

OWNER'S MANUAL AND INSTALLATION GUIDE FOR

LoDock Leveler (LD)





DO NOT INSTALL, OPERATE OR SERVICE PRODUCT WITHOUT READING AND FULLY UNDERSTANDING ALL SAFETY PROCEDURES, WARNINGS, INSTALLATION AND OPERATING INSTRUCTIONS ENCLOSED IN THIS MANUAL.

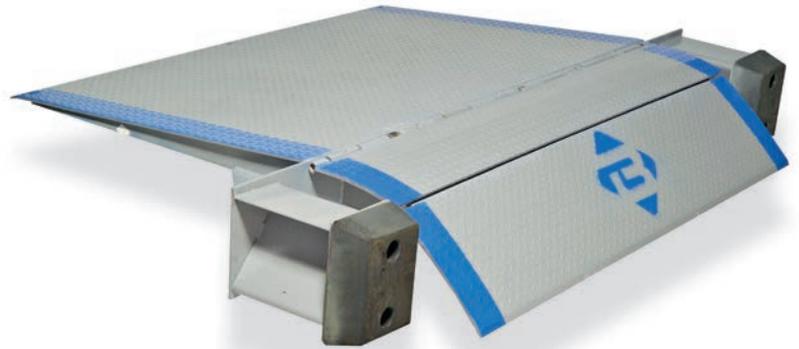
Lo-Dock Levelers Model LD

Raise the height of your present dock as much as 11" without expensive dock alterations. Lo-Dock Levelers can easily be installed on any concrete dock without welding or modifications. Complete technical information and installation instructions are available upon request.

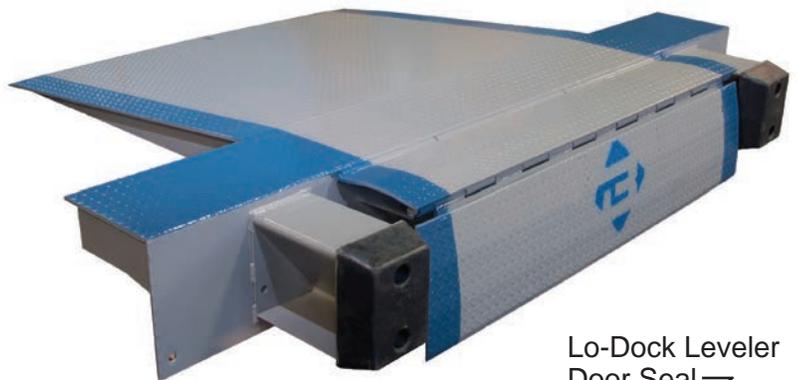
Bluff's Edge of Dock Leveler is designed to have a working range of 5" above and 5" below dock.

- Completely assembled
- No site welding required
- Available in 20,000; 25,000; and 30,000 lb. capacities.
- Hydraulic assist and refrigerated lip available as options. Hydraulic assist can be retrofitted on existing units, or is available as an add-on option.

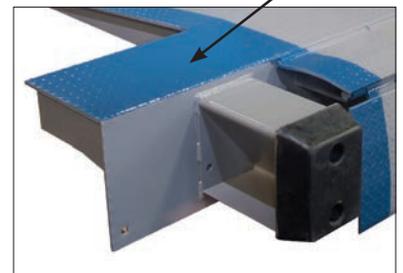
Because of gradeability problems, dock levelers are not recommended for use with pallet jacks or stackers.



