

INSTALLATION & OWNER'S MANUAL



WARNING

DO NOT INSTALL, OPERATE OR SERVICE THIS PRODUCT UNLESS YOU HAVE READ AND FULLY UNDERSTAND THE ENTIRE CONTENTS OF THIS MANUAL. FAILURE TO DO SO MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR DEATH.

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1.

ABOUT the ACS- AIR CYLINDER SERIES

The **U-Series Air Cylinder Dock Leveler** harnesses the power of air to deliver the same heavy-duty, proven performance that makes Blue Giant dock levelers a standard at loading docks worldwide. Powered by a tankless, oil-free compressor, the air cylinder dock leveler is one of a kind in the industry. Its deck structure is supported by a minimum of six (6) U-beams, with at least twelve distributed load points. The deck will flex up to 4" (101mm) when under load to compensate for canted truck beds. The fixed rear hinge remains flush with the floor during use, eliminating pinch points and cross-traffic obstructions.

The **StrongArm™ SVR303A** is powered by an on-demand air system and presents a solid safeguard against trailer creep, trailer walk, and unscheduled truck departure. Non-impact, low-profile, and ANSI MH30.3-approved, SVR303A has a restraining capacity of 35,000 lbs (15,909 kgs) and a vertical engagement range of 8" to 26" (203 to 660mm) above ground level, allowing it to work well with air-ride suspension systems and secure most ICC bars, even those misshapen or damaged by impact-style restraints. The unit's switchless Intelligent Positioning System (IPS) detects a truck's ICC bar without using breakable mechanical switches, adding another layer of safety to loading dock operations, and communicates the arm's position to the control station via a network.

The **Blue Genius™ Touch Control Panel** with advanced microprocessor technology controls the operation of the restraint and dock leveler combination and alerts both the driver and dock attendants of safe/unsafe conditions. Its onboard diagnostics and communications feature a user-friendly, multi-language LCD intelligent text display and keypad with supervisory override.

1. 1

OWNER'S PURCHASE RECORD

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

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

2.

INTRODUCTION

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

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

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



American National Standards Institute (ANSI)
1430 Broadway
New York, NY 10018
(212) 642-4900



ALSO MEMBERS OF :
Loading Dock Equipment Manufacturers
A Product Section of Material Handling Industry of America,
A Division of Material Handling Industry
8720 Red Oak Blvd., Suite 201, Charlotte, NC, 28217-3992
Telephone: (704) 676-1190 Fax: (704) 676-1199

2.1

WARRANTY INFORMATION

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

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

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

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

2.2

EXCLUSION OF LIABILITY

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

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

2.3

MANUFACTURER'S NOTE

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

3. OPERATOR'S MANUAL SAFETY MESSAGE COLOR IDENTIFICATION

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

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

3.1

OPERATIONAL SAFETY WARNINGS

<p>⚠ DANGER</p> <ul style="list-style-type: none"> • DO NOT operate leveler or vehicle restraint with anyone standing in the path of operation. • Lift the dock leveler and vehicle restraint with suitable hoisting equipment only. Do not stand under the dock equipment or any heavy objects while they are being hoisted. • BEFORE BEGINNING ANY SERVICE PROCEDURES: <ul style="list-style-type: none"> – Disconnect the power and follow all LOCKOUT / TAGOUT procedures. • Exercise caution when touching or handling the cooling tube, as tube is hot and edges may be sharp. • Compressor is hot when in use. Do not touch.

<p>⚠ WARNING</p> <ul style="list-style-type: none"> • Installation must be performed only by trained and authorized personnel. • Prior to installation, place adequate barriers to prevent personnel and vehicle traffic from entering the work area. • During installation, anchors must be properly torqued to obtain the necessary anchoring strength. DO NOT USE IMPACT DRIVERS. • DO NOT drive or walk onto the transport vehicle until it is parked against the dock bumpers and the wheels are chocked, or the vehicle restraint has been fully engaged and the lights have changed to GREEN inside and RED outside. • NEVER attempt to lift or hold the lip out by hand. Serious personal injury could occur. • Keep away from hinge when operating leveler. • Post safety warnings and barricade working area at dock level and at ground level to prevent unauthorized use of the dock equipment during maintenance/service. • NEVER remove the wheel chocks until loading/ unloading is finished and the truck driver has been given permission to depart, or the Vehicle Restraint has been released and the lights have changed to RED inside and GREEN outside. 	<p>IMPORTANT</p> <ul style="list-style-type: none"> • DO NOT ground welding equipment to any air cylinder or electrical components. • DO NOT attach welder as ground to leveler 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 or junction box until all welding has been completed. • NOTE - check motor rotation. Jog the motor until rotation has been determined. DO NOT allow the motor to run in reverse for more than a couple of seconds, otherwise the power unit may become damaged. • DO NOT force valve adjustment screws against internal stops. Damage will occur to the valve/seat. • If a procedure is not clearly defined in this manual, contact your authorized service representative.
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<p>⚠ CAUTION</p> <ul style="list-style-type: none"> • ONLY TRAINED PERSONNEL should operate or service this equipment. • DO NOT operate dock equipment until the truck is parked against the dock bumpers and has been secured by a vehicle restraint and/or chocks. • ALWAYS return the leveler platform to the proper stored position.

4.

LOCKOUT / TAGOUT PROCEDURE and RULES

⚠ WARNING

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

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







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

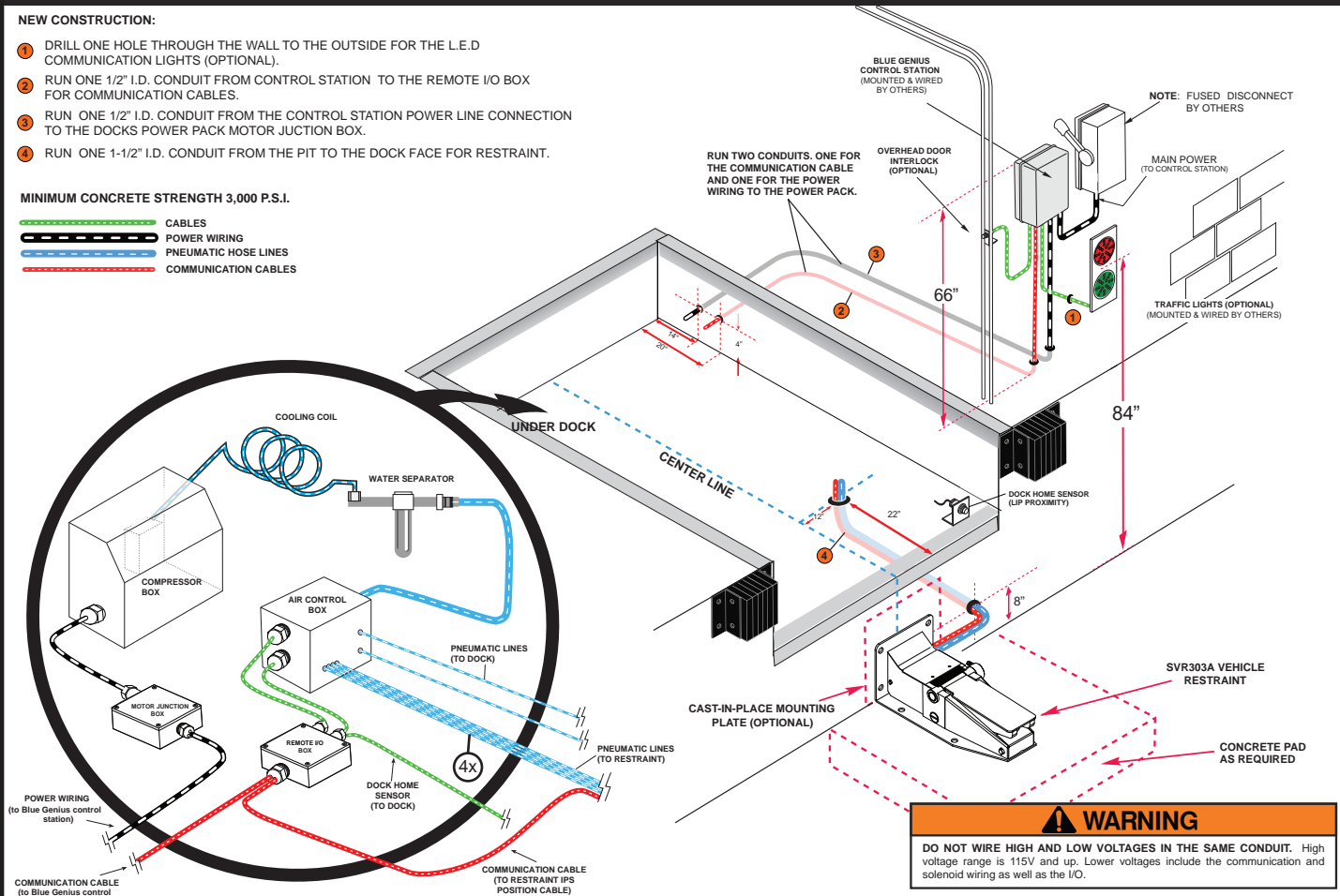
5. AIR CYLINDER DOCK LEVELER AND SVR303A ARRANGEMENT

NEW CONSTRUCTION:

- 1 DRILL ONE HOLE THROUGH THE WALL TO THE OUTSIDE FOR THE L.E.D COMMUNICATION LIGHTS (OPTIONAL).
- 2 RUN ONE 1/2" I.D. CONDUIT FROM CONTROL STATION TO THE REMOTE I/O BOX FOR COMMUNICATION CABLES.
- 3 RUN ONE 1/2" I.D. CONDUIT FROM THE CONTROL STATION POWER LINE CONNECTION TO THE DOCKS POWER PACK MOTOR JUNCTION BOX.
- 4 RUN ONE 1-1/2" I.D. CONDUIT FROM THE PIT TO THE DOCK FACE FOR RESTRAINT.

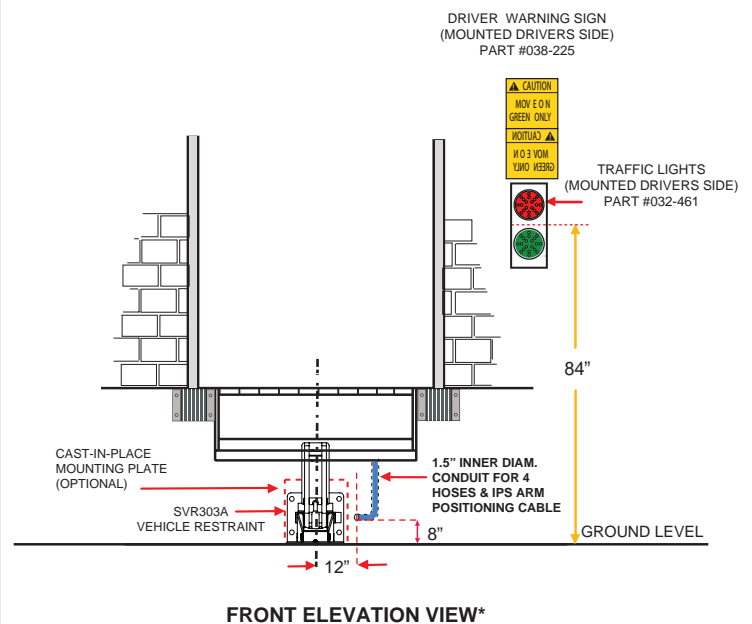
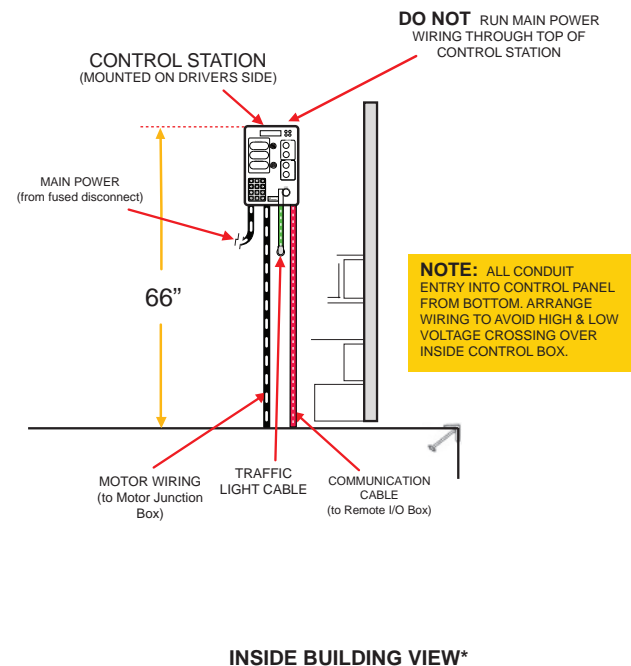
MINIMUM CONCRETE STRENGTH 3,000 P.S.I.

 CABLES
 POWER WIRING
 PNEUMATIC HOSE LINES
 COMMUNICATION CABLES



ELECTRICAL REQUIREMENTS-

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



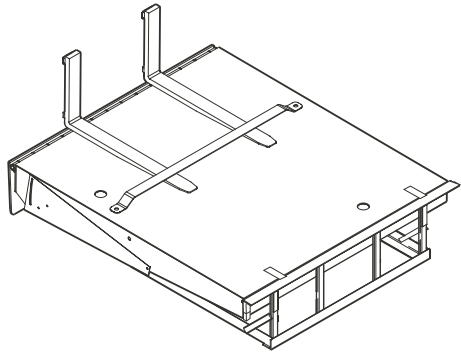
NOTE: *DRAWINGS NOT TO SCALE

6.

