



TARPING SYSTEMS & ACCESSORIES

P/N 1123394 Rev. H

# OWNER'S MANUAL



## Aluminum System for Aulick 18" Hinge Hi-Lift Live-Bottom Trailer

STANDARD ROLL

*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  
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**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<sup>®</sup>, 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<sup>®</sup>, LLC parts in conjunction with Shur-Co<sup>®</sup>, 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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*For more information, log on to our website:*

**[www.shurco.com](http://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.

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. Welder
- 2. Hammer
- 3. Center Punch or Transfer Punch
- 4. #3 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/Flathead 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

**A**



1704367 Cap Screw - #10 x 3/4"

**B**



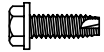
1700403 Self-Tapping Screw - 1/4" x 3/4"

**C**



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

**D**



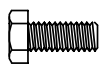
1704338 Self-Tapping Screw - 1/4" x 1"

**E**



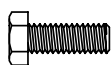
1705198 Self-Drilling Screw - 1/4" x 1"

**F**



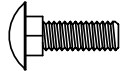
1701045 Cap Screw - 5/16" x 3/4"

**G**



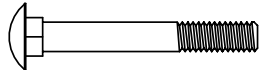
1702926 Cap Screw - 5/16" x 7/8"

**H**



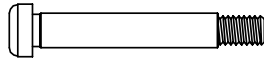
1704237 Carriage Bolt - 5/16" x 1"

**J**



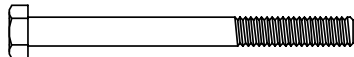
1701455 Carriage Bolt - 5/16" x 2 1/2"

**K**



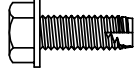
1704943 Shoulder Bolt - 3/8" x 2" - 5/16" x 1/2" Thd.

**L**



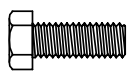
1201022 Cap Screw - 5/16" x 3 1/2"

**M**



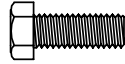
1700400 Self-Tapping Screw - 3/8" x 1"

**N**



1701061 Cap Screw - 3/8" x 1" - Gr. 5

**P**



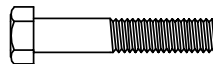
1704416 Cap Screw - 3/8" x 1" - Gr. 2

**Q**



1702891 Cap Screw - 3/8" x 1 1/4"

**R**



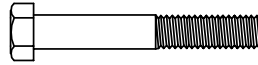
1704264 Cap Screw - 3/8" x 2"

**S**



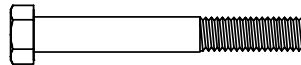
1701544 Self-Tapping Screw - 3/8" x 2"

**T**



1702573 Cap Screw - 3/8" x 2 1/2"

**U**



1700371 Cap Screw - 3/8" x 3"

**V**



1700408 Hex Nut - 1/4"

**W**



1701543 Nylon Lock Nut - 1/4"

**X**



1700411 Hex Nut - 5/16"

**Y**



1704931 Flanged Nylon Lock Nut - 5/16"

**Z**



1704946 Flanged Top Lock Nut - 5/16"

**AA**



1704297 Nylon Lock Nut - 5/16"

**BB**



1700419 Nylon Lock Nut - 5/16"

**CC**



1700407 Hex Nut - 3/8"

**DD**



1701062 Hex Nut - 3/8"

**EE**



1701580 Nylon Lock Nut - 3/8"

**FF**



1702668 Top Lock Nut - 3/8"

**GG**



1701283 Flanged Top Lock Nut - 3/8"

**HH**



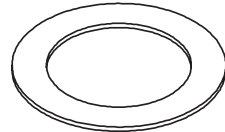
1700436 Lock Washer - 1/4"

**JJ**



1700427 Flat Washer - 1/4"

**KK**



1702890 Flat Washer - 1 1/4"

**LL**



1700433 Lock Washer - 5/16"

**NN**



1700428 Flat Washer - 5/16"

**PP**



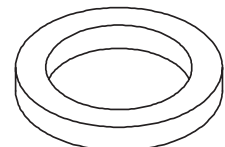
1700434 Lock Washer - 3/8"

**QQ**



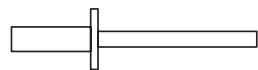
1700429 Flat Washer - 3/8"

**RR**



1118318 Spacer Washer - 1/4" x 1.81"

**SS**



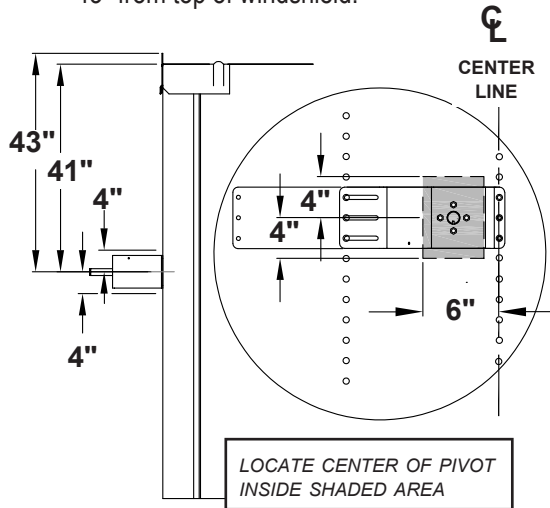
1706103 Rivet - 3/16"

Inspect all parts in 4500 Series HD electric kit upon arrival.

**NOTE:** Read entire section before drilling holes.

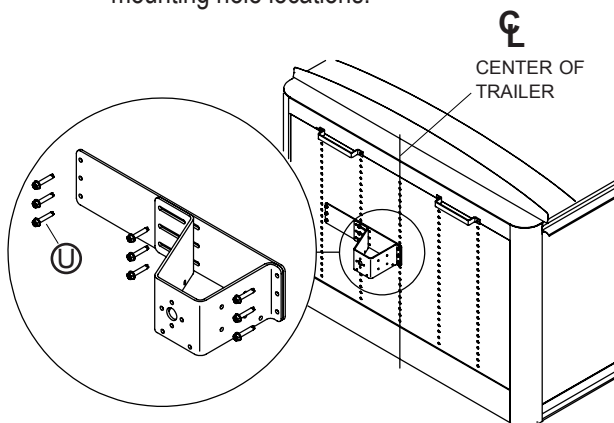
**FRONT OF TRAILER**

**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.



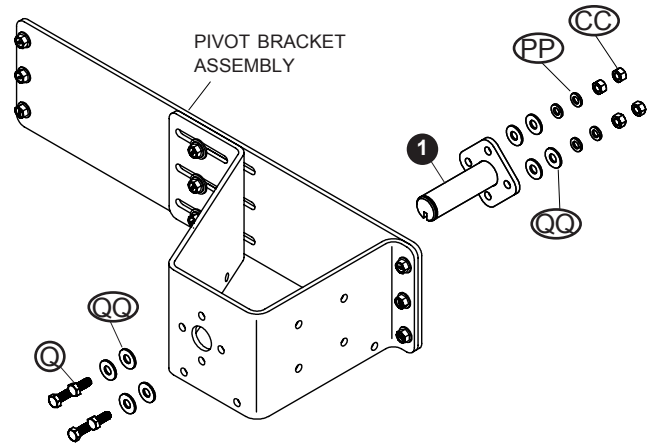
**NOTE:** Mount front pivot bracket on front of trailer. Reinforce mounting area with backer plate for adequate support. Before drilling any holes, make sure flex arm will have clear pathway to operate.

**STEP 2:** Place pivot mount bracket and backer plate on front of trailer as shown. Using backer plate as guide, mark mounting hole locations.



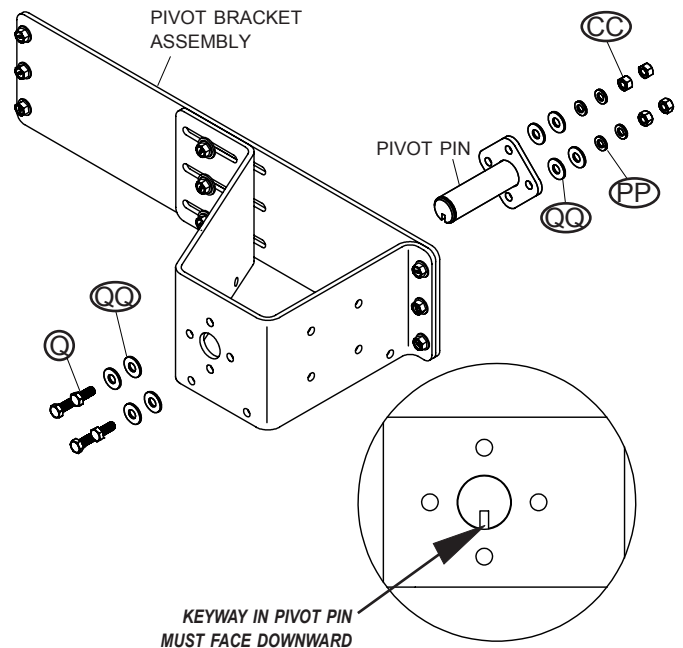
**STEP 3:** Drill 5/16" holes in trailer and fasten with screws Ⓢ.

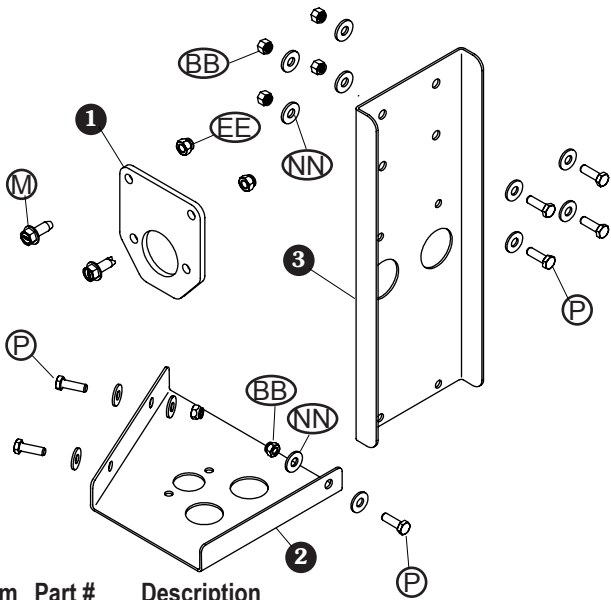
**PIVOT PIN INSTALLATION**



Item	Part #	Description
1.	1116920	Pivot Pin - 4 Spring
Q.	1702891	Cap Screw - 3/8" x 1 1/4"
CC.	1700407	Hex Nut - 3/8"
PP.	1700434	Lock Washer - 3/8"
QQ.	1700429	Flat Washer - 3/8"

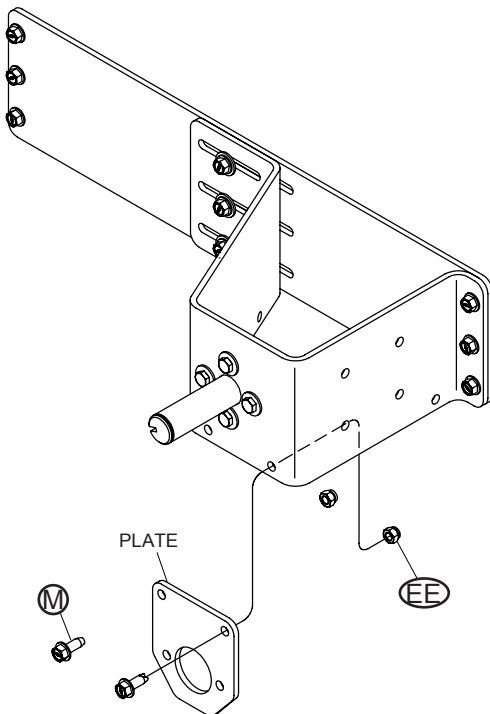
**STEP 1:** Fasten pivot pin to pivot bracket with keyway facing downward as shown.



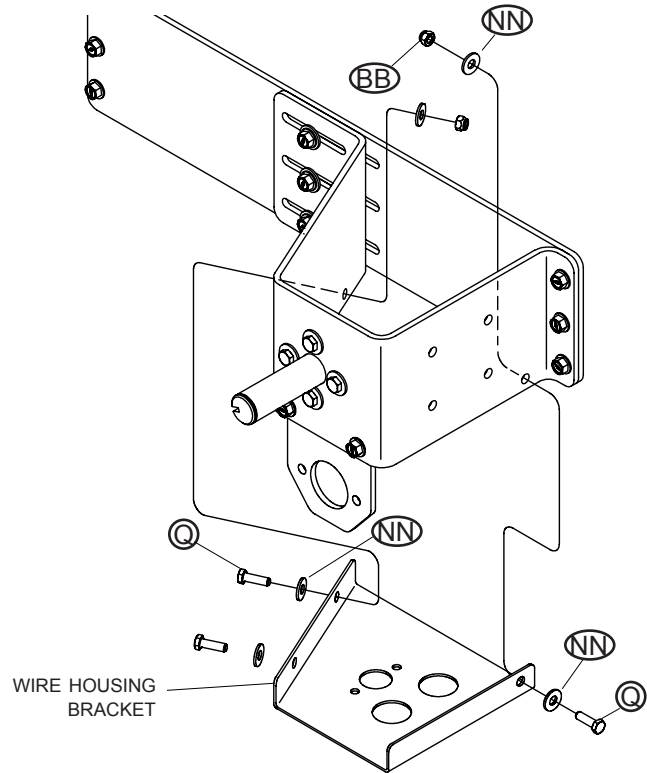


Item	Part #	Description
1.	1124955	Plate
2.	1124956	Wire Housing Bracket
3.	1124953	Receiver Mount Hanging Bracket
M.	1700400	Self-Tapping Screw - 3/8" x 1"
P.	1704416	Cap Screw - 5/16" x 1"
BB.	1700419	Nylon Lock Nut - 5/16"
EE.	1701580	Nylon Lock Nut - 3/8"
NN.	1700428	Flat Washer - 5/16"

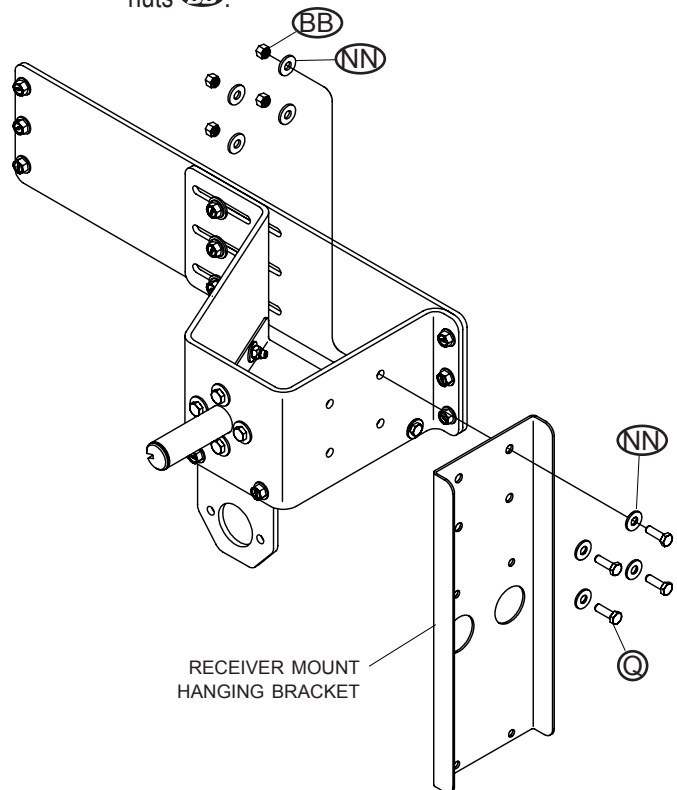
**STEP 1:** Fasten plate to pivot bracket assembly with screws **M** and nuts **EE**.



