$4.00

AUTOCOVER II-CH
AUTOCOVER II-CH36

US Patents and Patent Pending

Owner's Manual

FOR ASSISTANCE
CALL 252-291-2141

ATTENTION INSTALLER: 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!

5/2008

TABLE OF CONTENTS

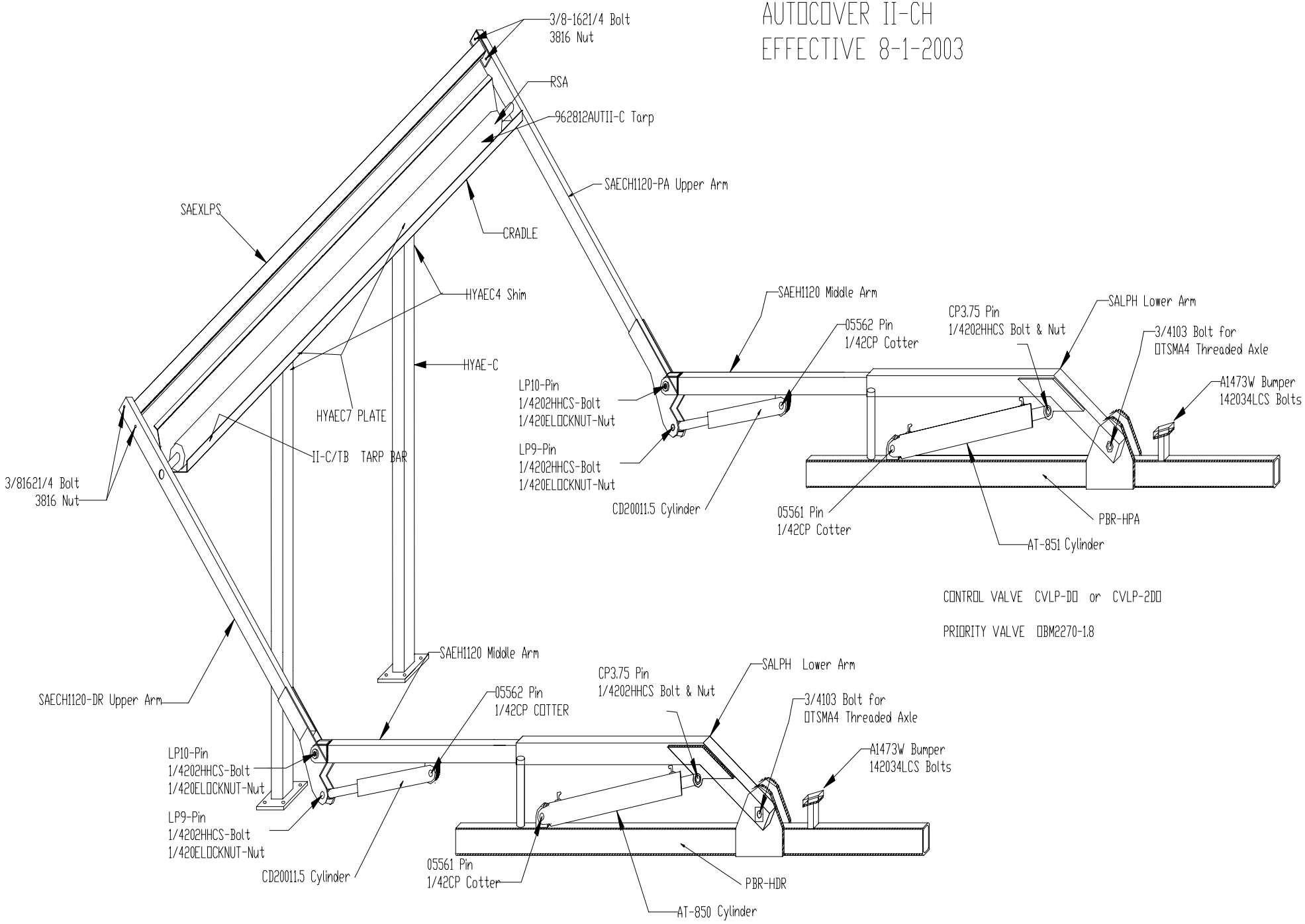
TO COVER:

1. Raise lower arms and extend upper arms to raise roller up between cab and over the front edge of the container.
2. Raise gantry above front edge of the container. (OPTIONAL)
3. Once the roller is past the front of the container, continue to hold joystick in the covering direction and cover container.
4. Position the roller so it will **REST ON THE TOP REAR EDGE OF THE CONTAINER BUT BELOW 13'6". POWER DOWN THE ROLLER AGAINST THE TAILGATE.** 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. Flip the tarp side flaps down and secure them as needed.
6. Lower gantry down to just under container edge (Optional)

TO UNCOVER:

7. Un-secure the side flaps
8. Raise the gantry over the front edge of the container (optional).
9. Extend the upper arms to get roller off of container.
10. Bring the lower arms forward and clear the front top edge of the container with the roller.
11. Lower gantry (OPTIONAL)
12. Lower the side arms and adjust the upper arms in order to lower the roller down between the container and the cab.
13. **POSITION THE ARMS SO THAT THE WEIGHT OF THE ROLLER IS RESTING ON THE BOTTOM OF THE CRADLE AND NOT ON THE ARMS!** This keeps the arms from bending downward.

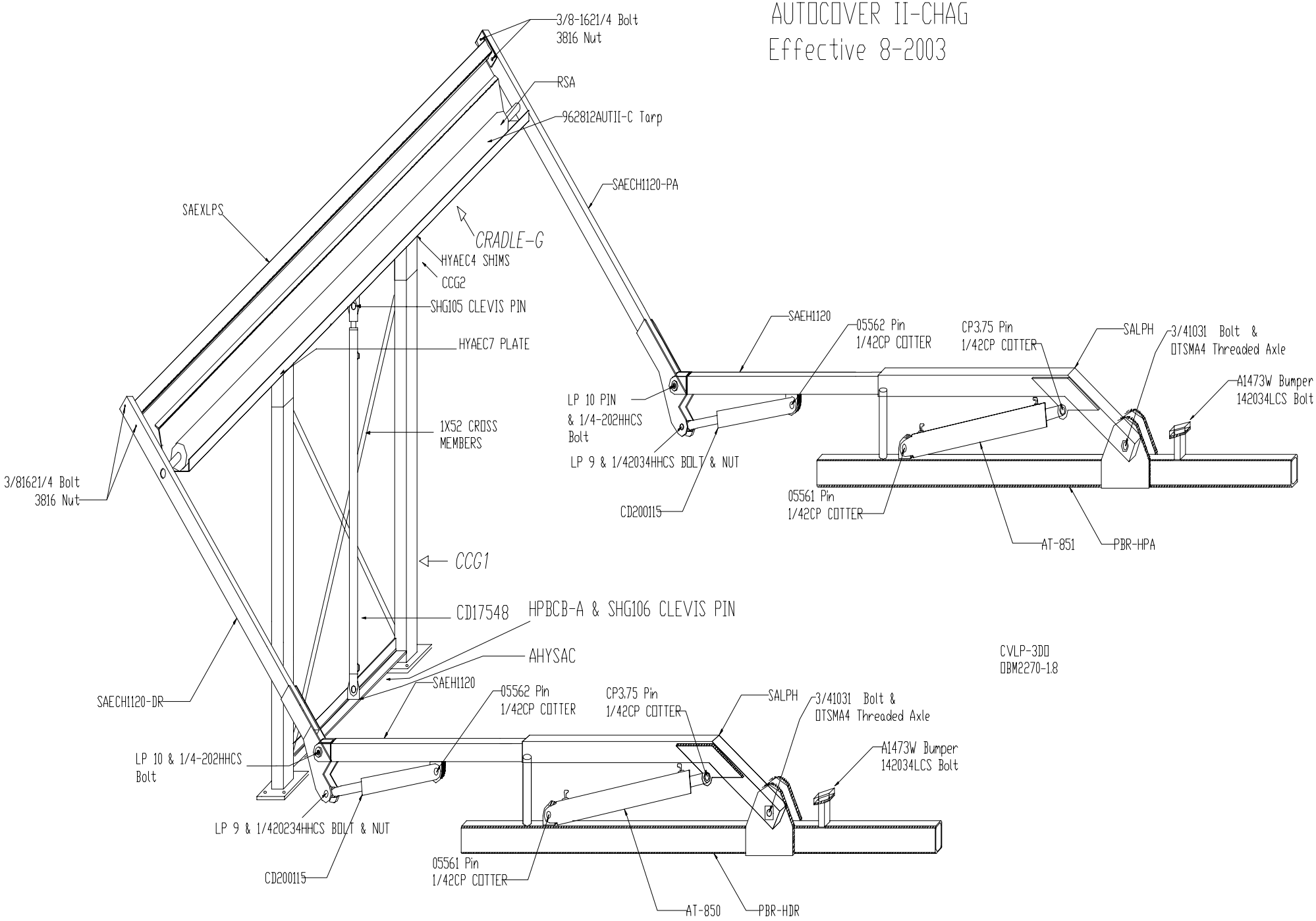
OVERVIEW
AUTOCOVER II-CH
EFFECTIVE 8-1-2003



