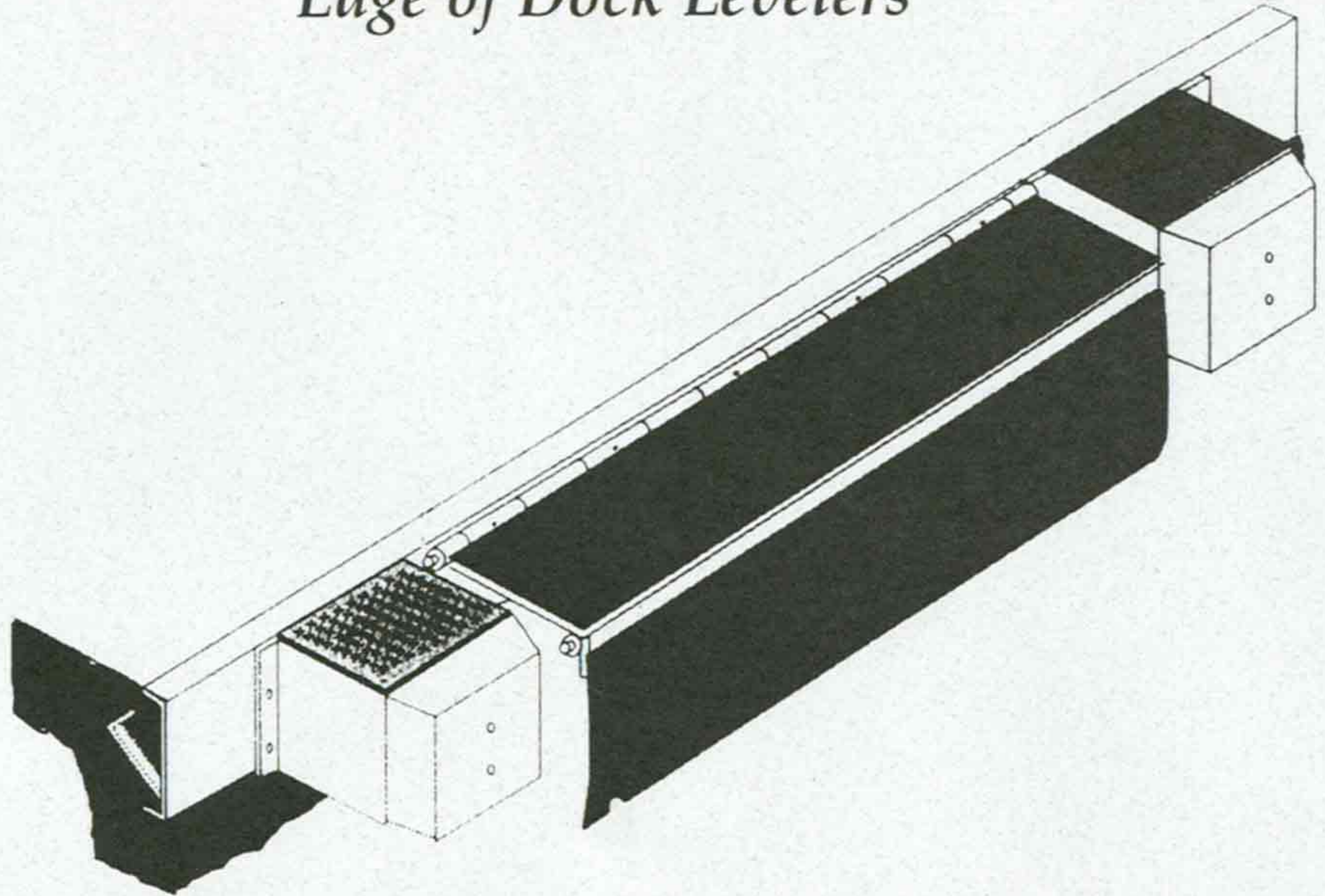


# *"HPO & HED" Series Owner's Manual*

*Electric - Hydraulic  
Edge of Dock Levelers*



**PIONEER**  
LOADING DOCK EQUIPMENT

P.O. Box 338 • Spring Hill, Tennessee 37174  
931/486/2296 • 800/251/3382 • Fax 931/486/0316

