties provided herein may be addressed in writing to the address below.

**13-1 WARRANTY, Superwinch, 20750 S.W. 115<sup>th</sup> Avenue, Tualatin, OR 97062. U.S.A.**