

CRAMARO

TARPAULIN SYSTEMS

Slide N Go

**INSTALLATION, MAINTENANCE,
& SAFETY INSTRUCTIONS**



(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. Read through these instructions and familiarize yourself with the various part of the system.
4. 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. Improper installation will burn out electrical components and may damage the motor. 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.

ELECTRICAL COMPONENTS

Electrical components (such as wire, breakers, switches, solenoids, relays, etc.) are not returnable nor are they covered under warranty.

ELECTRIC MOTORS

All motor assemblies - warranted for a period of 1 year from date of shipment. Motor assemblies must be returned intact. Any attempt to disassemble will void all warranties. Cramaro will repair or replace defective motors upon inspection at our discretion. Cramaro does not warranty motors installed on non-Cramaro systems.

PLASTIC LINERS

Liners are not warranted against wear and tear. We recommend that the "Plastic Bed Liner Usage Chart" be viewed to select the best liner material being transported.

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

Before You Start

Before you start...What is the condition of the side rails? They must be smooth to provide an even surface for the bows to slide on. If they cannot be smoothed then plastic runner can be used to provide a smooth surface. Keep in mind the use of plastic runner will affect the positioned height of the front shaft. See Step 1. Wood sideboards may need to be replaced prior to beginning installation. Also damaged/bent boards or board holders will need to be repaired or replaced.

The type of bulkhead your bed has will dictate how you install the front drive: Square front see Step 2, Radius or chamfered see Step 3, for a cab shield see Step 4.

You will have to determine the centerline of the body so that cables and drive pulleys are centered to function equally. The centerline in the rear must be the same as in the front. This may require shims or fabrication when mounting the rear pulleys. See the following drawings on how to determine your centerline. Proper alignment of the bows, pulleys and cables are crucial to obtain trouble-free operation.

Important: The proper alignment of the shaft, the bows and the rear brackets are critical to obtaining a smoothly operated system. Misalignment can cause the system to bind and decrease the life of the product.

Important: This manual is written for removable bow end system. Old style bows with the white plastic ends require an alternate manual for proper installation.

Warning: Tarp must be fully closed when body is in motion. Tarp must be open when dumping and loading to

Step 1: Side Rails and Plastic Runner Install (Optional Component)

The runner's thickness will affect the mounting height of the shaft. If you have purchased this option install now as it will affect later steps in the installation process.

NOTE: Because the bows must have a continuous even surface to ride on, you may have to repair or replace sideboards if your trailer is equipped with them.

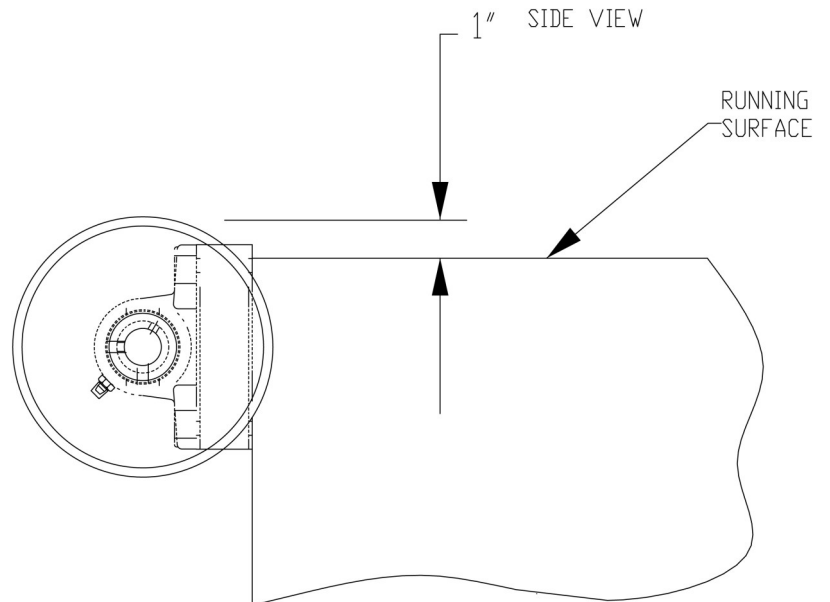
Center the plastic strip on the sideboards and position the strip as far forward as possible. Starting at the first countersunk hole on the plastic runner, drive the screw until the head is flush or slightly below the running surface. For metal surface, first drill a 7/32" pilot hole. (You will be supplied metal screws if you have a metal rail or wood screws if you have wooden sideboards). At each countersunk hole, pull the strip tight and drive in all remaining screws. Repeat these steps for both sides and cut off any excess at the rear edge of the top rail. The top of the plastic runner is now the "top of the running surface". Be sure this is kept in mind for future steps.

Step 2: Front Shaft

Begin by choosing mounting location. The type of front bulkhead will determine the type of shaft that is supplied with the system. Some bulkheads allow straightforward installation, while others will require more effort and some can require disassembly of the shaft. Sometimes it be necessary to adjust the factory placements of the bearings, if this is the case then the outer bearings **can't be anymore than 3" away from the adjacent cable pulley.**

Locate the centerline of the bed/body at the front. The cable centers of the drive pulleys must then be equal distances from the center point.

The top of both of the front cable pulleys should be mounted exactly 1" above the bow running surface for the removable end bows to run smoothly. Make certain the output side of the shaft for the drive pulley, sprocket or motor is on the left side of the body.

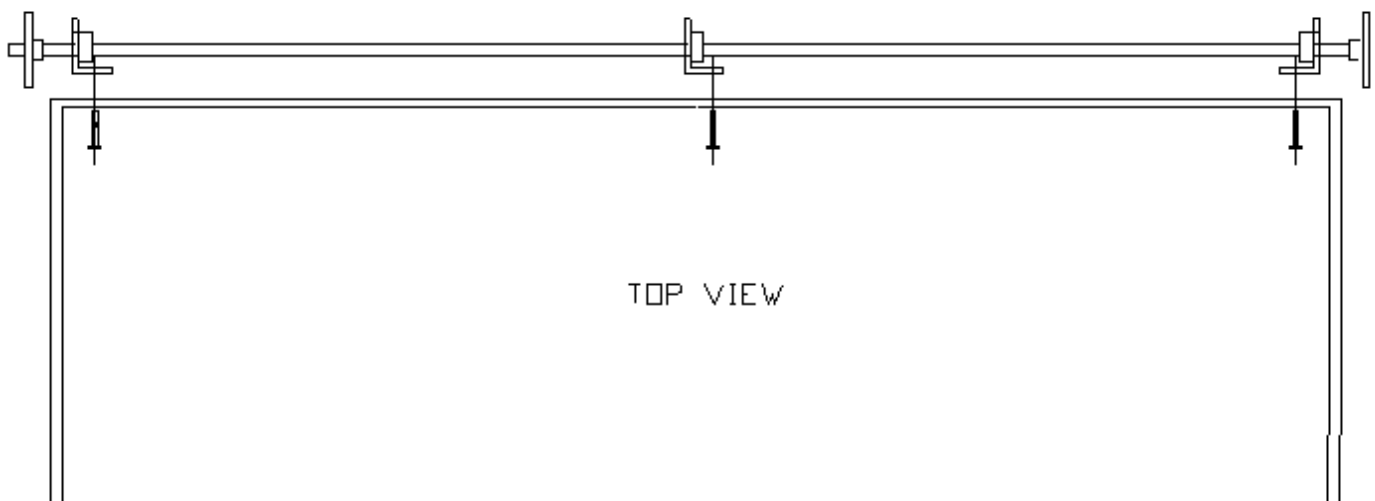


For square front bulkheads proceed to step 2 for further instruction. For Radius or Chamfer fronts proceed to step 3. For cab shields proceed to step 4.

