



POWERSPORTS WINCH

Manual

Read this entire manual before installation and/or use of this product.

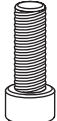
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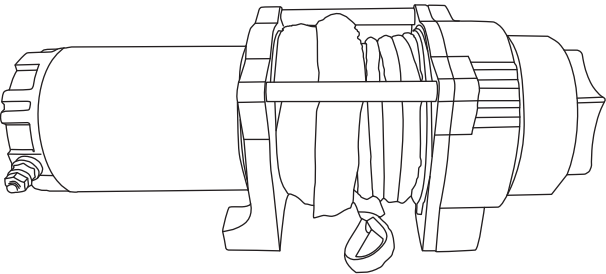
Thank you for purchasing this Open Trail® winch. Although your purchase is covered by a one-year warranty, we have designed and manufactured your winch to provide years of trouble-free operation. Please see the detailed warranty information at the back of this manual. All Open Trail® warranties must be processed through the dealer from which the product was purchased. To ensure correct operation of your Open Trail® winch, it is recommended that the winch and its components be installed by a trained technician. If you have any questions regarding this product, please go to opentrailusa.com/contact.

Included in the Package

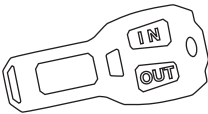
HARDWARE

	Cap Bolt M8x25	QTY: 4		Bolt M10x25	QTY: 2
	Flat Washers M8	QTY: 4		Nuts M10	QTY: 2
	Lock Washers M8	QTY: 4			

COMPONENTS



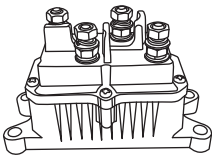
Winch Assembly with Wire or Synthetic Rope



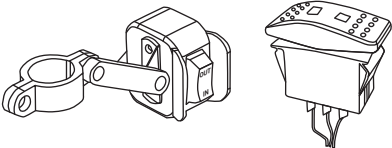
Wireless Remote with Module



Cable Kit



Contactor



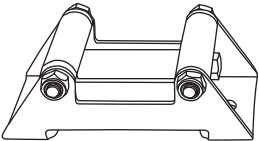
Handlebar or Dash Panel Switch



Cable/Rope Bump Stop

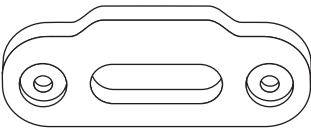


Strap



Roller Fairlead
(for Steel Rope)

or



Hawse Fairlead
(for Synthetic Rope)

Safety Warnings and Precautions



As you read these instructions, you will see **WARNINGS** and **NOTICES**. **WARNINGS** indicate a potentially hazardous situation, which, if not avoided, could result in serious injury or death. **NOTICES** indicate situations which could result in property damage. **PLEASE WORK SAFELY!**



CHEMICAL, ELECTRICAL AND FIRE HAZARD

Failure to observe these instructions could lead to severe injury or death. It is recommended that the winch and its components be installed by a trained technician.

- Wear proper eye protection during installation and use of winch.
- Remove all jewelry and loose fitting clothing with any potential to come into contact with winch or winch components during installation and use of winch.
- Never lean over the vehicle battery while making connections during installation and use of winch.
- Before installation of winch, verify that all drilling locations are clear of fuel lines, fuel tank, brake lines, electrical wires, or any dangerous hose vehicle location.
- During installation, do not route electrical cables across any sharp edges, through or near moving parts, or near any parts that become hot.
- Insulate and protect all exposed wiring and electrical terminals on host vehicle and winch system.
- Install terminal boots as directed in installation instructions. Wear proper eye protection.



WARNING



MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to severe injury or death.

To avoid injury to hands or fingers:

- Keep hands clear of rope, hook loop, hook and fairlead opening during installation, operation and when spooling in or out.
- Remove all jewelry and loose fitting clothing to avoid potential entanglement from contact with winch or winch components.
- Use extreme caution when handling hook and rope during spooling operations.
- Use the supplied hook strap whenever spooling rope in or out, during installation and during operation.
- Keep vehicle in sight during winching operation.
- Always wear heavy leather gloves when handling rope.

GENERAL SAFETY

Failure to observe these instructions could lead to severe injury or death.

