

ATR-5000 LB ATV Winch

Owner's Manual and Operating Instructions



5000 lb.

ATV/UTV WINCH

WARNING

Read this manual before using this product. Failure to do so can result in serious injury.

Safety Rules

This manual uses the following symbols to help differentiate between different kinds of information. The safety symbol is used with a key word to alert you to potential hazards in operating and owning a winch.

Follow all safety messages to avoid or reduce the risk of serious injury or death.

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

The cable may break before the motor stalls. For heavy loads at or near rated capacity, use a pulley block/snatch block to reduce the load on the wire rope.

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 cable and drum.

Do not accelerate your vehicle while winching. Loss of traction can cause a shock load on the cable.

Do not use cable as a pull strap.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Pull only on areas of the vehicle as specified by the vehicle manufacturer

Do not use the winch to secure or hold a vehicle for a long period of time. Do not use the winch to secure a vehicle for

Do not exceed the rated capacity.

Do not use this winch for lifting or moving people or animals.

Disconnect the remote control and battery leads when not in use for extended periods.

Keep yourself and others a safe distance to the side of the cable when under

Never step over a cable or near a cable under load.

Read this manual thoroughly before operating your winch. Failure to follow instructions could result in serious injury or death.



Do not move the vehicle to pull a load (towing) on the winch cable. This could result in cable breakage.

Never release the release clutch when there is a load on the winch.



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

Use hook strap when handling the hook for spooling or unspooling the cable.

Do not wrap the cable around any object and hook it back onto itself.

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

Controls and Features

Read this owner's manual before operating your winch. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

WARNING

Batteries contain acid and produce explosive gases.

Keep sparks, flames and cigarettes away from batteries at all times. Wear safety glasses and protect the eyes at all times. Do not lean over the batteries during operation.

CAUTION

CAUTION

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.

WARNING

WARNING

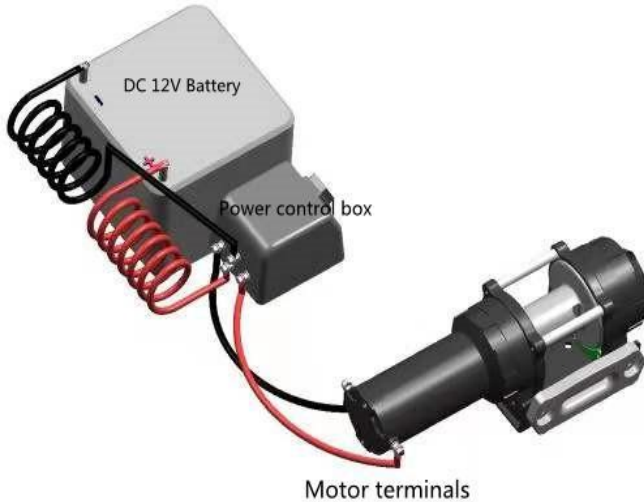
When re-spooling the cable, ensure that the cable spools in the under-wind position with the cable entering the drum from the bottom, not the top.

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.

CAUTION

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.



Motor terminals

Motor (1): 1.9 HP 12V DC motor provides power to the planetary gear mechanism.

Winch Drum (8): The winch drum is the cylinder on which the cable is stored. It can spool or unwind the rope depending on the remote winch switch.

Synthetic Cable (19): 5.5mm x 15 Synthetic cable designed specifically for load capacity of 6,500lbs. (36 useable feet with five wraps on the drum). The synthetic rope feeds onto the drum in the “under wind” position through the roller fairlead (4) and is looped at the end to accept the clevis hook pin (12)

Roller Fairlead (23): When using the winch at an angle the roller fairlead or aluminum fairlead acts to guide the synthetic rope onto the drum and minimizes damage to the synthetic rope from abrasion on the winch mount or bumper.

Free spooling Clutch (18): The clutch allows the operator to manually disengage (“RELEASE”) the spooling drum from the gear train. Engaging the clutch (“ENGAGE”) locks the winch into the gear system.

Braking System (2): Braking action is automatically applied to the winch drum when the winch motor is stopped and there is a load on the synthetic rope.

Planetary Gear System (12-15): The reduction gears convert the winch motor power into extreme pulling forces. This system allows high torque while maintaining compact size and light weight.

Mounted Mini- Rocker Switch: Dash mounted switch for easy access with a premium look and quality.

Wireless remote control: More than 25 m long- distance radio wireless remote control included

Power control box: IP67 Solenoid control box for connecting between winch terminals and battery.