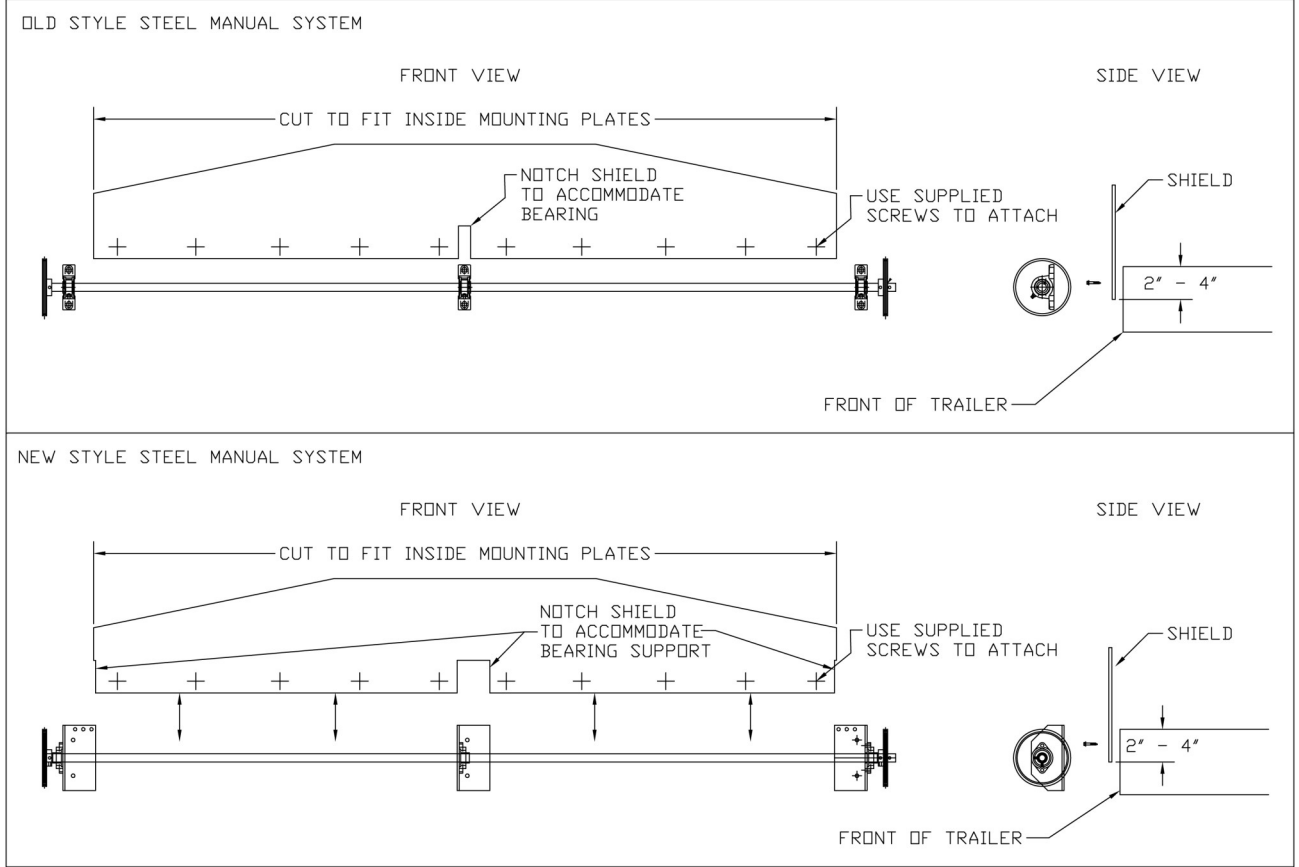
Step 3: Front Drive—Square Front

Your shaft will be sent with aluminum or steel attachments points based on the body type. This will allow the pieces to be welded if desired. **Locate the centerline of the bed/body at the front. The cable centers of the drive pulleys must then be equal distances from the center point.** Weld or bolt the shaft to the front bulkhead so that the top of the cable pulleys are exactly 1" above the running surface.

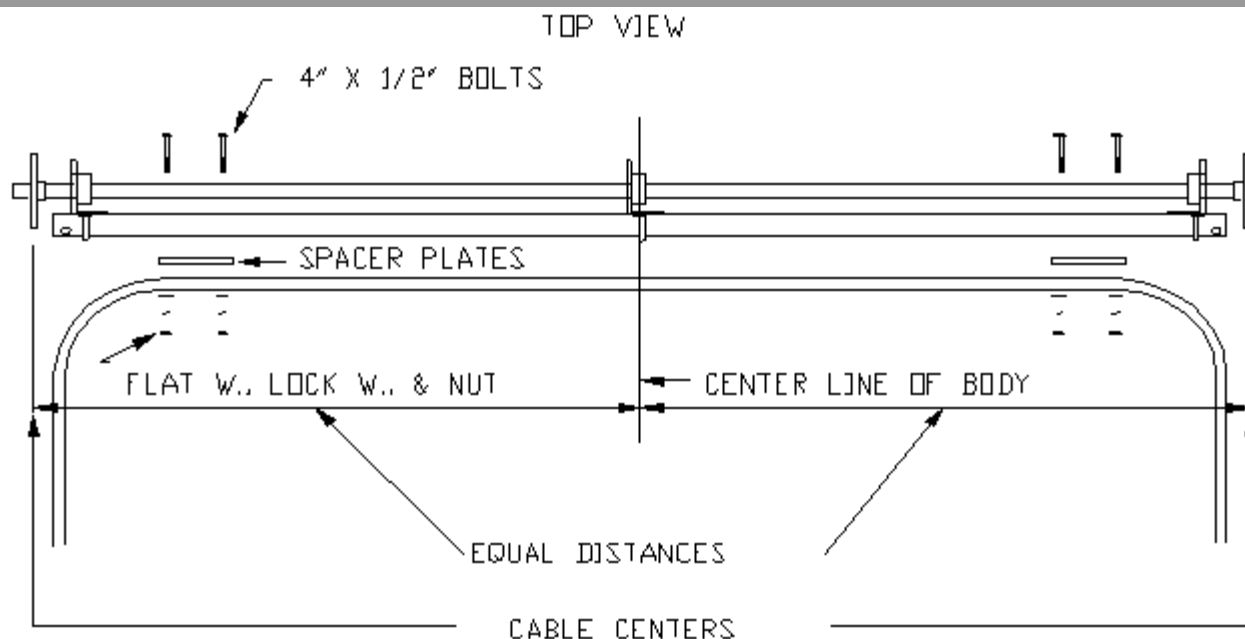
Weld or bolt mounting pieces in the proper location to secure front pipe for tarp attachment. You will be provided bolts to weld to steel bodies and adapter brackets to bolt for aluminum bodies. The front pipe must be centered and should be positioned as far forward as mounting allows directly behind the shaft. Distance between the studs is determined by the predrilled holes in the aluminum front pipe. This measurement varies depending on system width. Check the front pipe prior to final attachment.



Instructions for mounting front shield to the front bulkhead



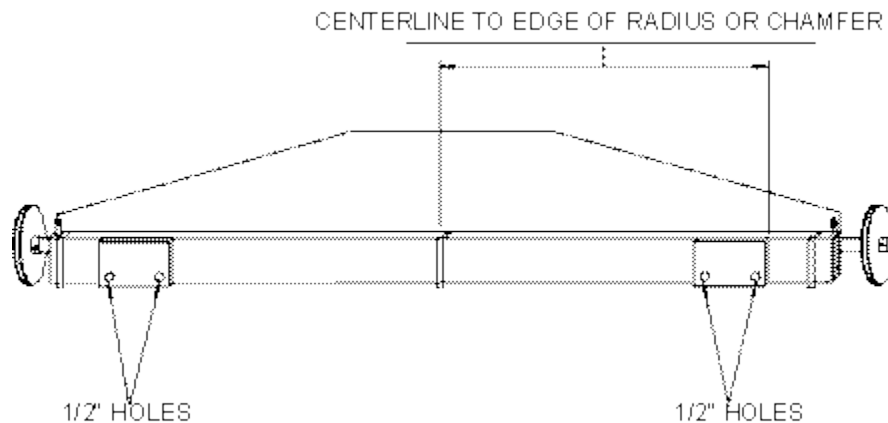
Step 4: Front Drive—Radius or Chamfered Bulkhead



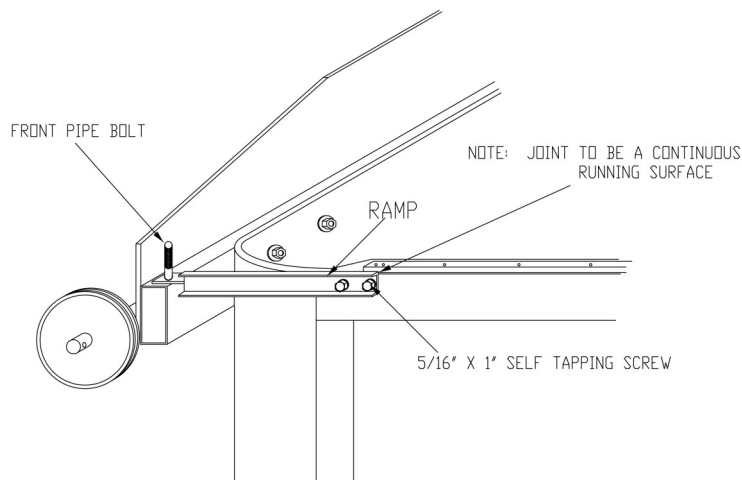
Spacer plates should be mounted as far out to the sides as possible, but not to exceed the beginning of the radius or chamfer. NOTE - spacer plates MUST be used to accommodate any flexing of the body when dumping. Failure to use spacer plates may cause damage to your system.

Clamp spacer in the proper location on steel 2" x 4". Drill through the 2" x 4" steel and plastic shield in the 4 places of the spacers using a 1/2" drill bit.

Clamp the front assembly in place and drill through the body. Mount using 1/2" x 4 1/2" Grade 5 bolts, flat washers, lock washers, and nuts.



Install ramps by placing the welded end over the vertical bolt located on each end of 2" x 4" assembly (cut ramp if needed). Drill two holes using a 9/32" drill bit and fasten with two 5/16" x 1" self-tapping screws. If possible you may be able to install the ramps high enough to act as a continuation of the running surface and allow the compact tarp unit to open even closer the front.



Step 5: Front Drive—Cab Shield

If you have a cab shield you must decide if you can mount on the front of the shield or if you will have to mount through the cab shield. If you mount through, then the shaft must be disassembled. Remove cable pulleys by loosening setscrews on either side of shaft. Remove bearings by loosening setscrews and shaft plastic pieces following cable pulley.

Locate where the shaft will be placed and drill a 2" hole on each side of the cab shield. Center point on a 7" pulley is 2-1/2" down for removable end style bows. This will position the shaft so the top of the pulley is 1" above running surface. Old style white plastic end bows will have a center point for the hole of 2 3/4" down from the top of the cab shield, this will allow 3/4" above the running surface.

