



TARPING SYSTEMS & ACCESSORIES

P/N 1118019 Rev. L

OWNER'S MANUAL



ProTrap[®] Hopper Door Opener

READ BEFORE INSTALLING

PO BOX 713 ■ 2309 SHUR-LOK STREET ■ YANKTON, SD 57078-0713
PHONE 1-800-4-SHUR-LOK (1-800-474-8756) ■ FAX 605-665-0501
www.shurco.com

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SHIPPING. Orders are shipped F.O.B. from the Shur-Co®, LLC sites listed below. No full freight is allowed or prepaid shipment accepted unless quoted and approved in writing prior to acceptance of the order. All shipments are made by the most reasonable means in accordance with size and weight of order, unless specified routing instructions are furnished by the customer. Shipments are made daily via U.P.S. and common carrier. Claims for shortages must be made within 10 days. All claims for damages or loss in transit must be made with the carrier. No collect calls will be accepted. To ensure delivery of orders, we need your full street address and phone number. When you receive your shipment, examine it carefully. Be sure all cartons listed on the delivery sheet are accounted for. Large items may be packaged separately. If a carton is damaged, open it and inspect the contents before signing for delivery. If merchandise is damaged, describe damage on the delivery receipt. Failure on your part to document damaged or missing merchandise on the delivery receipt releases the carrier of all liability; repair or replacement will be the customer's responsibility.

WARRANTY. We warrant all new products are free of defects in materials and workmanship.* This warranty is effective if products are properly installed and used for the purpose for which they were intended and applies to the original buyer only. Except as set forth above or in any product-specific warranty documentation, we make no other warranties, express or implied, including but not limited to warranties of merchantability of fitness for a particular use.

Returns of a product for warranty must be accompanied by a Return Merchandise Authorization number (RMA#), obtained by calling Customer Service at 866-748-7435, and sent, with freight paid by us, to Shur-Co®, LLC, 2309 Shur-Lok St., PO Box 713, Yankton, SD 57078. All products returned without an RMA# will be refused. When we issue the RMA#, we will also issue a call tag to have UPS (or other freight company) pick up the product. C.O.D. returns not accepted. We will pay no storage fees for a warranty product return prior to pick by us or the freight company. If a warranty product return is scheduled to be picked up by us, we will pick up the product at our earliest convenience.

If a product returned is found, in our judgement, to be defective in material or workmanship, our obligation under this warranty is limited to the repair or replacement of the product, which will be made by us. Repair or replacement will be at our discretion, with replacements being made using current products performing in the equivalent function. Labor charges, other than those incurred at our factory, including, but not limited to, any labor to install a repaired or replacement product, are not covered under this warranty. All expenses associated with delivering defective products to our factory and delivering repaired or replacement products from our factory to the owner will be paid by us.

If the product returned is found, in our judgement, to be non-warrantable, the owner will be contacted to authorize repair work, purchase of a replacement product or return of the product, all of which will be at the owner's expense. Payment authorization must be received by us before any non-warrantable product is repaired, replaced or returned. All expenses associated with delivering the repaired non-warrantable product, a replacement product or the non-warrantable product from our factory to the owner will be paid by the owner.

In no event will we be liable for any damages of any kind to person, product or property, including but not limited to indirect, incidental, special, consequential or punitive damages, or damages for loss of profits or revenue, even if we have been advised of the possibility of such damages. There are no warranties for used products or products that have been repaired, altered, modified or subjected to misuse, negligence or accident. We will not repair or replace products that fail or malfunction due to ordinary wear and tear, except as expressly noted in a product-specific warranty. Use of non-Shur-Co®, LLC parts in conjunction with Shur-Co®, LLC products will void this product warranty.

*Certain products have specific warranties that differ from this warranty, for example motors and electronics. Product-specific warranty documentation is available for these items. In the event of a conflict between this warranty and a product-specific warranty, the product-specific warranty will govern.

RETURN POLICY. All sales final. See WARRANTY above for return details.

OTHER. All prices, product listings, sizes, weights and manufacturing details are subject to change without notice. No person is authorized to modify the foregoing conditions of sale whatsoever.

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Ravenna, OH 44266
Ph 866.356.0242 | Fax 330.297.5599

SHUR-CO® of TEXAS
34505 I-10 West, S. Frontage Rd.
Brookshire, TX 77423
Ph 866.689.0039 | Fax 281.934.3311


SHUR-CO® UK, Ltd.
Unit 41 Rochester Airport Estates
Laker Rd., Rochester, Kent ME1 3QX
Ph +44 (0)1795.473499
Fax +44 (0)871.272.8278

For more information, log on to our website:

www.shurco.com

MESSAGE TO OWNERS

Thank you for buying this tarping system from Shur-Co®. We appreciate your confidence in our products. Please read and thoroughly understand this manual before installing and/or operating this system.

Pay particular attention to important safety and operating instructions, as well as warnings and cautions. The hazard symbol  is used to alert users to potentially hazardous conditions and is followed by caution, warning or danger messages.

Failure to READ AND FOLLOW INSTRUCTIONS could result in failure of your tarping system and/or personal injury. Your trailer requirements may, however, call for minor variations to these instructions.

Please inspect your tarping system periodically. Repair or replace worn or damaged parts to your system.

QUESTIONS? CALL OUR HELP LINE:

1-866-748-7435

MON-FRI 8 AM-5 PM CENTRAL TIME

SAFETY

We at Shur-Co.® are concerned with your safety and the safety of all those operating this system. Therefore, we have provided safety decals at various locations on your tarping system. Keep decals as clean as possible at all times. Replace any decal that has become worn or damaged, painted over or otherwise difficult to read. Replacement decals are available through Shur-Co.® dealers.

SAFETY INSTRUCTIONS

- 1. Always wear safety glasses during installation.**
- 2. Keep body and clothing clear of moving parts.**
- 3. No other use of this system is authorized, except as designed.**

RUST PREVENTION

To prevent rust, paint all exposed metal, such as weld seams and/or metal exposed by grinding or cutting, with corrosion-resistant paint.

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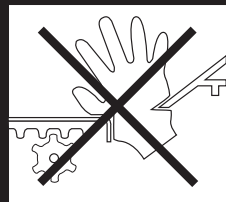
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TOOLS REQUIRED

1. Carpenter's Square
2. Plumb Line
3. Drill
4. 3/16" Drill Bit
6. 13/32" Drill Bit
7. 5/16" Drill Bit
8. 7/8" Drill Bit
9. #3 Phillips Insert Bit
10. 5/16" Combination Wrench
11. 3/8" Combination Wrench
12. 10 mm Combination Wrench
13. Tape Measure
14. Hack Saw (Metal Cutter)
15. 1/2" Combination Wrench
16. 9/16" Combination Wrench
17. 15/16" Combination Wrench
18. Air or Electric Impact Wrench (9/16" Socket)
19. 7/16" Socket
20. Ratchet
21. Wire Cutters
22. 1" Combination Wrench
23. Flat Head Screwdriver
24. Pencil or Marker
25. Wire Terminal Crimper



WARNING



- MOVING PARTS HAVE PINCH POINTS AND ENTANGLEMENT AREAS.
- STAY CLEAR OF DOOR AND MECHANISMS WHEN OPERATING.
- FAILURE TO COMPLY CAN CAUSE INJURY OR DEATH.

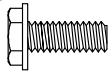


CAUTION



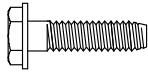
- JAMMED OR OVERLOADED DOOR CAN CAUSE MOTOR DAMAGE.
- RELEASE SWITCH IMMEDIATELY IF DOOR STALLS OR REACHES END OF INTENDED TRAVEL.
- FAILURE TO COMPLY CAN CAUSE MOTOR AND EQUIPMENT DAMAGE.

A



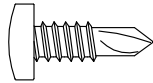
1704308 Flange Hd. Cap Screw - #10 x 1/2"

B



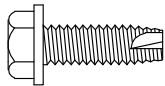
1704367 Hex Flange Cap Screw - #10 x 3/4"

C



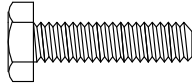
1700398 Self-Drilling Screw - 1/4" x 3/4"

D



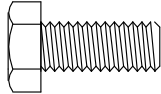
1704338 Self-Tapping Screw - 1/4" x 1"

E



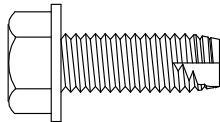
1700381 Cap Screw - 1/4" x 1"

F



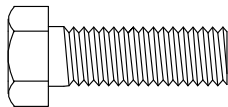
1701045 Cap Screw - 5/16" x 3/4"

G



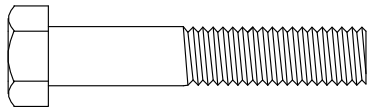
1700400 Self-Tapping Screw - 3/8" x 1"

H



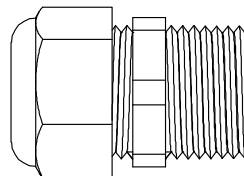
1702904 Cap Screw - 3/8" x 1 1/8"

J



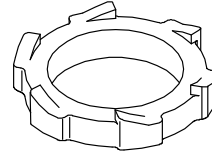
1704264 Cap Screw - 3/8" x 2"

K



1704152 Dome Nut - 1/2"

L



1704187 Lock Nut - 1/2"

M



1702653 Machine Screw Nut w/Washer - #10 x 1/2"

N



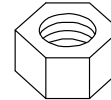
1700408 Hex Nut - 1/4"

P



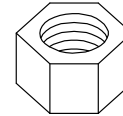
1701543 Nylon Lock Nut - 1/4"

R



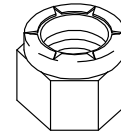
1700411 Hex Nut - 5/16"

T



1700407 Hex Nut - 3/8"

U



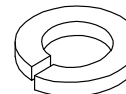
1701580 Nylon Lock Nut - 3/8"

V



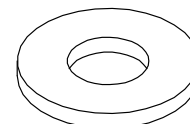
1700436 Lock Washer - 1/4"

W



1700434 Lock Washer - 3/8"

Y



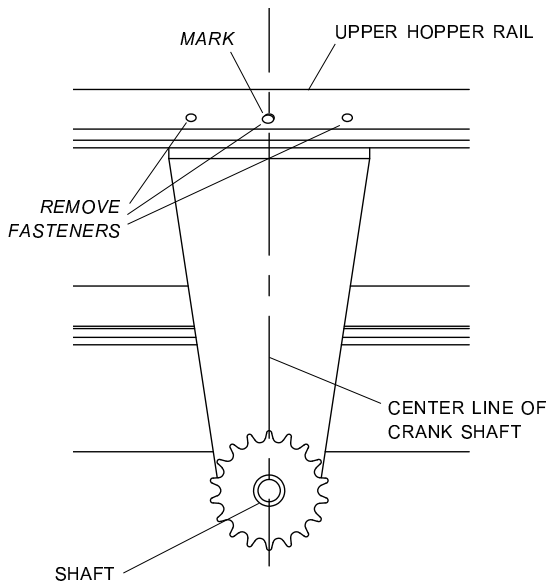
1700429 Flat Washer - 3/8"

INSPECT ALL PARTS IN YOUR PROTRAP® KIT UPON ARRIVAL

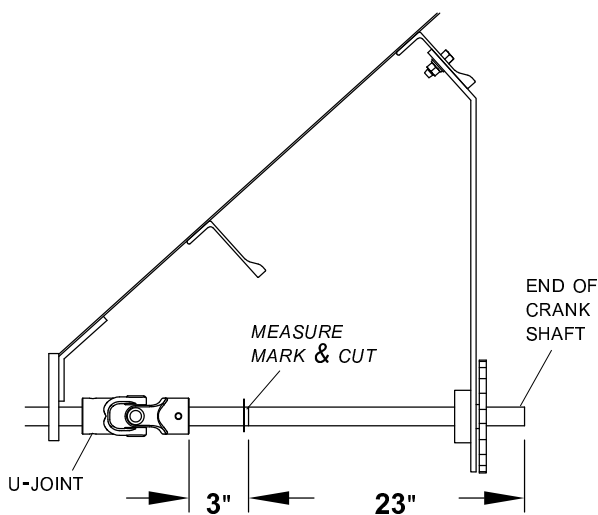
NOTE: The ProTrap® system is designed for use only with rack and pinion hopper doors.

