SUPERWINCH



OWNER'S MANUAL

INSTALLATION • OPERATION • MAINTENANCE **SAFETY PRECAUTIONS • REPAIR PARTS**

EP/EPi6.0 and EP/EPi9.0 12 & 24 Volt DC Electric Winch

▲ CAUTION

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

Superwinch, Ltd.

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INTRODUCTION

Thank you for purchasing an EP series winch from Superwinch. It has been designed and manufactured to provide years of trouble-free operation. We hope you will be pleased with its performance. If you are not, for any reason, please contact our Customer Service Department: (860) 928-7787 USA; +44 (0) 1822 614101 England.

When requesting information or ordering replacement parts; always give the following information:

- 1. Winch Part Number
- 2. Serial Number
- 3. Part Number
- 4. Part Description

Note: Winch specifications and equipment may vary from country to country.

The responsibility for safe installation and operation of this winch ultimately rests with you, the operator. Read and understand all safety precautions and operating instructions before installing and operating the winch. Careless winch operation can result in serious injury and/or property damage.

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



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. This notation is also used to alert against unsafe practices.

The following symbols on the product and in the Owner's manual are used:











Never u

to lift or move winch to holo people loads in place

Note: Indicates additional information in the installation and operation procedures of your winch.

Correct installation of your winch is a requirement for proper operation.

Please Note: Winch is designed primarily for intermittent applications. This winch is not designed to be used in hoisting applications and Superwinch does not warrant it to be suitable for such use. Please contact our Customer Service Department for further information.

Congratulations on your choice!

Superwinch is not responsible for printing errors inadvertently made in the production of this manual.

ROLLING LOAD CAPACITIES

		Slope				
Model		10% (6°)	20% (11°)	30% (17°)	100% (45°)	
EP/EPi 6.0	Lbs.**	29,410	20,760	15,460	7,710	
	kg**	13,340	9,140	7,010	3,500	
EP/EPi 9.0	Lbs.**	45,225	30,600	23,500	11,573	
	kg**	20,514	13,880	10,659	5,250	

Ratings assume a 10% coefficient of friction.

UNPACKING

This carton contains the following items. Please unpack carefully. **Read instructions before beginning.**

Description	Quantity
Winch assembly with wire rope	1
Handsaver	1
Remote switch	1
Clevis hook, roller fairlead, pulley block	1
Owner's manual	1

FEATURES

- **1. Electric Motor** 12V series wound and 24V series wound.
- **2. Braking** Automatic loadholding brake.

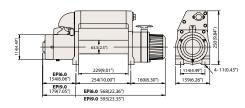
Drum - Fabricated steel

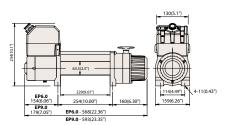
Freespool Clutch – Operated by an easy action lever which

disengages the ring gear to allow the wire rope to be pulled out without using electric power.

Remote Switch – 15' handheld pendant switch assembly.

DIMENSIONS





^{*} A 10% slope is a rise of one foot in ten feet. Slope in approximate degrees is also shown above

^{**} All loads shown are for single-line operation. Double-line operation with optional pulley block (p/n 7750A) approximately doubles capacity of winch.

INTERMITTENT DUTY

An electric winch is like any othe motor driven power tool such as an electric drill or saw. The electric motor should not be allowed to become excessively hot. Normal, precautions will extend the life of your motor. Keep the duration of pulls as short as possible. If the end of the motor becomes uncomfortably hot to touch, stop winching and allow the motor to cool down.

If the winch **A** CAUTION motor stalls. do not continue to apply power to the winch.

▲ CAUTION

Brake housing will get hot during extended power out operation.

