

KODIAK

WINCHES by Quality Gear

Electric Winch

Installation & Operation Manual

Series Wound DC Motor



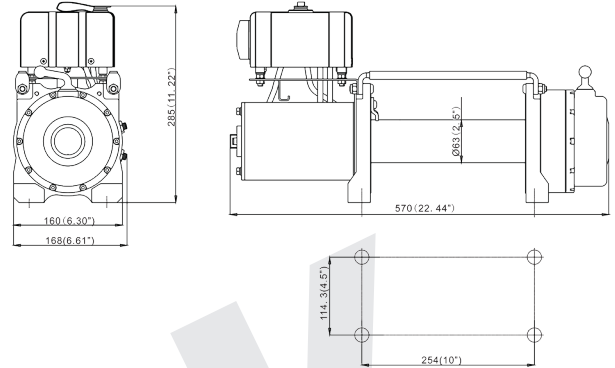
THE POLAR
K8000EXTQG

TO PREVENT SERIOUS INJURY,
READ AND UNDERSTAND ALL WARNINGS
AND INSTRUCTIONS BEFORE USE.

www.kodiakwinch.com

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K8000EXTQG POLAR WINCH



FEATURES:

- Fast Performance Line Speed**
- Low Electric Current**
- Automatic Load-Holding Brake**
- Free Spooling**
- Power In and Power Out**

SPECIFICATIONS:

| | |
|---------------------------------|--|
| Rated Line Pull (Single Line) | 8000lbs (3629kg) |
| Gear Reduction Ratio | 152:1 |
| Motor (12 volt DC) Series Wound | 3.6kW (4.8hp) |
| Drum Size | 2.5" x 9" (63 x 228 mm) |
| Rope Supplied (Synthetic) | 5/16" x 100' (8 mm x 30.5 m) |
| Overall Dimension (LxWxH) | 22.5" x 6.6" x 11.3" (570 x 166 x 285 mm) |
| Net Weight | 94lbs (42.6kg) |
| Mounting Bolt Pattern | 10" x 4.5" (254 x 114.3 mm) |

Performance of 1st Layer

| Line Pull | | Line Speed | | Motor Current |
|-----------|------|------------|-----|---------------|
| Lbs | Kgs | Fpm | Mpm | Amp |
| 0 | 0 | 26 | 7.9 | 95 |
| 2000 | 907 | 20 | 6 | 175 |
| 4000 | 1814 | 14 | 4.3 | 240 |
| 6000 | 2722 | 12 | 3.7 | 295 |
| 8000 | 3629 | 10.8 | 3.3 | 370 |

Line Pull & Cable Capacity by Layer

| Cable Layer | Rated Line Pull | | Cable Capacity | |
|-------------|-----------------|------|----------------|--------|
| | Lbs | Kgs | Ft | Meters |
| 1 | 8000 | 3629 | 15 | 4.6 |
| 2 | 6335 | 2874 | 38 | 11.5 |
| 3 | 5243 | 2378 | 64 | 19.5 |
| 4 | 4473 | 2029 | 95 | 29 |
| 5 | 3190 | 1447 | 100 | 30.5 |

UNPACKING

When unpacking, check to make sure all parts are included. Refer to the Parts List and Assembly Drawing on page 10 and 11. If any part is missing or broken, please contact your local distributor where you bought the winch as soon as possible.

SAFETY WARNINGS & PRECAUTIONS



When using this winch, safety precautions should always be followed to reduce the risk of personal injury and damage to the winch.

LEARN TO USE THIS WINCH:

After the winch has been installed, take some time and practice using it so you will be familiar with ALL OPERATIONS. Periodically check the winch installation to ensure that all bolts are tight. To ensure proper operation, carefully inspect for any damaged parts before operating the winch. Any damaged part should be properly repaired or replaced with identical parts by a qualified technician.

KEEP WINCHING AREA CLEAR:

Do not allow people to remain in the area during winching operations. Do not step over a taut wire rope or allow anyone else to do so. Due to the possibility of a cable breaking, direct all persons to stand clear of possible pathways. A snapped cable could cause winch failure, injury or death. Keep proper footing and balance at all times. Do not reach over or across the winch and/or pulling cable while winch is in operation.

