

# Operation, Install & Parts Manual

## Model JPS1720

### Pivoting Spout

D-180919CMA01B  
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D-180918CMA01B

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### Contact Information

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## **Statement of Limited Warranty**

### **Class III Warranty**

#### **Parts Only**

Hillco warrants its Class III products to be free from defects in material and workmanship for a period of twelve (12) consecutive months following the warranty start date.

The warranty start date for Hillco Class III products is the date of the invoice, or the first date of use, whichever is earliest. Once the warranty period has begun, it cannot be stopped or interrupted.

Hillco warrants genuine Hillco replacement parts and components to be free from defects in material and workmanship for a period of ninety (90) consecutive days following the Hillco invoice date, or the remainder of the original equipment warranty period, whichever is longer.

Hillco's obligation under this parts warranty shall be limited to repairing or replacing, any part(s) that, in Hillco's judgment, shows evidence of such defect, to the original purchaser. This parts warranty does not cover any related labor associated with replacing parts deemed to be defective.

### **Limitations to Warranty**

This warranty does not cover:

- 1) Any product damaged by accident, abuse, misuse, negligence, or improper maintenance.
- 2) Any unauthorized product alteration or modification.
- 3) Any unauthorized repairs made with parts other than genuine Hillco parts unless specifically authorized by Hillco.
- 4) Any repairs performed by anyone other than Hillco or an authorized Hillco dealer unless specifically authorized by Hillco.
- 5) Any claims directly resulting from improper installation, except those installations performed by Hillco.
- 6) Any labor costs associated with the defective part(s).

### **Warranty Procedure**

Hillco Class III Warranty Registration Card must be completed and submitted by retail customer within thirty (30) days of purchase.

All warranty work must be performed, and claims submitted, within thirty (30) days of the occurrence of the claim and within the warranty period.

All parts removed during warranty repair should be held for a period of sixty (60) days after the warranty claim has been submitted to Hillco.

Hillco reserves the right to either inspect the product at the original retail purchaser's location, or the authorized Hillco's dealer's location; or require it to be returned to Hillco, transportation charges prepaid, for inspection.

To file a warranty claim, email [support@hillcotechnologies.com](mailto:support@hillcotechnologies.com) with the following information:

- Your full name and phone number
- Proof of purchase
- Description of issue
- Serial number and/or part number(s) of items needing replaced, and
- If available, include any photos that can assist to describe the issue.

### **Limitation of Liability**

Hillco makes no express warranties other than those, which are specifically described herein. Any description of the goods sold hereunder, including any reference to buyer's specifications and any descriptions in circulars and other media published by Hillco is for the sole purpose of identifying such goods and shall not create an express warranty that the goods shall conform to such description.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. There are no implied warranties of merchantability or fitness for a particular purpose. This warranty states Hillco's entire and exclusive liability and buyer's exclusive remedy for any claim for damages in connection with the sale or furnishing of Hillco products, their design, suitability for use, installation, operation, or for any claimed defects herein. HILLCO WILL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, NOR FOR ANY SUM IN EXCESS OF THE PRICE RECEIVED FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.

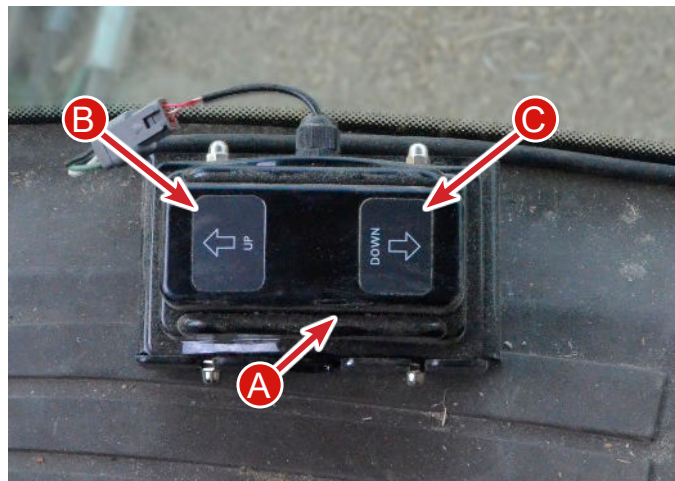
Neither representative of Hillco nor any dealer associated with Hillco has the authority to change the terms of this warranty in any manner whatsoever, and no assistance to purchaser by Hillco in the repair or operation of any Hillco product shall constitute a waiver of the conditions of this warranty, nor shall such assistance extend or revive it.

Hillco reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold.

## OPERATION

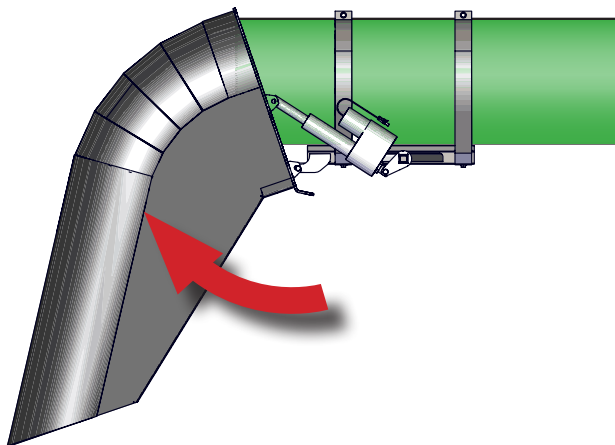
The pivoting spout is controlled with a foot switch (A) mounted on the floor of the cab.

The pivoting spout rotates 37° directing the stream both further away and closer to the combine than the standard John Deere unloading auger tip.



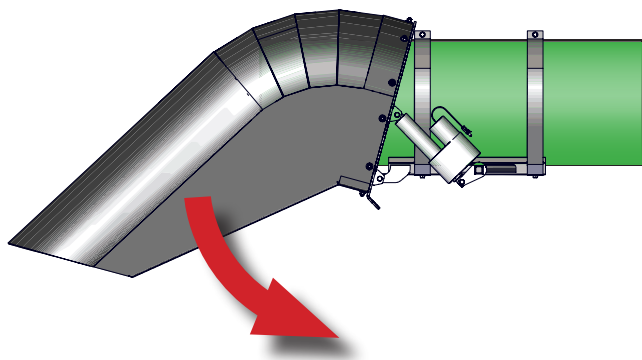
To rotate the pivoting spout up to direct the grain stream further away from the combine press the UP arrow (B).

Stop pushing the switch when you have either reached the desired position or the spout no longer moves up.



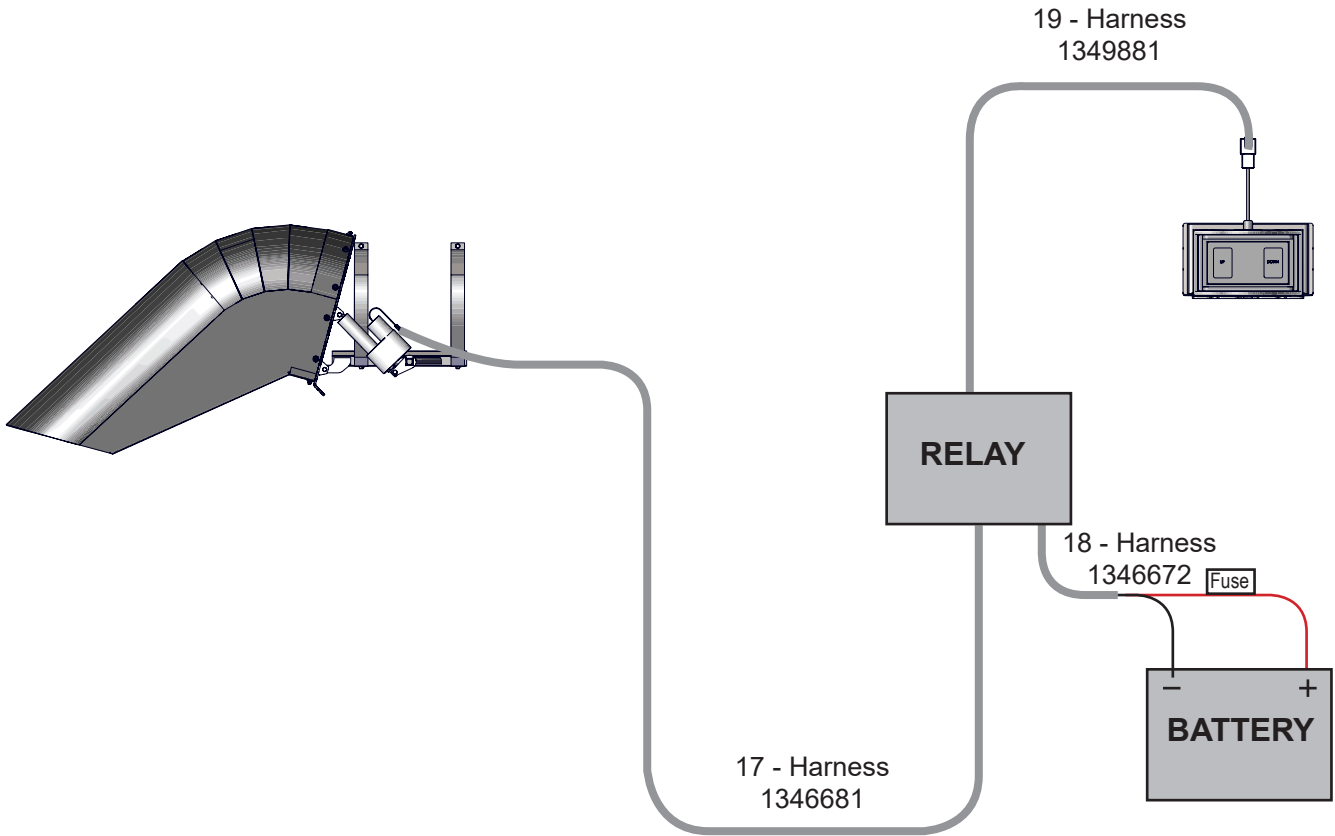
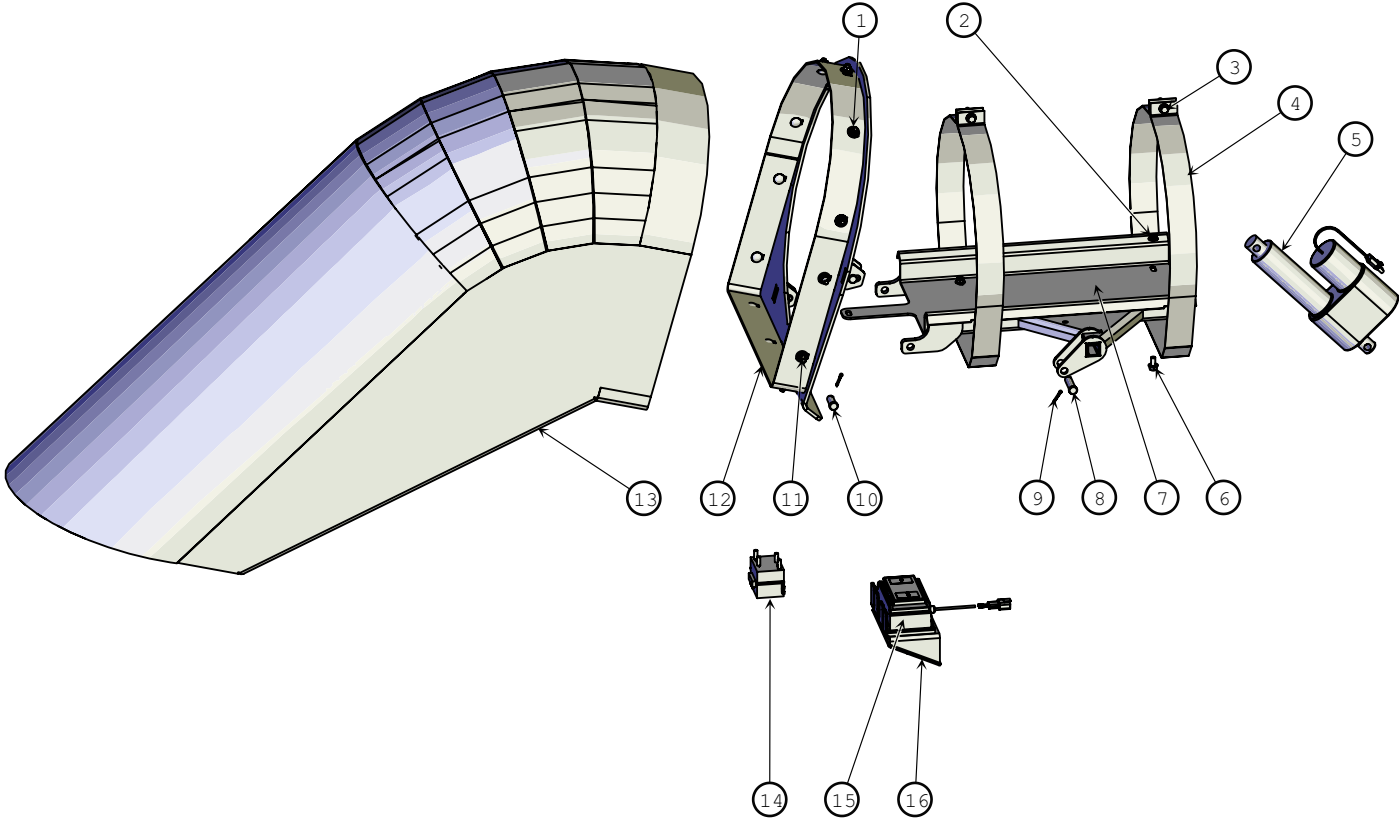
To rotate the pivoting spout down to direct the grain stream closer to the combine press the DOWN arrow (C).

