Load Loc-Farm,Semi
Select-Farm,Semi
Maximizer-Farm,Semi
Grain Carts
Grain Bagger
Spreaders

Side Rolling Tarp
Systems Under 9’ 6” Wide

CRANK STYLE

INSTALLATION INSTRUCTIONS

MICHEL’S INDUSTRIES, LTD.
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EM: sales@michels.ca www.michels.ca

Notes of Operation:

ALWAYS OPEN THE TARP INTO THE WIND AND CLOSE IT WITH THE WIND TO PREVENT DAMAGE

IF ELECTRIC, DO NOT OPERATE TARP WHILE MOVING, ALWAYS DISCONNECT POWER TO TRAILER WHEN DRIVING IF WIRELESS SYSTEM IS INSTALLED

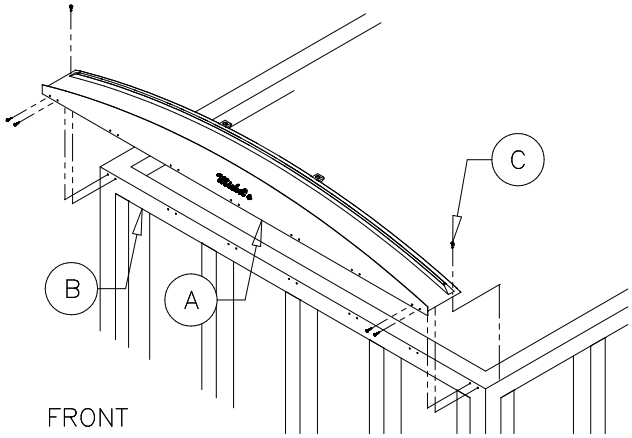
PLEASE READ ENTIRE INSTRUCTIONS BEFORE BEGINNING

Note: THESE INSTRUCTIONS ARE FOR A *STANDARD ROLLING* TARP THAT LOCKS CLOSED ON THE *DRIVER'S* SIDE.
IF ELECTRIC DRIVE, DO THE FOLLOWING FIRST AND THEN PROCEED TO THE ELECTRIC INSTALLATION INTRUCTIONS

Step 1: Front Hood Installation

(See Figure 1)
Procedure: Center the front hood which has a wind deflector 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

Option 1 of 2: Semi Rear Hoods

(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*.

Option 2 of 2: Farm Rear Box Hoods

(See Figure 2)

Procedure: Temporarily place the rear hood on the rear ledge of the box with its flange (D) inside the box. Place two bent angles (E) into the tubular supports (F), which are welded to the underside of the rear hood. Slide the hoop holder bracket (G) vertically until it is positioned just below the bend in the bent angle (E). Mark hoop holder holes on the inside box wall and secure the hoop holder to the box wall using the 1/4"x1" lag screws provided. Apply firm downward force on the ends of the rear hood and clamp the hood down on both sides. Drill a 1/4" hole through the bottom area of the bent angle (E). Be sure to drill the hole as close to the bottom of the hoop holder as possible to prevent the rear hood from moving. Insert the hitch pin (H). Weld the bent angle to the tube (F) on steel hoods only. For aluminum hoods drill a 1/4" hole through the tube (F) and the bent angle (E). Secure using the roll pin (I) provided.

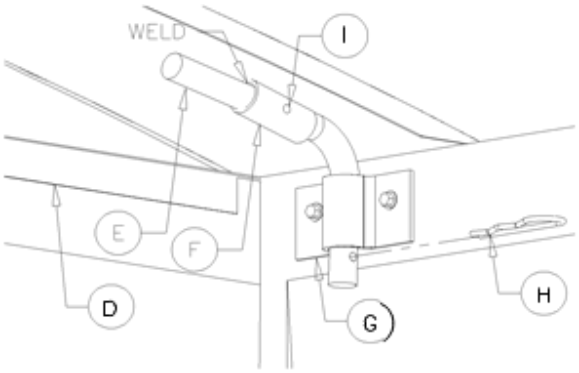


Figure 2

Step 3: Optional Ratchet & Strap Installation

(See Figure 3)

Procedure: Insert the bar-hooks through the washer welded to the front (D) and rear (E) hoods. Slide the vinyl ratchet covers onto the strap before hooking up the ratchet, the location of the ratchet (F) is not critical. Adjust the straps so they are reasonably tight, once tight slide the ratchet covers over the ratchet assemblies. With ratchet brackets being optional, they may have to be bolted in with 5/16 truss head bolts, to accommodate ratchet straps in standard hoods.