INSPECT WIRE ROPE AND EQUIPMENT FREQUENTLY:

The wire rope should be inspected for damages that can reduce its breaking strength. A frayed rope with broken strands should be replaced immediately. Always replace the rope with a rope that is rated to sustain any load that winch is capable of pulling. Any substitute must be IDENTICAL in strength, quality, lay and stranding to the Kodiak cable originally supplied.

WORKING AREA CONDITIONS:

Keep the work area well lit. Do not use this winch in the presence of flammable gases or liquids.

KEEP CHILDREN AWAY:

Keep children away from working area. Never let children operate the winch.

USE LEATHER GLOVES:

When handling or rewinding the winch line, always use hand protection to eliminate the possibility of cuts caused by burrs or slivers from broken strands.

DRUM ROPE:

Always make sure that there are at least 5 complete turns of rope left on the drum before winching.

KEEP HANDS AND FINGERS CLEAR OF WINCH LINE AND HOOK WHEN OPERATING WINCH:

Never put your fingers through the hook when reeling in the last few feet. If your finger gets trapped in the hook or rope, you could lose it. Never guide a wire rope under tension onto the drum with your hand.

NEVER HOOK THE ROPE BACK ONTO ITSELF:

Hooking the rope back onto itself creates an unacceptable strain, breaking individual strands, which in turn weakens the entire winch line.

KEEP PULLING DURATIONS AS SHORT AS POSSIBLE:

The winch is designed for intermittent use and cannot be used in constant duty applications. Do not pull more than one minute at or near rated load. If the motor becomes too hot to touch, stop and let it cool off for a few minutes. If the motor stalls, cut off the power immediately.

DO NOT OVERLOAD:

Always use this winch at its rated capacity for your safety and for better performance. Do not use inappropriate attachments in an attempt to exceed its rated capacity.

AVOID CONTINUOUS PULLS FROM EXTREME ANGLES:

This will cause the rope to pile up at one end of the drum. When feasible, get the rope as straight as possible to the direction of the object.

NEVER OPERATE THE WINCH WITHOUT THE ROPE FAIRLEAD FITTED:

Operator injury or winch damage can result if a fairlead is not installed.

STAY ALERT:

Watch what you are doing. Use your common sense. Do not use this winch when you are tired, stressed or ***WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.***

DISCONNECT SWITCH:

Unplug switch when not in use.

REPLACEMENT PARTS & ACCESSORIES:

When servicing, use only identical replacement parts. Use of other parts will void the warranty.

WINCH WARNINGS & PRECAUTIONS



- 1) Keep hands and body away from fairlead (cable intake slot) when operating.
- 2) Secure vehicle in position before using winch.
- 3) Do not exceed winch load weight capacity (see specifications on Page 1).
- 4) Make sure the winch is properly bolted to a structure (or vehicle) that can hold the winch load.
- 5) Always use proper couplings when connecting winch hook to load.
- 6) Do not lift items vertically. The winch was designed for horizontal use only.
- 7) Do not use inappropriate attachments to extend the length of the winch cable.
- 8) Never lift people or hoist loads over people.
- 9) Never come between the winch and the load when operating.
- 10) Do not apply load to winch when the winch line is fully extended. Keep at least **5 full turns** of cable on the reel.
- 11) After moving an item with the winch, secure the item. Do not rely on the winch to hold it for an extended period.
- 12) Examine winch before using. Components may be affected by exposure to everyday weathering chemicals, salts and rust. Replace any parts needed before using winch.
- 13) Never fully extend cable while under load. **Keep 5 complete turns** of cable around the winch drum.
- 14) When loading a boat onto a trailer without reel or side hull rollers, make sure the trailer is submerged into the water when the boat is loaded by the winch. Attempting to drag the boat onto the trailer while on land can cause winch failure and possible injury.
- 15) Never operate the winch if the winch line shows any signs of weakening, is knotted or kinked.
- 16) Winch does not have a locking mechanism. **ALWAYS** Secure load after moving.
- 17) Do not cross over or under the cable while it is in process of loading.
- 18) Do not move vehicle with cable extended and attached to load to pull it. The cable could snap.
- 19) Apply blocks (Such as wheel chock) to vehicle when parked on incline.
- 20) Do not hit the motor housing when the winch stalls or stops during operation.
- 21) Re-spool cable properly after every use.

1) **NOTE:** Depending on your level of knowledge regarding electrical wiring, you may wish to have this procedure performed by a qualified technician.