Stop pushing the switch when you have either reached the desired position or the spout no longer moves down.



Note: If the spout is at its maximum either in or out and the switch is still pressed the actuator will ratchet. Constant ratcheting will shorten the life of the actuator motor and drive components. Constant ratcheting can also cause the fuse to blow.

PARTS



BOM ID	Part Number	Qty	Description
1	105.005	12	WASHER,FLT 5/16
2	123.008	18	NUT,HX,FL,CL10 M8
3	122.008.040	2	BOLT,HX,FL,CL10.9 M8 X40
4	1343042	2	STRAP, MOUNTING, JD17
5	1349841	1	ACTUATOR, RAISE/LOWER, FAST
6	121.008.016	4	BOLT,HX,CL 8.8 M8 X 16
7	1342954	1	MOUNT, CHANNEL, FLEXIBLE SPOUT JD17
8	141.008.032	2	PIN, CLEVIS 1/2" X 2"
9	142.002.016	4	PIN, COTTER 1/8 X 1
10	141.008.022	2	PIN,CLEVIS 1/2 X 1-3/8" ZINC
11	163.008.025	12	BOLT,CARR,CL8.8 M8X25
12	1342856	1	PIVOT, RING MOUNT
13	1378352	1	SPOUT, MOLDED, PIVOTING
14	155853	1	RELAY, 100/50 AMP, 12V, DC, REVERSE POLARITY
15	1349851	1	SWITCH, FOOT
16	1351833	1	MOUNT, FOOT, SWITCH
17	1346681	1	ACTUATOR HARNESS
18	1346672	1	POWER HARNESS
19	1349881	1	SWITCH BOX HARNESS
ns	105.004	3	WASHER,FLT 1/4
ns	114.#10.008	2	SCREW,PHM,CH 10-24X1/2
ns	122.008.020	2	BOLT,HX,FL,CL10.9 M8X20
ns	122.010.030	2	BOLT,HX,FL,CL10.9 M10X30
ns	123.008	9	NUT,HX,FL,CL10 M8
ns	123.010	2	NUT,HX,FL,CL10 M10
ns	141341	40	WIRE TIE, BLK, 3/16 X 14.5
ns	155922	1	DECAL, HILLCO, PIVOTING SPOUT
ns	163.008.016	1	BOLT,CARR,CL8.8 M8X16
ns	198.008.016	6	BOLT,CARR,CL10.9 M8X20
ns	119.#10	2	NUT,HX,FL,SERR 10-24
ns	155775	4	VELCRO, 1"X1" SELF STICK SQUARE HOOK AND LOOP
ns	138781	1	STRAIN RELIEF,BLACK,
ns	142121	1	NUT,STRAIN RELIEF,BLK

## Installation

Start the installation by removing and discarding the spout tip off the end of the unloading auger (A).

Either slide back or remove light strap (C).

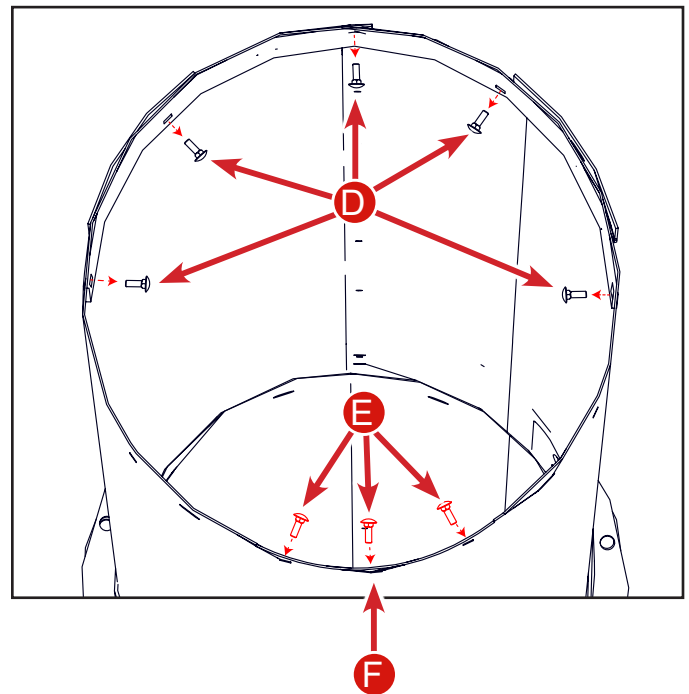
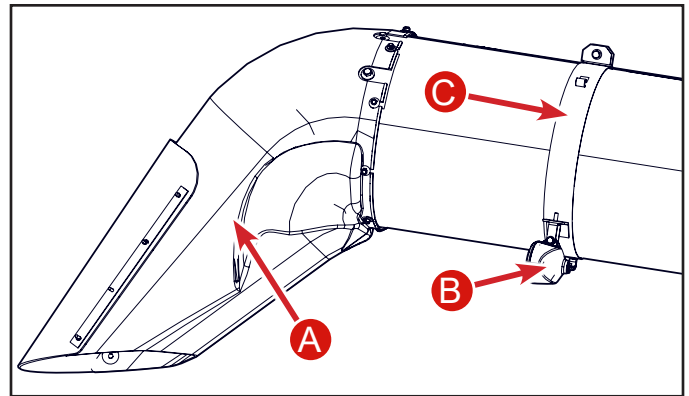
The light can be mounted to the pivoting spout or the whole original strap can be moved back. If you chose to remove the strap the light will be reinstalled later.

Remove and discard the carriage bolts around the top of the auger as shown in (D).

Remove the bolts for the grain saver (E) and replace with the smaller carriage bolts M8x16 and M8 nuts. These bolts are located in bolt bag 4. They need to be shorter bolts so that they do not come in contact with the pivoting spout. Depending on model there may be 6-9 bolts used for (D) & (E).

Note: On certain combine models it may be necessary to drill hole (F). Use a 3/8 drill bit. Do not put a bolt in this hole yet as that is used to locate the spout mount.

Flip carrier bearing support bolts (G) so the head is to the outside. If not there may be clearance issues between the bolt and the Hillco pivoting spout.

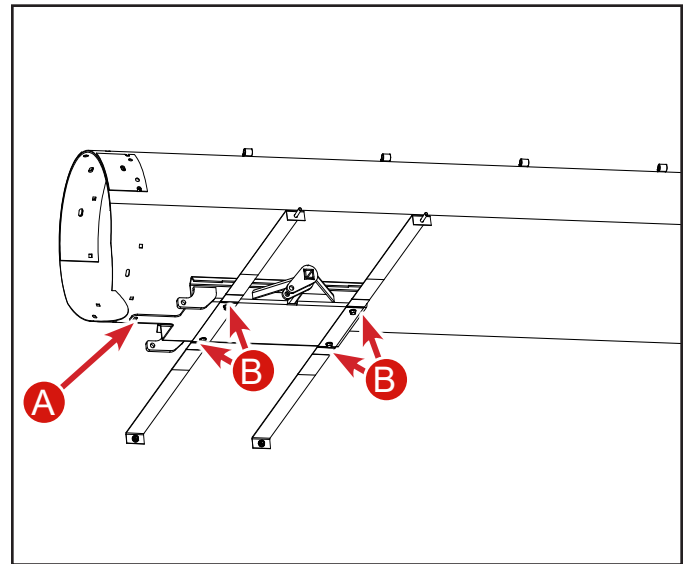


If you installed a bolt into the bottom hole remove the nut that secures the grain saver to the bottom of unloading auger tube (A). This is used as a locator for the pivoting spout mount.

Install straps to the bottom tray prior to mounting to auger. Use 4 M8x16 bolts and M8 Flange nuts (B).

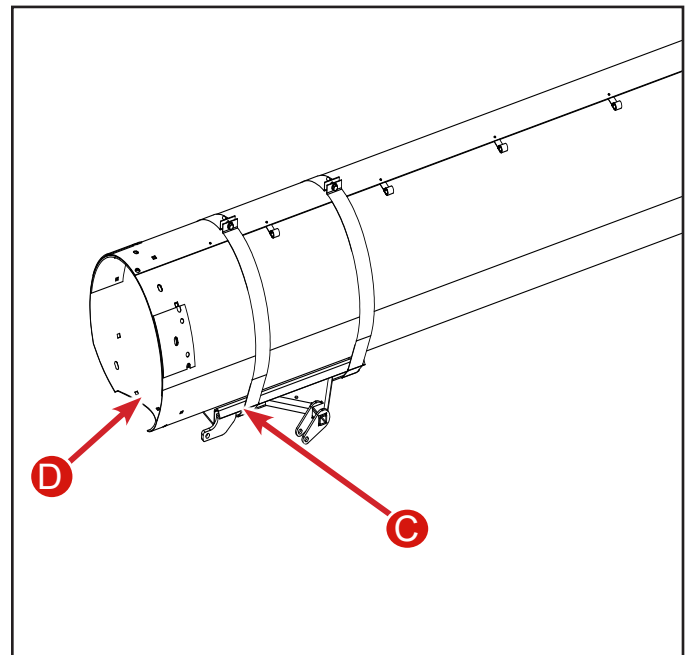
Bolt A - found in Bolt Bag 4

Bolt B - found in Bolt Bag 2



Install the bottom mount (C). Install over bolt for grain saver. Reinstall original nut (D).

