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 and operation.
2. Stay 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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TOOLS REQUIRED

1. Wrench
2. Hammer
3. Center Punch or Transfer Punch
4. #6 Phillips Insert Bit
5. Air or Electric Impact Wrench (9/16" deep socket)
6. 7/16" Deep Socket
7. 3/8" Combination Wrench
8. 9/16" Combination Wrench
9. 1/2" Combination Wrench
10. 1/8" Hex Wrench Long T-Handle
11. 3/16" Hex Wrench Long T-Handle (recommended)
12. 7/32" Drill Bit
13. 5/16" Drill Bit (for 3/8" self-tapping screws)
14. 11/32" Drill Bit
15. 13/32" Drill Bit
16. 3/8" Drill
17. 1 1/8" Hole Saw
18. 1 1/2" Hole Saw
19. 2" Hole Saw (if bracket for conductor socket is not used)
20. Standard/Fathead Screwdriver
21. #2 Phillips Screwdriver
22. Utility Knife
23. Ratchet
24. Hack Saw (metal cutter)
25. Pliers
26. Snap-Ring Pliers
27. Wire Cutters
28. Grinder
29. Tape Measure

Shur-Co® HELP LINE: 1-866-748-7435
Inspect all parts in your 4500 HD Series electric kit upon arrival.

A  1704367 Cap Screw - #10 x 3/4"
B  1700403 Self-Tapping Screw - 1/4" x 3/4"
C  1700398 Self-Drilling Screw - 1/4" x 3/4"
D  1704338 Self-Tapping Screw - 1/4" x 1"
E  1705198 Self-Drilling Screw - 1/4" x 1"
F  1700381 Cap Screw - 1/4" x 1"
G  1701045 Cap Screw - 5/16" x 3/4"
H  1702926 Cap Screw - 5/16" x 7/8"
I  1701455 Carriage Bolt - 5/16" x 2 1/2"
J  1704943 Shoulder Bolt - 3/8" x 2 - 5/16" x 1/2" Thd.
K  1201022 Cap Screw - 5/16" x 3 1/2"

L  1700400 Self-Tapping Screw - 3/8" x 1"
M  1702891 Cap Screw - 3/8" x 1 1/4"
N  1704264 Cap Screw - 3/8" x 2" - Grade 8
O  1700408 Hex Nut - 1/4"
P  1701543 Nylon Lock Nut - 1/4"
Q  1704946 Flanged Top Lock Nut - 5/16"
R  1704931 Flanged Nylon Lock Nut - 5/16"
S  1700419 Nylon Lock Nut - 5/16"
T  1700407 Hex Nut - 3/8"
U  1701580 Nylon Lock Nut - 3/8"

V  1700436 Lock Washer - 1/4"
W  1700427 Flat Washer - 1/4"
X  1702890 Flat Washer - 1 1/4"
Y  1700428 Flat Washer - 5/16"
Z  1700434 Lock Washer - 3/8"
a  1700429 Flat Washer - 3/8"
b  1118318 Spacer Washer - 1/4" x 1.81"
c  1120291 Pivot Bracket Washer
**NOTE:** Read pages 2 and 3 entirely before drilling holes. Determine if rivets are centered or off center on front and rear of trailer.

**FRONT OF TRAILER**

**STEP 1:** Locate front pivot mount bracket on passenger side of trailer so center of pivot lies within shaded area shown below. Measure 41” down from top of cap or 43” from top of windshield.

**REAR OF TRAILER**

**STEP 2:** Locate rear pivot mount bracket so that center of pivot lies within shaded area shown below.

**NOTE:** Mount brackets into support braces on trailer, if possible. If bracket cannot be mounted into support braces, reinforce mounting area with backer plate for adequate support. Before drilling any holes, make sure flex arm has clear pathway to operate.

**INSTALL BRACKETS ON HORIZONTALLY CORRUGATED TRAILERS**

**NOTE:** Use pivot bracket washers only when horizontal corrugation on trailer skin prevents bracket from contacting trailer skin.

**STEP 1:** If installing pivot bracket or pivot mount bracket on horizontally corrugated trailer skin, use brackets as guide to mark hole locations. Mark and drill 1 3/32” holes in trailer and fasten with 3/8” x 1 1/4” cap screws, flat washers, lock washers, pivot bracket washers and nuts. Locate pivot bracket washers between pivot bracket and trailer skin as shown.
STEP 3: Place pivot mount brackets on trailer as shown below. Using brackets as guide, mark mounting hole locations.

