

2017

# Installation Instructions for Key Switch SNOWRATOR

We appreciate your purchase of L.T. Rich's Product. Please read carefully before Operating or detaching.



AES  
L.T.RICH  
6/15/2017



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## SHIPPING CONTENTS

1. Parts
  - a. (1) Main Electrical Harness
  - b. (1) Pump Electrical Harness
  - c. (1) Rocker Switch, Red
  - d. (1) Rocker Switch, Blue
  - e. (1) Key Switch
  - f. (1) O-Ring Connector, Red
2. Fasteners
  - a. (2) M6 x 3/8" Hex Screws
3. Tools Needed
  - a. Wire Crimpers
  - b. Wire Strippers
  - c. Cable Tie Cutter
  - d. Standard Screwdriver
  - e. 3/8" Wrench
  - f. 10mm Wrench
  - g. 1/2" Ratchet Wrench
  - h. 10mm Nut Driver
  - i. Ratchet
  - j. 1 1/2" Extension
  - k. 8mm, 10mm, 11mm, and 3/8" Sockets



## WARNING



### Before Working on This Machine

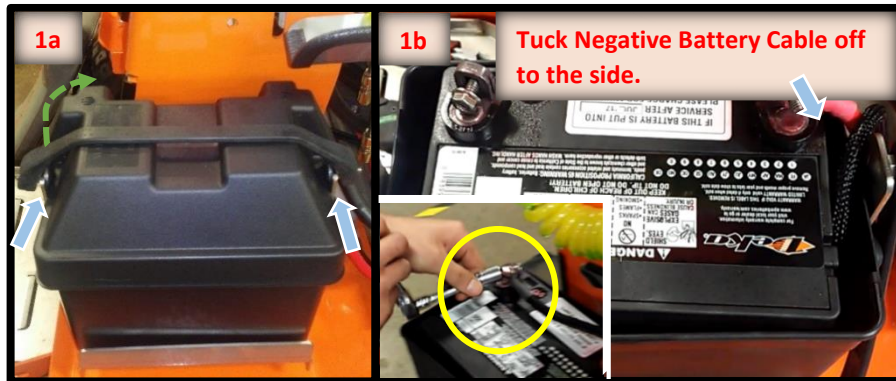
- Switch Engine to OFF



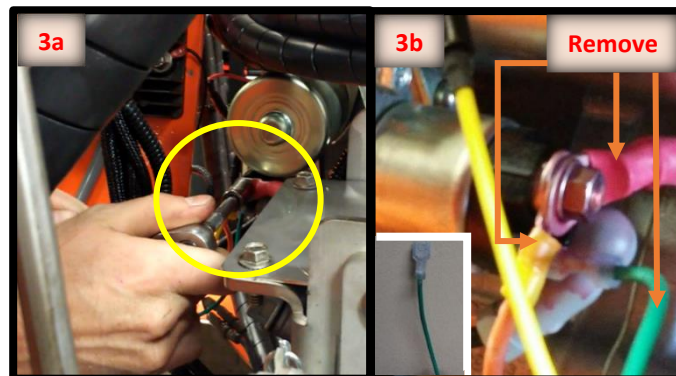
- Please note that this installation guide is for a **standard machine only**.
- The hose and electrical harness routing may be different depending on the attachments that may already be installed on your machine.
- A Snowrator machine is shown for all assembly photos.
- For any questions please contact us at toll free (877) 482-204 Mon-Fri 8 a.m. to 4:30 p.m.

## DISCONNECT POWER

1. *Disconnect the Negative Battery Cable*
  - a. *Remove battery cover by unhooking strap.*
  - b. *Disconnect Ground Wire from negative battery terminal using socket or wrench.*



2. *Remove Power Wires*
  - a. *Remove nut on Solenoid using the 10mm socket with 1 1/2" extension*
  - b. *Remove Positive Battery Cable (red), Power Wire (orange) and Green wire.*

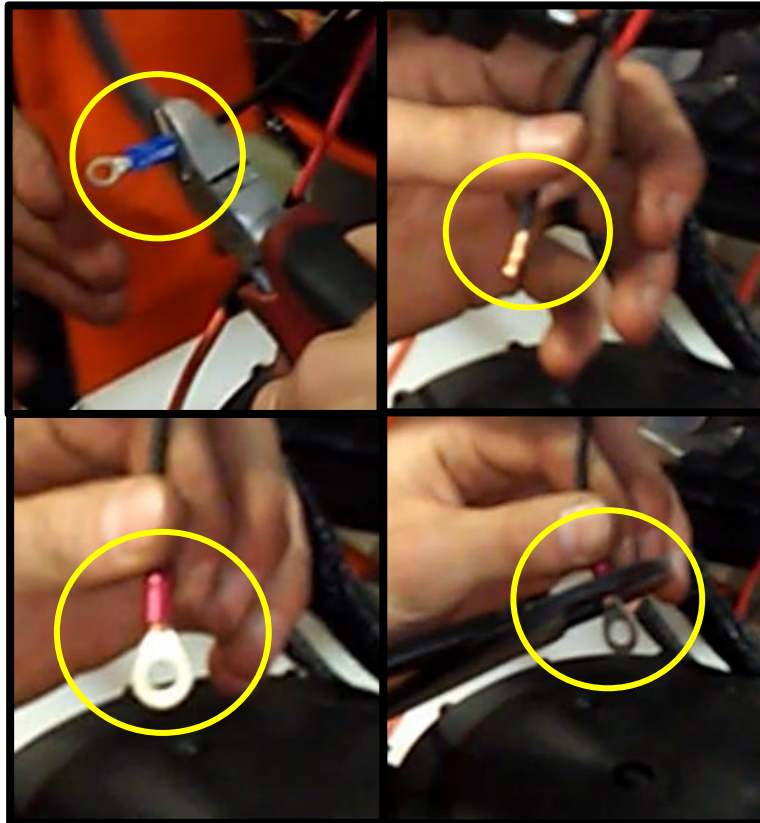


3. *Remove Ground Wires*
  - a. *Remove nut from Center Ground Post using a 1/2" wrench*
  - b. *Disconnect all Ground Wires from right side of Rectifier.*



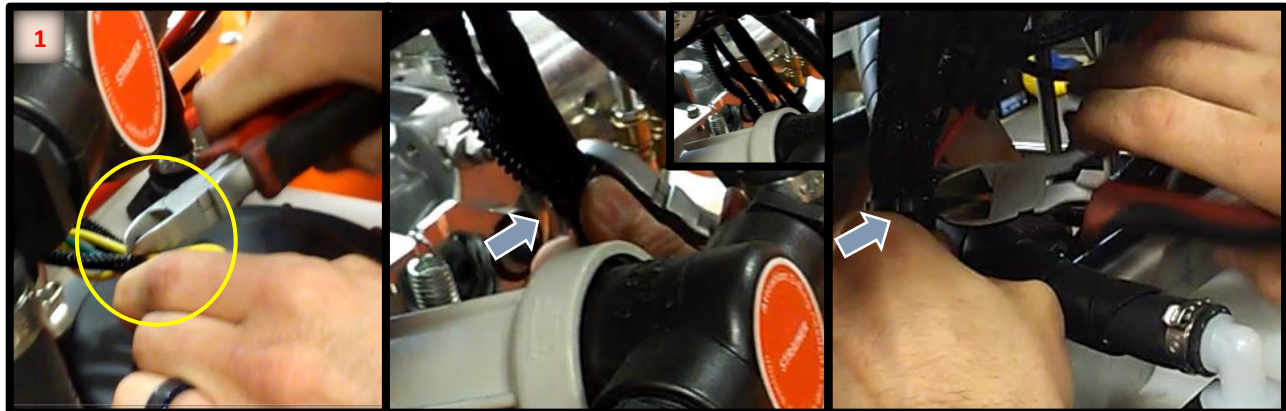
## PREP IGNITION HARNESS

1. *Replace Ground Wire Connector*
  - a. *Cut the Blue O-Ring connector off the Ground Wire using cable tie cutters.*
  - b. *Strip 1/4" of insulation from the wire using the wire strippers.*
  - c. *Slide the Red O-Ring connector onto the exposed wire.*
  - d. *Crimp the new connector to the wire using wire crimpers.*

