



INSTALLATION INSTRUCTIONS WINCH MOUNTING KIT

Part Number: 84705

Application: Honda Foreman 500 & Honda Rubicon

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided installation and operating instructions and other information on labels and in this guide. This information alerts you to potential hazards that could hurt you or others. It is not possible to warn you about all potential hazards associated with this product, you must use your own good judgment.

CARELESS INSTALLATION AND OPERATION CAN RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE. READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND OPERATING INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS PRODUCT.

This guide identifies potential hazards and has important safety messages that help you and others avoid personal injury or death. **WARNING** and **CAUTION** are signal words that identify the level of hazard. These signal words mean:

WARNING signals a hazard that *could* cause serious injury or death, if you do not follow recommendations. **CAUTION** signals a hazard that *may* cause minor to moderate injury, if you do not follow recommendations.

This guide uses **NOTICE** to call attention to important mechanical information, and **Note**: to emphasize general information worthy of special attention.

WARNING

INJURY HAZARD

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

- Always** use extreme caution when drilling on any vehicle. Make sure that all fuel lines, brake lines, electrical wires, and other objects are not punctured or damaged when / if drilling on the vehicle. Thoroughly inspect the area to be drilled (on both sides of material) prior to drilling, and relocate any objects that may be damaged. Failure to inspect the area to be drilled may result in vehicle damage, electrical shock, fire or personal injury.
- Always** wear safety glasses when installing this kit. A drilling operation will cause flying metal chips. Flying chips can cause eye injury.
- Always** use extreme caution when cutting and trimming during fitting.
- Always** remove jewelry and wear eye protection.
- Never** lean over battery while making connections.
- 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.
- Always** use appropriate and adequate care in lifting components into place.
- Always** insure components will remain secure during installation and operation.
- Always** tighten all nuts and bolts securely, per the installation and operation.
- Always** perform regular inspections and maintenance on the winch, winch mount and related hardware.
- Never** operate this **WARN** product with damaged or missing parts.

⚠ Caution
Moving Parts Entanglement Hazard
Failure to observe these instructions could lead to minor or moderate injury.
<input type="checkbox"/> Always take time to fully read and understand the installation and Operations Guide included with this product. <input type="checkbox"/> Never operate this product if you are under 16 years of age. <input type="checkbox"/> Never operate this product when under the influence of drugs, alcohol or medications.
Read installation and operating instructions thoroughly.

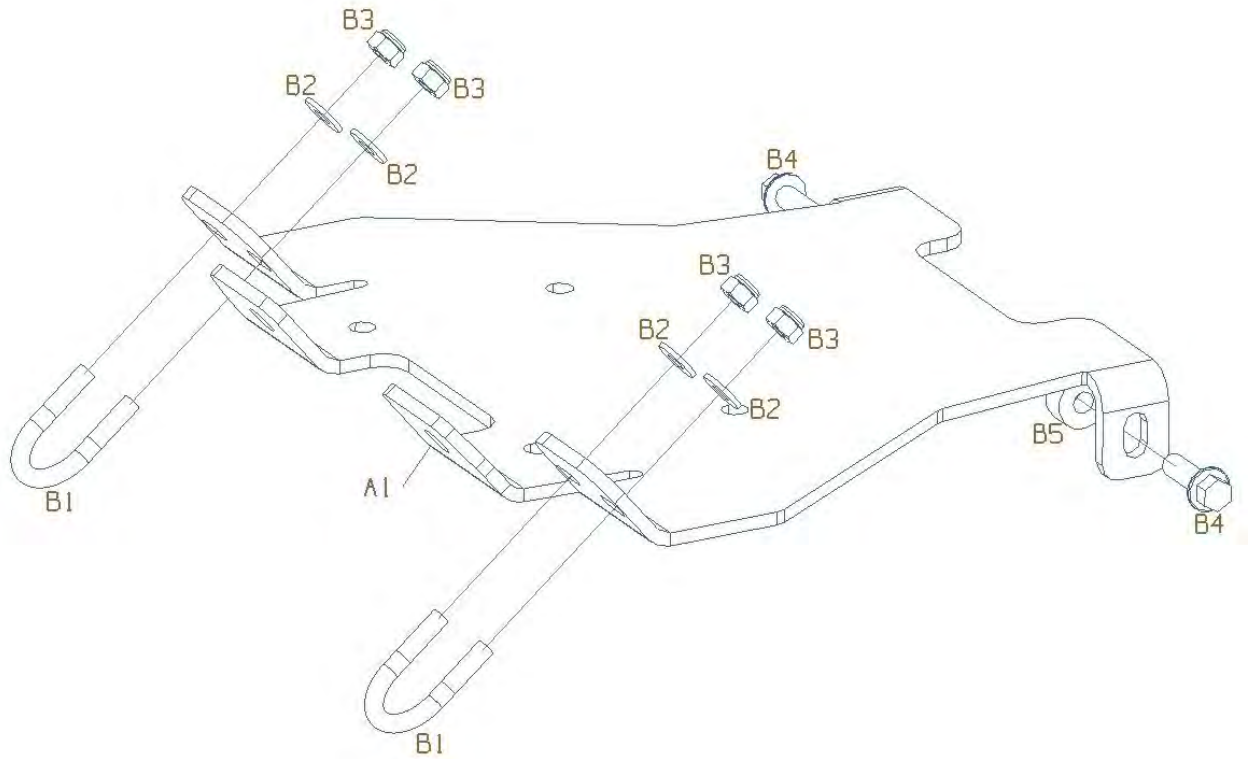
Notice
Equipment Damage
<input type="checkbox"/> Always refer to the Installation and Specification Guide, supplied in the winch kit, for all wiring schematics and specific details on how to wire this WARN product to your vehicle.
Read installation and operating instructions thoroughly.

Before You Begin

This kit is compatible with WARN's line of ATV winches. Winch is sold separately. Please read WARN's Winching Technique guide provided with the winch prior to use of this product.