- Do not operate this winch when under the influence of drugs, alcohol or medication.
- Do not operate this winch if you are under 16 years of age.
- Do not leave the wireless remote control where it can be activated during free spooling, rigging or when the winch is not being used.
- Bystanders should stay clear of the vehicle while winch is in operation or has a load on it.
- Know your winch. Take time to fully read the Winch Manual in order to understand your winch and its operation.
- Do not exceed winch or rope capacity listed on product data sheet. Double line using a snatch block to reduce winch load.
- Spool the rope onto the drum in the direction specified by the winch warning label on the winch and/or documentation. This is required for the automatic brake (if so equipped) to function properly.
- Pre-stretch wire rope and respool under load before use. Tightly wound wire rope reduces chances of binding, which can damage the rope.
- Inspect, rope, hook and slings before operating winch. Frayed, kinked or damaged rope must be replaced immediately. Damaged components must be replaced before operation.
- Never tie or splice broken synthetic ropes back together.
- Never hook the rope back onto itself, this damages the rope.
- Use a choker chain, choker rope or tree trunk protector on the anchor.
- Remove any element or obstacle that may interfere with safe operation of the winch.

- Use the appropriate rigging techniques for a winch pull.
- Be certain the anchor you select will withstand the load and the strap or chain will not slip.
- Do not engage or disengage clutch if winch is under load, rope is in tension or drum is moving.
- Never use the winch with less than 5 wraps of rope around the drum. The rope could come loose from the drum.
- Select an anchor point as far away as possible while maintaining at least 5 wraps of rope around the drum, this will provide the winch with its greatest pulling power..
- Do not touch the rope or hook while in tension or under load or while someone else is at the control switch or at any time during winching operation.
- Stand clear of rope and load and keep others away while winching.
- Be aware of the stability of the vehicle and load during winching, keep bystanders away.
- Never use winch to secure a load.
- Only use a hook with a latch.
- Ensure hook latch is closed and not supporting the load.
- Never apply a load to hook tip or latch. Apply load only to the center of the hook.
- Do not use a hook that has been modified or damaged in any way.



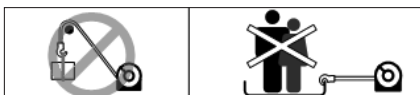
WARNING

INSTALLATION SAFETY

It is recommended that the winch and its components be installed by a trained technician. Failure to properly install the winch can lead to safety hazards during use. If your vehicle has other aftermarket modifications, you must have a trained technician verify that it is safe to install this winch. Aftermarket accessories can interfere with the installation and use of this winch. To prevent accidental activation of the winch and serious injury, complete the winch installation and attach the hook before installing the wiring.

- Choose a mounting location that is sufficiently strong to withstand the maximum pulling capacity of your winch.
- Use factory-approved mounting hardware, components and accessories.
- Use only grade 5 SAE, grade 8.8 metric or better mounting hardware.
- Do not weld the mounting bolts.
- Use care when using longer bolts than those supplied from factory. Bolts that are too long can damage the base and/or prevent the winch from being mounted securely.
- Mount the winch and attach the hook to the rope's end loop before connecting the electrical wiring.

WARNING



FALLING OR CRUSHING HAZARD

Failure to observe these instructions could lead to severe injury or death.

- Never use the winch as a hoist or to suspend a load.
- Never use the winch to lift or move persons.

WARNING



CUT AND BURN HAZARD

Failure to observe these instructions could lead to injury.

- Always wear heavy leather gloves when handling the rope.
- Do not let the rope slip through your hands.
- Be aware of possible hot surfaces (winch motor, drum or rope) during or after winch use.

NOTICE

AVOID WINCH AND EQUIPMENT DAMAGE

- Always ensure the clutch is fully engaged or disengaged.
- Avoid side pulls which can pile up rope at one end of the drum, this can damage the rope or winch.
- Never use the winch to tow other vehicles or objects. Shock loads can momentarily exceed capacity of rope and winch.
- When winching out a stuck vehicle, find a secure mounting location on the stuck vehicle to attach the winch rope to (preferably the vehicle frame).
- Never jog the rope under load. Shock loads can momentarily exceed capacity of rope and winch.
- Do not use the winch to secure a load during transport.
- Avoid powering out for extended distances. This causes excess heat and wear on the winch motor and brake.
- Do not submerge the winch in water.
- Store the remote control in a protected, clean, dry area.
- Double line or pick a more distant anchor point when rigging. This maximizes pulling power and avoids overloading the winch.

