

Tarp-All Panel System

INSTALLATION, MAINTENANCE, & SAFETY INSTRUCTIONS



(800) 272-6276 001-321-757-7611



www.cramarotarps.com

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

Important: Read before you start

- 1. The DOT regulated maximum width of a vehicle with a tarp system is 108". That is 102" for the body plus 3" per side. The 3" per side is the maximum and both sides are to be equal.
- 2. Height limits are set by individual states and can vary from 13'6" to 14'. It is important to make sure you will be in compliance with your state & Federal rules before making any modifications to your vehicle.
- 3. A 60" front trailer height will be 13'6" tall if using an 8'6" system. On arched trailers the maximum arch height would be 61-1/2".
- 4. Read through these instructions and familiarize yourself with the various part of the system.
- 5. Never operate the tarp system when the vehicle is moving!

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Section -Title

PRODUCT WARRANTY

GENERAL INFORMATION

Prior to returning any part for warranty, customers should contact Cramaro Sales at 800-272-6276 to explain the issue and obtain a Return Goods Authorization (RGA) number. Parts are returned at the customer's expense. After a part has been determined to be covered by warranty, Cramaro will ship the repaired or replaced part to the customer prepaid. Any expedited shipping or special handling is solely the customer's responsibility.

Cramaro products are warranted against defects in quality and workmanship only. They are not warranted for application suitability or any specific application other than what they were designed for. This warranty does not cover any non-Cramaro labor to remove or replace any part found to be defective.

It is also understood that under the terms of sale that Cramaro does not assume responsibility for and is not liable for any consequential losses or damages to equipment or materials; or expenses incurred due to delays, loss of production, vehicle down time, loss of revenue, or costs resulting from a product failure within the limits of this warranty.

For more information contact Cramaro Sales at 800-272-6276. Please have order information and details of the claim available.

TARP SYSTEMS AND RELATED PARTS

Cramaro warrants its tarp systems and parts (excluding tarps and electrical components) to be free of defects for a period of 1 year from the date of shipment. Cramaro's liability is limited to repair or replacement of covered items. See above for exclusions and exceptions. These products should be installed by trained technicians only.

TARPS

Tarp seals and/or stitching that is found to be defective will be repaired by Cramaro. Tarps must be returned to Cramaro for repairs. Tarp fabric is not warranted as it is subject to wind damage if not used properly. Warranty coverage is for 1 year from date of shipment.

FOR MORE INFORMATION CONTACT CRAMARO AT (800) 272-6276

Recommended Tools

1/2" Capacity Drill Machine

1/8" to 1/4" Capacity Rivet Gun

Various Drill Bits up to 1/2"

Various Wrench's up 1 1/4"

C- Clamps or equivalent

3-4 Wide Opening Locking Clamps with swivel pads

Flat / Head Bolt Counter sink up to 7/8" Diameter

5/16" Allen Wrench

15' min. Lifting Device for mounting Headboard

Box Cutter

Pliers

Electrical Tape/Connectors

Cutting Device for Track (if needed)

Baby oil (for panel insertion)

Welder

Cutting Torch

Step 1: Preparing the Trailer

It is very important that the trailer has been thoroughly checked and verified that the actual measurements and the system are compatible. Because the bulkhead and the track attach to the trailer, the points of attachment must be evaluated for mounting. This must be done before you start. Some areas of concern are:

- 1. At the Front of the unit, check where the locking handle on the bulkhead will be when the bulkhead is mounted. Occasionally a pocket is in the way or a rub rail must be moved out of the way.
- 2. Check the front of the unit to see if it is flat. Check with a large square. Spacers may be required to ensure that the bulkhead is square.
- 3. Remove all stickers and labels since they will be covered by the bulkhead
- 4. Remove glad hands and electrical sockets. They will be replaced when the install is finished
- 5. Check the rub rails for flatness. Spacers or other corrective action may be required to provide a flush, even installation of the track.
- 6. Spacers may also be required for concave rails where the track bolts will be placed.
- 7. The track must be flush with the running surface of the deck. Remove any obstructions. On the underside make sure the tires will not interfere with the track.
- 8. Check all lighting for height in relation to the track. Often the side lights will need to be removed and or lowered before the track is mounted.