REAR OF TRAILER

RIVETS/CORRUGATION ON CENTER

RIVETS/CORRUGATION OFF CENTER

CENTER OF TRAILER

STEP 4: Remove rivets and mount brackets into rivet holes. If not possible, drill 13/32" holes in trailer. Fasten with screws , washers , and nuts .
NOTE: Read entire page before drilling holes. Determine if ribs are centered or off center on front and rear of trailer.

NOTE: Use pivot bracket washers only when horizontal corrugation on trailer skin prevents bracket from contacting trailer skin (see instructions on page 2).

**FRONT OF TRAILER**

**STEP 1:** Locate sloped pivot mount bracket 41” down from top of cap or 43” from top of windshield, measuring vertically as shown. Do not measure along slope of trailer.

**REAR OF TRAILER**

**STEP 2:** Locate sloped pivot mount bracket 41” below top of cap, measuring vertically as shown. Do not measure along slope of trailer.

**NOTE:** Mount brackets into support braces on trailer if possible. If bracket cannot be mounted into support braces, reinforce mounting area with backer plate for adequate support. If bracket does not sit flush with skin of trailer, install spacers between mounting bracket and skin of trailer to assure solid contact through support braces or backer plate.

Before drilling any holes, make sure flex arm has a clear pathway to operate.

**STEP 3:** Place pivot mount brackets on trailer as shown below. Using brackets as guide, mark mounting hole locations.

**RIVETS/CORRUGATION ON CENTER**

**RIVETS/CORRUGATION OFF CENTER**

**STEP 4:** Drill 13/32” holes in trailer. Fasten sloped pivot mount bracket to trailer with screws Ø, washers ø, ø and nuts ⅛.
STEP 5: Place pivot brackets on pivot mount brackets as shown below. Fasten pivot brackets to pivot mount brackets with 3/8" x 1 1/4" cap screws, flat washers, lock washers and nuts.

FRONT OF TRAILER

RIVETS/CORRUGATION ON CENTER

CENTER OF TRAILER

REAR OF TRAILER

RIVETS/CORRUGATION ON CENTER

RIVETS/CORRUGATION OFF CENTER

RIVETS/CORRUGATION OFF CENTER

Shur-Co® HELP LINE: 1-866-748-7435
**Item** | **Part #** | **Description**
--- | --- | ---
1. | 1116920 | Pivot Pin - 4 Spring
2. | 1121583 | Pivot Backer Plate - 7" x 16"
1121584 | Pivot Backer Plate - 7" x 20"
3. | 1121993 | Sloped Pivot Mt. Bracket - 6" Standoff - 6" Wide
1121994 | Sloped Pivot Mt. Bracket - 8" Standoff - 6" Wide
4. | 1121992 | Pivot Bracket - Sloped - 6" Wide
5. | 1116919 | Vertical Pivot Mount Bracket - 7 1/4" Standoff
1117031 | Vertical Pivot Mount Bracket - 9 1/4" Standoff
L. | 1700400 | Self-Tapping Screw - 3/8" x 1"
M. | 1702891 | Cap Screw - 3/8" x 1 1/4"
T. | 1700407 | Hex Nut - 3/8"
Z. | 1700434 | Lock Washer - 3/8"
a. | 1700429 | Flat Washer - 3/8"
c. | 1120291 | Pivot Bracket Washer

**STEP 1:** Align and loosely fasten pivot bracket to pivot mount bracket with 3/8" cap screws, lock washers and nuts.

**STEP 2:** Align face of pivot bracket vertically and align pivot pin parallel with top rail of trailer, then tighten screws.

**STEP 3:** Fasten pivot pins to pivot brackets.

**Vertical Trailer:**
- Pivot Pin
- Keyway in Pivot Pin Must Face Downward

**Sloped Trailer:**
- Pivot Pin
- Keyway in Pivot Pin Must Face Downward

Shur-Co® HELP LINE: 1-866-748-7435
**WARNING**

Do not stand or climb on flex arm. Standing or climbing on flex arm could result in fall/impact causing serious injury or death.

