

C50079 5,000lb Winch Owners Manual

INTRODUCTION

Congratulations on your purchase of a Champion Power Equipment winch. CPE designs and builds winches to strict specifications and with proper use and maintenance should bring you years of satisfying service.



READ, STUDY, AND FOLLOW ALL INSTRUCTIONS BEFORE OPERATING THIS DEVICE.

Your winch can develop tremendous pulling forces and if used unsafely or improperly could result in property damage, serious injury, or death. Throughout this manual you will find the following symbols for caution, warning, and danger. Pay particular attention to the notes preceded by these symbols as they are written for your safety. Ultimately, safe operation of this device rests with you, the operator.



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.

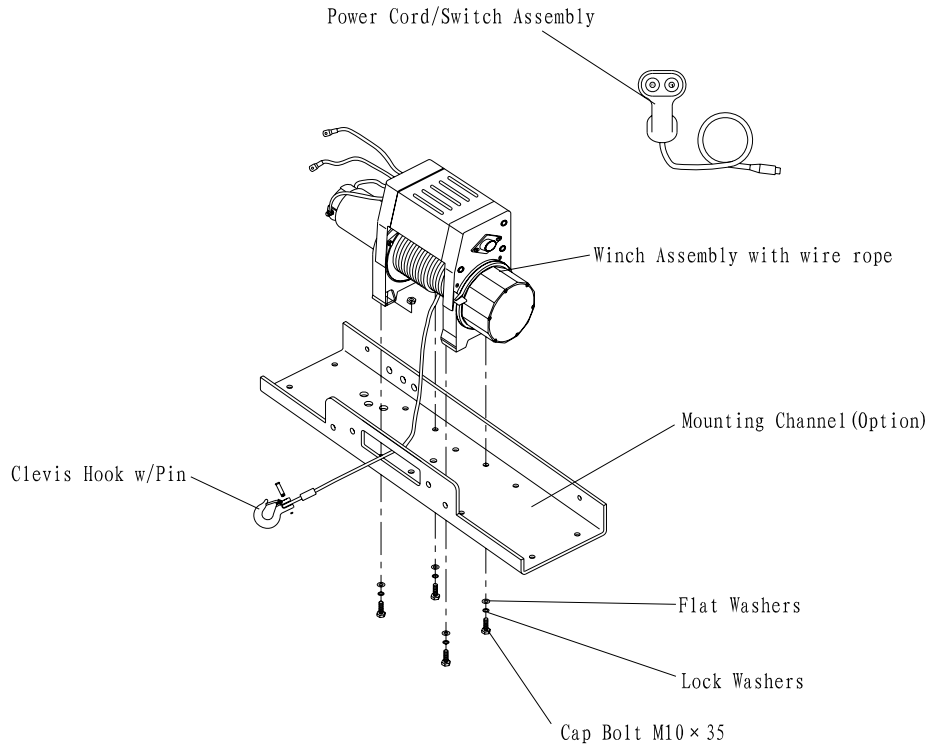


Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CONTENTS

**This carton contains the following items, please unpack carefully.
Read Instructions before beginning.**

<u>DESCRIPTION</u>	<u>QUANTITY</u>
Winch assembly with wire cable	1
Power Cord/Switch Assembly	1
Cap Bolt M10 x 35	6
Lock Washers	6
Flat Washers	6
M10 Nuts	6
Clevis Hook w/Pin	1
Hand Strap	1



GETTING TO KNOW YOUR WINCH

Your 5,000lb Champion Power Equipment winch is a powerful piece of machinery. It is important that you understand the basics of its operation and specifications so that when you need to use it, you can use it with confidence and safety. Below is a list of the components of your winch and their uses. Practice operating your winch before you actually use it.

