

Premium Belt & Ratchet Tarping System

INSTALLATION INSTRUCTION MANUAL

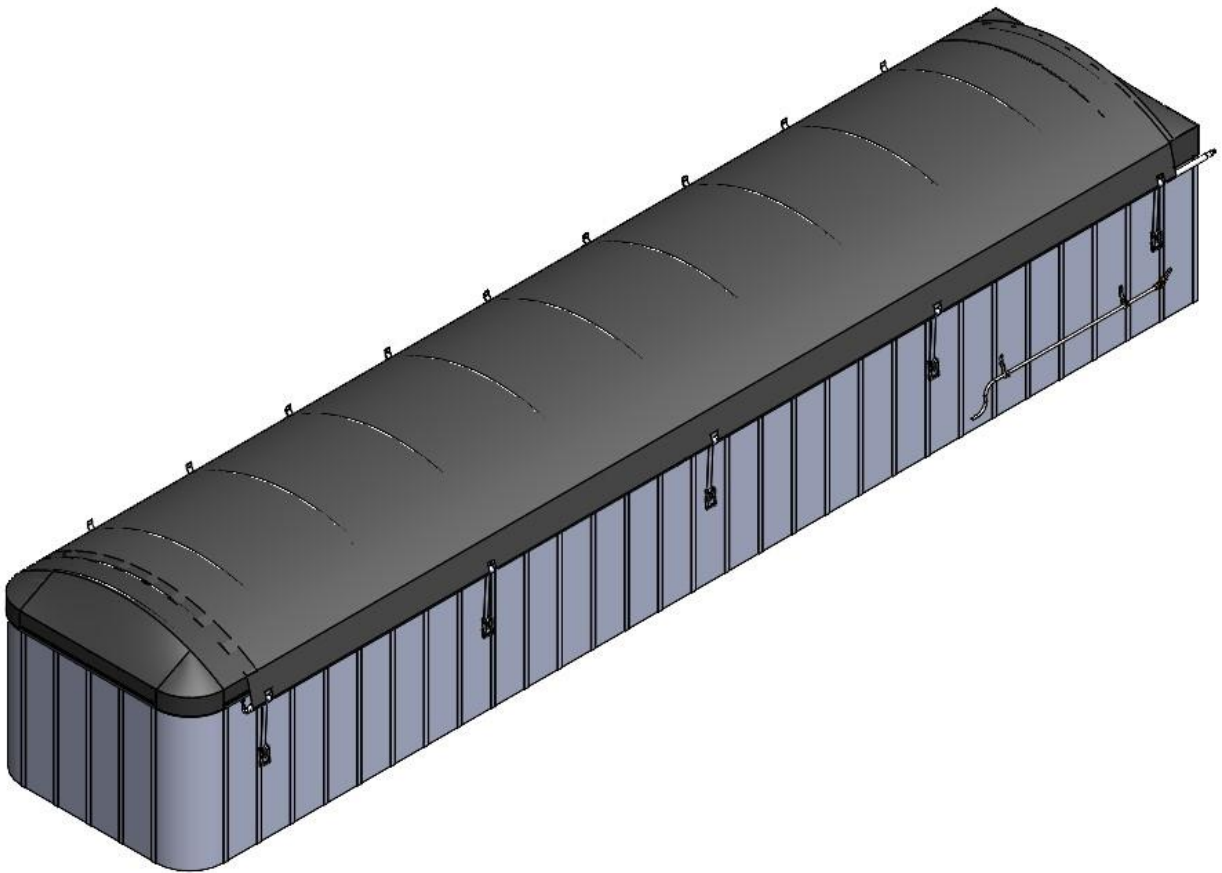


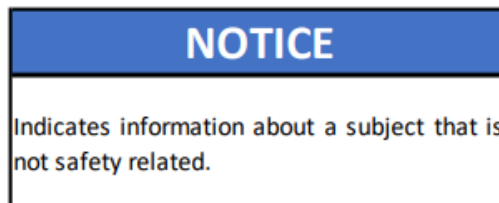
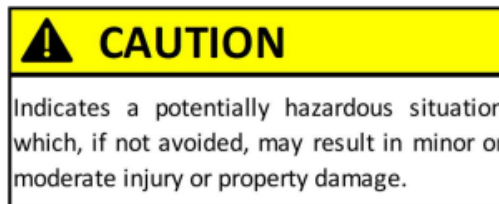
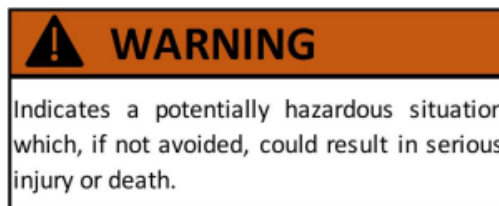
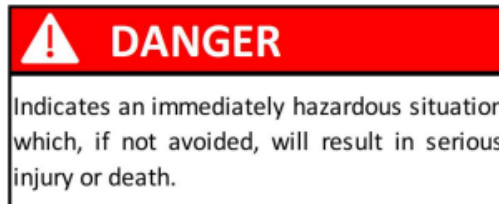
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SAFETY

Read this section carefully before proceeding. The following symbols may appear prior to certain safety related assembly and installation steps described in this manual.

FAILURE TO OPERATE AND INSTALL THIS UNIT AS INSTRUCTED MAY RESULT IN SERIOUS INJURY OR DEATH.



Step 1: Installing the Bow Brackets

Determining the Number of Bows

The number of bows required for the system is determined by the length of the box the system is to be installed on. See Table 1.1 to determine the number of bows required.

Box Length	Bow Quantity
10'-14'	2
15'-18'	3
19'-22'	4
23'-26'	5
27'-30'	6
31'-34'	7
35'-38'	8
39'-43'	9
44'-46'	10
47'-50'	11
51'-54'	12

Table 1.1

Standard Steel Bow Brackets

Mark the locations on top rails between the end caps. The bows nearest to each end cap should be between 24" and 30" from the inside edge of the end cap. The remaining bows should be spaced equally between the front and rear most bows.

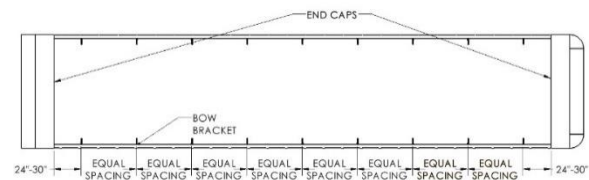


Figure 1.1

The height of the bow brackets on the rail must be determined before mounting the brackets to the rail to minimize wear on the tarp. Using your bow rise, rail width, and trailer width locate the distance the bottom of your bracket must be below the top rail by using Table 1.2.

RAIL	HIGH RISE 12"		LOW RISE 8"	
	96"	102"	96"	102"
1"	2-15/16	3	3-5/16	3-5/16
2"	2-7/16	2-1/2	3	3-1/16
3"	1-15/16	2-1/16	2-11/16	2-3/4
4"	1-7/16	1-9/16	2-3/8	2-7/16
5"	15/16	1-1/8	2-1/16	2-1/8
6"	1/2	11/16	1-3/4	1-7/8

Table 1.2

Using this distance, mark the depth of the brackets. Place the bottom of the bracket on the depth mark and center on the spacing mark.

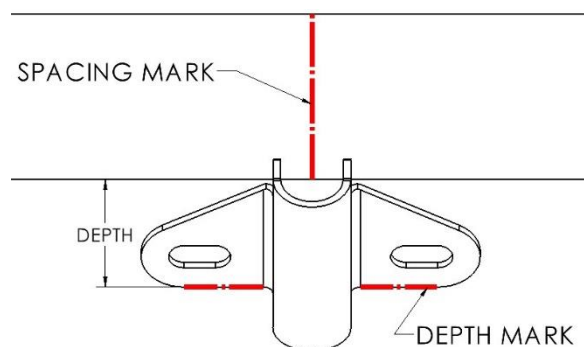


Figure 1.2

NOTICE

The depths marked red in Table 1.2 should be marked so that the top of the mounting slot is as close to the top of the rail as possible. The exact measurement will cause the slots to sit higher than the rail allows.