It may be necessary to temporarily support the mount with a ratchet strap until the metal straps can be installed.

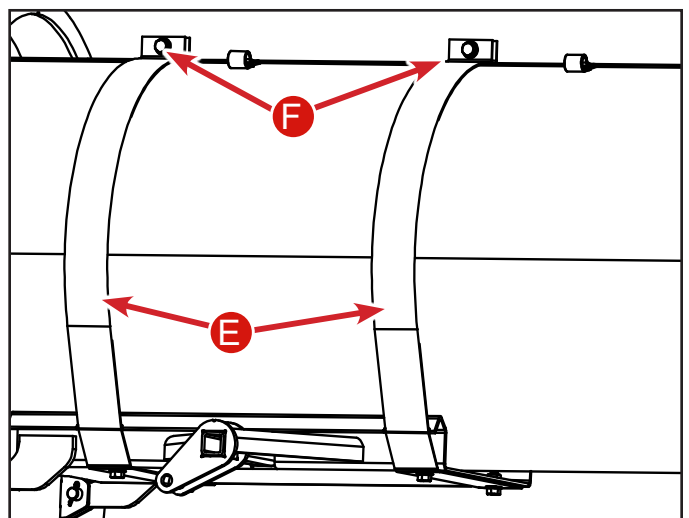


Install the straps (E) over the tube. The straps secure to the mount with (2) M8X40 bolts and flange nuts (F).

Bolt F - found in Bolt Bag 2

Install tip: Use ratchet straps to temporarily secure the mount to the auger.

Install tip: Use channel locks to pull tabs (F) together to get bolts through both tabs.





Install the spout tip (A) on the ring (B).

Install with (12) - M8x25 Carriage Bolts, 5/16 washer, and M8 Nut from bolt Bag #1.

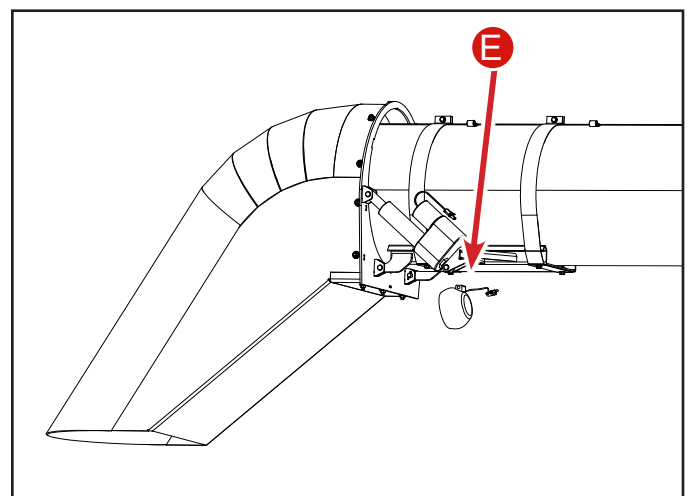
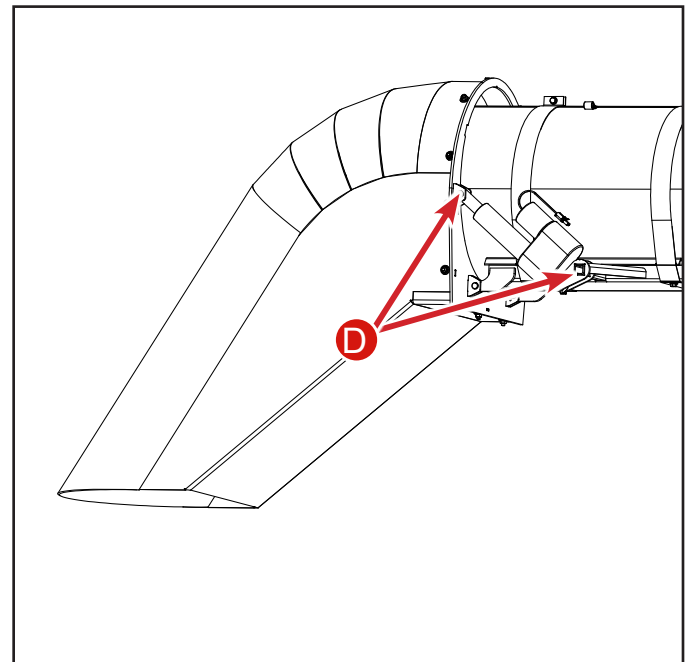
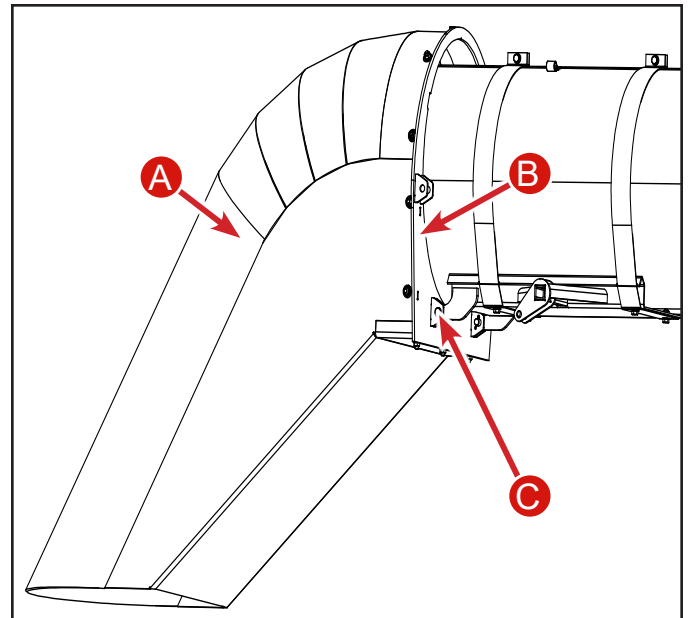
Slide spout tip into the mount and install clevis and cotter keys (C).



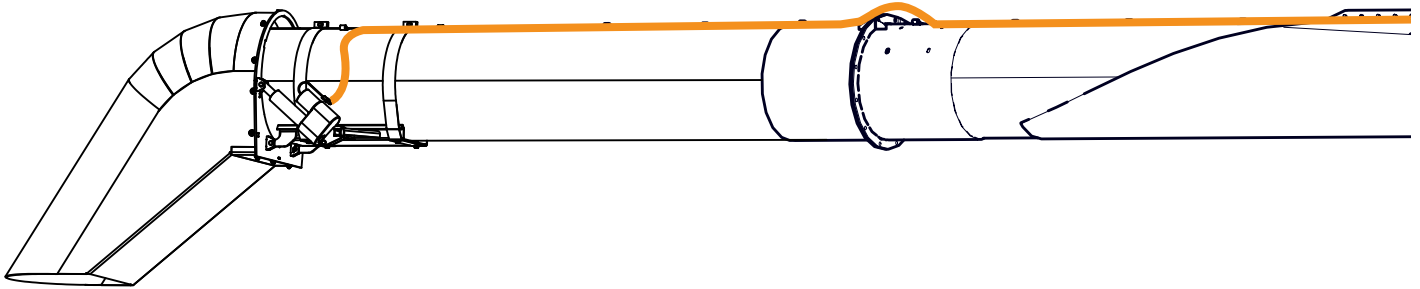
Spout pins & Actuator Pins are in Bolt Bag 3.

Install the actuator (D) as shown using the longer pins supplied. Secure in place with the clevis pins and cotter keys.

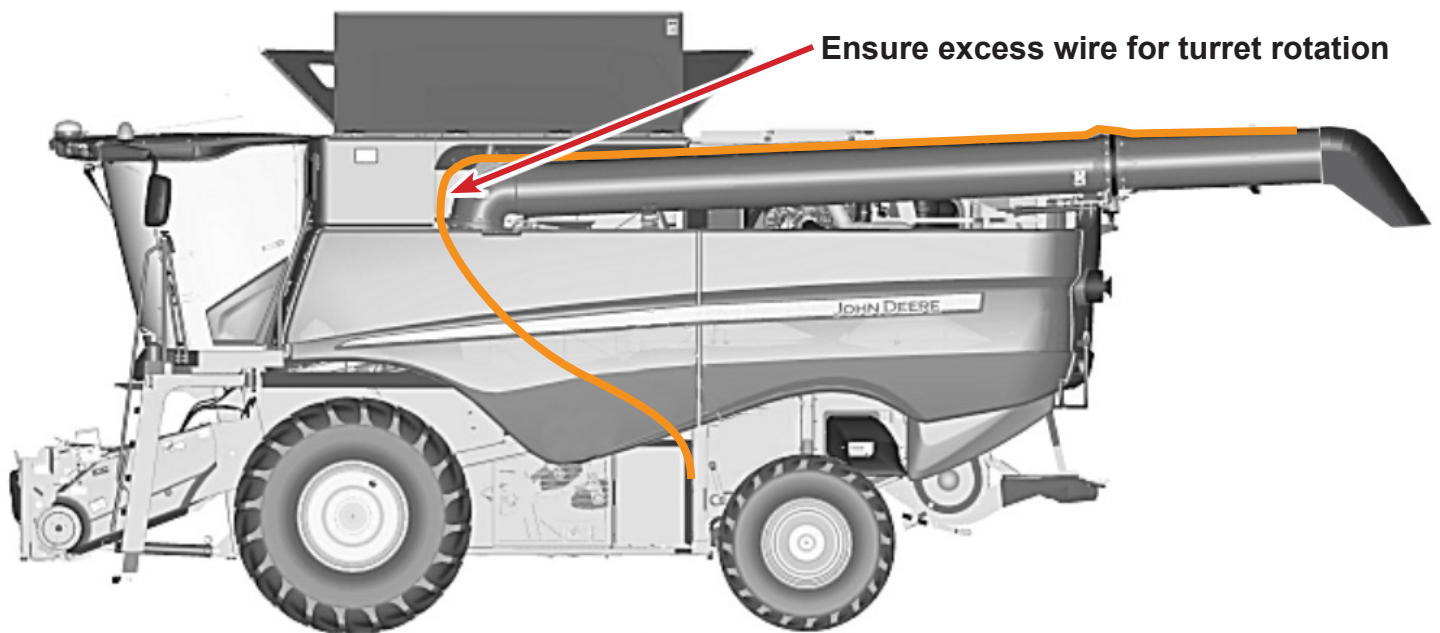
Remount the light (E) to the hole in the mount near the actuator.



