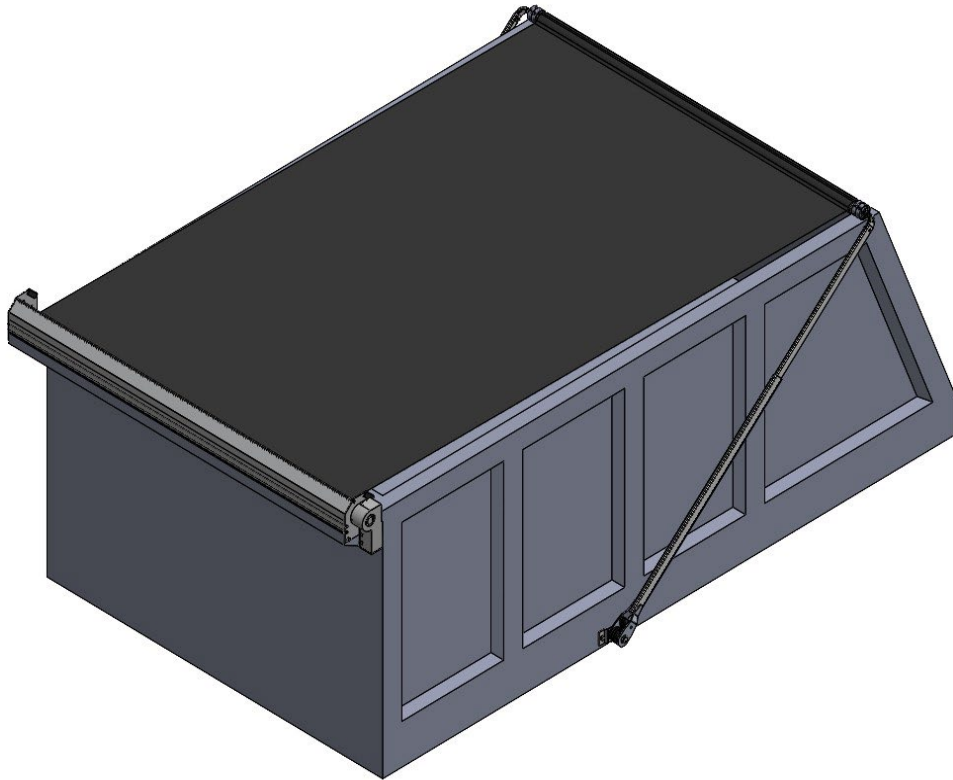


# Aluminum External Mount Tarping System

## INSTALLATION INSTRUCTION MANUAL



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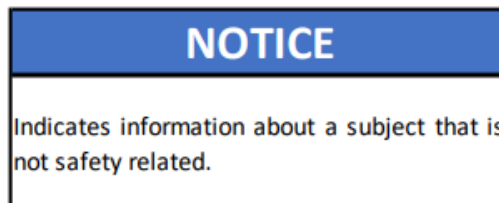
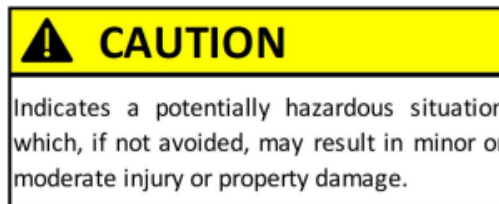
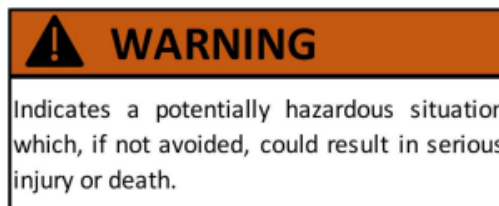
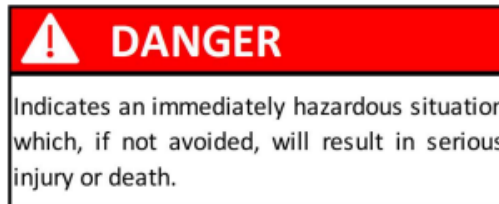
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# SAFETY

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.



## Step 1: Installing the Tarp Spool Assembly

### Mounting the Tarp Spool Mounting Brackets

Mount the two supplied tarp spool mounting brackets (2) as far forward as possible on the exterior of the dump box. Drill the two mounting holes 1-3/4" down from the top edge of the box. Use the supplied 1/2" x 1" bolts (1) and 1/2" nuts (3) to attach the tarp spool mounting brackets. (Figure 1.1)

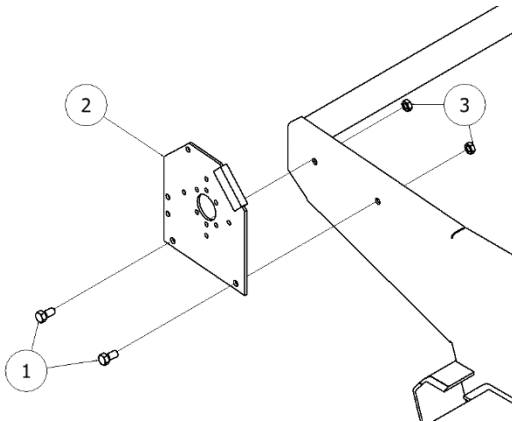
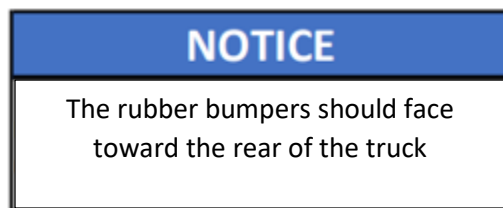


Figure 1.1

### Mounting the Motor

Mount the Slim Bulletproof Motor (2) to the tarp spool mounting bracket (1) on the driver's side of the dump box using the three supplied M8-1.25x16mm Hex Bolts (5). Use the three supplied Phillips Drive Pan Head Screws (4) to mount the Chrome Motor Cover (3) to the motor. (Figure 1.2)

