

# INSTALLATION & OWNER'S MANUAL



## 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.

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## 1. ABOUT THE XDS DOCK LEVELER with DOOR AND DOCK GUARD

The **Blue Giant XDS2000 Extra Dock Safety System** features our heavy-duty I-beam dock leveler with built-in door and dock guard (DDG). A 4" (102 mm) maintained deck tilt prolongs deck life and prevents forklift damage. The raised guard is designed to prevent forklift roll-off and protect overhead doors from impact damage. Toe guards, a maintenance strut, and laminated bumpers provide extra safety to personnel and building during use.

The **Blue Genius™ Gold Series I Touch Control Panel** with advanced microprocessor technology controls the operation of the XDS2000. Using a combination of red /yellow / green LED control station lights and red / green exterior traffic lights, the Blue Genius™ alerts both the truck driver and dock attendants of safe and unsafe conditions. Its onboard diagnostics and communications feature a user-friendly, multi-language LCD intelligent text display and keypad with supervisory override support.

### 1.1

### OWNER'S PURCHASE RECORD

OWNER'S PURCHASE RECORD Please record information for future inquiries	
<b>Dealer:</b>	<b>Date in Service:</b>
<b>Serial Number(s):</b>	<b>Number of Units:</b>
	<b>Door # :</b>

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

## 2.

## INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the XDS2000 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 XDS2000 System. These laws and regulations include but are not limited to:

- The Occupational Safety and Health Act (USA)
- Occupational Safety and Health Acts for Individual States (USA)
- Canadian Material Handling Regulations

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  
(212) 642-4900



ALSO MEMBERS 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 Fax: (704) 676-1199

## 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 on-line Warranty Registration at [www.BlueGiant.com](http://www.BlueGiant.com).

For more information about Blue Giant's Warranty Support, please contact your local Blue Giant Equipment dealer, representative or authorized partner near you. You may also visit [www.BlueGiant.com](http://www.BlueGiant.com) or phone 1-905-457-3900.

\* 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 XD2000 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 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 XDS2000 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.


### 3. 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.


 <b>DANGER</b>	<b>IMPORTANT</b>
Serious injury or death will likely occur if the instructions are not followed.	Procedures marked IMPORTANT must be followed in order to prevent damage to machinery.
 <b>WARNING</b>	 <b>CAUTION</b>
Serious injury or death may occur if the instructions are not followed.	Instructions marked CAUTION concern safe operating procedure. Failure to comply may result in personal injury.

#### 3.1

#### OPERATIONAL SAFETY WARNINGS

 <b>DANGER</b>
<ul style="list-style-type: none"> <li>• <b>DO NOT</b> operate leveler with anyone standing in its path of operation.</li> <li>• <b>DO NOT</b> service leveler unless Maintenance Stand is properly engaged.</li> <li>• <b>BEFORE BEGINNING ANY SERVICE PROCEDURES:</b> <ul style="list-style-type: none"> <li>– Position the dock leveler in the vertically stored position.</li> <li>– Disconnect the power and follow all LOCKOUT / TAGOUT procedures.</li> </ul> </li> <li>• <b>DO NOT</b> operate leveler without filling the cylinder if the leveler has not been in service for an extended period of time.</li> <li>• <b>Procedure for filling cylinder:</b> <ul style="list-style-type: none"> <li>– Press and hold the 'Deck' button (Run Pump). Operate for <b>(35) seconds</b>.</li> </ul> </li> </ul>

 <b>WARNING</b>	<b>IMPORTANT</b>
<ul style="list-style-type: none"> <li>• Keep away from hinge when operating leveler.</li> <li>• Post safety warnings and barricade working area at dock level and at ground level to prevent unauthorized use of the leveler during maintenance/service.</li> <li>• During installation, anchors must be properly torqued to obtain the necessary anchoring strength. <b>DO NOT USE IMPACT DRIVERS.</b></li> <li>• <b>DO NOT</b> drive or walk onto the transport vehicle until it is parked against the dock bumpers and the wheels are chocked, or the Vehicle Restraint has been fully engaged and the lights have changed to <b>GREEN</b> inside and <b>RED</b> outside.</li> <li>• <b>NEVER</b> attempt to lift or hold the lip out by hand. Serious personal injury could occur.</li> <li>• <b>DO NOT</b> remove lifting equipment until:             <ul style="list-style-type: none"> <li>a) The main cylinder has been filled.</li> <li>b) The Maintenance Stand has been installed and engaged.</li> </ul> </li> <li>• <b>ALWAYS</b> check the rigging to make sure that it is secure before proceeding to lift the unit. <b>Never stand under any unit being lifted.</b></li> <li>• <b>NEVER</b> remove the wheel chocks until loading/ unloading is finished and the truck driver has been given permission to depart, or the Vehicle Restraint has been released and the lights have changed to <b>RED</b> inside and <b>GREEN</b> outside.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>DO NOT</b> ground welding equipment to any hydraulic cylinder or electrical components.</li> <li>• <b>DO NOT</b> attach welder as ground to leveler platform when welding on base frame assembly. Attach welder ground to base frame assembly <b>only</b>. Otherwise damage to bearings or hydraulic equipment will occur.</li> <li>• <b>DO NOT</b> allow the drill to go too deeply when drilling holes in the control box. Damage to the control systems may occur.</li> <li>• <b>NEVER</b> use air to blow debris from control box. Use a vacuum to remove debris from control box.</li> <li>• <b>DO NOT</b> connect green ground lead into control box or junction box until all welding has been completed.</li> <li>• <b>CHECK HYDRAULIC FLUID LEVEL.</b> Deck mounted power unit has been filled with fluid but cylinders, hoses and manifold are shipped dry.</li> <li>• <b>NOTE</b> - check motor rotation. Jog the motor until rotation has been determined. <b>DO NOT</b> allow the motor to run in reverse for more than a couple of seconds, otherwise the power unit may become damaged.</li> <li>• <b>DO NOT</b> force valve adjustment screws against internal stops. Damage will occur to the valve/seat.</li> <li>• If a procedure is not clearly defined in this manual, contact your authorized Service Representative.</li> </ul>

 <b>CAUTION</b>
<ul style="list-style-type: none"> <li>• <b>ONLY TRAINED PERSONNEL</b> should operate or service this equipment.</li> <li>• <b>DO NOT</b> operate leveler until freight carrier is parked against the dock bumpers and has been secured.</li> <li>• <b>ALWAYS</b> return the leveler platform to the proper stored position.</li> <li>• <b>ALWAYS</b> conduct routine inspections and maintenance. Failure to conduct could cause personal injury or damage to equipment.</li> </ul>

## 4.

## LOCKOUT / TAGOUT PROCEDURE and RULES

**⚠ 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.

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 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 devices not be susceptible to deterioration or illegibility due to weather conditions or exposure to chemicals and moisture.





**ABOVE: APPROVED WAY TO LOCKOUT / TAGOUT**

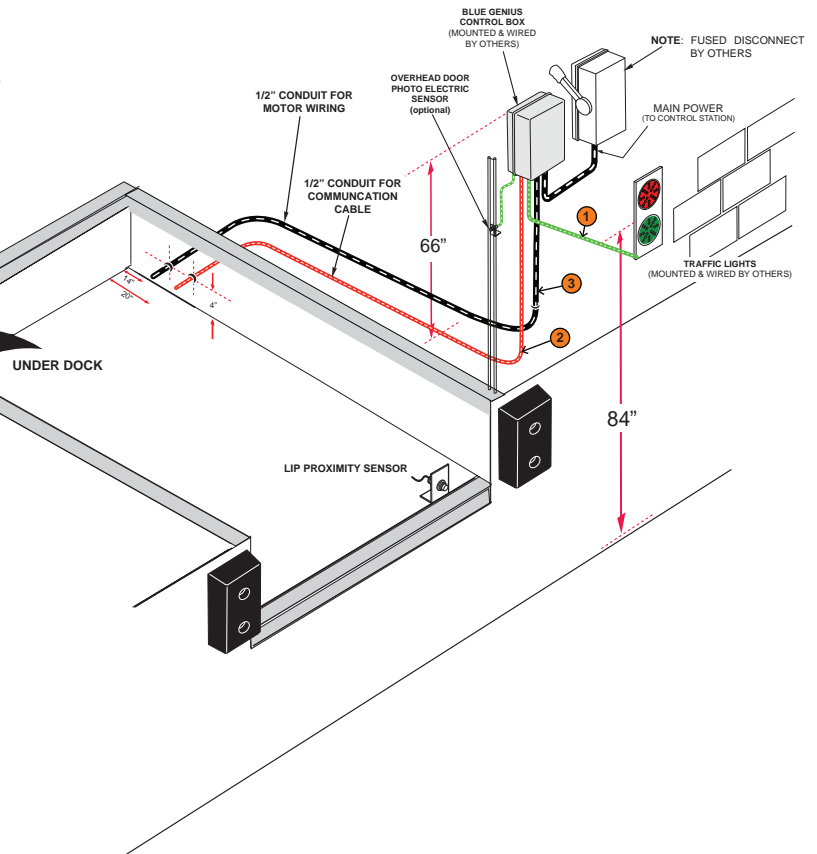
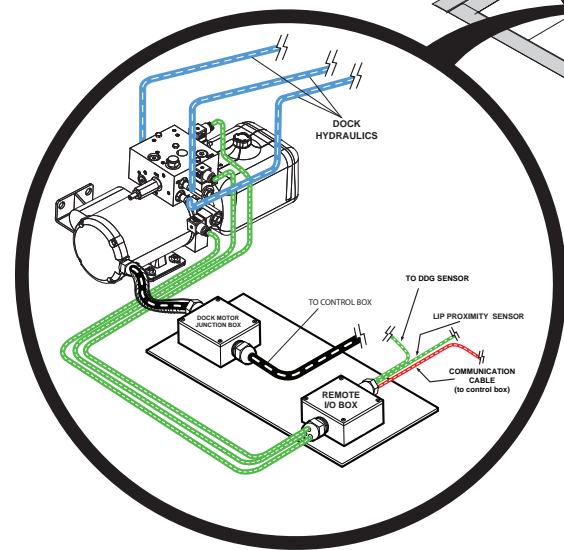
## 5. XDS DOCK (pit mounted) INSTALLATION ARRANGEMENT

### NEW CONSTRUCTION (COMBO DOCK C/W POWER PACK & RESTRAINT):

- 1 DRILL ONE HOLE THROUGH THE WALL TO THE OUTSIDE AND WIRE THE L.E.D TRAFFIC LIGHTS.
- 2 INSTALL ONE 1/2" I.D. CONDUIT FROM THE CONTROL BOX TO THE REMOTE I/O FOR THE DOCK'S COMMUNICATION CABLE.
- 3 INSTALL ONE 1/2" I.D. CONDUIT FROM THE CONTROL BOX TO THE DOCK'S POWER PACK FOR MOTOR WIRING.

CONDUIT MADE OF RIGID PLASTIC 80 P.S.I. 8" MIN. BEND RADIUS.  
MINIMUM CONCRETE STRENGTH 3,000 P.S.I.

 CABLES  
 POWER WIRING  
 HYDRAULIC HOSE LINES  
 COMMUNICATION CABLES



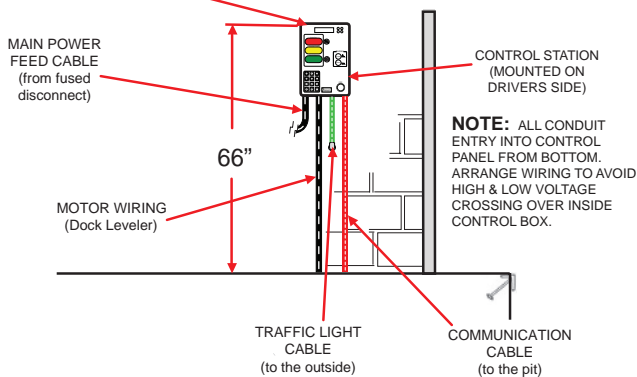
### ELECTRICAL REQUIREMENTS:

- MOUNT CONTROL BOX STATION TO WALL, SIGNAL LIGHTS AND DRIVER WARNING SIGNS
- FUSED DISCONNECT PROVIDED BY OTHERS AND WIRING BY OTHERS
- INSTALL CABLE FROM CONTROL BOX STATION TO POWER PACK (BY OTHERS)
- INSTALL CABLE FROM CONTROL BOX STATION TO POWER SUPPLY (BY OTHERS)

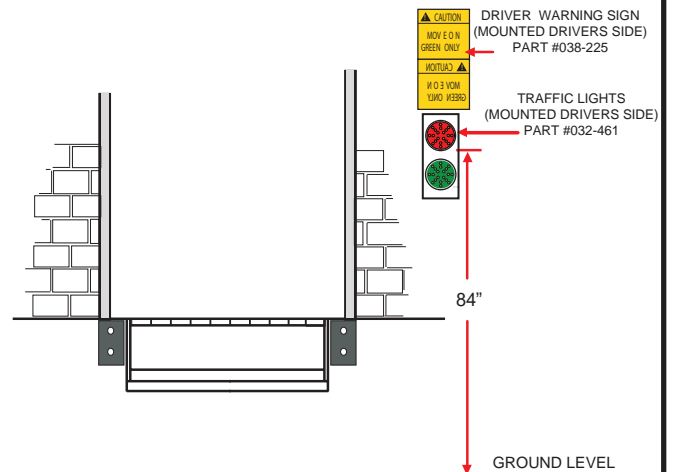
### WARNING

**DO NOT WIRE HIGH AND LOW VOLTAGES IN THE SAME CONDUIT.** High voltage range is 115V and up. Lower voltages include the communication and solenoid wiring as well as the I/O.

