

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Powerwinch®

Model 215 Strap Winch

Description

Trailer winches are used for launching and loading boats. This winch features power-in/free-wheel out capabilities. A lanyard cord is supplied for remote operation.

Unpacking

When unpacking, inspect carefully for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc., are tightened before putting unit into service.

General Safety Information

⚠ DANGER *Danger means a hazard that will cause death or serious injury if the warning is ignored.*

⚠ WARNING *Warning means a hazard that could cause death or serious injury if the warning is ignored.*

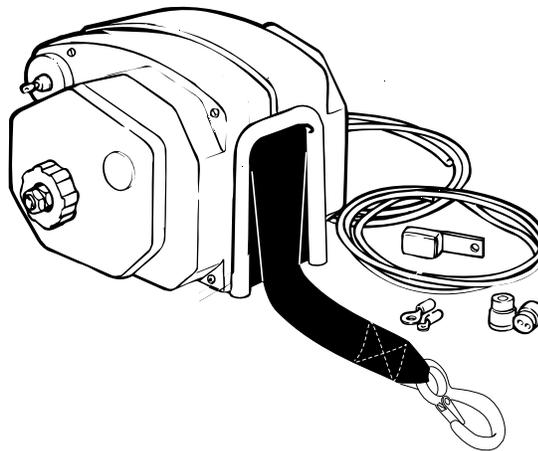
⚠ CAUTION *Caution means a hazard that may cause minor or moderate injury if the warning is ignored. It also may mean a hazard that will only cause damage to property.*

NOTE: Note means any additional information pertaining to the product or its proper usage.

The following safety precautions must be followed at all times:

1. Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Only persons well acquainted with these rules of safe operation should be allowed to use the winch.

⚠ WARNING *Always unplug the wiring harness to prevent accidental starting before attempting to install, service, relocate or perform any maintenance.*



Powerwinch Model 215 Strap Winch

2. Never use the winch to lift or move people or animals.
3. Stand away from the winch when in use and keep children away from winch area at all times.

⚠ WARNING *Always stand clear of the area behind and between the load or anchor point and the winch. Serious injury could occur, if the strap breaks.*

4. Always keep hands clear of strap spool (drum area).
5. Do not wear loose fitting clothing, scarves, or neck ties. Loose clothing may become caught in moving parts and result in serious personal injury.
6. **Never** use the winch for overhead lifting.
7. Always wire the winch with circuit breakers. Failure to use the breakers could cause overheating thus creating a potential fire hazard or motor damage.

⚠ DANGER *The strap fasteners on this or any winch are not designed to hold rated loads. Always leave a minimum of three wraps of strap on the drum at the bottom layer to achieve a rated load.*

8. Inspect the entire strap for weak or worn condition or cuts before each use.
9. When replacing the strap, **always** use a genuine Powerwinch replacement strap with the same winch rating and strength.
10. Never substitute rope for strap. Possible injury could occur.
11. Do not attempt to pull a load greater than the rated load of the winch.
12. Do not use the winch to hold or support the load once a job is complete or to permanently secure the load. Damage could occur to the winch or the load.
13. Never wrap the winch strap around the load. Use an properly rated nylon strap or chain to prevent the cable from kinking or fraying.

CAUTION

After using the winch, always disconnect the power cord from the socket to avoid moisture collection in the socket and prevent the possibility of short circuiting.

- 14. Always block the vehicle wheels to help prevent the vehicle from rolling when pulling a load with the winch.
- 15. Do not operate the winch under the

influence of drugs, alcohol, or other medication.

WARNING

Secure the boat to the trailer after winching the boat onto the trailer or personal injury could occur.

Specifications

Various load conditions will affect winch performance. The line pull required for a specific application depends on the weight of the load, condition of the trailer

rollers, and the degree of the loading ramp incline. The chart below is based on a single line pull and is a guideline to aid in calculating pulling requirements.

