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## Model RP4500 SATR Rack 'n Pinion Tarping System

**Installation, Operations & Maintenance Manual** 

<u>WARNING</u>: In order to prevent damage, the tarp must always be left in the <u>uncovered</u> <u>position</u> 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.

### ATTENTION DISTRIBUTOR: DO NOT DISCARD

Please give this manual & drawings to the customer when the unit is delivered.

#### RP 4500 SA TR RACK 'n PINION

#### **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.

THIS SYSTEM IS DESIGNED TO BE USED WITH CONTAINERS THAT HEVE A 32' MAXIMUM OVERALL INSTALLATION LENGTH.
THIS SYSTEM FEATURES FIXED ARMS, THIS MEANS THAT FINISHED COVERED POSITIONS MUST SHARE A COMMON ARC.

PRIOR TO INSTALLING THE FLOW DIVERTER, WITH INTEGRAL PRESSURE RELIEF VALVE AND COVER CONTROL VALVE INTO YOUR TRUCKS HYDRAULIC SYSTEM, WE RECOMMEND THAT YOU CHECK WITH THE HOIST MANUFACTURER FOR POSSIBLE WARRANTY IMPLICATIONS.

#### 1. MOUNTING THE GANTRY AND ROLL ASSEMBLY

A. Pick a suitable stationary forward position on the trailer directly ahead of the container stop position, to mount the GANTRY and ROLL ASSEMBLY. Clear away or re-route any hoses, cable, etc. that may interfere with mounting the GANTRY to the trailer. The GANTRY can be mounted to the trailer using the -2- CHASSIS MOUNTING ANGLES provided. These can be bolted to the chassis using grade 8 hardware and then welding the GANTRY on top of these angles or these angles can be welded to existing plates that are already bolted to the trailer. Another method is to utilize brackets, etc. that are already bolted to the trailer, and weld a piece of channel or tube to the existing brackets, across the width of the trailer and then mount the gantry on top of the channel. In either case, allow enough clearance between the rearward portion of the GANTRY LEGS and the front of the container. This will provide clearance for the ROLL ASSEMBLY as it moves up and down. Square the GANTRY to the hoist and level from side to side as well as being plumb vertically. A GOOD WAY TO MAKE CERTAIN THE GANTRY IS SQUARE TO THE HOIST IS TO CLAMP A STRAIGHTEDGE ACROSS THE INSIDE OF THE "J" HOOKS AND MEASURE FROM THIS TO THE GANTRY LEGS.

Once the GANTRY is located and welded securely at the bottom, add front to rear gussets to stabilize the GANTRY and strengthen the mounting.

B. Place the ROLL ASSEMBLY on top of the GANTRY and install using -4- 1/2-13 hex nuts and lock washers provided. Install the 36" stroke cylinder onto the clevis eye pads on the GANTRY and ROLL ASSEMBLY using the clevis pins and cotters provided.

NOTE: THE PORTS ON THE CYLINDER SHOULD FACE TO THE LEFT OR DRIVERS SIDE WHEN VIEWED FROM THE REAR.

### 2. <u>DETERMINING THE PIVOT POINT AND INSTALLING THE MOUNTING BRACKET ASSEMBLIES</u>

#### **NOTE**

THE MOUNTING BRACKET ASSEMBLIES AND ARMS MUST BE MOUNTED TO A FABRICATED STRUCTURE THAT IS BOLTED TO THE TRAILER FRAME. THIS STRUCTURE MUST EXTEND OUTWARD FROM THE FRAME TO ALLOW FOR THE WIDEST WIDTH CONTAINER THAT WILL BE CARRIED ON THE TRAILER, WHETHER OR NOT THE CONTAINER IS TO BE COVERED. (ex. self contained compactor containers) THE OUTSIDE WIDTH FROM THE GREASE FITTING TO THE GREASE FITTING CANNOT BE MORE THAN 108" TO BE IN COMPLIANCE WITH THE FEDERAL D.O.T. AND REGULATIONS PROMULGATED THEREUNDER. SOME STATES HAVE REQUIREMENTS FOR STATE AND LOCAL ROADS THAT DIFFER FROM THE FEDERAL D.O.T. REGULATIONS. PRIOR TO INSTALLATION, YOU SHOULD CHECK WITH YOUR STATE AND LOCAL D.O.T. TO ASCERTAIN WHAT STANDARDS APPLY IN YOUR AREA. IF THEY DO NOT COMPLY WITH THE FEDERAL D.O.T., YOU MUST MOUNT THE SYSTEM IN COMPLIANCE WITH YOUR STATE AND LOCAL REGULATIONS.