Note: *Do not overtighten the straps or the front and rear hood will deform.*

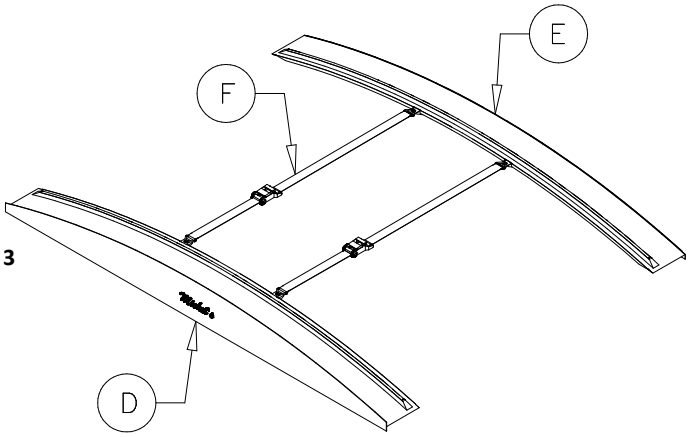


Figure 3

Step 4: Optional Hoop Installation

Please proceed to the Option which best suits your application. If order does not include hoops please proceed to step 5.

Hoop Holder Spacer Installation

(See Figure 4)

Optional: Use the Hoop Holder Spacers if the top sill on the unit is less than 2 inches deep and does not have the adequate room to mount the hoops properly, as described in the below steps. These are sent standard for grain carts, spreaders, gravity wagons and grain baggers to be used on either hoops or tarp stops.

Procedure: Mount the hoop holder spacers (H) where the hoops are to be mounted, attach with two 1/4" x 1" self-tapping lags. The remaining hoop holder spacers are to be centered according to the length of the unit, and the number of hoops supplied.

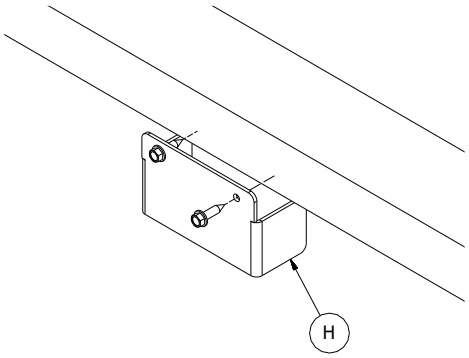


Figure 4

Option 1 of 2: Steel Hoops ***(used on farm boxes and some semi-trailers)***

(See Figure 5, 6)

Procedure: 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 1 inch 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 (K) 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 (K) 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 5).

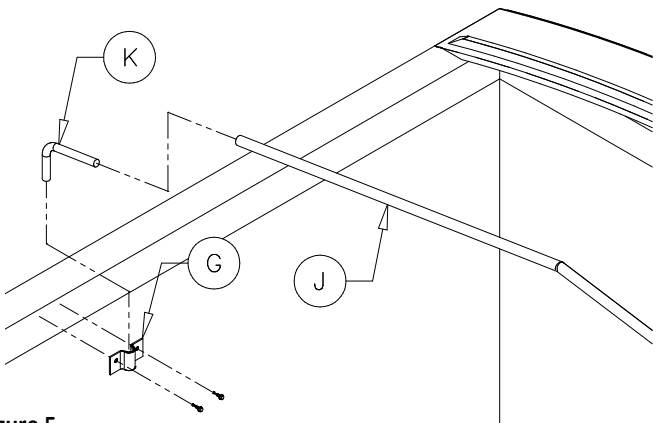


Figure 5

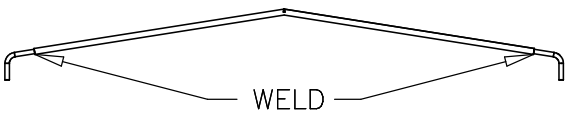


Figure 6

Option 2 of 2: Aluminum Hoops with Dimple ***(Typically used with fiberglass center rod in tarp)***

(Figure 7, 8)

Procedure: 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 (K) 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 (K) 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. Drill and bolt the hoop to the bent angles using 1/4x1-3/4 inch bolts provided making sure that the hoop is parallel with the bent angles (see Figure 8).