The ProTrap® system is designed for use with 1" diameter crank shaft.

STEP 1: To determine ProTrap® hinge bracket location, transfer center line of crank shaft to upper hopper rail. If there is no hole drilled at center line, mark new hole location on upper hopper rail.

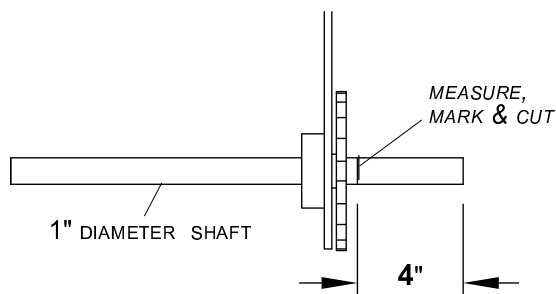


STEP 2: Measure and mark 23" from end of shaft. Adjust measurement, if needed, so remaining shaft extends at least 3" past U-joint. Cut through shaft at marked location. Remove manual crank.

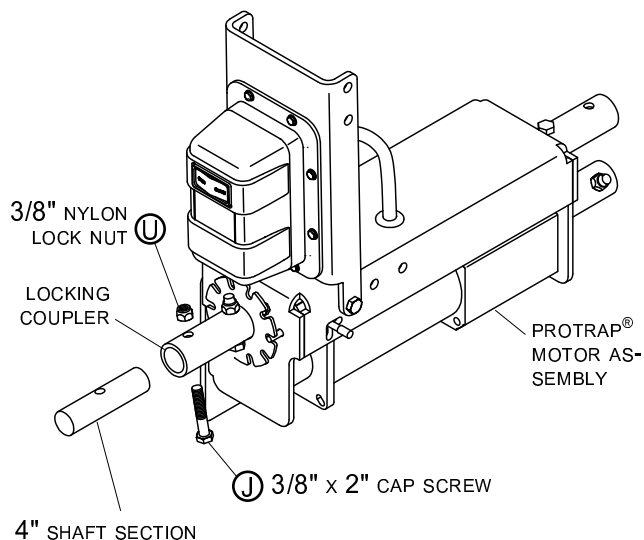


STEP 3: Remove fasteners holding manual crank bracket to hopper rail.

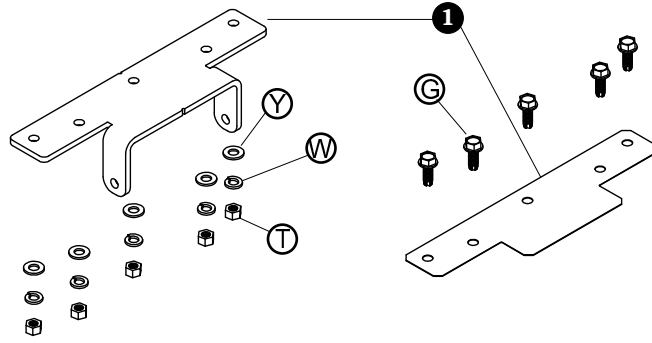
STEP 4: Measure and mark 4" from end of shaft. Cut through shaft at marked location.



STEP 5: Insert 4" section of shaft into locking coupler until shaft contacts existing shaft inside coupler. Drill 13/32" hole through shaft. Secure with 3/8" x 2" cap screw and nylon lock nut.



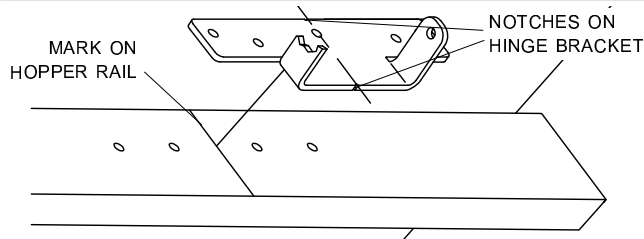
Item	Part #	Description
1.	1118439	Replacement Hinge Bracket
G.	1700400	Self-Tapping Screw - 3/8" x 1"
T.	1700407	Hex Nut - 3/8"
W.	1700434	Lock Washer - 3/8"
Y.	1700429	Flat Washer - 3/8"



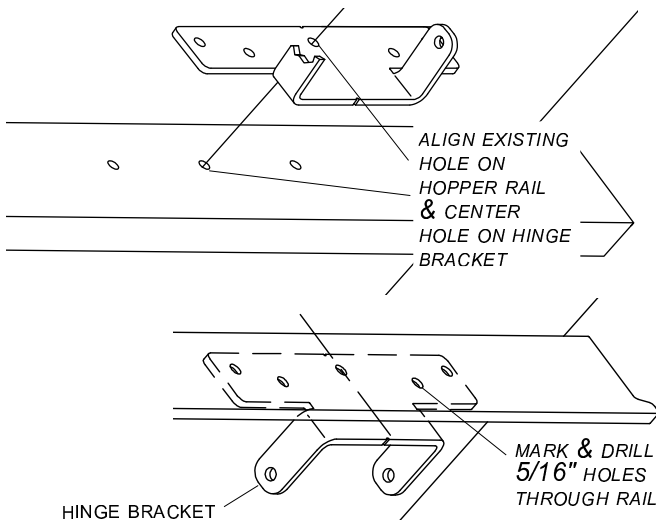
STEP 1: Locate ProTrap® hinge bracket on hopper rail. For most applications, hinge bracket will be installed to upper rail, although some applications will require mounting to lower rail. Hinge bracket may be located on top or bottom of rail, depending on your application.

If no existing holes on hopper rail align with center of crank shaft: Align notches on hinge bracket with mark on hopper rail (marked in step 2).

NOTE: Notches on bracket must align with center line of crank shaft.

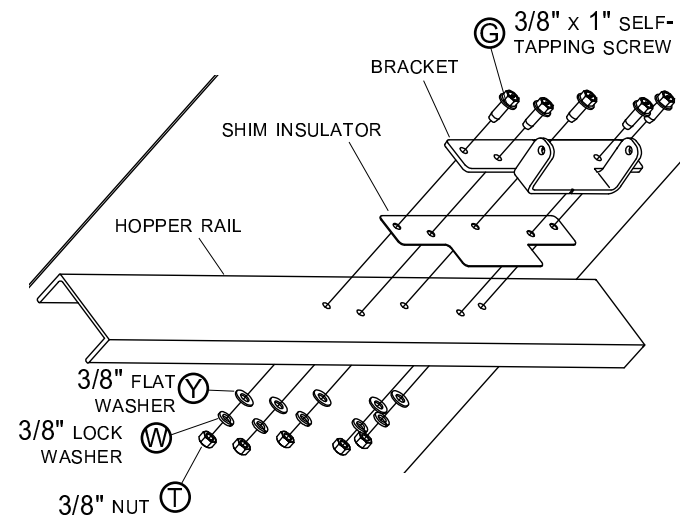


If an existing hole on hopper rail aligns with center of crank shaft: Align center hole in hinge bracket with hole on hopper rail.



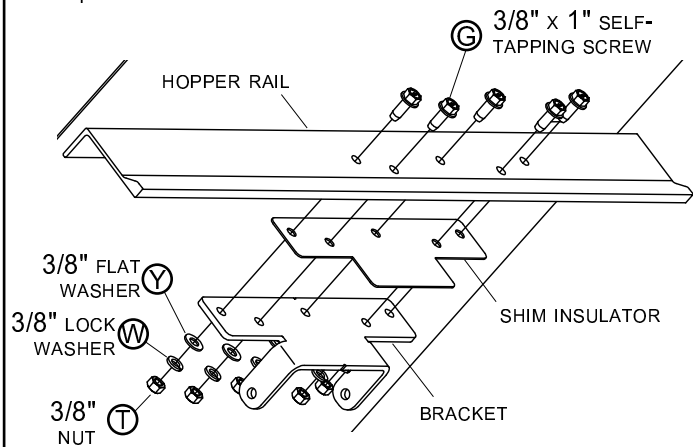
STEP 2: Square up bracket and clamp in place. Using hinge bracket as guide, mark and drill 5/16" holes through hopper rail (five places).

STEP 3: Place shim insulator between rail and bracket. Fasten hinge bracket to hopper rail with 3/8" x 1" self-tapping screws, flat washers, lock washers and nuts.

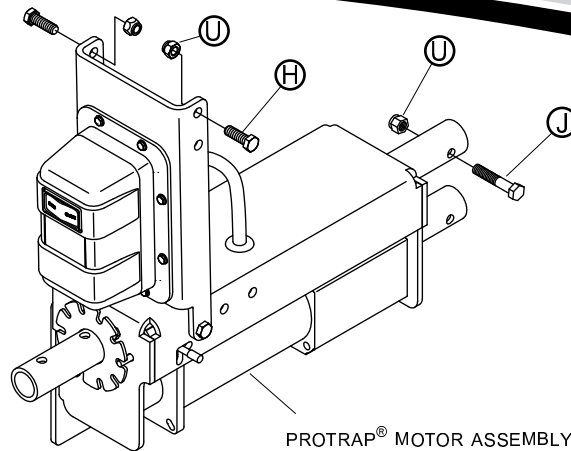


BRACKET ON TOP SIDE OF RAIL

Install bracket on top or bottom side of hopper rail. Locate on same side of rail manual crank bracket was located. Fasten in five places.



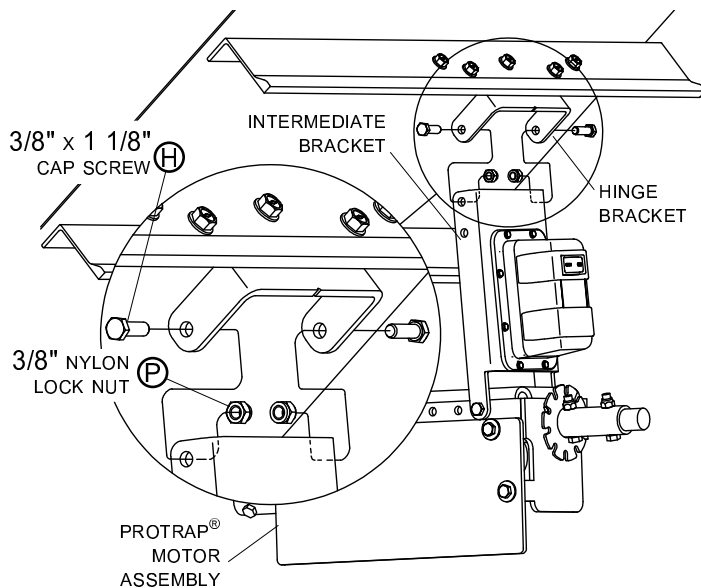
BRACKET ON BOTTOM SIDE OF RAIL



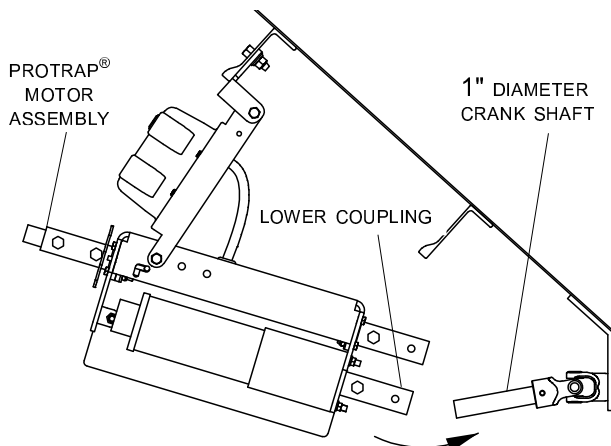
Item	Part #	Description
H.	1702904	Cap Screw - 3/8" x 1 1/8"
U.	1701580	Nylon Lock Nut - 3/8"
J.	1704264	Cap Screw - 3/8" x 2"

PROTRAP® MOTOR ASSEMBLY

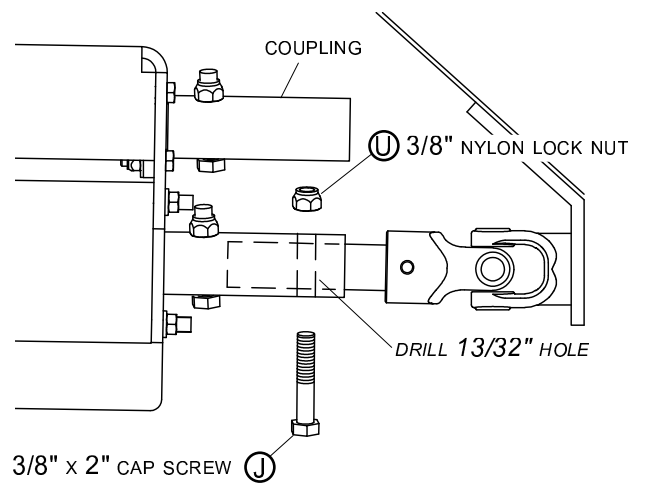
STEP 1: Fasten ProTrap® motor assembly intermediate bracket to hinge bracket with 3/8" x 1 1/8" cap screws and nylon lock nuts.