Locate wiring harness 1346681. Install the end with the 2 pin weather pack connector to the plug on the actuator. Route the harness on top of the unloading auger and zip tie it to the light harness.



### S680, S690, S780 & S790 Routing



Route wires from unloading auger to batteries where actuator controller will be mounted. Zip tie harness as needed. Ensure there is enough wire around the turret where it rotates so the wire does not get bound up when the auger is swung out.

### Controller Installation

Locate reverse polarity actuator control (155853).

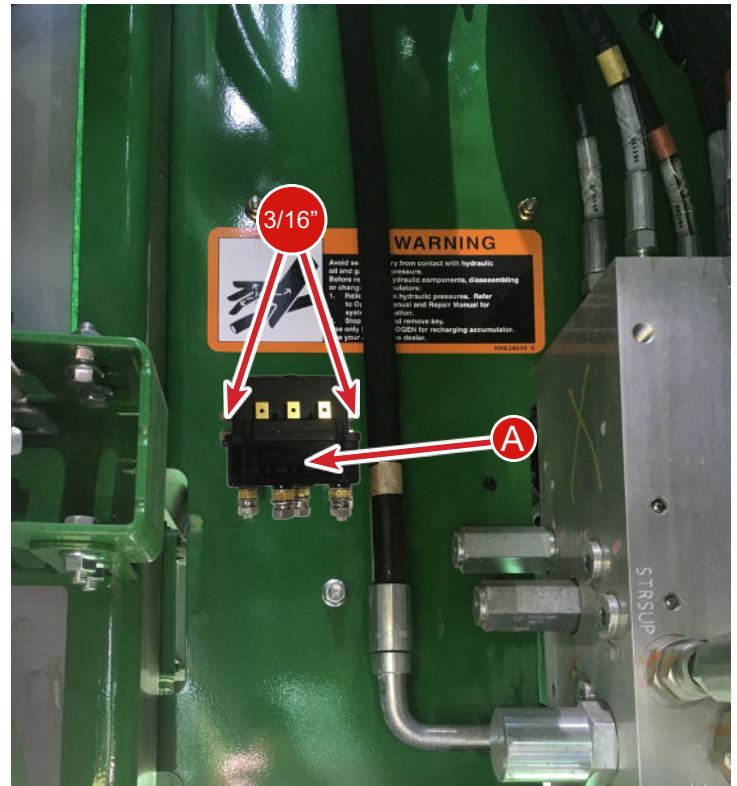


Mount the reverse polarity actuator control (A) (155853) above the battery as shown.

Drill two 3/16" holes and secure box to support frame with two #10 x 1" bolts and #10 nuts.

#10 bolts and nuts are in bag 4.

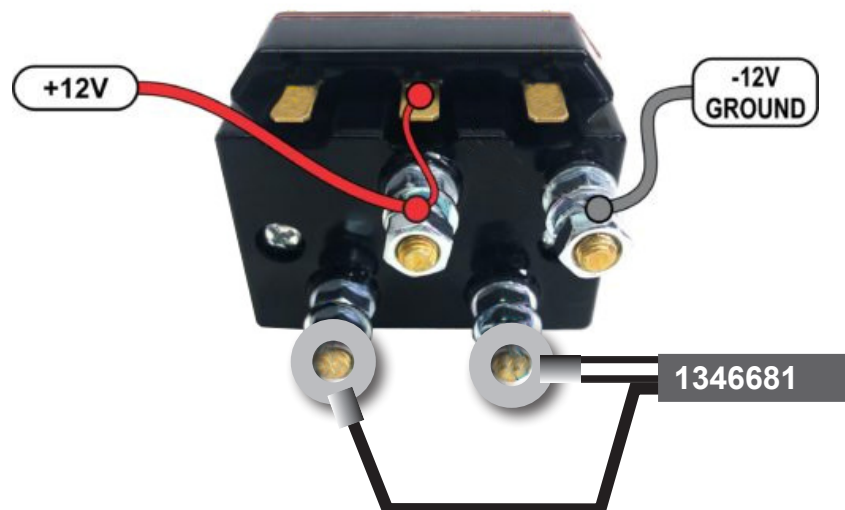
Note: Be careful when drilling holes and there are other electrical components on the opposite side of that metal panel.



Route harness 1346681 to the actuator control. Cut off excess wire and crimp on ring terminals. The white wire and black wire need to be connected to the two bottom terminals. If after installation is complete the spout pivots the wrong direction these wires can be switched.

Note: It may be easier to switch the wires from the foot switch to reverse the rotation.

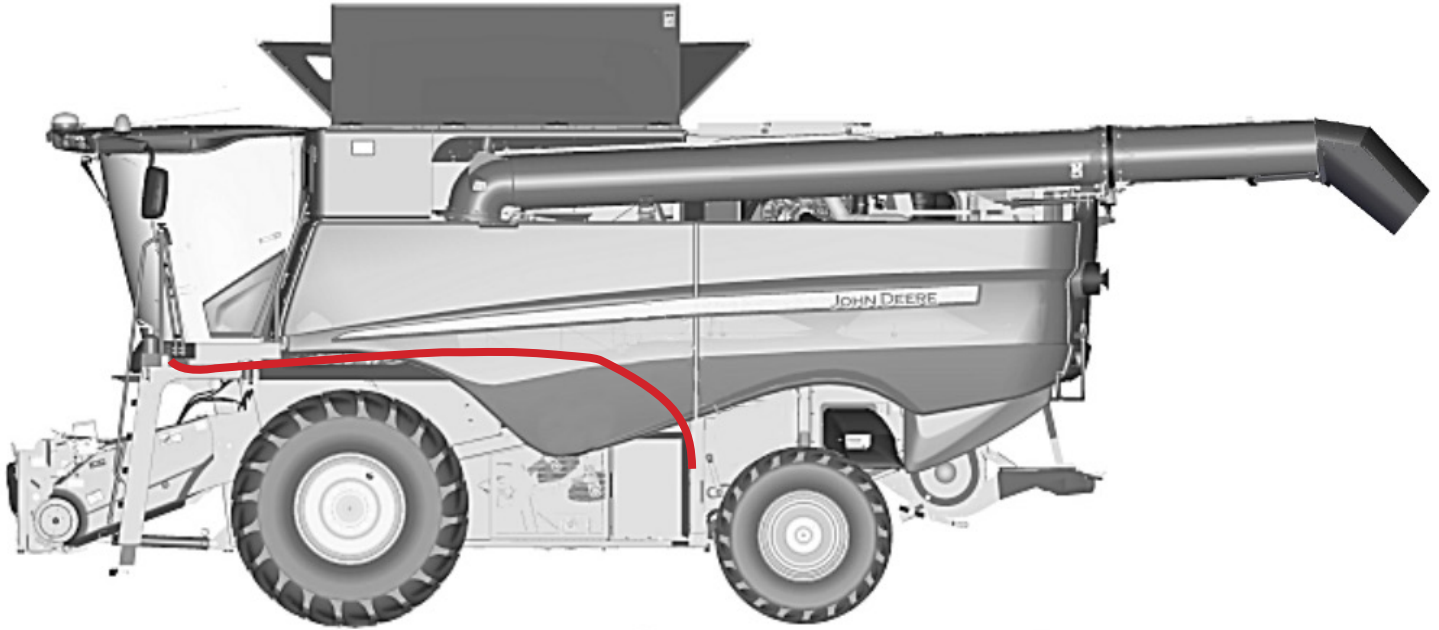
If the red jumper wire (1349831) is not connected it must be installed from (+) post with a ring terminal to the middle spade as shown.





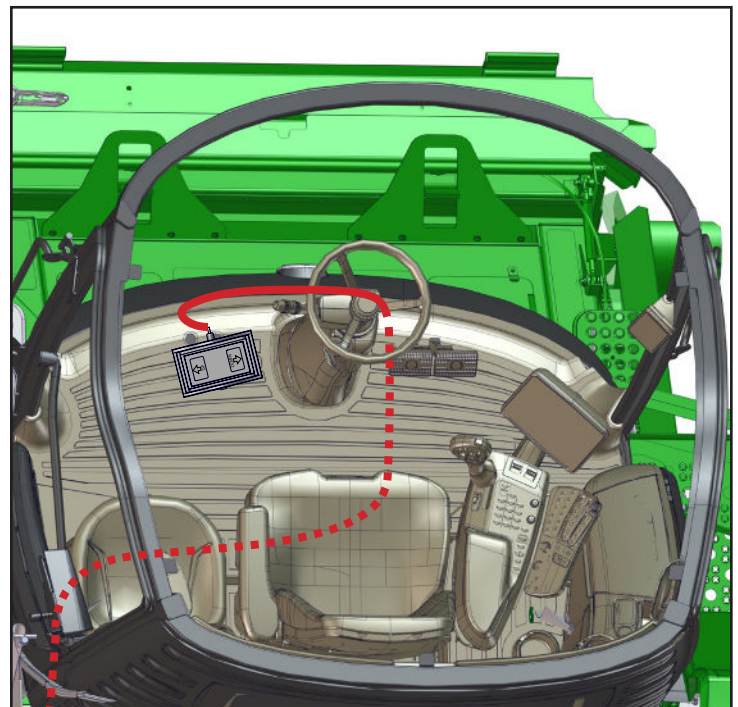
## Foot Switch Installation

Locate Harness 1349881. Route the end with the 3 pin connector to the bottom of the cab near the steering wheel from the controller by the battery. The controller end will have two female spades and a ring terminals.



Pull up the floor liner to the right of the steering wheel and there will be a small knockout hole. Remove knock out. Insert 1349881 up through the floor and route under floor mat towards front window.

Locate the foot switch. Sit in the seat and place the switch in a convenient spot for you to operate it with your left foot. Use the provided velcro tape to secure foot switch to floor mat. Connect foot switch to harness 1349881.

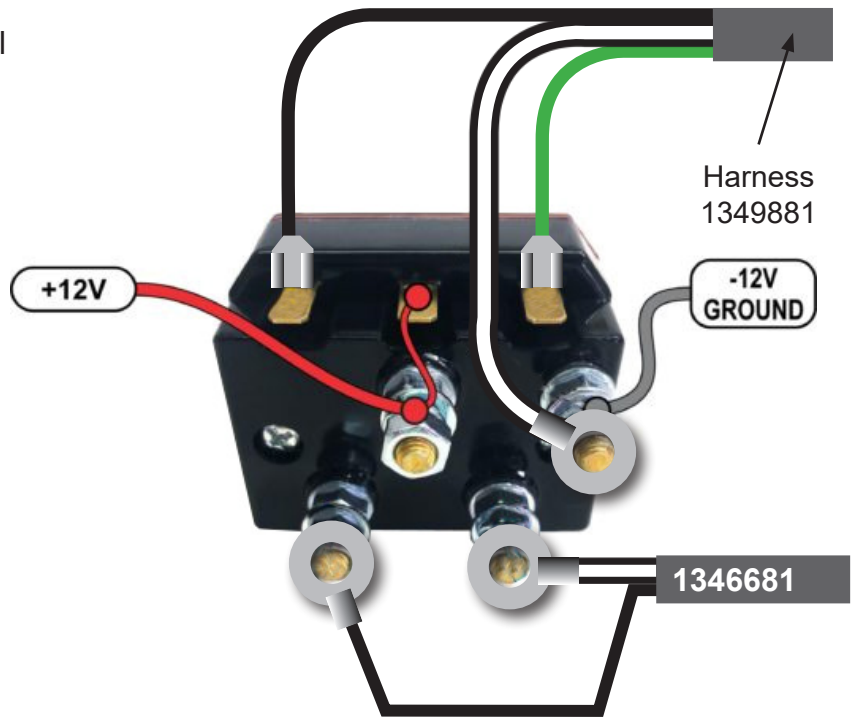


The opposite end of harness 1349881 will connect to the controller.