**NOTE:** Do not remove cable tie from front flex arm and motor assembly until installation is complete. See step 9.

**Item** | **Part #** | **Description**
--- | --- | ---
1. | 1121296 | Flex Arm Assembly w/Motor - Std.
2. | 1121298 | Flex Arm Assembly w/Motor - 7 1/4”
3. | 1111027 | Spiral Torsion Spring
4. | 1702888 | External Retaining Ring - 1 1/4”
5. | 1704751 | SMARTwire™ - 6 Ga. Plug - 9’ 9” w/Encoder Wire
6. | 1702108 | Harness Lock Pin - 1/4” x 7/8”
7. | 1121414 | Bellow Plate - Square Holes
8. | 1121413 | Bellow Plate - Round Holes
9. | 1704893 | Cap Plug w/Hole
10. | 1705523 | Warning Decal - 4500 HD Arm Sweep Area
11. | 1700398 | Secure-Drilling Screw - 1/4” x 3/4”
12. | 1701455 | Carriage Bolt - 5/16” x 2 1/2”
13. | 1700403 | Self-Tapping Screw - 1/4” x 3/4”
14. | 1700408 | Hex Nut - 1/4”
15. | 1704931 | Flanged Nylon Lock Nut - 5/16”
16. | 1700436 | Lock Washer - 1/4”
17. | 1700427 | Flat Washer - 1/4”
18. | 1702890 | Flat Washer - 1 1/4”
19. | 1118318 | Spacer Washer - 1/4” x 1.28”

**STEP 1:** Assemble spacer washers onto pivot pin.

**STEP 2:** Align holes in bellow, end fitting and bellow plates with holes in lower flex arm assembly as shown. Fasten with 5/16” x 2 1/2” carriage bolts and lock nuts.

**NOTE:** Motor assembly on upper flex arm must face toward trailer as shown.
**STEP 3:** Assemble spiral torsion springs and lower flex arm onto pivot pin. Hook springs over 3/8" x 3 1/2" cap screw and spacer tube.

![Spiral Torsion Springs and Lower Flex Arm](image1)

**STEP 4:** Secure with 1 1/4" flat washer and retaining ring.

![Retaining Ring](image2)

**STEP 5:** Choose appropriate pilot hole on pivot bracket to route 6-ga. wire from flex arm through trailer skin. Fasten wire clip to pilot hole with 1/4" x 3/4" self-drilling screw.

![Pivot Bracket with Pilot Hole](image3)

**NOTE:** Motor assembly on upper flex arm must face toward trailer as shown.

**STEP 6:** Measure 11" horizontally from center line of trailer and 1" down from lower edge of pivot bracket. Mark and drill 1 1/2" hole through trailer skin.

![Drill Hole Diagram](image4)

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

**STEP 7:** Align wiring plate assembly with 1 1/2" hole. Using wiring plate as guide, mark and drill two 7/32" holes as shown.

**STEP 8:** Fasten wiring plate assembly to front of trailer with 1/4" x 3/4" self-tapping screws, flat washers, lock washers and nuts.

![Wiring Plate Assembly](image5)

**STEP 9:** Remove cable tie from front arm/motor assembly before operating system.

**NOTE:** Fasten wire clip to pilot hole on opposite side of pivot bracket from flex arm to prevent wire from being pinched during operation.
WARNING
Flex arms are under tension while torsion springs are engaged. Use caution while assembling and disassembling arms. Failure to read and follow instructions could result in serious injury or death.

Warning label must be in plain view on outside of assembly.

NOTE: Insert cap screw through flex arm so head of screw is on inside of assembly (toward's trailer).
STEP 4: Insert flex arm joint into upper flex arm and slide bellow over flex arm joint. Align holes in upper flex arm, bellow plates, flex arm joint and bellow. Fasten with 5/16" carriage bolts and flanged nylon lock nuts.

STEP 5: Insert lower end fitting into lower flex arm assembly with end of bellow over outside of arm. Align holes in lower flex arm assembly, bellow plates, end fitting and bellow. Fasten with 5/16" carriage bolts and flanged nylon lock nuts.

STEP 6: Assemble spacer washers onto pivot pin.

NOTE: Bracket on upper flex arm must face toward outside of trailer as shown above.

STEP 7: Assemble spiral torsion springs and lower flex arm onto pivot pin. Hook springs over 3/8" x 3 1/2" cap screw.

STEP 8: Secure with 1 1/4" flat washer and retaining ring.

STEP 9: Roll tarpoused over box with roll tube hanging below latchplate. Remove crank assembly and U-clamps from roll tube.

NOTE: Remove any existing returns, such as cable return, bungee return, etc. Do not leave unattended until flex arm is securely fastened to roll tube extension.

STEP 10: Insert roll tube through bearing mount box, bearing ring and upper flex arm bearing plate, aligning end of splined shaft 5" past bearing plate as shown. Fasten with 5/16" shoulder bolts and nuts as shown, anchoring bearing ring between bolts.