Now, mark the center of the bracket mounting slots. Drill out the mounting holes using an 11/32" drill bit and mount the brackets using the supplied 3/8 x 1-1/2" self-tapping hex bolts.

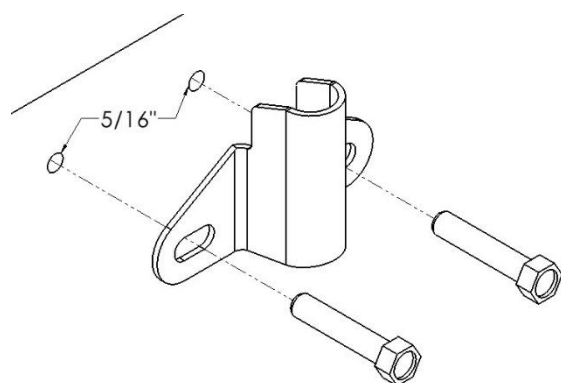


Figure 1.3

Aluminum Bow Brackets

Mark the locations on the top rails between the end caps. The bows nearest to each end cap should be between 24" and 30" from the inside edge of the end cap. The remaining bows should be spaced equally between these bows.

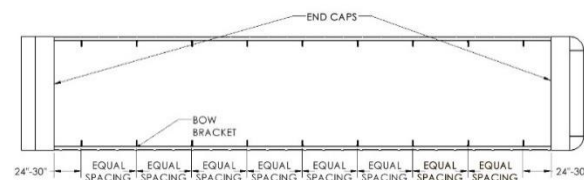


Figure 1.4

Hold the aluminum bow bracket so that it is center on the spacing mark and the top of the bracket is flush with the top of the rail. Mark the position of the four mounting holes.

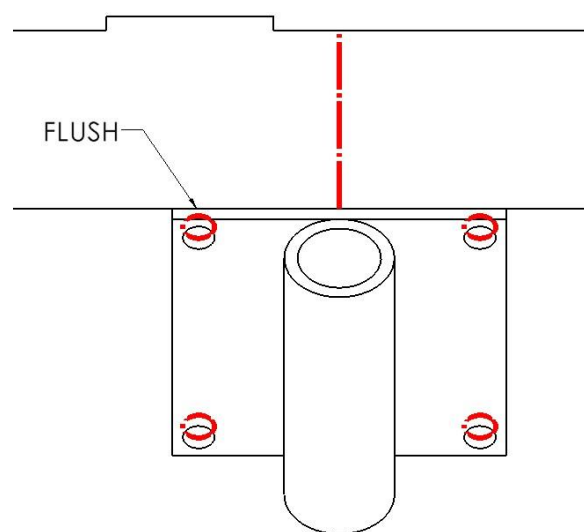


Figure 1.5

Drill out the mounting holes using an 11/32" drill bit and mount the bracket using the supplied 3/8 x 1-1/2" self-tapping hex bolts.

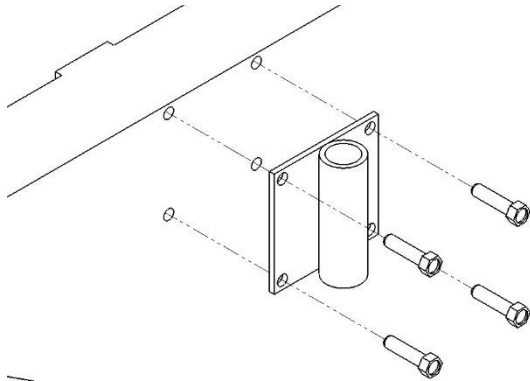


Figure 1.6

Step 2: Installing the Bows

Insert the welded bow and shank into the mounting bracket.

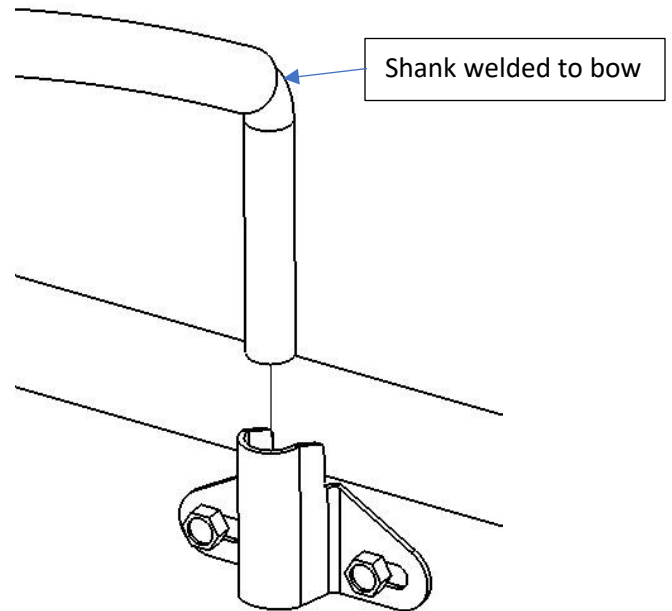


Figure 2.1

Place the loose bow shank into the bracket on the opposite side of the box. Align the bow with the loose bow shank and mark the bow as shown in Figure 2.2

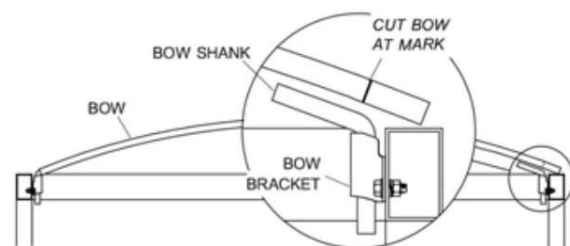


Figure 2.2

Remove the bow. Cut the bow at the mark and grind the end until smooth.

Place the loose bow shank into the end of the bow and insert both shanks into the mounting brackets. Repeat this process with the rest of the bows.

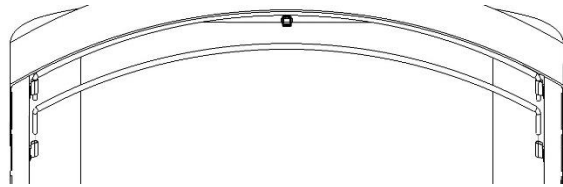


Figure 2.3

Step 3: Installing the Ridge Strap

Fabric End Caps with Anchor

For boxes that are less than or equal to 102" wide, mark and drill a mounting hole 1" from the inside edge on the top of the front and back rails along the centerline of the box using an 11/32" drill bit.

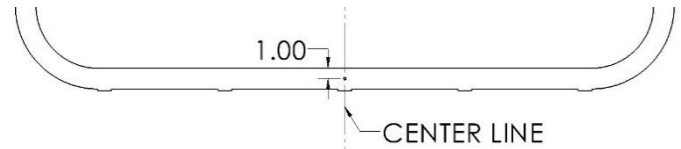


Figure 3.1

For boxes that are wider than 102" mark and drill two 11/32" mounting holes that are each 10" from the center line and 1" from the inside edge on the top of the front and back rails.