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I. Parts List

<u>Ref</u>	<u>Description</u>	<u>Qty</u>
A1	Mounting Plate	1
B1	1/4-20 x 1" x 1 1/2" U-bolt	2
B2	1/4" flat washer	4
B3	1/4-20 lock nut	4
B4	8mm-1.25 x 25mm bolt	2
B5	Spacer	2

II. Tools Required

- Ratchet
- Sockets: 10mm, 12mm, 7/16", 1/2", 9/16"
- Wrenches: 1/2", 9/16"
- Drill
- 1/4" drill bit

III. Rubicon & Foreman Installation

1. Begin by removing the front skid plate located on the front of the ATV. Remove the four side 8mm bolts and four bottom 6mm bolts securing the front skid plate, figure 1. Save the fasteners as they will be used later to reinstall the front skid plate.

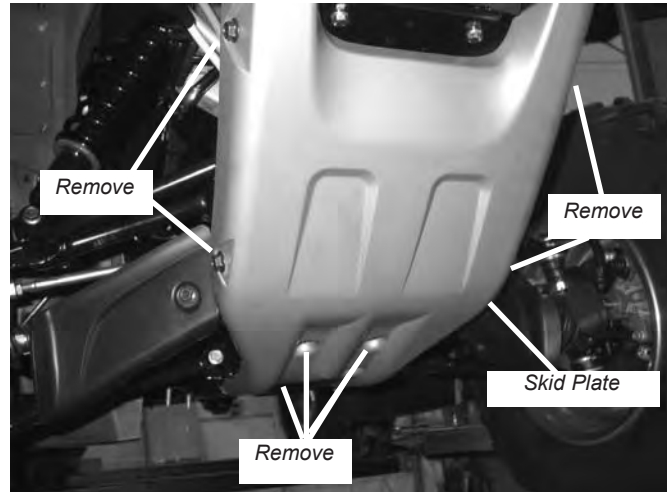


Figure 1 Remove Front Skid Plate

2. Remove the four plastic rivets on each side of the front plastic fascia, figure 2. Use a large screw driver to carefully remove the center rivet. After removing the center rivet, remove the rivet housing. Save the fasteners as they will be used to reinstall the front plastic fascia.

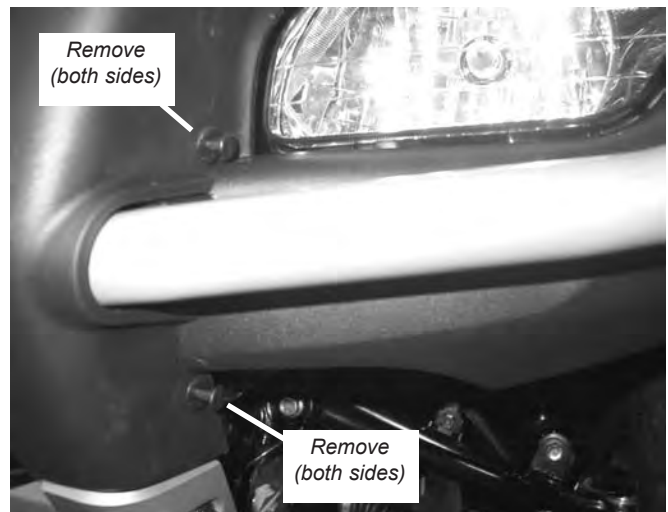


Figure 2 Remove the Four Plastic Rivets

3. Remove the two 6mm bolts that attach the front plastic fascia to the bumper, figure 3. Remove the front plastic fascia at this time.

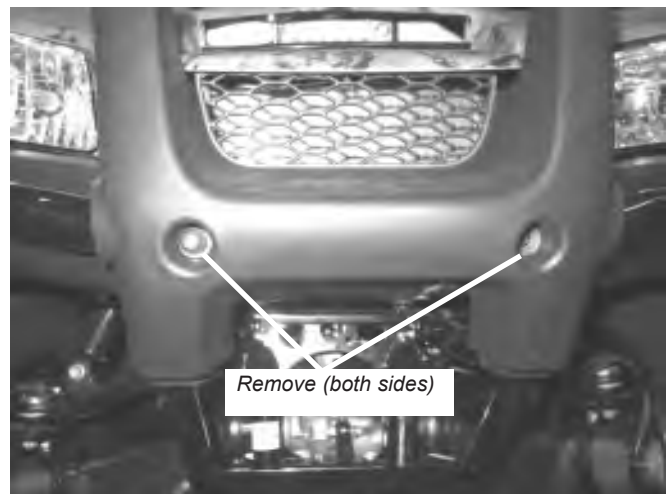


Figure 3 Front Plastic Fascia Bolts

4. Remove the two 6mm bolts that attach the front bumper to the plastic headlight assembly, figure 4. Save the fasteners as they will be used to reinstall the front bumper.

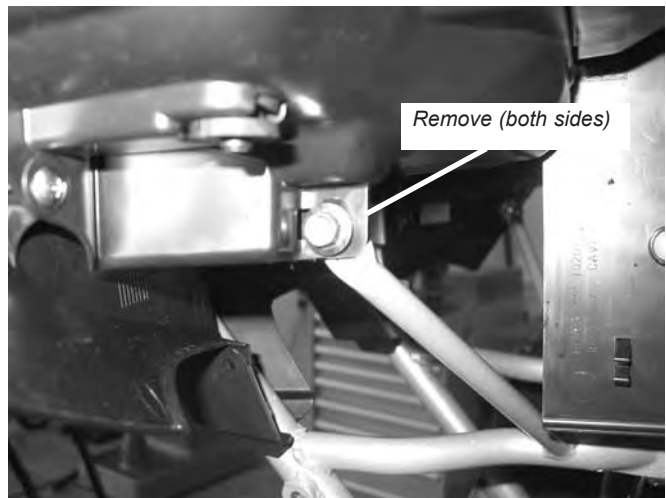


Figure 4 Front Bumper Bolts

5. Remove the two top 8mm bumper bolts that attach the front bumper to the front rack, figure 5. Save the fasteners as they will be used to reinstall the front bumper.