PERFORMANCE

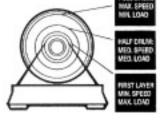
	EP/EPi 6.0			
Wire Rope Layer	Max. Pulling Capacity			
Layer	lbs.	kg		
1	6,000	2722		
2	5,465	2477		
3	5,000	2268		
4	4,670	2118		
5				

	EP/EPi 9.0			
Wire Rope Layer	Max. Pulling Capaci			
Layer	lbs.	kg		
1	9,000	4082		
2	8,190	3715		
3	7,500	3402		
4	7,010	3180		
5	6,570	2980		

Line Speed and Amp Draw									
			EP/EPi 6.0				EP/EP	i 9.0	
Load Lbs.	kg	Line S FPM	Speed* MPM	AMP 12V	Draw 24V	Line S FPM	peed* MPM	Amp 12V	Draw 24V
0	0	48	14.6	40	24	44	13.4	33	15
2,000	907	23	7	170	102	15	4.6	110	55
4,000	1814	13	4	350	210	11	3.4	200	100
6,000	2722	10	3.1	440	264	9	2.7	230	115
8,000	3629	NA	NA	NA	NA	7.5	2.3	260	130
9,000	4082	NA	NA	NA	NA	6.4	2	350	210

SPECIFICATIONS

	EP/EPi 6.0	EP/EPi 9.0
Working Load*	6000 lbs. (2722 kg)	9000 lbs. (4082 kg)
Wire Rope EP 6.0/9.0 EPi 6.0/9.0	100' x 21/64" 125' x 21/64"	
Motor Type	Series Wound	Series Wound
Motor Output 12V	3.6 HP	4.6 HP
Motor Output 24V	2.0 HP	2.6 HP
Clutch	Sliding Ring Gear	Sliding Ring Gear
Brake	Auto. Load-holding	Auto. Load-holding
Gear Ratio	156:1	156:1



4

GENERAL SAFETY INFORMATION

Your winch is a very powerful machine. Treat it with respect, use it with caution and always follow these safety guidelines.

▲ WARNING

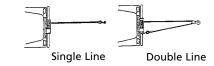
The responsibility for safeinstalla-

tion and operation of the winch and prevention of personal injury and property damage ultimately rests with you, the operator. There is no substitute for the use of good judgement and caution in operating a winch.

The wire rope **M** WARNING may break before

the winch stalls. For heavy loads, use a pulley block to reduce the load on the wire rope.

1. Do not maintain power to the winch if the motor stalls. Overloads can damage the winch and/or the wire rope and create unsafe operating conditions. FOR LOADS OVER 2/3 RATED CAPACITY, WE RECOMMEND THE USE OF THE OPTIONAL PULLEY BLOCK TO DOUBLE LINE THE WIRE ROPE (Figures 1). This reduces the load on the winch and the strain on the wire rope by approximately 50%. If attaching back to vehicle, attach to the frame or other load bearing part. The vehicle engine should be running during winch operation to minimize battery drain and maximize winch power and **speed.** If considerable winching is performed with the engine off, the battery may be too weak to restart the engine.



- 2. AFTER READING AND **UNDERSTANDING THIS** MANUAL, LEARN TO USE YOUR WINCH, After installing the winch, practice using it so you will be familiar with it when the need arises.
- 3. DO NOT "move" your vehicle to assist the winch in pulling a load. The combination of the winch and vehicle pulling together could overload the wire rope and the winch itself.
- 4. KEEP WINCHING AREA CLEAR. Do not allow people to remain in the area during winching operations. ALWAYS STAND CLEAR OF WIRE ROPE/HOOK AND WINCH. IN THE UNLIKELY EVENT OF ANY COMPO-NENT FAILURE IT'S BEST TO BE OUT OF HARM'S WAY.
- 5. INSPECT WIRE ROPE AND EOUIP-MENT FREQUENTLY. A FRAYED WIRE ROPE WITH BROKEN STRANDS SHOULD BE REPLACED **IMMEDIATELY.** Always replace wire rope with the manufacturer's identical replacement part (see Replacement Parts List). Periodically check the winch installation to ensure that all bolts are tight.
- 6. USE HEAVY LEATHER GLOVES when handling wire rope. DO NOT LET WIRE ROPE SLIDE THROUGH YOUR HANDS EVEN WHEN WEARING GLOVES.

