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G1500 Series
Truck & Trailer Covering Systems

Installation, Operation & Maintenance Manual

 **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.

ATTENTION DISTRIBUTOR: DO NOT DISCARD.

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

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INSTALLATION INSTRUCTIONS

MODELS G1500, G1500D, ETC1500D & EDD1500D

READ AND FOLLOW ALL INSTRUCTIONS BEFORE USING THIS PRODUCT. REPLACE ALL WARNING LABELS WHEN THEY BECOME UNREADABLE.

ROLLER ASSEMBLY - ALL UNITS

Assemble -1- Center Section into the right and left sides of the roll assembly on the ground. The Right Side Roll Assembly on G series units has the SERIAL PLATE attached to it and the Left Side Roll Assembly always has a crank, sprocket or electric motor attached to it. Bolt -2- Roll Mounting Angles (6" for 8/19' units, 10" for 20/32' units and 6" for EDD units) to the inside of each bearing plate using the 3/8" bolts, nuts and lock washers provided. Place the Roller Assembly on top of the cab shield or front of the trailer in the position desired. Clamp the Roller Assembly in place and check to see that it is square and level to the body.

NOTE: IF THE DISTANCE BETWEEN THE BEARING PLATES, WHEN MOUNTED IS LESS THAN 86", THEY MUST BE SHIMMED/MOVED OUT FROM THE SIDES OF THE CAB SHIELD SO THE MINIMUM DISTANCE BETWEEN THE PLATES IS 86". THIS CAN BE ACCOMPLISHED BY USING CHANNEL OR ANGLE IRON SPACERS (NOT PROVIDED).

NOTE: ON ROUND OR RADIUSED NOSE TRAILERS, IT IS STRONGLY SUGGESTED THAT THE FRONT OF THE TRAILER BE SQUARED OFF PRIOR TO INSTALLING THE ROLLER ASSEMBLY. THIS MODIFICATION TO THE TRAILER MAKES IT EASIER TO MOUNT THE ROLLER AND WINDSCREEN WHILE AIDING THE OVERALL OPERATION OF THE UNIT. IT ALSO MAKES USE OF SPACE THAT MIGHT OTHERWISE BE UNDERUTILIZED (i.e. The space over the doghouse).

2 pc. ARMS-SIDE MOUNT and UNDERBODY HUB STYLE MOUNT

All pivot arm units now come with 2 pc. Arms. These arms are broken down into a Base Arm (spring, spacers and brace on side mount and underbody hub style units) and an Upper Arm (Tube and setscrews). Spiral Torsion Spring and Cantilever Style Spring Units also come with the Spring mounts separate from the Upper Arms. When installing or replacing

either portion of the arm, remove the setscrews completely, disassemble the arm, coat the base portion of the arm and setscrews with "never-seize" and reassemble.
The setscrews should be torqued to 40 - 45 ft-lbs.
Replace worn setscrews immediately.

PIVOT POINT LOCATION AND MOUNTING OF ARM MOUNTING BRACKET

STANDARD SIDE MOUNTED TORSION SPRING MODELS 8-33'

Measure the distance from the back side of the roller to the center of the tailgate. Dividing this measurement in half will give you a starting point for locating your arm mounting brackets. Tack weld -1- arm mounting bracket to one side of the body so that the front of the bracket lines up with the measurement determined above. **MOUNT THE ARM MOUNTING BRACKET AS LOW ON THE SIDE OF THE BODY AS POSSIBLE. DO NOT MOUNT THE BRACKET ON THE FACE OF A VERTICAL RIB OR ON THE FACE OF THE RUB RAIL.** If the center point happens to fall directly on the face of a rib, then the arm mounting bracket must be moved to either side of the rib. ON LARGE TRAILERS IT IS ADVISABLE TO MOUNT THE ARM MOUNTING BRACKETS BELOW THE FLOOR LEVEL IN ORDER TO MAXIMIZE THE ANGLE THAT THE ARM MAKES WITH THE FLOOR OF THE TRAILER.
THIS LARGER ANGLE MAKES THE UNIT WORK EASIER AND PROLONGS THE LIFE OF THE SPRINGS.

The arm mounting brackets must be mounted square and plumb. The long dimension of the arm mounting bracket must be vertical when viewed from the side of the body and the face of the bracket must be plumb vertically and parallel horizontally to the side of the body. Be careful of tapered bodies and tapered rubrails! Test for correct location as shown below.

OPTIONAL UNDERBODY MOUNTED TORSION SPRING (HUB STYLE) 8-22' UNITS

The Underbody Arm Mounting Bracket and the Underbody Mounting Bracket is pre assembled for ease in installation. Measure the distance from the back side of the roller to the center of the tailgate. Dividing this measurement in half will give you a starting point for locating your arm mounting brackets. Tack weld -1- Underbody Mounting Bracket to one side of the body so that the front of the mounting hub lines up with the measurement determined above. Test for correct location as shown below. Once the correct location has been determined, the Underbody Mounting Bracket can be welded to the body. Make certain the front edge of the Underbody Mounting Bracket is even to the outside edge of the rubrail and the bracket is level and plumb. Be careful, the underside of some rubrails may not be square and some shimming may be required. Additionally, the inside end of the

Underbody Mounting Bracket may need to be supported if the body cross members are higher that the rubrail. Do Not Weld the Underbody Arm Mounting Bracket to the body. If it appears as though the brackets may interfere with the tires, you may trim or radius the brackets to suit your installation. See Installation Diagram.

