



# SIDE FLIP

## INSTALLATION INSTRUCTIONS



# SIDE FLIP INSTALLATION

Congratulations on your purchase of a Mountain Tarp Side Flip tarping system. With tarping systems for dump bodies, transfer trailers, scrap trailers, landscaping trucks and roll-offs, Mountain Tarp offers the most complete line of tarping systems and parts in the industry.

**Note:**

Please read through instructions for entire system and follow instructions thoroughly to ensure your system will work properly. It is important that you inspect your trailer and prepare it for installation by removing any sharp edges or any thing that will cause damage to your tarp.

For further technical assistance, contact our corporate headquarters at (800) 248-7717 or email us at [sales@mountaintarp.com](mailto:sales@mountaintarp.com). For parts and service, visit us at one of our locations in Kentucky, Texas, or Ohio, or contact one of our many dealers nationwide. To learn more about Mountain Tarp and the products we offer, visit us online at [www.mountaintarp.com](http://www.mountaintarp.com).

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# SIDE FLIP INSTALLATION

## STEP 1: FRONT AND REAR ARM ASSEMBLIES

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1A:

Insert brass bushings into the holes in the cylindrical ends of the straight and bent arms.

**Figure 1-** Inserting Brass Bushings



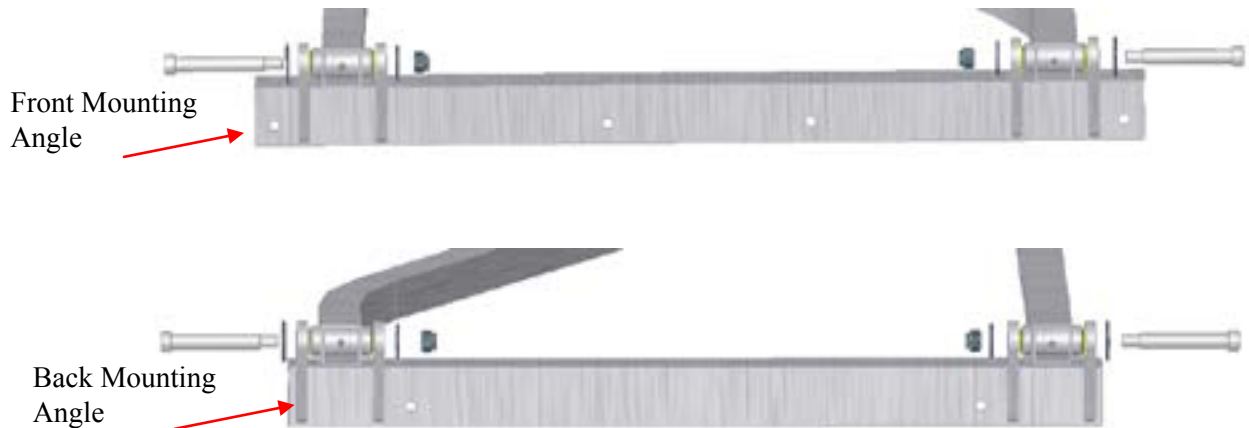
1B:

Attach the straight and bent arms to the mounting angle ears using 5/8" x 6" bolts with washers placed under the bolt head and nut. The final assembly of the arms is shown in *figure 4*. Snug the nut against the ear. **DO NOT** deform ears when tightening.

1C:

Grease joints once installed.

**Figure 2-** Attaching Arms to Mounting Angle Bars



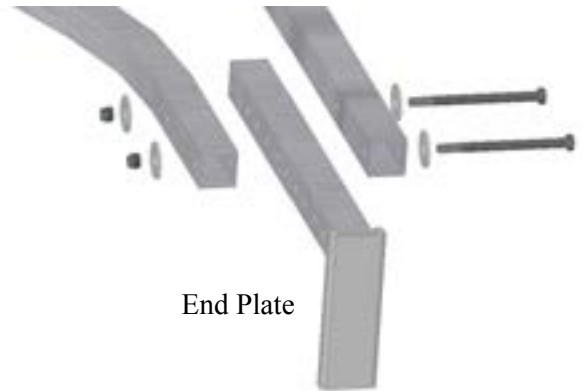
Note: When installing the arms, mount the bent arms to the middle most ears in relation to the trailer body as shown in figure 6. The front mounting angle, as shown in figure 4, is distinguished by 2 1/4" of length outside the ears so the motor and actuator assembly can be attached.

