

**BEACON<sup>®</sup>**

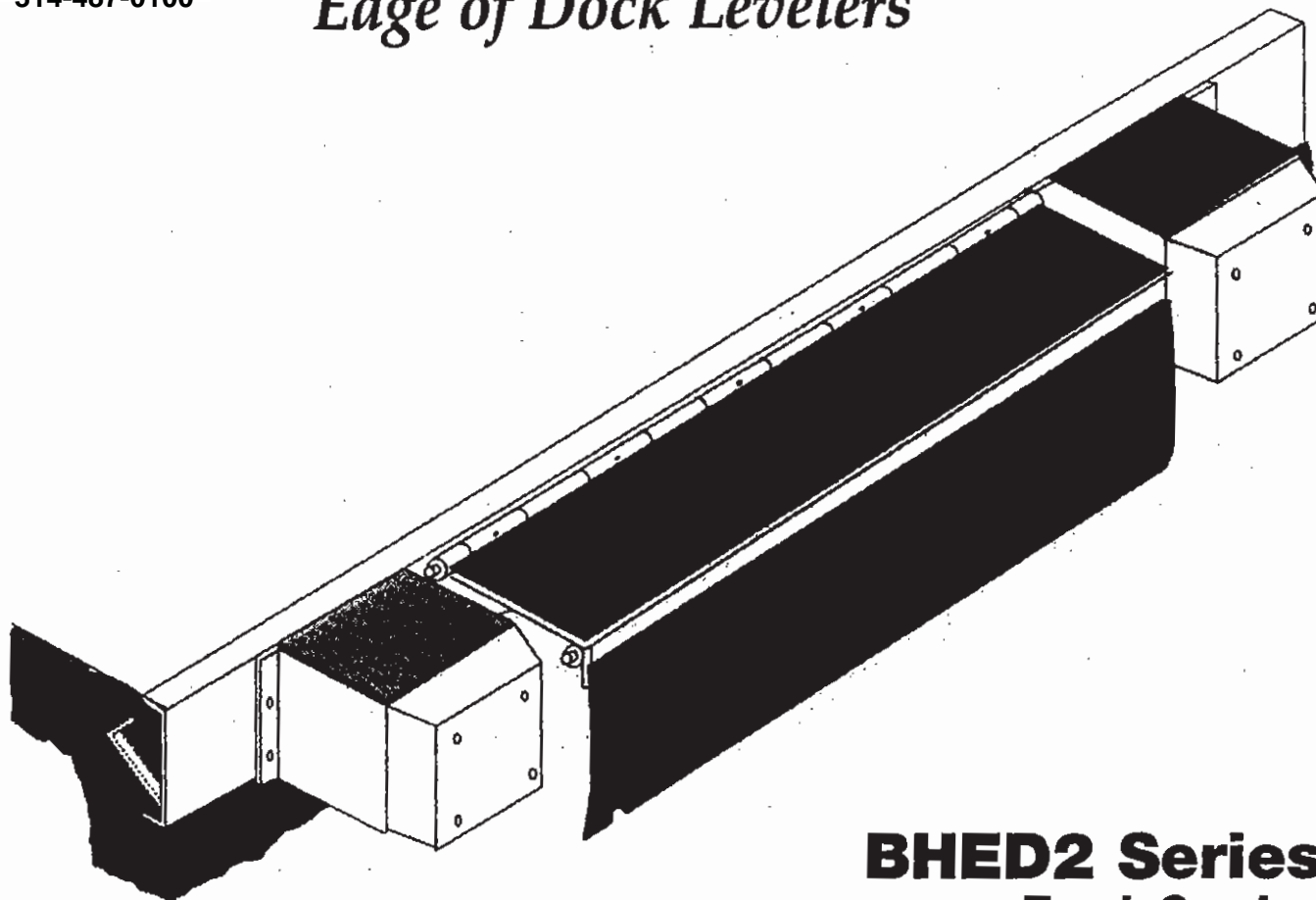
**BEACON INDUSTRIES, INC.**

12300 Old Tesson Rd.

St. Louis, MO 63128-2247 USA

OFFICE: 314-487-7600 FAX: 314-487-0100

*Electric - Hydraulic  
Edge of Dock Levelers*



**BHED2 Series**

**Truck Service**

**HYDRAULIC 20,000, 25,000  
& 30,000 lb. CAPACITIES**

## SECTION 1

## INSTALLATION INSTRUCTIONS RECEIVING AND HANDLING

### RECEIVING:

Check for possible damage or missing parts immediately upon receipt of unit. Note any damage on receiving papers.

