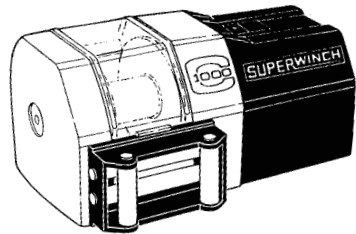
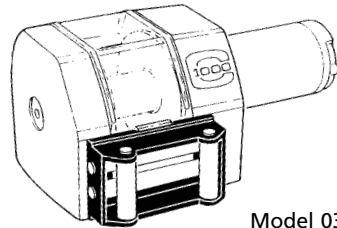


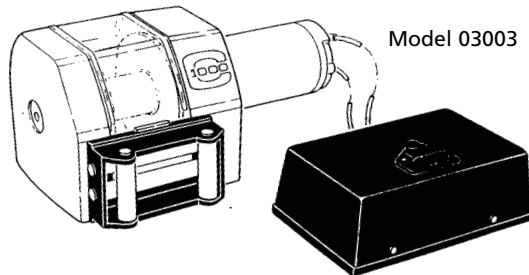
SUPERWINCH®



Model 03000



Model 03001



Model 03003

Models
03002
03005
03010

OWNER'S MANUAL

INSTALLATION • OPERATION • MAINTENANCE
SAFETY PRECAUTIONS • REPAIR PARTS

C-SERIES

12 & 24 Volt DC Electric Winch
Models 03000, 03001, 03002,
03003, 03005, 03010

⚠ CAUTION

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

Superwinch, Inc.
Winch Drive
Putnam, CT 06260
U.S.A.
Tel. (860) 928-7787
Fax (860) 963-0811

Superwinch, Ltd.
Abbey Rise, Whitchurch Road
Tavistock, Devon PL 19 9DR
England
Tel. +44 (0) 1822 614101
Fax +44 (0) 1822 615204

DESCRIPTION

The C1000 electric winch is for intermittent duty only. Motor cool-down time is required. Can be mounted horizontally or vertically. Winch can be utilized in a variety of lifting operations involving machinery, trucks, boats, farm implements, etc. Equipped with DC motor, permanently lubricated/sealed gear box, switch with harness assembly, handsaver, and pulley block.

For additional information, consult Specifications and Performance.

UNPACKING

Please unpack carefully and read the instructions before beginning. Inspect carefully for any damage that may have occurred during transit. Check for loose, missing or damaged parts.

SPECIFICATIONS

Electric Motor - 1.3 peak hp (0.9 kW) 12 Volt Permanent Magnet.

Gear Ratio 159:1

Braking - A wrap spring brake will support the load when power to the motor stops.

Remote Switch - 12' (3.66m) Hand held pendant switch assembly with interlocking reverse switch and trigger.

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

Safety Factor 5:1
 (*) Based on first layer performance.

⚠ DANGER *This equipment must be used as recommended by the manufacturer. Failure to follow these recommendations could endanger your life and/or cause property damage.*

Description	Quantity				
	03000	03001	03002	03003	03005 03010
Winch assembly with roller fairlead (no wire rope)	1	1	1	1	1
Winch assembly with roller fairlead (with wire rope)	2 ea.	2 ea.	2 ea.	2 ea.	2 ea.
Bolts, nuts, lockwashers	4 ea.	4 ea.	4 ea.	4 ea.	4 ea.
Flat washers					
Cable ties	5	5	5	5	5
Owner's Manual	1	1	1	1	1
Remote control switch					
Without control switch	1	1	1	1	1
Circuit breaker assembly					
Pulley block assembly		1	1	1	1
Handsaver					
Internal solenoids	1	1	1	1	1
External solenoids					
12 Volt Motor					
24 Volt Motor	1	1	1	1	1

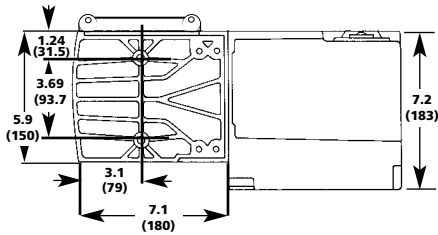
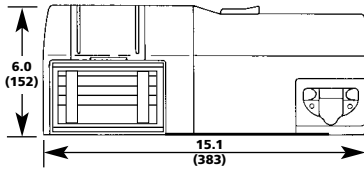
PERFORMANCE

