COME-UP WINCH

Model: ATV-1500

INSTRUCTION MANUAL

ATV Winch

WINNER·TAIWAN·SYMBOL OF EXCELLENCE

TÜV CERT ISO-9001:2000

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ATV WINCH

Thank you for purchasing a **COME-UP Winch.** This manual covers operation and maintenance of the winch. All information in this publication is based on the latest production information available at the time of printing.

I. General Safety Precautions

To prevent serious injury and property damage, please read and understand this instruction manual before installing your winch.

- ⚠ Check all safety and environmental conditions prior and during use.
- ⚠ Before use, ensure that you are familiar with all winching performance and operation such as speed & direction.
- ⚠ A wire rope should be replaced if it shows signs of excessive wear, broken wires, corrosion or any other defects.
- ⚠ The winches duty rating is S3 (intermittent – periodic)
- ⚠ If the winch fails to pull a load under normal conditions, stop the operation within 30 seconds otherwise motor damage may occur.
- ⚠ Ensure that the winch is connected to the correct voltage. 12VDC only and any voltage drop shall be less than 10% during operation.
- ⚠ Check that the free-spool shifter is in the "Engaged" position during and after use.
- ⚠ Remove the remote control from the winch when not in use.
- ⚠ Do not wrap the wire rope around the load and back onto it self. Always use a strap to ensure that the wire rope does not fray or kink.
- ⚠ Keep hands and clothes away from the winch, wire rope, and fairlead during operation..
- ⚠ Never unplug the remote control and battery leads when winching a load.
- ⚠ To avoid insufficient power when winching a load, the vehicle should be running and in neutral.
- ⚠ When winching a heavy load, lay a heavy blanket or jacket over the wire rope near to the hook end
- ⚠ If excessive noise or vibration occurs when running, stop the winch immediately and return it for repair.
- ⚠ If a free-spool can't be properly locked in the "Engaged" position, rotate the drum to have the free-spool coupled to the gear train.

⚠ WARNING

1. The winch is rated for intermittent-periodic duty.
2. The winch is not to be used to lift, support or otherwise transport personnel.
3. A minimum of five (5) wraps of rope around the drum is necessary to support the rated load.
4. When choosing the right winch, you need to consider the vehicle size and weight.
   As a general guide, you need a winch with a maximum load rating of at least one and a half times greater than the gross vehicle weight.
5. The rated line pull of the winch must be powerful enough to overcome the added resistance caused by whatever the vehicle is stuck in.

II. Performance Data

▶Specifications

Model			ATV-1500
Line Pull (first layer)			680 kg / 1,500 lb
Line Speed (first layer, no load)			4.6 mpm / 15 fpm
Amp. Draw	12V		65A
Motor	Type		Permanent magnet
	Input	12V	300 w / 0.4 hp
Gear Train	Type		3 stage planetary
	Ratio		103:1
Free-spool			Sliding shaft gear
Brake			Dynamic and mechanical
Control			Remote switch
Wire Rope	Type		A7 x 19 aircraft galvanized
	Length		15.2 m / 50 ft
	Size		4 mm / 5/32"

▶Line Pull and Rope Capacity

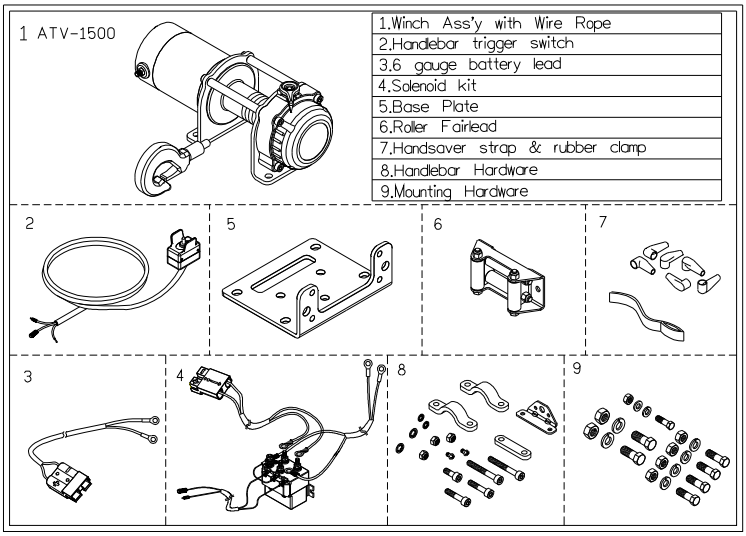
Model		ATV-1500
1st layer	Line pull (kg / lb)	680 / 1,500
	Line speed (mpm / fpm)	1.13 / 3.7
	Rope cap. (m / ft)	2.4 / 7.9
2nd layer	Line pull (kg / lb)	571 / 1,256
	Line speed (mpm / fpm)	1.34 / 4.4
	Rope cap. (m / ft)	5.2 / 17.1
3rd layer	Line pull (kg / lb)	492 / 1,082
	Line speed (mpm / fpm)	1.55 / 5.1
	Rope cap. (m / ft)	8.5 / 27.9
4th layer	Line pull (kg / lb)	433 / 953
	Line speed (mpm / fpm)	1.77 / 5.8
	Rope cap. (m / ft)	12.2 / 40.0
5th layer	Line pull (kg / lb)	386 / 849
	Line speed (mpm / fpm)	1.98 / 6.5
	Rope cap. (m / ft)	15.2 / 50