Connect the female spade on the green wire to the far right male spade.

Connect the ring terminal on the white wire to the negative post.

Connect the female spade on the black wire to the far left male spade.



### Power Harness

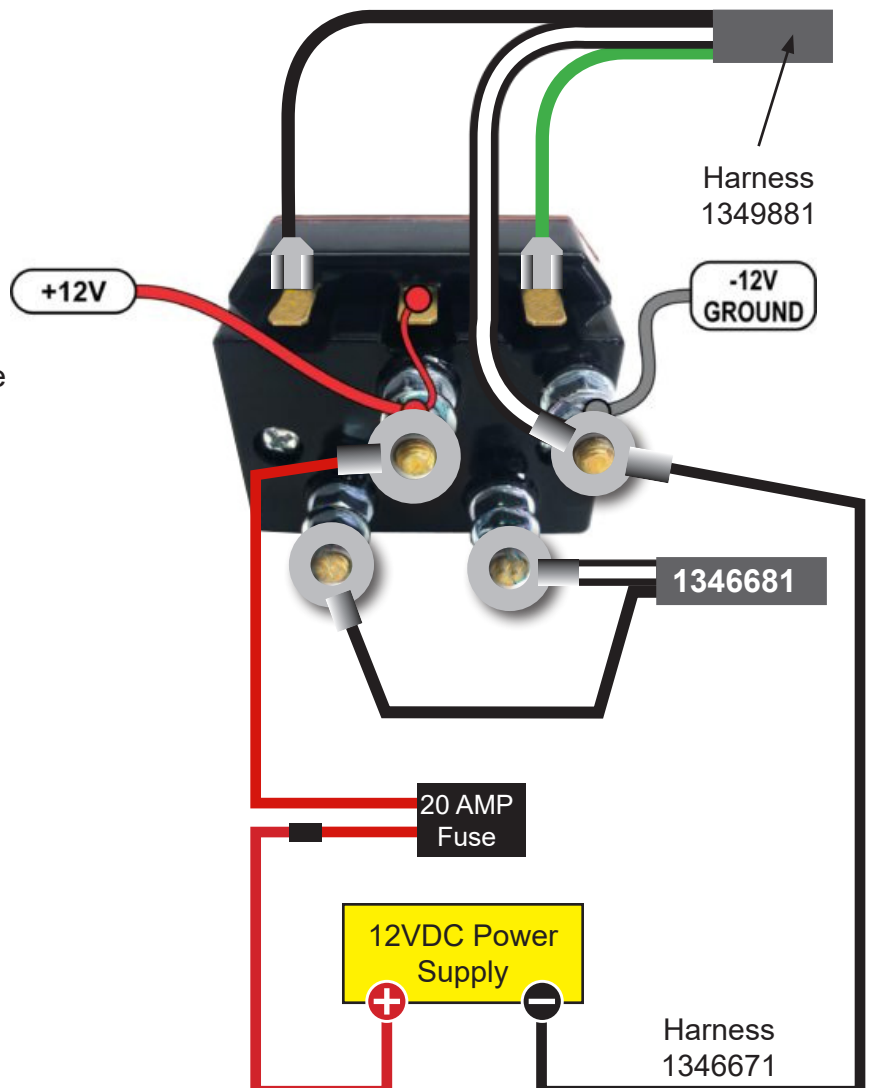
Locate Harness power harness 1346671.

Connect the orange wire with the 20 amp fuse to the positive terminal on the controller.

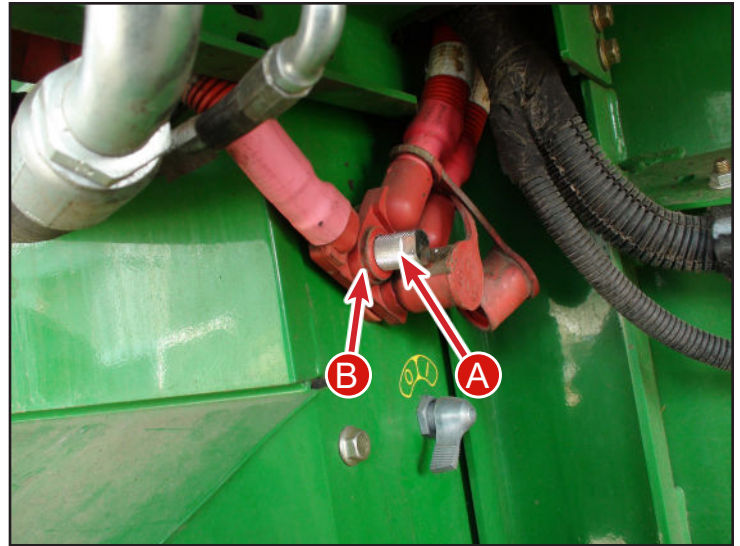
Connect the black wire with to the negative terminal on the controller. Route harnesses to battery.

Install harness such that the 20 Amp fuse is as close to the battery as possible.

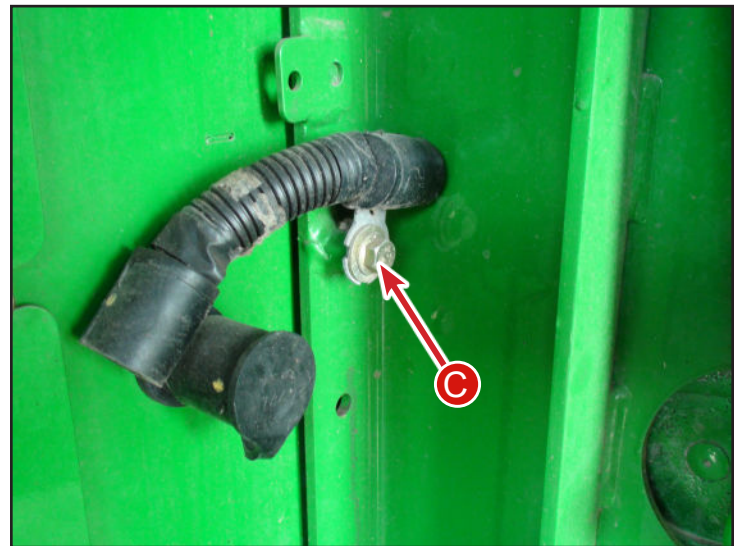
See next page for connecting to battery.



Remove the stud (A) on the power terminal and install the power wire behind the existing terminal (B). Reinstall stud.

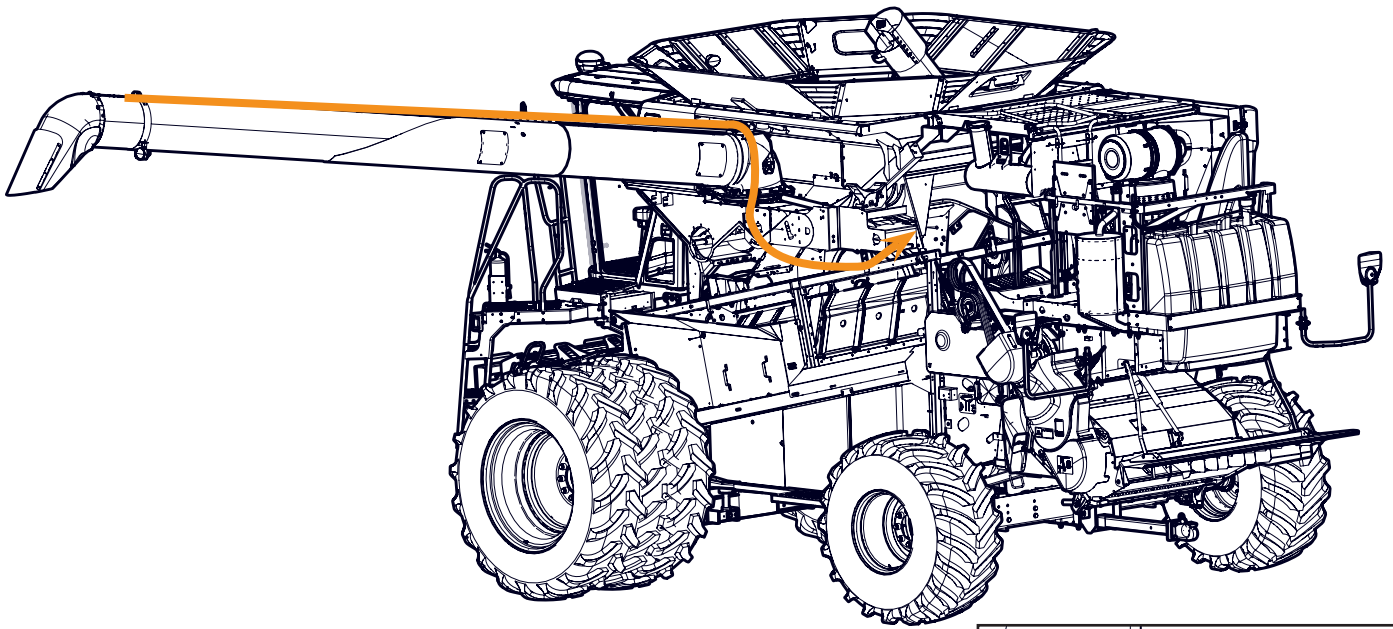


Route the black ground wire down to the grounding stud. DO NOT secure ring terminal to the stud under the black cap but instead to exposed bolt (C). If it is connected to the stud under the cap the battery disconnect will not power off the spout pivot.





