ROLTEC™
ELECTRIC HOPPER CONVERSION

INSTALLATION INSTRUCTIONS

Thank you for purchasing ROLTEC™ Electric Hopper Conversion. Agri-Cover, Inc. proudly manufactured this tarp using superior quality materials and workmanship. With proper care, your tarp system will provide years of service.

NOTICE TO INSTALLER: Even if familiar with product, read instructions prior to installation as improvements may be made without notice. Always handle components with care. If you have questions or problems, have serial number ready and call customer service. When done, these instructions must be given to the consumer.

NOTICE TO CONSUMER: Before using this product, read operating, maintenance and safety sections. Save these instructions for future reference.

FOR YOUR RECORDS

DATE PURCHASED: _____

WHERE PURCHASED: _____

MOTOR SERIAL NUMBER: _____
(Located on motor and gearbox)

ACI™
AGRI-COVER, INC.
Questions? (800) 233-4655
agricover.com

PREPARATION

TOOLS NEEDED

- Ratchet with 1/2” socket
- 3/8” Electric drill with 5/16” drill bit
- 3/16” Allen wrench
- 7/16”, 1/2” and 9/16” wrenches
- Grinder
- Hammer
- Heat gun
- Marking pen
- Protective eyewear
- Tape measure
- (2) Locking pliers
- Welder
- Wire crimper
- Wire stripper

SAFETY INFORMATION

- Always use caution when operating hopper system.
- Disconnect power from the motor before servicing system.
- Do not operate without shields.
- Do not directly spray the electric motor and electrical connections with a pressure washer.
- Ensure people are clear of hopper system before and during operation.
- Instruct everyone who will operate the hopper system on the proper procedures.
- Lock-out the electric system when you are not operating the system to avoid unintended operation.
- Open tarp before unloading.
- Maintain obstacle free part for moving parts.
- Stay clear of moving parts.

STAINLESS STEEL HARDWARE ONLY

⚠ CAUTION: To avoid galling of stainless steel hardware, use anti-galling spray, grease or lubricant on threads and avoid high speed when fastening. Do not use impact tools for stainless steel hardware.

A. Turn 3/8” x 1” non-stainless steel self-threading bolt in 5/16” hole to cut threads, then turn back out.

B. Turn 3/8” x 1” stainless steel bolt in for attachment. When possible, use stainless steel nuts and washers with these bolts.

1: DETERMINE MOUNTING LOCATION

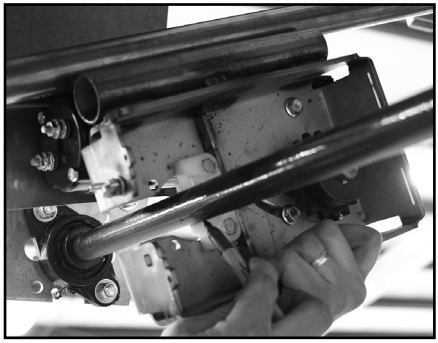
NOTE: Prior to installing electric hopper conversion, perform all necessary maintenance on hopper doors.

A. Hold drive box on crank shaft to determine best location for motor based on ability to mount the anchor brace to a solid location. Motor assembly must be square to shaft.

NOTE: Mounting tab on anchor brace may need to be bent to ensure proper connection. The supplied mounting bracket may be used to help secure anchor brace to a solid location (Steps 10-11).

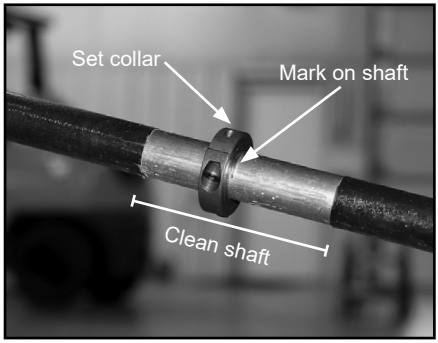
2: MARK LOCATION

A. Mark on shaft where attaching motor, then make (2) additional marks 2” in each direction on shaft from original mark.



3: PREPARE MOUNTING LOCATION

A. Between two additional marks made in previous step, clean shaft to bare metal for welding and to ensure overall diameter is 1”.

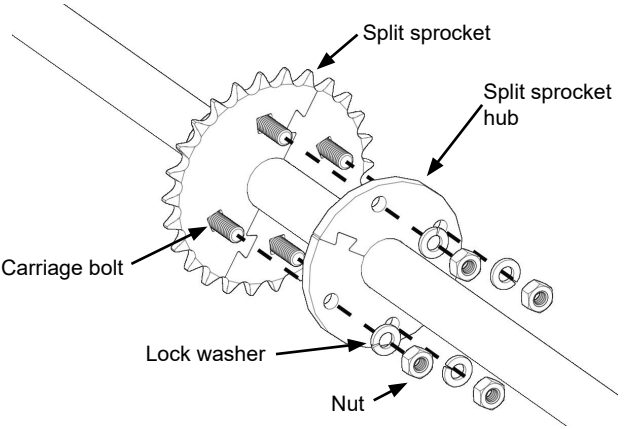


NOTE: Ensure shaft is clean at location of bushing assembly.

B. Once shaft is clean, replace 1st mark made in Step 2, back on shaft, place set collar on outside of mark and secure to shaft with 3/16” Allen wrench.

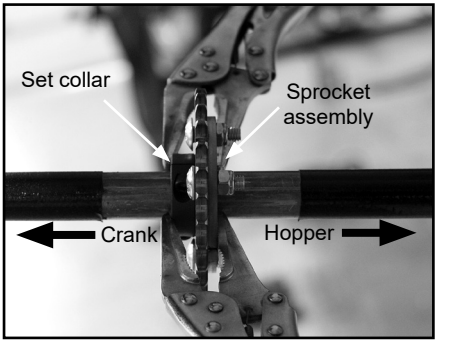
4: INSTALLING SPLIT SPROCKET

A. Place split sprocket and split sprocket hub adjacent to set collar and assemble split sprocket hub toward hopper. Use (4) 5/16” x 1” stainless steel carriage bolts, lock washers and nuts to assemble.



