

# INSTALLATION & TECHNICAL MANUAL

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## STATIONARY DOCK LIFT



ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN

### WARNING

Do not 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**<sup>®</sup>

STARTING FROM SEPTEMBER 24, 2019 / SERIAL # 0.

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## 1.0 GENERAL SITE CHECKLIST FOR DOCK LIFT

Use this chart to prepare the site for installation.

		Yes	No	Comments
1	Review site conditions. Have you completed and reviewed site survey report?	<input type="checkbox"/>	<input type="checkbox"/>	
2	Does the pit or pad fit the dock lift that has been provided? See "7.0 LOAD DISTRIBUTION" on page 17.	<input type="checkbox"/>	<input type="checkbox"/>	
3	Is the electrical power present to hook up to? i.e. on inside wall near control install location	<input type="checkbox"/>	<input type="checkbox"/>	
4	If required, was the conduit(s) installed and properly positioned?	<input type="checkbox"/>	<input type="checkbox"/>	
5	Did you check to see if the proper voltage is supplied?	<input type="checkbox"/>	<input type="checkbox"/>	
6	When unpacking, were all the parts included? See "12.1 COMPONENTS AS SHIPPED CHECKLIST" on page 35.	<input type="checkbox"/>	<input type="checkbox"/>	
7	Do you have all the tools needed to complete the job? This includes ladder(s), safety equipment and personal safety devices. See "10.0 TOOLS REQUIRED FOR INSTALLATION" on page 29.	<input type="checkbox"/>	<input type="checkbox"/>	
8	Do you have the anchors for the (optional) exterior driver traffic light, warning sign and control box? <b>Supplied by:</b> You, contractor, or installer	<input type="checkbox"/>	<input type="checkbox"/>	
9	Have you read this installation manual and fully understood it?	<input type="checkbox"/>	<input type="checkbox"/>	
10	Do you have the Blue Giant technical support number? 1.800.872.2583. Before calling, make sure to have serial # of equipment.	<input type="checkbox"/>	<input type="checkbox"/>	
11	Do you know what an ESD " <i>Electrostatic Sensitive Device</i> " is and how to handle? See "4.1 ELECTROSTATIC SENSITIVE DEVICE (ESD) HANDLING" on page 12.	<input type="checkbox"/>	<input type="checkbox"/>	



## 2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the Dock Lift System. It is not intended to cover, or suggest that it does cover, all procedures necessary to ensure safe operation. All owners and operators should be aware of and abide by all workplace safety regulations applicable to the inspection and operation of the dock lift. 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), Provinces, or Territories
- ANSI standard MH29.1

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



Lift Manufacturers Product Group (LIFT)  
 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/lift



## 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 Customer Support Team 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 Warranty Support, please contact your Blue Giant Dealer. You may also visit [www.BlueGiant.com](http://www.BlueGiant.com) or phone 1.800.872.2583.

**NOTE: All products must be registered to qualify for warranty.**

### DEALER INFORMATION

Name:

Contact:

Telephone:

## 2.2 EXCLUSION OF LIABILITY

To the maximum extent permitted by applicable law, the manufacturer assumes no liability for damage or injury to persons or property that occur as a result of use of the Dock Lift Equipment. Furthermore, to the maximum extent permitted by applicable law, the manufacturer does not assume any liability for lost profits, operating downtimes, consequential, indirect, incidental, special, exemplary, punitive or enhanced damages, or similar losses, whether incurred by owner, authorized users and, other third parties. By use of the Dock Lift Equipment, owner assumes all risk of liability for damage or injury to persons or property that occur as a result of use of the Dock Lift Equipment, including, with respect to owner, authorized users and other third parties.

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 advance notice. As the Dock Lift Equipment is a highly customizable product, please contact the manufacturer by telephone at 1.800.872.2583 for the latest information.

## 2.3 MANUFACTURER'S NOTE

The dock lift equipment has been carefully inspected and tested at the manufacturer's plant prior to shipment, but **MUST be checked** upon receipt for transport damage. Any observed transport damage is to be listed on the signed copy of the freight document.

There are many configurations or custom designs whose specifications may not be fully reflected in this manual. Contact your Blue Giant Dealer to obtain the General Arrangement drawing for application specific designs.

**Notify the freight forwarder and the dealer of any damage WITHIN 24 HOURS.**

## 2.4 INSTALLER'S GUIDELINES

Please read all instructions carefully before installing this Blue Giant dock product. Proper installation of this product is required to ensure safe operation. Avoid accidents by recognizing dangerous procedures or situations before they occur.

It is the installer's responsibility to comply with the following:

- The installation of Blue Giant dock products must 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, and referred to by the installer.

Failure to comply with this requirement may result in an improper install and possible voiding of the warranty.

Follow any health and safety regulations as may apply to the work, not limited to:

- PPE codes and regulations
- Electric lockout/tagout procedures of any power source before performing any electrical work, in accordance with health and safety regulations (OSHA) and approved electrical codes
- Hoisting or rigging codes and regulations
- Welding and hot work codes and regulations
- Power tool and hand tool safe operation
- Concrete drilling codes and regulations

Only Blue Giant-supplied or approved parts must be used. Any unauthorized parts substitution may void the warranty.



### 3.0 SAFETY MESSAGE COLOR IDENTIFICATION

This manual includes color-coded safety messages that clarify instructions and specify areas where potential hazard exists. To reduce 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 occur if the instructions are not followed.

#### WARNING

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

#### CAUTION

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

#### NOTICE

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

### 3.1 OPERATIONAL SAFETY WARNINGS

These are safety warnings that may be part of a procedure or hardware warning decal.

#### DANGER

- Do not enter the pit area below the dock lift.
- BEFORE BEGINNING ANY SERVICE PROCEDURES:
  - Disconnect the power and follow all lockout / tagout procedures, as per OSHA requirements. Refer to wiring diagrams.
- Never operate a broken or damaged dock lift. Repair immediately by a qualified service technician.
- All loads must be centered and secured from rolling off the platform. Loose or unbalanced loads are dangerous.
- While transferring load across lip to truck bed or finished floor, be aware of potential fall risks from table and lip edges.

#### WARNING

- The lip hinge is a hazardous pinch point. Do not use fingers or hands to remove foreign materials.
- Hinged lips may drop unexpectedly, keep people and objects clear of the area immediately under or near the lip.
- Post safety warnings and barricade working area around the dock lift and at ground level (if pit opens to driveway) to reduce unauthorized use of the lift during maintenance/service.
- Lift operator must be present during all steps of this procedure and keep an unobstructed view of lift to ensure safe operation. Never leave the dock lift unattended in the raised position.
- Never leave loads sitting on the dock lift.
- Do not use the dock lift if the lip's full width is not fully supported by at least four (4) inches (100 mm) of the vehicle load bed or floor.
- Do not operate the dock lift beyond its rated capacity. Before load transfers, verify the load does not exceed the single axle rolling load maximum rating as found on nameplate of the dock lift.
- 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.
- Never attempt to lift or hold the lip out by hand unless instructed by this manual and using caution. Serious personal injury could occur.
- Never remove the wheel chocks until loading/ unloading is finished and the truck driver has been given permission to depart.

 CAUTION

- Only trained personnel should operate or service this equipment.
- Do not operate the dock equipment until the transport vehicle is parked against the dock bumpers.
- Always park the dock lift equipment after use.
- Conduct routine inspections and maintenance. Failure to do so could cause equipment damage and or personal injury.
- Always contact your Blue Giant Dealer immediately if a malfunction occurs.

NOTICE

- Do not ground welding equipment to any electrical components.
- Do not attach welder as ground to lift platform when welding on base frame assembly. Attach welder ground to base frame assembly only.
- Do not allow the drill to go too deeply when drilling holes in the control box. Damage to the control systems may occur.
- Never use air to blow debris from control box. Use a vacuum to remove debris from control box.
- Do not connect green ground lead into control box until all welding has been completed.
- Always keep the work area clean and free of litter.
- Always clean all side openings of dirt and debris.
- Always clean all dirt and debris from the lip hinge.
- Always clean up dry and liquid spills immediately after they occur.
- Always maintain proper lighting in the work area.
- If a procedure is not clearly defined in this manual, contact your Blue Giant Dealer.

## 4.0 LOCKOUT / TAGOUT PROCEDURE AND RULES

In accordance with the rules and regulations of the Occupational Safety and Health Administration (OSHA) and/or local jurisdiction, 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 verify 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.

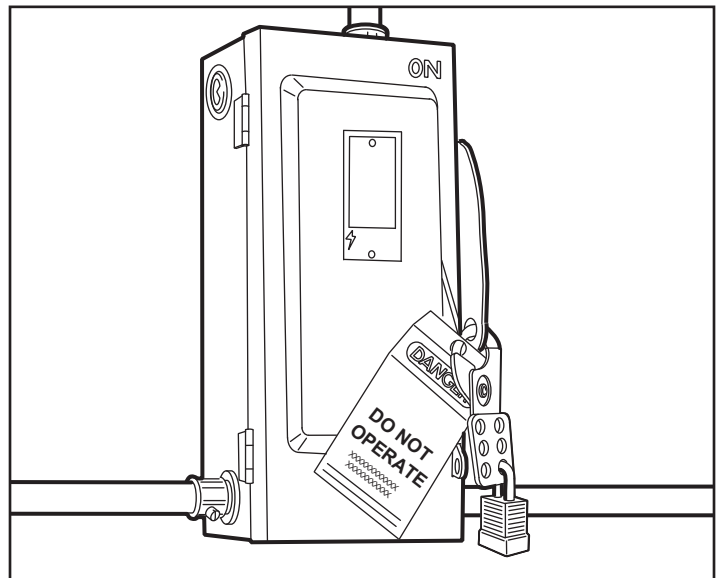
Blue Giant strongly recommends that only OSHA-approved lockout devices and procedures be utilized.

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 shall **NOT** be susceptible to deterioration or illegibility due to weather conditions, exposure to chemicals and/or 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. Refer to wiring diagrams.



An example of lockout / tagout. Verify and comply with local codes/ regulatory requirements.

## 4.1 ELECTROSTATIC SENSITIVE DEVICE (ESD) HANDLING

This policy applies to static sensitive electronic products/modules primarily printed circuit boards (PCBs) and sensors.

### Welding

If welding near static sensitive electronic components, correctly protect all equipment.



### Servicing Components

1. Prior to handling electronic modules, wear a static grounding wrist strap (Blue Giant Part #026-612) (and clip it to an electrical ground).  
The metal plate on the inside of the static wristband must be in contact with the wearers skin.
2. Electronic modules should never be handed to other personnel or set down anywhere, if outside of static bag.
3. Place electronic modules in black (ESD) shielding bags for return or storage.  
Only one electronic module or sensor should be placed in each static bag.
4. Attach paperwork and other items to the outside with adhesive pouches or elastic bands.
5. The control boxes protect the electronic modules inside from static, and should not be used to store manuals or other accessories.
6. Wearing antistatic SD rated footwear and standing on the same antistatic floor mat is highly recommended.

## **5.0 HOW TO READ THIS MANUAL**

This Installation and Technical manual covers standard installation steps for the Blue Giant Dock lifts. There are many configurations or custom designs whose specifications may not be fully reflected in this manual. Contact your Blue Giant Dealer to obtain the General Arrangement drawing for application specific designs.

The site preparation, physical mounting, and electrical hook ups are presented in the general installation section, see "14.0 INSTALLATION GUIDELINES" on page 39.

Site preparation information may be found in "7.0 LOAD DISTRIBUTION" on page 17.

Physical mounting information may be found in "14.3 HOIST DOCK LIFT" on page 41 and "14.6 POWERPACK ELECTRICAL INSTALLATION" on page 45.

Electrical hook up information may be found in "14.6 POWERPACK ELECTRICAL INSTALLATION" on page 45 and "14.4 ELECTRIC POWER SUPPLY AND WIRING" on page 43. NOVEMBER 12, 2020 REV. 1.2



## 6.0 DOCK LIFT HOIST HANDLING

Use the correct hoist hardware to safely move the dock lift.

### WARNING

- Follow OSHA regulations and any local authority regarding hoist lifting safety.
- Failure to follow proper handling procedures may result in serious injury or death.

### NOTICE

- Failure to follow proper handling procedures may result in serious equipment damage.

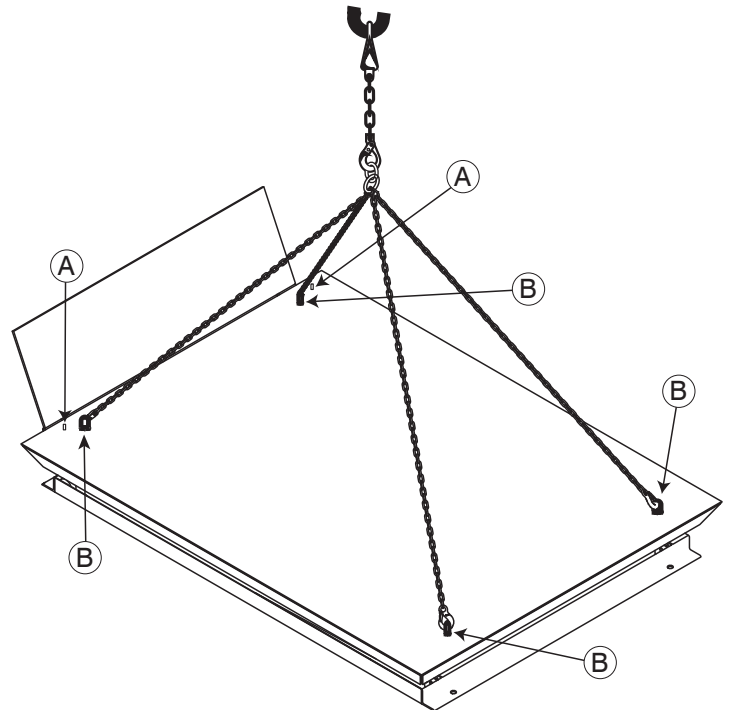
All Blue Giant dock lifts must use a hoist and appropriate anchors for safe and convenient handling. To ensure that the dock lift does not experience any unnecessary damage, **always lift using a hoist and chains**. Also, consider using lifting beams or spreader bars for greater load control.

All lift / scissor products are being shipped with two (2) bolts fitted into 3/4 in. 10-threaded holes which hold the deck to the lower frame during transporting. Hoist Rings are not supplied by Blue Giant.

Each piece of lifting hardware supports a working load of 5,000 lbs (2,268 kg) to ensure safe support of the unit during the hoisting process. Working load limits apply to in-line hoisting only. Do not use hardware that shows signs of wear or damage.

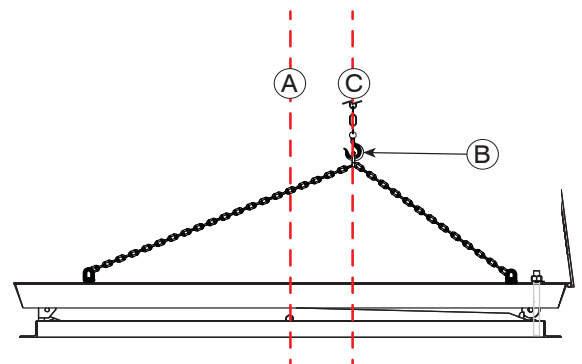
**NOTE:** Follow the rigging procedures of your local jurisdiction.