Straight Truck Locking Rod Handle Fabrication and Welding Notice

On a Standard Tarp-All Panel system, the locking rod has a mechanical tube welded to the bottom for the locking rod handle to be inserted. On a standard panel system the locking rod swings around the front and locks in the spring latch. On a straight truck it swings under the body. It will be up to you to find the best location for the locking rod spring latch to be mounted under the body. It will also be up to you to bend the 1" locking rod handle to lock in the spring latch. Please call (800)272-6276 for assistance if needed.

- 1. Find the best location for the spring latch
- 2. Construct a mounting surface if needed.
- 3. Position the locking handle assembly inside the spring latch and tack weld the mechanical tube to the locking rod. (you may need to cut the locking rod down)
- 4. Test the function and seal without system tension.
- 5. If adjustment is needed cut tack welds and try again.
- 6. Weld fully.

Section 1—Prep the Trailer Front

- 1. **See Figure 1.** If front corners are chamfered, use steel or aluminum angle to square off the chamfered front corners of the trailer. If chamfer is small enough that you are still able to bolt the 4 side bolts on each side, welding the corner may not be necessary. **See Figure 2.**
- 2. **See Sec.2 Fig.1.** Measure the inside legs of the bulkhead frame. It should measure approximately 98" for a 102" wide trailer. It should measure approximately 92" for a 96" wide trailer.
- 3. Cut the angle to fit the chamfered corners and weld corners to trailer. Be sure the overall width of the

If front corners are square, weld spacers to the sides of the deck where the side of the bulkhead will be mounted. From the front of the trailer, the spacer should stop @ 8 1/2". If a pocket is in the way, it must be cut out.

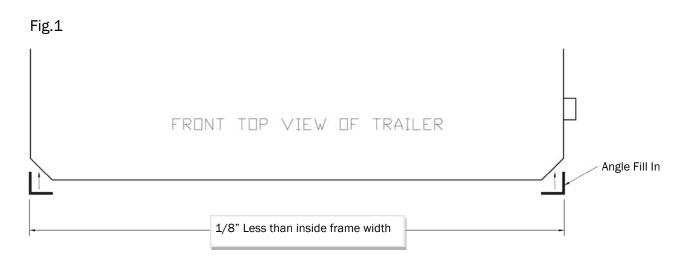


Fig.2





Trailer designs will differ. The pictures above show a simple way to modify the front to accept the Cramaro Bulkhead Frame. In this case the installer countersunk one of the corner cap bolts because the Bulkhead Locking Rod will be passing directly over the bolt. It may also be necessary to cut into the rail and reinforce. Once the frame is able to slide onto the deck and it has an ample mounting surface, assemble the frame and proceed to section 6.