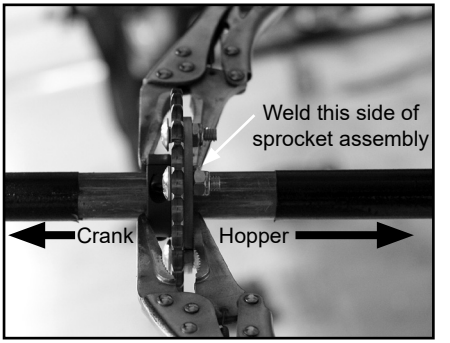
5: POSITION SPLIT SPROCKET

A. Clamp sprocket assembly to set collar to ensure sprocket stays square to drive shaft.



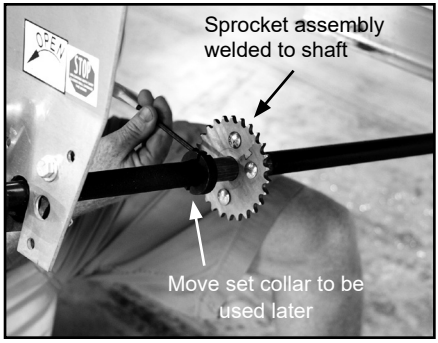
6: WELD SPLIT SPROCKET

A. Weld sprocket assembly to drive shaft and let cool. Check sprocket teeth for weld splatter. Deburr if necessary.



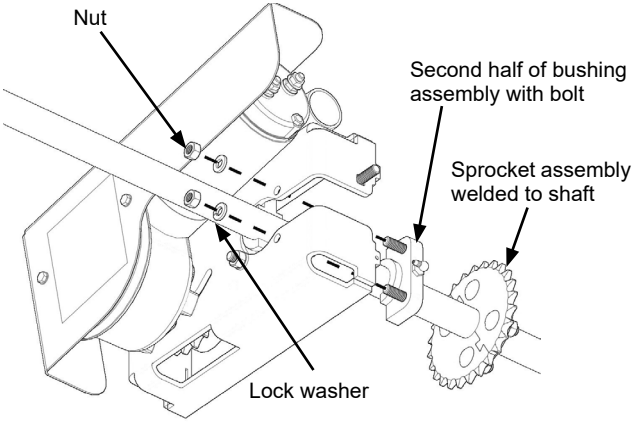
7: REMOVE SET COLLAR

A. Loosen set collar and move it out of the way.



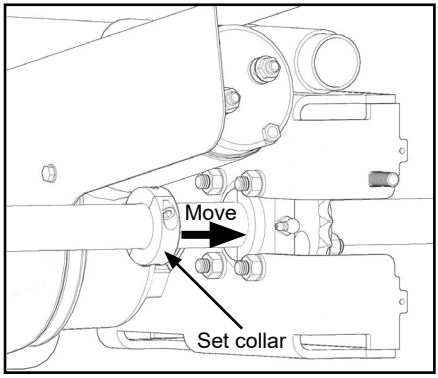
8: POSITION MOTOR ASSEMBLY

A. After sprocket assembly and shaft are cool to the touch, place motor assembly back on shaft, insert second half of bushing assembly with 5/16” x 1” stainless steel bolts and secure to motor assembly with lock washer and nuts.



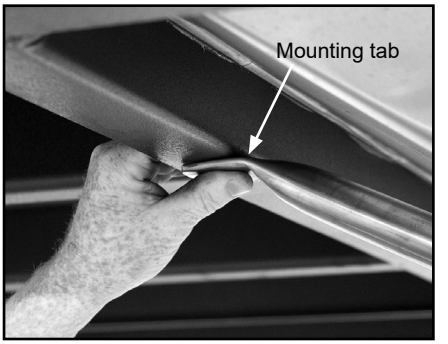
9: SECURE MOTOR ASSEMBLY

A. Move set collar tight against plastic bushing to square up motor and secure in place by tightening set screws. Motor assembly will spin freely on the shaft.

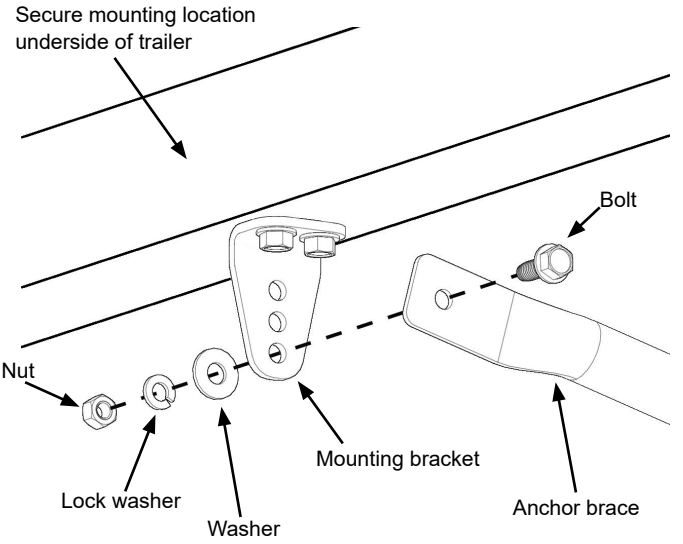


10: INSTALL ANCHOR BRACE

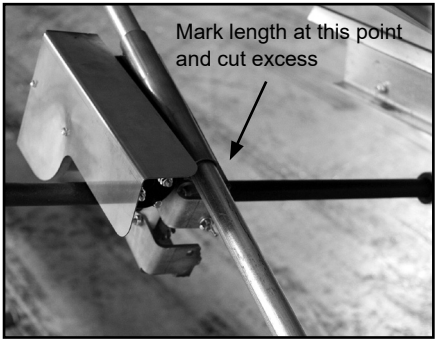
A. Slide anchor brace into motor assembly. Mounting tab may need to be bent to ensure a flat or secure fit at mounting location.



NOTE: The supplied mounting bracket may be used to help secure anchor brace to a solid location.

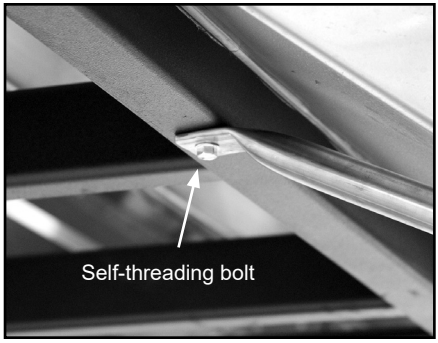


B. With anchor brace held in place make a mark at location shown. Remove brace and cut off excess at mark.



11: SECURE ANCHOR BRACE

A. Mark location of mounting tab on trailer. Drill 5/16” hole and secure brace with 3/8” self-threading bolt and secure it with flat washer, lock washer and nut where possible.