Chart 1 - Approximate rolling load capacities

Winch Model	Level Surface 0°	% incline (° incline)						
		5% 3°	10% 6°	20% 11°	30% 17°	50% 26°	70% 35°	100% 45°
215 Strap Winch	15,000 lbs.	10,005 lbs.	7,530 lbs.	5,250 lbs.	3,915 lbs.	2,790 lbs.	2,295 lbs.	1,935 lbs

- A 10% incline (or 6°) is 1 foot rise in 10 ft.
- To convert from pounds (lbs) to kilos (kgs) divide by 2.2.
- Capacity can be increased (approximately doubled) by using a pulley block.

Chart 2 - Winch and boat capacities

Winch Model	Single Line Capacity	Double Line Capacity	Approximate* Boat Weight
215 Strap Winch	1,500 lb.	N/A	4000 lb.

* Boat size and weight is approximate and varies depending on boat type. When calculating boat weight be sure to use fully loaded weight - including boat, motor, fuel, water, gear etc.

Chart 3 - Winch specifications

Winch Model	Line Speed @ Capacity (FPM)	Gear Ratio	Voltage (Volts DC)	Circuit Breaker (Amps)	Unit Weight (lbs)	Depth	Height	Width
215 Strap Winch	12	270:1	12	30	23	9.5"	10"	8"

Installation

MOUNTING THE WINCH

The winch can be mounted on the trailer in the same position and location as an existing hand winch. After removing the hand winch, bolt the Powerwinch unit using the two 3/8" machine bolts, lock washers and hex nuts supplied in the parts pack.

For faster winch mounting and dismounting, the Powerwinch Quick Mount Kit (P7700000AJ) is available from the your dealer.

The cable hook on the winch and the bow eye on the boat should be at the same height when the boat is in the fully loaded position on the trailer. If the bow eye is too high, extra pull is required of the winch and extra stress is exerted on the boat's stern and bow eye.

To achieve equal height of the winch and boat, raise or lower the winch stand. In most cases, the trailer manufacturer will have an adapter available for use with a winch.

⚠ CAUTION *A minimum of 12 inch clearance is required between the winch and the bow eye to prevent the cable hook from being drawn into the winch drum when the boat is in the fully loaded position on the trailer.*

If necessary, extend the bow stop to obtain the clearance.

WIRING

MODEL 215 STRAP WINCH PERMANENT WIRING

To permanently wire the winch, refer to Figure 1 and follow the outlined procedures.

1. Strip approximately 3/8" of insulation from each wire end.
2. Grasp one end of the red and black wires, insert the wires into rubber boot and the plug cover.
3. Attach the **red** wire to the **gold** terminal and attach the **black** wire to the **silver** terminal.
4. Firmly tighten the two screws that hold the wires in place. Screw the plug cover into the plug base and slide the rubber boot firmly over the plug.
5. Run the red and black wires under

or through the vehicle. Drill holes to feed the wires and be sure to protect the wires from damage by using grommets (not supplied). Worn wire insulation can cause short circuits. At 10" intervals, join the red and black wires together using electrical tape or wire ties.

6. Attach the 5/16" ring terminal to the end of the black wire and crimp together.
7. Attach the 3/16" ring terminal to the end of the red wire and crimp together.

⚠ WARNING *Connect the positive wire before grounding the black wire to the vehicle frame to prevent electrical arcing.*

8. Connect the red wire with the 3/16" ring terminal to the circuit breaker.
9. Connect the circuit breaker to the battery terminal.
10. Attach the black wire with the 5/16" ring terminal to the vehicle frame.