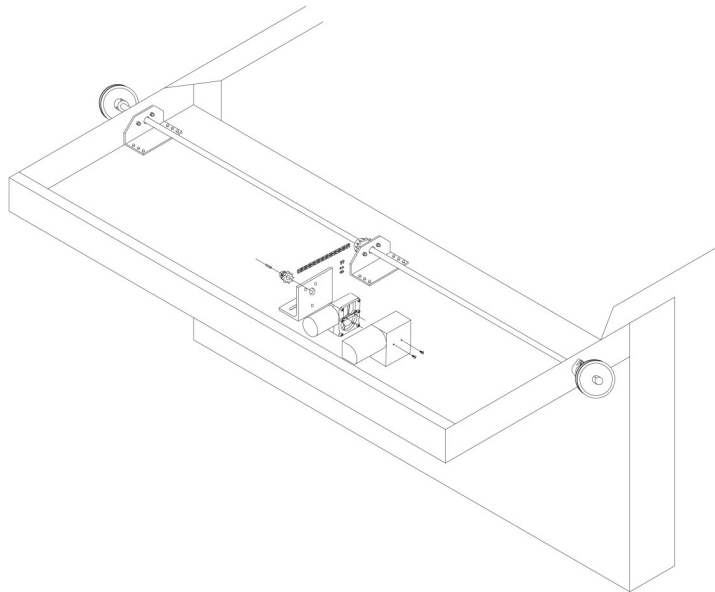
NOTE - to figure how forward on the cab shield to drill holes, count the number of bows in your kit and allow approximately 1 1/2" per bow. This will show you the resting place of the last bow when the tarping system is cranked forward.

NOTE: Electric drive may require that the motor and the drive bracket to be mounted in the center of the shaft and mounted to the shelf of the cab shield.

Insert shaft into hole and replace bearing and plastic to the original locations.

Enter shaft into other hole and refasten cable pulley. Mount bearing to support pieces, center shaft in the 2" hole on each side, and then weld support pieces to the cab shield.

Modify the wind deflector to block all wind from going underneath the front of the tarp. Fabrication of brackets may be required.

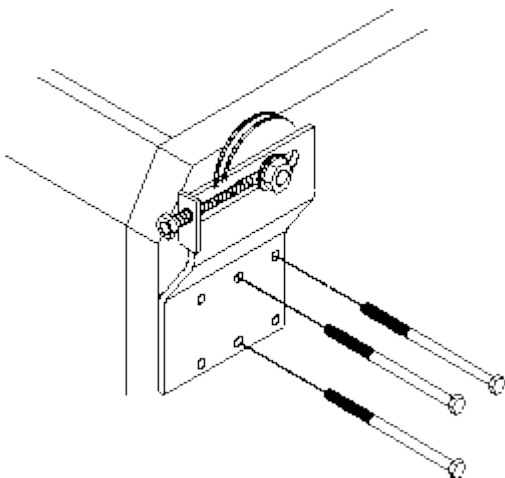
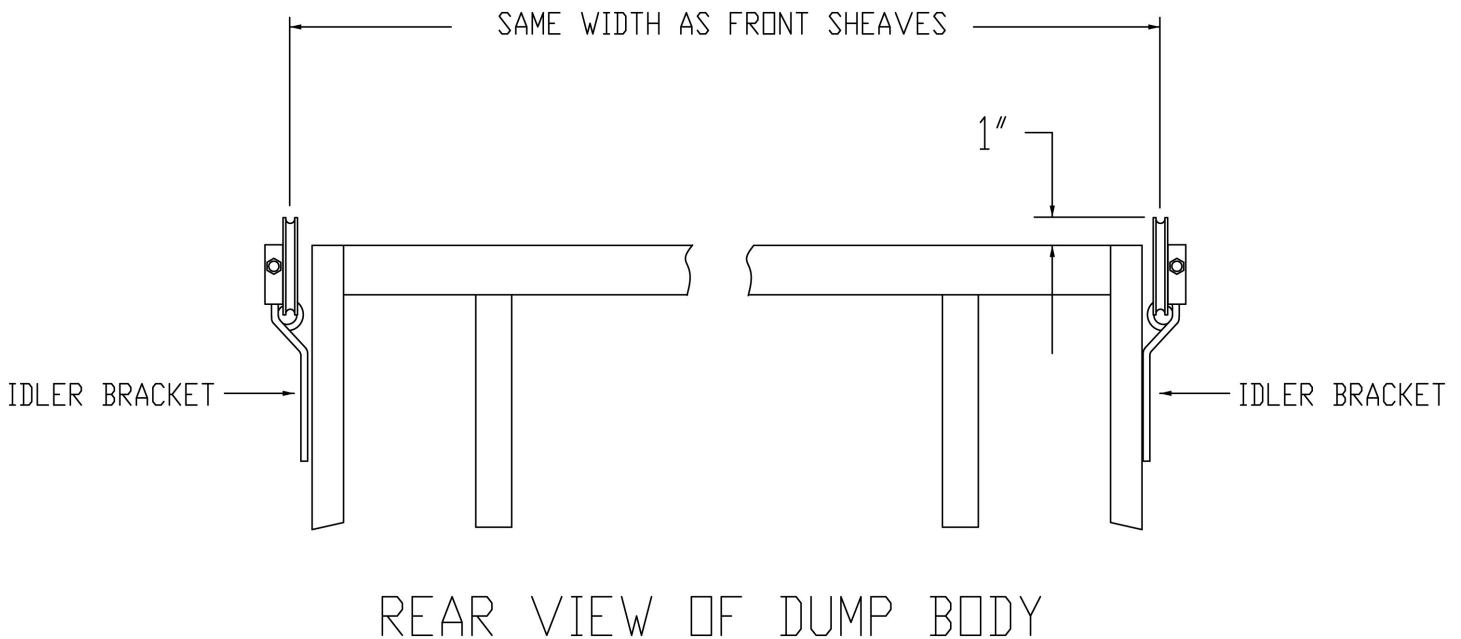


Step 6: Rear Brackets

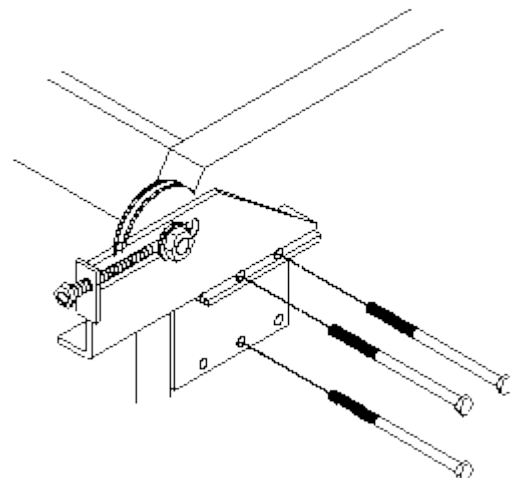
Position brackets as far to the rear as possible, allowing maximum coverage of the load. Make sure both the left and right brackets are the same distance from the front assembly. If your application has a rear barn door, you will be limited as to how far back to mount the brackets. More than likely the rear brackets will prevent the door from opening all the way against the side of the trailer. While holding the bracket in place test open the door to determine the desired mounting location.

The width of the rear brackets must have the same cable centers as the front shaft for the tarp system to operate smoothly. Use of shims (not supplied) may be necessary. If you have the optional adjustable/extended rear bracket, simply loosen the bolts and adjust the width of the pulleys.

The top of the cable pulley should be 1" above the running surface.



Drill 3/8" holes through the dump body. Bolt the rear bracket assemblies by using the 3/8" x 5 1/2" Grade 5 bolts, flat washers, lock washers and nuts provided. Three bolts per side are required as a minimum.



Using the adjustment nut on the back of the rear bracket, position the pulleys as far forward on the rear bracket as possible. This will facilitate tightening the cables later in the installation process to give yourself maximum adjustment over the life of the system.

Step 7: Bows—Tarp—Cable Installation

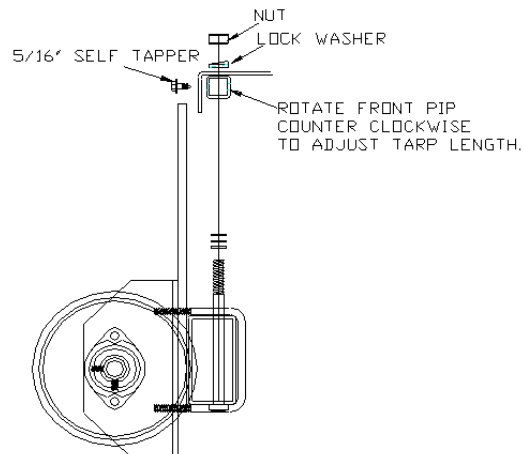
In this step you will be putting the bows into the tarp, putting the tarp on the body and attaching the cables.

