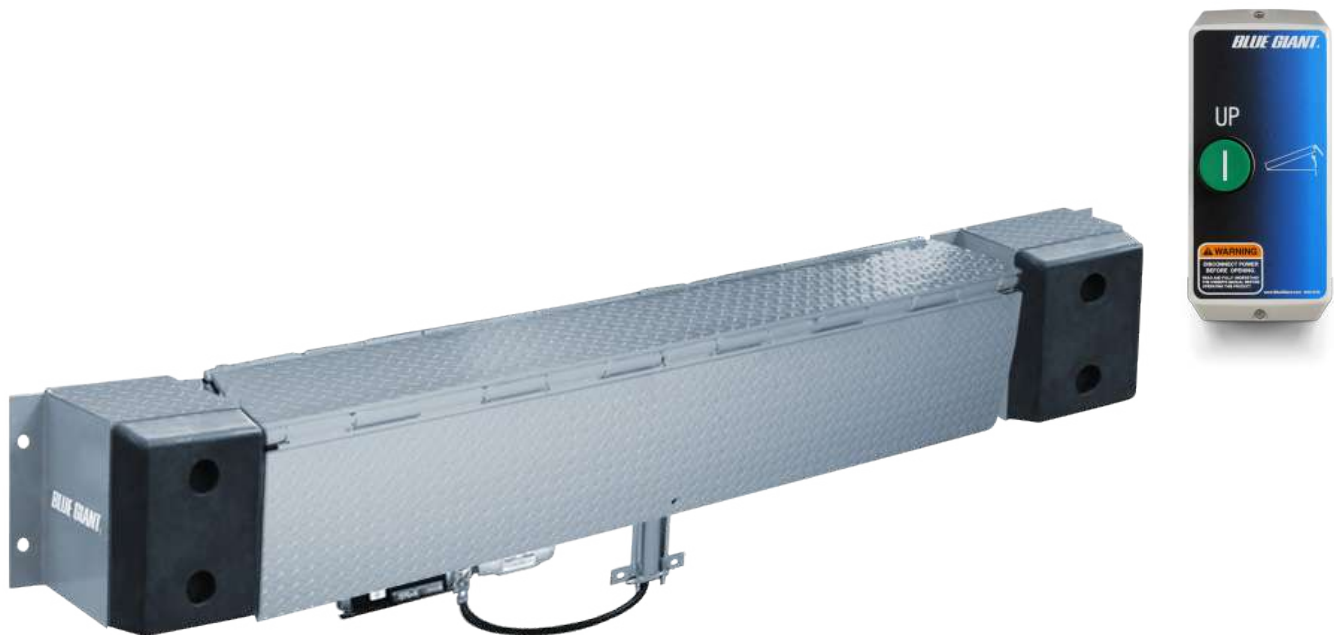


INSTALLATION & OWNER'S MANUAL

HYDRAULIC EDGE-OF-DOCK LEVELER WITH CONTROLS



ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN



WARNING

Do not install, operate, or service this product unless you have read and fully understand the entire contents of this manual. Failure to do so may result in property damage, bodily injury or death.

BLUE GIANT[®]

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1.0 ABOUT THE MD-CH SERIES HYDRAULIC EDGE-OF-DOCK LEVELER

The MD-CH Series Hydraulic Edge-of-Dock (EOD) Leveler from Blue Giant is ideally suited for applications where installation of pit levelers is not feasible or where standard fleet bed heights are serviced at the loading dock. The MD-CH Series is easily installed to the dock face providing an efficient self storing docking unit, with ease of use at the touch of a button.

1.1 OWNER'S PURCHASE RECORD

OWNER'S PURCHASE RECORD
Please record information for future inquiries and to validate warranty. (See Section 2.1 for warranty validation)

Dealer:	Date in Service:
	Number of Units:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:
Serial Number:	Door #:

The manufacturer offers a full line of dock levelers, dock safety equipment, accessories, ergonomic and scissor lift equipment, seals and shelters, and industrial trucks. Concurrent with a continuing product improvement program, specifications are subject to change without notice (see Section 2.2 "Exclusion of Liability" of this manual). Please contact the manufacturer for latest information. Some features illustrated may be optional in certain market areas.

2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the Vehicle Restraint System. It is not intended to cover, or suggest that it does cover, all procedures necessary to ensure safe operation. All operators should be aware of and abide by all workplace safety regulations applicable to the operation of the Vehicle Restraint System. These laws and regulations include but are not limited to:

- The Occupational Safety and Health Act
- Canada Occupational Health and Safety Regulations
- Occupational Safety and Health Acts for Individual States (USA)

For additional information on these regulations as well as industry standards that may apply to this product, please contact:



American National Standards Institute (ANSI)
1430 Broadway
New York, NY 10018
Telephone: 212.642.4900
www.ansi.org

Also a member of:



Loading Dock Equipment Manufacturers
A Product Section of Material Handling Industry of America
A Division of Material Handling Industry
8720 Red Oak Blvd, Suite 201
Charlotte, NC, 28217-3992
Telephone: 704.676.1190
www.mhi.org/lodem

2.1 WARRANTY INFORMATION

Thank you for purchasing Blue Giant products. We appreciate your business, and are confident that our product will serve you for many years to come. In the event that you experience a problem with our product, our Warranty Center is here to support the Blue Giant Product(s) that you have purchased.

To validate warranty on recently purchased equipment, please complete and submit your information with our online Warranty Registration at www.BlueGiant.com.

For more information about Blue Giant Warranty Support, please contact your local Blue Giant Equipment dealer, representative or authorized partner near you. You may also visit www.BlueGiant.com or phone 1.905.457.3900.

DEALER INFORMATION

Name:

Contact:

Telephone:

* **NOTE** that failure to validate warranty at the time of receipt can seriously affect the outcome of any claim.

2.2 EXCLUSION OF LIABILITY

The manufacturer assumes no liability for damage or injury to persons or property which occur as a result of defects or faults in or incorrect use of the Vehicle Restraint System. The manufacturer also assumes no liability for lost profits, operating downtimes, or similar indirect losses incurred by the purchaser. Injury to third parties, irrespective of its nature, is not subject to compensation.

The manufacturer reserves the right to make changes at any time to the modules, components, and accessories, concurrent with its continuing product improvements and development program. Specifications, operating instructions, and illustrations included in this manual are subject to change without notice. Please contact manufacturer for the latest information.

2.3 MANUFACTURER'S NOTE

The Vehicle Restraint has been carefully inspected and tested at the manufacturer's plant prior to shipment, but should be checked upon receipt for transport damage. Any observed transport damage is to be listed on the signed copy of the freight document. Notify the freight forwarder of any damage WITHIN 48 HOURS.

2.4 OWNER'S RESPONSIBILITY

1. The owner should recognize the inherent danger of the interface between the dock and the freight carrier. The owner should, therefore, train and instruct operators in the safe use of the dock equipment and accessories in accordance with the manufacturer's recommendations.
2. The owner should thoroughly familiarize themselves with the following procedures and specifications, and request immediate replacement of all manufacturer-supplied documents that are missing, damaged, or otherwise illegible.
 - Installation instructions
 - Operating instructions
 - Planned maintenance procedures
 - Inspections procedures
 - Replacement parts lists

Upon receipt of any newly purchased dock equipment, the owner shall verify the presence of owner's manuals, operating placards, and any other documentation necessary for training dock personnel how to use the equipment safely and effectively.
3. Nameplates, cautions, instructions, and posted warnings shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.
4. Manufacturer's recommended periodic maintenance and inspection procedures shall be followed, and written records of the performance of these procedures should be kept as per warranty guidelines.
5. Dock equipment that is structurally damaged, experiencing performance irregularities, or has been potentially compromised (i.e. sudden loss of support due to premature truck departure) shall be removed from service until a trained and authorized manufacturer's representative can conduct an inspection and perform any necessary repairs.
6. As with any piece of machinery, dock equipment requires routine maintenance, lubrication, and adjustments. Your local Blue Giant® representative offers owners the option of a Planned Maintenance Program (P.M.P). As part of this service, your local Blue Giant® representative will do all routine maintenance, lubrication, and adjustments.
7. The owner shall ensure that all nameplates, caution/instruction markings or labels are in place and legible, and that the appropriate operating/maintenance manuals are provided to authorized users. Replacement name plates, caution/instruction labels, and manuals containing operating and maintenance instructions are available through the Blue Giant Aftermarket Department.
8. Modifications or alterations of dock equipment shall be made only with written permission of the original manufacturer. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the particular application of the dock equipment.
9. The owner or a trained and authorized representative shall verify that all freight carrier brakes have been applied and a vehicle restraint and/or wheel chocks properly engaged before cross-docking procedures such as loading and unloading begin.
10. Unless specifically agreed to in writing by Blue Giant Equipment Corporation at the time of order (and prior to manufacture), all Blue Giant Dock equipment is sold as a complete offering, and must not be altered or added to in any manner (which includes configuration and function) without written permission from an authorized manufacturer's representative.
11. If, at the request of the owner, Blue Giant does not supply all or some of the dock equipment power unit and/or control station components, the owner shall assume responsibility for any and all operational and safety issues associated with the resulting configuration.