Figure 5 Remove Top Bumper Bolts

6. Remove the two bottom bumper bolts that attach the bumper to the bottom of the vehicle frame, figure 6. Save the fasteners as they will be used to reinstall the front bumper.

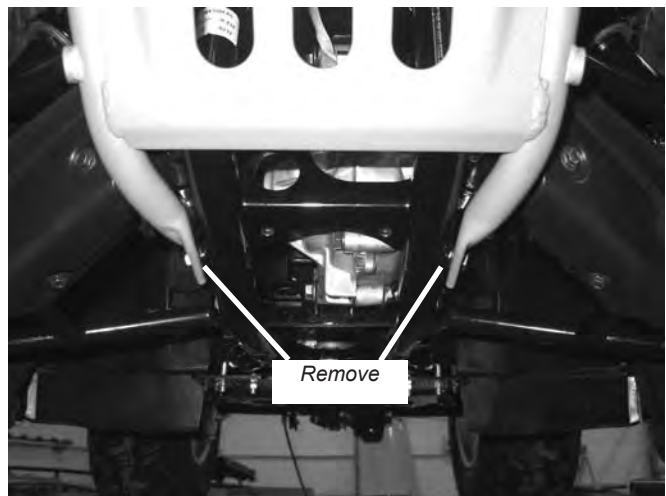


Figure 6 Remove Bottom Bumper Bolts

- Remove the two middle bumper bolts that attach the bumper to the middle of the vehicle frame, figure 7. Remove the front vehicle bumper at this time.

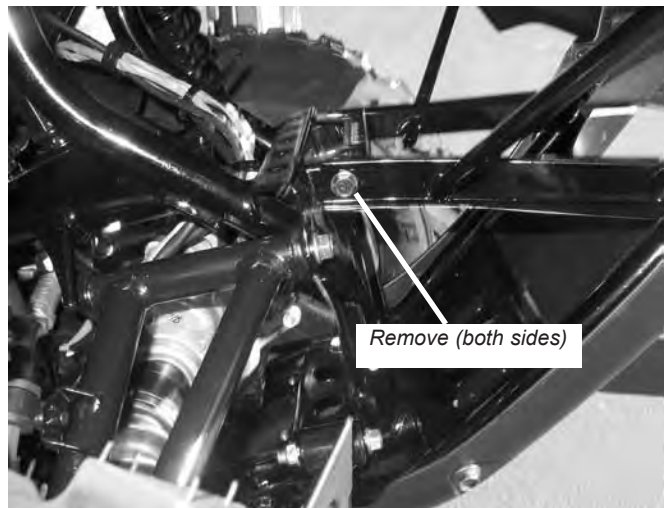


Figure 7 Remove Frame Bumper Bolts

- Attach the roller fairlead to the winch mounting bracket (A2), figure 8. Use the two supplied 3/8" dia bolts, nuts, and lock washers provided with the winch as shown in figure 8. Tighten the two 3/8" dia bolts to a recommended torque of 34 N-m (25 ft-lb).

Note: At this point in the installation refer to the "Motor Rotation Guide" supplied with this mounting kit to rotate the winch motor. This will allow the motor terminals to be in the horizontal position and avoid interference with the head light cowling.

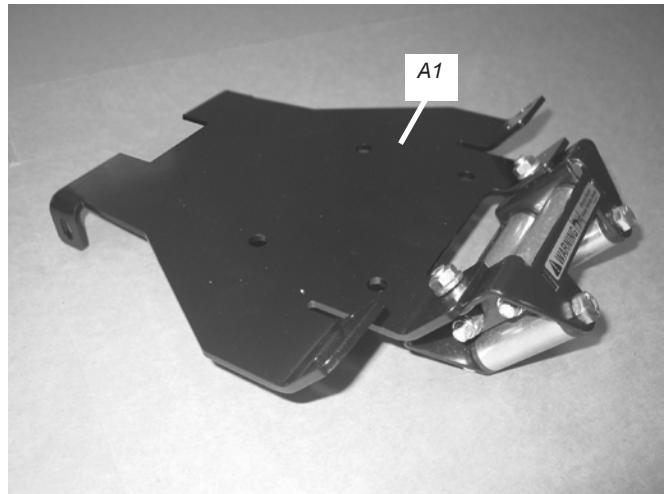


Figure 8 Attach Roller Fairlead

- Mount a 2.5ci winch to the mounting bracket (A1) with four 5/16" dia bolts and lock washers supplied with the winch kit. Mount the winch so that the motor faces the right side of the vehicle, figure 9. Tighten the bolts to a recommended torque of 17 N-m (12 ft-lb).



Figure 9 Install Winch onto Mounting Bracket and Fairlead Bracket

10. Place the winch, mounting plate and roller fairlead assembly into position on the front bumper, figure 10. Install two 1/4-20 x 1" x 1 1/2" U-bolts (B1), four 1/4" flat washers (B2) and four 1/4-20 lock nuts (B3) that were supplied in the mounting kit, figure 10. Do not tighten fasteners at this time.