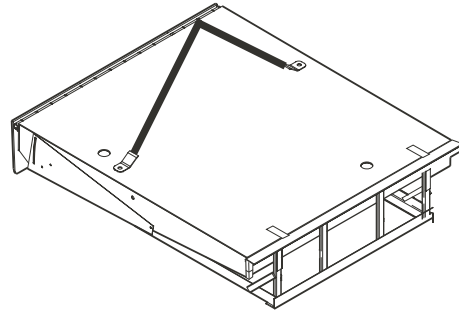
WELD INSTALLATION PICTORIAL

WELD INSTALLATION PICTORIAL

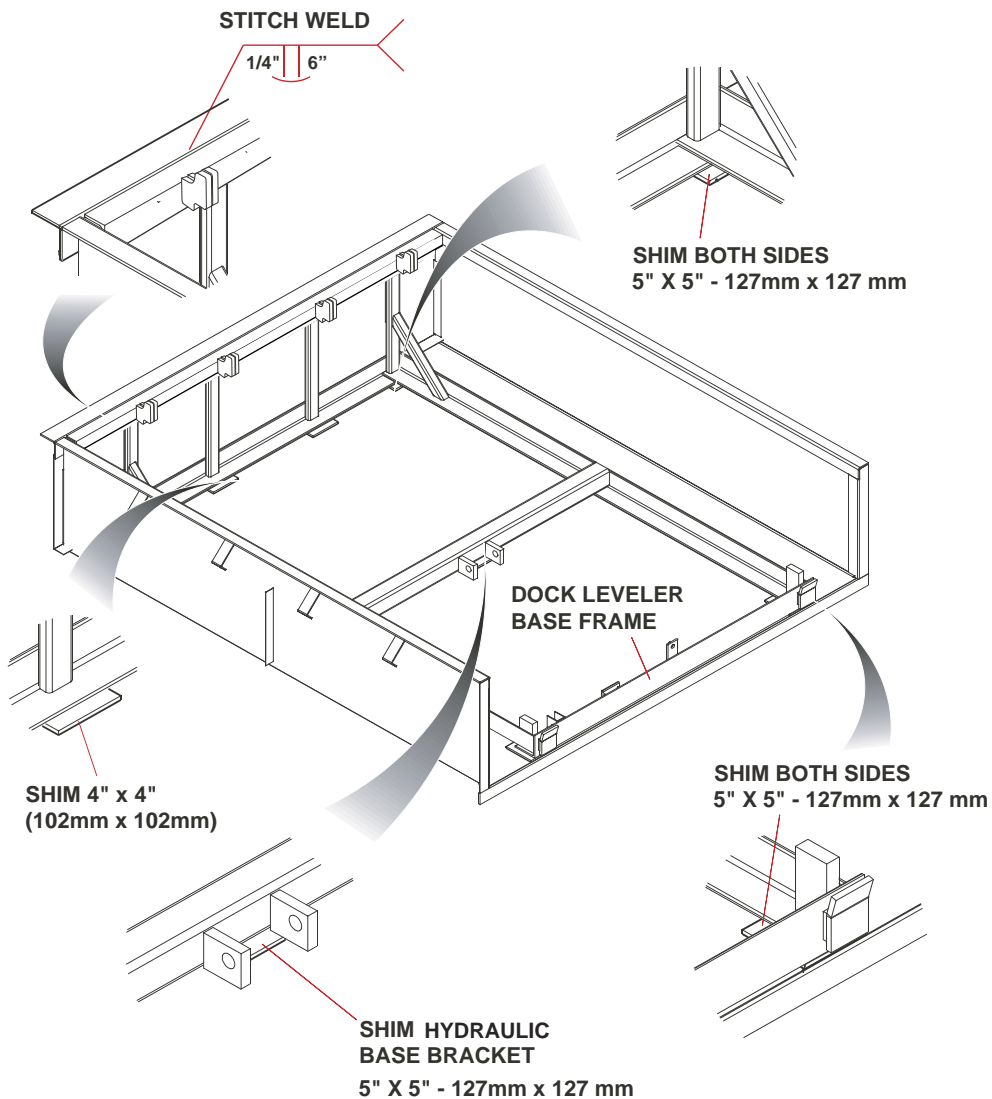
(Shim placement guidance only- dock depicted may not be same model covered in this manual)



FORK LIFT TRUCK HANDLING



SLING HANDLING



7.

DOCK LEVELER INSTALLATION INSTRUCTIONS

WARNING

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

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

Keep hands and feet clear of dock leveler pinch points.

IMPORTANT

The information below is crucial to proper installation:

Pit Curb Angles

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

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

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

WARNING

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

WARNING

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

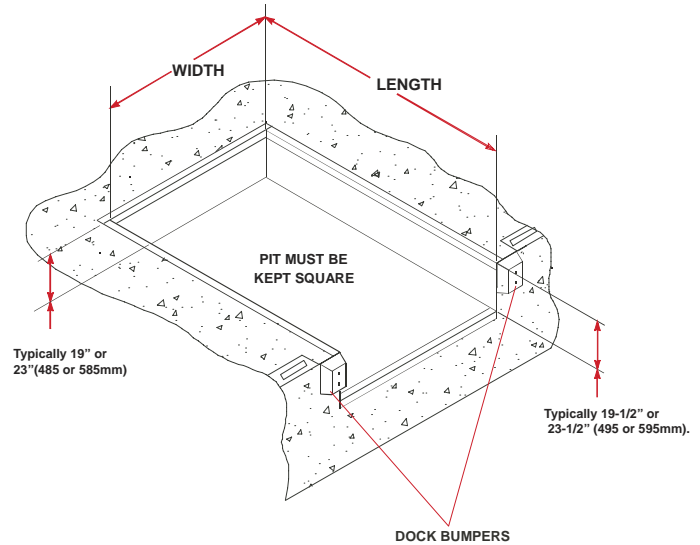


Figure 1 : Pit Layout - Typical (Four piece curb angle shown)

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

IMPORTANT

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

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

7.

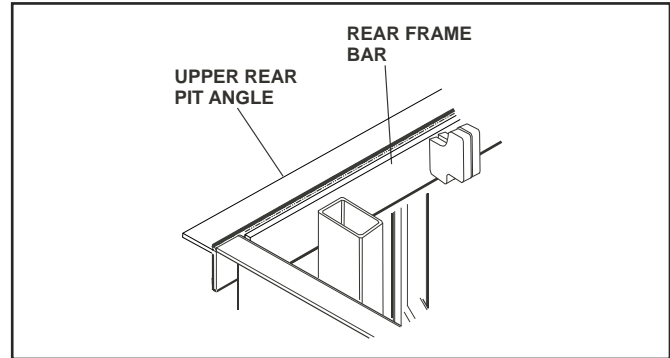
DOCK LEVELER INSTALLATION INSTRUCTIONS

**WARNING**

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

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

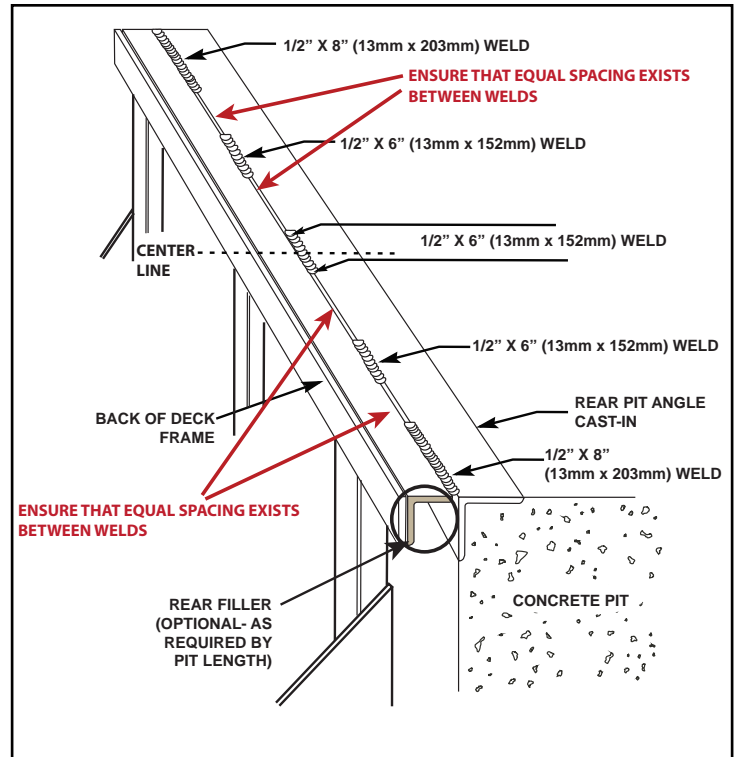
9. Mount Blue Genius Control Station assembly in a suitable location.
10. Using a boom crane or forklift, mechanically raise the deck high enough to engage the maintenance strut. For additional security during installation, set up a dock safety stand once the deck has been raised high enough to accommodate one.
11. Remove the pin from telescopic maintenance strut, and extend the maintenance strut to the desired height. Then reinsert pin to engage the strut to the head board.
12. Rear frame on most models has one or more vertical frame members in addition to rear corner vertical members. Place adequate shims directly under each vertical member to fill space between bottom frame and floor of pit. Finish weld all rear shims. **Reminder:** the rear frame MUST be flush with the floor.
13. Measure thickness of shims that were installed under middle of front frame and place same thickness of 6" x 6" (150mm x 150mm) shims under base of deck cylinder. Finish weld to cylinder mounting plate.
14. Finish weld all shims securely to the front curb angle and front frame, under the lip keeper supports.
15. Weld the rear frame to the pit's rear curb angle. (See Figure 2).
16. Install specified dock bumpers as required. Do not use the dock leveler without bumpers, as damage to both building and leveler may result.
17. Release bottom safety skirts by removing and discarding shipping bolts, one bolt from each side.
18. Make permanent electrical connections as required.
19. Mount the operations placard on the wall in plain view of dock leveler operations.



7.1

Installation Inspection

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



8.

SVR303A INSTALLATION ANCHORING INSTRUCTIONS

WARNING

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

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

Follow proper lock-out/tag-out procedures.

Use caution when unbanding the restraint. Keep hands clear of pinch points and wear appropriate safety attire: glasses, gloves and work boots.

Keep hands and feet clear of vehicle restraint pinch points.

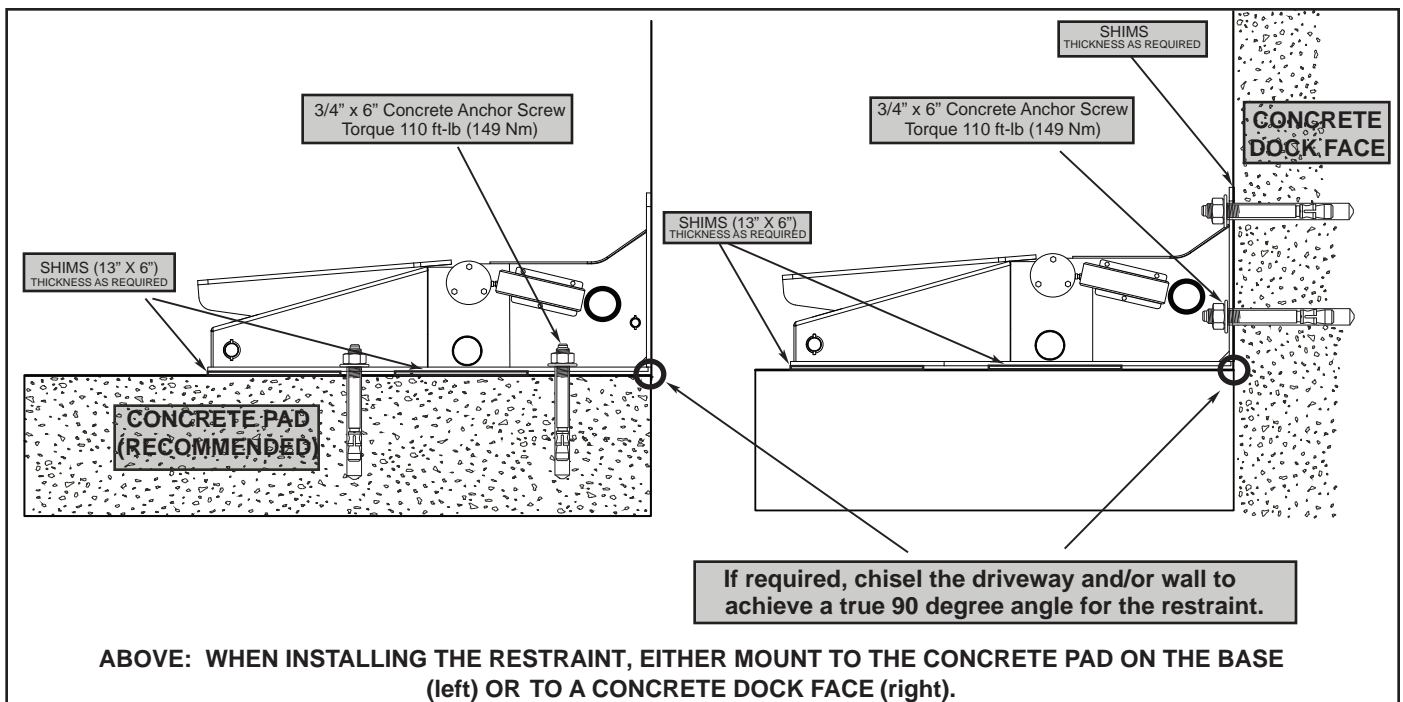
1. Clean up the general area where the vehicle restraint is to be installed: clear away all debris and dirt from the driveway and dock face, and do a visual inspection afterward.
2. To maximize its performance, install the vehicle restraint on a dock face and driveway made of poured concrete. If installation is to take place on a cement block base or poor concrete dock face, consult the manufacturer for custom lag plates and/or lag anchors. For asphalt driveways that are cracked or have pieces missing, an 8" deep concrete pad should be poured to cover the damage.
3. Using appropriate hoisting equipment, position the vehicle restraint square against the dock face. Center it under the door frame. NOTE: it may be necessary to chisel out a portion of the wall and/or driveway to provide a 90 degree fit for the restraint.
4. To maintain the restraint base-plate at a 90 degree angle to the dock face and provide positive support, a sufficient thickness of shims (not supplied) must be placed under the mid-support pillars and between the driveway and the underside of the base-plate's outer edge. Shims should be a

IMPORTANT

If an extension plate / box is required, securely mount it onto the SVR303A with hardware provided before shimming and drilling.

minimum 13"x6" and be welded permanently to each other and the base-plate.

5. With the SVR303A properly positioned, and using back-plates as a template, drill four holes 3/4" dia. X 6" deep, in the dock face concrete. Clean out holes and permanently install anchors and lag bolts (supplied) with a torque of 110 ft-lbs (149 Nm).
6. Run required pneumatic lines and communication cables via conduit from the restraint to the air on demand system mounted in the pit.



9.

ELECTRICAL INSTALLATION

! WARNING

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

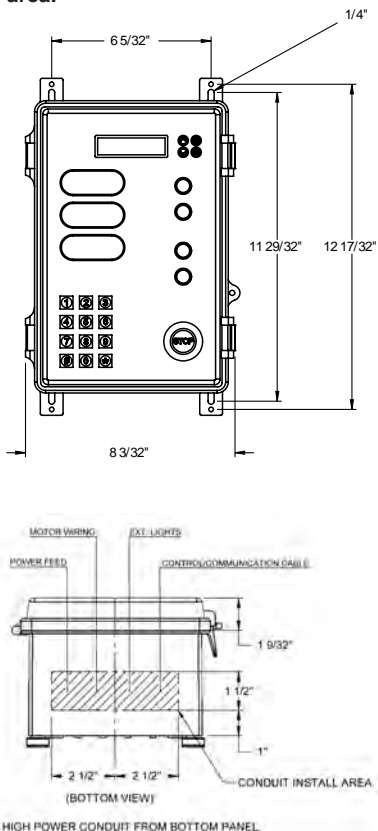
During installation, place adequate barriers to prevent vehicle traffic from entering the work area, and follow proper lockout / tagout procedures.

! WARNING

Do not loop the communication cable excessively, or interference may result and create intermittent communication problems. Trim cable to appropriate length during install.

