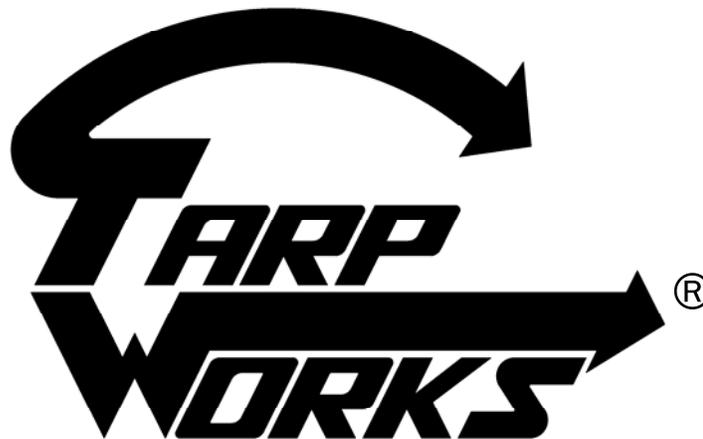




Side Roll

INSTALLATION, MAINTENANCE,
& SAFETY INSTRUCTIONS



(800) 272-6276

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Plants In: Delaware, Florida, Massachusetts, Nevada, Ohio, and Canada

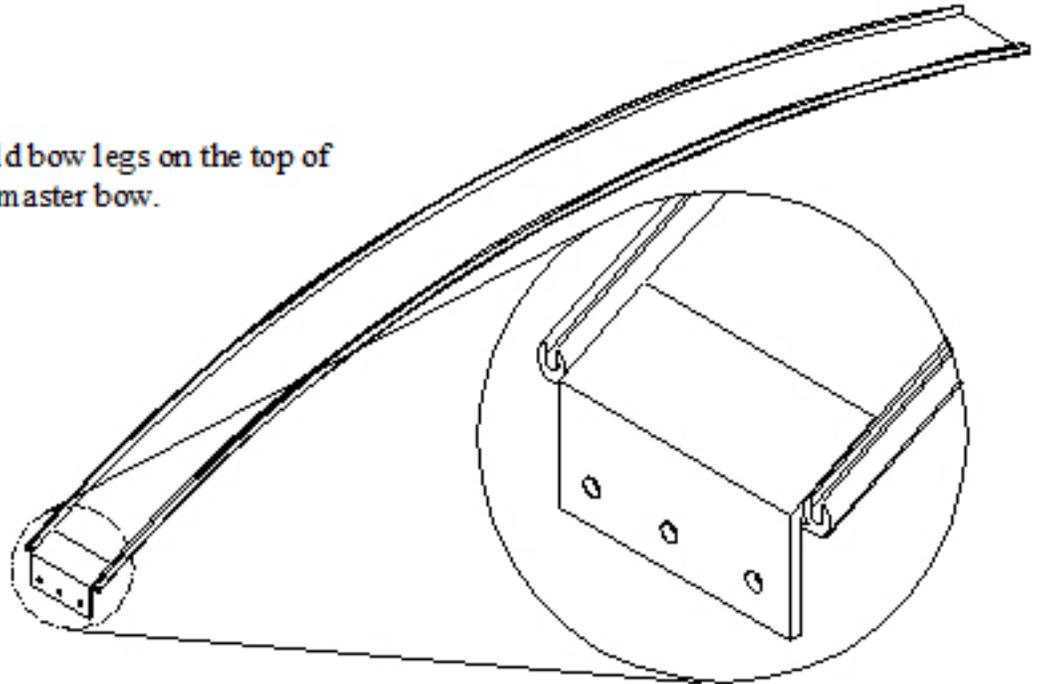
Step 1: Installation of Master Bow Cap (Front/Rear) Optional

NOTE: On a two cap system, the length of the tarp should be one inch shorter than the distance between the front groove of the front cap and the rear groove of the back cap. (If a No Cap system, go to step 2.)