Load lbs.	kg	Speed		Current 12V	Draw* (amps)	
		ft/min	m/min		24V	24V
0	0	19.5	5.9	30	15	
1000	454	14.7	4.5	80	40	

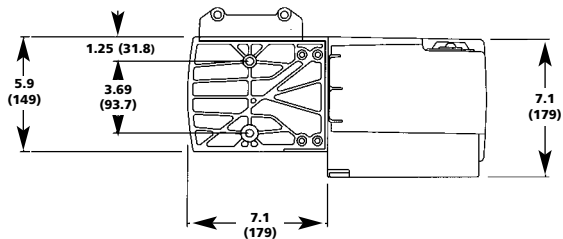
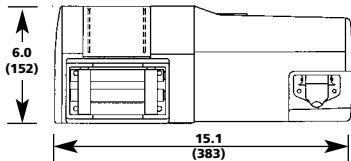
(*) Based on first layer performance.

DIMENSIONS

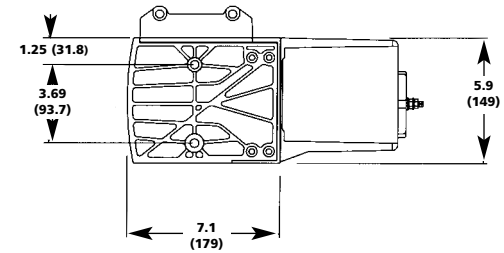
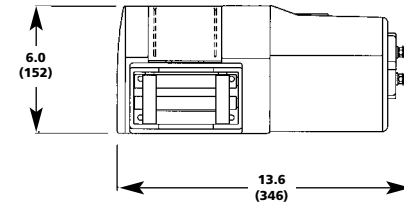
MODELS 03002, 03005, 03010



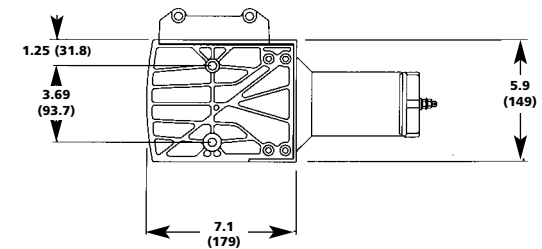
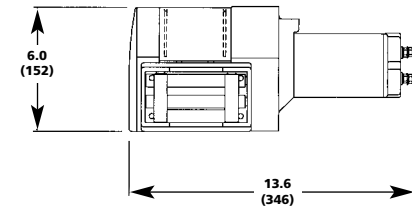
MODEL 03000



MODEL 03001




MODEL 03003





- NOTES:
 1. All dimensions are in inches (millimeters).
 2. Typical mount is to flat surface capable of handling the loads. Bolts to be Grade 5 or better.



GENERAL SAFETY INFORMATION

⚠ WARNING *Do not use for lifting, supporting, or transporting people, or over areas where people are present. Disconnect power before servicing.*

1. READ AND SAVE ALL INSTRUCTIONS. 
2. DO NOT OVERLOAD. See Performance information. Do not maintain power to the winch if the motor stalls. Overloads can damage the winch and create unsafe operating conditions.
3. LEARN TO USE WINCH. After installing your winch, take the time to practice using it so that you are comfortable with it when the need arises. Periodically check the winch installation to assure that all bolts are tight.
4. NEVER ALLOW CHILDREN OR UNTRAINED PERSONNEL TO OPERATE WINCH.
5. INSPECT ELECTRIC CABLE FITTINGS FOR TIGHTNESS BEFORE EACH USE.
6. REPLACE DAMAGED OR BROKEN PARTS IMMEDIATELY WITH MANUFACTURER'S RECOMMENDED REPLACEMENT PARTS.

⚠ DANGER *Never connect 110VAC power as fatal shock may occur.*

7. USE CAUTION WHEN using the winch. KEEP PEOPLE, PETS, AND PROPERTY CLEAR OF THE PATH OF THE LOAD. DO NOT USE WINCH TO LIFT OR MOVE PEOPLE. 
8. DO NOT USE THE WINCH TO SUPPORT AN UNATTENDED LOAD. 

