

TARPING USA

Installation, Maintenance, & Safety Instructions

This pamphlet is applicable to all TarpingUSA aluminum and steel externally mounted tarping systems whether electric or manual.



WARNING:

Never operate a tarp system under power lines. This may cause serious injury or death.

Never operate a tarp system while moving. Please come to a complete stop before attempting to operate.

CAUTION:

Read through the entire instructions and follow directions thoroughly to ensure proper installation and operation of the tarping system.



Tarping Solutions At It's Very Best

Kym Industries, Inc. has been serving the waste and hauling industry for many years. Through our marketing strategy and superior customer service we have been able to provide quality products at the best prices.

Our product line is simple, **KYM INDUSTRIES, INC.** is in the container liner and tarp business. We feel that our strength comes from offering a product line that is narrow and deep. Our customers know that each day, all we will be concerning ourselves with is the quality of our products and making sure they get there in a timely manner. It is that simple.

When doing business with us, you know that there are no hidden costs. All tarps we manufacture include webbing all around the hems, vinyl reinforced pockets, double stitching, and grommets all around at standard spacing at no extra charge. We can build any tarp to your specifications, to include landfill covers, transfer trailer tarps and vinyl waterproof tarps. We always have service and quality in mind for you the customer.

We are proud to say that **KYM INDUSTRIES, INC.** takes pride in every tarp we sell, and we look forward to doing business with your company. If you have any questions, please feel free to call (888) 577-5218.



Kym Industries is a proud member of

Women's Business Enterprise National Council



"A Portion Of All Sales Goes to the Treatment of Autism"

AUTISM SPEAKS™
It's time to listen.

Included in your kit will be:

QTY	Part #	Description
Long Box		
2	T-ALA T-SLA	Aluminum Lower Arm Steel Lower Arm
2	T-ASAWC93 T-SUA	93" Aluminum Side Arm with 90° Corner Steel Upper Arm
1	T-ACT93 T-SCT	Aluminum Cross Tube Steel Cross Tube
1	T-ATA93	Adjustable Aluminum Tarp Axle (93"-110")
Small Box		
2	T-PP#SP	Lower Arm Bed Mounted Pivot Pins
8 or 10	T-ST5	Spiral Torsion Springs
1	T-ABWF	Axle Bearing With Flange
2	T-ATSMB	Aluminum Tarp Spool Mounting Brackets
2	T-PRB T-STRB	Rubber Bumper
1	T-SS	Steel Stud Shaft
1	T-HWK	Hardware Bag
Electrical Components		
1	T-APACHE	Apache 50:1 Tarp Motor
1	T-W6G	50ft / 65ft of 6 Gauge Dual Connector Wire
1	T-RSK	Rotary Switch Kit
Manual Components		
1	T-SB14	14" Sprocket Bar
1	T-C#40	#40 Crank Chain
1	T-CBGL	Ground Level Crank Box

Optional Accessories

2	T-A##C-A	30° or 45° Cast Aluminum Elbows
1	T-RPSS2	Weather Resistant Reverse Polarity Super Switch Kit
1	T-AWDK##	94" or 102" Aluminum Wind Deflector with Hardware

Tools Required

(with some mechanical knowledge, complete installation can occur in less than 4 hours)

- 1/2" Ratchet
- 3/8", 1/2", 9/16", and 3/4" Sockets and Ratcheting Wrenches
- Needle-Nose Pliers
- Phillips Head Screwdriver
- 3/8" and 5/8" Drill Bits
- T-Handle Set (Allen)
- Wire Cutter & Stripper
- Crimping Pliers

Optional but Helpful

- Welder (Aluminum and Steel)
- 2" Hole Saw (for mounting axle directly to cab protector)
- Extra Long Heavy Duty Zip Ties

Before you Begin

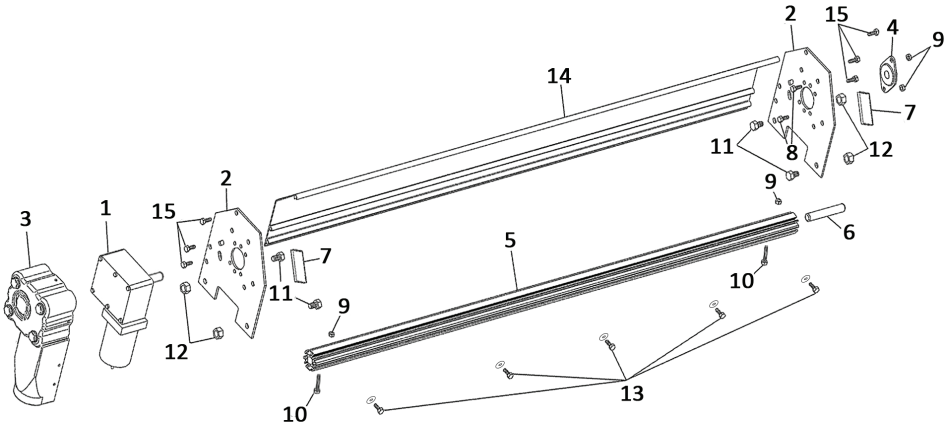
1. Make sure you have enough 6 gauge wire.
2. Determine how you would like to route your wires.
3. Ensure all parts are present and undamaged prior to installation.

WARNING:

Installation of broken or damaged parts is dangerous. We can not guarantee proper operation if any or all items are damaged. If you have received any broken, missing, or slightly damaged parts, please contact us directly.