OPTIONAL UNDERBODY CANTILEVERED TORSION SPRING 8-32' UNITS

PIVOT POINT LOCATION

Measure back from the bearing plate 4" and make a mark on the top of the cab shield. Using two tape measures, place the end of -1- tape measure at the mark you just made in step and place the -1- end of the other tape measure in the middle of the tailgate. Stretch the tape measures diagonally down to the bottom of the rubrail and cross them over one another.
Move the tape measures back and forth until the measurement on each one is the same at the point where they cross each other. This establishes the pivot point for the arms. Mark this point on the rubrail of the truck. Duplicate this point on the other side of the truck, using the roller assembly as a benchmark.
The Spring Assemblies are marked Drivers Side and Passengers Side to aid in installation.

UNDER THE BODY MOUNTING:

Locate the appropriate Spring Assembly on the side of the body, aligning the center of the shaft with the Pivot Point marked above. Position the Spring Assembly against the underside of the rubrail with the outside mounting plate against the face of the rubrail. Mark and drill holes in the rubrail to accept the hardware provided. Support the inside of the mount by securing to a crossmember. If the inside of the mount is between cross members, it is best to add an angle iron etc. for support

THRU THE RUB RAIL MOUNTING

This type of installation assumes that the pivot point will fall in between two of the crossmembers. After measuring for the pivot point as above, check to make sure that the pivot point allows for this type of mounting. Correct as necessary. Determine the vertical position on the rubrail for the hole that must be drilled thru the rubrail for this type of installation. Mark this vertical location on the outside of the rubrail at the pivot point that was determined earlier. Drill a 1.5" dia. hole thru the rubrail at the proper location. Remove the outside mounting plate. Use the spring assembly as a template to determine the locations for the bolt holes. Drill the holes and secure in place from the inside out.

place. Support on the inside of the bracket by affixing it to a crossmember using angle iron etc.

Install the Arm & Plate Adapter onto the square drive on the shaft so the adapter is horizontal and facing the rear of the body. Install a Roll Pin into the outside hole on the shaft to hold the arm adapter in place.
Repeat for the other side of the body. Measure the Pivot Point Location on this side of the truck and use these measurements on the other side. **IT IS VERY IMPORTANT THAT THE PIVOT POINTS BE IN IDENTICAL POSITIONS ON BOTH SIDES OF THE TRUCK.**

OPTIONAL SIDE MOUNTED SPIRAL TORSION SPRING MODELS

Using two (2) tape measures, measure approximately 4" from the backside of the roller, and from the center of the tailgate (*see diagram*). The spot where the tapes cross centered on the rub rail will be the pivot point, and the location for mounting the BASE MOUNT (G2143-1, G2144-1 & G2145-1).

The Base Mount is a -3- pc. assembly consisting of a base plate (female hex), shaft and cover plate (hole). Using the cover plate as a template, mark the position of the holes on the body making sure the pivot point that was determined above is in the center of the hole. Drill the holes in the body and install the Base Mount in the following sequence. BASE PLATE, SHAFT and COVER. Using two (2) ea. of the flathead bolts, nuts, and lockwashers provided. Make sure the keyway in the shaft is in the 6 o'clock position. The hex on the shaft is designed to give you adjustability in the spring tension should it be required. Repeat this procedure for the opposite side, being sure that the base mounts are aligned front to rear as well as in height.

Although the BASE MOUNTS may be mounted at various points vertically, it is recommended that they be mounted at the lowest convenient location to ensure longevity and to avoid over-stressing the springs. Beware of tapered rubrails. The base mounts must be Vertical.

The hex shafts in the base mount have been provided to enable various spring pre-loading, or may be utilized to accommodate a higher vertical mounting location. The 6 o'clock keyway position will be adequate in most cases.

To complete the assembly, position one (1) of the SPRINGS (G2142) against the inside wall of the HOUSING (G2146, G2147 or G2148). To aid alignment, hook the spring's tail over the spring anchor rod in the HOUSING. The HOUSING'S arm mounting tube will be facing rearward during this phase of the installation process (*note; the springs anchor tail will be at 6 O'clock, and will engage the BASE MOUNT slot accordingly*). Slide the BASE MOUNT shaft through the HOUSING'S far wall and engage the 1st

spring, then the next spring and so on, until all the springs for that side are in place and the BASE MOUNT shaft protrudes through the near wall of the HOUSING.

Slip the WASHER (G2150) over the BASE MOUNT shaft, and secure with the SNAP RING (G2150A). Repeat for the other side of the truck.