Section 2— Assemble the Bulkhead Frame

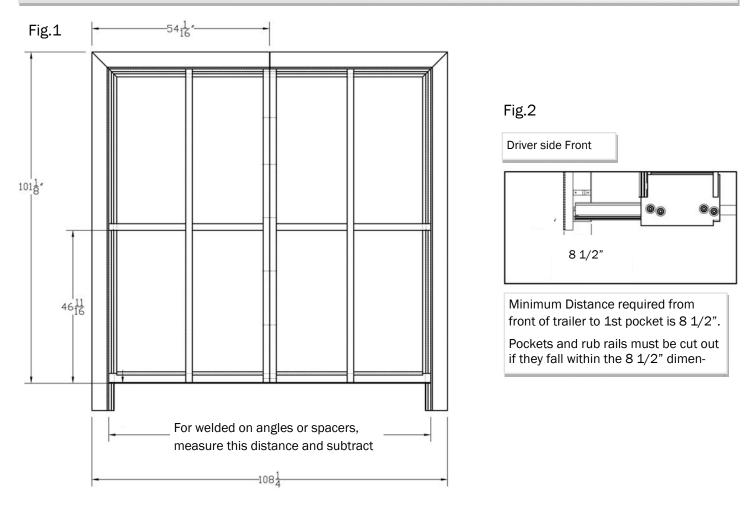
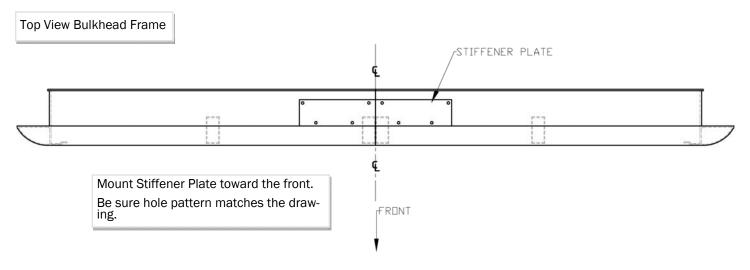


Fig.3



7

Section 2—Assemble the Bulkhead Frame

- 1. See Figure 4-5. Join the two halves together using silicone where the halves meet and bolt with provided 3/8" hardware.
- 2. **See Figure 6-7.** Apply foil tape to the outside top radius of the Bulkhead joint starting from the front skin and ending at the inside of the 2x4 upright tube.
- 3. **See Figure 8.** Locate the bulkhead stiffener plate. (3/8" x 4" @ 23" with holes) Clamp to the top of the bulkhead on center. Push the plate toward the front.
- 4. **See Figure 9-10.** Using the stiffener plate as a guide, Drill 3/8" holes through the bulkhead extrusion and fasten with 3/8" hardware. **See Sec.6 Fig. 1** for lifting bracket tip.
- 5. **See Figure 11-12.** Rivet the bulkhead joining clip (Thin Aluminum with holes in it). It should start where the bulkhead skin ends and wrap around the radius of the bulkhead extrusion at the top. Use the joining clip as a guide to drill holes. Rivet clip to radius.
- 6. See Sec. 7 Fig. 1. Stick the provided foam 3/4" x 3" pads to the flat trolley contact point on the lower portion of the bulkhead leg. This will continue the seal where the foam stops on the trolley. This must be done before mounting the track.

Fig.4



Fig.6



Fig.5



Fig.7

Tape the entire joint from front to inside.





Section 2 —Assemble the Bulkhead Continued

Fig.8



Fig.9



Fig.10



Fig.11

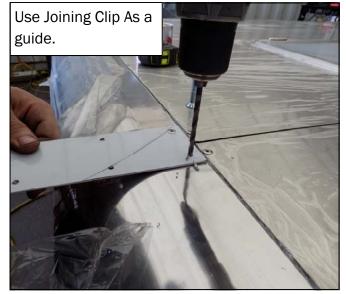
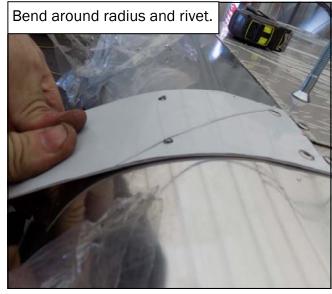


Fig.12



Section 3— Identify Trolleys and Trolley Connectors

1. See Figure 1-6. Identify Trolleys and Trolley Connectors before assembling. The Rear Trolley Connector must go with the Rear Trolley and The Front Trolley Connector must go with the Front Trolley.

Fig.1 Fig.2



Fig.3



Fig.5





Fig.4



Fig.6



Section 4—Assemble the Trolleys

1. See Figure 1-2. Assemble the front, rear and intermediate trolleys to the connector using provided 3/8" hardware. The Rear trolley must be countersunk and 3/8" flat head socket screws must be used. See Figure 3. Be sure the trolleys are assembled so the tarp channels meet and the Rear Trolleys match the Rear and the front match the front. It may be necessary to chase the connector fastener holes to 3/8". See Figure 3. Rivet the upper hinges to the lower portion of the connector with 1/4" rivets.

