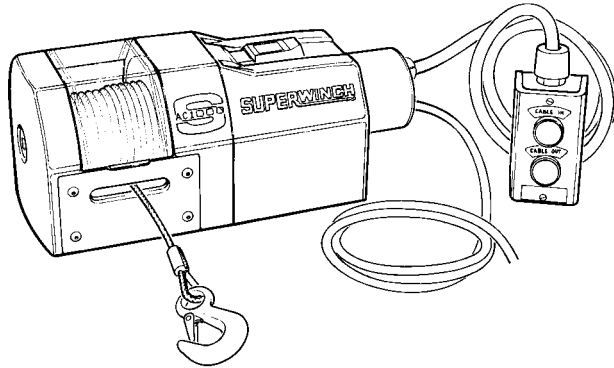


# SUPERWINCH®



## OWNER'S MANUAL

INSTALLATION • OPERATION • MAINTENANCE  
SAFETY PRECAUTIONS • REPAIR PARTS

### SAC1000 AC Electric Winch

#### ▲ CAUTION

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

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## INTRODUCTION

Thank you for purchasing a SAC1000 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; (1822) 614101 England.

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

1. Winch Part Number (01002, 01003, 01050, 01051, 01052, 01053)
2. Serial Number (found on housing)
3. Part Number (found in Replacement Parts List section)
4. Part Description

Please read and understand this Owner's Manual prior to installing and using your winch. Pay particular attention to the General Safety Information. 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 features in this winch to minimize this possibility; however, your safety ultimately depends on your caution when using this product.

**CAUTION** Pay particular attention to the caution and warning notes preceded with the symbols shown here. The notes contain advice for your protection.

### WARNING

Correct installation of your SAC1000 winch is a requirement for proper operation.

**Please Note:** This winch is not designed to be used in industrial or hoisting applications and Superwinch does not warrant it to be suitable for such use. Superwinch manufactures a separate line of winches for industrial/commercial use. Please contact our Customer Service Department for further information.

Note the electrical requirements of the SAC1000 winch you have purchased.:

Part Numbers 01000, 01001,	120 Volt 50/60Hz
01002, 01003	Single Phase Alternating Current Only
Part Numbers 01050, 01051,	240 Volt 50/60Hz
01052, 01053	Single Phase Alternating Current Only

Congratulations on your choice!

## UNPACKING

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

Description	Quantity
Winch assembly with wire rope including lead wires	1
Hand saver bar	1
Mounting hardware kit	1
Owner's manual	1

**CAUTION** Risk of electric shock. Do not open. To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

## GENERAL DESCRIPTION

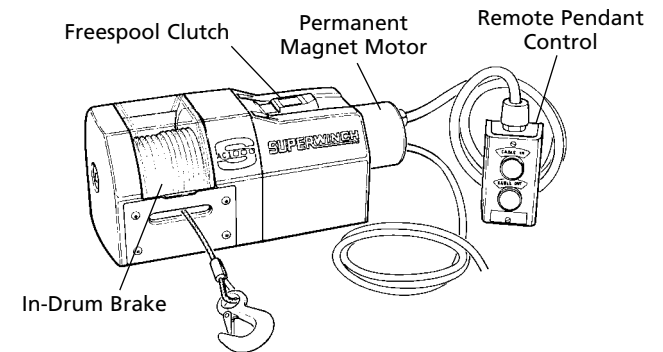


Figure 1

## FEATURES

**Electric Motor** – 0.6 hp (0.45 kW)  
120 or 240 Volt Permanent Magnet.

**Braking** – A wrap spring brake which will hold a 1,000 lb. (454 kg) load on the first wrap.

**Drum** – Die cast aluminum running in maintenance free bearings.

**Freespool Clutch (optional)** – Operated by an easy action lever

which disengages the gearbox to allow the wire rope to be pulled out without using electric power. A tension plate reduces backlash and snarling when pulling out the wire rope.

**Remote Switch** – 6' (1.8 m) hand held pendant switch assembly with interlocking push button station.

## INTERMITTENT DUTY

An electric winch is like any other 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.

