

Hydraulic Dock Leveler Surface Mount Series

Model "SMD", EZ-Dock I

Operation and Maintenance Manual

This manual applies to SMD series dock levelers manufactured on or after November 2016, with Serial Number(s) 39147 and greater.

P/N 49-0240-A

NORDOCK INC.

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Preface

PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY

This manual gives detailed information and instruction on how to install, operate and maintain your equipment correctly. Failure to do so could result in personal injury, and/or equipment damage. Please consider this manual a permanent part of the unit and keep it with the dock leveler for reference whenever needed.

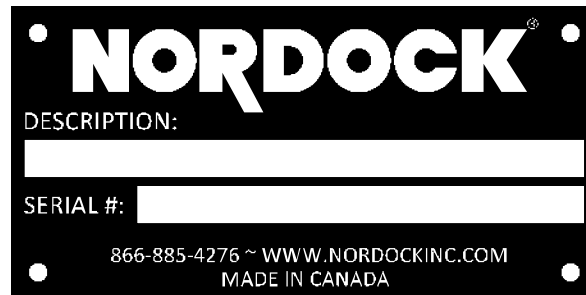
If you have any questions about this manual, the dock leveler, its components, or our products and services, please call us at 1-866-885-4276 and we will be happy to assist you. With proper care and maintenance, this dock leveler is designed to work effectively and efficiently for many years to come.

Problems, Errors and Omissions

This manual has been prepared with the utmost care and attention to detail as to ensure accurate parts and service information should the need arise. Nordock Incorporated believes this manual will provide the operators of this unit all the necessary information required to operate and maintain it for many years. If you believe there is an error, if you have a problem following the guidelines, or if there is information that you feel is missing from this manual, please contact us at the above number so we may attend to the issue immediately.

Dock Identification

It is very important that in order to provide the best possible service from Nordock Inc., please include the model, serial number and capacity of the dock leveler whenever you contact us. Below is the model and serial number nameplate that will be found on the deck of the leveler. Please fill in the information here from the name plate on the leveler. This will greatly reduce the possibility of improper parts being shipped to you.



Copyright

This manual is copyright to Nordock Incorporated. All information, text, drawings, and technical data contained herein are for reference only. No part of this manual may be copied, altered, or stored on electronic media, and cannot be revealed to others for the purpose of competition.

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Warranty

Nordock Inc. expressly warrants that all of its manufactured product shall remain free of defects in material and workmanship under normal use for a period of one-year from the date of delivery to the purchaser. The purchaser must maintain and operate the product in accordance with proper procedures. In the event the product proves defective in material or workmanship, Nordock Inc. will at its option either:

1. Replace the product or the defective portion thereof without charge to the purchaser; or,
2. Alter or repair the product on site or elsewhere, as Nordock Inc. may deem advisable, without charge to the purchaser.

The warranty stated herein is that offered by Nordock Inc. and expressly disclaims all implied warranties including those of merchantability and fitness. This warranty does not cover any failure caused by improper installation, misapplication, overloading, abuse, negligence, or failure to maintain and protect the equipment from vehicle impact. Nordock Inc. or its representative assume no responsibility or liability for any incidental or consequential damages of any kind including loss of use of any equipment, damage or failure resulting from the use of unauthorized replacement parts or equipment modification, or damages resulting from the misuse of the equipment.

Nordock Inc. warranties extend only to the product itself. Nordock Inc. disclaims all liability of any kind arising out of the workmanship, methods and materials used by the installer or premature product wear, product failure, property damage or bodily injury arising from improper installation.

These warranties as stated herein are the exclusive remedies for all claims.



Safety



WARNING

The operators of this unit must read these safety practices before installing, operating or servicing the dock leveler.

FAILURE TO FOLLOW THESE SAFETY PRACTICES MAY RESULT IN BODILY INJURY, PROPERTY DAMAGE OR DEATH.

If you do not understand the instructions, contact your supervisor for an explanation on the safe operation of this unit or call Nordock Inc. at 1-866-885-4276. The following guidelines are to be used in conjunction with all laws, governances and codes in effect where the dock leveler is installed.

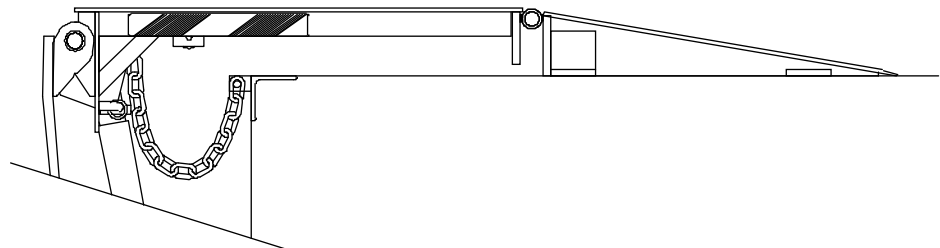
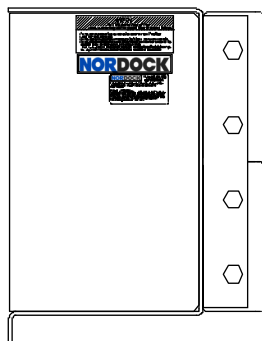
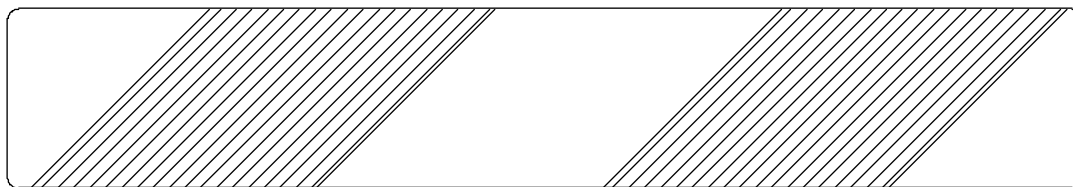
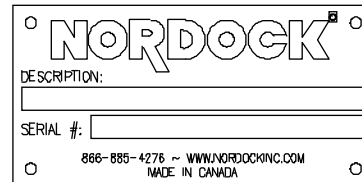
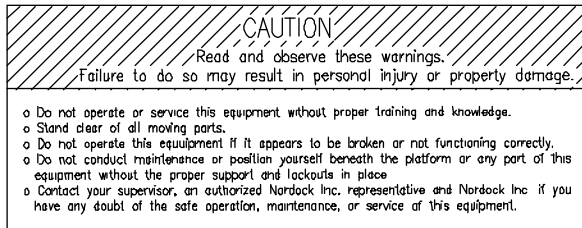
Operation

