

Bulletproof External Mount Tarping System

INSTALLATION INSTRUCTION MANUAL

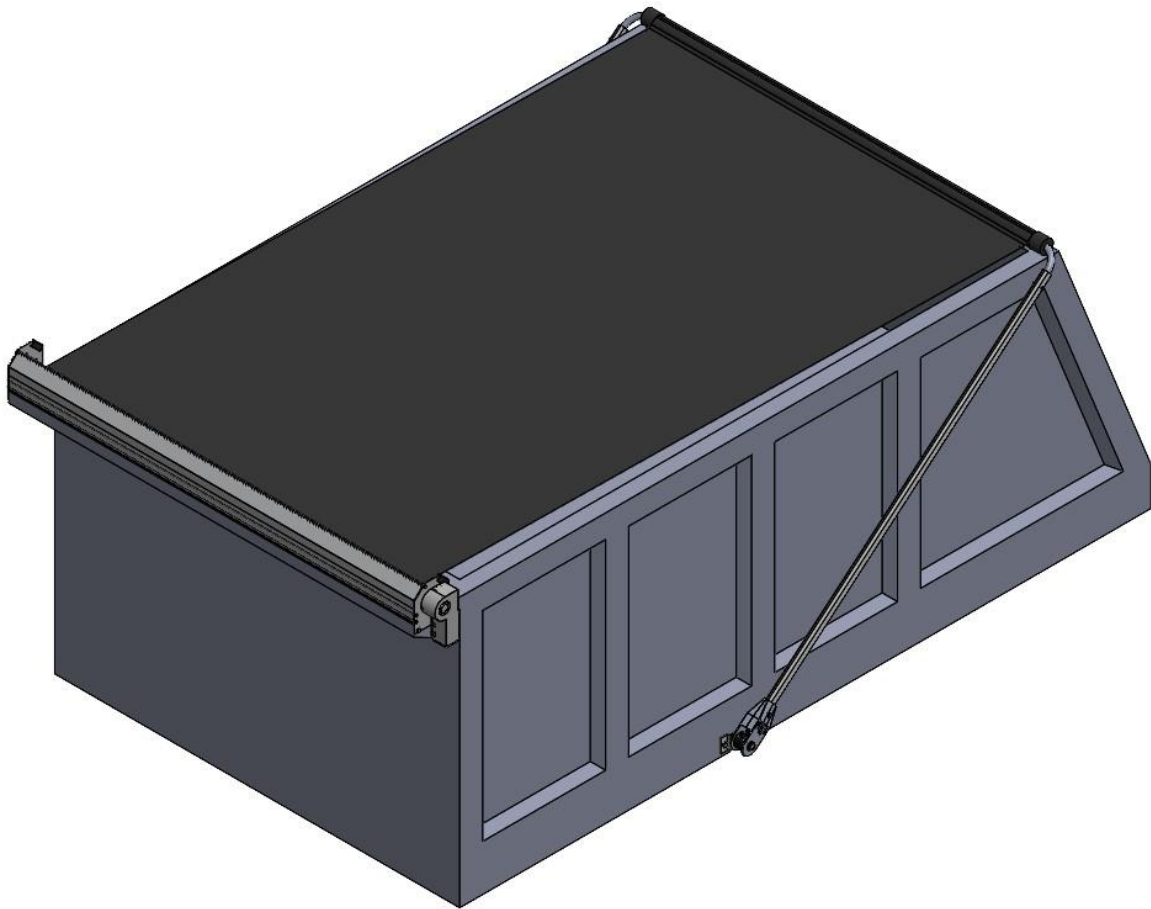


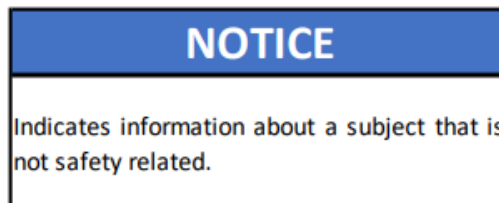
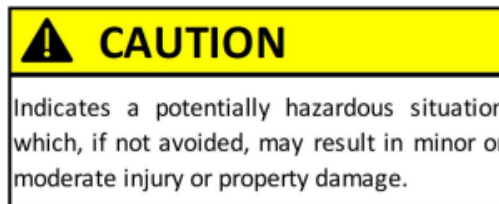
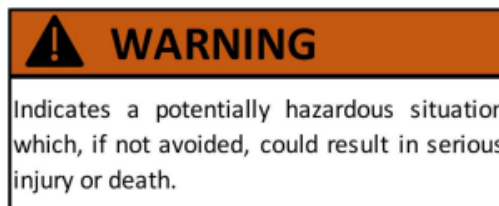
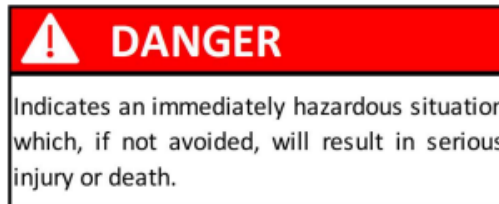
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SAFETY

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)

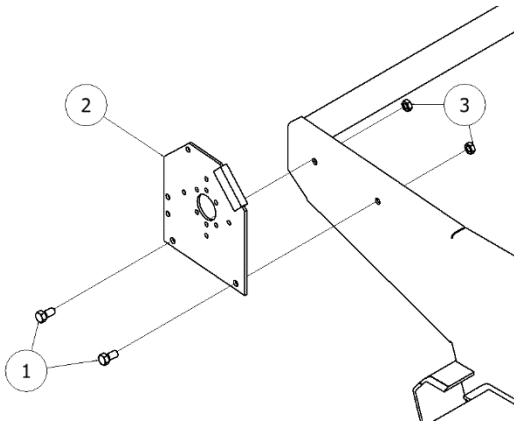
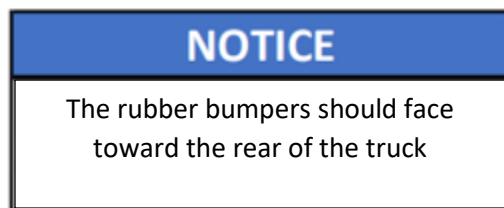


Figure 1.1

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)