Fairlead Mount (22): Adapter to mount the winch and fairlead for utility applications.

Contactactor (11): Power from the vehicle battery flows through the weather sealed solenoid switch before being directed to the winch motor.

Clevis Hook (20): Provides a means for connecting the looped ends of cables to an anchor 5/16"

Cable Hook Strap (21):For a hook

Installation

Installation

This ATR-5000 lb winch is designed with a bolt pattern that is standard in this class of winch. Many winch mounting kits are available that utilize this bolt pattern for the most popular ATV's and UTV's. You can find most of the ATV/UTV winch mounts

Step 1-Mount the Winch

WARNING

Before you start to install this winch, disconnect the vehicle ground and positive leads from the battery.

1. Install the winch and fairlead with the supplied hardware per the instructions provided with the model specific mounting kit or prepare a flat, secure mounting location for the winch.

NOTE

If you chose not to use a model specific mounting kit, you will need to drill holes in the structural support of the vehicle. Be certain that your structural support will stand up to the pulling forces of this winch.

CAUTION

Mounting bolts must be SAE grade 5 or better and torque to 17 ft. lbs.

2. Attach the winch using the M8 x 25 or 30 bolts and washers through the fairlead bracket or model specific mount and then into the winch.
3. Disengage the clutch by rotating the clutch cap to the "RELEASE" position. Release the synthetic rope and pull through the roller fairlead.
4. Attach the clevis hook and hand strap to the cable.

Step 2-Mount the Power Control box (Solenoid)

1. Find a location for the Power Control Box(Solenoid). If the Model specific mounting kit does not indicate a recommended contactor location, then it is recommended that the contactor be mounted close to the battery in a clean dry

Installation

Step 3 - Wiring the Winch



CAUTION

Never route electrical cables across any sharp edges, through or near moving parts, or near parts that become hot.

1. Connect the yellow and blue cables to the motor terminals on the winch. Torque the terminal nuts on the motor to 5.7 N-m (50 in-lbs). Route the other ends to the contactor location.
2. Connect the yellow and blue cables to the contactor (yellow to yellow and blue to blue). Do NOT tighten nuts.
3. Connect the red and black cables to your contactor (red to red and black to black). Do NOT tighten nuts. Route the other ends to your battery location.
4. Connect the Dash rocker switch to the contactor. (black to black and green to green)
5. Once all wiring is connected to the contactor you can then mount it using the supplied M6 hardware.



NOTE

Depending on the location of the contactor or Power Control Box, you may need to use an alternate winch wiring configuration. Please see the "Alternate Winch Wiring Diagram" available .

6. Torque the contactor terminal nuts to 4.5 N-m (40 inch pounds). Do NOT over tighten.
7. Place all terminal boots over terminals and secure all cables with zip ties or electrical tape.



NOTE

If you are installing the remote socket along with the dash mounted switch you will need to connect the remote socket to the

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

socket.

8. Connect the battery leads from the contactor to the ATV's Battery (black to black and red to red) (Above)
9. Check for proper drum rotation. Turn the clutch cap to the "RELEASE" position. Pull out some cable from the drum, and then turn the clutch cap to the "ENGAGE" position to engage the gears. Make sure your machine is running and press the cable out button on the switch. If the synthetic rope is turning and releasing more cable, then your connections are accurate. If the synthetic rope is turning and collecting more cable, then reverse the leads on the motor. Repeat and check rotation.

Installation

Cable Hook Installation and Use

1. Release winch and pull out approx. 1 meter of synthetic rope.
2. Take the hook pin out and put the rope loop into the hook
3. Assemble cable hook tightly
4. To stow hook and put a hook strap

General Tips for Safe Operation

Your ATR-5000 winch is rated at 5,000 lbs. capacity in first layer (max) when spooling the first rope layer on the drum. Overloads can damage the winch, motor and/or cable.

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 cable and equipment before each use. A frayed or damaged rope should be replaced immediately. Use only manufacturer's identical replacement rope with the exact specifications.

Inspect the winch installation and bolts to ensure that all bolts are tight before each operation.

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.

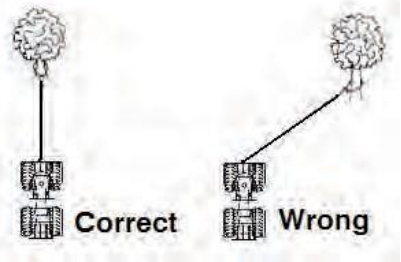
Only attachments and/or adapters supplied by the manufacturer are to be used.

