

AMERICA'S ULTIMATE YARD RAMP

MOBILE CONTAINER RAMP

Installation and Owner's Manual



WARNING:

Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, Installation and Operating Instructions contained in this manual before. Failure to do so could result in serious injury or death.



by JH INDUSTRIES, INC.

Model # _____

Serial # _____

Date: _____



WARRANTY

ALL WARRANTY CLAIMS MUST HAVE PRE-APPROVED RATES, TIMES AND AUTHORIZATION NUMBERS PRIOR TO ANY FIELD WORK, IN ORDER TO BE ACCEPTED BY JH INDUSTRIES, INC.

J H Industries, Inc. expressly warrants that any MOBILE CONTAINERAMP sold will be free from defects in material and workmanship under normal use for a period of one (5) years from sixty (60) days after the date of shipment provided the purchaser maintains and operates the MOBILE CONTAINERAMP in accordance with the Owners Manual.

The hydraulic components and steel grating in this CONTAINERAMP are warranted for a period of one (1) year after date of shipment against defects in material and workmanship. Defective hydraulic components must be returned to the factory.

In the event that the MOBILE CONTAINERAMP proves to be defective in materials or manufacturing workmanship within the applicable period, J H Industries, Inc. will, at its option:

1. Replace the MOBILE CONTAINERAMP or the defective portion thereof without charge to the purchaser, or
2. Alter or repair the MOBILE CONTAINERAMP, on site or elsewhere, without charge to the purchaser.

This warranty IS EXCLUSIVE AND IS IN LIEU OF ALL GUARANTEES AND WARRANTIES, EXPRESSED OR IMPLIED BY ANYONE OTHER THAN J H Industries, Inc. sole warranty obligation shall be as set forth above.

The warranty does not cover any failure caused by improper installation, abuse, misapplication, overloading, negligence, or failure to lubricate and adjust the MOBILE CONTAINERAMP properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, improper operation or lack of proper protection are not covered by this warranty. Seller assumes no responsibility or liability for (1) consequential damages of any kind which result from the use or misuse of the MOBILE CONTAINERAMP; (2) damage or failure resulting from the use of unauthorized replacement parts or modification to the MOBILE CONTAINERAMP; (3) damage resulting from the misuse of the MOBILE CONTAINERAMP. THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ABOVE. THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

J H Industries, Inc. warranties extend only to the product itself.

J H Industries, Inc. DISCLAIMS all liability arising out of the workmanship, methods and materials used by the installer.

J H Industries, Inc. DISCLAIMS all liability for premature wear, product failure, property damage or bodily injury arising from improper installation or maintenance.

WARRANTIES, whether expressed or implied, relating to workmanship and materials used in connection with the installation of J H Industries, Inc. products are specifically DISCLAIMED.

INTRODUCTION

Welcome, and thank you for purchasing your Mobile Container Ramp from Copperloy by JH Industries Inc. It is designed to give you years of trouble-free operation. This manual contains information that is needed to operate and maintain the ramp safely. It also contains a complete parts list and information about ordering replacement parts. Please read completely before using your new leveler.

Verify that this is the most current Installation, Operation and Service Manuals.

To obtain an updated version please contact:

JH Industries Inc.

1981 E. Aurora Rd.

Twinsburg, Ohio 44087

(330) 963-4105 (Phone) or 1-800-321-4968 (toll free)

Or visit our website under Mobile Container Ramps to download and print an up to date manual.

www.copperloy.com

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SAFETY

A product safety sign or label should alert persons to a specific hazard, the degree or level of hazard seriousness, the probable consequence of involvement with the hazard, and how the hazard can be avoided. **SIGNAL WORD** is a word or words that designate a degree or level of hazard seriousness. The signal words for product safety signs are “**DANGER**, **WARNING**, **CAUTION**” and “**NOTICE**”. Below is each of these signal words along with their definitions as directly referenced from *ANSI Z535.4-1998*.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

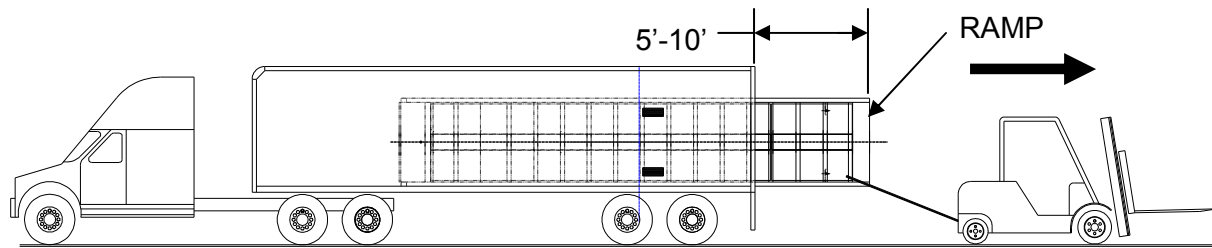
CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE!

“NOTICE” is the preferred signal word to address practices not related to personal injury. The safety alert symbol shall not be used with this signal word. As an alternative to “NOTICE”, the word “CAUTION” without the safety alert symbol may be used to indicate a message not related to personal injury.

UNLOADING MOBILE CONTAINER RAMP



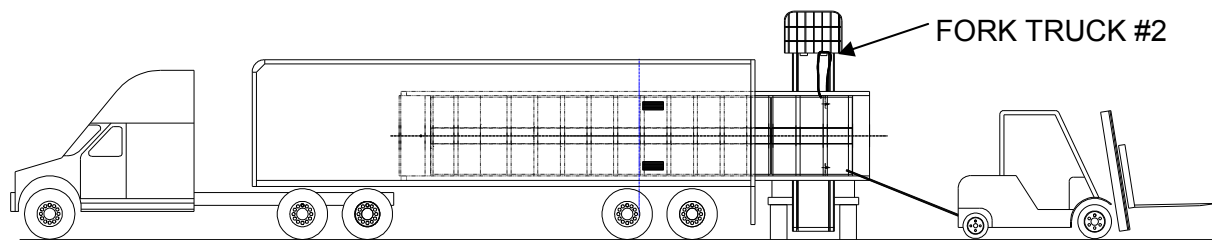
STEP #1:

Attach cable or chain and pull ramp out of the truck until a sling can be placed at the end of the ramp with a second fork truck. Do not pull the ramp out past its center of gravity.



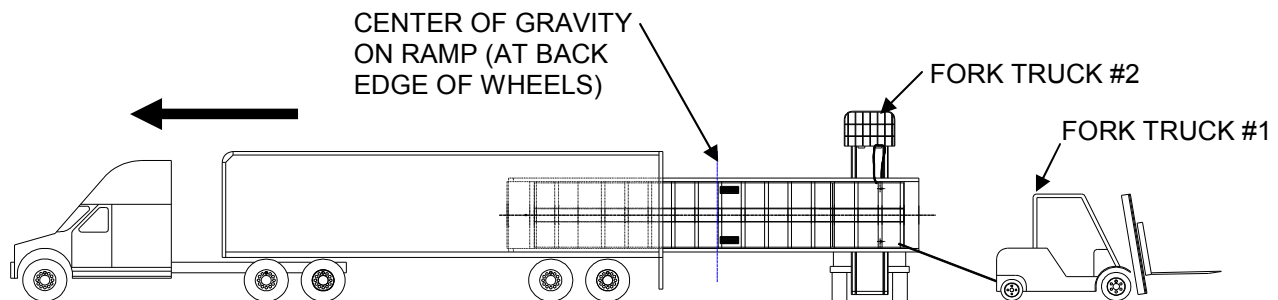
WARNING

All lifting devices and fork trucks used need to have the appropriate capacity. Failure to do so could result in death or serious injury.



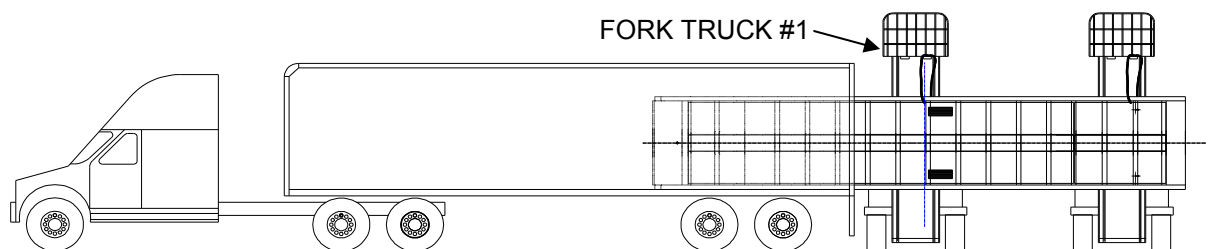
STEP #2:

Attach sling as close to the truck as possible with a Fork Truck #2 to help stabilize the ramp. Keep sling taught at all times. Apply parking brake to first fork truck and leave attached to yard ramp as shown.