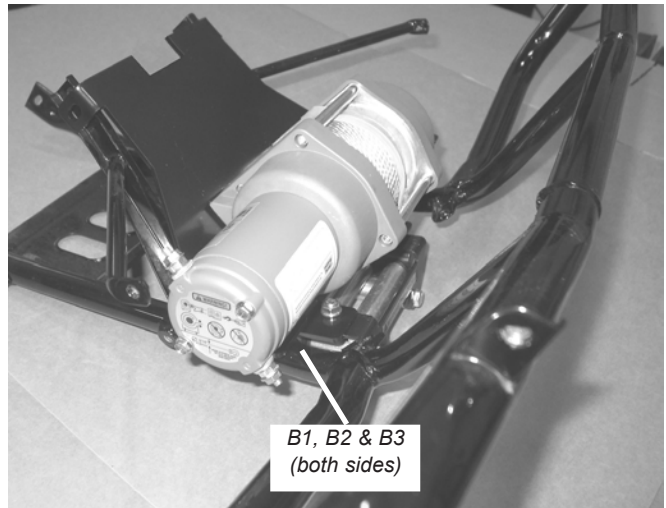


Figure 10 Place Winch, Mounting Plate and Roller Fairlead Assembly onto Front Bumper

11. Place the front bumper with attached winch assembly back onto the vehicle frame. Reinstall the two top and two bottom bumper bolts that were removed in steps 5 & 6. Do not tighten at this time.

12. Install the supplied 8mm-1.25 x 25mm bolts (B4) into the middle bumper mounting location, place the supplied spacer (B5) into position between the ATV frame and the winch mounting bracket tab figure 11. Do not tighten at this time.

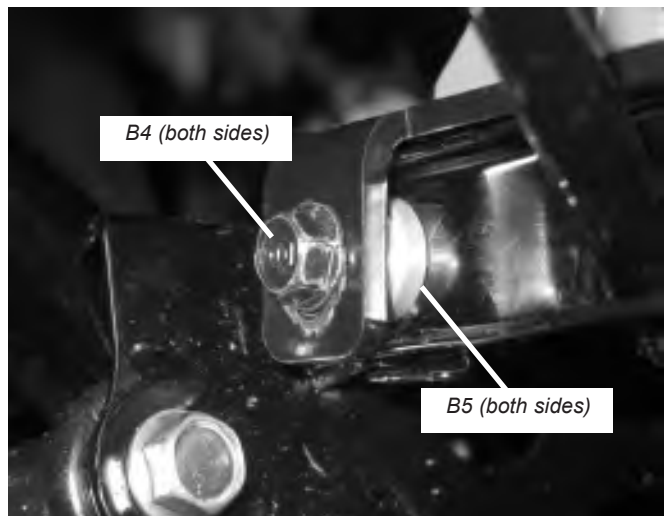


Figure 11 Bolt and Spacer Installation

13. Reinstall the two 6mm bolts that were removed in step 4. Reinstall the four rivet fasteners that were removed in step 2. Reinstall the two 6mm bolts that were removed in step 3. Do not tighten at this time.

14. Reinstall the front plastic skid plate that was removed in step 1, four side 8mm bolts and four bottom 6mm bolts. Do not tighten at this time.

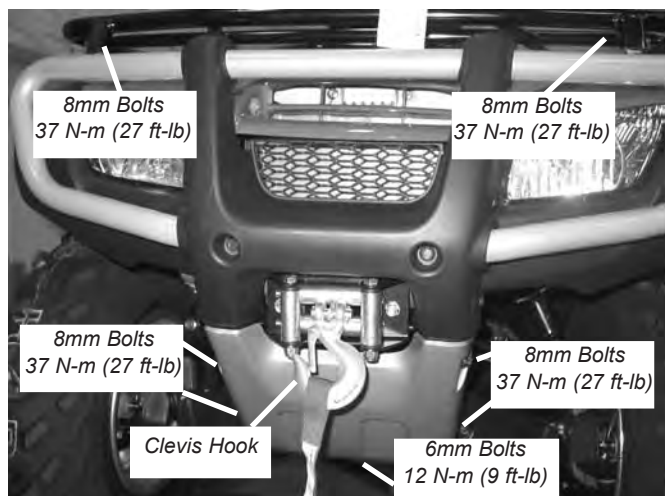


Figure 12 Completed Winch Installation on the Rubicon

15. Tighten all fasteners to a recommended torque of:

- 6mm bolts - 12 N-m (9 ft-lb)
- 8mm bolts - 37 N-m (27 ft-lb)
- 1/4" U-bolts - 10 N-m (7 ft-lb)

16. Switch the winch clutch to freespool. Manually feed the winch cable through the roller fairlead. Attach the clevis hook, supplied with the winch, to the end cable loop as shown in figure 12. This is done by placing the winch wire loop between clevis pin tabs on hook. Insert clevis pin through clevis pin tabs and the winch wire loop. Insert cotter pin into clevis pin retaining hole, figure 13 and figure 14.
17. Complete the winch installation as described in the winch installation and specification guide that came with the winch.

Winch and winch mount installation is now complete and should look like figure 12. Proceed to section IV, entitled “Winch Wiring”.

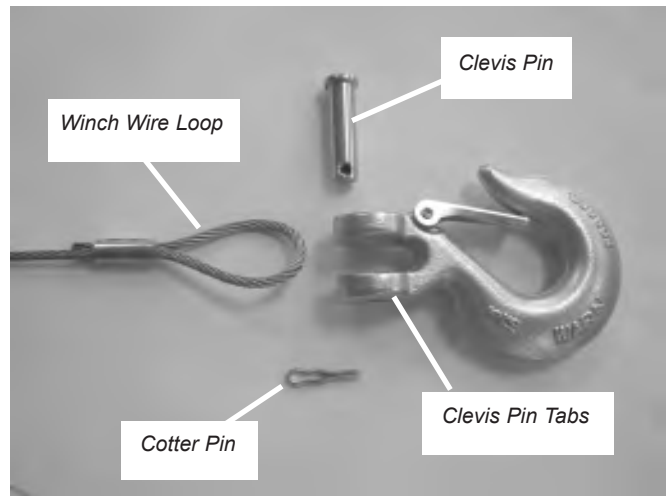


Figure 13 Hook Assembly - Exploded View


 WARNING
Tighten all nuts and bolts securely. Failure to check all nuts and bolts prior to use can result in product failure which can lead to vehicle damage and operator injury or death.