Self Recovery

Locate a suitable anchor such as a strong tree trunk or boulder. Always use a sling as an anchor point.

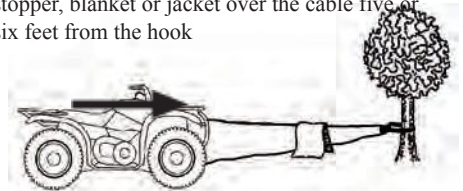
Your winch is equipped with a fairlead to help guide the cable and to reduce binding on short side pulls

Do not winch from an acute angle as the cable will pile up on one side of the drum causing damage to cable and the winch



Short pulls from an angle can be used to straighten the vehicle. Long pulls should be done with the cable straight out from the winch/vehicle

When pulling a heavy load, place a cable hook stopper, blanket or jacket over the cable five or six feet from the hook



In the event of a cable snap it will dampen the snap back. For additional protection open the hood of the vehicle

Winching Techniques

1. Take time to assess your situation and plan your pull.
2. Wear gloves to protect your hands.
3. Disengage the clutch to allow free-spooling and also save battery power.
4. Attach the hook strap to the clevis hook.
5. Pull out the cable to your desired anchor point using the hook strap.
6. Secure the clevis hook to the anchor point: Sling, chain or snatch block. Do not attach the hook back onto the cable.
7. Engage the clutch.
8. Start your engine to ensure power is being replenished to the battery.
9. Power in the cable guiding the cable under tension to draw up the slack in the cable. Once the cable is under tension, stand clear. Never step over the cable.
10. Double check your anchors and make sure all connections are secure.
11. Inspect the cable. Make sure there are at least 5 wraps of cable around the winch drum.
12. Place cable hook stopper over the cable approximately 5 to 6 feet from the hook.
13. Clear the area. Make sure all spectators stand clear and that no one is directly in front or behind the vehicle or anchor point.
14. Begin winching. Be sure that the 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 cable under tension.
15. The vehicle to be winched should be placed in neutral and the parking brake released. Only release the loads to the winch. This can damage the winch, cable and vehicle.
16. The winch is meant for intermittent use. Under full load with a single line rig do not power in for more than a minute without letting the motor cool down for a few minutes and then resume the winching operation.
17. The winching operation is complete once the vehicle is on stable ground and is able to drive under its own power.
18. Secure the vehicle. Be sure to set the brakes and place the vehicle in park.
19. Release the tension on the cable. The winch is not meant to hold the vehicle for long periods of time.
20. Disconnect the cable from the anchor.
21. Rewind the cable. Make sure that any cable already on the drum has spooled tightly and neatly. If not, draw out the cable and re-spool from the point where the cable is tight.
22. Keep your hands clear of the winch drum and fairlead as the cable is being drawn in.
23. Secure the hook and hook strap.
24. Disconnect the remote control and store in a clean, dry place.
25. Clean and inspect connections and mounting hardware for next winching operation.
26. Never use the winch as a tie down.
27. Use brake pedal when under full tension.

Maintenance

Maintenance

The owner/operator is responsible for all periodic maintenance.



Complete all scheduled maintenance in a timely manner. Correct any issue before operating the winch.

Motor

Periodically when not used very often, or after wet / damp conditions. Be sure to run the motor in free spool until the motor is warm. This helps dry out any moisture and condensation trapped inside the housing.

Lubrication

All moving parts within the Electric Winch have been Lubricated using high temperature lithium grease at the factory. No internal lubrication is required under normal conditions. If the winch is subjected to extreme conditions lubrication may be required using a high temperature lithium grease.

Cable Assembly Replacement

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

1. Rotate the clutch cap to the "Release" 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. Rotate the clutch cap to the "Engage" position.
5. Retract Cable Assembly onto drum being careful not to allow kinking or over heating of the winch.

