

# *Michels*

## **ENVIRO I**

### **Single Tension Control Dual Crank**

#### INSTALLATION INSTRUCTIONS

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**PLEASE READ ENTIRE INSTRUCTIONS BEFORE BEGINNING**

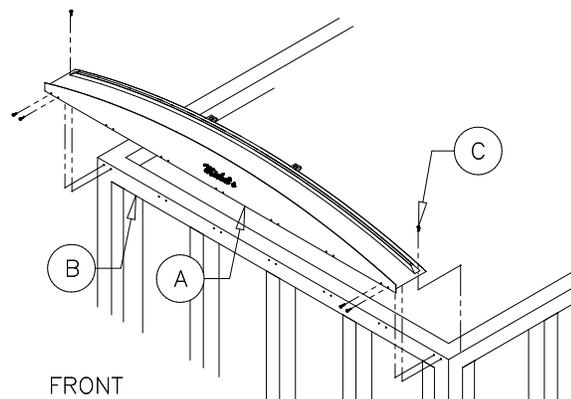
**THESE INSTRUCTIONS ARE FOR A STANDARD ROLLING TARP THAT LOCKS CLOSED ON THE DRIVER'S SIDE.**

**Step 1: Front Hood Installation**

(See Figure 1)

**Procedure:** Center the front hood on the front wall of the trailer with the lower 1-inch flange (A) positioned flush against the outside front edge of the trailer. If the hood is notched on the front corners then the hood is to be positioned flush against the inside front edge of the trailer. Using a 3/16" drill bit, drill 14 holes through the 1inch flange and into the box wall (B) placing 2 holes at approximately every 15 inches (see Figure 1). Secure the front hood to the trailer using the 1/4"x1" lag screws (C) provided. Drill through the top portion on each side of the front hood and secure using 1/4"x1" lag screws (C).

Figure 1



**Step 2: Rear Hood Installation**

(See Figure 1)

**Procedure:** Center the rear hood on the rear ledge of the trailer with the lower 1inch flange positioned flush against the outside rear edge of the trailer. If the rear hood is notched on the corners then it is to be positioned against the inside rear edge of the trailer. Note: Continue from Step 1 to complete the rear hood installation.

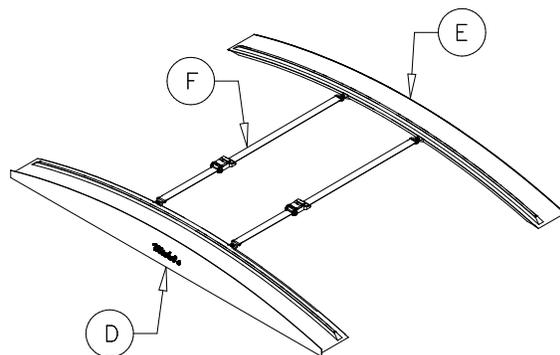
**Step 3: Optional Ratchet & Strap Installation**

(See Figure 2)

**Procedure:** Insert the bar-hooks through the washer welded to the front (D) and rear (E) hoods. The location of the ratchet (F) is not critical. Adjust the straps so they are reasonably tight.

Note: Do not over tighten the straps or the front and rear hood will deform.

Figure 2



**Step 4: Optional Hoop Installation**

(See Figure 3)

**Procedure:** Three, four or five hoops (J) are provided according to the length of the trailer. Equally space the hoop holders (G) along the length of the trailer and locate the top edge of the hoop holder 1inch down from the top edge of the inside trailer wall. Once in place mark the position of the hoop holder and drill two 3/16" holes into the trailer wall. Secure the hoop holder using the 1/4"x1" lag screws provided. Follow this procedure to the remaining hoop holders making sure that they are at the same level, equally spaced, and directly across from each other. Insert bent angle (I) with one end fitted into the hoop holder (G) and the other end in the hoop (J), then repeat for the opposite side of the trailer. Measure the vertical distance from the inside of the trailer floor to the top center of the front or rear hood. Record the measured distance. Center the hoop on the bent angles (I) and measure the vertical distance from the inside trailer floor to the top center of the hoop. The measurement to the top of the hoop should be 3/4 inch greater than the distance from the trailer floor to the top of either hood. If the distance is less than or greater than the required 3/4 inch, adjust the hoop and bent angles accordingly. Weld the hoop to the bent angles making sure that the hoop is parallel with the bent angles (see Figure 3).