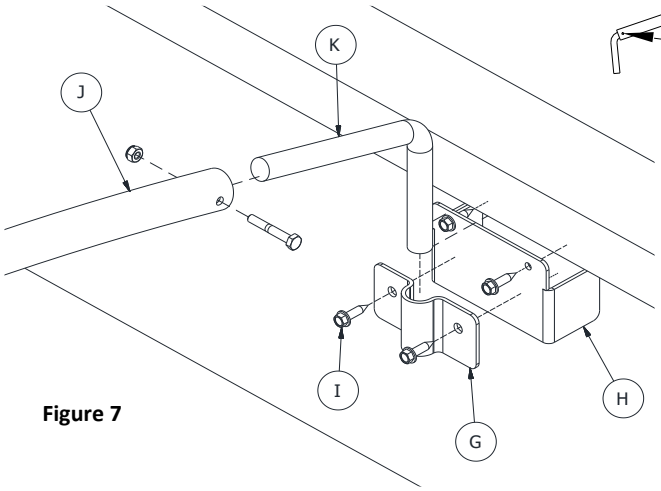


Figure 7

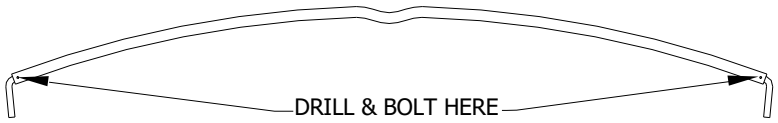


Figure 8

Step 5: Tension Control Unit & Filler Plate Installation

Please proceed to the Option which best suits your application.

Option 1 of 2: Select or Maximizer ***(Springs and Cables on front and back for tension)***

(See Figure 9)

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 (D), 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 3/16" hole through the 1 inch flange and into the lip of the trailer, 1/2" down from the top of the locking flange along the extruded line, spacing each hole at approximately every 15 inches. Secure the holdbacks to the box with the 1/4"x1" lag screws provided. After both holdbacks are secured mount the filler plate (E).

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.

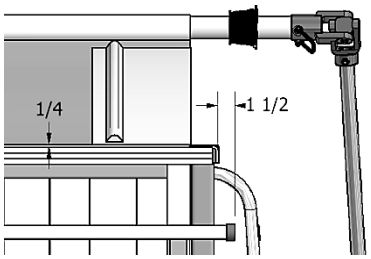
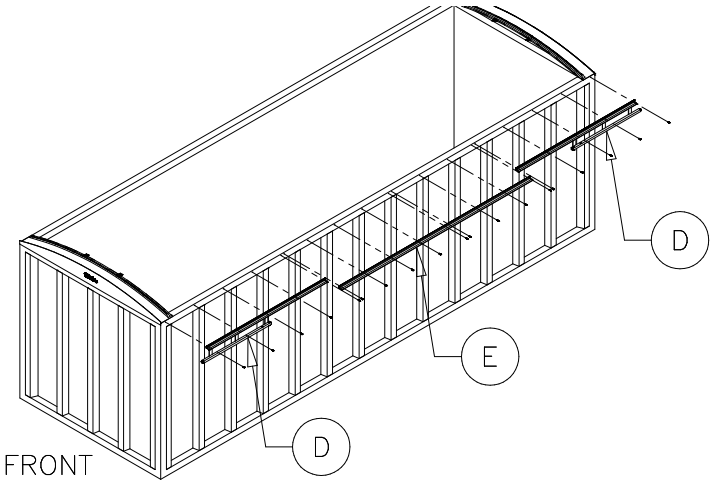


Figure 9



Note: When installing holdbacks on a unit with a side wall as shown in Figure 9A mount a spacer behind the flat to prevent the holdback from bending and deforming.

