



INSTALLATION
OPERATION
MAINTENANCE
MANUAL
FOR
MODEL ESR 2000
ELECTRIC LOCK-N-ROLL
TARPING SYSTEM

ATTENTION DISTRIBUTOR: DO NOT DISCARD.
PLEASE GIVE THIS MANUAL TO THE CUSTOMER
WHEN THE UNIT IS DELIVERED.

LEGAL



WARNING: In order to prevent damage, the tarp must always be left in the uncovered position when the truck is not in use for a period of more than 2 consecutive hours.



WARNING: All repairs and parts replacement should be undertaken by qualified technicians. The buyer assumes all risks and liabilities arising out of his or her repairs, modifications, or parts replacement on the original product.



WARNING: Inspect the tarp system before each use for fit, wear and damage. Check tarp system at regular intervals during use. Replace parts at first sign of damage or material wear. If you find anything upon inspection that cannot be corrected, do not use as severe injury could result.



WARNING: Do not operate vehicle until you are certain that the tarp system is properly installed and can be safely operated.



WARNING: Do not operate the tarping system while the vehicle is in motion and make sure the vehicle is clear of any obstructions (such as overhead wires).



CAUTION: Any piece of equipment can be dangerous, even deadly, if not used properly. You are responsible for the proper use of this product and the safe operation of any accessories or related equipment and vehicles. Common sense and caution cannot be built into the equipment and must be supplied by the operator.



CAUTION: If for any reason you do not understand all portions of these instructions and warnings, contact the company at the number listed herein for assistance. Do not use, or allow others to use, the tarp system until you (and others) fully understand its operation, these instructions and warnings. Manufacturer assumes no liability or responsibility for injury or damage caused by improper use or failure to read and follow all instructions and warnings.

ESR2000 SYSTEM INSTALLATION

ESR2000

ELECTRIC LOCK-N-ROLL TARPING SYSTEM

INSTALLATION INSTRUCTIONS

Read and understand these instructions completely before beginning the installation. Use these instructions with the drawings included. Unpack, identify and familiarize yourself with the various components of the unit.

Congratulations on your purchase of a Mountain Tarp ESR2000 Electric Lock-N-Roll 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.

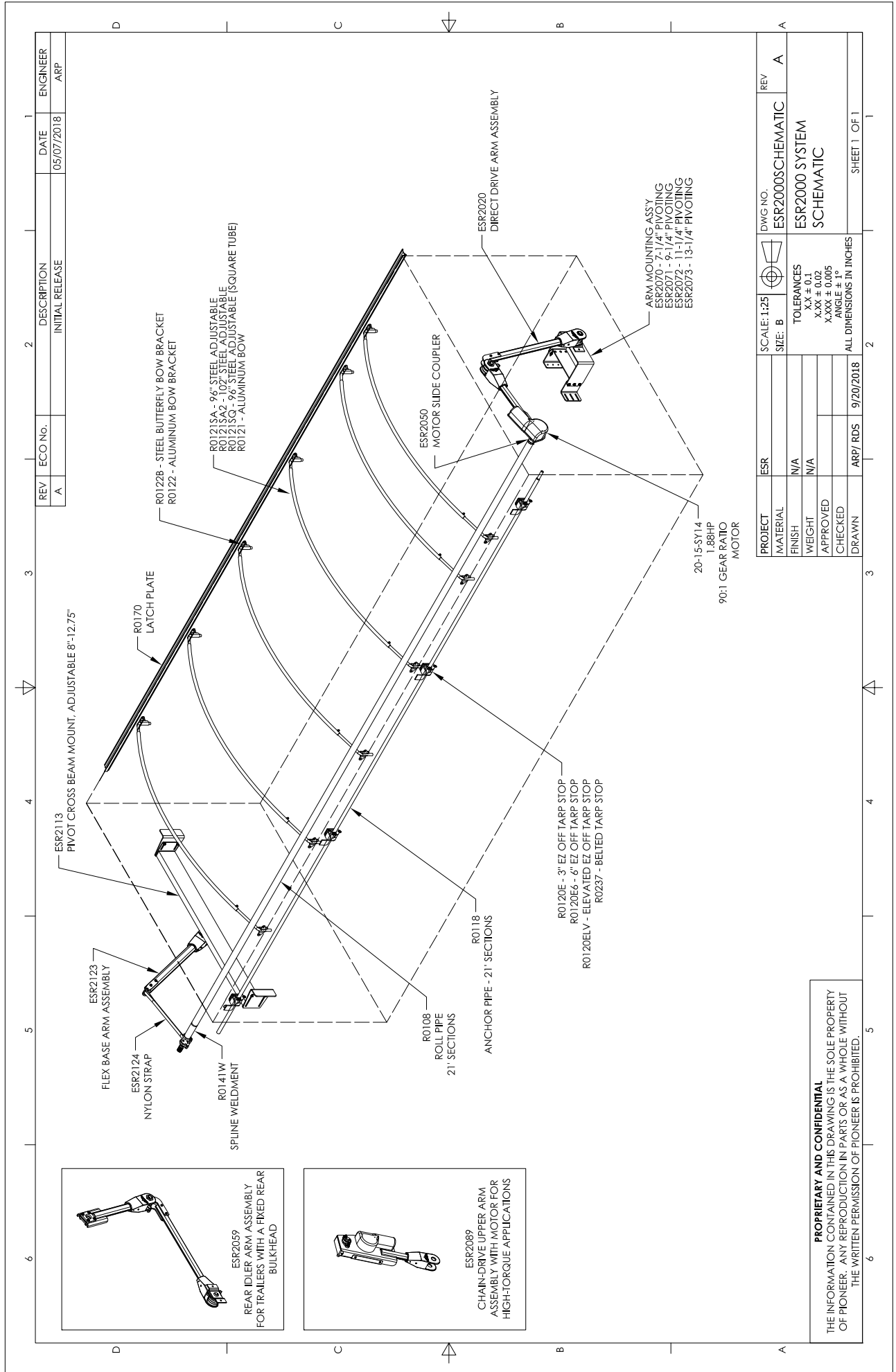
Note: It is important that you inspect your trailer and prepare it for installation by removing any sharp edges or any thing that will cause damage to your tarp. For further technical assistance, contact our corporate headquarters at (800)-248-7717 or email us at sales@mountaintarp.com.

For parts and service, visit us at one of our locations in Kentucky 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.