1. **Motor:** Your 1.8HP motor requires a 650CCA 12 volt battery for operation and provides power to the gear mechanism which turns the drum and winds the wire cable.
2. **Winch Drum:** The winch drum is the cylinder on which the wire cable is stored. It can feed or wind the rope depending on the remote winch switch.
3. **Wire Rope:** Your winch has a 1/4" x 79' galvanized aircraft cable designed specifically for load capacity of 5,000lbs. The wire cable feeds onto the drum in the "under wind" position and is looped at the end to accept the clevis hook pin.
4. **Planetary Gear System:** The reduction gears convert the winch motor power into extreme pulling forces. This system allows high torque while even though it is light weight and compact.
5. **Braking System:** Braking action is automatically applied to the winch drum when the winch motor is stopped and there is a load on the wire rope. The braking action is applied by a separate mechanical brake.
6. **Free Spooling Clutch:** The clutch allows the operator to manually disengage ("Out") the spooling drum from the gear train. Engaging the clutch ("In") locks the winch into the gear system.
7. **Solenoid:** Power from the vehicle battery flows through the weather sealed solenoid switch before being directed to the winch motor.
8. **Remote Switch:** Power switch with 12' cord has a dual switch for powering the rope in or out of your winch drum. The 12' cord allows you to stand clear of the wire rope when the winch is under load.

9. Clevis Hook: This hook allows you to connect the winch to the object you are pulling.



FIG B

MOUNTING YOUR WINCH

(Mounting Channel and Roller Fairlead not included)

1. Your CPE 5,000lb winch is designed with a 6.55" x 4.5" bolt pattern that is standard in this class of winch. Winch mounting kits are available that utilize this bolt pattern for most popular trucks, SUV's, and ATV's. If you cannot find a kit locally, contact CPE and we will provide you with the name of a dealer near you.

If you will utilize a mounting channel you must ensure that it is mounted on a flat surface so that the three major sections (motor, drum and gear housing) are properly aligned. Proper alignment of the winch will allow even distribution of the full rated load.

2. Insert 2xM10 Nuts with Lock Washers (Part# 500022 & Part # 500020) to the mounting channel (not included) hole and attach the Roller Fairlead (not included) to the mounting channel with the bolts provided, and guide the wire cable through the rollers. (See Fig.2)

Mounting bolts must be SAE grade 5 or better and torque to 34 lbs.

3. Turn the winch up-side-down; insert 4 Cap Screws with Flat Washers (Part#500019 & Part# 500021) into the holes of the winch as showed in Fig. 3.
4. Place the Mounting Channel (not included) on the winch as shown in Fig. 4. Make sure the winch is centered in the middle of the mounting channel. Disengage the clutch by moving the Cam Ring to the "Out" position. Release the wire cable and pull through the slot in the front of the channel.
5. Attach using the 4 x M10 Nuts with Lock Washers (Part# 500022 & Part# 500020) into the hole. (See Fig. 5)

6. Attach the clevis hook and hand strap. (See Fig. 6, Fig. 7)
7. Connect the battery leads. **NOTICE: BATTERY SHOULD BE A MINIMUM OF 650CCA FOR WINCH TO FUNCTION PROPERLY.** Connect the red (positive) lead from the solenoid to the positive (+) terminal of the vehicles 12 volt battery. Connect the black (negative) lead from the solenoid to the negative (-) terminal of the battery.

 **Caution** Battery cables should not be drawn taut. Leave some slack for cable movement.

8. Attach the hand held remote lead to the winch and test for proper operation. (See Fig. 9)
9. Check for proper drum rotation. Pull and turn the clutch knob to the “out” position (Free spooling). Pull out some cable from the drum, and turn the clutch knob to the “in” position to engage the gears. Press the cable out button on the power switch. If the drum is turning and releasing more cable then your connections are accurate. If the drum is turning and collecting more cable then reverse the leads on the battery. Repeat and check rotation.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9

SAFETY PRECAUTIONS

⚠ WARNING ⚠

⚠ WARNING

READ, STUDY, AND FOLLOW ALL INSTRUCTIONS BEFORE OPERATING THIS DEVICE.

