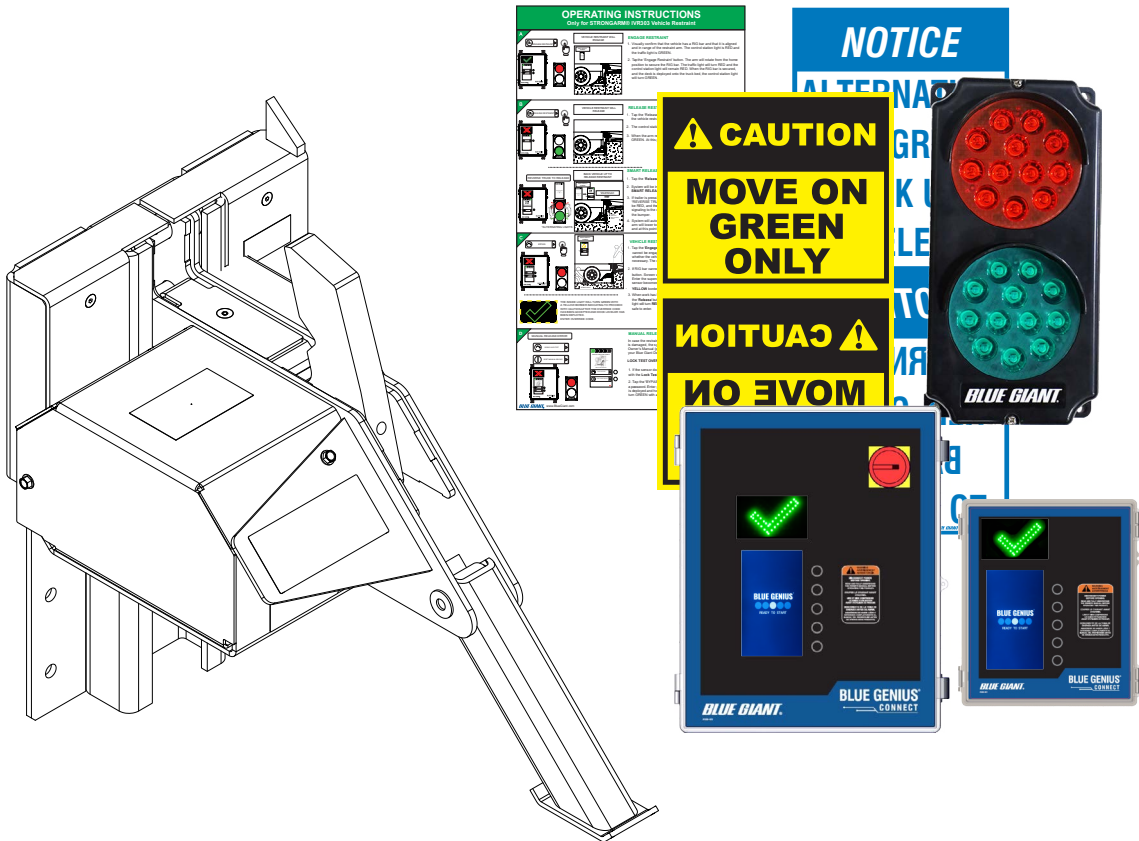


OWNER'S MANUAL

STRONGARM® IVR303 VEHICLE RESTRAINT WITH BLUE GENIUS® CONTROLS



ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN

WARNING

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

BLUE GIANT®

STARTING FROM SEPTEMBER 1, 2026

ISSUE DATE: SEPTEMBER 24, 2026 REV. 1.0 (PART # 038-1254E)

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1.0 ABOUT THE STRONGARM® IVR303 RESTRAINT

The Blue Giant StrongArm® IVR303 Restraint Equipment is a high performance system. The IVR303 Restraint provides an electric, RIG-engaging vehicle restraint when a facility must handle a variety of trailer or vehicle needs.

An interior and exterior lights communication system keeps truck drivers and warehouse personnel advised of safety conditions during dock operations.

With a restraining force of 35,000 lbs (15,909 kgs), the StrongArm® IVR303 electric lock vehicle restraint counteracts the dangers associated with unexpected horizontal or vertical trailer movement. Its vertical restraining range of 9" to 25" (227 – 635 mm) and instant compensation float of 16" (406 mm) enable it to match active trailer movement, making the StrongArm® IVR303 work well with air-ride suspension systems and minimizing the risk of accidental separation and worker injury.

1.1 OWNER’S PURCHASE RECORD

Please record information for future inquiries and to validate warranty. See “2.1 WARRANTY INFORMATION” on page 6.

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

The manufacturer offers a full line of chocks, dock levelers, dock safety equipment, accessories, ergonomic equipment, scissor lift equipment, seals and shelters, and industrial trucks. Concurrent with a continuing product improvement program, specifications are subject to change without notice (See “2.1 WARRANTY INFORMATION” on page 6). Please contact your Blue Giant Dealer for latest information. Some features illustrated may be optional in certain market areas.

2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the StrongArm® IVR303 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 StrongArm® IVR303 Restraint. These laws and regulations include but are not limited to:

- The Occupational Safety and Health Act
- Canada Occupational Health and Safety Regulations
- Occupational Safety and Health Acts for Individual States (USA), Provinces, or Territories
- ANSI standard MH30.3

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

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



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



2.1 WARRANTY INFORMATION

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

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

For more information about Blue Giant Warranty Support, please contact your Blue Giant Dealer. You may also visit www.BlueGiant.com or phone 1.905.457.3900.

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

DEALER INFORMATION

Name:

Contact:

Telephone:

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 StrongArm® IVR303 Restraint System. The manufacturer assumes no liability for lost profits, operating downtimes, or similar

indirect losses incurred by the purchaser. Injury to third parties, irrespective of its nature, is not subject to compensation.

The manufacturer reserves the right to make changes at any time to the modules, components, and accessories, concurrent with its continuing product improvements and development program. Specifications, operating instructions, and illustrations included in this manual are subject to change without notice. Please contact manufacturer for the latest information. Please see "2.4 OWNER'S RESPONSIBILITY" on page 7.

2.3 MANUFACTURER'S NOTE

The StrongArm® IVR303 Restraint has been carefully inspected and tested at the manufacturer's plant prior to shipment, but it **MUST be checked** upon receipt for transport damage. Any observed transport damage is to be listed on the signed copy of the freight document. There are many configurations or custom designs whose specifications may not be fully reflected in this manual. Contact your Blue Giant Dealer to obtain the General Arrangement drawing for application specific designs.

NOTE: Notify the freight forwarder, Blue Giant, and the dealer of any damage WITHIN 24 HOURS.

2.4 OWNER'S RESPONSIBILITY

The StrongArm® IVR303 Restraint needs to be maintained and inspected by the owner to verify its safe condition for operation.

1. The owner should recognize the inherent danger of the interface between the StrongArm® IVR303 Restraint and the freight carrier. The owner should, therefore, train and instruct operators in the safe use of the StrongArm® IVR303 Restraint and accessories in accordance with the manufacturer's recommendations.
2. The owner should thoroughly familiarize themselves with the following procedures and specifications as referenced in this manual, and request immediate replacement of all manufacturer-supplied documents that are missing, damaged, or otherwise illegible. Owners shall apply sound principles of safety, training, inspection, maintenance, and expected operating environment toward their IVR303 Restraint usage and maintenance requirements.
 - Installation Instructions
 - Commissioning instructions
 - Operating instructions
 - Daily maintenance procedures checklist
 - Inspections procedures
 - Recommended spare parts listsUpon receipt of any newly purchased StrongArm® IVR303 Restraint, the owner shall verify the presence of owner's manuals, operating placards, and any other documentation necessary for training dock personnel how to use the equipment safely and effectively.
3. All Blue Giant StrongArm® IVR303 Restraint shall undergo regularly scheduled planned maintenance. Maintenance requirements will vary according to usage frequency and application, so the owner shall contact with their authorized Blue Giant distributor for schedule recommendation. Written records of the performance of these procedures shall be kept as per warranty requirements and per local state or provincial requirements. Please see "7.0 MAINTENANCE" on page 24.
4. StrongArm® IVR303 Restraint that is structurally damaged, experiencing performance irregularities, or has been potentially compromised shall be removed from service until a trained and authorized manufacturer's representative can conduct an inspection and perform any necessary repairs.
5. As with any piece of machinery, StrongArm® IVR303 Restraint requires routine maintenance, lubrication, and adjustments. Recommended procedures are itemized in the Planned Maintenance Program (PMP) checklist included in installation and technical manuals. It is recommended that for anything other than the basic maintenance procedures outlined in this manual, please contact your Blue Giant Dealer.
6. The owner shall ensure that all nameplates and safety labels are in place and legible, and that the appropriate manuals are provided to authorized users. Replacement nameplates, safety labels, and manuals are available through the Blue Giant Aftermarket Department.
7. The owner or a trained and authorized representative shall verify that all freight carrier brakes have been applied and a vehicle restraint and/or wheel chocks properly engaged before cross-docking procedures begin. For safety reasons, trailers must be held securely in place to avoid accidental separation from the StrongArm® IVR303 Restraint.
8. Unless specifically agreed to in writing by Blue Giant Equipment Corporation at the time of order (and prior to manufacture), all Blue Giant StrongArm® IVR303 Restraint is sold as a complete offering and must not be altered or added to in any manner (which

includes configuration and function) without written permission from an authorized manufacturer's representative. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the particular application of the StrongArm® IVR303 Restraint.

9. If, at the request of the owner, Blue Giant does not supply all or some of the StrongArm® IVR303 Restraint power unit and/or control panel components, the owner shall assume responsibility for any and all operational and safety issues associated with the resulting configuration.
10. The owner must adhere to the load classification information provided on the product nameplate. Failure to do so will void product warranty and can result in serious injury, including death.
11. Operational placards must be visible from equipment location and permanently attached to a wall or structure.
12. The owner shall ensure that inspections are performed to the lifting device as prescribed by law or regulation.

3.0 SAFETY MESSAGE COLOR IDENTIFICATION

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

DANGER

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

WARNING

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

CAUTION

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

NOTICE

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

3.1 OPERATIONAL SAFETY WARNINGS

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

DANGER

- BEFORE BEGINNING ANY SERVICE PROCEDURES:
 - Disconnect the power and follow all lockout / tagout procedures, as per OSHA requirements. Refer to wiring diagrams.
- Installation must be performed only by trained and authorized personnel.
- Prior to installation, place adequate barriers to prevent vehicle traffic from entering the work area.
- Lift the dock equipment with suitable hoisting equipment only. Do not stand under the dock equipment or any heavy object while it is being hoisted.
- During installation, anchors must be properly torqued to achieve the necessary anchoring strength. **DO NOT USE IMPACT DRIVERS.**
- Any electrical work must be performed by qualified personnel only.
- Do not operate the dock equipment while anyone is standing in its path.
- Do not remove the wheel chocks until loading /unloading is finished and the truck is cleared for departure and the lights have changed to **RED** inside and **GREEN** outside.

WARNING

- Do not ground welding equipment to any electrical components.
- Do not allow the drill to go too deeply into the control box, as damage may occur to the control systems.
- Never use air to blow debris from the control box. Use a vacuum to perform any necessary cleaning.
- Do not connect green ground lead into control box or junction box until all welding has been completed.
- Improper adjustments may cause operational problems with equipment.

CAUTION

- Only trained personnel should operate or service this equipment.
- Do not operate the StrongArm® IVR303 Restraint until the transport vehicle is parked against the dock bumpers.
- Always park the StrongArm® IVR303 Restraint after use.
- Conduct routine inspections and maintenance. Failure to do so could cause equipment damage and or personal injury.
- Always call your authorized service representative or manufacturer immediately if a malfunction occurs.

NOTICE

- Do not ground welding equipment to any electrical components.
- Do not allow the drill to go too deeply when drilling holes in the control box. Damage to the control systems may occur.
- Never use air to blow debris from control box. Use a vacuum to remove debris from control box.
- Do not connect green ground lead into control box until all welding has been completed.
- Always keep the work area clean and free of litter.
- Always clean all side openings of dirt and debris.
- Always clean up dry and liquid spills immediately after they occur.
- Always maintain proper lighting in the work area.
- Improper adjustments and / or lubrication may cause operational problems with equipment.
- If a procedure is not clearly defined in this manual, contact your Blue Giant Dealer.

4.0 LOCKOUT / TAGOUT PROCEDURE AND RULES

In accordance with the rules and regulations of the Occupational Safety and Health Administration (OSHA) and/or local jurisdiction, all affected employees must be notified that the machine or equipment will be shut down and locked out to perform repair or maintenance work.

The work area must be checked to verify that all personnel have been removed or safely repositioned.

The machine or equipment power supply shall be locked in the **OFF** position or disconnected from the energy source.

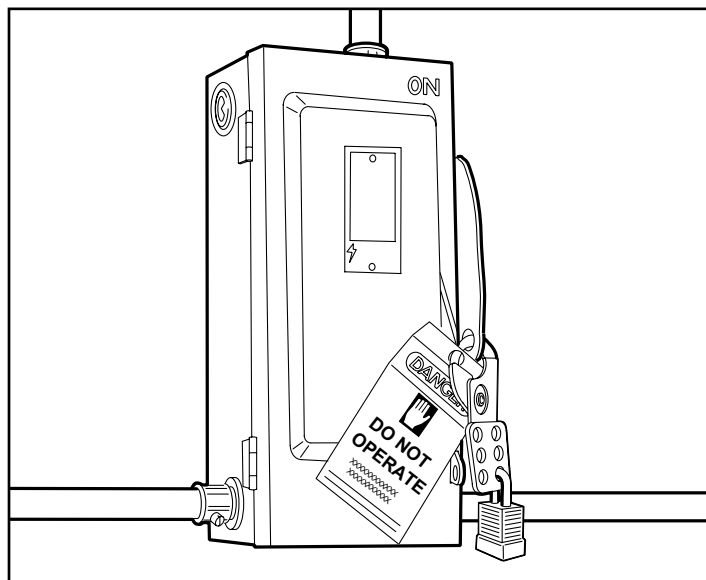
Blue Giant strongly recommends that only OSHA-approved and/or local jurisdiction lockout devices and procedures be utilized.

The energy isolating device must bear a prominent warning tag indicating that work is being done on the equipment and the name of the authorized employee responsible for the lockout.

It is mandatory that tagout notices shall **NOT** be susceptible to deterioration or illegibility due to weather conditions, exposure to chemicals and/or moisture.

WARNING

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



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

4.1 ELECTROSTATIC SENSITIVE DEVICE PROTECTION POLICY

This policy applies to static sensitive electronic products primarily printed circuit boards (PCBs) and sensors. Switches, relay, lamps and wire are not sensitive and do not apply.

If welding near ESD components, correctly protect and ground all necessary equipment.



1. Prior to handling PCBs, wear a static grounding wrist strap and clip it to an electrical ground. The metal plate on the inside of the wristband must be in contact with the wearers skin.
2. PCBs should never be handed to other personnel or set down anywhere.
3. Place PCBs in black ESD shielding bags for return or storage. Only one PCB or sensor should be placed in a static bag. Attach paperwork and other items to the outside with adhesive pouches or elastic bands.
4. The control boxes protect the PCBs inside from static, and should not be used to store manuals or other accessories.

5.0 CONTROL STATION OPERATION

Depending on the specific installation, the control station may be mounted on an adjacent wall. See “6.0 Operating Instructions” on page 15 for more information.