Figure 14 Hook Assembly - Assembled

IV. Winch Wiring

Notice

Please refer to the Installation and Specification Guide, supplied in the winch kit, for all wiring schematics and specific details on how to wire the winch to the ATV.

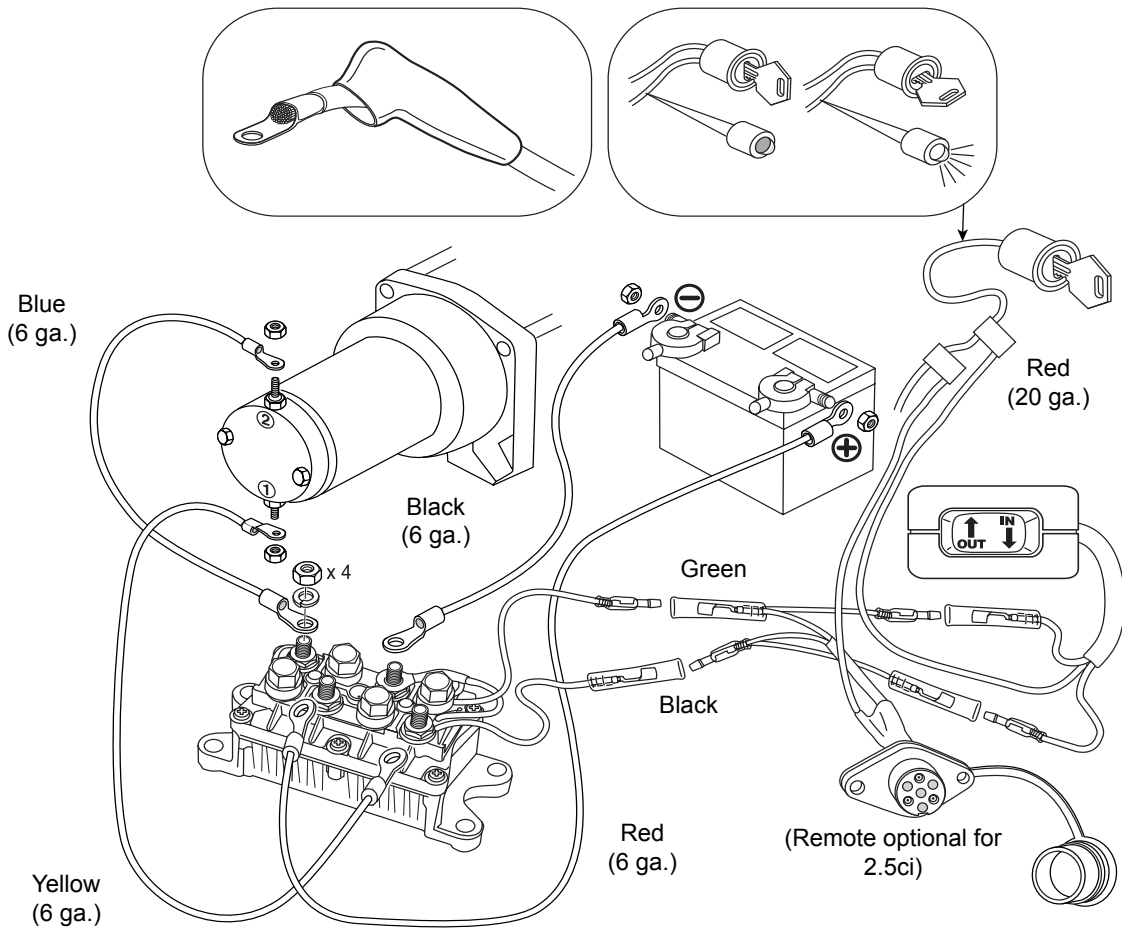


Figure 15 Universal Wiring Installation diagram

V. Rubicon & Foreman Specific Wiring Instructions

Notice

It should be noted that the following instructions are ATV specific only. The following instructions should be referred to as reference instructions to assist wiring the winch from the Installation and Specification Guide supplied in the winch kit.

1. Contactor Location - Step Three in the Installation and Specification Guide:

- a. The contactor is located in the right rear inner fender, on the right side of the rear tool box, figures 18, 19 & 20.
- b. Remove the wire harness, figure 16, from the bracket that holds the wire harness in position.
- c. Using the drill and 1/4" drill bit, remove the top of the rivet heads to remove the wire harness bracket.
- d. Relocate the wire harness that was removed along the rear rack tube, figure 18. Use a zip-tie to secure the wire harness.

