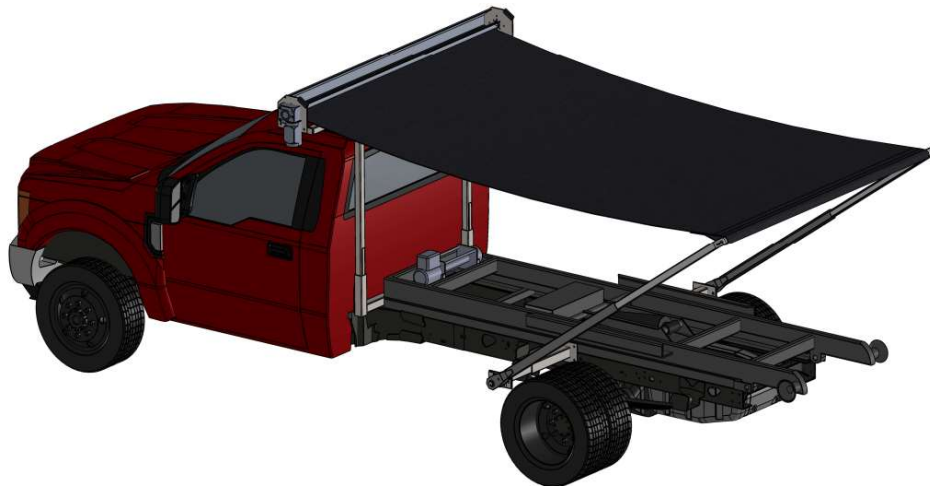




**WASTE WARRIOR™  
STATIONARY LT GANTRY**

# **INSTALLATION INSTRUCTIONS**



1425 KALAMAZOO STREET | SOUTH HAVEN, MI 49090

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# SAFETY

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

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

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
|  <b>DANGER</b>             |
| Indicates an immediately hazardous situation which, if not avoided, will result in serious injury or death. |

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
|  <b>WARNING</b>            |
| Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. |

|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
|  <b>CAUTION</b>                            |
| Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage. |

|                                                                   |
|-------------------------------------------------------------------|
| <b>NOTICE</b>                                                     |
| Indicates information about a subject that is not safety related. |

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## STEP 1: INSTALL THE GANTRY FRAME BASE

The Stationary LT gantry frame is designed to be mounted to a variety of chassis and frame types. Chassis bolt plates for mounting the LT frame to straight frame rails are provided with the standard system. Alternative mounting methods may be required and are the responsibility of the installer. This step will show instructions for mounting the LT frame with the provided bracketry.

**A minimum of 4 inches is required between the cab and hoist system to mount the Stationary LT gantry. (Figure 1.1)**

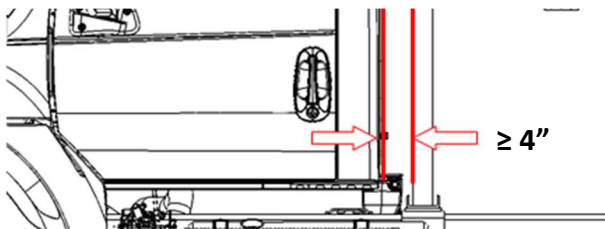


Figure 1.1

### Chassis Bolt:



## CAUTION

DO NOT DRILL INTO CHASSIS TOP OR BOTTOM FLANGE. DO NOT DRILL THROUGH SIDEWALL OF CHASSIS CLOSER TO TOP OR BOTTOM FLANGE THAN HOLES DRILLED BY MANUFACTURER

The Stationary LT Base frame comes with 2 bolt brackets welded to it. See Figure 1.2.

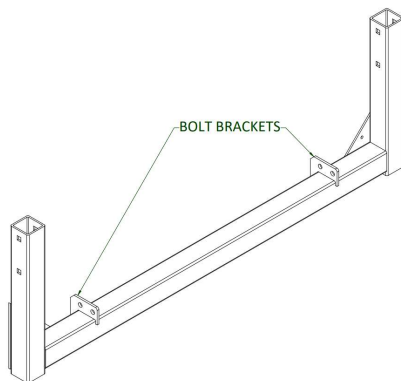


Figure 1.2

There are four supplied chassis brackets, 2 per side, that bolt to the bolt brackets on the frame and then into the frame rails. The chassis plates can be bolted on the inner or outer face of the bolt brackets to account for varying width chassis's. Shims (not supplied) can be added to bolt to a wider range of frame widths. The chassis plates should face each other on each side to fully grip the base frame tube, see Figure 1.3.

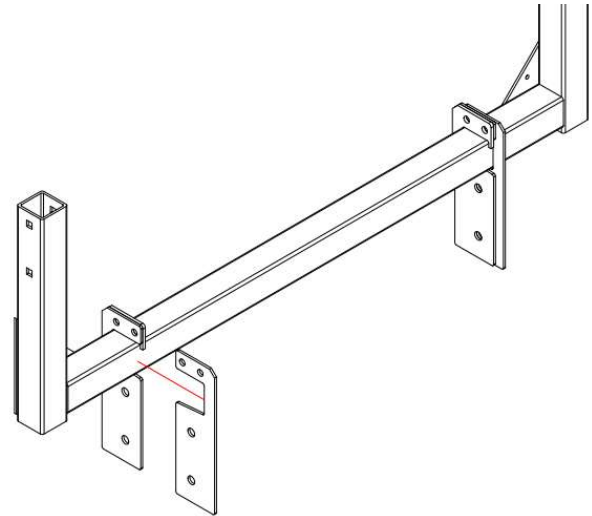


Figure 1.3

Set the base tube on the chassis or measure the frame rail width to determine which face of the bolt bracket the chassis plates need to get bolted to. Bolt the chassis plates to the base tube brackets using the provided grade 8, 1/2" x 1-1/2" bolts, washers, and nuts, see Figure 1.4.