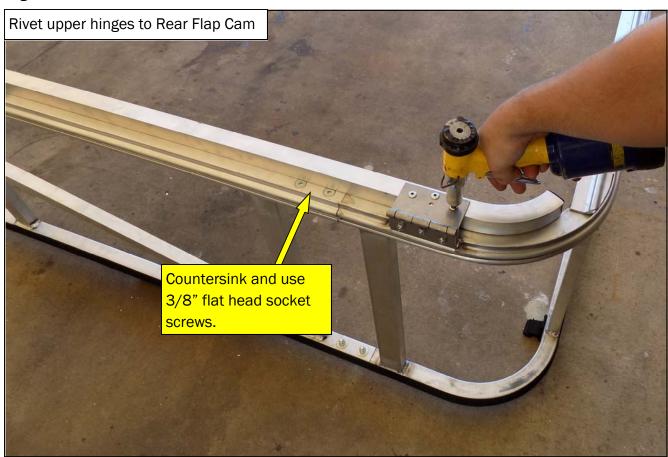
Fig.1



Fig.2



Fig.3



Section 5 — Apply Foam Seal and Felt

The foam seal comes with predrilled holes.

- 1. Remove a portion of the adhesive backing on the foam seal and place the foam seal on the trolley connector so the center of the foam aligns with the center of the connector.
- 2. Adhere the foam seal to the front trolley (the one without the flap cam tube) using the rail of the extrusion as a guide.
- 3. Drill through one wall of the trolley tube at each pre-drilled hole and rivet with 1/8" rivets.
- 4. See Figure 3-4. Apply felt to main trolley tubes (the ones without the tarp insertion channels).

Once installed, the foam will contact the bulkhead frame to create a seal.

Fig.1



Fig.2



Fig.3



Fig.4



Section 6-Mount the Bulkhead Frame

Note: It is critical that the Bulkhead frame is mounted square with the trailer. Mounting holes in bulkhead frame are not pre-drilled. They are left undrilled so you can find the best location based on your trailer. Use at least 6 bolts on the top and 4 bolts for each side. The lower Locking Rod mounting bolts should be removed before mounting the Bulkhead frame. Replace after frame is mounted. Remove protective plastic immediately if being installed outdoors, water can get behind the plastic and stain the finish.

See Figure 1. Tip: Create a lifting bracket that mounts to the stiffener plate. Use the stiffener plate as a guide to transfer the hole pattern into a steel plate. Bend a steel rod into a "U" shape and weld to center of steel plate.

1. See Figure 2. Using lifting straps or chain and a forklift, lift the assembled bulkhead frame and place on the deck at the front of the trailer. The stainless front skin should be against the front face of the trailer. The top of the deck where the Bulkhead frame is mounted must be at least 5". Shims may be required if the trailer mounting surface is raised. See Figure 5.

Fig.1 Fig.2





Fig.3 Fig.4





Section 6 - Mount the Bulkhead Frame

- 3. **See Figure 4-5.** With the Bulkhead skin pushed against the trailer, drill one top hole on each bulkhead half. Fasten first 2 top corners with 1/2" bolts. Check to be sure the frame is leaning toward the front 1/16" @ the 2' mark. **Adjust before adding side bolts.**
- 4. **See Figure 6.** Drill and fasten 4 side bolts per side.
- 5. See Figure 7. Finish drilling the top and fasten with 1/2" hardware.

Fig.5

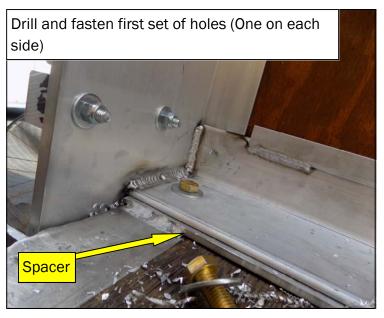


Fig.6



Fig.7



Section 7 —Install the Track

A 48' system requires two different lengths of track. A 53' system requires 3 different lengths of track. Be sure track length is equal at left and right when mounted. Be sure 1/4" stainless dowel pins are used to join the track.

