

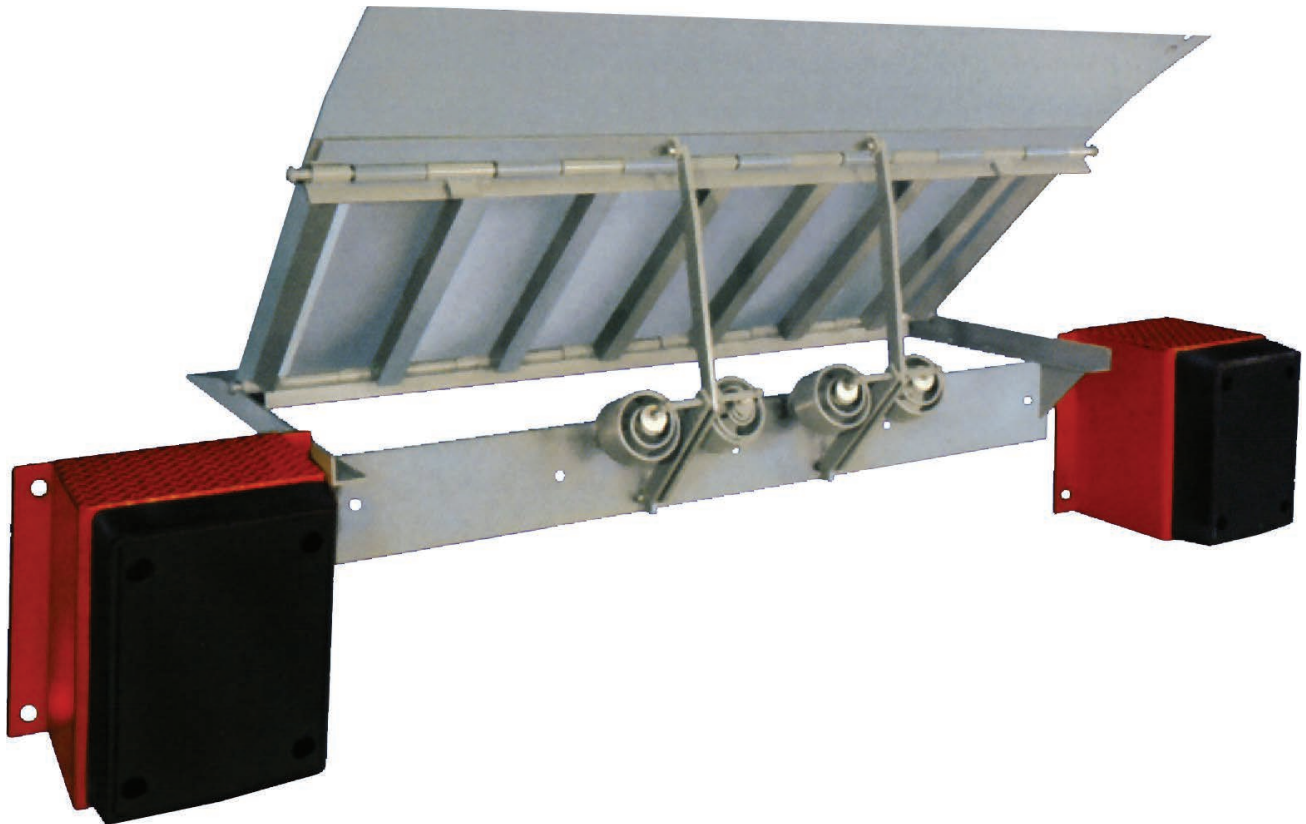
A Division of Systems, LLC

DLM
DOCK LEVELER
MANUFACTURING

SM Series

Dock Leveler

Owner's/User's Manual



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Recognize Precautionary Information

Safety-Alert Symbol



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

DANGER

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

WARNING

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

CAUTION

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

NOTICE

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

SAFETY INSTRUCTIONS

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

General Operational Precautions



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

Never operate a dock leveler or transport vehicle restraint while a safety device or guard is removed or disconnected.

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

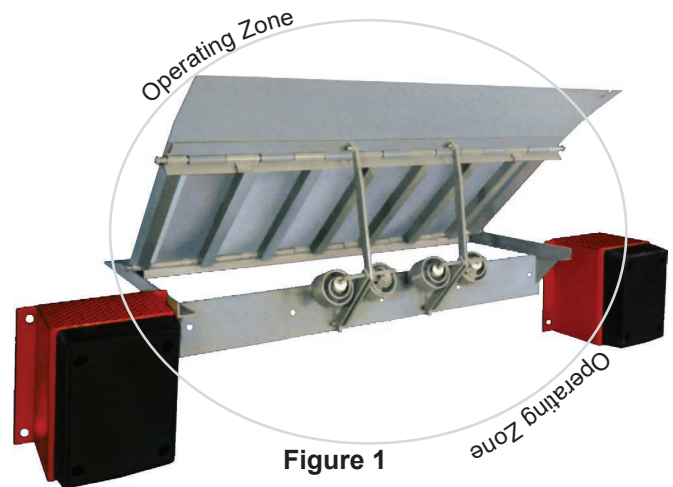


Figure 1

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

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

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



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

PRECAUTIONS

Operational Precautions



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

DANGER



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



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



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

WARNING



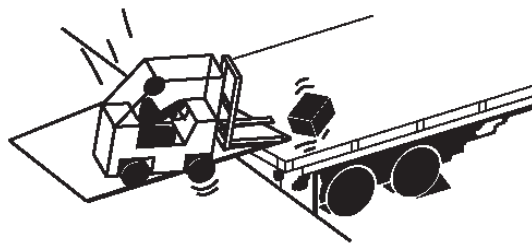
Chock/restrain all transport vehicles. Never remove the wheel chocks or release the restraining device until loading or unloading is finished, and transport driver has been given permission to drive away.



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



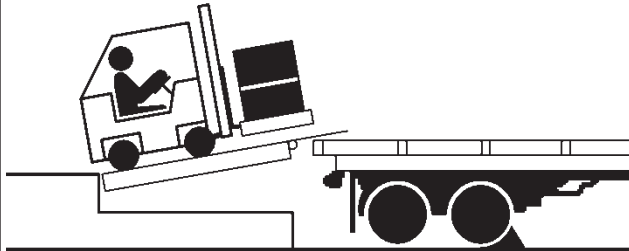
Make sure lip overlaps onto transport vehicle bed at least 4 in. (102 mm).



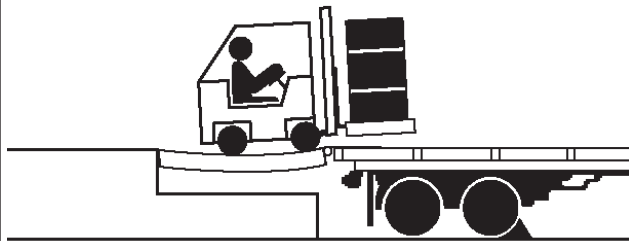
Keep a safe distance from both side edges.

Operational Precautions

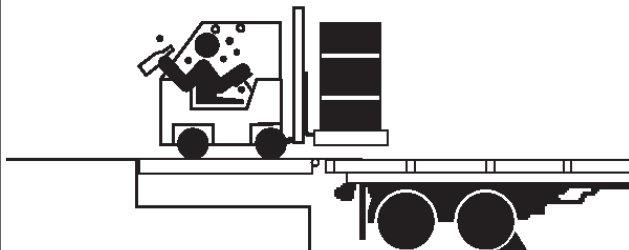
WARNING



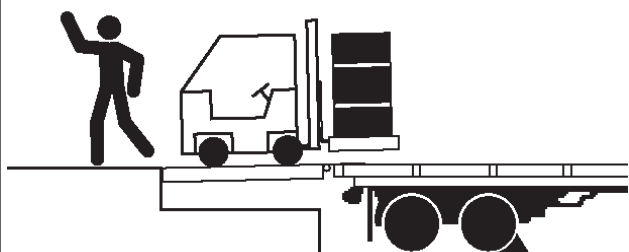
Do not use dock leveling device if transport vehicle is too high or too low.



Do not overload the dock leveling device.



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



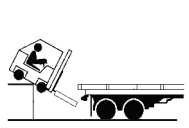
Do not leave equipment or material unattended on dock leveling device.

PRECAUTIONS

Safety Decals

⚠

DANGER



①

Unsupported dock leveler ramps can lower unexpectedly.

Before allowing vehicle to leave the dock always:

- Ensure no equipment, material or people are on dock leveler.
- Return dock leveler to its stored position at dock level.

SAFETY INFORMATION

OPERATION

1. Read and follow all instructions and warnings in owner's/user's manual.
2. Use of dock leveler restricted to trained operators
3. Always chock trailer wheels or engage truck restraint before operating dock leveler or beginning to load or unload.
4. Never use hands or equipment to move ramp or lip
5. Before activating dock leveler:
 - Ensure trailer is backed in against bumpers.
 - Remove any end loads if required.
 - Check trailer alignment to avoid lip interference. If lip does not lower to trailer bed, reposition vehicle.
6. Ensure truck bed supports extended lip or leveler frame supports the ramp before driving on ramp.
7. Stay clear of hinges and front and sides of moving dock leveler.
8. Never use damaged or malfunctioning dock leveler. Report problems immediately to supervisor.

MAINTENANCE/SERVICE


1. Read and follow all instructions, warnings and maintenance schedules in the owner's/user's manual.
2. Maintenance/Service of dock leveler restricted to trained personnel.
3. Place barriers on the driveway and dock floor to indicate service work is being performed.
4. DO NOT ENTER PIT unless dock leveler is securely supported by maintenance prop.
5. If electrically powered turn off and use OSHA lockout/tagout procedures.