Prepare any claims against carrier if necessary.

**NOTE: Damage noticed after receipt must be reported to carrier within 15 days.**

Notify BEACON of any damage or missing parts.

### HANDLING:

Unit is easily handled for installation by hooking a heavy chain to each buttonhead rivet.

## INSTALLATION INSTRUCTIONS INSTALLATION

### GENERAL INFORMATION:

Beacon Edge of Dock Levelers are designed to service trailers 5" above to 5" below dock level.

Prior to installation, clean the dock face and dock area.

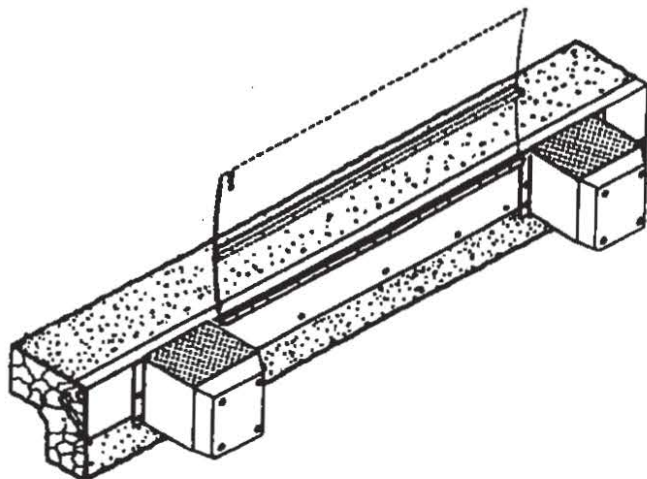
All prepunched holes are 13/16" diameter. Use 4" to 6" x 3/4" anchor bolts.

**Caution: Before you start to install the leveler, use proper safety signs and barriers to separate the work area from the remainder of the dock.**

## SECTION 1

## INSTALLATION INSTRUCTIONS INSTALLATION

Illustration: 1



### WELD ON—NEW CONSTRUCTION

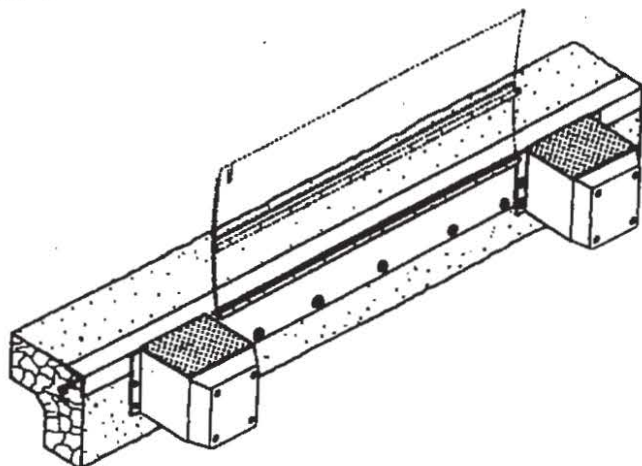
Use when dock edge vertical steel is 8" or wider. At dock edge, mark the center of chosen leveler location. Mark dock edge 33" either side of center (36" for 72" models; 39" for 78" models; 42" for 84" models).

Locate leveler with top of rear hinge flush with top of dock. This will place top of base plate approx. 1/4" below dock surface.

Tack weld ends of base plate to dock face steel, the top edge of base plate being 1/4" below dock. Tack weld both bump blocks at left and right ends of leveler allowing 1/4" space for weld between base plate ends and bump block.

**Continuous weld** bump blocks and base plate along top and all vertical edges while holding leveler firmly against dock. Spot weld in prepunched holes.

Illustration: 2



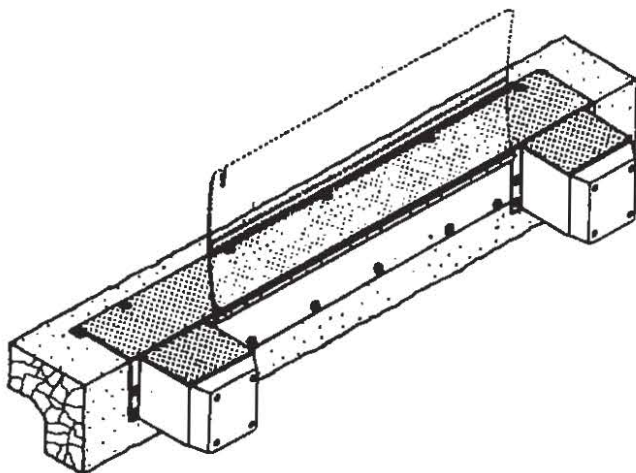
### WELD ON/BOLT ON—EXISTING CONSTRUCTION

Use when dock edge steel is securely anchored, but not adequate for weld-on method.