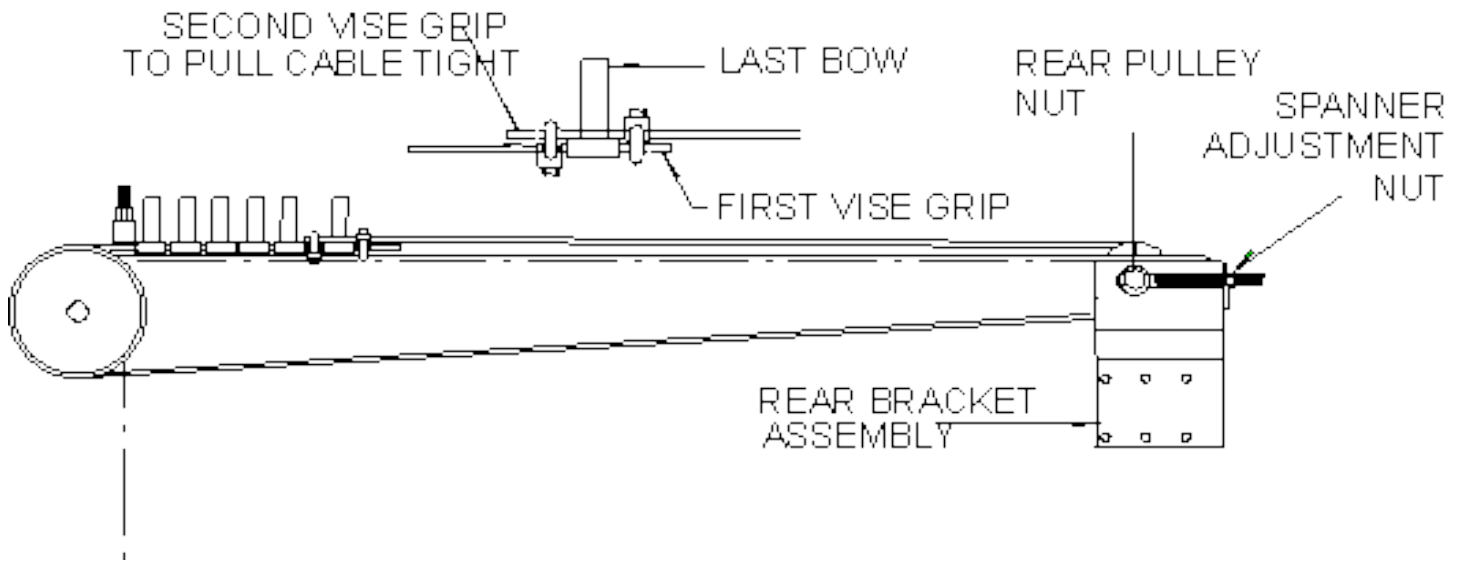
1. Lay the tarp on a flat, clean surface with the bow pockets facing up.
2. Insert one galvanized bow blank (arched downwards, with bow ends up) into each pocket on the tarp, making certain the bows are inserted into the center of the pockets and not between the pocket and tarp. A small amount of WD-40 can be sprayed into each pocket to ease the insertion of the bows. NOTE: If your system was ordered with an 18" arch, the first bow at the front will be a 12" arch.
3. Center the bow from side to side. NOTE - the rear bow pocket is attached to the rear flap and may look different from the others.
4. The UHMW removable bow ends supplied with the system are drilled in multiple locations to adjust to desired cable center measurement. Depending on the system width, slide one plastic block end onto each side of the bow and adjust cable centers to match the front and rear pulleys. Install supplied bolts and locknuts to lock bow leg into place on the galvanized bow blank. Repeat this step for all remaining bows.



5. OPTIONAL HIGH LIFT GATE/ROCK BOW SYSTEM ONLY: The rock bows will go in the last two pockets with the long bushing leg in front of the leg with the plate. Depending on the system width, adjust the metal legs into each side of the bow and adjust cable centers to match the front and rear pulleys. Install supplied bolts and locknuts to lock rock leg into place on the galvanized bow blank.

6. On the front of the tarp (without the Cramaro logo) along 1-1/2" webbing, center on the front pipe (1" square aluminum tube) and anchor the tarp by using 5/16" x 1" self-tapping screws. The pilot holes are already drilled into the front pipe to make this attachment. The two large holes on each end of the front pipe are to attach the pipe to the mounting points at the front of the body as installed in an earlier step.
7. Place the tarp, with its bows installed, onto the running surface of the bed. (For ease of handling, place the bows together and insert a 1/4" rod (not supplied) through the bow bushings so that the tarp and bows can be lifted as a unit onto the running surface). The front of the tarp has the front pipe mounted to it. The arch of the bows will be up.



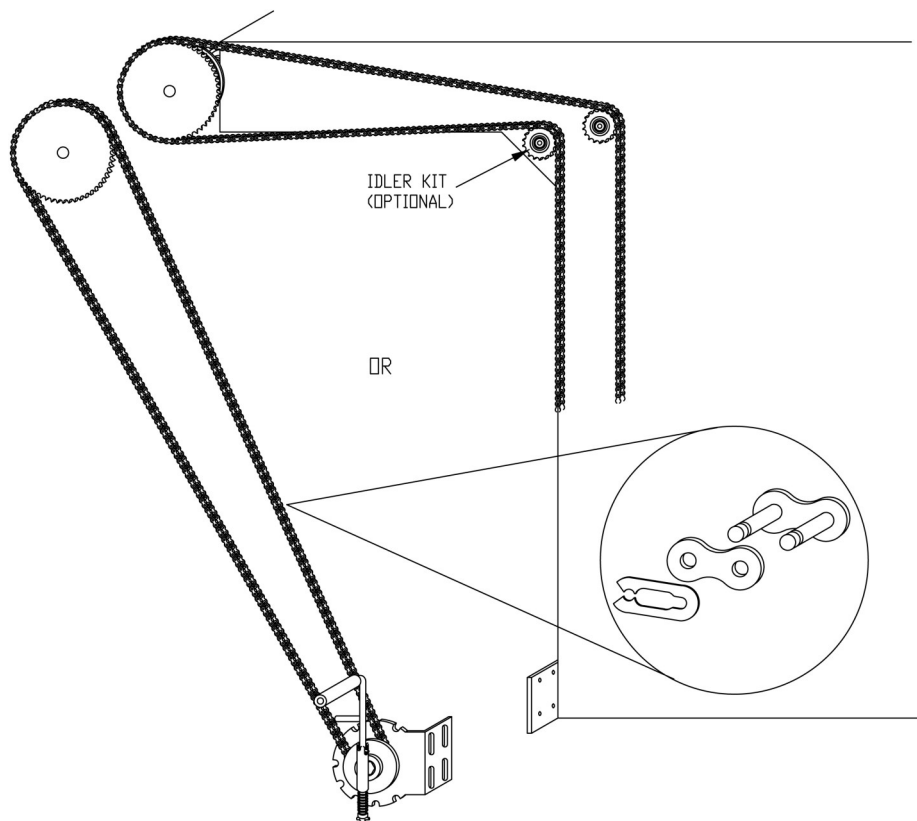


8. Starting on one side of the bed, thread the 1/4" cable around the top of the front pulley and through each bow end, stopping just after the last bow. Take the other end of the cable from under the front pulley and wrap it around the rear pulley, and then go over last bow block. Temporarily clamp each side of the last bow with vise grip pliers.. Make sure the rear pulleys are in the forward position to allow for later adjustment. Pull the cable as tight as possible and fasten securely with two cable clamps. Make sure to place the cable clamps as shown. Release the vise grip pliers and cut off the excess cable approximately 2" past the cable clamps.
9. Repeat for the other side. The last bow must be the same distance from the front pulley on each side.
10. Loosen the rear pulley nut 1/2 turn. Tighten the spanner adjustment nut until there is enough tension to where 18" forward of the rear bracket, the cables can be squeezed by hand to within 1". DO NOT over tighten the cable damage will occur to the front assembly.
11. Burn and/or place black electrical tape on the cable ends to prevent damaging the tarp and/or fraying of the cable.

Step 8: Belt or Chain Drive Installation

See separate instructions for installing the electric option.

1. Slide provided drive sprocket or pulley (with the hub facing in) onto the drive side of the shaft on the outside of the cable pulley. Tighten the longer setscrew through the pulley and into the pre-countersunk hole on the shaft. Then tighten the short setscrew to the shaft.
2. If you are installing an idler kit, mount idler pulleys or sprockets near body front but make sure the chain or v-belt will not obstruct the cab door from opening.



3. Temporarily tighten the handle bracket to the mounting plate, making certain the bolts are in the lower end of the adjustment slots, giving you full range of tension adjustment after mounting. Position on the body in your desired mounting location in line with the upper drive sprocket or pulley.
4. Hang the chain or v-belt from the upper sprocket or pulley on the shaft and attach to the handle pulley or sprocket. Adjust on the dump box where the handle assembly is to be mounted, making certain the belt or chain is straight and will not bind when cranking. For v-belt, stretch so the belt has minimal slack. For chain, cut off any excess chain and connect the ends using the provided master link.
5. Weld the mounting plate or bracket to the body; additional fabrication may be needed.
6. Apply downward force on the crank assembly to desired tension and tighten the (3) nuts that attach the crank assembly to the mounting bracket.

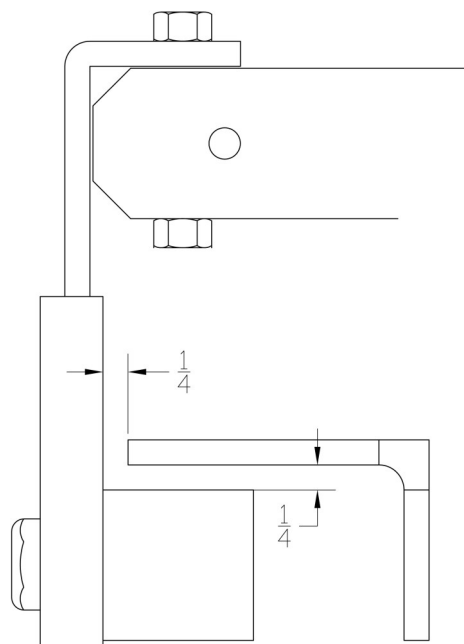
Step 9: Adjusting the Tarp Length

1. Crank the tarp towards the rear to within 2" of the rear pulley and roll any excess material around the front pipe. Place the front pipe onto the studs on ends of the front assembly or on mounting bolt/brackets and anchor using 1/2" lock washers, and nut. If your tarp stretches after use, just simply roll the excess material on the front pipe in the same manner, DO NOT shorten more than 12".

Step 10: Anti Lift Clips for Vinyl Systems

It is very important to use the anti lift clips on vinyl systems in order to prevent the tarp from being blown up away from the body. The longer the truck, the more anti lift clips you will receive. You will receive (1) set if your system is 20 feet or less; (2) sets if your system is 21 – 30 feet; or (3) sets if your system is 31 feet or longer. Space them evenly across the length of the body.]\

1. Crank the tarp fully to the rear and place the handle in the locked position. Your tarp should not have any slack at this point in the installation and should be 1"-2" from contacting the front of the rear bracket. Make any adjusts now prior to finishing this step.
2. Locate where the anti lift clips should be mounted (making sure they are spaced evenly on both sides).
3. Place the anti lift clip on the top of the plastic bow end firmly seated in the 90 degree bend of the anti lift clip and bolt in place using a 3/8" x 2-1/4" bolt and locknut through the predrilled hole in the plastic end.