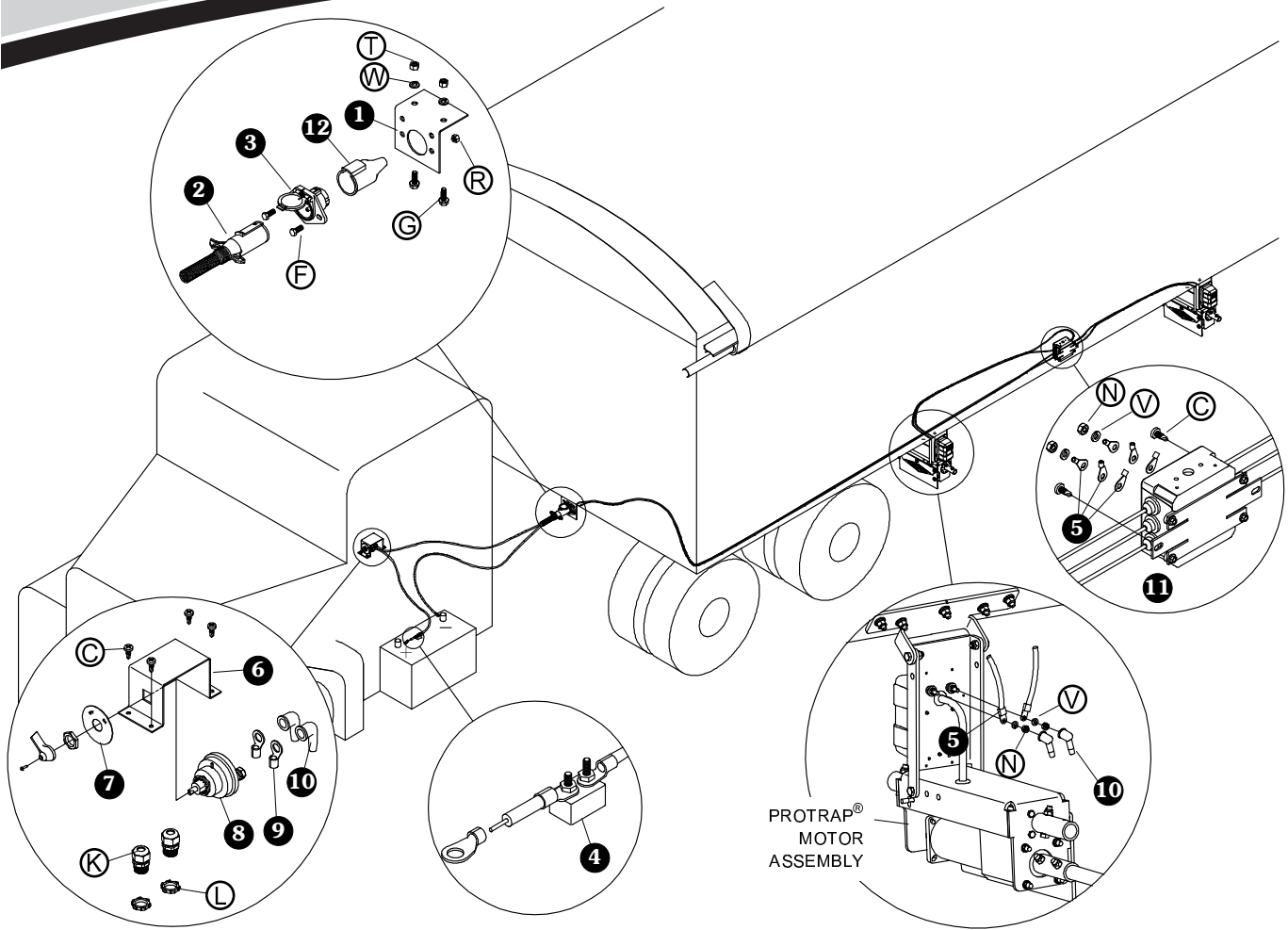
STEP 2: Insert end of 1" diameter crank shaft into lower coupling on ProTrap® motor assembly.



STEP 3: Using hole through lower coupling as guide, mark and drill 13/32" hole through crank shaft. Fasten coupling to shaft with 3/8" x 2" cap screw and nylon lock nut.

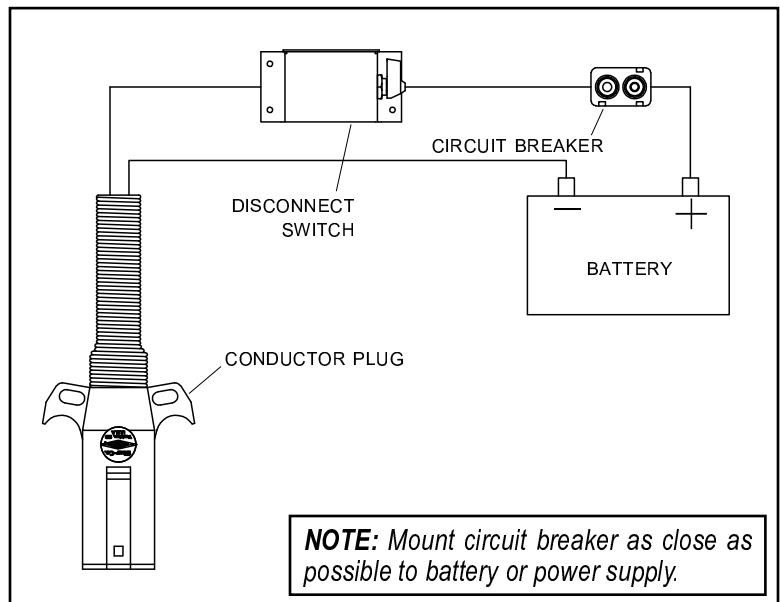


NOTE: Use anti-seize (P/N 1704381) to prevent crank shaft from seizing into lower coupling.



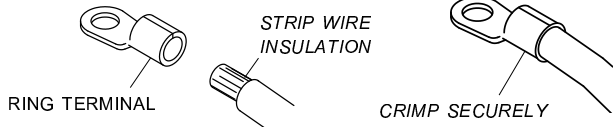
NOTE: Add grommets to all holes drilled in trailer for routing wires.

Item	Part #	Description
1.	1109015	Mounting Bracket for Conductor Socket
2.	1115385	Heavy-Duty Dual-Conductor Plug
3.	1115386	Heavy-Duty Dual-Conductor Socket
4.	1704354	40-Amp Modified-Reset Circuit Breaker
5.	1702707	Ring Terminal - 6 Ga. x 1/4" Stud
6.	1118323	Disconnect Switch Mounting Bracket
7.	1704284	Face Plate
8.	1704283	Battery Disconnect Rotary Switch
9.	1703244	Ring Terminal - 6 Ga. x 3/8" Stud
10.	1704330	Rubber Insulating Boot
11.	1119366	Sealed Junction Box Kit (see Page 7 for assembly of components)
12.	1704573	Conductor Socket Sealed Boot
C.	1700398	Self-Drilling Screw - 1/4" x 3/4"
F.	1701045	Cap Screw - 5/16" x 3/4"
G.	1700400	Self-Tapping Screw - 3/8" x 1"
K.	1704152	Dome Nut - 1/2"
L.	1704187	Lock Nut - 1/2"
N.	1700408	Hex Nut - 1/4"
R.	1700411	Hex Nut - 5/16"
T.	1700407	Hex Nut - 3/8"
V.	1700436	Lock Washer - 1/4"
W.	1700434	Lock Washer - 3/8"

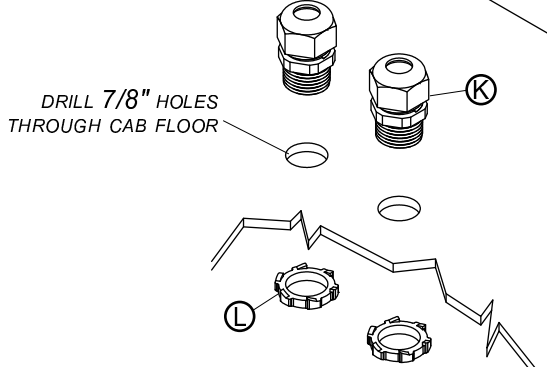


NOTE: Mount circuit breaker as close as possible to battery or power supply.

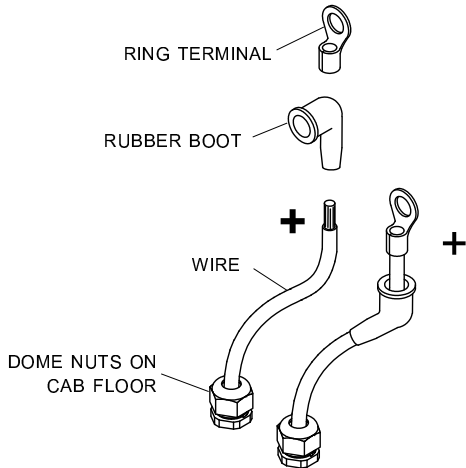
Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.



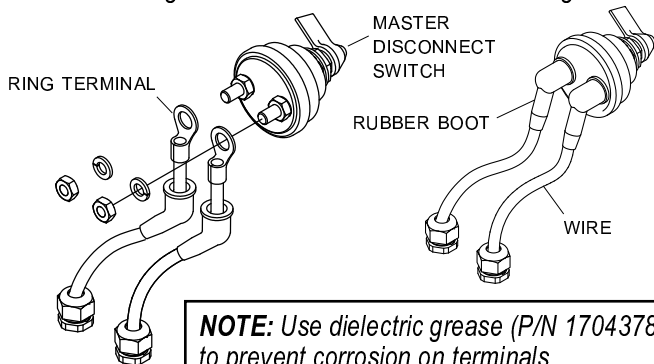
STEP 1: Master Disconnect Switch. Drill two 7/8" holes in cab floor to route wire into cab. Install dome nut strain reliefs into holes.



STEP 2: Run positive 6-ga. wire from battery through dome nuts on cab floor. Run wire ends through rubber boots and crimp 3/8" ring terminals to ends of wire.

