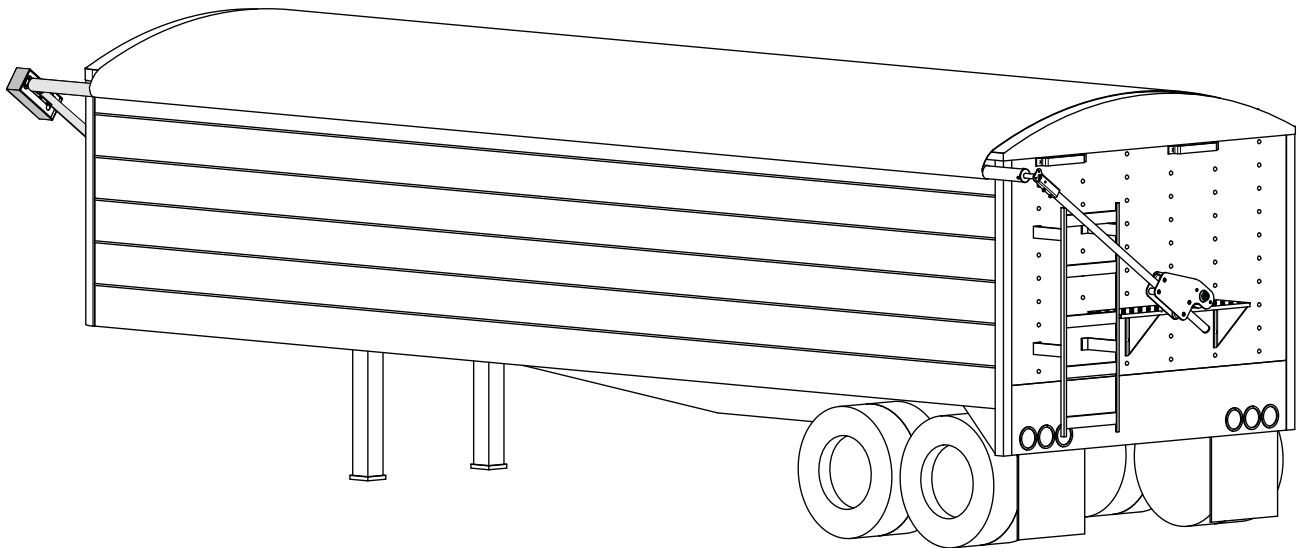




Serving the Truck & Trailer Industry
Since 1944



FOR GRAIN TRAILERS



PowerLock™

Installation Instructions

Attention Dealers: Please give this owners manual to the customer when the product is delivered.

Call 800-535-9545 | www.aeroindustries.com

Indianapolis, IN | Omaha, NE | Streetsboro OH

Installation Directory

Item	Step	Page
Safety Information		3
Warranty Information and Tools Required		4
Front Caps		
Fabric Front Cap: Mark Top Rail for Bow Placement	1a	5
Fabric Front Cap: Install Double Bow Bracket or Heavy Duty Bows	1b	6-7
Aluminum Front Cap: Install Square Nose	1c	8
Aluminum Front Cap: Instal Shaped to Nose (level front)	1d	8
Rear Caps		
Fabric Rear Cap: Install Double Bow Bracket or Heavy Duty Bows	2a	9-10
Aluminum Rear Cap: Install Mounted to Tailgate	2b	11
Aluminum Rear Cap: Install with Fabric Tail	2c	11
Bows		
Marking Bow Location	3a	12
Installing Aluminum Bows	3b	13
Installing Adjustable Steel Bows	3c	13
Installing Heavy Duty Bows	3d	14
Installing Flex Bows	3e	15
Install PowerLock™ Pivot Box (Front and Rear)	4	16
Install PowerLock™ Spring Assembly (Front and Rear)	5	17
Install PowerLock™ Swing Arm Assembly (Front and Rear)	6	18
Install Cut Swing Arm	7	19
Determine Roll Pipe Length, cut, and weld	8	20
Installing Roll Stops	9	21
Install Latch Plate	10	22
Assemble Anchor Pipe and Roll Pipe into Tarp	11a	23
Install Ridge Pole (Optional)	11b	23
Position Tarp on Trailer	11c	24
Install Roll Pipe	12	24
Place Labels	13	25
PowerLock™ Semi-trailer Truck Wiring	14a	26
PowerLock™ Semi-trailer Wiring	14b	27
PowerLock™ Optional Remote Wiring	14c	27
PowerLock™ Alternate Remote Wiring	14d	28-29
How to operate PowerLock™		30
Safety Messages related to the Operaton of PowerLock™		30
How to maintain PowerLock™		31
Safety Messages related to the Maintenance of PowerLock™		31

Important Safety Information

Explanation of Signal Words

- ⚠ WARNING:** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- ⚠ CAUTION:** Indicates a hazardous situation which, if not avoided could result in minor or moderate injury.

General Safety Messages

- ⚠ WARNING:** Read this entire manual and all safety messages before installing and operating this product.
- ⚠ WARNING:** Always wear safety glasses during installation and operation.
- ⚠ CAUTION:** Keep all clothing clear of moving parts.
- ⚠ CAUTION:** Keep everyone clear of the area.

Safety Messages related to the Installation of PowerLock™

- ⚠ CAUTION:** Use caution lifting heavy components. Use more than one person and/or proper equipment to handle components.
- ⚠ CAUTION:** Use caution while installing the swing arms, springs are under spring tension. Arms may rotate unexpectedly.
- ⚠ WARNING:** Use OSHA approved ladders or scaffolding to work above ground level. Be sure that your working platform is secure as you work on the truck.
- ⚠ WARNING:** Properly fasten all components. If not properly secured components may come loose.

⚠ IMPORTANT: *Contains information critical to installation, operation, or warranty policy.*

NOTICE: *Is used to address practices not related to physical injury. Risk of product or vehicle being damaged.*

NOTE: *Contains information critical to the installation or operation of this product.*

⚠ IMPORTANT: *This tarp system must have arched bows to support the tarp fabric when closed. When not in use, the tarp should be fully opened to prevent moisture from collecting on the tarp surface. Failure to open tarp could cause damage to the tarp system and will not be covered by warranty.*

Label part# 0920-103001	
⚠ WARNING	⚠ CAUTION
<p>Springs and arms are under extreme tension. DO NOT stand in the path of the swing arms.</p> <div style="text-align: center;"> </div> <p>Broken or damaged components could cause death or serious injury. DO NOT stand in the path of the front/rear swing arms or injury could occur.</p>	<p>DO NOT operate when damaged.</p> <div style="text-align: center;"> </div> <p>Tarp MUST be fully covered or uncovered before driving.</p>
MAINTENANCE INSTRUCTIONS	OPERATION INSTRUCTIONS
<ul style="list-style-type: none"> * Refer to Maintenance sheet or website. * Repairs must ONLY be made after proper instruction. * Spring tension must be properly released before repairs. * Replace damaged or broken parts. * Keep path of arms clear. 	<ul style="list-style-type: none"> * Refer to Operations sheet or website. * Only drive with tarp in fully covered or uncovered position. * Routinely inspect tarp and arms and replace if damaged.
www.powerlockmaintenance.com	www.powerlockoperation.com

This manual explains how to install and maintain a PowerLock™ Roll Tarp system.

Aero Warranty

Aero Products come with a one year warranty on all parts. It's another example of our ongoing commitment to customer satisfaction and quality.

Customer: If you have any concerns or questions prior to the installation of this product, please call our Customer Service at 1-800-535-9545.

Tools Required for Installation

Marker or Felt Pen	Drill Bits: 9/32", 11/32"
Tape Measure	Sockets: 5/16", 7/16", 9/16", 3/4"
Protractor	Open End or Box Wrenches: 5/16", 7/16", 9/16", 3/4"
Black Electrical Tape	Torx T40
Awl	Hex Key: 5/16"
Hammer	Phillips: #3
Saw	Electric or Air Drill
Hack Saw	Welder
1 1/8" hole saw	

Step 1a

Fabric Front Cap: Mark Top Rail for Bow Placement

NOTE: If this is a Classic Roll Tarp and has no front and rear caps, go to Step 3.

- 1) **Figure 1 & 2.** Mark the top rail where flat on side of trailer starts. Also mark 10" from there for heavy duty bows. The dimension of the **Radius**, **Diagonal**, or **Offset**.

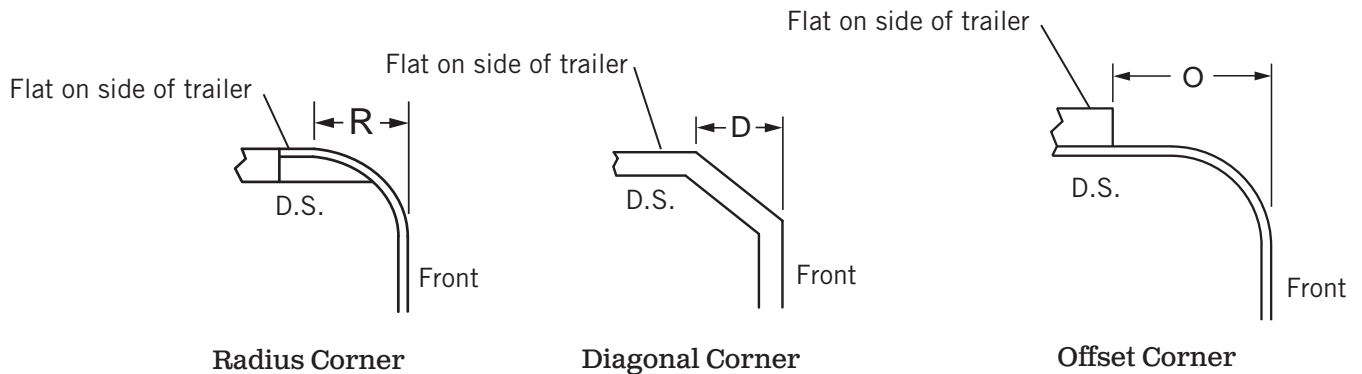


Figure 1

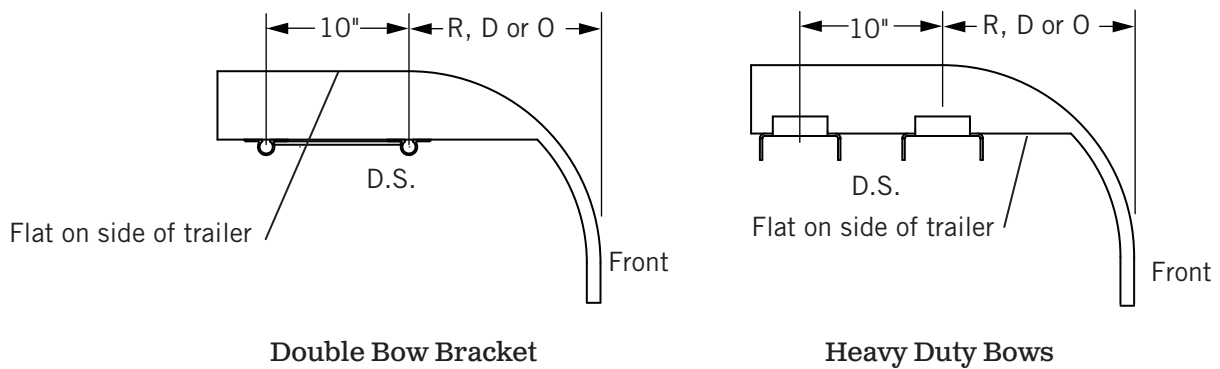


Figure 2

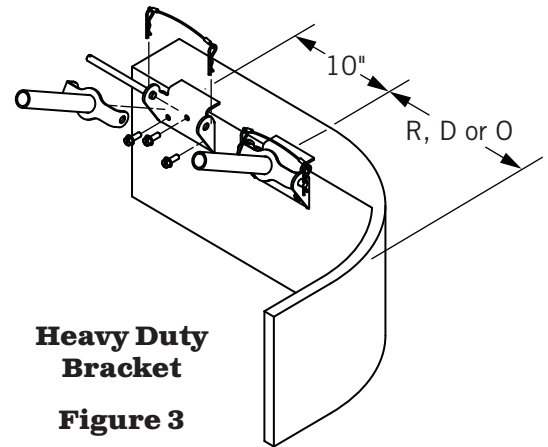
Step 1b

Fabric Front Cap: Install Double Bow Bracket or Heavy Duty Bows

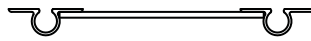
Index	Description	Qty
1	Fabric Front Cap	1
2	Heavy Duty Bracket	4
2A	Double Bow or Double Bow W/Insert	2
3	Bows	2
4	3/8 x 1 Type F HWH	24
5	5/16 x 1-1/2 Type F Torx	15
6	Aluminum Flat Bar 1/8" x 1"	12 ft
7	Bow Tie Bar	1

Install Heavy Duty Bracket

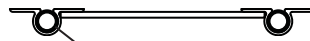
Figure 3. Position heavy duty brackets centered on marks on top rail. Attach with 3/8 x 1 type F HWH bolts.



Install Double Bow Bracket



**Double Bow Bracket
No Insert**



**Double Bow Bracket
W/Insert**

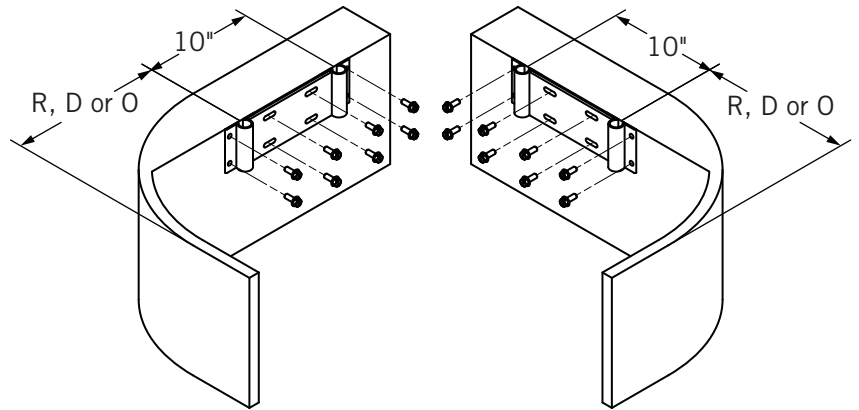
1) Figure 3. Clamp first pocket of double bow bracket centered on mark on top rail.