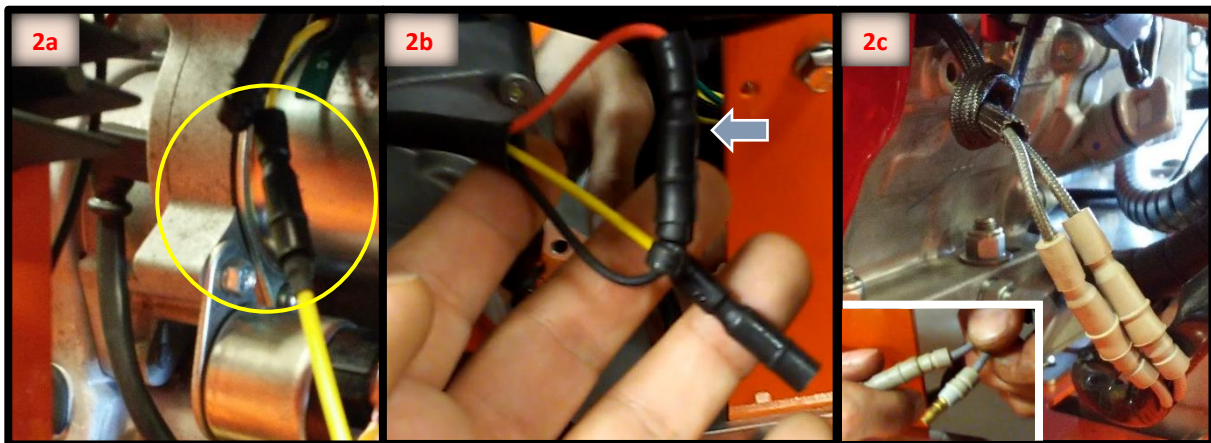


## REMOVE ELECTRICAL HARNESSES AND SWITCHES

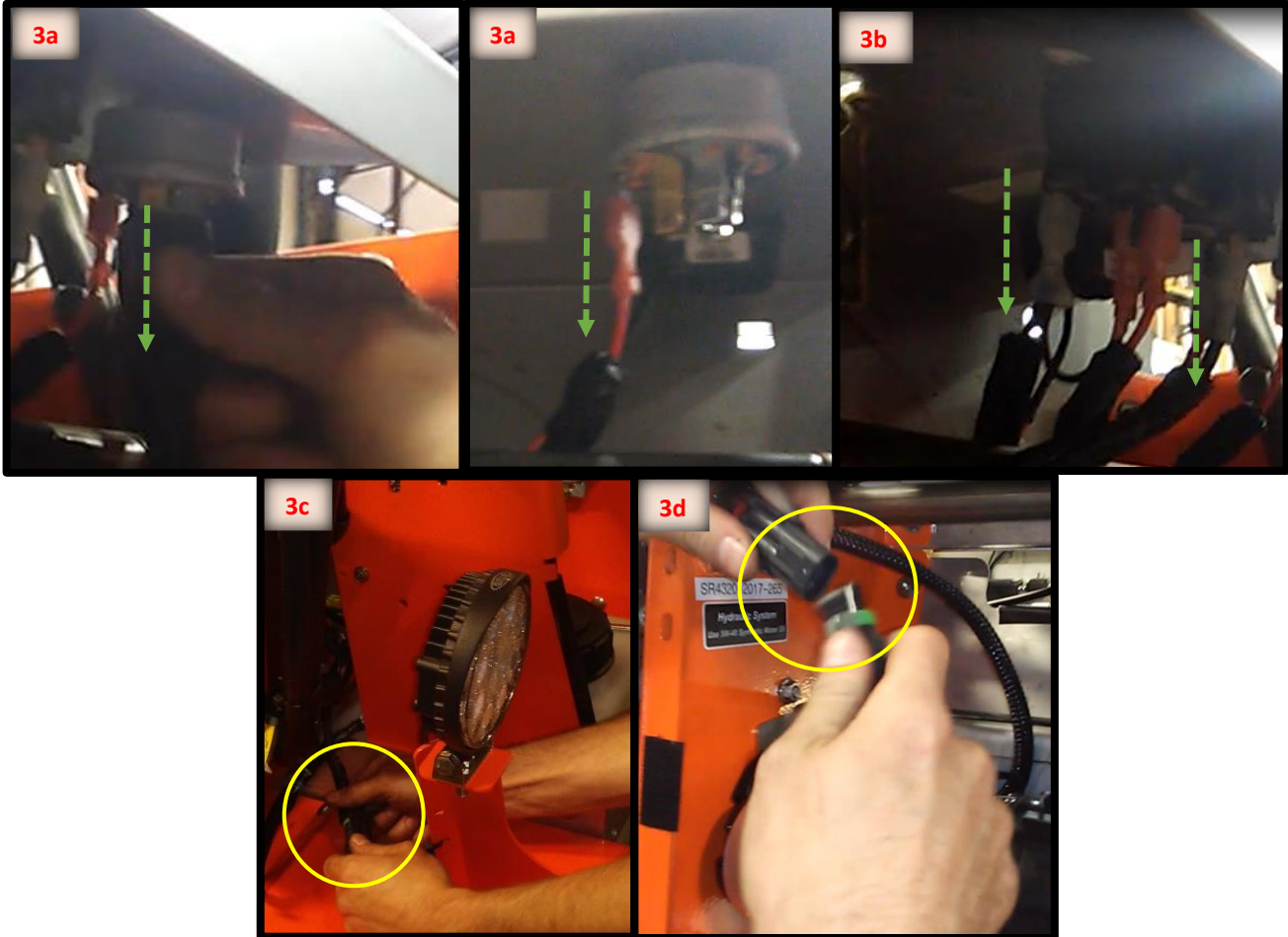
1. *Cut cable ties on Wire Harness Bundle.*



2. *Disconnect the Engine Wires from the harness.*
  - a. *Unplug the yellow wires from each other.*
  - b. *Unplug the red and black wires from each other.*
  - c. *Unplug the (2) two gray wires.*
  - d. *Unplug the white wire.*