### <u>PIONEERS INSTRUCTIONS ARE PREMISED ON 102" MAXIMUM TRAILER WIDTH</u> ALLOWED BY FEDERAL D.O.T. REGULATIONS.

A. Supplied with your system to make installation easier are -4- CHASSIS MOUNTING TUBE ASSEMBLIES. These are made longer in both directions than you may need so you can cut them to fit your installation. To determine how far out from the trailer frame you must be with the MOUNTING TUBES, measure the outside width of your frame and subtract this measurement from 106 1/4". Divide this measurement by 2 to determine how far out from the chassis on each side the MOUNTING TUBES will protrude to support the MOUNTING BRACKET ASSEMBLIES in their proper location. From this measurement subtract the thickness of the "fish plates" that may already be already bolted to the frame or need to be attached to the frame where the MOUNTING TUBES will be welded.

EXAMPLE: Frame width (outside to outside) = 33 1/2"

106 1/4" - 33 1/2" = 72 3/4"

72 3/4" divided by 2 = 36 3/8"

"fish plates" are 1/2" thick

36 3/8" - 1/2" = 35 7/8"

Horizontal portion of CHASSIS MOUNTING TUBES needs to be 35 7/8" long.

B. Put the longest and highest container that will be covered on the trailer. Using two tape measures, place one end of one tape on the top rear of the container, and the end of the second tape on the arm rest (provided), then stretch the tapes out diagonally toward the center of the trailer and move along the bottom of the rubrail of the container toward the middle, until you

identify the point of equal distance, front to rear. Make a mark on the container or on the trailer locating the point of equal distance. This will become the pivot point for the arms. Remove the container from the trailer, making certain the pivot point is clearly marked on the trailer or on the hoist itself.

C. The vertical height of the MOUNTING BRACKET ASSEMBLIES is determined by placing a straight edge across the hoist rails and measuring down to the center of the trailer frame. Tack weld the CHASSIS MOUNTING TUBES in place making sure they are plumb and square to the hoist. A good "Rule of Thumb" to use for setting these heights is to mount them in the middle of the chassis. This allows you room to put gussets above or below for strength. Using the straightedge, measure down from the straightedge the distance measured above. Mark the CHASSIS MOUNTING TUBES and cut. Install the chassis mounting tubes back in the same place on the truck, after cutting, making sure they are plumb and square. Place a MOUNTING BRACKET ASSEMBLY on top of these tubes and align the center of the PIVOT PIN (grease fitting) with the pivot point mark determined above. Measure from the hoist to the MOUNTING BRACKET at the front and rear to make certain it is parallel to the hoist. Plumb the bracket vertically and tack weld in place.

Check to make sure the BASE ARM/GEAR ASSEMBLY is straight and parallel to the hoist. If not, correct by moving the MOUNTING BRACKET ASSEMBLY in or out as necessary. NOTE: There is a small amount of in and out movement built into the RACK 'N PINION assembly.

Repeat for other side.

NOTE: A GOOD WAY TO MAKE CERTAIN THAT BOTH PIVOT POINTS ARE IN THE SAME PLACE ON BOTH SIDES OF THE TRUCK IS TO MEASURE ON A DIAGONAL FROM THE ROLL BASE/REST TO THE ARM PIVOT PIN.

Measure across the trailer to make certain you are no wider than 108" from grease fitting to grease fitting. Correct as necessary.

Add Gussets between the CHASSIS MOUNTING TUBES and the "fish plates" in front to rear as well as up and down locations to strengthen the mounting. Weld everything securely.

#### **SOME POINTS TO REMEMBER ARE:**

- -DO NOT WELD DIRECTLY TO THE CHASSIS, USE "FISH PLATES" THAT ARE DRILLED AND BOLTED TO THE CHASSIS. Follow the chassis manufacturers recommendations. Do Not use any hardware below a grade 8.
- -Make sure the structure is well supported and gusseted.
- -There cannot be any flexing of the supports that hold the MOUNTING BRACKET ASSEMBLIES. This must be as rigid as possible.