- 1. See Figure 1. Start at the front of the trailer. Push the track up against the foam pads on the bulkhead leg with about 1/8" compression. If you did not add the foam pads to the bulkhead frame, do it before the track is mounted.
- 2. See Figure 2-3. Drill and mount the track using 1/2" fine thread flat head socket screws. The top of the track should be flush with the top of the deck. Follow the camber of the trailer.

Fig.1

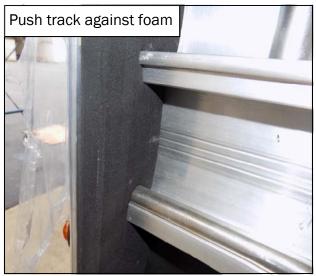


Fig.2



Fig.3

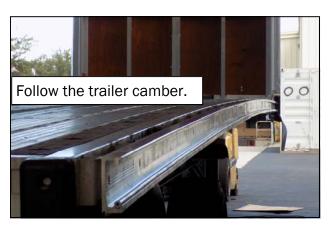


Fig.4



Section 8 —Insert the Pelmet

A light lubricating oil such as WD-40 is recommended to be used when inserting the pelmet into the "T" slot.

- 1. The T-shaped pelmet is to be inserted so that the vertical portion of the T points inward towards the body of the unit to protect the track and trolleys. It should press against the side of the unit. See *image below*
- 2. Coat the inside of the T-slot for the entire length of the track with lubricating oil such as WD 40.
- 3. Now you need to install the Rubber Pelmet into the small "T" slot on the inside bottom of the track. Start at the rear of the unit.
- 4. Put lubricating oil on the pelmet and insert it into the slot. This is at least a two-man job. One to pull the pelmet and the other to feed it into the slot and add the oil as it enters the slot

Some applications may require an extra pocket to support the ends of the track. In the picture below, the rub rail should be cut behind the weld and bent straight to match the line of the rest of the trailer. Then add proper sized tubing or flat bar to create a pocket.

Fig.1



Section 9 —Load the Trolleys onto the Track

- 1. Use a forklift to lift the assembled trolleys and bring them to the rear of the system.
- 2. With one person on each side of the trailer and one person operating the forklift, guide the trolleys one by one onto the track.
- 3. After the last trolley is loaded, place a clamp at the end of the track as a safety; this will ensure the trolleys don't roll off the back of the trailer.

Section 10—Insert the panels

It is best to install the panels with three or four people if possible.

Person 1: On the deck with a 6ft ladder.

Person 2: On the deck lifting the panels to Person 1.

Person 3: On the ground guiding the panels in the slots.

Person 4: On the other side with a rolling ladder.

YouTube Video Available!

Video Title

Tarp All Instruction: Insertion of Panel (sec.10) / J Clips (sec.11)

17

See Figure 6. Tip: As the panel passes the first radius, fold the panel over so the outside is resting on the outside of the panel behind it. This will allow the panel to relax as it travels around the corner. Do the same for the second corner.

- 1. Separate the trolley section that will be receiving the panel about 3ft.
- 2. Place a clamp on each side of the trolley so it does not roll away as you are inserting the panels.
- 3. See Figure 1. Coat the inside of the trolley channels with baby oil before inserting panels.
- 4. Use caution when inserting panels to avoid damage.
- 5. See Figure 2-5. Panels must be inserted in proper order and proper tarp channel.
- 6. Be sure all panels are centered on trolleys and wrinkles are pulled out.

To watch instructional video for insertion of the Tarp All Panel and J Clips, visit: www.youtube.com/user/CramaroTarps: click on the playlist tab: select Tarp All Panel playlist: view the video titled 'Tarp All Instruction: Insertion of Panel (sec.10) / J Clips (sec.11)' or simply search YouTube with the title of the video.