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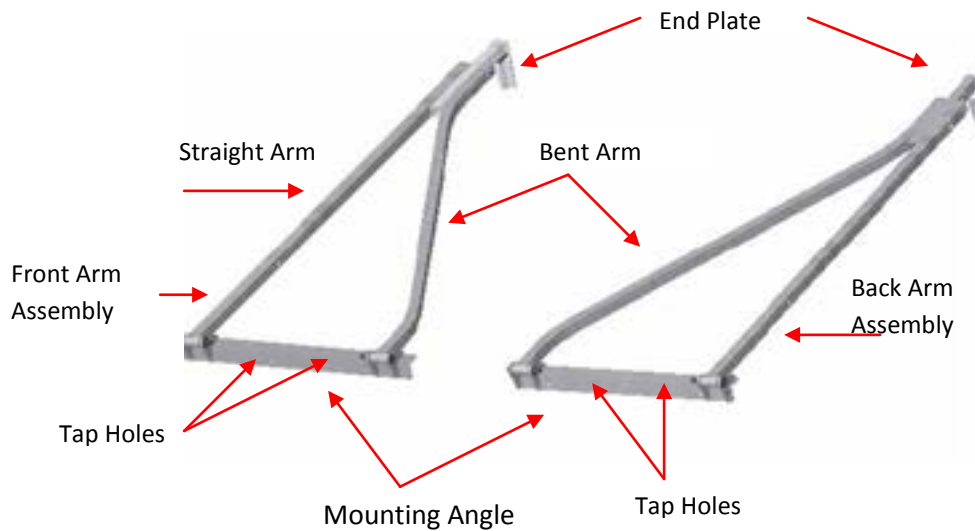
1D:  
Bolt the end plate between the two arms as seen in figure 3. Adjust the end plate so it clears the trailer by approximately one (1) inch. (Additional clearance may be necessary if the trailer is old and “bellied out” in the middle.)

**Figure 3- End Plate Assembly**

Note: The holes on the arms and end plate will not line up; the assembly must be slightly deformed to attach the end plate. The bent arm must come towards the straight arm.



**Figure 4-Arm Assemblies**



## STEP 2: MODIFICATIONS FOR A PASSENGER'S SIDE MOUNT

Do not complete this step unless you are mounting the tarping system on the passenger's side.

2A:  
Start with motor assembly as shown in figure 5.

2B:  
Unbolt motor arm.

2C:  
Remove all hoses.

**Figure 5-Driver's Side Mount**



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2D:  
Unbolt and rotate pump and over-center valve mounting plate 180°, then rebolt.

2E:  
Rotate over-center valve 180° and rebolt.

2F:  
Turn 90° elbows 180°.

2G:  
Adjusting Helac.

1. Remove hose adapters in top of helac. (fluid will leak when these are pulled)
2. Pull plugs from bottom and place in top
3. Place hose adapters in holes in bottom.

Note: Motor assembly must look exactly like *figure 6*.

2H:  
Replace hoses as labeled in *figure 7*.

1. The hose connected to the lower output of the over-center valve must be connected to the adapter on the helac farthest from the mounting plate.

2I;  
Activate helac turning counter clockwise until it reaches the end of its cycle.

2J:  
Remount motor arm 60° (two bolts) off vertical as shown in *figure 8*.

2K:  
Motor assembly is now ready for passenger's side use.

**Figure 6**-Switched Motor Assembly



**Figure 7**-Final Assembly of Hoses



**Figure 8**-Completed Passenger's Side Mount



## STEP 3: CONNECTING THE ARM AND THE MOTOR ASSEMBLY TO TRAILER BODY

3A:  
The front arm assembly must be positioned with c-clamps on the front of the trailer with the end extended at least 4" from the face of the trailer as shown in *figure 9*. This allows enough clearance for the motor assembly to be installed.

**Figure 9:** Mounting Front Arm Assembly.



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**Figure 10-** Deflection of Front Straight Arm

Note: The extended end of the straight arm should be about 1/2" forward of the front of the trailer to allow for arm deflection when the cable is tightened.

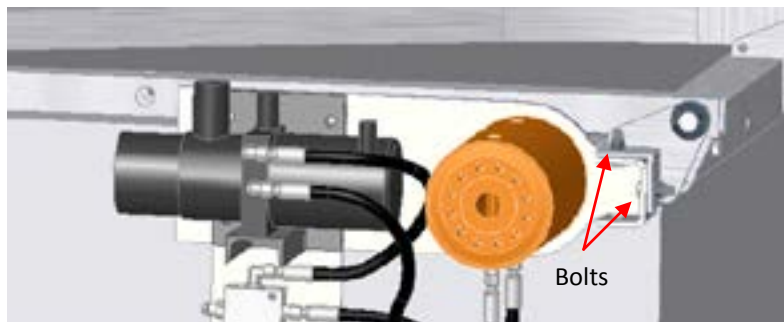


3B:  
Clamp the front arm assembly in place with a minimum of two c-clamps.