2) Figure 4. Position bracket as shown to reduce tarp wear.

Note: Put the bolts in the center of the slots incase pocket needs to be adjusted.

3a) Figure 3. Attach with 3/8 x 1 type F HWH bolts.

3b) Figure 5. Attach with 3/8 x 2-1/2 carriage bolts.



**Double Bow Bracket
on Passenger Side**

**Double Bow Bracket
W/Insert on Drive Side**

Install Double Bow Bracket to Sideboards

Hardware to Mount to Sideboards

Index	Description	Qty
7	5/16 X 2-1/2 CARRIAGE BOLT	16
8	5/16 FLAT WASHER	16
9	5/16 LOCK WASHER	16
10	5/16 HEX NUT	16

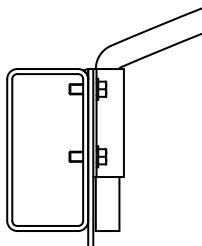


Figure 4

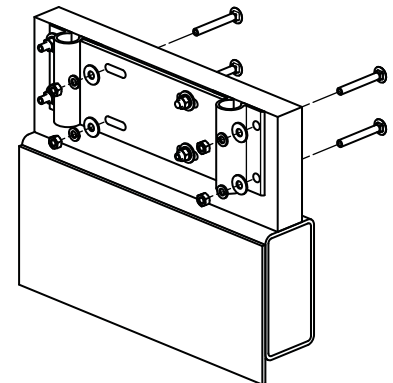
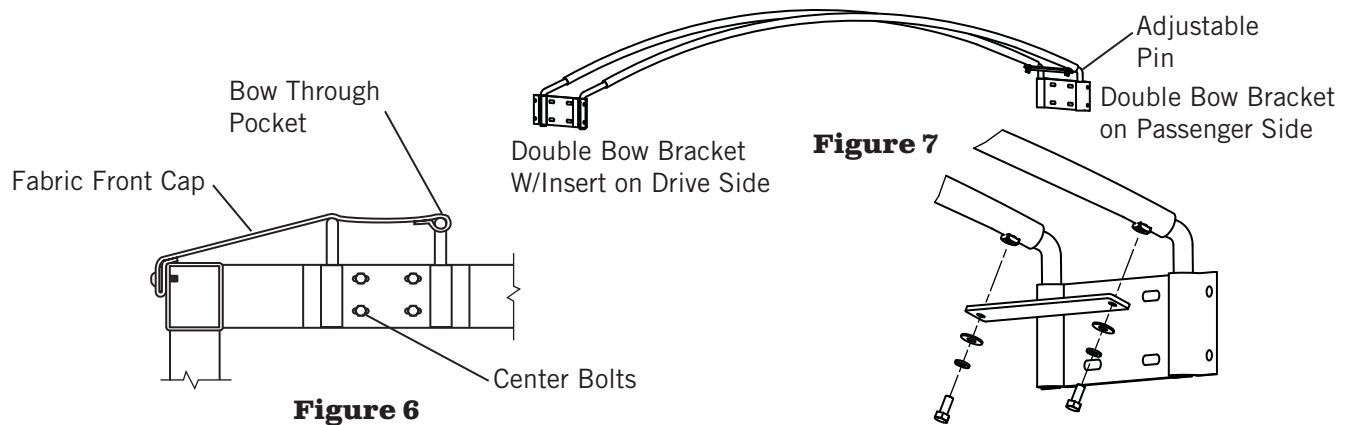
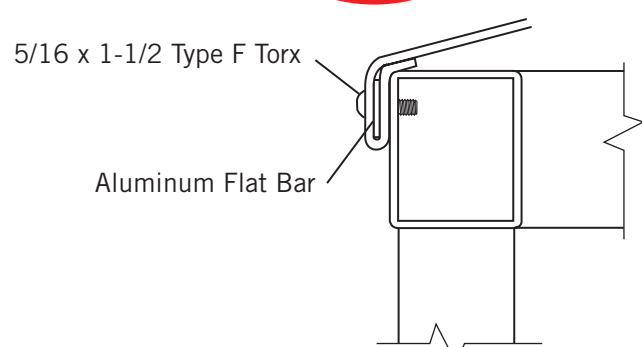
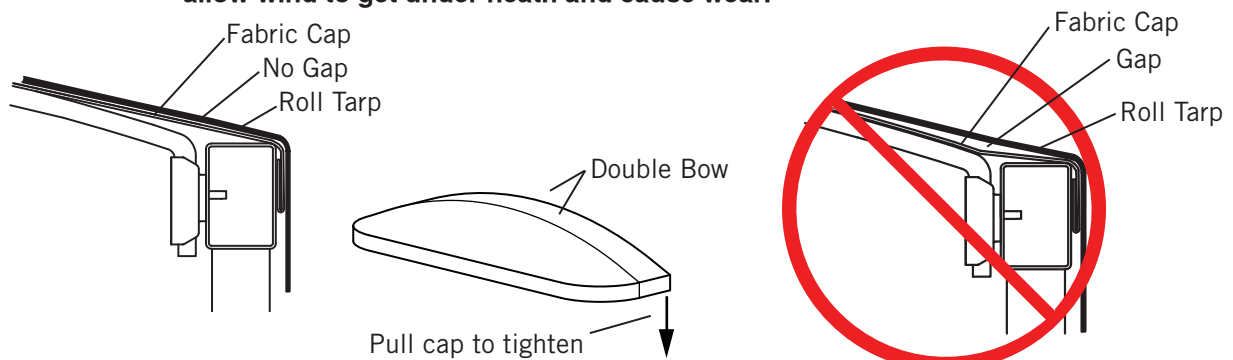


Figure 5

- 5) **Figure 6.** Feed bow through pocket of fabric cap and install on trailer. On adjustable bows remove bolt and pin. Orient the bow so the end with the removable pin is on the passenger side.
- 6) Install heavy duty bows per STEP 3d.
- 6a) **Figure 7.** Adjustable bows are tied together with the Bow Tie Bracket, flat washers, lock washers, and bolts removed in earlier step.
- 7) **Figure 8.** Pull cap tight over top rail.
- 8) **Figure 9.** Drill holes evenly spaced through aluminum flat bar and attach with 5/16 x 1-1/2 Type F Torx.



⚠ IMPORTANT: If the cap is not pulled tight, a gap with the roll tarp will allow wind to get under neath and cause wear.



Step 1c

Aluminum Front Cap: Install Square Nose

Index	Description	Qty
1	Front Cap Square Aluminum	1
2	3/8 x 1 Type F HWH	4

- 1) Measure and make any cut-outs and place cap on trailer.
- 2) Attach with 3/8 x 1 Type F HWH Bolts through trough into top rail.

Step 1d

Aluminum Front Cap: Install Shaped to Nose

Index	Description	Qty
1	Front Cap Aluminum	1
2	Aluminum Strip 1/8 x 3	2
3	3/8 x 1 Type F HWH	4

- 1) Place cap on front of trailer, center and push lip up against the trailer.
- 2) **Figure 10.** Trace the corner shape of nose onto front cap and cut-out shape

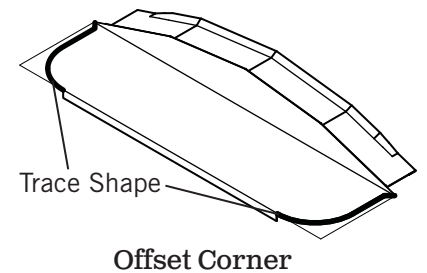
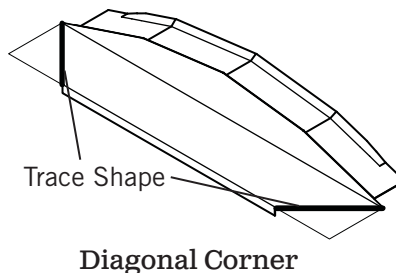
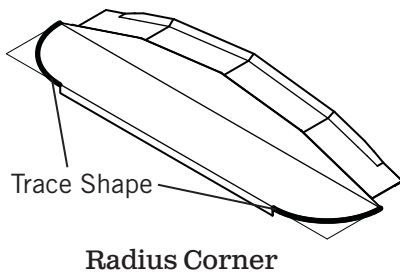


Figure 10

- 3) **Figure 11.** Attach with 3/8 x 1 Type F HWH Bolts through trough into top rail.
- 4) **Figure 11.** Shape the aluminum strip around the corner of the trailer, mark and cut to length for both sides.
- 5) **Figure 12.** Weld both pieces to the front cap.

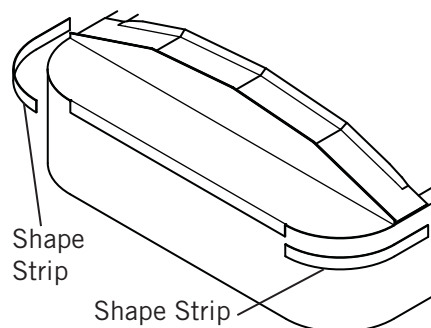


Figure 11

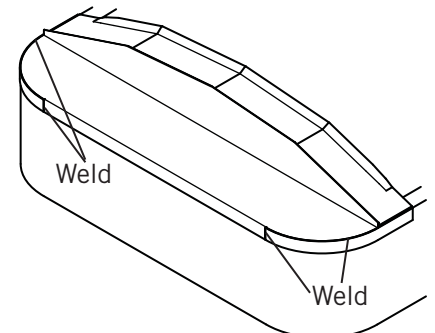


Figure 12

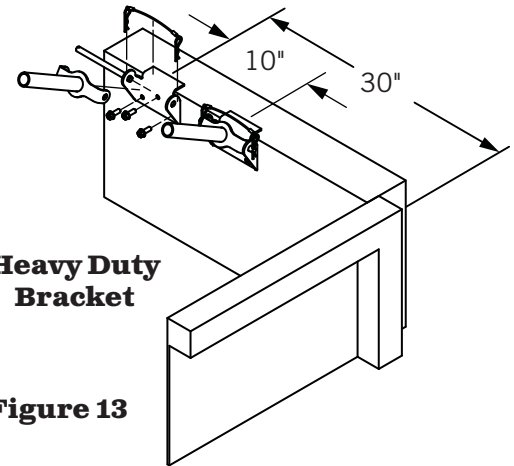
Step 2a

Fabric Rear Cap: Install Double Bow Bracket or Heavy Duty Bows

Index	Description	Qty
1	Fabric Rear Cap	1
2	Heavy Duty Bracket	4
2A	Double Bow or Double Bow W/Insert	2
3	Bows	2
4	3/8 x 1 Type F HWH	16
5	Bow Tie Bar	1

Install Heavy Duty Bracket

Figure 13. Position heavy duty brackets centered on marks on top rail. Attach with 3/8 x 1 type F HWH bolts.



Heavy Duty Bracket

Figure 13

Install Double Bow Bracket



**Double Bow Bracket
No Insert**

**Double Bow Bracket
W/Insert**

1) Figure 13. Measure and mark 30" from the outside of the tailgate and 10" towards the rear from the previous mark.

2) Figure 13. Clamp first pocket of double bow bracket centered on mark on top rail.

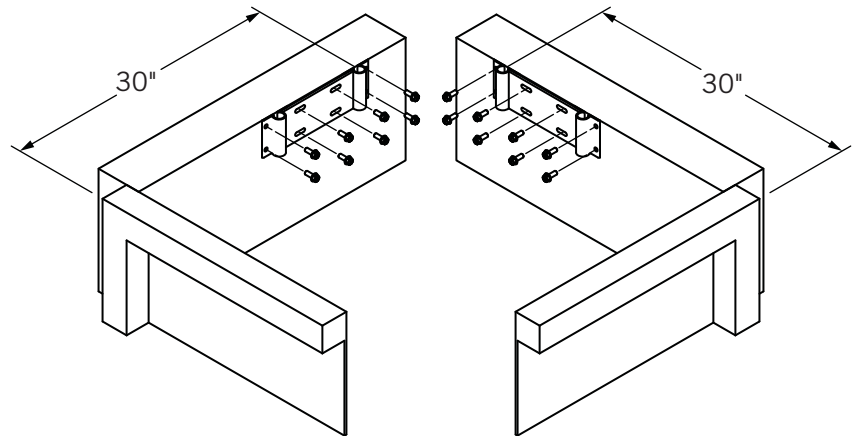
3) Figure 14. Position bracket and bow as shown to reduce tarp wear.

Note: Put the bolts in the center of the slots incase pocket needs to be adjusted.

4a) Figure 13. Attach with 3/8 x 1 type F HWH bolts.

4b) Figure 15. Attach with 3/8 x 2-1/2 carriage bolts.

Note: There may be up to 3 different widths of aluminum bows, make sure you have the right one.