## 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 PIONEER 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:

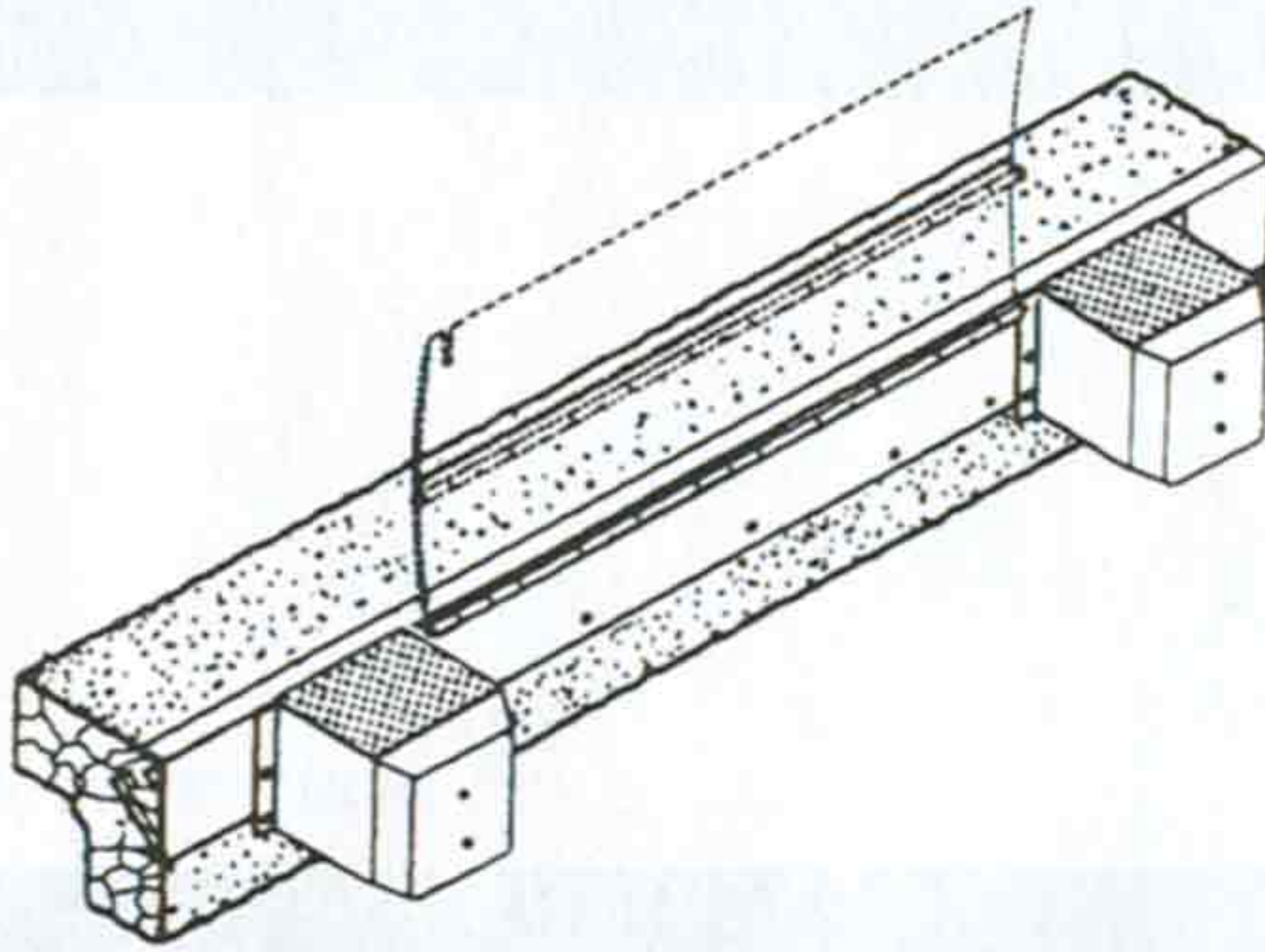
Pioneer Edge of Dock Levelers are designed to service trailers 5" above to 5" below dock level. (Optional 17" Lip +3-5")

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.

Illustration: 1

**WELD ON—NEW CONSTRUCTION**

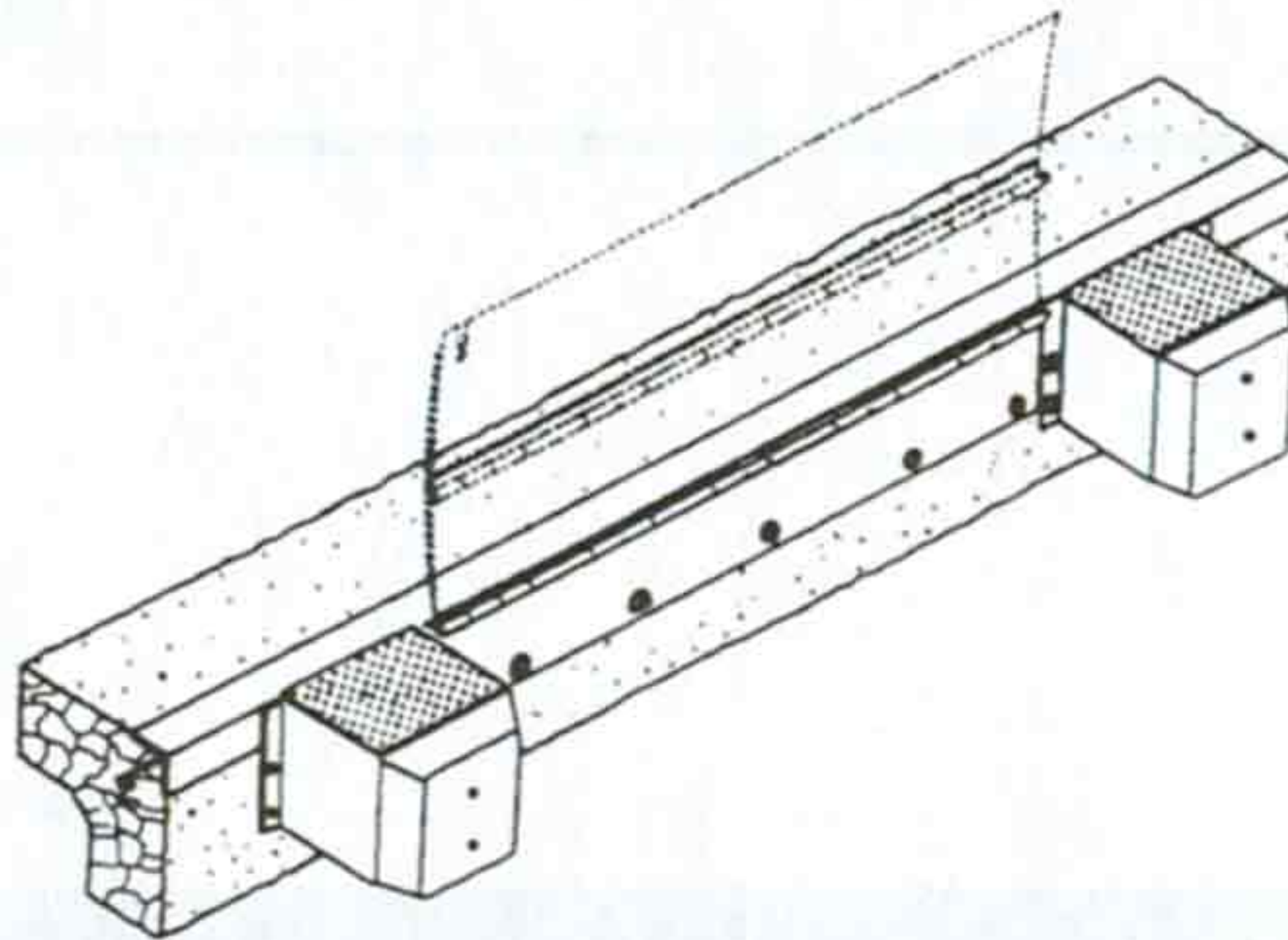
Use when dock edge vertical steel is 8" or wider. At dock edge, mark the center of chosen leveler location. Mark dock edge 33" either side of center (36" for 72" models; 39" for 78" models; 42" for 84" models).