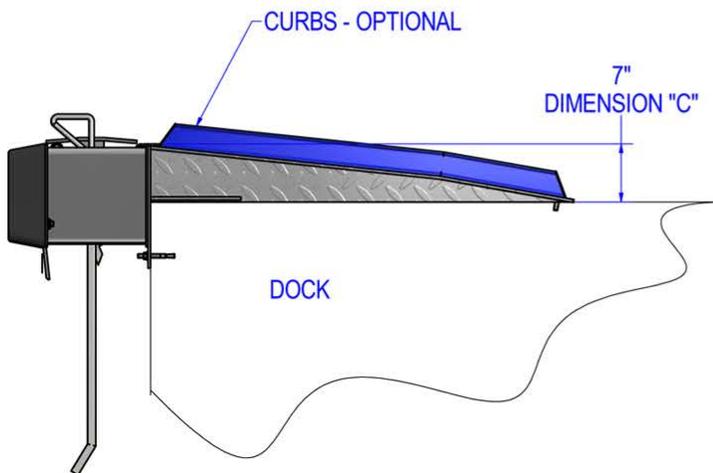
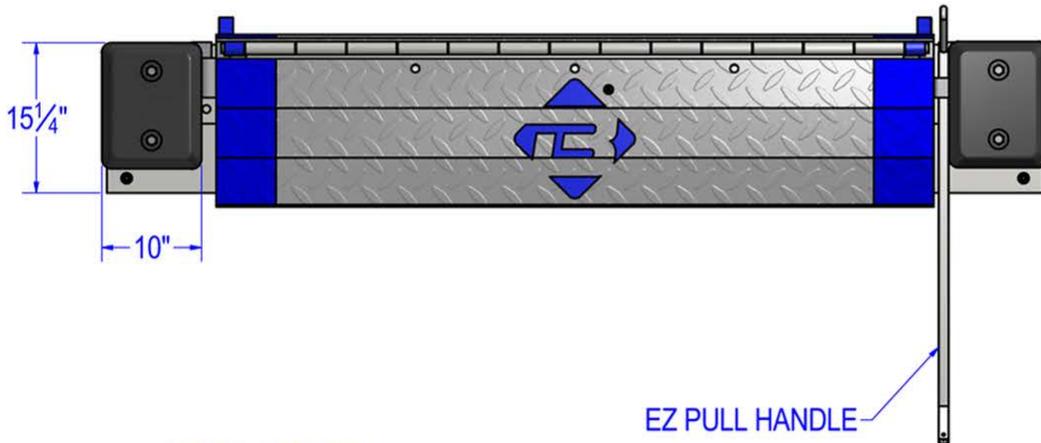
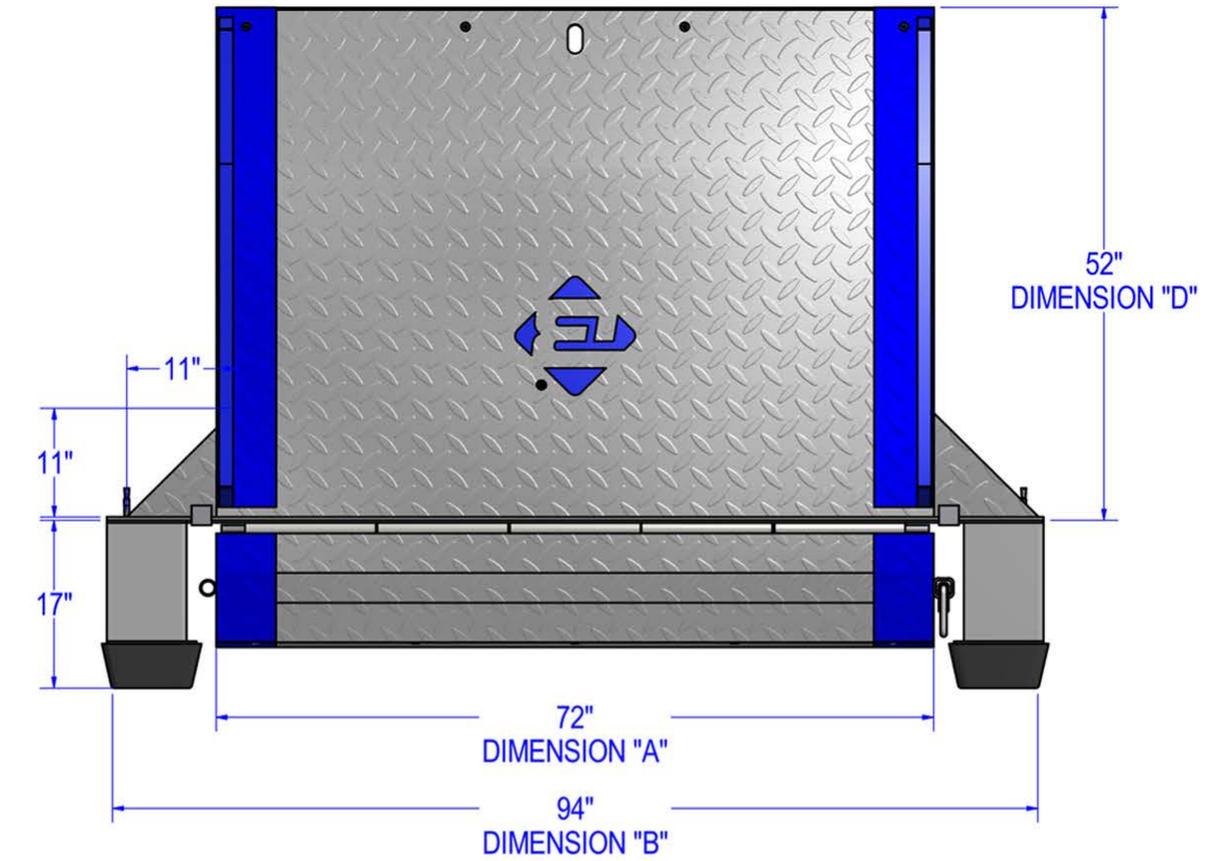
Lo-Dock Leveler (LD)



Lo-Dock Leveler
Door Seal



Lo-Dock Levelers Model LD



Lo-Dock Table				
MODEL #	WIDTH	OVERALL WIDTH	HEIGHT	LENGTH
20LD72-3	72"	94"	3"	30"
25LD72-3	72"	94"	3"	30"
20LD72-5	72"	94"	5"	48"
25LD72-5	72"	94"	5"	48"
20LD72-7	72"	94"	7"	52"
25LD72-7	72"	94"	7"	52"
20LD72-9	72"	94"	9"	64"
25LD72-9	72"	94"	9"	64"
20LD72-11	72"	94"	11"	78"
25LD72-11	72"	94"	11"	78"
20LD78-3	78"	100"	3"	30"
25LD78-3	78"	100"	3"	30"
20LD78-5	78"	100"	5"	48"
25LD78-5	78"	100"	5"	48"
20LD78-7	78"	100"	7"	52"
25LD78-7	78"	100"	7"	52"
20LD78-9	78"	100"	9"	64"
25LD78-9	78"	100"	9"	64"