#### The **MOUNTING BRACKET ASSEMBLIES** must be:

- -PLUMB (vertically) and level (horizontally).
- -Parallel to the chassis.
- -Must be the same distance out from the chassis on both sides of the truck.

#### 3. INSTALLING THE ARMS and STABILIZER BAR

A. Lift the DRIVERS side arm up and slide the base end of the arm into the BASE ARM/GEAR ASSEMBLY. Bolt the Arm to the BASE ARM/GEAR ASSEMBLY using -2- 1/2-13 x 3 1/2" long bolts, lock washers and nuts (provided)for the horizontal holes and -1- 1/2-13 x 4 1/2" long bolt, lock washer and nut (provided)for the vertical hole. Tighten securely.

B. Install the PASSENGERS side arm into the BASE ARM/GEAR ASSEMBLY in the same way as was done for the DRIVERS side arm.

C. Install the ARM EXTENSIONS into the BASE ARM.

D. Install the STABILIZER BAR between the arms using -4- 5/16-18 x 2 1/4" long bolts and locknuts (provided).

E. Install the LOW ARM RESTS on to the bottom of the ROLL BASE by welding. The STABILIZER BAR should rest on these in the UNCOVERED position. Locate them as far outboard as possible without interfering with the TARP or ARMS.

F. Slide the ARM EXTENSIONS out so that the STABILIZER BAR will be able to rest in the LOW ARM RESTS. Drill through the BASE ARMS and ARM EXTENSIONS and bolt together, using the 1/2-13 x 2 1/2" bolts (provided). Be sure that the right and left arm assemblies are identical in length, and are parallel and square.

#### 4. INSTALLING THE HYDRAULICS

**REF: HYDRAULIC SCHEMATIC** 

NOTE: FILTRATION OF 30 MICRON OR BETTER MUST BE USED WITH THESE COMPONENTS.

NOTE: MAX. INPUT TO FLOW DIVERTER TO BE NO GREATER THAN 40 GPM.

NOTE: USE ONLY PIPE DOPE, SUCH AS RECTORSEAL, ON PIPE THREADS. <u>DO NOT</u> OVERTIGHTEN FITTINGS AND DO NOT USE TEFLON TAPE.

A. Follow the hydraulic schematic and install the FLOW DIVERTER into the pressure line that runs from the pump to the hoist controls. The inlets to the FLOW DIVERTER are #16 SAE. The outlet from the FLOW DIVERTER that goes to the hoist control inlet is also #16 SAE. 1/2" Hydraulic Hoses with reusable fittings and adapters are provided for you to make the connections from; the Priority side of the FLOW DIVERTER to the Inlet Side of the COVER CONTROL VALVE, and a return line from the COVER CONTROL VALVE to TANK. The FLOW DIVERTER may be hard plumbed directly to the pump or the hoist valve, or it can be remotely mounted to a bracket.

NOTE: SYSTEMS THAT RUN ON HIGH PRESSURE, THE FLOW

DIVERTER MUST BE MOUNTED AFTER THE HOIST CONTROLS
(DOWNSTREAM). REFER TO THE HYDRAULIC SCHEMATIC.

- B. Mount the COVER CONTROL VALVE in a suitable place that will allow for ease in operation, while not interfering with the hoist, container or hoist controls. DO NOT MOUNT IN AN AREA WHERE THE ARMS MAY CONTACT THE OPERATOR.
- C. Follow the HYDRAULIC SCHEMATIC and install the proper fittings into the CYLINDERS, FLOW DIVIDER/COMBINERS and COVER CONTROL VALVE.

#### DO NOT USE TEFLON TAPE.

The hoses furnished with this system all have reusable ends to allow you to custom fit the hoses for your installation. These ends will be installed once the hoses have been installed. NOTE: IF THE HOSES ARE CUT, BLOW THEM OUT WITH COMPRESSED AIR TO REMOVE ANY HOSE FILINGS OR PARTICLES WHICH MAY CONTAMINATE THE SYSTEM.

