A Division of Systems, LLC

POWERAMP®

Premium Loading Dock Systems

HM Series

Dock Leveler

Owner's/User's Manual

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Apr. 2018

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Recognize Safety Information

SAFETY ALERT SYMBOL

The safety alert symbol directly relates to a hazard that identifies the hazard, level of severity of hazard, the probable consequence of involvement with the hazard, and how the hazard can be avoided.

⚠ DANGER

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

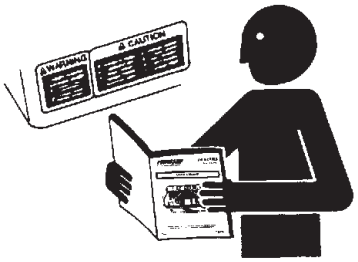
NOTICE

Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).

SAFETY INSTRUCTIONS

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

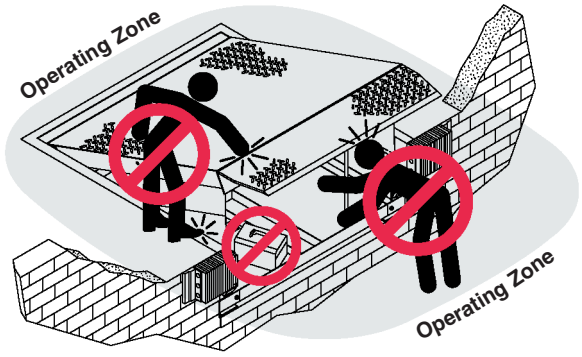
General Operational Safety Precautions



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

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

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



DO NOT activate the equipment until all unauthorized personnel in the area have been warned and have moved outside the operating zone.

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.

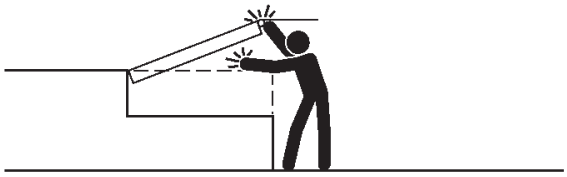
Operational Safety Precautions

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.

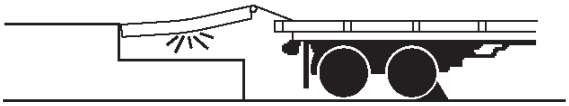
Do not move or use the dock leveling device if anyone is under or in front of it.



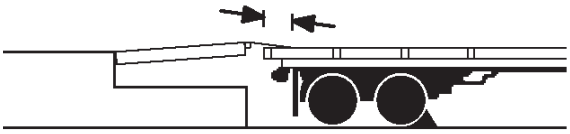
Keep hands and feet clear of pinch points. Avoid putting any part of your body near moving parts.

WARNING

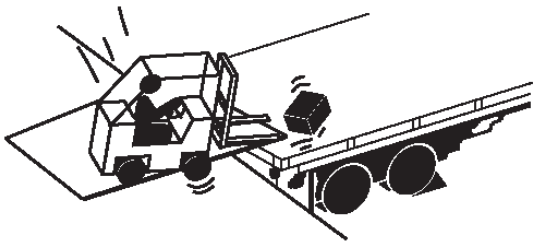
Never remove the wheel chocks until loading or unloading is finished and transport vehicle driver has been given permission to drive away. Always chock/restrain all transport vehicles.



Do not use a broken or damaged dock leveling 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.

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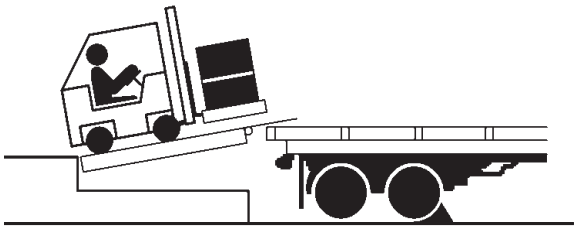
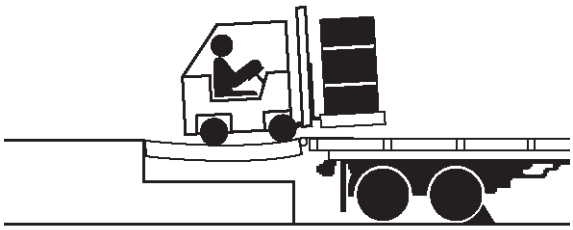
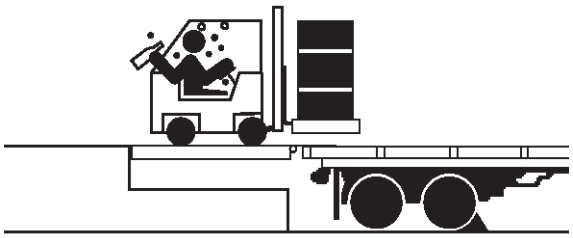
⚠ WARNING



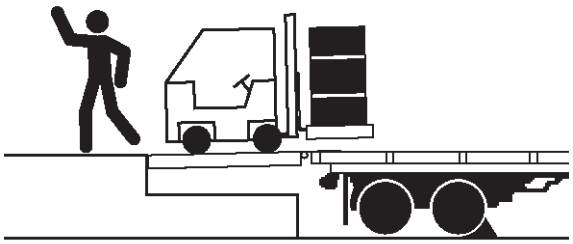
Do not use dock leveling device if transport vehicle bed is too high or too low.



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.

Safety Decals

1 

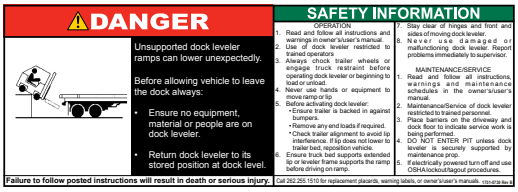
1 

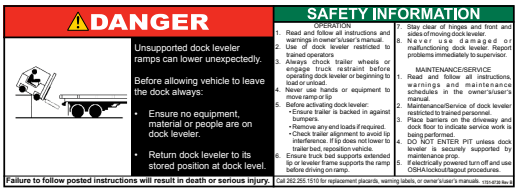
1751-0329

3 

3 

1751-0330 Two positions one on top of each fork pocket.

4 

4 

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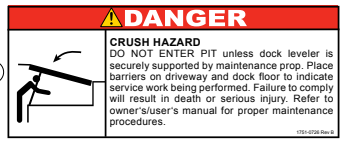
5 

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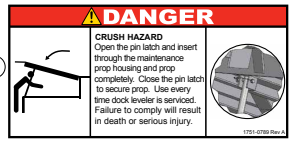
6 

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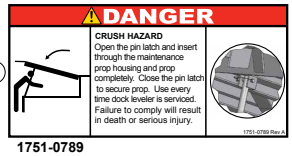
6 

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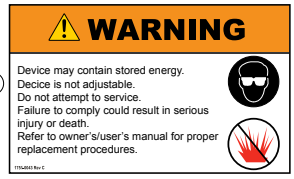
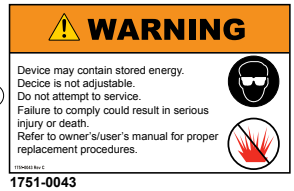
11 

11 

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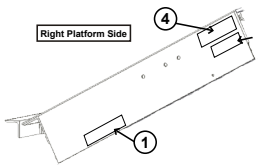

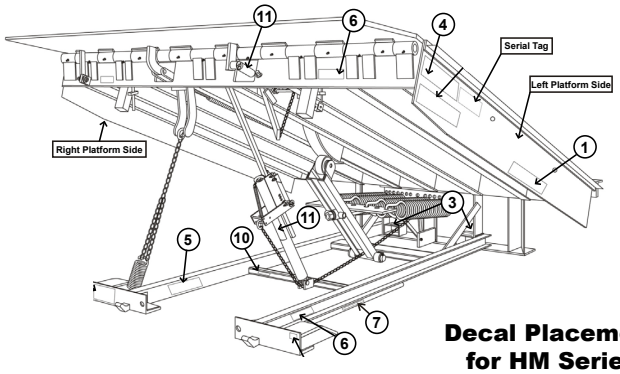

Decal Placement for HM Series

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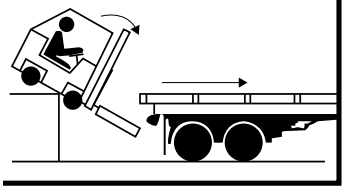
Placard

DANGER



- 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.
- 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, ensure lip avoids contact with transport vehicle sides and cargo. If lip does not lower to transport vehicle bed, 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 by the maintenance prop.
- Disconnect power and follow proper lockout/tagout procedures for the dock leveler before entering the dock leveler pit or doing any repair or inspection under the dock leveler.

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

Scan to view our owner's/user's manuals online.
www.**DockSystemsInc**.com

1.800.643.5424
Call for additional placards, or manuals, or with questions regarding proper use, maintenance, and repair of dock leveler.

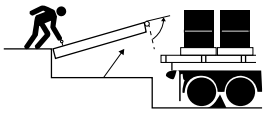
POWERAMP MCGUIRE DLM
SYSTEMS, INC.
Loading Dock Equipment

1751-0875 Rev C

1751-0875

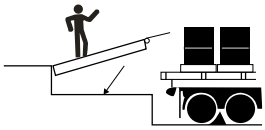
OPERATING INSTRUCTIONS

MECHANICAL DOCK LEVELERS

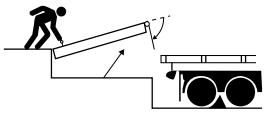


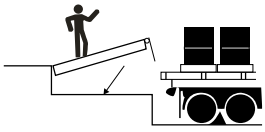
NORMAL OPERATION

1. Raise the platform by pulling and holding the platform release ring.



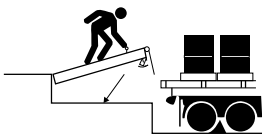
2. Hold the platform release ring until the lip is fully extended, then release the platform release ring. Walk out onto the platform. The platform will lower until lip is resting on the transport vehicle.





STORING LEVELER

1. Pull the platform release ring. Slowly walk the platform down allowing enough time for the lip to fold, clearing the transport vehicle. Once lip clears transport vehicle, continue to walk leveler to the cross-traffic position.



BELOW DOCK ENDLOADING

- Pull and hold the platform release ring until the platform is at the fully-raised position. Slowly walk the platform down allowing enough time for the lip to fold. Just before the platform reaches the cross-traffic position, pull and hold the safety leg retract pull ring located in a recess at front of the platform. The platform will continue lowering to the full below dock position.

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.

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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.

General Information

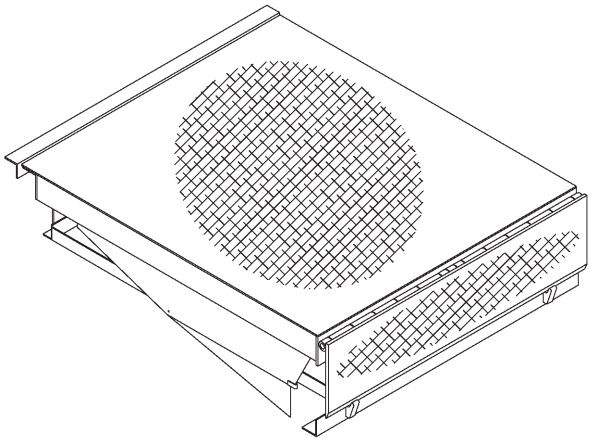

Figure 1

Congratulations on your choice of a Poweramp dock leveler. This manual covers the HM-Series mechanical dock leveler (Figure 1).

To obtain maximum performance and longest possible use, a simple program of preventive maintenance is recommended.

Dock Leveler Stock Specifications

HM-Series dock levelers are available in the following sizes, weight capacities, and options:

Width

6 ft. (1828.8 mm)
6-1/2 ft. (1981.2 mm)
7 ft. (2133.6 mm)

Length

5 ft. (1424 mm)
6 ft. (1828.8 mm)
8 ft. (2438 mm)
10 ft. (3048 mm)

Capacity (CIR*)

20,000 lb. (9072 kg)
25,000 lb. (11 340 kg)
30,000 lb. (13 608 kg)

* CIR (Comparative Industry Rating)

Call Poweramp for your specific needs.