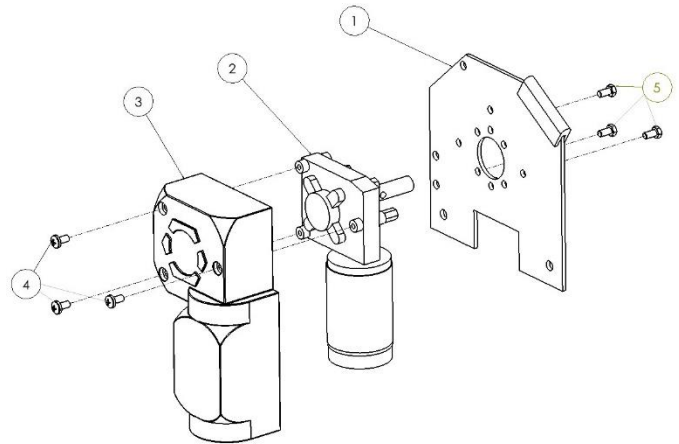


Figure 1.2

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, 5/16" 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 1-1/2" shorter as opposed to 2-1/2"

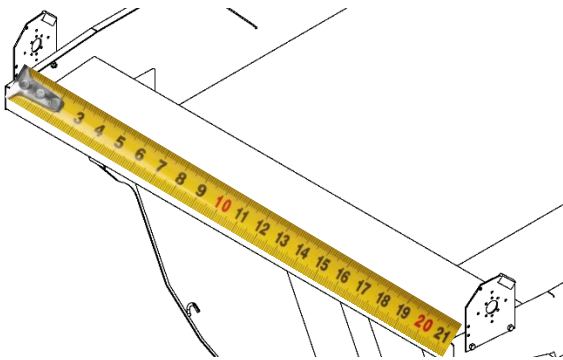


Figure 1.3

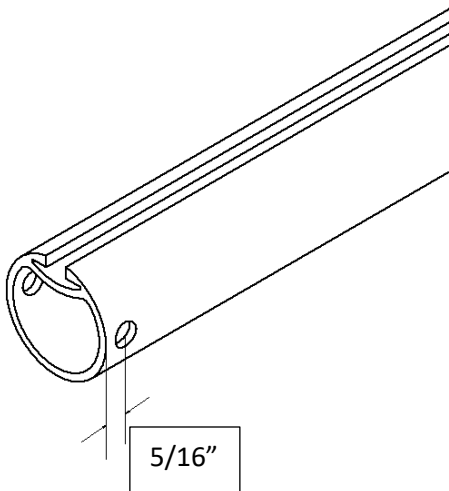


Figure 1.4

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

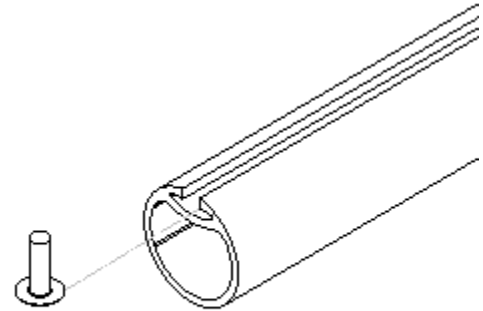


Figure 1.5

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)

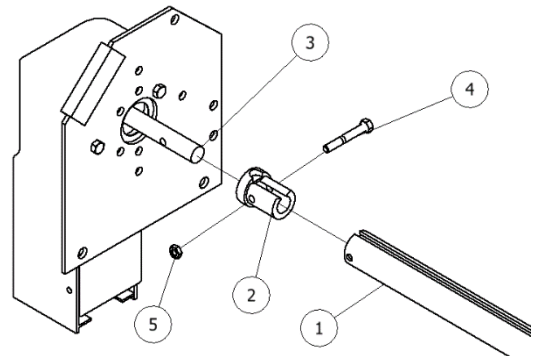


Figure 1.6

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)

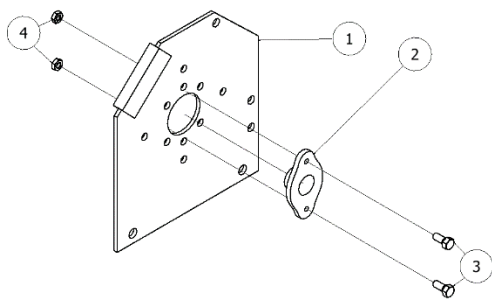


Figure 1.7

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 screw in the axle bearing sleeve. (Figure 1.8)

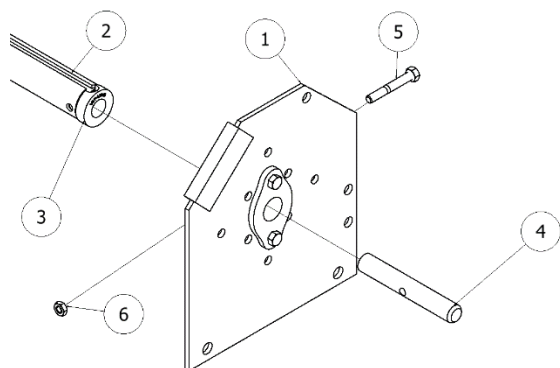


Figure 1.8

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)

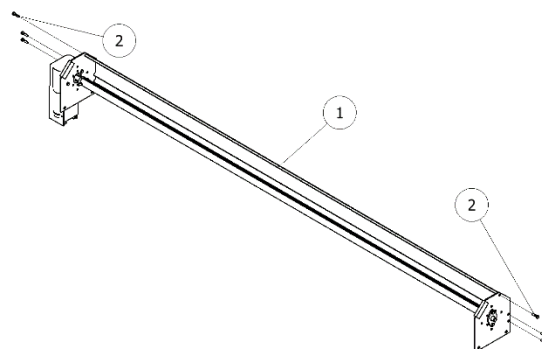


Figure 1.9

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 assembly.

NOTICE

Do not bind the wire around the hinge.

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

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 switch.

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.

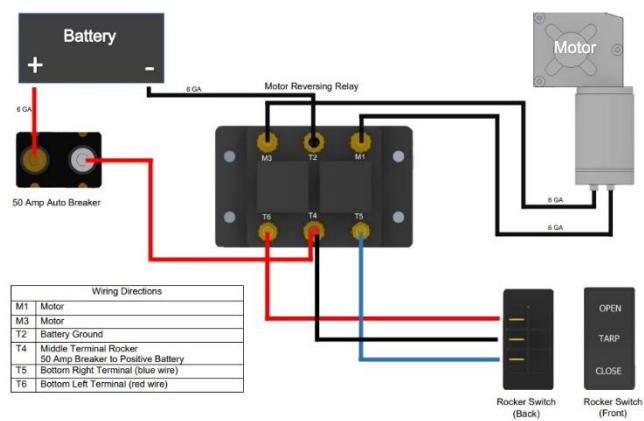


Figure 2.1

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 end at the front edge of the tarp spool mounting plate and clamp it in place as shown (Figure 3.1).