Callout	Description
A	3/4 in. 10-Threaded Bolt (supplied)
B	3/4 in. 10-Threaded Hoist Rings (not supplied)



Carefully sling the lift into position based on the dock lift weight distribution.

Callout	Description
A	Deck Center Line
B	Hoist hook and chain
C	Hoisting Load Center Line







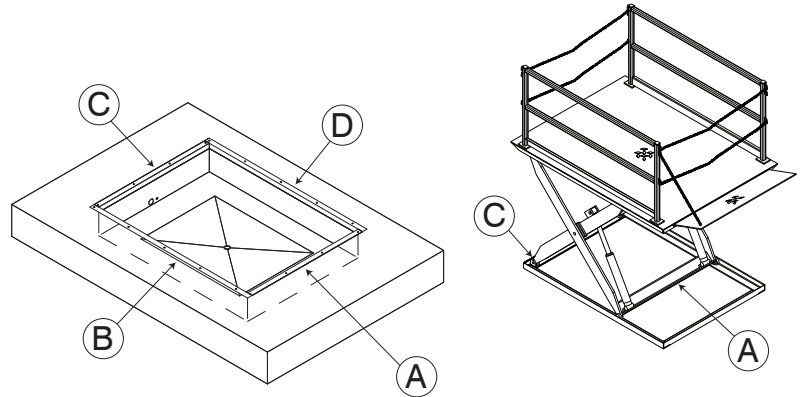
## 7.0 LOAD DISTRIBUTION

This section describes the load distribution of pit and ground mounts.

## 7.1 MOUNT AND LIFT TERMINOLOGY

The lift elevates as the rolling end travels from Side A towards Side C, until contacting the roller stops. The Up limit switch is not connected at this time. The lift lowers as the rolling end moves back toward Side A, until the minimum lowered height is reached. The Pit mount is shown, but these callouts apply to ground mounts as well.

Callout	Description
A	Side A Rolling End
B	Side B
C	Side C Fixed End
D	Side D

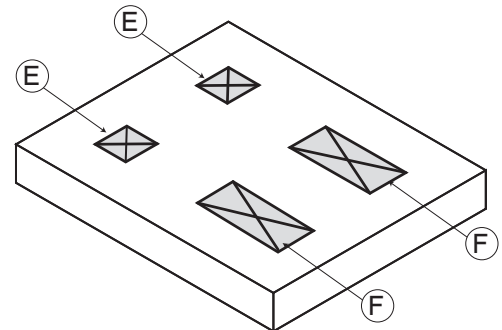


## 7.2 GROUND MOUNT AND DIMENSIONS

Regardless of lift coverage area, use these dimensions for ground mount shimming and concrete reinforcements,

1. Place the shims in these locations:

Callout	Description
E	Non-rolling End Shims
F	Rolling End Shims



- In each of the two (2) rolling end corners (F), place a shim that is six (6) inches wide and six (6) inches long over the leg roller travel distance (typ. 40 inches).
- In each of the two (2) non-rolling end corners or fixed end (E), place a shim that is six (6) to ten (10) inches wide by six (6) to ten (10) inches long.

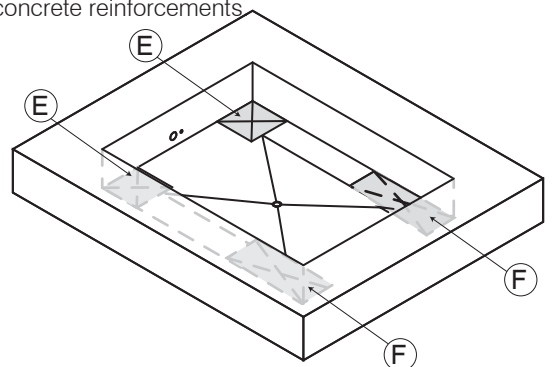
2. Add shims so that deck is level. See specific installation at "14.2 SHIM INSTALLATION" 14 on page 39.

## 7.3 PIT MOUNT AND DIMENSIONS

Regardless of lift coverage area, use these dimensions for pit mount shimming and concrete reinforcements

1. Place the shims in these locations:

Callout	Side
E	Non-rolling End Shims
F	Rolling End Shims

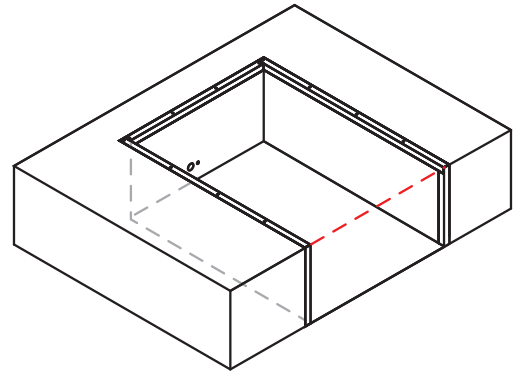


- In each of the two (2) rolling end corners (F), place a shim that is six (6) inches wide and six (6) inches long over the leg roller travel distance (typ. 40 inches).
- In each of the two (2) non-rolling end or fixed end (E), place a shim that is ten (10) inches wide and ten (10) inches long.

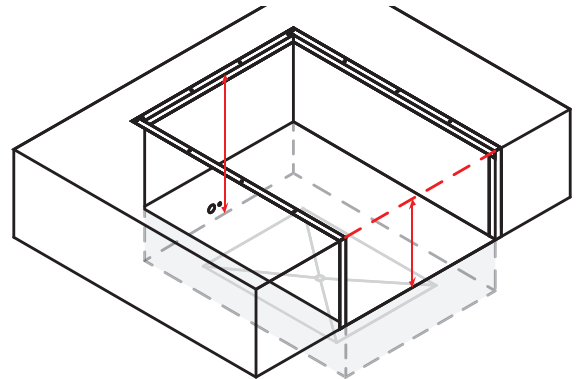
2. Add shims so that deck is level with the floor. See specific installation at “14.2 SHIM INSTALLATION” 14 on page 39.

### Dock to Driveway Setup

This setup allows for below floor height and greater height transfer traffic. Flat Pitt is used to load or unload between the drive way/truck level and finished floor height. This is similar to a ground mount.

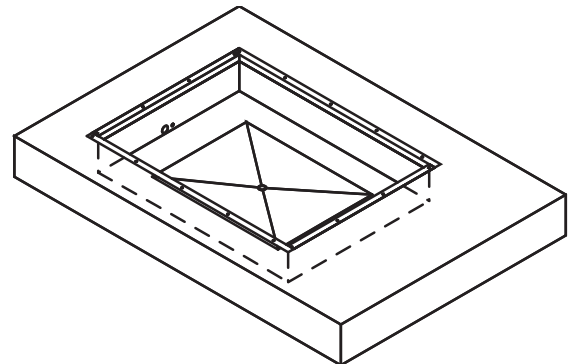


Recessed Pit is used to load or unload between the truck way level and finished floor height.

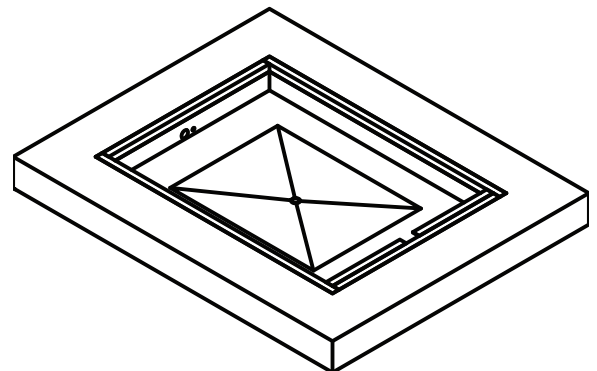


### Complete Pit Setup

This setup is used to load or unload between the finished floor and vehicle height.

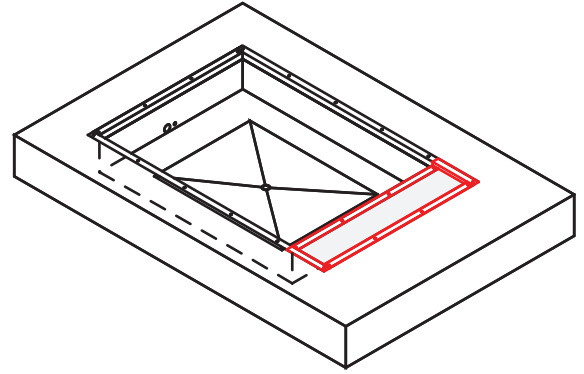


A complete pit for a dock lift with an spring assisted or hydraulic lip can require a notch to provide clearance for the assist mechanism. The pit is made longer to take the notched curb angle.

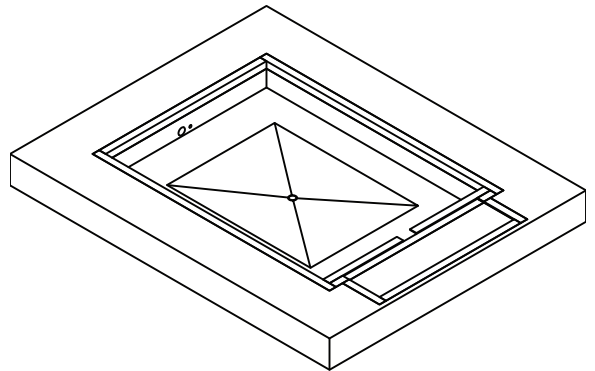


**Deck to Flat Ground Setup**

This setup is used to load or unload between the finished floor and vehicle height, with a recess cut out for a deployed lip.



This setup can also support a notch that provides clearance for a spring or hydraulic assisted lip. The pit is made longer to take the notched curb angle.



**7.4 PIT DIMENSIONS**

This section describes the method to measure the pit width and length.

Callout	Description
A	Width of Pit, $W_{Pit}$
B	Length of Pit, $L_{Pit}$
C	Height of Pit, $H_{Pit}$
D	Distance of Opposite Corners, S1
E	Distance of Opposite Corners, S2

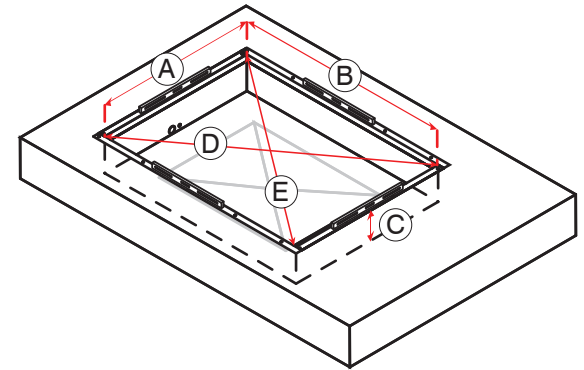
These dock pit must match these measurements for correct operation.

Verify that the pit is level side to side and front to back.

The distance of S1 and S2 must be equal, indicating squared corners. Verify using a level across each corner.

The side curb angles must be parallel.

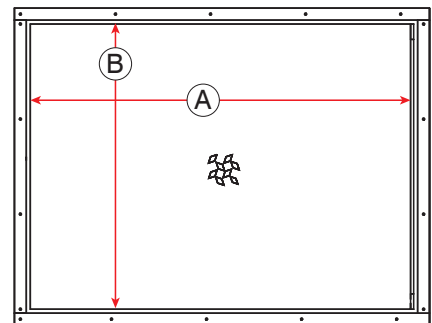
The finished floor must be flush with the embedded curb angle.



**7.5 DECK DIMENSIONS**

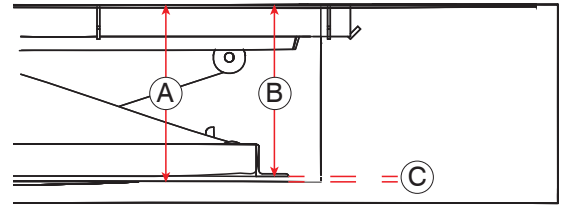
This is the method to measure the deck width and length.

Callout	Description
A	Deck Length, $L_{Deck}$
B	Deck Width, $W_{Deck}$



Measure the deck height to later calculate  $H_{Pit}$ .

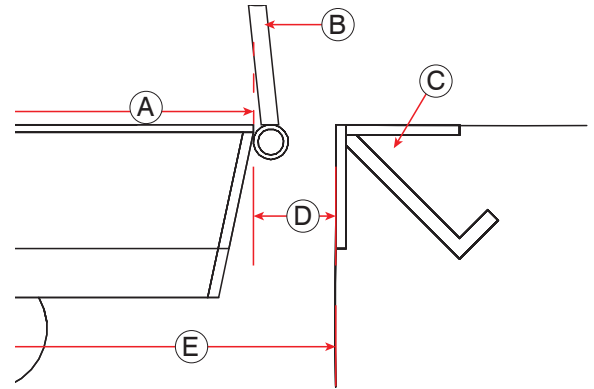
Callout	Description
A	$H_{Pit}$
B	$H_{Deck}$
C	½ in. typical gap



## 7.6 LIP CLEARANCES

This section describes the clearance required if the deck has one or more attached lips.

Callout	Description
A	$L_{Deck}$
B	Lip
C	Curb Angle
D	Clearance (3 in. shown)
E	$L_{Pit}$



## 7.7 CALCULATING PIT DIMENSION

Use the previous measurements to calculate the correct size of pit for the dock lift.

Pit to Deck Dimensions - Equations	
Pit to Deck Width	$W_{Pit} = W_{Deck} + (\text{Side B Clearance} + \text{Side D Clearance})$
Pit to Deck Length	$L_{Pit} = L_{Deck} + (\text{Side A Clearance} + \text{Side C Clearance})$
Pit to Deck Depth	$H_{Pit} = H_{Deck} + \frac{1}{2} \text{ in. (typical)}$

The lip hinge tube is a four (4) inch diameter CE tube as standard.

The pit is always one (1) inch longer per side and ½ in. deeper than the lowered height.

Calculate each side of the pit using these values.

Lip Options	Clearance (Callout “D” on page 20)
No Lip	1 inch
With one Lip	3 inch
Spring Assist Lip / Hydraulic Assist Lip (rectangular pitch)	6 inch (see drawing for lips assist opening)

For example, The DL5 lift table specifications are 72 in. Wide x 96 in. Long x 12 in. High, without a lip.

$$W_{Pit} = 72 \text{ in.} + (1 \text{ in.} + 1 \text{ in.}) = 74 \text{ in.}$$

$$L_{Pit} = 96 \text{ in.} + (1 \text{ in.} + 1 \text{ in.}) = 98 \text{ in.}$$

$$H_{Pit} = 12 \text{ in.} + \frac{1}{2} \text{ in.} = 12 \frac{1}{2} \text{ in.}$$

For example, The DL5 lift table specifications are 72 in. Wide x 96 in. Long x 12 in. High, with a lip.

$$W_{Pit} = 72 \text{ in.} + (1 \text{ in.} + 1 \text{ in.}) = 74 \text{ in.}$$

$$L_{Pit} = 96 \text{ in.} + (3 \text{ in.} + 1 \text{ in.}) = 100 \text{ in.}$$

$$H_{Pit} = 12 \text{ in.} + \frac{1}{2} \text{ in.} = 12 \frac{1}{2} \text{ in.}$$

## 8.0 DOCK LIFT STRUT AND STAND SET-UP

This section describes the different functions of the lift Maintenance Strut and the Service Stand. These procedures require at least temporary electrical power for the Powerpack to raise and lower the lift.