▶Line Speed and Amp. Draw (First layer of wire rope on the drum)

Model		ATV-1500		
Line Pull		Line Speed		Amp.
kg	lb	mpm	fpm	12V
0	0	4.6	15	6A
230	500	3.3	11	27A
450	1,000	2.1	7	44A
680	1,500	1.5	5	65A

Your winch will pull your ATV up or down in a ramp, it also help another ATV or a load if it is anchored in a stationary position.

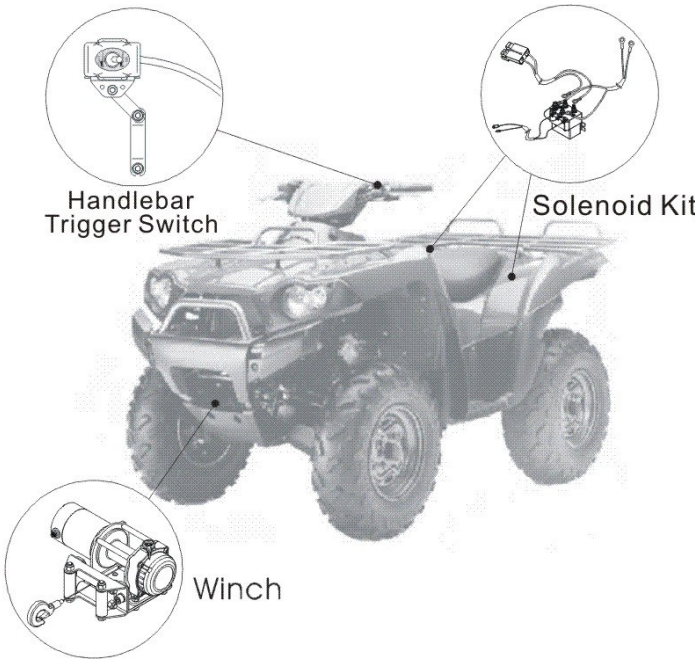
▶Main Components



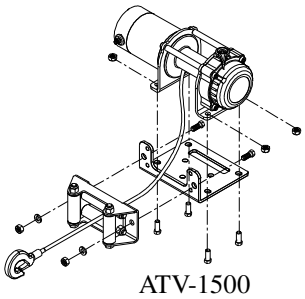
Ⅲ. Installation

▶Complete kit installation

To install the complete kit, you need to amount the winch, roller fairlead, solenoid, remote socket and trigger switch. Read and understand the following instruction to choose the proper mounting locations.



▶Winch & Roller Fairlead Mounting


ATV-1500

1.It is very important that the winch shall be mounted on a flat hard base plate to make sure the motor, drum and gearbox housing are aligned correctly.

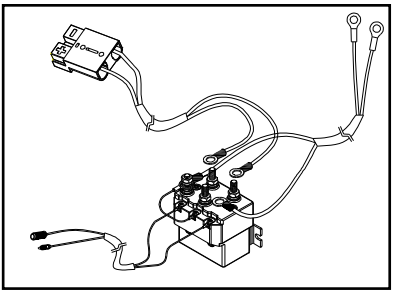
2. If a different base plate is used, the thickness shall be 5 mm (3/16”) at least.

3. Four (4) M8x 20L 8.8 Grade High Tensile Steel Bolts must be used for securing the winch on the base plate in order to sustain the loads imposed on the winch mounting.