**Double Bow Bracket
W/Insert on Drive Side**

**Double Bow Bracket
on Passenger Side**

Install Double Bow Bracket to Sideboards

Hardware to Mount to Sideboards

Index	Description	Qty
7	5/16 X 2-1/2 CARRIAGE BOLT	16
8	5/16 FLAT WASHER	16
9	5/16 LOCK WASHER	16
10	5/16 HEX NUT	16

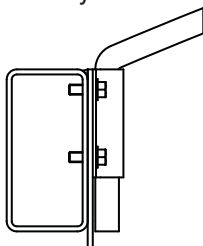


Figure 14

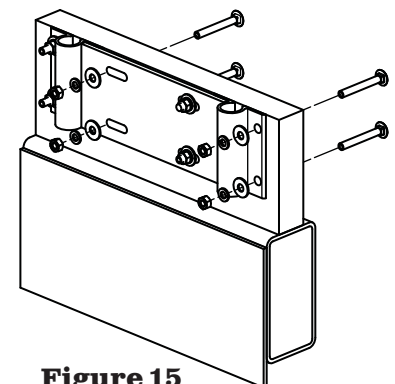
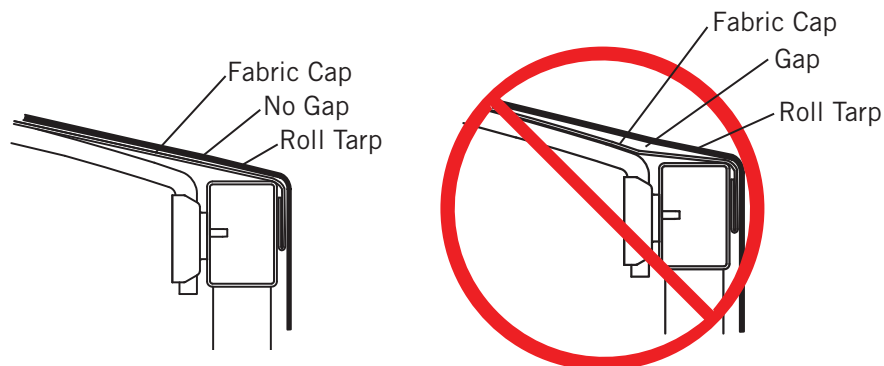
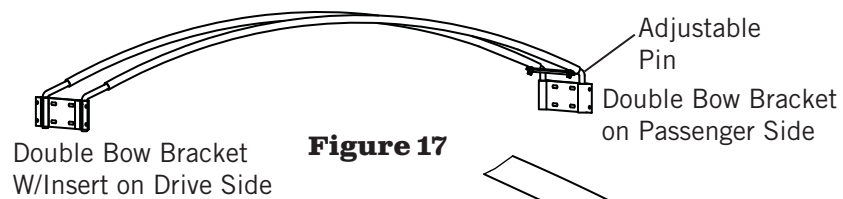
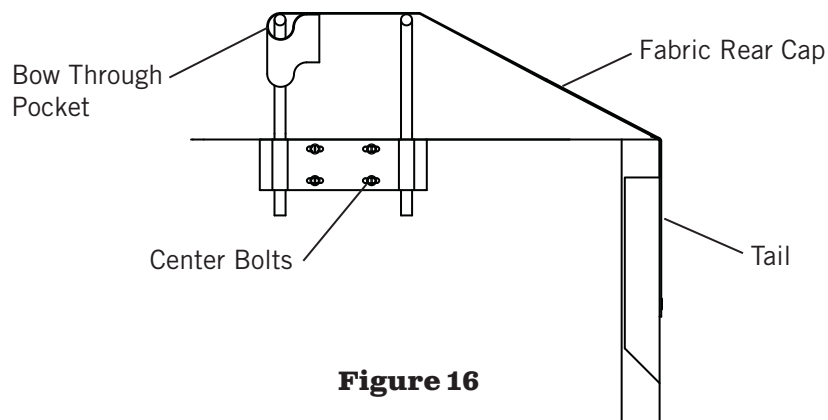


Figure 15

- 5) **Figure 16.** Feed bow through pocket of fabric cap and install on trailer. On adjustable bows remove bolt and pin. Orient the bow so the end with the removable pin is on the passenger side.
- 6) Install heavy duty bows per STEP 3d.
- 6a) **Figure 17.** Adjustable bows are tied together with the Bow Tie Bracket, flat washers, lock washers, and bolts removed in earlier step.
- 7) **Figure 18.** Pull cap tight when securing with Latch Plate or Roll Stop.



Step 2b

Aluminum Rear Cap: Install Mounted to Tailgate

Index	Description	Qty
1	Rear Cap Aluminum Tailgate	1
2	3/8 x 1 Type F HWH	4

- 1) Figure 19.** Position aluminum rear cap centered on inside of tailgate with the bottom of the trough even with the side walls.
- 2)** Drill pilot holes and secure with 3/8 x 1 Type F HWH bolts.

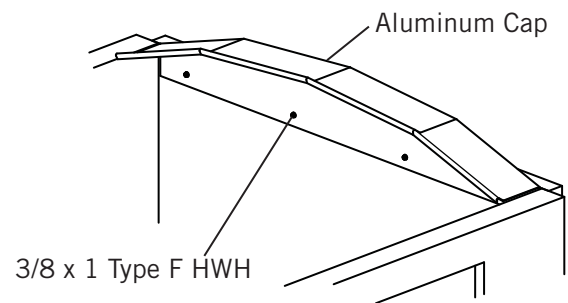


Figure 19

Step 2c

Aluminum Rear Cap: Install with Fabric Tail

Index	Description	Qty
1	Rear Cap Aluminum with Tail	1
2	Fabric Rear Tail for Aluminum Cap	1
3	3/8 x 1 Type F HWH	4

- 1) Figure 20.** Position aluminum rear cap on top rail centered on width, locate the front edge of cap 20" from outside of tailgate.
- 2)** Drill pilot holes and secure with 3/8 x 1 Type F HWH bolts.
- 3) Figure 21.** Insert welt on tail into Keder on back of cap and center on width. Use light oil to slide welt in keder.
- 4)** Secure tail with rubber straps. See STEP 9 on installing J-hooks for straps.

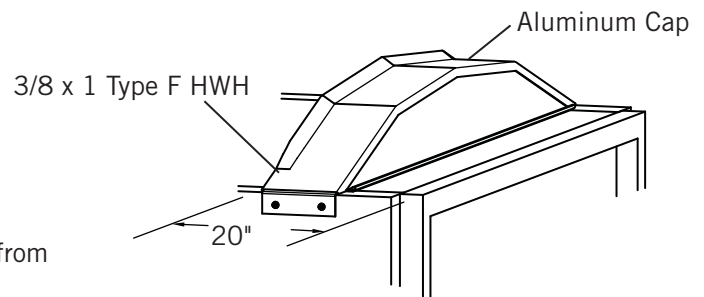


Figure 20

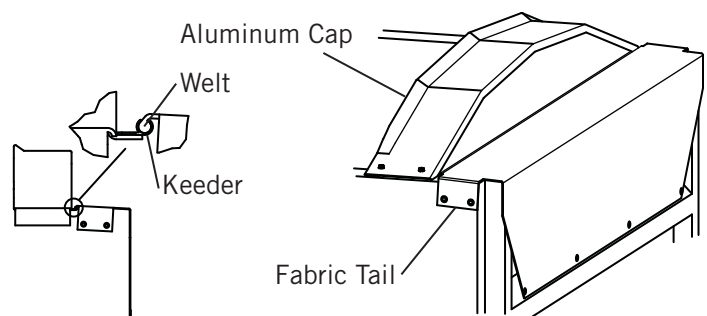


Figure 21

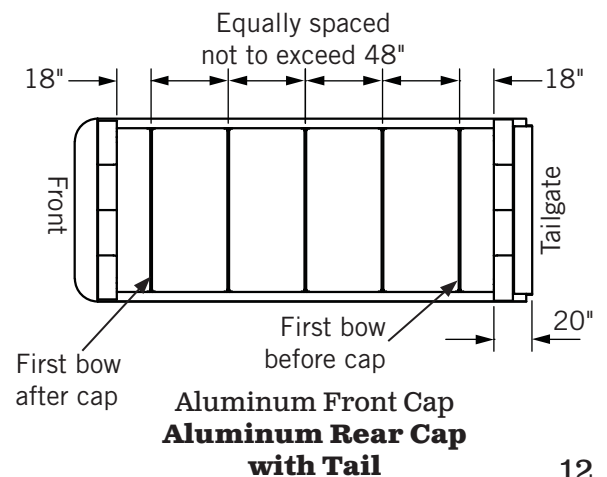
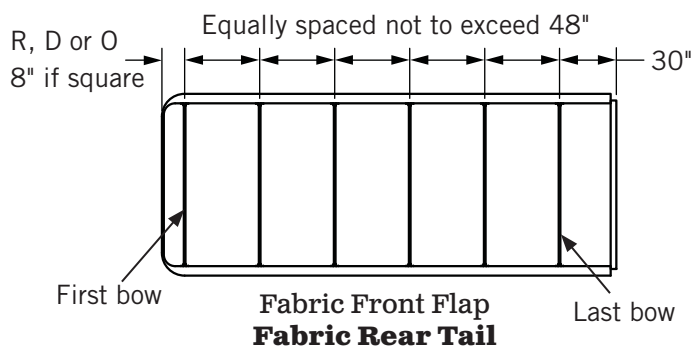
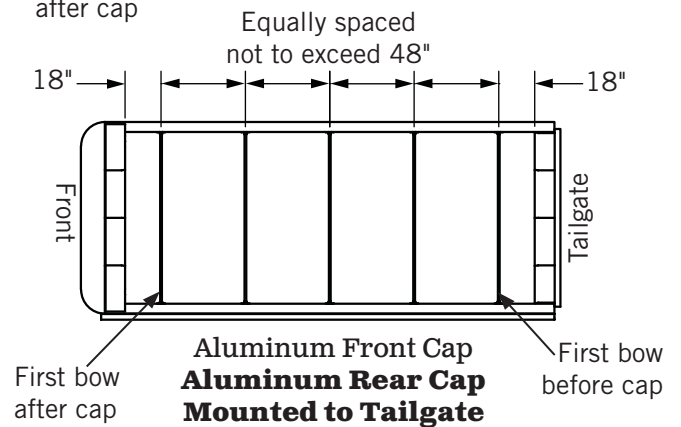
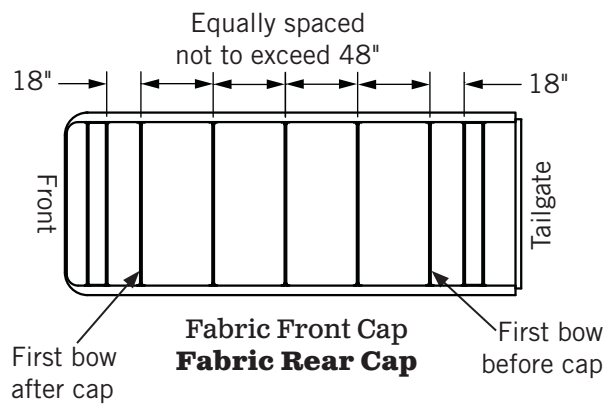
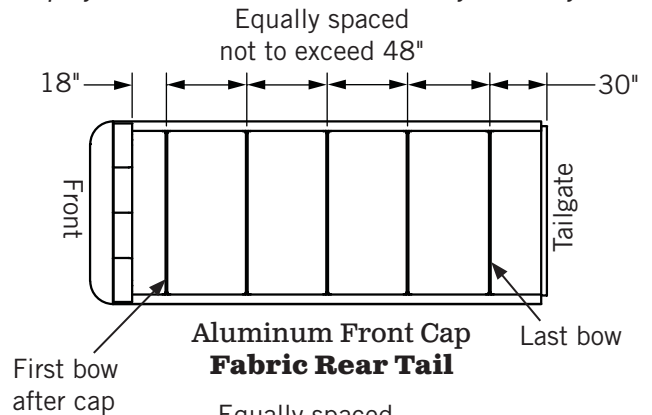
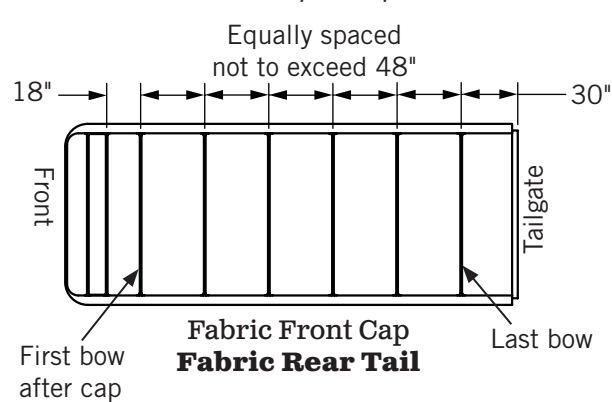
Step 3a

Marking Bow Location

1) Mark top rail according to what caps are on the trailer.

⚠ IMPORTANT: DO NOT exceed 48" spacing for bow centers. This will void the warranty.

⚠ IMPORTANT: *This tarp system must have arched bows to support the tarp fabric when closed. As such, When not in use, the tarp should be fully opened to prevent moisture from collecting on the tarp surface. Failure to open tarp could cause damage to the tarp system and will not be covered by warranty.*



Step 3b

Installing Aluminum Bows

1) Figure 22. Align aluminum pocket with marked bow location and flush with top of rail.

WELD

2A) Weld down each side of pocket.

BOLT

2B) Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts.

3) Figure 23. Insert bow into pockets.

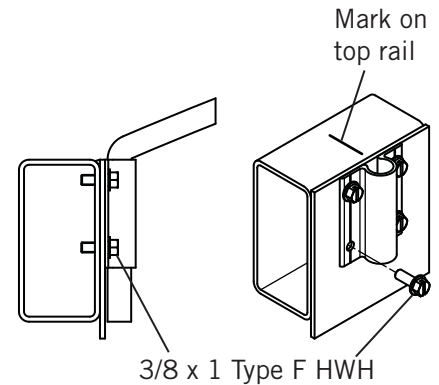


Figure 22



Figure 23

Step 3c

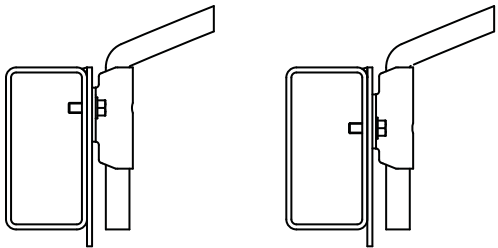
Installing Adjustable Steel Bows

1) Figures 24 & 25. Align steel pocket with marked bow location and adjust height so bend in bow is even with the top rail.