2) **Select a mounting site:** on the bed of a truck, trailer, or other suitable location.

CAUTION: This winch can generate pulling force as noted in its specifications. Make sure the location selected can withstand this much force. It may be required to use steel reinforcement plates (not included), and/or to weld on additional bracing (not included), depending on the desired mounting location. Remember that the winch is designed for horizontal pull, not vertical.

3) **Mount the Hawse Fairlead to the Mounting Frame** (Bear Essentials Kit) using supplied bolts and nuts.

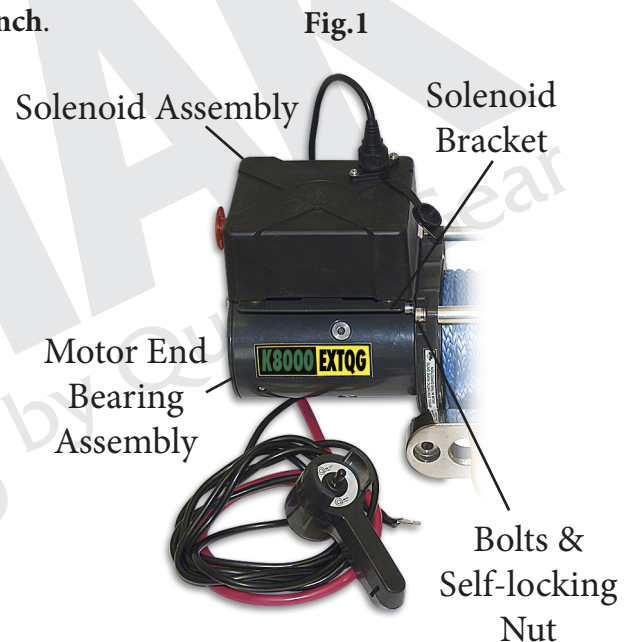
4) **Mount Electric Winch to the Mounting Frame** using bolts and nuts. (included)

5) **Mount Solenoid Assembly and Solenoid Bracket to the winch.**

1) Firstly, put the winch on a mounting channel or flat surface. To attach the supplied solenoid bracket, remove the 2-screws from the motor end bearing assembly. (See Fig.1)

2) Then, align the solenoid bracket with the 2-tie bar mounting holes. Resecure the tie bars and attach the solenoid bracket to the motor end bearing assembly using the 2 same screws that were previously removed.

3) Torque the screws tightly. Retain the solenoid bracket supplied to the motor end bearing assembly by attaching the plastic strap around both until tightly secured.



6) **Electric Cable Connection** (Refer to Fig.2)

1) Connect the red (positive) battery cable from solenoid assembly to the closest screw-down positive (+) terminal to 12-volt battery.

2) Connect black cable to the closest screw-down battery negative (-) on one end and to the low-terminal of the motor rotator on the other end.

3) Connect the yellow cable from the solenoid assembly to up-terminal of motor stator.

4) Connect the green cable from solenoid assembly to low-terminal of motor stator.

5) Connect the red cable (short) from solenoid assembly to up-terminal of motor rotator.

6) Connect the black wire (thin) from solenoid assembly to thermo-relay.

