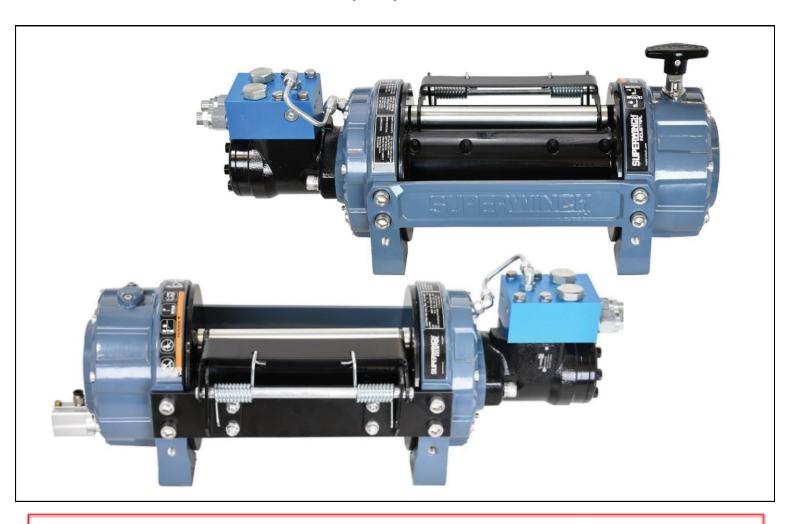


SI Series, EN14492-1 Planetary Hydraulic 8000 lb (35.58 kN) Planetary Hydraulic 10000 lb (44.45 kN) Planetary Hydraulic 12000 lb (53.38 kN



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

DANGER

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

AWARNING

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

ACAUTION

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

NOTICE

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

The following symbols on the product and in the owners manual are used:



Hand Saver.



Keep clear of Winch Rope and Hook while operating.



Lift or Move People.



Never use Winch to Hold Load in Place.

Read the Winch Users Guide for additional safety symbols



Westin Automotive Products 320 W. Covina Blvd.
San Dimas, CA 91773
Tel: (800) 323-2031

EC DECLARATION OF CONFORMITY / EU KONFORMITÄTSERKLÄRUNG DECLARATION DECONFORMITE EUROPEENNE / EU CONFORMITEITSVERKLARING

We hereby declare that the following Winch fulfils all the relevant provisions of the following EU Directives; I. Wir redizer in industinger Verantoriung, das at logitander will seed the insteadings the Berfamment folgender or U.E. Ethebitains or fullen; I. Yous soussignis dictarous sous note seable et unique responsabilité que le Treail suivants remplissent toutes le dispositions concernant les directives européennes suivantes; I. Wij verklarren hierbij dat de volgende Ure is ouverklarren hierbij dat de volgende Ure is ouverklarren hierbij dat de volgende Ure is ouverklarren hierbij dat de volgende Ure is ouverklarren.

2006/42/EC Machinery Directive / Maschinerichtlinie / Machine richtlijn 2004/108/EC EMC Directive Noise Emission in the Environment 2000/14/EC

Winch model S100430 - INDUSTRIAL - 12-W-HY-1S-BSD-EN14492

Power Rating : Hydraulic Winch Certified EU rating WLL : 53.4 kN (12000lbs)

Relevant standards upon which conformity is declared include: Relevante Normen and due Konformitist credits wird behabites: I. Ja précide conformitie increas warson de conformite is veridaerd, affin included:

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: Synthetic Rope : 11 mm (0.43 inch) : 106.8 kN : 2 SK 75/78/99 : 24.5 m (80.4 ft) : Wire Rope : 11 mm (0.43 inch) : 106.8 kN : 1960 N/mm2 : 25.7 m (84.3 ft) Minimum Breaking Force Minimum Tensile Grade Maximum Recommended Length Recommended Rope Diameter

Director of Engineering Jan 31st 2022 Jeremy Lanini Position Date (mr) Signed:

Press type: The certificade copies the winch and rope only and not the insulation, which should be tablect of further test and certification.
Warning (The winch despiced primarily for internalizances topolocious, pelling and handing but and despiced to be used in lifting or beloning applications. Superveying does not warrant to be suitable for und han. The winch must never be used to lift or more people.