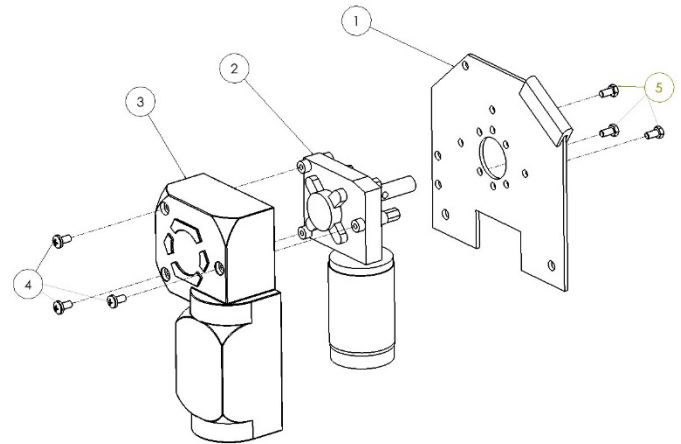
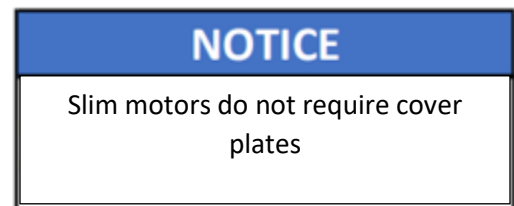


Figure 1.2



## Installing the Tarp Axle

Measure the distance between the two tarp spool mounting brackets (Figure 1.3). Verify that the tarp axle is 2" shorter than this length. If the tarp axle is too long, cut it to the correct length and drill a hole, 11/32" in diameter, through the axle such that it is 5/16" from the cut end. (Figure 1.4)

### NOTICE

For heavy duty tarp axles verify that the axle is 1" shorter as opposed to 2"

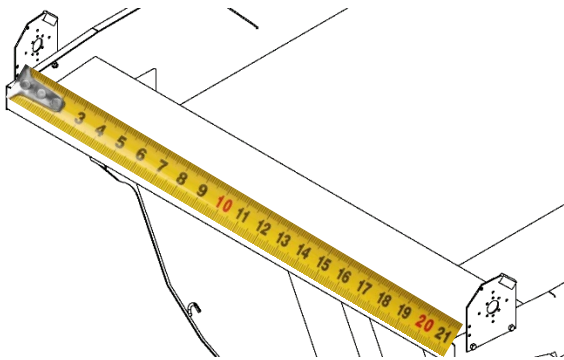


Figure 1.3

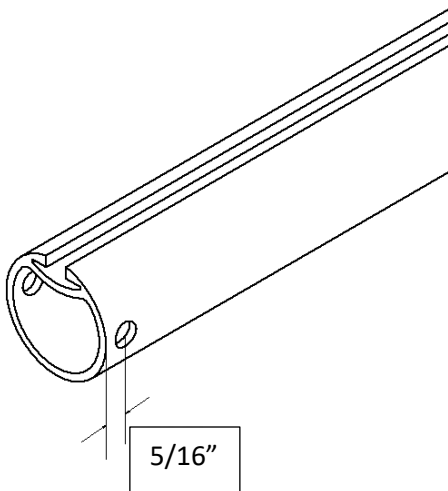


Figure 1.4

slide the five, 1/4"-20 x 3/4", carriage bolts into the tarp axle slot.

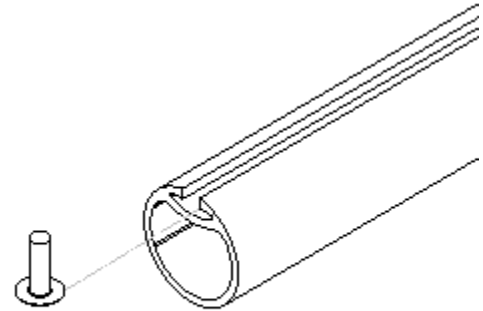


Figure 1.5

Insert the plastic axle caps (2) into both ends of the tarp axle (1). Slide the tarp axle over the motor shaft (3) and secure it with a 5/16" x 2-1/4" bolt (4) and a 5/16" nut (5). (Figure 1.6)

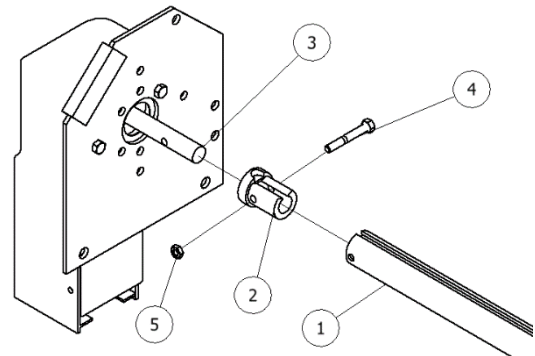
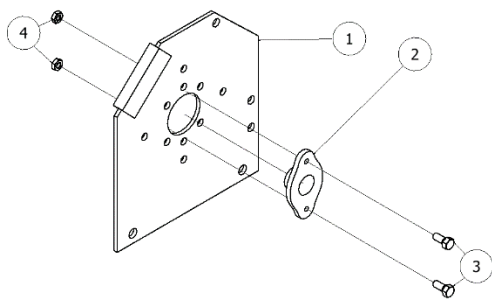


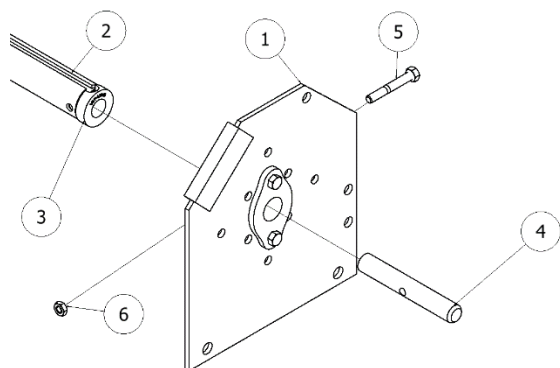
Figure 1.6

On the passenger side secure the axle bearing (2) to the tarp spool mounting plate with 5/16" x 3/4" bolts (3) and 5/16" nuts (4). (Figure 1.7)



*Figure 1.7*

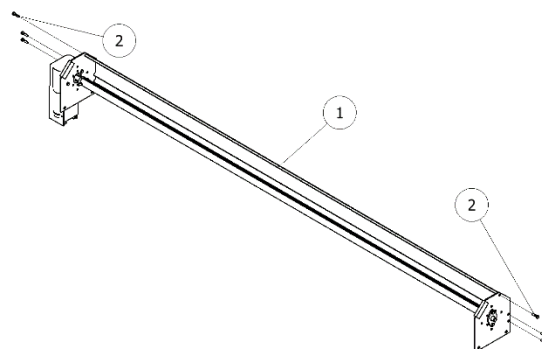
Line the tarp axle (2) up with the axle bearing on the passenger side. Slide the spool shaft (4) through the axle bearing and into the plastic axle cap (3) which is in the tarp axle. Line up the holes on the tarp axle, axle cap, and spool shaft and secure them using a 5/16" x 2-1/4" bolt (5) and 5/16" nut (6). Tighten the set screws in the axle bearing sleeve. (Figure 1.8)



*Figure 1.8*

## Installing the Optional Wind Deflector

Measure the distance between the two, tarp spool mounting brackets (Figure 1.3). Verify that the wind deflector is the same length. If the wind deflector is too long, cut it to the correct length. Attach the wind deflector to the tarp spool mounting brackets using the supplied 5/16" x 1-1/4" self-threading bolts. (Figure 1.9)



*Figure 1.9*

## Step 2: Wiring the Motor and Switch

Run the dual conductor wire from the motor down the front of the dump box, then along the bottom of the dump box around the hinge and along the frame rail to the EZ switch relay.

