

Installation and Operations Manual for ATV/UTV Winch Series



Throughout this manual, you will find notations with the following headings:

- ⚠ DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. This notation is also used to alert against unsafe practices.

The following symbols on the product and in the Owner's manual are used:



Note: Indicates additional information in the installation and operation procedures of your winch.
Correct installation of your winch is a requirement for proper operation.
Please Note: Winch is designed primarily for intermittent applications. This winch is not designed to be used in industrial or hoisting applications and Superwinch does not warrant it to be suitable for such use.

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 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 wire rope may break before the winch stalls. For heavy loads, use a pulley block to reduce the load on the wire rope.

1. Maximum working load capacity is on the wire 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 wire rope and create unsafe operating conditions. FOR LOADS OVER 1,000 POUNDS (454 kg), WE RECOMMEND THE USE OF THE OPTIONAL PULLEY BLOCK TO DOUBLE LINE THE WIRE ROPE (Figure 2). This reduces the load on the winch and the strain on the wire rope by approximately 50%. Attach hook to load bearing part. The vehicle engine should be running during winch operation. If considerable winching is performed with the engine off, the battery may be too weak to restart the engine.

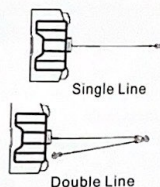


Figure 2

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 wire rope and the winch.
4. ALWAYS STAND CLEAR OF WIRE ROPE, HOOK AND WINCH. IN THE UNLIKELY EVENT OF ANY COMPONENT FAILURE IT'S BEST TO BE OUT OF HARM'S WAY.
5. INSPECT WIRE ROPE AND EQUIPMENT FREQUENTLY. A FRAYED WIRE ROPE WITH BROKEN STRANDS SHOULD BE REPLACED IMMEDIATELY. Always replace wire rope with the manufacturer's identical replacement part (see Replacement Parts List). Periodically check the winch installation to ensure that all bolts are tight.
6. USE HEAVY LEATHER GLOVES when handling wire rope. DO NOT LET WIRE ROPE SLIDE THROUGH YOUR HANDS.
7. NEVER WINCH WITH LESS THAN 5 TURNS of wire rope AROUND THE WINCH DRUM since the wire rope end fastener may NOT withstand full load.

8. KEEP CLEAR OF WINCH, TAUT WIRE ROPE AND HOOK WHEN OPERATING WINCH. Never put your finger through the hook. If your finger should become trapped in the hook, you could lose your finger. ALWAYS USE THE HANDSAVER when guiding the wire rope in or out (See Figure 3).

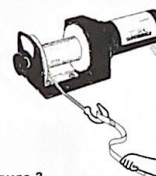
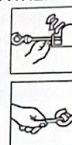


Figure 3

9. NEVER HOOK THE WIRE ROPE BACK ONTO ITSELF because you could damage the wire rope. Use a nylon sling (Figure 4).



Figure 4

10. It is a good idea to lay a heavy blanket or jacket over the wire rope near the hook end when pulling heavy loads (Figure 5). If a wire rope failure should occur, the cloth will act as a damper and help prevent the rope from whipping.

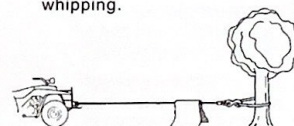


Figure 5

11. NEVER USE YOUR WINCH FOR LIFTING OR MOVING PEOPLE.
12. Your winch is not intended for overhead hoisting operations.
13. AVOID CONTINUOUS PULLS FROM EXTREME ANGLES as this will cause the wire rope to pile up on one end of the drum (Figure 6). This can jam the wire rope in the winch, causing damage to the rope or the winch.

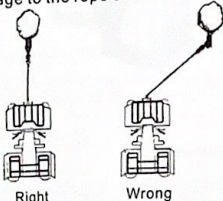


Figure 6

14. NEVER OBSCURE THE WARNING INSTRUCTION LABELS.
15. Always operate winch with an unobstructed view of the winching operation.
16. Equipment such as tackle, hooks, pulley blocks, straps, etc. should be sized to the winching task and should be periodically inspected for damage that could reduce their strength.
17. NEVER RELEASE FREESPOOL CLUTCH WHEN THERE IS A LOAD ON THE WINCH.
18. NEVER WORK ON OR AROUND THE WINCH DRUM WHEN WINCH IS UNDER LOAD.
19. DO NOT OPERATE WINCH WHEN UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR MEDICATION.
20. ALWAYS DISCONNECT WINCH POWER LEADS TO BATTERY BEFORE WORKING IN OR AROUND THE WINCH DRUM so that the winch cannot be turned on accidentally.
21. When moving a load, slowly take up the wire rope slack until it becomes taut. Stop, recheck all winching connections. Be sure the hook is properly seated. If a nylon sling is used, check the attachment to the load.
22. When using your winch to move a load, place the vehicle transmission in neutral, set vehicle brake, and chock all wheels.
23. DO NOT USE THE WINCH TO HOLD LOADS IN PLACE. Use other means of securing loads such as tie down straps.
24. USE ONLY FACTORY APPROVED SWITCHES, REMOTE CONTROLS AND ACCESSORIES. Use of non-factory approved components may cause injury or property damage and could void your warranty.
25. DO NOT MACHINE OR WELD ANY PART OF THE WINCH. Such alterations may weaken the structural integrity of the winch and could void your warranty.
26. DO NOT CONNECT WINCH TO EITHER 110V AC HOUSE CURRENT OR 220V MAINS AS WINCH BURNOUT OR FATAL SHOCK MAY OCCUR.
27. Never allow shock loads to be applied to winch or wire rope.
28. Use caution when pulling or lowering a load up and down a ramp or incline. Keep people, pets and property clear of the path of the load.

INSTALLATION

Correct installation of your winch is required for proper operation.

