CRAMARO®
TARPAULIN SYSTEMS

Tarp-All®

INSTALLATION, MAINTENANCE, & SAFETY INSTRUCTIONS

TARP WORKS®

(800) 272-6276

001-321-757-7611

www.cramarotarps.com

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

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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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

½” Capacity Drill Machine

1/8” to ¼” Capacity Rivet Gun

Various Drill Bits up to ½”

Various Wrench’s up 1 ¼”

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)

Mini Grinder with Cutting Disk

Black Marker

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.
9. If equipped, the ABS light must be able to be seen by the driver through the mirror.
10. View the rear outside corners for being level with the running surface. Occasionally the tension plates may need to be notched to fit in the correct location. .

Step 2: Track Mounting

1. Lift the front track section into place keeping the front of the track in the front of the bulkhead mounting surface by ¼". Clamp into place and level to the top running surface. The stainless steel rod and the T-slot are on the bottom.
2. Drill a ½" hole 2" from the front end and countersink it to 7/8" diameter to make a flush mount for a flathead fine thread bolt.
3. Drill a second hole and countersink about 2" further back and install a second bolt.
4. Continue bolting in the center of every 2nd pocket or approx. every 4', keep the track level and flush to the running surface on every bolt. Bolting through a pocket is the most ideal location.
5. When you come to the end of a section you will need to install 2 bolts as was done on the front.
6. Before adding the next section of track insert a 1-1/4" stainless steel dowel pin into the pinhole in the center of the stainless steel rod on one side of the track and make sure the pinhole on the other section is deep enough to ensure a flush fit when finished.
7. Also make sure the "T" slot at the joining ends of the track sections are free of burrs of other obstructions. Deburr if necessary. It cannot be done after the sections are joined and it will interfere with installing the pelmet
8. Insert the next section and repeat the bolting procedure. All track sections must be bolted using double bolts in the front and rear to ensure that the track stays tight together where the sections are joined together. The end of last section must be flush to the end of the trailer when installed. If cutting is required it is best done before it is mounted. *See image below*
9. Repeat the track installation on the other side.
10. On longer trailers a third section may be required. When installing a third section it is mounted at the rear NEVER in the middle.

Step 3: Rubber Pelmet Insertion

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
5. During the insertion process the rubber pelmet will stretch. Make sure that any stretching has been relieved and the pelmet has contracted before you cut the excess off the end.

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 flatbar to create a pocket.

Step 4: Main Trolleys, Front and Rear

It is strongly recommended that the installers familiarize themselves with the various components before assembling any of the trolleys. One way is to layout all the parts on the ground then group the same parts together. Be careful some of the risers parts may be similar but shorter that others. Refer to the parts drawing in the back of this manual for assistance in identifying the various parts.

Each trolley (and riser) consists of 3 pieces; a right side, a left side and a center connector.

There are front and rear main trolleys. They are the same except the rear main sections have a tensioning device and a rain lip attached to them. The front does not.

Make sure you are joining front pieces to front pieces and rears to rears. Once they are assembled it is very difficult to separate them. *See image below*

1. Using a rubber mallet or a hammer with a block of wood, tap the right and left sections onto the center section until the bolt holes align. There may be a production burr from drilling or a weld spot inside the center tube. These need to removed or de-burred before assembly.
2. After the bolt holes in the connecting pieces have been lined-up bolt them together, using 3/8" x 2" bolts with Nylock nuts. It is important that the nuts be on the inside to avoid damage to the tarp. Exception: see below.
3. On the rear main ONLY. On the rear face of the rear main use 3/8" x 2 1/4" flat head bolts in the countersunk holes.
4. On the rear main ONLY. On the rear face of the rear main in the center of the angle, pre-drill 3/16 mounting holes for the rear flap. Starting with one hole in the center, drill a hole every 6". Be careful not to drill into the bolts holding the sections together.
5. On the front main ONLY. Attach the rubber foam seal to the front side of the front main. The front side is the side without any pushup yokes welded to it. This foam will seal the front main to the bulkhead.
6. Peel the backing off one side of the provided rubber and stick the foam in position on the front face of the front main trolley.
7. Cut any excess rubber off at the bottom.
8. Starting at the bottom corner (about 2" up), cut a 1" long slice in the middle of the rubber through the top layer. Then take a 3/16" drill and drill a small hole in the middle of the slot to allow you to insert a wide head aluminum rivet into the hole. Be sure that the rivet head goes past the top layer and tighten with a rivet gun.
9. Continue riveting every 8" until you reach the bottom of the other side.

Picture shown below is of main rear trolley.

Rivet through bulkhead foam seal.

Step 5: Intermediate Trolleys and Mounting All the Trolleys

If you are installing the optional rope & pulley roll-up kit for the rear flap, see step 18 before placing the rear main on the track.

1. The intermediate trolleys consist of three pieces; right, left and center, just like the mains. The difference is the intermediates only have one vertical tube and the mains have two. They are assembled the same way. The bolt heads should be on the front facing side of each trolley.
2. Make sure when assembling the trolleys that you use the 3/8" x 2" bolts with 3/8" Nylon lock nuts. They should not have any excess threads showing after assembly.
3. Before mounting the main trolleys be sure to check that the lock handles underneath are turned open all the way to the bottom so they do not interfere with the motion of the rollers while you mount them.
4. Start with the front main with the foam facing the front. Load it onto the track. Follow with the intermediates with the bolt heads facing forward and finish with the rear main with the rain lip facing the rear.
5. Once you have them on the track roll to about the middle and lock in place.