ART-5000 Specifications

Performance Specifications

Part Number : ATR-5000

1. pulling rate: 5000lbs. (2265 kgs) single-line
- 2.motor : DC 12V 1.9hp/ 1.5kw permanent magnet
- 3.gear ratio: 158:1 three stage planetary gear train
- 4.clutch: cam activated
- 5.brake : mechanical
- 6.switch : handlebar mount mini-rocker wire control and wireless remote control included
- 7.fairlead : aluminum hawse for synthetic rope , 8.Wire Rope: 50', 6.5mm diameter (15m, 6.5mm diam)
9. 6 AWG wirings ,solenoid inside of control box (IP67) INCLUDED
- 10.Weight: 26 Pounds (12 kg)

11.Performance Chart

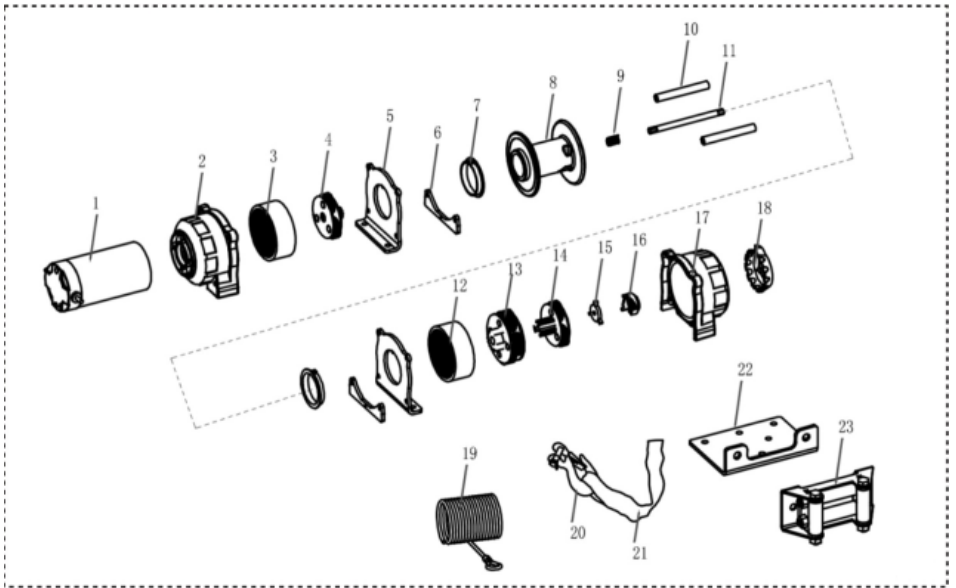
Line Pull	lb	NO	1000	2000	3000	4000	5000
	kg	LOAD	453	906	1360	1814	2265
Line speed	ft/ min	17.9	12.8	10.8	8.1	5.8	4.5
	m/ min	5.9	4.2	3.6	2.7	1.9	1.5
Motor current	Amps	52	86	158	210	258	300

Pull by Layer/layer/lbs(kgs)

Layer	of		1	2	3	4
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cable					
Rated line	lb	5500	3980	3450	3040
pull per layer	kg	2265	1803	1563	1377

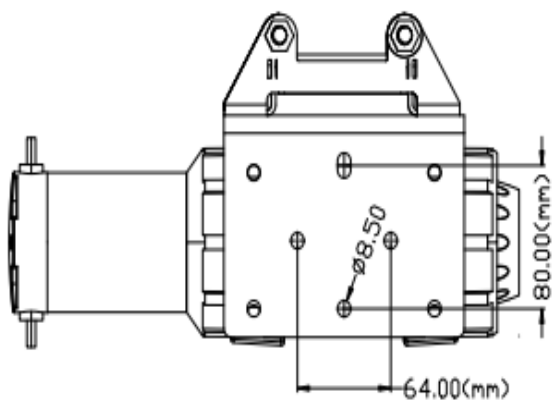
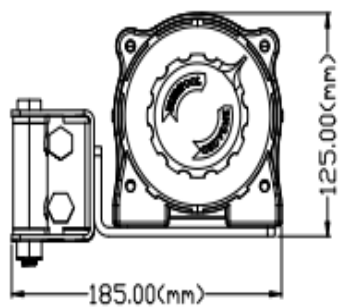
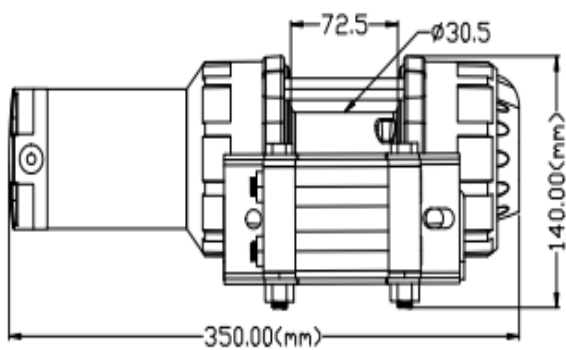
Winch Assembly Diagram