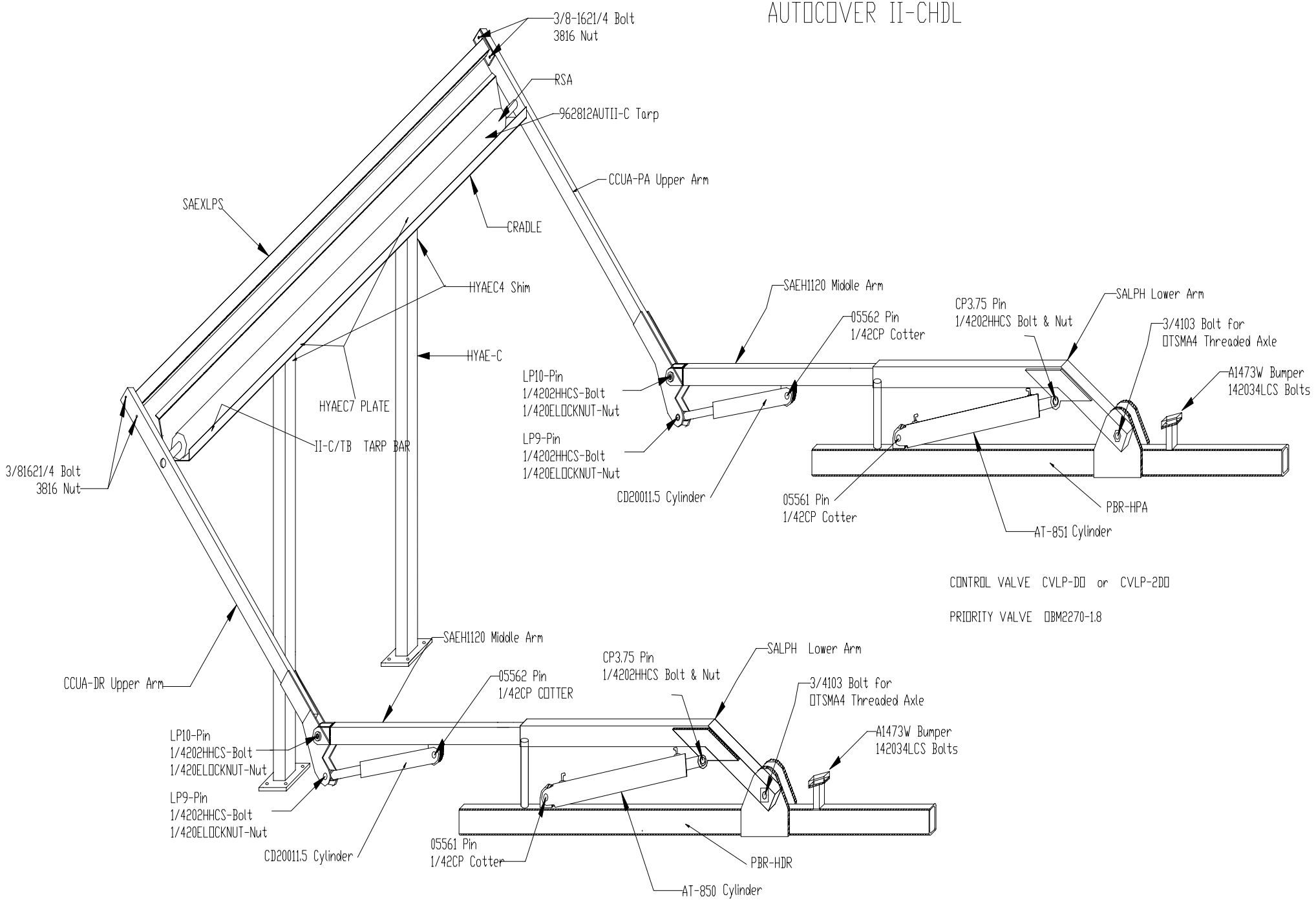
CONTROL VALVE CVLP-DO or CVLP-2DO

PRIORITY VALVE OBM2270-1.8

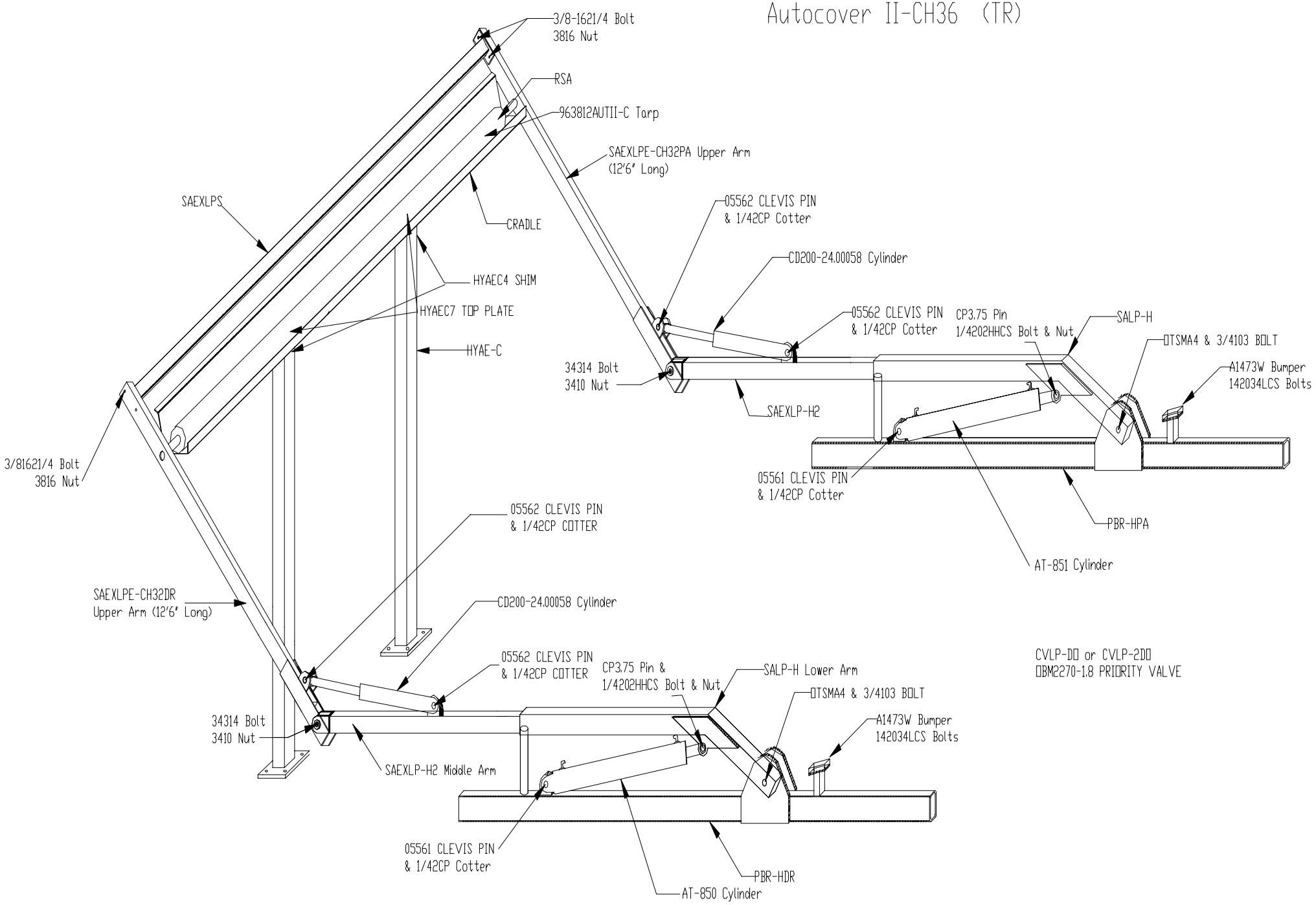
OVERVIEW
AUTOCOVER II-CHAG
Effective 8-2003



OVERVIEW
AUTOCOVER II-CHDL



Overview
Autocover II-CH36 (TR)