- D. Install -1- 6' long and -1- 9' long hose between the COVER CONTROL VALVE and the fittings on the GANTRY CYLINDER per the schematic.
- E. Install -2- 14' long hoses onto the COVER CONTROL VALVE (for COVER-UNCOVER) per the schematic. Run these hoses down along the chassis toward the rear using wire ties, etc. to attach them to stationary objects along the way. Mark or identify the hoses in some fashion so you will not cross the lines when making the connections. In the area where the hoses end, you will need to mount the FLOW DIVIDER/COMBINERS.
- F. Connect -2- FLOW CONTROLS to the FLOW DIVIDER/COMBINER and "TEE" that will control the "COVER-UNCOVER" function with the fittings provided. The INLET side of the FLOW CONTROLS is stamped with the letter "B"
- G. Install the FLOW DIVIDER/COMBINER in a suitable place on the chassis, it should be situated as close to the MOUNTING BRACKET ASSEMBLIES (front to rear location) as possible. They can be mounted to a non moving hoist cross member or to a plate that is attached to a chassis cross member. Install using 1/4" hardware (not provided). Install the reusable fittings on the hoses and connect to the FLOW DIVIDER/COMBINER and "TEE" per the schematic.
- H. Attach the four remaining hoses to the 16" cylinders and route toward the FLOW DIVIDER/COMBINER. Install the ends and make the connections to the FLOW DIVIDER/COMBINER and "TEE" per the schematic.
- NOTE: HOSE LENGTHS AND FITTINGS ARE CRITICAL.

EXAMPLE: HOSES THAT RUN FROM THE FLOW DIVIDER/COMBINER TO THE BASE END OF THE CYLINDERS MUST BE THE SAME LENGTH. IN ADDITION, THE FITTINGS COMING OUT OF THE FLOW DIVIDER/COMBINER MUST BE THE SAME. (i.e. both straight or both elbows). THE SAME HOLDS TRUE FOR THE FITTINGS ON THE CYLINDERS.

NOTE: THE BASE END PORTS OF THE CYLINDERS MUST BE CONNECTED TO A FLOW DIVIDER/COMBINER AND THE ROD END PORTS MUST BE CONNECTED TO A TEE. THE SYSTEM WILL NOT WORK PROPERLY IF

### THESE LINES ARE CROSSED. IT WILL ALSO CAUSE DAMAGE TO THE SYSTEM AND PRESENTS A POSSIBLE SAFETY HAZARD.

J. Make certain that all connections are made per the Hydraulic Schematic and the return lines are connected to the tank. Attach the hoses to each other or to stationary objects along the way to make a neat installation. If any chafe points are evident, slip a large piece of hose or chafe guard over the hose(s) at the chafe point and secure.

K. Using a pressure gage, set the PRESSURE RELIEF VALVE that is installed upstream of the FLOW DIVERTER to 100 PSI HIGHER than the hoist Relief. Example: Hoist Relief is set to 1500 PSI. Set the main PRV to 1600 PSI.

L. Bleed the system as follows: Start the truck and slowly engage the PTO to activate the hydraulic system. Operate the COVER-UNCOVER valve to make the arms move toward the rear (COVER). Go up only a few feet, then operate the valve to move the arms toward the front (UNCOVER). Move the arms back and forth a few times to fill the cylinders with oil.

NOTE: DO NOT ALLOW THE ARMS TO GO OVER "CENTER" UNTIL THE CYLINDERS ARE FILLED WITH OIL. IF THEY ARE ALLOWED TO GO OVER "CENTER" YOU WILL NOT BE ABLE TO CONTROL THEIR DOWNWARD MOVEMENT WHICH COULD CAUSE DAMAGE TO THE UNIT OR PERSONAL INJURY.

NOTE: IF THE ARMS WILL NOT MOVE UPWARD FROM THE ROLL REST, YOU WILL HAVE TO ADJUST THE PRESSURE RELIEF ON THE COVER CONTROL VALVE. REMOVE THE CAP AND TURN THE ADJUSTING SCREW 1/4 OF A TURN CLOCKWISE AND TRY THE SYSTEM. REPEAT UNTIL THE ARMS MOVE SMOOTHLY AND IN UNISON.

With the Arms at the front of the truck and the STABILIZER BAR sitting in the LOW ARM RESTS, crack open the fittings at the base end of the cylinders to let any air escape that may be trapped inside. Re-tighten the fittings and run the unit so the arms are at the rear of the truck and the rack is against the stop. Crack open the fittings at the rod end of the cylinders to let any air escape that may be trapped in that end of the cylinders. Re-tighten the fittings and run the unit back and forth a few times.

Re-bleed the cylinders as above and run again. Check to make sure the unit "COVERS" when the valve handle is moved in that direction. If not, the hoses are reversed. Correct as necessary.