4. Two (2) M10 x 20L Grade High Tensile Steel Bolts must be used for securing the roller fairlead on the base plate.

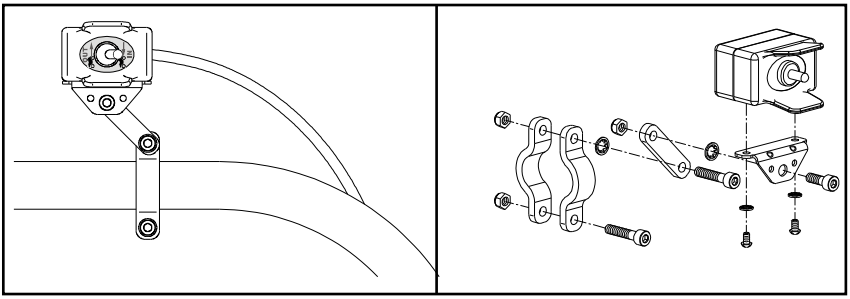
▶Solenoid Kit Mounting

1. It disconnects your winch from the power source when the vehicle is not in use.
2. It should be mounted close to the battery and keep the location from all metal structures.

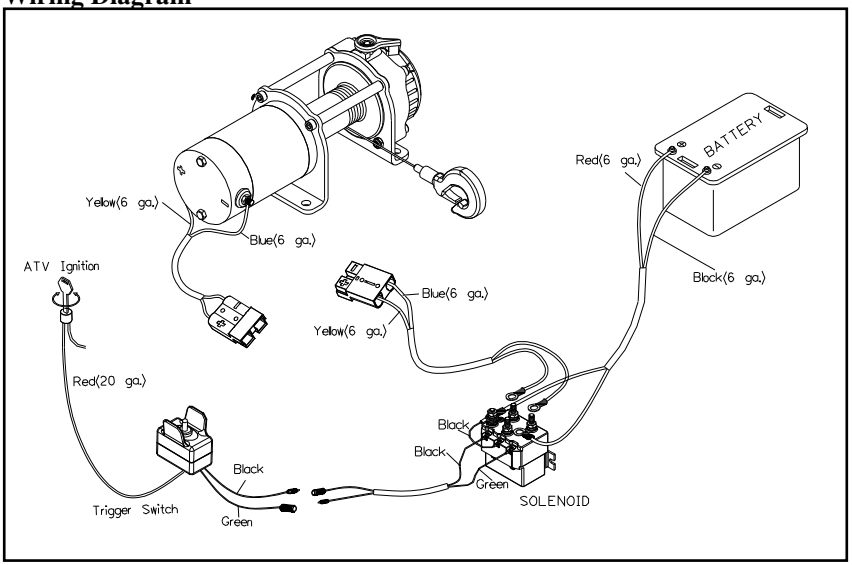


▶Handlebar Trigger Switch Mounting

Handlebar mounted trigger switch can be operated without removing your hand from the grip.



▶Wiring Diagram



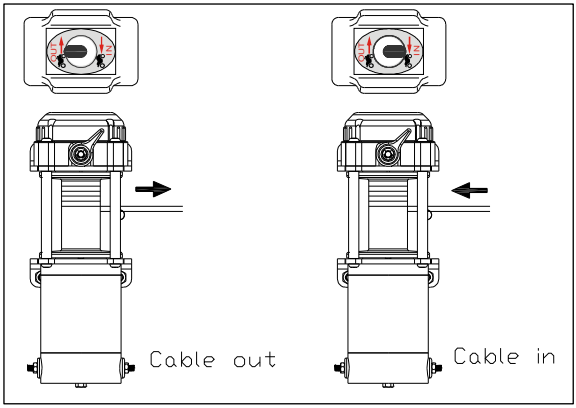
Ⅳ. Operation

▶Cable In and Out

1). To determine " Cable Out ", trigger to the "Cable Out" position

2). To determine " Cable In ", trigger to the "Cable In" position

3). To stop winching, release the free-spool shifter

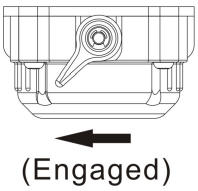


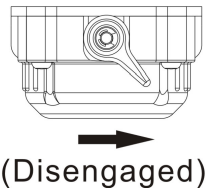
▶ Free-spool Function

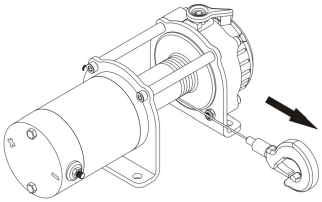
The free-spool allows rapid payout of the wire rope for hooking onto a load or anchor points and is operated by a free-spool shifter located on the end of the winch.