1. Tarp Motor
2. Tarp Axle Mounting Brackets
3. Chrome Motor Cover
4. 3/4" Axle Bearing with Flange
5. Aluminum Tarp Axle / Spool
6. 5" x 3/4" Stud Shaft
7. Rubber Bumper
8. 5/16" x 3/4" Bolt

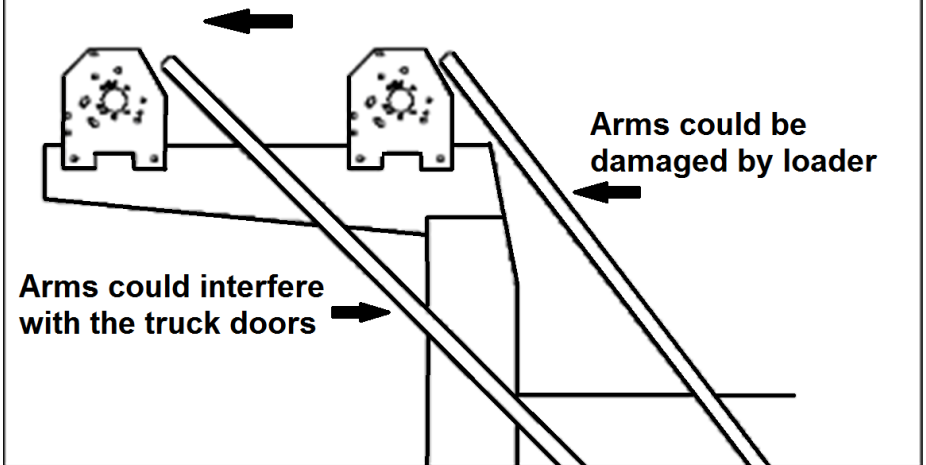
9. 5/16" Nylon Nut
10. 5/16" x 2-1/2" Bolt
11. 3/8" x 1-1/2" Bolt
12. 3/8" Nut
13. 5/16" x 3/4" Bolt & Washer
14. **OPTIONAL** Aluminum Wind Deflector
15. 1/4" x 1-1/2" Self-Tapping Bolts
(for use with optional wind deflector)



Please Consider your Arm Placement

**Mount Tarp Spool Assembly
as far forward as possible**

Figure 01



We highly recommend, if having troubles with arm placement, purchasing a 30° or 45° elbow insert (sold in pairs), to better angle your arms for loading and unloading.

STEP 1: CHOOSING THE MOUNTING LOCATION OF THE TARP SPOOL KIT

The Tarp Spool (5) and Tarp Motor (1) should be mounted on top of the cab protector, as far forward as possible to avoid damage by loaders, but not so far forward that the upper arms block the vehicle doors (Figure 01).

Exception: Trucks with vertical stacks may be in the way of the pivot arms if the tarp spool kit and motor were mounted ahead of the stack(s). You can either re-align or shorten the stack(s) to solve this problem. Otherwise, the tarp spool kit and motor should be mounted towards the rear of the stack(s). If there is no room to mount the tarp spool kit and motor towards the rear, they will need to be mounted on top of the sideboard pockets to the front of the body.

STEP 2: INSTALLING THE MOUNTING BRACKETS

Once you have determined your mounting location, install the tarp spool mounting brackets (2), or use the brackets as a template to drill directly into the cab protector.

Note: Leave enough space between the tarp axle and cab guard to allow the entire tarp to roll up effectively.

STEP 3: INSTALLING THE OPTIONAL WIND DEFLECTOR

If installing a wind deflector, measure the outside width of the tarp spool mounting location and cut the wind deflector to that length and pre-attach the mounting brackets to each side with the wind deflector hardware (15). This way you can set this assembly on top of your cab protector and properly align the front edge of the wind deflector along the edge of your cab protector to seal most of the wind gap in-between the top of your cab and the wind deflector. Hold each bracket in place with a vise grip and make sure it's level to your liking before you mark and drill the two 3/8" holes for the mounting bracket bolts.

STEP 4: MOUNTING THE TARP MOTOR AND TARP SPOOL

(For manually operated systems, refer to the diagram at the end of this pamphlet)

Measure from the outside of one mounting bracket to the outside of the other and cut the tarp axle 2" shorter than the length measured. After cutting, drill a 5/16" hole through the axle 3/4" from the ends. Attach the axle bearing (4,8) to the passenger side mounting bracket. Slide the stud shaft (6) through the axle bearing into the tarp axle. Line up the holes in the tarp axle to the hole in the stud shaft and secure with 5/16" x 2-1/2" bolt (10) and nut. With the axle secured on one side, slide the motor shaft through the center hole of the drivers side bracket and into the axle and secure with a 5/16" bolt (10), washer, and nut (9). Now you can insert the 5 motor bolts supplied with the motor (be careful not to overtighten). Lastly, use a T-Handle (Allen) to tighten the set screws on the axle bearing, securing the stud shaft.

STEP 5: POSITIONING THE PIVOT PINS

Measure your dump body from **Point A** to **Point B** (See Figure 02). Divide that number by 2 and make a mark at the top of the bed for **Point C**. Then, measure from **Point B** to **Point C**.

Bring measurement from **Point C** down to the bottom of your bed. Starting from **Point B2**, measure out toward the cab until you reach the same measurement from earlier. This will be your **Point C2** (Your Pivot Point)

Before moving on, double check your measurements by measuring from **Point A** (Center Point of Motor Shaft) to **Point C2** (Center Point of Pivot Pin). Next, measure from **Point B** to **Point C2**. Both measurements should be the same. This will be the center point of the pivot pin.

Note: Make sure the operation of the tail gate will not be inhibited by the position of the rear cross tube.

STEP 5A:

Hold or clamp the pivot pin plate against your bed rail at the intersection and align the center of the pin with the mark.

STEP 5B:

Use the pivot pin holes to mark your drilling locations. Start with a smaller drill and slowly step your way up to avoid the drill bit walking. You can also weld the pivot pin to your box with a tack weld if you so choose.

