



***motoalliance***

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# Installation Instructions

## 2007-2012 Polaris RZR models (MA11908)

### Kit Contents

Qty	Description
3	Mount Plates
10	3/8"-16 x 3/4" cap screws
10	3/8" flat washers
10	3/8" nylock nuts

### Important

Your Polaris RZR mount is designed exclusively for your vehicle. Please read instructions thoroughly before beginning. Installation of any item is easier if the vehicle is clean and free of debris.

### PICTURE HELP

See the final pages for picture help on the instructions as well as an independent install from [www.rockcrawler.com](http://www.rockcrawler.com) for further help.

## I. Installation Preparation

1. Remove the driver seat and disconnect the negative (black) wire using a 10mm wrench.
2. Remove the positive (red) wire.
3. Remove all hardware from your winch and from the RZR kit.

## II. Winch Installation

1. Install winch mounts first. Locate in chassis and fasten with four 3/8-16" x 3/4" cap screws and four lock washers. Tighten firmly. It is best to use a torque wrench to 18ft/lbs.
2. Install the winch to the winch mounts using four 5/16" bolts and four lock washers as included with your winch. Torque to 12ft/lbs.

3. Install the fairlead bracket. Remove the winch cover panel in the front bumper by removing the four 25 torx screws. Install the fairlead bracket to the chassis and then the fairlead to the bracket with 3/8"-16" x 3/4" cap screws.
4. Ensure the winch is orientated so the cable comes off from the bottom side of the spool. Tighten assembly after all cap screws are installed.
5. Route the cable through the fairlead and attach hook. Put the winch clutch on the freespool setting. Manually free the cable and re-engage the winch clutch.

### III. Contactor/Solenoid Installation

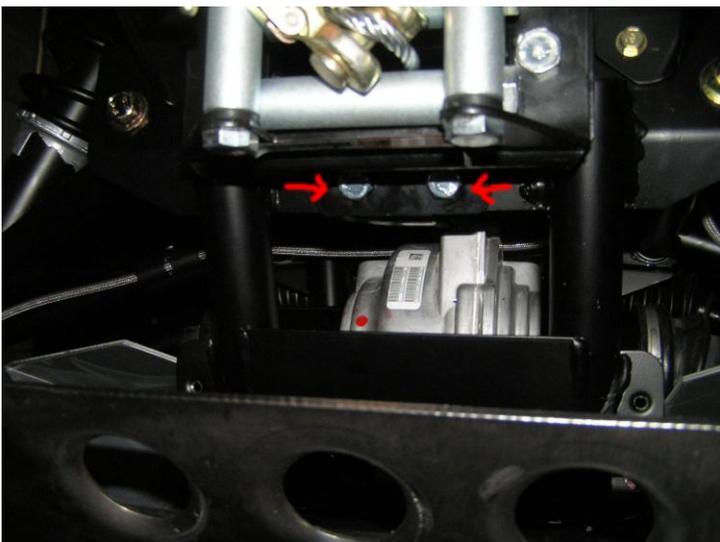
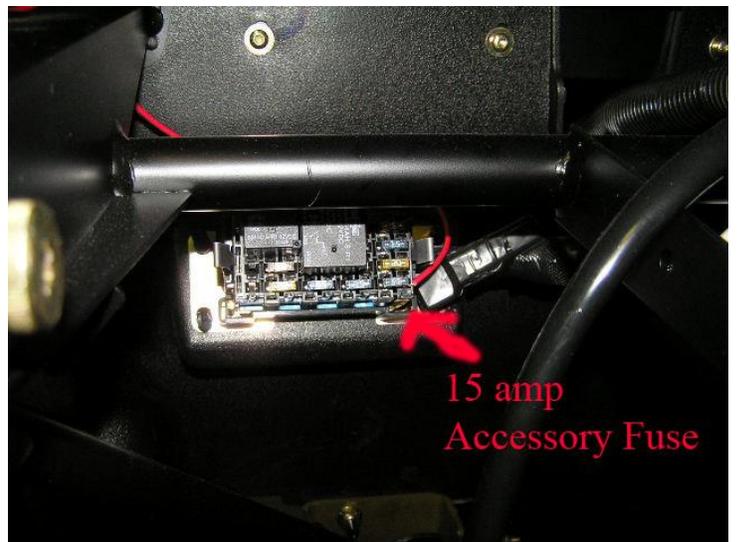
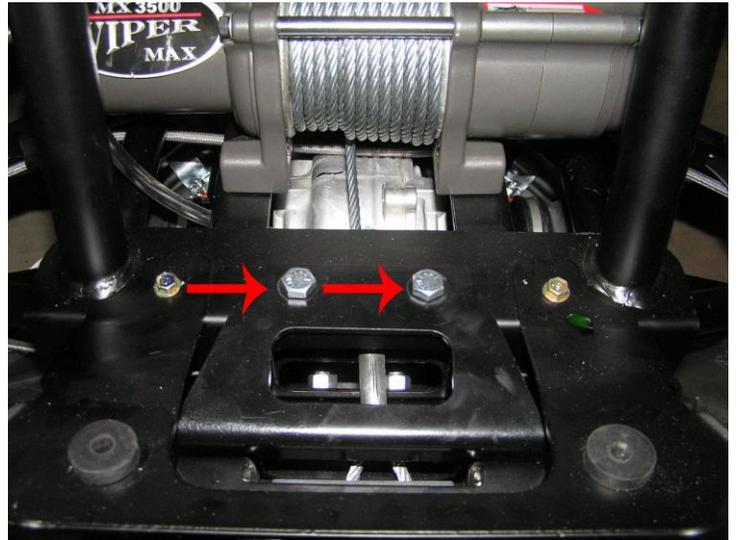
1. First determine where to install the contactor (control relay). It is best to install it to the firewall on the inside of the right fender well. Locate and remove the four clips in the contactor mounting holes in the firewall. When installing the contactor here, you can choose to attach all the wires first, before bolting it down firmly.
2. Install contactor with four 1/4-20" x 1" capscrews, locknuts and nuts as included with your winch.
3. Run the power wires. Take the long set of red/black power wires and attach the red wire to the winch's red terminal and the black wire to the silver terminal. Keep the wire away from moving suspension parts. We left wire loose as we went down the upper frame. When fastening any wire where moisture could cause problems put dielectric tune-up grease (Permatex 22058 from NAPA) on all connections. Also if you want extra vibration protection, Napa has plastic split loom tube conduct that can also be installed over the wire after it has been routed through the frame. (Napa #737300, 3/8" split loom) Connecting the wire to the contactor, you will want the red wire attached to the red nut on the winch motor to go to the blue terminal on the contactor. (Blue is painted on top of the contactor terminal). The black wire attached to the silver terminal on the winch goes to the yellow terminal on contactor. If you get this wiring backwards this will not damage anything, the control switch will just work in reverse.
4. Now the power wires can be run. Take the long set of red/black power wires and attach the red wire to the winch's red terminal and the black wire to the silver terminal. Keep the wire away from moving suspension parts. We left wire loose as we went down the upper frame. When fastening any wire where moisture could cause problems put dielectric tune-up grease (Permatex 22058 from NAPA) on all connections. Also if you want extra vibration protection, Napa has plastic split loom tube conduct that can also be installed over the wire after it has been routed through the frame. (Napa #737300, 3/8" split loom) Connecting the wire to the contactor, you will want the red wire attached to the red nut on the winch motor to go to the blue terminal on the contactor. (Blue is painted on top of the contactor terminal). The black wire attached to the silver terminal on the winch goes to the yellow terminal on contactor. If you get this wiring backwards this will not damage anything, the control switch on handlebars will just work in reverse.
5. Next, run the power wires from the battery into the compartment or location you have chosen for your contactor. The red wire goes to the positive terminal on the battery and the red terminal on the contactor. The black wire goes negative terminal on the battery and the black terminal on contactor. We didn't attach the red wire until all the rest of the wiring was complete. **Caution!** It is easier to reverse the polarity at the battery then you would think and that can cause damage to your voltage regulator, contactor, and can start fires. The battery is capable of supplying a lot of current even to a short.
6. The last of the wiring is to mount and wire in the control switch onto your dash. We wrapped a