12: INSTALL CHAIN

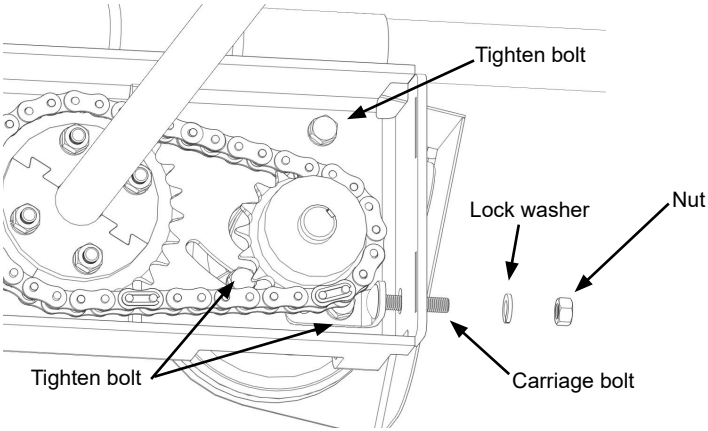
A. Position motor to allow chain to be placed on sprockets.

NOTE: Chain has two master links to ensure chain can be changed at any location of motor. Master links should be installed so clip is visible.

B. With chain installed, slide 5/16” x 1-1/2” stainless steel carriage bolt through hole on gear box assembly. Secure with stainless steel lock washer and nut. Then tighten to take slack out of chain.

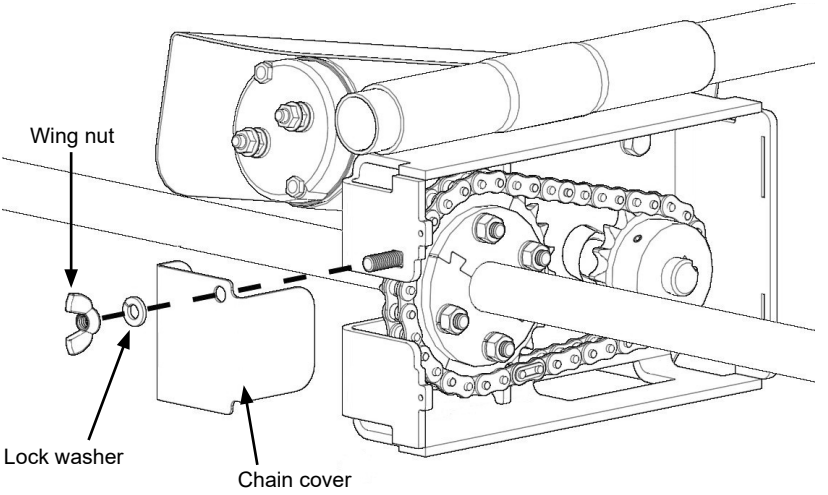
⚠ CAUTION: Do not over tension chain.

C. With chain tensioned, tighten three bolts (see below) with 1/2” open end wrench and 1/2” socket.



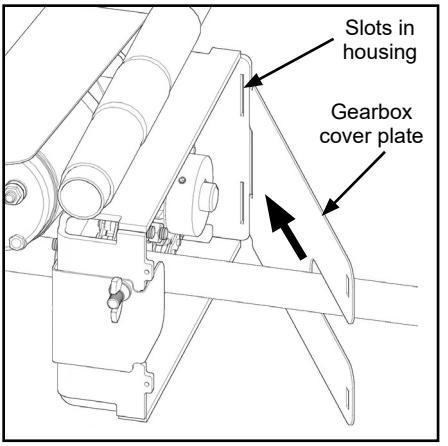
13: INSTALL CHAIN COVER

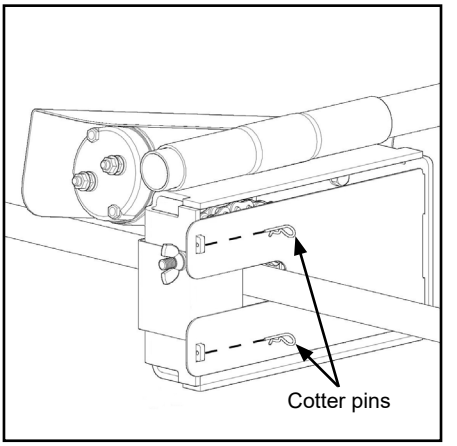
A. Attach chain cover with wing nut and lock washer.



14: INSTALL GEARBOX COVER PLATE

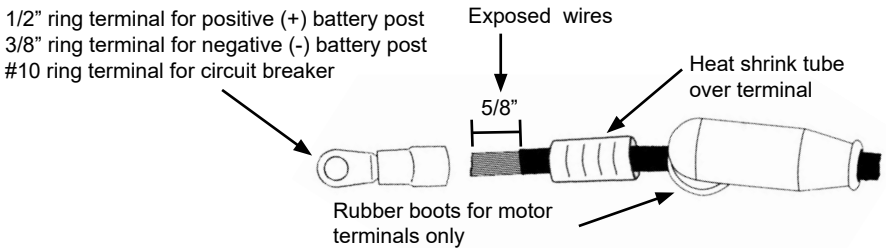
A. Attach gearbox cover plate over shaft and insert tabs into slots in housing. Secure with stainless steel cotter pins.





15: PREPARE WIRING

The illustration below shows terminal ring sizes for heavy gauge wires connecting to battery posts and circuit breaker used in the following steps. Insulation is stripped off ends. Heat shrink tubes are supplied for sealing and rubber boots are supplied for battery terminals. Always measure wire lengths to ensure you have plenty of wire when cutting and attaching terminals.



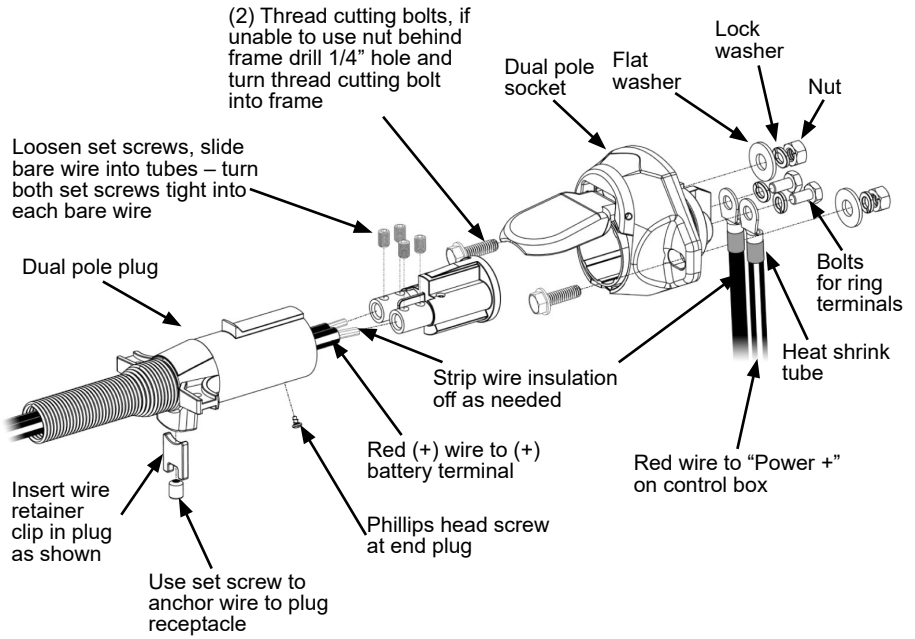
16: INSTALL DUAL POLE CONNECTOR

NOTE: If installing on trailer with existing electric tarp skip to Step 17.