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

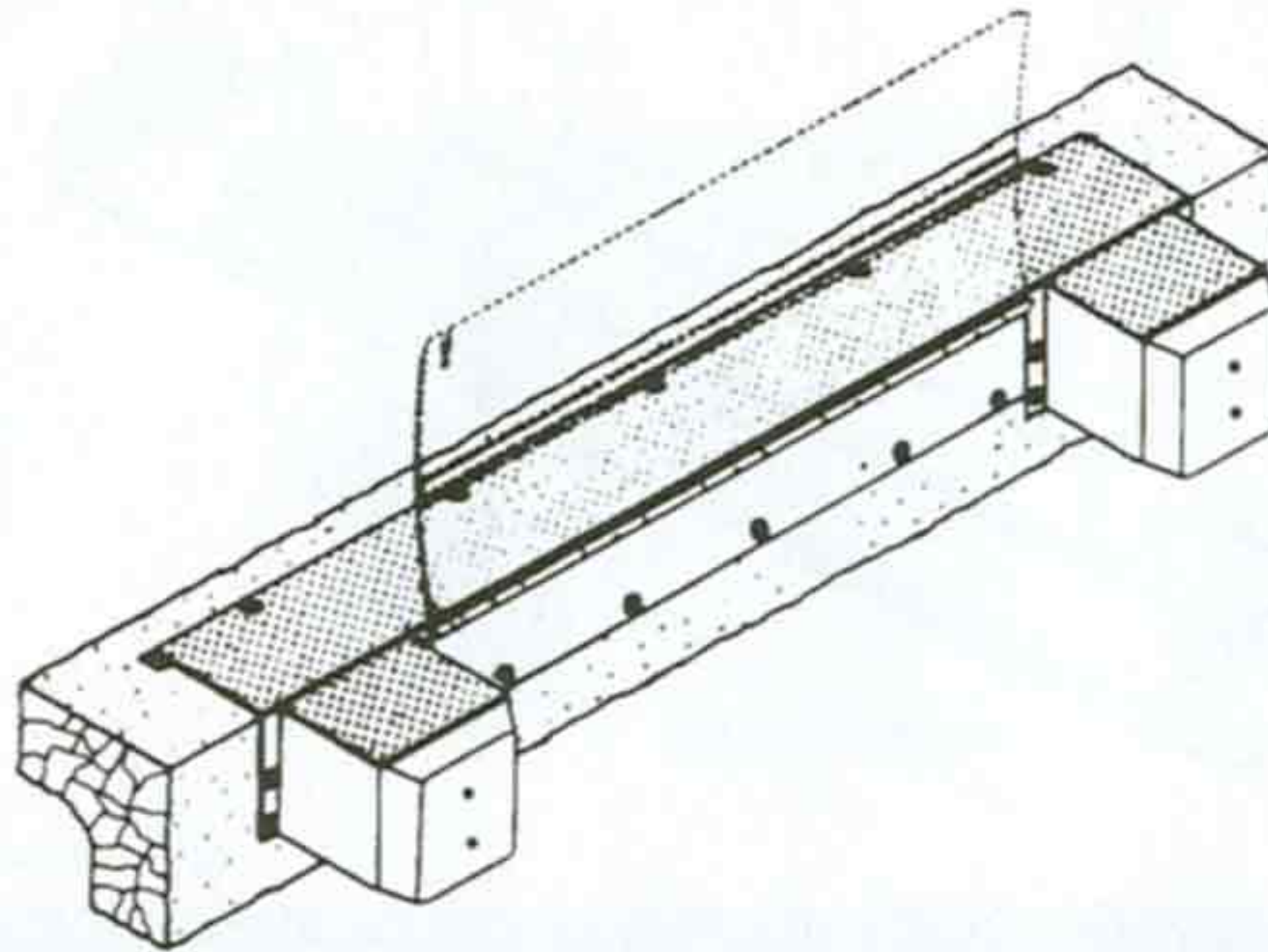
**WELD ON/BOLT ON—EXISTING CONSTRUCTION**