2.5 INSTALLER'S GUIDELINES

Please read all instructions carefully before installing this Blue Giant dock product. It is the installer's responsibility to comply with the following:

- The installation of Blue Giant dock products should comply with all applicable local or national building codes and regulations, including any that may supersede this manual.
- Site surveys and other applicable install-related documentation must be properly and accurately completed prior to installation. Failure to comply with this requirement may result in an improper install and possible voiding of the warranty.
- Only Blue Giant-supplied or approved parts must be used. Any unauthorized parts substitution may void the warranty.

Always lockout and tagout any power source before performing any electrical work, in accordance with OSHA regulations and approved electrical codes. The installer is responsible for reading, understanding, and complying with all personal protective equipment (PPE) policies in effect.

3.0 OPERATOR'S MANUAL SAFETY MESSAGE COLOR IDENTIFICATION

This manual includes color-coded safety messages that clarify instructions and specify areas where potential hazard exists. To prevent the possibility of equipment damage and serious injury or death, please observe strictly the instructions and warnings contained in the messages. If warning decals become damaged or missing, replace them immediately. Avoid accidents by recognizing dangerous procedures or situations before they occur.


 DANGER
Serious injury or death will likely occur if the instructions are not followed.

NOTICE
Procedures marked important must be followed in order to prevent damage to machinery.


 WARNING
Serious injury or death may occur if the instructions are not followed.


 CAUTION
Instructions marked caution concern safe operating procedure. Failure to comply may result in personal injury.

3.1 OPERATIONAL SAFETY WARNINGS

 DANGER
<ol style="list-style-type: none"> 1. Do not enter the pit area below the dock leveler. 2. BEFORE BEGINNING ANY SERVICE PROCEDURES: <ul style="list-style-type: none"> – Disconnect the power and follow all lockout / tagout procedures. 3. Never operate a broken or damaged dock leveler. Have repairs done immediately by a qualified service technician. 4. Always secure and center loads on the forklifts. Loose or unbalanced loads are dangerous.

NOTICE
<ol style="list-style-type: none"> 1. Do not ground welding equipment to any electrical components. 2. Do not attach welder as ground to leveler platform when welding on base frame assembly. Attach welder ground to base frame assembly only. 3. Do not allow the drill to go too deeply when drilling holes in the control box. Damage to the control systems may occur. 4. Never use air to blow debris from control box. Use a vacuum to remove debris from control box. 5. Do not connect green ground lead into control box until all welding has been completed. 6. Always keep the work area clean and free of litter. 7. Always clean all side openings of dirt and debris. 8. Always clean all dirt and debris from the lip hinge. 9. Always clean up dry and liquid spills immediately after they occur. 10. Always maintain proper lighting in the work area. 11. If a procedure is not clearly defined in this manual, contact your authorized Service Representative.

 WARNING
<ol style="list-style-type: none"> 1. The upper hinge point is a hazardous pinch point. Do not use fingers or hands to remove foreign materials. 2. Post safety warnings and barricade working area at dock level and at ground level to prevent unauthorized use of the leveler during maintenance/service. 3. Never leave the dock leveler unattended in the raised position. 4. Always make sure that the lip is seated inside the night lock after putting the dock in the parked position. 5. Never leave loads sitting on the dock leveler. 6. Do not attempt to raise the dock leveler if someone is standing on it. 7. Do not use the dock leveler if the lip's full width is not fully supported by the vehicle load bed. 8. Do not operate the dock leveler beyond its rated capacity. 9. Do not drive or walk onto the truck until it is parked against the dock bumpers and the wheels are chocked, or the vehicle restraint has been fully engaged. 10. Never attempt to lift or hold the lip out by hand. Serious personal injury could occur. 11. Never remove the wheel chocks until loading/ unloading is finished and the truck driver has been given permission to depart.

 CAUTION
<ol style="list-style-type: none"> 1. Only trained personnel should operate or service this equipment. 2. Do not operate the dock equipment until the transport vehicle is parked against the dock bumpers. 3. Always park the dock equipment after use. 4. Conduct routine inspections and maintenance. Failure to do so could cause equipment damage and or personal injury. 5. Always call your authorized service representative or manufacturer immediately if a malfunction occurs.

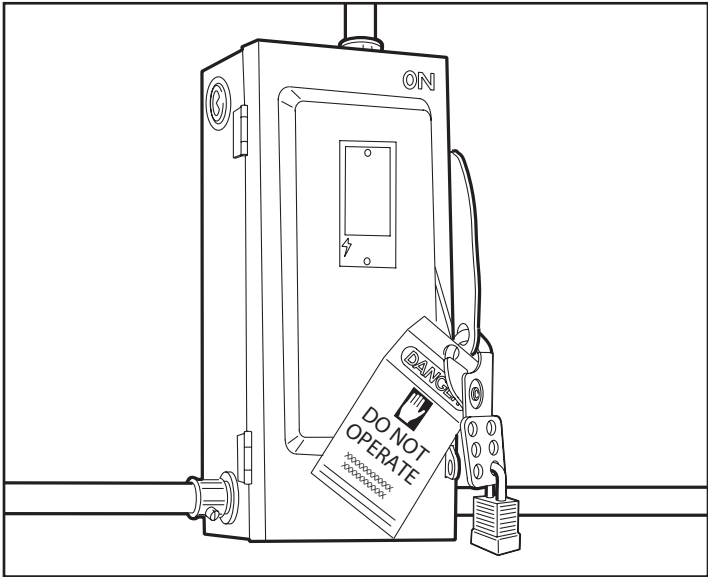
4.0 LOCKOUT / TAGOUT PROCEDURE AND RULES

In accordance with the rules and regulations of the Occupational Safety and Health Administration (OSHA), all affected employees must be notified that the machine or equipment will be shut down and locked out to perform repair or maintenance work. The work area must be checked to ensure that all personnel have been removed or safely repositioned. The machine or equipment power supply shall be locked in the OFF position or disconnected from the energy source. Blue Giant® strongly recommends that only OSHA-approved lockout devices and procedures be utilized.

The energy isolating device must bear a prominent warning tag indicating that work is being done on the equipment and the name of the authorized employee responsible for the lockout. It is mandatory that tagout notices not be susceptible to deterioration or illegibility due to weather conditions or exposure to chemicals and moisture.

⚠ WARNING

Always lockout and tagout any power source before performing any work on any electrical devices or electrical controls according to OSHA regulations and approved local electrical codes.



Approved way to lockout / tagout.

5.0 INSTALLATION WITH PIT TYPE DOCK LEVELERS



WARNING

Do not install, operate, or service this product unless you have read and followed the safety practices, warnings, and installation instructions contained in this manual. Failure to do so could result in death or serious injury. Always use dock leveler support when working under a dock leveler ramp or lip.