INDEX

INSTALLING FRONT MASTER BOW	4	INSTALLING ROLL PIPE / ANCHOR PIPE	13
INSTALLING NOSE BONNET	5	INSTALLING TARP	14
INSTALLING REAR MASTER BOW	7	INSTALLING MOTOR COUPLER	15
INSTALLING REAR BONNET	7	ATTACHING REAR ROLL RETURN BUNGEE	16
INSTALLING EZ OFF TARP STOPS	7	INSTALLING CRANK HANDLE	16
INSTALLING LATCH PLATE	8	INSTALLING ELECTRICAL	17
INSTALLING OPTIONAL REAR ROLL RETURN AND ROLLERS	9	INSTALLING THE ALTERNATE REAR ARMS FOR FIXED REAR BULKHEADS	17
INSTALLING FRONT ARM MOUNT	11	INSTALLING THE ALTERNATE REAR ARMS FLEX ARM FOR TAILGATES	19
INSTALLING FRONT ARM ASSEMBLY	12	MAINTENANCE TIPS	20



ESR2000 SYSTEM INSTALLATION

STEP 1: INSTALLING THE FRONT MASTER BOW

1A: Placement of the master bow is dependent on the depth of the cap or bonnet to be installed. In most cases, the Master Bow should be a max of 24".

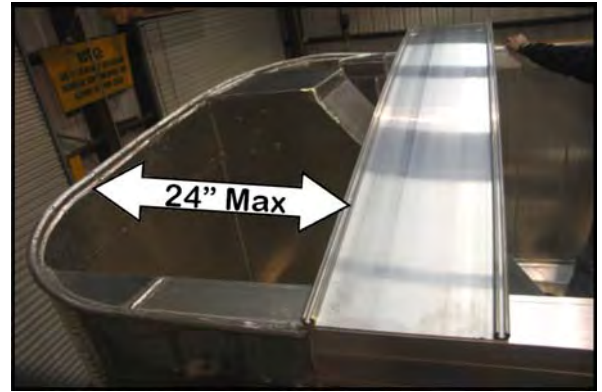


figure 1

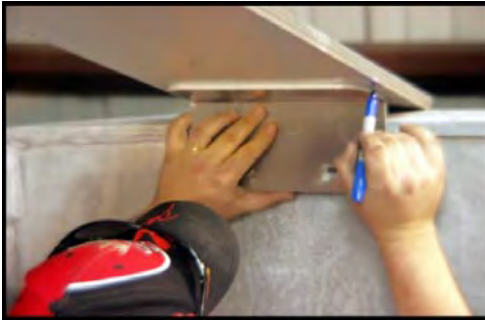


figure 2

1B: Place one edge of the master bow flush with the side of the bed and mark the bottom of the other bow end with the outside edge of trailer. Cut off the excess bow at that mark. After cutting, center the bow legs on both sides flush with the bottom of the master bow and the inside of the trailer. The flange of the leg containing the slots should be pointing down. Mark the leg positions on both sides of the underside of the master bow in preparation for welding.



figure 3a

1C: Remove the master bow. Weld both legs in place using the marks made in the previous step, making sure the flange without the slots is the flange being welded to the master bow.



figure 3b



figure 4a

1D: Use a saw to taper the rear tarp rail on both sides of the master bow, as shown. Use a hammer or file to make sure all edges are smooth to avoid tearing the tarp.

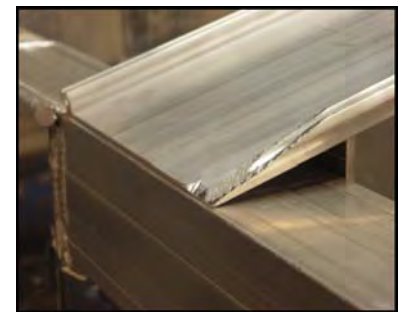


figure 4b

ESR2000 SYSTEM INSTALLATION

STEP 2: INSTALLING THE INTERMEDIATE BOWS

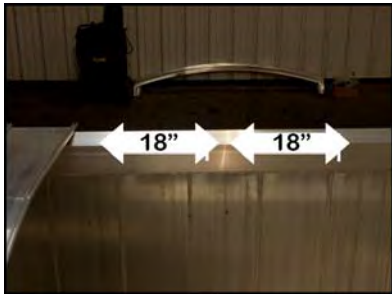


figure 5

2A: Measure 18" back from the front master bow for the first two intermediate bows and mark the location for the bow brackets on both sides of the trailer (figure 5).

2B: Measure 30" from the rear master bow and mark both sides for the rear intermediate bow (figure 6).

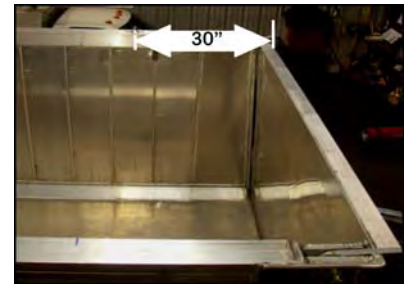


figure 6

2C: Measure and mark both sides of the trailer for the remaining intermediate bow locations on 48" (MAX) centers from the second bow location (figure 7).

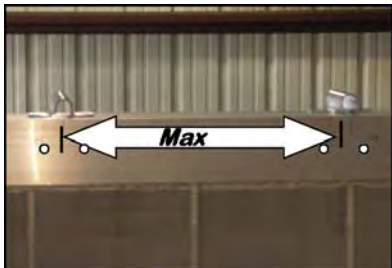


figure 7

2D: Hold a bow bracket on a determined mark and pre-drill, keeping the top of the bracket flush below the top of the trailer. Attach each bracket with the 3/8" machine screws provided (figures 8a & 8b).



figure 8a

2E: Repeat the previous step until a bracket is mounted at all marked locations.



figure 8b

2F: Slide the fixed end of an intermediate bow into a bracket on either side of the trailer. Slide the long end of the bow leg into the other end of the bow, then slide the short end into the other bow bracket. Tighten the bolt on the bow to secure the leg.



figure 9

2F: Repeat the previous step for all remaining intermediate bows. Once all bows are in place inspect their height to make sure the rise is consistent.