NOTICE

Do not bind the wire around the hinge.

Run another section of the dual conductor wire from the battery to the relay.

Mount the supplied switch and bracket inside the cab using the two mounting holes and the necessary screws or bolts.

Run the 18 ga/ 3 conductor wire from the switch to the relay.

Connect the dual conductor wire and the 18 ga/ 3 conductor wire, as shown in Figure 2.1 and Appendix A for the EZ switch and in Appendix B for the Rotary switch, to the motor, switch, circuit breaker, and battery.

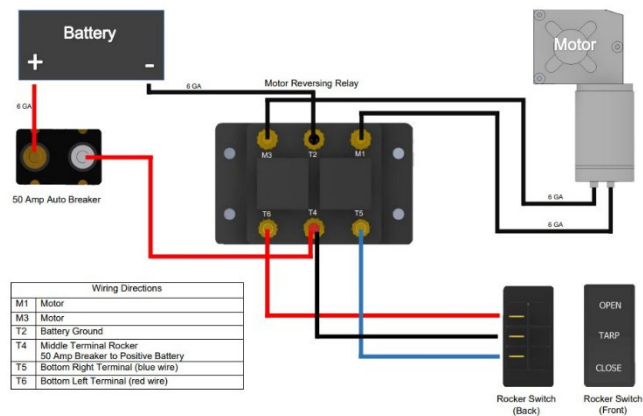


Figure 2.1

After connecting all wires check to see that when the switch is turned to “wind up” the tarp axle turns counterclockwise when viewing it from the driver’s side of the truck. If not reverse the two wires on the motor

## Step 3: Mounting the Tarp Arms

### Finding the Pivot Point

To install the arm kit, you must first locate the pivot point on the dump box. To find the pivot point you will need two tape measures and two clamps.



Position the first tape measure's free end on the middle of the rubber bumper on the tarp spool mounting plate and clamp it in place as shown (Figure 3.1).

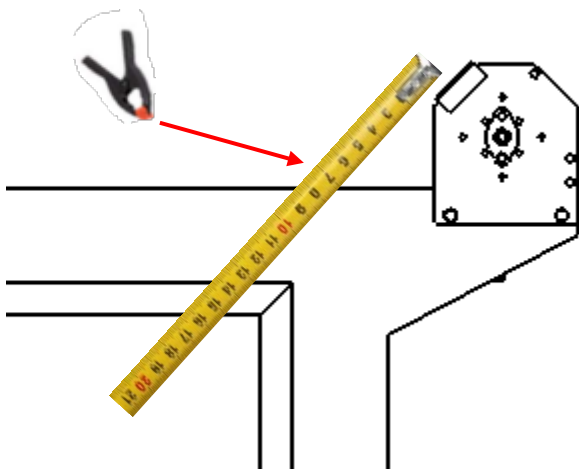


Figure 3.1

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 3.2)

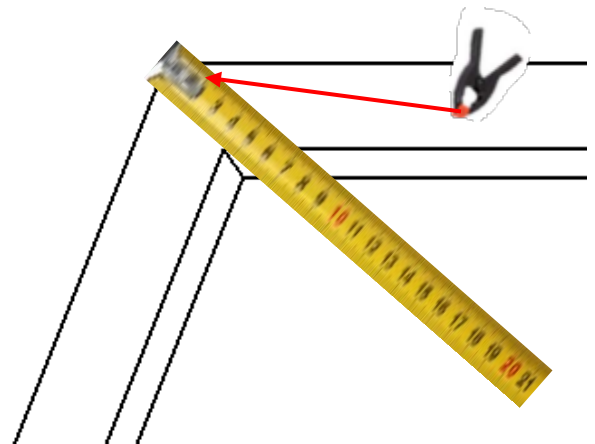


Figure 3.2

To find the pivot point, extend both tape measures as shown in Figure 3.3.

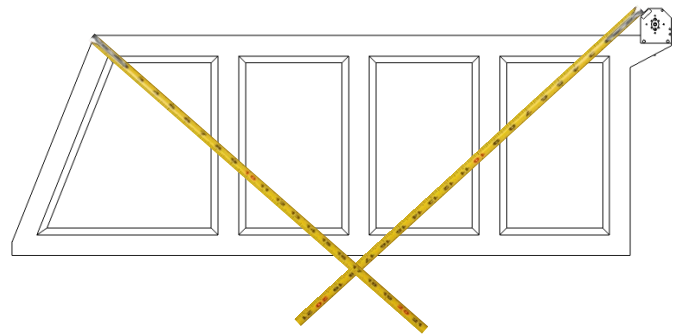


Figure 3.3

Find the point where the measurements match **and** the tape measures cross at the desired pin mounting height. Mark this point on both sides of the body.



## Mounting the Pivot Pin

Hold the pivot pin (1) centered over the mark created and mark the two mounting holes for drilling. Using a 11/16" drill bit, drill out the mounting holes on both sides of the dump box. Mount the pivot pin with the groove facing down and use the supplied 5/8" x 1-1/2" hex bolt (2), 5/8" washer (3), and 5/8" hex nut (4) to secure the pivot pin to the dump box as shown in Figure 3.4.

### NOTICE

The groove on the pin must be facing down.