2a) Figure 26. Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts.

2b) Figure 26. Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts.

3) Figure 27. Loosen set screw on bow. Insert bow into pockets into one pocket and adjust width and insert in other pocket and tighten set screw.



Bracket can be positioned high or low

Figure 24

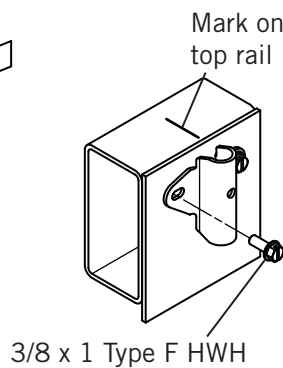


Figure 25

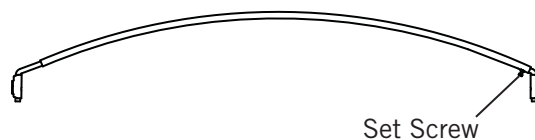


Figure 27

Install Bow Bracket to Sideboards

Hardware to Mount to Sideboards

Index	Description	Qty
1	5/16 X 2-1/2 CARRIAGE BOLT	8
2	5/16 FLAT WASHER	8
3	5/16 LOCK WASHER	8
4	5/16 HEX NUT	8

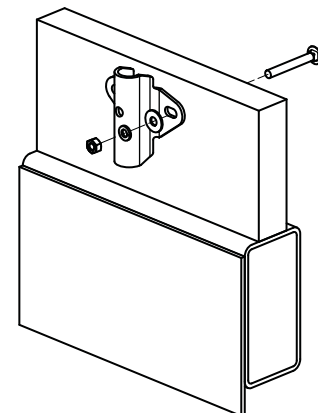


Figure 26

Step 3d

Installing Heavy Duty Bows

- 1) **Figures 28 & 29.** Align bracket with marked bow location and place on top of rail.
- 2) **Figure 29.** Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts. Repeat for opposite side.
- 3) **Figure 29.** Attach swivel bracket assembly to base with headless pin and cotter pins.
- 4) On opposite side attach heavy duty bow assembly with headless pin and cotter pin.

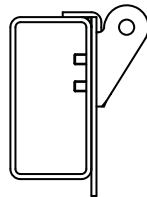


Figure 28

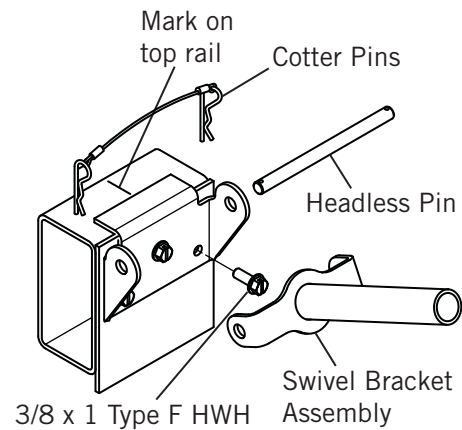


Figure 29

- 5) **Figure 30.** Mark heavy duty bow assembly, disassemble, and cut to length.

- 6) **Figure 31.** Reassemble with swivel bracket assembly inserted into the heavy duty bow assembly.

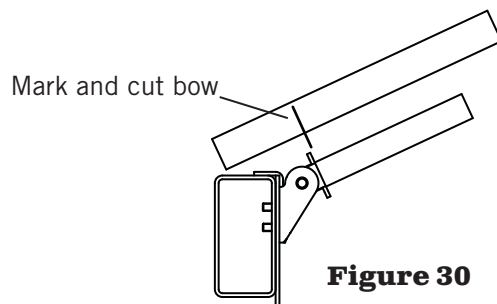


Figure 30



Figure 31

Step 3e

Installing Flex Bows

BOLT

1A) Figures 32. Align pocket with marked bow location and flush with top of rail. Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts.

WELD

1B) Figure 32 & 33. Align pocket with marked bow location and flush with top of rail. Weld all around pocket.

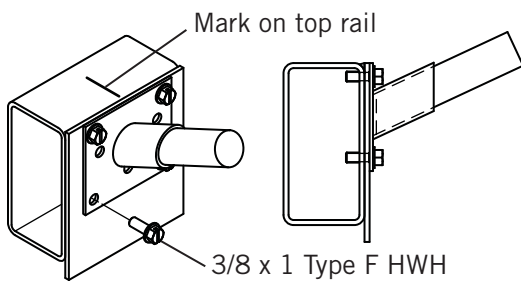


Figure 32

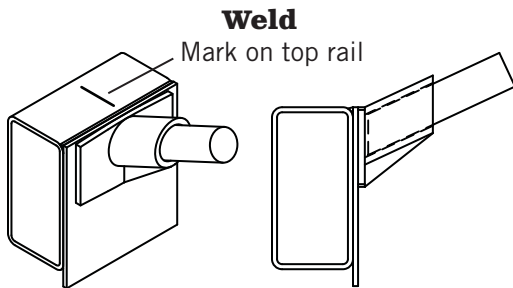


Figure 33

Figure 34. For sideboard installation weld a plate to weld or bolt the pocket to.

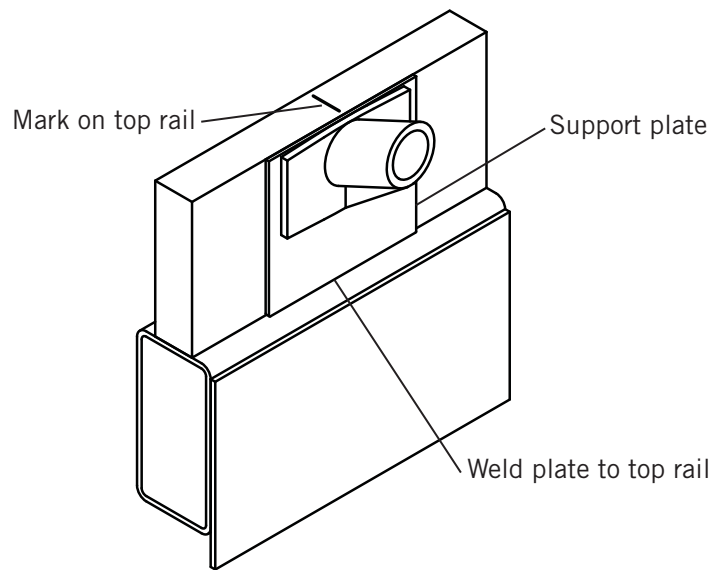


Figure 34

⚠ IMPORTANT: The ends of the bow must be cut to the proper angle or the warranty is void. The flex bow has a pre-set arch or spline, make sure the arch is up when cutting the ends.

3) Figure 35. Cut both ends of the flex bow at 25°-30° angle and 2" longer than the inside width of the trailer.

4) Figure 36. Insert bow into pockets.

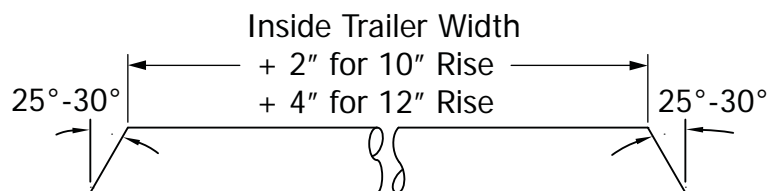


Figure 35



Figure 36

Step 4

Install PowerLock™ Pivot Box (Front and Rear)

Index	Description	Qty	Index	Description	Qty
1	Pivot Box Grain Style	2	5	1/2 Flat Washer	4
2	Pivot Mounting Plate	2	6	3/8-16 x 1-1/2 Hex Bolt	8
3	1/2-13 x 1-3/4 FHCS	4	7	3/8-16 Nylon Hex Nut	8
4	1/2-13 Nylon Hex Nut	4	8	3/8 Flat Washer	8

1) See Figure 37. Attach the mounting plate to the pivot box with the provided fasteners.

2) See Figure 38. At the **FRONT and REAR** of the trailer find location for pivot box mount.

3) See Figure 39. Drill clearance holes and secure with 3/8-16 x 2-3/4 hex bolt, washers, and nylon nut.

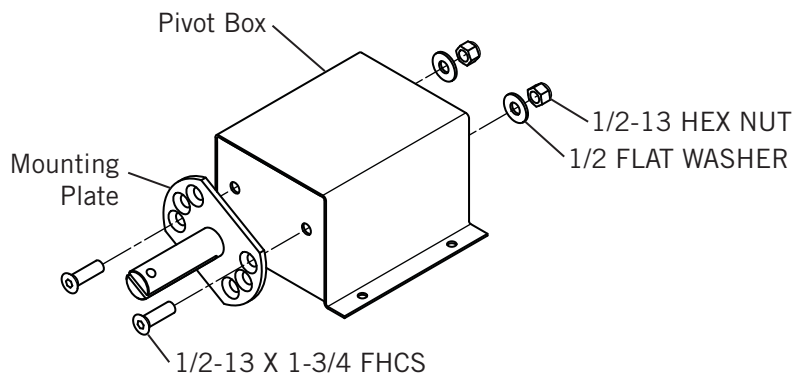


Figure 37

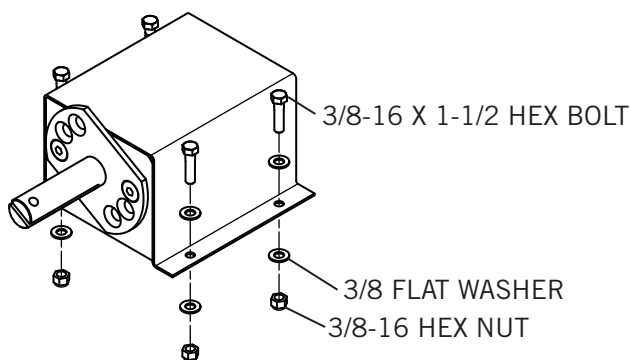


Figure 39

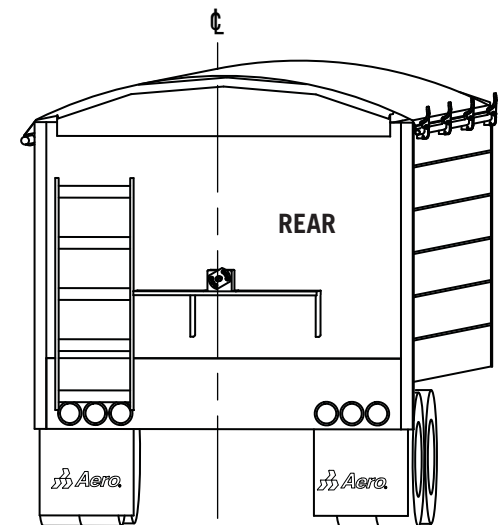
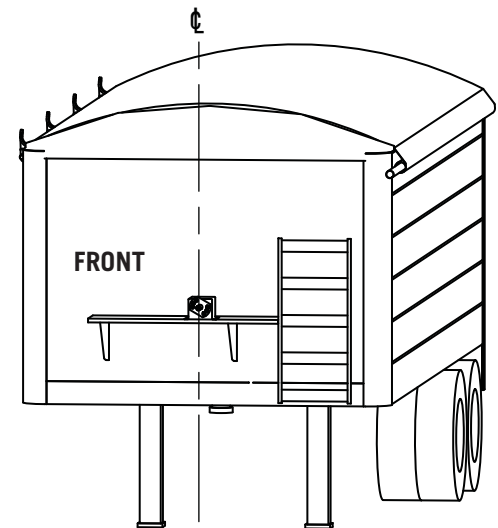


Figure 38

Step 5

Install PowerLock™ Spring Assembly (Front and Rear)

1) See **Figure 40 & 41**. Mount the spring assembly onto the mounting plate and secure with collar and screw.

