



DIABLO TARPER

US Patents and Patent Pending

Owner's Manual

**FOR ASSISTANCE
CALL 252-291-2141**

ATTENTION DISTRIBUTOR: DO NOT DISCARD, Please forward to customer
Along with warranty registration when unit is delivered and hang driver operation
Tag in cab around hoist controls

WARNING: If incorrectly used, this equipment can cause injury!

December 19, 2017

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COVER OPERATION

TO COVER:

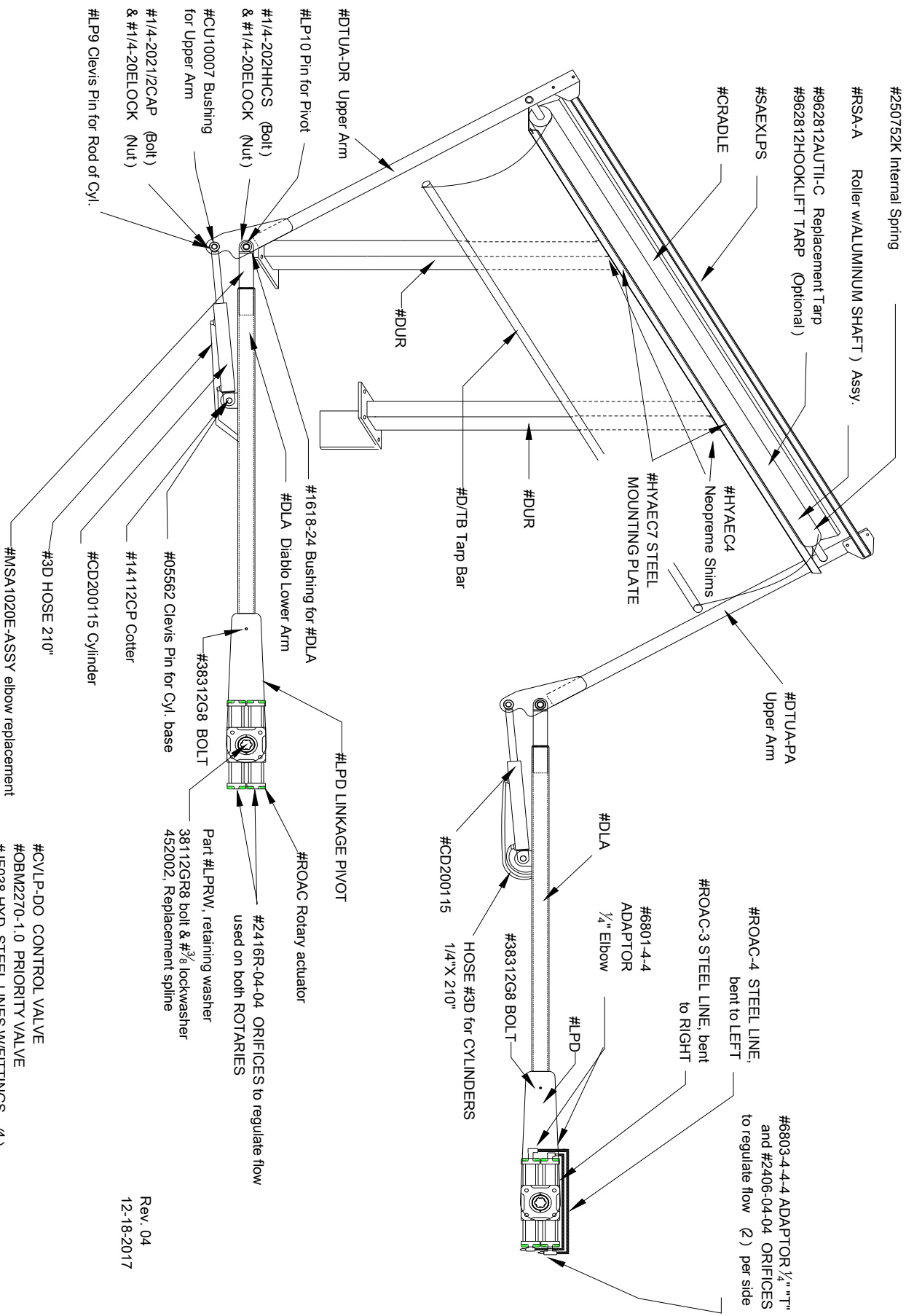
1. Rotate lower arms and extend upper arms to position the roller past the front of the container.
2. Raise gantry to just below the container edge. (OPTIONAL)
3. Continue to cover container.
4. Position the roller so it will **REST ON THE TOP REAR EDGE OF THE CONTAINER OR ON THE RAILS OF THE HOIST IF HAULING A SHORT CONTAINER WHILE STAYING BELOW 13'6". POWER DOWN THE ROLLER AGAINST THE TAILGATE OR HOIST.** This helps to keep the roller from bouncing up and down against the container while going down the road. If powered against the tailgate, the roller should ride tightly against the container as the truck goes down the road.
5. **If over height, rotate arms until roller rests against hoist rails and power down.**
6. Flip the tarp side flaps down and secure them as needed.

TO UNCOVER:

1. Un-secure the side flaps
2. Extend the upper arms to get roller off of container or hoist rails.
3. Rotate the lower arms forward and clear the front top edge of the container with the roller.
4. Lower the gantry (OPTIONAL)
5. Rotate the lower arms and adjust the upper arms in order to position the roller down between the container and the cab.
6. **POSITION THE ARMS SO THAT THE WEIGHT OF THE ROLLER IS RESTING ON THE BOTTOM OF THE CRADLE AND NOT ON THE ARMS!** This will keep the arms from bending downward.

*****IF THE TARP ROLLER IS NOT SUPPORTED IN THE BOTTOM OF THE CRADLE, ON THE REAR OF THE CONTAINER OR ON THE RAILS OF THE HOIST, ACTUATOR AND/OR ARM DAMAGE WILL OCCUR OVER TIME RESULTING IN A BROKEN SPLINE SHAFT/ BENT ARMS THAT ARE NOT COVERED BY THE TARP SYSTEM WARRANTY*****

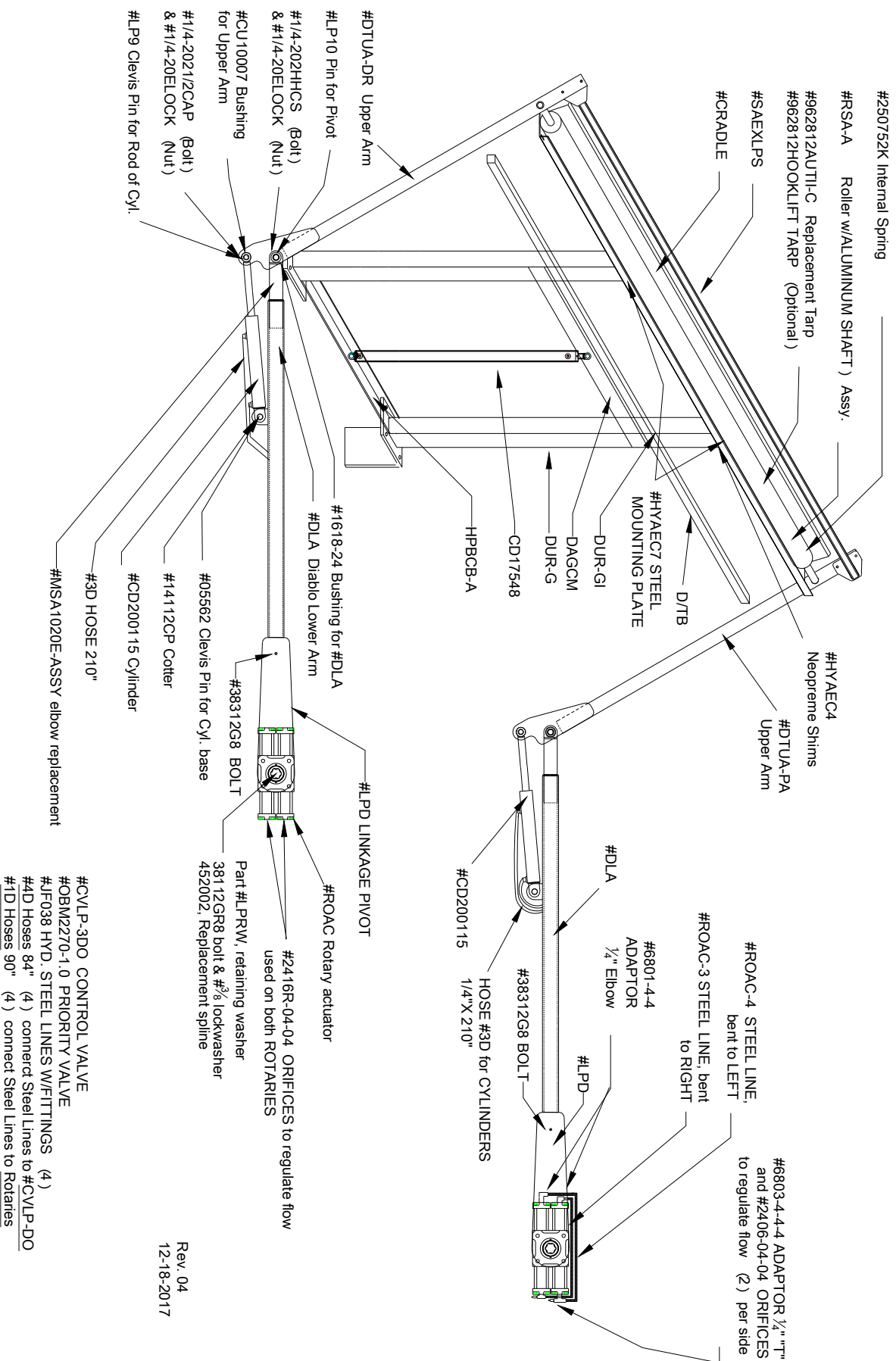
DIABLO ISOMETRIC EFFECTIVE JULY 2005 THRU CURRENT