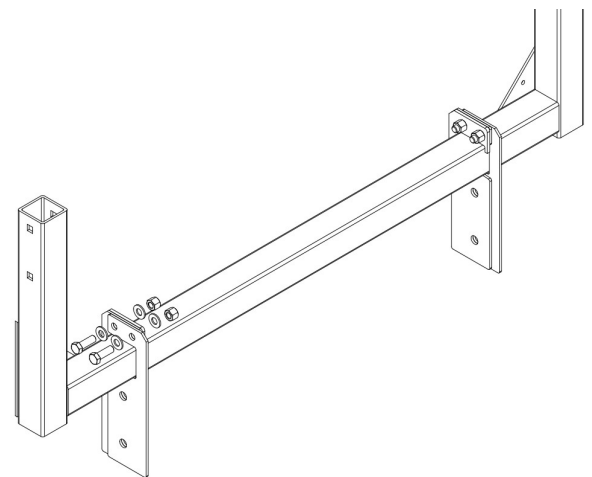
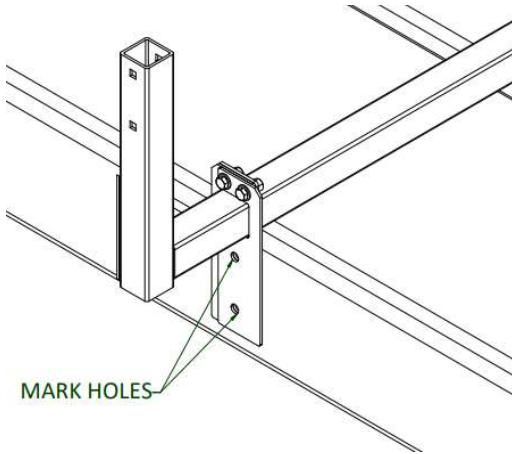


Figure 1.4

Place the base tube assembly on the chassis in its intended mounting position, square the frame, and mark on the frame rail where holes need to be drilled to secure the chassis plates. *Figure 1.5.*



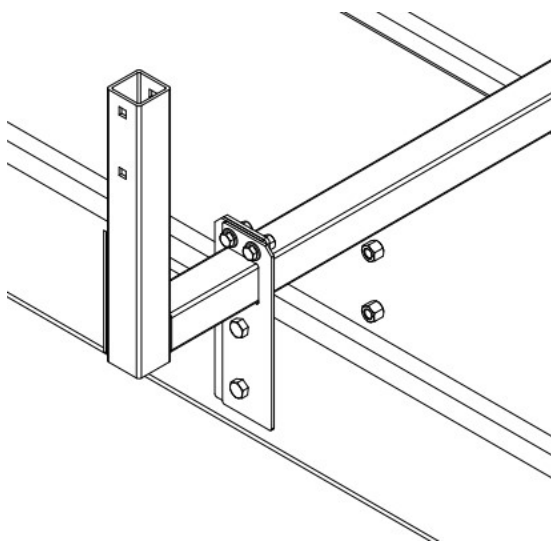
*Figure 1.5*



## CAUTION

DO NOT DRILL INTO CHASSIS TOP OR BOTTOM FLANGE. DO NOT DRILL THROUGH SIDEWALL OF CHASSIS CLOSER TO TOP OR BOTTOM FLANGE THAN HOLES DRILLED BY MANUFACTURER

Remove the LT frame and drill holes in frame rails. Bolt the base tube to the frame rails using the supplied grade 8, 5/8" x 2" Bolts (1) and Nuts (2), see *Figure 1.6.*

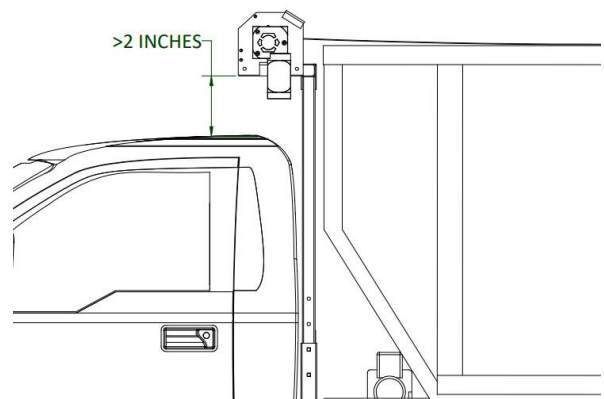


*Figure 1.6*

## STEP 2: ASSEMBLING THE GANTRY

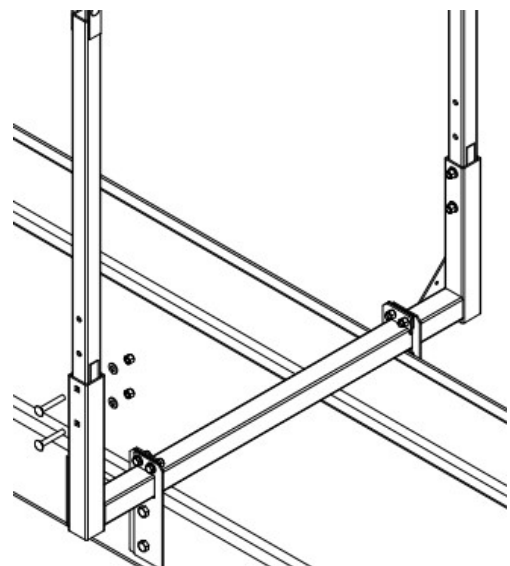
### Determine Leg Height & Install

The Stationary LT gantry is designed with 3 pre-determined frame height options. The maximum frame height is 6ft from top of frame rail to top of housing. Frame height should be determined by height of the tallest container. Frame height can be adjusted at a later time if container height is unknown. Do not mount the LT tarp housing lower than 2" above the top of the cab. See *Figure 2.1.*