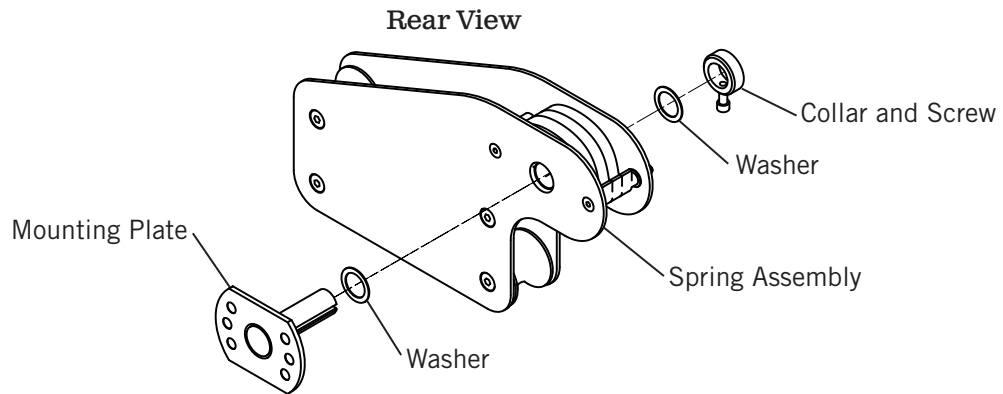


Figure 40

Standard Roll

Reverse Roll Optional

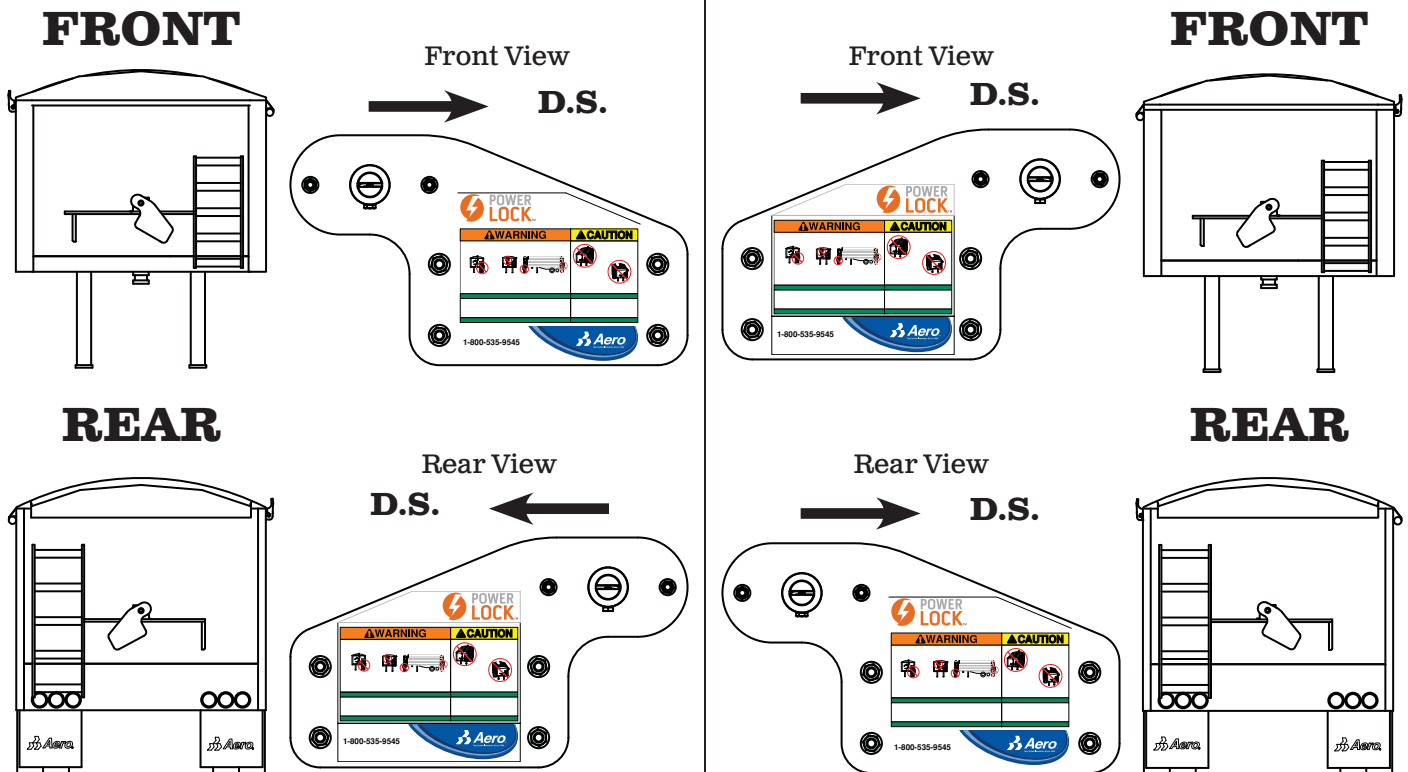


Figure 41

Step 6

Install PowerLock™ Swing Arm Assembly (Front and Rear)

- 1) See Figures 42 & 43. Remove bottom collar and insert electric cord and swing arm assembly through the spring assembly.
- 2) See Figure 43. Slide lock collar over the power cable and onto the front swing-arm and tighten 5/16-18 x 1" bolt w/ nylon patch thru hole in tube and tighten second bolt against tube.

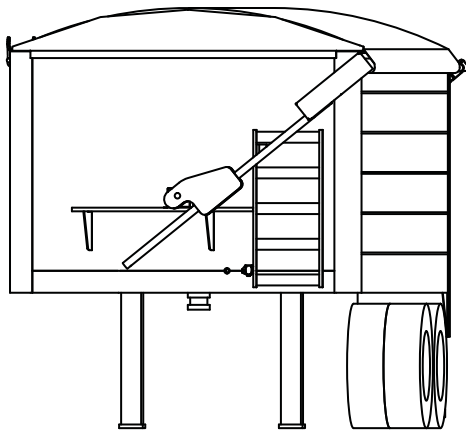


Figure 42

▲ IMPORTANT: Swing arm must be parallel with the plates in the spring assembly.

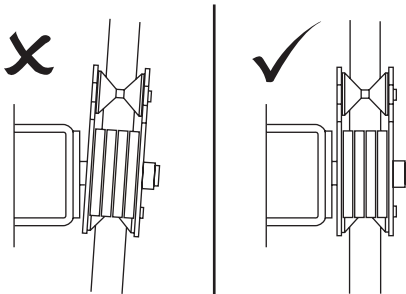


Figure 44

- 3) See Figures 45 & 46. Remove bottom collar insert swing arm assembly through the spring assembly.
- 4) See Figure 45 & 46. Place collar back on bottom of swing arm.

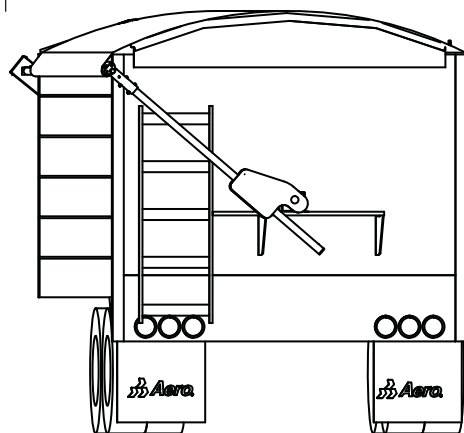


Figure 45

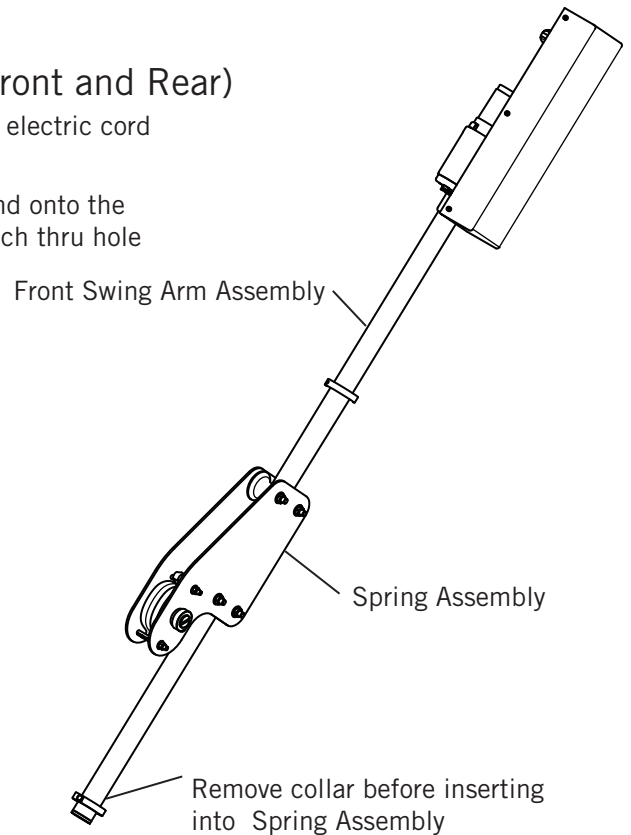


Figure 43

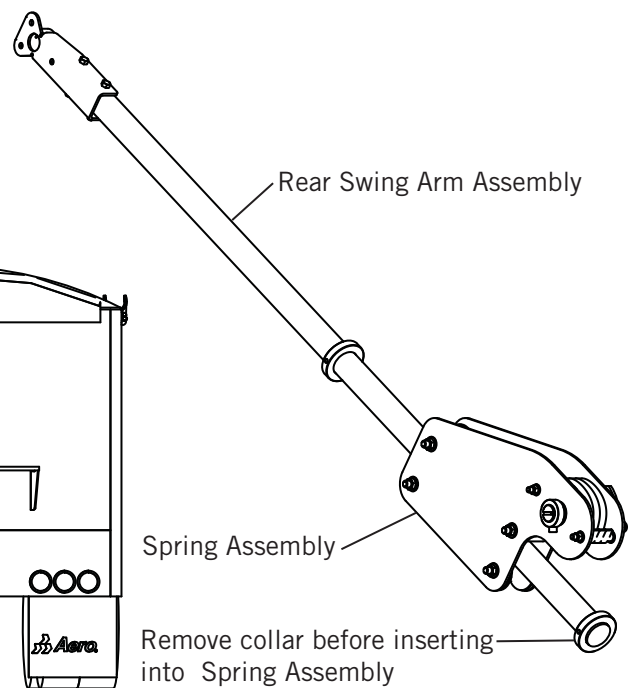


Figure 46

Step 7

Install Cut Swing Arm

1) See Figure 47. When the front swing arm is extended the farthest, the bottom of the swing arm should be at least 2" away from the bottom of the pivot boot. Cut tube making sure not to cut the wires and re-drill hole for screws in collar.

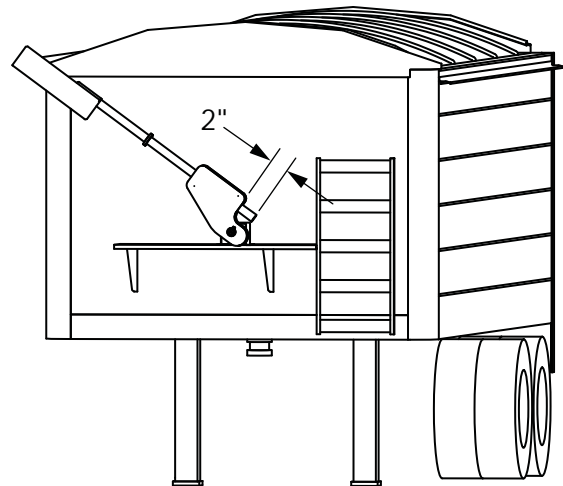


Figure 47

2) See Figure 48. When the rear swing arm is extended the farthest, the bottom of the swing arm should be at least 2" away from the bottom of the pivot boot. Cut tube and re-drill hole for screws in collar.

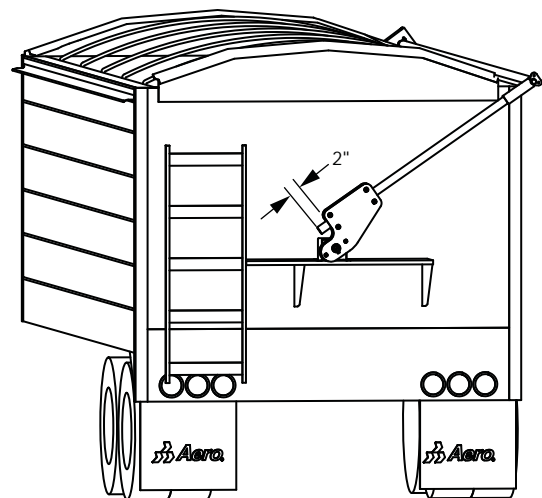


Figure 48

Step 8

Determine Roll Pipe Length, Cut, and Weld

- 1) **See Figure 49.** Insert swaged end of the tube adapter assembly into the front end of the roll pipe and weld in place.

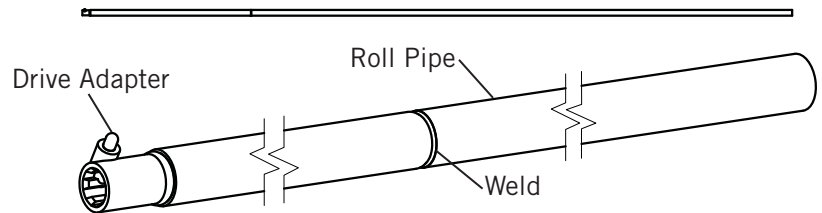


Figure 49

- 2) **See Figure 50.** Measure and note the distance between the notch in the shaft on the motor drive and the shaft bushing face on the rear swing arm.
- 3) Subtract 2" from the distance noted in step 1 and transfer the measurement to the roll pipe.
- 4) Measure from the drive adapter back, mark the distance determined in the previous step and cut to length.
- 5) **See Figure 51.** Insert the larger diameter end of the roll pipe adapter into the roll pipe. Make sure the adapter is aligned with the tube and weld the adapter to the pipe. Grind the weld down and spray with corrosive inhibiting paint.

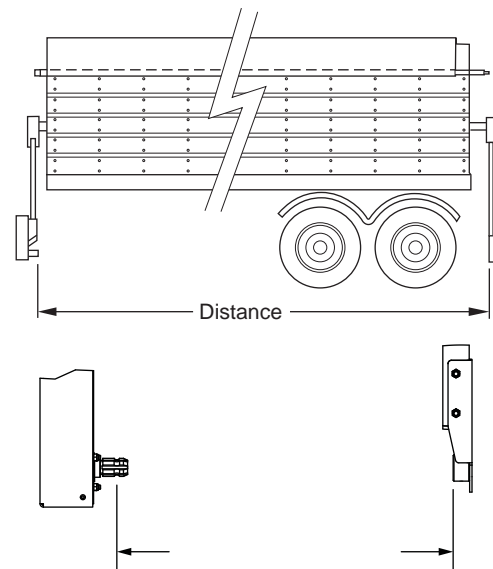


Figure 50

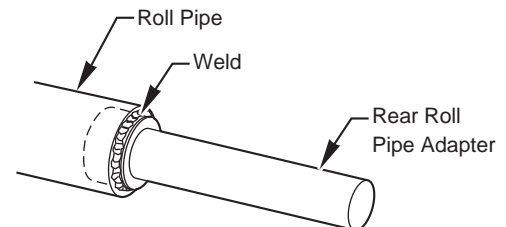


Figure 51

Step 9

Installing Roll Stops and Secure Anchor Pipe

1) Figure 52 & 53. Locate first roll stop bracket 5"-9" from the first bow and 1" down from top rail.

Note: Tarp & end of anchor pipe should be 1" from center of same bow.

2) Figure 52 & 53. Drill a pilot hole and attach with 3/8 x 1 type F HWH bolts.

3) Locate last roll stop bracket 5"-9" from end of anchor pipe or as close as possible and 1" down from top rail.

4) Evenly space roll stop brackets along top rail with maximum of 96" apart.