### 8.1 ENGAGING THE DOCK LIFT MAINTENANCE STRUT

The Maintenance Strut is engaged to perform cleaning or visual inspection under the dock lift.

#### DANGER

- Failure to properly secure the dock lift deck prior to working underneath it may result in bodily injury, or death.
- Engage the Maintenance Strut before visual inspecting or cleaning under the deck. If the strut cannot be successfully engaged, contact your Blue Giant Dealer.

#### WARNING

- Post safety warnings and barricade work area at dock and ground level. Notify all affected personnel that work is being performed on the unit and follow proper lock-out procedure. Verify that power to the unit has been completely cut off and cannot be turned back on accidentally, as per OSHA requirement.
- Head protection and other applicable PPE is recommended when working under or around the raised deck.
- Service Stand must be used with the Maintenance Strut when working under the lift. (i.e. more than cleaning or visually inspecting)
- Install Service Stand only when the Maintenance Strut is fully deployed.

#### CAUTION

- It is recommended that a retrieval tool be used when retrieving or replacing the Maintenance Strut from its stored position
- It is recommended that this procedure be performed with assistance.

1. Examine the Maintenance Strut for damage or if it is missing. Contact your Blue Giant Dealer for service or repair, as required.
2. Press the **DOWN** push button to lower the dock lift to the lowest height position.
3. Clear any load or debris on the lift's deck.
4. If present, manually lift any lip into the vertical position and hook up the lip chain(s) from guard rail to lip anchor. If hydraulic lip is present, press the **Lip UP** push button to raise it then hook up the lip chain. See the Control Station Operation in the Owner's Manual.
5. Hook up personnel restraint chains between guard rails at the lip or open ends.
6. When the area around the dock lift is clear of personnel, equipment, and materials, press the **UP** push button to raise the lift to a point where it is safe to deploy Maintenance Strut then release the push button.
7. Flip or move the Maintenance Strut into the locked position. Only reach in far enough with a body part to move the Maintenance Strut.
8. Press the **DOWN** push button to lower the lift until the Maintenance Strut is fully braced against the lower frame of the lift.
9. When the Maintenance Strut is fully braced and holding the lift in position, an authorized person shall lock out and tag out the electrical connections to the lift hydraulic Powerpack.
10. If safe to do so, use an extension tool to clear any debris or material from under the lift.
11. Inspect the lift without being near, on, or placing yourself/anyone under the lift (and pit, if present).

#### Drop-in Style Maintenance Strut

##### Part# 1005834-01 and 1005834-02

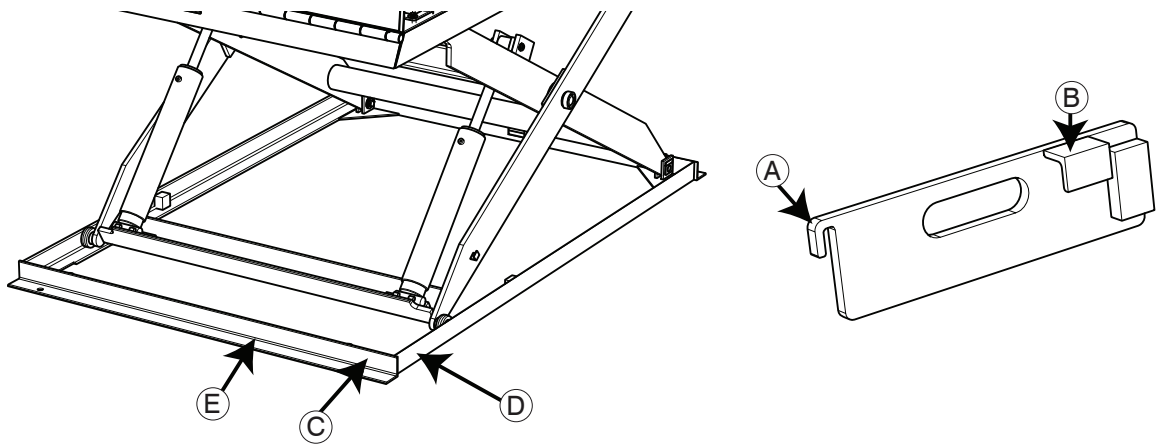
Applicable to a lift table with a self-weight maximum of 3000 lbs or less. For all other requirements, contact your Blue Giant Dealer.

This Maintenance Strut is found on:

- 8 in. lowered height DL table with 4 in. wide legs
- 12 in. lowered height DS/EDD tables

This Maintenance Strut is rated for standard DL table with a maximum capacity of 6000 lbs and EDD/DS table with a maximum capacity of 4000 lbs. It is added to right leg out weldment unless otherwise specified.

Frame Length	Raised Height 32 in. or higher	Raised Height 38 in. or higher	Raised Height 48 in. or higher
42 in. to 46 in.	8 in. long strut (Part# 1005834-02)	Not Applicable	Not Applicable
46 in. to 60 in.	-	10 in. long strut (Part# 1005834-01)	Not Applicable
60 in. to 96 in.	-	-	10 in. long strut (Part# 1005834-01)



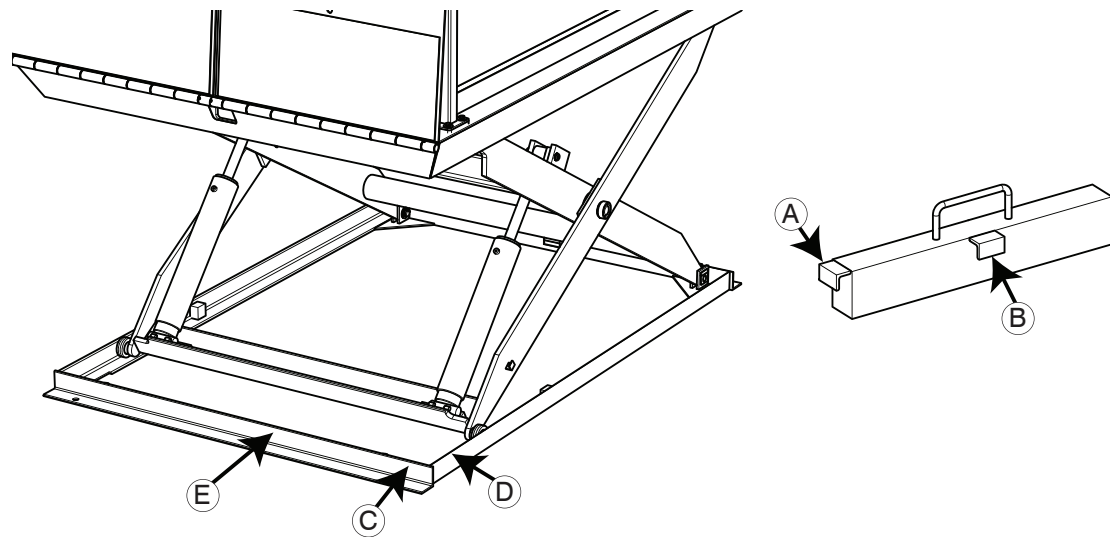
Callouts	Description
A	Rolling end hook side
B	Wheel track side
C	Hook A on this edge
D	Hook B on this edge
E	Storage area of drop-in Maintenance Strut. Not on concrete.

**Part# 828-418-1, 828-418-3, and 838-702**

This Maintenance Strut is stored within the lower frame of the lift. There is one strut per table and is applicable to tables with a total self-weight maximum between 3000 lbs or less.

This stand alone drop-in style Maintenance Strut available in 12 in. (Part# 828-418-1), 14 in. (Part# 828-418-3), and 18 in. (Part# 838-702) lengths.

It is an optional line item for all DL tables and is available as an additional safety device.



Callouts	Description
A	Rolling end hook side
B	Roller track side
C	Hook A on this edge
D	Hook B on this edge
E	Storage area of drop-in Maintenance Strut. Not on concrete.

Attached chain keeps the Maintenance Strut nearby for easy use. Store away from moving parts of the table.

**Flip Style Maintenance Strut**

**Part# 31-009696-1**

Quantity one per table, this Maintenance Strut applicable to tables with a total self-weight maximum of 3500 lbs or less.

Quantity two per table, this Maintenance Strut applicable to tables with a total self-weight maximum between 3500 lbs to 7500 lbs.

All other requirements, contact your Blue Giant Dealer.

All DL/FS/EDD/DS 10 in. lowered height and up will take a flip-style Maintenance Strut.

Frame sizes 60 in. or larger, and a raised height above 48 in. need a 14 in. long flip-style Maintenance Strut.

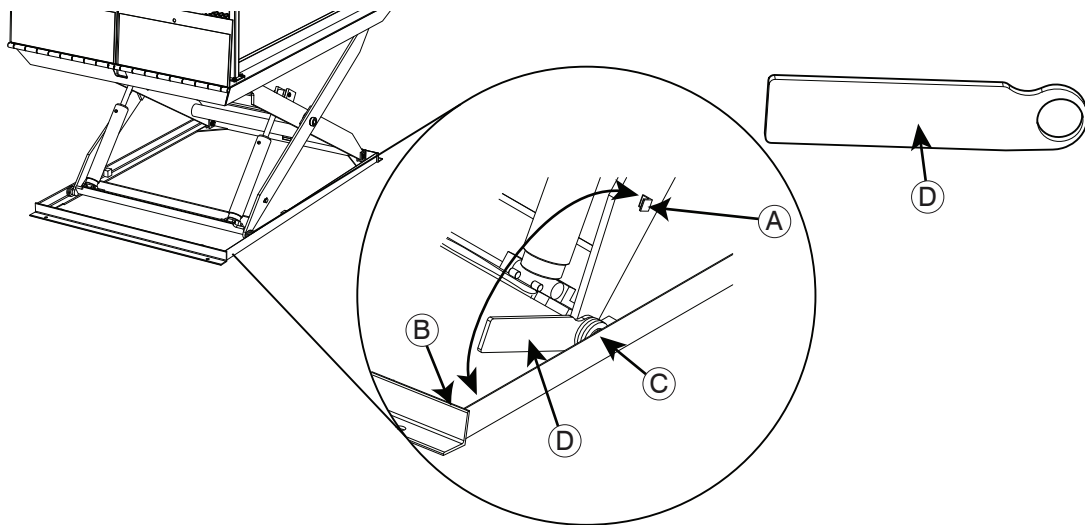
For a table capacity of 8000 lbs and a frame length of 96 in. or a frame length less than 96 in., one flip-style Maintenance Strut is required and is located to the right outer leg weldment.

For table capacities about 10000 lbs or longer than a 96 in. frame length, two flip-style Maintenance Struts are required. There is one Maintenance Strut per each outer leg weldment.

Table Capacity	Frame length 60 in. to 96 in.	Frame length 96 in. to 132 in.
8000 lbs or less	1 strut	2 struts
10,000 lbs to 20,000 lbs	2 struts	2 struts

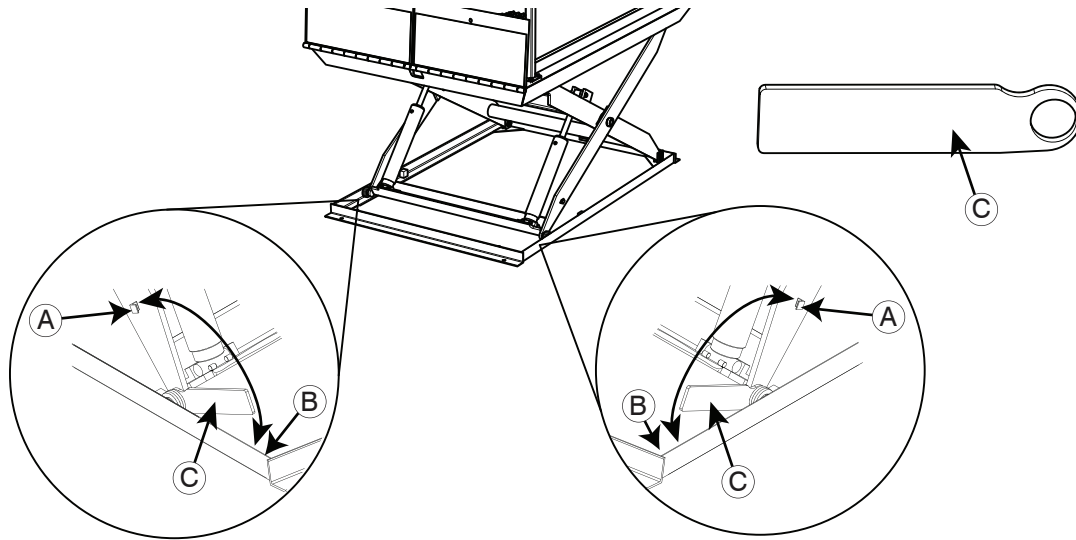
Non-standard smaller raised height tables may require a shorter Maintenance Strut, contact your Blue Giant Dealer.

One flip-style Maintenance Strut



Callout	Description
A	Store flip-style strut here
B	Engage flip-style strut here
C	Leg Roller / Bearing
D	Flip Style Maintenance Strut

Two flip-style Maintenance Strut



Callout	Description
A	Store flip-style strut here
B	Engage flip-style strut here
C	Two (2) Flip Style Maintenance Struts

## 8.2 DISENGAGING THE DOCK LIFT MAINTENANCE STRUT

The Maintenance Strut is disengaged after a cleaning or visual inspection is completed under the dock lift.

### DANGER

- Failure to properly secure the dock lift deck prior to working underneath it may result in bodily injury, or death.
- Engage the Maintenance Strut AND Service Stand before working. If the strut cannot be successfully engaged, contact your Blue Giant Dealer.

### WARNING

- Post safety warnings and barricade work area at dock and ground level. Notify all affected personnel that work is being performed on the unit and follow proper lock-out procedure. Verify that power to the unit has been completely cut off and cannot be turned back on accidentally, as per OSHA requirement.
- Head protection and other applicable PPE is recommended when working under or around the raised deck.
- Service Stand must be used with the Maintenance Strut when working under the lift. (i.e. more than cleaning or visually inspecting)
- Install Service Stand only when the Maintenance Strut is fully deployed.
- Do not stand in the pathway of the dock lift during the disengagement process in case the dock falls unexpectedly.