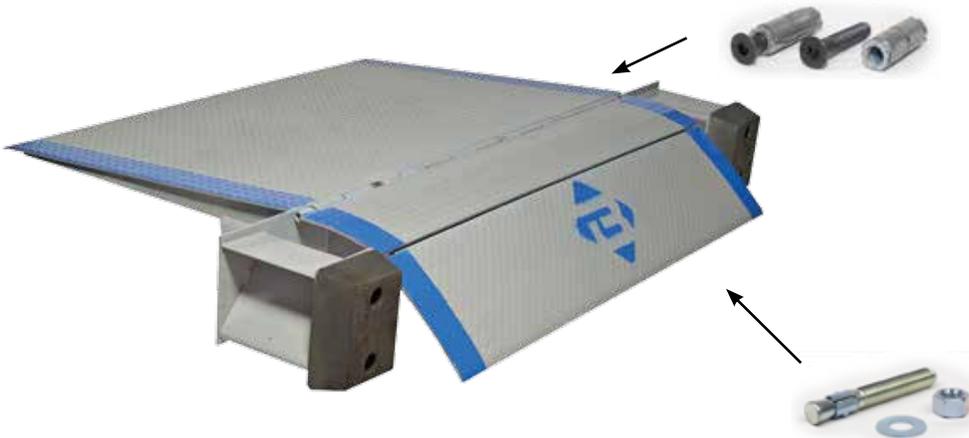
SAFETY PRECAUTIONS

READ AND UNDERSTAND ALL SAFETY PRACTICES AND OPERATING INSTRUCTIONS before installing, servicing or operating the dock leveler. Failure to do so could result in damage to unit, to property, and personal injury to operator.

1. Do not stand between leveler and trucks backing up to dock.
2. Do not operate the leveler with equipment, material or people on the deck section of the leveler.
3. Do not stand or travel across leveler unless lip is placed securely on truck bed floor.
4. Never attempt to work under the dock leveler without properly securing the front and center sections.
5. Keep clear of dock leveler while in operation.
6. Do not exceed capacity rating.
7. If dock leveler is not operating normally, discontinue use. Request maintenance personnel to inspect and contact your local Bluff dealer if necessary.
8. Keep clear of all pinch points that could cause injury.
9. Do not use leveler if it appears to be damaged or broken.
10. Damage to leveler could occur if product is misused or used in an abusive manner.
11. For additional information or concerns, contact your local Bluff representative.

LO-DOCK INSTALLATION INSTRUCTIONS

Mechanical Lo-Dock Levelers(LD)



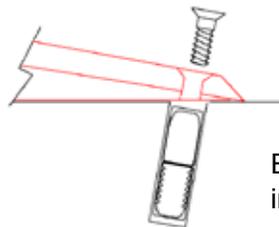
CAUTION: STAND CLEAR OF UNIT WHEN CUTTING STEEL BANDING.

NOTE: REMOVE HANDLE AND BUMPERS BEFORE BEGINNING THE INSTALLATION.

Handle is attached to mount plate for shipping purposes only

Installation requires; 5 heavy duty expansion anchors, 9 - $\frac{3}{4}$ "x 4" wedge anchors bolts & $\frac{1}{2}$ " flat head socket cap screws 3-1/2" long, (optional) steel shimms (NOT INCLUDED)

1. Position Lo-dock leveler into desired location.
2. This unit requires 5 heavy duty expansion anchors and 9 - $\frac{3}{4}$ "x 4" wedge anchors bolts.
3. With Lo-dock in position, drill $\frac{9}{16}$ " pilot hole over existing holes at rear of ramp.
4. Move the ramp out of position and drill over pilot holes with $\frac{7}{8}$ " concrete drill bit.
5. Place expansion shields into holes with treads facing down as shown below.



Expansion shield anchors
installed at an angle.

6. Re-position Lo-dock and anchor with $\frac{1}{2}$ " flat head socket cap screws 3-1/2" long.
7. Drill and anchor the front and side gussets of the Lo-dock leveler with $\frac{3}{4}$ "x 4" wedge anchors.
NOTE: ANY GAP BETWEEN TOP OF DOCK AND LEVELER STRUCTURE AT THE DOCK FACE MUST BE SHIMMED (STEEL).
8. The latch is factory installed with notch against mount plate. Latch should swing freely when leveler is in its resting position.
9. Remove bolt from bottom of handle and position handle into sleeve tube with bend facing away from dock face. Re-install bolt and nut into bottom of handle.
10. Test unit for correct operation. (See operating instructions for mechanical levelers.)

MECHANICAL EDGE-OF-DOCK OR LO-DOCK OPERATING INSTRUCTIONS



CAUTION

USE CAUTION WHEN OPERATING UNIT: FAILURE TO DO SO COULD RESULT IN INJURY OR DAMAGE TO PRODUCT.

Step 1: Pull the EP handle up until the dead bolt hits the bottom of the 2-inch-square tube sleeve.

Step 2: Pull the handle back until the latch mechanism falls into catch position.

Step 1



Step 2a



Step 2b



Latch Position
(Illustrated in red for clarity)

Step 3: Push the handle forward to extend the unit outward toward the truck bed.

Step3



Step 4: Continue to push forward until the front lip rests fully on the truck bed.

Step 5: Return the handle to its rest position while in use.

