

OWNER'S MANUAL

U-SERIES MECHANICAL DOCK LEVELER



ACTUAL PRODUCT MAY NOT APPEAR EXACTLY AS SHOWN



WARNING

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

BLUE GIANT®

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1.0 ABOUT THE U-SERIES MECHANICAL DOCK LEVELER

The Blue Giant U-Series Mechanical Dock Leveler is a high performance yet easy to operate system. No manual lifting is involved: simply pull the hold-down release ring (located at the rear of the leveler) to activate the ratchet hold-down system and the deck will move upward, propelled by heavy-duty lift springs. Walk the dock down onto the truck bed, and begin loading / unloading.

The deck is held in place by a precision-milled steel ratchet hold-down system that provides superior locking capabilities.

The lip actuator allows the lip to move smoothly out to the locked position as the deck rises. When the truck departs, the lip will automatically release and lower.

Sturdy steel U-Beams are welded at dynamic impact points on the underside of the deck, preventing "dishing" and providing structural integrity.

1.1 OWNER'S PURCHASE RECORD

OWNER'S PURCHASE RECORD

Please record information for future inquiries and to validate warranty. (See Section 2.1 "Warranty Information" for warranty validation)

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

The manufacturer offers a full line of dock levelers, dock safety equipment, accessories, ergonomic and scissor lift equipment, seals and shelters, and industrial trucks. Concurrent with a continuing product improvement program, specifications are subject to change without notice (See Section 2.2 "Exclusion of Liability" of this manual). Please contact the manufacturer for latest information. Some features illustrated may be optional in certain market areas.

NOTICE

See Section 9.0 "Decal Identification and Location" item #5 for serial number location.

2.0 INTRODUCTION

The following is a quick reference to important procedures that must be followed while using the Loading Dock Equipment. 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 Loading Dock. 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)

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

Also a member 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
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 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 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.

DEALER INFORMATION

Name: _____

Contact: _____

Telephone: _____

* **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 Loading Dock Equipment. 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 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.

2.3 MANUFACTURER'S NOTE

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

2.4 OWNER'S RESPONSIBILITY

1. The owner should recognize the inherent danger of the interface between the dock and the freight carrier. The owner should, therefore, train and instruct operators in the safe use of the dock equipment and accessories in accordance with the manufacturer's recommendations.
2. The owner should thoroughly familiarize themselves with the following procedures and specifications, and request immediate replacement of all manufacturer-supplied documents that are missing, damaged, or otherwise illegible. Below is a list of Best Practices for dock equipment usage and maintenance.
 - Commissioning instructions
 - Operating instructions
 - Daily maintenance procedures checklist
 - Inspections procedures
 - Recommended spare parts lists
3. Upon receipt of any newly purchased dock equipment, 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.
4. All Blue Giant dock equipment should undergo regularly scheduled planned maintenance. Maintenance requirements will vary according to usage frequency and application, so the owner shall consult with their authorized Blue Giant distributor for schedule recommendation. Written records of the performance of these procedures should be kept as per warranty requirements.
5. Dock equipment 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.
6. As with any piece of machinery, dock equipment 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, you contact your local Blue Giant representative.
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 loading dock.
8. Unless specifically agreed to in writing by Blue Giant Equipment Corporation at the time of order (and prior to manufacture), all Blue Giant Dock equipment 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 dock equipment.
9. If, at the request of the owner, Blue Giant does not supply all or some of the dock equipment 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.

3.0 OWNER'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.

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

3.1 OPERATIONAL SAFETY WARNINGS

 DANGER	NOTICE
<ol style="list-style-type: none"> 1. Do not enter the pit area below the dock leveler. 2. BEFORE BEGINNING ANY SERVICE PROCEDURES: <ul style="list-style-type: none"> – Follow all lockout / tagout procedures. 3. Never operate a broken or damaged dock leveler. Have repairs done immediately by a qualified service technician. 4. Always secure and center loads on the forklifts. Loose or unbalanced loads are dangerous. 	<ol style="list-style-type: none"> 1. Do not ground welding equipment to any electrical components. 2. Do not attach welder as ground to leveler platform when welding on base frame assembly. Attach welder ground to base frame assembly only. 3. Always keep the work area clean and free of litter. 4. Always clean all side openings of dirt and debris. 5. Always clean all dirt and debris from the lip hinge. 6. Always clean up dry and liquid spills immediately after they occur. 7. Always maintain proper lighting in the work area. 8. If a procedure is not clearly defined in this manual, contact your authorized Service Representative.
 WARNING	 CAUTION
<ol style="list-style-type: none"> 1. The upper hinge point is a hazardous pinch point. Do not use fingers or hands to remove foreign materials. 2. Post safety warnings and barricade working area at dock level and at ground level to prevent unauthorized use of the leveler during maintenance/service. 3. Never leave the dock leveler unattended in the raised position. 4. Always make sure that the lip is seated inside the night lock after putting the dock in the parked position. 5. Never leave loads sitting on the dock leveler. 6. Do not attempt to raise the dock leveler if someone is standing on it. 7. Do not use the dock leveler if the lip's full width is not fully supported by the vehicle load bed. 8. Do not operate the dock leveler beyond its rated capacity. 9. Do not drive or walk onto the truck until it is parked against the dock bumpers and the wheels are chocked, or the vehicle restraint has been fully engaged. 10. Never attempt to lift or hold the lip out by hand. Serious personal injury could occur. 11. Never remove the wheel chocks until loading/ unloading is finished and the truck driver has been given permission to depart. 	<ol style="list-style-type: none"> 1. Only trained personnel should operate or service this equipment. 2. Do not operate the dock equipment until the transport vehicle is parked against the dock bumpers. 3. Always park the dock equipment after use. 4. Conduct routine inspections and maintenance. Failure to do so could cause equipment damage and or personal injury. 5. Always call your authorized service representative or manufacturer immediately if a malfunction occurs.

4.0 LOCKOUT / TAGOUT PROCEDURE AND RULES

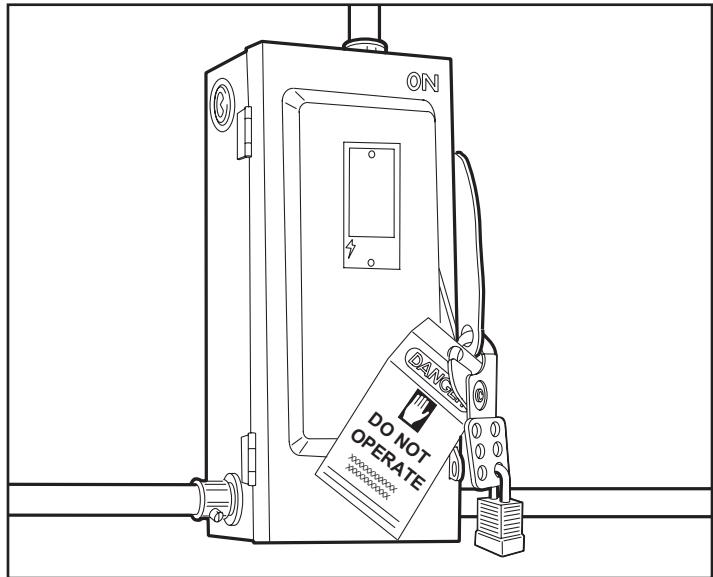
In accordance with the rules and regulations of the Occupational Safety and Health Administration (OSHA), all affected employees must be notified that the machine or equipment will be shut down and locked out to perform repair or maintenance work. The work area must be checked to ensure that all personnel 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 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 not be susceptible to deterioration or illegibility due to weather conditions or exposure to chemicals and 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.



Approved way to lockout / tagout.

5.0 DOCK STRUT SET-UP



DANGER

Failure to properly secure the dock leveler deck prior to working underneath it may result in property damage, bodily injury, or death. Engage the dock strut first. If the device cannot be successfully engaged, contact your authorized service representative.



WARNING

Post safety warnings and barricade work area at dock and ground level. Notify all affected personnel that work is being performed on the unit and follow proper lock-out procedure.

Ensure that power to the unit has been completely cut off and cannot be turned back on accidentally.

5.1 ENGAGING THE DOCK STRUT



WARNING

Head protection and other applicable PPE is recommended when working under or around the raised deck.



WARNING

Use of a secondary service stand (Blue Giant Part #796-710) in conjunction with the dock strut is required when working under the leveler.



WARNING

Install dock strut and secondary service stand only when the unit is fully raised and deployed.

This dock comes with a telescopic dock strut that must be used, in conjunction with a service stand, during under-dock inspections or repairs / maintenance. The V-shaped groove ensures safe headboard and lip support.

To apply the dock strut, pull the hold-down release ring (located at the rear of the dock) and fully raise the dock. Let go of the hold-down release ring once the deck reaches full height. Verify that it is safe to retrieve the dock strut. Extend the dock strut to just below the headboard and fully insert the quick release pin in the nearest hole. Ensure that the headboard is resting firmly in the middle of the V-shaped groove of the dock strut.

It is recommended that a retrieval tool be used when retrieving the dock strut from its storage position beneath the dock.

NOTE: Use of a service stand and hard hat while performing this step is required.

NOTE: It is recommended that this step be performed with assistance.

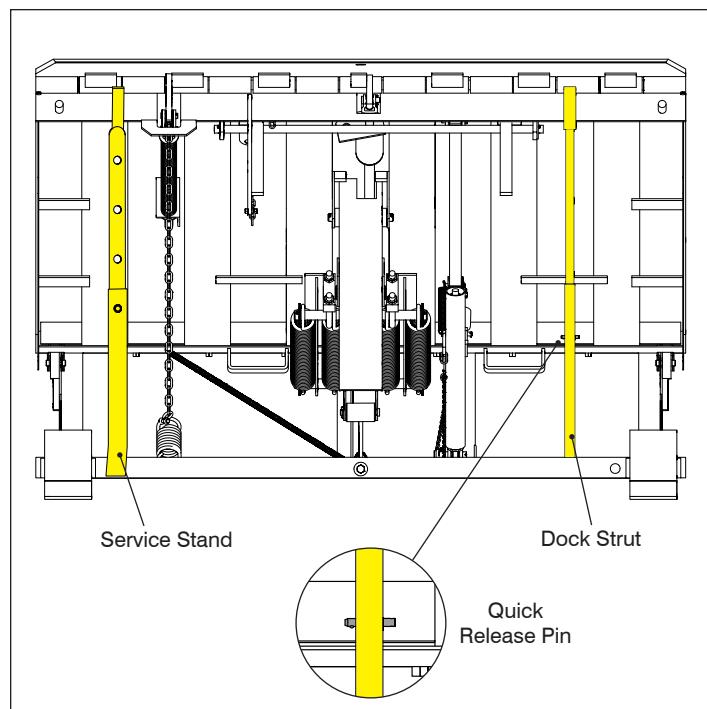
5.2 DISENGAGING THE DOCK STRUT



CAUTION

Remove the service stand only AFTER disengaging the dock strut (or equivalent)

Have an assistant fully raise the dock by pulling on the hold-down release ring. Remove the quick release pin and collapse the dock strut. Reinsert the quick release pin in the lowest hole and return the dock strut to the storage position.