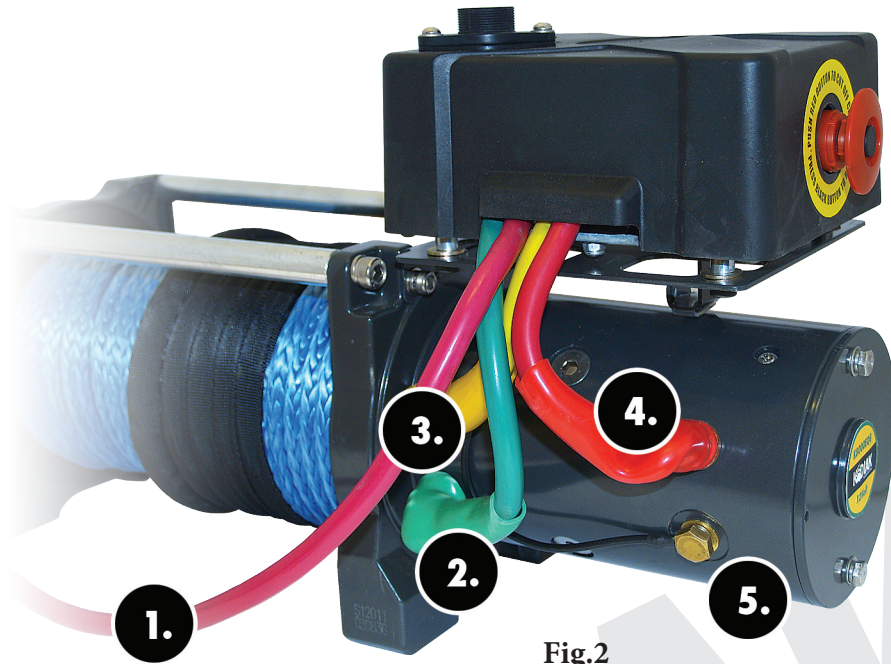


Fig.2

- 1) Red Long Cable to Battery Positive Terminal
- 2) Green Short Cable to Motor Stator Terminal
- 3) Yellow Short Cable to Motor Stator Terminal
- 4) Red Short Cable to Motor Rotator Terminal
- 5) Black Wire to Thermo-Relay
- 5) Black Long Cable to Motor Rotator Terminal

CAUTION:

Battery cables should not be drawn taut. Leave slack for some cable movement. The battery cable should be secure, out of the way of moving parts, road debris, or any possibility of being damaged by operation or maintenance of the vehicle. For example, the battery cables may be routed under the vehicle, attaching them to the frame using suitable fasteners (not included). Do not attach the battery cables to the exhaust system, drive shaft, emergency brake cable, fuel line, or any other components which may create damage to the battery cables through heat or motion, or create a fire hazard. If a hole is drilled through the bumper or any other part of the vehicle, make sure to install a rubber grommet (not included) in the hole to prevent fraying of the battery cables at that point.

7) **Disengage the clutch** by turning the clutch handle to the disengaged position (See Fig.3)

8) **Pull the cable** through the Fairlead and connect the hook and safety pin.

NOTE: The use of at least a 650 CCA battery is recommended.

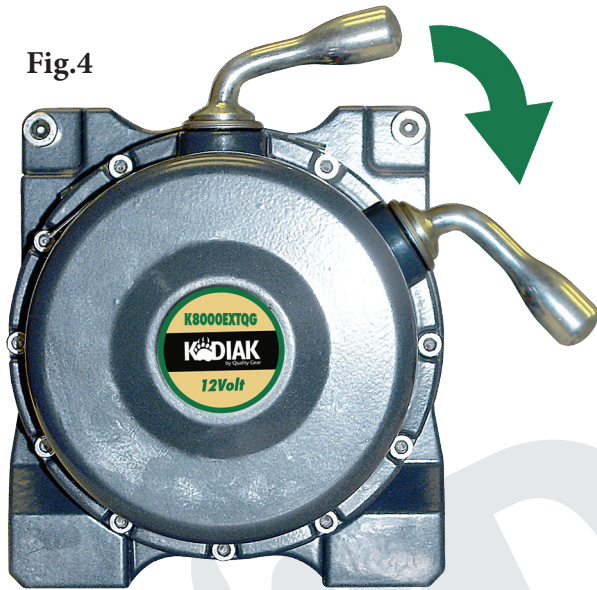


Fig.4

Clocking Positions from 0° to 60°



Clutch Handle

DISENGAGED POSITION



Fig.3

Clutch Handle

ENGAGED POSITION

9) **Clocking Instructions:**

Winch gear housing can be clocked in 12 ways enabling the user to position the clutch lever at 12 equidistant locations (0°, 30°, 60°... 360°). Undo the 11 bolts (M5x58) on the gear housing. Rotate the gear housing to any one of the able positions so that all holes align. Secure the gear side housing to the winch leg by the 11 bolts (M5x58) that were removed earlier. See Fig.4.

OPERATION



- 1) Disengage the clutch by moving the clutch handle to the **DISENGAGED** position.
- 2) Grab the cable assembly hook with hand strap and pull the cable to the desired length, then attach to item being pulled.

CAUTION: Always leave at least 5 turns of cable on the drum. Review winch safety warnings & precautions on pages 2 and 3 before continuing.