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Component Identification

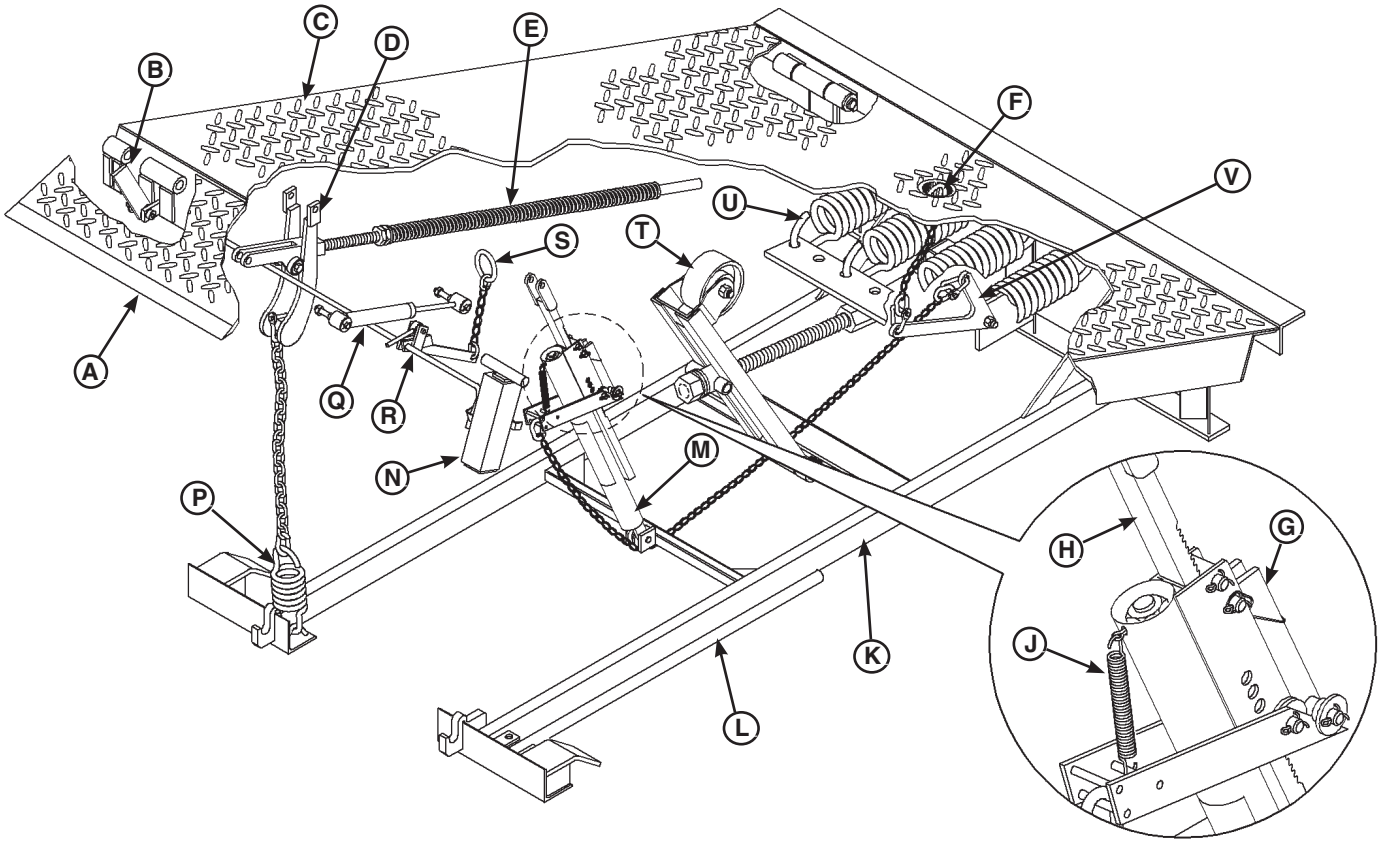

Figure 2

A — Lip
B — Lip Maintenance Prop
C — Platform
D — Lip Banger
E — Lip Assist Spring
F — Platform Release Ring
G — Ratchet Pawl
H — Ratchet Bar
J — Release Arm Spring
K — Main Frame
L — Platform Maintenance Prop
M — Hold-Down Mechanism
N — Safety Leg (2 used)
P — Lip (Snubber) Spring
Q — Lip Shock Absorber
R — Safety Leg Linkage
S — Safety Leg Release Ring
T — Lift Arm Assembly
U — Lift (Main) Spring Assembly
V — Release Arm

Prepare Pit

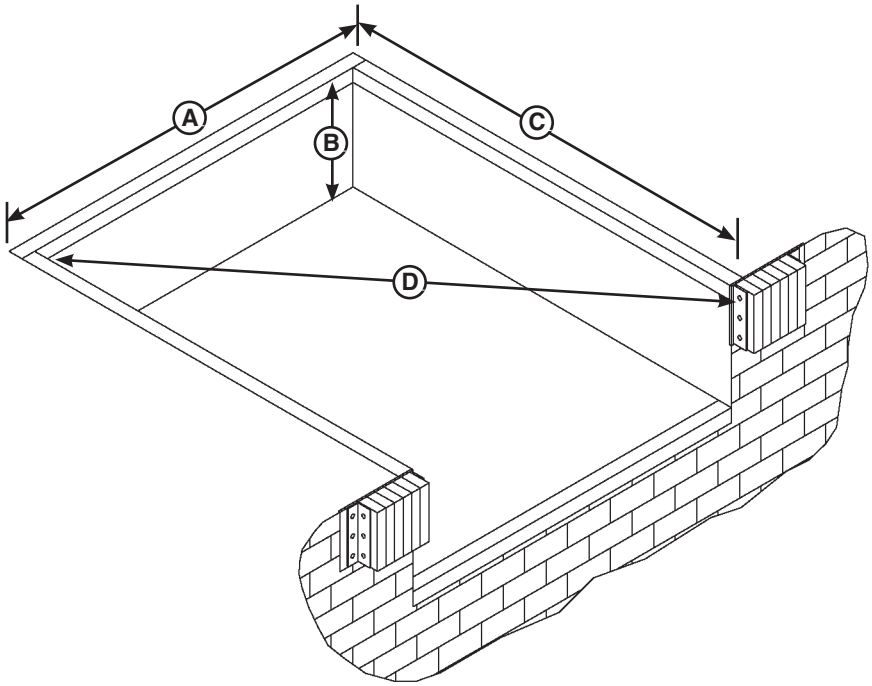

Figure 3

A— Distance (Pit Width) (Front and Rear)

B — Distance (Dock Floor-to-Pit Floor) (All Four Corners)

C — Distance (Pit Length) (Both Sides of Pit)

D — Distance (Pit Corner-to-Corner) (Top, Bottom, and Both Sides)

⚠ 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 installation has been completed.

⚠ CAUTION

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

NOTICE

DO NOT remove the shipping bands around the dock leveler lip until instructed to do so.

Before lowering the dock leveler into the pit, users must perform the following:

1. Remove all debris from the pit and sweep the pit clean.

2. Check the entire dock leveler pit for proper construction according to approved/certified pit drawings. Make sure pit is square by making the following measurements (Figure 3):

- Measure pit width distance (A) at both front and rear of pit.
- Measure dock floor-to-pit floor distance (B) at all four corners.
- Measure pit length distance (C) at both sides.
- Measure corner-to-corner (criss-cross) distance (D) at both sides. Take measurements at dock floor level and at pit floor level.

3. If any measurement is off by more than 1/8 in. (3.18 mm), contact Technical Services before proceeding.

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Prepare Dock Leveler

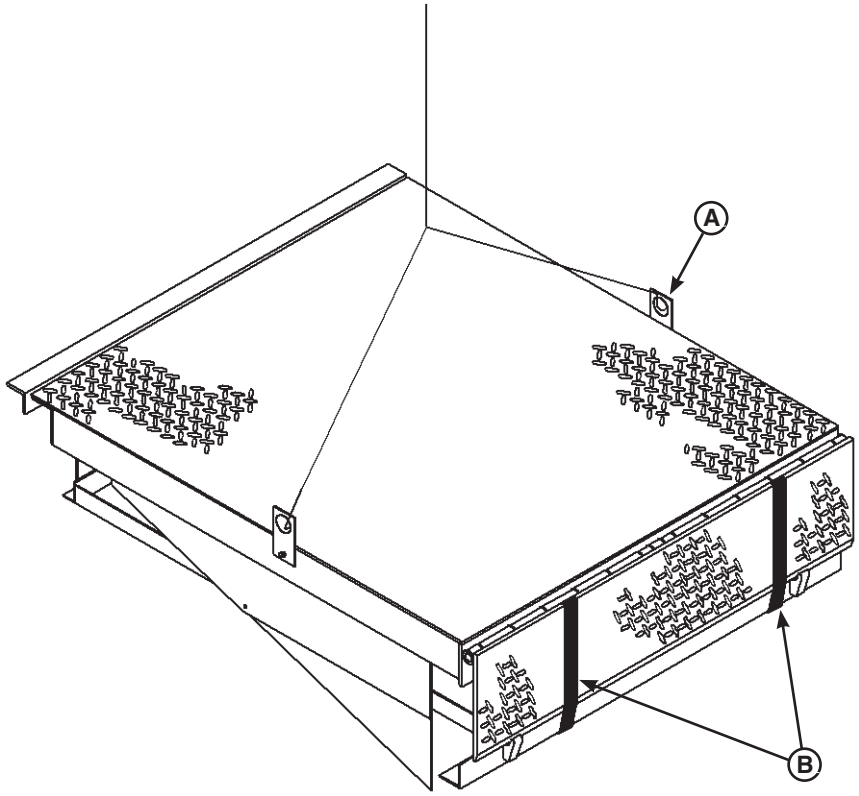


Figure 4

A— Lifting Bracket (2 used)

B — Shipping Bands

1. Remove any bumpers that may be banded or bolted to the frame of the dock leveler (Figure 4).

   DO NOT remove the shipping bands (B) around the platform lip and leveler frame at this time (Figure 4).

NOTE: *Overall width of platform and lifting brackets (A) must be kept to a minimum to prevent interference between the lifting brackets and the pit walls as the dock leveler is lowered into the pit.*

2. Make sure the mounting hardware of lifting brackets (A) is snug. The brackets should pivot relatively freely on the mounting cap screw. DO NOT over-tighten (Figure 4).

3. Attach lifting chains to lifting brackets (A) and to a lifting device (i.e., hoist or fork truck) having the appropriate lifting capacity and reach (Figure 4).

4. Remove wood blocks that are attached to the leveler frame before putting the dock leveler into the pit (Figure 4).

⚠ WARNING

Always use a lifting device and chains with the appropriate lifting capacity and reach. The dock leveler is heavy.

Always use the lifting brackets provided with the unit whenever lowering or lifting a dock leveler into or out of a pit.

Poweramp dock levelers are designed with installation in mind. Each unit is shipped with lifting brackets (A) fastened to the platform side joists (Figure 4).

NOTICE

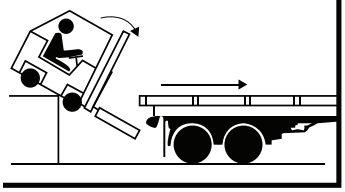
DO NOT remove the shipping bands (B, in Figure 4) around the platform lip and leveler frame at this time. The shipping bands are needed to hold the leveler together during the installation process.

NOTICE

DO NOT over-tighten the lifting bracket hardware. Over-tightening can damage the weather seal, if equipped.

PLACARD 1751-0875 MUST BE PLACED IN CLOSE PROXIMITY AND IN CLEAR VIEW OF THE LEVELER

DANGER



- 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.
- 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, ensure lip avoids contact with transport vehicle sides and cargo. If lip does not lower to transport vehicle bed, 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 by the maintenance prop.
- Disconnect power and follow proper lockout/tagout procedures for the dock leveler before entering the dock leveler pit or doing any repair or inspection under the dock leveler.

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

Scan to view our owner's/user's manuals online.
www.**DockSystemsInc**.com

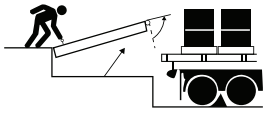
1.800.643.5424
Call for additional placards, or manuals, or with questions regarding proper use, maintenance, and repair of dock leveler.

POWERAMP MCGUIRE DLM
SYSTEMS, INC.
Loading Dock Equipment

1751-0875 Rev C

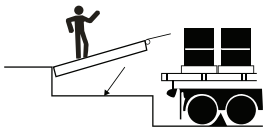
OPERATING INSTRUCTIONS

MECHANICAL DOCK LEVELERS

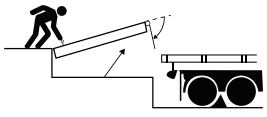


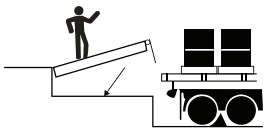
NORMAL OPERATION

1. Raise the platform by pulling and holding the platform release ring.



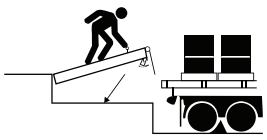
2. Hold the platform release ring until the lip is fully extended, then release the platform release ring. Walk out onto the platform. The platform will lower until lip is resting on the transport vehicle.





STORING LEVELER

1. Pull the platform release ring. Slowly walk the platform down allowing enough time for the lip to fold, clearing the transport vehicle. Once lip clears transport vehicle, continue to walk leveler to the cross-traffic position.



BELOW DOCK ENDLOADING

- Pull and hold the platform release ring until the platform is at the fully-raised position. Slowly walk the platform down allowing enough time for the lip to fold. Just before the platform reaches the cross-traffic position, pull and hold the safety leg retract pull ring located in a recess at front of the platform. The platform will continue lowering to the full below dock position.