**DO NOT** RUN MAIN POWER WIRING THROUGH TOP OF CONTROL STATION



INSIDE BUILDING VIEW\*



FRONT ELEVATION VIEW\*

NOTE: \*DRAWINGS NOT TO SCALE



6.

# DOCK LEVELER INSTALLATION

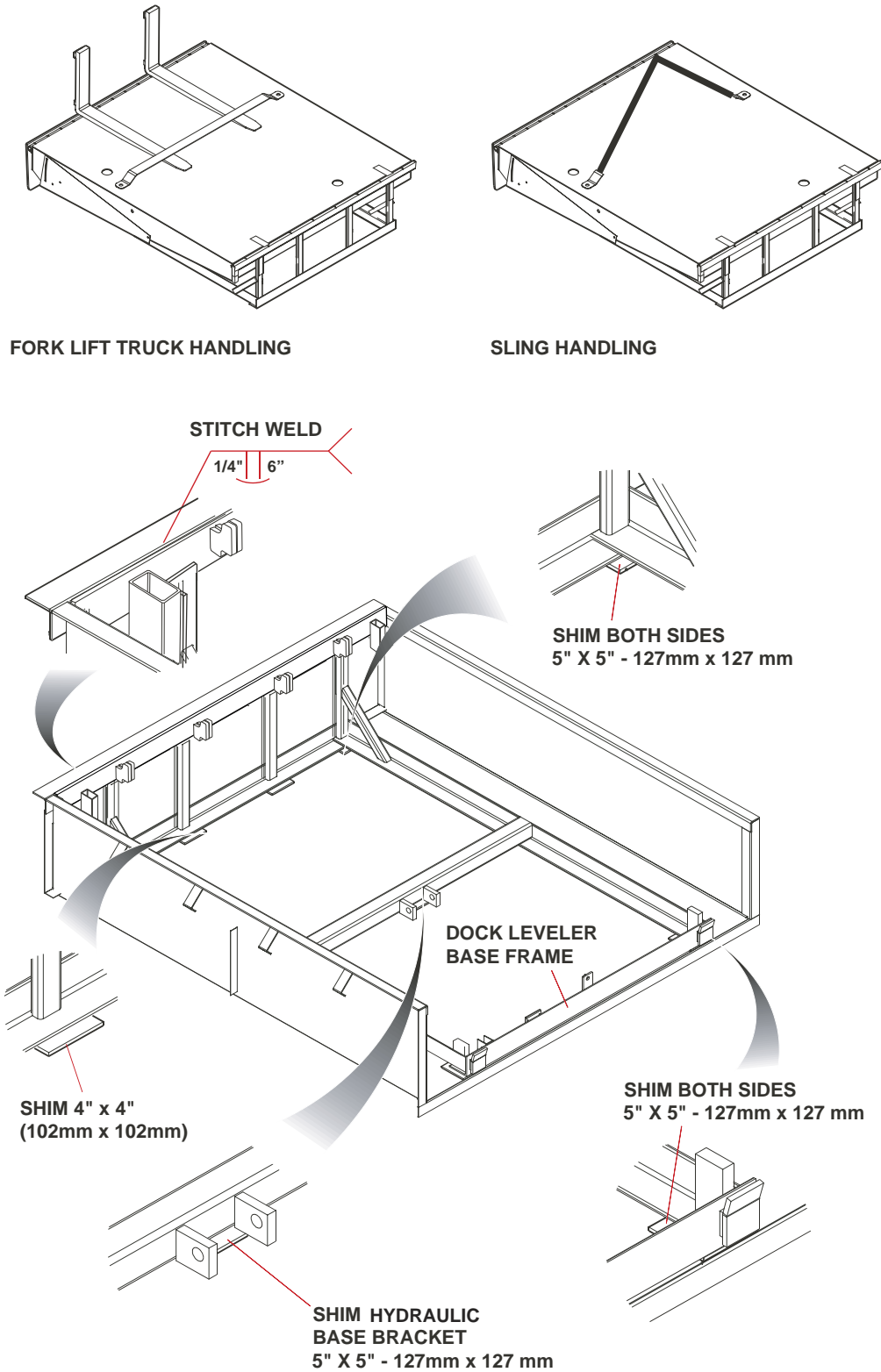


Figure 1 : Dock Leveler Installation Pictorial



## 7.

## DOCK LEVELER INSTALLATION INSTRUCTIONS

**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.

**IMPORTANT**

The information below is crucial to proper installation:

**Pit Curb Angles**

- A. Must be level side-to-side and front-to-back.
- B. Must be square at both rear corners.
- C. Side curb angles must be parallel to each other.
- D. Finished floor to be flush with top surface of curb angle.

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

1. Prior to installation, clean pit thoroughly and verify that all dimensions are in accordance with manufacturer specifications.
2. Measure height of rear corners of dock leveler, bottom of frame to top of deck plate, typically 19" or 23"(485 or 585mm). Measure depth of pit at both rear corners where rear bottom corners of frame will be positioned. Locate and place suitable shims (not supplied) in pit corners to produce a depth to match frame height.
3. Measure height of dock leveler front corners, bottom of frame to top of deck plate, typically 19-1/2" or 23-1/2" (495 or 595mm). Measure depth of pit at both front corners where front bottom corners of frame will be positioned. Locate and place suitable shims (not supplied) at both front corners to produce a depth to match frame height. See Figure 1.

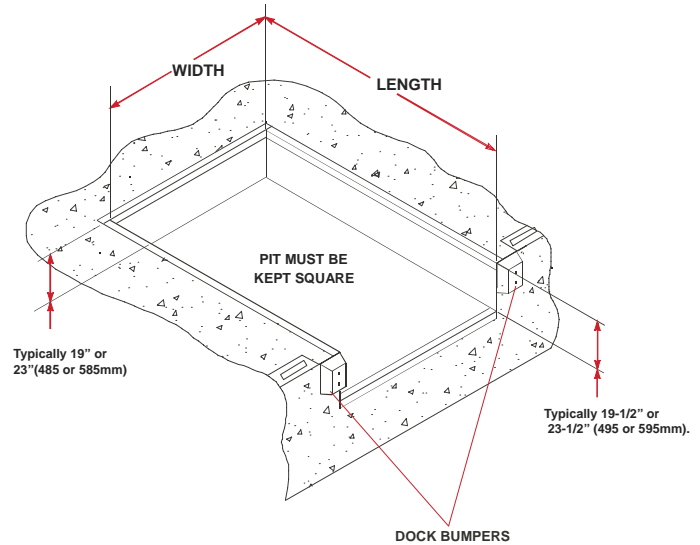
**WARNING**

All electrical work must be performed by trained and authorized personnel.

4. Prepare to hook up electrical wires and hydraulic hoses if required. Identify hose ends as "Lip" and "Deck". For units with self-contained (mounted under deck) power pack, establish a temporary electrical hook-up to enable deck to be raised and lowered during installation. For units with a wall mounted (remote) power pack, prepare hydraulic hoses for "pulling" through conduit and electrical wires for temporary hook up.

**WARNING**

Use caution when lifting or moving the leveler. Do not attempt to lift without suitable hoisting equipment capable of lifting as much as 3500 lbs. Do not work beneath a raised object. Follow all hoisting safety requirements.



**Figure 1 : Pit Layout - Typical (Four piece curb angle shown)**

5. Using extreme caution, sling dock leveler into place squarely above pit and lower gently onto pre-located shims. Locate and square dock leveler to best suit pit and dock face. Space between sides of deck and sides of pit should be equal. Line up the bottom clevis holes to the pivot edges of the rear frame.

**IMPORTANT**

It is important that the shims fill the space between the bottom edge of the back beam and face of the curb angle, as well as behind each hinge lug on the top edge. Confirm that the top of the back beam is flush with the top surface of the rear curb angle, and then finish weld back beam to curb angle.

6. If the rear beam does not line up squarely with the rear curb angle, use 3" x 6" (75mm x 150mm) shims of suitable thickness to fully support top rear and bottom rear of rear beam at weld areas. Weld rear beam to curb steel with 1/4" x 6" (6mm x 150mm) welds, on 9-5/8" (250mm) centers.
7. Remove sling brackets, chains, etc. from the deck. Remove and discard the shipping bolts from the front of the dock leveler lip plate and the rear tilt bar.
8. Check the deck height to confirm that it is flush with the top of the side curb angles and tack-weld all front shims to the front curb angle and front frame.
9. Adjust the lip proximity sensor and interlock sensor by loosening the holding nuts and setting the gap. Once the desired adjustment has been achieved, re-tighten the holding nuts.

## 7.

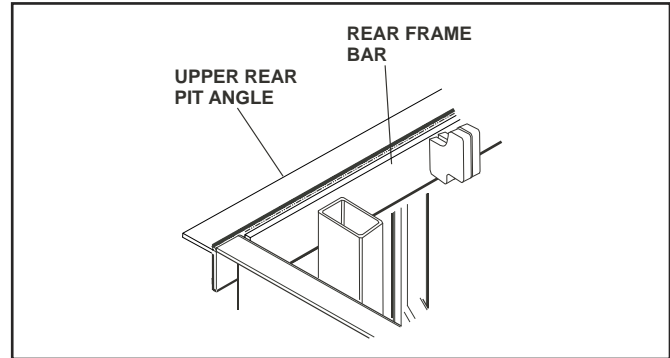
## DOCK LEVELER INSTALLATION INSTRUCTIONS

10. Mount Blue Genius Control Station assembly in a suitable location. Mount power unit in a suitable location if applicable (remote power pack).
11. If power unit is mounted remote from pit (wall mounted) permanently attach hydraulic hoses. "Lip" hose is attached to the top fitting on the power unit manifold block and the "Deck" hose is attached to the side fitting.
12. Perform a temporary electrical hook-up to allow use of power unit to raise dock leveler. Confirm correct motor rotation on start-up of 3 phase units – if motor runs but deck will not raise, qualified personnel to interchange any two motor leads.
13. Touch and hold "Deck" button to raise deck and extend lip. Raise and position maintenance strut. Release the button and allow dock leveler to lower onto maintenance strut. Install additional blocking to assure deck can not lower unexpectedly and place traffic barriers as required.
14. Remove the pin from telescopic maintenance strut, and extend the maintenance strut to the desired height. Then reinsert pin to engage the strut to the head board.

### WARNING

Do not work beneath the dock leveler without engaging the maintenance strut.

Do not work beneath the dock leveler without following proper lockout procedures. Disconnect and lockout the electrical power supply, and confirm that there is no power to the dock leveler control panel. Also confirm that it cannot be turned on again accidentally.



## 7.1

## Installation Inspection

1. Clean up the entire work area and apply touch-up paint to all welds, scratches and burns.
2. Test operate the unit through several full cycles of operation. Refer to the Operating Procedures section. If problems are noted, consult the TROUBLESHOOTING section of this manual.
3. Leave these Instructions with the dock leveler for use by owner.

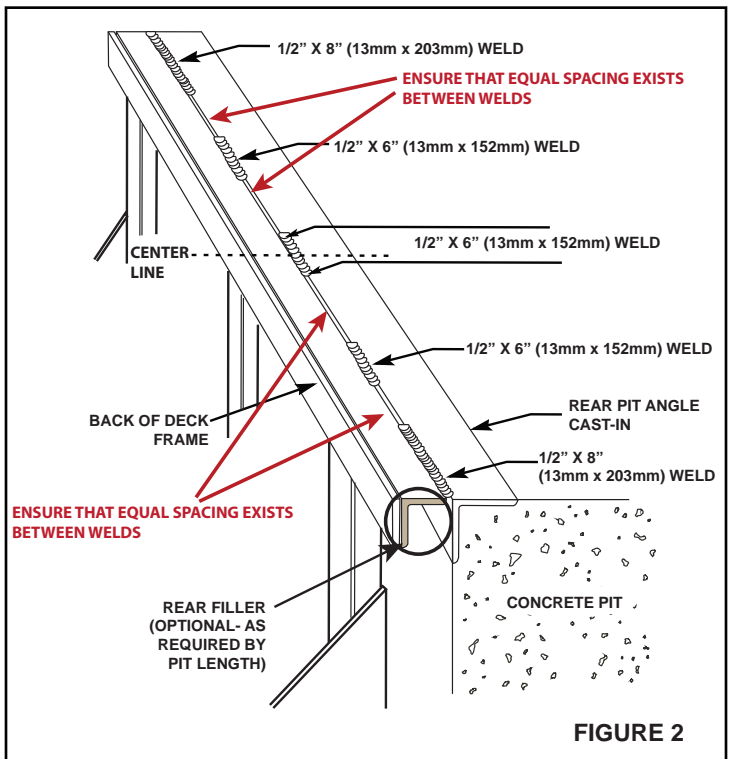


FIGURE 2

15. Rear frame on most models has one or more vertical frame members in addition to rear corner vertical members. Place adequate shims directly under each vertical member to fill space between bottom frame and floor of pit. Finish weld all rear shims.
16. Measure thickness of shims that were installed under middle of front frame and place same thickness of 6" x 6" (150mm x 150mm) shims under base of deck cylinder. Finish weld to cylinder mounting plate.
17. Finish weld all shims securely to the front curb angle and front frame.
18. Install specified dock bumpers as required. Do not use the dock leveler to be used without bumpers, as damage to both building and leveler may result.
19. Release bottom safety skirts by removing and discarding shipping bolts, one bolt from each side.
20. Make permanent electrical and hydraulic connections as required.
21. Mount the operations placard on the wall in plain view of dock leveler operations.