FRONT CAP (Used in place of a fitted front – bonnet stays in place when tarp is rolled open)

Assemble and weld one master bow leg (8" aluminum angle piece) to one end of the aluminum master bow (the master bow leg will be positioned on the outside of the trailer). Place the master bow at front of trailer, just behind where radius or chamfer ends. On a square front, place the master bow approximately 12" from the front of the trailer (must refer to your order form to see what distance was ordered). With the master bow resting on the top rails measure a distance of 9" from the middle of the bow down to an imaginary point level with the top rail (use a piece of string across from rail to rail if needed). You may need to push down on the middle of the bow to achieve the 9" distance. Mark the length of the master bow at the outside of the top rail less 1/4". Cut the bow and weld on the other bow leg. Make sure to grind any burrs or sharp edges so the tarp will not be damaged. Drill 3/8" holes through the bow legs and bolt the master bow onto trailer using 3/8" x 5" bolts, flat washer, lock washer and nut. Again, make sure that the master bow legs are mounted on the outside of the trailer. If a flat cap is used it must have a slight (3/4") arch to allow for trailer stretching and flexing.

Weld bow legs on the top of the master bow.



A vinyl cap comes with the master bow (the purpose of the cap is to cover the space between the master bow and the front of trailer). The front bonnet will not have the Cramaro name on it; the rear bonnet will have the Cramaro name on it. Slide the rope end of the bonnet through the front extrusion of the master bow. Light oil (WD 40 or similar) may be used in the groove to make the cap slide easier. Rubber strap the grommets on the vinyl cap to the trailer.

REAR CAP (Used in place of a attached rear flap – flap stays strapped in place when loading/unloading)

Assemble and weld one master bow leg (8" aluminum angle piece) to one outside end of the aluminum master bow. Place the master bow as far back as possible, making sure not to interfere with the operation of the tailgate (must refer to your order form to see what distance was ordered).

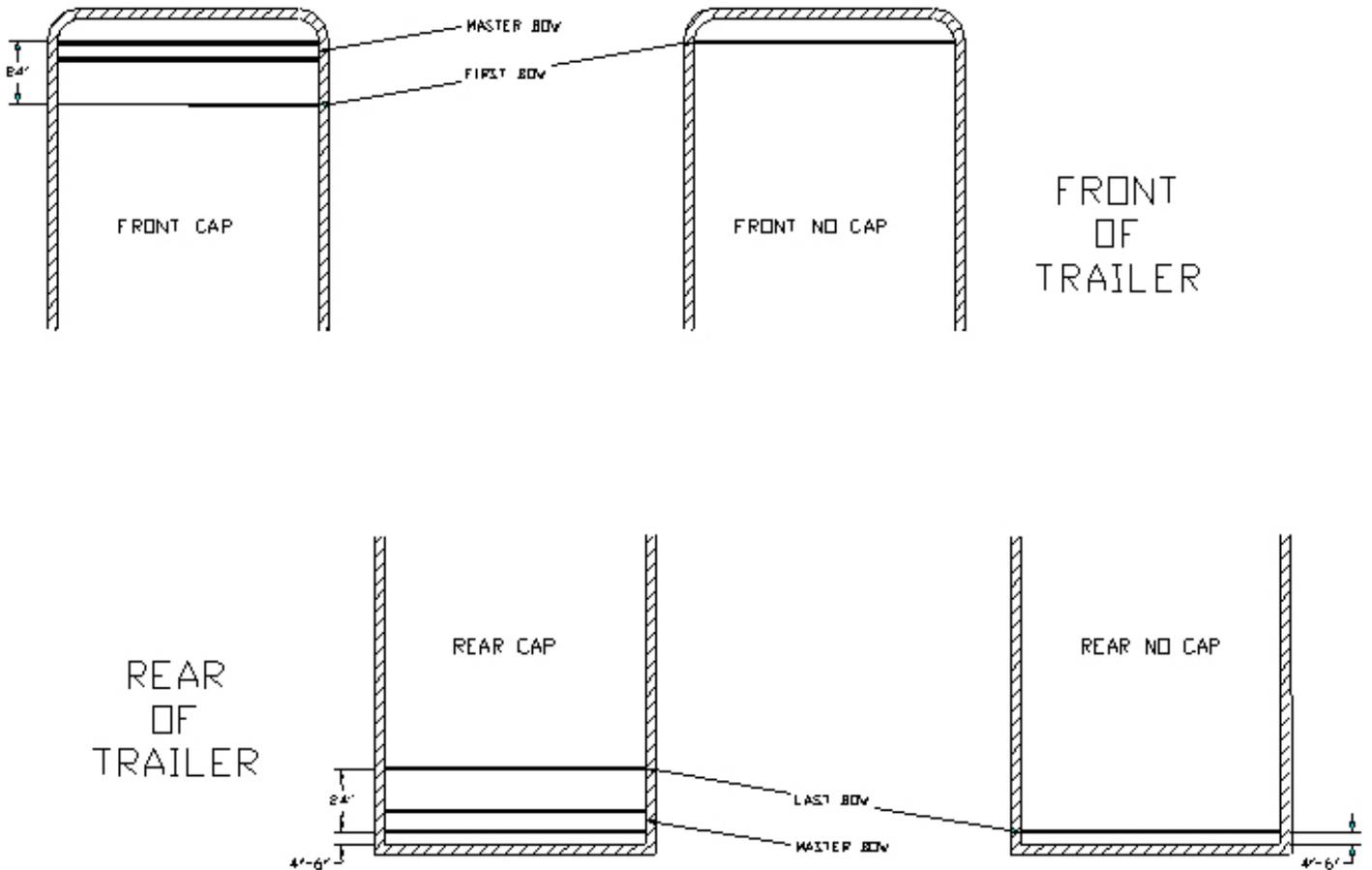
With the master bow resting on the top rails measure a distance of 9" from the middle of the bow down to an imaginary point level with the top rail (use a piece of string across from rail to rail if needed). You may need to push down on the middle of the bow to achieve the 9" distance. Mark the length of the master bow at the outside of the top rail less 1/4". Cut the bow and weld on the other bow leg. Make sure to grind any burrs or sharp edges so the tarp will not be damaged. Drill 3/8" holes through the bow legs and bolt the master bow onto trailer using 3/8" x 5" bolts, flat washer, lock washer and nut. Mount the master bow legs on the outside of the trailer.

