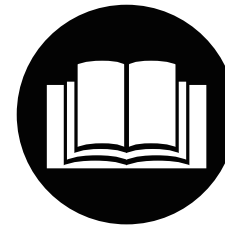




VEHICLE RECOVERY ELECTRIC WINCH



2010AOR - 2000 lb. winch w/
synthetic rope & aluminum fairlead

3510AOR - 3500 lbs. winch w/
synthetic rope & aluminum fairlead

4511AOR - 4500 lbs. winch w/
synthetic rope & aluminum fairlead

4501AOR - 4500 lbs. winch with
metal cable & roller fairlead

ATV WINCH



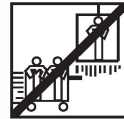
**OPERATION MANUAL
READ BEFORE YOU INSTALL
AND USE WINCH**

APPLICATION INFORMATION

This winch is designed to move a load at ground level or up an incline. It is neither designed nor intended for lifting.

This winch is not to be used to lift or move people.

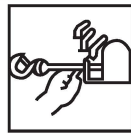
This winch is for intermittent use due to heat build up characteristics of various components. **If the end of the motor becomes uncomfortably hot to touch**, stop winching and allow the motor to cool down.



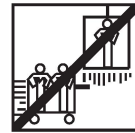
Read Owner's Manual



Always Use w/ safety handle



Keep clear of winch, wire rope and hook while operating



Never use winch to lift or move people



Never use winch to hold loads in place

GENERAL SAFETY INFORMATION

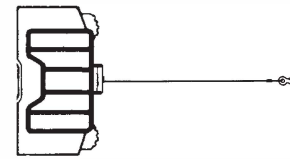
Your winch is a very powerful machine. If used unsafely or improperly, there is a possibility that property damage or personal injury could result.

Warning The responsibility for safe installation and operation of the winch and prevention of the winch and prevention of personal injury and property damage ultimately rests with you, the operator. There is no substitute for the use of good judgement and caution in operating a winch.

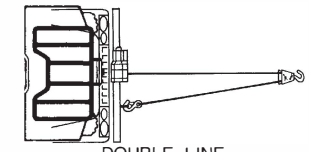
Warning The metal or synthetic rope may break before the winch stalls. For heavy loads, use a pulley block to reduce the load on the metal cable or synthetic rope.

1. Maximum working load capacity is on the metal or synthetic rope layer closest to the drum. **DO NOT OVERLOAD. DO NOT ATTEMPT PROLONGED PULLS AT HEAVY LOADS.** Overloads can damage the winch and/or the metal or synthetic rope and create unsafe operating conditions. **FOR LOADS OVER 1/2 RATED CAPACITY, WE RECOMMEND THE USE OF THE OPTIONAL PULLEY BLOCK TO DOUBLE LINE THE METAL OR SYNTHETIC ROPE (Figure 2).** This reduces the load on the winch and the strain on the metal or synthetic rope by approximately 50%.

(1)



Single Line



Double Line

2. After reading and understanding this manual, learn to use your winch. After installing the winch, practice using it so you will be familiar with it when the need arises.



3. **DO NOT "move" your vehicle to assist the winch in pulling the load.** The combination of the winch and vehicle pulling together could overload the metal or synthetic rope and the winch.

4. Always stand clear of metal or synthetic rope, hook and winch. In the unlikely event of any component failure it's best to be out of harm's way.

5. Inspect metal or synthetic rope and equipment frequently. **A frayed metal or synthetic rope with broken strands should be replaced immediately.**

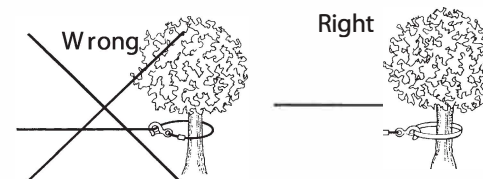
Periodically check the winch installation to ensure that all bolts are tight.