WARNING This winch **MUST** be mounted with the wire rope in the under-wind direction. Improper mounting could damage your winch and void your warranty.

Step (1)
Install mounting kit or structural support for winch.

Step (2)
Mount the winch to the mounting kit base plate or to the mount that you have designed. Typical mount is to a flat surface capable of handling the loads.

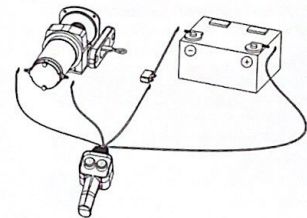
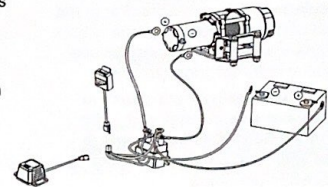
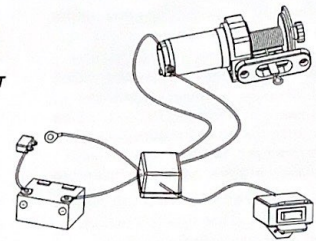
The M8 x 1.25 x 30mm mounting bolts supplied are the correct length for use with a 1/4" (6.3mm) thick mounting plate.

WARNING Do not substitute any strength grade weaker than ISO grade 4.6

Step (3)
Disconnect the vehicle battery leads.

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 Figure 7 for wiring diagram.



Use the supplied hardware and Brackets to mount the handlebar Switch. Mount the solenoid close to the battery, in the storage box, under the seat or on the frame.

⚠ WARNING The location of the Switch **MUST** not interfere with safe operation of the vehicle. Wiring **MUST NOT** come in contact with any moving parts or sharp edges, such as engine, suspension, brakes, exhaust, or steering.

Route the red wire from the handlebar Switch to the Ignition switch and connect to the wire that is powered when ignition is in the ON position ONLY.

Route the two wires from the solenoid to the motor. Route the two wires from the solenoid to the battery. Attach the circuit breaker to the end of the red wire. Wrap the circuit breaker with electrical tape to prevent accidental short circuits.

Apply several layers of electrical tape where wiring may come into contact with sharp metal parts of the vehicle to prevent insulation abrasion or cutting.

Attach the short circuit breaker wire to the battery positive terminal and reattach the terminal to the battery. Connect the remaining black solenoid wire to the battery negative terminal and connect the terminal to the battery.

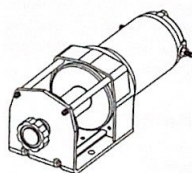
Step (5)

Pull and turn (see Figure 8) the freespool clutch knob to the "Free" position. Pull several feet of wire rope off the drum. Return the clutch knob back to the "Engaged" position. Activate the winch in Cable Out momentarily to check drum rotation direction. If the drum rotates in the wrong direction, recheck your wiring.

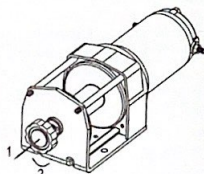
FREESPOOL OPERATION

Pull and turn the clutch knob to the "Free" position as shown in Figure 8. If there is a load on the wire rope, the clutch knob may not pull out easily. **DO NOT FORCE THE CLUTCH KNOB.** Release tension on the clutch by jogging out some of the wire rope. Release the clutch and pull out the wire rope and secure to anchor or load. Check that there are at least five (5) turns of wire rope left on the drum. Re-engage the drum by returning the clutch knob to the "Engaged" position. (See Figure 8).

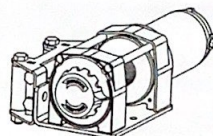
⚠ CAUTION Clutch must be fully engaged before winching. Never engage clutch knob while drum is turning.



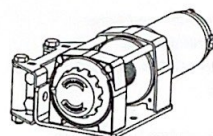
Engaged



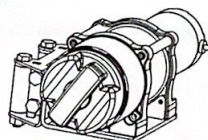
Free



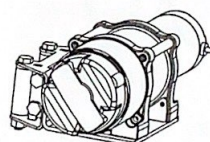
Free



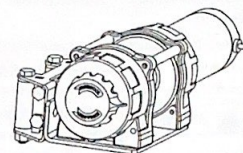
Engaged



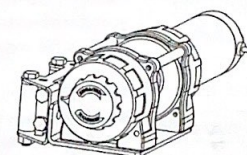
Free



Engaged



Free



Engaged

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

INTERMITTENT DUTY

An electric winch is like any other motor driven power tool such as an electric drill or saw. The electric motor should not be allowed to become excessively hot. Normal precautions will extend the life of your motor. Keep the duration of pulls as short as possible. **If the end of the motor becomes uncomfortably hot to touch, stop winching and allow the motor to cool down.**

For further information and complete warranty, visit our website

INSTALLATION PROCEDURE: ATV2500/3000/4000

Step (1)

Install mounting kit or prepare a flat, secure mounting location for winch to make sure the motor, drum, and gearbox are aligned correctly. Carefully follow the instructions included with the mounting kit.

WARNING Be sure structural support is strong enough to support rated capacity of the winch.

Note: If you choose not to use a mounting kit, you will need to drill holes in the structural support. Be sure that your structural support is at least 3/16" (5mm) thick.

WARNING If different length bolts, nuts, washers and other hardware are required for your installation, always use hardware that equals or exceeds the strength grade of the supplied hardware.

Step (2)

Position the winch over the holes in the mounting kit or structural support.

WARNING As you position the winch, make sure that the wire rope winds in the proper rotation on the drum. Your winch is intended to operate in one direction only. Failure to operate the winch in the proper direction can cause the winch brake (if equipped) to operate improperly, and/or cause the winch to fail.

Step (3)

Secure winch (Figure 2) to mounting kit or structural support using bolts, lock washers and square nuts supplied with winch.