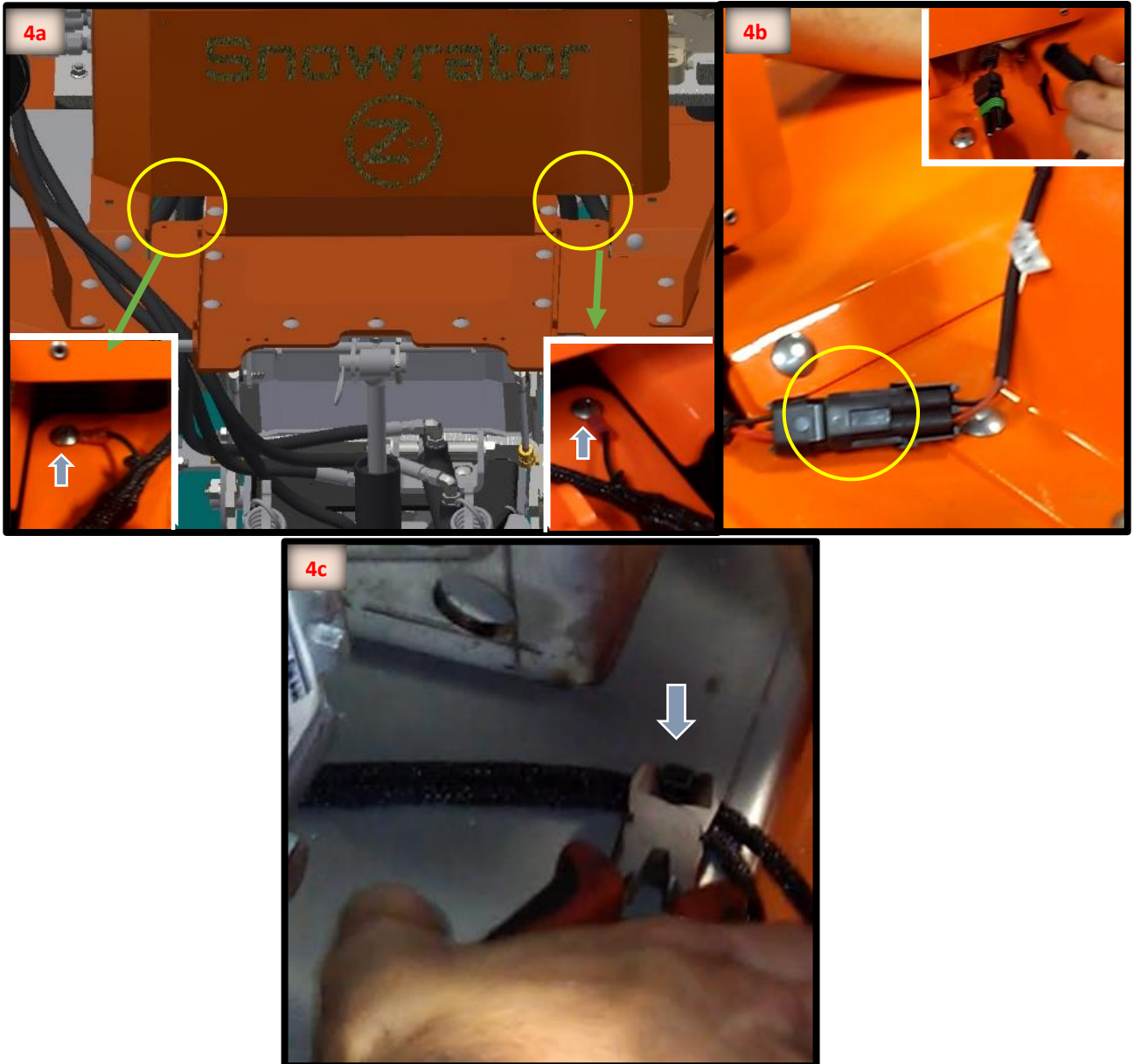


3. *Disconnect Switches, Pump and Rear Light*
- a. *Unplug all wires from the Ignition Switch*
  - b. *Unplug all wires from both Rocker Switches*
  - c. *Unplug Rear Light Connector.*
  - d. *Disconnect the Liquid Pump*

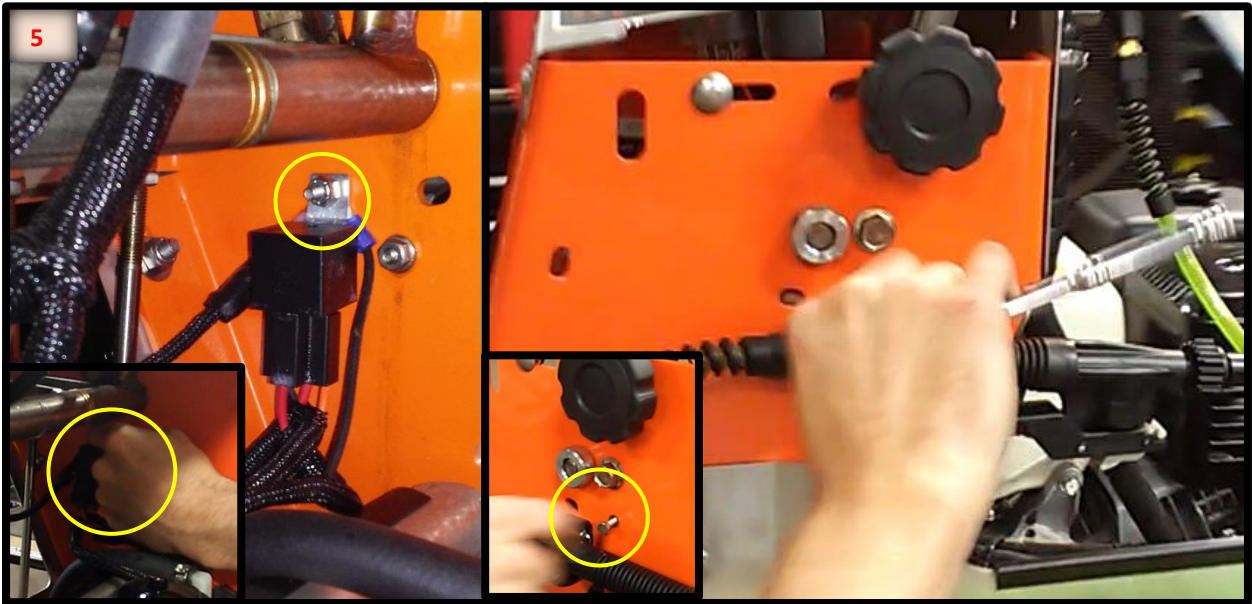




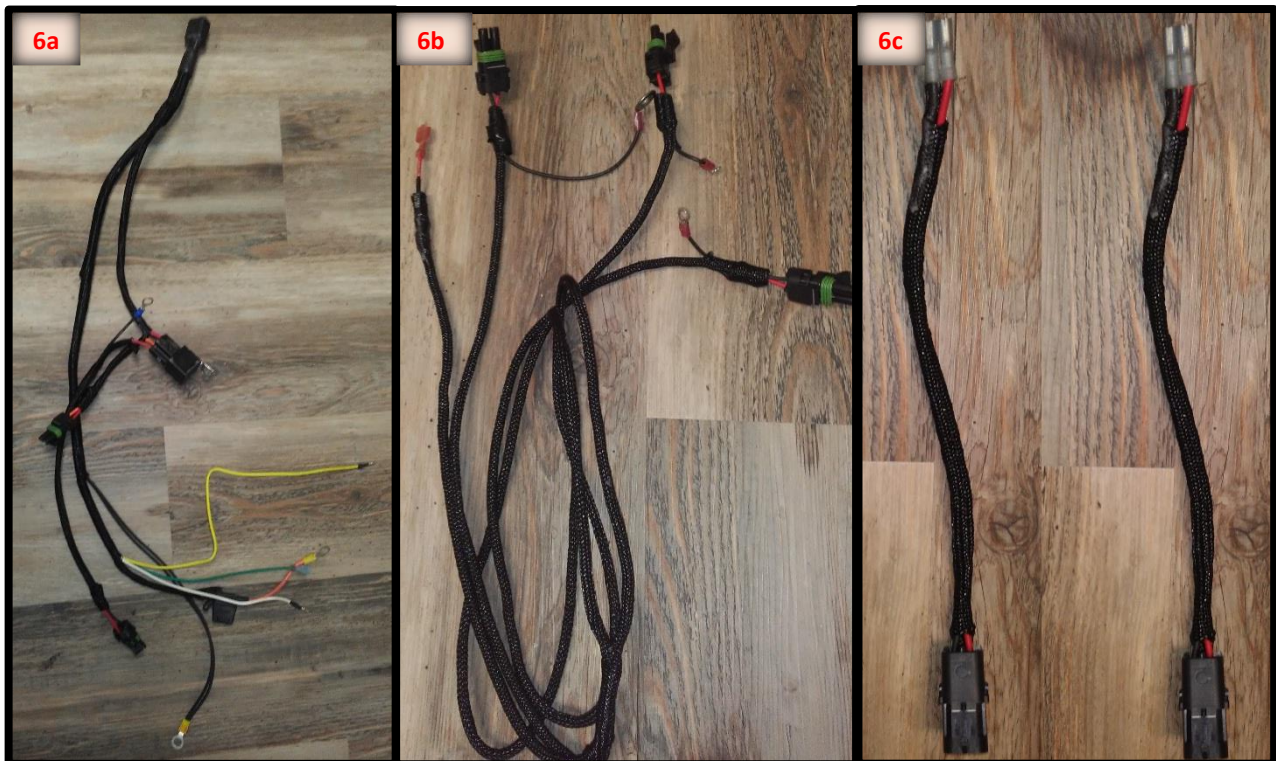
4. **Remove Front Light Harness**
  - a. Remove the **Ground Wires** for each light using the 3/8" socket with 1 1/2" extension and a Philips screw driver (nut is under frame)
  - b. *Unplug* each **Front Light Connector**.
  - c. *Cut Cable Tie* holding the harnesses to the frame (in front of Hydro Pump)