1. Inspect the dock leveler both before the truck arrives, and once it has left to ensure that all parts are undamaged and in good working order. If the dock leveler does not appear to function properly, or if it looks damaged, disconnect the power supply, lock out the control panel and immediately report it to your supervisor and safety representative.
2. Do not attempt to service trailers that are outside the safe operation service range. Service range varies depending on the combination of dock and lip length. Contact Nordock Inc. to determine the correct range for this particular dock leveler.
3. Be sure that the tires of the truck are properly chocked, or that the truck is properly locked in place by a functioning restraining device before loading or unloading.
4. Stay clear of the dock leveler when it is in motion.
5. Do not operate the dock leveler with equipment, material, or people on the ramp or lip, and **NEVER USE A FORK TRUCK OR ANY TYPE OF MATERIAL HANDLING EQUIPMENT TO LOWER THE RAMP.**
6. Keep hands and feet clear of hinges at all times. Do not attempt to raise the ramp or lip manually. If the dock leveler fails to operate using the procedures contained in this manual, do not use the dock leveler. Disconnect the power supply, lock out the control panel and immediately report it to your supervisor and safety representative. Contact Nordock Inc. or an authorized service representative for service.
7. Stay clear of the leveler unless the lip is supported by the trailer bed or by both keeper lugs at the front of the dock. **An unsupported leveler can lower rapidly and unexpectedly.**
8. Ensure the dock leveler is clear of all material, equipment, or people before the chocks are removed, or the truck is released from the restraint. After loading or unloading, make sure the dock has been returned to its level, stored position.

If you have any questions, contact your supervisor or your local Nordock Inc. representative.

Labels

The labels and decals on the dock leveler must be kept in clean, legible condition at all times. The following shows the decals and their placement on the dock leveler. Please check their condition on a daily basis, and replace them immediately if they become unreadable.



NOTE: LABEL PLACEMENT IS THE SAME ON BOTH SIDES

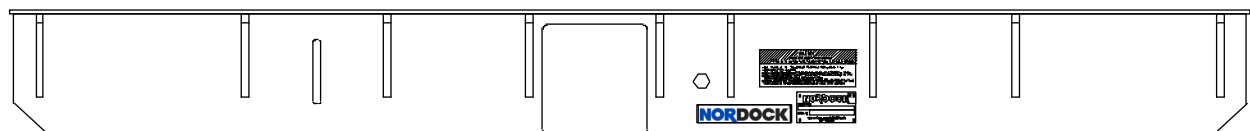


Figure 1

Maintenance Procedure



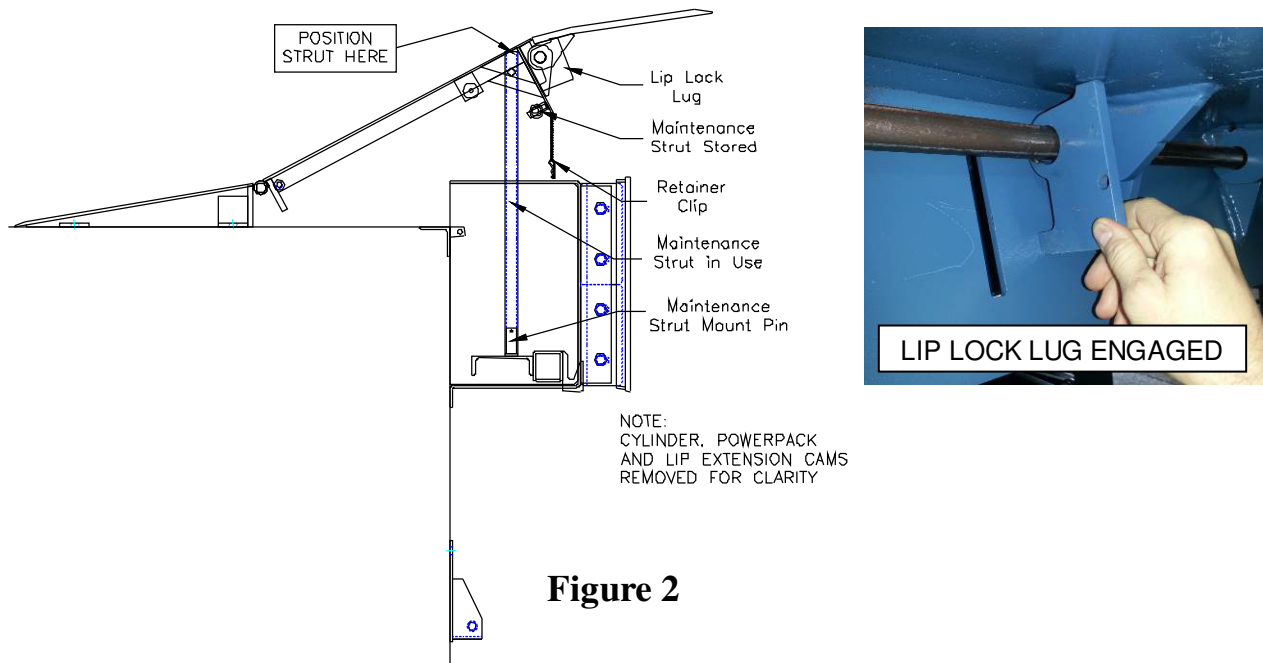
WARNING

USE EXTREME CAUTION WHEN INSTALLING THE MAINTENANCE STAND.