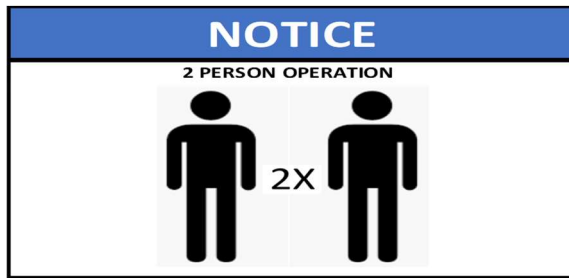
*Figure 2.1*

Once frame height is decided, insert legs into base tube, and align bolt holes at desired height. Insert the provided 1/2" carriage bolts, add washers and lock nuts but do not tighten. See *Figure 2.2.*

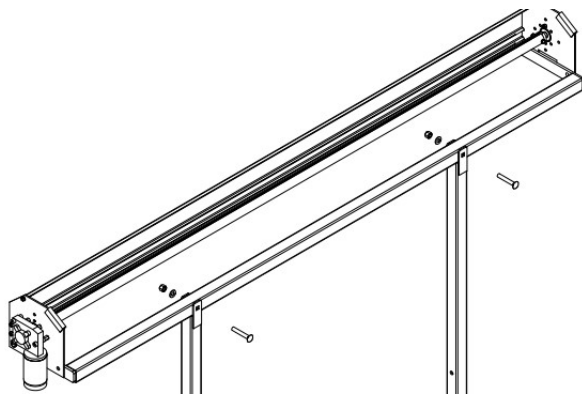


*Figure 2.2*

## Install Housing Assembly



Carefully, install the spreader bar and housing assembly on the legs, aligning the bolt holes of the spreader tube and leg plates. Insert the provided 1/2" carriage bolts, add washers, and turn on the nuts. See *Figure 2.3*.



*Figure 2.3*

Tighten the spreader bar nuts first. Then tighten the leg nuts. Ensure the frame is secure and resistant to any movement.

*If installing Manual Pull-Style Gantry, skip to Step 6: Final Assembly*

*If installing Manual Adjustable Pivots, refer to Manual Adjust Pivot Add-On Installation Instructions before continuing to Step 4: Optional Arm Kit.*

## STEP 4: OPTIONAL ARM KIT

### Wiring the Motor and Switch

All arm kits come with a waterproof rocker switch kit and 6ga wire. The switch can be placed in the cab or on the exterior of the cab mounted in the vertical position.

Route the 6ga wire from the motor, down the frame and to the location where the relay/breaker will be mounted. Ensure the wire is not in a position where it will get pinched or caught by moving parts.

Route another set of 6ga wire from the battery to the relay.

### NOTICE

DO NOT GROUND TO CHASSIS

Mount the rocker switch box in the desired location and route the 18ga wire from switch to relay location.

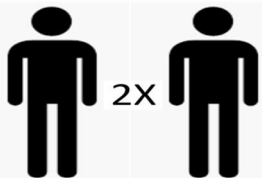
Connect wires as shown in APPENDIX A.

### Finding the Arm Pivot Point:

To install the arm kit, you must first locate the pivot point from the longest roll-off box. Common lengths are 12 or 14ft. This is best done with a container loaded.

### NOTICE

2 PERSON OPERATION



To find the pivot point you will need two tape measures and two clamps. Position the first tape

measure end at the rear landing spot of the tarp cross tube as shown. Clamp in place. (Figure 4.1)

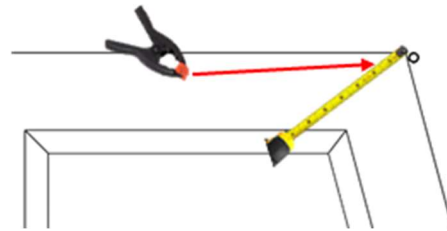


Figure 4.1

Position the second tape measure at the rear landing spot where the tarp cross-tube will be when the tarp is fully extended. Clamp in place. (Figure 4.2)

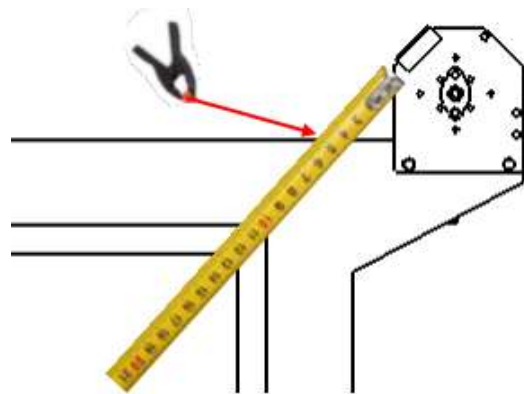


Figure 4.2

To find the pivot point, extend both tape measures as shown in Figure 4.3.

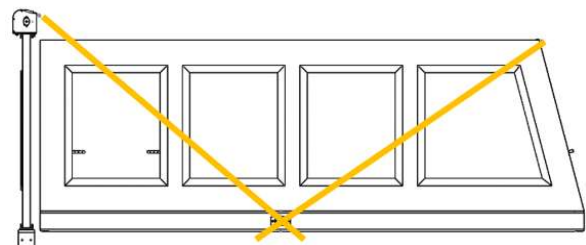


Figure 4.3

Find the point where the measurements match and the tape measures cross at the desired pin mounting height. Mark this point on the frame rail.