Step 6: Push-up Risers; Assembly and Installation

With the trolleys assembled and on the tracks what is left, after you matched up the pieces, are the push-up risers and additional risers, if you have them. The push-up risers are 1" square Aluminum tubes. They consist of a peaked center section and bent side pieces with a steel insert sticking out from the bend. The majority of the side pieces will all be the same length. However, depending on the length of the system there could be 4 or 8 pieces that are longer or shorter than the rest. They will be identified as custom by a sticker and painted steel connector and are to be used between the front main and the first intermediate trolleys. On occasion, depending on the overall system length, they could also be needed between the first and second intermediates. They are always used at the front.

1. Take a peaked center piece and insert equal length side pieces into the center piece. Make two of these
2. Lay one assembly on top on the other. Taking care to line up the pre-drilled holes in the center piece with the steel insert.
3. Attach the two assemblies together by riveting a flexible hinge to both assemblies using 3/16 rivets. One hinge is attached to each side where the sides are inserted into the center piece.
4. The result should be one piece that is joined at the top but whose legs can be pulled apart forming an "A" shape.
5. The legs of the push-up risers assemblies will now be attached to the push-up yokes on two adjacent trolleys
6. Repeat this process until all the push-up risers have been assembled.
7. Locate the push-up yokes. They are about 18" above the top of the trolley plates, the part of the trolley that the wheels are on.
8. Line up the holes on one push-up leg with the holes on the yoke.
9. Insert bronze bushings into both sides of the pushup. Then insert a 3/8" clevis pin through the trolley yoke from the outside.
10. Secure the clevis pin with a push-up kick out ring Attach all four (4) legs of the push-up assembly to the two (2) trolleys.

Step 7: Assembling the Bulkhead

1. Lay both halves of the headboard with the skin facing down onto some wooden 2x4s. Be careful and use protection to prevent damage to the skin.
2. Make sure that the halves match together evenly at the top and bottom and that the bolts holes line up. Insert the bolts, washers, and nuts provided through the holes in both halves.
3. DO NOT TIGHTEN the nuts and bolts at this time.
4. While the bolts are still loose pull the halves apart and run a bead of silicone, from top to bottom, in-between the joining surfaces of the frames. Tighten the bolts.
5. Locate the cutouts or the holes on the trailer for air and electrical fittings onto the bottom angle of the bulkhead will be. Measure carefully from the flat surface of the top of the trailer to the center of the fittings. It is suggested that you make a drawing of your measurements. Measure from both sides of the trailer using the same centerline location to determine the center distance for the fittings.
6. Keep in mind that the headboard is upside down and which side the cutouts for the fittings will be. Transfer the dimensions onto the bulkhead measuring down from the bottom of the bulkhead angle that will rest on the top of the trailer. And measure out from the center to mark placement of holes. Drill a pilot hole from the inside out at each desired location. Then make the necessary cutouts to accommodate protrusions through the bulkhead.

Step 8: Mounting the Bulkhead

CAUTION: The bulkhead is heavy and awkward. It can easily be affected by wind until it has been completely secured to the unit. Use a lifting strap and a forklift or similar method to position the bulkhead during its installation.

1. Mount the 1 ½" x 1 ½" aluminum angle horizontally near the top and across the steel 2" x 4" frames. This is a stiffener.
2. The angle should be installed horizontally across the steel frames. This should be 8" from the top of the skin to the bottom of the angle. To bolt the center you need to temporarily remove the top center bolt joining the bulkhead together. Clamp the angle facing up to the frame and use holes in the angle as a guide to drill holes into the steel frame. Bolt into place using 3/8" x 1-1/4" bolts, lock washers, and nuts.
3. Slide a lifting strap between the skin and the vertical part of 2" x 4" frame out and around the outside of the angle to enable it to be lifted using a fork lift. Make sure the lifting strap is securely fastened to the forks of the lifting vehicle. A cable can also be used by going through the top bolt holes.
4. Lift the headboard up close to the front of the unit.
5. Pay close attention to the fittings and center the headboard onto the front face of the unit. Lift it higher than the front then lower it into position. Pay careful attention to matching the holes in the bulkhead AND keeping equal spacing to allow movement of the locking handles on either side of the bulkhead.
6. Clamp into position using wood blocks to prevent damage to the skin. Check the center position from both sides before doing any drilling.
7. Bring the front master trolley forward and clamp into the headboard using the locking handles. This will give proper alignment to the headboard in relation to the track. Check to see if spacers will be required under the bulkhead angle to maintain the correct alignment. Adjust if necessary.
8. Take a moment to verify that the three adjustable locking rod bolts (preset at the factory) are pushing firmly on the pads welded to the trolley and are putting pressure on the foam seal that goes against the bulkhead. With the lower handle installed you should have a moderate amount of force to push the handle into the u-clip on the front of the bulkhead and still be able to insert the lock pin. Check both the left and the right locking rods for locking pressure. Visually look at the foam seal for compression all the way around the bulkhead. Adjust the bolts if necessary.
9. Starting in the middle, drill the1/2" holes in the top inside base plate of the headboard and bolt and tighten before going to the next hole.
10. **CAUTION:** Before drilling you must make sure that the bolt will clear under the deck and no obstructions will prevent you from putting the nut and washer on. Sometimes the predrilled holes are not a correct match to the actual trailer and its underneath components. Drill new holes if necessary.
11. Next, drill the front of the headboard and bolt it to the front plate of the trailer. Again, use caution in their position looking behind to ensure that they clear any obstructions. When this is done you can finish the wiring and the air line connections, as well as the lights for the headboard.
12. Bulkhead lights are pre-wired. Connect into existing trailer wiring with the appropriate pigtail connector for your truck or trailer. Wrap with electrical tape for added protection.

Step 9: Positioning and Unrolling the Tarp

The rolled up tarp is marked to indicate the front. The “front” will start at the front main trolley and the tarp will be unrolled to the rear main. There is also a blue center line to help keep it “centered” on the trolleys.