Shur-Co® HELP LINE: 1-866-748-7435
**Roll Tube Extension Installation - Standard Roll**

**Item** | **Part #** | **Description**
---|---|---
1. | 1121296 | Flex Arm Assembly w/Motor - Std.
2. | 1121298 | Flex Arm Assembly w/Motor - 7 1/4"*
3. | 1120680 | Motor Mount Bearing Spacer
4. | 1704746 | Radial Ball Bearing - 1/4" x 1/4"*
5. | 1120681 | Motor Mount Bearing Retainer
6. | 1120679 | Motor Spacer
7. | 1120677 | Roll Tube Extension w/Drive Shaft - 34.43"*
8. | 1120698 | Roll Tube Extension w/Drive Shaft - 45.37"*
9. | 1120699 | Roll Tube Extension w/Drive Shaft - 74.67"*
10. | 4500 Series Motor Cover - Black

**A.** 1704367 | Hex Flange Cap Screw - #10 x 3/4"*
**N.** 1704264 | Cap Screw - 3/8" x 2"- Grade 8
**P.** 1701543 | Nylon Lock Nut - 1/4"*
**U.** 1701580 | Nylon Lock Nut - 3/8"*

---

**REAR OF TRAILER**

**STEP 1:** Adjust roll tube toward front or rear of trailer so rear flex arm lies on vertical plane parallel to face panel and perpendicular to roll tube extension. Mark roll tube where roll tube extension ends.

**VERTICAL TRAILER**

ALIGN FLEX ARM WITH VERTICAL PLANE PARALLEL TO FACE PANEL

**SLOPED TRAILER**

ALIGN FLEX ARM WITH VERTICAL PLANE PARALLEL TO FACE PANEL

---

**FRONT OF TRAILER**

**STEP 2:** Slide tarp back on roll tube.

**VERTICAL TRAILER**

**SLOPED TRAILER**

---

**Shur-Co® HELP LINE:** 1-866-748-7435
Fasten roll tube extension to motor mount bracket:

**STEP 3A**: Slide motor spacer over motor shaft.

**STEP 3B**: Slide roll tube extension over motor shaft. Fasten with 3/8" x 2" cap screws and locknuts. Finger tighten only.

**STEP 4**: Hold flex arm with motor and roll tube extension in vertical plane to trailer and 90° to roll tube. Mark roll tube at location to be cut.

**NOTE**: Requires two people for safe installation.

---

**CAUTION**

On certain trailers, clearance lights might be in way of roll tube and can be damaged if caution is not taken. In some instances, a ‘deflector’ might have to be installed to prevent roll tube from causing damage to lights.

---

**VERTICAL TRAILER**

**STEP 5**: Reverse step 3B to unfasten and remove motor from roll tube extension. Remove roll tube extension from roll tube. Cut roll tube at marked location.

**STEP 6**: Insert swaged end of roll tube extension w/drive shaft into roll tube. Align extension straight with roll tube and weld all around. Grind smooth.

**NOTE**: Pull roll tube away from tarp and trailer before welding to protect from weld spatter. Align roll tube extension straight with roll tube before welding so tarp system will roll smoothly.
NOTE: To prevent rust, paint all exposed metal, such as weld seams and/or metal exposed by grinding or cutting, with corrosion-resistant paint.

STEP 7: Slide roll tube/roll tube extension weldment back into position and align upper flex arm on front of trailer. Follow step 8 to install motor, positioning motor as shown below. Make sure torsion springs load when tarp opens.

WARNING

Flex arms are under tension while torsion springs are engaged. Use caution while assembling and disassembling arms. Failure to read and follow instructions could result in serious injury or death.

STEP 8: Refasten and secure roll tube to electric motor shaft with 3/8" x 2" cap screw and lock nut. Install bearing spacers, radial ball bearings and bearing mount retainer and secure with 1/4" lock nuts.

NOTE: Verify again that flex arm is on vertical plane and parallel to face panel before proceeding. Make sure all fasteners holding motor to upper flex arm bracket are tightened securely.

STEP 9: Fasten motor cover onto motor with #10 x 3/4" screws.

STEP 10: Adjust rear roll tube extension to align flex arm on vertical plane parallel to face panel. Do not drill holes and/or fasten until tarp and roll tube are in desired position.

STEP 11: When both front and rear flex arms are vertical, fasten bearing ring to roll tube with two 1/4" x 1" self-drilling screws.

STEP 12: Re-fasten tarp to roll tube with existing U-clamps and screws. Tighten all fasteners securely. Tighten front and rear flex arm connections.
WARNING

When transporting trailer, wiring from in-cab rocker switch must be connected to 4500HD system on trailer. If motor is not connected to cab-wired solenoid while in transit, tarp may unwind and blow off.

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

STEP 2: Mount solenoid in a suitable location - a ventilated area near the battery is ideal. Determine best route for wire, usually along frame with existing wire harness. Run 6-ga. wire from conductor plug to solenoid and from power supply to solenoid as shown in diagram. Run 14-ga. wires from solenoid to switch.

