

# Michel's Flip Tarp

## INSTALLATION INSTRUCTIONS

**PLEASE READ ENTIRE INSTRUCTIONS BEFORE BEGINNING**

### **Step 1: Rolltube Bracket Installation**

(See Figure 1-2)

**Procedure:** Position the driver and passenger rolltube brackets (A) along the front sides of the gravel box. The brackets should be mounted in the top corner of the box making sure the brackets are parallel with the front face of the box. The top of the bracket should be 7-1/4" from the top rail so the hood will sit just on top of it. The brackets have to be at the same height so the rolltube sits level. Using a 3/8" drill bit, drill 4 holes through the predrilled holes in the brackets and through the box. Fasten the driver and passenger rolltube brackets to the box with (8) 3/8"x1" bolts, (16) 3/8" flat washers, and (8) 3/8" nylon lock nuts provided.

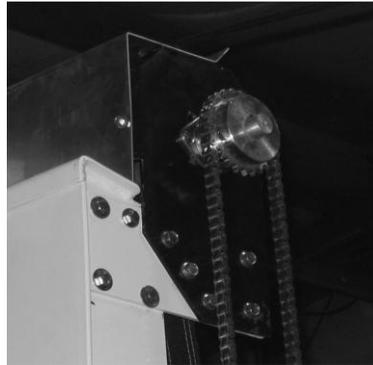


Figure 1

### **Step 2: Tarp Installation**

(See Figure 3)

**Procedure:** Slide the rolltube (C) through the large pocket at the front of the tarp. Center the tarp material on the rolltube. Remove any creases in the tarp along the rolltube. Position a pvc front tarp clamp (D) on both edges of the tarp material. Fasten both tarp clamps to the tarp and rolltube with the #10-24x3/4" wafer head screws (E) provided. Center and fasten the remaining two pvc front tarp clamps to the tarp material and rolltube.



Figure 2

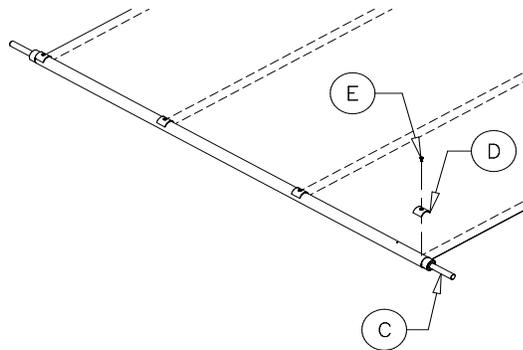


Figure 3

**Step 3: Rolltube Installation**

(See Figure 4)

**Procedure:** Insert the rolltube ends (C) through the large hole in the the driver and passenger side rolltube brackets. Slide the round flanges (F) and the UC205-16 self aligning bearing (G) on the rolltube end (C). Fasten the flanges to the rolltube brackets with the 5/16"x1" carriage bolts (J), 5/16" flat washers and 5/16" nylon lock nuts provided. Center the rolltube on the driver and passenger bracket. Tighten the grub screws in the the UC205-16 bearings (G).

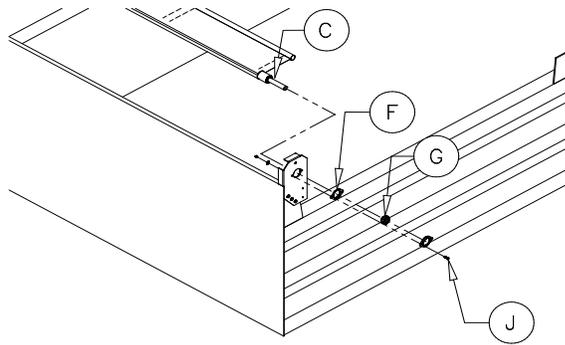


Figure 4

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**Step 4: Bottom Crank Installation**

(See Figure 5-7)

**Procedure:** Slide the 40X24 sprocket (P) and 1X hub on the rolltube end (see Figure 8). Loosen the 3/4" bolt slightly so you can adjust the angle of the chain guard. Place the #40 roller chain (Q) on the 40X24 sprocket (P) (see Figure 9). Hang the bottom crank (R) from the #40 chain. Apply a downward force on the bottom crank (R) to stretch out the chain. Adjust the angle of the chain guard so the chain clears. Mark the slots of the bottom crank in the lower dump body. Tighten the 3/4" bolt with the chain guard is properly positioned. Using a 11/32" drill bit, drill four holes through the right sides of the bracket slots. Fasten the bottom crank to the box with the 3/8"x1-1/4" self threading bolts (S) and 3/8" flat washers provided (see Figure 7).