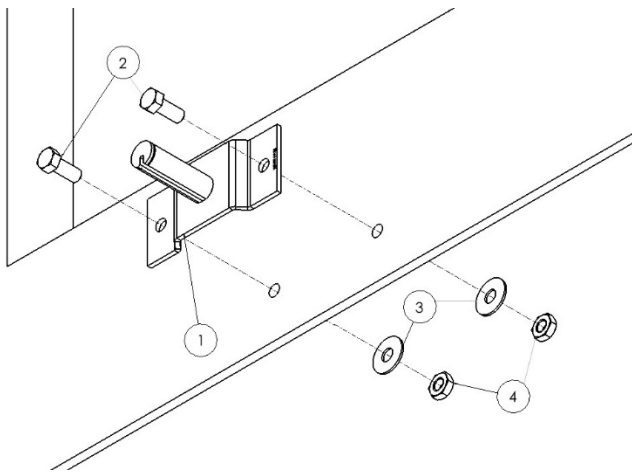


Figure 3.4

## Attaching the Lower Arms

Place a stainless steel bushing onto the pivot pin. Insert the torsion springs (2) into the lower arms (1) such that the long leg of each torsion spring is above the pin on the lower arms as shown in Figure 3.5.

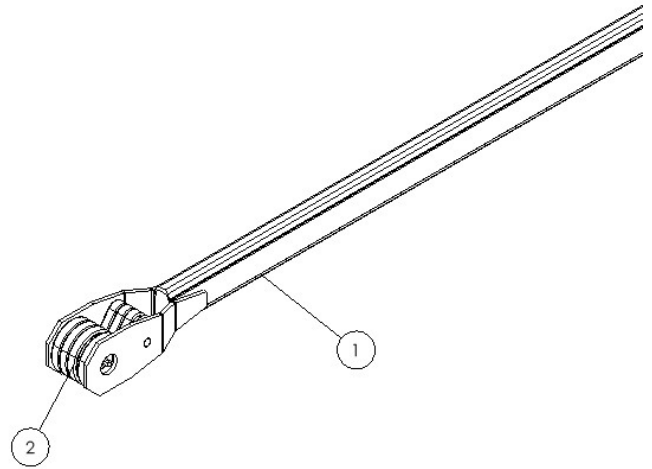


Figure 3.5

With the lower arm pointing toward the rear of the dump box, slide the lower arm (2) and torsion springs (3) onto the pivot pin (1).

### NOTICE

The leg of each torsion spring must be above the pin on the lower arm and pointing toward the rear of the dump box.

Once the lower arm is on the pivot pin, place another stainless steel bushing (4) onto the pivot pin and attach the retaining ring (5) to the groove in the pivot pin. (Figure 3.6)

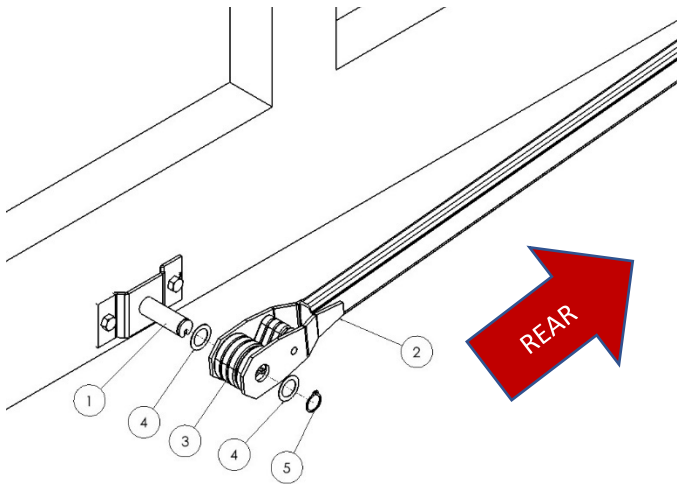


Figure 3.6

Once installed the arm should look like what is shown in Figure 3.7.

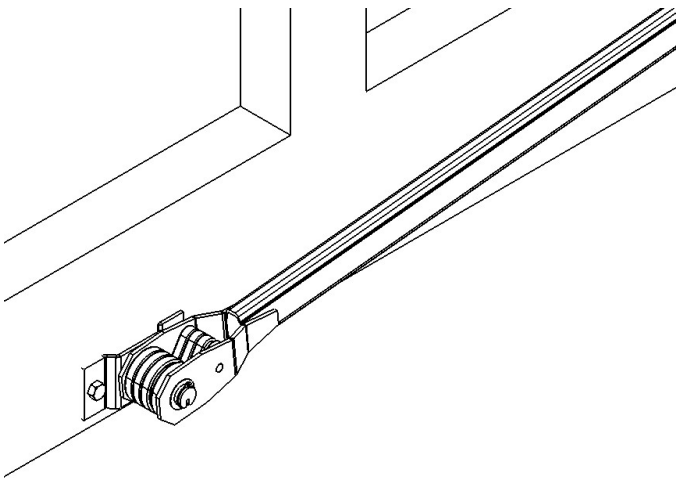


Figure 3.7

Repeat the previous steps to install the lower arm on the opposite side of the dump box.

## Attaching Cross Tube to the Upper Arms

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 3.8)

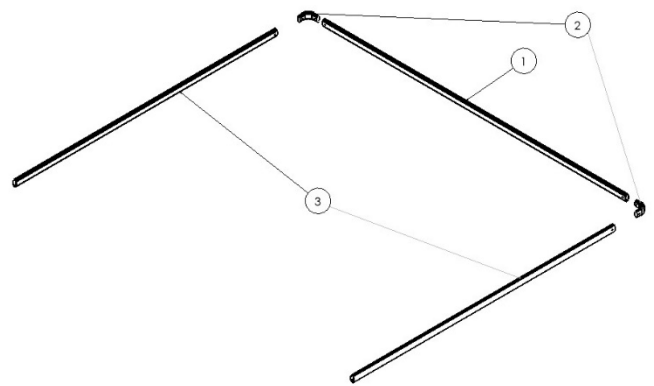


Figure 3.8

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 11/32" 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 3.10.

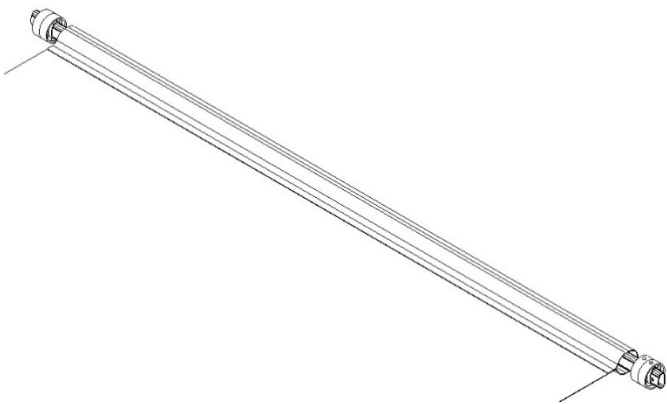


Figure 3.10

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 3.11). **Note:** In most cases the 90 degree corners will come preinstalled in the upper arm.