9. KEEP THE ELECTRIC CABLES FROM HEAT, OIL, AND SHARP EDGES. Periodically inspect for damage.
10. DO NOT OPERATE THE WINCH WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.
11. NEVER INSTALL WINCH IN SUCH A WAY THAT THE WARNING AND INSTRUCTION LABELS ARE OBSCURED. Someone who has not read this manual may need to see them to understand the proper operation of the winch.
12. Always operate the winch with an unobstructed view of the winching operation.
13. CHECK FOR CORRECT DIRECTION OF ROTATION BEFORE USING WINCH. The winch must be properly wired to ensure correct direction of drum rotation.
14. REMOVE AND STORE THE REMOTE PENDANT ASSEMBLY IN A SAFE PLACE when not in use to prevent unauthorized use.
15. ALWAYS UNPLUG THE REMOTE PENDANT BEFORE WORKING IN OR AROUND THE ROLLER FAIRLEAD OR WINCH DRUM (THE DANGER ZONE) to prevent the winch from being turned on accidentally. Use handsaver when winding end of wire rope. 

16. When lifting a load, slowly take up the slack until it becomes taut. Stop, recheck all winching connections.
17. DO NOT MACHINE OR WELD ANY PART OF THE WINCH. Such alterations may weaken the structural integrity of the winch, and void your warranty.
18. Never allow shock loads to be applied to winch.

INSTALLATION

LOCATION

Mount the winch to a firm base. The structure the winch is attached to must be capable of withstanding a load greater than 1-1/2 times the winch's rated line pull.

The winch can be mounted in a horizontal or vertical position. Do not mount the winch where there would be the possibility of it being submerged in water. The winch is weather resistant but not waterproof.

⚠ WARNING *This winch MUST be mounted with the pull in the underwind direction. Improper mounting could damage your winch, cause the brake to not work and void your warranty.*

Step (1)

Install structural support for winch. See "Dimensions" section for winch dimensions.

Step (2)

Mount the winch to the mount that you have designed.

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

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

When attaching wire to the motor terminals and solenoids (relays), hold the inner nut when tightening the outer nut. Do not allow the terminals to rotate. It may cause internal wire breakage or part misalignment. Be especially careful in preventing the solenoid (relay) terminals from rotating. Any rotation can damage the solenoid (See Figure 1).

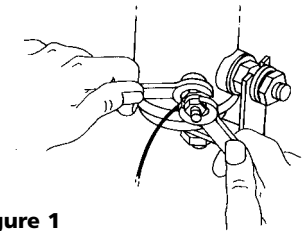


Figure 1

Step (3)

Disconnect the battery leads.

⚠ WARNING *Batteries contain gases which are flammable and explosive. Wear eye protection during installation and remove all metal jewelry. Do not lean over battery while making connections.*

Step (4) Model 03003

Select a convenient location for mounting the Solenoid Remote Control Assembly. The solenoid

Electrical Schematic

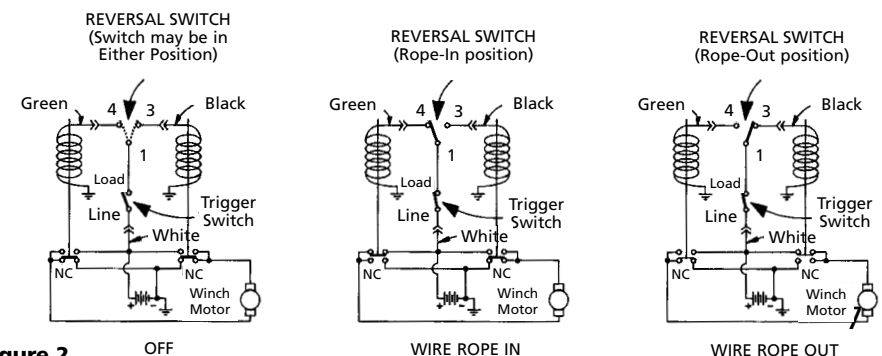


Figure 2

mounting plate must be electrically grounded to the battery. If it is not, the winch will not work. Preferably, the solenoids should be mounted vertically, with the solenoid end terminals pointing downwards.

Electrical Connection

Cut two lengths of wire, one red and one black, to reach from the winch to the solenoids. When routing all wires, be sure to keep them away from all hot or moving parts. Crimp a 1/4" ring terminal on the end of each wire at the winch end. Attach one wire to each motor terminal (See figure 3). Crimp a 5/16" ring terminal at the solenoid ends of the wires and attach to the terminals on the solenoid assembly as shown in Figure 3.

