
PORTABLE STEEL YARDRAMP

August, 2008

**DO NOT SHIP YARDRAMP
ON UNDERCARRIAGE WHEELS
*SHIP UNIT ON SIDE ONLY!***

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INSTRUCTIONS FOR UNLOADING YARDRAMPS FROM FLATBED TRAILERS

If an overhead crane of sufficient capacity is not available, use a forklift with a minimum capacity rating of 8,000 pounds to unload a standard yardramp. If you have ordered a custom size yardramp in width, length or rated capacity, please call your Handi-Ramp Representative for recommendations on the forklift capacity required.

A nylon sling of at least 96" in length is recommended. The sling may be of the "2-Eye" or "Endless" configuration. A minimum capacity of 10,000 pounds for the "basket method" of lifting is recommended.

Push both forks of the forklift as close together as possible in the center of the forklift. Position the forklift forks above the ramp. Feed the sling through the side mounted lifting lug and position one loop of the sling over each fork within 24 inches of the forklift carriage, thus creating a basket lift. Lift the yardramp until it clears the floor of the trailer by a few inches. Move away from the trailer and lower the ramp to the ground.

NOTE: If mast height of the forklift will not allow sling usage, position forks beneath the upper side of the ramp and above the grating. ***Do not attempt to lift the yardramp from the lower side of the unit!!!***

To lower the yardramp onto its wheels, position the forklift on the underside of the yardramp. Attach sling as described above, lift the yardramp, place the front lip (End with the Chains) on a stack of three (3) pallets and lower the ramp so that the rear approach apron touches the ground. Tilt forks back fully and move slowly away from the yardramp, lowering the forks at the same time. Continue moving and lowering the forks until the ramp is resting on its wheels. Remove the sling.

Additional information on slings and hitches can be supplied by sling providers.

YARDRAMP OPERATING INSTRUCTIONS

BALANCE

Wheels are located near the balance point of the yardramp with the heavy side on the approach (Low) end for ease of operation and to make the yardramp trail properly when being towed. The balance will shift as the yardramp is elevated.

TOWING



Ramp Clamp

Release hydraulic pressure (rotate pump release valve handle counter-clockwise, refer to item 22 in schematic) and let the yardramp settle slowly to its lowest position. Leave pump release valve open while yardramp is being towed to prevent damage to the hydraulic system.

Tow bar

Towing speed will be governed by prevailing conditions but should not be such as to cause severe jostling. Towing speeds should not exceed 10 MPH.

Off-Road towing must be accompanied with appropriate suspension option. The Ramp Clamp is intended for short towing distances. Tow bars are intended for longer distances. Over-the-road towing is limited by governing State, Federal and Local Laws.

RAISING

Open pump vent plug/drain cock (item 34 on schematic) by making 2 complete turns counter-clockwise. The vent plug/drain cock must be partially open while operating the pump.

Close pump release valve (item 22 in schematic) by rotating handle clockwise or pushing handle towards mid-section of ramp. **CAUTION:** Do not over-tighten. It is unnecessary and will damage the valve seat.

Install pump handle stored on the side of the yardramp onto the pump actuator pin (item 13 in schematic). Actuator pin is accessible through an opening in the deck grating. Actuate pump handle with long strokes parallel to yardramp until lip of yardramp is higher than the level on which it is to rest. Return pump handle to holder. **NOTE:** Numerous cycles of the handle are required to prime the system after shipping or following extended periods without use.

WARNING: To avoid injury and equipment damage, do not continue pressurizing cylinders after they reach maximum travel.

POSITIONING

Position the yardramp so that the front lip is over the surface on which it is to rest with the stop plates resting against the edge of the surface. Slowly open the pump release valve (item 22 in the schematic) by turning the lever counter-clockwise to lower the ramp. Downward movement of the yardramp can be stopped at any point and its lip height held at that level by closing the pump release valve. After the yardramp has settled into place and stopped moving, open the pump release valve completely and leave in the open position until ready to raise the yardramp again.

DO NOT LOAD YARDRAMP WITH THE PUMP RELEASE VALVE CLOSED.

DO NOT BACK TRUCKS UP TO AND UNDER THE LIP OF THE YARDRAMP.

Always move the yardramp to the truck.

SECURING

For safety always secure the yardramp utilizing the two safety chains. Chains should be looped around a sturdy part of the carrier; platform or dock on which the yardramp is resting using the grab hooks to complete the loop. The chains should be as tight and as horizontal as possible but allow for change in the height caused by shifting loads.

USING

Vehicles traversing the yardramp should always maintain a slow, steady speed, preferably in low gear. They should not stop or change gears while on the yardramp as the increased traction will cause excessive wear and damage to the tires.