STEP 3: Locate rocker switch in convenient operating location. Switch can be mounted in cab, on dash panel or on driver side door jamb, for example.

STEP 4: Unfasten and remove insert from conductor plug. Feed 6-ga. wire through plug and into brass contacts on insert. Tighten set screws to secure wires. Replace insert into conductor plug and secure screw.

Shur-Co® HELP LINE: 1-866-748-7435
**CAUTION**

Do not cut SMARTwire™. Bind excess wire with cable ties.

**WIRING SCHEMATIC**

**STEP 1:** Connect SMARTwire™ from electric motor to SMARTwire™ from dual-conductor socket and secure connection with lock pin. Secure all wires to trailer with cable clips and screws. If needed, use cable ties.

**NOTE:** Coat each connection with dielectric grease (P/N 1704378) to prevent corrosion.

**CAUTION**

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

**STEP 2:** Check motor direction by activating switch to "OPEN." If switch is running system backwards, swap wire leads on two outside tabs on rocker switch.

**OPERATION:**

A) Close tarp: Push switch to "CLOSE" and hold. Observe tarp and release switch when tarp is fully closed.

B) Open tarp: Push switch to "OPEN" and hold. Observe tarp and release switch when tarp 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 tarp components, release switch at end of each cycle.

**DUAL CONDUCTOR**

**STEP 1:** Locate dual-pole conductor socket near seven-pole conductor socket as shown. Determine location and drill 2" hole through trailer skin.

**STEP 2:** Align socket over 2" hole. Using holes in flanges on socket as guide, mark and drill two 5/16" holes.

**STEP 3:** Fasten conductor socket to trailer with 5/16" x 3/4" cap screws, flat washers and nuts.

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

Do not power any Shur-Co® wireless system with battery charger alone, as this will likely cause system abnormalities and/or system malfunction. Instead, use a 12-volt truck/automobile battery to provide power to trailer.

**STEP 1:** Mount circuit breaker as close as possible to battery or power supply.

**STEP 2:** Unfasten and remove insert from conductor plug. Feed 6-ga. wire through plug and into brass contacts on insert. Tighten set screws to secure wires. Replace insert into conductor plug and secure screw.

---

**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. | 1125020 | Shur-Co® Wireless Receiver - SMART1+™ SMARTwire™
7. | 1125008 | Shur-Co® Wireless Receiver - SMART2+™ w/SMARTwire™
8. | 1703244 | Ring Terminal - 6 Ga. x 3/8" Stud
9. | 1704338 | Self-Tapping Screw - 1/4" x 1"
10. | 1701045 | Cap Screw - 5/16" x 3/4"
11. | 1702926 | Flanged Top Lock Nut - 5/16"
NOTE: Wire lengths are predetermined. Before installing SMARTwire™ components, review and confirm wire routing so wires reach components with ample room for connection.

**DUAL-CONDUCTOR SOCKET**

**STEP 1:** Locate dual-pole conductor socket near 7-pole conductor socket as shown. Determine location and drill 2" hole through trailer skin.

**STEP 2:** Align socket over 2" hole. Using holes in flanges on socket as guide, mark and drill two 5/16" holes.

**STEP 3:** Fasten conductor socket to trailer with 5/16" x 3/4" cap screws, flat washers and nuts.

---

**CAUTION**

Do not fasten SMARTwire™ components to trailer through hopper walls.
CAUTION

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

NOTE: Coat each connection with dielectric grease (P/N 1704378) to prevent corrosion.

CAUTION

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

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

STEP 1: Connect SMARTwire™ from wireless receiver to SMARTwire™ from electric motor. Connect SMARTwire™ plug from wireless receiver to SMARTwire™ from dual-conductor socket. Secure connections with lock pins. If you have SMART1+ or SMART2™ system, connect encoder wire from receiver to encoder wire from motor. Secure wires to trailer with cable clips and screws. If needed, use cable ties.

STEP 2: Align holes in wireless receiver over 2" hole in trailer as shown below. Using holes on flanges on receiver as guide, mark and drill four 5/16" holes as shown.

STEP 3: Install grommet into 2" hole. Insert wire from wireless receiver through grommet.

STEP 4: Align holes on wireless receiver with holes on trailer. Fasten receiver to trailer with 5/16" x 7/8" cap screws, lock washers and nuts. Adhere warning decal P/N 1705546 above receiver in location shown.

Shur-Co® HELP LINE: 1-866-748-7435
**WARNING**

DO NOT OPERATE MOTORIZED SYSTEMS WHILE INDIVIDUALS ARE ON OR OCCUPYING BOX/TRAILER/HOPPER.