1. If conduits were not poured in with the concrete, install 3" i.d. conduit for the communication wires and air hoses. Run them from the SVR303A along the dock face, up and through the wall, and up to the control station.
2. Run the communication cable from the remote I/O to the control station.
3. Run motor wiring from the air-on-demand system to the control station.
4. Run the conduit from the control station to the traffic lights.
5. Complete the electrical hookup between:
 - 1) the restraint and the air-on-demand system and remote I/O
 - 2) the control station and the air-on-demand system and remote I/O
 - 3) the control station and the traffic lights

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

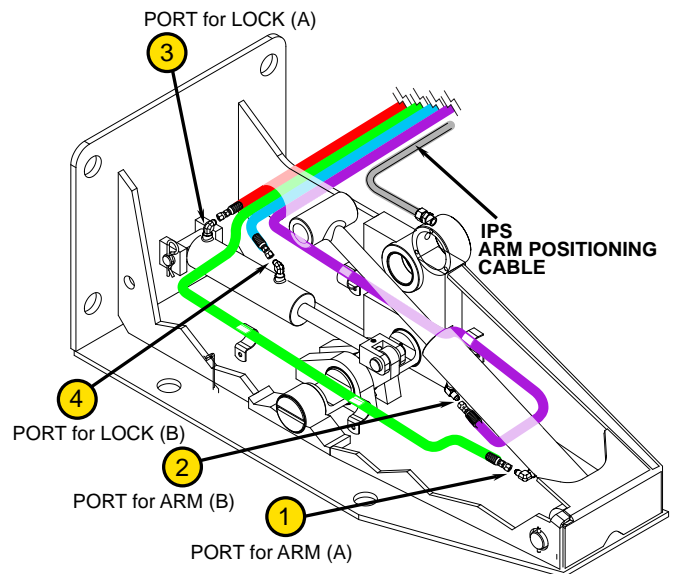


9.1

Final Inspection

1. Verify that all fasteners have been tightened and secure.
2. Check all air line connections for leaks and tighten as required.
3. Check that all electrical and pneumatic connections and wires are mechanically protected against damage and are adequately secured.
4. Return all wiring diagrams to the control box.
5. Mount warning placard adjacent to control station.
6. Leave this manual near the dock equipment for easy access.
7. Clean up the entire work area and apply touch-up paint to all welds, scratches and burns.

Figure 2: Hose Identification

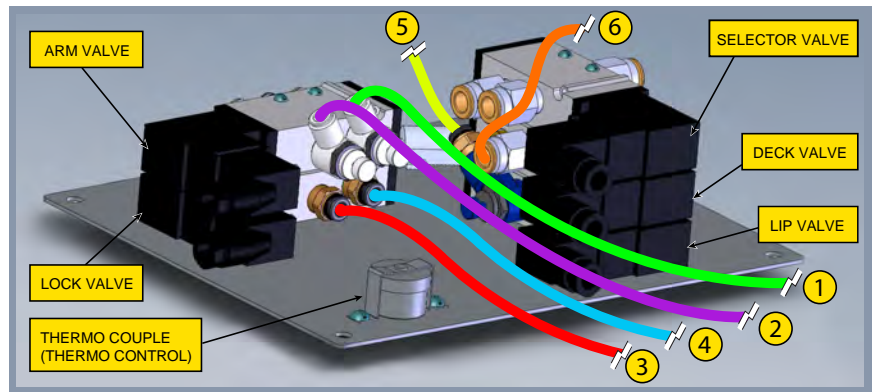
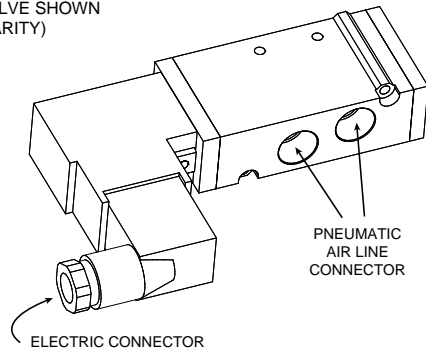
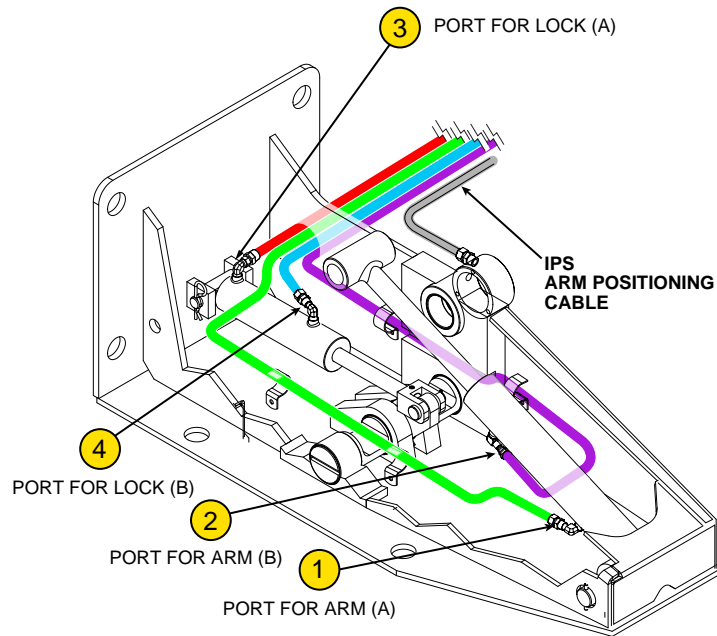
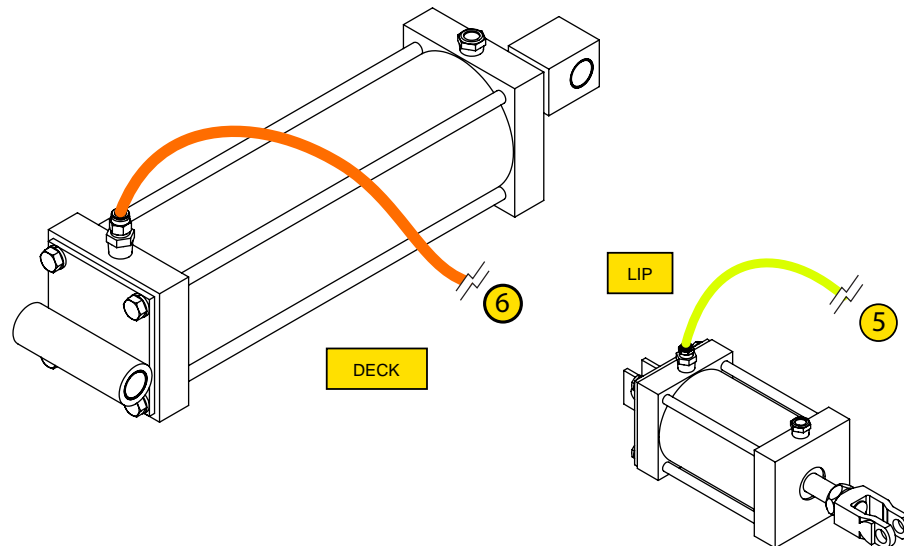


9.2

PNEUMATIC INSTALLATION LAYOUT

PNEUMATIC VALVE BOX CONNECTIONS

SOLENOID VALVE
(ONE VALVE SHOWN
FOR CLARITY)

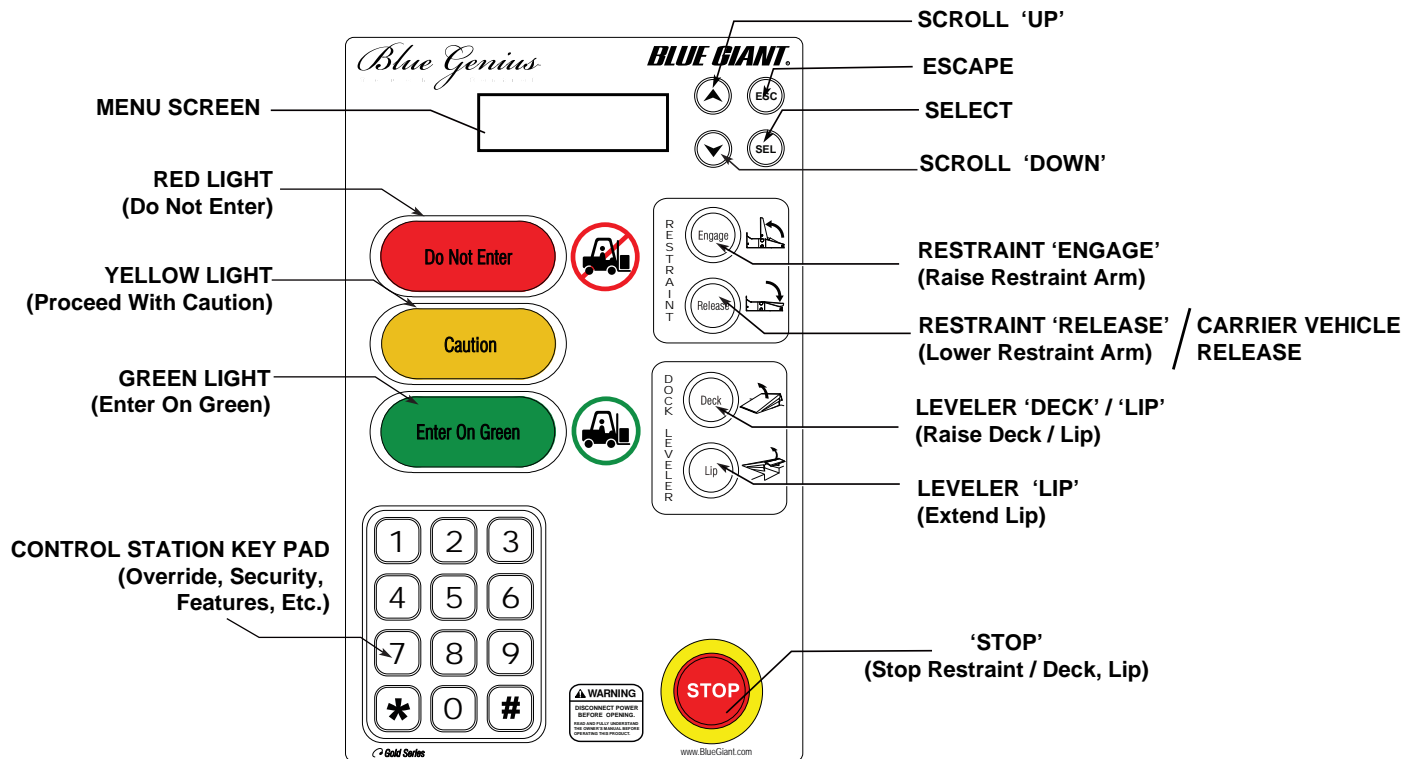
RESTRAINT
CONNECTIONSAIR CYLINDER
CONNECTIONS

10.

CONTROL STATION OPERATION

COMBINATION TYPE CONTROL STATION - Controls Vehicle Restraint in combination with a Hydraulic or Air Cylinder Dock Leveler

When a combination of a Vehicle Restraint and Hydraulic or Air Cylinder Dock Leveler are installed together, a combo control station is provided which includes touch buttons for both units.

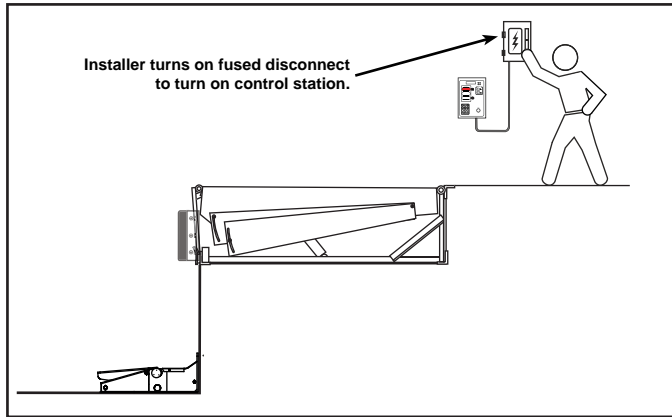


11.

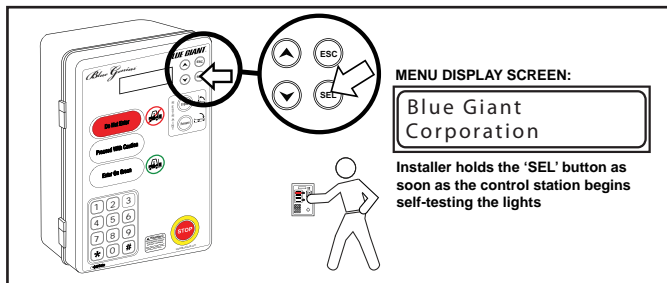
MANUAL START-UP PROCEDURE

The Manual Start-Up Procedure must always be performed after the installation of a new unit or replacement of any component. The restraint's system has to be checked for any leaks that could cause air to escape. Failure to do so could result in the restraint arm failing to function properly.

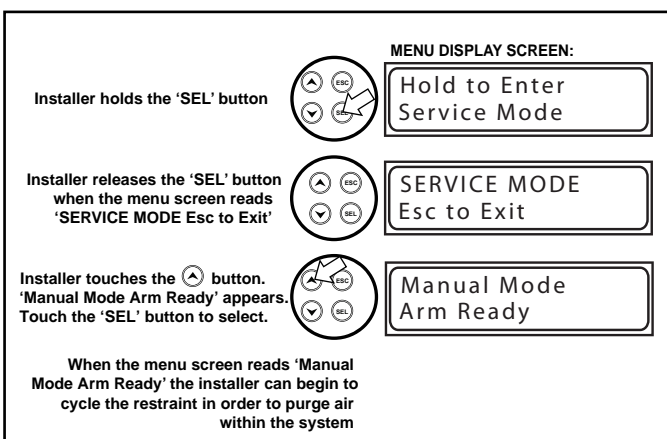
NOTE: This manual start-up procedure must be completed before the arm's 'Position Control' feature is performed.



1. When the control station is turned on for the first time, hold the 'SEL' (Select) button. This step must be performed during **the first few seconds** of the power on sequence, while the control station is testing its lights. Otherwise the main fused disconnect will have to be shut off and the above steps repeated.



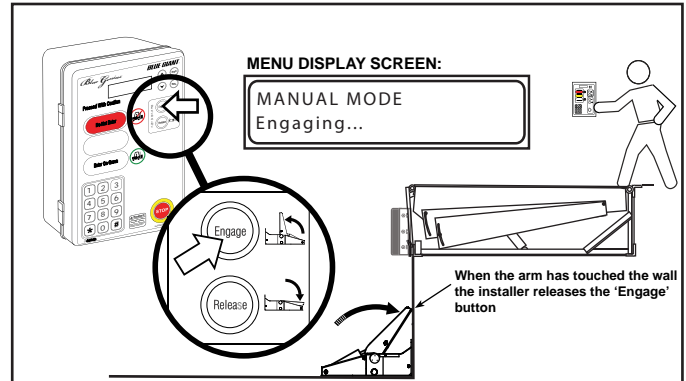
2. After the control station has tested all its lights, the menu screen will read 'Hold to Enter SERVICE MODE'. Continue to hold the SEL button, releasing only when the menu screen reads 'SERVICE MODE Esc to Exit'. Touch the 'Arrow Up' button to enter the Manual Control mode, then touch SEL to select.



11.1

Restraint Arm Test

1. Hold the 'Engage' button to deploy the restraint arm. The menu screen will read 'MANUAL MODE Arm Up.' Release the button when the arm has raised past the 90 degree angle to touch the wall and the power pack has gone into relief pressure. The restraint arm will press against the wall until the 'Release' button is touched.