Further adjust the position of the #40X24 sprocket on the rolltube end until it is aligned with the bottom crank (R). Remove the 5/16"x3/4" set screws from the 1X hub. Mark the location of the two 5/16" threaded holes in the 1X hub. Using a 5/16" drill bit, drill two holes in the rolltube end approximately 1/4" deep. Secure the #40X24 sprocket and 1X hub to the rolltube end with the 5/16"x3/4" set screws.

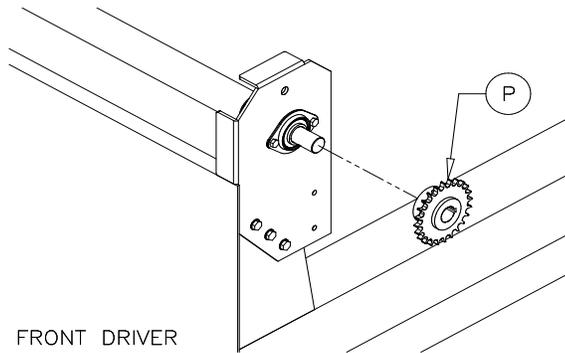
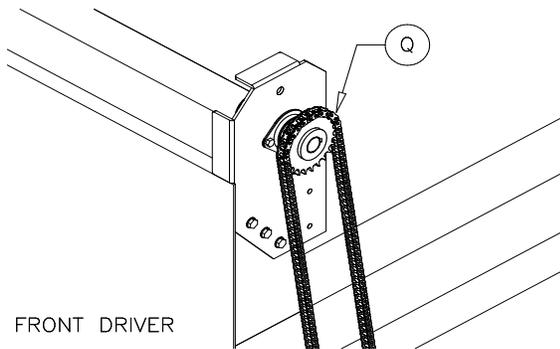
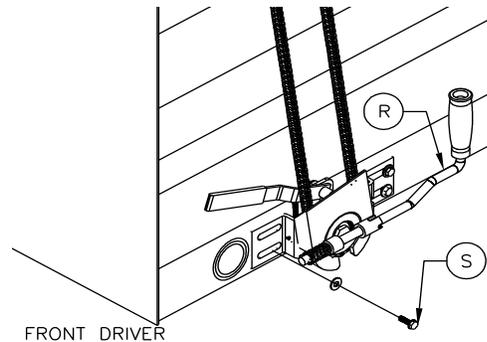


Figure 5



FRONT DRIVER

Figure 6



FRONT DRIVER

Figure 7

**Step 6: Pivot Arm Installation**

(See Figure 8-19)

**Procedure:**

Measure from Point A (see Figure 8) to a point on the lower inside rib of the box that is close to the pivot point (see Figure 10). Mark this point and record the distance as X. Using distance X, measure from Point B (see Figure 9) to a point on the lower inside rib of the box (see Figure 10). Mark this point.

Divide the distance between the first and second mark by two and mark this point as the pivot point (see Figure 10).

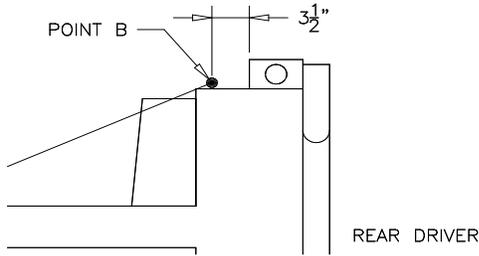


Figure 9

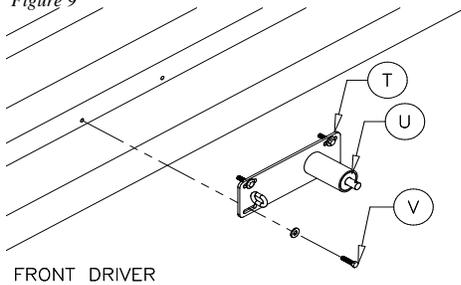


Figure 11

Match the pivot point up with the 3/4" pin sticking out on the pivot arm bracket (T).