Before operating or maintaining the dock leveler, read and follow the safety practices contained in this manual. Failure to follow guidelines in this manual and those in effect in the workplace can result in serious bodily harm and equipment damage.

NOTE: Any work to be performed on the electrical system must be carried out by a qualified electrician.

1. Hold the "RAISE" button to raise the dock and stay clear until it has risen fully. Have a helper pull the lip lock lug out from the headboard and slide it across the lip hinge in front of the headboard. The lug will hold the lip in the extended position once the deck is resting on the maintenance strut.
2. Continue holding the "RAISE" button and have the helper remove the maintenance stand that is located on the backside of the headboard.
3. Have the maintenance strut placed onto the pin located on the lip keeper shelf. The stand should be kept vertical.
4. Release the "RAISE" button and lower the dock onto the strut, making sure the strut supports the deck plate and headboard between the deck beams as shown. **DO NOT** support the dock from the bottom of the deck beam. Carefully reposition the strut if required.
5. Be sure that the power has been disconnected before entering the area beneath the dock leveler.
6. After completing work on the dock, manually unlock and lower the lip. Have a helper press and hold the "RAISE" button until the maintenance stand has been removed and returned it to its stored position. Release the "RAISE" button and store the dock. **DO NOT STAND UNDER THE DOCK AFTER THE SUPPORT HAS BEEN REMOVED.**



Installation



WARNING

Before operating or maintaining the dock leveler, read and follow the safety practices contained in this manual. Failure to follow the guidelines in this manual and those in effect in the workplace can result in serious bodily harm and equipment damage.

Note: When moving the dock leveler in preparation for installation, it is crucial that the unit be moved only using the pallet provided or minimum 80 grade chain and a 3/4"-10 lifting lug. Chain hooks have a minimum 1-ton capacity. An endless master link should also be used to assist in the levelling of the dock leveler. Three chains must be used; one hooked at the rear, centered on the deck, and two hooked around the lip hinge outside the second set of lip lugs from the sides of the deck.

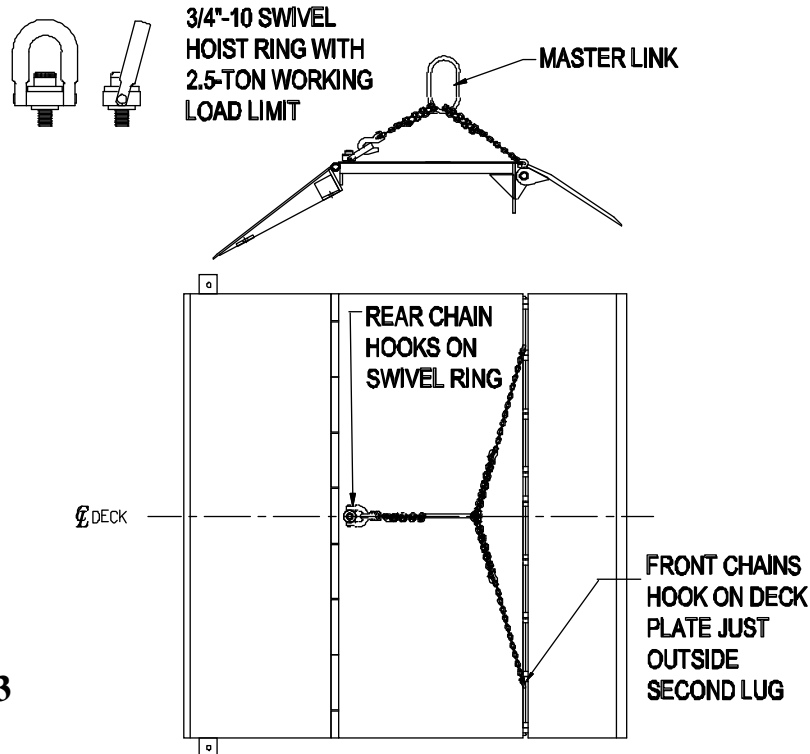


Figure 3

Note: All ramp, bumper box, floor riser and cylinder bracket anchors are 5/8" by 4-1/2" wedge style (supplied by others).

1. The dock leveler has been shipped with the lifting cylinder tied up beneath the deck. This must be untied and swung out to vertical before the leveler is positioned for anchoring on the dock floor.
2. Minimum dock height of 40".
3. Have the control panel station mounted and wired by a qualified electrician. See the electrical diagram at the end of this manual. Wires shown as dashed lines are field connections.

4. **Position the front of the floor risers flush with the dock face** and up against the jamb on each side of the door. See **Figures 4 & 5**.
5. **Measure width of the vertical ramp face**. This must fit tight between floor risers so it can be welded solid to them. Position floor risers accordingly and fill gap at door jamb if necessary.
6. Anchor floor risers to floor (all anchors to be 5/8" x 4-1/2" long wedge anchors supplied by others) and weld solid to curb angle and door jamb. Bumper gussets may take the place of floor risers for open dock installations.
7. Attach 1" x 90 degree weather seal to the inside of each floor riser and down 1/4" from the top. See **Figure 5**.
8. Weld the chain bracket to the curb angle and offset to the left. May be anchored if no curb angle present or curb angle not secure. See **Figures 4 & 5**.
9. With the risers, weather seals and lip keepers installed, attach lifting chains to leveler. See **Figure 2**. Attach ramp and deck at this point using hinge rod and spring pins provided if separated for shipping purposes.
10. Position the leveler assembly so the edge of deck is 12-1/2" ahead of the dock face. See **Figure 3**.

The cylinder must be oriented with the hose fitting towards the building wall.

11. Adjust the dock position so that it is centred between the floor risers and the lip is parallel with the dock face. There should be a 1" gap between each floor riser and the deck plate. See **Figures 4 & 5**.