TESTING PIVOT POINT LOCATION

General – All mounts

The best way to check the proper pivot point location as well as the bow location is outlined below. The arms and bows are attached as follows and then the following test is performed.
On side mount and underbody hub style units, install the arm, setscrew end onto the base arm (spring) and tighten the setscrews. When testing is complete, install the retaining rings and roll pins
With cantilevered underbody springs, install the arm, setscrew end onto the adapter and tighten the setscrews.
Spiral torsion spring equipped systems will have the arms etc. slid onto the base arm with the setscrew end onto the base arm.

Swing the arm to the front of the truck and adjust the bow in or out so that it is approximately 1-2" behind the bearing plate. On straight trucks, the 45 degree bend in the bow is provided so that the arm and bow in combination do not cut across the corner where the side of the body joins with the headboard. Secure the bow temporarily to the arm by clamping and swing the arm through its arc to the rear of the truck. The portion of the bow which will hold the rear section should end up in line with the center of the tailgate. Correct as necessary and swing the arm to the front of the truck. The roll assembly may have to be moved either forward or back to maintain the 1-2" dimension between the bow and the bearing plate. Once the arm, bow and roller have been aligned properly, you are ready to duplicate this on the other side of the truck.

REAR SECTION , BOWS & DONUTS

Install the rear section between the bows making sure that the width between the arms at the pivot points is the same as the width between the arms at the bows. Shorten the rear section as necessary.

SIDE MOUNTED TORSION SPRING UNITS- (Steel Framework)

Secure the arms to the bows and the bows to the rear section by drilling -4- 1/4" holes through the pieces and installing -4- 1/4" x 2" cotter pins (provided).

UNDERBODY MOUNTED TORSION SPRING UNITS (Hub & Cantilevered)

Secure the arms to the bows by drilling holes through the arm and bow and install 5/16" hardware (provided). The bow to rear section connection is made using the same hardware.

OPTIONAL SIDE MOUNTED SPIRAL TORSION SPRING MODELS

Secure the arms to the bows by drilling holes through the arm and bow and install 5/16" hardware (provided). The bow to rear section connection is made using the same hardware.

ALL PIVOT ARM UNITS

After the Rear Section has been installed, the arm mounting brackets and the roller assembly can now be fully welded in place (if required). Make sure that the welds have good penetration and add any gussets that you as the installer feel are necessary. The Donuts (G1616) can now be installed on the rear section to support the arms when the load is covered. The donuts should be positioned as far outboard as possible to allow for the cover spring to be installed between the tarp and the rear section. Secure the donuts to the rear section by securely tightening the set screws. The cover spring will be installed later.

NOTE: All units with Aluminum Arms, Bows & Rear Section use Nuts & Bolts to hold these pieces together.

INSTALLING THE CONTROL BOX

MODEL G1500

The Spring Disengaging Crank Handle is shipped permanently installed into the crank box. Attach the Crank Box Support angle to the slot in the back of the crank box using the 3/8" nuts, bolts and washers provided. Secure the crank box to the left side bearing plate using the 3/8" bolts washers and nuts that are used to attach the bearing plate to the roll mounting angles. Do not tighten the nuts all the way at this point; they will be tightened later on after the chain has been installed. Check the alignment of the drive sprocket on the roller with the drive sprocket inside the crank box. Correct as necessary by moving the left side roller in or out as necessary. This can be accomplished by loosening the 2 set screws on the collar of the bearing, moving the roller and then re-tightening the set screws.
Check to make sure that the crank box support angle is of the proper length to support the crank box and keep the two sprockets in alignment as far as parallelism is concerned. Also check to make sure the inside of the Crank Handle will not hit the body when pushed into

the slots in the drive sprocket. Cut the crank box support angle or add to it as required so that the alignment is maintained. Weld the crank box support angle to the body. Push the crank in and out to check for proper clearance. Lead the 3.5 foot drive chain around the sprockets and attach the two ends using a master link (provided). Adjust tension on the chain by moving the crank box away from the roller assembly and tighten the -3- bolts and nuts securely. Proper tension is achieved when the chain cannot be deflected more than 1/2" midway between the two sprockets. Lubricate the chain with white grease and install the chain guard using -2- 1/4-20 x 1/2 bolts and flat washers provided. The bolts go through the slots in the chain guard and into tapped holes in the crank box. Adjust the chain guard so that adequate clearance is maintained between the chain and the guard so that the chain does not rub or bind on the guard.