Engaged dock strut (part # 1003224). 7' mechanical dock leveler model shown. Dock strut is located on the opposite side of the leveler on 6' and 6' 6" models.

6.0 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 – safety glasses, gloves and work boots.

The maintenance strut and safety stand must be in place before commencing maintenance procedures.

6.1 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 dock leveler. 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, lubrication, and minor adjustments are outlined in the Installation and Technical manual for this product.

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.

6.2 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 DMP Checklist (See Section 6.6). The operator should fill out this form to keep a daily record of operation and maintenance issues.

6.3 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.

6.4 PLANNED MAINTENANCE PROGRAM INTERVALS

Arrange for a qualified dock leveler repair technician to perform regularly scheduled planned maintenance on your dock leveler every three months for single shift operations or monthly for multi-shift operations. Call your authorized manufacturer / dealer for further details.

6.5 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

6.6 DAILY MAINTENANCE PROCEDURES (DMP) CHECKLIST - U-SERIES MECHANICAL DOCK LEVELER

INSPECTED BY: _____ DATE: _____

SERIAL #: _____ DOOR #: _____

Forward this checklist to the person responsible for dock equipment maintenance. See Section 1.1 "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):

- Remove any debris that may have accumulated around the dock equipment
- Verify complication-free operation of the dock equipment and the interior and exterior lights system (if installed)
- Verify that outside signage is present and legible (if equipped)
- Remove any potential trip hazards from around the dock area
- Verify that dock bumpers/risers/extensions are in working condition (if equipped)
- Check curb angles for irregularities (e.g. concrete cracks)
- Verify that the overhead door is functioning correctly
- Verify that instructional caution and danger labels are present and legible on the product. Replace if necessary
- Verify that wheel chocks are present and in working condition

PHOTOCOPY THIS CHECKLIST AND FILL OUT REGULARLY FOR YOUR RECORDS.

Explain faults briefly in the space provided below:

**DANGER**

When repairing or conducting maintenance procedures on electrical components, perform lockout / tagout steps according to OSHA regulations and approved electrical codes.

**DANGER**

Prior to installation, place adequate barriers to prevent unauthorized personnel and vehicle traffic from entering the work area.

**WARNING**

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

7.0 OPERATING INSTRUCTIONS



WARNING

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

Do not operate the dock leveler beyond its rated capacity.

Do not operate this leveler until you have checked its condition. Report the need for repairs to your supervisor immediately and do not operate the unit until repairs are made. Neglect may cause a minor repair to become a major service problem and cause the leveler to become unsafe.

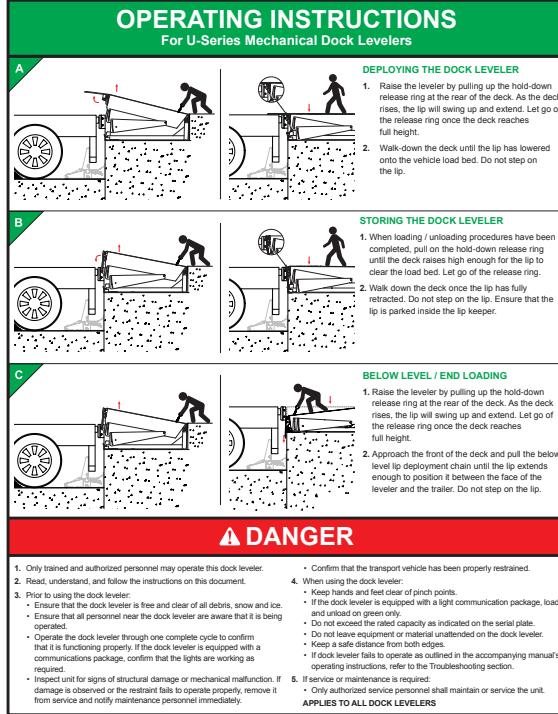
Never try to lift or move any part of the dock leveler manually.

Do not drive on the leveler unless the lip is securely on the truck bed and has a minimum of 4" (102mm) overlap on its surface.

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

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

Confirm brakes have been set and air has been removed from the air-ride suspension (if applicable).



U-Series Mechanical Dock Leveler operation placard—part # 038-1027E.

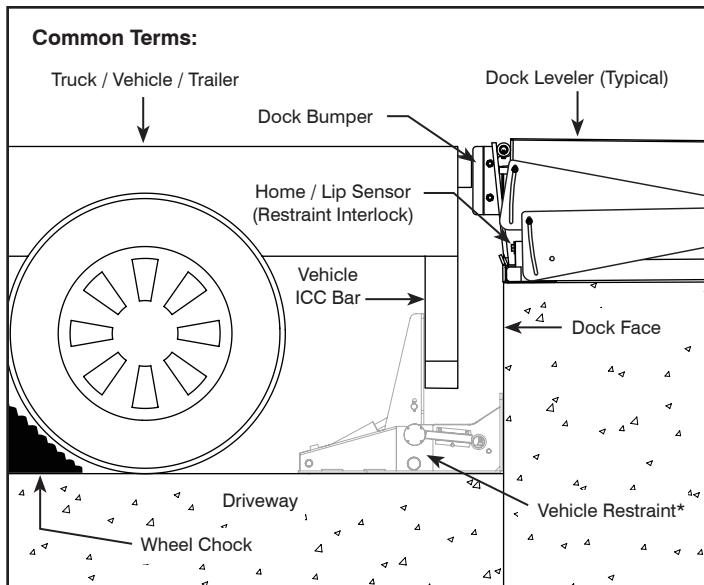
7.1 FUNCTIONAL DESCRIPTION

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

After the door has been opened, the rear of the truck is parked and restrained in place against the outer wall of the loading dock, in working alignment with the dock leveler. To activate the dock leveler, firmly pull the hold-down release ring located at the left rear corner of the deck, holding it until the lift springs completely raise the deck. The lip will automatically extend and lock as the deck reaches the fully raised position.

The dock attendant walks up the slope of the deck to lower it. The extended lip makes firm contact with the truck bed. At this point, the bridge is formed.

NOTE: Although the lift springs are always trying to lift the deck, their upward force is opposed by the hold-down mechanism.



* For Reference

STANDARD OPERATION PROCEDURES



WARNING

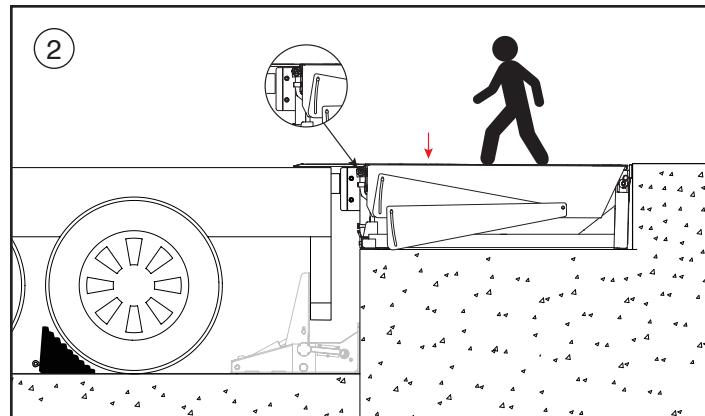
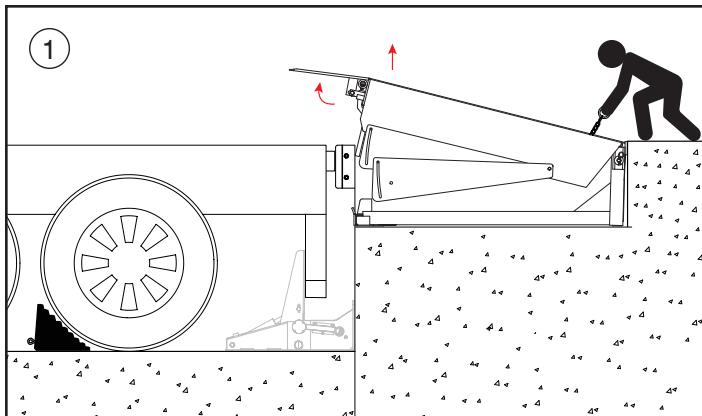
Walk carefully when performing the walk-down procedure, taking special precautions if the deck is wet or slippery.

7.2 DEPLOYING THE DOCK LEVELER

1. Raise the dock leveler by firmly pulling up the hold-down release ring located at the rear of the deck. As the lip rises, it will automatically swing up and extend. Let go of the release ring once the deck reaches full height.
2. Walk the leveler down until the lip is resting on the vehicle load bed. If the leveler does not fully lower during the walk-down process, do not attempt to complete the process by jumping on the deck or stepping on the lip. The minimum weight required to successfully walk-down the deck is 160 lb (73 kg).

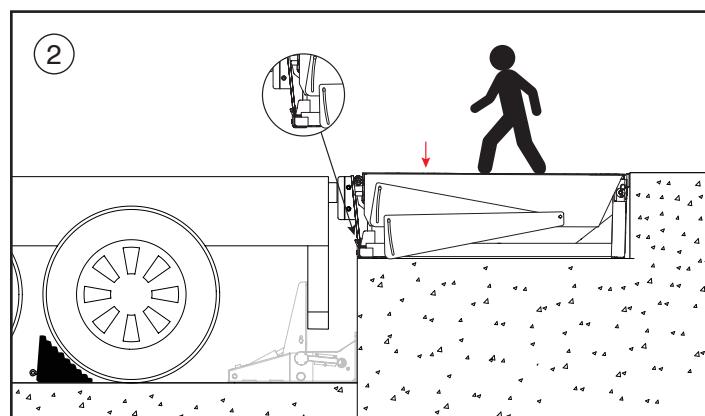
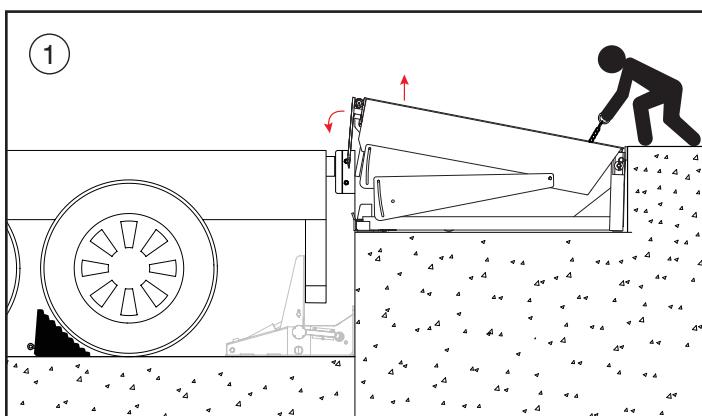
While in use, the deck will raise and lower to match the vertical motion of the truck.