Installation

Safety

It is recommended that the winch and its components be installed by a trained technician. Failure to properly install the winch could lead to safety hazards during use. If your vehicle has other aftermarket modifications, you must have a trained technician verify that it is safe to install this winch. Aftermarket accessories can interfere with the installation and use of this winch. Always use caution when working with electricity and remember to verify no exposed electrical connections exist before energizing your winch circuit. For specifications and performance data, refer to the specification sheet supplied with your winch.

Step 1 – Mounting the winch

Note: Vehicle specific mounting plates are available from many manufacturers for ATV/UTV applications. Mounting plates require a 3.0" x 4.875" (standard) or a 3.0" x 6.57" (wide) bolt pattern.

To secure the winch, always use:

- A flat, secure mounting location at least 4.8 mm (.1875") thick.
- Lock washers.
- Hex head cap screws when using a one-piece winch mount plate.

Note: When using separate winch mount and fairlead plates use hex head cap screws on the motor side of the base as shown in figure 1.

- Torque the mounting bolts to 16 N-m (12 lb-ft).
- Attach the clevis hook to the wire rope.
- Put clutch in freespool position.
- Manually feed cable loop through fairlead.
- Attach hook to cable loop and re-engage clutch.

Step 2 – Mounting the contactor

- The contactor is a primary safety feature in your winch system. It disconnects your winch from its power source when the ATV/UTV is not in use. The contactor must be correctly installed to work properly.
- It is recommended that the contactor is mounted close to the battery and in a clean and dry location. Exact location will vary depending on the ATV/UTV. Usual locations include inside, on top of or on the side of rear storage box; under the dash; under the front fenders; and under the seat.

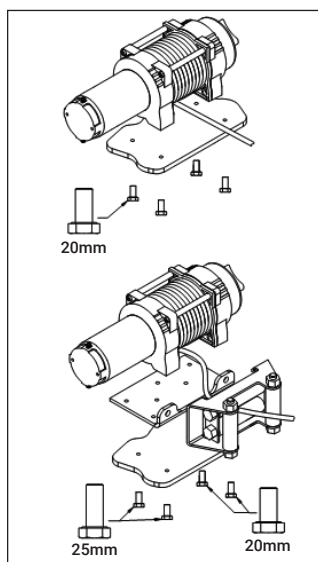


Figure 1. Orientation of winch to mounting plate and bolt lengths

- Ensure the contactor mounting location selected provides sufficient clearance from all metal structures such as frame tubes. Do NOT place tools or other items in a position that might contact the contactor directly.
- Drill the mounting holes for the contactor at this time, then move on to step four as it will be easier to attach all the wiring to the contactor before attaching it to the ATV/UTV. Do NOT mount the contactor at this time.

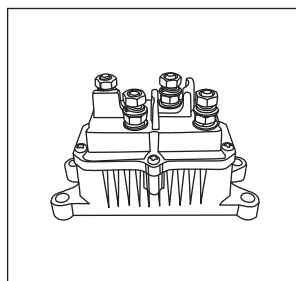
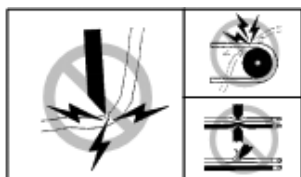


Figure 2. Contactor for ATV/UTV winch

Step 3 – Mounting the handlebar or dash panel switch



TO PREVENT SERIOUS INJURY OR DEATH FROM ELECTRICAL FIRE:

- Do NOT route electrical cables across sharp edges.
- Do NOT route electrical cables through or near moving parts.
- Do NOT route electrical cables through or near any high heat parts.
- Avoid pinch and wear/abrasion points when installing all electrical cables.

TO AVOID INJURY AND PROPERTY DAMAGE:

- Use caution when moving or repositioning any vehicle controls so as to not compromise the safe operation of the ATV/UTV. Select a mounting position that will provide clearance for all vehicle controls.

HANDLEBAR SWITCH

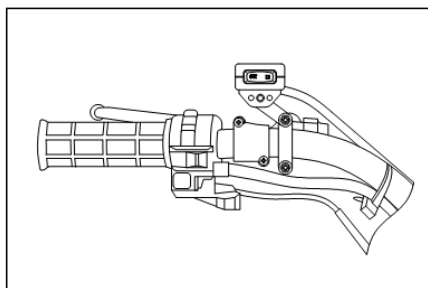


Figure 3. Handlebar mount assembly
Exact positioning may vary depending on ATV make and model.