DO NOT OPERATE WITHOUT CHAIN GUARD (Label P/N CGD-ANSI)

GROUND CONTROL EXTENSION

MODEL G1500D

The Ground Control Extension consists of an Upper Extension and a Lower Extension. The upper extension has two tapped holes at one end and a single drilled hole at the other end. The lower extension slides inside the upper extension so that the correct or desired length of extension can be set. The upper extension has a bracket on the back side that bolts to the left side bearing plate, utilizing the same hardware that holds the bearing plate to the roll mounting angle. The crank box bolts to the bracket on the back of the lower extension with 3/8" bolts, nuts and washers provided. Attach the crank box support angle to the crank box as outlined in the previous section. Bolt the upper extension to the left side bearing plate, then bolt the crank box, with the support angle attached, to the lower extension. Slide the lower extension into the upper extension as far as necessary until the desired height is achieved. Clamp the pieces together to hold this position until the assembly has been secured to the body. Check the alignment of the sprocket on the roller with the sprocket in the crank box. Correct as necessary as outlined in the previous section. Check to see if the crank box support angle needs to be shortened or lengthened to ensure that the drive chain will track properly. When all these adjustments have been made, the crank box support angle can be welded to the body to provide support for the crank box and the crank extension. It will be necessary to use the long drive chain (10') in conjunction with the short drive chain (3.5') when the extension is extended to its maximum length.
For other lengths, the chain(s) may have to be linked together or cut depending on the situation. When the correct length has been found, connect the chain ends using the master link(s) provided. Adjust the chain by sliding the crank box away from the roller assembly. Make sure that the bolts and nuts are all tightened securely after adjusting the chain. Proper chain tension is achieved when the chain cannot be deflected more than 3/4" midway

between the two sprockets. Lubricate the chain with white grease and install the chain guard onto the top of the upper extension using -2- 1/4-20 x 1/2" bolts and flat washers provided. The bolts go through the slots in the chain guard and into the tapped holes in the upper extension. Adjust the chain guard so that adequate clearance is maintained between the chain and the guard so that the chain does not rub or bind on the guard.

MODEL EDD1500D (Direct Drive) & ETC1500D (Chain Drive)

ELECTRICAL CONNECTIONS

Each kit comes with enough wire and terminals to properly wire -1- unit. The electrical connections are the same on all sizes of units. The only difference is that on trailer units (20-33') a connecting plug is furnished to connect the tractor to the trailer. The dual wire is furnished in one continuous length. One (1) piece of wire is used to connect the battery to the Rotary Switch and -1- piece of wire is used to connect the Rotary Switch to the electric motor. Please note that the wire connecting the switch to the motor is to be run without interruption along the chassis to the pivot point and then under the body directly to the motor.

Following of the wiring diagram found included in this booklet will make connecting the wires to the proper place very easy. The Rotary Switch is not waterproof and **MUST** mount in the cab where it is out of the weather. Mount the switch and bracket in a suitable place in the cab where the operator can easily view the tarping system in his mirrors or while standing on the ground directly outside the cab. Run the long wire from the Motor down the front of the body, under the body to the pivot point, around the pivot point and along the chassis to the cab. Split & strip the wire and attach two ring terminals to the wires at the motor end and make the connection to the motor. **Use two wrenches when tightening the nuts on the studs.** Use wire ties or clamps to secure the wire to the body and chassis. Cut the wire to length. Split & strip the wire and connect these to terminals **A1** & **A2** using the ring terminals with small holes. Split & strip one end of the remaining piece of wire, attach the terminals and connect to terminals **B1** & **B2** on the switch. Route these wires to the battery (**B1 positive + and B2 negative -**). Connect the circuit breaker to the positive lead (**B1**) and then to the battery positive. Connect the other lead (**B2**) to the negative side of the battery. *Coat all terminals and connections with dielectric grease to prevent corrosion.*

Check to make sure the roller turns the correct way when the switch is activated, that is the roller turns clockwise as viewed from the drivers side of the truck when the switch is turned to the uncover position and turns counterclockwise as viewed from the drivers side of the truck when the switch is turned to the cover position. Correct as necessary by reversing the wires on the motor terminals. On EDD1500D systems, install the cover on the Motor using the screws provided.

MOUNTING THE MOTOR AND CHAIN GUARD
ETC 1500D (Chain Drive) ONLY

When mounting an ETC 1500D it is wise to plan out ahead of time where the motor is going to be mounted in relation to the roll assembly. More often than not, the motor is mounted in front of the roller but sometimes because of space restrictions the motor is mounted under the roller (under the cab shield). Either way is acceptable as long as everything lines up properly and the slip clutch on the motor is readily accessible for adjusting.

Once the roller and framework are in place the motor and motor mounting bracket can be mounted. Assemble the motor to the motor mounting bracket with the hardware supplied. Be sure to bolt the motor to the slotted side of the mounting bracket so that chain tension may be adjusted later. Position the motor and bracket in front of the roller so that the center to center dimension between the roller and the motor is 8-9". Anything greater than this may cause interference with the chain guard. Line up the sprocket on the roller with the sprocket on the motor and then bolt or weld the motor mounting bracket in place on the body. Loosen the bolts that secure the motor to the bracket and slide the motor towards the roll assembly. Lead the chain around the sprockets and connect with a master link.

NOTE: THE CHAIN WILL HAVE TO BE CUT TO A SHORTER LENGTH IN ORDER TO FIT AROUND THE SPROCKETS CORRECTLY.