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**

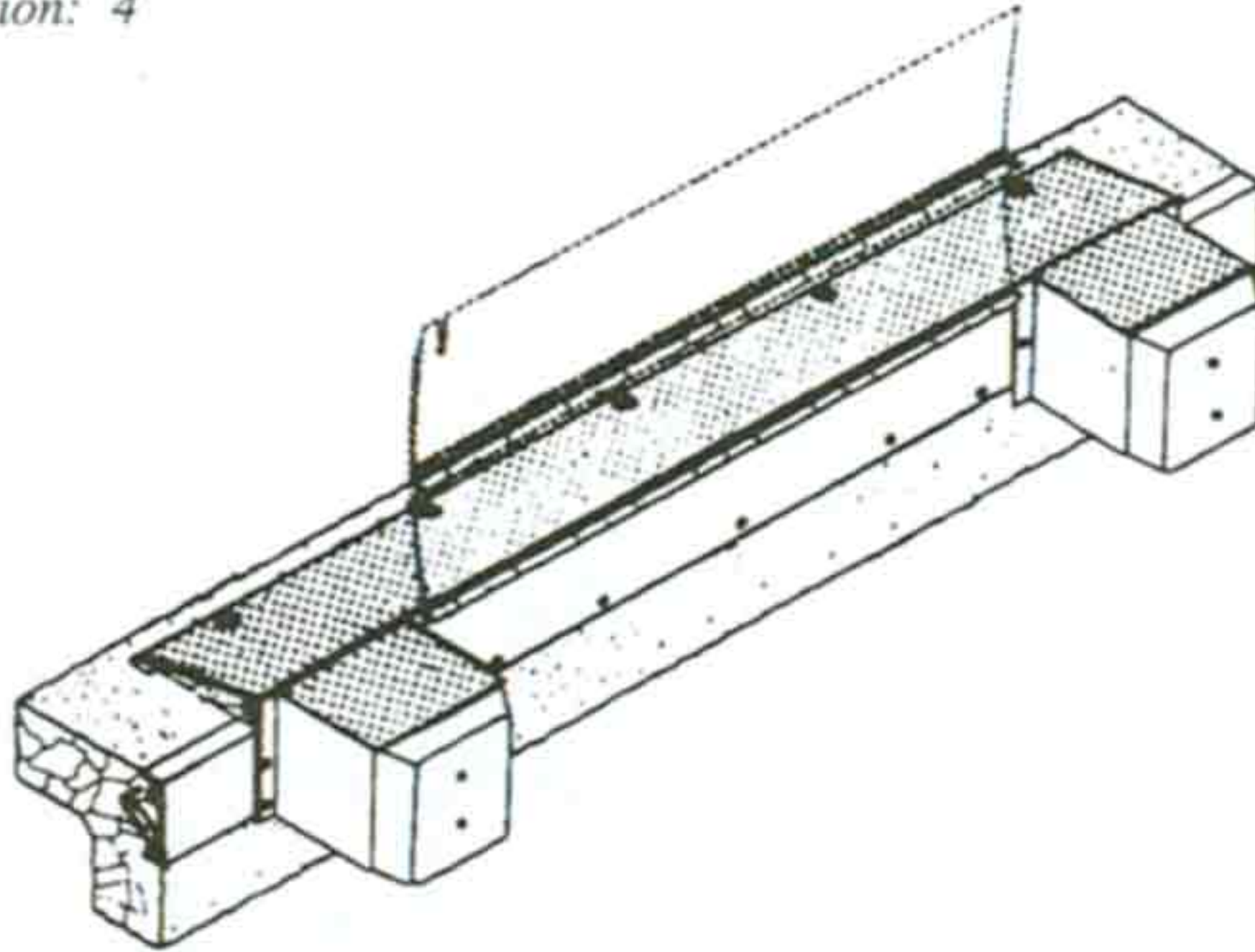
Use when dock edge has no steel, or steel is poorly anchored, and dock face is adequate for bolting. Mark and drill holes for dock leveler centered 6-1/4" below dock edge; base plate to be raised 1/8" above dock edge for welding to approach plate. Install two (2) anchor bolts in end holes., position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

Illustration: 4

**WELD ON AND RAISED APPROACH PLATE**

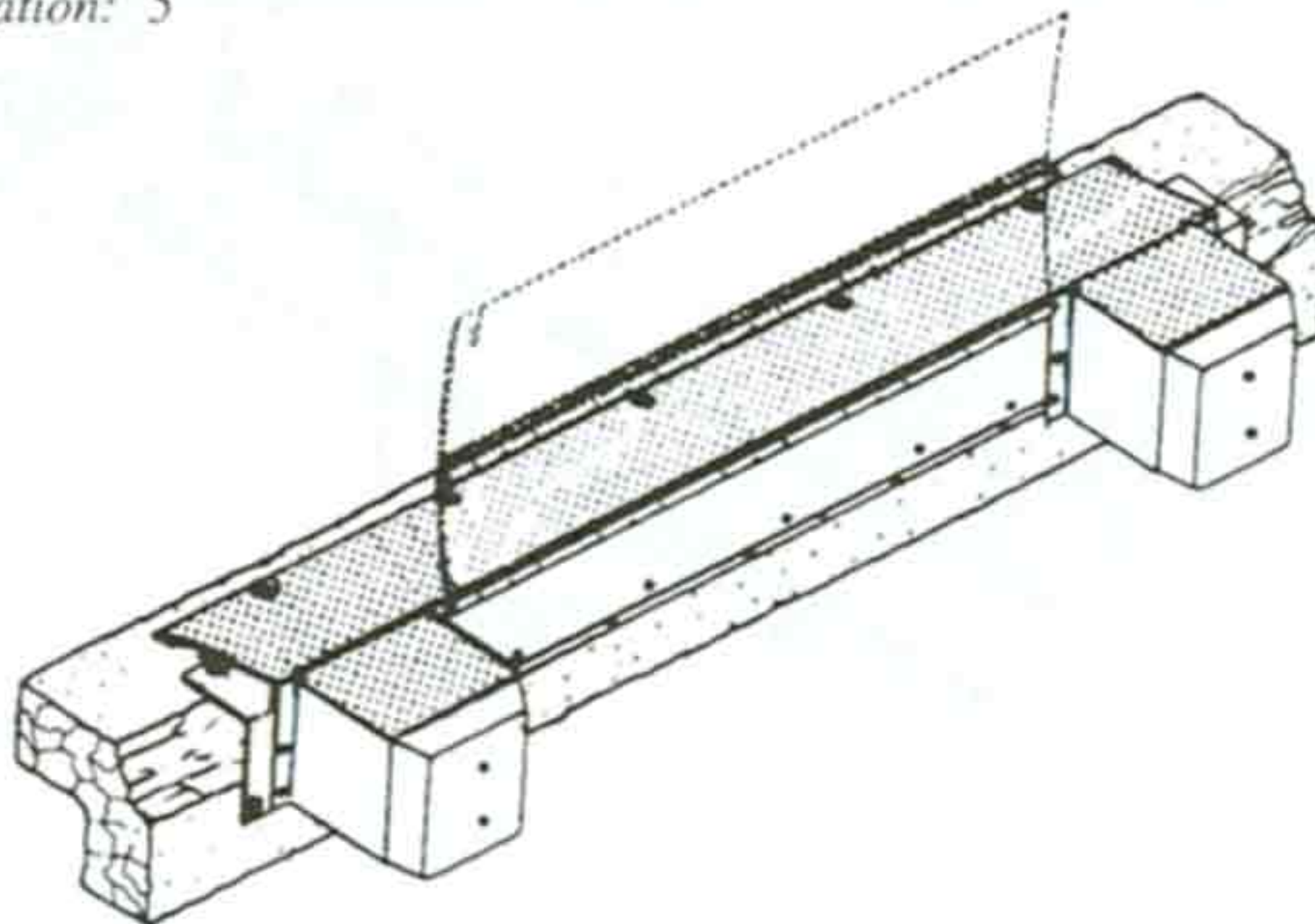
Use when dock edge is sound but height is less than adequate (bolting may also be required). At dock edge, mark the center of chosen leveler location. Mark dock edge 33" either side of center (36" for 72" models; 39" for 78" models; 42" for 84" models).