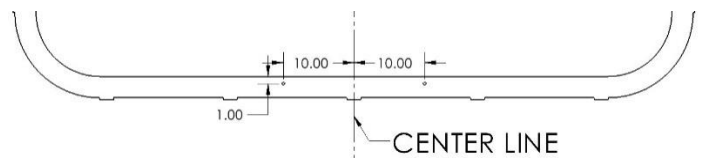


Figure 3.2

Anchor the long strap(s) to the back rail of the box using the supplied 3/8" x 1-1/2" self-tapping hex bolts. Feed the strap under the rearmost bow and over the remaining bows as shown in Figure 3.3.

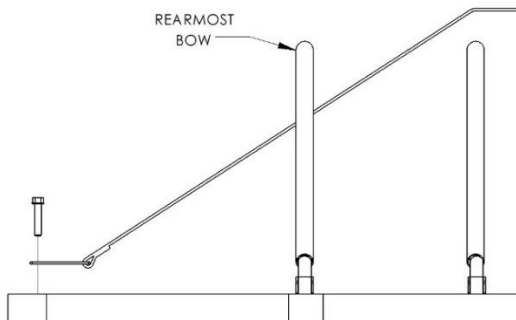


Figure 3.3

Anchor the short end of the strap that is connected to the ratchet to the front of the trailer so that the ratchet is under the strap as shown in Figure 3.4.

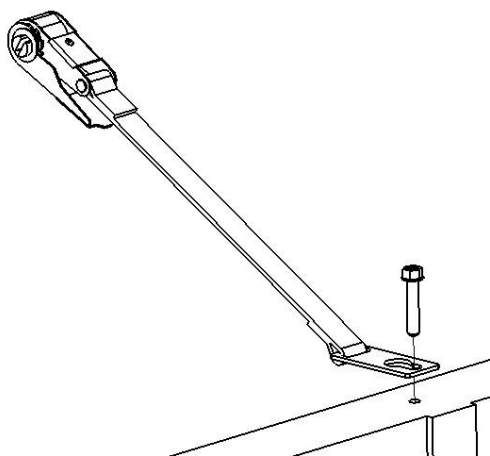


Figure 3.4

Feed the long strap under the frontmost bow and through the ratchet. Tighten the straps so that the bows cannot be lifted.

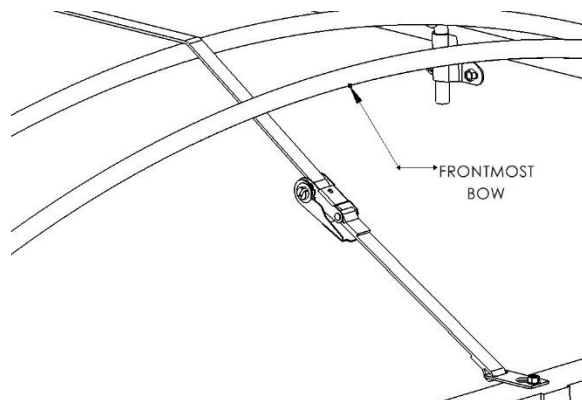


Figure 3.5

NOTICE

Mounting the ratchet so that it is above the strap will result in wear on the tarp.

Fabric End Caps with Hook

For boxes that are less than or equal to 102" wide, mark and drill a mounting hole on the inside of the box 1" down from the top of the front and back rails along the centerline of the box using a 13/32" drill bit.

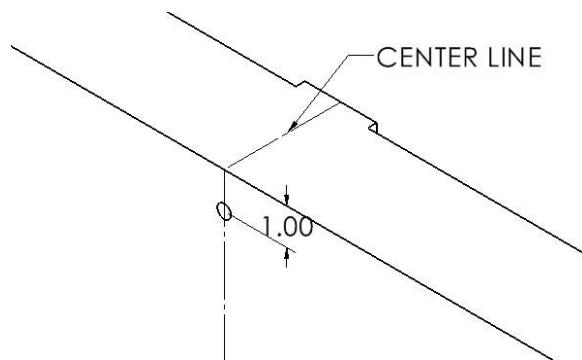


Figure 3.6

For boxes that are wider than 102" mark and drill two mounting holes that are each 10" from the center line, 1" down from the top of the front and back rails using a 13/32" drill bit.

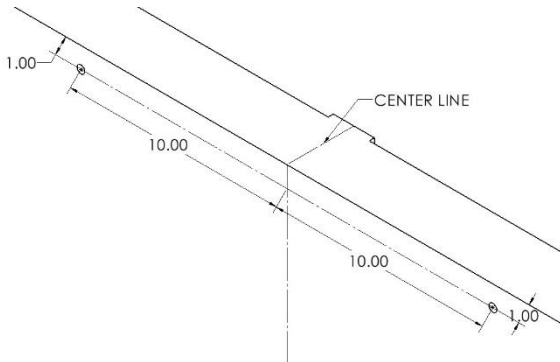


Figure 3.7

Mount the eye bolt(s) through the front and rear mounting holes as shown in Figure 3.8

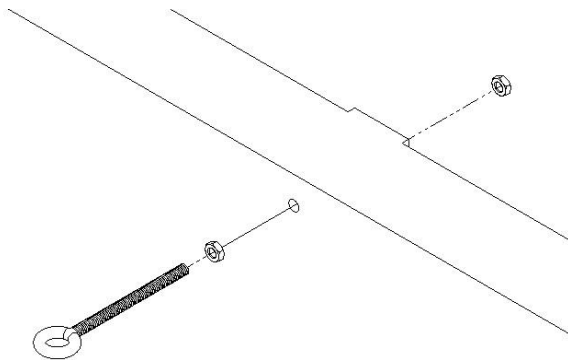


Figure 3.8

Hook the long strap(s) to eyebolt(s) on the back rail of the box. Feed the strap under the rearmost bow and over the remaining bows as shown in Figure 3.9.

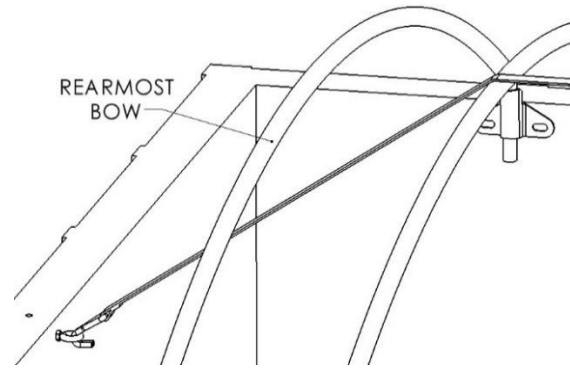


Figure 3.9

Hook the short end of the strap that is connected to the ratchet to the eyebolt on the front of the trailer so that the ratchet is under the strap as shown in Figure 3.10.

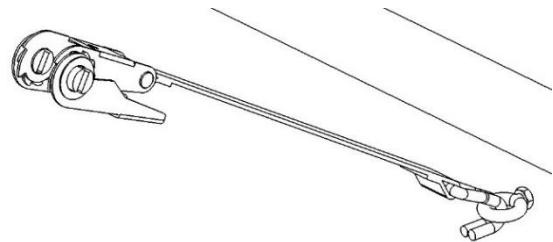


Figure 3.10

Feed the long strap under the frontmost bow and through the ratchet. Tighten the straps so that the bows cannot be lifted.

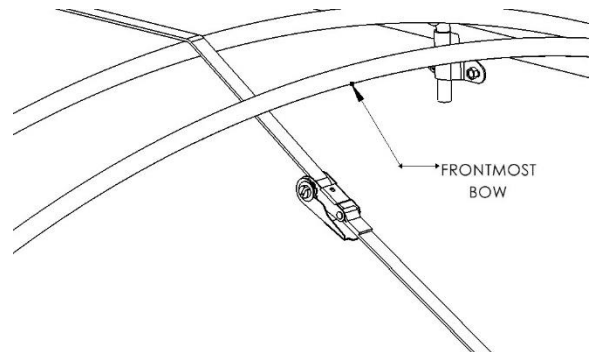


Figure 3.11

NOTICE

Mounting the ratchet so that it is above the strap will result in wear on the tarp.