A. Mount dual pole socket to suitable location on trailer, adjacent to existing plugs. Prep wires by stripping off insulation as needed.

B. On wires at socket, slide heat shrink tube over wire, attach ring terminals and apply heat to shrink tubes. Bolt terminals tight. On wires at plug, insert bare wires into plug tubes and secure with set screws.

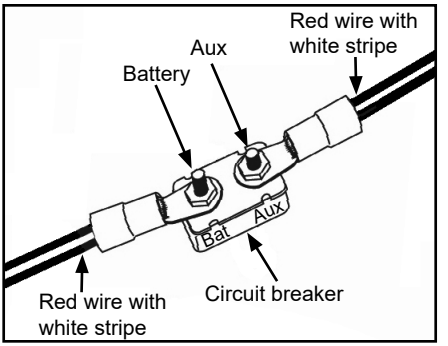
NOTE: If using pup trailer, connect directly to dual pole as shown below.



C. Select best routing for heavy gauge wire along frame toward cab near existing wire harness and up to the battery.

D. Install circuit breaker in line on red (+) wire close to battery using #10 ring terminals and heat shrink (see Wiring Diagrams).

E. Prep end of heavy black wire for battery (-) post with heat shrink tube and 3/8" ring terminal. Prep end of heavy red wire for battery (+) post with heat shrink tube and 1/2" ring terminal.



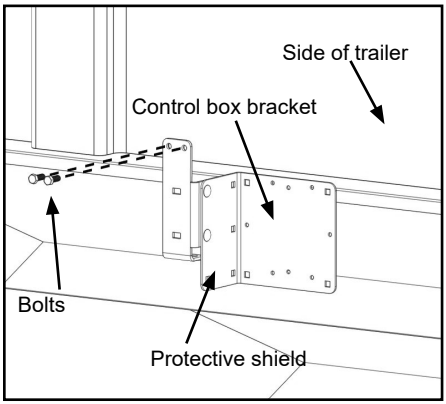
⚠ **CAUTION: Do not connect wires to battery terminals at this point.**

17: MOUNTING CONTROL BOX

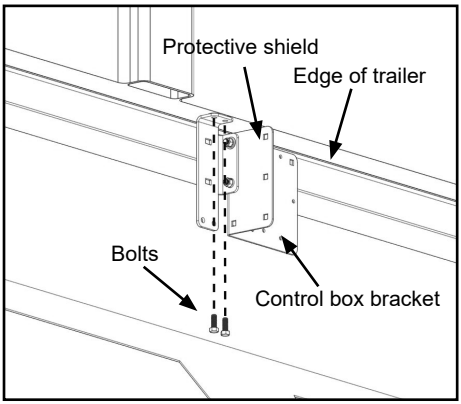
A. The control box bracket has the flexibility to be mounted several different ways. Select the best option and mount to a rigid location on trailer near electric hopper motor (close enough for pre-assembled wire length to reach hopper motor).

B. Mark holes and drill 5/16” hole and turn a 3/8” x 1” self-threading bolt into hole to cut threads. Remove bolt and install bracket with 3/8” x 1” stainless steel bolt. When possible, secure bolt with flat washer, lock washer and nut.

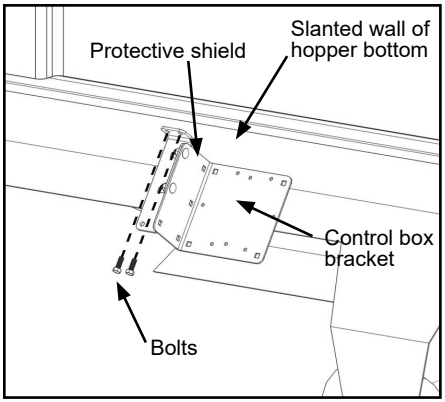
NOTE: Always mount bracket with protective shield facing front of trailer (see options below).



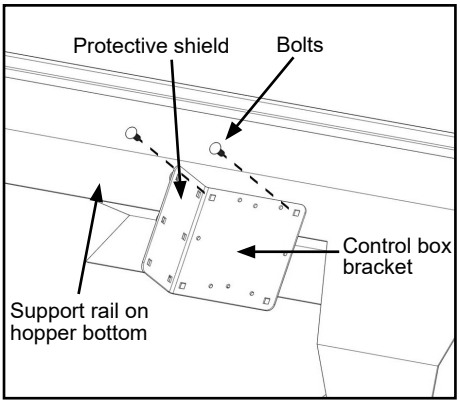
Option 1 - Mounting to side of box wall



Option 2 - Mounting to underneath side of box



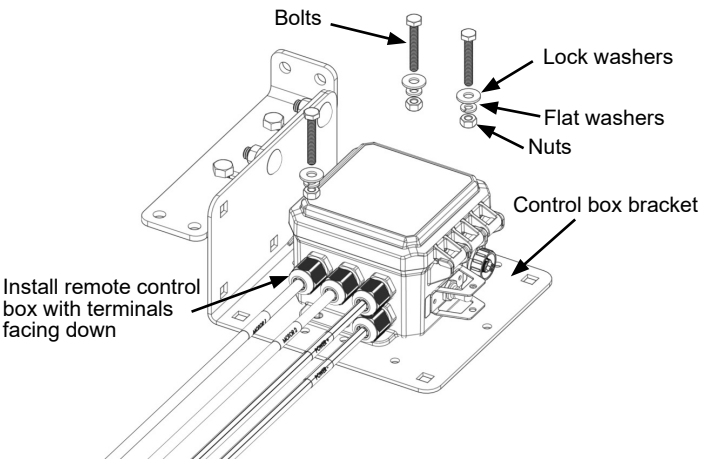
Option 3 - Mounting to slant of hopper bottom



Option 4 - Mounting to hopper bottom supports

17: MOUNTING CONTROL BOX (Continued)

C. With terminals facing down, align control box with pre-drilled holes in bracket. Secure using at least (3) 1/4” x 1-3/4” bolts, flat washers, lock washers and nuts.