Complete all steps of instruction under "Weld On—New Construction."

Bolt leveler and bump blocks to dock face using all 13/16" prepunched holes furnished.

Illustration: 3



## BOLT ON + APPROACH PLATE — EXISTING CONSTRUCTION

Use when dock edge has no steel, or steel is poorly anchored, and dock face is adequate for bolting. Mark and drill holes for dock leveler centered 6-1/4" below dock edge; base plate to be raised 1/8" above dock edge for welding to approach plate. Install two (2) anchor bolts in end holes., position leveler on bolts and partially tighten nuts to hold leveler secure.

Place approach plate in position on floor, front edge being 1/8" behind base plate. Mark floor along rear edge of approach plate.

Slide plate forward 2", tack weld to leveler and use as a guide for cutting groove in floor along entire width (long dimension) of approach plate. Groove to be 2" wide and 1/8" deeper than thickness of approach plate.

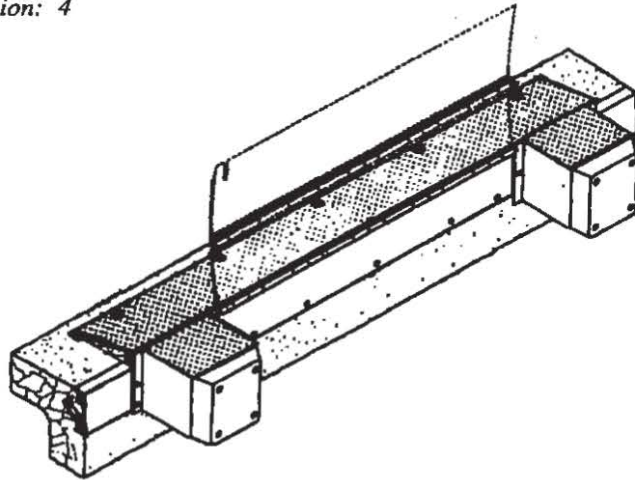
Break plate loose from leveler. Position approach plate in groove and tack weld to leveler base plate. Drill holes in floor using plate holes as guide. Install anchor bolts in plate (See General Information page 1-1). Weld and grind bolt heads to approach plate to a smooth dome shape. **Continuous weld** approach plate to top of base plate. Complete bolting phase of unit.



## SECTION 1

## INSTALLATION INSTRUCTIONS INSTALLATION

Illustration: 4



### WELD ON AND RAISED APPROACH PLATE

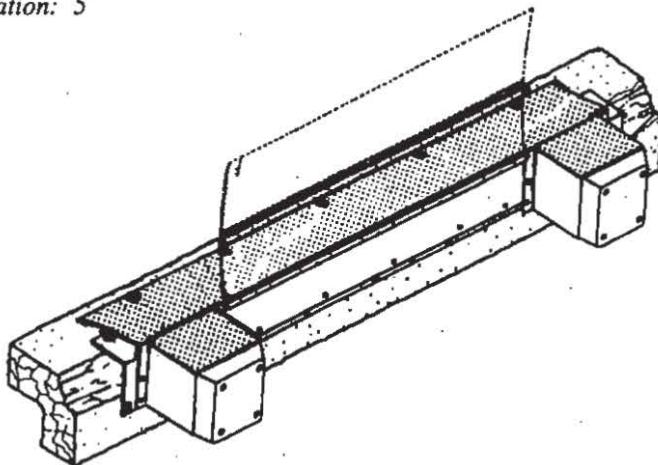
Use when dock edge is sound but height is less than adequate (bolting may also be required). At dock edge, mark the center of chosen leveler location. Mark dock edge 33" either side of center (36" for 72" models; 39" for 78" models; 42" for 84" models).

Raise leveler and bump blocks to desired height (3" max.), and weld back of base plate to dock edge steel. Tack weld both bump blocks at left and right ends of leveler allowing 1/4" space for weld between base plate ends and bump block.