Step 2: Installation of Aluminum Bows (Optional if using Steel Roll Pipe)

NOTE: If you have a Master Bow Cap (front cap) follow the steps below, with the exception that first bow will be mounted 24" behind the front of master cap. Master bows are mounted 1" lower than the aluminum round bows. (If Not using bows, go to step 3)

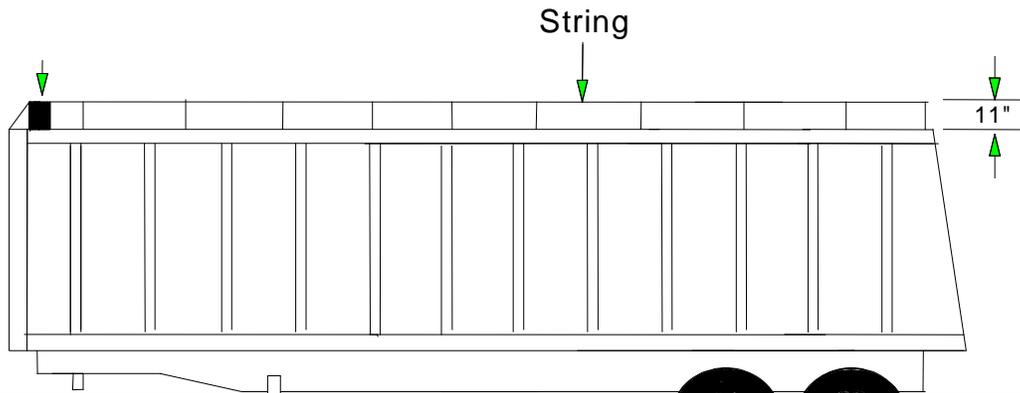
The first bow will be mounted at the end of the radius front. If a square front, the first bow will be mounted approximately 12" back from the very front of the trailer (must refer to your order form to see what was ordered). To determine the height of the bows, hold the first bow up to the top rail/side board of the trailer. On a 10" arch system, the top of the first bow should be 10" above the top rail.