couple wraps of electrical back tape on the handlebars before we clamped the switch down. Route the control wiring down the vertical wiring harness and join up with the power cable on left side of cowling. Keep the red wire that hangs out near switched 12-volt wire. Route the control wire down to the power wire and follow the power wire back to the contactor location. Fasten the green wire to the green wire on contactor and the black wire to the black wire on the contactor. (The connectors can't be reversed.)

7. The red switch control wire is the next item, which often raises some questions. The red control wire hanging out of the control cable near the switch goes to the switch 12 volts on the ATV. Some ATV's will have an accessory wire provided and it is spelled out in the owner's manual. The wire will be fused for it. The wires can be many different colors. On Polaris the Red/white wires are fused accessory wires and Orange/white on later models. Under the front cover  $\frac{3}{4}$  of the up on left side as sitting on the ATV, there will be a stubbed Red and white wire with heat shrink. Cut heat shrink away and use a crimp on spade connector and plug right into the wire. You could also call an your service center & they will give you the location and color wire for winch control, switch 12 volts wires over the phone. A factory service manual will also have the schematic in it. We found the switch 12 volts by using a 12-volt test light. We poked a hole though the insulation. With the test light clipped to the frame we turned on the key and lit the light. We turn turned off the key and light went out. (Switched 12 volts are defined as 12 volts is removed with the key off, as opposed to battery 12 volts that has power all the time. You can always find switch 12 volts on the backside of the ignition switch.) You may obtain a crimp on side tap terminal for taping into insulated wire at an Auto parts store or hardware store. We bared the insulation and soldered the red wire to the 12-volt wire. We used RTV Silicone on the joint and wrapped it in electrical tape. Some manufacturers provide a connector to plug into under the front access panel. Usually a crimp on spade connector will mate with it.
8. The last of the wiring is to mount and wire in the control switch on the dash (optional). Drill two holes in the dash, using the switch housing as a template. Remove nuts from side bolts, fasten switch to dash and attach with the materials of your choice from your local hardware store. We suggest two fender washers and a rubber grommet.
9. Drill a hole for the wiring and use the grommet to protect the wire before feeding it through. Keep the red wire that hangs out near switched 12-volt wire. Route the control wire down to the power wire and follow the power wire back to the contactor location. Fasten the green wire to the green wire on contactor and the black wire to the black wire on the contactor. (The connectors are gender specific and can't be reversed.)
10. Lastly, fasten down the contactor with the bolts provided in the winch box. Make sure the 10-MM terminal nuts are tight on the contactor and wire terminal lugs and not shorting. Double check the green and black control wires on the contactor. They can mate hard, so make sure they are seated. Then, attach the battery wires to the battery. Your winch is operational. With the ignition key on, the relay should click when the handle bar control switch is activated. You should test both halves of the switch. The click is independent of winch powering 12 volts. It will click even if the battery is not wired to the contactor or winch. Wind in excess winch steel cable by carefully guiding it to the spool.

## IV. PICTURES





You can also visit <http://www.rockcrawler.com/2010/05/rockcrawler-rzr-install-motoalliance-viper-ex4000-winch/> for another version of installation instructions based on actual user experience.

Thank you for your purchase from Motoalliance. Please feel free to contact our customer service for any further questions and comments.