

A Division of Systems, LLC

POWERAMP
Premium Loading Dock Systems

Unichock XL®

Vehicle Restraint

Owner's/User's Manual



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Table of Contents

Page

Precautions

| | |
|--|---|
| Recognize Cautionary Information | 1 |
| General Operational Precautions | 1 |
| Operational Precautions | 2 |
| Safety Decals..... | 4 |
| Placard | 5 |
| Owner's/User's Responsibilities | 6 |

Introduction

| | |
|-------------------------------|---|
| General Information..... | 8 |
| Component Identification..... | 9 |

Installation

| | |
|---|----|
| Installation Precautions | 10 |
| Standard Installation Overview | 11 |
| Post Mount Installation Overview | 23 |
| Standard Ground Plate Installation..... | 25 |
| Winter Plate Installation | 26 |
| Electrical Installation | 31 |
| Placard Installation Instructions | 34 |

Operation

| | |
|--|----|
| Operational Precautions | 35 |
| Inside & Outside Light Sequence Charts | 38 |

Maintenance

| | |
|-------------------------------------|----|
| Maintenance Precautions..... | 41 |
| Periodic Maintenance Schedule | 42 |

Adjustments

| | |
|-----------------------------------|----|
| Articulating Arm Adjustment | 43 |
| Adjust Spring tension..... | 45 |

Troubleshooting

Parts

| | |
|------------------------------------|----|
| OSLA (Outside Light Assembly)..... | 48 |
| Signs | 49 |
| Arm and Chock - Part Diagram | 50 |
| Ground Plate - Part Diagrams..... | 52 |

Miscellaneous

| | |
|----------------------------|------------|
| Customer Information | 54 |
| Notes | 55 |
| Warranty..... | Back Cover |

PRECAUTIONS

Recognize Precautionary Information

Safety-Alert Symbol



The Safety-Alert Symbol is a graphic representation intended to convey a safety message without the use of words. When you see this symbol, be alert to the possibility of death or serious injury. Follow the instructions in the safety message panel.

DANGER

The use of the word DANGER signifies the presence of an extreme hazard or unsafe practice which will most likely result in death or severe injury.

WARNING

The use of the word WARNING signifies the presence of a serious hazard or unsafe practice which could result in death or serious injury.

CAUTION

The use of the word CAUTION signifies possible hazard or unsafe practice which could result in minor or moderate injury.

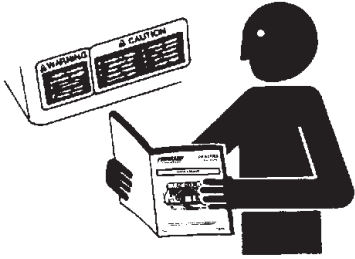
NOTICE

The use of the word NOTICE indicates information considered important, but not hazard-related, to prevent machine or property damage.

SAFETY INSTRUCTIONS

Indicates a type of safety sign, or separate panel on a safety sign, where safety-related instructions or procedures are described.

General Operational Precautions



Read and understand the Owner's/User's Manual and become thoroughly familiar with the equipment and its controls before operating the equipment.

Never operate equipment while a safety device or guard is removed or disconnected.

Never remove DANGER, WARNING, or CAUTION signs, Placards or Decals on the equipment unless replacing them.

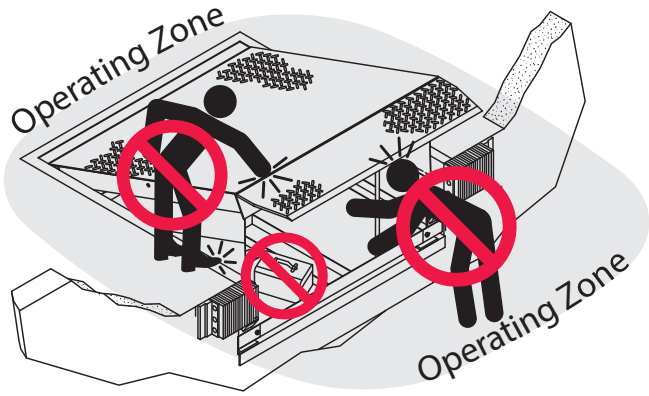



Figure 1

Do not start the equipment until all unauthorized personnel in the area have been warned and have moved outside the operating zone (Figure 1).

Remove any tools or foreign objects from the operating zone before starting.

Keep the operating zone free of obstacles that could cause a person to trip or fall.

 **WARNING:** This product can expose you to chemicals including lead, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

PRECAUTIONS

Operational Precautions



Learn the safe way to operate this equipment. Read and understand the manufacturer's instructions. If you have any questions, ask your supervisor.

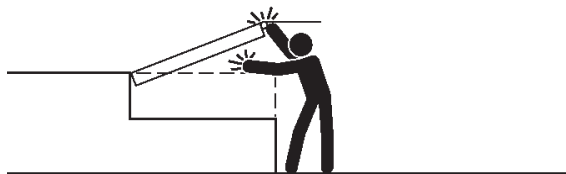
DANGER



Stay clear of dock leveling device when transport vehicle is entering or leaving area.



Do not move or use the dock leveling device if anyone is under or in front of it.



Keep hands and feet clear of pinch points. Avoid putting any part of your body near moving parts.

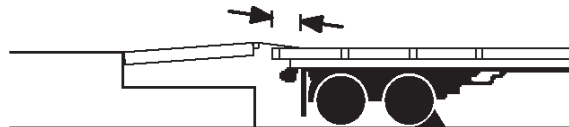
WARNING



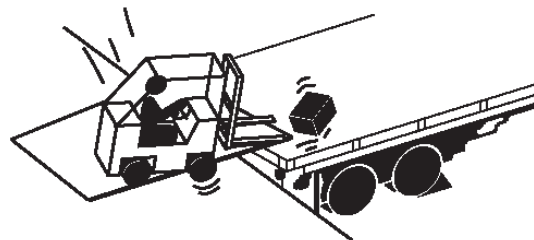
Chock/restrain all transport vehicles. Never remove the wheel chocks or release the restraining device until loading or unloading is finished, and transport driver has been given permission to drive away.



Do not use a broken or damaged dock leveling device or restraining device. Make sure proper service and maintenance procedures have been performed before using.



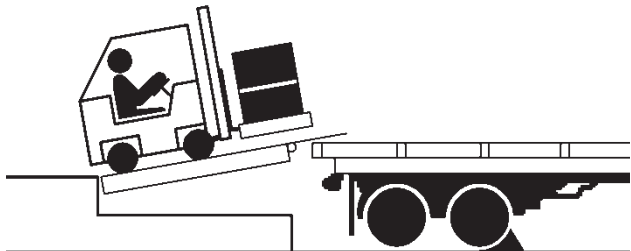
Make sure lip overlaps onto transport vehicle bed at least 4 in. (102 mm).



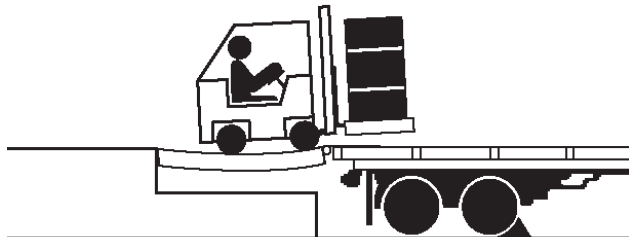
Keep a safe distance from both side edges.

Operational Precautions

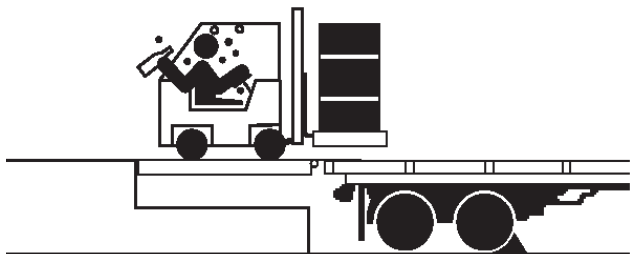
 **WARNING**



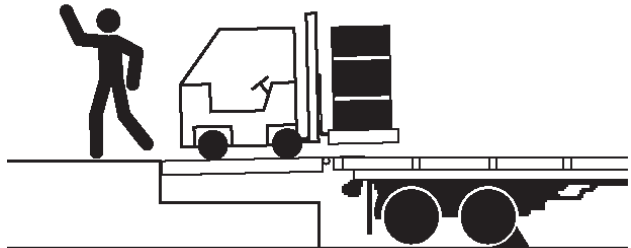
Do not use dock leveling device if transport vehicle is too high or too low. Ensure air is bled from suspension system according to manufacturer's instructions.



Do not overload the dock leveling device.



Do not operate any equipment while under the influence of alcohol or drugs.



Do not leave equipment or material unattended on dock leveling device.

PRECAUTIONS

Safety Decals

*Control box appearance may vary depending on options.

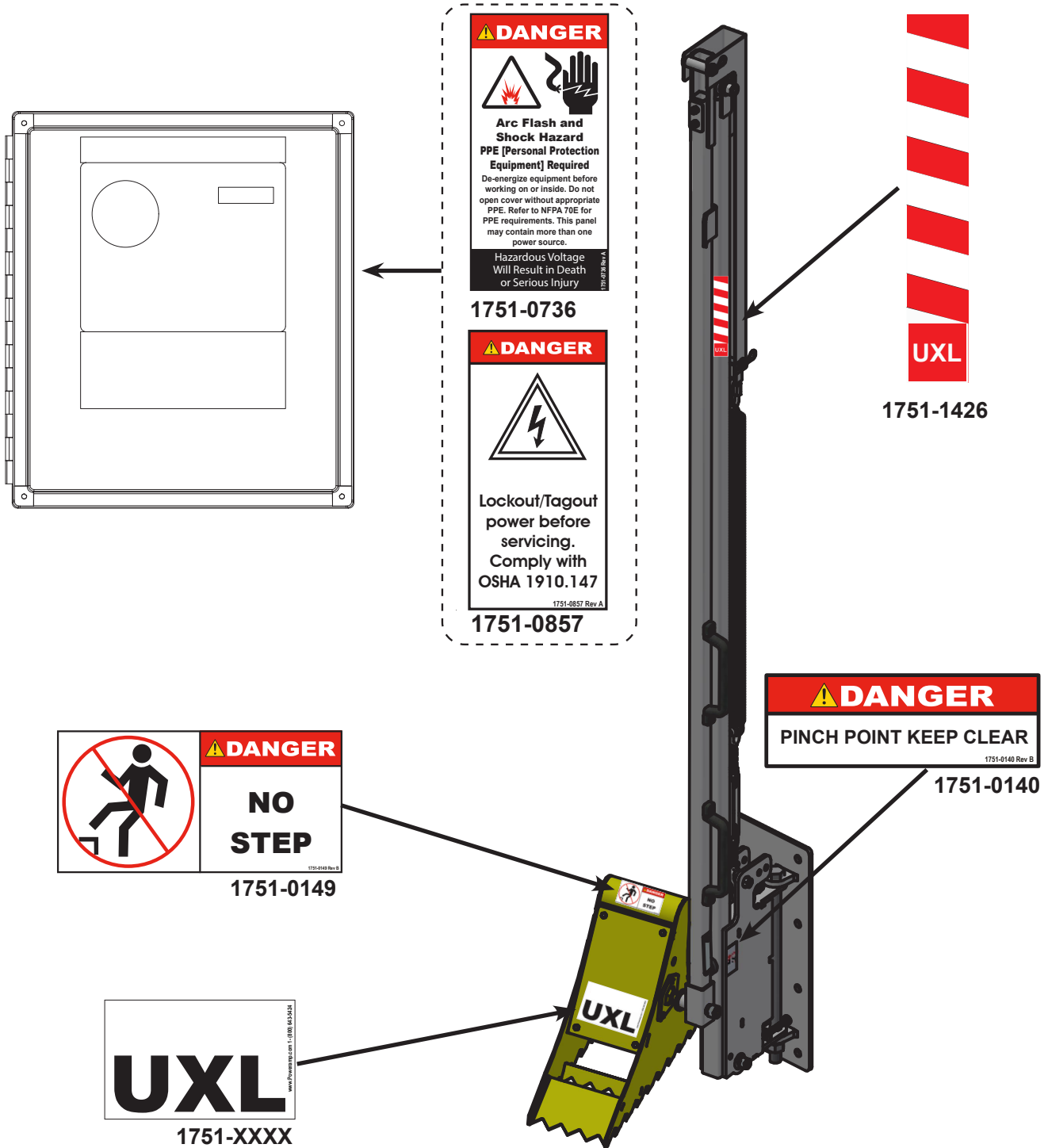


Figure 2

Placard




DANGER

- Read and follow all instructions, warnings, and maintenance schedules in the manual and on placards.
 - Wheel chock restraint operation and servicing is restricted to authorized personnel.
1. Before using the vehicle restraint:
 - Remove any debris, snow, or ice that may obstruct the operation of the wheel chock to restrain the transport vehicle.
 - Alert personnel in the area of potential operation of the wheel chocking system.
 - Operate the wheel chocking system through one complete cycle, inspecting it for proper operation and light sequence. Advise maintenance personnel of any damage or improper operation immediately. Remove all malfunctioning or damaged wheel chocking systems from service using approved lockout/tagout procedures.
 2. Before attempting to restrain a transport vehicle:
 - Verify that transport vehicle is positioned squarely against dock bumpers.
 - Inspect the transport vehicle's wheel area. Fenders or shrouds near the wheel may obstruct and not allow the wheel chocking system to securely capture the transport vehicle wheel.
 3. After activating vehicle restraint:
 - Verify that the wheel chock is fully engaged and centered with vehicle tire.
 - If equipped with a light communication system, load and unload on GREEN light only.
 4. Maintenance or service must be performed by authorized personnel only. Follow approved lockout/tagout procedures.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN DEATH OR OTHER SERIOUS INJURY.



Scan to view our owner's/user's manuals online.
www.LoadingDockSystems.com
1.800.643.5424
Call for additional placards, or manuals, or with questions regarding proper use, maintenance, and repair of dock leveler.

 **WARNING: CANCER AND REPRODUCTIVE HARM**
www.P65Warnings.ca.gov



1751-UXL

OPERATING INSTRUCTIONS

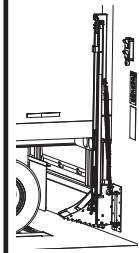
VEHICLE RESTRAINTS

Only for UXL



ENGAGE WHEEL CHOCK

1. Place chock in front of wheel. (Inside RED light indicates chocking in process)
2. RED/AMBER inside light will indicate proper engagement with the wheel.
3. Control box display will prompt to open overhead door and/or operate leveler.
4. GREEN light indicates chock engaged and door open.



RELEASE RESTRAINT

1. When loading/unloading is complete store leveler and close overhead door.
2. To change light communication:
 - a. Manual light change requires operator to press the DOCK ALERT STATUS button.
 - b. Automatic light change requires the leveler to be stored or overhead door closed.
3. Outside light will start to alternate RED & GREEN to indicate it is safe to remove the wheel chock. Inside light will be RED to indicate chock maybe in process of returning to the stored position.
4. Wheel chock must be returned to the stored position to complete the sequence of operation.

BY-PASS

1. If the UXL is not able to chock the wheel or provide proper light communication, it is still required use a wheel chock to restrain transport vehicle.
2. Chock must be stored on bracket.
3. Press the DOCK ALERT STATUS button.
4. Inside light is GREEN/AMBER and outside light is RED.
5. Place chock in front of wheel.
6. Loading/unloading may proceed with caution.

BY-PASS RESET (RETURN TO NORMAL OPERATION)

1. When loading/unloading is complete remove wheel chock and store it on wall bracket.
2. Press the DOCK ALERT STATUS button.
3. Lights change to RED inside and GREEN outside.

OWNER'S/USER'S RESPONSIBILITIES

- 1) The manufacturer shall provide to the initial purchaser and make the following information readily available to the owners/users and their agents, all necessary information regarding Safety Information, Operation, Installation and Safety Precautions, Recommended Initial and Periodic Inspections Procedures, Planned Maintenance Schedule, Product Specifications, Troubleshooting Guide, Parts Break Down, Warranty Information, and Manufacturer's Contact Information.
- 2) The owner/user should recognize the inherent dangers of the interface between the loading dock and the transport vehicle. The owner/user should, therefore, train and instruct all operators in the safe operation and use of the restraining device in accordance with manufacturer's recommendations and industry standards. Effective operator training should also focus on the owner's/user's company policies, operating conditions and the manufacturer's specific instructions provided with the restraining device. Maintaining, updating and retraining all operators on safe working habits and operation of the equipment, regardless of previous experience, should be done on a regular basis and should include an understanding and familiarity with all functions of the equipment. Owners/users shall actively maintain, update and retrain all operators on safe working habits and operations of the equipment.
- 3) When selecting a restraining device, it is important to consider not only present requirements but also future plans and any possible adverse conditions, environmental factors or usage. The owners/users shall provide application information to the manufacturer to receive recommendations on appropriate equipment specifications.
- 4) The owner/user must see all nameplates, placards, decals, instructions and posted warnings are in place and legible and shall not be obscured from the view of the operator or maintenance personnel for whom such warnings are intended. Contact manufacturer for any replacements.
- 5) Modifications or alterations of restraining devices shall be made only with prior written approval from the original manufacturer. These changes shall be in conformance with all applicable provisions of the MH30.3 standard and shall also satisfy all safety recommendations of the original equipment manufacturer of the particular application.
- 6) An operator training program should consist of, but not necessarily be limited to, the following:
 - a) Select the operator carefully. Consider the physical qualifications, job attitude and aptitude.
 - b) Ensure that the operator reads and fully understands the complete manufacturer's owner's/user's manual.
 - c) Emphasize the impact of proper operation upon the operator, other personnel, material being handled, and equipment. Cite all rules and why they are formulated.
 - d) Describe the basic fundamentals of the restraining device and component's design as related to safety, e.g., mechanical limitation, stability, functionality, etc.
 - e) Introduce the equipment. Show the control locations and demonstrate functions. Explain how they work when used properly and maintained as well problems when they are used improperly.
 - f) Ensure that the operator understands nameplate data, placards and all precautionary information appearing on the restraining device.
 - g) Supervise operator practice of equipment.
 - h) Develop and administer written and practical performance tests. Evaluate progress during and at completion of the course.
 - i) Administer periodic refresher courses. These may be condensed versions of the primary course and include on-the-job operator evaluation.
- 7) It is recommended that the transport vehicle is positioned as close as practical to the dock leveling device and in contact with both bumpers. When an industrial vehicle is driven on or off a transport vehicle during loading and unloading operations, the transport vehicle parking brakes shall be applied and wheel chocks or a restraining device that provides equal or better protection of wheel chocks shall be engaged.
- 8) Air-ride suspension systems must have the air exhausted prior to performing loading and unloading operations. Follow the trailer manufacturer's instructions on safely exhausting the air.

OWNER'S/USER'S RESPONSIBILITIES

- 9) When goods are transferred between the loading dock and a trailer resting on its support legs/ landing gear instead of a tractor fifth wheel or converter dolly, it is recommended that an adequate stabilizing device or devices shall be utilized at the front of the trailer.
- 10) In order to be entitled to the benefits of the standard product warranty, the dock safety equipment must have been properly installed, maintained and operated in accordance with all manufacturer's recommendations and/ or specified design parameters and not otherwise have been subject to abuse, misuse, misapplication, acts of nature, overloading, unauthorized repair or modification, application in a corrosive environment or lack of maintenance. Periodic lubrication, adjustment and inspection in accordance with all manufacturer's recommendations are the sole responsibility of the owner/user.
- 11) Manufacturer's recommended maintenance and inspection of all restraining devices shall be performed in conformance with the following practices: A planned maintenance schedule program must be followed, only trained and authorized personnel shall be permitted to maintain, repair, adjust and inspect restraining devices, and only original equipment manufacturer parts, manuals, maintenance instructions, labels, decals and placards or their equivalent shall be used. Written documentation of maintenance, replacement parts or damage should be kept. In the event of damage, notification to the manufacturer is required.
- 12) Restraining devices that are structurally damaged shall be removed from service, inspected by a manufacturer's authorized representative, and repaired or replaced as needed or recommended by the manufacturer before being placed back in service.

