QUALITY GEAR®

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KODIAK WINCHES by Quality Gear

TOUGHER. STRONGER. BETTER.

Cub EXT

2500 lb. Electric ATV Winch
Installation & Operations Manual

KODIAK WINCHES by Quality Gear Extreme Trail Series

To prevent serious injury or death read and understand all warnings and instructions before using this equipment.

K2500EQG_EXT/0904

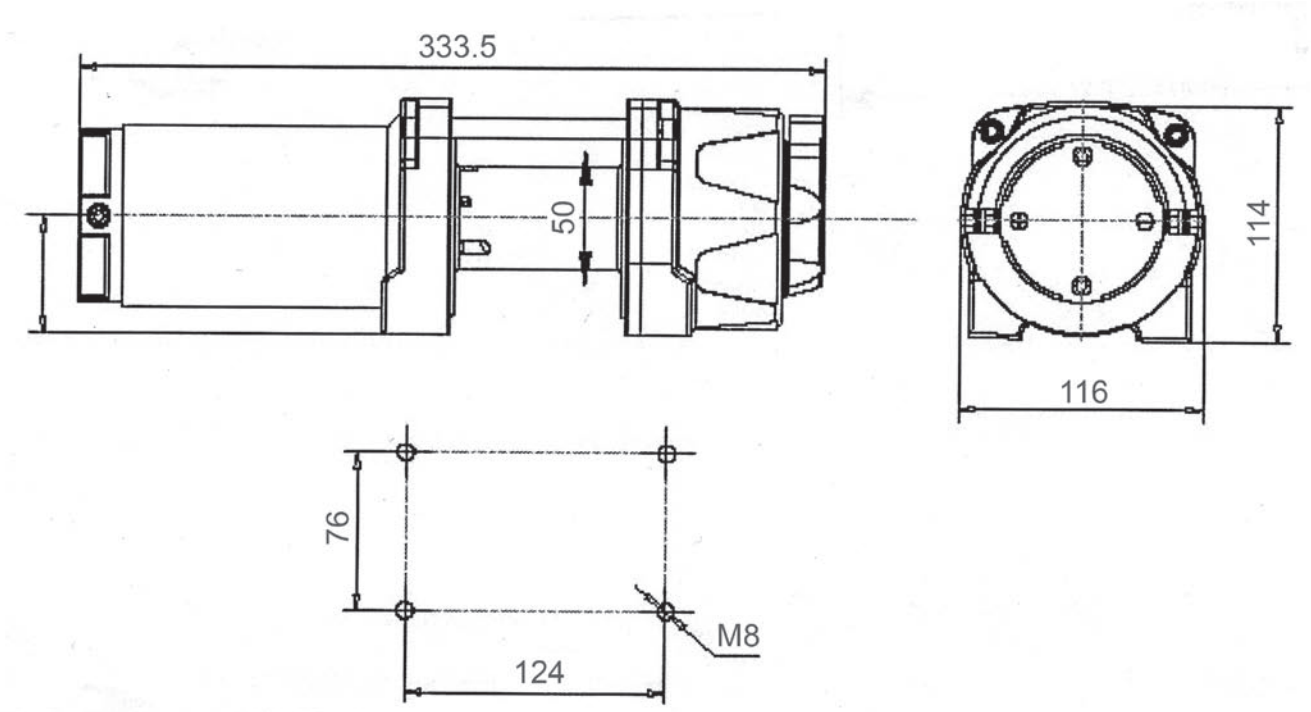
Model: CUB

Features

- Planetary Gear System for fast line speed
- Automatic load-holding brake
- Free spooling
- Power In & Power Out
- 3 Hp (2.25 Kw) heavy duty electric permanent magnetic motor
- Low electric current

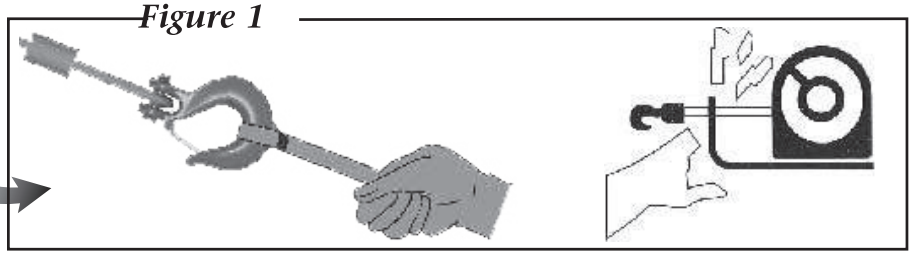
Specifications

Rated Line Pull (Single Line):	2500 lbs (1134 kgs)
Gear Reduction Ratio:	249:1
Motor (Permanent Magnet):	3 Hp (2.25 Kw) 12 volts DC
Drum size:	Diameter: 2" (50 mm) Length: 3.2" (82 mm)
Force:	4200 lbs Aircraft cable
Net Weight:	19.8 lbs (9.1 kg)
Mounting bolt pattern:	1.9" x3" (48 x 76 mm)
Flange:	96 mm
Cable supplied:	3/16" x 50' (4.76 mm x 15 m)
Overall dimension:	12.9" x 4.5" x4.3" (328 x 114 x 110 mm)