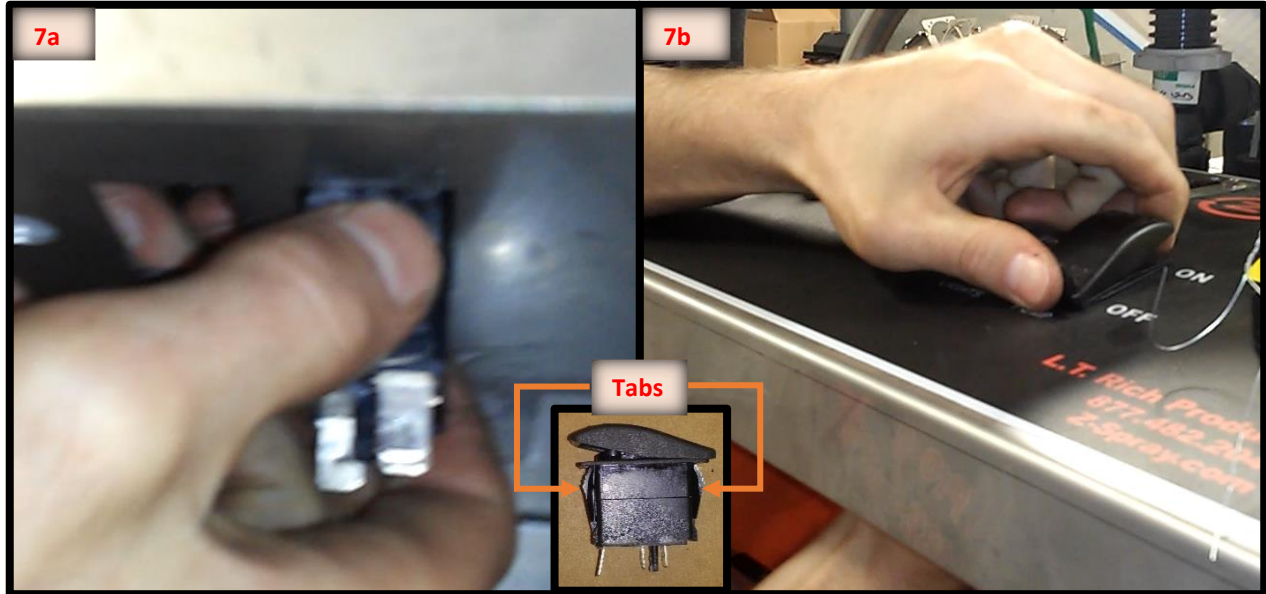
5. Detach Relay using the 8mm socket with 1 1/2" extension and a 3/8" wrench.



6. Remove the following harnesses
  - a. Ignition harness
  - b. Front Light Harnesses
  - c. Switch harnesses (2)

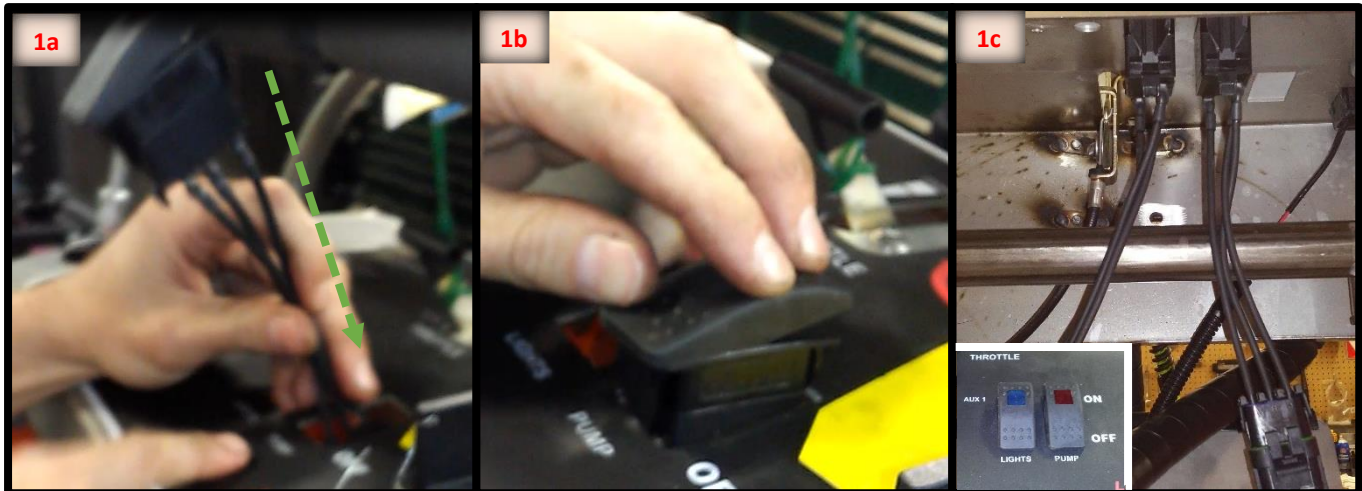


7. Remove the **Pump** and **Light** Switches
  - a. Press **tabs** on both sides of Light Switch
  - b. Pull **switch** from console while tabs are pressed in.
  - c. Repeat for **Pump** Switch