⚠ CAUTION *Never attach the red wire with the circuit breaker to the negative (-) or ground battery terminal. Incorrect*

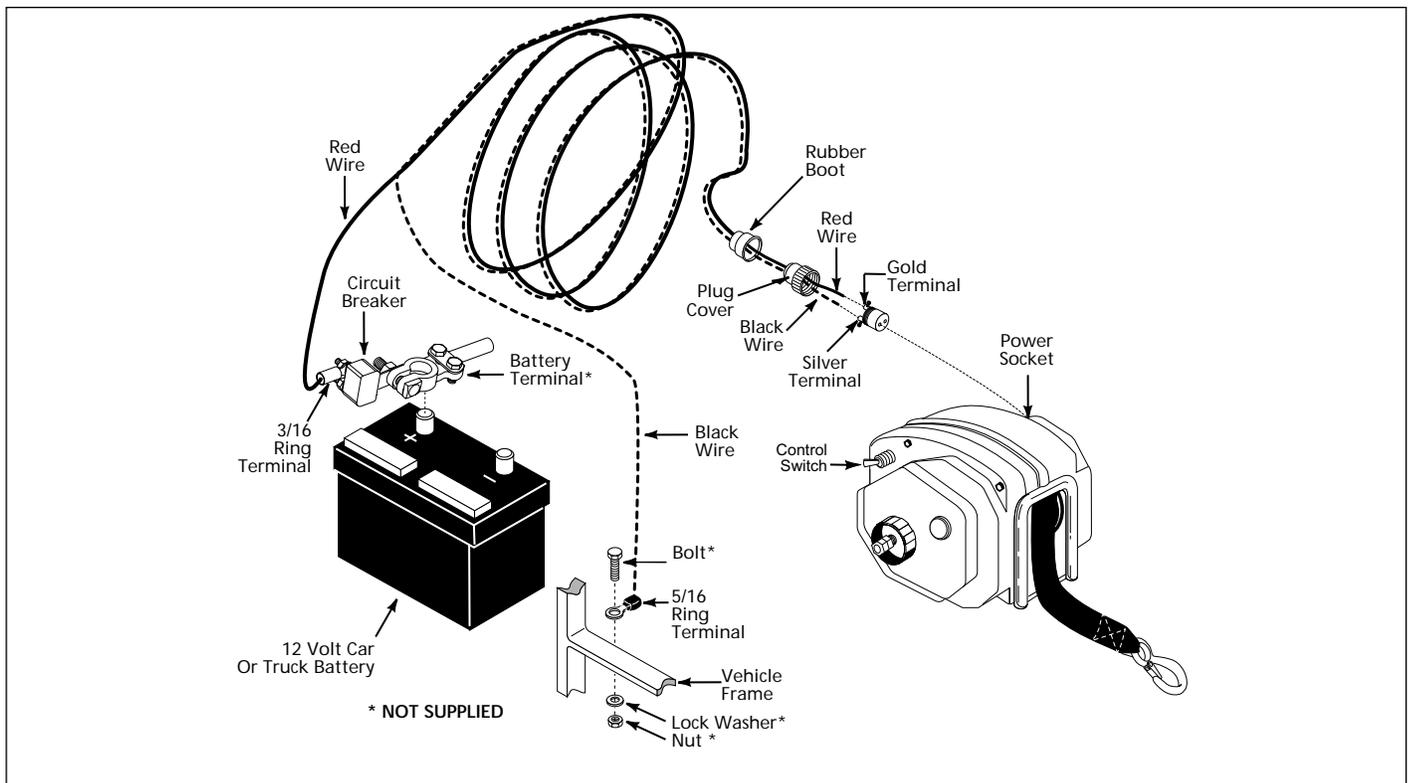


Figure 1 - Permanent Wiring Hookup for Model 215 Strap Winch

wiring will short circuit and damage the circuit breaker and/or motor which could cause damage to the vehicle and winch.

11. Insert the plug into the power socket on the winch.

TEMPORARY WIRING

To temporarily wire the winch, follow the outlined procedures. A complete wiring harness is available from your dealer. Order part number P7865900AJ for Model 215.

1. Attach two large "alligator" type clips, one to the circuit breaker and one to the end of the black wire.
2. Run the red wire (with the circuit breaker) to the battery and clip the wire to the hot (positive) side of the battery.
3. Clip the black wire to the vehicle frame or negative side of the battery.

Operation

UNLOADING

To unload the boat and follow the outlined procedures.

⚠ WARNING Clear the area around and behind the boat of people, animals, and obstructing objects before loading or unloading or personal injury could occur.