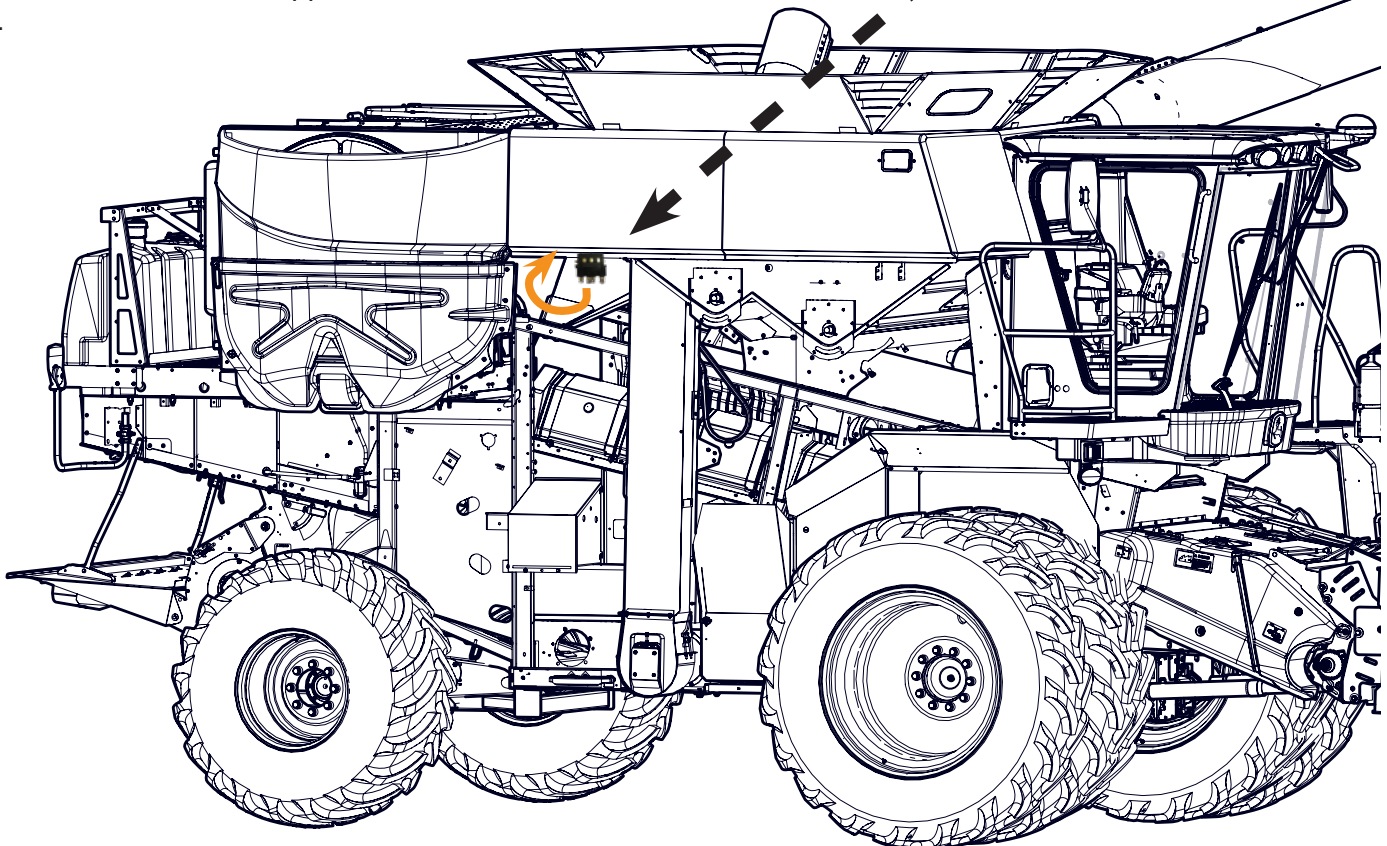
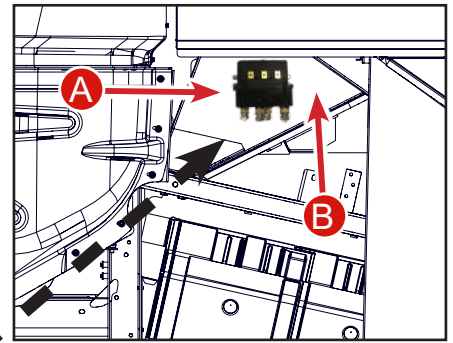
## 60, 70 Series & S650, S660 & S670 Wiring Harness Routing

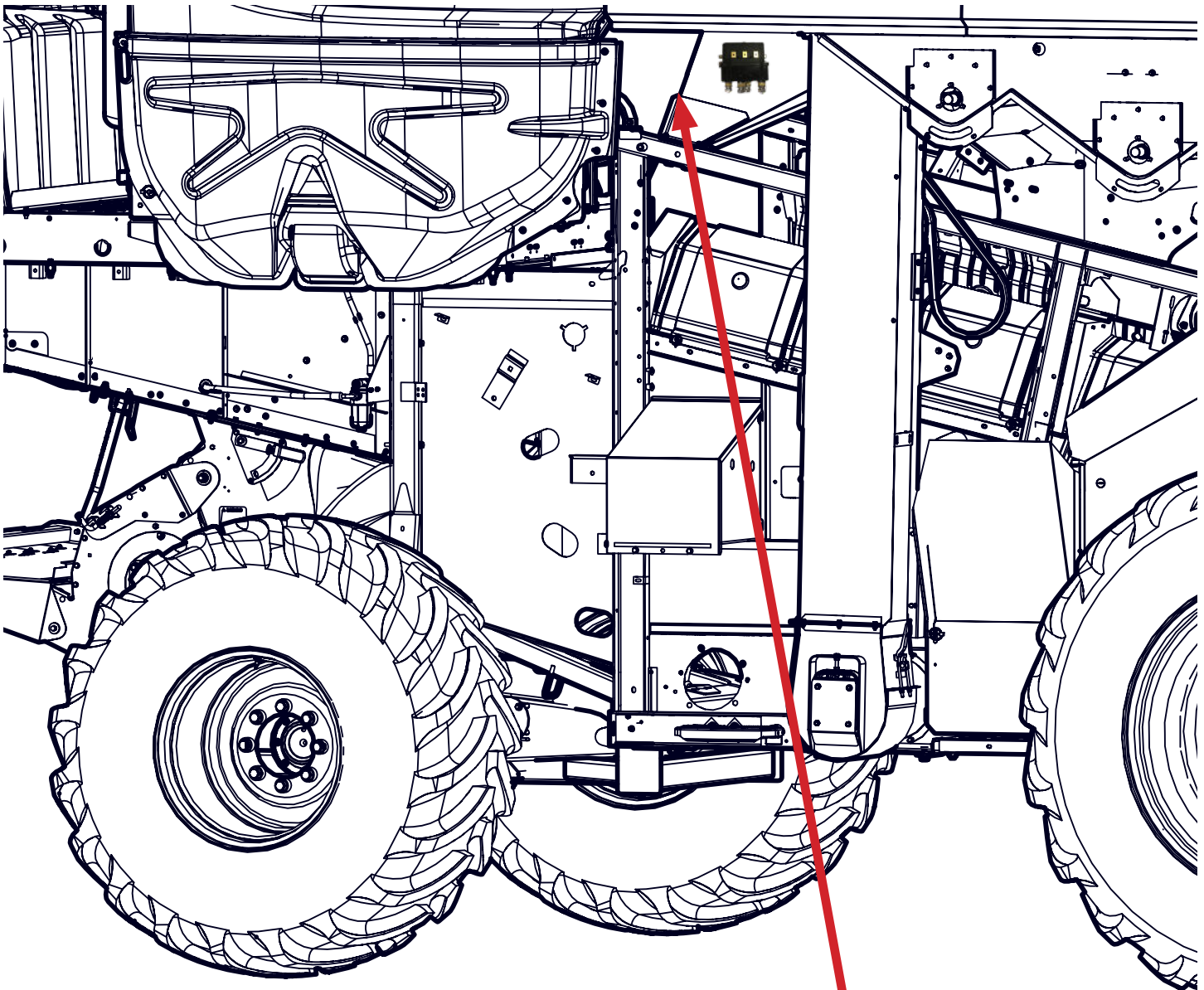


Route harness 1346681 from the base of the unloading auger turret back towards the engine deck. Route to the other side of the combine between the engine deck and the grain tank. Leave enough wire around turret for rotation.

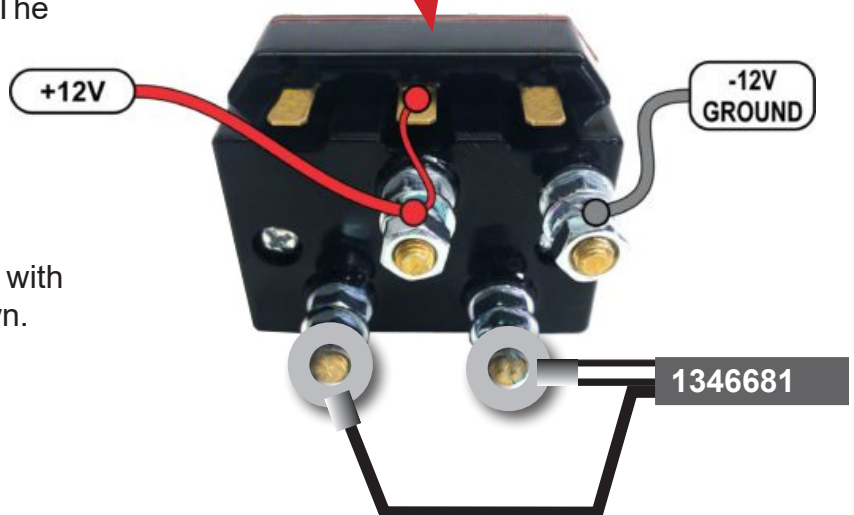
Locate box 155853. This box contains the remote, control box and an extra battery.

Mount the control box (A) on the grain tank support (B). Drill two 3/16 holes and secure box to support frame with two #10 x 1" bolts and #10 nuts.





Route harness 1346681 to the actuator control. Cut off excess wire and crimp on ring terminals. The white wire will secure to M1 Terminal. The Black wire will secure to the M2 Terminal.