AUTOCOVER II-CH PACKING LIST

QTY.	PART #	DESCRIPTION
4	L-BRACKETS	MOUNTING BRACKETS
8	SF4	GUSSETS
2	PBR-H	PIVOT BRACKET
2	SALPH	LOWER ARM
2	SAEH-1120	MIDDLE ARM
1	SAECH-1120-DR	UPPER ARM- DRIVER
1	SAECH-1120-PA	UPPER ARM- PASSENGER
2	CD200115	UPPER ARM CYLINDERS
1	AT-850	DRIVER LIFT CYLINDER
1	AT-851	PASSENGER LIFT CYLINDER
1	SAEXLPS	STABILIZER BAR
1	CRADLE	CRADLE
1	RSA	ROLLER SPRING ASSY
1	IICTB	TARP BAR
1	962812AUTII-C	TARP
2	HYAEC	CRADLE UPRIGHTS
1	HOSEKITII-CH	HOSE KIT- AUTOCOVER II-CH
1	SPKIICH	SMALL PARTS KIT- AUTOCOVER II-CH
4	JF038	STEEL LINES

AUTOCOVERI I-CHAG PACKING LIST

QTY.	PART #	DESCRIPTION
2	CCG1	GANTRY BASE
2	CCG2	GANTRY INSERT
1	CRADLE-G	CRADLE FOR GANTRY
1	CD17548	GANTRY CYLINDER
2	1X52	GANTRY CROSS BRACES
1	HPBCB	GANTRY CYLINDER MOUNT
1	HOSEKITG	GANTRY HOSE KIT
1	SPKIICH	SMALL PARTS KIT
4	L-BRACKETS	MOUNTING BRACKETS
8	SF4	GUSSETS
2	PBR-H	PIVOT BRACKET
2	SALPH	LOWER ARM
2	SAEH-1120	MIDDLE ARM
1	SAECH-1120-DR	UPPER ARM- DRIVER
1	SAECH-1120-DR	UPPER ARM- PASSENGER
2	CD200115	UPPER ARM CYLINDERS
1	AT-850	DRIVER LIFT CYLINDER
1	AT-851	PASSENGER LIFT CYLINDER
1	SAEXLPS	STABILIZER BAR
1	RSA	ROLLER SPRING ASSY
1	IICTB	TARP BAR
1	962812AUTII-C	TARP
4	JF038	STEEL LINES
1	HOSEKITII-CH	HOSE KIT- AUTOCOVER II-CH

AUTOCOVER II-CH36 PACKING LIST

QTY.	PART #	DESCRIPTION
4	L-BRACKETS	MOUNTING BRACKETS
8	SF4	GUSSETS
2	PBR-H	PIVOT BRACKET
2	SALPH	LOWER ARM
2	SAEXLP-H2	MIDDLE ARM
1	SAEXLPECH-32DR	UPPER ARM- DRIVER
1	SAEXLPECH-32PA	UPPER ARM- PASSENGER
2	CD20024.00058	UPPER ARM CYLINDERS
1	AT-850	DRIVER LIFT CYLINDER
1	AT-851	PASSENGER LIFT CYLINDER
1	SAEXLPS	STABILIZER BAR
1	CRADLE	CRADLE
1	RSA	ROLLER SPRING ASSY
1	IICTB	TARP BAR
1	962812AUTII-C	TARP
2	HYAEC	CRADLE UPRIGHTS
1	HOSEKITII-CH	HOSE KIT- AUTOCOVER II-CH
1	SPKIICH	SMALL PARTS KIT- AUTOCOVER II-CH
4	JF038	STEEL LINES

AUTOCOVERI I-CH36 AG PACKING LIST

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1	SPKIICH	SMALL PARTS KIT
4	L-BRACKETS	MOUNTING BRACKETS
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2	PBR-H	PIVOT BRACKET
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2	SAEXLP-H2	MIDDLE ARM
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1	RSA	ROLLER SPRING ASSY
1	IICTB	TARP BAR
1	962812AUTII-C	TARP
4	JF038	STEEL LINES
1	HOSEKITII-CH	HOSE KIT- AUTOCOVER II-CH

GANTRY INSTALLATION

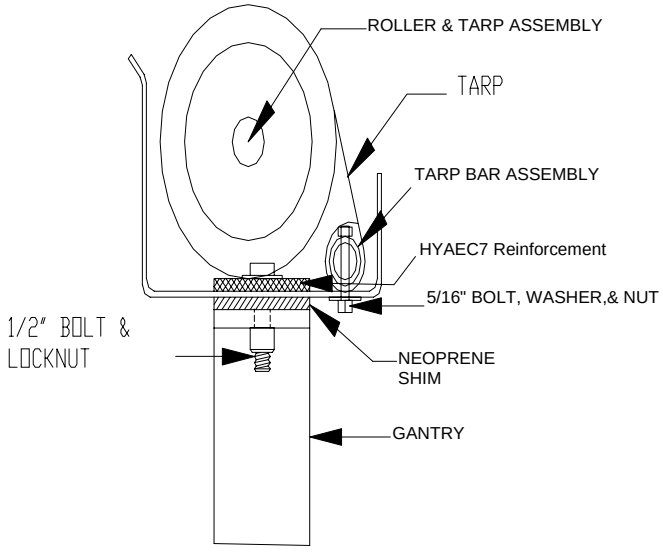
1. Check for clearance between cab, exhaust, and hoist.
2. You need a minimum of 7" clearance between hoist and cab to mount the gantry.
3. Sit gantry on top of chassis, flex U-bolts apart, slide in from bottom of chassis into mounting plate holes, and attach the 5/8" U-bolts wit the 5/8" nuts and washers. If this option will not work then a chassis bridge will need to be fabricated for gantry attachment.
4. If mounting to chassis; flex U-bolts apart, slide in from bottom of chassis into mounting plate holes, and attach the 5/8" nuts and washers.
5. The closer the roller is to the cab the easier it will be to raise and lower arms. ***Note- leave at least one (1") inch of 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. Mount cradle on top of gantry using the(4) ½" x 1 ¾" bolts. **Place the reinforment on top of cradle and insert the rubber shims between cradle and gantry uprights.** *These shims are needed to allow for chassis flex.* Be sure to mount the cradle with the ½" bolts and washers through the top and the locknuts on the bottom.
8. Place roller assembly into the cradle with the end marked **PASSENGER SIDE and TORQUE SHAFT** on the **PASSENGER SIDE.** Bolt the tarp bar to the **INSIDE** of the cradle with the 5/16" x 2" bolts and locknuts. (See Diagram)
9. **NOTE:** The shaft end on the passenger side has a **FLAT** spot. So you can put the supplied wrench on for tensioning.

ADJUSTABLE GANTRY INSTALLATION

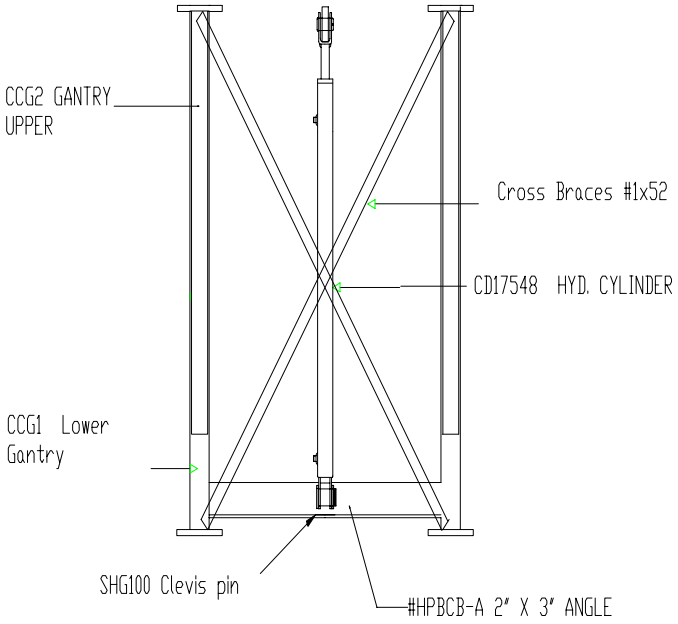
1. Check for clearance between cab, exhaust, and hoist.
2. You will need a minimum of 7" clearance between hoist and cab to mount gantry base.
3. Sit gantry base (CCG1) on top of chassis, flex U-bolts apart, slide in from bottom of chassis into mounting plate holes, and attach the 5/8" U-bolts with the 5/8" nuts and washers. 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 at least one inch (1") of clearance between cab and gantry.**
5. Measure the distance from hoist to gantry base. Make sure both gantry base's are the same distance from the hoist and plumb.
6. Insert the gantry inserts (CCG2) into the gantry bases.
7. Mount cradle-G on top of gantry inserts using the (4) ½" x 1 ¾" bolts. **Place the reinforcement on top of cradle and insert the rubber shims between cradle-G and gantry inserts.** *These shims are needed to allow for chassis flex.* Be sure to mount the cradle with the ½" bolts and fenderwashers through the top and the nuts with lock washers on the bottom.
8. Place roller assembly into the cradle with the end marked **PASSENGER SIDE and TORQUE SHAFT** on the **PASSENGER SIDE.** Bolt the tarp bar to the **INSIDE** of the cradle with the 5/16" x 2" bolts and locknuts.
9. **NOTE:** The torque shaft end on the passenger side has a **FLAT** spot. So you can put the supplied wrench on for tensioning.

