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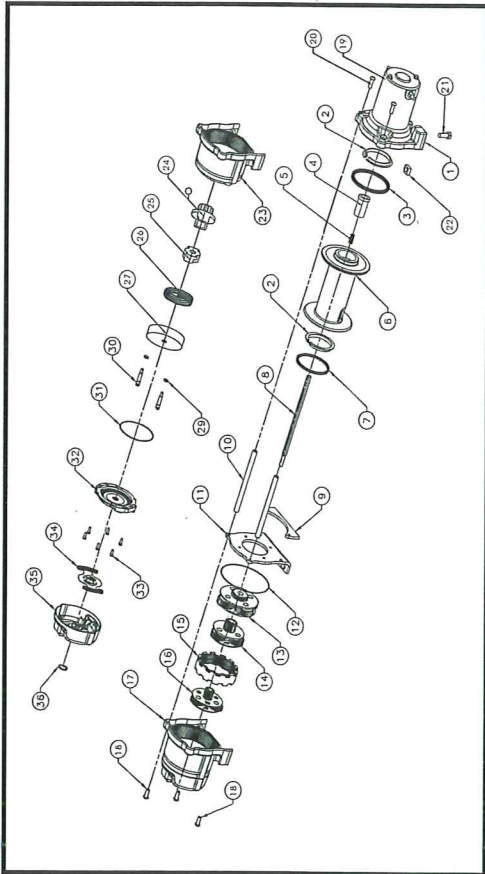
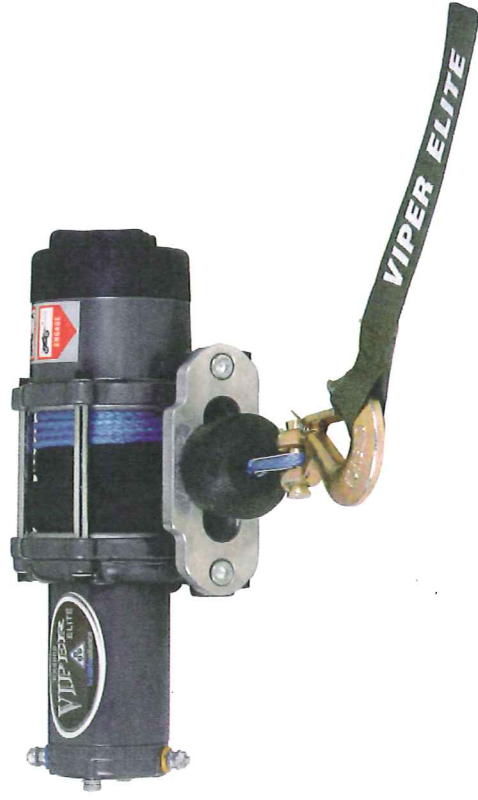
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Installation and Operations Manual for VIPER ATV/UTV Winch Series

VIPER CLASSIC

VIPER MAX

VIPER ELITE



EX3000/EX3500/EX4000/EX4500/EX5000/SE4000/SE4500/SE5000 Replacement Parts

Item#	Description	Part#	Qty.
1	Drum Support, Motor	EX201	1
2	Drum, Bushing	EX202	2
3	X- Ring, Seal	EX203	1
4	Drive Shaft Coupler	EX204	1
5	Compression Spring	EX205	1
6	Drum Assembly	EX206	1
7	X- Ring, Seal	EX207	1
8	Drive Shaft	EX208	1
9	Wire Rope Protector	EX209	1
10	Tie Rod	EX210	2
11	Drum Support, Gear	EX211	1
12	O- Ring, Seal	EX212	1
13	Carrier Assembly Stage 3	EX213	1
14	Carrier Assembly Stage 2	EX214	1
15	Ring Gear	EX215	1
16	Carrier Assembly Stage 1	EX216	1
17	Clutch End Housing Assembly	EX217	1
18	Bolts M6	EX218	4
19	Motor Assembly	EX219	1
20	Bars, Bolts M6	EX220	4
21	Bottom Bolts M8	EX221	4
22	Square Nuts M8	EX222	2
23	Clutch End Housing	EX223	1
24	Abnormal Sun Gear Stage 1	EX224	1
25	Abnormal Block	EX225	1
26	Rectangular Twist Spring	EX226	1
27	Brake Disc	EX227	1
28	X- Ring, Seal	EX228	1
29	Clutch Pins	EX229	2
30	O- Ring, Seal	EX230	2
31	Aluminum End Cover	EX231	1
32	Self-tapping Screws	EX232	1
33	Clutch Stents	EX233	6
34	Clutch Stents	EX234	1
35	Freepool Knob	EX235	1
36	Freepool Dial Retention Ring	EX236	1

Thank you for your purchase of the VIPER WINCH from **MotoAlliance**. Our winches are sold by dealers around the world and are known for premium performance at prices people can afford. Please take time to thoroughly read through the following instructions. If you have any questions, call our team at 1-866-527-7637 or visit us at www.motoalliance.com.