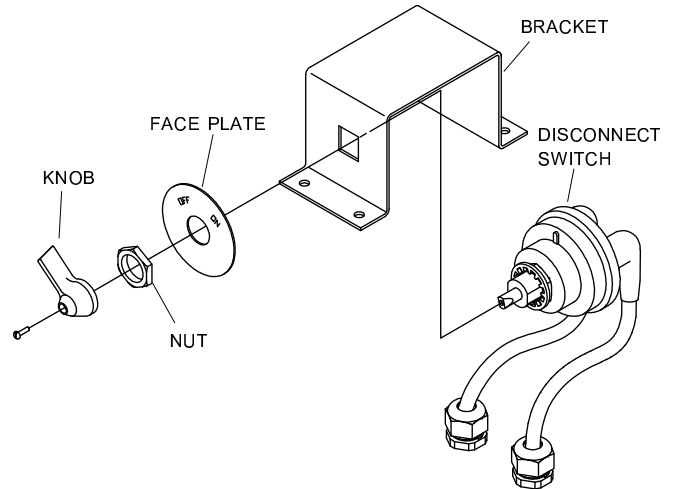


STEP 3: Connect wires to disconnect switch. Coat with dielectric grease and install rubber boots over ring terminals.

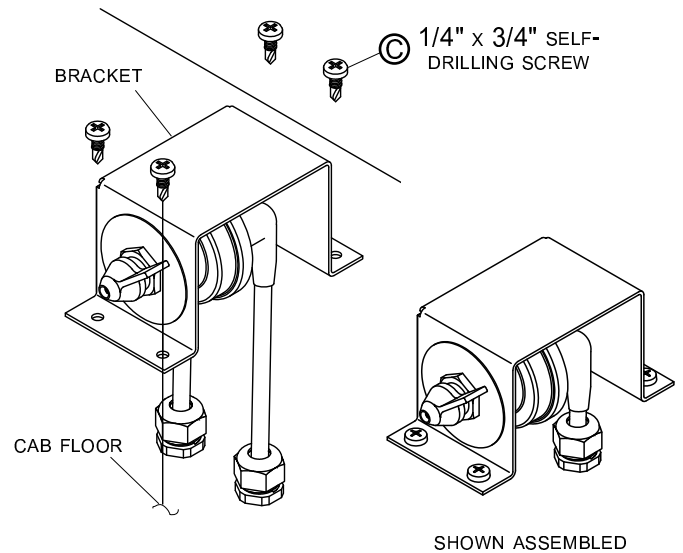


NOTE: Use dielectric grease (P/N 1704378) to prevent corrosion on terminals.

STEP 4: Remove knob and nut from disconnect switch and assemble face plate and disconnect switch to bracket as shown.

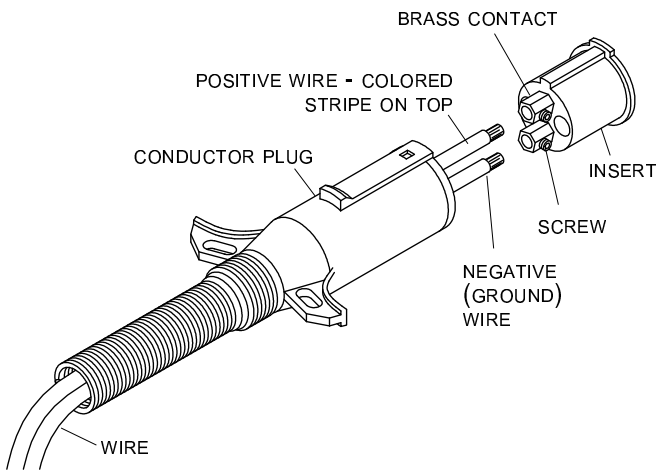


STEP 5: Fasten bracket to cab floor with 1/4" x 3/4" self-drilling screws.

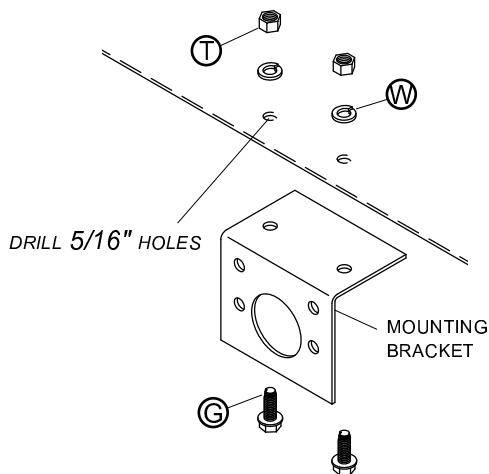


NOTE: ProTrap® rocker switch will remain active until master disconnect switch is turned off.

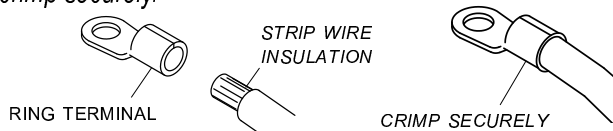
STEP 1: Conductor Plug. Unfasten and remove insert from conductor plug. Feed 6-ga. wire through plug and into brass contacts on insert. Tighten screws to secure wires. Replace insert into conductor plug and secure screw.



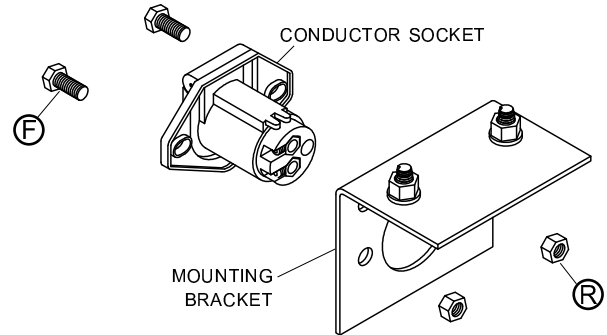
STEP 2: Mounting Bracket. Mount bracket at suitable location on front of trailer, usually near existing plugs. Mark and drill 5/16" holes and fasten with 3/8" x 1" self-tapping screws, lock washers and nuts.



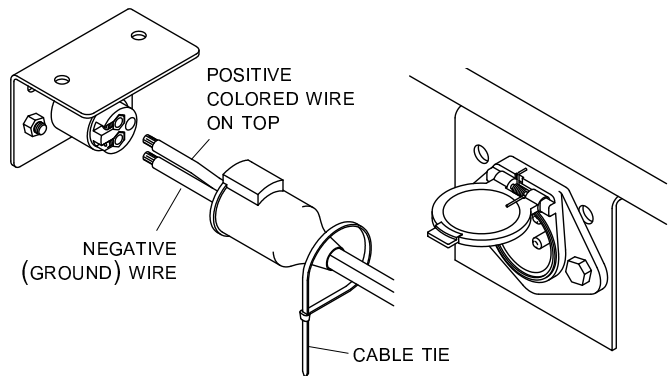
Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.

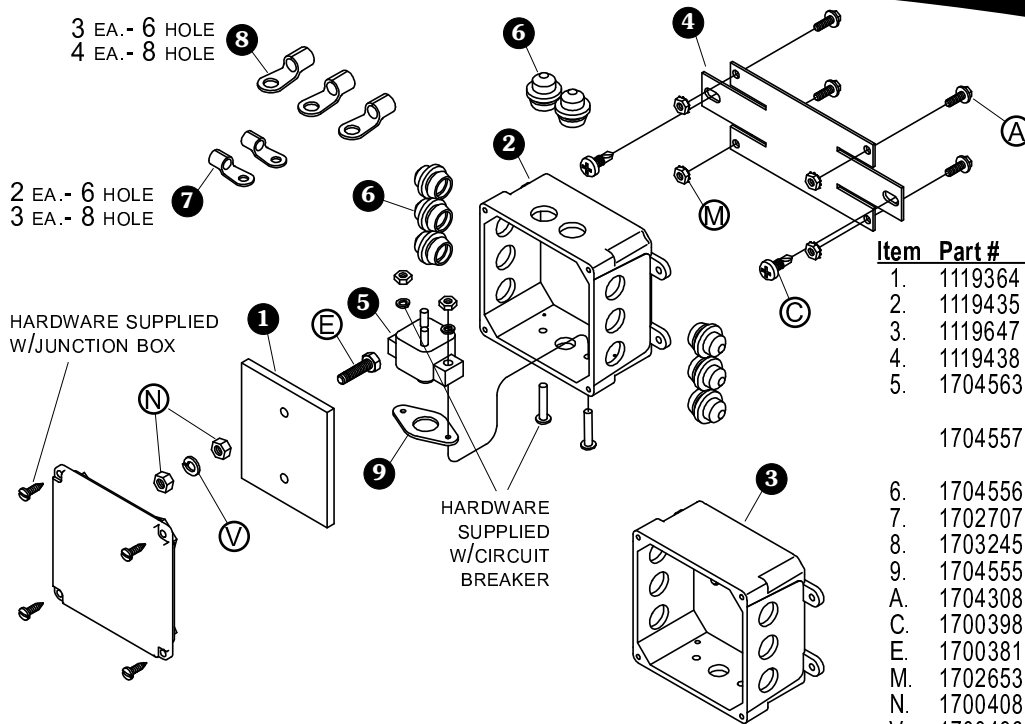


STEP 3: Conductor Socket. Fasten conductor socket into mounting bracket with 5/16" x 3/4" cap screws and nuts.



Slide 6-ga. wire through sealed boot and connect wire to socket, aligning positive wire on socket with positive wire on conductor plug. Slide sealed boot against conductor socket and secure boot to wire with cable tie.



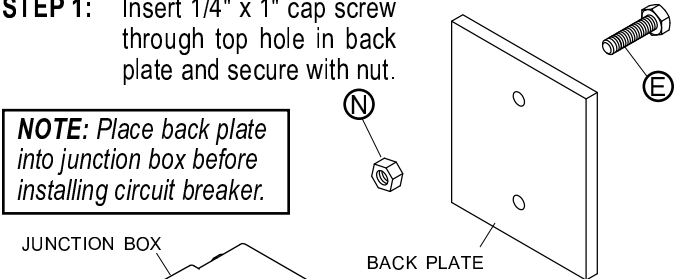


Item	Part #	Description
1.	1119364	Junction Box Back Plate
2.	1119435	Junction Box w/Breaker - 6 Hole
3.	1119647	Junction Box w/Breaker - 8 Hole
4.	1119438	Junction Box Mtg Plate
5.	1704563	30-Amp Manual Reset Circuit Breaker - ProTrap® 150
	1704557	35-Amp Manual Reset Circuit Breaker - ProTrap® 250
6.	1704556	Rubber Grommet
7.	1702707	Ring Terminal - 6 Ga. 1/4" Stud
8.	1703245	Ring Terminal - 6 Ga. #10 Stud
9.	1704555	Circuit Breaker Gasket
A.	1704308	Flange Hd. Cap Screw - #10 x 1/2"
C.	1700398	Self-Drilling Screw - 1/4" x 3/4"
E.	1700381	Cap Screw - 1/4" x 1"
M.	1702653	Machine Screw Nut w/Washer
N.	1700408	Hex Nut - 1/4"
V.	1700436	Lock Washer - 1/4"

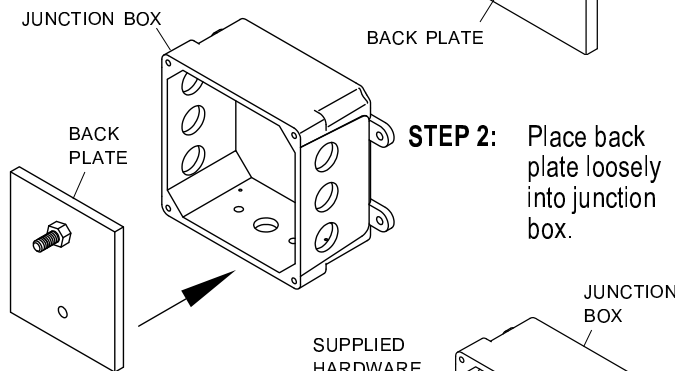
NOTE: Use junction boxes on trailers with two or more hoppers.