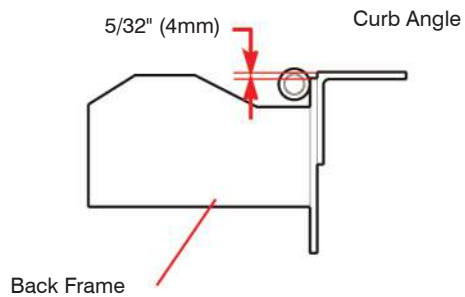
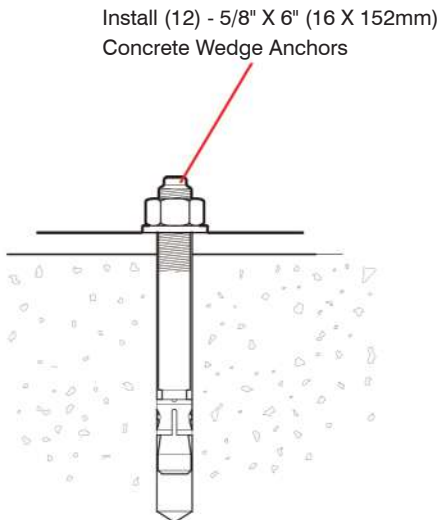
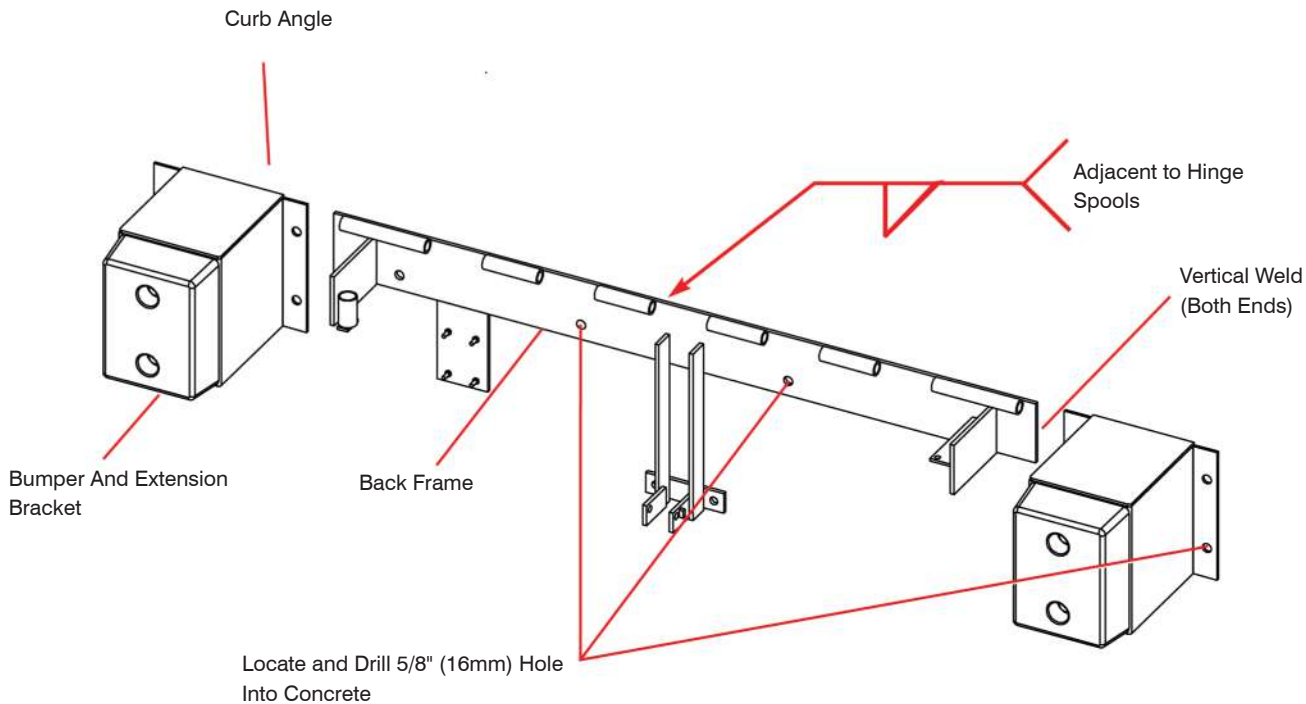
Place barricades around the pit on the dock floor and driveway while installing, maintaining or repairing dock leveler or vehicle restraint.

Improper installation of anchoring devices or installation into aged or unsound concrete could result in death or serious injury.


Inadequate lifting equipment or practices can cause a load to fall unexpectedly. Make sure the lifting chain or other lifting devices are in good condition and have rated capacity of at least 500 lb. (227 kg) for the lifting angle used. Never allow anyone to stand on or near the vehicle restraint when it is lifted or positioned. Stand clear of the vehicle restraint when it is positioned.

Use caution when unbinding the vehicle restraint. Keep hands clear of pinch points and wear appropriate safety attire: glasses, gloves and work boots. Site conditions may require extra safety equipment such as hard hat and safety harness. Keep hands and feet clear of vehicle restraint pinch points. Failure to follow this warning can allow the vehicle restraint to fall, tip, or swing into people, causing death or serious injury.

5.1 INSTALLATION INSTRUCTIONS



5.1 INSTALLATION INSTRUCTIONS CONT'D


 **WARNING**

Do not install, operate, and/or service this leveler until you have read and understood all of the safety information and instructions contained herein and on the leveler.

Do not work under or around leveler being installed without first placing adequate barriers to positively prevent vehicle traffic from entering the work area.

Keep hands and feet clear of dock leveler pinch points.


1. Inspect the loading dock curb angle and verify that it is firmly embedded and anchored in the concrete and is minimum 3" x 8" x 1/4" (75 x 75 x 6mm) steel. If there is no curb angle, if anchoring or embedding is questionable, or is not of minimum size specified, proceed with advised installation mounting types (Section 5.5)

 **WARNING**

The EOD leveler must be welded to a firmly embedded steel channel or other dock steel as describe in installation instructions. Do not attempt to use only bolts or anchors to attach the dock leveler to the concrete.

Use caution when removing strapping from the EOD leveler. Keep hands clear of pinch points and wear appropriate safety attire - glasses, gloves, and work boots.

2. Remove strapping from the EOD leveler and discard all shipping material.

 **WARNING**

Use caution when lifting or moving the EOD leveler. Do not attempt to lift without suitable hoisting equipment capable of lifting as much as 600 lb.

3. Locate and set aside the push-button control box and hydraulic powerpack with mounting bracket. Remove the bumper extensions and store outside the immediate work area.
4. Tack weld top of back frame securely to curb angle.

5. Ensure that the back frame is firmly against curb angle or dock face concrete and plug-weld the back frame to the curb angle at the four circular holes in the frame. If curb angle does not overlap these holes, use the back plate as a template and drill four holes 5/8" dia. x 6" (15mm x 150mm) deep, in the dock face concrete. Clean out holes and insert and permanently install appropriate concrete wedge anchors. Tighten enough to secure the back frame.
6. Finish weld the top of the back frame to the curb angle. Weld 1/4" x 5" (6mm x 125mm) long welds on both ends of the back frame. Repeat the 1/4" (6mm) welds on 9" (225mm) centers across the full length of the back frame.
7. Vertical weld both ends of back frame to curb angle, full length of vertical contact. Tighten the wedge anchor nuts securely.
8. Position the left-hand bumper bracket (as viewed when standing on the driveway in front of the dock leveler) so that there is 1/2" (13mm) clearance between the bracket side and the comfort grip handle pocket, and the bracket is level with the top of the curb angle. Weld all horizontal and vertical contact areas between bracket and curb angle and plug weld mounting holes that overlap curb angle. Install concrete wedge anchors 5/8" x 6" (15mm x 150mm) in mounting holes that are not welded.
9. Position the right-hand bumper bracket so that there is a 1/2" (13mm) clearance between the bracket and the dock leveler deck plate. Weld all horizontal and vertical contact areas between bracket and curb angle and plug weld mounting holes that overlap curb angle. Install concrete wedge anchors 5/8" x 6" (15mm x 150mm) in mounting holes that are not welded.
10. Lubricate all pivot points using SAE30 motor oil or equivalent.

5.2 SELF-CONTAINED POWERPACK (PER MOUNTED)

1. Enlist the services of a qualified electrician to have the electrical conduit and wiring installed between the push button control box and the powerpack motor.

5.3 REMOTE POWERPACK INSTALLATION

1. Securely mount the hydraulic powerpack horizontally on an interior wall adjacent to the door opening, at approximately 8' (2438mm) above floor level. Install 1-1/2" (38mm) conduit for hydraulic hose, from the lift cylinder up and through the exterior wall to the hydraulic powerpack. Pull the hydraulic hose through the conduit and attach to the fitting on the powerpack center manifold and the opposite end to the fitting located at the base of the lift cylinder. Repeat the same for the lip cylinder. Ensure that the hose is free of kinks and clear of any obstructions. Secure the hose to the foundation structure using clips. Enlist the services of a qualified electrician to have the electrical conduit and wiring installed between the push button control box and the powerpack motor.