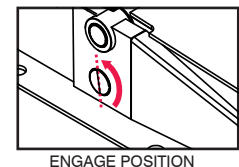
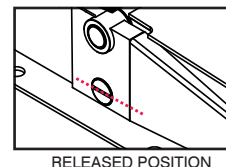


2. Hold the 'Release' button until the arm has returned to the stored position. Repeat step 1 twice, or until the arm is engaging and releasing smoothly.

11.2

Lock Cylinder- Test

1. To test the lock cylinder, leave the arm past the 90 degree angle so that the lock may move freely while in manual mode. To position the arm, touch and hold the 'Engage' button until the arm is in the required position and proceed with the testing procedure.
2. Touch the 'Arrow Up' (Up) button to access the restraint's manual control for the locking cylinder. The menu screen will read 'MANUAL MODE Lock Ready'.
3. The locking cylinder can now be cycled manually for testing purposes. Hold the 'Engage' button to engage the lock and hold it until the power pack has gone into relief pressure (approximately 5 seconds). The menu screen will read 'MANUAL MODE Lock Ready'.



⚠ WARNING

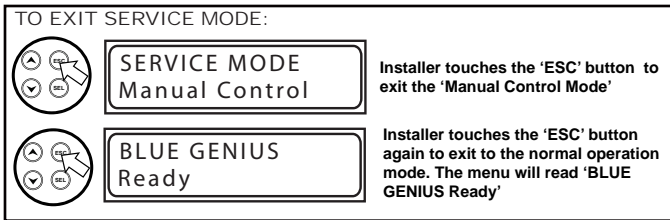
Do not touch the compressor during testing procedures, as components are hot and injury may result.

11. MANUAL START-UP PROCEDURE

11.2 Exiting Service Mode Manual Control

When the restraint arm and lock cylinder have been tested and returned to the stored position, exit Manual Mode by touching the ESC button. The Service Mode menu options will reappear.

Perform the Position Setup for the arm sensor by touching the ⏏ (Arrow Down) key to scroll to the 'SERVICE MODE-Position Setup' option. Touch the SEL button to select this option, and proceed to the next section of this manual.

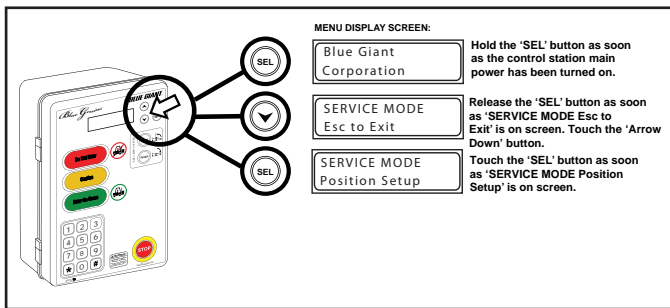


12.

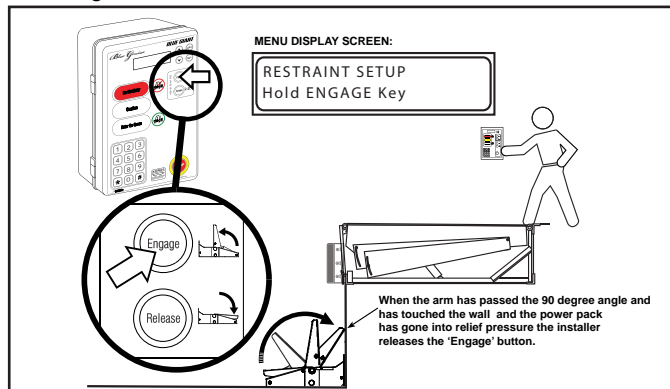
INITIAL START-UP PROCEDURE

The Initial Start-Up Procedure must be performed before cycling the restraint arm. This procedure is always followed after the installation of a new unit or replacement of either the control box or the IPS arm sensor. The restraint's air hoses must be checked for air leaks beforehand. (See Section 10: Manual Start-Up Procedure.) Failure to follow the directed steps will result in the failure of the restraint arm to function properly.

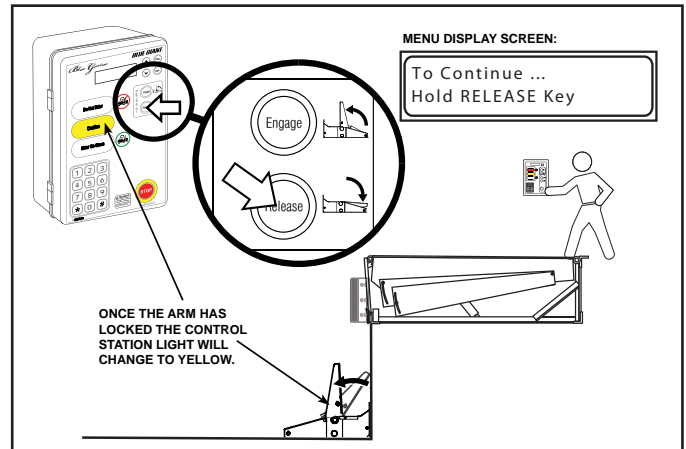
1. When the control station is turned on for the first time, hold the 'SEL' (Select) button. This step must be performed during **the first few seconds** of the power on sequence, while the control station is testing its lights. Otherwise the main fused disconnect will have to be shut off and the above steps repeated.
2. Release the SEL button when the menu screen displays the message 'SERVICE MODE Esc to Exit'. Touch the 'Arrow Down' button to access the Position Setup screen, and touch 'SEL' to select.



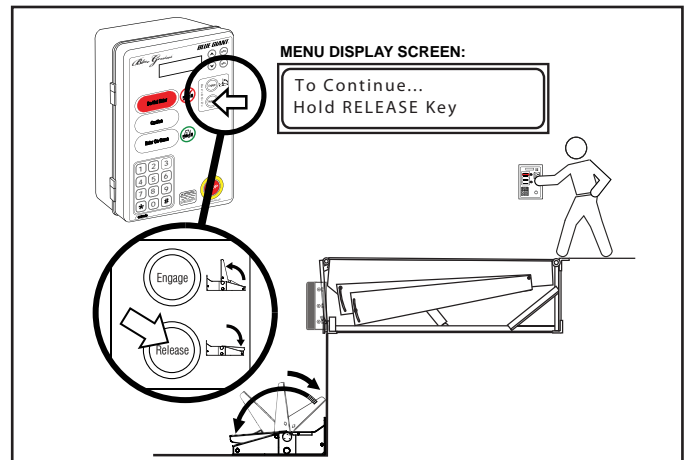
3. The menu screen will read 'RESTRAINT SETUP Hold ENGAGE Key'. Hold the 'Engage' button to deploy the arm until it touches the wall. Release the button once the arm is against the wall. There may be a 5-10 second pause as air is released from the system. Wait for the menu screen to change.



4. The menu screen will read 'To Continue... Hold RELEASE Key'. Hold the 'Release' button until the arm has locked in the 90 degree position. Once the arm locks and the button is released, the YELLOW light on the control station will come on.



5. The message 'To Continue... Arm Down' will appear. Hold the 'Release' button a second time to return the restraint arm to the stored position. Hold the 'Release' button until the arm has completely lowered. First it will extend to the wall, then it will resume the stored position. Release the button once the arm has stored. There may be a 5-10 second pause as air is released from the system.



6. After the restraint arm has resumed the stored position, touch the ESC button. The control system will exit the Service Mode and the menu screen will read 'Blue Genius Ready'. Test and cycle the restraint through the normal engage and release functions to verify that it is working properly.

13.

OPERATING INSTRUCTIONS

⚠ WARNING

Do not operate this dock equipment unless you have been trained and authorized to do so, and have read and understood all of the safety information and instructions contained in this manual.

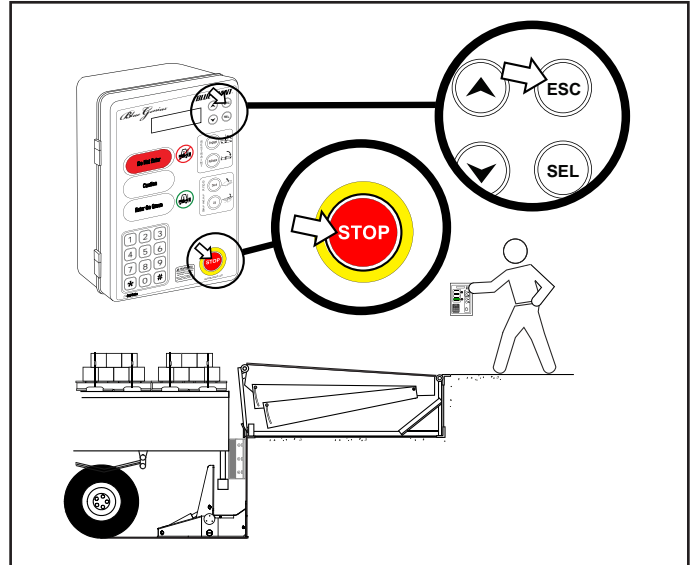
Do not operate this dock equipment until you have checked its condition. Report the need for repairs to your supervisor immediately and do not operate the unit until repairs are made.

Never try to lift or move any part of the dock equipment manually. Keep hands and feet clear of pinch points.

It is the responsibility of the owner / operator to (whenever possible) exhaust the air in air-ride suspension systems prior to performing loading or unloading.

Because ICC bars differ in strength and construction, review the need to use wheel chocks in conjunction with the vehicle restraint.

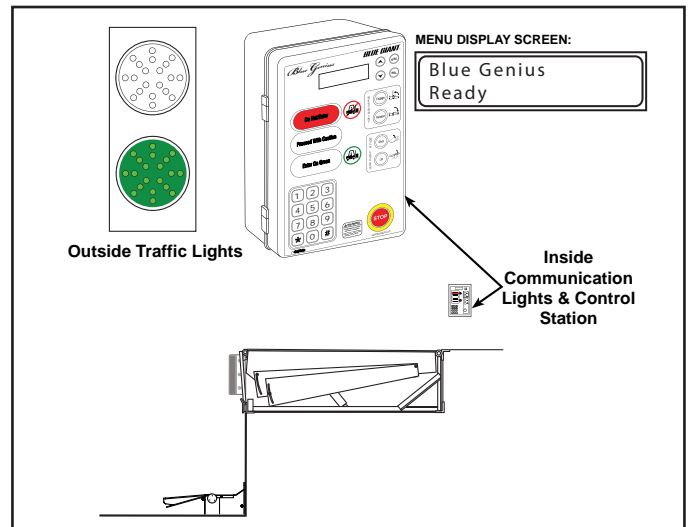
The SVR303A vehicle restraint is designed for rear impact guards and rear impact protection (ICC Bar) that follow the Federal Motor Carrier Safety Administration guidelines (FMCSA section 571.223 and 571.224).



13.3

Deploying the Restraint Arm

1. Control station is powered on and ready for use. The restraint arm is fully lowered. The outside traffic light is GREEN while the control station light is RED.



2. The transport vehicle reverses into position against the dock leveler bumpers. The lights remain GREEN outside and RED inside.

The dock attendant activates the vehicle restraint by touching the 'Engage' button. The outside traffic light immediately turns RED. The restraint arm rises past the 90 degree position, senses the ICC bar, and then returns to the locked position. During the motion of the restraint arm, the control station light is YELLOW.

NOTE: For vehicles without an ICC bar, please refer to the 'Manual Override Procedure'.

13.1

Functional Description

The **StrongArm™ SVR303A** vehicle restraint restrains a freight carrier at the loading dock. It is a nonimpact design that is both engaged and released by the dock attendant. When engaged, it restrains a vehicle by acting as a barrier to the underride guard (ICC bar), restricting any forward movement caused by vehicle creep or unscheduled departure.

The **U-Series Air Cylinder Dock Leveler** serves as a bridge between a loading dock floor and a truck bed. The leveler's upper deck plate, complete with a hinged, vertically hanging lip, is in a shallow pit at the edge of the dock, flush with the dock's edge and the floor surface.

Both restraint and dock leveler are operated via the **Blue Genius™ Gold Series III** touch control station.

13.2

Stop Button Function

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

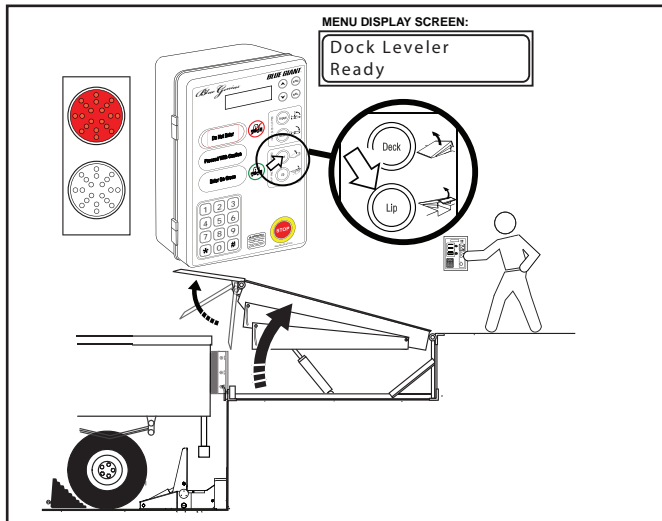
To exit the 'STOP' mode touch 'ESC'.

13.

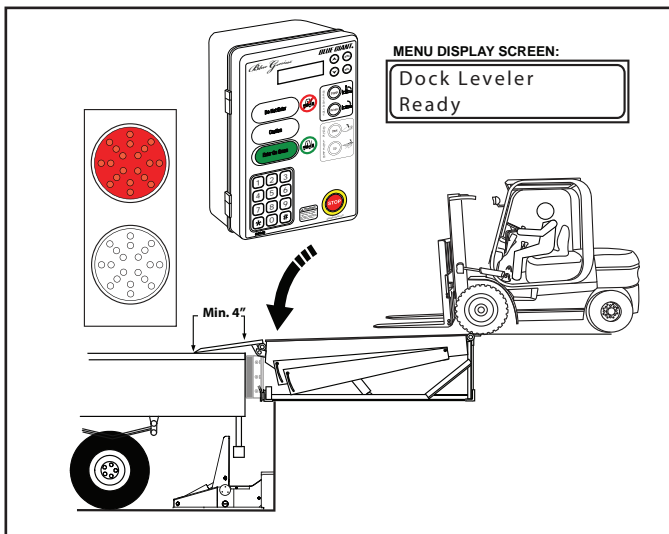
OPERATING INSTRUCTIONS

13.4 Deploying the Deck and Lip

1. Raise the dock leveler by touching and holding the 'Deck' button. The outside traffic light is RED. Release the 'Deck' button once the leveler has reached a height where the lip can be deployed without interference.
2. Deploy the lip by touching and holding the 'Lip' button. The outside traffic light remains RED. **NOTE:** The 'Lip' button should only be touched after the lip has cleared the keepers and has no obstruction in its deployment path.