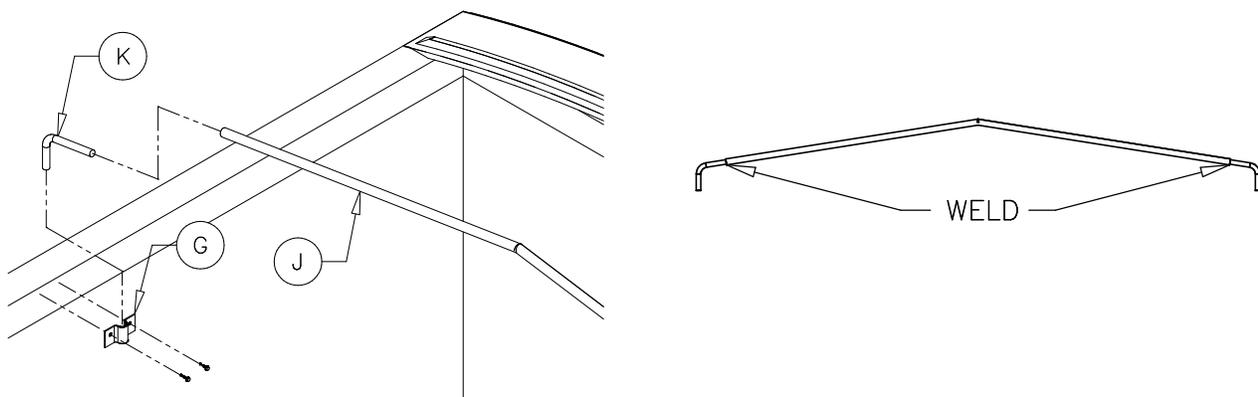


Figure 3

**Step 5: Holdback (Tension Control Unit) & Filler Plate Installation**

(See Figure 4)

**Note:** Standard Rolling Tarps have the Holdback System mounted on the driver side. Reverse rolling tarps have the Holdback System mounted on the passenger side.

**Procedure:** To mount the front and rear holdbacks (2), clamp the top flange 1/4 inch lower than the upper edge of the trailer. Be sure that the 1-1/4 inch square tubing is facing down. Make sure that the PVC cable guide is approximately 1-1/2 inches ahead of the front/rear of the trailer. Predrill a 5/16" hole through the 1 inch flange and into the lip of the trailer, spacing each hole at approximately every 15 inches. Secure the holdbacks to the box with the 3/8"x1" self-threading bolts provided. After both holdbacks are secured mount the filler plate (3).

**Note:** In most cases the filler plate will have to be cut shorter depending on the length of the trailer. Do not leave a space between the holdbacks and the filler plate.

