

FLEX-LIP® Series
Hydraulic Powered Dock Leveler
Model "SHF"
25,000 to 50,000 lbs. Capacity

Operation and Maintenance Manual

This manual applies to dock levelers manufactured on or after October 2018 with Serial Numbers greater than 44336.

P/N: 49-0232-B

NORDOCK INC.

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Nordock Inc. reserves the right to make changes to specifications without notice or obligation. Nordock products are covered by U.S. Patents: 7,384,229; 7,162,762; 7,013,519; 6,912,750; 6,834,409 and U.S. and foreign pending applications.

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Preface

PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY

This manual gives detailed information and instruction on how to 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 are the model and serial number decals that will be found on the left side frame rail (standing on the dock, facing the lip). Please fill in the information from the decal on the dock leveler to this area. This will greatly reduce the possibility of improper parts being shipped to you.

NORDOCK[®]
DESCRIPTION: _____
SERIAL #: _____
866-885-4276 ~ WWW.NORDOCKINC.COM
MADE IN CANADA

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.

Warranty

Nordock Inc. expressly warrants that Model SHF FLEX-LIP™ series dock levelers 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.

In addition, the front and rear hinge assemblies are guaranteed, under specified guidelines, for a period of Twenty-Years, and the deck lip and frame for Ten-Years.

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.

Read and follow the operating instructions contained in this manual before operating the dock leveler. 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 when 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, **DO NOT USE THE DOCK LEVELER**. Disconnect the power supply, lock out the control panel and report it immediately 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. or an authorized service representative 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 report it immediately to your supervisor and safety representative. Contact Nordock Inc. or an authorized service representative for service.
7. Use extreme caution when installing the Maintenance/Support stand. Stay clear of the dock until it has risen fully. **Do not stand under the dock after the stand has been removed.** The lip may fold rapidly, striking the worker.
8. Make sure the maintenance stand is properly seated on the pin and resting on the inside of the deck plate, not on a beam or other component. Carefully reposition the stand if required. Be sure that both the maintenance/support stand is engaged and the power has been disconnected with the control panel locked out, before entering the dock leveler pit area.
9. Any work to be performed on the electrical system must be carried out by a qualified electrician.
10. Any work to be performed on the hydraulic system must be carried out by a qualified hydraulic technician or specialist.
11. 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.

Maintenance Procedure:



WARNING

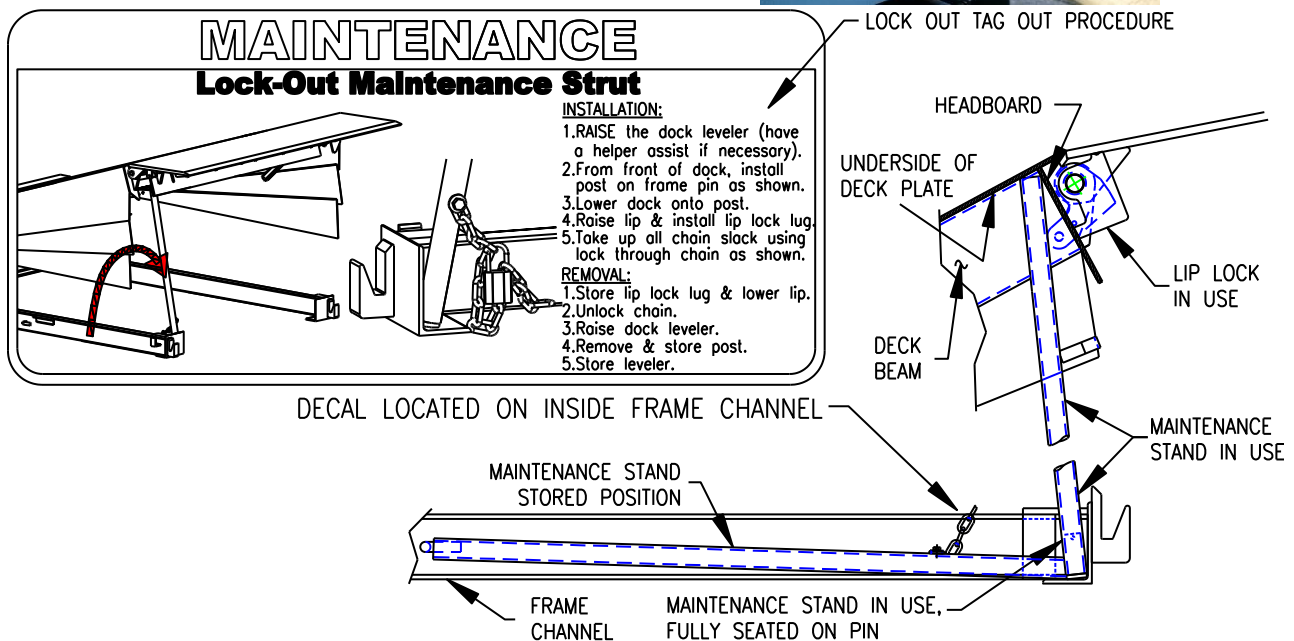
USE EXTREME CAUTION WHEN INSTALLING THE MAINTENANCE STAND

ONLY USE THE PIN PROVIDED TO PROPERLY LOCATE THE MAINTENANCE STAND. SUPPORTING THE LEVELER AT ANY OTHER LOCATION CAN RESULT IN SERIOUS BODILY HARM AND EQUIPMENT DAMAGE.

BE SURE THE POWER HAS BEEN DISCONNECTED, THE CONTROL PANEL IS LOCKED OUT AND BOTH LIP AND DECK MAINTENANCE SUPPORTS ARE IN PLACE BEFORE ENTERING THE DOCK LEVELER PIT AREA.

Before operating or maintaining the dock leveler, read and follow the practices in the Safety Section and all warnings 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.

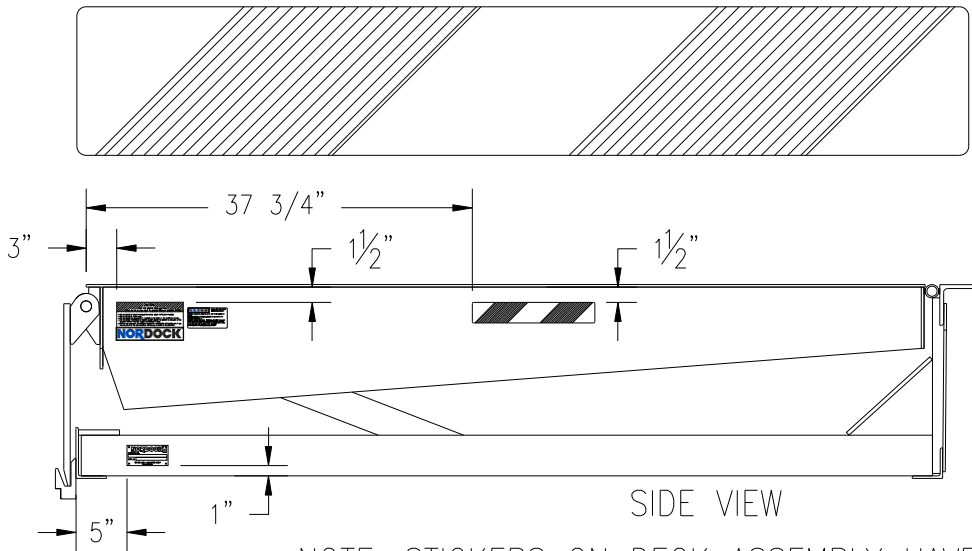
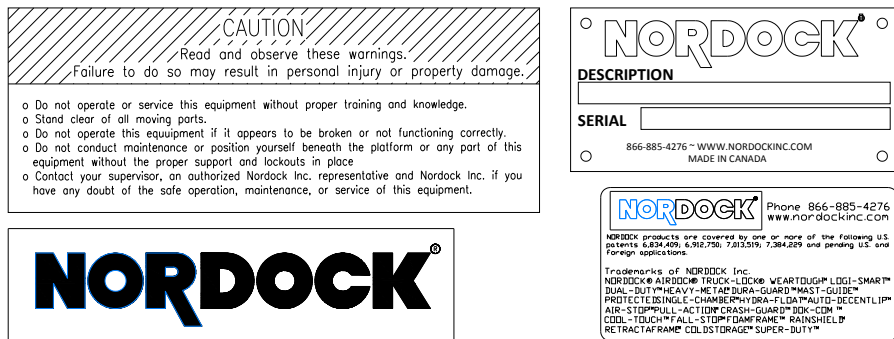
1. Raise the dock to its highest position.
2. Raise the lip and use the lip lock to hold the lip in the extended position.
3. Remove the maintenance stand, located on the frame lower outside left side and position one end onto the adjacent pin (on the frame). The stand will slope toward the rear of the dock, but should be kept vertical left or right.