## 8.

## ELECTRICAL AND HYDRAULIC INSTALLATION

**! WARNING**

**DO NOT WIRE HIGH AND LOW VOLTAGES IN THE SAME CONDUIT.** High voltage range is 115V and up. Lower voltages include the communication and solenoid wiring as well as the I/O.

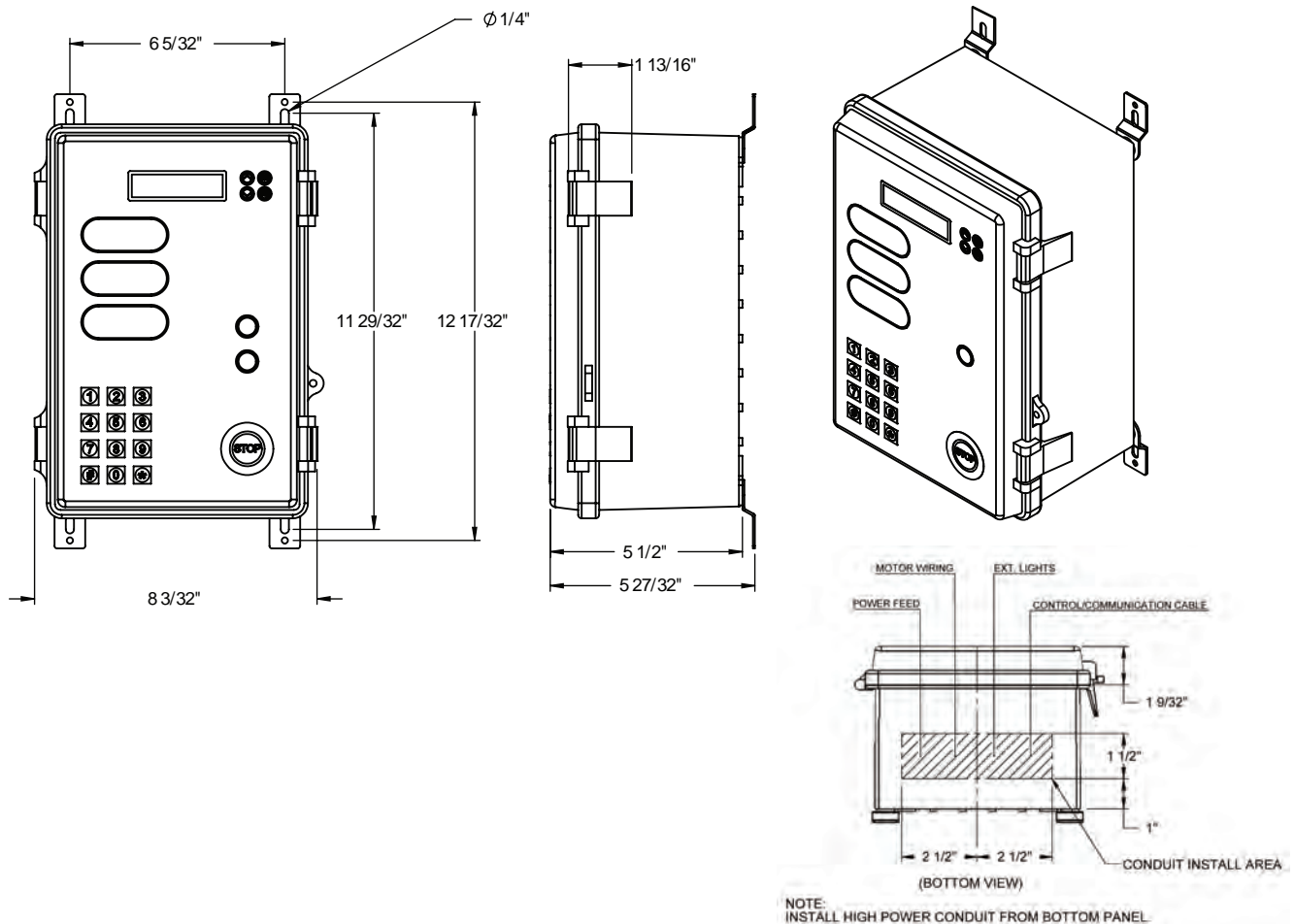
During installation, place adequate barriers to prevent vehicle traffic from entering the work area, and follow proper lockout / tagout procedures.

## 8.1 Electrical and Hydraulic Dock Installation

1. Securely mount the exterior traffic lights and signs on the exterior wall adjacent to the doorway (on the driver's side), at approximately 8 feet (2438mm) above floor level.
2. Drill one hole through the wall to the outside for the L.E.D communication lights cable. Run cable through to the control box. Install cable gland, run cable through, and tighten it.
3. Run one 1/2" I.D. conduit from control station to the remote I/O for the dock's communication cable.
4. Run one 1/2" I.D. conduit from the control station to the dock's power pack for the motor wiring.
5. Complete the electrical hookup between the exterior traffic lights and control panel.

For a pictorial of this installation procedure, see Section 5.

Figure 1: Blue Genius™ control station dimensions and conduit install area.



## 8.2

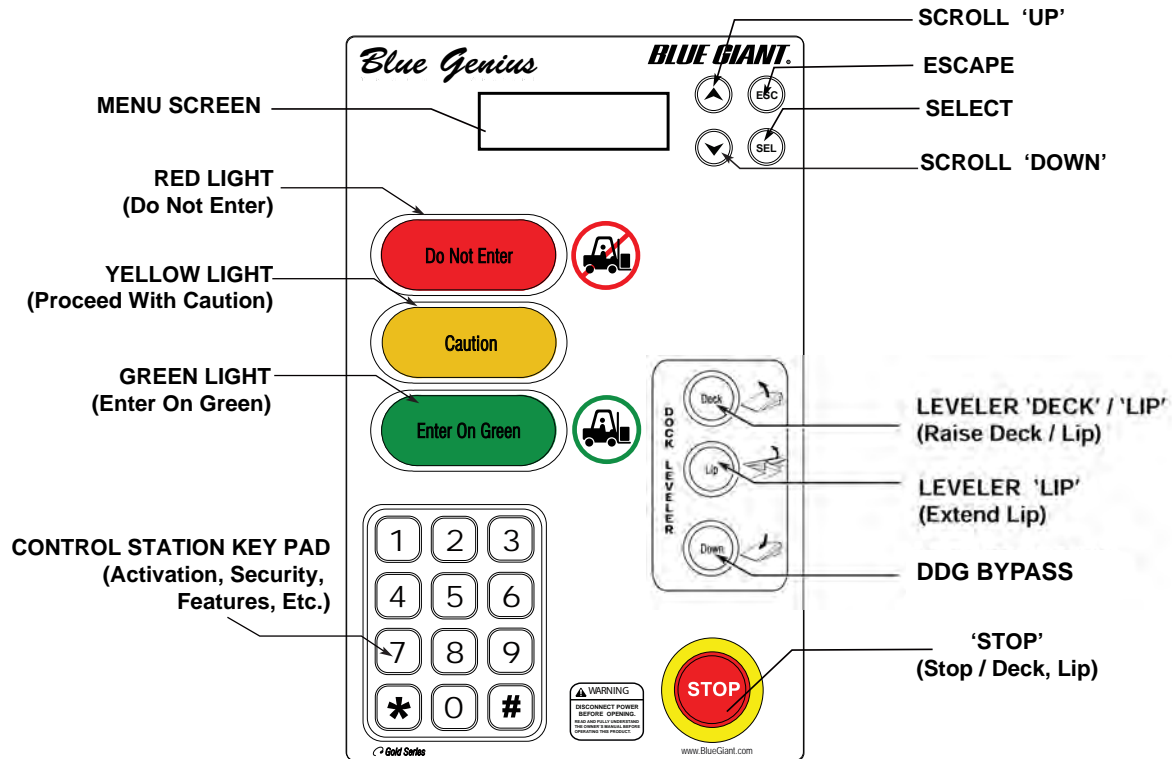
## Final Inspection

1. Check all hydraulic connections for leaks and tighten as required.
2. Check that all electrical and hydraulic conduits, hoses, and wires are mechanically protected against damage and are adequately secured.
3. Return all wiring diagrams to the Blue Genius™ Control Panel.
4. Mount warning placard next to the Blue Genius™ Control Panel.
5. Leave these instructions near the dock leveler for easy future access.

## 9.

## CONTROL STATION OPERATION

## CONTROL STATION TYPE - Blue Genius Gold Series I for XDS2000



## 10.

## OPERATING INSTRUCTIONS

**⚠ WARNING**

Do not operate this leveler unless you have been trained and authorized to do so, and have read and understood all of the safety information and instructions contained herein and on the leveler.

Do not operate the dock leveler beyond its rated capacity.

Do not operate this leveler until you have checked its condition. Report the need for repairs to your supervisor immediately and do not operate the unit 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 manually.

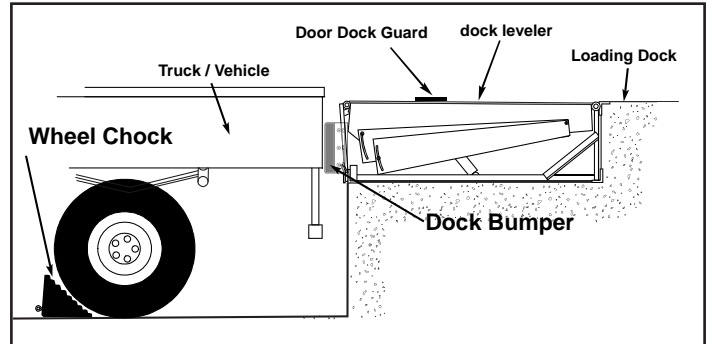
Do not drive on the leveler unless the lip is securely on the truck bed and has a minimum of 4" (100mm) overlap on its surface.

Do not exceed 4 mph when driving over the dock leveler.

Do not drive over edges of the leveler and / or dock bumper blocks (bumpers blocks are not structural).

**⚠ WARNING**

Secure the transport vehicle with a vehicle restraint, wheel chocks or other method before commencing traffic across the dock leveler.



## 10.1 Functional Description

The XDS Dock Leveler with Door and Dock Guard (DDG) is intended to serve as a bridge between a loading dock floor and the load bed of a transport vehicle. The leveler's upper deck plate, complete with a hinged, vertically hanging lip, is in a shallow pit at the edge of the dock, flush with the dock's edge and the floor surface. The raised guard is designed to prevent forklift roll-off and protect overhead doors from impact damage. Toe guards, a maintenance strut, and laminated bumpers provide extra safety to personnel, equipment, and building during use.

The rear of a transport vehicle is parked and blocked in place against the outer wall of the loading dock, in working alignment with the dock leveler, which is operated by maintaining pressure on a touch button to raise the front of the deck. The hinged lip plate raises with the deck, its leading edge swinging out horizontally over the rear of the transporter vehicle once the deck reaches its fully raised position. The dock attendant releases the touch button, causing the deck and extended lip to lower together until the lip's underside comes to rest on the load bed of the transporter vehicle. A solid bridge is now formed between the dock and the truck.