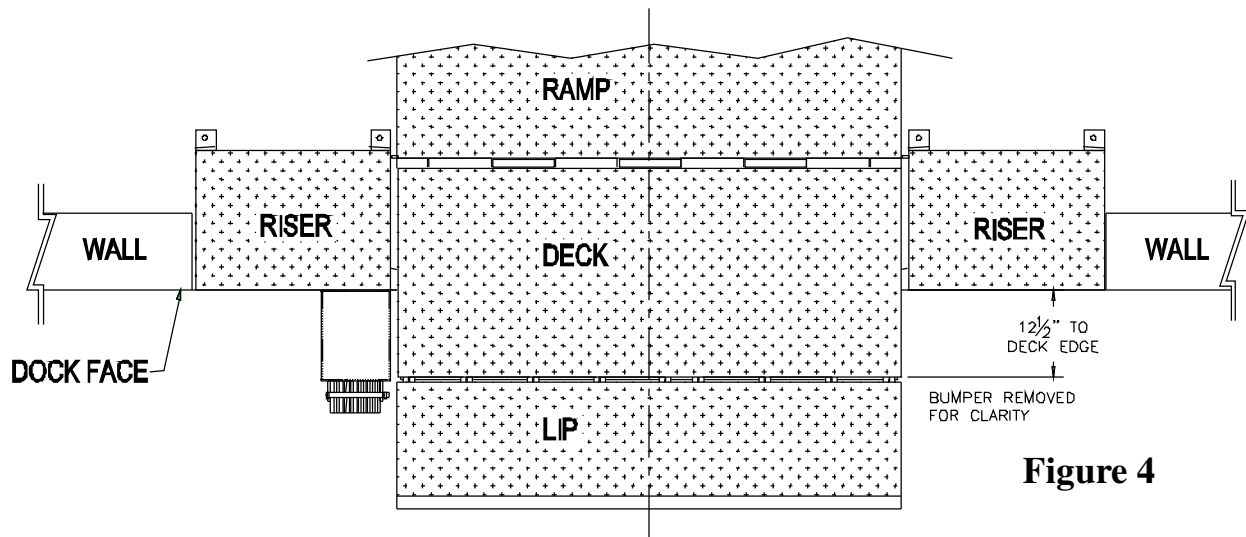


Figure 4

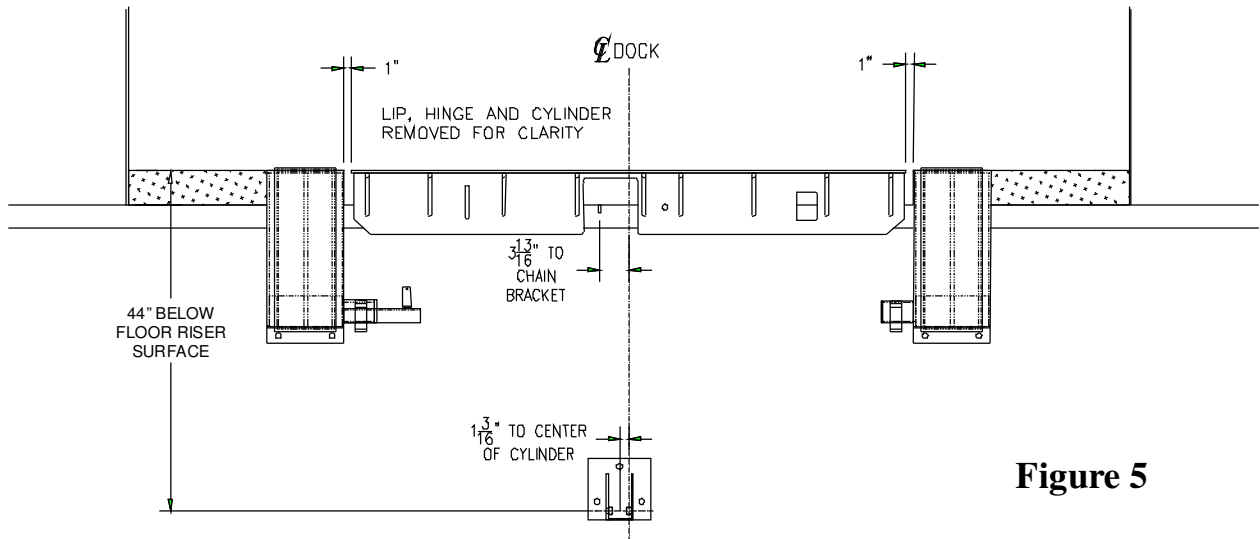


Figure 5

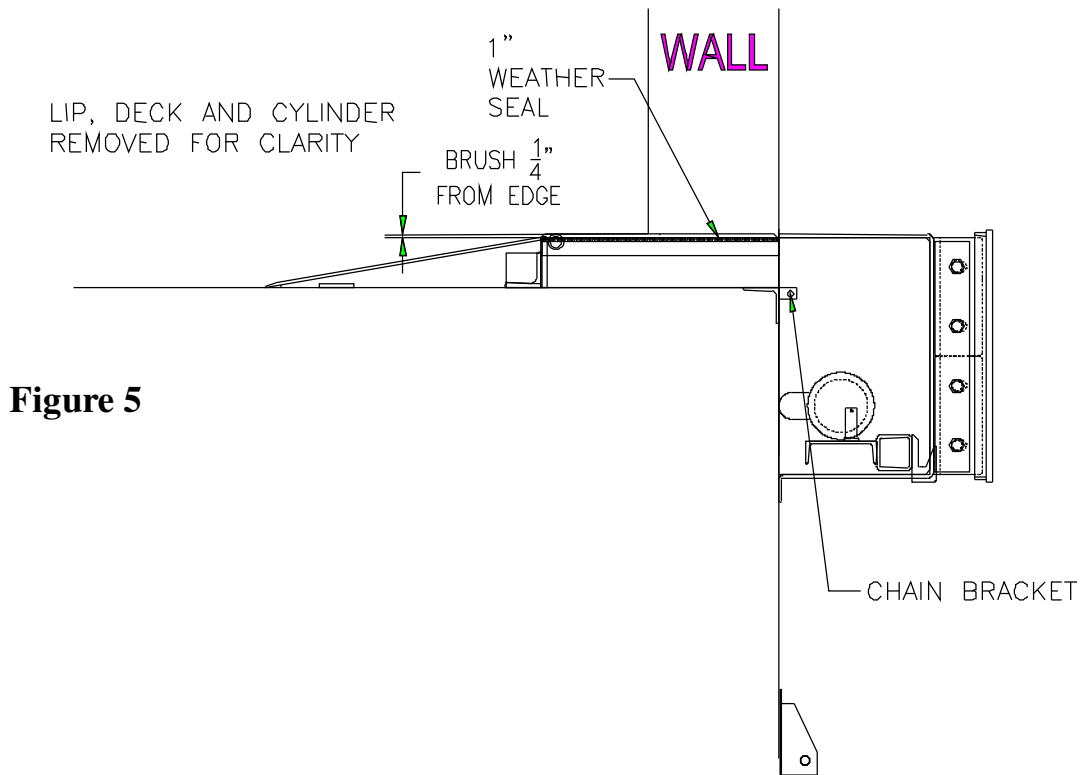


Figure 5

12. With the leveler in place, anchor the ramp to the floor and weld the ramp solid to the floor risers.
13. Anchor the cylinder bracket to the wall ensuring that it is plumb and level. Pin cylinder to the wall bracket. See **Figures 4 & 5**. **Positioning is critical to ensure proper lip extension, lip return and service range.**
14. Attach actuator chain to wall bracket on curb angle. See **Parts section** for assembly drawing.

15. If applicable, install the hydraulic power unit on right bumper box with reservoir towards centerline of dock. See **Figure 5 and Parts section**.
16. With the dock leveler fully installed and anchored, attach the hydraulic hose to the cylinder making sure to keep it free of dirt and debris and leaving ample slack so it cannot be pulled taught or pinched through its range of motion.
17. Have a qualified electrician connect the motor to the panel. To facilitate, a cord passage has been provided through the bumper boxes. If power unit is mounting remotely, this passage is to be utilized for hose routing.
18. The leveler is now operational, test full range of motion and check for interferences or malfunction. Simulate landing on and storing from a truck bed.
19. Follow the maintenance procedure carefully to install the maintenance strut.
20. Remove all left over debris from the pit and surrounding area and touch-up paint as required (paint supplied by others) to ensure a professional quality fit and finish to the completed installation.
