

**FLATBED TARPS & TARP SYSTEMS** 

P/N 2002257 Rev. A



# MAGNUM

## **Retractable Tarp System**

READ BEFORE INSTALLING

VERMILLION, SOUTH DAKOTA • BRANDTFORD, CANADA 1-877-474-8726 (U.S.) • 1-800-265-0823 (Canada) www.SHURTITE.com

SHOP ONLINE: www.SHOPSHURCO.com

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

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

Returns of a product for warranty must be accompanied by a Return Merchandise Authorization number (RMA#), obtained by 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 conjuction 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.shurtite.com** 

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#### MESSAGE TO OWNERS

Thank you for buying this tarping system from ShurTite<sup>™</sup>. 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 **A** is used to alert users to potentially hazardous conditions and is followed by caution, warning or danger messages.

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

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

## QUESTIONS? CALL OUR HELP LINE: **1-866-748-7435**

MON-FRI 8 AM-5 PM CENTRAL TIME

We at ShurTite<sup>™</sup> 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 ShurTite<sup>™</sup> dealers.

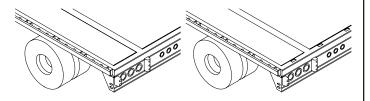
#### BEFORE STARTING THE INSTALLATION:

STEP 1: Verify the trailer length that was submitted on the **Trailer Order Form.** This form can be found linked in the Order Management Window.

You will need to measure the trailer from the font to the rear.

• REAR POCKETS: If trailer has rear pockets this measurement should stop at the front side of the rear pocket. If this is not correct you will need to use this measured location as the rear of the trailer.

• NO REAR POCKETS: The measurement should match the distance from the front of the trailer to the rear of the trailer. If this is not correct you will need to use this measured location as the rear of the trailer.



STEP 2: Verify that the Job #, serial number and customer name match those on the trailer order form and kit boxes.

#### Air Deflector Installation......51 Rear Flap......54 Rear Step ......65

#### SAFETY

We at ShurTite <sup>™</sup> 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 ShurTite<sup>™</sup> 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.

#### SUGGESTED INSTALLATION TOOL LIST

May require some or all listed tools.

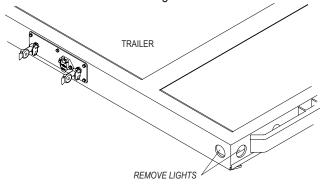
- 1. Aluminium Welder and/or Steel Welder (Dependent on Trailer Make/Model)
- 2. Circular/Skill Saw to Cut Aluminum
- 3. Hand Drill 1/2" Chuck
- 4. Grinder Aluminum/Steel
- 5. Plasma Cutter (Optional)
- 6. Wire Brush (To Clean Welds)
- 7. Utility Knife (To Cut Track Rubber)
- 8. Black Marker
- 9. Sliding Bar Clamps 8-10 Clamps or 10-12 Heavy Vice Grip Locking Pliers to Mount Track
- 10. Impact Gun 3/8" or 1/2" Drive (Same as Sockets)
- 11. Adjustable Tri Square (To Weld Track Tabs Perpendicular to Deck)
- 12. 2' Carpenter Square or Level (To Set Headboard Angle)
- 13. Measure Tape
- 14. Hammer (To Install Tarp Anchors)
- 15. Heavy C-Clamp Vice Grip with Swivel Pads or C-Clamp (To Install Tarp Anchors)
- 16. Cocking gun (To Seal Headboard)
- 17. 24" Long Pry Bar (To Install Tarp Anchors)
- 18. 1" 82° Counter Sink (For Track Bolts)
- 19. 3/16" Rivet Gun
- 20. Pliers (To Install Tarp Anchors)
- 21. Wire Strippers (To Install Headboard Lights)
- 22. Side Cutters (To Install Headboard Light Wiring, Cut Straw for Tarp Anchor Install)
- 23. 3" Hole Saw (Wheel Access Hole in Track)
- 24. 2-3/4" Hole Saw
- 25. Ability to Cut Holes for Any Size Trailer Lights at Front or Rear
- 26. 3/4" Socket
- 27. 3/4" Wrench
- 28. 1/2" Wrench (For Rope and Pulley Install Over 90 Bar Latch)
- 29. 7/32" Hex Key Socket 3/8" Track Bolt (For Steel Trailer)
- 30. 5/16" Hex Key Socket 1/ 2" Track Bolt (For Aluminum Trailer)
- 31. 9/16" Wrench
- 32. 9/16" Socket
- 33. 1/2" Drill Bit
- 34. 3/8" Drill Dit
- 35. #3 (Black) Robertson Screw Driver (To Install Lock Brace Guide)
- 36. 7/16" Wrench (To Install Lock Brace Guide)
- 37. 1/4" Drill Bit (To Install Hole for Tether)
- 38. 13/64" Drill Bit (To Install Rivets)
- 39. Diagonal Brace for Headboard Mounting Angle 2 Pieces, Minimum 8' Long (Wood 2" x 4", Steel Angle, Aluminum Angle)
- 40. Floor Jack (To Install Mount Track Optional)
- 41. Some Method to Bend Small Pieces of Aluminum or Steel

## Hardware List and Drawings Coming Soon

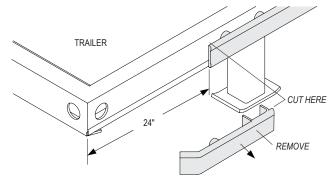
**NOTE:** If not installing FRONT END BUILT OUT, skip to page 8.

#### TRAILER PREPARATION

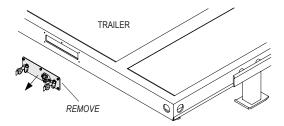
**STEP 1:** Remove all lighting around front of trailer. Be sure wiring is out of way and not resting on any metal parts that may become heated due to welding.



**STEP 2:** Remove rub rail and pockets 24" back measured from front of trailer.



**STEP 3:** Remove glad-hands, glad hand connections and electrical connections.

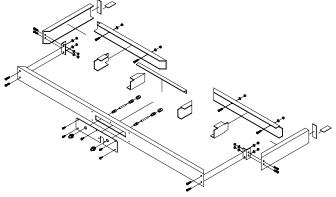


STEP 4: Prepare front and side for welding.

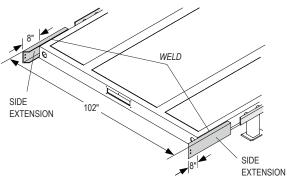
#### INSTALLATION STEPS

**NOTE:** Install front build-out parallel to front and flush with top of deck.

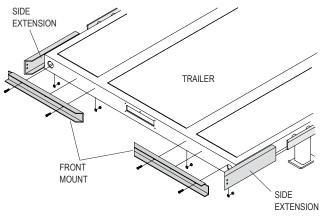
**STEP 1:** Review assembly diagram prior to starting build-out installation.



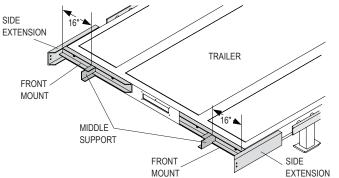
**STEP 2:** Weld side extensions PN 2001386 to trailer with angled end measuring 8" from front of trailer.



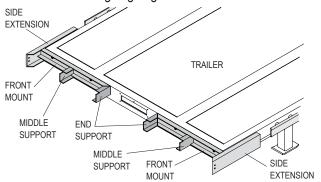
**STEP 3:** Fit notched end of front mount PN 2001389 and PN 2001390 into side extensions with notch up and top surface flush with side extensions. Weld to trailer and install bolts, washers and nuts.



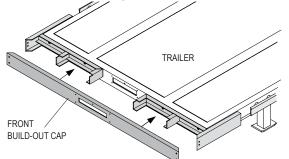
**STEP 4:** Position and tack in place with middle support PN 20013897 and PN 2001388.

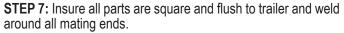


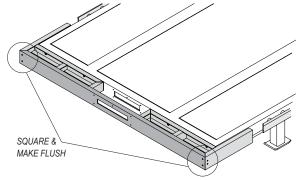
**STEP 5:** Position and tack in place end support PN 2001391 and PN 2001392 aligning angled ends with front mount.



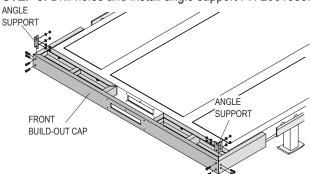
**STEP 6:** Fit front build-out cap PN 2001384 between side extensions and tack corners together.



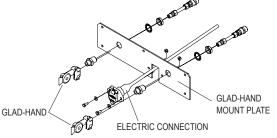




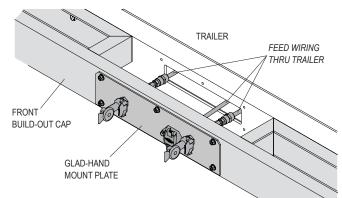
STEP 8: Drill holes and install angle support PN 2001385.



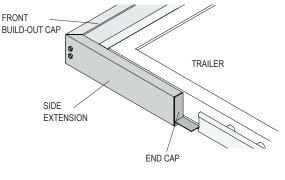
**STEP 9:** Install air extension kit PN 2001394 and attach gladhands and electrical connection to gladhand mount plate PN 2001393.



**STEP 10:** Fasten glad-hand mount plate to front build-out cap with five bolts and nuts.

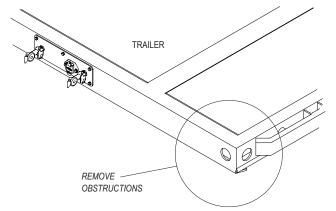


**STEP 11:** Weld end caps to side extensions.

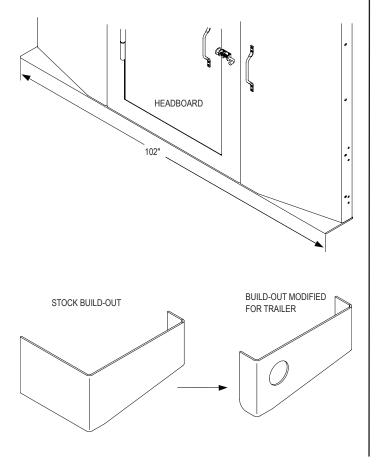


**NOTE:** Front corner must be square to front and side of deck. Each trailer is different and may need different modifications.

**STEP 1:** Remove obstructions from the front corners of trailer.

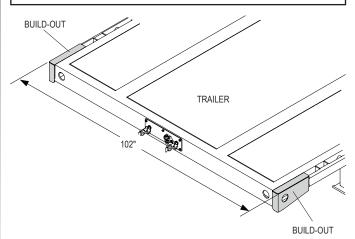


**STEP 2:** Measure the width of base plate of headboard and build your build-out to match width.

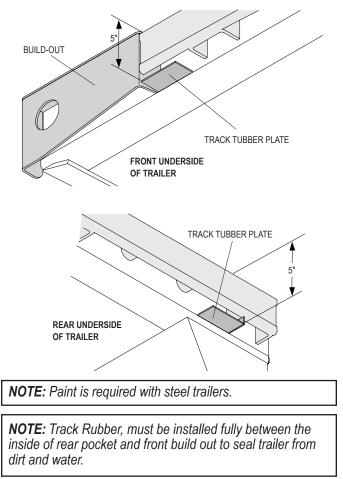


**STEP 3:** Tack weld build-out to trailer making sure cap sits flush with deck of trailer, and weld in place both build-out and cap.

**HINT:** It may be necessary to add extra material not included with kit.

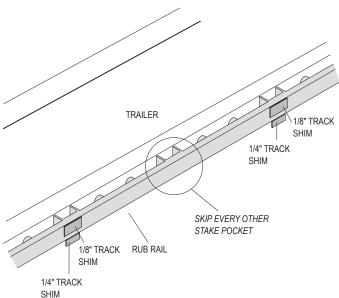


**STEP 4:** Add one, track rubber plate 5" from top of deck behind build-out, and one, track rubber plate ahead of last pocket to rear 5" from top of deck to fasten track rubber to later.

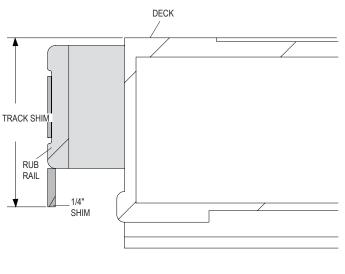


**STEP 1:** Weld on 1/8" and 1/4" track shims. The 1/8" shims perpendicular to the deck. The track shims are installed every other stake pocket where bolts will go.

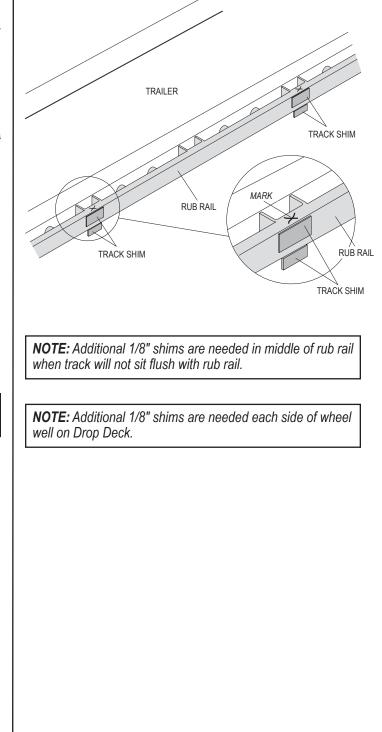
**OPTIONAL:** The 1/8" shims may be duct taped over the conspicuity tape.



**NOTE:** If the 1/4" shims extended more than 5" below the deck, they must not be used.



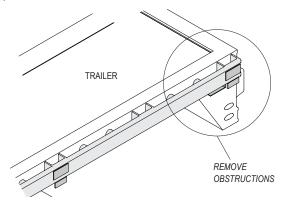
**STEP 2:** Mark deck at center of stake pockets to locate shims for Track Installation.



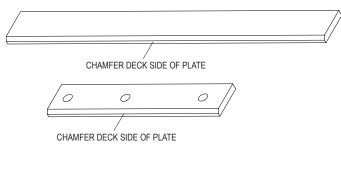
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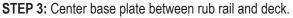
For systems with winding brace tensioning system.

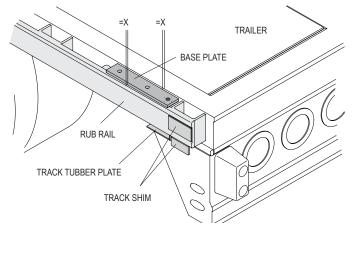
**STEP 1:** Remove or modify any obstructions located in installation area prior to installation of rear lock brace mount.



**STEP 2:** Chamfer deck side of plates to allow for weld beed where plate contacts deck.

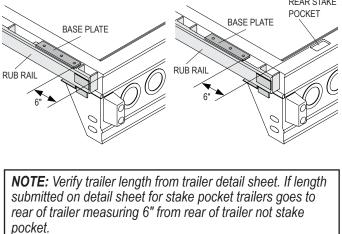






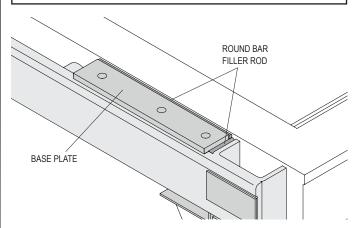
10

**STEP 4:** Base plate will sit centered between rub rail and deck and flush with deck, 6" from rear of trailer or 6" from front side of rear stake pockets.

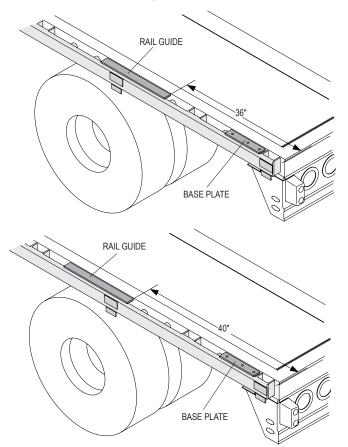


**STEP 5:** Tack weld base plate into position with several welds to prevent base from warping. Weld base solid to trailer.

**NOTE:** You may have to add additional support or remove material to mount base plate.

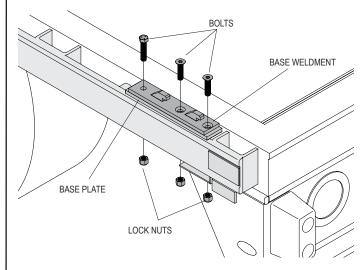


**STEP 6:** Install rail guide mount 36" from rear of base plate, from Step 3 flush to deck. For winding braces 72" to 100" high or 46" for drop deck winding braces.

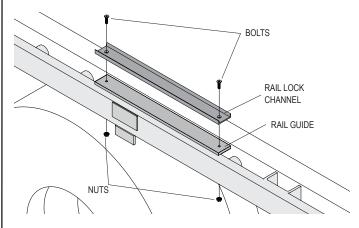


**STEP 7:** Place base weldment on top of base plate with hooks open towards rear of trailer.

NOTE: Weldment must align with holes already in base plate. Hex head bolt toward front of trailer. **STEP 8:** Insert hardware provided and fasten to trailer.