Westin Automotive Products 320 W. Covina Blvd. San Dimas, CA 91773 Tel: (800) 323-2031

EC DECLARATION OF CONFORMITY / EU KONFORMITÄTSERKLÄRUNG DECLARATION DECONFORMITE EUROPEENNE / EU CONFORMITEITSVERKLARING

We hereby declare that the following Which fulfils all the relevant provisions of the following EU Directives; IVW erthiren in inclining Verantorrung, dass die objected with end the classified Bestimmungen der folgenden in PLE-Richtlinien erfüllen; I/Nous sousziprés déclarous sous notre soule et unique responsabilité que le Trentil anivants remplissent toutes les dispositions concernant les directives européannes suivantes; I/Wij verklaren hierbij dat de volgende lerie ourshielden en perpoducerent in overveustemming met de volgende norman norman en voorschriften:

2006/42/EC Machinery Directive / Maschineurichtlinie / Machine richtlijn 2004/108/EC EMC Directive 2000/14/EC Noise Emission in the Eavironment

Winch model S100429 - INDUSTRIAL-10-W-HY-1S-BSD-EN14492

Power Rating : Hydraulic Winch Certified EU rating WLL : 44.5 kN (10000lbs)

Relevant standards upon which conformity is declared include: / Relevante Normen auf die Konformität erklärt wird beinhalten: / La pierken conformit inclusies in normen warzop de conformitet is verklaard, zijn inclusies:

EN 14492-1.2006

BS EN 1429-1.2006

BS EN 1585, Part 42102-4.12006 Whire Ropes have a steel core, are 6 x 36 or 6 x 19)

BS EN 1850 12100

Safety of Machinery – Basic Concepts

SE EN 1850 14121

Safety of Machinery – Basic Concepts

SE EN 1850 14131

Safety of Machinery – Electrical

BEEN 61600 Electromagnetic compatibility (EMC) Generic standards
BS EN ISO 1982 Uniform and a partial management systems. Requirement Certificate no 441583
BS EN ISO 1982 ELEC ASSOSITE CONTRACTOR TO THE electromagnetic Compatibility Directive Amendments Systems. Result of the Compatibility Directive Amendments Systems.

: Synthetic Rope : 11 mm (0.43 inch) : 89.0 kN : 2 SK 75/78/99 : 24.4 m (80 ft) : Wire Rope : 11 mm (0.43 inch) : 89.0 kN : 1960 N/mm2 : 25.7 m (84 ft) Minimum Breaking Force Minimum Tensile Grade Maximum Recommended Length nended Rope Diameter Rope Compatibility:

Director of Engineering Jan 31st 2022 try Date Jerenay Lanini Name :

Phase Note 7 file certificate covers the winch and rope only and and the installation, which about by subject of further text and excellentees. Warring 1706 and the designed primarely for intermitment application, pulsa and having the and edispeted to was feel in fitting or habiting applications. Supervinch does not warrant to be mainlike for each sur. This winch must serve be used to lift or more people.

S103287 Rev B

SUPERWINCH

9

Westin Automotive Products 320 W. Covina Blvd. San Dimas, CA 91773 Tel: (800) 323-2031

EC DECLARATION OF CONFORMITY / EU KONFORMITÂTSERKLÂRUNG DECLARATION DECONFORMITE EUROPEENNE / EU CONFORMITETISY PERKLARING

We hereby declare that the following Winch fulfils all the relevant provisions of the following EU Directives; VMr refairen in indiagral Veranneving, das de loggender Wilse alle dischaligher Bedrimmente folgender and extended the dischaligher der folgender EU-Liktchilarien erfilms; // Nous soussignés déclarous sous notre seule et unique responsabilité que le forgende result and sous sous actes seule et unique responsabilité que le Treati suivants remplissent toutes les dispositions concernant les directives européennes suivantes; // Wij verkiarren hierbij dat de volgende lier for norriskate du aggrondeuerd in overeenstemming met de volgende une norme en voorschaffen.