6. Use heavy leather gloves when handling synthetic rope. Do not let metal or synthetic rope slide through your hands.

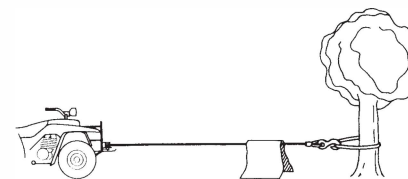
7. Never put your finger through the hook. If your finger should become trapped in the hook, you could lose your finger. **ALWAYS USE THE SAFETY HANDLE** when guiding the metal or synthetic rope in or out.



8. **NEVER HOOK** the metal or synthetic rope back onto itself because you could damage the synthetic rope. Use a strap.

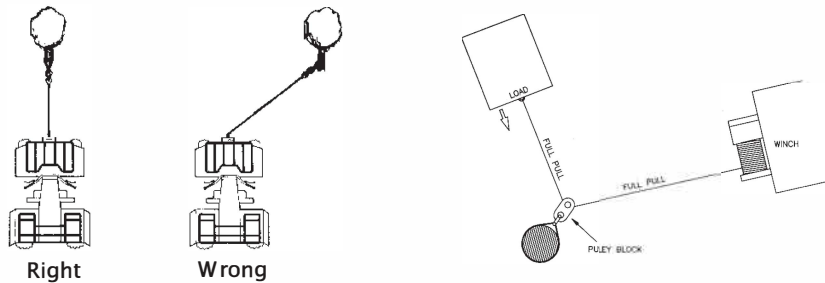


9. It is a good idea to lay a heavy blanket or jacket over the synthetic rope near the hook end when pulling heavy loads.



(2)

10. AVOID CONTINUOUS PULLS FROM EXTREME ANGLES as this will cause the metal or synthetic rope to pile up on one end of the drum. This can jam the metal or synthetic rope of the winch.



11. Always operate winch with an unobstructed view of the winching operation.

12. Equipment such as straps, hooks, pulley blocks, etc. should be sized to the winching task and should be periodically inspected for damage that could reduce their strength.

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

14. NEVER work on or around the winch drum when winch is under load.

15. Always DISCONNECT winch power leads to battery before working in or around the winch drum so that the winch can not be turned on accidentally.

16. DON'T use the winch to hold loads in place. Use other means of securing loads such as tie down straps.



17. Only use factory approved switches, remote controls and accessories.

18. DO NOT machine or weld any parts of the winch. Such alterations may weaken the structural integrity of the winch.

19. DO NOT connect winch to either 110V AC house current or 220V .

20. Use CAUTION when pulling or lowering a load up. Keep people, pets, and property clear of the path of the load.

INSTALLATION

Caution When mounting, check all vehicle and winch parts for free operation. Be sure that the winch mounting location does not significantly reduce ground clearance.

(3)

Step (1)

Mount the winch to a firm base. Be sure that your structural support is strong enough to support the rated pulling forces of the winch. (Attach Fairlead to the mounting plate with two bolts.)

Step (2)

While mounting attitude is at your discretion, always remember that your winch is to be operated with the synthetic rope in an underwound orientation on the wire rope drum. Your winch is designed to ROPE IN and ROPE OUT in one direction. DO NOT attempt to reverse the operation.