21. Return the leveler to the stored position.
22. The installation is now complete. Give this manual to the customer and make sure arrangements have been made for proper equipment operation training.

Correct installation will ensure consistent, efficient operation for many years to come.

Operation



WARNING

Before operating or maintaining the dock leveler, read and follow the safety practices contained in this manual. Failure to follow the guidelines in this manual and those in effect in the workplace can result in serious bodily harm and equipment damage.

Standard Control Panel

1. Push and hold the “RAISE” button. The ramp will rise and the lip will extend as the deck reaches its highest point. Release the button once the lip has fully extended and the deck will lower and rest on the truck bed.
2. Proceed with loading and/or unloading.
3. To return the dock leveler to its stored position, push and hold the “RAISE” button until the lip clears the bed and has folded back in. Release the “RAISE” button and the dock leveler will return to its stored position.
4. Ensure the lip is seated in the lip keepers before walking or driving on the dock.

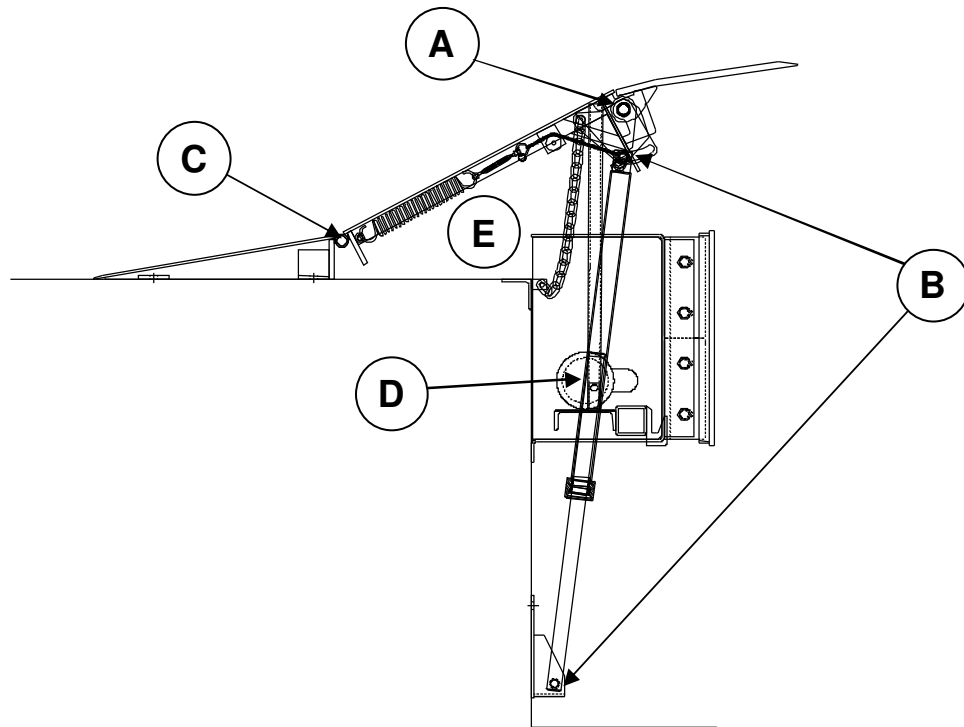
Maintenance and Lubrication



WARNING

Before operating or maintaining the dock leveler, read and follow the safety practices contained in this manual. Failure to follow the guidelines in this manual and those in effect in the workplace can result in serious bodily harm and equipment damage.

Note: Use only the lubricant grades specified in this manual. Failure to use the materials listed may lead to premature failure, and will void any warranty claims for the dock leveler.