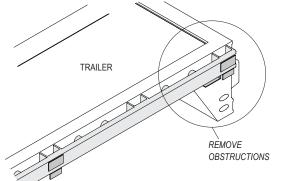
**STEP 9:** Place rail lock channel on base rail. Align, drill and countersink three holes for 1/4" flat head bolts PN 2000430 and nuts PN 2000440 install bolts at either end of rail and one in center making sure they are flush with guide rail.



STEP 10: Repeat installation procedure for other side of trailer.

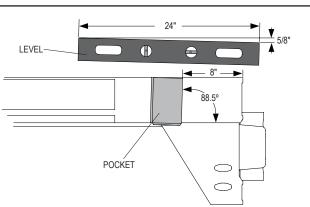
For systems with posts and ratchet tensioning system.

**STEP 1:** Remove or modify any obstructions located in installation area prior to installation of rear lock brace mount.

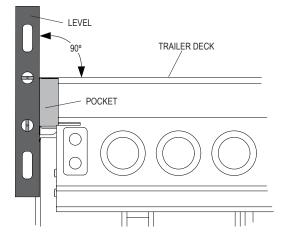


**STEP 2:** Pocket is welded flush to deck, 8" from rear of trailer on an angle of 5/8" over 2' from bubble level. (88.5°)

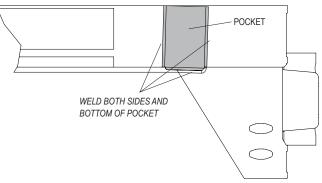
**NOTE:** Pockets angled back to allow posts more room to flex forward during tensioning.



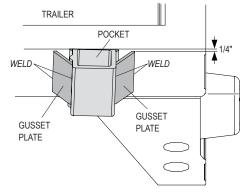
**STEP 3:** Ensure pocket is bubble level (parallel to deck) on sides to ensure proper installation of track later.

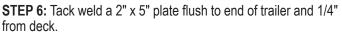


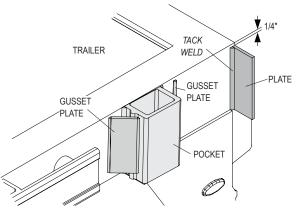
**STEP 4:** Weld pocket solid to trailer on both sides of pocket and underside.



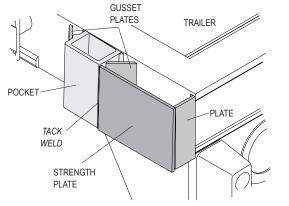
**STEP 5:** Weld in 2" x 5" gusset plates to both sides of pocket 1/4" from deck.



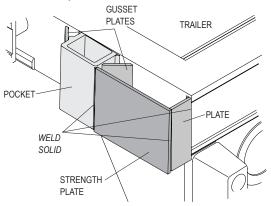




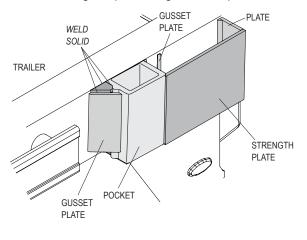
**STEP 7:** Test fit 6" x 8" strength plate flush to side of pocket and to side of the 2" x 5" plate.



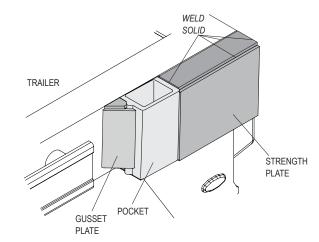
**STEP 8:** Weld 2" x 5" plate solid and weld strength plate solid to pocket and 2" x 5" plate.



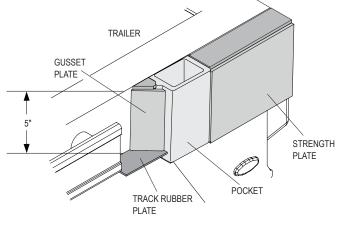
STEP 9: Weld triangle cap to front gusset and pocket.



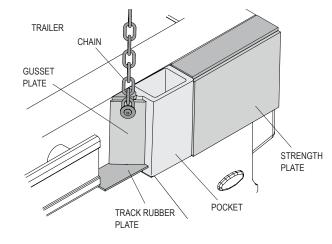
**STEP 10:** Weld 2" x 8" strength plate cap into position.



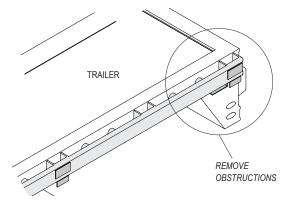
**STEP 11:** Weld a 1/8" track rubber plate to internal pockets 5" down and parallel to deck.



**STEP 12:** A length of chain is installed to top of triangle cap with 1/4" huck rivet and washer to secure posts later.

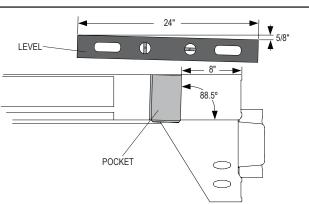


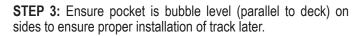
**STEP 1:** Remove or modify any obstructions located in installation area prior to installation of rear lock brace mount.

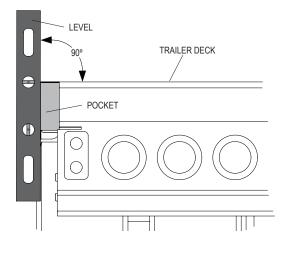


**STEP 2:** Pocket is welded flush to deck, 8" from rear of trailer on an angle of 5/8" over 2' from bubble level.

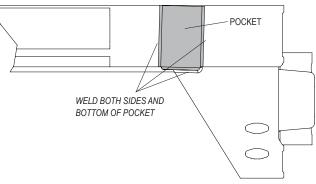
**NOTE:** Pockets angled back to allow posts more room to flex forward during tensioning.



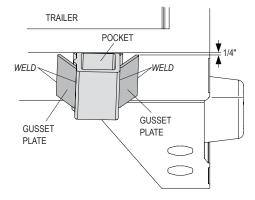




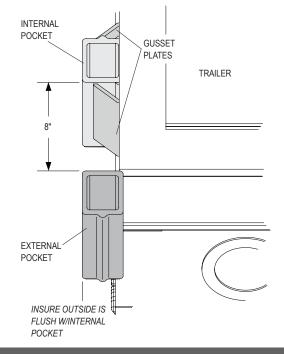
**STEP 4:** Weld pocket solid to trailer on both sides of pocket and underside.



**STEP 5:** Weld in 2" x 5" gusset plates to both sides of pocket 1/4" from deck.

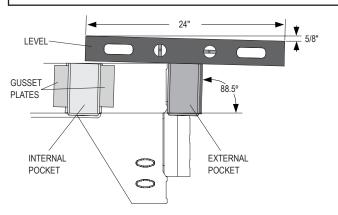


**STEP 6:** Position external pocket at rear of trailer approximately 8" from internal pocket and line it up with outside of internal pocket allowing track to sit straight later.



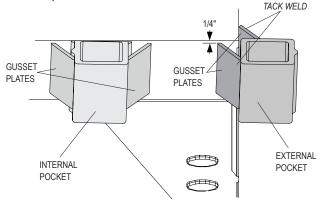
STEP 7: Add angle to external pocket.

**NOTE:** There will be a gap at top of pocket from angling the pocket back, fill with weld. The high heat will make pocket turn, make sure to distribute heat evenly on all sides.

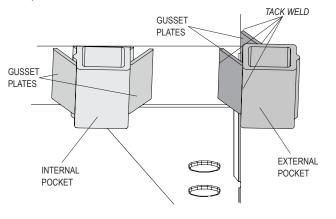


STEP 8: Adjust and weld solid.

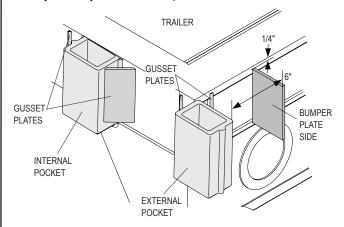
**STEP 9:** Tack weld in two more of gusset plates to either side of external pocket on corner of trailer.



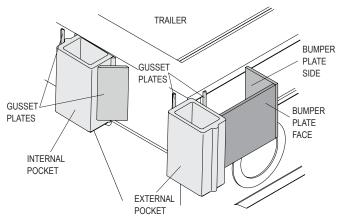
**STEP 10:** With pockets aligned, weld gusset plates to trailer and pockets.

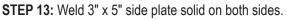


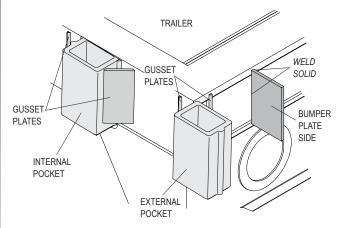
**STEP 11:** Tack weld bumper 3" x 5" plate side into place approximately 6" away from external pocket and 1/4" down from deck.



**STEP 12:** Test fit 5" x 6" bumper plate face so it sits square with pocket and side plate.







STEP 14: Weld bumper face to side plate and external pocket and strength plate to pockets.

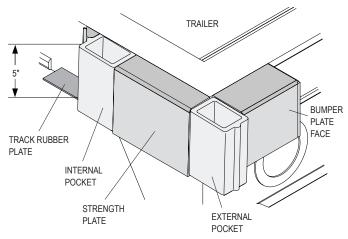
NOTE: Weld on inside as much as possible.

PLATE SOLID SIDE BUMPER PLATE INTERNA FACE POCKET WELD SOLID **EXTERNAL** POCKET

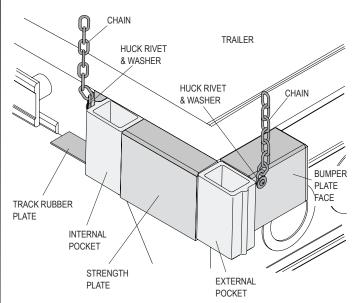
STEP 15: Weld caps for rear bumper, strength plate and gusset plate toward front of trailer.

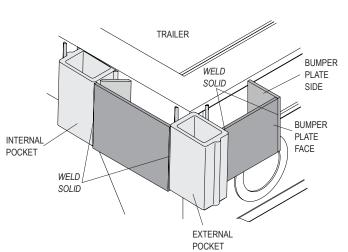
WELD SOLID TRAILER WELD BUMPER WELD SOLID PLATE SOLID SIDE BUMPER PLATE INTERNAL FACE POCKET STRENGTH EXTERNAL PLATE POCKET

STEP 16: Weld a 1/8" track rubber plate to internal pockets 5" down and parallel to deck.



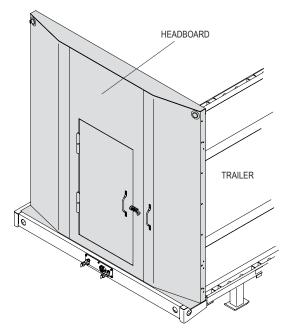
STEP 17: A length of chain is installed to top of triangle cap with a 1/4" huck rivet and washer to secure combo pockets.



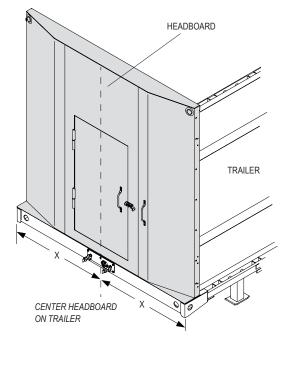


**NOTE:** Steel Trailers: Add duct tape to bottom of headboard to be a barrier against corrosion.

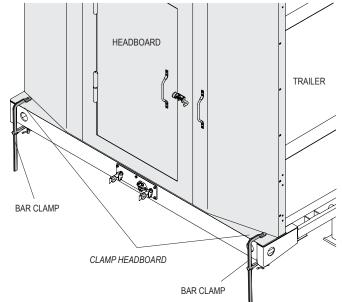
STEP 1: Lift headboard onto trailer deck.



**STEP 2:** Align and center headboard with front of trailer and on both sides.

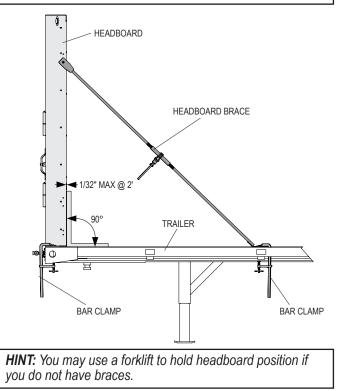


**STEP 3:** Attach headboard braces and clamp headboard foot plate with bar clamps.



**STEP 4:** Set headboard angled by adjusting headboard braces and checking with 24" square measuring distance at bottom of square and then at top to make sure headboard is set at 90° to deck. A forward lean of not more than 1/32" is acceptable.

**NOTE:** Add shims to fill gap under headboard at bolt locations. Too much gap under headboard and it might bow at top when bolts are installed.



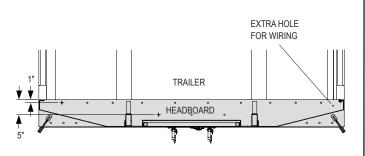
#### Headboard Installation - Bolting the Headboard

**STEP 1:** Drill small hole using pilot bit to ensure there will be no issues with new bolt locations in deck and re-drill 1/2" holes as per diagram.

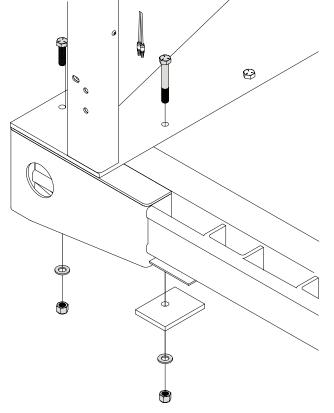
**NOTE:** Eight 1-3/4" and fifteen 3-1/2" bolts supplied. Adjust bolting pattern to suit individual trailer.

#### 

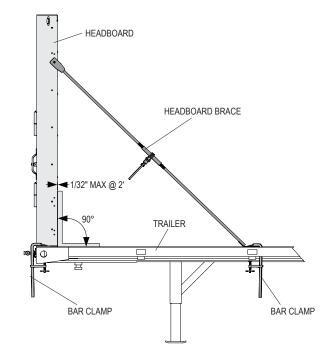
Be aware of airlines, beams, wiring and other variables when drilling and bolting through trailer.



**STEP 2:** Insert bolts and attach washers and nuts from underneath using a wrench and an impact wrench. Aluminum washer plates are generally not required for bolts along very front of trailer.



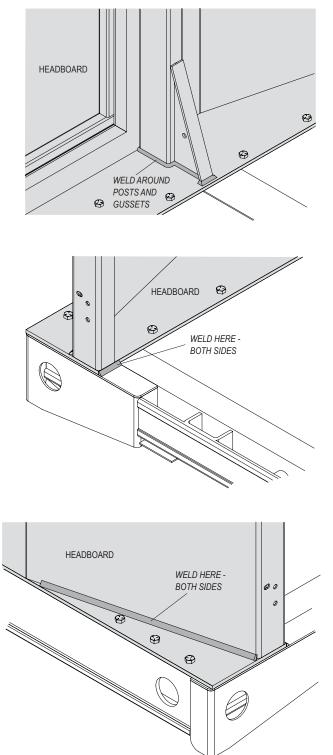
**STEP 3:** Re-check angle of headboard to ensure it is still at 90° to deck.



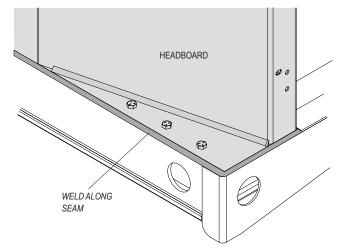
**HINT:** For bolting on wood decks, use structural angle underneath trailer.

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**STEP 1:** With headboard aligned at 90°, weld around posts and gussets on inside of headboard to lock position. Additional welds are needed along front corners between base plate and headboard itself.



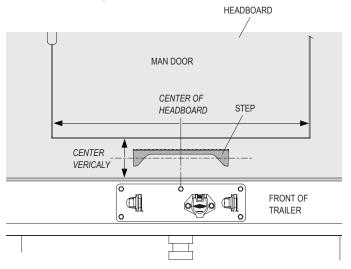
**STEP 2:** For aluminum trailers weld along seam between front of trailer and headboard mount plate. Grooving may be required to allow for better penetration of weld.

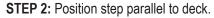


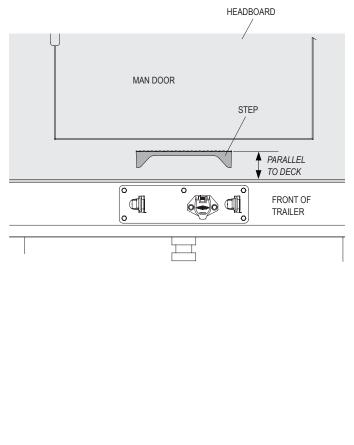
Care must be taken to protect finish of headboard from welding spatter.

#### For headboards with man door.

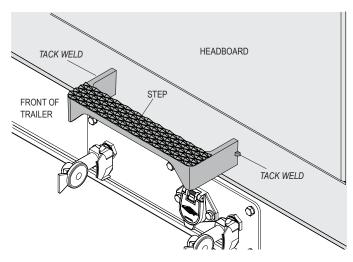
**STEP 1:** Position step in middle of headboard under man door between bottom of man door and base plate of headboard with treaded side facing up.