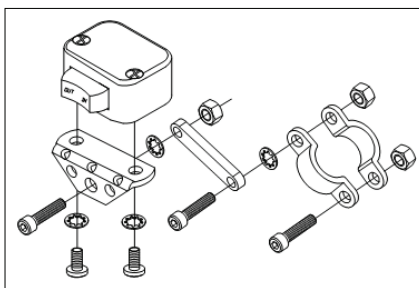


Figure 4. Handlebar switch

- Before securing the switch cable with tie wraps, make sure that the handlebars have full range of motion.
- It is recommended the switch be installed on the left handlebar. A piece of electrical tape around the handlebar will help prevent rotation of mount on the handlebar.
- Do NOT tighten over any hoses or cables.

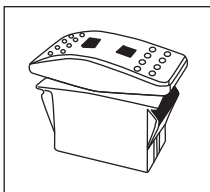


Figure 5. Dash panel switch

DASH PANEL SWITCH

- Dash panel switches are designed to be positioned in one of the locations specified by the ATV/UTV manufacturer for accessory switches.

HANDLEBAR and DASH PANEL SWITCHES

- Once the switch is mounted, route the two bullet terminal wires back to where the contactor will be mounted.
- Splice the end of the red wire to a key controlled accessory circuit of the ATV/UTV (use the provided wire splice).
- Using a test light, locate a suitable wire from the ATV/UTV key switch. The wire should only have power when the key is in the ON position.

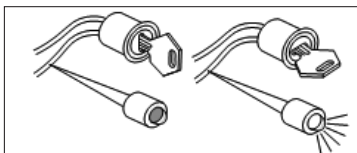


Figure 6. Use a test light to locate a suitable wire.

Step 4 – Mounting the wireless remote control box



WARNING

TO PREVENT SERIOUS INJURY OR DEATH FROM EXPLOSION:

- Do NOT drill into gas tank.
- Verify the area is clear behind the mounting location before drilling.
- After determining the mounting location for the remote socket, drill two holes and install.
- Once the remote control box is mounted, route the two bullet terminal wires back to where the contactor will be mounted. Splice the end of the red wire to a key controlled accessory circuit of the ATV/UTV (use the provided wire splice). Using a test light, locate a suitable wire from the ATV/UTV key switch. The wire should only have power when the key is in the ON position.

Step 5 – Install the wiring



WARNING

Place the supplied terminal boots on wires before securing to the contactor. All wires must be attached to the contactor before mounting the contactor to the ATV/UTV.

See figures 7 and 8 on the following pages for complete wiring installation diagrams.

- Connect one terminal (marked "M+") of contactor to terminal positive (+) of the winch with short red cable.
- Connect one terminal (marked "M-") of contactor to terminal negative (-) of the winch with short black cable.
- Connect one terminal (marked "B+") of contactor to terminal positive (+) of the battery with long red cable.
- Connect one terminal (marked "B-") of contactor to terminal negative (-) of the battery with long black cable.
- If installing both the handlebar switch or dash switch, and the wireless receiver.
 - Connect the black wire of the handlebar switch or dash switch to the black wire of the contactor.
 - Connect the blue wire of the handlebar switch or dash switch to the yellow wire of the contactor.
 - Connect the yellow wire of the wireless receiver to the yellow wire of the contactor.
 - Connect the white wire of the wireless receiver to the black wire of the contactor.
 - Connect the red wires of the handlebar switch or dash switch and wireless receiver to the terminal (marked B +) of the contactor or connect the red wires of the handlebar switch or dash switch and wireless receiver to a powered wire when the ignition is turned on.
 - Connect the black wires of the handlebar switch or dash switch and wireless receiver to the terminal (Marked B -) of contactor or connect the black wires of the handlebar switch or dash switch and wireless receiver to a ground.



WARNING

- **Always** remove jewelry, wear fitted clothing and wear eye protection.
- **Never** lean over battery while making connections.
- **Always** verify area is clear of fuel lines, fuel tank, brake lines, electrical wires, etc. when drilling.
- **Never** route electrical cables:
 - Across any sharp edges.
 - Through or near moving parts.
 - Near parts that become hot.
- **Always** insulate and protect all exposed wiring and electrical terminals.
- **Always** install terminal boots as directed in installation instructions.