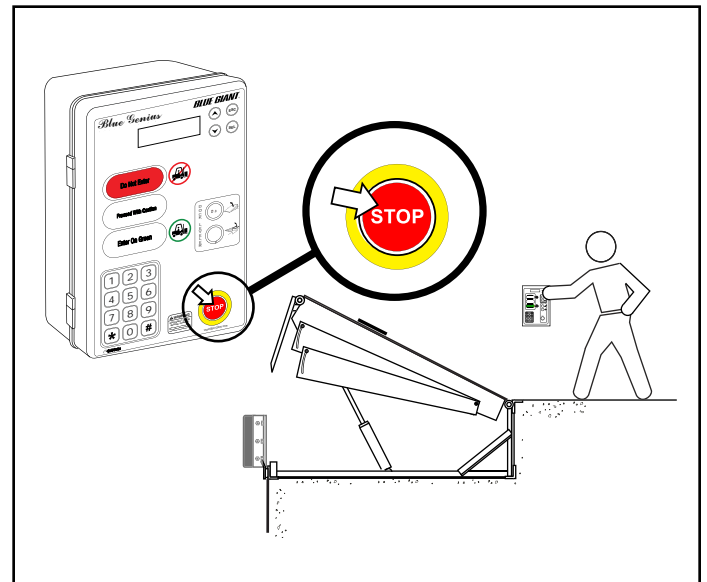
During loading/unloading operations, both deck and lip automatically follow the raising and lowering movement of the transport vehicle. The DDG in combination with the overhead door sensor provides a safe means of moving between the load bed and dock during loading and unloading by automatically activating the DDG if the door happens to close. If the door closes during loading / unloading the DDG will raise, preventing traffic from damaging the dock door.

Once all work is completed, the dock attendant returns the leveler to its original stored position.

## 10.2 Stop Button Function

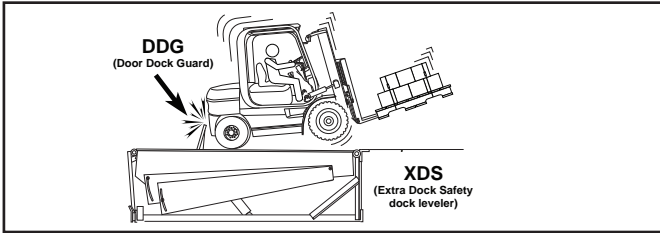
The Blue Genius™ Control Panel has a temporary 'STOP' button for situations where the dock leveler might need to be stopped immediately or left in a certain position because of an unexpected interference or a potentially dangerous situation. Touching the 'STOP' button during operation will cause the unit to stop in mid motion.

To exit the 'STOP' mode touch 'ESC'.



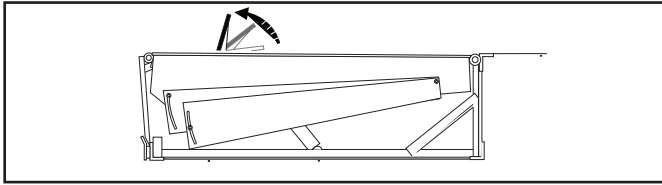
## 10.

## OPERATING INSTRUCTIONS

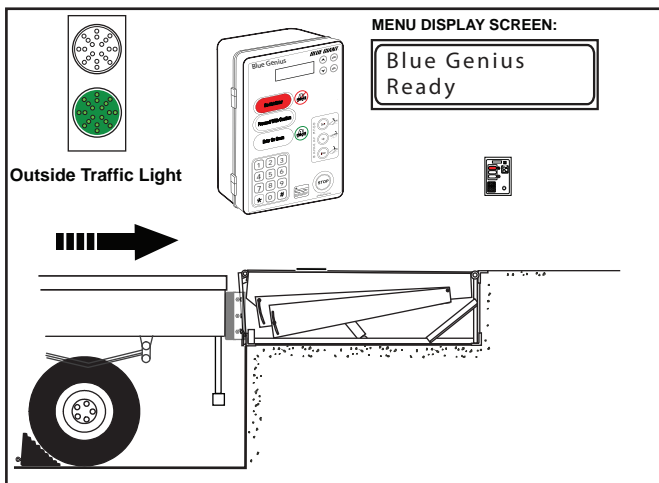


## 10.3 Operating Procedure

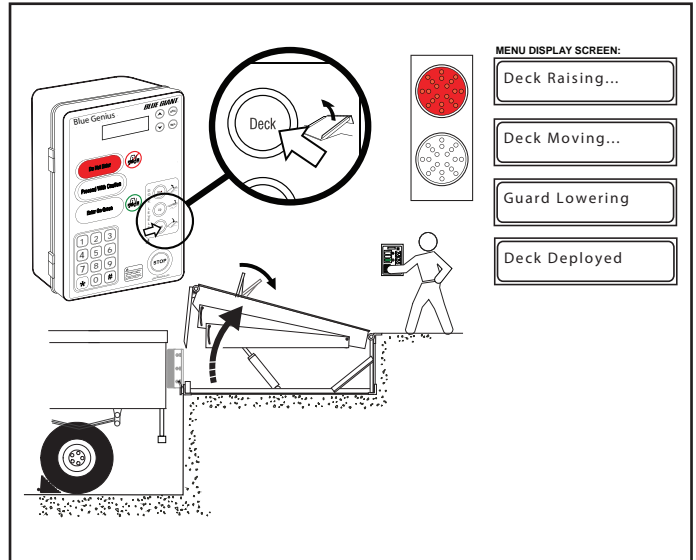
1. When the unit is first powered on, the DDG will automatically deploy from the stored to the raised position to prevent forklift traffic from falling through the door.



2. The carrier vehicle reverses into position against the dock leveler bumpers. The outside traffic light is GREEN and the control panel light is RED.

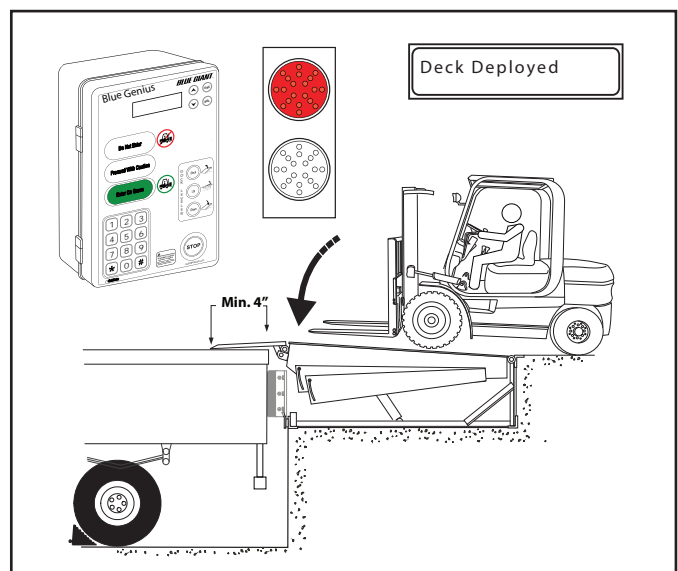
10.4 Operating Procedure (Method 1)  
Deploying the XDS Dock (Deck Button Only)

1. After the truck is parked and restrained / chocked in place, raise the dock leveler by touching and holding the 'Deck' button. The LCD screen will read 'Deck Raising'. Both the control panel and outside traffic light are RED. Keep holding the deck button until the lip deploys.



2. Release the button. The LCD screen reads 'Deck Moving'. Both dock leveler and deployed lip will descend onto the truck bed. The DDG will lower and the onscreen message will change to 'Guard Lowering' followed by 'Deck Deployed'. The control panel light will turn GREEN while the outside traffic light remains RED.

**NOTE:** Ensure that the full width of the lip overlaps the vehicle load bed a minimum of 4" (102mm) to provide full dock leveler support.



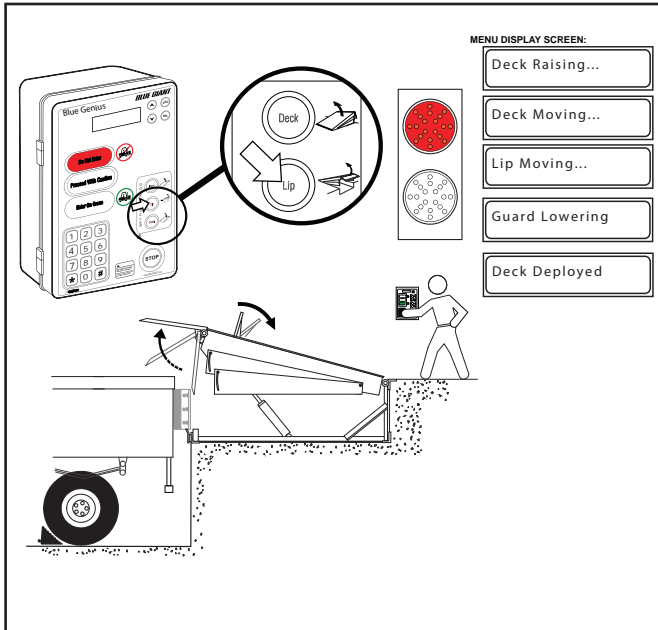


## 10.

## OPERATING INSTRUCTIONS

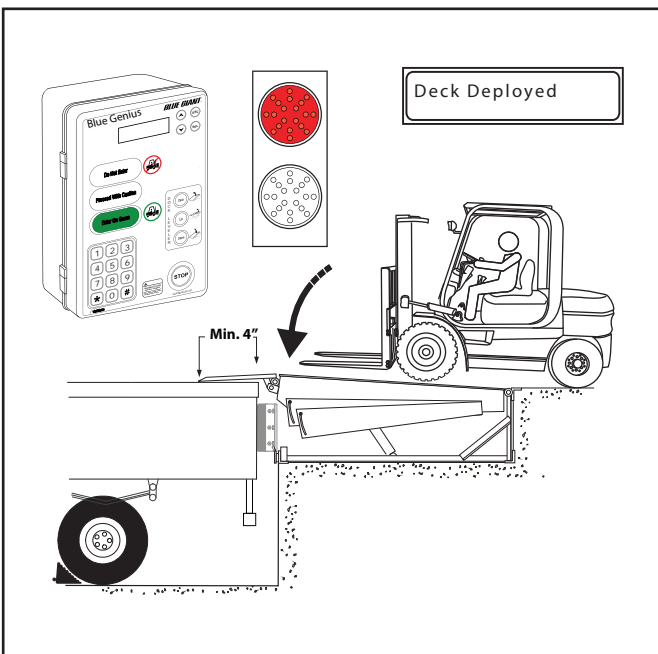
## 10.5 Operating Procedure (Method 2) Deploying the XDS Dock (Deck and Lip Buttons)

1. Touch and hold the 'Deck' button. The LCD screen will read 'Deck Raising'. When the lip has cleared the lip keepers, release the 'Deck' button and touch and hold the 'Lip' button. The LCD screen reads 'Lip Moving'.



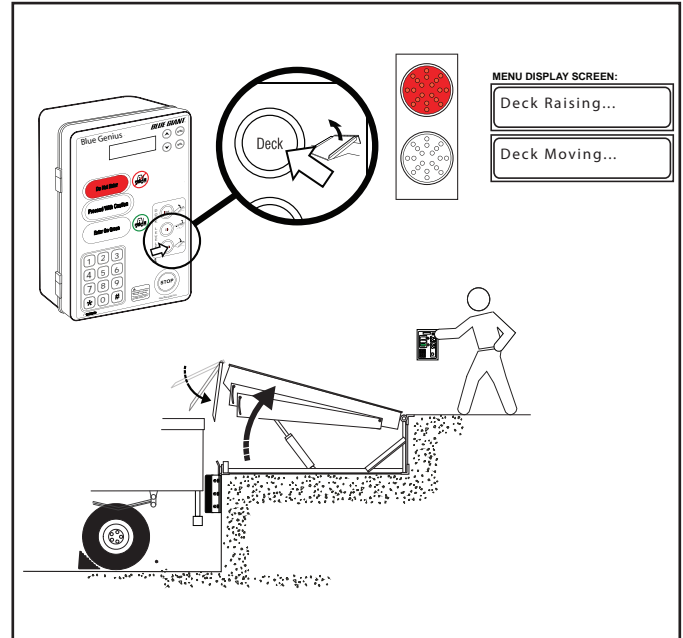
2. Release the button. The LCD screen reads 'Deck Moving'. Both dock leveler and deployed lip will descend onto the truck bed. The DDG will lower and the onscreen message will change to 'Guard Lowering' followed by 'Deck Deployed'. The control panel light will turn GREEN while the outside traffic light remains RED.

**NOTE:** Ensure that the full width of the lip overlaps the vehicle load bed a minimum of 4" (100mm) to provide full dock leveler support.

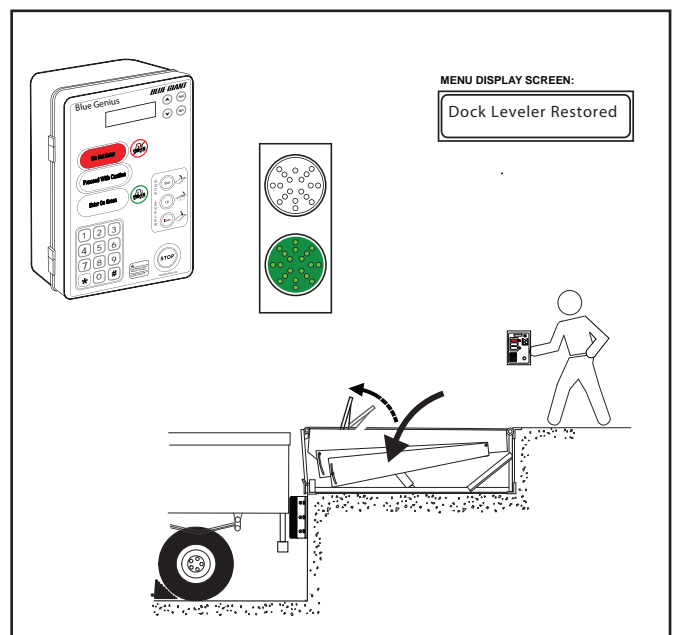


## 10.6 Operating Procedure - Returning Dock To Stored Position

1. Touch and hold the 'Deck' button. The control panel light turns RED. The deck will raise and the lip will retract. The LCD screen reads 'Deck Raising'.