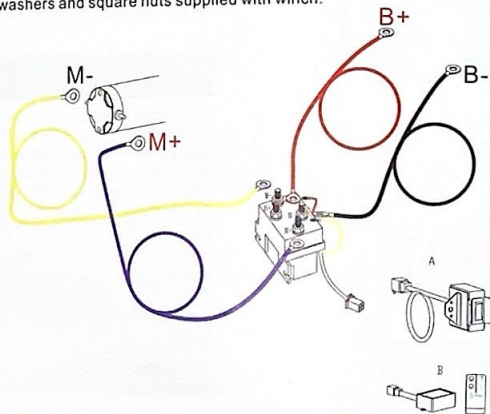
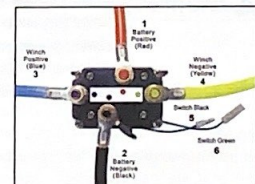
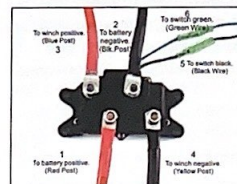
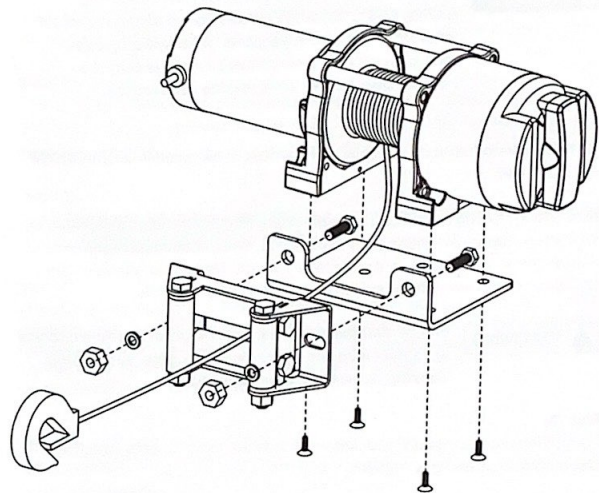


Figure 2 – Winch mounting
ATV2500/3000/4000



TOGGLE SWITCH INSTALLATION cont.

⚠ DANGER

DO NOT ATTEMPT TO INSTALL WIRING WHEN THE BATTERY IS CONNECTED. Automotive batteries contain flammable and explosive gases. Wear eye protection during installation and remove all metal jewelry. Do not lean over battery while making connections.

Step (2)

Route the wiring harness, attaching the harness to hard points on the vehicle with cable ties.

Note: When routing the wires, the appropriate terminals should be located near the battery, switch mounting point, and winch. Your installation requirements will vary depending upon your vehicle and winch. Make sure wires are long enough to reach the battery, switch mounting point and winch.

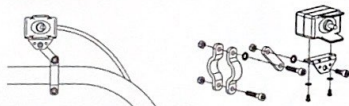
⚠ WARNING

Ensure that the wiring harness does not interfere or come in contact with any hot or moving engine, suspension, steering, braking or exhaust parts.

Step (3)

Using the supplied clamps, bracket and hardware mount toggle switch in a convenient location. See Figure 5.

Figure 5



⚠ CAUTION

ALWAYS USE THE TOGGLE SWITCH MOUNTING BRACKET, SCREWS, AND LOCK NUTS PROVIDED. Screw lengths are sized for correct penetration into switch box. Excess penetration may result in short circuits that could lead to wire over heating.

Step (4)

It is recommended that the switch be installed on the left handlebar.

Step (5)

Once the toggle switch is mounted, route the jacketed green and black leads back to where the solenoid is mounted. Splice the red lead into wire that energizes with ignition switch on and de-energizes with ignition switch off.

WIRING INSTALLATION

Step (1)

Connect the yellow and blue 6 ga. wires to the motor terminals. Route the wiring back to the solenoid and connect to the yellow and blue contact posts.

Step (2)

Attach the short black and green leads to the solenoid terminals (Figure 6). Install the short black jumper lead to the black battery negative post and to the center terminal.

Step (3)

Attach the green and black leads from the toggle switch to the green and black leads connected to the solenoid terminals.

Step (4)

Attach the red and black 6 ga. leads to the red and black contact posts on the solenoid and connect the red wire to the unmarked end of the circuit breaker. Connect the short red wire to the end of the circuit breaker marked "+". Connect the other end of the short red wire to battery "+". Connect the 6 ga. black wire to battery "-".

Step (5)

Check that all wiring is clear of sharp edges and pinch points. Secure loose wiring with tie wraps or electrical tape.

⚠ WARNING

Before testing winch operation, be sure to reel off approximately two feet of wire rope.

TEST DRIVE

1. Double check that all wiring is correct and that there are no exposed terminals that can short to the vehicle frame.
2. Turn the ignition key to the ON position. Check winch for proper operation.

REMOTE SOCKET MOUNTING – optional

1. Determine the mounting location for the remote socket.
2. Drill three holes using the included dimensions as a guide.
3. Once the remote socket is mounted, route the jacketed green and black leads back to where the solenoid is mounted. Splice the red lead to a key controlled electrical wire on the ATV.

SAFETY PRECAUTIONS

1. Operator must be alert. Do not operate the winch under the influence of drugs, alcohol or medication.
2. The best way to get acquainted with how the winch operates is to make practice runs before you need it in an emergency situation.

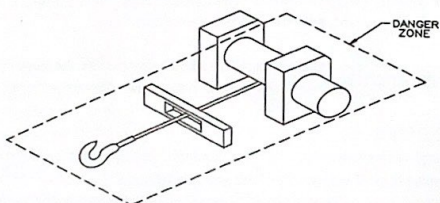
⚠ DANGER Never connect DC powered winches to AC current. Motor damage or fatal shock may occur.

⚠ WARNING Stand clear of wire rope and load during winching. Keep helpers and spectators at a safe distance. If a wire rope pulls loose or breaks under load, it can lash back with dangerous force.