- 3) Re-engage the clutch by moving the clutch handle to the **ENGAGED** position.
- 4) Lift the female connector cover on solenoid assembly exposing the electrical switch connector.
- 5) Insert the switch assembly into the female connector.
- 6) While standing aside of the tow path, push the button on remote control forward and backward (Fig.5) to check winch running directions. Wait until the motor stops before reversing directions.

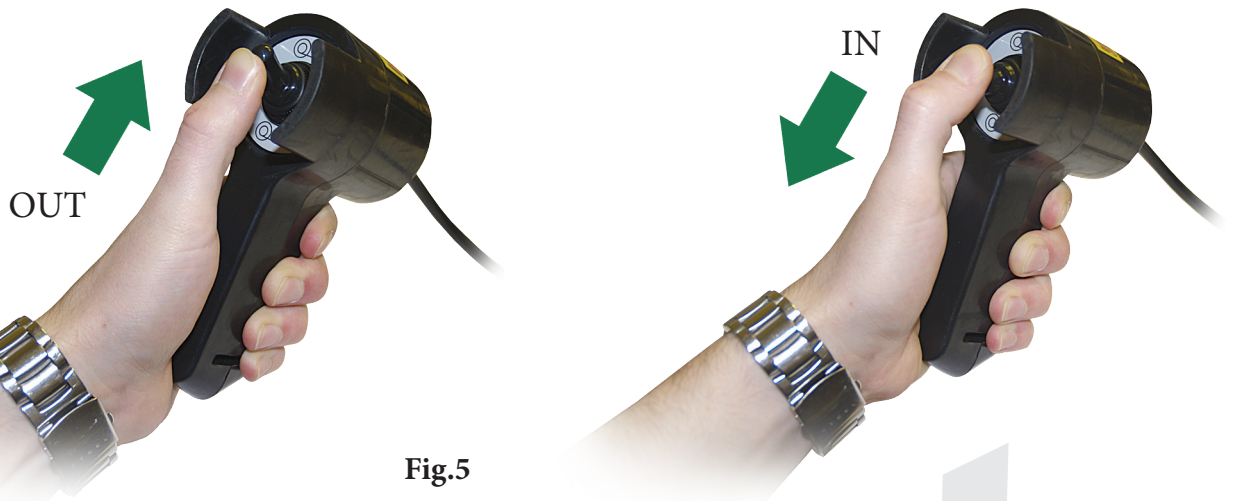


Fig.5

CAUTION: Do not POWER winch OUT for more than 10 seconds at a time as this may cause damage to the brake system.

7) When pulling is complete, rewind cable on to the drum. The cable must be rewound on to the drum under a load of at least 500lbs. If this precaution is not taken, inner wraps will damage the cable.

8) Remove the switch assembly from the female connector and replace the female connector cover.

CAUTION: It is important to make sure the winch is mounted on a flat surface to guarantee the 3 major sections of the winch (the motor end, the cable drum and gear housing end) are properly aligned. Run the vehicle engine during pulling operations to keep the battery charging. When pulling a heavy load, place a blanket or similar over the cable 5 to 6 feet (1.5m to 1.8m) from the hook.

WIRELESS REMOTE CONTROL

- | | | | | | | | | |
|----|---|---|---|---|---|---|---|---|
| 1. | ■ | ■ | □ | □ | □ | ■ | □ | □ |
| 2. | ■ | ■ | □ | □ | ■ | ■ | □ | ■ |
| 3. | □ | □ | □ | □ | ■ | □ | □ | ■ |