To install the first bow, use the steel bow pockets provided. Mount the bow pocket where needed to keep the bow 10" above the top rail. Pre-drill and mount pockets with 3/8" x 1" "F" point self tapping screws for metal bodies or the 3/8" x 1 1/2" lag bolts for wood sideboards.



Place the last bow (at the same height) as far back as possible, making sure not to interfere with the operation of the tailgate (must refer to your order form to see what was ordered). If a Rear Cap is used, the last bow will be 24" forward from the back of the Rear Cap. **Make** sure that the installation of the rear bow does not interfere with the opening of the tailgate.

Attach a string from the first bow to the last bow, making sure the string is tight. Space out the remainder of the bows evenly, but not more than 4' apart. Make certain the bottoms of the bows are touching the string. On long trailers you may have to clamp a bow in the middle to keep the string from sagging.



Step 3: Installation of Ratchets

****Tarp Positioning**** (Keep this in mind when performing following steps) - When tarp is on the trailer in the closed position, the tarp should overhang the driver's side by approximately 12" and about 4" on passenger side (if side boards, approximately 4" below the boards). Position the front of the tarp so that it is ½" behind the front groove of the master bow (if "CAP" system) or until "fit" is in place, around front radius of trailer.

Mount the front ratchet 6" from the front end of master cap or first bow. Place them at a level that the top of the ratchet assembly is approximately 15" below the "D" ring on an upper strap. To determine this distance, measure the length of an upper strap and add 27" (12" for drop-15" from strap to ratchet). Take this total distance and measure down from top rail or top of side board and mount ratchet. Place the last ratchet 6" from back of rear cap or last bow. Mount ratchets using 3/8" x 1" "F" point screws provided.

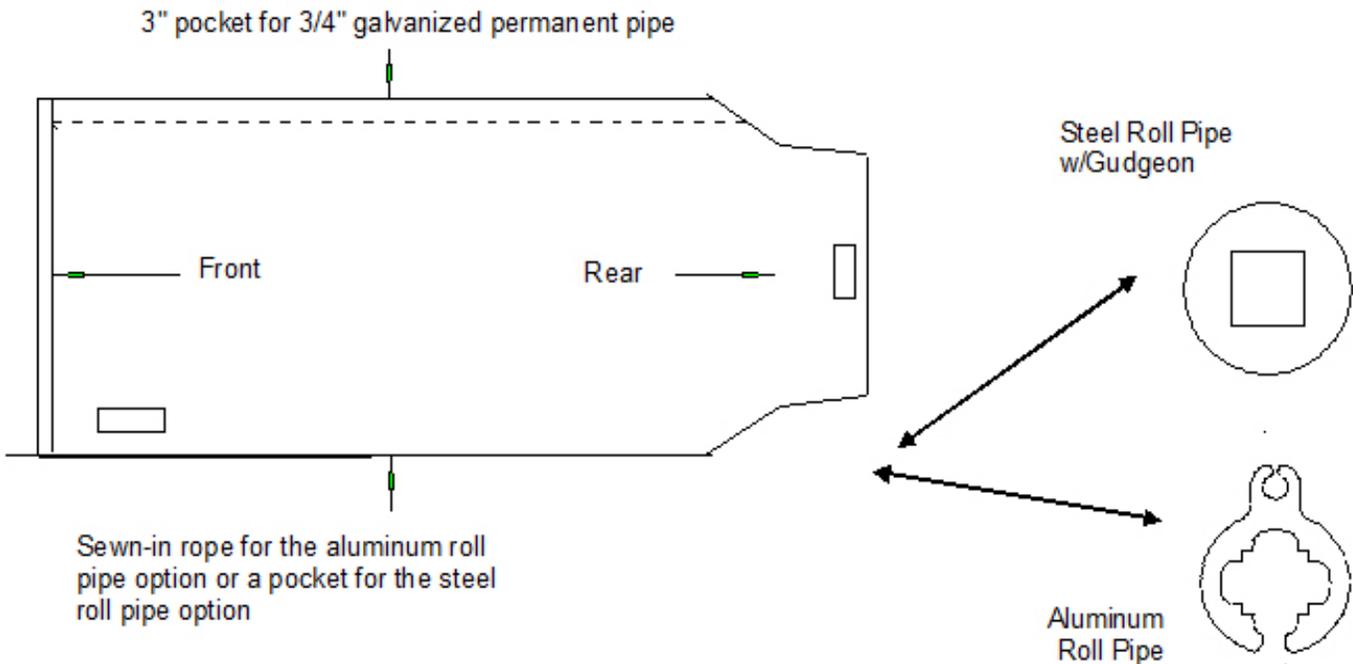
Mount remaining ratchets evenly between first and last, with no more than 8' between them.