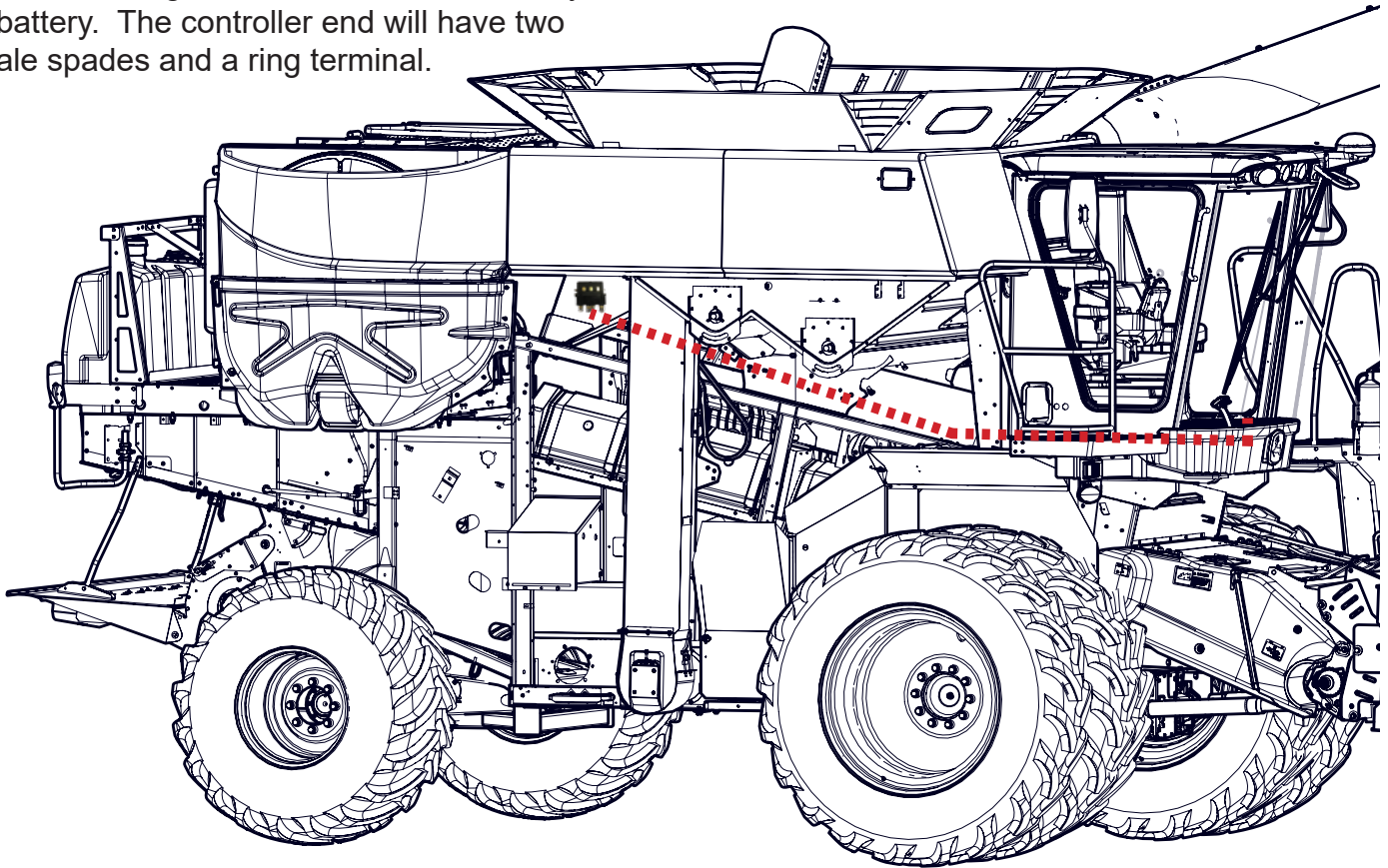


If the red jumper wire (1349831) is not connected it must be installed from (+) post with a ring terminal to the middle spade as shown.

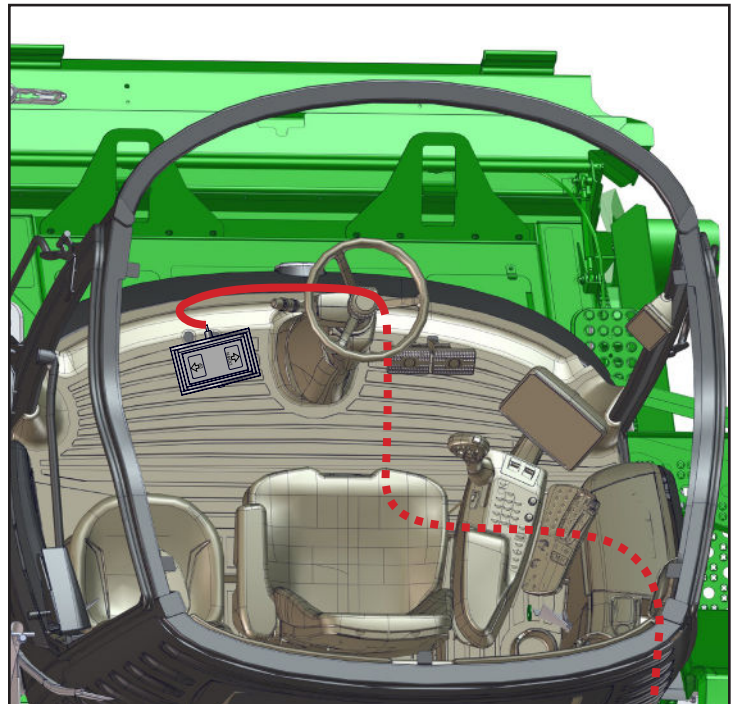


## Foot Switch Installation

Locate Harness 1349881. Route the end with the 3 pin connector to the bottom of the cab near the steering wheel from the controller by the battery. The controller end will have two female spades and a ring terminal.



Pull up the floor liner to the right of the steering wheel and there will be a small knockout hole. Remove knock out. Insert 1349881 up through the floor and route under floor mat towards front window.



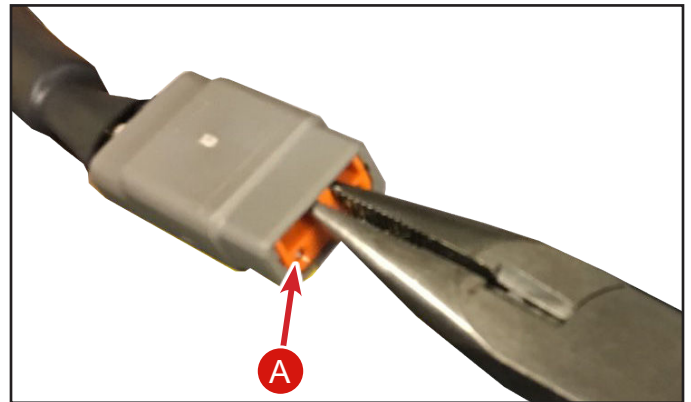
## 60-70 Series Combines

On 70 series combines a hole will need to be drilled. Drill hole large enough for supplied knockout. You will have to take the end off the harness to get the harness through the strain relief.

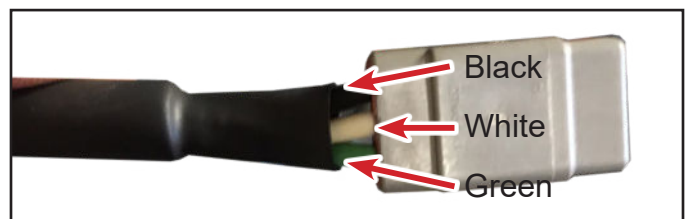
Use a small needle nose pliers to pull out the orange wire retainer (A).



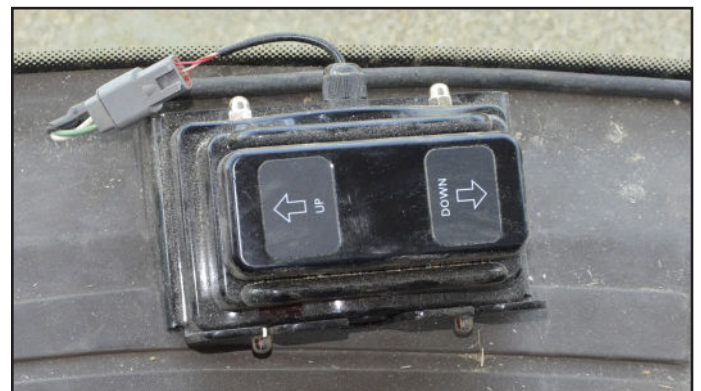
Use a small screw driver to release the clip for each wire (B). Then pull that wire out. When the last wire is released the grey plug will come off. Route harness through strain relief.



Reassemble wires into the grey plug in the same location they originally were. Push wires in far enough so the metal clip secures the wire inside the plug. Reinsert the orange wire retainer.



Locate the foot switch. Sit in the seat and place the switch in a convenient spot for you to operate it with your left foot. Use the provided velcro tape to secure foot switch to floor mat. Connect foot switch to harness 1349881.

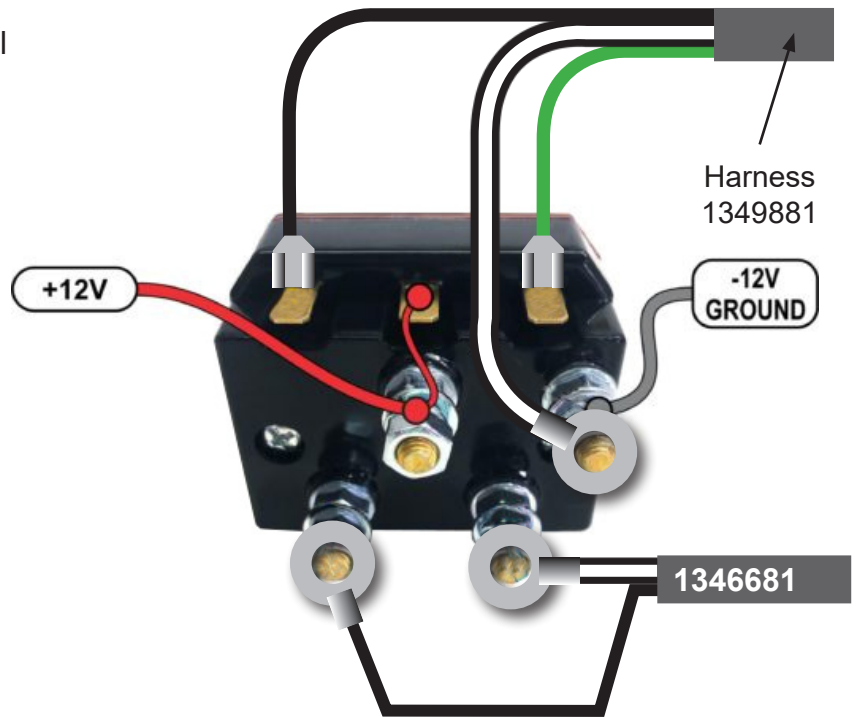


The opposite end of harness 1349881 will connect to the controller.

Connect the female spade on the green wire to the far right male spade.

Connect the ring terminal on the white wire to the negative post.

Connect the female spade on the black wire to the far left male spade.



### Power Harness

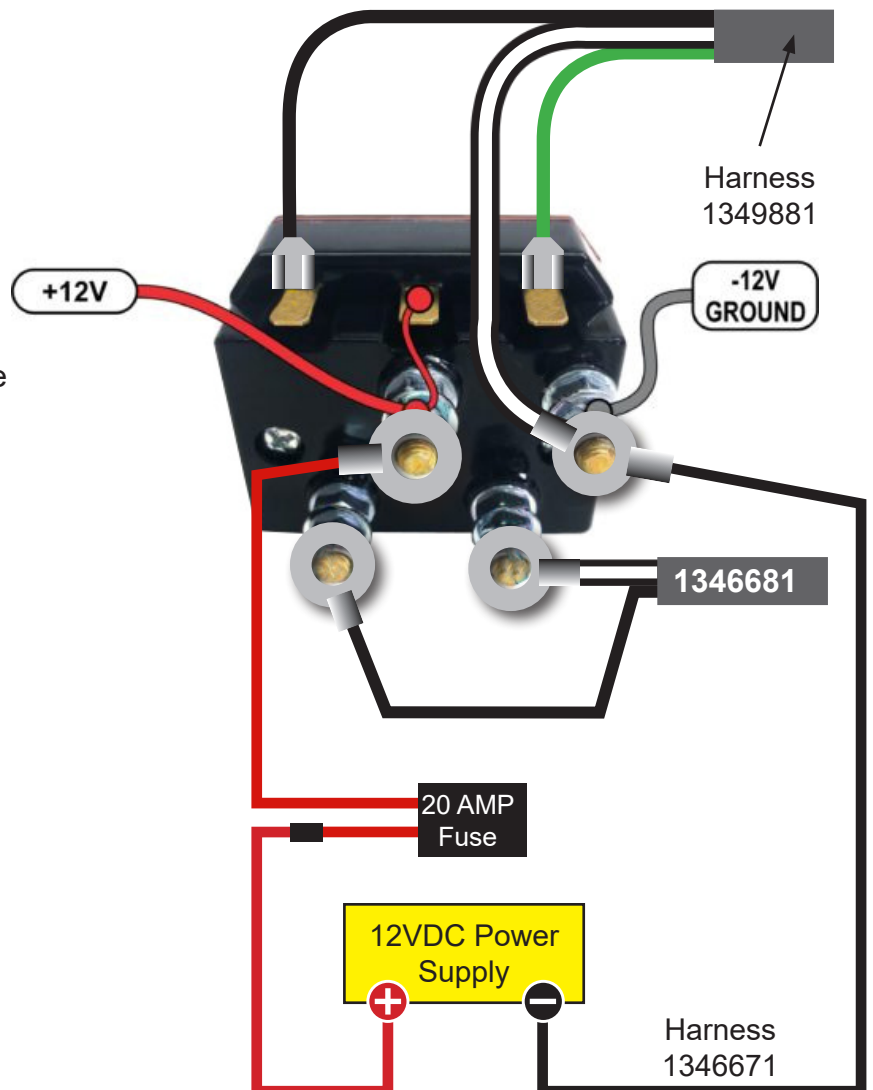
Locate power harness 1346671.