3. Beware of the danger zone. The danger zone is the area of the rotating wire rope drum, the fairlead (if fitted), the wire rope, the hook, and motor (see Fig. 1). First relieve tension on load then disconnect the control switch before putting hands in or around the danger zone. Disconnect power leads to battery before working in or around drum.

Fig. 1



4. It is recommended that if you are within four feet of the winch, do not hold the wire rope and the remote (if equipped) at the same time.
5. USE ONLY FACTORY APPROVED SWITCHES, REMOTE CONTROLS AND ACCESSORIES. Use of non-factory approved components may cause injury or property damage and could void your warranty.

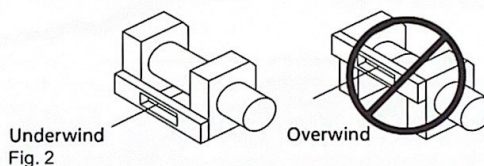
INSTALLING THE WINCH

⚠ DANGER Be aware that vehicle batteries contain gases that are flammable and can explode violently. The following precautions should be taken before making battery connection:

- * Wear eye protection.
- * Remove all jewelry.
- * Follow wiring diagram included in installation instructions.
- * Keep spectators away.

In the event of a battery explosion, acid should be flushed away immediately. Seek medical help as soon as possible.

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.
2. While mounting attitude is at your discretion, always remember that your winch is to be operated with the wire 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 of winch.



⚠ CAUTION Do not weld or machine any part of the winch. Machining or welding may weaken the structural integrity of the winch and will void your warranty.

3. If you do not understand an instruction, or if you have a question that is not covered in the manuals with your winch or mounting kit, please contact the Superwinch Customer Service Department.

WIRE ROPE

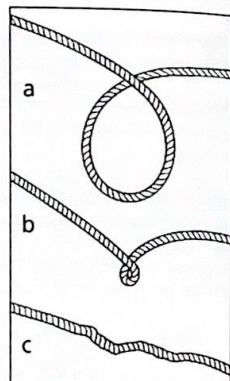
1. The life of the wire rope is directly related to the care it receives. The wire rope on a new winch, and any replacement ropes, should be respooled under a minimum of 100 lb load before using the winch. Failure to do this will result in wire rope damage. Inspect wire rope before use. Mashed, pinched, frayed or kinked areas severely reduce the load-carrying capability. Replace damaged wire rope.

2. Prevent kinks before they occur.

(a) This is the start of a kink. At this time, the wire rope should be straightened.

(b) The wire rope was pulled and the loop has tightened to a kink. The wire rope is now permanently damaged and should not be used.

(c) The result of kinking is that each strand pulls a different amount causing the strands under greatest tension to break and reduce load capacity of the wire rope.



3. When it is necessary to respool the wire rope under no load after use, hold the remote switch lead in one hand and the wire rope in the other. Start from as far from the vehicle as the remote switch will allow, activate the switch, walk in several feet of rope and release switch. Repeat the process. Always release the switch before your hand comes within four feet from the fairlead (the physical opening through which the wire rope passes).

4. Be sure the wire rope is distributed evenly and tightly on the drum. A loosely wound drum allows the wire rope to work its way down into the layers of wire rope on the drum and become wedged.

5. It is not advisable to grease or oil the wire rope due to dirt contamination that will reduce the wire rope life.

PREPARING THE WINCH

⚠ DANGER Wear heavy leather gloves when handling wire rope. Do not let the wire rope slip through your hands, even with gloves on. When handling the hook, always use handsaver (see Fig. 4). Never put your fingers into the hook. Placing finger(s) in hook could result in injury.



Fig. 4



WRONG

1. When anchoring the pulling vehicle, set the parking brake and block or chock the wheels. Keep the vehicle's foot brake depressed and place automatic and manual transmissions in neutral.



⚠ WARNING Inspect switch and wiring for cracks, pinched spots, frayed wire, or loose connections. A damaged, shorted lead could cause the winch to run as soon as it is plugged in.

2. When using the remote switch inside a vehicle, always pass it through a window to avoid pinching the wire in the door.

WINCHING

⚠ DANGER Never touch the wire rope or hook while they are in tension or under load. Even at rest, the winch may have the wire rope in tension. Never guide a wire rope under tension onto the drum with your hands (see Fig. 5).

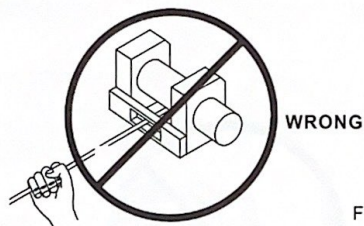


Fig. 5

1. Winch with at least five wraps of wire rope around the winch drum. With fewer wraps, the wire rope could pull loose from the drum under load.
2. When pulling a load, place a blanket, jacket or tarpaulin over the wire rope near the hook end (see Fig. 6). This will slow the snap back of a broken wire rope and help to prevent serious injury. Raise hood to protect windshield.

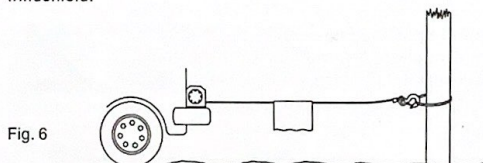


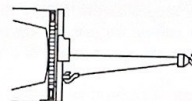
Fig. 6

⚠ WARNING Note the winch's rated capacity and do not exceed it.

3. Double line with a pulley block (see Fig. 7) to reduce the load on the winch, wire rope and battery. Double lining will also reduce winch line speed. Be sure all equipment used meets the winch's maximum line pull rating. When double-lining, pulley blocks should be rated to a minimum of two times the winch's line pull rating.

WINCHING

Fig. 7



4. If you install a tow hook for double lining, it should be attached to the vehicle frame.

5. Equipping the winch with a fairlead will reduce wear on the wire rope during angle pulls (see Fig. 8). The rollers reduce rubbing and abrasion to the wire rope.