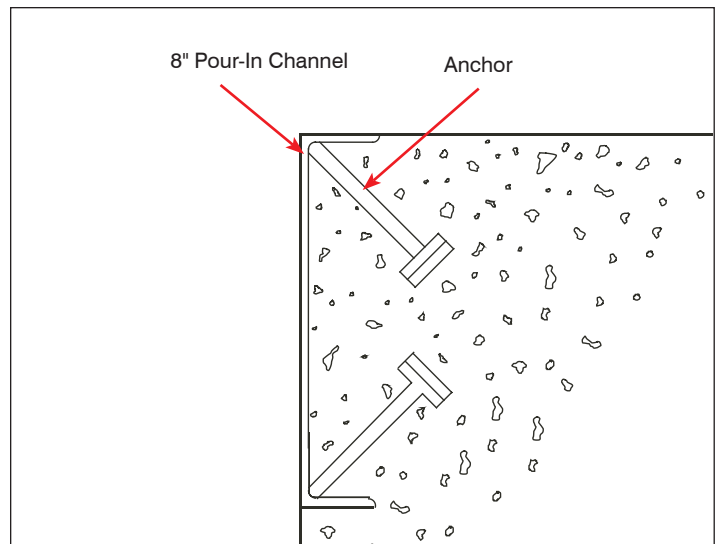
5.4 INSTALLATION INSPECTION

1. Clean up the entire work area and apply touch-up paint to all welds, scratches, and burns.
2. Ensure all concrete wedge anchors have been securely tightened.
3. Test operate the unit through several full cycles of operation. Refer to Section 6.0 "*Operating Instructions*." If problems are noted, refer to Section 11.0 "*Troubleshooting*."
4. Leave these instructions with the EOD leveler for use by the owner.

5.5 INSTALLATION MOUNTING INSTRUCTIONS

5.5.1 8" POUR-IN CHANNEL

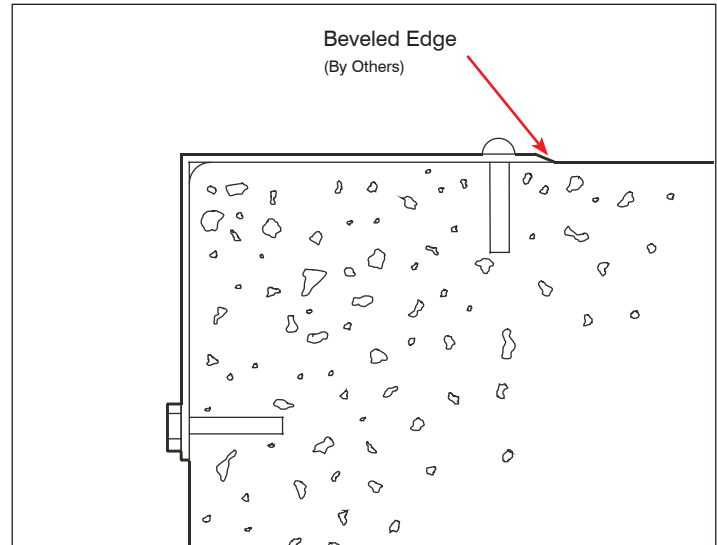
- Must be poured in with dock concrete
- 8" structural channel minimum. 11.5 lb. / ft.
- Weld-on curb angle concrete anchors to be a minimum 5/8" x 6" long (16 x 152mm) located on 12" (305mm) centers with one anchor 3" (76mm) from each end



5.5 INSTALLATION MOUNTING INSTRUCTIONS CONT'D

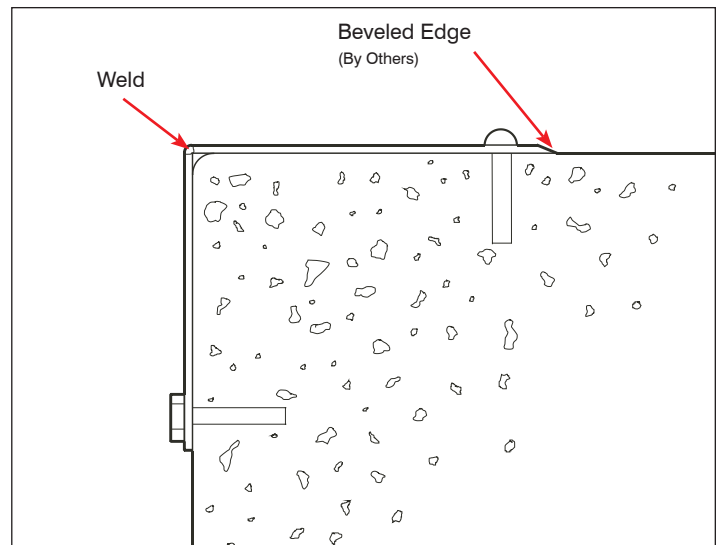
5.5.2 ONE PIECE ANGLE PLATE

- Face Plate Types - For use on existing docks with no curb steel
- 1/4" (6mm) minimum plate thickness. Top plate 13" (330mm) wide, face plate 10" (254mm) wide. Lengthen to suit EOD Leveler model
- Place angle plate on existing dock as shown. Use drill as template
- Lag to sound concrete as follows:
Top Plate: Drill 3/4" dia. x 3-1/2" (19 x 89mm) deep holes. Insert 5/8" (16mm) expansion sleeves (010-116). Install and tighten 5/8" x 1-1/2" (16 x 38mm) button-head bolts (010-117) using 3/8" (10mm) Allen key
Face Plate: Drill 5/8" dia. x 6" (16 x 152mm) deep holes. Insert 5/8" x 6" (16 x 152mm) long concrete anchor wedges (010-108) and tighten



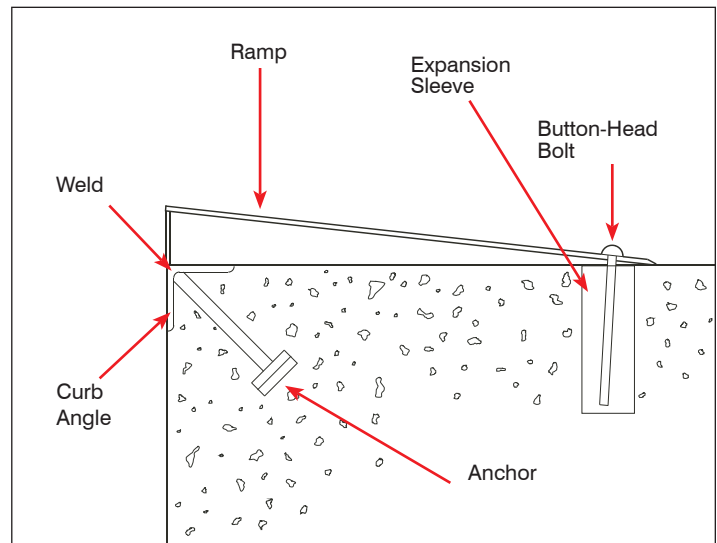
5.5.3 TWO PIECE ANGLE PLATE

- 1/4" (6mm) minimum plate thickness. Top plate 13" (330mm) wide, face plate 10" (254mm) wide. Lengthen to suit EOD Leveler model
- Place top plate on top of existing dock, front edge flush with dock face, full length
- Drill 3/4" dia x 3-1/2" (19 x 89mm) deep holes using plate as template. Insert 5/8" (16mm) expansion sleeves (010-116). Install and tighten 5/8" x 1-1/2" (16 x 38mm) button-head bolts (010-117) using 3/8" (10mm) Allen key
- Place face plate in position as shown. Position top edge for welding and tack-weld to top plate
- Drill 5/8" dia. x 6" (16 x 152mm) deep holes using plate as a template. Insert 5/8" x 6" (16 x 152mm) long concrete wedge anchors (010-108) and tighten
- Weld the two plates together as illustrated. 1/4" x 5" (6 x 127mm) long welds on 9" (229mm) centers



5.5.4 OPTIONAL APPROACH RAMP

- Position ramp as illustrated. Outside edge of ramp flush with outside edge of curb angle
- Tack-weld ramp to curb angle
- Drill 3/4" dia. (19mm) holes using ramp as template. Insert 5/8" expansion sleeves (010-116). Install and tighten 5/8" x 1-1/2" (16 x 38mm) button-head bolts (010-117) using 3/8" (10mm) Allen key
- Weld the ramp to the curb angle as illustrated. 1/4" x 5" (6 x 127mm) welds on 9" (229mm) centers



6.0 OPERATING INSTRUCTIONS - MD-CH SERIES EDGE-OF-DOCK LEVELER

! WARNING

- Do not install this leveler, operate, and/or service unless you have been trained and authorized to do so.
- Do not install, operate, and/or service this leveler until you have read and understood all of the safety information and instructions contained herein and on the leveler.
- Do not operate this leveler until you have checked its condition. Report the need for leveler repairs to your supervisor immediately and do not operate leveler until repairs are made. Neglect may cause a minor repair to become a major service problem and cause the leveler to become unsafe.
- Never try to lift or move any part of the dock leveler without using the comfort grip handle.
- Keep hands and feet clear of dock leveler pinch points at all times. Never use hands to lift dock ramp and/or lip onto vehicle or to store the dock leveler.
- Do not drive on leveler unless lip is securely on vehicle bed and has a minimum of 4" (100mm) projection on vehicle bed.
- Do not exceed 3 MPH when driving over the dock leveler.
- Do not drive over edges of the dock leveler and/or dock bumper blocks (bumper blocks are not structural).