Failure to follow posted instructions will result in death or serious injury. Call 282.255.1510 for replacement placards, warning labels, or owner's/user's manuals. 1751-0730 Rev. 2

1751-0730

⚠

CAUTION



③

LIFTING HAZARD

The SM/MSM dock leveler requires a heavy lifting force to operate and position into the back of a truck.


Refer to Owner's/User's Manual for proper use and lifting instructions. Failure to comply could result in minor or moderate injury.

1751-1253 Rev. 1

1751-1253

⚠

DANGER

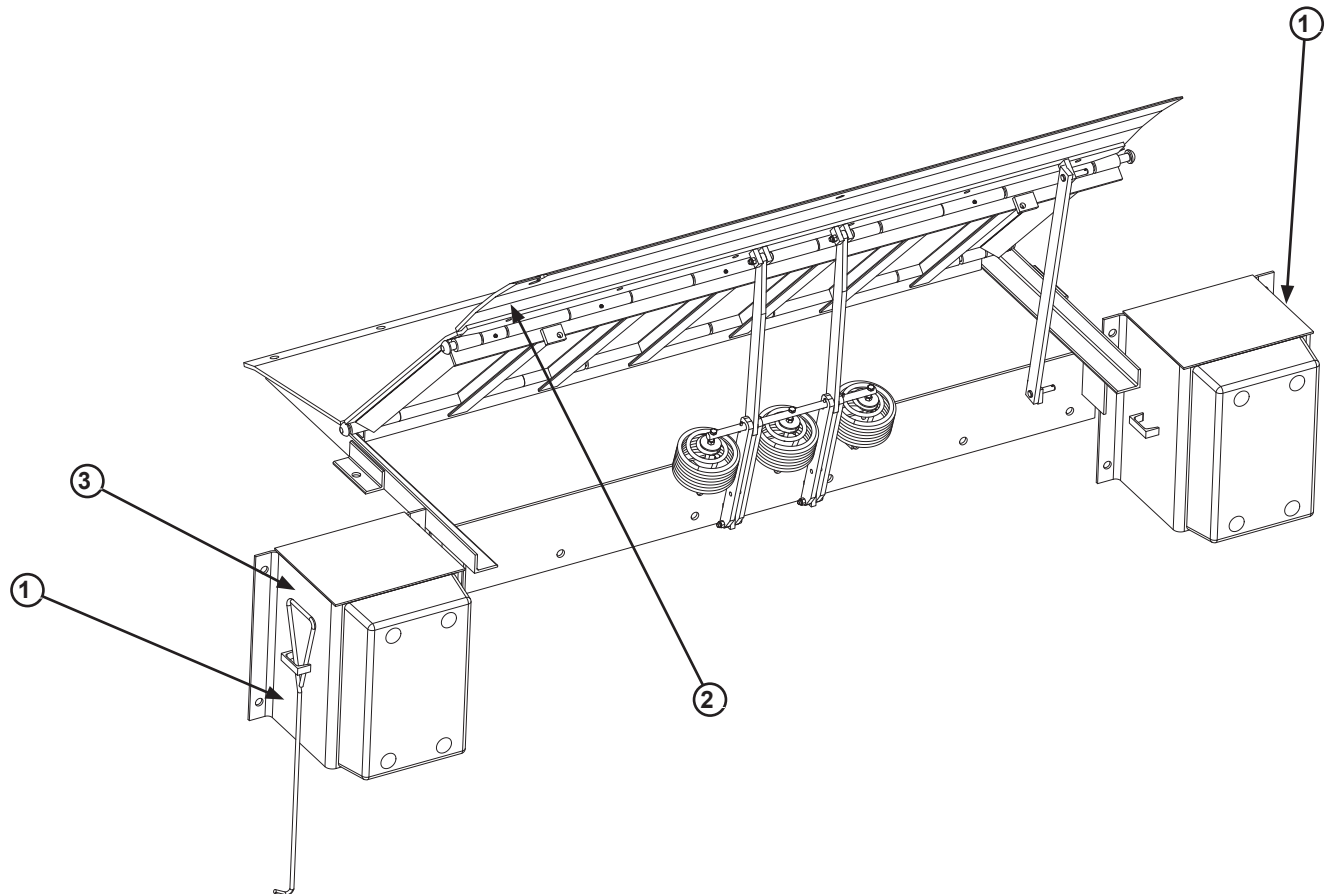


②

Ramp swings toward you. Stand Clear. Use maintenance strut while servicing. Failure to do so will result in death or serious injury.

Refer to owner's/user's manual for proper procedure 1751-0763 Rev. 2

1751-0763




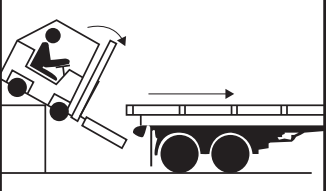
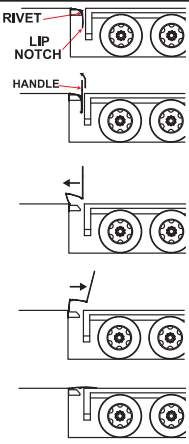
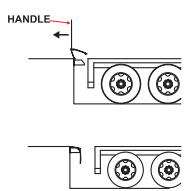



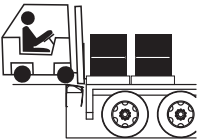
The diagram shows a side view of a dock leveler assembly. Callout 1 points to the electrical control box on the left and the main control box on the right. Callout 2 points to the hydraulic cylinder and support structure. Callout 3 points to the lip of the dock leveler.

Figure 2

4

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Placard

 <h1 style="margin: 0;">DANGER</h1>	<h1 style="margin: 0;">OPERATING INSTRUCTIONS</h1>
 <ul style="list-style-type: none"> Read and follow all instructions, warnings, and maintenance schedules in the manual and on placards. Operation and servicing of dock leveler is restricted to authorized personnel. <ul style="list-style-type: none"> Always chock transport vehicle wheels or engage vehicle restraint and set parking brakes before operating dock leveler or beginning to load or unload. Before activating dock leveler, check to make sure the transport vehicle is positioned squarely against dock bumpers. Ensure lip will avoid contact with transport vehicle frame, sides and cargo during dock leveler activation. If contact is likely or observed, reposition transport vehicle. Ensure the transport vehicle floor supports extended lip or the leveler frame (lip keepers or below dock endload supports) supports the ramp before driving on ramp. Stay clear of hinges and front and sides of moving dock leveler. Never use hands or equipment to move the ramp or lip. Never use damaged or malfunctioning dock leveler. Report problems immediately to supervisor. Always store dock leveler and remove people, material, and equipment from ramp before vehicle leaves the dock. DO NOT ENTER PIT unless dock leveler is securely supported and proper lockout/tagout procedures have been completed. See "Maintenance Precautions" in Owner's/User's Manual. <p>FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN DEATH OR OTHER SERIOUS INJURY.</p>	<h2 style="text-align: center; background-color: black; color: white; padding: 5px;">DL EDGE-OF-DOCK LEVELERS</h2> <div style="display: flex;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <h3 style="color: red;">NORMAL OPERATION</h3> <ol style="list-style-type: none"> To raise the unit, use the lifting hook to pull back and up on rivet or engage on the lip notch until leveler is cocked. Actuate the leveler by placing the lifting hook into lip notch (if using rivet) and manually lift the lifting hook until the lip plate section extends over the transport vehicle. Lower lip until it rests on the transport vehicle. </div> </div> <hr/> <div style="display: flex;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <h3 style="color: red;">STORING LEVELER</h3> <ol style="list-style-type: none"> Use lifting hook to pull back and up on rivet until lip just clears the bed of the transport vehicle. Slowly allow handle to come forward until leveler is lowered to the stored position. Return handle to the stored position. <p>NOTE: If transport vehicle departs before leveler is stored, leveler will automatically return to stored position.</p> </div> </div>
 <p>Scan to view our owner's/user's manuals online. www.LoadingDockSystems.com 1.800.643.5424 Call for additional placards, or manuals, or with questions regarding proper use, maintenance, and repair of dock leveler.</p> <p> WARNING: CANCER AND REPRODUCTIVE HARM www.P65Warnings.ca.gov</p> <p>1751-0876</p>	  <h3 style="color: red;">BELOW DOCK ENLOADING</h3> <ul style="list-style-type: none"> Remove any endloads while leveler is in the stored position. <p style="text-align: right;">1751-0876 Rev D</p>