Roller Fairlead

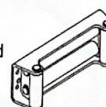
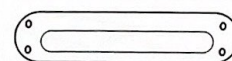


Fig. 8



Hawse Fairlead

6. Pull as straight as possible to reduce the buildup of wire rope on one end of the drum.

7. The vehicle engine should be running during winch operation. If considerable winching is performed with the engine off, the battery may be too weak to restart the engine.

⚠ CAUTION Use a pulley block to avoid winching at sharp angles. Uneven layering will cause serious damage to the winch and wire 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 wire rope when you disengage the clutch. Before winching a load, be sure the clutch is fully engaged.

⚠ WARNING Use the winch to move the load. Do not attempt to assist the winch by moving the vehicle. The combination of the winch and vehicle pulling could overload the wire rope and the load could break the winch.

⚠ 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.



RIGGING

WARNING Take your time when rigging and include a reasonable factor for safety. Improper rigging can result in damage to vehicle and equipment. It can also cause injury.

1. Never handle the wire rope or rigging while anyone else is at the control switch.

CAUTION Use a nylon sling when attaching the wire rope to an anchor point. Do not attach the hook back on to the wire rope. Doing so can cause the wire rope to break.

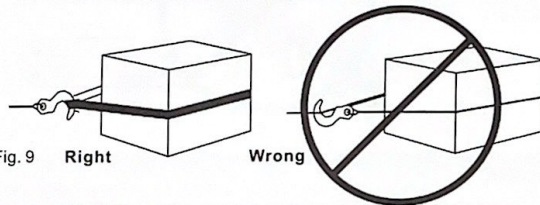


Fig. 9 Right

Wrong

WARNING Always use the handsaver (see Fig. 10). Do not hold the hook with your hand. This is important not only when reeling wire rope in but also when removing wire rope from the winch under power.



Fig. 10

2. Run the winch intermittently to take up wire rope slack. When using a pulley block, be sure the wire rope is running properly in all pulleys before applying a load.

WARNING Do not re-engage clutch while winch is running.

WARNING Always operate winch with an unobstructed view of the winching operation. Never obscure warning and instruction labels.

3. Figure 11 illustrates the most commonly used rigging. A nylon sling is used to protect the tree when it is used as an anchor, and the wire rope is attached to use the sling. The use of a chain or wire rope is not recommended due to the damage it could cause to the tree.

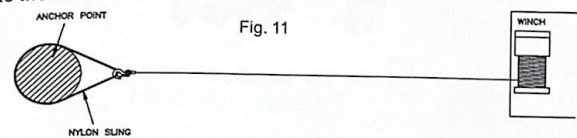


Fig. 11

4. Figure 12 illustrates a method of rigging used to obtain a mechanical advantage. The use of a pulley block will almost double pulling line capacity.

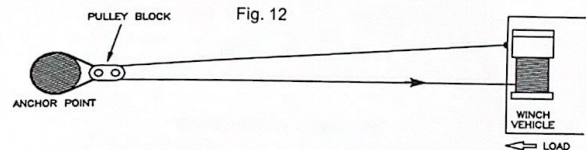


Fig. 12

5. 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 wire rope to the anchor point.

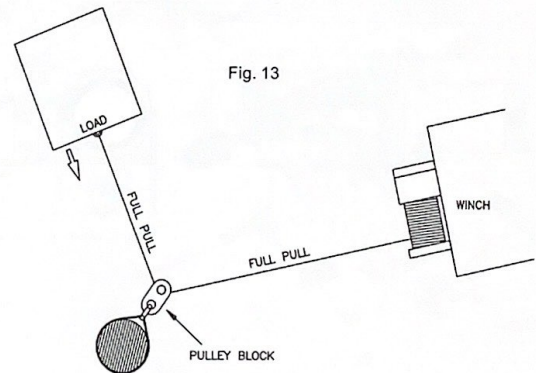
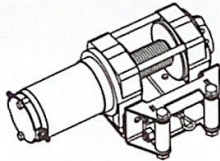


Fig. 13

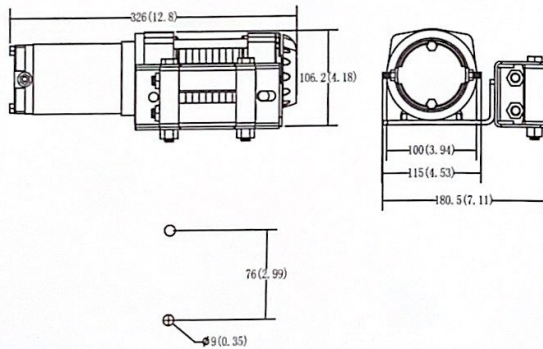


3.0 Winch FEATURES AND SPECIFICATIONS

Motor	Permanent magnet, 1.00W/1.34hp(12V)
Gear Reduction Ratio	153:1
Gear Train	3 Stage Planetary
Cable(Dia* \bar{L})	Dia:0.19" (4.8mm) Length:36.2' (9.2m)
Control	Remote switch
Drum size(Dia* \bar{L})	Dia:2.0" (51mm)*2.9" (74mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions(L*W*H)	12.8" *7.11" *4.18" (326*180.5*106.2)
Mounting Bolt Pattern	3.13" (79.5mm)
Weight	N.W. 10kg G.W. 12kg