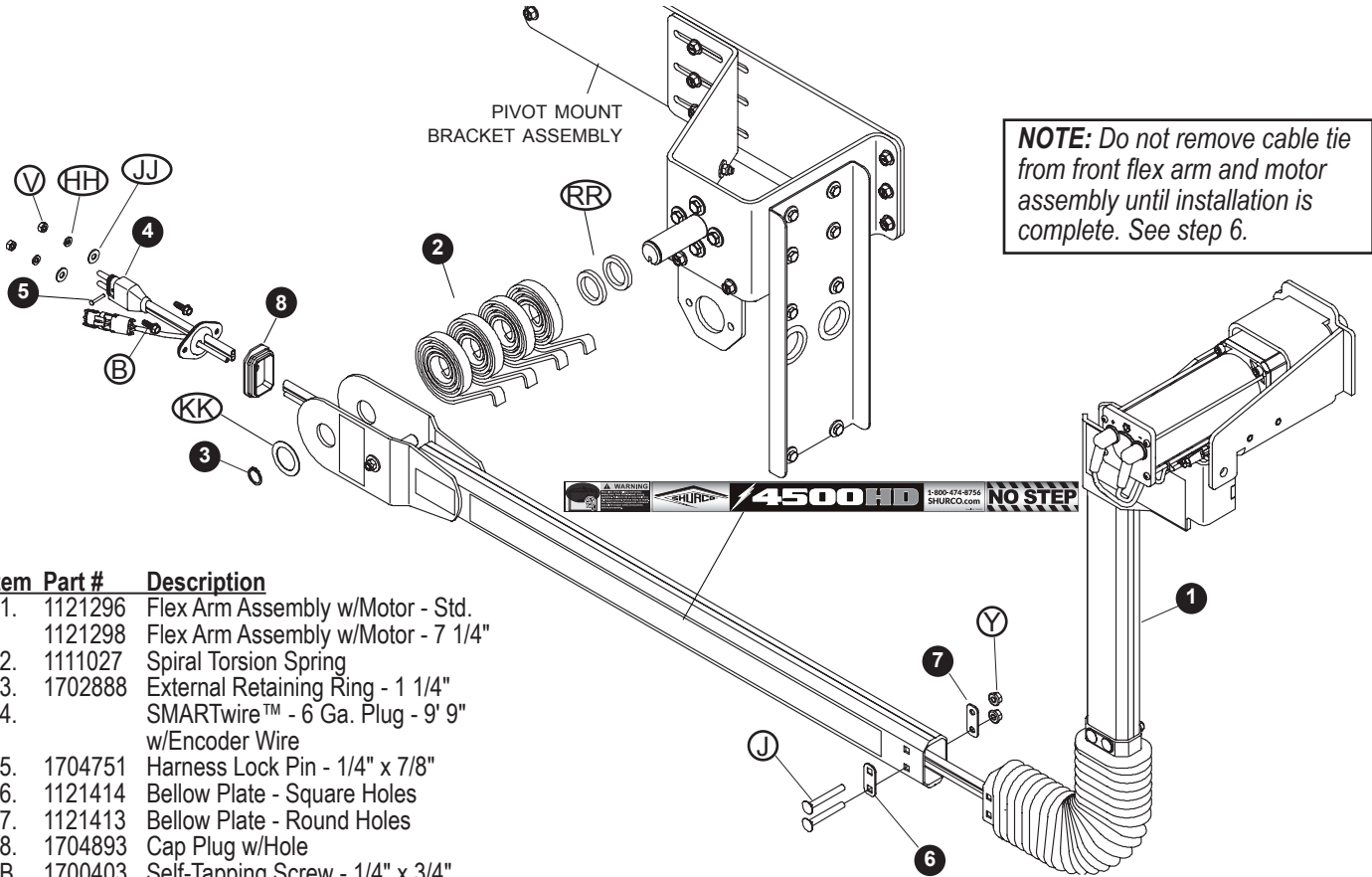
**STEP 2:** Fasten wire housing bracket to pivot bracket assembly with screws **Q**, washers **NN** and nuts **BB**.



**STEP 3:** Fasten receiver mount hanging bracket to pivot bracket assembly with screws **Q**, washers **NN** and nuts **BB**.



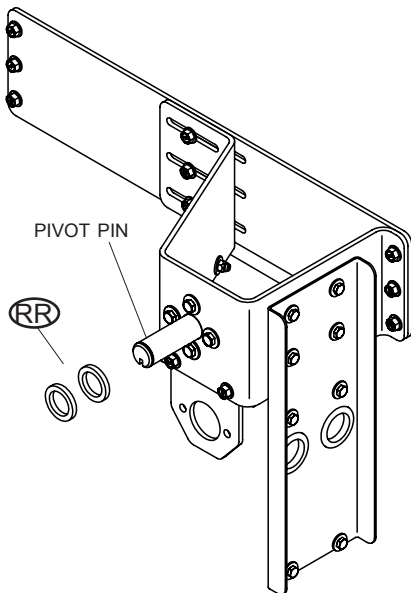




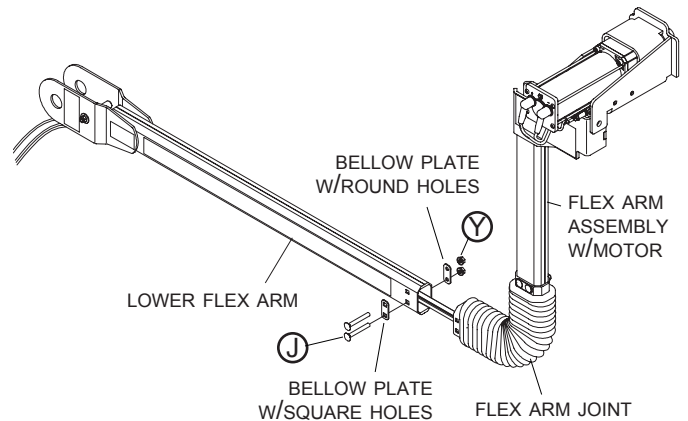
Item	Part #	Description
1.	1121296	Flex Arm Assembly w/Motor - Std.
	1121298	Flex Arm Assembly w/Motor - 7 1/4"
2.	1111027	Spiral Torsion Spring
3.	1702888	External Retaining Ring - 1 1/4"
4.		SMARTwire™ - 6 Ga. Plug - 9' 9"
		w/Encoder Wire
5.	1704751	Harness Lock Pin - 1/4" x 7/8"
6.	1121414	Bellow Plate - Square Holes
7.	1121413	Bellow Plate - Round Holes
8.	1704893	Cap Plug w/Hole
B.	1700403	Self-Tapping Screw - 1/4" x 3/4"
J.	1701455	Carriage Bolt - 5/16" x 2 1/2"
V.	1700408	Hex Nut - 1/4"
Y.	1704931	Flanged Nylon Lock Nut - 5/16"
HH.	1700436	Lock Washer - 1/4"
JJ.	1700427	Flat Washer - 1/4"
KK.	1702890	Flat Washer - 1 1/4"
RR.	1118318	Spacer Washer - 1/4" x 1.28"

**! 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.

**STEP 1:** Assemble spacer washers (RR) onto pivot pin.

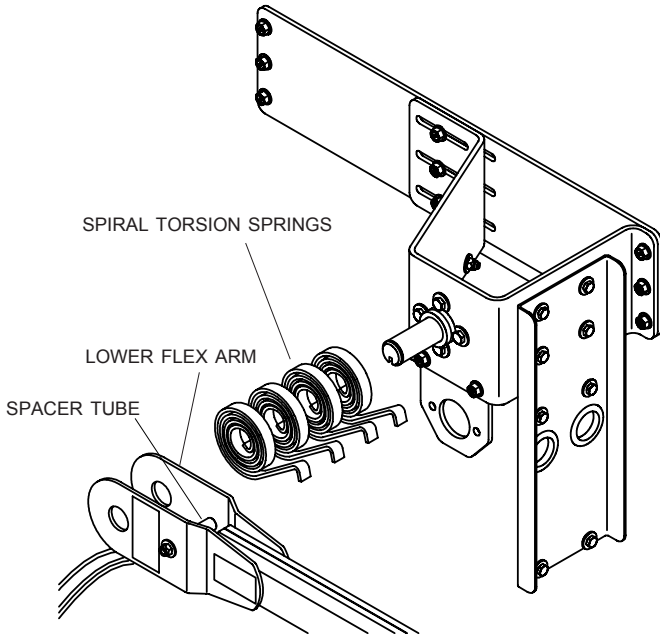


**STEP 2:** Align holes in bellow, end fitting and bellow plates with holes in lower flex arm assembly as shown. Fasten with carriage bolts (J) and lock nuts (Y).

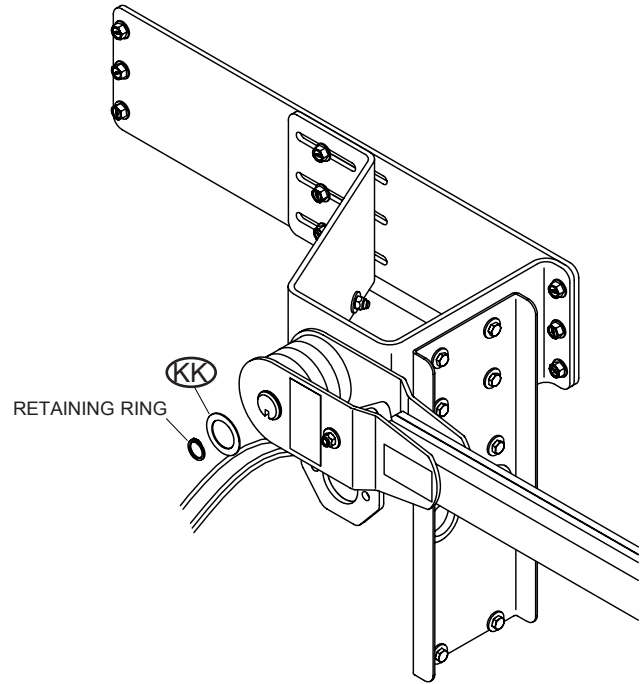


**NOTE:** Motor assembly on upper flex arm must face toward trailer as shown.

**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.



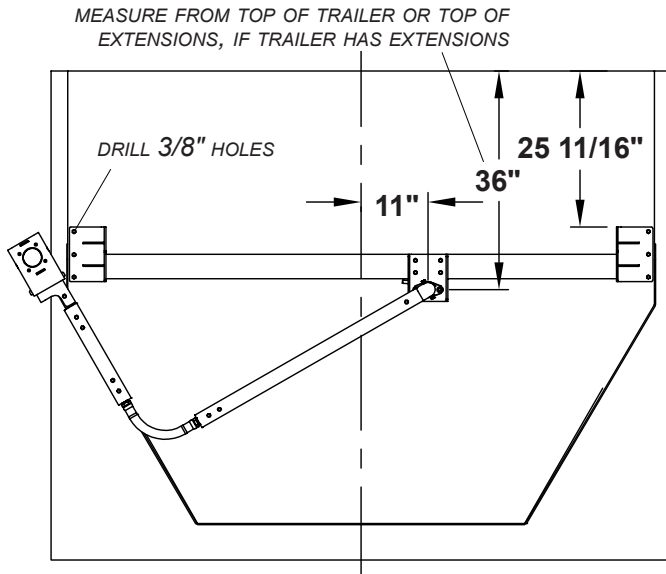
**STEP 4:** Secure with washer (KK) and retaining ring.



**STEP 6:** Remove cable tie from front arm/motor assembly before operating system.



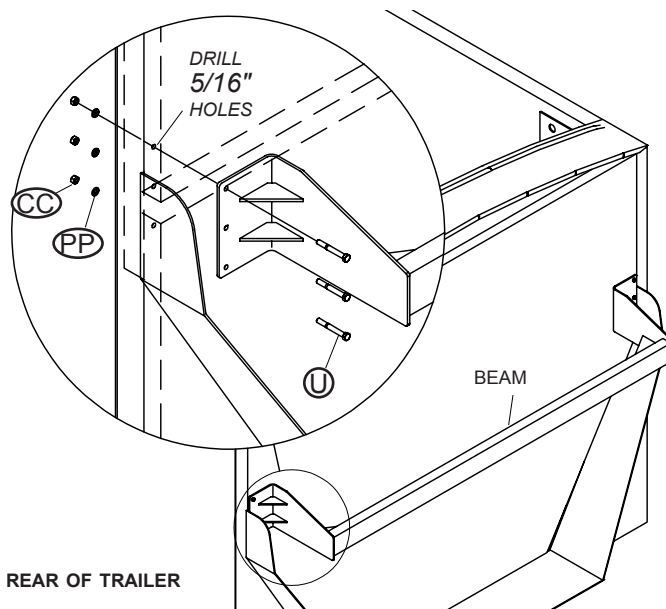
**STEP 1:** Center beam on rear of trailer, positioning beam so spring pivot shaft is located as shown.



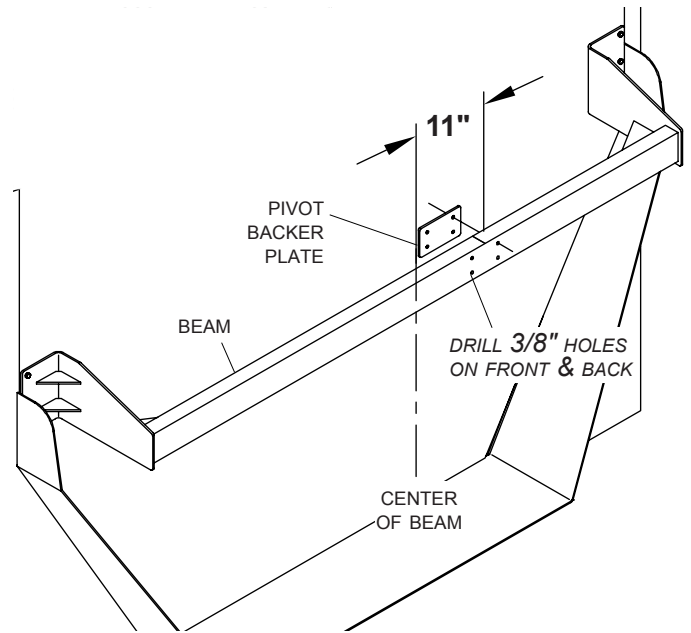
**NOTE:** If bottom corner of mounting bracket does not fit inside rear extensions, trim to fit and drill replacement holes as needed.