INTRODUCTION

General Information



Figure 3

This manual provides current information on the UniChock XL (UXL) vehicle restraint. Due to ongoing product improvement, some parts may have changed, along with operation and troubleshooting methods. This manual describes these changes where applicable.

The UXL uses a steel chock and ground plate to create a rigid barrier against transport vehicle wheels. The chock is attached to an articulating arm for ease of placement into the engaged and stored positions.

The durable, powder coated, steel housing is designed to withstand impact from trailers and provide weather resistance for all internal components.

The UXL vehicle restraint is engaged manually, by removing the unit from its stored position and locking the chock on the ground plate in front of a transport vehicle's rear wheel. The unit incorporates a sensor which detects a vehicle tire.

Technical Service at 800-643-5424 or techservices@loadingdocksystems.com

Component Identification

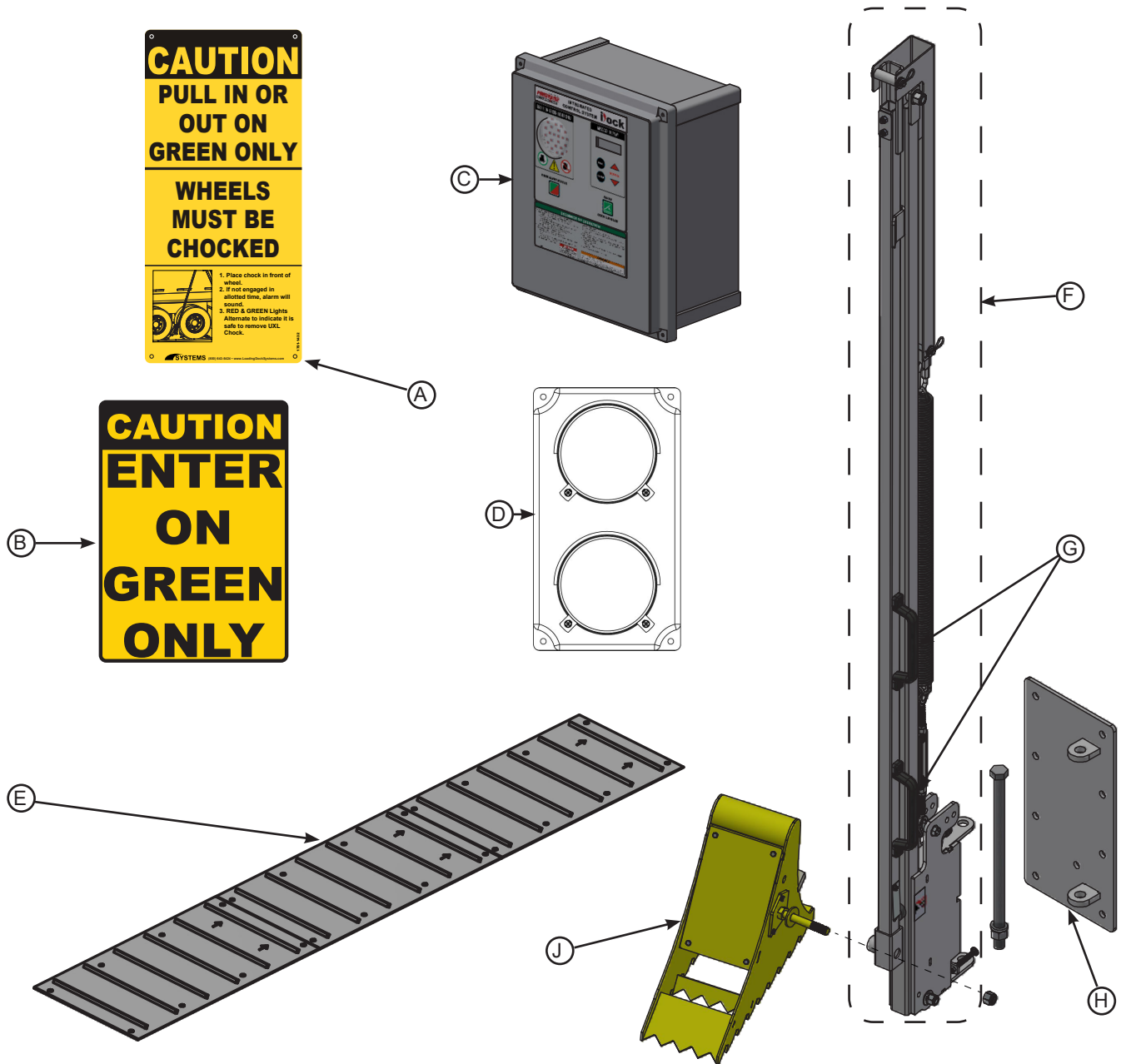


Figure 4

A — Outside Sign, Pull In/Out
 B — Inside Sign, Enter On Green Only
 C — iDock Controller

D — Outside Light Assembly
 E — Standard Ground Plates
 F — Articulating Arm

G — Handles
 H — Wall Plate (Optional Post Mount Available)
 J — Chock

INSTALLATION

Installation Precautions

WARNING

Post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before installation has been completed.

WARNING

DO NOT grind or weld if hydraulic fluid or other flammable liquid is present on the surface to be ground or welded.

DO NOT grind or weld if uncontained hydraulic fluid or other flammable liquid is present. Stray sparks can ignite spills or leaks near the work area. Always clean up the oil leaks and spills before proceeding with grinding or welding.

Always keep a fire extinguisher of the proper type nearby when grinding or welding.

CAUTION

Only trained installation professionals with the proper equipment should install this product.

CAUTION

All electrical work — including the installation of the disconnect panel, control panel, and final connections to the pit junction box — must be performed by a certified electrician and conform to all local and applicable national codes.

NOTICE

DO NOT connect the vehicle restraint electrical wiring and ground connections until all welding has been completed.

DO NOT ground welding equipment to any electrical components of the vehicle restraint. Always ground welding equipment to the vehicle restraint base, NEVER to the moving components.

Failure to follow these instructions may damage the motor, wiring, and/or control panel.

Standard Installation Overview

Tools:

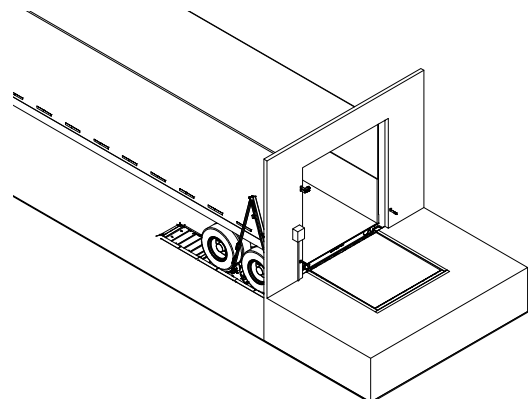
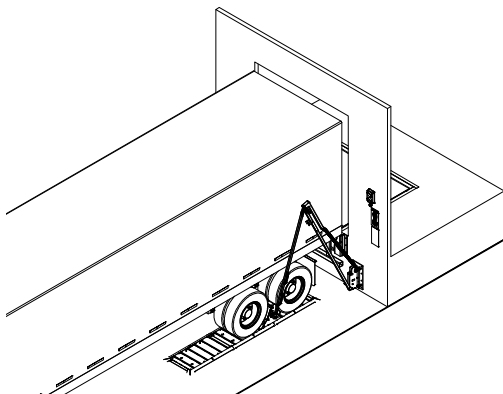
Before you begin, ensure that all the tools listed below are available to install the UXL Restraint system.

| Tools | Notes/Size |
|--|--|
| Measuring Tape | 20 ft. or longer |
| Combination Wrenches | Full Set 3/16" to 1-1/2" |
| Screwdriver Set | Flat, Square, and Phillips Drive |
| Knockout Punch | 7/8" and 1-1/8" |
| Hammer Drill with Masonry Bit & Scaling Chisel | 5/8" Masonry Bit, 1/2" to 1" Chisel |
| Ground Rod Driver | Used to drive rebars into ground |
| Level | 2 ft. |
| Ladder/Step Ladder | 8 ft. |
| Sledgehammer | 6 to 10 lbs. Double Sided |
| Impact Wrench with Socket | 5/8" & 3/4" |
| Stick Welding Machine | For Welding Sections of Restraining Plates |
| Angle Grinder | For Cutting Asphalt & Concrete |
| Hammer | General Purpose |
| Spray Paint | To Make Cutting Patterns |
| Restraining Plate Alignment Tool (Provided by Systems) | To Position Restraining Plates for Welding |
| Snow Plate Template (Provided by Systems) | Used With Spray Paint to Mark Cutting Patterns |

Safety practices:

Post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the dock leveler before installation has been completed

Installation plan:



WARNING

Qualified technicians must perform welding. The welding of galvanized steel parts produce toxic gases. Do not inhale. A 30-minute fire watch is required unless otherwise requested. Hot work permits will be required on some sites.

Note: When installing electrical controls in a temperature-controlled environment, the installer must determine an appropriate means to isolate/prevent thermal and vapor transfer through electrical conduit, where conduit routing crosses temperature zones. Systems, LLC is not responsible for any damage due to moisture collecting inside the control panel caused by improper isolation/prevention of thermal and vapor transfer through the conduit. Refer to Tech Service Bulletin 19-053 for more information. In case of light signals or alarm, the operator must immediately notify his superior or the person in charge. Maintenance or servicing operations may be performed only by authorized personnel. Follow the authorized locking and tagging instructions.

Service and maintenance of the wheel restraint system are reserved for authorized personnel only.

Installers and/ or Owner's/ User's are responsible for the installation and placement of product placards. Placard must be in plain view of dock leveler and/ or vehicle restraint operations. Suggested placement of placard is near control box, attached to the wall or electrical conduit using a cable tie. If the equipment does not have a control panel, mount the placard on the wall to the immediate left of leveler at eye level.

INSTALLATION

Wall Plate

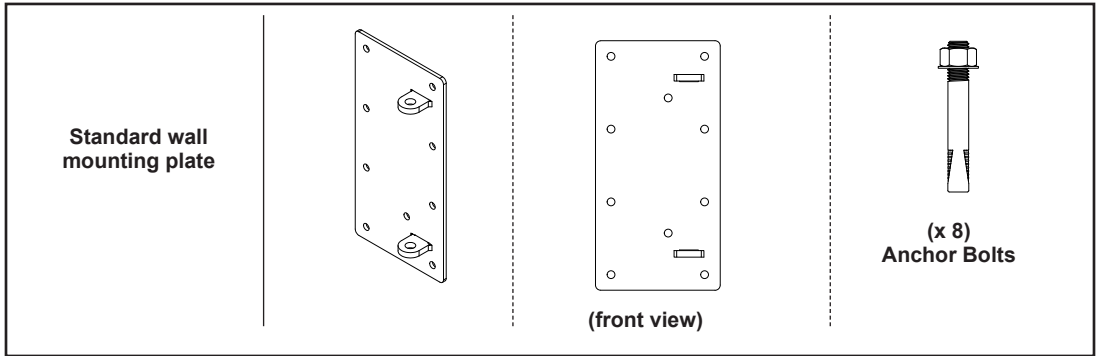


Figure 5

Make sure that all parts and tools listed below are available prior to installation.

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|---|
| Wall Mount Plate | <ul style="list-style-type: none"> • Measuring Tape • Hammer Drill With 5/8" Masonry Bit • Level • Combination Wrench Set • Hammer |
| 5/8" x 4" Anchor Bolts | |
| Junction Box | |
| Cable Protection Conduit | |

Position wall mounting plate:

1. Position the wall mounting plate eyelets (**A**) at the distance referenced on the site survey, measured from the center line of the dock leveler. See **figure 6**.
2. Position the wall mounting plate so that the bottom edge of the plate matches the site survey (typically, this distance is 3").
3. Mark the position of the wall plate for reference.
4. Mark the position of the junction box (**B**) at the distance required.

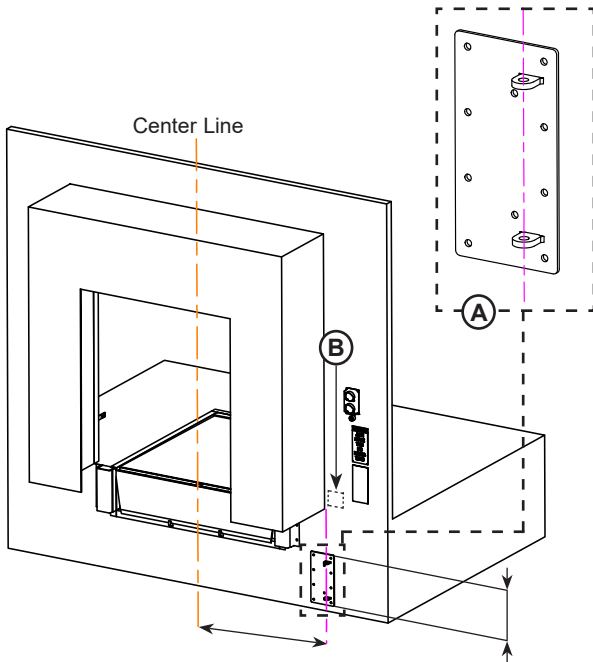


Figure 6

WARNING

Two installers are required for this step.

INSTALLATION

Mount the wall mounting plate:

1. Starting with an upper mounting hole, use a hammer drill and a 5/8" masonry bit to drill the first anchor hole. Install an anchor bolt in the first hole **(A)** without overtightening. See **figure 7**
2. Verify the plate eyelets are level **(B)**, check the vertical positioning of these eyelets (not the edges of the plate) and mark a hole in the opposite corner. Drill and install a second anchor bolt **(C)**.
3. Drill the remaining holes and install remaining anchor bolts **(D)**. Snug the anchors with a socket wrench. Do not fully torque.
4. Verify eyelets remain level, then tighten all the anchors.

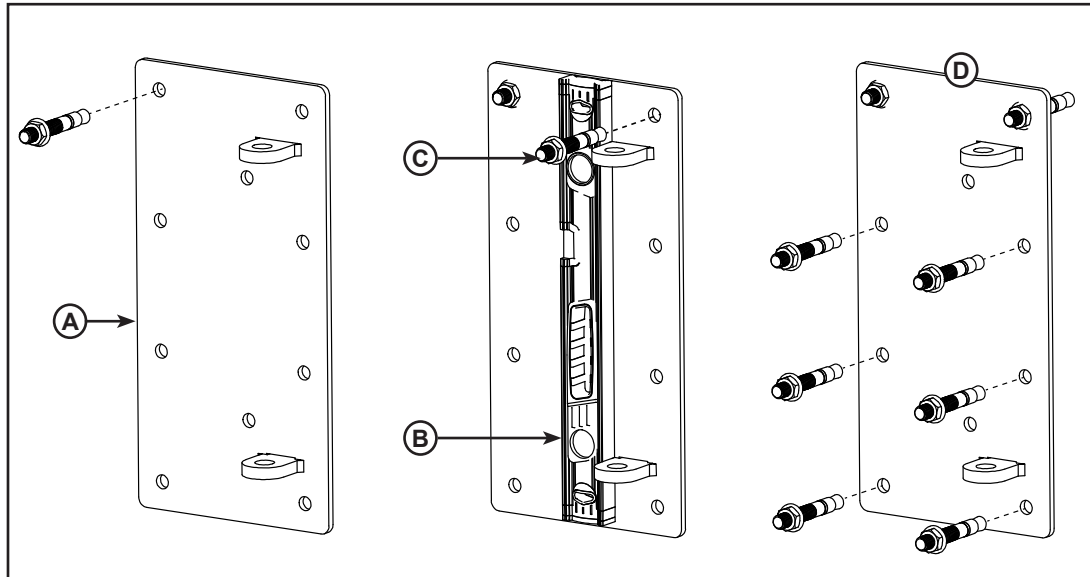


Figure 7

Note: A minimum of four (4) anchor bolts must be installed to ensure proper mounting of the wall mounting plate at all times. The wall mounting plate has 10 holes to provide alternative anchor locations when an obstruction is encountered in the building wall.

INSTALLATION

Articulating Arm Assembly

Tools listed below will be required.

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|-----------------|
| Articulated Arm | • 1-1/2" Wrench |

1. Position articulated arm between the wall mounting plate's eyelets.
2. Insert 1" x 20" bolt through eyelets on arm and wall mount. Insert the lock washer, and secure the bolt with nut. Ensure arm pivots freely.
3. Route pre-wired communication cable from the articulated arm to the iDock controller through the junction box.

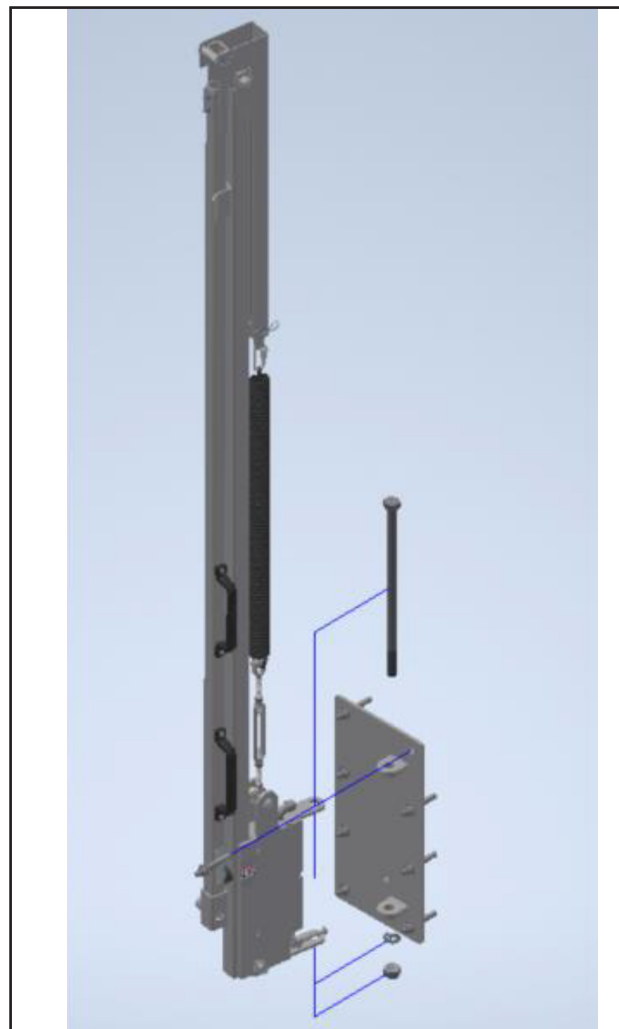


Figure 8

Mounting the Chock

Tools listed below will be required

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|--|
| Wheel Chock | • 1-1/16" Wrench/Socket • 7/16" Wrench/Socket |

Mount the chock on articulated arm:

1. Install chock by sliding chock axle into the tube on the lower front-arm.
2. Secure it with the locknut.

IMPORTANT: Do not overtighten the locknut. Operation of the UXL may be affected. The chock may not align properly with the ground plates if the nut is over tightened.

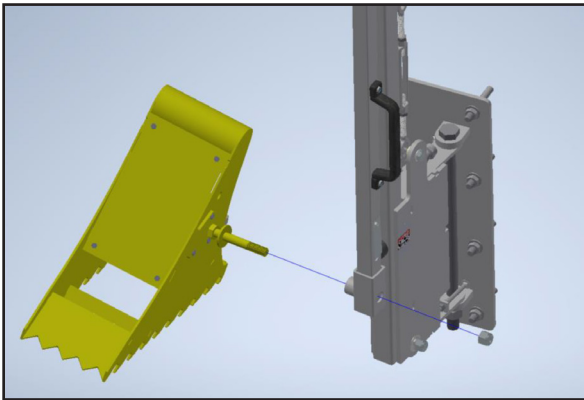


Figure 9

Connect the sensor cable:

1. Remove access cover on front-arm by unscrewing the screw and flat washer.

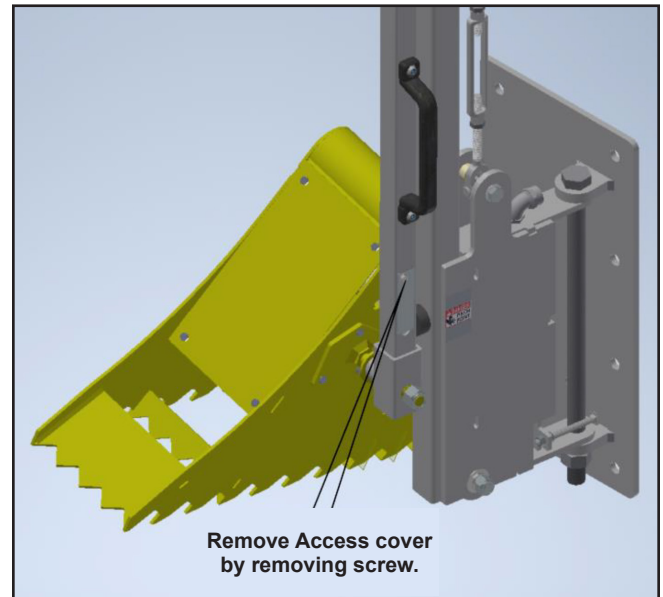


Figure 10

2. Connect the wheel chock sensor cable to the articulated arm cable.
 - a. Align the connectors from both the chock and the front-arm then connect them together.