OWNER'S/USER'S RESPONSIBILITIES

- 1) The manufacturer shall provide to the initial purchaser and make the following information readily available to the owners/users and their agents, all necessary information regarding Safety Information, Operation, Installation and Safety Precautions, Recommended Initial and Periodic Inspections Procedures, Planned Maintenance Schedule, Product Specifications, Troubleshooting Guide, Parts Break Down, Warranty Information, and Manufacturers Contact Information, as well as tables to identify the grade(slope) for all variations of length or configuration of the dock leveling device and information identifying the maximum uncontrolled drop encountered when sudden removal of support while in the working range of the equipment.
- 2) When selecting loading dock safety equipment, it is important to consider not only present requirements but also future plans and any possible adverse conditions, environmental factors or usage. The owners/users shall provide application information to the manufacturer to receive recommendations on appropriate equipment specifications and capacity.
- 3) The owner/user must see all nameplates, placards, decals, instructions and posted warnings are in place and legible and shall not be obscured from the view of the operator or maintenance personnel for whom such warnings are intended for. Contact manufacturer for any replacements.
- 4) Dock leveling devices may become hazardous if the manufacturer's instructions regarding modifications or adjustments are not followed. Modifications or alterations of dock leveling devices shall only be made with prior written approval from the original manufacturer. These changes shall be in conformance with all applicable provisions of the MH30.1 standard and shall also satisfy all safety recommendations of the original equipment manufacturer of the particular application.
- 5) The owner/user should recognize the inherent dangers of the interface between the loading dock and the transport vehicle. The owner/ user should, therefore, train and instruct all operators in the safe operation and use of the loading dock equipment in accordance with manufacturer's recommendations and industry standards. Effective operator training should also focus on the owner's/user's company policies, operating conditions and the manufacturer's specific instructions provided with the dock leveling device. Maintaining, updating and retraining all operators on safe working habits and operation of the equipment, regardless of previous experience, should be done on a regular basis and should include an understanding and familiarity with all functions of the equipment. Owners/users shall actively maintain, update and retrain all operators on safe working habits and operations of the equipment.
- 6) An operator training program should consist of, but not necessarily be limited to, the following:
 - a) Select the operator carefully. Consider the physical qualifications, job attitude and aptitude.
 - b) Assure that the operator reads and fully understands the complete manufacturer's owners/users manual.
 - c) Emphasize the impact of proper operation upon the operator, other personnel, material being handled, and equipment. Cite all rules and why they are formulated.
 - d) Describe the basic fundamentals of the dock leveling device and components design as related to safety, e.g., mechanical limitation, stability, functionality, etc.
 - e) Introduce the equipment. Show the control locations and demonstrate its functions. Explain how they work when used properly and maintained as well as problems when they are used improperly.
 - f) Assure that the operator understands the capacity rating, nameplate data, placards and all precautionary information appearing on the dock leveling device.
 - g) Supervise operator practice of equipment.
 - h) Develop and administer written and practical performance tests. Evaluate progress during and at completion of the course.
 - i) Administer periodic refresher courses. These may be condensed versions of the primary course and include on-the-job operator evaluation.

OWNER'S/USER'S RESPONSIBILITIES

- 7) Loading dock safety equipment should never be used outside of its vertical working range, or outside the manufacturer's rated capacity. It shall also be compatible with the loading equipment and other conditions related to dock activity. Please consult the manufacturer if you have any questions as to the use, vertical working range or capacity of the equipment. Only properly trained and authorized personnel should operate the equipment.
- 8) It is recommended that the transport vehicle is positioned as close as practical to the dock leveling device and in contact with both bumpers. When an industrial vehicle is driven on or off a transport vehicle during loading and unloading operations, the transport vehicle parking brakes shall be applied and wheel chocks or a restraining device that provides equal or better protection of wheel chocks shall be engaged. Also, whenever possible, air-ride suspension systems should have the air exhausted prior to performing said loading and unloading operations.
- 9) When goods are transferred between the loading dock and a trailer resting on its support legs/ landing gear instead of a tractor fifth wheel or converter dolly, it is recommended that an adequate stabilizing device or devices shall be utilized at the front of the trailer.
- 10) In order to be entitled to the benefits of the standard product warranty, the dock safety equipment must have been properly installed, maintained and operated in accordance with all manufacturer's recommendations and/ or specified design parameters and not otherwise have been subject to abuse, misuse, misapplication, acts of nature, overloading, unauthorized repair or modification, application in a corrosive environment or lack of maintenance. Periodic lubrication, adjustment and inspection in accordance with all manufacturers' recommendations are the sole responsibility of the owner/user.
- 11) Manufacturer's recommended maintenance and inspection of all dock leveling devices shall be performed in conformance with the following practices: A planned maintenance schedule program must be followed, only trained and authorized personnel shall be permitted to maintain, repair, adjust and inspect dock leveling devices, and only the use of original equipment manufacturer parts, manuals, maintenance instructions, labels, decals and placards or their equivalent. Written documentation of maintenance, replacement parts or damage should be kept. In the event of damage, notification to the manufacturer is required.
- 12) Loading dock devices that are structurally damaged or have experienced a sudden loss of support while under load, such as might occur when a transport vehicle is pulled out from under the dock leveling device, shall be removed from service, inspected by a manufacturer's authorized representative, and repaired or replaced as needed or recommended by the manufacturer before being placed back in service.

INTRODUCTION

General Information

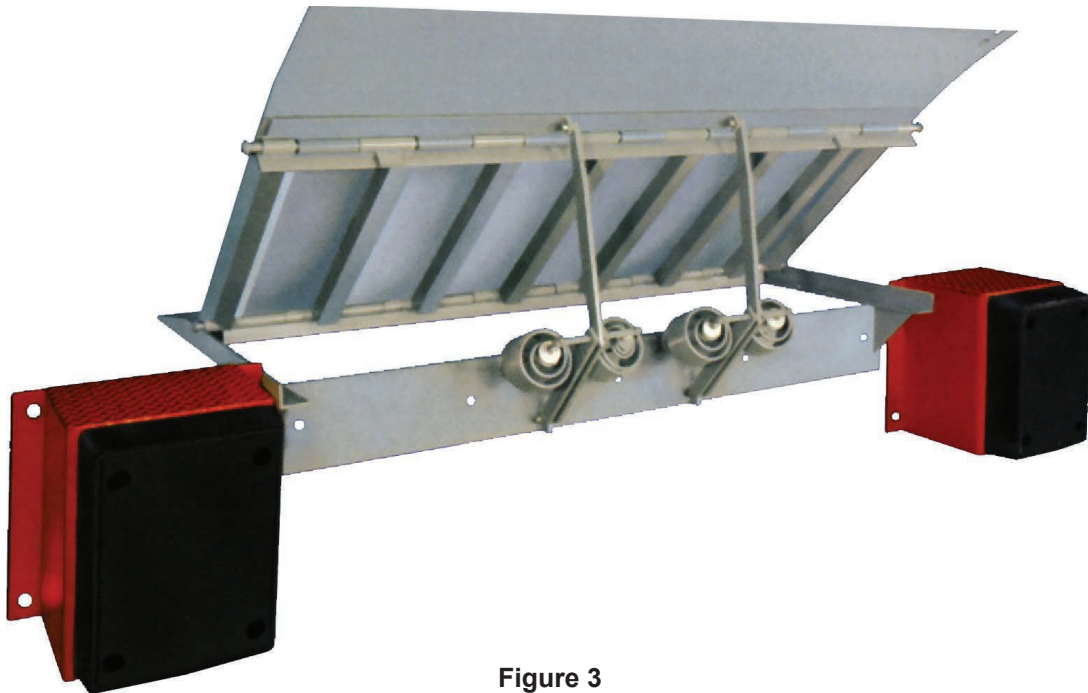


Figure 3

This manual provides current information on the SM-series dock leveler (Figure 3). Due to ongoing product improvement, some parts may have changed, along with operation and troubleshooting methods. This manual describes these changes where applicable.

The SM-series dock leveler is a rugged and economical choice for older docks that are below the 50" industry standard height. The SM-series allows a 10" upward reach from the dock to the trailer, so that low docks can remain useful.

SM-series dock levelers mount directly to the floor and edge of a loading dock. No pit is needed. Space requirement is minimal - only 35" back from the dock edge.

SM dock levelers are available in the following sizes and weight capacities:

Dimensions and Capacities			
Model #	Deck Width	Lip Length	Comparative Industry Rating
SM500	72"	15"	20,000
SM525	72"	15"	25,000
SM530	72"	15"	30,000

Call DLM to discuss available options to meet your specific needs.

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

Component Identification

Inspect package and all components. Report any missing or damaged items immediately and note on the shipping Bill Of Lading (BOL).