Step 4: Installation of Tarp to Roll Pipe, Permanent Pipe, and Upper Straps

NOTE: Open the box and layout the tarpaulin with the topside facing up. Note that one side has a rope sewn into it (for the aluminum roll pipe) or a 4" pocket (for the steel roll pipe). The other side has a 3" pocket. ("Front Cap/Rear Flap" Style Tarp Shown)

- On a no cap system, the roll pipe should extend (6 – 8" past the first bow). If a front "cap" is used, the roll pipe should be a maximum of 2" past the front end of tarp.
- The rear end of roll pipe should stick out 8" past the tailgate. If possible, cut off any excess pipe and grind smooth any rough edges. Make sure the gate will not hit roll pipe.
- Once aluminum roll pipe is cut, tie off the rope, cut and melt the end.

Assemble all lengths of the 3/4" galvanized permanent pipe together using the threaded collars attached. Insert the permanent pipe into the 3" pocket on the permanent side of the tarp.



If Aluminum Roll Pipe: assemble the roll pipe by inserting the square stock (connector) half way into one section of roll pipe. Drill two holes through one layer of the pipe and into the connector approximately 3" apart. Countersink and tap with self-threading 1/4" x 1" torx screws. Turn roll pipe over and repeat process with one screw between the two on opposite side. Slide other half of connector into the other section of roll pipe and repeat same process to connect all sections of roll pipe.

Feed the rope side of the tarp into the rope groove of the roll pipe until the tarp is completely in the pipe. A light lubricant (WD 40 or similar) may be used to ease the rope through the groove. Leave ends of rope for now.

The upper straps slide into the bottom extrusion of the roll pipe. Position the straps with the ratchets below. Make sure to slide the short "D" ring strap so it ends up in the middle of the tarp and attach the 30' pullover rope to the "D" ring. Note - if a roll pipe connector is used, you must slide straps from both ends of the roll pipe to ensure proper strap positioning.

Insert crank handle into roll pipe and roll up the tarp on the ground, starting from the roll pipe side and roll to the permanent pipe. Set the tarp aside.

If Steel Roll Pipe: assemble the roll pipe by sliding the swaged end of one piece into the wide end of the other (if you use more than 2 pieces a connector may be needed). If gudgeon is not welded into one end of the roll pipe, weld at this time. Also weld all around the pipe where the two pieces meet.

Cut a 2" wide (1/2 moon) slit in the 4" roll pipe pocket on the tarp for each upper strap (these slits will need to line up exactly above the ratchets already mounted). Measure from where front of tarp will lay (see**Tarp Positioning** under step 3) to the center of the first ratchet for your first slit.

While sliding the roll pipe into the pocket (make sure the gudgeon will end up at the rear of the tarp) insert an upper strap in the slits as you go. The pipe will go through the 6" loop at one end of each strap. Make sure to place the strap with the extra "D" ring in the middle of tarp for the middle ratchet and attach the 30' pull-over rope to the top "D" ring of that strap.

Step 5: Installation of Tarpaulin and Tarp Stops

NOTE: Mount the tarp stops as close as possible in line with the ratchets on the other side.