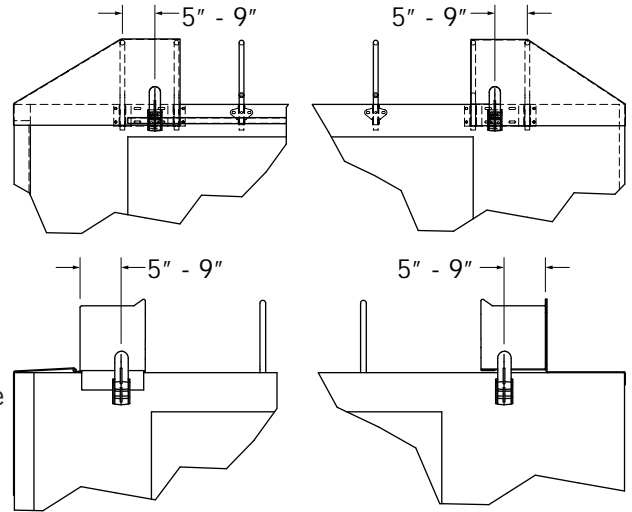


Figure 52

Sideboards (Optional)

Note: Anchor pipe can be mounted in the roll stop or to the top rail. Mounting the anchor pipe to the top rail allows the tarp to cover the gap at the bottom of the sideboard, install tarp and secure anchor pipe before installing roll stops.

1) Figure 54. OPTIONAL Attach tarp and anchor pipe to top rail with clamps #14 screws.

2) Figure 52 & 53. Locate roll stops the same distance from the bows as in step 1 and 1" from top of sideboard.

3) Figures 54 & 55. For sideboards. Drill a pilot hole and attach with 3/8 x 2-1/2 carriage bolts.

4) Figure 55. Attach aluminum flat at top of sideboard for the full length of the tarp.

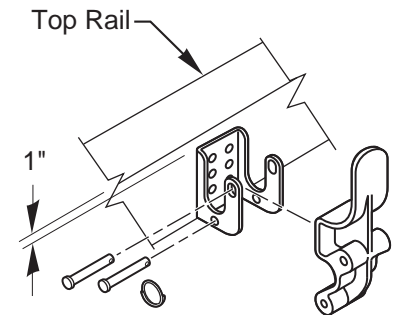


Figure 53

Install Anchor Pipe to Top Rail & Roll Stops to Sideboards

Install Anchor Pipe & Roll Stops to Sideboards

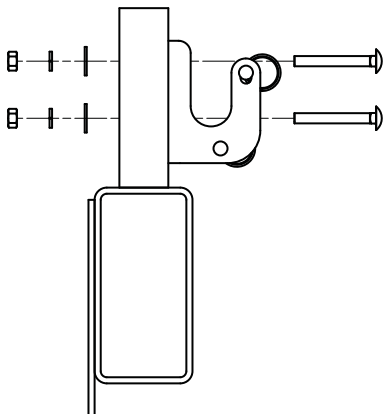


Figure 54

Hardware to Mount to Sideboards

Index	Description
1	5/16 X 2-1/2 CARRIAGE BOLT
2	5/16 FLAT WASHER
3	5/16 LOCK WASHER
4	5/16 HEX NUT
5	1/8" x 1" x 12' FLAT ALUMINUM
6	SCREW #14 X 1 HWH AB ZINC
7	CLAMP, ANCHOR PIPE
8	3/8 X 1 TYPE F HWH BOLT

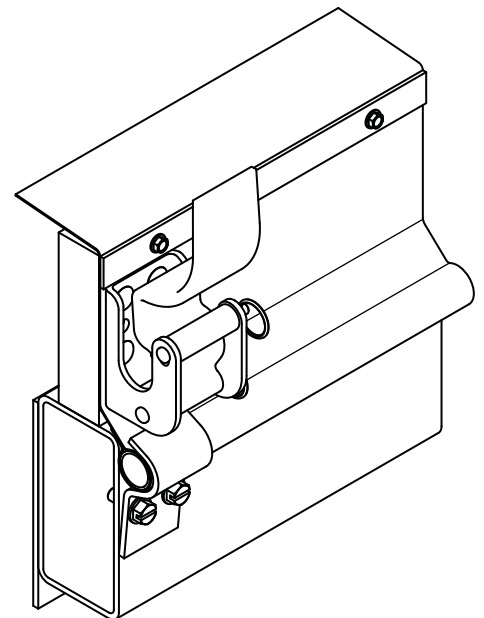


Figure 55

Step 10

Install Latch Plate

NOTE: Check to ensure the roll tube will have a clear path past the tailgate. Shim latch plate if needed.

1) Figures 56 & 57. Locate the latch plate 3" forward of the front edge of the tarp and 1"-5" below the top rail or as high as possible.

NOTE: Front edge of latch plate can be cut at a 45° angle when beyond the flat of the side wall.

2) Figure 58. Drill a pilot hole 2"-4" in from each end and every 24" in each section.

NOTE: First hole may need to be farther back where the flat side wall starts.

3a) Figure 57. Attach with 3/8 x 1 type F HWH bolts.

3b) Figure 59. Attach with 3/8 x 2-1/2 carriage bolts.

NOTE: Rear edge of latch plate may need to be cut at a 45° angle as to not interfere with the swing gate.

4) Cut the last section so it goes back at least 3" past the end of the tarp.

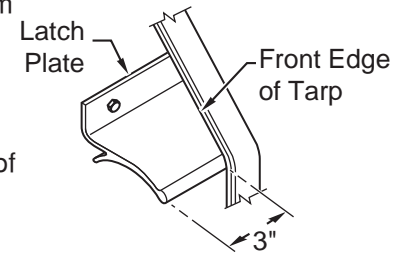


Figure 56

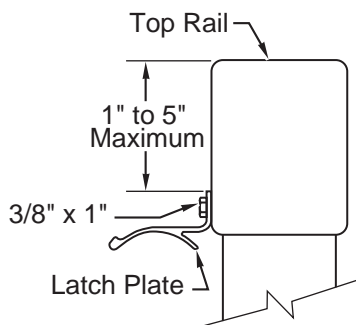


Figure 57

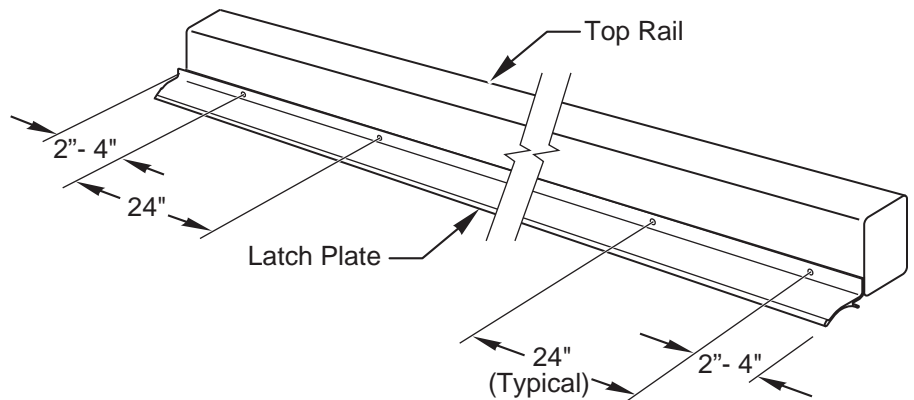


Figure 58

Install Latch Plate to Sideboards

Hardware to Mount to Sideboards

Index	Description	Qty
1	5/16 X 2-1/2 CARRIAGE BOLT	8
2	5/16 FLAT WASHER	8
3	5/16 LOCK WASHER	8
4	5/16 HEX NUT	8

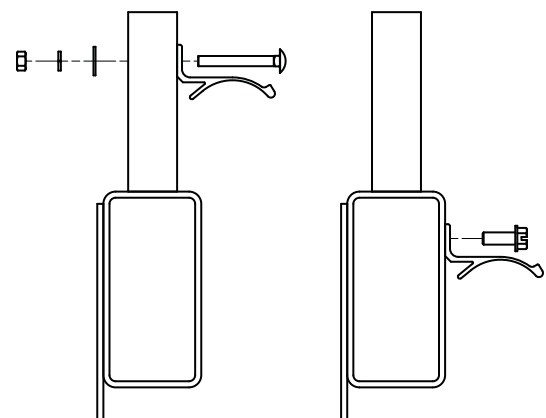


Figure 59

Step 11a

Assemble Anchor Pipe and Roll Pipe into Tarp

- 1) **See Figures 60 & 61.** Attach lengths of anchor pipe and roll pipe and weld together.
- 2) **See Figure 60.** Cut the anchor pipe flush with the ends of the pocket on the tarp.
- 3) Place rubber cups on ends of anchor pipe.
- 4) **See Figure 62** Slide the anchor pipe into the tarp pocket and secure with #14 x 1 PPH self drilling screw at each end.
- 5) **See Figure 62** Slide the roll pipe into the other pocket and leaving it sticking out at the **both ends** of the tarp.

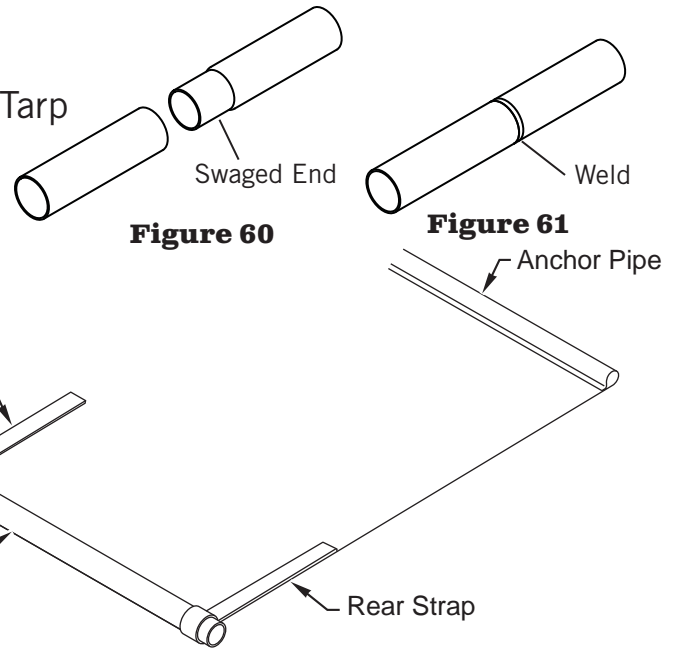


Figure 60

Figure 61

Figure 62

Step 11b

Install Ridge Pole (Optional)

- 1) **Figures 60 & 61.** Assemble the ridge pole if necessary and weld at seam and grind smooth
- 2) **See Figure 63.** The ridge pole is installed either on top of the tarp or bottom of the tarp. Cut the ridge pole to fit your installation per these figures.

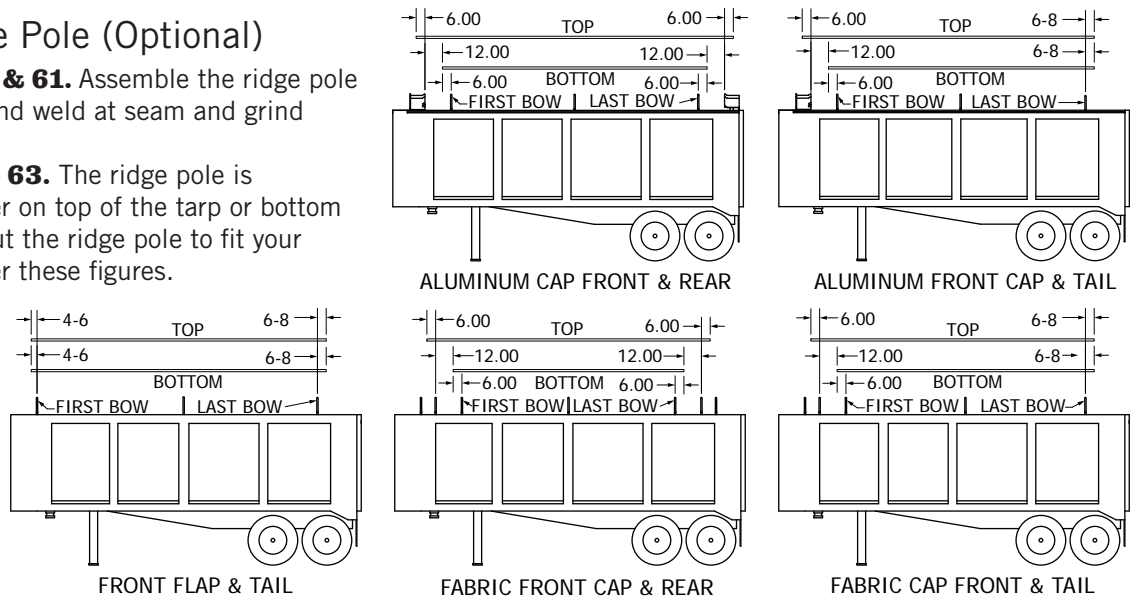


Figure 63

- 3) **See Figure 64.** Place rubber cups on ends of ridge pole.
- 4) **See Figure 65.** Slide the ridge pole into the tarp pocket and secure with #14 x 1 PPH self drilling screw.

- 6) **See Figure 65.** Fold flaps around end of ridge pole when provided.

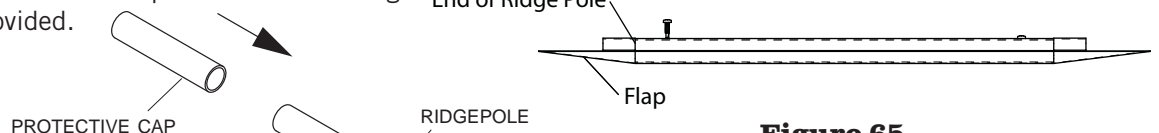


Figure 65

Step 11c

Position Tarp on Trailer

1) **Figures 66 & 67.** Roll the tarp onto the roll pipe and place on the trailer. Position the tarp front to back accordingly.