10. Attach the CD17548 cylinder to the cradle-G clevis with the supplied clevis pin. Attach the base of the cylinder to the female clevis with the supplied clevis pin. Measure the distance between the gantry legs at the cylinder base clevis pad. Cut the HPBCB-A angle to fit this dimension. **Center the clevis.** Weld the HPBCP-A angle to the gantry legs, making sure that the HPBCP-A angle is level and plumb with the truck. After making sure that the gantry legs are level and plumb, weld the 1X52 cross braces to the gantry bases on the front side in a criss-cross pattern. This will give the gantry additional bracing for raising and lowering the cradle.

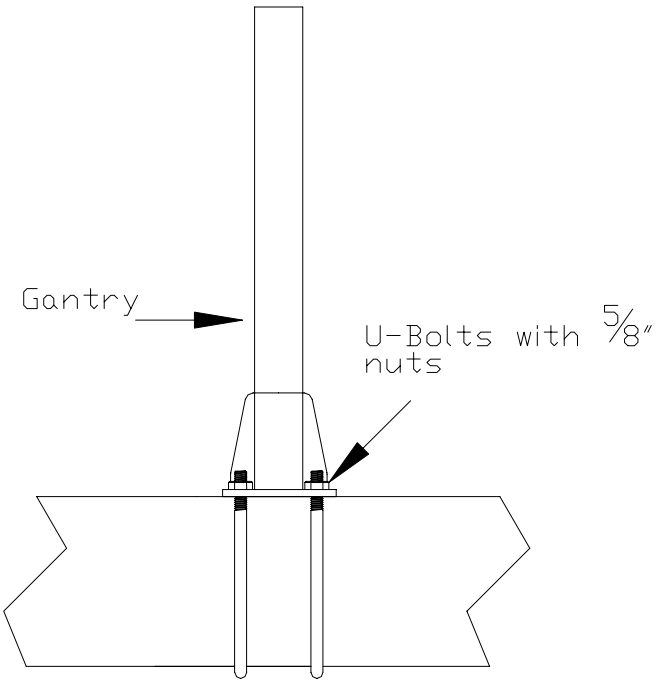
Cradle Side View



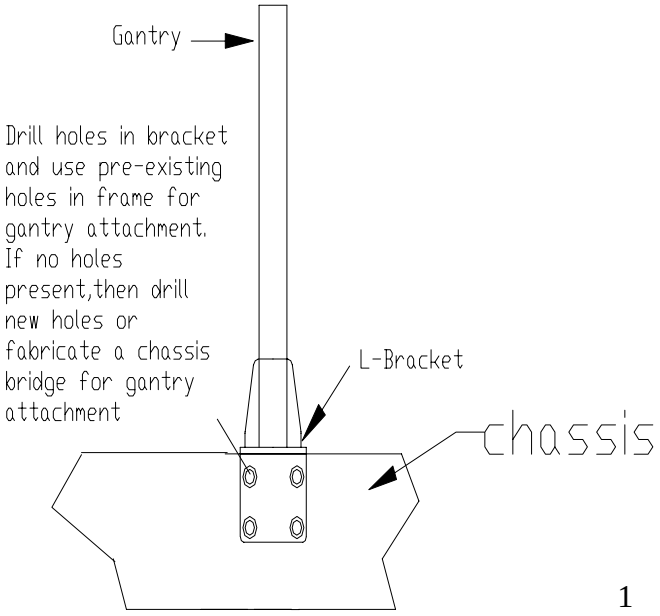
Adjustable Gantry



U-BOLT ATTACHMENT



GANTRY BOLT ON



PIVOT BRACKET INSTALLATION

1. Federal D.O.T. allows for 108" overall width for safety devices. Therefore maximum width for the *O'Brian Tarper* must not exceed 108" overall width. This includes any bolts, 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 ½" wide then the following formula will give you your maximum overall width.

108"- 35 ½" = 72 ½"

72 ½" / 2 = 36 ¼" maximum width from hoist for each side.

O'Brian recommendation is 36" on each side

3. PIVOT POINT FORMULA

Take the length of your longest box (22'-24') and add the length from the front of the box to the center of the gantry uprights (example 1') then divide by two.

(22'-6" **+ 1' = 23'-6", 23'-6" / 2 = 11'-9" or 24' + 1' = 25', 25' / 2 = 12'-6")**

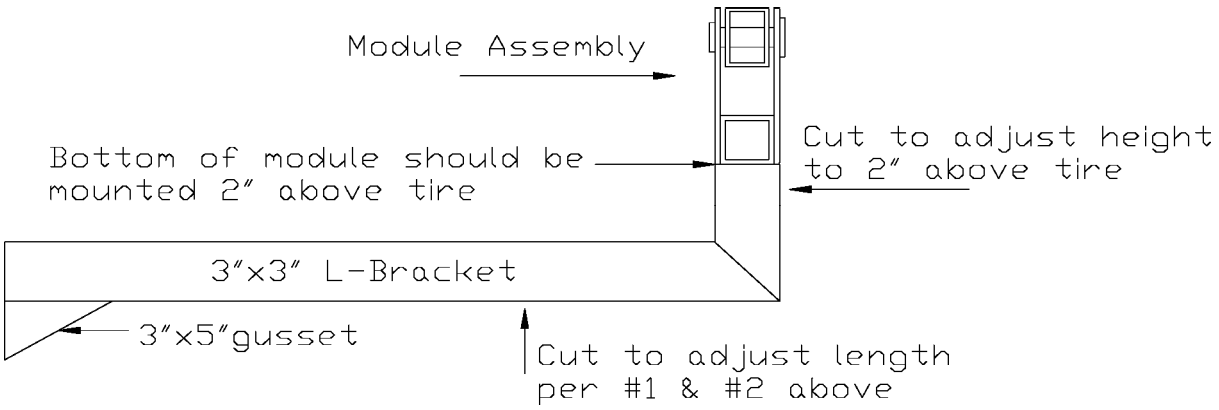
Your pivot point is now 11'-9" - 12'-6" from the center of your gantry uprights to the pivot center of your modular assembly.

Note: Average pivot points NORMALLY fall between 11'-9" and 12'-6"; depending on overall container lengths.

4. The pivot brackets are not side sensitive and can be mounted to the sub frame anywhere on their bottom. The pivot brackets must be level front to rear, side-to-side, and parallel to the hoist.
5. As a general rule, mount the pivot brackets as low as possible to clear the container and high enough to change the tires.

(Minimum tire clearance is 2" from bottom of pivot bracket to top of tire! ! But will vary with high articulation suspension systems, air rides, etc.!!)

6. Use the supplied 3" x 3" "L" brackets for mounting the pivot brackets. You may have to cut either length to get the pivot brackets level front to rear and side to side. **DO NOT WELD TO THE CHASSIS!! THERE MUST BE A PLATE *BOLTED* TO THE CHASSIS AND/OR USE THE HOIST SUB FRAME TO WELD TO.**
7. You can use the stabilizer bar as a measuring point to level the mounting brackets. By placing the stabilizer bar on top of the hoist you can measure down to the mounting brackets verifying that they are level.
8. Use the supplied gussets to finish the modular installation.



SIDE ARM INSTALLATION

1. Align the lower arms (SALPH) with the pivot hole of the pivot brackets (PBR-H)
2. Slide in the ¾" square headed threaded axle through the hole in the PBR-H and SALP-H. Be sure to align the square head with the head retainer. Thread the ¾" tap bolt into the threaded axle and torque to 75 ft. /lbs.
3. Slide the middle arm (SAEH-1120) into the lower arm (SALPH) with the 1"x3" clevis pad facing the ground on Autocover II-CH and facing the sky on an Autocover II-CH36.
4. Slide the upper arm (SAECH-1120DR/PA, SAEXLPE-CH32 DR/PA) onto the RSA shaft.
5. Slide the middle arm out of the lower arm AND rotate the upper arm around so that the pivot holes are aligned for the pivot pin.
6. Attach the middle arm to the upper arm using the LP10 cold rolled pin with the ¼" hole close to the end. Be sure that the ¼" hole will align with the thru hole in the shaft collar on the outside of the upper arm and secure using the ¼" x 2" bolt.