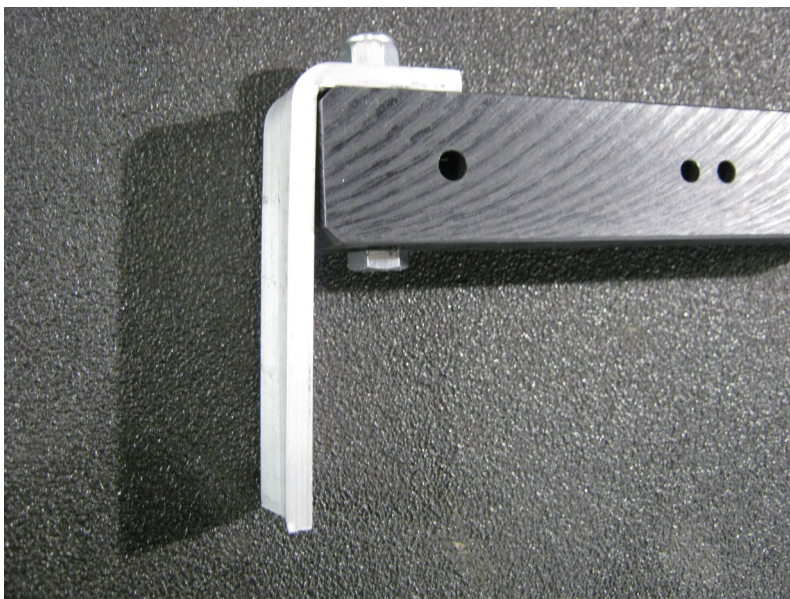


4. Once the anti-lift clips are bolted to the appropriate bows, position the anti-lift guide brackets above the round plastic bushing of the anti lift clip so there is 1/4" clearance and it is centered on the guide. The clearance between the outside of the anti lift guide and the inside of the clip is also 1/4". Failure to adhere to these clearances can result in damage to or loss of the tarp system. The guide has unequal sides and can be positioned either way to achieve the dimensions required. Sometime it will be necessary to cut down one side of the legs to achieve the required clearance.
5. Weld or bolt the provided aluminum angle bracket to the side rails or sideboards. If bolting, use 3/8" x 6" carriage bolts, flat washers, and lock nuts. Fabrication may be required depending on the body style. If requested steel brackets can be provided with the system allowing welding onto steel sided trailers. They would need to be cut down or spaced out to provide a similar 1/4" clearance as shown in the figure above.
6. Cut off any excess of the bolt inside the body once securely fastened.
7. Crank the tarp back and forth to ensure all anti lift clips and anti lift guides line up properly. It may be necessary to change out the bolts on the board holders to round head if the anti-lift clips catch as they pass during operation.

Step 11: Slip Clips for Mesh Systems

A mesh tarp allows air to pass through the tarp and therefore mesh tarps do not have the lifting issue that vinyl tarps do. They can however shift from side to side. To prevent this, slip clips are provided for all mesh tarped systems. The longer your bed, the more slip clips you will receive. You will receive 1 set if your system is up to 20 feet; 2 sets if up to 30'; and 3 sets if more than 31'.

1. Crank the tarp fully to the rear and place the handle in the locked position. Your tarp should not have any slack at this point in the installation and should be 1"-2" from contacting the front of the rear bracket. Make any adjustments now prior to finishing this step.
2. Locate where the slip clips should be mounted making sure they are placed evenly on both sides of the body. Place the slip clip on the top of the plastic bow end bolt in place with a 3/8" x 2-1/4" bolt and locknut through the predrilled hole in the plastic end.

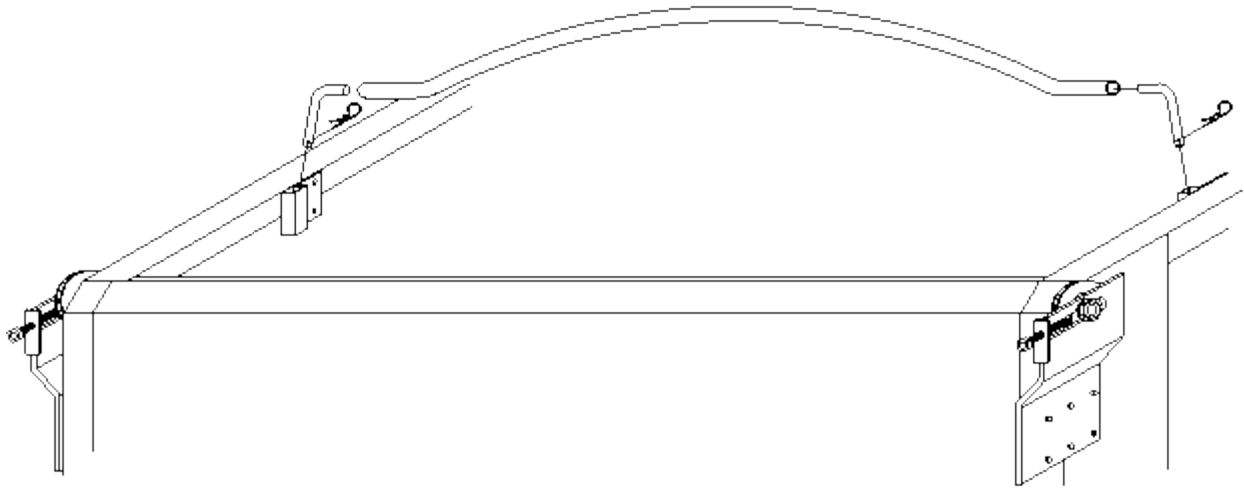


Step 12: Attaching Tarp to Bow Ends

To prevent premature wear to the tarp due to excess flapping, you have been provided an appropriate number of 3/16" self tapping screws (2 per every bow) to attach the tarp to the bows. These screws should be installed at each bow on both sides down through the center of the seatbelt webbing of the tarp. Depending on the combination of the system width and the tarp width sometimes the screws will go into the bow blank only or sometimes through the removable bow end itself. The tarp should be fully closed prior to install these screws.

Install one screw on each side of the bow at this time.

Step 13: Rear Bow Cap (Optional Component)



NOTE - The optional Rear Bow Cap must be mounted properly so the tarp system will slide over the Rear Bow Cap, overlapping 3”.

Crank system completely to the rear. Once the tarp is in the stretched position, lock the handle.

Measure the distance (inside to inside) of your running surface of the last bow. Deduct 3”, and cut the ends of the cap bow (evenly on each side). Slide one bowleg completely into position as shown and tack weld. Make certain the bow is positioned perpendicular to the body. Slide the Vinyl Rear Bonnet onto the bow and tack weld the other leg. Be certain not to damage the Vinyl Bonnet.

To locate the mounting position of the bow pockets, mount the top of the bow pockets 3/4” below the top of the running surface and 3” forward of the last bow. With assistance, temporarily hold the pockets in place and position the rear cap bow in the pockets. There should not be any clearance between the top of the bow cap and the bottom of the last bow.

Once exact position is found, mount the pockets by bolting using lag screws if wood sideboards, or 3/8” X 1” self-tapping screws if metal or aluminum body. Finish welding the bow to the bow ends.

Bolt or rubber-strap the Bonnet down on the tailgate. Make certain there are no pinch points or rough edges that could damage the Vinyl Bonnet.

Maintenance Schedule & Adjustments

Every 2 months

Check tension of cables.

Clean and lubricate cables

Inspect the tarp for any tears, cuts, or worn areas

Check condition of cables (check for frayed wire, cuts, rust)

Inspect hardware to be sure fasteners haven't become loose

Check length of tarp

Check security of cable clamps

Check alignment of rear bow

Check tension of V belt or chain

Make certain anti-lift clips are installed on all vinyl systems

Every 6 months

Remove the cable clamps and inspect that area of the cable for corrosion or broken wires. If necessary, replace the cable.

Every 12 months

Replace the cable, and replace any corroded or damaged fasteners.

Cable Tension

The cable tension is correct when you cannot easily touch the cable together when squeezing with one hand 18" from the rear pulley. It is recommended to check tension after 2 weeks of the initial install.

The cable is adjusted by first loosening the main nut on the rear pulley using a 1 1/8" wrench and then tightening the cable by using a 3/4" wrench on the rear spanner nut. Be sure to retighten the pulley nut.

Do not over tighten the cable as this will cause the front shaft to bend or break which can cause the cable to derail.

To clean and lubricate the cable, run a clean rag covered with light oil or WD 40 over the entire cable on both sides of the system. In addition, spray WD 40 or a similar product into the slots on the bow ends. Do not use any heavy oil products as this will cause the dirt to stick to the cables and pulleys.

Adjustment of the V-Belt or Chain

If the rubber belt slips or if the chain loosens while operating the system, an adjustment will be necessary. Simply loosen the three bolts on the handle bracket and slide the handle downward until desired tension is achieved. Retighten the bolts.

Adjusting the Tarp Length

The tarp should be stretched tight when in the covered position. If the tarp is loose or if the last bow touches the rear cable pulley, the tarp must be shortened or premature wear will result. To shorten the tarp, undo the bolts on the front pipe, and rotate the front pipe until desired length is achieved, retighten bolts. Do not shorten more than 12" from the original length for a Slide 'N Go system.