I. WINCH FEATURES

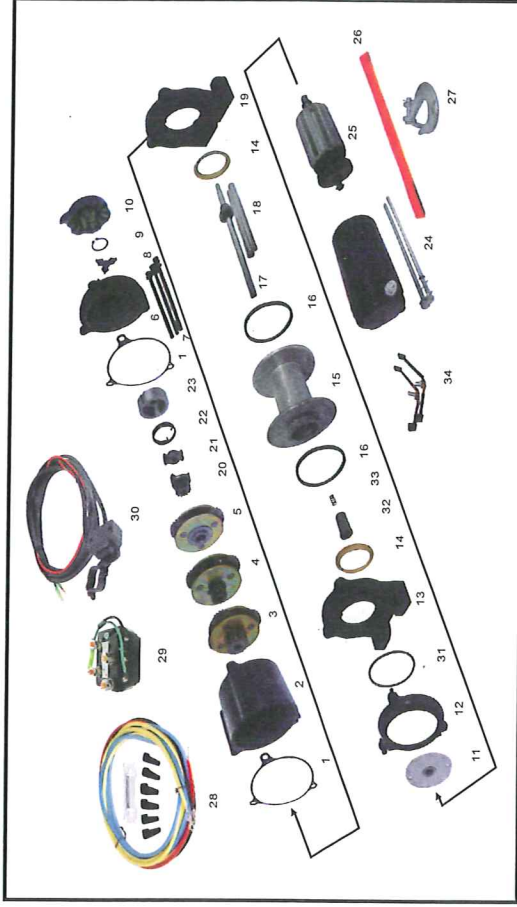


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Which VIPER WINCH is right for you?

	CLASSIC SERIES	MAX SERIES	ELITE SERIES
Winch Warranty	6 months	1 year	2 years
Electrical Components Warranty	6 months	1 year	1 year
Waterproof	Fully Sealed	Fully Sealed	Fully Sealed
Mini Rocker Switch	Included	Included	Included
Cabled Remote Switch	Extra Charge	Included	Extra Charge
Wireless Remote Switch	Extra Charge	Extra Charge	Included
Dashboard Mounted Switch	Extra Charge	Extra Charge	Extra Charge
50' Steel Cable	Included	Included	N/A
Amsteel Blue Synthetic Cable*	Extra Charge	Extra Charge	Included
4T Snatch Block	Extra Charge	Included	Included
Winch Cover	Extra Charge	Included	Included
Rubber Line Stopper	Extra Charge	Included	Included
Upgraded Contactor	Extra Charge	Included	Included
Rubber Terminal Boots	Extra Charge	Included	Included
Elite Greasing System	N/A	N/A	Included

*Max & Classic winches can be upgraded to either 3/16" or 1/4" diameter synthetic cable
 **Dashboard mounted switches are included with UTV style winches (wide spool)
 Steel cable is not included on winches with synthetic cable.
 The Elite winches come standard with 1/4" diameter cable.



MX3500/MX4000/MX4500/MX5000 Replacement Parts

Item#	Description	Part#	Qty.
1	Gasket, Gear-	MX101	3
2	Gear Box Right & Left	MX102	2
3	Carrier Assembly Stage1	MX103	1
4	Carrier Assembly Stage2	MX104	1
5	Carrier Assembly Stage3	MX105	1
6	End Cover	MX106	1
7	Bolts M6	MX107	3
8	Cam Follower	MX108	1
9	Freepool Dial Retention Ring	MX109	1
10	Freepool Knob	MX110	2
11	Bearing	MX111	1
12	Motor Support	MX112	1
13	Drum Support, Motor	MX113	1
14	Drum Bushing	MX114	2
15	Drum Assembly	MX115	1
16	X-Ring, Seal	MX116	2
17	Drive Shaft	MX117	1
18	Tie Rod	MX118	1
19	Drum Support, Gear	MX119	2
20	Abnormal Sun Gear Stage 1	MX120	1
21	Abnormal Block	MX121	1
22	Rectangular Twist Spring	MX122	1
23	Brake Disc	MX123	1
24	Motor Housing Assembly	MX124	1
25	Motor	MX125	1
26	Handsaver Strap	MX126	1
27	Wire Rope Hook	MX127	1
28	Wiring Assembly	MX128	1
29	Contactors	MX129	1
30	Mini Switch	MX130	1
31	Drive Shaft Coupler	MX131	1
32	O-Ring, Seal	MX132	1
33	Clutch Return Spring	MX133	1
34	Brushes	MX134	2