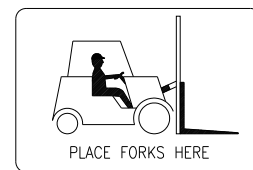
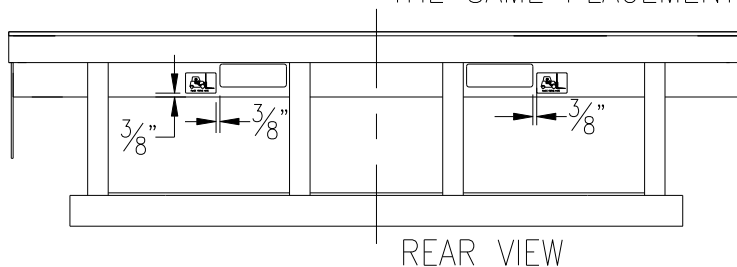
- Lower the dock onto the stand, making sure the stand supports the deck plate and headboard between the deck beams, as shown. DO NOT support the dock from the bottom of the deck beam.
- After completing work on the dock, unlock and lower the lip. Remove the maintenance stand and return to its stored position. Do not stand under the dock after the support has been removed.

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: STICKERS ON DECK ASSEMBLY HAVE THE SAME PLACEMENT ON BOTH SIDES



Installation



WARNING

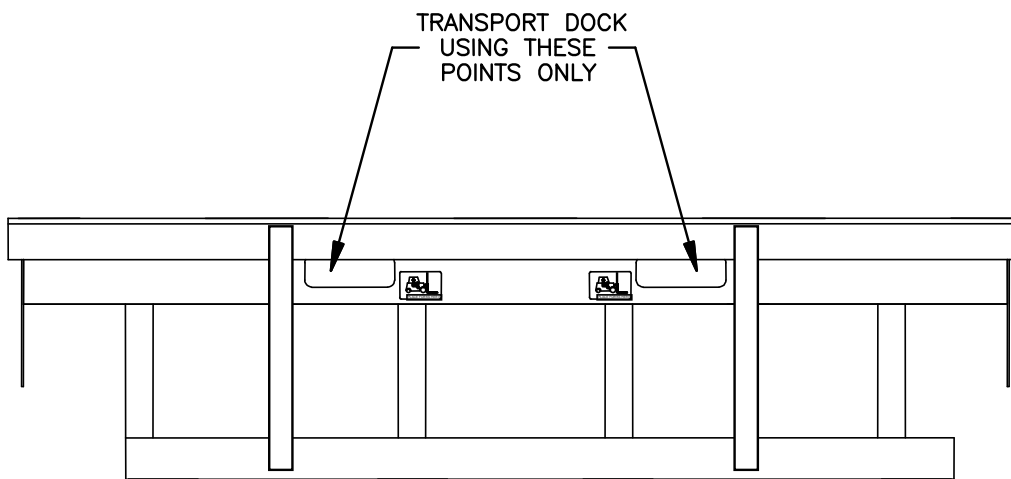
Before operating or maintaining the dock leveler, read and follow the safety practices contained in this manual. Failure to follow the guidelines in this manual and those in effect in the workplace can result in serious bodily harm and equipment damage.

Pit Check;

1. Check the entire pit area for proper construction according to the certified pit drawings. Ensure the pit walls are square and plumb. If this is a replacement, ensure the steel sections are on good, weldable condition. Check the electrical service running to the pit and make sure it is the same as the voltage and phase as shown on the wiring diagram in the control panel.
2. Complete any pre-wiring procedures before the dock is placed in the pit. Ensure that any cables, plugs or leads are connected to the dock, and that there are correct corresponding leads, receptacles or device boxes with covers in the pit.
3. Make sure that any conduit and/or junction boxes do not interfere with the frame uprights. See drawing below for best placement.