6.1 FUNCTIONAL DESCRIPTION

The MD-CH Series Hydraulic Edge-of-Dock (EOD) Leveler is intended to be used as a bridge located between a loading dock floor surface and the rear deck upper surface of a vehicle.

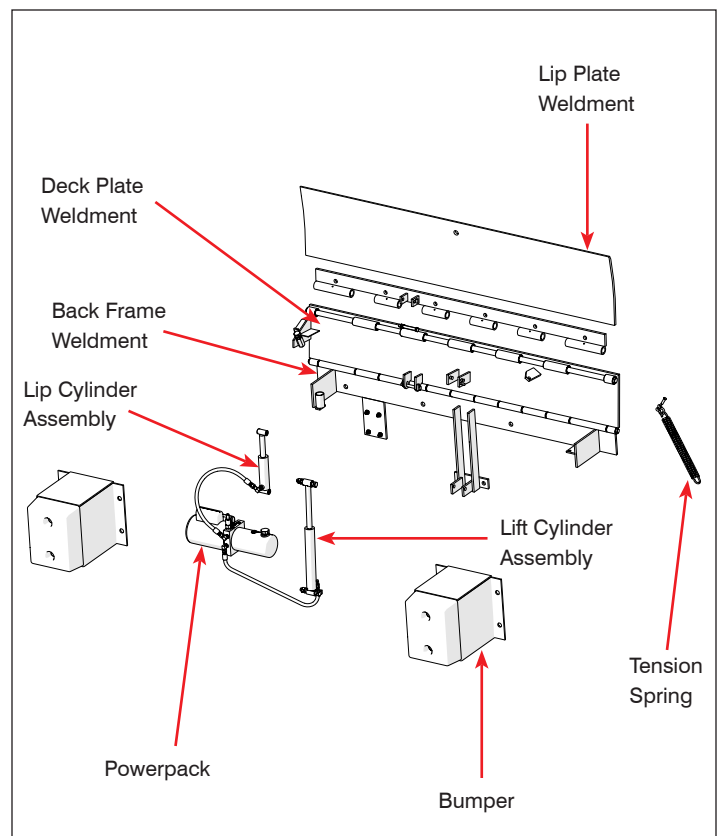
The EOD Leveler upper deck plate complete with a hinged, vertically hanging lip plate is located flush with the floor surface and is permanently mounted on the outer edge of the loading dock.

The rear deck surface of a vehicle is parked and blocked in place against the dock bumpers that are integral components of the EOD Leveler, in working alignment with the EOD Leveler. An EOD Leveler, used in conjunction with a vehicle restraint are ideal for this application. Consult your local Blue Giant dealer / distributor for more details.

The EOD Leveler is operated by maintaining pressure on a push button switch located on a control box. The push button activates a hydraulic pump / motor that forces fluid into a hydraulic lift cylinder. As the cylinder rod extends, the deck is rotated up into a vertical position. When the lift cylinder reaches its maximum extension the smaller lip cylinder begins to extend, forcing the lip plate into a vertical position as well. The push button switch is then released. As the operator releases the push button switch, the lip cylinder remains extended while the lift cylinder retracts. This forces the lip plate to remain in an extended position as the deck plate moves forward. The lip plate moves forward horizontally until the underside comes to rest on the load bed of the vehicle.

No other means of support is provided when in this position

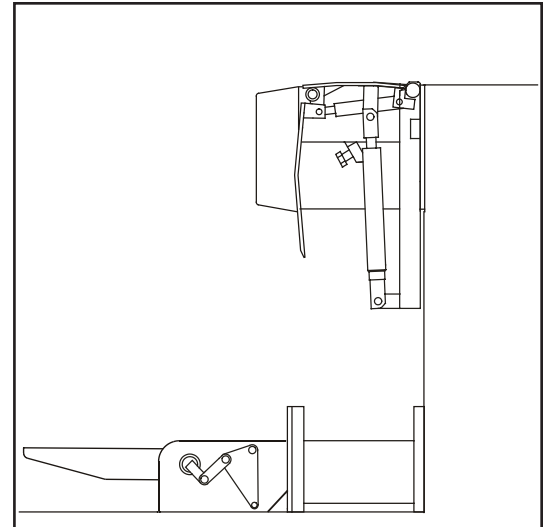
The EOD Leveler is restored to its original stored position by the operator before the vehicle is allowed to depart.



STANDARD OPERATION PROCEDURES

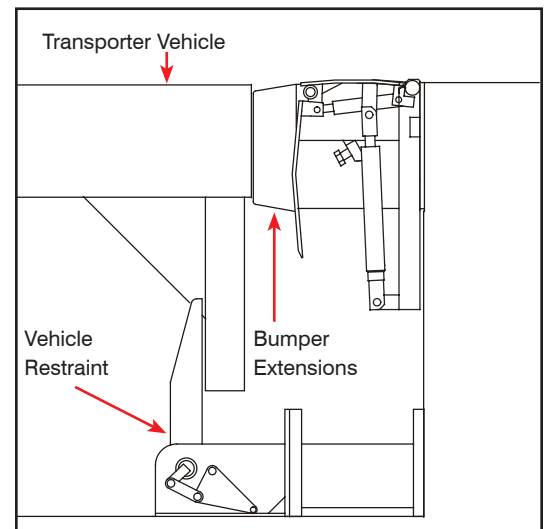
6.2 PRIOR TO USE: EQUIPMENT IN HOME POSITION

The restraint apparatus is in the home position and the dock leveler lip is parked safely in the lip keepers.



6.3 TRAILER AT BAY

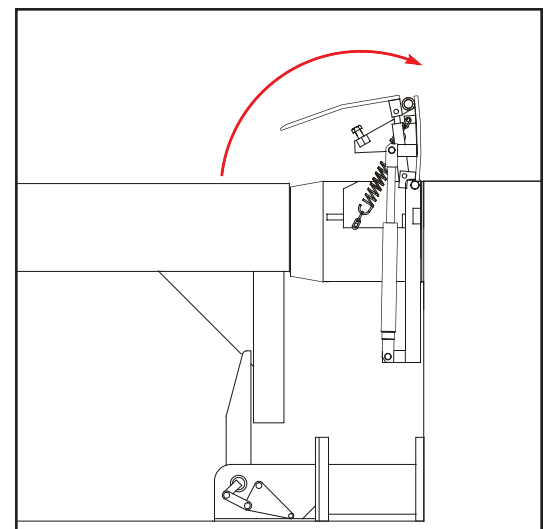
The vehicle driver reverses the vehicle into position firmly against the dock bumper extensions.



6.4 ENGAGING DOCK LEVELER

The EOD Leveler is operated by pushing and holding the "DOWN" push button on the control box.

The dock operator assures that the vehicle is secured (using either a vehicle restraint or wheel chock) to prevent forward creep or unexpected departure.