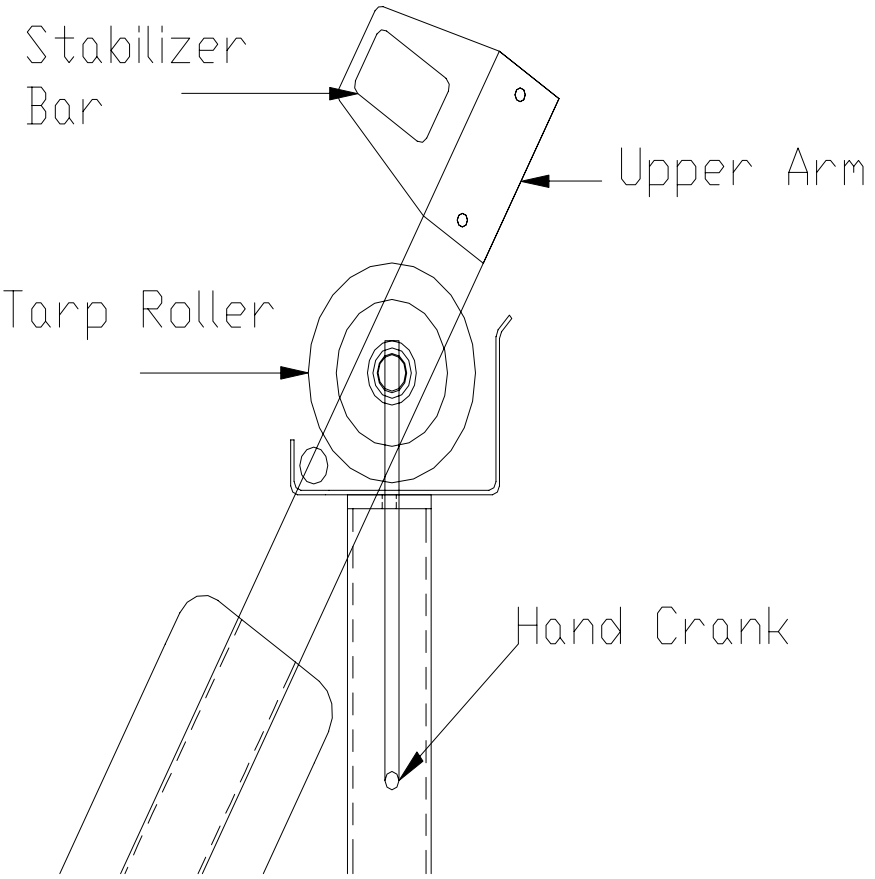
6b. On the II-CH36, attach the middle arm to the upper arm using the ¾" bolt and locknut. Torque to 50 ft. /lbs.

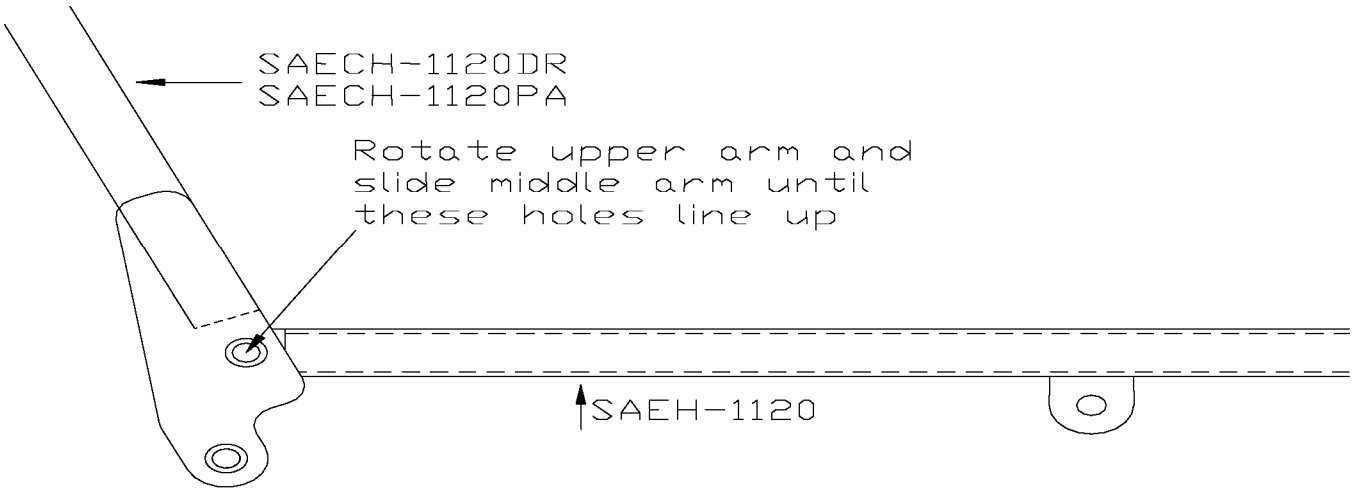
7. **Make sure that the middle and lower arms are level. Slide the middle arm in or out of the lower arm to accomplish this.** When level, measure the distance from the elbow pivot to the lower arm. Make sure that both sides are the same distance and level before drilling.
8. Measure back 2" and down 1" on the lower arm (SALPH), drill and bolt middle arm to lower arm using the 3/8" x 2 1/2" bolt.
9. Align the rod end of the 12" stroke cylinder(CH) with the lower hole in the upper arm using the provided cold roller 1" x 3" pin with the ¼" hole in the center (Part # LP9). Align the ¼" hole in the cylinder rod with the ¼" hole in the cylinder pin and secure using the ¼" x 2" bolt.

9b. Align the rod end of the 24" stroke cylinder (CH36) with the upper arm clevis pad using the provided 1"x2 ½" pin and cotter pin.

10. Attach the base of the cylinder to the middle arm clevis pad with the 1" x 2 ½" pin and cotter pin.
11. Place enclosed tarp tensioning wrench on passenger side RSA shaft. Torque allen screw down against the flat side of RSA shaft. Torque the wrench 10-12 turns clockwise, and then align the holes of the upper arm with the hole of the roller shaft. Place the 5/16" x 1 ¾" bolt through roller shaft and upper arm on Passenger and Driver sides. Finish by tightening the 5/16" locknuts against the bolts.
12. **PRACTICE EXTREME CAUTION!!! THE WRENCH COULD SLIDE OUT OF YOUR HANDS, SPIN AROUND AND BREAK WRISTS!!!**
13. Install the stabilizer bar (SAEXLPS) between the upper arms using the (4) 3/8" x 2 ¼" bolts and lock nuts. Make sure that the stabilizer bar is facing the rear of the truck. See Diagram.
14. Mount the 1"x3" rubber bushings onto the pivot bracket using the ¼" x 1" button head bolts. Snug the bolts down but do not over-torque. Over-torquing will result in a deformed rubber bushing which will not stay in place.