- ⚠ WARNING – DO NOT EXCEED RATED CAPACITY.**
- ⚠ WARNING – Do not use winch for lifting or moving people or animals.**
- ⚠ WARNING – A minimum of 5 wraps of cable around the drum barrel is necessary for pulling and holding the rated load. The cable clamp is not designed to hold the load without 5 wraps of cable around the barrel.**
- ⚠ WARNING – Keep yourself and others at a safe distance. Stand to the side of the cable when under tension.**
- ⚠ WARNING – The wire rope may break before the motor stalls. For heavy loads at or near rated capacity, use a pulley block/snatch block (not included) to reduce the load on the wire rope.**
- ⚠ WARNING – Never step over a cable, or near a cable under load.**
- ⚠ WARNING – Do not move the vehicle to pull a load (towing) on the winch cable. This could result in cable breakage.**
- ⚠ WARNING – Disconnect the remote control and battery leads when not in use.**
- ⚠ WARNING – Avoid “shock loads” by using the control switch intermittently to take up the slack in the wire rope. “Shock loads” can far exceed the rate capacity for the wire rope and drum.**
- ⚠ WARNING – When re-spooling the cable, ensure that the cable spools in the under-wind position with the cable entering the drum from the bottom, not the top. To re-spool correctly, and while wearing gloves, keep a slight load on the cable while pushing the remote button to draw in the cable. Walk toward the winch not allowing the cable to slide through your hands. Do not let your hands get within 12” of the winch while re-spooling. Turn off the winch and repeat the procedure until a few feet of cable is left. Disconnect the remote control and finish spooling by rotating the drum by hand with the clutch**

disengaged. Keep hands clear of the fairlead and drum while the winch is under power.

⚠ WARNING – Do not use as a hoist. Do not use for overhead lifting.

⚠ CAUTION – Use gloves to protect hands when handling the cable. Never let the cable slide through your hands.

⚠ WARNING – Don't wrap cable around any object and hook back onto itself.

Apply blocks to the wheels of the vehicle when on an incline.

No modifications, alterations, or deviation to the winch are authorized by the manufacturer and shall not be made.

Duration of winching pulls should be kept as short as possible. If the motor becomes uncomfortably hot to the touch, stop winching immediately and let it cool down for a few minutes. Do not pull for more than one minute at or near the rated load.

⚠ CAUTION - If the motor stalls do not maintain power to the winch. Electric winches are designed and made for intermittent use and should not be used in constant duty applications.

⚠ CAUTION - Never release the free-spool clutch when there is a load on the winch.

⚠ CAUTION - Use the hand strap when handling the hook for spooling or unspooling the wire cable.

⚠ WARNING - Failure to heed these warnings may result in personal injury and/or property damage.

GENERAL TIPS FOR SAFE OPERATION

- The C50079 is rated at 5,000 lbs. capacity (Max) on the first layer when spooling the first cable layer on the drum. Overloads can damage the winch motor or wire cable. For loads over 5,000 lbs., we recommend the use of the pulley block/snatch block (not included) to double the wire cable line. This will aid in two ways: a) reduce the number of cable layers on the drum, as well as: b) reduce the load on the wire cable by as much as 50%. When doubling the line back to the vehicle, attach to the frame or other load bearing part.
- The vehicle engine should be kept running during operation of the winch to minimize battery drain and maximize power and speed of the winch. If the winch is used for a considerable time with the engine off the battery may be drained and too weak to restart the engine.
- Get to know your winch before you actually need to use it. We recommend that you set up a few test runs to familiarize yourself with rigging techniques, the sounds your winch makes under various loads, the way the cable spools on the drum, etc.
- Inspect the wire cable and equipment before each use. A frayed or damaged cable shall be replaced immediately. Use only manufacturer's identical replacement cable with the exact specifications.
- Inspect the winch installation and bolts to ensure that all bolts are tight before each operation.



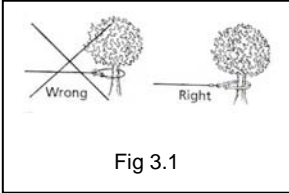
WARNING

Never connect the cable back to itself. This will cause cable damage. Always use a snatch block, sling or chain of suitable strength as shown in the illustrations.

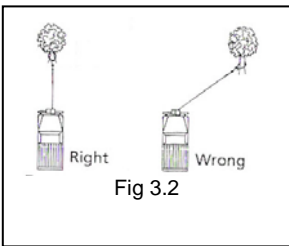
- **Store the remote control inside your vehicle in a place that it will not be damaged.**
- **Any winch that appears to be damaged in any way, is found to be worn, or operates abnormally MUST BE REMOVED FROM SERVICE UNTIL REPAIRED. It is recommended that the necessary repairs be made by a manufacturer's authorized repair facility.**
- **Pull only on areas of the vehicle as specified by the vehicle manufacturer.**
- **Only attachments and/or adapters supplied by the manufacturer are to be used.**