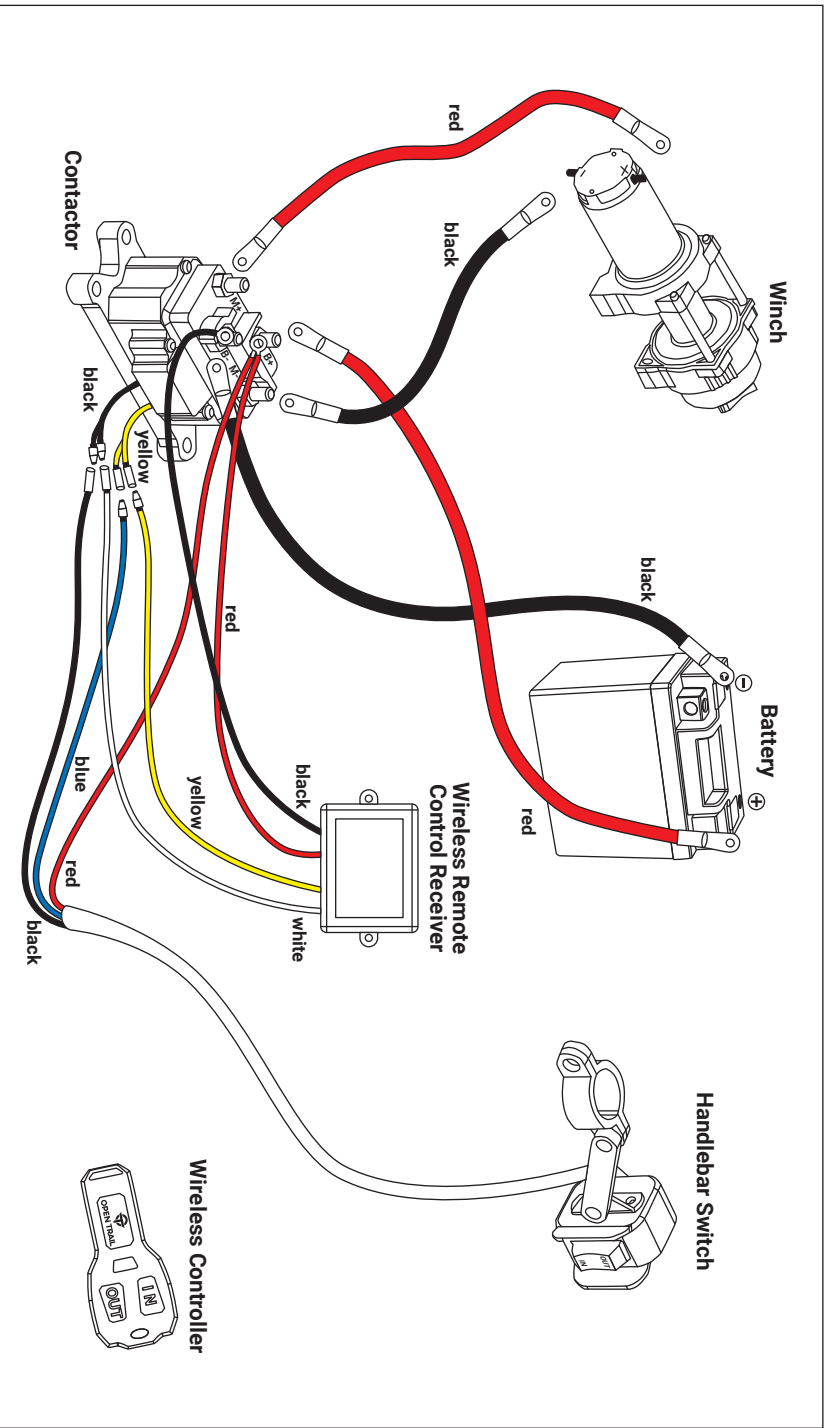


Figure 7. Complete wiring installation diagram – handbar switch

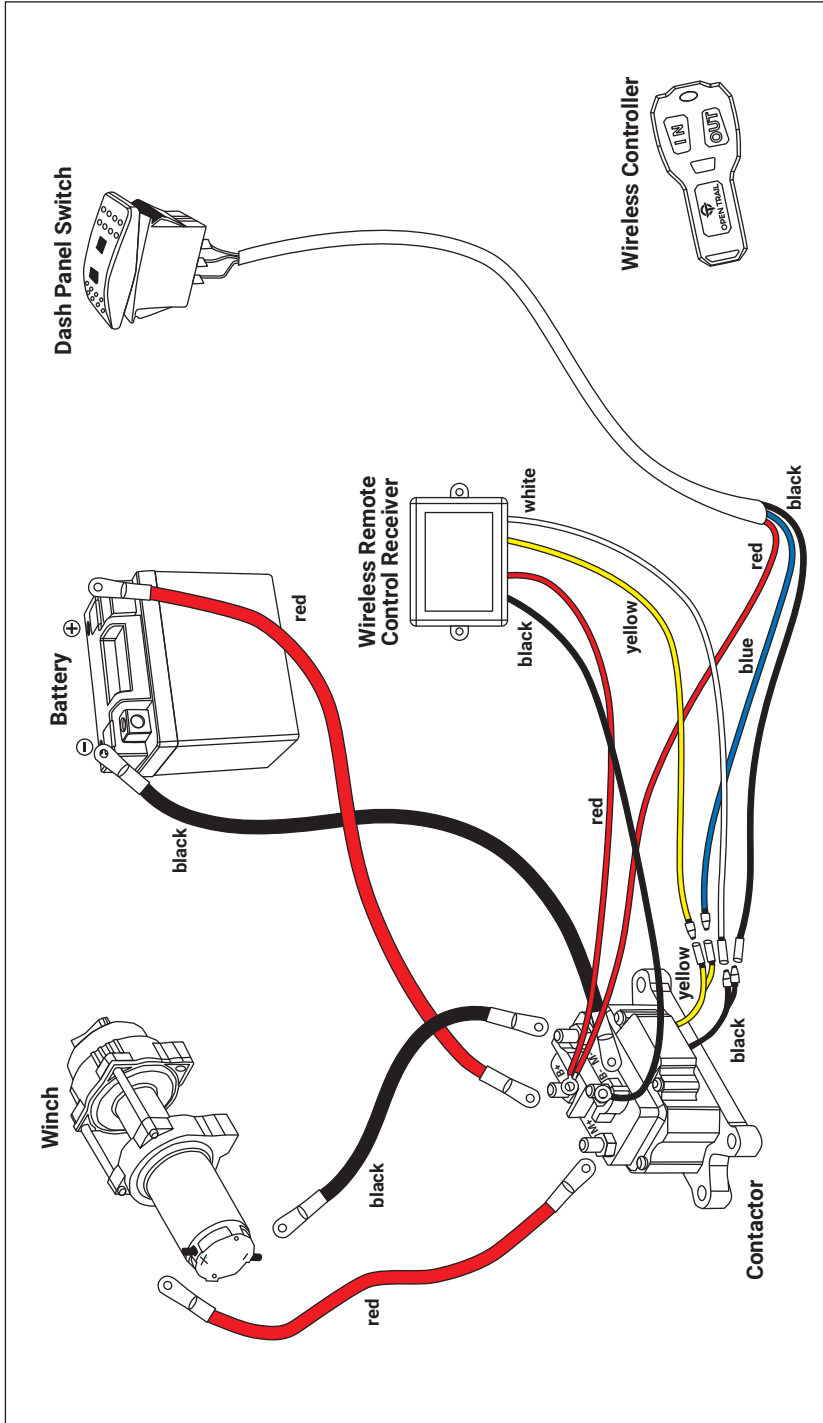


Figure 8. Complete wiring installation diagram — dash panel switch

Step 6 – Check the system

Before using the winch, verify the following:

- Wiring to all components is correct. All loose wires are tie wrapped tight.
- There are no exposed wiring or terminals. Cover any existing terminal exposures with terminal boots, heat shrink tubing or electrical tape.
- Turn ATV/UTV key switch to ON position. Check winch for proper operation. The wire rope should spool in and out in the direction indicated on the switch.

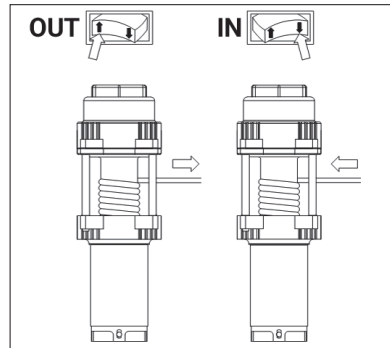


Figure 9.

Wireless Remote Control Operation

- To activate the wireless remote control, press and hold the on/off button until the red indicator light flashes. If after ten seconds the indicator light fails to illuminate replace the battery.
- To switch off the wireless remote control, press and hold the on/off button until the indicator light goes out.
- The wireless remote control will automatically switch off after two minutes without use.