PULL, SPEED, AMPERES, VOLTS

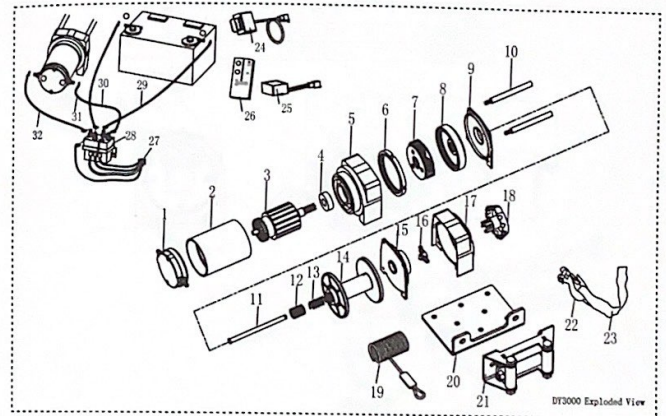
Line Pull lbs(kgs)	Line speed ft/min(m/min)	Current A
0	10.5(3.2)	8
1000(454)	9.3(2.8)	29
2000(907)	7.5(2.3)	61
3000(1360)	6(1.8)	90
4500(1360)	6(1.8)	90



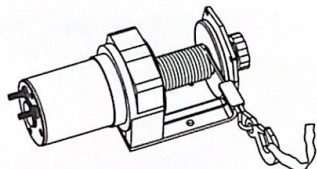
19

PARTS LIST&ASSEMBLY DIAGRAM

Part	Description	Quantity	Part	Description	Quantity
1	Motor Cover	1	17	Base	1
2	Motor Shell	1	18	Clutch	1
3	Rotor	1	19	Steel Cable	1
4	Bearing	1	20	Mounting Plate	1
5	Motor Base	1	21	Roller Fairlead	1
6	Inner gear ring	1	22	Hook	1
7	Planetary Gear	1	23	Strap	1
8	Static Ring Gear	1	24	Handlebar remote control	1
9	Plastic Plate	1	25	Wireless receiver	1
10	Tie Rod	2	26	Wireless sender	1
11	Shaft	1	27	Connect Ass'y	1
12	Spline	1	28	Solenoid	1
13	Spring	1	29		
14	Drum	1	30		
15	Plastic Plate	1	31		
16	Drum	1	32		



20

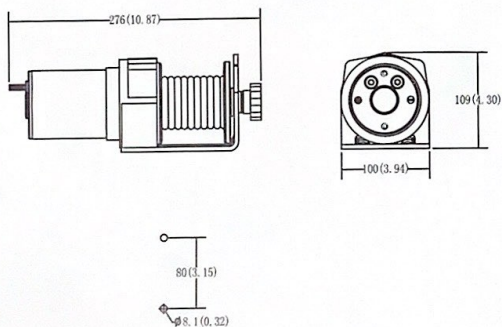


2.0 Winch FEATURES AND SPECIFICATIONS

Motor	Permanent magnet, 0.75/0.9hp (12V)
Gear Reduction Ratio	153:1
Gear Train	3 Stage Planetary
Cable (Dia* <i>L</i>)	Dim: $\phi 0.16"$ (4mm) Length: 32.2' (9.2m)
Control	Remote switch
Drum size (Dia* <i>L</i>)	Dim: $1.24"$ (31.5mm) \times 2.8" (71mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions (L* <i>W</i> * <i>H</i>)	10.87" \times 3.94" \times 4.30" (276*100*109)
Mounting Bolt Pattern	3.13" (79.5mm)
Weight	N.W. 7kg G.W. 9kg

PULL, SPEED, AMPERES, VOLTS

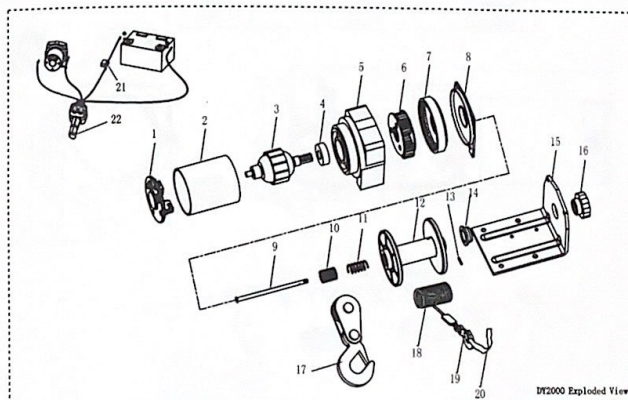
Line Pull lbs (kgs)	Line speed ft/min (m/min)	Current A
0	10.5 (3.2)	8
500 (227)	9.3 (2.8)	29
1000 (454)	7.5 (2.3)	61
2000 (907)	3.3 (1.0)	90



21

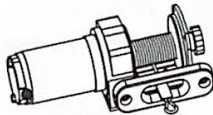
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Quantity	Part	Description	Quantity
1	Motor Cover	1	17	Snatch Block	1
2	Motor Shell	1	18	Steel Cable	1
3	Rotor	1	19	Hook	1
4	Bearing	1	20	Strap	1
5	Motor Base	1	21	Circuit Breaker protected	1
6	Planetary Gear	1	22	Handle Remote Control	1
7	Static Ring Gear	1	23		
8	Plastic Plate	1	24		
9	Shaft	1	25		
10	Spline	1	26		
11	Spring	1	27		
12	Drum	1	28		
13	Pin	1	29		
14	Bushing	1	30		
15	L-bracket Assy	1	31		
16	Clutch	1	32		



DT2000 Exploded View

22

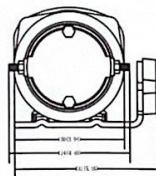
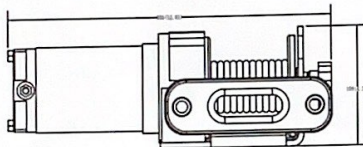


