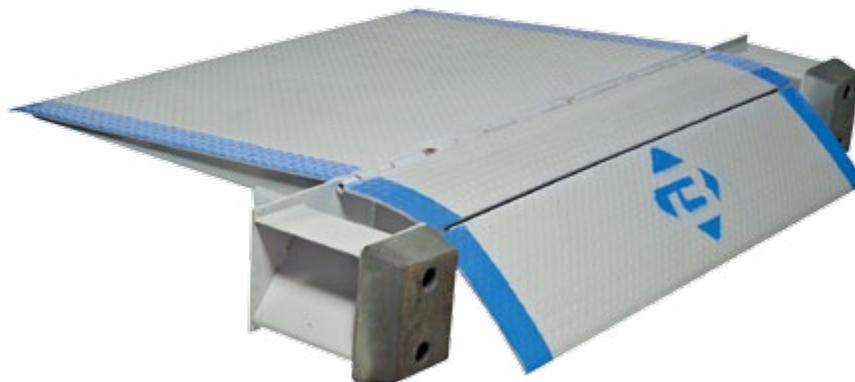




BLUFF
MANUFACTURING, INC.

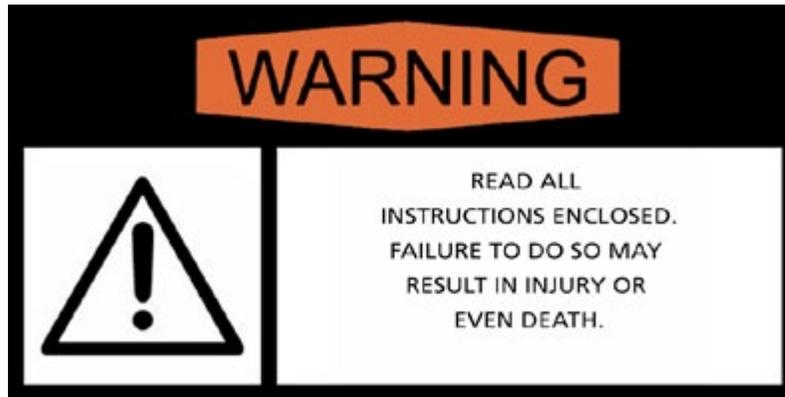
LO-DOCK LEVELER (LD)



OWNER'S MANUAL AND INSTALLATION GUIDE

SERVICE YOU CAN STAND ON

(800) 433-2212 • www.bluffmanufacturing.com • Fax 817-293-7570
1400 Everman Parkway • Suite 156 • Fort Worth, TX 76140



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

EZ-PULL EDGE OF DOCK LEVELER

OWNERS MANUAL*

*Read entire manual prior to unit installation.

Engineering Design

The Bluff EZ-Pull dock leveler design offers a tremendous ergonomic solution when compared to other available dock leveler designs. The simple, smooth performance and easy to position design eliminates the lifting and difficult positioning factors associated with hook type designs.

The Bluff latch assembly allows the operator to easily position the unit. A Pull and Push action on the EZ-Pull handle activates the unit, moving the lip forward onto the trailer floor. Retraction and storage of the unit after use is also accomplished by a pull and push action on the EZ-Pull handle. Simply pull the handle back until the leveler lip is removed from the trailer floor and then push the handle forward to allow the unit to store.

Dock Parameters

The EZ-Pull dock leveler will accommodate a maximum of five (5) inches above dock and five (5) inches below dock, providing 18.5% grade down and 20% grade up. This is acceptable for most gas or propane forklifts but is not suitable for most pallet trucks or many electric forklifts.

- Freight trailers range in height from 46 to 56 inches; therefore the EZ-Pull leveler should be mounted at 51 inches above the driveway.
- Refrigerated trailers range in height from 50 to 60 inches; therefore the EZ-Pull leveler should be mounted at 55 inches above the driveway. In addition, this application requires a Reefer Lip (17' lip length) to accommodate the offset floor of the trailer.
- Flatbed trailers have a wide range of trailer heights. Dock boards or other equipment may be needed for extreme height variations.
- Containers have variations in both floor heights and door configurations.
- Captive fleets require mounting midway between lowest and highest trailer, provided $\pm 5"$ range is maintained.

Pallet trucks and electric forklifts can be used with trailers three (3) inches above and three (3) inches below dock level. Dock boards or other equipment may be needed to accommodate a greater service range for pallet jacks and electric forklifts. This is due to limited clearance and gradeability of that equipment.

EZ-Pull Dock Levelers WILL NOT accommodate refrigerated and freight trailers at a single dock location due to limitations specified above.

Solutions:

1. Mount separate EZ-Pull levelers at different heights to handle both types correctly.
2. Mount an EZ-Pull leveler with Reefer Lip at 55 inches and use Bluff Wheel Risers to raise low trailers to proper height.

Declining and inclining drives require special dock specification. Call for more information.