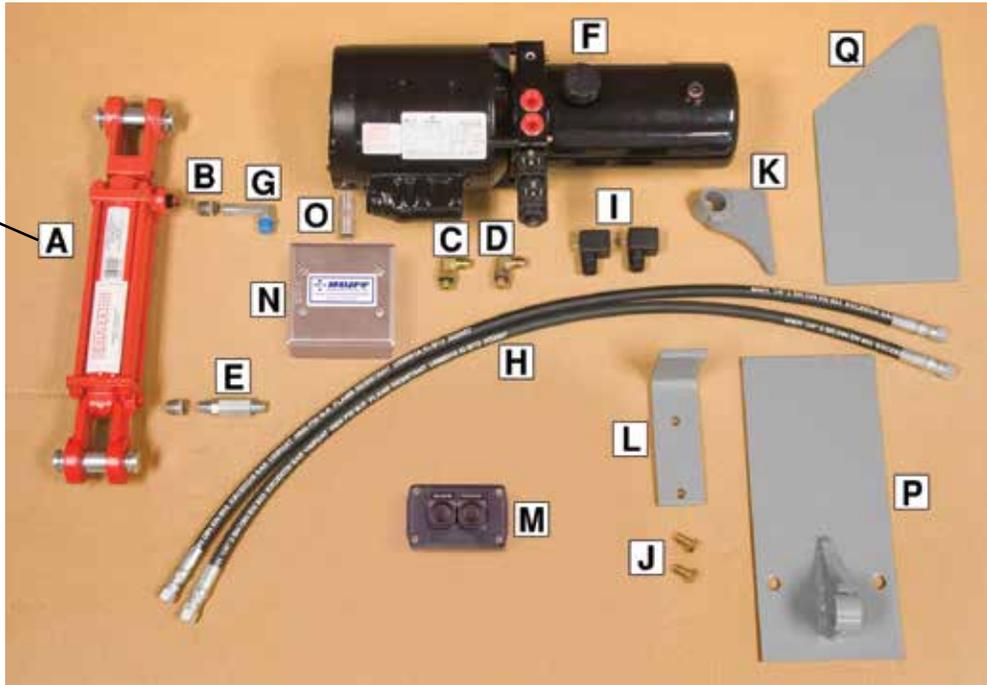
Step 6: When returning the unit to its stored position, Pull the EP handle up until the dead bolt hits the bottom of the 2-inch-square tube sleeve.

Step 7: Pull back the handle until the front lip clears the truck floor then allow the weight of the leveler to drop the unit into its resting position.

Step 8: Return the handle to its resting position.

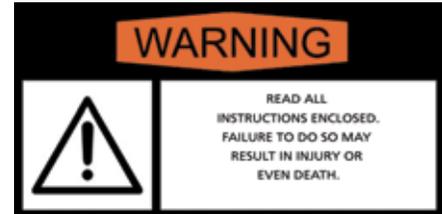
INSTALLATION GUIDE FOR EPHYDRAULIC OPTION FOR BLUFF EDGE-OF-DOCK AND LO-DOCK LEVELERS

MHYDCYLINDER
Fully extended: 22.25"
Closed: 16.25"



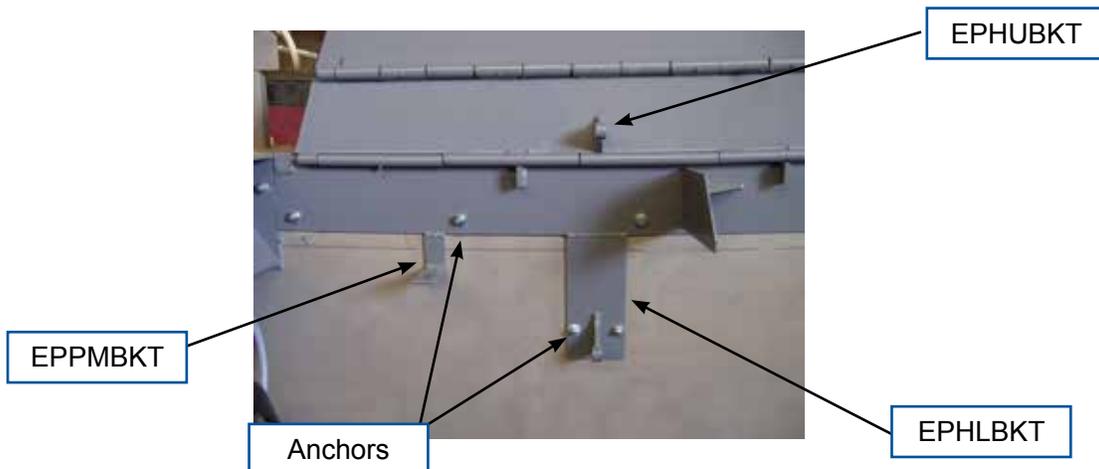
ITEM	QTY	PART #	DESCRIPTION
A	1	MHYDCYLINDER	6" STROKE, TIE ROD HYD.CYLINDER.
B	2	Y3414B	FITTING REDUCER
C	1	MADAPTER90	90 DEG. ELBOW SHORT
D	1	MADAPTER90XL	90 DEG. ELBOW LONG
E	1	YFCV	FLOW CONTROL VALVE
F	1	MPOWERUNIT	AC HYD-PWR UNIT
G	1	Y90ML	90 DEG. ELBOW
H	1	Y30HH	30" HYDRAULIC HOSES
I	2	**	SOLENOID CONNECTORS
J	2	F3834H	PUMP MOUNT BOLTS
K	1	EPHUBKT	EP-HYD. UPPER BRACKET
L	1	EPPMBKT	EP PUMP MOUNT BRACKET
M	1	MPUSHBUTTON	WALL MOUNTED PUSH BUTTON
N	1	M442GANGBOX	ELECT. JUNCTION BOX
O	1	M123RIGIDNIPPLE	3" PIPE FITTING
P	1	EPHLBKT	EP-HYD. LOWER BRACKET
Q	1	EPHDS	EP-HYD. DECK STOP

COMPLETE HYDRAULIC SET-UP INSTALLATION INSTRUCTIONS FOR FACTORY ISSUED HYDRAULIC UNIT

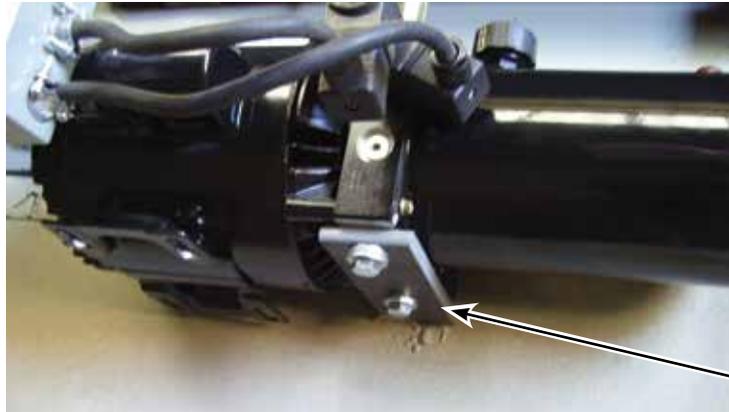


NOTE: FOR LO-DOCK APPLICATIONS CALL YOUR LOCAL BLUFF DEALER AT 800-433-2212.