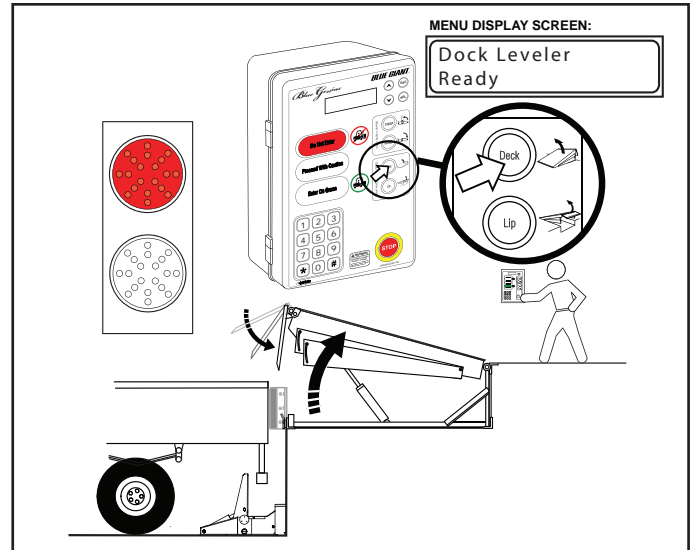


3. Once the lip has deployed, release the 'Lip' button. Both dock leveler and extended lip will descend onto the vehicle load bed. The outside traffic light remains RED and the control station light turns GREEN, advising dock staff that loading / unloading operations may begin. **NOTE:** Ensure that the full width of the lip overlaps the vehicle load bed by a minimum of 4" (100mm) to provide full dock leveler support.



13.5 Storing the Dock Leveler

1. To return the dock leveler to the stored position, touch and hold the 'Deck' button. The outside traffic light remains RED and the control station light immediately turns from GREEN to RED. The dock will raise and the lip will retract.

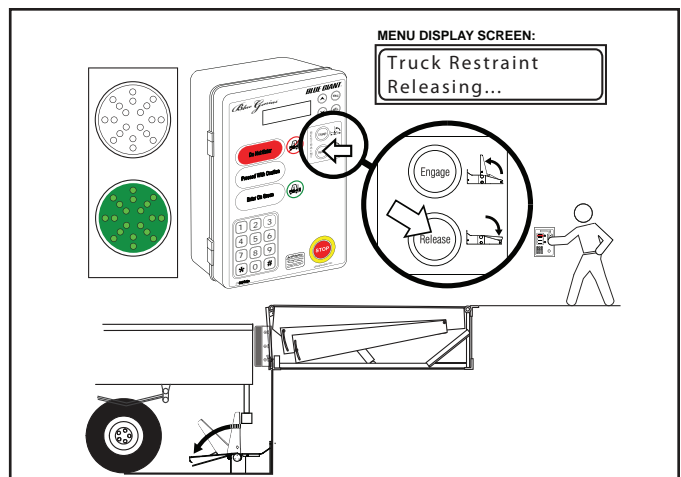


2. When the lip has fully retracted, release the 'Deck' button. The dock will fall back to the stored position with the lip resting in the lip keepers.

13.6 Undeploying the Restraint Arm

To disengage the vehicle restraint, touch and hold the 'Release' button. The control station light will be YELLOW as the arm descends and then change to RED, warning dock staff that the transport vehicle is no longer accessible. When the arm has completely descended to the stored position, the outside traffic light will turn GREEN, indicating to the truck driver that it is safe to depart.

NOTE: If the restraint arm encounters any obstructions that prevent it from lowering, it will 'pound' down five (5) times to dissolve the blockage. The control station light will flash YELLOW, accompanied by an intermittent alarm and the onscreen message TRUCK RESTRAINT ARM IS BLOCKED.



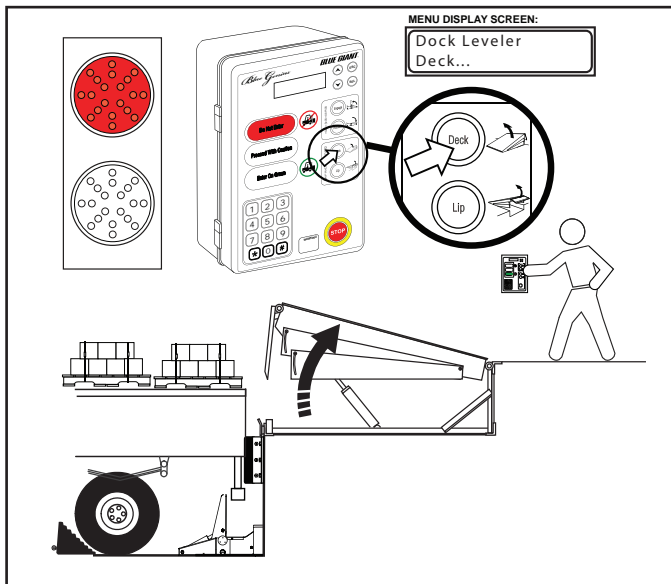
13.

OPERATING INSTRUCTIONS

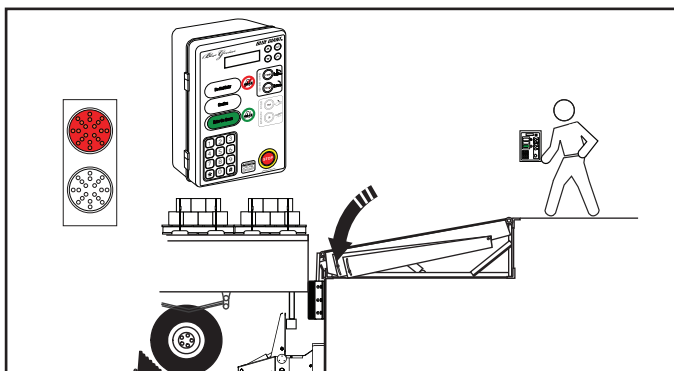
13.7 Below Level / End Loading

This section outlines dock leveler operation in situations where the lip plate cannot make contact with the transport vehicle load bed. (e.g. Loading / unloading the first skid or pallet from the load bed when there is insufficient surface area to extend the dock leveler lip plate.

1. Engage the vehicle restraint (see appropriate section of this manual.) Below level / end loading can take place **ONLY** after the freight carrier has been properly restrained.
2. Hold the 'Deck' button to raise the deck. Both the control station light and the outside traffic light are RED.

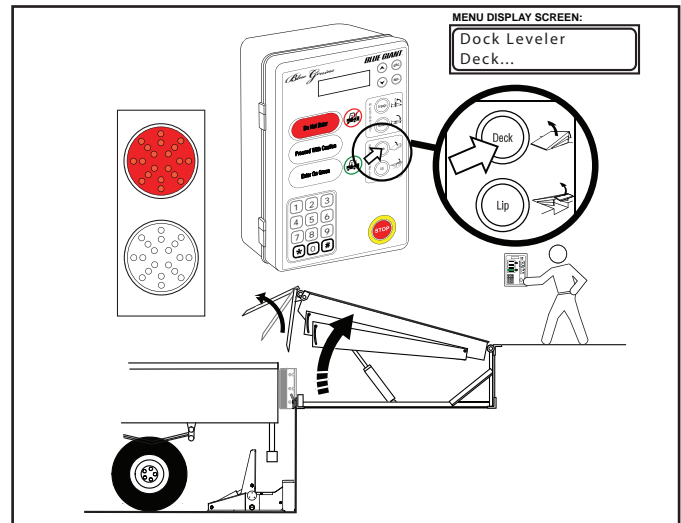


3. When the dock is fully raised, the lip extends. With the lip partially extended (approximately 2" [50mm]) release the button to return the dock to the stored position. Since the lip is out and clear of the lip keepers, the dock will descend past the floor level so that below level / end loading can be accomplished. The outside traffic light is RED and the control station light is GREEN. **NOTE:** Dock personnel must exercise caution when walking on or around the leveler while it is in the below level position, as a gap exists between the leveler edge and the vehicle load bed, and the dock slopes downward, toward the outside.

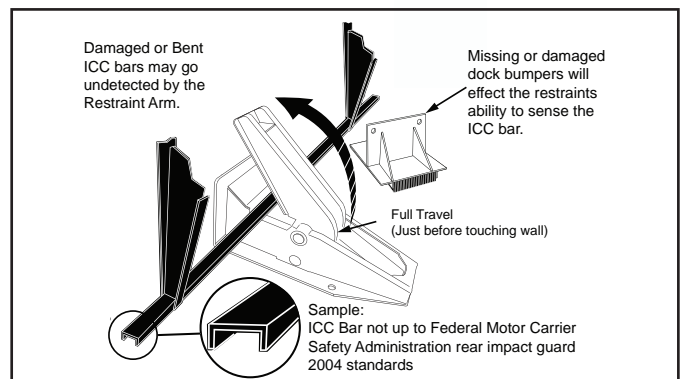


13.7.1 Returning to Normal Lip on Load Bed Operation

1. After below level / end loading or unloading has been completed, touch and hold the 'Deck' button until the dock is high enough to safely deploy onto the vehicle load bed. The control station light and outside traffic light will both be RED until the deck and lip descend onto the load bed. The control station light will turn GREEN once the underside of the dock leveler has made full contact with the load bed.



13.8 Vehicle Restraint Override Feature



OPTION 1

NO ICC BAR PRESENT

1. If the truck has no ICC bar, enter the override code *247 on the control station keypad. Both the outside traffic light and the control station light are RED. The menu screen reads 'TRUCK RESTRAINT Bypassed'. Ensure that the truck wheels are chocked before deploying the dock leveler. Once the dock leveler has been deployed, the control station light turns GREEN while flashing YELLOW, advising caution.
2. After loading / unloading is completed and the dock leveler has been returned to the stored position, remove the wheel chocks, and reset the control station by touching the restraint's 'Release' button. The outside traffic light changes to GREEN, advising the driver that it is safe to depart, while the control station light turns RED, warning dock staff that the vehicle is no longer accessible.

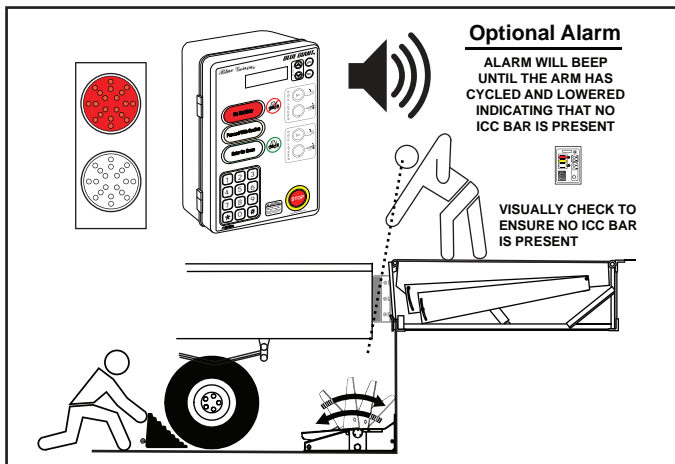
13.

OPERATING INSTRUCTIONS

OPTION 2

ICC BAR CANNOT BE ENGAGED

1. If the truck has an ICC bar, but the restraint fails to engage it, the control station light will be RED. If the optional alarm is installed, a beeping sound will be heard. The outside traffic light and control station light will be RED. The menu screen will first read 'NO ICC BAR FOUND', followed by 'CHOCK WHEEL-Enter Override Code.'
2. Enter the override code *247. The outside traffic light is RED and the control station remains RED. The menu screen will read 'TRUCK RESTRAINT Bypassed'. The dock leveler is now enabled. Once the dock leveler has been deployed, the control station light turns GREEN while flashing YELLOW, advising caution.



14.

MAINTENANCE

⚠ WARNING

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

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

Follow proper lock-out/tag-out procedures.

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

14.1 Planned Maintenance

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

Recommended procedures for a periodic planned maintenance program that covers inspections, operational checks, cleaning, lubrication, and minor adjustments are outlined in this manual. An authorized dealer or distributor is prepared to assist with a planned maintenance program by offering trained service personnel with expertise in dock leveler maintenance requirements.

14.2 Operator Daily Inspection

The dock leveler should always be examined by the operator **PRIOR TO ANY USE** to verify that it is safe to operate.

The manufacturer recommends making multiple photocopies of the Operator's Daily Checklist. The operator should fill out this form to keep a daily record of operation and maintenance issues.

⚠ WARNING

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

14.3 Routine Servicing and Maintenance

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

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

14.4 Planned Maintenance Intervals

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

Call your authorized manufacturer/ dealer for further details.

14.5 Maintenance Sequence

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

MAINTENANCE & SERVICE TIME INTERVALS FOR SPECIFIC DOCK COMPONENTS CHART

	DECK CYLINDER	DECK ASSEMBLY	MAINTENANCE STAND	LIP HINGE ASSEMBLY	LIP CYLINDER	
INSPECT	ALL THE ABOVE EVERY 90 DAYS (for multi-shift operations every 30 days is required)					
CLEAN	ALL THE ABOVE EVERY 90 DAYS Clean Lip As Required (for multi-shift operations every 30 days is required)					
LUBRICATE	Not Required	Every 90 Days Pivot Points (Light Oil)	Not Required	Every 90 Days (Grease)	Not Required	
ADJUST	As Needed	Not Required	Not Required	Not Required	As Needed	

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

14.6

PM CHECK LIST - DOCK LEVELER

Customer		Tel		SWO#	
Location		Cust. Contact			
Date		Inspected By			

Barricade Work Area

CLEAN	Repairs?	OK	CHECK / ADJUST / LUBE	Repairs?	OK
			Check Air Cylinder		
Pit Area			Check Lip Lift Cylinder		
Deck Hinge			Check Clevis Pins & Lubricate		
Lip Hinge			Check Control Station		
CHECK	Repairs?	OK	Check Wiring Harness		
Check Full Operating Cycle			Check Air Compressor		
Check Instruction, Caution, Danger Labels			Check Automatic Return To Dock		
Check Welds On Dock Leveler			Check Dock Bumpers		
Check Maintenance Strut / Lip Latch			Check Weather Seals		
Check Ramp Rear Hinges			Check Dock Seal/Dock Shelter		
Check Dock Leveler Structure, Sub Frame, Shim					
Lubricate Rear Hinges & Pins					
Lubricate Dock Leveler Lip Hinge					
Structural Damage					
Check Lip Crown			Check For Proper Operation		
Dock Bumpers / Extensions					
Overhead Door					
Curb Angle			Place Updated Service Sticker On Equipment		
Check Air Hoses and Fittings					
Safety Skirts			Clean Up Of Dock Leveler Area		

COMMENTS

REPAIRS RECOMMENDED

⚠ WARNING

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

OPERATOR'S DAILY CHECK LIST

INSTRUCTIONS FOR USE: Indicate "OK for Use" with a check mark (✓) in the appropriate box of each inspection point.

- ☐ Visually inspect the Vehicle Restraint and take note of obvious damage that may have been caused by operation during the last shift.
- ☐ Check that the Operating Hazards Placard is present in correct location and is legible.
- ☐ Inspect for damaged or missing parts, rust, corrosion, bent parts, cracks, etc.
- ☐ Inspect operating controls to assure they are not missing, damaged or broken.
- ☐ Clean away all foreign material such as parts of broken skids, etc. from area in which the Vehicle Restraint is located.
- ☐ Check for missing or damaged dock bumpers mounted on dock face.
- ☐ Visually inspect the Vehicle Restraint for signs of structural damage or mechanical malfunction as you operate the Vehicle Restraint throughout the day. Be alert to abnormal sounds or operation.