**WARNING: Death or serious injury can occur! If motor assembly weight exceeds 50 pounds a forklift or crane must be utilized when installing this product.**

3C:  
Using a forklift, crane, or other lifting device, hoist the motor assembly into place, clamp it, and bolt it to the front arm assembly as shown in *figure 11*.

**Figure 11-** Mounting of Motor Assembly



1.If the trailer has a rounded front, a formed 1/4" plate must be made so the motor assembly sits perpendicular to the side of the trailer.

3D:  
Make sure the motor assembly is still properly placed. If needed, adjust the positioning of the mounting angle and motor assembly.

3E:  
Drill holes for both mounting angle and motor assembly and bolt both to the trailer.

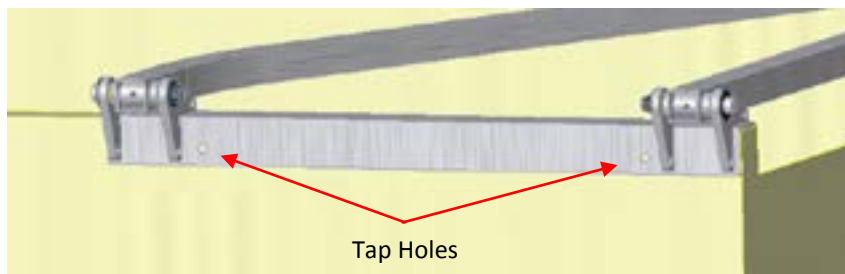
# SIDE FLIP INSTALLATION

## STEP 4: MOUNTING THE BACK ARM ASSEMBLY

4A:  
Clamp the back arm assembly to the trailer with the end of the mounting angle flush with the rear of the trailer as shown in *figure 12*.

- 1.Ensure there is enough room so the tail gate and sides do not hinder movement of the arms.

**Figure 12-** Mounting of Back Arm Assembly



4B;  
Drill holes and bolt the mounting angle in place.

## STEP 5: ATTACHING TOP CABLE TO REAR MOUNTING ANGLE

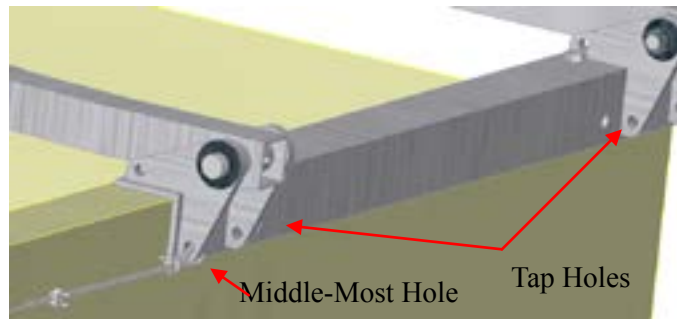
5A;  
Make sure the arms are in the “closed” position.

5B:  
Attach cable at the rear mounting angle first by looping a thimble through the middle-most hole. (*See figure 13*)

5C:  
Thread the cable around thimble and pull out one to two feet of slack.

5D:  
Clamp the cable to itself in two places: one as close to the thimble as possible, the every 6” minimum until the end of the slack.

**Figure 13-**Attaching Top Cable to Rear Mounting Angle



## STEP 6: ATTACHING TOP CABLE TO THE FRONT MOUNTING ANGLE

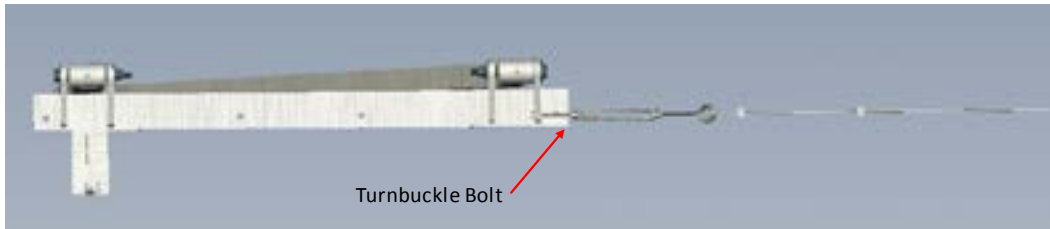
6A:  
Mount turnbuckle leaving it as open as possible.