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Install Dock Leveler

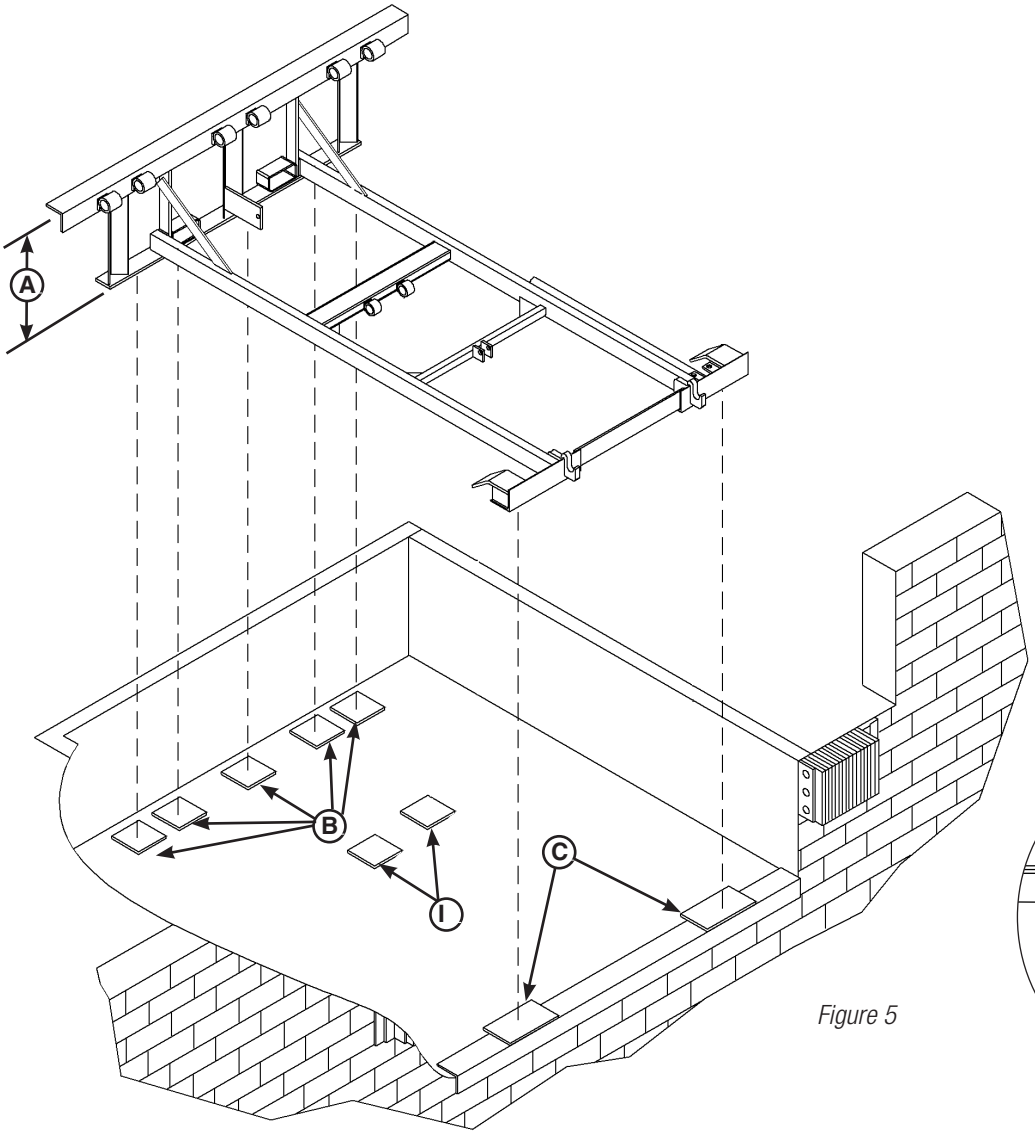

Figure 5

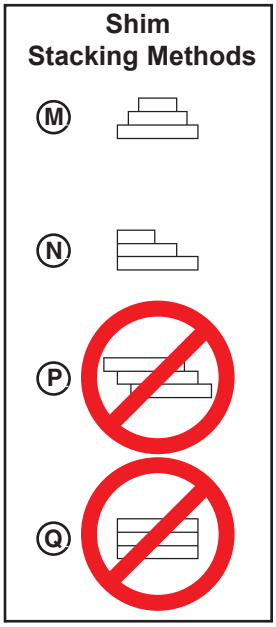

Figure 6

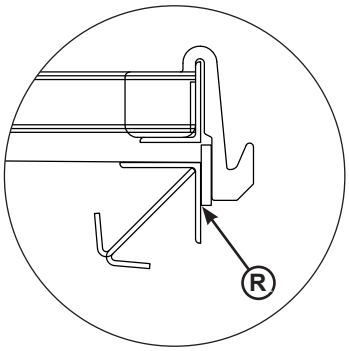

Figure 7

A— Distance (Leveler Frame Height)
B— Shim Locations (Under Rear Vertical Supports) (Outer Shims Only Used on 7 ft. Leveler)
C— Shim Locations (Under Lip Keepers and Prop)
D— Dock Floor
E— Rear Pit Curb Angle
F— String
G— Rear Hinge Frame Angle
H— Distance (Dock Floor-to-Pit Floor)
I— Shim Locations (Lift Arm)
J— Distance (Top of Shim Stack-to-Dock Floor)
K— Shim Stack
L— Dock Leveler Frame
M — Pyramid (Preferred)
N— Stepped (Acceptable)
P— Offset (Not Acceptable)
Q — Straight (Not Acceptable)
R— Lip Keeper (Shim between lip keeper and curb angle as required)

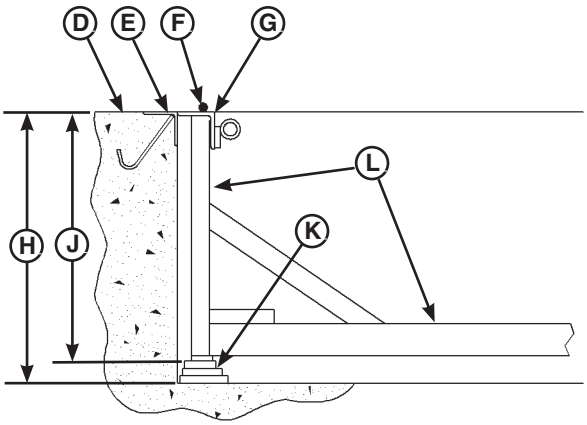

Figure 8

NOTE: *Poweramp dock levelers are designed with a nominal 1/2 in. (12.7 mm) shimming distance to allow for pit inconsistencies.*

1. Determine height of shim stack (K) for each shim location (B) by performing the following (Figure 5 and Figure 8):

   a. Measure leveler frame height distance (A) (Figure 5).

   b. Measure dock floor-to-pit floor distance (H) at each shim location (B). Write down the dimensions obtained at each location (Figures 5 and 8).

   c. Subtract distance (A) from distance (H) to obtain the shim height. Repeat for each shim location.

NOTICE

The minimum size of the shim that contacts the leveler frame (i.e., the top shim of each shim stack) must be at least 4-1/2 x 4-1/2 in. (114.3 x 114.3 mm) to support the full width of the frame rail and to provide a shelf for a fillet weld.

Use the thickest shim stock possible for stability and weld penetration purposes. DO NOT use multiple layers of 1/8 in. (3.18 mm) or thinner shim stock.

2. Using the results obtained in step 1, create the individual shim stacks on the pit floor at locations (B). Build each shim stack (K) using the pyramid method (M) (preferred) or stepped method (N) with the top shim having a minimum size of 4-1/2 x 4-1/2 in. (114.3 x 114.3 mm) and each successive lower shim being larger so the shims can be welded together using a fillet weld. DO NOT use offset method (P) or straight method (Q) (Figure 6).

NOTE: *To assist in obtaining an accurate measurement of distance (J), use a string (F) pulled tight across the pit opening, directly over the shim locations (Figure 8).*

3. Verify that each shim stack is at the correct height by measuring distance (J) [top of shim stack (K) to dock floor]. Distance (J) must equal the dock leveler height (A) (Figure 8).

4. Put a 1/4 in. (6.6 mm) thick shim at locations (C) (under lip keepers and prop). Make sure shims are larger than frame angle iron so pyramid or stepped stacking method can be used (Figure 5).

⚠ WARNING

Always use chains and a lifting device with the appropriate lifting capacity and reach. The dock leveler is heavy.

NOTE: *A 1/4 in. (6.6 mm) thick shim at locations (C) is used only as a starting point. The final shim stack height will be determined after the dock leveler is lowered into the pit.*

5. Using an appropriate lifting device connected to the lifting brackets, lower dock leveler into the pit so rear hinge frame angle (G) is tight against rear pit curb angle (E) across full width of the leveler frame (Figure 8).

6. Allow rear of dock leveler to rest on the rear shims while keeping the front of the dock leveler level with the dock floor (Figure 8).

7. Add shims at front shim locations (C) so front of dock leveler will stay level with dock floor when leveler is resting fully on shims (Figure 5).

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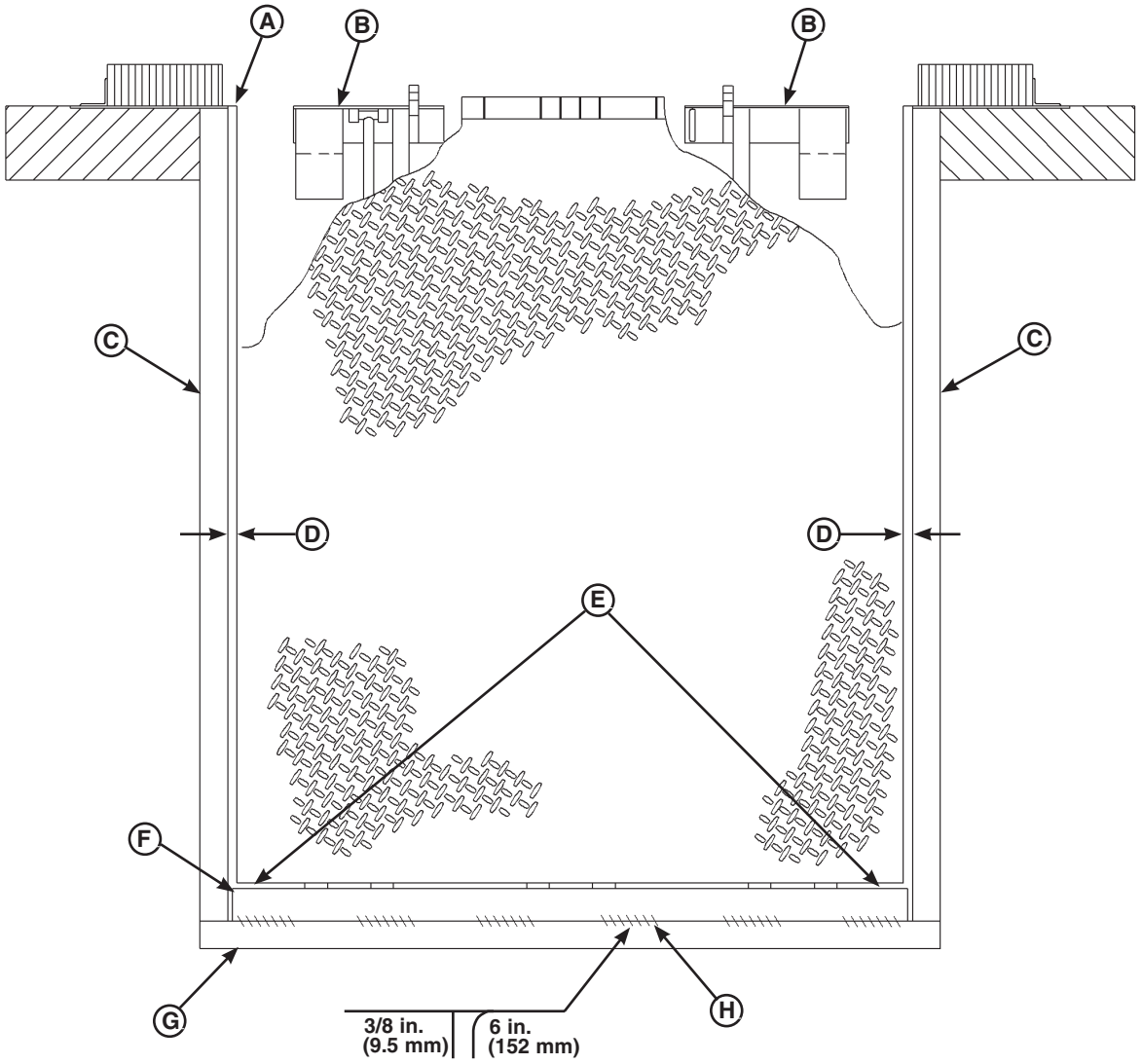

Figure 9

A— Front of Dock Pit
B— Dock Leveler Frame
C— Side Pit Curb Angle
D— Gap [3/4 in. (19 mm) Minimum]
E— Pry Locations
F— Rear Hinge Frame Angle
G— Rear Pit Curb Angle
H— Flare Bevel Weld, Typical (To Fit Spacing)

8. With rear hinge frame angle (F) tight against rear pit curb angle (G), perform/check the following (Figure 9):

- Ensure leveler rear edge of platform is parallel to the rear hinge frame angle (F and G) (Figure 9).

- Adjust the gap (D) equally along both sides of leveler so weather seal (if equipped) will not bind during dock leveler operation (Figure 9).

9. If gap (D) cannot be obtained equally at both sides of leveler, grind or add material at the rear edge of rear hinge frame angle (F and G) as needed (Figure 9).

10. Allow the dock leveler to rest fully on the shim stacks. Make sure the leveler is in the cross-traffic (stored) position with lip resting on lip keepers.

11. Tack weld angle (F) to (G) on each side (Figure 9).

NOTE: *If leveler cannot be squared and made level as instructed in steps 8 – 10, contact Systems, LLC Technical Services.*

⚠ WARNING

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

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.

NOTICE

Always ground welding equipment to the dock leveler frame, NEVER to the platform.

DO NOT weld continuously along the full length of the rear hinge frame angle. This can put unnecessary stress on the leveler components, causing the leveler not to function correctly and shortening the lifespan of the affected components.

NOTE: *Figure 9 shows a typical weld pattern. The weld pattern will vary slightly depending on size of dock leveler.*

12. Remove shipping bands at this time. Allow platform to float. Add/remove shims as necessary to bring platform level/flush with floor (Figure 4).

⚠ WARNING

Make sure all personnel are outside of the leveler operating zone and clear of the platform lip before activating the leveler.

⚠ WARNING

Make sure all personnel are outside of the leveler operating zone and are standing clear of the platform lip before removing the shipping bands.

NOTICE

When activating the leveler, always pull AND hold the platform release ring until the platform is at the full-raised position. Releasing the ring while the platform is still rising may result in damage to the equipment.

13. Tack weld front shims in place (Figure 5).

14. Disconnect lifting device and chains from the lifting brackets.

15. Pull and hold the release ring (located in recess at rear of platform) until the platform is fully raised. Check for binding as platform rises.

16. Slowly walk out onto the platform to lower the platform. Allow the platform to lower to the cross-traffic position. Check for binding as platform lowers.

17. If binding occurs, reposition leveler and/or add or remove shims as necessary. Raise and lower platform again. If platform still binds, contact Systems, LLC Technical Services for further instructions.

18. Check that the leveler is flush with the dock floor and that the platform lip contacts both lip keepers evenly.

19. Pull the release ring to raise platform. Engage the platform maintenance prop (B) in the service (upright) position and lock the maintenance prop at this position using an OSHA approved locking device (D). Engage lip maintenance prop (Figure 10).