Bow Alignment

To check for proper bow alignment, crank the system all the way to the front of the vehicle. The ends of all the bows should be touching each other and should be tight against the front pipe. If one side is not tight to the front then loosen the cable on the opposite side, with the bow(s) that are closer to the front assembly, and use the handle or switch to open the system. This side that is loose will slip and the bows will begin to align themselves. When every bow is aligned and tight to the front, then retighten the cable.

Trouble Shooting

If the system will not move when cranked:

1. The v-belt or chain is too loose.
2. The cables are too loose.
3. The (chain sprocket or v belt pulley) set screw on the shaft is loose.
4. Check side boards to see if obstructed.

If cables are breaking:

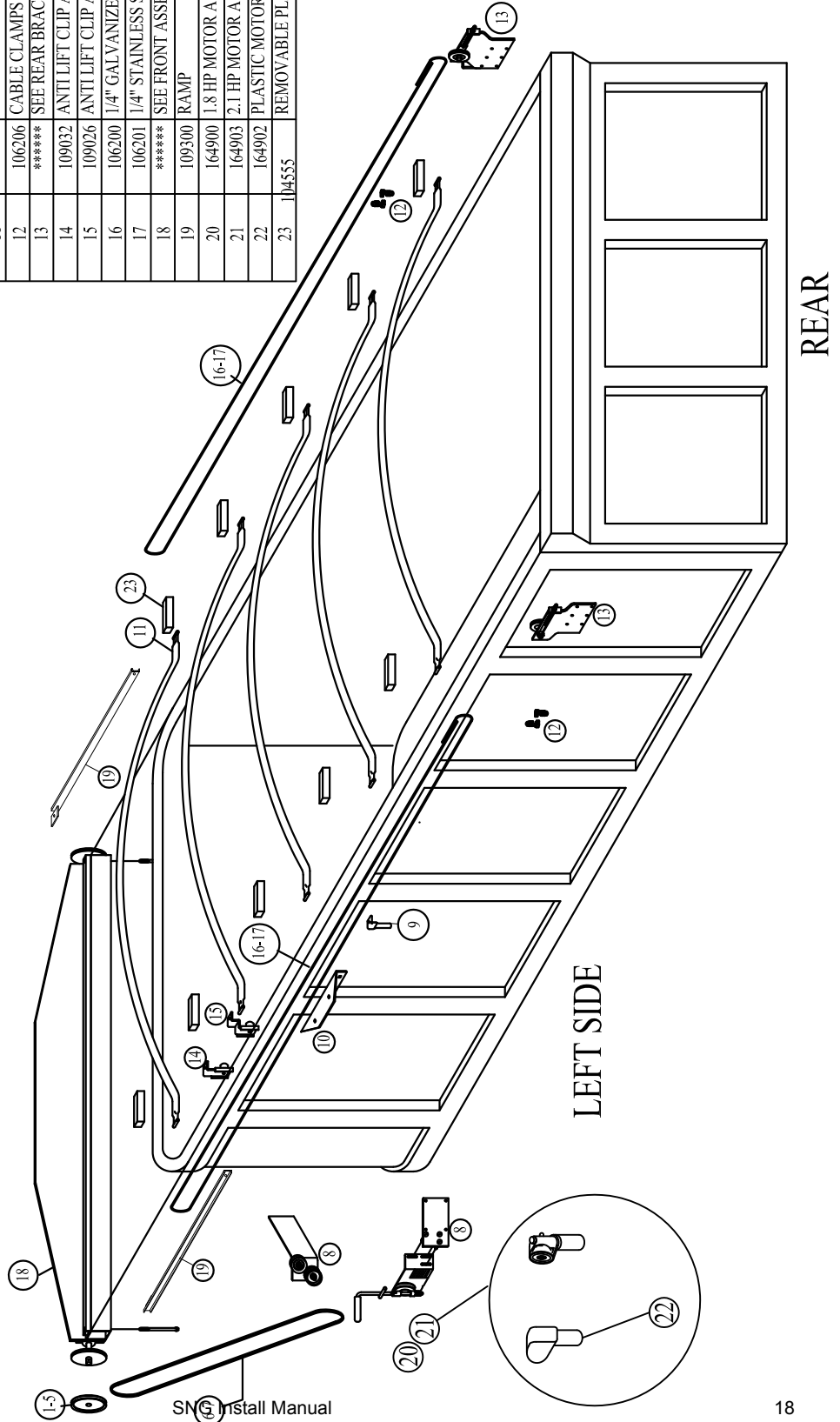
1. Check the height of your drive cables. The bottom of the cables should be approximately 3/4" above the running surface of the body. Heights greater than 1" can cause the cable to wear prematurely or even snap.
2. Make sure the cables are not loose.
3. Tarp is too long, creating a lot of wind whipping which can break cables and cause premature wear on system.
4. Make sure anti-lift clips and slip clips are used properly.
5. Tarp needs to be stretched tight when traveling or bows may "rock back and forth".

If the system is hard to crank:

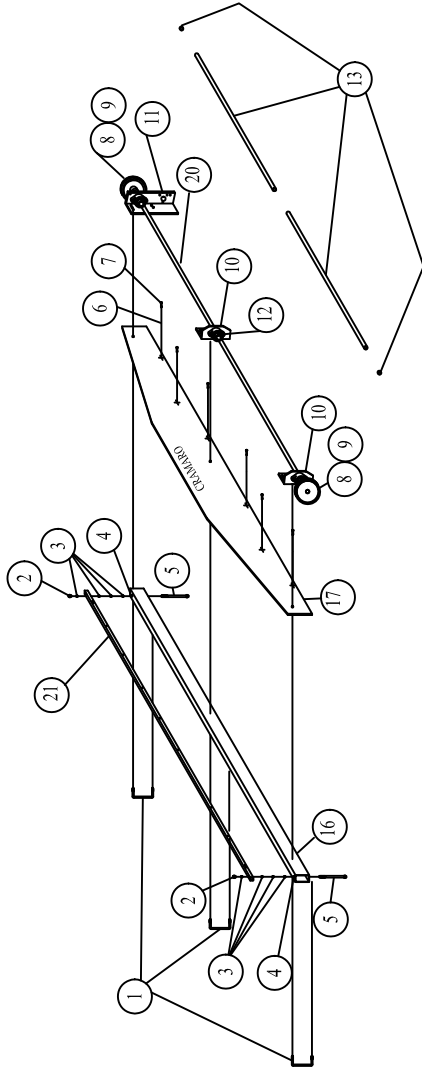
1. The cables are too tight.
2. The cables are dirty or not lubricated, use WD-40 to clean and lubricate the cables.
3. The rear bow is not in alignment.
4. The bows are not at the same cable centers. (You can reshape the bows by pushing upwards or downwards to bend them back into shape. The distance between the ends of each bow must be the same as the center distance of the cable pulleys).
5. For systems with nylon cables, the nylon cables may be too loose.
6. The sideboards are damaged.

SLIDE N GO®

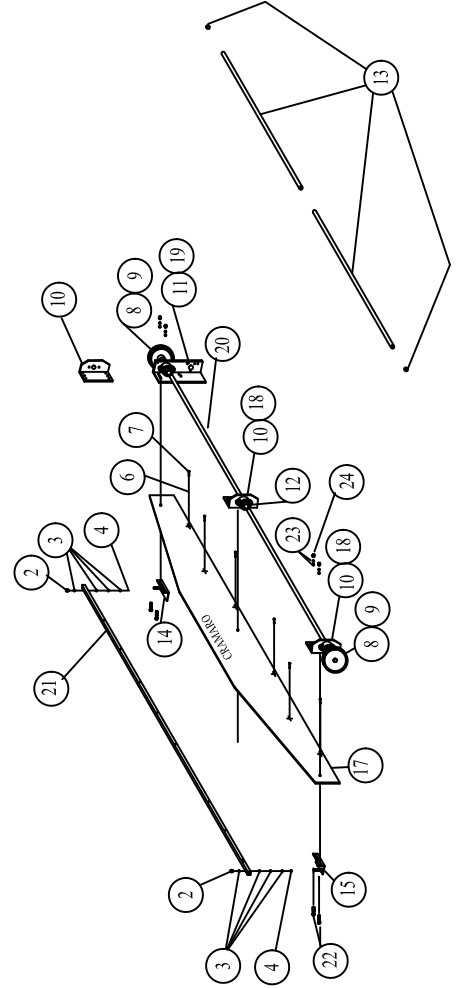
ITEM	PART #	DESCRIPTION
1	105030	V-BELT PULLEY 7"
2	105035	V-BELT PULLEY 9"
3	105050	CHAIN SPROCKET 5"
4	105055	CHAIN SPROCKET 7"
5	105060	CHAIN SPROCKET 9"
6	105075	CHAIN #40 NICKEL PLATED
7	*****	SEE PART LIST #106005 - 106064 FOR BELTS & PRICING
8	*****	SEE IDLER AND DRIVE ASSEMBLY PAGE
9	109025	SLIP CLIP
10	109028	ANTI LIFT ALUMINUM GUIDE
11	*****	SEE PART LIST #108106 - 108612 FOR BOWS & PRICING
12	106206	CABLE CLAMPS 1/4"
13	*****	SEE REAR BRACKET ASSEMBLY PAGE
14	109032	ANTI LIFT CLIP ASSEMBLY SINGLE BEND
15	109026	ANTI LIFT CLIP ASSEMBLY DOUBLE BEND
16	106200	1/4" GALVANIZED STEEL CABLE
17	106201	1/4" STAINLESS STEEL CABLE
18	*****	SEE FRONT ASSEMBLY PAGE
19	109300	RAMP
20	164900	1.8 HP MOTOR ASSEMBLY
21	164903	2.1 HP MOTOR ASSEMBLY
22	164902	PLASTIC MOTOR COVER
23	104555	REMOVABLE PLASTIC BOW END