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

## PERFORMANCE

Wire Rope Layer	Max. Pulling Capacity lbs.	Max. Pulling Capacity kg
1	1,000	454
2	875	397
3	800	363
4	700	318

Load lbs.	kg	Speed		Motor Current Amps	
		ft/min	m/min	120V	240V
0	0	13.8	4.2	4.3	2.2
250	113	12.0	3.6	6.0	3.0
500	227	10.9	3.3	7.2	3.6
750	340	10.0	3.0	8.2	4.1
1,000	454	9.2	2.8	10.0	5.0

## SPECIFICATIONS

Working Load\* . . . . 1,000 lbs. (454 kg)

Stall Load 120V or 240V . . . . 2,500 lbs.

(1135 kg)

Wire Rope . . . . . 3/16" x 50'

(4.8mm x 15.2m)

120V or 240V Motor . . . . . 0.6 hp

(0.45 kW)

Gear Ratio . . . . . 159:1

\*Based on first layer performance

European Union



**Noise** The noise level of this winch in operation is below 92 dB(A).

**Emergency Stop** In order to conform to Machinery Directive 89/392/EEC, each machine installation must be fitted with a suitable isolator whereby the machine can be brought safely to a complete stop.

## GENERAL SAFETY INFORMATION

Your SAC1000 winch is a very powerful machine. Treat it with respect, use it with caution and always follow these safety guidelines.

**⚠ WARNING** *The wire rope may break before the winch stalls. For heavy loads, use a pulley block to reduce the load on the wire rope.*

1. The SAC1000 winch is rated at 1,000 pounds (454 kg) (single line) capacity on the wire rope layer closest to the drum. **DO NOT OVERLOAD. DO NOT ATTEMPT PROLONGED PULLS AT HEAVY LOADS.** 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 750 POUNDS (340 KG), WE RECOMMEND THE USE OF THE OPTIONAL PULLEY BLOCK TO DOUBLE LINE THE WIRE ROPE** (Figures 2 & 17). This reduces the load on the winch and the strain on the wire rope by approximately 50%.

2. **AFTER READING AND UNDERSTANDING THIS MANUAL, LEARN TO USE YOUR WINCH.** After installing the winch, practice

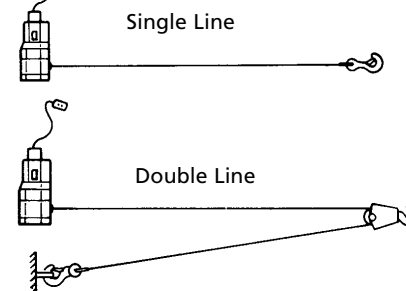


Figure 2

using it so you will be familiar with it when the need arises.

3. **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 COMPONENT FAILURE IT IS BEST TO BE OUT OF HARM'S WAY.
4. **INSPECT WIRE ROPE AND EQUIPMENT 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.
5. **USE HEAVY LEATHER GLOVES** when handling wire rope. **DO NOT LET WIRE ROPE SLIDE THROUGH YOUR HANDS EVEN WHEN WEARING GLOVES.**
6. **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. **ALWAYS USE THE HANDSAVER BAR** when guiding the wire rope in or out (see Figure 3).

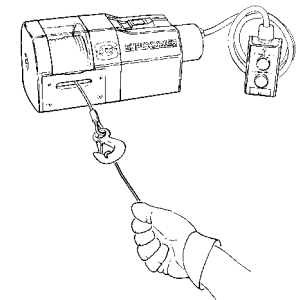


Figure 3

## GENERAL SAFETY INFORMATION (CONT.)

7. 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 lose your finger. **Never guide a wire rope onto the drum with your hand. Use hand-saver when winding end of wire rope.**



8. NEVER HOOK THE WIRE ROPE BACK ONTO ITSELF because you could damage the wire rope. Use a nylon sling (Figure 4).



Figure 4

9. It is a good idea to lay a heavy blanket or jacket over the wire rope near the hook end when pulling heavy loads (Figure 5). If a wire rope failure should occur, the cloth will act as a damper and help prevent the rope from whipping. Raise the hood of the vehicle for added protection.