Figure 1 5

^{*} Based on first layer performance

GENERAL SAFETY INFORMATION (CONT.)

7. NEVER WINCH WITH LESS THAN 5 TURNS of wire rope AROUND THE WINCH DRUM since the wire rope end fastener will NOT withstand a load. Your winch wire rope has a ten-foot red "warning indicator" on each end. The "warning indicator" at the winch end warns you that the wire rope is near or less than 5 turns. The "warning indicator" at the hook end of the wire rope warns you that the hook is approaching the winch. ALWAYS USE THE HAND-SAVER when guiding the wire rope in or out (see Figure 2). As you use your winch, the red paint will wear off due to normal use. When this happens, renew the red paint as it is a safety feature of the winch.



Figure 2

- 8. KEEP CLEAR OF WINCH,
 TAUT WIRE ROPE AND
 HOOK WHEN OPERATING WINCH. Never put your
 finger through the hook. If your
 finger should become trapped in
 the hook, you could be injured.
 Never guide a wire rope onto
 the drum with your hand.
- NEVER HOOK THE WIRE ROPE BACK ONTO ITSELF. You could damage the wire rope. Use a nylon sling (Figure 3).



Figure 3

10. Lay a heavy blanket or jacket over the wire rope near the hook end when pulling heavy loads (Figure 4). Should a wire rope failure occur, the cloth will act as a damper and help prevent the rope from whipping. Raise the hood of the vehicle for added protection.

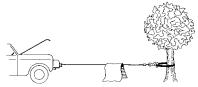


Figure 4

11. NEVER USE YOUR WINCH FOR LIFTING PEOPLE OR MOVING PEOPLE.



- 12. Your winch is not intended for overhead hoisting operations.
- 13. AVOID CONTINUOUS PULLS FROM EXTREME ANGLES as this will cause the wire rope to pile up at one end of the drum (Figure 5). This can jam the wire rope in the winch, causing damage to the wire rope or winch itself.

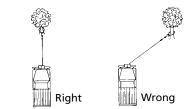
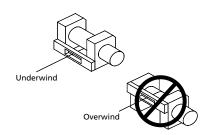


Figure 5

GENERAL SAFETY INFORMATION (CONT.)

- 14. NEVER OBSCURE THE WARNING INSTRUCTION LABELS.
- 15. Always operate winch with an unobstructed view of the winching operation.
- 16. Equipment such as tackle, hooks, pulley blocks, straps, etc. should be sized to the winching task and should be periodically inspected for damage that could reduce their strength.
- 17. NEVER RELEASE FREESPOOL CLUTCH WHEN THERE IS A LOAD ON THE WINCH.
- 18. STORE THE REMOTE PENDANT ASSEMBLY IN A SAFE PLACE when not in use to prevent use by children or other unauthorized persons who could injure themselves or others.
- 19. DO NOT OPERATE WINCH WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.
- 20. ALWAYS UNPLUG THE REMOTE PENDANT BEFORE WORKING IN OR AROUND THE FAIRLEAD OR WINCH DRUM (THE DANGER ZONE) so that the winch cannot be turned on accidentally.
- 21. When moving a load, slowly take up the wire rope slack until it becomes taut. Stop, recheck all winching connections. Be sure the hook is properly seated. If a nylon sling is used, check the attachment to the load.
- 22. When using your winch to move a load, place the vehicle transmission in neutral, set vehicle parking brake, and chock all wheels.

- 23. DO NOT USE THE
 WINCH TO HOLD
 LOADS IN PLACE. Use
 other means of securing loads
 such as tie down straps.
 Superwinch offers a wide variety
 of tie downs. Contact your local
 Superwinch dealer.
- 24. USE ONLY FACTORY APPROVED SWITCHES, REMOTE CONTROLS AND ACCESSORIES. Use of nonfactory approved components may cause injury or property damage and could void your warranty.
- 25. DO NOT MACHINE OR WELD ANY PART OF THE WINCH. Such alterations may weaken the structural integrity of the winch and will void your warranty.
- 26. DO NOT CONNECT WINCH TO EITHER 110 VOLT AC HOUSE CURRENT OR 220V MAINS AS WINCH BURNOUT OR FATAL SHOCK MAY OCCUR.
- 27. Never allow shock loads to be applied to winch or wire rope.
- 28. Always operate your winch in an underwound orientation only.