Pull the motor away from the roll assembly to tighten the chain then tighten the bolts that hold the motor to the mounting plate. Correct chain tension is achieved when the chain cannot be deflected more than 1/2" midway between the two sprockets. Apply grease to the chain to provide lubrication. The chain guard can now be mounted using the "L" and "U" brackets provided. The brackets and the chain guard can be mounted any way you see fit as long as the guard covers the pinch points created where the chain goes over the sprockets. We strongly suggest that the brackets be welded in place and the chain guard bolted to the brackets to provide for easy removal when performing maintenance on the chain and slip clutch. The silver colored "Z" shaped piece with the eye on the end is the emergency crank handle that may be used to roll the cover in or out in the event of an electrical failure. To use this handle, remove the chain guard and insert the handle into the hole on the end of the motor shaft. The flats on the handle have to be engaged with a slot inside the motor. Turning the crank will turn the shaft and sprocket that will either wind or unwind the cover. This may take a while but it can get you out of a bind. Connect the power wires to the studs on the back of the motor using the lock nuts and terminals provided. Operate the motor using the switch to make sure that nothing is binding or rubbing. Check to make sure the roller turns the correct way when the switch is activated, that is the roller turns clockwise as viewed from the drivers side of the truck when the switch is turned to the uncover position and turns counterclockwise as viewed from the drivers side of the truck when the switch is

turned to the cover position. Correct as necessary by reversing the wires on the motor terminals.

ADJUSTING THE SLIP CLUTCH
ETC 1500D (Chain Drive) ONLY

In order for the unit to operate properly and for the slip clutch to do its job correctly, it must be adjusted while operating the unit. With the cover in place and the arms at the rear of the body, loosen the set screw that serves to lock the large nut in place on the slip clutch. Tighten the nut and try the unit, if the arms fail to lift up off the tailgate, tighten the nut until the arms lift off the back of the body. Move the arms and cover to the front of the body and observe the sprocket on the slip clutch. If the sprocket stops turning and the shaft continues to turn, when the cover has become fully wound on the roller, then the slip clutch is adjusted properly. If the sprocket continues to turn, then the nut must be backed off until the sprocket stops turning. Run the unit back and forth a few times to test the slip clutch. A general guideline is that the sprocket on the slip clutch and the shaft should turn together when lifting the arms and cover up off the tailgate, but the clutch should stop turning when the cover is fully wound on the roll to prevent damage to the cover or roller. The nut might have to be adjusted a few times until a happy medium has been achieved. When the nut has been adjusted properly, re-tighten the set screw on the nut to lock it in place. Before tightening the setscrews, coat them with an anti-seize compound before tightening.

COVER (TARP) - ALL MODELS
RECTANGULAR & 9' WIDE TAPERED

Before installing the cover onto the roll assembly, attach the Center Section to the left & right rollers using -2- 1” sheet metal screws (provided). Center the center section between the roller halves to provide equal strength on both sides. These sheet metal screws go thru the grooves in the roll halves and thru the groove in the center section to lock everything together. Wrap the Cover 3/4 of the way around the roller in a clockwise manner as viewed from the drivers side and attach the cover to the roller using -5- 1" Sheet Metal Screws and Fender Washers provided. Make sure the cover is straight on the roller and that the Fender Washers are firmly in place over the grommets. Also, make sure the shock cords (on tapered covers) are on the top.

Attach the cover to the roller as outlined above. Disassemble one bow from the rear section and slide the rear boot of the cover onto the rear section. Re-assemble the bow and rear section. Insert -1- cover spring into each grommet at the rear of the cover and attach the loose end of the spring into the eye of the cotter pin that is used to attach the bow to the rear section on steel framework units. On systems with optional mountings, where the rear section is bolted to the bows, a cotter pin has been provided to attach the other end of the cover spring. You will have to drill -1- 1/4" dia. hole approximately 2" away from the edge

of the cover in the rear section on both sides and then install -1- 1/4" cotter pin into each hole for the loose end of the spring to attach to. If the unit includes a 9' wide tapered cover, tie the cover shock cords as follows and follow the remainder of the operating instructions to test and operate the unit.

COVER SHOCK CORDS - ALL MODELS WITH 9' WIDE TAPERED COVERS

The shock cords on the top of the cover are designed to fold the cover upward and inward so that the 9' wide cover will roll up between the bearing plates on a narrower cab protector. This is accomplished by firmly tying one end of the shock cord to a loop on one side of the cover and then passing the other end of the shock cord through the loop in the center of the cover towards the other side and stretching the shock cord so that it pulls the cover up and in. The amount of tension applied to the shock cord will vary depending on how narrow the cab shield is. Tie a secure knot in the loose end of the shock cord when a satisfactory amount of tension has been applied to cause the cover to wind properly. The best test for this is to check the cover while it is being wound on the roller. The cover should not "bunch up" and/or rub on the bearing plates nor should it pull in too far away from the bearing plates. Shock cords that are too tight are as bad as those that are too loose. Be patient, they may have to be adjusted a couple of times in order to get them right. Make sure that the first couple of winds that go onto the roller are smooth and even. If not, then the cover will wind up faster on one side than the other because of the extra material which gives a larger circumference to the roller.