MX2000/MX2500/MX3000/VX2000/VX2500/VX3000/VX3500/VX4000 Replacement Parts

Item #	Description	Part #	Qty.
1	Motor End Housing	MX001	1
2	Sun Gear Stage 1	MX002	1
3	Carrier Assembly Stage 1	MX003	1
4	Clutch Return Spring	MX004	1
5	Drive Shaft	MX005	1
6	Drum Support	MX006	1
7	Cable Protector	MX007	1
8	Spool Assembly	MX008	1
9	Wire Rope Retention Plug	MX009	1
10	Tie Rod	MX010	2
11	Wire Rope Protector	MX011	1
12	Spool Support	MX012	1
13	Carrier Assembly Stage 3	MX013	1
14	Carrier Assembly Stage 2	MX014	1
15	Sun Gear Stage 2	MX015	1
16	Cam Follower	MX016	1
17	Spacer	MX017	2
18	Clutch End Housing	MX018	1
19	Freespool Dial Retention Ring	MX019	1
20	Freespool Dial	MX020	1
21	Brushes	MX021	2
22	Housing	MX022	1
23	Motor	MX023	1
24	Handsaver Strap	MX024	1
25	Wire Rope Hook	MX025	1
26	Wiring Assembly	MX026	1
27	Connector	MX027	1
28	Mini Thumbswitch	MX028	1
29	Wire Rope	MX029	1

II. SAFETY PRECAUTIONS

As operator of this product, the responsibility for safe operation ultimately lies with you. It is important that you read and understand all the safety precautions and operating instructions prior to installing and operating your winch. Failure to understand the proper operation of this product can result in serious injury and/or property damage. Please begin with the following general safety information.

Load Capacities and Instructions

1. Maximum working load capacity is on the first layer closest to the drum. Do not overload. Do not attempt prolonged pulls at heavy loads. Overloads can damage the winch and/or cable and create unsafe operating conditions. For loads over 1,000lbs, we recommend the use of a snatch block to double line the cable. This reduces the load on the winch and the strain on the rope by approximately 50%. Snatch blocks come standard in VIPER MAX and VIPER ELITE winch packages, and are available for purchase at www.motoalliance.com.
2. Do not move your vehicle to assist the winch in pulling the load. **This is considered towing** which can damage the winch in an obvious way and void the warranty.
3. Never use your winch for lifting or moving people.
4. **Your winch is not designed for hoisting overhead.** Each winch is equipped with a permanent magnet motor and is designed for intermittent duty winching. Use as a hoist can void the warranty.
5. 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.
6. When using a winch to move a load, place the vehicle transmission in neutral, set the vehicle parking brake and chock the wheels.
7. Do not use the winch to hold loads in place – for example, it should not be used to tie down a winch on a trailer. Please use tie-down straps.

Steel Cable Usage

*This section is for winches with wire rope. Please see our special section for usage and care of our AMSTEEL-BLUE synthetic ropes.

1. The cable was installed under minimal load at the factory. **It must be respooled onto the drum under minimum 100lb load** to take the “flex” out of the line so

that the outer layers will not draw down onto the inner layers and damage the winch and/or cable.

2. The cable will unwind quickly the first time the gears are unengaged. You may need to hold it with your thumb as you disengage using the freespool knob to prevent tangled cable on the drum ("bird's nest"). This condition will disappear as the cable ages and the flex is taken out of the line.
3. Cable must be guided when spooling onto the winch. This may involve stopping the pull and checking the cable periodically, particularly when pulling at severe angles. If it is not winding in evenly (if it is piling up on either end), you may need to stop and tie off your load, re-align your cable, and begin again. Simply winching in the cable without checking can cause serious damage.
4. When using the freespool option, there cannot be any pressure on the cable or you could ruin the mechanism. You should unwind the cable slightly with the switch and motor to create slack in it before disengaging the gears.
5. Always stand clear of the wire rope when winching in case of breakage. Inspect the rope frequently. A frayed rope should be replaced immediately to prevent injury to yourself or damage to your vehicle. We advise using leather gloves when handling the cable, and putting a heavy blanket on the cable when under pull.
6. Never put your finger through the hook when winching. If your finger gets caught in the winch, you could lose your finger.
7. When moving a load, always make sure the rope is taut. If a nylon sling is used, check the attachment to the load.