Using a 3/8" drill bit, drill through the center of the slots in the bracket (T) and through the box wall. Fasten the pivot arm bracket to the box with the 3/8"x1-1/2" hex bolt (V), 3/8" flat washers, and 3/8" nylon lock nuts provided (see Figure 11).

Slide the pivot arm elbow (S) into the top pivot arm (G) Figure 12. Drill a 3/8" hole through the top pivot arm and pivot arm elbow about 4" in from the bottom edge of the top pivot arm. Bolt together with a 3/8"x1-3/4" bolt (T) and 3/8" nylon lock nut (U). Do all four at the same time and there are lefts and rights.

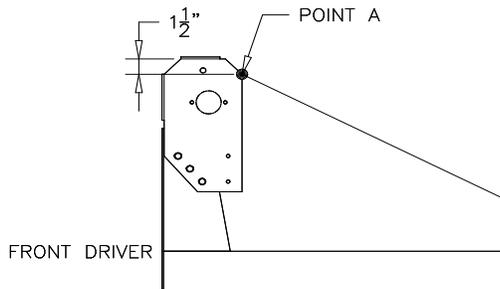


Figure 8

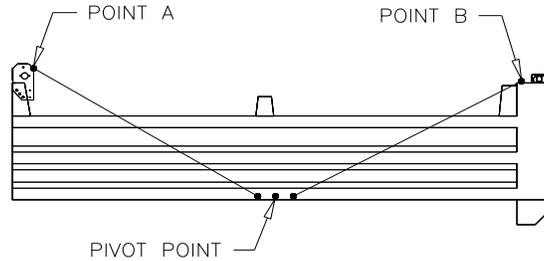


Figure 10

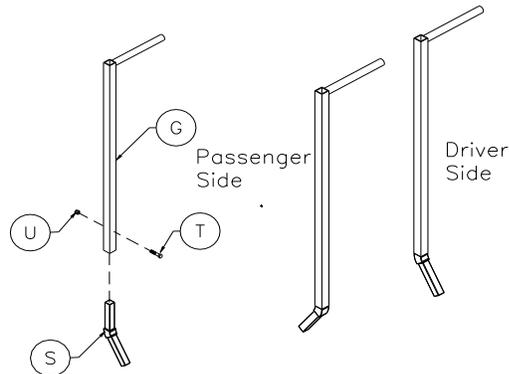


Figure 12

Measure the distance from Point A (Figure 8) to the center of the 3/4" pin on the pivot arm bracket (T). Record this as "Distance C". Lay the bottom pivot arm on the ground with the mounting flat on the top side of the tubing. Place one of the top pivot arm on the bottom pivot arm so the remaining cast elbow is in line with it. Have the 1" pipe sticking up. Slide the top pivot arm along the bottom arm until the distance from the center of the 1" pipe to the center of the mounting hole is the same as the Distance C.

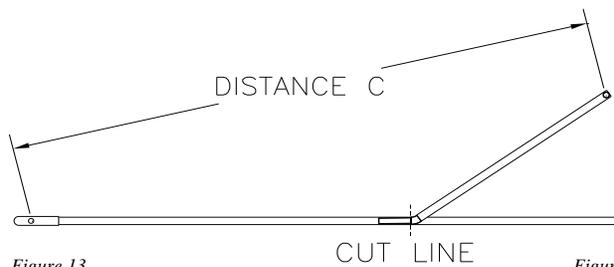


Figure 13

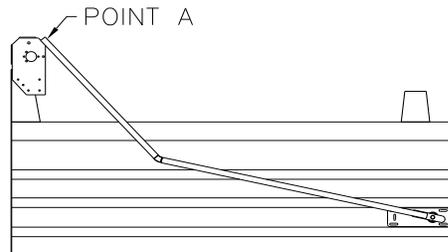


Figure 14

**Step 6: Pivot Arm Installation Con't**

Mark the bottom pivot arm inline where the 1" part of the elbow ends. Double check your measurements before cutting at your mark.

Once cut slide the elbow into the bottom pivot arm. Place the bottom pivot arm on the pivot arm bracket and position like Figure 14. Make sure that the 1" pipe is sitting at Point A. If not position correctly, move the elbow in and out until properly positioned. Drill a 3/8" hole through the bottom pivot arm and elbow. Drill the 3/8" hole approximately 4" down from the 1-1/4" part of the elbow.