Dock Installation;

Note: When moving the dock leveler in preparation for installation, it is crucial that the unit be moved using **only** the fork pockets at the rear of the frame.

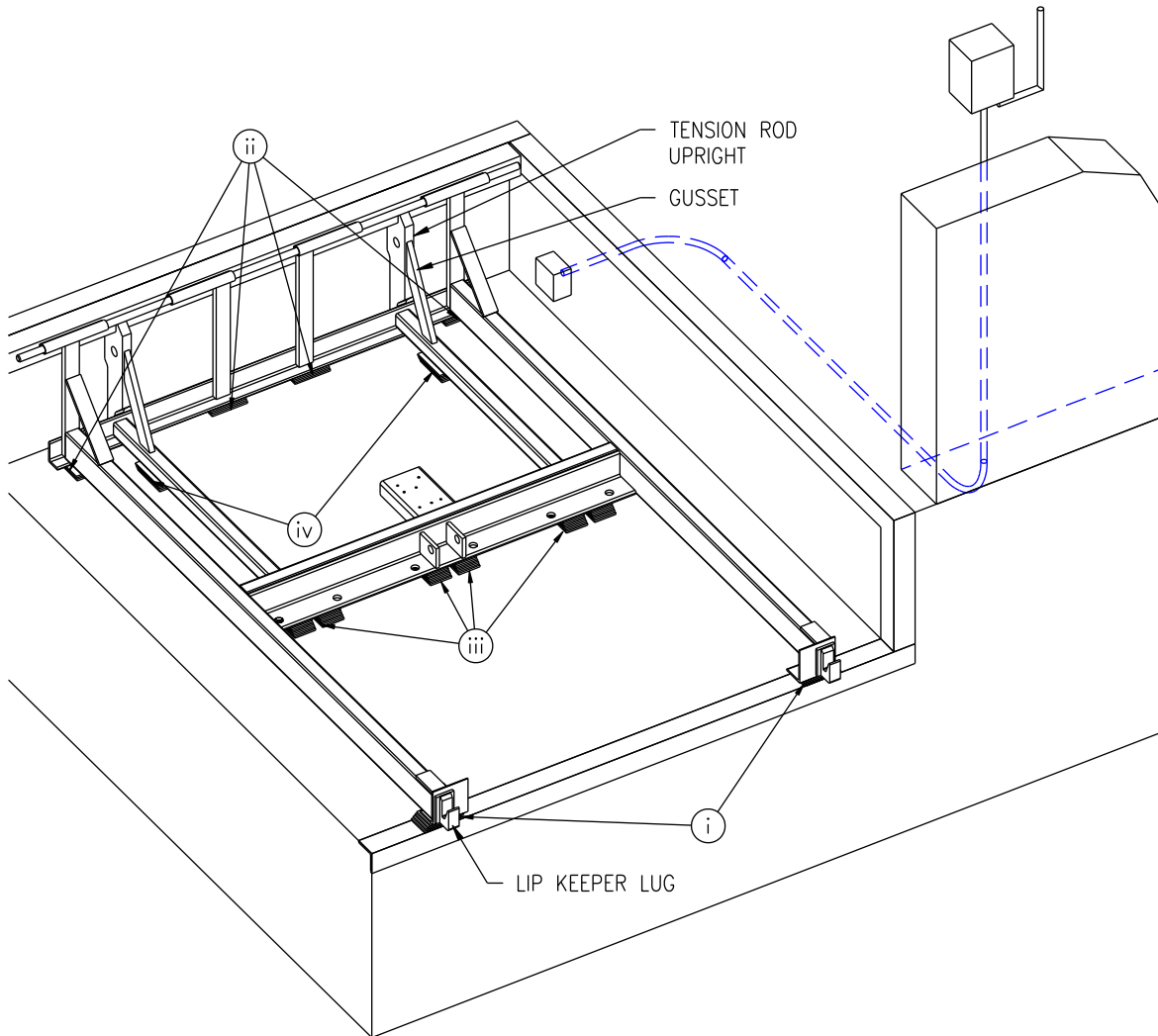


1. Have the control panel mounted and wired by a qualified electrician. See electrical diagram inside the control panel. Wires shown as dashed lines are field connections.