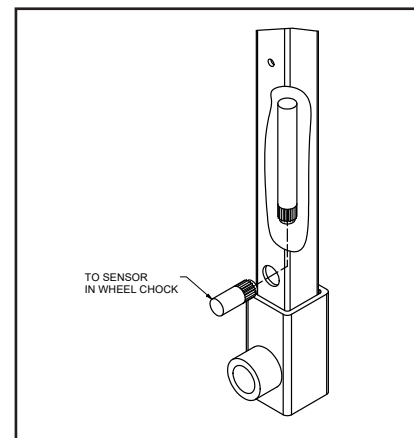


Figure 11

Continued on page 16.

INSTALLATION

- b. As the resistance develops, screw them together (at least two full turns are required to ensure a tight connection).

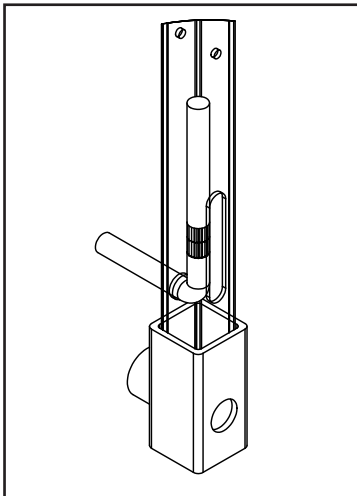


Figure 12

3. Push the connectors back into the front-arm.
IMPORTANT: Leave enough cable length between the arm and the chock to prevent the cable from limiting the rotation and movement of the chock.
4. Reinstall the electrical cable access cover by aligning the end of the safety cable with the hole in the access cover. Secure them together with the screw and flat washer removed earlier.

Articulating Arm Adjustment Notes:

Loading/unloading operations can create vibrations, causing the chock to move away from the vehicle wheel and off the ground plate.

To mitigate this movement, the pivot weldment is equipped with an adjustment bolt to hold the chock in position once the articulated arm is extended.

Note that this adjustment is factory-set. However, adjustments can be made if necessary. Loosen jam nuts and turn the carriage bolt clockwise or counterclockwise to achieve correct operation.

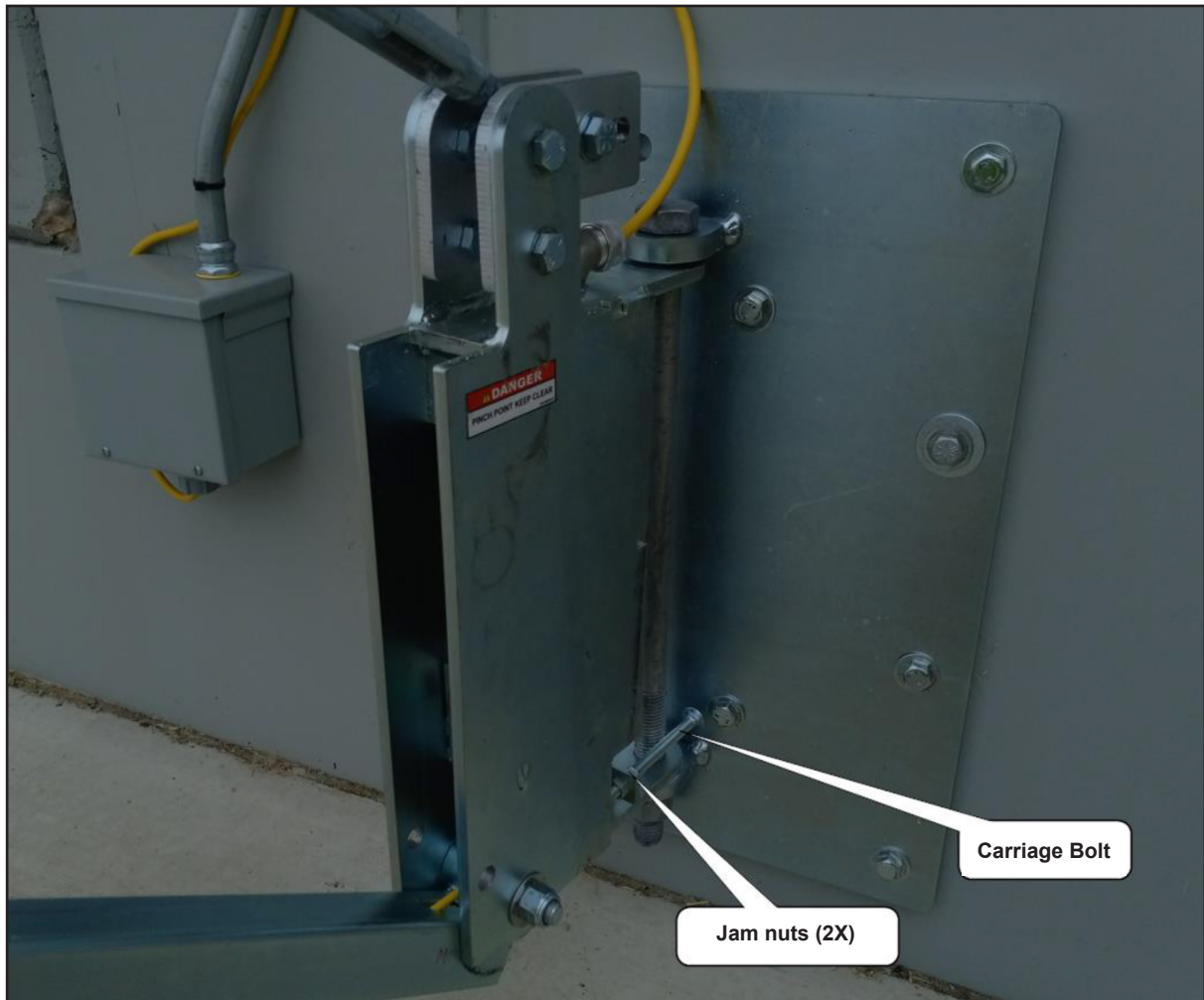


Figure 13

INSTALLATION

Articulating Arm Adjustment

1. Verify articulating arm operating range. Extend arm and confirm it can travel to last section of ground plates. See **figure 14**.



Figure 14

2. If the arm does not reach the end of the ground plates, return the UXL to the stored position.
3. Using a ladder, access the extension adjustment mechanism at the junction of the front and rear arms. Screw in the limiter bolt. See **figure 15** on page 19.

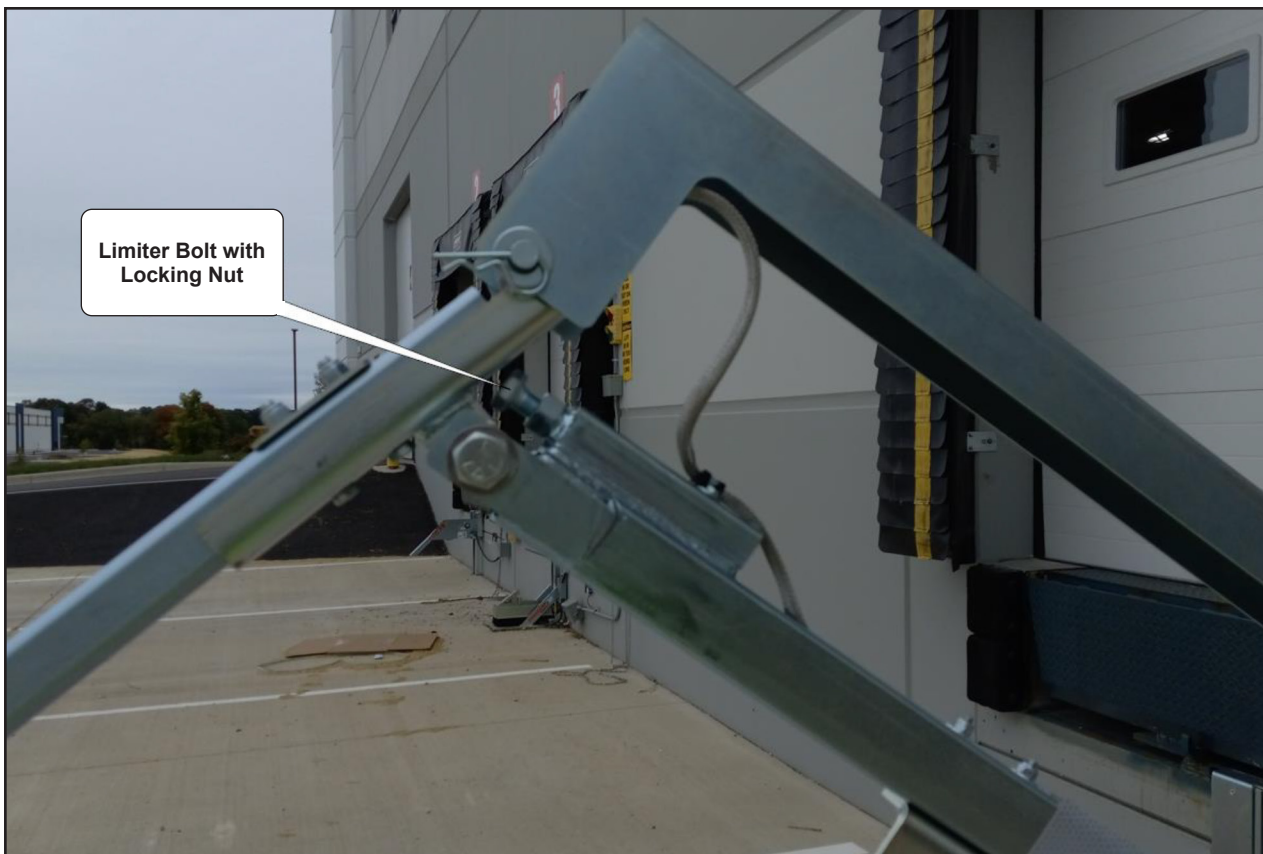


Figure 15

1. Verify articulating arm operating range. Extend arm and confirm it can travel to last section of ground plates. See **figure 14** on page 18.
2. Loosen the limiter bolt until it touches the end of the front-arm, then hold this adjustment in place by tightening the lock nut.

INSTALLATION

Adjust Spring Tension

Spring tension on the articulated arm is important for proper operation. If the spring tension is too loose, chock operation will be difficult and the arm will not retract. If the spring is too tight, the arm will be difficult to position and the chock may not stay in position on the ground plate.

For proper spring tension adjustment, follow these steps:

1. Position the chock on the ground next to the furthest ground plate. See **figure 16**.



Figure 16

2. Adjust the spring tension with the turnbuckle, shown in **figure 17** on page 21. Loosen the jam nuts then adjust the turnbuckle to the desired tension. The arm should retract towards the wall within 5 seconds or less.

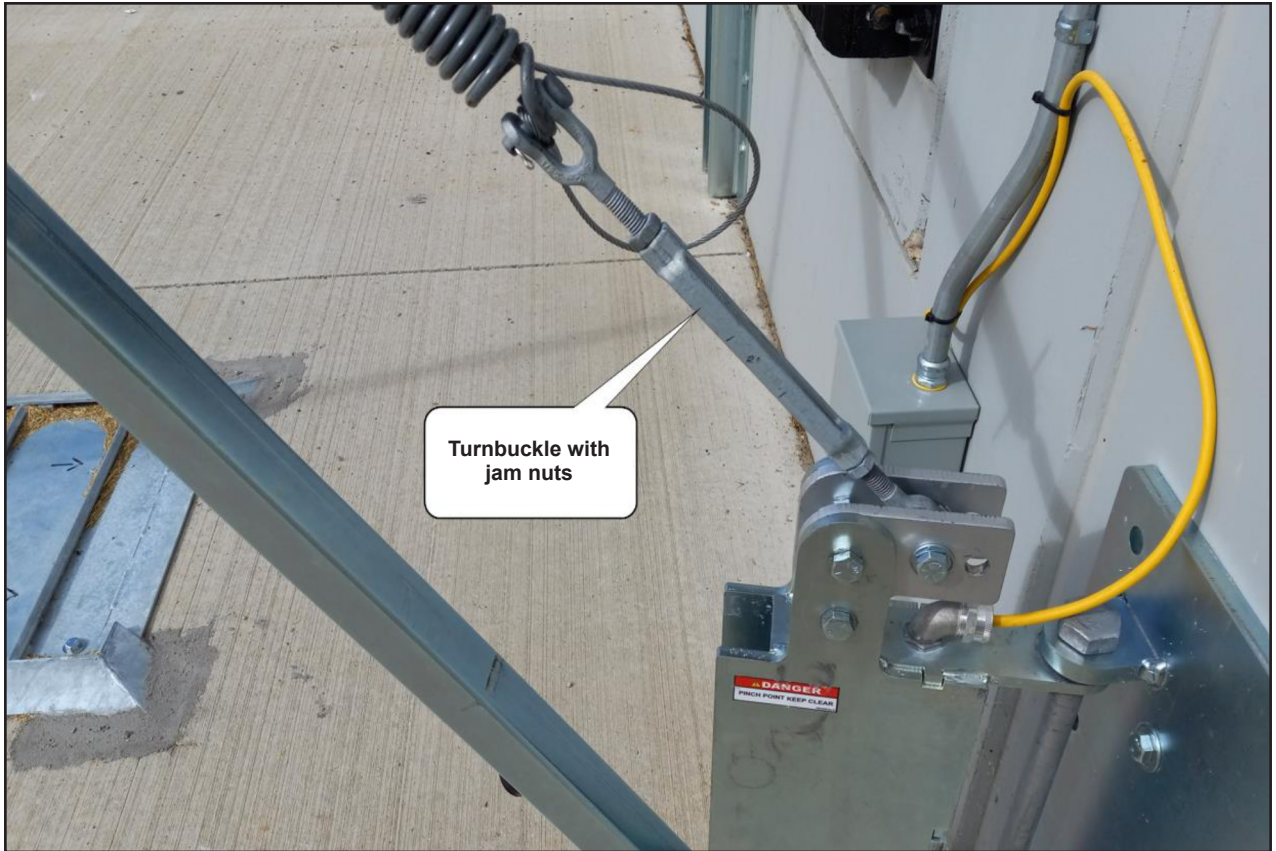


Figure 17

3. Test retraction with the chock on the ground next to the second restraining plate. Check that the arm retracts towards the wall in 5 seconds or less. Continue to adjust the spring tension with the turnbuckle if necessary. See **figure 18** on page 22.

INSTALLATION



Figure 18

4. Verify retraction from the closest ground plate. Ensure the arm retracts towards the wall in 5 seconds or less, if not, adjust spring tension with the turnbuckle.



Figure 19

5. When correct operation is achieved, retighten the jam nuts on the turnbuckle.
6. Perform a final check next to all ground plates and confirm that the chock retracts correctly. The UXL should be easy to use in both directions (extended and retracted.)

Post Mount Installation Overview

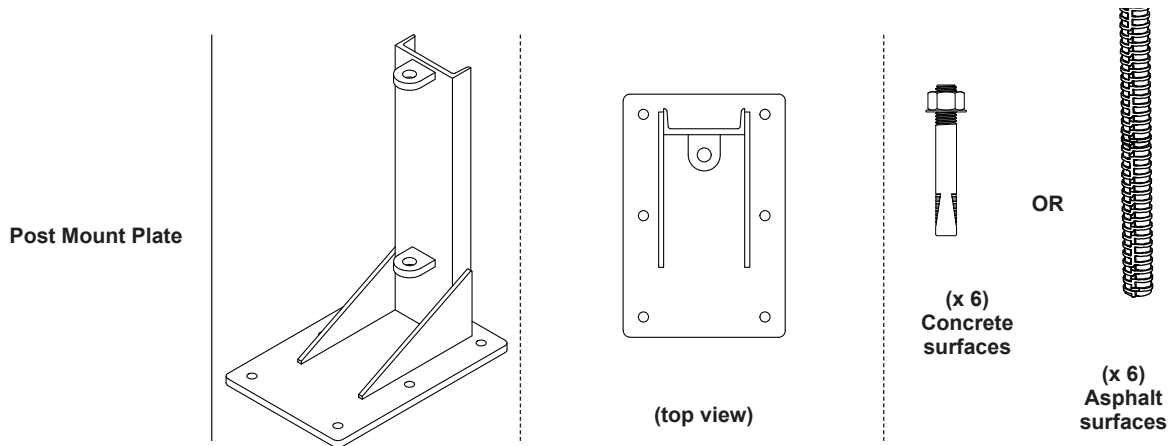


Figure 20

Tools listed below are required for installation. **If rebar is needed for an asphalt installation, it must be sourced by installer.**

| Parts (Supplied by Systems) | Required Tools |
|--|---|
| Post Mount Plate | <ul style="list-style-type: none"> • Measuring Tape • Hammer Drill With 5/8" Masonry Bit • Impact Wrench (3/4" Socket) • Level • Welding Equipment • Anti Rust Paint • Sledge Hammer • Combination Wrench Set • Hammer |
| 5/8" x 4" Anchor Bolts (for concrete installations) | |
| 5/8" x 15" Rebar Stock (not included) | |
| Junction Box | |
| Cable Protection Conduit | |

Pre-Installation Notes:

Refer to site survey for prescribed mounting location. This location will vary based on features of the dock layout and spacing between components. Consult with Technical Services if you have questions.

Position the post:

1. Position center of mounting post **(A)** at the distance shown on the site survey which is measured from the center of the dock leveler and also from the building face. See **figure 21**.
2. Mark the position of the post on the ground.
3. Mark the position of the junction box **(B)** at the distance specified on the specific layout plan.

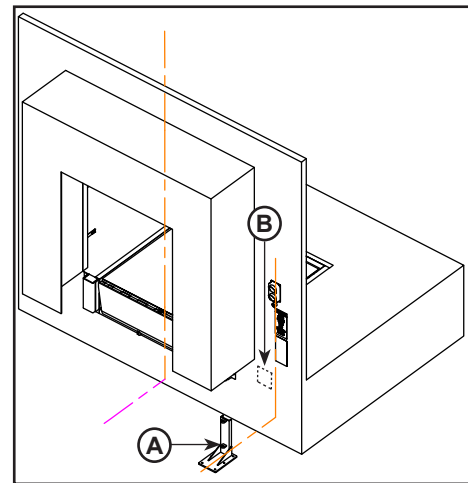


Figure 21

Anchor the post (concrete):

1. Using the holes in the post **(A)** base as a drilling guide, drill holes 4-1/4" deep minimum using a hammer drill and 5/8" masonry bit.
2. Place anchor bolts in the post base plate and hammer them into the drilled holes. Tighten using 3/4" impact wrench.

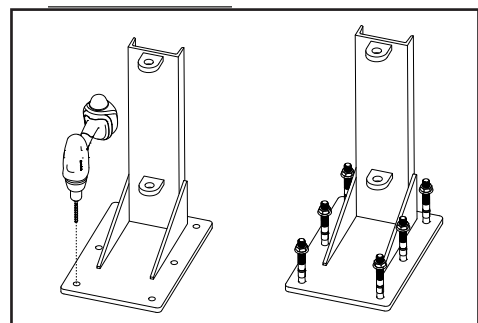


Figure 22

INSTALLATION

Anchor the post (asphalt):

1. Using the holes in the post (A) base as a drilling guide, drill holes 15" deep minimum at a 30° angle from vertical axis using a hammer drill and 5/8" masonry bit.