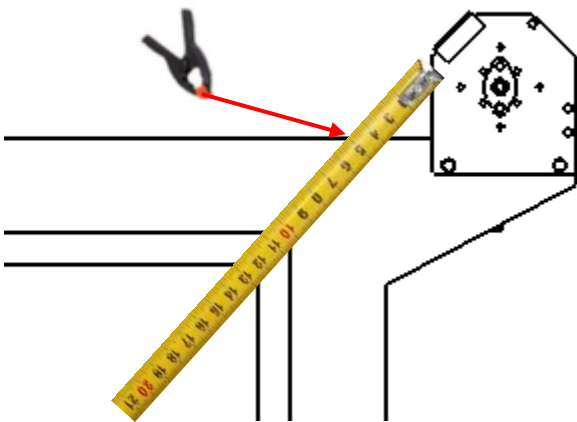


Figure 3.1

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)

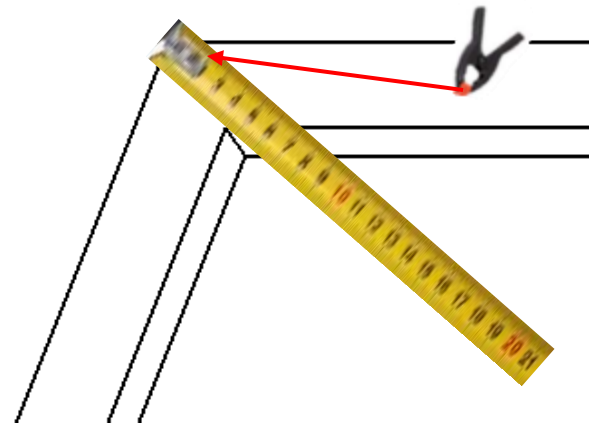


Figure 3.2

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

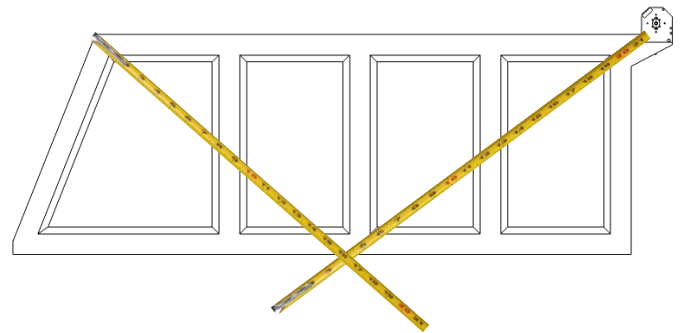


Figure 3.3

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

Mounting the Pivot Pin

Hold the pivot pin (1) centered over the mark created and mark the two mounting holes for drilling. Using a 5/8" 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.

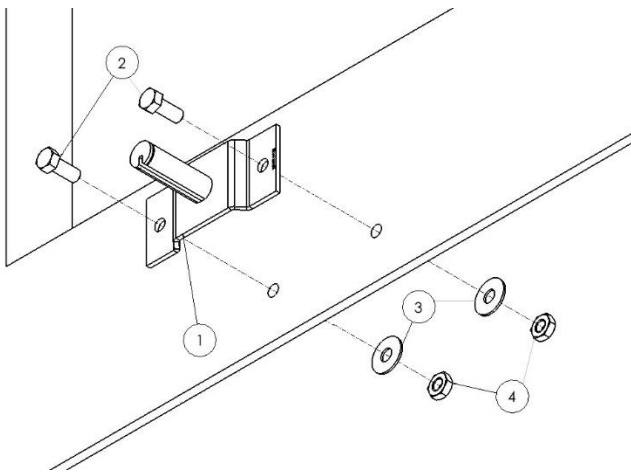


Figure 3.4

Mount the other pivot pin in the same location on the opposite side of the dump box.

Attaching the Pivot Castings

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

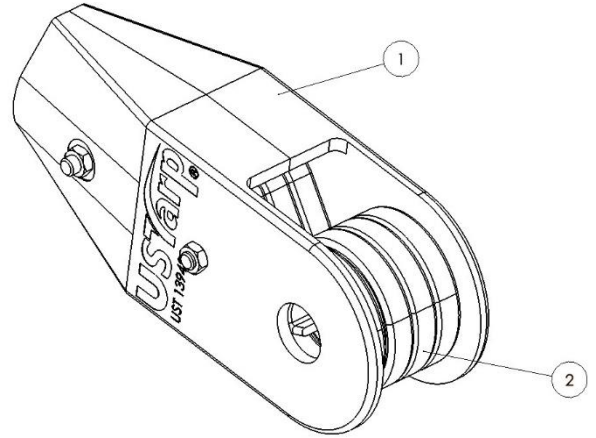


Figure 3.5

Slide the pivot casting onto the pivot pin such that it is pointing toward the rear and the long leg of each torsion spring is above the pin in the pivot casting.

NOTICE

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

Once the pivot casting (2) is on the pivot pin (1) place another stainless steel bushing (3) onto the pivot pin and attach the retaining ring (4) to the groove in the pivot pin. (Figure 3.6)

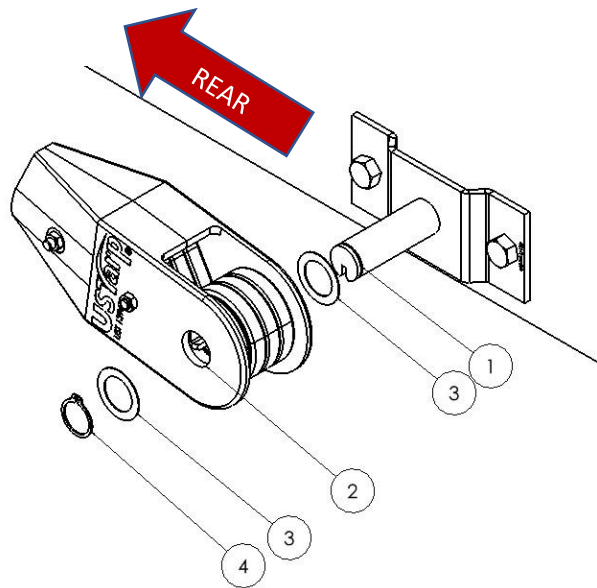


Figure 3.6

Repeat the previous steps to install the pivot casting on the opposite side of the dump box.