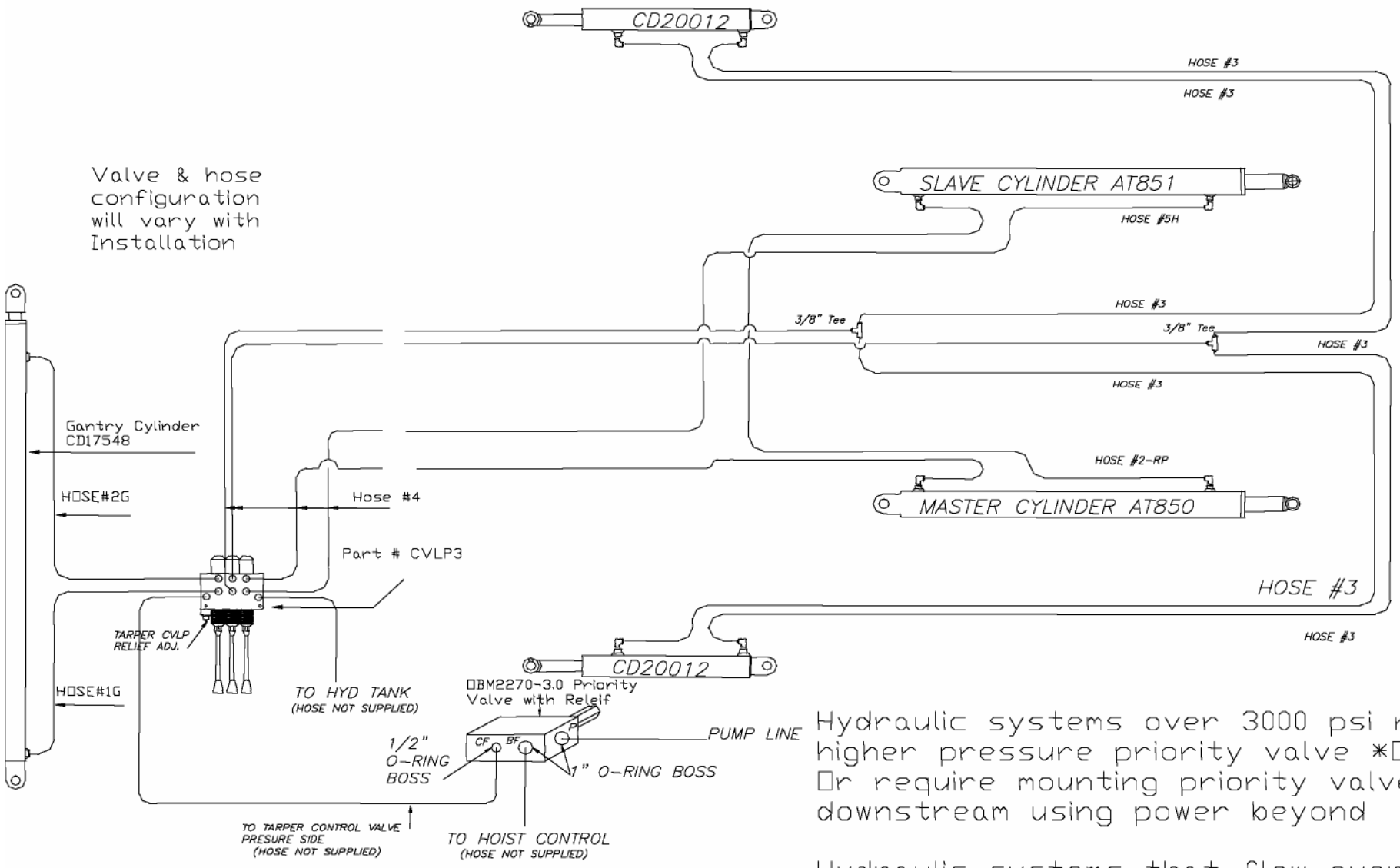
Upper Side View





Upper Side View

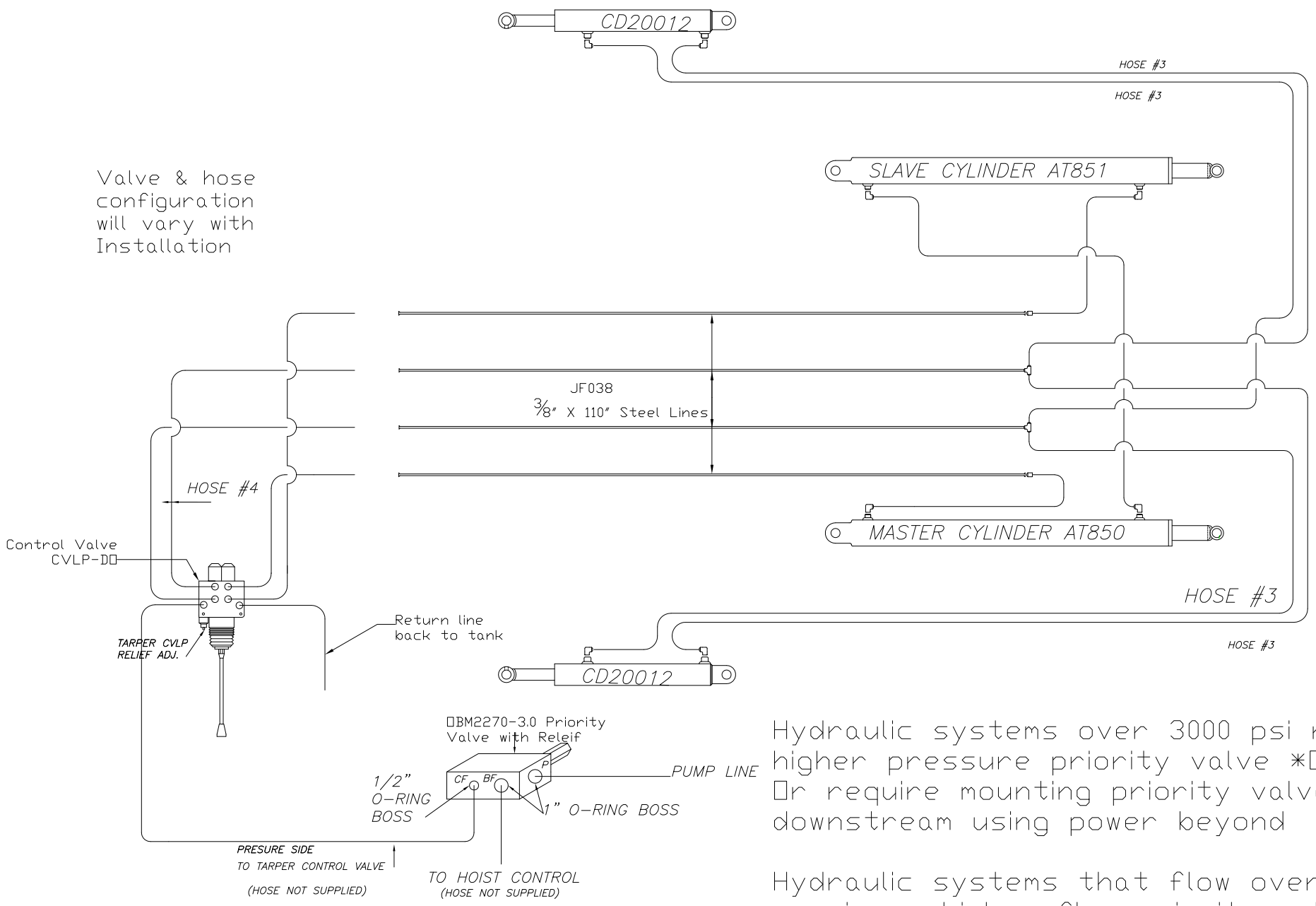
Autocover II-CHAG
Hydraulic Schematic



Hydraulic systems over 3000 psi require a higher pressure priority valve *OPTIONAL* Or require mounting priority valve downstream using power beyond

Hydraulic systems that flow over 50 gpm require a higher flow priority valve *OPTIONAL*

Autocover II-CH
Hydraulic Schematic



Hydraulic systems over 3000 psi require a higher pressure priority valve *□PTI□NAL* □r require mounting priority valve downstream using power beyond

Hydraulic systems that flow over 50 gpm require a higher flow priority valve *□PTI□NAL*

Hydraulic systems that _____ flow over 50 gpm require a higher flow Priority valve. (OPT.)

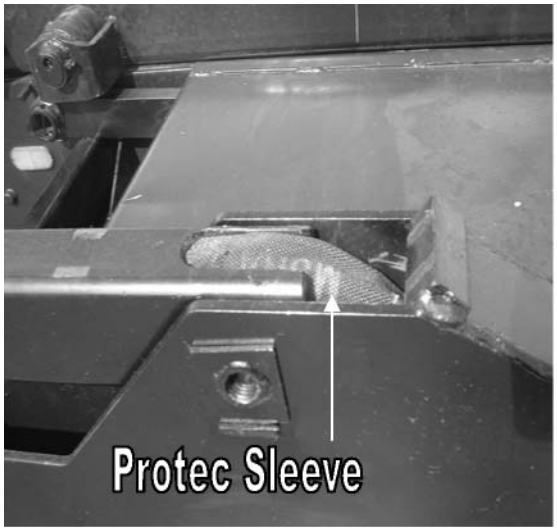
Hydraulic systems over 3000 psi require a higher pressure Priority valve. (OPT.) or require mounting priority valve downstream using power beyond

Plumbing Instructions Continued

1. Mount the tarper control valve where it is easiest for the driver to operate but out of the way of the tarper arms.
2. Mount the Priority valve at a place that is easily accessible for hydraulic lines and service maintenance.
3. Disconnect the pump line from the hoist control valve. **If over 3500 psi, then plumb from the RETURN side of the control valve using power beyond into the 1" O-ring port labeled "P".**
4. Plumb the pump line into the 1" o-ring port labeled "P".
5. Plumb from the 1" o-ring port labeled "BF" back to the hoist control valve (Not Supplied). If plumbed after the control valve, plumb this line back to tank.
6. Plumb from the ½" o-ring port labeled "CF" to the relief valve side of the tarper control valve. (Not Supplied)
7. Plumb from the return side of the tarper control valve back to tank.(Not Supplied)

UPPER & LOWER ARM PLUMBING INSTRUCTIONS

1. Install the larger bore 30" stroke cylinder (AT-850) onto the driver's side pivot bracket and lower arm using the CP3.75 and 05562 cylinder pins.
2. Install the smaller bore 30" stroke cylinder (AT-851) onto the passenger's side pivot bracket and lower arm using the CP3.75 and 05562 cylinder pins.
3. Screw the 8-1/4" NPT by ¼" Male JIC 90 degree elbows into all of the cylinders. Be sure to use some sort of pipe sealant.
4. Screw the 2- 3/8" Tee's onto one end of 2- 3/8" steel lines.
5. Run the steel lines down the chassis in a neat manner. Be sure to use the weld/plastic tabs to secure the 3/8" steel lines, with the T's toward the rear of the truck.
6. Route the (4) #4 hoses from the control valve work ports to the (4) 3/8" steel lines.
7. Route the (1) #1 hoses from an available steel line to the base port of the driver's side lifting cylinder. See Diagram
8. Route the (1) #5 hose from the remaining steel line to the rod port of the passenger side lifting cylinder. See Diagram
9. Route the (1) #2 hose from the Rod port of the driver's side cylinder to the base port of the passenger side cylinder. See Diagram
10. Route the (4) #3hoses from the upper cylinders, through the arms, and to their respective "T's". Base ports to base ports, and rod ports to rod ports. **Be sure to use the included Protective sleeving wherever a hose enters or exits an arm, or enters or exits a pivot bracket.**
11. Tighten all of the lifting cylinder hose fittings. Retract lifting arm cylinders under pressure until engine comes under load. Continue retracting cylinders for an additional 3-5 minutes. This will completely remove any and all air from the hydraulic system. Traditional practices of cracking lines WILL NOT remove all of the air from the system but rather remove very little of it.
12. However, traditional practices of cracking lines will remove most all of the air out of the upper arm cylinders.