**Installing the rubber line stopper on your cable.*

8. If your kit came with the rubber line stopper (standard on VIPER MAX and VIPER ELITE models), install the line stopper by fully unspooling your cable, detaching it from the winch drum, threading the stopper down the cable to the eyelet end, and then reattaching your cable to the drum. This is easy to do when you first pull out your cable to take the flex out of the line.

General Safety Items

1. Never obscure the warning instruction label.
2. Always operate the winch with an unobstructed view of the winching operation.
3. Never release the freespool knob when there is a load on the winch.
4. Disable the winch when not in use so unauthorized people or children are not able to start the winch. We suggest you also remove the key to prevent such use.

purpose or merchantability are deemed to apply to this product, they exist for so long as the express limited warranty elsewhere set forth is in existence.

8. MotoAlliance reserves the right to improve any product through changes in design or materials as desired without being obligated to incorporate such changes in products of previous manufacture. We guarantee to keep parts for your winch style for a period of at least 18 months after we stop selling that style. The stated warranty does not cover bills for service, labor, or other expenses which have been incurred by the buyer. The warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

9. **All warranty claims are based on initial invoice date** and not from the time from which you first installed and used your winch.

VI. TROUBLESHOOTING

Please observe the following troubleshooting tips for further help in operating your winch:

Symptom	Possible Cause(s)	Corrective Action
Motor will not operate or runs in one direction only.	1. Switch inoperative or wired incorrectly. 2. Broken wires or bad connection. 3. Damaged motor.	1. Replace Switch. 2. Check for poor connections. 3. Replace or repair motor.
Motor runs extremely hot.	1. Long period of operation. 2. Damaged motor.	1. Allow to cool. 2. Replace or repair motor.
Motor runs but with insufficient power or line speed.	1. Weak battery 2. Battery to winch wire too long. 3. Poor battery connection. 4. Poor ground. 5. Damaged motor.	1. Recharge or replace battery, check charging system. 2. Keep winch within distance allowed by lead wires. 3. Check battery terminals for corrosion. Clean as required. 4. Check and clean connections. 5. Replace or repair motor.
Motor Runs but drum doesn't turn.	1. Clutch not engaged.	1. Engage Clutch.
Winch runs backwards.	1. Motor wires reversed. 2. Switch wires reversed. 3. Switch installed incorrectly.	1. Recheck wiring. 2. Recheck wiring. 3. Check switch installation.
Winch will not hold load.	1. Excessive load.	3. Reduce load or double line.
Contactors only runs one way, or hums.	Connections "stuck" on inside	Lightly tap with hammer to break apart connections.

VII. Parts Diagram

- c. use only a hawse fairlead as a roller fairlead can significantly damage the rope
 - d. be careful to not exceed the breaking strength of your cable – snatch blocks will double the pulling power & can potentially cause this issue
- *If your rope breaks within the first year of use, you may send it in for warranty evaluation, resplicing and/or replacement.

5. Further guidelines for warranty:

- a. Most powersports companies require you to pay for shipping both ways. We ask you to send it in at your cost, but we will send it back at our cost if the warranty covers your claim.
- b. In warranty claims, we will most often do one of three things:
 - i. send you parts free of charge (Contiguous USA, AK, HI, and Canada only....other locations must pay shipping).
 - ii. repair your winch to full working condition after you send it in
 - iii. or on rare occasions, send out a new replacement. This will only be done once.
- c. Steel cable and roller fairleads have no warranty associated with them.
- d. Warranty is voided if winch is used in applications other than self-recovery.
- e. Warranty is voided if general care and maintenance is not performed.
- f. Typical service time is **3-4 weeks** from receipt of returned item by MotoAlliance to receipt of item to owner.