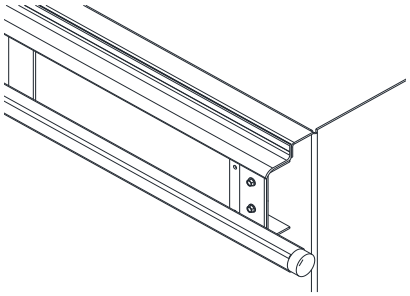


Figure 9A

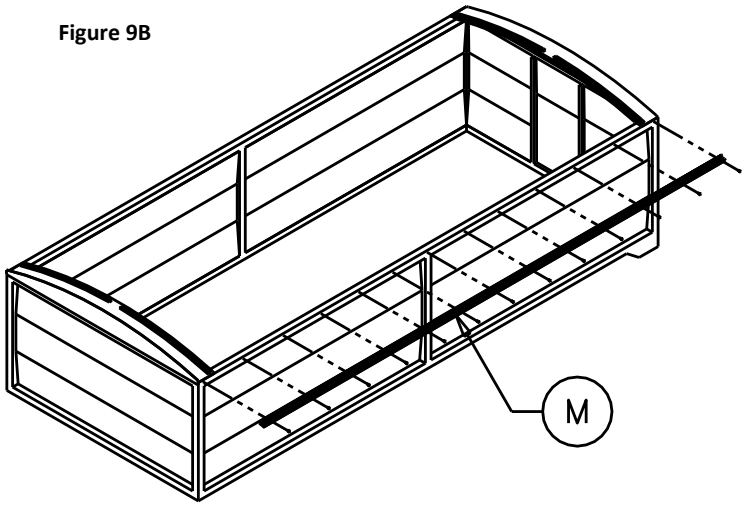
Option 2 of 2: Load-Loc (Rope on front for tension)

(See Figure 9B)

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

Procedure: To mount the latch plate (M), clamp the top flange 1/4" lower than the upper edge of the box, making sure that the latch plate is all the way to the front and parallel to the box lip. Predrill a 3/16" hole through the 1 inch flange and into the lip of the box, spacing each hole at approximately every 15 inches. Secure the latch plate to the box with the 1/4"x1" lag screws provided.

Figure 9B



Note: In most cases the latch plate will have to be cut shorter depending on the length of the box.

Step 6: Tarp Stop Spacer Installation

(See Figure 10)

Optional: Use the Tarp Stop Spacers if the top sill on the unit is less than 2 inches deep and does not have the adequate room to mount the tarp stops properly, as described in the below steps. These are sent standard for grain carts, spreaders, gravity wagons and grain baggers to be used on either hoops or tarp stops.

Procedure: Mount the tarp stop spacers (H) where the tarp stops are to be mounted, (See Step 7) attach with two 1/4" x 1" self-tapping lags. The remaining tarp stop spacers are to be centered according to the length of the unit, and the number of tarp stops supplied.

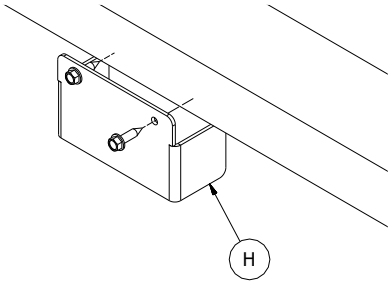


Figure 10

Step 7: Tarp Stop Installation

Please proceed to the Option which best suits your application.

Option 1 of 2: Round Tarp Stop

(See Figure 11)

Procedure: Raise the roll-tube and place it on the top passenger side of the bows and end caps making sure that the roll tube spline is at the rear of the trailer. Reverse rolls would be placed on the driver side. Roll out the tarp to the driver side (passenger side for reverse roll). Position the tarp so that the material sits 2 inches in from the face of the front end cap. Smoothen the tarp out and apply as much tension to it as possible by pulling down on the loose end of the tarp. The pocket holding the quick release pipe (H) should hang down the side of the trailer approximately 3-1/2 inches. The quick release pipe (1-1/8" pipe in the tarps pocket) will be held against the side of the trailer by the round tarp stops (I) shown in Figure 11. Make sure the tarp material is 2 inches in from the face of the front end cap. Mount the front round tarp stop 4 inches in from the front edge of the tarp material. Drill a 5/16" hole through the predrilled holes in the tarp stop and into the trailer. Secure the stops using the 3/8"x1-1/4" self-threading bolts provided. Next mount the rear tarp stop 4 inches in from the rear edge of the tarp material, ensure the tarp material is pulled tight from end to end. The remaining round tarp stops are to be centered according to the length of the trailer. Make sure that the quick release pipe (H) is positioned parallel with the trailer lip.