Item	Lubrication	Adjustment	Cleaning
- A - Lip Hinge	Every 90 days Using grease	None	Remove debris as required
- B - Cylinder Pivot Pins	Every 90 days Using light oil	None	Remove debris as required
- C - Dock Hinge	Every 90 Days Using light oil	None	Remove debris as required
- D - Hydraulic Oil Reservoir	Check level every 90 days Change oil yearly	None	Remove and clean strainer and magnet yearly
- E - Pit Area	None	None	Every 90 days or as required to remove debris

Acceptable Lubricants and Oils

Hydraulic

Oils used in the hydraulic system must meet minimum ISO grade 22 standard. E.G.:

COMMERCIAL OIL MULIT-VIS MV22
MOBIL AERO HFA (49011)
EXXON UNIVIS GRADE J13
TEXACO AIRCRAFT OIL #1537BB
U.S.OIL CO. #5606 (LOW TEMP)
SHELL TELLUS T22

Grease

Grease used for hinges must meet a minimum EP-2 grade. E.G.:

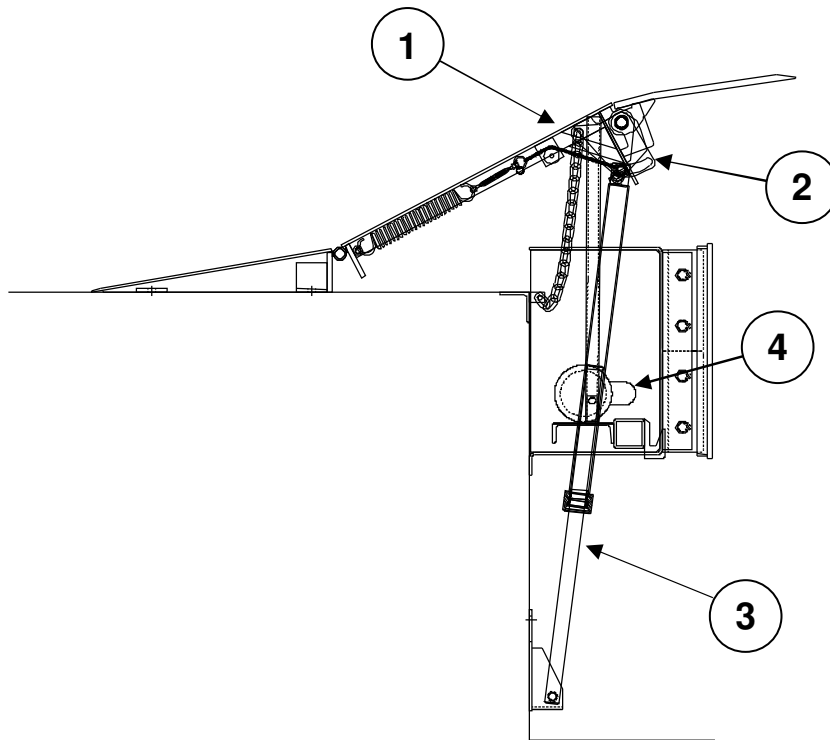
CHEVRON DURA-LITH EP-2

Light Oil

Light oils used should have good penetration and adhesion qualities.

NOTE: Biodegradable fluids are available for use in the dock leveler. Please consult Nordock for information and instruction.

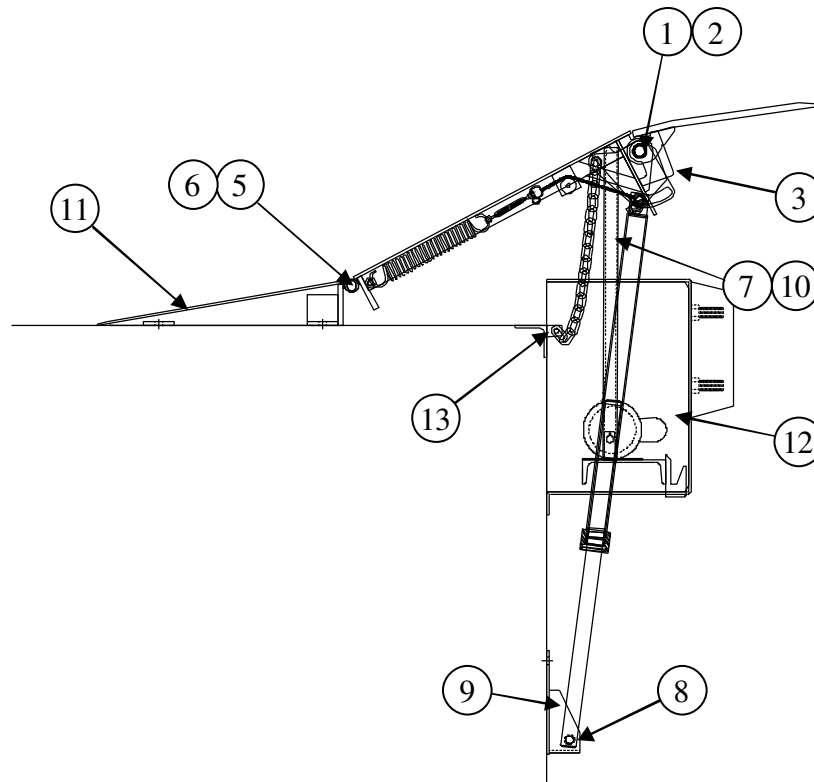
Parts and Service Table



Item Number/ Section	Description
1	Deck, Lip and Ramp Assembly
2	Lip Actuator Assembly
3	Hydraulic Cylinder
4	Power Pack and Related Hydraulic Components
5	Control Panel (not shown)

Note: Not all parts and weldments are noted in this manual. Only those that are serviceable and/or replaceable will be listed. For additional information on those parts not included in this manual, please contact Nordock. Remember to make note of the model and serial number of the unit for accurate parts and service.