1. Attach the winch strap hook to the bow eye on the boat.

⚠ WARNING Always stand clear of the area behind and between the load or anchor point and the winch. Serious injury could occur if the cable breaks.

The clutch control knob on the side of the winch controls the loading and unloading operation (See Figure 2). Turning the

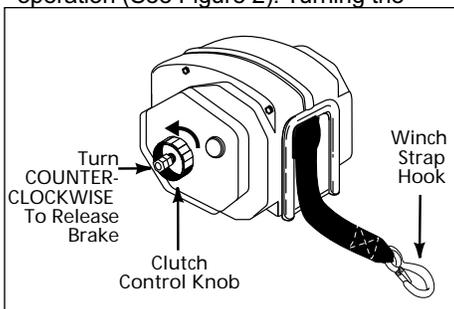


Figure 2. Clutch knob operation for unloading.

knob counterclockwise releases the brake and allows the cable to free-wheel out.

2. Turn the clutch knob slowly in a counterclockwise motion to release the brake on the winch.
3. Allow the boat to slide off the trailer (a slight push may be necessary to start the boat down the run).

⚠ WARNING Once the boat is moving, do not attempt to slow or stop the boat motion by turning the clutch knob. The knob will free-wheel with the outgoing cable. Any contact with the clutch knob while in motion could result in personal injury.

LOADING

1. Align the boat and trailer.

⚠ WARNING Always stand clear of the area between the load or anchor point and the winch. Serious injury could occur if the cable breaks.

2. Free-wheel the winch cable out and attach the strap hook to the eye on the boat.

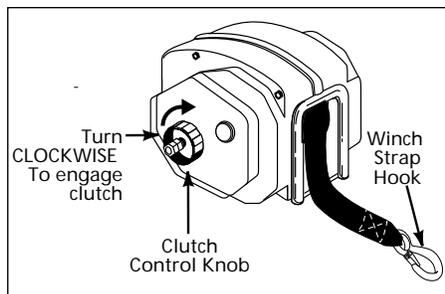


Figure 3. Clutch knob operation for loading.

⚠ DANGER Only tighten clutch knob hand tight. Using a tool such as a wrench to tighten the clutch knob will damage the clutch and will overload the winch. Serious injury may occur if the winch is overloaded.

3. Turn the clutch control knob clockwise until hand tight to set the brake (See Figure 3).
4. Step clear of the winch and winch strap area and power in the cable until the boat touches the bow stop.
5. Secure the boat to the trailer once the

boat is fully loaded.

⚠ DANGER Do not use the winch to hold the weight of the boat while in transit. Always secure the boat to the trailer before towing the boat and trailer.

6. Remove the winch cable hook from the bow eye and power-in the strap. Secure the cable hook to prevent personal injury or property damage.

EMERGENCY HAND CRANK

The emergency hand crank is included with your winch. This emergency hand crank should only be used when there is no power source(i.e. dead battery). The emergency hand crank should never be used to help a running motor.

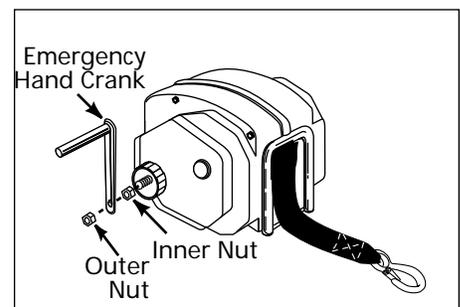


Figure 4 Emergency Hand Crank Assembly

To use the winch in manual mode, follow the procedures outlined below.

1. Unplug the winch from the wiring harness.
2. Turn the clutch control knob clockwise until tight. DO NOT overtighten the knob or clutch damage will occur (See Figure 4).
3. Remove the outer nut shown in Figure 4 and place the emergency hand crank on the shaft.
4. Tighten the outer nut firmly against the hand crank.

After using the emergency hand crank, follow the procedures outlined below.