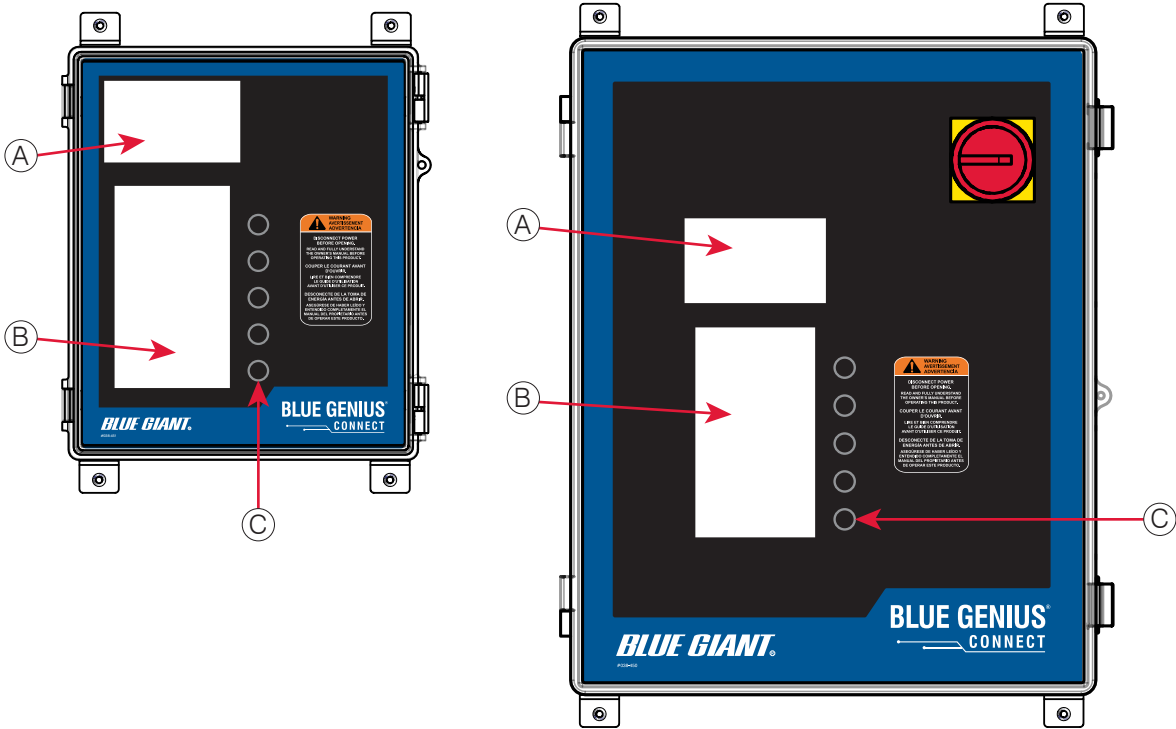
5.1 TOUCH BUTTON CONTROLS

Controls one individual vehicle Control Panel only, equipped with touch buttons, inside forklift operator traffic lights, and operator menu screen.

See below for names of components. These names will be used throughout the manual.

⚠ WARNING

- Do not install, operate, or service this product unless you have read and followed the safety practices, warnings, and installation instructions contained in this manual and owner’s manual. Failure to do so could result in death or serious injury.
- Place barricades around the pit on the dock floor and driveway while installing, maintaining, or repairing dock equipment.
- Improper installation of anchoring devices or installation into aged or unsound concrete could result in death or serious injury.



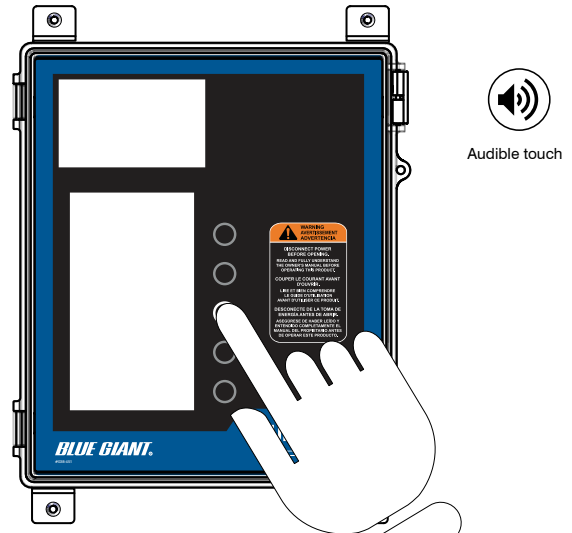
ITEM	DESCRIPTION
A	Transfer Proceed Indicator
B	Status Screen
C	Touch sensitive button

5.2 BUTTON FUNCTION

When touching any of the function buttons, use the ball of the finger.

Pressure not required to operate buttons. The control station's unique touch sensors detect the proximity of the dock operator's finger.

Control buttons are momentary contact: a single tap will activate the engage or release features based on situation.



6.0 OPERATING INSTRUCTIONS

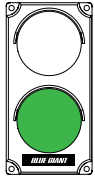
⚠ WARNING

- Do not operate this vehicle restraint 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 restraint 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 vehicle restraint manually. Keep hands and feet clear of vehicle restraint pinch points.
- It is the responsibility of the owner / operator of truck / vehicle to (whenever possible) exhaust the air from air-ride suspension systems prior to performing loading or unloading.
- Because RIG-bars differ in strength and construction, review the need to use wheel chocks in conjunction with the vehicle restraint.
- This vehicle restraint is designed for rear impact guards (RIG) and rear impact protection (RIG-bar) that follow the Federal Motor Carrier Safety Administration guidelines (FMCSA section 571.223 and 571.224) + NHTSA (National Highway Traffic Safety Administration) guidelines.

6.1 FUNCTIONAL DESCRIPTION

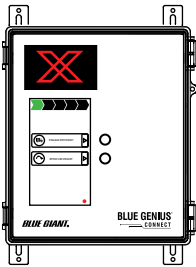
The vehicle restraint is used to restrain a trailer at the loading dock. When engaged, it secures a vehicle’s RIG-bar, restricting forward movement caused by vehicle creep or unscheduled departure. It is electro-mechanically operated and monitored via the Blue Genius® Touch Control Panel, and comes standard with an automatic lights communication package consisting of red/yellow/green control panel lights and exterior red/green LED traffic lights.

EXTERIOR TRAFFIC LIGHT



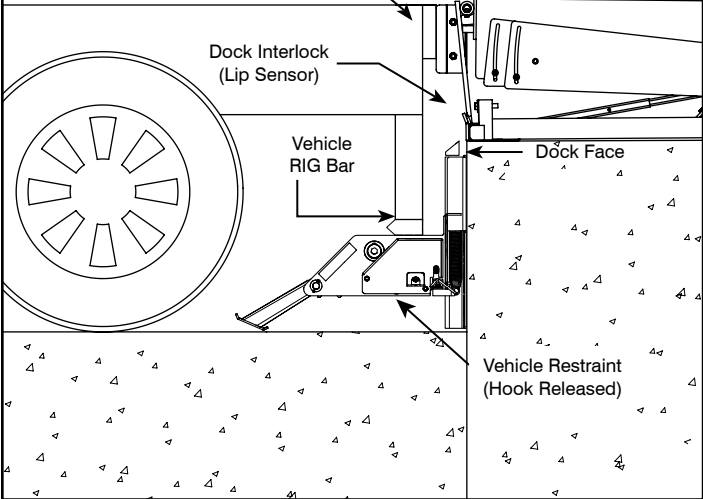
Exterior red / green traffic lights advise the truck driver when it is safe to depart.

INSIDE COMMUNICATION LIGHTS & CONTROL PANEL



Red / yellow / green control panel lights keep forklift operators and warehouse personnel advised of safety conditions at the loading dock.

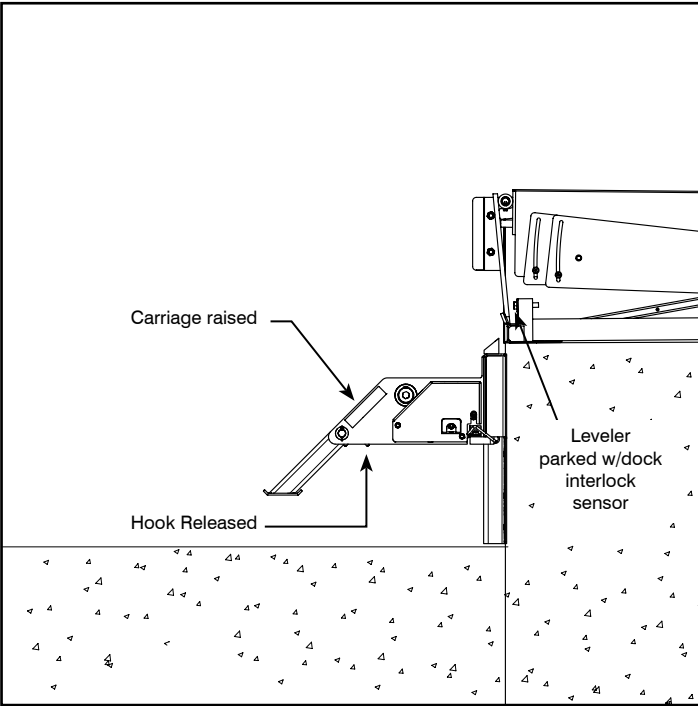
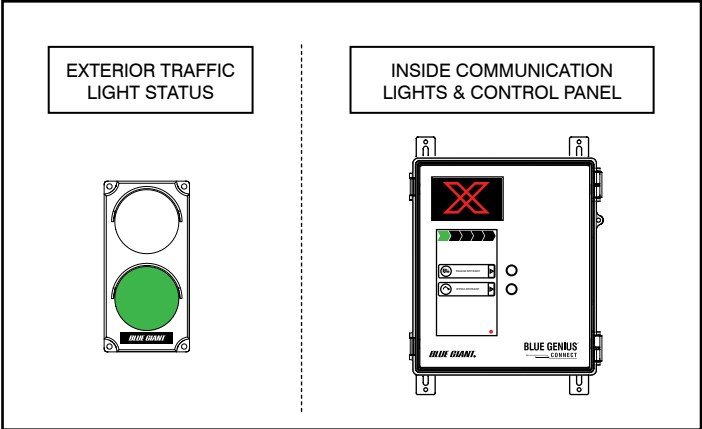
Common Terms:



STANDARD OPERATION PROCEDURES

6.2 PRIOR TO USE: EQUIPMENT IN STORED POSITION

The Blue Genius® control panel is powered on and ready for use. The restraint apparatus is in the home position and the dock leveler lip is parked safely in the lip keepers. The exterior traffic light is GREEN and the control panel light is RED.

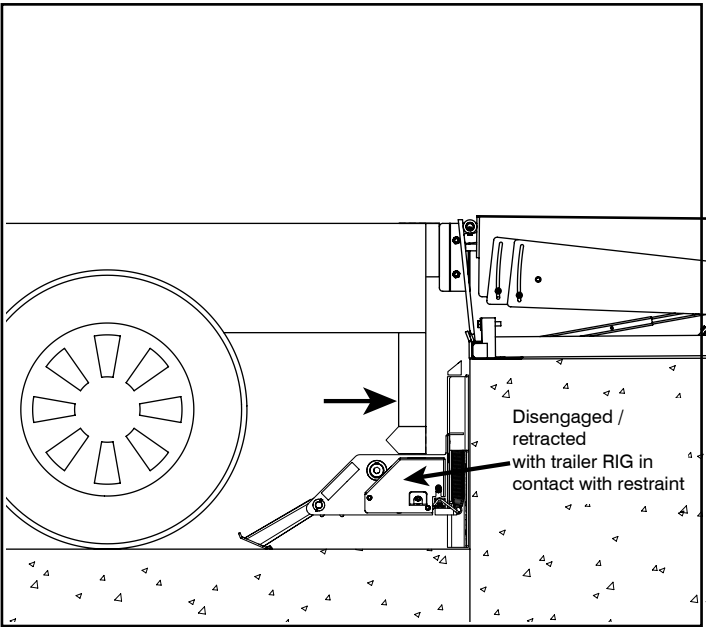
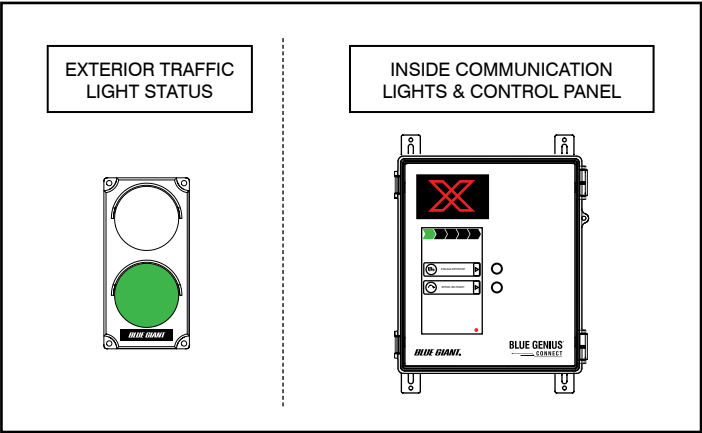


6.3 TRAILER AT BAY

⚠ WARNING

The restraint arm is in motion during the engage and release process. Please ensure that the personnel and objects remain clear of the motion path when the restraint arm is traveling.

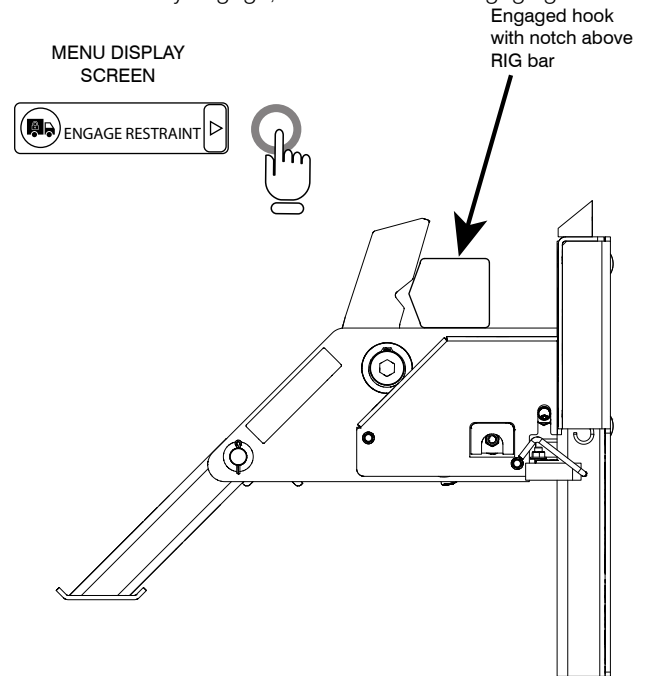
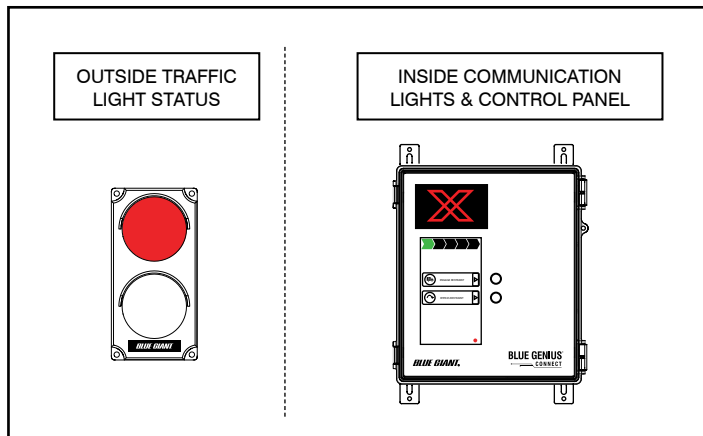
The truck reverses into position against the dock leveler bumpers. The exterior traffic light is GREEN and the control panel light is RED.