6. The obligation under this warranty, statutory, or otherwise, is limited to the replacement or repair of such part as shall appear to the manufacturer, upon inspection of such part, to have been defective in material or workmanship. This warranty does not obligate MotoAlliance to apply it to a product that has been altered from its original state, misused, neglected, or improperly installed.
7. To the fullest extent permitted by applicable law, the following are hereby excluded and disclaimed, and there are no warranties extended beyond these descriptions:
 - a. All warranties of fitness for a particular purpose
 - b. All warranties of merchantability
 - c. All claims for consequential or incidental damages

Some states do not allow the above exclusions or disclaimers in consumer transactions and as such this disclaimer/exclusion may not apply to your particular case. To the extent such warranties of applicability for a particular

5. Do not operate under the influence of drugs, alcohol, or medication.
6. Do not connect the winch to either 110V AC house current or 220V as winch burnout or fatal shock can occur.
7. Always disconnect battery connections before working with the winch so that it cannot be accidentally turned on.

III.INSTALLATION INSTRUCTIONS

Winch Mounting Information

1. It is recommended that you use a ATV/UTV-specific mounting kit for your vehicle. Mounting kits for most models are available from us at www.motoalliance.com. You may also use other mounting kits provided they follow the standard four-bolt mounting patterns.
2. Your winch comes with a plate that may be used as the fairlead mount as part of specific mount kit, or it may be used to mount the winch on a flat surface. It may have to be modified substantially for use on an ATV or UTV.
3. Most often you will mount your winch with the cable coming from under the spool. In some special cases such as the Honda Rancher 420, you will have the cable coming from the top of the spool.
4. Detailed mounting instructions can be found in your mounting kit.

Electrical Information

Additional information is available on our website, www.motoalliance.com, under Technical Support. You can also call our technician directly at 1-877-369-0167. Please note your winch model diagram/picture in the following section for further instruction. Also, please disconnect vehicle ground and positive leads from the battery before you begin.

DO NOT ATTEMPT TO INSTALL WIRING WHEN THE BATTERY IS CONNECTED.

Severe injury from hazardous and flammable materials may be released or ignited. Wear eye protections and remove all metal jewelry. Do not lean over battery when making connections.

1. When attaching wires to the motor or contactor terminals hold the inner nut with a wrench while tightening the outer nut with a second wrench. Do not allow the

terminals to rotate in their housings. Rotation may cause internal wire damage or part misalignment.

2. **CONTACTOR LOCATION:** The contactor is mainly a safety component for your winch system. It separates your winch from its power source when not in use. It is recommended that the contactor be mounted close to the battery in a clean, dry location. Typical locations are in or near storage box and on some models, under the seat. Make sure the location you choose allows sufficient clearance from all metal components such as frame tubes. Drill mounting holes once location is found but do not install as it is easier to wire the contactor prior to mounting.

The VIPER MAX contactor has been upgraded with anti-corrosive inner materials and a highly heat resistant cap for premium performance. The VIPER ELITE contactor has been upgraded with anti-corrosive materials and is encased in a wireless box system.

3. **SWITCH MOUNTING:** The switch is typically mounted on the left handlebar. Use a piece of black electrical tape to prevent rotation on the bar. Do not install over any wires or hoses. Once mounted, route the wiring harness back to where the contactor will be mounted, attaching the harness to hard points on the vehicle with cable ties. Splice the end of the red wire in **figure 1** to a key controlled electrical wire on your ATV. A test light can be used to locate an appropriate wire. The wire should only have power when the key is on.

Attach the two bullet point wires to their corresponding wires on the contactor as shown in **figure 2, 3, or 4** depending upon your winch model.

Mount corded remote, if you have a VIPER MAX according to the diagram in **figure 3a**. Attach the two bullet point wires as shown in **figure 1**. The receptacle location is at user discretion dependent on application. Some riders create a velcro attachment to the side of their vehicle, others keep them in a glove box or storage box and plug in as needed.

4. **BATTERY CONNECTION:** When routing the wires, the appropriate terminals should be located near the battery, switch, mounting point, and winch. Your installation requirements will vary depending on your vehicle and winch. Note that if the wires are not long enough to reach the battery, switch mounting point, and winch, you can switch the wires or you may need to increase the length of the wiring harness.

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

5. For AMSTEEL-BLUE care, we provide a sliding abrasion guard for use at points of tension and the hawse fairlead instead of a roller fairlead.