1. Place the rolled up tarp on the trolleys at or near the bulkhead. Keep it centered on the trolleys.
2. Clamp the center of the “front” to the center of the front main trolley. The front bead on the tarp should be on the top/front radius of the front main trolley. Use the blue line to keep it centered on the trolleys.
3. Unroll the tarp by rolling it from the front to the back. As it unrolls move the intermediate trolleys to provide support but do not space them so far apart that the tarp can slip between them.
4. Clamp the “rear” of the tarp to the rear face of the rear main trolley.
5. With the tarp clamped securely front and rear, unfold the tarp from the center outwards towards the sides. When you have unfolded it across the top them you can allow the side to drop or unfold down the side of the trolleys.
6. Clamp the corners of the tarp to the master trolley on both sides on both ends.

Step 10: Securing the Tarp to the Main Trolleys

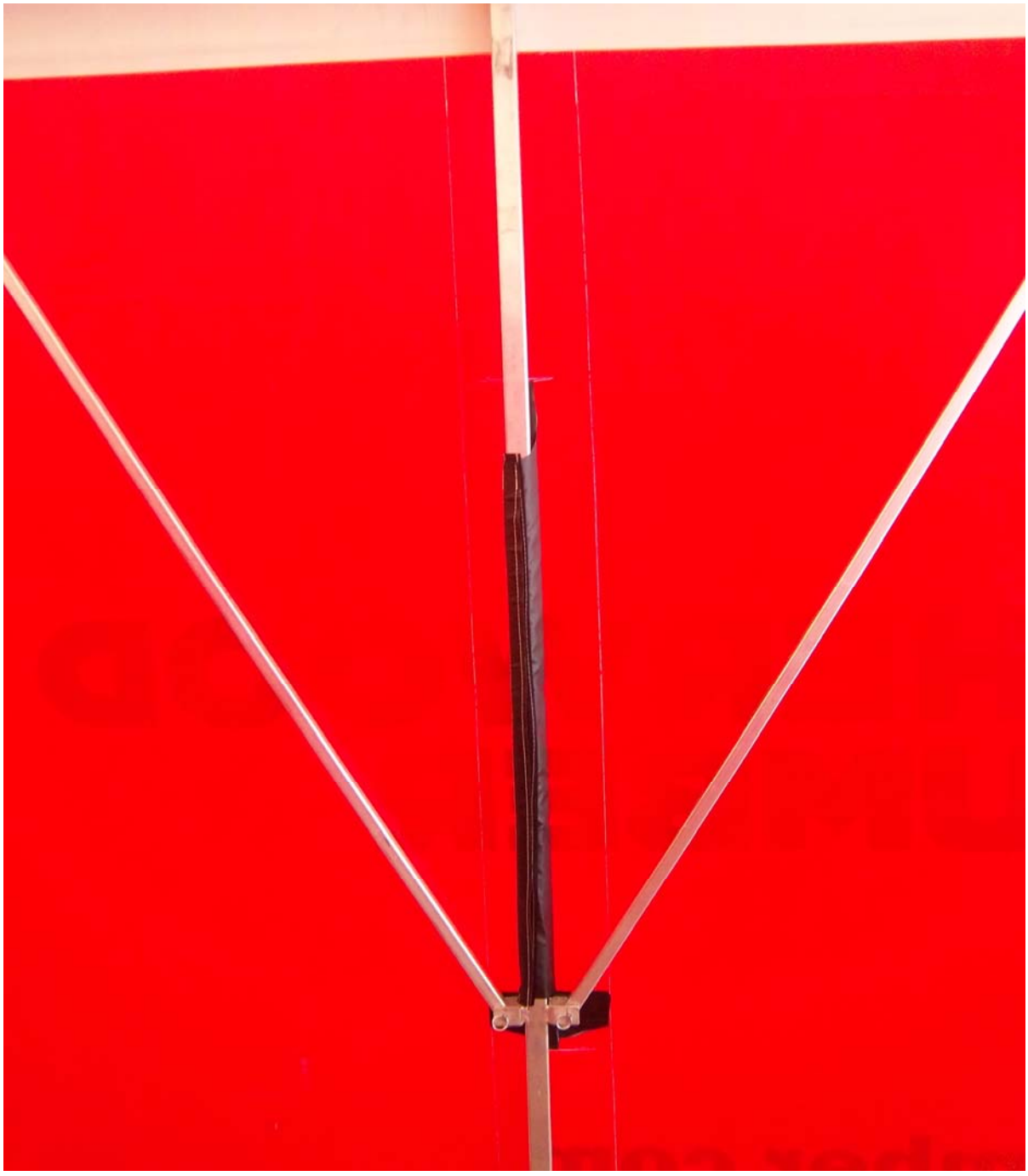
CAUTION: Make sure the tarp is centered before and during the time you are permanently attaching the tarp to the trolleys.

Included in the kit are 4 pieces of 1" x 1/8" x 16" long strips of aluminum. These are to fasten the tarp to the front and rear main trolleys.

1. Remove wrinkles by pulling the tarp taunt. This can be done by using about 30 to 40 pounds of weight in a bucket and a smooth jaw vise grip.
2. Clamp the weight to bottom corner edge of the tarp. This will take all the vertical fold marks out of the tarp. Allow the tarp to stretch tight. Make sure the tarp hangs past the trolley plates equal distances on both sides.
3. Start in the top middle front of the front trolley and clamp the strip with the tarp sandwiched between the strip and the trolley frame. The tarp bead is just in front of the leading edge of the Aluminum strip.
4. Drill a 13/64" hole through the strip, tarp, and top of the aluminum tube of the trolley and install a large head aluminum rivet.
5. Continue this every 8" along the length of the strip and around the corner until you reach the wheel plate of the trolley.
6. STOP. Next, change to ¼" drill for the trolley plates. Looking behind for obstructions, drill and install ¼" long rivets to finish the bottom of the strip. This may require 2 or 3 rivets per section.
7. The strip is longer than is needed so it can be trimmed later at the bottom of the trolley. Be sure to leave enough length to bend the strip to follow the bend of the trolley plate. Then cut flush with the end of the trolley plate bend. One rivet should be installed as close as possible to the bend in the plate underneath. Be sure this rivet does not interfere with trolley movement.
8. Repeat this process on all four sides. That is both sides on front piece of the front trolley and on the rear piece of the rear trolley.