D. Select most suitable route for wires, usually along frame with existing harness. Run heavy gauge wire from dual pole socket to first control box.

E. Repeat for remaining control boxes.

18: WIRING

NOTE: If installing a system on a pup trailer, run a separate heavy gauge wire from dual pole connector at front of trailer to dual pole connector at rear of trailer to power electric systems on pup.

NOTE: See Wiring Diagrams.

NOTE: Use dielectric grease (packet included) at all electrical connections.

POWER WIRING PREPARATION

A. Select most suitable route for wires, usually along frame with existing harness. Run heavy gauge wire from dual pole socket to control box. Prepare wires by stripping off insulation as needed.

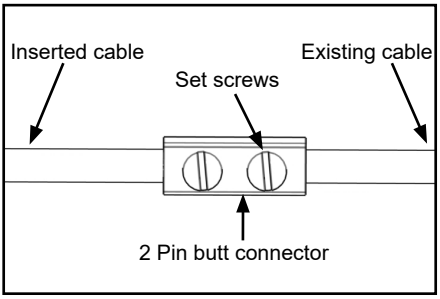
18: WIRING (Continued)

POWER WIRING FOR SINGLE HOPPER SYSTEMS:

A. Slide heat shrink over dual pole positive (red) and negative (black) wires.

B. Connect dual pole positive (red) wire to control box “Power +” (red with white stripe) wire with 2 pin butt connector.

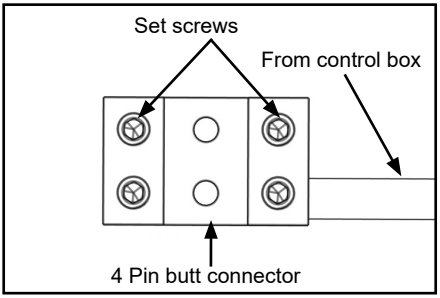
C. Connect dual pole negative (black) wire to control box “Power -” (black with white stripe) wire with 2 pin butt connector.



POWER WIRING FOR MULTIPLE HOPPER SYSTEMS:

A. Except for last control box, remove 2 pin butt connectors from control boxes’ “Power +” (red with white stripe) and “Power -” (black with white stripe) wires.

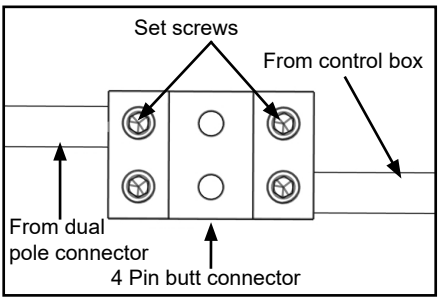
B. Except for last control box, attach 4 pin butt connectors to each control boxes’ “Power +” and “Power -” wires.



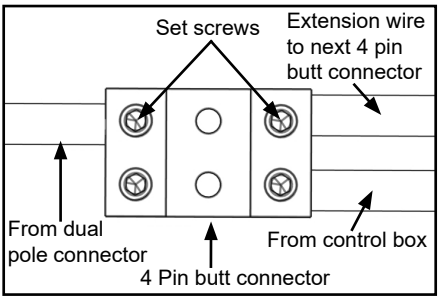
C. Slide heat shrink over dual pole positive wire.

D. At first control box, connect dual pole positive wire to empty end of 4 pin butt connector attached to “Power +” wire.

E. Connect dual pole negative wire to empty end of 4 pin butt connector attached to “Power -” wire.



F. If next control box is last, go to Step 18J. At first control box, attach power extension wire to positive 4 pin butt connector (on control box wire side), then slide heat shrink over power extension wire.

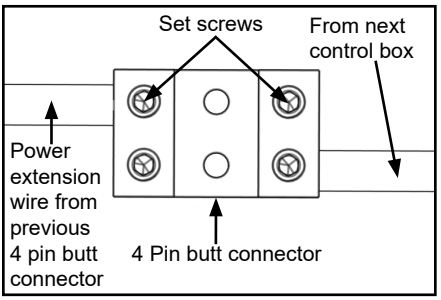


18: WIRING (Continued)

G. Attach power extension wire to empty end of 4 pin butt connector at next control box.

H. Repeat Steps 18F-G for negative wiring.

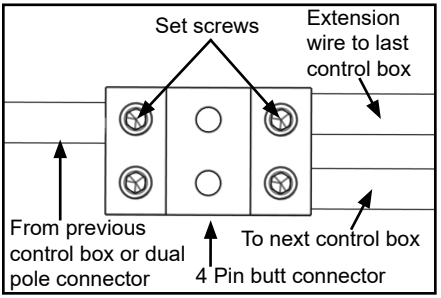
I. Repeat Steps 18A-H for remaining control boxes, except for last control box (see Step 18J).



J. Connect extension wires to last 4 pin butt connectors (on control box wire side), then slide heat shrink over power extension wires.

K. Connect extension wire to last control box “Power +” wire with 2 pin butt connector.

L. Connect extension wire to last control box “Power -” wire with 2 pin butt connector.



WIRING MOTOR TERMINALS

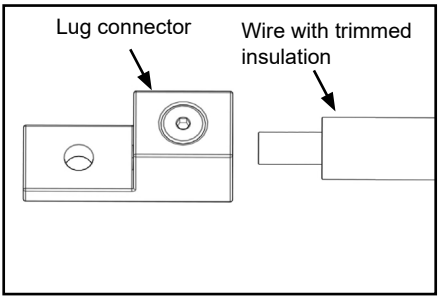
NOTE: In most cases, motor cables attached to the control box are long enough to reach the relevant motor. If more length is needed, attach extension wires to control box motor wires with 2 pin butt connectors.

A. Remove 2 pin butt connectors from control box “Motor” (black and red) wires.

B. Slide heat shrink over control box “Motor” wires then attach lug connectors to wires.

C. Verify lug connector is secure, then seal with heat shrink.

D. Attach BLACK wire to M1 on motor. Attach RED wire to M2 on motor. Always hold base nut while tightening top nut.



E. Repeat for remaining control boxes.

WIRING BATTERY AND SYSTEM CHECKS

A. At battery, first attach RED wire to positive (+) post then attach BLACK wire to negative (-) post.

B. Check power by activating switch to open and closed positions. **If motor runs hopper in reverse of open and closed switch positions, reverse wires on motor terminals.**

C. Seal heat shrink over butt connectors and wires.

IMPORTANT: Ensure all connections are secure and clear of sharp edges.

ELECTRIC MOTOR OPERATING INSTRUCTIONS

NOTE: Remote comes pre-programmed from the factory. Refer to Remote Control owner's manual for re-programming and directions to program a remote to multiple receivers.