Verifying Arm Length

Insert the bulletproof arm into the pivot casting and lay it on the ground so it is pointing toward the rear of the truck. Do not use hardware to secure the arm to the casting yet. Insert one end of the cross tube in the bulletproof arm. Do not secure it yet. Now compare the distance from the pivot to the cross tube to the distance from the pivot to the tarp axle/ tailgate. The distances should be approximately the same. If the side arms are too long, remove them and cut them to length. (Figure 3.7)

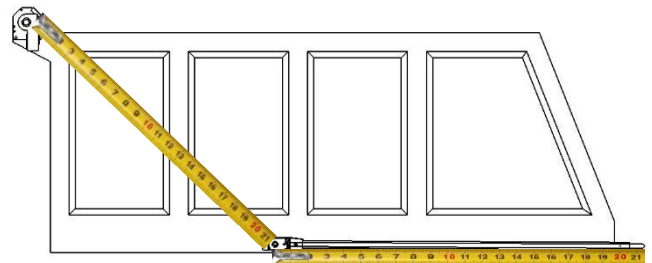


Figure 3.7

Attaching the Arms

Once you have verified that the arm length is correct, you will need to drill a hole on the end of the bulletproof arm that you intend to insert into the pivot casting to mount it. Remove the 5/16" hex bolt from the pivot casting, insert the arm into the pivot casting but make sure it is not so deep that it is touching the torsion springs. Mark the position of the mounting hole on the bulletproof arm. Remove the arm from the casting and drill this mounting hole on the thin wall using a 5/16" drill bit as shown in Figure 3.8.

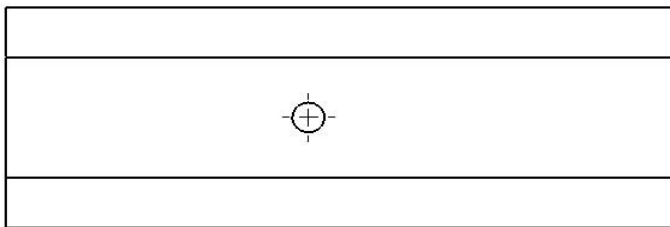


Figure 3.8

Insert the bulletproof arm (1) into the pivot casting (2) and secure it using the 5/16" x 1-1/4" hex bolt (3) and hex nut. (Figure 3.9)

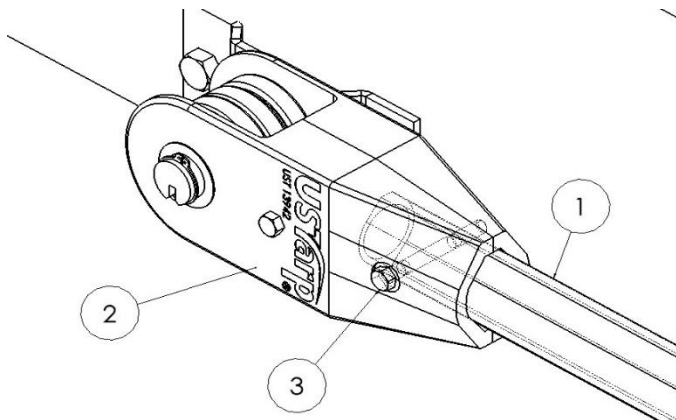


Figure 3.9

Repeat this process for the arm on the opposite side.

Step 4: Attaching the Cross Tube

From one end of the cross tube (1), slide on one of the rubber centering flanges (2). Now, from the other end of the cross tube, slide on the pocket end of the tarp (3) followed by the remaining rubber centering flange.

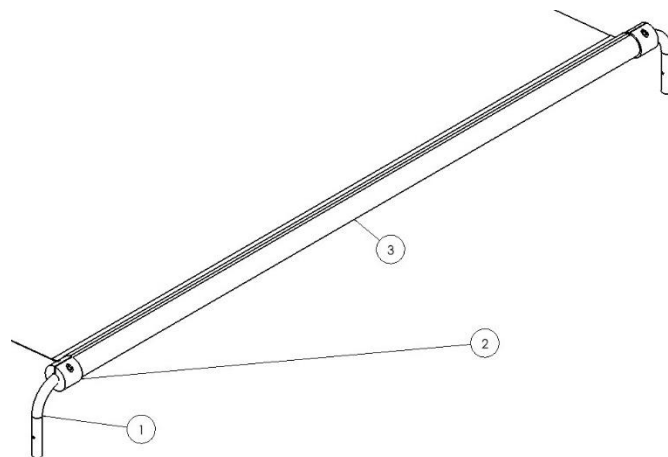


Figure 4.1

Drill a 5/16" hole into the bulletproof arms 3" from the end where the cross tube will be inserted. (Figure 4.2)

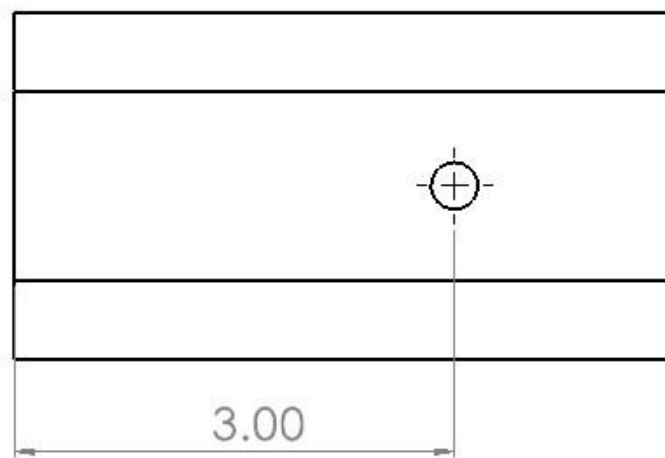


Figure 4.2

Place the cross tube on the tailgate of the dump box. Slide the ends of the cross tube into the bulletproof arms. Secure the cross tube (1) to the bulletproof arms (2) using a 5/16" x 2-1/4" hex bolt (3) and hex nut as shown in Figure 4.3.