Step 11: Securing the Tarp to the Intermediate Trolleys & Risers

1. As you attach the tarp to the various trolleys and riser make sure the tarp stays centered and make adjustments as you proceed if necessary.
2. Position each of the trolleys so that they line up with the appropriate Velcro attachment strips. The trolleys should be straight and centered before you start.
3. Every trolley and riser should be aligned with their own Velcro attachment strip. The tarp was designed to match up to all the risers and trolleys
4. At this point the tarp can be left to relax and remove wrinkles and fold marks. If possible let the tarp relax overnight to remove wrinkles.



Step 12: Optional Additional Risers; Assembly and Installation

The optional additional risers create a lift in that area of the tarp between the push-up risers and the trolley. They are used to reduce tarp "droop". An Additional Riser consists of: 2 corner pieces and a connector (3/4" x 10" steel square tube).

1. Mark the mid point of the 10" connector. Insert the square tubing into the end of the corner piece up to the center mark. Make sure you insert the connector into the end WITHOUT the predrilled holes.
2. Drill two rivet holes into the SIDE at about 1" and 4" from the end and rivet the connector into the corner piece.
3. Next insert the protruding end of the connector into the other curved piece. Drill two rivet holes at 1" and 4" from the end and rivet it. Lay the riser on the ground before the final holes are drilled and rivets added. This is to make the riser flat so the legs attach as designed. All Additional Risers should be the same length. The assembled riser is an inverted "U" shape.
4. Attach the legs of the riser to the Additional Riser Yoke on the opposite sides, passenger or driver sides of the same trolley. The Additional Riser Yoke is single flanged and located about 2/3 the way up the trolley.
5. Insert bronze bushings into the pre-drilled holes on the riser legs. They are bolted to the yoke with a 1-1/4" shoulder bolt from the inside. The Nylock nut is attached to the outside.

Step 13: Installing the Rear (Track) End Caps

The adjustable bolt in the end cap is used to adjustably set the stopping point for the rear main trolley. Adjustment is required to prevent over-tightening the tarp. The end caps can be placed either in front of the track or, space permitting, behind the track. Different, longer bolts will be required if mounting the end caps behind the track.

1. Remove the 1/2” adjusting bolt and locking nuts.
2. There is a right and left end cap. Place the appropriate end cap on the track with piece with the 2 counter sunk holes at the top.
3. Mark and drill two (2) 1/4” holes through the track
4. Bolt in place using the 1” x 1/4”, hex drive, flathead bolts and lock nuts
5. Insert the 1/2” bolt with head pointing towards the rear main trolley.
6. Lock in place by tightening the nuts placed on both sides of the plate
7. Adjust the stopping point for the trolley taking care not to over-tighten the tarp.

Step 14: Installing the Rear Tensioning 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 ½" 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.

Step 15: Installing the Side Cables

Along the bottom side of the tarp there are ropes sticking out of holes in the bottom pocket of the tarp. The rope, or twine, is used to pull the steel bottom cables through the length of the tarp on both sides. The steel cable in the bottom is to keep the bottom of the tarp secure and taunt. One end of the cable terminates in a swaged threaded stud. The other end (the front) will be rapped around a bolt and clamped with a “U” clamp when the final length is determined.

1. Before starting, the front trolley should be locked to the bulkhead, the rear trolley pulled to the rear and a moderate amount of tension should be applied using the tensioning device.
2. From the rear, tape the end of the rope to the un-swaged end of the steel cable. The connection must be small enough to get through the pocket and yet strong enough to not come apart while the cable is being pulled through the pocket.
3. Pull the cable through the pocket. This is a two-man job. Stop when the threaded stud reaches the hole in the rear pocket.
4. A block has been welded to the bottom of the rear main trolley. Pass the threaded stud through the hole an secure it with a nut. Do not tighten the nut. Once the front has been secured the nut will be tightened to pull the cable taunt.
5. On the bottom of the front trolley is a bolt that has a spacer and a washer on it. Wrap the cable around the bolt. Pull it tight and secure it with a cable clamp close to the bolt.
6. Cut all excess cable off leaving about 10” to 12” of length. Wrap with electrical tape and insert back into the slice in the tarp.
7. Go to the rear and using a vice grip to hold the swage turn the nut until a good amount of tension is achieved. The tarp should curl under the unit a little. Repeat for other side.

Front Trolley

Rear Trolley

Step 16: Securing the Tarp to the Sides with Locking Plates

The tarp must be secured to each trolley with a “trolley attachment plate”. The tarp must be taunt, free of wrinkles and lined up with each trolley before installing the plates. Each attachment plate will be secured to each trolley using 1/4” x 3/4” self tapping machine screws screwed into pre-punched holes on the trolley plates.