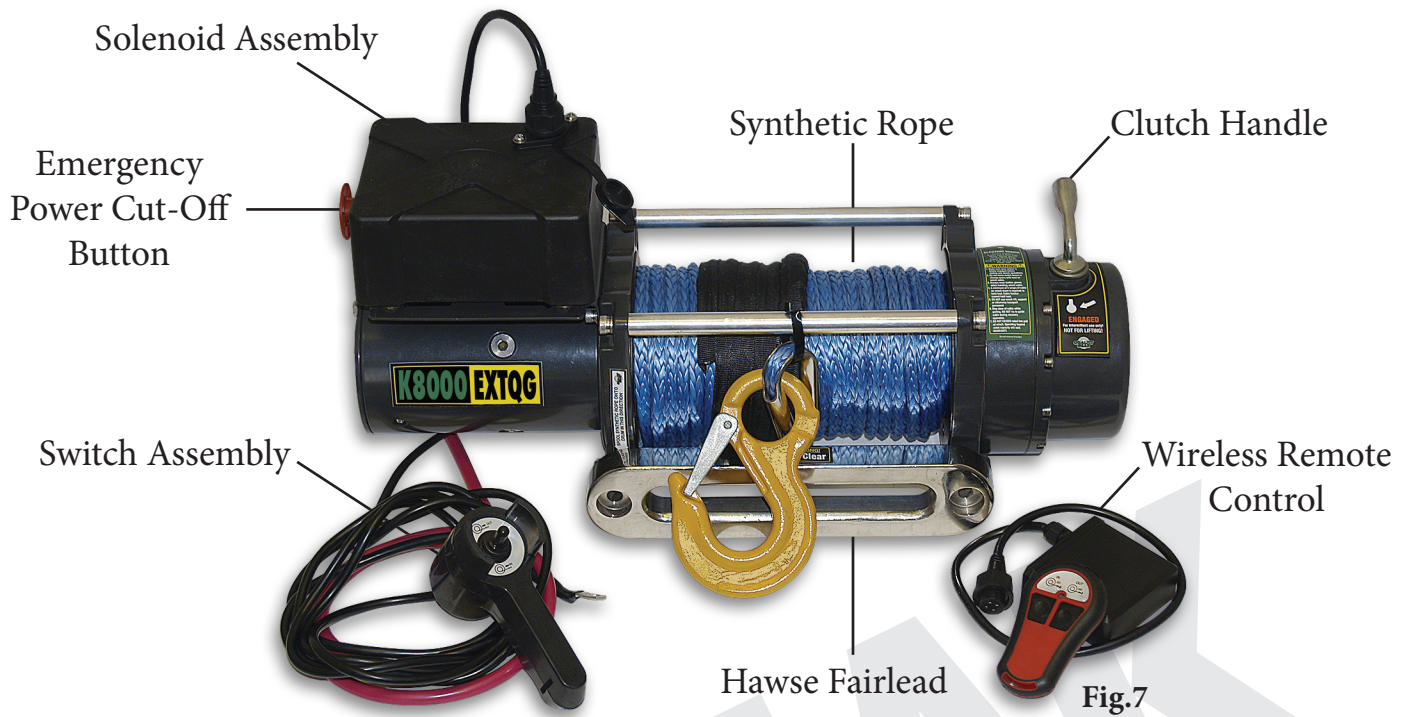
Fig.6



Wireless Remote Control Code Adjustment:

There are 8 codes. See Fig.6 Above.

- 1) Line 1 being soldered together with line 2 stands for "1"
- 2) Line 2 being soldered together with line 3 stands for "0"
- 3) No line soldered together stands for "2". Fig.6 shows a number "11220120". Both remote control and Receiver should be on the same number. Then remote control can communicate with receiver.



MAINTENANCE



- 1) All moving parts within the electric winch have been lubricated using high temperature lithium grease at the factory. No internal lubrication or maintenance is required with this winch.
- 2) Periodically check the synthetic winch cable for damage or wear. Also, check for mud and/or moisture as muddy rope left on the drum can make it susceptible to rot. To clean your rope after a muddy ride, spool out the winch line, rinse it thoroughly with a hose, and let it dry completely before respooling back onto the winch drum. Keeping your synthetic winch cable clean and dry (especially during storage) will prolong the life of your rope.
- 3) Before each use, it is important to check the Hawse Fairlead for any damage or abrasions. A damaged fairlead can easily ruin your rope, and possibly lead to a rope failure, placing an unnecessary risk on the winch operator and anyone else nearby. It is never advisable to combine a synthetic rope with a fairlead that has sharp edges, such as a cable worn down by a steel cable.
- 4) Before and after each use, it is recommended that you visually inspect all power and winching cables, sleeves, switches, housings as well as the winch hook to ensure they are in good operating condition and ready/safe to use.

CABLE ASSEMBLY REPLACEMENT



- 1) Move clutch handle to DISENGAGED position.
- 2) Extend cable assembly to its full length.
 Note how the existing cable is connected to the inside of the drum
- 3) Remove old cable assembly and attach new one.
- 4) Rewind cable assembly onto cable drum being careful not to allow kinking.

NOTE:

Performance of this winch may vary depending on variations of vehicle and/or battery power.