1. Remove the outer nut shown in Figure 4 and remove the emergency hand crank off the shaft.
2. Tighten the outer nut firmly against the inner nut.

Maintenance

⚠ WARNING *Always unplug the wiring harness to prevent accidental starting before attempting to install, service, relocate or perform any maintenance.*

Strap Maintenance:

- Inspect the entire strap for weak or worn condition, including cuts or frays, before every use. Replace strap immediately if any cuts or frays are found or if the strap is beginning to show any wear. Use only genuine Powerwinch replacement parts.
- Check strap plate screws every three months and/or at the beginning of every boating season to make sure they are tight. If they are loose, remove and inspect the screws and strap plate and washers. Replace the screws and strap plate if they are bent. Always put thread locker like Loctite 242 on the strap plate screws and tighten screws to a minimum torque of 50 in.lbs. Use only genuine Powerwinch replacement parts.

Winch Maintenance:

- A light coat of lithium grease can be applied to the winch gears once per year.

⚠ CAUTION *Extreme caution must be taken to avoid getting any grease on the clutch lining because this may cause clutch slipping.*

STRAP REPLACEMENT

⚠ WARNING *Always unplug the wiring harness to prevent accidental starting before attempting to install, service, relocate or perform any maintenance.*

To replace the strap, follow the outlined procedures and refer to Figure 5.

Always replace the strap fasteners as well as the strap plate when replacing the strap. Use an exact replacement genuine Powerwinch strap. The winch rating and cable strength are carefully matched. Never replace the cable with rope.

1. Unplug the wiring harness. Loosen the clutch knob and free-wheel the strap out.
2. Locate the strap plate fasteners and turn strap shaft until the fasteners are

accessible from the front of the winch. Tighten clutch knob to prevent shaft from turning while screws are being removed.

3. Using a 5/32" hex key, remove the strap plate screws and then the strap should come free from the strap shaft.
4. Place the new strap plate through the looped end of the replacement strap. Make sure the stitching is facing up and the strap is centered between the holes in the strap plate. See Figure 5.
5. Place the new strap plate screws through the holes in the strap plate and assemble the lock washers. Make sure the split on the lock washer does not touch the strap. See Figure 5.

⚠ CAUTION *Make sure to use a threadlocker, like Loctite 242, on the strap plate screws before assembling the screws back into the strap shaft.*

6. Place threadlocker on the strap plate screws and replace them back into the strap shaft.
7. Tighten screws to a minimum torque of 50 in.lbs.
8. Plug wiring harness back into winch and retrieve strap. Make sure to keep some tension on the strap so it does not twist or pile up on the shaft.
9. Finally, check tightness of strap plate screws. The winch is now ready to use.