NOTE: Letting go of the hold-down release ring at any time will stop the upward travel of the deck.



7.3 STORING THE DOCK LEVELER

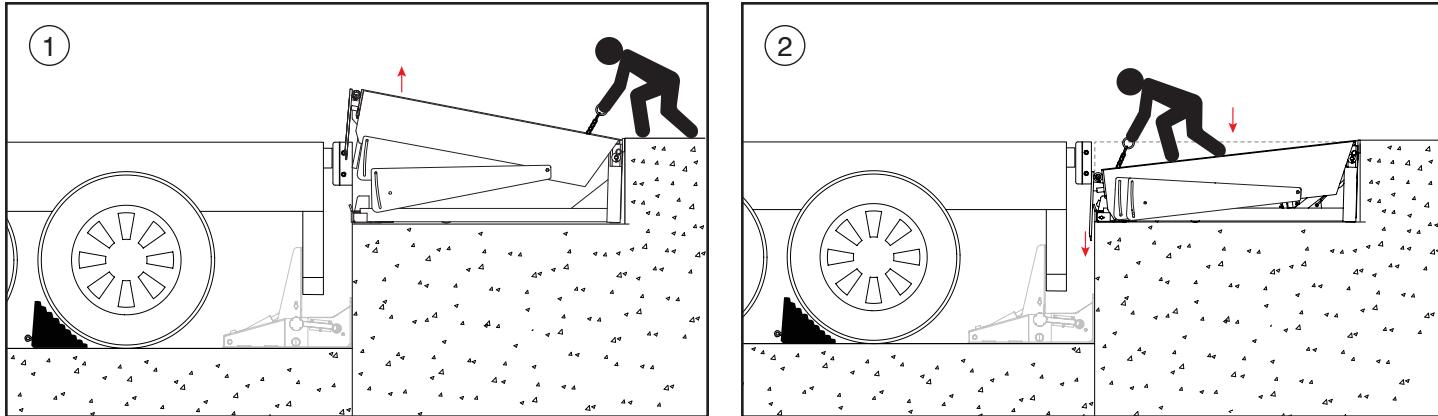
1. When loading / unloading operations have been completed, pull on the hold-down release ring until the deck raises high enough for the lip to clear the load bed while moving in a downward arc.
2. Let go of the release ring and walk down the deck once the lip has completely retracted. If the leveler does not fully lower during the walk-down process, do not attempt to complete the process by jumping on the deck or stepping on the lip. The minimum weight required to successfully walk-down the deck is 160 lb (73 kg). Ensure that the lip is parked inside the lip keepers.



7.4 BELOW LEVEL / END LOADING

This section outlines dock leveler operation in situations where the lip cannot make contact with the vehicle load bed (i.e. loading or unloading the first skid or pallet from the truck when there is not enough room to extend the lip) or the truck height is below dock level.

1. Raise the leveler by pulling up the hold-down release ring at the rear of the deck. As the deck rises, the lip will swing up and extend. Let go of the hold-down release ring once the deck reaches full height.
2. Approach the front of the deck and pull the below level lip deployment chain until the lip extends enough to position it between the face of the dock and the trailer. Do not step on the lip.

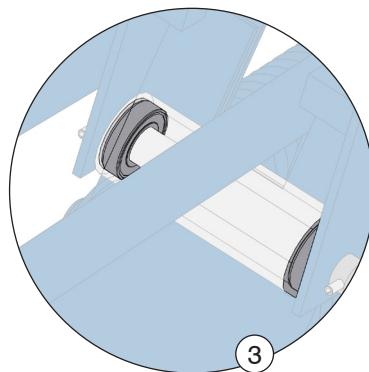
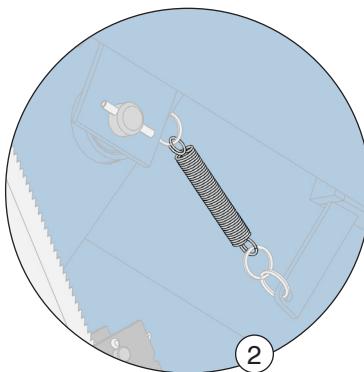
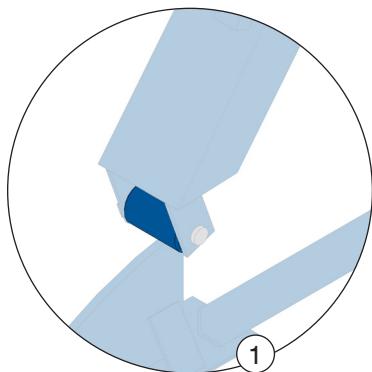


7.5 OVERRIDING THE FALL-SAFE OPTION

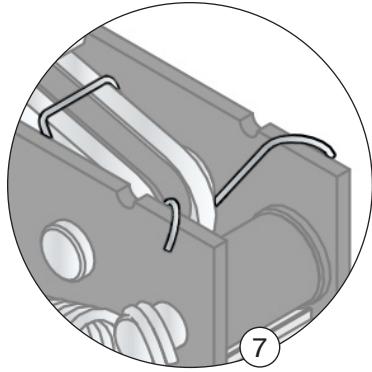
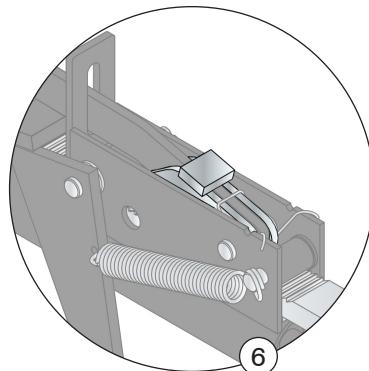
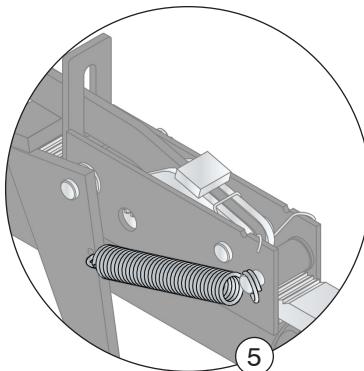
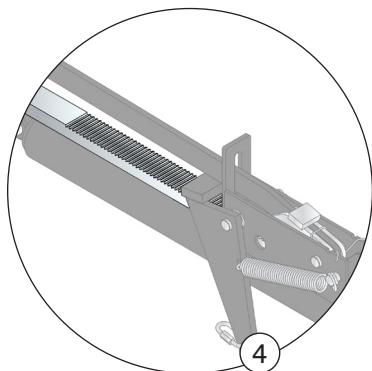
The mechanical fall-safe option consists of two support legs held rigidly in place by springs. Their purpose is to stop downward travel of the deck by approximately 2.5" (60 mm) below level position.

When situations arise that require the deck to be lowered more than 2.5" (60 mm) below the cross-traffic position, retract the fall-safe support legs via the lip deployment chain located at the left front corner of the deck. The lip deployment chain retracts the support legs and allows the dock leveler to lower a full 12" (304 mm) below level position. The support legs will return to the normal pendent position when the lip deployment chain is released and the deck has risen high enough via operation of the hold-down release ring.

8.0 RECOMMENDED SPARE PARTS - U-SERIES MECHANICAL DOCK LEVELER



8.1 RECOMMENDED SPARE PARTS - RATCHET HOLD-DOWN ASSEMBLY



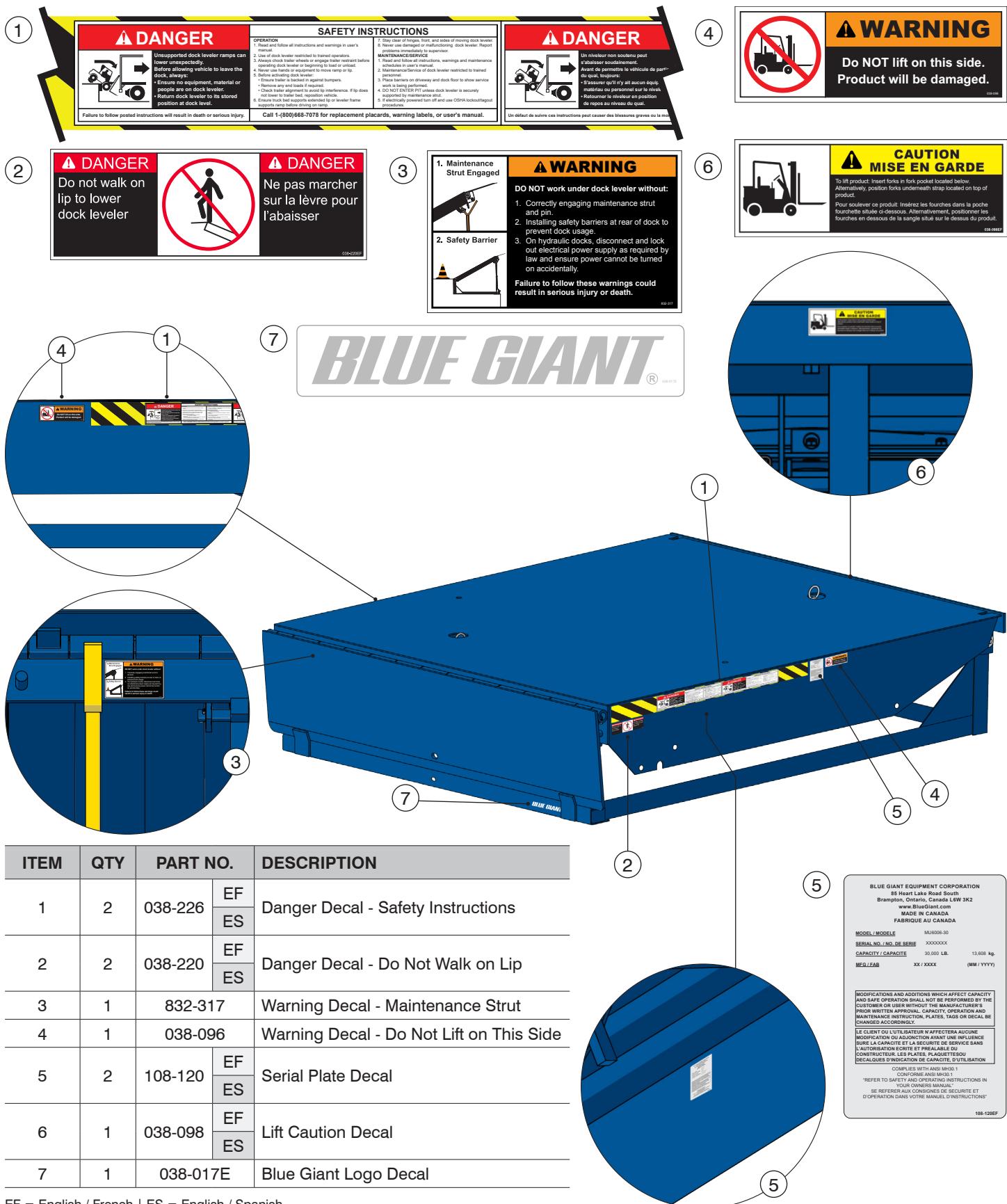
REPLACEMENT PARTS U-SERIES MECHANICAL DOCK LEVELER