RIGGING TECHNIQUES

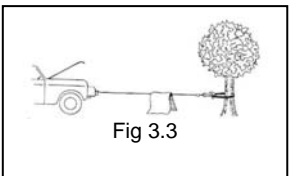
Self Recovery



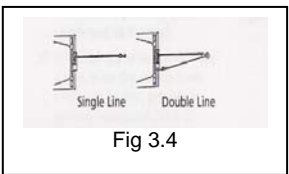
Locate a suitable anchor such as a strong tree trunk or boulder. Always use a sling (not included) as an anchor point. **⚠ CAUTION** - Do not attach the clevis hook back onto the cable as this could cause damage to the cable. See Fig 3.1.



A roller fairlead (not included) will help guide the wire cable and reduce binding on short side pulls. **⚠ Do not** winch from an acute angle as the wire rope will pile up on one side of the drum causing damage to wire rope and the winch. See Fig 3.2. Short pulls from an angle can be used to straighten the vehicle. Long pulls should be done with the wire rope at a 90° angle to the winch/vehicle.



When pulling a heavy load, place a blanket or jacket over the wire rope five or six feet from the hook. In the event of a broken cable it will dampen the snap back. For additional protection open the hood of the vehicle as shown in Fig 3.3.



For pulls over 3,200lbs., we recommend the use of a snatch block/pulley block (not included) to double line the wire rope. See Fig 3.4. This reduces the load on the winch and the strain on the cable by approximately 50%.



⚠ WARNING - Never use your winch for overhead hoisting or for lifting people or moving people.

WINCHING TECHNIQUES A-Z

- a. Take time to assess your situation and plan your pull.
- b. Put on gloves to protect your hands.
- c. Disengage the clutch to allow free-spooling and also save battery power.
- d. Attach the hand strap to the clevis hook.
- e. Pull out the wire cable to your desired anchor point using the hand strap.
- f. Secure the clevis hook to the anchor point (sling, chain, or snatch block).
Do not attach the hook back onto the wire rope.
- g. Engage the clutch.
- h. Connect the remote control to the winch. If you are going to control the winch from inside your vehicle, then pass the remote through an open window to avoid the wires being pinched in the door.
- i. Start your engine to ensure power is being replenished to the battery.
- j. Draw up slack in the cable. Once the cable is under tension stand clear.
Never step over the wire cable.
- k. Double check your anchors and make sure all connections are secure.
- l. Inspect the wire cable. Make sure there are at least 5 wraps of wire cable around the winch drum.

- m. Drape a blanket or jacket over the wire cable approximately 5 to 6 feet from the hook. Open the hood for added protection.**
- n. Clear the area. Make sure all spectators are at a safe distance and that no one is directly in front or behind the vehicle or anchor point.**
- o. Begin winching. Be sure that the wire cable is winding evenly and tightly around the drum. The vehicle that is being winched can be slowly driven to add assistance to the winching process. Avoid shock loads; keep the wire cable under consistent tension.**
- p. The vehicle to be winched should be placed in neutral and the emergency brake released. Only release the brake pedal when under full tension. Avoid shock loads to the winch. This can damage the winch, cable, and vehicle.**
- q. The winch is meant for intermittent use while under a full load with a single line rig. Do not reel in the winch for more than one minute without letting the motor cool down for a few minutes. Afterwards, you may resume the winching operation.**
- r. The winching operation is complete once the vehicle is on stable ground and is able to drive under its own power.**
- s. Secure the vehicle. Be sure to set the brakes and place the vehicle in park.**
- t. Release the tension on the wire cable. The winch is not meant to hold the vehicle for long periods of time.**
- u. Disconnect the wire cable from the anchor.**

- v. Rewind the wire cable. Make sure that any wire already on the drum has spooled tightly and neatly. If not, draw out the wire and re-spool from the point where the rope is tight.**

- w. Keep your hands clear of the winch drum and fairlead as the wire rope is being drawn in.**

- x. Secure the hook and hand strap.**

- y. Disconnect the remote control and store in a clean, dry place.**

- z. Clean and inspect connections and mounting hardware for next winching operation.**

MAINTENANCE

Lubrication

1. All moving parts within the electric winch have been lubricated using high temperature lithium grease at the factory. No internal lubrication is required.
2. Lubricate cable assembly (4) periodically using a light penetrating oil.