STEP #3:

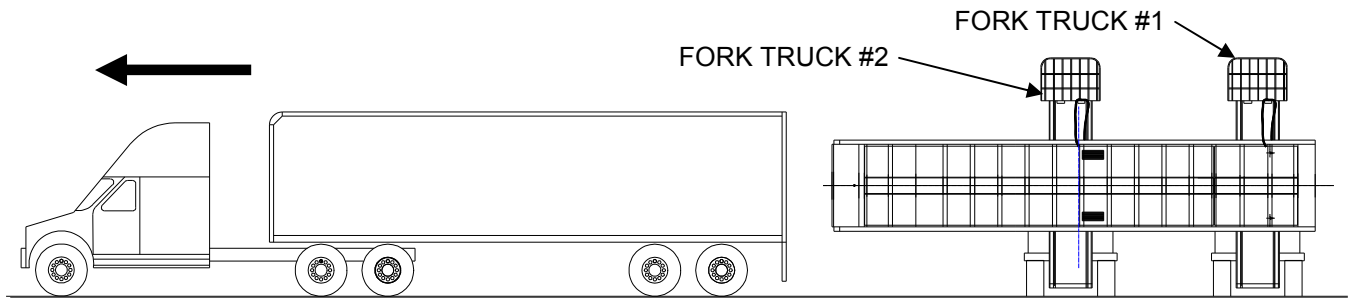
Slowly drive the truck forward until the back edge of wheels are clear of the trailer by approximately 5'. Fork Truck #1 is used as an anchor for the ramp as the truck pulls forward. Keep all slings and chains taught at all times. Lifting the ramp slightly with Fork Truck #2 may allow the ramp to slide easier.



STEP #4:

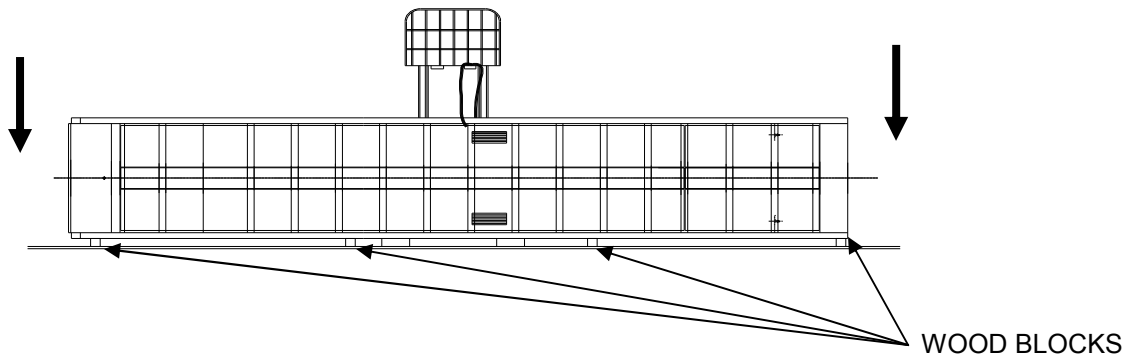
Keep Fork Truck #2 attached to the rear end of the ramp and position Fork Truck #1 at the center of the ramp. Attach a sling at the center of gravity of the ramp and begin to raise the ramp clear of the floor of the trailer. Keep both slings taught at all times.

UNLOADING MOBILE CONTAINER RAMP



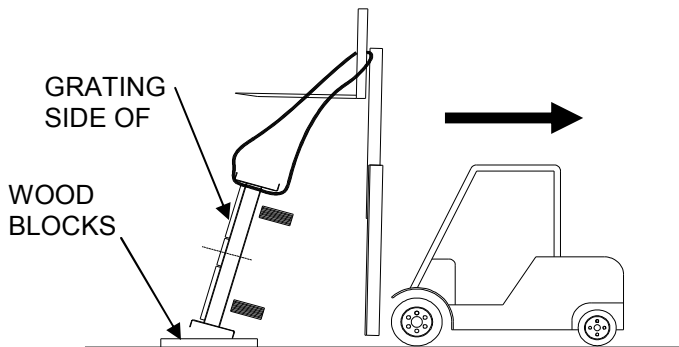
STEP #5:

Once the ramp is clear of the trailer floor slowly drive the truck forward. With the ramp clear position wood under the location of the ramp on the ground. Keep both slings taught at all times.



STEP #6:

Set the ramp slowly onto the wood blocks while keeping Fork Truck #2 sling taught remove the sling from Fork Truck #1 and drive fork truck clear of ramp.



STEP #7:

Keep the ramp resting on the wood blocks and slowly back the fork truck while lowering the forks until the ramp is resting on it's wheels. Check the ramp for any damage and **OPEN THE PETCOCK VALVE** located on the hydraulic pump (See Figure #3, Pg. 9). Verify the hydraulic system works. If there are any issues please contact the factory.

WARNING

Keep all slings and chains taught while connected to the Mobile container Ramp.

Stand clear of Mobile Container Ramp while unloading unless ramp is secured properly. Never place any body part under the ramp at any time.

All fork trucks, chains and lifting slings or devices used need to have the appropriate capacity.

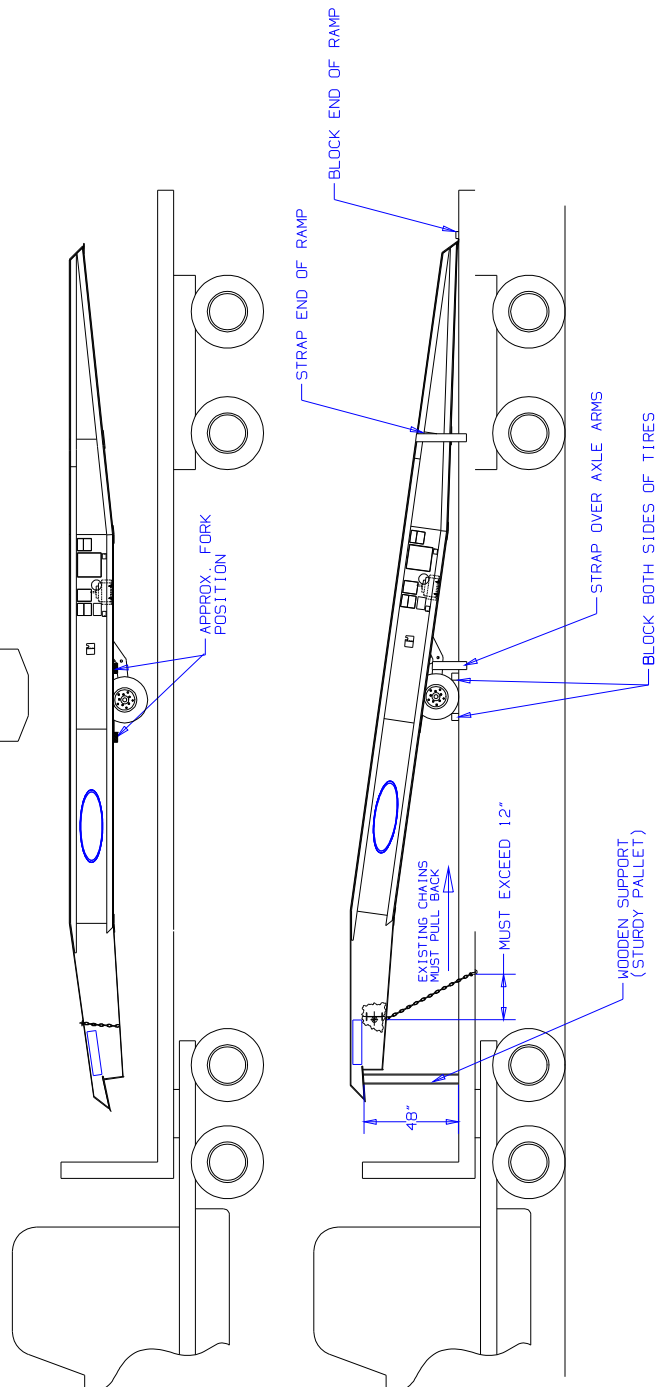
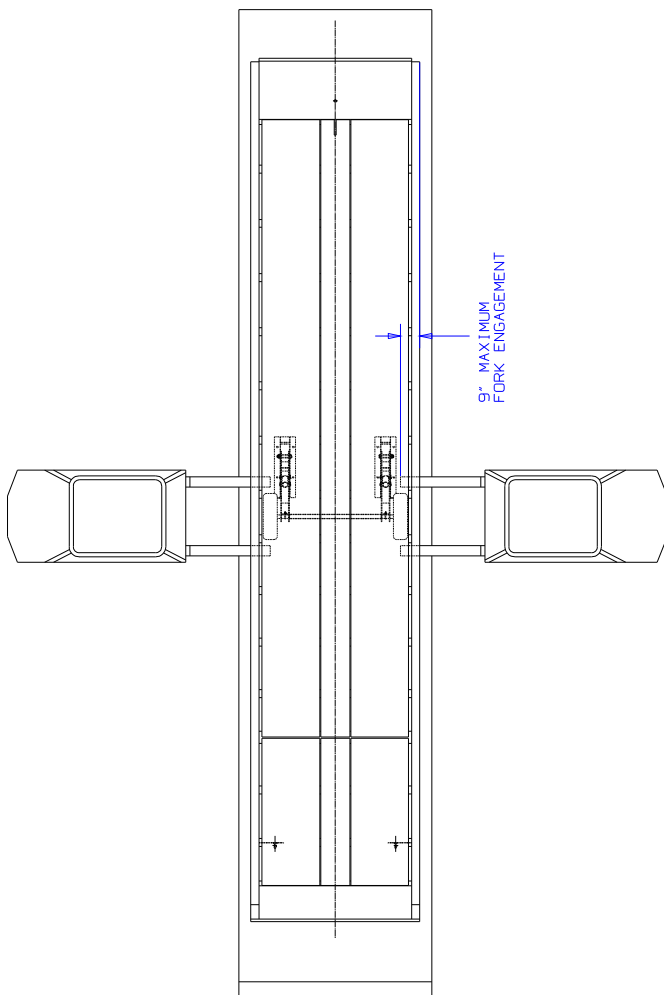
Do not pull the ramp out of the trailer beyond its center of gravity without the ramp being supported or lifted from above.