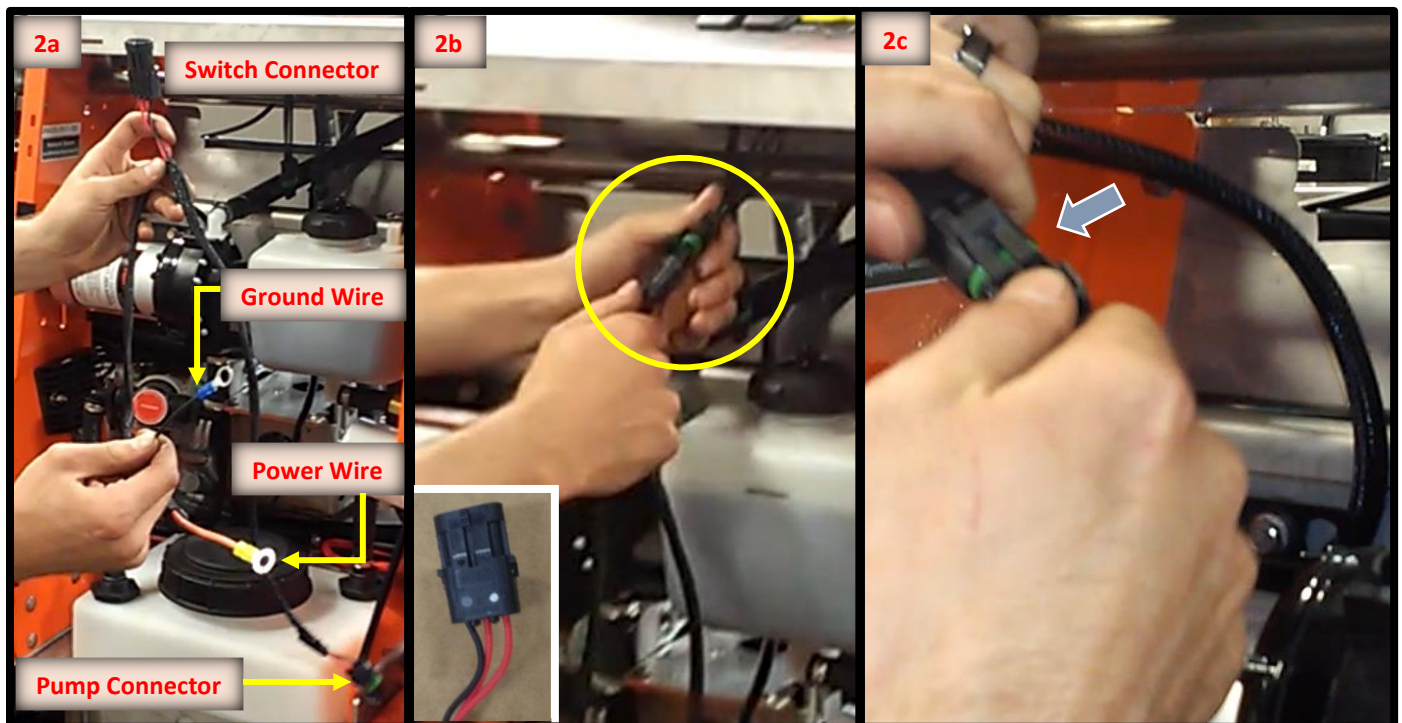


## INSTALL NEW HARNESS AND SWITCHES

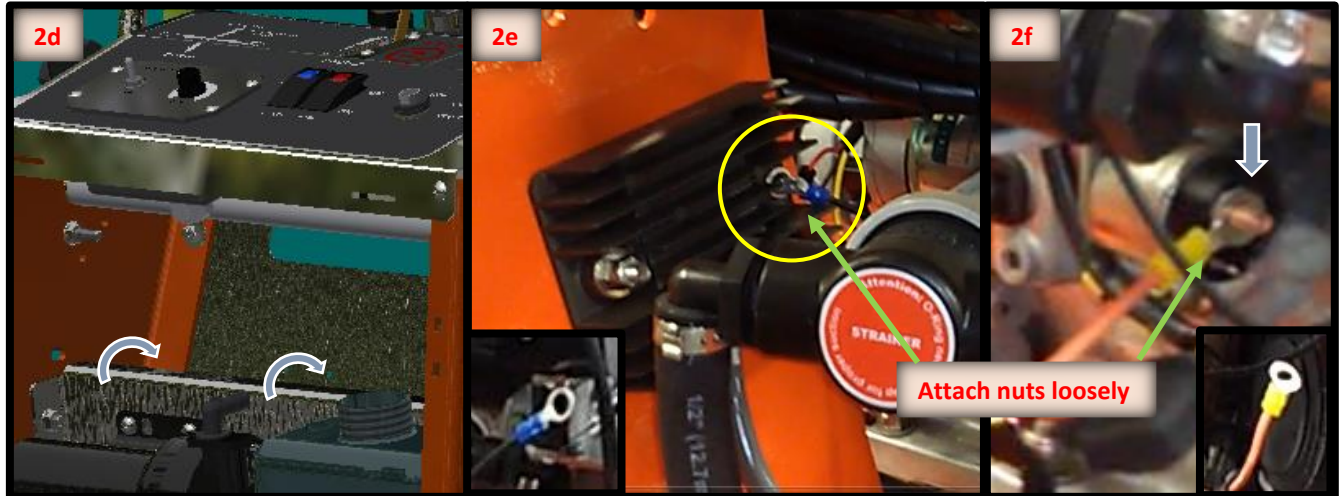
1. *Install Liquid Pump and Light Switches*
  - a. *Thread **wires** of the Red Rocker Switch through the opening labeled “PUMP”*
  - b. *Push the **switch** down until you hear a “click”*
  - c. *Repeat with the **Blue Rocker Switch** and the opening labeled “LIGHTS”*



2. *Install Liquid Pump Harness*
  - a. *Liquid Pump Harness Labels*
  - b. *Connect the **Switch Connector** to the Pump Rocker Switch (red)*
  - c. *Connect the **Pump Connector** to the Liquid Pump*

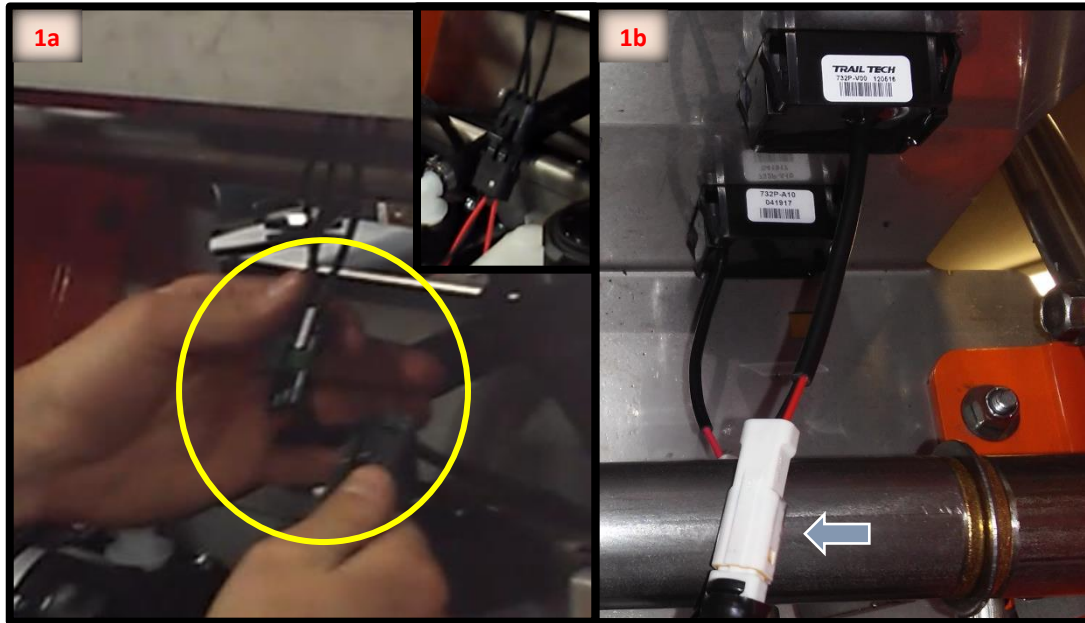


- d. *Route Power and Ground Wires* in between metal brackets of uprights
- e. *Connect the Ground Wire* to the right side of the Rectifier
- f. *Connect the Power Wire* to the solenoid post.

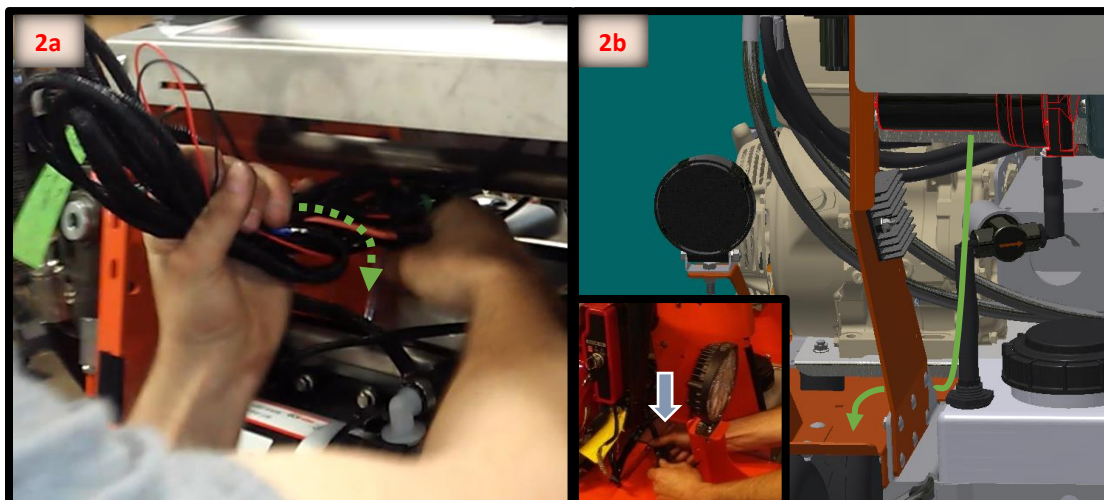


## INSTALL IGNITION HARNESS

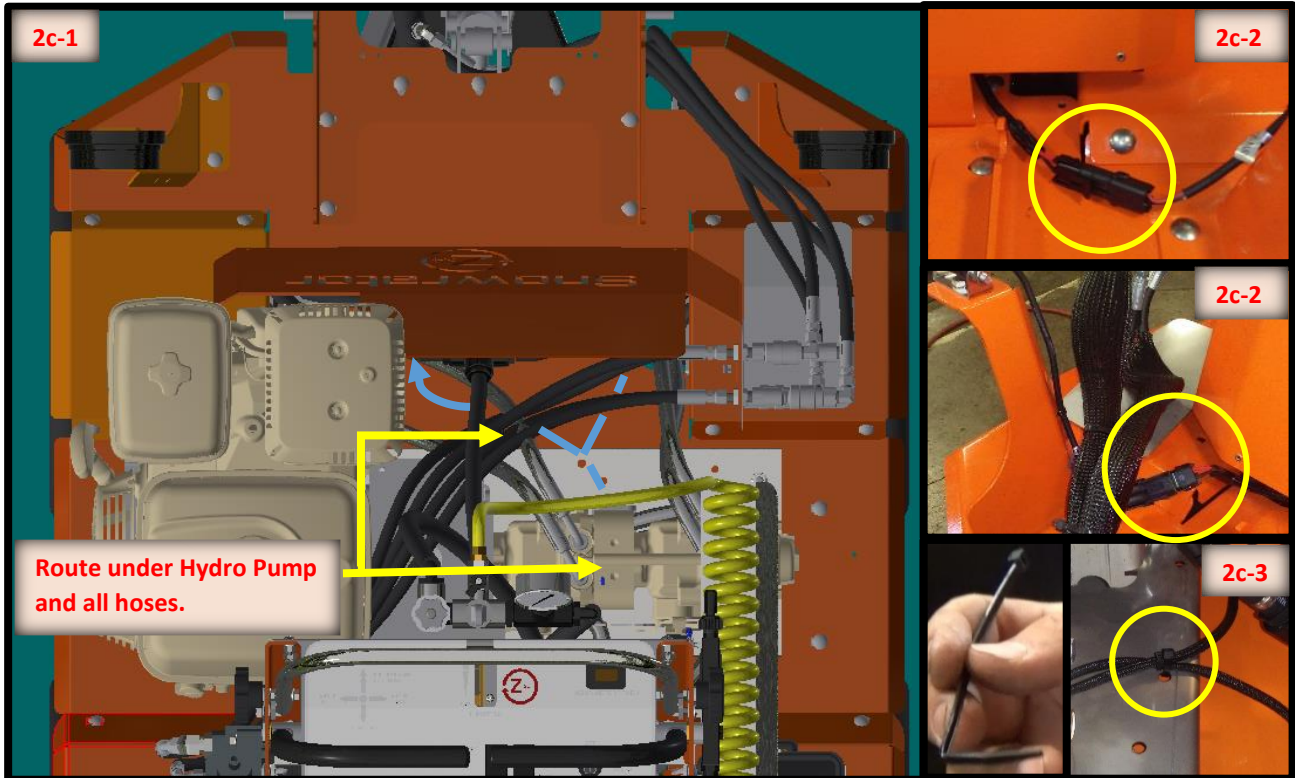
1. *Attach Console connections*
  - a. *Plug the Switch Connector to the Light Rocker Switch (blue)*
  - b. *Plug the Voltmeter Connector to the Voltmeter. If not used, fold together with a cable tie and tuck out of the way.*