STEP 5C:

Once drilling is complete, bolt the pivot pins to the rail using the included 1/2" x 1-1/2" bolts, washers, and nylock nuts. Make sure that the slot in the pivot pin is pointed down.

Please repeat these steps for the other side

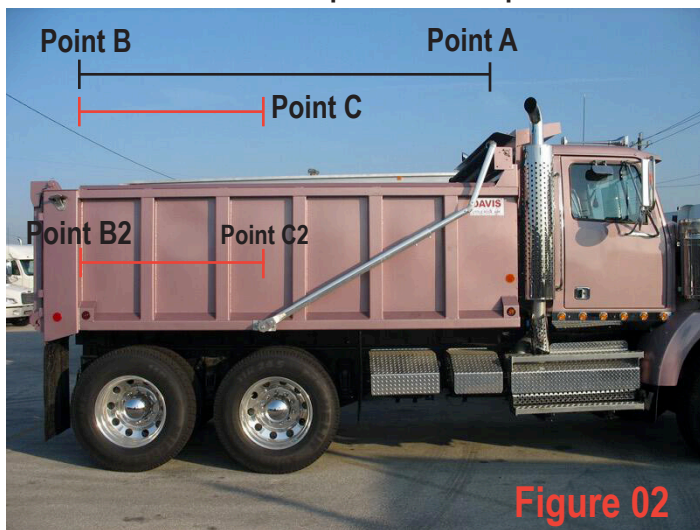


Figure 02

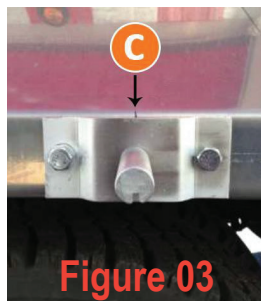
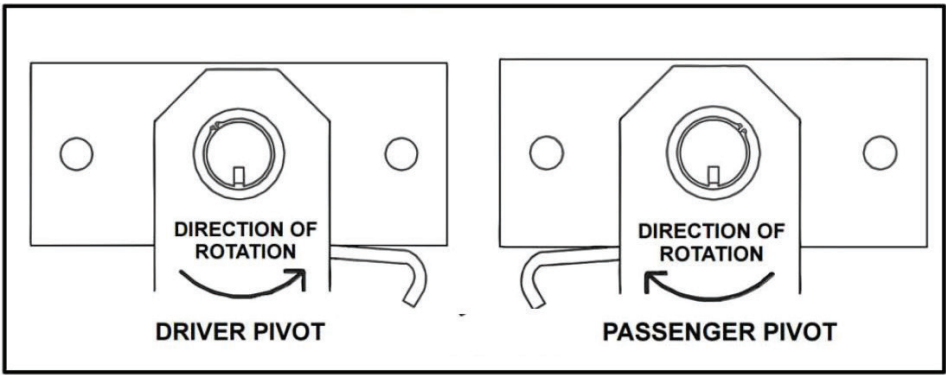


Figure 03

STEP 6: INSTALLING THE TARP ARM SET

1. Install a corner (5) in each upper arm (4) using the included 5/16" x 1-3/4" bolts (15), 5/16" washers, and 5/16" nylock nuts (16).
2. Check to make sure that the arms will have enough clearance. Hold an upper arm up to the side of the dump box with the corner resting against the axle mounting bracket and with the bottom end aligned with the pivot pin. If the arms will be exposed or in the way, then install two 30° or 45° elbows to add a bend in the arms.
3. Next, determine the overall length of the arm assembly. Without loading the springs (3), fit the bottom end of the lower arm (2) onto the pivot pin (1).
4. Slide an upper arm into the lower arm and position it so that the corner sits on top of the tail gate. If the arm is too long, cut it to a suitable length, leaving at least 2 feet to slide into the lower arm. Use the set screws (13) to lightly tighten the upper arm in place. Swing the arm assembly to the front of the box. If necessary, untighten the set screws and adjust the position of the upper arm so that the corner lands in the correct location at both the front and back of the box. Mark the position on the upper arm.
5. After completing both arm assemblies, hold the cross tube (6) up so that you can slide the upper arm corners into each end. Attach the cross tube to the corners with the included hardware (15, 16) but do not fully tighten yet.
6. Rotate the assembled tarp arm set forward. Make sure the arms and cross tube rest symmetrically against the axle mounting brackets. Adjust as needed.
7. Swing the tarp arm set back to the rear of the dump body and check the landing position. Check for binding or rubbing of the arms against the sides of the dump box and adjust as needed (Bushings or spacers can be used to maintain a certain position of the lower arm spring housing on the pivot pin).
8. Remove the cross tube, upper arms, and lower arms so that you can load the spiral torsion springs (3) into the lower arms and begin final installation.
9. Place a Stainless Steel Bushing (8) onto the pivot pin. Cradle the spiral torsion springs (3) inside the spring housing of the lower arm and maneuver the lower arm back onto the pivot pin, making sure the center tab of each spring sits in the pivot pin slot. Place a second Stainless Steel Bushing (8) on the pivot pin and snap the External Retaining Ring (9) into place, in the notch at the end of the pivot pin.



Depending on the height of the pivot pins from the ground, it is common to need to raise the dump in order to load the springs onto the lower arm. In doing so, understand and use necessary support and safety guidelines to do so safely.

10. With the spiral springs loaded (with no tension on them yet), rotate the lower arm up (counterclockwise on the driver side, clockwise on the passenger side) until you can install the upper arm into the lower arm. Then, slide the upper arm into the lower arm to the mark made in step 4 and tighten the set screws to hold it in place.