2.5 Winch FEATURES AND SPECIFICATIONS

Motor	Permanent magnet, 0.88W/1.1hp(12V)
Gear Reduction Ratio	153:1
Gear Train	3 Stage Planetary
Cable (Dia* <i>L</i>)	Dimatet. 0.19" (4.8mm) Length 36.2' (9.2m)
Control	Remote switch
Drum size (Dia* <i>L</i>)	Dimatet. 24" (31.5mm)*2.8" (71mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions (L*W*H)	12.01" *5.16" *4.29" (305*131*109)
Mounting Bolt Pattern	3.13" (79.5mm)
Weight	N.W. 7kg G.W. 9kg

PULL, SPEED, AMPERES, VOLTS

Line Pull lbs (kgs)	Line speed ft/min (m/min)	Current A
0	14 (4.2)	19
500 (227)	12.5 (3.8)	30
1000 (454)	10 (3.0)	56
1500 (680)	9 (2.7)	75
2000 (907)	7.8 (2.4)	98
2500 (1133)	5 (1.5)	121

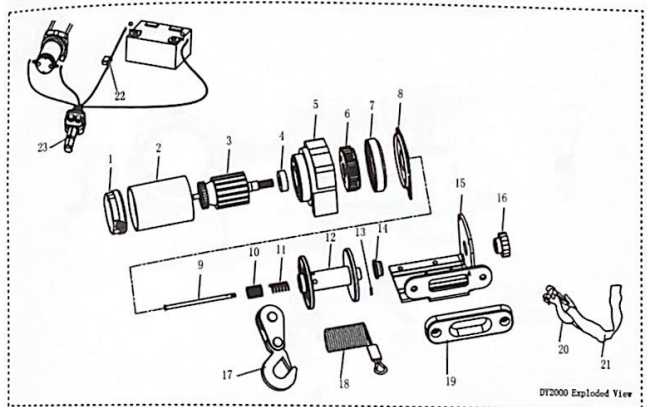


23

PARTS LIST&ASSEMBLY DIAGRAM

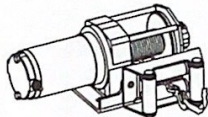
Part	Description	Quality
1	Motor Cover	1
2	Motor Shell	1
3	Rotor	1
4	Bearing	1
5	Motor Base	1
6	Planetary Gear	1
7	Static Ring Gear	1
8	Plastic Plate	1
9	Shaft	1
10	Spline	1
11	Spring	1
12	Drum	1
13	Pin	1
14	Bushing	1
15	L-bracket Assy	1
16	Clutch	1

Part	Description	Quality
17	Snatch Block	1
18	Steel Cable	1
19	Hawse Fairlead	1
20	Hook	1
21	Strap	1
22	Circuit Breaker protected	1
23	Handle Remote Control	1
24		
25		
26		
27		
28		
29		
30		
31		
32		



DF2000 Exploded View

24

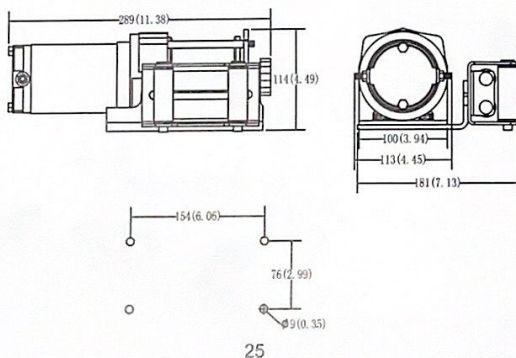


3.0 Winch FEATURES AND SPECIFICATIONS

Motor	Permanent magnet, 0.8KW/1.34hp (12V)
Gear Reduction Ratio	153:1
Gear Train	3 Stage Planetary
Cable (Dia* ϕ)	Dimete ϕ .19" (4.8mm) Length 36.2' (9.2m)
Control	Remote switch
Drum size (Dia* ϕ)	Dimete ϕ 2.0" (51mm)*2.9" (74mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions (L*W*H)	11.35" *7.13" *4.49" (289*181*114)
Mounting Bolt Pattern	3.13" (79.5mm)
Weight	N.W. 10kg G.W. 12kg

PULL, SPEED, AMPERES, VOLTS

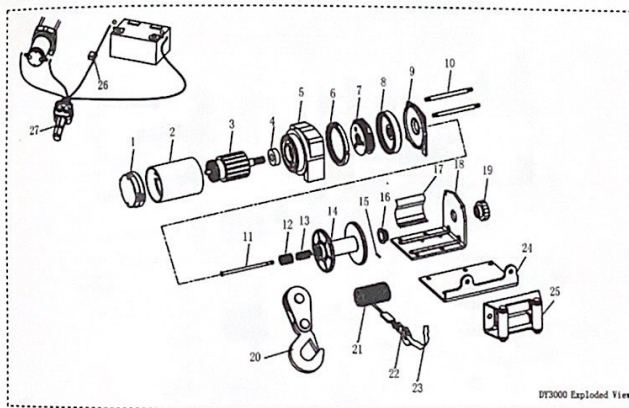
Line Pull lbs(kgs)	Line speed ft/min(m/min)	Current A
0	10.5(3.2)	8
1000(454)	9.3(2.8)	29
2000(907)	7.5(2.3)	61
3000(1360)	6(1.8)	90



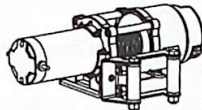
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Quantity
1	Motor Cover	1
2	Motor Shell	1
3	Rotor	1
4	Bearing	1
5	Motor Base	1
6	Inner gear ring	1
7	Planetary Gear	1
8	Static Ring Gear	1
9	Plastic Plate	1
10	Tie Rod	2
11	Shaft	1
12	Spline	1
13	Spring	1
14	Drum	1
15	Pin	1
16	Bushing	1

Part	Description	Quantity
17	Tension Plate	1
18	L-bracket Assy	1
19	Clutch	1
20	Snatch Block	1
21	Steel Cable	1
22	Hook	1
23	Strap	1
24	Mounting Plate	1
25	Roller Fairlead	1
26	Circuit Breaker protected	1
27	Handle Remote Control	1
28		
29		
30		
31		
32		