Aluminum End Cap with Anchor

For boxes that are less than or equal to 102" wide, mark and drill a mounting hole 1" from the inside edge of the aluminum end cap, along the centerline using an 13/32" drill bit.

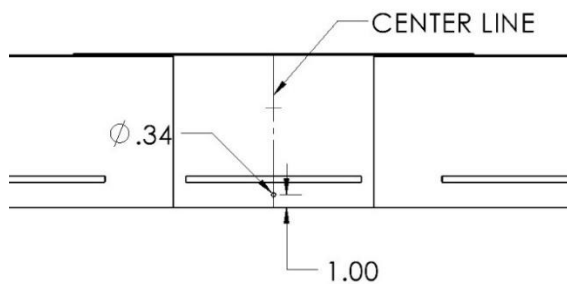


Figure 3.12

For boxes that are wider than 102" mark and drill two 13/32" mounting holes that are each 10" from the center line, 1" from the inside edge of the Aluminum end cap on both end caps.

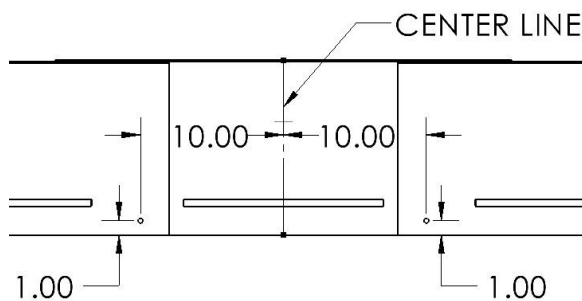


Figure 3.13

Anchor the short strap(s) that is connected to the ratchet to the aluminum end cap at the front of the trailer so that the ratchet is under the strap.

Anchor the long strap(s) to the aluminum end cap that is at the rear of the trailer.

Use a 3/8" x 1-1/2" self-tapping hex bolt and hex nut to secure the anchors to the aluminum end caps.

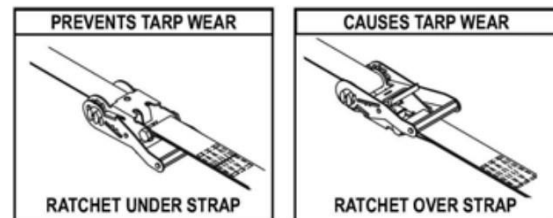
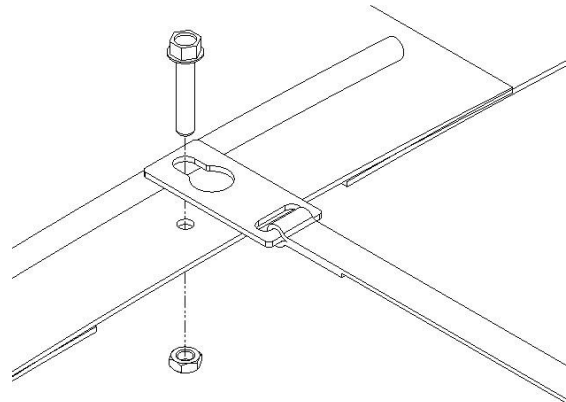


Figure 3.14

Place the ridge straps over the bows, positioning the ratchet below the strap as shown.

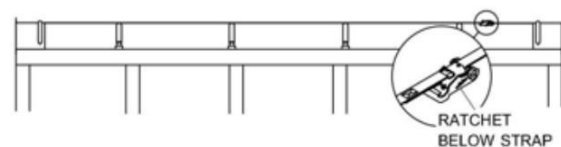


Figure 3.15

Thread the strap through the ratchet and tighten so that the bows cannot be lifted.

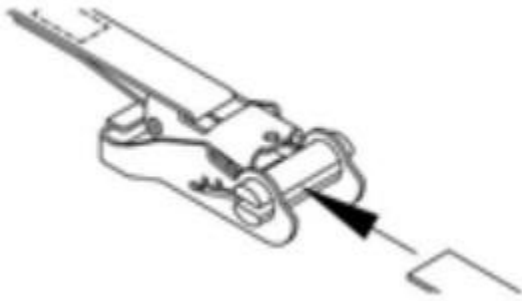


Figure 3.16

Aluminum End Cap with Hook

For boxes that are less than or equal to 102" wide, mark and drill a 1" diameter mounting hole, along the center line, 1" from the inside edge of the Aluminum end cap on both end caps.

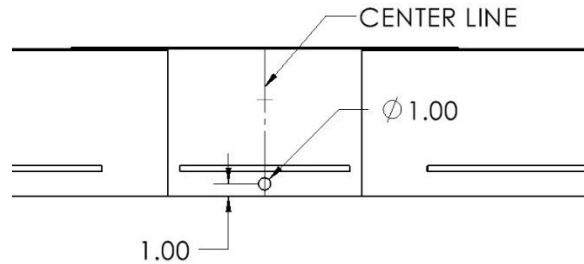


Figure 3.17

For boxes that are wider than 102" mark and drill two 1" mounting holes that are each 10" from the center line, 1" from the inside edge of the Aluminum end cap on both end caps.

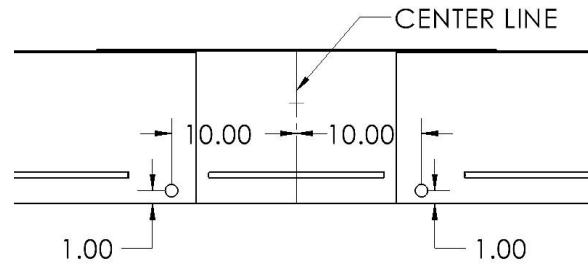


Figure 3.18

Hook the short strap(s) that is connected to the ratchet to the aluminum end cap at the front of the trailer so that the ratchet is under the strap

Hook the long strap(s) to the aluminum end cap that is at the rear of the trailer.

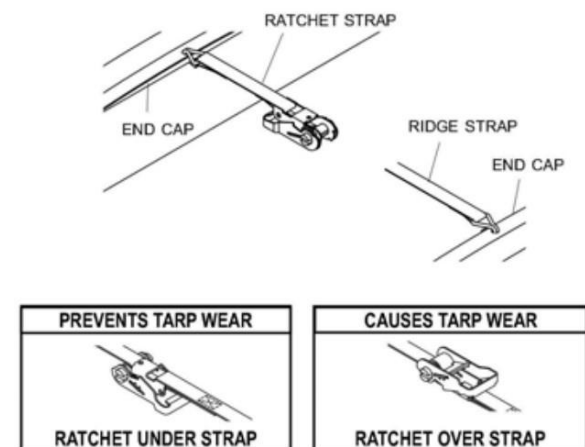


Figure 3.19

Place the ridge straps over the bows, positioning the ratchet below the strap as shown.

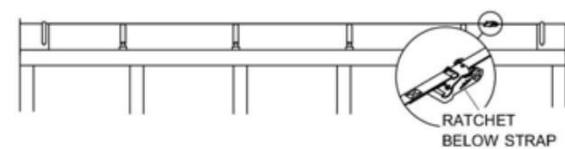


Figure 3.20

Thread the strap through the ratchet and tighten so that the bows cannot be lifted.