2. When the lip has fully retracted, release the 'Deck' button. The LCD screen will read 'Deck Moving' and the deck will fall to the stored position with the lip in the lip keepers. The DDG will rise and the LCD message will change to 'Dock Leveler Restored'. The outside traffic light will turn GREEN.





## 10.

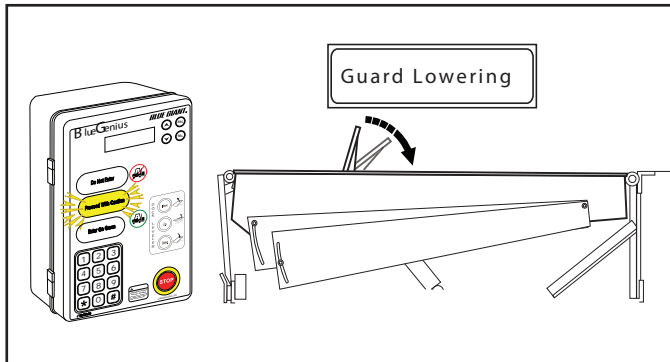
## OPERATING INSTRUCTIONS

## 10.7 DDG - FOR END LOADING / UNLOADING

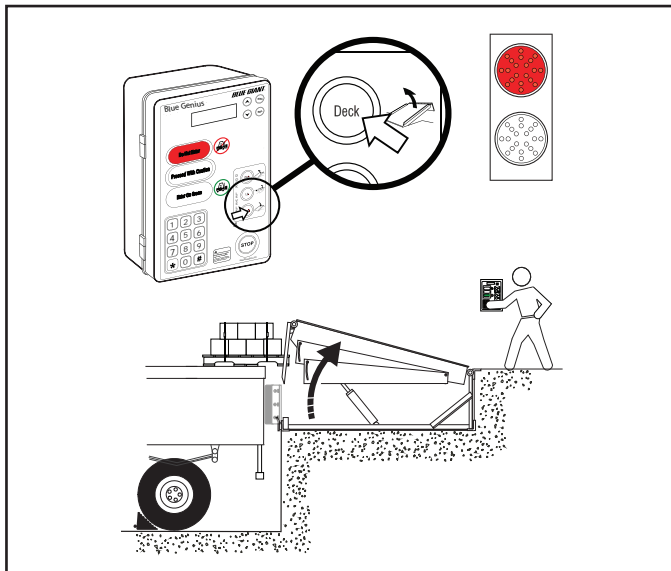
## 10.7.1 Lowered / Deactivated Position (Manually)

**For End Loading Only:** Touch the 'Down' button. The LCD message 'Hold to Lower Guard' will appear. Hold it for three (3) seconds. The menu screen will display the message 'Guard Lowering'. When the DDG lowers, the control station's YELLOW light will come on and remain active for the duration of the Bypass mode.

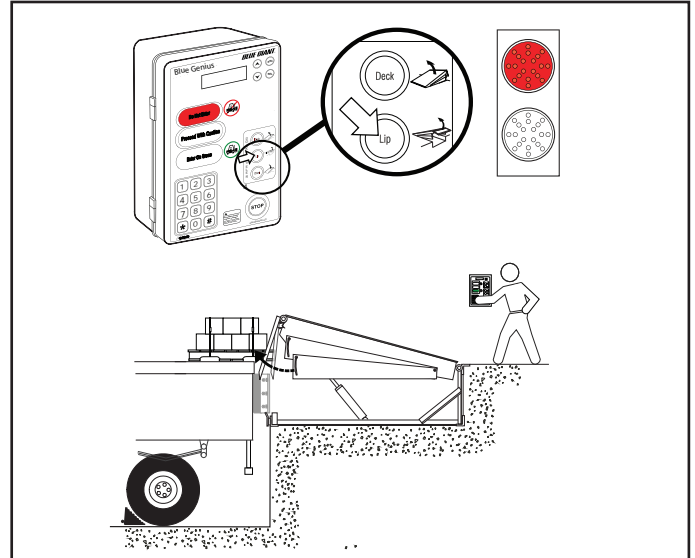
NOTE: The DDG can only be lowered when the dock is in the parked position. Touching the 'Down' button again will bring the DDG out of Bypass mode.



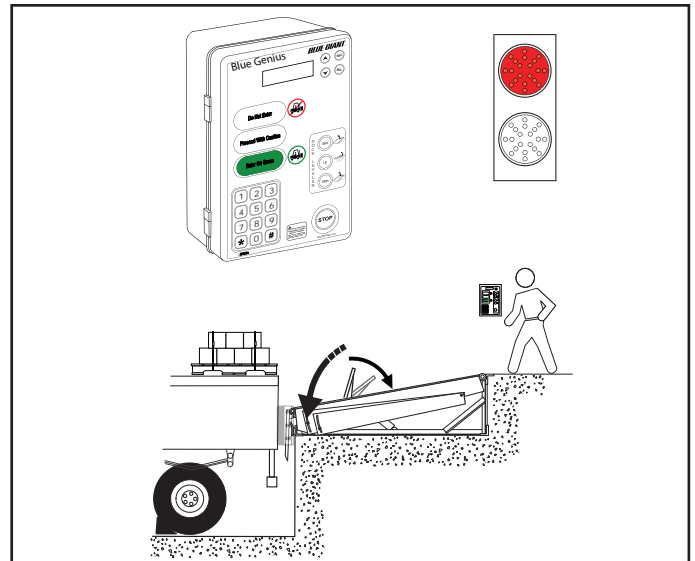
1. Touch and hold the 'Deck' button until the lip clears the lip keepers. The control panel light changes to red when 'Deck' button is touched..



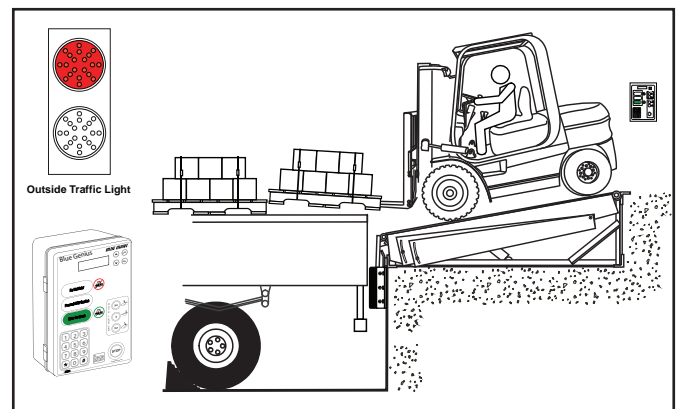
2. Touch and hold the 'Lip' button to deploy the lip (approx. 2").



3. Release the 'Lip' button. If the lip is sufficiently clear of the lip keepers, the dock will descend past floor level so below level / end loading can be performed. The control panel light changes to GREEN once the leveler has stopped at the below level position.



4. Perform below level / end loading or unloading operation.

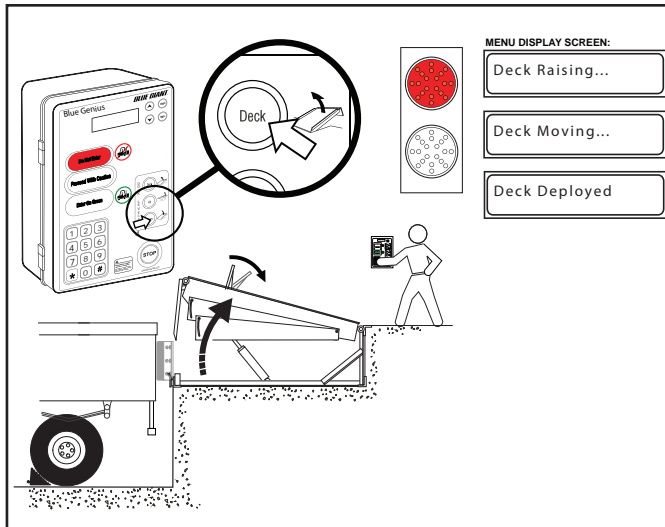


## 10.

## OPERATING INSTRUCTIONS

## 10.7.2 Deploying the Dock Leveler- Returning to Normal Lip-on-Load Bed Operation

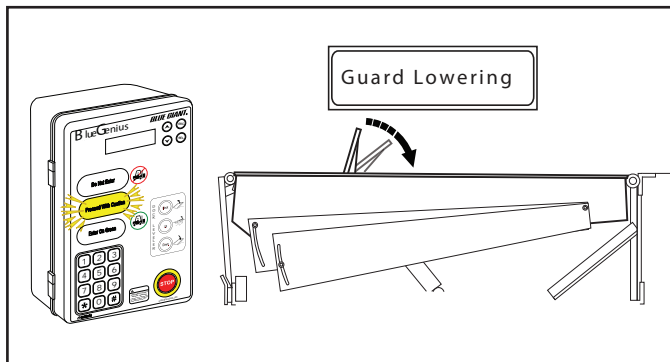
1. When below level / end loading has been completed, return to the normal 'lip on vehicle load bed' operation by touching the 'Deck' button until the dock is high enough for the lip to deploy safely onto the load bed.



## 10.8 DDG Bypass Mode

Touch the 'Down' button. The LCD message 'Hold to Lower Guard' will appear. Hold it for three (3) seconds. The menu screen will display the message 'Guard Lowering'. When the DDG lowers, the control station's YELLOW light will come on and remain active for the duration of the Bypass mode.

NOTE: The DDG can only be lowered when the dock is in the parked position. Touching the 'Down' button again will bring the DDG out of Bypass mode.

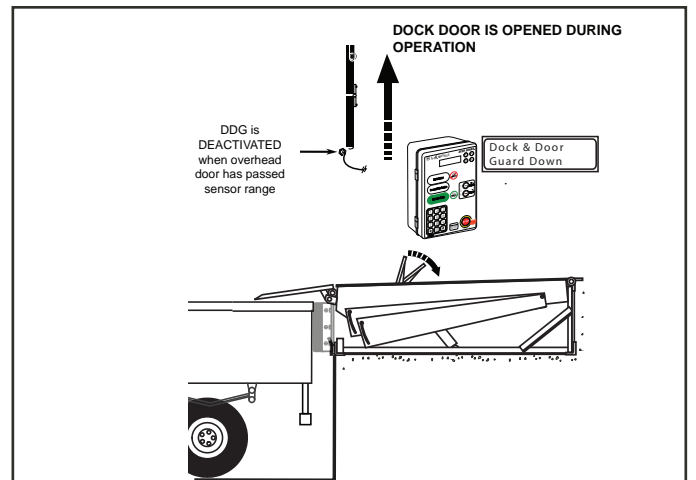
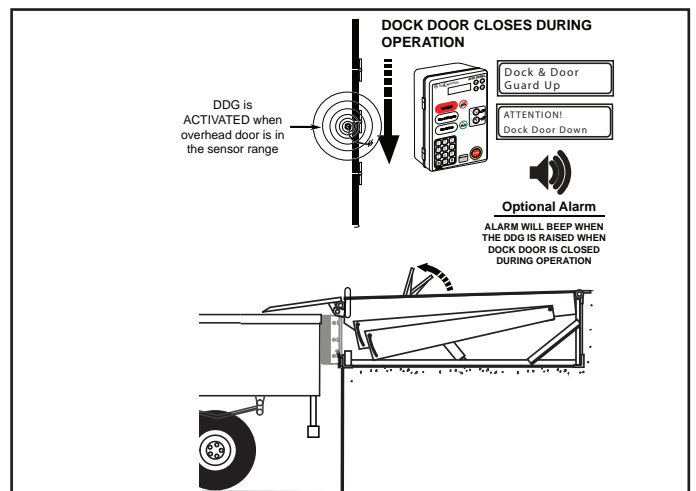


## 10.8 DDG &amp; Overhead Door Sensor (optional)

The DDG in conjunction with the overhead door sensor offers an extra degree of safety during loading and unloading operations. If the sensor detects that the door has closed, the DDG is automatically activated, preventing traffic from striking and damaging the dock door.

As the DDG raises, the optional alarm will sound and the control station light will change from GREEN to RED. The menu screen will read 'ATTENTION! Dock Door Down' before switching the message to 'Dock & Door Guard Up'.