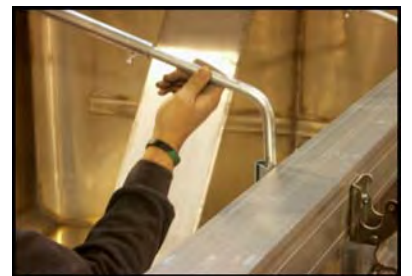


figure 10



figure 11

Note: The bolts may be loosened for adjustment after the bows are in place.



figure 12

ESR2000 SYSTEM INSTALLATION

STEP 3: INSTALLING NOSE BONNET

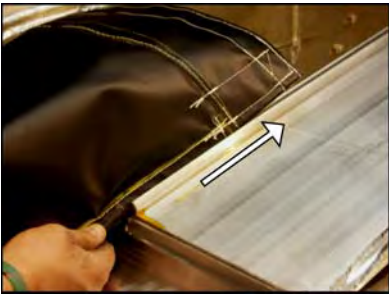


figure 13a

3A: Apply a small amount of lubricant to the front tarp rail on the master bow. Insert the nose bonnet tubing into the tarp rail and slide it to the opposite side (figures 13a & 13b).



figure 13b



figure 14

3B: Work the bonnet over the front of the bulkhead. Align the seam with the top weld, but do not let the seam ride over the front of the bulkhead (figure 14).



figure 15a

3C: Align the bottom of the bonnet along the front. Drill and bolt it in place a minimum of 18" apart using the 3/8" machine bolts provided. Once the front is secured, slide the master bow toward the back to remove any slack and smooth any creases in the bonnet (figures 15a & 15b).

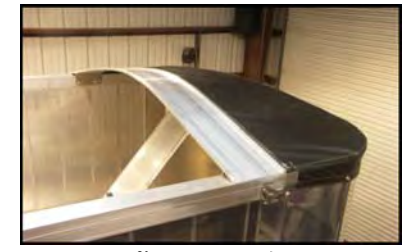


figure 15b



figure 16a

3D: With the bonnet smoothed out, mark the bolting location of the bow legs on both sides of the trailer. Pre-drill the holes at the marks and then bolt the master bow in place using the 3/8" machine bolts provided. (figures 16a & 16b).



figure 16b

ESR2000 SYSTEM INSTALLATION

STEP 4: INSTALLING THE REAR MASTER BOW

- 4A: The rear master bow should be located as close to the tailgate as possible without interfering with the dumping operation of the tailgate. Typically this distance is about 24" (max).
- 4B: Cut the excess off the rear master bow and weld on the bow legs using the same steps as for the front master bow.
- 4C: Attach the Master Bow brackets using the provided 3/8" machine bolts.

STEP 5: INSTALLING THE REAR BONNET

- 5A: Install the Rear Bonnet using similar steps to the installation of the front bonnet.
- 5B: Attach the bonnet around the rear of the trailer, similar to the way the front bonnet was attached.
- Note:** Consideration must be given to whether or not the trailer has a tailgate, and how it will open if there is one.

STEP 6: INSTALLING THE EZ OFF TARP STOPS



figure 17a



figure 17b

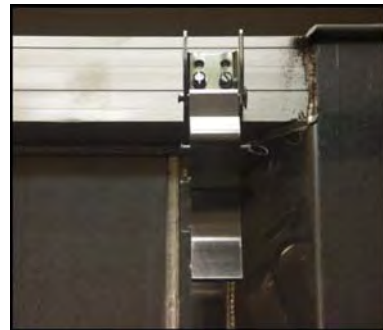


figure 17c

Mount the first EZ OFF on the passenger side of the trailer, 1" back from the front master bow, and 1" below the edge of the trailer. Mount the rear EZ OFF on the passenger side, 1" in front of the rear master bow, or 1" in front of the rear standard if there is no rear master bow. Evenly space the remaining EX OFFs between the front and rear EZ OFF at a maximum of 8' apart.

ESR2000 SYSTEM INSTALLATION

STEP 7: INSTALLING THE LATCH PLATE

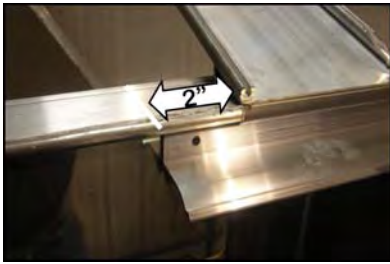


figure 17

7A: Place the front of the latch plate approximately 2" in front of the front master bow and 2 1/2" below the top of the trailer. Pre-drill and bolt in place with the 3/8" machine bolts provided. Maintain a 24" minimum between the bolts. Cap latch plate over the bonnet as shown.



figure 18

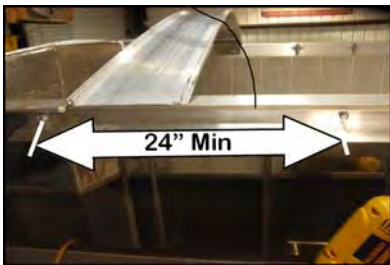


figure 19

7B: Butt latch plates together as shown in figure 20. Maintain a minimum of 3" between the bolts at the joints.

7C: Hold the last section in place and mark it at the middle of the rear master bow. Cut off the excess latch plate. Smooth all edges to avoid tearing or puncturing of the tarp.

Note: Cutting the last section of latch plate can be done in conjunction with the installation of the bungee to ensure that everything fits properly.



figure 21

7D: Place the last bolt a minimum of 2" from the end.

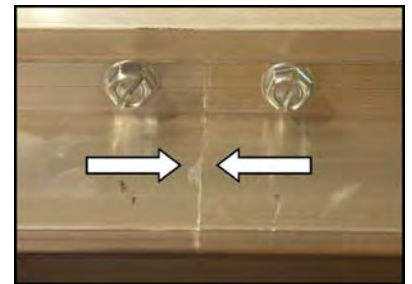


figure 20



figure 22

ESR2000 SYSTEM INSTALLATION

STEP 8: INSTALLING THE OPTIONAL REAR ROLL RETURN AND ROLLERS

8A: If the bungee was delivered assembled, then skip to step 8B.
If not, assemble the bungee system using the following steps:

1. Fold over about 6" of one end of the bungee.
2. Insert the folded end into the square tube cap and insert the pin through the tube cap and between the folds of the bungee. The pin will need to remain in place during the tying operations. Taping or otherwise temporarily securing the pin in place will allow the use of both hands.
3. Fold the tail of the bungee over the main bungee and pass it back through the loop closest to the pin, as shown.
4. Pull the main bungee and the tail tight around the pin. The pin will try and pull out if it is not securely fastened to the tube cap.
5. Thread bungee into the non-roller end of the square tube.
6. Remove the tape or other pin holding means from the tube cap and install the tube cap.
7. Securely fasten the tube cap by adding a short machine screw through the tube and into the tube cap. Make sure the machine screw is short enough that it will not damage the bungee inside the tube.
8. Apply the two roller plates to the roller end of the square tube and loosely bolt in place with the 1/4" bolts and nuts provided. Insert the bolts with the heads on what will be the outside of the tube.
9. Loosely bolt the two rollers in place using the 1/4" bolts and nuts provided, inserting the bolts with the heads out like the previous step. Make sure the bungee is exiting the tube between the two rollers.
10. Tighten all the side plate and roller bolts until the plates are snug on the tube and the rollers are securely fastened but still able to roll freely.
11. Inspect the plastic teardrop and make sure the edges of the small hole on the teardrop are well rounded and free of burrs any sharp objects. This will help prevent premature wear on the bungee.
12. Thread the bungee through the small hole on the teardrop.
13. Tie a "figure 8" knot in the end of the bungee to prevent it from pull- ing back through the teardrop.

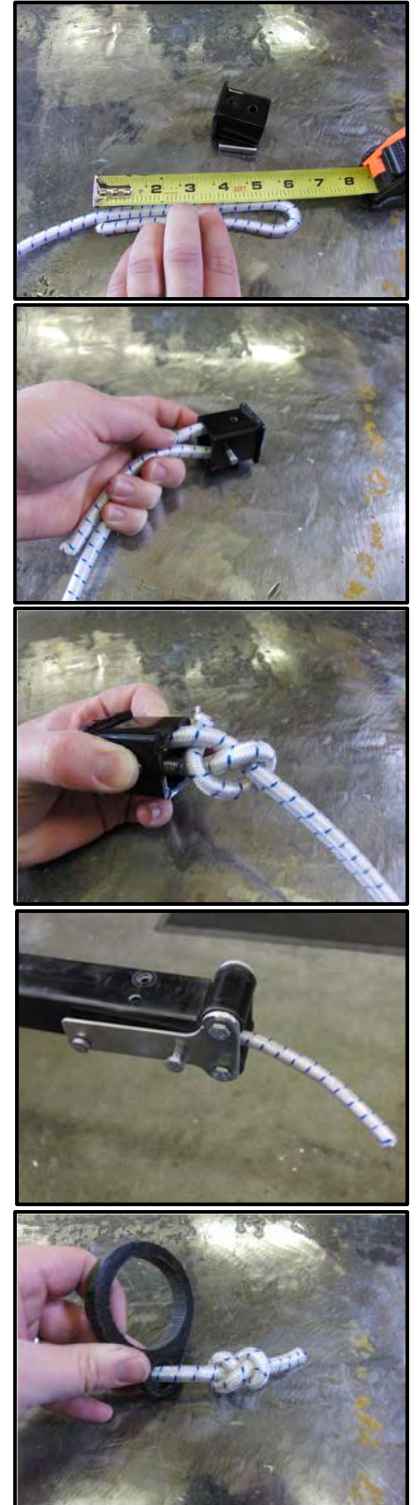


figure 23

ESR2000 SYSTEM INSTALLATION

STEP 8 (CONTINUED)

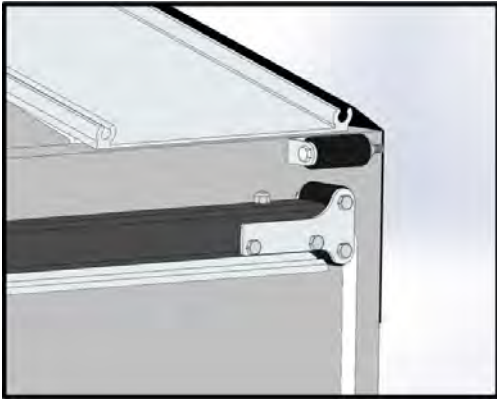


figure 24

8B: Place the square bungee tube on top of the latch plate at the rear of the trailer with the rollers at the rear. Make sure the taller roller is on top as shown. Position the tube such that the mounting holes for the tube are positioned directly over the highest point in the curve on the underside of the latch plate.

Note: The tube should be positioned more toward the outside of the latch plate.

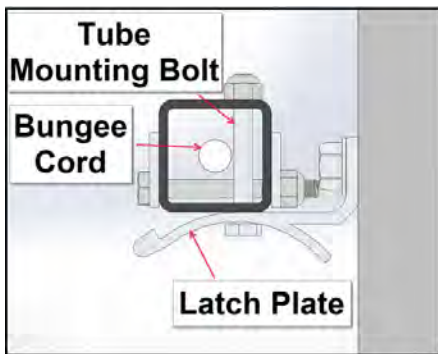


figure 25

8C: Match drill the tube mounting holes in the latch plate with a 1/4" bit. Bolt the tube to the latch plate with the 1/4" bolts and lock nuts provided by passing the bolt up through the latch plate first and then the tube. Be sure to tighten the bolts enough to secure the tube but not so tight as to cause damage to the bungee tube. Make sure the bungee is not caught between a bolt and the side of the tube and is free to stretch in and out of the tube.

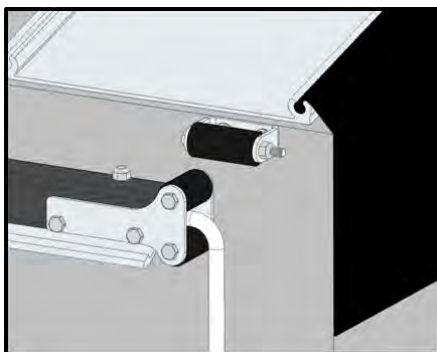


figure 26

8D: Place the separate bungee roller bracket above the rollers that are attached to the tube. Position it so that the bungee will pass over the middle of the roller as it comes out of the tube rollers. Mark the mounting hole locations on the trailer.