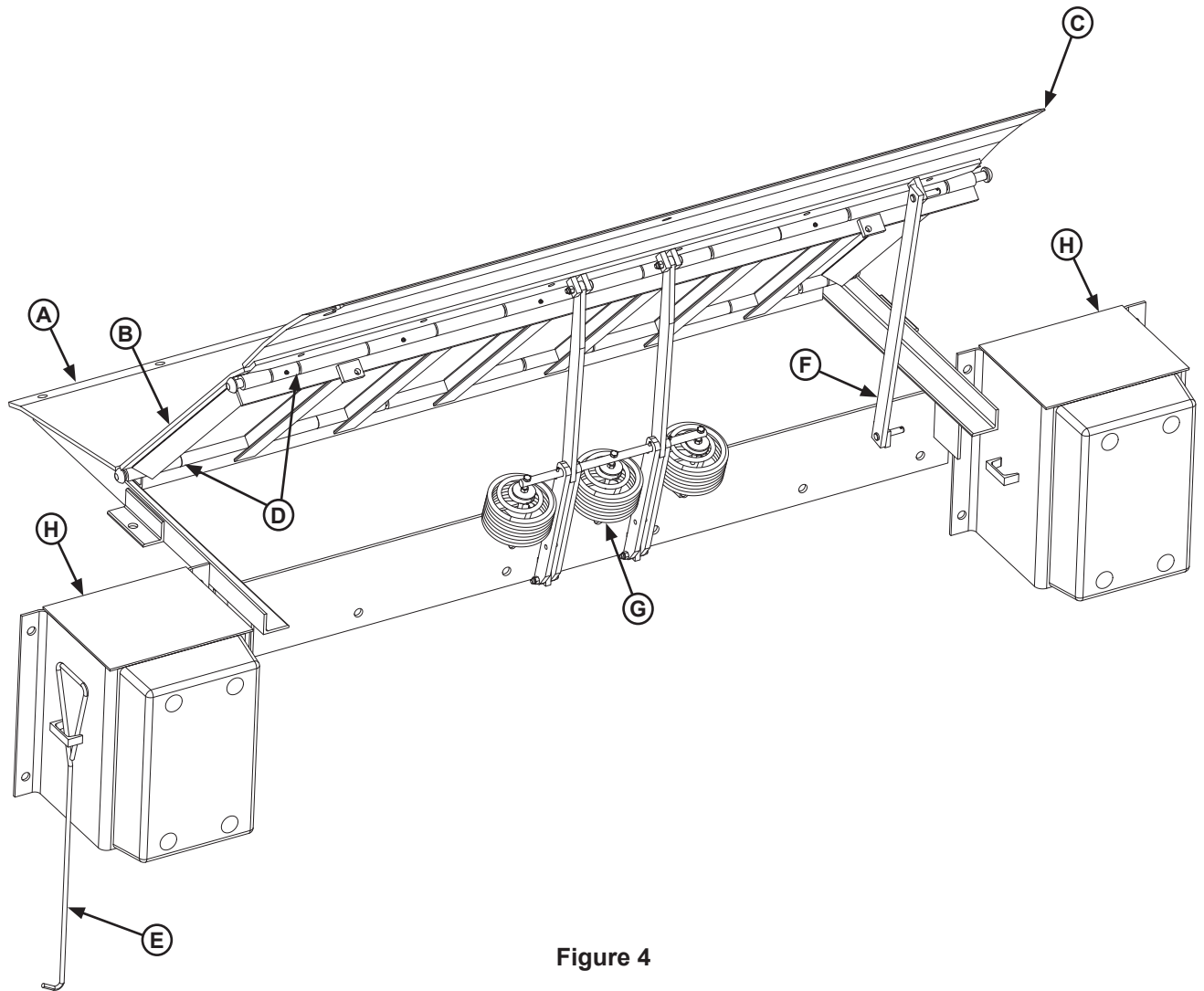


Figure 4

A — Ramp Plate
B — Center Plate
C — Lip Plate

D — Hinge Area
E — Lifting Hook
F — Maintenance Prop

G — Extension Spring Assembly
H — Bumper Blocks (2 used)

INSTALLATION

Installation Precautions

DANGER

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

WARNING

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

WARNING

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

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

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

WARNING

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

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

CAUTION

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

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INSTALLATION

Weld/Bolt On

A weld/bolt on application is used when adequate dock steel is securely anchored in the concrete at the dock edge.

1. Remove all existing bumper material and protruding objects from dock edge. Clean and sweep dock edge free of debris and flammable chemicals before installing unit.
2. Using a proper lifting device, place unit at desired location on surface of dock. Mark along full length of back edge of ramp plate. Slide unit forward the width of bushing tool, approximately 2".
3. Place bushing tool on marked line at each end of ramp to ensure proper alignment at both ends. A Skil Roto Hammer #736 or similar tool is recommended.
4. Using the back edge of the ramp plate as a guide, groove concrete approximately 3/4" deep by 2" wide, and should be the entire length of ramp plate.
5. Slide unit back into position so that rear edge of unit fits against back edge of groove.
6. Tack weld base plate of unit to dock edge steel. Using holes in unit as a guide, drill (9) 5/8" dia. by 5" deep holes. Install anchor bolts per manufacturers specifications, and tighten securely.
7. Weld anchor bolt nuts to ramp plate using a 1/4" fillet weld all the way around the nut. Cut off any portion of the anchor bolt exposed through the nut, and plug weld around the top of the nut to the anchor bolt. Ensure the top of the nuts are well rounded for smooth rollover.
8. Continuous weld base plate to existing dock steel.
9. If dock edge steel is narrower than 6", repeat step 6 for holes in base plate, ensuring anchor bolts are securely tightened.
10. Position bump blocks approximately 3" above dock surface so back plate rests on dock surface, and out approximately 5/8" out from the edge of the inside flange of the bump block to the end of the base plate. Tack weld bump blocks to dock steel. If dock steel is narrower than 6", repeat step 5 for holes in bump blocks.
11. Complete bumper install:
 - a. Weld back of bumper flanges to dock steel.
 - b. Plug weld mounting holes to imbed or drill holes 5/8" dia. by 5" deep in concrete. Install 5/8" x 4-3/4" anchor bolts with washers.
12. Repeat step 5 for holes in side angles as shown in drawing.
13. Installer must remove all welding slag, and repaint welded areas.
14. Installer must adjust springs on all mechanical Surface Mount levelers to provide desired tension for smooth operation. See page 22.

WARNING

Securely block or support ramp and lip when in vertical positions. Lack of proper bracing can result in ramp dropping during adjustment or installation.

NOTICE

Springs must be adjusted after install to ensure correct operation and preserve unit warranty.

Weld/Bolt On

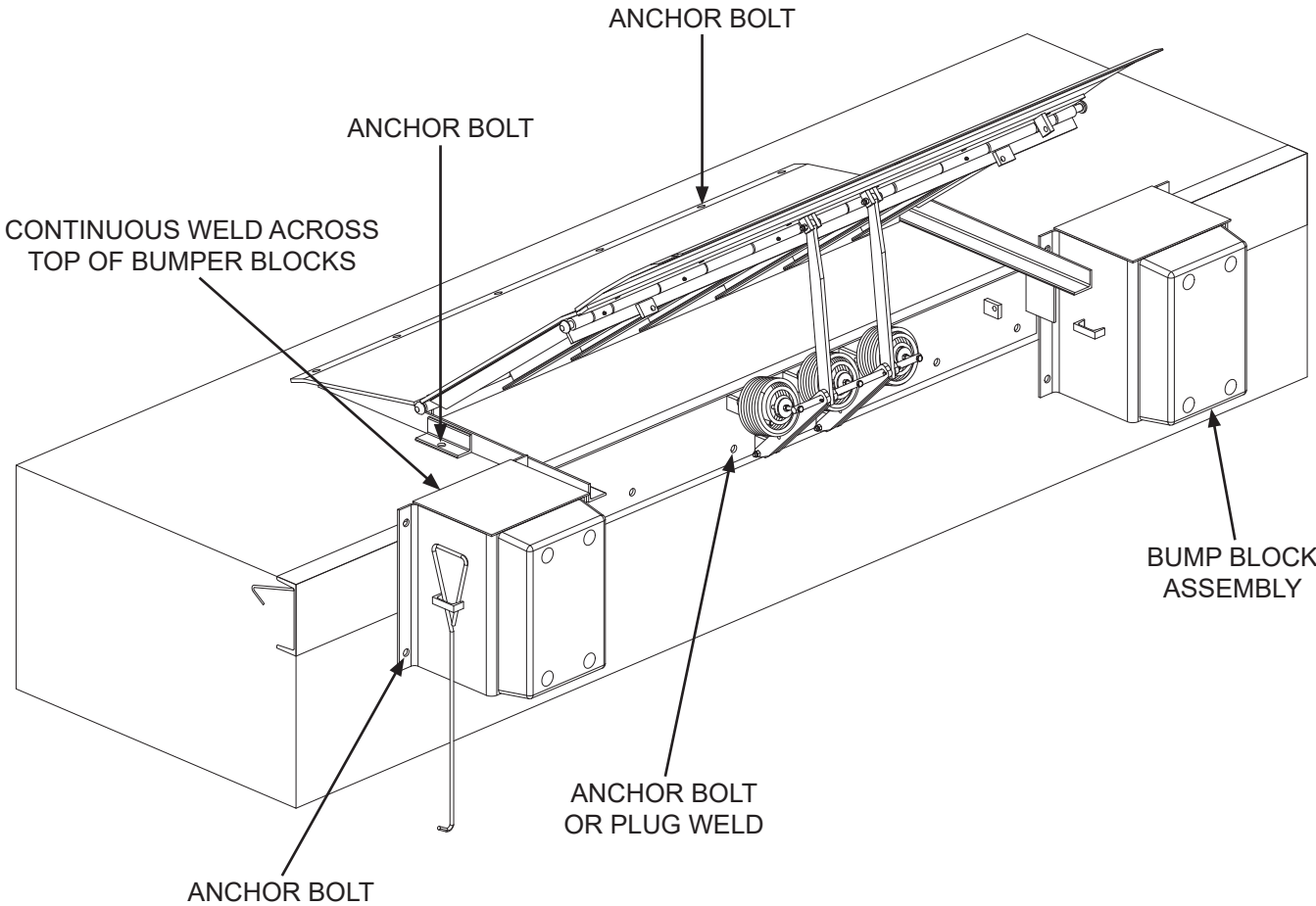
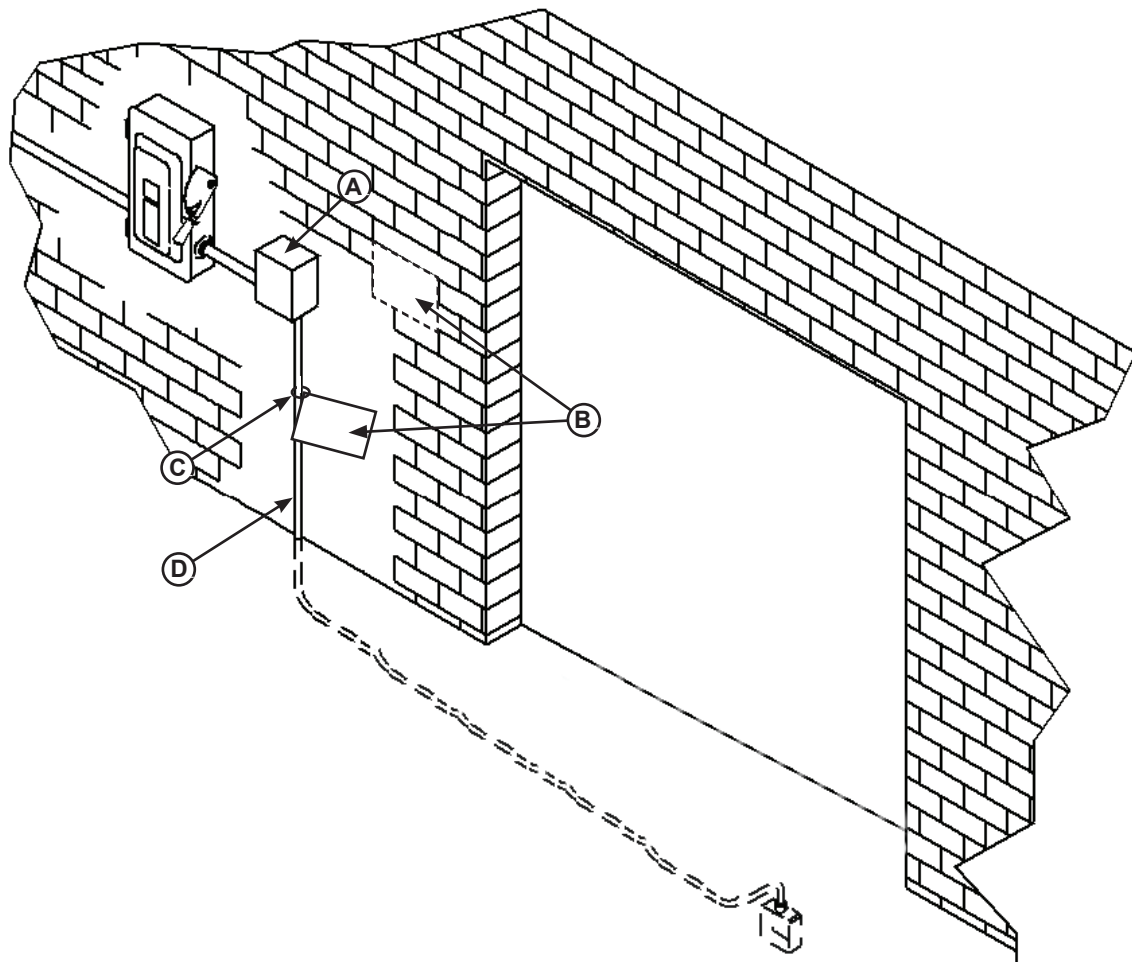