- 1.Slide the turnbuckle bolt through the middle-most hole in the ear as shown in figure 14.
2. Attach the turnbuckle body to the bolt.

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3. Attach eyebolt to turnbuckle body.

**Figure 14-Attaching Front Cable**



6B:

Loop the thimble through the eyebolt and thread the cable.

6C:

Grease the cable, allowing it to slide freely over the thimble.

6D:

Pull the cable as tight as you can by hand and clamp it as done previously.

6E:

Attach five rubber coated clamps along the entire length of cable equal distances apart to attach cable to trailer body.

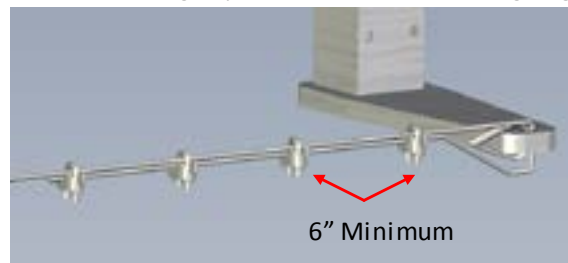
## STEP 7: ATTACHING END CABLE TO BACK END PLATE

7A:

Flip arms to “open” position, loop thimble to the hole as shown in *figure 15*.

1. Thread the cable onto thimble and clamp as done previously.

**Figure 15-Attaching Top Cable to Rear Mounting Angle**



## STEP 8: ATTACHING CABLE TO FRONT END PLATE

8A:

Repeat step a. of “Attaching Top Cable to Front Mounting Angle” and insert Bellville washers as seen in *figure 16*.

1. Follow the previous steps to attach cable to turnbuckle.

2. Tighten the turnbuckle until Bellville washers are flat

**Figure 16-Bellville Washer**



## STEP 9: WIRING POWER TO THE MOTOR

9A:

Run a wire from the battery port of the circuit breaker to the positive battery terminal.



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9B:  
Run a wire from the auxiliary terminal of the circuit breaker to the positive port of the GMC quick-connect.

1. Crimp the end piece onto the wire before inserting it into the GMC quick-connect.

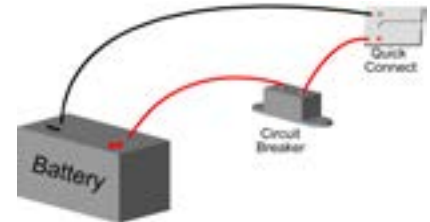
9C:  
Run a wire from the trailer frame to the negative terminal of the GMC quick-connect, crimping on the end piece before inserting.

9D:  
Run the switch box wire through the corner post or along the outside of the trailer.

9E:  
Grommet any holes the wire passes through.

9F:  
FILL THE RESERVOIR WITH AUTOMATIC TRANSMISSION FLUID.

Figure 17-Wiring the Motor



## STEP 10: ATTACHING THE LINK AND MOTOR ARM

10A:  
Run the rotary actuator to the end of its “open” stroke (clockwise for driver side mount, counter clockwise for passenger side mount).

1. If motion is jerky, bleed air out of the hydraulic lines.

10B:  
Mount the motor arm 60 degrees off vertical (2 bolts off vertical) as shown in *figure 18*.

Figure 18-Mounting Motor Arm



10C:  
Insert inner ring so it is around all bolt holes.

10D: Place three bolts evenly spaced around the bolt pattern, you may have to adjust the inner ring with a screwdriver, then place the rest of the bolts and tighten firmly in a star pattern.

Figure 19-Mounting Link Arm



10E:  
Rotate motor arm counter clockwise to the vertical position as shown in *figure 19*.