Section 10 —Insert the Panels

Fig.1



Fig.3



Fig.5



Fig.2



Fig.4



Fig.6



Section 11-J-Clips

The front and rear J-clips can only fit one way. The Intermediate J-clips can be used at any intermediate location.

Tip: Create temporary tension plates to tension the system without committing to the permanent tension plate location. Cut a 1/4" x 1-2" steel flat bar @ 30" long. Weld a steel rod to the flat bar to catch the tension box "foot". Rod must be welded in proper location so the foot of the tension box can catch it. Clamp to the top of the track at the rear of the system.

- 1. See Figure 1. Locate the J-clips. Note: the Rear J-clips are longer than the front.
- 2. After panels are inserted, the end of each panel must be secured. Slide the J-clip onto the remaining tarp material until it bottoms out on the trolley plate.
- 3. Fasten the J-clips with 1/4" steel rivets to the trolley plate.
- 4. Lock the front Locking Rods to secure the front trolleys. Tension the system (not fully).
- 5. Pull down on each panel to remove any wrinkles or waves. Center the panels.
- 6. Pull down on the panel and clamp it to the trolley plate. (Use a rag to protect the tarp)
- 7. Drill through the panel with a 1/4" drill bit using the J-clip holes as a guide. Drill through the trolley plate and fasten with 1/4" stainless machine screws w/flat washers and a nyloc nut.
- 8. Continue until all panels are secure.

Fig.1









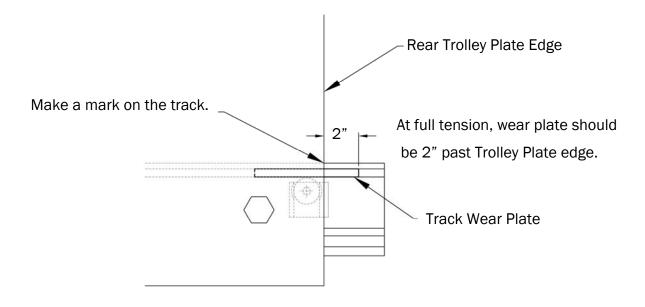
Drill through panel using J-clip holes as a guide.

Section 12 —Wear Plates

The Track Wear Plate is a 3/4" x 1/2" zinc plated steel bar with 1/4-20 tapped holes. It is designed to eliminate the wear on the top rail of the Tarp-All track when the system undergoes tension.

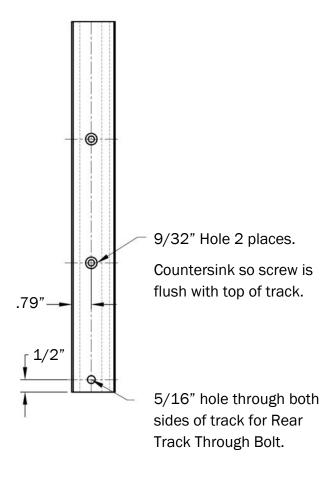
- 1. Tension the system using temporary plates created in section 11.
- 2. When system is under full tension, make a mark on the track at the rear edge of the rear trolley plate.
- 3. At full tension, the wear plate should come past the rear trolley plate edge by about 2"

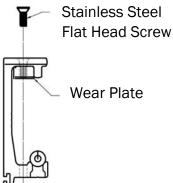
(See next page for further instruction.)



Section 12-Wear Plates Cont.

Rear of Track (Top View)





- Use the wear plate as a guide to transfer the hole pattern to the top rear of the track.
- 2. To find center, use calipers to scribe from the side closest to the trailer @ .79". If you cannot measure .79", 25/32" with an oversized hole will work.
- Drill a 9/32" hole in two places toward the rear of the system. Remember, the placement is determined by the mark that we made on the previous page.
- 4. Fasten the track with provided stainless steel flat head screws. Use thread locker.
- 5. Do the same for the other side.