Connect the orange wire with the 20 amp fuse to the positive terminal on the controller.

Connect the black wire with to the negative terminal on the controller. Route harnesses to battery.

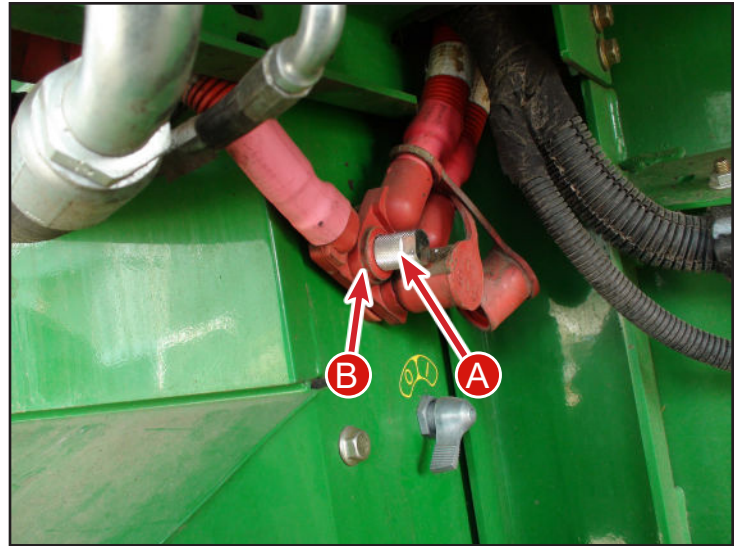
Install harness such that the 20 Amp fuse is as close to the battery as possible.

See next page for connecting to battery.





Remove the stud (A) on the power terminal and install the power wire behind the existing terminal (B). Reinstall stud.

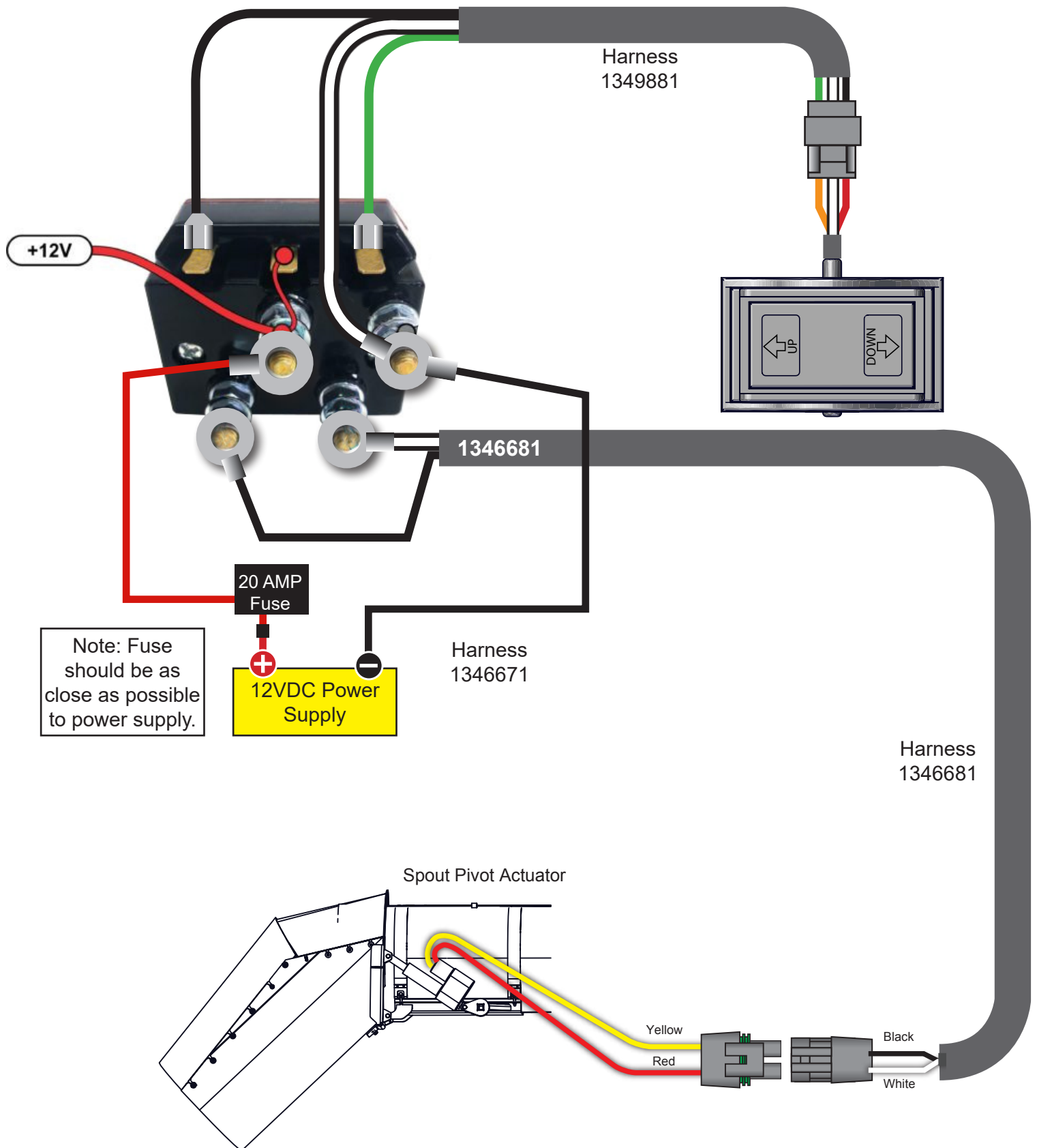


Route the black ground wire down to the grounding stud. DO NOT secure ring terminal to the stud under the black cap but instead to exposed bolt (C). If it is connected to the stud under the cap the battery disconnect will not power off the spout pivot.

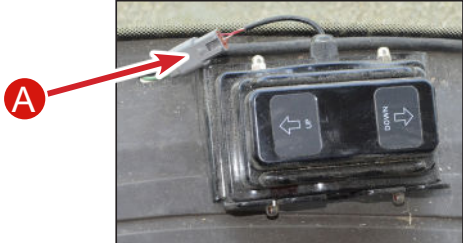
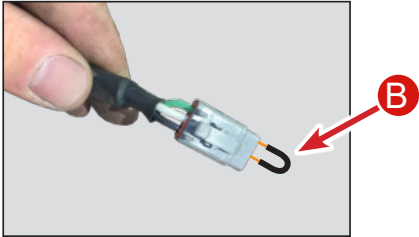
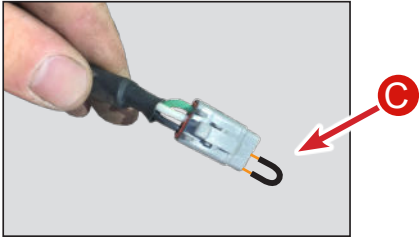


This completes the installation. If you have any questions please call Hillco Technologies. at 800-937-2461.

## Wiring Diagram

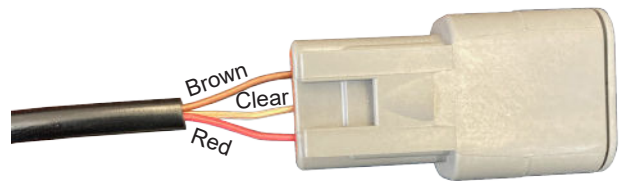


## Trouble Shooting

Problem	Solution
Spout does not move	Blown fuse. Replace fuse (Spout is sent with two extra fuses) Note: resting your foot on the switch can cause it to actuate and max out the actuator thus causing the fuse to blow.
	Spout tip is hung up. Verify tip is not bound on any of the mounting hardware
	Check connections at relay.
Spout pivots wrong direction	Reverse two wires going to the actuator at relay or reverse black and green wires coming from the switch on the relay.
Spout pivots only one direction	<p>1. Disconnect foot switch from wiring harness. (A).</p>  <p>2. On the harness entering the cab run a jumper wire (B) from the middle pin to either side pin of the wiring harness.</p>  <p>3. If the spout pivots swap the jumper wire to the other outside pin leaving the middle pin.</p>  <p>If the spout pivots the opposite direction the relay is good and the foot switch will need repair. See next page for foot switch repair.</p>

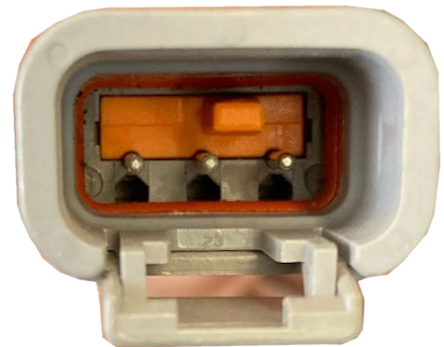
## Foot Switch Repair

Verify wires are in correct spot as shown.

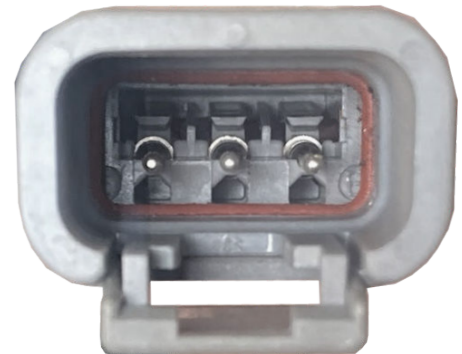


Verify pins are seated correctly in plug

If wires are in correct spot and pins look correct use a needle nose pliers to remove the orange plastic insert.



Use a small flat screw driver to release the wire and pin from the connector. Remove the three wires and inspect that the wires are connected to the pins. If they look good reinstall pins in the spots shown above.



If the three pin connector looks good disassemble the switch box by taking the bottom cover off. Verify the three wires are soldered to the corresponding spades on each switch. If a wire is broke resolder it to the correct spade. The clear wire should be soldered to both switches. The brown and red wire go to the switches as shown.

For a replacement switch contact Hillco Technologies at 800-937-2461.