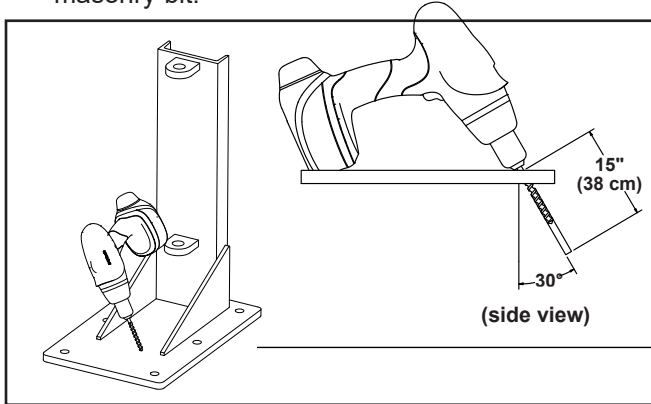


Figure 23

2. Place the steel reinforcing bars into the base plate of the post. Hammer them into the drilled holes to within 3/8" of the plate. Fillet weld all reinforcing bars to the base plate and then apply a coat of rustproof paint of the cold galvanizing type onto the welds.

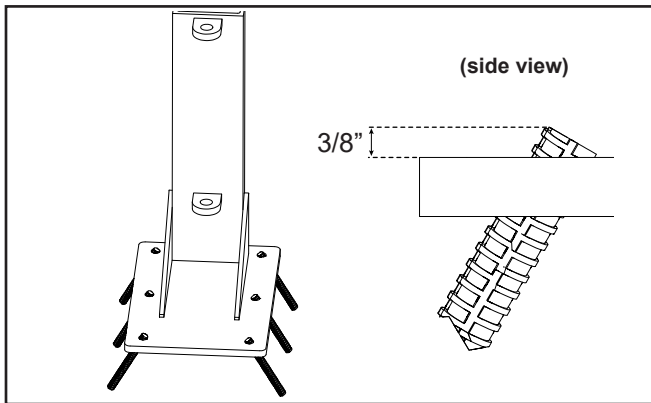


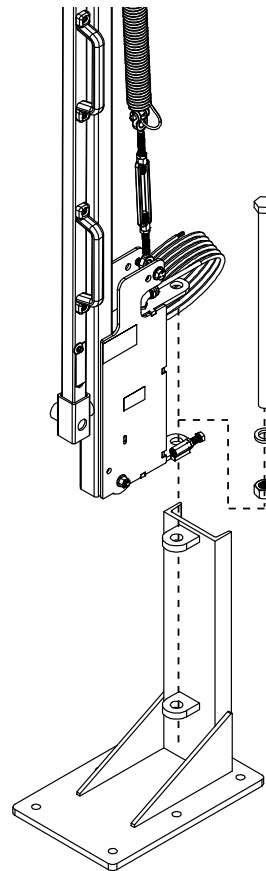
Figure 24

Articulating Arm Installation:

Tools listed below will be required.

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|-----------------|
| Articulated Arm | • 1-1/2" Wrench |

1. Position articulated arm between the ground mounting plate's eyelets.
2. Insert 1" x 20" bolt through eyelets on arm and ground mount. Insert the lock washer, and secure the bolt with nut. Ensure arm pivots freely.
3. Route pre-wired communication cable from the articulated arm to the iDock controller through the junction box. See **figure below**:



Mounting the chock:

[See page 15]

Articulating arm adjustment:

[See pages 17-19]

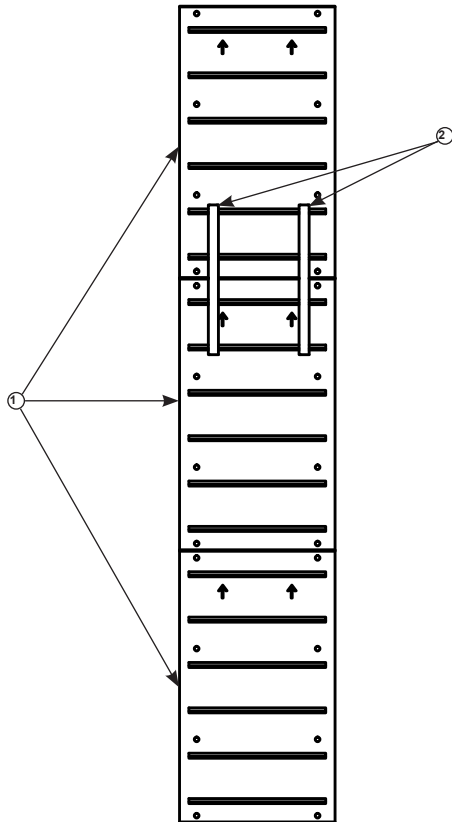
Adjust spring tension:

[See pages 20-22]

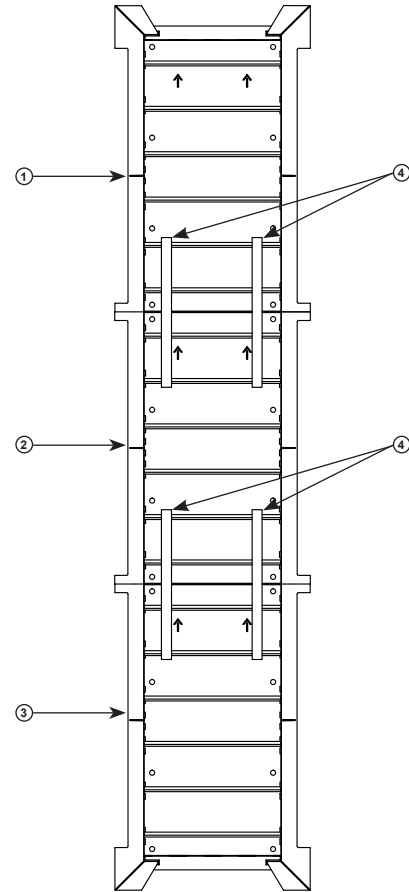
Standard Ground Plate Installation

The standard ground plate can be installed using the instructions found on pages 29-30. The instructions related to cutting/notching the concrete on pages 26-28 are only for the Winter Plates. These have specially formed edges to aid in snow removal and require more prep before anchoring.

| Standard Ground Plate | |
|-----------------------|---|
| Item | Description |
| 1 | Wldt, Std Ground Plt, UXL |
| 2 | Alignment Bracket, Grnd Plt, UXL (Install Only) |



| Winter Ground Plate | |
|---------------------|---|
| Item | Description |
| 1 | Wldt, Winter Gnd Plt, End A, UXL |
| 2 | Wldt, Winter Gnd Plt, Mid, UXL |
| 3 | Wldt, Winter Gnd Plt, End B, UXL |
| 4 | Alignment Bracket, Grnd Plt, UXL (Install Only) |



INSTALLATION

Winter Plate Installation

WARNING

Qualified technicians must perform welding. The welding of galvanized steel parts produce toxic gases. Do not inhale. A 30-minute fire watch is required unless otherwise requested. Hot work permits will be required on some sites.

Tools listed below are required for installation.

| Parts (Supplied by Systems) | Required Tools |
|---|--|
| Winter Plates (Qty 3) | <ul style="list-style-type: none"> • Hammer Drill • Masonry Drill Bit (5/8") • Scaling Chisel • Angle Grinder • Impact Wrench • Welding Equipment for Galv. Steel • Anti-Rust Paint – Cold Galvanizing • Sledgehammer • Level (24") • Hammer • Spray Paint • Restraining Plate • Alignment Tool (Supplied by Systems) • Snow Restraining Plate • Template (Supplied by Systems) |
| 5/8" x 4" Anchor Bolts (for concrete installations) | |
| 5/8" x 15" Reinforcing Bars (for asphalt installations) | |

Install the winter ground plates:

1. Mock up the ground plates and the distance between each section, using the alignment tool provided. See **figure 25**
2. Make sure the ground plates are level and resting properly on the concrete or asphalt and will not get snagged by any equipment passing over them.
3. If the ground plates are not level with the approach, use a hammer drill with a chisel bit to eliminate high spots on concrete or asphalt.
4. Move the plates aside and continue with the steps on page 27.

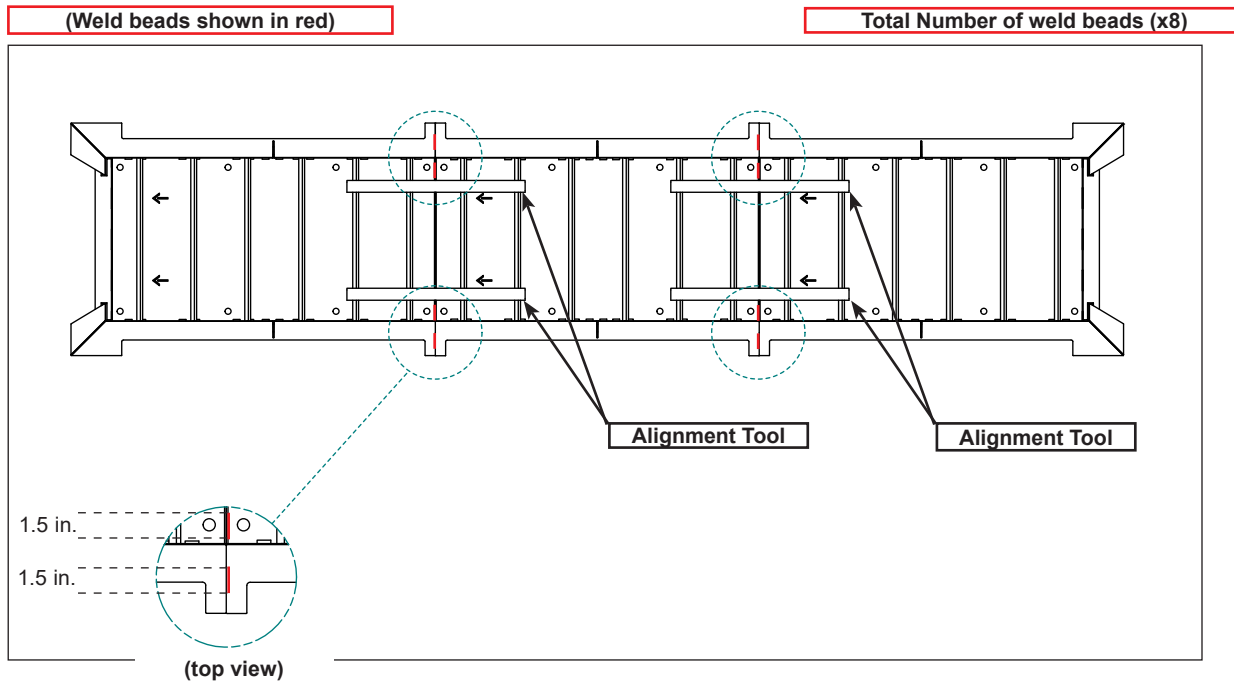


Figure 25

Position the Winter Plate Template:

1. Position the center of the template at the specified distance from the center of the door and the dock bumper "A".
2. Position the leading edge of the template at the specified distance from the dock bumper face to the leading edge of the template.
3. Ensure winter plate templates are square with dock face.
4. Check alignment of template before marking cutting patterns with spray paint.
5. Weld the restraining plate sections using a stick welding machine. See **figure 25** on page 26.

IMPORTANT:

- Requires four (4) weld beads between each restraining plate: Two (2) between the body of the plates and two (2) between the countersunk tabs of the plates.
- Typical weld bead is 3/16" x 1-1/2" long.

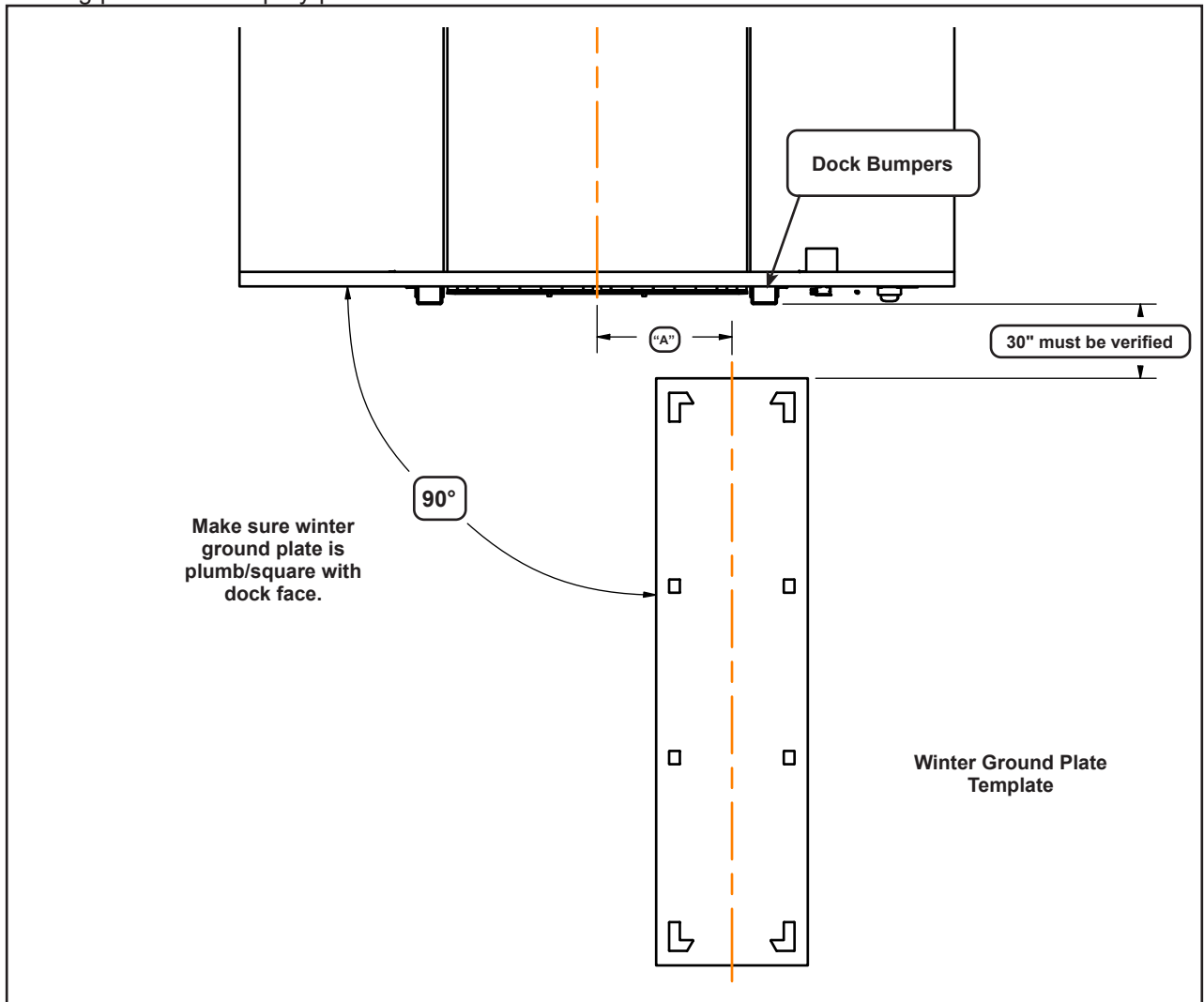


Figure 26

INSTALLATION

Surface Preparation - Winter Plates:

1. Once the template is positioned on the ground, use spray paint (or wax pencil if the ground is wet) to mark the cutting pattern around the template cut-outs.
2. Remove the template.
3. Use a diamond cutting disc to cut 1-1/2" deep along the lines. Cuts should not extend beyond the outline.
4. Use a hammer drill with chisel bit to chip the concrete/asphalt from the inside out to a depth of 1-1/2".
Make sure installation area is cleaned of all debris on the ground after concrete/asphalt has been chipped.
5. Position the winter plates on the ground and make sure the legs are properly positioned in the cut-out sections. Adjust cuts if necessary for accurate fitment.

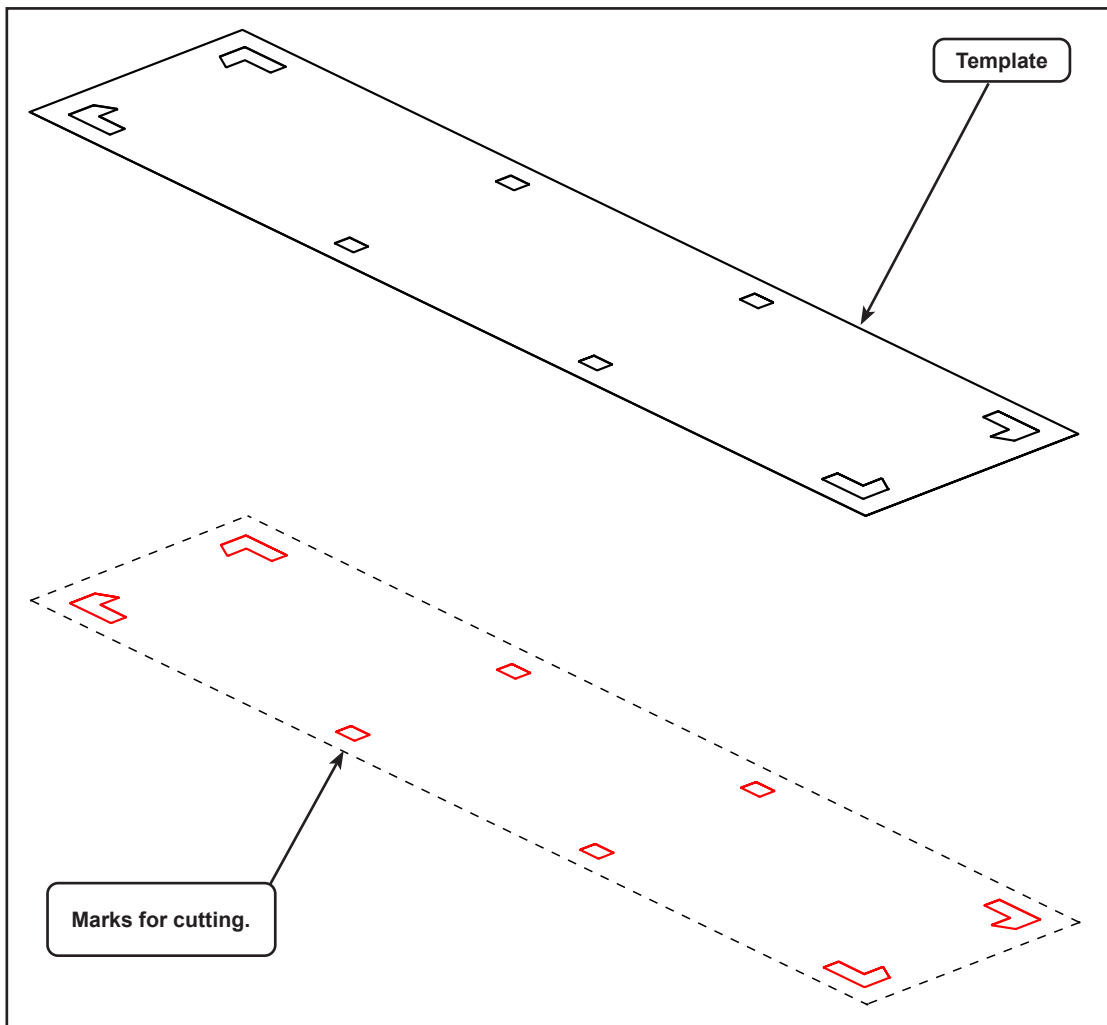


Figure 27

INSTALLATION

Anchor the ground plates:

Install on concrete:

1. Drill two (2) holes in adjacent corners of ground plate, then install (2) anchor bolts in the same drilled holes to hold the plates in place. See **figures 28 and 29.**

Note: Use a vacuum or blower to clear the holes before installing anchors.

2. Using the holes on each plate as a guide, drill holes a minimum of 4-1/4" deep using a hammer drill and a 5/8" masonry drill bit.
3. Place the 5/8" x 4" anchor bolts and hammer them into the drilled holes.