Failure to do any of the above could cause death or serious injury.

RECOMMENDED PROCEDURE FOR UNLOADING COPPERLOY MOBILE CONTAINER RAMP FROM A FLATBED TRAILER

UNLOADING INSTRUCTIONS

1. AFTER CARRIER COMES TO A COMPLETE STOP AND SETS THE BRAKES, REMOVE HOLD DOWN STRAPS, RELEASE RAMP CHAINS & REMOVE WOODEN SUPPORT.
2. POSITION LIFT TRUCKS ON BOTH SIDES OF RAMP. SPREAD FORKS AS WIDE AS POSSIBLE. THE LIFT TRUCK CAPACITY MUST BE SUFFICIENT TO LIFT THE RAMP AT A DISTANCE NEAR THE FORK END. SEE THE STRAP END OF THE RAMP FOR THE ACTUAL WEIGHT OF THE RAMP.
3. SLOWLY MOVE LIFT TRUCKS FORWARD. NO MORE THAN 9" OF FORK TIP SHOULD ENGAGE THE RAMP SIDE GIRDER.
- ALTERNATE METHOD:
USE OVERHEAD CRANE TO LIFT RAMP FROM TRAILER. BE SURE THE CRANE CAPACITY AND LIFTING DEVICES ARE SUFFICIENT LIFTING CAPACITY.
4. SLOWLY & UNIFORMLY LIFT THE RAMP OFF THE CARRIER.
5. HAVE CARRIER DRIVER PULL FORWARD & COMPLETELY CLEAR OF RAMP. THEN SLOWLY & UNIFORMLY LOWER RAMP TO THE GROUND.



OPERATION

WARNING

Read and follow all safety practices and owners manual warnings before installing, operating or servicing the Mobile Containeramp. Failure to follow the information provided could result in death or serious injury.

If you do not understand the instructions or if you have any problems or questions using or operating the Mobile Containeramp, contact your supervisor or the factory for assistance.

1. ELEVATE:

The reservoir is equipped with a petcock valve in the filler plug. The valve is closed for shipping and must be opened for proper operation. Screw in counter-clockwise until it stops.

CAUTION

Failure to open the petcock valve can cause damage to the hydraulic system and create back pressure in the tank which could result in injury.

To elevate the ramp, close the pump release valve by turning the lever clockwise. The valve seat is a precision type and does not require force beyond finger tight. Overturning may damage the valve seat. The pump is located under the grating on the left hand side of the ramp and is accessible by reaching through the opening in the side of the ramp.

Take the pump handle from its storage bracket on the outside of the ramp along the lower flange of the side girder. On the aluminum ramp the handle is stored along the cross beam. Accessible through the opening in the side of the ramp at the pump. Place it through the grating onto the pump handle adapter. Oscillate the pump until the ramp is slightly higher than the carrier. It may take a few strokes before the full pressure is felt in the handle.

Return the handle to its storage bracket.

CAUTION

DO NOT LEAVE THE HANDLE IN THE PUMPING

POSITION. Serious damage or injury can occur if the pump handle is left in the hydraulic pump.

2. POSITION:

Move the ramp ahead until the lip apron is completely over the carrier floor, and the stop plates are against the carrier door sill. Always take the ramp to the trailer. Do not back up trailers against the ramp.

Slowly open the pump release valve by turning counter clockwise. The ramp will settle onto the carrier floor.

WARNING

The release valve must be left in the open position when the Mobile Containeramp is in use. Failure to do so could result in death, serious injury or property damage.

This allows the understructure and hydraulics to float freely so that no load is transferred on the running gear. The ramp is designed as a single span bridge, supported at the ends only, with no load on the wheels.

Refer to paragraph #9, POSITIONING SLEEVE for additional information on positioning.

3. SECURE:

Loop the two eight (8) foot long safety chains supplied on the ramp around the carrier frame and lock with grab hooks. Excess slack should be taken up so as to prevent the ramp and carrier from separating.

WARNING

Do not use the ramp if either of the chains are missing or if the chains are not securely in place. Chock carrier wheels and use support jacks under the trailer as required. (OSHA Requirements) Accidental separation of ramp and carrier may result in serious injury or death.

If the ramp is to be used at a loading dock or other fixed platform, make sure the platform is equipped with hook or eye devices firmly anchored in place to receive the Containeramp safety chains as outlined.

OPERATION, CONTINUED

4. OPERATION:

Verify the **PUMP RELEASE VALVE** is in the **OPEN POSITION**.

Approach the ramp with the fork ramp in low gear and maintain an even rate of climbing speed.

Always traverse the ramp with the forks towards the carrier or elevated end. Fork trucks should **ASCEND AND DESCEND** the ramp in **LOWEST GEAR**.

All lift truck safety and operation standards of ASME/ANSI B56.1-1993 (incl. latest addenda) should be followed.

WARNING

Do not stop, start or change speeds of truck on ramp. Failure to do so could result in death or serious injury.

5. LOADING/UNLOADING COMPLETED:

Be sure that the lift truck is off and clear from the ramp. Unlock both safety chains and disengage ramp from carrier.

WARNING

Do not walk or drive on the ramp when the ramp is not resting on a firm support at the lip end. Failure to do so could result in death or serious injury.

Close the pump release valve (turn lever clockwise) finger tight only.

Slide the pump handle on to the pump handle adapter, and oscillate the pump so as to raise the ramp a few inches above the carrier floor.

The carrier may now pull away, or move the ramp (by means of the **Positioning Sleeve or Towbar**) to the next location. **Be sure all personnel and objects are cleared from under the ramp.** Slowly open the release valve to lower the ramp.

Refer to the **Positioning Sleeve or Towbar** sections of this manual for correct use of these accessories.

WARNING

Never permit a carrier to pull away and allow the ramp to fall to the ground. Failure to do so will cause severe damage to the ramp and death or serious injury to personnel.

6. LOWERING THE RAMP:

Be sure that all objects and personnel are cleared from under the ramp. Slowly open the release valve to lower the ramp. Turn the release valve lever counter-clockwise. **Leave the valve in the open position.**

WARNING

Always store the ramp in the lowered position. Failure to do so could result in serious injury or death.

7. TOWING: TOWBAR:

If the ramp has been ordered with an optional towbar accessory, attach it to the ramp as follows:

Open the pump release valve, and let the ramp settle into the lowered position. Place the towbar hook in position between the grating panels on the lateral centerline of the ramp.

Raise the low end of the ramp until the towbar clears the ground and block it in position. Use a lift truck for all lifting.

WARNING

Do not attempt to manually lift the ramp, death or serious injury could result.

Do not place hands, head, feet or any part of person between the ground and the ramp or towbar. Failure to do so could result in death or serious injury.

Swing plate 'A' under the ramp approach plate.

Turn handle 'B' clockwise until tight.

When towbar is secure, ramp is ready for towing.



OPERATION, MAINTENANCE & HYDRAULIC SYSTEM

Recommended Towing Speeds

Without spring assemblies.....5 MPH Max.

With spring assemblies.....25 MPH Max.

8. POSITIONING SLEEVE:

If the ramp is equipped with a positioning sleeve, standard on steel frame ramps, optional on aluminum frame ramps, install it as follows:

Insert the positioning sleeve lug into the hole in the approach plate of the ramp, and swing the sleeve down flat against the plate. Insert one fork into the sleeve the full 18" depth.

