



# KODIAK WINCHES

**TOUGHER. STRONGER. BETTER.**

## Cub

*2500 lb. Electric ATV Winch  
Installation & Operations Manual*



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

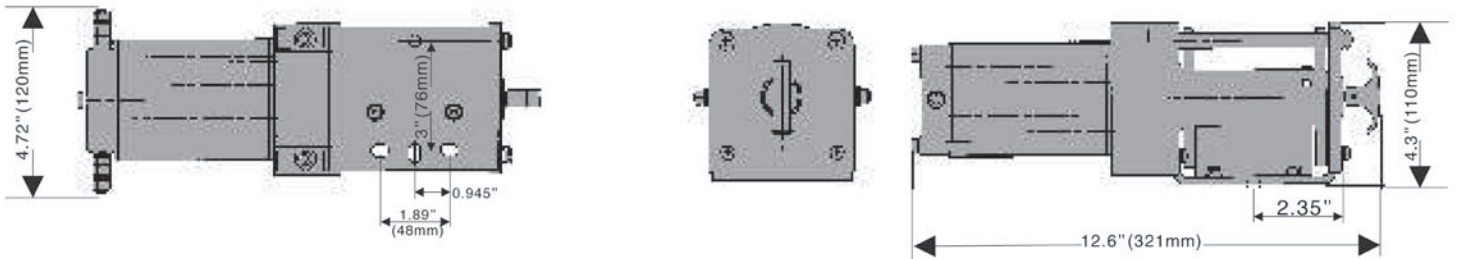
# Model: CUB

## Features

- Planetary Gear System for fast line speed
- Automatic load-holding brake
- Free spooling
- Power In & Power Out
- 1.5 Hp (1.1 Kw) heavy duty electric permanent magnetic motor
- Low electric current

## Specifications

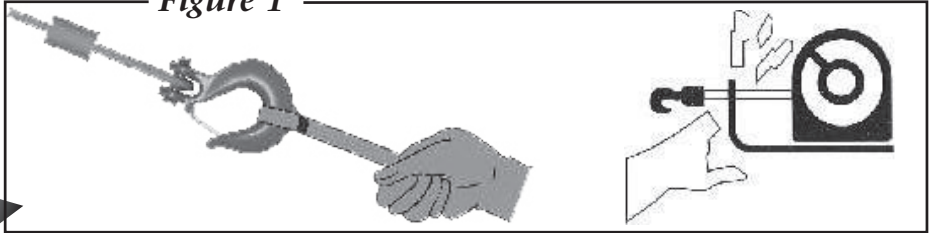
Rated Line Pull (Single Line): .....	2500 lbs (1134 kgs)
Gear Reduction Ratio: .....	153:1
Motor (Permanent Magnet): .....	1.78 Hp (1.3 Kw) 12 volts DC
Drum size: .....	Diameter: 1.34" (34 mm) Length: 3.2" (82 mm)
Force: .....	4200lbs Aircraft cable
Net Weight: .....	19.8lbs (9.1 kg)
Mounting bolt pattern: .....	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)



## CAUTION!

Keep hands clear of winch cable, hook and fairlead opening during operation. Always use handsaving belt to hold hook when spooling.

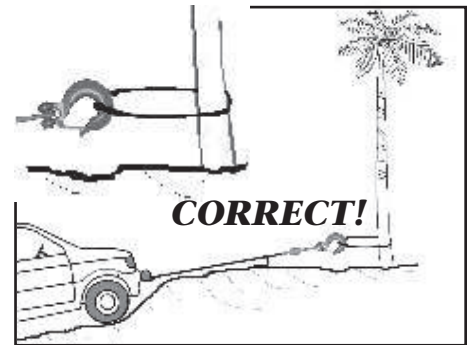
Figure 1



## SAFETY WARNINGS & PRECAUTIONS

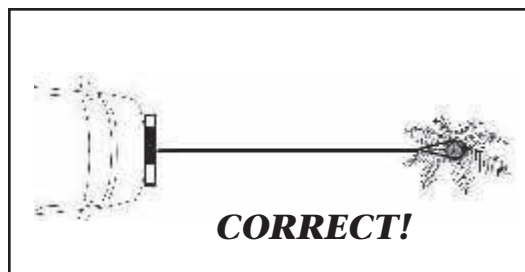
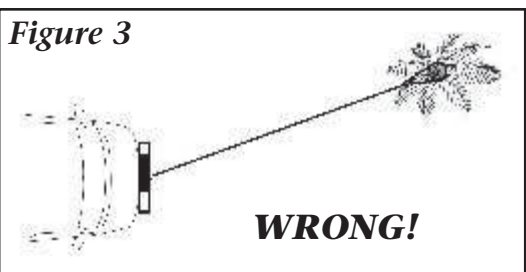
- Do not operate winch under the influence of drugs or alcohol.
- Read manual before using any winch.
- Always use heavy gloves when handling winch cable.
- Never hook the winch cable back upon itself. The winch cable can break under tension and cause injury and damage.
- Stay clear of winch cable and 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 hand-saving belt 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  $\frac{5}{16}$ " 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. Connect the wiring by routing the two pairs of lines from the switch to the motor and battery respectively. Connect the red line to the positive (+) terminal and the green (or black) line to the negative (-) terminal of the 12 volt battery. Connect the other two lines to the terminals on the motor of the winch (see Fig. 4).