INSTALLATION

MOUNTING YOUR WINCH

WARNING mounting

can cause personal injury.

Improper mounting could damage your winch and void warrantv.

MINIMUM ELECTRICAL REQUIREMENTS

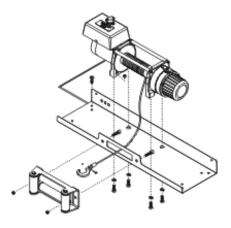
For 12 Volt winches, a 60 amp alternator and battery with 440 cold-cranking amperes capacity are the minimum recommended power sources. If the winch is in heavy use, an auxiliary battery is recommended.

Under some circumstances, it may be appropriate to install additional circuit protection devices (circuit breakers). If in doubt, seek appropriate advice.

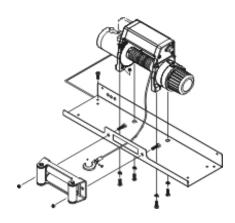
Superwinch recommends that all inch electrical systems can be readily and quickly isolated from their electrical supply in the event of an emergency. The winch electrical system should always be isolated when the winch is not in use.

- 1. Install mounting kit or structural support for winch.
- 2. Mount the winch to a mounting kit base plate or to the mount that you designed.

Do not sub-**▲** WARNING stitute anv strength grade weaker than SAE Grade 8 (ISO 10.9).



EP 6.0/9.0



EPi 6.0/9.0

▲ WARNING

Automobile batteries contain gasses which are flammable and

explosive. Wear eye protection during installation and remove all metal jewelry. Do not lean over battery while making connections.

3. Route the long red and black color coded wires to the battery. To ensure against insulation abrasion and/or cutting, apply several layers of electrical tape where wiring may come in contact with sharp parts on the vehicle. Attach the red color coded wire to the battery positive terminal, and reattach the terminal to the battery.

If your vehicle is equipped with side pole terminals, it may be necessary to obtain auxiliary side terminal bolts from your local auto parts dealer to make these connections.

Connect the black color coded wire to the battery negative terminal, then connect the terminal to the battery.

4. Turn the freespool clutch lever to the "free" position. Pull several feet of wire rope off the drum. Return the clutch lever back to the "Engage" position. Plug in remote pendant control. Push button momentarily to check wire rope drum rotation direction. If drum rotates in the wrong direction, recheck your wiring.

▲ CAUTION

To prevent unauthorized

use of the winch, remove pendant control and store in a clean dry area such as the glove box.

PENDANT OPERATION

Cable Out Cable In

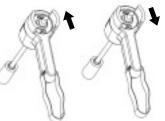


Figure 6

Figure 7

The handheld pendant switch activates a solenoid that activates power to the winch motor.

To connect the pendant control, remove the cover on the plug receptacle and insert the plug end of remote switch. The plug on the pendant control cord is keyed and will fit into the socket only one

The switch trigger returns to the "Off" position when released.

To change direction, move the toggle in the other direction.

A CAUTION

The switch assembly

must be kept free of dirt and moisture to ensure safe operation.

PULLING OUT THE WIRE ROPE

The wire rope has been installed on vour winch under minimal load at the factory. The wire rope must be respooled onto the drum under load so that the outer lavers will not draw down into the inner ones thereby damaging the wire rope.

Rotate the clutch lever to the "Free position as shown in Figure 8. If there is a load on the wire rope, the clutch lever may not turn easily. DO NOT FORCE THE CLUTCH LEVER. Release tension on the wire rope by jogging out some of the wire rope, then try releasing the clutch. Pull out the wire rope and secure to anchor or load. Check that there are at least five (5) turns of wire rope left on the drum. Re-engage the drum by rotating the clutch lever to the "Engaged" position (see Figure 8).