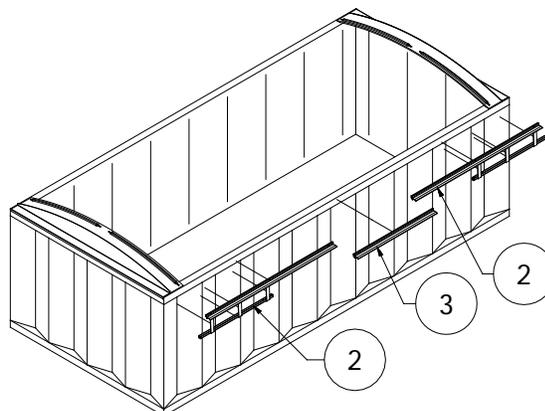


Figure 4

**Step 6: Round Flip-Release Tarp Stop Installation**  
 (See Figure 5-7)

Procedure: Locate the front round bracket (6) 10 inches in from the face of the front of the hood and 3/4" lower than the top edge of the trailer. Using a 5/16" drill bit, drill two holes through the predrilled holes in the bracket and into the trailer. Secure the bracket to the trailer using two 3/8" X 1\_1/4" self-threading bolts (5) provided. Remove the 1/4" X 3" hex bolt (7) from the flip-release tarp stop (4). Insert the bolt through the bracket (6) and through the tarp stop (4). Secure using the 1/4" lock nut. Torque the bolt appropriately so the flip-release tarp stop will remain in the unlocked position (see Figure 8). Remove the quick pin from the bottom hole of the flip-release tarp stop and adjust the tarp stop so it is in the unlocked position (see Figure 8). Install the rear bracket 10 inches in from the face of the rear end cap and 3/4" lower than the top edge of the trailer. Evenly space the remaining flip-release tarp stops along the same side of the trailer making sure to mount the brackets 3/4" lower than the top edge of the trailer. Position the traveling tarp pipe (9) in the lower seat of the round brackets (6) (see Figure 7-8). Then place the loading tarp pipe (8) in the higher seat of the bracket. Adjust both tarps so that both tarps are two inches in from the wind deflector on the front hood. Once the tarps are in position, engage the stops into the locked position. Reinsert the quick pins through the bottom holes in the round flip-release stops. Place the travel tarp on top of the trailer on the side with the tarp stops and unroll it some towards the middle of the trailer. The travel tarp has reinforcements and 1 center in it. With it unrolled some, pull the small quick release pipe and tarp down into the tarp stops. Place the loading tarp on top of the travel tarp on top of the trailer and unroll it towards the middle as well. The loading tarp has 2 loading holes and no center rod in it. With it unrolled some, pull the large quick release pipe and tarp down into the tarp stops. Position the travel tarp pipe (9) in the lower seat while the loading tarp pipe is in the higher seat of the round brackets (6). Adjust both tarps so that both tarps are two inches in from the wind deflector on the front hood. Once the tarps are in position, engage the stops into the locked position. Reinsert the quick pins through the bottom holes in the round flip-release stops.