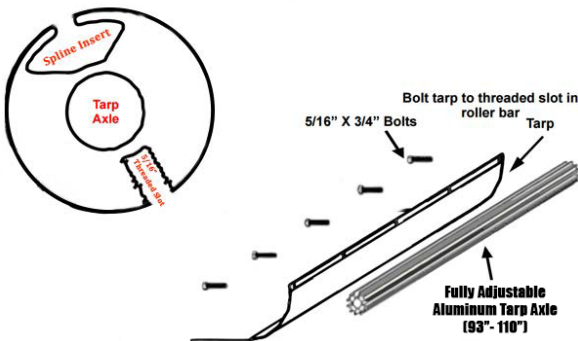
WARNING:

Make sure to maintain a firm grip on the lower arm to prevent the spring-loaded arm from spinning freely and potentially causing serious damage or injury.

11. Set the rear cross tube across the back of the dump body, but do not reconnect with the upper arms until you are ready to install your tarp.

STEP 7: INSTALLING THE TARP TO THE TARP AXLE

The tarp axle has several ways of attaching to the tarp. You can screw self-tapping bolts through the tarp grommets into the threaded slot of the axle, or you can use the square slot to bolt through the grommets into the 5/16" square nuts. There is also a slot on the tarp axle to receive spline. The most common method is to use the threaded slot, which allows you to securely fasten the tarp at the grommet locations. The included hardware will assume you choose this method.



1. Line the front tarp grommets up with one of the threaded slots in the tarp axle.
2. Attach the tarp to the front axle with 5/16" x 3/4" bolts and washers, centered on the tarp axle.
3. Slide the cross tube (6) through the tarp's pocket in the back of the tarp.
4. Slide the rubber bumpers (14) over each end of the cross tube and then bolt the upper arm corners into the cross tube.
5. Position the rubber bumpers (14) up against the edges of the tarp so the tarp is centered on the cross tube and tighten the bumper set bolt securely. These bumpers will help keep the tarp centered as well as prevent the tarp from getting damaged when being operated back and forth.

STEP 8: WIRING THE TARP MOTOR

NOTE: The tarp motor must be wired with the provided 6 Gauge Wire. Usage of any wire smaller than 6 gauge can cause your tarp system to operate slowly and will definitely overheat.

SUGGESTION: Running 3/4" EMT conduit down the front of the body and back along the frame rail provides a safe place to run the wires as well as adding a clean look to your tarping system installation.

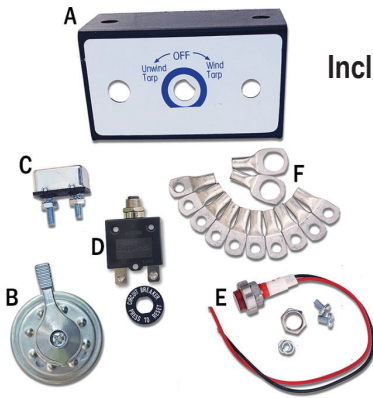
1. Mount the included switch bracket in a convenient location making sure that nothing will fall or rest against the bracket that could hold the switch in the "ON" position or prevent the circuit breaker from popping. Either situation could damage the motor and the motor will not be covered under warranty.
2. Connect the switch, circuit breaker, and indicator light in the bracket using the included terminals and jumper wire.
3. Unroll the included 6 gauge wire. Run the wire down the front of the body from the tarp motor, back along the bottom of the box, around the hinge (leaving enough slack to avoid binding or pinching during the operation of the lift) and into the cab where the switch is mounted. For tractor-trailer or lead-pup combinations, a plug set rated to 50 amps or higher should be used between the truck and the trailer(s).
4. Cut off the extra length of wire, leaving enough to easily connect to the switch. Set aside one of the pieces of left-over wire to later run from the cab to the positive (+) post of the battery or starter. **WARNING: DO NOT CONNECT AT THIS TIME!** Run another piece of wire from the cab to a ground screw on the firewall or other suitable ground location using the included terminal.

5. Connect the wires leading from the switch to the motor from the cab to the ground terminal of the battery. Connect using the included terminal
6. Connect the positive wire to the battery terminal marked (+) and check to see that the tarping system is operating as indicated on the switch bracket. To wind-up the tarp, the tarp axle should spin counter-clockwise viewing it from the driver's side of the cab.

CAUTION:

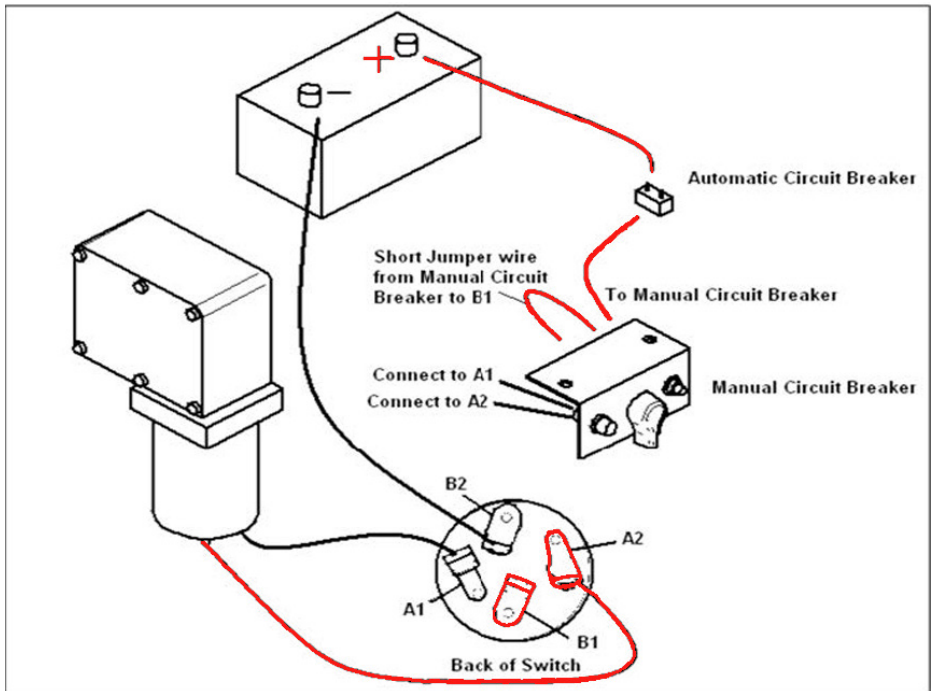
If the roller bar rotates clockwise, any debris on the tarp will be rolled up into it and possibly cause severe damage.