TRIM OFF

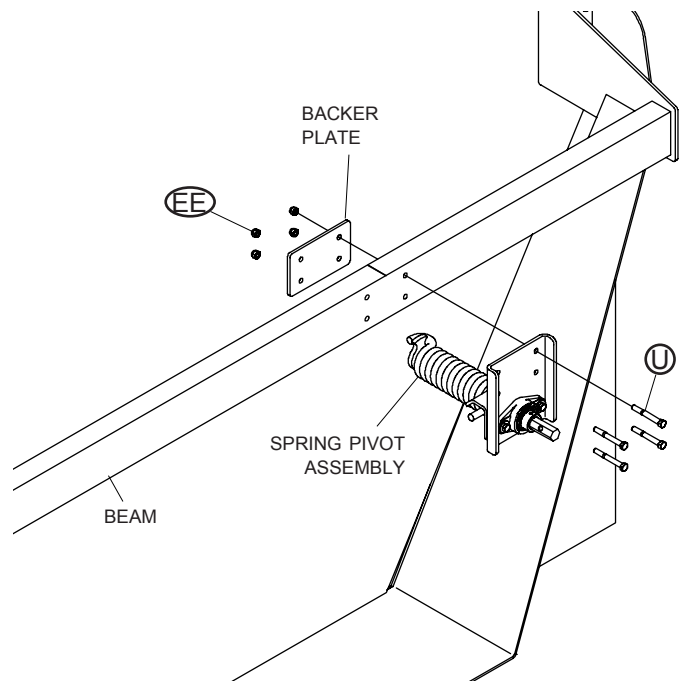
**STEP 2:** Hold beam in place and use as guide to mark and drill 3/8" holes through door frame tubing. Fasten with screws **U**, lock washers **PP** and nuts **CC**.



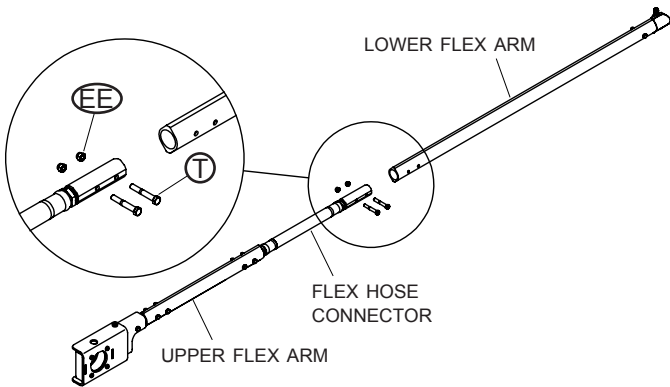
**STEP 3:** Fasten spring pivot assembly to beam. On front of beam, measure and mark 11" from center of beam toward curb side of trailer. Center pivot backer plate on mark and use as guide to locate and drill 3/8" holes. Place plate on backside of beam and repeat process, to ensure alignment of holes on backside of beam with holes on front of beam.



**STEP 4:** Place spring pivot assembly and backer plate on either side of beam as shown and fasten with screws **U** and lock nuts **EE**.

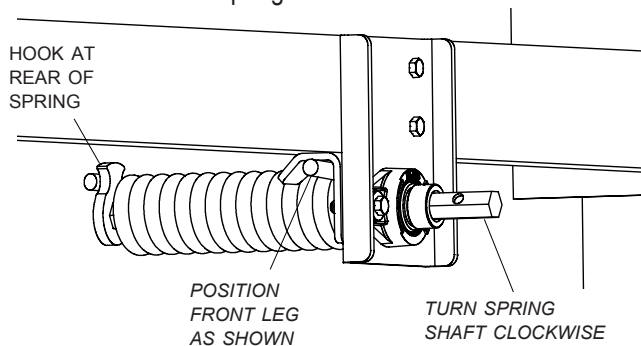


**STEP 1:** Assemble flex arm. Align flex hose connector on upper flex arm assembly with lower flex arm as shown and slide connector into flex arm. Fasten connector to lower flex arm with screws **T** and lock nuts **EE**. If flex arm comes pre-assembled, begin with step 2.

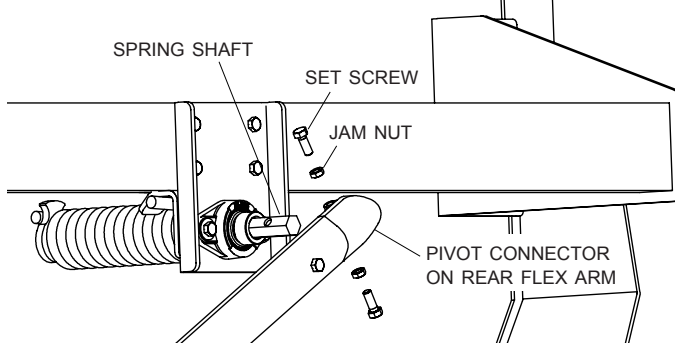


**NOTE:** Make sure arm upper arm is oriented as shown with lower arm, otherwise arm can be damaged in operation.

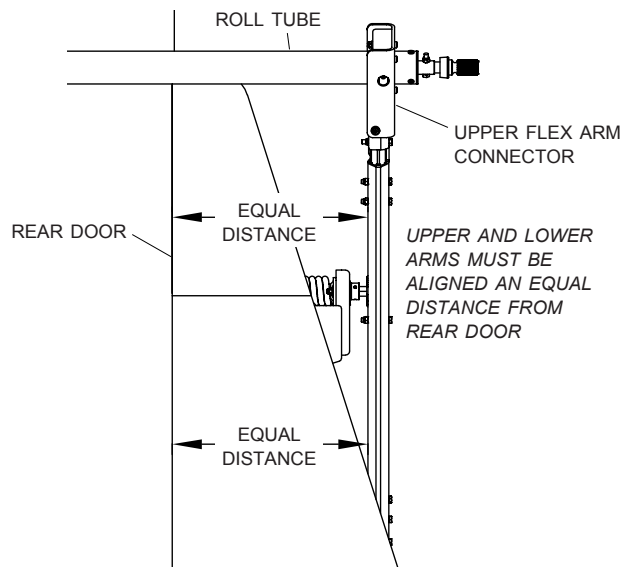
**STEP 2:** To correctly position spring and spring shaft, make sure front leg of spring is positioned as shown below. Then turn shaft clockwise until shaft catches in hook at rear of spring.



**STEP 3:** Align rear flex arm with spring shaft as shown below and slide pivot connector onto shaft. Align set screw in pivot connector with hole in shaft and tighten until screw bottoms out in hole. Tighten other set screw, then tighten jam nuts to lock set screws into shaft.



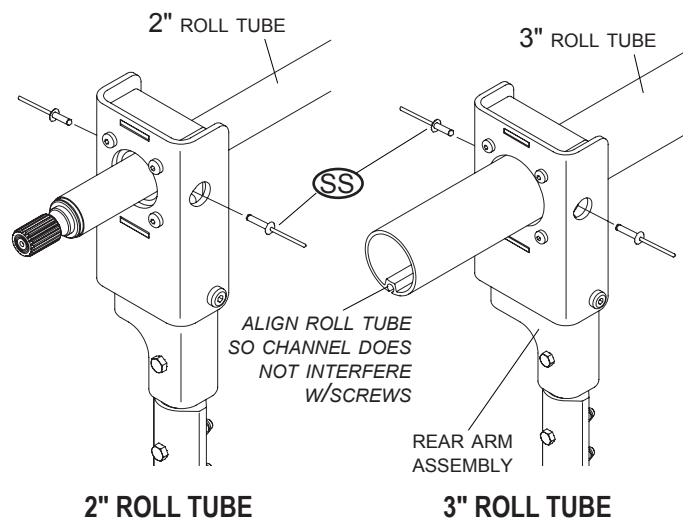
**STEP 4:** With tarp hanging loosely in closed position, lift flex arm up to roll tube and slide upper flex arm connector onto roll tube. Adjust connector forward or backward to align upper arm with lower arm on vertical plane. To check alignment, measure distance between upper and lower arms and rear door on trailer.



**NOTE:** Wait to do this step until after front arm has been connected and both front and rear arms are correctly aligned.

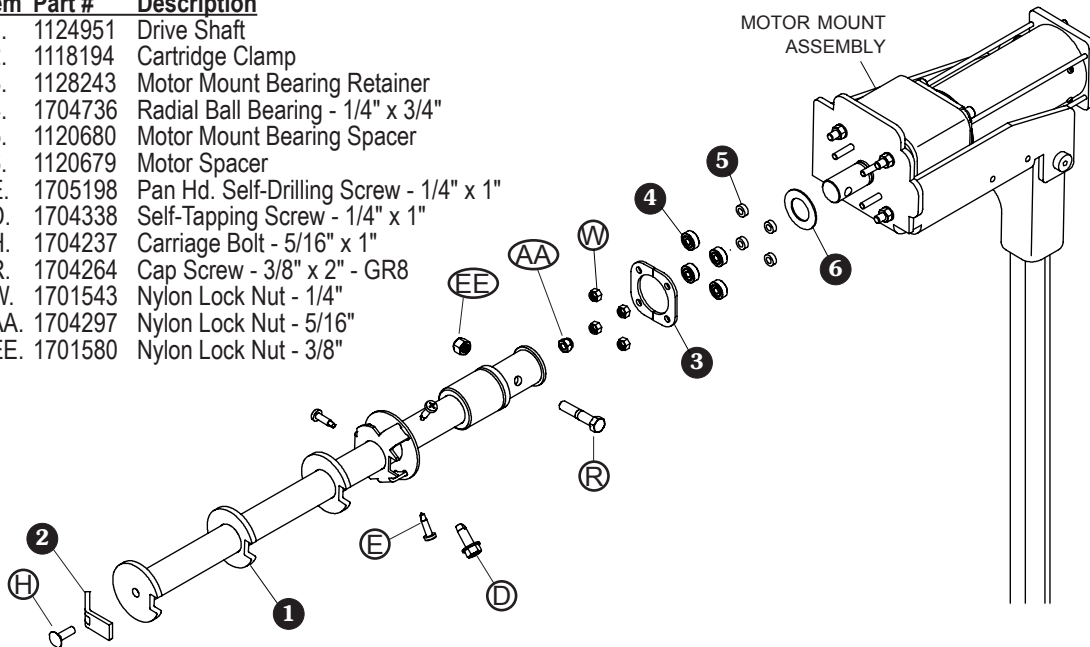
**NOTE:** For systems using 3" roll tube, wait until after manual crank/spline adapter has been installed.

**STEP 5:** With rear arm correctly aligned, fasten rear arm bearing ring on rear arm assembly to roll tube. Drill 3/16" holes and fasten bearing ring to roll tube with rivets **SS**.

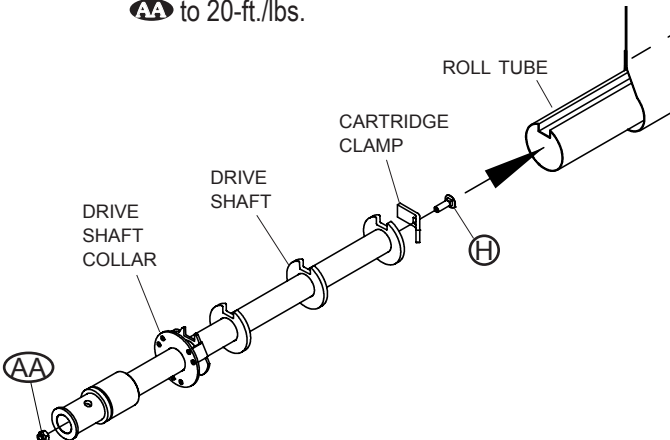


**Item Part # Description**

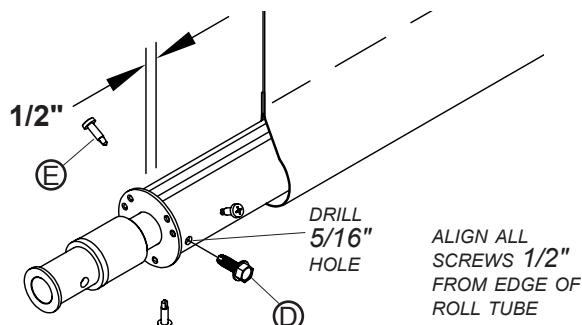
- 1. 1124951 Drive Shaft
- 2. 1118194 Cartridge Clamp
- 3. 1128243 Motor Mount Bearing Retainer
- 4. 1704736 Radial Ball Bearing - 1/4" x 3/4"
- 5. 1120680 Motor Mount Bearing Spacer
- 6. 1120679 Motor Spacer
- E. 1705198 Pan Hd. Self-Drilling Screw - 1/4" x 1"
- D. 1704338 Self-Tapping Screw - 1/4" x 1"
- H. 1704237 Carriage Bolt - 5/16" x 1"
- R. 1704264 Cap Screw - 3/8" x 2" - GR8
- W. 1701543 Nylon Lock Nut - 1/4"
- AA. 1704297 Nylon Lock Nut - 5/16"
- EE. 1701580 Nylon Lock Nut - 3/8"



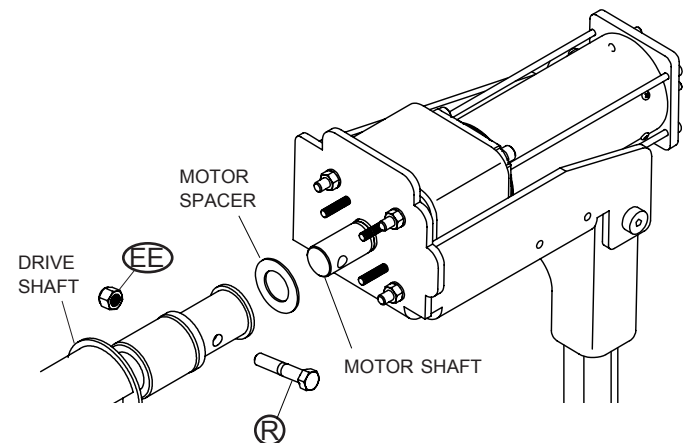
**STEP 1:** Loosely fasten cartridge clamp to drive shaft with screw **E** and lock nut **AA**. Insert drive shaft into roll tube. To secure drive shaft to roll tube, tighten nut **AA** to 20-ft./lbs.



**STEP 2:** Install three screws **E** through roll tube and flats on drive shaft collar. Drill 5/16" hole between flats and collar, then fasten screw **D** through roll tube and collar.



**STEP 3:** Slide motor spacer over motor shaft. Slide drive shaft over motor shaft. Fasten with screws **R** and nuts **EE**. Finger tighten only.





**CAUTION**

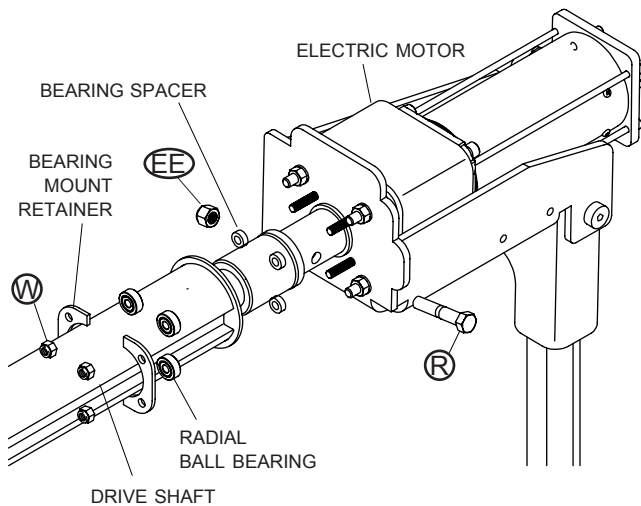
If clearance lights are in path of roll tube, install deflector to prevent roll tube from damaging lights.