Keep hands clear of winch cable, hook and fairlead opening during operation. Always use the Safety Hook Strap to hold hook when spooling.

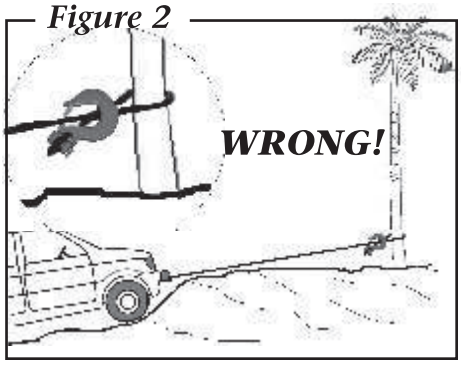
Figure 1

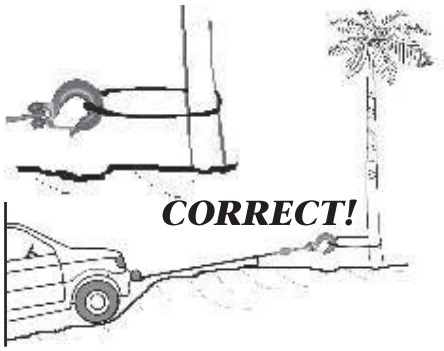


SAFETY WARNINGS & PRECAUTIONS

- Do not operate winch under the influence of drugs or alcohol.
- Read manual before using any winch.
- Always use heavy gloves when handling winch cable.
- Never hook the winch cable back upon itself. The winch cable can break under tension and cause injury and damage.
- Stay clear of winch cable and keep others away when in operation or with load on winch cable.
- Inspect winch and winch cable before each use. Do not use winch if winch cable or winch shows wear or damage.
- Replace any parts as needed before using the winch.
- Do not exceed the winch's load capacity.
- Do not place hands near the fairlead when winch is in operation. Always use the protective Safety Hook Strap when spooling. *See Figure 1*
- Do not use the winch as a hoist or to move people.
- Do not use winch to secure a load or tow vehicles.
- Do not submerge winch in water.
- Avoid injury and property damage, be safe and think first before operating winch. Use common sense. Electric winch is for intermittent use only.
- Look to see where the drill bit will come through before drilling holes for installation.
- Never drill into the gas tank or electrical wiring.
- Place towel or sandbag over winch cable while winch is in use.

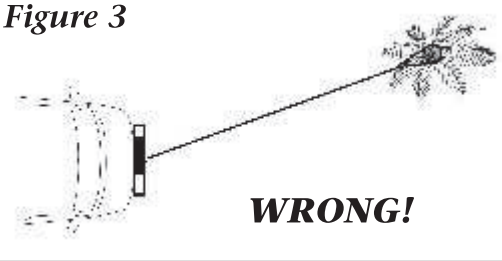
Figure 2

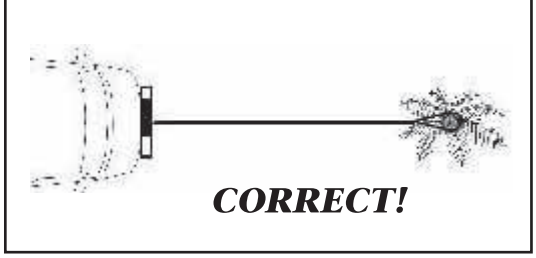




Avoid continuous pulls from extreme angles as this will cause the winch cable to pile up on one end of the drum (*Figure 3*). This can jam the winch cable in the winch causing damage to the cable or the winch.

Figure 3





INSTALLATION INSTRUCTIONS

Your installation may vary from the manual diagrams and instructions included here due to different vehicle and mounting operation in the structure.

CAUTION!

Always disconnect the battery from the vehicle to remove the electrical hazard.

If you choose not to use an ATV mounting kit, you may be required to drill holes in a structural support on the ATV. Be sure the location will be strong enough to support the rated pulling force of the winch. **Do not drill into wiring or gas tank!**

If the mounting bolts needed are different in length than supplied, use a bolt of equal or better quality.