6.4 ENGAGING RESTRAINT

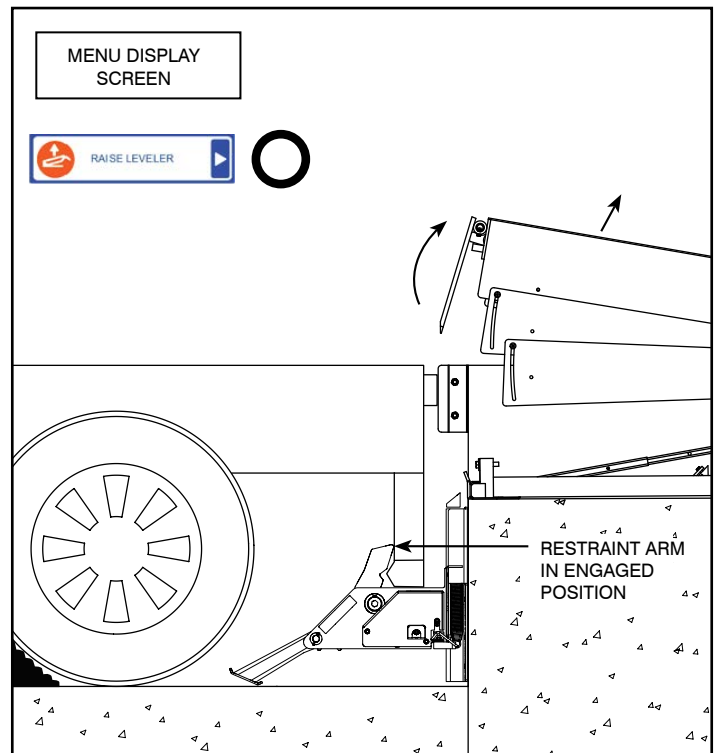
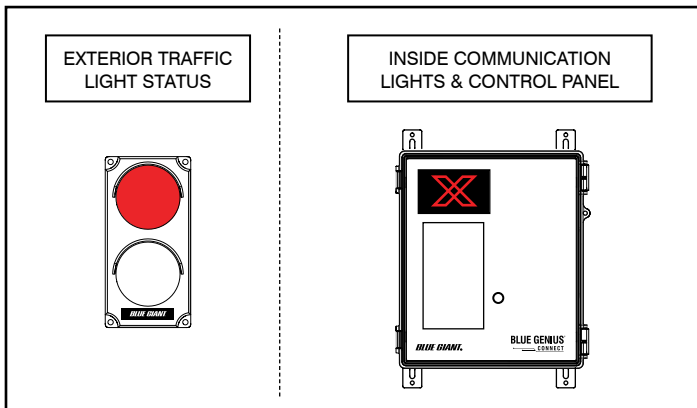
Tap the 'Engage' button on the control panel. The securing apparatus will exit the stored position to secure a truck's RIG-bar. The LCD screen will read 'Engaging'. The traffic light will turn RED and the control panel light will remain RED. When the RIG-bar is secured, the LCD screen will read 'Restraint is Engaged', followed by 'Dock Leveler Restored' and 'Ready to Raise Deck'. The exterior traffic light remains RED, warning the truck driver to stay in place.

NOTE: For vehicles without an RIG-bar, or if the restraint apparatus cannot successfully engage, see Section 6.8 "Engaging the Override Feature" for instructions.



6.5 DEPLOYING THE DOCK LEVELER

Deploy the dock leveler (supplied by others) using controls provided by original manufacturer. Both the exterior traffic light and the control station light will be RED. Tap and hold the 'Deck' button. The LCD screen will read 'Deck Raising'. Keep holding the button until the lip deploys, and then release. The LCD message will change to 'Deck Moving'. The dock leveler and deployed lip will descend onto the truck bed and the message will now read 'Deck Deployed'. The control panel light will turn GREEN.

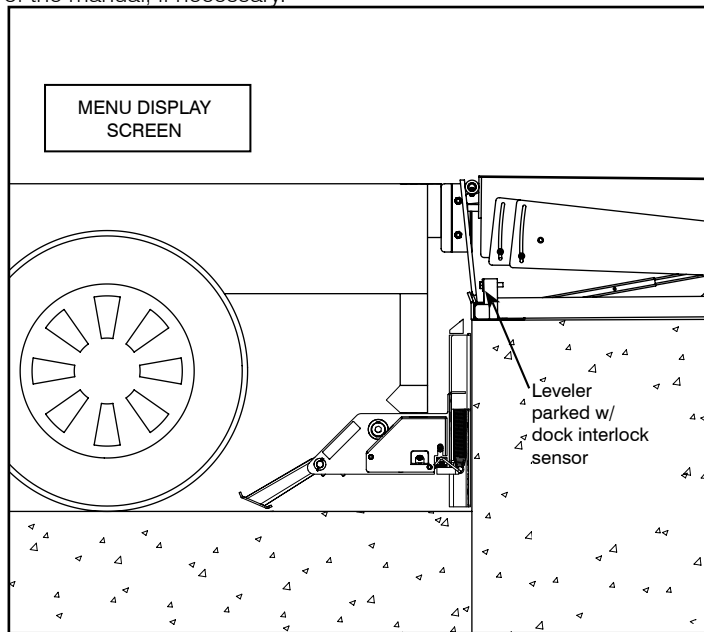
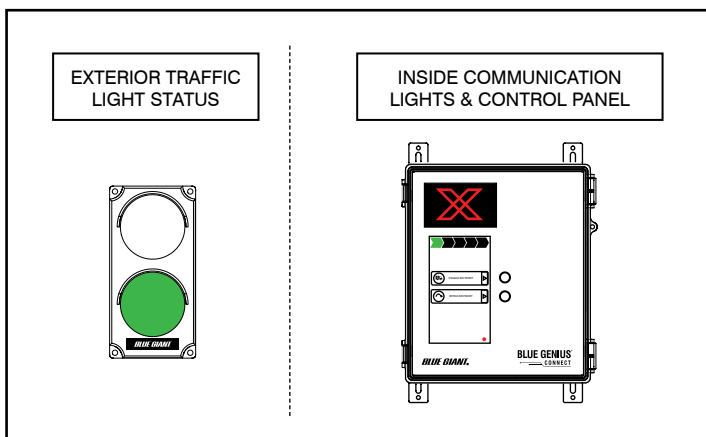


PERFORM LOADING AND UNLOADING

6.6 RELEASING THE RESTRAINT ARM

After the dock leveler is safely parked, tap the 'Release' button to disengage the vehicle restraint. The control station light will change to RED and the LCD screen will read 'Restraining Releasing'. When the arm reaches the home position and the traffic light turns GREEN. At this point the vehicle is safe to depart.

NOTE: If the securing apparatus was not properly parked, the LCD screen will read '**Arm Blocked**'. Consult "6.7 SMART RELEASE (IF ARM IS BLOCKED)" on page 18 and the Troubleshooting section of the manual, if necessary.



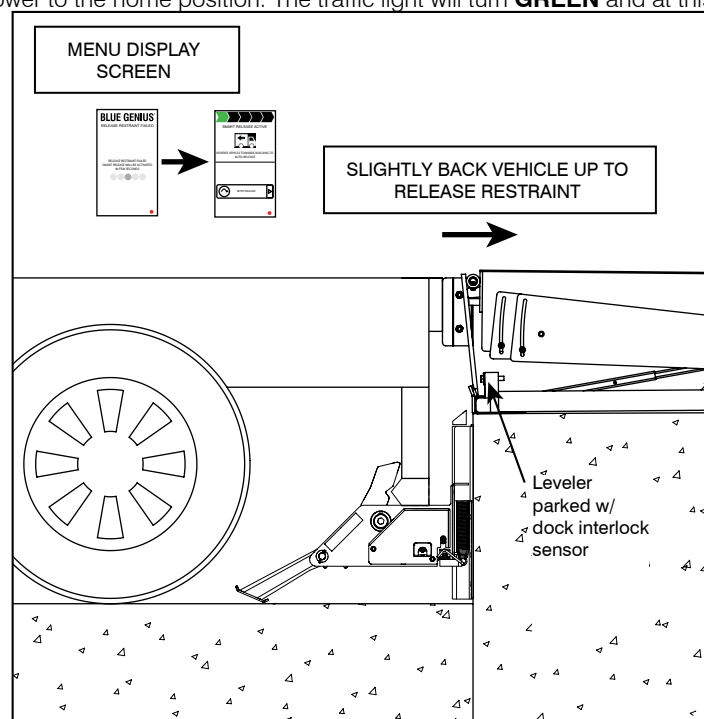
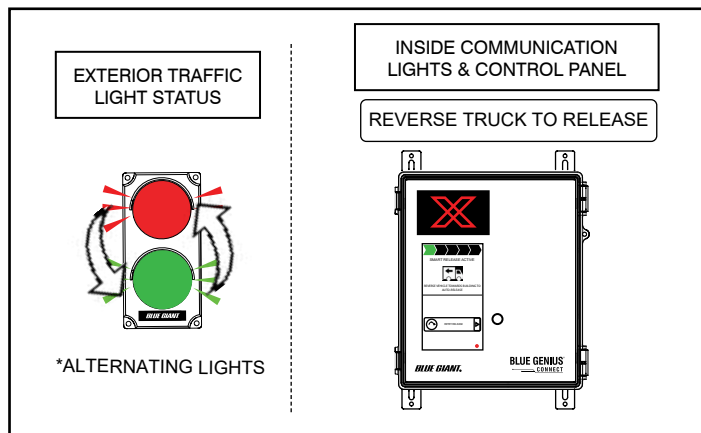
6.7 SMART RELEASE (IF ARM IS BLOCKED)

When the truck pulling against RIG bar and the screen displays: "**RELEASE RESTRAINT FAILED SMART RELEASE WILL BE ACTIVATED IN FEW SECONDS**"

When Smart Release activated, the screen will display: "**REVERSE TRUCK TO RELEASE**".

The control station light will be **RED**, and the traffic light will alternately flash **GREEN** and **RED** signaling to the driver to reverse the truck slightly.

System will automatically detect clearance and the restraint arm will lower to the home position. The traffic light will turn **GREEN** and at this point the vehicle is safe to depart.



6.8 ENGAGING THE OVERRIDE FEATURE

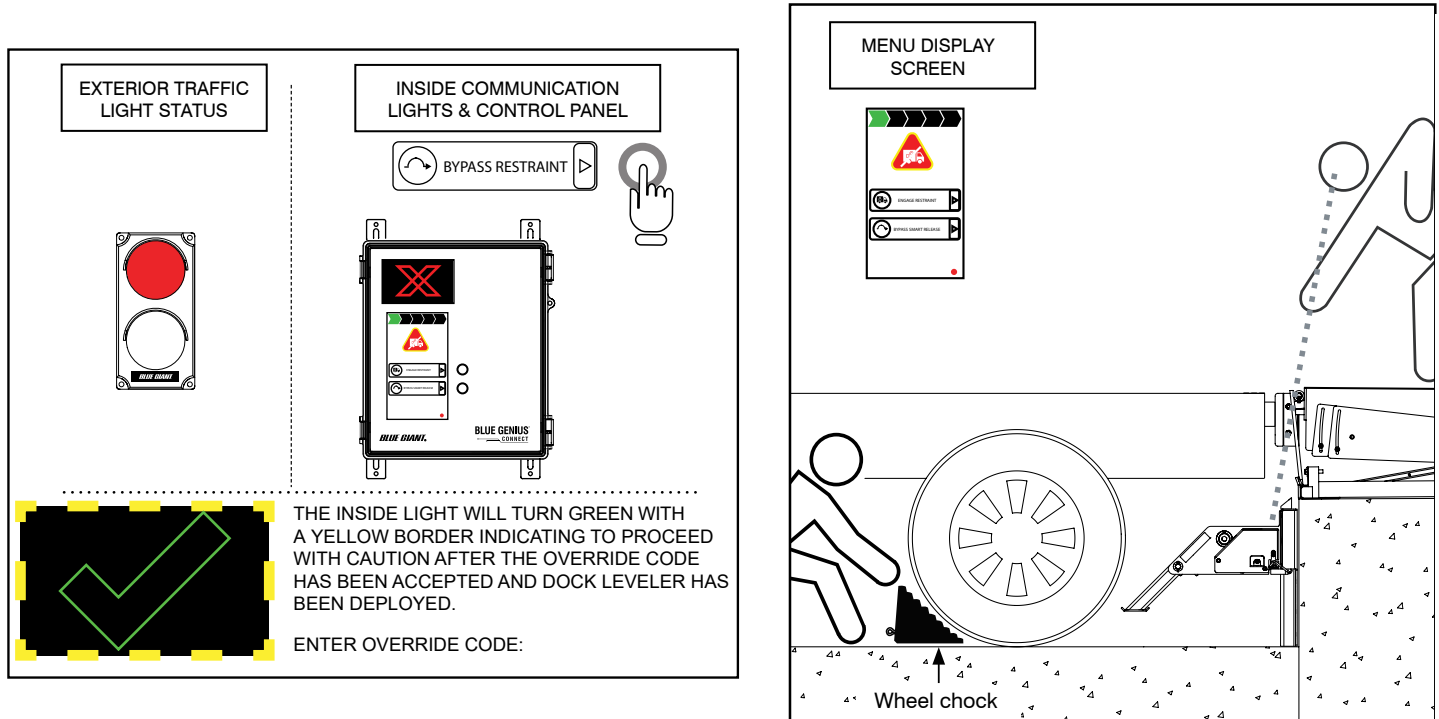
Should it be necessary to bypass the vehicle restraint function (i.e. the truck has an outdated, damaged, or missing RIG-bar), a system-approved override code may be entered via the Blue Genius Connect® or Blue Genius Connect Plus® control pane. This code can be used whether or not the dock leveler is interlocked with the Blue Genius Connect® or Blue Genius Connect Plus®.

⚠ WARNING

Verify that the vehicle is manually chocked before loading and unloading begins.

NOTE: If a visual inspection confirms that the RIG-bar is missing or too damaged to be secured then use the Bypass Restraint option.

1. Tap the '**Engage Restraint**' button, if a vehicle's RIG bar is absent or cannot be engaged. A visual inspection is now necessary to determine whether the vehicle needs to be realigned or if wheel chocks are necessary. The control station light and traffic light are both **RED**.



2. If RIG bar cannot be secured by restraint, press the '**Bypass Restraint**' button. Screen will prompt for a password. Enter password. Enter the supervisor code (default factory set code is '**1111**').

NOTE: Please call your Blue Giant representative for further information.

Once the deck is deployed and home sensor becomes in-active, the control station will turn **GREEN** with a **YELLOW** border.

3. When work has been completed, store the dock leveler.
4. Tap the '**Release**' button on the control station.
5. The control station's light will turn **RED**, warning dock staff that the vehicle is no longer accessible.

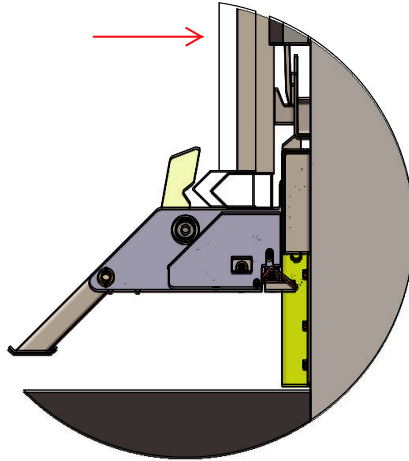
6.9 EMERGENCY VEHICLE RESTRAINT RELEASING PROCEDURE

In the event of a power/malfunction failure to the control panel while the restraint arm is in the vertical locked position, the locking mechanism can be released manually. The restraint arm can then be lowered to the stored position. In case of restraint or control panel malfunction, see the following procedure that describes how to manually release the IVR303 Restraint with a Manual Release Tool.

NOTE: Turn-off power switch / disconnect before performing manual emergency procedure.

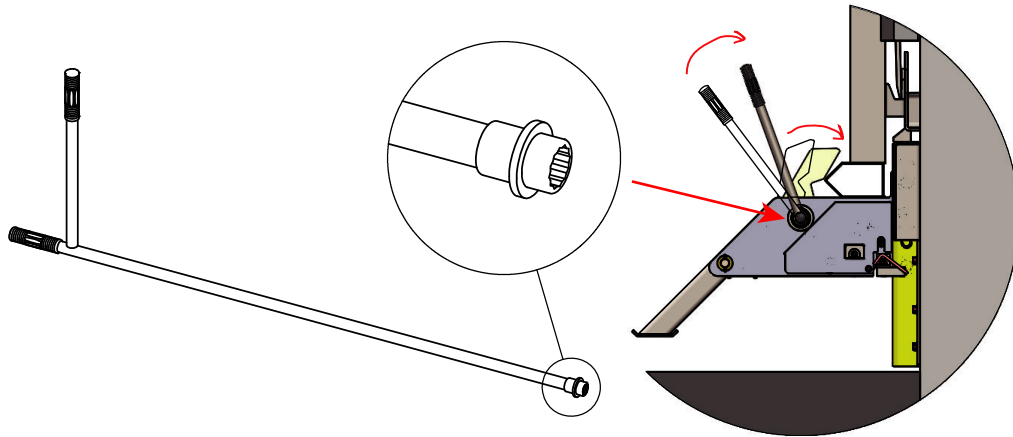
NOTE: Confirm that the trailer RIG bar is not applying pressure to the arm / lock mechanism before attempting to unlock. Otherwise, manual release will not be possible.

1. Ask driver to back up to release pressure on the IVR303 Restraint Arm.
Verify there is sufficient space between the RIG-bar and the Restraint Arm.

