






ProTrap®

OWNER'S MANUAL

SMARTwire™ Hopper Door Opener



Download the ShurLink™ App

	<p>Shurlink Shur-Co, LLC ★★★★★ 5.0 Free</p>		
		<p>iOS</p>	<p>Android</p>



PHONE: 1.866.748.7435 | FAX: 1.605.665.0501
2309 SHURLOCK STREET | YANKTON, SD 57078-0713
SHURCO.COM

⚠ SAFETY INSTRUCTIONS

At Shurco, your safety is our top priority. Please read and thoroughly understand all instructions before operating all equipment. Failure to READ AND FOLLOW INSTRUCTIONS may result in system failure, property damage, or personal injury. Pay close attention to warnings, cautions, and operating instructions. The hazard symbol ⚠ alerts users of potentially hazardous conditions, and is followed by Caution, Warning, or Danger messages to indicate risk:

- **Danger** : (Red) Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.
- **Warning** : (Orange) Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.
- **Caution** : (Yellow) Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury or damage to the system.
- **Notice** : (Blue) Indicates operational notes or other essential information without addressing safety.

Regularly inspect equipment to ensure proper performance. Always repair or replace worn or damaged parts immediately to maintain safety. Safety decals are placed at critical locations on the equipment. Keep these decals clean and legible at all times. Replace any decal that is worn, damaged, painted over or otherwise unreadable. Replacement decals can be obtained by your local Shurco dealer.

- Always wear safety glasses during installation and operation.
- Stay clear of moving parts.
- No other use of Shurco equipment is authorized, except as designed.

SHUR-CO, LLC TERMS OF SERVICE

ORDER
TERMS AND CONDITIONS



WARRANTY



PATENTS



SERVICE AND DISTRIBUTION CENTERS

SHURCO.com

LOCATIONS



MESSAGE TO OWNERS

Thank you for choosing Shurco for your tarping system needs. We appreciate your confidence in our products. Please note that while this manual provides comprehensive installation and operation instructions, your trailer may require minor adjustments to these guidelines.

Visit Shurco.com to access the most current version of these instructions and other important product information.

QUESTIONS?

CALL OUR HELP LINE:

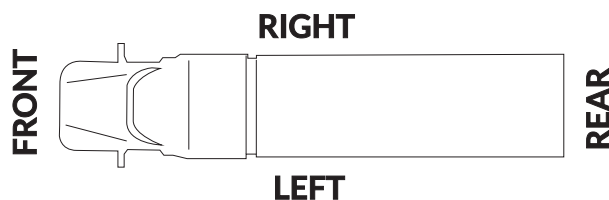
1-866-748-7435

MONDAY-FRIDAY
8 AM-5 PM CENTRAL TIME

MAINTENANCE

- Apply dielectric grease to all exposed connections.
- Tighten any loose bolts.
- Keep the trap in proper operating condition as recommended by the trailer manufacturer.
- Inspect all wiring weekly for damage.

VEHICLE ORIENTATION



REQUIRED TOOLS

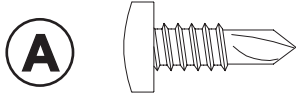
- Pencil or Marker
- Carpenter's Square
- Plumb Line
- Tape Measure
- Drill
- 3/16" Drill Bit
- 13/32" Drill Bit
- 5/16" Drill Bit
- 7/8" Drill Bit
- #3 Phillips Insert Bit
- 5/16" Combination Wrench
- 3/8" Combination Wrench
- 10 mm Combination Wrench
- 1/2" Combination Wrench
- 9/16" Combination Wrench
- 15/16" Combination Wrench
- 1" Combination Wrench
- Air or Electric Impact Wrench (9/16" socket)
- 7/16" Socket
- Ratchet
- Flat Head Screwdriver
- Hack Saw (metal cutter)
- Wire Cutters
- Wire Terminal Crimper

NOTICE: For trailer makes **Castleton, DMF, Dakota, Jet (2009 or newer), Liberty, Merritt, Neville, and Timpfe (2009 or newer)**: Refer to page 8 for the installation note.
For **Cornhusker** trailers: Refer to page 6.

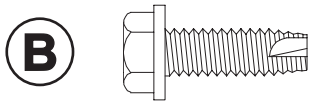
*PLEASE READ THE COMPLETE MANUAL BEFORE
PROCEEDING WITH INSTALLATION OR USE OF THE TARPING SYSTEM.*

Safety, Legal, and Support Information2
Product Guide: Tool Requirements, Maintenance, Vehicle Orientation3
Table of Contents4
Hardware Identification5
Installation Instructions
 • Preliminary Groundwork6
 • Hinge Bracket Installation7
 • Motor Assembly Installation8
 • Wiring9
Operation12
Convert to Manual Crank13
Replacement Parts14

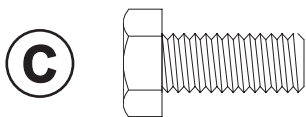
Inspect all parts upon arrival.



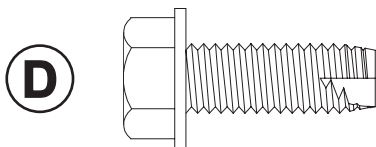
1700398 Self-Drilling Screw - 1/4" x 3/4"



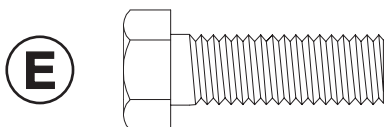
1704338 Self-Tapping Screw - 1/4" x 1"



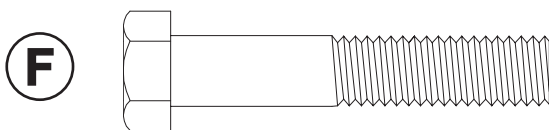
1701045 Cap Screw - 5/16" x 3/4"



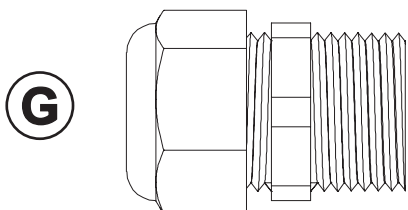
1700400 Self-Tapping Screw - 3/8" x 1"



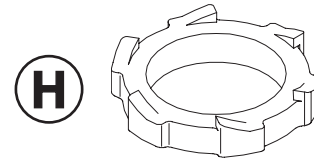
1702904 Cap Screw - 3/8" x 1-1/8"



1704264 Cap Screw - 3/8" x 2"



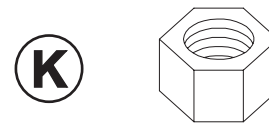
1704152 Liquid Tight Strain Relief Dome Nut - 1/2"



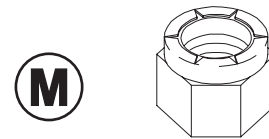
1704187 Lock Nut - 1/2"



1704946 Flanged Top Lock Nut - 5/16"



1700407 Hex Nut - 3/8"



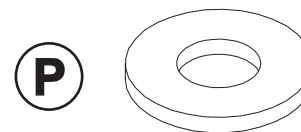
1701580 Nylon Lock Nut - 3/8"



1700427 Flat Washer - 1/4"



1700434 Lock Washer - 3/8"

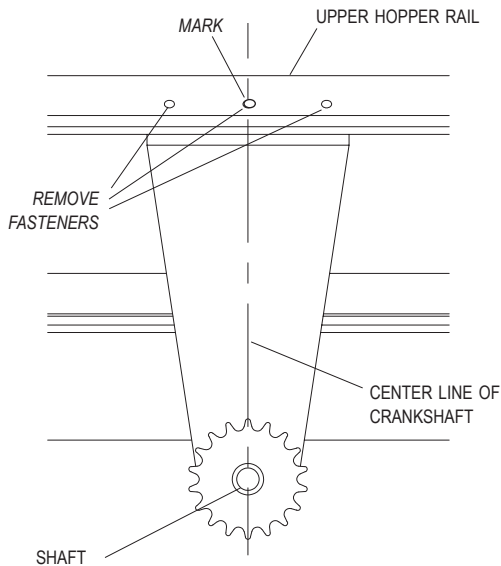


1700429 Flat Washer - 3/8"

NOTICE: Check part number on motor for compatibility:

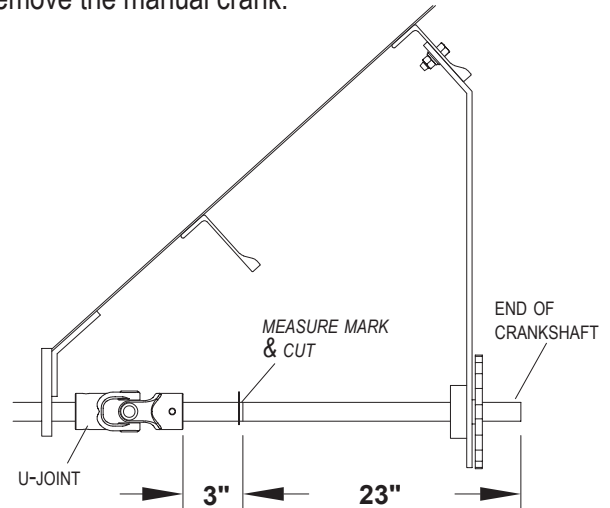
Trap Style	Motor Part Number
Strap Trap	1704505 (150)
Rack and Pinion	1704241 (250)
Large Hopper Doors with Rack and Pinion	1705636 (350)

STEP 1: To determine ProTrap hinge bracket location, transfer center line of crankshaft to upper hopper rail. If hole is not already drilled at center line, mark new hole location on upper hopper rail.



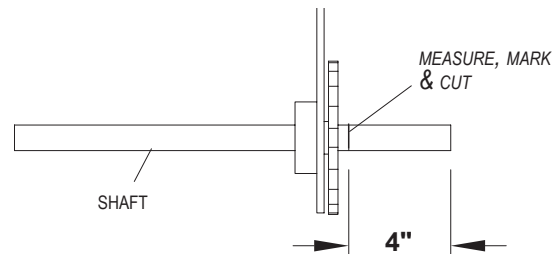
NOTICE: For **Cornhusker** trailer installation: Refer to the supplemental instruction sheet and complete the shaft adapter installation before proceeding with standard installation.

STEP 2: Measure and mark 23 inches from the end of the shaft. If needed, adjust the mark so that at least 3 inches of shaft extends past the U-joint. Cut the shaft at the mark and remove the manual crank.

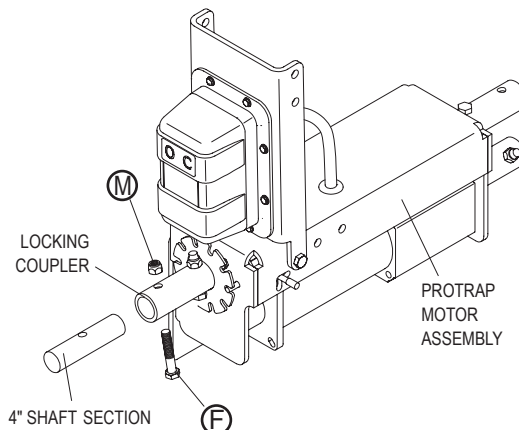


STEP 3: Remove fasteners holding manual crank bracket to hopper rail.

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

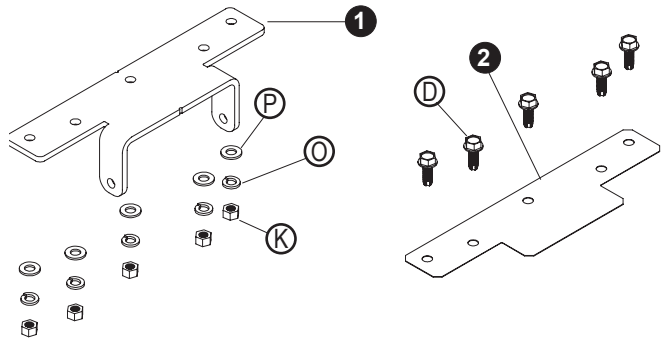


STEP 5: Insert 4 inches section of shaft into locking coupler until shaft contacts existing shaft inside coupler. Drill 13/32 inch hole through shaft. Secure with **cap screw (F)** and **nylon lock nut (M)**.



NOTICE: Cornhusker, Jet, Merritt trailers: Refer to the supplemental instruction sheet and complete the hinge bracket mount to rail installation before proceeding with standard installation.

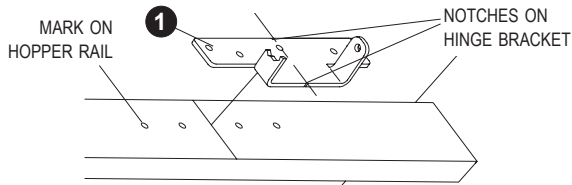
Item	Part #	Description
1.		Hinge Bracket
2.		Shim Insulator
D.	1700400	Self-Tapping Screw - 3/8" x 1"
K.	1700407	Hex Nut - 3/8"
O.	1700434	Lock Washer - 3/8"
P.	1700429	Flat Washer - 3/8"



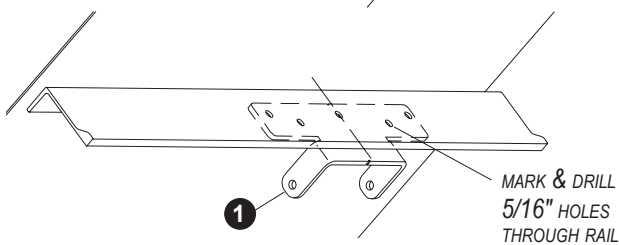
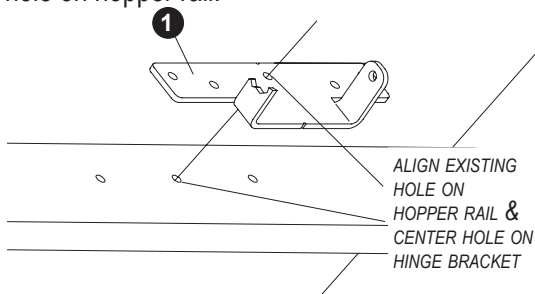
STEP 1: Locate ProTrap hinge bracket (1) on hopper rail. For most applications, hinge bracket will be installed on upper rail although some applications will require mounting to lower rail. Hinge bracket may be located on top or bottom of rail, depending on application.

If no existing holes on hopper rail, align with center of crankshaft: Align notches on hinge bracket (1) with mark on hopper rail (marked in STEP 2).

NOTICE: Notches on hinge bracket (1) must align with center line of crankshaft.



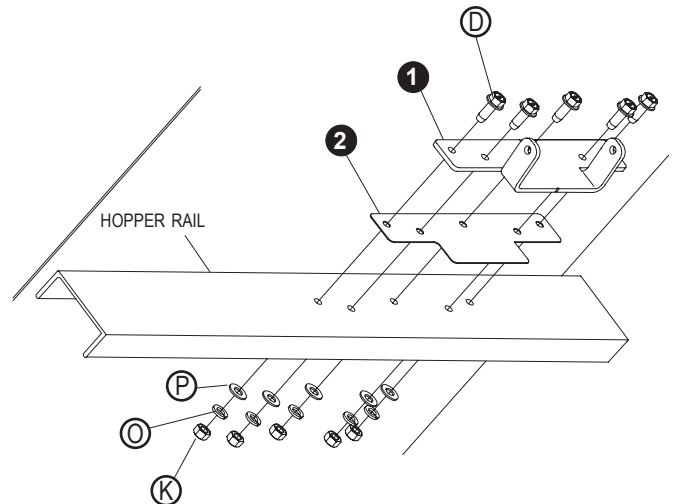
If an existing hole on hopper rail aligns with center of crankshaft: Align center hole in hinge bracket (1) with this hole on hopper rail.