Amsteel-Blue Cable Care

1. Use the sliding 5' abrasion guard on points of tension during your pull. For example, if the rope needs to go around a tree, put the guard between the rope and the surface of the tree.
2. Use the abrasion guard when running over sharp objects like rocks or trees. Try to avoid these objects as much as possible.
3. You must use a hawse fairlead with your rope. If your fairlead gets a ding in it that causes a sharp point, you may gently sand it smooth again.

V. WARRANTY INFORMATION

Our VIPER winches have been carefully designed to provide exceptional performance and durability. If, in the rare event of a failure of any kind, please observe the following guidelines for warranty and replacement.

1. **Please call us first at 1-866-527-7637.** It is most helpful if you have your invoice as proof of purchase as warranty may not be honored without it. Note the length of warranty according to the winch model you have.
2. **CONTACTOR/SOLENOID PROCESS:** If you believe your contactor is defective, we may ask you to send it in for evaluation. This is to protect a strong warranty process as we discovered many fraudulent claims in the past. Your contactor will be quickly evaluated for care and a new one sent back if it is defective. In addition, we may have you speak to our technician directly as "fixes" can often be made over the phone.
3. **WINCH PROCESS:** If you believe your winch is defective, we may ask you to send it in for evaluation or send digital pictures of the are in question. Your winch will then be quickly evaluated for care and usage. We may have you talk to our technician directly about how the winch was used as well.
4. **AMSTEEL-BLUE PROCESS:** If you have purchased our AMSTEEL BLUE upgraded cable, you have a one-year warranty. We will ask you to send the cable in for evaluation. To maintain warranty, you must
 - a. use the abrasion guard at points of tension like rocks or trees,
 - b. avoid running it over sharp objects

Submersion, Heavy Use, and Winch Care

1. Your winch is an electrical device designed to hold up under extreme conditions as long as it is cleaned, inspected and serviced on a regular schedule. The frequency will depend on operating conditions, frequency of use, and common sense.
2. For very heavy pulls, operate the winch in 30 second intervals with pauses of at least one minute to avoid overheating the winch.
3. Your freespool knob is not fully sealed and is the most susceptible to environmental conditions such as mud, sand, and silt. This can be easily removed and cleaned should it begin to stick.
4. Your motor and gears are fully sealed and submersible for all VIPER winches. However, mud, sand, silt, and water are **HIGHLY CORROSIVE** and can degrade the seals and lubrications systems if the winch is not carefully cleaned and dried after each use. **DO NOT POWER WASH YOUR WINCH.**
5. To protect your winch from corrosion and the elements, periodically coat exposed metal parts and components with a light oil. When disassembly and cleaning are performed, gearing should be re-lubricated with a quality gear grease and lubricant.

** Failure to perform simple maintenance items can lead to premature failure and/or repairs. Even though your winch is under warranty, this warranty – like an automobile warranty – will be voided if proper care and maintenance is not done. For helpful tips, please visit our technical support area at www.motoalliance.com.

Optional Amsteel-Blue Upgrade

Amsteel-Blue Cable Information

**The wire cable on all VIPER winches can be upgraded to the patented AMSTEEL-BLUE synthetic cable for an additional charge (standard on on ELITE winches.) Please consider the following information:

1. AMSTEEL-BLUE is a patented product from the USA. It comes complete with a one-year warranty against all manufacturing defects.
2. AMSTEEL-BLUE is patented because of its Samthane coating that keeps it slick and highly abrasion-resistant. "Blue steel", "Dyneema" etc. are generic cables that do not have this critical coating. They are very susceptible to breakage.
3. AMSTEEL-BLUE is available from us in 3/16" x 50' and 1/4" x 40" lengths. It is stronger than steel in the same diameter.
4. We carry AMSTEEL-BLUE in red, black, yellow, blue, and olive green. It is all the same material, just dyed differently for your preference.

Attach battery wires to contactor locations as shown in figure 2, 3, or 4. Do not connect battery at this time. Attach winch wires to contactor as show in figure 2, 3, or 4. The opposite end should be routed to the winch and can be connected at this time red-to-positive (red nut) and black-to-negative (silver nut.)

Your contactor can now be secured to your chosen mounting location. When all wires have been properly routed and secured with cable ties and electrical tape, take a moment to ensure that your system is properly installed and free from restrictions. You may now attach the wires 1 and 2 to the battery positive and negative.

**Please contact us directly if you need installation assistance. Also, visit our technical support at www.motoalliance.com for more help.