Raise leveler and bump blocks to desired height (3" max.), and weld back of base plate (3/8" plate only) 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!**

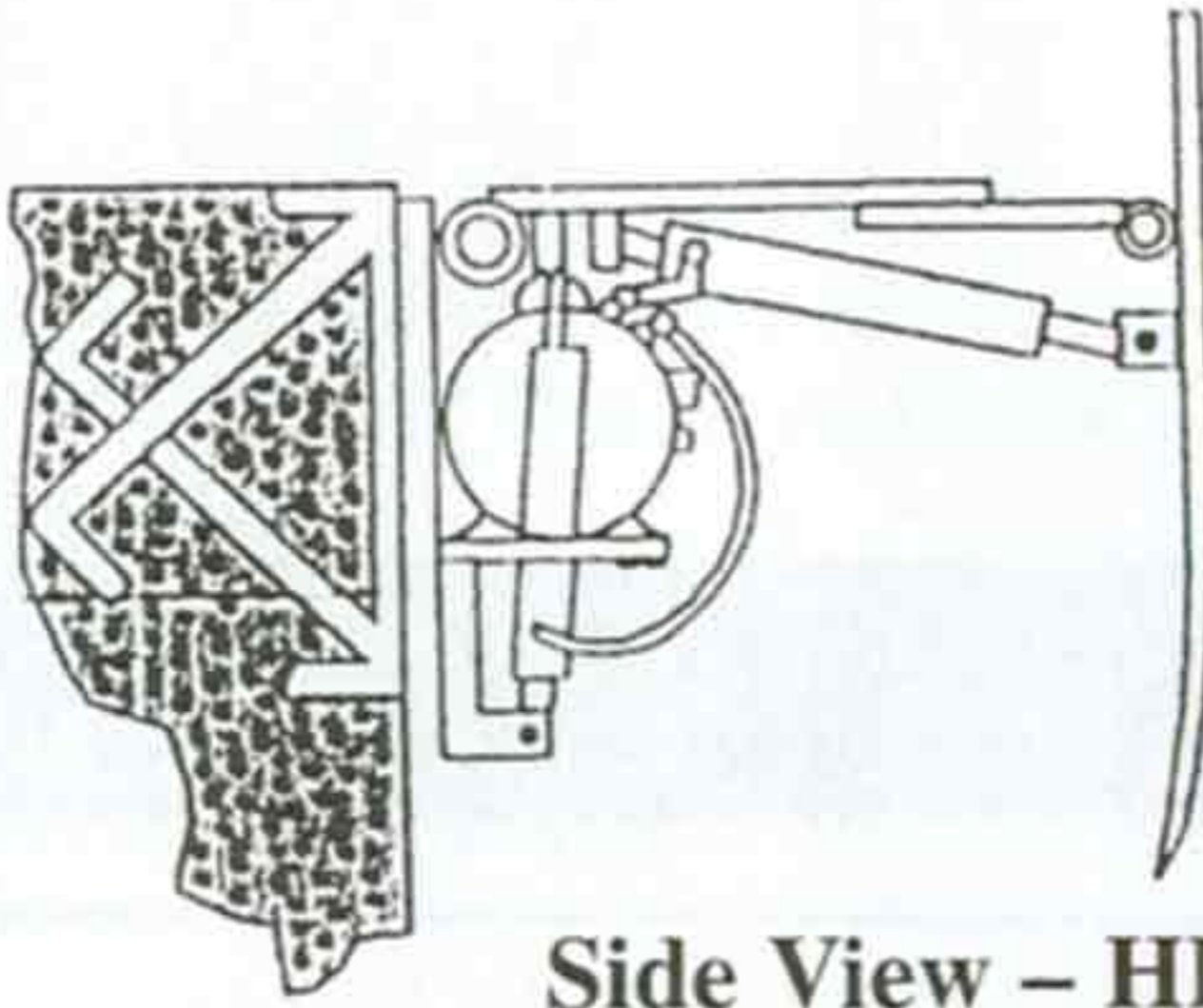
Position formed angle at desired location, mark holes, remove angle, drill holes and install angle. Install unit and approach plate according to methods described for "Existing Construction" (See Illustrations 3 & 4).