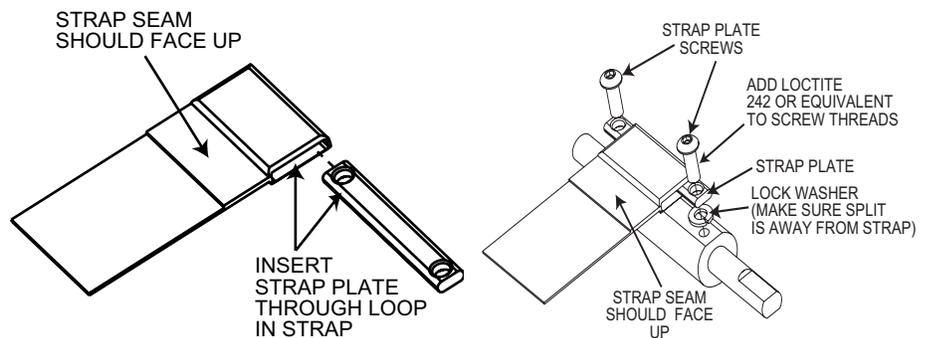
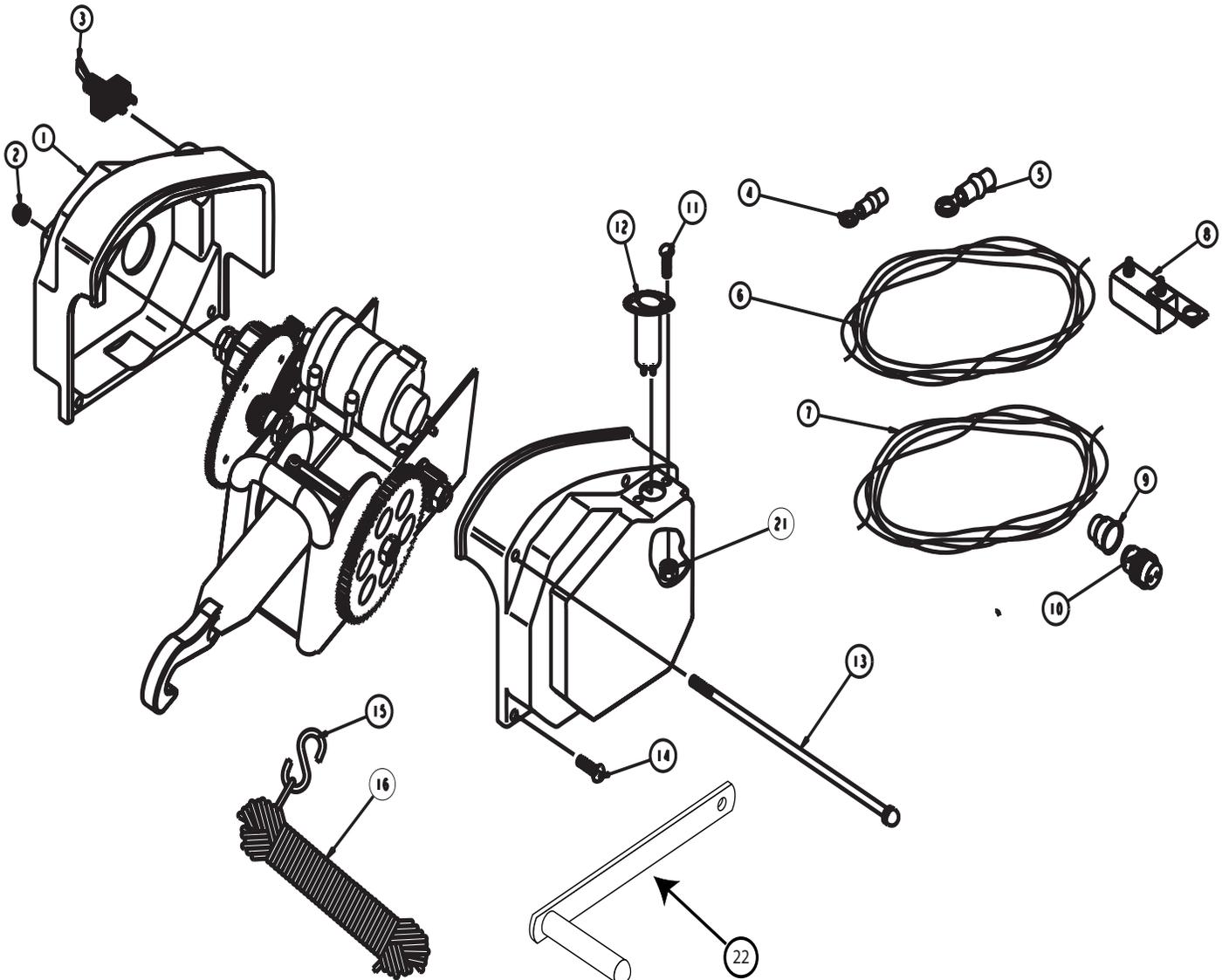