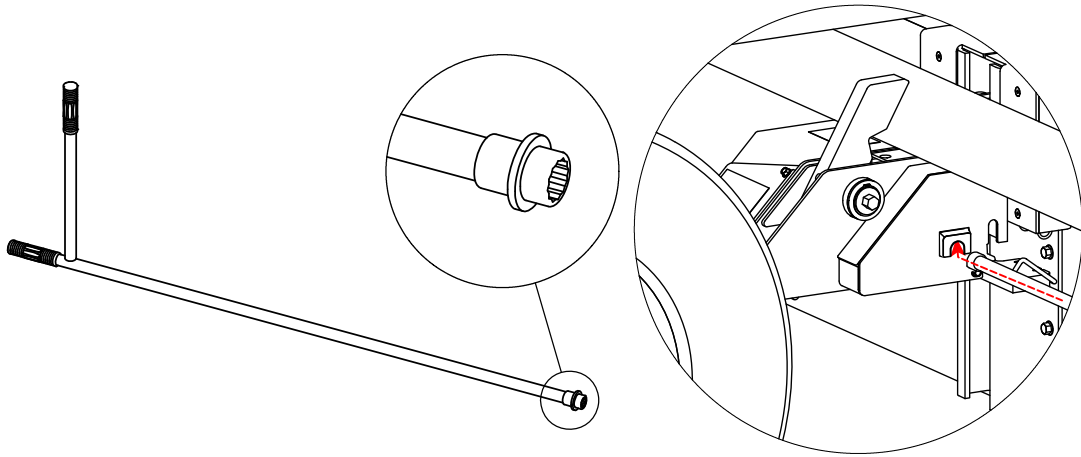


2. Insert the Manual Release Tool into the Restraint Arm Lock Pin. Turn the Lock Pin clockwise towards the RIG-bar.

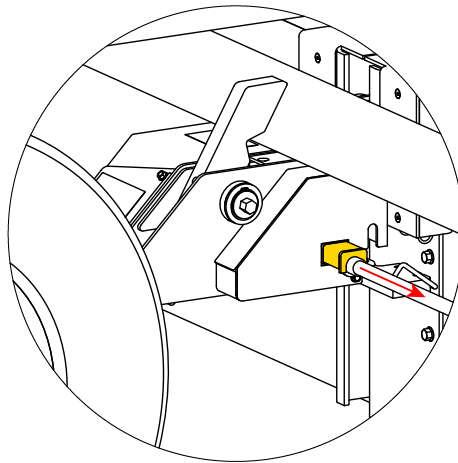
NOTE: If there is not enough room to turn the main arm, then repeat Step 1.



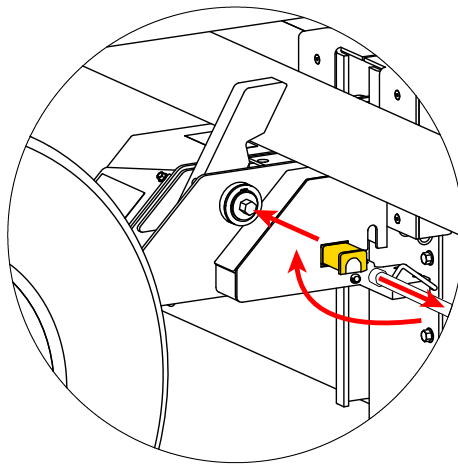
3. Remove the Manual Release Tool from the main arm and insert hook into the Manual Release Pin Bracket.



4. Once the Manual Release Tool is hooked on the Manual Release, pull as far as the bracket can travel.

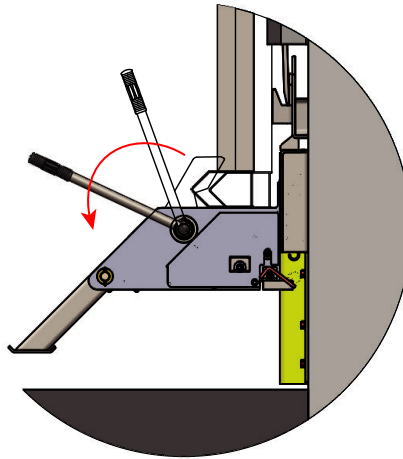


5. Remove the Manual Release Tool from the Manual Release Bracket and insert the Manual Release Tool into the Pin.



6. Turn the Manual Release Tool Counter-Clockwise until the Restraint Arm is returned to the home position.

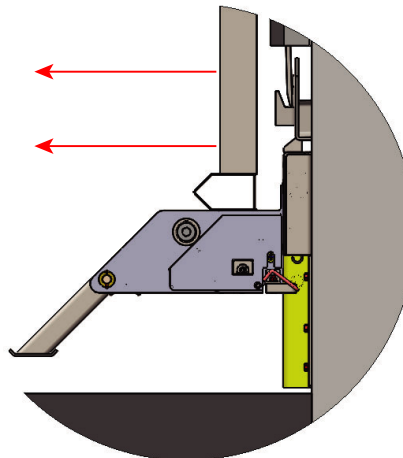
NOTE: Verify that the Restraint Arm is fully lowered and not sticking out of the carriage weldment



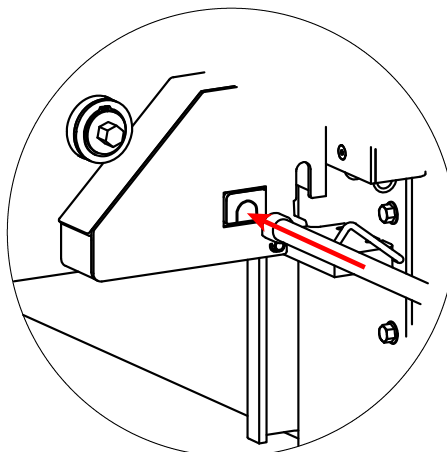
7. Visually verify the Restraint Arm is no longer engaged to the RIG-bar and there is clearance for the RIG-bar to travel.

NOTICE

- Trucks may damage the arm during parking approach, if arm isn't in the home position.
Notify the driver when the vehicle is able to drive free of the restraint.



8. Reset by pushing the Manual Release Pin to the starting position and cycle the restraint to ensure ongoing functionality
. Manual Release of the Restraint Arm



6.10 MANUAL RELEASE OF THE RESTRAINT ARM ERROR

If the Manual Reset Pin is not fully stored when power is restored then the **LATCH NOT DETECTED** error message may appear.

WARNING

During these procedures, it is NOT safe to perform loading or unloading.

Verify that the vehicle is manually chocked or/and restraint properly deployed before loading and unloading begins.



1. Tap
 - RESET MANUAL RELEASE to return the Manual Reset Pin to locked position.
 - a. Tap **“RESET MANUAL RELEASE”** to reset Manual Release Pin. Latch will move after completion of resetting cycle.
 - b. Wait for restraint to engage.
 - BYPASS LOCK TEST to ignore this test
 - a. Tap **“BYPASS LOCK TEST”** if release arm fails to rest.
 - b. Enter code again.
 - c. Test is bypassed.

7.0 MAINTENANCE

Develop a planned or scheduled maintenance plan to keep the StrongArm® IVR303 Restraint in good operating order.

WARNING

- Do not attempt to install, make repairs, or adjustments. Only a trained and authorized service technician should perform the installation process, make repairs, or make adjustments. Contact your Blue Giant Dealer for assistance.
- Do not service this equipment until you have read and understood all of the safety information and instructions contained herein. Failure to adhere to recommended safety practices in this manual and on the StrongArm® IVR303 Restraint warning labels could result in death or serious injury.
- Do not conduct maintenance or repairs until adequate barriers have been placed to keep warehouse and vehicle traffic away from the work area.
- Before doing any electrical work, verify that the power is disconnected and properly tagged or locked out.

7.1 PLANNED MAINTENANCE PROGRAM (PMP)

In addition to the Daily Maintenance Procedures (DMP), the manufacturer recommends (and local government regulations may require) that a Planned Maintenance Program (PMP) and safety inspection program be performed by a trained and authorized service technician on a regular basis to ensure the equipment is in safe operating condition. The PMP will provide an opportunity to make a thorough inspection of the safety and operating condition of the StrongArm® IVR303 Restraint. Necessary adjustments and repairs can be done during the PMP, 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, and minor adjustments are outlined in the Owner's Manual for this product. Contact your Blue Giant Dealer regarding for assistance with a planned maintenance program by offering trained service personnel with expertise in StrongArm® IVR303 Restraint maintenance requirements.

7.2 OPERATOR DAILY INSPECTION

The IVR303 Restraint shall always be examined by the operator **PRIOR TO ANY USE** to verify that it is safe to operate.

The manufacturer recommends scanning to storage or making multiple photocopies of the DMP Checklist. The operator should fill out this form to keep a daily record of operation and maintenance issues. See "7.6 DAILY MAINTENANCE PROCEDURES (DMP) CHECKLIST" on page 25.

7.3 ROUTINE SERVICING AND MAINTENANCE

Regular maintenance and care of the IVR303 Restraint is very important for operator safety, operation efficiency, and cost. A faulty IVR303 Restraint is a potential source of danger to the operator, and to other personnel working near it. As with all quality equipment, keep the IVR303 Restraint in good operating condition by following the recommended schedule of maintenance. Failure to properly maintain or operate the IVR303 Restraint can void the manufacturer warranty.

7.4 PLANNED MAINTENANCE PROGRAM INTERVALS

Arrange for a qualified IVR303 Restraint repair technician to perform regularly scheduled planned maintenance on your IVR303 Restraint every three months for single shift operations or monthly for multi-shift operations. Please contact your Blue Giant Dealer for further details.

7.5 MAINTENANCE SEQUENCE

Follow this procedure for maintenance of the StrongArm® IVR303 Restraint.

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

7.6 DAILY MAINTENANCE PROCEDURES (DMP) CHECKLIST

Use checklist to aid the daily maintenance inspection. Photocopy or scan to storage then print from stored copy as needed.

DANGER

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

CAUTION

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

INSPECTED BY: _____ DATE: _____

SERIAL #: _____ DOOR #: _____

Forward this checklist to the person responsible for StrongArm® IVR303 Restraint maintenance. See "Owner's Purchase Record" for Date in Service.

INSTRUCTIONS: Indicate "OK for USE" with a check mark ✓ in the appropriate box of each inspection point. Indicate "NOT OK for USE" with an x in the appropriate box of each inspection point.

EVERY DAY (MAY BE PERFORMED BY OWNER OR ATTENDANT):	EVERY 90 DAYS (30 DAYS FOR MULTI-SHIFT OPERATIONS)
☐ Remove any debris that may have accumulated around the dock equipment.	☐ Perform all "every day" tasks.
☐ Check dock bumpers/extensions and wall cracks	☐ Grease IVR303 rollers
☐ Check interior and exterior light system.	☐ Inspect for damaged or missing parts, rust, corrosion, bent parts, cracks, etc.
☐ Check all applicable exterior signage.	☐ Check anchors.
☐ Check safety warning decals and replace if necessary.	☐ Check junction box and control panel for proper and secure mounting. Verify that all electrical connections are firm.
☐ Verify complication-free operation of the Control Panel	☐ Check condition and torque of securing anchors and concrete conditions.
☐ Verify complication-free operation of the dock equipment	☐ Test Manual Pin Pull Operation.
☐ Verify that instructional caution and danger labels are present and legible on the product. Replace if necessary.	☐ Inspect main arm for any signs of cracks
☐ Verify complication free operation of the equipment through a complete cycle (refer to Operation Placard).	☐ Check latch arm face for signs of deformation
EVERY 6 MONTHS	ONCE A YEAR
☐ Check mounting anchor bolt torque 45 lbf-ft (61 N·m)	☐ Remove the carriage assembly and inspect/lubricate the bearings
☐ Test manual pin pull operation and confirm the proximity sensor-to-pin gap is 0.125 in (3 mm)	
☐ Check and if required clean the roller track U-channel	

☐ _____

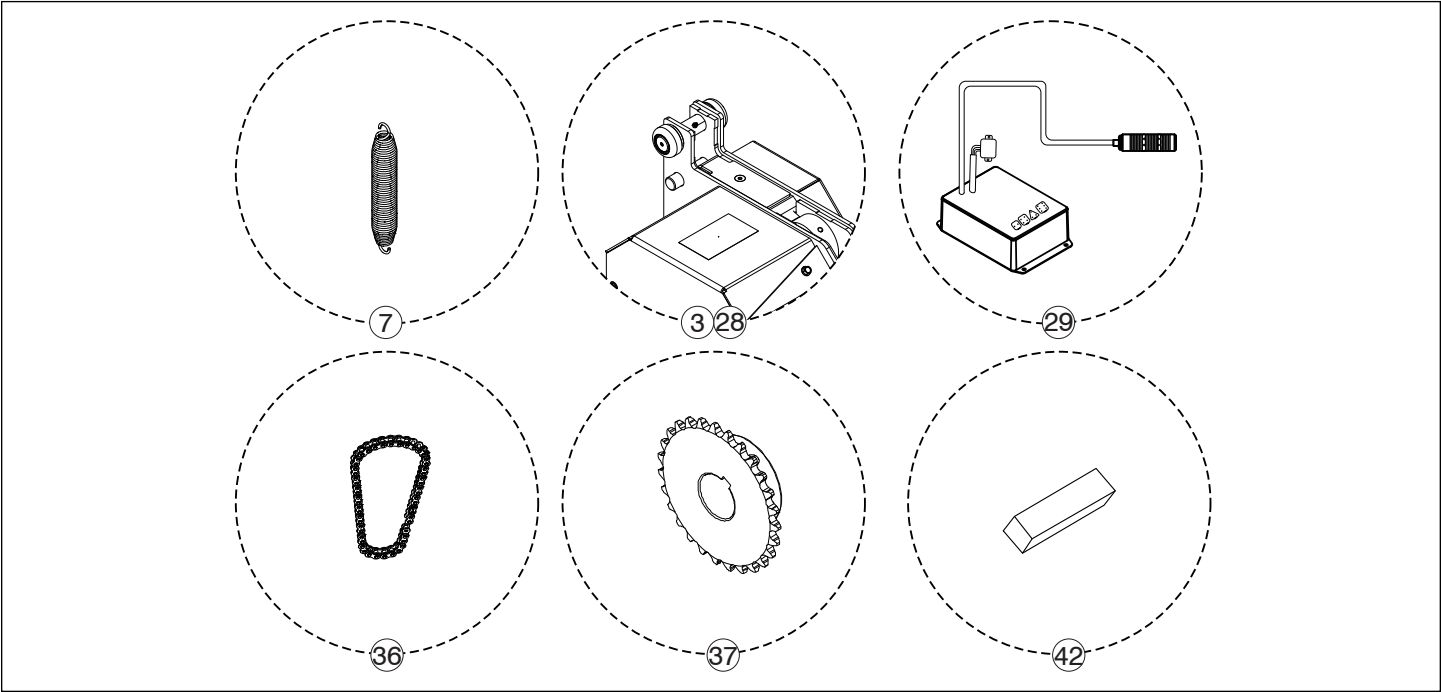
☐ _____

SCAN TO STORAGE OR PHOTOCOPY THIS CHECKLIST AND FILL OUT REGULARLY FOR YOUR RECORDS.