ITEM	PART NO.	DESCRIPTION	QTY REQ'D.
1	109-791-1	Lifting Arm Roller Assembly Includes 2 Bearings (018-500)	1
2	109-107	Extension Spring	1
3	018-501	Bearing, Lifting Arm	2

REPLACEMENT PARTS RATCHET HOLD-DOWN ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY REQ'D.
4	22-002641	Ratchet Bar	1
5	70-003743	Tension Spring	1
6	22-002636	Pawl Assembly	1
7	22-002639	Spring, Retainer Pawl	1

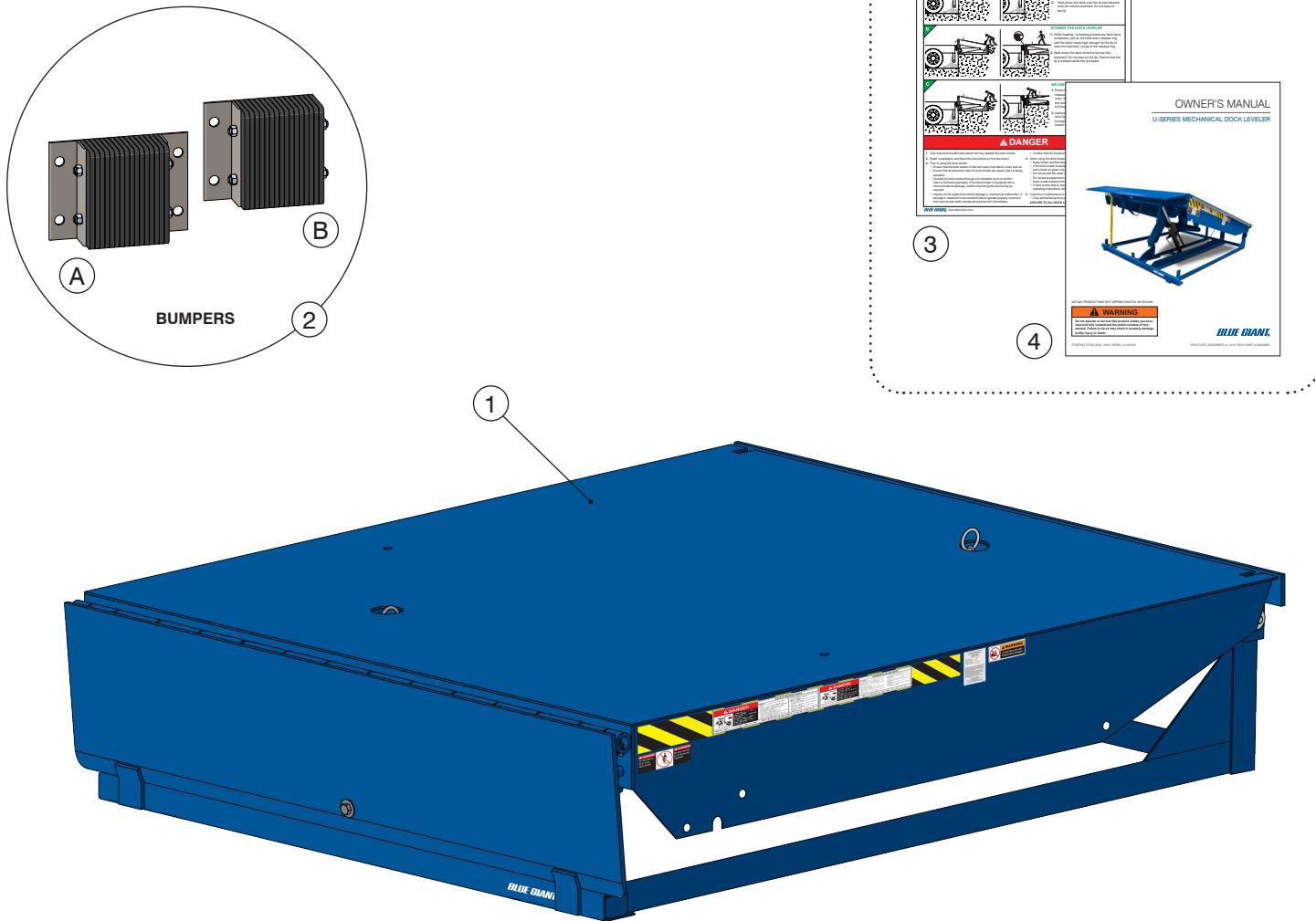
9.0 DECAL IDENTIFICATION AND LOCATION



EF = English / French | ES = English / Spanish

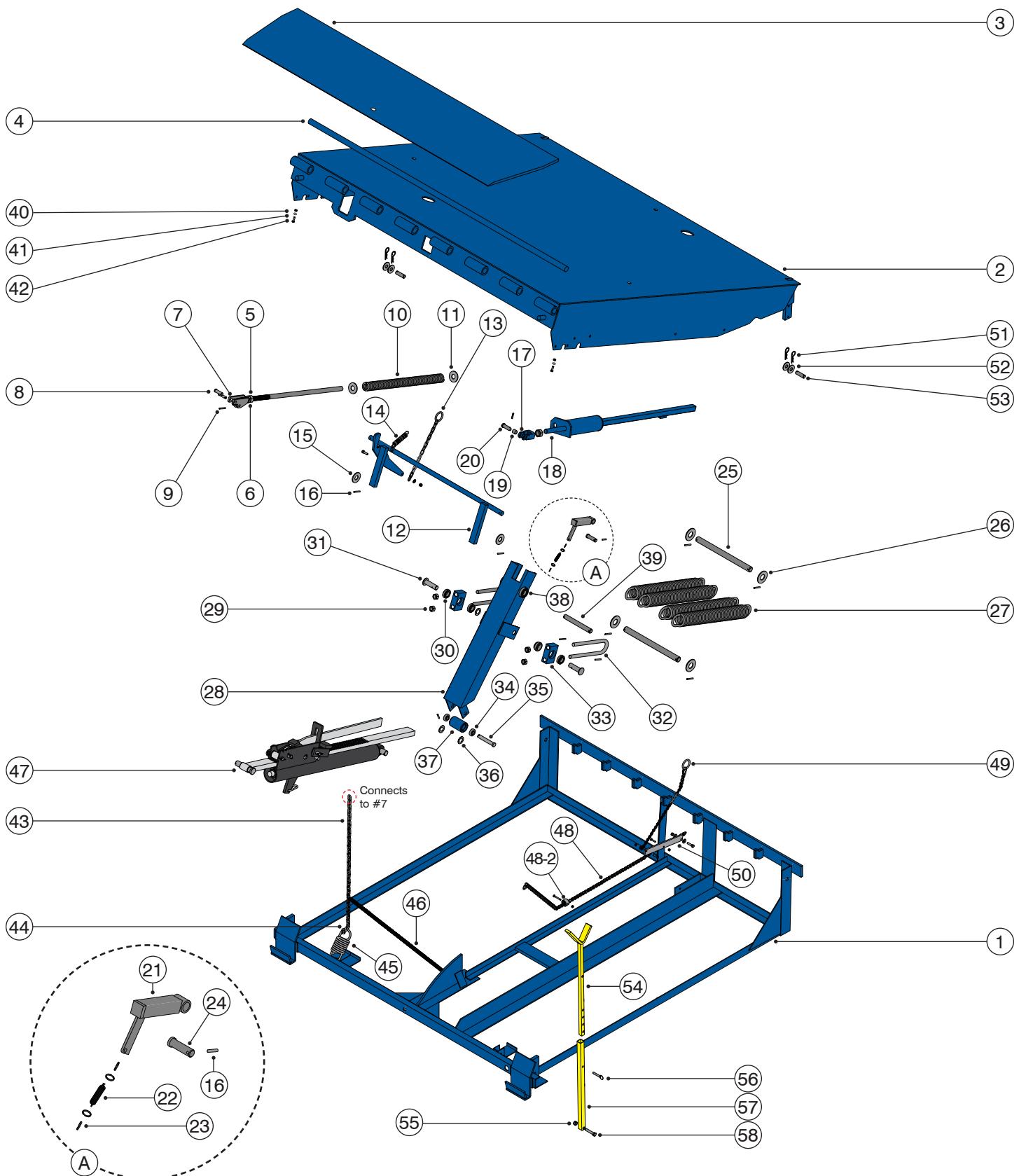
10.0 EQUIPMENT COMPONENT ILLUSTRATIONS

10.1 COMPONENTS AS SHIPPED CHECKLIST

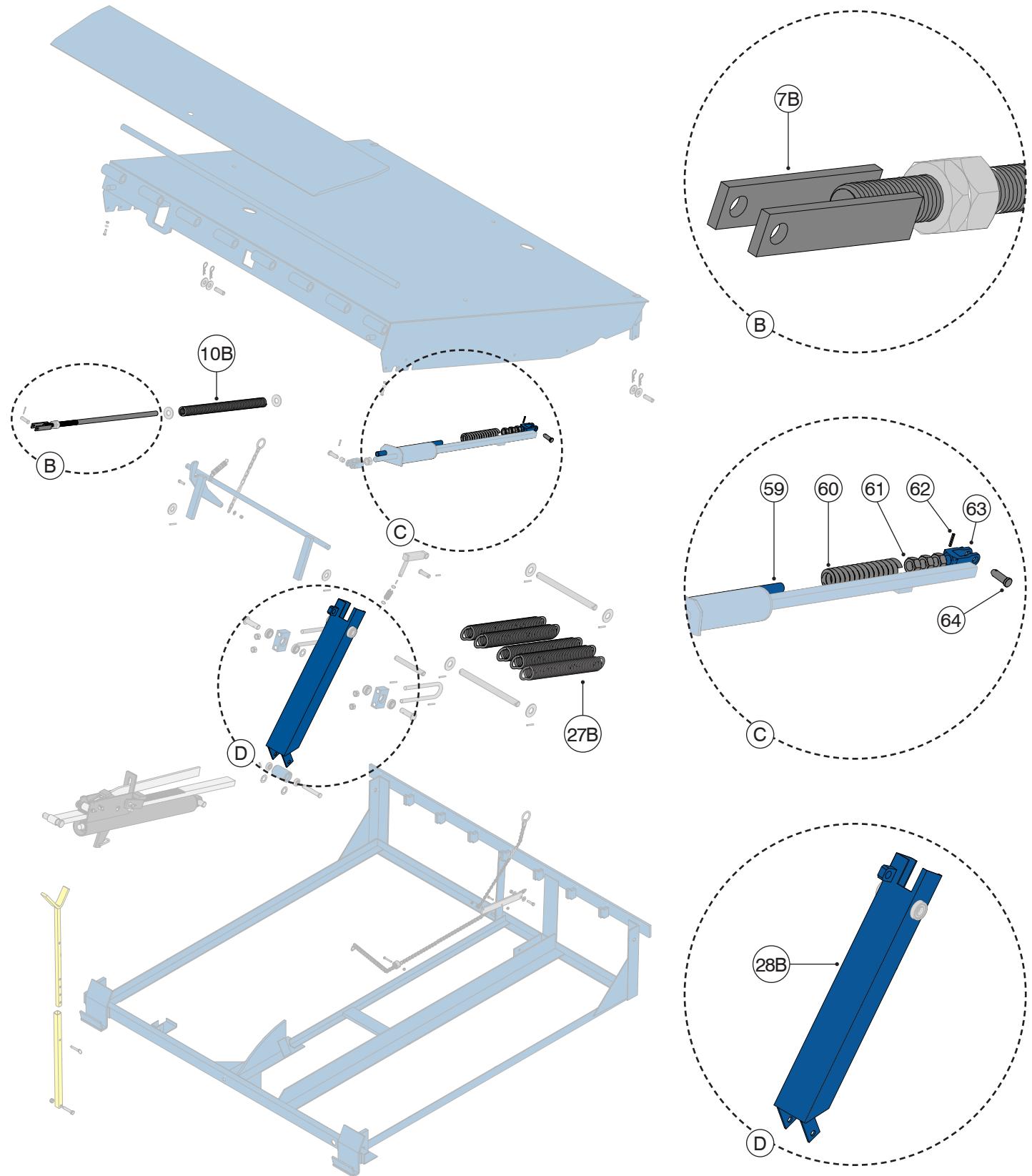


✓	ITEM	QTY	PART NO.	DESCRIPTION	APPROX. WEIGHT	
	1	1	MUXXXX-XX	Mechanical Dock Leveler - See Section 10.5 for more information	Varies by Model	
2	A	2	DB411	Laminated Bumper, Dual Flange	50 lb	23 kg
	B		DB411WB	Laminated Bumper, Single Flange	48 lb	22 kg
	3	1	038-1027E	Operation Placard	—	
	4	1	038-1028E	Owner's Manual (this one)	—	

10.2 MECHANICAL ASSEMBLY - 7' U-SERIES MECHANICAL DOCK LEVELER



10.3 MECHANICAL ASSEMBLY - 6' - 6' 6" U-SERIES MECHANICAL DOCK LEVELER



10.4 MECHANICAL ASSEMBLY - U-SERIES MECHANICAL DOCK LEVELER

NOTE	DESCRIPTION	NOTE
●	7' Model Only	Includes parts highlighted
+	6' and 6' 6" Model Only	Includes parts highlighted

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	See Section 10.8	Frame
2	1	See Section 10.5	Deck
3	1	See Section 10.6	Lip
4	1	See Section 10.7	Lip Shaft
5	2	011-531	Hex Nut
6	1	011-511	Hex Jam Nut
●	7	1	1003160
+	7B	1	200-03455-1
8	2	013-628	Clevis Pin
9	3	013-010	Spring Pin
●	10	1	1003131
+	10B	1	200-03460
11	2	012-250	Flat Washer 1"
12	1	24-000608	Fall Safe Weldment
13	1	788-197-1	Pull Chain Assembly
14	1	017-012	Tension Spring
15	2	105-879	Flat Washer
16	7	013-012	Spring Pin
17	1	114-663	Clevis (Machined)
●	18	1	1003157
+	18B	1	24-003409
19	1	018-001	Bushing, Super Oilite
20	1	107-196	Clevis Pin
21	1	793-965	Dog Assembly
22	1	109-107	Extension Spring
23	4	013-134	Split Ring
24	1	222-0010	Dog Pin
25	2	109-137	Main Spring Hanger Shaft
26	4	105-882	Flat Washer
●	27	4	24-012508-1
+	27B	5*	223-0004
●	28	1	1003156
+	28B	1	24-003406
29	4	011-510	Hex Nut

ITEM	QTY.	PART NO.	DESCRIPTION
30	4	018-501	Ball Bearing Load Wheel
31	2	788-085	Arm Shaft 3-3/4" x 1-1/4" x 3/9"
32	2	111-570	Adjustable U-Bolt
33	2	111-572	Adjusting Bracket
34	2	018-500	Bearing
35	2	223-0000	Axle, Load Roller
36	2	106-389	Washer Spacer
37	1	109-791	Lifting Arm Roller
38	2	018-501	Bearing, Lifting Arm
39	1	113-207	Lifting Arm Pin
40	2	011-502	Hex Nut
41	2	012-201	Lock Washer 3/8"
42	2	010-039	Cap Screw 3/8-16 x 1 HH GR .5 ZC
●	43	1	091-021-0320
●	44	2	013-616
●	45	1	1002455
●	46	1	1003133
47	1	22-003769-1	Ratchet Hold-Down Assembly See Section 11.0 for more info
48	1	1003221	Ratchet Release Chain Assembly
48-2	1	1002299	Stop Block
49	1	1002445	Release Chain, 21" (533 mm)
50	1	1001386	Easy Release Handle