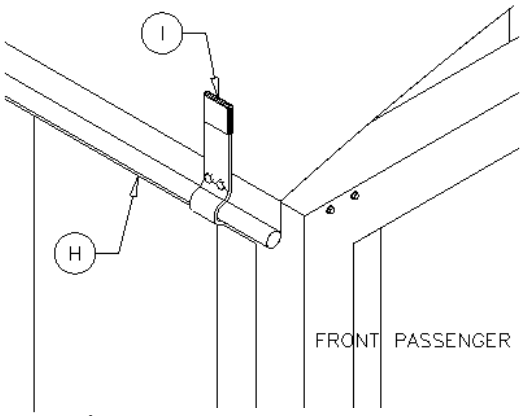


Figure 11

Option 2 of 2: Round Flip-Release Tarp Stop

(See Figure 12-14)

Procedure: Locate the front round bracket (J) 4 inches in from the face of the front end cap 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"x1-1/4" self-threading bolts (K) provided. Remove the 1/4"x3" hex bolt (L) from the flip-release tarp stop (M). Insert the bolt through the bracket (J) and through the tarp stop (M). 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 14). 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 14). Install the rear bracket 4 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 quick release pipe (N) in the round brackets (J) (see Figure 12-13). Adjust the tarp so that it sits two inches in from wind deflector on the front end cap. Once the tarp is in position engage the stops into the locked position (see Figure 14). Reinsert the quick pins through the bottom holes in the round flip-release stops. After all the tarp stops are secured in the locked position, secure the small

plastic clamps (O) to the quick release pipe in front of the first tarp stop and behind the last tarp stop with a #10 x ¾" wafer tek screw (P) to ensure the quick release pipe from moving.

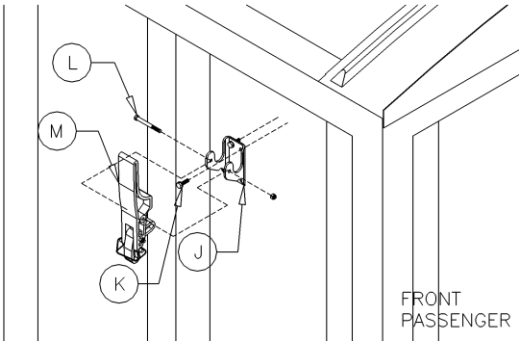


Figure 12 Optional

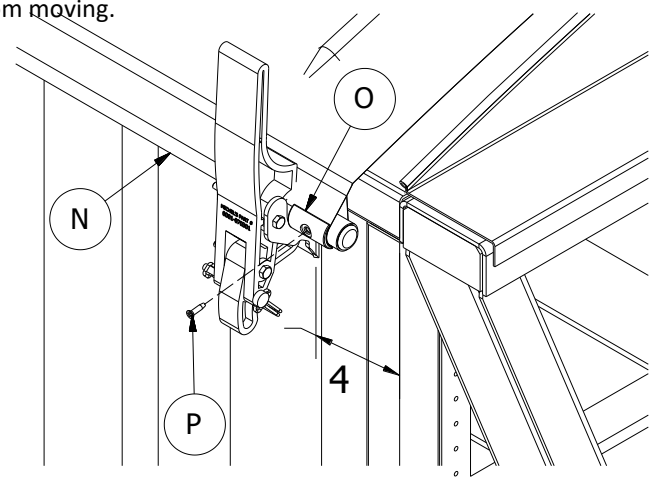


Figure 13 Optional

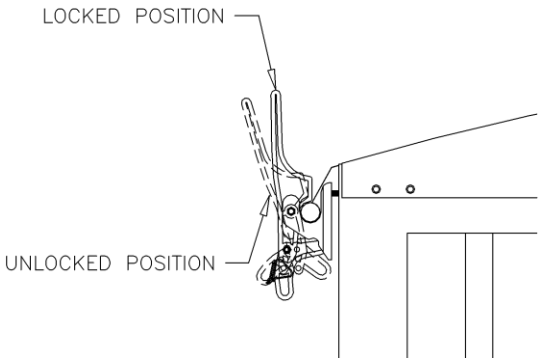


Figure 14 Optional

Step 8: Spring Lock Bracket Installation

(See Figure 15)

NOTE: *If it's a silage end gate the spring lock brackets get mounted on the side of the box to allow the end gate to open and close.*

If ordered as an electric without backup crank skip to step 10.

Drill a 5/16" hole through the predrilled holes in the spring lock bracket and into the box. Secure the bracket with the 3/8"x1-1/4" self-threading bolts provided. Lock the tarp in the closed position, engaging the spring lock (E). Adjust the angle of the spring lock so that the crank handles seats properly in the spring lock. Make sure that the spring lock bracket does not interfere with the taillights.