Explain faults briefly in the space provided below.

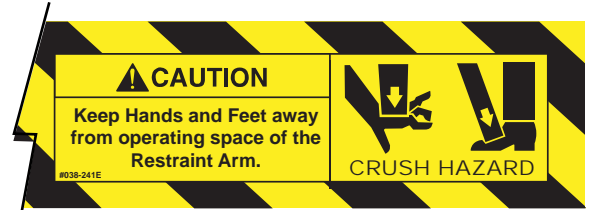
INSPECTED BY: _____ **DATE:** _____

Forward checklist to the person responsible for Vehicle Restraint maintenance.

15. SVR303A DECAL IDENTIFICATION AND LOCATION



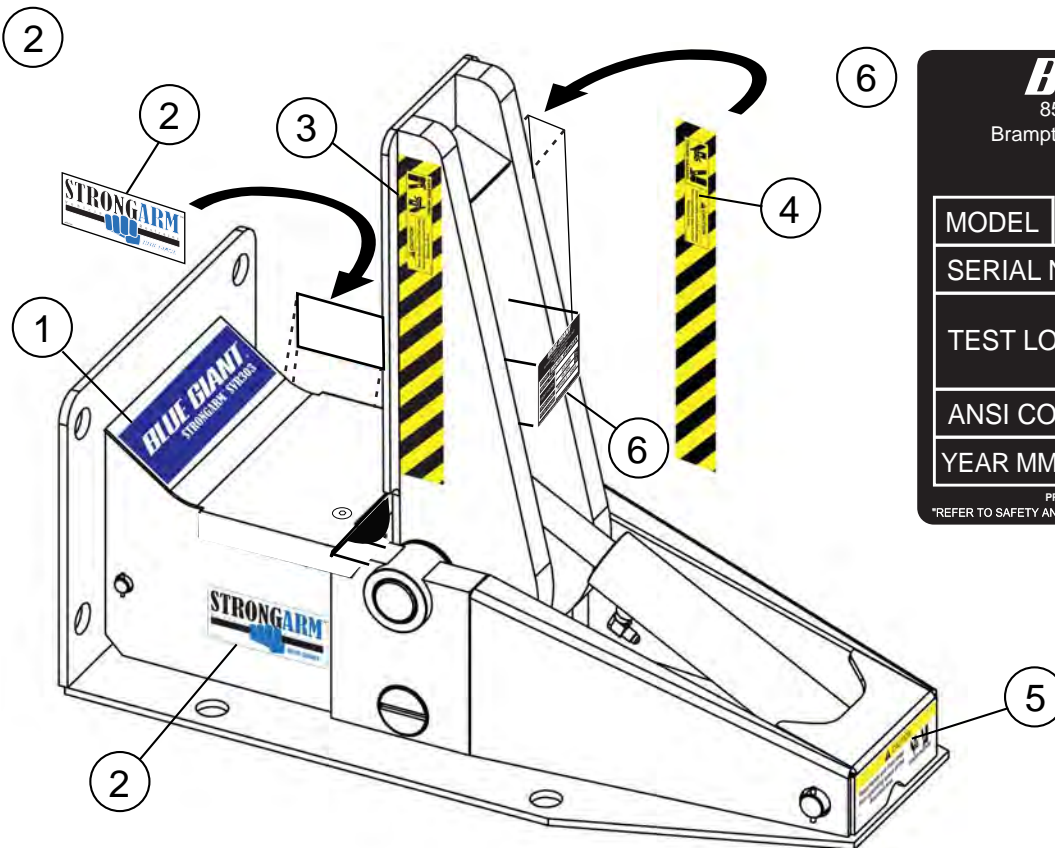
3
LEFT SIDE



4
RIGHT SIDE



5



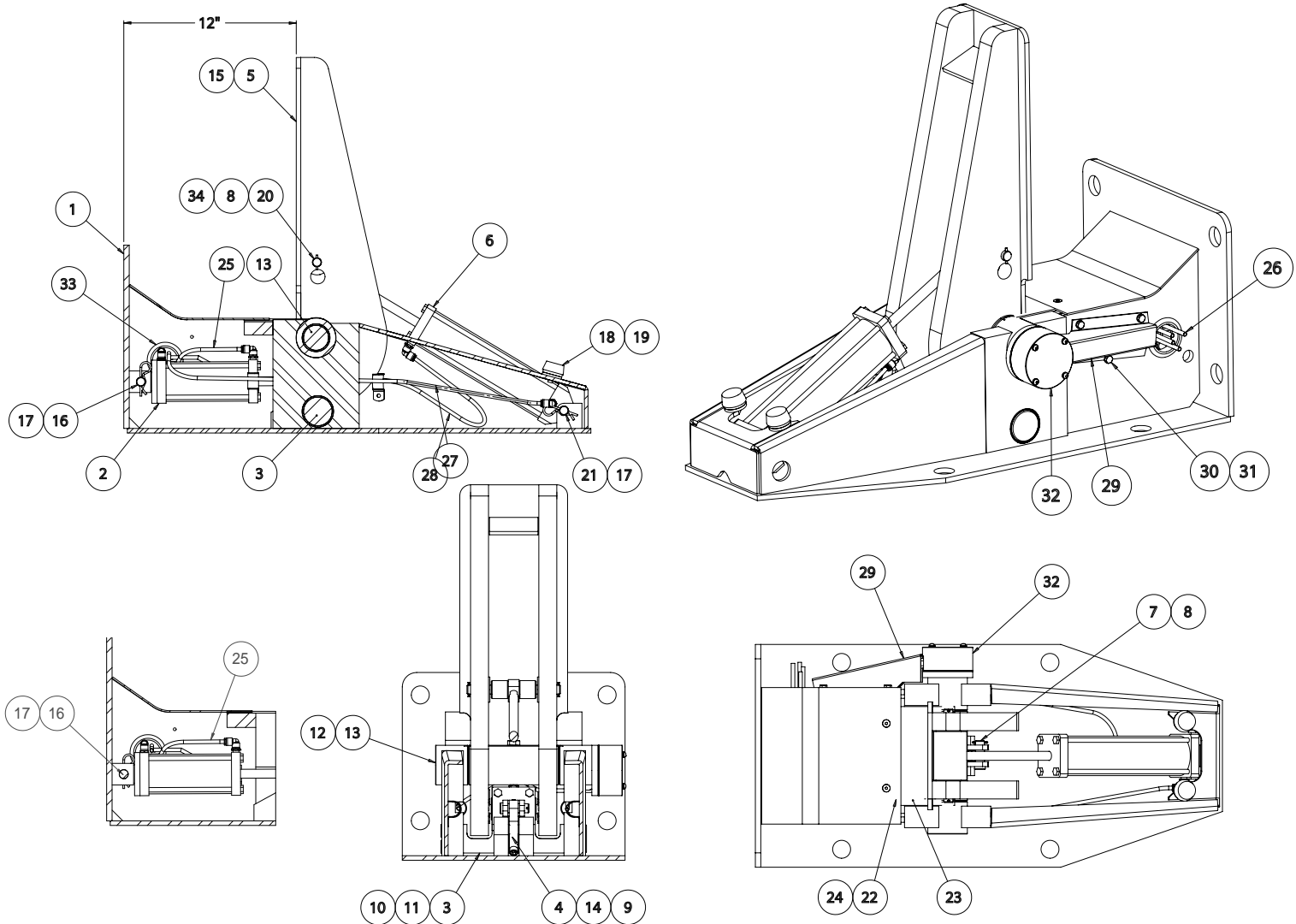
6



ITEM	QTY	PART NO.	GENERAL DESCRIPTION
1	1	038-239	STRONGARM SVR303 LOGO DECAL
2	2	038-240	STRONGARM VEHICLE RESTRAINT LOGO DECAL
3	1	038-241E	STRONGARM LEFT CAUTION DECAL
4	1	038-242E	STRONGARM RIGHT CAUTION DECAL
5	1	038-243E	STRONGARM FRONT CAUTION DECAL
6	1	038-788E	STRONG ARM SVR303A SERIAL DECAL

16.

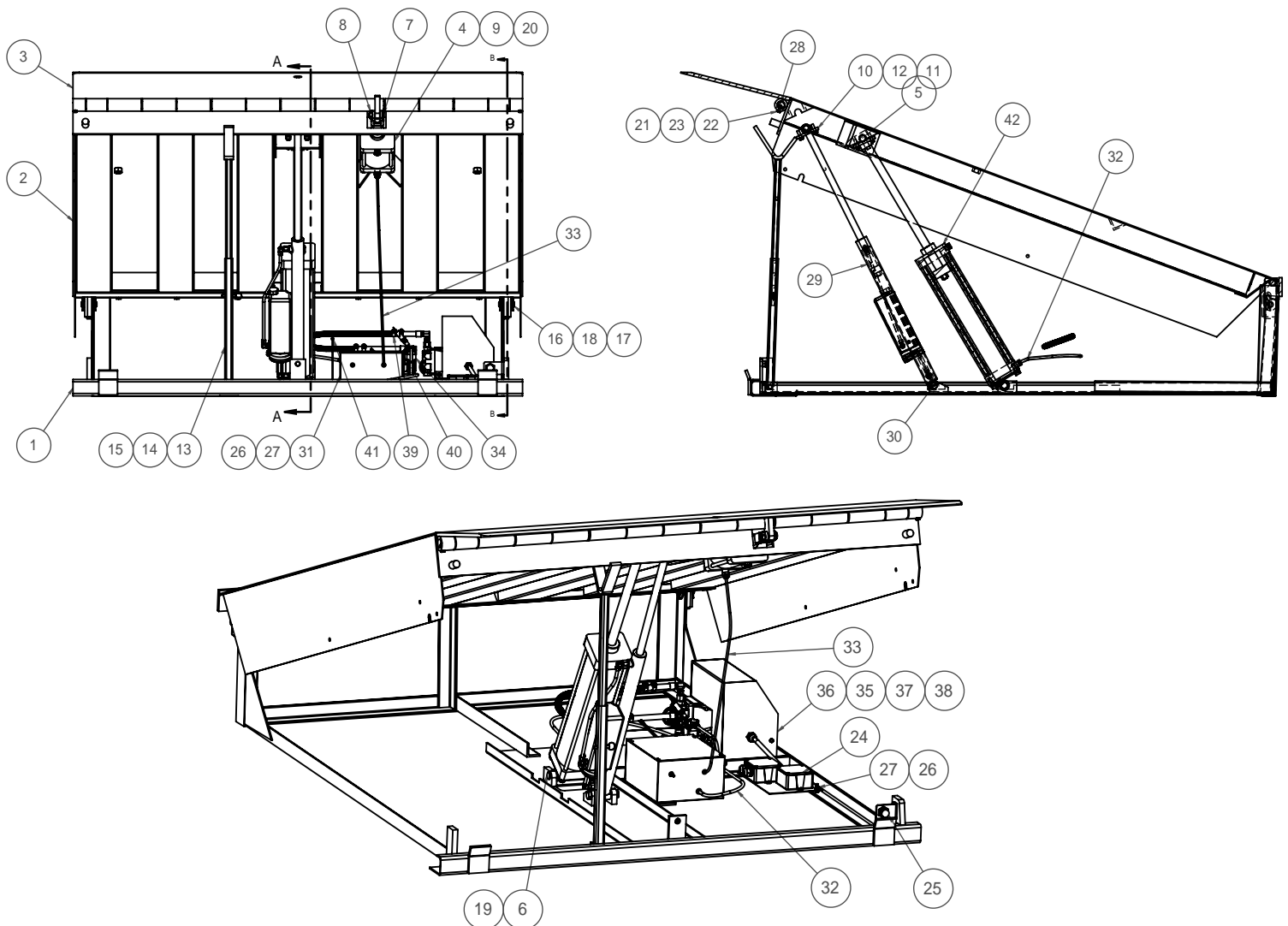
SVR303A GENERAL ASSEMBLY



Item No.	Qty.	Part No.	Description	Item No.	Qty.	Part No.	Description
1	1	54-006290	CHASSIS WELDMENT	18	2	165-9197	RUBBER BUMPER
2	1	54-003988-1	LOCK CYLINDER	19	4	107-038	WASHER
3	1	54-000534	LOCK PIN	20	1	54-006286	ROD END PIN
4	1	54-00043	LUG	21	1	54-006287	CLEVIS PIN (ARM CYLINDER)
5	1	54-000520	ARM WELDMENT	22	1	54-000535	COVER
6	1	54-005825-2	ARM CYLINDER	23	1	54-001608	RUBBER SEAL
7	1	54-00022	ROD END PIN	24	2	011-037	FHSCS
8	3	013-020	1/8 DIA. X 1" SPRING PIN	25	1	54-006288	TUBE#1
9	1	018-638	DU BEARING	26	1	54-006289	TUBE#2
10	2	018-634	DU BEARING	27	1	54-006433	TUBE#3
11	2	018-635	DU BEARING	28	1	54-006435	TUBE#4
12	4	018-636	DU BEARING	29	1	54-001600	CABLE COVER
13	1	54-006851	PIVOT PIN	30	3	010-072	CAP SCREW 1/4 X 20 X 1/2 HH
14	1	011-184	SHCS 3/8 X 24 UNF X 2	31	3	012-202	REGULAR SPRING LOCK WASHERS
15	1	010-211	HHCS	32	1	54-008363	HUB ASSEMBLY
16	1	54-000513	CLEVIS PIN	33	1	037-090	RUBBER GROMMET
17	4	013-028	HAIRPIN COTTER	34	2	012-213	FLAT WASHERS (u.s.)

12.