51	4	013-029	Hairpin Cotter
52	4	012-214	Flat Washer 3/4"
53	2	26-005610	Rear Fixed Hinge Pin
54	1	1003225	Upper Strut Weld
55	1	011-554	Hex Self Lock Nut
56	1	013-587	Quick Release Pin
57	1	113-414	Lower Strut Weld
58	1	010-027	HHCS 1/2 -13 UNC x 2.5"
+	59	1	24-003386
+	60	1	223-0005
+	61	3	011-531
+	62	1	013-010
+	63	1	114-663
+	64	1	107-196

* Only 4 springs are required for MU6006 with 16" and 18" lips.

10.5 DECK

By size and capacity

DECK SIZE (NOMINAL)	CAPACITY		MODEL	PART NO. MU
	LB	KG		
6' x 6'	30,000 lb	13,636 kg	MU6006-30	24-001136
	35,000 lb	15,909 kg	MU6006-35	24-005580-1
	40,000 lb	18,144 kg	MU6006-40	24-000546-2
	45,000 lb	20,454 kg	MU6006-45	
6' x 8'	30,000 lb	13,636 kg	MU6008-30	24-001134
	35,000 lb	15,909 kg	MU6008-35	24-005899-1
	40,000 lb	18,144 kg	MU6008-40	24-003405
	45,000 lb	20,454 kg	MU6008-45	
6' x 10'	30,000 lb	13,636 kg	MU6010-30	24-012321
6' 6" x 6'	30,000 lb	13,636 kg	MU6606-30	24-001324
	35,000 lb	15,909 kg	MU6606-35	24-005573-1
	40,000 lb	18,144 kg	MU6606-40	24-000828
	45,000 lb	20,454 kg	MU6606-45	
6' 6" x 8'	30,000 lb	13,636 kg	MU6608-30	24-001138
	35,000 lb	15,909 kg	MU6608-35	24-005569-1
	40,000 lb	18,144 kg	MU6608-40	24-000929
	45,000 lb	20,454 kg	MU6608-45	
6' 6" x 10'	30,000 lb	13,636 kg	MU6610-30	24-012549
7' x 6'	30,000 lb	13,636 kg	MU7006-30	24-001328
	35,000 lb	15,909 kg	MU7006-35	24-005552-1
	40,000 lb	18,144 kg	MU7006-40	24-000864
	45,000 lb	20,454 kg	MU7006-45	
7' x 8'	30,000 lb	13,636 kg	MU7008-30	1003121-2
	35,000 lb	15,909 kg	MU7008-35	1003121-1
	40,000 lb	18,144 kg	MU7008-40	1003121
	45,000 lb	20,454 kg	MU7008-45	1003121-3
7' x 10'	30,000 lb	13,636 kg	MU7010-30	24-012512

10.7 LIP SHAFT

By size and capacity

DECK SIZE (NOMINAL)	CAPACITY		PART NO.
6'	30,000 lb	13,636 kg	109-699
	35 - 45,000 lb	15,875 - 20,411 kg	110-763
6' 6"	30,000 lb	13,636 kg	109-687-1
	35 - 45,000 lb	15,875 - 20,411 kg	111-595-1
7'	30,000 lb	13,636 kg	109-690
	35 - 45,000 lb	15,875 - 20,411 kg	111-594

10.6 LIP

By size and capacity

DECK WIDTH	CAPACITY		LENGTH	PART NO. MU
	LB	KG		
6'	30,000	13,636	16"	406mm
			18"	457mm
			20"	508mm
	35,000	15,909	16"	406mm
6' 6"	35,000	15,909	18"	457mm
			20"	508mm
			16"	406mm
	40,000	18,144	18"	457mm
7'	40,000	18,144	20"	508mm
			16"	406mm
			18"	457mm
	45,000	20,454	20"	508mm
7' 6"	30,000	13,636	16"	406mm
			18"	457mm
			20"	508mm
	35,000	15,909	16"	406mm
7' 10"	40,000	18,144	18"	457mm
			20"	508mm
			16"	406mm
	45,000	20,454	20"	508mm

10.8 FRAME

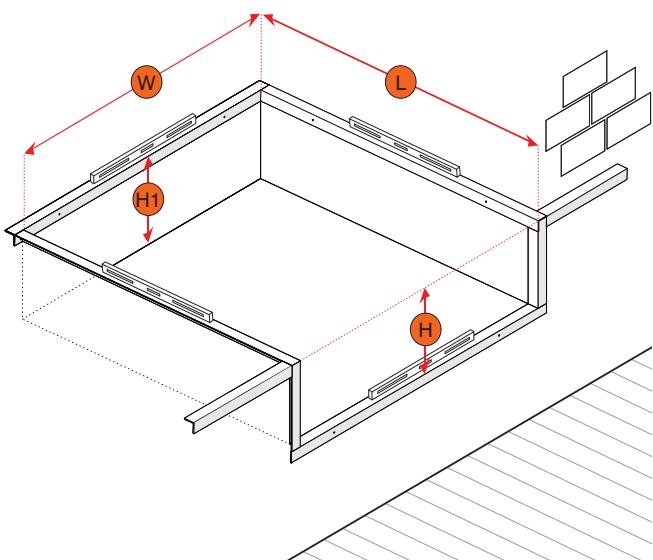
By size

DECK SIZE (NOMINAL)	LENGTH	PART NO.	
		MU	MU
6' x 6'			MU6006
	16"	406mm	1005228-3
	18"	457mm	1005228-4
	20"	508mm	1005228-5
6' x 8'			MU6008
	16"	406mm	1005228
	18"	457mm	1005228-1
	20"	508mm	1005228-2
6' x 10'			MU6010
	16"	406mm	24-012320
	18"	457mm	24-012320-1
	20"	508mm	24-012320-2
6' 6" x 6'			MU6606
	16"	406mm	1005229-3
	18"	457mm	1005229-4
	20"	508mm	1005229-5
6' 6" x 8'			MU6608
	16"	406mm	1005229
	18"	457mm	1005229-1
	20"	508mm	1005229-2