1).To engage the free-spool, turn the free-spool shifter counter-clockwise to the "Engaged" position. The winch is now ready for pulling.

2).To disengage the free-spool, turn the free-spool shifter clockwise to the "Disengaged" position. Wire rope can now be free spooled off the drum.


(Engaged)


(Disengaged)



Ⅴ. Maintenance

▶Wire Rope Replacement

Before installing a new wire rope, wrap the end of the wire rope with tape to prevent fraying. Wind the wire rope on the drum by pull a force to keep the tension constant. Never use a wire rope of a different size or material and only use genuine wire ropes.

1). Disengage the free-spool.

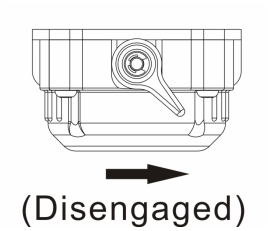
2). Spool the old wire rope, and then remove it from the drum.

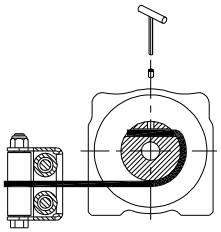
3). Have horizontal rollers and bolts apart from the roller fairlead, then place the replacement wire rope through the throat, of the roller fairlead pass below the drum, and insert it into the hole on the drum core.

4). Use a hex wrench to tighten the screw downwards to secure the wire rope.

5). Tighten the horizontal rollers and bolts of the roller fairlead

6). Wear leather gloves and use a handsaver strap when guiding the wire rope off the drum.





▶Lubrication

All moving parts in the winch are permanently lubricated at the time of assembly. Under normal conditions factory lubrication will suffice. If re-lubrication is necessary after repair or disassembly use a marine type grease.

▶Maintenance Schedule

Carry out all inspections listed below on schedule and inspections are divided into Daily, Monthly and 3 Monthly. Clean all connections because corrosion on electrical connections will reduce performance or may cause a short.

Classification of check			Item		Checking method	Checking reference
Daily	Periodical					
	One month	Three month				
		○	Complete winch		Operate the winch in and out	Minimum corrosion of the internal motor components
○			Installation	Mounting bolts & alignment.	Bolts tension & wear.	Tightened and aligned
○			Trigger switch	Working	Manual	Reasonable actuation
		○		Wearing in contact points	Visual.	Free of wear or damage.
○			Wire rope	Broken strands	Visual, measuring	Less than 10%
○	○			Decrease in rope diameter	Visual, measuring	7% of nominal diameter max
○				Deforming or corrosion and fastening condition of end	Visual	No existence of abnormalities
		○	Free-spool assembly	Damaged free-spool assembly	Visual evidence of wear	Free of wear or damage.
		○	Motor	Staining, damage	Visual evidence of wear	No existence of abnormalities
		○	Brake	Wearing of lining	Visual evidence of wear	Free of wear or damage.
○				Performance	Visual	Reasonable actuation
		○	Gear train	Damage, wearing	Visual evidence of wear	Free of wear or damage and distortion.

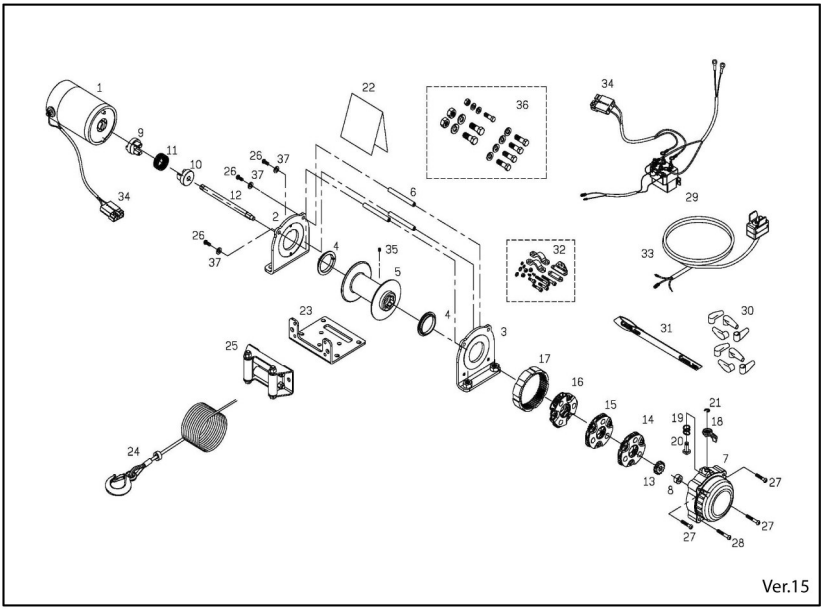
Ⅵ. Trouble Shooting

When the winch fails to operate after several attempts, or if there is any fault operation while **winching, check the followings.**