To locate the pivot point on the opposite side of the truck, measure from the front of the chassis to

the center of the pivot pin. Then measure and mark the same distance on the opposite side.

## Installing the Frame Mount Offset

On frame mounted installations when truck and trailer frames are narrower than the dump box, pivot extensions must be installed. (Figure 4.4)

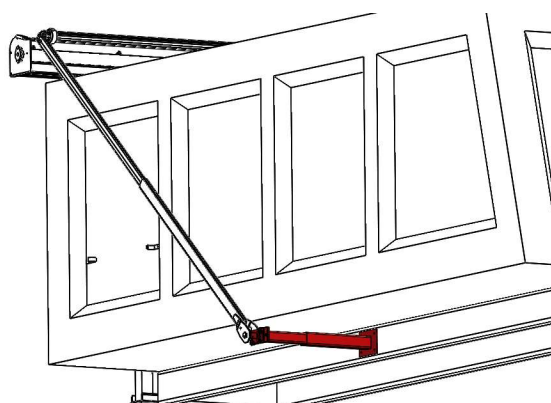


Figure 4.4

Pivot extensions are supplied in a two-piece arrangement to provide width adjustment. Position extension arms at the pivot point on each side and bolt to chassis. Extend pivot arm to align with side of dump bed (Figure 4.5). Weld all the way around extension joint.

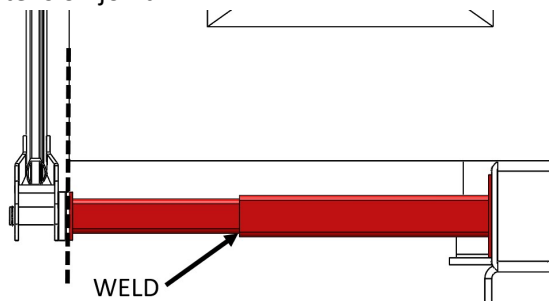


Figure 4.5

If the pivot point lands over the rear axle, a bracket will need to be made to mount the pins rather than using the frame offsets.

## Installing Aluminum Arms:

The pivot pins must be mounted to the truck with the spring slot facing down. Use the supplied 5/8" x 1-1/2" hex bolt, 5/8" washer, and 5/8" hex nut to secure the pivot pin to the frame mount offset.

The torsion springs are designed with a tab which is inserted into the pivot pin slot. Install bushing/flat washer (1) over pivot pin. Slide bottom of the arm (2) over the pivot pin and install springs (3) one at a time as shown (Figure 4.6).

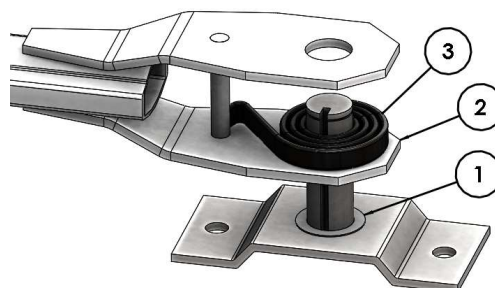


Figure 4.6

Continue installing remaining springs (3), then flat washer (1), and secure with snap ring (4) as shown in Figure 4.7. Repeat procedure for opposite side of system.

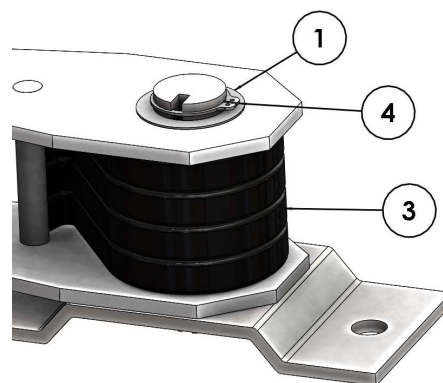


Figure 4.7

Insert upper arms (1) into lower arms (2). Install set screws (3), but do not tighten (Figure 4.8).

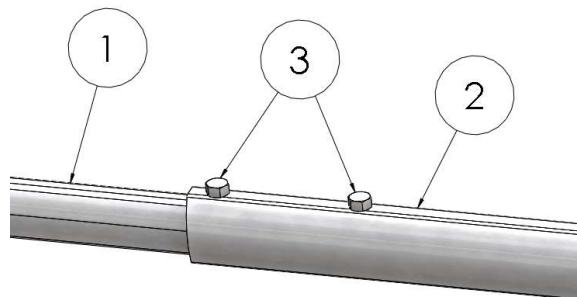


Figure 4.8

Lay the cross tube (1) on the ground behind the truck. Slide the 90-degree elbows (2) into the cross tube so that they are pointing toward the truck. Slide the upper arms (3) over each of the 90-degree corners. Verify that the cross tube is the right size by checking to see that the upper arms can be slid into the lower arms. If the cross tube is too long cut it to size. (Figure 4.9)

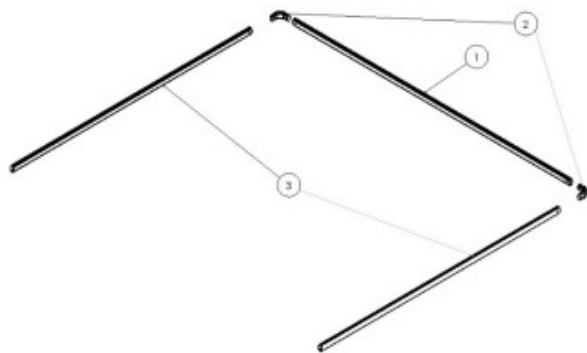


Figure 4.9

Once you have verified that the upper arms will slide into the lower arms and that the cross tube is the correct length, you will need to drill holes into the cross tube and upper arms to connect them to the 90-degree elbows. Mark where the mounting holes on the elbows line up with the upper arms and cross tube. Drill these holes into the upper arms and cross tube using a 5/16" drill bit.