T-RSK
(Standard)



Included Rotary Switch Kit Contents:

- A. Switch Mounting Bracket
- B. Rotary Switch
- C. 50 AMP Automatic Circuit Breaker
- D. 40 AMP Manual Circuit Breaker
- E. Indicator Light
- F. Ring Terminals & Hardware



STEP 9: OPTIONAL SWITCH KIT WIRING

If purchasing the optional solenoid switch kit, follow the full-page wiring diagram on the next page. Below, we have added some helpful installation tips for when you are wiring the optional and upgraded switch kits.

INSTALLATION TIPS

When installing on a dump-style truck, an optimal location for this is inside the c-channel frame, under the cab. This makes it easy to secure to any nearby frame holes or already ran wires while also shielding from the elements.

Make sure to wrap the circuit breaker with electrical tape or vinyl material as to not cause a short once connected to the battery.

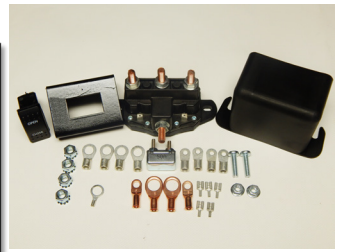
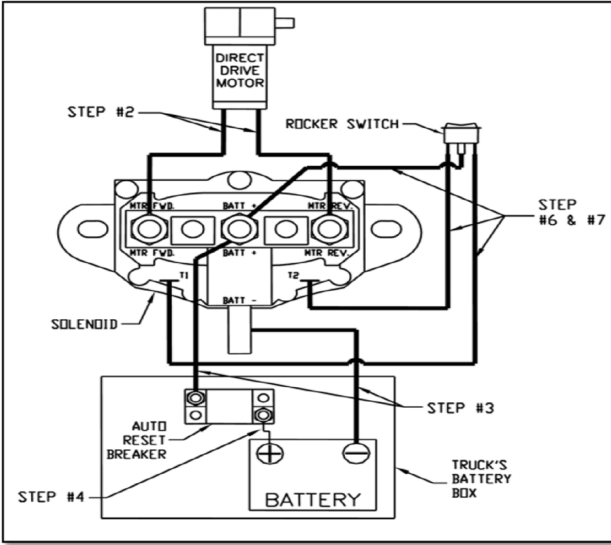
CAUTION:

Although there are drill holes in the solenoid, do NOT drill holes in your truck frame. This can void manufacturers warranties for your vehicle as well as be a potential grounding fault for your system. The included mounting screws are meant for an outside non-frame application such as side rails of a trailer.

Heavy duty zip ties are plenty to secure this solenoid switch and the wiring to the inside of the frame.

CONGRATULATIONS ON INSTALLING YOUR NEW TARPING SYSTEM!

Installation can be tricky, but the hard work sure does pay off once you are able to enjoy the simplicity and convenience of an automatic tarping system. If you are having any technical issues or have any questions about preventative maintenance or replacement parts, please do not hesitate to give us a call at (334) 886-7772!



T-RPSS
(Optional)

**SOLENOID SWITCH KIT OPTIONAL
(FIGURE 3)**

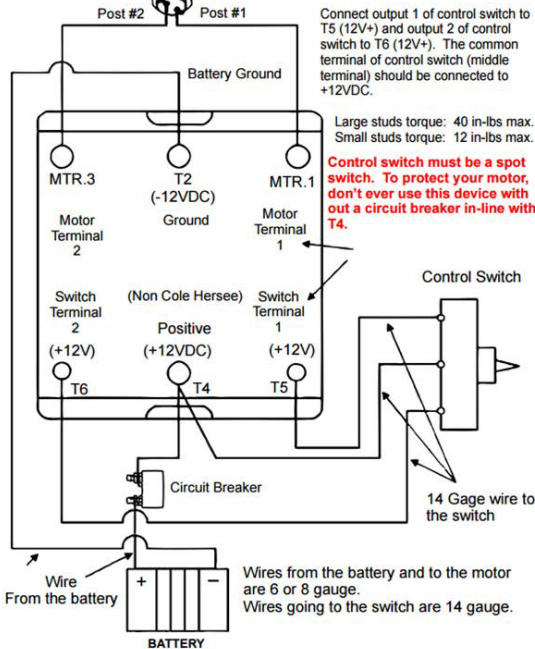


Connect MTR.1 and MTR.3 studs to motor leads. Connect T2 to -12VDC (ground). Connect T4 to +12VDC with appropriate circuit breaker in-line.

Connect output 1 of control switch to T5 (12V+) and output 2 of control switch to T6 (12V+). The common terminal of control switch (middle terminal) should be connected to +12VDC.

Large studs torque: 40 in-lbs max.
Small studs torque: 12 in-lbs max.

Control switch must be a spot switch. To protect your motor, don't ever use this device with out a circuit breaker in-line with T4.