### CAUTION

- It is recommended that a retrieval tool be used when retrieving or replacing the Maintenance Strut from its stored position
- It is recommended that this procedure be performed with assistance.

#### Flip Style Maintenance Strut and Drop-in Style Maintenance Strut

1. Examine the Maintenance Strut for damage or if it is missing. Contact your Blue Giant Dealer for service or repair, as required.
2. When all work is completed and the area around the lift is cleared, an authorized person shall inform all affected personnel before removing the lock out and tag out from the electrical connections to the lift hydraulic Powerpack.
3. Press the **UP** push button to gently raise the lift off of the Maintenance Strut.
4. Flip or lift out the Maintenance Strut to the stored position. Use an extension tool (i.e. broom handle or wood) to move the Maintenance Strut. As much as possible, never reach in with a body part to move the Maintenance Strut.
5. Press the **DOWN** push button to lower the lift to ground or lowest height position then release the button.



### 8.3 ENGAGING THE DOCK LIFT SERVICE STAND

The Service Stand is engaged to perform servicing, repair, or diagnostic testing under the dock lift.

**⚠ DANGER**

- Failure to properly secure the dock lift deck prior to working underneath it may result in bodily injury, or death.
- Engage the Maintenance Strut AND Service Stand before working. If both cannot be successfully engaged, contact your Blue Giant Dealer.
- Never engage the Service Stand on the rolling end of the dock lift.

**⚠ WARNING**

- Post safety warnings and barricade work area at dock and ground level. Notify all affected personnel that work is being performed on the unit and follow proper lock-out procedure. Verify that power to the unit has been completely cut off and cannot be turned back on accidentally, as per OSHA requirement.
- It is recommended that this procedure be performed with assistance.
- Head protection and other applicable PPE is recommended when working under or around the raised deck.
- Service Stand must be used with the Maintenance Strut when working under the lift. (i.e. more than cleaning or visually inspecting)
- Install Maintenance Strut and secondary Service Stand only when the unit is sufficiently raised.

**⚠ CAUTION**

- It is recommended that a retrieval tool be used when retrieving or replacing the Maintenance Strut from its stored position
- It is recommended that this procedure be performed with assistance.

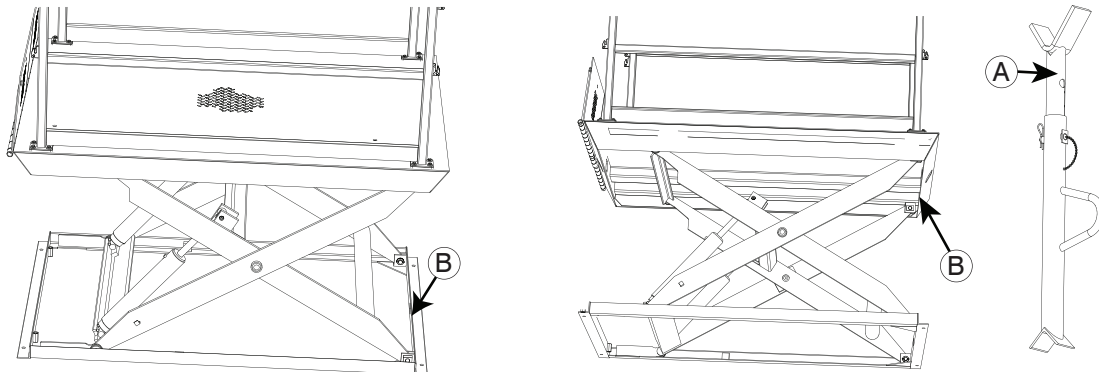
The dock lift may be equipped with a one (1) or two (2) Maintenance Strut(s) that **MUST** be used in conjunction with one (1) Service Stand, during under-dock inspections or repairs / maintenance. If the rated capacity of the dock lift is 10,000 lbs (4536 kg) or greater, OR have a deck length longer than 108 in. (2743 mm), a second Maintenance Strut (or a second Service Stand) must be used. Verify the number of Service Stands required before attempting to secure the deck.

To apply the Service Stand, one person raises the deck while another puts the strut in place.

It is recommended that a retrieval tool be used when retrieving the Maintenance Strut from its stored position beneath the dock.

This is a two person operation.

1. Set the Service Stand for the required length, if it is adjustable.
2. Follow the procedure to engage the Maintenance Strut before attempting to set up the Service Stand.
3. When the Maintenance Strut is full braced against the lower frame of the lift, slide the Service Stand in the vertical position between a lower frame cross beam and a lift deck edge/cross beam on the same side.  
Do NOT stand or hold any body parts under the lift is fully secured by the Service Stand.
4. Test the firmness of the Service Stand as it holds the dock lift, if necessary use additional suitable blocking if Maintenance Strut is inoperable.
5. Verify any Lockout/Tagout conditions or that the Powerpack is not electrically powered.



Callout	Description
A	Service Stand Part# 796-710-1; adjustable length 26 in. to 45 in.
B	Engage Service Stand here for fixed end top and bottom

## 8.4 DISENGAGING THE DOCK LIFT SERVICE STAND

The Service Stand is disengaged after servicing, repair, or diagnostic testing under the dock lift.

### DANGER

- Failure to properly secure the dock lift deck prior to working underneath it may result in bodily injury, or death.
- Engage the Maintenance Strut AND Service Stand before working. If both cannot be successfully engaged, contact your Blue Giant Dealer.
- Never engage the Service Stand on the rolling end of the dock lift.

### WARNING

- Post safety warnings and barricade work area at dock and ground level. Notify all affected personnel that work is being performed on the unit and follow proper lock-out procedure. Verify that power to the unit has been completely cut off and cannot be turned back on accidentally, as per OSHA requirement.
- Head protection and other applicable PPE is recommended when working under or around the raised deck.
- Service Stand must be used with the Maintenance Strut when working under the lift. (i.e. more than cleaning or visually inspecting)
- Install Maintenance Strut and secondary Service Stand only when the unit is sufficiently raised.
- Do not stand in the pathway of the dock lift during the disengagement process in case the dock falls unexpectedly.

### CAUTION

- It is recommended that a retrieval tool be used when retrieving or replacing the Maintenance Strut from its stored position.
- It is recommended that this procedure be performed with assistance.

The dock lift may be equipped with a one (or two) piece Maintenance Strut(s) that must be used, in conjunction with a Service Stand, during under-dock inspections or repairs / maintenance.

Depending on dock lift size and capacity, a second Maintenance Strut may be used. Verify the number of Service Stand(s) required before attempting to secure the deck.

1. When all work is completed and the area around the lift is cleared, an authorized person shall inform all affected personnel before removing the lock out and tag out from the electrical connections to the lift hydraulic Powerpack.
2. Press the **UP** push button to gently raise the lift off of the Maintenance Strut.
3. Follow the procedure to disengage the Maintenance Strut then leave it in the stored position. Use an extension tool (i.e. broom handle or wood) to move the Maintenance Strut. As much as possible, never reach in with a body part to move the Maintenance Strut.
4. Examine the Maintenance Strut for damage or if it is missing. Contact your Blue Giant Dealer for service or repair, as required.
5. Remove the Service Stand from the lift then inspect Service Stand for any damage.
6. Press the **DOWN** push button to lower the lift to ground or lowest height position then release the button.

## 9.0 INSTALLATION LAYOUT

The facility environment will dictate the type of pit or on level ground layout. These illustrations are generic in layout. Refer to building drawings for installation specifics.

The pit mount option permits installation for: a Complete Pit, a Dock to Driveway, or a Dock to Flat Ground option.

The ground mount option permits installation on a prepared level surface.

### NEW PIT CONSTRUCTION

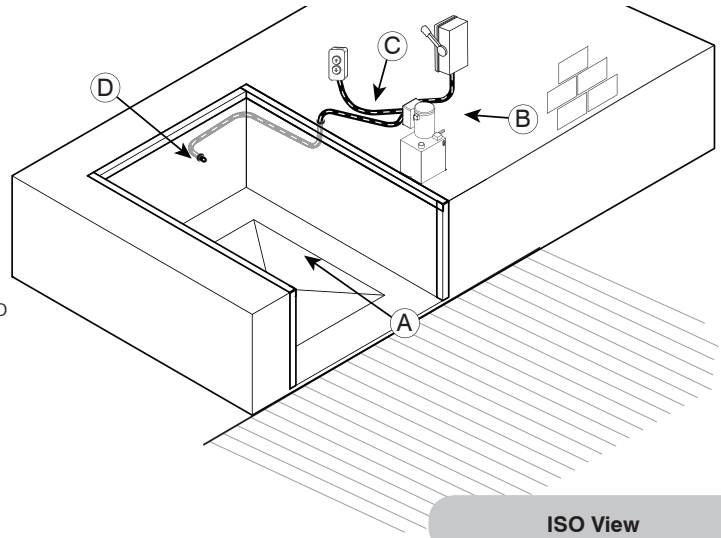
#### (CONDUIT POURED IN CONCRETE)

##### Complete Pit, Dock to Ground or Dock to Driveway

The complete pit, dock to ground, and dock to driveway have similar conduit requirements. The dock to driveway is shown.

This configuration allows for the Powerpack location to be movable depending on need. For example, a wall set back from the lift.

1. Run a 2.5 in. (63.5 mm) inner diameter (at minimum) trade size conduit from the remote hydraulic Powerpack on the finished floor to the lift cylinders or from the fused disconnect to the self-contained Powerpack in the pit.
2. The push button controls may be located as a remote pendant, on a deck mounted post, floor mounted post, or bolted guard rail. If required by the drawings, plan 2.5 in. (63.5 mm) inner diameter (at minimum) trade size conduit for the control cable.



Callouts	Description
A	Pit
B	Electrical Hookup to Control Box and Hydraulic Powerpack
C	Push Button Control cable
D	Hydraulic cable to lift cylinders

#### MINIMUM CONCRETE STRENGTH

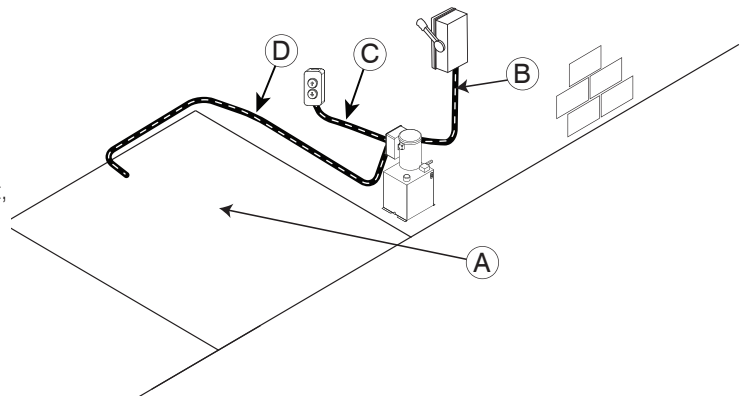
**3,000 P.S.I.**

### NEW GROUND LEVEL CONSTRUCTION

#### (CONCRETE FLOOR OR PAD)

This layout requires a prepared concrete pad to support the lift.

1. Run any finished floor surface ties for the electrical cabling between the remote hydraulic Powerpack or the self-contained Powerpack and the fused disconnect. Also, the hydraulic hose from Powerpack to lift cylinders.
2. The push button controls may be located as a remote pendant, on a deck mounted post, floor mounted post, or bolted guard rail. If required by the drawings, plan conduit for the control cable.



Callouts	Description
A	Concrete Pad
B	Electrical Hookup to Control Box and Hydraulic Powerpack
C	Push Button Control cable
D	Hydraulic cable to lift cylinders

#### MINIMUM CONCRETE STRENGTH

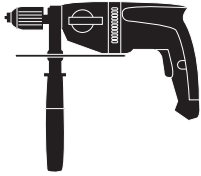
**3,000 P.S.I.**

**ELECTRICAL REQUIREMENTS**

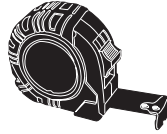
1. If the push button control station is not attached to the lift (via post or bolted guard rail control box), mount control station near the Powerpack.
2. Install wiring from under the deck to the hydraulic Powerpack. Refer to wiring drawings.
3. Install wiring from fused disconnect, provided by others and wiring by others, to the control box.
4. Install wiring from the hydraulic Powerpack to control box. Refer to wiring drawings.

## 10.0 TOOLS REQUIRED FOR INSTALLATION

These tools are required for the complete and safe installation of the DL dock Lift. Not all are applicable for every installation.



Hammer Drill



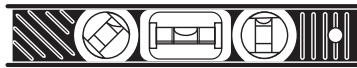
Tape Measure



Crowbar 3'-5'



5/8 in. and 1/4 in. Concrete Bit Carbide



2' / 4' Level



Cold Chisel



Chip Hammer



Ball Peen Hammer



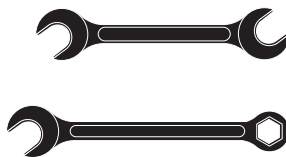
Small Flat Screwdriver  
(flat tip to be suitable for .150 slot)



Large 1/8 in. x 3/8 in. Screwdriver



Electrician's Tools



Combination wrench set 3/8 in. to 1 in.



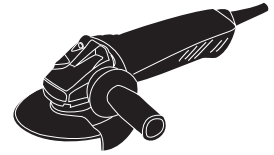
Sledge Hammer 10 lbs



Welder



Socket Set 3/8 in. to 1 in.



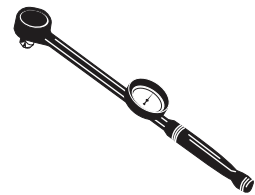
Grinder with Zip Blades As Well



Drill/Screwdriver



Nut Driver Drill Bit 5/16 in.



Torque Wrench



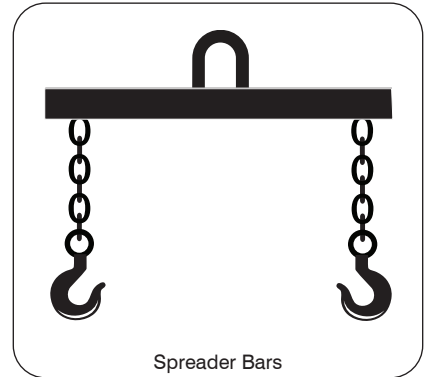
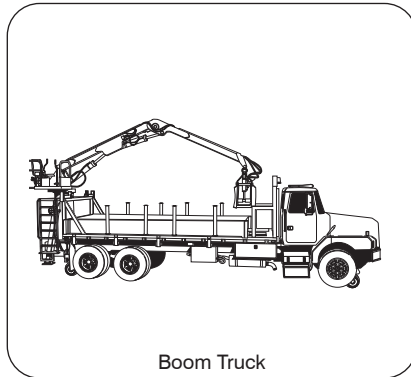
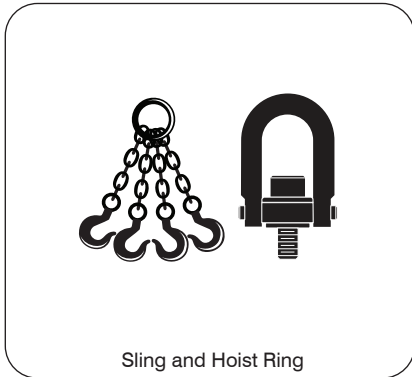
Fish Tape



Hole Clearing Blow Pump Tool

## 10.1 RECOMMENDED EQUIPMENT FOR RIGGING OR HOISTING

This equipment is recommended for the safe hoisting of the DL dock lift onto a pit or ground mounting. All necessary local regulatory hoist rules must be followed for safe handling of the dock lift.