ALL TARPS

NOTE: REMOVE ANY AND ALL SHARP EDGES OR CORNERS ON THE TOP OF THE BODY THAT THE TARP MAY COME IN CONTACT WITH. PAY PARTICULAR ATTENTION TO THE TAILGATE PORTION OF THE BODY AS WELL AS THE CAB SHIELD PORTION. FAILURE TO REMOVE THESE SHARP AREAS WILL RESULT IN COVERS BECOMING CUT AND FAILING AS THEY COME INTO CONTACT WITH THESE AREAS.

WINDSCREEN MOUNTING

GENERAL

After operating the unit, the last item to be installed is the windscreen. The cover should be rolled up onto the roller so that the windscreen may be placed as close to the roller as possible without interfering with the cover. A general guide is to have the windscreen 2-3" in front of the cover when rolled up onto the roller. **The purpose of the windscreen is to keep air flowing over the cover and not under the cover that will cause billowing of the cover which in turn will shorten its life.** It is imperative that any air that might flow under the roller be stopped. Even if this means adding blocking in between the ribs on a ribbed cab shield. The height of the windscreen when properly installed should be just over the top of the roller assembly when the cover is rolled up.

G1500 8/19', G1500D 8/19', ETC1500D 8/19, EDD 1500D 8/19'

These units use a 2 piece curved windscreen that is to be **BOLTED** to the cab shield, with -6- bolts, nuts and washers provided, in front of the roller as outlined above. Each piece is 48" long and they may be overlapped in the middle if the 2 pieces together are too wide for the cab shield. The only place where the windscreen is to be welded is to tack the 2 pieces together where they butt or overlap in the middle. It has been shown that welding the windscreen to the cab shield results in the cracking of welds and weakening of the windscreen.

G 1500, G1500D, ETC1500D & EDD 1500D TRAILERS 20/33'

A trailer windscreen is composed of -3- pieces, 2-48" long pieces and 1-12" piece. Because the roll assembly is supposed to be mounted on the nose of the trailer and there is not a cab shield to mount the windscreen to, we provide -2- pieces of angle iron to form a mounting base for the windscreen. These angle irons are to be welded horizontally across the front of the trailer and then the windscreen pieces are bolted to the angle irons. The location of the angle irons and the windscreen pieces for proper clearance with the roll assembly is the same as outlined above.
The short section of windscreen is designed to overlap in front of the two long pieces. **BOLT** the windscreen pieces to the angle irons with the fasteners provided. **DO NOT WELD** for the same reasons as set forth in the preceding section. The small section may be tack welded to the long pieces for rigidity.

TENSION HOOP (optional)

IF YOUR SYSTEM INCLUDES THE OPTIONAL TENSION HOOP, THIS SHOULD BE THE LAST ITEM TO BE INSTALLED AS PART OF YOUR TARPING SYSTEM, HOWEVER WHEN LOCATING THE ROLLER ON THE CAB SHIELD, YOU MUST CONSIDER THAT YOU ARE GOING TO USE A TENSION HOOP. WHEN A TENSION HOOP IS TO BE USED, THE BEARING PLATES SHOULD BE POSITIONED 6" FORWARD OF THE REAR OF THE CAB SHIELD.

1. Uncover the body by fully winding the tarp onto the Roller Assembly.
2. Measure the height of the cab shield from the highest part of the side (including the side board if used) to the top of the cab shield ("A" on drawing). Dividing this measurement in half will give you a starting place for locating the Pivot Point Assembly on the side of the cab shield (1/2 "A" on drawing). Measure down from the top of the cab shield and mark this dimension horizontally on the side of the cab shield.

3. Place -1- Bow Corner into the Base Bow on the Pivot Point Assembly and clamp the Pivot Point Assembly to the cab shield so the center of the pivot bolt lines up with the horizontal mark made earlier. The front to rear location is determined by the location of the Rear Section when the tarp is fully wound onto the roller. This is done as follows: The top of the bow corner MUST be in front of the Rear Section and vertical. The Bow Corner should not stick up above the rear section; it should be aligned with the rear section. Trim the bow corner if necessary.
4. Move the arms to the covered position at the rear of the truck. Swing the Bow Corner thru its arc toward the rear of the truck and down to make sure that adequate clearance is maintained between the rear corner of the cab shield and the underside of the bow corner. Check to see that the Bow Corner comes to rest at the corner between the side of the body and the cab shield. If not, adjust the pivot point location and/or bow corner length as necessary to achieve the proper position for the bow corner in its covered and uncovered position. Re-check the position of the bow corner to make certain that it remains aligned with the rear section in the uncovered position.
5. Once the correct position has been established, weld the base plate of the Pivot Point assembly to the cab shield. Be careful not to damage the spring and spacer. This can be taken apart if necessary. Position the Pivot Point Assembly on the other side of the cab shield using dimensions taken from this side. Weld in place.
6. Insert the Bow Corners into the Base Bow so they face to the inside of the body and are in line with each other. Drill -1- 1/4" dia. hole thru each Base Bow/Bow Corner Assembly from front to rear and fasten with a 1/4" x 2" Cotter pin. Open the cotter pin fully.
7. With the bow corners in the vertical position, measure the distance between their inside ends. Add 8 inches to this dimension to get the length of the Cross Tube. Cut to length if necessary and deburr the ID & OD on both ends. Assemble the cross tube to the Bow Corners. Drill a 1/4" hole from the rear to the front, making sure the bolt that goes into this hole will be out of the way of the tarp, thru the bow corner & cross tube and fasten with a 1/4 bolt and locknut provided on both sides. Make sure the bow corners are plumb vertically before drilling the holes. Correct as necessary.
8. Uncover and Cover the load a few times to make certain that everything is working properly and the Tension Hoop is falling into the proper place on the body. Correct as necessary.