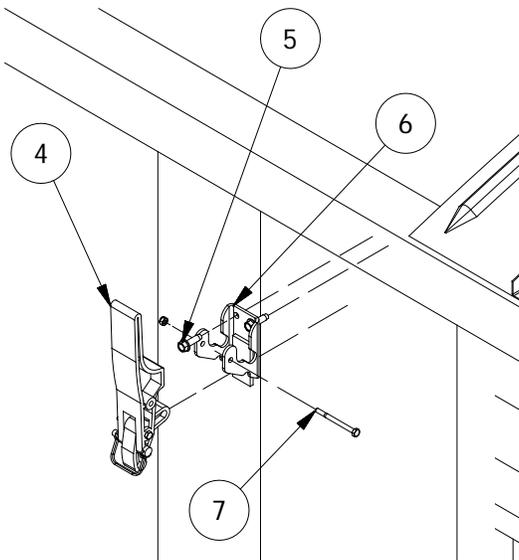


Figure 5

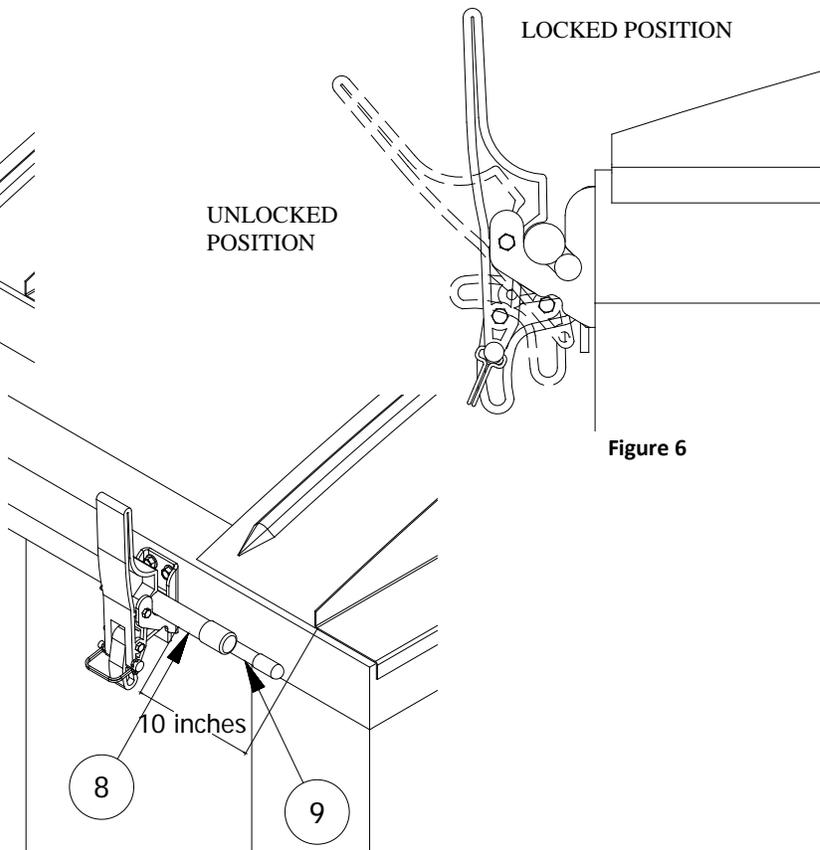


Figure 6

Figure 7

**Step 7: Crank & Crank Lock Installation**

(See Figure 8)

Procedure: Mount the spring lock brackets to the trailer to secure the crank assembly. Position on the bottom of the trailer or the catwalk depending on the configuration of the trailer. Drill 5/16" holes through the brackets and trailer and secure with 3/8"x1\_1/4" self-threading bolts or drill 3/8" holes and bolt on with 3/8" bolts. You may want to remove the crank lock from the bracket and bolt it directly to the catwalk or ladder. With the travel tarp fully unrolled, slide the rear-beveled pulley stamped FRONT REVERSE (14) onto the rolltube of the travel tarp with the small flange sliding on first. Slide the universal joint and shaft onto the spline. Insert quick pin through universal joint. Insert the crank handle assembly into the crankshaft. Pull / rotate the crank handle (11) towards the trailer so the crankshaft locks into the spring lock bracket (10). The crank handle should have approximately 30 lbs of force applied to it to lock it in the spring lock bracket when the tarp is locked tight under the locking flange. If there is not enough or too much tension on the tarp, then change the position of the universal joint on the spline. Adjust the angle of the spring lock so that the crank handle seats properly in the spring lock. Adjust the length and rotation of the crank handle in the shaft and drill a 1/4" hole through the crankshaft and handle. Fasten the crank handle to the shaft with the 1/4" x 1\_3/4" hex bolt and 1/4" nylon lock nut provided. Roll the loading tarp tight up against the tarp stops and lock the shaft into the spring lock. Fasten the crank handle to the shaft with the 1/4"x1\_3/4" hex bolt and 1/4" nylon lock nut.

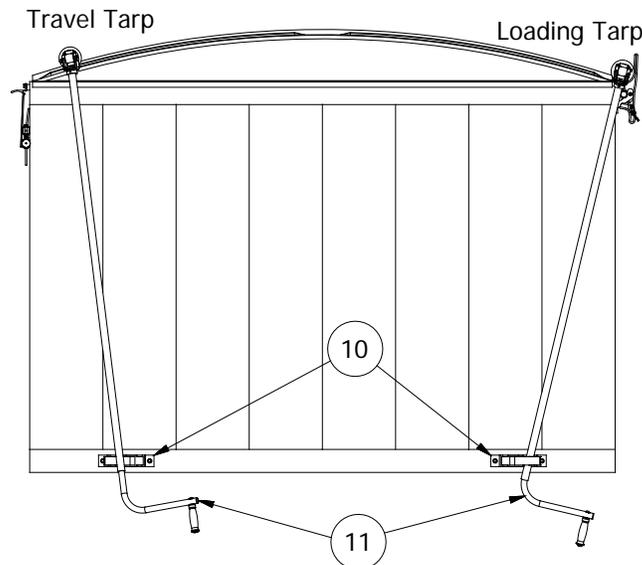


Figure 8

**Step 8: Beveled Cable Pulleys Installation & Tension Control Adjustment**

(See Figure 9-10)