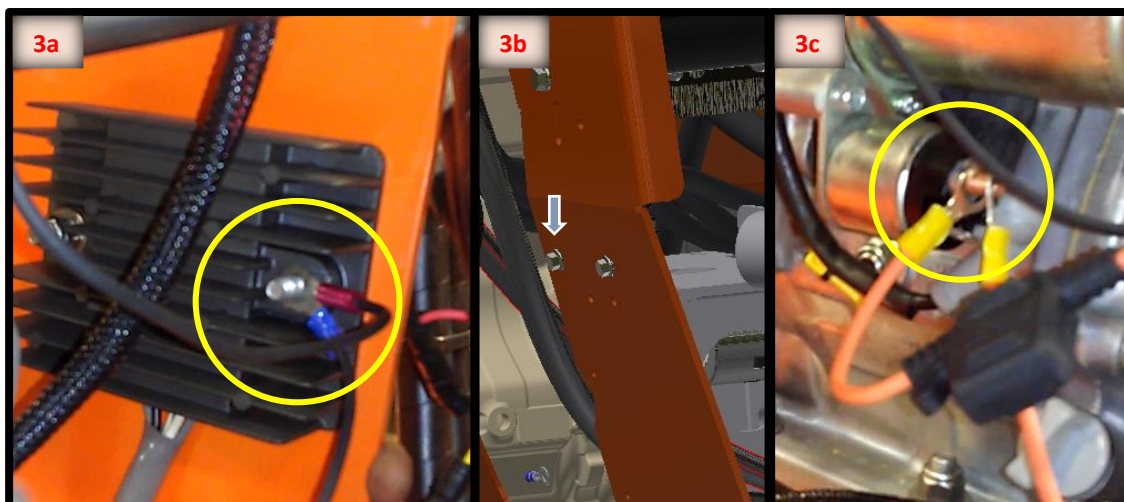
2. *Attach Light Connections*
  - a. *Route all other wires through Upright brackets.*
  - b. *Route Rear Light Connector to the left of the Upright and connect to Rear Light*



- c. Route the (2) two **Front Light Connectors** to the front of the machine.
- 1) Route under the **Hydro Pump** and all **Hoses**
  - 2) Connect a **Front Light Connector** to each Front light
  - 3) Bend **Cable Tie** into an "L" to attach cables to the frame

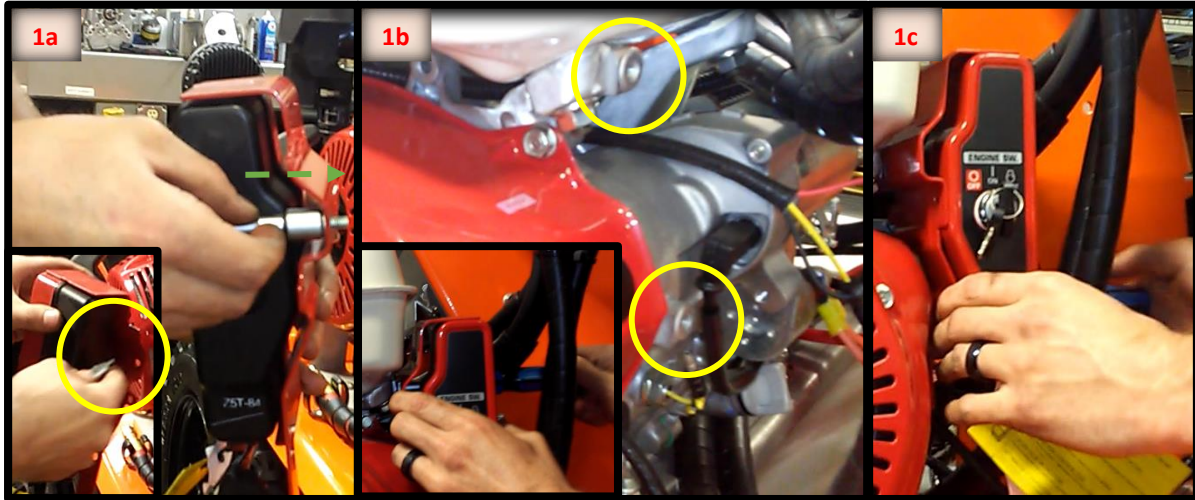


3. **Connect Power and Ground Wires**
  - a. Connect the **Ground Wire** to the right side of the Rectifier.
  - b. *Tighten nut* on Rectifier using the 10mm socket with a 1 1/2" extension and 3/8" wrench.
  - c. Connect the **Power Wire** to the Solenoid Post.



## KEYSWITCH AND HARNESS CONNECTIONS

1. *Attach Key Switch to the Engine*
  - a. *Insert an M6 x 3/8" hex bolt into the top hole of the Key Switch.*
  - b. *Mount to the top hole on the engine using the 10mm nut driver.*
  - c. *Repeat steps 1a and 1b with the bottom mounting hole.*

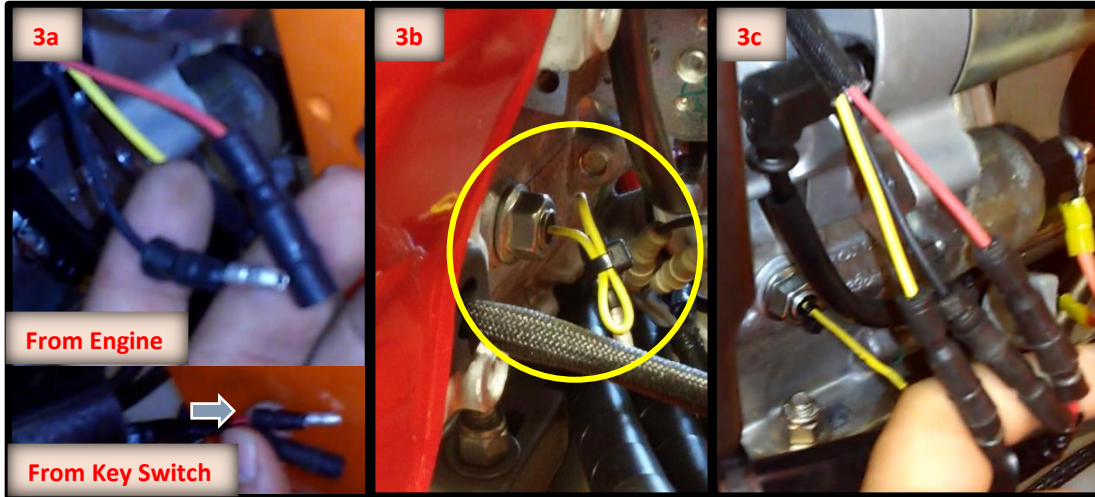


2. *Connect Rectifier Harness*
  - a. *Connect the white wire from Rectifier Harness to white wire on the Key Switch*
  - b. *Connect the black wire from Rectifier Harness to black wire on the Key Switch*
  - c. *Connect the two gray wires on Rectifier to gray wires from Engine*