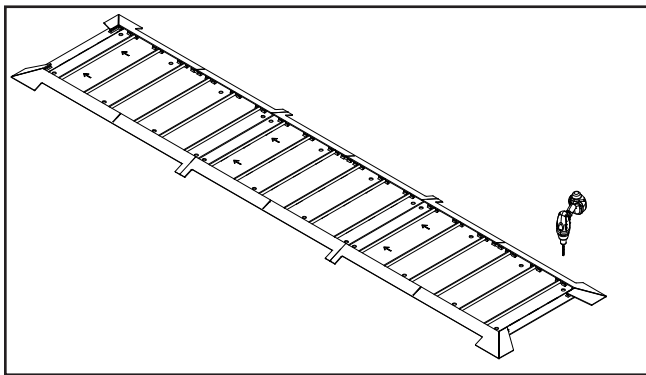


Figure 28

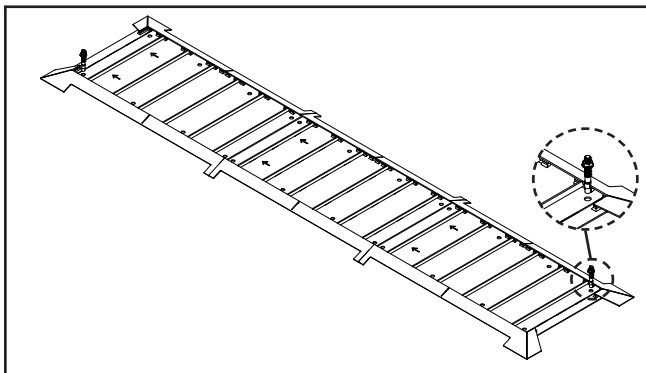


Figure 29

Now that the restraining plates are fastened in the ground, continue to drill the remaining holes, and place the remaining bolts by following the method for the initial holes..

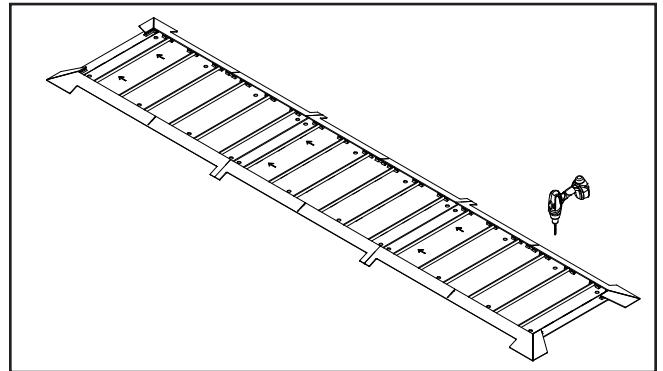


Figure 30

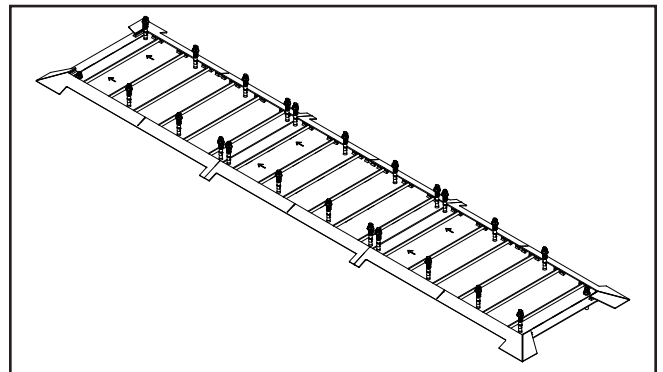


Figure 31

Tighten all restraining plate bolts using an impact wrench.

IMPORTANT: Torque bolts to 81 N-m (60 ft-lbs.)

INSTALLATION

Install on Asphalt:

1. Drill two (2) holes in adjacent corners of ground plate, then install (2) anchor bolts in the same drilled holes to hold the plates in place. See **figures 32-34**.
2. Using the holes on each plate as a guide, drill holes a minimum of 15" deep at a 30-degree angle. Use a hammer drill and a 5/8" masonry drill bit.

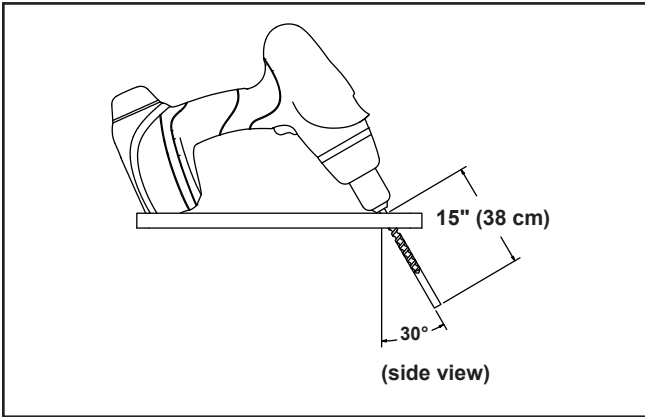


Figure 32

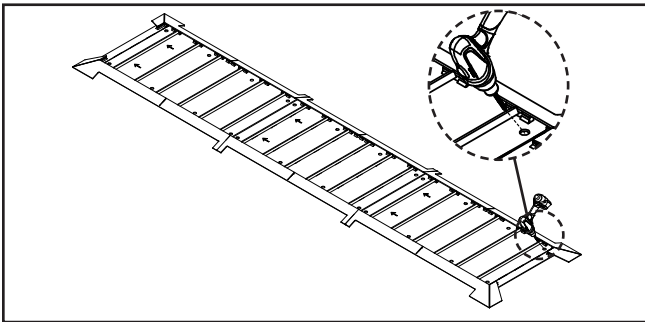


Figure 33

3. Position 5/8" x 15" steel rebar, and hammer them through the drilled holes. Leave 3/8" above the ground plates. See **figure 35**.

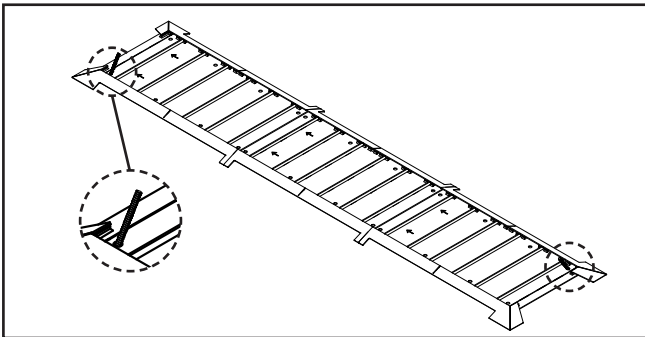


Figure 34

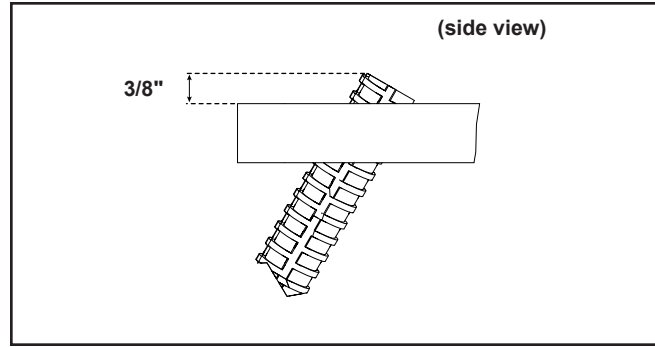


Figure 35

4. With ground plates secure, drill remaining holes, and position rebar by following the same steps described above.

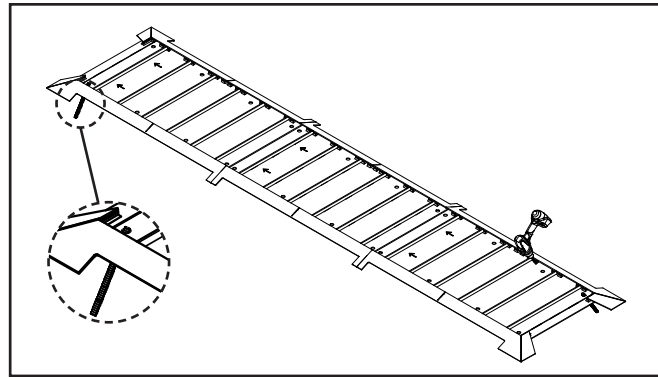


Figure 36

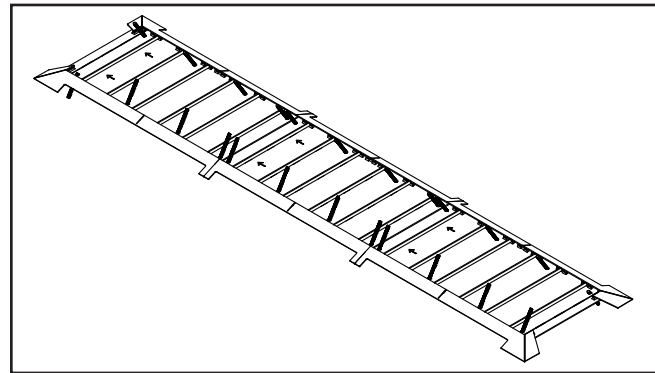


Figure 37

5. Fillet weld all rebar to the ground plates.
IMPORTANT: Apply a coat of rustproof, cold galvanizing paint on the welds.

Electrical Installation

Install Control Panel

Installing of the control box:

Make sure that all parts and tools listed below are available prior to installation. Refer to the electrical schematic when making connections.

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|--|
| Control Box | <ul style="list-style-type: none"> • Ladder (6.5 ft.) • Knockout Punch Tool (7/8" & 1-1/8") • Drill • Phillips Drive Screwdriver |
| Junction Box | |
| Cable Protection Conduit | |

The control box must be installed inside the loading dock, on an inside wall near the dock door. It can be installed on either side of the dock door, based on the specific layout plan.

In addition, the control box must be clearly visible and easily accessible by authorized personnel only.

⚠ WARNING

Qualified electricians must do electrical installation and connections (120V or higher). Accidents can result in injury or death.

1. Position the control box according to your site survey. An example is shown below.

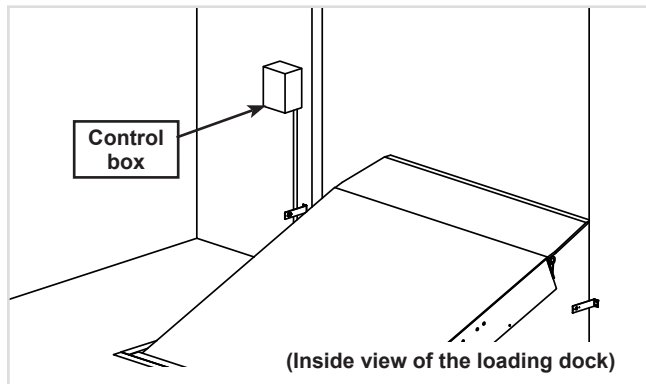


Figure 38

2. Secure the control box and junction boxes to the wall using mounting hardware.
3. Connect all sensor wires (chock, signal lights, door, etc.) from the junction boxes to the terminals inside the control box.

4. Perform a complete verification sequence of the system.

⚠ CAUTION

All electrical work — including the installation of the disconnect panel, control panel, and final connections to the pit junction box — must be performed by a certified electrician and conform to all local and applicable national codes.

IMPORTANT:

- The wiring diagrams indicating electrical connections are included with the order. Contact Technical Services if needed.

Install Outside Light Assembly and Signs

Make sure that all parts and tools listed below are available prior to installation.

| Parts (Supplied by Systems) | Required Tools |
|--------------------------------|--|
| Signal Light with Alarm | <ul style="list-style-type: none"> • Ladder (6.5 ft.) • Hammer Drill • Masonry Drill Bit (7/8" depending on wall material) • Phillips Drive Screwdriver • Drill |
| Wall Signboard | |
| Cable Protection Conduit | |

Outside light assembly:

1. Position the set of signal lights against the outside wall of the loading dock.
2. Drill a hole through the exterior wall behind the marked location. Use a hammer drill with a hole saw or masonry drill bit, depending on wall material.
3. Place the signal lights on the outside wall to cover the drilled hole.
4. Use the four (4) pre-drilled holes, located in the corners on the signal lights housing, as a drilling guide. Then mark their center and drill four (4) holes.
5. Run the pre-assembled cable through the drilled hole and to the control box.
6. Secure the traffic lights with alarm to the wall using the supplied hardware.
7. From inside the loading dock, connect the cable wires to the main circuit board located inside the control box.

INSTALLATION

Signs:

Install the exterior signs, below the signal lights, at a height visible to the driver of the vehicle (this must be determined on site). See **figure 19** for example.

Install Outside Junction Box

1. Position J-Box against the outside wall, ideally close to the center of the articulated arm or in a more suitable location. Mark the location on the wall.
2. Drill a hole through the outside wall behind the marked location. Use a drill with a hole saw or a 7/8" masonry drill bit, depending on wall material.
3. Secure the junction box to the wall.
4. Run the communication cable from the articulated arm through the drilled hole and to the iDock controller.

Note: Seal all holes through exterior wall when wiring is complete, to maintain a vapor barrier.

5. Reference wiring diagrams provided for this application. Contact Technical Services if drawings are needed.

DANGER

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

In addition, it is recommended and good safety practice to use an additional means to support the dock platform and lip anytime when physically working in front of or under the dock leveler. This additional means may include, but is not limited to a boom truck, fork truck, stabilizing bar or equivalent.

WARNING



Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the unit before maintenance is complete.

Install Optional Sensors

Install the dock leveler sensor:

Tools listed below are required for installation.

| Parts (Supplied by Systems) | Required Tools |
|---|---|
| Dock Leveler Sensor with Mounting Bracket & Cable | • Ladder (6.5 ft.) • Measuring Tape |
| Cable Protection Conduit | • Drill • Socket Set • Phillips Drive Screwdriver |

1. Make sure the dock leveler is raised and maintenance prop is positioned behind header plate. See **figure 39**.
2. Use of an additional means to support the dock leveler is recommended.

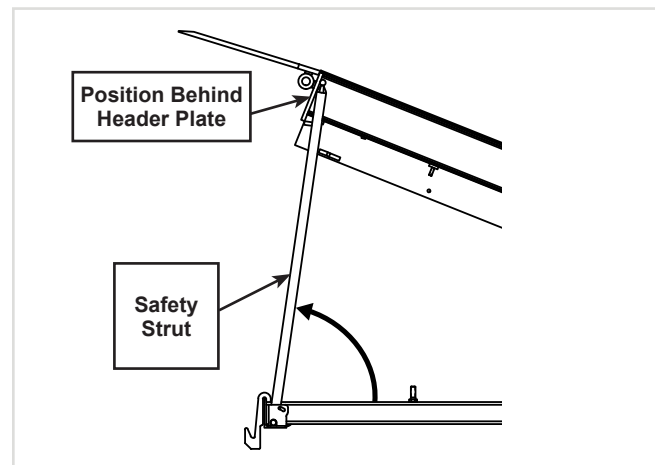


Figure 39

WARNING

A hard hat or other applicable head protection should always be worn when working under or around a dock leveler.

Always stand clear of platform lip when working in front of the dock leveler.

3. Choose a mounting location before starting the installation where the sensor can be activated when the dock leveler is in the raised position.

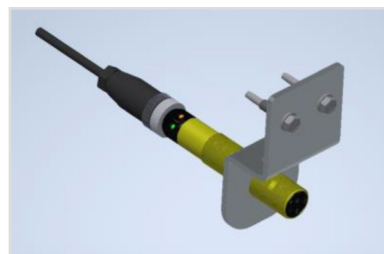


Figure 40 - Leveler Stored Sensor

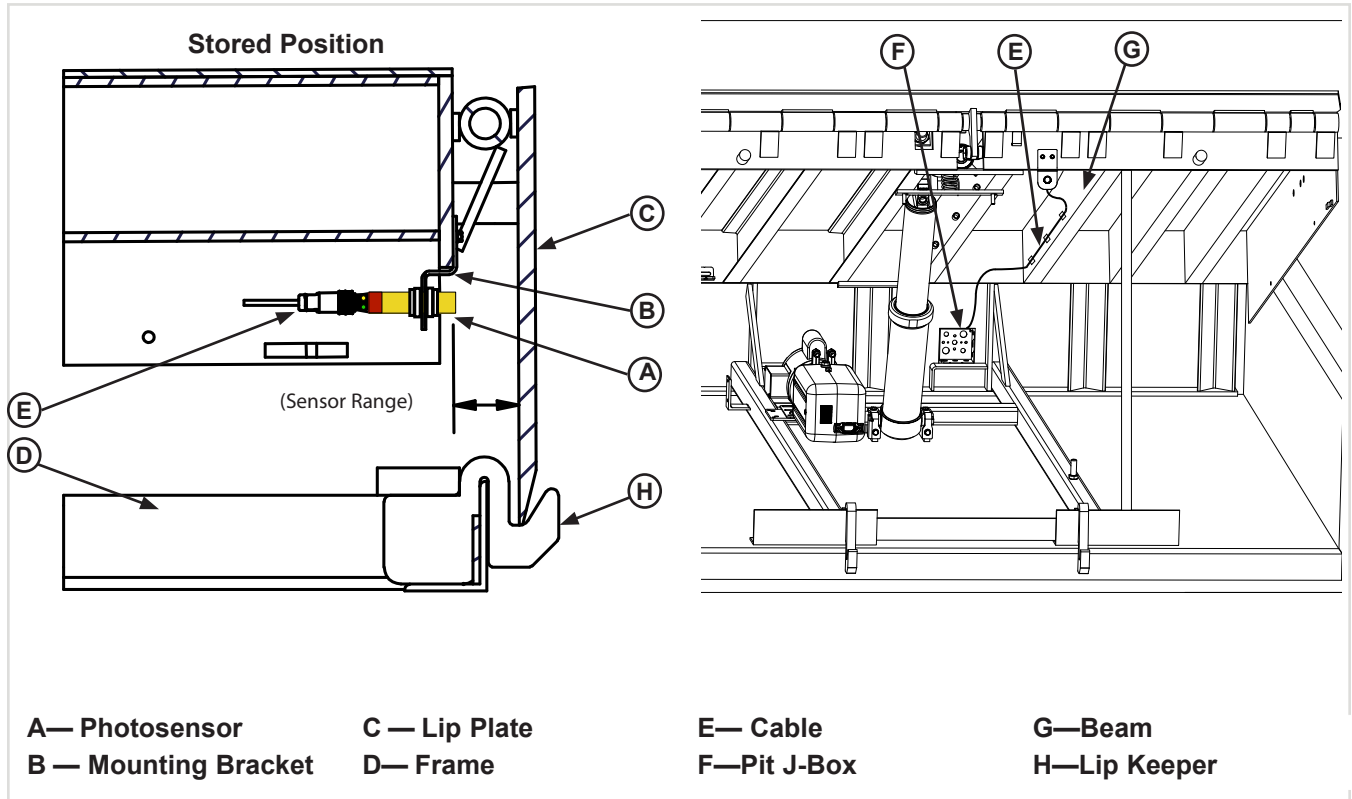


Figure 41

Note: Position the sensor near the center of the leveler header plate, away from any hydraulic/mechanical equipment.

1. Install the photosensor (A) into the mounting bracket (B) using the plastic sensor nuts. Make sure that the sensor will not interfere with the lip plate (C) or frame (D), or the sensor could be damaged.
2. Connect the cable (E) to the sensor. See **Figure 5**.
3. Verify the cable's path to the junction box (F) at the rear of the pit. See **Figure 6**. Evenly distribute the included cable tie mounting bases on the platform beam (G) next to the cable's path.