Maintenance and Troubleshooting

Winch Maintenance:

1. No further internal lubrication is required for the life of the winch. The winch should not be soaked in water for a significant amount of time. If the winch is accidentally submerged, you should use the winch until the motor is hot. This will minimize the amount of moisture inside the motor.
2. Inspect and replace the cable if there are fractures, creases or cuts in it.
3. Clean the winch after each use if needed.
4. Inspect all electrical connections and mounting bolts on at least a monthly basis to assure they are not loose or corroded. Repair or replace affected items if you find these conditions. More frequent inspections are recommend under severe use conditions.

Troubleshooting

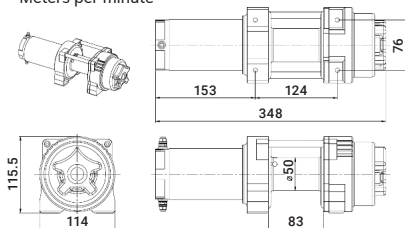
NO.	SYMPTON	POSSIBLE	SUGGESTED
1	Winch motor does not turn on	– Switch assembly not connected properly – Loose battery cable connections – Contactor malfunctioning – Switch assembly is damaged – Motor is damaged – Water has entered motor	– Insert switch assembly all the way into the connector. – Tighten nuts on all cable connections. – Tap contactor to loosen contacts. Verify that 12 volts is being applied to the contactor from the handlebar or panel switch. – Replace switch assembly. – Check for voltage at armature port with switch pressed. If voltage is present replace motor. – Allow to drain and dry. Run in short bursts without load until completely dry.
2	Motor runs but cable drum does not turn	– Clutch is not engaged	– Verify that the clutch knob is locked in the engaged position. If problem persists, a qualified technician needs to check and repair.
3	Motor runs slowly or without normal power	– Insufficient current or voltage	– Battery is weak, recharge. Run winch with vehicle motor running. – Loose or corroded battery cable connections. Clean, tighten or replace.
4	Motor runs too hot	– Long period of operation	– Let winch cool down periodically.
5	Winch runs in one direction only	– Defective or stuck contactor – Defective switch assembly	– Tap contactor to loosen contacts. – Repair or replace contactor. – Replace switch assembly.

Specifications

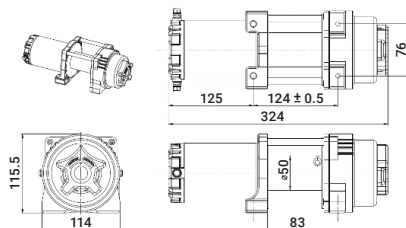
3500lb SPECIFICATIONS							
Rated line pull:	3500 lb (1588 kg) single line						
Motor:	Permanent magnetic motor DC12V						
Gear train:	3 stage planetary						
Gear ratio:	198: 1						
Clutch:	Sliding ring gear						
Braking action:	Automatic in the drum, independent mechanical brake						
Fairlead:	4-way roller fairlead or hawse fairlead						
Cable:	39 ft steel wire or 39 ft of synthetic rope						
Mounting bolt pattern:	3.0" x 4.875"						
N.W:	17.6 lb (8.0 kg)						
	PERFORMANCE						
Line speed and motor current (first layer)	Line pull	lb	0	1000	2000	3000	3500
		kg	0	454	907	1360	1589
	Line speed	FPM*	16	10.5	9.2	7.2	4.9
		MPM**	4.9	3.2	2.8	2.2	1.5
	Motor current	Amps	15	70	105	135	150
Line pull and cable capacity	Layer of cable		1	2	3	4	
	Rated line pull per layer	lb	3500	2870	2430	2100	
		kg	1598	1300	1100	950	
	Cable capacity per layer	feet	6.9	15.1	24.9	39	
		meters	2.1	4.6	7.6	12	