Symptom	Possible Cause	Remedy
Winch will not operate	Cut circuit or loosing	Check battery cable.
	Weak battery or insufficient power	Recharge or replace battery
	Loose connection of wirings	Checking all wirings
	Damaged or stuck solenoid	Replace solenoid
	Defective trigger switch	Check winch operation with an auxiliary switch
	Damaged motor or worn carbon brush	Replace motor or carbon brush
Motor runs in one direction	Broken wirings or bad connections	Reconnect or replace wirings
	Damaged or stuck solenoid	Replace solenoid
	Switch inoperative	Replace switch
	Dropt or lost wirings	Replace wiring and tighten.
Drum will not free spool	Free-spool does not disengaged	Engaged free-spool
	Damaged brake or free-spool assembly	Replace brake or free-spool assembly
	Damaged drum bushing	Replace drum bushing
	Damaged gear box	Replace gear box
No brake	Damaged or inoperative pressed spring	Replace pressed spring
	Disengaged free-spool	Engaged
	Damaged 3rd stage carrier	Replace 3rd stage carrier
	Damaged 1st shaft	Replace 1st shaft
Brake distance is too long	Worn or damaged brake	Replace or adjust brake
	Motor leads crossed	Reverse electrical connections to motor
Winch runs opposite direction	Solenoid kit crossed	Reverse black and red wires on the solenoid
	Trigger switch crossed	Reverse electrical connections
Motor runs extremely hot	Long period of operation	Stop operation to have it cooled
	Over-load	Reduce load
	Damaged or inoperative brake	Replace or repair brake

Ⅶ. Replacement Parts List

▶ATV-1500



No.	Description	Q'ty	No.	Description	Q'ty	No.	Description	Q'ty
1	Motor	1	14	1st stage carrier	1	27	Hex. bolt	2
2	Motor support rack	1	15	2nd stage carrier	1	28	Hex bolt	2
3	Gearbox support rack	1	16	3rd stage carrier	1	29	Solenoid CES-2012	1
4	Drum bushing	2	17	Ring gear	1	30	Boot	8
5	Drum	1	18	Free-spool shifter	7	31	Handsaver strap	1
6	Tie bar	3	19	Pressed spring	1	32	Handlebar hardware	1
7	Gear box	1	20	Free-spool lever	1	33	Trigger switch assembly	1
8	Bearing	1	21	Disc packing	1	34	Quick connector assembly	2
9	Connection A	1	22	Foot print	1	35	Hex bolt	1
10	Connection B	1	23	Base plate	1	36	Mounting hardware	1
11	Brake spring	1	24	Wire rope w/hook	1	37	Spring washer	1
12	1st shaft	1	25	Roller fairlead	1			
13	1st pinion	1	26	Hex bolt	2			

Limited Warranty

This Limited Warranty is given by the Comeup Industries Inc. (the "Seller") to the original purchaser (the "Purchaser") of a **COMEUP Winch** specified in this manual. This Limited Warranty is not transferable to any other party.

The Seller takes the responsibility for all parts and components, with the exception of the wire rope, to be free from defects in materials and workmanship appearing under normal use for as long as the said Purchaser owns the vehicle that the winch was originally mounted on. Electrical components are warranted for 1 Year from date of purchase under the same conditions. Any COMEUP Winch, which is defective, will be repaired or replaced without charge to the Purchaser.

Upon discovering any defect, the Purchaser under this Limited Warranty is requested to return the complete winch and inform the seller or their authorised distributors of any claims. The Purchaser must provide a copy of the proof of purchase bearing the winch serial number, date of purchase, owners name and address, vehicle details and registration number.

The Limited Warranty does not cover any failure that results from improper installation, operation or the Purchaser's modification in design. The winch is designed for vehicle self-recovery use only and should not be used in industrial applications or for moving people. The Seller does not warrant them to be suitable for such use.

ATV-1500 2008-07-500