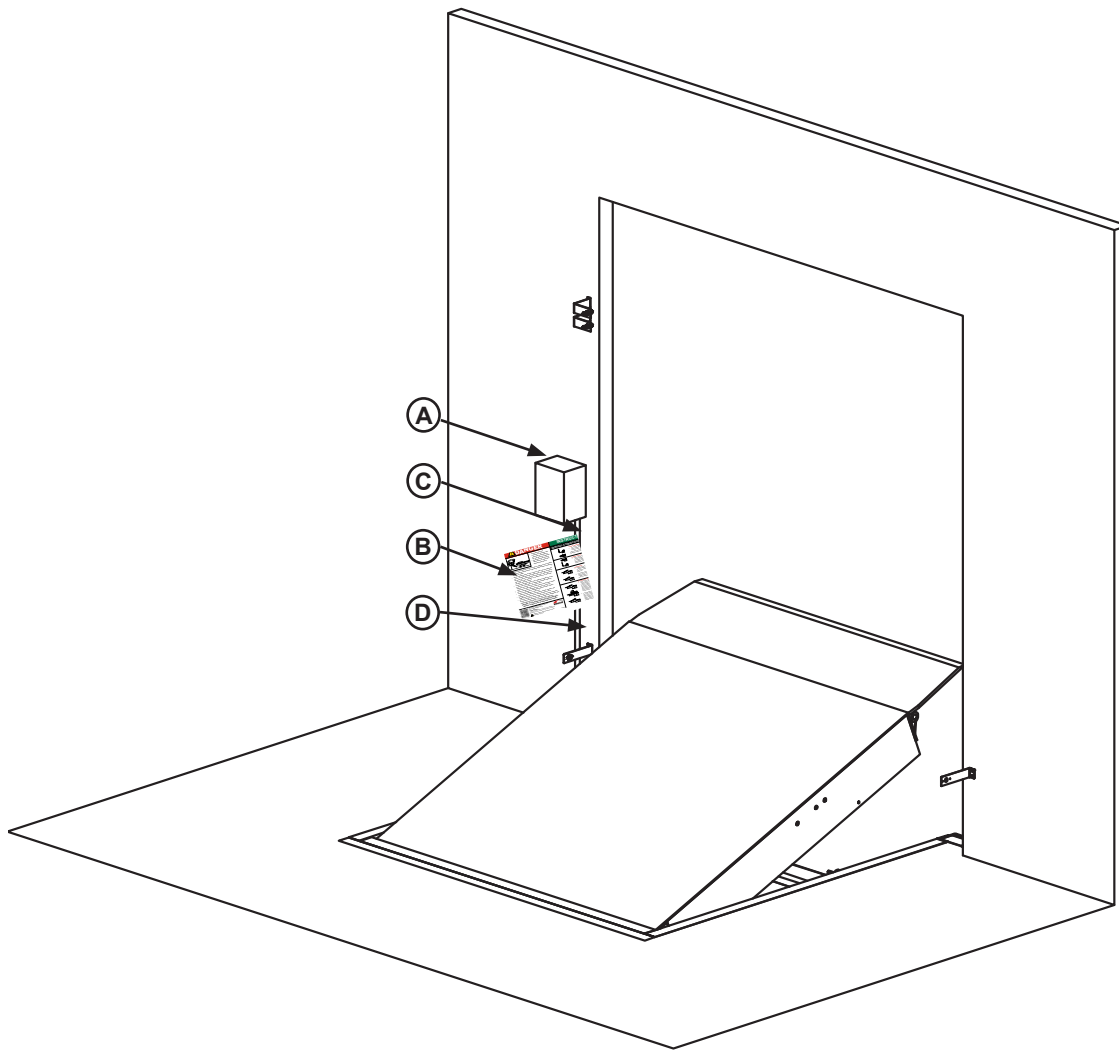
Note: Clean the beam before attaching mounting bases to ensure proper adhesion.

4. Secure the cable to the mounting bases using the included cable ties.

INSTALLATION

Placard Installation Instructions

1. Equipment Placards provide concise equipment operation information and should be available near the equipment for operators to reference.
2. Installers and/or owners/users are responsible for the installation and placement of product placards.
3. Placard must be in plain view of dock leveler and/or vehicle restraint operations.
4. Suggested placement of placard is near control box, attached to the wall or electrical conduit using a cable tie. If the equipment does not have a control panel, mount the placard on the wall to the immediate left of leveler at eye level.



A—Control Box

B—Placard

C—Nylon Cable Tie

D—Conduit

Operational Precautions

DANGER

Stay clear of dock leveler and vehicle restraint when transport vehicle is entering or leaving dock area.

DO NOT move or use the dock leveler or restraint if anyone is under or in front of leveler.

Keep hands and feet clear of pinch points. Avoid putting any part of your body near moving parts.

WARNING

Only trained personnel should operate the dock leveler and vehicle restraint.

DO NOT use a broken or damaged dock leveler or vehicle restraint. Make sure proper service and maintenance procedures have been performed on the equipment before using.

Transport vehicle wheels must be chocked. Do not remove the restraint until loading/unloading is finished and transport vehicle driver has been given permission to leave.

Make sure platform lip rests on the transport vehicle bed with at least 4 in. (102 mm) of overlap.

Maintain a safe distance from side edges of leveler during the loading/unloading process.

WARNING

Once the vehicle restraint has been positioned, the dock attendant must visually inspect to assure that the restraint has properly engaged the vehicle wheels.

iDock Controller User Interface:

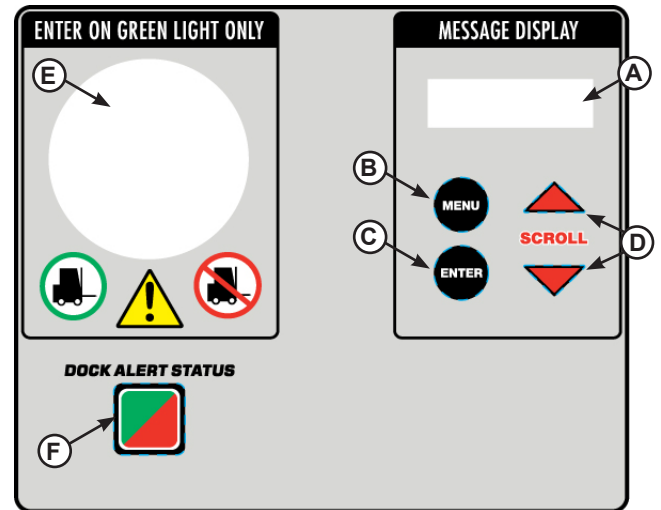


Figure 43

System Control Buttons/ Displays

A — Message Display

B — MENU button

C — ENTER button

D — SCROLL UP/DOWN buttons

E — Multi-Colored LED Light

Equipment Control Buttons

F — DOCK ALERT STATUS button

(Optional controls for integrated solutions not shown)

OPERATION

Operation - Normal

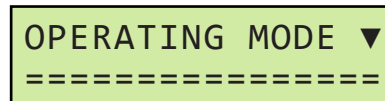
1. Check that the transport vehicle is positioned squarely against both dock bumpers. See Figure 47 and Figure 48. Lights will display:
 - Inside light - RED
 - Outside light - GREEN
2. Using the handles on the articulating arm (see Figure 47) position the UXL chock in front of transport vehicle wheel and engage the ground plate. While positioning the chock, the lights will display:
 - Inside light - RED
 - Outside light - RED
3. After chock is positioned and confirms presence of the transport vehicle wheel, the communication lights will display:
 - Inside light - RED & AMBER
 - Outside light - RED
4. Visually inspect restraint for proper engagement. Chock should be locked into ground plate and in front of a tire as shown.
5. Ensure overhead door is open and clear of dock leveler and material handlers. Then, position dock leveler onto transport vehicle.
6. When loading or unloading is complete, return dock leveler to the stored position and close door.
 - Inside light - RED
 - Outside light - ALTERNATING RED/GREEN
7. Remove UXL chock from ground plate and return to stored position. Light will display:
 - Inside light - RED
 - Outside light - RED
8. Close overhead door.
9. Transport vehicle can now depart.
 - Inside light - RED
 - Outside light - GREEN

Operation - Bypass

If the trailer UXL restraint is damaged or not functioning correctly, the system can be used in BYPASS mode.

(See Figure 49)

1. Secure transport vehicle wheels by other means.
 - Use a standard wheel chock on the tires not positioned over the ground plate. (Opposite side)
2. Activate BYPASS mode through menu screens under OPERATION MODE. (Shown below)



- **Restraint Only and Leveler/Restraint models:** Allows user to select the following operating modes:
 - **Normal**
 - **Bypass**
- Lights will display:
 - Inside light - GREEN & AMBER
 - Outside light - RED
- 1. Make sure overhead door is open and clear of the dock leveler and material handlers.
- 2. Position dock leveler onto transport vehicle trailer.
- 3. When loading or unloading is complete, return dock leveler to the stored position.
- 4. Reset BYPASS mode to NORMAL mode by pressing the RELEASE button once, or through menu screens under OPERATION MODE.
 - Inside light - RED
 - Outside light - GREEN
- 5. Close the overhead door.
- 6. Release the transport vehicle wheels when transport vehicle is ready to depart.

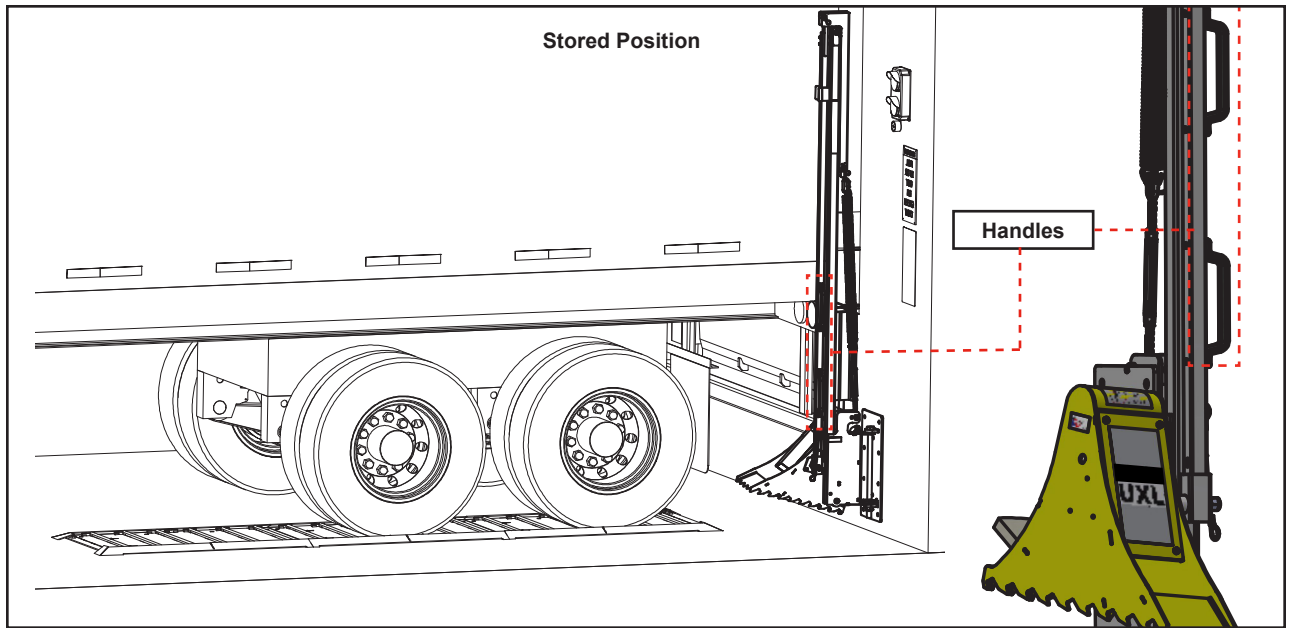


Figure 44

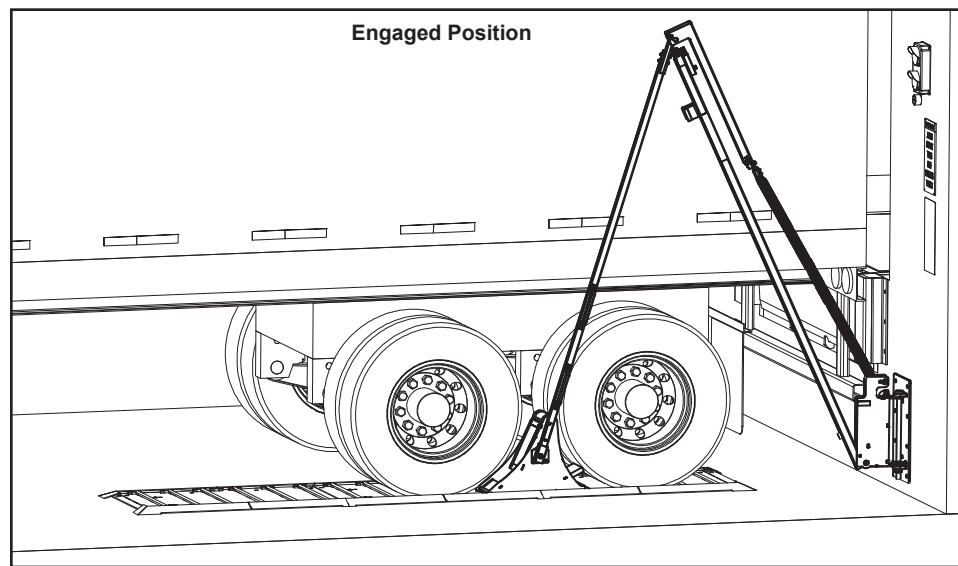


Figure 45

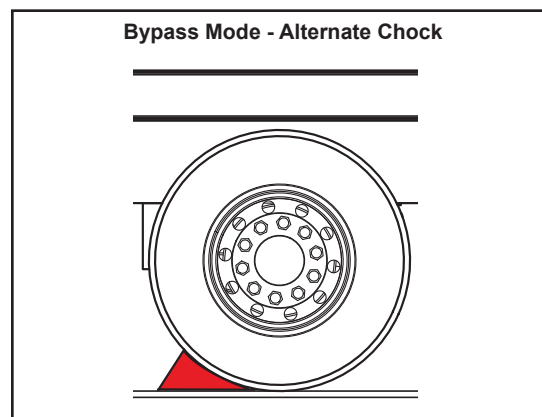


Figure 46

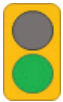

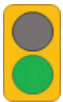






















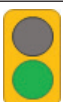

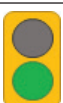

OPERATION




















Inside & Outside Light Sequence Charts

Factory Configuration

- Door operated lights
- Interlock (RELO) Restraint Engaged before Leveler Operate
- Sequence of Operation Truck → Restraint → Door → Leveler → Door → Restraint → Truck

System Operating Procedure & Light Sequence

| Step | Outside Light Assembly | Outside Alarm | Inside Light Red/Green | Inside Light Amber | Inside Alarm | Description |
|------|---|---|---|---|---|---|
| 1 |  | |  | | | <ul style="list-style-type: none"> • Vehicle Not Present • Restraint Stored (Chock in storage bracket) • Door Closed • Leveler Stored |
| 2 |  | |  | | | <ul style="list-style-type: none"> • Vehicle Present • Restraint Stored (Chock in storage bracket) • Door Closed • Leveler Stored |
| 3 |  | |  | | | <ul style="list-style-type: none"> • Restraint Removed from Stored Position • Door Closed • Leveler Stored |
| 4 |  | |  |  | | <ul style="list-style-type: none"> • Restraint Engaged (Chock in front of wheel) • Door Closed • Leveler Stored |
| 5 |  | |  | | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Stored |
| |  |  Continuous |  | |  Continuous | <p>If the restraint is pulled from the engaged position, the lights will change, and audible alarms will sound to get the attention of the operator. Fault #11 will occur after a delay (see Fault #11 details below)</p> <p>Fault condition in the controls will clear once chock is reengaged with the wheel.</p> |
| 6 |  | |  | | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Deployed |
| 7 |  | |  | | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Stored |
| 8 |  | |  |  | | <ul style="list-style-type: none"> • Door Closing • Leveler Stored |
| 9 |  | |  |  | | <ul style="list-style-type: none"> • Restraint Removed from the Engaged Position • Door Closed • Leveler Stored |
| 10 |  | |  | | | <ul style="list-style-type: none"> • Restraint Stored • Door Closed • Leveler Stored |
| 11 |  | |  | | | <ul style="list-style-type: none"> • Vehicle Not Present • Restraint Stored • Door Closed • Leveler Stored |

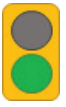

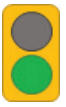













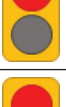




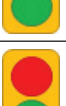









| FAULT CONDITIONS | | | | | | |
|------------------|---|---|---|---|--|--|
| Fault #9 |  | |  |  |  | Sensor Error <ul style="list-style-type: none"> If the sensors indicate that the chock is stored and engaged at the same time. Must fix fault condition before it will clear on the control box. Press ENTER on the control box to clear fault. |
| Fault #10 |  |  Continuous |  |  |  | Improper Chock Position (Restraint not Engaged) <ul style="list-style-type: none"> Occurs in 2 scenarios <ul style="list-style-type: none"> After chock is removed from the stored position and not engaged with the wheel within 30 seconds. After chock is engaged, but before door is open and chock/wheel has moved where the chock is not detecting the wheel. Return chock to the stored position, engage wheel or open door to clear fault condition. |
| Fault #11 |  |  Continuous |  |  |  | Improper Chock Position (Reengage Failure) <ul style="list-style-type: none"> Occurs after chock is engaged with the wheel and the door has been opened, and chock no longer senses the wheel. Must return chock to the engage position with wheel to clear fault condition. |
| Fault #13 |  |  Continuous |  |  |  | Improper Chock Position (Not Returned to Stored Position) <ul style="list-style-type: none"> Occurs after chock is removed from the wheel and is not returned to the stored position with 6 seconds after permission is given. Must return chock to the stored position to clear fault condition. |

OPERATION

Factory Configuration

- Leveler operated lights
- Interlock (RELO) Restraint Engaged before Leveler Operate
- Sequence of Operation Truck → Restraint → Door → Leveler → Door → Restraint → Truck

System Operating Procedure & Light Sequence

| Step | Systems UniChock | | | | | Description |
|---|---|---|---|---|---|--|
| | Outside Light Assembly | Outside Alarm | Inside Light Red/Green | Inside Light Amber | Inside Alarm | |
| 1 Vehicle Not Present |  | |  | | | <ul style="list-style-type: none"> • Vehicle Not Present • Restraint Stored (Chock in storage bracket) • Door Closed • Leveler Stored |
| 2 Vehicle Present |  | |  | | | <ul style="list-style-type: none"> • Vehicle Present • Restraint Stored (Chock in storage bracket) • Door Closed • Leveler Stored |
| 3 Chock Removed from Stored Position |  | |  | | | <ul style="list-style-type: none"> • Restraint Removed from Stored Position • Door Closed • Leveler Stored |
| 4 Chock Engaged with Wheel |  | |  |  | | <ul style="list-style-type: none"> • Restraint Engaged (Chock in front of wheel) • Door Closed • Leveler Stored |
| 5 Open Door |  | |  |  | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Stored |
| |  |  |  | |  | If the restraint is pulled from the engaged position, the lights will change, and the outside alarm will sound to get the attention of the operator. |
| 6 Leveler Deployed |  | |  | | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Deployed |
| 7 Leveler Stored |  | |  |  | | <ul style="list-style-type: none"> • Restraint Engaged • Door Open • Leveler Stored |
| 8 Door Partially Closed |  | |  |  | | <ul style="list-style-type: none"> • Restraint Engaged • Door Partially Closed • Leveler Stored |
| 9 Close Door |  | |  |  | | <ul style="list-style-type: none"> • Close Door • Leveler Stored |
| 10 Chock Removed from the Wheel |  | | |  | | <ul style="list-style-type: none"> • Restraint Removed from the Engaged Position • Door Closed • Leveler Stored |
| 11 Chock Stored |  | |  | | | <ul style="list-style-type: none"> • Restraint Stored • Door Closed • Leveler Stored |

Maintenance Precautions



Figure 48

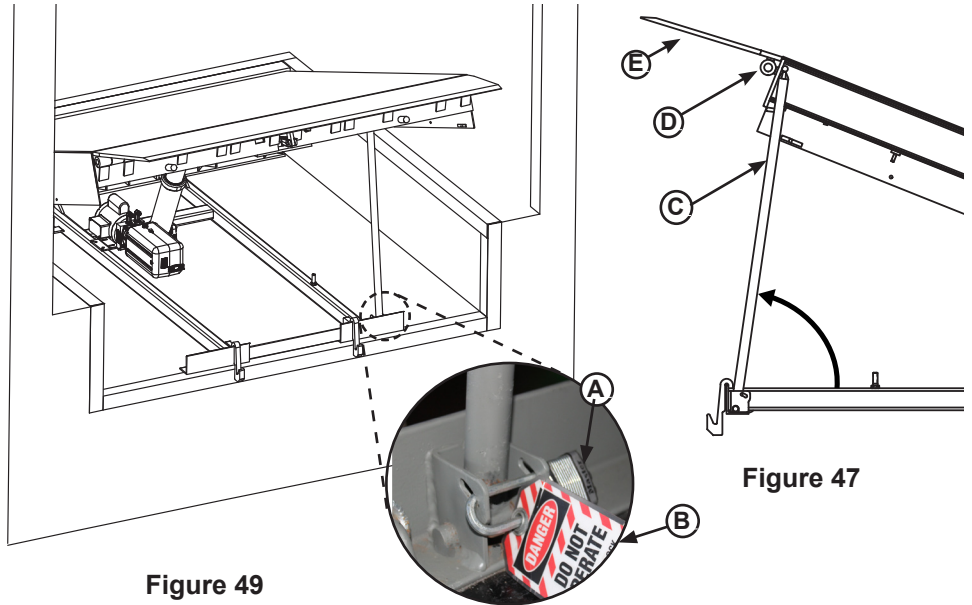


Figure 49

- A — Lock Out Device C — Maintenance Prop E — Lip plate
 B — Tag Out D — Header plate

Figure 47

⚠ DANGER

Unless the dock leveler is equipped with a tethered remote, two people are required to engage the maintenance prop: one person to operate the unit, the other person to engage the maintenance prop.