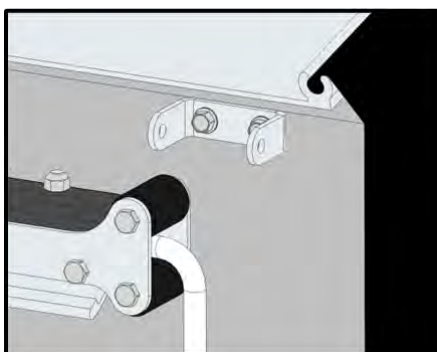


figure 27

8E: Pre-drill at the marks and mount the bracket with the 1/4" philips-head Tek screws provided. Mount the roller using the pin and retainer provided.

ESR2000 SYSTEM INSTALLATION

STEP 9: INSTALLING THE FRONT ARM MOUNT

Note: Inspect the mounting location for the front arm mount and make sure the arm will not interfere with any ladders and/or other attachments to the outside or inside of the trailer. Various mounting brackets are available with the different offsets from the bulkhead mounting flanges.

- ESR2070 has a 7-1/4" offset.
- ESR2071 has a 9-1/4" offset.
- ESR2072 has a 11-1/4" offset.
- ESR2073 has a 13-1/4" offset.

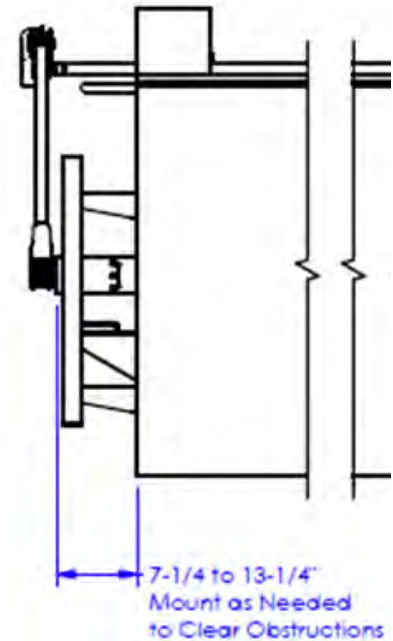


figure 28

9A: Place the arm mounting bracket on the front of the trailer once the correct mounting offset has been determined to clear any obstructions on the front of the trailer. If this is a hopper bottom grain trailer, drill out the rivets that align with the mounting bolt holes in the Arm Mount Bracket. The center of the front arm pivot mount should be located at a distance of 36-46" below the highest point that the tarp roll tube will have to roll over on the container or bows. It should be located side-to-side on the center line of the trailer and up to 4" towards the tarp open side of the trailer as shown in figure 29. Mark the location for the six mounting bolts.

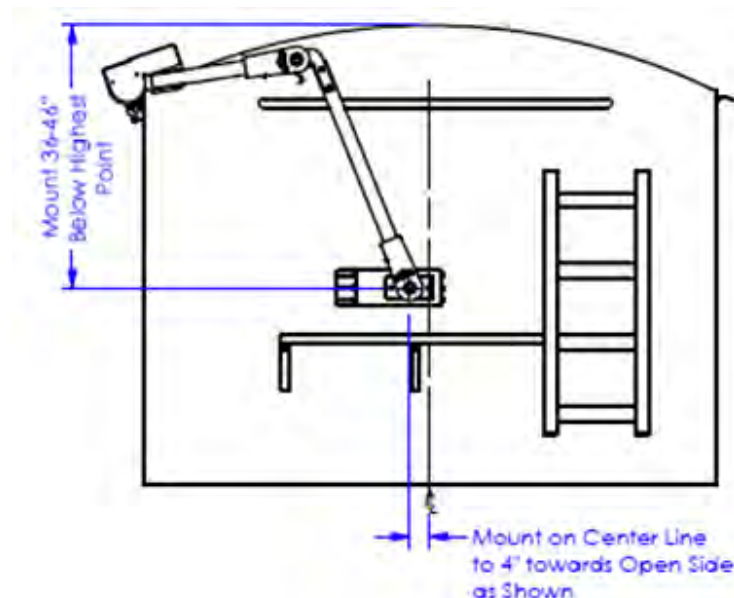


figure 29

ESR2000 SYSTEM INSTALLATION

9B: Pre-drill on the marks all the way through the front wall. Insert the 3/8" hex head bolts provided through the mount and the front wall. If the trailer front bulkhead is thin and the mounting bracket does not line up with the trailer bulkhead reinforcing angles, you will have to install backing angles.

9C: Match drill the holes on the backing angles if required and bolt the mounting bracket to the bulkhead with 3/8" bolts and nuts.



figure 30

Note: Special front mounting brackets will be required for dump trailers with front lift cylinders like the unit shown in figure 30.

STEP 10: INSTALLING THE FRONT ARM ASSEMBLY

10A: If the front arm is fully assembled skip to step 10B. If not, the front arm assembly will need to be assembled using the following steps.

1. Determine which side you will the tarp will be in the cover position. The diagram on **Page 11** shows the front arm assembled for a driver's side "cover" position.
2. Begin with the K0256 (4) spring mounting bracket.
3. Install the K0134A (4) spring clock spring arm plug with a K0301 arm bushing inserted into either side and four K0199 clock springs. Be sure to install the clock springs and arm plug in the correct orientation. The springs should be exerting force to help "cover" the load. Secure the arm plug and springs to the K0256 mounting bracket with a K0283 flat washer and K0258 Snap Ring.

ESR2000 SYSTEM INSTALLATION

4. Construct the arm components beginning with the ESR2021 base arm assembly. This will be a short arm tube with two mounting brackets bolted to one end. Using another K0134A 4 spring arm plug, install the two K0301 arm bushings and two K0199 clock springs. The springs and arm plug should be installed so that the force of the springs should be trying to straighten the arm. Insert the ESR2025 pivot pin and secure with the K0283 flat washer and K0258 snap ring.
 5. Insert the ESR2032 Upper Arm Assembly with the direct drive motor and ESR2050 quick-disconnect roll pipe coupling into the center arm base arm assembly and tighten the two set screws in the base arm to secure in place.
 6. Insert the ESR2021 base arm and attached components into the main pivot K0134A arm plug and secure with the two set screws. The assembly should now look like the diagram above.
- 10B: Install the fully assembled front arm onto the front mounting bracket that was installed to the front of the trailer in Step 9. Bolt the arm assembly to the mounting bracket with two ½" bolts and lock nuts.