Cut groove in floor, position approach plate at top edge of base plate and tack weld to unit and bump blocks. (See Illustration 3 for details.)

Complete bolting phase of installation, then continuous weld all points of contact between leveler, dock steel and approach plate.

Illustration: 5



### FORMED ANGLE-WELD ON—RAISED APPROACH PLATE

Use when dock edge is badly crumbled and dock edge is slightly low.

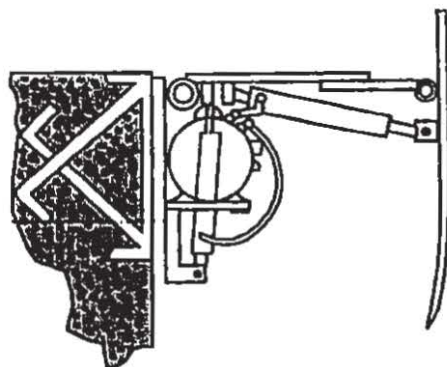
**Unit must be raised approximately 2" in this application!**

Position formed angle at desired location, mark holes, remove angle, drill holes and install angle. Install unit and approach plate according to methods described for "Existing Construction" (See Illustrations 3 & 4).

## SECTION 1

## INSTALLATION INSTRUCTIONS INSTALLATION

Illustration: 6



Side View – BHPO Series

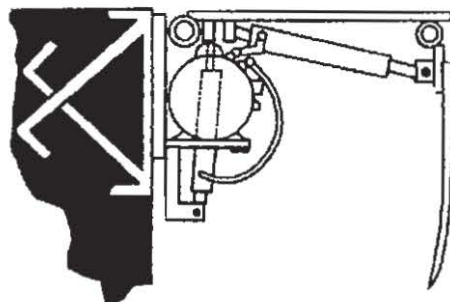
### NOTE:

Cylinder mounting bracket must be anchored to dock face, parallel with base plate of unit, by means of bolting or welding to preset plate.

Shim may be required.

## SECTION 1

## INSTALLATION INSTRUCTIONS HYDRAULIC

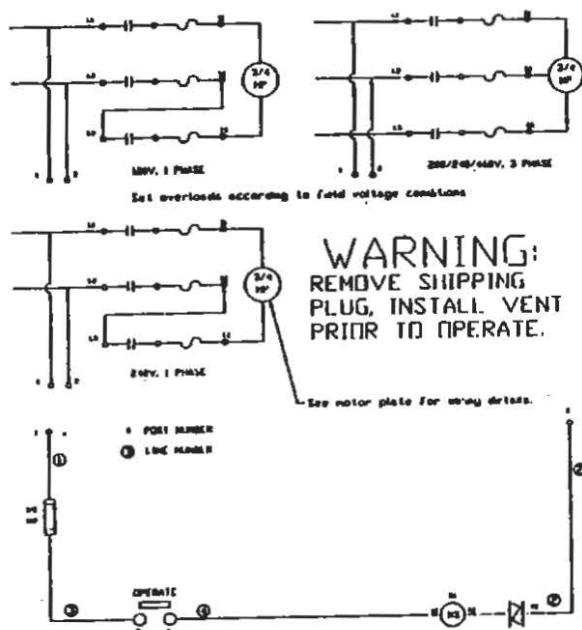


Side View – BHED Series

Units are shipped filled with transmission fluid. Check fluid level upon installation.

**IMPORTANT!** Replace plug cap with breather cap provided. DAMAGE COULD OCCUR!

## SECTION 1



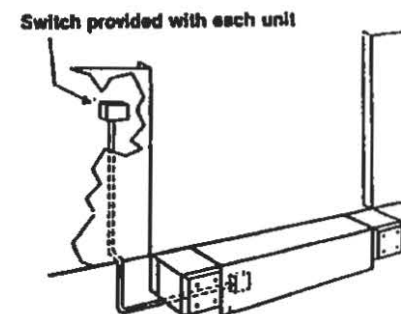
## INSTALLATION INSTRUCTIONS ELECTRIC

Motor may be wired for 120V/1 phase, 240V, 1 phase or 208/240/460V 3 phase. (Please specify when ordering.)

N.E.M.A. approved switch shipped with each unit.

Install conduit and wiring as per electrical schematic instructions.

Conduit may be run externally for existing construction installation.



## SECTION 1

## TEST OPERATION

*Test operate unit:*

Ensure breather cap is in place of plug in reservoir.