Figure 5

INSTALLATION

Placard Installation Instructions

- Owner/Users are responsible for the installation and placement of product placards.
- Make sure placard is in plain view of dock leveler and/or vehicle restraint operations.
- Suggested placement of placard is near control box attached to electrical conduit by using nylon cable tie. If there is no control box present, mount placard on wall to the immediate left of leveler at eye level.



A - Control Box

B - Placard

C - Nylon Cable Tie

D - Conduit

Figure 7

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OPERATION

Operational Precautions

DANGER

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

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

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

WARNING

Only trained personnel should operate the dock leveler.

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

Transport vehicle wheels must be chocked unless a vehicle restraint is used. Never remove the wheel chocks until loading/unloading is finished and transport driver has been given permission to leave.

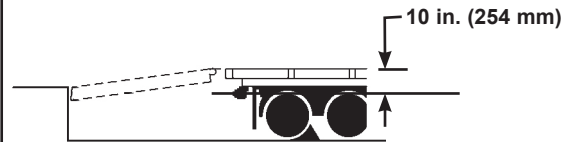
Make sure platform lip rests on the transport vehicles bed with at least 4 in. (102 mm) of overlap.

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

CAUTION

The SM mechanical dock leveler requires approximately 70 lbs. of human force to operate and position into the back of a truck. Always bend at the knees, never at the back when operating the dock leveler.

WARNING



The SM mechanical dock leveler is designed to compensate for a maximum + 10 in.* (254 mm) of height difference between the loading dock and the transport vehicles bed. DO NOT use the dock leveler if the transport vehicles bed is more than 10 in. (254 mm) higher than the dock floor.

*Service height may vary with design specifications

DO NOT overload the dock leveler.

DO NOT operate any equipment while under the influence of alcohol or drugs.

DO NOT leave equipment or material unattended on the dock leveler.

Operating Instructions - SM

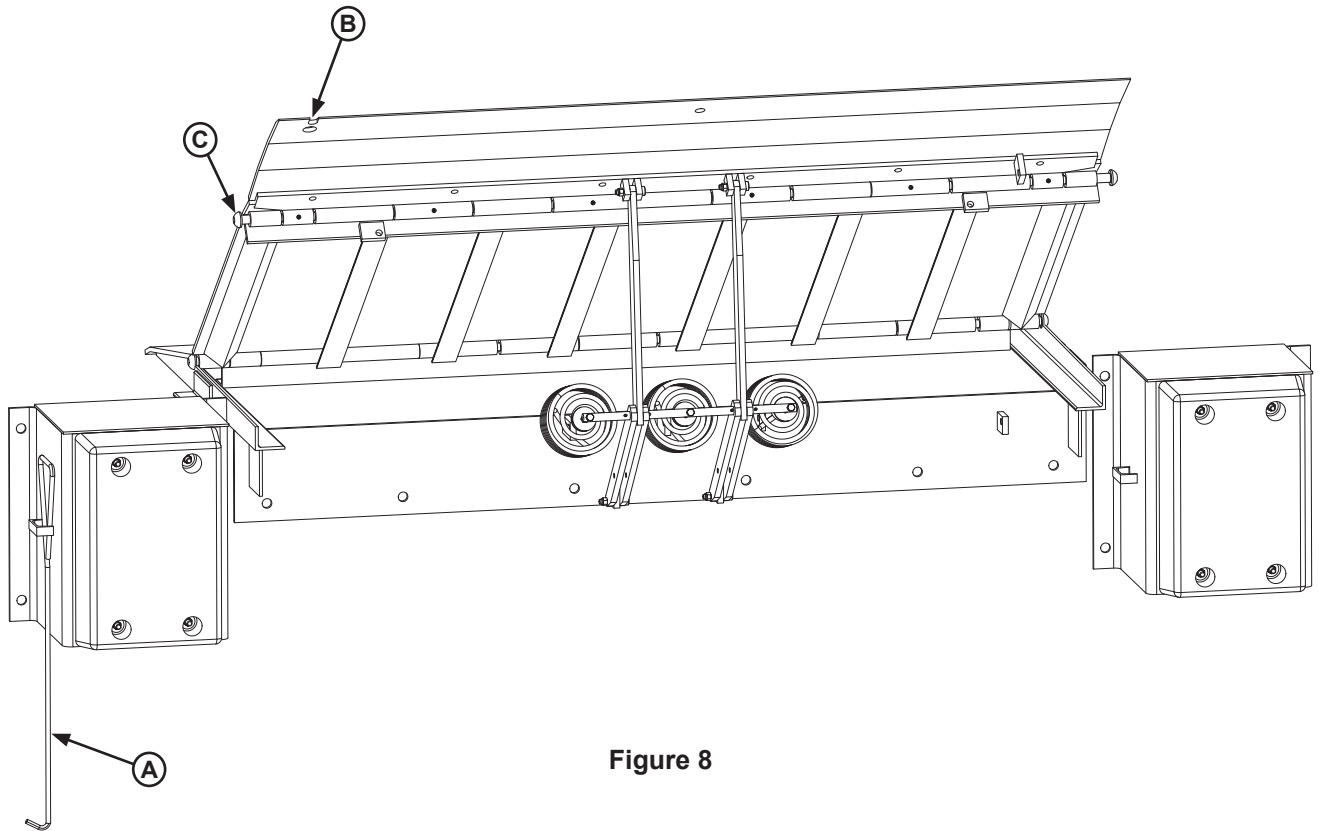


Figure 8

A — Lifting Hook

B — Notch

C — Rivet

CAUTION

The SM mechanical dock leveler requires approximately 70 lbs. of human force to operate and position into the back of a truck. Always bend at the knees, never at the back when operating the dock leveler.

1. Check to make sure the transport vehicle is positioned squarely against dock bumpers.
2. Instruct driver to remain at the dock until the loading or unloading process has been completed.
3. Chock the transport vehicle wheels, or use a vehicle restraint if available.
4. If necessary, remove any end loads with the leveler in the stored position.
5. Actuate the leveler by placing the lifting hook (A) into lip plate notch (B) and manually lifting the hook until the lip plate section extends over the transport vehicle bed. Then, lower lip to bed of the transport vehicle.
6. Proceed with loading or unloading.
7. When loading or unloading is finished, remove chocks from transport vehicle wheels, or release the vehicle restraint if used.
8. Indicate to driver that the transport vehicle may leave the dock.
9. Leveler will automatically return to the stored position.