STEP 2: Square up bracket and clamp in place. Using hinge bracket (1) as guide, mark and drill 5/16 inch holes through hopper rail (five places).

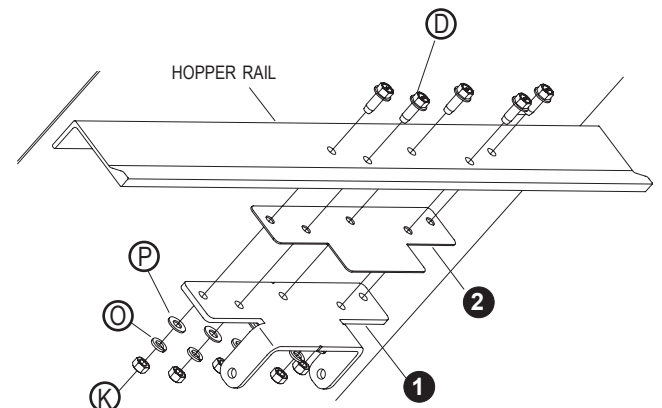
STEP 3: Place shim insulator (2) between rail and hinge bracket (1). Fasten hinge bracket to hopper rail with screws (D), flat washers (P), lock washers (O) and nuts (K).

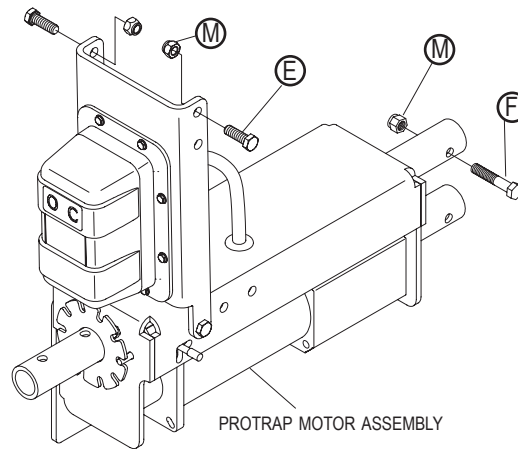
BRACKET ON TOP SIDE OF RAIL



BRACKET ON BOTTOM SIDE OF RAIL

Install hinge bracket (1) on top or bottom side of hopper rail. Locate on same side of rail as manual crank bracket. Fasten in five places.



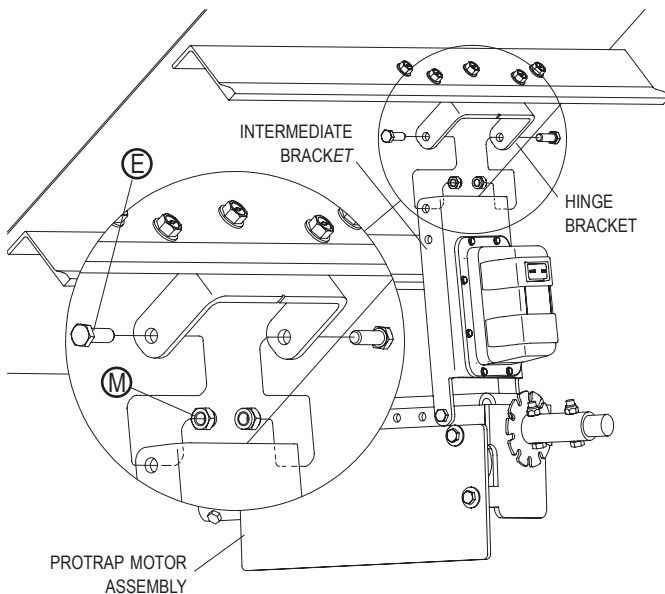


SHAFT ADAPTERS
(FOR APPLICABLE KITS ONLY)

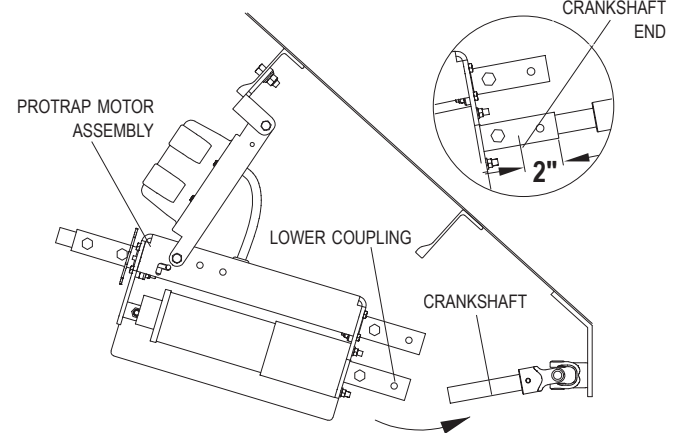
Item	Part #	Description
1.	1119428	3/4-Inch to 1-Inch
	1121121	7/8-Inch to 1-Inch

Item	Part #	Description
	1704381	Anti-Seize (not pictured)
E.	1702904	Cap Screw - 3/8" x 1-1/8"
F.	1704264	Cap Screw - 3/8" x 2" Grade 8
M.	1701580	Nylon Lock Nut - 3/8"

STEP 1: Fasten ProTrap assembly intermediate bracket to hinge bracket with cap screws (E) and lock nuts (M).

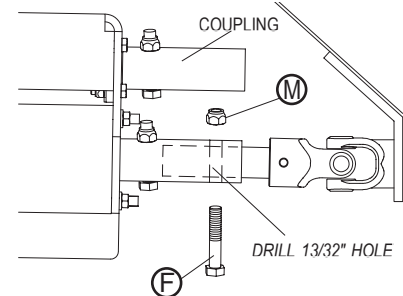


STEP 2: Insert the end of the crankshaft 2 inches into the lower coupling on the ProTrap motor assembly.



NOTICE: Use the adapter (1) provided with kit for crank shafts under 1 inch.

STEP 3: Using the hole in the lower coupling as a guide, mark and drill a 13/32-inch hole through the crankshaft. Fasten coupling to shaft with cap screw (F) and nylon lock nut (M).



NOTICE: For trailer makes: **Castleton, DMF, Dakota, Jet (2009 or newer), Liberty, Merritt, Neville, and Timpfe (2009 or newer):** Refer to the supplemental instruction sheet and complete installation of door stop components before proceeding to the wiring section.