OPERATING INSTRUCTIONS

G1500 & G1500D

The CRANK BOX utilizes a chain drive to wind and unwind the cover along with a friction brake, to control the speed of covering as well as a positive lock, to lock the roll in place. The crank, on the front, is designed to hang straight up and down when it is disengaged and not being used to roll up the cover. The crank is spring loaded to ensure that

it will disengage when not in use. The friction brake on the left hand side of the box is used to control the speed of covering.

This friction brake is activated by pushing downward on the brake control rod. It is imperative that no oils, greases or other lubricants come in contact with the friction brake strap or the drum that it presses against. These foreign substances could cause the friction brake to slip, which in turn could cause uncontrolled covering. Uncontrolled covering could result in damage to the unit as well as personal injury, so be careful when lubricating the chain not to get lubricants where they do not belong.

The brake lock, on the front of the crank box, is only to be used to lock the cover in one of two positions, either fully wound on the roll or when extended over the load.

DO NOT USE THE BRAKE LOCK AS A BRAKE TO SLOW THE UNIT DOWN. DAMAGE TO THE UNIT CAN RESULT. The brake lock is designed to be a positive lock on the sprocket teeth when the crank is turned in a CLOCKWISE DIRECTION when winding the cover on the roll. If the crank is turned in a counterclockwise direction the brake lock will not hold. Severe damage to the unit and possible personal injury will result if the crank is not turned CLOCKWISE.

TO COVER A LOAD:

1. Make sure that nobody is standing in the body or in the path of the arms.

2. Make sure that the truck is clear of overhead wires. (Label P/N CEWD-ANSI)
3. Make sure that the crank handle is disengaged.
4. Place one hand on the friction brake that is on the left hand side of the crank box and press downward.
5. With your other hand, release the Safety Latch on the Brake Lock by swinging it up and to the left, out of the way and then release the brake lock by moving it to the right and up.
6. Control the speed of the cover over the load by applying more or less downward pressure on the friction brake until the arms go over the load coming to rest on the bow rests.
7. Engage the brake lock into the sprocket teeth by moving it down and to the left.
8. Engage the Safety Latch with the Brake Lock by swinging it down and to the right until the slot is seated firmly on the Brake Lock.
9. For added security, attach the two tarp straps provided to the rear section and the truck body.

TO UNCOVER A LOAD:

1. Remove the two tarp straps from the rear section if they were used.

⚠WARNING 2. Make sure that nobody is standing in the body or in the path of the arms.

⚠WARNING 3. Make sure that the truck is clear of overhead wires.(Label P/N CEWD-ANSI)

4. Engage the crank with the drive sprocket by sliding it into the slots on the shaft with one hand.
5. With your other hand, release the Safety Latch on the Brake Lock by swinging it up and to the left, out of the way and then release the brake lock.
6. Once you have released the brake lock, place your free hand on the handle of the friction brake located on the left side of the crank box.

⚠WARNING 7. **AVOID PERSONAL INJURY**. Turn the crank in a **CLOCKWISE DIRECTION** as indicated by the curved arrow on the front of the crank box, and the warning label to wind the cover onto the roll until the rear section is resting on the cab shield. Remove your hand from the friction brake while still holding the crank. With your free hand engage the brake lock into the sprocket teeth by moving it down and to the left until it locks into place. (Label P/N CB- ANSI)

8. Engage the Safety Latch with the Brake Lock by swinging it down and to the right until the slot is seated firmly on the Brake Lock.
9. You may now remove your hand from the crank handle. Make sure that the crank handle "pops" out of engagement and hangs straight up and down.

ETC1500D & EDD 1500D
or
Any Model that has been converted to ELECTRIC operation

Electrically operated units are the easiest to operate. They can be operated from inside the cab or outside, depending on the switch placement. If you are operating the unit from inside the cab, make sure that you have good visibility in your mirrors of the arms and cover.

TO COVER A LOAD:

⚠WARNING 1. Make sure that nobody is standing in the body or in the path of the arms.

⚠WARNING 2. Make sure that the truck is clear of overhead wires. (Label P/N CEWD-ANSI)

3. Cover the load by moving the Rotary Switch to the COVER position. Release the switch when the arms come to rest on the bow rests.