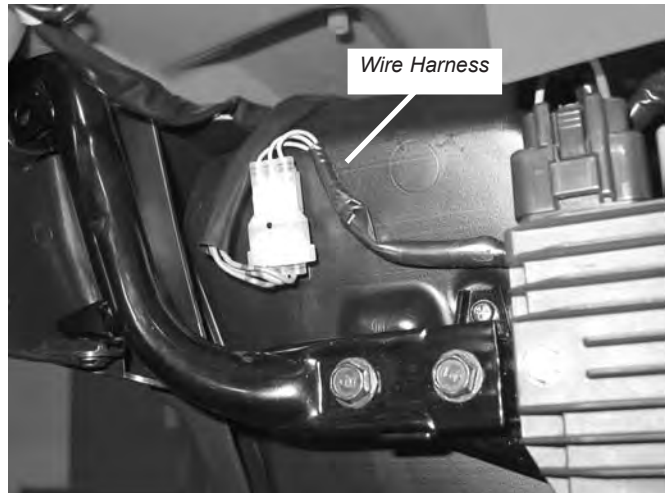


Figure 16 Remove Wire Harness from Bracket



Figure 17 Remove Wire Harness Bracket

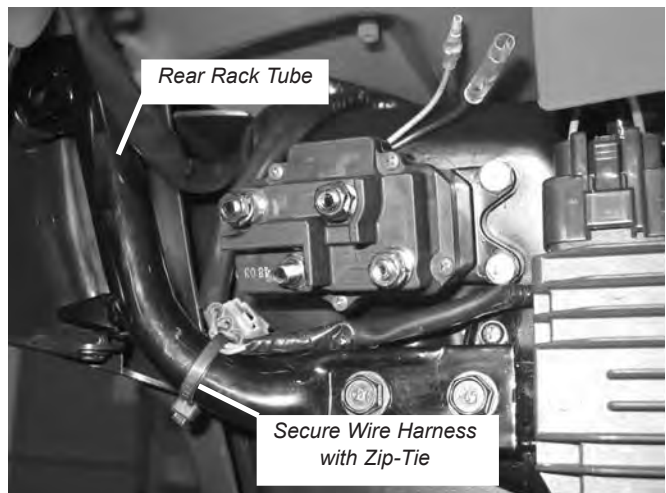


Figure 18 Contactor Location - Right Side of Tool Box

- e. Position the contactor with the post for the positive battery cable (red cable) in the lower left corner (leads for the handlebar switch are positioned up), figure 19 & 20. Mark and drill 1/4" holes for contactor. Secure the contactor with four 1/4-20 x 1" bolts, washers, lock-washers and nuts supplied with the winch. Tighten the nuts to a recommended torque of 7 N-m (5 ft-lb).

Notice
Please note that all wires in the wiring photographs are shown without conduit on the colored wires. This is for clarity in the instructions.

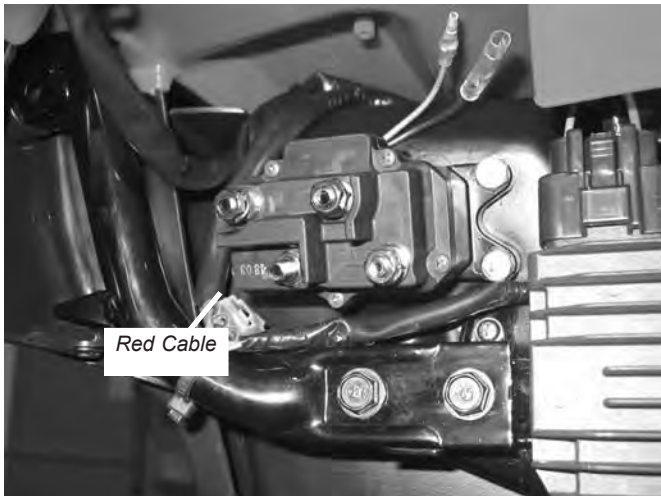


Figure 19 Contactor Location - Right Side of Tool Box

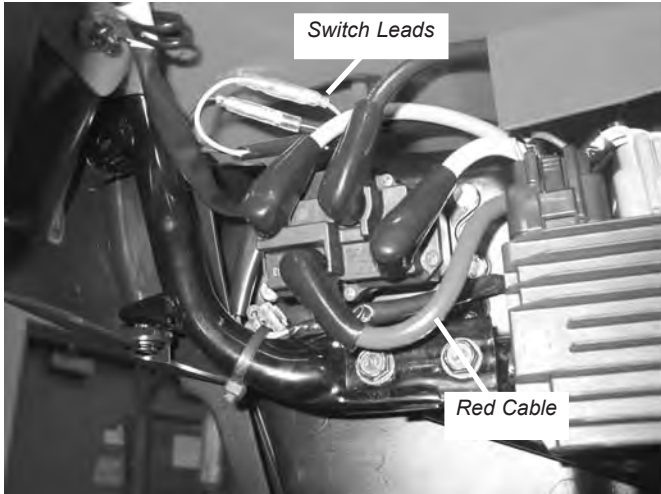


Figure 20 Contactor Location - Right Side of Tool Box

2. Handlebar Switch Installation - Step Four in the Installation and Specification Guide:

- a. Before installing the winch switch, route the red wire towards the switch case. Secure with electrical tape a distance of approximately 25cm (10in) from where the red wire protrudes from the back casing towards the switch case, figure 21. This will allow you to see the red wire when routing the switch wires, down the steering column, to the contactor.

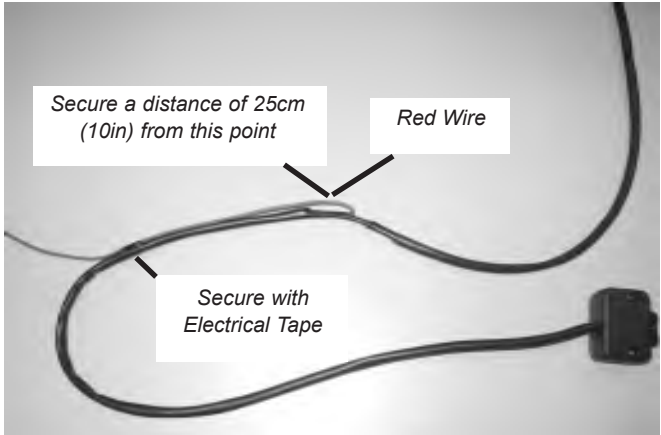


Figure 21 Red Wire - Tie-off 25cm (10in)

b. Mount the winch switch in the location shown in figure 22. The recommended location is on the bottom of the left side of the handlebars.

Notice
Please refer to the Installation and Specification Guide, supplied in the winch kit, for specific details on how to install the switch onto the ATV. Please note that the switch extension brackets are not used in the Rubicon and Foreman application.