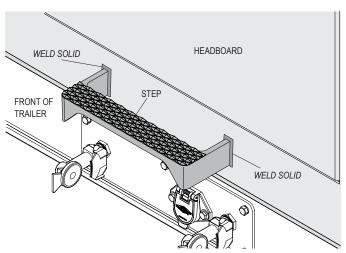


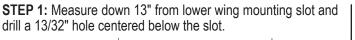


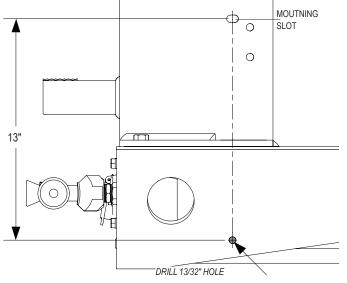
**STEP 3:** Tack weld both ends of step and re-adjust step to parallel to deck.



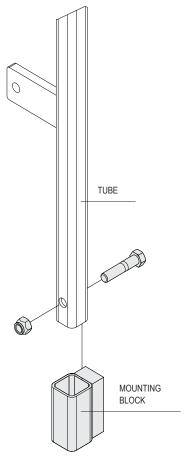
**STEP 4:** With step parallel to face of headboard, weld step solid making sure not to be too hot and blow through headboard material.

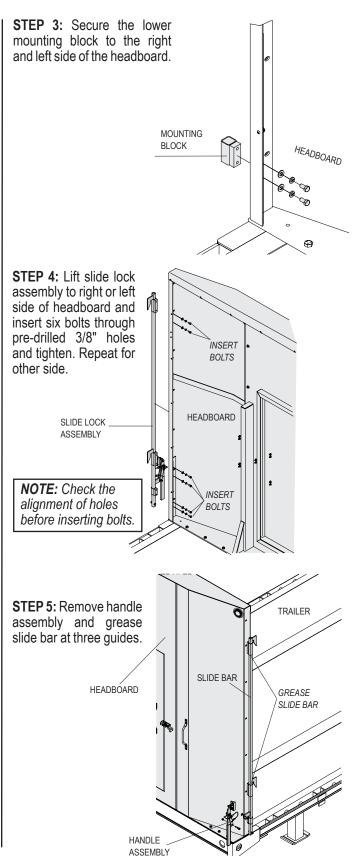




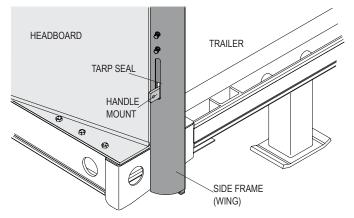


**STEP 2:** Remove bolt from end of slide lock + slide lower mounting block from tube.

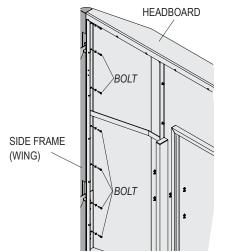




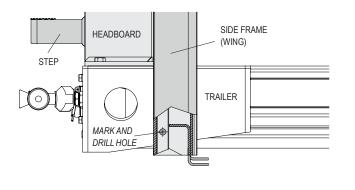
**STEP 6:** Slide appropriate side frame (wing) onto slide locks making sure to slide bottom handle mount through tarp seal on inside of side frame and out through slot.



**STEP 7:** Bolt side frame (wing) into position using pre-drilled holes in headboard. Make sure side frame aligns with top of headboard and front is flush.

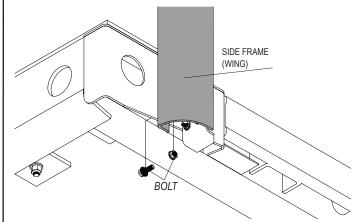


**STEP 8:** A hole will need to be match drilled into front build-out to accommodate additional bolt located at bottom of side frames (wings).

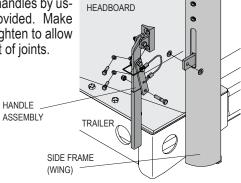


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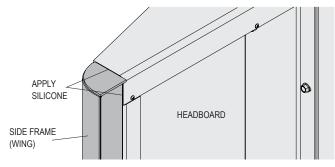
**STEP 9:** Secure the bottom of the side frames (wings) with the bolt and nut.



**STEP 10:** Mount handles by using hardware provided. Make sure not to over-tighten to allow for free movement of joints.



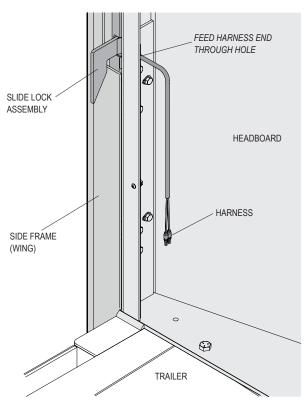
**STEP 11:** Apply silicone to top of wing cap and inside wing where bow will seal with headboard where "D" rubber is mounted. This sealing must be done to accommodate the "D" Rubber Installation.



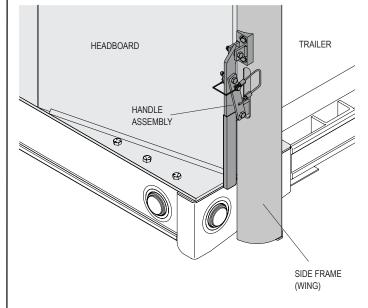
**NOTE:** Further sealing is done during final phase of installation.

**STEP 1:** Drill a hole through drivers side corner of headboard and trailer deck if not done during Bolting the Headboard section.

**STEP 2:** Feed end of harness through hole in corner of head-board.



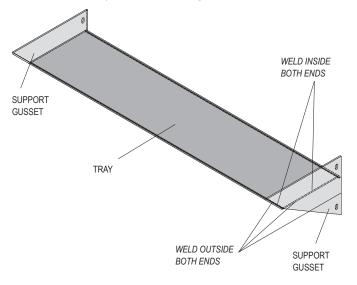
**STEP 3:** Connect harness to trailer electrical system and reinstall corner clearance lights.



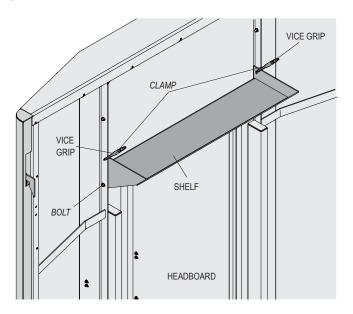
#### Headboard Installation - Utility Shelf

#### Optional accessory.

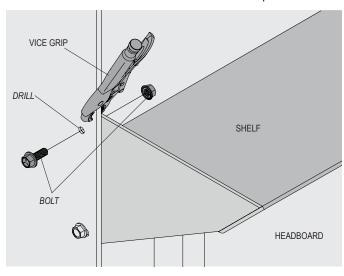
STEP 1: Weld tray to side support gussets inside and out.

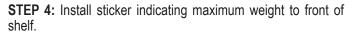


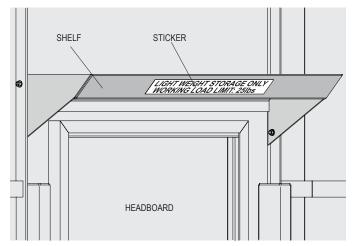
**STEP 2:** Bolt clamp shelf into place above man door using existing 3/8" bolt and nuts in headboard. Secure top of shelf w/vice grips.



STEP 3: Drill four holes to fasten with hardware provided.

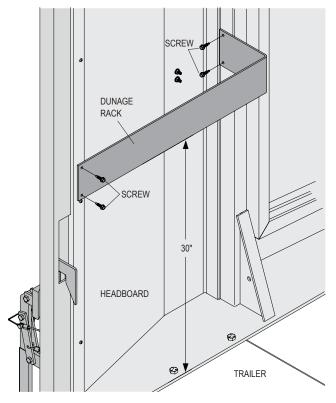




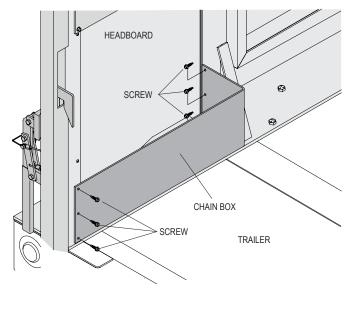


#### Optional accessory.

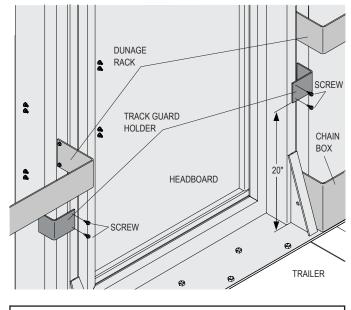
STEP 1: Measure up from floor 30" and mount dunage rack.



STEP 2: Position chain boxes and fasten to head board.



**STEP 3:** Attach track guard holder to head board at 20" from base plate.

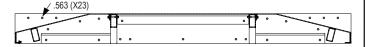


**NOTE:** Sealing of side frame (wing) was done in previous section, Front Lock and Side Frames.

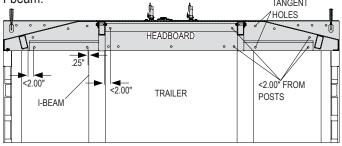
#### **WARNING**

Do not drill through the I-beam.

**STEP 1:** Determine the location of the twenty-three total holes. Position of holes will depend on trailer. Bolt in with hex cap screw HD 1/2-20" and hex locknut HD nylon insert 1/2-20" GD-8 PL.

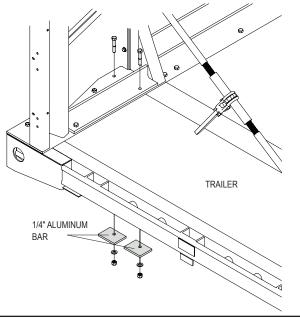


**STEP 2:** Drill at least two 9/16" holes into each 3" x 3" angle piece (within 2" from each post, if possible) and bolt in 1/2" bolts. Drill at least four holes through the base plate and/or a 3" x 3" angle approximately 1/4" tangent to outside of trailers support I-beam.

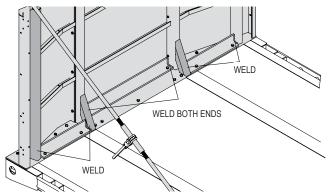


STRAIGHT FACING VIEW OF TRAILER HEADBOARD

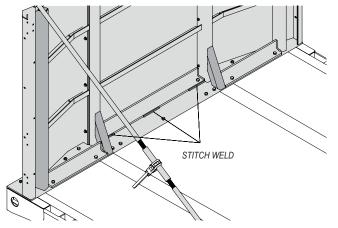
**STEP 3:** Span a piece of 1/4" aluminum bar on underside of trailer from 1/2" bolt to underside of I-beam flange.

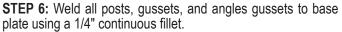


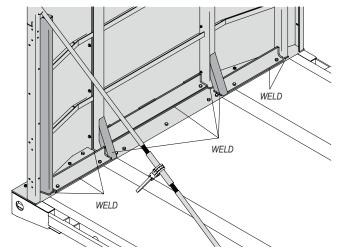
**NOTE:** After headboard base plate has been aligned and secure to trailer deck and proper vertical angle for headboard has been achieved move on to following steps. **STEP 4:** With headboard alligned at 90°, weld angles to tube gussets and posts with a .25" continuous fillet along perimeter.



**STEP 5:** Stitch weld middle angle to front panel sheet with 6" x 1/4" fillet weld at right, left and in the middle.







**STEP 7:** Install remaining components to headboard as standard installation procedure (i.e. wings, wiring, etc.). Refer to PAGES 20 - 25

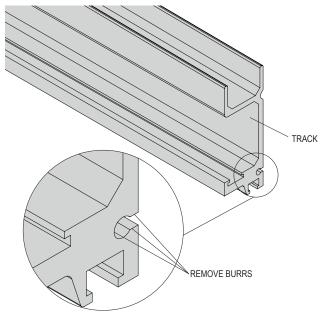
**STEP 1:** Determine length of track required. Measure from rear end of deck all the way up to headboard wings, add 2" to overall length or 9" from front without headboard installed, add 2" to overall length. Track will extend beyond end of trailer but not beyond bumper.

STEP 2: Transfer measurement to track and cut.

**NOTE:** Track rubber length is distance between front buildout and last pocket to rear. Measure from each end the distance to track rubber mounts, mark track.

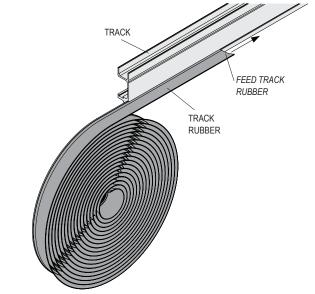
**NOTE:** For 53' trailers, 5' of track will need to be added to front.

**STEP 3:** Remove any burr from end of track where track rubber will be installed.



STEP 4: Blow out channel for track rubber entire length of track.

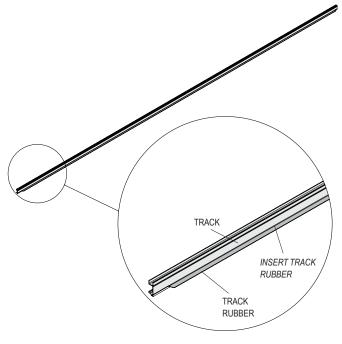
**STEP 5:** Feed track rubber into channel provided in track extrusion.



**STEP 6:** Pull track rubber into track up to previously marked line and cut. Allow for stretch.

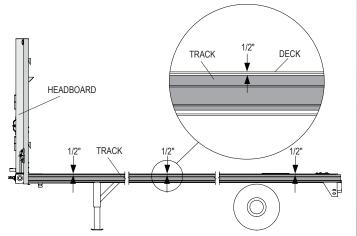
*HINT:* You can use lubricant to help rubber slip in channel more easily. (Example: CRC 33-36 Multi Purpose Lubriacant)

STEP 7: Insert track rubber in to track.

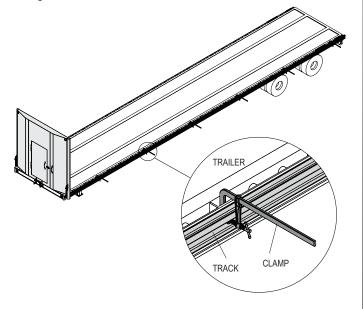


**NOTE:** Rear lock brace mount plates or post pockets and front corner built-out and tracker rubber must be installed before track mounting.

**STEP 1:** Lift track into approximate required position 1/2" from deck to top of track. This distance must be consistent from front-to-back on both sides.



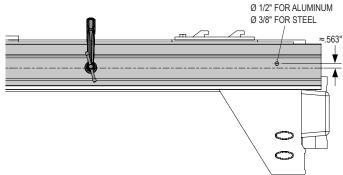
**STEP 2:** Clamp with six or seven bar clamps evenly spaced along trailer.



**NOTE:** Place clamps in stake pockets that do not have track shims. This is where bolts go. Top of track must be below deck edge same distance from front-to-back and side-to-side.

**STEP 3:** Starting from rear, loosen one or two bar clamps and set top of track 1/2" from top of deck. Re-tighten clamps.

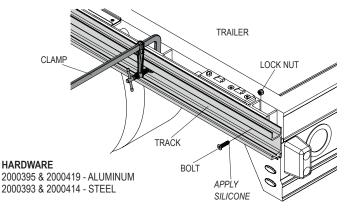
**STEP 4:** Starting at rear drill appropriate sized hole for hardware provided (1/2" bolts for aluminum trailers and 3/8" bolts for steel trailers) at approximately 1/2" up from center of wide space on track into stake pockets that were previously marked. See track shims.



STEP 5: Countersink holes to allow a flush mount of bolts.

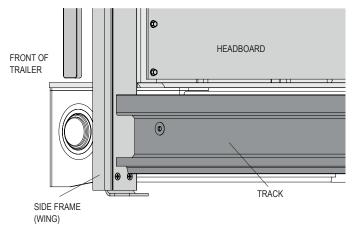
**HINT:** The head of bolt should be not more than 1/32" above surface. Be careful not to countersink too much.

**STEP 6:** Apply silicone to back of bolt and insert bolt in holes and fasten with nylon insert lock nut.



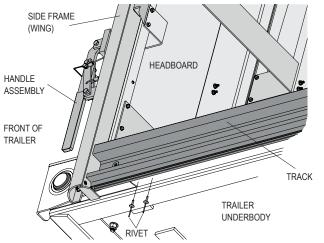
**STEP 7:** Hold nut with a wrench and tighten with impact wrench. Give nut an additional turn with wrench to ensure nut is tight.

**STEP 8:** Start from rear ends of track (last pocket to rear). Repeat Steps 4 and 5 with last bolt in front corner build-out.

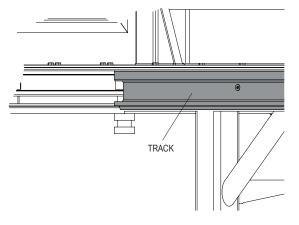


STEP 9: Remove bar clamps and clean out debris with an air gun.