Forklifts should ascend and descend with their forks tilted back and raised to avoid contact with the yardramp deck.

STORAGE

When finished using the yardramp:

Release the safety chains and place them securely on the deck of the yardramp.

1. Close pump release valve (item 22 in schematic)
2. Insert pump handle and actuate pump until the lip of the yardramp is clear of the supporting surface.
3. Roll yardramp away from platform, dock or vehicle. Trucks may be driven away from the yardramp but not before steps 1 through 3 above have been performed.
4. Open pump release valve (item 22 in schematic) slowly.
5. Lower yardramp to stored position.
6. Close pump release valve (item 22 in schematic) and vent plug/drain cock (item 34 in schematic)
7. Replace pump handle into holder on the side of the yardramp.

YARDRAMP MAINTENANCE

LUBRICATION

Under normal conditions and environment the yardramp should be lubricated at six month intervals.

Lubricate wheel bearings with waterproof automotive grease by using standard “Zerk” grease gun

Pivot pins of wheel undercarriage may be oiled with standard SEA30 Motor Oil.

TIRES

Solid Rubber Pneumatic Profile Tires

1. These types of tires are virtually maintenance free.
2. Tires can develop flat spots if left standing under load for extended periods, especially in hot weather. This can be prevented by resting the yardramp lip on a stable support and releasing the hydraulic pressure, thereby taking load off of the tires.

Pneumatic Tires.

1. Maintain air pressure of 100 psi.

HYDRAULICS

Inspect hydraulic system for evidence of damage and leaks. Check oil level in the pump reservoir. See “Hydraulic System Notes”.

STRUCTURE

Welded yardramp structure should be inspected at least annually (or more often according to usage) for evidence of damage.

Steel work should be repainted as required. Bolts used to attach wheel understructure to ramp structure should be checked and tightened as necessary.

REMOVING WHEELS

Pump yardramp to its maximum height. Lift lip of yardramp with fork truck until wheel are off of the ground and place supports under the lip to hold the yardramp securely in that position. Remove nut and washer from axle. Remove bolt axle to free wheel. Note the relative positions of the several spacers and washers so they can be replaced in the same locations. When re-installing the wheel make sure not to over-tighten the bolt axle. Over-tightening the bolt axle will prevent the wheel from rolling freely. To loose will result in bearing damage. Improper tightening will result in bearing damage.

REPLACING BEARINGS

Remove wheel per instructions above. Then remove the seal and remove the bearing from the hub. Replace with new bearing and seal as necessary. Lubricate thoroughly. Grease “Zerk” after wheel and axle assembly have been installed.

PATCHING PNEUMATIC TIRES

Insure that tire and tube are deflated. Remove wheel per previous instructions. Disassemble rim from hub and remove the bolts that join the two halves of the rim together. Remove flap and

tube from tire. Repair with Automotive tire/tube patch as necessary. Reverse the above procedure to reassemble. Inflate tire to 100 psi.

TROUBLE SHOOTING

Possible reason why the yardramp may not raise when the pump is actuated:

1. Physical or mechanical damage to wheel undercarriage or hydraulic system.
2. No oil in pump reservoir. Fill as required and check for leaks.
3. Pump release valve not completely closed. If free end of handle is not in contact with pump base when rotated clockwise the valve may not be completely closed. Reposition the handle on shaft.
4. Pressure relief valve not properly adjusted. Pump handle will have normal resistance on power stroke but yardramp will not rise or attempt to rise and then settle back. Readjust Pressure Relief Valve.
5. Oil Leaks – Repair as required.
6. Pump check valves clogged or out of adjustment. Pump handle has normal resistance and yardramp rises on power stroke but handle returns by itself and yardramp drops. See accompanying drawing of Hydraulic Pump for location of check valves and clean, repair or adjust as required.
7. Load superimposed on yardramp. Hydraulic system, wheel structure and wheels are designed to raise and support only the weight of the ramp.

Possible reasons why yardramp might not lower when pump release valve is opened.

1. Physical or mechanical damage to the wheel undercarriage or hydraulic system.
2. Pump release valve handle hitting pump base and not opening.
3. Flow control valves clogged.
4. Obstructed or inoperative vent in vented filler plug of ramp.
5. Oil reservoir overfilled leaving insufficient air cushion in non-vented reservoirs.
6. Hydraulic cylinder packing nuts too tight.
7. Hydraulic cylinder pushrods bent or damaged.

Yardramp rises slow or is hard to pump.