**NOTICE**

THIS TARP SYSTEM OPERATES IN EXPRESS MODE. UPON PRESSING THE OPEN/CLOSE BUTTON THE TARP SYSTEM WILL CONTINUE TO TRAVEL TO THE END STOPS. TO STOP THE MOTOR, PRESS EITHER BUTTON. READ OWNERS MANUAL BEFORE OPERATING. CONTACT SHUR-CO® FOR ALL TARP SYSTEM QUESTIONS AT 1-866-748-7435.

**NOTICE**

Decal shown above must be placed above wireless receiver on front of box.

---

**NOTE:** 4500 Series HD trailer-mounted control boxes now operate in EXPRESS MODE, for both SMART1+™ and SMART2™ remote systems. Pressing O or C button on control box initiates express open or close operation. After that, pressing either button will stop tarp operation. If neither button is pressed, operation will automatically stop at end of travel. On SMART2™ systems, if travel stops are not set, trailer-mounted control box operates in MANUAL (momentary) MODE. Remotes for both systems are shipped with tarp channel set to EXPRESS MODE and can be configured as desired.

**NOTE:** Tarp systems will operate in EXPRESS MODE when using buttons on trailer-mounted control box, if encoder wires are connected. For SMART2™ systems, travel stops must also be set, otherwise you must press and hold buttons. When in EXPRESS MODE, press and release buttons to open and close tarp (operation will continue until complete after releasing button). When in MANUAL MODE, press and hold buttons (operation will stop if button is released). See remote instruction manual for detailed instructions on remote operation.

**NOTE:** Tarp systems operate in EXPRESS MODE when commanded to operate from buttons on trailer-mounted control box. Closing remote lid or pressing select button will not stop system in this case. Pressing open or close button on remote will stop system if in range.

**NOTICE**

Decal shown above must be placed above wireless receiver on front of box.

---

**WARNING**

Stay clear of roll tarp and arm(s) area of travel during operation. Failure to do so could result in serious injury or death.

**WARNING**

Stay clear of the roll tarp and arm(s) sweep area, from front-to-back, during operation. Failure to do so may result in a fall/impact causing serious injury or death. For repair/service of equipment, reference manual for proper safety precautions before proceeding.
Perform following steps to change 4500 HD Series Electric system to manual crank operation:

**NOTE:** Store manual crank arm in truck or mounted to trailer. (Example - above kingpin in the apex.)

**STEP 1:** Close tarp, letting roll tube hang loose under latchplate.

**STEP 2:** At front of trailer, remove 3/8” x 2” cap screw and lock nut from motor shaft and roll tube extension connection.

**STEP 3:** Remove protective cap and install crank arm assembly as shown in Shur-Lok® owner’s manual. View owner’s manual at http://www.shurco.com.

---

**CAUTION**

Do not open or close tarp without U-joint securely fastened to splined shaft with wire lock pin. Failure to do so could result in injury.
Electric Motor Replacement - Standard Roll

**REMOVE EXISTING MOTOR**

**STEP 1:** Close tarp, letting roll tube hang loose under latch plate.

**STEP 2:** Disconnect electric power to trailer. Unfasten and remove motor cover. Unfasten 3/8" x 2" cap screw and lock nut holding motor shaft to roll tube extension.

**NOTE:** Leave roll tube fastened to motor bracket.

**STEP 3:** Disconnect electric wires from motor terminals and encoder wire.

**STEP 4:** Unfasten and remove only 5/16" lock washers and hex nuts holding motor to motor bracket/front arm assembly, leaving motor mount bearing retainers in place. Remove existing motor.

---

**INSTALL NEW MOTOR**

**STEP 1:** Install new motor. Fasten motor to motor bracket with 5/16" washers and nuts.

**STEP 2:** Connect electric wires to motor terminals and encoder wire.

**STEP 3:** Fasten motor shaft to roll tube with 3/8" x 2" cap screw and lock nut. Replace motor cover and fasten to motor with #10 x 3/4" cap screws. Reconnect electric power.

---

**CAUTION**

Check all hardware for complete assembly before operating. Inspect system at this time and adjust as required.
NOTE: Replace system parts only with Genuine Shur-Co® parts to ensure proper system function. If Genuine Shur-Co® parts are not used, warranty could be void.