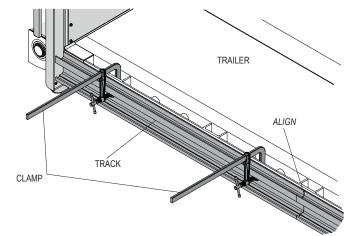
**STEP 10:** Rivet track rubber to 1/8" track rubber plates previously installed during trailer modification. Two rivets at each end.



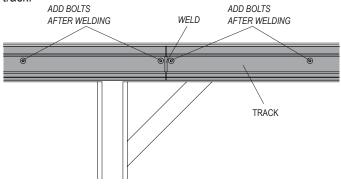
**STEP 11:** For 53' trailer install rear track section first leaving out last bolt toward front.



STEP 12: Align front section with rear and clamp into place.

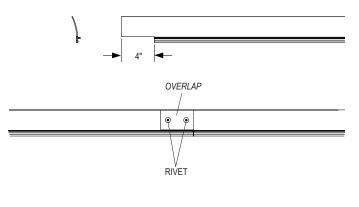


**STEP 13:** Weld ends of track together only in wide section of track.



**NOTE:** Both ends must align exactly or you may have problems inserting track insert.

**STEP 14:** If required, trim and overlap rubber seal with the section to the front of the trailer below the next section (road side). This is to keep the tab lifting off the next section as the trailer is traveling down the road. Secure the two sections of seal with silicon and rivets.

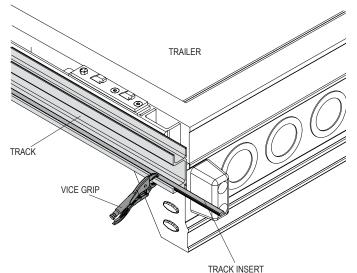


#### **Track Installation - Track Insert**

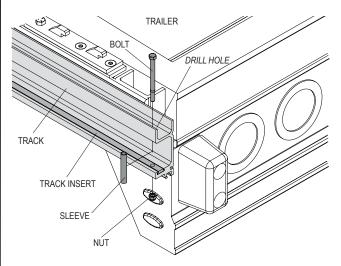
**STEP 1:** Insert white nylon track insert into one side of track. Fill track from front-to-rear.

**NOTE:** If headboard is not installed, secure at front with a pair of vice grips. Do not proceed to next step until headboard and the wings (side frames) have been installed.

**STEP 2:** Push track insert towards front of trailer and make sure there are no gaps in track insert. Temporarily hold in position with a vice grip.



**STEP 3:** Drill clearance hole for a 3/8" bolt through track from top to bottom passing through center of white nylon insert approximately 1" from the end of track and insert bow stopper bolt assembly. Trim excess track insert.



STEP 4: Repeat for other side.

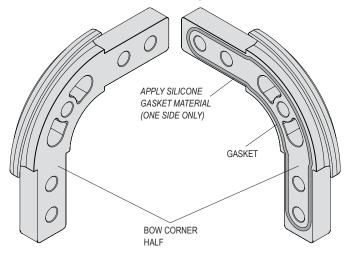
**NOTE:** The joins in white nylon insert should be staggered from one side to other to ease movement of bows.

Bows typically ship fully assembled.

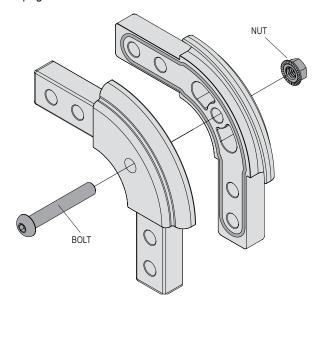
**CORNER PREPARATION** 

**NOTE:** Prepare and then install. Do not prepare all corners prior to installation.

**STEP 1:** Before assembly, apply silicone gasket material to one face and press two corner halves together.

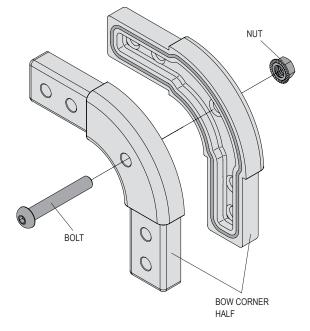


**STEP 2:** Install corner assembly and clean away excess silicone. See Intermediate/Front and Rear Bow Assembly Procedure pages 32 and 33.

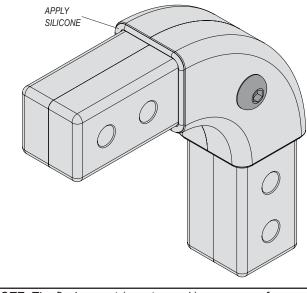


#### FRONT & REAR CORNER PREPARATION

**STEP 1:** Before assembly, apply silicone gasket material.

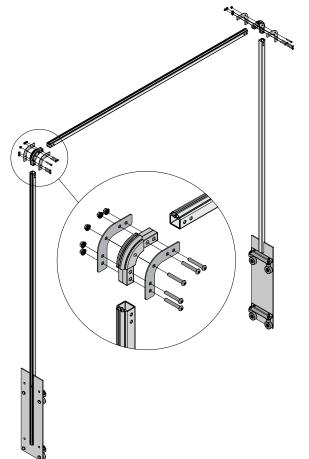


**STEP 2:** Flush mounted (counter sunk) cast corners are paired up with standard corners. Seal corners in same manor as standard corners.

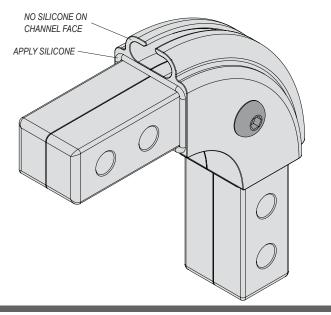


**NOTE:** The flush mount (counter sunk) corners are for creating a flat surface on the front and rear bows to seal with headboard and for rear flap. Corner Preparation must be done prior to each assembly.

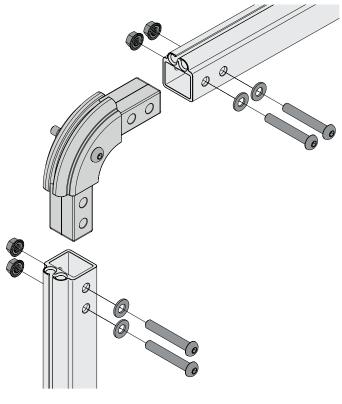
**STEP 1:** Assembly of an intermediate bow requires two side assemblies, a top tube, two pairs of cast corners and hardware.



**STEP 2:** Apply blue silicone gasket material all around both ends of case corner assembly. Be sure not to apply silicone to face of channel area.



**STEP 3:** With a pair of corners sealed, install in tubes and fasten with hardware provided.

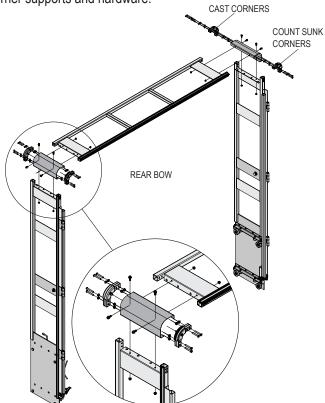


**NOTE:** Prepare and then install. Do not prepare all corners prior to installation.

**STEP 4:** Build remaining intermediate bows, always sealing and then installing.

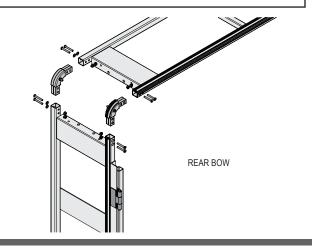
**NOTE:** On each side assembly, one channel tube is blocked or ground. Two sides must be on same side to allow tarp to pass.

**STEP 1:** Assembly of a front and rear bow requires two side assemblies with lock plates in same location, a top assembly, two pairs of cast corners, two pairs of count sunk corners, two corner supports and hardware.



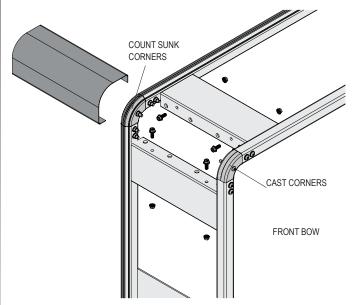
**STEP 2:** With cast corners sealed, insert appropriate corner into channel tubes. Secure with fasteners.

**NOTE:** Counter sunk corners are for non-blocked/ground channels.



**STEP 3:** Repeat for other side.

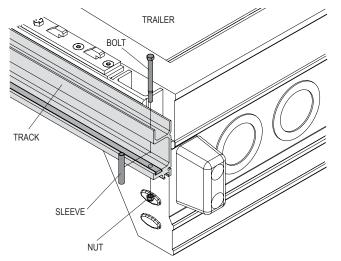
**STEP 4:** Install corner supports between cast corners and fasten with hardware (this will draw corners together tightly).



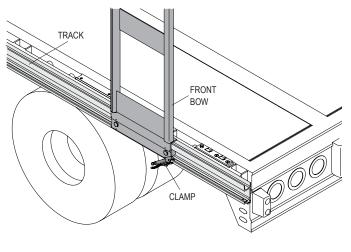
STEP 5: Tighten All Fasteners.

**NOTE:** The lettering on cast corners may need to be ground down to allow corner support to be installed.

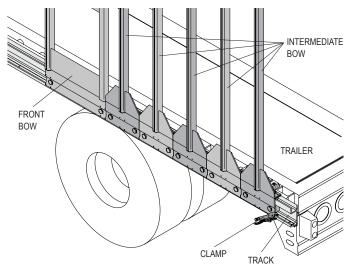
**STEP 1:** Remove bow stopper bolts from end of tracks (if currently installed).



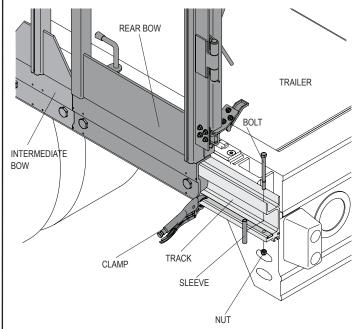
**STEP 2:** Lift and push onto tracks the front bow with flush mounted corners (flat head bolts) facing headboard. Secure bow with clamp.



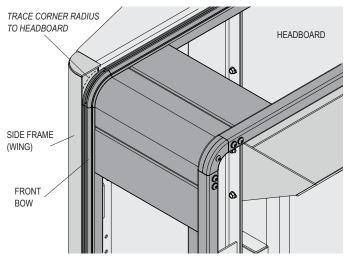
**STEP 3:** Lift and push onto tracks each of the intermediate bows with button head bolt facing rear. Secure with clamp.



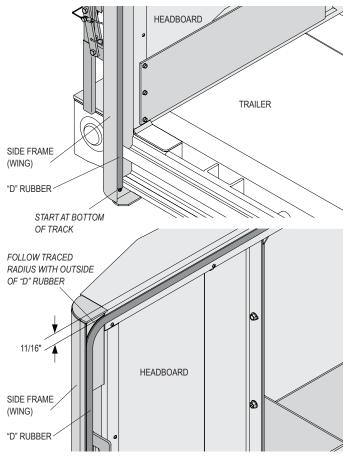
**STEP 4:** Lift and push on rear bow with flush mount corners (flat head bolts) facing rear. Secure bow with a clamp and re-install rear stopper bolts.



**STEP 1:** Move front bow to headboard. Using Sharpie marker trace outside radius of bow corner to headboard. Repeat for second corner.



**STEP 2:** Starting at botton of track, stick "D" rubber up wingers (side frames) and along outside. When you reach corner, be careful to follow radius of corner from bow. Proceed along top keeping seal above wire hareness screw heads. Seal should be 11/16" below top of headboard.



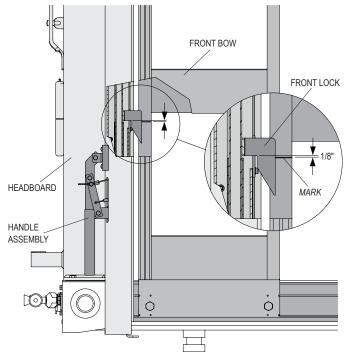
**STEP 3:** Repeat for other corner and down opposite site.

**STEP 4:** Cut off extra "D" rubber parallel with bottom of track.

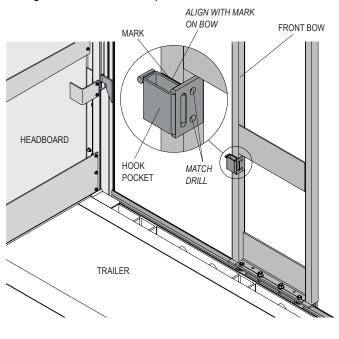
**STEP 5:** Move front bow up to headboard and see how "D" rubber sits up against bow. Seal should cover flat head bolts on bow corners.

**STEP 1:** With "D" rubber seal installed, push front bow up to headbard.

**STEP 2:** With front locks in down position (locked) mark location of bottom of hook and mark 1/8" below allowing for clearance.

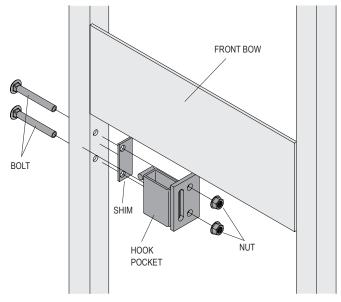


**STEP 3:** Move bow away from headboard and drill two holes through bow to mount hook pocket.



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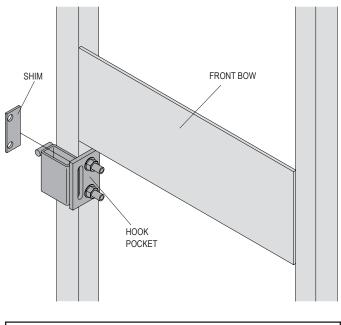
STEP 4: Instert and secure fasteners.



**STEP 5:** Repeat Steps 1-4 for both sides.

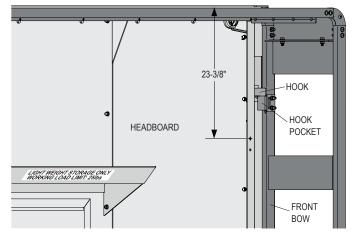
STEP 6: Push bow up to headboard and lock.

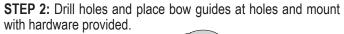
STEP 7: Add or remove shims to make adjustments.

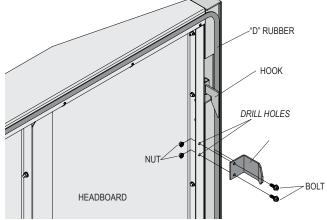


**NOTE:** Inspect seal after tensioning sections has been applied to see quality of seal. Install spacers between bow tube and hook pockets to add additional seal.

**STEP 1:** Locate mouting holes approximately 23-3/8" down from top of headboard.

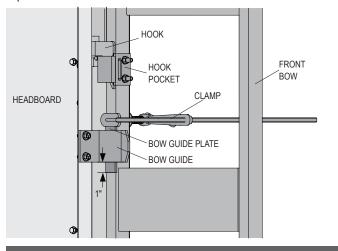






STEP 3: Repeat for other side.

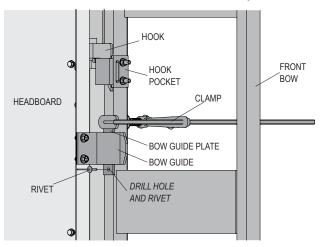
**STEP 4:** Roll bow up to headboard. Place bow guide plate between bow and bow guide. Clamp bow guide into place and repeat for other side.



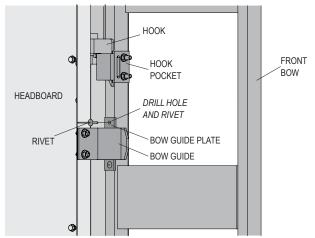
**NOTE:** Do no install bow guide so tight that bow does not pass.

**STEP 5:** Center bow against headboard to ensure ease of locking with slide locks.

STEP 6: Drill holes and mount with hardware provided.



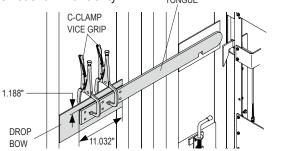
AFTER FIRST RIVET PLACED, REMOVE CLAMP



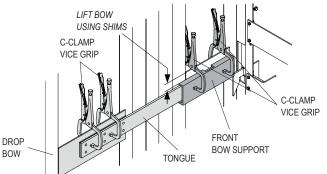
STEP 7: Repeat for other side.

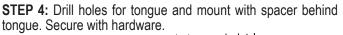
**STEP 1:** Move drop bow into upper deck.

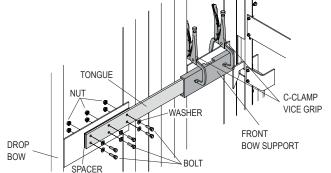
**STEP 2:** Clamp piggy back tongue onto bow with vice grips. Panels not shown for clarity.

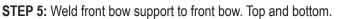


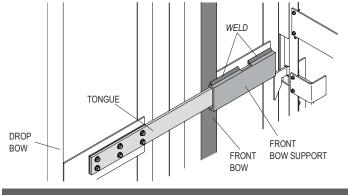
**STEP 3:** Align front bow support with tongue so tongue, when installed, will lift front bow slightly but not enough to bind wheels. (Shims may be used under wheels of front bows to lift.)