Attach the chain from the sleeve through the lift truck fork carriage and secure the grab hook to the chain. Remove as much slack from the chain as possible.

With the positioning sleeve secured, raise the forks so the ramp is 4"-6" clear of the ground. Travel speed for positioning is not to exceed 2 MPH.

Return the sleeve to the storage bracket when not in use.



WARNING

This device is not for towing, it is for positioning and traveling over short distances. Failure to do so could result in death or serious injury.

Positioning distances may be up to several hundred yards with this device. Beyond that distance use the TOWBAR as outlined elsewhere in this manual.



WARNING

Extreme caution must be exercised when using transport devices. Attention must be given to all persons and property in the path of travel. Failure to do so could result in equipment damage, property damage, and death or serious injury to personnel.

MAINTENANCE

1. BLOCKING INSTRUCTIONS:

Most maintenance work on a Containeramp will be performed from the underside of the ramp. The complete hydraulic system and running gear assemblies are located below the main deck surface.



It is imperative that the ramp be supported and held securely before maintenance personnel are permitted to go under the ramp. Failure to do so could result in death or serious injury.

The support should be placed under the lip apron end and must be suitably stable and sturdy. Acceptable supports are load bearing structures such as loading docks. Do not use lumber or steel members as a vertical post brace. The safety, locking chains supplied with the ramp must also be used to secure the ramp to the supports. **DO NOT DRIVE ON THE RAMP WHEN IN THE BLOCKED POSITION.**

HYDRAULIC SYSTEM

1. HYDRAULIC HAND PUMP/RESERVOIR:

The hydraulic system is factory filled and the vent/petcock valve is closed for shipping. However, if at some time fluid needs to be added, follow this procedure: With the ramp in the fully lowered position, remove the filler plug from the top of the pump reservoir. Be sure to clean away any foreign matter so as not to contaminate the fluid in the reservoir. Contaminated fluid is the leading cause of hydraulic system malfunction.

2. LINE BLEEDING:

After filling the reservoir or performing other maintenance of the hydraulic system, it may be necessary to bleed the system of entrapped air. The pump must be at its fully lowered position. Loosen the hose fitting at the cylinder farthest from the pump and, with the release valve closed, slowly operate the pump until the oil flows clear without a sign of air bubbles. Tighten the hose fitting. Repeat the process at the cylinder nearest to the pump. Add oil to the reservoir as required.

HYDRAULIC SYSTEM & RUNNING GEAR

WARNING

During line bleeding do not allow the ramp to begin raising, this will permit the ramp to fall suddenly when a fitting is loosened and may cause death or serious injury.

3. REMOVING HYDRAULIC CYLINDER:

Elevate the lip end of the ramp and follow “**BLOCKING INSTRUCTIONS**”. If the ramp is in the raised position, slowly open the release valve and let the ramp settle on to the support. If the ramp is to be raised by external means; the pump release valve must be open before the ramp is elevated. **AFTER FOLLOWING THE BLOCKING INSTRUCTION**, disconnect the hose from the cylinder to be removed.

CAUTION

Be sure no foreign objects contaminate the hydraulic system. Damage to hydraulic system could occur.

Remove the upper and lower cylinder retaining pins and spacers.

To install the new or re-packed cylinder, pull out the rod. (If difficulty is encountered, make sure hydraulic port is clear and open). Place cylinder in position, making sure that the port is at the top. Replace cylinder retaining pins and spacers. Replace hydraulic line, but do not tighten fitting. With release valve still in the open position, use a fork truck to raise the lip end of the ramp clear of the support. Remove the support and slowly lower the ramp into its lowest position. Bleed the hydraulic system as described previously, tighten hose fittings, and add oil as required. (Refer to bleeding instructions)

4. REMOVING HYDRAULIC PUMP:

The ramp must be in the fully lowered position before starting removal. Disconnect hose from the pump.

CAUTION

Be sure no foreign objects contaminate the hydraulic system. Damage to hydraulic system could occur.

Remove four (4) hex nuts at the base of the pump reservoir. Take pump off of the bracket. To replace the pump, reverse the procedure. After the pump is installed and attached to the system, bleed the hydraulic lines, add oil as required.

RUNNING GEAR

When preparing to work on any part of the wheel or axel assembly, start with the pump in the lowest position. The pump release valve must be open. Lift the ramp at the lip end with a fork truck or other suitable means until wheels are slightly off the ground. **FOLLOW BLOCKING INSTRUCTIONS.**

WARNING

It is imperative that the ramp be supported and held securely before maintenance personnel are permitted to go under the ramp. Failure to do so may result in death or serious injury.

5. REMOVING WHEELS:

Pneumatic tire:

Assemblies are automotive type. Refer to page 16, remove five (5) hex lug nuts and lock washers (*Items 1K & 1N Figure #1*), and remove wheel from hub assembly (*Item 1A Figure #1*).

Moldon tire:

Tire is retained by means of a spring roll pin through the axel. Force out the outer roll pin and remove the flat washer. Remove the wheel assembly off of the axel.

To reassemble tire, reverse the directions above.

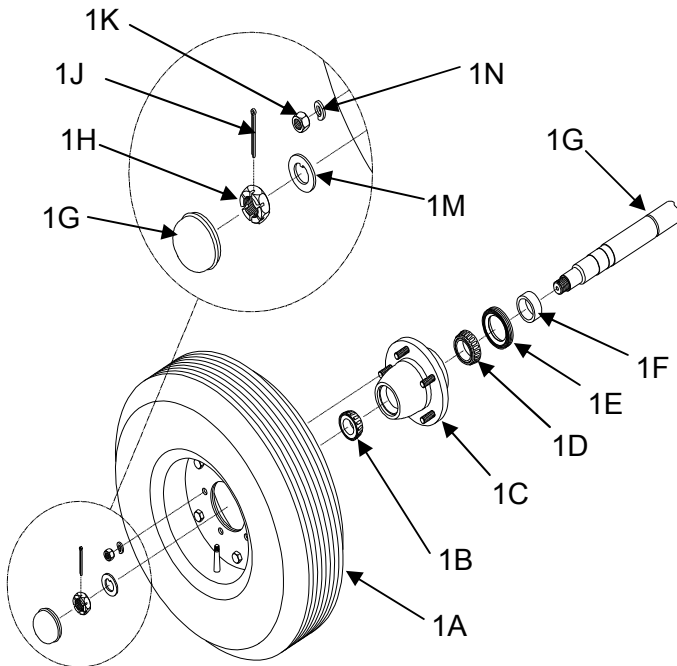
6. REPLACING BEARINGS:

Pneumatic tire:

Remove wheel per instructions above. Remove dust cap from hub assembly (*Item 1A Figure #1*). Remove cotter pin (*Item 1J Figure #1*), remove spindle nut (*Item 1H Figure #1*), remove spindle washer (*Item 1M Figure #1*), hub assembly can now be removed from the axle. Repair hub assembly or bearings as necessary. Inner grease seal (*Item 1E Figure #1*) should be replaced with a new seal when servicing hub assemblies. To reassemble, reverse the procedure above.

RUNNING GEAR & TROUBLE SHOOTING

Figure 1



Moldon tire:

Remove wheel per instructions above. Roller type bearings will slide free with wheel removed. The outer race of the bearing will need to be pressed out of the wheel hub. Washer like retainers are on both the inside and outside of the hub. Slight force may be necessary to remove and replace these retainers. To reassemble, reverse the procedure above.

7. STEEL CONTAINERAMP FRAME:

Annual inspection of the steel frame's enamel finish should be performed. Any areas indicating rust should be thoroughly wire brushed, prime painted, and top coat painted with a good quality rust inhibiting coating. All steel products will begin to show signs of weathering at some point. This general "touch-up" is not to be considered a claim against the products warranty.

1. UNEVEN RAISING:

Although it may seem to be a defect, some amount of uneven raising may be experienced at first. This

TROUBLE SHOOTING

is not unusual with a new ramp. Depending on the number of cycles performed, a week or so of use will typically remedy the situation. The cause can be traced to a difference in hydraulic cylinder packing tightness.

The condition may also be a result of air in one of the hydraulic lines. This may be caused during the unloading of the ramp by allowing the undercarriage to move. This will draw the air past the cylinder packing or allowing it to be drawn in through the fluid pick up tubes while not submerged in the fluid. Although raising and lowering the ramp several times may self bleed the hydraulic system, refer to **LINE BLEEDING** section of this manual to eliminate this possibility.

On older ramps, if the problem persists, re-pack the cylinders or install new cylinders. This may be required due to damage or wear of the packing material. Refer to section **REMOVING HYDRAULIC CYLINDER**.

2. RAMP DOES NOT RAISE:

Check the pump oil reservoir oil level. Fill as necessary as described in the MAINTENANCE section of this manual.