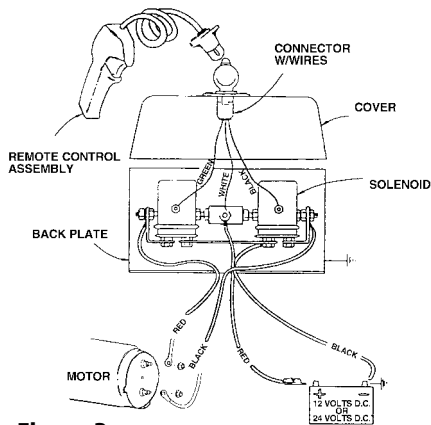


Figure 3

Cut and strip two lengths of wire, one red and one black, to reach from the solenoids to the battery. On the battery end of the red wire, install a 3/16 ring terminal, and attach to the circuit breaker. The other end of the circuit breaker attaches to the harness. On the opposite end of this wire, connect a 5/16 ring terminal and attach to the solenoid assembly (See Figure 3). Install 5/16 ring terminals to both

ends of the black wire. Connect one end to the solenoid assembly, and the other end to the battery negative terminal (See Figure 3).

Connect the circuit breaker assembly bracket to the battery positive terminal.

Plug in the remote control, and with the directional lever in the "Rope Out" position, momentarily depress the trigger to check for proper rotation direction of the winch drum. If the winch runs in the wrong direction, reverse the wires connected to the winch motor.

Step (4) Models 03000, 03001

These winches are supplied with controls. To design the control system for your application, you can purchase the needed materials to complete your system from Superwinch, or buy them locally.

You will need a switch or a solenoid control, a circuit breaker, hook up wire, and wire terminals.

Switch

Select a (3) position reversing switch with a switch action of "momentary on"/"off"/"momentary on". "Momentary on" means the switch automatically returns to OFF position when released. Minimum contact rating must be 50 amp DC carry.

Superwinch offers a (3) Position Heavy Duty Rotary Switch Part Number 1591. The Superwinch switch has an internal shunt that provides dynamic braking to further assist the winch's brake. (See Figure 4)

Solenoids

You will need (2) 12 Volt double pole, double through solenoids, with a continuous current rating of 80 amps on the normally open contacts and 60 amps on the normally closed contacts.

Superwinch offers an external solenoid pack as shown with Model 03003. (Superwinch Part Number 1515A Remote Control). It comes with 12 foot pendant, 20 feet of 8 gauge wire, and instructions.

Circuit Breaker

We recommend using a 40 Amp Circuit Breaker between the battery positive terminal and the wire that goes to the switch or solenoid pack (See Figure 5). This can be purchased from Superwinch as Part Number 89-32341. The circuit breaker prevents overloads to the switch and to the winch motor.

Hookup Wire

If the total length of wire required is less than 20 feet, use 8 gauge wire. If the total length of wire required exceeds 20 feet, use 6 gauge wire.

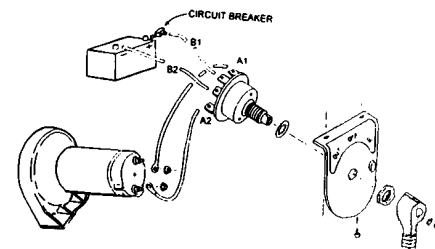


Figure 4

Step (4) Models 03002, 03005, 03010

Route the (2) 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 metal parts. Attach the circuit breaker assembly to the end of the blue terminated wire. Wrap the circuit breaker assembly with electrical tape to prevent accidental short circuits.

Note: If you choose to locate the winch at a greater distance than the wires provided will permit, it may be necessary to purchase a larger gauge wire to get the best performance from your winch. If the total length of additional wire to be added to the system exceeds 10 ft. (3m), use a larger wire gauge size.

Attach the circuit breaker directly to the battery positive terminal, and reattach the terminal to the battery.

Connect the remaining wire to the battery negative terminal, and connect the terminal to the battery. (See Figure 5)

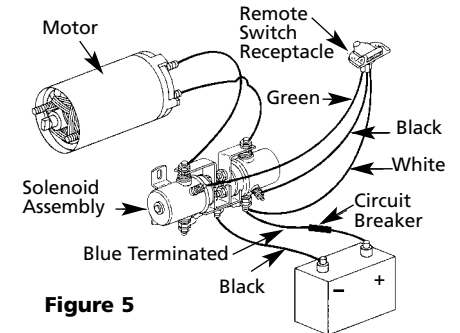


Figure 5

Step (5)

Pull the trigger momentarily to check wire rope drum rotation and direction. If the drum rotates in the wrong direction, recheck your wiring.

The hand-held pendant switch activates a solenoid that activates power to the winch motor. One solenoid is for power-in (lifting a load) motor direction and the other is for power-out (lowering a load) motor direction (See Figure 6).