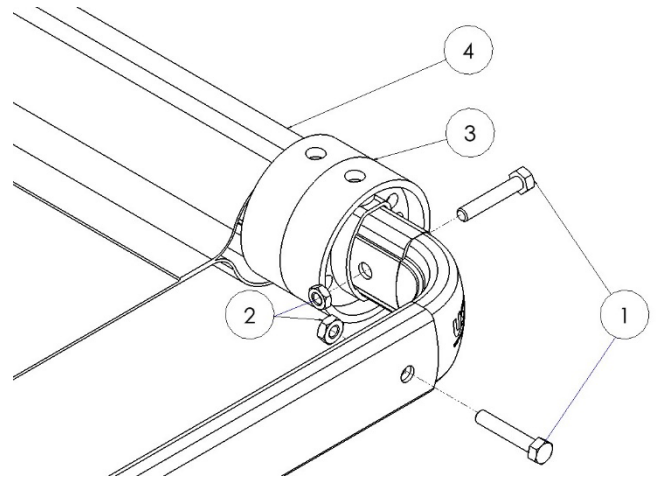


Figure 3.11

## Attaching the Upper Arms to the Lower Arms

Slide the upper arms into the lower arms and raise the cross tube so that it lays on the tailgate of the dump box, where it will rest when it is fully extended.

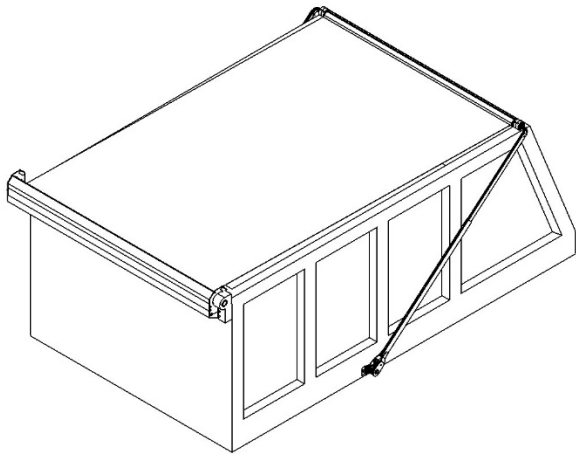


Figure 3.10

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 of the dump box.

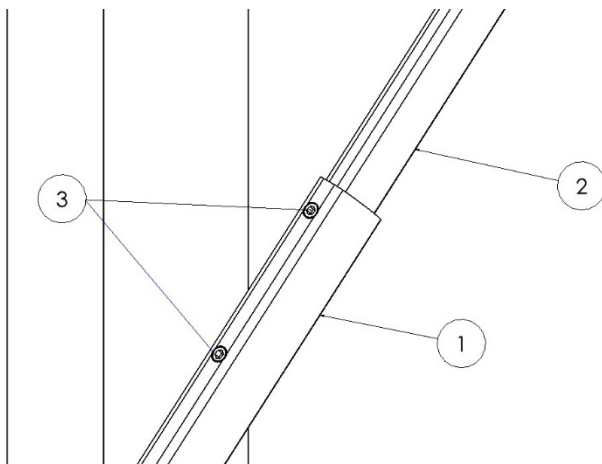


Figure 3.11

## Step 4: Attaching the Tarp

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).

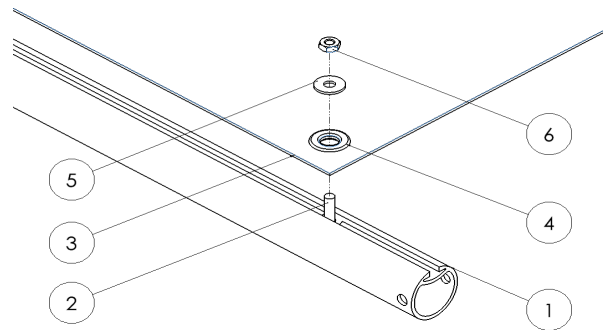
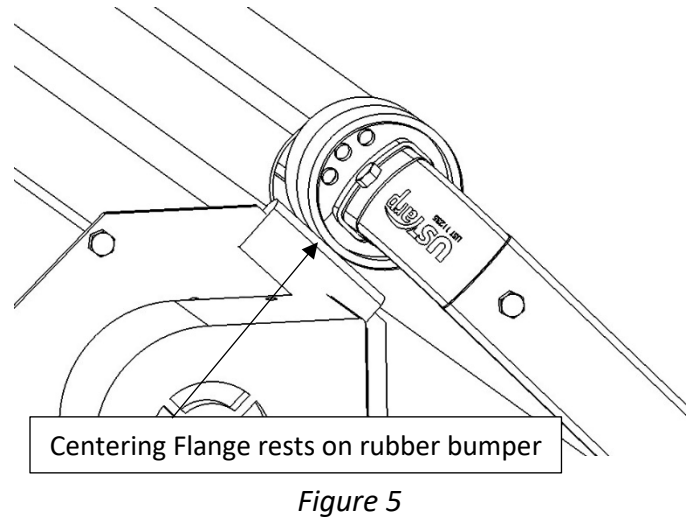
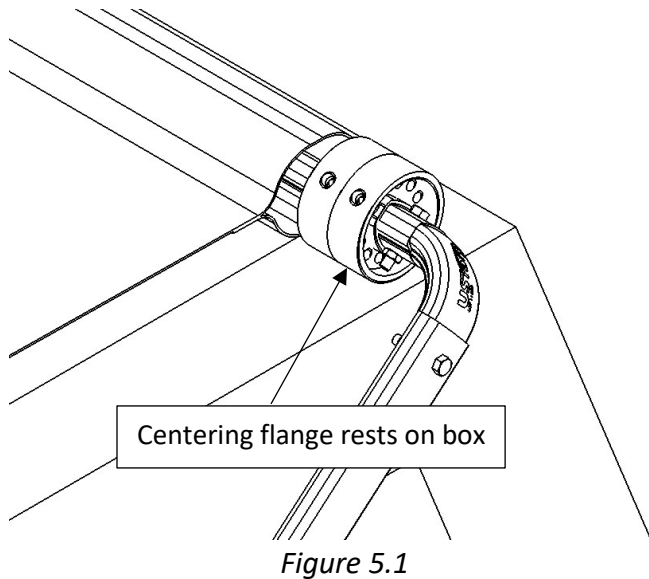