4. For added security, attach the two tarp straps provided to the rear section and the truck body.

TO UNCOVER A LOAD:

1. Remove the two tarp straps from the rear section if they were used.

⚠WARNING 2. Make sure that nobody is standing in the body or in the path of the arms.

⚠WARNING 3. Make sure that the truck is clear of overhead wires. .(Label P/N CEWD-NSI)

4. Uncover the load by moving the Rotary Switch to the UNCOVER position. Release the switch when the rear section comes in contact with the cab shield.

OPERATING ANY SYSTEM EQUIPPED WITH A TENSION HOOP

When covering the load, make sure to unroll enough tarp from the roller to allow the tension hoop to rotate down to its proper position.

MAINTENANCE TIPS

1. Keep the torsion spring at the base of the arms free from debris.
2. Check the drive chain (G1500, G1500D & ETC1500D) for proper tension and adjust if necessary.
3. Periodically grease or lubricate the drive chain (G1500, G1500D & ETC1500D).
4. Check the crank to make sure it disengages properly. (G 1500 & G 1500 D) Items to check are: the spring is intact and lubricated and the roll pin and washer that retain the crank are in place
5. Periodically apply a spray lubricant such as WD-40 to the bearings, being careful not to contaminate the friction brake.
6. Replace any worn or broken parts immediately.
7. Periodically check the slip clutch on ETC 1500D units to make sure that it is functioning properly and that it is properly adjusted.
8. On systems equipped with electric motors, check all electrical connections, to make sure that no corrosion has set in which will adversely affect the units operation.
9. Should you have any problems with any motor, please do not disassemble it as this will void the warranty.
10. Guards are there for your protection, do not remove them
11. Periodically check all fasteners, screws, nuts, bolts, cotter pins, etc. Tighten and/or replace as needed.

12. Replace all warning labels when they become unreadable.

TIPS FOR THE OPERATOR

1. Keep the arms under control when covering the load by using the friction brake.
2. Make sure that the crank handle is disengaged when not in use.
3. Make sure that the truck is clear of any overhead obstructions before moving the pivot arms.

⚠WARNING 4. Make sure that the truck is clear of overhead wires.

5. Keep hands clear of any moving parts.

⚠WARNING 6. Make sure that nobody is standing in the body or in the path of the arms. when using the unit.

7. Guards are there for your protection, do not remove them.
8. Pay attention to the safety decals.
9. DO NOT USE THE PIVOT ARMS AS HANDLES OR STEPS WHEN CLIMBING UP ON THE BODY.

SPECIAL NOTE

Pioneer Cover all will not be held responsible for damages to or caused by their truck/ trailer covering systems when they have not been installed or used in the manner prescribed in this manual.
Any modifications to the units or deviations from the procedures outlined in this manual must be authorized in writing by Pioneer Cover all.

SPECIAL NOTE

NOT MANUFACTURED OR INTENDED FOR USE WITH HAZARDOUS WASTE

LIMITED WARRANTY

Pioneer Cover-all ("Seller") warrants its products to be free from proven defects in materials and workmanship under intended normal use as described in the Instruction Manual for a period of one (1) year from the original date of purchase.

Seller's obligation under this Limited Warranty is limited to the repair or replacement of any defective product and does not include freight, labor charges or lost time due to or in connection with the failure of any defective part. Any product will be repaired or replaced (at Seller's election) under the conditions of this Limited Warranty at Seller's expense when Seller has authorized a return and determined, in its sole discretion, that the product is defective.

The following are not covered by this Limited Warranty:

1. Any failure of the product or any parts of the product due to misuse, accident, neglect, abuse, improper maintenance, improper handling, improper installation, alteration, modification or acts of God including, but not limited to, lightning strikes, floods, fire or other causes beyond the reasonable control of the Seller.
2. Products that have been modified or that have serial numbers that have been removed, altered or defaced; and
3. The fabric tarp.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

THE SELLER MAKES NO WARRANTY OR REPRESENTATION EITHER EXPRESS OR IMPLIED, WITH RESPECT TO AN ITEM'S MERCHANTIBILITY OR

FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITAION MAY NOT APPLY TO YOU.

SELLER'S RESPONSIBILITY IS LIMITED TO REPAIR OR REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY. THE REMEDIES PROVIDED IN THIS LIMITED WARRANTY ARE THE EXCLUSIVE REMEDIES PROVIDED TO THE PURCHASER BY SELLER AND ARE PROVIDED IN SUSTITUTION OF ALL OTHER REMEDIES. NEITHER THE SELLER, NOR ITS AGENTS SHALL BE LAIBLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, DOWNTIME, DAMAGE TO OTHER EQUIPMENT AND PROPERTY, OR ANY OTHER COSTS THAT MAY BE INCURRED. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMTATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSIONMAY NOT APPLY TO YOU.

This Limited Warranty applies only to the original purchaser of the product through Seller or its authorized dealer or distributor and is not transferable. Proof of purchase from Seller or its authorized dealer or distributor will be required prior to any consideration of warranty claims.

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