Lever must be in the engaged position and locked before winching.



Figure 8

TIPS FOR EXTENDING THE LIFE OF THE WINCH

1. KEEP A TIGHTLY WOUND WIRE ROPE DRUM. Do not allow the wire rope to become loosely wound. A loosely-wound drum allows a wire rope under load to work its way down into the layers of wire rope on the drum. When this happens, the wire rope may become wedged within the body of the windings damaging the wire rope. To prevent this problem, keep the wire rope tightly and evenly wound on the drum

- at all times. A good practice is to rewind the wire rope under tension after each use. One way to do this is to attach the hook to a stationary object at the top of a gradual incline and winch your vehicle up the incline.
- 2. DO NOT ALLOW WINCH MOTOR TO OVERHEAT. Remember, the winch is for intermittent use only. During long or heavy pulls the motor will get hot. The internal parts will be hotter than the case. To check the motor temperature, stop winching and carefully touch the motor case, if the motor is uncomfortable to touch, allow the motor to cool before continuing. KEEP THE ENGINE RUNNING TO RECHARGE THE BATTERY during this break.
- 3. To maximize winch and wire rope life, use a pulley block to double line heavier loads (Figure 9).



Figure 9

- 4. The pull required to start a load moving is often much greater than the pull required to keep it moving. AVOID FREQUENT STOPPING AND STARTING during pull.
- 5. PREVENT KINKS BEFORE THEY OCCUR.

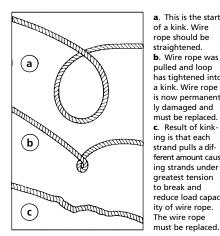


Figure 10

6. EOUIPPING THE WINCH WITH A **ROLLER FAIRLEAD** will substantially reduce wear on the wire rope during angle pulls (Figure 11). The rollers eliminate heavy rubbing and abrasion to the wire rope.

Figure 11



MAINTENANCE

Periodically check tightness of mounting bolts and electrical connections. Remove any dirt or corrosion that may have accumulated on the electrical connections.

Repairs should be done by **Authorized Superwinch Repair** Centers ONLY. Do not attempt to disassemble the gearbox. Disassembly will void warranty.

LUBRICATION

The gearbox and drum bearing are permanently lubricated with a high performance gear lube.

REPLACING THE WIRE ROPE

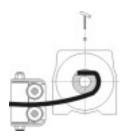


Figure 12

a. This is the start of a kink. Wire

rope should be

pulled and loop

has tightened into

is now permanent-

a kink. Wire rope

ly damaged and

must be replaced.

strand pulls a dif-

ferent amount caus-

reduce load capac-

ity of wire rope.

must be replaced.

ing strands under

greatest tension

to break and

straightened.

Never substitute a heavier or lighter wire rope. Never use rope made of any other material other than wire.

Always replace damaged wire rope with manufacturer's identical replacement part (see Replacement Parts list). Pass attaching end of wire rope through the fairlead (if equipped) and attach it to the drum. When inserting the wire rope into the drum, insert it into the correct end of the hole provided (Figure 12). Tighten the set screw securely.

It is important that the wire rope be wound tightly onto the drum. A good way to do this is to attach the wire rope hook to a fixed object at the top of a slight incline, then winch the vehicle up the incline.

When wire rope is removed from the drum, as in bringing the hook to the load, the freewheel feature of the winch should be used.

BRAKE ADJUSTMENT

Over time, the load-holding brake in your winch will wear. Should you find the load beginning to slip, adjustments can be made to the brake mechanism as follows:

- 1) Loosen the 3 retaining bolts and remove the brake cover. (Ref.#25 Fias. 13, 14)
- 2) Remove the two retaining C-rings. (Ref.#35 Fias. 13, 14)
- 3) Insert washers to maintain a spacing of .090" +/- .010" between the C-ring grooves and the brake actuating cam. (Ref.#21 Figs. 13, 14)
- 4) Re-install the two C-rings and brake cover.