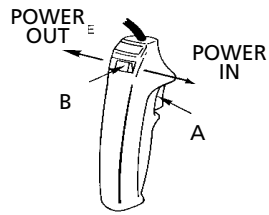


Figure 6
PENDANT OPERATION

The switch trigger returns to the "OFF" position when released (See Figure 6, Ref. A). The slide button on the back of the switch determines the direction of the drum rotation for lowering or lifting a load (See Figure 6, Ref. B). The slide is fitted with an interlock so that the motor cannot be reversed if the trigger is depressed. To change direction, release the trigger, move the slide button, and depress the trigger again.

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

To connect the pendant control, lift the dust cover on the plug receptacle (See Figure 7), and insert the plug end of the remote switch. The plug on the pendant control cord is keyed and will fit into the socket only one way.

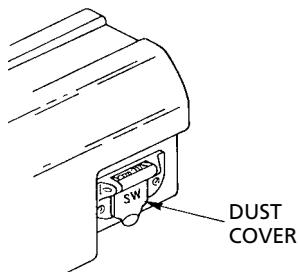


Figure 7

Do not allow winch motor to overheat. The winch is for intermittent use only. During long or heavy pulls

the motor will get hot. Allow to cool after 2 minutes of "ON" time.

MAINTENANCE AND REPAIR

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

BRAKE OPERATION

Your winch has a wrap spring brake that stops and holds loads up to 1,000 lb. (454 kg). When the winch is powered out, as in releasing a load, the brake is engaged and the motor must overpower the brake resistance 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. Drum must turn counterclockwise, looking from motor end, when winching in. **DO NOT OVERWIND.** Powering against the brake will cause heat to build up in the drum and may transfer heat to the wire rope. **DO NOT POWER OUT FOR MORE THAN 2 MINUTES.**

CAUTION *The drum may get very hot.*

OPERATION

WIRE ROPE

For safety reasons, it is important that you use a wire rope with a break strength of at least 5,600 lbs. Recommended wire rope for this winch will have a 1/4" diameter with a 7 x 19 construction, and a minimum break strength of 7,000 lbs. or a 7/32" diameter with 7 x 19 construction, with a minimum break strength of 5,600 lbs.

REPLACING THE WIRE ROPE

Replace damaged wire rope with the manufacturer's recommended replacement part or a factory approved equivalent identical in strength, quality, lay, and stranding. Pass the attaching end of wire rope through the fairlead and attach it to the drum. When inserting the wire rope into the drum, insert it into the correct end of the hole provided (See Figure 8). Tighten the set screw securely.

It is important that the wire rope be wound tightly onto the drum.

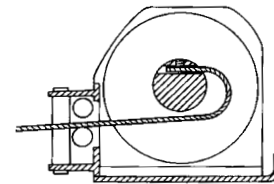


Figure 8
HANDLING THE WIRE ROPE

CAUTION *Use heavy leather gloves when handling wire rope. Do not allow wire rope to slide through hands.*

1. Never winch with less than 5 turns of wire rope around winch drum, since wire rope and fastener may not withstand the load.

ALWAYS USE HANDSAVER BAR WHEN GUIDING HOOK FOR THE LAST FEW FEET OF ROPE (See Figure 9)

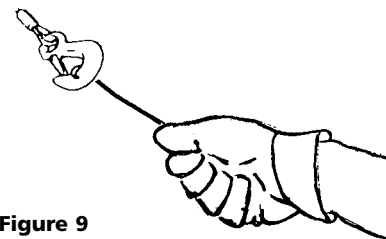


Figure 9

WARNING *Keep clear of winch wire rope and hook when operating winch. Never put your finger through the hook. Placing finger(s) in hook could result in injury.*

2. Never hook wire rope back onto itself. Hooking wire rope onto itself can damage rope. Use a nylon sling (See Figure 10). When using a sling, make sure that sling is properly seated in saddle of hook.

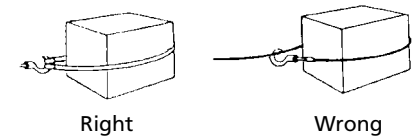


Figure 10

CAUTION *Avoid continuous pulls from extreme angles. This will cause wire rope to pile up at one end of drum. This can jam wire rope in winch causing damage to rope or winch itself.*

3. Do not use wire rope as a ground for welding.
4. Never touch welding electrode to wire rope.
5. Keep wire rope tight and even on drum.
6. Replace wire rope when frayed.