Remove the cross tube from the 90-degree corners. On one end of the cross-tube place two plastic centering flanges. From the other end of the cross tube slide the pocket of the tarp over the cross tube. Now place the remaining two centering flanges on the side of the cross tube that does not already have them. Ensure that the tarp is centered on the cross tube, if it is not, adjust the centering flanges, then secure them in place using the set screws. At this point the cross tube should look like what is shown in Figure 4.10.



Figure 4.10

Secure the 90-degree corners to the upper arms and cross tube using 5/16" x 1-3/4" hex bolts (1) and 5/16" hex nuts (2). (Figure 4.11)

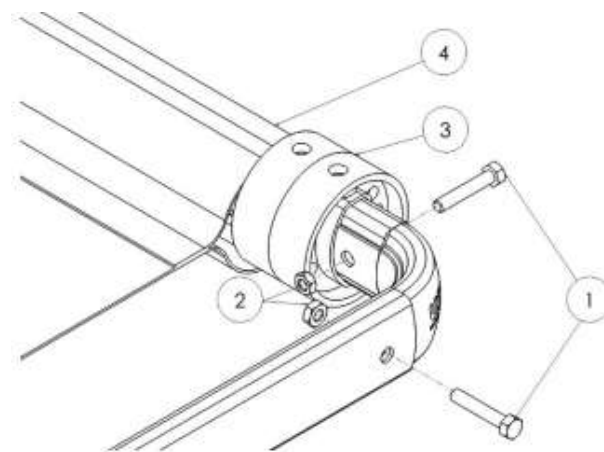


Figure 4.11

With the cross tube laying on the tailgate of the container, secure the lower arm (1) to the upper arm (2) by tightening the supplied 1/2" x 3/8" set screws (3) in the pre-tapped holes in the lower arms on both sides.

### Installing Steel Arms:

The pivot pins must be mounted to the truck with the spring slot facing down. Use the supplied 5/8" x 1-1/2" hex bolt, 5/8" washer, and 5/8" hex nut to secure the pivot pin to the frame mount offset.

The torsion springs are designed with a tab which is inserted into the pivot pin slot. Install bushing/flat washer (1) over pivot pin. Slide bottom of the arm (2) over the pivot pin and install springs (3) one at a time as shown (Figure 4.12, next page).

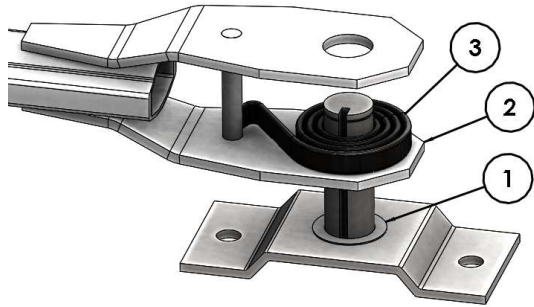


Figure 4.12

Continue installing remaining springs (3), then flat washer (1), and secure with snap ring (4) as shown in Figure 4.13. Repeat procedure for opposite side of system.

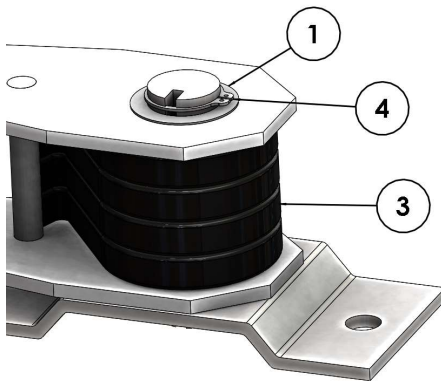


Figure 4.13

Lay the cross tube (1) on the ground behind the truck. Slide the 90-degree elbows (2) into the cross tube so that they are pointing toward the truck. Slide the upper arms (3) over each of the 90-degree corners. Verify that the cross tube is the right size by checking to see that the upper arms can be slid into the lower arms. If the cross tube is too long cut it to size. (Figure 4.14)

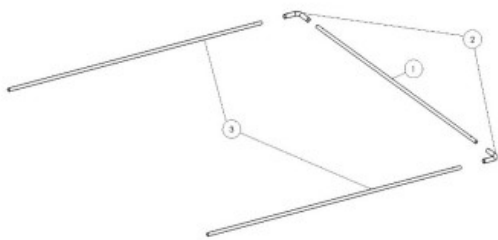


Figure 4.14

Once you have verified that the upper arms will slide into the lower arms and that the cross tube is the correct length, you will need to drill holes into the cross tube and upper arms to connect them to the 90-degree elbows. Mark where the mounting holes on the elbows line up with the upper arms and cross tube. Drill these holes into the upper arms and cross tube using a 5/16" drill bit. Before connecting the 90-degree corners and the cross tube, sandwich the pocket end of the tarp (5) between the rubber tarp centering flanges (4) and their tarp collar clamps (3) on both sides of the cross tube. Secure the 90-degree corners to the upper arms and cross tube using 5/16" x 2-1/4" hex bolts (1) and 5/16" hex nuts (2). (Figure 4.15)