In addition, it is recommended and good safety practice to use an additional means to support the dock platform and lip anytime when physically working in front of or under the dock leveler. This additional means may include, but is not limited to a boom truck, fork truck, stabilizing bar or equivalent.

When working with electrical or electronic controls, make sure that the power source has been tagged* (B) and locked out (A) according to OSHA regulations* and approved local electrical codes (see Figure 48).

Whenever maintenance is to be performed under the dock leveler platform, support the platform with maintenance prop (C). Position the maintenance prop behind front header plate (D) while staying clear of the lip. The lip will fold down after the platform has rested on the maintenance prop. Lock the maintenance prop in the service (upright) position using an OSHA approved lockout device* (A) and tag out device* (B). See Figure 51 and Figure 52.

Only the person servicing the equipment should have the capability to remove the lockout devices. The tag out devices* must inform that repairs are in process and clearly state who is responsible for the lockout condition.

⚠ WARNING

Always post safety warnings and barricade the work area at dock level and ground level to prevent unauthorized use of the unit before maintenance is complete.

⚠ WARNING

A hard hat or other applicable head protection should always be worn when working under or around a dock leveler.

Always stand clear of platform lip when working in front of the dock leveler.

* Refer to OSHA regulations 1910.146. Confined Space and 1910.147. Lockout/Tagout

MAINTENANCE

Periodic Maintenance Schedule

Daily Maintenance

- Verify that all inside and outside signal lights and alarm (if equipped) work correctly.

Weekly Maintenance

- Operate the vehicle restraint through the complete operating cycle to verify correct operation. Reference normal operation on page 36 of this manual.
- Remove debris around vehicle restraint and in articulating arm, chock and ground plate.
- Verify articulating arm is able to move freely with no binding or obstruction.
- Inspect warning decals and placards inside and outside the loading dock. Replace if damaged or missing.

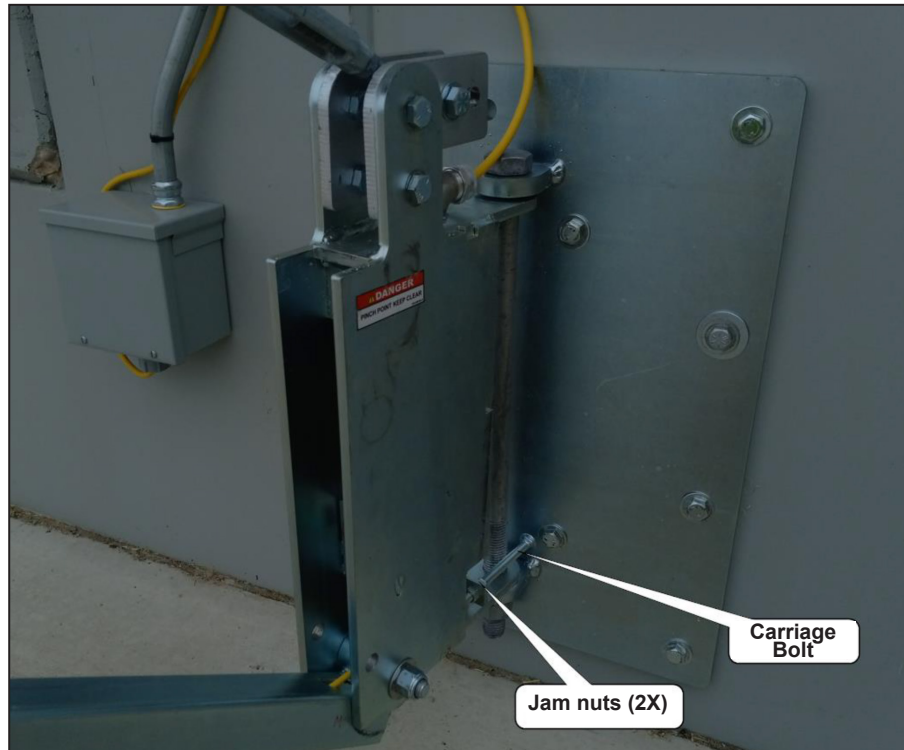
Quarterly Maintenance

- Complete Weekly Maintenance.
- Inspect the following for damage/abnormal wear:
 - Check welds for cracks.
 - Check for loose mounting hardware.
 - Check J-box for water damage.
 - Check control box and conduit for damage.
 - Check bumpers for more than 1" of wear. Replace worn, loose, damaged or missing bumpers.
 - Inspect rubber chock spacer.
 - Inspect chock assembly and axle.
 - Inspect articulating arm assembly.
 - Inspect all cables and sensors.

Articulating Arm Adjustment Notes:

Loading/unloading operations can create vibrations, causing the chock to move away from the vehicle wheel and off the ground plate. To mitigate this movement, the pivot weldment is equipped with an adjustment bolt to hold the chock in position once the articulated arm is extended.

Note: this adjustment is factory-set. However, adjustments can be made if necessary. Loosen jam nuts and turn the carriage bolt clockwise or counterclockwise to achieve correct operation.



Articulating Arm Adjustment

1. Verify articulating arm operating range. Extend arm and confirm it can travel to last section of ground plates. See **figure 50**.

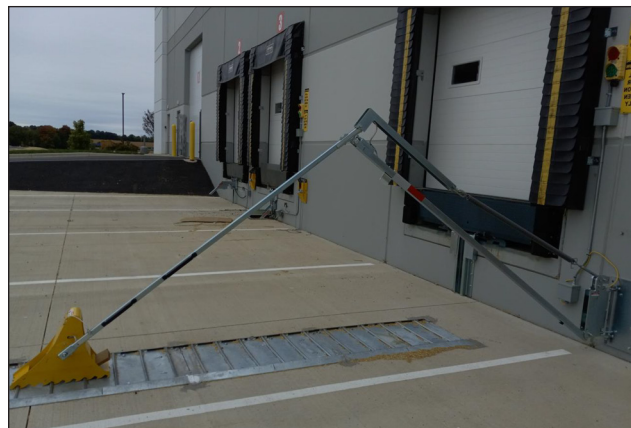


Figure 50

2. If the arm does not reach the end of the ground plates, return the UXL to the stored position.
3. Using a ladder, access the extension adjustment mechanism at the junction of the front and rear arms. Screw in the limiter bolt.

ADJUSTMENT

Articulating Arm Adjustment (Continued)

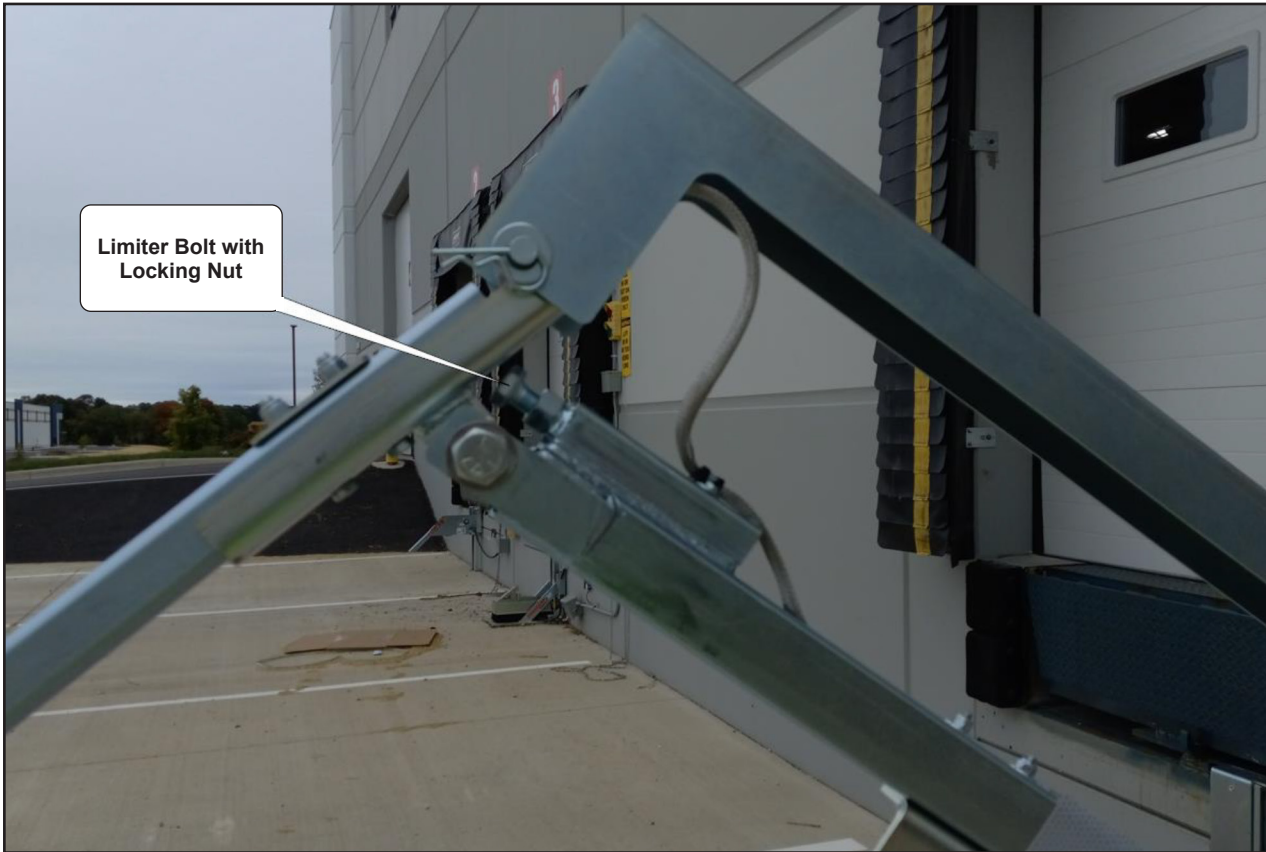


Figure 51

4. Verify articulating arm operating range. Extend arm and confirm it can travel to last section of ground plates.
5. Loosen the limiter bolt until it touches the end of the front-arm, then hold this adjustment in place by tightening the lock nut.

Adjust Spring Tension

Spring tension on the articulated arm is important for proper operation. If the spring tension is too loose, chock operation will be difficult and the arm will not retract. If the spring is too tight, the arm will be difficult to position and the chock may not stay in position on the ground plate.

For proper spring tension adjustment, follow these steps:

1. Position the chock on the ground next to the furthest ground plate. See image below:

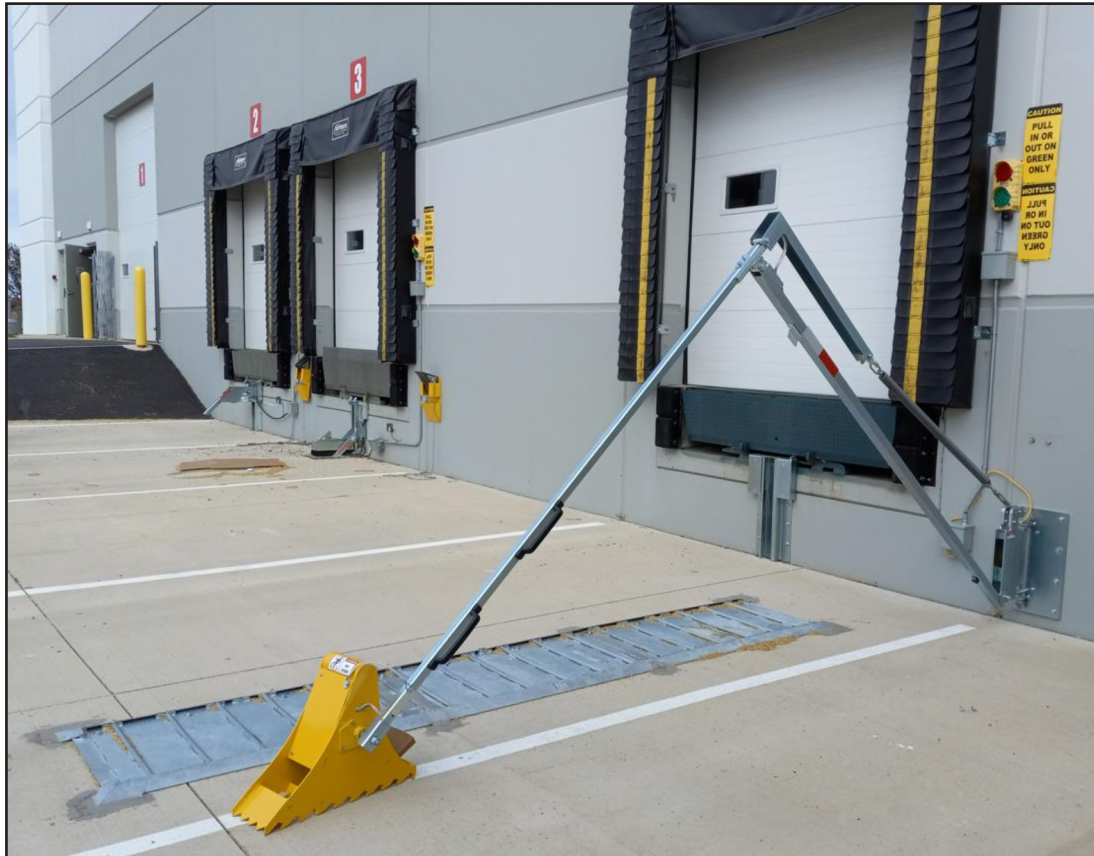


Figure 52

2. Adjust the spring tension with the turnbuckle, shown in **figure 53** on page 46. Loosen the jam nuts then adjust the turnbuckle to the desired tension. The arm should retract towards the wall within 5 seconds or less.

ADJUSTMENT

Adjust Spring Tension (Continued)

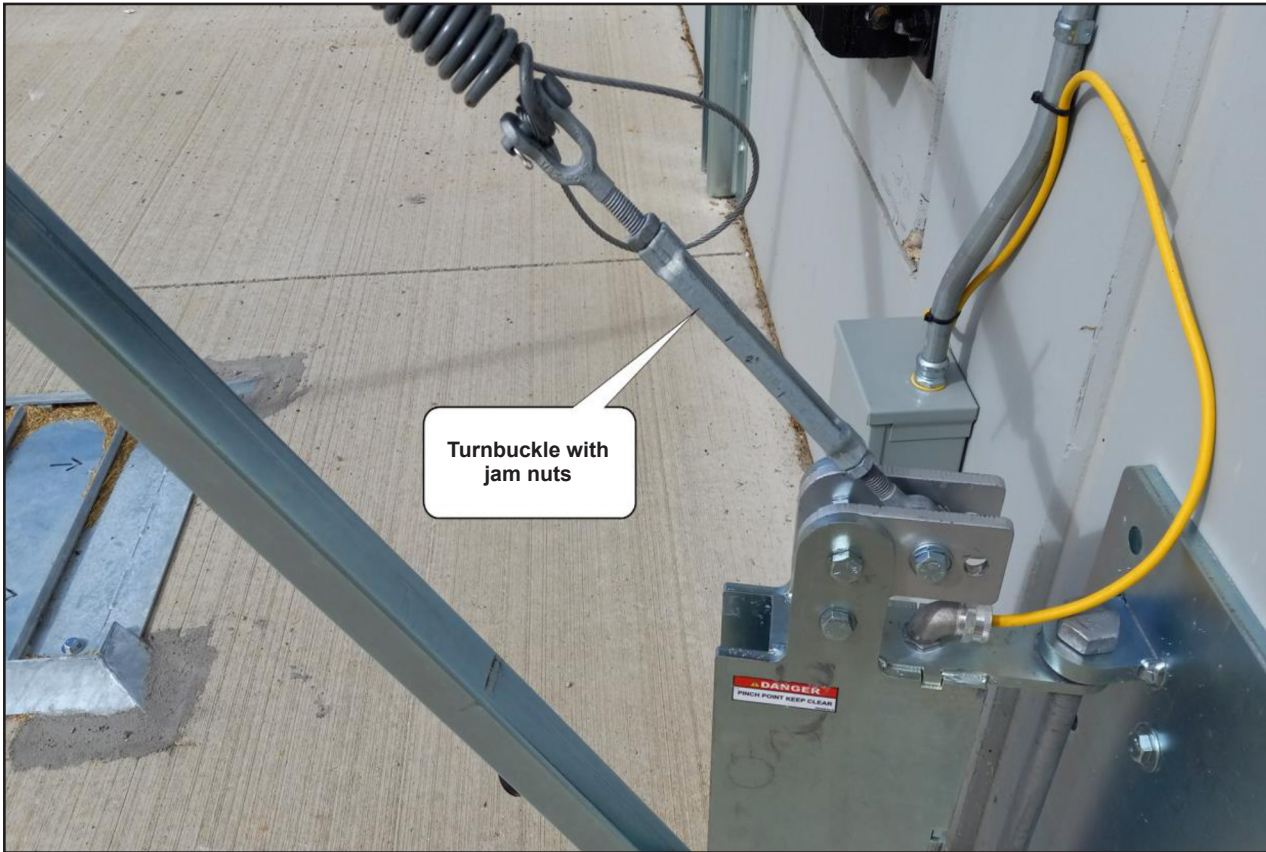


Figure 53

3. Test retraction with the chock on the ground next to the second restraining plate. Check that the arm retracts towards the wall in 5 seconds or less. Continue to adjust the spring tension with the turnbuckle if necessary. See **figure 54** on page 47.



Figure 54

4. Verify retraction from the closest ground plate. Ensure the arm retracts towards the wall in 5 seconds or less, if not, adjust spring tension with the turnbuckle.