MAINTENANCE

Maintenance Precautions

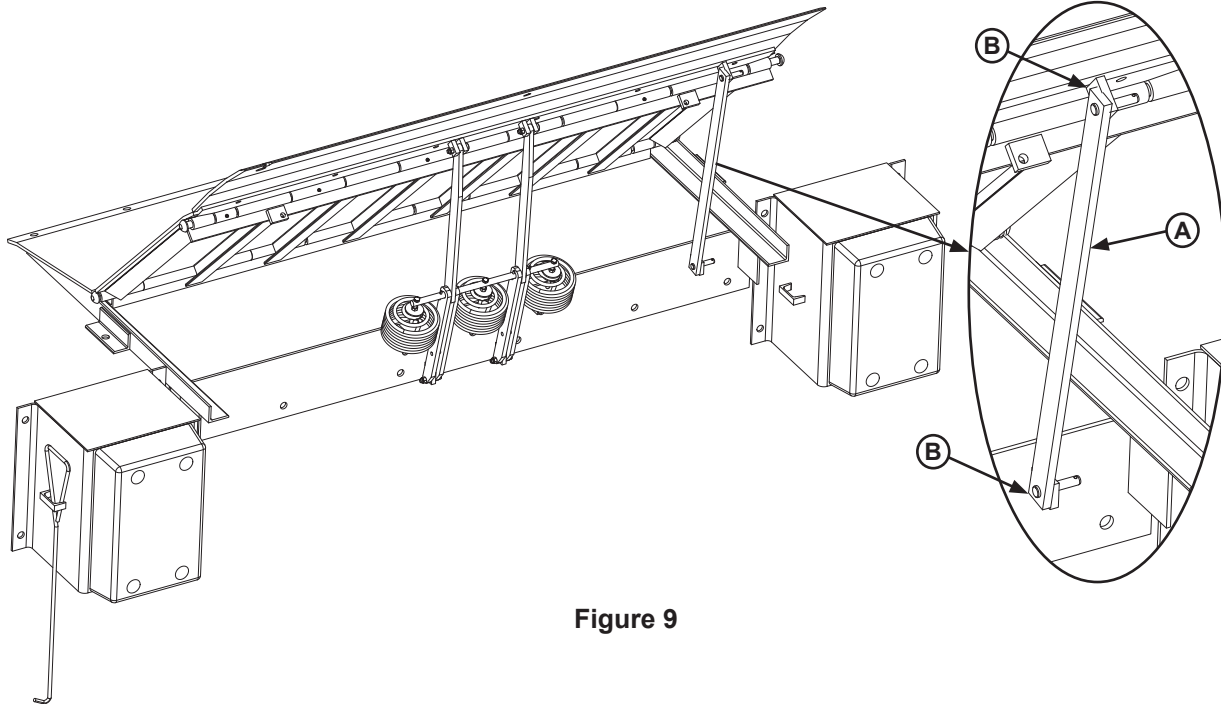


Figure 9

A — Maintenance Prop

B — Support Gussets

DANGER

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

WARNING

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

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

WARNING



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

Whenever maintenance is to be performed under the dock leveler, support the dock leveler with the maintenance prop (A). Position the maintenance prop in its support gussets (B). See Figure 9.

The maintenance prop supports both the lip and center plate.

Periodic Maintenance

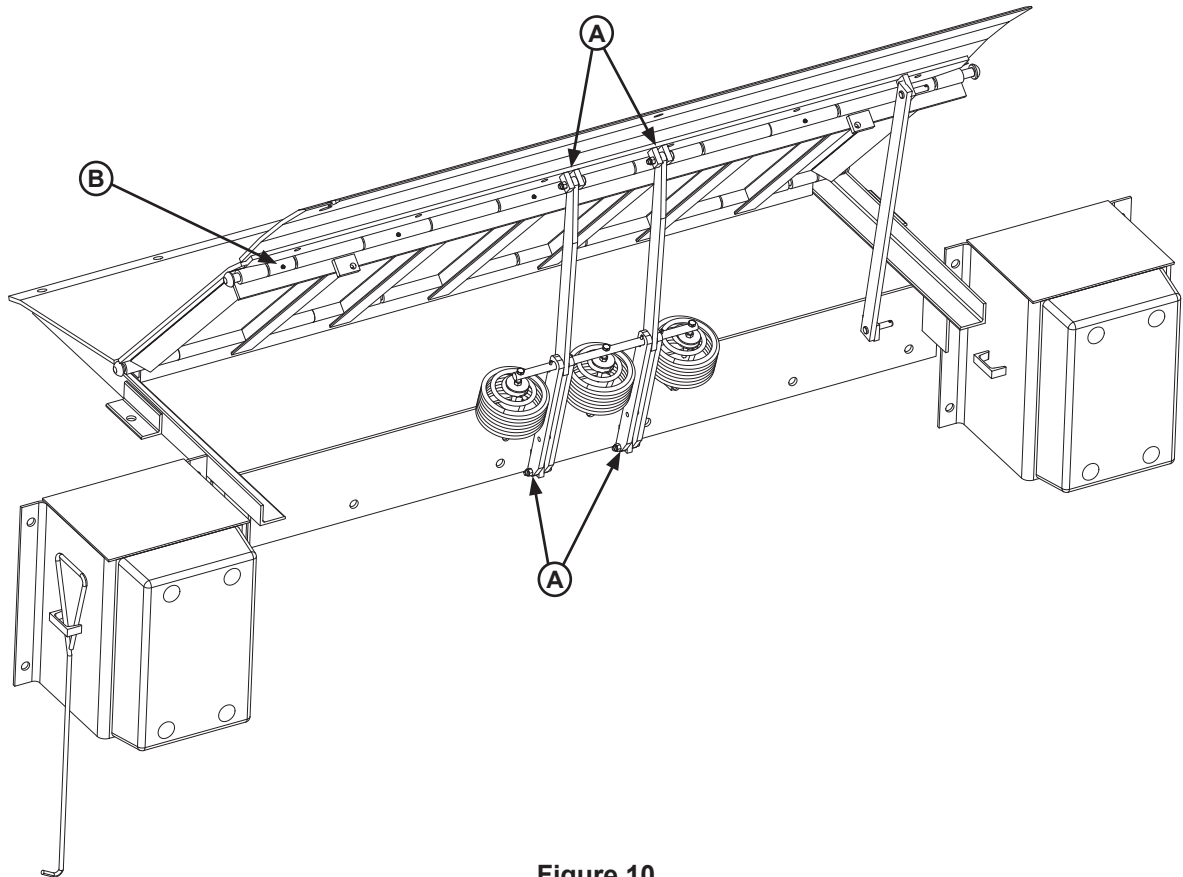


Figure 10

Weekly Maintenance

- Operate the dock leveler through the complete operating cycle to maintain lubrication.
- Inspect the platform hinge and the lip hinge areas. The hinge areas must be kept free of dirt and debris. Build-up of foreign material in the hinge areas will increase wear and cause abnormal operation.
- Inspect warning decals and placards. Replace if damaged or missing.

Quarterly Maintenance

- Perform Weekly Maintenance.
- Inspect welds for cracks or damage, and inspect lip and rear hinge pins. Repair or replace damaged or cracked parts as needed.
- Check spring tension and adjust if necessary. See page 22 for instructions.
- Lubricate the following areas with light-weight machine oil:

(A) — Linkage arm pivots

- Lubricate the following areas with white lithium grease:

(B) — Lip plate grease fittings

NOTICE

Failure to properly lubricate the dock leveler will cause abnormal operation of the leveler.

ADJUSTMENTS

Spring Adjustment

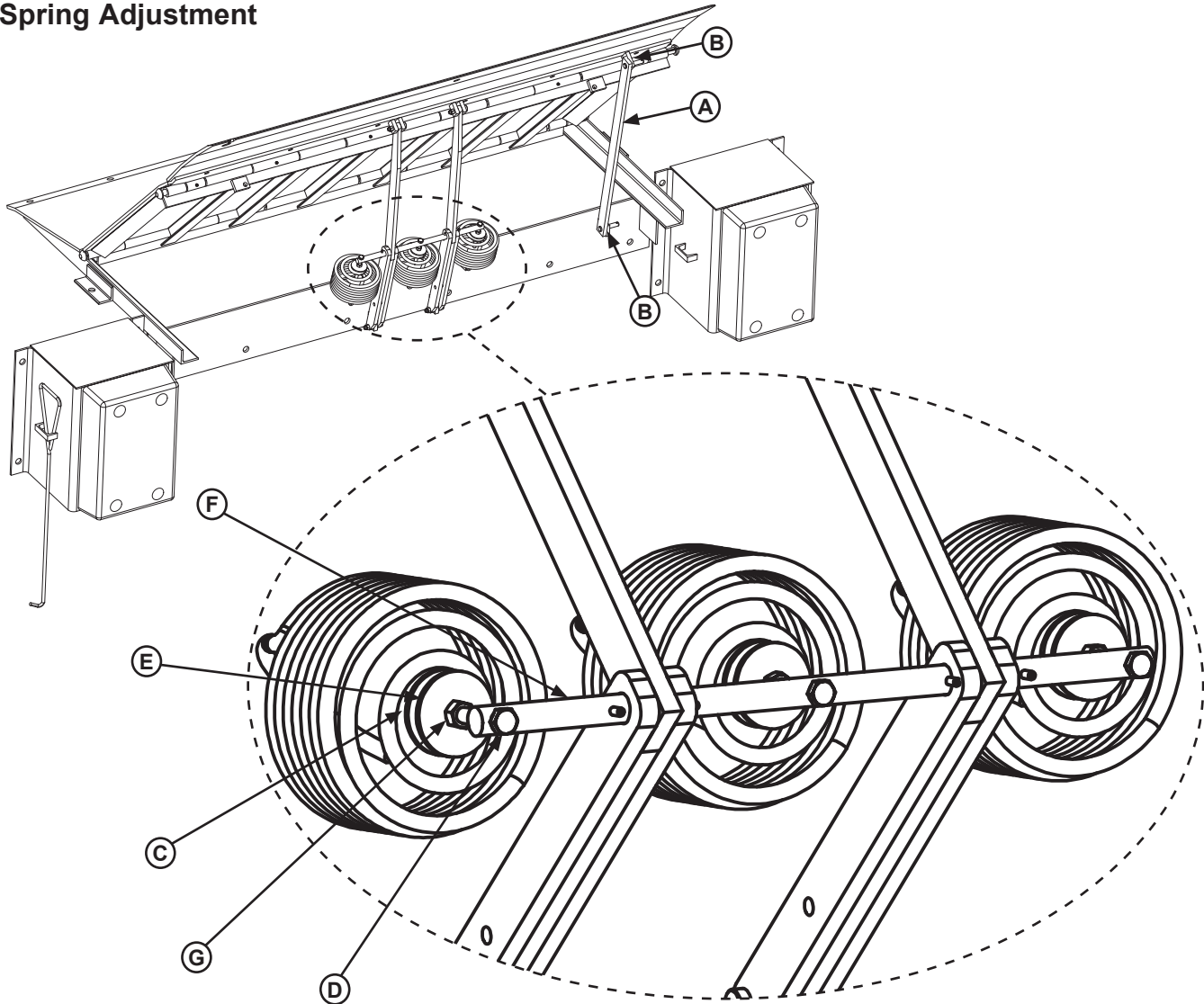



Figure 11


Extension Spring Adjustment

1. Lift and secure leveler in full upright position and support the dock leveler with the maintenance prop (A). Position the maintenance prop in its support gussets (B).
2. Tighten the nut (G) until the nut is about 1-1/2 inches (38 mm) from the underside of the linkage pin (F).
3. Tighten the jam nut (G) by turning the nut clockwise.
4. Tighten locknut (C) located inside the spring body.
5. Store the maintenance prop (A) and lower the leveler to stored position.
6. Test leveler operation. If spring tension is not sufficient, see step 7.
7. To further increase spring tension, repeat step 1, then loosen jam nut (G) by turning the nut clockwise. Once jam nut is loosened, use an open faced wrench to hold the locknut (C) inside the spring body. Tighten the hex bolt (D) by turning clockwise.
8. Store maintenance handle (A) lower leveler to stored position.
9. Test leveler operation. If spring tension is not sufficient, repeat step 7.