When the door is reopened, the DDG automatically deploys back to the lowered position for cross traffic. The menu screen will read 'Dock & Door Guard Down' and the control station light will change from RED to GREEN.



## 11.

## MAINTENANCE

**⚠ WARNING**

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

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

*Follow proper lock-out/tag-out procedures.*

*Keep hands and feet clear of dock leveler pinch points and wear appropriate safety attire - glasses, gloves and work boots.*

**11.1 Planned Maintenance**

In addition to the daily operator inspection, the manufacturer recommends (and local government regulations may require) that a planned maintenance (PM) and safety inspection program be performed by a trained and authorized service technician on a regular basis to maintain the equipment in safe operating condition. The PM will provide an opportunity to make a thorough inspection of the safety and operating condition of the dock leveler. Necessary adjustments and repairs can be done during the PM, which will increase the life of components, reduce unscheduled downtime, and increase safety.

The procedures for a periodic planned maintenance program that covers inspections, operational checks, cleaning, lubrication, and minor adjustments are outlined in this manual. An authorized dealer or distributor is prepared to assist with a Planned Maintenance Program by trained service personnel who possess expertise in dock leveler safety and efficiency.

**11.2 Operator Daily Inspection**

The dock leveler should always be examined by the operator to ensure it is safe to operate, PRIOR TO ANY USE. The importance of this procedure is emphasized in this manual with a brief illustrated review and later with more detailed instructions. The manufacturer recommends making multiple photocopies of the Operator's Daily Checklist. The operator should make a daily inspection prior to use; filling out this form in order to keep a daily record of operation and maintenance issues.

**⚠ WARNING**

*The Maintenance strut must be in place before commencing maintenance procedures.*

**11.3 Routine Servicing and Maintenance**

Regular maintenance and care of the dock leveler is very important for cost and operation efficiency and more importantly; operator safety. A faulty dock leveler is a potential source of danger to the operator, and to other personnel working near it. As with all quality equipment, keep the dock leveler in good operating condition by following the recommended schedule of maintenance.

Failure to properly maintain or operate the dock leveler within its rated capacity can void the manufacturer warranty.

**11.4 Planned Maintenance Intervals**

Arrange for a qualified dock leveler Repair Technician to perform regularly scheduled planned maintenance on your dock leveler every 3 months for single shift operations or monthly for multi-shift operations.

Call your authorized manufacturer/ dealer for further details.

**11.5 Maintenance Sequence**

1. Cleaning, including pit area.
2. Visual inspection of all components.
3. Lubrication, as required. (by a trained service technician only)
4. Test operate all functions.
5. Adjustments, if required. (by a trained service technician only)
6. Check for missing or damaged dock bumpers.
7. Record inspection details and findings for owners' files.

**11.6 Recommended Hydraulic Fluids****Normal, All Season Weather Conditions:**

- Valvoline All Weather 36 or equivalent.

**Note: Dextron II Automatic Transmission Fluid may be used if other suitable oils are not available.**

**Extreme Low Temperature Conditions:**

- Esso Univis N15 or Gulf Harmony Arctic 15 or suitable equivalent.

## MAINTENANCE &amp; SERVICE TIME INTERVALS FOR SPECIFIC DOCK COMPONENTS CHART

	DECK CYLINDER	DECK ASSEMBLY	MAINTENANCE STAND	LIP HINGE ASSEMBLY	LIP CYLINDER	HYDRAULIC OIL RESERVOIR
<b>INSPECT</b>	ALL THE ABOVE EVERY 90 DAYS (for multi-shift operations every 30 days is required)					
<b>CLEAN</b>	ALL THE ABOVE EVERY 90 DAYS Clean Lip As Required (for multi-shift operations every 30 days is required)					
<b>LUBRICATE</b>	As Needed	Every 90 Days Pivot Points (Light Oil)	Not Required	Every 90 Days (Grease)	Every 90 Days (Light Oil)	Drain, Flush & Change Once Per Year
<b>ADJUST</b>	As Needed	Not Required	Not Required	Not Required	As Needed	Fill As Needed

Note : In many localities, all lifting devices must be inspected a minimum once per year.

## 11.7

## PM CHECK LIST - DOCK EQUIPMENT

<b>Customer</b>		<b>Tel</b>		<b>SWO#</b>	
<b>Location</b>		<b>Cust. Contact</b>			
<b>Date</b>		<b>Inspected By</b>			

## Barricade Work Area

<b>CLEAN</b>	<b>Repairs?</b>	<b>OK</b>	<b>CHECK / ADJUST / LUBE</b>	<b>Repairs?</b>	<b>OK</b>
			Check Main Lift Cylinder		
Pit Area			Check Lip Lift Cylinder		
Deck Hinge			Check Clevis Pins & Lubricate		
Lip Hinge			Check Push-Button Station		
<b>CHECK</b>	<b>Repairs?</b>	<b>OK</b>	<b>Check Wiring Harness</b>		
Check Full Operating Cycle			Check Oil Level (Top off as needed)		
Check Instruction, Caution, Danger Labels			Check Automatic Return To Dock		
Check Welds On Dock Leveler			Check Dock Bumpers		
Check Maintenance Strut / Lip Latch			Check Weather Seals		
Check Ramp Rear Hinges			Check Dock Seal/Dock Shelter		
Check Dock Leveler Structure, Sub Frame, Shim					
Lubricate Rear Hinges & Pins					
Lubricate Dock Leveler Lip Hinge					
Structural Damage					
Check Lip Crown			Check For Proper Operation		
Dock Bumpers / Extensions					
Overhead Door					
Curb Angle			Place Updated Service Sticker On Equipment		
Safety Skirts			Clean Up Of Dock Leveler Area		

**COMMENTS**

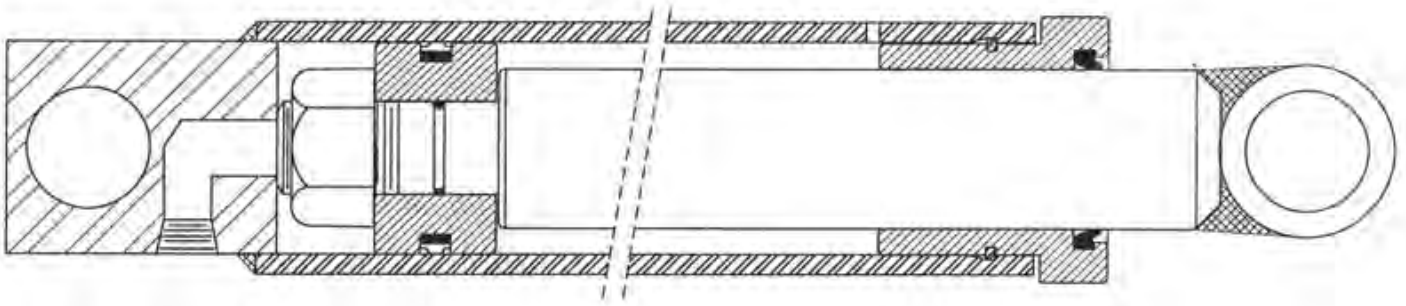

**REPAIRS RECOMMENDED**


**WARNING**

*Do not install this leveler, operate and/or service unless you have been trained and authorized to do so.*

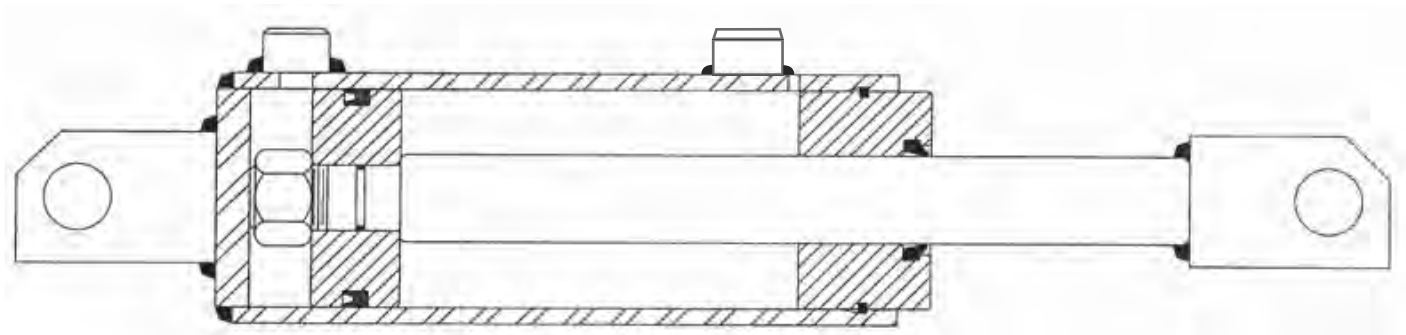
## 12.

## HYDRAULIC CYLINDERS



## 12.1 Hydraulic Deck Lifting Cylinder

ITEM	QTY	PART NUMBER	GENERAL DESCRIPTION
-----	-----	788-635-1	Deck Lifting Cylinder – (6' & 8' Long Docks)
-----	-----	788-636-1	Deck Lifting Cylinder – (10' & 12' Long Docks)
-----	-----	036-205	Seal Kit for all Deck Lifting Cylinders



## 12.2 Hydraulic Lip Extension Cylinder

ITEM	QTY	PART NUMBER	GENERAL DESCRIPTION
-----	1	211-7002	Lip Extension Cylinder - (Double Acting)
-----	1	211-7002-1	Seal Kit for Lip Cylinder

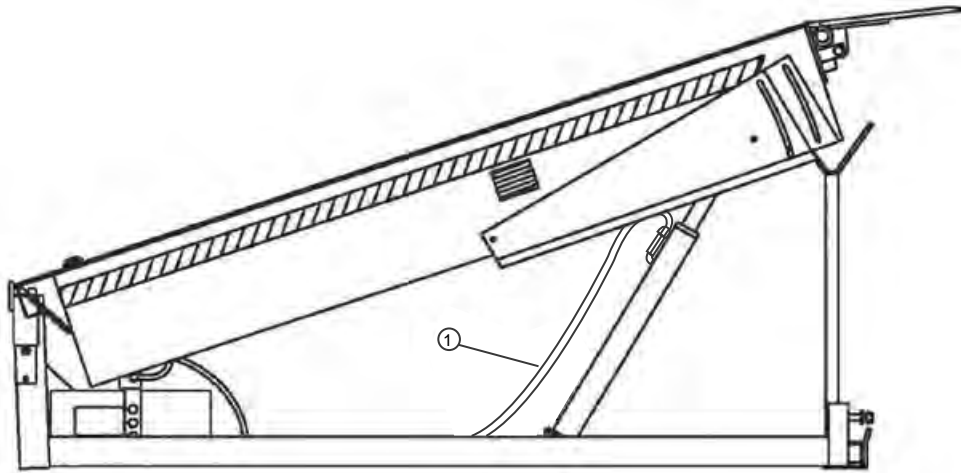


## 12.3 Velocity Fuse – Fall Safe

ITEM	QTY	PART NUMBER	GENERAL DESCRIPTION
1	1	033-661	Velocity Fuse – All Models

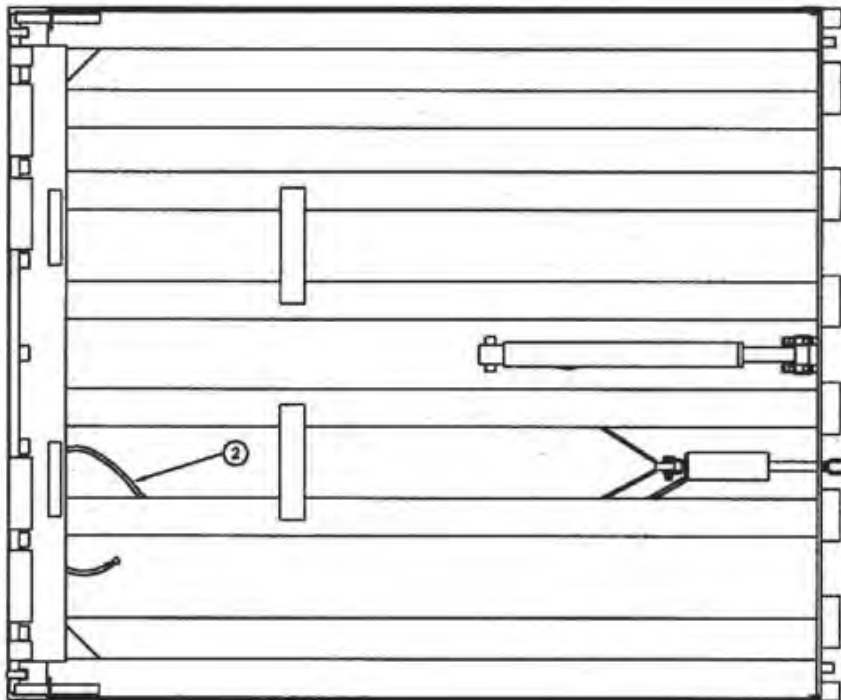
## 13.