1. The front and rear trolleys must be secured prior to starting and the bottom cable tight.
2. Remove wrinkles by pulling the tarp taunt. This can be done by using about 30 to 40 pounds of weight in a bucket and a smooth jaw vise grip.
3. Clamp the weight to the center of the tarp in the center of the trolley position. Clamp it just above the cable so it can not slip off. This will take all the vertical fold marks out of the tarp. Allow the tarp to stretch tight. Make sure the tarp hangs past the trolley plates equal distances on both sides.
4. One person must go to the inside of the unit and center the trolley to the correct spot and hold while the other fastens the trolley attachment plate on the outside of the tarp.
5. Using the small ¼” x ¾” self-tap machine screws to fasten the plate to the trolley sandwich the tarp. Start with the upper hole first. The pre-punched hole in the trolley is located about 1” below the center wheel bolt on the trolley plate. **Care must be used when tightening the screws, they can break easily**. (Using a 1/4”, NC 28 Tap to thread the holes before you start will make this easier.) Next do the lower hole. Repeat on all intermediate trolleys.

Step 17: Installing the Rear Flap

Installing the rear flap involves inserting the square tubing into the bottom pocket and attaching the tarp to the top of the rear main trolley. The square tubing can be inserted before the flap is attached or after. It is easier to handle the flap if the tubing is inserted after the flap is attached.

1. Secure the flap to the rear main trolley just under the aluminum angle welded at the top. It can be held with C clamps.
2. Center the flap to make sure that it touches equally both side of the rear trolley to allow for the locking mechanisms to work.
3. Use the 1" long drill point TEC screws and the small flat washers. Start in the middle of the top of the rear trolley just under the angle that is welded to the top. Use the TEC screws to fasten the flap going from the center outwards in both directions.
4. Use ¼"x 1 ¼" bolts to fasten the 2 outside ends.
5. Coat the 1" square tubing with lubricating oil such as WD-40 and insert it into the pocket until both sides are the same distance from the end of the pocket.
6. Make sure the tubing is positioned square to the flap. Drill a ¼" hole through the tarp into the tube about 8" from the end and rivet with a steel rivet to secure the tarp to the tube. Repeat for other side and put a third rivet in the middle.
7. Repeat for the other side.
8. Insert Rear Flap Stiffener Bar into the pocket in the middle of the rear flap. Secure the ends with cable ties.

Step 18: Installing the Optional Rope & Pulley Roll-up Kit on the Rear Flap

The first step is best done before the rear main trolley is placed on the track, see step 5 in this manual.

1. Drill 3, 1/2" holes through the rain lip on the rear main trolley. The holes should be as follows: On the driver's side drill 2 holes at 4 inches in and at 18 inches in (from the driver's side). On the passenger side drill one hole at 18 inches in (from the passenger side)
2. Once the rear flap has been mounted as in step 17 above. Drill 3 holes through the tarp material to match up with the holes in the rain lip.
3. Using the 1/2" x 3 1/2" bolts, bolt the two double pulleys on the driver's side and the single pulley on the passenger side. Bolt from the outside to the inside.
4. Tie one end of the rope to the cross connector inside the rear flap just behind the single pulley on the passenger side. Run the rope down the inside and back up the outside of the rear flap. Feed it through the single pulley then through the rear pulley on each of the double pulleys on the driver's side.
5. Hook the rope around something to keep it from pulling back through the pulley then feed the other end through the front pulley in each of the double pulleys. Start from the pulley that is 4 inches in then go through the double that is 18 inches in. Run the rope down the front of the rear flap and back up the inside. Tie it off on the cross connector inside the tarp just behind the pulley that is 18 inches in from the driver's side.
6. Pull on each rope that forms a closed loop from the pulley that is 4 inches in from the driver's side. Pull each one to remove slack in the rope that hangs down from each of the two pulleys that are 18 inches in. There should be just enough tension so that when you pull on both of the ropes from the 4 inch in pulley the tarp rolls up from the bottom like a window shade.
7. Mount the two "J" hooks with the curls going in opposite directions, in some convenient place about 12 inches apart. Once you are certain that all is working as intended you can shorten the rope. Tie the rope at the end and near the top (when the rear flap is in the closed position).

Step 19: Installing Trolley Guides

Trolley guides are mounted on the top of the bulkhead frame just below the cross bar. They are used to consistently guide the front trolley into its locking position.

1. Lock the front main trolley against the bulkhead using the cam locks.
2. Measure the side clearance on each side and adjust them until both side are equal.
3. Place the slotted side of the guide on the bulkhead frame so that the short, non-slotted side is between the frame and the trolley.
4. Mark the position for where the pilot holes are to be drilled for the self-tapping bolts used to secure the guide to the frame. The spots should be centered in the slots and have about ¼" clearance between the guide and the trolley. This is to allow for future adjustment of the guides.
5. Drill 3, 5/16" holes for the 3/8" x 1" self-taping, hex head bolts.
6. Insert the bolts but do not tighten. Slide the guide until you feel the side next to the bulkhead skin touch the trolley. Tighten the bolts. This should leave about 1/16" gap due to the slight bend in the guide. Repeat for the other side.

WARNING WARNING WARNING

TO REDUCE THE CHANCE OF INJURY,

BEFORE RELEASING THE FRONT LOCKING HANDLES, BE SURE THE REAR TENSIONING DEVICES ARE FULLY DISENGAGED.

To Open the CRAMARO Tarp All™

- Along the sides of the system, detach any shock cord, rubber straps or other tie downs (if equipped).
- Release the flap cam assemblies located at the rear of the trailer by loosening the threaded knob. Open the rear flap with the crank handle, and then latch the crank handle over the flap cam hinge. This will keep handle and flap secure while you work. For venetian blind style, pull rope to raise the flap then tie off the rope on J hooks.
- 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.
- At the front of the trailer remove the front locking pin and disengage the handle from the yoke on each side of the trailer.
- The system is now disengaged and may move freely.

The system can be locked in place along the trailer at anytime be tightening the trolley brake knobs located at each corner of the tarping system under the bottom of the main trolleys.