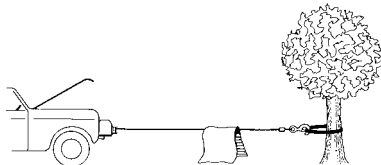


Figure 5

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



- Your winch is not designed or intended for overhead hoisting operations.
- AVOID CONTINUOUS PULLS FROM EXTREME ANGLES as this will cause the wire rope to pile up at one end of the drum (Figure 6). This can jam the wire rope in the winch, causing damage to the rope or the winch.

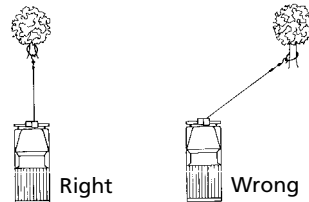


Figure 6

- NEVER OBSCURE THE WARNING INSTRUCTION LABELS.
- Always operate winch with an unobstructed view of the winching operation.
- 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.
- NEVER RELEASE FREESPOOL CLUTCH WHEN THERE IS A LOAD ON THE WINCH.
- DO NOT OPERATE WINCH WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.

18. 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.

## GENERAL SAFETY INFORMATION (CONT.)

- 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.
- USE ONLY FACTORY APPROVED SWITCHES, REMOTE CONTROLS AND ACCESSORIES. Use of non-factory approved components may cause injury or property damage and could void your warranty.
- DO NOT MACHINE OR WELD ANY PART OF THE WINCH. Such alterations may weaken the structural integrity of the winch and could void your warranty.



**WARNING** The drum and wire rope may get very hot (Figure 7).

- Never allow shock loads to be applied to winch or wire rope.
- Use caution when pulling or lowering a load up and down a ramp or incline. Keep people, pets and property clear of the path of the load.
- Do not power the winch out for more than 50 feet (15.2m) or longer than 2 minutes.

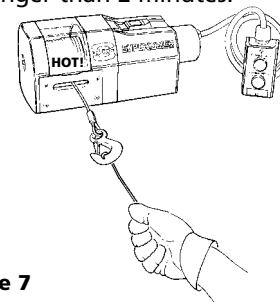
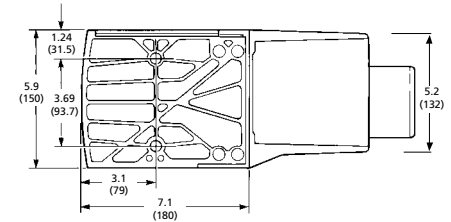
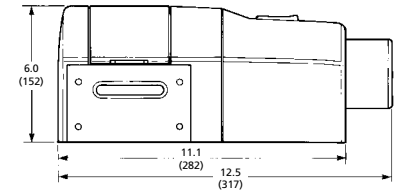


Figure 7

## MOUNTING YOUR WINCH

**WARNING** This winch **MUST be mounted with the wire rope in the underwind direction. Improper mounting could damage your winch and void your warranty.**

This unit may be mounted in either a horizontal or vertical position, on a wall or other suitable support. In all installations, the unit must be mounted so that the wire rope feeds perpendicular to the drum axis and does not rub across the housing or base.



### NOTES

- All dimensions are in inches [millimeters].
- Typical mount is to flat surface capable of handling the loads. Bolts to be Grade 5 or better.

## INSTALLATION

### MINIMUM ELECTRICAL REQUIREMENTS

The three-prong plug must be plugged into a 120 or 240 Volt, AC grounded outlet. Make sure that the power supply cord is positioned so that the moving load will not damage it. Unplug the winch when not in use. Electrical storms or line surges can cause premature failure of the internal bridge rectifier.

#### Step (1)

Install mounting kit or structural support for winch.

#### Step (2)

Mount the winch to the mount that you have designed.

Mounting bolts supplied are the correct length for use with up to a 1/4" (6.3mm) thick plate.

**⚠ WARNING** *Do not substitute any strength grade weaker than grade 5.*

#### Step (3)

Lift the freespool clutch lever to the "Free" position. Pull several feet of wire rope off the drum. Return the clutch lever back to the "Engaged" position.