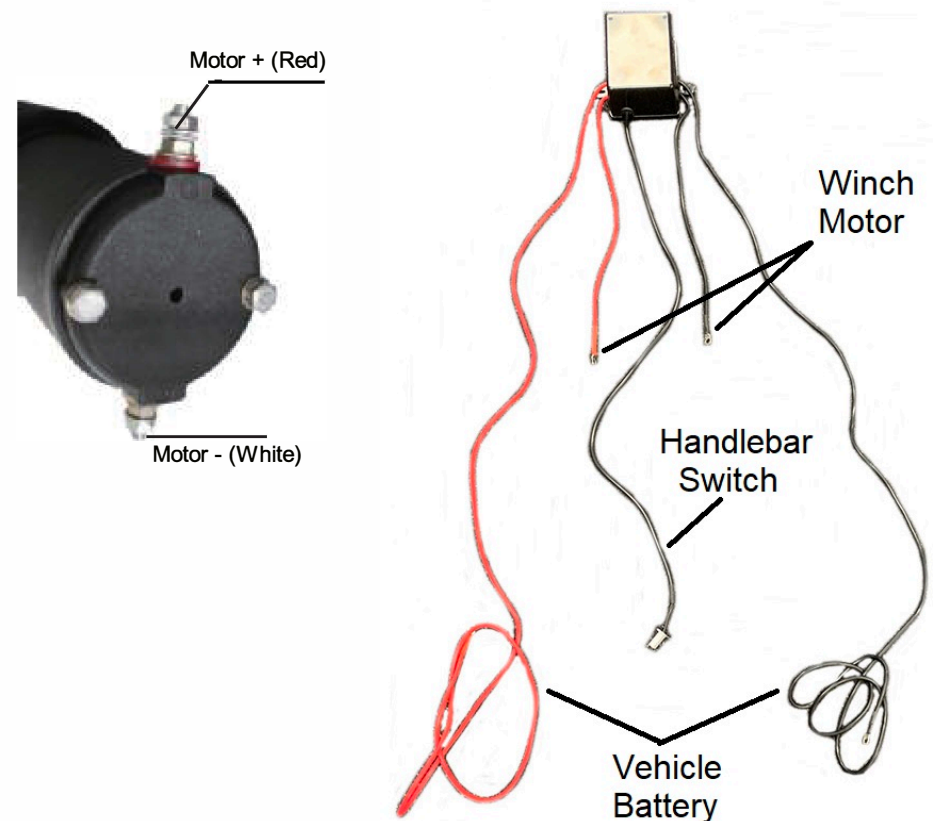
Step (3)

Disconnect the battery leads of the vehicle.

Warning Batteries contain gasses which are flammable and explosive. Wear eye protection during installation and remove all metal jewelry. Do not lean over battery while making connections.

Step (4)

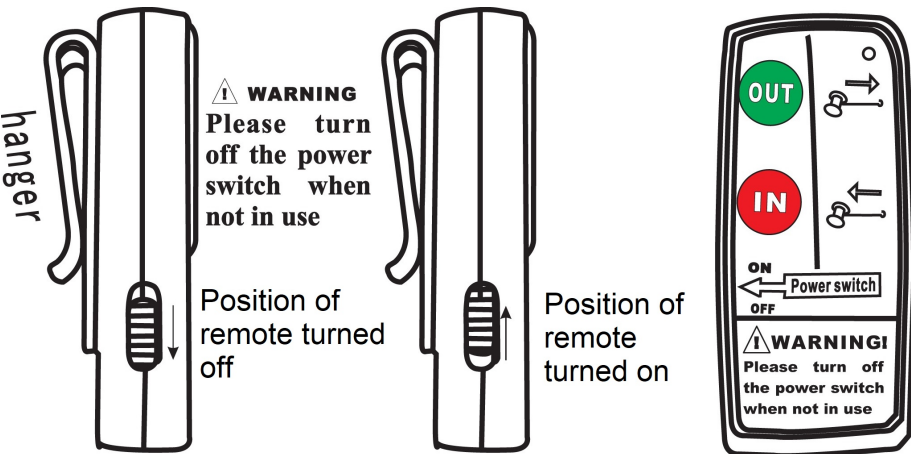
Refer to the figure shown below for wiring diagram.



OPERATION OF WIRELESS REMOTE

Before you begin, you should familiarize yourself with our Wireless Remote Control and each of its functions.

Note: Turn off the remote to extend the battery life.



(5)

Clutch Operation

Engaged

Freespool



CAUTION Clutch must be fully engaged before winching. Never engage clutch knob while drum is turning.