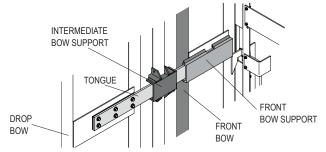




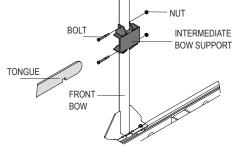




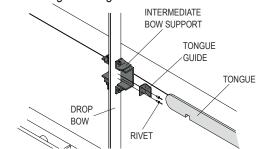
**STEP 6:** Place intermediate bow support over tongue and lift intermediate bow slightly, but not enough to bind wheels, and mount intermediate bow support so top inside is tight to top of tongue. (Shims may be used under wheels of front bows to lift.)



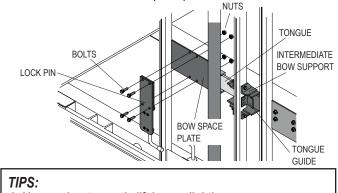
STEP 7: Clamp in place and drill holes. Fasten with bolts.



STEP 8: Mount guide tongue.

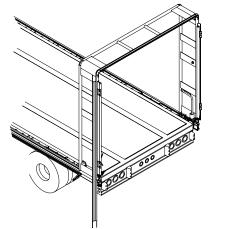


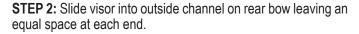
**STEP 9:** Align ground closing lock pin with notch in piggy back tongue through front bow support and drill four holes through bow space plate and fasten bolts and nuts. Ground closing lock is mounted on outside bow space plate.

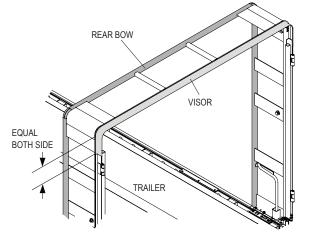


Use pry bar to gently lift bows slightly.
 Top and bottom rails should overlap by 6".

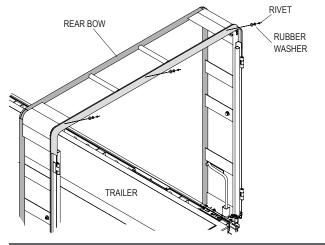
**STEP 1:** From bottom of tube, insert visor with seamed side of material facing ground when in position. Insert into channel closest to back of trailer on rear bow.



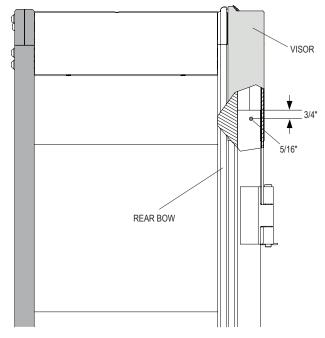




**STEP 3:** Install three rivets PN 2000432 with large steel washer PN 2000509 and rubber washer PN 2000438 evenly spaced from corners and one in middle.



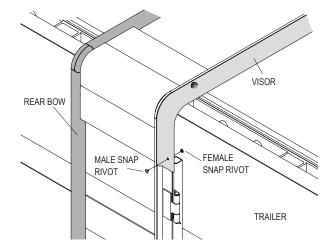
**STEP 4:** Measure approximately 3/4" from top edge down of angle and outside edge in and drill 5/16" through over 90° bar angle.



**STEP 5:** Push end of visor up to angle and make a small hole through visor in line with 5/16" hole.

**STEP 6:** Insert female half on snap rivet into 5/16" hole from inside out.

**STEP 7:** Push male half on snap rivet through small hole in end of visor from outside in and push it through female half of rivet.

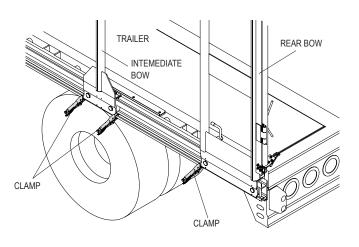


**STEP 8:** Repeat Steps 4-6 for other end.

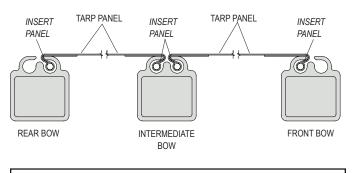
# **Tarp Installation**

**NOTE:** All tarp panels are installed from driver's side to passenger side.

**STEP 1:** Clamp bows that tarps are to be installed in and apply silicone lubricant (recommended CRC-336 Fastenal lubricant) into the channel tube and in corners of bow that tarp is being installed.



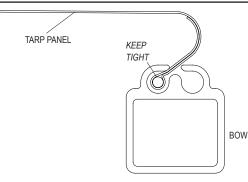
**STEP 2:** Insert panel into channel of each bow making sure panel is in correct channel.



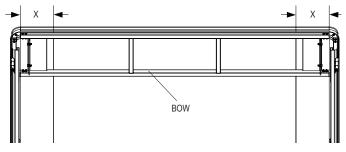
**NOTE:** For one-piece lifters – make sure Velcro in middle of panels is all installed facing same way.

**STEP 3:** Slide panel into bow channels about three feet alternating between two bows. Care must be taken when rounding corners to prevent tarp from slipping out.

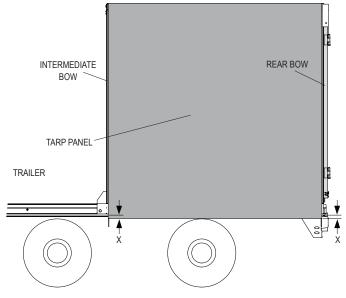
*HINT:* Note the way tarp is folded so it fits straight into channel. This will make it easier to feed tarp around corner.



**STEP 4:** After panel has been installed, center it on bow by comparing measurements of skylight to cast corners on both sides and adjust to center.

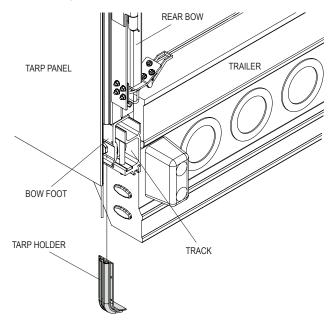


**STEP 5:** Repeat for all panels. There should be an equal amount of overhang on each side of trailer. All tarp panels must be even at bottom on either side of trailer.



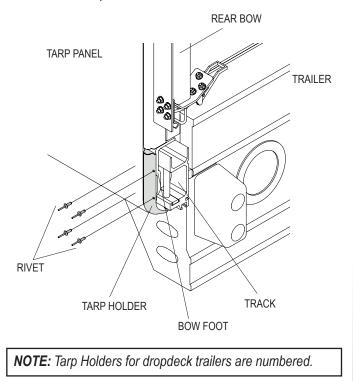
STEP 6: Clean excess lubricant from bows and tarp.

**NOTE:** The more balanced the tarp is, the better its appearance and longevity.



**STEP 1:** With system loose, slide ends of tarp into tarp holders.

STEP 2: Rivet tarp holder onto feet.

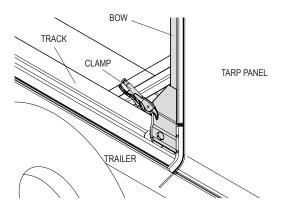


**STEP 3:** Repeat for remaining tarp holders.

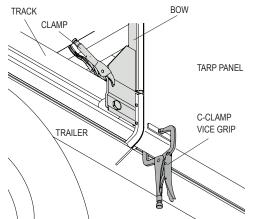
# **Tarp Holder - Anchor Installation**

**NOTE:** Care must be taken while performing this procedure, a slip of knife could cause irreversible damage to tarp. Keep tarp inside tarp holder entire time while performing this procedure.

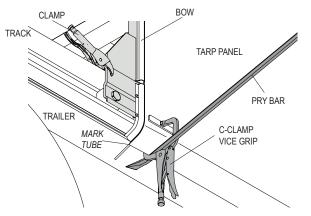
**STEP 1:** Clamp feet the bow anchors are installed in and give tube a slight pull to relieve any slack in tubes.



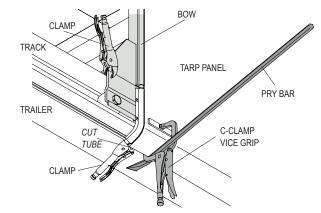
**STEP 2:** Push tarp over away from foot and hold with C-clamp vice grip.



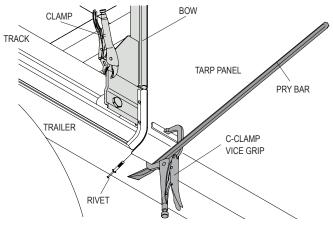
**STEP 3:** Insert pry bar and push down to bring end of tarp out past end of tarp holder. Mark each tube where it exits tarp.



**STEP 4:** Pull plastic tube out about 2" (length of anchor) and cut off flush with tarp. Tube should pull back into tarp same amount that was cut-off (you can push straw up with anchor).



**STEP 5:** Insert anchor all the way (up to head) in hole where plastic tube was cut from.



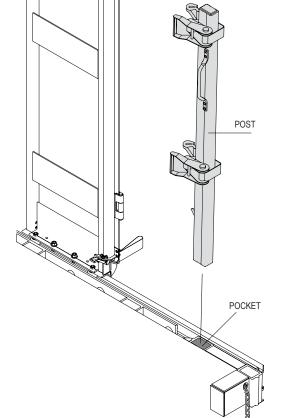
**STEP 6:** Slide tarp back so head of anchor is flush with end of tarp holder.



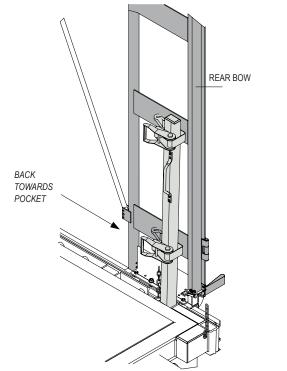
STEP 7: Use a hammer and drive nail in anchor carefully.

STEP 8: Repeat steps 1-7 to install remaining anchors.

**STEP 1:** Place ratchet post assembly into internal pockets at rear of trailer.

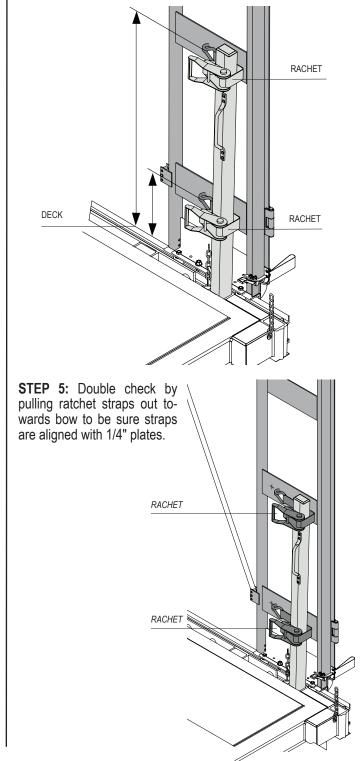


STEP 2: Roll rear bow back towards pockets.

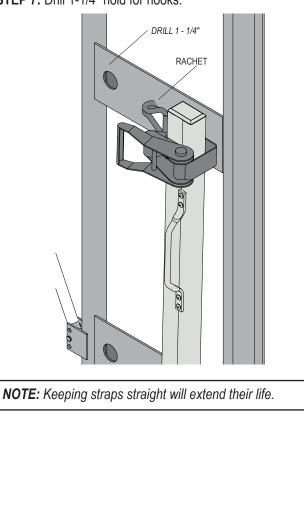


**STEP 3:** Push post towards front of trailer to simulate direction post will sit when tension is applied.

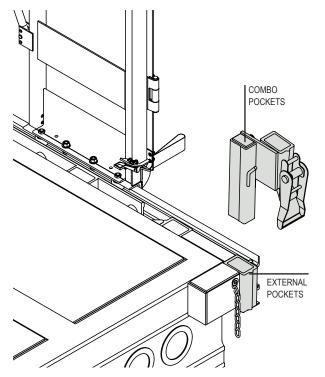
**STEP 4:** Measure from deck height to each of centers of ratchets and transfer measurements to 1/4" plate on bow 2" from tube towards front.



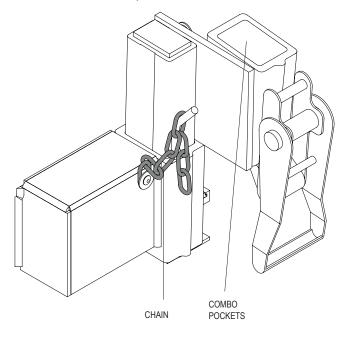
**STEP 6:** Repeat Steps 1-6 for all four ratchet straps. **STEP 7:** Drill 1-1/4" hold for hooks.



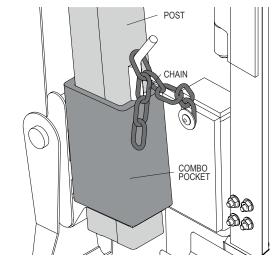
**STEP 1:** Insert combo pockets into external pockets with ratchets in line with track facing rear of trailer.



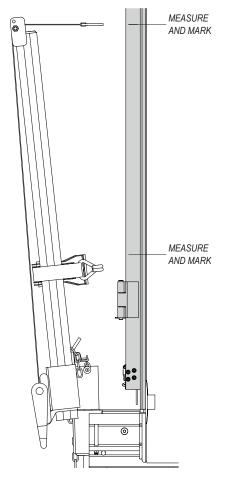
STEP 2: Secure combo pockets with chains.



**STEP 3:** Insert posts for appropriate side with ratchets in same position as internal into combo pocket and secure chains.

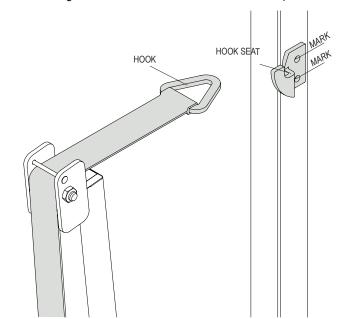


**STEP 4:** Same as internal pockets. Push posts towards from and measure and mark positions of bottom ratchets and top of roller of combo post to angle on over 90 bars.



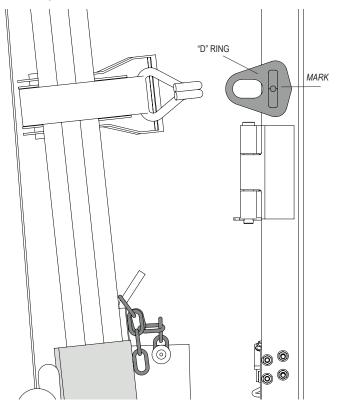
45

**STEP 5:** Place hook on outside of bow, with hook flaring to the outside. Align the Hook Seat with the mark from Step 4.

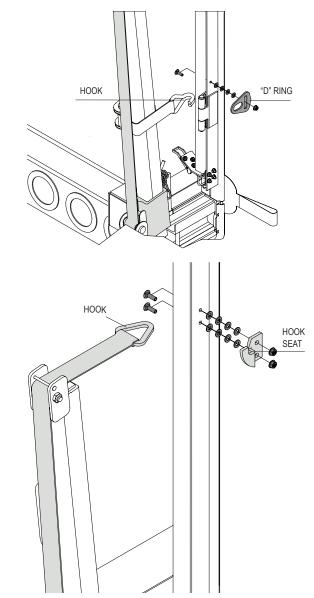


STEP 6: Mark holes and drill.

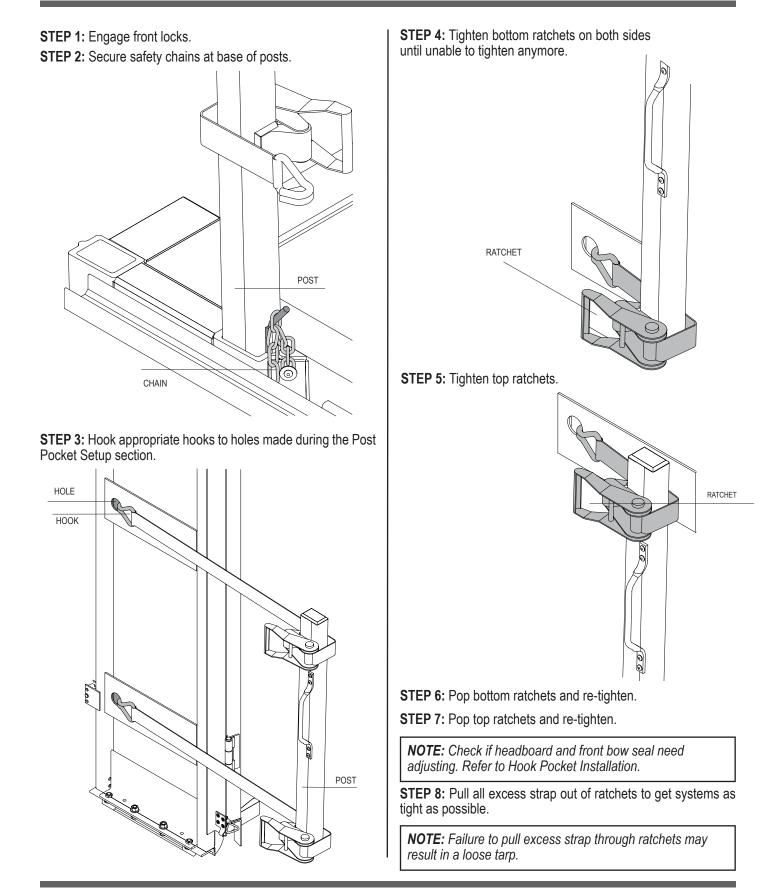
**STEP 7:** Mark bottom "D" rings in same way but line up to center of "D" ring and drill.