FRONT ASSEMBLIES

<table>
<thead>
<tr>
<th>Item</th>
<th>Part #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1120697</td>
<td>Roll Tube Extension w/Drive Shaft - 34.43&quot;</td>
</tr>
<tr>
<td>2.</td>
<td>1120698</td>
<td>Roll Tube Extension w/Drive Shaft - 45.37&quot;</td>
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<tr>
<td>3.</td>
<td>1701580</td>
<td>Nylon Lock Nut - 3/8&quot;</td>
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<tr>
<td>4.</td>
<td>1704264</td>
<td>Cap Screw - 3/8&quot; x 2&quot; - Grade 8</td>
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<td>5.</td>
<td>116920</td>
<td>Pivot Pin - 4 Spring</td>
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<td>6.</td>
<td>1700407</td>
<td>Hex Nut - 3/8&quot;</td>
</tr>
<tr>
<td>7.</td>
<td>1700434</td>
<td>Lock Washer - 3/8&quot;</td>
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<td>8.</td>
<td>1120281</td>
<td>Pivot Bracket Washer</td>
</tr>
<tr>
<td>9.</td>
<td>1700429</td>
<td>Flat Washer - 3/8&quot;</td>
</tr>
<tr>
<td>10.</td>
<td>1702891</td>
<td>Cap Screw - 3/8&quot; x 1 1/4&quot;</td>
</tr>
<tr>
<td>11.</td>
<td>1121578</td>
<td>Pivot Mt. Bracket - Vertical - 9 1/4&quot; Standoff</td>
</tr>
<tr>
<td>12.</td>
<td>1121582</td>
<td>Pivot Mt. Bracket - Vertical - 7 1/4&quot; Standoff</td>
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<table>
<thead>
<tr>
<th>Item</th>
<th>Part #</th>
<th>Description</th>
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<tbody>
<tr>
<td>28.</td>
<td>1703873</td>
<td>Flex Arm Joint</td>
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<tr>
<td>29.</td>
<td>1704775</td>
<td>4500 Series HD Bellow</td>
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<td>30.</td>
<td>1121289</td>
<td>Upper Flex Arm - Motor</td>
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<tr>
<td>31.</td>
<td>1120677</td>
<td>Upper Arm Spacer</td>
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<td>32.</td>
<td>1700411</td>
<td>Hex Nut - 5/16&quot;</td>
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<td>33.</td>
<td>1700433</td>
<td>Lock Washer - 5/16&quot;</td>
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<td>34.</td>
<td>1120967</td>
<td>4500 Series HD Electric Motor</td>
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<tr>
<td>35.</td>
<td>1701543</td>
<td>Nylon Lock Nut - 1/4&quot;</td>
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<tr>
<td>36.</td>
<td>1120681</td>
<td>Motor Mount Bearing Retainer</td>
</tr>
<tr>
<td>37.</td>
<td>1704736</td>
<td>Radial Ball Bearing - 1/4&quot; x 3/4&quot;</td>
</tr>
<tr>
<td>38.</td>
<td>1120680</td>
<td>Motor Mount Bearing Spacer</td>
</tr>
<tr>
<td>39.</td>
<td>1120679</td>
<td>Motor Spacer</td>
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<td>40.</td>
<td>1120776</td>
<td>4500 Series HD Motor Mount - 7 1/4&quot;</td>
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<tr>
<td>41.</td>
<td>1120662</td>
<td>4500 Series HD Motor Mount</td>
</tr>
<tr>
<td>42.</td>
<td>1704778</td>
<td>Shoulder Bolt - 1/2&quot; x 5/8&quot; - 3/8&quot; x 1/2&quot; Thrd.</td>
</tr>
<tr>
<td>43.</td>
<td>1704945</td>
<td>Flanged Top Lock Nut - 5/16&quot;</td>
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<tr>
<td>44.</td>
<td>1121659</td>
<td>4500 Series HD Motor Cover Kit - Black</td>
</tr>
<tr>
<td>45.</td>
<td>1704367</td>
<td>Hex Flange Cap Screw - #10 x 3/4&quot;</td>
</tr>
</tbody>
</table>
4500 SERIES HD ELECTRIC COMPONENTS