## LEVELER HYDRAULIC HOSES



## 13.1 Deck Lifting Cylinder - Hose All Capacity

ITEM	QTY	PART NUMBER	GENERAL DESCRIPTION
1	1	788-621	6' and 8' Models (Nominal Deck & Lip Length)
1	1	788-331	10' & 12' Models (Nominal Deck & Lip Length)



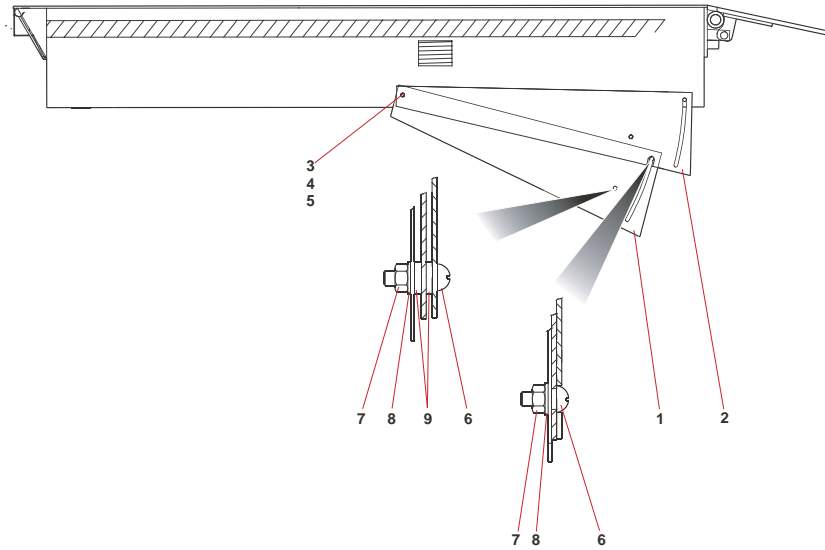
## 13.2 Lip Extension Cylinder - Hose All Capacity

ITEM	QTY	PART NUMBER	GENERAL DESCRIPTION
2	1	788-329	6' and 8' Models (Nominal Deck & Lip Length)
2	1	788-334	10' & 12' Models (Nominal Deck & Lip Length)



14.

## SIDE SAFETY SKIRTS



Side Safety Skirts

ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
-----	-----	202-5024	Safety Skirt Package - 6' & 8' Long	4	2	012-252	Washer, Flat - 3/8" ID BS Washer
-----	-----	202-5024-1	Safety Skirt Package - 10' & 12' Long	5	2	011-552	Nut, Hex 3/8"-16 Nylon Insert
1	2	202-0036	Safety Skirt, Lower - 6' & 8' Long	6	4	011-135	Capscrew, Sckt Buttn/Hd 5/16"-18x3/4
1	2	202-5036-1	Safety Skirt, Lower - 10' & 12' Long	7	4	011-543	Nut, Hex - 5/16"-18 Nylon Insert
2	2	202-5037	Middle Safety Skirt - 6' & 8' Long	8	4	012-211	Washer, Zinc 5/16" Bs Flat
2	2	202-5037-1	Middle Safety Skirt - 10' & 12' Long	9	4	012-312	Washer Nylon Fender 5/16" ID x 7/8" OD x 1/16" TH
3	2	010-039	Cap Screw, Hex Hd. - 3/8"-16x1"	10	2GA	039-059	Paint, Safety Yellow

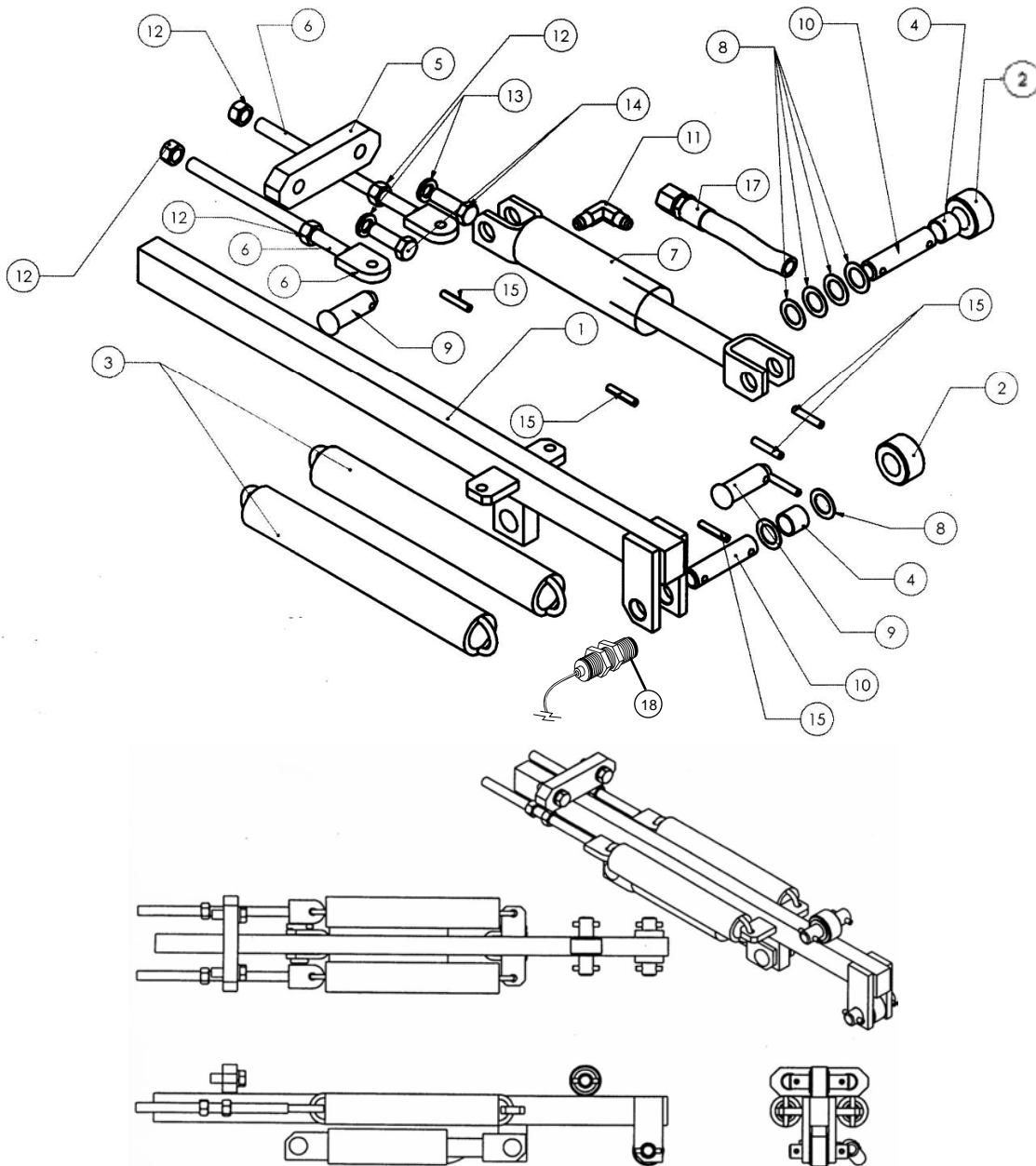


## 15.

## XDS FLAP ACTUATOR - PARTS

ITEM	QTY	PART NO.	DESCRIPTION
1	1	200-01021	Safety Lip Actuator Bar Weldment
2	2	119-748	Push Roller
3	2	017-062	Spring
4	2	018-001	Bushing
5	1	200-01003	Guide Block top Strap
6	2	200-01038	Clevis Weldment
7	1	200-01039	Cylinder 2.25 Stoke
8	6	105-878	Spacer Washer
9	2	107-196	Clevis Pin

ITEM	QTY	PART NO.	DESCRIPTION
10	2	200-01042	Support Roller Pin
11	1	034-511	Adapter 90o
12	4	011-508	Hex Nuts
13	2	012-220	Regular Spring Lock Washers
14	2	010-048	Hex Head Cap Screw
15	6	013-011	Spring Pin 1/4" dia.
16	1	028-126	Limit Switch
17	1	100-5003-3	Hose #4 High Pressure Straight
18	1	028-199	Proximity Sensor



## 16.

## XDS RECOMMENDED SPARE PARTS

## REPLACEMENT PARTS FOR FLAP ACTUATOR

Part #	Description	Qty Req'd
Consult factory	XDS FLAP WELDEMENT	*
200-01021	XDS SAFETY LIP ACTUATOR BAR	1
017-062	SPRING EXTENSION CLOSED HOOK	2
010-048	CAP SCREW,	2
012-220	WASHER	2
200-01003	XDS GUIDE BLOCK TOP STRAP	1
200-01038	XDS CLEVIS WELDMENT	2
HARDWARE REQ'D: QTY: X 4, Part # 011-508 HEX NUT		
791-015-022	CYLINDER-SUB ASS'Y	1
QTY: X 1, Part # 034-511 Adapter 90, QTY: X 2, Part # 107-196 CLEVIS PIN, QTY: X 2, Part # 013-011 SPRING PIN		
791-015-1	SEAL, KIT FOR CYLINDER-SUB ASS'Y	1
100-5003-3	HOSE ASSEMBLY HIGH PRESSURE	1
119-748	ROLLER-PUSH	2
200-01042	PIN-ROLLER SUPPORT	2
HARDWARE REQ'D: QTY: X 2, Part # 018-001 BUSHING, QTY: X 4, Part # 013-011 SPRING PIN, QTY: X 6, Part # 105-878 WASHER		
028-126	SWITCH, LIMIT, ADJUSTABLE ROD	1

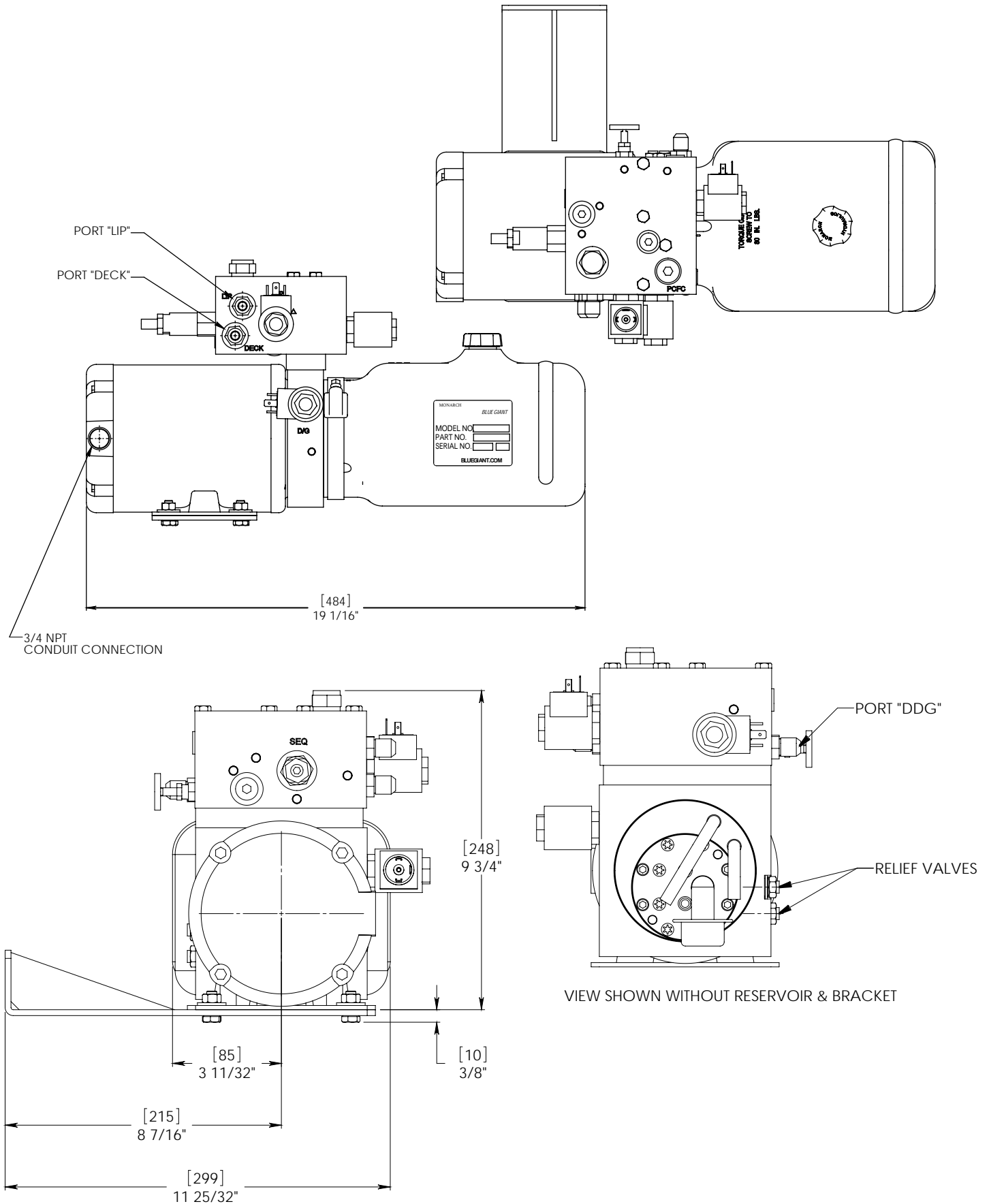
## REPLACEMENT PARTS FOR HYDRAULIC CYLINDER

	Part #	Description	Qty Req'd
	788-599	CYLINDER-LIP ASS'Y (SINGLE)	1
	036-204	SEAL, KIT FOR LIP CYLINDER	1
	033-563	VELOCITY FUSE	4
For 6' & 8' / 25,000 to 50,000	788-655-1	CYLINDER ASSY 2.5"DIA (DECK)	1
	788-655-2	SEAL, KIT FOR DECK CYLINDER	1
For 6' & 8' / 60,000 to 80,000	788-635-1	CYLINDER ASS'Y, 2" DIA DECK	1
	036-205	SEAL, KIT FOR DECK CYLINDER	1
For 10' & 12' / 25,000 to 50,000	788-655	CYLINDER ASSY 2.5"DIA (DECK)	1
	788-655-2	SEAL, KIT FOR DECK CYLINDER	1
For 10' & 12' / 60,000 to 80,000	788-636-1	CYLINDER ASS'Y, 2" DIA DECK	1
	036-205	SEAL, KIT FOR DECK CYLINDER	1

Part #	Description	Qty Req'd
Consult factory	RELAY,OVERLOAD	*
Consult factory	CONTACTOR	*
Consult factory	FUSE	*
Consult factory	POWER PACK	*
Consult factory	CONTROL BOX	*

17.