Rev. 04
12-18-2017

#CULP-DO CONTROL VALVE
#OBM2270-1.0 PRIORITY VALVE
#JF038 HYD. STEEL LINES W/FITTINGS (4)
#4D Hoses 84" (4) connect Steel Lines to #CULP-DO
#1D Hoses 90" (4) connect Steel Lines to Rotaries

DIABLO-G ISOMETRIC EFFECTIVE JULY 2005 THRU CURRENT



Rev. 04
12-18-2017

DIABLO CRATE CONTENTS

Quantity	Part Number	Name or Description
2	MBD	Mounting Brackets
4	SF4	Gussets for Brackets
2	ROAC	Rotary Actuators
2	LPD	Linkage for Diablo
2	DLA	Lower Side Arms
1	DTUA-DR	Upper Side Arm-Drivers Side
1	DTUA-PA	Upper Side Arm-Pass Side
2	DUR	Cradle Uprights
1	RSA-A w/Tarp	Roller with Aluminum shaft & tarp attached
1	CRADLE	Cradle
2	CD200115	Upper Arm Cylinders
1	SAEXLPS	Stabilizer Bar for Diablo
4	JF038	Steel Hydraulic Lines
1	HOSEKIT-D	Hose Kit for Diablo
1	SPK-D	Diablo Small Parts Kit
1	D/TB	Tarp Bar

DIABLO-G CRATE CONTENTS

Quantity	Part Number	Name or Description
2	MBD	Mounting Brackets
4	SF4	Gussets for Brackets
2	ROAC	Rotary Actuators
2	LPD	Linkage for Diablo
2	DLA	Lower Side Arms
1	DTUA-DR	Upper Side Arm-Drivers Side
1	DTUA-PA	Upper Side Arm-Pass Side
2	DUR-G	Gantry-Base
2	DUR-GI	Gantry-Insert
1	RSA-A w/Tarp	Roller with Aluminum shaft & tarp attached
1	CRADLE	Cradle
2	CD200115	Upper Arm Cylinders
1	SAEXLPS	Stabilizer Bar for Diablo
4	JF038	Steel Hydraulic Lines
1	HOSEKIT-D	Hose Kit for Diablo
1	HOSEKIT-G	Hose Kit for Gantry
1	SPK-DG	Diablo-G Small Parts Kit
1	D/TB	Tarp Bar
1	CD17548	Gantry Cylinder
1	HPBCP-A	Gantry cylinder lower mount
1	DAGCM	Gantry cylinder upper mount

FIXED GANTRY INSTALLATION

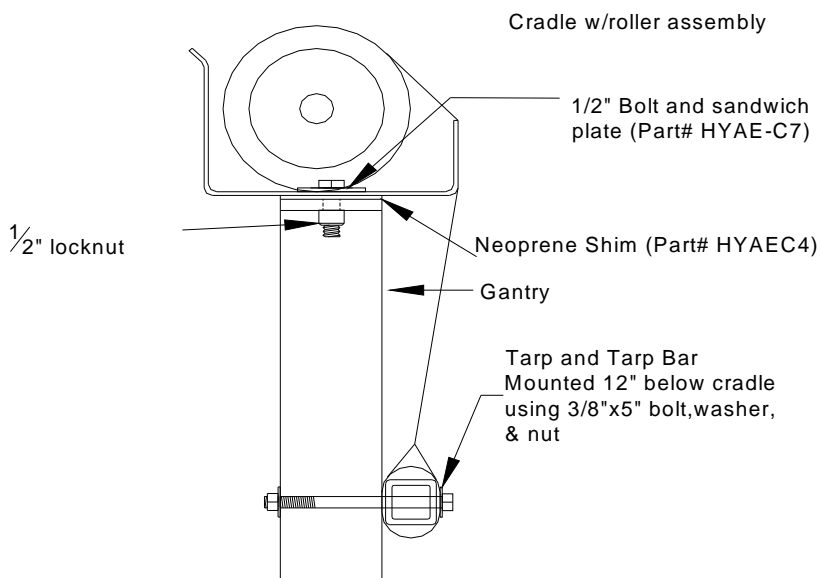
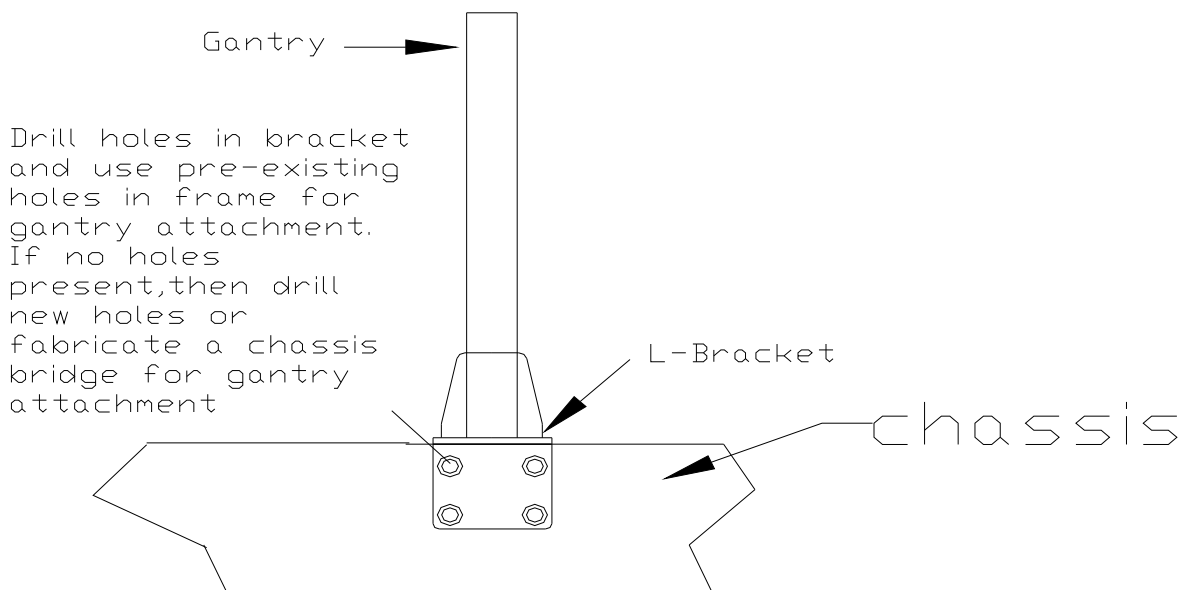
1. Check for clearance between cab, exhaust, and hoist.
2. You need a minimum of 8" clearance between hoist and cab to mount the gantry.
3. Sit gantry (DUR) on top of chassis, remove any of the bolts that are in your way and mark the mounting bracket for these holes. Drill a **minimum of 2 holes** in the mounting plate so that you can use the pre-existing holes for gantry mounting. If no holes are available, new holes will need to be drilled. If this option will not work then a chassis bridge will need to be fabricated for gantry attachment.
4. The closer the roller is to the cab the easier it will be to raise and lower arms. ***Note- leave a minimum of one (1") inch clearance between cab and gantry.**
5. Measure the distance from hoist to gantry. Make sure both gantry legs are the same distance from the hoist and plumb.
6. Position the neoprene shims on top of the gantry and place the cradle on top of the neoprene shims. Position the steel shim sandwich plates over top of the slots in the cradle and insert the 4) $\frac{1}{2}$ " x $1\frac{3}{4}$ " bolts through the steel shims, cradle, neoprene shims and the gantry and secure using the $\frac{1}{2}$ " locknuts. The neoprene shims are there to allow for chassis flex without destroying the cradle. Be sure to mount the cradle with the $\frac{1}{2}$ " bolts and Steel sandwich plates (HYEAC7) from the top and the locknuts on the bottom. Do not over-torque mounting bolts and squish out the neoprene shim. Over-torquing bolts will cause cradle to crack and void warranty. Snug bolts down until shim starts to deform into cradle slot. This should be enough torque to locate cradle to gantry
7. Place roller assembly into the cradle with the end marked **PASSENGER SIDE and TORQUE SHAFT** on the **PASSENGER SIDE**. Roll the tarp and tarp bar off of the top of the roller and bolt the tarp bar to the **BACKSIDE** of the gantry in the provided holes using the $\frac{3}{8}$ " x 5" bolts and locknuts. (See Diagram) You will need to drill the holes in the tarp bar. (Not Pre-Drilled)
8. **NOTE:** The shaft end on the passenger side has a **FLAT** spot. So you can put the supplied tensioning wheel on for tensioning.