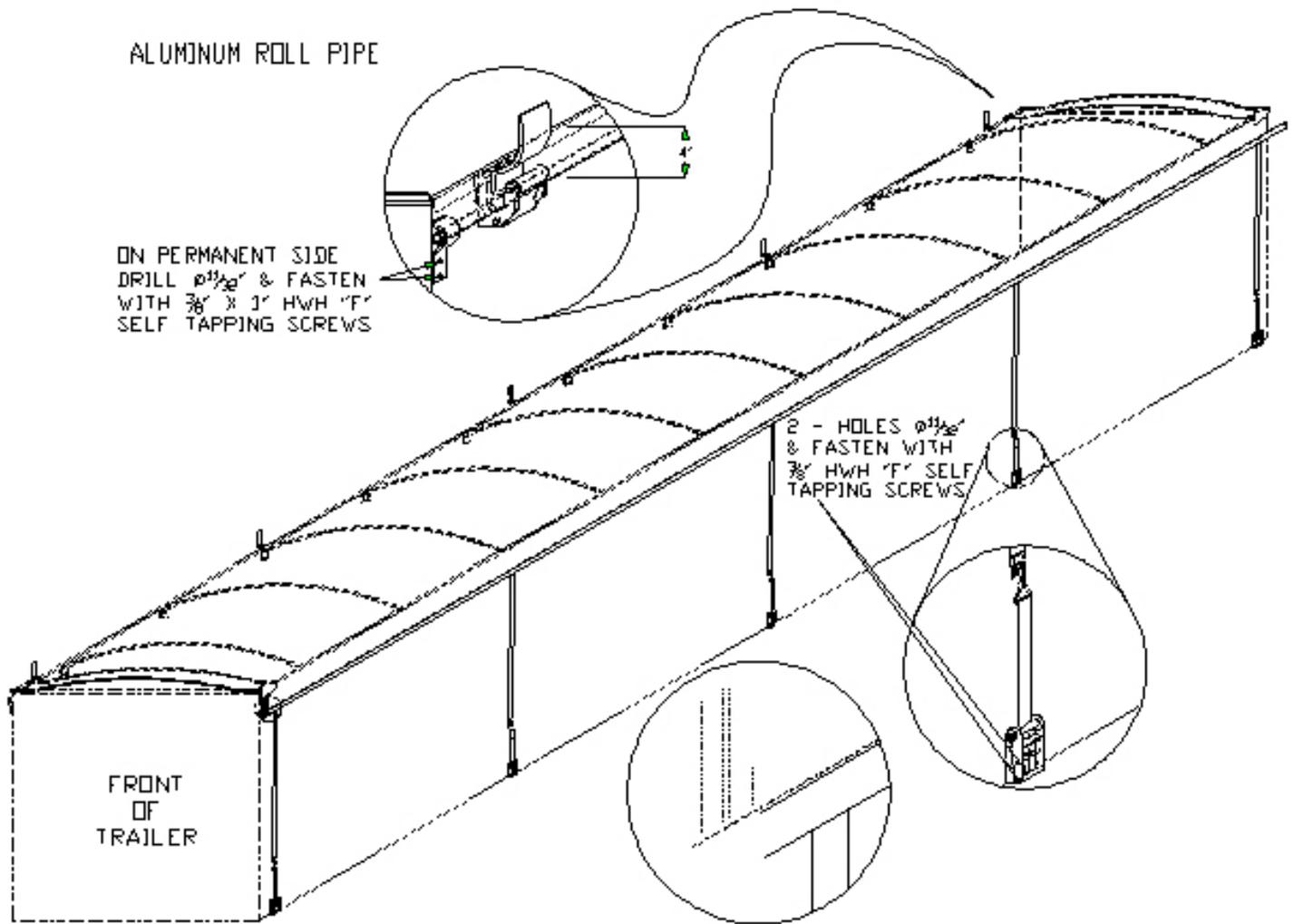
Lift tarpaulin onto permanent side of trailer, making sure roll pipe side is able to unroll. Unroll tarp and position it to hang at correct spot (see **Tarp Positioning** under step 3).