Figure 5. Strap Replacement

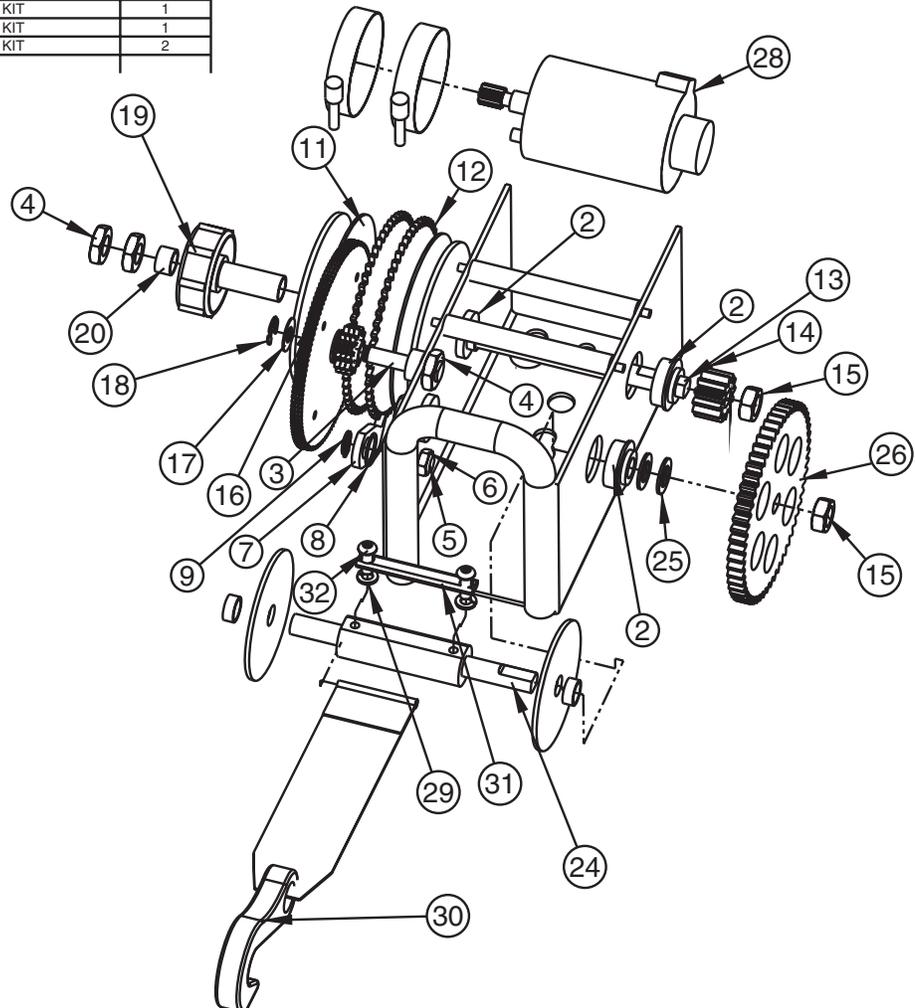
Troubleshooting Guide

Symptom	Possible Causes	Corrective Action
Winch does not operate.	1. Disconnected wires or bad circuit breaker.	1. Start checking the wiring at the battery. Bypass the circuit breakers and test the winch. If the winch operates, replace the circuit breaker. 2. Check wiring insulation for worn or bare spots that may be causing a short. 3. Check all connections for tightness.
Load slips under retrieval	1. Clutch knob not fully tightened. 2. Clutch lining worn. 3. Ratchet pawl is caught between drive gears.	Tighten clutch knob. Tighten only hand tight. Replace clutch lining. Remove winch cover. Locate ratchet pawl and make sure it is not trapped between drive gears and clutch plates. If ratchet pawl is trapped, pull it out and engage it with the drive gear teeth.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P10918	COVER KIT	1	12	P7816100AJ	SOCKET KIT	1
2	R001269	FASTENER KIT	4	13	R001269	FASTENER KIT	2
3	R001267	SWITCH KIT	1	14	R001269	FASTENER KIT	4
4	P7933901AJ	WIRING KIT	1	15	P7901300AJ	LANYARD CORD KIT	1
5	P7933901AJ	WIRING KIT	1	16	P7901300AJ	LANYARD CORD KIT	1
6	P7933901AJ	WIRING KIT	10 FT	17	P7704100AJ	EMERGENCY HAND CRANK	1
7	P7933901AJ	WIRING KIT	25 FT				
8	P7933901AJ	WIRING KIT	1				
9	P7933901AJ	WIRING KIT	1				
10	P7933901AJ	WIRING KIT	1				
11	P7816100AJ	SOCKET KIT	2				