Slide the helical torsion spring (B), bottom pivot arm (C), and 3/4" flat washer (D) on the pivot arm end (U). Insert and lock the cotter pin (E). Slide the tension control arm pivot mount (F) onto the bottom pivot arm (C).

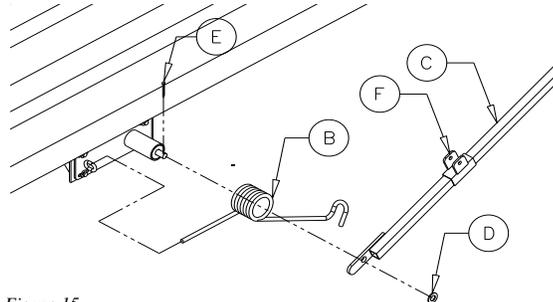


Figure 15

Position the bottom pivot arm (C) so it is hooked in the helical torsion spring (B) (see Figure 16). Repeat the above procedure for the opposite side of the box.

Slide the rear pivot arm crossmember (F) through the rear tarp pocket. Position the rear pivot arm crossmember at Point B (see Figure 9).

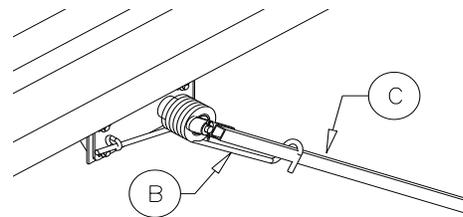


Figure 16

Insert the 1" OD. pipe on the top pivot arm into the rear pivot arm crossmember (F).

Repeat for the opposite side of the box.

**Note:** The 1"OD. pipe welded to the top pivot arm (G) may have to be shortened.

Adjust the rear pivot arm crossmember (F) and the pivot arm brackets (N) so they are at Point B (see Figure 9).

**Note:** Make sure that the distance of the bottom pivot arms are equal.

Rotate the rear pivot arm crossmember so that the crossmember guides (I) are approximately 1/2" above the top of the box. Using a 5/16" drill bit, drill through the pivot arm crossmember and top pivot arm (G). Secure the pivot arm crossmember to the top pivot arms with the 5/16"x1-3/4" hex bolts (H) and 5/16" nylon lock nuts provided (see Figure 17/18).

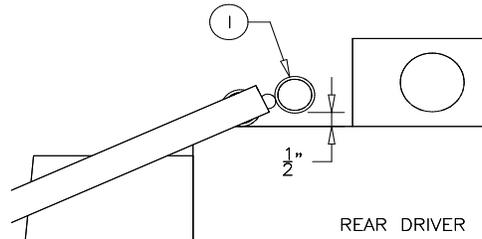


Figure 17

**Note:** Allow a great enough distance between the box wall and the the pivot arm, in order to install the pivot arm guides on both sides of the box (see Step 7).

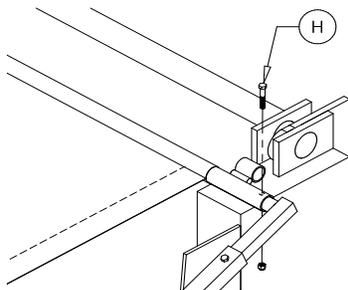


Figure 18

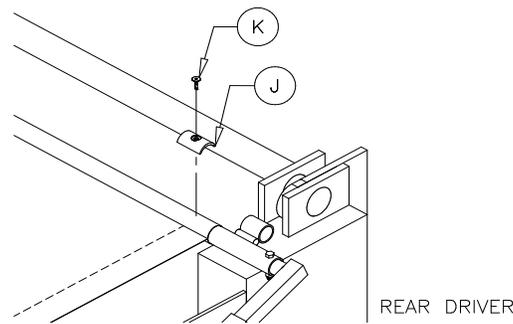


Figure 19

Center the rear tarp pocket on the rear pivot arm crossmember. Position a pvc rear tarp clamp (J) on both edges of the tarp material. Fasten both tarp clamps to the tarp and rear pivot arm crossmember with the #10-24x3-4 wafer head screws (K) provided (see Figure 19).

### Step 7: Pivot Arm Guide Installation

(See Figure 20)

**Note:** The pivot arm guides (L) (see Figure 20) prevent the tarp from shifting to either side of the box when the tarp is in closed position.