DECK SIZE (NOMINAL)	LENGTH	PART NO.	
		MU	MU
6' 6" x 10'			MU6610
	16"	406mm	24-012515
	18"	457mm	24-012515-1
	20"	508mm	24-012515-2
7' x 6'			MU7006
	16"	406mm	1005230
	18"	457mm	1005230-1
	20"	508mm	1005230-2
7' x 8'			MU7008
	16"	406mm	1003137-2
	18"	457mm	1003137-1
	20"	508mm	1003137
7" x 10'			MU7010
	16"	406mm	24-012509
	18"	457mm	24-012509-1
	20"	508mm	24-012509-2

10.9 STANDARD PIT DIMENSIONS

NOMINAL SIZE		PIT WIDTH (W)		PIT LENGTH (L)	
		in	mm	in	mm
6' x 6'	1829 x 1829mm	74	1880	61.25	1556
6' x 8'	1829 x 2438mm			85.25	2165
6' x 10'	1829 x 3048mm			109.25	2775
6' 6" x 6'	1981 x 1829mm	80	2032	61.25	1556
6' 6" x 8'	1981 x 2438mm			85.25	2165
6' 6" x 10'	1981 x 3048mm			109.25	2775
7' x 6'	2133 x 1829mm	85	2159	61.25	1556
7' x 8'	2133 x 2438mm			85.25	2165
7' x 10'	2133 x 3048mm			109.25	2775

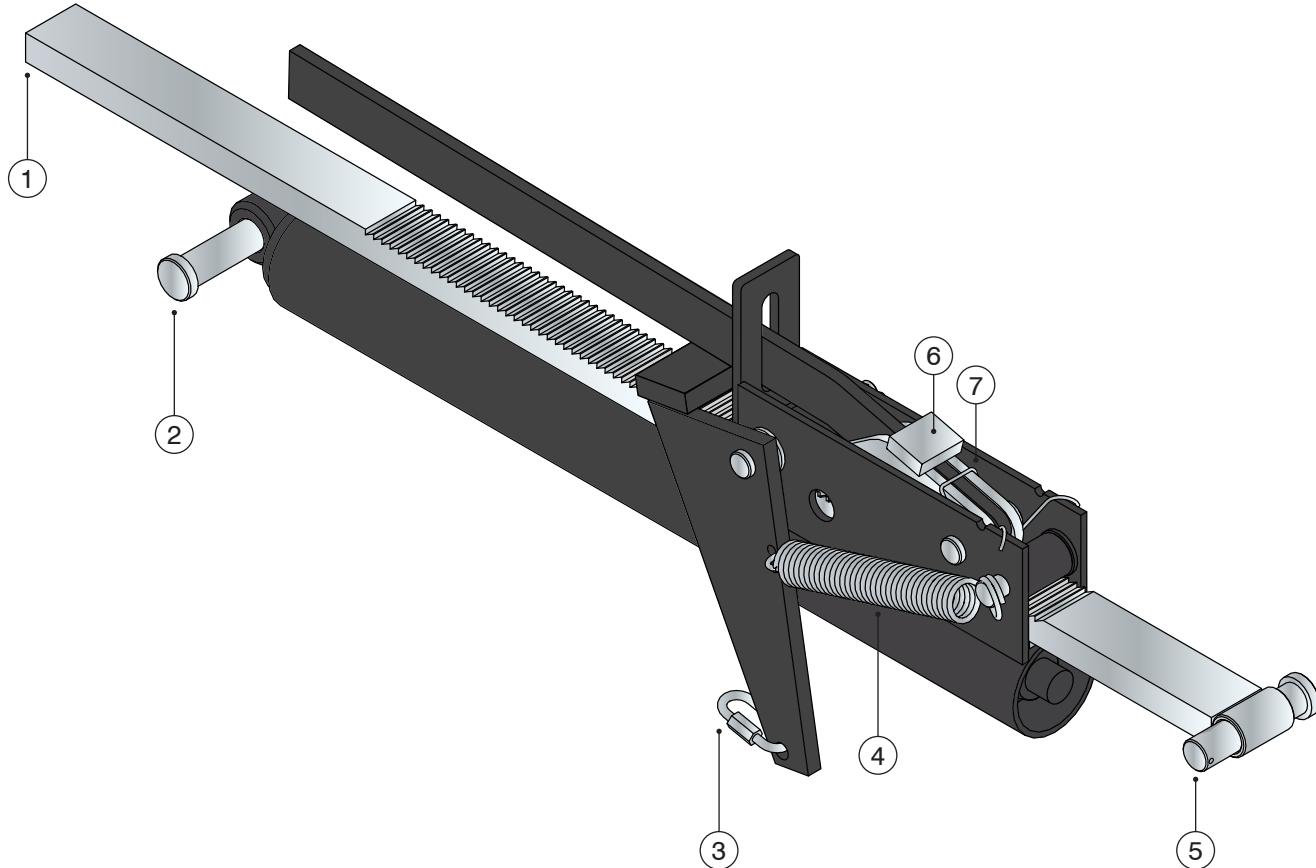


Lip Length:	16", 18", 20" (406, 457, 508mm)
Standard Frame Depth:	Front: 19.5" (495mm) Rear: 19" (483mm)
Standard Pit Depth:	Front (H): 20" (508mm) Rear (H1): 19.5" (495mm)

Alternatives available:

- Longer filler
- Deeper pits
- Other options – consult factory

11.0 RATCHET HOLD-DOWN ASSEMBLY

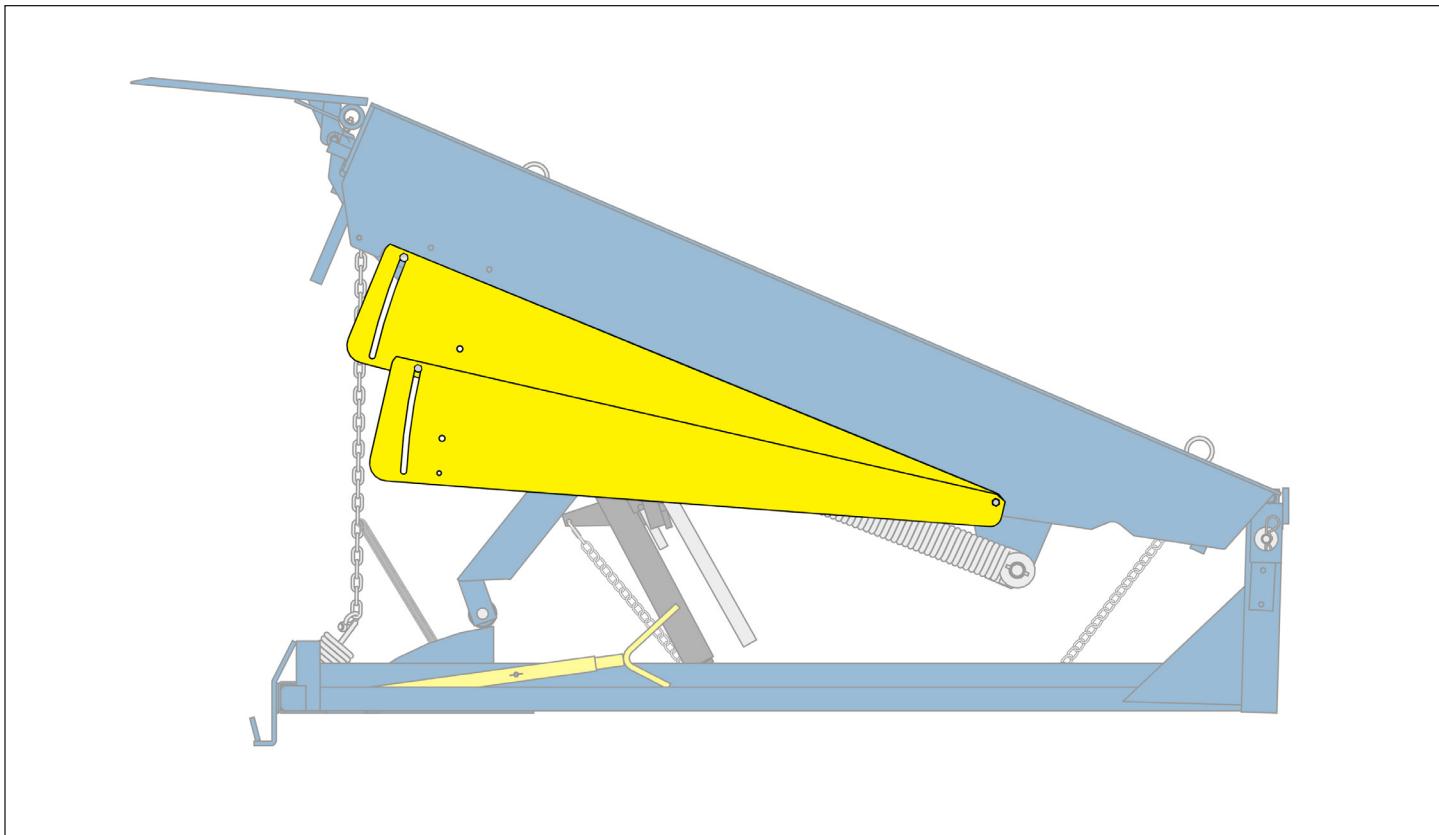


REPLACEMENT PARTS FOR RATCHET HOLD-DOWN ASSEMBLY - 22-003769-1

ITEM	PART NO.	DESCRIPTION	QTY REQ'D.
1	22-002641	Ratchet Bar	1
2	22-002092	Clevis Pin, Base	1
3	013-507	3/16" Chain, Quick Link	1
4	70-003743	Tension Spring	1
5	22-002092-1	Clevis Pin, Top	1
6	22-002636	Pawl Assembly	1
7	22-002639	Spring, Retainer Pawl	1

12.0 TOE GUARDS

The U-Series Mechanical Dock Leveler features fixed toe guards on either side of the deck that closes the gap between the floor and the sides of the leveler while the dock is in **working range** (i.e. when the lip is on the trailer bed and 12" (305 mm) max. above the floor). Additional toe guards (highlighted below) are available as an option that closes the gap between the floor and sides of the leveler while the dock is in **operational range** (i.e. when deck is raised to its maximum height during the deployment process).