A. Push and hold switch in CLOSED position. Verify hopper gate position and release switch when hopper gate is fully closed.

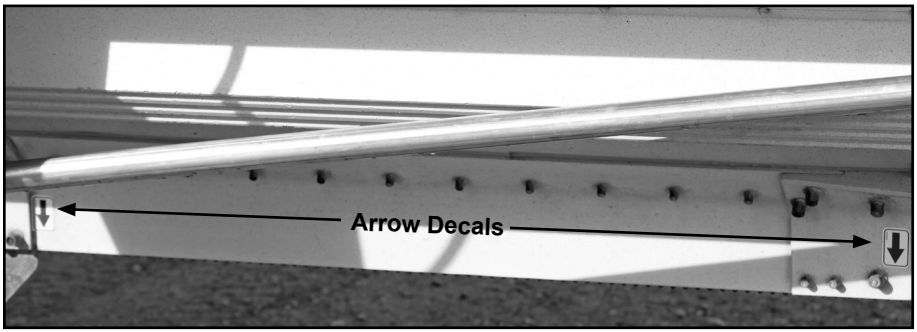
B. Push and hold switch in OPEN position. Verify hopper gate position and release switch when hopper gate is at desired location.

IMPORTANT: Electric hopper system is equipped with a modified reset circuit breaker. Holding switch until circuit breaker trips is too long. When this occurs, breaker will trip and reset if the breaker is overloaded by the motor.
To reduce unnecessary strain on components, always release switch before breaker trips. If breaker trips and does not reset, it may have detected a continuous short and will not reset until the short is repaired.

DECAL PLACEMENT

Electric hopper conversion kits will come with (2) arrow decals (PN 80489) per hopper bottom. Decals are provided to aid operator in opening and closing hopper doors. Clean surface area then place decal on side of hopper when gate is at fully open and closed positions.

NOTE: Location may vary depending on trailer manufacturer, and may not be applicable on some trailers.



NOTE: If original decals become damaged or missing, order replacement decals by calling Customer Service at 800-233-4655.

HOW TO ENABLE MANUAL OVERRIDE

A. Disconnect power to hopper motor.

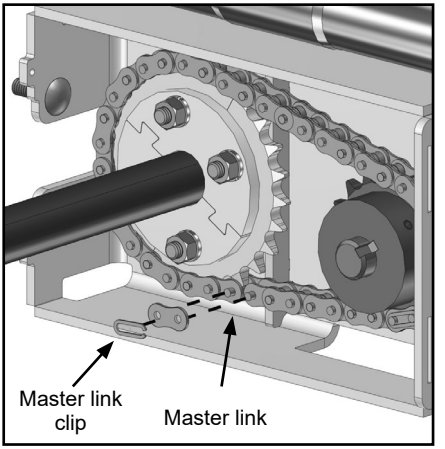
B. Remove stainless steel cotter pins and back cover plate.

C. Loosen 3 bolts (See Step 12), slide motor toward shaft to loosen chain.

D. Remove clip from one of the two master links and remove master link from chain. Remove chain from sprockets and store components for later installation.

E. Tighten 3 bolts loosened above.

F. Attach back cover plate over shaft and insert tabs into slots in housing. Secure with stainless steel cotter pins (See Step 14).



G. Hopper can now be used with trailer manufacturer's handle.

⚠ **CAUTION: Always remove manufacturer's handle before connecting power back to hopper motor.**

INSPECTION AND MAINTENANCE

The operator can perform most of inspection and maintenance. It may be necessary to review the installation and operating instructions.

- Periodic preventive maintenance should be practiced. Inspect system often for proper operation.
- Periodically inspect all components for loose or worn parts, replace as needed.
- Always use genuine Agri-Cover, Inc. replacement parts if repairs are needed.
- Periodically check the tightness of mounting bolts and electrical connections. Remove dirt or corrosion that may have accumulated on the electrical connections.
- Periodically inspect chain tension, lubricate chain and grease zerk fittings.
- Perform routine maintenance on trailer hoppers to ensure optimal performance from your system.

NOTE: Inspection and/or maintenance should also be performed anytime a malfunction is observed or suspected. If you need assistance inspecting and/or servicing your tarp call Customer Service at 800-233-4655. If you want to order a replacement part, call Customer Service or visit tarpreplacementparts.com. Always use original equipment replacement parts for your tarp.

PARTS LIST

For detailed parts list scan QR Code.

WIRING DIAGRAMS

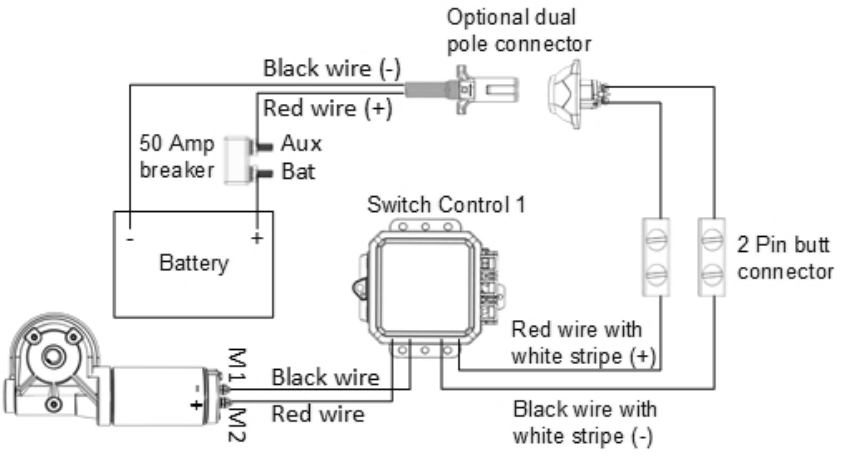
NOTE: Use dielectric grease (packet included) at all electrical connections.

This electric system requires a 50 Amp modified reset circuit breaker. If breaker trips and does not reset, it may have detected a continuous short and will not reset until short is repaired. Disconnect battery and repair short.

If installing this electric system on an existing unit, ensure there is a circuit breaker installed and operating properly. If breaker is missing or malfunctioning, replace it with a new 50 Amp modified reset circuit breaker.