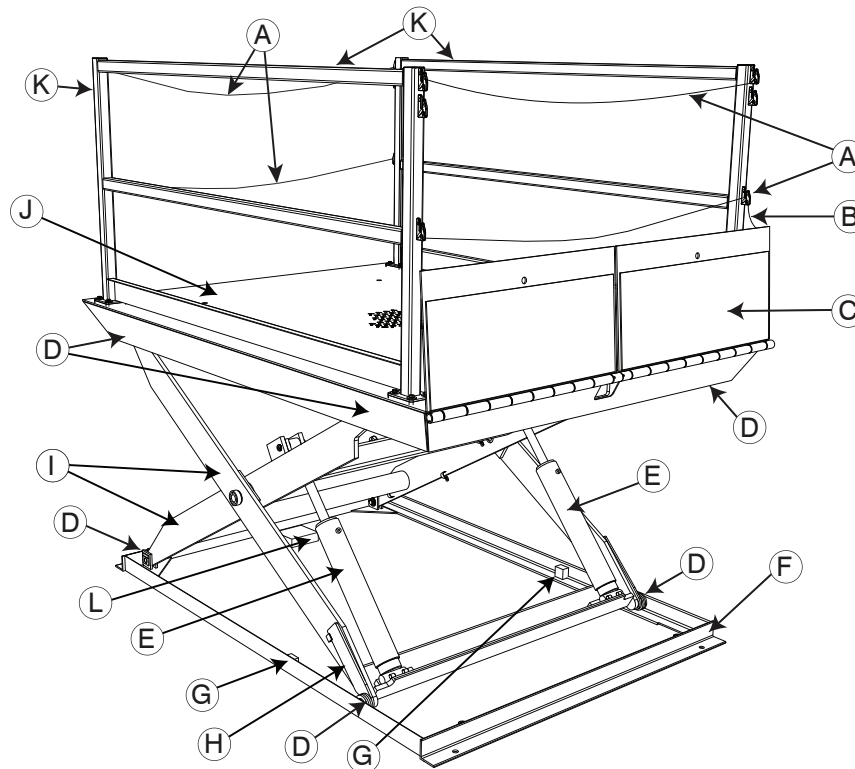
## 11.0 GENERAL DESCRIPTION

This section describes the general parts of a dock lift. See below for names of general Blue Giant dock lift components. The hoses and cables are removed for clarity. These names will be used throughout the manual.

### ⚠ 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 and owner’s manual. Failure to do so could result in death or serious injury.
- Always use the dock lift Service Stand and Maintenance Strut when working under a dock lift ramp or lip.
- Place barricades around the pit on the dock floor and driveway while installing, maintaining, or repairing dock lift.
- 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/hoist chain or other lifting devices are in good condition and have a rated capacity of 5000 lbs (2268 kg), or greater, for the lifting angle used.
- Never allow anyone to stand on or near the dock lift when it is lifted or positioned. Stand clear of the dock lift when it is positioned.
- Failure to follow this warning can allow the dock lift equipment to fall, tip, or swing into people which could result in death or serious injury.

## 11.1 DOCK LIFT



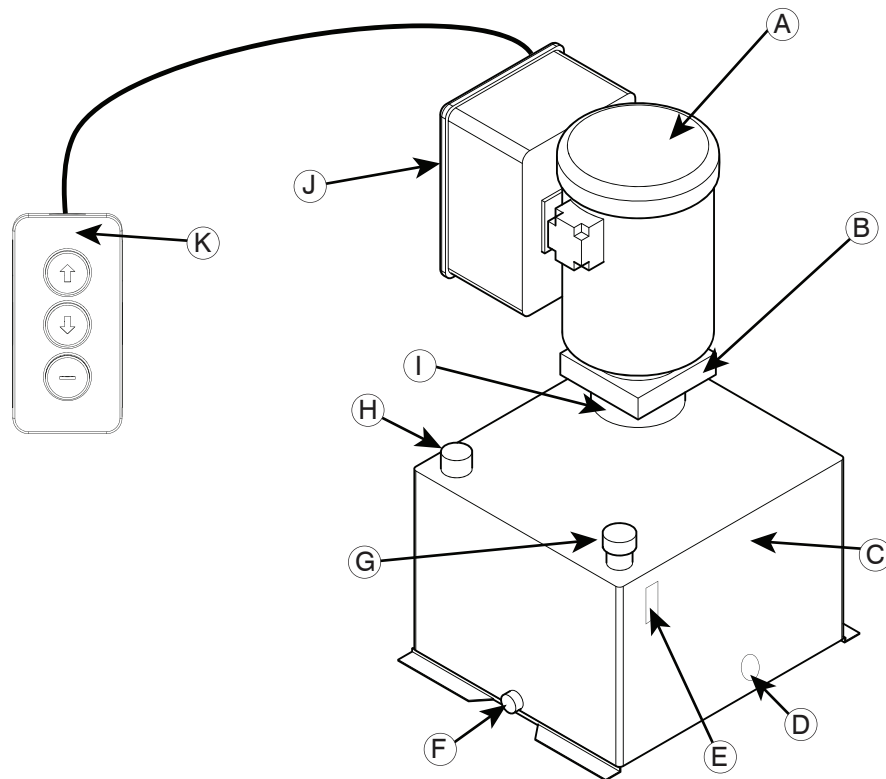
Callout	Description
A	Personnel Restraint Chain
B	Lip Pull Chain(s)
C	Lip(s)
D	Leg Rollers
E	Cylinder(s)
F	Base Frame
G	Roller Hard Stop
H	Maintenance Strut (type model dependent)
I	Scissor Legs

Callout	Description
J	Deck
K	Guard Rails
L	Base Frame Wiring Junction Box

## 11.2 HYDRAULIC POWERPACK

The assembly and parts of the Powerpack (Pit or Remote) are listed below for easy reference.

Refer to the electrical drawings for specific wiring requirements



ITEM	QTY	DESCRIPTION
	1	Powerpack 3 HP
	1	Powerpack 5 HP
	1	Powerpack 7.5 HP
	1	Powerpack 10 HP
A	1	Motor
B	1	Manifold
C	1	Tank/Reservoir
D	1	Heater Port
E	1	Sight Glass Oil Level (Optional)
F	1	Drain
G	1	Tank/Reservoir Filler Breather
H	1	Filler / Vent Hole
I	1	Pump (not shown)
J	1	Control Box
K	1	Push Button Control

## 12.0 EQUIPMENT COMPONENT ILLUSTRATIONS

This section displays the various hardware components.

### 12.1 COMPONENTS AS SHIPPED CHECKLIST

This section displays the shipped hardware components.



✓	CALLOUT	QTY.	PART NO.	DESCRIPTION	APPROX. WEIGHT	
	A	1	Model Dependent	Dock Lift	Varies by Model	
	B	1	Model Dependent	Remote Powerpack with Push Button Control Pendant	Varies by Model	
	C	1	038-545E	Operation/Warning Placard	—	—
	D	1	038-1098	Installation Manual	—	—
	E	1	038-1099	Owner's Manual	—	—

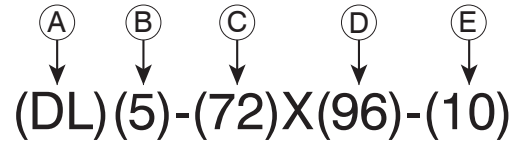


### 13.0 GENERAL DIMENSIONS AND OPERATING RANGE

This is a partial list of available Dock Lifts by size, lowered/raised heights, and Powerpack options. Contact your Blue Giant Dealer regarding a full list of options.

#### Model Breakdown

This is how to read the specifications of a model from its part number:



Callout	Description
A	Model Style
B	Rated Capacity (in 1000's of lbs. i.e. 5 = 5000 lbs)
C	Deck Width (in inches)
D	Deck Length (in inches)
E	Lowered Deck Height (in inches)

Contact your Blue Giant Dealer regarding a full list of options.



## 14.0 INSTALLATION GUIDELINES

### ⚠ WARNING

- Use caution when the dock lift lifting or moving the lift. Do not attempt to lift without suitable hoisting equipment capable of lifting 5000 lbs (2268 kg) or greater. Do not work beneath a raised object. Follow all hoisting safety requirements.

This section describes environmental requirements before hardware installation can happen.

1. Prior to installation, clean the pit or pad thoroughly and verify that all dimensions are in accordance with manufacturer specifications.
2. The dock lift must be level side-to-side and front-to-back.
3. The dock lift must be square at both rear corners.
4. The side curb angles must be parallel to each other.
5. The finished floor must be flush with top surface of curb angle.

## 14.1 DOCK LIFT INSTALLATION

For specific floor or pit installation, see “7.2 GROUND MOUNT AND DIMENSIONS” on page 17 and “7.4 PIT DIMENSIONS” on page 19.

## 14.2 SHIM INSTALLATION

Depending on circumstances,

- If the pit or surface mount has electrical service to the Powerpack then use the full procedure as described.
- If there is no electrical service to the Powerpack then use a temporary on-site solution or portable Powerpack to provide power.

### ⚠ DANGER

- It is recommended that two persons should perform these procedures.
- Do not work, stand near, or put any part of your body under the lift without the Service Stand and Maintenance Strut in place, and a lockout/tagout in place on the Powerpack, as per OSHA requirement.
- Only a qualified technician should use the Service Stand.
- Do not leave any load on the lift while performing these procedures or any service work.

### ⚠ WARNING

- While inspecting under the lift, the Maintenance Strut must be deployed.
- If cleaning or visual inspecting the lift using only the flip or drop-in maintenance strut, use an extension tool (i.e. broom handle) to clean under the lift and NEVER place an appendage near or under the lift.
- 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.

This section describes the installation of the shim hardware prior to hoisting the dock lift into position.

### STEP 1



Clean the pit / pad and verify that all dimensions and conduit locations are in accordance with pit / pad drawings.

### STEP 2

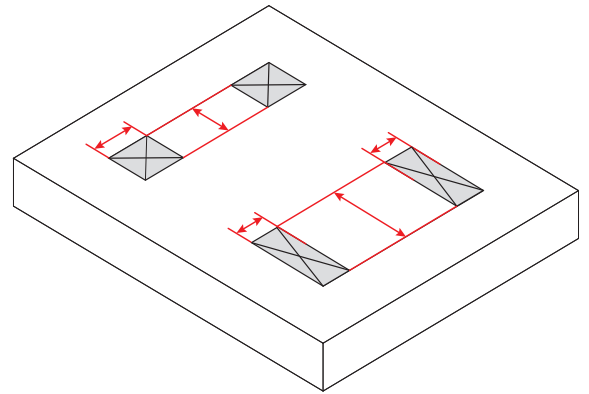
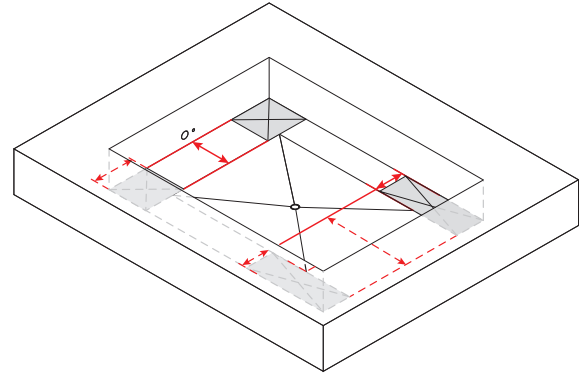


Measure the height of the lift at each corner (pit-style only).

### STEP 3

Place sufficient starter shims on floor:

- pit: the lowered deck and finished floor surface are level.
- ground level: the finished floor surface is level. For further ground level mount instructions, proceed to “14.3 HOIST DOCK LIFT” on page 41.



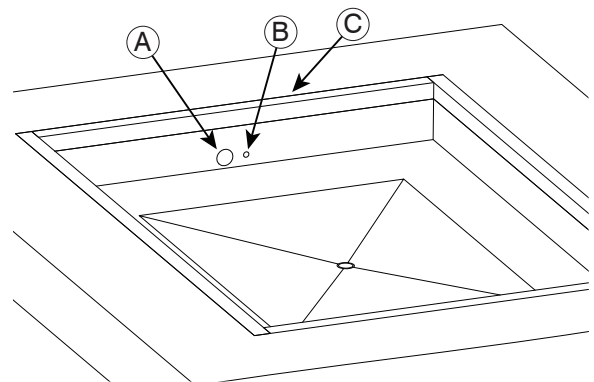
### STEP 4

Locate the Powerpack end of the buried conduit and place Powerpack nearby.

### STEP 5

Unpack the Powerpack and prepare hydraulic hose, vent line, and electrical cable for pulling through their respective buried conduit. Do not tie hydraulic hose and vent line together except at pulling end.

**NOTE:** Electrical cable(s) must NOT be in the same conduit as the hydraulic hose(s).



Callout	Description
A	Hydraulic hose(s) conduit
B	Controls and/or electrical cable conduit
C	Side C



**STEP 6**



From the Powerpack, insert fish tape through the hydraulic conduit, line, and electrical cable through their respective conduits and into pit / pad area.

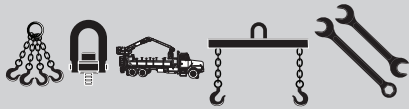
**STEP 7**



Prepare slings and hoisting equipment as required.

**NOTE:** Do not stand the lift on its side, as damage will result.

**STEP 8**



Position the lift adjacent to the pit / pad oriented to securely connect the hydraulic hose from the conduit to the hydraulic hose in the deck through the frame opening.

### 14.3 HOIST DOCK LIFT

Follow these guidelines to safely hoist the dock lift, and comply with local regulations.

**⚠ DANGER**

- Do not work, stand near, or put any part of your body under the lift without the Service Stand braced, the Maintenance Strut deployed, and a lockout/tagout in place on the Powerpack.
- Only a qualified technician should use the Service Stand.
- Do not leave any load on the lift while performing these procedures or any service work.
- It is recommended that two persons should perform these procedures.