ADJUSTABLE GANTRY INSTALLATION

1. Check for clearance between cab, exhaust, and hoist.
2. You need a minimum of 8" clearance between hoist and cab to mount the gantry.
3. Position gantry base (DUR-G) on top of chassis, remove any of the bolts that are in your way and mark the mounting bracket for these holes. Drill a **minimum of 2 holes** in the mounting plate so that you can use the pre-existing holes for gantry mounting. If no holes are available, new holes will need to be drilled. If this option will not work then a chassis bridge will need to be fabricated for gantry attachment.
4. Slide the gantry inserts (DUR-GI) into the gantry base. Be sure to have the gantry tops "pointing" out to the sides versus pointing front to rear
5. The closer the roller is to the cab the easier it will be to raise and lower arms. ***Note- leave a minimum of one (1") inch clearance between cab and gantry.**
6. Measure the distance from hoist to gantry. Make sure both gantry legs are the same distance from the hoist and plumb.
7. Position the neoprene shims on top of the gantry and place the cradle on top of the neoprene shims. Position the steel shim sandwich plates over top of the slots in the cradle and insert the 4) $\frac{1}{2}$ " x $1\frac{3}{4}$ " bolts through the steel shims, cradle, neoprene shims and the gantry and secure using the $\frac{1}{2}$ " locknuts. The neoprene shims are there to allow for chassis flex without destroying the cradle. Be sure to mount the cradle with the $\frac{1}{2}$ " bolts and Steel sandwich plates (HYEAC7) from the top and the locknuts on the bottom. Do not over-torque mounting bolts and squish out the neoprene shim. Over-torquing bolts will cause cradle to crack and void warranty. Snug bolts down until shim starts to deform into cradle slot. This should be enough torque to locate cradle to gantry

8. Measure the inside width between the gantry bases at the bottom. Then cut the gantry cylinder base mounting bracket (HPBCB-A) to width. Be sure to have the cylinder mount centered between the gantry bases.
9. Install the gantry cylinder onto the base mount using the $\frac{3}{4}$ " mounting pin.
10. At the rod end, measure the OVERALL width of the gantry inserts. Cut the gantry cylinder upper mounting bracket (Part# DAGCM) to this width. Be sure to keep the mounting clevis in the center
11. Slide the gantry cylinder upper mounting bracket onto the gantry inserts and then slid down onto the gantry cylinder rod mount. Install the $\frac{3}{4}$ " pin attaching the cylinder to the mount.
12. Be sure that the upper and lower cylinder mounts are square and plum. Firmly weld in the mounts
13. Place roller assembly into the cradle with the end marked **PASSENGER SIDE and TORQUE SHAFT** on the **PASSENGER SIDE**. Roll the tarp and tarp bar off of the roller and bolt the tarp bar to the **BACKSIDE** of the gantry in the provided holes using the $\frac{3}{8}$ " x 5" bolts and locknuts. (See Diagram) You will need to drill the holes in the tarp bar. (Not Pre-Drilled)
14. **NOTE:** The shaft end on the passenger side has a **FLAT** spot. So you can put the supplied wrench on for tensioning.

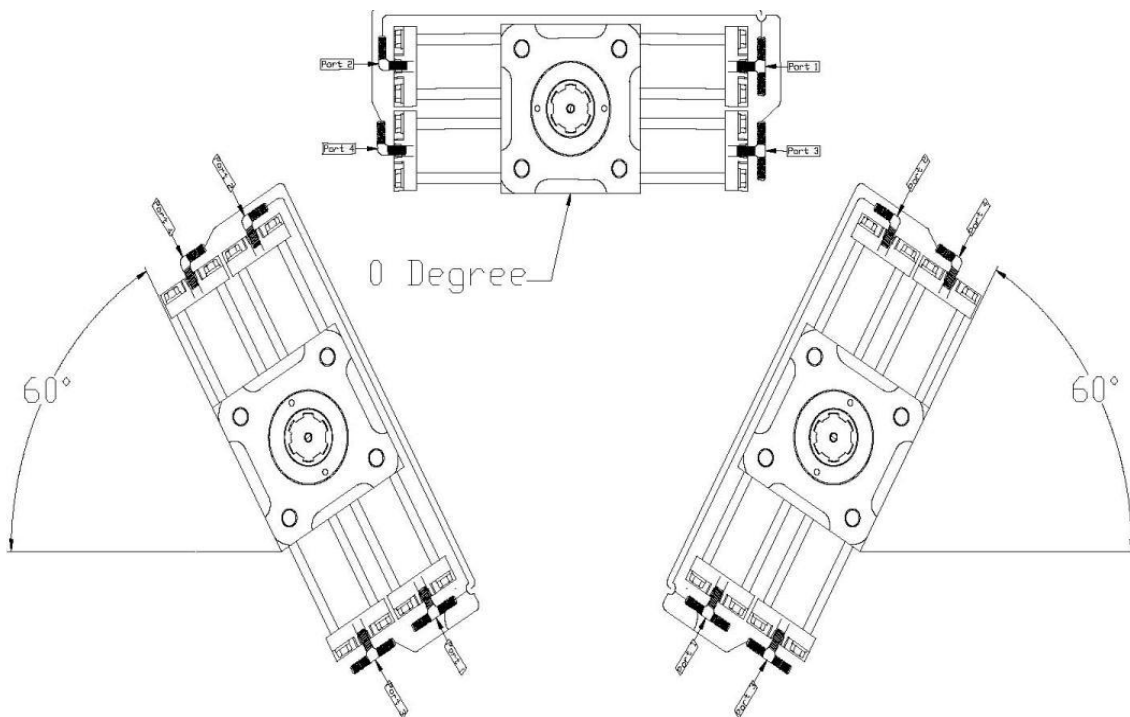
GANTRY BOLT ON



PIVOT POINT INSTALLATION

NOTE: The installation of the Diablo pivot is very simple. The only thing involved is mounting the rotary actuators to the truck's chassis

1. Federal D.O.T. allows for 108" overall width for safety devices. Therefore; maximum width for the *Diablo Tarper* must not exceed 108" overall width. This includes any bolts, nuts, hydraulic fittings, etc. **Check with your state and local D.O.T. to determine what standards apply in your area!**
2. For example, if the hoist is 35 1/2" wide, then the following formula will give you your maximum overall width, if it is agreeable with your local D.O.T.
3. $108" - 35 - 1/2" = 72 - 1/2"$
4. $72 - 1/2"$ divided by 2 = $36 - 1/4"$ maximum width from hoist for each side. O'Brian's recommendation would be 36" maximum width for each side in this scenario to allow for "deviations" in DOT measurement devices
5. **PIVOT POINT LOCATION:** Due to the rotary actuator's width, a standard pivot point location will not work. But due to the actuators 180 degree capability, we can mount the actuator in a better, more ideal location. You can place it in front of the first drive wheel, if that is close to center
6. The Rotary Actuators are not side sensitive; however the splines are located in mid-rotation and need to be rotated all the way to the front of the truck before sliding on or torquing down the linkage assembly to the spline adapter. The actuators must be square side-to-side, and parallel to the hoist. They must be set up so that the arms will fall into the cradle and not stop just before it. **If a slanted installation is needed to compliment the fender profile, then mount the actuators in 60 degree increments and allow for the roller to completely fall into and be supported by the cradle!!**