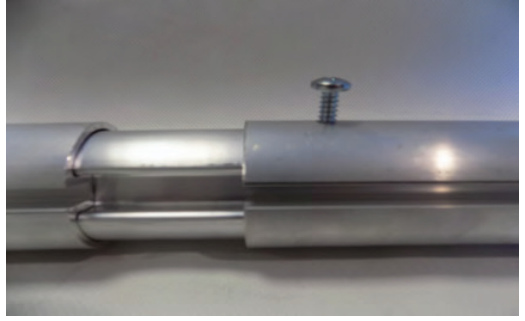


T-RPSS2
(Optional)

Wires from the battery and to the motor are 6 or 8 gauge.
Wires going to the switch are 14 gauge.

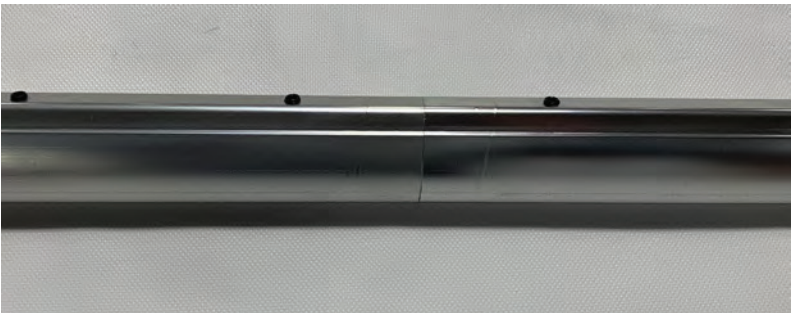
EXTRA: HOW TO ADJUST YOUR TARP AXLE

Our tarp axle is fully adjustable from 93" all the way to 110". If you received our new tarp axle, T-ATA93, no cutting and drilling is required! Slide the outside ends out evenly between each tarp spool mounting brackets and reinsert the pan head stabilizing screw.

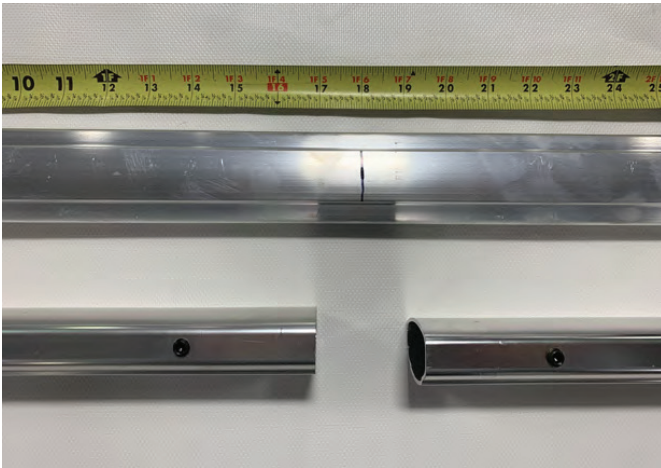


EXTRA: HOW TO ADJUST YOUR ALUMINUM CROSSTUBE

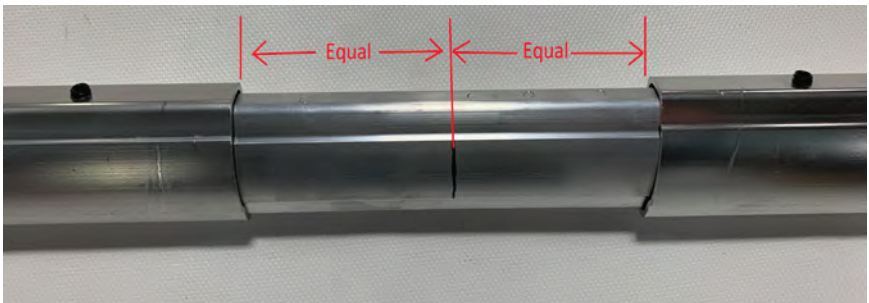
Our fully adjustable cross tube will come in (2) 46-1/2" sections with a 36" aluminum insert. Your adjustable crosstube must be custom fit to the width of your truck.



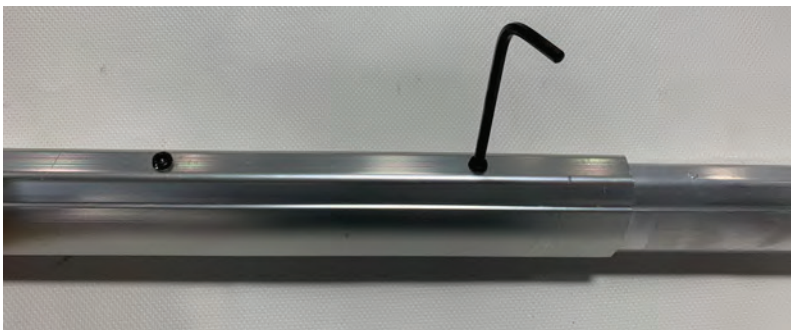
With a 5/32" T-Handle (allen), undo the screws and pull the aluminum insert and measure 18" from one end to find the center and mark accordingly.



Insert inner coupling and adjust evenly from both ends of mark on inner coupling to reach the required width. This cross tube is designed to fit up to 102" wide truck bodies.