**STEP 8:** Bolt with hardware provided making sure to space hooks/D-rings with four washers per bolt.

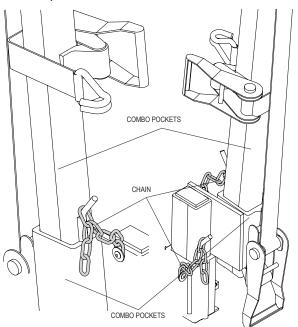


**NOTE:** Make sure the over 90 bar will be able to pass freely when four washers per bolt are spaced behind hooks and *D*-rings.

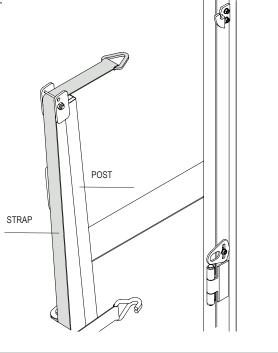


**STEP 1:** Engage front locks.

**STEP 2:** Secure safety chains at base of combo pockets and posts.

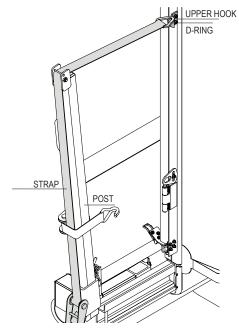


**STEP 3:** Insert ground closing rod straps from inside of trailer to outside over top rollers of posts and under aluminum strap guide.

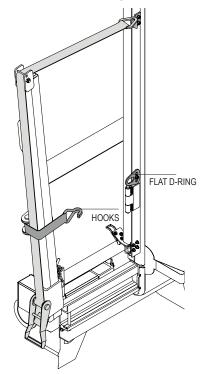


**NOTE:** Rode must be to outside of system away from rear flap area.

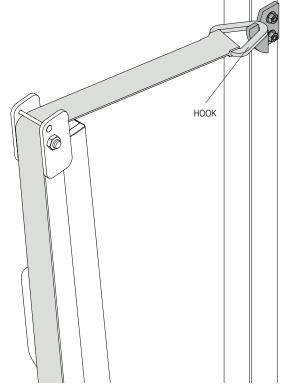
**STEP 4:** Secure D-rings to upper hooks on bows.



STEP 5: Secure hooks to flat D-rungs.



**STEP 6:** Tighten bottom ratchets on both sides until unable to tighten anymore.



STEP 7: Tighten ratchets on combo pockets.

COMBO POCKET **STEP 8:** Pop bottom ratchets and re-tighten.

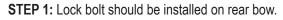
STEP 9: Pop combo pocket ratchets and re-tighten.

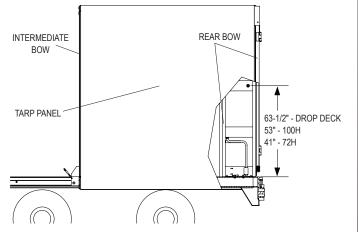
**NOTE:** Check if headboard and front bow seal needs adjusting. Refer to Hook Pocket Installation.

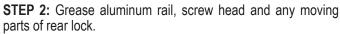
**NOTE:** Check if headboard and front bow seal needs adjusting. Refer to Hook Pocket Installation.

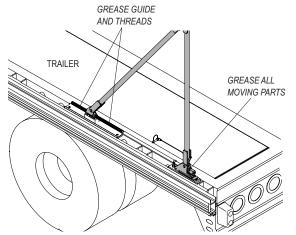
**STEP 10:** Pull all excess strap out of ratchets to get systems as tight as possible.

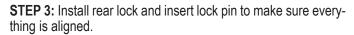
**NOTE:** Failure to pull excess strap through ratchets may result in a loose tarp.

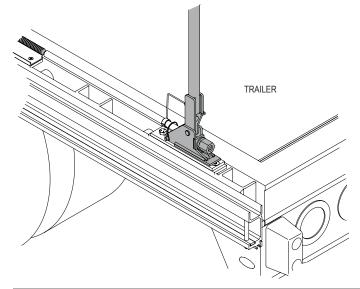








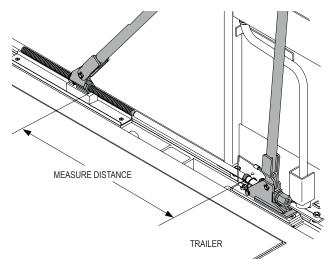




## STROKE LIMITER CUTTING & INSTALLATION

**STEP 4:** Tension system to where it should be.

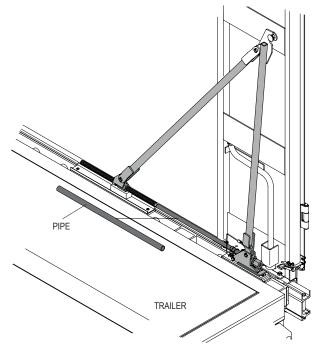
STEP 5: Measure between stop collar and nut.



**STEP 6:** Release system.

**STEP 7:** Unscrew nut from front of rod.

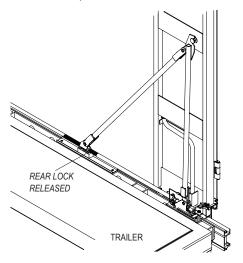
STEP 8: Slip cut pipe over rob and re-attach nut assembly.



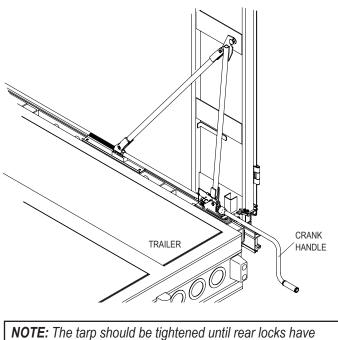
**STEP 9:** Tension system, if stroke limiter is too long remove it and cut a little off. If stroke limiter is too short add 1" spacer or whatever you need.

# REAR LOCKS

**STEP 1:** With front locks engaged and rear lock fully released pull tarp system to back of trailer and hook the lock bolts on both sides with hook at the top of rear locks.



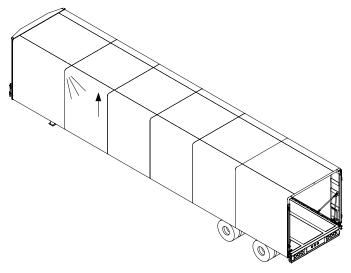
**STEP 2:** With crank handle, tension on side 50% and then proceed to tension other side 100%. Return to starting side and tension 100%.



**NOTE:** The tarp should be tightened until rear locks have moved rear bow approximately three inches from rear of trailer of continued tensioning is no longer possible. Over time tarp sections will stretch and rear bow will travel an additional inch. WRINKLES

STEP 1: Release tension from system.

**STEP 2:** Mark tarp with a temporary mark for reference and pull wrinkle up over top.

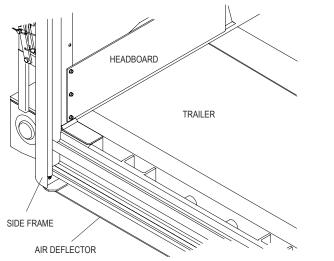


**NOTE:** Wrinkle is a result of too much tension in side panel; pulling wrinkle up over top does not actually move wrinkle it only relaxes tarp. Folds in tarp are a result of packaging and will relax with a few hot or sunny days.

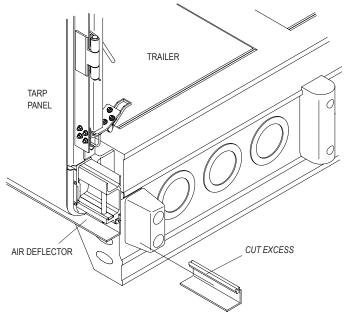
51

STEP 3: Tension system and repeat if necessary.

**STEP 1:** Air deflector is installed all the way up to headboard side frames (wings) sliding into wing extensions.

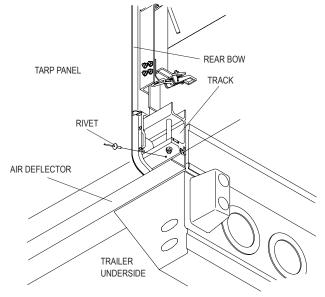


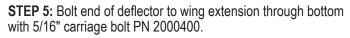
**STEP 2:** Install air deflector until rear is reached, then mark and cut excess.

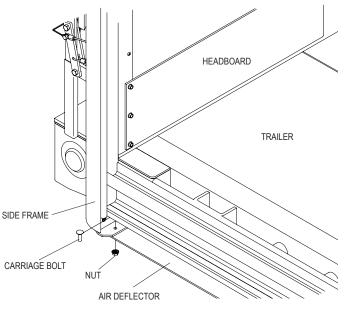


STEP 3: Repeat Steps 1 and 2 for other side.

**STEP 4:** Fasten air deflector two inches from end of track with 3/16" rivet through track into air deflector.







**NOTE:** Air deflector is installed after Tarp Installation, Anchor Installation, Tensioning and Wrinkles.

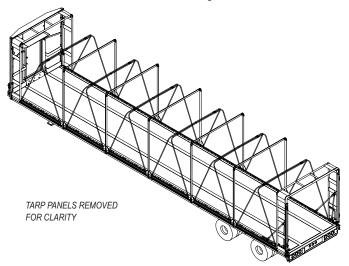
**NOTE:** Up-lifters push up in middle but do not deform corners of tarp while tensioned. If up-lifters are too tight, permanent damage to tarp may occur.

**NOTE:** One piece lifters – install lifter into Velcro on ceiling

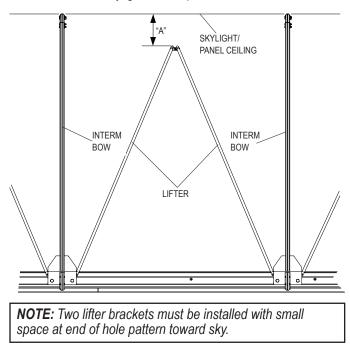
HINGED LIFTERS

STEP 1: Tension system.

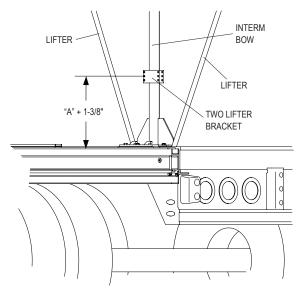
**STEP 2:** Place all lifters between bows and spread legs between interm bow feet with ends sitting on track.

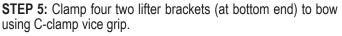


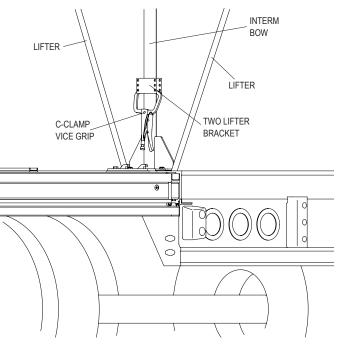
**STEP 3:** Starting at first two interm bows from rear. Measure distance "A" from skylight to lifter peak.



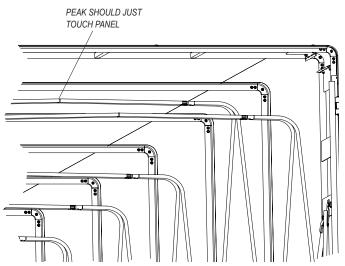
**STEP 4:** Measure distance acquired in Step 3 ("A" plus 1-3/8") from top of track to middle hole in two lifter bracket (2000151) to locate all four brackets on first two interm bows.







**STEP 6:** Temporary attach lifter to four brackets with a clevis pin in middle hole and check how lifter contacts tarp. Peak should just touch, not push up, on tarp.



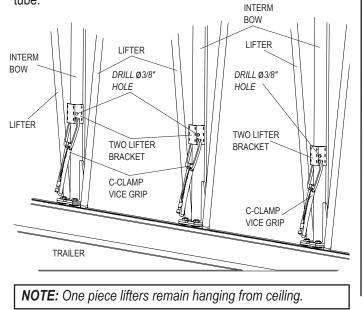
**STEP 7:** Re-adjust brackets if necessary. Remaining intermediate bow two lifter brackets will be installed at same height.

**NOTE:** All lifter brackets are approximately same height on all intermediate bows.

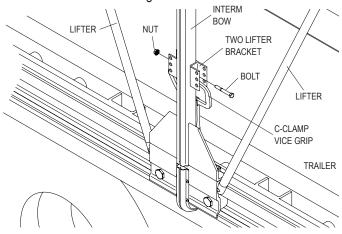
STEP 8: Remove clevis pins and let lifter sit on track.

**NOTE:** Lifter legs can be installed in any of three holes provided.

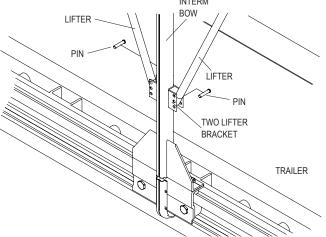
**STEP 9:** Drill a 3/8" hole through middle of bracket and through tube.



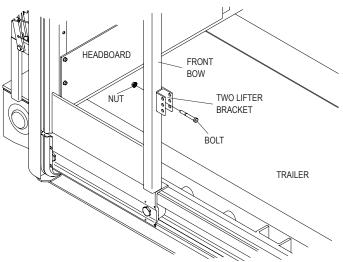
**STEP 10:** Insert hardware provided (bag 2000128) with nuts toward front of trailer and tighten.



**STEP 11:** Re-install lifters with supplied pin 2001179 from bag 2001087.



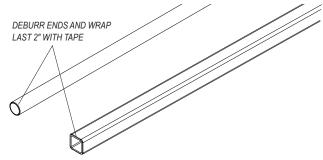
**STEP 12:** For front and rear bows use half two lifter brackets 2000836 LT and 2000835 RT and continue with same instructions except install bolt with head toward lifter leg.

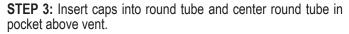


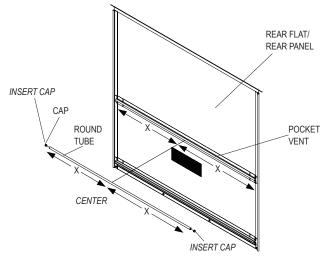
**STEP 1:** Place back flap on a clean surface with outside facing down.

**STEP 5:** Center and insert square tube in pocket at bottom of flap.

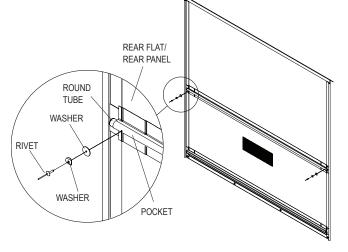
**STEP 2:** Grind ends of square and round tube so they are not sharp. Wrap tape around ends to further protect tarp and to act as a barrier for contact with aluminum.

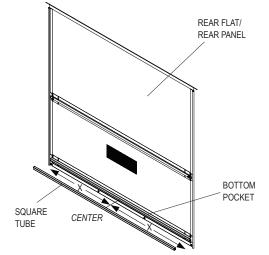




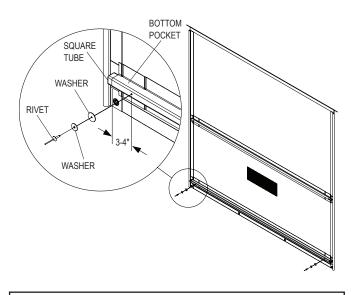


**STEP 4:** Insert two rivets PN 2000432. One about 1-2" from each end of pocket, through pocket and into tube.





**STEP 6:** Insert two rivets PN 20004327. One about 3-4" from each end of pocket, through pocket and into tube.

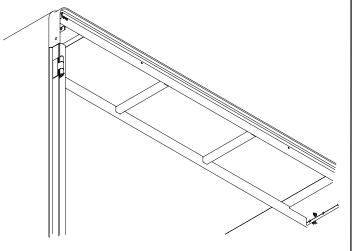


**NOTE:** No fasteners are to be installed through rear flap itself.

STEP 7: Re-roll flap for hanging.

## PULLEY EQUIPPED REAR FLAP ONLY

**STEP 1:** Place rope in through pre-drilled hole towards front of systems and knot. Continue with rear crank instructions.



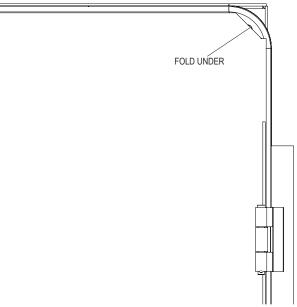
## REAR CRANK EQUIPPED

**STEP 1:** Slide top of flap into rear flap extrusion at top of bow.

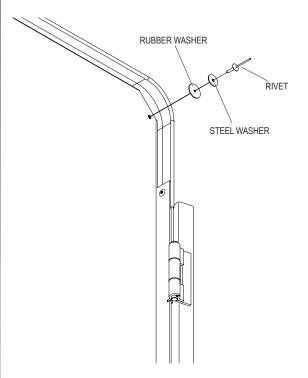
**NOTE:** Rear flat extrusion was installed during rear bow back flap extrusion.