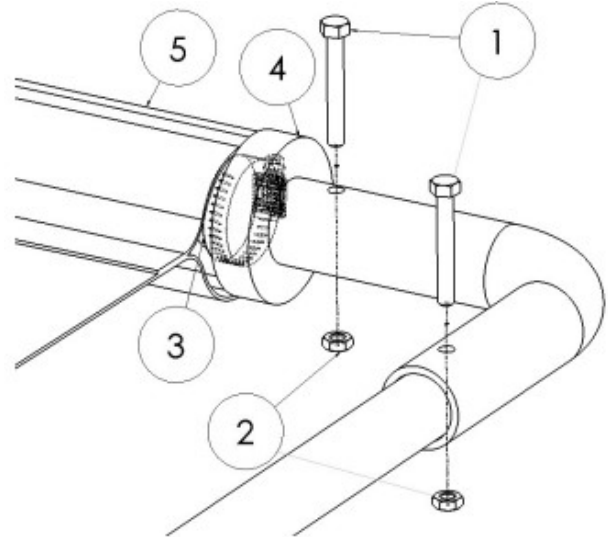


Figure 4.15

Slide the upper arms into the lower arms and raise the cross tube so that it lays on the tailgate of the container, where it will rest when the load is covered.

With the cross tube laying on the tailgate of the container mark the position of the mounting holes that are predrilled on lower arms onto the upper arms. Remove the upper arms from the lower arms and drill out the mounting holes on the upper arms using a 5/16" drill bit. Reinsert the upper arms (2) into the lower arms (1) and secure them using

5/16" x 2-1/4" hex bolts (3) and 5/16" hex nuts (4). (Figure 4.16)

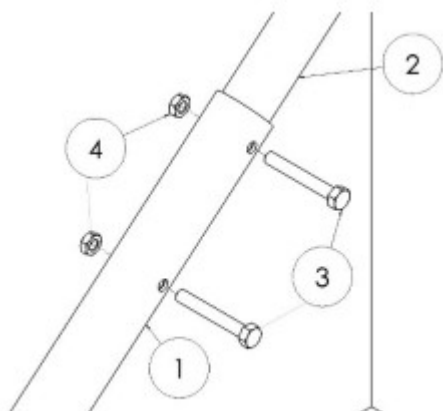


Figure 4.16

## STEP 5: ATTACHING THE TARP

A pull-style assembly will have the tarp pre-loaded in most cases. Follow pre-wind instructions on axle for tarp replacement if this is not the case.

Bring the free end of the tarp (3) to the front of the truck. Adjust the previously installed carriage bolts (2) on the tarp axle (1) so that they line up with the grommets (4) that are on the tarp. Make sure that the tarp is centered on the axle. Secure the tarp to the axle using the supplied 1/4" washers (5) and Nylock nuts (6). (Figure 5.1)

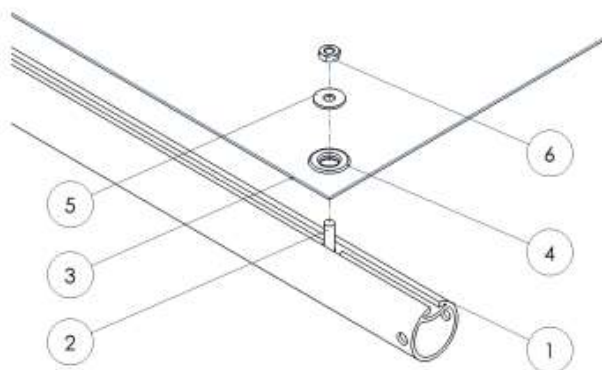


Figure 5.1

## STEP 6: FINAL STEPS

### Pull-Style System

#### Installing the Pull Rope:

Feed the end of the supplied rope that is not attached to the bungee and rings through the center grommet on the tarp. Tie the rope so that it is secure. (Figure 6.1)

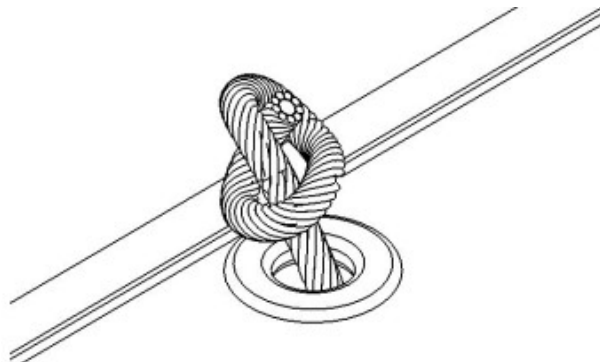


Figure 6.1

## NOTICE

DO NOT USE THE BUNGEE TO CONNECT THE ROPE TO THE TARP

#### Installing the J-Hooks:

Mount a set of j-hooks on the driver side near the cab and another set at the center back of the system. See Figure 6.2 for orientation.

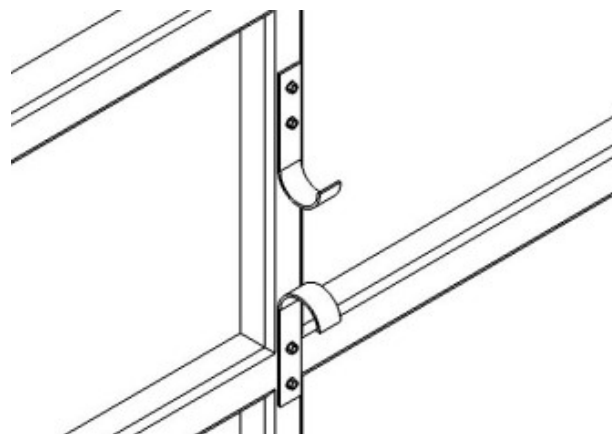


Figure 6.2

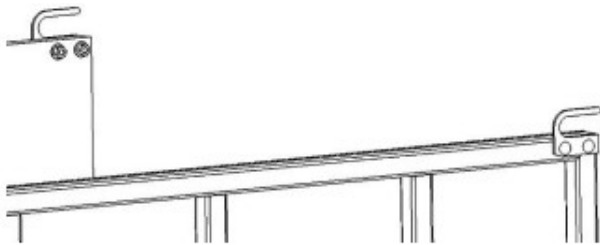
## NOTICE

J-HOOKS ARE NOT INTENDED TO SECURE THE TARP IN PLACE. THEY ARE INTENDED TO HOLD THE EXTRA ROPE

### *Installing the Tailgate Latches*

Mount a set of tail gate latches on each container.