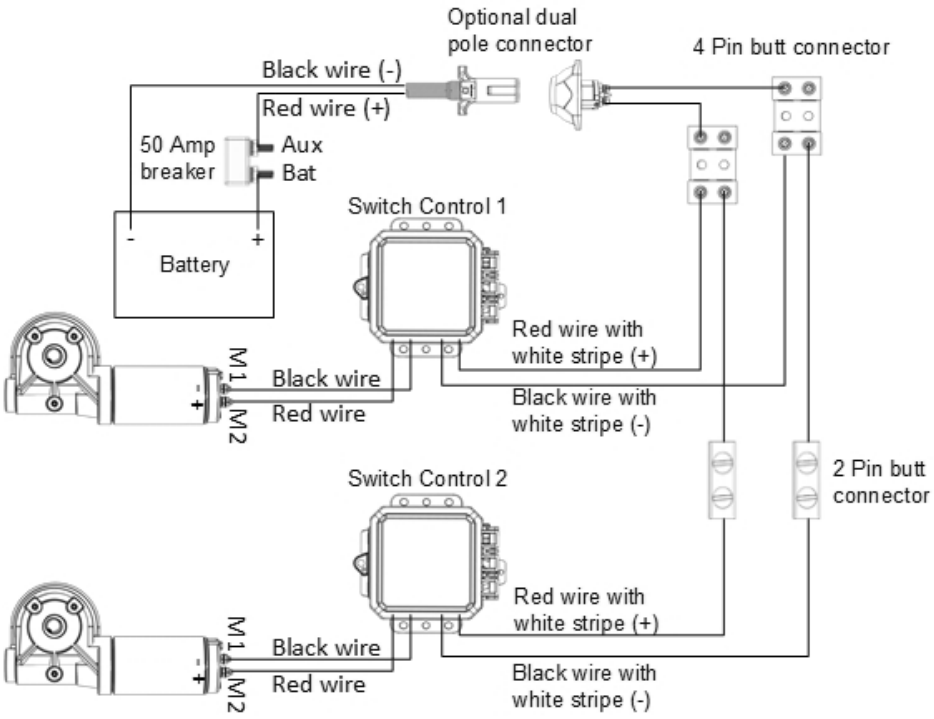
IMPORTANT: Operating system without a circuit breaker voids warranty.

SINGLE HOPPER



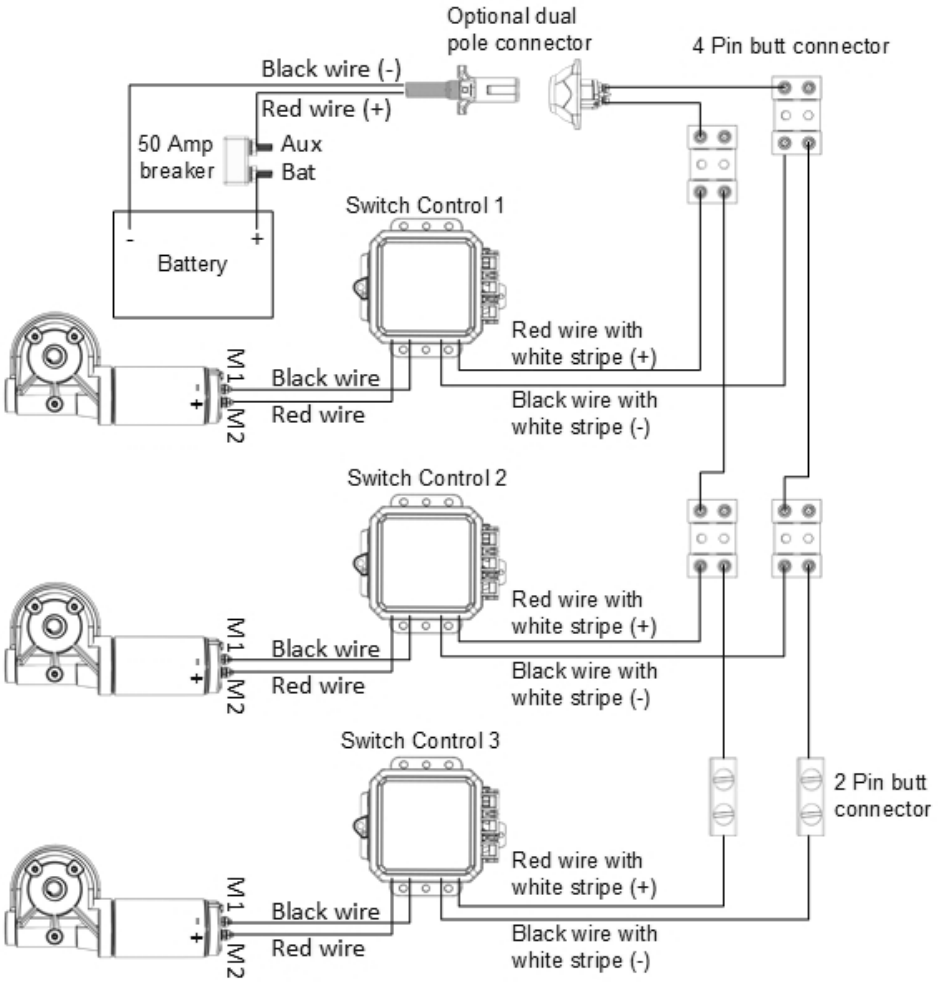
WIRING DIAGRAMS (Continued)