**WARNING**

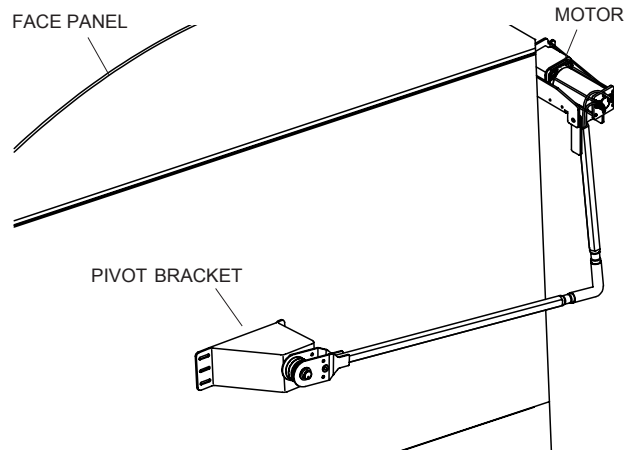
Flex arms are under tension while torsion springs are engaged. Use caution while assembling and disassembling arms. Failure to read and follow instructions could result in serious injury or death.

**STEP 4:** Fasten drive shaft to electric motor shaft with screw and nut . Install bearing spacers, radial ball bearings and bearing mount retainer and secure with 1/4" lock nuts .

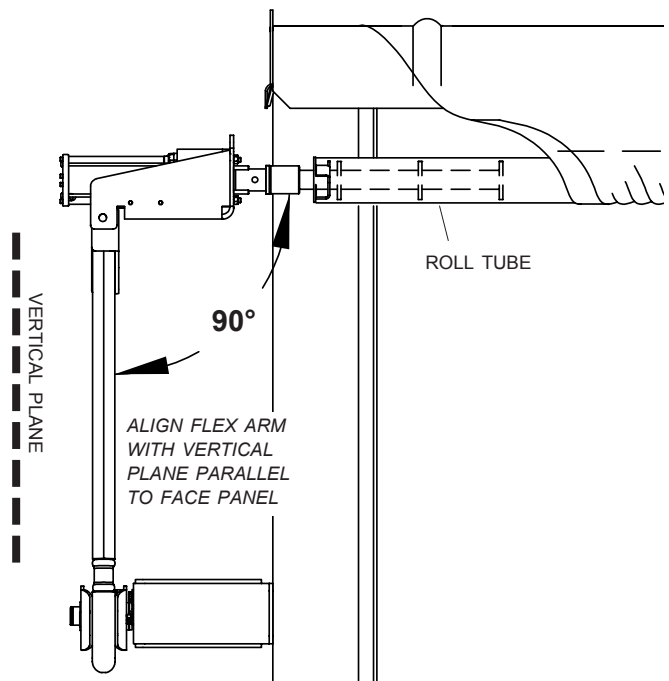


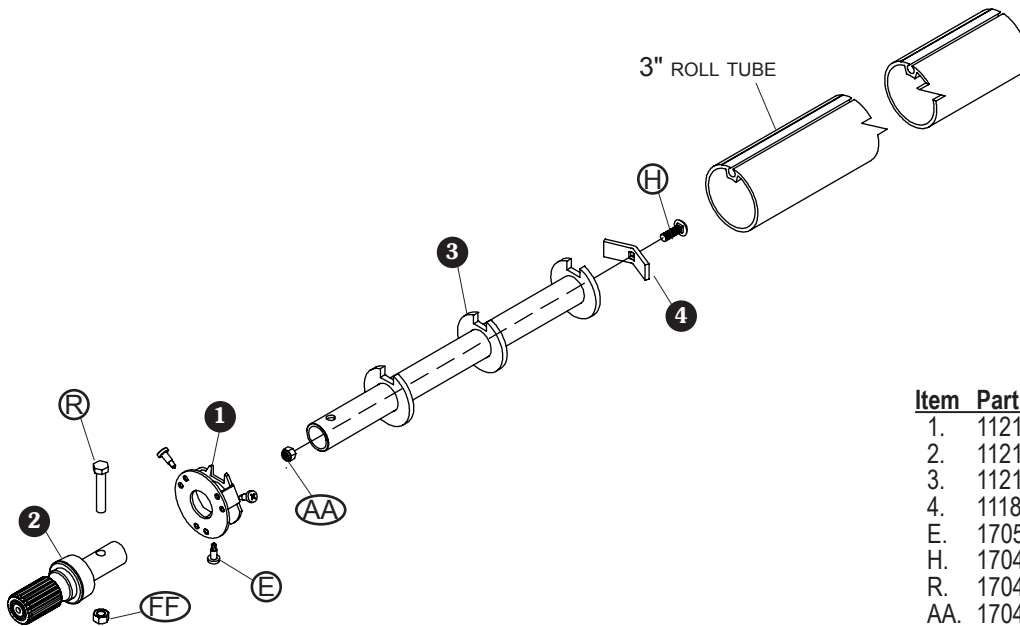
**NOTE:** Make sure all fasteners holding motor to upper flex arm bracket are tightened securely.

**STEP 5:** Position motor as shown below. Make sure torsion springs load when tarp opens.



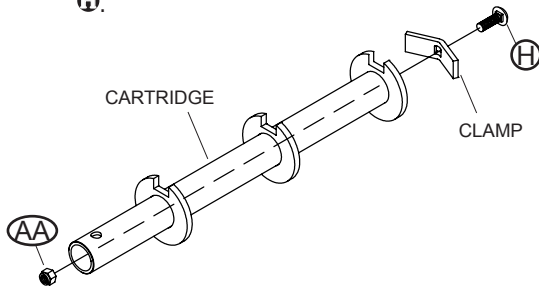
**STEP 6:** Align flex arm vertically with front of trailer and 90° to roll tube.



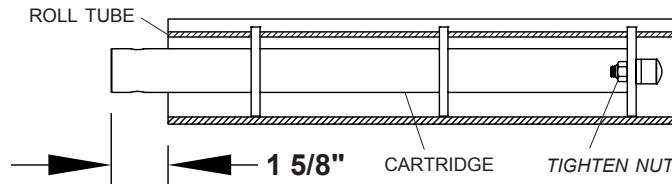


Item	Part #	Description
1.	1121040	Roll Tube Cap - 3" Spline
2.	1121111	Manual Crank Spline - 3" Tube
3.	1121039	Cartridge - 3" Spline End
4.	1118194	Cartridge Clamp
E.	1705198	Self-Drilling Screw - 1/4" x 1"
H.	1704237	Carriage Bolt - 5/16" x 1"
R.	1704264	Cap Screw - 3/8" x 2"
AA.	1704297	Nylon Lock Nut - 5/16"
FF.	1702668	Top Lock Nut - 3/8"

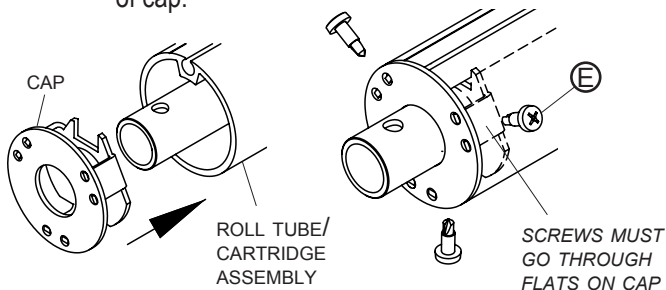
**STEP 1:** Assemble cartridge, nut **AA**, clamp and carriage bolt **H**.



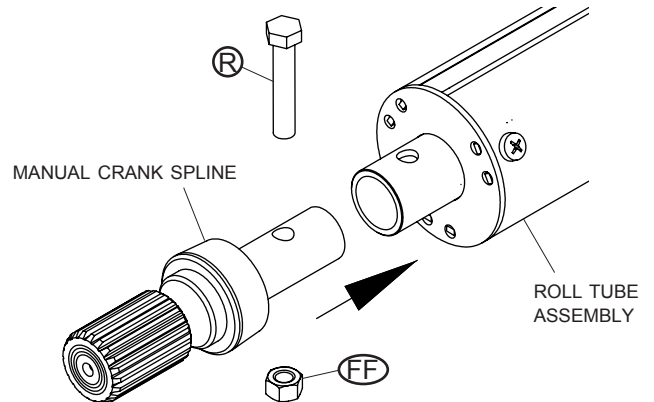
**STEP 2:** Insert cartridge assembly into roll tube. Position cartridge to extend 1 5/8" past end of roll tube. Tighten nut to 20-ft./lbs.



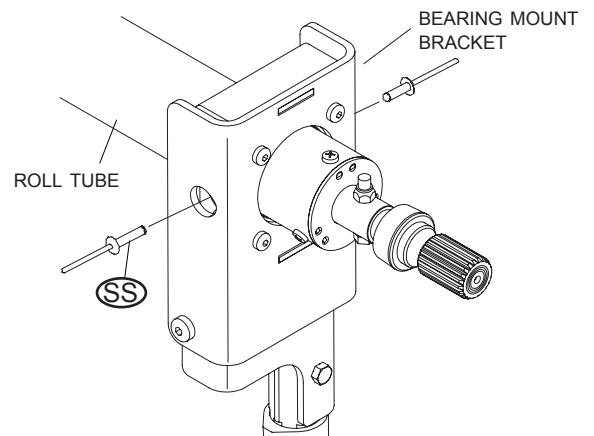
**STEP 3:** Insert cap into roll tube/cartridge assembly. Fasten three screws **E** through roll tube and flats on sides of cap.



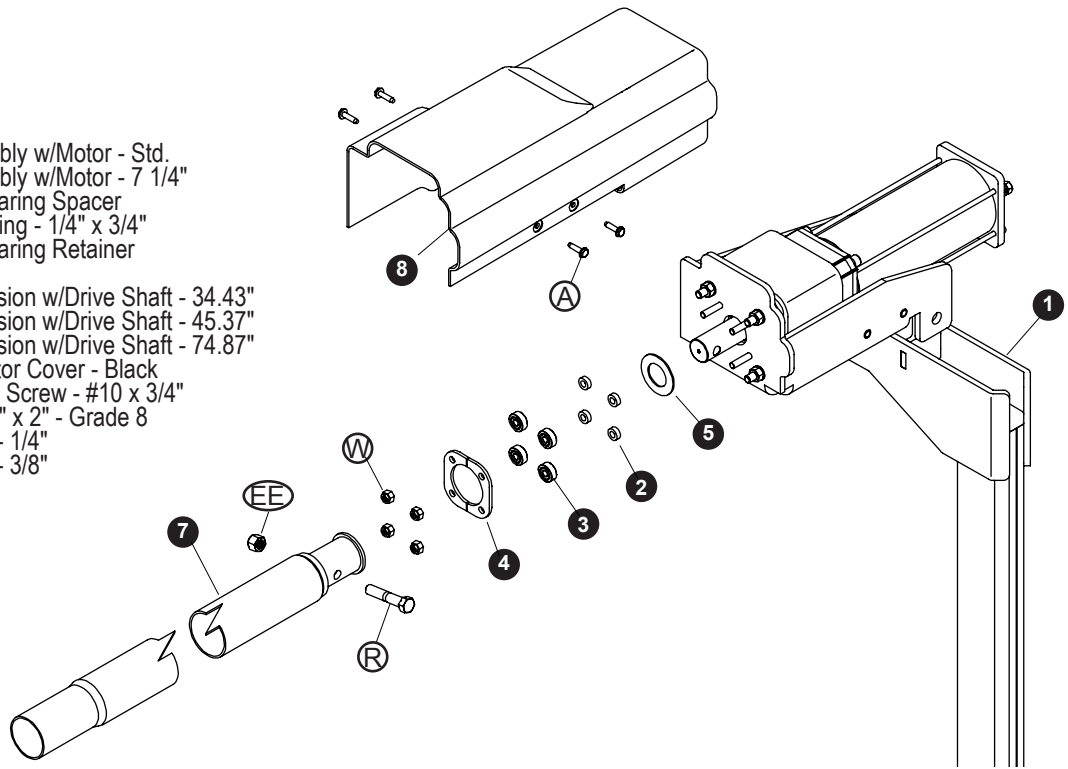
**STEP 4:** Insert manual crank spline into roll tube assembly. Secure with screw **R** and nut **FF**.



**STEP 5:** When both front and rear flex arms are vertical, fasten bearing ring in bearing mount bracket to roll tube with two rivets **SS**.

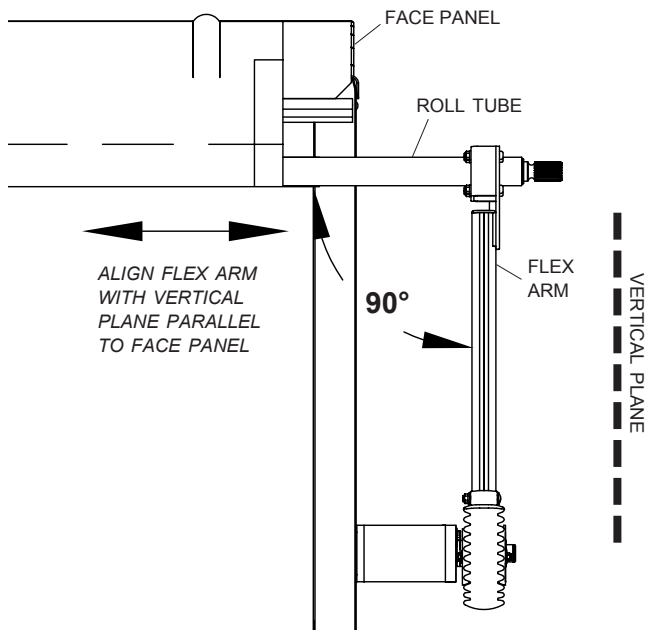


Item	Part #	Description
1.	1121296	Flex Arm Assembly w/Motor - Std.
	1121298	Flex Arm Assembly w/Motor - 7 1/4"
2.	1120680	Motor Mount Bearing Spacer
3.	1704736	Radial Ball Bearing - 1/4" x 3/4"
4.	1128243	Motor Mount Bearing Retainer
5.	1120679	Motor Spacer
7.	1120697	Roll Tube Extension w/Drive Shaft - 34.43"
	1120698	Roll Tube Extension w/Drive Shaft - 45.37"
	1120699	Roll Tube Extension w/Drive Shaft - 74.87"
8.		4500 Series Motor Cover - Black
A.	1704367	Hex Flange Cap Screw - #10 x 3/4"
R.	1704264	Cap Screw - 3/8" x 2" - Grade 8
W.	1701543	Nylon Lock Nut - 1/4"
EE.	1701580	Nylon Lock Nut - 3/8"



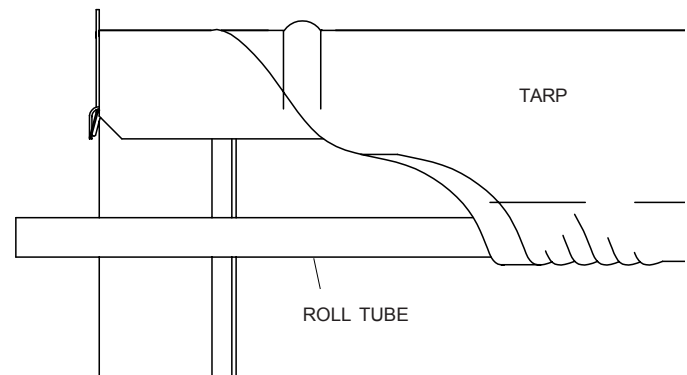
### REAR OF TRAILER

**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.



### FRONT OF TRAILER

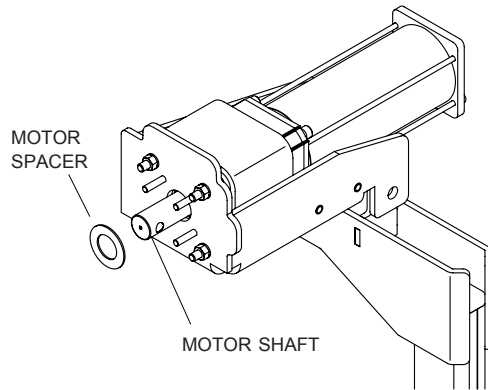
**STEP 2:** Slide tarp back on roll tube.