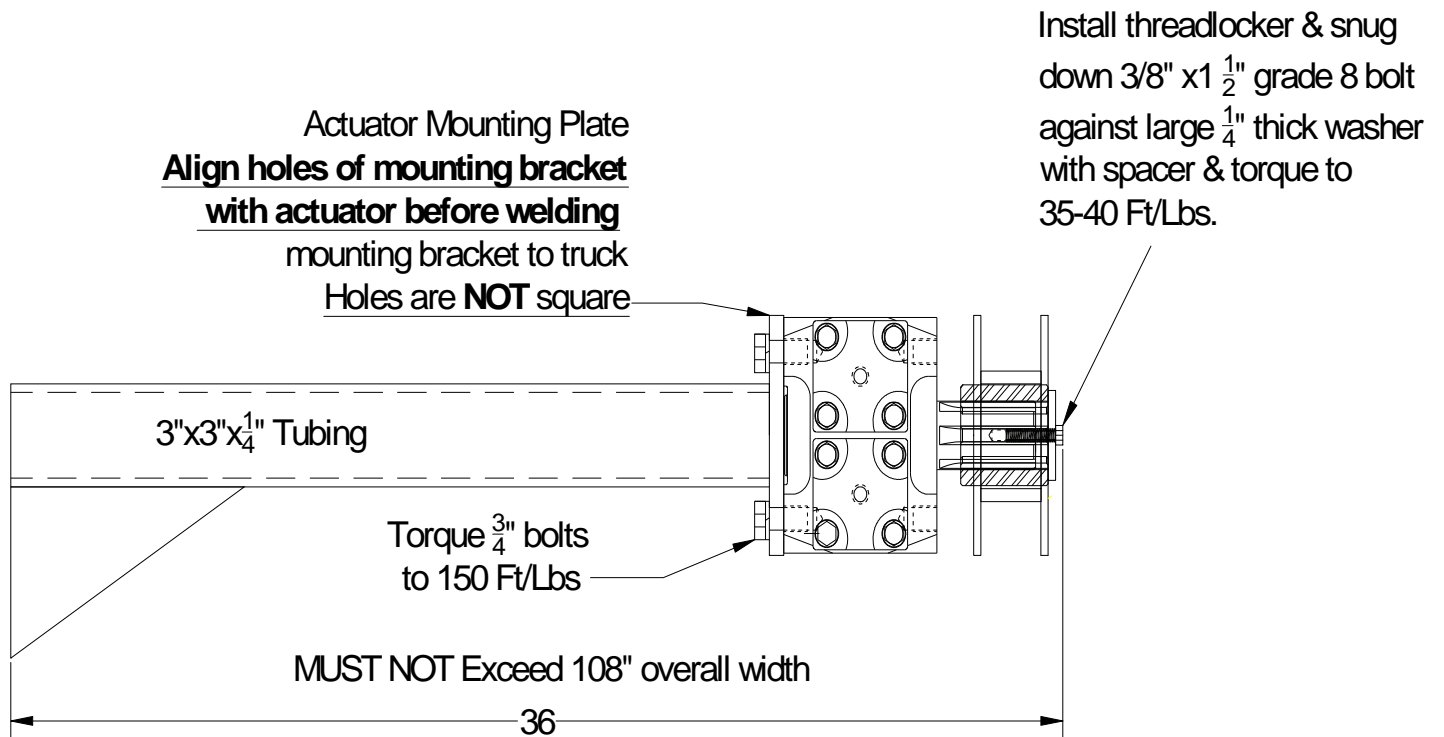


Due to the splines of the actuator, the actuator MUST be mounted in 60 degree increments to allow for the upper arm to run perpendicular to the ground and to allow for enough arm rotation to cover a 22' 40 cu. yd. box

7. As a general rule, mount the actuators as low as possible to clear the container
8. Use the supplied 3" x 3" tubing for mounting the actuator. You may have to cut the length to get the actuator out to but not past 108". **DO NOT WELD TO THE CHASSIS!! THERE MUST BE A PLATE BOLTED TO THE CHASSIS AND/OR USE THE HOIST MOUNT TO WELD TO.**

9. Before the tubing has been welded, you must orient the actuator mounting plate. This is the 7"x7"x1/2" metal plate with 4- 3/4" holes in it. Be sure to orient the plate **CORRECTLY** with the actuator as the 3/4" holes are **NOT** in a perfect square. Tack-weld the mounting bracket in place and mount the actuator with the 3/4" bolts and lock washers. Check for clearance between tires, containers, etc. Once you are sure of the installation, burn in the welds, add the gussets under and beside the tubing, and torque the 3/4" bolts to 150 ft/lbs.

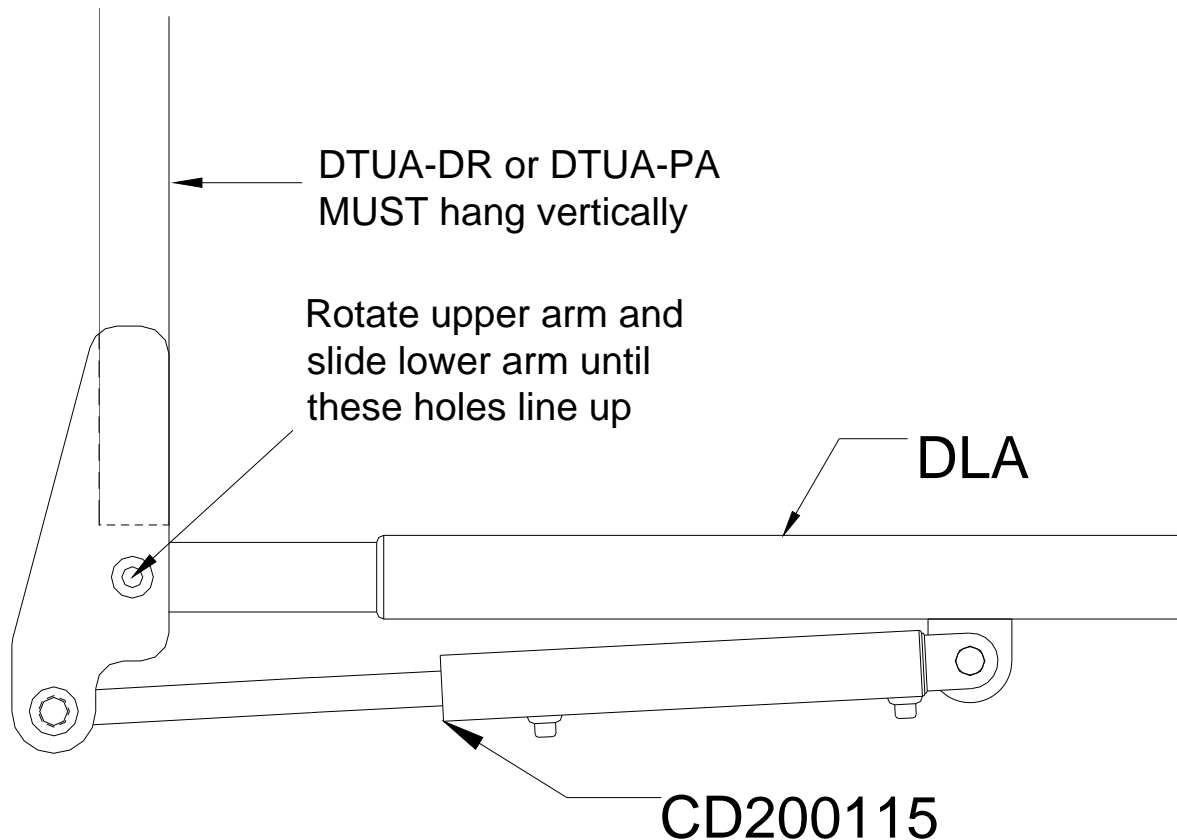
NOTE: Gussets must be welded under and to the side of the tubing to give vertical, lateral and torsional support to the actuator mounting bracket(s).



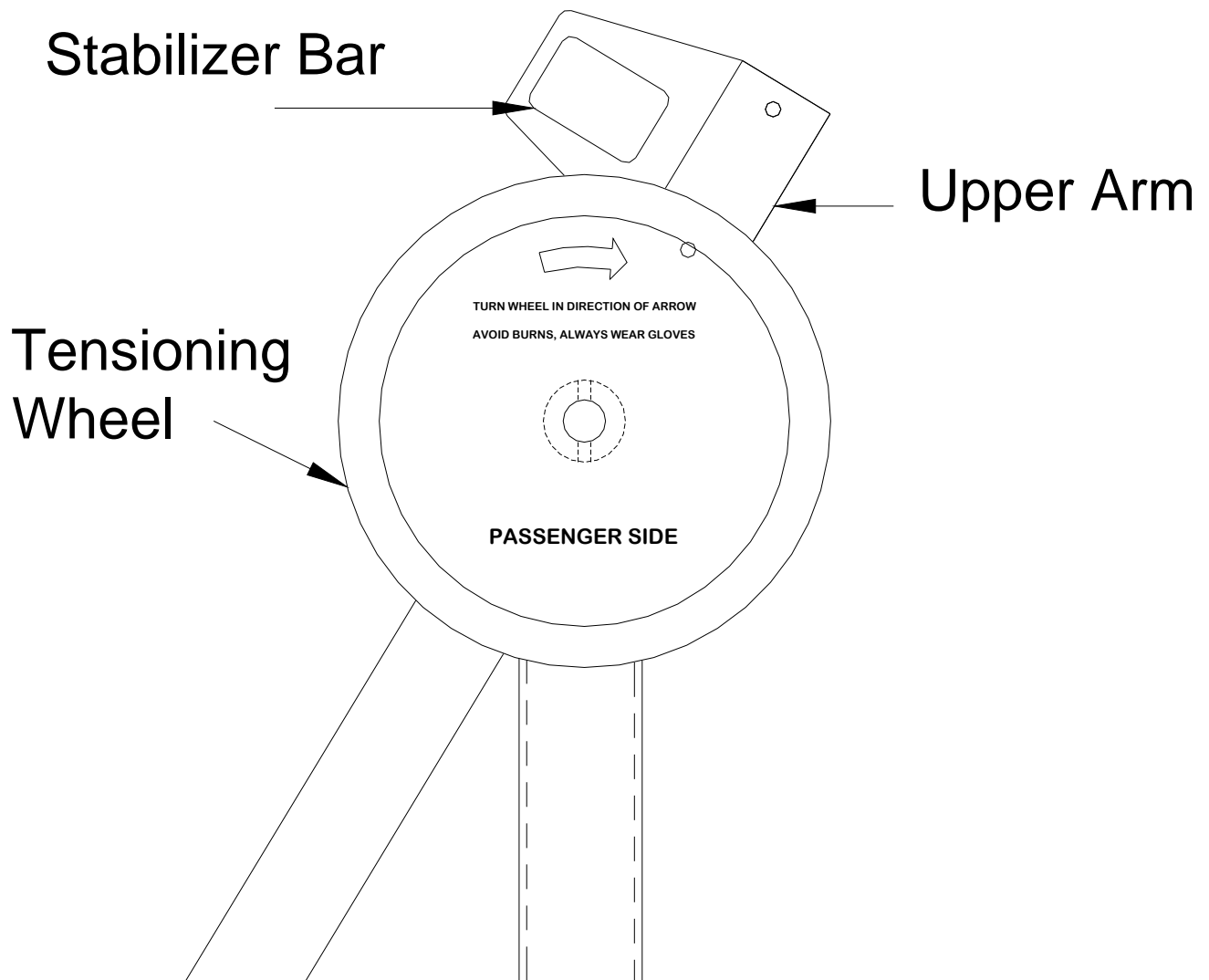
BE SURE TO MOUNT THE THICK WASHER WITH THE SPACER TO THE INSIDE AGAINST THE SPLINE FACE. THIS WILL ALLOW FOR THE ARM TO MOVE ON THE SPLINES WITHOUT THE ARM RETAINING BOLT LOSING TORQUE.