TWO HOPPERS



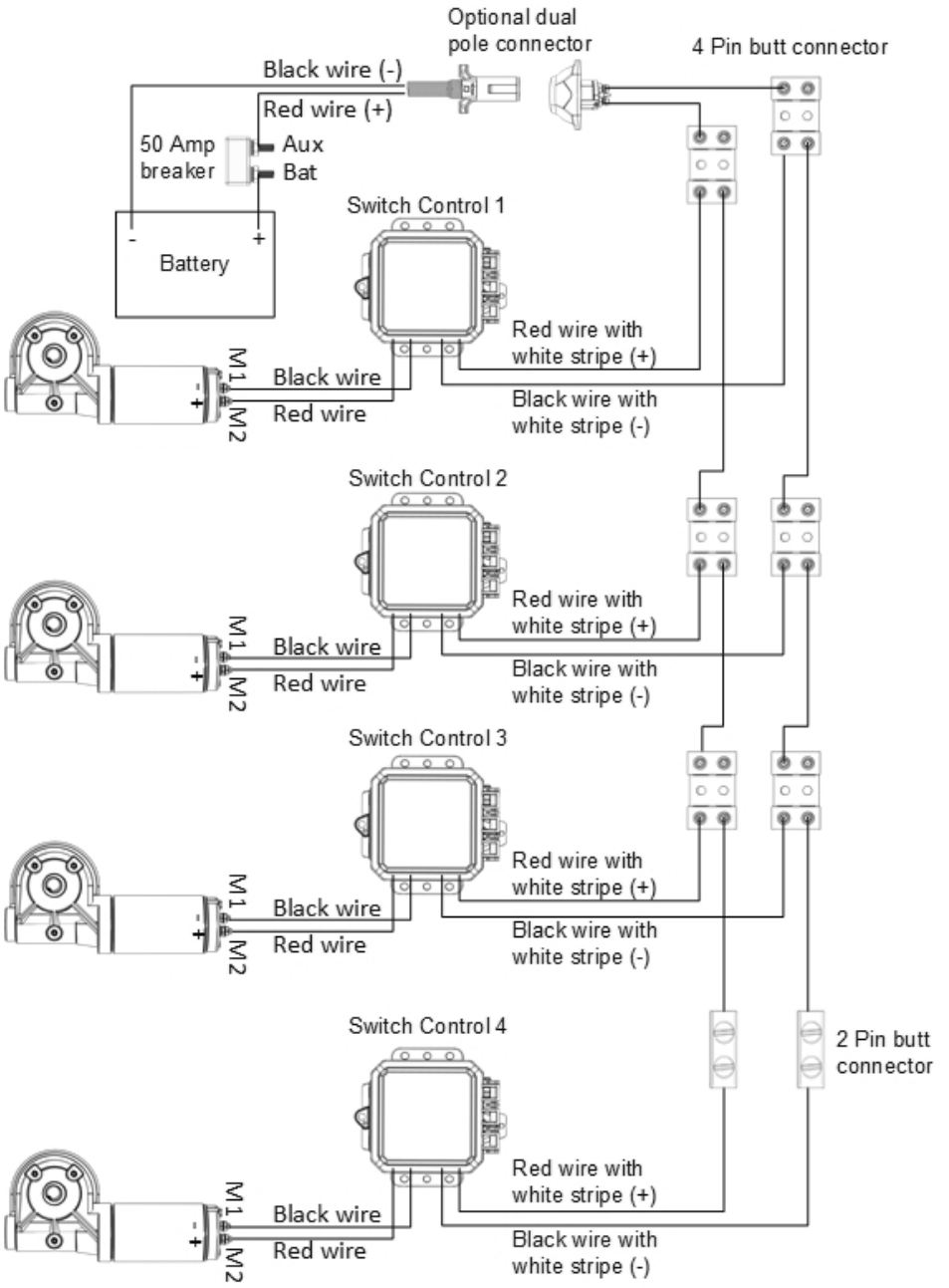
WIRING DIAGRAMS (Continued)

THREE HOPPERS



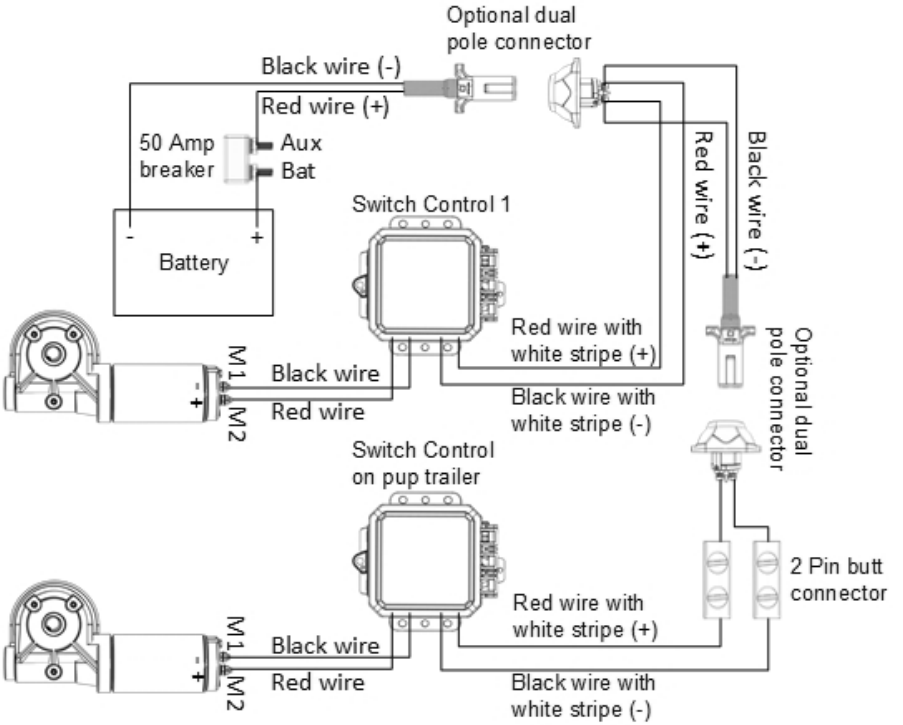
WIRING DIAGRAMS (Continued)

FOUR HOPPERS



WIRING DIAGRAMS (Continued)

HOPPER(S) WITH PUP TRAILER



MANUFACTURER'S LIMITED WARRANTY

Agri-Cover, Inc. extends the following Limited Warranty on its ROLTEC™ Electric Hopper Conversion:

Agri-Cover, Inc. warrants its ROLTEC™ Electric Hopper Conversion to be free from defects in material and workmanship under normal use for one (1) year from date of manufacture unless accompanied by proof of purchase. The one (1) year warranty start date can be found on the unit (motor and gearbox). Check both and refer to the oldest date shown. This Limited Warranty does not cover any failure due to abuse, misuse, alteration, neglect, improper assembly or installation, or improper maintenance.

ANY IMPLIED WARRANTY APPLICABLE TO THE ROLTEC™ ELECTRIC HOPPER CONVERSION IS LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF MANUFACTURE UNLESS ACCOMPANIED BY PROOF OF PURCHASE. Agri-Cover Inc.'s sole obligation under this Limited Warranty or any implied warranty is limited to the repair or replacement at its option, of defective parts only. No labor or service allowance is given or implied. IN NO EVENT SHALL AGRI-COVER, INC. BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES. EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION CONTAINED HEREIN.

For warranty, have serial number ready and fill out the warranty claim form at agricover.com/warrantyclaim or call Customer Service Department at 800-233-4655 to determine if only a replacement part is needed or if the COVER needs to be returned for inspection and repair. Goods to be returned must have a pre-authorized RA # (Return Authorization Number) – obtained by calling the number above. Mark the number on the package and ship it freight prepaid to address below. Agri-Cover will pay freight to return goods to sender.

This Limited Warranty gives you specific legal rights and you may have other rights, which vary, from state to state.

For replacement parts shop at agricoverparts.com or call Customer Service at 800-233-4655.

ACI™
AGRI-COVER, INC.

Agri-Cover, Inc.
Customer Service Dept
3000 Hwy 281 SE
Jamestown, ND 58401
Phone: 800-233-4655

Hours: 8:00 am - 5:00 pm CST Monday through Friday, except Holidays

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