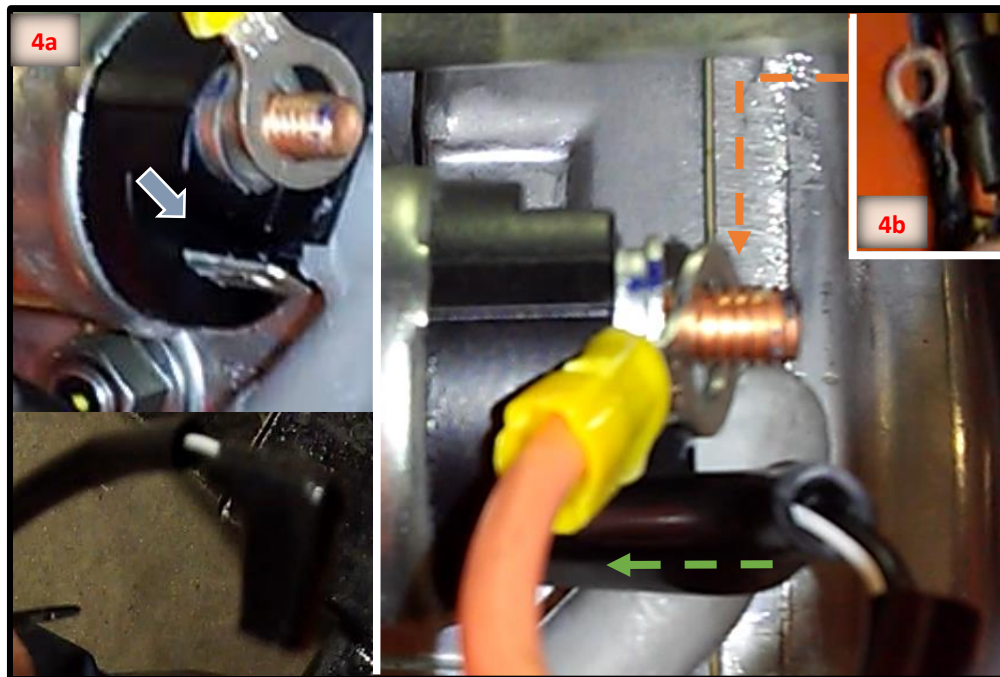




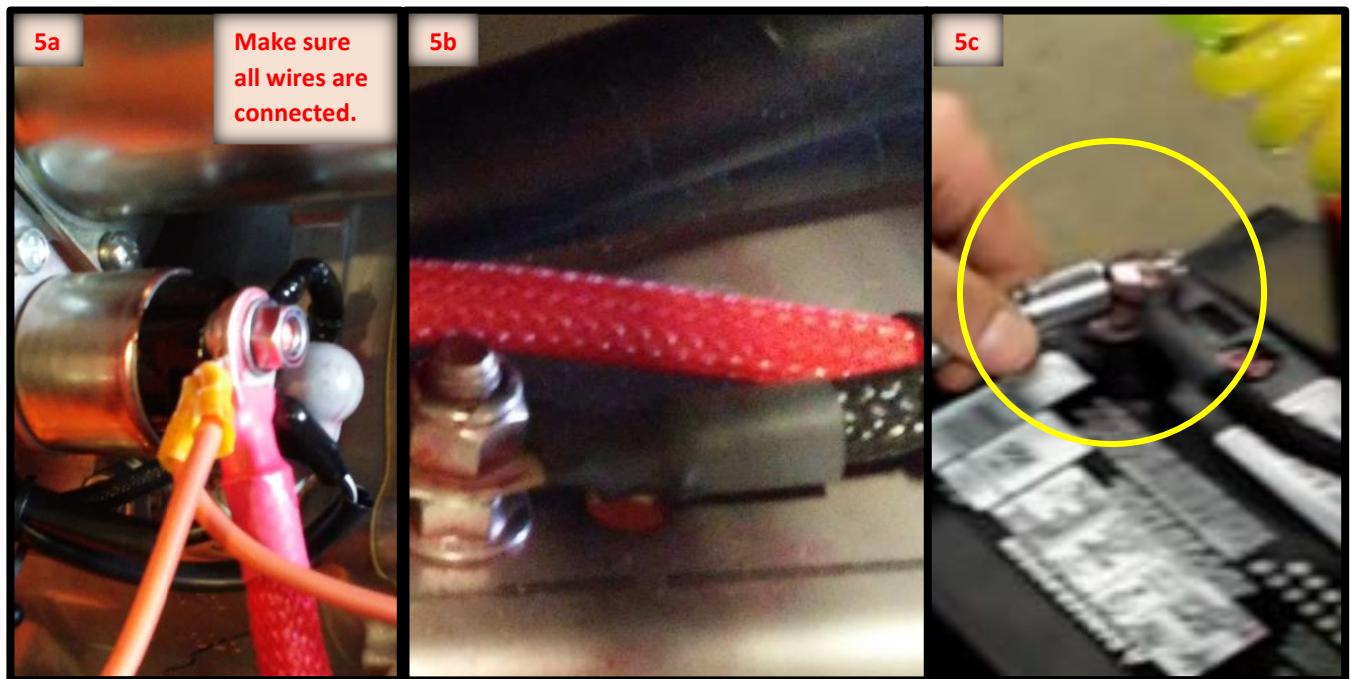
3. **Connect Engine Wires**
  - a. Connect **red** and **black** wires from the engine and Key Switch (match colors)
  - b. Connect **yellow** wire from top of engine to yellow wire cable tied to engine.
  - c. Completed connections



4. **Connect Key Switch to Solenoid**
  - a. Connect the **female blade connector** from the Key Switch to the Solenoid Blade Connector
  - b. Connect the **wire with the O-Ring** from the Key Switch to the Solenoid Post

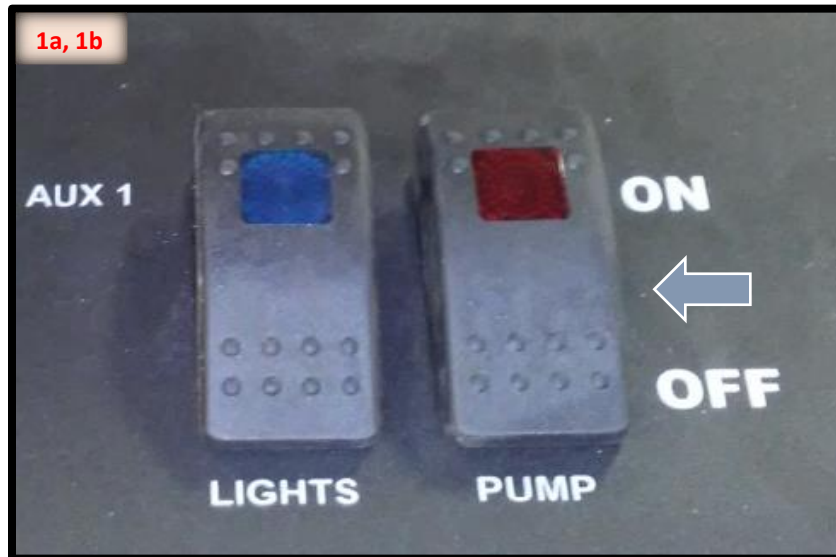


5. **Connect Battery Cables**
- a. *Connect the **Positive Battery Cable** to the Solenoid Post and tighten nut using 10mm socket and 1 1/2" extension*
  - b. *Connect the **Negative Cable** to the Center ground post and tighten nut with 1/2" wrench.*
  - c. *Connect the **Negative Cable** to the Battery and tighten nut using 10mm socket and 1 1/2" extension*