SIDE ARM INSTALLATION

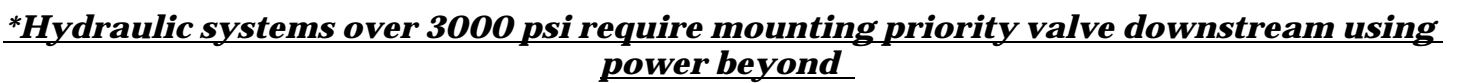
1. Be sure that the spline has been rotated completely forward BEFORE sliding the linkage pivot onto the spline of the actuator. **Do NOT torque down the spline retaining bolt at this point!!**. If done, then you will need a gear/pulley puller to remove the linkage from the spline.
2. Using the supplied anti-seize, coat the splines of the rotary actuator.
3. Align the spline adapter of the LP-D with the splines of the rotary actuator and slide on.
4. Install the spline retaining washer and spacer against the face of the spline with the 3/8"x 1 1/2" bolt. **Be sure to mount the spacer against the spline face. DO NOT TORQUE DOWN THE SPLINE RETAINING BOLT YET!**
5. Slide the lower arm (DLA) into the linkage pivot (LPD)
6. Slide the upper arm (DTUA-DR/PA) onto the shaft of the tarp roller (RSA)
7. Slide the lower arm out AND rotate the upper arm around so that the pivot holes are aligned.
8. Ideally, the upper arms should be at hanging vertical. This will allow the arms to be below and in front of the container, virtually eliminating container inflicted arm damage.
9. Attach the lower arm to the upper arm using the 1"x3 1/4" steel pin with a 1/4" hole drilled on one end. Secure the pin to the arm with the 1/4" bolt and lock nut. *****Prelube the holes and bushing material with WD-40 or similar lubricant. This will make assembly go much easier***.**
10. **Make sure that the lower arms are level or running slightly uphill with the upper arms hanging vertical. Slide the lower arm in or out of the linkage assembly to accomplish this.** When the upper arms are hanging vertical, measure the distance from the elbow pivot to the linkage assembly. Make sure that both sides are the same distance before drilling. If you cannot level the lower arms, the upper arms will ideally be hanging perpendicular to the ground.



11. Drill and bolt the lower arm to the linkage assembly using the provided hole as a guide. Secure the lower arm with a 3/8" x 3" bolt.
12. Install the upper arm cylinders to the upper arms using the flanged cylinder pin at the base. Take a long zip tie and loosely wrap it around the cylinder rod and lower arm. This will allow the cylinder to be bled later without having to remove the rod pin
13. Place enclosed tarp tensioning wheel on passenger side RSA shaft. Torque set screw against the flat side of RSA-A shaft. Install a 5/16" x 1 3/4" bolt and locknut through roller shaft and upper arm on Passenger side. Torque the wheel 10-12 turns clockwise. Finish by aligning the arm hole with the roller hole on the driver's side and placing a 5/16" x 1 3/4" bolt and locknut through roller shaft and upper arm.
14. **PRACTICE EXTREME CAUTION!!! THE WHEEL COULD SLIDE OUT OF YOUR HANDS, SPIN AND BURN HANDS!!!**
15. Install the stabilizer bar (SAEXLPS) between the upper arms using the (4) 3/8" x 2 1/4" bolts and locknuts. Make sure that the stabilizer offset is facing toward the rear.