Depress switch to raise unit. As unit raises, lip will extend. When lip extends, release switch. Unit will lower to truck bed. IF A VEHICLE IS NOT PRESENT, RESET LEVELER BY MANUALLY LIFTING LIP.

INSURE UNIT RESTS ON SUPPORT GUSSETS IN STORED POSITION. NO WEIGHT SHOULD BE RESTING ON HYDRAULIC CYLINDER SHAFT.

## WEEKLY MAINTENANCE

**CAUTION:**  
**ALWAYS BRACE LEVELER SECURELY**  
**AND SAFELY WHEN MAINTENANCE IS**  
**REQUIRED.**

Check unit for leaks.

Check unit for physical damage.  
-Cracks in tubes and welds

Check installation

## MONTHLY MAINTENANCE

Check fluid levels

## YEARLY MAINTENANCE

Lubricate hinges and all other moving parts.

Check rubber bumpers.

## 5 YEAR MAINTENANCE

Replace hydraulic fluid.

**HYDRAULIC FLUID:**

Use Dextron III for normal operation or any standard grade transmission fluid.

For extremely cold regions fluid can be replaced by an arctic grade hydraulic fluid. Check local distributors for availability.



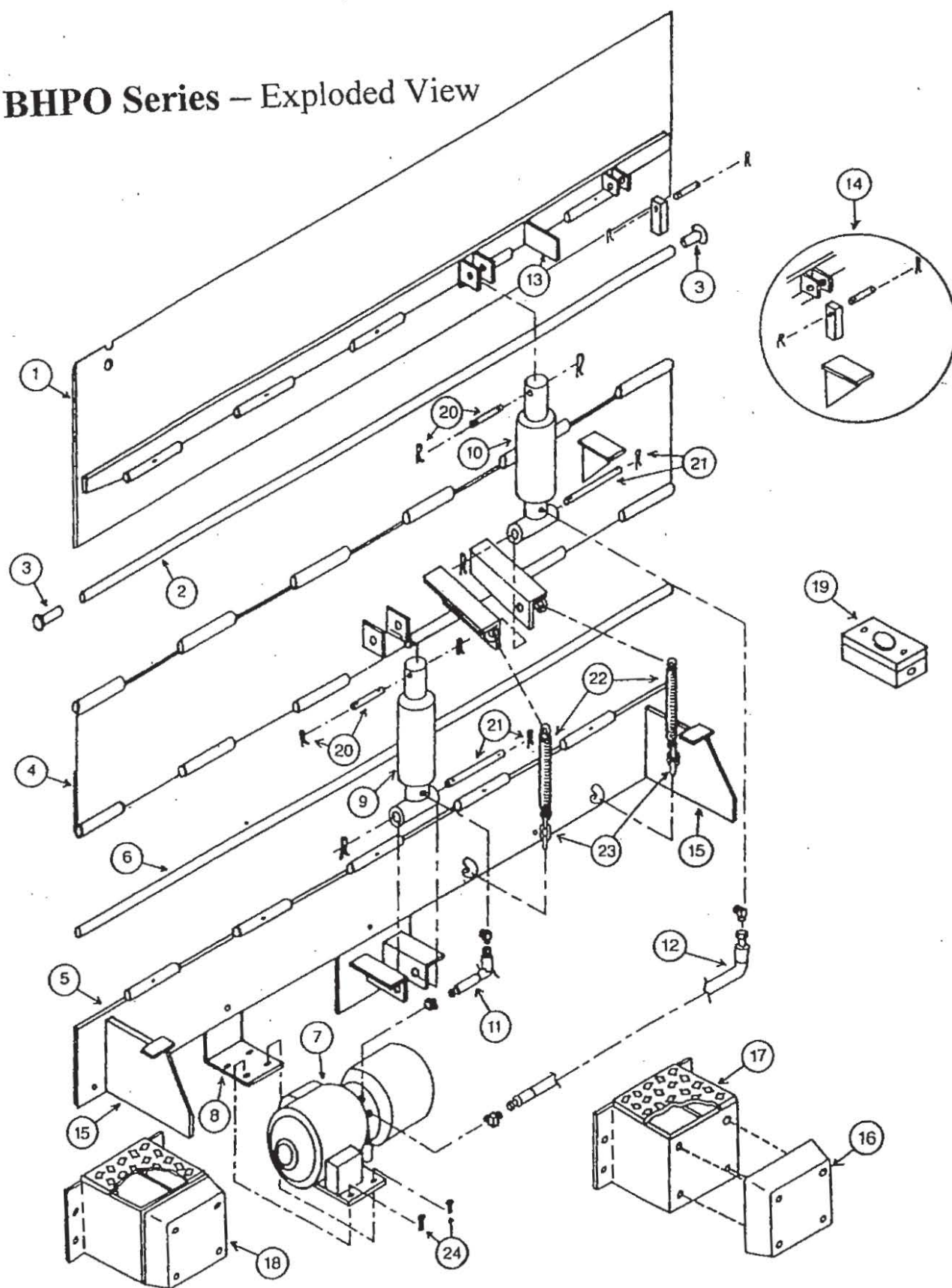
# Hydraulic Edge-Of-Dock Models

2-2

## BHED & BHPO

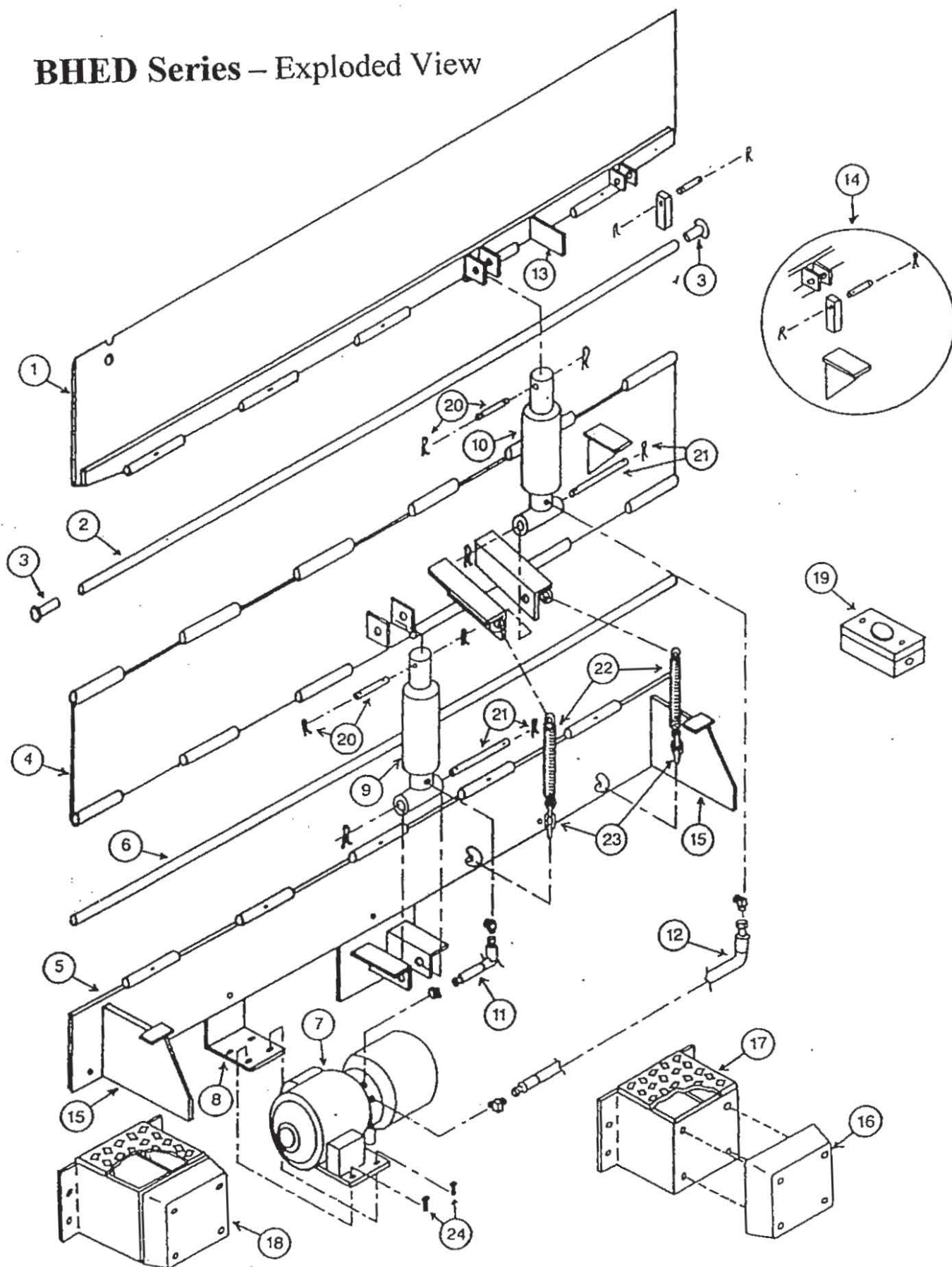
Item #	Part Description
1	Lip Plate Assembly
2	Lip Hinge Pin
3	Rivet (2ea. Req)
4	Center Plate Assembly
5	Base Plate Assembly
6	Base Hinge Pin
7	Hydraulic Motor, Pump and Reservoir
8	Motor Mounting Plate
9	Cylinder – C1
10	Cylinder – C2
11	Hydraulic Hose, C1 – 24½"
12	Hydraulic Hose, C2 – 30"
13	Lip Stop Tab
14	Lip Lock Assembly
15	Gussets (2 ea. Req.)
16	Molded Cord Rubber
17	Bump Block Steel Assembly
18	Bump Block Assembly
	18" Bump Block Assembly is Optional
19	Control Box
20	Cylinder Pin W/ Keys Upper
21	Cylinder Pin W/ Keys Lower
22	Lip Return Spring (2 ea. Req.)
23	Lip Return Chain (2 ea. Req.)
24	Bolt Assembly – Motor Mounting (4 ea. Req.)