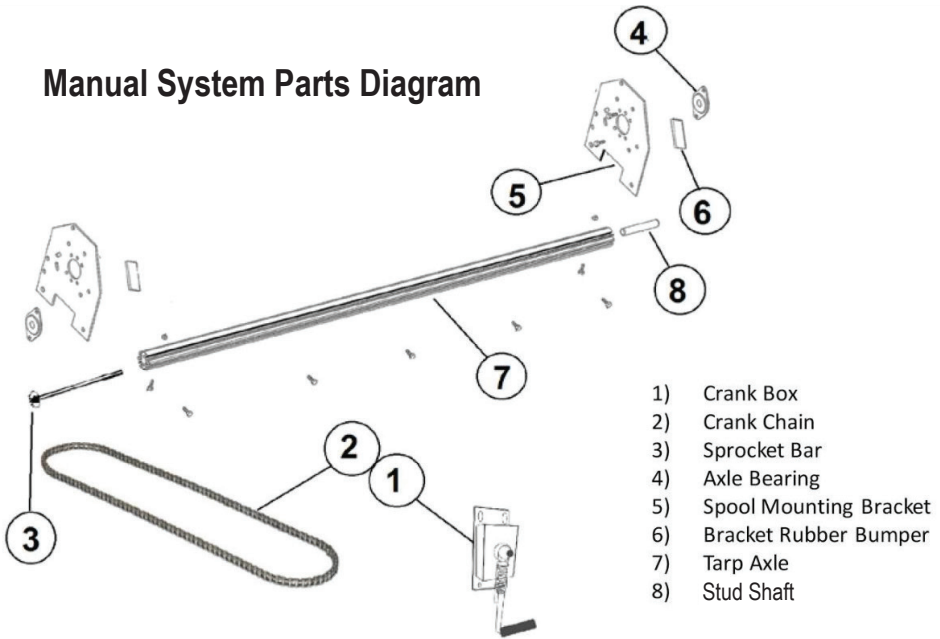


Don't forget to securely fasten all 4 set screws before installing your crosstube



DIAGRAMS

Manual System Parts Diagram



For manual tarp systems, follow the same directions as for an electric system, except for the installation of the motor. Instead, manual systems come with a crankbox, a chain, a shafted sprocket, and an additional axle bearing.

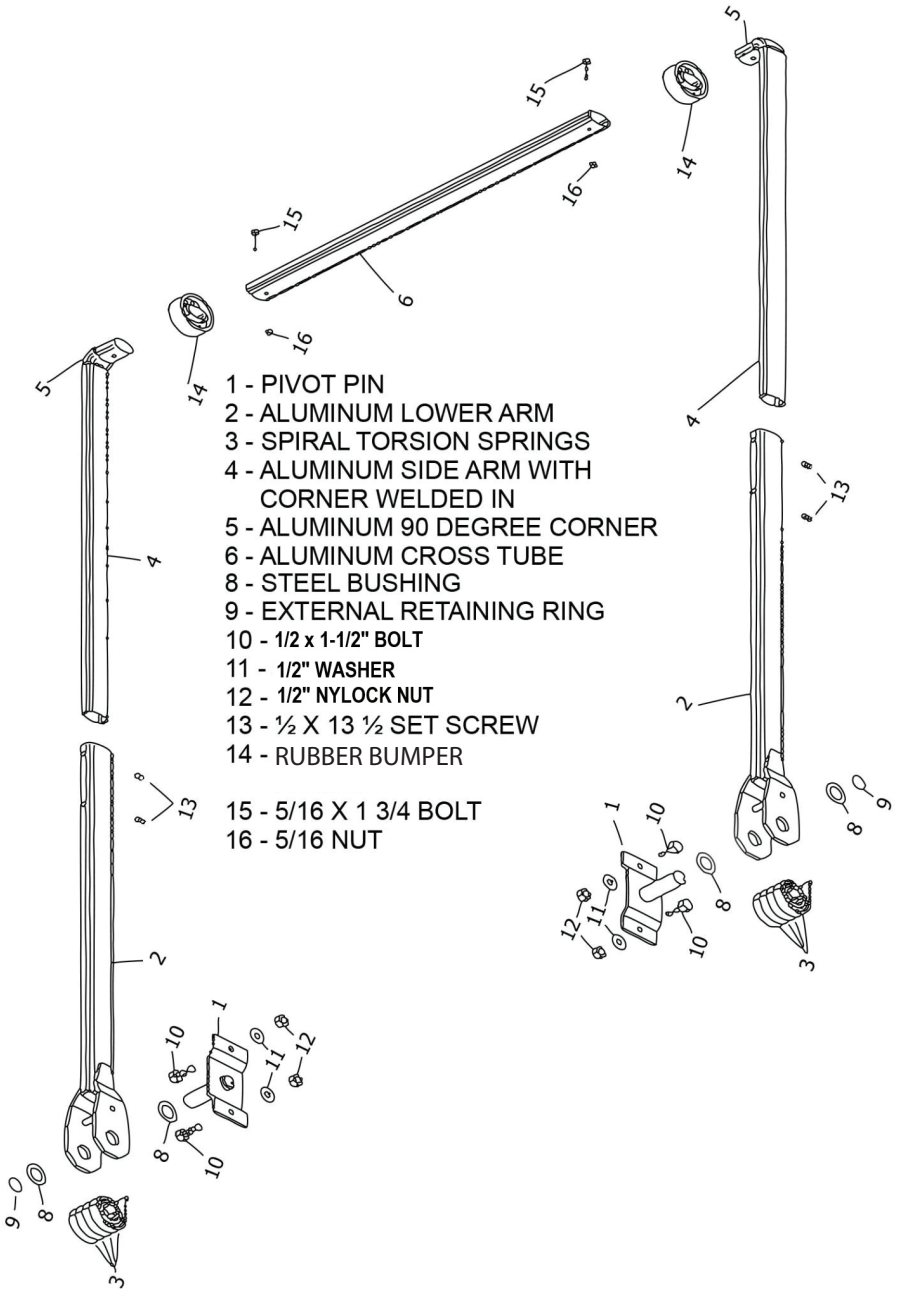
1.Mount the crank box (1) as far forward on the external rail as possible. The crankbox is designed with slotted bolt holes to allow for the installation and tightening of the crank chain.