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
-	-	-	-
2	R001263	BEARING KIT	4
3	R001411	SHAFT KIT	1
4	R001269	FASTENER KIT	3
5	R001265	RATCHET PAWL KIT	1
6	R001265	RATCHET PAWL KIT	1
7	R001265	RATCHET PAWL KIT	1
8	R001265	RATCHET PAWL KIT	1
9	R001269	FASTENER KIT	1
-	-	-	-
11	R001262	CLUTCH KIT	2
12	R001264	GEAR KIT	2
13	R001411	SHAFT KIT	1
14	R001264	GEAR KIT	1
15	R001269	FASTENER KIT	3
16	R001264	GEAR KIT	1
17	R001269	FASTENER KIT	1
18	R001269	FASTENER KIT	1
19	P7940500AJ	CLUTCH KNOB KIT	1
20	P7940500AJ	CLUTCH KNOB KIT	1
-	-	-	-
-	-	-	-
-	-	-	-
24	R001411	SHAFT KIT	1
25	R001269	FASTENER KIT	2
26	R001264	GEAR KIT	1
-	-	-	-
28	R001274	REPLACEMENT MOTOR WITH GEAR	1
29	R001412	STRAP KIT	2
30	R001412	STRAP KIT	1
31	R001412	STRAP KIT	1
32	R001412	STRAP KIT	2



Technical Information

For information on the operation or repair, please call 1-800-243-3097.

Replacement Parts Information

For information regarding where to order replacement parts, call 1-800-243-3097. Please have the following information available:

Winch Model Number

Winch Serial Number

Part Number and Description

Address correspondence to:

Carefree/Powerwinch

Attn: Customer Service

2145 West 6th Ave.

Broomfield, CO 80020

Limited Warranty

- A. This Limited Warranty is given by the Powerwinch Division of the Scott Fetzer Company (the "Company") to the original purchaser (the "Purchaser") of a Powerwinch Product (the "Product") specified in this manual. This Limited Warranty is not transferable to any other party.
- B. Responsibilities of the Company under this Limited Warranty:
1. Repair or replace (at the discretion of the Company) any part or parts of the Product found by the Company to be defective within a one (1) year period from the date of purchase.
 2. The Company will pay the transportation charge for shipment back to the Purchaser of any Product received for legitimate Warranty repair.
- C. Responsibilities of the Purchaser under this Limited Warranty:
1. Purchaser will have to show dated proof of purchase to qualify for service under the provisions of the Limited Warranty.
 2. Promptly notify the Seller or the Company of any claim hereunder.
 3. At the Option of the Company, return the Product to the Company for inspection. Authorization must be given prior to any Product return. Call the Company at 1-800-243-3097 or write the Company at 2145 West 6th Street, Broomfield, CO 80020, for authorization and complete instructions on how to return the Product directly to the Company.
 4. Use reasonable care in maintenance, operation, use and storage of the Product in accordance with the instructions contained in the Owner's Manual.
 5. Have Warranty work performed by a dealer or representative approved by the Company.
 6. Except as noted in B.2., transportation charges are the responsibility of the Purchaser.
- D. This Limited Warranty covers:
1. Defects in workmanship or materials.
 2. Any part or parts of the Product sold or manufactured by the Company.
- E. This Limited Warranty does not cover:
1. Any failure that results from improper installation of the Product.
 2. Any failure that results from accident, Purchaser's abuse, neglect, modification, improper maintenance, or failure to operate and use the Product in accordance with the instructions provided in the Owner's Manual supplied with the Product.
- F. There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from date of purchase. This is the exclusive remedy and any liability for any and all incidental or consequential damages or expenses whatsoever is excluded.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow exclusion or limitation of incidental or consequential damages, the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