Position the steel tailgate latches so that the hook opening faces the rear of the trailer. Move the tailgate latch as close to the rear as possible on the trailer to maximize tarp coverage. Also make sure to make the bottom of the hook opening as flush as possible with the top edge of the trailer. Mark the position of the mounting holes on the trailer. Using a 1/2" drill bit, drill out the mounting holes. Secure the tailgate latches to the trailer using the 1/2"-13 x 1-1/2" grade 5 zinc carriage bolt, 1/2" zinc plated SAE flat washer, and 1/2"-13 Nylock nut. See Figure 6.3 for an example of how the tailgate latches should be mounted.

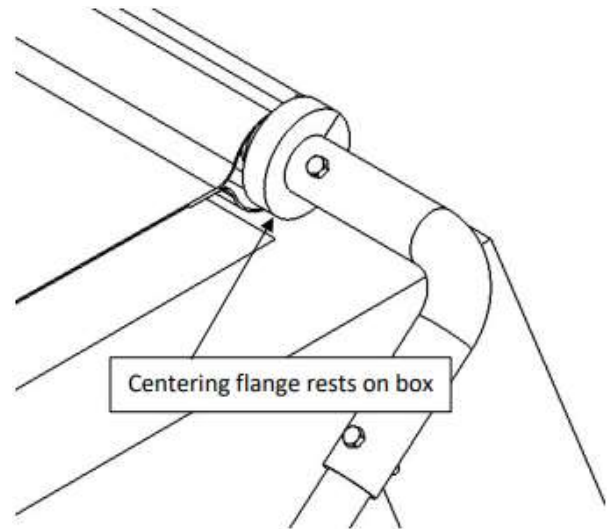


*Figure 6.3*

Ensure the spring loaded axle provides the proper amount of spring tension on the tarp. If more or less tension is needed, remove the tarp from the axle and add/remove pre-load turns.