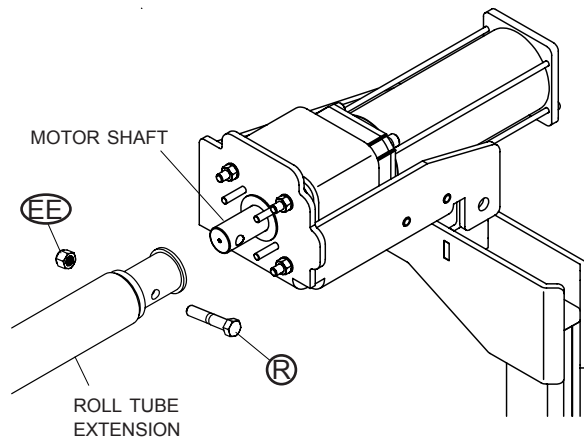


**Fasten roll tube extension to motor mount bracket:**

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



**STEP 3B:** Slide roll tube extension over motor shaft. Fasten with screws **(B)** and lock nuts **(EE)**. Finger tighten only.



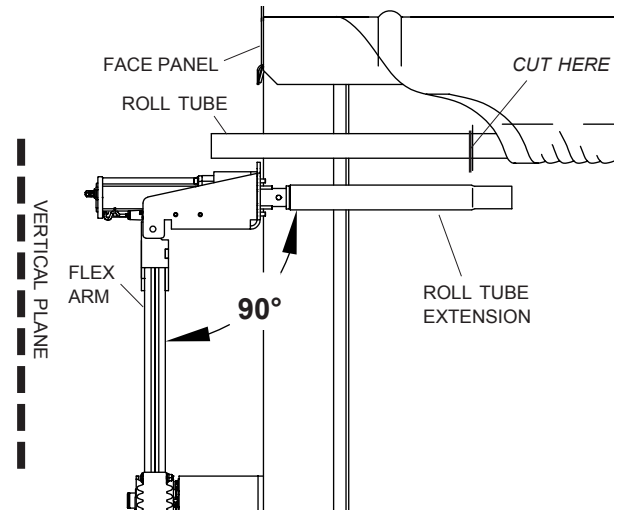
**STEP 4:** Hold flex arm with motor and roll tube extension in vertical plane to trailer and 90° to roll tube. Mark roll tube at location to be cut.

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



**CAUTION**

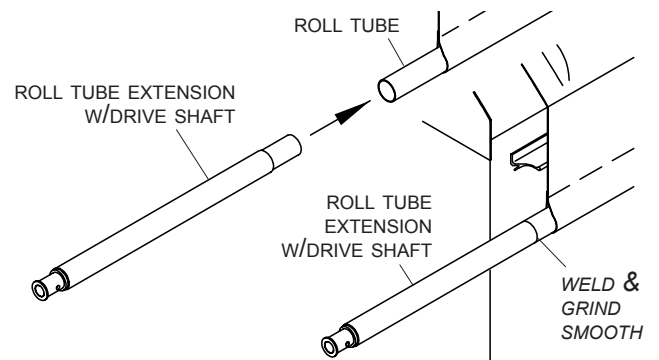
On certain trailers, clearance lights might be in way of roll tube and can be damaged if caution is not taken. In some instances, a 'deflector' might have to be installed to prevent roll tube from causing damage to lights.



**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.

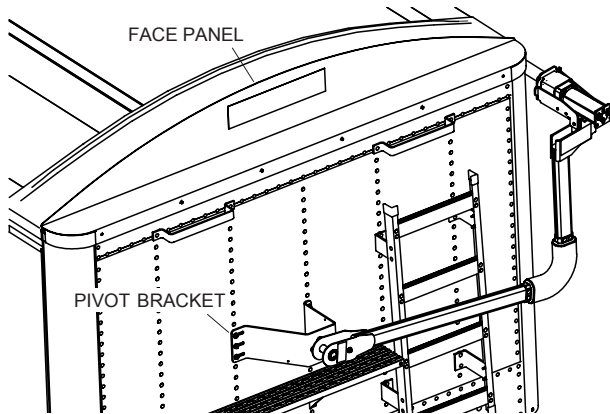
**STEP 6:** Insert swaged end of roll tube extension with drive shaft into roll tube. Align extension straight with roll tube and weld all around. Grind smooth.

**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.

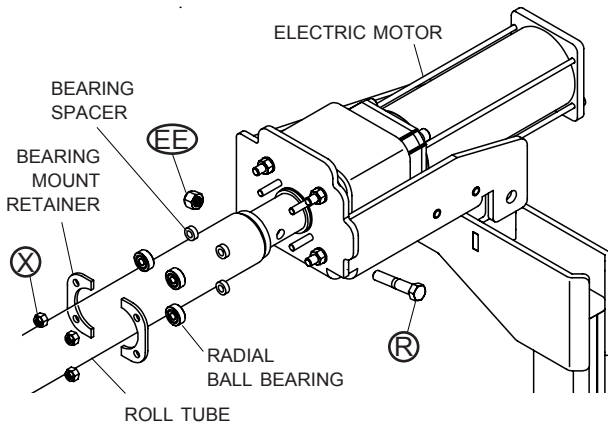
**STEP 7:** Slide roll tube/roll tube extension weldment back into position and align upper flex arm on front of trailer. Follow step 8 to install motor, positioning as shown below. Make sure torsion springs load when tarp opens.



**WARNING**

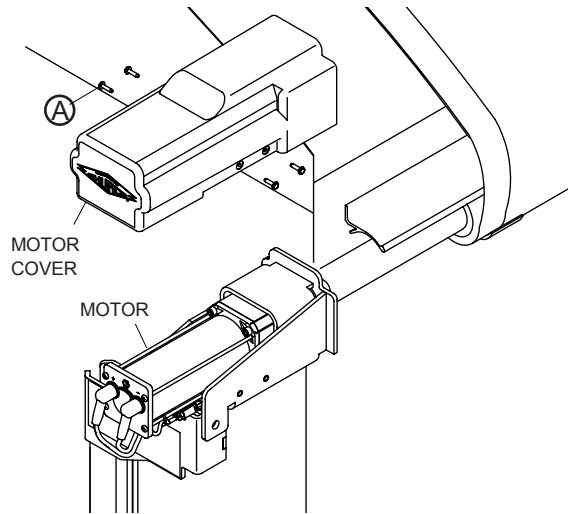
Flex arms are under tension while torsion springs are engaged. Use caution while assembling and disassembling arms. Failure to read and follow instructions could result in serious injury or death.

**STEP 8:** Refasten and secure roll tube to electric motor shaft with screw (R) and lock nut (EE). Install bearing spacers, radial ball bearings and bearing mount retainer and secure with lock nuts (X).



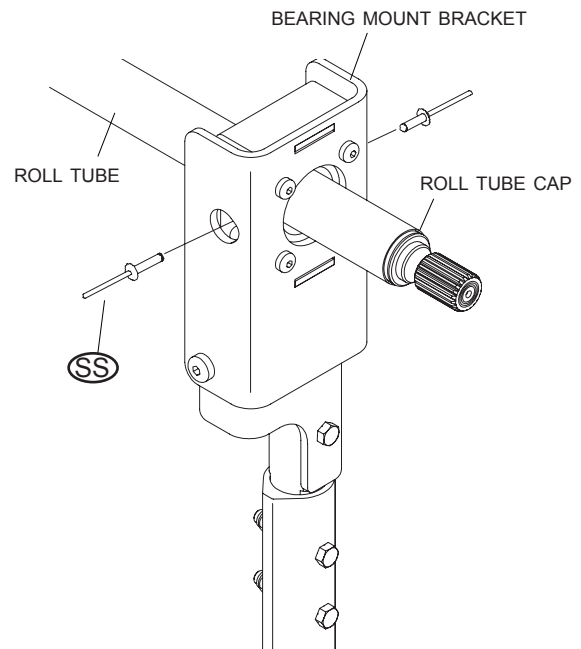
**NOTE:** Verify again that flex arm is on vertical plane parallel to face panel before proceeding. Make sure all fasteners holding motor to upper flex arm bracket are tightened securely.

**STEP 9:** Fasten motor cover onto motor with screws (A).



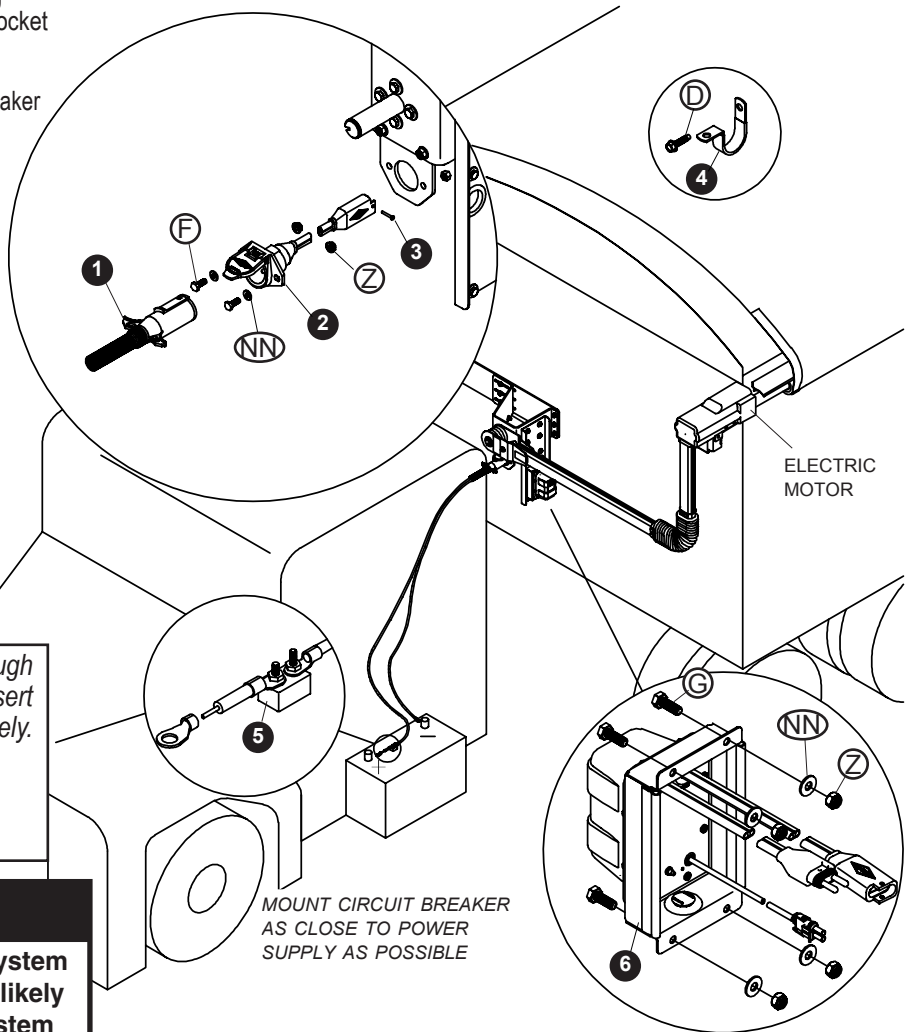
**STEP 10:** Adjust rear roll tube extension to align flex arm on vertical plane parallel to face panel. Do not drill holes and/or fasten until tarp and roll tube are in desired position.

**STEP 11:** When both front and rear flex arms are vertical, fasten two rivets (SS) into roll tube and roll tube cap.



**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.

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.	1125003	Shur-Co® Wireless Receiver - SMART2™ SMARTwire™
	1126862	Shur-Co® Wireless Receiver - SMART3™ SMARTwire™
D.	1704338	Self-Tapping Screw - 1/4" x 1"
F.	1701045	Cap Screw - 5/16" x 3/4"
G.	1702926	Cap Screw - 5/16" x 7/8"
Z.	1704946	Flanged Top Lock Nut - 5/16"
NN.	1700427	Flat Washer - 1/4"



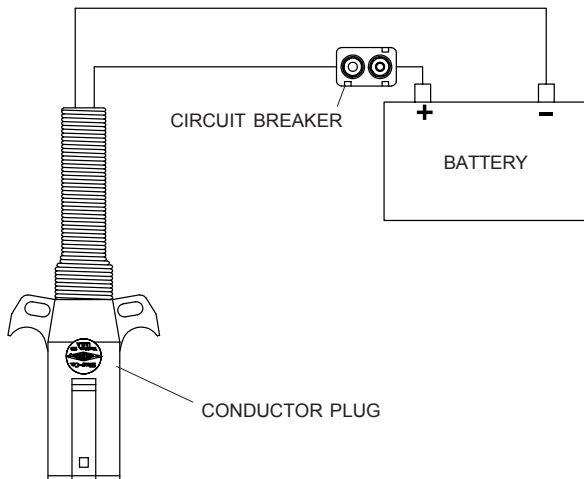
**NOTE:** Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.

STRIP WIRE INSULATION  
RING TERMINAL  
CRIMP SECURELY

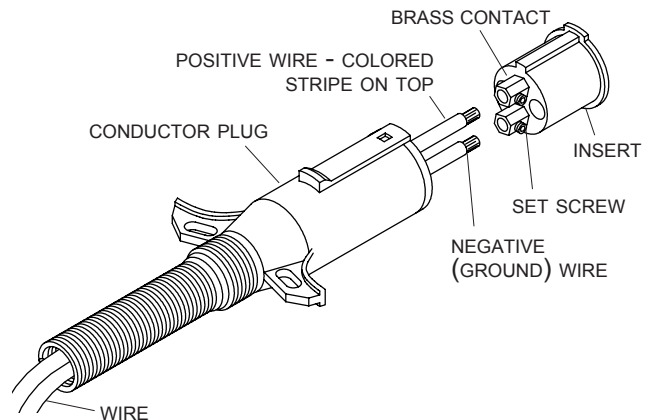
**NOTICE**  
Do not power any Shur-Co® wireless system with battery charger alone, as this will likely cause system abnormalities and/or system malfunction. Instead, use 12-volt truck/automobile battery to provide power to trailer.