Item  Part #  Description
1.  1702108  Wire Clip - 3/4”
2.  1704338  Self-Tapping Screw - 1/4” x 1”
3.  1703231  Cable Tie - 8”
4.  1700407  Hex Nut - 3/8”
5.  1700434  Lock Washer - 3/8”
6.  1109015  Mounting Bracket
7.  1700400  Self-Tapping Screw - 3/8” x 1”
8.  1700408  Hex Nut - 1/4”
9.  1700436  Lock Washer - 1/4”
10.  1700427  Flat Washer - 1/4”
11.  1700403  Self-Tapping Screw - 1/4” x 3/4”
12.  SMARTwire™ - 6 Ga. - Plug - 9’ 9” w/Encoder Wire
13.  1120670  SMARTwire™ Dual-Conductor Socket
14.  1704946  Ranged Top Lock Nut - 5/16”
15.  1701045  Cap Screw - 5/16” x 3/4”
16.  1115385  Heavy-Duty Dual-Conductor Plug
17.  1704751  Harness Lock Pin - 1/4” x 7/8”
18.  1704354  40-Amp Modified-Reset Circuit Breaker
19.  1116020  Rocker Switch
20.  1703661  Rocker Switch Mounting Bracket
21.  1703896  Solenoid Cover
22.  1701543  Nylon Lock Nut - 1/4”
23.  1703845  Motor-Reversing Solenoid
24.  1700381  Cap Screw - 1/4” x 2”
25.  1700419  Lock Nut - 5/16”
26.  1700427  Flat Washer - 1/4”
27.  1202938  Rubber Grommet - 1 1/2” Insert
28.  1125020  Shur-Co® Wireless Receiver - SMART1™ w/SMARTwire™
29.  1125008  Shur-Co® Wireless Receiver - Version 11 - SMART2™ w/SMARTwire™ (only compatible with version 11 remote)
30.  1702926  Cap Screw - 5/16” x 7/8”
31.  1123160  5-Channel SMART1+™ Remote
32.  1122231  SMART2™ Remote w/Cradle
33.  1704957  SMART2™ Cradle
34.  1704958  SMART2™ Charger Cable
35.  1704312  Motor-Reversing Solenoid - 3 Pt. Mt.
36.  1704308  Ranged Cap Screw - #10 x 1/2”
37.  1705163  SMART1+™ Remote Replacement Battery
38.  1703659  Push-On Terminal - 14 Ga. - 1/4”
39.  1704153  Ring Terminal - 14 Ga. x 1/4” Stud
40.  1703244  Ring Terminal - 6 Ga. x 3/8” Stud
41.  1703245  Ring Terminal - 6 Ga. x #10 Stud
42.  1702707  Ring Terminal - 6 Ga. 1/4” Stud

NOTE: To check remote version, go to SETUP, then select INFORMATION. Call Shur-Co’s Help Line, if needed.

HD SLOPED PIVOT MOUNTS

Item  Part #  Description
1.  1700429  Flat Washer - 3/8”
2.  1700434  Lock Washer - 3/8”
3.  1700407  Hex Nut - 3/8”
4.  1116920  Pivot Pin - 4 Spring
5.  1702891  Cap Screw - 3/8” x 1 1/4”
6.  1120291  Pivot Bracket Washer
7.  1121993  Pivot Mount Bracket - Sloped - 6” Standoff - 6” Wide
8.  1121992  Pivot Bracket - Sloped - 6” Wide
9.  1700400  Self-Tapping Screw - 3/8” x 1”
10.  1121583  Pivot Backer Plate - 7” x 16”
11.  1121584  Pivot Backer Plate - 7” x 20”

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  - Value Series Shur-Lok®
  - Super Duty Shur-Lok®
  - Shur-Lok® Junior
  - Premium Belt 'n Ratchet
  - Cable-Lok™
  - Turning Point™ Bow

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  - SMART2™ Remote
  - SMART1 +™ Remote
  - 4500 Series HD Electric
  - Electric Shur-Lok®
  - AutoTrap™ Hopper Opener
  - ProTrap® Hopper Opener
  - Electric Gate & Hoist
  - LiteALL™ Work Lights
  - Cable-Lok™ Electric Upgrade
  - Electric Turning Point™ Bow
  - Solar Power Pack

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  - Shur-Lok® Tarp Cords
  - Gustbuster™ Tarp Cords

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  - Super Duty Shur-Lok®
  - Shur-Trak II™
  - Cover-Pro II®
  - Turning Point™ Bow
  - IronSide™ Side-Dump System
  - Arm-Matic™
  - DuraPull™
  - Econo-Pull™
  - Turbo Tarp2™
  - 2000 Series
  - 5000 Series
  - Hammer™
  - Bullet™
  - Flash™
  - Long Arm™

- SMARTrailer™ Accessories for Construction Products
  - 4500 Series HD Electric w/Gate Flex™
  - Shur-Trak II™ Electric Upgrade
  - Cover-Pro II® Electric Upgrade
  - Electric Turning Point™ Bow
  - Solar Power Pack

- Waste Products
  - The Ox™
  - Quick-Flip III™
  - Sidewinder™
  - Sidewinder™ 350
  - HyTower™ SL
  - HyTower™ DL
  - Double-Flip™

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