20. With the rear hinge frame angle (F) tight against the rear pit curb angle (G), weld the rear hinge frame angle (F) to the rear pit curb angle (G) using a 3/8 in. (9.5 mm) flare bevel skip weld, each weld being 6 in. (152 mm) long (Figure 9).

    Start at each end with a 6 in. (152 mm) long weld. Space all other welds out evenly leaving approximately 6 in. (152 mm) space between each weld.

    Alternate welding locations to distribute heat. Welding sequentially from one end to the other may cause warping or distortion.

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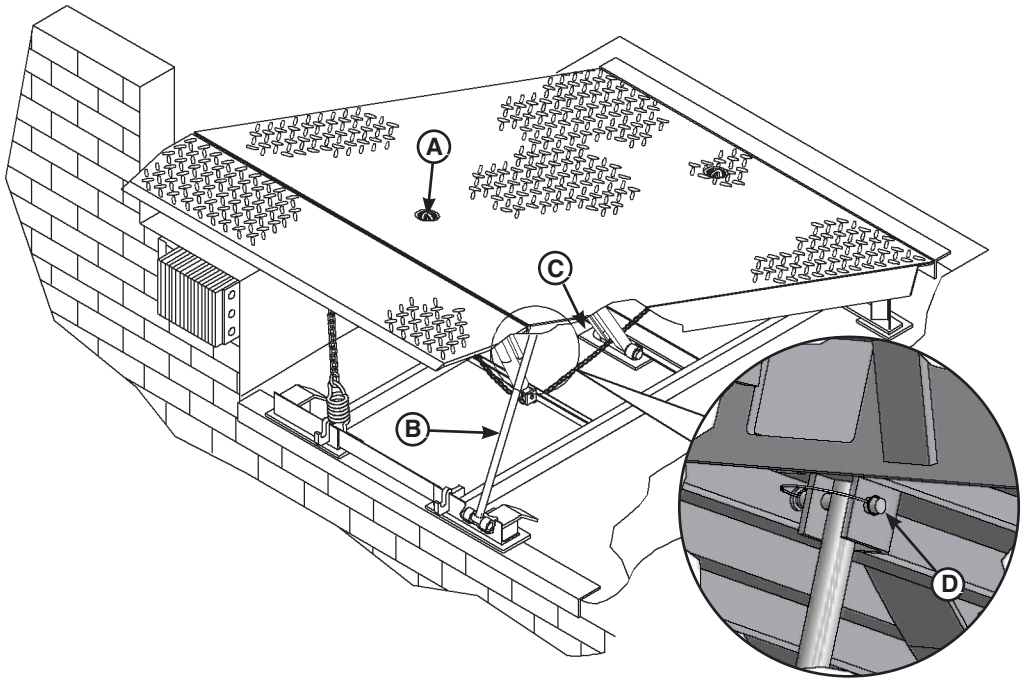

Figure 10

A— Safety Leg Chain Pull Ring B— Platform Maintenance Prop C — Shim Location (Under Lift Arm Pivot) D —Prop Pin & Clip

21. Finish weld all shims using a fillet weld.

- Weld all shims within each shim stack to each other, then weld the shim stack to the leveler frame.
- Weld the front leveler frame shim stacks to the front pit curb steel if not done previously.

⚠ WARNING

Make sure the platform is properly supported in the raised position before entering the pit to finish weld the shims.

22. Install shims under lift arm at locations (C) using the pyramid shimming method. The lift arm pivot must be solidly shimmed the entire length of the lift arm pivot. Make sure the lift arm pivot is level from side-to-side (Figure 5).

23. Weld front of dock leveler frame (B) to shims located under the keepers, then weld the shims to the front pit curb steel (Figure 9).

24. When all welding has been completed, remove all slag then paint all the welds and shims.

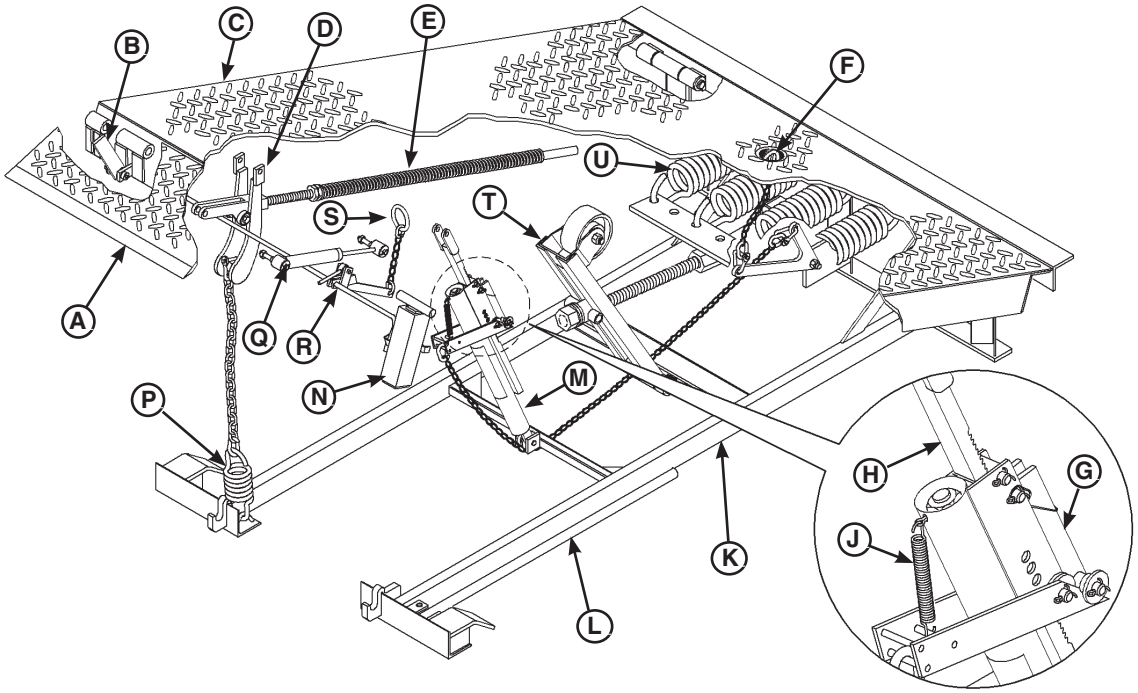

Figure 11

A — Lip
B — Lip Maintenance Prop
C — Platform
D — Lip Banger
E — Lip Assist Spring
F — Platform Release Ring
G— Ratchet Pawl
H — Ratchet Bar
J — Release Arm Spring
K — Main Frame
L — Platform Maintenance Prop
M— Hold-Down Mechanism
N — Safety Leg (2 used)
P — Snubber Spring
Q — Shock Absorber
R — Safety Leg Linkage
S — Safety Leg Retract Pull Ring
T — Lift Arm
U — Lift Springs

The HM-Series mechanical dock leveler uses lift springs (U) to apply force to lift arm (T). The lift arm pushes against the cam mounted under the platform (C), rolling on the cam (not pictured), forcing the platform to rise. The force of the spring is just enough to lift the weight of the platform (Figure 11).

NOTICE

When activating the leveler, always pull AND hold the platform release ring until the platform is at the full raised position. Releasing the ring while the platform is still rising may result in damage to the equipment.

To actuate the dock leveler platform, the operator pulls and holds the platform release ring (F) located in the recess at the rear of the platform. This allows ratchet pawl (G) to disengage from ratchet bar (H). With the ratchet pawl disengaged, spring tension from lift springs (U) forces the platform to rise (Figure 11).

NOTE: *Ratchet pawl (G) and bar (H) are part of the hold-down mechanism (M).*

The ratchet pawl disengages only when the platform release ring (F) is pulled AND held. Spring tension from release arm spring (J) causes the ratchet pawl to engage the ratchet bar when the release ring is let go (Figure 11).

When the platform rises to approximately 2 – 3 inches (51 – 76 mm) from its full raised height, the snubber spring (P) and a chain pulls the lip banger (D) forward. This, in conjunction with the lip assist spring (E), causes the lip linkage to push the lip out and up. The lip assist spring also helps control the amount of time required for the lip to fully fold (Figure 11).

To lower the platform, the operator walks out onto the platform. The platform will lower until the extended lip rests on the transport vehicle. If the lip did not fully extend or there is no transport vehicle at the dock, the platform will lower until one of the following conditions occurs:

- Lip is resting on lip keepers (cross-traffic position).
- Lip did not fully fold, causing the platform to rest on safety legs (below-dock position).
- Lip did not fully fold and safety legs are retracted, causing the platform to rest on the safety stops (full below-dock position).

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The hold-down mechanism (M) will keep the platform at the desired position until the platform release ring is pulled again (Figure 11).

Operating Instructions

⚠ DANGER

Always stay clear of dock leveler when transport vehicle is entering or leaving dock area.

DO NOT raise or lower the dock leveler if anyone is under or in front of leveler.

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

⚠ WARNING

DO NOT activate the dock leveler until the transport vehicle is positioned squarely against the bumpers and the transport vehicles are chocked.

Never remove the wheel chocks until loading and unloading is finished and driver of the transport vehicle has been given permission to leave.

DO NOT use the dock leveler if the transport vehicle is too high or too low.

NEVER use a fork truck or any other material handling equipment to lower the dock leveler.

DO NOT drive any equipment onto the dock leveler until platform lip is resting on the transport vehicle with at least 4 in. (102 mm) of overlap.

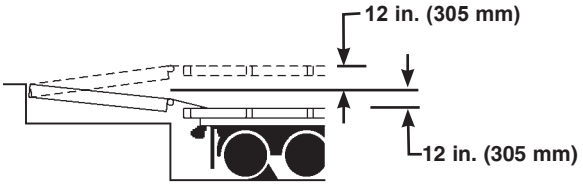
Always maintain a safe distance from side edges of leveler during the loading and unloading process.

NEVER attempt to walk on an unsupported lip.

NEVER allow untrained personnel to operate the dock leveler.

NEVER attempt to lift any part of the leveler by hand.

⚠ WARNING



The HM leveler is designed to compensate for a maximum ± 12 in.* (305 mm) of height difference between the loading dock and the transport vehicle bed. DO NOT use the dock leveler if the transport vehicle bed is more than 12 in. (305 mm) higher or lower 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.

The dock leveler operation instructions are divided into the two methods of loading and unloading:

- For ramp loading and unloading, see Ramp Loading/Unloading Instructions on page 20.
- For end loading and unloading, see End Loading/ Unloading Instructions on page 21.

Operating Instructions — Continued

Ramp Loading/Unloading Instructions

NOTE: *If end unloading is required, see End Loading/ Unloading Instructions on page 21.*

1. Check to make sure 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's wheels or use vehicle restraint if present.

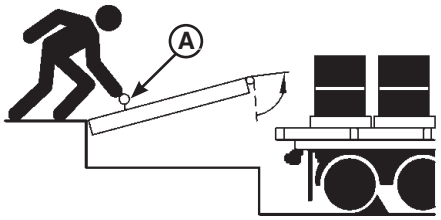


Figure 12

4. Raise the platform by pulling and holding the platform release ring (A) (Figure 12).

5. Hold the release ring until the platform is at the fully raised position and lip is fully extended.

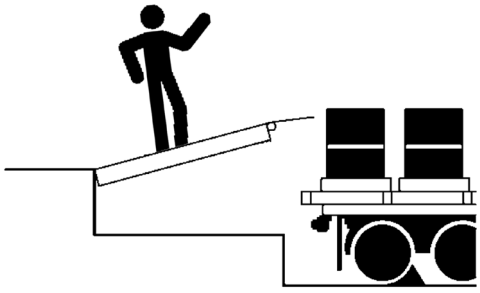


Figure 13

6. Walk out onto the platform. The platform will lower until the lip rests on the transport vehicle (Figure 13).

7. Make sure that the lip is fully extended and supported on the transport vehicle along the entire width of the platform with at least 4 in. (102 mm) of lip contacting the transport vehicle bed (Figure 14).

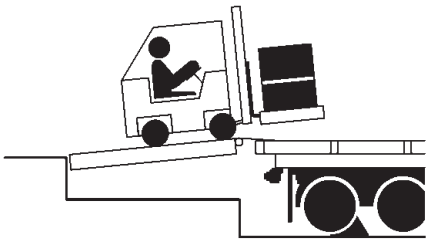


Figure 14

8. Proceed with loading or unloading.

NOTE: *If end loading is necessary, see End Loading/ Unloading Instructions on page 21.*

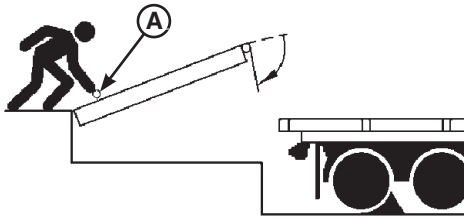


Figure 15

9. When the loading or unloading process has been completed, return platform to cross-traffic (stored) position as follows:

   a. Raise the platform to the fully raised position by pulling and holding the platform release ring (A) (Figure 15).

   b. Lower platform by slowly walking out onto the platform, allowing time for the lip to fully fold and clear the transport vehicle. Continue walking out on platform until platform lowers to the cross-traffic position (lip engages in the lip keepers) (Figure 13).

10. Remove chocks from transport vehicle wheels or release vehicle restraint if used.

11. Communicate to driver that transport vehicle may leave the dock.

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Operating Instructions — Continued

End Loading/Unloading Instructions

NOTE: *End loading or unloading can be done with the dock at the cross-traffic position or below-dock position depending on the height of the transport vehicle bed.*

1. Check to make sure transport vehicle is positioned squarely against dock bumpers (Figure 16).

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 vehicle restraint if present.