TROUBLESHOOTING

 DANGER


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

 WARNING

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

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

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

 WARNING

The maintenance prop **MUST** be in the service position when working under the dock leveler. For maximum protection, use an OSHA approved locking device to lock the maintenance prop in the service position. Only the person servicing the equipment should have the key to unlock the maintenance prop.

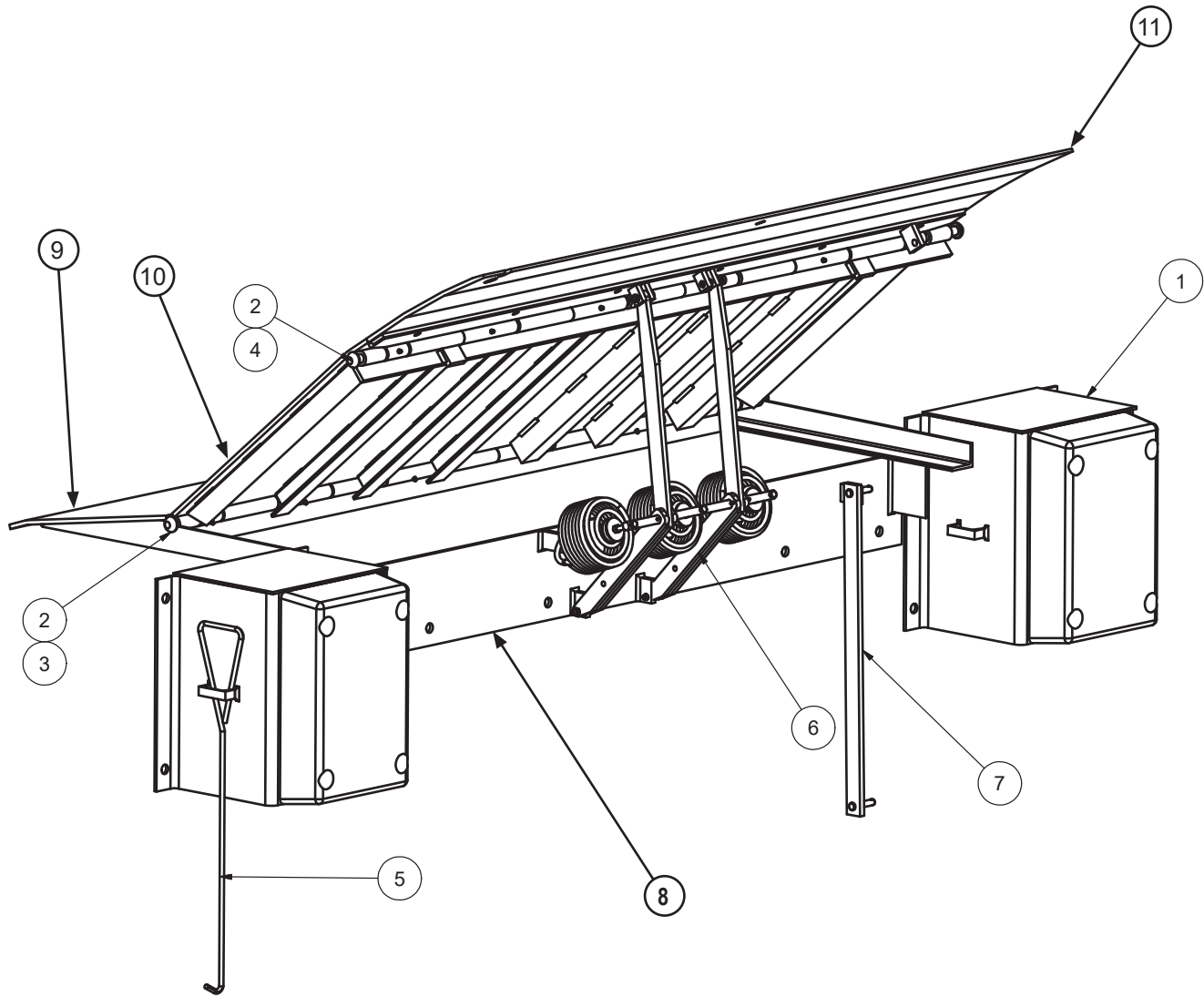
Symptom	Possible Cause	Solution
Unit does not operate properly, or is very difficult to operate.	Debris impacted in the hinge line.	Clean out debris.
	Insufficient lubrication.	Lubricate leveler; see page 21.
	Main springs need more tension or less tension.	Adjust main springs; see page 22.
	Damaged or missing parts.	Repair or replace as needed.

If additional troubleshooting assistance is required, contact Systems, LLC Technical Services with equipment serial number or customer order number (CO#).

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

PARTS

Leveler Components

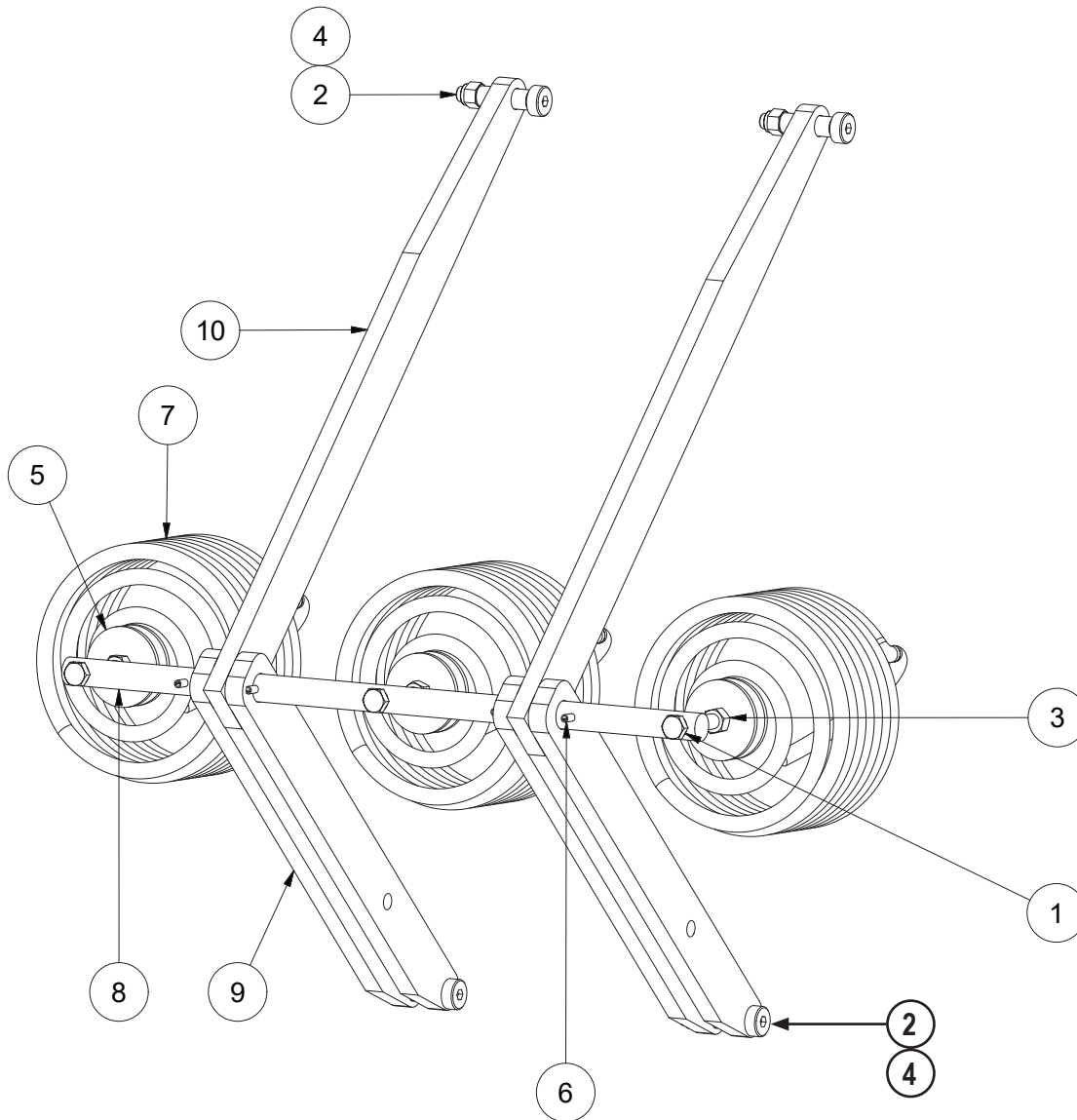


Item	Quantity	Part Number	Description
1	2	DBBS-3520	Bumper Block Assembly
2	4	DOTH-2400	Rivet - Button Head, 3/4 x 2
3	1	DOTH-5407	Pin - Lip Hinge, 21/32 Dia. x 67-1/2
4	1	DOTH-2406	Pin - Lip Hinge, 21/32 Dia. x 69-1/2
5	1	DOTH-3342	Lifting Hook, 3/8 Dia. x 46" Lg.
6	1	DOTH-5611	Spring Linkage Assembly - SM, 3-Spring
7	1	DOTH-5315*	Safety Bar Assembly - SM/HSM
8	1	DOTH-5300*	SM500/525/530 Base Plate Assembly
9	1	DOTH-5400*	SM/HSM 500/525 Ramp Assembly
10	1	DOTH-5200*	SM500/525 Deck Assembly
		DOTH-5214*	SM530 Deck Assembly
11	1	DOTH-5107*	SM500/525 Lip Plate & Hinge Assembly (6-9/16" Hinge)
		DOTH-5112*	SM530 Lip Plate & Hinge Assembly (6-9/16" Hinge)