## XDS STANDALONE POWER PACK ASSEMBLY



## 18.

## GENERAL PARTS

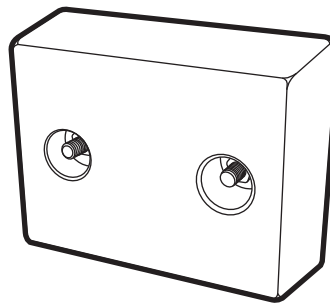
## MOLDED RUBBER BUMPERS

## 18.1 MOLDED RUBBER BUMPERS

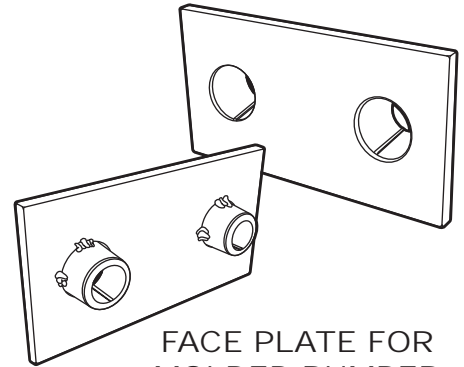
PART ID	DESCRIPTION
DB13	4" x 10" x 13"
DB18	4" x 10" x 18"
DB30	4" x 10" x 30"
DBL18	4" x 18" x 18"

## 18.2 FACE PLATES FOR MOLDED RUBBER BUMPERS

PART ID	DESCRIPTION
DB13FP	4" x 10" x 13"
DB18FP	4" x 10" x 18"



MOLDED RUBBER BUMPER



FACE PLATE FOR MOLDED BUMPER

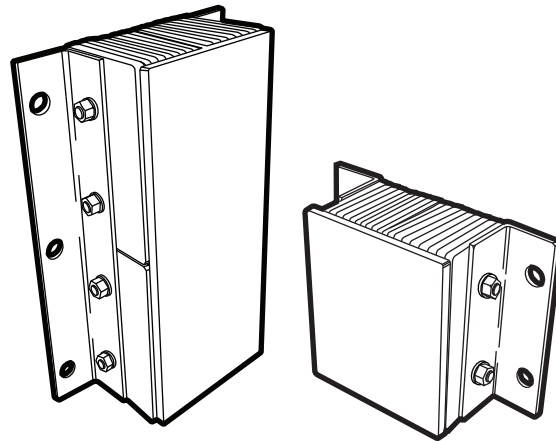
## LAMINATED BUMPERS

## 18.3 LAMINATED BUMPERS

PART ID	DESCRIPTION
DB411	4.5" x 14" x 10"
DB511	5.5" x 14" x 10"
DB412	4.5" x 14" x 20"
DB512	5.5" x 14" x 20"
DB421	4.5" x 24" x 10"
DB521	5.5" x 24" x 10"
DB431	4.5" x 36" x 10"
DB531	5.5" x 36" x 10"

## 18.4 FACE PLATES FOR LAMINATED BUMPERS

PART ID	DESCRIPTION
DB411FP	4.5" x 14" x 10"
DB511FP	5.5" x 14" x 10"
DB412FP	4.5" x 14" x 20"
DB512FP	5.5" x 14" x 20"

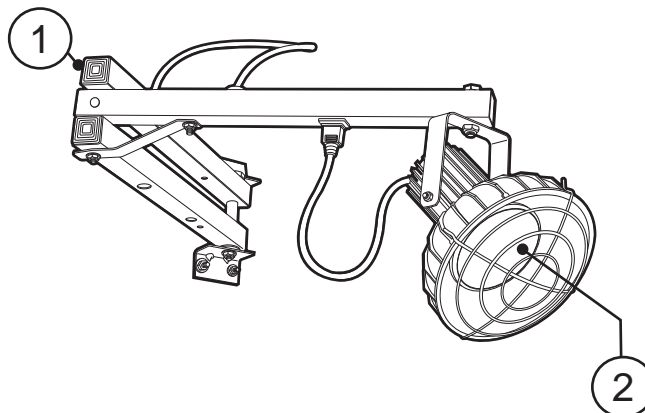


LAMINATED BUMPER WITH FACE PLATE

## 18.5

## FLOOD LIGHT

ITEM	QTY	PART ID	DESCRIPTION
1	1	LDL-150	LOADING DOCK LIGHT - 150W MAX
2	1	026-725	90W HALOFLOOD BULB - 130V



19.

## 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**

DDG does not lower when the 'Deck' button is touched.

1. The solenoid valve has a power problem or is faulty.  
Repair and replace if necessary.

DDG does not raise when the dock is lowered and the lip is resting in the lip keepers.

1. The lip sensor is out of adjustment.  
Adjust the proximity switch by loosening the holding nuts and setting the gap. Once the desired adjustment is completed, re-tighten the holding nuts.
2. The lip is not properly stored.  
Adjust as necessary.

Deck will not raise when touch button is operated. Motor does start and run.

1. Foreign material lodged between side of deck and pit wall.  
Remove and discard foreign material as required.
2. Damaged or missing bumpers allowing truck to contact and hold lip.  
Move truck as required and replace bumpers
3. Equipment or goods parked on dock leveler deck.  
Remove.
4. Low hydraulic oil fluid in power unit.  
Damaged hose or other oil leak is present. Repair and refill with approved hydraulic oil as required.
5. Relief valve is bypassing.  
Adjust as necessary.

Deck will not begin to raise immediately when motor begins to run. Usually occurs only after deck cylinder hose has been replaced with a new hose that was not pre-filled with oil.

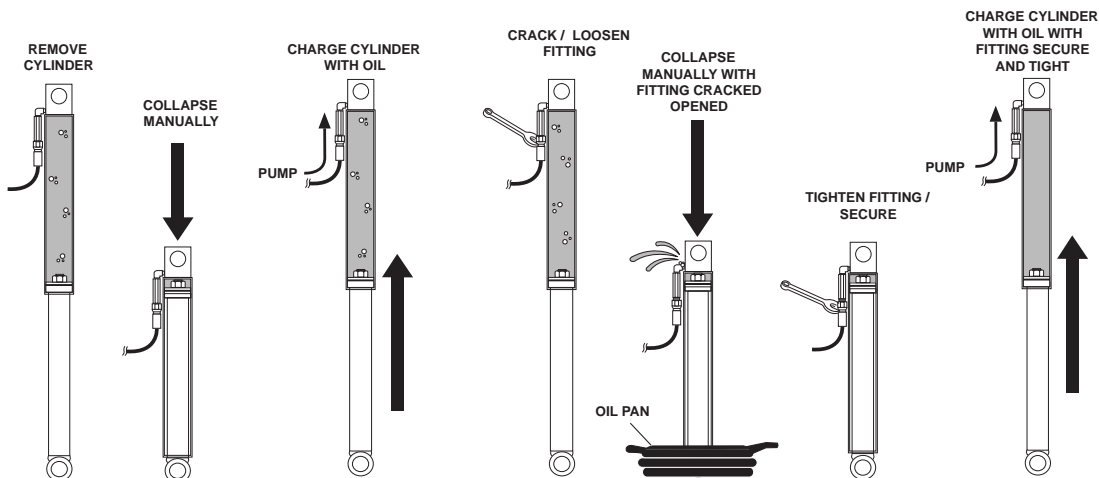
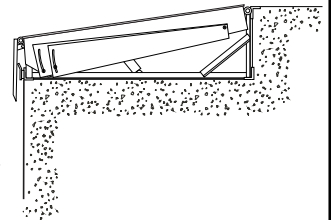
Air is trapped in the deck lifting cylinder. Bleed as follows:

**METHOD #1**

1. Operate dock leveler, placing it in fully below level position.
2. Allow to rest in place for 60 – 90 seconds, and repeat as required until deck begins to raise immediately and the motor starts to run.

**METHOD #2**

1. Raise the dock and let it rest on the maintenance stand. Remove and invert the cylinder to collapse ram fully. Power up to extend ram, then re-install.



## 19.

## 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**

Deck will not raise when touch button is operated. Motor does not attempt to run. No sound is heard from the motor/power pack and control box.

- 1. Interlock devices not operating i.e. overhead door interlock.**  
Open overhead door or repair sensor.
- 2. No power supply to the control station.**  
Breaker tripped.  
Fuse blown.  
(Disconnect) switch open.
- 3. Faulty control box component (fuse, touch button, contactor, transformer).**  
Have a qualified person repair as required.

Deck will not raise when touch button is operated. Motor tries to run, but power supply's breaker switch trips to the off position, shutting off the power before the motor reaches full running speed.

- 1. Power supply poor.**  
Motor may be shorted. Have a qualified person repair as required.

Deck raises more slowly than normal, and fluid level in reservoir is correct.

- 1. Deck or damaged skirts dragging on side of pit.**  
Repair as required.  
NOTE: Hydraulic oil must be replaced if contaminated by foreign material. For valves, count and record turns when removing or replacing adjustable parts.
- 2. Relief valve bypassing.**  
Foreign material lodged between ball and seat of relief valve. Flush by raising deck and lip to maximum height and continue to run motor for 30 seconds maximum.  
Remove relief valve, disassemble, and clean thoroughly. Change oil, replace valve, adjust to original setting, and then test operate.  
Ball seat is contaminated (i.e. dirty) and must be re-seated. Remove relief valve, disassemble, and clean thoroughly. Using a brass punch, hit the ball onto its seat. Then clean again, change oil, replace valve, adjust to original setting, and test operate.
- 3. Power pack is faulty.**  
Replace.

Deck raises partially and stops. Motor continues to run and power unit makes more noise than normal.

- 1. Oil in reservoir is low.**  
Add appropriate hydraulic oil to the reservoir.  
Locate oil leak source and repair as required. Top up reservoir with the dock leveler in the parked position: correct oil level is 1" below the top of the reservoir when the leveler is in the parked position.

Deck will not lower from a fully raised position with extended lip. The lip does lower.

- 1. The fall-safe velocity fuse located at the bottom of the deck cylinder is in the locked-closed position.**  
Air is trapped in the deck cylinder and hose. Bleed system by operating deck to achieve the fully below level position and allow to sit for 60-90 second intervals. Repeat as required.  
To open a locked velocity fuse, remove deck weight from cylinder by lifting with a fork truck or other means if cylinder is fully extended. Jog the UP touch button if the cylinder is not extended. NOTE: Repairs are needed (i.e. leaking hydraulic hose) before the up jog is performed.

19.

## 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**

Lip does not fully extend.  
Oil in reservoir is not low.

- 1. Lip plate may be bent, causing hinge to stick.**  
Repair and lubricate as required.
- 2. Foreign material lodged in the lip hinge area.**  
Clean thoroughly.
- 3. Relief valve is bypassing.**  
Foreign material lodged between ball and seat of relief valve. Flush by raising deck and lip to maximum height and continue to run motor for 30 seconds maximum.  
Remove relief valve, disassemble, and clean thoroughly. Change oil, replace valve, adjust to original setting, and then test operate.

Lip lowers slowly in normal temperatures and very slowly in frigid conditions. Deck lowering speed is correct.

- 1. Cylinder hose may be pinched, causing a restriction.**  
Investigate and correct if required.
- 2. Hydraulic fluid type may need to be changed.**  
Change to special low temperature hydraulic fluid and continue to change seasonally. See Maintenance section for recommended low temperature oil.



## NOTES

## NOTES



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