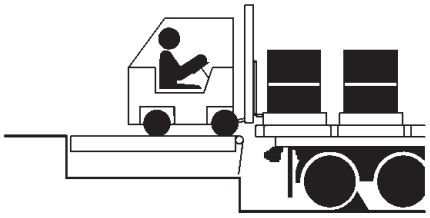


Figure 16 – End Loading/Unloading — Platform at Cross-Traffic Position

4. If transport vehicle bed is at or above dock floor level, leave leveler at the cross-traffic position and proceed with loading or unloading. When finished, perform steps 9 and 10.

   If transport vehicle bed is below the dock floor level, perform steps 5 – 10.

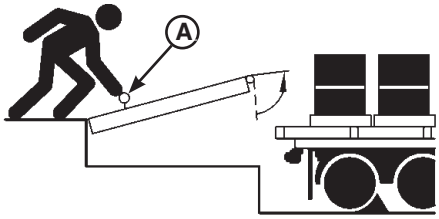


Figure 17

5. Pull and hold the platform release ring (A) until the platform is at the fully raised position (Figure 17).

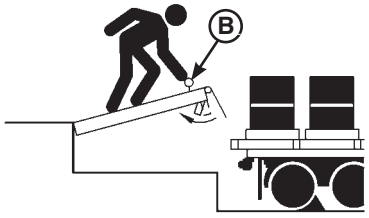


Figure 18

6. Slowly walk the platform down, allowing enough time for the lip to fold. Just before the platform reaches the cross-traffic position, pull and hold the safety leg retract pull ring (B) (located in a recess at front of the platform). The platform will continue lowering to the full below-dock position (Figure 18).

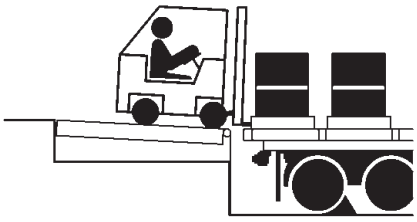


Figure 19 – End Loading/Unloading — Platform at Below-Dock Position

7. Proceed with loading or unloading (Figure 19).

NOTE: *When end unloading is finished and additional access to the transport vehicle requires that the platform lip be extended, see Ramp Loading/ Unloading Instructions on page 20 for further instructions.*

8. When loading or unloading is finished, raise the platform to the fully raised position by pulling and holding the platform release ring (A) (Figure 17). Slowly walk the platform down, allowing enough time for the lip to fold. The platform will lower to the cross-traffic position (lip engages in the lip keepers).

9. Remove chocks from the transport vehicle wheels or release vehicle restraint if used.

10. Communicate to the driver that the transport vehicle may leave the dock.

Service Dock Leveler Safely

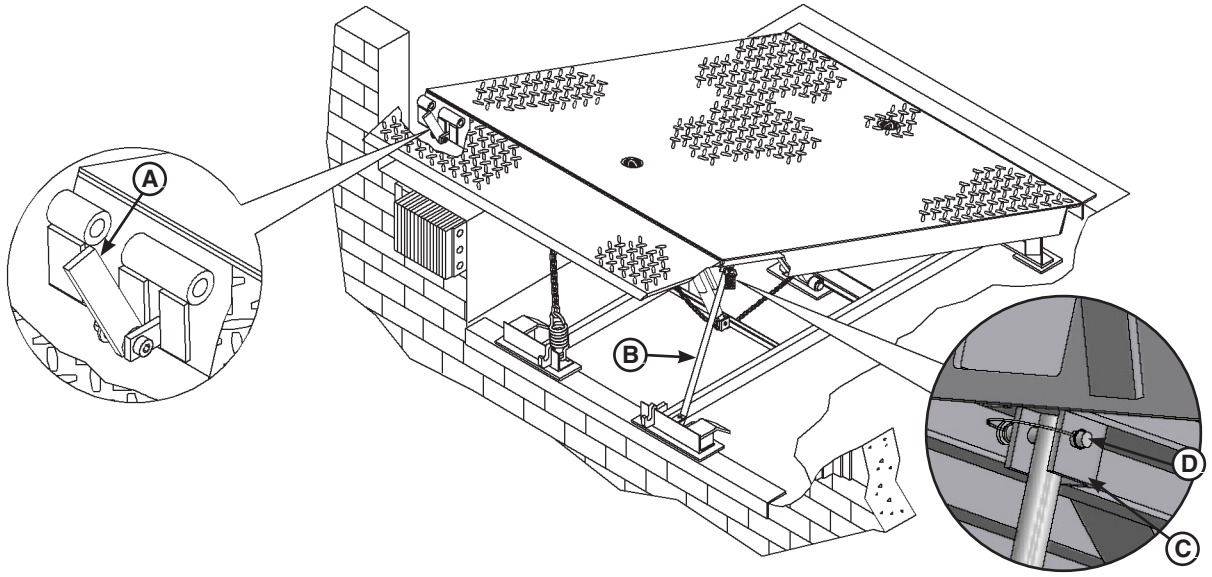


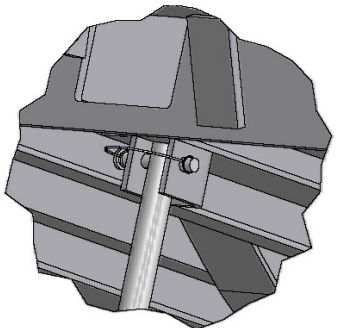
Figure 20

A— Lip Maintenance Prop **B — Platform Maintenance Prop** **C — U-Bracket** **D — Prop Pin & Clip**

⚠ 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.

⚠ DANGER



A maintenance prop permanently attached and hinged to the unit with means for lockout/tagout requirements (per OSHA 1910.147) is included with each pit style dock leveler. In addition, it is recommended and good safety practice to use an additional means to support the dock platform and lip anytime when physically working in front of or under the dock leveler. This additional means may include, but is not limited to a boom truck, fork truck, stabilizing bar or equivalent.

Whenever maintenance is to be performed under the dock leveler platform, support the platform with the platform maintenance prop (B) (Figure 20).

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Put the platform maintenance prop in the service (upright) position so that the prop is cradled in the U-Bracket (C) (Figure 20). Lock the platform maintenance prop in this position by inserting the prop pin and clip (D) or attaching an OSHA-approved lockout device* and tagout device*, supplied by others.

Only the person servicing the equipment should have the capability to remove the lockout device. The tagout device must communicate that repairs are in process and clearly state who is responsible for the lockout condition.

If maintenance requires that the lip be in the extended position, raise the lip by hand and support the lip with the lip maintenance prop (A) (Figure 20).

NOTE: *Make sure to disengage the lip maintenance prop and allow the lip to fold fully before disengaging the platform maintenance prop.*

* Refer to OSHA regulation 1910.147.

Periodic Maintenance

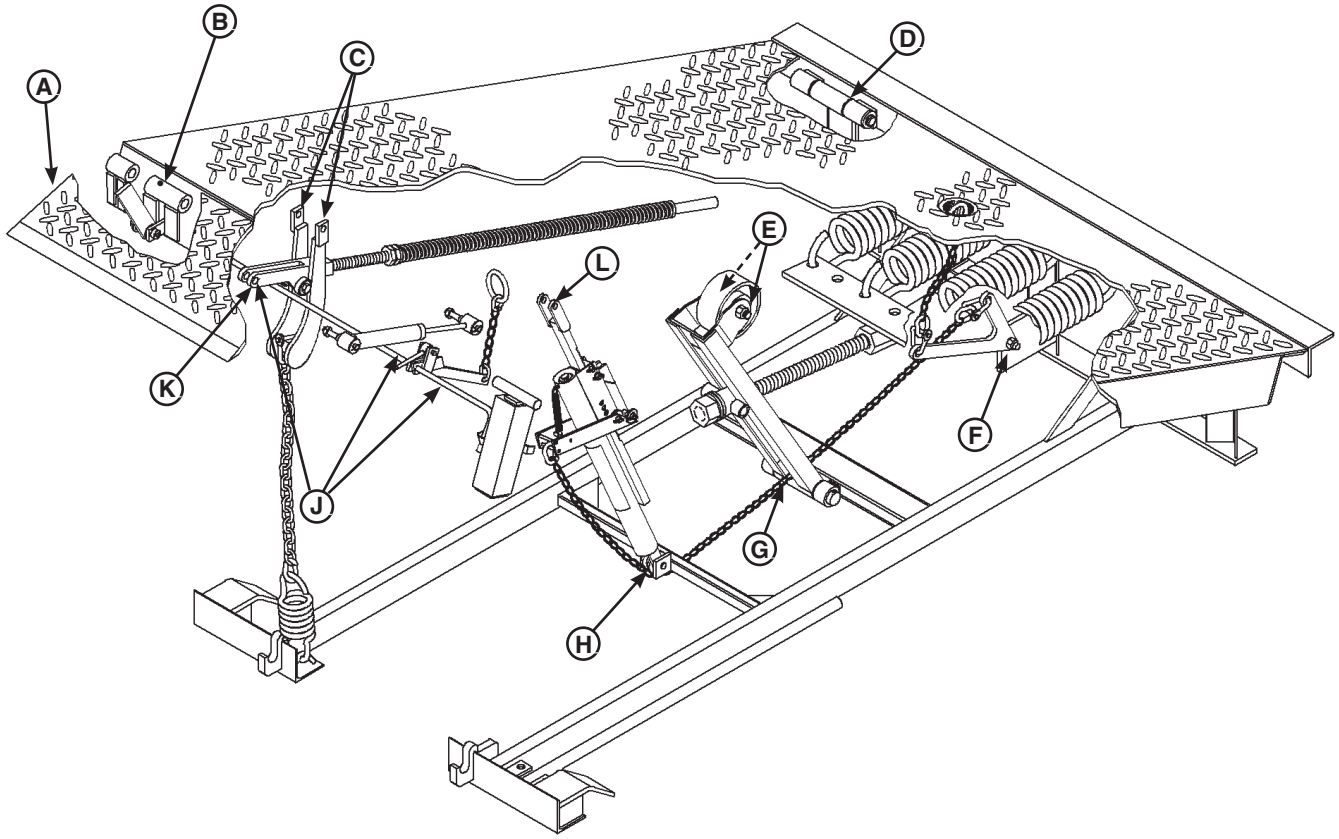

Figure 21

A — Lip Hinge Grease Fittings
B — Lip Maintenance Prop Pivot
C — Lip Banger Pivots
D — Platform Hinge Area
E — Lift Arm Roller Bushing
F — E-Z Release Bellcrank Pivot
G — Lift Arm Pivot
H — Hold-Down Pivot/Pulley
J — Safety Leg Linkage Pivots
K — Lip Lift Assist Pin
L — Hold Down-to-Platform Pin

⚠ 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.

⚠ WARNING

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

⚠ WARNING

The platform 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.

Regular maintenance must be performed on a weekly and quarterly schedule. Follow all safety precautions.

Weekly Maintenance

- Operate the dock leveler through the complete operating cycle to maintain lubrication.

NOTE: *To thoroughly inspect the platform hinge area, position the platform in the full below-dock position.*

- Inspect the platform hinge and the lip hinge areas. The hinge areas must be kept free of dirt and debris. Buildup of foreign material in the hinge areas will increase wear and cause abnormal operation.

NOTICE

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

DO NOT lubricate the hold-down ratchet bar and pawl.

Quarterly Maintenance

- Complete Weekly Maintenance.

- Inspect the following for damage/abnormal wear:
  - Check welds for cracks.
  - Lift arm pins and mounting holes.
  - Lip hinge pins and rear hinge pins.
  - Check toe guards for free movement.
  - Bumpers for more than 1” of wear.
  - Side and rear weather seals.

- Lubricate the following areas with lightweight machine oil (See Figure 21):

  (B)— Lip maintenance prop pivot

  (C)— Lip banger pivots

  (F)— E-Z release bellcrank pivot

  (H)— Hold-down pivot/pulley

  (J)— Safety leg linkage pivots

  (L)— Hold down-to-platform pin

- Lubricate the following areas with white lithium grease (See Figure 21):

  (A)— Lip hinge area (inject grease into all the lip hinge grease fittings)

  (D)— Platform hinge area (inject grease into all the platform hinge grease fittings)

  (E)—Lift arm roller bushing (2) grease fittings

  (G)— Lift arm pivot

  (K)— Lip assist pin

Note: Apply grease to lip hinge grease fittings if equipped. **Do not put grease or oil on the ratchet bar or cam!**