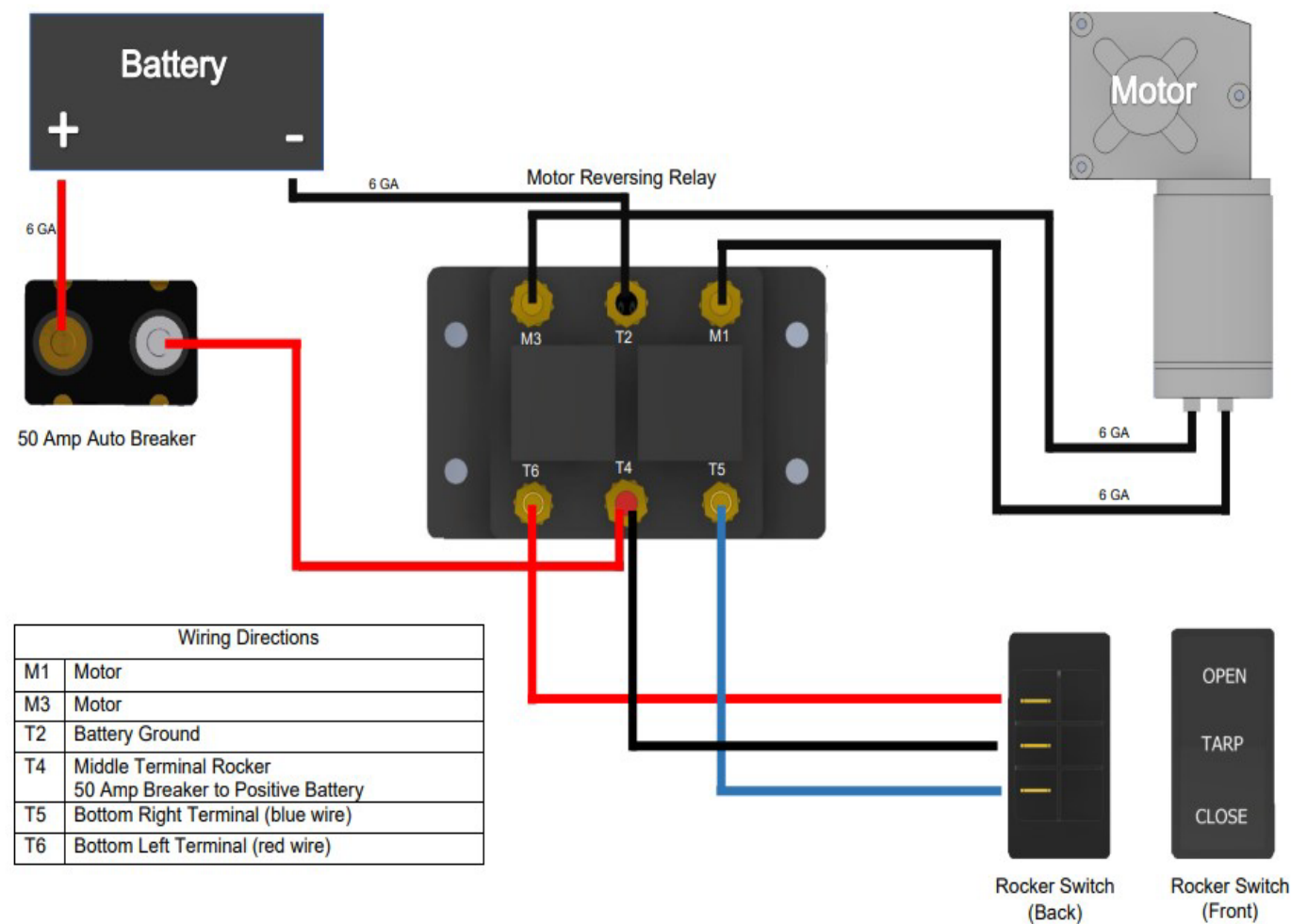
Figure 4.1

## Step 5: Final Steps

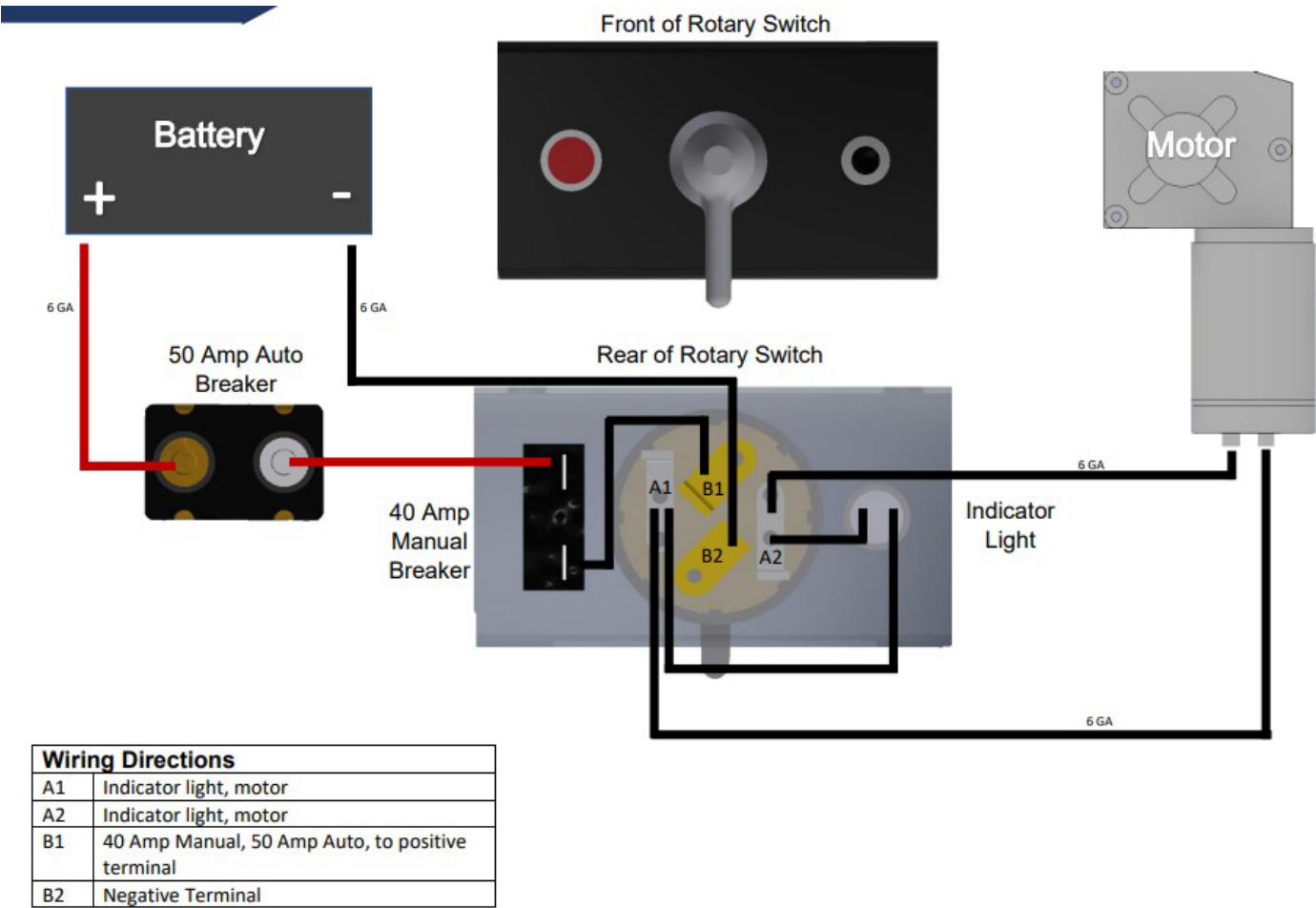
Operate your newly installed tarping system. Be sure to check that the cross tube does not rest on the dump box directly (Figure 5.1) and that the centering flanges hit the rubber bumpers on the tarp spool mounting brackets when the tarp is fully rolled up (Figure 5.2).