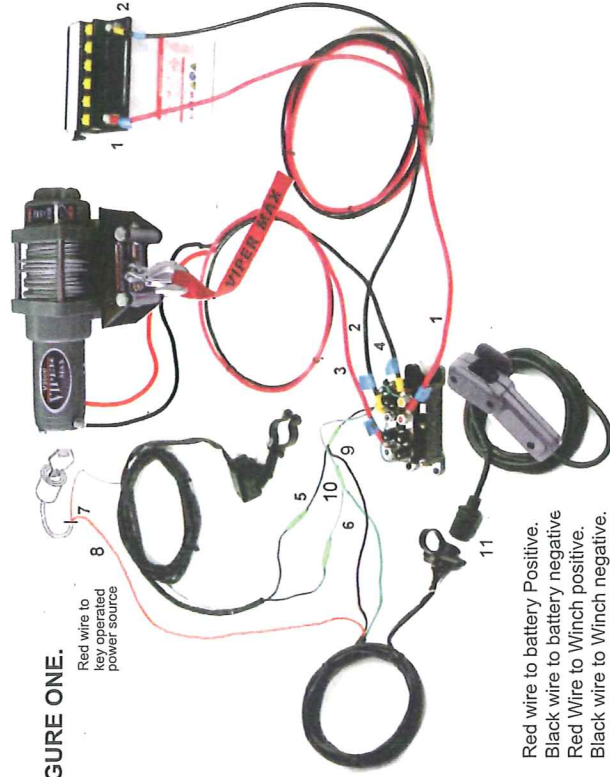


FIGURE ONE.

Red wire to key operated power source

1. Red wire to battery Positive.
2. Black wire to battery negative
3. Red Wire to Winch positive.
4. Black wire to Winch negative.
5. Black wire to switch black
6. Green wire to switch green
7. Red wire to key operated power source
8. Red wire to key operated power source
9. Black wire to corded remote receptacle black
10. Green wire to corded remote receptacle green
11. Corded remote receptacle to corded remote plug.

FIGURE TWO.

Contactor Wiring for MX2000/MX2500/MX3000/VX2000/VX2500/VX3000

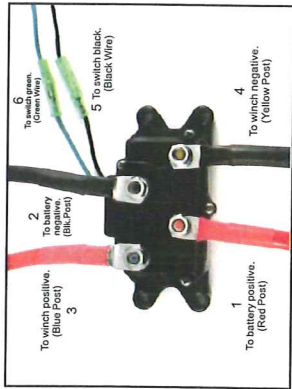


FIGURE THREE.

Contactor Wiring for MX3500/MX4000/
MX4500/MX5000/VX3500/VX4000

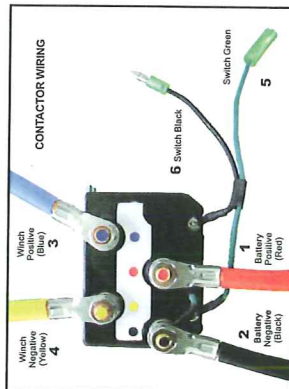
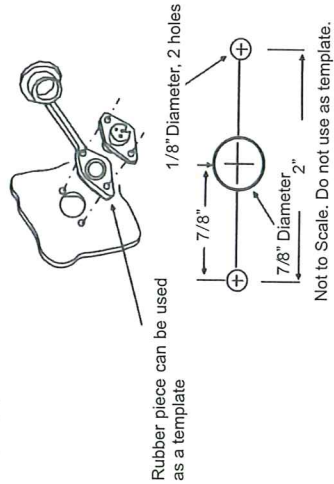


FIGURE THREE(a).



IV. WINCH OPERATION

Freewheel/Freespool Operation

1. Move the freewheel clutch knob to disengage as show in figure 5 or 6. If there is load on the drum, the clutch may not move easily. **DO NOT force the clutch knob.** Release tension on the drum by letting out some of the cable with the "power out" function.
2. Pull out the desired length of cable and secure to anchor point or load. Check to ensure there are at least five turns of cable remaining on the drum.
3. Re-engage the drum by returning the clutch to engaged position as shown in figure 5 or 6. **FREEWHEEL MUST BE ENGAGED** before winching. Never attempt to free or engage the knob while the drum is turning.

VIPER CLASSIC/MAX



Figure 5a Freewheel disengaged (Free Position)



Figure 5b Freewheel Engaged

VIPER ELITE



Figure 6a Freewheel disengaged (Free Position)



Figure 6b Freewheel Engaged