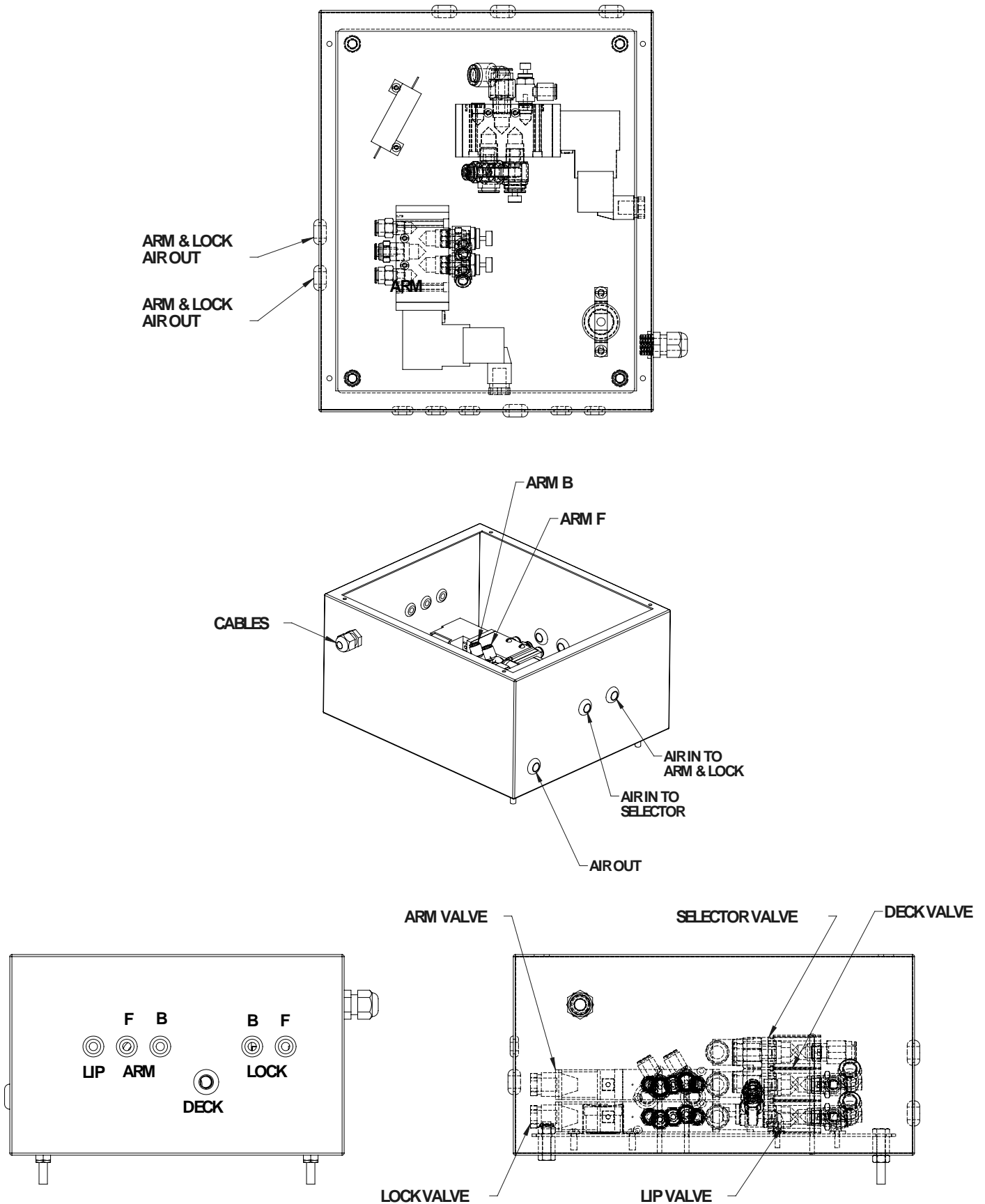
GENERAL DOCK ASSEMBLY COMPONENTS



Item No.	Qty.	Part No.	Description	Item No.	Qty.	Part No.	Description
1	1	26-005841	FRAME WELD 72"	22	2	010-006	CAP SCREW 5/16-18 X 1 HH GR 5 ZC
2	1	26-005761	DECK WELD	23	2	012-200	REGULAR SPRING LOCK WASHERS
3	1	26-003950-1	LIP WELD 72" WIDE	24	1	26-006805	I/O PANEL ASSEMBLY
4	1	26-007672	LIP CYLINDER	25	1	028-199	SENSOR XS2 30BLPAL2-TELEMEC
5	1	26-003569	PIN	26	4	012-210	WASHER ¼ FLAT
6	1	26-004729	CLEVIS PIN	27	4	011-545	NYLON INSERT LOCKNUTS ¼"-20
7	1	112-740	CLEVIS PIN	28	1	109-699	SHAFT
8	1	011-530	¾" HEX JAM NUTS	29	1	26-009097	FALL-SAFE ASSEMBLY
9	1	107-196	CLEVIS PIN	30	2	013-127	3/16 DIA. SPRING PIN X 1.50
10	4	113-096	PIVOT BLOCK TOP PLATE	31	1	26-007670	ENCLOSURE ASSEMBLY
11	8	010-077	CAP SCREW 3/8-16 X 1-1/4 HH	32	1	26-008967	TUBE (DECK CYLINDER) 78" LONG
12	8	012-201	LOCK WASHERS 3/8' HELICAL	33	1	26-008968	TUBE (LIP CYLINDER) 48" LONG
13	1	200-5001	SAFETY STRUT ASSEMBLY	34	1	26-009636-1	FILTER ASSEMBLY
14	1	010-027	HHCS ½-13 UNC X 2 1/2	35	4	26-005773	VIBRATION DAMPING MOUNT
15	1	011-554	NYLON INSERT LOCKNUTS ½-13 (US)	36	1	26-009173	COMPRESSOR ASSEMBLY
16	2	26-005610	PIN (FIXED REAR HINGE)	37	4	012-202	REGULAR SPRING LOCK WASHERS
17	4	012-214	FLAT WASHERS (U.S.) ¾"	38	4	011-506	NUTS HEX ¼-20 PLTD
18	4	013-029	HAIRPIN COTTER	39	1	26-009638	COOLER ASSEMBLY
19	1	013-622	5/16 DIA. SPRING PIN 1.0 LG	40	1	26-009104	TUBE (AIR IN) 67" LONG
20	1	013-090	¼ DIA. SPRING PIN 1.5 LG	41	1	26-009160	EDGE GUARD
21	2	011-502	HEX NUTS (U.S.)	42	1	26-008673	CYLINDER ASSEMBLY (125MM BORE)

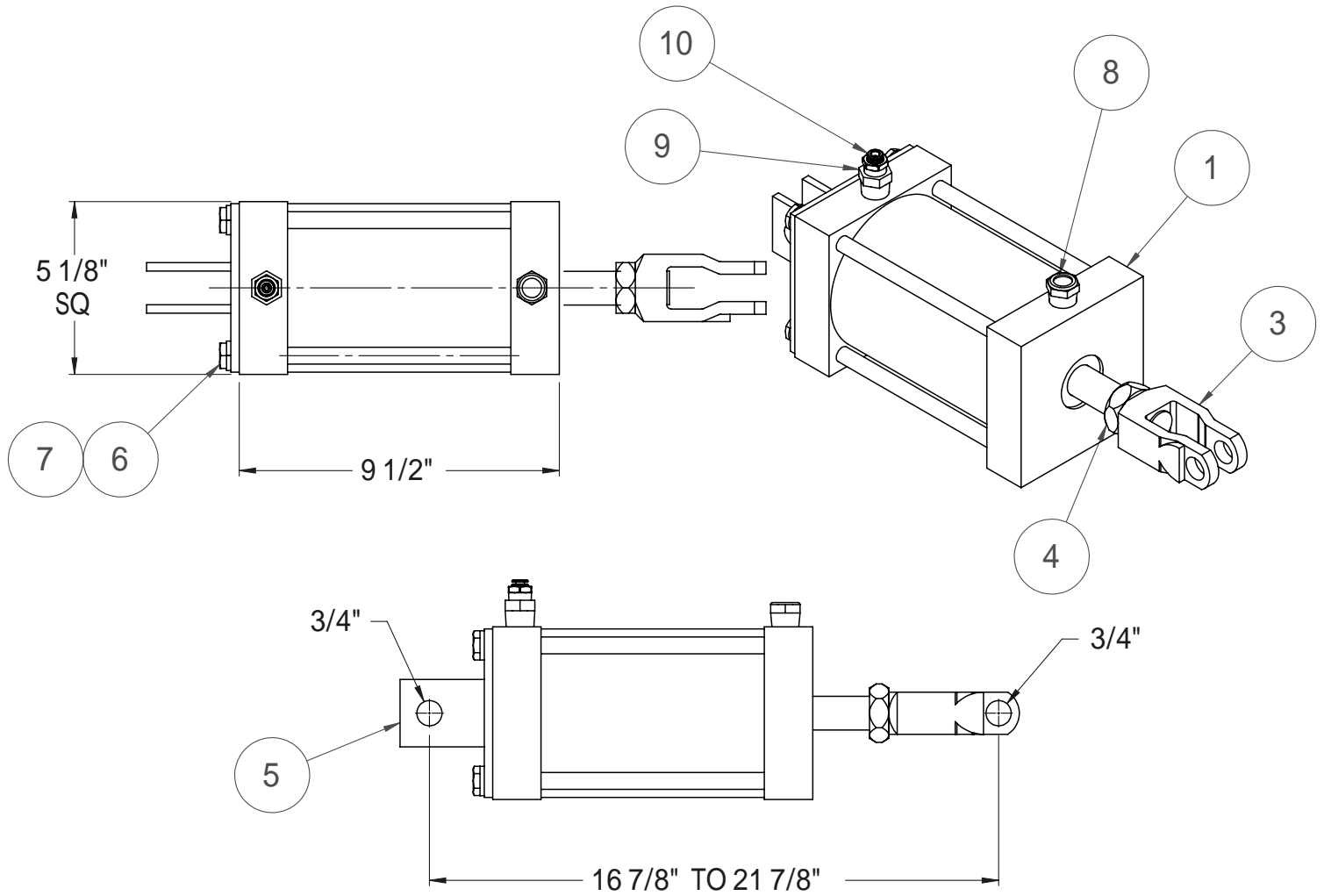
18.

AIR CONTROL BOX ASSEMBLY



19.

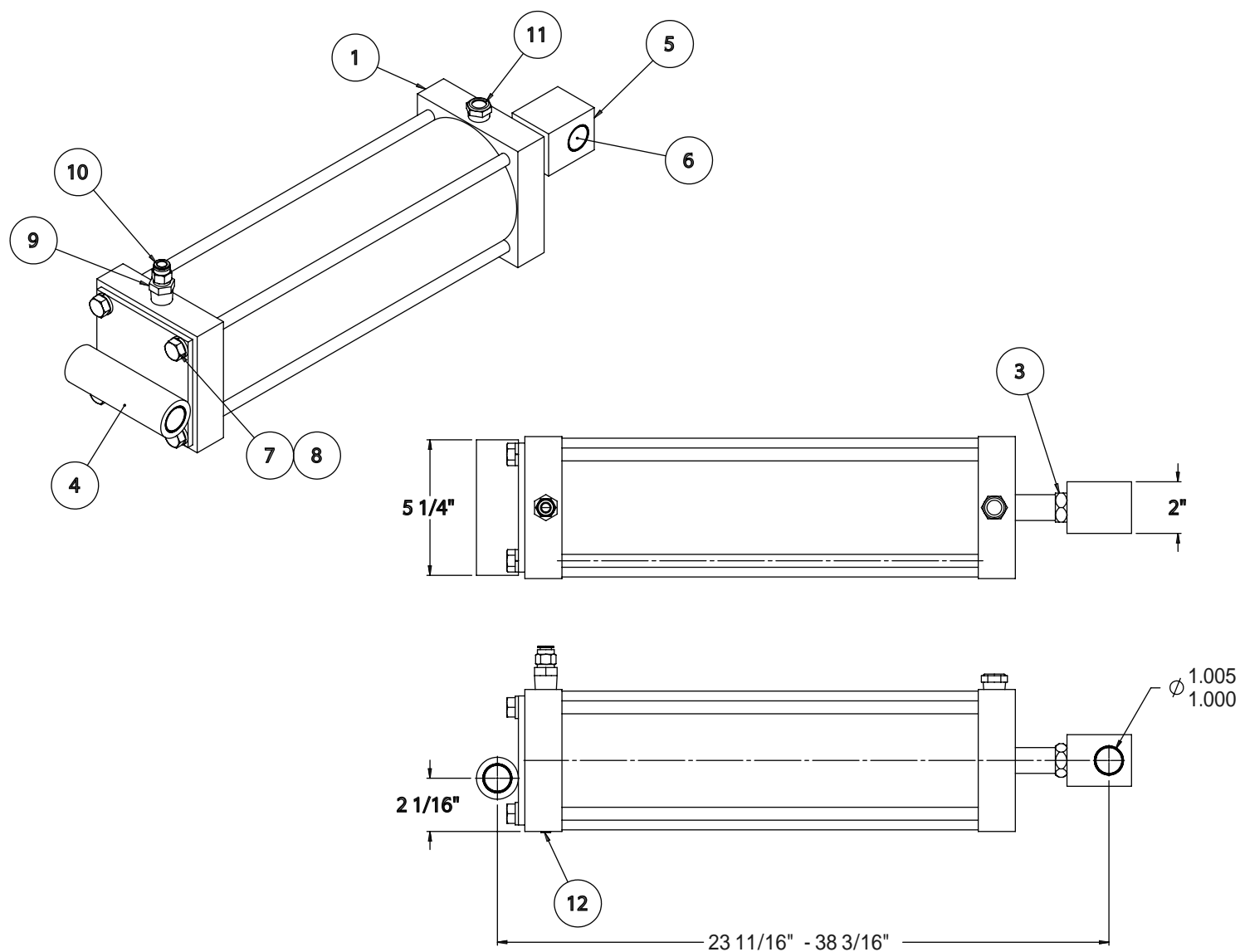
LIP CYLINDER ASSEMBLY

**NOTES:***** 4 1/2" DIA. BORE***** 1" DIA ROD***** 1NC-8 THREAD ON ROD**

Item No.	Qty.	Part No.	Description
1	1	26-003897	CYLINDER SHELL
2	1	26-003898	CYLINDER ROD
3	1	114-663	CLEVIS
4	1	011-511	HEX JAM NUTS
5	1	26-003945	CLEVIS WELDMENT
6	4	010-033	HHCS
7	4	012-220	Regular Spring Lock Washers (U.S.)
8	1	26-005734	MUFFLER 1/2" NPT
9	1	034-509	REDUCER
10	1	26-007667	MALE CONNECTOR

20.

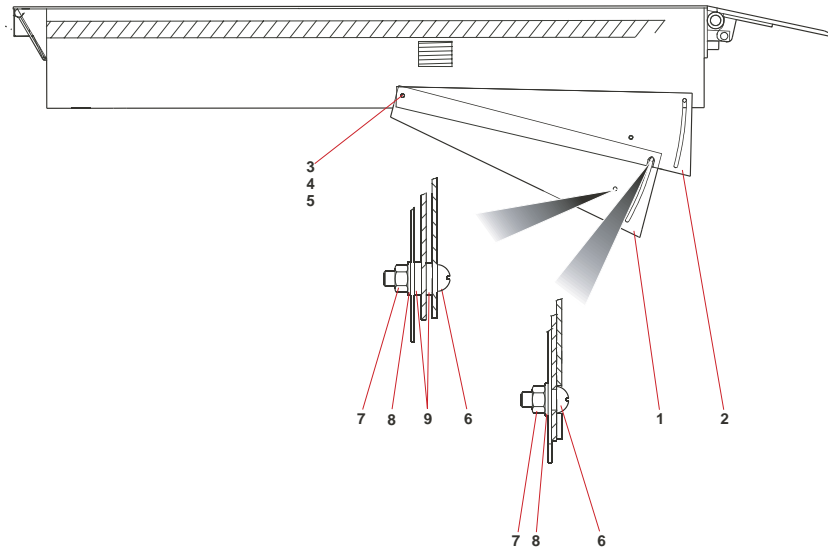
DECK CYLINDER ASSEMBLY



Item No.	Qty.	Part No.	Description
1	1	26-008646	CYLINDER SHELL
2	1	26-008647	CYLINDER ROD
3	1	011-583	HEX JAM NUTS
4	1	26-005847	REAR CLEVIS WELDMENT
5	1	26-003956	ROD END CLEVIS
6	4	010-017	BUSHING
7	4	010-033	HHCS
8	4	012-220	Regular Spring Lock Washers (U.S.)
9	1	034-509	REDUCER
10	1	26-005727	3/8 NPT FITTING
11	1	26-005734	MUFFLER 1/2" NPT
12	1	034-776	HEX SOCKET PLUG 1/8 NPT

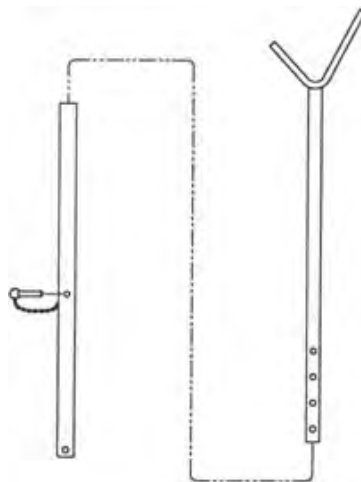
21.