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 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 small load and winch that load to rewind rope.

2. To maximize winch and wire rope life, use pulley block to double line heavier loads.

3. PREVENT KINKS BEFORE THEY OCCUR. (See Figure 11.)

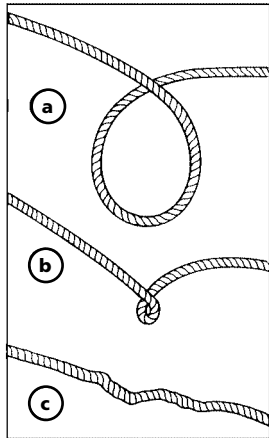


Figure 11

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.

LUBRICATION

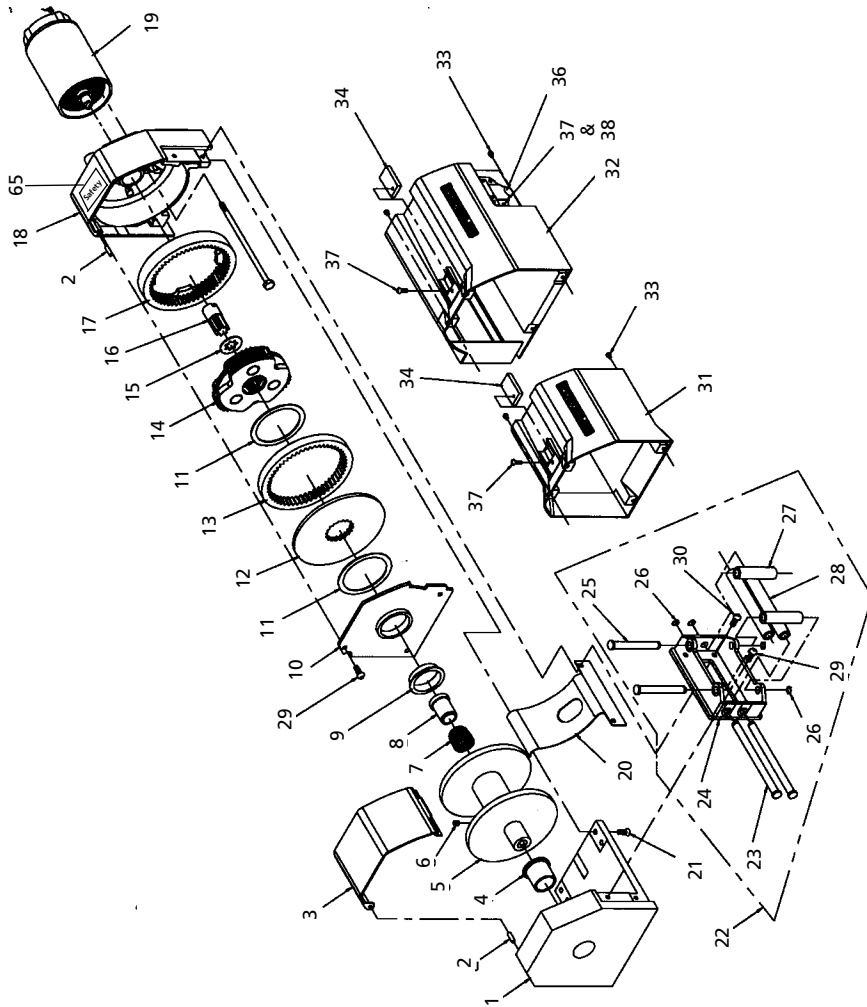
The winch is permanently lubricated. There may be grease leakage out of winch, especially during first few operations. This is normal and it is not necessary to grease or oil any internal part of winch at any time.

Periodically lightly lubricate wire rope with penetration oil and wipe off excess.