Explain faults briefly in the space provided below:

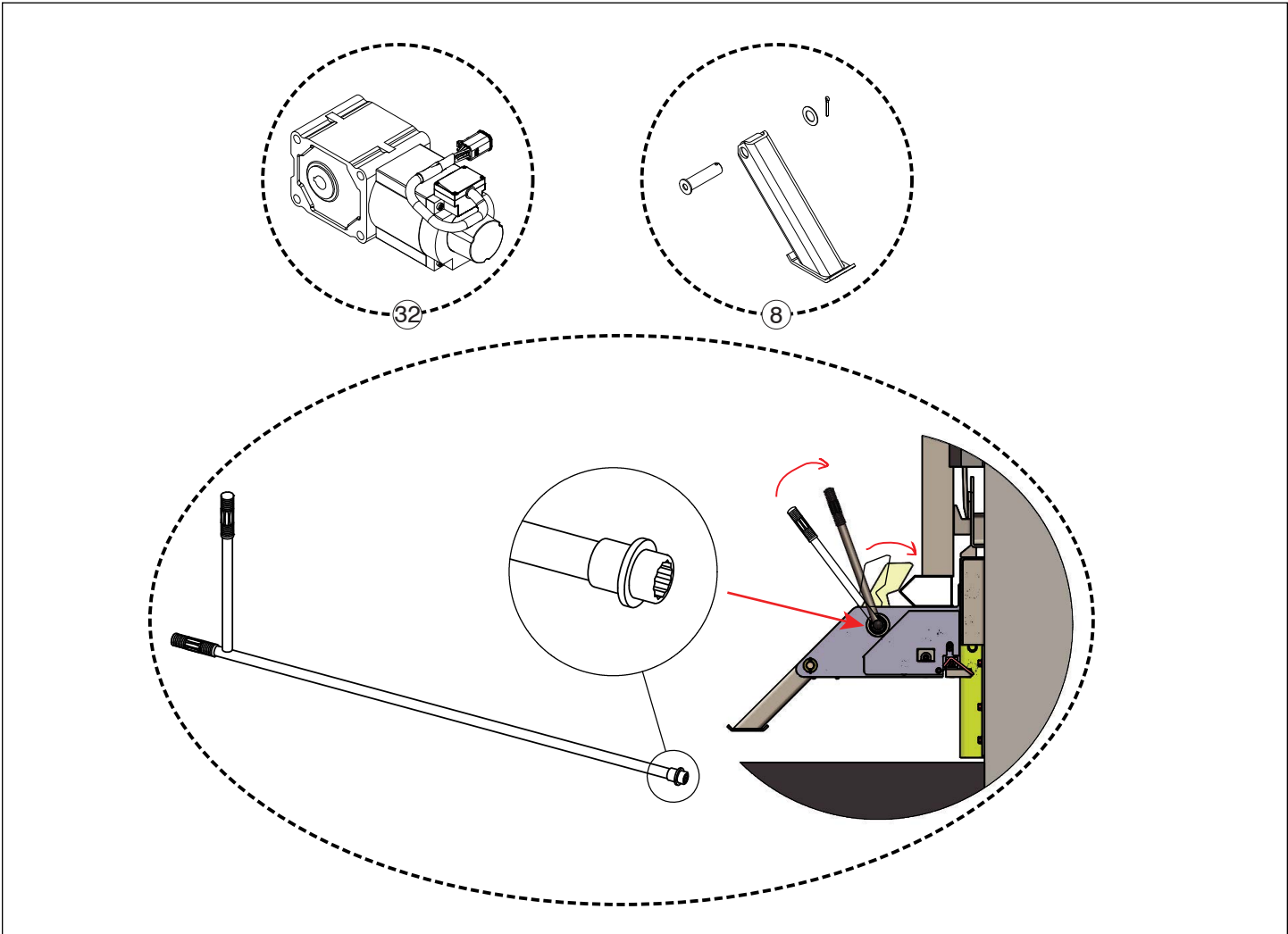
8.0 RECOMMENDED PARTS

8.1 STANDARD OPERATIONAL COMPONENTS



RESTRAINT STANDARD OPERATIONAL COMPONENTS			
ITEM	QTY	PART NO.	DESCRIPTION
7	4	56-010295	Extension Spring OD 1.875 x 10.75 long
2	1	2028856-PC	CARRIAGE ASSEMBLY,IVR303
		2028856-ZP	CARRIAGE ASSEMBLY,IVR303, Zinc Plated
29	1	BGRM204-IVR	MODULE,BGENIUS4,IVR RESTRAINT
36	1	2028384	ROLLER CHAIN ASSEMBLY
37	1	023-002	CHAIN SPROCKET #35B-15T BORE 0.625
42	1	118-755	KEY 1/4in SQ x 1in LG

8.2 OPTIONAL SUPPORT COMPONENTS

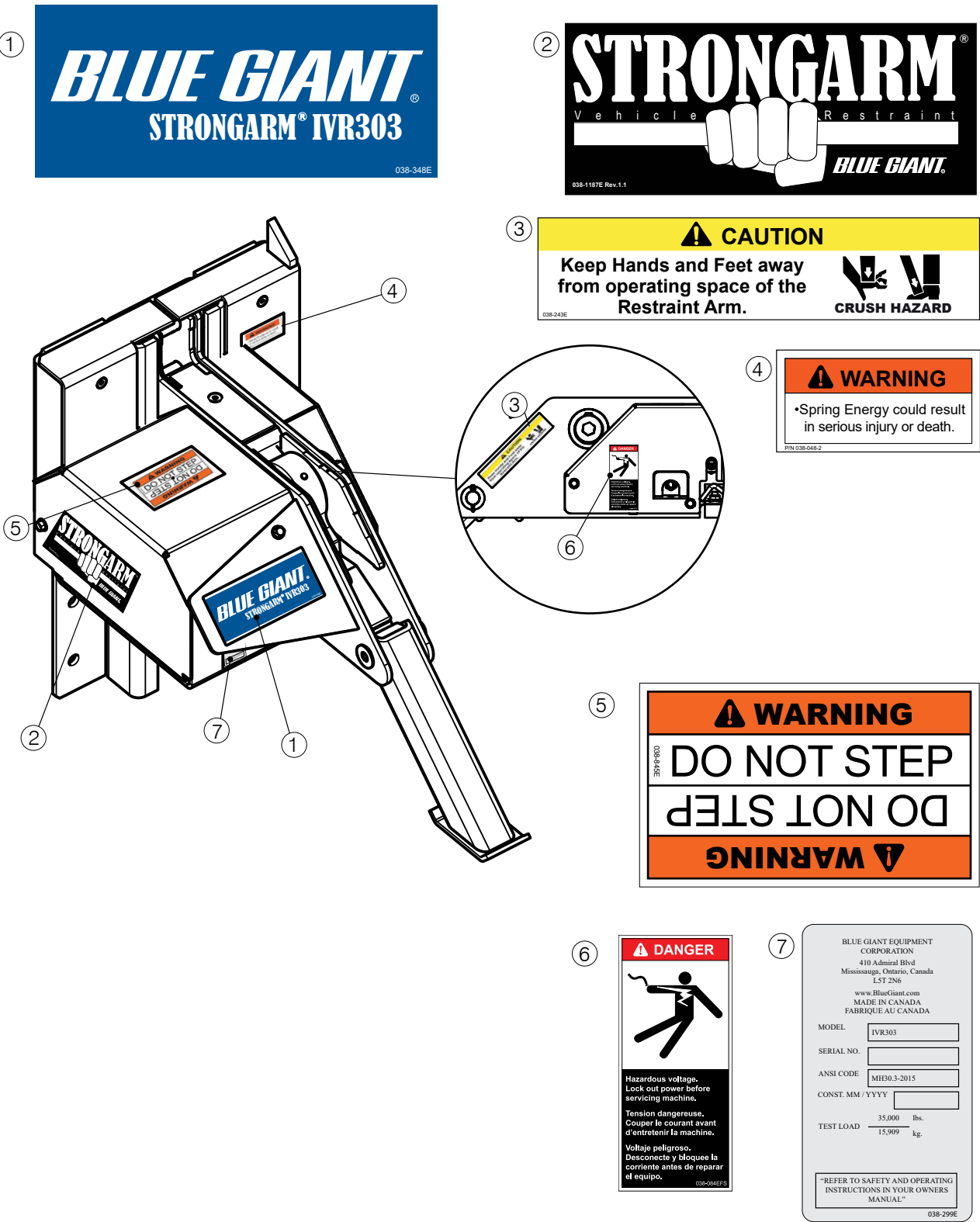


RESTRAINT OPTIONAL COMPONENTS			
ITEM	QTY	PART NO.	DESCRIPTION
8	1	2030058-PC	EXTENSION ARM ASSEMBLY,IVR303
		2030058-ZP	EXTENSION ARM ASSEMBLY,IVR303, Zinc Plated
32	1	1005476	GEARMOTOR, W/CONN, HVR303, 115V
	1	56-011930-1-PC	MANUAL RELEASE KEY, IVR303

9.0 DECAL IDENTIFICATION AND LOCATION

These labels inform operators and personnel about hazardous areas on and around the restraint.

NOTE: Actual product may not appear exactly as shown.



The Operation Placard (Part. No. 038-1293E) is to be wall mounted near the restraint controls. A duplicate is provided on the following page. The Exterior Notice Placard (Part. No. 038-1258E) is to be wall mounted near the External Traffic Lights. Duplicates of 038-1293E and 038-1258E provided on the following pages (Not to scale).



NOTICE

**ALTERNATING
RED GREEN
BACK UP
TO RELEASE**

NOTICE

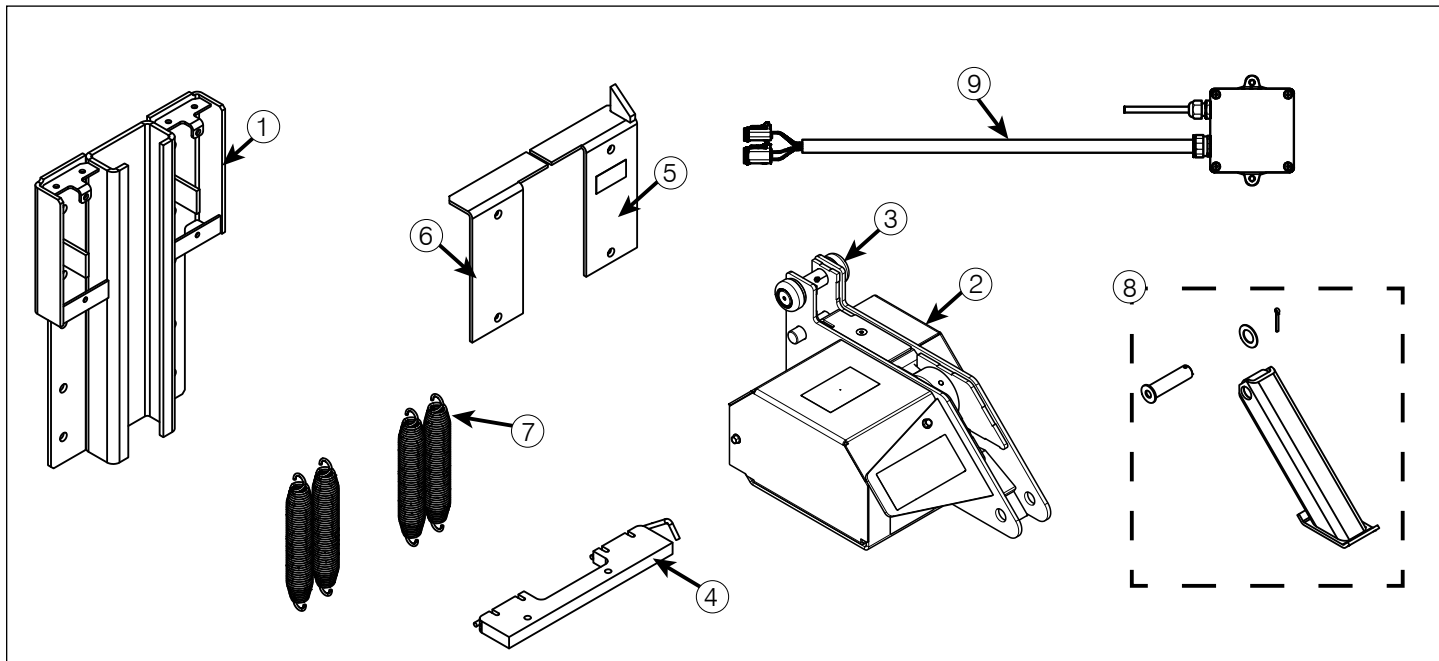
**ALTERNATING
RED GREEN
BACK UP
TO RELEASE**

10.0 EQUIPMENT COMPONENT ILLUSTRATIONS

This section displays the various hardware components.

10.1 COMPONENTS AS SHIPPED CHECKLIST

This section displays the shipped hardware components. It is valid for either right or left hand drive versions.



✓	ITEM	QTY	PART #	DESCRIPTION	APPROX. WEIGHT	
	1	1	2028408-PC	ROLLER TRACK ASSY,IVR303,POWDER COATED	62 lbs	28 kg
			2028408-ZP	ROLLER TRACK ASSY,IVR303,ZINC PLATED		
	2	1	2028856-PC	CARRIAGE ASSEMBLY,IVR303	125 lbs	57 kg
			2028856-ZP	CARRIAGE ASSEMBLY,IVR303, ZINC PLATED		
	3	4	019-034	Carriage Roller, Housing with Bearing	3.20 lbs	1.45 kg
	4	1	56-010193	Spring Bar Weld	12 lbs	5.44 kg
			56-010193-ZP	Spring Bar Weld, Zinc Plated		
	5	1	56-010306	L Spring Cover Weld	6 lbs	2.72 kg
			56-010306-ZP	L Spring Cover Weld, Zinc Plated		
	6	1	56-010304	R Spring Cover	5 lbs	2.27 kg
			56-010304-ZP	R Spring Cover, Zinc Plated		
	7	4	56-010295	Extension Spring OD 1.875 x 10.75 long	2 lbs	0.9 kg
	8	1	2030058-PC	Extension Arm Assembly	10 lbs	4.5 kg
			2030058-ZP	Extension Arm Assembly, Zinc Plated		
	9	1	026-H27-2	JCT BX ASSY, BGC, HVR/IVR	1 lb	0.45 kg



CONTROL AND COMPONENTS INCLUDED:

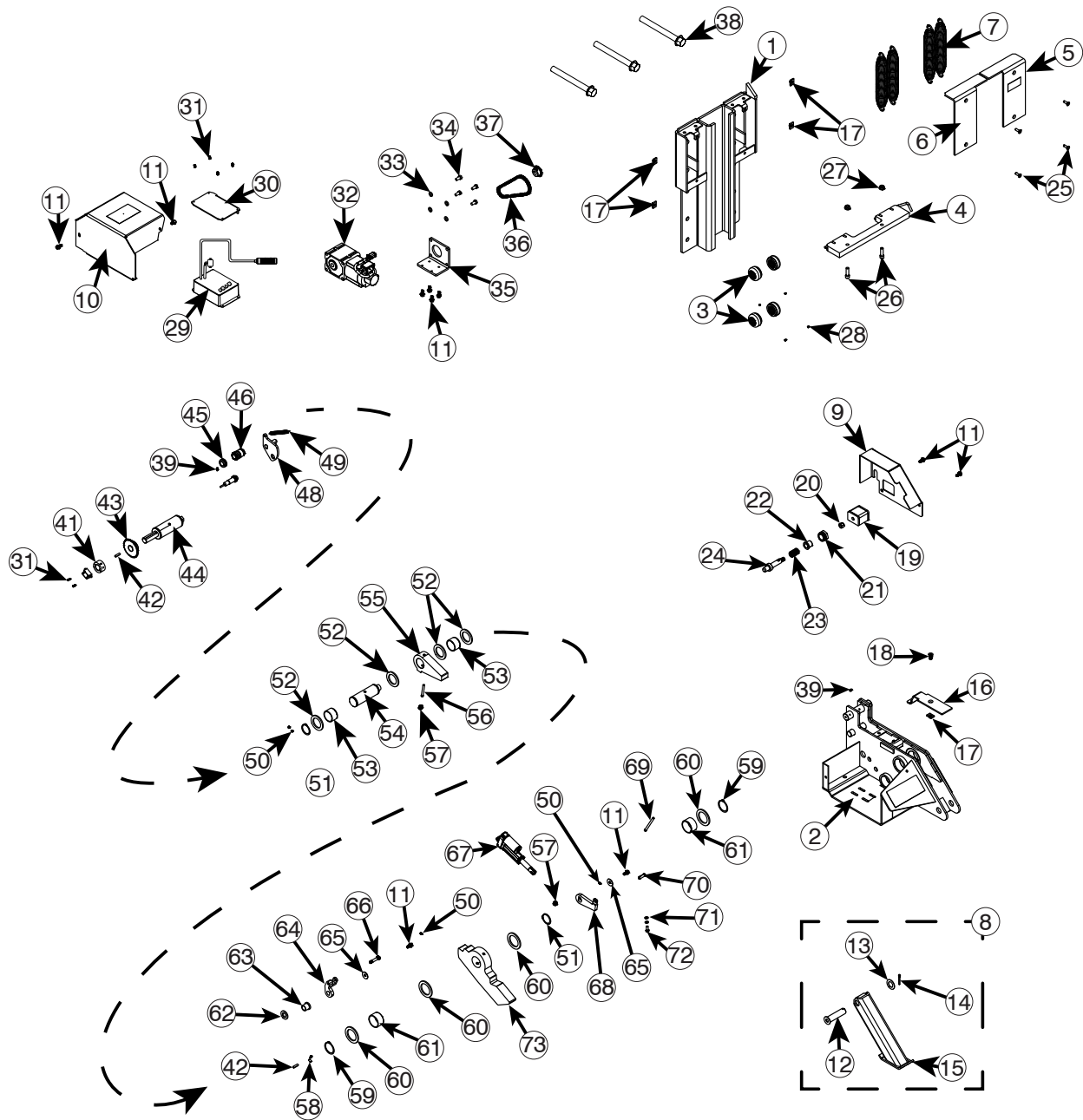
✓	QTY.	PART NO.	DESCRIPTION	APPROX. WEIGHT	
	1	—	Complete Control Assembly	lb	kg
	1	038-1293E	Operating Instructions Placard	—	—
	1	038-1258E	Exterior Notice Placard	—	—
	1	038-1254EI	Installation Manual	—	—
	1	038-1254E	Owner's Manual	—	—
	1	038-1254EPL	Parts List (available on the Blue Giant website)	—	—
	1	032-806	Exterior Traffic Light	1.3 lb	0.6 kg
	1	038-225	E	Exterior Driver Warning Sign	0.7 lb
			F		
			S		
	1	026-G019	Dock Interlock (Lip Sensor)	0.4 lb	0.18 kg
	1	026-M12-F5	5 Meter Cable for Proximity Sensor	—	—
	1	026-M12-F2	2 Meter Cable for Proximity Sensor	—	—
	1	21-002154	Mounting Bracket for Proximity Sensor	—	—

HARDWARE INCLUDED:

✓	QTY	PART #	DESCRIPTION	APPROX. WEIGHT	
	2	010-232	Socket Cap Screw 7/16"-14 x 1 1-2" L	1 lb	0.45 kg
	2	011-863	Serrated-Flange HEX. Nut 7/16" - 14		
	4	011-042	Cap Screw, HEX Socket F/H 5/16-18 x 1"		
	2	010-037	Cap Screw 5/16-18 x 3/4 HH GR. 5 ZC		
	2	012-200	Regular Spring Lock Washer 5/16"		
	15	010-239	Self Tapping Anchor	6 lbs	2.72 kg
	1	026-H27-2	JCT BX ASSY, BGC, HVR/IVR	0.8 lb	0.36 kg

Contact your Blue Giant Dealer, if you have questions.