**⚠ CAUTION** *The switch assembly must be kept free of dirt and moisture to ensure safe operation.*

### OPERATION

This unit is activated via the switch at the six foot cord. To remove wire rope from the winch, depress the "Out" button. The load will stop without coasting when the button is released. To pull a load or spool

wire rope onto the drum, depress the "In" button. Your winch is designed to pull 1,000 pounds in single line for 20 seconds "On" time on the wire rope layer closest to the drum. Attempts to pull more than this weight or exceed the duty cycle may cause damage to the winch or wire rope and could cause the circuit breaker to trip, and the winch will not operate. (See "Trouble Shooting".) Maintain a minimum of five wraps of wire rope around the winch drum before attempting any pulls.

### PULLING OUT THE WIRE ROPE

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

Lift the clutch lever to the "Free" position as shown in Figure 16. 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. Releasing the clutch and 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 returning the clutch lever to the "Engaged" position (see Figure 16).

**⚠ CAUTION** *Lever must be in the "Engaged" position and locked before winching.*

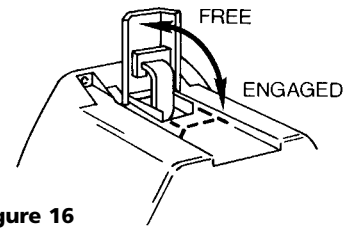


Figure 16

### TIPS FOR EXTENDING THE LIFE OF YOUR WINCH

1. KEEP A TIGHTLY WOUND WIRE ROPE DRUM. Do not allow the wire rope to become loosely wound. A loosely-wound spool 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.
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. At 1,000 lb. (454 kg) allow motor to cool after 20 seconds of "On" time. At loads less than 500 lb. (227 kg) allow to cool after 2 minutes of "On" time.
3. USE A PULLEY BLOCK FOR HEAVY LOADS. To maximize winch and wire rope life, use a pulley block to double line heavier loads (Figure 17).



Figure 17

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

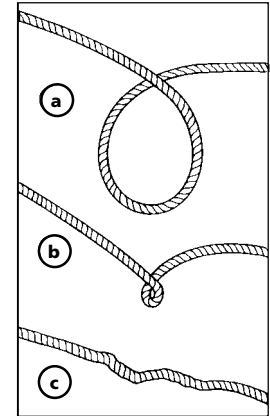


Figure 18

- a. This is the start of a kink. At this time, the wire rope should be straightened.
  - b. The wire rope was pulled and the loop has tightened to a kink. The wire rope is now permanently damaged and must be replaced.
  - c. Kinking causes the wire strands under the greatest tension to break and thus reduces the load capacity of the wire rope. The wire rope must be replaced.
6. EQUIPPING THE WINCH WITH A ROLLER FAIRLEAD will substantially reduce wear on the wire rope during angle pulls (Figure 19). The rollers eliminate heavy rubbing and abrasion to the wire rope.

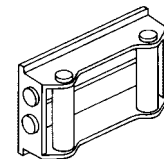


Figure 19

## MAINTENANCE AND REPAIRS

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

**Repair 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. If relubrication is necessary (after repair or disassembly) only use Shell Alvenia EP2 or equivalent.

### REPLACING THE WIRE ROPE

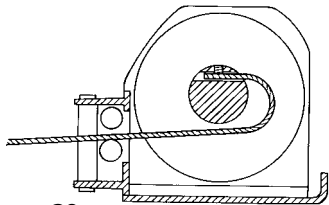


Figure 20

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 20). 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 load and winch it in.