Section 1 – Deck, Lip and Ramp Assembly

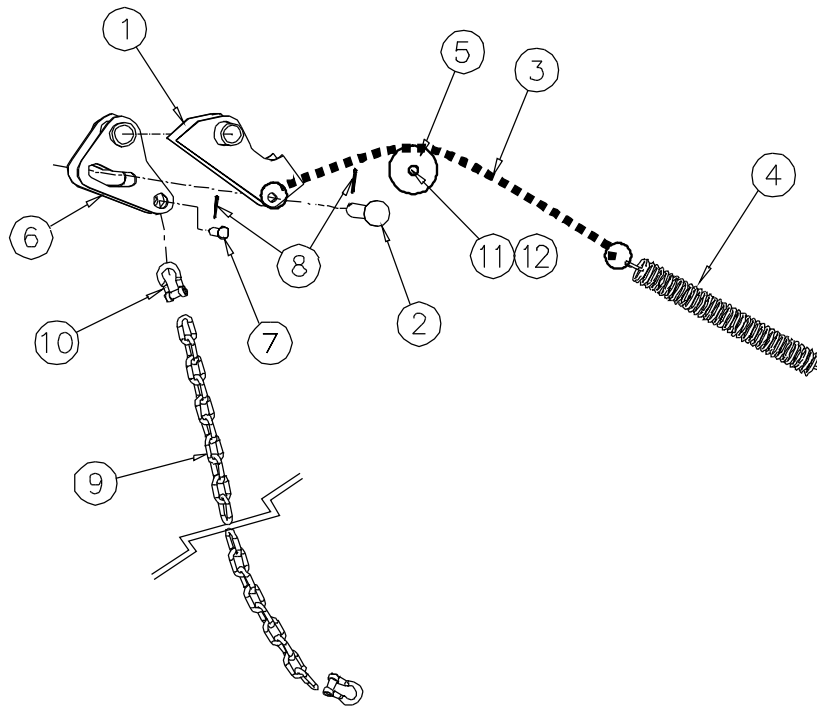


Item	Qty.	Description / Model	P/N	Note	
1	1	Lip Hinge Rod	6' 6.5' 7'	43-0148 43-0149 43-0150	
2	2	Roll Pin, 1/4" x 2		13-0555	
3	1	Lip Safety Lock Lug		43-0252	
4	1	Dock leveler Decal Kit (not shown)		42-0392	1
5	1	Rear Hinge Rod	6' 6.5' 7'	43-0154 43-0155 43-0156	
6	2	1/4" x 2" Roll Pin		13-0555	
7	1	Maintenance / Support Strut		43-1104	
8	1	Lower Cylinder Pin		42-2505	
9	1	Cylinder Wall Bracket		42-2500	
	2	Brushed Weather Seal (not shown)		43-1153	
10	1	Maintenance Strut clip and chain		42-3800	
	2	Floor riser (not shown for clarity)		C/F	
11	1	Ramp		C/F	
12	1	Bumper box, Left		C/F	
	1	Bumper box, right			
13	1	Actuator Chain Bracket		42-2503	

1 – For correct decal placement, see safety section.

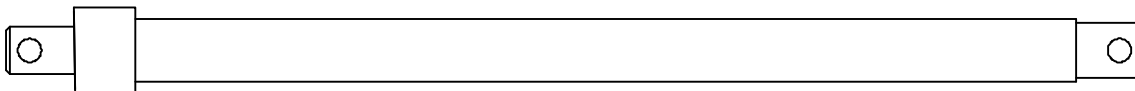
C/F – Consult Factory

Section 2 – Lip Actuator Assembly



Item	Qty.	Description / Style	P/N	Note
1	1	Lip Cam Weldment	13793-LEW	
2	1	Pin, Lip Cam, 3/4" Dia.	42-0687	
3	1	Cylinder Return Chain c/w Rings, #4 Twist	19416-AC	
4	1	Cam Return Spring	13-1955	
5	1	Roller	43-0875	
6	1	Lip Extend Actuator	13793-LAW	
7	1	Clevis Pin, 3/4" Dia. x 2" Steel Plated	13-1208	
8	2	Cotter Pin, 3/16" x 1 3/4"	13-0304	
9	1	Actuator Chain (1/4" Gr. 30)	4.5" ramp 8" ramp	43-1109 11663-AC
10	2	Shackle, 5/16" Dia. Forged Steel c/w Rd Pin	13-0242	
11	1	Clevis Pin, 1/2" x 1-1/2"	13-1073	
12	1	Cotter Pin, 1/8" x		