If using steel tarp stops, drill 11/32" holes into the trailer body through the tarp stops. With the tarp stops in place over the permanent pipe fasten them down with 3/8" x 1" "F" point self-tapping screws. Make sure that the tarp has not slipped and that it is still 1/2" in from the front groove of the master bow (or front fit is still in place) and permanent pipe is hanging down approximately 4" from top of rail (if side boards, approximately 4" below the boards).

Permanent pipe "Hold Down Clips" are then mounted, (1) at the front end of the pipe and (1) at the rear end of the pipe.

If using the "EZ" off tarp stops, they are all to be mounted, and then the permanent pipe placed into the slots in the stops. Close the stops down over the pipe and secure with pin. Be sure the pipe is level down the length of the trailer.

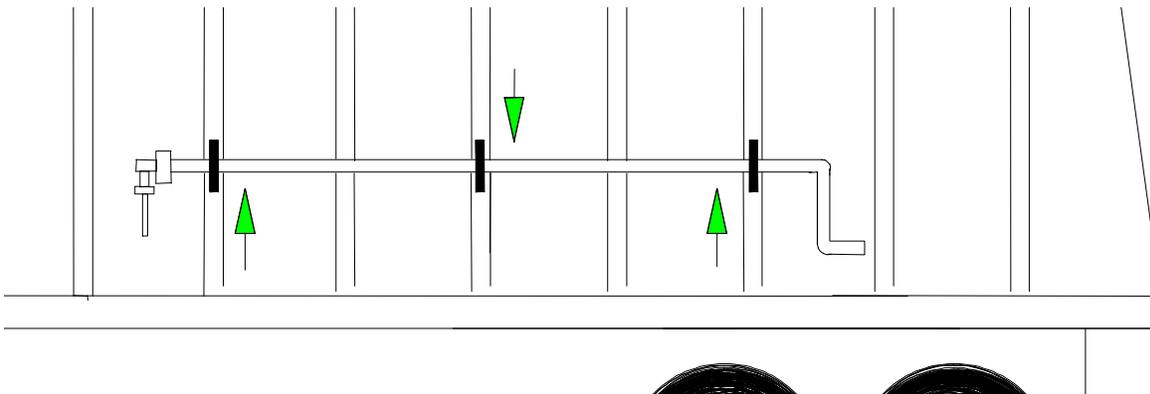
If you have the "EZ" off tarp stops, drill through tarp and one layer of the permanent pipe just before and after the first "EZ" caddy with 1/4" x 5/8" self-tapping screws. This will prevent the tarp from sliding forwards and backwards.



Once the tarp has been secured by the tarp stops, you need to cut off any excess permanent pipe. Cut the permanent pipe 1" past the front and rear of the tarp on the permanent side.

Step 6: Installation of Crank Assembly

Weld or bolt the crank-handle brackets (3), to the side of the trailer, making sure not to interfere with any tarp or trailer mechanisms. The two end brackets should face upwards, the middle bracket downwards. The brackets should be mounted parallel to each other since the crank handle is flexible enough to place into and remove. Bolt in place using 3/8" x 1" "F" point screws and lock washer.



Step 7: Installation of J Hooks

The J-hooks are used to secure the excess pull over rope when tarp is in covered position. Mount the J-hooks directly below the pullover rope at a convenient height using $\frac{1}{4}$ x 1 self-drilling screws. Space the J-hooks out approximately 2' from each other, and mount so you can 'wrap' the pullover rope around them.

Safety Considerations

- Do not dump with load covered.
- Be sure to disconnect battery terminals when welding to the body.
- Use OSHA approved ladders or scaffolding when working above ground level.
- Keep clothing and body parts clear of any moving parts while operation system.
- System is recommended to be in covered position at all times when traveling.

Maintenance

- Periodically lubricate (WD 40 recommended) ratchets to ease operation.
- Immediately fix or replace any part including tarp, straps, rope, etc. that is showing wear.
- Be sure to tighten any loose bolts.
- Periodically check welds.
- NOTE: To prevent whipping of upper straps, twist once then hook into ratchet.

If you require further information or assistance please, contact us at (800) 272-6276.