**STEP 2:** Even out flap on both sides and check location of tubes. Adjustment of bottom tube may be required.

 **STEP 3:** Fold corner inside at 45° angle making it tangent to bow corner.

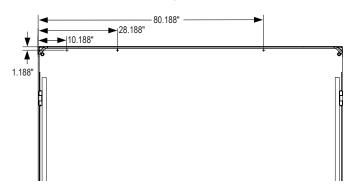


**STEP 4:** Drill through folded corner into face of bow corner place rubber washer PN 2000438 on flap cover it with steel washer PN 2000509 and insert rivet PN 2000432.

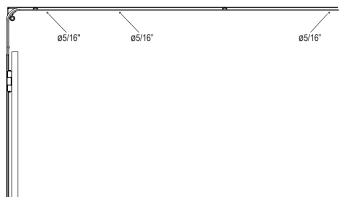


**STEP 5:** Repeat Step 3 and 4 on second corner.

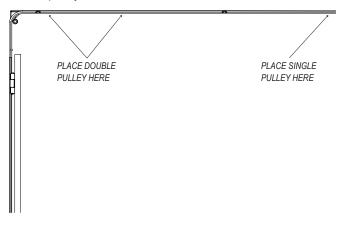
STEP 1: Mark location for pulley mounts on rear flap.



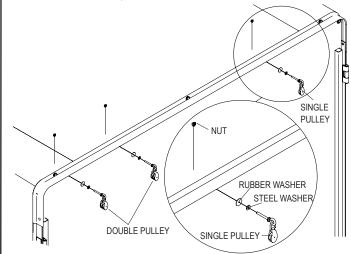
**STEP 2:** Drill  $\emptyset$ 5/16" holes through rear flap and top tube at marks.



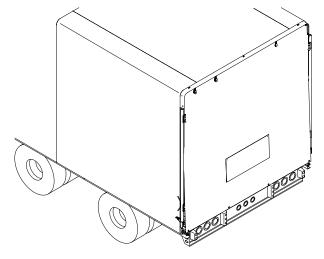
**STEP 3:** Single pulley is located on passenger side and two double pulleys are on driver's side.



STEP 4: Insert pulley assemblies and secure with nut.



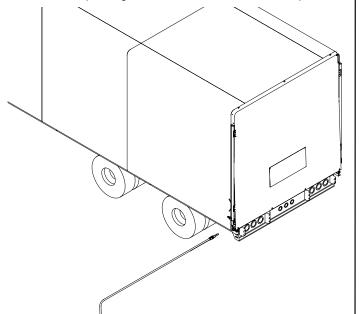
**STEP 5:** Run your rope from backside installed during Rear Flap Installation under flap and backup through pulleys.



**STEP 6:** Wrap rope three times around hope hanger installed during Rear Bow Flap Extrusion. Trim excess and tape together to make a loop to hook rope hanger.

# **Rear Flap - Rear Flap Crank Installation & Operation**

**STEP 1:** Slide pivoting end into bottom steel tube of flap.



**STEP 2:** Standing to side of trailer roll tarp up so it is 80% to top.

**STEP 3:** With a push away from rear and a twist of handle swing rolled up tarp onto top of rear bow.

**STEP 4:** Crank handle until flap is tight and secure.

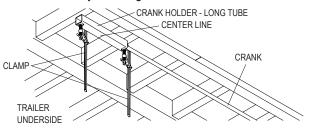
**NOTE:** Operation of rear crank will become easier with practice.

#### NOTE: Do not weld holder to main frame of trailer.

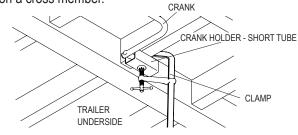
**STEP 1:** On driver side find a location under bed of trailer to mount crank holder.

**NOTE:** Passenger side may be used as a mounting point only if there is no sufficient space to mount on driver's side.

**STEP 2:** Clamp tube into position on two cross members and insert crank halfway into long 2" x 2" tube.

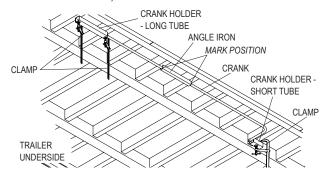


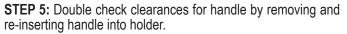
**STEP 3:** Holding crank up against cross members parallel to side of trailer locate position of short 2" x 2" tube and clamp into position on a cross member.



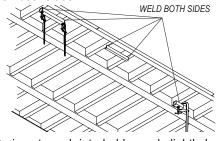
**NOTE:** Adjustment of tube may be required to allow proper positioning of pipe. Attempt to remove crank and re-insert.

**STEP 4:** With crank in both tubes, mark 2" x 2" angle irons position on two cross members close to center of first bend of handle and 2" x 2" tube, then remove.

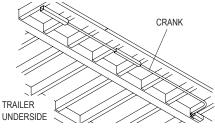




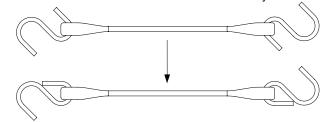
**STEP 6:** Remove crank and weld all three items into position with welds on both sides.



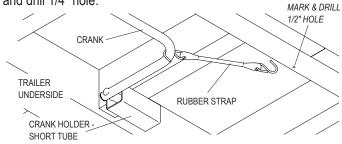
**STEP 7:** Re-insert crank into holder and slightly bend crank in middle to pass over edge of 2" x 2" angle and into holder.

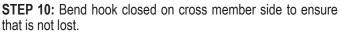


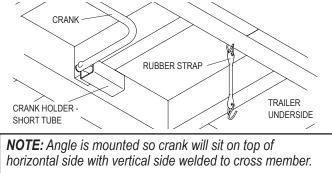
STEP 8: Bend small ends of hooks to rubber body.



**STEP 9:** Installing bungee requires you to hook handle near first bend and mount other end to a cross member. Mark position and drill 1/4" hole.

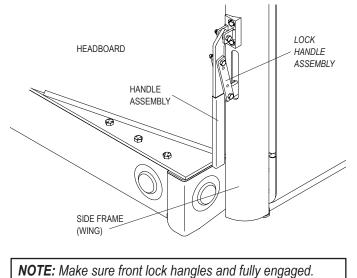




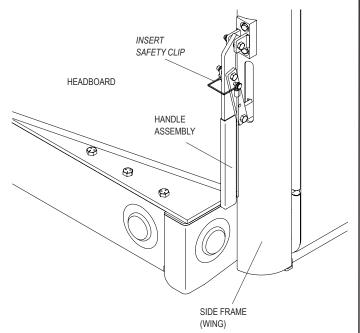


# Lock Handles - Safety Clips

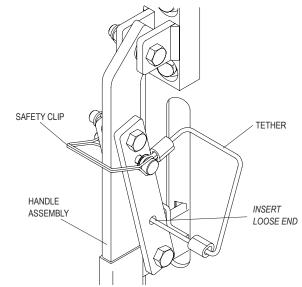
STEP 1: Lock front locks.

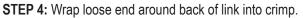


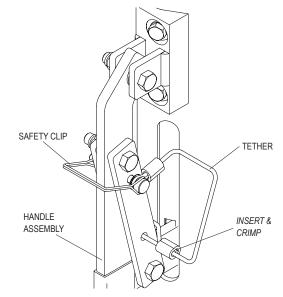
**STEP 2:** Insert safety clip through the 3/16" hold through link and handle from outside in.



STEP 3: Insert loose end of tether sleeve and into hole in link.





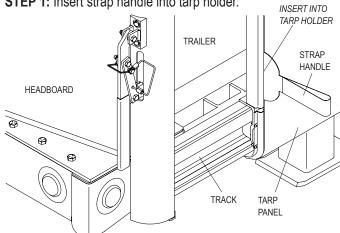


STEP 5: Repeat for other side.

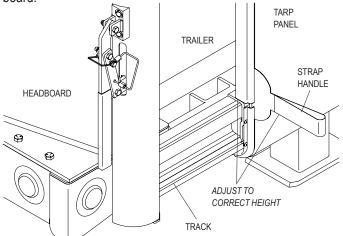
**STEP 6:** Do not tension system unless safety clip has been installed.

## FRONT BOW STEPS

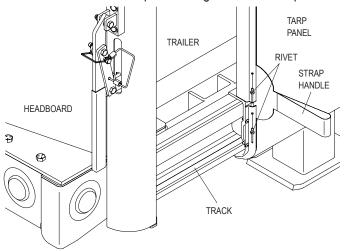
STEP 1: Insert strap handle into tarp holder.



STEP 2: Slide handle up until handle part itself is able to fold easily in front of foot and in-between "D" foam seal of headboard.



STEP 3: Rivet handle into place through one wall of tarp holder.



HANDLE TRACK

STRAP

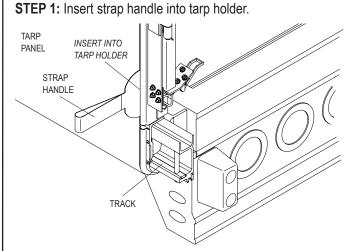
TARP

PANEL

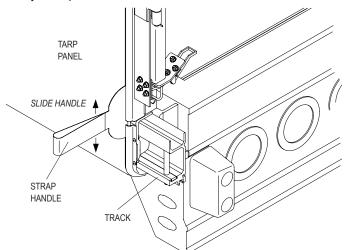
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## **BACK BOW STEPS**



STEP 2: Slide handle up until handle part itself is able to fold easily into space between foot and handle.

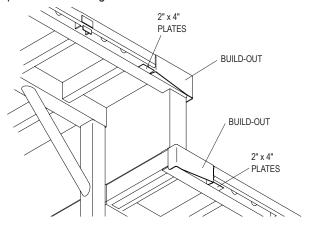


STEP 3: Rivet handle into place through on wall of tarp holder.

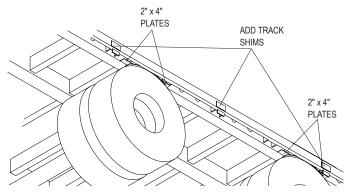
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**STEP 1:** Follow steps outlined in Trailer Deck Preparation section for both upper and lower track installation.

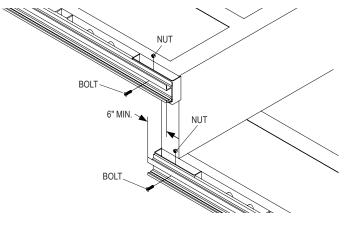
**STEP 2:** Install corner build-out boxes without cover on upper and lower deck. Cover will be installed later and add 2" x 4" plates for securing track rubber if needed.



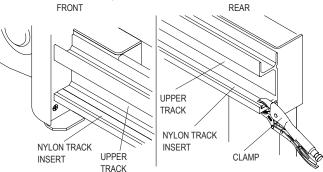
**STEP 3:** Add shims 3/8" to 1/2" behind track at wheel openings if opening is less than 8" from top of deck so tires do not contact air deflector. Add only enough shim to clear tires and add 2" x 4" plates for securing track rubber if needed..



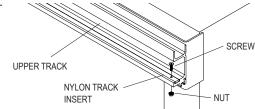
**STEP 4:** Mount upper and lower track. Must overlap by minimum 6".



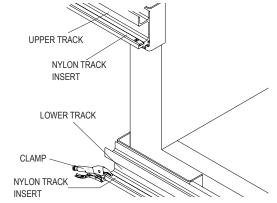
**STEP 5:** Insert white nylon track insert in upper track.



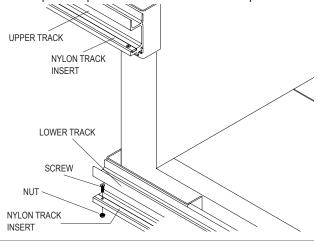
**STEP 6:** From underneath track drill a 9/32" hold up through center of nylon insert and insert a 1/4" flat head screw down through hole and fasten with a nut so screw head is flush with insert.



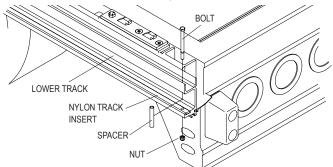
**STEP 7:** Insert white nylon track insert in lower track flush to track ends and temporally hold with vice grip.



STEP 8: Repeat Step 6 for lower track insert at drop end.

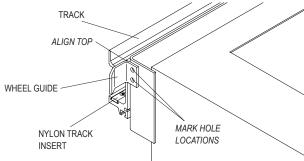


**STEP 9:** For lower track back end; drill a clearance hole for a 3/8" bolt through track from top to bottom passing through center of white nylon insert approximately 1" from end of track and insert bow stopper bolt assembly. Trim excess.

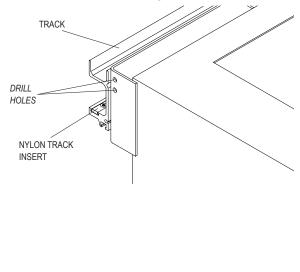


STEP 10: Repeat for other side.

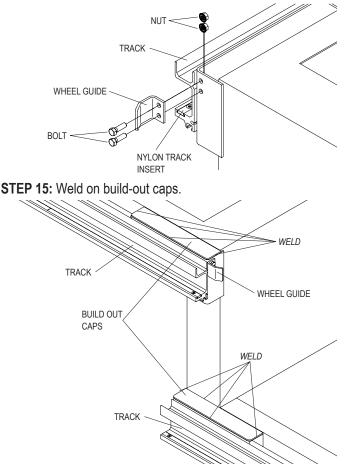
- STEP 11: Install bow 1-3/4" wheel guide at drop.
- **STEP 12:** Position wheel guide so it is in line with top of track and mark location for two holes.



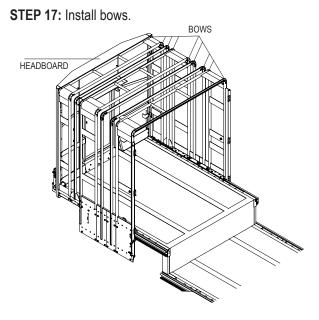
#### **STEP 13:** Drill two 13/32" holes through corner build-out.



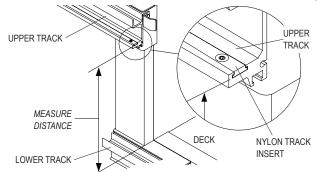
**STEP 14:** Insert 3/8-16" x 1-1/8" bolts with heads toward rear of trailer and fasten with 3/8" flange nut.



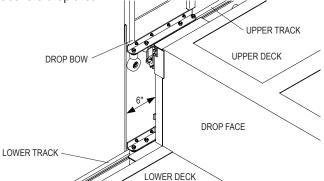
**STEP 16:** Repeat Steps 12 - 15 for opposite side.



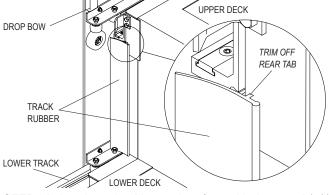
**STEP 18:** Measure between bottom of upper track nylon insert and deck and cut two pieces of track rubber at measured length.



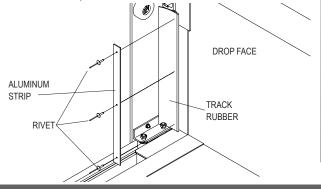
**STEP 19:** Move drop bow to drop area so approximately 6" of foot covers drop area.



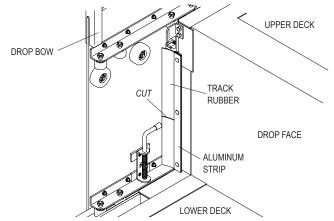
STEP 20: Push measured piece of track rubber right to foot.



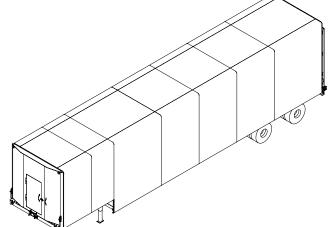
**STEP 21:** Attach track rubber to drop face with rivets and 1-1/4" x 1/8" aluminum strips.



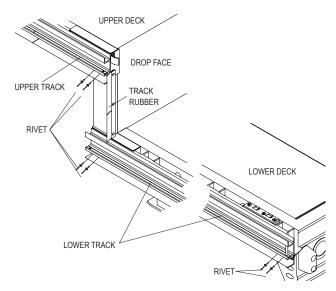
**STEP 22:** Cut a slit in rubber just above bow lock mount with razor knife. This will allow bow lock to slip past rubber seal.



**STEP 23:** Install tarp sections as described in Tarp and Tarp Holder installation section.

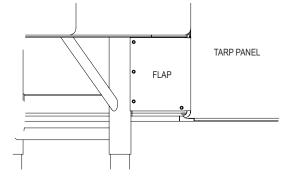


**STEP 24:** Insert air deflector and secure with rivets at ends of track, two at end of upper track and four places on lower track.