Appendix A: Wiring Guide – Rocker Switch



Appendix B: Wiring Guide - Rotary Switch



## Appendix C: Bulletproof Motor Assembly

Mount the bulletproof motor (3) to the tarp spool mounting bracket (1) on the driver's side of the dump box with the chrome motor cover plate (2) sandwiched between the motor and the tarp spool mounting bracket. Use the three supplied M8 grade 5 bolts (5) for mounting the motor. (Figure C.1)

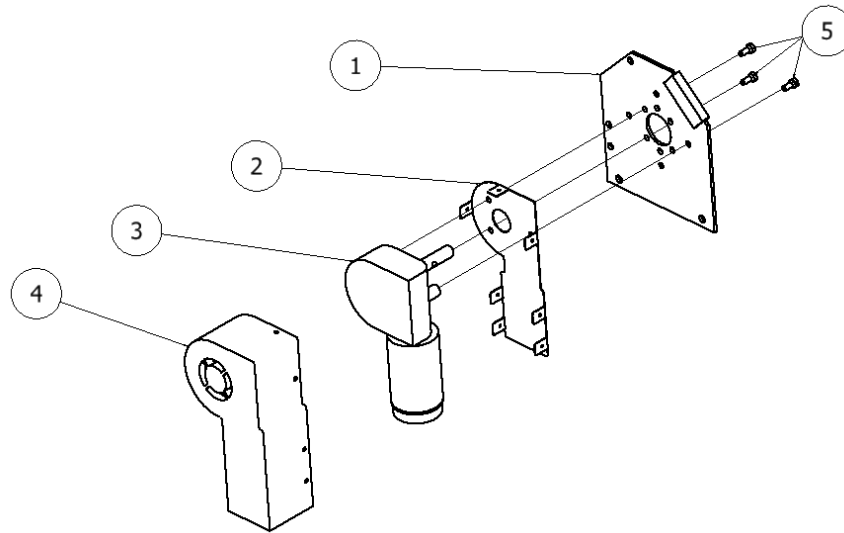


Figure C.1

Attach the chrome motor cover (2) to the motor cover plate (1) using the seven supplied #10 screws (4) and rubber grommets (3). (Figure C.2)

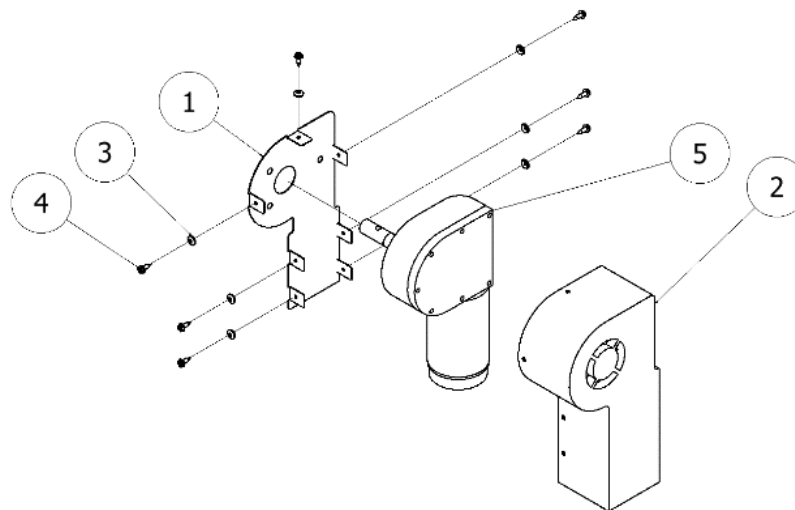


Figure C.2



## Appendix D: Heavy Duty Tarp Axle

The heavy duty tarp axle allows the user to fasten their tarp to the axle in three different ways.

To connect the heavy duty tarp axle to the motor, first measure the distance between the two tarp spool mounting brackets and verify that the axle is 1" shorter than this length. If it is not, cut it to the correct length. Drill a hole  $\frac{5}{16}$ " in diameter through the axle such that it is  $\frac{5}{16}$ " from the end of the axle, on each end. (Figure D.1)

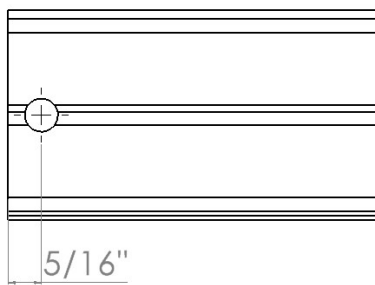


Figure D.1

### Spline:

If you have a splined tarp, insert the splined end of the tarp into the spline slot on the HD axle and pull through. (Figure D.2)