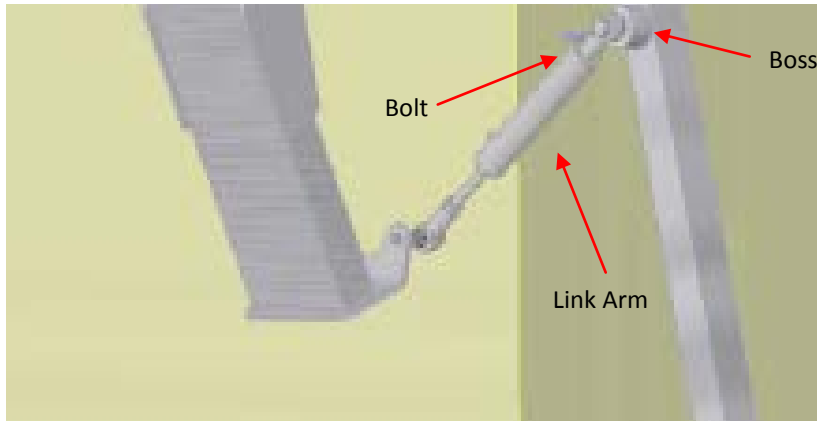
10F:  
Attach the all-thread end of link arm to the motor arm mounting hole that is nearest the tarper arm.

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10G:

Place link attachment boss in the straight front taper arm. Bolt the linkage, boss, and taper arm together as shown in figure 20. The link arm must be installed with the bolt on the upper side.

**Figure 20-** Attaching the Latch Cable

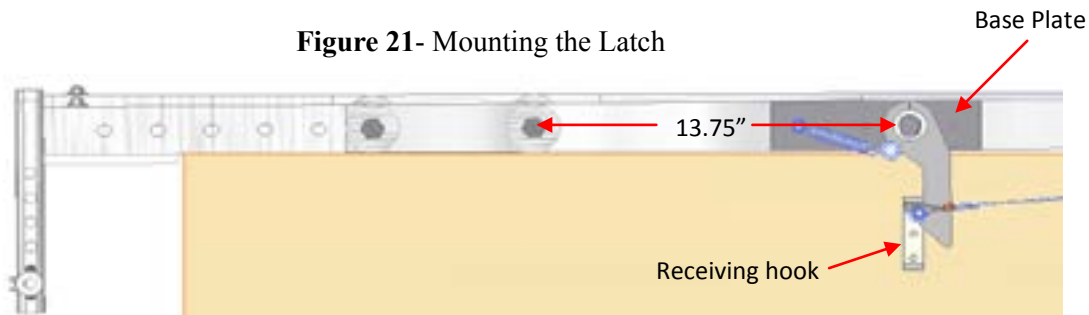


## STEP 11: MOUNTING THE LATCH

11A:

With the arm in the “closed” position, mount the latch base plate to the front assembly straight-arm 13.75” from the nearest bolt to the center pivot of the mounting plate with Tec Screws as shown in figure 21. The latch must be facing toward the end plate.

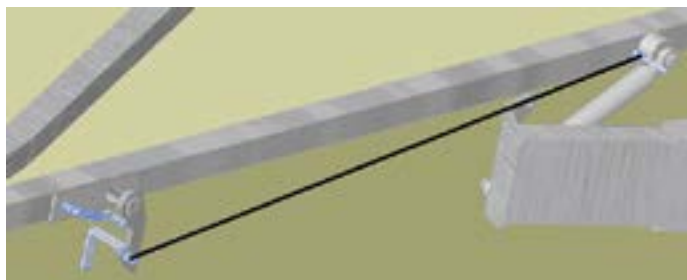
**Figure 21-** Mounting the Latch



11B;

Attach the cable from the bolt in the end of the latch, as shown in figure 22, to the bolt in the linkage

**Figure 22-** Attaching the Latch Cable



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11C:

Close arms and align the receiving hook with the latch. Using Tec-screws, mount the receiving hook to the trailer.

-For a passenger side mount

11D:

Remove the snap ring and flip the latch over.

11E:

Rotate base plate 360 degrees.

## STEP 12: MOUNTING THE TARP

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12A:

With the arms in the “open” position, attach the tarp along the top cable.

1. Attach the corners of the tarp with zip ties to hold it in place.
2. Zip tie at each grommet.
3. Leave the zip-ties loose so they can slide along the cable easily.

12B:

Using Tec-screws and washers, attach the tarp to the outside of the front assembly straight-arm every foot the whole length of the arm.

12C:

Again, using Tech-screws and washers, attach the tarp to the rear assembly straight-arm by pulling the tarp tight lengthwise as you put in the screws.

12D:

Cut off the excess length of tarp.

12E:

Tighten the ties along cable.

12F:

Using zip-ties, attach the tarp to end cable. Leave a 6-inch bend in the tarp so the cables are not pulled when tarp is closed over the body of the trailer.

## STEP 13: REAR TIE DOWN

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Put thimble through hole on extension leg on rear arm assembly. Use the two cable clamps to adjust the length of cable at desired position for you to put your ratchet on the trailer.