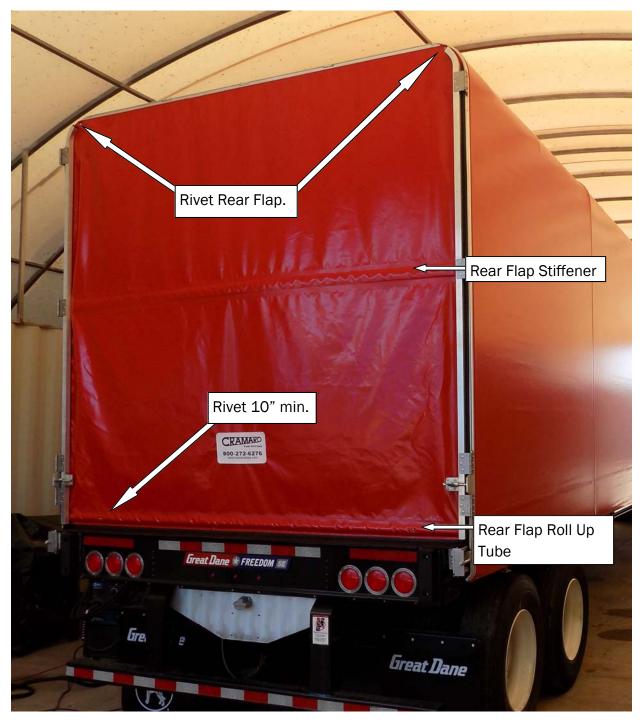
Section 13 - Tension Plates

- 1. After the tarp has settled and it is relieved, it is time to mount the tension plates at the rear right and left rear corners of the unit.
- 2. Make sure the leg on the tensioning device which is mounted on the rear trolley is adjusted to the front of its range. This will ensure maximum adjustment over the life of the system.
- 3. Position the bottom plate so that if you use moderate pressure pulling the trolley to the rear of the unit you can still slip the dog-catch behind the little tab welded to the plate.
- 4. When you are confident that you have the best position for the plate, then fasten it through the pocket and the $1\frac{1}{2}$ " channel with the 5" bolts provided in your kit.
- 5. Check to ensure the position is correct then drill the three 3/8" holes through the trailer looking to be sure of any obstruction for the nuts under the deck.
- 6. Fasten it into place using appropriate 3/8" bolts and nuts. Repeat on other side. Tension the unit to proper tension. Set the rear end cap bolts to prevent over tightening of the tarp.



Section 14 —Rear Flap

- 1. Slide the Rear Flap into the insertion channel at the top of the rear trolley. Be sure flap is @ center.
- 2. Slide 1/4" x 2" aluminum stiffener bar into the center pocket.
- 3. Slide the galvanized roll up tube into the lower pocket.
- 4. Drill and rivet the tube in 4 locations. Rivets must be at least 10" from the end of the tube so the handle will insert.
- 5. Check to be sure flap cams will close and rear flap is centered.
- 6. Rivet Rear Flap at the top 2 corners to keep the flap from shifting.





CRAMARO TARPAULIN SYSTEMS, INC.

www.cramarotarps.com (800) 272-6276

INT: 001-508-393-3062

Tarp-All Panel System

AWARNING WARNING

NEVER RELEASE FRONT LOCKING HANDLES WITH SYSTEM UNDER TENSION!

Serious injury or death may occur as well as system damage. Tension must be released from the rear before disengaging the front locking handles.

To open tarp system

- Release both flap cam assemblies located at the rear of the trailer by disengaging the toggle clamps. Open the rear flap with the long crank handle. Secure the crank handle. (Crank handle commonly stored under deck) For venetian blind style, pull rope to raise the flap then tie off the rope on J-hooks. When closing, be sure the round keder is not caught underneath the flap cam. Do not force the toggle closed if round keder is caught.
- Insert the tensioning handle square end over the square stock on the rear tensioning device and turn the handle counter clockwise until the spring loaded tensioning leg disengages from the rear catch plate. Repeat on the other side. If necessary, pull back on the trolley to disengage tension legs. (Tension handle is stored on the rear trolley)

CAUTION! Front Locking Handle will be under significant pressure, hold securely when disengaging.