1. Hydraulic hoses might be kinked or have internal obstruction.
2. Filter screen on pump might be obstructed.
3. Wheel structure might be damaged.
4. Pump check valve clogged or out of adjustment.
5. Hydraulic Cylinder packing nuts too tight.
6. Pump release valve not completely closed. If free end of handle is in contact with pump base when rotated clockwise the valve may not be completely closed. Reposition handle on shaft.
7. Pump reservoir filled with oil of higher viscosity than recommended,

Ramp Settles

1. Check for hydraulic leaks in the system.
2. If there are no leaks evident in the hydraulic system it may be necessary to readjust the pump's internal pressure relief valve for a slightly higher pressure. This factory present valve is located inside the reservoir. Remove top to gain access. This adjustment should not be necessary.

Excessive Oil Leakage around pump might be caused by:

1. Reservoir overfilled (filled when yardramp was not in the fully lowered position) and excess oil was forced out of the vent in the filler plug or out from around the filler plug when the yardramp was lowered.

2. Yardramp lowered too quickly which can build up pressure in the reservoir and force oil out through vent in the filler plug or out from around the filler plug. Yardramp should be lowered by slowly opening the pump release valve.
3. Pump piston packing leaking. Replace packing as necessary. Adjust packing nut.
4. Pump release valve shaft packing leaking. Adjust nut or replace packing as necessary.
5. Cracked pump body, probably caused by overfilled oil reservoir. Pump reservoir is not designed to contain oil under high pressure. The pressure of oil returning to the reservoir is relieved by air and excess oil escaping through the vented filler plug or a vented reservoir or by compressing the air cushion in a non-vented system. Restriction of the vent, insufficient air cushion or a too rapid build-up of pressure caused by "dropping" the yardramp can increase the pressure beyond that which the reservoir can contain.

Broken or burst hydraulic hoses, cylinders, etc.

1. Caused by operating vehicles on yardramp with pump release valve closed. *Hydraulic system, wheel structure and wheels are designed to raise and support only the weight of the yardramp.*

HYDRAULIC SYSTEM NOTES

Prior to factory departure, all fittings and connections are inspected for tightness and leaks. However, it is important to recheck these connections prior to use as they may loosen during shipment. All yardramp hydraulic systems are factory filled to the proper level. If a leak has occurred during shipment, with the ramp resting on its wheels and in the fully lowered position, check the fluid level in the pump by removing the filler plug (item 14 in the schematic) and fill reservoir with proper oil. Filler plug furnished with the pump has an integral vent with a check valve that will allow excess oil to escape if the reservoir overfilled.

OIL

Enerpac strictly recommends the use of Enerpac Fluid. Use of anything else will VOID the Warranty. Enerpac oil type is identified as 1507.

FILLING OIL RESERVOIR

The reservoir in the hydraulic pump should be filled only when the yardramp is in the fully lowered position and the pump release valve is open. Remove the filler plug (Item 14 in schematic) on top of the cap and fill the reservoir with oil. Replace the filler plug and tighten until snug. The filler plug furnished with the pump has an integral vent with a check valve that will allow excess oil to escape if the reservoir is overfilled.

BLEEDING HYDRAULIC SYSTEM OF AIR

After filling the reservoir it may be necessary to bleed the system of entrapped air. The yardramp must be in its fully lowered position. Loosen the hose connection at one cylinder and slowly operate the pump with the pump release valve closed until no air is noticeable in the oil. Retighten the hose connection and refill the pump reservoir. Repeat the process for the other cylinder.

Air becomes entrapped in the system only when hydraulic connections are disconnected, when the pump is operated with the oil low in the reservoir or when there are leaks in the system.

PUMP RELEASE VALVE

The hydraulic pump is equipped with an internal pressure relief valve which is adjusted at the factory to hold the yardramp elevated with no superimposed load. If the yardramp tends to settle and there is no apparent leakage in the system, the relief valve may have to be readjusted for a slightly higher by-pass pressure. Access for this adjustment is obtained by removing the base cover. Increase relief pressure by turning the adjustment screw (or nut) one-quarter turn clockwise. Reassemble and test for proper operation. Repeat as necessary.

PUMP RELEASE VALVE HANDLE

If rotation is limited by the handle hitting the pump base and the valve cannot be completely closed (or sufficiently opened), the handle can be repositioned on its shaft by removing the screw in the end of the shaft, sliding the handle off and reassembling in the proper position. Be sure that packing nut around the valve shaft is properly tightened.

FLOW CONTROL VALVE

A flow control valve at the hose connection to each cylinder allows oil to flow to the cylinder without restriction but retards the flow away from the cylinder. This provides a means of reducing the rate at which the yardramp lowers when the pump release valve is opened. This slower lowering rate prevents damage to the yardramp which can be caused by dropping it by

quickly opening the pump release valve or by failure of a hydraulic component (hydraulic hose, etc.). Safety of operating personnel is greatly enhanced.