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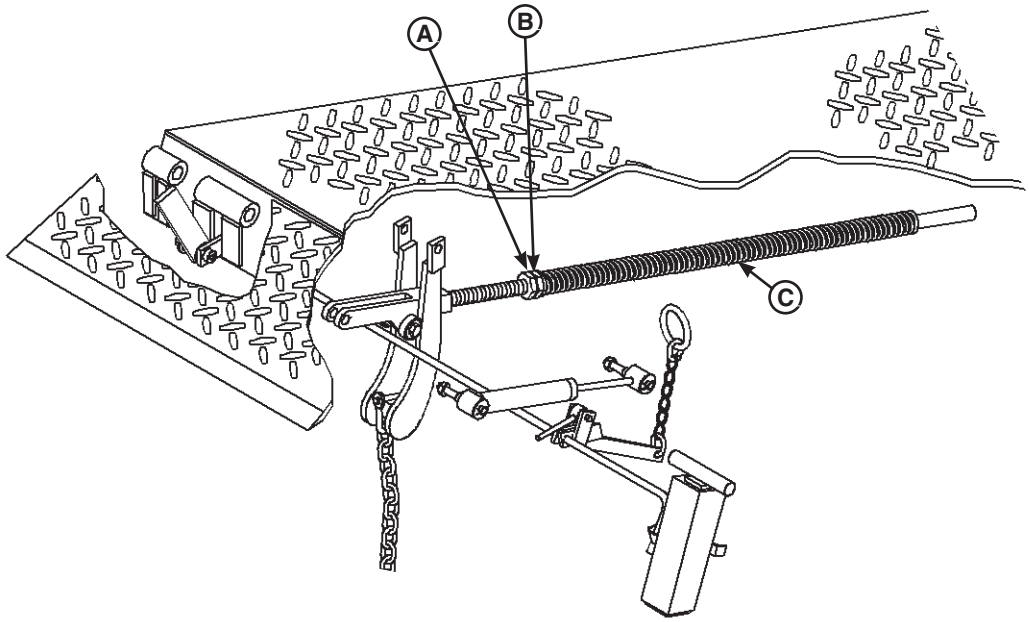
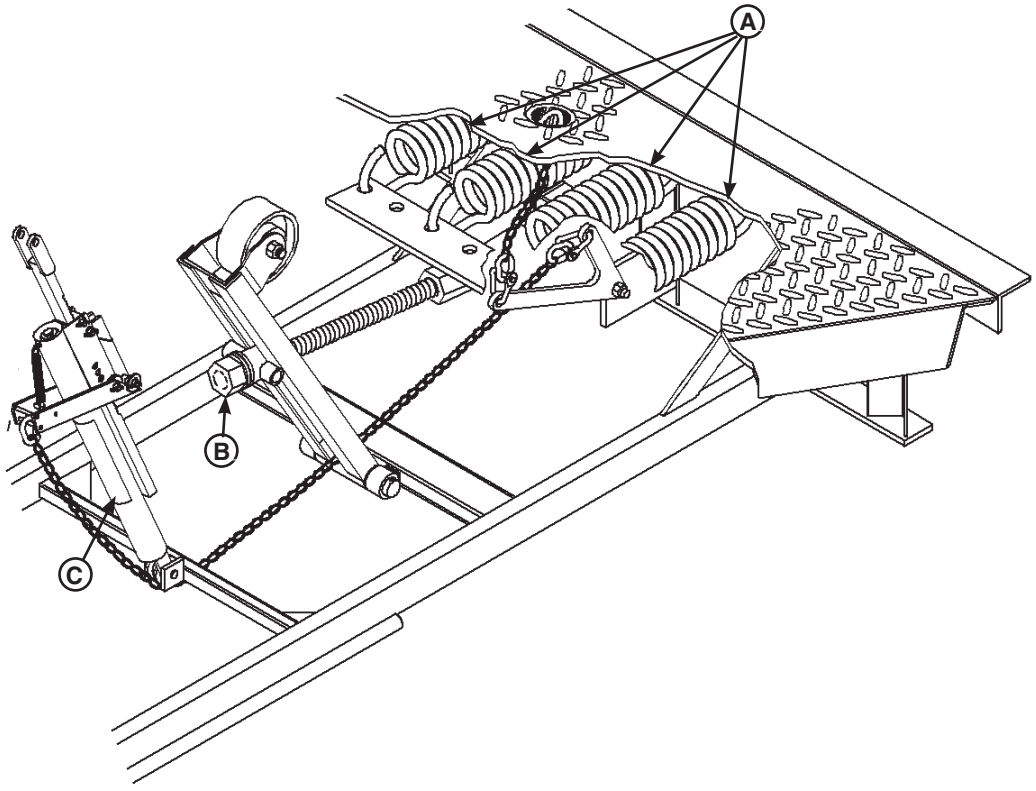
Adjust Lift Arm Spring and Lip Assist Spring Tension



A — Jam Nut
B — Adjustment Nut
C — Lip Assist Spring

Figure 22



A — Lift Springs
B — Lift Spring Bolt
C — Hold-Down Mechanism

Figure 23

⚠ 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.

⚠ WARNING

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

⚠ WARNING

The platform 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.

⚠ WARNING

Make sure to engage and lock the platform maintenance prop after raising the platform. If the platform does not rise fully on its own, it may be necessary to use an external lifting device. Use a lifting device with the appropriate lifting capacity to safely raise the platform.

NOTICE

When using an external lifting device to raise the platform, make sure hold-down mechanism (C, in Figure 23) is disengaged. Pull and hold platform release ring during the lifting process to avoid shearing the ratchet pawl and ratchet bar teeth.

Lip Operation Adjustment

NOTE: *Before adjusting the lip assist spring, verify that the shock is not leaking or damaged.*

1. Raise leveler a couple of inches above the keepers.
2. Manually raise lip to fully open position.
3. Allow lip to drop. Time from fully open to fully closed should be between 18 to 20 seconds. If lip drops too early or takes too long to drop, the tension must be adjusted on the lip assist spring.
4. Raise the platform and engage the maintenance prop. Lock out and tag out, in the service position, using an appropriate locking device.
5. Adjust tension on the lip assist spring (C) as follows (Figure 22):
   a. Loosen jam nut (A).
   b. To increase spring tension, turn adjustment nut (B) clockwise.
   c. To decrease spring tension, turn adjustment nut (B) counterclockwise.
   d. Tighten jam nut.

NOTE: *Use 1/2 turn increments when turning adjustment nut (B). Check lip operation after each adjustment. Repeat until proper operation is obtained.*

Main Spring Adjustment

If the platform does not rise fully and/or lip does not extend fully, the lift spring tension may be set too low.

If the platform cannot be walked down or is difficult to walk down, the lift spring tension may be set too high.

NOTE: *A minimum of 160 lbs (72.6 kg) is required for walking down the platform.*

- To increase lift spring tension, turn lift spring bolt (B) clockwise (Figure 23).
- To decrease lift spring tension, turn lift spring bolt (B) counterclockwise.

6. After lift spring adjustment is completed, check operation of the lip.

NOTE: *Use 1/2 turn increments when adjusting the lift spring bolt (B, in Figure 23). Check platform operation after each adjustment. Repeat until proper operation is obtained.*

- If the lip folds before the platform can be walked down, adjust tension of lip assist spring (C) (Figure 22).

7. Recheck operation of platform and lip. Readjust lift spring tension and lip assist spring tension until proper operation is obtained.

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Adjust Lip Stop Bolt

⚠ 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.

⚠ WARNING

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

⚠ WARNING

The platform 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.

Check that lip (E) is fully resting on the lip keepers (D) and at the lowest part of the keeper cradle (Figure 24). If lip is not resting properly on keepers, perform the following adjustment.

1. Fully raise platform. Manually raise the lip and engage lip maintenance prop (not shown).
2. Loosen jam nut (B).
3. Adjust stop bolt (C) as necessary.
   - Turn stop bolt “in” (clockwise) to allow lip to fold closer to platform (A).
   - Turn stop bolt “out” (counterclockwise) to hold lip farther away from platform (A).

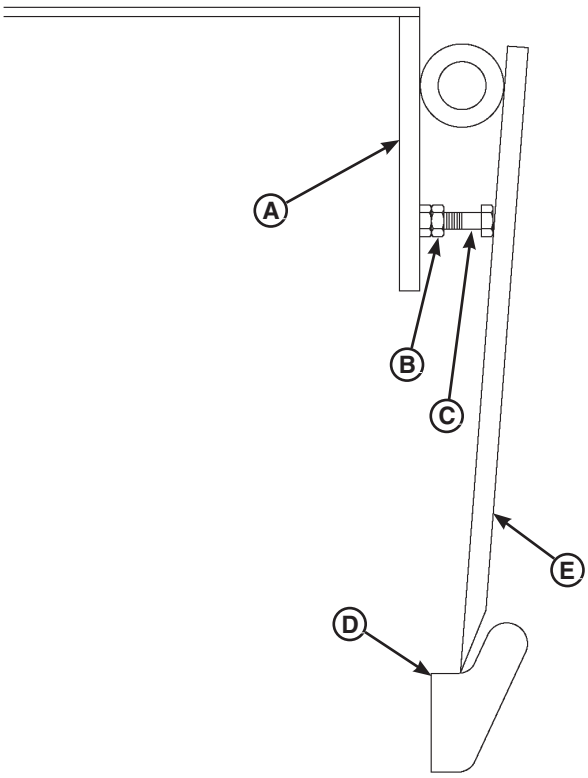

Figure 24

A— Platform
B— Jam Nut
C— Stop Bolt
D — Lip Keeper
E — Lip

4. Tighten jam nut (B).
5. Disengage lip maintenance prop.
6. Walk platform down to cross-traffic (stored) position.
7. Check lip position in both keepers. Repeat procedure if necessary.

TROUBLESHOOTING

⚠ 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.

⚠ WARNING

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

⚠ WARNING

The platform 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
Platform does not rise.	Object(s) on platform.	Remove object(s) from platform. ***NOTE:*** *For safety reasons, the dock leveler is designed to lift only the platform's own weight.*
	Disconnected or broken release chain.	Connect or replace chain.
	Dock leveler binds.	Check for visible obstructions that could cause binding. Check weather seal if equipped.
	Main springs out of adjustment or broken.	Adjust or repair main springs, as required.
Platform rises slowly or does not rise to the fully raised position.	Object(s) on platform.	Remove object(s) from platform. ***NOTE:*** *For safety reasons, the dock leveler is designed to lift only the platform's own weight.*
	Dock leveler binds.	Check for visible obstructions that could cause binding. Check weather seal if equipped.
	Insufficient main spring tension.	Increase tension on main springs. (See Main Spring Adjustment page 26.)
	Damaged or worn hold-down mechanism.	Clean and inspect hold-down mechanism.
	No lubrication or damaged bearings on cam roller caster wheel.	Lubricate or replace caster wheel.
	Flat spots on cam roller caster wheel.	Replace caster wheel.
Platform rises to full height, but lip does not fully extend.	Insufficient lip assist force.	Increase lip assist spring tension. (See Lip Operation Adjustment page 26.)
	Insufficient main spring tension.	Increase tension on main lift springs. (See Main Spring Adjustment page 26.)

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Symptom	Possible Cause	Solution
Platform does not lower when operator walks out onto the platform.	Excessive main spring tension.	Reduce main spring tension. (See Main Spring Adjustment page 26.)
	Damaged or worn hold-down mechanism.	Clean and inspect hold-down mechanism.
	No lubrication or damaged bearings on cam roller caster wheel.	Lubricate or replace caster wheel.
	Flat spots on cam roller caster wheel.	Replace caster wheel.
Lip folds too fast during normal walk-down.	Insufficient lip assist force.	Increase lip assist spring tension. (See Lip Operation Adjustment page 26.)
	Disconnected, worn or broken shock absorber.	Inspect shock absorber. Connect or replace shock absorber.
Platform does not stay down.	Entangled release chain.	Remove cause of entanglement.
	Dirt impacted in ratchet bar teeth.	Clean and inspect ratchet bar and ratchet pawl teeth. DO NOT lubricate the ratchet assembly.
	Broken or damaged ratchet assembly teeth.	Replace ratchet assembly. DO NOT lubricate the ratchet assembly.
	Disconnected or broken hold-down pivot pins.	Replace hold-down pivot pins.
	Damaged or worn hold-down mechanism.	Clean and inspect hold-down mechanism.
Lip does not fold after truck departs.	Lip hinge binding.	See Lip Operation Adjustment page 26.
	Excessive lip assist force.	Decrease lip assist spring tension. (See Lip Operation Adjustment page 26.)