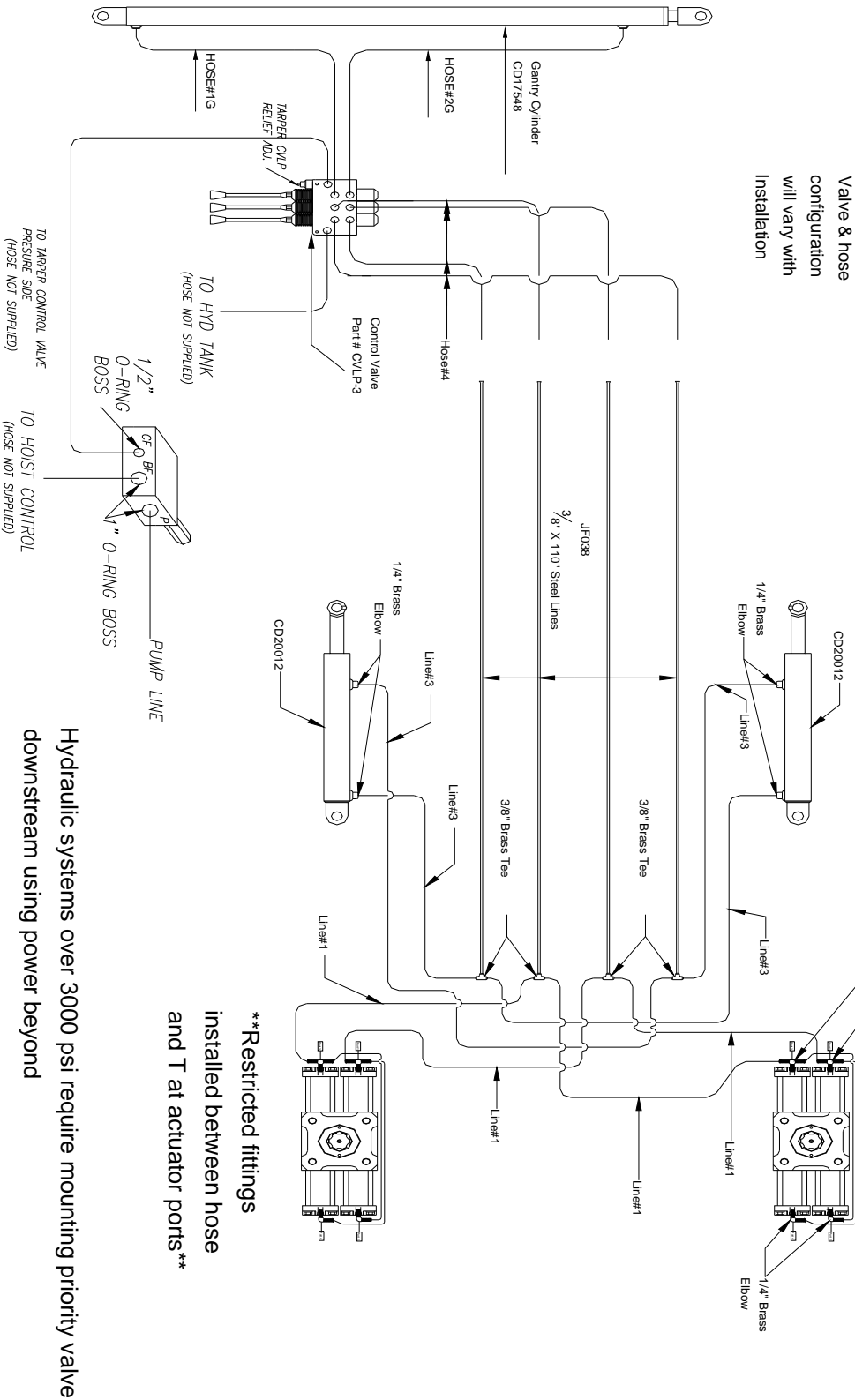


DIABLO PLUMBING INSTRUCTIONS



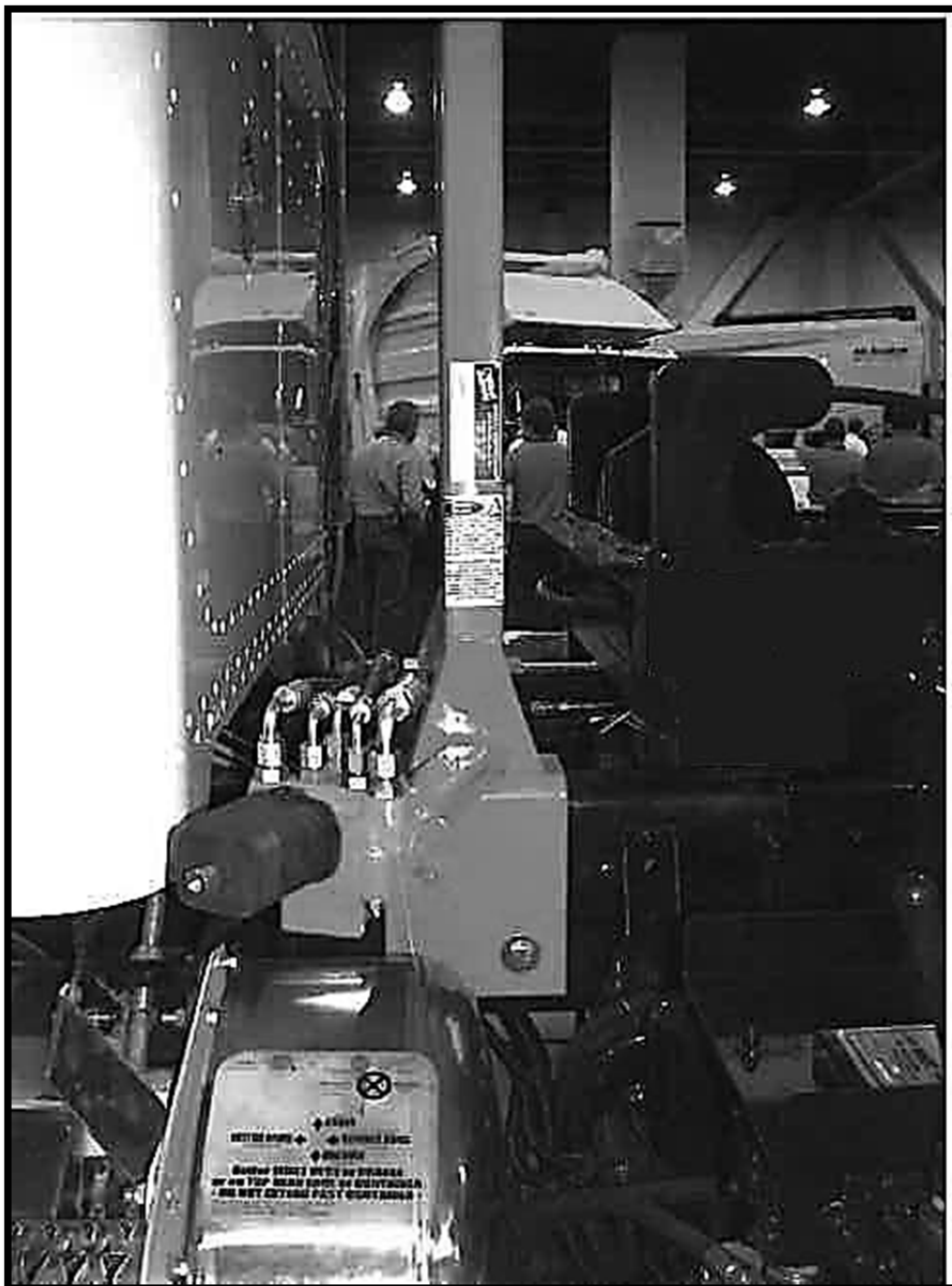
DIABLO-G PLUMBING INSTRUCTIONS

DIABLO-G HOSE SCHEMATIC



***Hydraulic systems over 3000 psi require mounting priority valve downstream using power beyond**

Mount the tarper control valve where it is easiest for the driver to operate but ORIENTING the driver out of the way of the tarper arms. Ideally, mount the control valve near the back of the cab at the driver's rear corner oriented to where the control handle forces the driver to stand in front of the door.

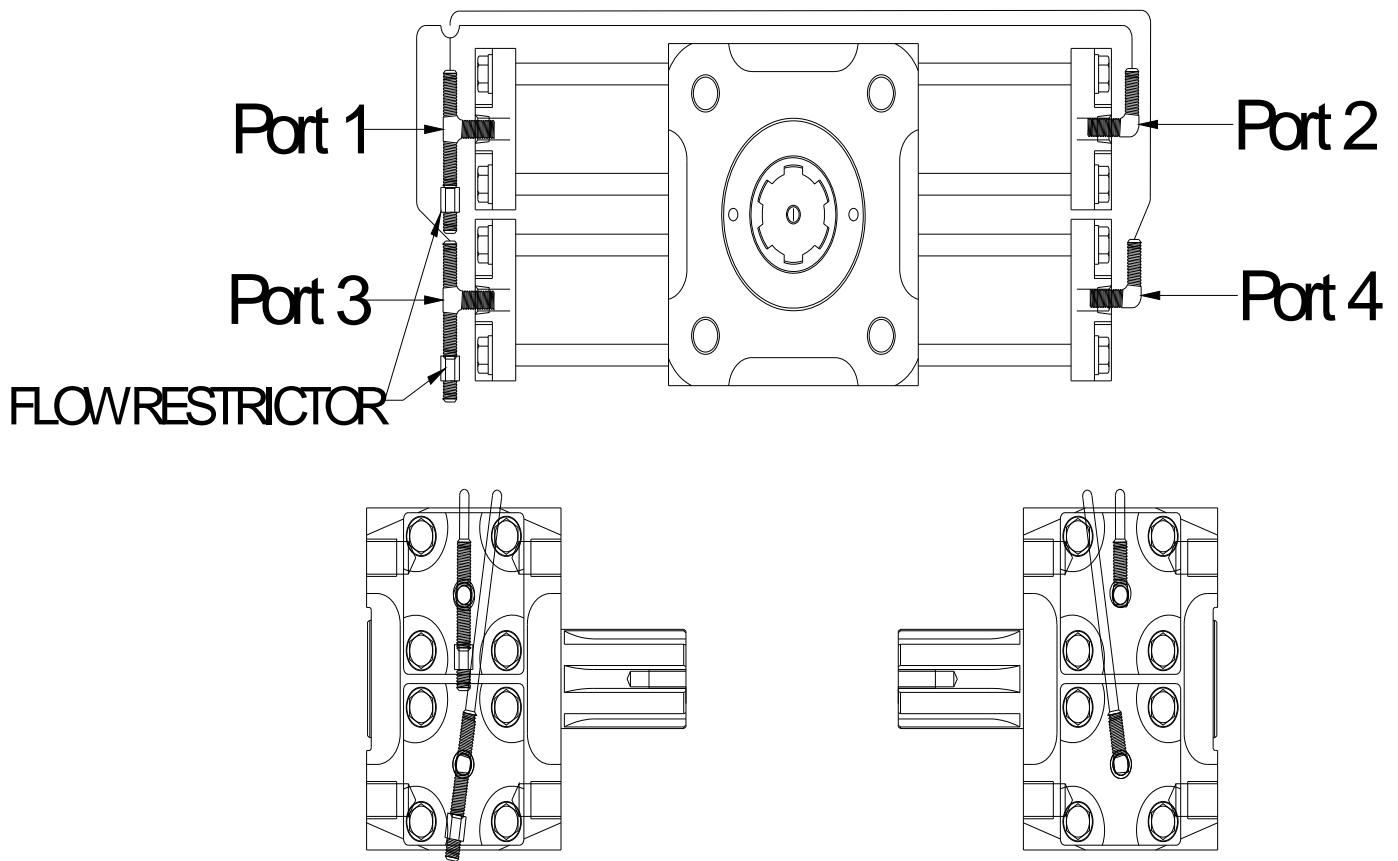


Plumbing Instructions

1. Mount the Priority valve at a place that is easily accessible for hydraulic lines and maintenance.
2. Disconnect the pump line from the hoist control valve.
3. Plumb the pump line into the 1" o-ring port labeled "P".
4. Plumb from the 1" o-ring port labeled "BF" back to the hoist control valve (Not Supplied)
5. Plumb from the ½" o-ring port labeled "CF" to the relief valve side of the tarper control valve. (Not Supplied)
6. Plumb from the return side of the tarper control valve back to tank. (Not Supplied)

Actuator Plumbing Instructions

1. Screw the 2-1/4" "T's" into the actuator ports 1 & 3
2. Screw the 2-1/4" elbows into ports 2 & 4
3. Have the fittings for ports 1&2 slightly offset from center and the fittings for ports 3&4 more offset than 1&2(See drawing).
4. The 1/4" steel lines are side sensitive. Match the offsets of the tubing with the offsets of the fittings or vice-versa. They are also easily bendable, bend to fit if needed.
5. Screw the steel lines onto the fittings but leave loose. We will tighten later when bleeding the system.
6. **Install the flow restrictors onto the T's between the hose and the T itself.**