2006/42/EC Machinery Directive / Maschineurichtlinie / Machine richtlijn 2004/108/EC EMC Directive 2000/14/EC Noise Emission in the Environment

Winch model S100429 - INDUSTRIAL-10-W-HY-1S-BSD-EN14492

Winch Certified EU rating WLL : 44.5 kN (10000lbs)

Relevant standards upon which conformity is declared include. Relevante Normen auf dis Konformität erklär wird beinhalten: La présente conformité indus les normes d'applications suivantes; / Relevante normen warop de conformiteit is verklaard, zijn inclusied: EN 14492-124006.

: Synthetic Rope : 11 mm (0.43 inch) : 2 SK 75/78/99 : 24.4 m (80 ft) : Wire Rope : 11 mm (0.43 inch) : 89.0 kN : 1960 N/mm2 : 25.7 m (84 ft) Minimum Breaking Force Minimum Tensile Grade Maximum Recommended Length Rope Compatibility:
Recommended Rope Diameter

Director of Engineering Jan 31st 2022 Position Date Jerenay Lanini [his

Pleas Nate ; filsi cerdificated covers the wisch and rope only and not the installation, which should be subject of further test stati cerdification. Wranting 150 feath shedged primarily for intermitient applications, population, post has basiling but and designed to be used in litting or beinding applications, Supervinted does not warrant to be multible for reach ms. The winds must never be used to little or prospit.

Declaration of Conformity S112 Declaration of Conformity S110 Declaration of Conformity S18,

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

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MAINTENANCE

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INTRODUCTION 1.

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. You 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

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

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

▲ DANGER

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 owners manual are used:



Always use a Manual. Hand Saver.



Keep clear of Winch Rope and Hook while operating.



er use Winch to Lift or Move People.



Never use Winch to Hold Load in Place.

Read the Winch Users Guide for additional safety symbols

REPAIRS AND REPLACEMENTS



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

Part Number:

Serial Number of the Winch:

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 (among 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 industrial gloves only. Should skin contact occur,

remove contaminated clothing immediately and obtain medical assistance without delay.

RECYCLING AND THE ENVIROMENT



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.

SI8 8000 lb (35.58 kN)

SI-8 Specifications		
Pressure (maximum)	2200 psi (151.7 Bar)	
Flow (maximum)	15 GPM (57 L p/m)	
Lubrication (gearbox)	Synthetic Grease	
Compliance	SAE J706 EN14492-01	
Gearbox	2 Stage Planetary 16:1	
Motor	80 cc Hyd Gear Motor	
Brake (hydraulic release)	Spring applied multi disk	
Load Block Valve	Bidirectional Brake Control	
Free spool	Manual or Pneumatic	
Drum EN Specification	W 256.5 mm x Ø 100 mm	
Weight (boxed shipping)	49 kg (no rope)	
Wire rope	10 mm	
Rope Length	45 Metre (maximum)	

Line Speed Per Layer 15 G p/m (57 L p/min)		
Layer 1	15 M p/m (49 ft p/m)	
Layer 2	18 M p/m (58 ft p/m)	
Layer 3	21 M p/m (68 f t p/m)	
Layer 4	24 M p/m (78 ft p/m)	
Layer 5	27 M p/m (88 ft p/m)	

Line Pull Per Layer 15 G p/m (57 L p/min at 2100 psi))		
Layer 1	8000 lb (35.58 kN)	
Layer 2	6710 lb (29.85 kN)	
Layer 3	6035 lb (26.85 kN)	
Layer 4	5310 lb (23.62 kN)	
Layer 5	4725 lb (21.02 kN)	