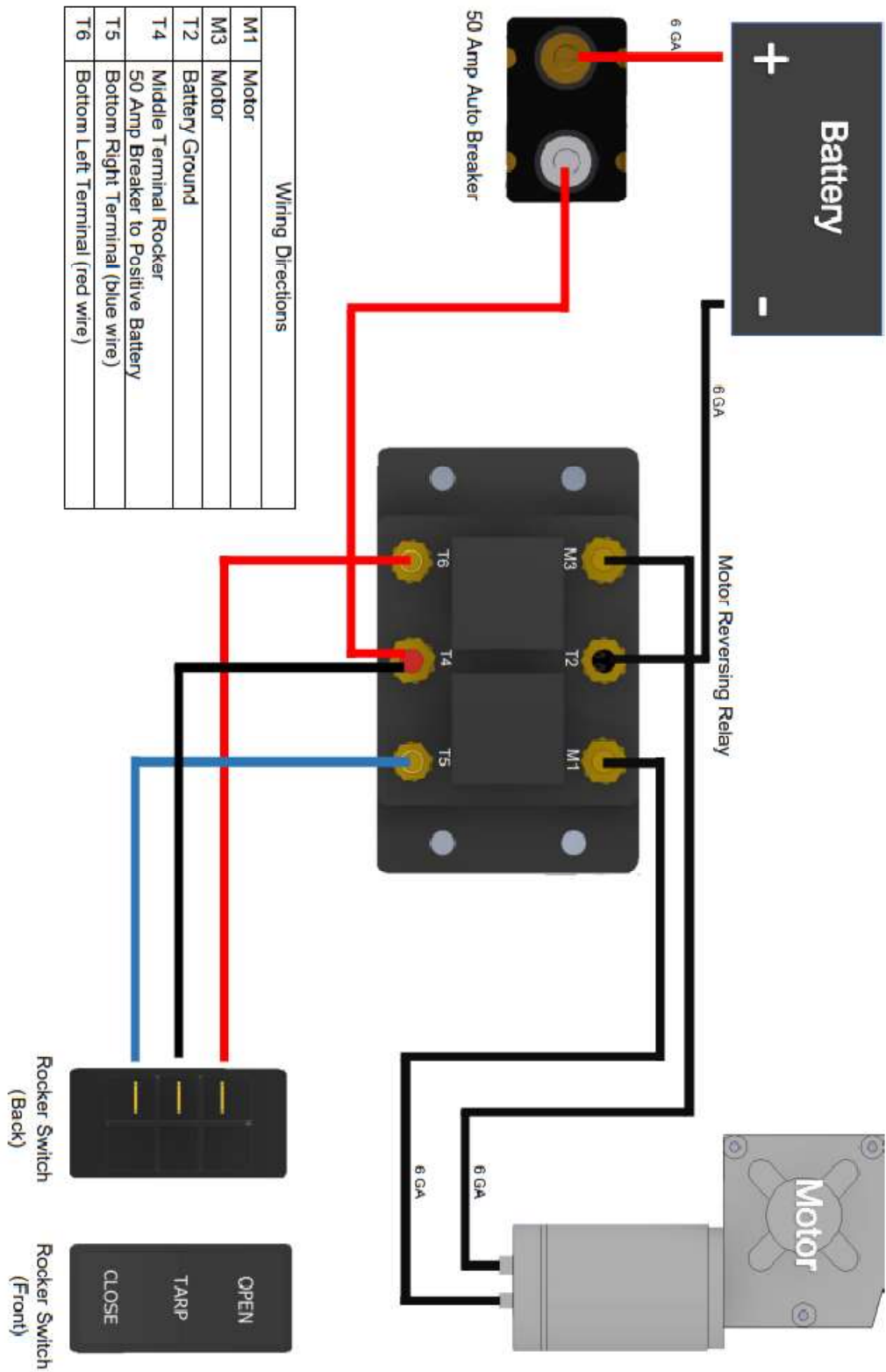
## Arm Kit System

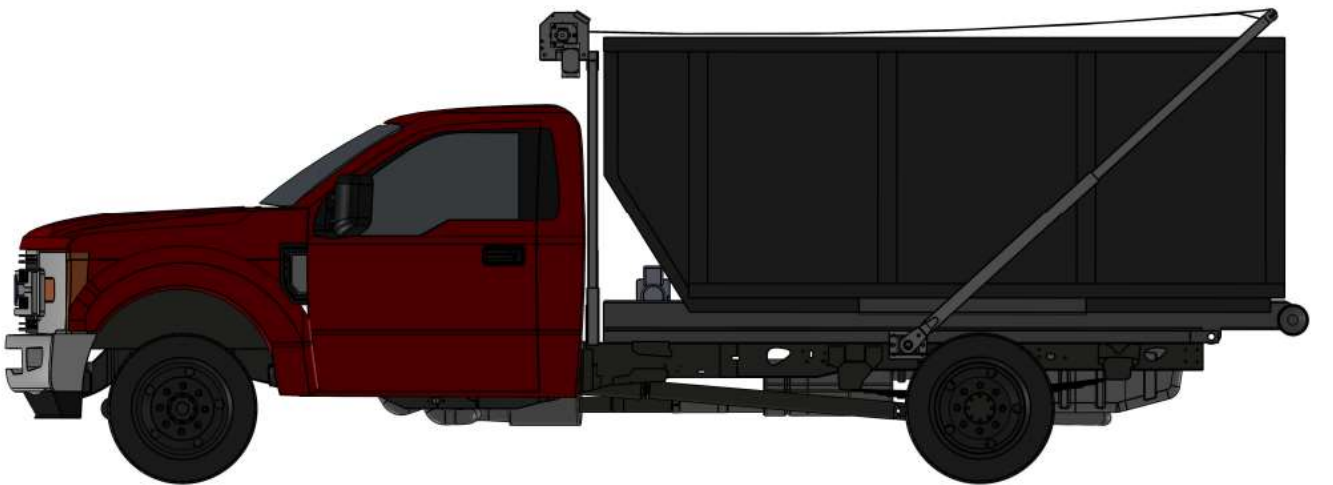
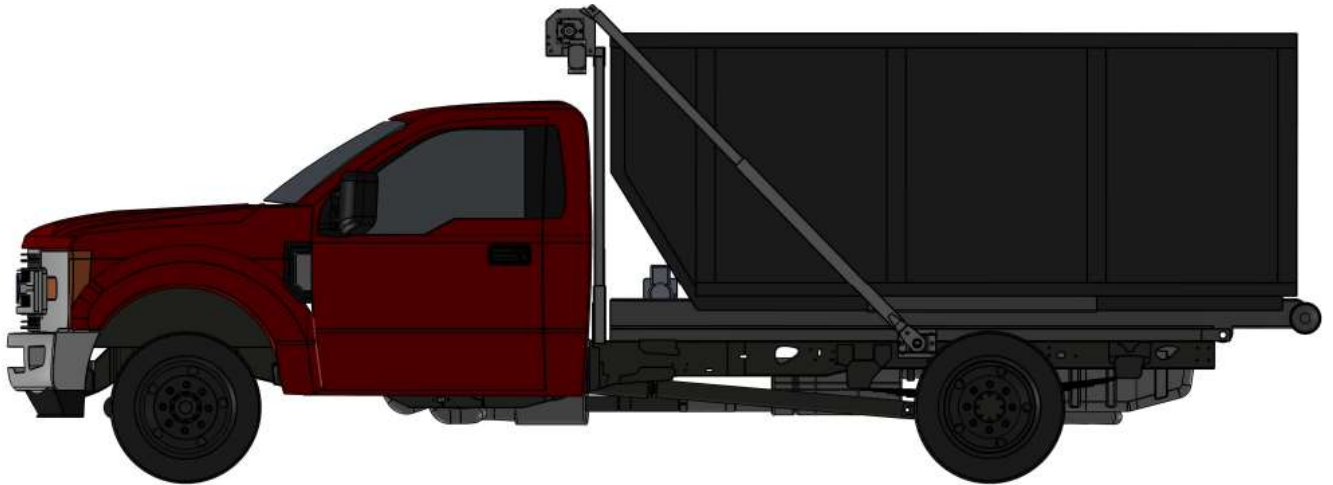
Operate the tarp system. Be sure to check that the centering flanges rest on the container when in the cover position. (Figure 6.4)



*Figure 6.4*

APPENDIX A: WIRING GUIDE – ROCKER SWITCH





## NOTES

System Part Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Installation Date: \_\_\_\_\_

Other Notes: \_\_\_\_\_

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