**⚠ WARNING**

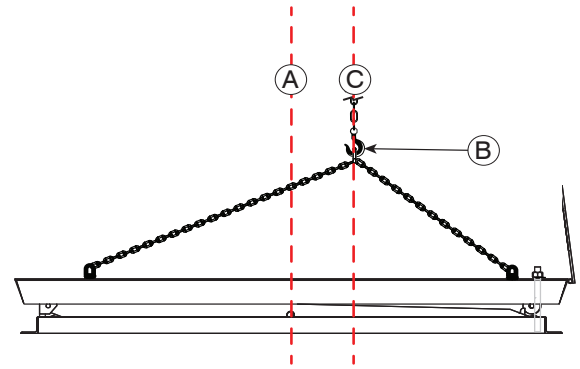
- While inspecting under the lift, the maintenance strut must be deployed to brace the lift's lower frame.
- If cleaning or visually inspecting the lift using only the maintenance flip strut, use an extension tool (i.e. broom) to clean under the lift and NEVER place an appendage near or under the lift.
- 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.

**STEP 1**



Carefully sling the lift into position.  
See "6.0 DOCK LIFT HOIST HANDLING" on page 15 for hoist requirements.

Callout	Description
A	Table Center Line
B	Hoist hook and chain
C	Load Center Line

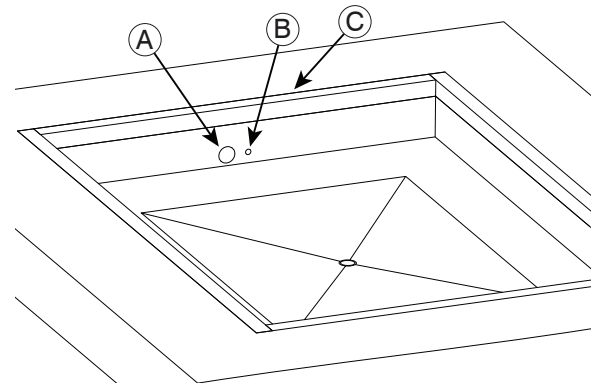


## STEP 2



If a pit mount, pull hydraulic hose through the 3in conduit as unit is lowered into the pit. See wire drawings for any controls cable conduit requirements. Protect cable, hose, and vent line from sharp edges and roughness with plastic tube or other sheathing if required.

Callout	Description
A	Hydraulic hoses conduit
B	Controls and/or electrical cable conduit
C	Side C



## STEP 3

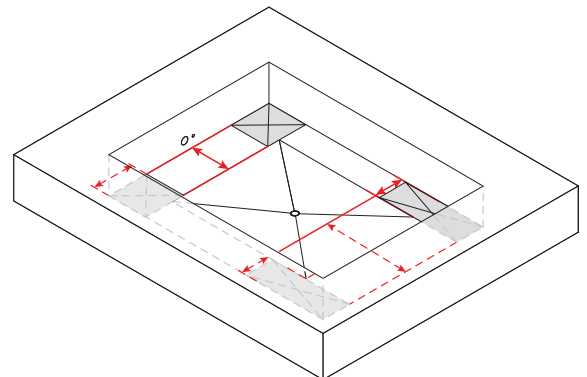
Verify that the starting shims are at each of the four corners of the mount.

**NOTE:** The corners of the “rolling end” should be the lift travel distance plus six (6) inches in length.

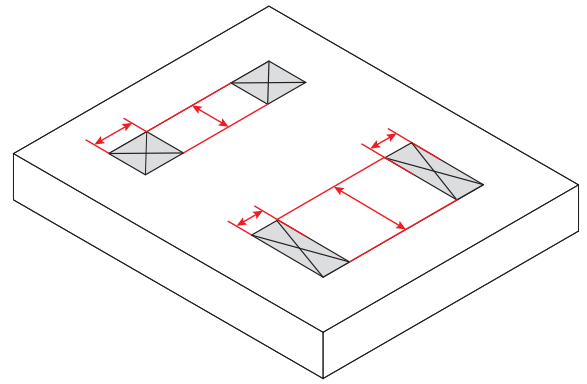
## STEP 4

Verify that the hydraulic hose, vent line, and electrical cable are not pinched or otherwise damaged as the unit is moved.

- Center and square unit in pit on shims (pit-style only).



- Center and square unit shims (ground mount only).

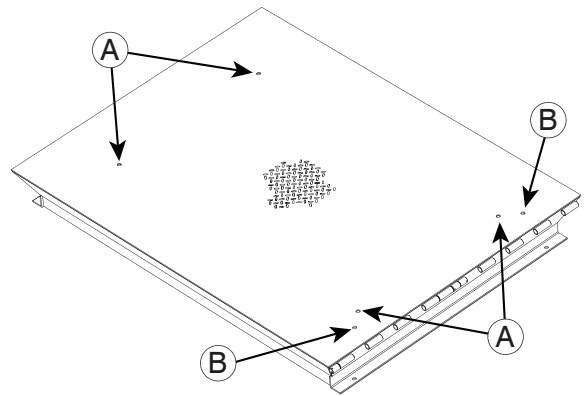


**STEP 5**



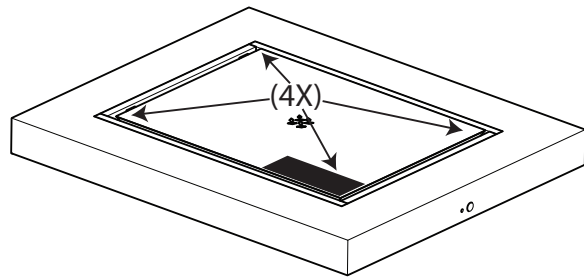
Remove hoist rings and hold down bolts.

Callout	Description
A	Hoist ring locations
B	Hold down bolt locations



**STEP 6**

Place shims and record amount of shim adjustment required to position top of deck flush with the finished floor surface, all four corners (pit-style only).



**STEP 7**

Place each stack of shims on the floor beside its corner. Do this for all four corners.

**14.4 ELECTRIC POWER SUPPLY AND WIRING**

Verify that the Powerpack control box power rating is compatible with that of the facility electric power supply. All wiring inside the Powerpack control box must be neatly laid out for ease of maintenance, avoid crossovers and untidy wiring patterns. All wiring must be completed in accordance with national and local codes. For more information regarding wiring of the dock lift and its electrical components, as equipped, see “15.0 CONTROL BOX INSTALLATION” on page 55 and “15.1 PUSH BUTTON CONTROL STATION” on page 55.

If site conditions call for a different wiring installation method, please contact your Blue Giant Dealer before proceeding.

## 14.5 POWERPACK HARDWARE INSTALLATION

This section describes the physical mounting of the Powerpack hardware. For a detailed layout of the Powerpack, see “11.2 HYDRAULIC POWERPACK” on page 34.

### STEP 1



Mount Powerpack in its permanent location.  
Install breather line and hydraulic hose to Powerpack.

### STEP 2



Install oil dip stick in tank and verify oil level.

### STEP 3



Remove temporary plugs from breather and vent line fittings, located side by side on top surface of reservoir. Breather fitting is ½ in. NPT and vent line fitting is ¼ in. NPT.

### STEP 4



Locate and remove plastic cap-plug from hydraulic hose connector fitting on the Powerpack.

### STEP 5



Position and permanently attach hydraulic hose, reservoir breather, and vent line to Powerpack.

### STEP 6



Install clips and ties as required to retain the hose, line, and cable in suitable positions.

## 14.6 POWERPACK ELECTRICAL INSTALLATION

This section describes the Powerpack installation. Have a qualified electrician supply an electrical hook-up to the power control box and check for correct motor rotation. For correct operation, the Powerpack motor rotation must be clockwise when viewed from the end opposite of the pump.

### Single phase power supply:

All single phase power supplies are factory-cabled for correct rotation at time of installation. To change rotation, see instructions located inside the cover of the electrical junction box on the motor.

### Three phase power supply:

All three phase power supplies must be field-cabled correctly at the time of installation and electrical power supply hook-up. To change rotation, interchange any two motor leads.

If the location of the Powerpack prevents a visual inspection of the motor to determine the direction of rotation.

### STEP 1

Turn power supply **ON**.

### STEP 2

Observe unit and run Powerpack motor by operating the **UP** push button for no more than 5 seconds.

### STEP 3

If unit begins to raise, rotation is correct.

### STEP 4

If there is no indication of movement, allow pump to cool for 1 minute minimum before running again.

### STEP 5

Repeat the 5 seconds **ON** and 1 minute **OFF** cycle no more than 3 times.  
If no movement of unit is evident, change rotation of motor and repeat above steps.

**STEP 6**

If there is no unit movement after completing of steps 1 to 5, contact Blue Giant Technical Support 1.800.872.2583.

**14.7 ANCHORING**

Only perform this procedure on an unloaded deck. If there is no electrical service to the Powerpack then use a temporary on-site solution or portable Powerpack to provide power.

**⚠ DANGER**

- Do not work, stand near, or put any part of your body under the lift without the Service Stand braced, the Maintenance Strut deployed, and a lockout/tagout in place on the Powerpack.
- Only a qualified technician should use the Service Stand.
- Do not leave any load on the lift while performing these procedures or any service work.
- It is recommended that two persons should perform these procedures.
- Never force the dock lift into the raised position without pressurizing the hydraulic system as this will introduce air into the system and may dislodge the cylinders from the base frame causing a crush hazard.

**⚠ WARNING**

- While inspecting under the lift, the maintenance strut must be deployed to brace the lift's lower frame.
- If cleaning or visually inspecting the lift using only the maintenance flip strut, use an extension tool (i.e. broom) to clean under the lift and NEVER place an appendage near or under the lift.
- 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.
- Exercise care when welding. High amperages are used.

**STEP 1**

Use an extension tool to flip or drop-in the maintenance strut(s) in to the locked position. See "8.1 ENGAGING THE DOCK LIFT MAINTENANCE STRUT" on page 21.

**STEP 2**

Prepare the Service Stand.  
See "8.3 ENGAGING THE DOCK LIFT SERVICE STAND" on page 25.

**STEP 3**

Turn electrical supply to control box **OFF**.

**STEP 4**

One corner at a time, one person uses a pry bar to raise the lower frame or sub-frame of the lift.

**STEP 5**

While the lower frame or sub-frame is raised, the second person places that corner's shim stack on top of the starter shim.

**NOTE:** The corners of the "rolling end" should be the lift travel distance plus six (6) inches in length.

**STEP 6**

When the second person is done and safely clear, lower the lower frame or sub-frame on top of the combined shim stack.

**STEP 7**

Repeat steps 7 to 9 for the remaining corners then verify the stability of the frame on the shims.

**STEP 8**

Use the two (2) foot level to verify that the lift deck is level with the finished floor.

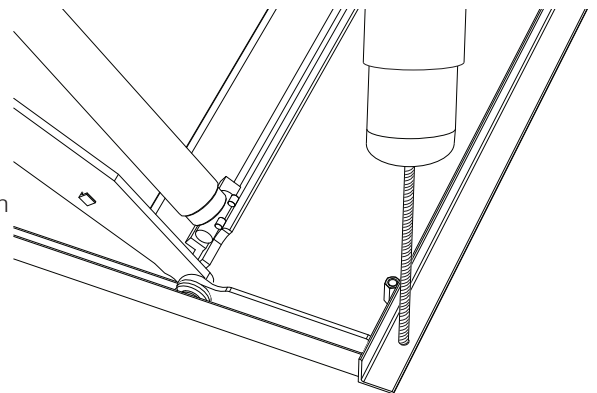
- The surface mount must be level with the finished floor.
- The pit mount must be flush with the finished floor.

If necessary, adjust deck level by repeating 6 to 9. Proceed when the lift deck is level with the finished floor.

**STEP 9**



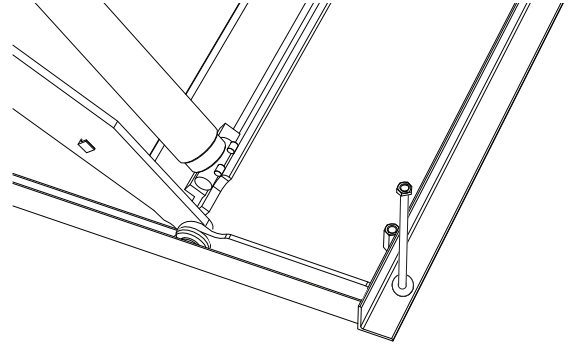
Once the lift deck is level with the finished floor, Drill concrete as required and clean dust out of hole.



**STEP 10**



Install anchor bolts or add-on clips to securely attach brackets to floor of pit.



**STEP 11**

Remove the Service Stand then the Maintenance Strut. See “8.4 DISENGAGING THE DOCK LIFT SERVICE STAND” on page 26 and “8.2 DISENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 24.

**STEP 12**



Turn power supply **ON**.

**STEP 13**

Operate lift up and down several times.

**STEP 14**



Verify that the deck is centered. Including:

- that the pit is square when fully lowered, and top of deck is flush with surface of the finished floor.
- that the surface mount is square and level with the finished floor.

**STEP 15**

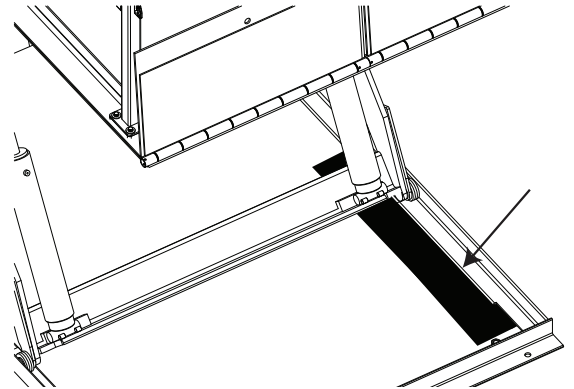
Raise deck, place Maintenance Strut then Service Stand into position, and lock power supply **OFF**. See “8.1 ENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 21 and see “8.3 ENGAGING THE DOCK LIFT SERVICE STAND” on page 25.



**STEP 16**



Adjust shims, if required.  
 See “4.1 ELECTROSTATIC SENSITIVE DEVICE (ESD) HANDLING” on page 12.  
 Verify that the dock lift electrical power is turned **OFF** and all lift components are properly secured/safed before welding.  
 Securely weld all shims and hold-down brackets permanently to frame.



**STEP 17**

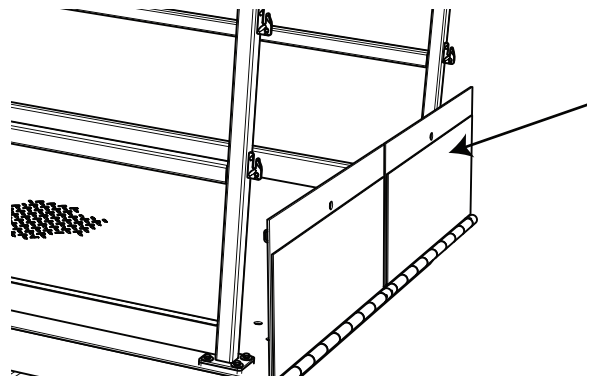
Turn power supply **ON**, remove Service Stand then Maintenance Strut, and lower lift fully.  
 See “8.4 DISENGAGING THE DOCK LIFT SERVICE STAND” on page 26 and “8.2 DISENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 24.  
 Apply touch up paint to areas on the dock lift requiring it.

**14.8 LIP CHAIN INSTALLATION**

This section describes the installation of optional features depending on the dock lift type and the specific order.