2.To find the chain length, slide the gear box up so that the mounting bolts are in the lowest position in the slotted bolt holes. Measure from the bottom of the crankbox sprocket to the top of the axle sprocket (3). Multiply by two and subtract 2”.

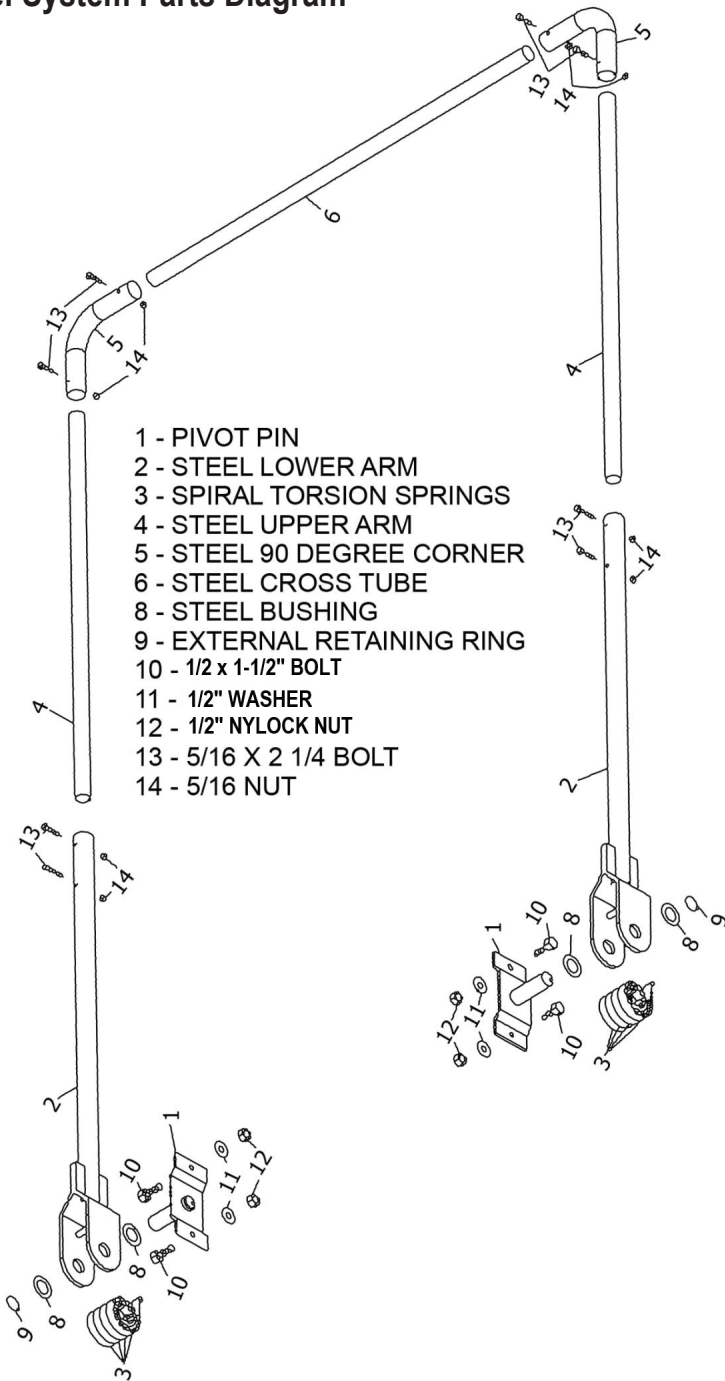
3.Cut the chain at that length and wrap the chain around the crankbox sprocket and the axle sprocket and reconnect using the included master link.

4.Push the crankbox downward to put tension on the chain and firmly tighten the crankbox bolts in order to maintain the chain tension.

Aluminum System Parts Diagram



Steel System Parts Diagram

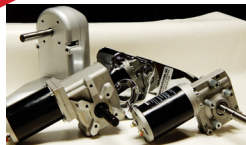


Ask About our Other Products

PREMIUM TARP MOTORS

12v and 24v Tarp Motors

We offer **Premium Tarp Motors** to meet any need from small dump bodies to large trailers. As shown to the right, our motor comes with a chrome cover, its 5 bolt pattern makes it compatible with any **Tarping System** currently in use from any manufacturer using a 3, 4, or 5 bolt pattern. Our **Premium Tarp Motors** will replace your existing motor.



GROUND LEVEL

Front to Back Secondary Arm

Our manual ground level kit is a ground operated **Tarping System** that comes with polished aluminum, premi-um aluminum, or galvanized steel pivot arms for dump bodies of all sizes. Kits ordered with this part number variation can be easily converted to an electric system!



INDUSTRIAL GRADE TARPULIN

Standard Dump Truck and Custom Tarps

VINYL

MULTI-MESH

PRO-GRADE
TEVLAR

BLACK MESH

SUPER MESH



“ASSASSIN”

Standard Side Roll Setup

The **ASSASSIN** offers dependable, watertight protection to cover your load. Seat belt webbing and reinforced stitching along edges increase tear resistance and helps the tarp withstand the stresses of highway speeds. The standard galvanized steel crank arm lets you operate the **Tarping System** safely from the ground.



“SLINGSHOT™”

Self Retracting Pull Style Kit

The **SlingShot™** is a modern front to back dump truck **Tarping System**. It is a semi automatic and easy to use kit with a simple pull feature. Use the rope to pull the tarp over the load, and when you're finished release the rope and the spring loaded tarp axle will retract the tarp for you. The spring loaded axle is adjustable to fit dump bodies up to 98" wide.