### BRAKE OPERATION

Your SAC1000 winch has a wrap spring brake that stops and holds loads up to 1,000 lbs. (454 kg). When powering the winch in, the brake is disengaged and does not become activated until the motor is turned off and the load tries to pull the wire rope off the drum. When the winch is powered out, as in releasing a load, the brake is engaged and the motor must over power the brake drag to rotate the drum. Therefore, it is normal for the winch to operate faster in one direction than the other. The brake is designed for the wire rope to be used in the underwind position only. **DO NOT OVERWIND.** Powering against the brake will cause heat to build up in the drum and may transfer heat to the wire rope (Figure 21). **DO NOT POWER OUT FOR MORE THAN 50 FEET (15.2m) OR 2 MINUTES.**

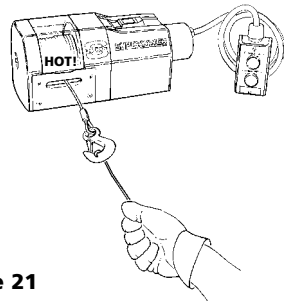
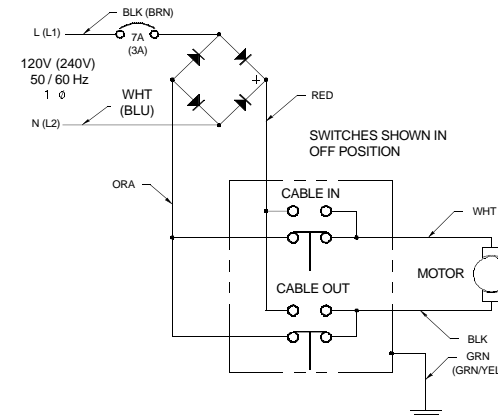


Figure 21

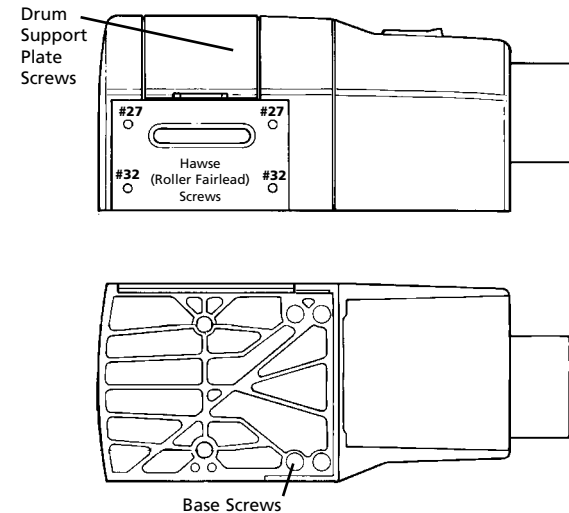
**⚠ WARNING** *The drum and wire rope may get very hot.*

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.

## ELECTRICAL SCHEMATIC



## TORQUE SPECIFICATIONS



### TORQUE SPECIFICATIONS

Drum Support Plate Screws	40-45 lb in
Hawse (Roller Fairlead) Screws	40-45 lb in
Base Screws	90-100 lb in