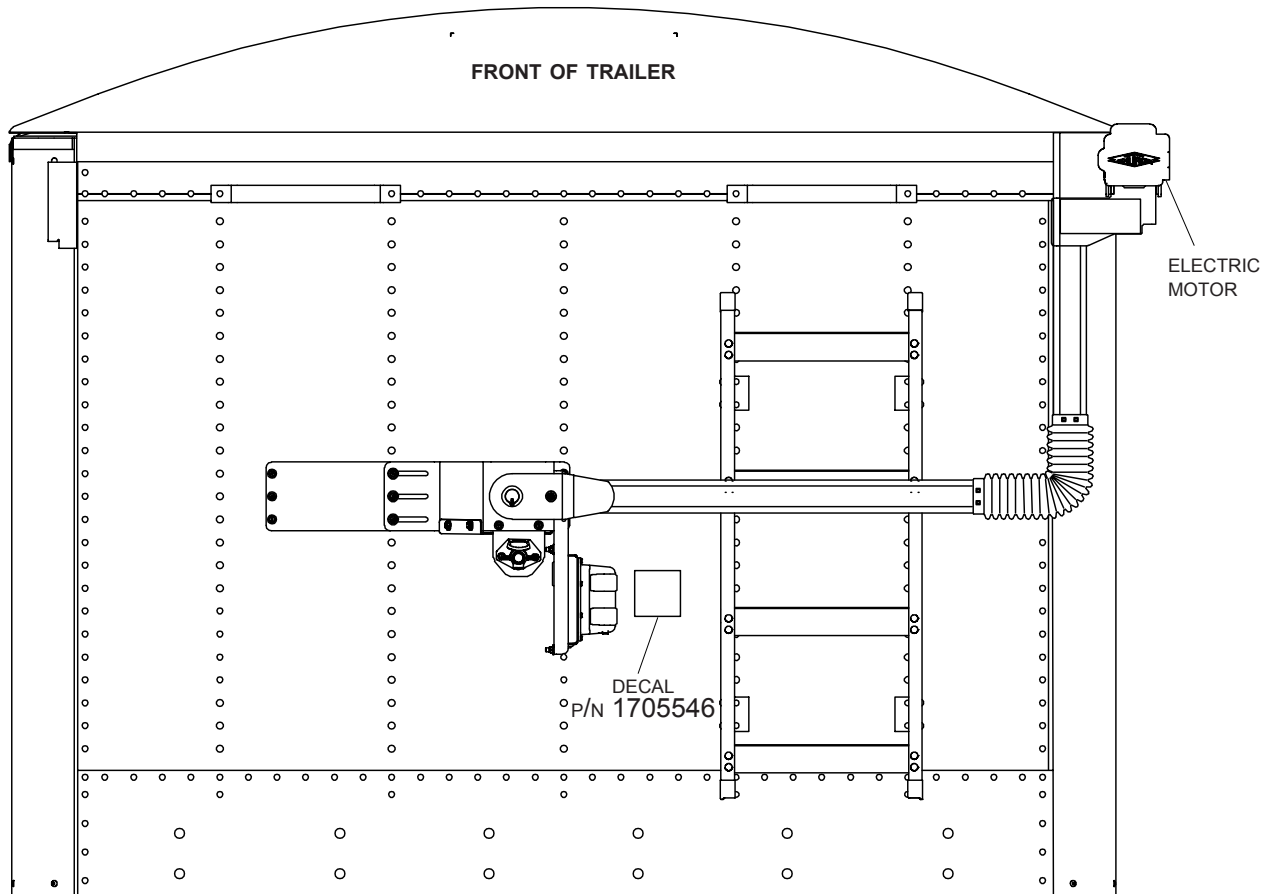
**NOTE:** Only hook up one electric tarp system at a time.

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



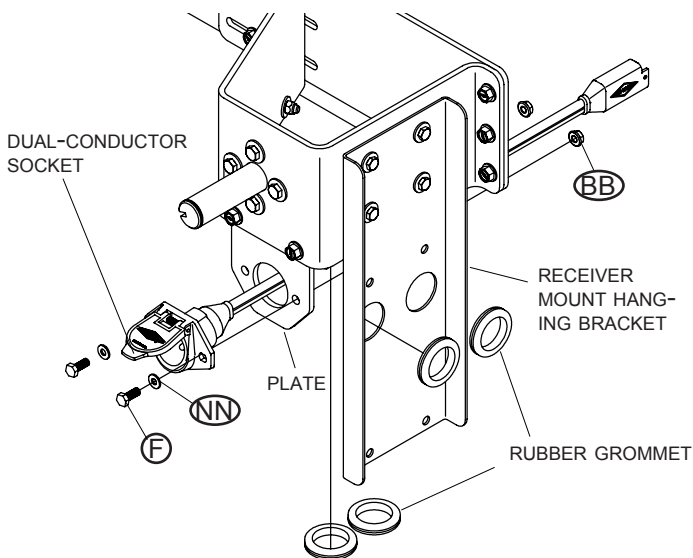
**STEP 2:** Unfasten and remove insert from conductor plug. Feed 6-ga. wire through plug and into brass contacts on insert. Tighten set screws to secure wires. Replace insert into conductor plug and secure screw.



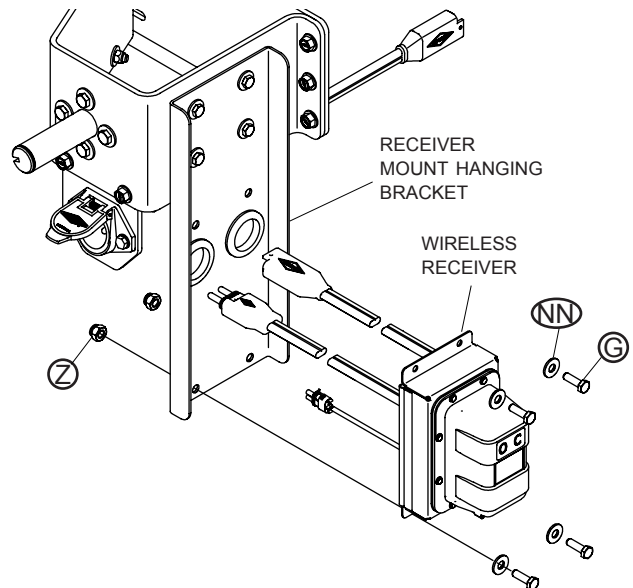


**NOTE:** Wire lengths are predetermined. Before installing SMARTwire™ components, review and confirm wire routing so wires reach components with ample room for connection.

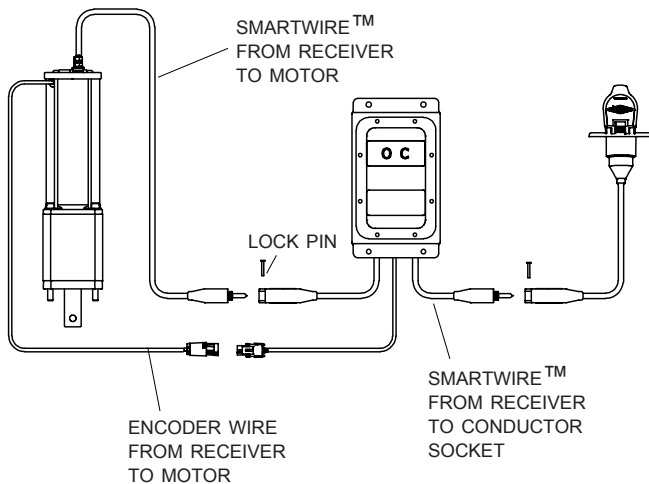
**STEP 1:** Fasten conductor socket to pivot bracket assembly with screws **F**, washers **NN** and nuts **BB**. Install rubber grommets into holes in receiver-mount hanging bracket and wire housing bracket.



**STEP 2:** Fasten wireless receiver to receiver mount hanging bracket with screws **G**, washers **NN** and nuts **Z**.



**STEP 1:** Connect SMARTwire™ from wireless receiver to SMARTwire™ from electric motor. Secure connections with lock pin.



**STEP 2:** Connect SMARTwire™ from wireless receiver to SMARTwire™ from conductor socket. Secure connection with lock pin.

**STEP 3:** Connect encoder wire from receiver to encoder wire from motor. Secure wires to trailer with wire clips and screws. If needed, secure with cable ties.

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

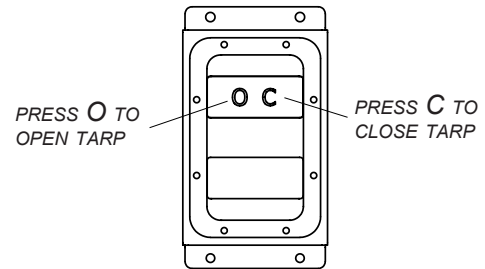


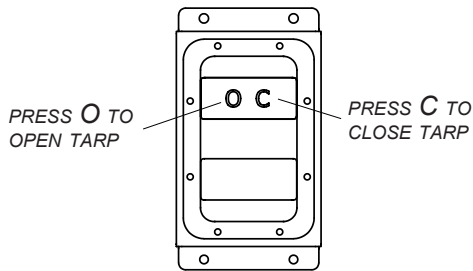
## CAUTION

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

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

**STEP 4:** Check motor direction by pressing either button. If button is released and operation continues, system is in *Express Mode*. To stop operation, press button again. If switch is running system backwards, program remote to wireless receiver and rewire as directed in troubleshooting guide in remote instructions.





**NOTE:** 4500 Series HD trailer-mounted control boxes now operate in **EXPRESS MODE**, for both SMART2™ and SMART3™ 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.

**NOTE:** Tarp systems 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 (see remote instructions for SMART2™ systems).

**! WARNING**

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

Decal P/N 1705546

**! NOTICE**

THIS TARP SYSTEM OPERATES IN EXPRESS MODE. UPON PRESSING THE **O** OPEN/**C** 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.

**! 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.

Decal P/N 1705523

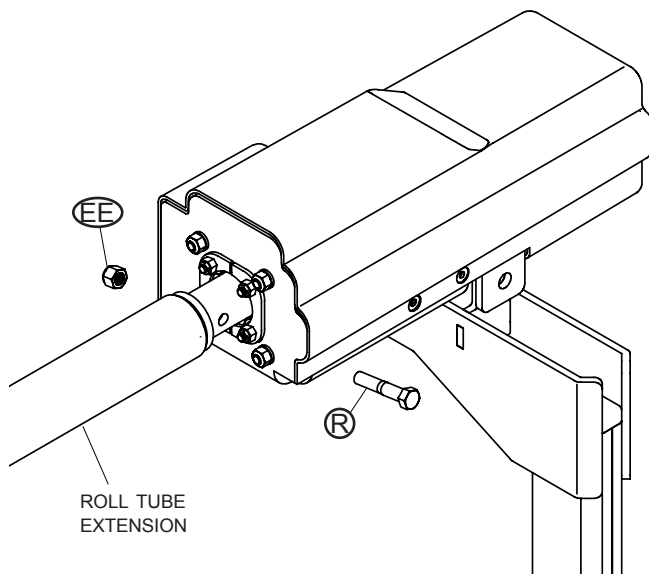


Perform following steps to change 4500 Series HD electric system to manual crank operation:

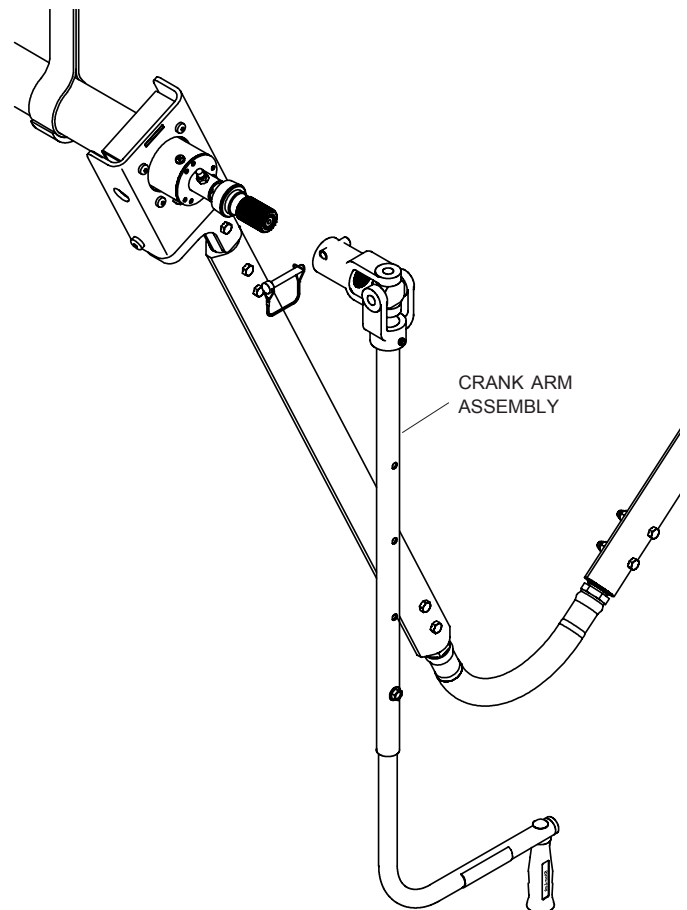
**NOTE:** Store manual crank arm in truck or mounted to trailer.  
(Example - above kingpin in apex.)

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

**STEP 2:** At front of trailer, remove screw **(R)** and lock nut **(EE)** 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>.



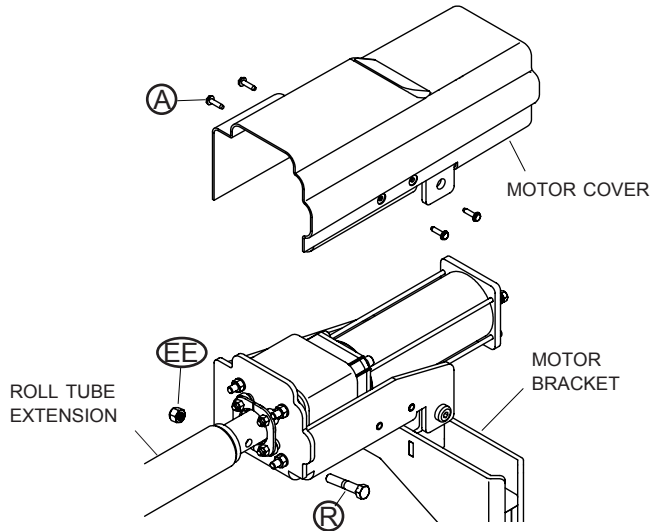
## CAUTION

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.

## REMOVE EXISTING MOTOR

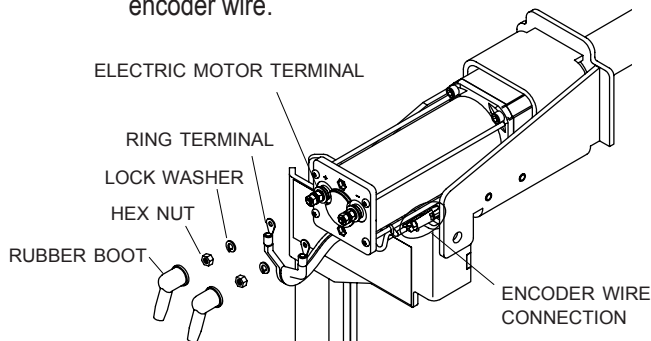
**STEP 1:** Close tarp, letting roll tube hang loose under latchplate.

**STEP 2:** Disconnect electric power to trailer. Unfasten and remove motor cover. Unfasten screw **(A)** and lock nut **(EE)** holding motor shaft to roll tube extension.

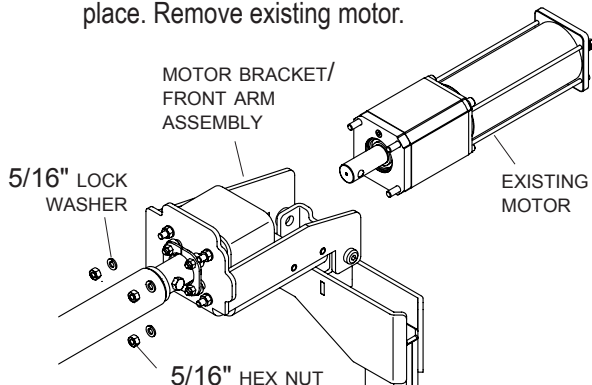


**NOTE:** Leave roll tube fastened to motor bracket.

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

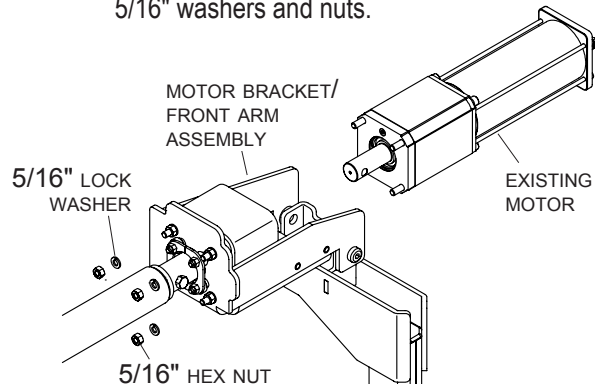


**STEP 4:** Unfasten and remove only 5/16" lock washers and hex nuts holding motor to motor bracket/front arm assembly, leaving motor mount bearing retainers in place. Remove existing motor.