FINAL ADJUSTMENTS

1. Bleed all hoses and check all fittings and lines for leaks.
2. If arms do not move smoothly; re-bleed as needed.
3. Stick caution labels and operation labels where driver will be sure to see them. Hang driver's operation tag in cab around hoist controls.
4. Fill out warranty application and put with installation manual in cab for customer.

MAINTENANCE

1. Check for hose abrasion on a weekly basis. Repair or replace as needed
2. Adjust spring tension if tarp is slack or will not roll up.
3. If arms do not lift evenly, retract lifting cylinders until completely retracted, and then continue retracting for an additional 2-3 minutes. It may be necessary to bring the roller out of the cradle with the upper cylinders so that the lower arms can completely retract

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

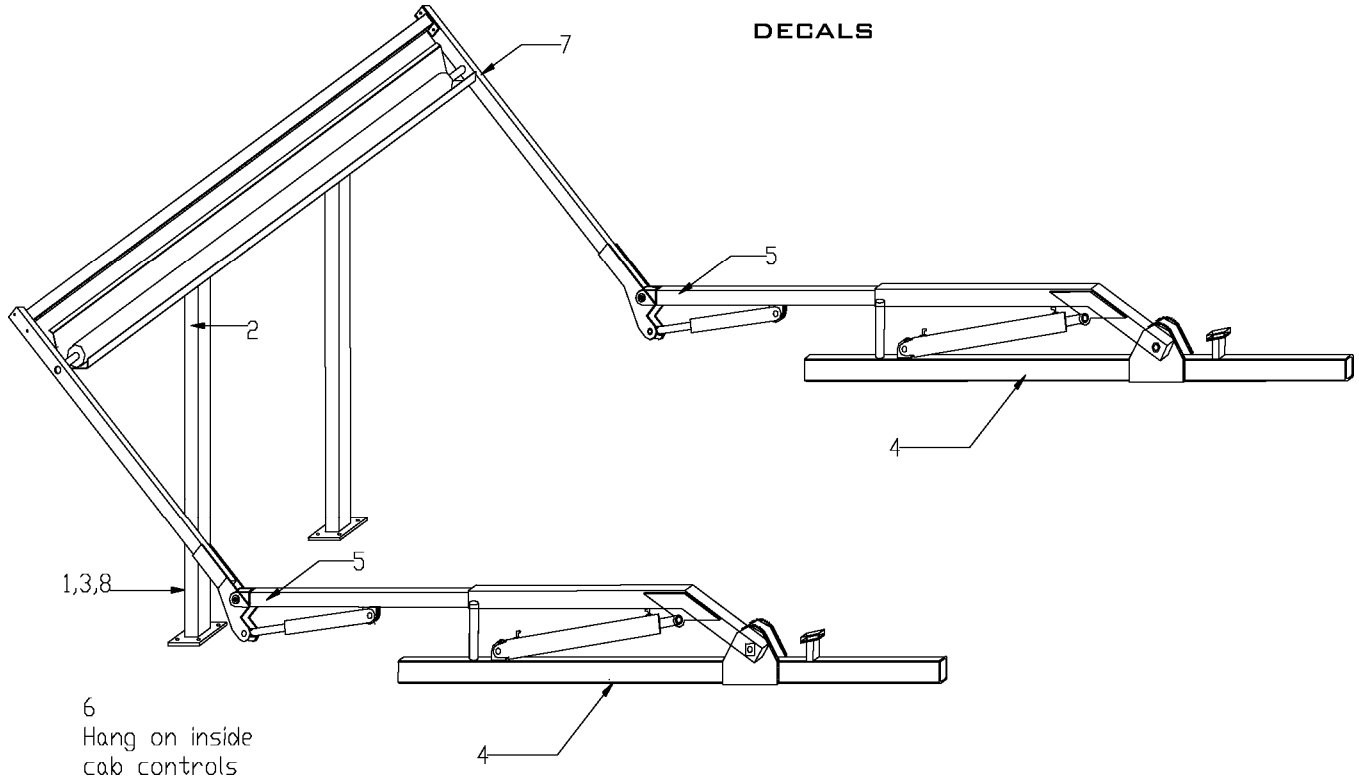
   Upright is not plumb, straighten arm

   Side arms are not parallel to frame/hoist. Realign bracket

   Cylinders have air in system/ cylinder bypassing. Bleed system/ rebuild cylinder

   Cover not square at one end or both. If not square, unroll cover and remove RSA tarp clamp on end of tarp that is rolling up slack. Pull excess cover under clamp and reattach.

   Wind is blowing tarp in from side. Move truck and/or increase spring tension on tarp roller.



FOR ALL AUTOCOVER II-CH MODELS

Item	Part Number	Decal Description	Quantity
1	UD13	Electrocution, Overhead clearance, Danger	1
2	DECAL	Serial Number Placard	1
3	Label Operate 5	Control Valve Operation Joystick	1
3	Label Operate 6	Control Valve Operation 3-Spool	1
4	Autocover II-CH	Autocover Decal	2
5	Decal-Warning	Pinch Point Warning	2
6	Hanger	Driver operation instructions hanger	1
7	RTC	Roller Spring Tension Caution	1
8	Rephase	Rephasing operation	1

. TARP REPLACEMENT

OPTION 1 "*Most Economical* "

1. *For Option 1, you will need to purchase the TARP WRENCH, p/n LW from O'BRIAN.*

2. Operate the tarp system and extend the roller out to it Lowest and farthest position, without a box on the hoist. Possition the roller about four feet off the ground.
3. With the aid of a second person, unroll the remaining tarp off the roller and position the "Locking Wrench" so that you can easily remove the old tarp and install the new tarp.
4. Slide the TARP LOCKING WRENCH into the slot on the end of the roller and slowly release the tarp until the Wrench handle is pressed against the stabilizer bar.
5. Remove screws and tarp clamp from roller. Remove old tarp from Cradle by removing the two bolts holding the tarp bar inside the front sleeve of the tarp.
6. Discard the old tarp. Spread out the new tarp onto hoist with the O'BRIAN logo up and close to the Cradle.
7. Re-insert the tarp bar into sleeve of tarp. Center the tarp on the tarp bar and re-attach tarp bar to Cradle.
8. Attach rear end of Tarp to Roller with the Tarp Clamp and Screws. Make sure the tarp is centered.
9. With the aid of a second person, pull on tarp to release the pressure from the wrench. Re-move the wrench. Gradually ease the tarp onto the Roller and make sure that the tarp rolls up and that the flaps are folded up under the tarp as it rolls up.
10. Operate the tarp sysstem and place the roller back into the Cradle.