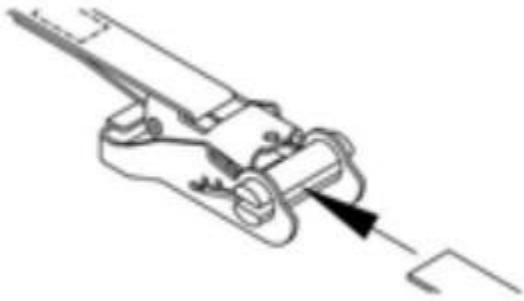


Figure 3.21

Step 4: Installing the Fixed Tube

Open the tarp and stretch it tight. Measure and compare the tarp measurements with those on the spec sheet attached to the tarp. Do not proceed with installation if the tarp measurements do not match the measurements specified on the sheet.

For boxes over 20', insert the swaged end of the fixed tube section into the full end of the second tube section. Align the tubes, weld them together, and grind them smooth.

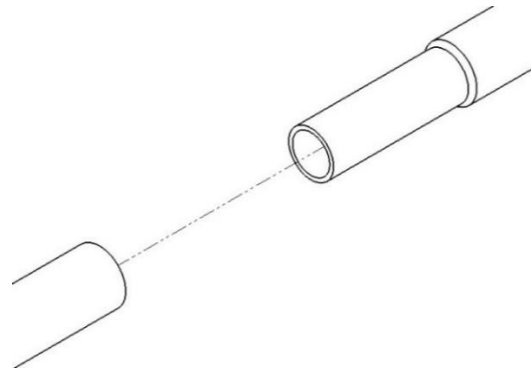


Figure 4.1

Insert the tube into the fixed tube pocket.

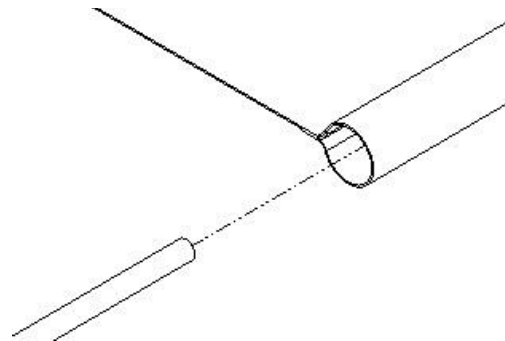


Figure 4.2

Position the fixed tube so that the non-swaged end is 1" past the tarp edge. Mark the swaged end 1" past the tarp edge. Remove the fixed tube and cut at this mark.

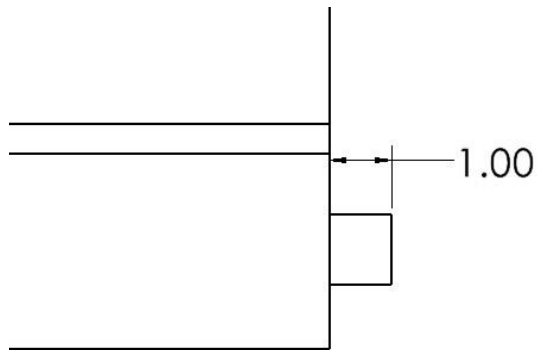


Figure 4.3



Figure 4.4

Step 5: Installing the Tarp Stops

Center the tarp between the front and rear end caps with the fixed tube on the passenger side of the box.

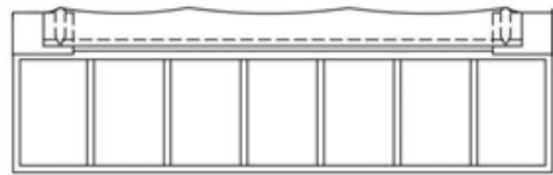


Figure 5.1

The first tarp stop mounting bracket should be centered 14"-18" from the rear edge of the tarp and 1-1/4" from the top edge of the rail on the passenger side of the box.

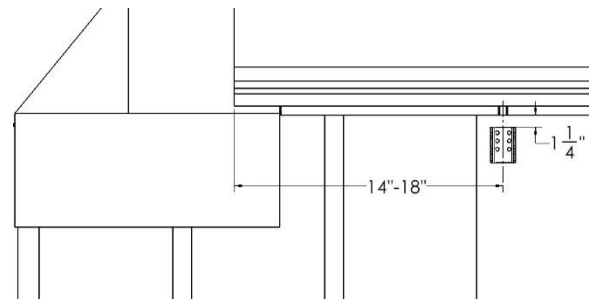


Figure 5.2

The second tarp stop mounting bracket should be centered 14"-18" from the front edge of the tarp and 1-1/4" from the top edge of the rail on the passenger side of the box.

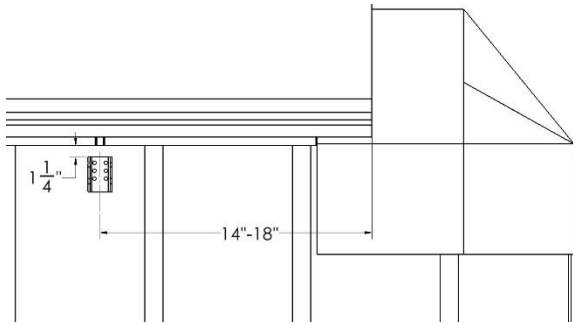


Figure 5.3

Equally space and vertically align the remaining tarp stop mounting brackets between the front and rear tarp stop mounting brackets.

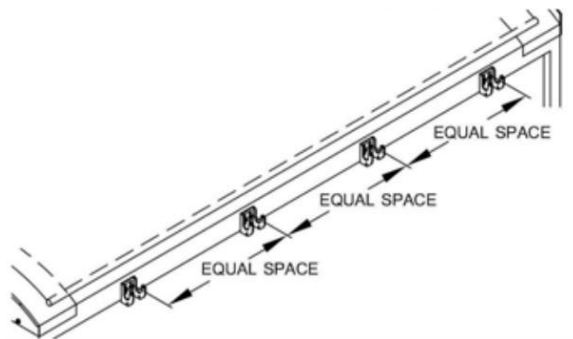


Figure 5.4

Secure all of the tarp stop mounting brackets to the trailer body using the supplied 3/8"x1-1/2" self-tapping screws as shown in Figure 6.5.

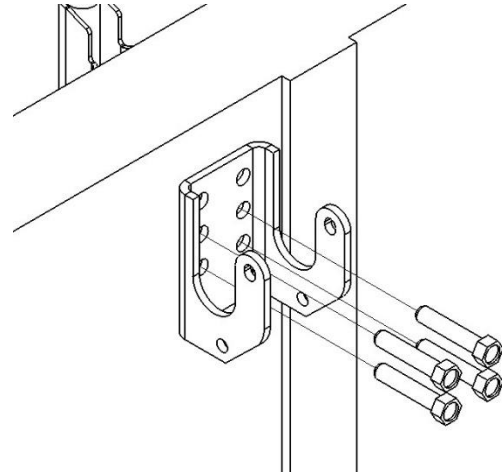


Figure 5.5

Adjust the tarp so that the fixed tube rests in the tarp stop mounting bracket. Fasten the tarp stops to the mounting brackets using the supplied clevis pins and bowtie cotter pins.

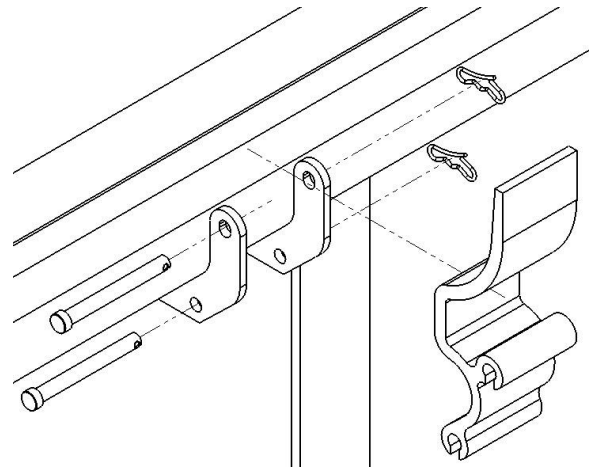


Figure 5.6

Step 6: Installing the Ratchets

You will first need to determine how many ratchets will be required for your system. To determine this, divide the length of your trailer length by ten, round up to the nearest whole number and add one.