**Bumper must be at 48" height min. to top of bumper.  
Both Applications.**

## SECTION 1

## INSTALLATION INSTRUCTIONS INSTALLATION

Illustration: 6



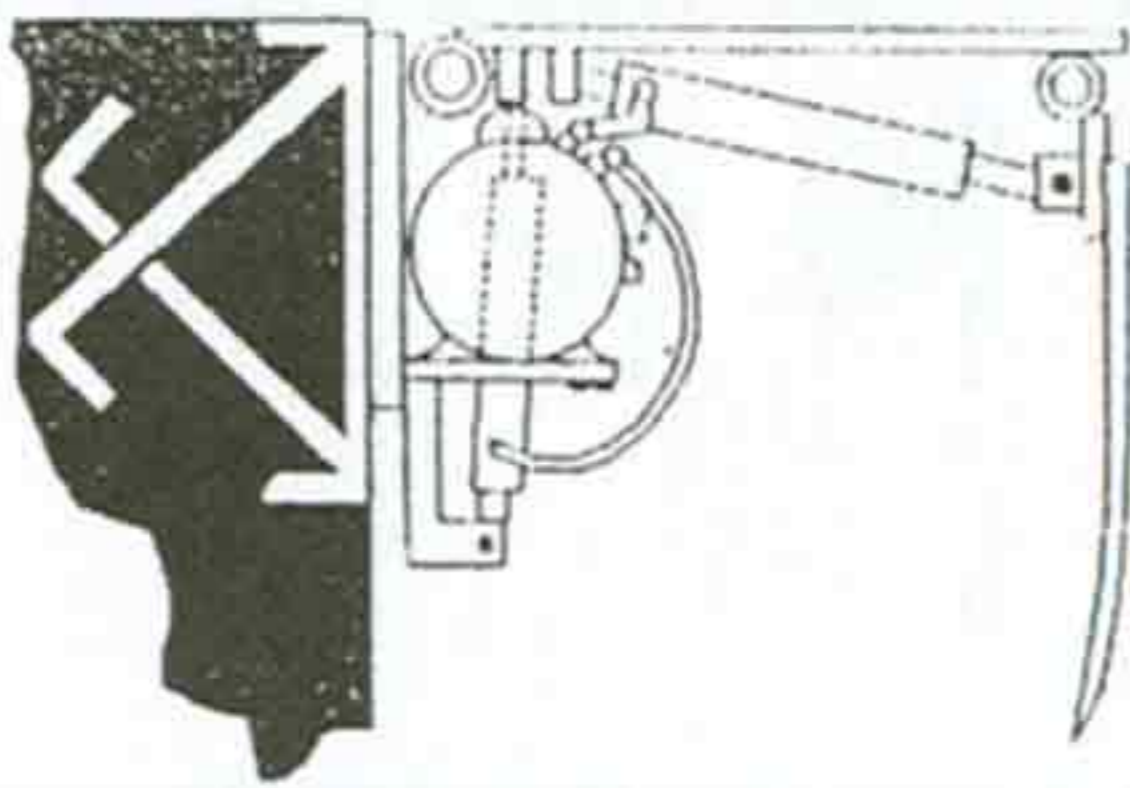
Side View – HPO Series

Units are shipped filled with aircraft hydraulic fluid. Check fluid level upon installation.

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

## SECTION 1

## INSTALLATION INSTRUCTIONS HYDRAULIC



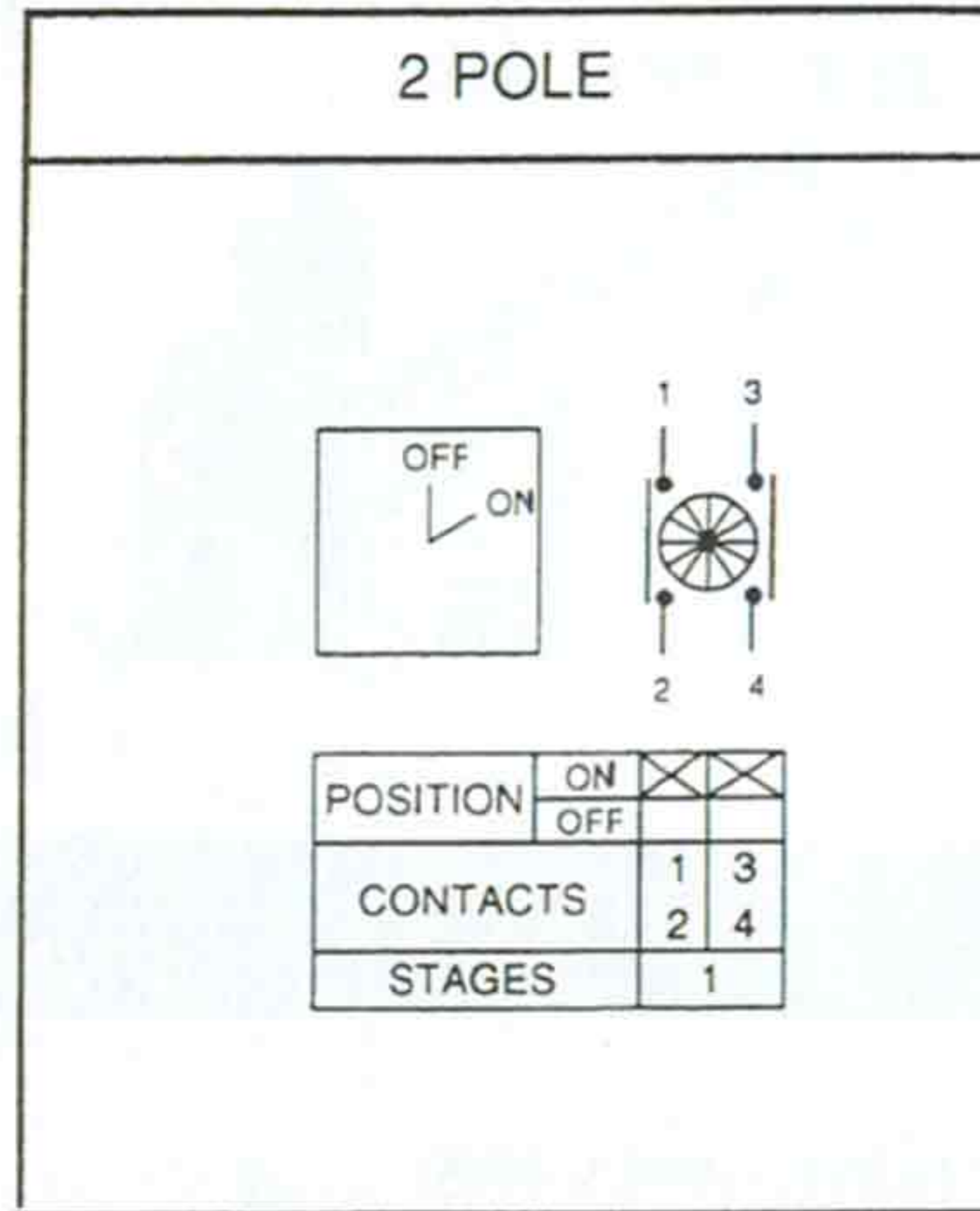
Side View – HED Series

Units are shipped filled with aircraft hydraulic. Check fluid level upon installation.