HYDRAULIC CYLINDER

The push rod should have a light coat of oil on its surface but it should not be excessive nor should there be any runoff. If an excessive amount does appear check the adjustment of the piston packing nut and correct as necessary. If there is a doubt about packing nut adjustment, elevate the yardramp by means of the pump and place supports under the lip so that the yardramp is held in position. With the pump release valve closed and pressure on the system, slowly loosen the packing nut on one cylinder until oil flows out and then immediately retighten until the flow stops. **DO NOT OVERTIGHTEN!** Check oil level in the reservoir and refill as necessary. Raise and lower the ramp several times in a normal manner and observe movement of the cylinder pushrods for evidence of binding that occurs if the packing nut is too tight.

If leak continues the cylinder should be removed and examined for a second pushrod or faulty packing and wipers. Repair or replace as required. See accompanying drawing and parts lists for parts and packing kits.

Removing Hydraulic Cylinder

Pump the yardramp up to its maximum height. Place supports under lip of the yardramp to hold it securely at near maximum height. Slowly release pressure in the hydraulic system and let yardramp slowly settle onto the supports, then rotate pump release valve handle to the fully open position. Remove retaining rings and washers from the pivot pins at the ends of the cylinder and push out the pins, Remove cylinder, disconnect hydraulic hose from cylinder and seal the end of the hose to keep out foreign objects. Repair or replace cylinder as necessary, but do not tighten fitting and reassemble into the yardramp. Be sure the pump release valve is fully open, then with forklift, lift tip of yardramp clear of supports. Slowly lower the lip of the yardramp to its minimum height. Fill reservoir in pump. Close pump release valve and slowly actuate pump to force air out of the system. Tighten hydraulic hose fitting at the cylinder when all air is out of the system. Check the level of fluid in the pump reservoir and refill as necessary.

Removing Hydraulic Pump

Pump the yardramp up to its maximum height. Place supports under the upper lip of the yardramp to hold it securely at or near maximum height. Slowly release pressure in the hydraulic system and let the yardramp slowly settle onto the supports, then rotate pump release handle to the fully opened position. Disconnect the hydraulic hose and seal the end of the hose to keep out foreign objects. Remove four (4) mounting bolts and remove the pump. Repair or replace the pump as required, remount and reconnect the hydraulic hose. Be sure pump release valve is fully open, then with a forklift, lift the lip of the yardramp clear of the supports, remove the supports and slowly lower the lip of the yardramp to minimum height. Fill the reservoir in the pump. Bleed air from the system according to the procedure previously detailed.

YARDRAMP PUMP PARTS LIST 23-Oct-00

For hydraulic pump repair parts contact:

Enerpac

13000 W Silver Spring Drive
Butler, WI 53007
USA

Phone: (414) 781-6600
Fax: (414) 781-1049
End User: (800) 433-2766 (US)
End User: (800) 426-4129 (Canada)

Handi-Ramp does not sell or price pump replacement parts.
Handi-Ramp uses the Enerpac P-50 pump on all yardramps.

Item No.	P-50	Quantity	Description
1	P6005	1	Reservoir
2	P6006	2	Plug
3	*	2	Gasket
4	P6051-1	1	Piston
5	Standard Hardware	6	Cap Screw, 1/4-20 UNC x 5/8"
6	Standard Hardware	6	Lock Washer, 1/4"
7	CA365024SR	1	Vent Plug (include item 8)
8	*	1	Gasket
9	P60306	1	Seat
10	*	1	Packing
11	60234-1SR	1	Rocker Arm (incl. items 9, 10 & 12)
12	P60307	1	Cap
13	A1016070	1	Handle
14	W12185SR	2	Plug (incl. item 15)
15	*	2	Gasket
16	*	2	Spring
17	*	2	Ball
18	*	2	Ball
19	P141264SR	1	Pump Head Assembly
20	*	4	Packing
21	P6011	1	Nut
22	P6012SR	1	Lever (incl. items 24 & 25)
23	P6010	1	Release Valve Spindle
24	P45139	1	Washer
25	P45138	1	Screw
26	P60268	2	Oil Tube
27	A8061049	2	Retaining Ring
28	*	1	Gasket
29	P181190W	1	Relief Valve
30	A8018018	2	Screen
31	*	1	Reservoir Gasket
32	CJ46550	1	Grip
33	A8069006	1	Pipe Plug
34	CA561024	1	Drain Cock
*	Indicates Items Included In an available only as part of Repair Kit P50K1		

YARDRAMP PUMP SCHEMATIC 23OCT00