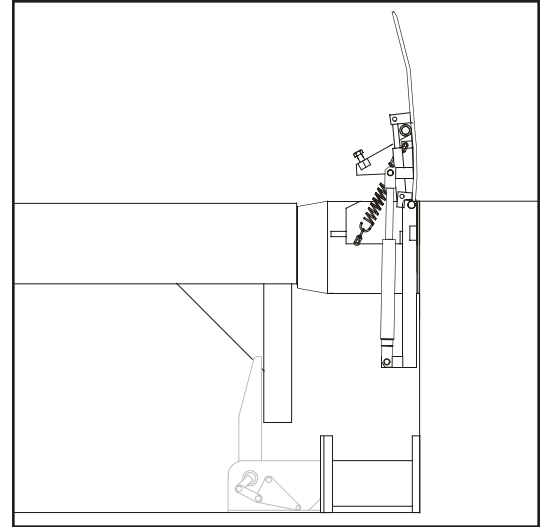
6.5 RAISING DOCK LEVELER



WARNING

Do not attempt to operate the EOD Leveler while the comfort grip handle (optional) is in use as a maintenance stand.

The operator maintains pressure on the "UP" push button to raise the EOD Leveler to its most extended raised position.



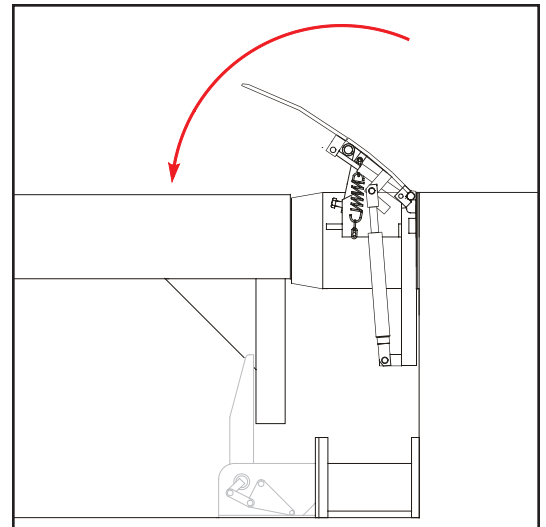
6.6 EXTENDING DOCK LEVELER



WARNING

The lip plate must overlap the vehicle load bed by a minimum of 4" (100mm) full width.

The lift cylinder will extend to its maximum length, raising the deck plate to a near vertical position. When the lift cylinder has reached its fullest extension the lip cylinder begins to extend.



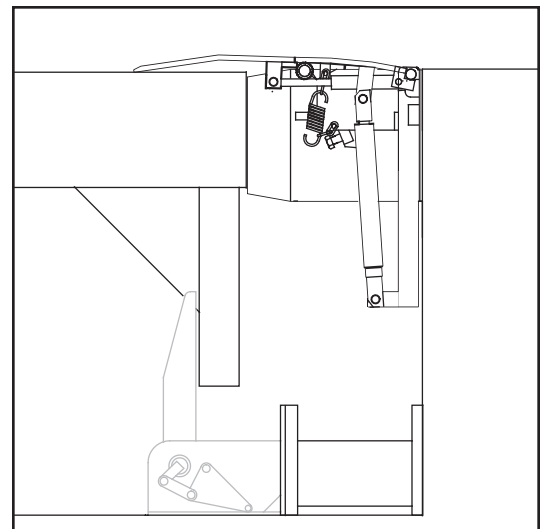
6.7 LIP ON LOAD BED



WARNING

The vehicle should never be allowed to depart with the lip plate resting on the load bed.

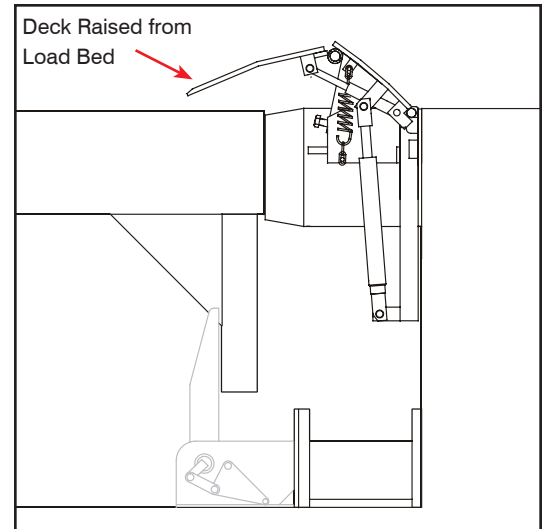
The lip plate will now be in full contact with the load bed.



PERFORM LOADING AND UNLOADING

6.8 STORING DOCK LEVELER

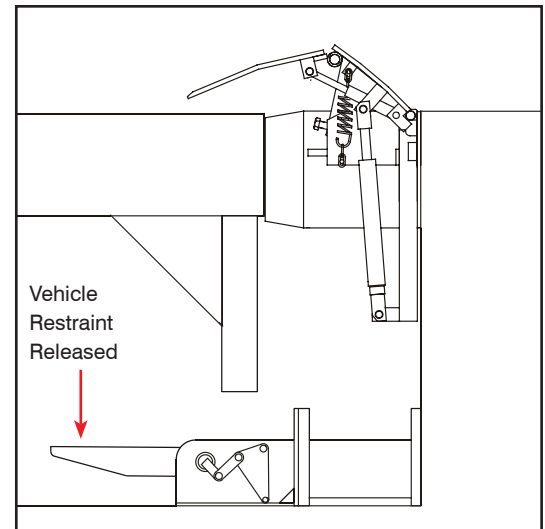
When the loading / unloading operation is completed, the operator repeats Steps 3 and 4 to raise the lip plate off the vehicle load bed.



6.9 DISENGAGING VEHICLE RESTRAINT / REMOVING WHEEL CHOCKS

The operator releases the vehicle restraint or removes the wheel chocks to allow the vehicle to depart. The operator then indicates to the vehicle driver that it is safe to depart.

The dock is once again available for use.



7.0 PLANNED MAINTENANCE



DANGER

When repairing or conducting maintenance procedures on electrical components, perform lockout / tagout steps according to OSHA regulations and approved electrical codes.



DANGER

Prior to repairs, place adequate barriers to prevent unauthorized personnel and vehicle from entering the work area.



WARNING

All repairs and maintenance work are to be conducted by trained and authorized personnel ONLY.

7.1 ROUTINE SERVICING AND MAINTENANCE

Regular maintenance and care of the equipment is very important for cost and operation efficiency and more importantly operator safety. Faulty equipment is potential source of danger to the operator, and to other personnel working near it. As with all quality equipment, keep the equipment in good operating condition by following the recommended schedule of maintenance. Failure to do so will void the manufacturer's warranty.

7.2 AUTHORIZE USAGE

The importance of this procedure is emphasized in this manual with a brief review and later with more detailed instructions. For more information regarding authorize usage, contact the manufacturer.