CAUTION If the winch motor stalls, do not continue to apply power.

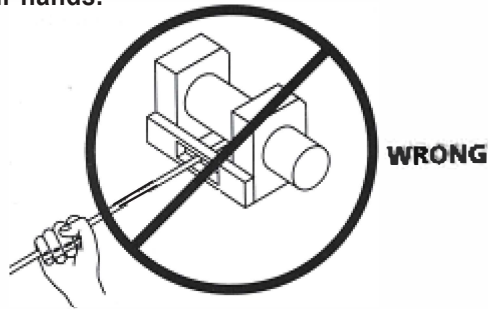
WINCH OPERATION

WARNING When the load exceeds the maximum rated pull of the winch, the external circuit breaker will automatically shut down the winch. To reset the circuit breaker, release the switch button. Note: The winch will not be able to restart normally until the motor cools off.

(6)

▼ Danger

Never touch the metal or synthetic rope or hook while they are in tension or under load. Even at rest, the winch may have the metal or synthetic rope in tension. Never guide a metal or synthetic rope under tension onto the drum with your hands.



▼ Danger

Wear heavy leather gloves when handling metal or synthetic rope. When handling the hook, always use the hook handle.

▼ Caution

Use a pulley block to avoid winching at sharp angles. Uneven layering will cause serious damage to the winch and metal or synthetic rope. It can be corrected by securing load, spooling out the wire rope and repositioning it to the opposite end of the drum.

▼ Danger

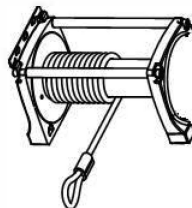
Do not disengage clutch under load, If your winch is equipped with a freespool clutch, be certain that there is no tension on the metal or synthetic rope when you disengage the clutch. Before winching a load, be sure the clutch is fully engaged.

▼ Danger

Never rely on the winch to hold a load in place. None of our winches are designed for load-holding applications and may unwind or fail due to shock loading as the load is being transported. The load should be secured by other means, and the winch hook detached from the load.

▼ Danger

A minimum of 5 wraps of cable on the drum is required to hold load. Otherwise the cable will leave the drum of the winch and cause damage.



Troubleshooting

When the winch fails to operate after several attempts, or if there is any fault operation while winching. Check the following:

| Symptom | Possible Cause | Remedy |
|-------------------------------|--|--|
| Winch will not operate | No power | Check battery cable |
| | Weak battery or insufficient power | Recharge or replace battery |
| | Damage to circuit breaker | Replace circuit breaker |
| | Loose connection of wiring | Check all wiring |
| | Damaged or stuck solenoid | Replace solenoid |
| | Defective remote control | Check winch operation with an auxiliary switch |
| | Damaged motor or worn brushes | Replace motor or brushes |
| Motor runs in one direction | Broken wiring or bad connection | Reconnect or replace wiring |
| | Damaged or stuck solenoid | Replace solenoid |
| | Switch inoperative | Replace switch |
| | Loose wiring | Replace wiring and tighten |
| Drum will not free spool | Freespool not engaged | Engage freespool |
| | Damaged brake or freespool assy | Replace brake or freespool assy |
| | Damaged drum bushing | Replace drum bushing |
| | Damaged gear box | Replace gear box |
| No brake | Damage on inoperative pressed spring | Replace pressed spring |
| | Disengaged freespool | Engage |
| | Damaged output shaft | Replace output shaft |
| | Damaged 1 st shaft | Replace 1 st shaft |
| Brake distance is too long | Worn or damaged brake | Replace or adjust brake |
| Winch runs opposite direction | Motor leads crossed | Reverse electrical connections to motor |
| | Solenoid control crossed | Reverse black and red wires on the solenoid |
| | Remote control or trigger switch crossed | Reverse electrical connections |
| Motor runs extremely hot | Long period of operation | Stop operation and let it cool |
| | Overload | Reduce load |
| | Damaged or inoperative brake | Replace or repair brake |

RIGGING

3. Figure 18 illustrates the most commonly used rigging. A nylon sling is used to protect the tree when it is used as an anchor, and the metal or synthetic rope is attached to use the sling. The use of a chain or metal or synthetic rope is not recommended due to the damage it could cause to the tree.