STEP 11: INSTALLING THE ROLL PIPE AND ANCHOR PIPE



figure 31

11A: The roll pipe and anchor pipe are supplied in 20' joints. Assemble and weld the joints. Insert the spline weldment in the end of the roll pipe and weld.



figure 32



figure 33

11B: Unfold and straighten the tarp. Insert the anchor pipe into the 4" pocket and slide it through to the other end. Cut both ends flush with the edge of the tarp.



figure 34



figure 35

11C: Place the plastic end caps into each end of the anchor pipe. Fasten each end of the tarp to the anchor pipe with the 1/4" Tek screws provided.



figure 36

ESR2000 SYSTEM INSTALLATION



figure 37



figure 39



figure 41

STEP 12: INSTALLING THE TARP

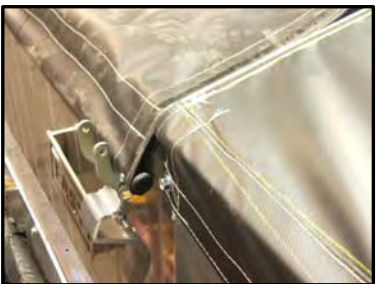


figure 43



figure 44

11D: Insert the 2" roll pipe, open end first, into the pocket from the rear of the tarp and slide it through to the other end. Leave enough of splined end out of the tarp that the spline itself will stick out past the tailgate/rear wall by about 2". There should be excess roll pipe sticking out of the front end of the tarp.

11E: Fasten the tarp to the roll pipe at the rear with a "U" clamp and 1/4" Tek screw. Install one "U" clamp on every seam down the length of the tarp ending with a "U" clamp at the front edge of the tarp.

11F: Roll the tarp onto the roll pipe with the anchor pipe at the end of the roll. The tarp is now prepared for installation on the trailer.



figure 38



figure 40



figure 42

12A: Lift the tarp up onto the trailer with the splined end of the roll pipe to the rear. Open the EZ OFFs and place the anchor pipe in the cradle of each EZ OFF. The tarp should be flush with the back edge of the nose bonnet. The anchor pipe should extend in front of the first EZ OFF behind the front master bow.

12B: Rotate the first EZ OFF to the closed position and lock it in place with the provided pin and retainer.



figure 45

ESR2000 SYSTEM INSTALLATION



figure 46

12C: Remove the previously installed Tek screw from the anchor pipe near the front EZ Off. Reinstall the screw, along with the "U" clamp, directly adjacent to the EZ Off. This helps prevent the anchor pipe from sliding during dumping and normal operation.



figure 47



figure 48

12D: Rotate the remaining EZ OFFs to the closed position and pin them in place. Remove the previously installed Tek screw on the rear end of the anchor pipe and reinstall, along with a "U" clamp, directly adjacent to the rear EZ Off. The two "U" clamps on the anchor pipe should be on opposite sides of their respective EZ OFFs; one on the front side and one on the rear side. This will help prevent the anchor pipe from sliding in either direction.

STEP 13: INSTALLING THE MOTOR COUPLER

13A: The ESR2050 quick disconnect motor coupler bolts to the output shaft of the motor reducer as shown in figure 49.

13B: Slide the roll pipe tube over the outside of the drive end of the ESR2050 quick coupler. Drill a matching 3/8" hole through the roll pipe 1" from the end. Bolt the roll pipe to the quick coupler with a 3/8 x 2-1/2" bolt and lock nut.

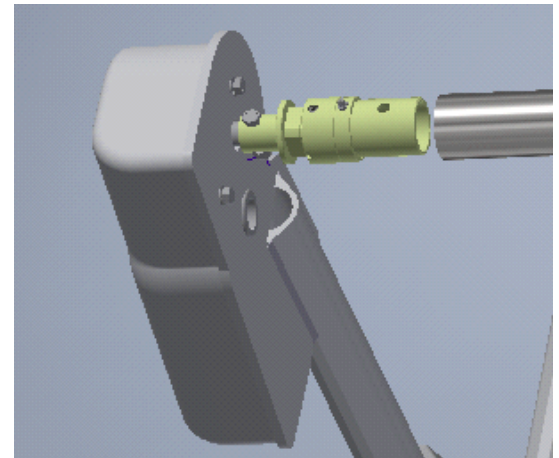


figure 49

13C: To engage the drive coupling, loosen the set screw and move the sliding collar forward towards the motor. The square drive shoulders will have to be in alignment for this to slide. Once collar is fully forward, tighten the set screw to keep the coupling engaged.

ESR2000 SYSTEM INSTALLATION

STEP 14: ATTACH THE REAR ROLL RETURN BUNGEE (FOR SYSTEMS WITH BUNGEE ROLL ASSIST)

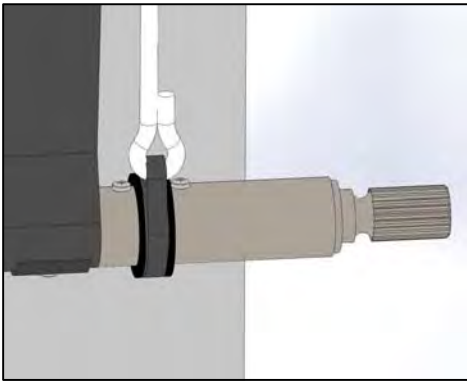


figure 50

14A: Lift the tarp up onto the trailer with the splined end of the roll pipe to the rear. Open the EZ OFFs and place the anchor pipe in the cradle of each EZ OFF. The tarp should be flush with the back edge of the nose bonnet. The anchor pipe should extend in front of the first EZ OFF behind the front master bow.

14B: After the tarper is operational, run it a few times and observe how the bungee is working. The position of the Tek screws can be adjusted up and down the roll pipe to allow the bungee to pass over the rollers properly.

STEP 15: INSTALLING THE CRANK HANDLE (FOR OPTIONAL MANUAL BACKUP)

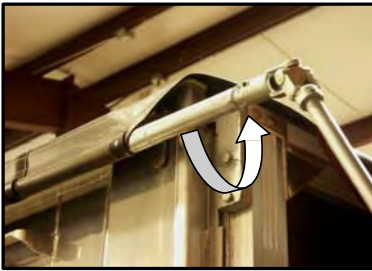


figure 51

15A: With the tarp in the covered position slide the "U" joint of the manual handle on to the spline on the rear end of the roll pipe. Rotate the roll pipe counter-clockwise until the tarp is locked in place under the latch plate. Uncouple the motor coupling to be able to roll the tarp up.



figure 52



figure 53

15B: With the tarp in locked position, pull the crank handle down and in against the side of the trailer (figure 53).