SI10 10000 lb (44.45 kN)

SI-10 Specifications		
Pressure (maximum)	2000 psi (136 Bar)	
Flow (maximum)	15 GPM (57 L p/m)	
Lubrication (gearbox)	Synthetic Grease	
Compliance	SAE J706 EN14492-01	
Gearbox	2 Stage Planetary 16:01	
Motor	125 cc Hyd Gear Motor	
Brake (hydraulic release)	Spring applied multi disk	
Load Block Valve	Bidirectional Brake Control	
Free spool	Manual or Pneumatic	
Drum EN Specification	W 256.5 mm x Ø 100 mm	
Weight (boxed shipping)	49 kg (no rope)	
Wire rope	7/16" (11mm)	
Rope Length	45 metre (maximum)	

Line Speed Per Layer 15 G p/m (57 L p/min)		
Layer 1	9.5 M p/m (31 ft p/m)	
Layer 2	11 M p/m (37 ft p/m)	
Layer 3	14 M p/m (45 ft p/m)	
Layer 4	16 M p/m (52 ft p/m)	
Layer 5	18 M p/m (58 ft p/m)	

Line Pull Per Layer 15 G p/m (57 L p/min at 2000 psi))		
Layer 1	10000 lb (44.4 kN)	
Layer 2	8393 lb (37.3 kN)	
Layer 3	7232 lb (32.1 kN)	
Layer 4	6352 lb (28.2 kN)	
Layer 5	5664 lb (25.2 kN)	

SI2 12000 lb (53.38 kN)

SI-12 Specifications

Pressure (max operating) 2050 psi (158 Bar)
Flow (maximum) 15 GPM (57 L p/m)
Lubrication (gearbox) Synthetic Grease

Compliance SAE J706 & EN14492-01
Gearbox 2 Stage Planetary 16:01

Motor 160 cc Hyd Gear Motor

Brake (hydraulic release) Spring applied multi disk

Load Block Valve Bidirectional Brake Control

Free spool Manual or Pneumatic

Drum EN SPEC W 256.5 mm x ø 100 mm

Weight (boxed shipping) 53 kg (no rope)

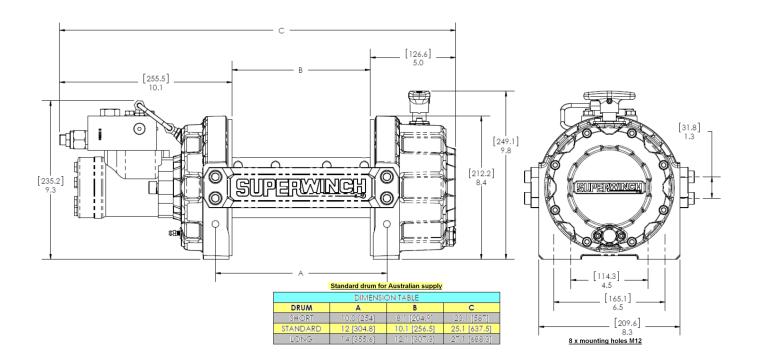
Wire rope 12 mm recommended Rope Length 25 metre (maximum)

Line Speed Per Layer 15 G p/m (57 L p/min)

Layer 1 8.5 M p/m (28 ft p/m)
Layer 2 9.4 M p/m (31 ft p/m)
Layer 3 10.2 M p/m (34 ft p/m)

Line Pull Per Layer 15 G p/m (57 L p/min at 2050 psi))

Layer 1 12000 lb (53.37 kN)
Layer 2 10000 lb (44.4 kN)
Layer 3 8573 lb (38.1 kN)



HYDRAULIC SYSTEM RECOMMENDATIONS

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 strop 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