Torque the kit's $^{5}/_{16}$" Grade 5 mounting bolts to 12 ft-lbs (1.7kg-m).

1. Install the mounting kit or prepare a flat and secure location on the ATV for the winch.

2. Position the winch over the mount and check for operation of the clutch lever to frame clearance. Check for tire to winch clearance. If ok, continue on to the next step.

3. Secure the winch to the mounting bracket or surface chosen with the correct hardware.
NOTE: Make sure the winch mounting bolts and winch hardware has been checked for proper torque.

4. Find a location to mount the solenoid box securely. Mount switch to handlebar using Handlebar Switch Clamp (#33 in parts list).

5. Connect the wiring as shown in ***Figure 4*** and double check each wire connection for correct position. Tie down wires to avoid snagging them and disrupting power between winch, battery, solenoid and/or switch.

CAUTION!

When attaching wires to the motor terminals, hold the inner nut with a second wrench to avoid the terminal from rotating in the housing. This will help avoid internal wire breakage. If the battery is of a type that will not accept the supplied terminals, you may have to find the correct adaptors at a local automotive store.

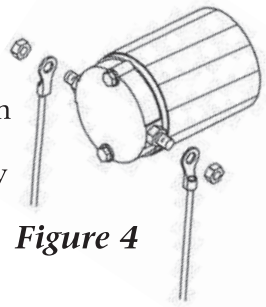


Figure 4

Figure 5

Figure 6

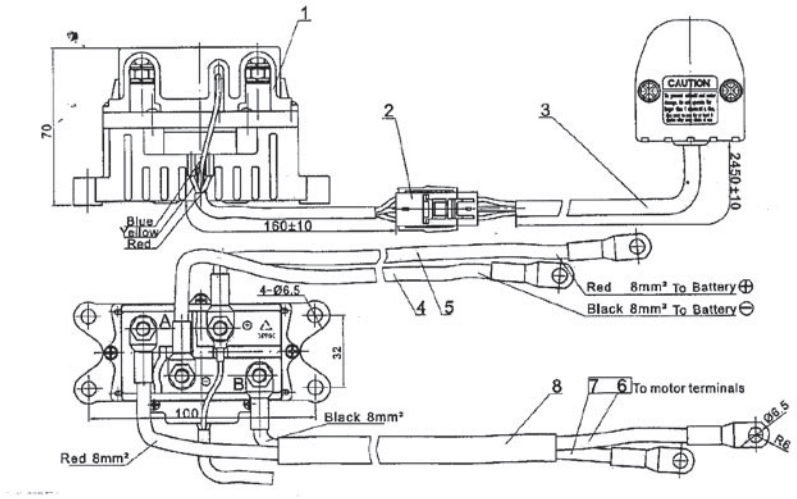
Before testing the winch, turn clutch knob clockwise to the ***Disengaged*** position (see Fig.5). Pull about 2 feet of winch cable off the drum then turn the Clutch Knob counter-clockwise to engage the clutch. (see Fig.6)
Always wear heavy gloves when handling heavy wire cable.

CAUTION!

ALWAYS USE THE SAFETY HOOK STRAP WHEN THE HOOK IS NEAR THE FAIRLEAD OR THE WINCH DRUM!

Push the "IN" button on the handlebar mounted switch. If the cable is respooling, then the cable connections are correct. Otherwise exchange the lines connected to the motor and repeat the above operation.

REMOTE CONTROL/SOLENOID CONNECTION ASSEMBLY



Item	Qty	Description
1	1	Solenoid Assembly
2	1	Remote Control Wire
3	1	Remote Control Switch
4	1	Black Lead Input (8 mm x 450 mm)
5	1	Red Lead Input (8 mm x 600 mm)
6	1	Black Lead Output (8mm x 2350 mm)
7	1	Red Lead Output (8 mm x 2300 mm)
8	1	Protective PVC Sleeve

1) Remove Solenoid cover
2) Connect one end of the Short Red Cable (#5) to the Positive Battery Terminal and the other end to the Positive End of the Solenoid.
3) Connect one end of the Short Black Cable (#4) to the Negative Battery Terminal and the other end to the Negative End of the Solenoid.
4) Connect one end of the Long Red Cable (#7) to Terminal A on the Solenoid and the other end to the Positive Motor Terminal.
5) Connect one end of the Long Black Cable (#6) to Terminal B on the Solenoid and the other end to the Negative Motor Terminal.
6) Connect the Remote Control (#3) to the Female Connector (#2)
7) Test the running direction of the winch drum by running the motor. If the direction is incorrect then reverse the motor terminal connections.
8) Replace the solenoid cover and tighten the screws securely.