5. Check the direction of the drum turning.

## 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.

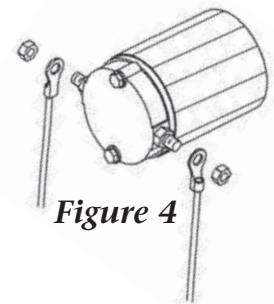


Figure 5



Figure 6

Before testing the winch, pull out the clutch knob, then turn counter-clockwise to the free spool position (see Fig.5). Pull about 2 feet of winch cable off the drum then turn the Clutch Knob clockwise to engage the clutch. (see Fig.6)

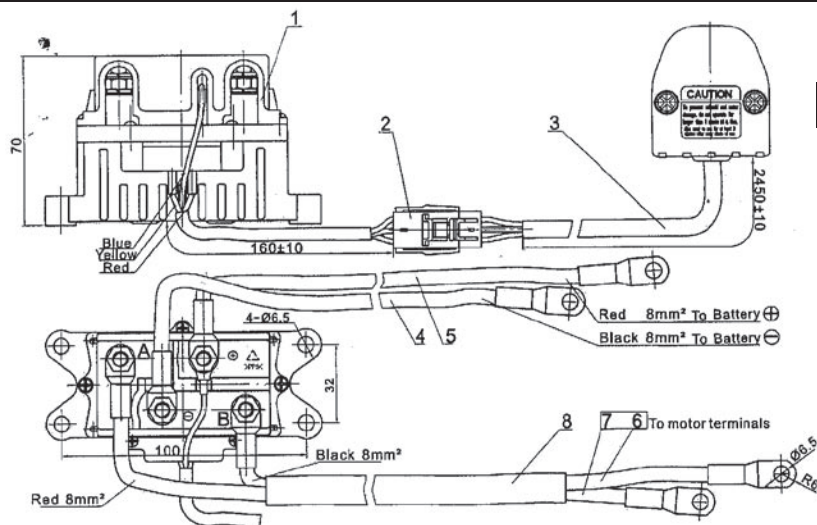
**Always wear heavy gloves when handling heavy wire cable.**

## CAUTION!

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

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





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



## REMOTE CONTROL/SOLENOID CONNECTION ASSEMBLY

- 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 pulling out the Clutch Knob (# 10) and rotating it about 45 -90 degrees (see Fig 6). This will allow you to freespool the winch. Turn Clutch Knob (# 10) 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 Pulling Belt (# 28), and pull the winch cable to the desired length, then attach the hook to item being pulled. Make sure the hookspring-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 operating: While standing aside of the tow path, press (and hold) the "CABLE IN" (  ) button on the Switch (#25) 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 "CABLE OUT" (  ) to reverse direction. Wait until the motor stops before reversing directions.
5. Re-spool cable after finishing operation.

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. Move clutch knob (#10) to the OUT position.
2. Extend winch cable assembly (#26) 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 (#22) 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

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>SUGGESTED REMEDY</b>
Motor does not turn on.	<p>Switch assembly not connected properly</p> <p>Loose battery cable connection</p> <p>Defective switch</p> <p>Defective motor</p> <p>Water has entered motor</p>	<p>Insert switch assembly firmly to the connector.</p> <p>Tighten nuts on cable connectors.</p> <p>Repair or replace switch.</p> <p>Check for voltage at armature port with Switch pressed. If voltage is present replace motor.</p> <p>Drain and dry. Then run in short bursts without load until completely dry.</p>
Motor runs too hot.	<p>Long period of operation</p>	<p>Allow winch to cool down periodically.</p>
Motor runs slowly with insufficient power.	<p>Battery run down</p> <p>Defective motor</p>	<p>Recharge battery by running vehicle engine or replace battery.</p> <p>Check battery terminals for corrosion - clean connections.</p> <p>Tighten or replace the connector.</p> <p>Repair or replace motor.</p>
Motor runs but cable drum does not turn.	<p>Clutch not engaged</p>	<p>Push clutch knob to "IN" position. If that does not work get a qualified technician to check and repair the unit.</p>
Motor runs in one direction only.	<p>Defective switch</p> <p>Broken wire or bad connection</p> <p>Defective motor</p>	<p>Repair or replace switch.</p> <p>Check for poor connections.</p> <p>Repair or replace motor.</p>

# KODIAK CUB Winch Assembly Drawing & Parts List

Item	Quantity	Description	Item	Quantity	Description
1	1	Motor Assembly	16	1	Mounting Frame
2	1	Gear Ring	17	1	Small Bushing (Drum Support)
3	1	Hawse Fairlead – optional	18	1	Side Plate
4	1	Gear Carrier	19	1	Screw 10 x 25mm, Nut 10mm
5	2	Spacer	20	1	Drum + Brake Assembly
6	1	Dish Gear	21	2	Screw 5 x 12mm
7	2	Nut 5mm	22	1	Spring Pin 2.5x14
8	2	Tie Bar	23	2	Bolt 5 x 132mm
9	1	Tension Plate	24	1	Clutch Knob
10	1	Gear Box Cover	25	1	Switch
11	1	Dry Bearing (Drum Support)	26	1	Roller Fairlead
12	4	Flat Washer 5mm	27	1	Mounting Channel-to special order
13	4	Spring Washer 5mm	28	1	Hand-Saving Belt
14	4	Screw 5 x 16mm	29	1	Cable Assembly w/Hook 3/16"x50'
15	2	Screw 5 x 12mm	30	3	Bolt 8x30mm, Washer, Spring Washer & Nut