INSTALLATION



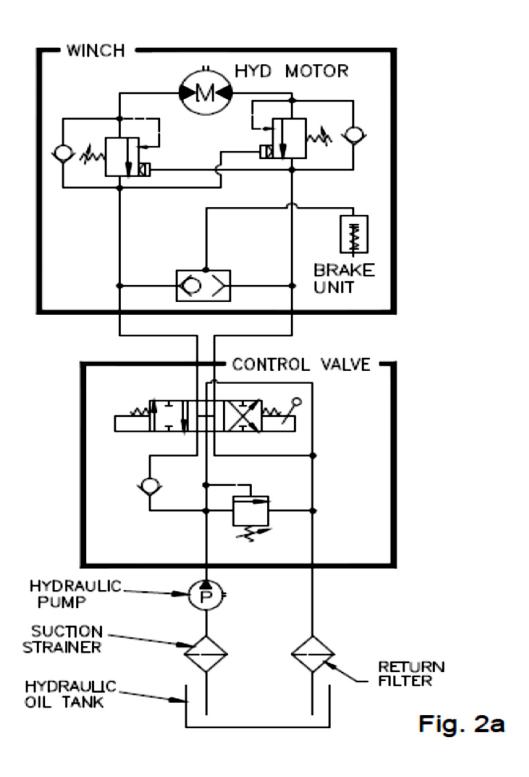
It is vital that all hose lengths are kept to a minimum. Pressure and flow loss is increased as hose length increases and/or bore size decreases. Pressure and return lines in excess of 11.5 ft. (3.5m) should be compensated with an increase in bore size.



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

WITH LOAD CONTROL



4. WINCH INSTALLATION

MOUNTING

The Figures below show the mounting dimensions for the Superwinch SI 8,10, 12, 15 & 18. The Superwinch SI8,10 & 12 serries is mounted 8 bolts only to dimensions shown in foot down (see below) or in a foot forward.

Due to the rating of these winches:

- Insure mountings are secure.
- Use Only M12 Grade 8 High tensile steel bolts
- Remember that the winch is only as strong as the plate and hardware it is mounted to.

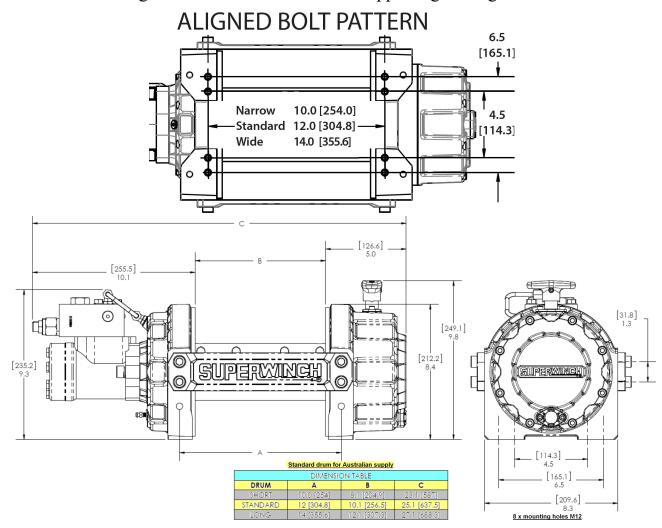


Important: All eight mount holes should be used. Use only the threaded holes provided, DO NOT drill and tap new holes in the winch. DO NOT weld the winch or any parts of the winch to the mounting plate.



Precautions for foot down mounting

- 1. The winch must be mounted to suitable steel plate suited to winch capacity
- 2. All mounting holes in the bottom of each supporting casting must be used



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 INSTALLATION**

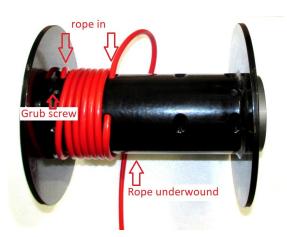


Use caution when installing/using winch line. Incorrect installation can lead to part damage. Follow these instructions.