WARNING:

The warnings, cautions and instructions discussed in this instructions manual cannot cover all the possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be exercised by the operator.

TROUBLE SHOOTING



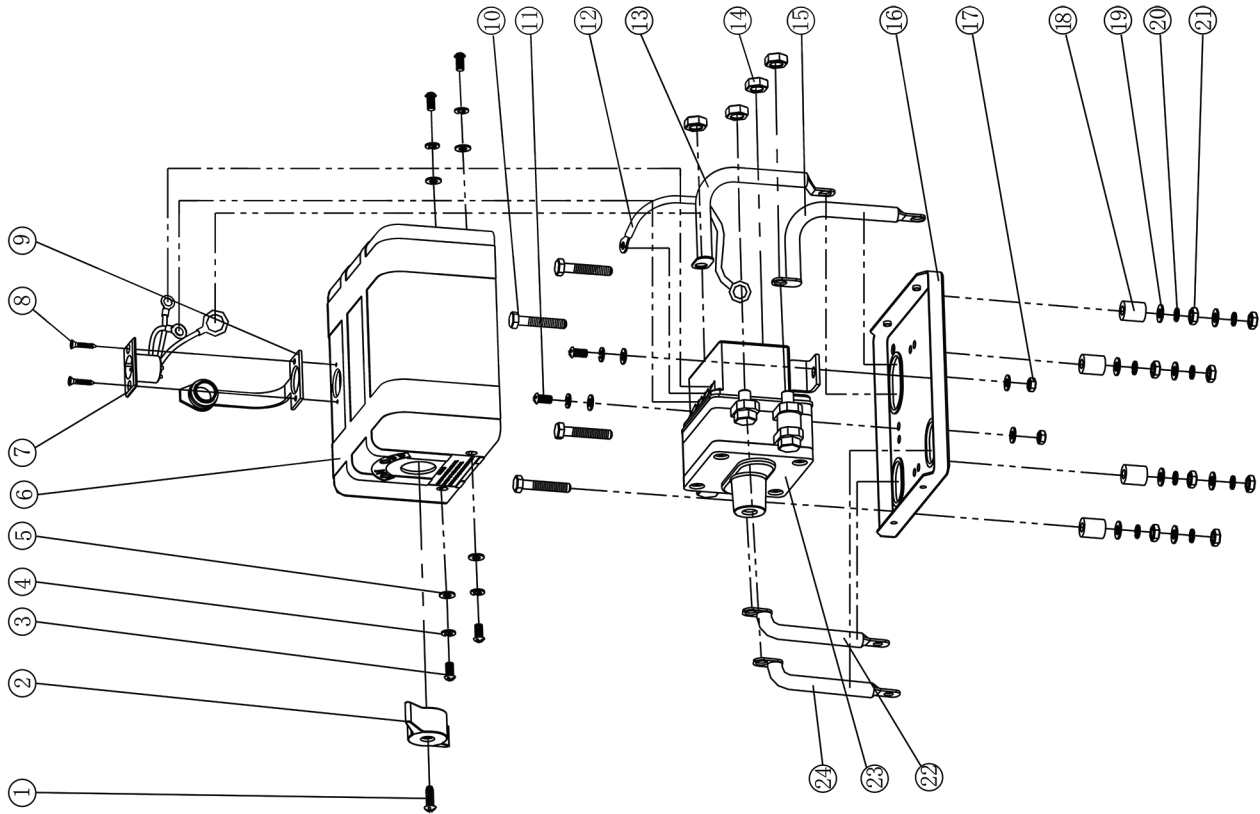
| SYMPTOM | POSSIBLE CAUSE | SUGGESTED REMEDY |
|---|--|---|
| Motor does not turn on | Switch Assembly not connected properly | Insert Switch Assembly firmly to the connector |
| | Loose battery cable connection | Tighten nuts on cable connectors |
| | Solenoid malfunctioning | Tap solenoid to free contact, applying 12V (for 12V motor) or 24V (for 24V motor) to coil terminal directly. Solenoid will make an audible clicking when activating |
| | Defective Switch Assembly | Replace Switch Assembly |
| | Defective Motor | Check for voltage at armature port with switch pressed. If voltage is present, replace motor |
| | Water has entered motor | Drain and dry. Run in short bursts without load until completely dry. |
| Motor runs too hot | Long period of operation | Let winch cool down periodically |
| Motor runs slowly or without normal power | Battery runs out | Recharge battery by running vehicle engine |
| | Insufficient current or voltage | Clean, tighten or replace the connector |
| Motor runs but cable drum does not turn | Clutch not engaged | Push clutch handle (13) into IN position. If that does not work, ask a qualified technician to check and repair. |
| Motor runs in one direction only | Defective or stuck solenoid | Tap solenoid to free contacts. Repair or replace solenoid. |
| | Defective Switch Assembly | Replace Switch Assembly |