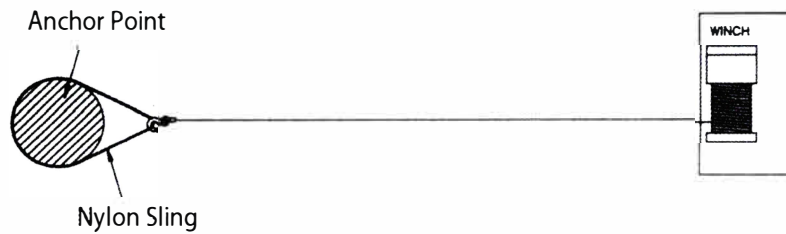


Figure 18

4. Figure 19 illustrates a method of rigging used to obtain a mechanical advantage. The use of a pulley block will almost double pulling line capacity.

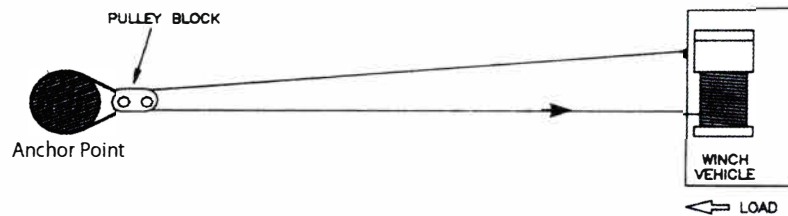


Figure 19

RIGGING

5. Figure 20 illustrates the use of a pulley block to change the direction of the pull. Mechanical advantage can be obtained by attaching a pulley block to the nylon sling with a shackle and running the metal or synthetic rope to the anchor point.

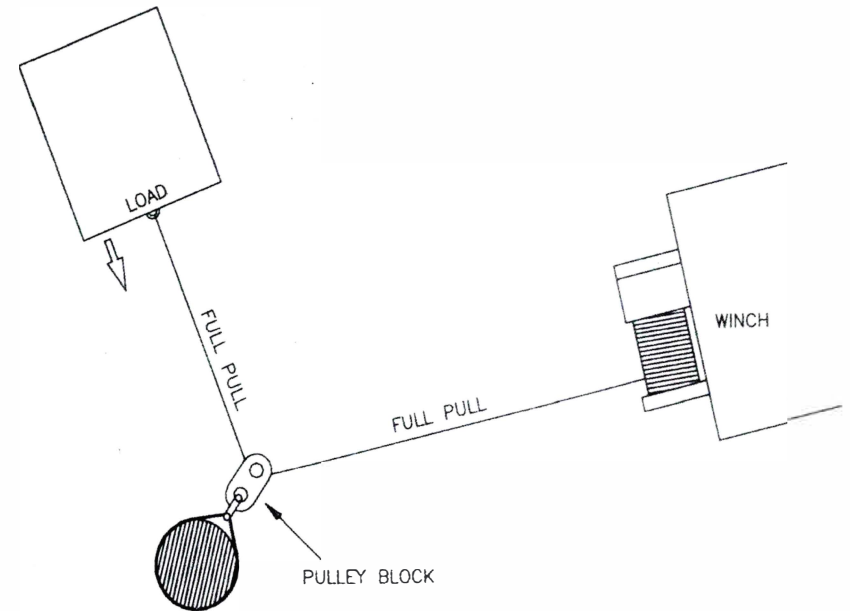


Figure 20

Caution Equipment such as shackle, hooks, pulley blocks, straps, etc. should be properly sized and rated and should be inspected periodically for damage that could reduce their strength.