Be sure the petcock vent (See Fig #3) is open for operation. A closed petcock may cavitate the pump. This will not permit the pump to draw oil.

Check for damage to the hydraulic system or physical damage to the running gear (this includes axle arms, axle arm mounting weldments, axle and all pivot points. Repair damage as necessary.) (See Fig #2)

Pump release valve (See Fig #3) may be worn or damaged by repeat over tightening. Replace the pump. Pump valve seats are not repairable.

If the pump handle returns or moves by itself, the trouble is in the ball check valves. Remove the pump and install appropriate repair kit. Refer to the **REMOVING HYDRAULIC PUMP** section of this manual.

TROUBLE SHOOTING

3. OIL LEAKAGE:

A) At the cylinder Rod:

Remove cylinder and check for scored rod or worn or damaged packing. Cylinders may be re-packed using repair kits as shown on the parts list. However, if a rod is scored, replace the entire cylinder. Refer to the **REMOVING HYDRAULIC CYLINDER** section of this manual.

B) At the pump filler plug:

Too much oil in the reservoir due to improper filling procedure. Reservoir was filled when the ramp was not in the fully lowered position. Excess oil is being forced out of the vent in the filler plug.

CAUTION

Pump reservoir may be permanently damaged if over filled serious injury could occur if pump fails.

C) At the pump release valve:

Open the release valve and allow the ramp to lower. When fully lowered, remove the lever from the stem and tighten the packing nut around the valve stem. If this does not remedy the leak, re-pack the stem using the repair kit as shown on the parts list. Reassemble lever in the proper orientation.

4. RAMP SETTLES WITH VALVE CLOSED:

Check for leaks in the hydraulic system. If no leaks are found, it may be necessary to check the release valve stem for damage. With the ramp in the fully lowered position, remove the release lever (*See Fig #3*) from the stem and unscrew the stem completely. Oil may begin to flow from the pump. Cap the hole with a plastic or rubber plug. If no damage is found, reinstall the release valve assembly. If stem nose is damaged, replace pump. This part of the pump is not repairable.

The ramp settling condition may be caused by foreign matter in the hydraulic fluid. The contaminants may be lodged between any of the check valves or pressure relief valve seats. To remedy, first **BLOCK THE RAMP SECURELY, refer to BLOCKING SECTION** of this manual. Remove the hand pump; refer to the **REMOVING HYDRAULIC PUMP** section of this manual.

Drain contaminated fluid from all lines and cylinders.

Flush with clean fluid. Assemble pump to the ramp and connect the hydraulic line. Bleed the system, and refill the reservoir as necessary.

WARNING

The pressure relief valve is factory set and should not require further adjustment. If re-adjusted by the user/owner, be aware that excessively high pressure settings will cause and unsafe operation, damage to the ramp, and possibly result in serious injury or death. Consult factory for safe operating pressure level.

5. RAMP DOES NOT LOWER:

Check the running gear for physical damage (*See Fig #2*). This includes axle arms (axle are mounting weldments), axle, all pivot points, damaged hydraulic cylinders, foreign objects caught between ramp undercarriage and its frame structure and so on. Damage can occur if a ramp is pushed sideways with a fork truck or if impacted by a vehicle or semi-tractor trailer.

WARNING

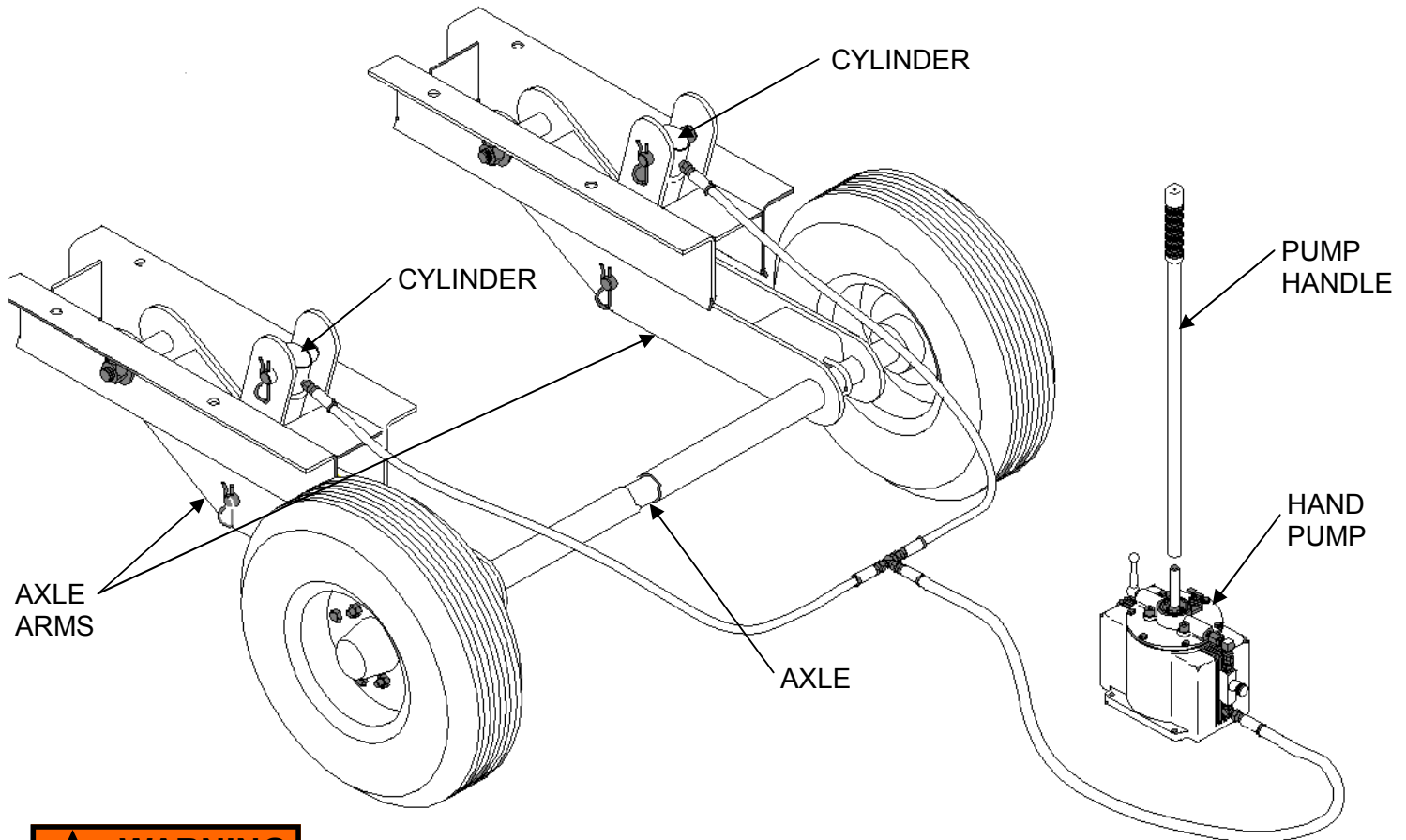
Do not attempt to skid a ramp sideways. Always position the ramp by rolling on its wheels. Failure to do so may damage the ramp or cause serious injury or death.

Be sure both cylinders' packings are not frozen/seized in the external position. Check the condition by referring to the **UNEVEN RAISING** section of this manual.

Check the flow control setting. This valve is located in the pump output port with elbow fittings at both ends (*See Fig #3*). This valve is factory set and locked. Blockage may occur through contamination. Before making any adjustment to this valve, secure the ramp at it's elevated position and make sure the positive release valve is closed. To re-adjust the flow control valve, use a 5/64" hex allen key. Loosen the set screw located just below the knurled portion of the control knob. Carefully turn knob clockwise until finger tight. Do not over tighten. Then back off 1-1/2 to 2 turns counter-clockwise. Re-tighten set screw.

TROUBLE SHOOTING

Figure 2



⚠ WARNING

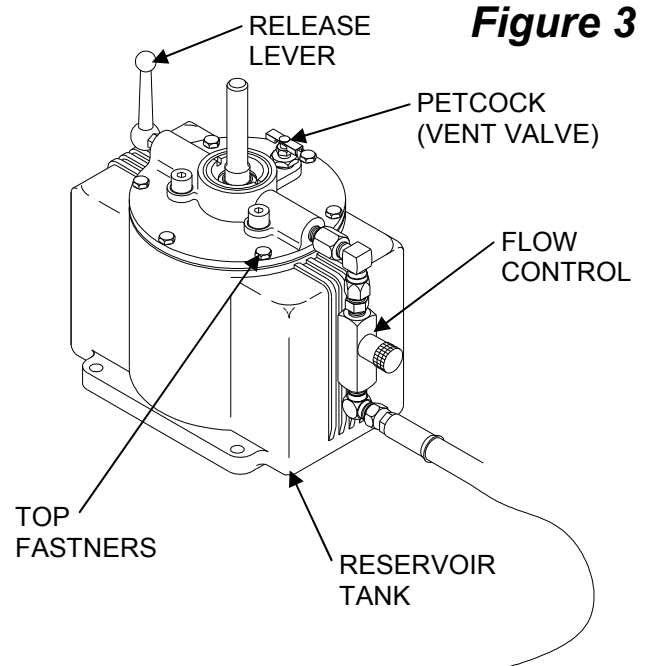
No part of your body should be under the ramp while making any of these adjustments, move to safety away from the underside of the ramp. Failure to do so may result in death or serious injury.