Product Specification & Features

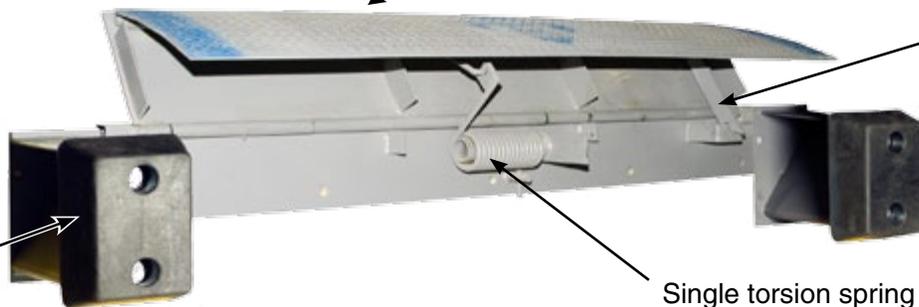
The Bluff EZ-Pull dock leveler is designed with a fully hinged lip and utilizes a torsion spring counterbalance assembly for ease of positioning. Unit conforms to OSHA and US Department of Commerce standard CS-202-55.

Three piece steel construction. Lip and ramp are constructed of 50,000 psi yield strength steel tread plate.

Mechanical latch produces lip extension.

Z shaped bumper beams with replaceable rubber bumpers.

Single torsion spring provides counterbalance on lip section for ease of positioning.



- Bluff's EZ-Pull leveler has 5 inches above and below dock surface operating range for propane and gas trucks and 3 inches above and below dock surface operating range for pallet jacks and electric forklifts.



Positioning tabs for installation.

- Lip section tilts up to 1 inch for out of level compensation.
- Unit is also designed to float allowing for vertical corner deflection when the lip is in contact with truck bed.
- Positioning tabs ensure correct height placement on dock surface during installation, effectively making the Bluff leveler the **EASIEST TO INSTALL IN THE INDUSTRY**.
- One year structural warranty as defined on page 10.

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. Never attempt to work under the dock leveler without properly securing the front and center sections.
4. Keep clear of dock leveler while in operation.
5. Do not exceed capacity rating.
6. If dock leveler is not operating normally, discontinue use. Request maintenance personnel to inspect and contact your local Bluff dealer if necessary.
7. Keep clear of all pinch points that could cause injury.
8. Do not use leveler if it appears to be damaged or broken.
9. Damage to leveler could occur if product is misused or used in an abusive manner.
10. For additional information or concerns, contact your local Bluff representative.

LO-DOCK Installation instructions

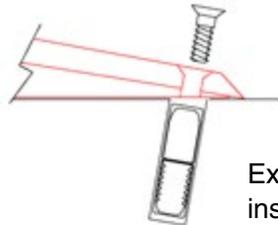
Mechanical Lo-Dock Levelers(LD)



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.

1. Position Lo-dock leveler into desired location.
2. This unit requires 5 heavy duty expansion anchors and 9 - 3/4" x 4" wedge anchors bolts.
3. With Lo-dock in position, drill 9/16" pilot hole over existing holes at rear of ramp.
4. Move the ramp out of position and drill over pilot holes with 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 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 3/4" x 4" wedge anchors.
NOTE: ANY GAP BETWEEN TOP OF DOCK AND LEVELER STRUCTURE AT THE DOCK FACE MUST BE SHIMMED.
8. The latch is factory installed with notch against mount plate. Latch should swing freely when leveler is in its rest 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.)

SPECIAL NOTES

For special docks with declining surfaces contact your local Bluff dealer.

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Mechanical EDGE-OF-DOCK or LO-DOCK Operating Instructions



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.

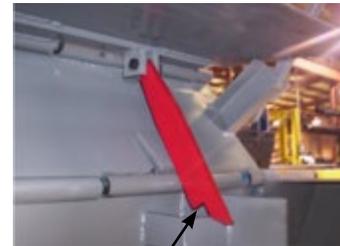
Step 1



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.

Step 3



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, repeat **Step 1**.

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 rest position.

Step 8: Return the handle to its rest position.

Maintenance

The Bluff EZ-Pull Leveler will provide years of efficient operation if properly maintained. Preventive maintenance should be performed every six months or as needed.

1. **Cleaning:** Check hinge tube areas for any debris. Clean hinges with wire brush to remove any foreign objects.
2. **Grease:** The unit should be greased twice a year or as needed – grease zerts are located underneath the deck of the leveler.
3. **Structural Check:** Check unit over for any obvious structural wear. Check hinge tubes for any signs of cracking or wearing.
4. **Spring Assembly:** Check spring assembly to assure a proper float in the leveler deck. Check spring linkage rod for any signs of bending.
5. **Handle Check:** Check EZ-Pull handle for any signs of bending or cracking. Improper handle bend may result in unit not latching properly.
6. **Latch:** Check the latch and latch catch for signs of wear on surfaces. Too much wear can decrease height up allowance and may keep latch from disengaging.

Any damaged parts should be replaced immediately and can be purchased from your local Bluff distributor. Bluff levelers feature a modular design, allowing for easy replacement.