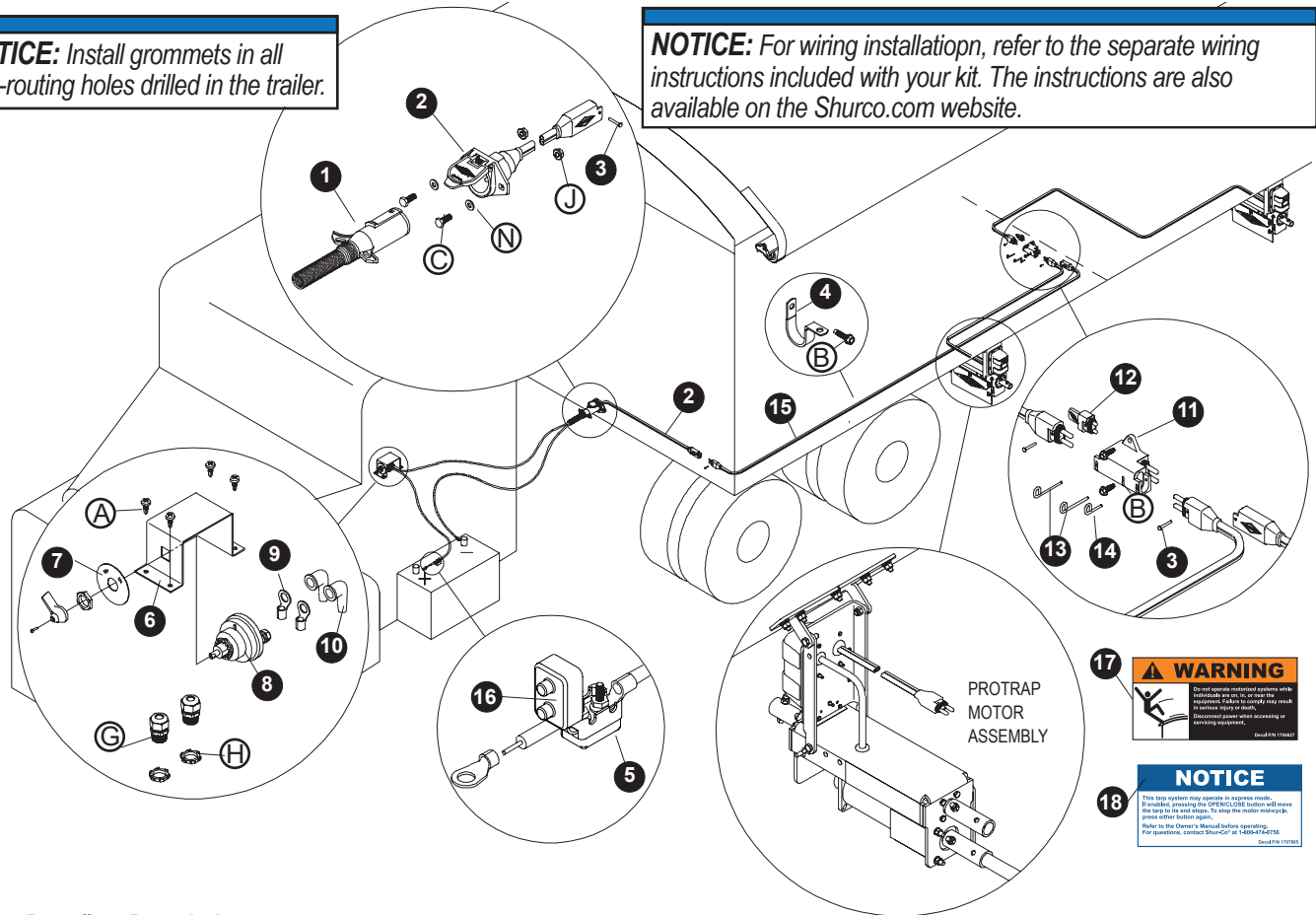
CAUTION
Pinch point hazard—keep hands clear while inserting crank shaft.

NOTICE: Ensure the motor is supported properly while lifting.

NOTICE: Use anti-seize (P/N 1704381) to prevent crankshaft from seizing into lower coupling.

NOTICE: Install grommets in all wire-routing holes drilled in the trailer.

NOTICE: For wiring installation, refer to the separate wiring instructions included with your kit. The instructions are also available on the Shurco.com website.

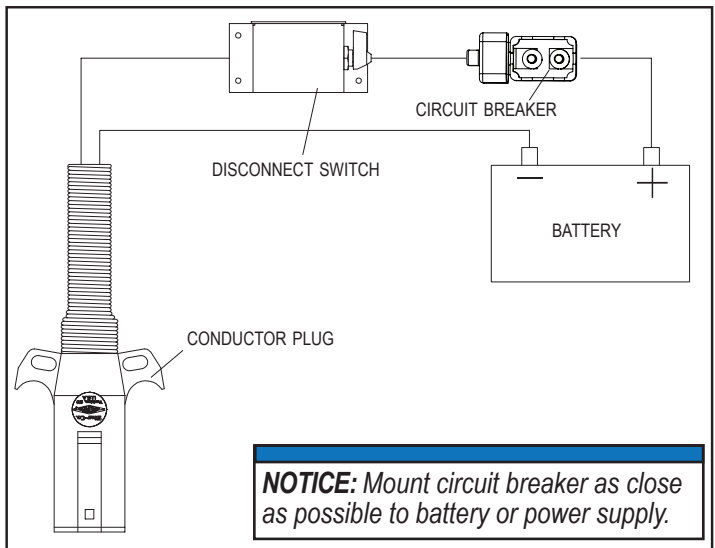


WARNING
Do not operate electrical systems while overloaded and on, or near the equipment unless properly trained. Excessive speed or shock, incorrect power, or incorrect wiring may result in personal injury or property damage. Refer to the Owner's Manual before operating.
Shurco 1121006

NOTICE
This trap system may operate in reverse mode. Reversed, pressing the OPERATOR button will result in the trap closing. To avoid the reverse mode, refer to the Owner's Manual before operating.
For questions, contact Shurco at 1-800-4-SHURCO.
Shurco 1121006

Item	Part #	Description
1.	1115385	Heavy-Duty Dual-Conductor Plug
2.	1120670	SMARTwire™ Dual-Conductor Socket
3.	1704751	Harness Lock Pin - 1/4" x 7/8"
4.	1702108	Wire Clip - 3/4"
5.	1704354	40-Amp Modified-Reset Circuit Breaker
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.	1704695	Harness Junction Block - Black Rubber
12.	1704717	Wire Harness Rubber Plug - Black
13.	1704696	Harness Lock Pin - Long
14.	1704711	Harness Lock Pin - Short
15.	1704704	SMARTwire™ - 6 Ga. x 25' - Plug/Socket
16.	1704411	Circuit Breaker Boot - Red
17.	1704627	Motorized System Warning Decal
18.	1707865	Express Operation Decal
19.	1131576	ShurLink EZR™ Remote (not pictured)
20.	1704378	Dielectric Grease (not pictured)
21.	1703231	Cable Tie - 8" (not pictured)
A.	1700398	Self-Drilling Screw - 1/4" x 3/4"
B.	1704338	Self-Tapping Screw - 1/4" x 1"
C.	1701045	Cap Screw - 5/16" x 3/4"
G.	1704152	Liquid Tight Strain Relief Dome Nut - 1/2"
H.	1704187	Lock Nut - 1/2"
J.	1704946	Flanged Top Lock Nut - 5/16"
N.	1700427	Flat Washer - 1/4"

CAUTION
Do not fasten SMARTwire components to the trailer through the hopper walls. Doing so may damage the hopper walls or compromise system performance.



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

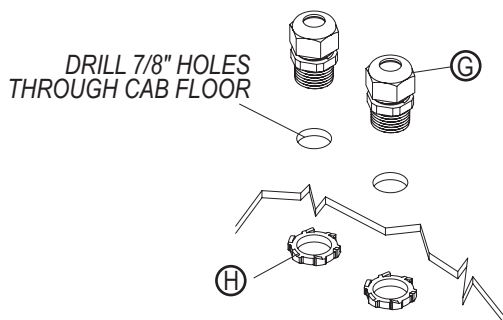
NOTICE: Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.

RING TERMINAL STRIP WIRE INSULATION CRIMP SECURELY

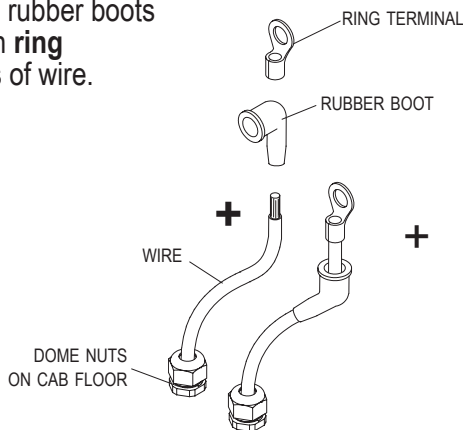
STEP 1: Drill two 7/8-inch holes in cab floor to route wire into cab. Install two **dome nut strain reliefs (G)** in the holes and secure with **lock nuts (H)**.