Note *If spring pressure is lost, re-tension roller from the FRONT OF THE TRUCK ONLY!!!!!*

See pretension directions earlier inthebook. **DO NOT TRY TO RE-TENSION ROLLER FROMREAROF TRUCK AS THE SPRING TENSION AT THE REAR IS FAR TOO GREAT*****

TARP REPLACEMENT

OPTION 2 "Most Time Consuming"

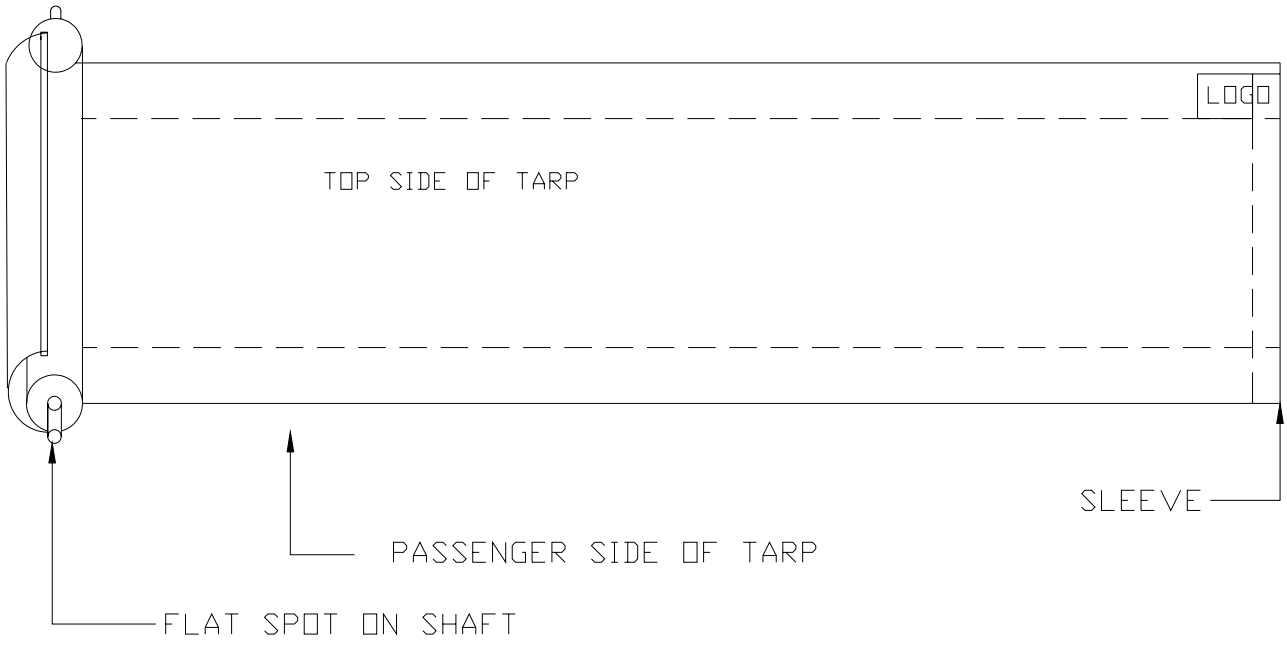
1.Remove Roller from between Arms and remove old tarp.

2.Spread new tarp on floor with the O'BRIAN logo up and flaps down. (SeeDiagram).

3.Position Rollerontop of tarp,6"-9" from edge of tarp, at the opposite end of the O'BRIAN logo.

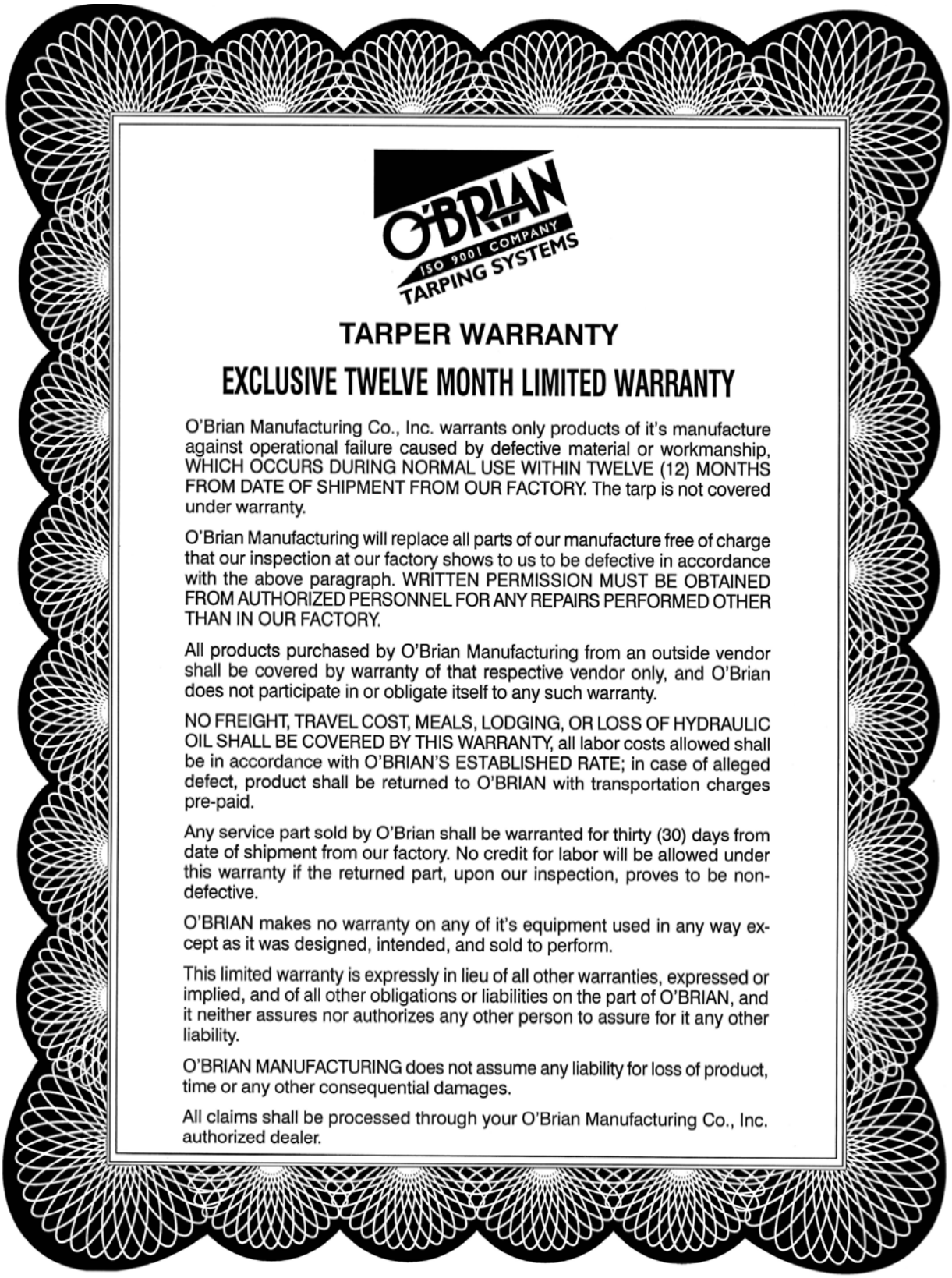
4.The roller shaft will have a machined flat edge on one end. This is the passenger side. Be sure that the passenger side of the roller is on the passenger

side of the tarp (opposite end and opposite side of the O'BRIAN logo.
5.Place the end of the tarp around and on top of the roller. Attach the tarp to the roller using the tarp clamp and screws. Use the existing holes if possible. If you have to create new holes, attach the screws on the opposite side of the spring bolt sticking out of the roller.
6.Slide the tarp bar into the sleeve of the tarp and mount back into the Cradle. Make sure that the tarp is centered left to right.
7.Roll tarp tightly around the roller and roll tarp onto roller.
8.Place the Roller into the Cradle *with the sleeve and tarp bar coming over the top of the roller* and attaching to the inside of the Cr
9. See Tensioning Roller below.



Pre-Tensioning Roller

1. Lay ROLLER AND TARP INTO CRADLE. ***Note****ONLY PRETENSION WITH ROLLER IN CRADLE****
2. **Slide Driver's side arm onto the 1" roller shaft.**
3. **Attach the** tarp-tensioning wrench, **part number** CRANK-C4 (provided in new kits) **to the Passenger side's 1" roller shaft. Tighten the wrench screw down tight onto the machined flat surface on the 1" shaft.**
4. FIRMLY HOLD ONTO TARP TENSIONING WRENCH!! FAILURE TO DO SO WILL CAUSE BODILY INJURY!!
5. **Torque the wrench 9-11 complete turns clockwise to pre-tension the roller spring. After you torque the shaft the 9-11 turns, turn the shaft clockwise looking for the hole alignment on the driver's side. Insert the bolt back into the driver arm and the roller shaft.**
6. **Remove the wrench from the roller. Install the passenger arm onto the roller arm and reinstall the bolt and nut.**
7. **Install the stabilizer bar onto the driver and passenger arms.**
8. **Operate the tarp system to check system.**
    a. **Does it have enough spring tension to roll tarp up? No, repeat procedure.**
    b. **Does it roll the tarp straight in or does it roll to one side? (This test is with the arms moving together.) If the tarp rolls to one side with the arms moving together, then you need to remove the slack in the tarp, so that the tarp will roll up even on the roller. If the tarp does roll to one side, then you will need to go back to** OPTION 1. **Work your way down** OPTION1 down to item 6. **Remove screws from center to end of tarp clamp on slack side of tarp. Slide the excess tarp past the tarp clamp to remove the excess tarp and then re-screw the tarp down. Now finish out** OPTION1.



TARPER WARRANTY

EXCLUSIVE TWELVE 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 TWELVE (12) 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.