Pull the tarp across the top of the trailer so that it is in the closed position. Snap a line no more than 8' from the bottom edge of the tarp on the driver's side. Make sure that this line is at a comfortable operating level as this is the line indicating the height the ratchet will be mounted at.

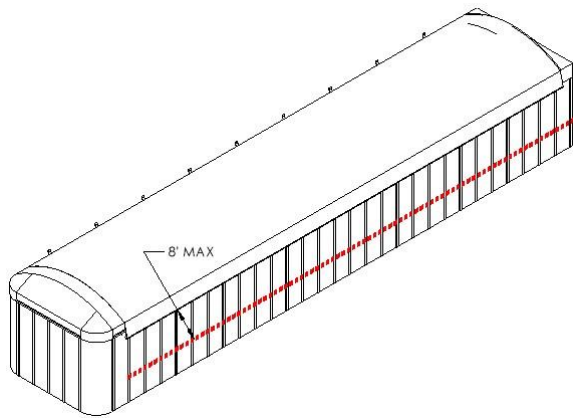


Figure 6.1

Now make a mark on both ends of this line 8" in from the edge of the tarp. These marks are where you will mount your ratchet. Equally space the remaining marks so that you have marked a location for each of your ratchets.

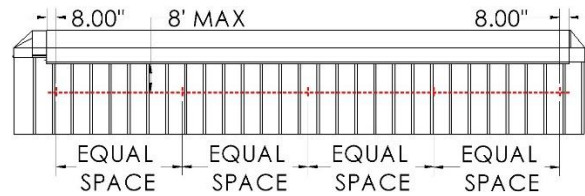


Figure 6.2

Using a 23/64" drill bit drill a mounting hole at each of the marked locations.

Mount the ratchets to the trailer using a 3/8" x 1-1/2" self-tapping screw.

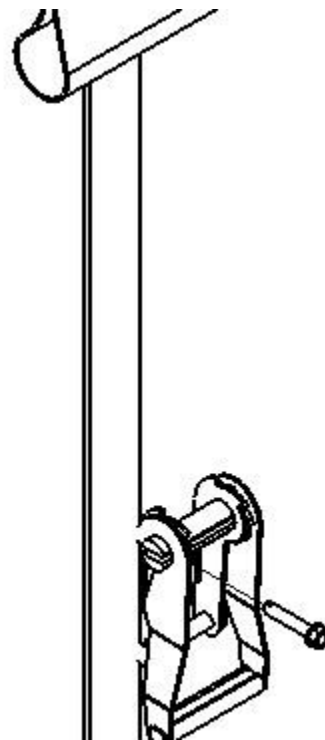


Figure 6.3

Step 7: Cutting the Tarp

Directly above each ratchet mark and cut a 3" rectangle, the depth of the pocket, out of the tarp.

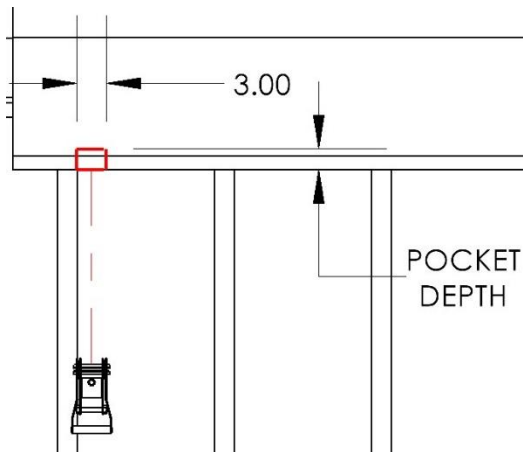
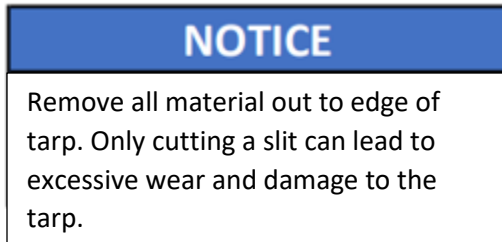


Figure 7.1

The cut tarp should look like what is pictured in Figure 7.2.

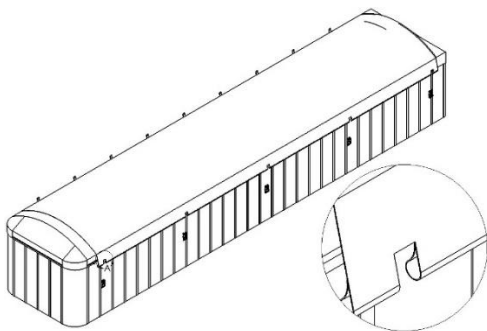


Figure 7.2

Step 8: Installing the Roll Tube

For boxes over 20' Insert the swaged end of the roll tube section into the full end of the second tube. Align the tubes, weld them, and grind them smooth.

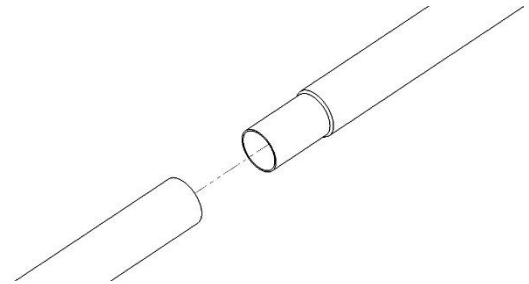


Figure 8.1

Measure from the rear of the trailer to the rear lip of your front end cap as shown in Figure 8.2.

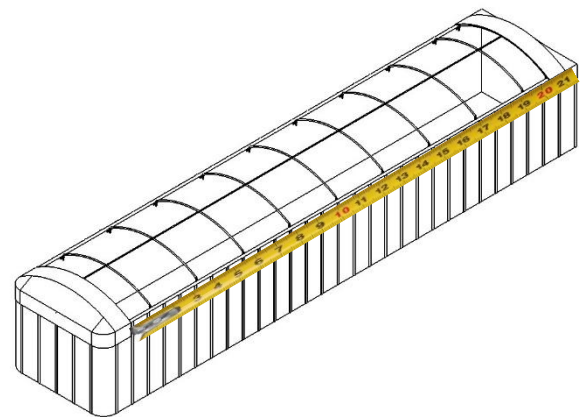


Figure 8.2

Cut the roll tube to this length + 7". Be sure to remove the non-swaged end when cutting the cross tube.

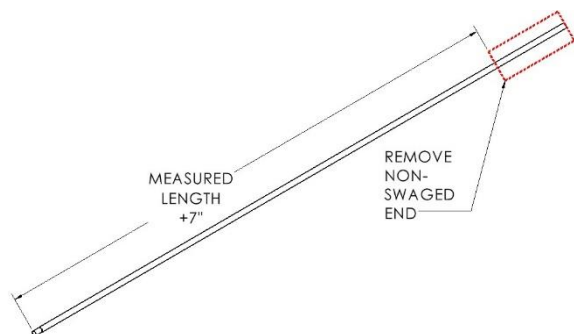


Figure 8.3

Insert the roll tube into the roll tube pocket on the tarp so that 1" of the roll tube sticks out past the front of the tarp.