M. Bleed the GANTRY CYLINDER in the same manner as that of the arm cylinders. Operate the Gantry "UP and DOWN" to make certain it is working properly.

Be sure to lift the arms up off of the ROLL ASSEMBLY before moving the GANTRY. Check to make sure the Gantry moves "UP" when the valve handle is moved in that direction. Correct as necessary.

NOTE: IN ORDER FOR THE SYSTEM TO OPERATE PROPERLY, ALL AIR MUST BE BLED FROM THE LINES AND CYLINDERS.

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N. Adjust the FLOW CONTROLS to control the speed of the arms in both directions so it takes 25-30 seconds to cover and uncover. These FLOW CONTROLS meter the flow in the reverse direction which means that when you are COVERING, the FLOW CONTROL attached to the "TEE" is controlling the speed and when you are UNCOVERING, the FLOW CONTROL attached to the FLOW DIVIDER/COMBINER is controlling the speed. Adjust these flow controls by turning the adjusting knob in a clockwise direction until the desired "COVER and UNCOVER" time is achieved.

LOCK THE ADJUSTING SCREW IN PLACE BY TIGHTENING THE SCREW ON THE SIDE OF THE KNOB. ONCE THE FLOW CONTROLS HAVE BEEN SET, THEY SHOULD NOT BE TOUCHED.

#### 5. INSTALLING THE TARP & LOADING THE ROLLER

- A. Move the arms to the rear of the truck so the rack is against the stop. Unbolt one end of the STABILIZER BAR from one arm.
- B. Unroll the tarp and stretch out along the hoist of the truck. Slide the pocket in the rear of the tarp over the tarp tube making sure the shock cords and black webbing are on the top of the tarp.
- C. Center the rear of the tarp on the stabilizer bar and drill a 1/4" dia. hole thru the tarp tube approximately 1" away from the edge of the tarp on both sides. Insert a 1/4" cotter pin thru the tarp tube and spread fully. Note: the eye of the cotter pin should face toward the grommet on the tarp. Install -1- Cover Spring to the eye of the cotter pin and then to the grommet on the tarp. Squeeze the loops on the spring to close. These springs keep the tarp centered and stretched taut on the tarp tube.
- D. You are now ready to Pre-Load the Spring loaded Roller and attach the tarp. The tarp must wind onto the roller in a CLOCKWISE direction, as viewed from the DRIVERS SIDE, therefore the roller must be loaded in a COUNTERCLOCKWISE DIRECTION AS VIEWED FROM THE DRIVERS SIDE OF THE TRUCK, **FOLLOW THE DECAL ON THE ROLLER.**
- E. Place a mark on the end of the roller and turn the roller in a COUNTERCLOCKWISE direction as viewed from the DRIVERS SIDE of the truck, until 40 turns (winds or revolutions) are reached. Clamp the roller to keep it from unwinding while attaching the tarp using "Vise-Grip" type welding clamps on both ends of the roller. The clamp should go around the roller and the handle part of the clamp should rest against the base portion of the roller assembly to lock the roller in place.
- F. Bring the tarp UNDER the roller and over the top in a CLOCKWISE direction. Center the tarp on the roller and fasten with -5- 3/4" long sheet metal screws and fender washers provided. Unclamp the roller to allow the tarp to wind onto the roller. Try to keep the wrinkles out of the tarp as it winds on the roller.
- G. The shock cords on the top of the tarp are designed to fold the tarp upward and inward so the 9' wide tarp will roll up between the plates on the Roll Assembly. This is accomplished by

firmly tying one end of the shock cord to a loop on one side of the tarp and then passing the other end of the shock cord thru the loop in the center of the tarp towards the other side and stretching the shock cord so that it pulls the tarp up and in toward the center. Apply just enough tension so the edges of the tarp do not rub on the plates. The tarp can and will overhang the roller on both ends. Tie a secure knot in the shock cord where it passes thru the loop on the other side of the tarp. It is best to tie the shock cords as the tarp is being wound onto the roller.

H. Operate the unit back and forth a few times to make sure that everything is working properly and the tarp winds correctly. If the tarp does not wind up fully onto the roller, more winds (up to 50) may need to be put on the roller. Make this adjustment as shown in Section E above. Also check to make sure that tarp is not bunching up or rubbing on the plates (shock cords too loose) or the windscreen (shock cords too tight). Any of these conditions will prevent the tarp from winding properly on the roller. Correct as necessary.