1. PRIOR TO MOUNTING, REFER TO EZ-PULL DOCK PARAMETERS AND MOUNTING INSTRUCTIONS FOR MECHANICAL EDGE-OF-DOCK LEVELERS OR LO-DOCK LEVELERS FOR MOUNTING THE LEVELER UNIT.
2. LIFT THE LIP OF THE EZ-PULL LEVELER TO EXPOSE THE BRACKETS AS SHOWN BELOW.
3. ANCHOR THE MOUNT PLATE AS SHOWN BELOW.
4. WELD EPHLBKT LOWER BRACKET IN-LINE WITH THE EPHUBKT UPPER BRACKET.



5. Mount the MPOWERUNIT on the pump mount bracket EPPMBKT.



3/8"-16 x 3/4" Bolts

6. Mount the MHYDCYLINDER onto the lower bracket EPHLBKT.

7. Install and connect hoses as shown below.



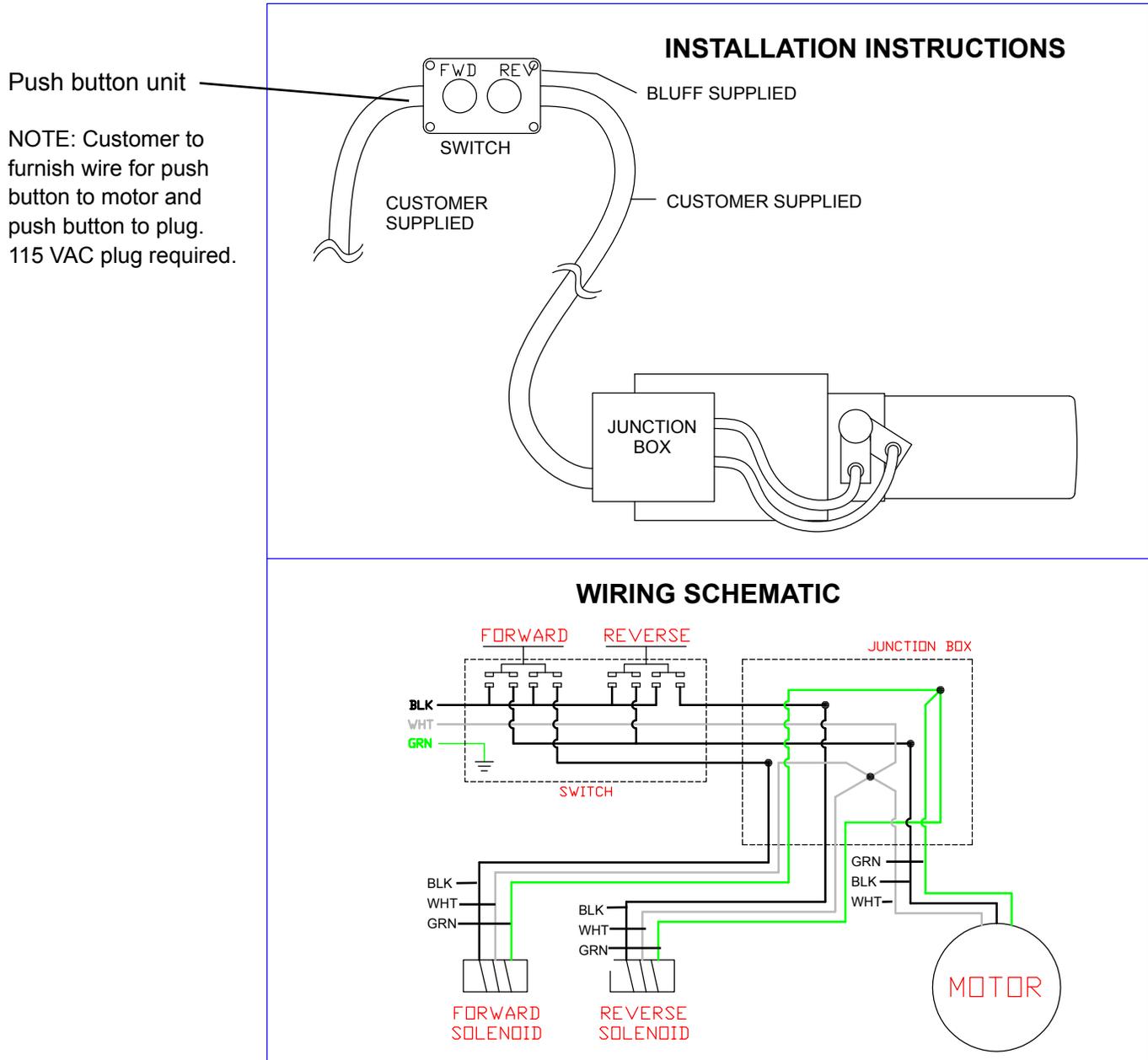
8. Mount the switch (MPUSHBUTTON) on the interior of the building wall.





CAUTION

ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT TO PERFORM THE FOLLOWING WIRING INSTRUCTIONS.