Cable Assembly Replacement

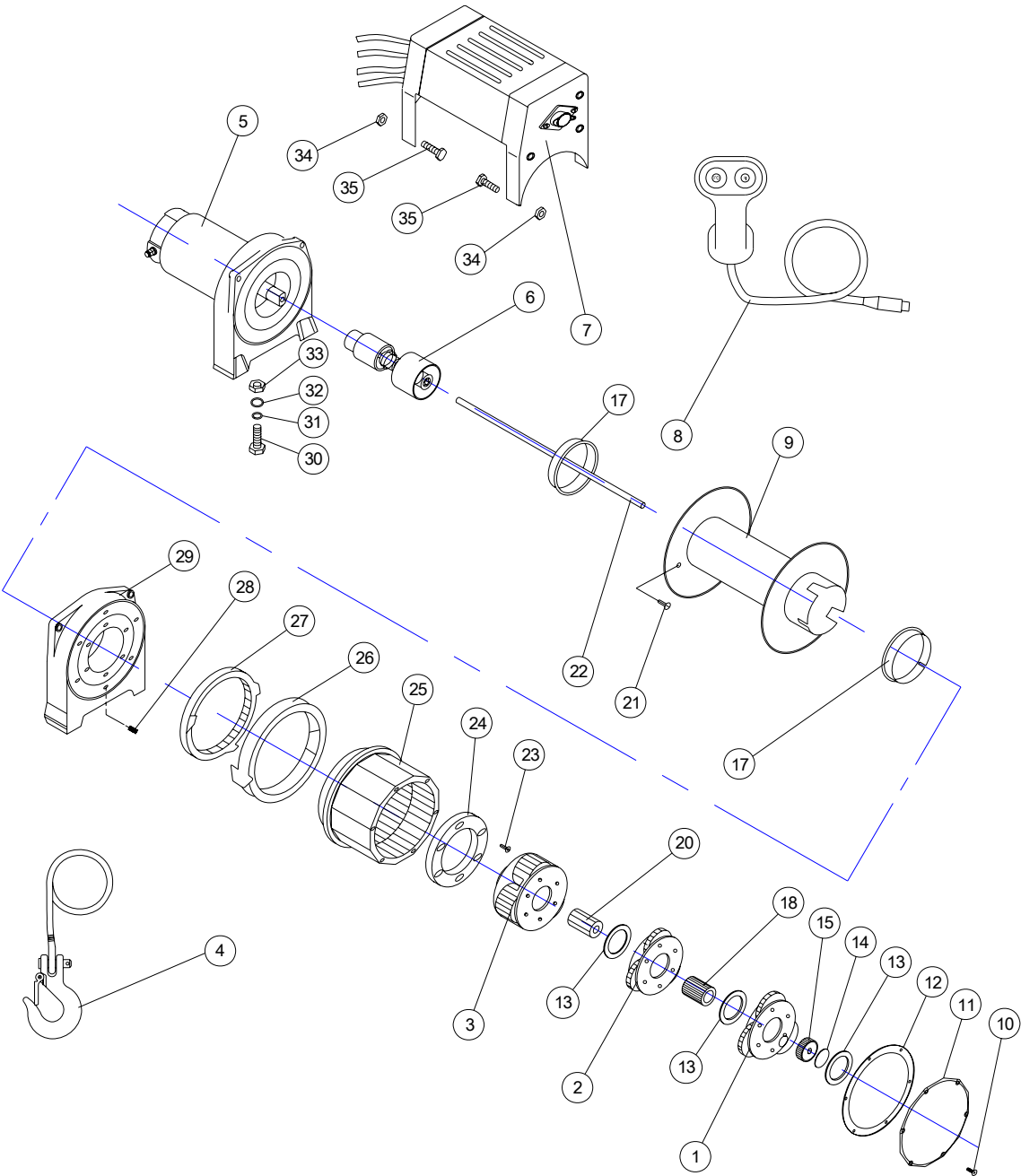
It is recommended that any such modifications be performed by a manufacturer's authorized repair facility, and that only manufacturer-supplied parts be used.

1. Move cam ring to the "out" position.
2. Extend cable assembly to its full length. Note how the existing cable is connected to the inside of the drum.
3. Remove the old cable assembly and attach new one.
4. Retract the cable assembly onto the drum being careful not to allow kinking.