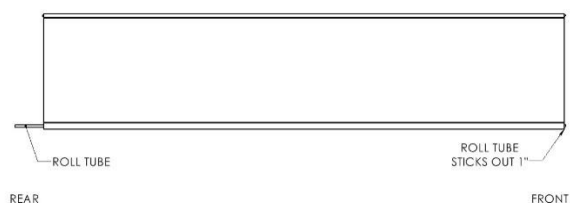


Figure 8.4

Install a U-clamp on the front end of the tarp to connect the tarp to the roll tube using a #12 x 1" Pan Head Phillips Self Tapping Screw. Stretch the tarp towards the rear of the roll tube and install a U-clamp in the middle of the tarp. Once more stretch the tarp toward the rear of the roll tube and install a U-clamp on the rear end of the tarp. Evenly space the remaining U-clamps.

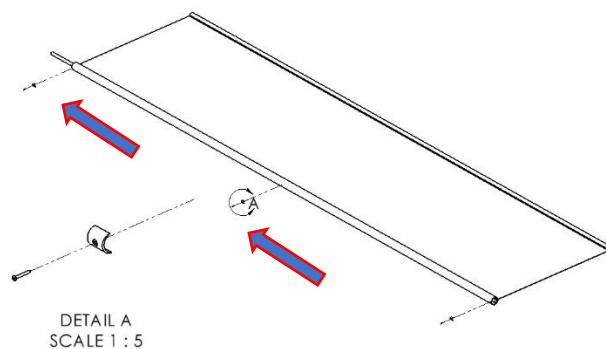


Figure 8.5

Step 9: Installing the Stretch Cord

The stretch cord assembly should come preassembled but if it is not, or modifications need to be made the following instructions may be beneficial.

Connect the 2 10' sections of 1/2" PVC pipe via the 1/2" PVC coupler.

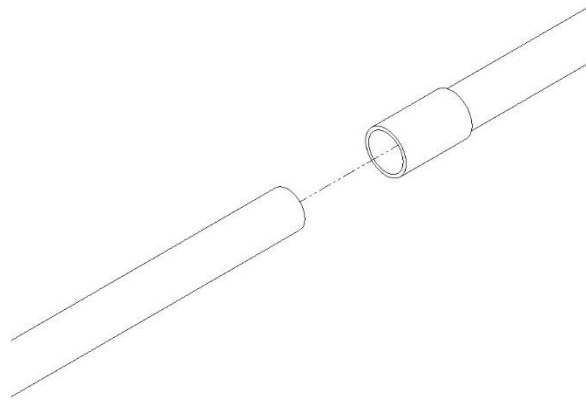


Figure 9.1

Place the roll tube end plug onto one end of the stretch cord pipe.

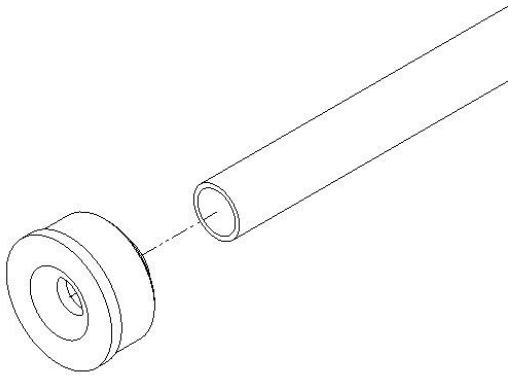


Figure 9.2

Feed the stretch cord through the end plug and roll return pipes. Slide a flat washer over the stretch cord on the end opposite of the end plug and tie a knot in the cord on this end.

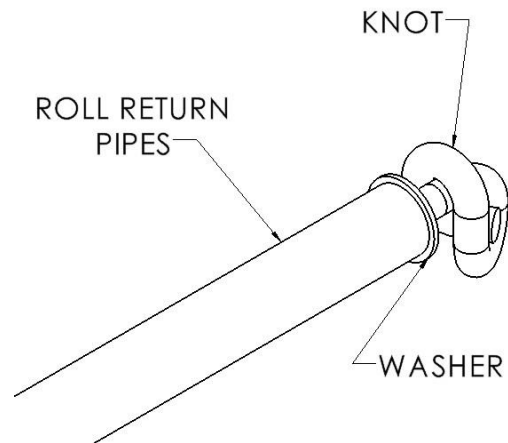


Figure 9.3

Insert the stretch cord return assembly into the roll tube. Press the end plug into the roll tube.

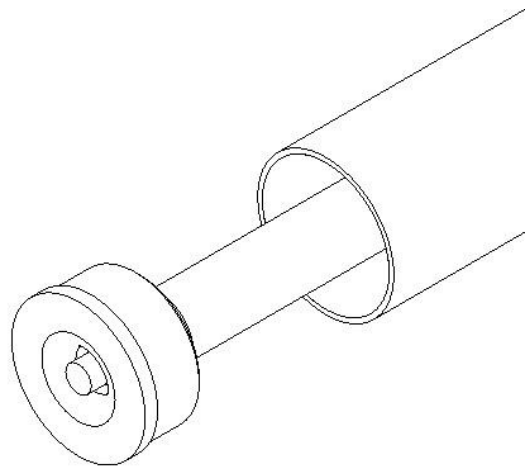


Figure 9.4

Drill a 13/32" hole through trailer 1-1/2" from the front edge of the tarp. Insert the eye bolt into the hole and secure it using the supplied hex nut.

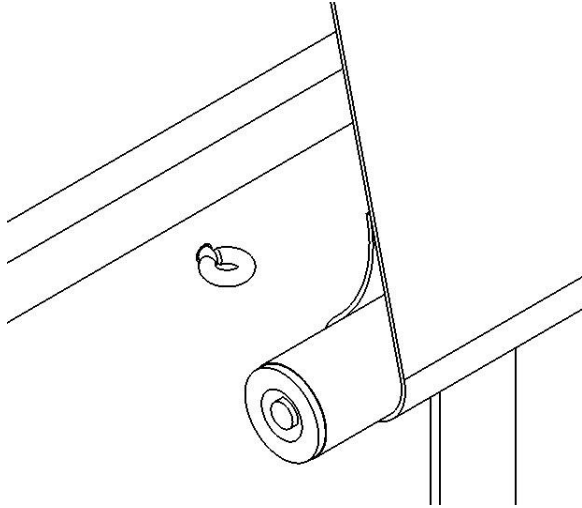


Figure 9.5

With the tarp hanging over the edge of the box, pull the stretch cord to remove all the slack, without stretching the cord, in the stretch cord return assembly. Tie a knot in the cord at the end plug. Slide the protective cover over the stretch cord.

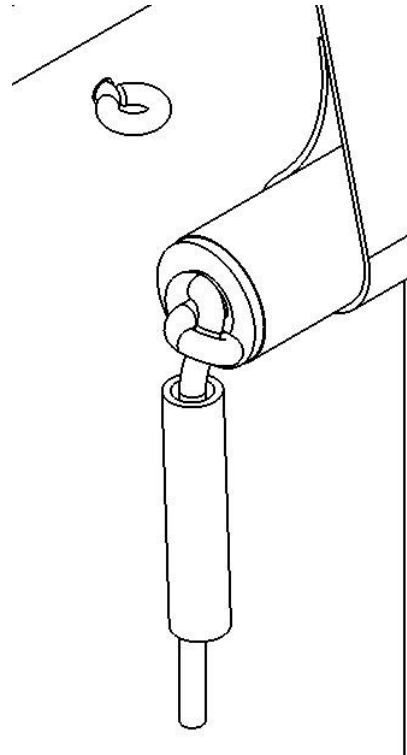


Figure 9.6

Thread the stretch cord through the eyebolt, applying enough tension to almost lift the roll tube, and tie a knot.