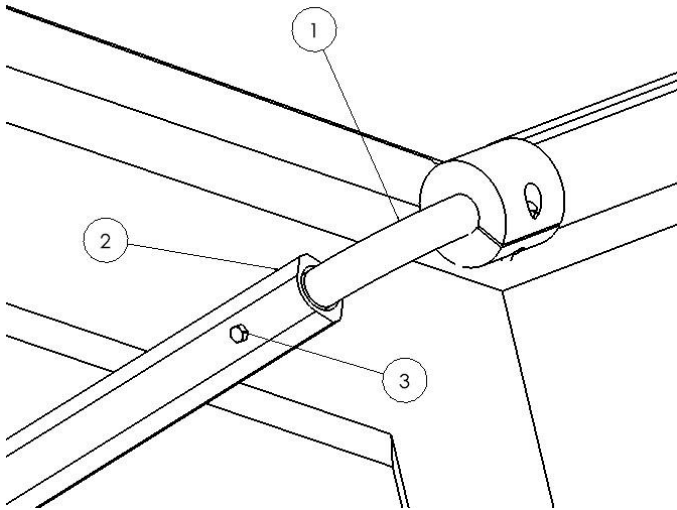


Figure 4.3

Installing the Optional 3-Piece Cross Tube

In the free ends of the side arms insert the 90-degree bulletproof corners (1). Measure the distance between these corners and verify that the length of the cross-tube is the same. If the cross-tube is too long cut it down to size. (Figure 4.4)

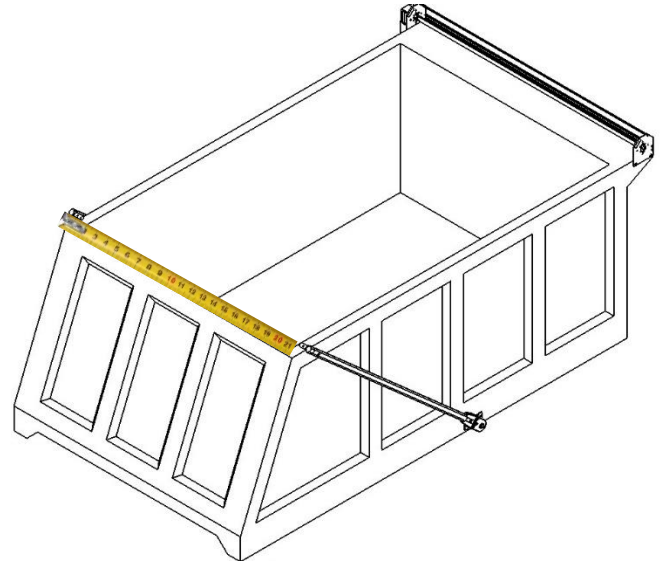


Figure 4.4

Remove the 90-degree corner from the side arm and place it inside the cross tube on both ends. Mark where the mounting holes on the corner are on the cross-tube, they should be approximately 1-1/2" from either end. Drill the mounting holes (1) in the cross-tube using a 5/16" drill bit. (Figure 4.5)

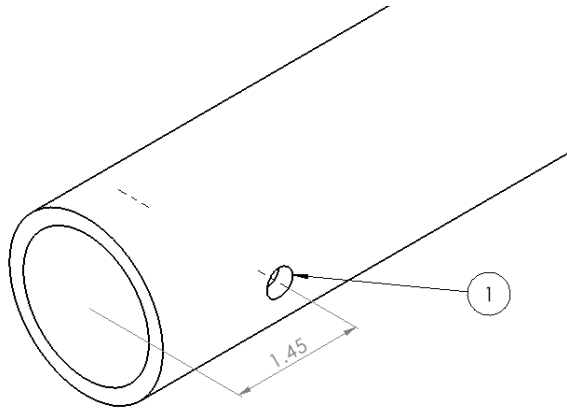


Figure 4.5

On one end of the cross-tube (1) slide on one of the tarp centering flanges (2). Now feed the end of the cross tube without the centering flange through the pocket end of the tarp (3). Place the remaining tarp centering flange on the cross tube. Adjust the tarp and centering flange so that the tarp is center on the cross-tube. Tighten the centering flanges to secure them in place. (Figure 4.6)

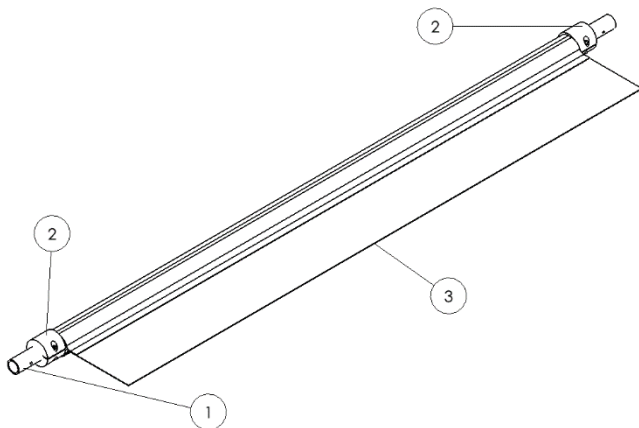


Figure 4.6

Before installing the assembled cross-tube, the length of the side arms must be checked. On the ground behind the truck, lay the cross tube down and slide the 90-degree corners into the side arms.

Now compare the distance from the pivot to the cross tube to the distance from the pivot to the tarp axle/tailgate. The distances should be approximately the same. If the side arms are too long, remove them and cut them to length. (Figure 4.7)

NOTICE

If the arm has a bend DO NOT cut the bent end. Only cut the straight end.

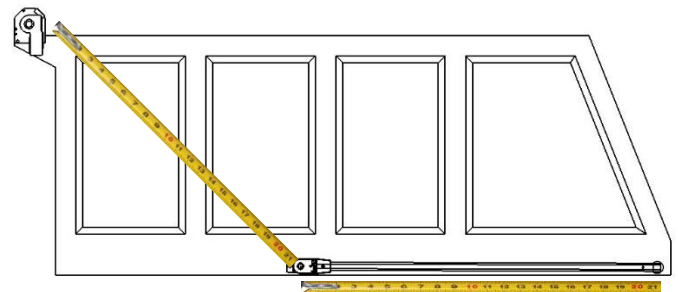


Figure 4.7

While the side arms are removed, you will need to drill mounting holes for the 90-degree corners. Slide the 90-degree corner into the side arm. Mark the location of the mounting hole on the 90-degree corner onto the side arm. Remove the corner and drill a 5/16" hole through this mark. See Figure 4.8 for an example of what this should look like.