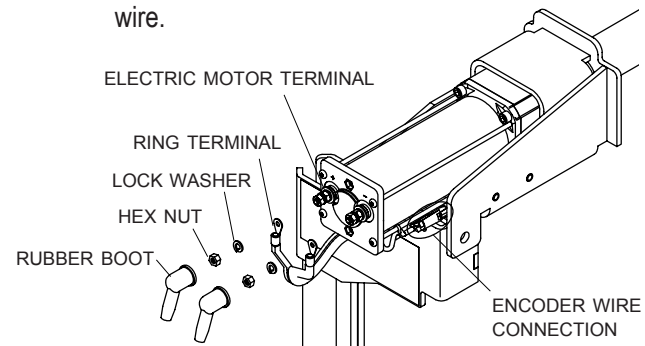


## INSTALL NEW MOTOR

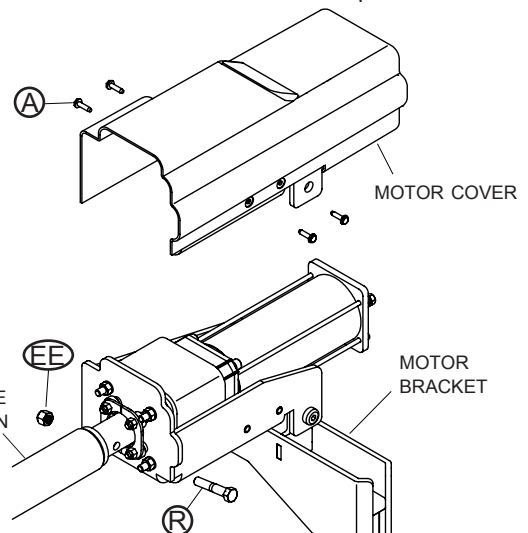
**STEP 1:** Install new motor. Fasten motor to motor bracket with 5/16" washers and nuts.



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

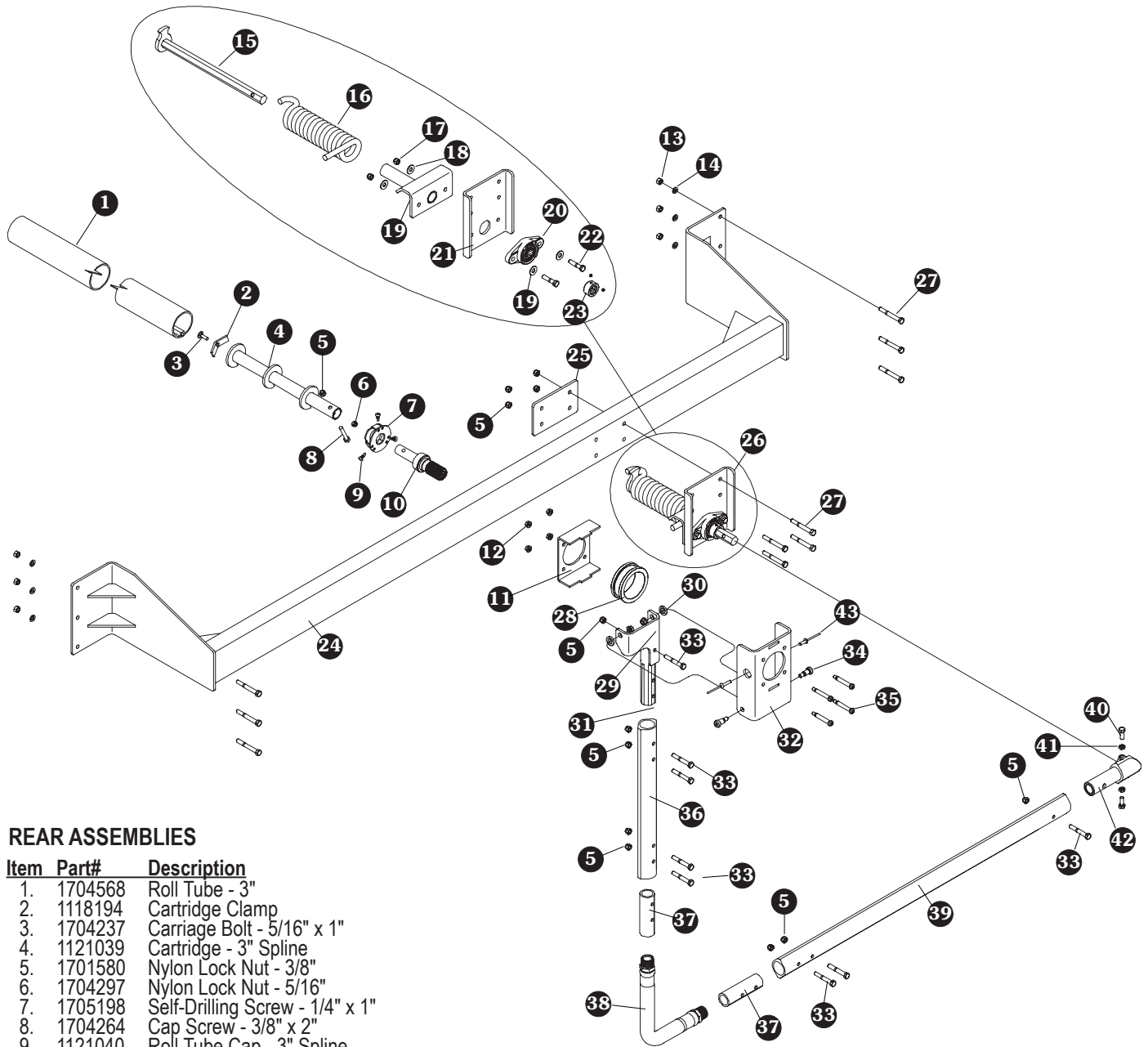


**STEP 3:** Fasten motor shaft to roll tube with screw **(B)** and lock nut **(EE)**. Replace motor cover and fasten to motor with screws **(A)**. Reconnect electric power.



## CAUTION

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



**REAR ASSEMBLIES**

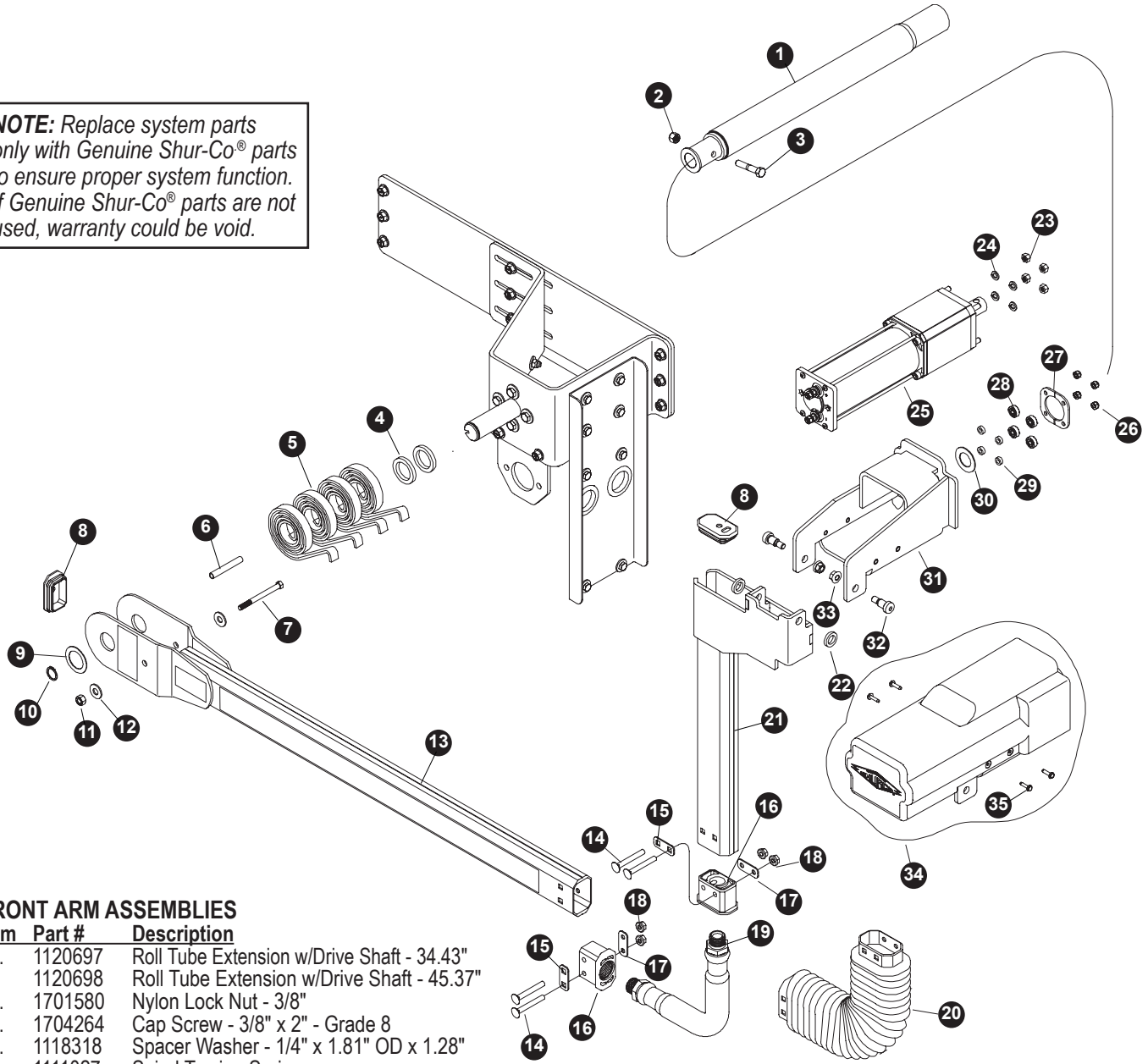
**Item Part# Description**

1.	1704568	Roll Tube - 3"
2.	1118194	Cartridge Clamp
3.	1704237	Carriage Bolt - 5/16" x 1"
4.	1121039	Cartridge - 3" Spline
5.	1701580	Nylon Lock Nut - 3/8"
6.	1704297	Nylon Lock Nut - 5/16"
7.	1705198	Self-Drilling Screw - 1/4" x 1"
8.	1704264	Cap Screw - 3/8" x 2"
9.	1121040	Roll Tube Cap - 3" Spline
10.	1121111	Manual Crank Spline - 3"
11.	1123248	Bearing Mount Box
12.	1704931	Flanged Nylon Lock Nut - 5/16"
13.	1700407	Hex Nut - 3/8"
14.	1700434	Lock Washer - 3/8"
15.	1123253	Spring Shaft - 7/8" Hex x 14 7/8"
16.	1800072	Spring Torsion Spring
17.	1700419	Nylon Lock Nut - 5/16"
18.	1700429	Flat Washer - 3/8"
19.	1118955	Spring Retainer Weldment
20.	1704456	Flange Bearing - 7/8" Hex - 2 Bolt
21.	1123254	Spring Pivot Mounting Bracket
22.	1700369	Cap Screw - 3/8" x 1 3/4"
23.	1704489	Locking Collar - 7/8"
24.	1123337	Beam - Rear
25.	1123255	Spring Pivot Mount Backer Plate
26.	1123256	Spring Assembly - Rear
27.	1700371	Cap Screw - 3/8" x 3"

**Item Part# Description**

28.	1705160	Rear Arm Bearing Ring - 3"
29.	1701283	Flanged Top Lock Nut - 3/8"
30.	1120677	Upper Arm Spacer
31.	1124949	Upper Arm Connector
32.	1123247	Bearing Mount Bracket
33.	1702573	Cap Screw - 3/8" x 2 1/2"
34.	1704778	Shoulder Bolt - 1/2" x 5/8" - 3/8" x 1/2" Thread
35.	1704943	Shoulder Bolt - 3/8" x 2" - 5/16" x 1/2" Thread
36.	1123341	Upper Flex Arm
37.	1123245	Flex Arm Joint Connector
38.	1704048	Flex Arm Joint
39.	1123344	Lower Flex Arm
40.	1701061	Cap Screw - 3/8" x 1"
41.	1701062	Hex Nut - 3/8"
42.	1704471	Spring Pivot Connector Hex Shaft
43.	1706103	Rivet - 3/16"

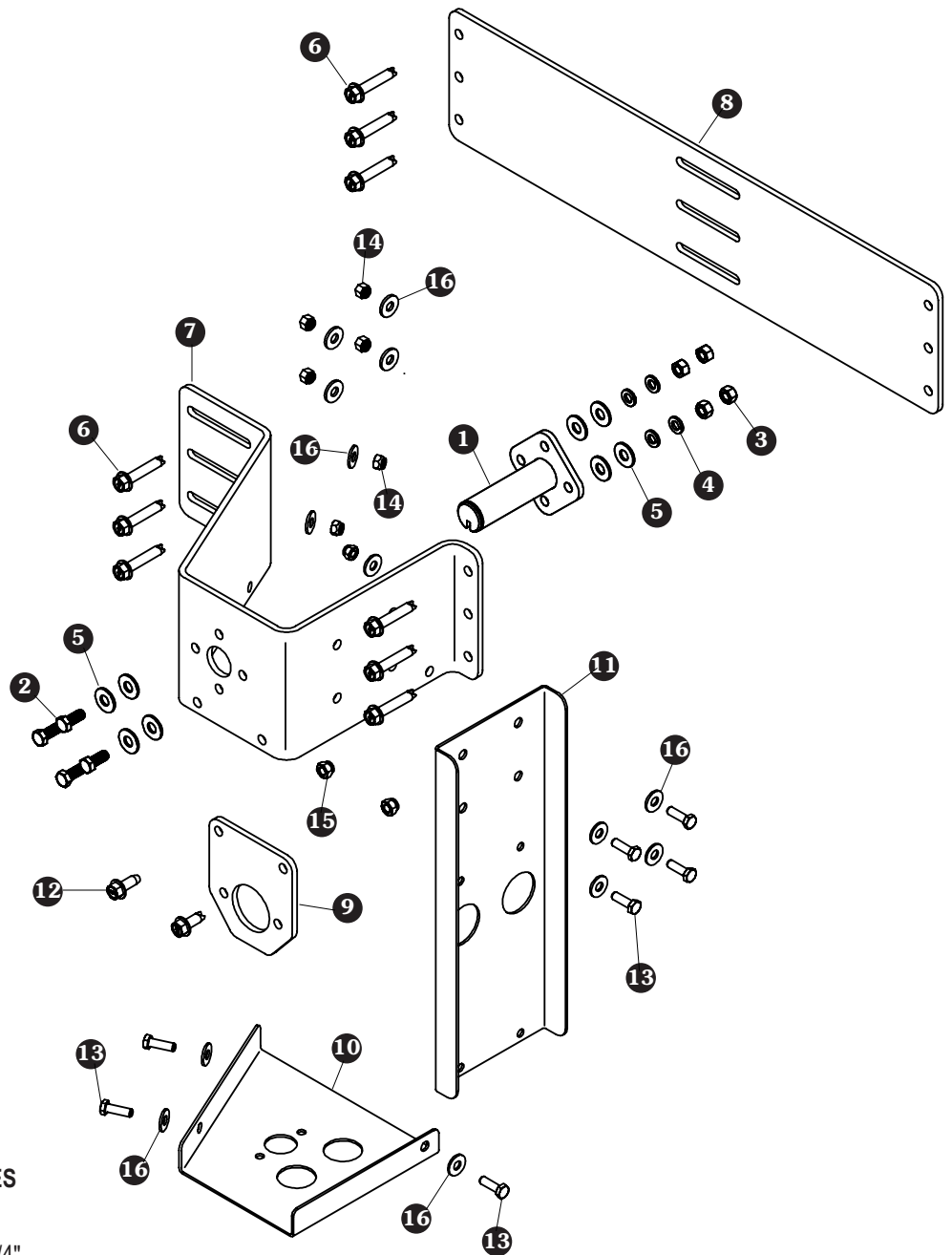
**NOTE:** Replace system parts only with Genuine Shur-Co® parts to ensure proper system function. If Genuine Shur-Co® parts are not used, warranty could be void.