SAFETY SIDE SKIRTS



SIDE SAFETY SKIRTS

ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
-----	-----	202-5024	Safety Skirt Package - 6' & 8' Long	6	4	011-135	Capscrew, Sckt Butn/Hd 5/16"-18x3/4
1	2	202-0036	Safety Skirt, Lower - 6' & 8' Long	7	4	011-543	Nut, Hex - 5/16"-18 Nylon Insert
2	2	202-5037	Middle Safety Skirt - 6' & 8' Long	8	4	012-211	Washer, Zinc 5/16" Bs Flat
3	2	010-039	Cap Screw, Hex Hd. - 3/8"-16x1"	9	4	012-312	Washer Nylon Fender 5/16"IDx 7/8"ODx1/16"TH
4	2	012-252	Washer, Flat -3/8"ID BS Washer	10	2GA	039-059	Paint, Safety Yellow
5	2	011-552	Nut, Hex 3/8"-16 Nylon Insert				



22. SAFETY STRUT ASSEMBLY

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	200-5001	Safety Strut Assembly

23.

OPTIONAL SVR303A ACCESSORIES

Option
Code
739-E24Option
Code
739-E53

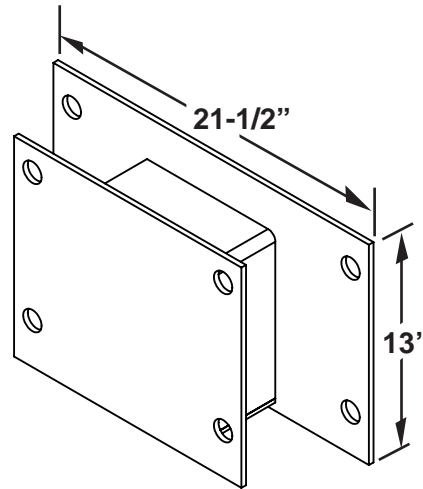
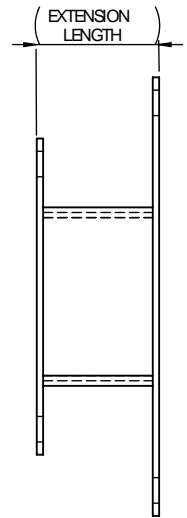
EXTENSION LENGTH	PART NO.
2"	54-001553-2
3"	54-001553-3
4"	54-001553-4
5"	54-001553-5
6"	54-001553-6
7"	54-001553-7
8"	54-001553-8
9"	54-001553-9
10"	54-001553-10
11"	54-001553-11
12"	54-001553-12
13"	54-001553-13
14"	54-001553-14

(consult factory for other size extensions)

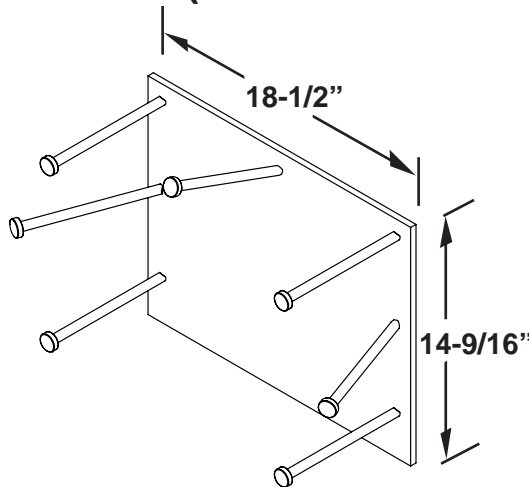
NOTE: SVR 303A can be ground mounted
provided concrete pad exists.

SVR303A WALL EXTENSION PLATE

Zinc Finish for Extension Option Code: 739-E24 and 739-E53

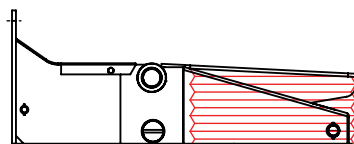
DETAILED VIEWTOP VIEW

CAST-IN PLACE FOR SVR303A RESTRAINT - PART# 54-001845 (OPTION CODE : 739-E1)

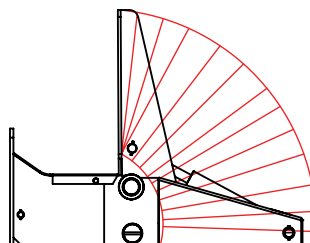


SVR303A RESTRAINT ARM WEATHER / DEBRIS SEAL KIT - PART# 54-000168 (OPTION CODE: 739-A50)

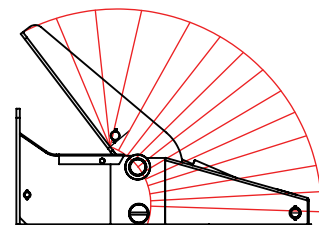
Includes vinyl bellows for extreme environmental conditions



CLOSED POSITION



LOCKED POSITION



FULLY EXTENDED POSITION

24.

GENERAL PARTS

24.1

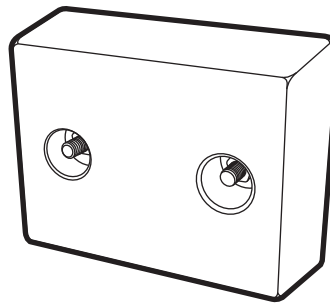
MOLDED RUBBER BUMPERS

MOLDED RUBBER BUMPERS

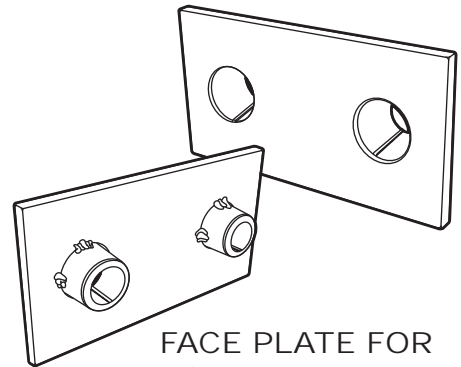
PART ID	DESCRIPTION
DB13	4" x 10" x 13"
DB18	4" x 10" x 18"
DB30	4" x 10" x 30"
DBL18	4" x 18" x 18"

24.2 FACE PLATES FOR MOLDED RUBBER BUMPERS

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



MOLDED RUBBER BUMPER



FACE PLATE FOR MOLDED BUMPER

24.3

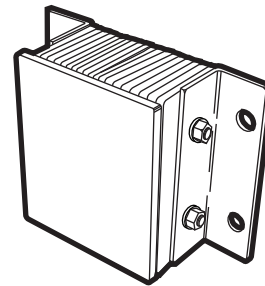
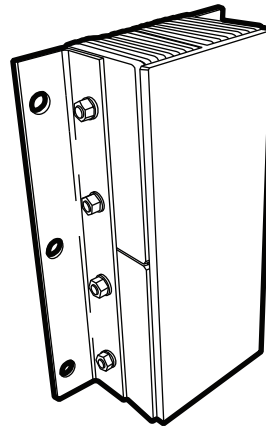
LAMINATED BUMPERS

LAMINATED BUMPERS

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

24.4 FACE PLATES FOR LAMINATED BUMPERS

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

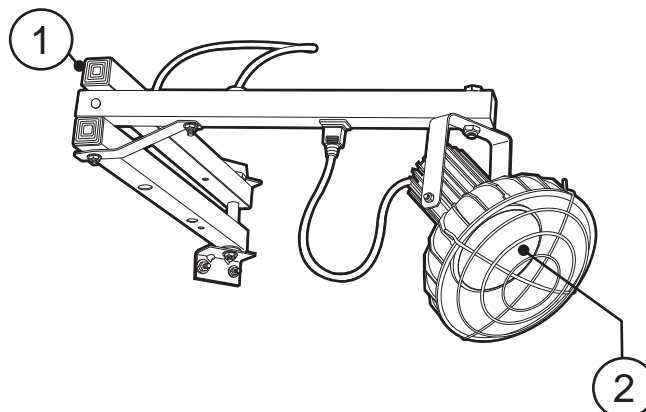


LAMINATED BUMPER WITH FACE PLATE

24.5

FLOOD LIGHT

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



25. RECOMMENDED SPARE PARTS FOR AIR CYLINDER DOCK LEVELER

* Complements for Fall Safe Cylinder*

Part #	Description	Qty Req'd
HARDWARE REQ'D:		
26-008709	CYLINDER ASS'Y 1 1/2" BORE X 22" STR.	1
Qty: 1, Part # 26-008964 Pin & Qty: 1, Part # 23-003569 Pin		
034-786-1	RESERVOIR (POLY)	1
HARDWARE REQ'D:		
033-785	VALVE, FLOW CONTROL 2.75 GPM	1
Qty: 1, Part # 034-580 Adapter, Qty: 1, Part # 034-515 Fitting (90DG)		

* Complements for Air (Lip) Cylinder * All Model

Part #	Description	Qty Req'd
HARDWARE REQ'D:		
26-007672-1	LIP AIR CYLINDER (125MM BORE 5" STROKE)	1
Qty: 1, Part # 011-511 Nut, Qty: 1, Part # 114-663 Clevis, Qty: 1, Part # 112-740 Clevis Pin (Rod End) & Qty: 1, Part # 011-530 Nut / Qty: 1, Part # 107-196 Pin & Qty: 1, Part # 013-090 Spring Pin		
26-006147	PILOT CHECK VALVE	1
26-005734	BREATHER VENT (MUFFLER)	1
HARDWARE REQ'D:		
26-006150	VALVE ASSEMBLY, LIP	1
QTY: X 2, Part # 011-850 Screws (U.S.) & QTY: X 2, Part # 012-223 Lock Washer		
26-005136	TUBE # 5 (45" L 1/4" OD)	1
26-005137	TUBE # 6 (40" L 1/4" OD)	1

* Complements for Air (Main) Cylinder * All Model

Part #	Description	Qty Req'd
HARDWARE REQ'D:		
26-008673-1	DECK AIR CYLINDER (125MM BORE 18" STROKE)	1
Qty: 1, Part # 011-511 Nut, Qty: 1, Part # 26-003956-1 Clevis, Qty: 2, Part # 018-017 Bushing, Qty: 1 Ea. Part # 23-003569 Rod End C. Pin & Part # 23-004729 Pin (Qty: 2, Part # 013-622 Spring Pin)		
HARDWARE REQ'D:		
113-096	CYLINDER PIVOT TOP PLATE	2
QTY: X 4, Part # 010-077 Bolt & QTY: X 4, Part # 012-201 Lock Washer		
26-006147	PILOT CHECK VALVE	1
26-005734	BREATHER VENT (MUFFLER)	1
26-006151	VALVE ASSEMBLY, DECK	1
26-005961	TUBE # 3 (32" L 3/8" OD)	1
26-005962	TUBE # 4 (30" L 3/8" OD)	1

* Complements for # 26-005850 Air Compressor Ass'Y * All Model

Part #	Description	Qty Req'd
HARDWARE REQ'D:		
26-005511	PUMP ASSEMBLY	1
26-005773	VIBRATION DAMPING MOUNT	1
QTY: X 1, Part # 011-506 Nut & QTY: X 2, Part # 012-210 Washer		
26-006794	AIR COMPRESSOR FILTER	1
26-005186	GROMMET	1

* Complements for Cooler Ass'Y * All Model

Part #	Description	Qty Req'd
26-009638	COOLER ASSY; ACU DOCK	1
26-006178	AIR FILTER AUTODRAIN	1
26-006219	POP SAFETY VALVE	1
26-005728	MALE BRANCH "Y"	1

RECOMMENDED SPARE PARTS FOR SVR303A

	Part #	Description	Qty Req'd
	54-008363	HUB ASSEMBLY	1
	54-001563	SWITCH ASSEMBLY (POSITION SENSOR)	1
	54-006823	GASKET (POSITION SENSOR)	1
	HARDWARE REQ'D:	54-00043	LUG
Qty: X1, Part # 011-184 Socket Head Cap Screw Per Lug			
	018-638	DU BEARING (LUG)	1

* Complements for Air (Cylinders) * All Model

Qty Req'd		Part #	Description	Qty Req'd
HARDWARE REQ'D:		54-005825-2	AIR CYLINDER (ARM)	1
Qty: X2, Part # Fitting Per Cylinder				
HARDWARE REQ'D:		54-006286	ROD END PIN (Top, Arm, Air Cylinder)	1
Qty: X3, Part # 013-020 Sprin pin & Qty: X2, Part # 012-213 Washer Per Cylinder				
HARDWARE REQ'D:		54-006287	CLEVIS PIN (Bottom, Arm, Air Cylinder)	1
Qty: X2, Part # 013-028 Hairpin Cotter Per Cylinder				
HARDWARE REQ'D:		54-0006851	PIVOT PIN (ARM WELDMENT)	1
Qty: X4, Part # 018-636 DU Bearing Per Cylinder				
		54-006288	TUBE 1 (Lock Cylinder)	1
		54-006289	TUBE 2	1
		54-006433	TUBE 3 (Arm, Air Cylinder)	1
		54-006435	TUBE 4 (Arm, Air Cylinder)	1
HARDWARE REQ'D:		54-003988-1	LOCK CYLINDER	1
Qty: X2, Part # Fitting Per Cylinder				
HARDWARE REQ'D:		54-000513	CLEVIS PIN (Lock Cylinder)	1
Qty: X2, Part # 013-028 Hairpin Cotter Per Cylinder				
HARDWARE REQ'D:		54-00022	ROD END PIN (Lock Cylinder)	1
Qty: X1, Part # 013-020, Spring Pin				

	Part #	Description	Qty Req'd
	54-001682	LOCK MANUAL RELEASE TOOL (Handle)	1
HARDWARE REQ'D:	54-000534	LOCK PIN	1
Qty: X2, Part # 018-634 DU Bearing & Qty: X2, Part # 018-635 DU Bearing Per Cylinder			
	54-001608	RUBBER SEAL	1
HARDWARE REQ'D:	165-9197	PAD (RUBBER BUMPER)	2
Qty: X2, Part # 107-038, Washer Per Pad (Qty: X 4 Total)			
	037-090	GROMMET, RUBBER	1

Optional

Part #	Description	Qty Req'd
54-001686	WEATHER / DEBRIS SEAL KIT	1

NOTES

NOTES

NOTES



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