CAUTION

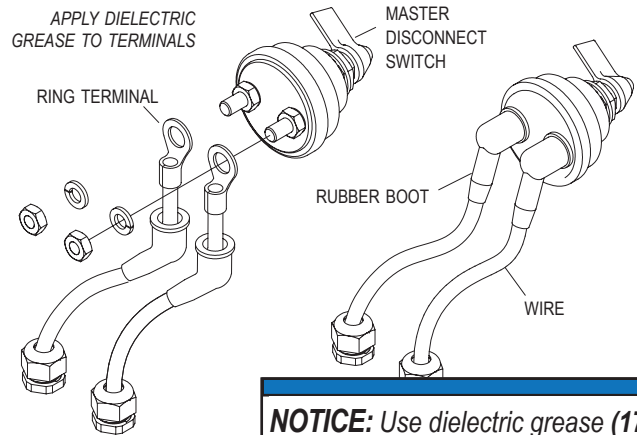
Verify the drilling path is clear of wires or lines to avoid system damage or personal injury.



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

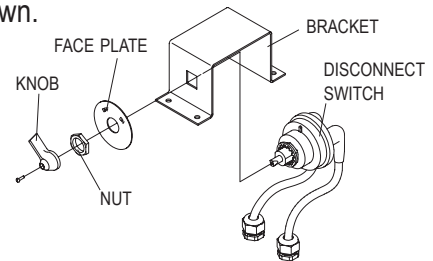


STEP 3: Connect wires to **disconnect switch**. Coat with **dielectric grease** and install **rubber boots** over ring terminals.

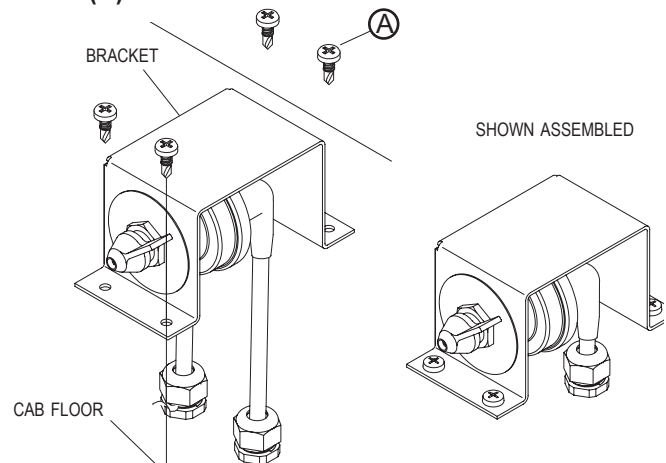


NOTICE: Use dielectric grease (17) to prevent corrosion on terminals.

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 **self-drilling screws (A)**.



WARNING

The ProTrap receiver remains active until the master disconnect switch is turned off. Turn off the master disconnect switch before servicing or working near the hopper doors to avoid serious injury from unexpected door movement.

STEP 6: Remove the insert from the conductor plug by loosening the retaining screw. Loosen terminal screws, then feed 6-ga. wire through the plug. Strip and separate wires, apply dielectric grease to wire ends, and push them into the brass contacts on the insert. Tighten the terminal screws to secure wires. Return the insert into the conductor plug and tighten the clamp screw and retaining screw.

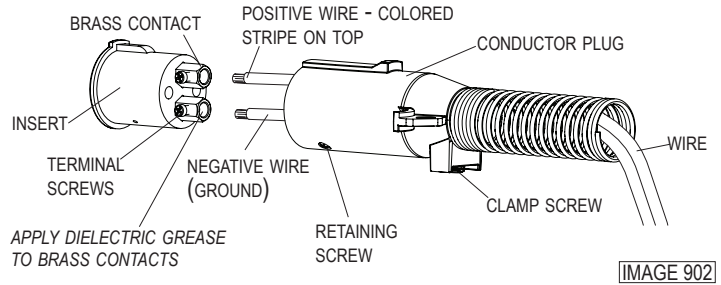


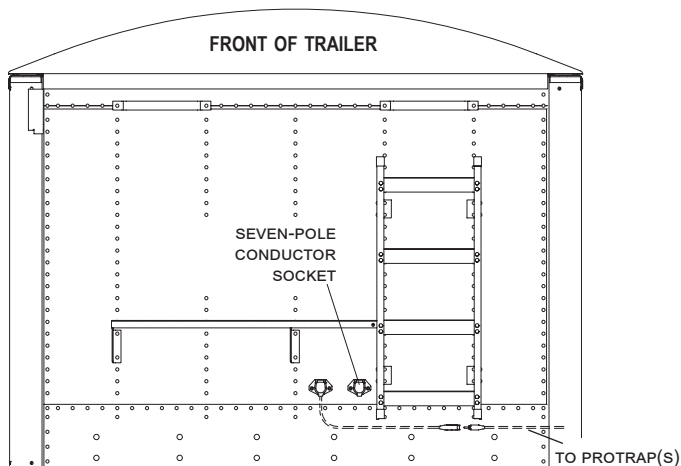
IMAGE 902

NOTICE: Wire lengths are predetermined. Before installing SMARTwire components, review and confirm wire routing so wires reach components with ample room for connection.

CAUTION

- Do not cut molded SMARTwire ends. Molded SMARTwire ends are designed with sealed connections to prevent corrosion; cutting the wire may lead to operational problems.
- Bind excess wire with cable ties to prevent loose wire entanglement.

DUAL-CONDUCTOR SOCKET INSTALLATION



STEP 7: Locate dual-pole conductor socket near seven-pole conductor socket as shown. Determine location and drill 2-inch hole through trailer skin.

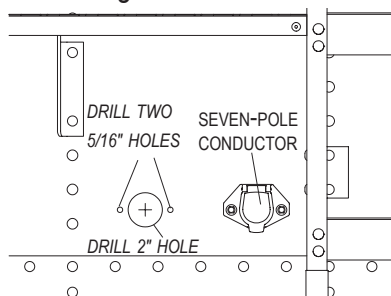
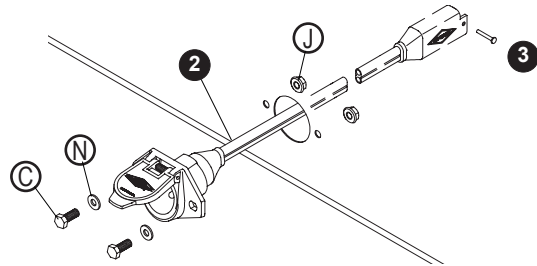


IMAGE 904

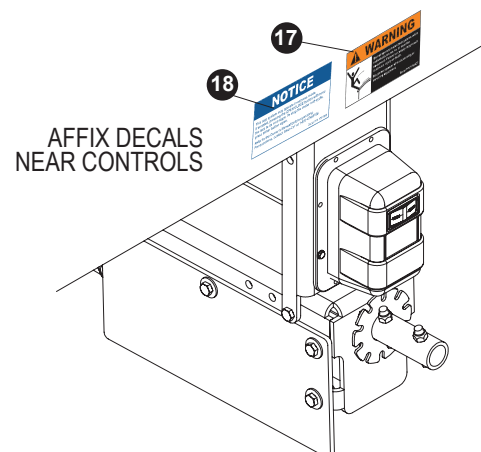
STEP 8: Align socket over 2-inch hole. Using holes in flanges on socket as guide, mark and drill two 5/16-inch holes as shown in Image 904.

STEP 9: Fasten conductor socket (2) to trailer with cap screws (C), flat washers (N) and nuts (J).



NOTICE: Coat each connection with dielectric grease to prevent corrosion.

STEP 10: Identify a clean, dry surface near all controls. Remove the backing from the warning decal (17) and notice decal (18). Affix them to the identified surface. Ensure the decals are clearly visible to the operators. Regularly inspect all safety decals for wear and adherence, and replace if necessary.



⚠ CAUTION

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

⚠ WARNING

Do not operate motorized systems while individuals are on, in, or near the equipment. Failure to comply may result in serious injury or death. Disconnect power when accessing or servicing equipment.