2 X 4 OPTION WITH SHIELD (ELECTRIC ONLY)
(SEE PART LIST #104060 - 104064 FOR COMPLETE NEW STYLE 2X4 SHAFT ASSEMBLY)



MANUAL OR ELECTRIC
(SEE PART LIST #104030 - 104054 FOR COMPLETE NEW STYLE SHAFT ASSEMBLY)



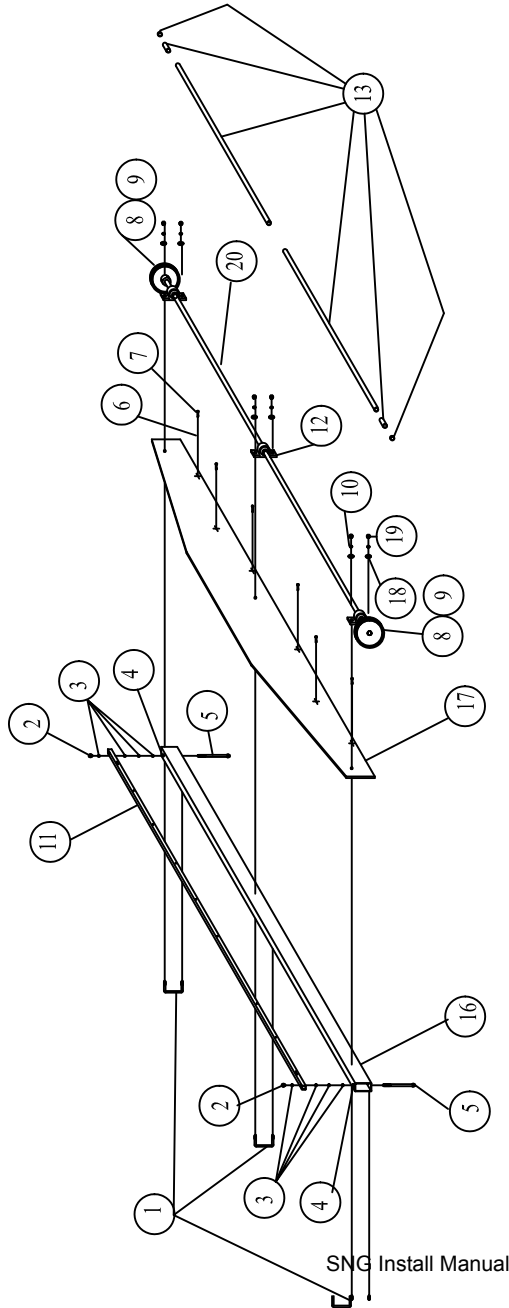
ITEM	PART #	DESCRIPTION
1	106250	U BOLT
2	407405	1/2" NUT
3	406440	1/2" LOCK WASHER
4	400003	1/2" RETAINING RING
5	401452	1/2" X 7" BOLT
6	406150	1/4" FLAT WASHER
7	404120	1/4" X 1" TEK SCREW
8	105004	CABLE PULLEY 5"
9	105005	CABLE PULLEY 7"
10	108805	ALUMINUM SHAFT ANGLE BEARING SUPPORT
11	108810	ALUMINUM SHAFT MOTOR BRACKET
12	116050	1" SIDE MOUNT BEARING
13	109205	PLASTIC SHAFT COVER TUBE KIT C/W PLASTIC & O-RINGS
14	108807	FRONT PIPE ADAPTOR BRACKET RIGHT
15	108808	FRONT PIPE ADAPTOR BRACKET LEFT
16	*****	SEE PART LIST #103105 - 103120 FOR 2X4 BEAM
17	109115	PLASTIC SHIELD
18	108806	STEEL SHAFT ANGLE BEARING SUPPORT
19	108809	STEEL SHAFT MOTOR BRACKET
20	*****	SEE PART LIST #103005 - 103030 FOR SHAFT MATERIAL
21	*****	SEE PART LIST #107810 - 107854 FOR FRONT PIPE
22	401310	3/8" X 1 1/4" HHCS GR5 COARSE THREAD BOLT
23	406350	3/8" FLAT WASHER
24	407315	3/8" NYLOCK NUT
25	*****	SEE PART LIST #104000 - 104024 FOR SHAFTS
26	413455	5/16" X 2 1/2" ROLL PIN ZINC PLATED
27	601415	SPROCKET #50B18-1" BORE
28	160000	KEYSTOCK 3/16"
29	601410	SPROCKET #50BS9-3/4" BORE
30	601405	#50 MASTER LINK
31	600001	CHAIN COVER
32	601400	NICKEL PLATED #50 22" CHAIN WITH MASTER LINK

CRAMARO SLIDE N GO®

ORIGINAL MANUAL STYLE FRONT SHAFTS

2 X 4 OPTION WITH SHIELD

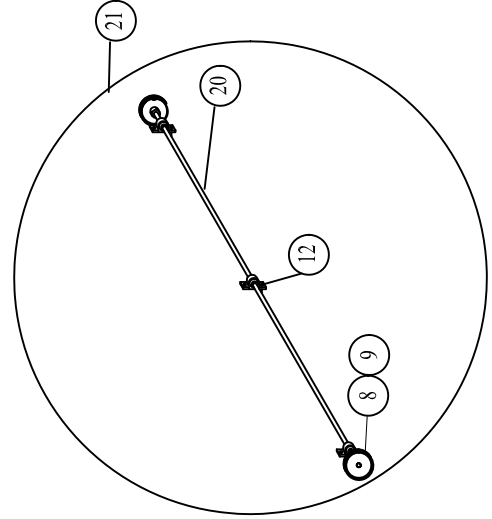
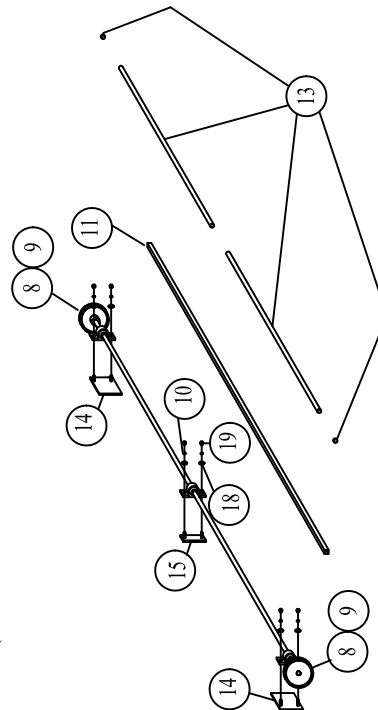
(SEE PART LIST #108620-108650 FOR COMPLETE ORIGINAL 2X4 SHAFT ASSEMBLY)

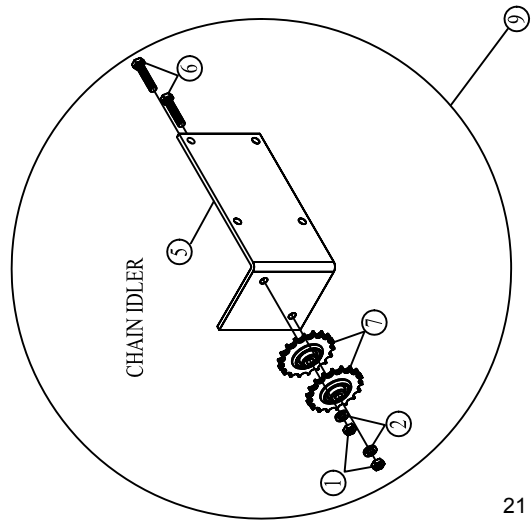
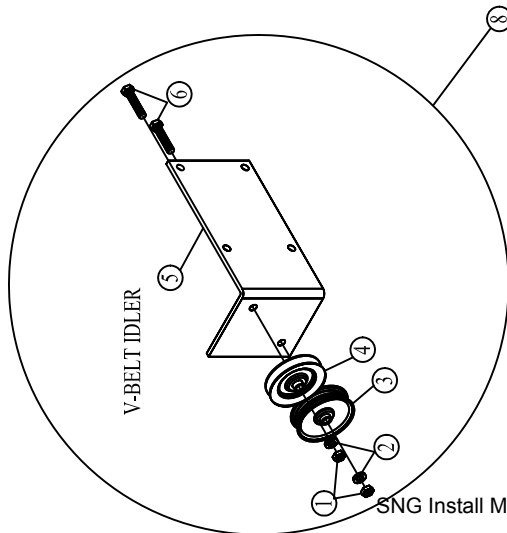


ITEM	PART #	DESCRIPTION
1	106250	U BOLT
2	407405	1/2" NUT
3	406440	1/2" LOCK WASHER
4	400003	1/2" RETAINING RING
5	401452	1/2" X 7" BOLT
6	406150	1/4" FLAT WASHER
7	404120	1/4" X 1" TEK SCREW
8	105004	CABLE PULLEY 5"
9	105005	CABLE PULLEY 7"
10	406340	3/8" LOCK WASHER
11	*****	SEE PART LIST #107810 - 107854 FOR FRONT PIPE
12	105010	1" PILLOW BLOCK SHAFT BEARING
13	109205	PLASTIC SHAFT COVER TUBE KIT C/W PLASTIC & O-RINGS
14	107130	SHAFT SUPPORT STEEL END PLATE
15	107135	SHAFT SUPPORT STEEL CENTER PLATE
16	*****	SEE PART LIST #103105 - 103120 FOR 2X4 BEAM
17	109115	PLASTIC SHIELD
18	406330	3/8" FLAT WASHER
19	407305	3/8" NUT
20	*****	SEE PART LIST #103005 - 103030 FOR SHAFT MATERIAL
21	*****	SEE PART LIST #108600 - 108610, 108615 - 108616 FOR SHAFTS