7' model shown

QTY.	PART NO.	DESCRIPTION
1 pkg. of 4 (includes hardware)	202-5024-99	Toe Guards for 6-8' Deck Size
1 pkg. of 4 (includes hardware)	202-5024-1-99	Toe Guards for 10' Deck Size

13.0 DOCK LEVELER TROUBLESHOOTING

 **WARNING**

Do not attempt to install, make repairs or adjustments. Only a trained and authorized service technician should perform the installation process. Contact your local dealer or distributor for assistance.

PROBLEM	PROBLEM CAUSE
Deck will not raise	<ol style="list-style-type: none"> 1. Hold-down mechanism is not releasing. The release chain or handle may be jammed or broken. 2. Foreign materials may be lodged between the side of the deck and the pit wall. 3. The bumpers may be damaged or missing, allow the truck to contact and hold the lip. 4. The lifting arm cam roller knocked off cam or jammed. 5. The lifting chain may be routed incorrectly.
The deck does not raise quickly enough to swing the lip up into the fully extended position	<ol style="list-style-type: none"> 1. Deck may be dragging on the side of the pit, slowing its movement. 2. Foreign material may be lodged between the side of the deck and the pit wall. 3. Lifting arm cam roller has groove worn into cam, or defective bearings. 4. Lack of lubrication. 5. Lifting springs may require adjustment (rule out all other causes first). 6. Side brush seals may be coming loose. 7. Foreign material may be lodged between the deck and the rear wall. 8. Ensure that you are not standing on the deck while attempting to operate the dock.
The lip does not lock after fully extending	<ol style="list-style-type: none"> 1. The lip lock is not engaging. The spring may be broken or stretched, or the lock may have seized. 2. The lip actuator is bent or broken. 3. Foreign material is lodged in the lip lock mechanism. 4. Length of spring and key ring assembly too long. 5. Compression spring out of adjustment. 6. Foreign object between the spools of the lip and the deck. 7. The lip spool is seizing, rusted or damaged spool.
The deck will not "walk down"	<ol style="list-style-type: none"> 1. Foreign material in the pit may be blocking the mechanism. 2. Side safety skirts are damaged and jammed against the wall. 3. The lifting arm cam roller is knocked off, causing the lift arm to jam against the cam. 4. The safety stand is engaged. 5. The ratchet assembly may be damaged.
The deck is difficult to "walk down"	<ol style="list-style-type: none"> 1. Weather seals, skirts, or deck may be dragging against the pit wall. 2. Foreign material may be in the pit. 3. The cam roller may be severely grooved by wear. 4. The cam roller bearing may have seized. 5. Lack of lubrication. 6. The lift springs are improperly adjusted. Tension may have been mistakenly increased to troubleshoot another problem. 7. The ratchet assembly be damaged.

13.0 DOCK LEVELER TROUBLESHOOTING CONT'D.

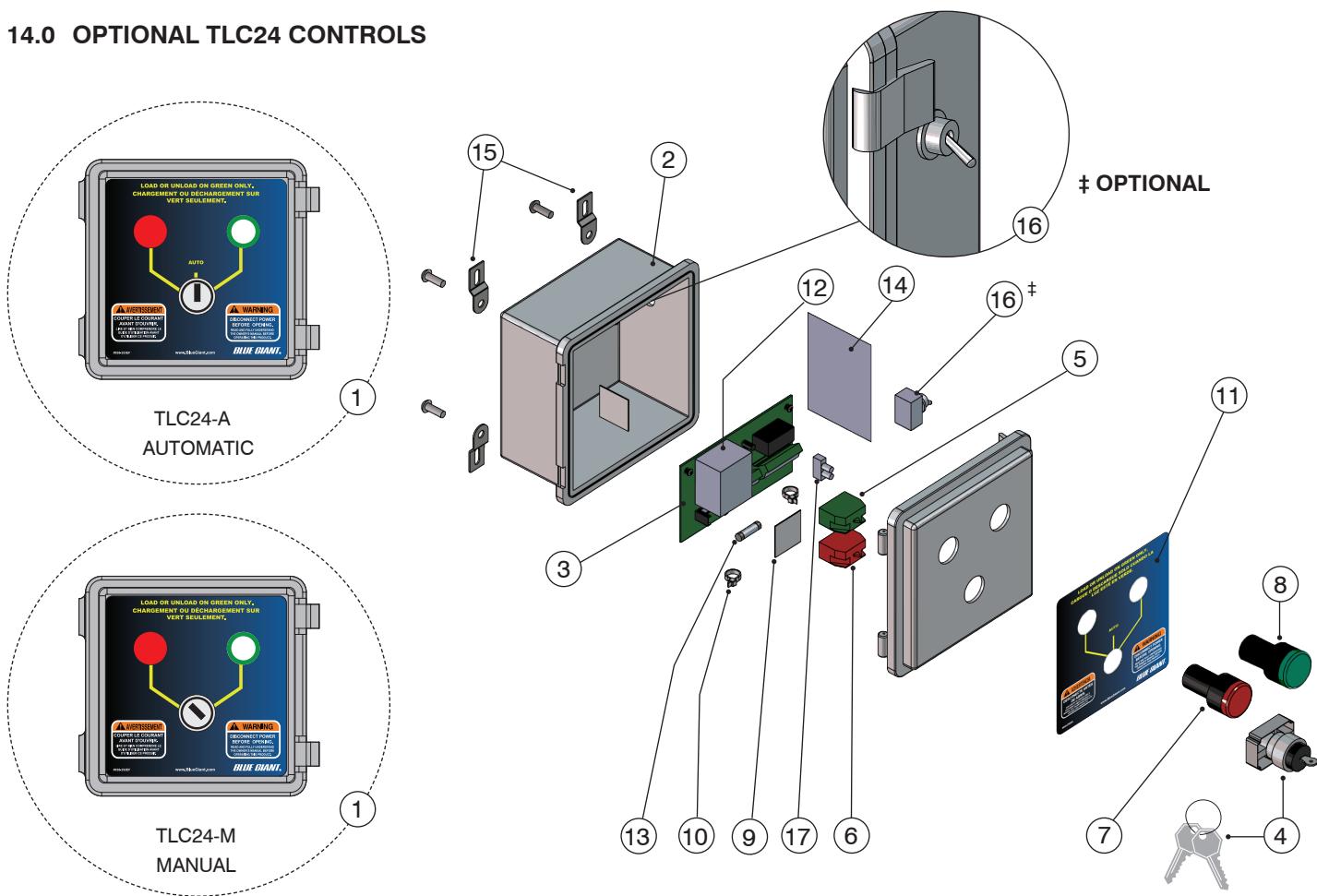


WARNING

Do not attempt to install, make repairs or adjustments. Only a trained and authorized service technician should perform the installation process. Contact your local dealer or distributor for assistance.

PROBLEM	PROBLEM CAUSE
The deck does not stay down: it springs back up after being walked down	<ol style="list-style-type: none"> 1. The pull chain is stuck in the open position. 2. The ratchet pawl teeth are broken. 3. The ratchet assembly mounts are broken. 4. The ratchet pawl has a foreign object preventing it from locking into place.
The lip strikes the rear of the truck as the deck raises, stops, or slows down, and lip does not extend in the locked position	<ol style="list-style-type: none"> 1. Damaged or missing dock bumpers allow the truck to park too close to the dock leveler. 2. Height difference between the dock and truck bed may be greater than recommended. 3. The lip actuator assembly may be damaged, causing the lip to extend too early in the cycle. 4. The lip actuator requires adjustment.
The lip will not clear the rear of the truck when attendant attempts to park the dock while the truck is parked	<ol style="list-style-type: none"> 1. Damaged or missing dock bumpers allow the truck to park too close to the dock leveler. 2. Height difference between the dock and truck bed may be greater than recommended. 3. The lip actuator requires adjustment. 4. The lip crown is set too high.
The lip does not release or swing down when the truck departs	<ol style="list-style-type: none"> 1. The lip lock may have seized due to lack of lubrication, or due to foreign material in the pit. 2. The lip lock may be held in the locked position by foreign material in the pit. 3. No traffic when over deck to break lip lock.

14.0 OPTIONAL TLC24 CONTROLS



COMPLETE CONTROL STATION ASSEMBLY ITEM # 1

(Example: TLC24A1115F)

ITEM	QTY.	PART NO.	DESCRIPTION	ASSY PART #
2	1	025-G023-M	Enclosure	
3	1	026-G014-1115	Traffic Lights Controller Board	TLC-24_1115 F
		026-G014-1230		S
4	1	026-G201	3 Position Key Selector Switch	A*
		026-G207	2 Position Key Selector Switch	M*
5	1	026-G202	No Contact Block	
6	1	026-G203	No Contact Block	
7	1	026-G205	24V Monoblock LED Indicator – Red	
8	1	026-G206	24V Monoblock LED Indicator – Green	
9	2	025-062	Cable Tie Mount	
10	2	522-008	Tie Wire YS-98C	