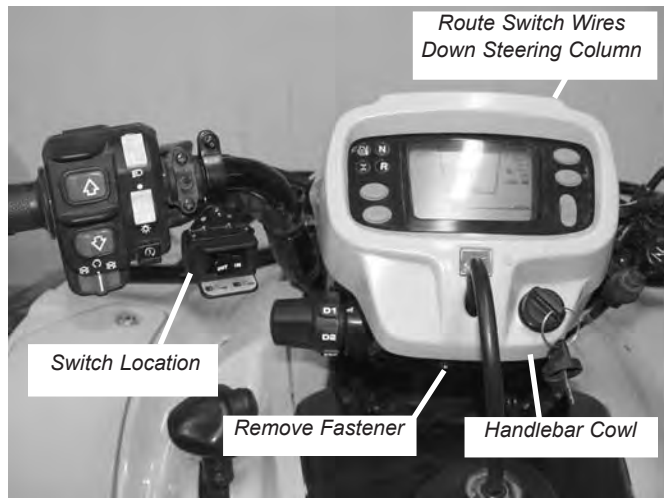


Figure 22 Switch Location

c. Remove the handlebar cowl, by removing the three fasteners (two on the side, one in front) to expose the ignition switch wire harness, figure 23. Cut back the harness protective cover and splice the red switch wire, using the scotch lock supplied in the mounting kit, into the pink wire located in the ignition switch wire harness. Before making the splice, make sure that the pink wire only has power when the key switch is on. Trim the red switch wire excess approximately 20cm (8 in). Retape with electrical tape.

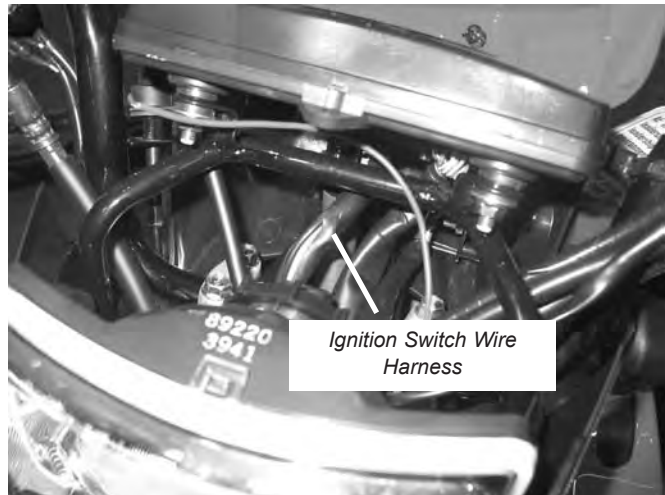


Figure 23 Connecting Switch - Red Wire

d. Remove the left and right side panels by removing the fasteners holding them in place, figure 24. Keep these fasteners for reinstallation.



Figure 24 Remove Side Panels

- e. Route the switch leads down the steering column, figure 25, to the rear of the ATV. Route switch leads in such a manner to follow other original wire harnesses along the right side of the frame to the contactor, figure 25, figure 26 and figure 27. Utilize existing plastic tie straps to secure handlebar switch wire.
- f. Reinstall the handlebar cowl. Use the original hardware to reattach the handlebar cowl. Tighten the bolts securely.

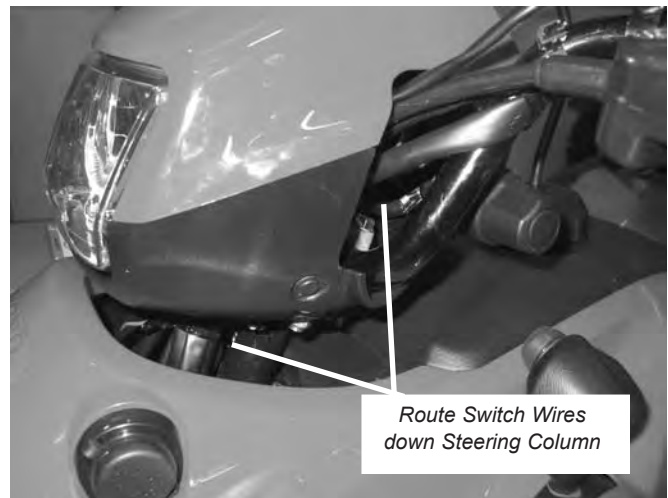



Figure 25 Route Switch Wires

 WARNING
<p>Avoid all moving and potentially hot components of ATV when routing electrical cables. Avoid areas where the wiring could be pinched when components are reinstalled. Failure to do so can result in product failure which can lead to vehicle damage and operator injury or death.</p>

3. Wiring Installation - Step Six in the Installation and Specification Guide:

- a. Connect the yellow and blue electrical cables to the contactor, figure 15, figure 19, figure 20 and figure 26. Route the winch wires (yellow and blue) from the contactor to the front of the ATV, figure 28. The routing should follow along the right side frame tube to the front of the ATV, figure 26, figure 27 and figure 28. Place the motor terminal boots, supplied in the mounting kit, onto the electrical cables. Attach the yellow and blue 6 Ga wires to the motor terminals on the winch, figure 28. Yellow is marked #1 and blue is marked #2 on the end of the motor cap. Slide the motor terminal boots over the motor terminals. The electrical cables route above the front differential and along the inside of the left front frame down-tube. Use cable ties to secure all electrical cables to the ATV frame. Avoid all moving and potentially hot components of the ATV when routing the electrical cables.

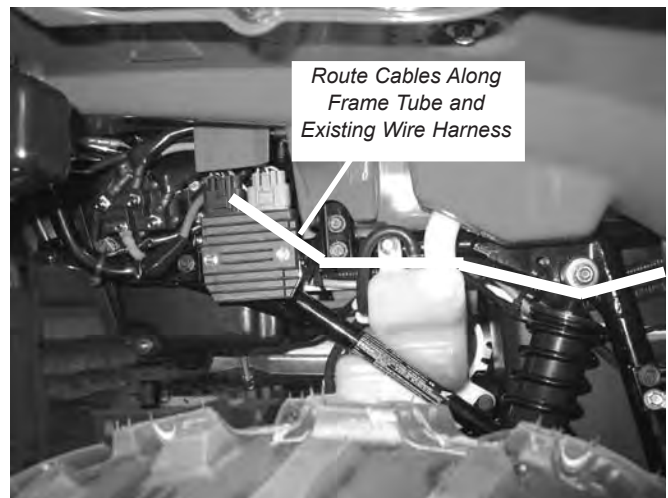


Figure 26 Routing Electrical Cables

Note: It may be necessary to remove or loosen the front plastic fascia to gain enough access to the motor terminal.