**Provide dock leveler serial number when e-mailing, calling or faxing orders. Older units with 4-15/16" hinges may require survey sheets.*

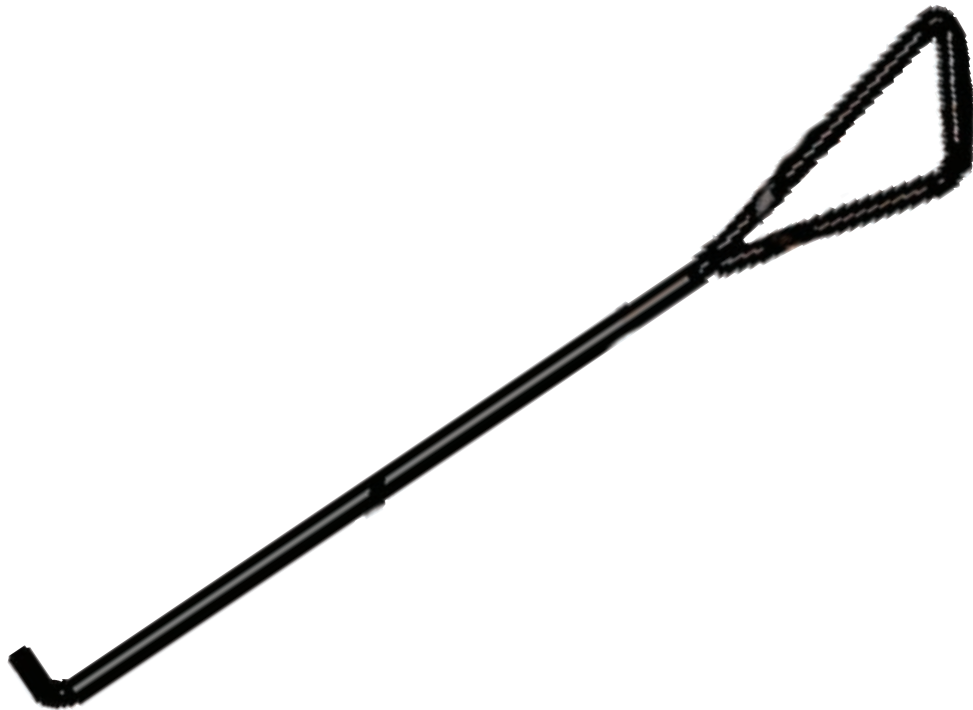
PARTS

Extension Spring Assembly



Item	Quantity	Part Number	Description
*	*	DOTH-5611	Extension Spring Kit (SM, 3 Springs) Includes 1-10
1	3	DOTH-2045	HHCS - Grade 5 - Zinc Plated
2	4	DOTH-2061	1-1/2" Shoulder Bolt
3	3	DOTH-2130	Hex Nut - Zinc Plated - Grade 5
4	7	DOTH-2137	Nylon Lock Nut
5	6	DOTH-2209	Washer - Fender - Zinc Plated
6	4	DOTH-2390	Roll Pin
7	3	DOTH-2520	Spring, Extension, Reg, Painted
8	1	DOTH-3619	Pin - Linkage
9	4	DOTH-3922	Bar - Base Linkage
10	2	DOTH-5601	Plate - SM Lip Linkage

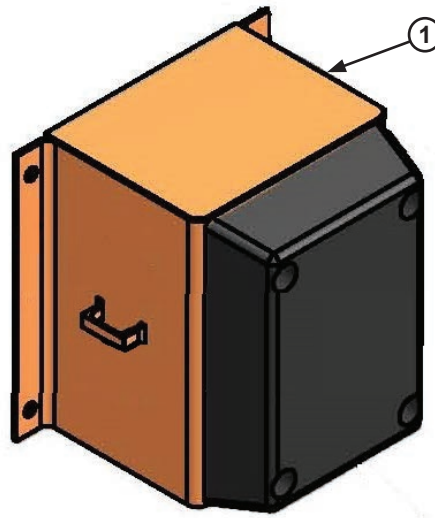
Lifting Hook



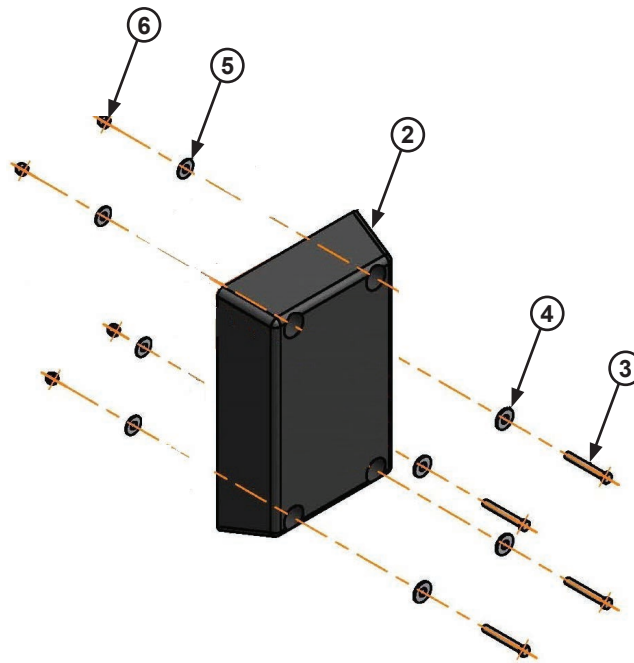
Part Number	Description
DOTH-3342	SM Lifting Hook

PARTS

Bumpers



Item	Quantity	Part Number	Description
*	*	DBBS-3520	4" x 10" x 18" Bumper Block Assembly With Kickplate, Complete
1	1	DOTH-3510	18" Bumper Block Weldment With Kickplate



Item	Quantity	Part Number	Description
*	*	DKIT-3541	Rubber Bumper and Hardware Kit
2	1	DOTH-3559	Molded Rubber Bumper 4" x 10" x 18"
3	4	DOTH-2056	Hex Head Cap Screw
4	4	DOTH-2208	Washer - Flat - Zinc Plated
5	4	DOTH-2210	Washer - Flat
6	4	DOTH-2129	Nut - Nylon Lock

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MISCELLANEOUS

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Customer Information

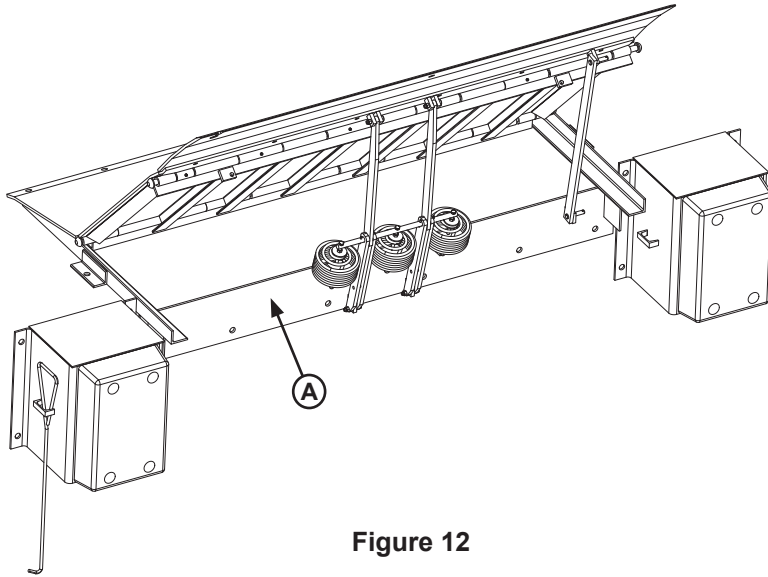


Figure 12

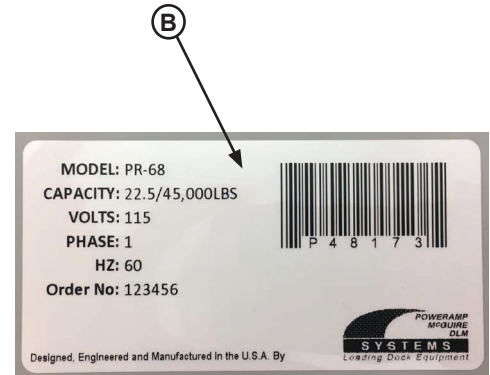


Figure 13

NOTE: Refer to Figure 12 for orientation of dock leveler and Figure 13 for example of decal.

The LEVELER model/serial number decal is located on the left side gusset (A).

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

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

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

For service, call or contact:

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

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

www.loadingdocksystems.com

Dock Leveler Information

Model _____

Serial No. _____

Systems, LLC, Job No. _____

Vehicle Restraint Information

Model _____

Serial No. _____

Systems, LLC Order No. _____

Original Owner Information

Name _____

Address _____

Installer Information

Name _____

Address _____

Date of Installation _____

STANDARD PRODUCT WARRANTY

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

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

WARRANTY LIMITATIONS

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