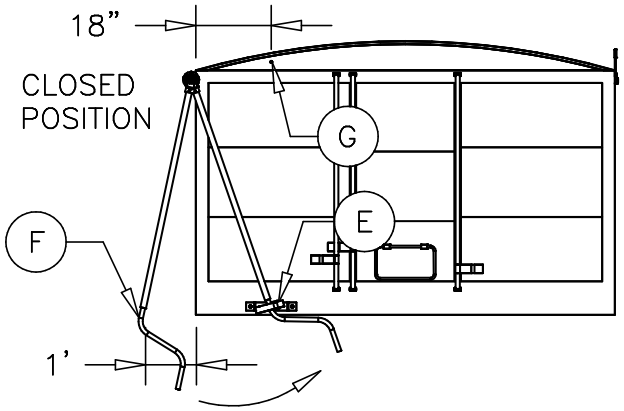
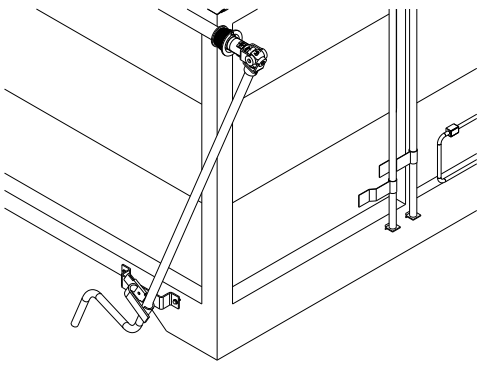


Figure 15



OPTIONAL SILAGE GATE INSTALLATION

Optional: Universal Crank Lock Bracket

Procedure: (See Figure 16-17)

Assemble the spring lock bracket shown below. Bolt the vertical supports (A) to the middle supports (B), (If Crank Style) Bolt steel retainers (C) and plastic spring retainers (D) with a 3/8"x1-1/2" hex bolts, flat washer and nylon nut. Bolt the horizontal supports (E) to the mounting brackets (F) and the middle supports (B) with 3/8" bolts and nylon lock nuts. Do not tighten bolts until it's fully installed on the cart. Depending on your cart the mounting bracket will lag into the grain tank wall or into support tubing's. If it is mounting into support tubing's determine the width and bolt together the middle supports to achieve your desired width. If it is mounting into the wall then set it so it's about 24" between the vertical supports. Center the bracket on the back of the cart and mark your holes. Drill 5/16" holes at your marks and secure the bracket to the cart with 3/8"x1-1/4" self-tapping bolts. With vertical supports secured rotate the horizontal supports up and lag the mounting brackets to the cart with 3/8"x1-1/4" self-tapping bolts. You may need to shorten the horizontal supports. Tighten all the bolts on the bracket with steel retainers on an angle shown here (If Crank Style).

On Electric Units the Pivot Arm will attach to this bracket as per instruction manual.

Figure 16

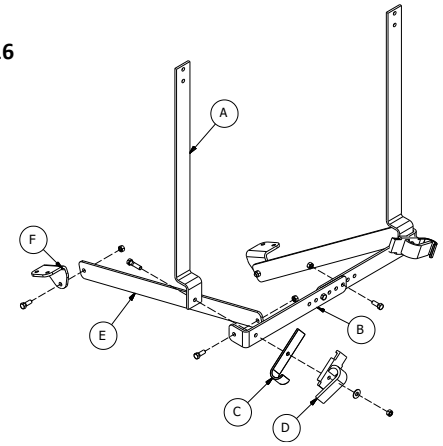
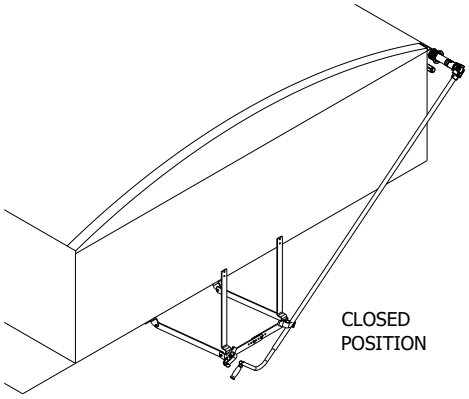


Figure 17



Step 9: Crank & Crank Lock Installation

(See Figure 18)

Procedure: With the tarp roll hanging under the locking flange, slide the rear beveled pulley stamped FRONT REVERSE (A) onto the roll-tube with the small flange sliding on first. Slide the universal joint (B) and shaft onto the spline (C) so that the end of the crank is on the outside of the box by approximately 1ft (see Figure 15).Insert quick pin (D) through the universal joint. Pull the crank towards the box where the spring lock bracket (E) is mounted. **Note:** The crank handle should have approximately 30 lbs. of force applied to it. If there is not enough force applied to the crank handle then the position of the universal joint must be altered.