**FRONT ARM ASSEMBLIES**

Item	Part #	Description
1.	1120697	Roll Tube Extension w/Drive Shaft - 34.43"
	1120698	Roll Tube Extension w/Drive Shaft - 45.37"
2.	1701580	Nylon Lock Nut - 3/8"
3.	1704264	Cap Screw - 3/8" x 2" - Grade 8
4.	1118318	Spacer Washer - 1/4" x 1.81" OD x 1.28"
5.	1111027	Spiral Torsion Spring
6.	1117033	Spacer Tube - .35" x 2 5/8"
7.	1201022	Cap Screw - 5/16" x 3 1/2"
8.	1704893	Cap Plug w/Hole
9.	1702890	Flat Washer - 1 1/4"
10.	1702888	External Retaining Ring - 1 1/4"
11.	1700419	Nylon Lock Nut - 5/16"
12.	1700428	Flat Washer - 5/16"
13.	1121617	Lower Flex Arm w/Warning Decals (Includes items 6; 7; 11; 12; 13)
14.	1701455	Carriage Bolt - 5/16" x 2 1/2"
15.	1121414	Bellow Plate - Square Holes
16.	1704891	End Fitting - 4500 Series HD
17.	1121413	Bellow Plate - Round Holes
18.	1704931	Flanged Nylon Lock Nut - 5/16"
19.	1703873	Flex Arm Joint
20.	1704775	4500 Series HD Bellow
21.	1121289	Upper Flex Arm - Motor

Item	Part #	Description
22.	1120677	Upper Arm Spacer
23.	1700411	Hex Nut - 5/16"
24.	1700433	Lock Washer - 5/16"
25.	1120967	4500 Series HD Electric Motor
26.	1701543	Nylon Lock Nut - 1/4"
27.	1128243	Motor Mount Bearing Retainer
28.	1704736	Radial Ball Bearing - 1/4" x 3/4"
29.	1120680	Motor Mount Bearing Spacer
30.	1120679	Motor Spacer
31.	1120776	4500 Series HD Motor Mount - 7 1/4"
	1120662	4500 Series HD Motor Mount - Standard
32.	1704778	Shoulder Bolt - 1/2" x 5/8" - 3/8" x 1/2" Thread
33.	1701283	Flanged Top Lock Nut - 3/8"
34.	1121659	4500 Series HD Motor Cover Kit - Black
35.	1704367	Hex Flange Cap Screw - #10 x 3/4"

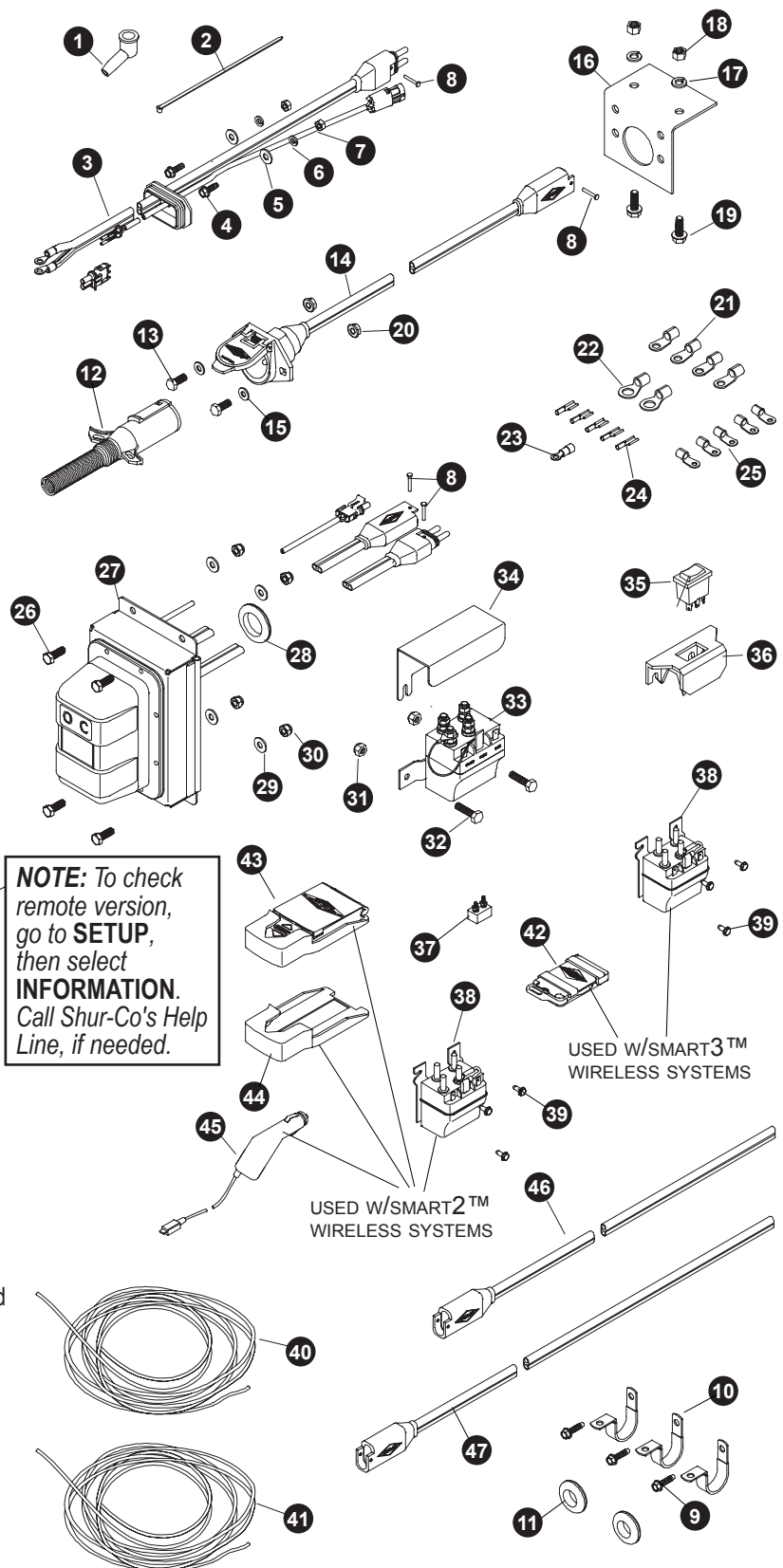


**FRONT PIVOT BRACKET ASSEMBLIES**

Item	Part #	Description
1.	1116920	Pivot Pin - 4 Spring
2.	1702891	Cap Screw - 3/8" x 1 1/4"
3.	1700407	Hex Nut - 3/8"
4.	1700434	Lock Washer - 3/8"
5.	1700429	Flat Washer - 3/8"
6.	1701544	Self-Tapping Screw - 3/8" x 2"
7.	1124954	Pivot Mt. Bracket - Vertical - 9 1/4" Standoff
8.	1124952	Backer Plate
9.	1124955	Plate
10.	1124956	Wire Housing Bracket
11.	1124953	Receiver Mount Hanging Bracket
12.	1700400	Self-Tapping Screw - 3/8" x 1"
13.	1704416	Cap Screw - 5/16" x 1"
14.	1700419	Nylon Lock Nut - 5/16"
15.	1701580	Nylon Lock Nut - 3/8"
16.	1700428	Flat Washer - 5/16"

**ELECTRIC COMPONENTS**

Item	Part #	Description
	1116473	Cab Wiring Kit - Rocker Switch
	1119643	Cab Wiring Kit - Remote - 30'
	1116930	Trailer Wiring Kit - Rocker Switch
	1118368	Electric Parts Kit w/Rocker Switch - 40-Amp Mod.
	1119366	Junction Box Kit - Unassembled 6 Hole
1.	1704330	Rubber Boot
2.	1703231	Cable Tie - 8"
3.	1120816	SMARTwire™ - 6 Ga. - Plug - 9' 9"
	1121415	SMARTwire™ - 6 Ga. - Plug - 9' 9" w/Encoder Wire
4.	1700403	Self-Tapping Screw - 1/4" x 3/4"
5.	1700427	Flat Washer - 1/4"
6.	1700436	Lock Washer - 1/4"
7.	1700408	Hex Nut - 1/4"
8.	1704751	Harness Lock Pin - 1/4" x 7/8"
9.	1704338	Self-Tapping Screw - 1/4" x 1"
10.	1702108	Wire Clip - 3/4"
11.	1703282	Rubber Grommet - 1 1/4" Insert
12.	1115385	Heavy-Duty Dual-Conductor Plug
13.	1701045	Cap Screw - 5/16" x 3/4"
14.	1120670	SMARTwire™ Dual-Conductor Socket
15.	1700427	Flat Washer - 1/4"
16.	1109015	Mounting Bracket
17.	1700434	Lock Washer - 3/8"
18.	1700407	Hex Nut - 3/8"
19.	1700400	Self-Tapping Screw - 3/8" x 1"
20.	1704946	Flanged Top Lock Nut - 5/16"
21.	1703245	Ring Terminal - 6 Ga. x #10 Stud - Motor/Breaker
22.	1703244	Ring Terminal - 6 Ga. x 3/8" Stud - Battery
23.	1704153	Ring Terminal - 14 Ga. x 1/4" Stud - Solenoid
24.	1703659	Push-On Terminal - 14 Ga. x 1/4" - Switch/Solenoid
25.	1702707	Ring Terminal - 6 Ga. x 1/4" Stud - Motor/Solenoid
26.	1702926	Cap Screw - 5/16" x 7/8"
27.	1125007	Shur-Co® Wireless Receiver - Version 11 - SMART2™ w/SMARTwire™ (only compatible with version 11 remote)
28.	1202938	Rubber Grommet - 1 1/2" Insert
29.	1700428	Flat Washer - 5/16"
30.	1700419	Lock Nut - 5/16"
31.	1808844	Nylon Lock Nut - #10
32.	1704905	Hex Flanged Cap Screw - #10
33.	1120695	Replacement RF Solenoid - 3 Pt. Mt.
34.	1703896	Solenoid Cover
35.	1116020	Rocker Switch
36.	1703661	Rocker Switch Mounting Bracket
37.	1704354	40-Amp Modified-Reset Circuit Breaker
38.	1704312	Motor-Reversing Solenoid - 3 Pt. Mt.
39.	1704308	Flanged Cap Screw - #10 x 1/2"
40.	1703822	Dual-Conductor Wire - 6 Ga. - 259 Strand
41.	1116482	Electrical Wire - 14 Ga. 3 Lead - 15'
42.	1126867	SMART3™ Remote
43.	1122231	SMART2™ Remote w/Cradle
44.	1704957	SMART2™ Cradle
45.	1704958	SMART2™ Charger Cable
46.	1704998	SMARTwire™ - 6 Ga. x 65' - Socket
47.	1704989	SMARTwire™ - 4 Ga. x 90' - Socket

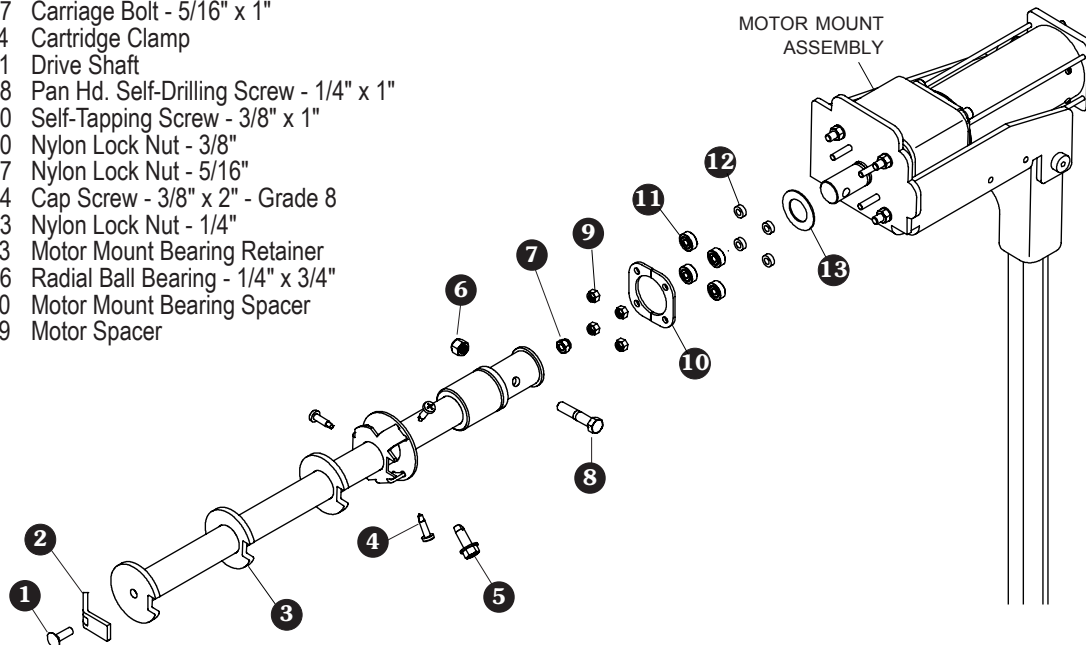


**NOTE:** To check remote version, go to **SETUP**, then select **INFORMATION**. Call Shur-Co's Help Line, if needed.



**2" ROLL TUBE EXTENSIONS**

Item	Part #	Description
1.	1704237	Carriage Bolt - 5/16" x 1"
2.	1118194	Cartridge Clamp
3.	1124951	Drive Shaft
4.	1705198	Pan Hd. Self-Drilling Screw - 1/4" x 1"
5.	1700400	Self-Tapping Screw - 3/8" x 1"
6.	1701580	Nylon Lock Nut - 3/8"
7.	1704297	Nylon Lock Nut - 5/16"
8.	1704264	Cap Screw - 3/8" x 2" - Grade 8
9.	1701543	Nylon Lock Nut - 1/4"
10.	1128243	Motor Mount Bearing Retainer
11.	1704736	Radial Ball Bearing - 1/4" x 3/4"
12.	1120680	Motor Mount Bearing Spacer
13.	1120679	Motor Spacer



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- **Genuine Replacement Parts**
  
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- **SMARTrailer™ Accessories for Agriculture Products**
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  - **Shur-Matic™**
  
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