# BHPO Series — Exploded View



# BHED Series – Exploded View

2-4



10/98

**SECTION 3****OPERATING INSTRUCTIONS**

Step 1	<p>With leveler in stored position, back truck into position against the bumpers.</p> <p><b>CAUTION:</b> ALWAYS CHOCK TRUCK WHEELS BEFORE LOADING AND UNLOADING.</p>
Step 2	<p>Remove end load, if any, from truck with leveler in stored position.</p>
Step 3	<p>Raise leveler by applying pressure to the wall mounted switch.</p> <p>Release button when both sections of leveler are fully raised. Unit will automatically lower to truck floor.</p> <p>When truck departs, unit will return to stored position.</p>
Step 4	<p>Unit may be recycled with truck in position against the bumpers.</p> <ol style="list-style-type: none"><li>1. Apply pressure to the wall switch. Center plate section of unit will raise off the truck floor.</li><li>2. Release the button as soon as the leading edge of the lip plate section clears the rear edge of the truck. The unit will tuck itself and return to the stored position.</li></ol>



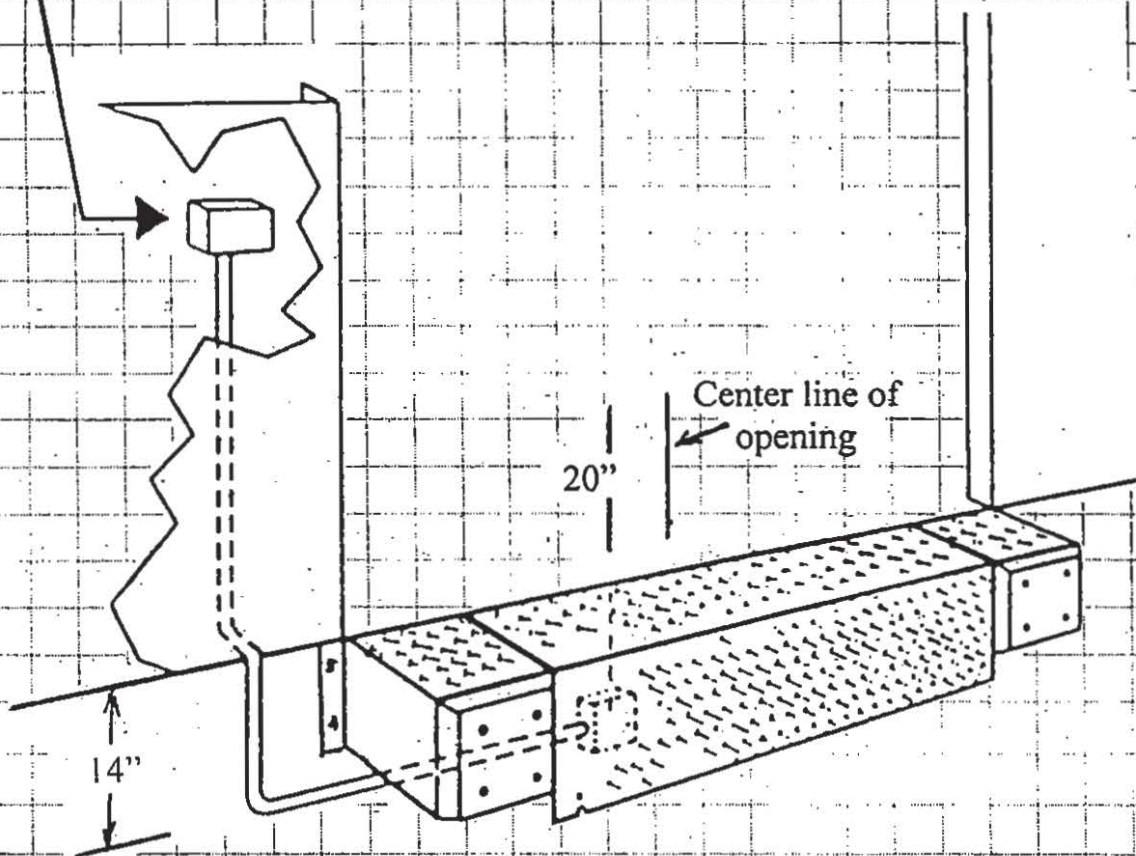
## Section 4

## TROUBLESHOOTING

Lip hitting rear of truck/trailer.	1. Adjust the sequence valve counterclockwise 1/4 turn
Lip not returning to stored position	1. Lip lock not disengaging - check for debris, lubricate if needed. 2. Sequence valve set point higher than relief valve set point < 1000 PSI>.
Unit not descending.	1. Check pullover chain/spring to ensure they are connected.
Unit descending too slowly or quickly.	1. Adjust descend valve <ul style="list-style-type: none"><li>• clockwise slows descend</li><li>• counter clockwise accelerates descend.</li></ul>
Lip plate not extending (center plate rises).	1. Relief valve needs adjustment or replacement
Unit not raising (motor running)	1. Visual check of hydraulic fluid tank. Should be 1/2 to 3/4 full. 2. Viscosity of fluid has failed. <ul style="list-style-type: none"><li>• Change to an arctic temperature type to prevent motor/pump burnout.</li></ul>
Unit not raising (motor not running)	1. Check electrical hook up - voltage, phase, and wiring. 2. Motor/pump damaged - requires replacement.

Control box provided with each unit.

Control box may be located on either side of unit.



Conduit may be installed externally on existing buildings, or embedded in concrete on new construction. Conduit and receptacle furnished by others.