STEP 1: Insert 1/4" x 1" cap screw through top hole in back plate and secure with nut.

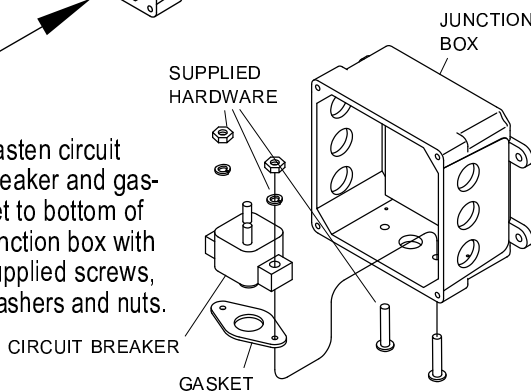
NOTE: Place back plate into junction box before installing circuit breaker.



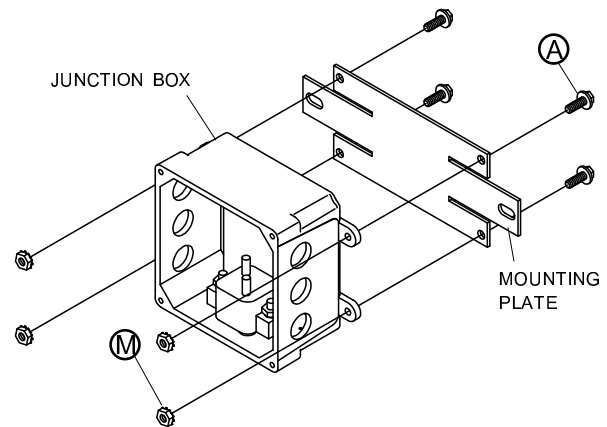
STEP 2: Place back plate loosely into junction box.



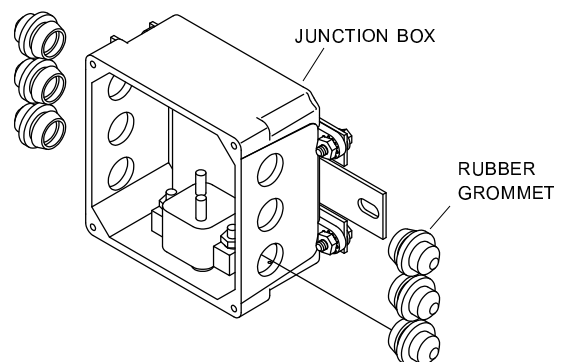
STEP 3: Fasten circuit breaker and gasket to bottom of junction box with supplied screws, washers and nuts.



STEP 4: Fasten mounting plate to junction box with #10 x 1/2" cap screws and nut/washers.

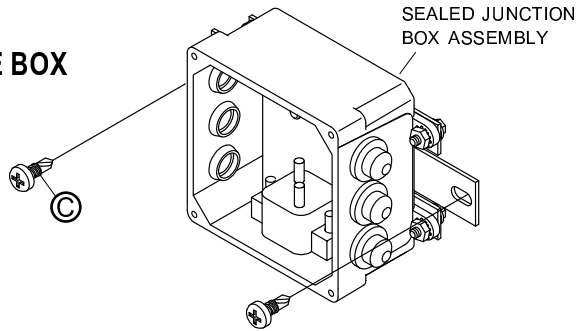


STEP 5: Install rubber grommets into holes in junction box.

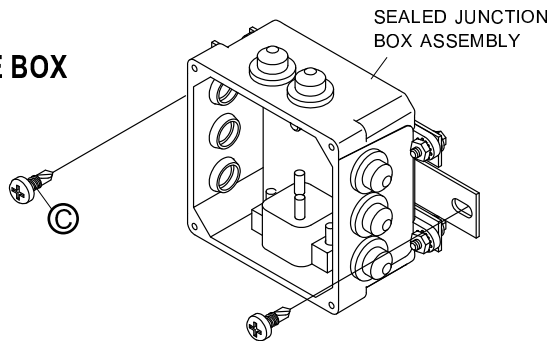


STEP 6: Locate junction box between hoppers to supply power to ProTrap® units. Using slots in junction box assembly as guide, mark and drill 3/16" holes and fasten to trailer with 1/4" x 3/4" self-drilling screws.

6-HOLE BOX

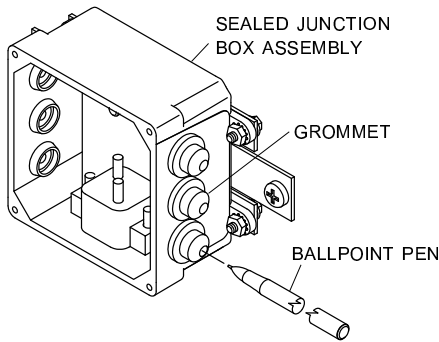


8-HOLE BOX

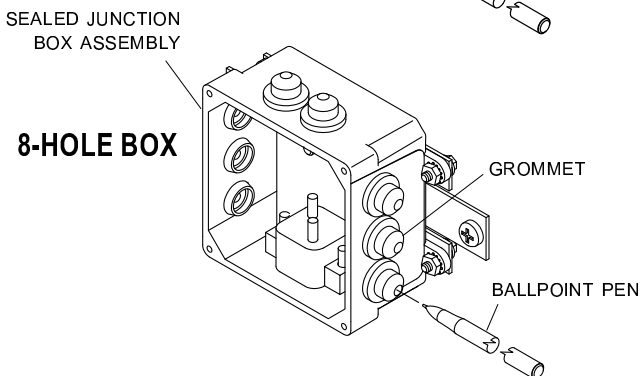


STEP 7: Pierce grommets with ballpoint pen so terminal wires can be inserted through pierced holes.

6-HOLE BOX

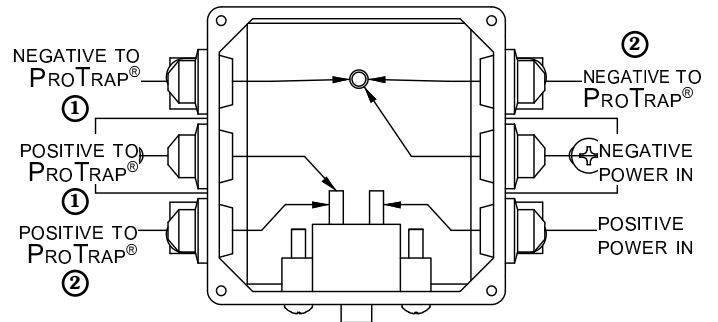


8-HOLE BOX

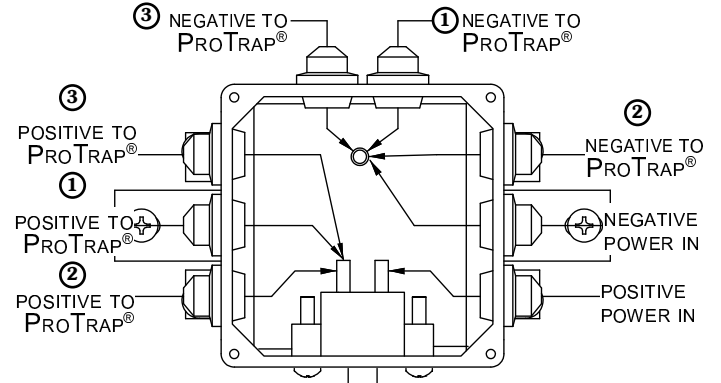


STEP 8: Run 6-ga. wire from conductor socket to junction box. Crimp 1/4" ring terminals to wire ends. Remove hex nut and lock washer from junction post assembly. Place positive wires on positive post and negative wires on negative post. Secure with hex nuts and lock washers.

6-HOLE BOX

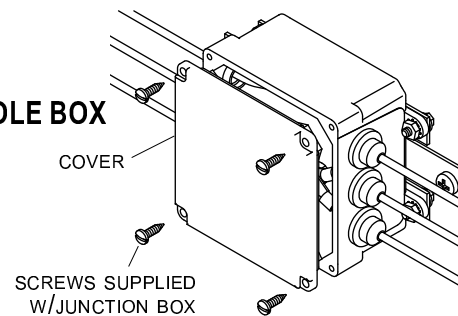


8-HOLE BOX

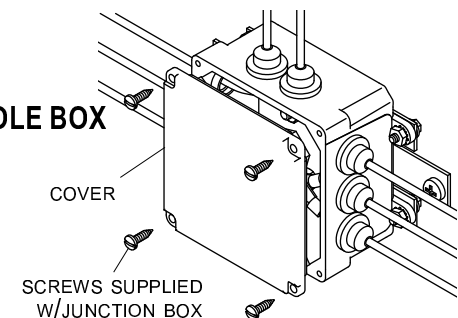


STEP 9: Fasten cover to junction box with supplied screws.

6-HOLE BOX



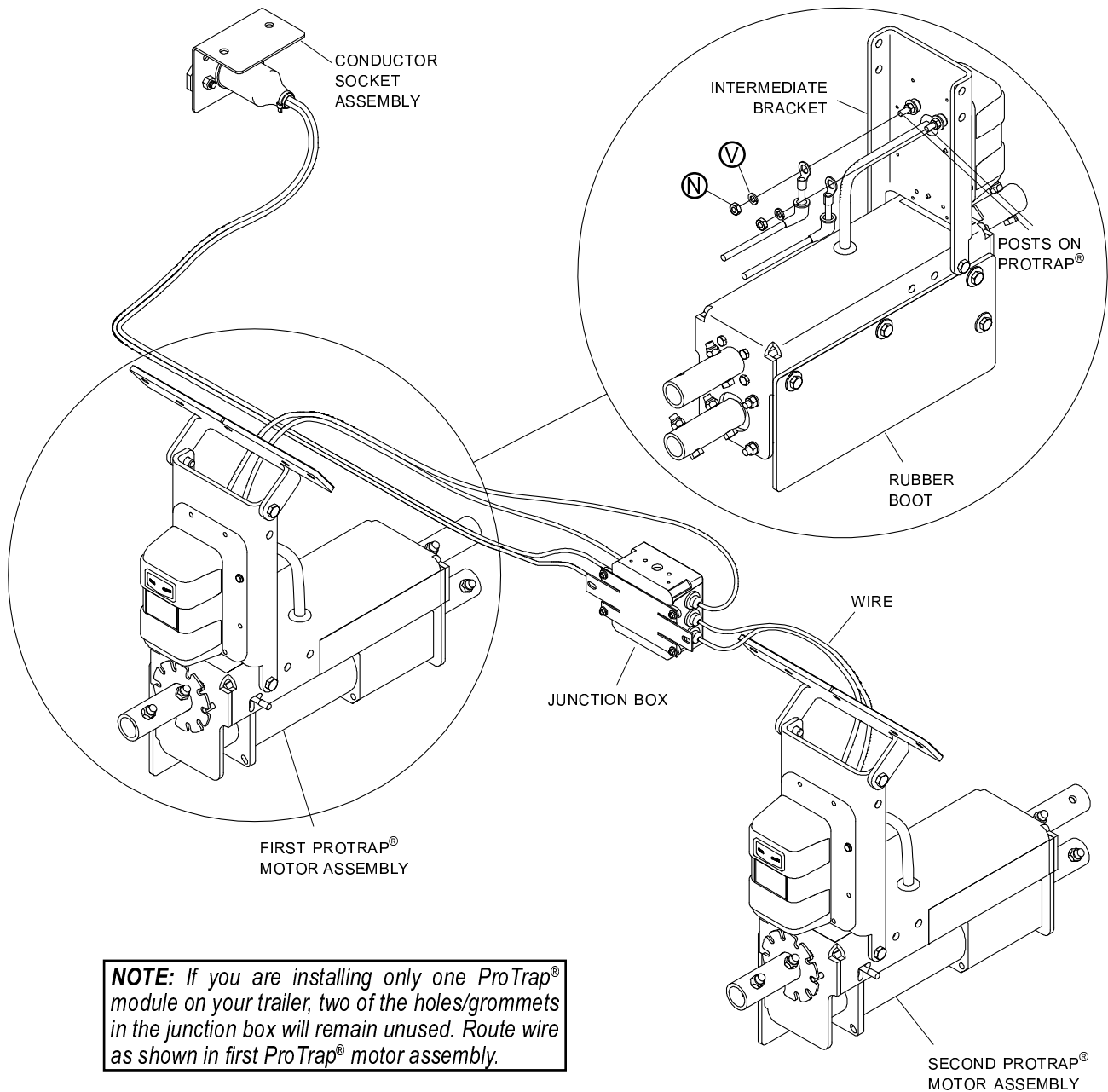
8-HOLE BOX



Connect Wires to ProTrap® Modules: Run 6-ga. wires from each ProTrap® motor assembly to sealed junction box. Run wire ends through rubber boots and crimp 1/4" ring terminals to ends of wire. Connect each positive wire to positive post and each negative wire to negative post. Secure with 1/4" lock washers and nuts. Coat with dielectric grease and install rubber boots over ring terminals.