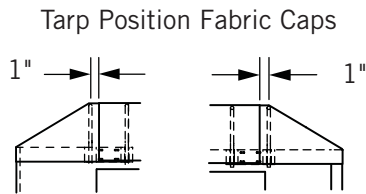


Figure 66

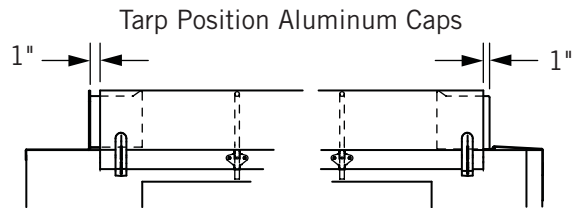


Figure 67

Step 12

Install Roll Pipe

1) **See Figure 68 & 69.** Align the drive adapter with the shaft on the swing arm assembly. Press the pin and slide onto shaft. Release pin and adjust drive adapter until pin locks onto shaft.

⚠ WARNING: Drive adapter must be locked onto shaft. If drive adapter comes loose the swing arm will rapidly rotate and could cause injury.

⚠ IMPORTANT: Swing arms at the front and rear must be parallel with the plates in the spring assembly

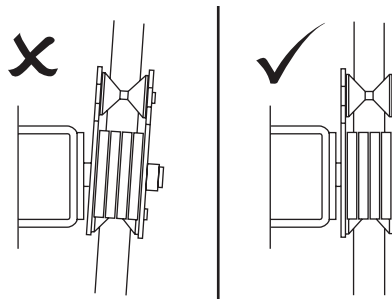


Figure 69

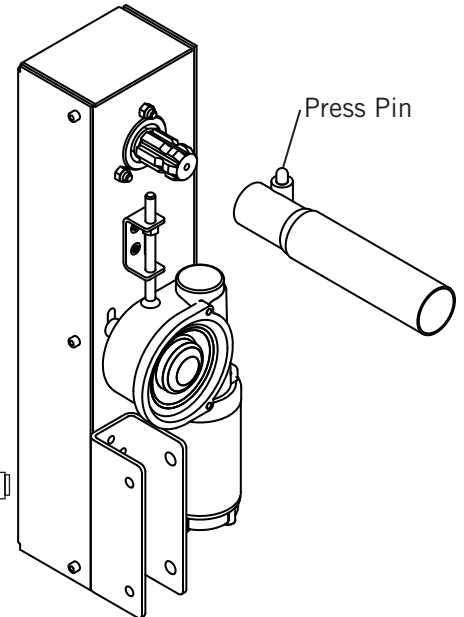


Figure 68

7) **See Figure 70.** Slide the shaft collar (5) and the rear swing-arm onto the adapter shaft at the rear of the trailer. Re-check the pivot box face for plumb. Place the shaft collar (5) 1/4" from the swing-arm bushing and tighten.

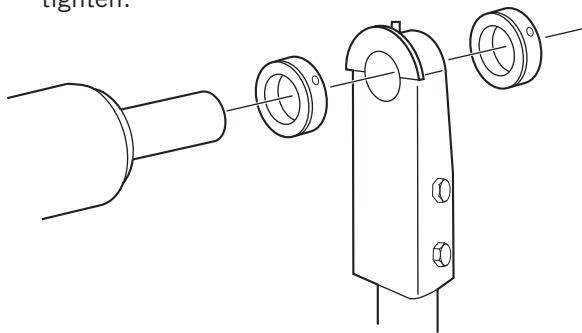


Figure 70

3) **See Figure 71.** At each strap secure tarp to roll pipe with U-clamp and #14 x 1 PPH self drilling screw.

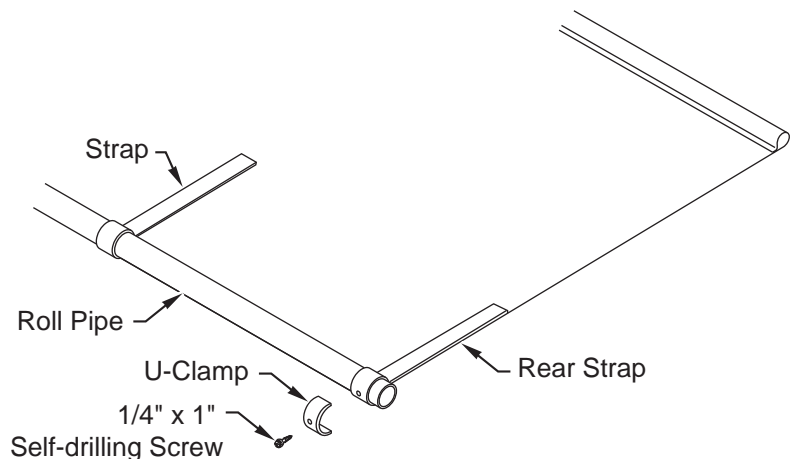


Figure 71

Step 13

Place Labels

- 1) **See Figure 72.** Locate a place for the safety label on the front of the trailer. On the side where the tarp system is in the closed position.
- 2) Clean the area with soap and water, dry area.
- 3) Remove backing and adhere label to trailer.
- 4) Repeat for the rear of the trailer.

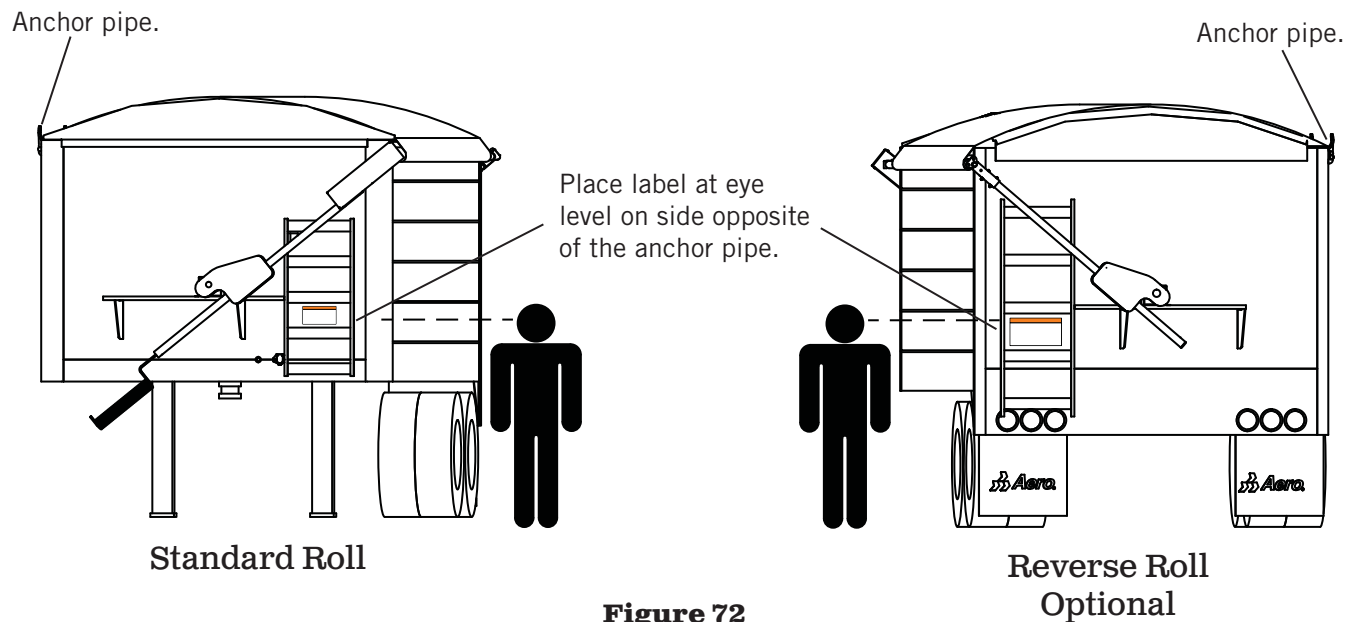
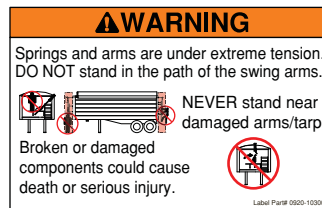


Figure 72

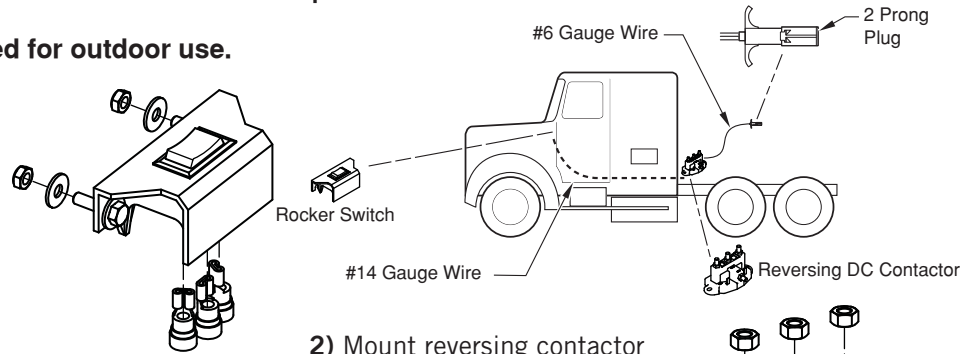
Step 14a

Semi-trailer Truck Wiring

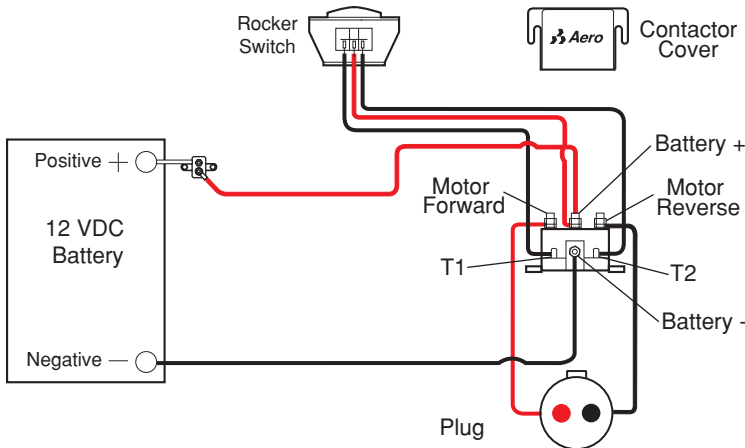
IMPORTANT: Locate Operation/Maintenance Sheet and keep near switch.

IMPORTANT: Switch is not rated for outdoor use.

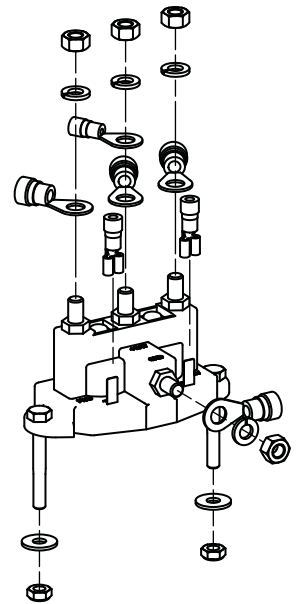
1) Find a convenient place on the driver's side under the dashboard to mount the rocker switch with 1/4-20 x 1" hex bolts



2) Mount reversing contactor outside near back of cab with 1/4-20 x 2" hex bolts.



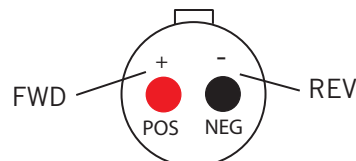
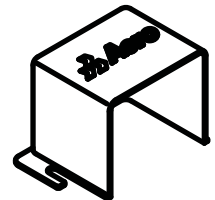
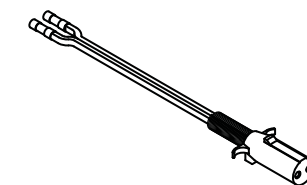
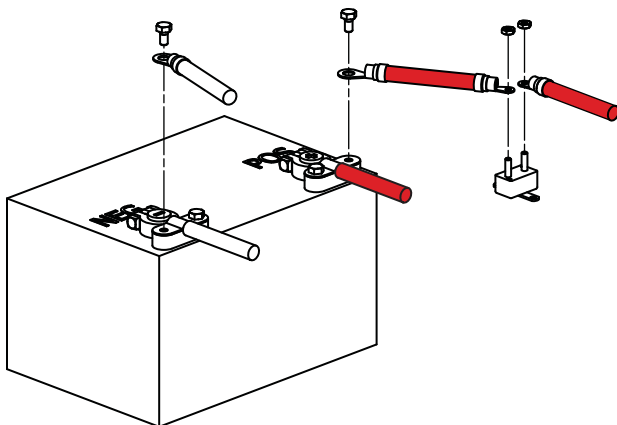
3) Run wire from switch to reversing contactor. Run wire from battery to reversing contactor. Secure all wire with clamps.



4) Connect breaker to battery and secure with zip ties.

5) Run wires from reversing contactor to plug, making sure there is enough wire to reach the receptacle.

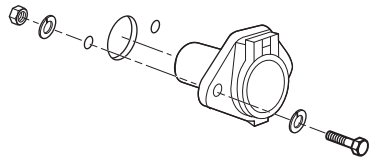
6) Place cover on reversing contactor.



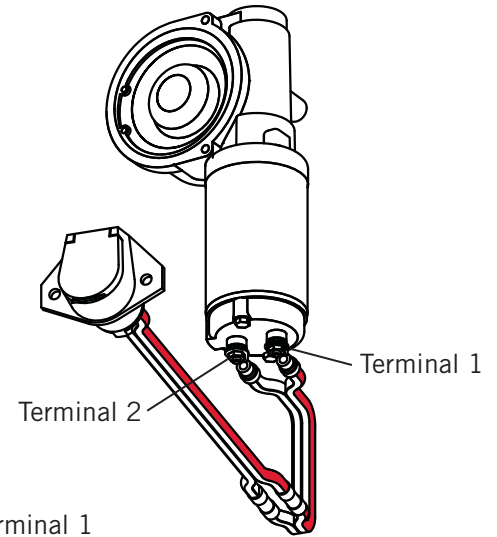
Step 14b

Semi-trailer Wiring

- 1) Mount receptacle in convenient location.