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

## SECTION 1

## INSTALLATION INSTRUCTIONS ELECTRIC

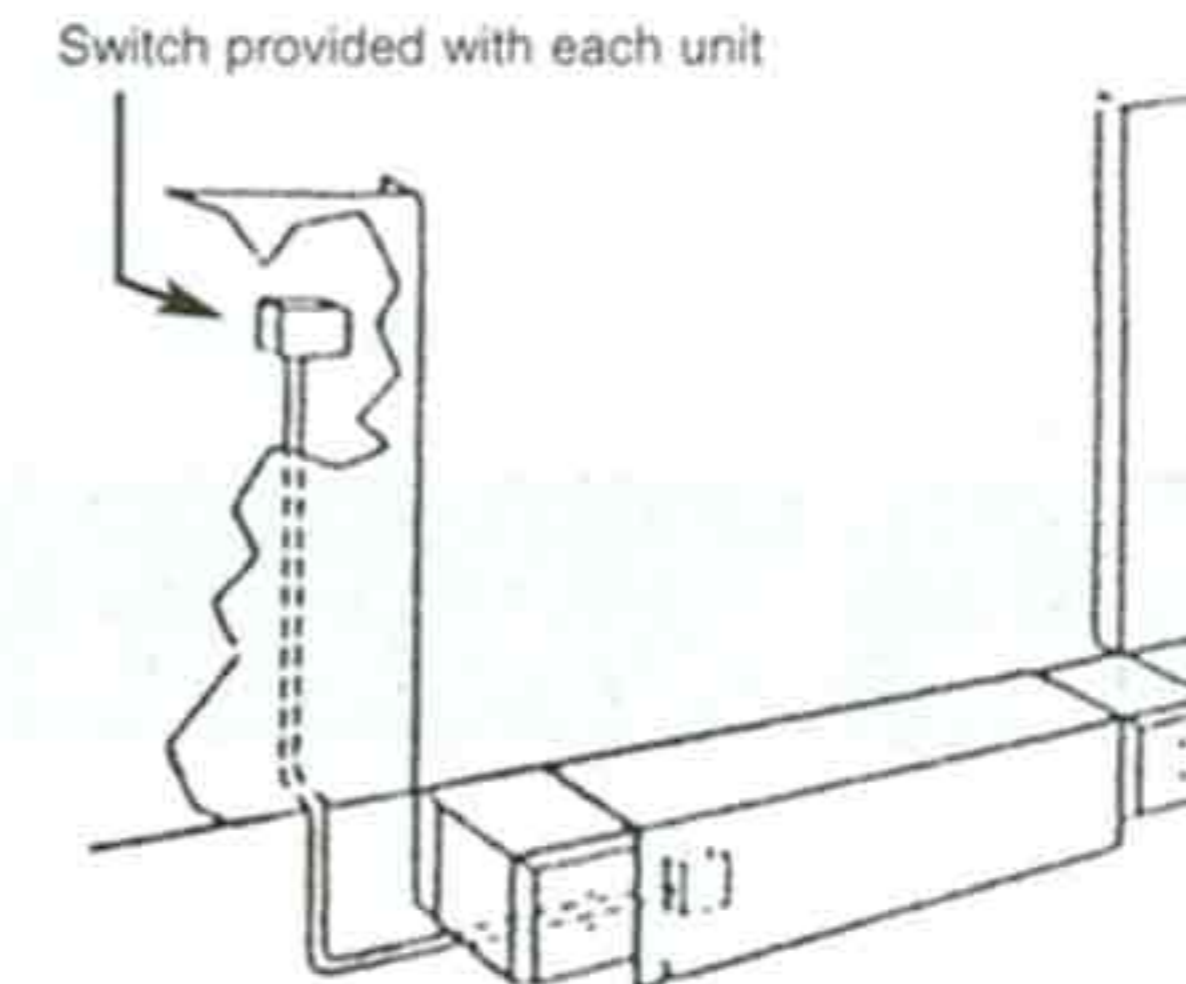


Motor may be wired for 120V/1 phase, 240V, 1 phase or 208/240/460V 3 phase. (Please specify when ordering.)

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:*

Insure breather cap is in place of plug in reservoir.

Depress button (or turn switch) to raise unit. As unit raises, lip will extend. When lip extends, release button (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.**

<p>WEEKLY MAINTENANCE</p> <p style="text-align: center;"><b>CAUTION: ALWAYS BRACE LEVELER SECURELY AND SAFELY WHEN MAINTENANCE IS REQUIRED.</b></p>	<p>Check unit for leaks.</p> <p>Check unit for physical damage. -Cracks in tubes and welds</p> <p>Check installation</p>
<p>MONTHLY MAINTENANCE</p>	<p>Check fluid levels</p>
<p>YEARLY MAINTENANCE</p>	<p>Lubricate hinges and all other moving parts.</p> <p>Check rubber bumpers.</p>
<p>5 YEAR MAINTENANCE</p>	<p>Replace hydraulic fluid.</p> <p><b>HYDRAULIC FLUID:</b> Use aircraft hydraulic fluid or Dextron III for normal operation.</p> <p>For extremely cold regions fluid should be replaced by an arctic grade (or aircraft) hydraulic fluid. Check local distributors for availability.</p>