⚠ WARNING

Avoid all moving and potentially hot components of ATV when routing electrical cables. Avoid areas where the wiring could be pinched when components are reinstalled. Failure to do so can result in product failure which can lead to vehicle damage and operator injury or death.

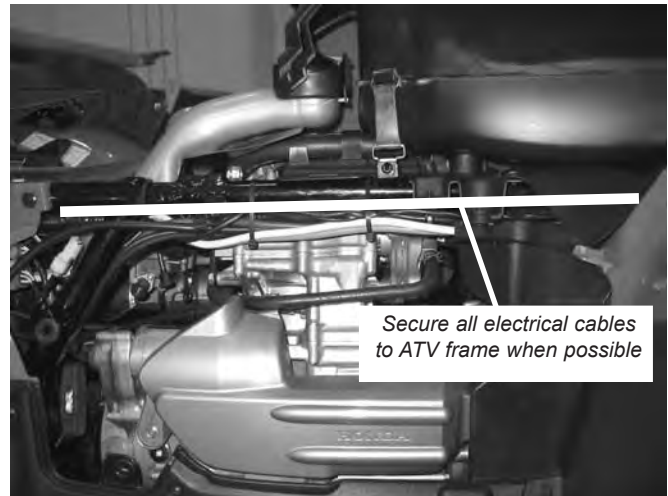


Figure 27 Electrical Cable Routing - Contactor to Winch



Figure 28 Electrical Cable Routing - Contactor to Winch

Notice

Please refer to figure 20 for the wiring schematic

- b. Connect the red and black electrical cables to the contactor, figure 15, figure 19 and figure 20. Route battery electrical cables (red and black), from the contactor to the battery, along the outside of the ATV frame as seen in figure 26. There is a hole in the battery compartment that the electrical cables can access the battery, figure 29. There is access to this hole above the frame tube when routing the electrical cables from the contactor to the battery, figure 29. Use cable ties, supplied in the mounting kit, to secure all electrical cables to the ATV frame. Avoid all moving and potentially hot components of the ATV when routing the electrical cables. Avoid areas where the wiring could be pinched when components are reinstalled (such as the seat).

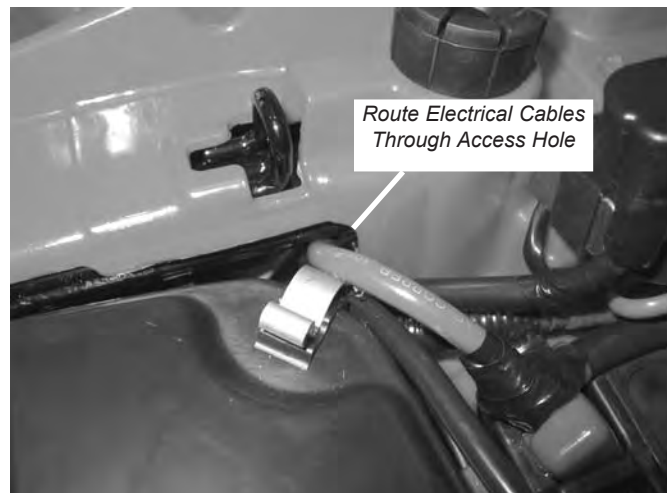


Figure 29 Electrical Connection - Battery Connection

- c. Attach the red wire to the red contactor post and battery positive terminal, figure 30. Attach the black wire to the black contactor post and battery negative terminal, figure 30. Reposition the protective boot over the positive battery terminal.
- d. Reinstall the side panels that were removed in Section 5, Step 2d. Use the original hardware to reattach the side panel.
- d. Reinstall the seat.

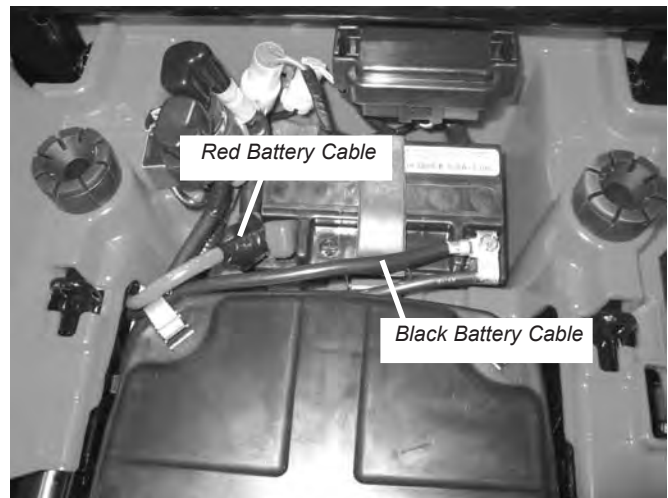


Figure 30 Battery Cover

Notice
Please refer to figure 15 for the wiring schematic

The winch is now fully operable. Test to confirm operation in all modes. Proceed to section VI, entitled “Maintenance/Care”.

VI. Maintenance/Care

- Inspect all metal parts on the winch, winch mount, and related hardware. Replace all that appears rusted, cracked or deformed prior to use.
- Inspect all nuts and bolts on the winch, winch mount, and related hardware prior to each use. Tighten all nuts and bolts that are loose. Missing, stripped, fractured, or bent bolts or nuts need to be replaced immediately.
- Check all cables prior to use. Replace cables that are worn or frayed.
- Check all moving and rotating parts. Remove debris that may inhibit the part from moving freely.

⚠ WARNING
Failure to perform regular inspections and maintenance on the winch, winch mount, and related hardware may result in vehicle damage and operator injury or death.