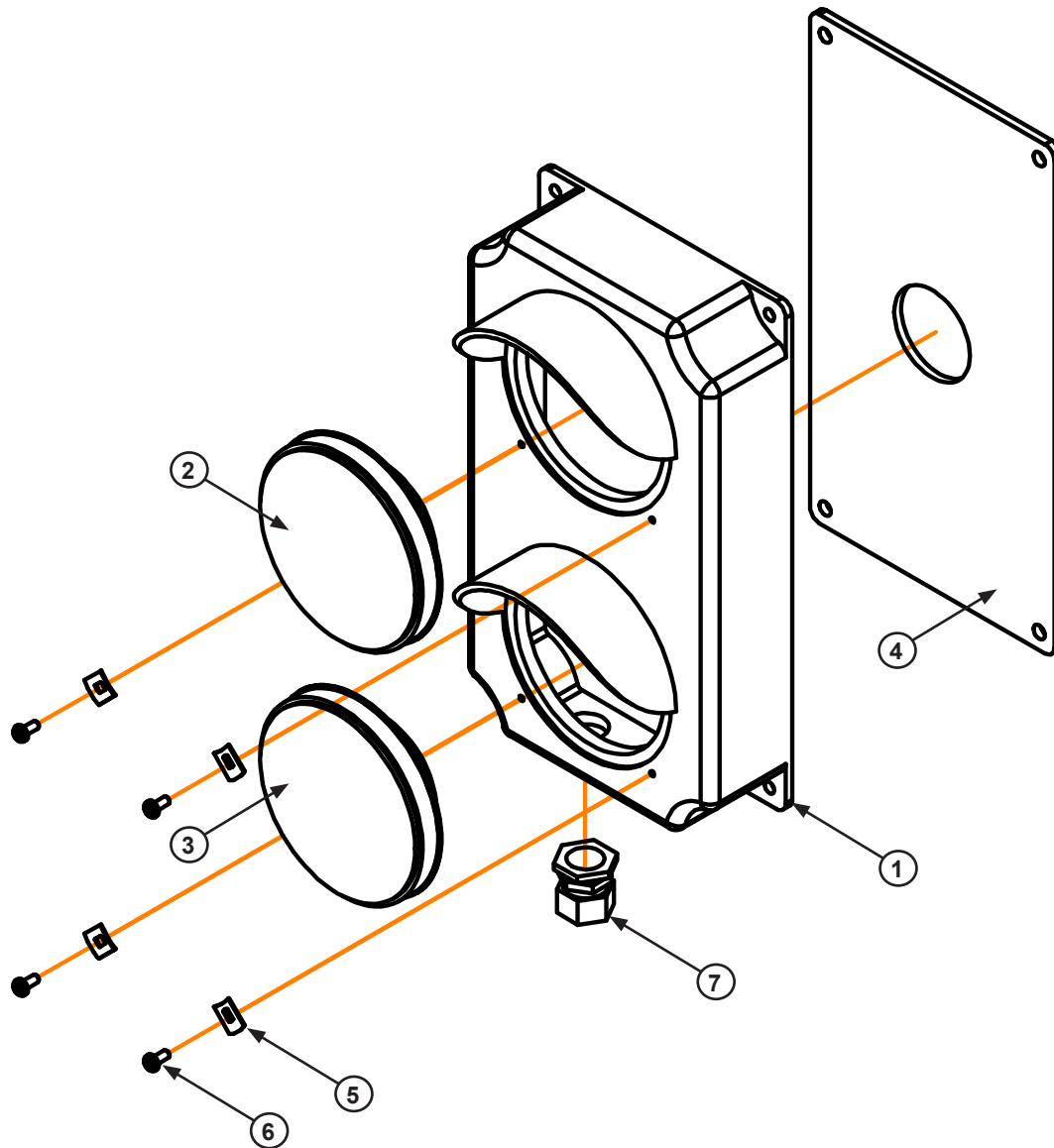


Figure 55

5. When correct operation is achieved, retighten the jam nuts on the turnbuckle.
6. Perform a final check next to all ground plates and confirm that the chock retracts correctly. The UXL should be easy to use in both directions (extended and retracted.)

PARTS

OSLA (Outside Light Assembly)



| Item | Quantity | Part Number | Description |
|------|----------|-------------|---|
| 1-7 | 1 | 3055-0011 | Complete Light Housing, Yellow Plastic, With LED Lights |
| 1 | 1 | 3051-0063 | Housing, Main, Yellow |
| 2 | 1 | 3051-0147 | Red LED Lens/Housing/Circuit Assembly, 12V |
| 3 | 1 | 3051-0149 | Green LED Lens/Housing/Circuit Assembly, 12V |
| 4 | 1 | 3051-0068 | Mounting Gasket |
| 5 | 4 | 3051-0105 | Clip, Lens Holding |
| 6 | 4 | 3051-0104 | Screw, Lens Holding |
| 7 | 1 | * | Conduit Fastener, 3/4" x 3/8" |

Signs



A



C

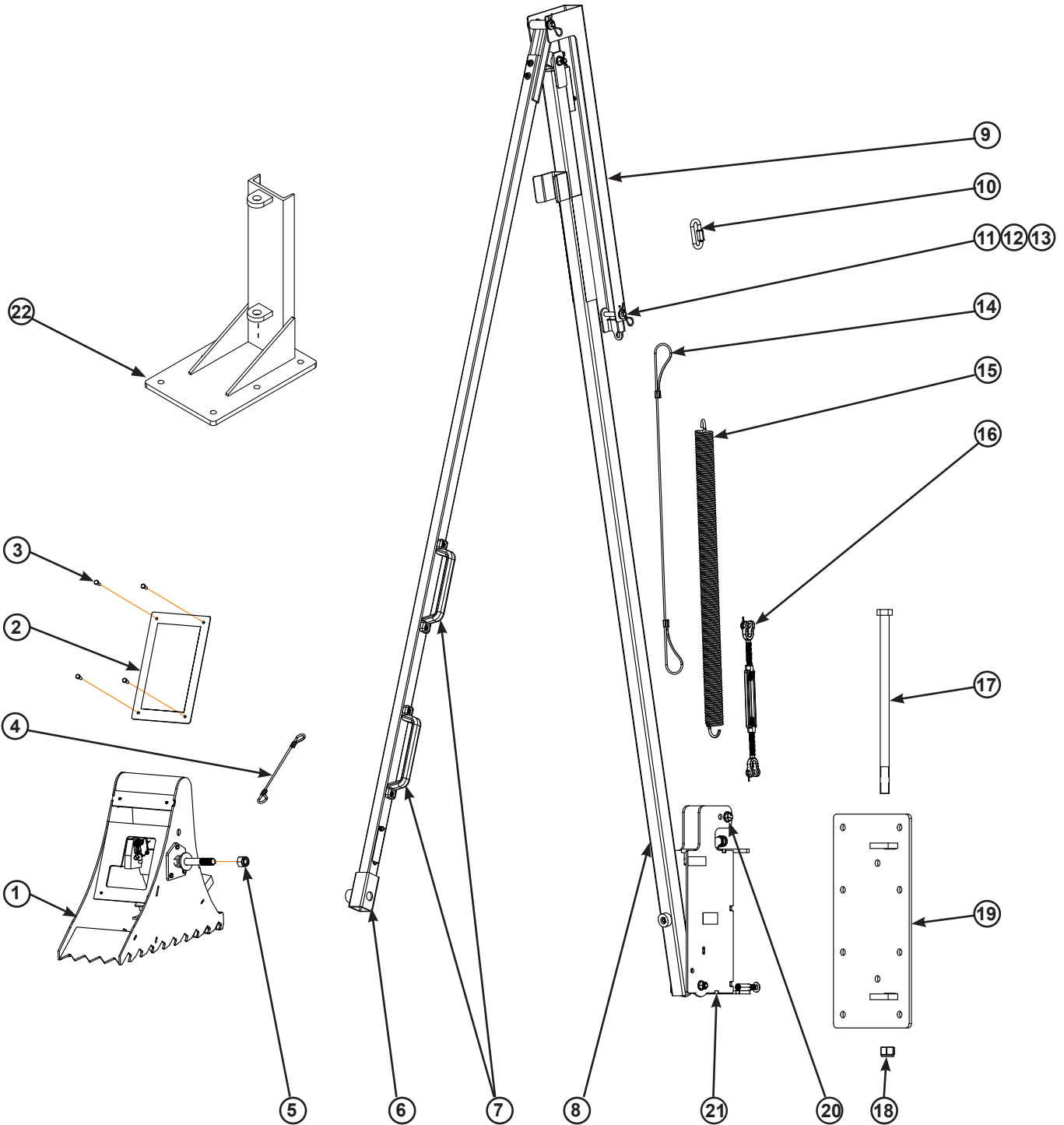


B

| Item | Part Number | Description |
|------|-------------|----------------------------------|
| A | 1751-1432 | Outside Sign, Pull In/Out |
| B | 1751-0033 | Outside Sign, Pull In/Out |
| C | 1751-0036 | Inside Sign, Enter On Green Only |

PARTS

Arm and Chock - Part Diagram

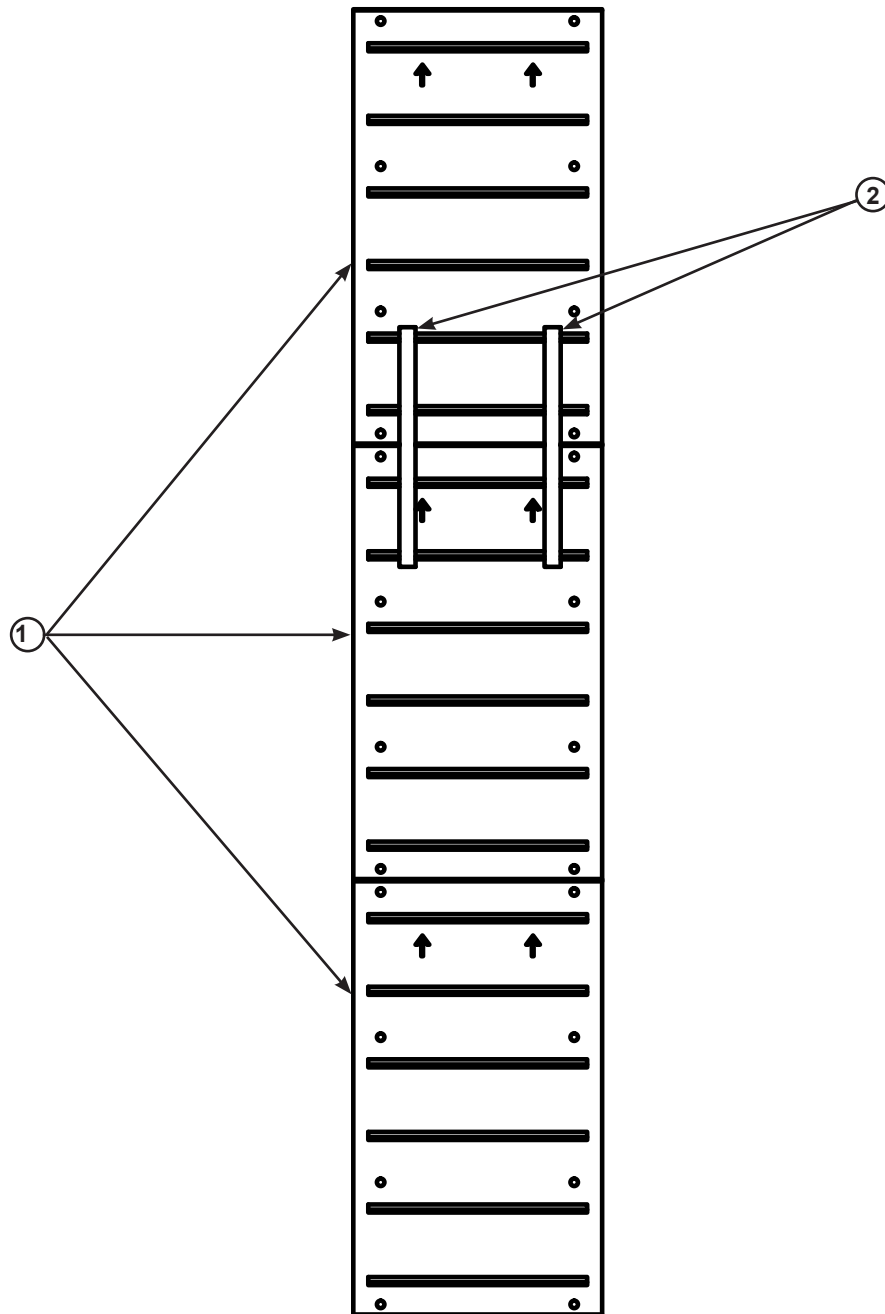


Arm and Chock - Part List

| Item | Quantity | Part Number | Description |
|------|----------|-------------|--|
| 1 | 1 | 9974-0006 | Weldment, Chock, UXL |
| 2 | 1 | 9971-0101 | Cover Plate, Chock, UXL |
| 3 | 4 | 2101-0006 | Screw, Hhcs, 1/4-20 UNC X 0.75 Grade 2 |
| 4 | 1 | 2101-0438 | Lanyard, Locking Loop To Loop, .1875" Dia x 12" Lg |
| 5 | 1 | 2101-0323 | Nut, Nylon Lock, 3/4-10 UNC |
| 6 | 1 | 9973-0015 | Front Arm Assembly, UXL |
| 7 | 1 | 5451-0002 | Handle, Plastic, Black 2-5/16 x 1-1/4 x 8-19/32 |
| 8 | 1 | 9973-0014 | Rear Arm Assembly, UXL |
| 9 | 2 | 9971-0070 | Spring Pivot Bracket, UXL 12 ga x 14.33 x 36.00 Lg |
| 10 | 1 | 5401-0003 | Quick Link, Threaded, UXL .375 x .75 x 2.688 |
| 11 | 2 | 2101-0426 | Clevis Pin 1/2" X 3.5" Long, Zp |
| 12 | 1 | 9971-0069 | Bracket, Ext. Spring Mount, UXL |
| 13 | 10 | 2101-0079 | Washer, Flat, 1/2" SAE, Zinc PL |
| 14 | 8 | 2101-0437 | Lanyard, Locking Loop To Loop .1875" Dia X 60" Lg |
| 15 | 2 | 9971-0042 | Spring, Extension, UXL |
| 16 | 2 | 2101-0421 | Turnbuckle, Clevis-Clevis 1/2-13, 6" Max Adj. |
| 17 | 2 | 2101-0411 | Bolt, 1"-8 x 20", Hot Dipped Galv. |
| 18 | 1 | 2101-0175 | Locknut, Hex, 1-8 UNC, Zp |
| 19 | 2 | 9973-0001 | Wall Mount Weldment, UXL |
| 20 | 1 | 2101-0423 | Screw, Hex Head, 9/16-12 3-1/2 Long, Zp |
| 21 | 2 | 9973-0004 | Pivot Weldment, UXL |
| 22 | 1 | 9973-0016 | Optional Post Mount, UXL |

PARTS

Standard Ground Plate

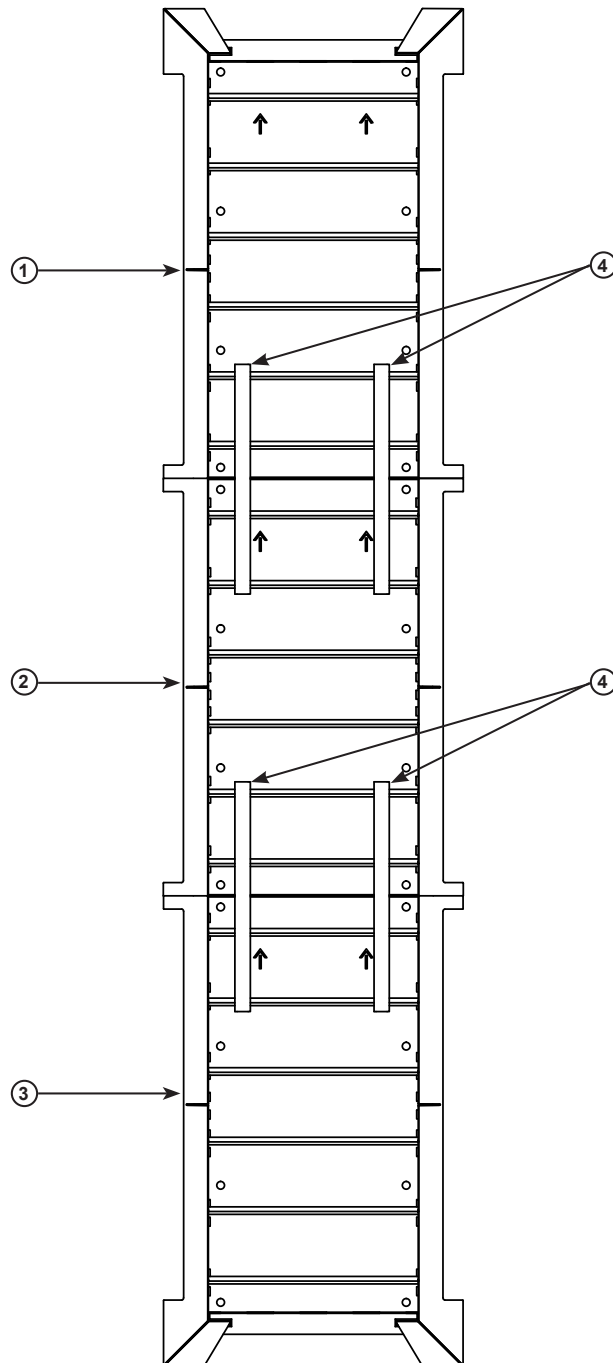


Ground Plate - Part List

| Item | Quantity | Part Number | Description |
|------|----------|-------------|---|
| 1 | 3 | 9973-0008 | Wldt, Std Ground Plt, UXL |
| 2 | 2 | 9971-0104 | Alignment Bracket, Grnd Plt, UXL (Install Only) |

Winter Ground Plate

| Item | Quantity | Part Number | Description |
|------|----------|-------------|---|
| 1 | 1 | 9973-0009 | Wldt,Winter Gnd Plt,End A,UXL |
| 2 | 1 | 9973-0010 | Wldt,Winter Gnd Plt,Mid,UXL |
| 3 | 1 | 9973-0011 | Wldt,Winter Gnd Plt,End B,UXL |
| 4 | 2 | 9971-0104 | Alignment Bracket, Grnd Plt, UXL (Install Only) |



MISCELLANEOUS

Customer Information



Serial Tag

Figure 57

Figure 56

NOTE: Refer to Figure 56 for orientation of vehicle restraint and Figure 57 for example of decals.

The model/serial number decal is located on the right side panel of the restraint.

When you receive your new equipment, write down the model and serial number in the form provided. This will help ensure safe keeping of the numbers in the event the model/serial number decal (A, B) becomes lost or damaged.

Also, write down Systems, LLC's order number, the company that installed the equipment, and the original owner's name. This will all help to identify the specific equipment if more information is required.

When ordering, use part numbers and description to help identify the item ordered. Do not use "item" numbers. These are only for locating the position of the parts. Always give MODEL NUMBER and/or SERIAL NUMBER.

For service, call or contact:

Systems, LLC
P.O. Box 309
Germantown, WI 53022

Phone: (800) 643-5424
Fax: (262) 255-5917

www.loadingdocksystems.com

| | |
|---|-------|
| <u>Dock Leveler Information</u> | |
| Model | _____ |
| Serial No. | _____ |
| Systems, LLC Order No. | _____ |
| <u>Vehicle Restraint Information</u> | |
| Model | _____ |
| Serial No. | _____ |
| Systems, LLC Order No. | _____ |
| <u>Original Owner Information</u> | |
| Name | _____ |
| Address | _____ |
| | _____ |
| <u>Installer Information</u> | |
| Name | _____ |
| Address | _____ |
| | _____ |
| Date of Installation | _____ |

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STANDARD PRODUCT WARRANTY

SYSTEMS, LLC warrants that its products will be free from defects in design, materials and workmanship for a period of one (1) year from the date of shipment. All claims for breach of this warranty must be made within 30 days after the defect is or can with reasonable care, be detected. In no event shall any claim be made more than 30 days after this warranty has expired. In order to be entitled to the benefits of this warranty, the product must have been properly installed, maintained and operated in accordance with all manufacturer's recommendations and/or specified design parameters and not otherwise have been subject to abuse, misuse, misapplication, acts of nature, overloading, unauthorized repair or modification, application in a corrosive environment or lack of maintenance. Periodic lubrication, adjustment and inspection in accordance with all manufacturers' recommendations are the sole responsibility of the Owner/User.

In the event of a defect, as determined by SYSTEMS LLC, covered by this warranty, SYSTEMS LLC shall remedy such defect by repairing or replacing any defective equipment or parts, bearing the cost for the parts, labor and transportation. This shall be exclusive remedy for all claims whether based on contract, negligence or strict liability.

WARRANTY LIMITATIONS

THE ABOVE WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SYSTEMS LLC AND ITS SUBSIDIARIES SHALL NOT IN ANY EVENT BE LIABLE TO ANYONE, INCLUDING THIRD PARTIES, FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND INCLUDING BUT NOT LIMITED TO, BREACH OF WARRANTY, LOSS OF USE, LOSS OF PROFIT, INTERRUPTION OF BUSINESS OR LOSS OF GOODWILL.