WARNING: TROLLEY BRAKE KNOBS ARE ONLY TO BE USED TO HOLD THE SYSTEM FROM GLIDING IN YOUR WAY AT THE TIME OF LOADING AND UNLOADING. TROLLEY BRAKES NOT TO BE USED WHILE VEHICLE IS IN MOTION.

To Close the CRAMARO Tarp All™

- Roll the system to the front
- Engage the front trolley to the locking cam, place the locking handle into the yoke, and lock in place (both sides). Then push on trolley to be sure system is locked in place.
- Roll the system to the rear of the truck
- Pull the system with one hand to the rear, carefully place the tensioning leg into the rear catch plate and insert tensioning handle into the tensioning device, then crank the system clockwise until the rear of the trolley touches the stop plate bolt. (Repeat on other side.)
- Close the rear door/flap mechanism and secure into place
- Attach any shock cord, rubber straps or other tie downs (if equipped)

Make sure tarp is not obstructing view of lights

Tarp Tension Adjustment for CRAMARO Tarp All™

There are stop plates located at the end of the track, located on the stop plates are adjustable stop bolts. To make the tarp tighter, loosen off on the two jam nuts and adjust the bolt ½" at a time until the tarp is tight. Do not over tighten the tarp or damage to the rear trolley or pulleys may occur.

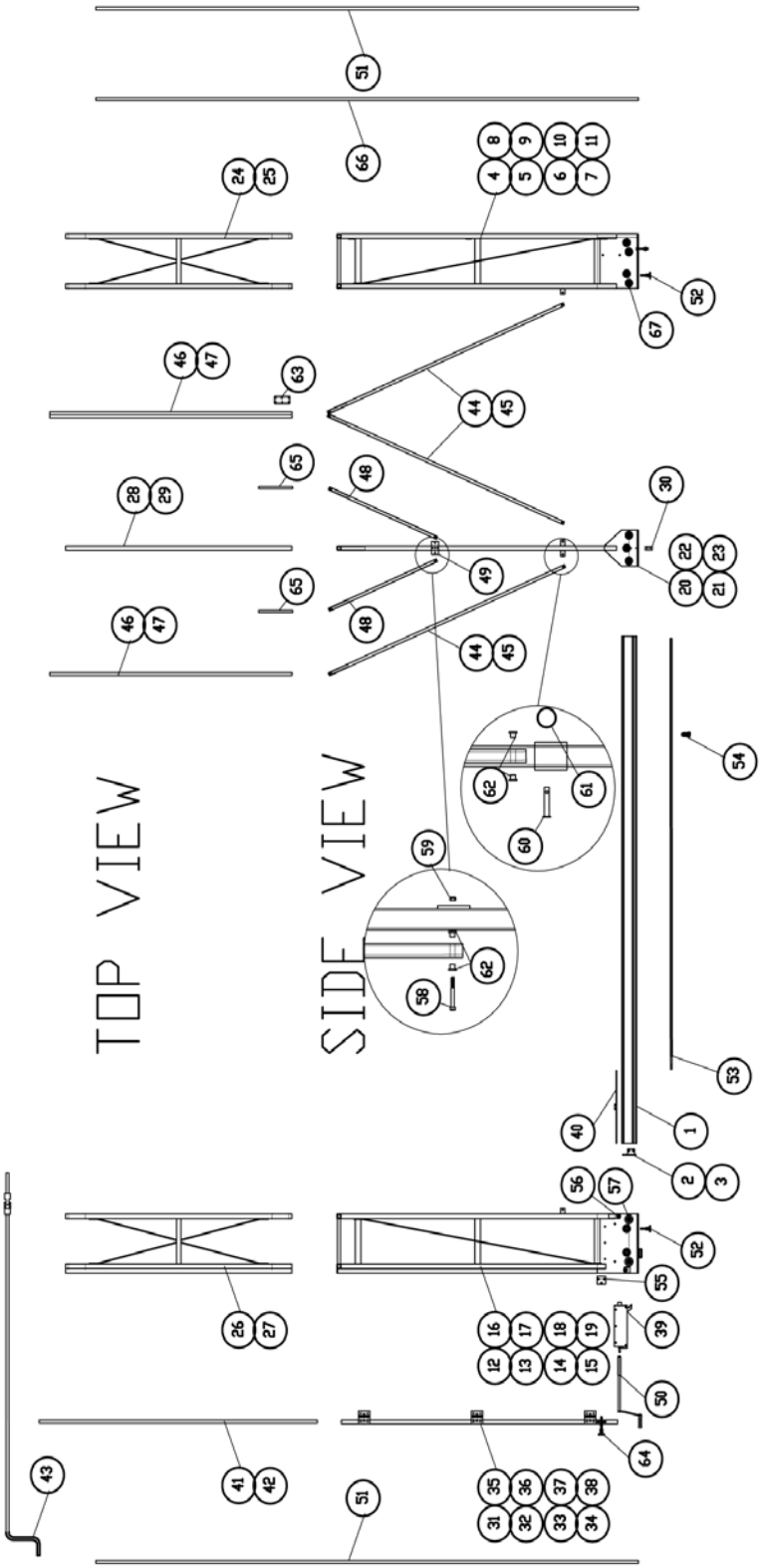
CRAMARO TARPAULIN SYSTEMS, INC. (800) 272-6276