SOLENOID PARTS LIST FOR K8000EXTQG

| Item | Qty | Description |
|------|-----|-------------------------------------|
| 1 | 1 | Screw M4x8 |
| 2 | 1 | Knob |
| 3 | 4 | Screw M5x8 |
| 4 | 6 | Spring Washer |
| 5 | 8 | Flat Washer 5 |
| 6 | 1 | Cover |
| 7 | 1 | Socket |
| 8 | 2 | Screw ST3.2x12 |
| 9 | 1 | Dust Boot-socket |
| 10 | 4 | Bolt M6x30 |
| 11 | 2 | Screw M5x12 |
| 12 | 11 | Ground Wire 14AWGx100 |
| 13 | 1 | Cable (A) to Battery (+)-Red-long |
| 14 | 4 | Nut M8 |
| 15 | 1 | Cable (A) to Battery (-)-Black-long |
| 16 | 1 | Supporting Plate |
| 17 | 2 | Nut M5 |
| 18 | 4 | Nylon Sleeve |
| 19 | 8 | Flat Washer 6 |
| 20 | 8 | Spring Washer 6 |
| 21 | 8 | Nut M6 |
| 22 | 1 | Cable (1)-output-black-short |
| 23 | 1 | Solenoid |
| 24 | 1 | Cable (2)-output-red-short |

Remarks:

1. When ordering parts from this list, be sure to quote winch model, winch series numbers and the parts numbers (with suffix of-s)
2. Due to continuing improvements, actual product may differ slightly from the product described herein.



WINCH ASSEMBLY DRAWING & PARTS LIST FOR K8000EXTQG



| Item | Qty | Description |
|------|-----|-------------------------------|
| 1 | 1 | Solenoid Assembly |
| 2 | 1 | Solenoid Bracket |
| 3 | 4 | Washer 6 |
| 4 | 1 | Spring Washer 6 |
| 5 | 1 | Screw M6x25 |
| 6 | 4 | Bolt M8x25 |
| 7 | 4 | Self-locking Nut M8 |
| 8 | 1 | Motor End |
| 9 | 2 | Tie Bar |
| 10 | 2 | Brake Shoe |
| 11 | 1 | Brake/Shaft Assembly |
| 12 | 1 | Roll Pin 4 x 10 |
| 13 | 1 | Drum |
| 14 | 1 | Cable Anchor |
| 15 | 1 | Screw M6x10 |
| 16 | 1 | Seal |
| 17 | 1 | Seal Cover |
| 18 | 1 | Clutch Handle |
| 19 | 1 | Retaining Screw M5x16 |
| 20 | 1 | Gear Ring-input, intermediate |
| 21 | 1 | Gear bushing |

| Item | Qty | Description |
|------|-----|--------------------------------------|
| 22 | 1 | Gear-input sun |
| 23 | 1 | Gear Carrier Assembly - input |
| 24 | 1 | Gear Carrier Assembly - Intermediate |
| 25 | 2 | Gasket |
| 26 | 1 | Gear Carrier Assembly - output |
| 27 | 1 | Gear Ring - output |
| 28 | 1 | Washer |
| 29 | 1 | End Bearing |
| 30 | 2 | Dry Bearing |
| 31 | 1 | Gear Ring Housing |
| 32 | 12 | Spring Washer 5 |
| 33 | 11 | Bolt M5x58 |
| 34 | 1 | Cable Assembly |
| 35 | 1 | Mount Channel (optional) |
| 36 | 1 | Roller Fairlead |
| 37 | 6 | Nut M10x34 |
| 38 | 1 | Screw M10x34 |
| 39 | 1 | Hand Strap |
| 40 | 1 | Wireless Remote Control (optional) |
| 41 | 1 | Switch Assembly (optional) |