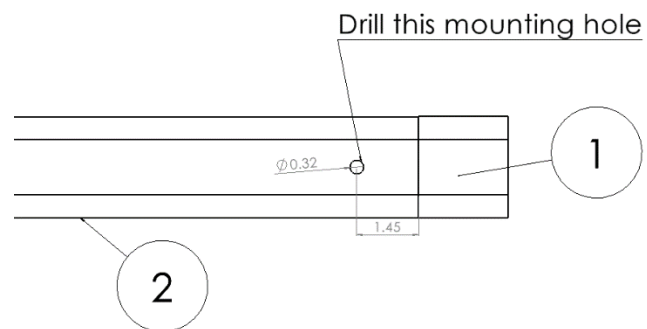


Figure 4.8

Remove the 90-degree corners (1) from the side arms and place them on each end of the cross tube (2) so that they point in the same direction and secure them to the cross-tube with 1/4" x 2-1/4" hex bolts and hex nuts (3) as shown in Figure 4.9.

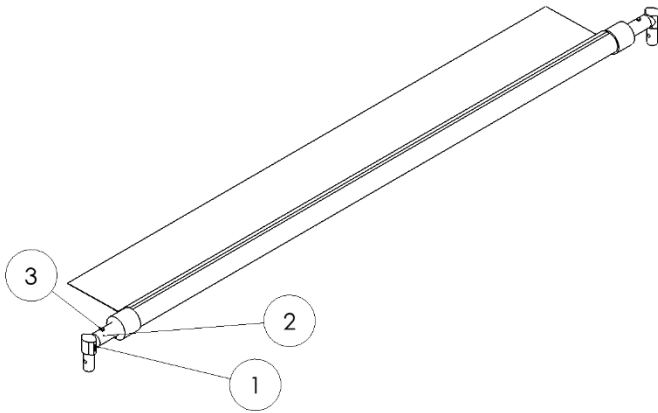


Figure 4.9

Reinstall the side arms. Now, place the cross-tube assembly onto the tailgate of the dump box. Slide the 90-degree elbows into the side arms and attach them using the provided 1/4" hex bolts and hex nuts. The fully assembled tarp arms should look like what is shown in Figure 4.10.

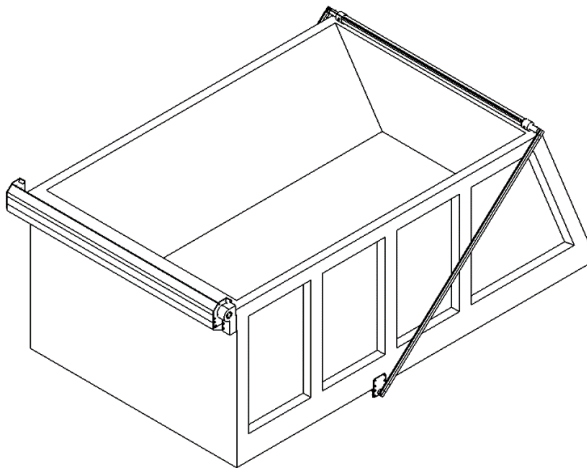


Figure 4.10

Step 5: 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 5.1)

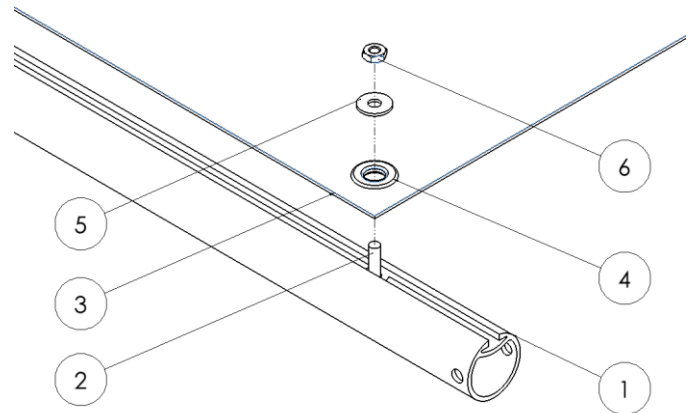


Figure 5.1

Step 6: 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 6.1) and that the centering flanges hit the rubber bumpers on the tarp spool mounting brackets when the tarp is fully rolled up (Figure 6.2).