**Installing cable onto rear pulley:** Roll the traveling tarp (12) open, keeping tension on the opposite end of the crank handle to make the tarp roll evenly. Pull the cable from the rear holdback system (13) towards the rear beveled pulley stamped FRONT REVERSE (14). Insert cable end into pulley slot and rotate beveled pulley 2 turns for an 8 ½' trailer or 2 ¾ turns for an 8' trailer. Rotate the pulley counter-clockwise (the cable will roll off the bottom of the pulley). Properly position the beveled pulley on the rolltube so that the nylon cable insert (15) on the holdback lines up with the small diameter on the pulley. Tighten the 1/4" set screws to hold the pulley in place.

**Installing cable onto front beveled pulleys:** Pull the cable from the front holdback system (18) towards the front beveled pulley on the traveling tarp (12). Repeat the rear beveled pulley procedure. You may have to cut the rolltube so the bevel pulley is an inch away from the front of the trailer. Roll the traveling tarp open and closed several times checking each time to make sure that the cable follows in the pulley grooves and the tarp rolls evenly. If the cable does not follow in the grooves, move the beveled pulley in or out until the correct position is achieved. If the tarp does not roll evenly, roll the tarp to the open position, loosen the 1/4"x3/8" set screws in the front and rear pulleys and increase the cable wrap. This

**Step 9: Beveled Cable Pulleys Installation & Tension Control Adjustment Cont.**

will increase the tension. Do not allow the pulley to have less than one complete wrap of cable when the tarp is in the open position. When finished, secure the beveled pulley cap (19) to the open end of the front beveled pulley (20). Once the traveling tarp is aligned and working properly, roll the loading tarp closed and open several times also to see if it rolls correctly. Repeat the aligning process if the tarp is rolling unevenly.

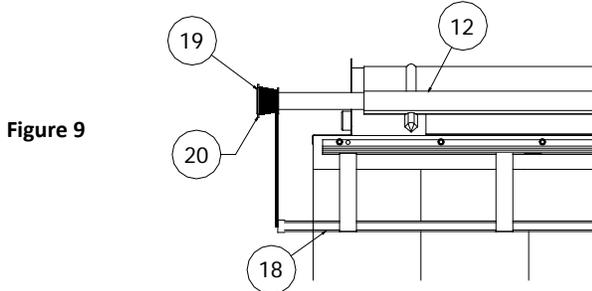


Figure 9

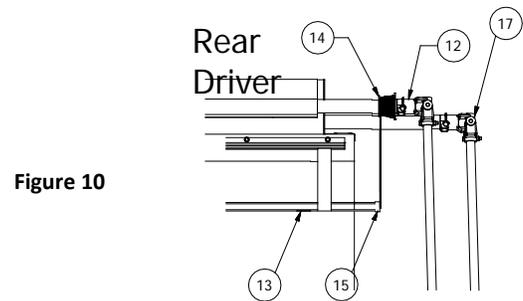


Figure 10

**Step 10: Load-Loc Installation for Loading Tarp.**

(See Figure 11)

Open the travel tarp and roll up to the tarp stop side and close the loading tarp over top of the travel tarp so it is locked under the locking flange. Cut the loading tarp rolltube so it sticks 3" past the travel tarp rolltube. Slide the load-loc return into the loading tarp rolltube. Tap the plastic plug into the rolltube and secure with a #8x3/8" self-tapping screw. Thread the 1/2" eye bolt with a washer on into the 5" offset steel bracket. Mount the 5" offset bracket to the top sill of the trailer on the same side as the rolltube. Place it so it so the cable or bevel pulley doesn't hit it. Once positioned properly mark the 2 holes. Drill 5/16" holes at your mark and secure the bracket with (2) 3/8"x1\_1/4" self-threading bolts. Untie the knot out of the rope on the load-loc and thread the rope through the eyebolt. Apply some tension to the rope and tie it securely to the eyebolt.



Figure 11

**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.

**Note:** We reserve the right to make improvements; therefore specifications are subject to change without notice.