EP SERIES WINCH ASSEMBLY

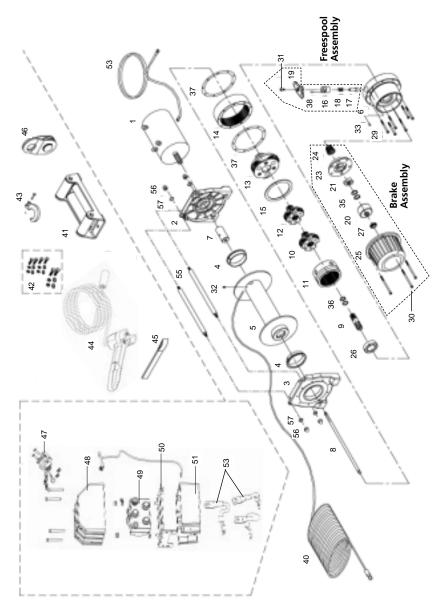


Figure 13

REPLACEMENT PARTS LIST

Reference Number	Description	Part Number	Qty
1	12 VDC Motor EP/EPi6.0	90-30500	1
	24 VDC Motor EP/EPi6.0	90-30501	1
	12 VDC Motor EP/EPi9.0	90-30502	1
	24 VDC Motor EP/EPi9.0	90-30503	1
2	Motor Support Rack	90-40500	1
3 4	Gear Support Rack Drum Bushing	90-40501 90-14500	1 1
5	Drum (3" diameter on 09332 and 09334 only)	90-30517	1
6	Gear Box	90-30504	1
7	Connecting Socket	90-20500	1
8	1st Shaft	90-20501	1
9 10	1st Pinion 1st Stage Carrier	90-20502 90-30505	1 1
11	1st & 2nd Ring Gear	90-30506	1
12	2nd Stage Carrier	90-30507	i
13	3rd Stage Carrier	90-30508	1
14	3rd Ring Gear	90-30509	1
15	3rd Washer	90-20503	1
Freespool Ass	•	90-20504	
16 17	Clutch Sleeve Clutch Lever		
18	Pressed Spring		
19	Clutch Knob		
38	Spring Pin		
Brake Asseml	bly	90-30510	
20	Brake Clutch Base		
21	Brake Cam		
23 24	Cone Brake Disc		
2 4 25	Spiral Spring Brake Cover		
27	Bearing		
35	C-Rings (2 per assembly)		
Hardware Kit		90-14501	
29	Hex. Bolt (6 per kit)		
30	Hex. Bolt (3 per kit)		
31 32	Hex. Bolt Hex. Bolt		
33	Hex. Bolt		
26	Bearing	90-20513	1
36	C-Ring	90-14502	1
37	Anit-leak Seal (2 included)	90-20505	1
40	Wire Rope	90-20506	1
41 42	Roller Fairlead Mounting Hardware	90-30511 90-14503	1 1
43	Clevis Hook	90-14503	1
44	Remote Switch Assembly	90-33450-01	i
45	Handsaver Strap	87-31120	1
46	Snatch Block	90-20508	1
47	Remote Switch Socket	90-25048-01	1
48 49	Upper Solenoid Box Solenoid 12V	90-41144 90-14452	1 1
1 3	Solenoid 24V	90-14452 90-14454	1
50	Solenoid Mounting Plate	90-24051	i
51	Lower Solenoid Box	90-41145	1
53	Motor Lead Wire Set	90-20511	1
55	Tie Bar	90-20509	1
56 57	Tie Bar Screw	90-14504 90-14505	1 1
31	Spring Washer	JU-14JUJ	1