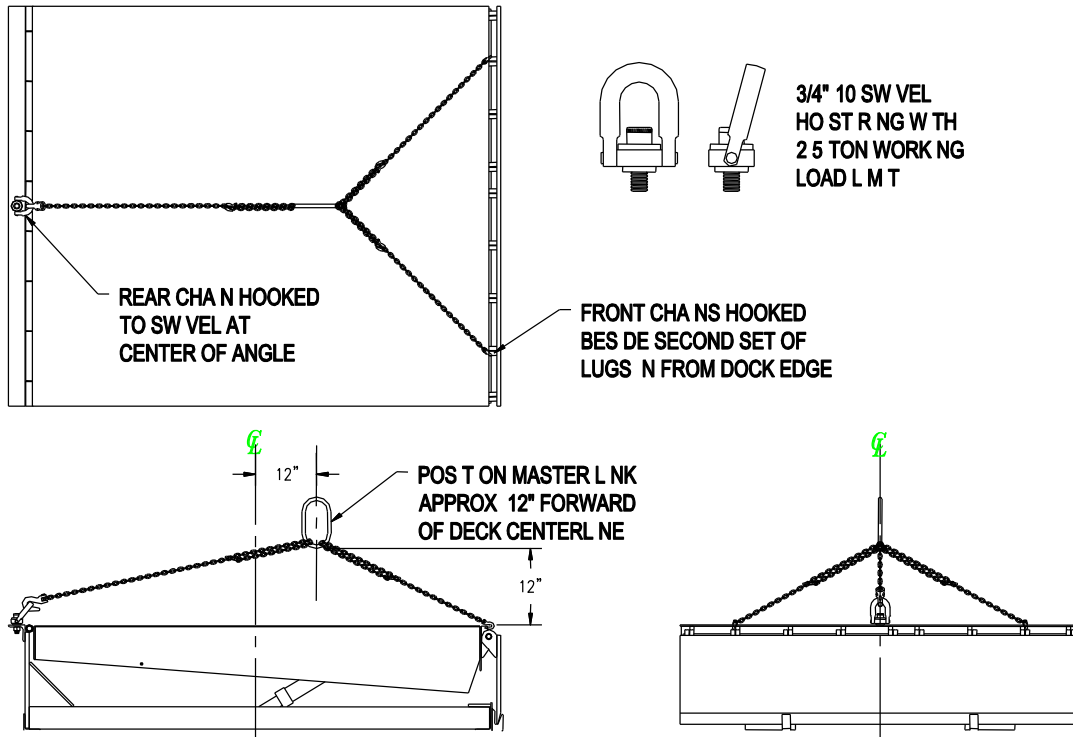
2. Shim heights may be established prior to the installation of the dock. Make sure shim heights all equal the same depth from the edge of the pit area. For best weld, stagger shims at least 1/4 inch. At this time, tack-weld the shims only. See below for shim locations. Recommended shim: 1/4" x 3" x 5" flat bar

Shims required at the following locations:

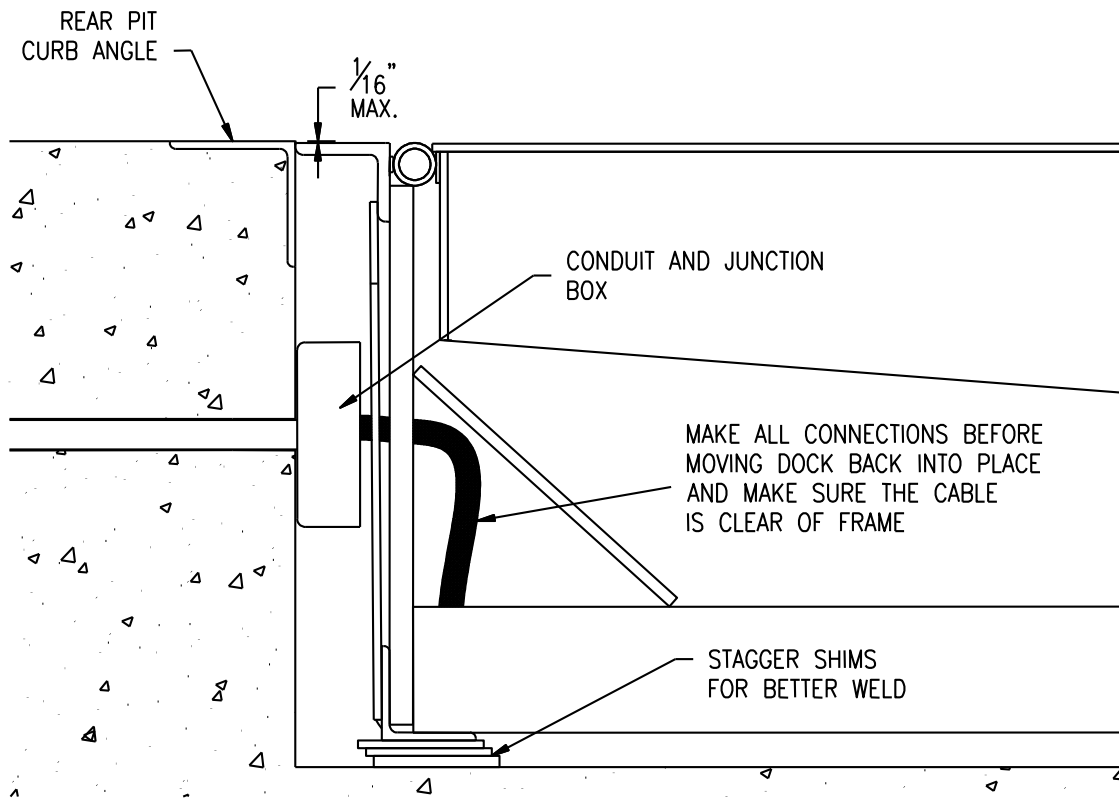
- i. Under both front frame angles directly behind the lip keeper lugs. (2 places)
- ii. Under lower rear frame angle at each hinge tube support upright. (4 places)
- iii. Under the cylinder mounting angle directly beside each anchor hole. (6 places)
- iv. Under base of each tension rod upright gusset. (2 places)



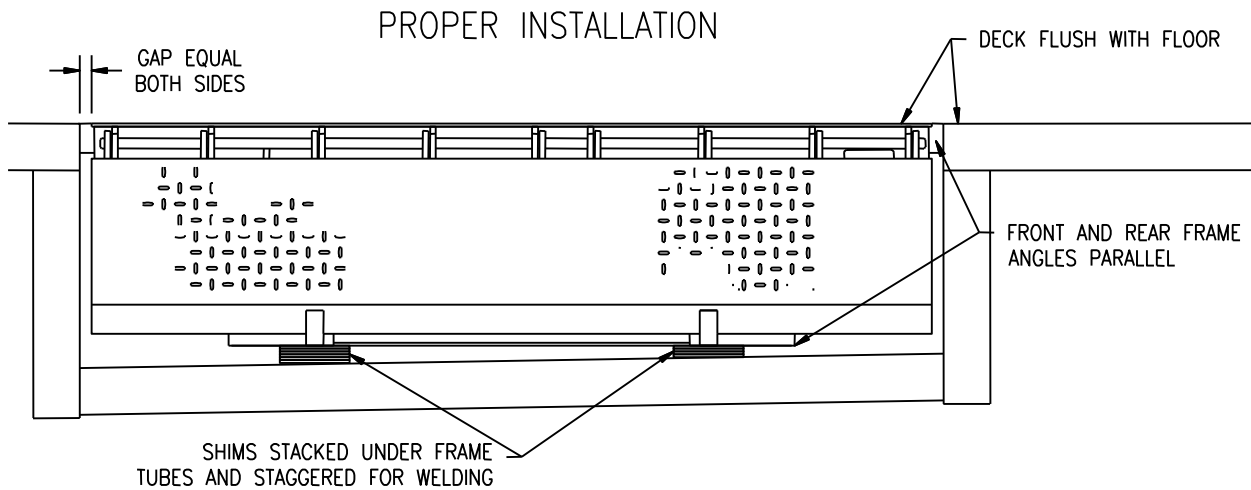
3. Attach lifting chains to dock leveler. All chains must be minimum grade 80 and chain hooks have a minimum 1-ton capacity. An endless master link should also be used to assist in the levelling of the dock leveler. Three chains must be used; one hooked at the center of the hinge angle, two hooked on the front deck plate outside the second set of lip lugs from the sides of the deck. Attach the chains so that the master link is approximately 12" forward of the center of the deck, and centered along the width.