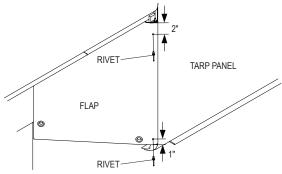


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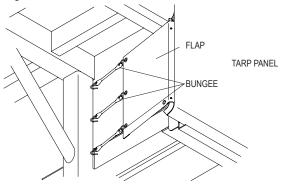
**STEP 1:** Insert edge of drop door with plastic tube into empty channel from bottom of tarp holder so cargo strap reinforcement is at bottom and facing in when door is closed.



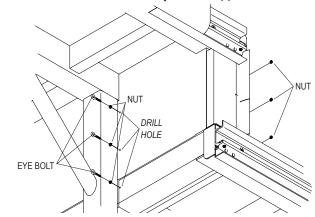
**STEP 2:** Fasten with two rivets; one 2" below top and one 1" above curve in tarp holder.



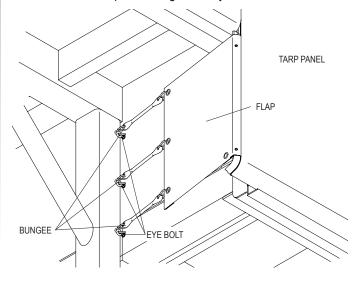
**STEP 3:** Pull flap around front of drop opening and check location of bungee anchors.



STEP 4: Drill holes and mount eye bolts supplied.



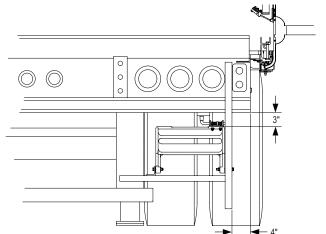
STEP 5: Secure flap with bungees to eye bolts.



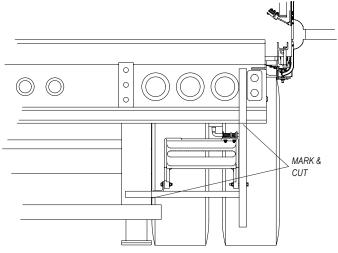
**STEP 6:** Fold back flap and secure with Velcro<sup>®</sup>. This will hold door open while moving system from back-to-front.

**STEP 7:** Fasten male buckle strap to bow foot with rivets.

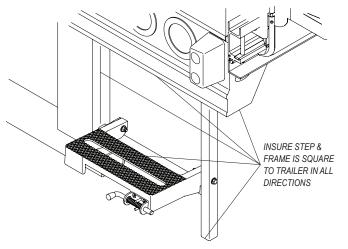
Rear Step Installation (Optional)



**STEP 2:** Mark and cut step frame to fit; square it on all sides and clamp or tack it into place.

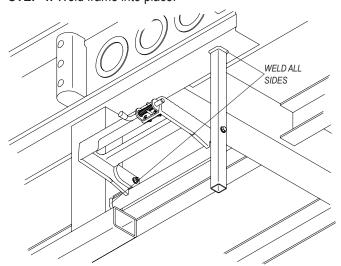


**STEP 3:** Open step and ensure outside edge is square to rear sill and bumper. Square top of step to step frame.

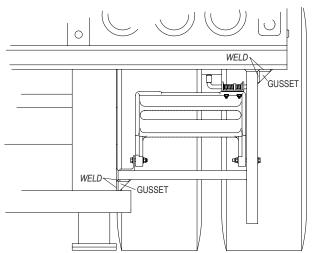


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STEP 4: Weld frame into place.



**STEP 5:** Weld  $1/4" \times 2" \times 2"$  gussets to reinforce step frame where it connects to trailer, if necessary.



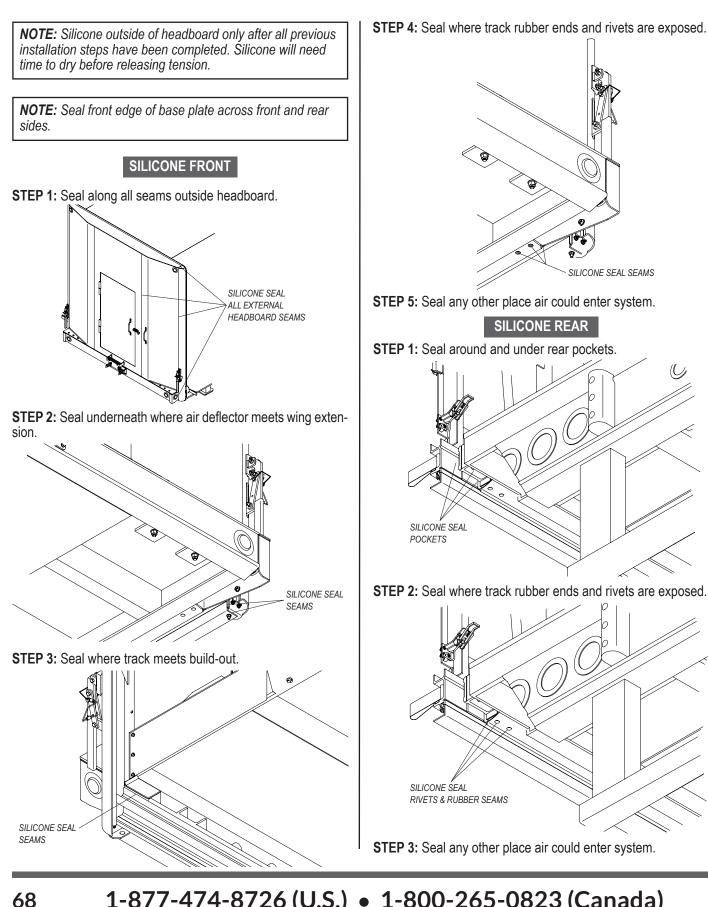
**NOTE:** Trailer must be cleaned off and track free of debris.

**STEP 1:** Roll system from all four corners to ensure smooth operation.

**STEP 2:** Open and close systems without tensioning another three to four times to help train tarp.

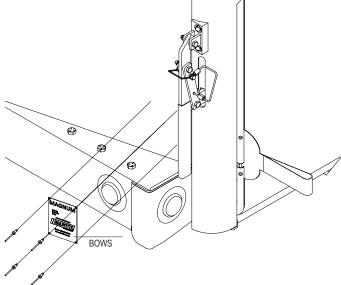
**STEP 3:** Lock front locks and tension system.

# Final Testing & Sealing - Sealing the System for Steel Trailers



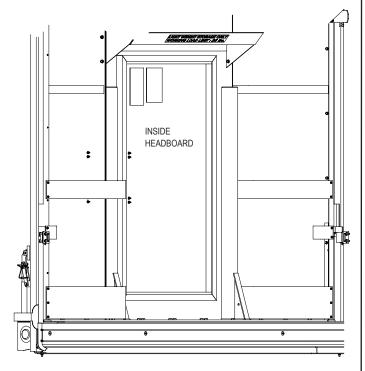
## SERIAL # PLATE PLACEMENT

**STEP 1:** Rivet serial number plate to lower driver side of head-board.





**STEP 1:** Apply slide lock decales one each per side.



**STEP 2:** Apply extra yellow and blue stickers inside headboard. Stick one per side each.

## TORQUE SPECIFICATIONS

Tightening torque suggested from fasteners on bow corners and feet. Torque values listed are from bolt suppliers catalog and actually past foot assemblies.

#### **BOW CORNERS:**

P/N: 4500-500-012 & 4500-500-014 3/8-16" Nylon insert lock nut, type NE GR 5 zinc coated Tighten to 30-35 ft-lbs

#### BOW CORNERS TO TOP AND SIDE TUBE:

P/N: 4500-500-012 & 4500-500-014 3/8-16" Nylon insert lock nut, type NE GR 5 zinc coated Tighten to 30-35 ft-lbs

#### BOW TOP AND SIDE SPACER ANGLE PLATE:

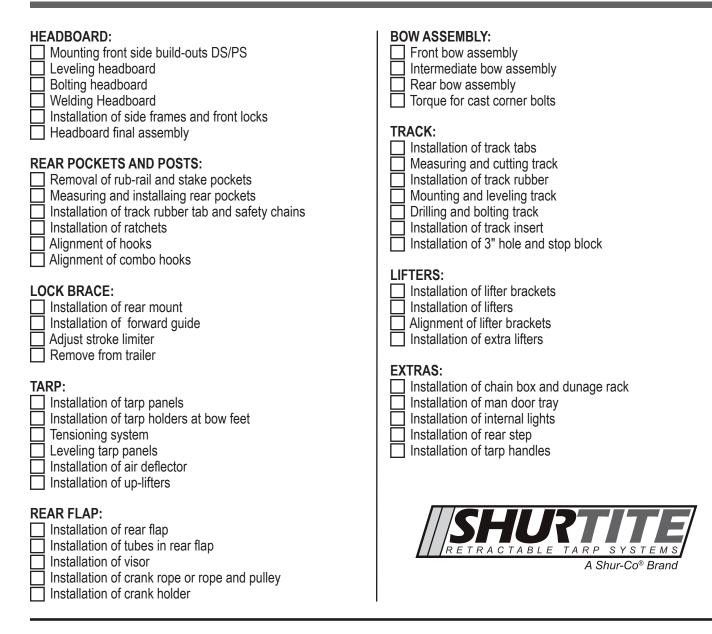
P/N: 4500-500-012 & 4500-500-014 3/8-16" Nylon insert lock nut, type NE GR 5 zinc coated Tighten to 30-35 ft-lbs

#### TWO LIFTER BRACKET TO BOW TUBE:

P/N: 5000-200-013 & 5000-200-011 5/16-18" Hex Nut GR 5 zinc coated Tighten to 20-25 ft-lbs

## 3" WHEEL AXLE TO FOOT FRAME:

P/N: 4500-500-005 3/4-16" Nylon insert lock , type NTE GR 5 zinc coated Tighten to 100-110 ft-lbs



**Note for Dealers:** Installation employees must be trained by Shur-Co<sup>®</sup>/ShurTite<sup>™</sup> before installing any tarp system independently. By signing this form, you agree that you have been fully trained and understand all of the installation and assembly processes of the Magnum<sup>™</sup> system and any issues, as a result, of installation process are solely the responsibility of the dealer.

Name of Trainee (Print):	Dealer:
Trainee Signature:	Date:
	Dealer:
Trainer Signature:	Date:

**HEADBOARD**:

In-House System Discharge and Quality Checklist	Date:
Customer:	VIN #:
System Size:	ShurTite™ Serial #:
Inspector:	Approved:

It is responsibility of employee (inspector) to check system to ensure all items listed below are satisfactory to Shur-Co<sup>®</sup>/ShurTite<sup>™</sup> standard of quality. It is responsibility of production manager, service manager, branch manager or acting supervisor (approved) to ensure trailer and system are safe to travel and all standards of quality are met.

Note for Dealers: A trailer and system must not leave the premisis without an approved signature.

<ul> <li>The front door opens and closes properly and locking mechanism functions correctly.</li> <li>Latching mechanism between headboard and tarpaulin operates smoothly.</li> <li>All seals are in place including silicone between headboard and trailer.</li> <li>Inspect bolt pattern and ensure bolts are tightened to specification.</li> </ul>
<ul> <li>TRACK/RAILS:</li> <li>Track is installed properly with correct hardware. Hole drilled for wheel service.</li> <li>Track stop-bolts installed at rear on both sides.</li> <li>Lights have been lowered (if required) and replaced at the front and rear. No hanging wires.</li> <li>Track guard is in place in the headboard.</li> <li>Rails have been cleaned and are free from debris.</li> </ul>
<ul> <li>TARPAULIN, BOWS AND LIFTERS:</li> <li>Inspect tarpaulin for pin holes, quality of bar seals and graphics.</li> <li>Check Velcro® is sealed around lifters.</li> <li>Ensure reinforcements are protecting tarp from wear.</li> <li>Check all bolts are tightened to proper specifications.</li> <li>Ensure all bow corners have been sealed.</li> <li>Lifters are centered and attached properly.</li> <li>Check overall height of system is within the 162" maximum for US systems.</li> </ul>
<ul> <li>REAR OF SYSTEM:</li> <li>Steps installed if requested.</li> <li>Tensioning system operates smoothly. Rear lock braces are greased.</li> <li>Rope and pulleys and rear flap fit correctly and securely behind lock bars and operate smoothly.</li> <li>Rear crank (if requested) operates properly and has mounting brackets installed.</li> </ul>
OVERALL: Tarpaulin has been trained by opening and closing system a minimum of five times. Wheels roll smoothly inside track. All moving parts have been lubricated. Clean track and trailer deck inside/outside of tarpaulin.
RETRACTABLE TARP SYSTEMS A Shur-Co® Brand

## Review with customer upon delivery of tarp system.

Check list must be signed, dated and faxed to ShurTite™ upon completion for warranty to take effect. Fax to: 519-751-3997.

Inspection and Tarp System Operation Tarp quality Front bow to headboard seal Lifters System rolls freely Tail flap Track rubber seals to bottom of trailer Tensioning device	
Comments:	
Customer agrees all items listed abover are in good order and quements. Customer has been instructed on system operation and pro-	
Employee Name (Print):	
Employee Signature:	_ Date of Delivery (DD/MM/YYYY): / /
Trailer Owner or Owner Representative (Print):	
Trailer Owner or Owner Representative Signature:	
Trailer Owner Phone:	_Fax:
Trailer Owner Email:	
VIN # of Trailer:	_ShurTite™ Serial #:



#### **CRITERIA:**

- 1. System must always be kept tight when trailer is in motion. Running with system loose will cause premature wear of system.
- 2. System must not be over tightened. Always use manufacture's devices to tighten system.
- 3. Rear flap must always be secured in down position. It is recommended not to run with rear flap in up position.
- 4. Tarpaulin material should only be washed with soap and water. No acid, wax or harsh chemicals should ever be used to clean tarp.
- 5. If you have a small rip, hole or other tarp issues have it properly repaired (or section replaced) by Shur-Co<sup>®</sup>/ShurTite<sup>™</sup> service professional.

#### DAILY INSPECTION SCHEDULE:

- 1. Be sure front lock is in locked position with safety clip in place.
- 2. Inspect tether safety clip is attached to. The safety clip must always be in place before system is tensioned (closed).
- 3. Release rear tensioning device, unlock the front and check latch hooks for cracks.
- 4. Inspect rear tensioning system including crank and crank holder for cracks or breaks.
- 5. Check for wear or fraying on ratchet straps. If straps show signs or wear replace immediately.
- 6. Check to be sure rear flap is down and properly secured.
- 7. Tarp should appear smooth and tight.
- 8. Be sure crank and/or rope are properly secured.

## MONTHLY INSPECTION SCHEDULE:

Note: Complete monthly inspection in addition to daily inspection.

1. From inside trailer:

- a. Check seal between headboard and front bow. There should be no light showing through.
- b. Visually check and also touch all nuts and bolts on bows and feet to see if any have come loose or are missing.
- 2. Inspect all wheels (large and small) to be sure they rotate freely. Replace damaged or seized wheels as soon as possible.
- 3. Inspect tarp for wear and/or small rips or holes. If any are found have tarp repaired immediately.
- 4. Check rear tensioning system for cracks or breaks and grease screw (winding brace) and moving parts when they appear dry.
- 5. Check winding brace crank for cracks. Replace or repair at once.
- 6. For crank operated rear flap: Check cranke and crank holder for cracks and universal joint should be free running. If not, then apply oil or grease.
- 7. For rope and pulley system: Rope should not be frayed or have cuts. Rope must always be properly stored.
- 8. Pulleys should swivel and roll freely.
- 9. Check up-lifter assemblies to be sure assembly is intact.
- 10. Inspect both inside and outside of rear flap for damage.
- 11. Visually check for cracks at any welded areas on and around headboard both inside and out.
- 12. Check for cracks around floor bolts that mount headboard (inside trailer).
- 13. Ensure track has not come loose and all bolts are in place.
- 14. Report immediately to specialized Shur-Co<sup>®</sup>/ShurTite<sup>™</sup> shop any suspected concerns or irregularities with your system.

#### TARP REPAIR:

- 1. Cut a piece of tarp 1-1/2" per side larger than area of repair.
- 2. Use a flat firm surface behind area that needs to be repaired. Set heat gun to 3/4" heat setting.

3. Insert end of gun between two pieces of tarp. Starting from middle of tarp, heat material and use roller to seal material. Work from center to outside edges. Use roller to smooth out edges. Adjust heat accordingly.

#### **MEMORANDUM:**

To: Dealer and End Users From: Roll-Tite™ Date: 08/18/2014 Re. Safety Alert (SA 2009 -01)

It is imperative to ensure safety clips (P/N 800-07-72-357) on Magnum<sup>™</sup> systems are securely in place when front lock assemblies are engaged. Failure to do so could result in lock opening, which may cause tarp system to disengage from trailer.

Inspection of safety clip assembly must be part of your regular daily maintenance and circle check procedures. DO NOT operate trailer without lock and safety clip securely in place.

Contact your authorized dealer if you have any questions or are in need of safety clip assemblies.

# **MORE QUALITY PRODUCTS FROM SHURTITE™**

# **CARGO CONTROL**

# **RETRACTABLE TARPS**

- Gen3™
- Magnum<sup>™</sup>

# **THROW TARPS**

- LUMBER TARPS
- STEEL TARPS

FLATBED TARPS & TARP SYSTEMS