IMPORTANT

9. Items ship without hydraulic fluid. FILL THE RESERVOIR WITH COMMON GRADE HYDRAULIC FLUID. (Common grade fluid is ISO 46). For areas of sub-freezing temperatures, a lighter grade (ISO 32) may be used.
10. Power the MPOWERUNIT and jog the motor to test wiring.
11. Jog motor to extend the MHYDCYLINDER such to attach to the upper bracket EPHUBKT utilizing the provided pin and keepers.
12. Carefully lower the lip to its resting position.
13. Press the forward and reverse button to complete a full cycle.
14. Refer to the trouble-shooting guide if unit does not function properly.



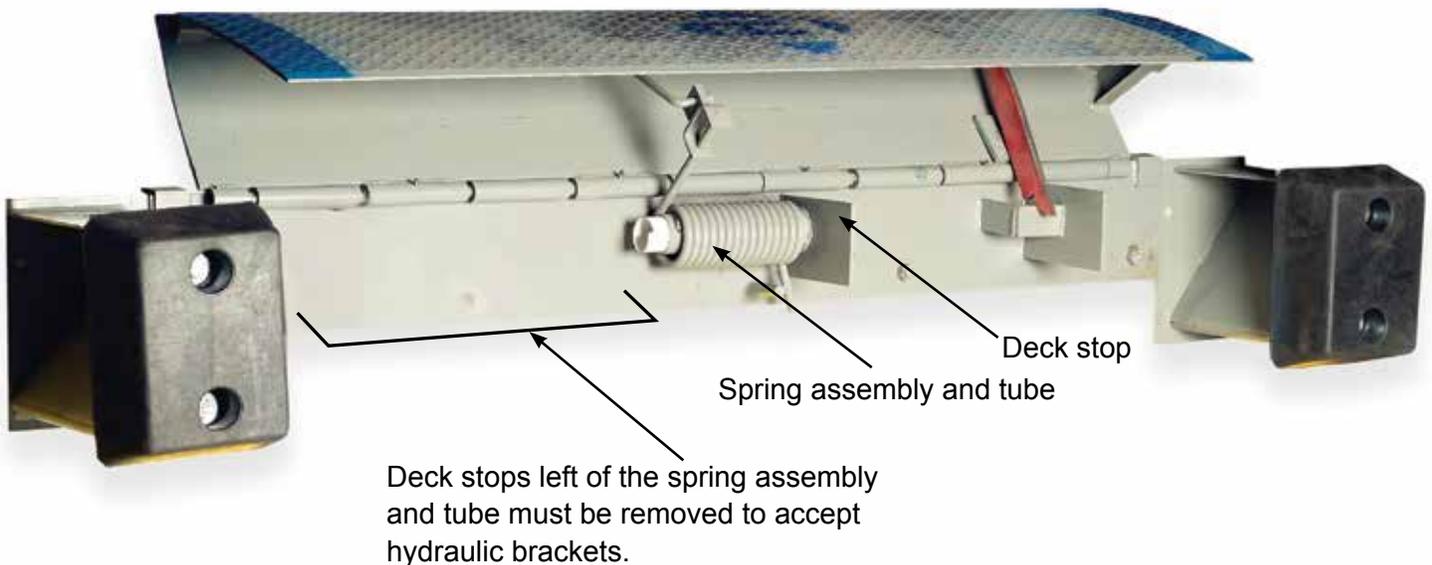
COMPLETE HYDRAULIC SET-UP INSTALLATION INSTRUCTIONS FOR IN-FIELD RETRO-FIT OF EXISTING LEVELER UNIT

Retro-Fit



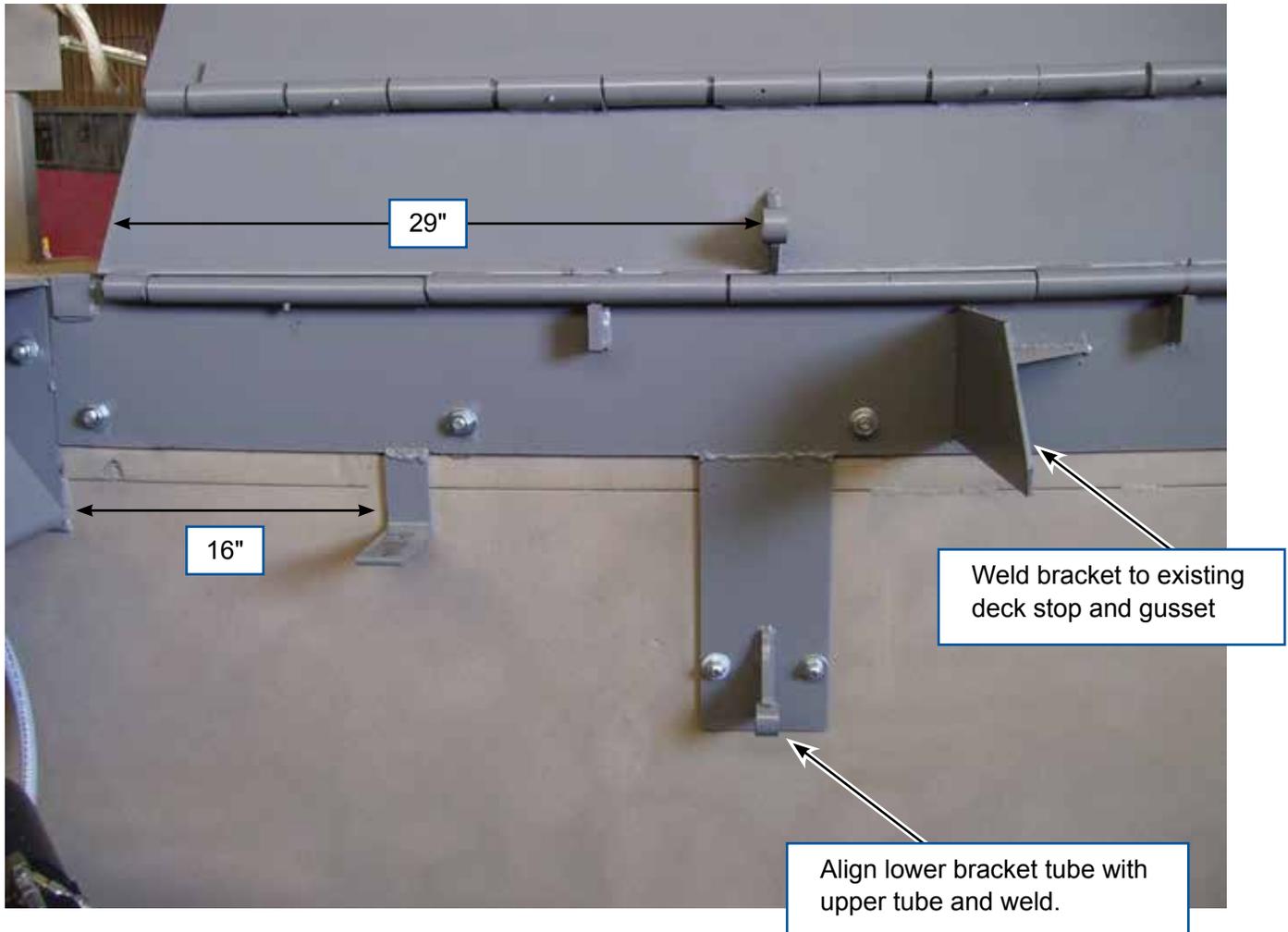
NOTE: The leveler selected for the retro-fit hydraulic package must be in acceptable working condition.