Adjust the length of the crank handle (F) and drill a 1/4" hole through the crank shaft and handle. Fasten the crank handle to the shaft with the 1/4"x1-3/4" hex bolt and 1/4" nylon lock nut provided.

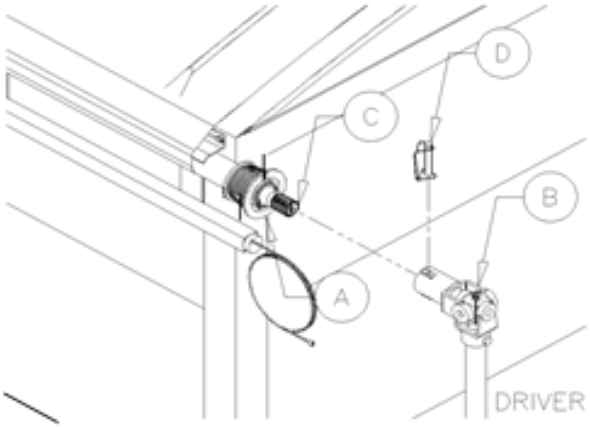


Figure 18

Step 10: Tension Control Adjustment

Option 1 of 2: Beveled Cable Pulley Installation

(See Figures 19-21)

Note: *When rolling the tarp to the open position, tension must be kept on the opposite end of the crank to keep the tarp rolling evenly. Procedure: Roll the tarp to the open position. Adjust the angle of the spring lock to properly seat the crank handle.*

Installing cable onto rear beveled pulley: Slide the correct beveled pulley onto the roll tube if not done already from crank installation, pull the cable from the rear holdback system (K) (see Figure 21) towards the rear beveled pulley stamped FRONT REVERSE on a standard roll locking closed on the driver's side (A). Insert cable end into pulley slot and rotate beveled pulley 1-3/4 turns for an 8-1/2ft box or 2-1/4 turns for an 8ft box. Rotate the pulley from the underside of it on the large diameter. Properly position the beveled pulley on the roll-tube so that the nylon cable guide (L) on the holdback lines up with the small diameter on the pulley (see Figure 21). Tighten the 1/4" set screws (H) to hold the pulley in place.

Installing cable onto front beveled pulley: Pull the cable from the front holdback system towards the front beveled pulley stamped FRONT STANDARD (I). Repeat the rear beveled pulley procedure. Roll the 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" set screws in the front and rear pulleys and increase the cable wrap. This 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 front beveled pulley cap (J) to the open end of the front beveled pulley (I). If you are installing an **electric system do not cut** the front of the roll tube, as it will be needed to drive the tarp.

Note: *The front beveled pulley (I) must never ride on the front hood (see Figure 20).*