LOCATIONS: DE, FL, MA, NV & OH

ITEM	PART #	DESCRIPTION
1	359002	ALUMINUM TRACK
2	359250	TRACK END CAP LEFT
3	359255	TRACK END CAP RIGHT
4	357511	TROLLEY MAIN FRONT ASSEMBLY 8'6" SYSTEM LEFT
5	357523	TROLLEY MAIN FRONT ASSEMBLY 8'6" SYSTEM RIGHT
6	357507	TROLLEY MAIN FRONT ASSEMBLY 7'6" SYSTEM LEFT
7	357519	TROLLEY MAIN FRONT ASSEMBLY 7'6" SYSTEM RIGHT
8	357502	TROLLEY MAIN FRONT ASSEMBLY 6'6" SYSTEM LEFT
9	357514	TROLLEY MAIN FRONT ASSEMBLY 6'6" SYSTEM RIGHT
10	357324	TROLLEY MAIN FRONT ASSEMBLY 9' SYSTEM LEFT
11	357325	TROLLEY MAIN FRONT ASSEMBLY 9' SYSTEM RIGHT
12	357534	TROLLEY MAIN REAR ASSEMBLY 8'6" SYSTEM LEFT
13	357547	TROLLEY MAIN REAR ASSEMBLY 8'6" SYSTEM RIGHT
14	357530	TROLLEY MAIN REAR ASSEMBLY 7'6" SYSTEM LEFT
15	357543	TROLLEY MAIN REAR ASSEMBLY 7'6" SYSTEM RIGHT
16	357526	TROLLEY MAIN REAR ASSEMBLY 6'6" SYSTEM LEFT
17	357538	TROLLEY MAIN REAR ASSEMBLY 6'6" SYSTEM RIGHT
18	357326	TROLLEY MAIN REAR ASSEMBLY 9' SYSTEM LEFT
19	357327	TROLLEY MAIN REAR ASSEMBLY 9' SYSTEM RIGHT
20	357558	TROLLEY INTERMEDIATE ASSEMBLY 8'6" SYSTEM
21	357554	TROLLEY INTERMEDIATE ASSEMBLY 7'6" SYSTEM
22	357550	TROLLEY INTERMEDIATE ASSEMBLY 6'6" SYSTEM
23	357328	TROLLEY INTERMEDIATE ASSEMBLY 9' SYSTEM
24	357560	TROLLEY MAIN FRONT CONNECTOR 96" BODY
25	357564	TROLLEY MAIN FRONT CONNECTOR 102" BODY
26	357562	TROLLEY MAIN REAR CONNECTOR 96" BODY
27	357566	TROLLEY MAIN REAR CONNECTOR 102" BODY
28	351003	TROLLEY INTERMEDIATE CONNECTOR TUBE 96" BODY
29	351004	TROLLEY INTERMEDIATE CONNECTOR TUBE 102" BODY
30	357801	TROLLEY TARP ATTACHMENT PLATE
31	358500	FLAP CAM ASSEMBLY FOR 8'6" SYSTEM LEFT
32	358502	FLAP CAM ASSEMBLY FOR 8'6" SYSTEM RIGHT
33	358504	FLAP CAM ASSEMBLY FOR 7'6" SYSTEM LEFT
34	358506	FLAP CAM ASSEMBLY FOR 7'6" SYSTEM RIGHT
35	358507	FLAP CAM ASSEMBLY FOR 6'6" SYSTEM LEFT
36	358508	FLAP CAM ASSEMBLY FOR 6'6" SYSTEM RIGHT
37	358509	FLAP CAM ASSEMBLY FOR 9' SYSTEM LEFT
38	358510	FLAP CAM ASSEMBLY FOR 9' SYSTEM RIGHT
39	357750	TENSIONING DEVICE ASSEMBLY
40	357776	DOG CATCH ASSEMBLY
41	358690	FLAP CROSS TUBE FOR 96" BODY
42	358695	FLAP CROSS TUBE FOR 102" BODY
43	138620	SIDE ROLL CRANK HANDLE
44	358000	PUSH UP STANDARD SPACED RISERS
45	358001	PUSH UP CUSTOM LENGTH RISERS
46	358010	PUSH UP CONNECTOR FOR 96" BODY
47	358015	PUSH UP CONNECTOR FOR 102" BODY
48	358111	ADDITIONAL RISER HALVES
49	358110	ADDITIONAL RISER ADAPTOR PLATE
50	351090	TENSIONING HANDLE
51	350002	TROLLEY ALUMINUM FLAT BAR
52	351105	TROLLEY BRAKE
53	355521	GALV. 1/4" CABLE SWAGED W/ STAINLESS STEEL END
54	106206	1/4" CABLE CLAMPS
55	358656	FLAPCAM PUSH PLATE
56	354100	7/16" CAM FOLLOWER BEARING
57	356000	TROLLEY PULLEY BOLT
58	413330	SOCKET SHOULDER BOLT 3/8" X 1 1/4"
59	407215	5/16" NYLOCK NUT
60	352002	CLEVIS PIN 3/8"
61	352003	PUSH UP KICK OUT RING
62	352004	PUSH UP FLANGE BRONZE BUSHING
63	358100	PUSH UP HINGE
64	358670	FLAP CAM KNOB ASSEMBLY
65	358112	ADDITIONAL RISER CONNECTOR
66	350007	FOAM SEAL
67	359060	TROLLEY PULLEY WITH BEARING
NOT SHOWN	412005	3/16" LARGE HEAD ALUMINUM RIVET
NOT SHOWN	354015	1/4" STEEL RIVET