Note: It may be necessary to pull the crank off the spline and adjust its attachment angle to achieve the proper angle to secure the crank handle against the trailer. To remove the crank from the spline, rotate the plastic pin 90° counter-clockwise and pull.



figure 54

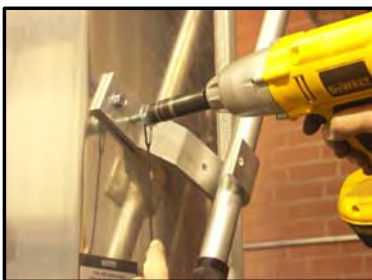


figure 55

15C: With the crank handle against the side of the trailer mark the desired "J" hook positions to hold the crank handle in place. Install the "J" hooks with the provided 3/8" machine bolts.



figure 56



figure 57

15D: Repeat "J" hook installation steps on passenger side.

15E: Disconnect the crank from the spline using the steps in the note above. Find a suitable location to mount the crank handle when not in use. Use "J" hooks to attach the crank handle to the trailer. Secure the crank handle in its stowed location. Ensure that it will not come out in transit.

ESR2000 SYSTEM INSTALLATION

STEP 16: INSTALLING THE ELECTRICAL

- 16A: Feed the end of the provided electrical wire through the inside of the front arm assembly tubing. Route the wire on the outside of the clock springs. Remove the motor cover, run the wire to the motor and attach it to the motor. Ensure that there is enough slack around the center pivot and main pivot mounts so that the wire will not be stretched or catch on anything. Zip tie the wire where necessary.
- 16B: Route the wire along the trailer, zip tie where needed and down to a convenient location to mount the trailer wire connector plug.
- 16C: Wire up trailer plug and switch.

STEP 17: INSTALLING THE ALTERNATE REAR ARMS - FIXED REAR BULKHEAD

- 17A: If the ESR2000 is installed on a trailer with a fixed non-opening rear door assembly, such as a hopper bottom trailer, the rear arm assembly will be the ESR2059. This arm will mount very similarly as the front arm assembly did. A Driver's side "cover" position is shown, and the arm can be reversed for a curb side cover position. You will need to remove the main center pivot arm plug and reverse the springs and flip the direction it is installed on the K0256 mounting bracket. The center pivot spring force should be helping to cover the load and the middle arm joint spring is trying to straighten the arm.

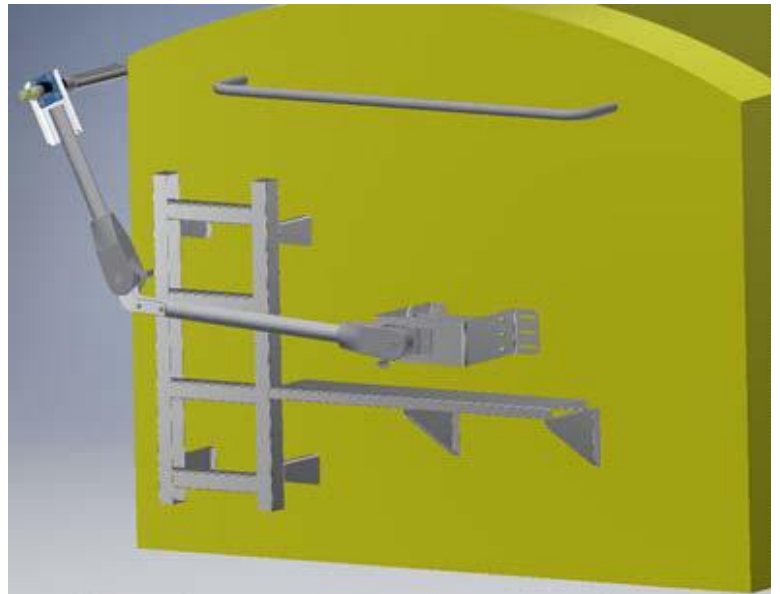


figure 58

- 17B: Locate and install the arm mounting bracket so that it clears all obstructions on the rear of the trailer. The same mounting brackets as used for the front are available with offsets of 7-1/4" to 13-1/4".

ESR2000 SYSTEM INSTALLATION

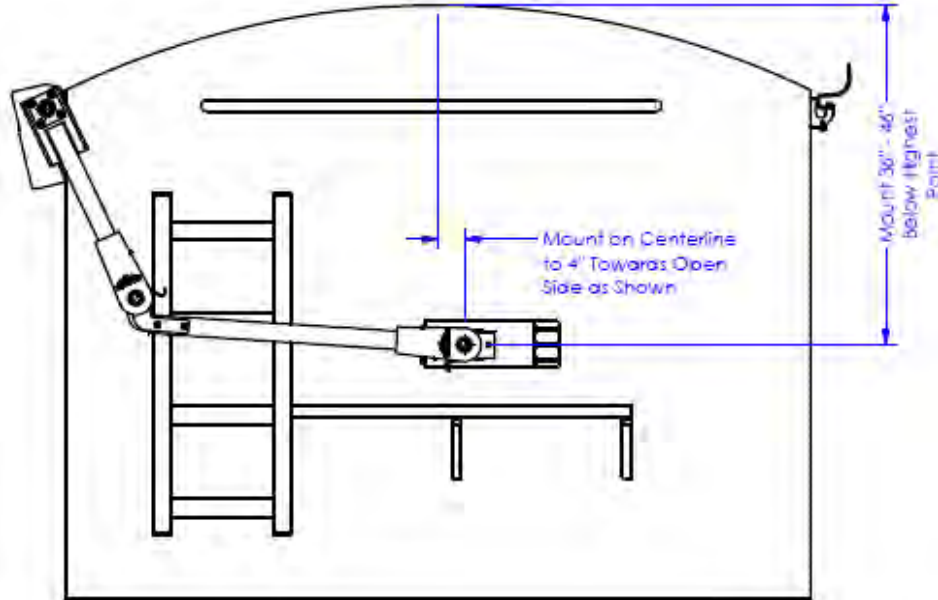


figure 59

17C: Place the arm mounting bracket on the rear of the trailer once the correct mounting offset has been determined to clear any obstructions. If this is a hopper bottom grain trailer, drill out the rivets that align with the mounting bolt holes in the Arm Mount Bracket. The center of the front arm pivot mount should be located at a distance of 36-46" below the highest point that the tarp roll tube will have to roll over on the container. It should be located side to side on the center line of the trailer and up to 4" towards the tarp open side of the trailer as shown in figure 59. Mark the location for the six mounting bolts.