Wire Rope: Wire rope must have a steel core.

Synthetic Rope: Superwinch recommends certified Dyneema synthetic ropes.

- 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.



Steel Rope Installation only EN drum

6. FREESPOOL OPERATION



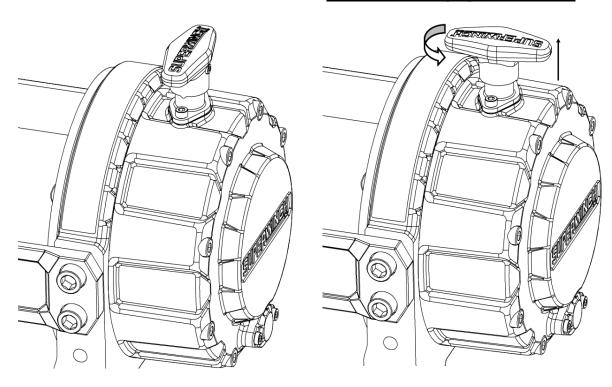
Avoid pulling a load at more than a 15 degree angle in relation to the winch. This will reduce wear and tear on the winch and cable.

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

To place the winch in freespool with use of manual disengage freespool, raise and rotate 90° As shown in disengaged diagram below.

Winch Engaged Position

Winch Disengaged Position



Pneumatic Freespool Option

A pneumatic freespool may be fitted to your Superwinch SI winch. Follow the same safety instructions as provided for the manual freespool option.

PULLING OUT THE ROPE



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.

Pneumatic Freespool Installation P/No S100512



Tools Required 4mm ball end Allen key

There are two 4mm socket head cap screws supplied with the S100512 pneumatic freespool, as required for installation. These are located as show in the picture.

IMPORTANT

To secure in tighten both screws fully to bring the S100512 into position.

It is important to then retighten both screw for the second time to fully secure.

Failure to properly secure will allow the o-ring to not fully seal. It can also allow the S100512 to loosen over time.

The S100512 pneumatic freespool can be mounted in various positions on the SI gearbox as shown in the image below.

There are two mounting holes in the gearbox housing, one at the end and one on the circumference.

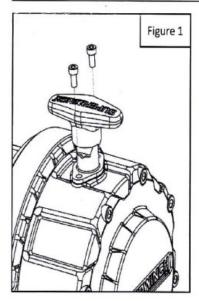
The blanking plug can be removed and located to the alternative mount bole. Retighten using instruction above.

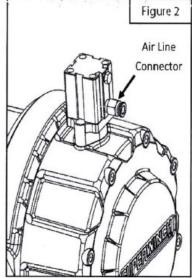
IMPORTANT

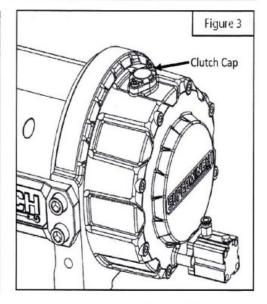
The gearbox housing can be rotated to create additional mount positions for the freespool.

This should done at the time of winch assembling or by an authorised dealer. Incorrect rotation may dislodge sealing rings, preventing freespool function. It can also allow moisture entry.

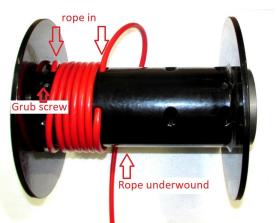
Unauthorised procedures will void warranty.







- 5. Connect an air line to the air line connector.
- 6. Apply air pressure to the air clutch to freespool the winch.



Steel Rope Installation Only EN Drum

7. TIPS FOR EXTENDING THE LIFE OF YOUR WINCH

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.