At the front of the system securely hold onto the Locking Handle and release the pressure.
 Push the spring loaded safety latch and disengage the handle from the receiver on each side of the trailer. The system can now move freely. (For straight trucks, handle is located under the deck)

WARNING! Trolley brake <u>IS NOT</u> to be used while trailer is in motion. The vehicle <u>IS NOT</u> to be driven with the tarp system compacted at any location. If so, the system will be over width and height. Serious Injury, death or damage will occur.

 System can be locked in place along parked trailer at any location by tightening the trolley brake knobs located at each corner of the tarping system at the bottom of the main trolleys.

To close tarp system

 Follow above steps in reverse. Tension system until the internal tension adjuster stops the rotation of the Tension Handle.

Tarp Tension Adjustment

To tighten the tarp, move the bolt and nut from the tension box located at the rear trolleys to a hole closer to the front. **Do not over tension the tarp** or damage to the system may occur. To loosen the tarp, move the bolt and nut closer to the rear. **Do not drive with the system too loose** or the tarp may experience premature wear.

For maintenance information, visit our website. www.cramarotarps.com



Tarp All ™ Monthly Maintenance Instructions

- Keep the track clean of debris and lightly lubricate it with WD-40 or similar product as needed.
 Wipe off excess lubrication. Do not use grease.
- Inspect the tarp for any tears, cuts or worn areas.
- Inspect system hardware to see if fasteners/bolts/nuts/rivets need to be tightened or replaced.
- Make certain the system is tightly closed. The tarp should be stretched tight when traveling.
 This will greatly improve tarp life. To tighten the tarp, move the bolt and nut from the tension
 box located at the rear trolleys to a hole closer to the front.
- For one piece tarps, Inspect condition of cables & shock cords, replace if frayed.
- Inspect condition of tensioning devices, replace any damaged parts. Spray the locking mechanism with light grease.
- The front locking assembly should require some effort to put into the locking position, adjust as needed at the locking tab bolts.
- Check all weatherproofing seals to make certain they are in good condition.
- Inspect all wire ties/Velcro strips and replace as needed.
- Inspect the rear flap mechanism or doors and replace any worn parts.
- Inspect the lights and reflective tape and replace as needed.
- Inspect and replace any framework that shows signs of wear, stress or damage.
- Replace any bearings or pulleys that are damaged.
- Fix any item that appears to be unsafe.

(800) Cramaro (800) 272-6276 www.cramarotarps.com

Plants in: Delaware, Florida, Massachusetts, Nevada, Ohio

PUSHUP/ADDITIONAL RISER STRAP (BUCKLE NOT INCLUDED) PUSHUP STRAP SINGLE BUCKLE (STRAP NOT INCLUDED) PUSHUP STRAP DOUBLE BUCKLE (STRAP NOT INCLUDED) PUSHUP STRAP (BUCKLE NOT INCLUDED) 0 (E) (E) SHOULDER ADDITIONAL RISER ADAPTOR PLAT Tarp-All Panel System Parts Breakdown (Trolleys, Track and Connectors) HANDLE -CLIP -CLIP MAIN RER RIGHT (PRIVER) J-CLIP INTERMEDIATE TRIP. SS FLAT WASHER -ALL PULLEY BOLT -ALL PULLEY WITH BEARING ADDITIONAL RISE OPTION ASSEMBL PUSHUP ASSEMBLY PLATE IDNAL RISER 102 IDNAL RISER 96 S NYLDC NUT NTS EY BRAKE ITEM PART # DESCRIPTION 9 2' FLAT HEAD SUCKET CAP SCREW SS BUTTON HEAD SCREW 1 1/4" DOWEL PIN SS (6) LOCK WASHER TROLLEY PULLEY ASSEMBLY ITEM PART # DESCRIPTION (7)