10.2 MECHANICAL ASSEMBLY



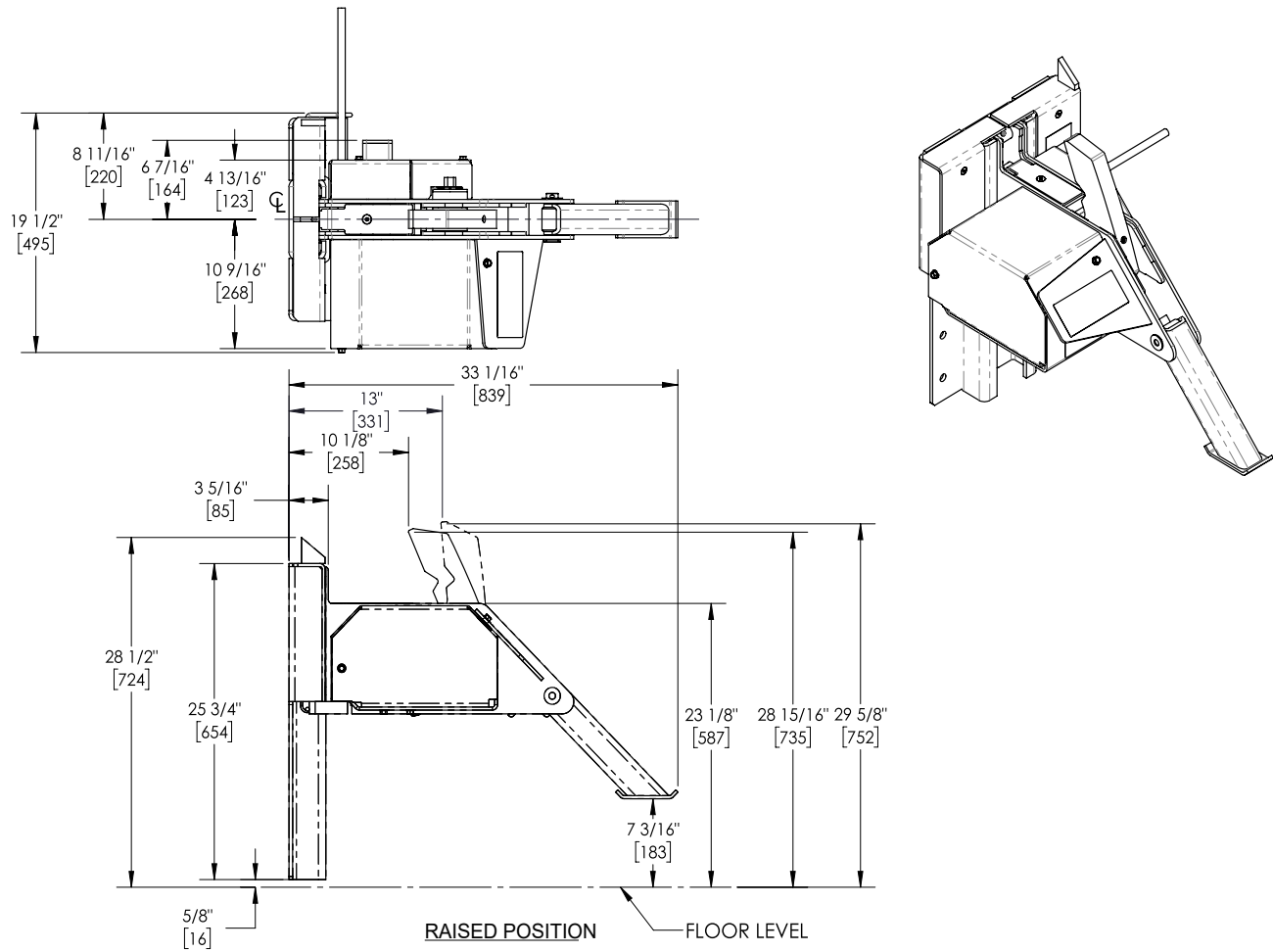
ITEM	QTY	PART #	DESCRIPTION
1	1	2028408-PC	ROLLER TRACK ASSY,IVR303,POWDER COATED
		2028408-ZP	ROLLER TRACK ASSY,IVR303,ZINC PLATED
2	1	2028856-PC	CARRIAGE ASSEMBLY,IVR303
		2028856-ZP	CARRIAGE ASSEMBLY,IVR303, ZINC PLATED
3	4	019-034	Carriage Roller, Housing with Bearing
4	1	56-010193-PC	WELDMENT,SPRINGS BAR,POWDER COATED
		56-010193-ZP	WELDMENT,SPRINGS BAR,Zn PLATED
5	1	56-010306-PC	WELDMENT,SPRINGS COVER,LH,POWDER COATED
		56-010306-ZP	WELDMENT,SPRINGS COVER,Zn PLATED,LH

ITEM	QTY	PART #	DESCRIPTION
6	1	56-010304-PC	RH SPRINGS COVER,POWDER COATED
		56-010304-ZP	SPRINGS COVER,Zn PLATED,RH
7	4	56-010295	Extension Spring OD 1.875 x 10.75 long
8	1	2030058-PC	EXTENSION ARM ASSEMBLY,IVR303
		2030058-ZP	EXTENSION ARM ASSEMBLY,IVR303, ZINC PLATED
9	1	2030468-PC	ACTUATOR COVER,IVR303,POWDER COATED
		2030468-ZP	ACTUATOR COVER,IVR303,ZINC PLATED
10	1	2030523-PC	MOTOR COVER,IVR303, POWDER COATED
		2030523-ZP	MOTOR COVER,IVR303,ZINC PLATED
11	9	011-226	SCREW,HEX HD,FLANGE,5/16-18 UNC,1/2Wx21/64Hx3/4inL
12	1	56-010569	WELDMENT, EXTENSION PIN
13	1	106-389	WASHER, SPACER,1 ID X 1-3/4 OD X 1/16 THK
14	1	013-025	PIN,COTTER,3/16X1 1/2,PREFERRED
15	1	2030058-PC	EXTENSION ARM ASSEMBLY,IVR303
		2030058-ZP	EXTENSION ARM ASSEMBLY,IVR303, ZINC PLATED
16	1	2029699-PC	TOP COVER,IVR303,POWDER COAT
		2029699-ZP	TOP COVER,IVR303,ZINC PLATED
17	1	011-864	CAGE NUT 5/16 UNC
18	1	011-230	SCREW,HEX HD,FLAT,3/8-16 UNC,0.781 DIAx0.234Hx1inL
19	1	2030507-PC	PULL WELDMENT,IVR303,POWDER COAT
		2030507-ZP	PULL WELDMENT,IVR303,ZINC PLATE
20	1	011-554	NUT HEX LOCK NYLON INSERT
21	1	2030374	PLUG WITH HOLE
22	1	018-032-7	BUSHING,IGUS,0.75 IDx1 OD,FLANGE 1.25 ODx1inL
23	1	017-011	Compression Springs, 1.5" Long, 0.97" OD, 0.81" ID
24	1	2030373	SUPPORT PIN
25	4	011-042	SCREW,SKT,COUNTER,5/16-18X1,PFD
26	2	010-232	SCREW,CAP,SOCKET HEAD,7/16-14X1 1/2,NP
27	2	011-863	NUT,HEX,SERRATED,FLANGE,7/16"-14,NP
28	4	014-013	SET SCREW, 1/4-28X1/4
29	1	BGRM204-IVR	MODULE,BGENIUS4,IVR RESTRAINT
30	1	2032859	MODULE BRACKET, IVR303
31	4	011-208	Socket Head Screw, 8-32 Thread Size, 3/8" Long
32	1	1005476	GEARMOTOR, W/CONN, HVR303, 115V
33	4	012-228	LOCKWASHER SPRING 7/16" BOLT SIZE, ZINC PLATED
34	4	010-170	HEX CAP SCREW M10x20 - GR8.8 ZINC
35	1	2000487-1	NEXT GEN HVR MOTOR BRACKET

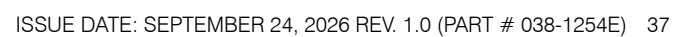
ITEM	QTY	PART #	DESCRIPTION
36	1	2028384	ROLLER CHAIN ASSEMBLY,IVR303
37	1	023-002	CHAIN SPROCKET #35B-15T BORE 0.625
38	15	010-239	SCREW ANCHOR,1/2inX4-1/2in
39	2	019-500	NIPPLE STRAIGHT GREASE 1/4"
41	1	2028171	SENSOR MOUNTING HUB
42	1	118-755	KEY 1/4in SQ x 1in LG
43	1	023-048	CHAIN SPROCKET, ANSI#35B27 x BORE 1 1/4
44	1	2027767	HOOK SHAFT
45	1	037-053	PUSH-IN GROMMET - ID 3/4 x OD 1 1/16 x 1/4
46	1	025-023	CONNECTOR CABLE,3/4in CORD GRIP
48	1	2030403	LINEAR ACTUATOR SWIVEL BASE
49	1	017-010	Spring with Loop Ends
50	2	014-027	SETSCREW,CUP-POINT,10-24 UNC,3/32 DIAx3/8inL
51	1	013-176	RETAINING RING,BP,1 3/4 ODx1.618 IDx0.062 THK
52	4	2027786	CAM SHAFT WASHER
53	1	018-032-3	BUSHING,IGUS,2 IDx2.1875 ODx1.5inL
54	1	2027784	CAM SHAFT
55	1	2030251	LATCH, INTERMODAL
56	1	013-095	M2 HIGH-SPEED TOOL STEEL, 0.305" DIAMETER, 2-1/2" LONG
57	1	014-036	Cup-Point Set Screw
58	2	014-004	SCREW,SET,SOCKET,5/16-18X1/2,PREFERRED
59	2	013-175	RETAINING RING,12 ODx1.85 IDx0.062 THK
60	1	2027778	HOOK SHAFT WASHER
61	1	018-032-5	BUSHING ,IGUS,2 IDx2.25 ODx2inL
62	1	012-018	WASHER,ZnCrO4,GR 9,0.819 IDx1.499 ODx0.146-0.174 THK
63	1	018-032-7	FLANGE BEARING, .75in DIA, 1 in LG
64	1	2033566	ACTUATOR MOUNTING BLOCK
65	1	012-009	WASHER,Zn,0.344 IDx1.250 ODx0.042-0.051 THK
66	1	011-229	SCREW,HEX SOCKET,SHOULDER,3/8-16 UNC,9/16 DIAx1/4Hx1 1/4inL
67	1	026-006	ACTUATOR,LINEAR,24VDC
68	1	2028208	LATCH HOOK LINK
69	1	013-093	M2 High-Speed Tool Steel, 0.305" Diameter, 4" Long
70	1	013-177	Flat-Head Quick-Release Pins
71	2	012-200	LOCKWASHER,SPRING,5/16",BOLT SIZE
72	1	010-037	SCREW,CAP,HEX HD,5/16-18x0.75X0.75,-,PREFERRED
73	1	2030452	HOOK ARM,IVR303

10.3 GENERAL DIMENSIONS

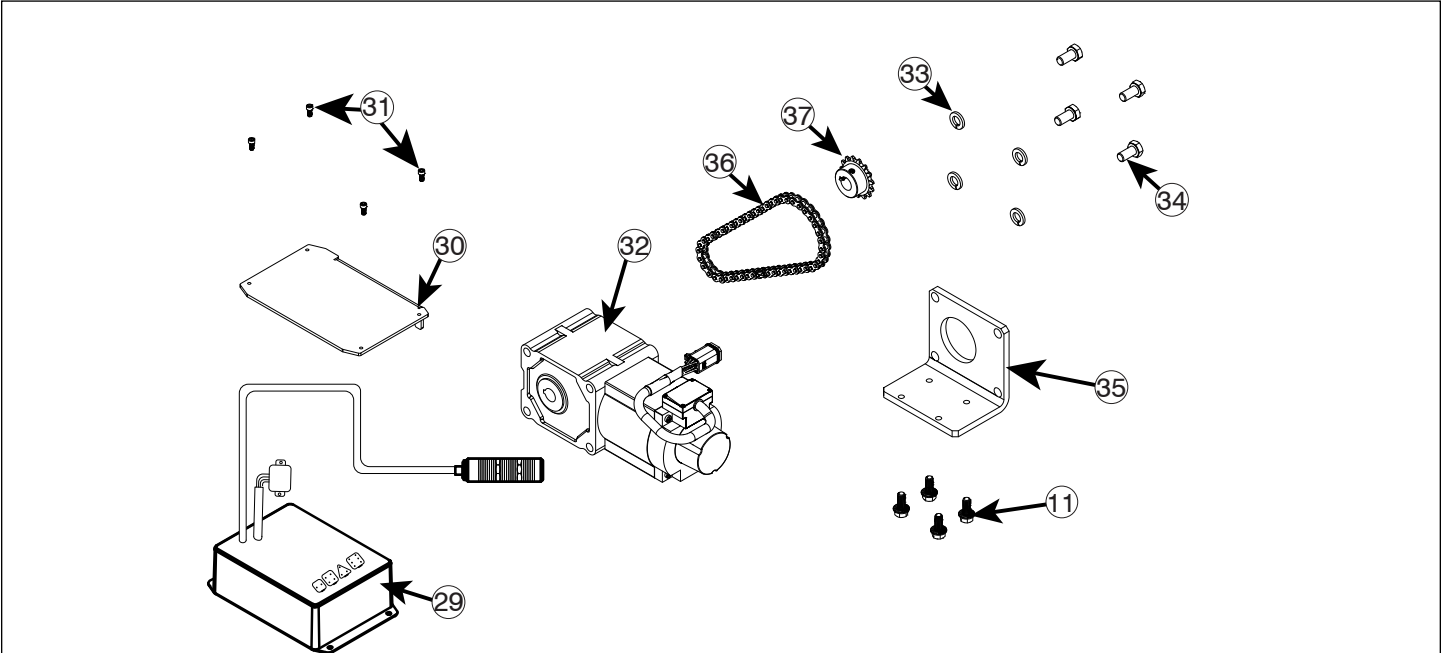
This section describes the length and height of the StrongArm® IVR303 Restraint components.



Contact your Blue Giant Dealer, if you have questions.