EPI SERIES WINCH ASSEMBLY 55 20 23 Figure 14

REPLACEMENT PARTS LIST

Reference			
Number	Description	Part Number	Qty
1	12 VDC Motor EP/EPi6.0	90-30500	1
•	24 VDC Motor EP/EPi6.0	90-30501	1
	12 VDC Motor EP/EPi0.0	90-30502	1
			1
2	24 VDC Motor EP/EPi9.0	90-30503 90-40500	1
3	Motor Support Rack Gear Support Rack	90-40501	1
4	Drum Bushing	90-14500	i
5	Drum (3" diameter on 09332 and 09334 only)	90-30517	i
6	Gear Box	90-30504	1
7	Connecting Socket	90-20500	1
8	1st Shaft	90-20501	1
9	1st Pinion	90-20502	1
10	1st Stage Carrier	90-30505	1
11	1st & 2nd Ring Gear	90-30506	1
12	2nd Stage Carrier	90-30507	1
13	3rd Stage Carrier	90-30508	1
14	3rd Ring Gear	90-30509	1
15	3rd Washer	90-20503	1
Freespool Ass		90-20504	
16	Clutch Sleeve		
17	Clutch Lever		
18 19	Pressed Spring		
38	Clutch Knob Spring Pin		
Brake Assemb		90-30510	
20	Brake Clutch Base	30-30310	
21	Brake Cam		
23	Cone Brake Disc		
24	Spiral Spring		
25	Brake Cover		
27	Bearing		
35	C-Ring	00 14501	
Hardware Kit		90-14501	
30	Hex. Bolt Hex. Bolt		
31	Hex. Bolt		
32	Hex. Bolt		
33	Hex. Bolt		
26	Bearing	90-20513	1
36	C-Ring	90-14502	1
37	Anit-leak Seal (2 included)	90-20505	1
40 41	Wire Rope Roller Fairlead	90-20515 90-30511	1 1
42	Mounting Hardware	90-14503	i
43	Clevis Hook	90-20507	i
44	Remote Switch Assembly	90-33450-01	i
45	Handsaver Strap	87-31120	1
46	Snatch Block	90-20508	1
47	Control Box Left Cover	90-30512	1
48	Control Box Right Cover	90-30513	1
49 50	Electric Box Rubber Clamp	90-30516 90-20510	1 1
51	Hex. Bolt	90-14506	i
52	Hex. Bolt	90-14507	i
53	Spring Washer	90-14508	i
54	Solenoid 12V	90-14453	1
	Solenoid 24V	90-14455	1
55	Motor Lead Wire Set	90-20512	1
56 57	Remote Switch Socket	90-25058	1
57 58	Bolt Nut	90-23032-22 90-23149-06	1 1
59	Rubber Cover	90-25046	i
-		.	

TROUBLESHOOTING CHART

If a problem arises, contact your nearest Superwinch dealer or repair center.

Symptom	Possible Cause(s)	Corrective Action		
Motor will not operate or runs in one direction only	Damaged or stuck solenoid; most likely caused by not holding the inner nut to keep the stud from turning when attaching wire to solenoid	1. CAUTION: Disengage clutch before performing this test to prevent powering the wire rope drum. If a solenoid sticks once, it is likely to stick again and must be replaced immediately. Tap solenoid to free stuck contacts. Check by applying voltage to the small solenoid terminal. Be sure solenoid is grounded back to source. A solenoid that is not stuck will make an audible "click" when first energized		
	2. Switch inoperative	2. Replace Switch		
	3. Broken wires or bad connection	3. Check for poor connect- tions. CAUTION : Always use two wrenches (spanners). (See Figure 10)		
	4. Damaged motor	4. Replace or repair motor		
	5. Solenoids not grounded	5. Check the ground path between battery negative and solenoid base		
Winch will not shut off	1. Solenoid stuck "on"	If solenoid sticks on, reverse direction and hold trigger switch on until the power lead can be disconnected. A safety on-off switch is available as an accessory		
Motor runs extremely hot	1. Long period of operation	1. Allow to cool		
	2. Damaged motor	2. Replace or repair motor		
	3. Damaged brake	3. Replace or repair brake		
Motor runs but with insufficient power or line speed	1. Weak battery	Recharge or replace battery. Check charging system		
	Battery to winch wire too long	2. Use larger gauge wire		
	3. Poor battery connection	Check battery terminals for corrosion. Clean as required		
	4. Poor ground	4. Check and clean connections		
	5. Damaged brake	5. Repair or replace brake		
Motor runs but drum does not turn	1. Clutch not engaged	1. Engage clutch		
Winch runs backwards	1. Motor wires reversed	1. Recheck wiring		
	2. Solenoids wired incorrectly	2. Recheck wiring		
Will not hold load	1. Excessive load	1. Reduce load or double line		
	2. Worn or damaged brake	2. Repair or replace brake		

SUPERWINCH!