TROUBLESHOOTING CHART

Symptom	Possible Cause(s)	Corrective Action
Motor will not operate or runs in one direction only	<ol style="list-style-type: none"> 1. Damaged or stuck solenoid 2. Switch inoperative 3. Broken wires or bad connection 4. Damaged motor 5. Solenoids not grounded 	<p>CAUTION Be prepared to disconnect power when performing this test. If a solenoid sticks once, it is likely to stick again and must be replaced immediately.</p> <ol style="list-style-type: none"> 1. 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. Replace switch. 3. Check for poor connections. CAUTION Always use 2 wrenches (See Figure 1). 4. Replace or repair motor. 5. Check the ground path between battery negative and solenoid base.
Winch will not shut off	Solenoid stuck "ON"	If a solenoid sticks on, reverse direction and hold trigger switch until the power lead can be disconnected. A safety disconnect switch is available as an accessory.
Motor runs extremely hot	<ol style="list-style-type: none"> 1. Long period of operation 2. Damaged motor 3. Damaged brake 	<ol style="list-style-type: none"> 1. Allow to cool. 2. Replace or repair motor. 3. Replace or repair brake.
Motor runs but with insufficient power or line speed	<ol style="list-style-type: none"> 1. Weak battery 2. Battery to winch wire extended with same size wire 3. Poor battery connection 4. Poor ground 5. Damaged brake 	<ol style="list-style-type: none"> 1. Recharge or replace battery. Check charging system. 2. Use larger diameter wire. 3. Check battery terminals for corrosion. Clean as required. 4. Check and clean connections. 5. Repair or replace brake.
Winch runs backward	<ol style="list-style-type: none"> 1. Motor wires reversed 2. Solenoids wired incorrectly 	<ol style="list-style-type: none"> 1. Recheck wiring. 2. Recheck wiring.
Will not hold load	<ol style="list-style-type: none"> 1. Excessive load 2. Worn or damaged brake 	<ol style="list-style-type: none"> 1. Reduce load or double line. 2. Repair or replace brake.

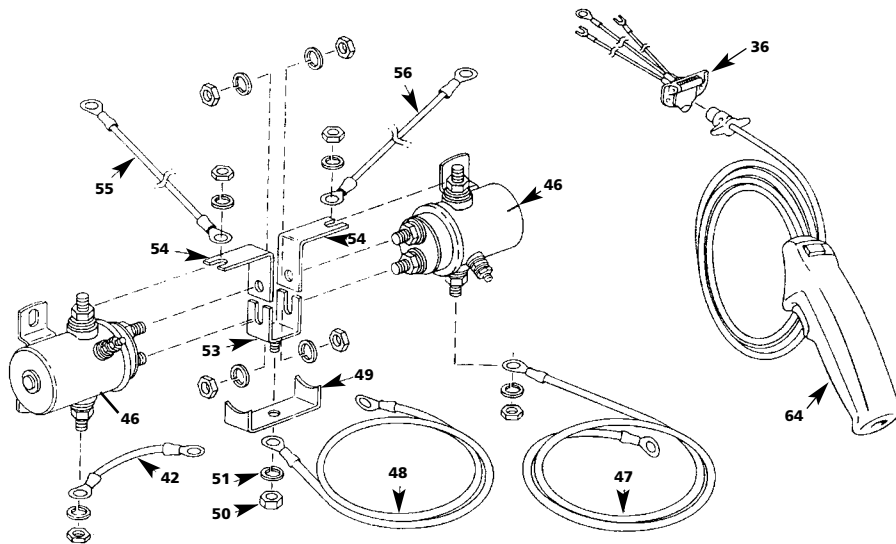
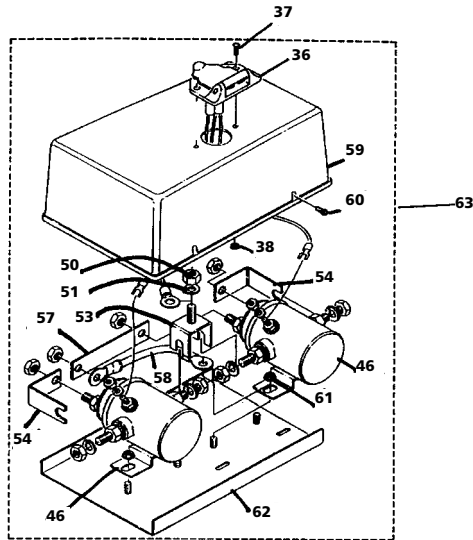
REPLACEMENT PARTS