1. Lift the front lip of the EZ-Pull leveler to expose the brackets as shown below.
2. Remove the spring assembly leaving the deck stop and gusset.



COMPLETE HYDRAULIC SET-UP INSTALLATION INSTRUCTIONS FOR IN-FIELD RETRO-FIT OF EXISTING LEVELER UNIT (CONT.)

3. Clean the surface and weld the brackets as shown below.



4. Anchor the lower bracket to side of dock.

5. To complete the retro-fit follow steps 5 thru 14 of the complete EPHYDRAULIC option.

OPERATING INSTRUCTIONS

Hydraulic Edge of Dock Levelers

Step 1: With truck backed to dock and trailer door open, depress the reverse button until the latch falls into position. See illustration below.



Step 2: Once the latch falls into position, release the reverse button and depress the forward push button.

Step 3: The front lip will begin to extend forward, continue to hold the forward button until the front lip rests on the truck floor or the latch kicks off and the front lip lowers onto the truck floor.

Step 4: To return the hydraulic leveler to its resting position, for proper storage, depress the reverse button until the front lip clears the truck bed and raises into a vertical position.

Step 5: The hydraulic fluid will return to the tank. The deck section will slowly lower to its resting position parallel to the dock face.

NOTE: When Leveler is not in use, keep in lowered, stored position.