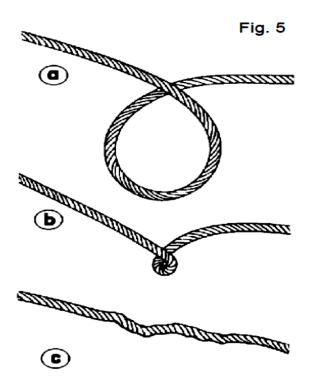
The pull required to start a load moving is often must greater than the pull required to keep it moving. AVOID FREQUENT STOPPING AND STARTING during a pull.

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.





SUPERWINCH SI INDUSTRIAL

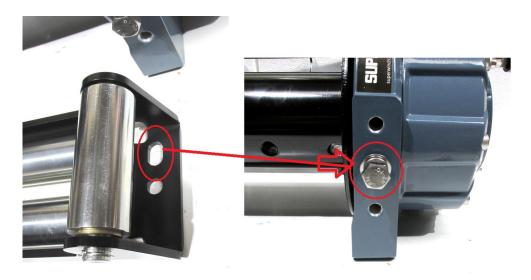
Roller Fairlead Installation

UNDERWOUND SI8, SI10 & SI12



The Superwinch SI Industrial roller is to be installed once the winch is mounted and secured into position.

You may then remove the front tie bar without risk of winch misalignment. The roller fairlead is used in place of the tie bar or reapply the tie bar above the roller using two bolts only.



The Superwinch SI Industrial roller is bolted to the second hole as indicated in the picture above.

The elongated hole of the roller fairlead frame is used to allow for positioning.

Secure the roller fairlead in position as close to the mounting floor as

possible.



MAINTENANCE & SERVICING

Your Superwinch SI winch will come pre lubricated from the factory ready to install.

Drum bearings and gearbox are lubricated with a recommended:

Shell Gadus synthetic lubricant.

Once installed and after initial use all mounting bolts and hose connections should be check to be tight and secure.

Daily

Check for any rope damage

<u>Steel Ropes</u>: If kinked, damaged, rusted or has broken strands must be replaced. <u>Synthetic Ropes</u>: If damaged, frayed or old and discoloured must be replaced.

Regularly

Check mounting bolts and hose connections. Making sure they are tight and secure.

Servicing

To extend the life of your winch. It is recommended that your winch be serviced at regular intervals based on usage or suitable time intervals.

After 50 hours of winching or a yearly service is recommended.

Servicing of your SI Superwinch should only be performed by an authorised service centre or service provider.

For correct continued performance and safety any replacement of parts must be genuine Superwinch approved parts.

For approved service providers check with Superwinch or

B&C Winches if you are in Australia

9. HYDRAULIC SYSTEM TROUBLESHOOTING

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.

Condition	Possible Cause	<u>Operation</u>
System Inoperative	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
	Leakage	Check all components, particularly the relief valve, for proper settings.
System Operates Erratically	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
	Restriction in filters or lines	Clean and/or replace elements or lines
System Operates Slowly	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.

9. **HYDRAULIC SYSTEM TROUBLESHOOTING**

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

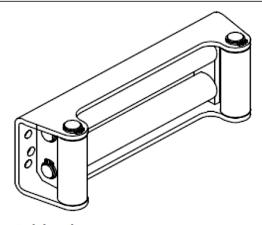
10. ACCESSORIES



Pulley Block

Part Number: 7755

Can double pulling power

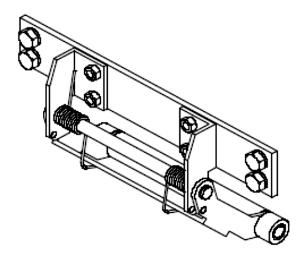


Roller Fairlead

• Standard Drum P/N: S100506

• Short Drum P/N: S100507

• Long Drum P/N: S100508



Cable Tensioner

Standard Drum Part Number – S100500 Short Drum Part Number – S100501 Long Drum Part Number – S100502

Air Clutch Free Spool P/No S100512



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:

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

13-1 WARRANTY

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