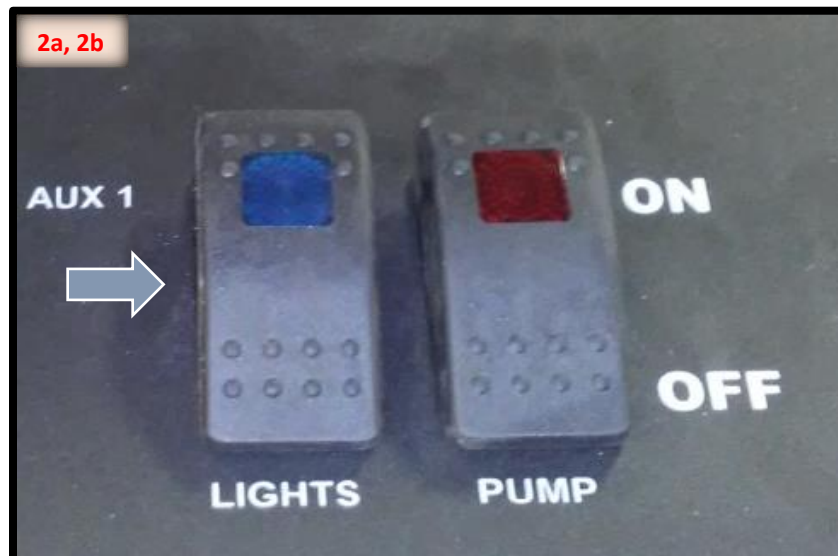


## TEST

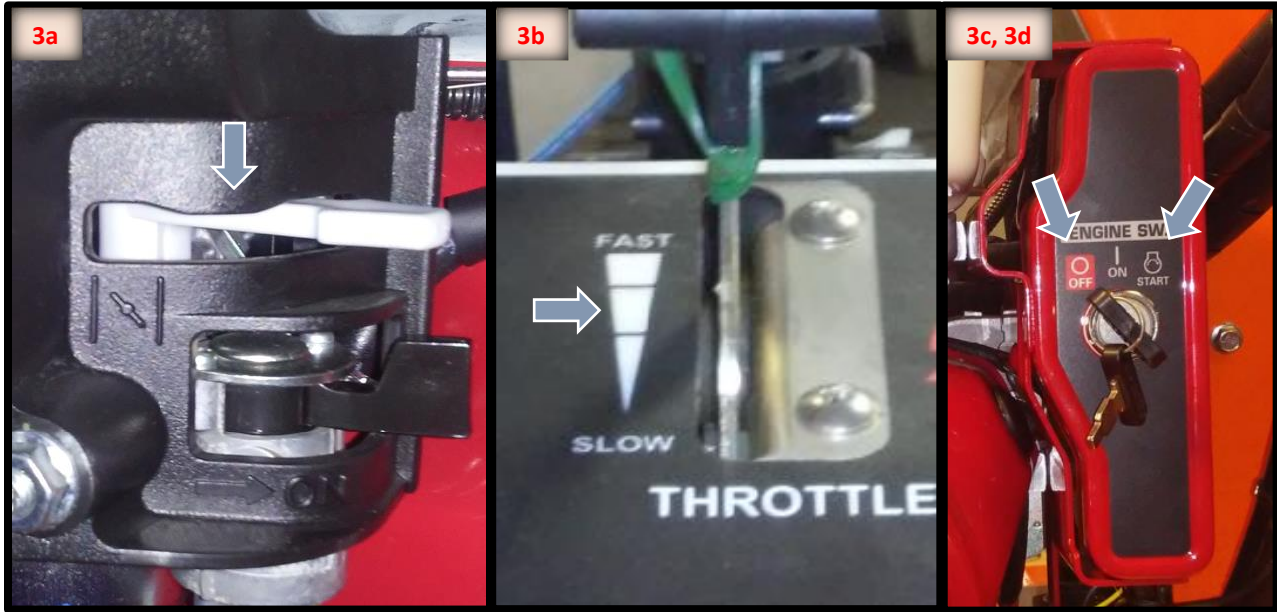
1. Liquid Pump
  - a. Press the **Pump Switch** and listen for the sound of the Liquid Pump running.
  - b. Turn off the **pump**.



2. Lights
  - a. Press the **Light Switch** and verify the Front and Back lights turn on.
  - b. Turn off the **lights**.

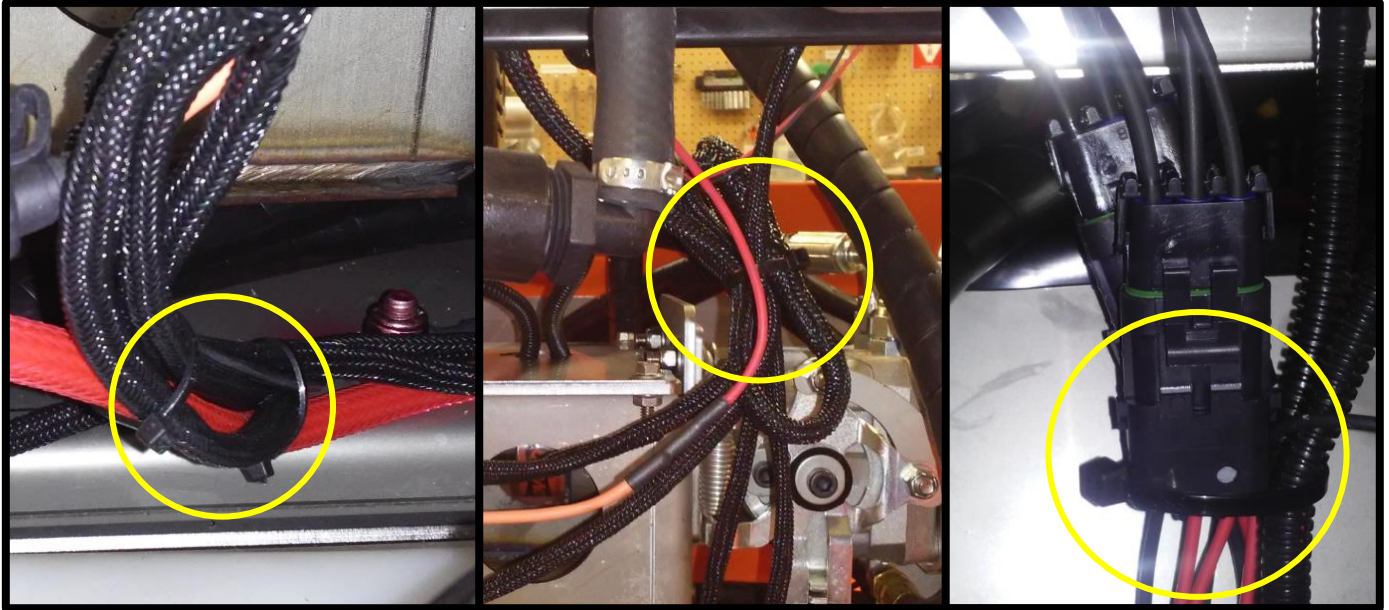


3. Key Switch
  - a. *Adjust Choke* halfway
  - b. *Adjust Throttle* halfway
  - c. *Turn on the Engine* using the Key Switch and verify it starts.
  - d. *Turn off Choke* and then the Engine

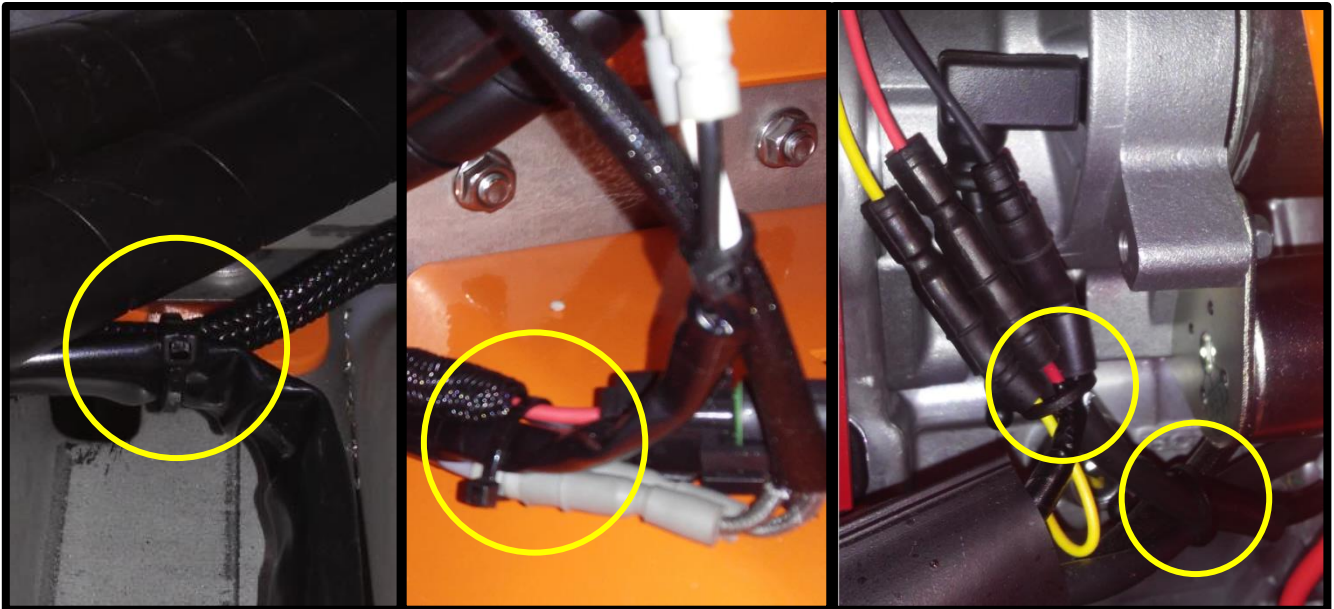


## CABLE MANAGEMENT

### 1. Ignition, Switch and Pump Harnesses



### 2. Rectifier Harness, Rear Light, Engine Wires



For any questions please contact us at toll free (877) 482-2040 Mon-Fri 8 a.m. to 4:30 p.m.