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	Drum	89-40152	1
6	M6 x 1 x 8mm Set PT screw	90-23164-12	2
7	Brake spring	89-22342	1
8	Brake adapter	89-22287	1
9	Drum bearing	89-22269	1
10	Drum support	89-40092	1
11	Thrust washer	90-12574	2
12	Drive plate	89-32263	1
13	Rotating ring gear	89-32265	1
14	Planetary carrier assembly	89-22141	1
15	Wear washer	89-22271	1
16	Sun gear	89-32253	1
17	Stationary Ring Gear	89-32266	1
18	Housing Assembly	89-40157	1
19	12V Motor (03000, 03001, 03002, 03003, 03005) 24V Motor (03010)	90-33256 89-32386	1 1
20	Cable Tension Plate	89-32295	1
21	M6 x 1 x 16mm FCHSS Screw	89-22291-01	4
22	Roller Fairlead Shaft (Includes 22-27)		1
23	Roller Fairlead Shaft (Long)	89-22334-02	2
24	Roller Fairlead Frame	89-40113	1
25	Roller Fairlead Shaft (Short)	89-22334-01	2
26	3/8 Retaining Ring	90-23029-08	4
27	5/8 x 2.352 Roller	90-12568-04	2
28	5/8 x 4.735 Roller	90-12568-06	2
29	M6 x 1 x 13mm BHDCS Screw	89-22290-01	2
30	M6 x 1 x 16mm BHDCS Screw	89-22290-02	5
31	Motor Cover Assembly (03000) (includes logo, 34 & 37)	89-40131	1
32	Motor Cover Assembly (03002, 03005, 03010) (Includes logo, 34 & 37)	89-40131-03	1
33	M4 x 0.7 x 6mm (03000, 03002, 03005, 03010)	89-22292-01	4
34	Filler Block (03000, 03002, 03005, 03010)	89-12032	1
36	SKT Half Connector (03002, 03005, 03010)	90-22115	1
37	8-32 Pan Head Screw (03000)	90-23032-03	1
	8-32 Pan Head Screw (03002, 03005, 03010)	90-23032-03	3
38	8-32 Hex Flange Nut (03002, 03005, 03010)	90-23149-06	2
NS	Handsaver Bar	89-32300	1
NS	1/4 x 25' Wire Rope Assembly (03005)	1577B	1
NS	1/4 x 50' Wire Rope Assembly (03010)	1577A	1
NS	Pulley Block with Hook (03005)	2207	1
NS	Mounting Hardware Package	90-22877	1
NS	Terminal Package (03003)	90-22885	1
NS	12V Circuit Breaker Assembly (03002, 03003, 03005)	87-22873-11	1
NS	24V Circuit Breaker Assembly (03010)	90-22873-01	1
(NS)	Not Shown		

REPLACEMENT PARTS



REPLACEMENT PARTS LIST

Reference Number	Description	Part Number	Qty
46	12V Solenoid (03002, 03003, 03005)	90-20329	2
	24V Solenoid (03010)	90-20331	2
47	6 GA x 5' Leadwire Assembly (Pos) (03002, 03010)	90-23292-20	1
	6 GA x 20' Leadwire Assembly (Pos) (03005)	89-23292-27	1
48	6 GA x 5' Leadwire Assembly (Neg) (03002, 03010)	90-20187-06	1
	6 GA x 10' Leadwire Assembly (Neg) (03005)	89-23292-26	1
49	Ground Strap (03002, 03005, 03010)	89-22356	1
50	5/16 Lockwasher (03002, 03003, 03005, 03010)	92-23057-03	1
51	5/16-18 Hex Nut (03002, 03003, 03005, 03010)	92-23034-04	1
52	6 GA x 3 1/2" Leadwire Assembly (03002, 03005, 03010)	90-23292-06	1
53	Buss Bar 2 Assembly (03002, 03003, 03005, 03010)	92-10200	1
54	Buss Bar 1 (03002, 03005, 03010)	92-20126	2
55	8 GA x 9 3/8" Leadwire Assembly (Red) (03005)	89-23292-21	1
	8 GA x 9 3/8" Leadwire Assembly (03002, 03010)	90-20187-08	1
56	8 GA x 6" Leadwire Assembly (Black) (03005)	89-23306-02	1
	6 GA x 6" Leadwire Assembly (03002, 03010)	89-23292-19	1
57	Buss Bar 3 (03003)	92-20128	1
58	6 GA x 2 3/4" Leadwire Assembly (03003)	90-20187-07	1
59	8-32 x 1/4 HW Taptite Screw (03003)	90-22247	1
60	8-32 x 1/4 HW Taptite Screw (03003)	90-23039-03	4
61	10-32 Flange Hex Nut (03003)	90-23149-01	4
62	Solenoid Pack Back Plate (03003)	90-32070	1
63	12V Remote Solenoid Pack (03003)	90-32139	
64	Remote Control Assembly (03002, 03003, 03005, 03010)	90-22117	1
65	Safety Label, 3/4" icon, 3 x 2	89-20330	1