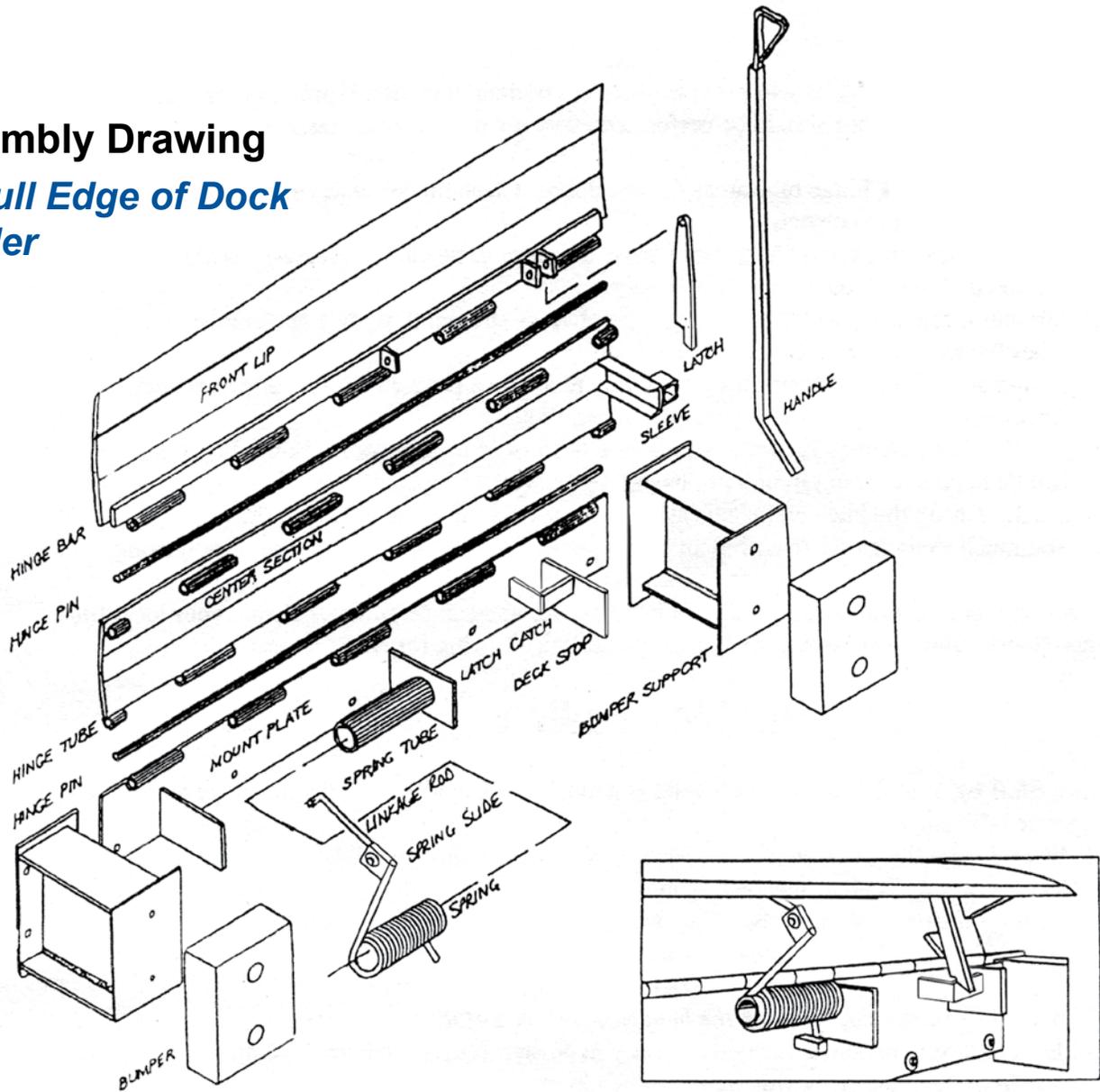
Troubleshooting Guide

(For all types of edge of dock units)

S Y M P T O M :	P O S S I B L E P R O B L E M :
Leveler will not pivot	<p>No grease in hinge and tube joints.</p> <p>No hydraulic fluid in tank.</p> <p>Missing or broken component.</p> <p>Check for obstruction preventing proper operation.</p>
Leveler will not extend forward	<p>Latch installed incorrectly. (Reverse)</p> <p>Latch did not engage.</p> <p>Leveler installed below the dock level and the unit not allowed to pivot back enough to for the latch to engage.</p> <p>No hydraulic fluid in unit, leak in hose.</p> <p>Broken or missing component.</p>
Lip not returning to stored position	<p>Latch not disengaging.</p> <p>Insufficient grease in hinges.</p> <p>Check for debris or obstructions.</p>
Leveler not moving (motor running)	<p>Check fluid level.</p> <p>Pushing wrong button.</p> <p>Faulty hose, damaged valve stem.</p> <p>Wiring wrong, damaged components.</p>
Leveler will not move (motor not running)	<p>Check wiring, voltage, etc.</p> <p>Motor damaged.</p> <p>Bad push button switch.</p> <p>Power Outage. Unit cannot be worked manually.</p>

Assembly Drawing

EZ-Pull Edge of Dock Leveler



**Important: Specify Model # and Serial # when ordering parts.*

Part #	Item Description
EP72LIP	EZ-Pull Front Lip Assy (Std) – 15" Lip Length
EP72LIPR	EZ-Pull Front Lip Assy (Reefer) – 17" Lip Length
EP72DECK	EZ-Pull Center Section Assy
EPBUMPBASE	EZ-Pull Bumper Support
EPSA	EZ-Pull Spring Assy (includes Linkage Rod)
EPRB10	EZ-Pull Molded Bumper – 13" x 10" x 4" w/Fasteners
EPLINKROD	EZ-Pull Linkage Rod w/Pins
EPHANDLE	EZ-Pull Handle w/Bolt
EPLAT	EZ-Pull Latch w/Bolt
EPCB10	EZ-Pull Bumper Complete w/Base

Bluff Warranty

Bluff Manufacturing, Inc. warrants their products to be free from defects in material and workmanship under use and service in accordance with the company's product selection guides and installation instructions, for a period of one year from shipping date to original purchaser.

Bluff Manufacturing's obligation under this warranty shall be limited to the repair or exchange of any part or parts which may prove defective under normal service within the time limitations set forth above, and which our examination shall disclose to our satisfaction to be defective. This warranty is expressly in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for a particular purpose and all other obligations or liabilities on our part.

This limited warranty does not cover any defects, malfunction or failure caused by or resulting from improper or unauthorized service, maintenance, installation repair or use not in conformance with the installation instructions or specifications or from abuse, neglect, accident or any other cause beyond the control of Bluff Manufacturing, Inc. This limited warranty is made only to the original purchaser, which shall be deemed to mean that person or organization to whom the product is originally shipped or installed.

This warranty shall apply only within the boundaries of the Continental United States. Bluff Manufacturing, Inc. does not approve nor authorize any other person or entity to obligate Bluff to any other liability not described herein concerning the sale of its products.

Bluff Manufacturing, Inc. shall not be liable for any incidental or consequential damages and liability hereunder is expressly limited to repair or replacement of any part or parts, which may prove defective within the time prescribed hereon.

Bluff Returned Goods Authorization (RGA)

Before returning any merchandise for any reason whatsoever, it is necessary to contact Bluff for approval. If approval is given, a RGA (Returned Goods Authorization) number will be given by Bluff to the dealer. This RGA number must appear on all documents involving the returned goods. **FREIGHT CHARGES ON ALL RGA's MUST BE PREPAID ON RETURNS (Not warranties).** RGA numbers will not be issued after thirty (30) days from date of shipment by Bluff Manufacturing or its designated representative. A minimum restocking charge of 20% will be made on all merchandise except as allowed under warranty claims. Additional charges will be determined solely by Bluff Manufacturing if the product is in non-reusable condition. Returns will not be allowed on any "Custom" items, determined solely obsolete products, or products in non-resalable condition.