PARTS LIST&ASSEMBLY DIAGRAM

Part	Description	Quality
1	Motor assy	1
2	Drum support breaket (left)	1
3	Drive gear	1
4	The first stage planetary gear assy	1
5	Drum support	2
6	Wire rope protector	2
7	Bushing	2
8	Drum	1
9	Spring	1
10	Tie rod	1
11	Drive shaft	1
12	Drive gear	1
13	The third stage planetary gear assy	1
14	The second stage planetary gear assy	1
15	Drum	1
16	End cam	1

Part	Description	Quality
17	Clutch end housing	1
18	Freespool knob	1
19	Steel Cable	1
20	Hook	1
21	Strap	1
22	Mounting Plate	1
23	Roller Fairlead	1
24		
25		
26		
27		
28		
29		
30		
31		
32		



Troubleshooting

Problem	Cause	Solution	
Winch runs one way	Defective or Stuck Contactor	Tap Contactor to loosen plungers. Repair or Replace Contactor.	
	Defective Switch Assembly	Replace Switch Assembly.	
	Contactor Issue	Double check your winch wiring diagram to make sure all wires are correct. Refer to our contactor troubleshooting	
		Call Technical support	
Contactor clicks but the winch does not run	Wired Incorrectly	Double check your winch wiring diagram to make sure all wires are correct. Hand remote / Dash rocker wires need to always be green to green and black to black. Call Technical support	
		Motor Issue	Call Technical support
		Brake Spring installed backwards	Call Technical support
	Motor runs but the cable is not moving	Cable is not Attached to the Spool	Refer to our cable retie guide from the factory
Winch is not engaged		Rotate the clutch cap to "engage"	
Broken coupler or Stripped shaft		Replace Coupler / Shaft	
Motor runs slowly or without normal power	Worn Brushes	Organise replacement brush kit Call Technical support	
	Loose or corroded cable connections	Clean, Tighten, or Replace	
Motor is overheating	Winch running time is too long	Allow winch to cool down periodically.	

Synthetic Cable



DANGER

Sharp edges and rough surfaces will shorten cable life. Inspect the cable and protective sleeve before use. Replace cable immediately if the cable has cut strands, fused or melted fibers, odd stiff sections, chemical contaminated, flat areas or lumps that cannot be eliminated after flexing the cable.



WARNING

Do not tie the cable to secure a load or connect a broken cable. Do not expose the cable to chemicals or heat sources. Do not run the cable over sharp edges or rough surfaces.

Synthetic Rope Guide

A



B



C



D



E



Inspection:

- The cable will have a smooth finish when new (A).
- The outer surface of the cable will appear slightly fuzzy (B) after normal use. This fuzziness is normal and will help protect the fibers below.
- Once approximately 25% of the outer fibers shows wear (C) it must be replaced.
- Inspect the inner and outer fibers. To inspect the inner fibers, open the strands of the cable by compressing the cable (D) and look for powdered fiber or abrasion (sign of internal wear). Consider the amount of wear on the internal fibers when Glossy or glazed sections determining the percent of wear for replacement.
- in the cable (E) are usually caused by compression from the cable being wound on the winch drum or through a pulley block. This is usually considered normal.
- A sign of heat damage is when you compress (D) the glazed section (E) of the cable and it remains hardened. In this case the cable must be replaced.

Prolonging the life of your synthetic rope:

Exercising proper care to prolonging

the ground.

t

the life of your cable is your responsibility

1. Minimize Cable Abrasion.
Perform heightened winch p
 2. ulls by elevating the anchor point and reducing friction against the ground.
 3. Minimize Cable Abrasion.
Perform heightened winch pulls by elevating the anchor point and reducing friction against the ground.
 4. Keep the Cable Clean. Keep you cable clean as dirt, sand and debris will cause abrasion. Use the protective sheath to cover the cable on the spool once cable is in the stowed position.
 5. Avoid Sharp Bends. If cable is angled at sharp degrees it will decrease the strength of the cable under load and can cause cable damage or failure.
 6. Correct Spool winding. When re-spooling cable without load it is always better to have someone apply load to the line while you reel it in evenly. Respool the cable evenly and tightly on the drum. If cable is wound loosely it may cause the cable to work it way down to the drum and wedge itself under other layers.
 7. DO NOT Grease or Oil the cable
-