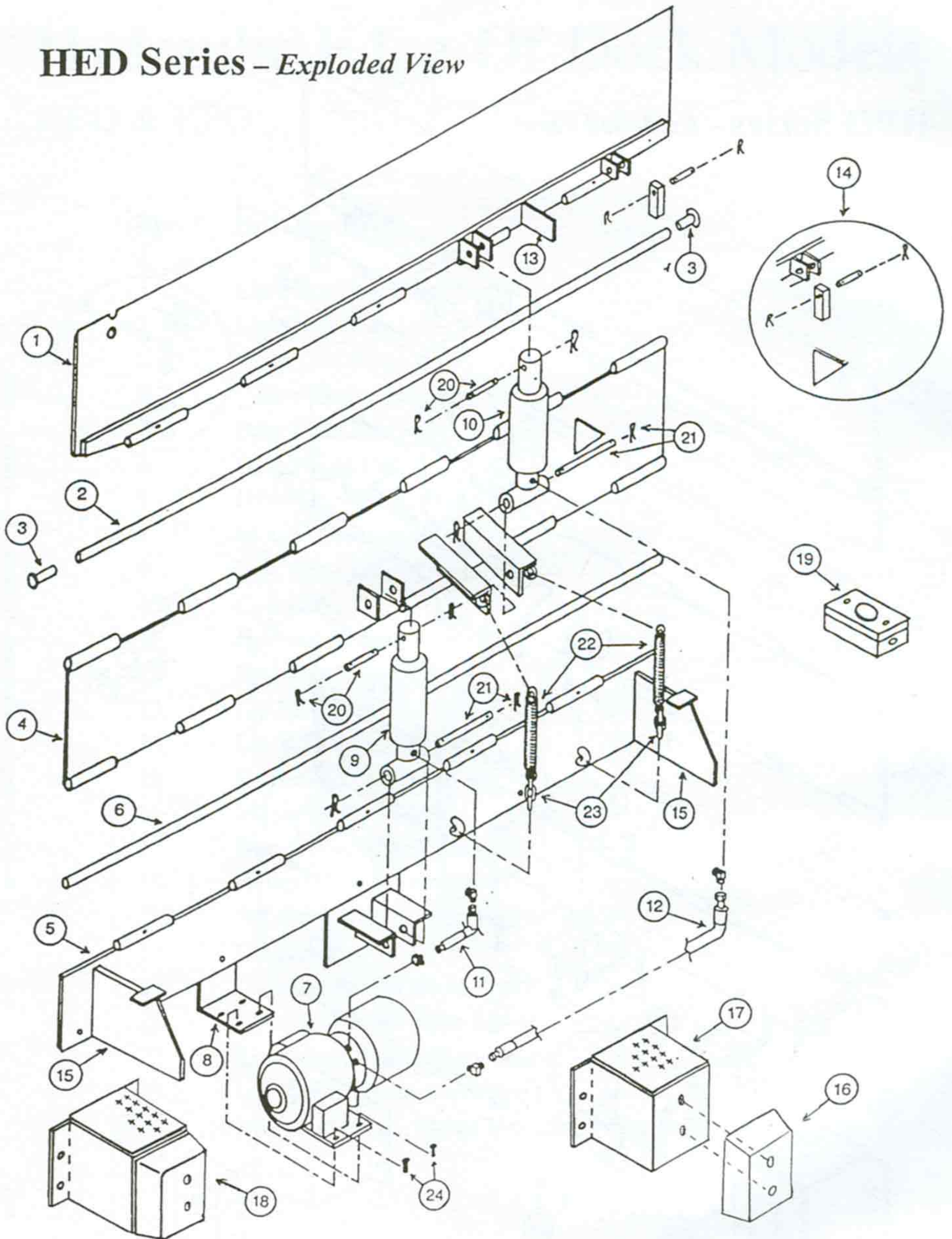
# Hydraulic Edge-Of-Dock Models

## HED & HPO

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.)



# HED Series - Exploded View



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 (turning) the wall mounted switch.</p> <p>Release button (switch) 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 (turn) the wall switch. Center plate section of unit will raise off the truck floor.</li><li>2. Release the button (switch) 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.	<ol style="list-style-type: none"><li>1. Adjust the sequence valve counterclockwise 1/4 turn</li></ol>
Lip not returning to stored position	<ol style="list-style-type: none"><li>1. Lip lock not disengaging - check for debris, lubricate if needed.</li><li>2. Visually check lip cylinder for damage.</li></ol>
Unit not descending.	<ol style="list-style-type: none"><li>1. Check pullover chain/spring to ensure they are connected.</li><li>2. Shuttle valve not properly adjusted.</li></ol>
Unit descending too slowly or quickly.	<ol style="list-style-type: none"><li>1. Adjust shuttle valve<ul style="list-style-type: none"><li>• clockwise slows descend</li><li>• counter clockwise accelerates descend.</li></ul></li></ol>
Lip plate not extending (center plate rises).	<ol style="list-style-type: none"><li>1. Adjust the sequence valve counterclockwise 1/4 turn</li></ol>
Unit not raising (motor running)	<ol style="list-style-type: none"><li>1. Visual check of hydraulic fluid tank. Should be 1/2 to 3/4 full.</li><li>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></li><li>3. Consult factory</li></ol>
Unit not raising (motor not running)	<ol style="list-style-type: none"><li>1. Check electrical hook up - voltage, phase, and wiring.</li><li>2. Motor/pump damaged - requires replacement.</li></ol>

## **EDGE OF DOCK WARRANTY**

**ALL PIONEER DOCK LEVELERS carry a comprehensive structural warranty. PIONEER guarantees its EDGE OF DOCK LEVELERS against defects in material and workmanship for a period of TWO (2) years, beginning at Date of Shipment, 1 year parts, labor, pump and cylinders.**

**PIONEER accepts full responsibility for the cost of materials, labor and freight for any warranty claim and reserves the right to either repair or replace any defective parts.**

**A claim for breach of warranty will be honored if the product has been properly installed, maintained and operated within its capacity, and not damaged by use.**

**PIONEER SHALL NOT BE LIABLE FOR LOSS OF ANY EQUIPMENT OR INCIDENTAL DAMAGES. PIONEER EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES.**

**All PIONEER products meet or exceed Federal Occupational Safety and Health Act Standards, Commercial Standards 202-56, and American Society of Mechanical Engineers Specifications ANSI MH14.1-84.**