Troubleshooting

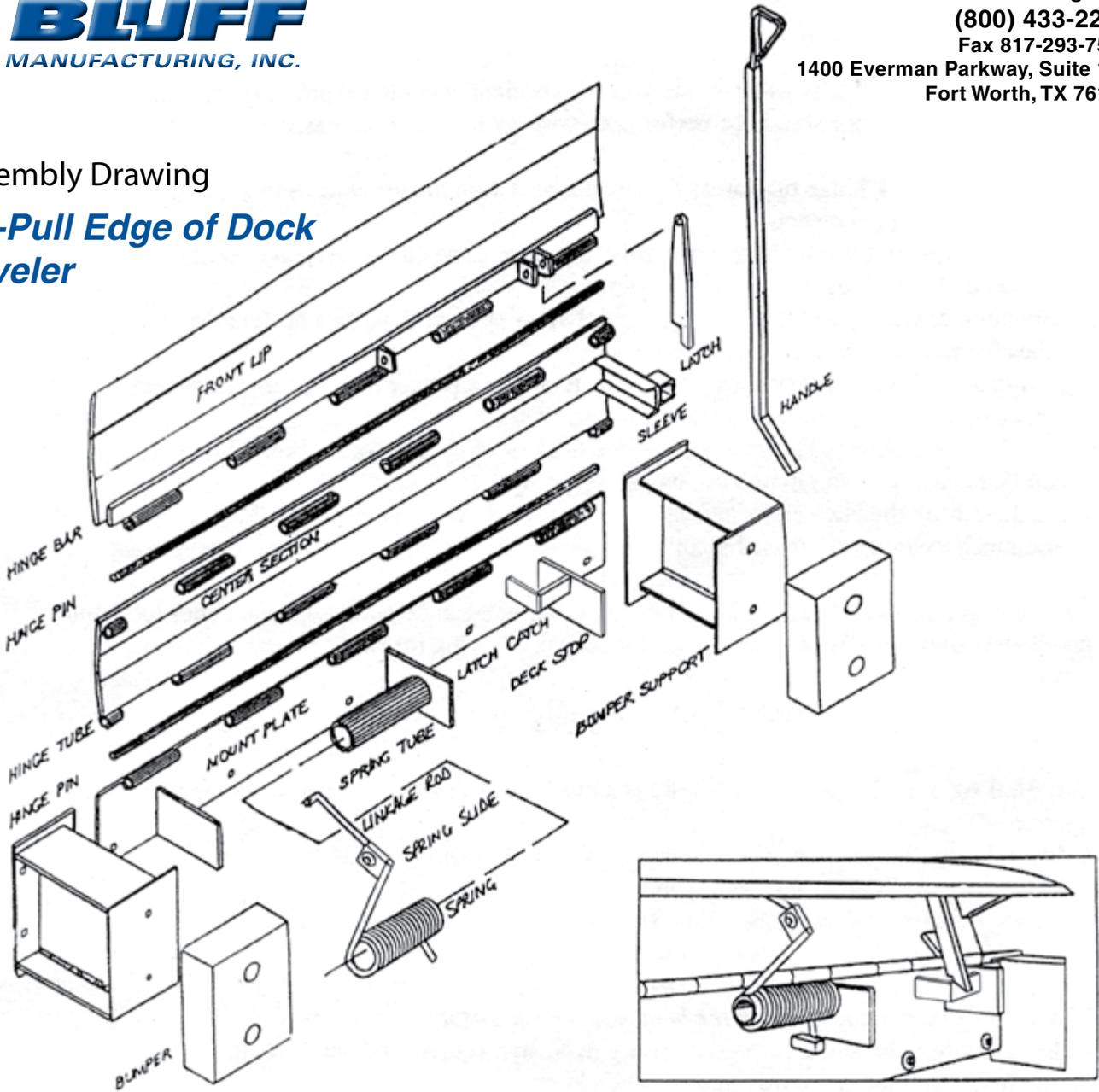
The Bluff EZ-Pull Edge of Dock Leveler is a mechanical device requiring leverage and gravity to operate efficiently.

1. ***When I raise the dock leveler, the front lip does not extend outward.***
 - Check to ensure latch is attached to unit.
 - Check to ensure latch notch is facing the dock.
 - Check latch assembly for damage or excessive wear.
2. ***When I raise the dock leveler, the handle hits the dock surface.***
 - Check to ensure handle is located correctly in holster. Handle and bend facing away from dock face (toward trailer) when stored in position.
 - Check handle for damage.
3. ***The leveler will not raise enough to allow latch to catch.***
 - Check for proper tube clearance. Tubes should be 1/8+" higher than dock surface. Deck needs to rotate to approximately the one o'clock position.
 - Check handle for any damage.
 - Check hinge tubes for any debris. Wood, nails, etc. can prevent proper rotation.
4. ***The leveler is difficult to raise and lower in position.***
 - Check hinge tubes. Clean any debris or foreign objects from hinges. Use wire brush if necessary.
 - Check hinge tube lubrication. Grease unit thoroughly.

*Important: Specify Model # and serial # when ordering parts

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

SERVICE YOU CAN STAND ON

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.