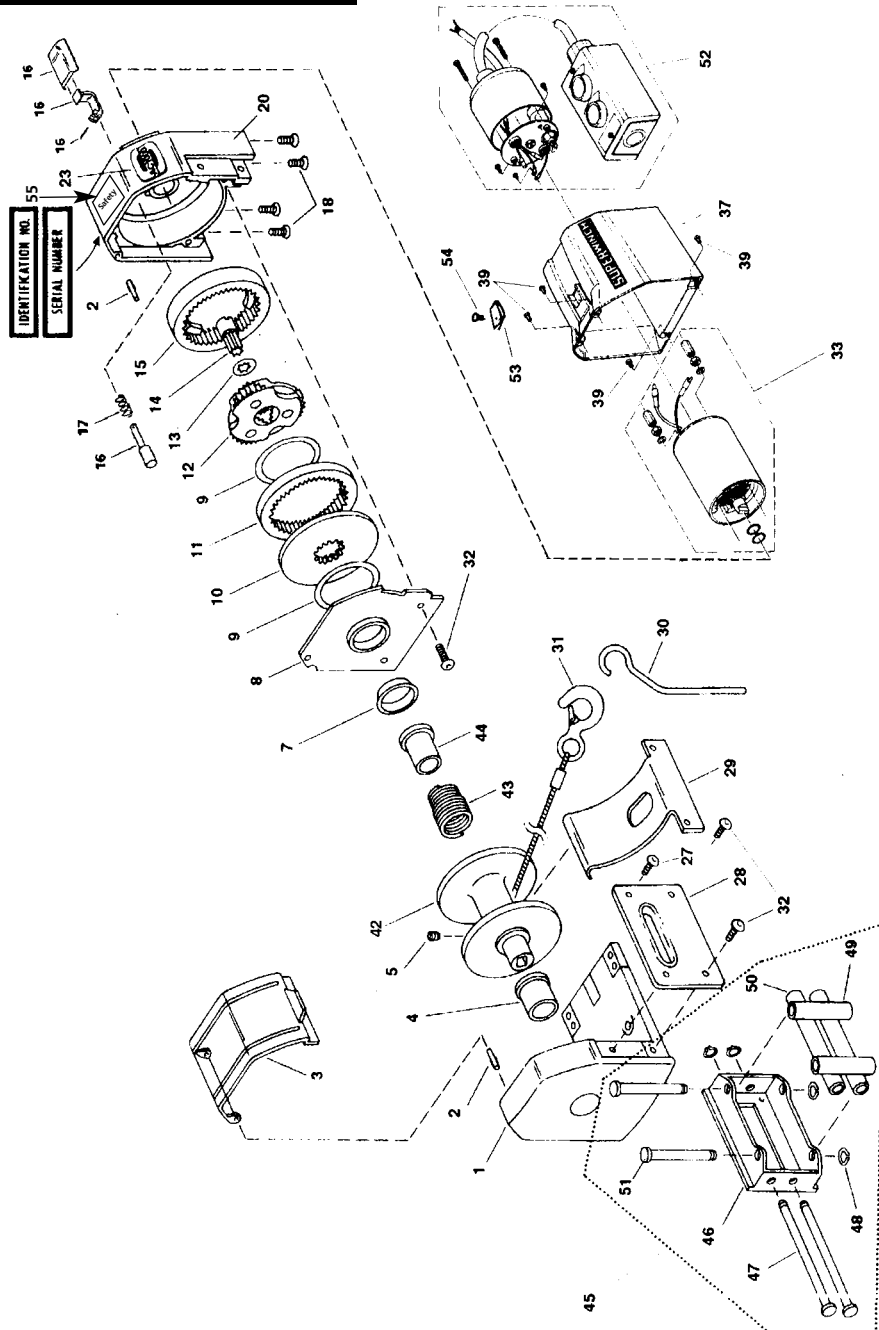
**⚠ WARNING** *Over torquing could damage your winch and void your warranty.*

**Note:** The hawse or roller fairlead frame holds the tension plate in place, and consequently is under tension.

To remove a hawse or roller fairlead frame, the wire rope must be removed to release tension. The (#32) two lower screws must be removed prior to the upper (#27) two screws.

To install a hawse or roller fairlead frame, the upper (#27) two screws must be inserted and tightened prior to the lower (#32) two screws. Reattach the wire rope after installation.