TARP-ALL SYSTEM ™

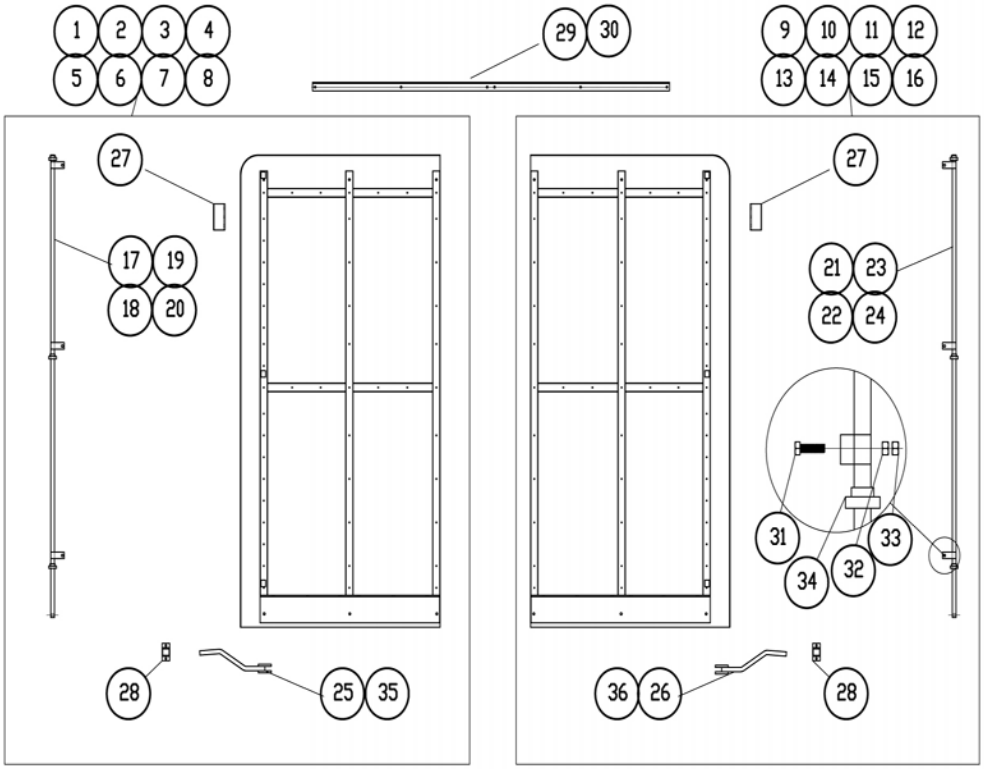
TROLLEYS, TRACK, AND CONNECTORS



CRAMARO

TARP-ALL SYSTEM ™

BULKHEADS



*DOOR AVAILABLE ON BULKHEAD BY REQUEST

ITEM	PART #	DESCRIPTION
1	357226	BULKHEAD FRAME & SKIN 8'6" SYSTEM 96" BODY LEFT
2	357228	BULKHEAD FRAME & SKIN 8'6" SYSTEM 102" BODY LEFT
3	357222	BULKHEAD FRAME & SKIN 7'6" SYSTEM 96" BODY LEFT
4	357224	BULKHEAD FRAME & SKIN 7'6" SYSTEM 102" BODY LEFT
5	357218	BULKHEAD FRAME & SKIN 6'6" SYSTEM 96" BODY LEFT
6	357220	BULKHEAD FRAME & SKIN 6'6" SYSTEM 102" BODY LEFT
7	357322	BULKHEAD FRAME & SKIN 9' SYSTEM 96" BODY LEFT
8	357320	BULKHEAD FRAME & SKIN 9' SYSTEM 102" BODY LEFT
9	357227	BULKHEAD FRAME & SKIN 8'6" SYSTEM 96" BODY RIGHT
10	357229	BULKHEAD FRAME & SKIN 8'6" SYSTEM 102" BODY RIGHT
11	357223	BULKHEAD FRAME & SKIN 7'6" SYSTEM 96" BODY RIGHT
12	357225	BULKHEAD FRAME & SKIN 7'6" SYSTEM 102" BODY RIGHT
13	357219	BULKHEAD FRAME & SKIN 6'6" SYSTEM 96" BODY RIGHT
14	357221	BULKHEAD FRAME & SKIN 6'6" SYSTEM 102" BODY RIGHT
15	357323	BULKHEAD FRAME & SKIN 9' SYSTEM 96" BODY RIGHT
16	357321	BULKHEAD FRAME & SKIN 9' SYSTEM 102" BODY RIGHT
17	357190	BULKHEAD LOCKING ROD FOR 8'6" SYSTEM LEFT
18	357200	BULKHEAD LOCKING ROD FOR 7'6" SYSTEM LEFT
19	357210	BULKHEAD LOCKING ROD FOR 6'6" SYSTEM LEFT
20	357318	BULKHEAD LOCKING ROD FOR 9' SYSTEM LEFT
21	357195	BULKHEAD LOCKING ROD FOR 8'6" SYSTEM RIGHT
22	357205	BULKHEAD LOCKING ROD FOR 7'6" SYSTEM RIGHT
23	357215	BULKHEAD LOCKING ROD FOR 6'6" SYSTEM RIGHT
24	357319	BULKHEAD LOCKING ROD FOR 9' SYSTEM RIGHT
25	357230	THREE BEND LOCKING HANDLE LEFT
26	357235	THREE BEND LOCKING HANDLE RIGHT
27	357245	BULKHEAD TROLLEY GUIDES
28	357237	BULKHEAD LOCKING HANDLE BRACKET
29	357180	BULKHEAD ALUMINUM REINFORCEMENT FOR 96" BODY
30	357185	BULKHEAD ALUMINUM REINFORCEMENT FOR 102" BODY
31	401414	1/2" X 1 3/4" HHCS COARSE THREAD BOLT
32	407420	1/2" JAM NUT COARSE THREAD
33	407415	1/2" NYLON LOCK NUT
34	355008	1" BEARING
35	357231	STRAIGHT LOCKING HANDLE LEFT
36	357236	THREE BEND LOCKING HANDLE RIGHT
NOT SHOWN	412005	3/16" LARGE HEAD ALUMINUM RIVET
NOT SHOWN	354015	1/4" STEEL RIVET