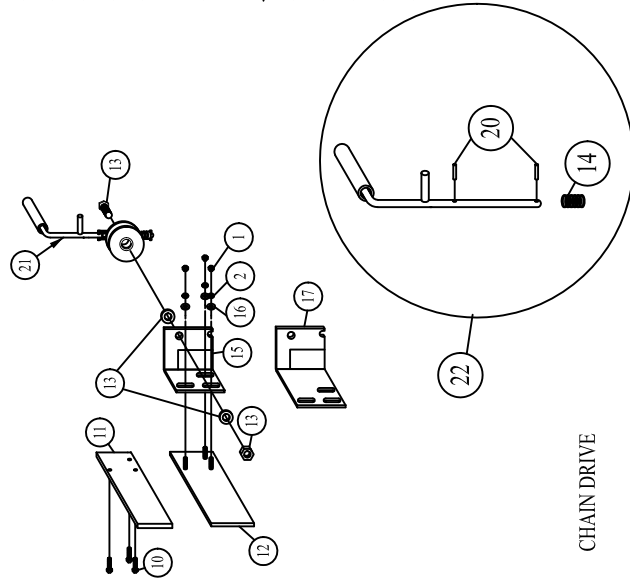
SHAFT CENTER & END PLATES (STEEL)

(SEE PART LIST #108720 - 108760 FOR COMPLETE ORIGINAL SHAFT ASSEMBLY)

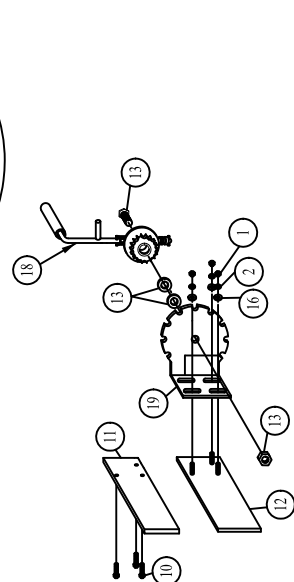




V-BELT DRIVE

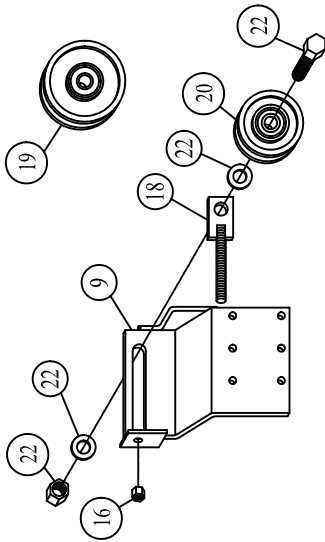


CHAIN DRIVE

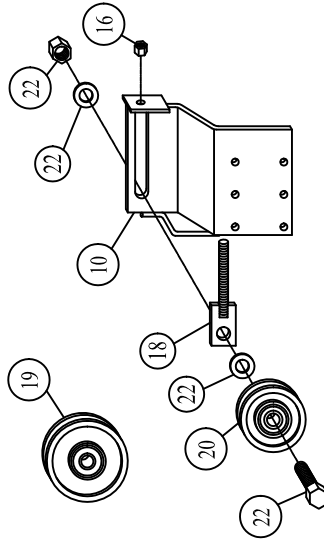


ITEM	PART #	DESCRIPTION
1	407305	3/8" NC NUT
2	406340	3/8" LOCK WASHER
3	105105	IDLER FLAT GROOVE PULLEY
4	105110	IDLER V-GROOVE PULLEY
5	109170	IDLER BRACKET
6	401312	3/8" X 1 1/2" HHCS GR5 COARSE THREAD BOLT
7	105115	IDLER CHAIN SPROCKET
8	109172	IDLER ASSEMBLY FOR V-BELT
9	109171	IDLER ASSEMBLY FOR CHAIN
10	401310	3/8" x 1 1/4" HHCS GR5 COARSE THREAD BOLT
11	107100	HANDLE ADAPTOR PLATE ALUMINUM
12	107105	HANDLE ADAPTOR PLATE STEEL
13	400000	3/4" CUT HEAD BOLT HARDWARE KIT
14	100007	2 3/4" COMPRESS SPRING ZINC PLATED
15	107256	HANDLE BRACKET SHORT 90°
16	406350	3/8" USS FLAT WASHER
17	107250	HANDLE BRACKET LONG 90°
18	107275	HANDLE CHAIN ASSEMBLY
19	107257	HANDLE BRACKET CHAIN MULTI POSITION
20	410050	7/32" X 1" ROLL PIN PLATED
21	107270	HANDLE V-BELT ASSEMBLY
22	106106	HANDLE SNG CHAIN OR BELT C/W PIN AND SPRING

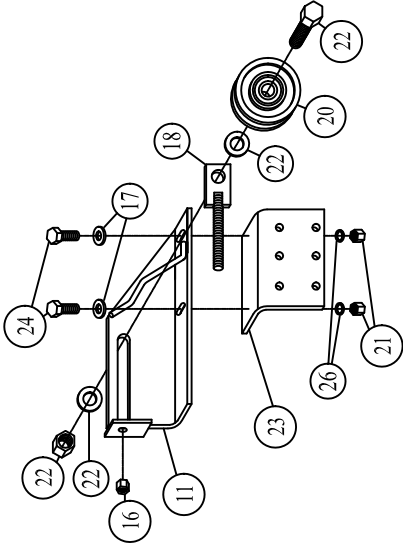
REAR BRACKET ASSEMBLY (L) (1) (3)



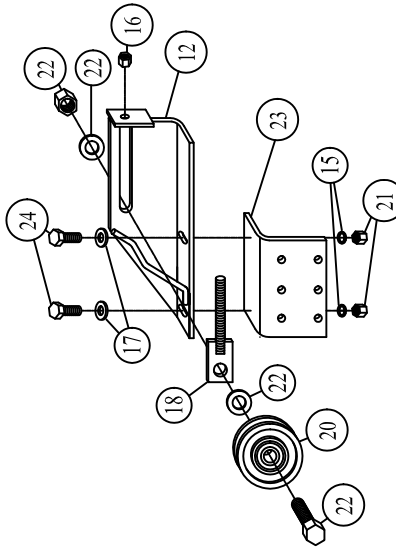
REAR BRACKET ASSEMBLY (R) (2) (4)



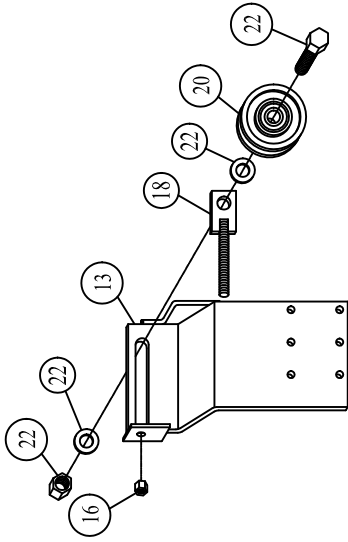
ADJUSTABLE REAR BRACKET ASSEMBLY (L) (5)



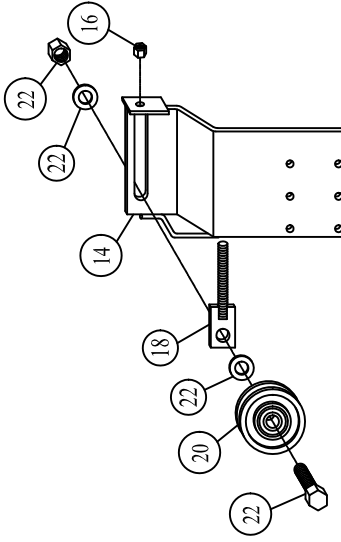
ADJUSTABLE REAR BRACKET ASSEMBLY (R) (6)



TALL REAR BRACKET ASSEMBLY (L) (7)



TALL REAR BRACKET ASSEMBLY (R) (8)



ITEM	PART #	DESCRIPTION
1	107710	STANDARD REAR BRACKET ASSEMBLY C/W 4" PULLEY LEFT
2	107711	STANDARD REAR BRACKET ASSEMBLY C/W 4" PULLEY RIGHT
3	107772	STANDARD REAR BRACKET ASSEMBLY C/W 5" PULLEY LEFT
4	107773	STANDARD REAR BRACKET ASSEMBLY C/W 5" PULLEY RIGHT
5	107755	ADJUSTABLE REAR BRACKET ASSEMBLY C/W 4" PULLEY LEFT
6	107750	ADJUSTABLE REAR BRACKET ASSEMBLY C/W 4" PULLEY RIGHT
7	107775	TALL REAR BRACKET ASSEMBLY C/W 4" PULLEY LEFT
8	107770	TALL REAR BRACKET ASSEMBLY C/W 4" PULLEY RIGHT
9	102006	REAR BRACKET PLATE LEFT
10	102005	REAR BRACKET PLATE RIGHT
11	102011	ADJUSTABLE UPPER REAR BRACKET LEFT
12	102010	ADJUSTABLE UPPER REAR BRACKET RIGHT
13	102016	TALL REAR BRACKET PLATE LEFT

ITEM	PART #	DESCRIPTION
14	102015	TALL REAR BRACKET PLATE RIGHT
15	406440	1/2" LOCK WASHER
16	407405	1/2" UNC NUT
17	406452	1/2" SAE FLAT WASHER
18	107700	REAR BRACKET SPANNER
19	105021	REAR CABLE PULLEY 5"
20	105020	REAR CABLE PULLEY 4"
21	407410	1/2" UNF NUT
22	400000	CUT HEAD BOLT HARDWARE KIT
23	102013	ADJUSTABLE LOWER REAR BRACKET
24	401415	1/2" X 1 1/4" HHCS UNF BOLT