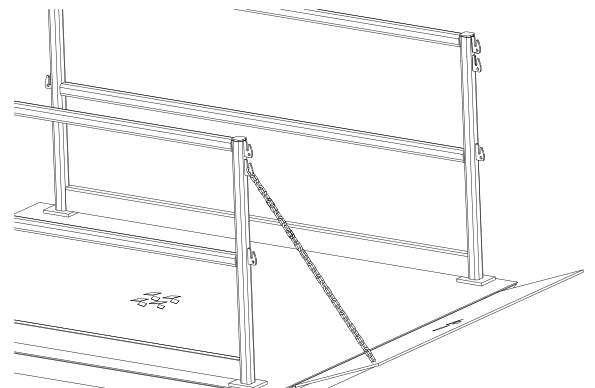
**STEP 1**

If necessary, manually lift lip into position.



**STEP 2**

Unpack and hook up lip chain from guard rail to lip anchor.



**STEP 3**

Repeat for any remaining lip chains. Apply touch up paint to areas on the dock lift requiring it.

## 14.9 GUARD RAIL SYSTEM INSTALLATION

Depending on the hardware ordered, the bolted guard rails may require mounting on the deck. In addition, there may be gates or bolted guard rails for mounting on the finished floor.

### Bolted Guard Rails or Gate Frames on the lift deck

Use the supplied bolts to attach the guard rails or gate frames to the required deck sides. Refer to the drawings for specific locations.

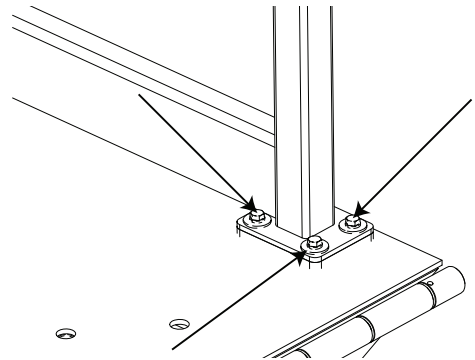
**STEP 1**

Unpack guard rails or gate frames.

**STEP 2**



Position guard rails then anchor to lift deck with supplied bolts and washers.

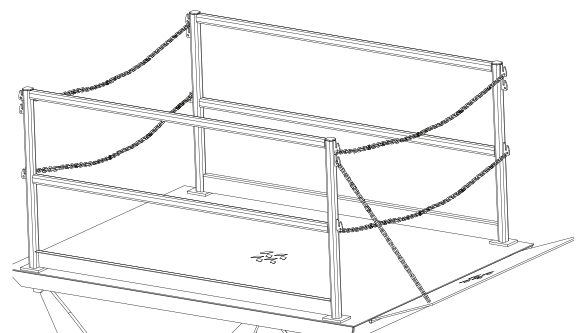


**STEP 3**

Repeat for any additional guard rails or gate frames.

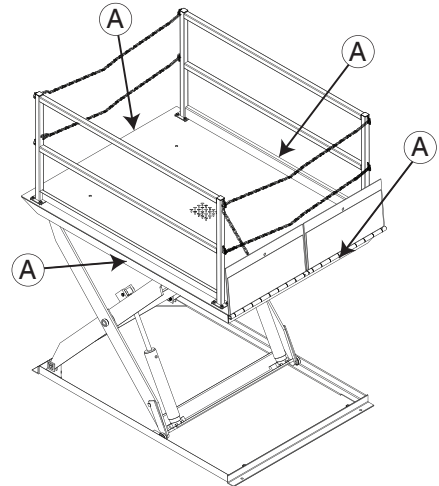
**STEP 4**

Install personnel restraint chain between guard rails at the lip or open ends. Refer to the drawings for specific hardware configuration of personnel restraint chains. Apply touch up paint to areas on the dock lift requiring it.



### 14.10 MAINTENANCE STRUT DECAL

Place on the edge of the deck at Callout A. This decal is intended to warn service personnel to engage maintenance strut before working on and, particularly, under the lift platform.

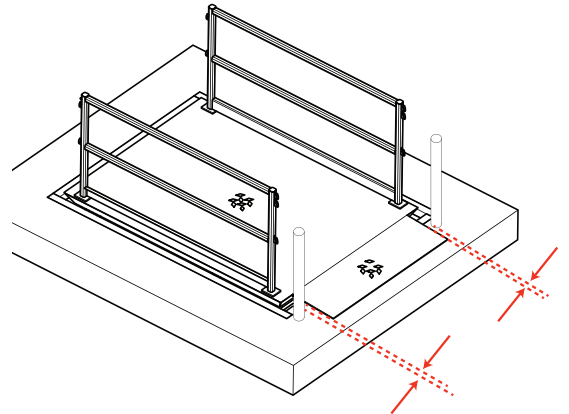


### 14.11 BUMPERS AND BOLLARDS

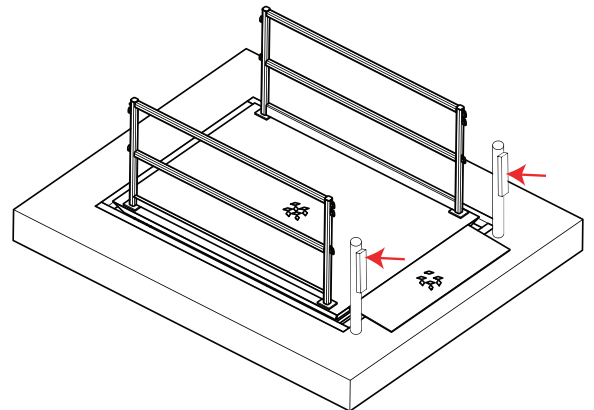
This section describes the lift requirements for installation between bollards or other physical vehicle barriers.

For more specific information, see the installation manuals for bumpers and/or bollards.

- Keep a minimum space of one (1) inch between each lip edge and bollard.



- Attach the bumper to the bollard, wall, or other barrier facing vehicle traffic.



## 14.12 OPTIONAL EQUIPMENT

The optional equipment allows for greater personnel protection, ease of use, or facility requirements.

**NOTE:** Refer to supplemental material for installation and commissioning of this equipment.

### Accordion Safety Skirting

Accordion safety skirting acts as a barrier to keep under the lift clean and provide personnel awareness.

This installation will require multiple persons to move the accordion safety skirting.

1. Raise the dock lift to a convenient height for the installers.
2. Deploy the Maintenance Strut. See “8.1 ENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 21.
3. Lock out and tag out the dock lift.
4. Carefully hang the skirting on the fittings around the perimeter of the lift deck.
5. Verify that the safety skirt is anchored correctly and that the skirt bottom rests around the lower lift frame without preventing normal operation.
6. Store the Maintenance Strut. See “8.2 DISENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 24.
7. Remove lockout and tagout.
8. Operate the lift by elevating and lowering the lift to verify that accordion safety skirt is correctly installed.

### Folding Gates, Swing Gates and Interlock Swing Gates

Swing gates, interlock swing gates, and folding gates close the transfer ends as alternatives to personnel restraint chains.

1. Install when the dock lift is lowered and has a lock out/tag out.
2. Anchor the swing gate to the lift deck in the same method as the guard rails.
3. If interlocking swing gates, wire the gate interlock switches as per wiring diagram.
4. Close and lock the swing gate(s).
5. Restore both electrical and hydraulic power.
6. Without a load on the deck, test the dock lift by raising then lowering the deck.
7. When dock lift is in motion, trip the interlock by opening interlock swing gates then verify that the lift comes to a stop. Troubleshoot the interlock swing gates, as required.
8. If the dock lift elevates and lowers, and any opened interlock (if present) stops the lift then proceed with remaining installation.

### Bolted Guard Rails or Gate Frames on the Finished Floor

Comply with construction drawings for any floor mounting of bolted guard rails or gate frames.

Refer to “14.2 SHIM INSTALLATION” on page 39 for instructions on drilling and preparing the finished floor for bolting.

1. Mark on the finished floor where the bolted guard rails or gate frames require anchoring. Refer to drawings for exact measurements.
2. Once the anchor holes are marked on the finished floor, drill each hole to fit a 3/8 inch anchor bolt
3. Clear debris out of the holes.
4. Place a guard rail or gate frame on the required side of the lift then permanently anchor to the finished floor.
5. Repeat until all required guard rails or gate frames are bolted to the finished floor.

### Sub-Frames

Sub-frames permit a standard dock lift to fit into a deeper than standard pit by bridging the height difference between the lowered deck and finished floor. The sub-frame is factory welded to the lower frame of the dock lift and shipped as a single unit. The floor anchors must be fastened to clips on the sub-frame using the same anchoring procedure as the standard dock lift.

Standard sub-frame heights available for ½ in. (12.7 mm) to 14 in. (356 mm) height. Custom sizes available on request.

### Hydraulic hose lengths

The standard supplied hydraulic hose is 12 feet (3.7m) long. Longer hose lengths are available (up to 35 feet (10.7m)).

**NOTE:** If hydraulic lip is optioned, two hoses are required.

**Wall bracket for Powerpack 24 foot long hydraulic hose(s)**

This bracket holds the extra length of hydraulic hose(s)

**Push button control**

The push button control has a key lock option and an E-stop option for greater safety and security for workers and employers.

The standard supplied control cable is 12 feet (3.7m) long. Longer cable lengths are available (up to 35 feet (10.7m)).

A coil cord for the push button control cable is available in 10 foot (3m) lengths, up to a maximum of 30 feet (9.1m).

There is a twist and remove option for the control cable to allow its removal for temporary storage or security reasons.

**Powerpack**

The Powerpack has several safety options available. There are visual/auditory warning systems for indicating lift motion: a warning bell, an adjustable volume horn, and a flashing amber beacon. These items may require onsite installation and shall be mounted so that all operators have an unobstructed view of the lift and any warning systems associated with that lift

The Powerpack supports an oil heater option for use in environments too cold for standard hydraulic oil. Arctic oil should never be used in combination with the oil heater, damage may occur.

**Assisted Lip Control**

Reduces the manual force required to raise or lower the lip into position. Lips length up to 42 inches.



## 15.0 CONTROL BOX INSTALLATION

This section describes the Powerpack installation in general. For specifics, refer to any necessary drawings for electrical hook up and/or physical mounting requirements.

Verify that the Powerpack control box power rating is compatible with that of the facility electric power supply. All wiring inside the Powerpack control box must be neatly laid out for ease of maintenance, avoid crossovers and untidy wiring patterns. All wiring must be completed in accordance with national and local codes.

1. Connect any push button controls.
2. Run power from the fused disconnect to the control box then to the Powerpack.
3. Complete the electrical hook-up between components.

If site conditions call for a different wiring installation method, please your Blue Giant Dealer before proceeding.

### 15.1 PUSH BUTTON CONTROL STATION

This section describes the installation of the push button control station on the dock lift.

#### **Controls installed directly to Powerpack on finished floor, or wall mount**

Refer to the wiring drawings for specific requirements. See "4.1 ELECTROSTATIC SENSITIVE DEVICE (ESD) HANDLING" on page 12.

1. Attach any control cord extension or coiled cord to Powerpack
2. Wire to permanent terminals in the Powerpack control box.  
This will connect the push button control station.
3. Attach wiring from dock lift lower frame junction box to the Powerpack control box.  
This will connect any dock lift features requiring electricity.
4. If required, physically mount any hook or storage hardware for the remote push button control station (pendant).

#### **Controls installed on a guard rail or a separate guard post**

Refer to the wiring drawings for specific requirements. See "4.1 ELECTROSTATIC SENSITIVE DEVICE (ESD) HANDLING" on page 12.

1. Attach wiring from dock lift lower frame junction box to the Powerpack control box.  
This will connect the push button control station and any dock lift features requiring electricity.
2. Anchor control box to guard rail
3. Wire to permanent terminals of Powerpack.

#### **Controls installed on self-contained pit model**

The dock lift, the push button control station, and the Powerpack is factory wired on the self-contained pit model.





## 16.0 PRE-COMMISSIONING INSPECTION CHECKLIST

Before using the lift, complete the pre-commissioning inspection checklist.

 **DANGER**

- When repairing or conducting maintenance procedures on electrical components, perform lockout / tagout steps according to OSHA regulations and approved electrical codes.
- Prior to installation, place adequate barriers to prevent unauthorized personnel and vehicle traffic from entering the work area.

 **WARNING**

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

**INSPECTED BY:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**SERIAL #:** \_\_\_\_\_ **DOOR #:** \_\_\_\_\_

Forward this checklist to the person responsible for dock equipment maintenance.

INSTRUCTIONS FOR USE: Indicate “OK for USE” with a check mark ✓ in the appropriate box of each inspection point.

<b>BEFORE POWERING ON THE UNIT:</b>	<b>AFTER POWERING ON THE UNIT</b>
<input type="checkbox"/> Is the platform sitting level in all four corners?	<input type="checkbox"/> Does the deck elevate when the <b>UP</b> push button is pressed?
<input type="checkbox"/> Are all welds cleaned and painted?	<input type="checkbox"/> Have all tools and debris been cleared from the pit?
<input type="checkbox"/> Was the junction box under the unit properly wired and closed?	<input type="checkbox"/> Are there no signs of an oil leak?
<input type="checkbox"/> Are the bolted guard rails installed correctly and painted “safety yellow”?	<input type="checkbox"/> Is the breather hose attached to the top of each cylinder?
<input type="checkbox"/> Was the hydraulic hose connected and routed properly?	<input type="checkbox"/> Is the breather hose from the Powerpack present and installed correctly?
<input type="checkbox"/> Is the Powerpack electrically connected to the nameplate voltage?	<input type="checkbox"/> Are the cylinders in their mounts properly?
<input type="checkbox"/> Is the wiring diagram inside the control panel?	<input type="checkbox"/> Are hydraulic hoses routed and tightened so no damage will occur when unit is raised and lowered?
<input type="checkbox"/> Is the control panel wiring positioned away from sources of physical damage?	<input type="checkbox"/> Are shims welded properly in place?
<input type="checkbox"/> Press each button on the control panel to ensure they return to home position and that there is no damage to the cord or body of the control panel	<input type="checkbox"/> Has any weld spatter or debris preventing the roller from running smoothly been removed? (Verify upper and lower roller locations)
<input type="checkbox"/> If unit equipped with lip(s), are they stored in the home position, secured by personnel restraint chains?	<input type="checkbox"/> Are the bolts securing the base frame in place tightened?
<input type="checkbox"/> Are the personnel restraint chains attached between the bolted guard rails?	<input type="checkbox"/> Is the up limit switch set to the work height required?
<input type="checkbox"/> Are all safety decals in place?	<input type="checkbox"/> If equipped, are safety trip bars functional and installed correctly?
<input type="checkbox"/> Are the Owner’s Manual and Operation Placard located near the control panel?	<input type="checkbox"/> If equipped, are lip assist springs in good working order?
	<input type="checkbox"/> If equipped, is the accordion skirt correctly installed?
	<input type="checkbox"/> If equipped, are the bell, adjustable volume horn, or visual beacon correctly installed?
	<input type="checkbox"/> If equipped, is the twist plug cord in good working order?
	<input type="checkbox"/> If equipped, is the mechanical roll-off barrier in good working order?
	<input type="checkbox"/> If equipped, is the immersion oil reservoir heater in good working order?
	<input type="checkbox"/> If equipped, are the keyed lock and/or E-Stop on the push button controls in good working order?