UPPER & LOWER ARM PLUMBING INSTRUCTIONS

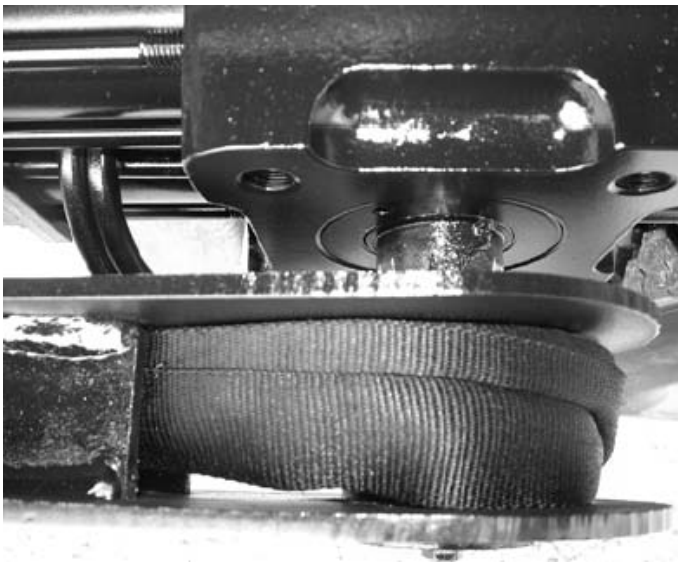
1. Screw 4- 3/8" Tee's onto one end of the 4- 3/8" steel lines.
2. Route the 4- 3/8" steel lines down the chassis in a neat manner. Be sure to use the weld/plastic tabs to secure the 3/8" steel lines to the sub assembly, with the T's toward the rear of the truck (See Diagram)
3. Make sure that the **flow restricted fittings are installed onto the T's for the actuators between the hose and the T's.** (See above Diagram) If the restricted fittings are NOT used, the actuators will **rotate extremely fast and result in uncontrollable arm behavior. THIS MAY RESULT IN DEATH, SERIOUS INJURY and/or CAB DAMAGE!!**
4. Install the 4, 1/2" o-ring to 1/4" male JIC adapters into the control valve's work ports.

5. Route the (4) #4 hoses from the control valve work ports to the (4) 3/8" steel lines, do not connect them to the steel lines yet.
6. Route the (2) #1 hoses from the Port#1's flow restrictor of each actuator to the same tee. (See Diagram)
7. Route the (2) #1 hoses from the Port#3's flow restrictor of each actuator to the same tee. (See Diagram)
8. Route the (2) #3 hoses from the base of each upper cylinder to the same tee. Be sure to put the short protective sleeving on the hose when it exits the arm and connects to the cylinder. Put the longer protective sleeving on the hosing where it enters the arm at the bottom. Route the hosing over and around the pivot and through the tubes of the actuator. (See Picture below)
9. Route the (2) #3 hoses from the rod end of the upper cylinder into the arm, over and around the pivot, through the tubes of the actuator and to the remaining T. Be sure to put the shorter protective sleeving on the hose where it exits the arm at the cylinder and the longer sleeving on the hose where it exits the arm and wraps around the pivot.
10. **Tighten the actuator hose fittings against the fluid restrictors on the Tees finger tight, quarter turn. Any more than this will crack the seat on the hose fitting NOT WARRANTY.** Leave the steel lines loose at the elbows.
11. **REMOVE THE LOWER ARM/ SPLINED ARM FROM THE ROTARY ACTUATOR AND SUPPORT. LEAVING THE ARM ON THE ROTARY WHILE BLEEDING WILL ALLOW THE ARM ASSEMBLY TO CRASH WHEN PASSING CENTER DUE TO AIR IN THE LINES**
12. Start engine and engage the PTO.
13. Operate the control valve in the "cover" direction. One of the #4 hoses from Step 5 will shoot out oil. Hook it up to the steel line that goes to "Port 1" from step 6
14. Operate the control valve in the "uncover" direction. One of the #4 hoses from Step 5 will shoot out oil. Hook it up to the steel line that goes to "Port 3" from step 7
15. Operate the control valve in the "extend arms" direction. One of the #4 hoses from Step 5 will shoot out oil. Hook it up to the steel line that goes to "rod end port " of the upper arm cylinder from step 9
16. Hook up the remaining Hose #4 to the last steel line.
17. Disconnect the hard lines from the elbow fitting on the actuators but leave them tight at the T's. Engage the control valve in the "cover" function until clean oil without air comes out of the hard lines. Replace the hard lines to the elbows.
 - a. OPTIONAL. Install a clear hose over the hard lines tying them together will allow you to see when oil comes out. Continue purging the circuit the same amount of time to be sure all the air is out of the system. Replace the hard lines to the elbows.
18. After tightening the steel lines down on the elbows, re-engage the control valve in the "cover" function to rotate the splines COMPLETELY to the rear.
19. If the system "loads up" and the splines do NOT move, switch the #4 hoses at the steel lines from step 13 and 14 and then completely rotate the splines the full 180 degrees
20. Remove the hard lines from the elbow fittings on the actuator and then reengage the control valve in the "uncover" function until good clean oil without air comes out of the lines. Reattach the hard lines to the elbow and fully rotate the splines back to the front
21. Reinstall the lower arm/ splined arm onto the spline of the rotary actuator. Install the 3/8" grade 8 bolt, heavy washer and spacer against the face of the spline. You MUST use some sort of thread locker on this bolt! Snug down and then torque to 35-40 ft./lbs. Failure to use thread locker and torquing the bolt to 35-40 ft./lbs. will result in the bolt backing off and the arm sliding off of the spline. NOT WARRANTY!
22. **It is very important that all of the air is bled out of the rotary actuators. If not, the arms will slam resulting in arm damage.**
23. Remove the upper arm hoses from the cylinder ports. Engage PTO and engage the control valve in the "retract arms" function until clean fluid comes out of the hoses. Install the short hose onto the base port of both upper arm cylinders.

24. Once installed, fully extend the cylinder by holding the control valve in the “retract arms” function.
25. With the rod end hoses removed, engage the control valve in the “extend arms” function until clean oil comes out of the hoses. Reinstall onto the rod end port
26. Fully retract and then extend the upper cylinder until the rod end is aligned with the lower hole in the upper arm and insert the provided 1” x 3” steel pin with a ¼” center drilled hole. Align the holes in the pin and upper cylinder and secure using a ¼” bolt and locknut.
27. **Protective sleeving MUST be installed wherever a hose enters or exits an arm.**

*******Operate the tarp system to verify that there isn’t any tarper “drift”. Drift is where the system moves uncontrollably when it passes center caused by air in the system. If there is ANY “drift” in the upper arms or lower rotaries, rebleed and recheck the tarp system. *******

If tarper “drift” isn’t taken care of; cab, tarp and/or tarper damage can occur



FINAL ADJUSTMENTS

1. Check all fittings and lines for leaks.
2. If arms do not move smoothly and/or together;
 - a. re-bleed rotary actuators and re-bleed upper cylinders
 - b. Double check that the arms are the same length
 - c. Double check that the pivot points are in the same location, square, level and plumb
3. Check that all hydraulic lines are secured, routed properly and not pulled tight over hard edges.
4. Install caution labels and operation labels per DECAL diagram below. Be sure to install the operational decal where the driver can see it. Be sure that the control valve operation decal and the control valve operation are the same. If not, reinstall the hoses at the control valve so that operation of the valve is the same as the decal.
5. Hang driver's operation tag in cab around hoist controls.
6. Fill out warranty application and put with installation manual and tension wheel in cab for customer.

MAINTENANCE

1. If arms will not extend or retract, check that the hydraulic pressure for the tarp valve is set at 2350 psi, and that the overall pressure relief is set at 2500 psi by using the gauge port on the diverter valve. The port is labeled with a stamping of "G"
2. Check for hose abrasion on a weekly basis. Repair or replace as needed
3. Adjust spring tension if tarp is slack or will not roll up.
4. Once every 4-6 months, bleeding the upper and lower arm circuit will remove any oil contaminants that do not make its way back to the hoist valve circuit for proper filtration. This is highly recommended.

OPERATOR TIPS

1. Do not operate under or near electrical wires.
2. Keep clear of moving parts
3. Do not allow anyone on container when unit is in operation.
4. If arms stop moving, they may have hit debris in the container. Reverse arm movement, readjust trash/ readjust arms, and recover. This shows that the tarper relief valve is working properly.
5. If cover rolls to one side when rolling up it is because of one of several things
 - Arm is bent- straighten arm
 - Upright is not plumb, straighten upright.
 - Side arms are not parallel to frame/hoist. Realign bracket
 - Actuators/Cylinders have air in system/ Actuator/Cylinder bypassing. Bleed system/ rebuild Actuator/Cylinder
 - Cover not square at one end or both
 - Wind is blowing tarp in from side. Move truck and/or increase spring tension on tarp roller.