⚠ WARNING

Powering any Shurco wireless system solely with a battery charger may lead to operational issues or system failure. A 12-volt truck or automobile battery must be used as the power source for the trailer's system.

NOTICE: Turn off the master disconnect during transport or when traps are not in use to prevent unauthorized hopper door operation.

NOTICE: These systems are designed for intermittent use. After 3 minutes of continuous operation, allow a 30-minute rest period before resuming use.

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.

Remote Operation: Refer to operating instructions included with your remote.

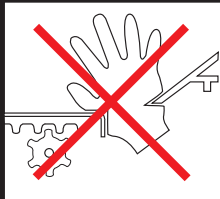
Express Mode: Express mode may be enabled. In this mode, pressing the O (open) or C (close) button initiates an express operation to open or close the tarp. This operation will continue until either button is pressed again to stop, or it will automatically conclude once the trap reaches the end of its travel.

NOTICE: 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. ShurLink systems will automatically turn off at *OPEN* or *CLOSE* side travel limit after being set. Refer to operating instructions included with ShurLink remote.

NOTICE: Receiver may be pressure washed, but keep nozzle at least 3 feet from system while spraying.



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.

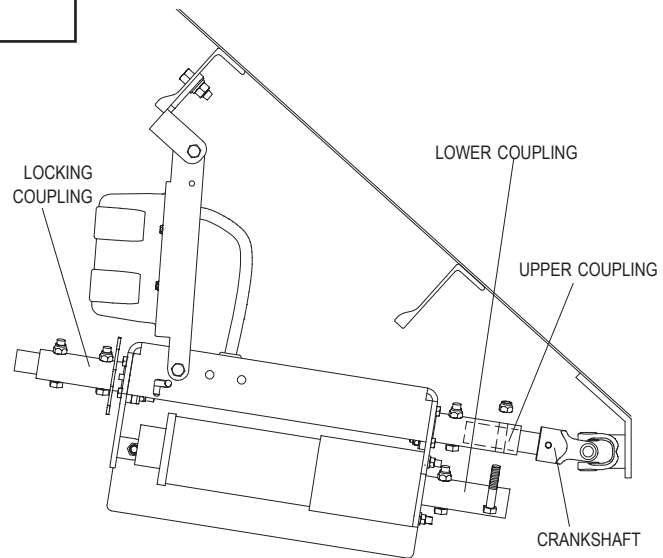
P/N 1704341

CONVERT TO MANUAL CRANK

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

⚠ CAUTION

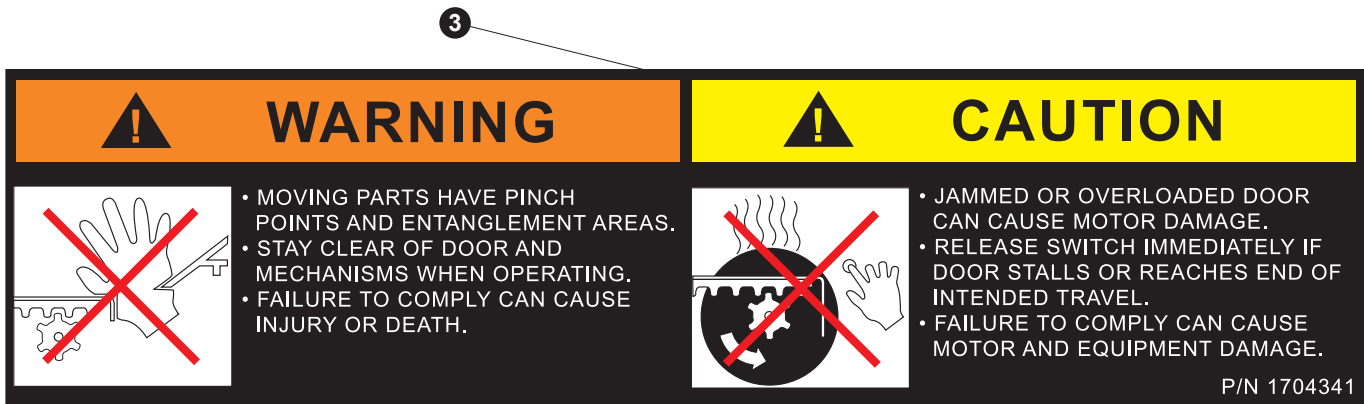
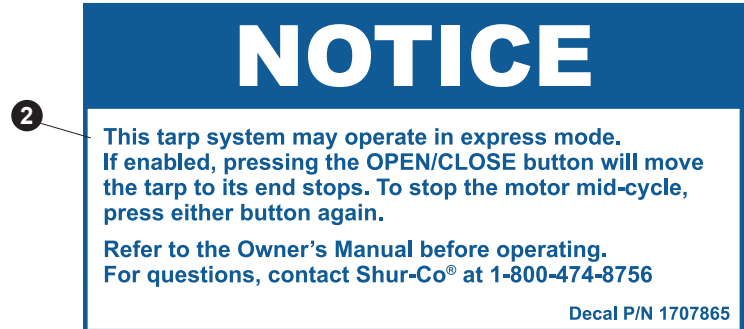
Pinch point hazard—keep hands clear while inserting crank shaft.





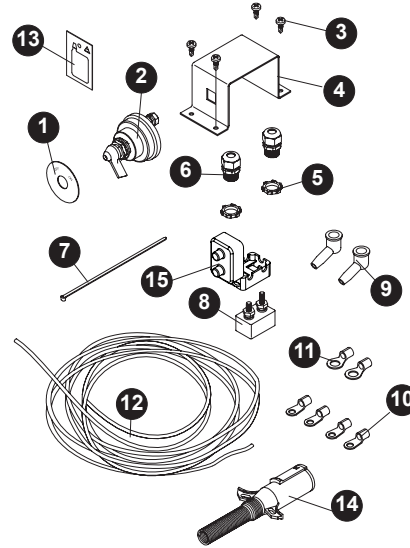
SAFETY DECALS

Item	Part #	Description
1.	1704627	Motorized System Warning Decal
2.	1707865	Express Operation Decal
3.	1704341	Trap Safety Decal



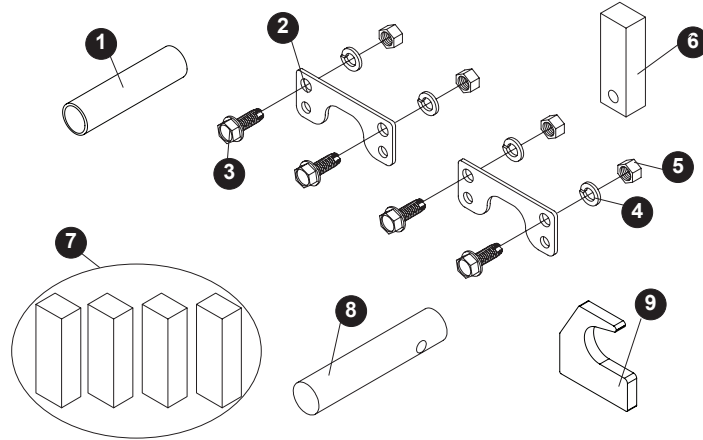
MASTER DISCONNECT SWITCH/CAB WIRING

Item	Part #	Description
	1118417	Cab Wiring w/Disconnect - 6 Ga. x 30' - 40 Amp
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	Liquid Tight Strain Relief 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.	1118495	Dual-Cond Wire - 6-Ga. - 30'
13.	1704378	Dielectric Connector Protector
14.	1115385	HD Dual-Conductor Plug - Vert Pin
15.	1704411	Circuit Breaker Boot - Red