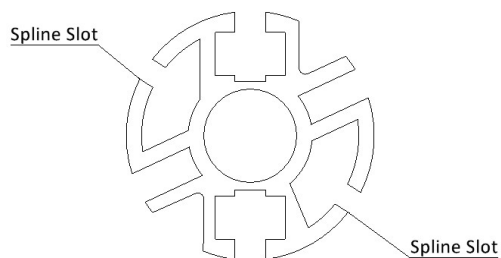


Figure D.2

### Square Nut:

Slide five,  $\frac{5}{16}$ " square nuts into the square nut slot and evenly space them along the axle's length. After you have attached the axle to the motor use five,  $\frac{5}{16}$ " x  $\frac{3}{4}$ " hex bolts and washers to connect the tarp with grommets to the axle as shown. (Figure D.3)

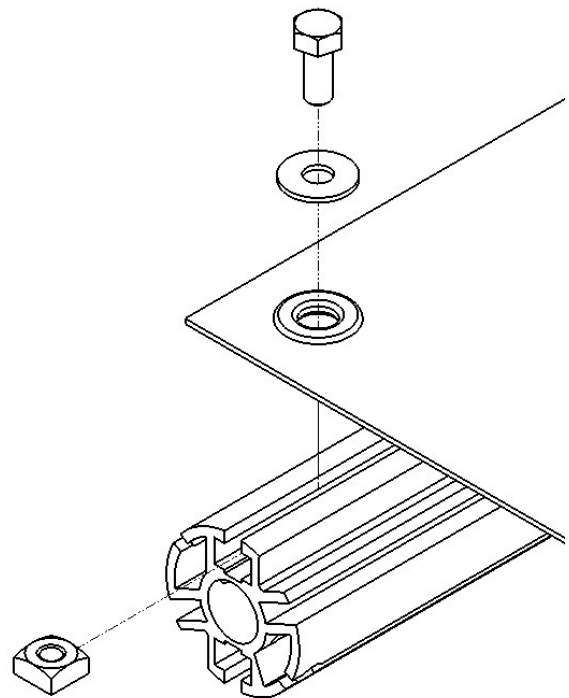
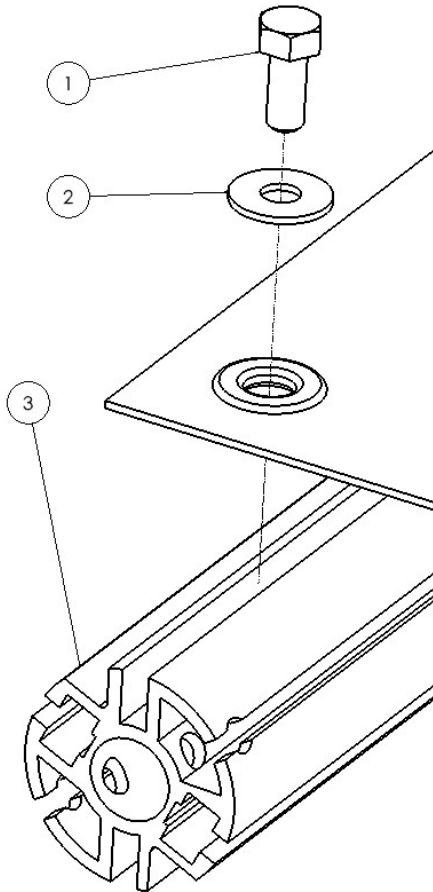


Figure D.3

### **Threaded Slot:**

After attaching the axle to the motor, center the tarp on the axle. Using five, 5/16" x 3/4" hex bolts (1) and washers (2), connect the tarp directly to the heavy duty axle (3) as shown. (Figure D.4)



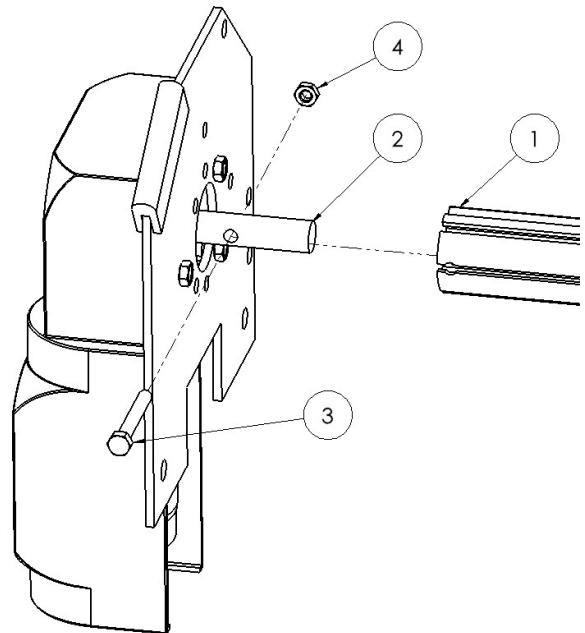
*Figure D.4*

### **Installing the Tarp Axle:**

Slide the heavy duty tarp axle (1) over the motor shaft (2) and secure it with a 5/16" x 2-1/2" hex bolt (3) and a 5/16" hex nut (4). (Figure D.5)

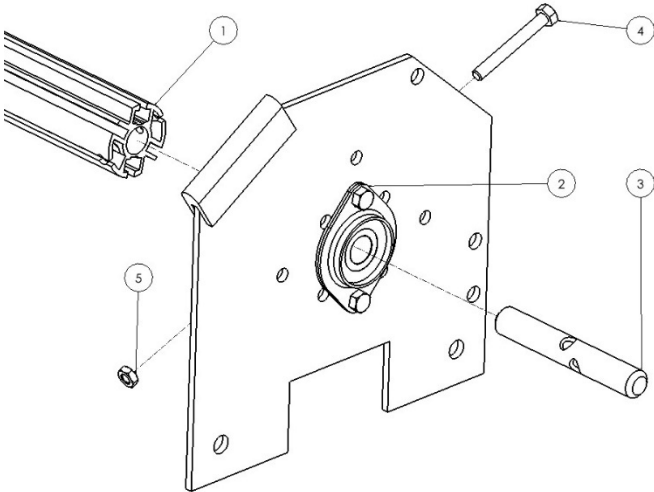
#### **NOTICE**

No axle caps are required for the heavy duty tarp axle.



*Figure D.5*

Line the heavy duty tarp axle (1) up with the axle bearing (2) on the passenger side. Slide the spool shaft (3) through the axle bearing and into the heavy duty tarp axle. Line up the holes on the tarp axle and spool shaft and secure them using a 5/16" x 2-1/2" bolt (4) and 5/16" nut (5). Tighten the set screw in the axle bearing sleeve. (Figure D.6)



*Figure D.6*



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