**Procedure:** Close the tarp. Place a pivot arm guide (L) along one of the ribs in the box wall (see Figure 20). Make sure the guide is aligned with the pivot arm (C). Mark the position of the pivot arm guide. Using a 11/32" drill bit, drill two holes into the box wall. Secure the pivot arm guide to the box wall with the 3/8"x1-1/4" self threading bolts provided. Repeat the above procedure for the opposite side of the box.

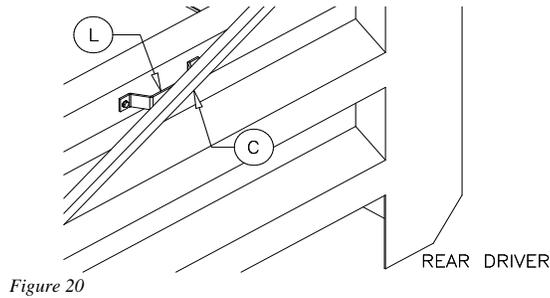


Figure 20

### Step 7: Tension Control Arm Installation

(See Figure 21-25)

Point C is close to the front of the box that will be behind the chain and has a clear view across the width of the box. From Point C measure to point on the bottom pivot arm close to the center of the box. Mark this point and record the distance. With the same distance as before measure from Point D and mark on the bottom pivot arm. Point D is at the outside edge of the 1" pipe on the top pivot arm. Take the distance between your two marks and divide by 2. This will give your second pivot point.

Double check the distance from pivot point 2 to point C and D to make sure they are the same.

Position the tension control arm pivot mount so the holes line up with the pivot point 2.

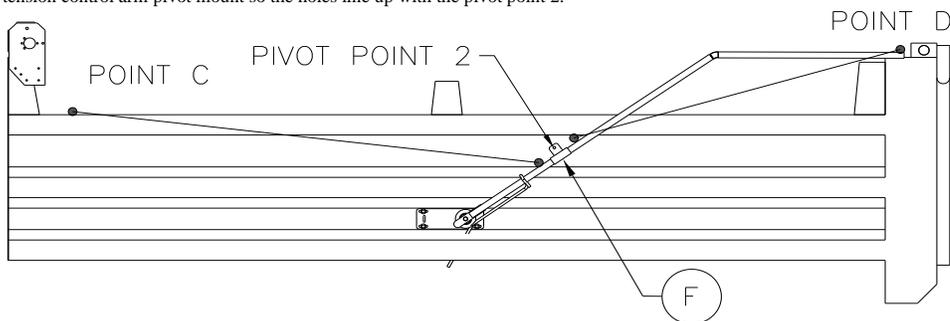


Figure 21

Using clamps secure the position of the tension control arm pivot mount on the bottom pivot arm.

Measure the distance from Point C (Figure 21) to the center of the hole of the tension pivot arm bracket (F). Record this as "Distance Z". Lay the bottom tension control arm (N) on the ground with the hole facing up. Place one of the top pivot arm on the bottom tension arm so the remaining cast elbow is in line with it. Have the 1" pipe sticking up. Slide the top pivot arm along the bottom tension arm until the distance from the center of the 1" pipe to the center of the mounting hole is the same as the Distance Z.

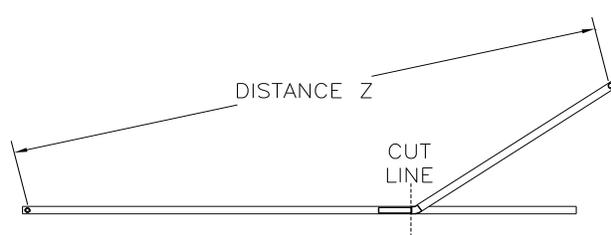


Figure 22

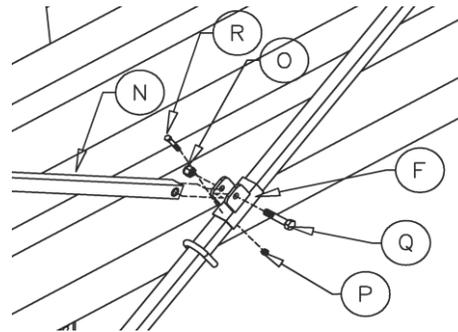


Figure 23

Mark the bottom pivot arm in line where the 1" part of the elbow ends. Double check your measurements before cutting at your mark.