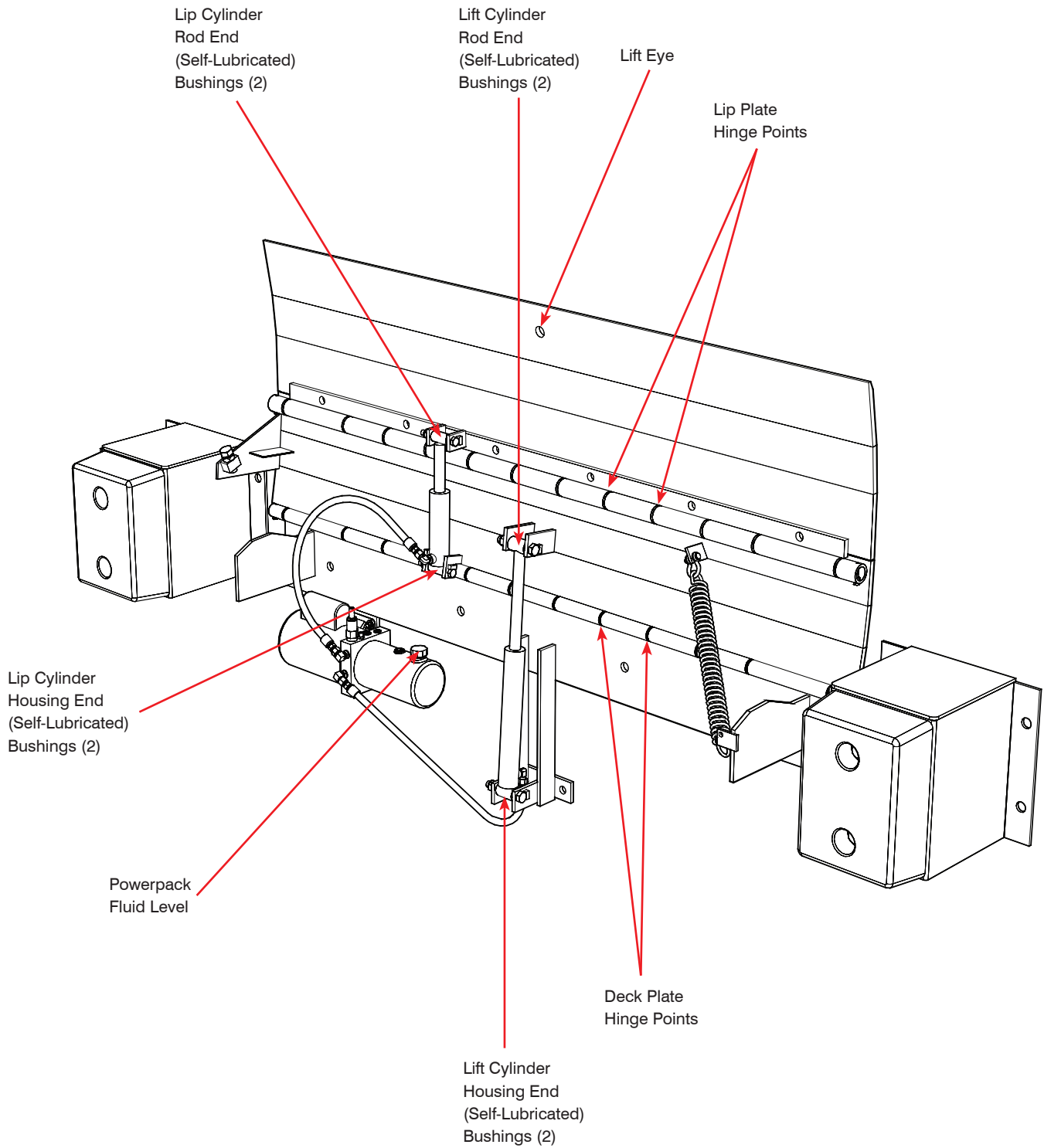
Available support by dealer / distributor:

- Equipment usage training and authorization
- Workplace practical guide for safe use of this product
- Ease of service; inspection and planned maintenance
- Equipment daily inspection checklist

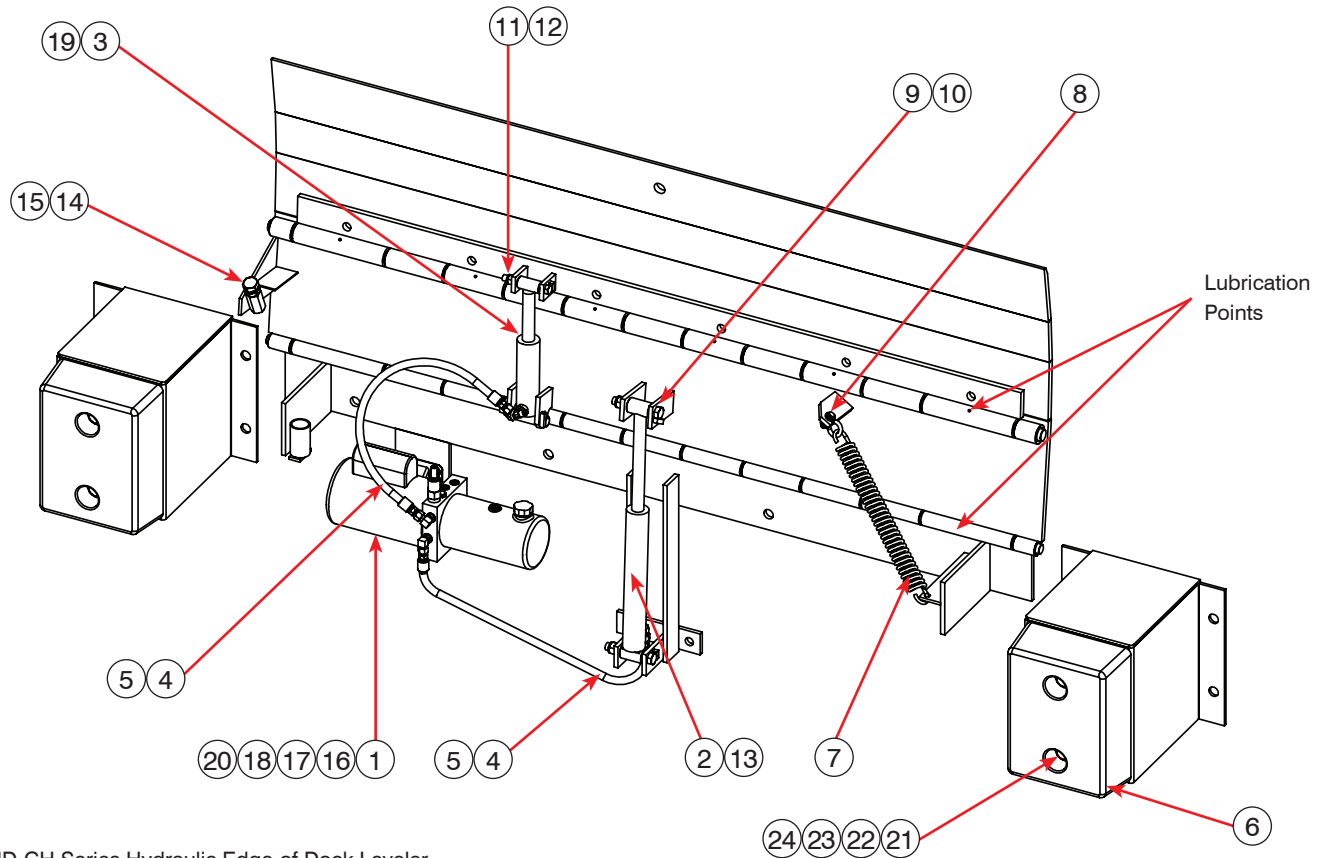
7.3 MAINTENANCE SEQUENCE

1. Cleaning, including surrounding area
2. Visual inspection of all components
3. Lubrication (as required)
4. Test operate all functions
5. Adjustments (if required)

8.0 COMPONENT IDENTIFICATION



9.0 RECOMMENDED SPARE PARTS

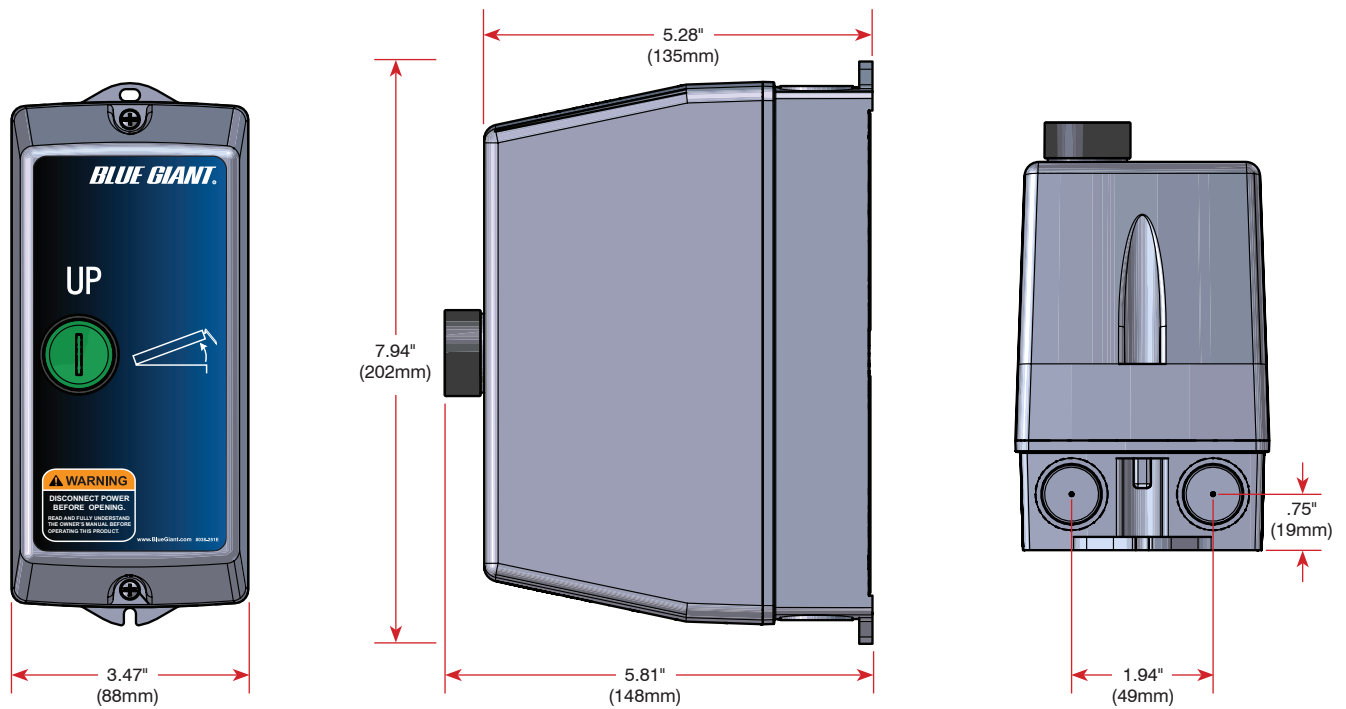


Model: MD-CH Series Hydraulic Edge-of-Dock Leveler
30,000 lb (13,608 kg) capacity