Final adjustment should be permit the ramp to lower at a rate of 6" per second with the release valve in the full open position. This rate should be measured at the lip end of the ramp.

⚠ WARNING

Do not leave the flow control valve in the closed position. This will cut off fluid flow back to the pump. This will be an unsafe condition. Do not use the ramp if it will not lower onto the carrier. Damage to the ramp and death or serious injury may result.

Figure 3



TROUBLE SHOOTING/ TIRE, WHEEL & AXLE ASSEMBLY

6. PUMP OPERATES IN ONE DIRECTION ONLY: (FOR DOUBLE ACTING PUMP)

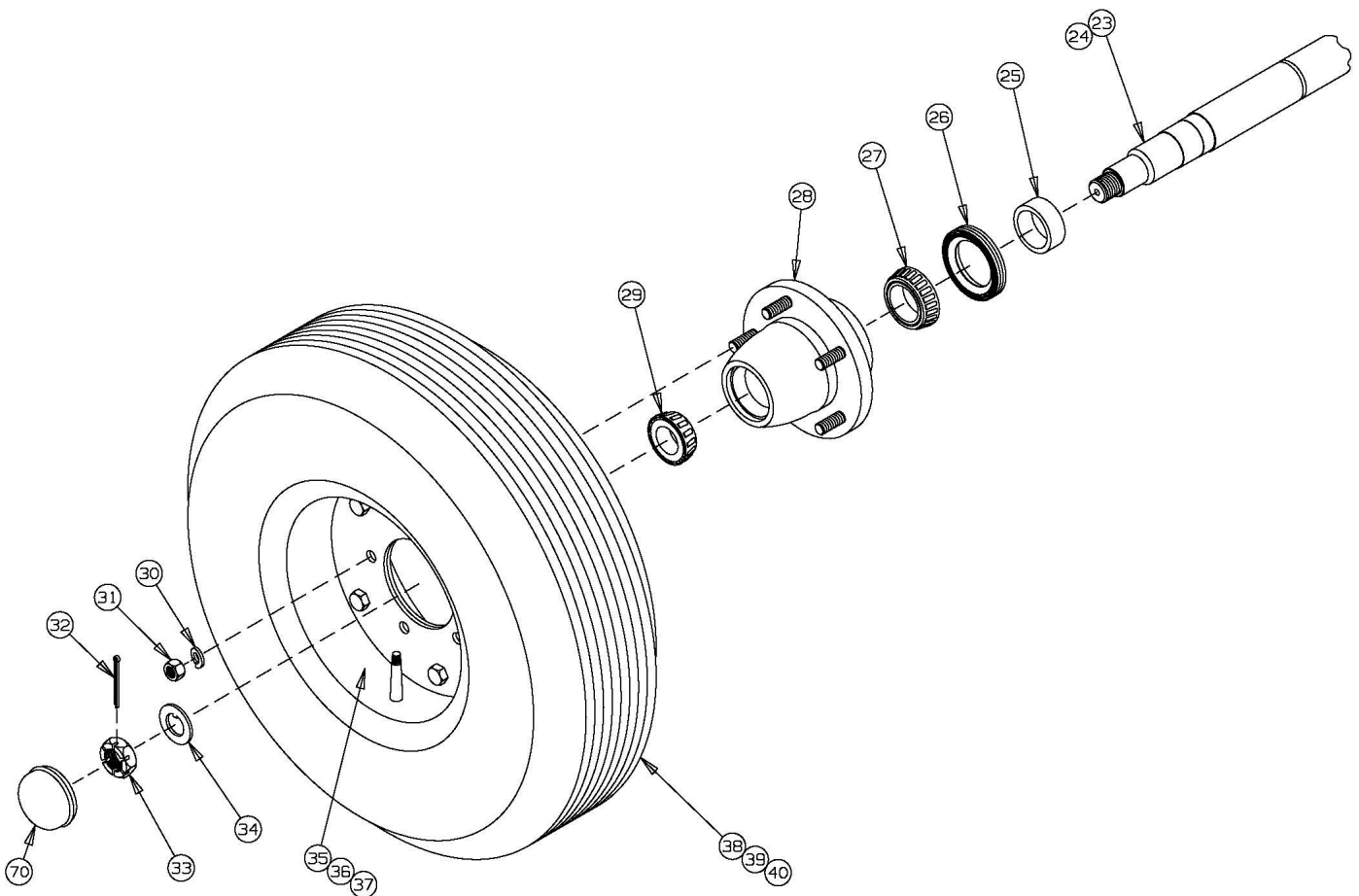
Reconnect the hose to the fitting. Refill with clean oil and bleed the system.

On occasion a pump may require rapid cycling to prim both pick-up tubes or to flush out minor contaminants from the check valve.

If unable to clear the condition, the pump may be worn excessively. Replace the pump.

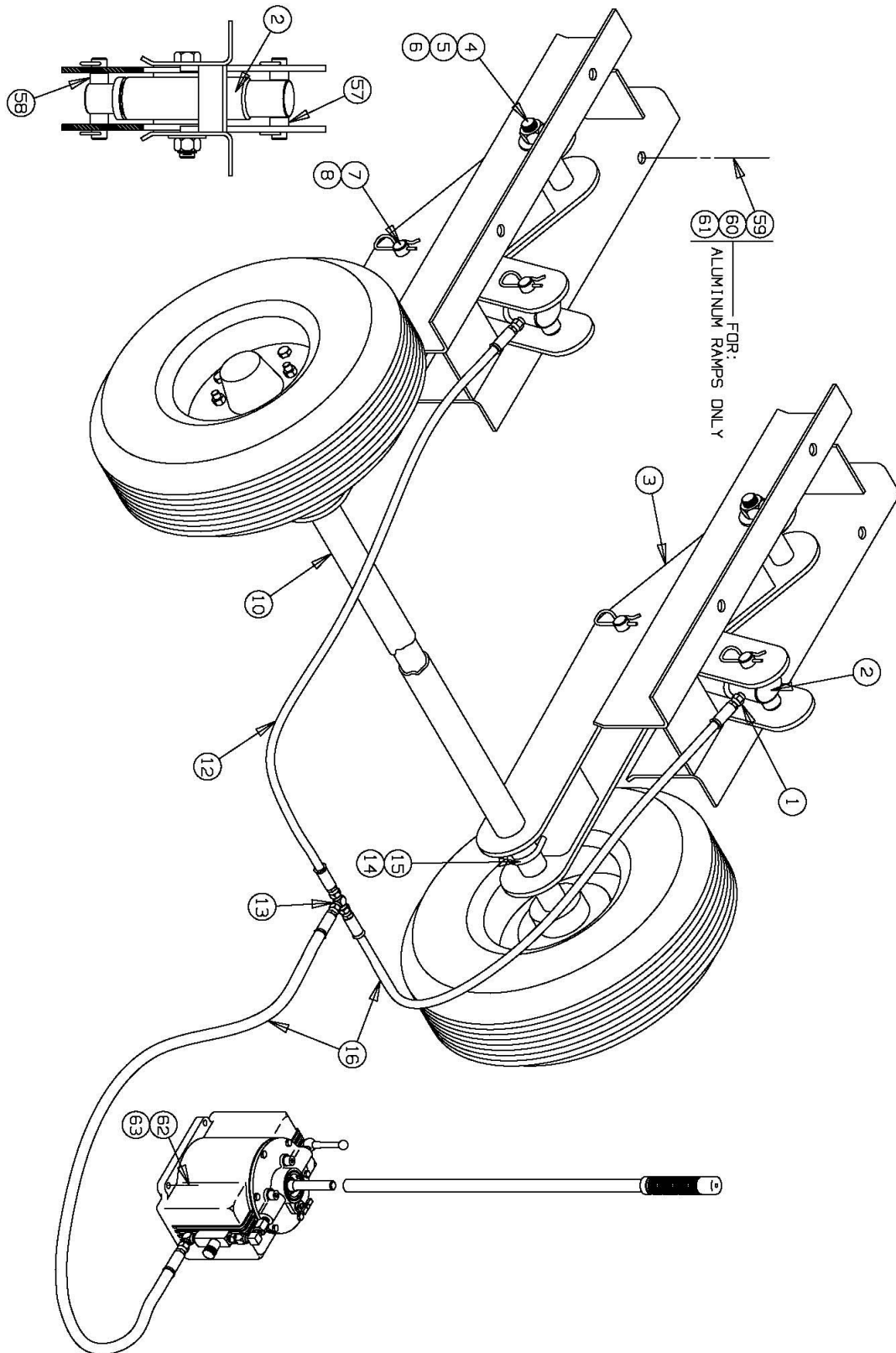
With the ramp in the fully lowered position, disconnect the pump out-put hose at the tee fitting which feeds both cylinders. This fitting is clamped to the ramp cross beam near the cylinders. Place a container to catch the oil at the open end of the hose. Protect ends of the open fittings from contamination. Be sure to close the pump release valve. Rapid motion of the pump handle, cycling the pump, will usually clear the condition.