17D: Pre-drill on the marks all the way through the front wall. Insert the 3/8" hex head bolts provided through the mount and the front wall. If the trailer front bulkhead is thin and the mounting bracket does not line up with the trailer bulkhead reinforcing angles, you will have to install backing angles.

17E: Match drill the holes on the backing angles if required and bolt the mounting bracket to the bulkhead with 3/8" bolts and nuts.

17F: The 2" Tarp Roll tube should extend past the ESR2059 Rear Arm Bracket bearings at least 4" as shown above. Install the R0141W splined stub shaft and weld to the rear of the 2" roll pipe so that the tarp can be rolled and unrolled manually should the electric drive be unavailable.

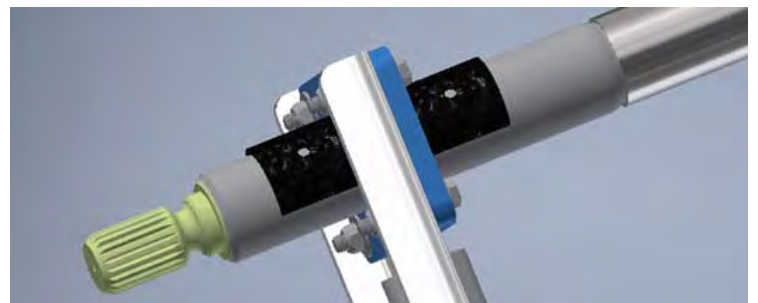


figure 60

17G: Install one of the R0109 plastic U Clamps to either side of the bearings and secure to the 2" roll tube pipe with Tek screws provided.

ESR2000 SYSTEM INSTALLATION

STEP 18: INSTALLING THE ALTERNATE REAR ARMS - FLEX ARM FOR TAILGATES

18A: If the ESR2000 is installed on a trailer with a top or side hinged tailgate the rear arm assembly will be the ESR2123. A Driver's side "cover" position is shown, and the arm can be reversed for a curb side cover position. You will need to remove the main center pivot arm plug and reverse the springs and flip the direction it is installed on the K0256 mounting bracket. The center pivot spring force should be helping to cover the load.



figure 61

18B: Locate and install the arm mounting bracket so that it clears all obstructions on the rear of the trailer. The same mounting brackets as used for the front are available with offsets of 7-1/4" to 13-1/4". If the trailer has a coal gate in the center as this example does, the arm mount will have to be positioned above the gate as shown. There is an optional mount for the coal gate style door with a cross beam to allow for certain designed coal doors to open correctly. It is shown in figure 62 and is part number ESR2113.



figure 62

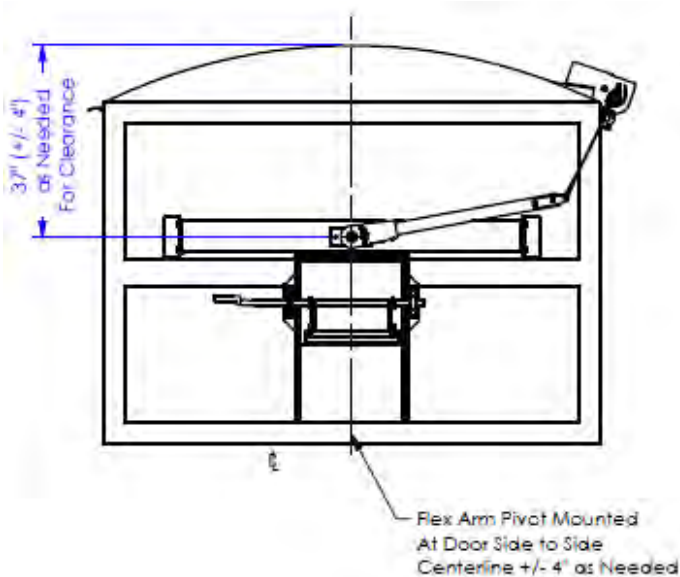


figure 63

18C: The 2" Tarp Roll tube should extend past the ESR2123 Flex Arm Bracket bearings at least 3" as shown above. Install the R0141W splined stub shaft and weld to the rear of the 2" roll pipe so that the tarp can be rolled and unrolled manually should the electric drive be unavailable.

ESR2000 SYSTEM INSTALLATION

18D: Install two of the ESR-RR10 anchors over the roll pipe with a 2" PVC pipe spacer between them. Use Tek screws to secure the R0109 plastic U Clamps to either side of the anchors and into the PVC pipe spacer as shown above.



figure 64



figure 65

18E: Install the ESR2124 nylon load strap to the roll pipe anchors with the pin provided. Unbolt the strap anchor from the outer end of the flex arm and slip the other end of the nylon load strap onto this bracket. Reinstall the bolts for the flex arm anchor to complete the installation.

MAINTENANCE TIPS

1. Check all connections weekly. Correct as necessary.
2. Apply a penetrating oil spray to all springs weekly. Do not use grease.
3. Replace/Repair any broken/worn parts immediately.

NOTES

WARRANTY

Mountain Tarp warrants this system for a period of twelve (12) months, against proven defective parts and workmanship. Excluded from this warranty is the fabric tarp. Our liability is limited to the replacement parts and does not include freight, labor or lost time due to or in connection with the failure of the parts. Any part will be replaced under the conditions of this warranty when Mountain Tarp has authorized a return and has received satisfactory evidence that the part(s) is(are) defective.

OUR LOCATIONS

<p>Headquarters Middlesboro, KY</p> <p>PO Box 186 1002 N. 15th St. Middlesboro, KY 40965 800-248-7717</p>	<p>Louisa, KY</p> <p>225 Fallsburg Rd. Louisa, KY 41230 606-686-2117</p>	<p>Sharonville, OH</p> <p>2580 E. Sharon Rd. Sharonville, OH 45241 513-422-7737</p>	<p>Ravenna, OH</p> <p>4442 State Rt. 14 Ravenna, OH 44266 330-325-7722</p>	<p>Houston, TX</p> <p>12245 FM 529 Rd. Houston, TX 77041 888-618-8277</p>	<p>N. Oxford, MA</p> <p>10 Boulder Pkwy N. Oxford, MA 01537 508-731-0164</p>
--	--	---	--	---	--