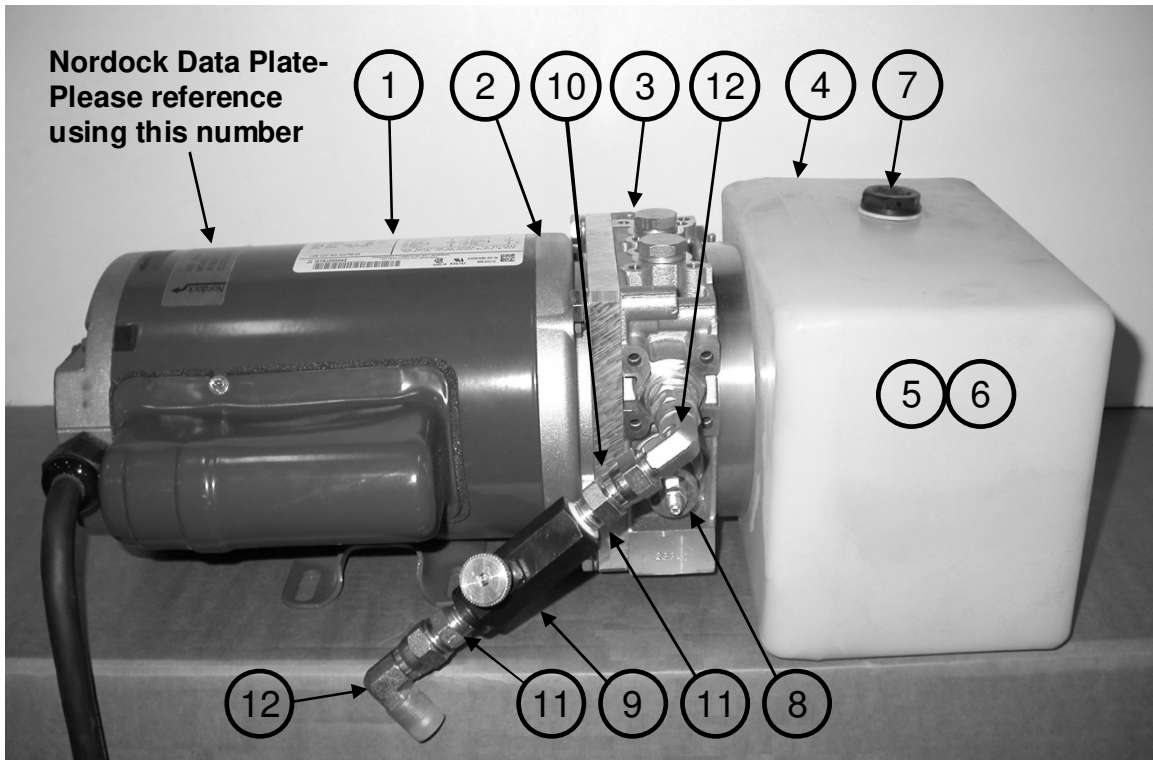
Section 3 – Hydraulic Cylinders



Ram Dia.	Description / Model	P/N	Note
1 1/2"	Seal Kit	C3-0025	
	Deck Lift Cylinder, 34-7/16" Closed, 29-3/4" Stroke	C1-0095	

The cylinder must be oriented with the hose fitting towards the building wall.

Section 4 – Power Pack and Related Hydraulic Components



Item	Qty.	Description / Model		P/N	Note
		Complete Power Pack Assembly (Pts 1-11 below)	115 / 230 V 1 Ph. 208 / 230 / 460 V 3 Ph. 575 V 3 Ph.	13-3447 13-3448 13-3449	
Power Pack Components:					
1	1	Drive Motor	115 / 230 v. 1 PH 230 / 460 v. 3 PH 575 v. 3 Ph		1
2	1	Motor Coupler	Standard Duty		
3	1	Manifold Assembly	Standard Duty		
4	1	Hydraulic Oil Reservoir Kit		13-3598	
5	1	Pump Assembly (Inside Tank)			
6	1	Oil Pickup Screen and Tube (Inside Tank)			
7	1	Cap, Filler/ Vent			
8	1	Pressure Relief Valve Cartridge			
9	1	Flow Control Valve, 1/4" NPT		13-1020	
10	1	Hydraulic Fitting, 1/4 (4) MNPT x 9/16 (6) FJIC Swivel		13-3518	
11	2	Hydraulic Fitting, 9/16 (6) MJIC x 1/4 (4) MNPT		13-0100	
12	2	Hydraulic Fitting, 90° 9/16 (6) FJIC x 9/16 (6) MJIC		13-0494	

Note 1 – Consult factory when ordering individual power pack components.

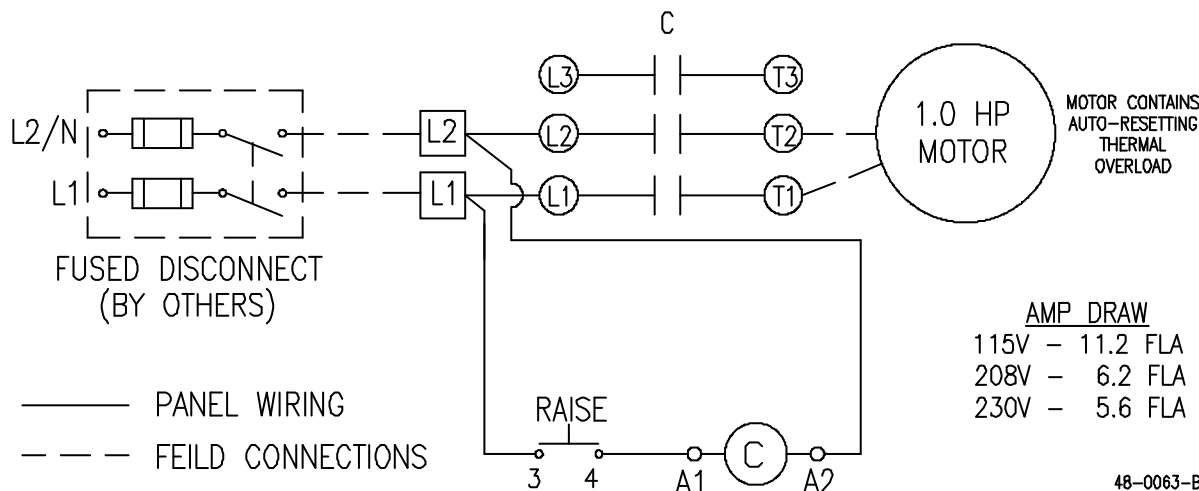
Section 5 – Control Panels

Volts	Phase	Description / Style	Control Panel	Wiring Schematic	Note
115	1	Standard Panel / Single Pushbutton	13-3767	48-0063	
208/230	1	Standard Panel / Single Pushbutton	13-3768	48-0063	
208/230	3	Standard Panel / Single Pushbutton	13-3769	48-0062	
460	3	Standard Panel / Single Pushbutton	13-3770	48-0062	
575	3	Standard Panel / Single Pushbutton	13-3771	48-0062	

Wiring Diagrams

The following wiring diagrams are specific to this dock leveler. It may be wired in conjunction with other systems used with the dock leveler. Please consult Nordock Inc. or a qualified electrician before performing any work on the control panel or its components.

Single Phase 1 Button 110v-220v – Starter Only 48-0063-B



3 Phase 1 Button 208v-575v – Starter Only 48-0062-B