* Feet per minute

** Meters per minute



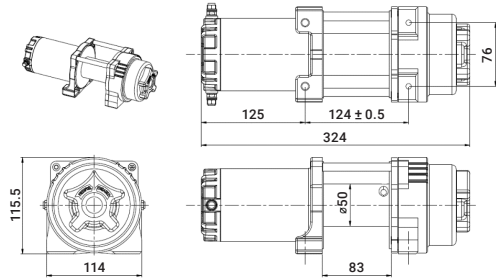
Wire Rope



Synthetic Rope

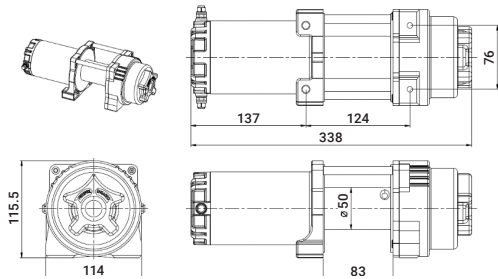
4500lb SPECIFICATIONS							
Rated line pull:	4500 lb (2041 kg) single line						
Motor:	Permanent magnetic motor DC12V						
Gear train:	3 stage planetary						
Gear ratio:	198: 1						
Clutch:	Sliding ring gear						
Braking action:	Automatic in the drum, independent mechanical brake						
Fairlead:	4-way roller fairlead or hawse fairlead						
Cable:	33 ft steel wire or 33 ft of synthetic rope						
Mounting bolt pattern:	3.0" x 4.875"						
N.W:	19 lb (8.6 kg)						
	PERFORMANCE						
Line speed and motor current (first layer)	Line pull	lb	0	1000	2000	3000	4500
		kg	0	454	907	1360	2041
	Line speed	FPM*	16	10.5	9.2	7.2	3.9
		MPM**	4.9	3.2	2.6	1.8	1.2
	Motor current	Amps	17	70	105	135	150
Line pull and cable capacity	Layer of cable		1	2	3	4	
	Rated line pull per layer	lb	4500	3625	3010	2596	
		kg	2041	1648	1368	1180	
	Cable capacity per layer	feet	12.5	26.9	43.3	33	
		meters	2	4.3	7.2	10	

* Feet per minute
 ** Meters per minute



6000lb SPECIFICATIONS							
Rated line pull:	6000 lb (2722 kg) single line						
Motor:	Permanent magnetic motor DC12V						
Gear train:	3 stage planetary						
Gear ratio:	198: 1						
Clutch:	Sliding ring gear						
Braking action:	Automatic in the drum, independent mechanical brake						
Fairlead:	Aluminum hawse fairlead						
Cable:	Standard: 33 ft of synthetic rope; Wide: 49.2 ft of synthetic rope						
Mounting bolt pattern:	Standard: 3.0" x 4.875"; Wide: 3.0" x 6.6"						
N.W:	19 lb (8.6 kg)						
	PERFORMANCE						
Line speed and motor current (first layer)	Line pull	lb	0	2000	3000	4000	6000
		kg	0	907	1360	1814	2722
	Line speed	FPM*	16	10.5	9.2	7.2	3.9
		MPM**	4.9	2.8	2.2	1.6	1
	Motor current	Amps	17	70	105	135	180
Line pull and cable capacity	Layer of cable		1	2	3	4	
	Rated line pull per layer	lb	6000	4583	3933	3441	
		kg	2722	2078	1784	1560	
	Cable capacity per layer	feet	6.6	14.1	23.6	Standard: 33; Wide: 49.2	
		meters	2	4.3	7.2	Standard: 10; Wide: 15	

* Feet per minute
 ** Meters per minute



Standard mount winch diagram shown

LIMITED WARRANTY

Replacement

For the recreational purchaser, Open Trail provides a one (1) year limited warranty that the mechanical and electrical components of your winch will be free of defects in material and workmanship. For the commercial or industrial purchaser, Open Trail provides a ninety (90) day limited warranty that the mechanical and electrical components of your winch will be free of defects in material and workmanship. Warranty commences from the original date of purchase. Transportation charges on product submitted for replacement under this warranty are the sole responsibility of the purchaser. This warranty only applies to the original purchaser and is not transferable.

Warranty Exclusions

This warranty does not cover the following:

Normal Wear

Winches need periodic parts and service to perform well. This warranty does not cover replacement when normal use has exhausted the life of a part or the equipment as a whole.

Installation, Use and Maintenance

This warranty will not apply to parts and/or labor if this winch is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond the winch's limits, modified, installed improperly or connected incorrectly to any electrical component. Normal maintenance is not covered by this warranty.

Other Exclusions

This warranty excludes: • The winch cable • Cosmetic defects such as paint, decals, etc. • Accessory parts such as storage covers • Failures due to acts of God and other events beyond the manufacturer's control • Problems caused by parts that are not original Open Trail® parts • Cable stacking and water submersion

Limits of Implied Warranty and Consequential Damage

Open Trail disclaims any obligation to cover any loss of time, use of this product, freight or any incidental or consequential claim by anyone from using this winch. THIS WARRANTY IS IN LIEU AND TO THE EXCLUSION OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by reference to the purchase date of the original unit. This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.



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