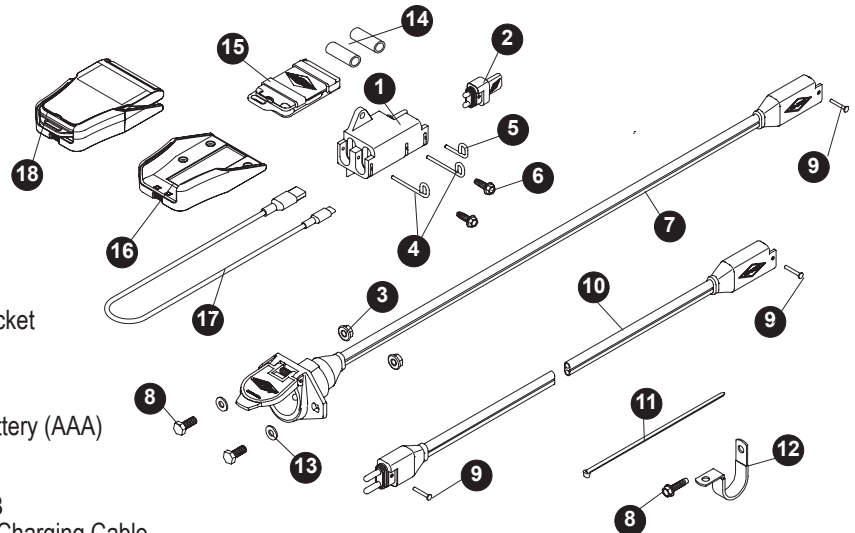
PROTRAP® TRAILER MOUNTS

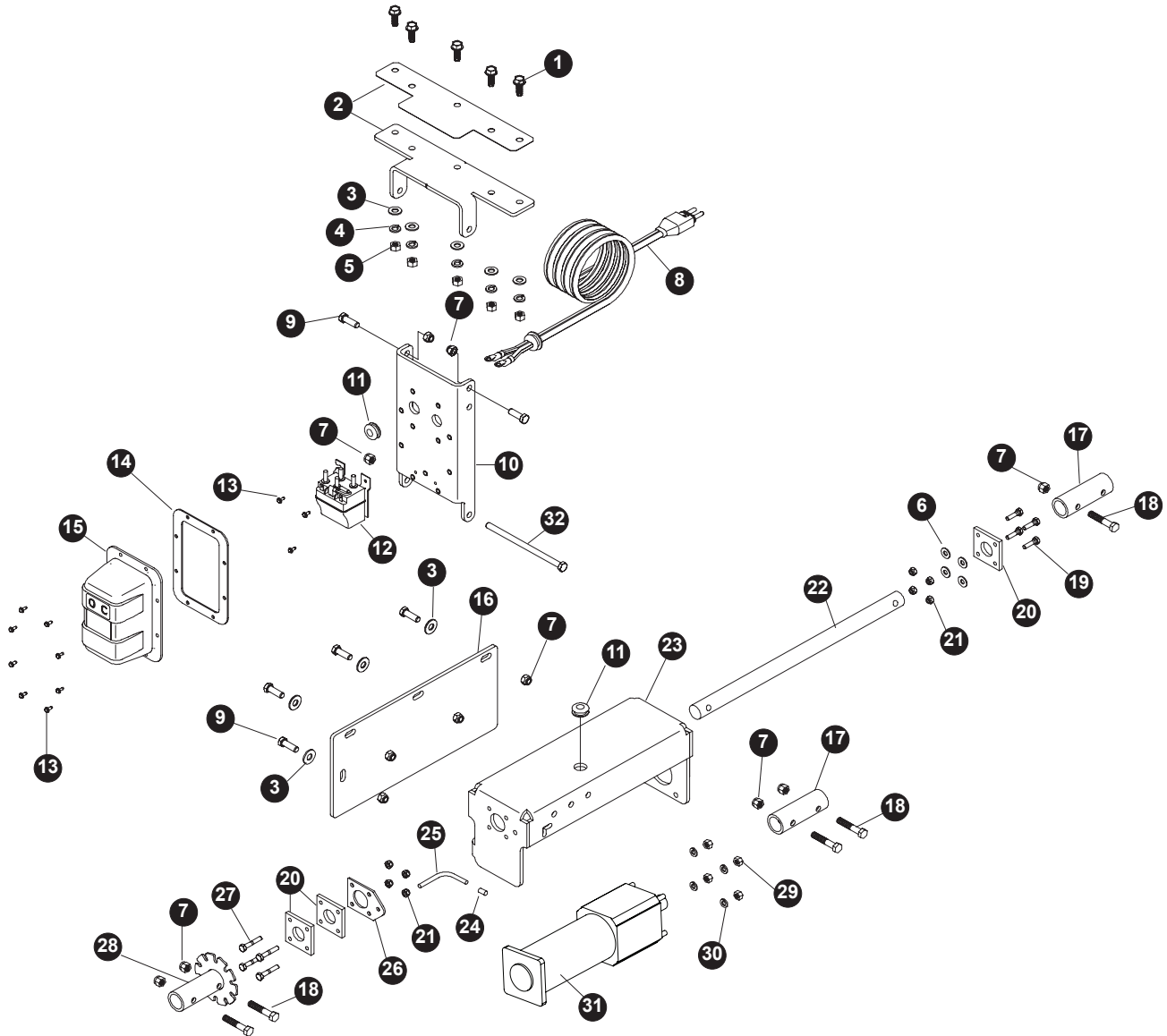
Item	Part #	Description
1.	1119428	Shaft Adapter - 3/4" to 1"
	1121121	Shaft Adapter - 7/8" to 1"
For Dakota Trailer		
	1118337	Hopper Parts Kit -Dakota
2.	1118305	Bearing Retainer
3.	1700400	Self-Tapping Screw - 3/8" x 1"
4.	1700434	Lock Washer - 3/8"
5.	1700407	Hex Nut - 3/8"
6.	1118306	Door Stop - 3" x 1" w/Hole
For Trailers w/Auxiliary Stops		
7.	1118338	Hopper Parts - Auxiliary
For Cornhusker Trailer		
8.	1118339	Hopper Parts - Cornhusker
For Jet & Stoughton		
9.	1118585	Stop Hook - 1-1/8" Tall
For Jet - 2008 and older		
	1118875	Stop Hook - 5/8" Tall
For Neville		
	1120472	Stop Hook - 1" Tall