WARRANTY REPAIR CENTERS

USA

Superwinch Inc. Winch Drive Putnam, CT 06260 phone: 860-928-7787 repair@superwinch.com Electric Motor Repair 2010 North 4th Street Minneapolis, MN 55411 phone: 612-588-4693

Berens & Associates 124 Hegenberger Loop Oakland, CA 94621 phone: 800-540-2858 berens94621@yahoo.com

Zorko's Alternator Service 241 Wells Road Home, PA 15747 phone: 800-468-5055 zasapw@microserve.net

Electric Motors of Iowa City 50 Commercial Court Iowa City, IA 52246 phone: 319-354-4040 emic4040@aol.com

CANADA

Demand Electric 228-39th St. N.E. Calgary, AB T2E 2M5 403-230-2709

Harold Supply 3 Southerland Ave. Sudbury, Ont. P3C 3A7 705-761-4455

Explora Industries Ltd. 9605-5th Ave. Edmonton, AB T6E 0B2 780-430-8591

Dayworth Sales 1 Saunders Rd. Unit 2 Barrie, Ont. 9A7 9A7 705-726-7778

Les Equipment Twin 10401 Parkway Blvd. Ville D'Anjou, PQ H1J 1R4 514-353-1190

Buffalo Industries 251-253 Princess Street Winnipeg, Manitoba R2C 1M1 204-942-1951

Power Plus Tool Repair 57 Millenium Ave. Moncton, NB E1E 2G2 560-855-8665

Muskoka Auto Parts 11 King William St. Huntsville, Ont. P1H 2K8 705-789-2321

Lou Dennis Auto Hiway 11 South Sundridge, Ont. POA 1Z0 705-384-5345 Outdoors Plus 128 Regional St. P.O. Box 1349 Port Aux Basques, NF A0M 1C0 709-695-7533

Bobcaygeon Auto and Marine 91 Main St. Bobcaygeon, Ont. K0M 1A0 705-738-2317

MAP Bracebridge 19 Taylor Rd. Bracebridge, Ont. P1L 1W3 705-645-8785

MAP Fenelon Falls 165 Lindsay St. Fenelon Falls, Ont. K0M 1N0 705-887-6232

Central Electric Motor Rewind #1-1960 Windsor Rd. Kelowna, NC V1Y 2Y3 250-860-4415 jnelsoncentral@netscape.net

Delta Tool Repair Limited 114-7533, 135th St. Surrey, BC V3W 0N6 604-591-3230

Ted's Power Tool Repair 426-44th St. East Saskatoon, SK S7K OW1 306-934-6155

Bob's Electric Truck Servise 845-B Macdonald Ave. Regina, SK S4N 2X5 306-721-4148

Off Road Canada 251-12th St. "B" North Lethbridge, AB T1H 2K8 403-327-7722

Gary's Starter & Alternator P.O.Box 7 Site 4 RR 1 Mount Uniacke BON 120 Contact: Gary Thorne 902-757-2388

Power Blitz Mftg. & Maintenance 577 Edgeley Blvd. Unit 6 Concord, Ont. L4K 4B2 905-669-8209 ali@powerblitz.com

Bruce's Recreaction 92 Balbo Dr. Shoal Harbour Nfld A5A 4A8 709-466-3355

Atlantic Recreation & Marine 5 School St. Sydney, Nova Scotia B1S 3G1 902-567-1697 sbidart@thearm.ca

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