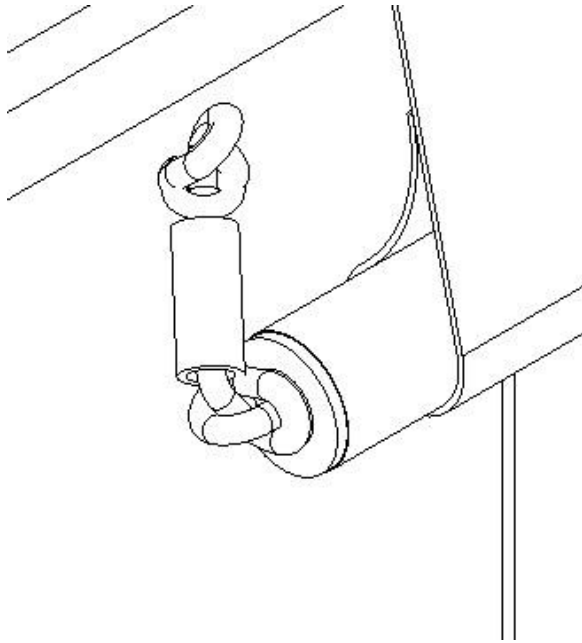


Figure 9.7

Step 10: Installing the Ratchet Straps

Loop the ratchet strap around the roll tube and through the D-ring. Pull the ratchet strap through the slot on the ratchet.

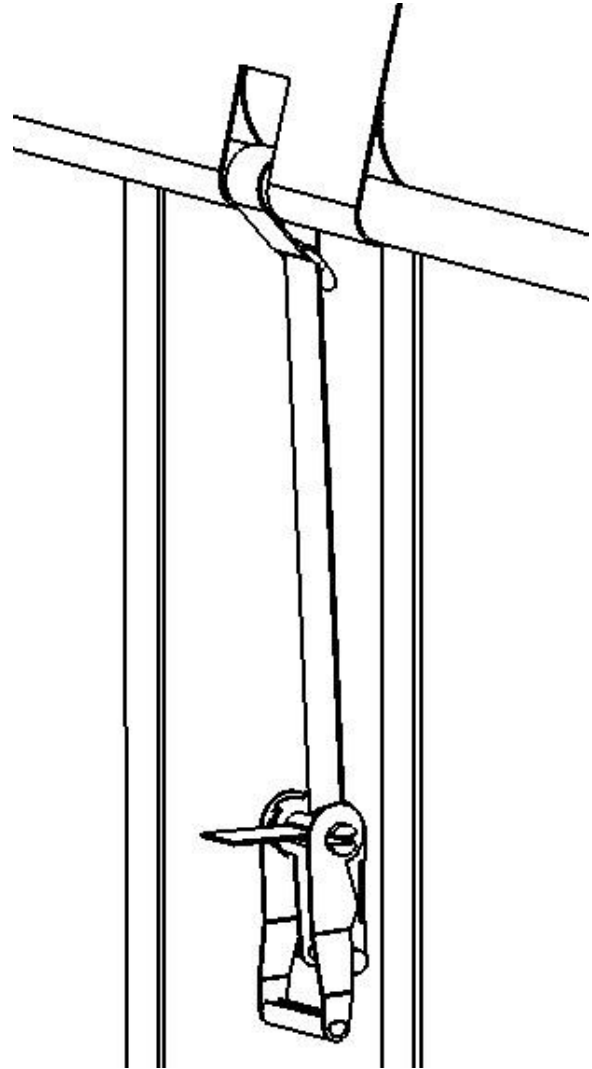


Figure 10.1

Tighten down each strap using ratchets.

Step 11: Installing the Crank Arm

The crank arm for the PBR system is designed to slide freely in and out of the roll tube rather than be fixed to the roll tube like other, similar, systems.

When the system needs to be open or closed, simply slide the square connector key that is welded to the U-joint into the square key weldment that is in the roll tube.

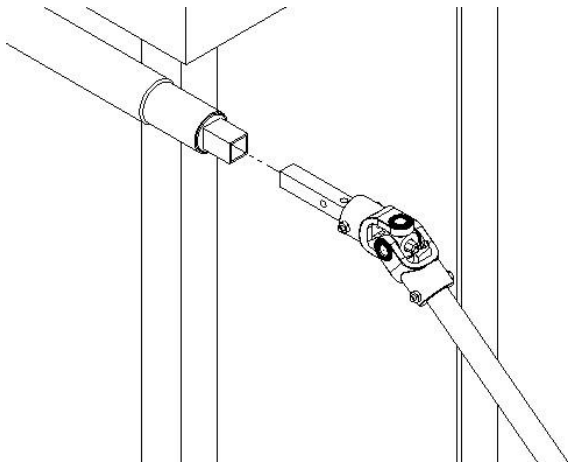


Figure 11.1

When you are not opening or closing the system place the crank arm in the crank retainers detailed in the next step of this instruction manual.

Step 12: Installing the Crank Retainers.

Mount two of the offset J-hooks on driver side of the trailer, toward the rear. Mount them such that the crank retainers are level, spaced approximately 5' from one another, and at a comfortable working height, as shown in Figure 12.1.

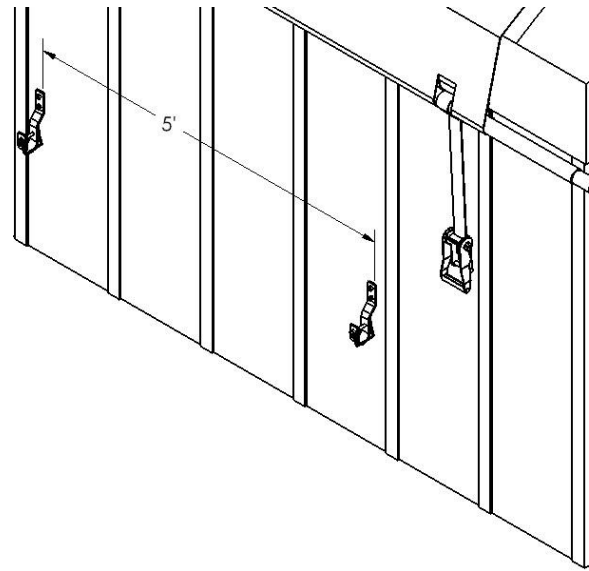


Figure 12.1

The offset J-hook is mounted directly to the trailer using the supplied 3/8" x 1-1/2" self-tapping screws.

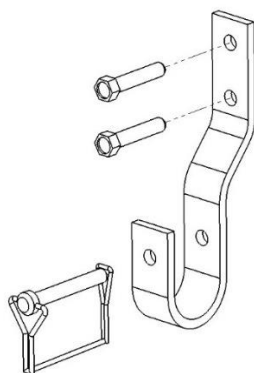


Figure 12.2

When the crank arm is not in use store the crank arm in the offset crank retainers. Always store the crank arm so that the curved end of the handle is toward the front of the trailer.

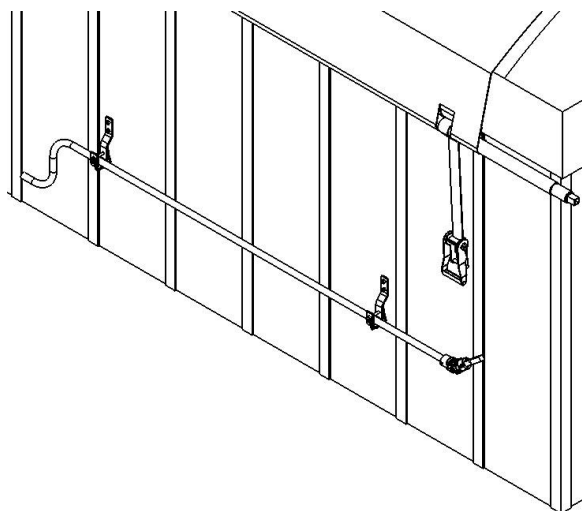


Figure 12.3