MOUNTING SPOOL ASSEMBLY

#RSA

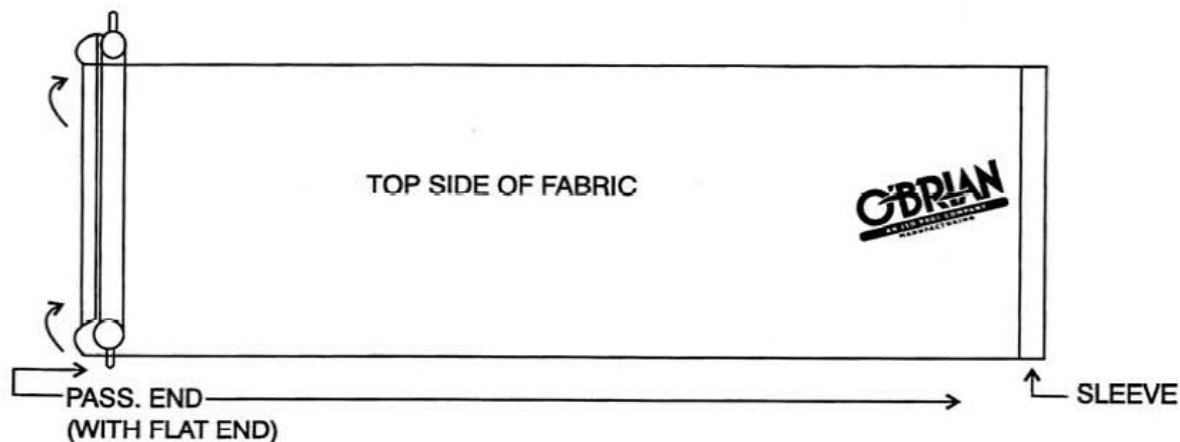
OPTION 1

Extend tarp out to working height at rear. Unwind remainder of tarp and lock roller in place. (A wrench for this job can be purchased from O'Brian). Remove tarp clamp and tarp bar. Replace tarp and reinstall. Remove wrench and ease excess fabric back onto roller.

OR

OPTION 2

Spread out tarp on ground with folded edges on Bottom side.



Lay Spool on **TOP** of **TARP** PER DIAGRAM. Find spring bolt on spool and line up tarp on opposite side. Use Tek screws and tarp clamp to fasten tarp to spool.

Note: End stenciled with PASS SIDE goes on RIGHT SIDE per diagram.

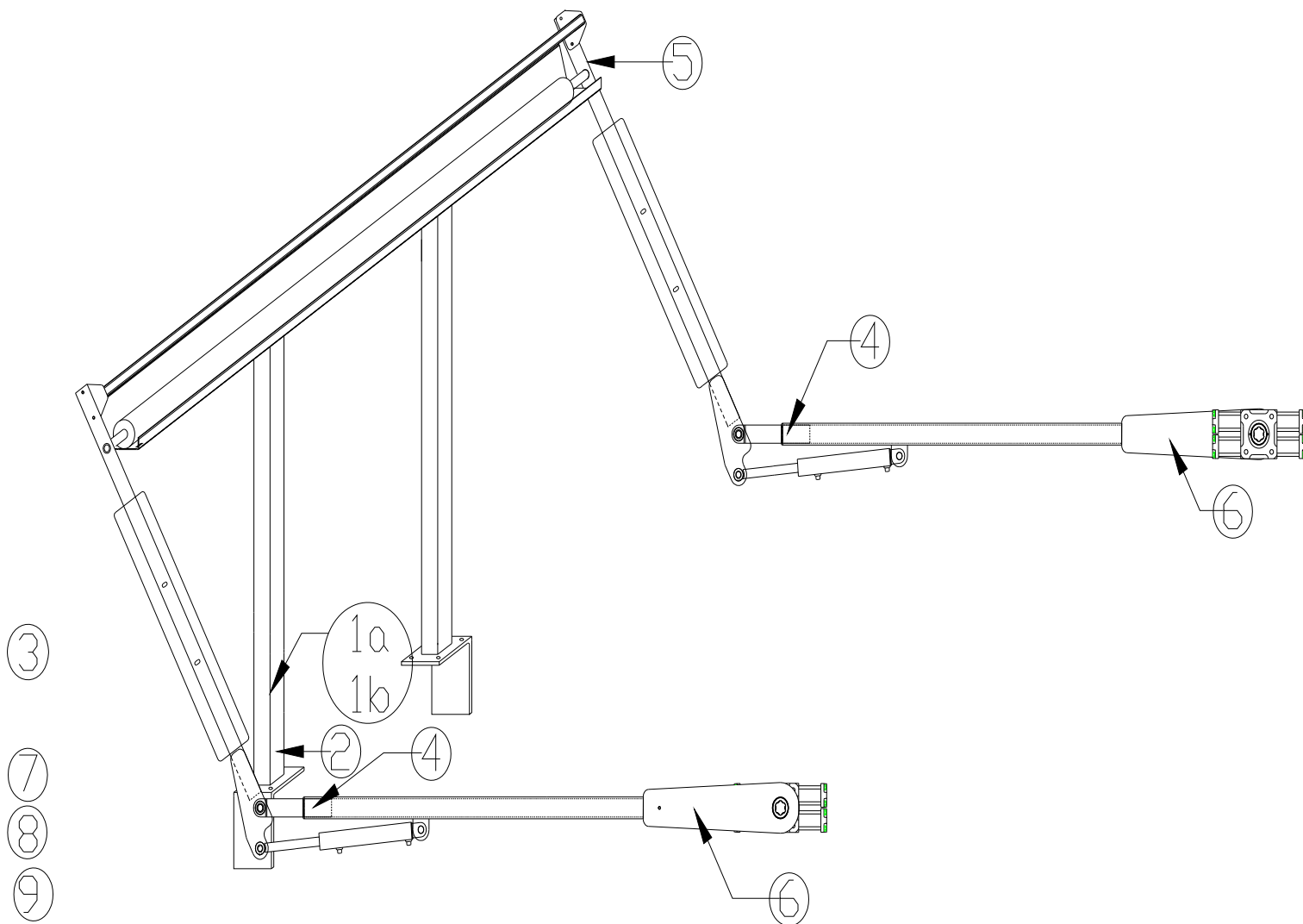
Now, roll spool onto Tarp.

Lay the Spool Assembly into the Cradle, with the end marked **PASS SIDE** on the **PASSENGER SIDE**. The sleeve in the cover should hang down on rearward side of cradle. The tarp should come off the top and hang down on the rear side of the roller and hang down rear side of cradle. Slide the 1-1/4" pipe thru the sleeve and fasten to the cradle.

PRETENSION SPOOL

Slide Driver's Side Arm onto the 1" spool shaft. Use the provided **WRENCH** on 1" shaft on Passenger side to pretension spring. Turn 10-11 **REVOLUTIONS CLOCKWISE**. Then turn **forward** to align the holes on shaft and arm, on **PASSENGER SIDE**. Bolt together, using 5/16" bolt. Then remove wrench and bolt shaft on Driver's side. ***CAUTION*** When tensioning roller, firmly hold onto wrench; failure to do so could result in injury.

NOTE: IF INSTALLATION IS NOT DONE CORRECTLY, THE SPRING WILL WARP AND WILL NOT CONTINUE TO OPERATE.



DECALS

Item	Part Number	Part Description	Quantity
1a	UD13	Electrocution Decal	1
1b	DTOW	Diablo Tarper Operational Warning	1
2	Serial	Serial Number Plate	1
3	Label Operate 5	Control Valve Operation Decal	1
4	Warning	Pinch Point Warning Decal	2
5	RTC	Roller Spring Tension Decal	1
6	Diablo	Diablo Arm Decal	2
7	Hanger	Driver Operation Hanger (Place in Cab)	1
8	Manual	Owner's Manual (Place in Cab)	1
9	Warranty	Warranty Application (Place in Cab)	1



O'BRIAN

MANUFACTURING CO., INC.

TARPER WARRANTY

EXCLUSIVE TWENTY-FOUR MONTH LIMITED WARRANTY

O'Brian Manufacturing Co., Inc. warrants only products of it's manufacture against operational failure caused by defective material or workmanship, WHICH OCCURS DURING NORMAL USE WITHIN TWENTY-FOUR (24) MONTHS FROM DATE OF SHIPMENT FROM OUR FACTORY. The tarp is not covered under warranty.

O'Brian Manufacturing will replace all parts of our manufacture free of charge that our inspection at our factory shows to us to be defective in accordance with the above paragraph. WRITTEN PERMISSION MUST BE OBTAINED FROM AUTHORIZED PERSONNEL FOR ANY REPAIRS PERFORMED OTHER THAN IN OUR FACTORY.

All products purchased by O'Brian Manufacturing from an outside vendor shall be covered by warranty of that respective vendor only, and O'Brian does not participate in or obligate itself to any such warranty.

NO FREIGHT, TRAVEL COST, MEALS, LODGING, OR LOSS OF HYDRAULIC OIL SHALL BE COVERED BY THIS WARRANTY, all labor costs allowed shall be in accordance with O'BRIAN'S ESTABLISHED RATE; in case of alleged defect, product shall be returned to O'BRIAN with transportation charges pre-paid.

Any service part sold by O'Brian shall be warranted for thirty (30) days from date of shipment from our factory. No credit for labor will be allowed under this warranty if the returned part, upon our inspection, proves to be non-defective.

O'BRIAN makes no warranty on any of it's equipment used in any way except as it was designed, intended, and sold to perform.

This limited warranty is expressly in lieu of all other warranties, expressed or implied, and of all other obligations or liabilities on the part of O'BRIAN, and it neither assures nor authorizes any other person to assure for it any other liability.

O'BRIAN MANUFACTURING does not assume any liability for loss of product, time or any other consequential damages.

All claims shall be processed through your O'Brian Manufacturing Co., Inc. authorized dealer.

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