NOTE: Add grommets to all holes drilled in trailer for routing wires.

NOTE: Use dielectric grease (P/N 1704378) to prevent corrosion on terminals.



NOTE: If you are installing only one ProTrap® module on your trailer, two of the holes/grommets in the junction box will remain unused. Route wire as shown in first ProTrap® motor assembly.

Power-Up/Down:

The transmitter will power up when the lid is opened. The transmitter will power down when the lid is closed or when the lid is left open three minutes after the last button is pushed.

Standard Operation:

After power-up, the first channel will be immediately active and the LED indicator for this channel will be flashing. The *Open/On* and *Close/Off* buttons are operational for the indicated active channel. While pressed, the LED indicator will flash faster indicating channel operation.

The *Select* button will cycle between enabled channels. If only one channel is enabled, there will be no apparent change when the *Select* button is pressed.

Channel Programming Mode:

The Shur-Co® SMARTransmitter® has five channels. Pressing the *Select* button toggles through these channels. Unused channels can be disabled, if desired, using the following process, but your transmitter is fully operational as shipped. This process may be skipped. Unused transmitter channels will not perform any functions.

Hold the *Select* button down for 10 seconds and the transmitter will enter *Channel Programming Mode*. Each time *Channel Programming Mode* is entered, the status of all five channels must be reset.

While in *Channel Programming Mode*, the programmable channel will be indicated by a solid lit LED.

NOTE: The transmitter will NOT activate any motor or lighting system while the transmitter is in *Channel Programming Mode*.

Press the *Open/On* button to enable the current channel (designated by the indicator light). Press the *Close/Off* button to disable the current channel. The indicator light will automatically jump to the next channel.

After programming all five channels, the transmitter will display the programmed channel status for all channels for three seconds. All enabled channel LEDs will be lit solid and all disabled channel LEDs will not be lit. Buttons will not function during this three-second period.

The transmitter will automatically exit *Channel Programming Mode* after three seconds and return to *Operational Mode*.

NOTE: If there is not at least one enabled channel after programming, the transmitter will not save the changes and will revert back to the previously saved channel settings.

TIP: To cancel your changes and exit *Channel Programming Mode*, close the transmitter cover.

Channel Programming Example:

The transmitter in this example is labeled with the following five channels:

- Tarp System
- Front Hopper
- Back Hopper
- Lights
- Auxiliary

These channel labels are for a standard agricultural transmitter. Your transmitter label may differ.

The task is to enable the *Tarp System*, *Front Hopper* and *Back Hopper* channels.

1. Hold down the *Select* button for 10 seconds. The transmitter will enter *Learn Mode*. The *Tarp System* channel LED will be lit. All other channel LEDs are off.

2. Press the *Open/On* button to enable the *Tarp System* channel. The *Front Hopper* LED will now be lit.

3. Press the *Open/On* button to enable the *Front Hopper*. The *Back Hopper* LED will be lit.

4. Press the *Open/On* button to enable the *Back Hopper*. The *Lights* channel LED will be lit.

5. Press the *Close/Off* button to disable the lights. The auxiliary LED will be lit.

6. Press the *Close/Off* button to disable the Auxiliary channel LED.

7. The transmitter will display all activated channels for three seconds. The transmitter will automatically exit *Channel Programming* and revert to *Operational Mode*. The *Tarp System* LED will be flashing, indicating that the channel is active and ready for operation.

Transmitter to Receiver Programming:

Shur-Co® SMARTransmitter® wireless systems are typically pre-programmed at the factory or by the dealer and should be ready to use as shipped. Re-programming is necessary after replacement transmitters or receivers are installed.

Use the following method to program the RF receiver to accept and respond to signals from up to five transmitters. The receiver will not accept or respond to signals from transmitters that have not been programmed using this method.

1. Remove the receiver cover from the motor assembly, pulling gently on the cover to prevent damage to wires that are connected to the rocker switch.

2. Check to be sure the ProTrap® is connected to the power supply. The receiver must be connected to power to be programmed. If a battery disconnect switch is installed, make sure it is turned on.

3. The receiver can learn to recognize and respond to up to five transmitters. Gather all of the transmitters to be introduced to the receiver. Open the transmitter lid(s) in order to turn them on.

4. Set the transmitter(s) to the appropriate channel (*Tarp System, Front Hopper, etc.*). See *Transmitter Operation & Programming Instructions*.

NOTE: Read the following steps in their entirety before proceeding. Steps 6 to 8 must be completed within 10 seconds.

5. Press and hold the programming button on the bottom of the RF solenoid for five seconds. The solenoid will beep to indicate that it is in programming mode. Release the programming button.

6. Press the *Open/On* button on the first transmitter being introduced. The receiver will beep after receiving the transmitter signal.

7. Repeat step 6 for any remaining transmitters.

8. The receiver will expect five signals, so if you are programming less than five transmitters, press the *Open/On* button additional times on the last transmitter you are programming. Push the *Open/On* button a total of five times (see programming example).

9. After pushing the *Open/On* button five times, the receiver will beep twice to indicate that it has been programmed successfully.

NOTE: The receiver will exit program mode after 10 seconds, whether or not it has five *Open/On* button signals.

10. Verify that each transmitter is operating correctly. If none of the transmitters are operating correctly, verify that there are 12 to 14 volts from the receiver positive to negative, then repeat steps 3 to 9.

11. Refasten receiver cover.

Receiver Programming Example:

In this example, the receiver controls the front hopper motor. The task is to program the receiver to recognize three transmitters.

1. Remove the receiver cover and turn on the three transmitters.

2. Set all three transmitters to the front hopper channel.

3. Press and hold the programming button on the RF solenoid for five seconds. The solenoid will beep to indicate it has entered *Channel Programming Mode*. Release the programming button.

4. Press the *Open/On* button on the first transmitter. The receiver will beep to indicate that it has received a signal and memory slot #1 has been filled.

5. Press the *Open/On* button on the second transmitter. The receiver will beep to indicate that it has received a signal and memory slot #2 has been filled.

6. Press the *Open/On* button on the third transmitter. The receiver will beep to indicate that it has received a signal and memory slot #3 has been filled.

7. Press the *Open/On* button on the third transmitter again. The receiver will beep to indicate that it has received a signal and memory slot #4 has been filled.

8. Press the *Open/On* button on the third transmitter again. The receiver will beep twice to indicate that it has received a signal and memory slot #5 has been filled. The double beep also indicates that the receiver has exited programming mode.

9. Verify that the front hopper *Open* and *Close* operations are functioning correctly on all three transmitters.

10. Refasten the receiver cover to motor assembly.



CAUTION

Check all hardware for complete assembly before operating. Inspect system at this time and adjust as required.

Operation:

Close Trap: Push switch to "CLOSE" and hold. Observe trap and release switch when trap is fully closed.

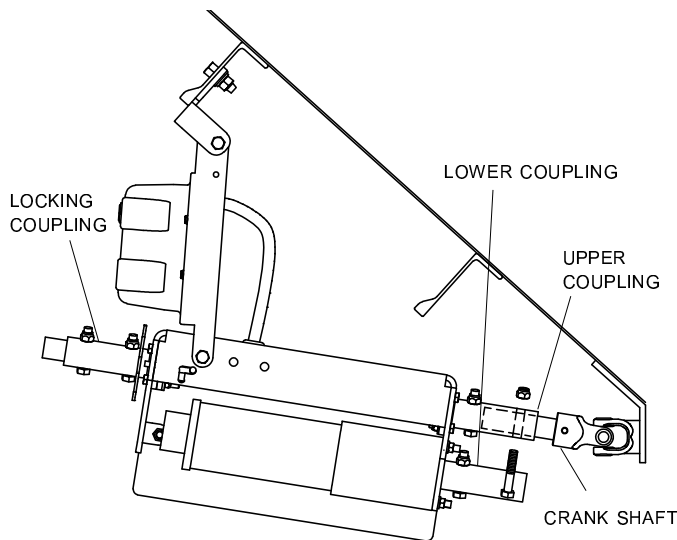
Open trap: Push switch to "OPEN" and hold. Observe trap and release switch when trap is fully open.

NOTE: Release switch at end of cycle or modified-reset circuit breaker will trip. After breaker resets, switch will activate motor again. To reduce unnecessary strain on components, release switch at end of each cycle.

NOTE: Pressure wash - the receiver may be pressure washed, but keep nozzle at least 3' from system while spraying.

Convert to Manual Crank:

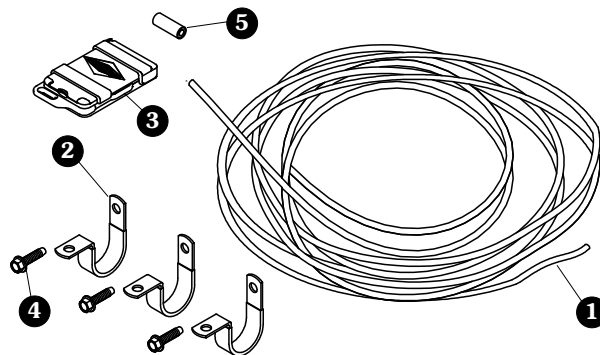
To change from electric to manual operation, unfasten and remove crank shaft from lower coupling. Use same fasteners to fasten shaft to upper coupling. Install crank onto locking coupling.