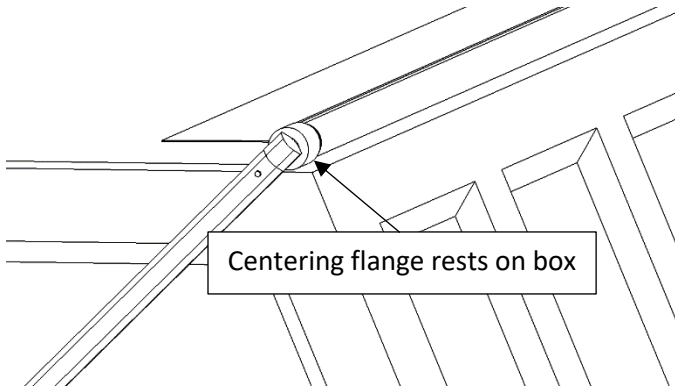


Figure 6.1

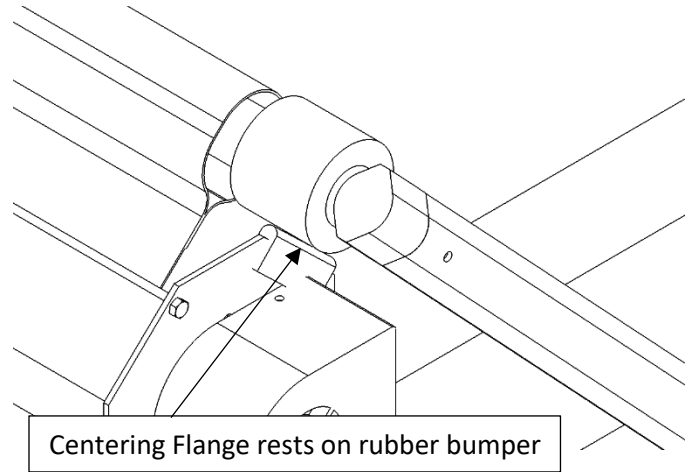
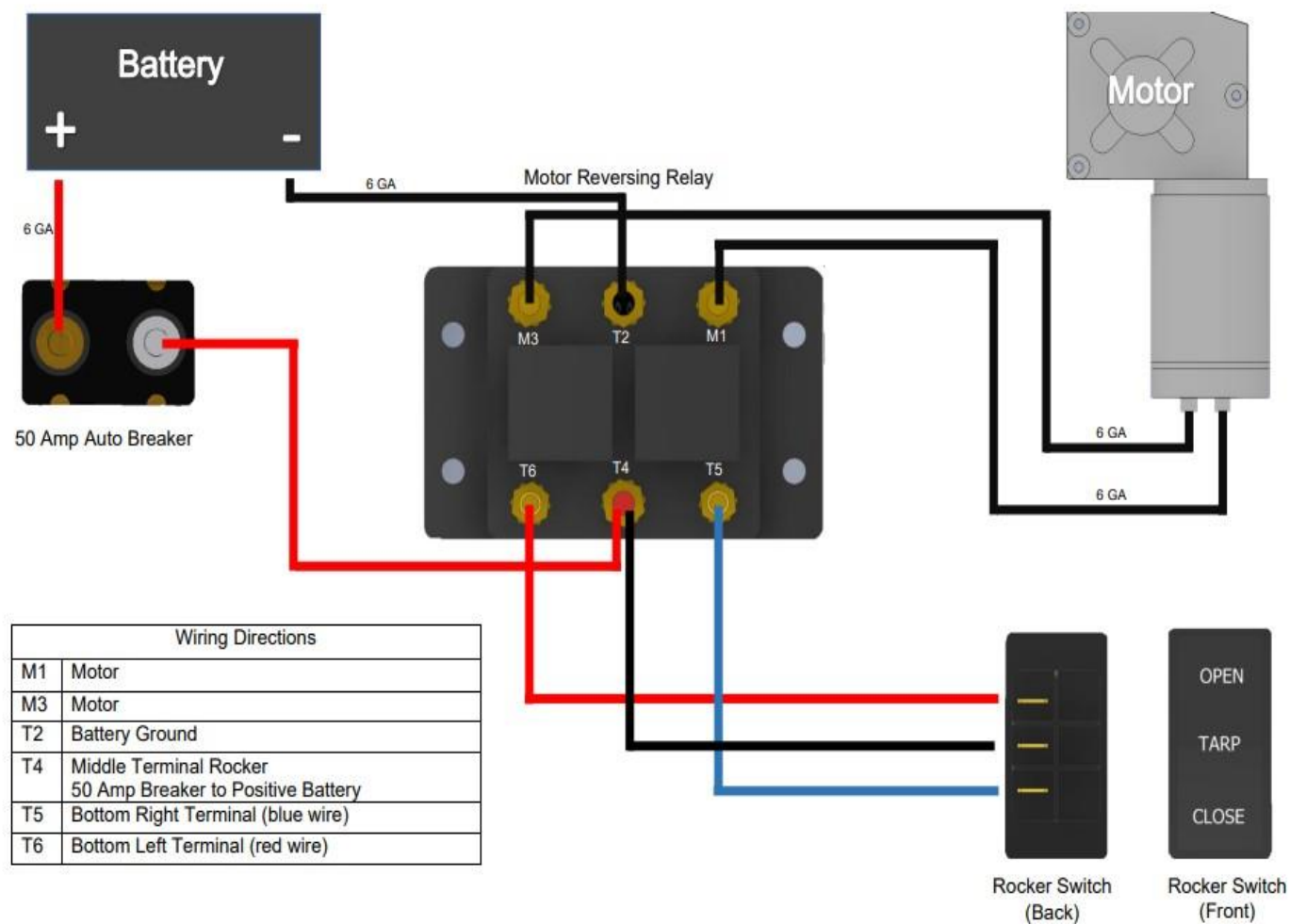


Figure 6.2

Appendix A: Wiring Guide – Rocker Switch



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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)

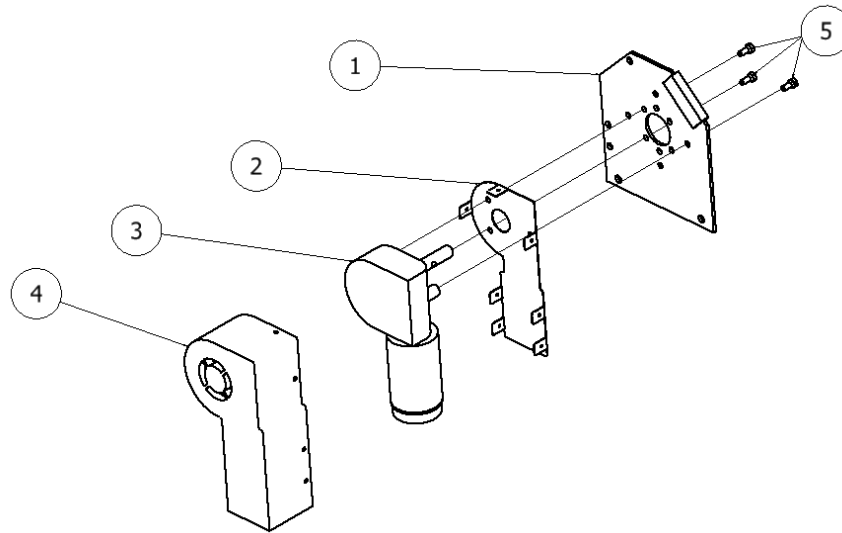


Figure C.1

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)

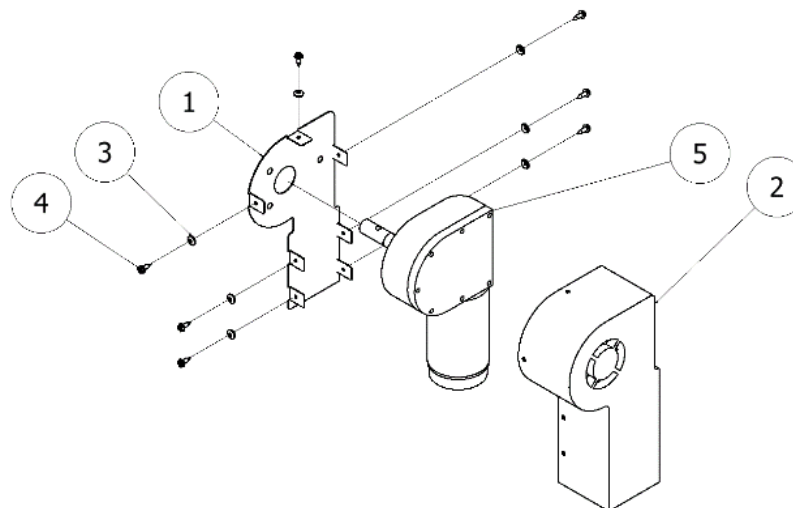


Figure C.2

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 1-1/2" shorter than this length. If it is not, cut it to the correct length. Drill a hole 5/16" in diameter through the axle such that it is 5/16" from the end of the axle, on each end. (Figure D.1)