NOTES

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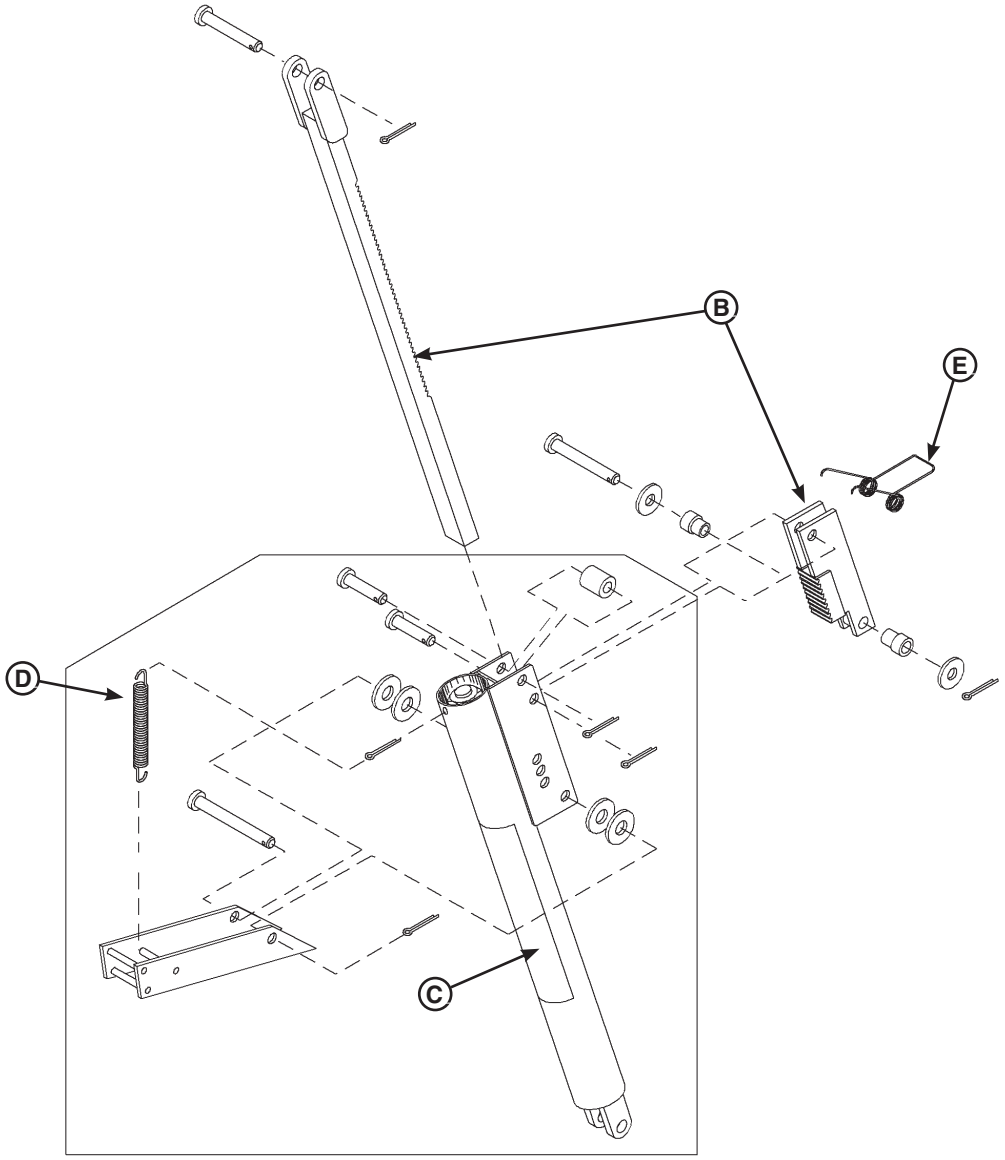
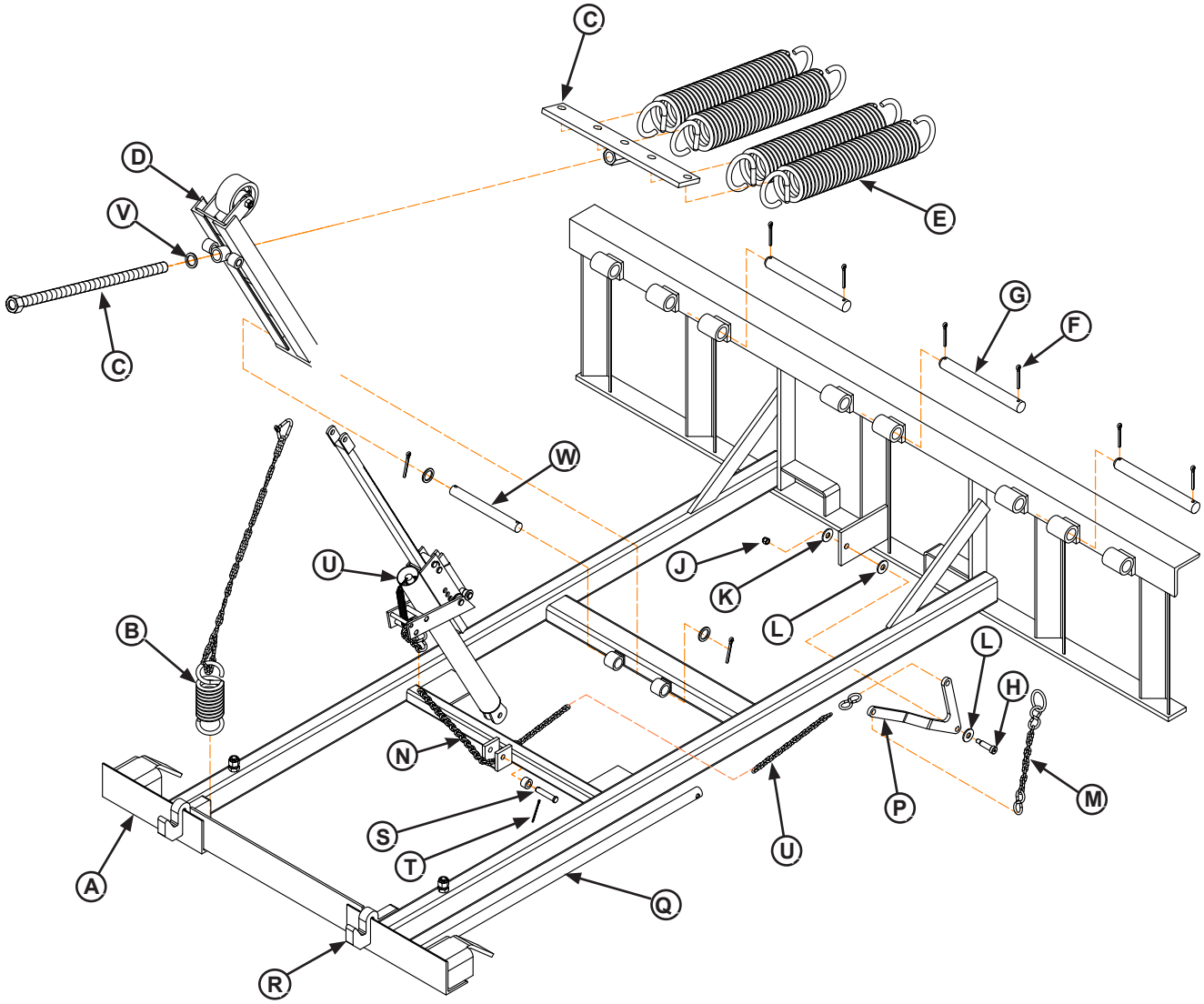
Hold-Down Mechanism



Item	Quantity	Part Number	Description
	1	DOTH-2563	Hold Down Assembly Complete, 31.5" Ratchet Bar
		DOTH-2564	Hold Down Assembly Complete, 34.5" Ratchet Bar
B	1	DKIT-2575	Ratchet Bar and Pawl Assembly 31.5" Ratchet Bar
		DKIT-2576	Ratchet Bar and Pawl Assembly 34.5" Ratchet Bar
C	1	1751-0043	Decal, Warning
D	1	DOTH-2559	Spring, Release Arm
E	1	DOTH-2556	Pawl Spring

Frame Components



Base Frames							
Item	Quantity	6' Long		8' Long		10' Long	
		6' Wide	20K/50K	6' Wide	20K/50K	6' Wide	20K/50K
A	1	16	DRFA-1003	16	DRFA-1012	16	DRFA-1021
		18	DRFA-1004	18	DRFA-1013	18	DRFA-1022
		20	DRFA-1005	20	DRFA-1014	20	DRFA-1023
		6.5' Wide	20K/50K	6.5' Wide	20K/50K	6.5' Wide	20K/50K
		16	DRFA-1006	16	DRFA-1015	16	DRFA-1024
		18	DRFA-1007	18	DRFA-1016	18	DRFA-1025
		20	DRFA-1008	20	DRFA-1017	20	DRFA-1026
		7' Wide	20K/50K	7' Wide	20K/50K	7' Wide	20K/50K
		16	DRFA-1009	16	DRFA-1018	16	DRFA-1027
		18	DRFA-1010	18	DRFA-1019	18	DRFA-1028
		20	DRFA-1011	20	DRFA-1020	20	DRFA-1029

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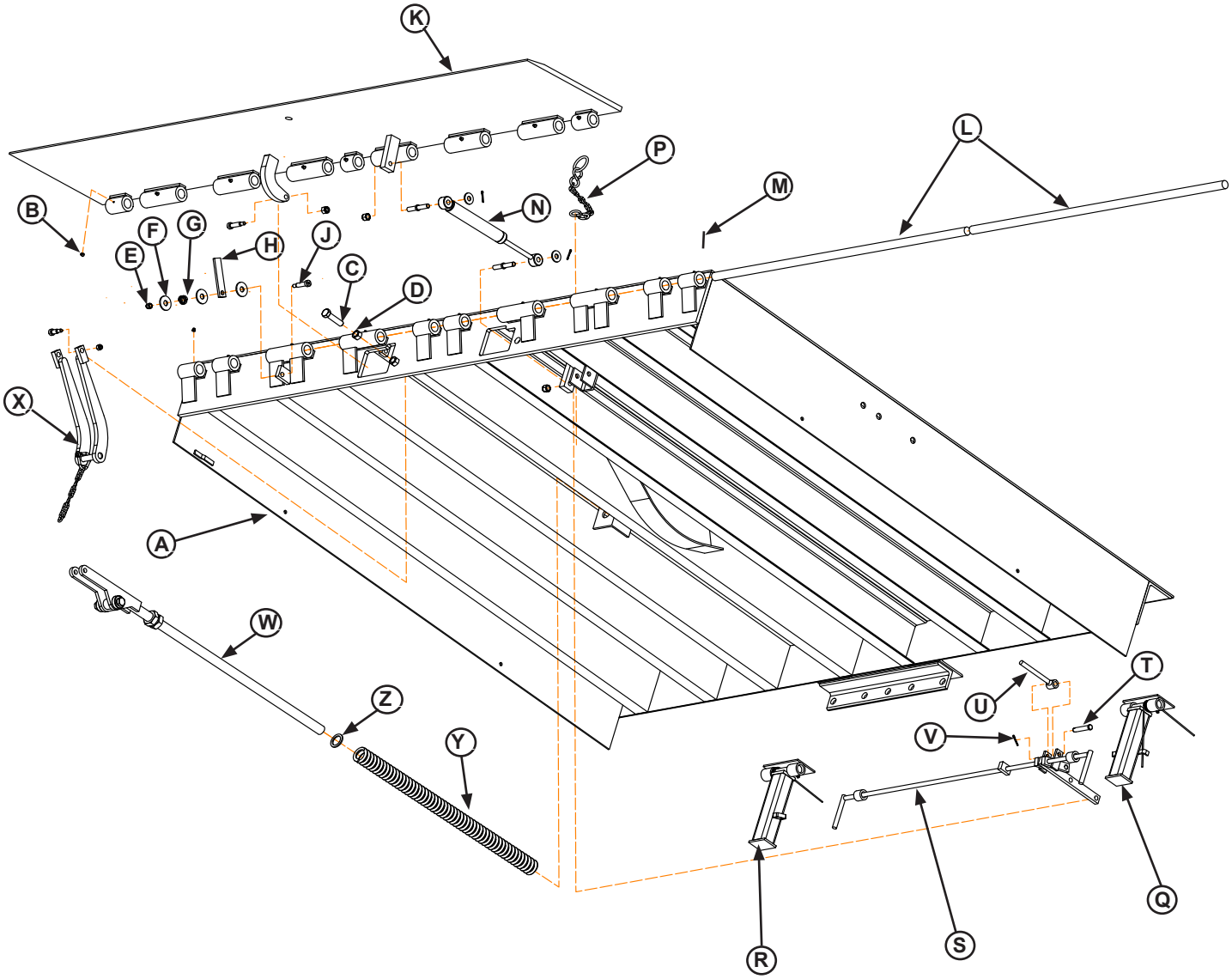
Frame Components

Item	Quantity	Part Number	Description
A	1	DFRA____ [1]	Frame, Welded Assembly (see page 32)
		DFRA-____ [1]	Frame, Clean Sweep, Welded Assembly (Optional)
B	1	DKIT-0001	Spring, Snubber Assembly
C	1	DFRA-0326	6' Bolt, Spring Adjuster & Plate, Spring Tensioner (Includes DOTH-2222)
		DFRA-0327	8' Bolt, Spring Adjuster & Plate, Spring Tensioner (Includes DOTH-2222)
D	1	DOTP-6424 [1]	Lift Arm, Short, 25"
		DOTP-6423 [1]	Lift Arm, Long, 27"
E	AR*	SEE CHART	Spring, Lift
F	6	DOTH-2382	Pin, Cotter, 1/4 x 2"
G	3	9202-0002	Pin, Rear Hinge
		9202-0009	Pin, Rear Hinge Optional Stainless Steel
H	1	DOTH-2060	Bolt, Shoulder
J	1	DOTH-2137	Nut, Nylon Lock
K	1	DOTH-2208	Washer
L	2	DOTH-2210	Washer
M	1	DLPA-1215	Below-Dock Release Chain Assembly
N		DKIT-9905	Hold-Down Release Chain Assembly 5', 6', 8' and 10'
P	1	DOTH-6929	Arm, E-Z Release
Q	1	DOTP-____ [1]	Prop, Maintenance
R	2	8432-0983 [1]	Keeper, 16" Lip, 20" Pit
		8432-0984 [1]	Keeper, 18" Lip, 20" Pit
		8432-0985 [1]	Keeper, 20" Lip, 20" Pit
		8432-0986 [1]	Keeper, 16" Lip, 24" Pit
		8432-0987 [1]	Keeper, 18" Lip, 24" Pit
		8432-0988 [1]	Keeper, 20" Lip, 24" Pit
S	1	DOTH-2356	Pin, Clevis
T	1	DOTH-2375	Pin, Cotter
U	1	DOTH-2563	Hold-Down Assembly Complete, 31.5" Ratchet Bar
		DOTH-2564	Hold-Down Assembly Complete, 34.5" Ratchet Bar
V	1	DOTH-2222	Washer
W	1	DRFA-1205	Pin Assembly (Includes Washers and Cotter Pins)

**AR = As Required*

[1] Provide dock leveler serial number, platform size, lip size and pit depth when calling or faxing orders.

Platform Components



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Platform Components

Item	Quantity	Part Number	Description
A	1	See Page 34	Platform, Welded Assembly
B	AR*	DOTH-2424	Fitting, Grease
C	1	2101-0243	Cap Screw, Lip Stop 5/8" -11 UNC
D	2	DOTH-2160	Nut, Hex 5/8"-11 UNC
E	1	DOTH-2137	Nut, Nylon Lock
F	3	DOTH-2214	Washer
G	1	DOTH-2547	Spring, Lip Maintenance Prop
H	1	DOTP-2006	Prop, Lip Maintenance
J	1	DOTH-2061	Cap Screw
K	1	See Page 36	Lip, Welded Assembly
L	2	DPLA-2101	Pin, Lip Hinge 6' wide
		DLPA-2102	Pin, Lip Hinge 6.5' wide
		DLPA-2103	Pin, Lip Hinge 7' wide
M	2	DOTH-2382	Pin, Cotter
N	1	DKIT-6465	Single Shock Absorber Assembly (Includes Items P and Q)
P	1	DLPA-1215	Below-Dock Pull Chain (Includes Items Q and R)
Q	1	DOTH-6231	Leg, Left Right Safety Assembly with Spring
R	1	DOTH-6232	Leg, Right Safety Assembly with Spring
S	1	DPLA-2122	Pull Bar Rod Assembly, Safety Leg
T	1	DOTH-2356	Pin, Clevis - Option on CM Models
U	1	DOTP-6647	Rod, Push - Option on CM Models
V	1	DOTH-2374	Pin, Cotter - Option on CM Models
W	1	DPLA-2130	Rod, Lip Assist Adjuster (1-1/8" x 34")
X	1	DPLA-2126	Link, Lip With Chain
Y	1	DOTH-2548	Spring, STD, Lip Assist 30"
		DOTH-2546	Spring, HD, Lip Assist 30"
Z	1	DOTH-2218	Washer, 2" OD

**AR = As Required*

[1] Provide dock leveler serial number, platform size, and lip size when calling or faxing orders.