### **5.1 Beacon Industries, Inc. Limited Warranty**

Beacon Industries, Inc. warrants that this BHED Series Hydraulic Edge Of Dock -Dock Leveler will be free from defects in design, materials and workmanship on all structural parts for a period of exactly two (2) years from date of shipment. All claims for breach of this warranty must be made within thirty (30) days after the defect is or can, with reasonable care, be detected and in no event more than two (2) years after shipment. This warranty is extended to the original purchaser of this product and is non transferable.

Beacon warrants that this BHED Series Hydraulic Edge Of Dock -Dock Leveler will be free from defects in design, materials and workmanship on all hydraulic parts for a period of exactly one (1) year from date of shipment. All claims for breach of this warranty must be made within thirty (30) days after the defect is or can, with reasonable care, be detected and in no event more than one (1) year after shipment.

Beacon warrants that this BHED Series Hydraulic Edge Of Dock -Dock Leveler will be free from defects in design, materials and workmanship on all electrical parts for a period of exactly one (1) year from date of shipment. All claims for breach of this warranty must be made within thirty (30) days after the defect is or can, with reasonable care, be detected and in no event more than one (1) year after shipment.

In order to be entitled to the benefits of this warranty, the unit must have been properly installed, maintained, operated within its capacity, and not otherwise abused. Ninety (90) day periodic maintenance and adjustment is the sole responsibility of the owner.

This warranty is Beacon's exclusive expressed warranty.

**Beacon expressly disclaims all implied warranties including the implied warranties of merchantability and fitness.**

In the event of any defects covered by this warranty, Beacon will remedy such defects by repairing or replacing any defective equipment or parts, bearing all of the costs for parts, from Beacon to site. This shall be the exclusive remedy for all claims whether based on contract, negligence, or strict liability. **Beacon shall not, in any event, be liable for any loss of the use of any equipment or incidental or consequential damages of any kind.**