RSP FOR EOD LEVELER			
ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
1	033-434	Powerpack	1
2	200-03114	Lifting Cylinder Assembly	1
3	200-03115	Lip Cylinder Assembly	1
4	300-5000-17	Hydraulic Hose	2
5	034-601	Fitting	2
6	110-886	Bumper	2
7	017-034	Tension Spring	1
8	013-616	Shackle	1
9	010-168	Cap Screw	2
10	011-621	Lock Nut	2
11	010-131	Cap Screw	2
12	011-554	Lock Nut	2
13	018-007	Bushing	4

RSP FOR EOD LEVELER			
ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
14	010-059	Cap Screw	1
15	011-530	Jam Nut	1
16	012-211	Flat Washer	4
17	012-200	Lock Washer	4
18	011-502	Nut	4
19	018-006	Bushing	4
20	027-006	Control Box - Push Button	1
21	010-086	Cap Screw	4
22	012-214	Washer	4
23	011-510	Nut	4
24	012-222	Lock Washer	4
—	027-006	Control Station 115V	1
—	027-007	Control Station 230V	

10.0 CONTROLS



Front View

Side View

Bottom View

COMPLETE CONTROL STATION SINGLE PUSH BUTTON SP1				
ITEM	SINGLE PHASE			
	QTY.	PART NO.	DESCRIPTION	VOLTAGE RANGE
1	1	027-006-L	115V / 1PH / 50-60 Hz	110 - 130V
	1	027-007-L	230V / 1PH / 50-60 Hz	208 - 240V

Decal included (part # 038-251E)

COMPLETE CONTROL STATION SINGLE PUSH BUTTON SP1 WITH OVERLOAD				
ITEM	SINGLE PHASE			
	QTY.	PART NO.	DESCRIPTION	VOLTAGE RANGE
1	1	027-006-LO	115V / 1PH / 50-60 Hz	110 - 130V
	1	027-007-LO	230V / 1PH / 50-60 Hz	208 - 240V

Decal included (part # 038-251E)

11.0 MD-CH SERIES HYDRAULIC EDGE-OF-DOCK LEVELER TROUBLESHOOTING



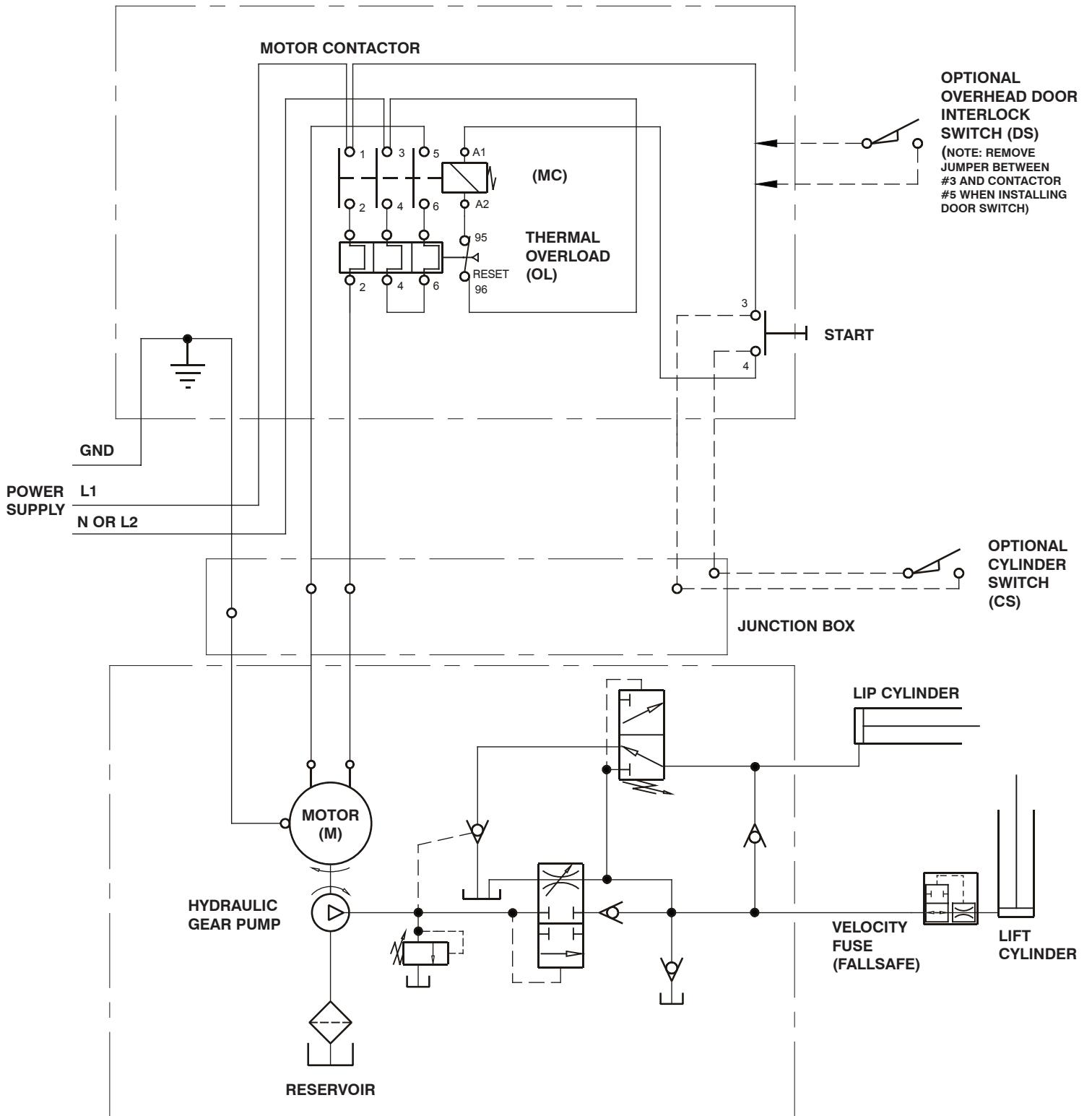
WARNING

Do not attempt to install, make repairs or adjustments. Only a trained and authorized service technician should perform the installation process. Contact your local dealer or distributor for assistance.

PROBLEM	PROBLEM CAUSE AND SOLUTION
Unit does not lower from fully raised position when push button is released.	<ol style="list-style-type: none"> 1. Lubricate all pivot points - SAE10 oil. 2. Check return spring tension (Part # 017-034), adjust or replace as required.
Unit lowers from fully raised position, but lip does not remain horizontal as deck plate rotates downward. - Lip does not deploy onto load bed	<ol style="list-style-type: none"> 1. Deck stop chain required adjustment. 2. Do not operate EOD Leveler with stop chain removed. 3. Powerpack requires sequential pressure setting adjustment (consult factory).
Lip plate raises early causing it to strike the rear of the vehicle.	<ol style="list-style-type: none"> 1. Powerpack requires sequential pressure setting adjustment (consult factory). 2. Deck / Lip Stop requires adjustment

12.0 WIRING DIAGRAM

REMOTE PUSH BUTTON STATION



Above schematic is for 1HP, 115-230V/1/60 (dual voltage motor) for MDC Series Model MD-CH
 Full load amps = 14.0 / 6.8

NOTES

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