SMARTWIRE™ & REMOTE COMPONENTS

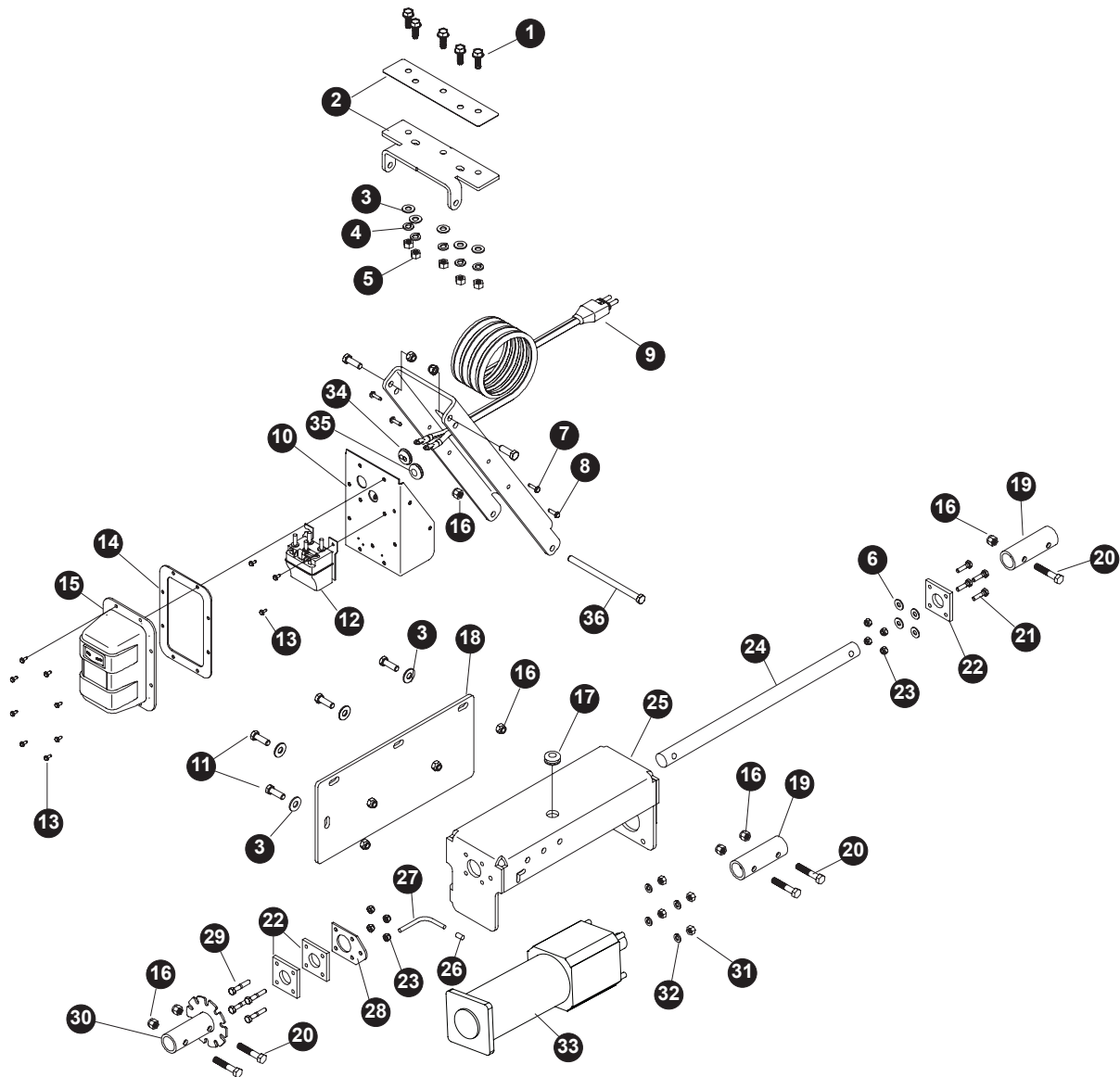
Item	Part #	Description
1.	1704695	Harness Junction Block
2.	1704717	Wire Harness Rubber Plug
3.	1704946	Flanged Top Lock Nut - 5/16"
4.	1704696	Harness Lock Pin - Long
5.	1704711	Harness Lock Pin - Short
6.	1704338	Self-Tapping Screw - 1/4" x 1"
7.	1120670	SMARTwire™ Dual-Conductor Socket x Socket - 6 Ga. x 3'6"
8.	1701045	Cap Screw - 5/16" x 3/4"
9.	1704751	Harness Lock Pin - 1/4" x 7/8"
10.		SMARTwire™ - 6-Ga. x 25' - Plug/Socket
11.	1703231	Cable Tie - 8"
12.	1702108	Wire Clip - 3/4"
13.	1700427	Flat Washer - 1/4"
14.	1705163	ShurLink EZR™ Remote Rplcmnt Battery (AAA)
15.	1131576	ShurLink EZR™ Remote
16.	1131764	ShurLink PRO™ Charging Cradle
17.	1706836	ShurLink PRO™ Charging Cable USB
18.	1131575	ShurLink PRO™ Remote w/Cradle & Charging Cable





STANDARD MOUNT ASSEMBLIES

Item	Part #	Description	Item	Part #	Description
1.	1700400	Self-Tapping Screw - 3/8" x 1"	17.	1118038	Coupling - 1-3/8" x 4"
2.	1118439	Replacement Hinge Bracket	18.	1704264	Cap Screw - 3/8" x 2" Grade 8
3.	1700429	Flat Washer - 3/8"	19.	1700381	Cap Screw - 1/4" x 1"
4.	1700434	Lock Washer - 3/8"	20.	1118034	Flange Bearing
5.	1700407	Hex Nut - 3/8"	21.	1701543	Nylon Lock Nut - 1/4"
6.	1700427	Flat Washer - 1/4"	22.	1118033	Manual Shaft
7.	1701580	Nylon Lock Nut - 3/8"	23.	1118026	Motor Mount Bracket - L
8.		SMARTwire™ - 6 Ga. - Plug - Ring Terminal	24.	1704276	Protective Cap - 1/4" x 1/2"
9.	1702904	Cap Screw - 3/8" x 1-1/8"	25.	1118036	ProTrap® Locking Pin
10.	1120623	Intermediate Bracket - SMARTwire™	26.	1118035	Lock Retainer
11.	1704270	Rubber Grommet - 1/2" x 11/16"	27.	1700377	Cap Screw - 1/4" x 1-1/2"
12.	1705408	Motor-Rev Solenoid - 12V - 3 Pt. Mt. Black Wire	28.	1118031	Locking Coupling
13.	1704367	Hex Flange Cap Screw - #10 x 3/4"	29.	1704389	Hex Nut - 5/16"
14.	1704309	Solenoid Cover Gasket - 1/8"	30.	1700433	Lock Washer - 5/16"
15.	1131631	ShurLink™ Rec Cover w/Gasket - ProTrap®	31.	1119072	ProTrap® 150 Motor
16.	1118436	Rock Flap (Includes Flap, 3, 7 & 9)		1118400	ProTrap® 250 Motor
				1125713	ProTrap® 350 Motor
			32.	1701378	Cap Screw - 3/8" x 6-1/2"



RAIL MOUNT ASSEMBLIES

Item	Part #	Description	Item	Part #	Description	Item	Part #	Description
1.	1700400	Self-Tapping Screw - 3/8" x 1"	15.	1131631	ShurLink™ Rec Cover w/Gasket - ProTrap®	26.	1704276	Protective Cap - 1/4" x 1/2"
2.	1119074	Replacement Hinge Bracket	16.	1701580	Nylon Lock Nut - 3/8"	27.	1118036	ProTrap® Locking Pin
3.	1700429	Flat Washer - 3/8"	17.	1704270	Rubber Grommet - 1/2" x 11/16"	28.	1118035	Lock Retainer
4.	1700434	Lock Washer - 3/8"	18.	1118436	Rock Flap (Includes Flap, 3, 11 & 16)	29.	1700377	Cap Screw - 1/4" x 1-1/2"
5.	1700407	Hex Nut - 3/8"	19.	1118038	Coupling - 1-3/8" x 4"	30.	1118031	Locking Coupling
6.	1700427	Flat Washer - 1/4"	20.	1704264	Cap Screw - 3/8" x 2" Grade 8	31.	1704389	Hex Nut - 5/16"
7.	1118527	Intermediate Bracket - Rail Mt.	21.	1700381	Cap Screw - 1/4" x 1"	32.	1700433	Lock Washer - 5/16"
8.	1704367	Cap Screw - #10 x 3/4"	22.	1118034	Flange Bearing	33.	1119072	ProTrap® 150 Motor
9.		SMARTwire™ - 6 Ga. - Plug - Ring Terminal	23.	1701543	Nylon Lock Nut - 1/4"		1118400	ProTrap® 250 Motor
10.	1120701	Modular Control Bracket	24.	1118033	Manual Shaft		1127513	ProTrap® 350 Motor
11.	1702904	Cap Screw - 3/8" x 1-1/8"	25.	1118026	Motor Mount Bracket - L	34.	1704818	Rubber Grommet - 1/2" x 1-1/16"
12.	1705408	Motor-Reversion Solenoid - 3 Pt. Mt. Black Wire				35.	1704721	Rubber Grommet w/Slot
13.	1704308	Flange Cap Screw - #10 x 1/2"				36.	1703178	Cap Screw - 3/8" x 6-1/2"
14.	1704309	Solenoid Cover Gasket - 1/8"						

2309 SHURLOCK STREET | YANKTON, SD 57078-0713
PHONE: 1.866.748.7435 | FAX: 1.605.665.0501
SHURCO.com