**Explain faults briefly in the space provided below:**

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**PHOTOCOPY THIS CHECKLIST AND FILL OUT REGULARLY FOR YOUR RECORDS.**

## 16.1 LUBRICATION POINTS AND POWERPACK RESERVOIR

Only trained technicians should lubricate the lift or fill the Powerpack reservoir. Use only the specific oil quoted in this order/drawing(s).

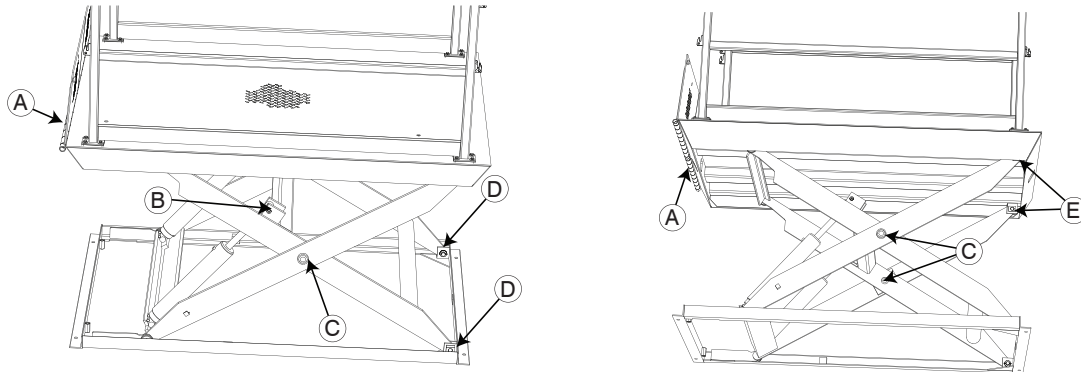
### DANGER

- Do not work, stand near, or put any part of your body under the lift without the Service Stand braced, the Maintenance Strut deployed, and a lockout/tagout in place on the Powerpack.
- Only a qualified technician should use the Service Stand.
- Do not leave any load on the lift while performing these procedures or any service work.
- It is recommended that two persons should perform these procedures.

### WARNING

- While inspecting under the lift, the maintenance strut must be deployed to brace the lift's lower frame.
- If cleaning or visually inspecting the lift using only the maintenance flip strut, use an extension tool (i.e. broom) to clean under the lift and NEVER place an appendage near or under the lift.
- 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.
- Do not attempt to install, make repairs or adjustments. Only a trained and authorized service technician should perform the installation process. Contact your Blue Giant Dealer.
- Do not service this equipment until you have read and understood all of the safety information and instructions contained herein. Failure to adhere to recommended safety practices in this manual and on the dock equipment warning labels could result in death or serious injury.
- Do not conduct maintenance or repairs until adequate barriers have been placed to keep warehouse and vehicle traffic away from the work area.
- Before doing any electrical work, make certain the power is disconnected and properly tagged or locked out.
- When conducting maintenance, use only Blue Giant approved lubricants. Improper lubrication or adjustments may cause operational problems.

Apply lubricate at these points and on the matching pivot points on other side.



Callouts	Description
A	Lip Hinge
B	Lift Cylinder Pivots
C	Center Scissor Pivots
D	Frame / Leg Pivots
E	Deck / Leg Pivots

1. Without a load on the lift deck, raise the dock lift to sufficient height to deploy the Maintenance Strut.
2. Deploy the Maintenance Strut. See “8.1 ENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 21.
3. Deploy the Service Stand to brace the lower frame and the lift deck edge. See “8.3 ENGAGING THE DOCK LIFT SERVICE STAND” on page 25.
4. Apply lubrication at the points shown in the illustration.

**NOTE:** It is recommended to use an oil can with an extended nozzle.

5. Inspect and top up Powerpack reservoir.
  - If Powerpack is self-contained, inspect and fill the reservoir as required while dock lift has Maintenance Strut and Service Stand deployed. Do not overfill because may leaks occur when the deck is lowered.
  - If Powerpack is a remote model, inspect and fill reservoir while dock lift is in the lowered position.
6. When the inspection is complete. Follow the procedures to disengage the Service Stand then the Maintenance Strut. See “8.4 DISENGAGING THE DOCK LIFT SERVICE STAND” on page 26 and “8.2 DISENGAGING THE DOCK LIFT MAINTENANCE STRUT” on page 24.

## 16.2 COMMISSIONING AND START-UP PROCEDURES

This procedure describes the process to start the hardware for the first time.

1. Consult the Pre-Commissioning Inspection Checklist - Scissor Lifts. See “16.0 PRE-COMMISSIONING INSPECTION CHECKLIST” on page 57 for inspection criteria.
2. Check that all electrical conduits, hoses, and cables are mechanically protected against damage and are adequately secured.
3. Return all wiring diagrams to the inside of the control box.
4. Mount Operation Placard (part # dependent on model) next to the Push Button Controls.

⚠ WARNING

APPLIES TO BLUE GIANT SCISSOR LIFTS

Do not operate this scissor lift without proper training and authorization.

**READ AND UNDERSTAND THE FOLLOWING:**  
The instructions and warnings on this placard and in the owner's manual.  
The warnings on the scissor lift details.

<p>Do NOT go under the scissor lift platform to clean or perform routine maintenance unless the Maintenance Strut and Service Stand are safely and securely engaged.</p> <p><b>Prior to using the scissor lift:</b></p> <ul style="list-style-type: none"> <li>• Verify that all safety devices (guard rails, restraint chains, toe guards, and warning belts-if equipped) are in place and functioning properly.</li> <li>• Operate the scissor lift through one complete lift/lower cycle and verify its proper operation. Inspect the scissor lift for signs of structural damage or mechanical malfunction. If damage is observed or the unit fails to operate properly, remove them from service and notify maintenance personnel immediately.</li> </ul> <p>Do NOT exceed the capacity as stated on the nameplate.</p> <p>Ensure that the scissor lift serial nameplate is present and legible.</p> <p>Do NOT leave the control station where it can be accidentally operated or damaged.</p> <p>Be aware that lift capacity may be reduced when loads are rolled over the platform sides or edges. Refer to the nameplate for reduced capacity under these conditions.</p> <p>If loads are mobile, secure them in a fixed position before operating the scissor lift.</p> <p>Lift operator(s) must be present during all steps of operation.</p>	<p>Lift operator(s) must keep an unobstructed view of lift, any operation light/horn/bell, and other operators to ensure safe operation.</p> <p>Ensure that all personnel near the scissor lift are aware that it is being operated.</p> <p>Keep objects, control cables, spills, possible trip hazards, and debris away from around or under the scissor lift platform(s) and its travel path.</p> <p>If the scissor lift is equipped with a hinged bridge(s), the bridge must overlap the trailer bed by a minimum of 4" (102mm) before use. Do not use the bridge if it is supported solely by the lifting chain.</p> <p>Hipped liss may drop unexpectedly, keep people and objects clear of the area immediately under or near the lip.</p> <p><b>If maintenance or service is required:</b></p> <ul style="list-style-type: none"> <li>• Only authorized service personnel shall provide maintenance / service on the lift.</li> <li>• Follow approved lockout procedures.</li> </ul> <p>Do NOT work on or under the lift without properly engaging the lift's maintenance strut. Blue Giant recommends the use of a secondary means (service stand) of securing the scissor lift while performing repairs under the deck.</p> <p>The lift shall not be modified or altered without written approval from an authorized Blue Giant representative.</p> <ul style="list-style-type: none"> <li>• Maintain records of repairs and preventive maintenance reports.</li> </ul>
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5. Clean up the entire work area and apply touch-up paint to all welds, scratches and burns.
6. Verify that no debris or personnel are in the operating path of the lift.
7. Check the lift for proper and safe operation.
8. Test-operate the unit through several full cycles of operation. Refer to the Owner's Manual (part # dependent on model). If problems are noted, see “18.0 TROUBLESHOOTING” on page 63.
  - a. Press the **UP** push button to raise the dock lift fully then press the **DOWN** push button to lower dock lift fully.
  - b. If present, lower lip manually or press the hydraulic lip push button then raise and secure lip.
  - c. Test with various operational weights as loads.
  - d. Try combinations of sub-steps a to c. Repeat as necessary.
5. Store this Installation Manual in a secure place for easy access.



## 17.0 PLANNED MAINTENANCE

Develop a planned or scheduled maintenance plan to keep the hardware in good operating order. See the Planned Maintenance chapter in the Stationary Dock Lift Owner's Manual for further information.

### DANGER

- Failure to properly secure the dock lift deck prior to working underneath it may result in property damage, bodily injury, or death.
- Engage the Maintenance Strut AND Service Stand before working. If both cannot be successfully engaged, Contact your Blue Giant Dealer.

### WARNING

- Do not attempt to install, make repairs or adjustments. Only a trained and authorized service technician should perform the installation process, make repairs, or make adjustments. Contact your Blue Giant Dealer.
- Do not service this equipment until you have read and understood all of the safety information and instructions contained herein. Failure to adhere to recommended safety practices in this manual and on the dock equipment warning labels could result in death or serious injury.
- Do not conduct maintenance or repairs until adequate barriers have been placed to keep warehouse and vehicle traffic away from the work area.
- Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off.
- When conducting maintenance, use only Blue Giant approved lubricants. Improper lubrication or adjustments may cause operational problems.

See the Owner's Manual supplied for the detailed Planned Maintenance checklist.



## 18.0 TROUBLESHOOTING

Use this section to help diagnose issues if the dock lift is not operating as specified.

### DANGER

- Failure to properly secure the dock lift deck prior to working underneath it may result in bodily injury, or death.
- Engage the Maintenance Strut and Service Stand before working. If both cannot be successfully engaged, contact your Blue Giant Dealer.

### WARNING

- Do not attempt to install, make repairs, or adjustments. Only a trained and authorized service technician should perform the installation process, make repairs, or make adjustments. Contact your Blue Giant Dealer for assistance.
- Do not service this equipment until you have read and understood all of the safety information and instructions contained herein. Failure to adhere to recommended safety practices in this manual and on the dock lift equipment warning labels could result in death or serious injury.
- Do not conduct maintenance or repairs until adequate barriers have been placed to keep warehouse and vehicle traffic away from the work area.
- Before doing any electrical work, verify that the power is disconnected and properly tagged or locked out, in accordance with OSHA regulations and approved electrical codes.
- When conducting maintenance, use only Blue Giant approved lubricants. Improper lubrication or adjustments may cause operational problems.

Following description of operating principles is intended as a guide when trouble shooting and making adjustments or repairs. If no fault can be found and equipment fails to operate properly, contact your Blue Giant Equipment Dealer.

- Pressing the **UP** push button energizes pump which supplies fluid under pressure to cylinder for lifting deck. A check valve (inside pump or in line) prevents any back flow of oil through pump when it is shut off.
- Pressing the **DOWN** push button opens solenoid lowering valve which allows fluid from the cylinder to return to reservoir. Lowering speed is controlled by load lowering valve. Lowering is factory set for safe lowering and normally requires no further adjustment.
- If a limit switch is used to control upward travel, it is electrically connected in series with the **UP** push button switch.
- Upward travel of the deck is limited by stops on the leg roller tracks of the lower frame (in some cases internal stops within cylinders are used to limit travel). These stops should never be used to position deck at intended raised height.

PROBLEM	PROBLEM CAUSED
Deck will not raise.	<p><b>Foreign material lodged between side of deck and pit wall.</b> Remove and discard foreign material as required.</p> <p><b>Equipment or goods parked on dock lift deck.</b> Remove and test operate the lift. Verify dock lift capacity before resuming.</p> <p><b>Low hydraulic oil fluid in power unit.</b> Damaged hose or other oil leak, repair and refill with approved hydraulic oil as required.</p> <p><b>Incorrect motor rotation: three phase power supply only.</b> Contact qualified personnel to correct.</p> <p><b>Fuse and / or overload blown.</b> Check fuse and / or overload reset.</p> <p><b>Filter may have blockages.</b> Clean or replace suction filter.</p> <p><b>Valve may have blockages.</b> Replace / repair if necessary.</p> <p><b>Pump not running at correct system pressure.</b> Replace / repair if necessary.</p> <p><b>UP push button/open circuit.</b> Check for open circuit in UP limit set improperly contact block or broken wire in harness.</p> <p><b>Wrong voltage.</b> Check line voltage to nameplate voltage.</p> <p><b>Motor connected to high voltage connection on lower voltage feed.</b> Check motor connection to nameplate.</p> <p><b>Control fuse blown.</b> Replace.</p> <p><b>Interlock devices.</b> Check all switches.</p> <p><b>Shipping bolts not removed.</b> Remove.</p> <p><b>Hydraulic hose pinched.</b> Check hose for pinching, folding, or object on top of hose.</p>
Lift deck does not maintain steady height.	<p><b>Oil leak may be present.</b> Repair leak.</p> <p><b>Motor check valve is defective.</b> Replace, if necessary.</p> <p><b>Down solenoid valve is defective.</b> Replace, if necessary.</p>
Lift deck locked in "UP" position. When <b>DOWN</b> button is pushed, a click can be heard.	<p><b>Velocity fuse locked.</b> Contact your Blue Giant Dealer.</p> <p><b>If equipped, lowering speed valve closed.</b> Open to set proper lowering speed.</p>
Deck will not lower. No clicking sound heard when a button is pressed.	<p><b>DOWN push button broken / open circuit.</b> Check for open circuit in contact block, broken wire in harness, safety trip bar circuit (if equipped). Scissor leg bushings seized.</p> <p><b>Lowering valve defective.</b> Replace.</p>
Deck raises slowly.	<p><b>Pressure relief bypassing.</b> Foreign material lodged between ball and seat. Contact your Blue Giant Dealer.</p> <p><b>Faulty Power Pack.</b> Replace Powerpack.</p> <p><b>Weight overload.</b> Remove weight until load matches nameplate weight capacity rating.</p>

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PROBLEM	PROBLEM CAUSED
Lip (if present) does not lower.	<p><b>Lip plate bent causing hinge to bind.</b> Repair and lubricate as required.</p> <p><b>Foreign material lodged in the lip hinge area or lack of lubricant.</b> Clean thoroughly as required and lubricate, as needed.</p> <p><b>Chain too short.</b> Replace.</p>
Lip will not lift.	<p><b>Foreign material lodged in the lip hinge area or lack of lubricant.</b> Clean thoroughly as required and lubricate, as needed.</p> <p><b>Spring assist lip spring is damaged or missing.</b> Replace spring.</p> <p><b>Chain is too long.</b> Shorten chain.</p>









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