WINCH OPERATION

1. **Clutch Operation:** The clutch is operated by turning the Clutch Knob and rotating it about 45 -90 degrees (see Fig 6). This will allow you to freespool the winch. Turn Clutch Knob until it pops back into place & the unit is fully in gear. Never release the winch cable while under tension. Doing this can badly damage the winch and/or cause property damage and serious injury.
2. **Winch Cable Handling:** Grab the Hook with Safety Hook Strap (See Fig. 1), and pull the winch cable to the desired length, then attach the hook to item being pulled. Make sure the hook's spring-loaded latch is set. Always leave at least five turns of winch cable on the drum.

Review Winch Safety Warnings & Precautions before continuing.

3. Set the transmission in neutral:
4. **Switch operation:** While standing aside of the tow path, press (and hold) the "IN" button on the Switch (See Figure 7) to pull the load. If the load will not move, release pull switch and check for obstacles blocking the load or check to see if load is too heavy for winch capacity. Press (and hold) the "OUT" button on the Switch to reverse direction. Wait until the motor stops before reversing directions.
5. Re-spool cable after finishing operation.

Figure 7

To avoid damaging the vehicle transmission, do not have the transmission in park or in any gear. Make sure to set the emergency brake and place wheel chocks, then put in neutral.

Note: A fully charged battery will give the best service. The engine should be kept running during operation.

CAUTION!

This winch is designed for intermittent use only, and should not be used for a constant duty application. The duration of the pulling job should be kept as short as possible. If the winch motor becomes very hot to the touch, stop the winch and let it cool down for several minutes.

Never pull for more than one minute at or near the rated load.

Do not maintain power to the winch if the motor stalls as it can damage the motor or gear.

WINCH MAINTENANCE

Lubrication

1. All moving parts within the winch have been lubricated using high temperature lithium grease at the factory. ***No internal lubrication is required.***

2. Lubricate winch cable periodically using a light penetrating oil.

Winch Cable Assembly Replacement *(to be performed only by a qualified service technician)*

1. Turn clutch knob to the ***Disengaged*** position.

2. Extend winch cable assembly to its full length.

Note how the existing winch cable is connected to the inside of the drum.

3. Remove old winch cable assembly and attach new one.

4. Retract winch cable onto drum being careful not to allow kinking.

General

1. Keep vehicle battery in good condition.

2. Be sure that the winch battery cables are not drawn tight against any surfaces which could possibly damage them.

3. Periodically remove and clean cable connections to the battery fuse box and chassis ground as corrosion will reduce performance or may cause a short circuit.

4. Cover the cables and winch when not in use. This winch is designed for intermittent use only, and should not be used for a constant duty application. The duration of the pulling job should be kept as short as possible. If the winch motor becomes very hot to touch, stop the winch and let it cool down for several minutes. ***Never pull for more than one minute at or near the rated load. Do not maintain power to the winch if the motor stalls as it can damage the motor or gear.***

5. Re-spool winch cable after finishing operation.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Motor does not turn on.	Switch assembly not connected properly	Confirm switch assembly is properly connected to solenoid.
	Loose battery cable connection	Tighten nuts on cable connectors.
	Defective switch	Repair or replace switch.
	Defective motor	Check for voltage at armature port with Switch pressed. If voltage is present replace motor.
	Water has entered motor	Drain and dry. Then run in short bursts without load until completely dry.
	Solenoid malfunctioning	Tap solenoid to free contacts. Repair or replace solenoid.
Motor runs too hot.	Long period of operation	Allow winch to cool down periodically.
Motor runs slowly with insufficient power.	Insufficient current or voltage	Recharge battery by running vehicle engine or replace battery.
		Check battery terminals for corrosion - clean connections.
		Tighten or replace the connectors.
	Defective motor	Repair or replace motor.
Motor runs but cable drum does not turn.	Clutch not engaged	Turn clutch knob to the ***Engaged*** position. If that does not work get a qualified technician to check and repair the unit.
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.

KODIAK CubEXT Winch Assembly Drawing & Parts List

Item	Description	Part Number
1	Gear Assembly	GA-2500EXTQG
2	Motor Assembly	MO-2500EXTQG
3	Drum Assembly	DA-2500EXTQG
4	Solenoid/Handle Bar Switch Assembly	SO-2500QG
5	Handle Bar Switch Clamp	CL-2500QG
6	Roller Fairlead	RF-2500QG
7	Safety Hook Strap	SS-STRAPQG
8	Cable & Hook	CA-2500QG
9	Mounting Channel	MB-2500QG