# WINCH ASSEMBLY



# REPLACEMENT PARTS LIST

Reference Number	Description	Part Number	Qty
1	Base	89-52021	1
2	Groove Pin	89-23303-01	2
3	Cable Guard	89-32268	1
4	Main Bearing	89-22268	1
5	M6 x 1 x 8mm Set Cup Pt. Screw	89-23164-12	1
7	Drum Bearing	89-22269	1
8	Drum Support	89-40092	1
9	Thrust Washer	90-12574	2
10	Drive Plate	89-32263	1
11	Rotating Ring Gear	89-32265	1
12	Planetary Carrier Assembly	89-22141	1
14	Sun Gear	89-33303	1
15	Stationary Ring Gear	89-32266	1
16	Free Wheel Repair Kit (01000, 01001, 01050, 01051) (Includes Shaft, Lever, Handle, and Rivet)	89-10580	1
17	Free Wheel Spring (01000, 01001, 01050, 01051)	90-23152-08	1
18	Screw, FCHSS M6 x 1 x 16	87-22291-02	4
20	Housing Assembly (01002, 01003, 01052, 01053)	89-40130	1
	Housing Assembly (01000, 01001, 01050, 01051)	89-40132	1
23	SAC1000 Logo	89-22403	1
27	M6 x 1 x 13mm Thd Rol BHDCS Screw	89-22290-01	2
28	Hawse (01000, 01002, 01050, 01052)	89-32264	1
29	Cable Tension Spring	89-32295	1
30	Handsaver Bar	89-32300	1
31	3/16" x 50' Wire Rope Assembly (01000, 01001, 01002, 01003)	1511C	1
	3/16" x 33' Wire Rope Assembly (01050, 01051, 01052, 01053)	1511D	1
32	M6 x 1 x 16mm Thd Rol BHDCS Screw	89-22290-02	5
33	120 Volt Complete Motor (01000, 01001, 01002, 01003)	90-32310-01	1
	240 Volt Complete Motor (01050, 01051, 01052, 01053)	90-31020-01	1
37	Motor Cover Assembly (includes logo) (01000, 01001)	89-40105	1
	Motor Cover Assembly (includes logo, 53 & 54) (01002, 01003)	89-40131	1
	Motor Cover Assembly (includes logo) (01050, 01051)	89-40131-01	1
	Motor Cover Assembly (includes logo, 53 & 54) (01052, 01053)	89-40131-02	1
39	M4 x 0.7 x 6mm Thd Rol HWHS Screw	89-22292-01	4
42	Drum Machined for Brake	89-40085	1
43	Brake Spring	89-22342	1
44	Brake Adapter	89-22287	1
45	Roller Fairlead (includes 46-51)(01001, 01003, 01051, 01053)	89-40123	1
46	Roller Fairlead Frame (01001, 01003, 01051, 01053)	89-40113	1
47	Roller Fairlead Shaft (Long) (01001, 01003, 01051, 01053)	89-22334-02	2
48	Retainer Ring (01001, 01003, 01051, 01053)	90-23029-08	4
49	5/8 x 2.352 Roller (01001, 01003, 01051, 01053)	90-12568-04	2
50	5/8 x 4.735 Roller (01001, 01003, 01051, 01053)	90-12568-06	2
51	Roller Fairlead Shaft (Short) (01001, 01003, 01051, 01053)	89-22334-01	2
52	Control Assembly (01000, 01001, 01002, 01003) (includes 6' Control Cord, Switch, & Power Cord)	90-32014	1
	Control Assembly (01050, 01051, 01052, 01053)	90-31035	1
53	Filler Block (01002, 01003, 01052, 01053)	89-12032	1
54	8-32 Pan Head Screw (01002, 01003, 01052, 01053)	90-23032-03	1
55	Safety Label, 3/4" icon, 3 x 2	89-20330	1

## 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	<ol style="list-style-type: none"> <li>1. Circuit breaker tripped</li> <li>2. Switch inoperative</li> <li>3. Broken wires or bad connection</li> <li>4. Damaged motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset Circuit Breaker. If the winch fails to operate, the end of the motor should be checked. If the circuit breaker has tripped, this will be indicated by the center portion of the breaker protruding from the main body. To reset the breaker, merely press the center portion back into the assembly.</li> <li>2. Replace switch</li> <li>3. Check for poor connections: <b>CAUTION</b> Always use 2 wrenches (spanners) (see Figure 12)</li> <li>4. Replace or repair motor</li> </ol>
Motor runs extremely hot	<ol style="list-style-type: none"> <li>1. Long period of operation</li> <li>2. Damaged motor</li> <li>3. Damaged brake</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow to cool</li> <li>2. Replace or repair motor</li> <li>3. Replace or repair brake</li> </ol>
Motor runs but drum doesn't turn	<ol style="list-style-type: none"> <li>1. Clutch not engaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage clutch</li> </ol>
Winch will not hold load	<ol style="list-style-type: none"> <li>1. Excessive load</li> <li>2. Worn or damaged brake</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce load or double line</li> <li>2. Repair or replace brake</li> </ol>