The Relief Valve on the Cover Control Valve may need to be re-adjusted because of the spring pressure acting on the arms and the weight of the tarp. Adjust if necessary.

NOTE: THE SPRING MAY HAVE TO BE RE-ADJUSTED IN THE FUTURE DUE TO THE SPRING TKING A SET. This can be done as shown in section E above.

#### 6. FINAL CHECKS AND ADJUSTMENTS

Grease the ARM PIVOT PINS

Apply a spray lubricant to the teeth on the RACK and PINION and spray lube the tube the rack slides on.

Apply a spray lubricant to the stud that the HOSE CLAMP ASSEMBLIES pivot on.

Grease the GANTRY LEGS.

Check all fasteners to make sure they are properly tightened.

Check to see that all welding is complete and that gussets have been installed where needed.

Make sure all fittings are tightened properly and there are no leaks in the hydraulic system.

Make sure all hoses have been fastened properly to stationary objects and that chafe guard has been installed where needed.

#### MAINTENANCE TIPS

Check all fittings and connections weekly. Correct as necessary Grease Arm Pivot Pins, Telescopic Extensions and Gantry Legs weekly. Spray lube the Rack & Pinion Gears weekly.

The Relief Valves (2) may have to be re-adjusted.

Replace/Repair any broken/worn parts immediately.

#### TIPS FOR THE OPERATOR

#### DO NOT OVERHANG THE STABILIZER BAR PAST THE END OF THE

### <u>CONTAINER.</u> THE STABILIZER BAR IS DESIGNED TO REST ON THE TOP REAR OF THE CONTAINER.

# WARNING: OVERSHOOTING THE CONTAINER AND RETRACTING THE ARMS, CAUSES THE ARMS TO BE UNSUPPORTED, WHICH WILL CAUSE DAMAGE TO THE ARMS AND PIVOT MECHANISM.

#### OPERATE THE ENGINE AT LOW RPM'S ONLY.

DO NOT keep the Cover Control Valve engaged after the stabilizer bar has been placed on the rear of the container or in the low arm rests.

DO NOT keep the Cover Control Valve engaged after the Telescopic Arm Extensions have been fully extended or retracted.

DO NOT keep the Cover Control Valve engaged after the gantry has been fully extended or retracted.

DO NOT operate under or near overhead wires.

Keep clear of moving parts.

There should be no one on or around the container when the unit is in operation.

If the Arms stop while in motion, they have probably come into contact with an obstruction (this shows that the relief valve is working properly). Return the arms to their original position, clear the obstruction and re-activate the unit.

#### **OPERATING THE UNIT**

#### **TO COVER**

- 1. Move the arms upward to clear the Roll Assembly.
- 2. Raise the Gantry up until the Roll Assembly is even to or above the front of the container.
- 3. Move the arms to the rear of the container to cover the load, stopping approximately 1 foot away from the rear of the container, move the arms all the way down so the Stabilizer Bar sits on top of the container.
- 5. Lower the Gantry, so the top of the Windscreen is even with the top front of the container.

#### **TO UNCOVER**

- 1. Raise the gantry up until the Roll Assembly is even with or above the front of the container.
- 2. Move the arms to the front of the truck, stopping 2-3 feet from the top front of the container.
- 3. Lower the Gantry all the way down.
- 4. Lower the arms to approximately 1-2 feet from the Roll Assembly.
- 5. Lower the arms all the way down so the Stabilizer Bar sits in the Low Arm Rests.

#### **SPECIAL NOTE**

NOT MANUFACTURED OR INTENDED FOR USE WITH HAZARDOUS WASTE

#### **SPECIAL NOTE**

Pioneer Consolidated Corporation will not be held responsible for damages to or caused by this automatic container covering system when it has not been used or installed in the manner prescribed in this manual. Any modifications to the system or deviations from the procedure outlined in this manual must be authorized in writing by Pioneer Consolidated Corporation.

#### **WARRANTY**

Pioneer Consolidated Corporation warrants its HR 4500 series "Rack n' Pinion" tarping systems for a period of twelve(12) months against proven defective parts and workmanship. Excluded from this warranty is the fabric tarp. This warranty does not include damage to the unit caused by improper use, improper installation or lack of maintenance. Our liability is limited to the replacement of proven defective 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 Pioneer Consolidated Corporation has authorized a return and has received satisfactory evidence that the part(s) is(are) defective.

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