Slide the top arm assembly into the bottom tension control arm and secure to the tension control pivot arm mount with the 1/2" bolt and nut.

Carefully swing the tension control assembly to the front of the box making sure that it doesn't come into contact or interfere with anything else. Make sure the top pivot arm pipe lands at Point C and D.

If there is contact or interference with the arms adjust the position of the pivot mounts and the stick out length of the bottom tension control arms.

Also make sure that the tension control crossmember can go across the box without hitting anything. It will slide on top of the 1" pipe of the top pivot arm.

With it all positioned properly drill a 5/16" hole through the bottom of the tension control arm pivot mount (F) and the bottom pivot arm and secure together with 5/16"x2" bolt (R) and lock nut (P).

Secure the elbow (S) and bottom tension control arm (N) together by drilling a 3/8" holes through them 4" down from the elbow (see figure 13). Fasten together with 3/8"x1-3/4" bolt and lock nut with the head of the bolts to the inside of the angle.

Repeat for other side of box. Measure the locations and dimensions off the existing side to mount the opposite side assembly to get them mounted identically.

Slide the tension control arm crossmember (1-1/4" OD) into the top pivot arms. Center the tension control arm crossmember between the top tension control arms. Drill through the top tension control arm and crossmember and secure together with 5/16"x1-3/4" bolt and nylon lock nut. Once properly positioned crank the tarp up to make sure nothing else gets in the way. With the tarp completely rolled up, the top tension control arm should be a little longer so it sits a little higher/closer to the front than the standard top pivot arm.



Figure 24



Figure 25

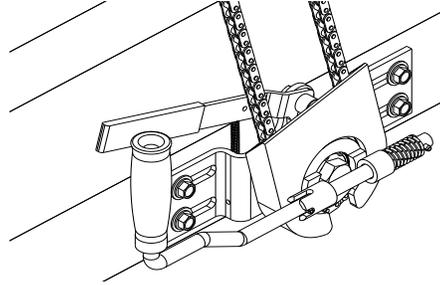
**Warranty** Michel's Industries warrants their products for a period of one year from date of purchase. Any parts returned to Michel's Industries LTD. Will be shipped prepaid and will be returned F.O.B. St.Gregor, Sk. Canada. We will not assume responsibility for shipping, labor or travel expenses. Please Note: We reserve the right to make improvements, therefore specifications are subject to change without notice.

**FOR INSTALLATION ASSISTANCE PLEASE CALL COLLECT (306) 366-2184**

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## Operating Instructions

**Opening Tarp** – To open the tarp so it is fully rolled up on the front rolltube to allow product to be dumped into the box, first unlock the rear lock if there is one installed. If installed, the tension should first be removed from the tarp by rotating the main crank clockwise. Then go to the rear of the trailer and remove the lynch pin holding the handle in the locked position. Rotate the handle up and use the lynch pin to secure the handle in the unlocked position. Go back to the front of the trailer and pull the handle of the crank and rotate it so the handle is sticking out from the box. Turn the crank counter clockwise to open the tarp. The locking handle on the crank will click on the sprocket and prevent the crank from spinning if you let go of the handle. Stop cranking when the tarp is completely rolled up on the front rolltube. Reposition the crank handle back into transport position so it will not be sticking out (shown below).



**Closing Tarp** – To cover your box, pull the crank handle and rotate it so the handle will be sticking out from the box. Firmly hold onto the crank handle and lift the locking handle up and slowly turn the crank clockwise to unroll the tarp. **CAUTION** The crank will want to spin clockwise on you since there is a high torque being applied to it. If you need to stop, lower the locking handle so it locks in the sprocket first and then let go of the handle. In case your hand slips off the crank handle, quickly let go of the locking handle and the tarp will stop. Unroll the tarp until the rear cross member is sitting on the back of the box. Once the rear crossmember is sitting on the top rail at the rear of the trailer, go to the rear and lock the tarp down if a lock is installed. If installed remove the lynch pin from the handle and rotate the handle downwards. This should cause the hooks to lock under the locking pins on the side of the box. Secure the handle in the locked position with the lynch pin. Go to the front and remove any slack in the tarp by cranking it counter clockwise.