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	SUGGESTED ACTION
Motor does not turn on	<ul style="list-style-type: none"> -Switch Assembly not connected properly -Loose battery cable connections -Solenoid malfunctioning -Defective Switch Assembly -Defective motor -Water has entered motor 	<ul style="list-style-type: none"> -Insert Switch Assembly all the way into the connector. -Tighten nuts on all cable connections. -Battery should minimum 650CCA. -Tap solenoid to loosen contacts. Apply 12 volts to coil terminals directly. A clicking indicates proper activation. -Replace Switch Assembly. -Check for voltage at armature port with Switch pressed. If voltage is present, replace motor. -Allow to drain and dry. Run in short bursts without load until completely dry.
Motor runs but Cable drum does not turn	<ul style="list-style-type: none"> -Cam Ring (clutch) not engaged 	<ul style="list-style-type: none"> -Move Cam Ring to the "in" position. If problem persists, a qualified technician needs to check and repair.
Motor runs slowly or without normal power	<ul style="list-style-type: none"> -Insufficient current or voltage 	<ul style="list-style-type: none"> -Battery weak, recharge. Run winch with vehicle motor running. -Loose or corroded battery cable connections. Clean, tighten, or replace.
Motor overheating	<ul style="list-style-type: none"> -Winch running time too long 	<ul style="list-style-type: none"> -Allow winch to cool down periodically.
Motor runs in one direction only	<ul style="list-style-type: none"> -Defective or stuck solenoid -Defective Switch Assembly 	<ul style="list-style-type: none"> -Tap solenoid to loosen contacts. -Repair or replace solenoid. -Replace Switch Assembly.