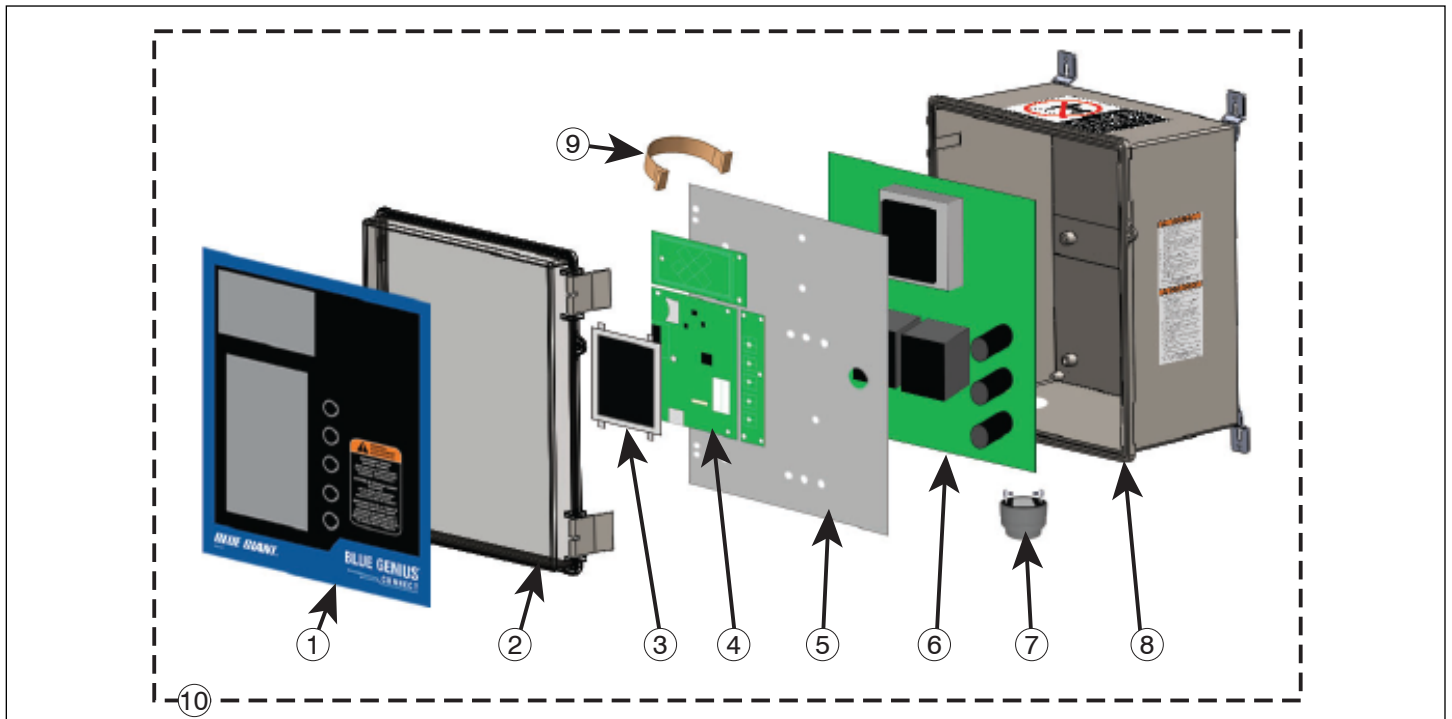


10.4 GEARMOTOR ASSEMBLY- 2033231



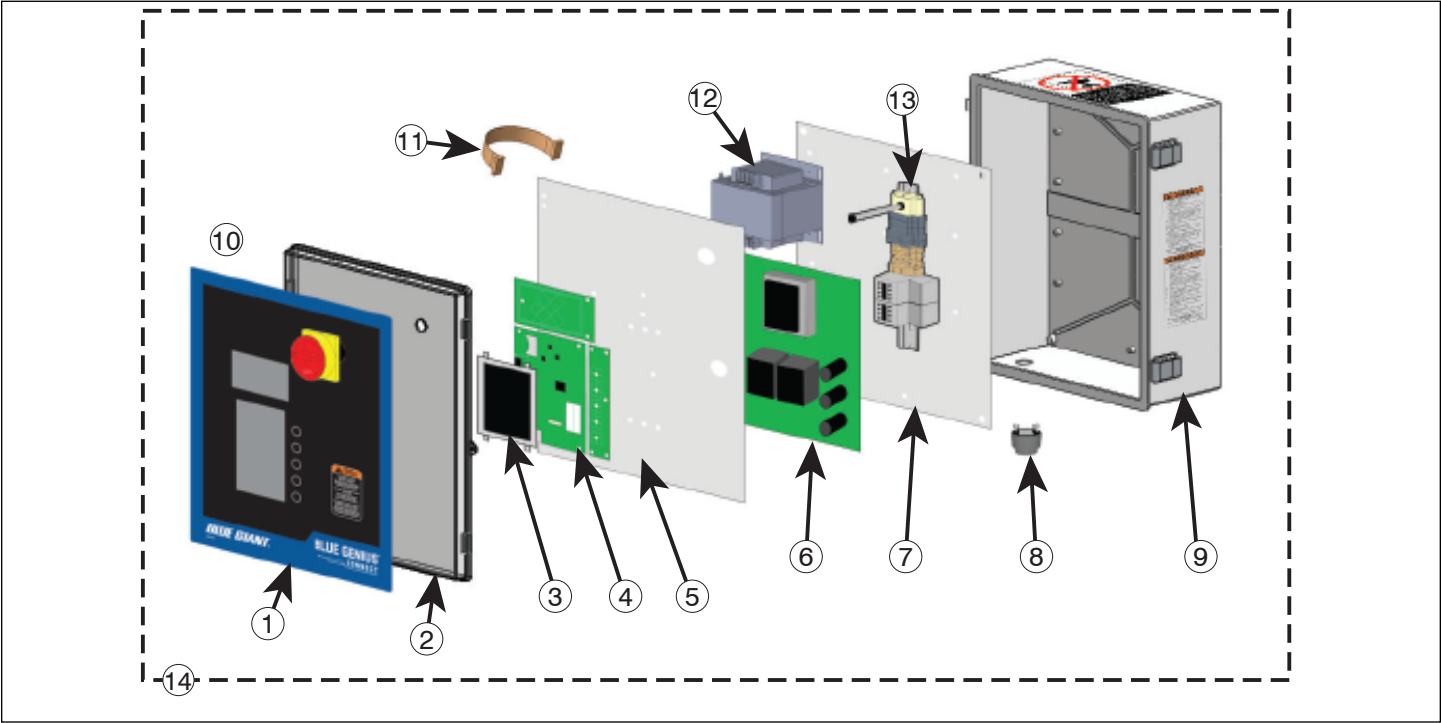
ITEM	QTY	PART #	DESCRIPTION
11	9	011-226	SCREW,HEX HD,FLANGE,5/16-18 UNC,1/2Wx21/64Hx3/4inL
29	1	BGRM204-IVR	MODULE,BGENIUS4,IVR RESTRAINT
30	1	2032859	MODULE BRACKET, IVR303
31	4	011-208	Socket Head Screw, 8-32 Thread Size, 3/8" Long
32	1	031-615	MOTOR,1/10HP,115/1/60
33	4	012-228	LOCKWASHER SPRING 7/16" BOLT SIZE, ZINC PLATED
34	4	010-170	HEX CAP SCREW M10x20 - GR8.8 ZINC
35	1	2000487-1	NEXT GEN HVR MOTOR BRACKET
36	1	2028384	ROLLER CHAIN ASSEMBLY,IVR303
37	1	023-002	CHAIN SPROCKET #35B-15T BORE 0.625

10.5 BLUE GENIUS CONNECT® CONTROLS



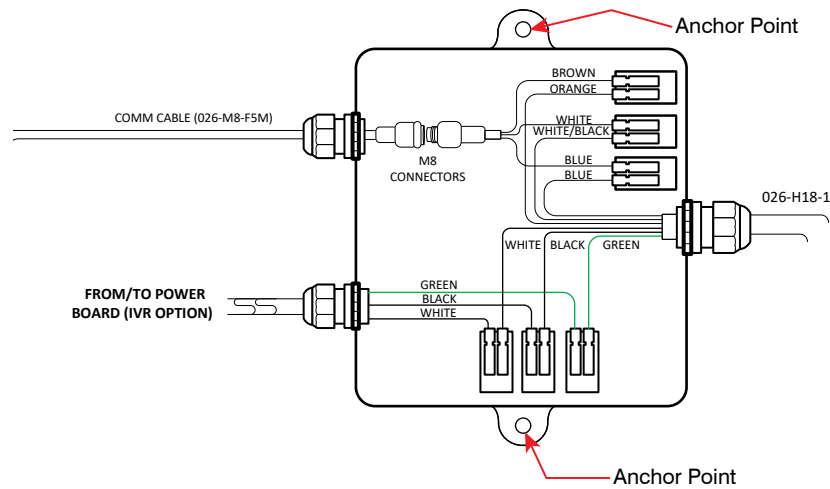
ITEM	QTY	PART #	DESCRIPTION
1	1	038-451	FRONT DECAL
2	1	025-G044-TC	BGC FRONT COVER
3	1	026-B120	DISPLAY SCREEN
4	1	BG2-CB002	CONTROL BOARD
5	1	025-G050	DIVIDER PLATE
6	1	BG2-PB001-115	POWER BOARD 1PH 115V
	1	BG2-PB003-230	POWER BOARD 3PH 230V
	1	BG2-PB003-460	POWER BOARD 3PH 460V
	1	BG2-PB003-575	POWER BOARD 3PH 575V
7	1	026-G402-C	ALARM
8	1	025-G044-A	ENCLOSURE
9	1	026-G030	RIBBON CABLE
10	1	BGC-1115	1PH,115V CONTROL BOX
	1	BGC-1230	1PH,230V CONTROL BOX
	1	BGC-3230	3PH,230V CONTROL BOX
	1	BGC-3460	3PH,460V CONTROL BOX
	1	BGC-3575	3PH,575V CONTROL BOX

10.6 BLUE GENIUS CONNECT PLUS® CONTROLS

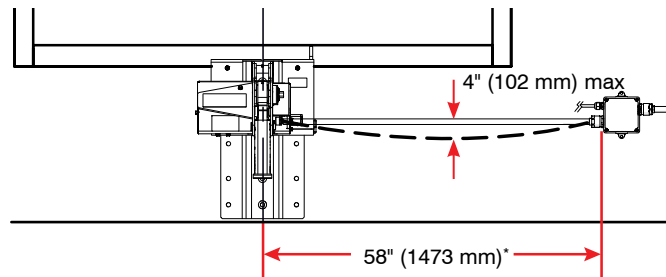


ITEM	QTY	PART #	DESCRIPTION
1	1	038-450	FRONT DECAL
2	1	025-G012-TC	BGC FRONT COVER
3	1	026-B120	DISPLAY SCREEN
4	1	BG2-CB002	CONTROL BOARD
5	1	025-G054	DIVIDER PLATE
6	1	BG2-PB003-230	POWER BOARD 3PH 230V
	1	BG2-PB003-460	POWER BOARD 3PH 460V
	1	BG2-PB003-575	POWER BOARD 3PH 575V
7	1	025-G052	BACK PLATE
8	1	026-G402-C	ALARM
9	1	025-G012-A	ENCLOSURE
10	1	028-590	ROTARY DISCONNECT HANDLE
11	1	026-G075	RIBBON CABLE
12	1	026-385	TRANSFORMER,2000VA,480V/600V,120V/240V
	1	026-387	TRANSFORMER 2000VA 240V 120V
13	1	025-G046-A	DIN RAIL ASSEMBLY
14	1	BGCP-3230	3PH,230V CONTROL BOX
	1	BGCP-3460	3PH,460V CONTROL BOX
	1	BGCP-3575	3PH,575V CONTROL BOX

10.7 REMOTE I/O J-BOX 026-H27-2



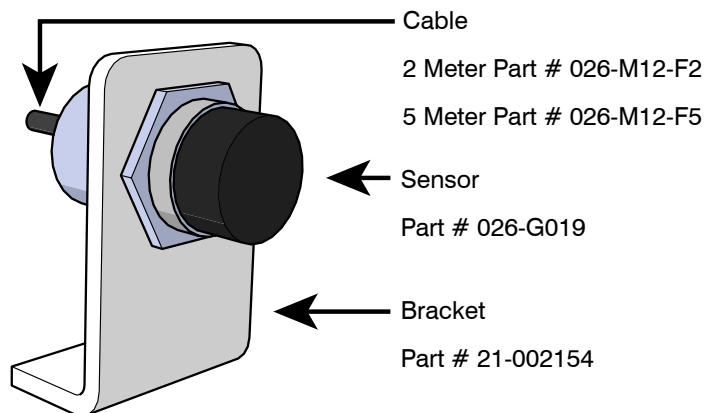
Cable droop to junction box adjustment (4" (102 mm) max). 58" (1473 mm) based on sight conditions.



10.8 DOCK INTERLOCK SENSOR

This section depicts the door interlock sensor and the mounting bracket.

- Ties sequence of vehicle restraint to dock leveler operation
- Loading dock safety is improved with accurate operation sequence
- Interior traffic light and vehicle restraint release operation relies on interlock capability
- Mounted at parked position of any leveler

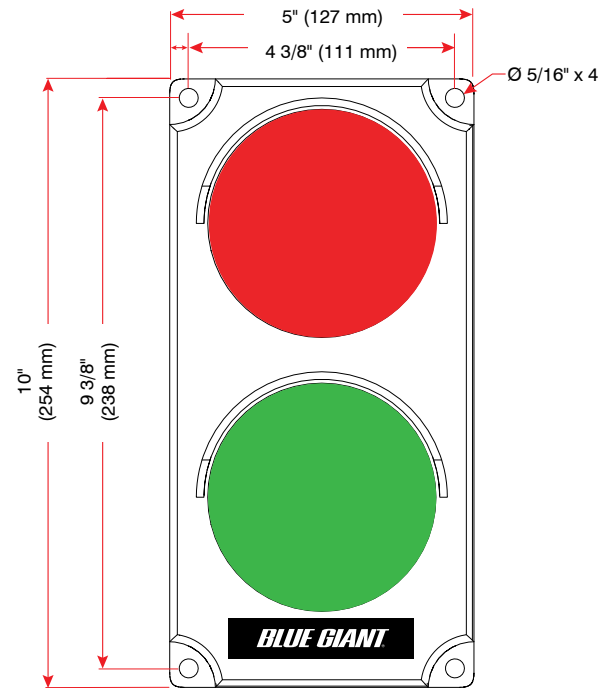


The sensor ties the sequence of wheel chock to the dock leveler operation. Loading dock safety is improved with accurate operation sequence. Interior traffic light and wheel chock release operation relies on the interlock capability. It is mounted at parked position of any leveler.

11.0 EXTERIOR DRIVER TRAFFIC LIGHT INSTALLATION

This procedure describes the wall mounting of the exterior traffic light

1. Mount the exterior traffic light approximately 84in. - 96in. (2134 - 2438mm) above the driveway surface on the required side of the loading bay entrance and easily viewed in the driver's rear view side mirror.



Exterior driver traffic light, part # 032-806.

2. Ensure that the traffic light is both square and level.
3. Add shims to the back if needed. Do not over-tighten the fasteners.
4. Drill the hole for the cable.
Ensure that the hole is thoroughly deburred (cleaned out) so that accidental damage does not occur when the cable is pulled through during and after installation.

NOTE: Mount to a flat surface. DO NOT deform light housing with irregular wall surface.

11.1 EXTERIOR DRIVER WARNING SIGN INSTALLATION

This procedure describes the mounting of the exterior warning sign for drivers.

NOTE: When fastening the sign to the wall, do not warp or twist the sign while tightening the anchors. (Use shim washer if needed.)

Do not over-tighten fastenings, as damage to the sign may occur.

1. Position the driver warning sign near or below the exterior traffic light and verify that the sign is easily viewed by drivers.
As the sign comes without mounting holes, drill a minimum of four holes, no less than 3/8in. (10mm) (see detail), from the sign's edge. Ensure that the mounting holes exceed the width of the anchor device shaft for expansion reasons (i.e. for a 1/4in. anchor use a 5/16in. hole).
2. Verify that the sign is level, and centered beneath/near the traffic light.