Platform Components

Continued from previous page

Platforms											
Item	**Qty**		**6' Long**			**8' Long**			**10' Long**		
			6.0' Wide	6.5' Wide	7.0' Wide	6.0' Wide	6.5' Wide	7.0' Wide	6.0' Wide	6.5' Wide	7.0' Wide
A	1	25K	DPLA-1008	DPLA-1029	DPLA-1050	DPLA-1015	DPLA-1036	DPLA-1057	DPLA-1022	DPLA-1043	DPLA-1064
	1	30K	DPLA-1009	DPLA-1030	DPLA-1051	DPLA-1016	DPLA-1037	DPLA-1058	DPLA-1023	DPLA-1044	DPLA-1065

Lips				
	Qty		25K	30K
		6.0'		
	1	16	DLIP-1000	DLIP-1003
	1	18	DLIP-1001	DLIP-1004
	1	20	DLIP-1002	DLIP-1005
		6.5'		
L	1	16	DLIP-1018	DLIP-1021
	1	18	DLIP-1019	DLIP-1022
	1	20	DLIP-1020	DLIP-1023
		7.0'		
	1	16	DLIP-1036	DLIP-1039
	1	18	DLIP-1037	DLIP-1040
	1	20	DLIP-1038	DLIP-1041

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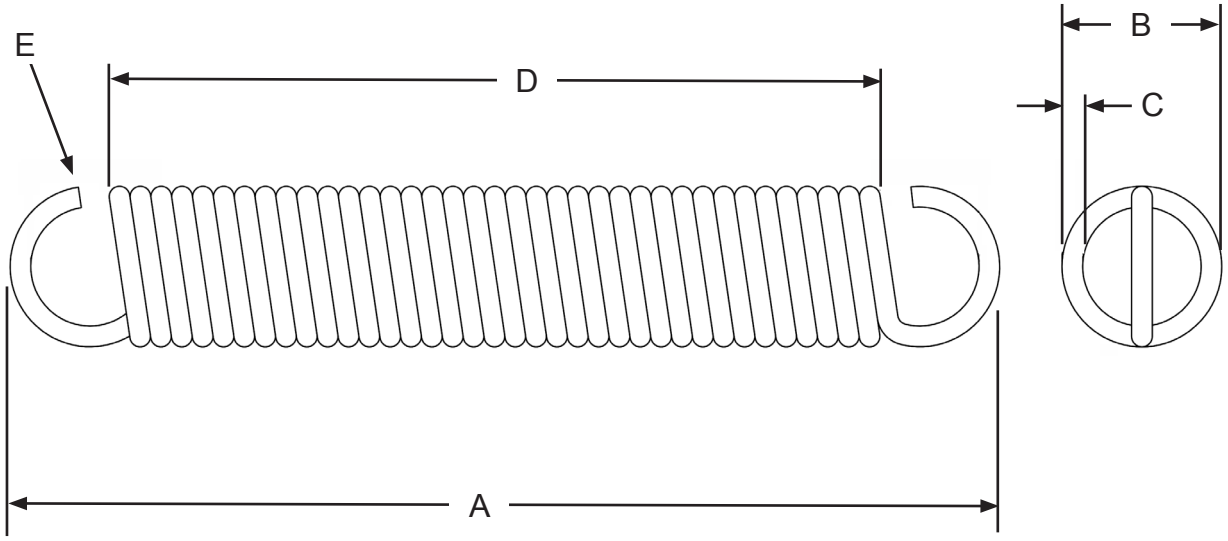
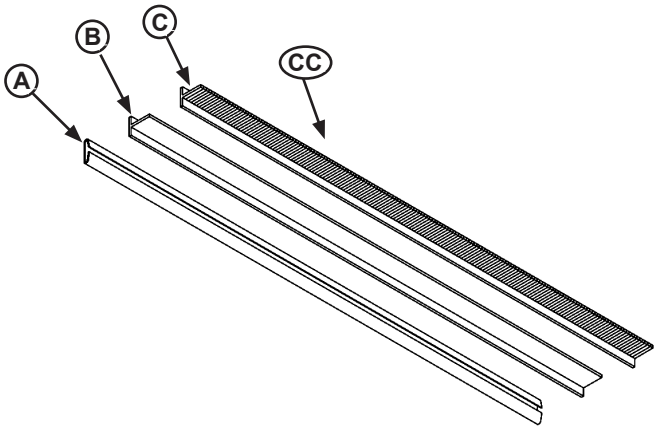
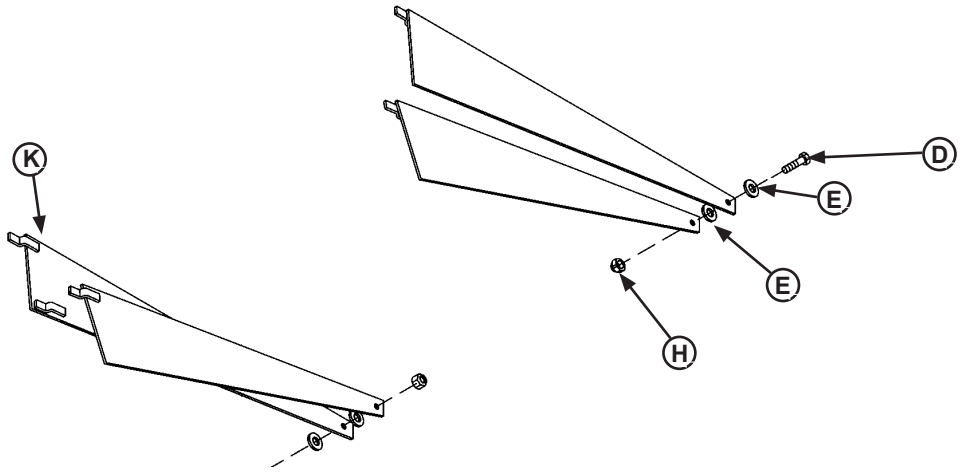
Main Springs



Part Number		DOTH-2570	DOTH-2574	DOTH-2576	DOTH-2578
A	Overall Length	20"	21"	23"	23"
B	OD of Spring	3.468"	4.750"	3.875"	4.70"
C	Wire Size	0.406"	0.531"	0.500"	0.594"
D	Number of Coils	38	26	37	30
E	Color of End Coils	BLUE	RED	BLACK	YELLOW

Toe Guard/Weather Seal—Optional





Item	Quantity	Part Number	Description
A	2	DOTH-2818	Channel, Weather Seal, 84"
B	2	DOTH-2824	T-Rubber, Weather Seal, 84"
C	2	DOTH-2820	Extrusion, Brush Weather Seal, 84"
CC	2	DOTH-2822	Brush Weather Seal, 1.58" x 84"
D	2	DOTH-2043	Cap Screw
E	4	DOTH-2207	Washer
H	2	DOTH-2131	Nut, Nylon Lock

Toe Guard / Weather Seal Options			
E	1	DKIT-9178	Full Range Toe Guard Assembly, 5'
		DKIT-9179	Full Range Toe Guard Assembly, 6'
		DKIT-9180	Full Range Toe Guard Assembly, 8'
		DKIT-9181	Full Range Toe Guard Assembly, 10'
	1	DKIT-9292	KIT COMPLETE RUBBER WEATHER SEAL 6'-8'
	1	DKIT-9293	KIT COMPLETE BRUSH WEATHER SEAL 6'-8'

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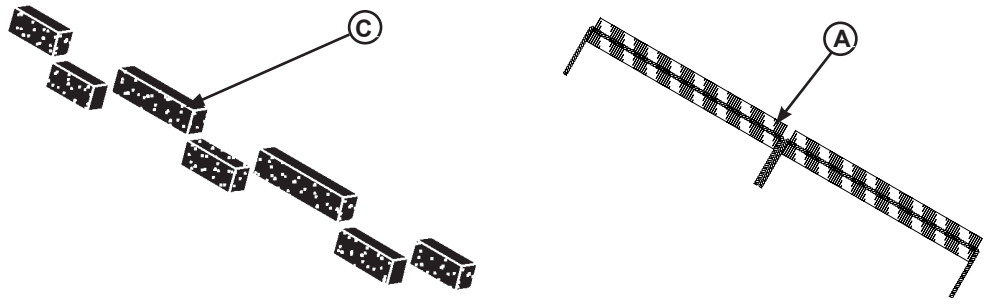
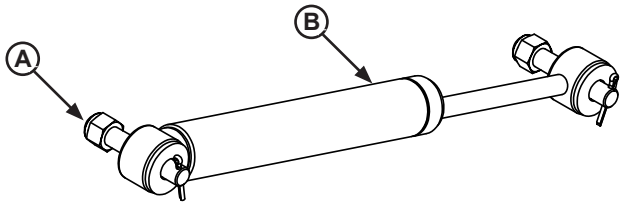
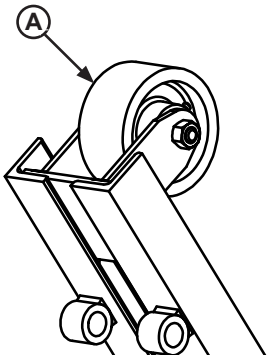
Rear Seals



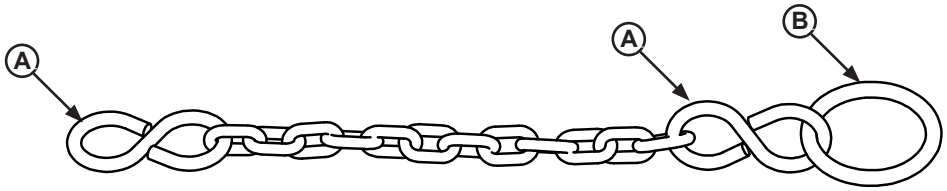
Item	Quantity	Part Number	Description
A	1	0195-0044	Rear Powerseal (Brush Seal)
B		0192-0179	Foam Seal (full length fit 6', 6.5' and 7' levelers not shown)
C		0195-0046	Foam Seal Fits 6' (self-adhesive backing)
		0195-0047	Foam Seal Fits 6-1/2' (self-adhesive backing)
		0195-0048	Foam Seal Fits 7' (self-adhesive backing)



A	1	DKIT-6464	Gas Shock Mounting Kit
B	1	DOTH-2582	Gas Shock Only
		DKIT-6465	Shock Assembly (includes Hardware)



A	1	DOTH-2401	Caster Wheel Assembly



A	2	DOTH-2540	S Hook
B	1	DOTH-2423	Ring, Chain
Chain Assemblies, See Page 34			

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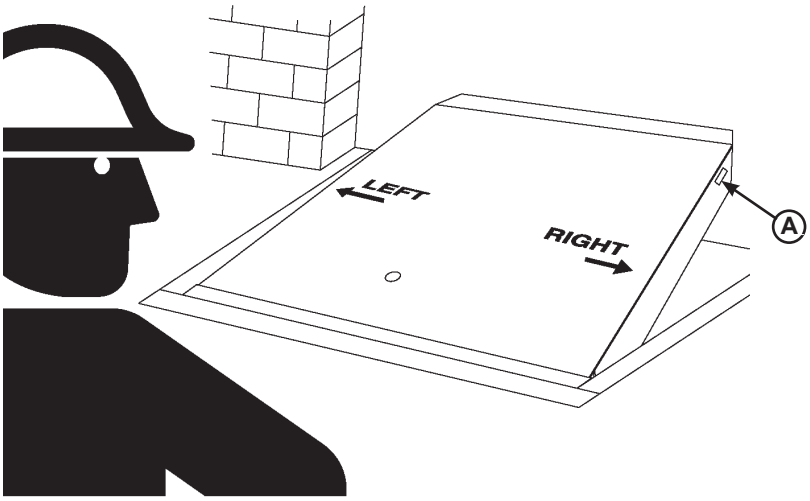
Customer Information



NOTE: *Refer to illustration for left/right orientation of dock leveler.*

NOTE: *The model/serial number decal (A) is located on the right platform joist near the front (lip) of dock leveler.*

When you receive your HM-Series dock leveler, write down the dock leveler model and serial number in the form provided. This will help ensure safekeeping of the numbers in the event the model/serial number decal (A, B) becomes lost or damaged.

Also, write down Poweramp's job 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 descriptions 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
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Dock Leveler Information	
Model	
Serial No.	
Systems, LLC, Job 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, INC. AND ITS SUBSIDARIES 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.

PRODUCT SPECIFIC WARRANTY
"CM DM HM" SERIES LEVELER

In addition to the "Standard Product Warranty" provided with all Poweramp® Products, SYSTEMS, LLC guarantees materials, components and workmanship to be free of defects for the following extended periods:

- Structural Warranty – For an additional period of nine (9) years, product will carry a **prorated** structural warranty. This warranty specifically applies to; the deck section, lip section, frame, rear hinge assembly and front hinge assembly only. This warranty covers structural repairs to or replacement of dock leveler in Systems LLC sole discretion and expense including reasonable labor, materials, freight and travel. If Systems LLC determines replacement is necessary, it will provide the original purchaser with a credit toward the purchase of the new replacement Systems LLC product in the amount equal to the original purchase price of the warranted product F.O.B. point of manufacture, discounted on a ten year straight line basis by the number of years of use prior to replacement.