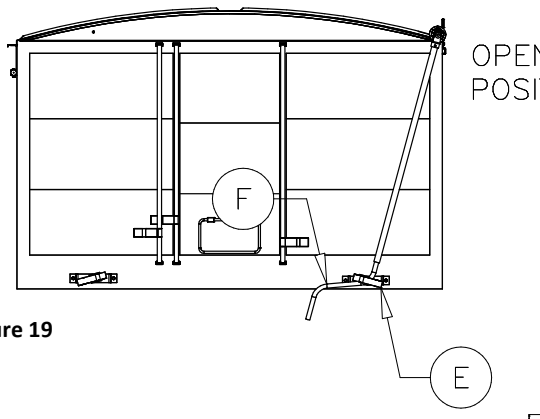


Figure 19

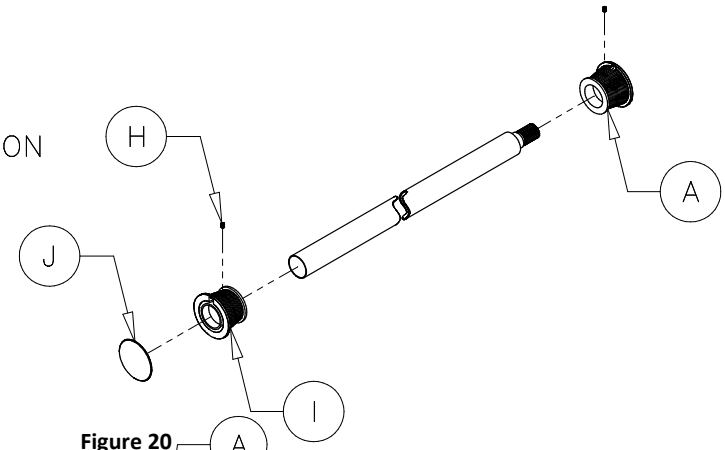


Figure 20

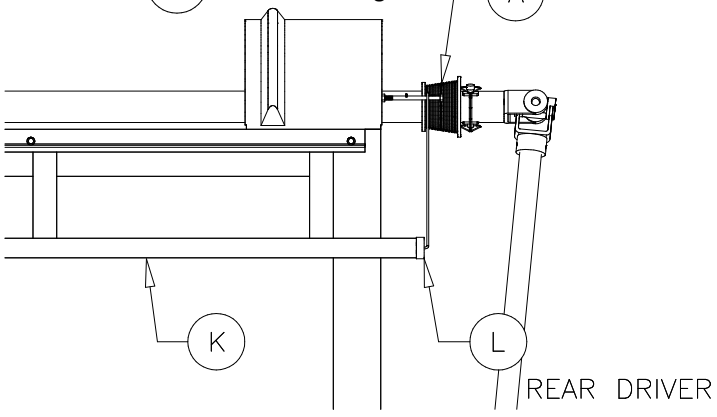


Figure 21

Option 2 of 2: Load-Loc Return Installation

(See Figure 22-23)

Procedure: First drill an 11/32" hole into the front of latch plate 1 1/2" from the edge of the tarp. Fasten the eyebolt (H) to the latch plate with the 5/16" nut (I) and nylock nut (J). Thread the rope through the eyebolt shown in figure 23 and knot the end of the rope to prevent it from going through the eyebolt. Cut any extra material off and melt the end to prevent it from fraying.

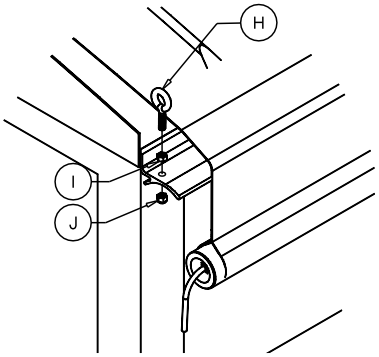


Figure 22

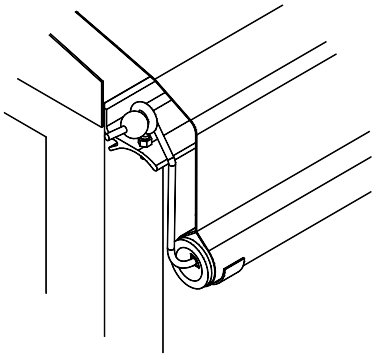


Figure 23

Step 11: Rear Hood Bolt Installation

(See Figure 24 & 25)

Note: *The rear hood bolt (G) prevents the cable from coming into contact with any obstructions when the tarp is open.*

Procedure: Drill a 1/4" hole through the rear hood at approximately 18" from the edge of the rear hood and centered according to the height of the hood (see Figure 24). Fasten the 1/4"x4" hex bolt to the rear hood; making sure that the bolt protrudes out far enough for the cable to rest on it properly when the tarp is in the open position.

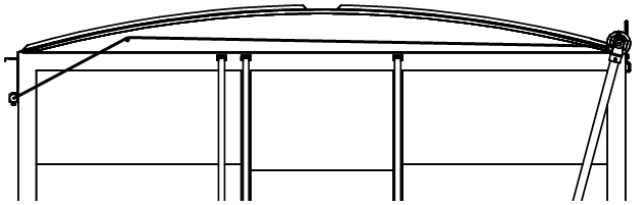


Figure 24

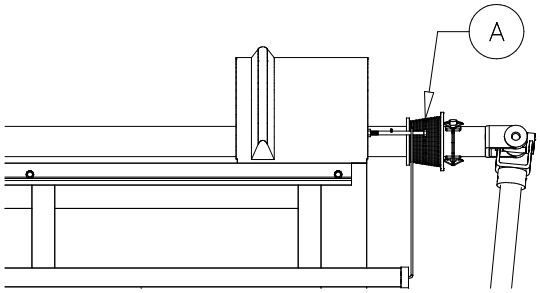


Figure 25

If **Electric** see additional instructions included in your kit.

WARNING:

Crank must be locked for transport in either the fully open or fully closed position. Traveling with the tarp in the open position with the tarp sitting on the hoops will cause premature wear on the tarp material.

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.

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