- 2) Run wire from receptacle to motor. Secure all wire with clamps.



Step 14c

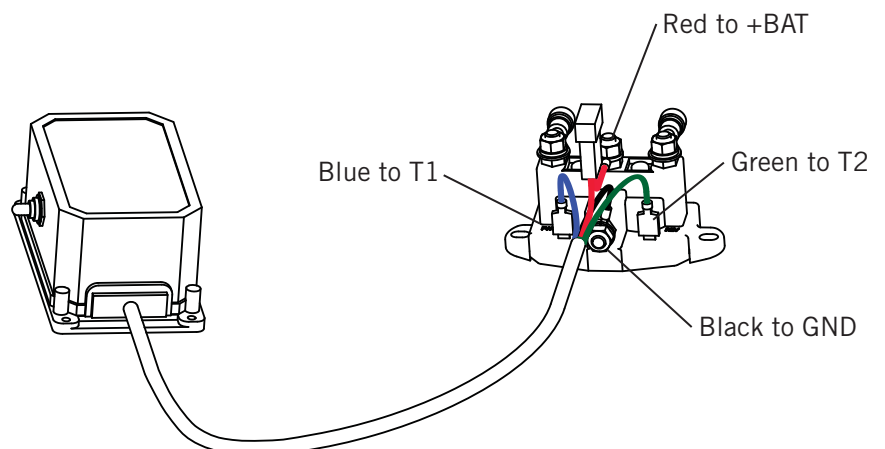
Optional Remote Wiring

⚠ IMPORTANT: Locate Operation/Maintenance Sheet and keep in a convenient location.

⚠ IMPORTANT: Remote receiver must be mounted with the wires at the bottom.

The optional remote kit replaces the use of the rocker switch. Follow steps 12a and 12b and replace the rocker switch with the remote receiver.

- 1) Mount the remote receiver to the back of the cab with the provided screws.
- 2) Connect remote receiver to reversing DC Contactor. Secure all wire with clamps.



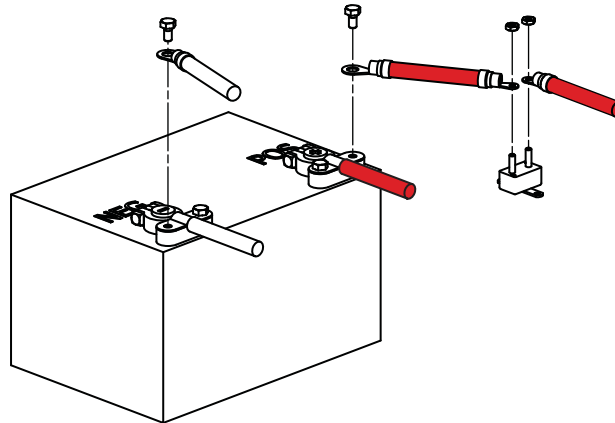
Step 14d

Alternate Remote Wiring

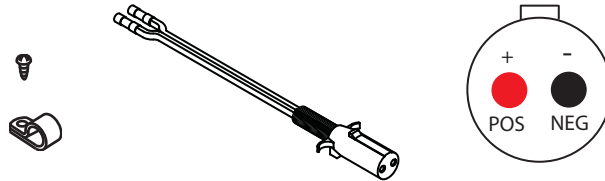
⚠ IMPORTANT: Locate Operation/Maintenance Sheet and keep in a convenient location.

Semi-trailer Truck Wiring

- 1) Connect breaker to battery and secure with zip ties.

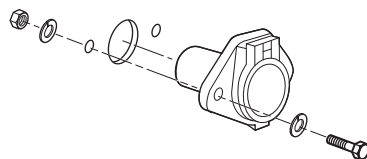


- 2) Run wire from battery to receptacle. Secure all wire with clamps.



Semi-trailer Wiring

- 3) Mount receptacle in convenient location on trailer.



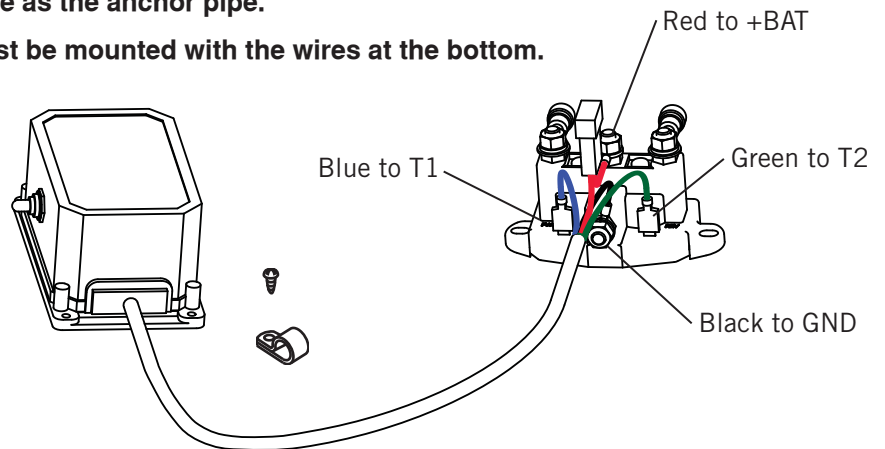
4) Mount reversing contactor under the nose of the trail with 1/4-20 x 2" hex bolts.

⚠ WARNING: DO NOT place remote receiver in the path of the swing arm, or injury could occur. Mount it on the face of the trailer on the same side as the anchor pipe.

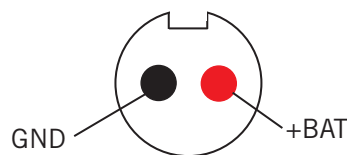
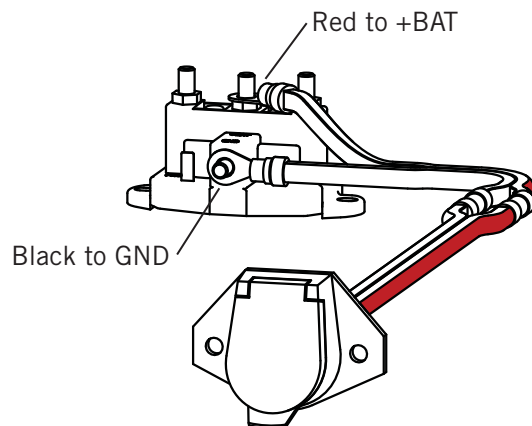
⚠ IMPORTANT: Remote receiver must be mounted with the wires at the bottom.

5) Mount the remote receiver to the back of the cab with the provided screws.

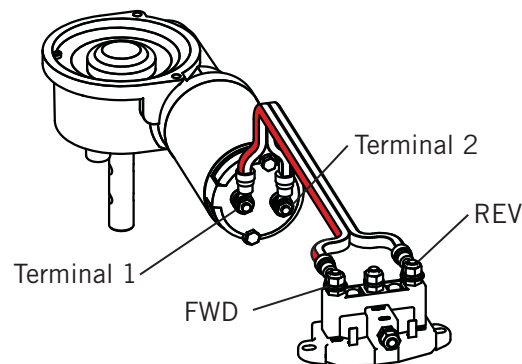
6) Connect remote box to reversing DC Contactor. Secure all wire with clamps.



7) Connect receptacle to reversing DC contactor. Secure all wire with clamps.



8) Connect reversing DC Contactor to motor. Secure all wire with clamps.

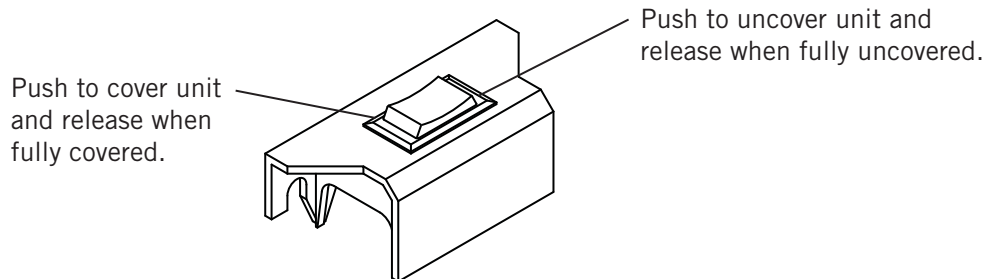


⚠ IMPORTANT: The reversing DC contactor should be mount under the nose of the trailer NOT near the motor.

How to Operate PowerLock™

NOTICE: NOT releasing the switch when the covered or uncovered position is reached may cause the motor to burn out.

Switch

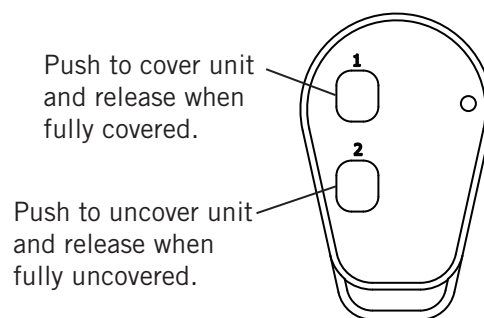


Remote Operation

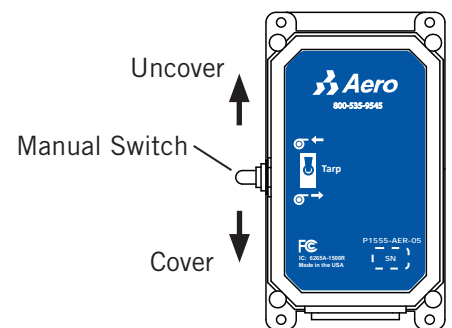
To operate the remote, disable the safety lock out by pushing both buttons for 2 seconds.

NOTE: After 1 minute of not pushing a button on the remote the safety lock out is activated.

Key FOB



Receiver



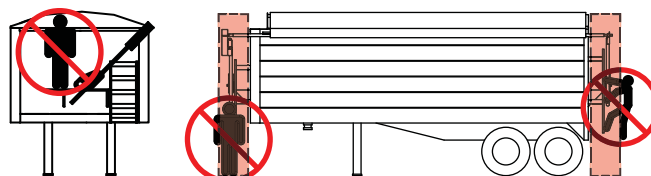
Explanation of Signal Words

- ⚠ WARNING:** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- ⚠ CAUTION:** Indicates a hazardous situation which, if not avoided could result in minor or moderate injury.

Safety Messages related to the operation of PowerLock™

Maintenance recommendations, safety messages, and repair instructions can be found at www.powerlockoperation.com or call 800-535-9545.









- ⚠ CAUTION:** Routinely inspect tarp and swing arms, DO NOT operate if parts are worn or damaged. Worn or damaged parts may come loose. Replace all worn or broken parts IMMEDIATELY.
- ⚠ CAUTION:** If the arms are damaged or fail to rotate freely under normal operation, DO NOT operate. Secure any damaged parts until repairs can be made.
- ⚠ WARNING:** The swing arms rotate under extreme spring tension during operation. during operation. Make sure no one is in the path of or on the arms.



How to Maintain the PowerLock™

▲ IMPORTANT: Replace all worn or broken parts immediately. Repairs must **ONLY** be made after proper instruction.

Minimal maintenance is required for the PowerLock™. Individual usage and operating conditions will determine when to check the PowerLock™. Aero Industries recommends a weekly inspection of the following items:

-  Inspect Tarp for wear and tears.
-  Inspect arms for damage (cracked, dented or bent).
-  **Bearings:** Pull the shafts from side to side and in and out. If there is excessive play, replace the bearings. Lubricate as often as necessary with penetrating oil. **DO NOT** use an excessive amount of lubricant.
-  **Springs:** Examine springs for breakage or distortion. Apply a light coat of penetrating oil to tension springs as needed.
-  **Fasteners:** Make sure that all mounting bolts and screws are in place and tight and that no parts are worn or damaged.
-  **Chain:** Check the chain tension, that links move smoothly, and make sure the master link is on. Lubricate the chain regularly with penetrating oil.
-  **Electrical Connections:** Check all electrical connections and tighten any that have become loose.
-  **Safety Labels:** Clean labels with soap and water. Replace if damaged and/or difficult to read.

Replacement Parts and instructions may be obtained from your Aero dealer or by contacting Aero Industries.

Explanation of Signal Words

- ▲ WARNING:** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- ▲ CAUTION:** Indicates a hazardous situation which, if not avoided could result in minor or moderate injury.

Safety Messages related to the Maintenance of PowerLock™

Maintenance recommendations, safety messages, and repair instructions can be found at www.powerlockmaintenance.com or call 800-535-9545..

- ▲ CAUTION:** Routinely inspect tarp and swing arms, **DO NOT** operate if parts are worn or damaged. Worn or damaged parts may come loose. Replace all worn or broken parts **IMMEDIATELY**.
- ▲ WARNING:** The swing arms rotate under extreme spring tension and damaged arms could come loose unexpectedly allowing the arm to rotate to with tremendous force. Before any repairs see repair instructions on website for "Properly Releasing Spring Tension" and properly release spring tension.
- ▲ WARNING:** **DO NOT** unlock the roll stops holding the anchor pipe before releasing the spring tension on the PowerLock™. Unlocking the roll stops can cause a rapid release of spring tension.



INDIANAPOLIS, IN
Indianapolis, IN 46241
800-535-9545
FAX: 317-244-1311

OMAHA, NE
Omaha, NE 68137
800-535-9545
FAX: 402-895-6129

STREETSBORO, OH
Streetsboro, OH 44241
800-535-8552
FAX: 330-626-3277

© 2014 Aero Industries, Inc.

US: 3384413, 3785694, 4657062, 6715817, 6857682, 6886879, 7032950

Canada: 2466454, 2514605, 2607746

UK: 2413119