PROTRAP® REPLACEMENT PARTS

ProTrap® Trailer Wiring & SMARTransmitter®

Item	Part #	Description
1.	1703822	Dual-Conductor Wire - 6 Ga. 259 Strand (per foot)
2.	1702108	Wire Clip
3.	1118437	SMARTransmitter® Remote
4.	1704338	Self-Tapping Screw - 1/4" x 1"
5.	1704597	SMARTransmitter® Battery (Replacement)



ProTrap® Trailer Mounts

Item	Part #	Description
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For Dakota Trailer

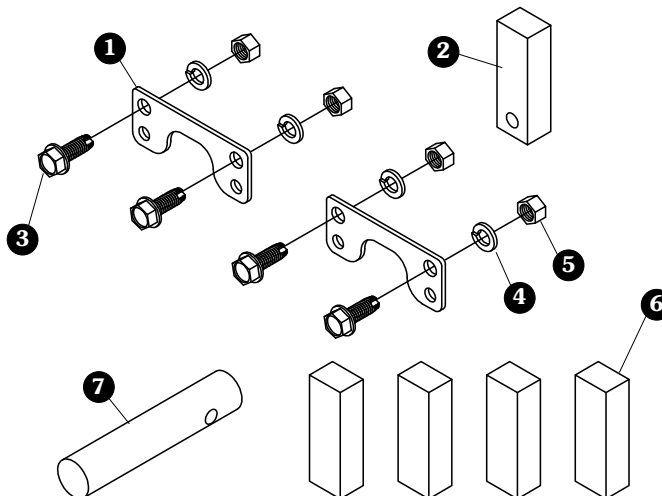
	1118337	Hopper Parts Kit (Includes 1 - 5)
1.	1118305	Bearing Retainer - Dakota
2.	1118306	Door Stop - Dakota
3.	1700400	Self-Tapping Screw - 3/8" x 1"
4.	1700434	Lock Washer - 3/8"
5.	1700407	Hex Nut - 3/8"

For Trailers w/Auxiliary Stops

6.	1118338	Hopper Parts
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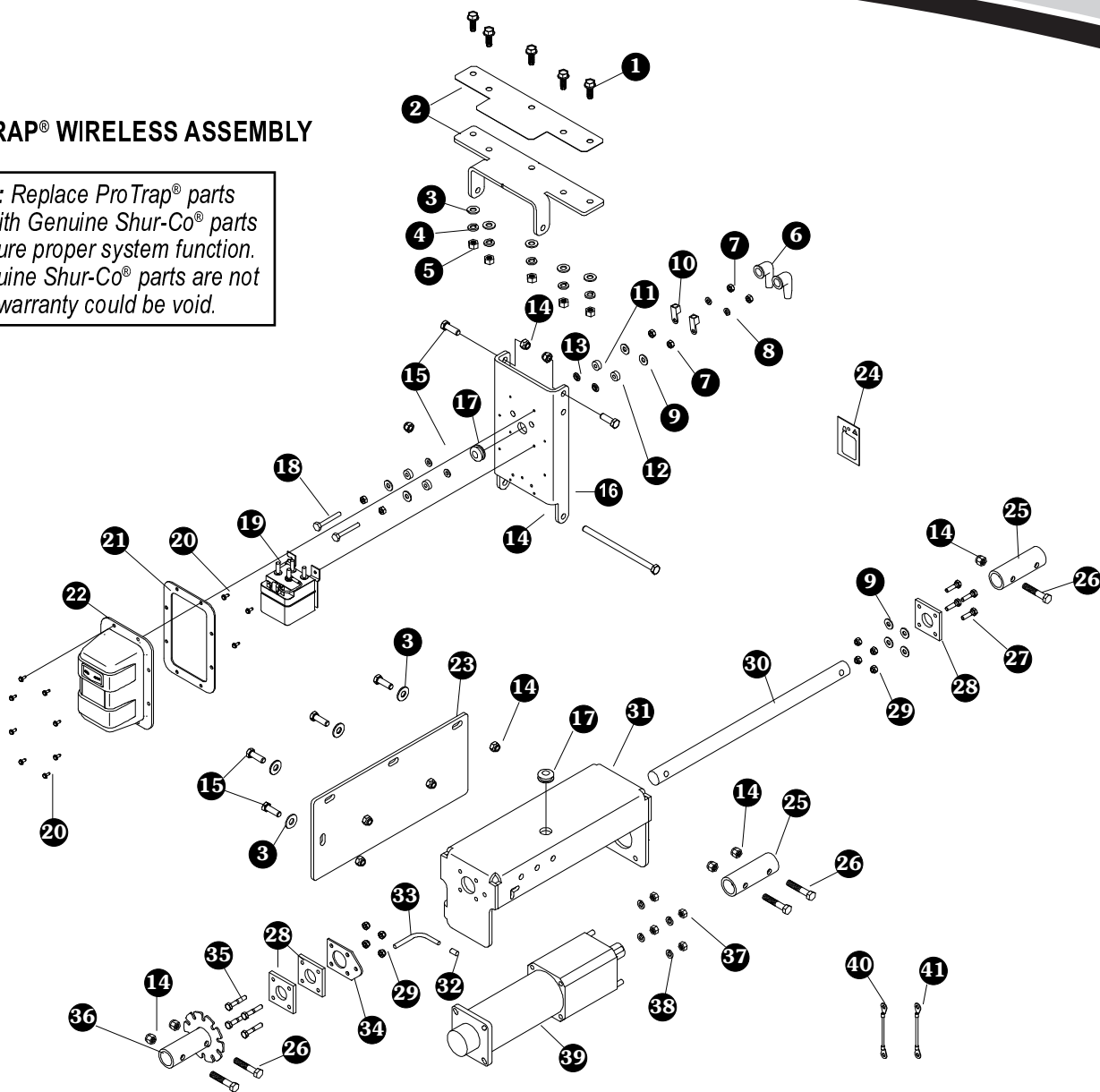
For Cornhusker Trailer

7.	1118339	Hopper Parts
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PROTRAP® WIRELESS ASSEMBLY

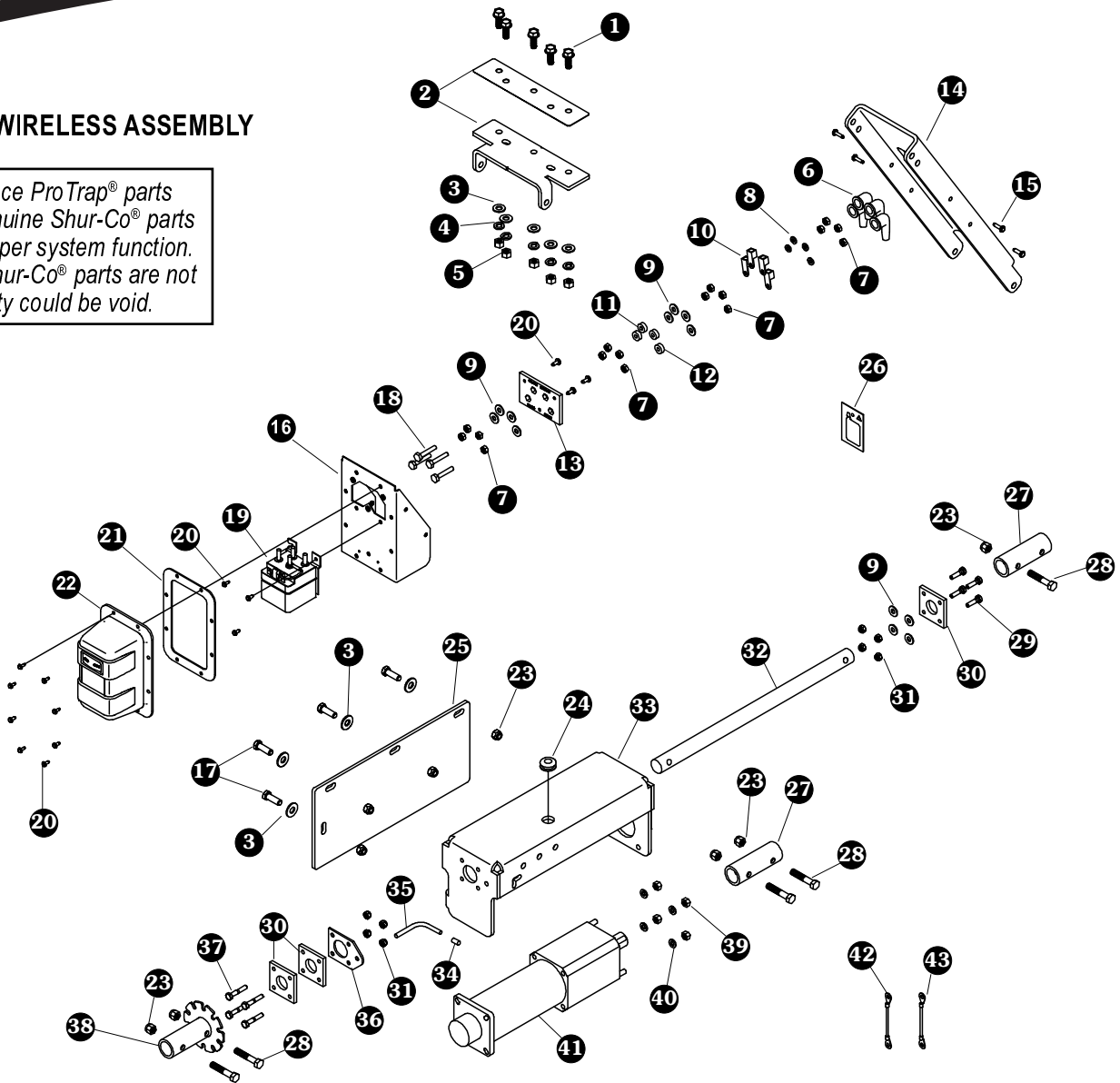
NOTE: Replace ProTrap® parts only with Genuine Shur-Co® parts to ensure proper system function. If Genuine Shur-Co® parts are not used, warranty could be void.



Item	Part #	Description	Item	Part #	Description	Item	Part #	Description
1.	1700400	Self-Tapping Screw - 3/8" x 1"	15.	1702904	Cap Screw - 3/8" x 1 1/8"	27.	1700381	Cap Screw - 1/4" x 1"
2.	1118439	Replacement Hinge Bracket	16.	1118027	Intermediate Bracket	28.	1118034	Flange Bearing
3.	1700429	Flat Washer - 3/8"	17.	1704270	Rubber Grommet - 1/2" x 11/16"	29.	1701543	Nylon Lock Nut - 1/4"
4.	1700434	Lock Washer - 3/8"	18.	1704260	Cap Screw - 1/4" x 2"	30.	1118033	Manual Shaft
5.	1700407	Hex Nut - 3/8"	19.	1704298	Motor Reversing Solenoid - RF	31.	1118026	Motor Bracket
6.	1704330	Rubber Insulating Boot	20.	1704367	Hex Flange Cap Screw - #10 x 3/4"	32.	1704276	Protective Cap - 1/4" x 1/2"
7.	1700408	Hex Nut - 1/4"	21.	1704309	Gasket - Solenoid Cover	33.	1118036	Locking Pin
8.	1700436	Lock Washer - 1/4"	22.	1118340	Solenoid Cover/Gasket	34.	1118035	Lock Retainer
9.	1700427	Flat Washer - 1/4"	23.	1118436	Mud Flap (Includes Flap, 3, 14 & 15)	35.	1700377	Cap Screw - 1/4" x 1 1/2"
10.	1702707	Ring Terminal - 6 Ga. 1/4" Stud	24.	1704381	Anti-Seize	36.	1118031	Locking Coupling
11.	1118037	Plastic Washer - Black	25.	1118038	Coupling - 1 3/8" x 4"	37.	1704389	Hex Nut - 5/16"
12.	1118250	Plastic Washer - Orange	26.	1704264	Cap Screw - 3/8" x 2"	38.	1700433	Lock Washer - 5/16"
13.	1704263	Nylon Shoulder Washer - 1/4" x 3/8"			39.	1118400	ProTrap® 250 Hopper Motor	
14.	1701580	Nylon Lock Nut - 3/8"				1119072	ProTrap® 150 Hopper Motor	
					40.	1704316	12 Ga. Wire - 3" Red	
					41.	1704317	12 Ga. Wire - 3" Black	

PROTRAP® WIRELESS ASSEMBLY

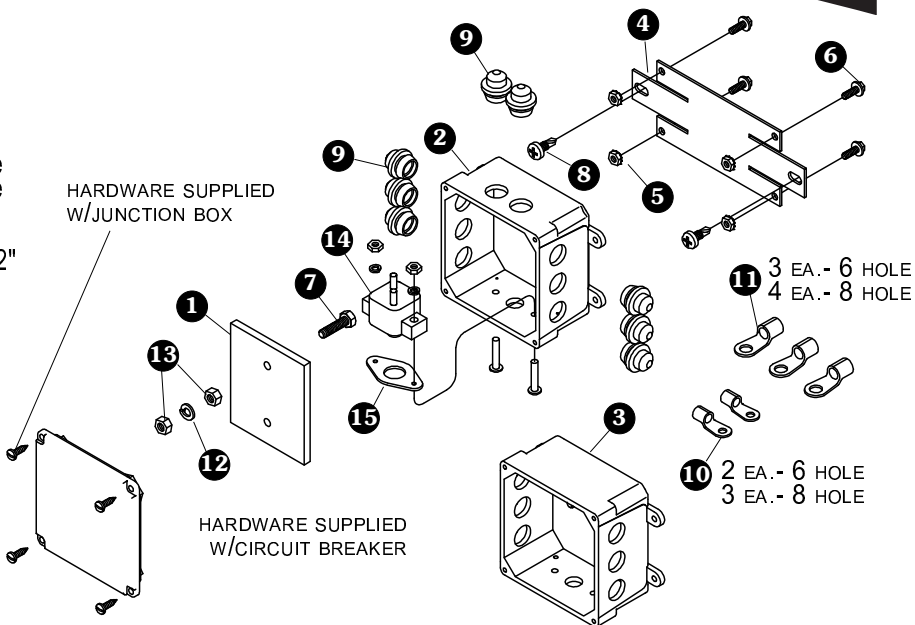
NOTE: Replace ProTrap® parts only with Genuine Shur-Co® parts to ensure proper system function. If Genuine Shur-Co® parts are not used, warranty could be void.