TIRE, WHEEL AND AXLE ASSEMBLY



UNDERCARRIAGE ASSEMBLY

UNDERCARRIAGE ASSEMBLY





MOBILE RAMP PARTS LIST

ITEM NO.	QTY.	DESCRIPTION	JH PART NO.
1	2	FITTING, HYDRAULIC CYLINDER	024-002
2	2	CYLINDER, HYDRAULIC 2"	045-012
3	2	AXLE ARM	048-025
4	2	HEX LOCKNUT, 1" -8 NC	020-013
5	2	SCREW, HEX HEAD, 1" -8 NC x 6 1/2" LG	002-033
6	2	FLAT WASHER, 1" STANDARD	020-014
7	4	PIN, CYLINDER, 5 1/2" LG	020-022
8	8	PIN, HAIR COTTER, 3/16" DIA.	020-011
9	1	AXLE SLEEVE FOR 70" WIDE RAMP	5367A08
10	1	AXLE SLEEVE FOR 84", 88" & 96" WIDE RAMP	5367A05
11	1	HOSE, HYDRAULIC 55" LG	024-001
12	1	HOSE, HYDRAULIC 70" LG	024-015
13	1	FITTING, TEE CONNECTOR	024-004
14	2	AXLE "U" BOLT	002-030
15	4	AXLE "U" BOLT, NUT	025-004
16	2	HOSE, HYDRAULIC, 24" LG	024-005
17	4	AXLE ROLL PIN, FOR MOLDON TIRES	020-025
18	2	TIRE, 20" DIA. MOLDON (INCLUDES BEARINGS & FACE WASHERS)	020-024
19	4	AXLE WASHER, FOR MOLDON TIRES	021-012
20	2	BEARING FOR 20" DIA. MOLDON TIRES (INCLUDES FACE WASHERS)	020-019
21	1	AXLE, 70" WIDE RAMP W/20" DIA. MOLDON TIRES	020-036
22	1	AXLE, 84", 88" AND 96" WIDE RAMP W/20" DIA. MOLDON TIRES	020-037
23	1	AXLE, 70" WIDE RAMP W/PNEUMATIC TIRES	5282C03
24	1	AXLE, 84", 88" AND 96" WIDE RAMP W/PNEUMATIC TIRES	5282C04
25	2	RETAINER, GREASE, FOR PNEUMATIC TIRES	048-013
26	2	SEAL, INNER BEARING FOR PNEUMATIC TIRES	048-032
27	2	BEARING, INNER FOR PNEUMATIC TIRES	048-032
28	2	HUB, FOR PNEUMATIC TIRES	048-032
29	2	BEARING, OUTER FOR PNEUMATIC TIRES	048-032
30	10	LOCKWASHER, WHEEL LUG	048-032
31	10	HEX NUT, WHEEL LUG	048-032
32	2	PIN, COTTER SPINDLE	048-004
33	2	NUT, SPINDLE	048-003
34	2	WASHER, SPINDLE	048-002
35	2	WHEEL, FOR 21" DIA. (6.00-9) PNEUMATIC TIRE	048-007
36	2	WHEEL, FOR 23" DIA. (6.50-10) PNEUMATIC TIRE	048-033
37	2	WHEEL, FOR 25" DIA. (7.50-10) PNEUMATIC TIRE	048-033
38	2	TIRE, 21" DIA. (6.00-9) PNEUMATIC W/TUBE & FLAP	048-005
39	2	TIRE, 23" DIA. (6.50-10) PNEUMATIC W/TUBE & FLAP	048-034
40	2	TIRE, 25" DIA. (7.50-10) PNEUMATIC W/TUBE & FLAP	048-029
41	2	CLAMP, HOSE	024-007
42	2	SCREW, SELF THREADING	024-008
43	-	REPAIR KIT, HYDRAULIC CYLINDER (#2 ABOVE)	045-013
44	-	GRATING PANEL, 2 1/4" THICK X 28 3/4" X 25' -4 3/4"	025-025
45	-	GRATING PANEL, 2 1/4" THICK X 14 1/2" X 25' -4 3/4"	025-027
46	-	GRATING PANEL, 2 1/4" THICK X 28 3/4" X 6' -3 3/4"	025-026
47	-	GRATING PANEL, 2 1/4" THICK X 14 1/2" X 6' -3 3/4"	025-028
48	*	CAP SCREW, GRATING HOLD DOWN (5/16 -18NC X 3" LG)	002-078
49	*	LOCK NUT, GRATING HOLD DOWN (5/15 -18NC)	024-010