11.2 EXTERIOR OPERATING INSTRUCTION PLACARD INSTALLATION

This procedure describes the mounting of the Exterior Operation Placard (part # 038-1258E) for outside dock workers or drivers.

NOTE: When fastening the sign to the wall, do not warp or twist the sign while tightening the anchors. (Use shim washer if needed.)
Do not over-tighten fastenings, as damage to the sign may occur.

1. Position the exterior operating instruction placard above the exterior chock cradle and verify that the sign is easily viewed by external dock workers and drivers.

As the sign comes without mounting holes, drill a minimum of four holes, no less than 3/8in. (10mm), from the sign's edge.

Ensure that the mounting holes exceed the width of the anchor device shaft for expansion reasons (i.e. for a 1/4in. anchor use a 5/16in. hole).



BLUE GIANT 038-1258E Rev.1.0

2. Verify that the sign is level and centered beneath the traffic light.

11.3 INTERIOR OPERATING INSTRUCTION PLACARD INSTALLATION

This procedure describes the mounting of the interior operating instruction placard for outside dock workers or drivers.

NOTE: When fastening the sign to the wall, do not warp or twist the sign while tightening the anchors. (Use shim washer if needed.) Do not over-tighten fastenings, as damage to the sign may occur.

1. Position the exterior operating instruction placard near the Blue Genius Connect® or Blue Genius Connect Plus® Control Panel and verify that the sign is easily viewed by the inside dock operators.

As the sign comes without mounting holes, drill a minimum of four holes, no less than 3/8in. (10mm), from the sign's edge.

Ensure that the mounting holes exceed the width of the anchor device shaft for expansion reasons (i.e. for a 1/4in. anchor use a 5/16in. hole).

OPERATING INSTRUCTIONS
 Only for STRONGARM® IVR303 Vehicle Restraint

A

VEHICLE RESTRAINT WILL ENGAGE

ENGAGE RESTRAINT

1. Visually confirm that the vehicle has a RIG bar and that it is aligned and in range of the restraint arm. The control station light is RED and the traffic light is GREEN.
2. Tap the 'Engage Restraint' button. The arm will rotate from the home position to secure the RIG bar. The traffic light will turn RED and the control station light will remain RED. When the RIG bar is secured, and the deck is deployed onto the truck bed, the control station light will turn GREEN.

B

VEHICLE RESTRAINT WILL RELEASE

RELEASE RESTRAINT

1. Tap the 'Release Restraint' button on the control panel to disengage the vehicle restraint.
2. The control station light will be RED.
3. When the arm reaches the home position and the traffic light turns GREEN. At this point the vehicle is safe to depart.

C

SMART RELEASE (IF ARM IS BLOCKED)

1. Tap the 'Release Restraint' button on the control panel.
2. System will be in loading and display: "RELEASE RESTRAINT FAILED SMART RELEASE WILL BE ACTIVATED IN FEW SECONDS"
3. If trailer is pressing against the arm, the system will display: "REVERSE TRUCK TO RELEASE". The control station light will be RED, and the traffic light will alternately flash GREEN and RED signaling to the driver to reverse the truck to release pressure on the bumper.
4. System will automatically detect the pressure release and the restraint arm will lower to the home position. The traffic light will turn GREEN and at this point the vehicle is safe to depart.

D

VEHICLE RESTRAINT OVERRIDE

1. Tap the 'Engage Restraint' button, if a vehicle's RIG bar is absent or cannot be engaged. A visual inspection is now necessary to determine whether the vehicle needs to be realigned or if wheel chocks are necessary. The control station light and traffic light are both RED.
2. If RIG bar cannot be secured by restraint, tap the 'Bypass Restraint' button. Screen will prompt for a password. Enter password. Enter the supervisor code. Once the deck is deployed and home sensor becomes in-active, the control station will turn GREEN with a YELLOW border.
3. When work has been completed, store the dock leveler. Then tap the 'Release' button on the control station. The control station's light will turn RED, warning dock staff that the vehicle is no longer safe to enter.

E

MANUAL RELEASE ERROR

In case the restraint was manually released, OR if the Latch Sensor Pin is damaged, the system presents this warning to the user. Refer to the Owner's Manual (part# 038-1254E) Section 6.10 for instructions or call your Blue Giant Dealer.

LOCK TEST OVERRIDE

1. If the sensor does not detect the latch pin after lock test then continue with the **Lock Test Override Bypass** procedure.
2. Tap the "BYPASS LOCK TEST" button. Screen will prompt for a password. Enter password; by default, password is _____. Once the deck is deployed and home sensor becomes in-active, the control station will turn GREEN with a YELLOW border. (*Note: this code can be changed)

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038-1293E Rev.1.0

2. Verify that the sign is level and visible near the Blue Genius Connect® or Blue Genius Connect Plus® Control Panel.

12.0 TROUBLESHOOTING

Use this section to help diagnose issues if the IVR303 Restraint is not operating as specified.

 **DANGER**

- Failure to properly secure the IVR303 Restraint deck prior to working underneath it may result in bodily injury, or death.

 **WARNING**

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

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

PROBLEM	EXPLANATION
The restraint arm will not rise when the ENGAGE button is tapped.	Faulty wiring, connection or broken wire. See "13.0 WIRING DIAGRAMS" on page 50. Power source problem. Check incoming voltage and compare to data nameplate voltage. Restraint apparatus is seized. Check for foreign objects such as broken wooden pallet splitters. Motor clutch is out of adjustment. Tighten to required specs. The controls are in bypass mode. Tap RELEASE and then ENGAGE on the LCD screen. Chain drive assembly is broken. Check for broken chain or missing keyways in either sprocket. Restraint option not chosen in menu. Drive motor is faulty.
The restraint arm will not lower when the RELEASE button is tapped.	Faulty wiring or connections. Refer to electrical wiring diagram. Arm was improperly engaged. Motor clutch is out of adjustment. Tighten to required specs. Chain drive assembly is broken. Check for broken chain or missing keyways in either sprocket. Restraint apparatus is blocked from coming down. Check for foreign objects.
Restraint works but LED cover lights are not lit. LCD display is working.	Power source for lights is damaged. Replace control board.
Exterior traffic lights are dim, displaying incorrectly (wrong color) or malfunctioning (only one light works).	Check wiring to lights. Check wiring to lights. See "13.0 WIRING DIAGRAMS" on page 50
The restraint is in the parked position and the inside light is green.	The restraint is in the bypass mode and the lip sensor is not active.
Restraint body is not in its home position.	One or more extension springs have broken or come off their mounts. Foreign debris is jamming the body from retracting to the home position. Main channel weldment is damaged from misuse. Lag mounting bolt is obstructing carriage movement.
Arm moves in one direction only.	Motor is not connected properly to terminal strip. See "13.0 WIRING DIAGRAMS" on page 50 Motor has an open winding. Replace motor.
The restraint is powered on. LCD screen displays the message 'Restraint is Bypassed'. The control panel lights are green and flashing yellow while the outside traffic light is red.	The dock leveler is either not parked or the home sensor does not detect it as being in the parked position.

12.1 BLUE GENIUS CONNECT® OR BLUE GENIUS CONNECT PLUS®

Use this section to help diagnose issues if the IVR303 Restraint is not operating as specified.

MESSAGE	EXPLANATION
“RIG-bar Not Found”	The restraint does not detect the vehicle RIG-bar. Verify that the trailer is properly positioned and check that the RIG-bar is present and within the restraint detection area.
“RIG-bar Out of Range”	The restraint has detected the RIG-bar, but the bar is outside the allowable range for the arm to engage and lock. Check the trailer and RIG-bar position and reposition the trailer as required.
“Restraint Runtime Overflow”	Turn power off and check the arm for foreign material or debris caught in the restraint apparatus pathway to the home position. Check to see if the chain is damaged or broken. Chain repairs must be performed by a qualified technician.
“Manual Release Error”	The manual release latch is not detected in its normal position, or the manual release latch is active . Restore the manual release latch to its normal operating position. Check the latch sensor and associated wiring if the error remains active. See “6.9 Manual Release of the Restraint Arm” on page 20
“IVR303 Tilt Sensor Error “	The tilt sensor is not detected. Check the tilt sensor and wiring for loose damage, or broken wires. Check the module inside the restraint and verify that all connections are secure.
“Restraint Failed To Lock”	Contact your Blue Giant Dealer for assistance.
“MANUAL RELEASE ERROR”	If this error repeats then contact your Blue Giant Dealer for assistance.

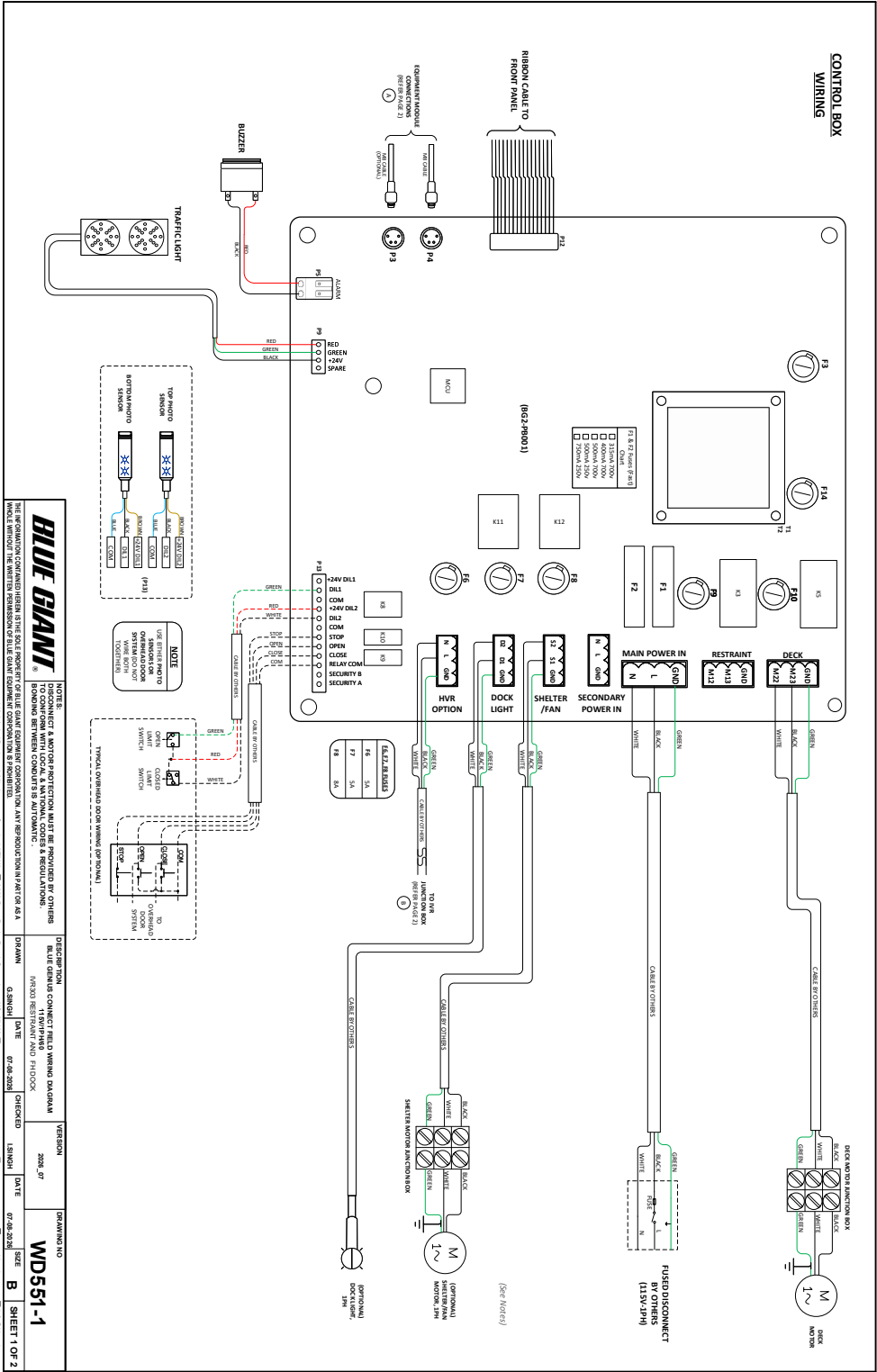
13.0 WIRING DIAGRAMS

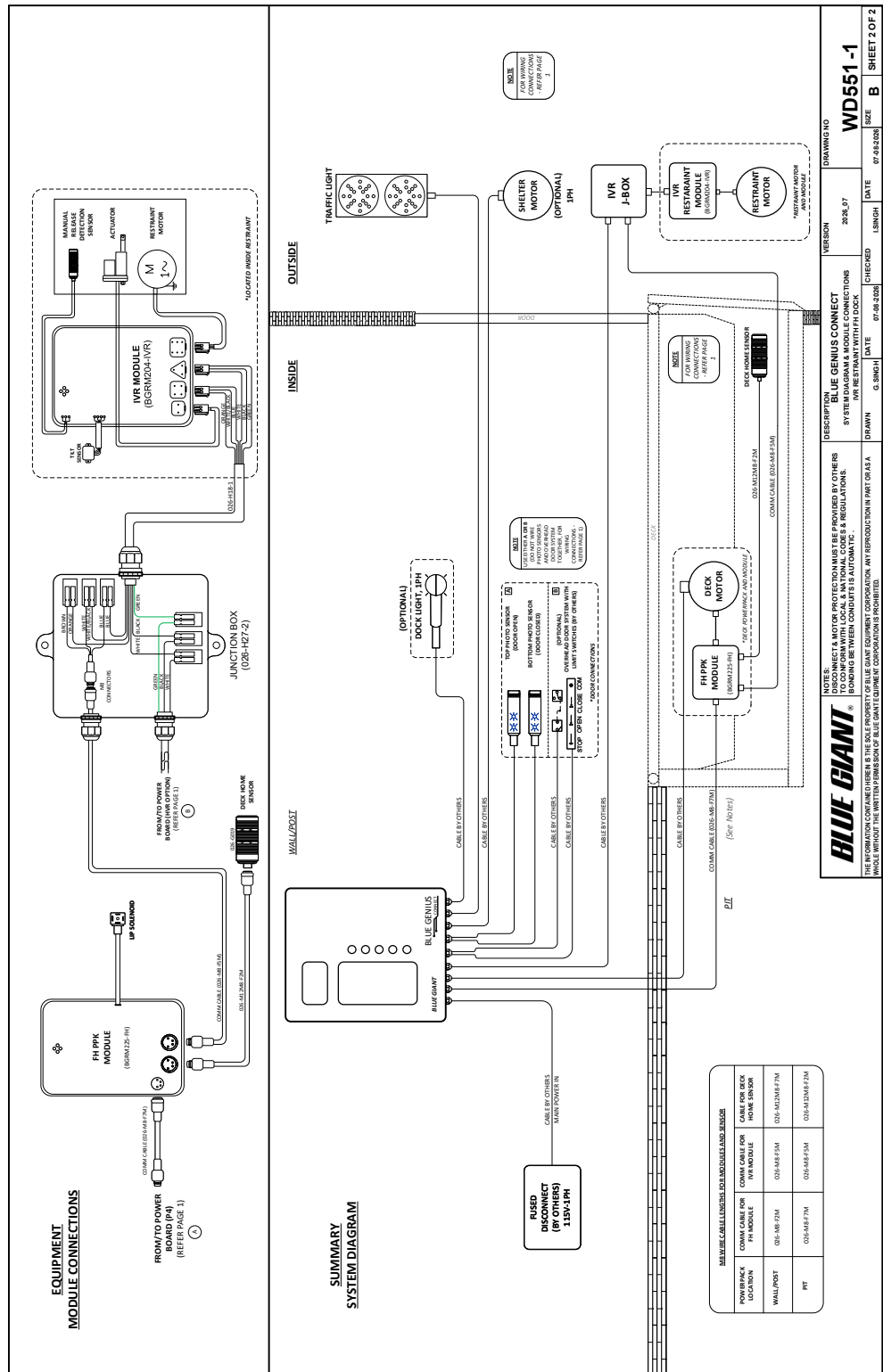
NOTICE

The following wiring diagrams are sample configurations only. Wiring diagrams specific to your needs will be provided inside the control panel and/or as part of your submittal package.

This section describes how the modules are installed, wired, and electrically powered.

13.1 BLUE GENIUS CONNECT® OR BLUE GENIUS CONNECT PLUS® WITH IVR303 RESTRAINT





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NOTES:



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