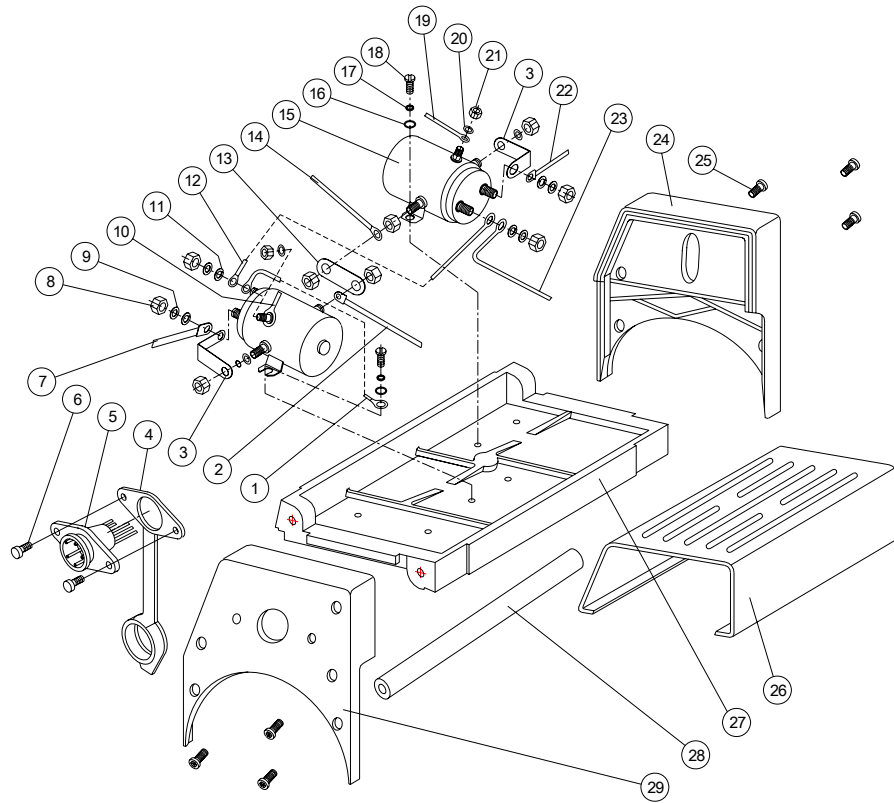
WINCH ASSEMBLY DRAWING



WINCH PARTS LIST

Item#	Part #	Qty	Description
1	500100	1	Gear Carrier Assembly –Input
2	500200	1	Gear Carrier Assembly –Intermediate
3	500300	1	Gear Carrier Assembly –Output
4	500400	1	Cable Assembly
5	500500	1	Motor/End Bearing Assembly
6	500600	1	Break / Shaft Assembly
7	500700	1	Solenoid Assembly
8	500800	1	Switch Assembly
9	500900	1	Drum Assembly
10	500001	6	Screw M4x12
11	500002	1	Cover - Gear Housing
12	500003	1	Gasket
13	500004	3	Thrust Washer
14	500005	1	Thrust Disc
15	500006	1	Gear-input, Sun
17	500008	1	Bushing-Drum
18	500007	1	Gear-Intermediate, Sun
20	500009	1	Gear-output, Sun
21	500010	1	Cap screw M6x10
22	500011	1	Hexangular Shaft
23	500012	6	Cap screw M6x20
24	500013	1	Retainer-Ring
25	500014	1	Gear-Ring
26	500015	1	Cam Ring
27	500016	1	Locking Ring
28	500017	6	Spring
29	500018	1	End Bearing
30	500019	6	Cap Screw M10x35
31	500020	6	Lock Washer Ø10
32	500021	6	Washer-Flat Ø10
33	500022	6	Nut M10
34	500023	4	Nut M6
35	500024	4	Cap screw M6x25

Solenoid Assembly Drawing



Note: All unidentified hardware comes supplied with the solenoid.

SOLENOID PARTS LIST

Item #	Part #	Qty	Description
1	500701	1	Connect Wire (I)
2	500702	1	Wire Assembly Battery (Red)
3	500703	2	Strap Copper (I)
4	500704	1	Connector Protector
5	500705	1	Connector Female Molded
6	500706	2	Screw M 5X14
7	500707	1	Wire Assembly (Black)
8	500708	16	Nut M8
9	500709	14	Washer-Flat Ø8
10	500710	1	Connect Wire (II) (Yellow)
11	500711	12	Lock Washer Ø8
12	500712	1	Connect Wire (III)
13	500713	1	Strap Copper (II)
14	500714	1	Connect Wire (IV)
15	500715	2	Solenoid
16	500716	6	Washer-Flat Ø5
17	500717	6	Lock Washer Ø5
18	500718	4	Screw M5X10
19	500719	1	Connect Wire (V) (Red)
20	500720	2	Washer-Flat Ø5
21	500721	4	Nut M5
22	500722	1	Wire Assembly (Black)
23	500723	1	Wire Assembly Battery (Black)
24	500724	1	Left Side
25	500725	6	Screw M8X16
26	500726	1	Solenoid Cover
27	500727	1	Bracket
28	500728	1	Tie bar
29	500729	1	Right Side

WINCH SPECIFICATIONS

Performance Specifications

Rated Pull	5,000 lbs (2,268kgs)
Gear Reduction Ratio	294:1 (DC 12V)
Motor	Permanent Magnet Motor 1.8 HP / 1.3 kW (DC 12V)
Drum Size	Ø2.48" (D) x 5.5" (L) Ø63 mm (D) x 140 mm (L)
Cable	Ø1/4" (D) x 79' (L) Ø6 mm (D) x 24 m (L) (Over 70ft. useable length with 5 wraps on the winch drum)
Overall Dimensions	17.3" (L) x 7.1" (W) x 10.63" (H) 440 mm (L) X 180 mm (W) X 270 mm (H)
Winch Weight	56.2 lbs (25.5kgs)
Mounting Bolt Pattern	6.55" x 4.5" 166.4 mm x 114.3 mm

Line speed and Motor Current (First layer) (Pull, Speed, Volts & Amps)

Line pull Max	lbs	0	1000	3000	5000
	kgs	0	454	1361	2268
Line speed (DC 12V)	FPM	12	10	7.5	5.0
	MPM	3.7	3.2	2.3	1.5
Current (Amps) Max.		45	90	150	230

Line pull and cable capacity

Use double line and snatch block for pulling loads over 3,200lbs/ 1454kgs.

Layers of cable on drum		1	2	3	4
Max pulling capacity per layer	lbs	5000	4200	3700	3200
	kgs	2268	1905	1678	1452
Cable capacity per layer	ft	14.7	29.5	56.0	79.0
	m	4.5	9.0	17.0	24.0

Inquiries can be sent to:

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