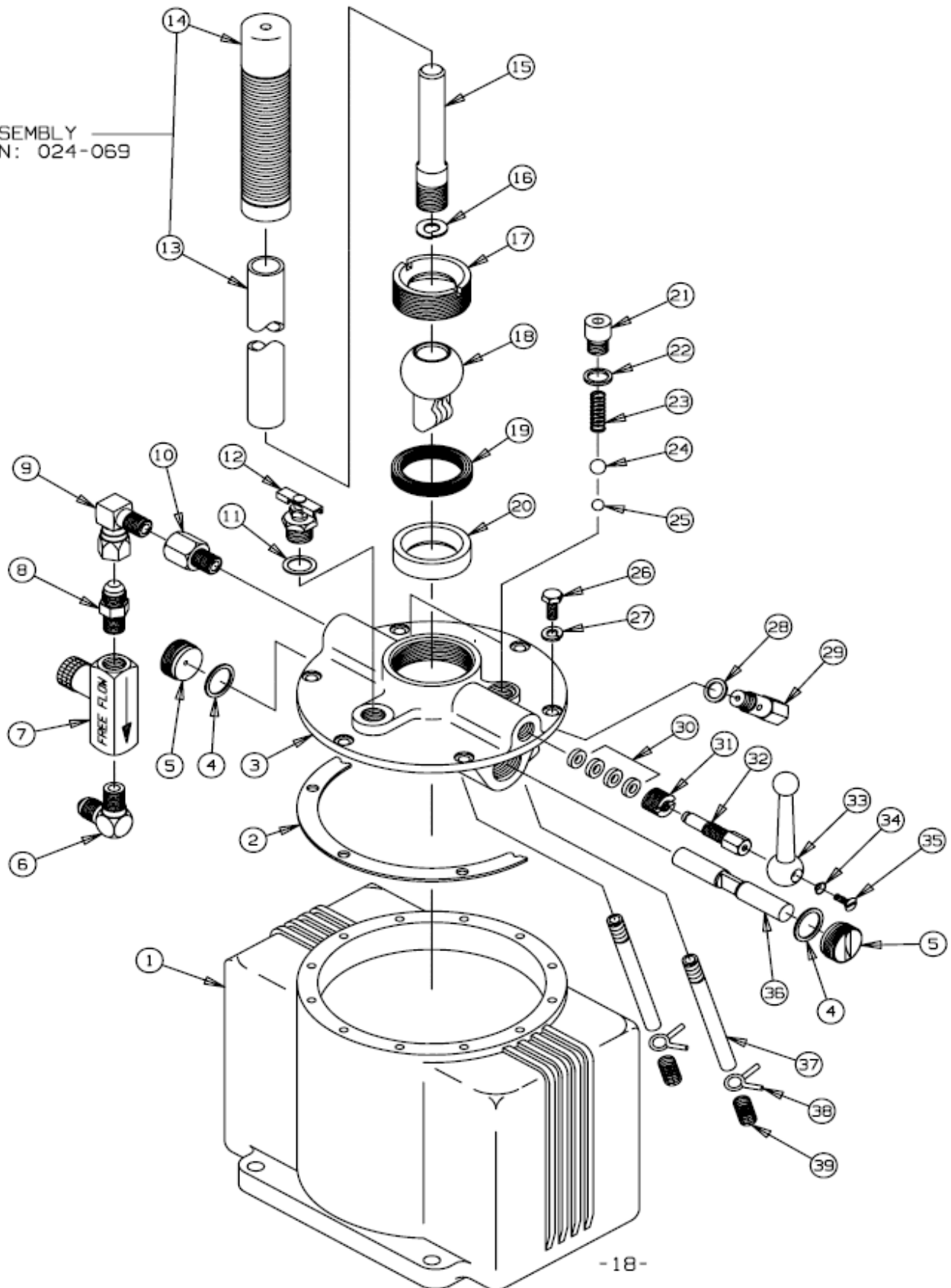
MOBILE RAMP PARTS LIST

ITEM NO.	QTY.	DESCRIPTION	JH PART NO.
50	*	CLAMP, GRATING HOLD DOWN	025-007
51	2	CHAIN, SAFETY (1-8' CHAIN & HARDWARE) ALUMINUM RAMP	2790BA
52	2	CHAIN, SAFETY (1-8' CHAIN & HARDWARE) STEEL RAMP	2790BS
53	-	ASS'Y POSITIONING SLEEVE (ALUMINUM RAMP)	5621CA
54	-	ASS'Y POSITIONING SLEEVE (STEEL RAMP)	5621CS
55	-	TOWBAR, COMMERCIAL APPLICATION (30" APPROACH PLATE)	042-035
56	-	TOWBAR, MILITARY APPLICATION (30" APPROACH PLATE)	042-015
57	4	PIN, SLEEVE (9/16" LG)	048-021
58	4	PIN, SLEEVE (23/32" LG)	020-023
59	8	SCREW, HH GR5 3/4 -10NC X 2 -1/2" LG PLTD	030-006
60	16	WASHER, FLAT SAE 3/4" PLTD	042-028
61	8	NUT, HEX, LOCK REV., GR-B, 3/4 -10NC PLTD	002-099
62	4	WASHER, LOCK 3/8" PLTD	002-057
63	4	NUT, HEX 3/8 -16NC PLTD	024-028
64	2	EYE BOLT 3/4-10NC X 2" LG (FOR ALUMINUM RAMP CHAINS)	037-008
65	2	WASHER LOCK 3/4" PLTD (FOR ALUMINUM RAMP CHAINS)	039-006
66	2	NUT, HEX 3/4-10NC PLTD (FOR ALUMINUM RAMP CHAINS)	039-005
67	2	SHACKLE, ANCHOR ROUND PIN, 7/16" NOM	030-011
68	2	CHAIN, HIGH TEST 5/16" GALV, 96" LG	009-051
69	2	CHAIN, GRAB HOOK CLEVIS TYPE 5/16"	009-001
70	2	CAP, DUST, PNEUMATIC TIRE AXLE	048-038
35/38	2	TIRE & WHEEL ASSEMBLY INCL TUBE & FLAP 6.00-9	048-014
36/39	2	TIRE & WHEEL ASSEMBLY INCL TUBE & FLAP 6.50-10	048-035

* ITEMS #48, 49 & 50 REQUIRED ON ALUMINUM RAMPS ONLY
 70" WIDE RAMP = 50 PCS. EACH
 84" WIDE RAMP = 60 PCS. EACH

PUMP PARTS LIST

ASSEMBLY
P/N: 024-069



-18-

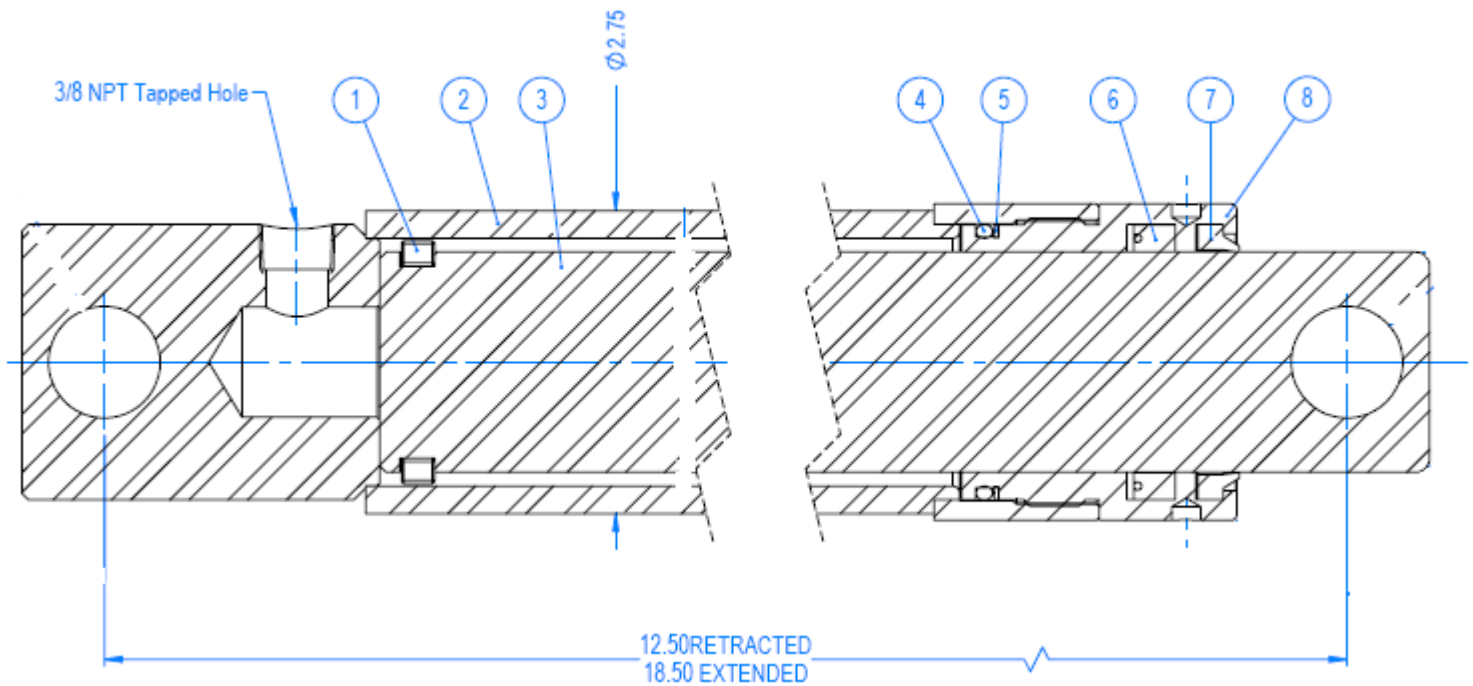


PUMP PARTS LIST

ENERPAC PUMP PARTS LISTING

ITEM NO.	QTY.	DESCRIPTION	JH P/N	REPAIR KIT 024-019	REPAIR KIT 024-029	PUMP ASSY. 024-066	HANDLE ASSY. 024-069
1	1	RESERVOIR				X	
2	1	RESERVOIR GASKET		X		X	
3	1	BASE				X	
4	2	GASKET		X		X	
5	2	PLUG				X	
6	1	90° ELBOW FITTING	024-031				
7	1	FLOW CONTROL	024-037				
8	1	CONNECTOR FITTING	024-062				
9	1	90° ELBOW SWIVEL FITTING	024-067				
10	1	ADAPTER FITTING	024-065				
11	1	GASKET				X	
12	1	VENT PLUG				X	
13	1	PIPE HANDLE	024-070				X
14	1	GRIP	024-024				X
15	1	HANDLE ADAPTER	024-017				
16	1	LOCK WASHER	002-057				
17	1	CAP	024-078			X	
18	1	ROCKER ARM	024-026			X	
19	1	PACKING		X		X	
20	1	SEAT	024-077			X	
21	2	PLUG				X	
22	2	GASKET		X		X	
23	2	SPRING	024-080	X		X	
24	2	BALL		X		X	
25	2	BALL		X		X	
26	6	HEX SCREW				X	
27	6	LOCK WASHER				X	
28	1	GASKET		X		X	
29	1	RELIEF VALVE				X	
30	4	PACKING		X	X	X	
31	1	NUT	024-079		X	X	
32	1	RELEASE VALVE SPINDLE			X	X	
33	1	LEVER			X	X	
34	1	WASHER			X	X	
35	1	SCREW			X	X	
36	1	PISTON				X	
37	2	OIL TUBE				X	
38	2	RETAINING RING				X	
39	2	SCREEN				X	
	NEW	PUMP W/ FLOW CONTROL	024-074				

CYLINDER PARTS LIST



ITEM NO.	QTY.	DESCRIPTION	JH P/N	REPAIR KIT 045-019	Cylinder ASSY. 045-012
1	1	Piston Ring, Split Stop			X
2	1	Jacket Assembly			X
3	1	Rod			X
4	2	Static Seal, O-ring,		X	X
5	2	Back-up Ring, Static Seal		X	X
6	1	Dynamic Seal, Type B		X	X
7	1	Rod Wiper		X	X
8	1	Gland Nut, Internal—No Step			X

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NOTES

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