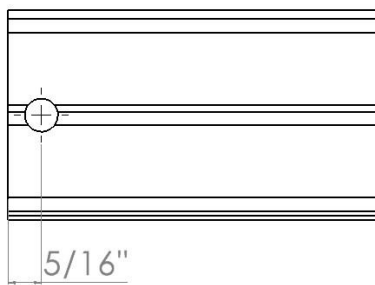


Figure D.1

Spline:

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

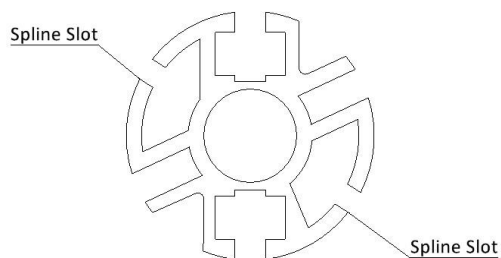


Figure D.2

Square Nut:

Slide five, 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, 5/16" x 3/4" hex bolts and washers to connect the tarp with grommets to the axle as shown. (Figure D.3)

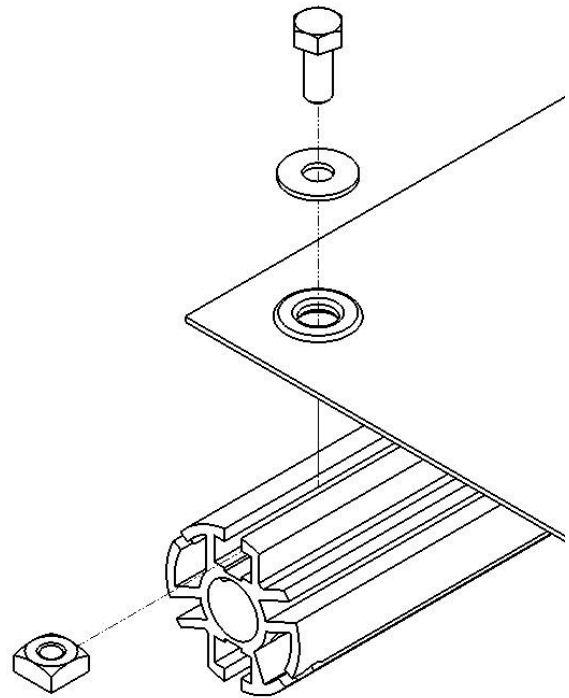


Figure D.3

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)

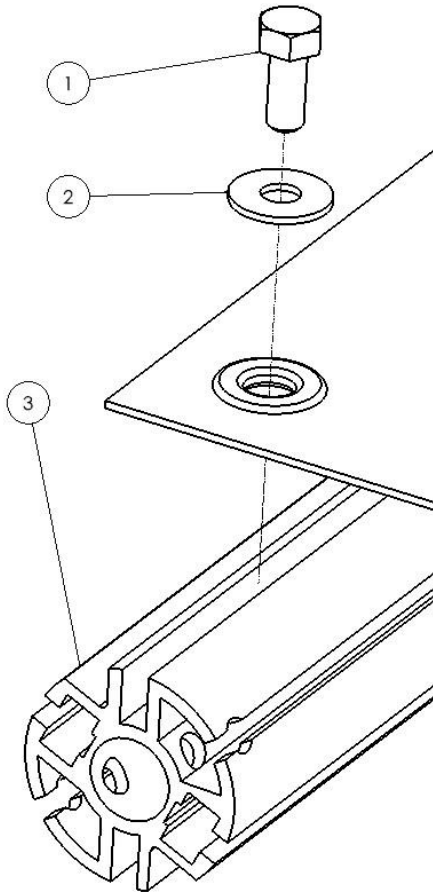


Figure D.4

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.

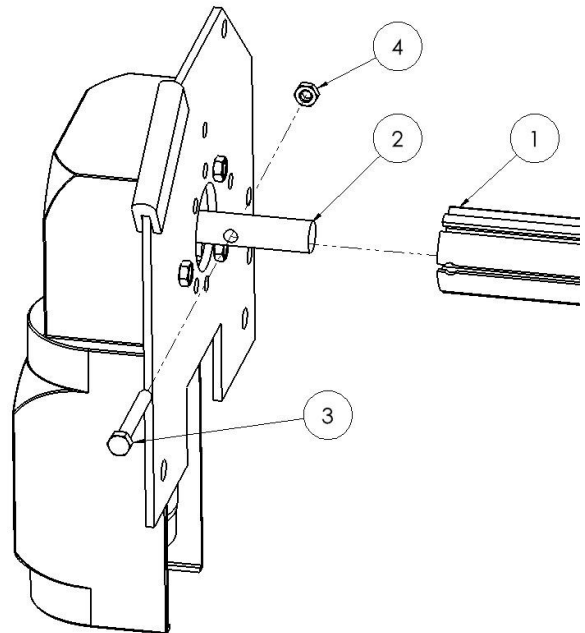


Figure D.5

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)

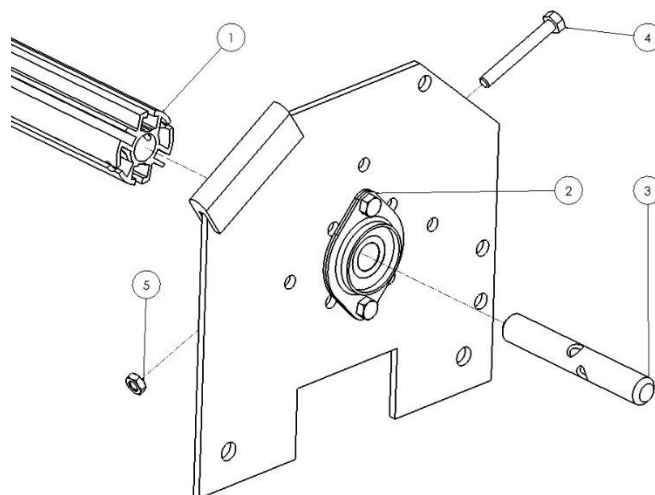


Figure D.6