COMPLETE CONTROL STATION ASSEMBLY ITEM # 1

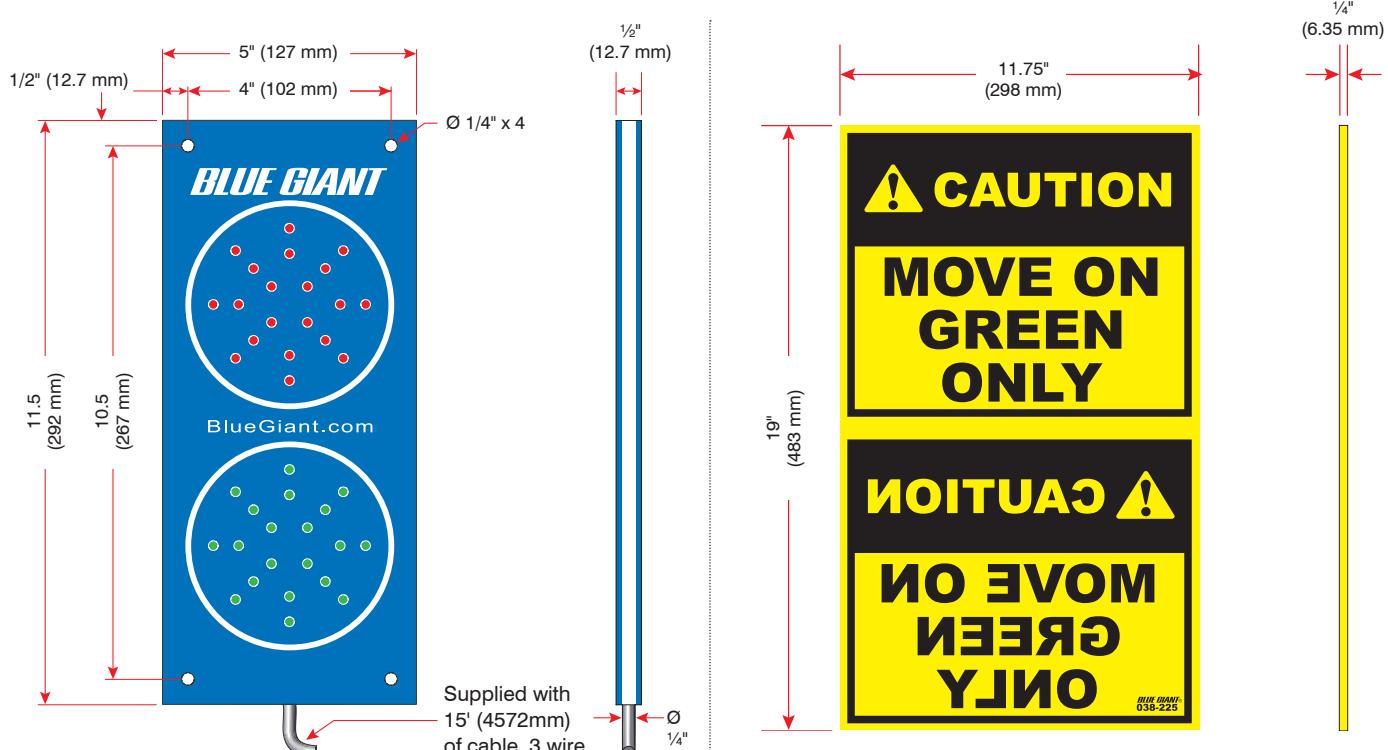
(Example: TLC24A1115F)

ITEM	QTY.	PART NO.	DESCRIPTION
11	1	038-252EF	Decal, Automatic Light System
		038-252ES	
		038-253EF	Decal, Manual Light System
		038-253ES	
12	3	010-216	Screw, M4 x 8 PAN PHIL
13	1	026-G121	Fuse F.A. 100mA, 250V 5 x 20mm
14	1	WD-169	TLC24A Field Wiring Diagram
		WD-168	TLC24M Field Wiring Diagram
15	1	025-G010-1	Mounting Tabs With Hardware (1 pkg of 4)
16	1	026-G209	On/Off Switch ‡ Optional
17	1	025-172-1	Terminal Blocks, 0.32in x11

*A = Automatic *M = Manual

15.0 OPTIONAL EXTERIOR TRAFFIC LIGHT / MIRROR IMAGE SIGN

Slim-build LED traffic lights and mirror image drive warning sign improve loading dock safety.



Exterior driver traffic light, part # 032-461.

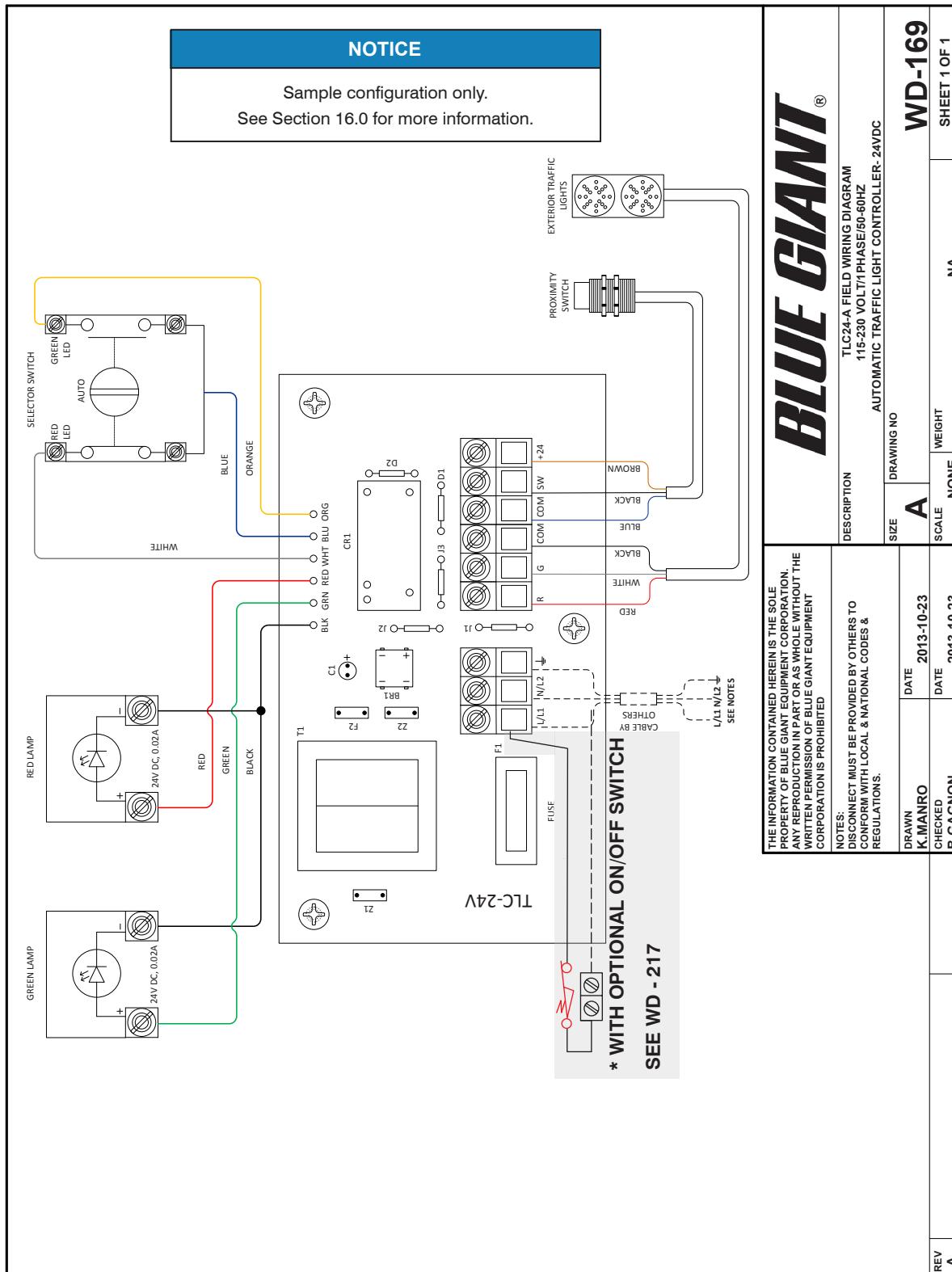
NOTE: Mount to a flat surface. DO NOT deform light housing with irregular wall surface.

16.0 WIRING DIAGRAMS

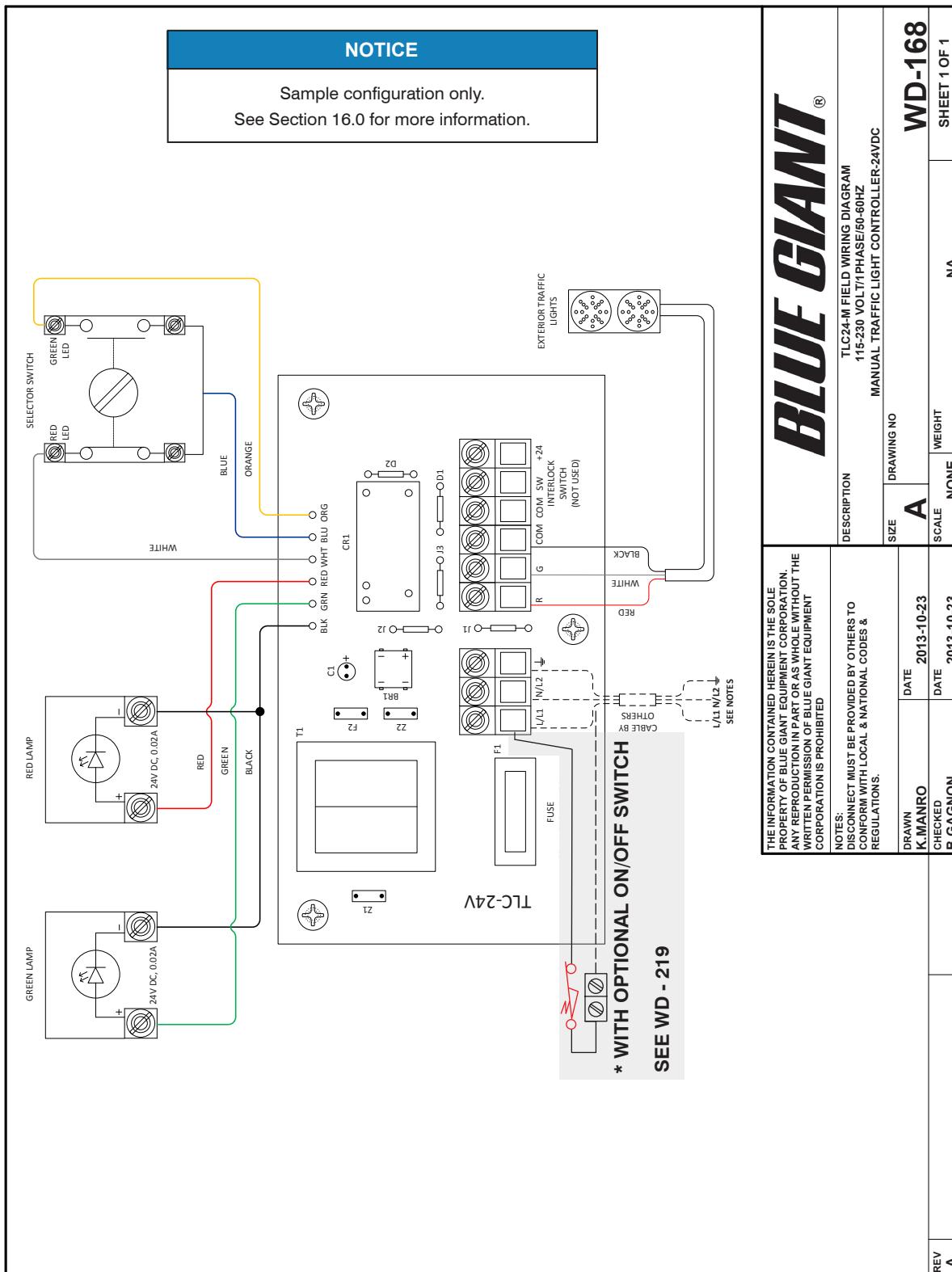
NOTICE

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.

16.1 WIRING DIAGRAM—TLC24-A 115V AND 230V SINGLE PHASE (AUTOMATIC)



16.2 WIRING DIAGRAM—TLC24-M 115V AND 230V SINGLE PHASE (MANUAL)



NOTES



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