BY3000 Exploded View

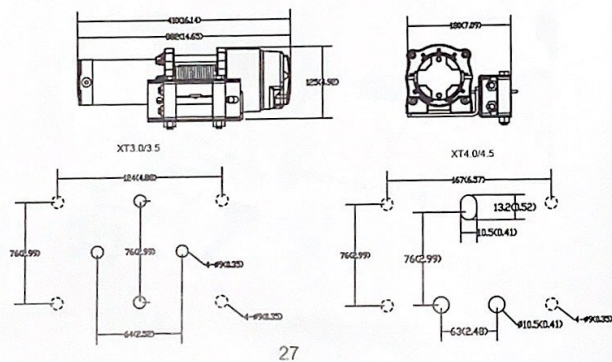


4.5/5.0/5.5/6.0 Winch FEATURES AND SPECIFICATIONS

Motor	120DC Permanent magnet
Gear Reduction Ratio	153:1 (XT3.0/4.0), 185:1 (XT3.5/4.5)
Gear Train	3 Stage Planetary
Cable (Dia*L)	XT3.0/3.5 Dimete0.19" (4.76mm) Length 42.6' (13m) XT4.0/4.5 Dimete0.24" (6mm) Length 52.6' (16m)
Control	Remote switch
Drum size (Dia*H)	XT3.0/3.5 Dimete2.05" (52mm) *2.87" (73mm), XT4.0/4.5 Dimete2.05" (52mm) *4.37" (111mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions (L*W*H)	XT3.0/3.5 15.04" *7.09" *4.92" (382*180*125), XT4.0/4.5 16.14" *7.09" *4.92" (410*180*125)
Mounting Bolt Pattern	3.13" (79.5mm)

PULL, SPEED, AMPERES, VOLTS

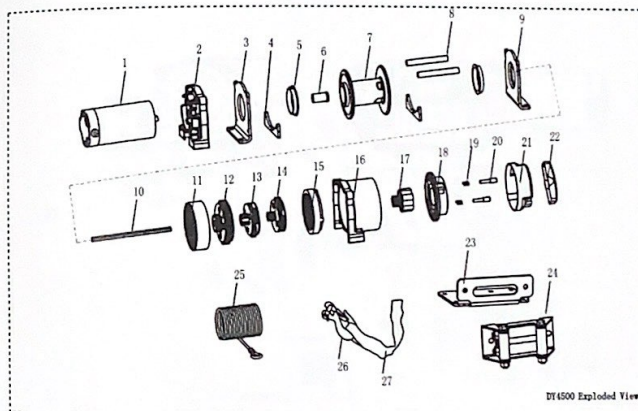
Line Pull lbs (kgs)	Line speed ft/min (m/min)	Current A
2000 (907)	11.2 (3.4)	144.7
2500 (1134)	8.4 (2.6)	175.0
3000 (1361)	7.3 (2.2)	206.3
3500 (1588)	5.7 (1.7)	241.2
4000 (1814)	3.6 (1.1)	278.8
4500 (2041)	2.9 (0.9)	318.0
5000 (2268)	2.9 (0.9)	318.0
5500 (2495)	2.9 (0.9)	318.0
6000 (2722)	2.9 (0.9)	318.0



27

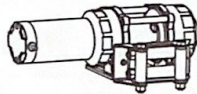
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Quality	Part	Description	Quality
1	Motor assembly	1	17	Braking assy	1
2	Motor base	1	18	Aluminum end cover	1
3	Drum support, motor	1	19	Spring	2
4	Wire rope protector	2	20	Self-tapping screws	2
5	Bushing	2	21	Freespool knob	1
6	Drive shaft coupler	1	22	Clutch	1
7	Drum	1	23	Mounting Plate	1
8	Tie rod	2	24	Roller Fairlead	1
9	Drum support, gear	1	25	Steel Cable	1
10	Drive shaft	1	26	Hook	1
11	Drive gear	1	27	Strap	1
12	The third stage planetary gear assy	1			
13	The second stage planetary gear assy	1			
14	The first stage planetary gear assy	1			
15	Drive gear ring	1			
16	Clutch end housing	1			



014500 Exploded View

28

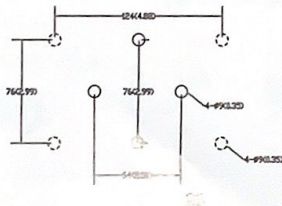
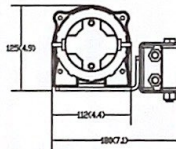
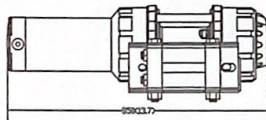


2.5 Winch FEATURES AND SPECIFICATIONS

Motor	12V Permanent magnet
Gear Reduction Ratio	158:1
Gear Train	3 Stage Planetary
Cable(Dia* ϕ)	Dimat ϕ 19" (4.76mm) Length 42.6' (13m)
Control	Remote switch
Drum size(Dia* ϕ)	Dimat ϕ 2.05" (52mm) * 2.87" (73mm)
Clutch	Sliding Ring Gear
Braking Action	Automatic In-The-Drum
Overall dimensions (L*W*H)	13.7" * 7.09" * 4.9" (350*180*125)
Mounting Bolt Pattern	3.13" (79.5mm)

PULL, SPEED, AMPERES, VOLTS

Line Pull lbs(kgs)	Line speed ft/min(m/min)	Current A
2000(907)	11.2(3.4)	144.7
2500(1134)	8.4(2.6)	175.0
3000(1361)	7.2(2.2)	206.3
5000(2268)	2.9(0.9)	318.0
5700(2568)	2.9(0.9)	318.0
6000(2728)	2.9(0.9)	318.0



PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Quantity
1	Motor assy	1
2	Drum support bracket (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	Quantity
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		