Item	Part #	Description	Item	Part #	Description	Item	Part #	Description
1.	1700400	Self-Tapping Screw - 3/8" x 1"	16.	1118528	Modular Control Bracket	28.	1704264	Cap Screw - 3/8" x 2"
2.	1119074	Replacement Hinge Bracket	17.	1702904	Cap Screw - 3/8" x 1 1/8"	29.	1700381	Cap Screw - 1/4" x 1"
3.	1700429	Flat Washer - 3/8"	18.	1704343	Cap Screw - 1/4" x 1 1/2"	30.	1118034	Flange Bearing
4.	1700434	Lock Washer - 3/8"	19.	1704298	Motor-Reversing Solenoid - RF	31.	1701543	Nylon Lock Nut - 1/4"
5.	1700407	Hex Nut - 3/8"	20.	1704308	Hex Flange Cap Screw - #10 x 1/2"	32.	1118033	Manual Shaft
6.	1704330	Rubber Insulating Boot	21.	1704309	Gasket - Solenoid Cover	33.	1118026	Motor Bracket
7.	1700408	Hex Nut - 1/4"	22.	1118340	Solenoid Cover/Gasket	34.	1704276	Protective Cap - 1/4" x 1/2"
8.	1700436	Lock Washer - 1/4"	23.	1701580	Nylon Lock Nut - 3/8"	35.	1118036	Locking Pin
9.	1700427	Flat Washer - 1/4"	24.	1704270	Rubber Grommet - 1/2" x 11/16"	36.	1118035	Lock Retainer
10.	1702707	Ring Terminal - 6 Ga. 1/4" Stud	25.	1118436	Mud Flap (Includes Flap, 3, 17 & 23)	37.	1700377	Cap Screw - 1/4" x 1 1/2"
11.	1118037	Plastic Washer - Black	26.	1704381	Anti-Seize	38.	1118031	Locking Coupling
12.	1118250	Plastic Washer - Orange	27.	1118038	Coupling - 1 3/8" x 4"	39.	1704389	Hex Nut - 5/16"
13.	1118297	Insulating Plate				40.	1700433	Lock Washer - 5/16"
14.	1118527	Intermediate Bracket - Rail Mt.				41.	1118400	ProTrap® 250 Hopper Motor
15.	1704367	Cap Screw - #10 x 3/4"				42.	1704316	12 Ga. Wire - 3" Red
						43.	1704317	12 Ga. Wire - 3" Black

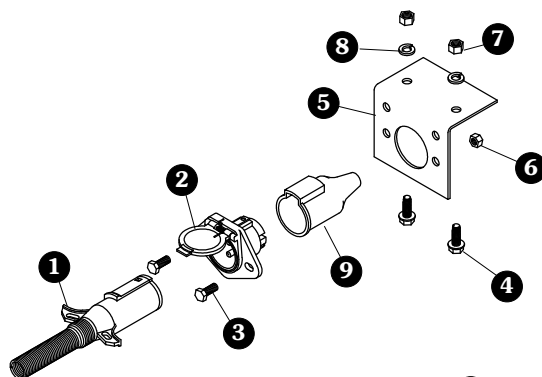
PROTRAP® SEALED JUNCTION BOX

Item	Part #	Description
	1119436	Junction Box Kit - ProTrap® 250
	1119437	Junction Box Kit - ProTrap® 150
1.	1119364	Junction Box Back Plate
2.	1119435	Junction Box w/Breaker - 6 Hole
3.	1119647	Junction Box w/Breaker - 8 Hole
4.	1119438	Junction Box Mtg Plate
5.	1702653	Machine Screw Nut w/Washer
6.	1704308	Flange Hd. Cap Screw - #10 x 1/2"
7.	1700381	Cap Screw - 1/4" x 1"
8.	1700398	Self-Drilling Screw - 1/4" x 3/4"
9.	1704556	Rubber Grommet
10.	1702707	Ring Terminal - 6 Ga. 1/4" Stud
11.	1703245	Ring Terminal - 6 Ga. #10 Stud
12.	1700436	Lock Washer - 1/4"
13.	1700408	Hex Nut - 1/4"
14.	1704563	30-Amp Manual Reset Circuit Breaker - ProTrap® 150
	1704557	35-Amp Manual Reset Circuit Breaker - ProTrap® 250
15.	1704555	Circuit Breaker Gasket



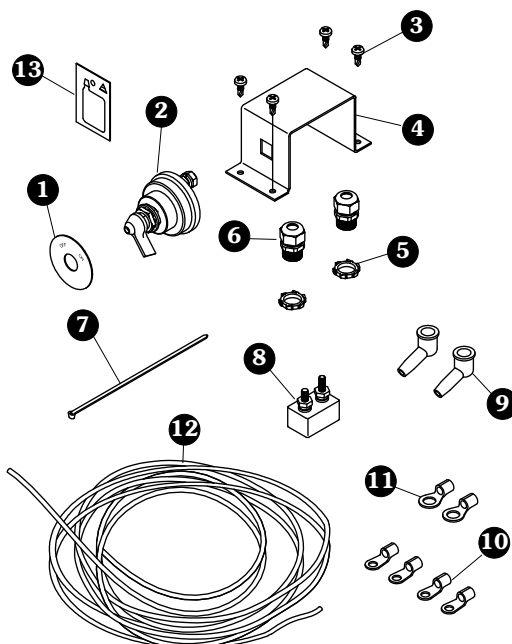
PROTRAP® DUAL POLE CONDUCTOR

Item	Part #	Description
	1109016	Heavy-Duty Dual Conductor w/Hardware
1.	1115385	Heavy-Duty Dual-Conductor Plug
2.	1115386	Heavy-Duty Dual-Conductor Socket
3.	1701045	Cap Screw - 5/16" x 3/4"
4.	1700400	Self-Tapping Screw - 3/8" x 1"
5.	1109015	Mounting Bracket - Conductor Socket
6.	1700411	Hex Nut - 5/16"
7.	1700407	Hex Nut - 3/8"
8.	1700434	Lock Washer - 3/8"
9.	1704573	Conductor Socket Sealed Boot



PROTRAP® MASTER DISCONNECT SWITCH/CAB WIRING

Item	Part #	Description
	1118417	Cab Wiring Kit - Master Disconnect
1.	1704284	Face Plate
2.	1704283	Battery Disconnect Rotary Switch
3.	1700398	Self-Drilling Screw - 1/4" x 3/4"
4.	1118323	Disconnect Switch Mounting Bracket
5.	1704187	Lock Nut - 1/2"
6.	1704152	Dome Nut - 1/2"
7.	1703231	Cable Tie - 8"
8.	1704354	40-Amp Modified-Reset Circuit Breaker
9.	1704330	Rubber Insulating Boot
10.	1703244	Ring Terminal - 6 Ga. x 3/8" Stud
11.	1703245	Ring Terminal - 6 Ga. x #10 Stud
12.	1703822	Dual Conductor Wire - 6 Ga. 259 Strand (per foot)
13.	1704378	Dielectric Connector Protector



Our **Advanced Troubleshooting Guide** is available on our website: <http://www.shurco.com>, or call our Help Line: **1-866-748-7435**.

Problem:	Try This:
<p>The SMARTransmitter® is not working.</p> <p>None of the lights on the remote turn on when I open the lid.</p>	<ol style="list-style-type: none"> 1. Make sure the battery is placed correctly. 2. The battery may be dead and must be replaced. Replacement high-capacity batteries may be purchased from Shur-Co® (part # 1704597). 3. The SMARTransmitter® may be damaged. Call Shur-Co's Help Line.
<p>The SMARTransmitter® is not working.</p> <p>I can operate the system with the rocker switch but not with the remote. The SMARTransmitter® channel light (<i>Tarp System</i>, for example) is blinking, and when I press the <i>Open/On</i> button, the light blinks faster.</p>	<ol style="list-style-type: none"> 1. Make sure the remote is set to the right channel. If you cannot set the remote to the desired channel (<i>Tarp System</i>, for example), the remote must be reprogrammed. See the SMARTransmitter® programming instructions. 2. Make sure you are within a couple feet of the receiver and try again. <ol style="list-style-type: none"> a) If it works at short range but not at greater distances, you have a range problem. A new battery may be needed. If the remote battery is not the cause, call Shur-Co's Help Line. 3. Reprogram the receiver. See the receiver programming instructions. If this doesn't work, call Shur-Co's Help Line.
<p>Two different motors operate at the same time when I use my remote.</p>	<ol style="list-style-type: none"> 1. Reprogram the receiver. See the receiver programming instructions. If this doesn't work, call Shur-Co's Help Line.
<p>The system will not operate with the rocker switch or the SMARTransmitter®.</p> <p>When I try to use the rocker switch or SMARTransmitter®, I don't hear any noises (a clicking noise, for example) from the receiver.</p>	<ol style="list-style-type: none"> 1. Make sure the master disconnect switch is turned to the "ON" position. 2. The circuit breaker may have tripped. Wait one minute and try again. 3. Check the vehicle's battery to make sure it isn't dead. 4. Check all connections from the battery to the system. Check for polarity, good connections and corrosion. Verify that you have at least 12V on the back side of the receiver on the battery hookup posts. 5. Call Shur-Co's Help Line.
<p>The system will not operate with the rocker switch or the SMARTransmitter®.</p> <p>When I try to use the rocker switch or SMARTransmitter®, I hear a clicking noise, but nothing happens.</p>	<ol style="list-style-type: none"> 1. Verify that you have at least 12V on the back side of the receiver on the battery hookup posts. 2. Call Shur-Co's Help Line.

Our **Advanced Troubleshooting Guide** is available on our website:
<http://www.shurco.com>, or call our Help Line: **1-866-748-7435**.

Problem:	Try This:
<p>The system will not operate with the rocker switch or the SMARTtransmitter®.</p> <p>When I try to operate the system, the motor shaft is rotating freely, but the trap does not move.</p>	<ol style="list-style-type: none"> 1. Check the bolt connections in the shaft between the motor and the trap and in the U-joint. If there are missing or sheared bolts, replace them with a grade-8 bolt. 2. Check to make sure the trap is not damaged or misaligned.
<p>The rocker switch is not sticking, but the motor continues to run after I release the rocker switch.</p>	<ol style="list-style-type: none"> 1. Call Shur-Co's Help Line
<p>The rocker switch is sticking.</p>	<ol style="list-style-type: none"> 1. Check the switch for excessive dirt, rocks or other objects. If the rocker switch cannot be cleaned, call Shur-Co's Help Line for a replacement receiver. <p>Pressure Wash: The receiver may be pressure washed, but keep nozzle at least three feet from system while spraying.</p>

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 - Cover-Pro II® Electric Upgrade
 - Electric Turning Point™ Bow
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