4. Lift the deck approximately 6" and check that it is level. Adjust chains accordingly if required. Do not attempt to install the dock if it is not level. Damage to the unit or personal injury may result.
5. Remove straps holding electrical cable and attach plug (if required). Temporarily strap cable to rear frame upright so that it can be easily reached for connection to pit outlet.
6. Place dock into pit. Leave room between the dock leveler and the rear pit wall so that the electrical connections can be made.
7. Connect dock leveler to the source connection in the pit area. Ensure that when the dock leveler is pushed into place that the dock does not crush the cord.

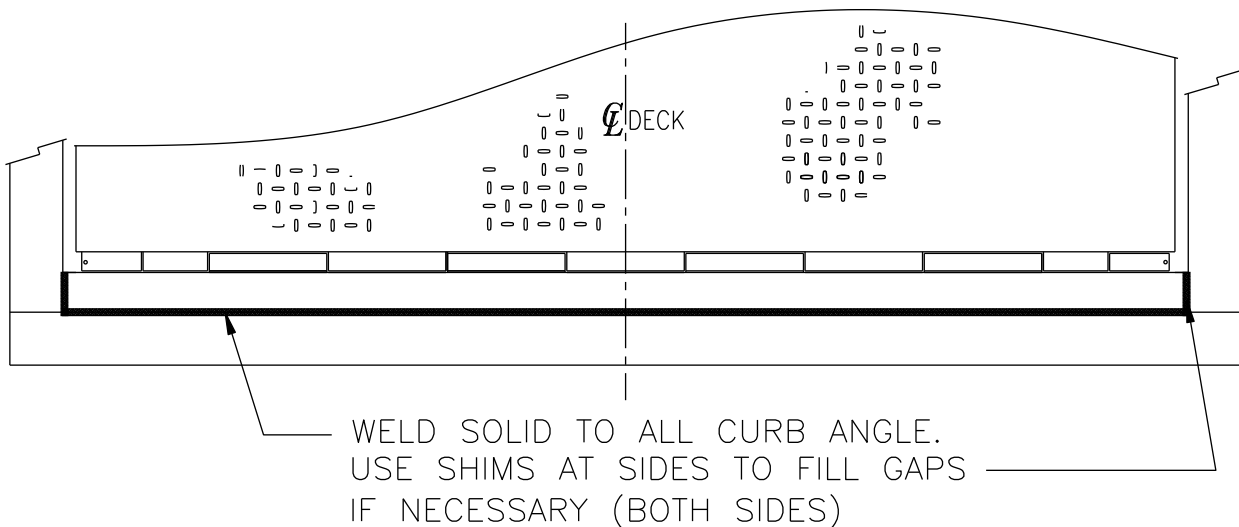


8. Move the dock so that the hinge angle is flush and tight to pit angle and is centered between side pit curb angles.
9. Remove the transport cables and raise the dock leveler. Install the maintenance supports (see Maintenance Stand section of this manual) and check the position of the shims. Re-position if necessary. There should be no more than 1/16" in height difference at any point between the pit curb angle and the dock leveler. Tack-weld the hinge angle to the pit curb angle.
10. Remove the maintenance supports and lower the dock to its stored position. Check that the dock is still squarely positioned and level with the pit sides. Add or remove shims as necessary.



11. Raise the deck and re-install the maintenance support. Weld the shims solidly together, and weld the shims to both the frame and the front angle where possible.

12. Weld the rear hinge angle solid to the rear and side pit curb angles as shown below.



13. Match drill holes in the cylinder mounting angle into the pit concrete. Use supplied wedge type anchors (supplied by Nordock) to secure. (6 places)

NOTE: Anchor installation

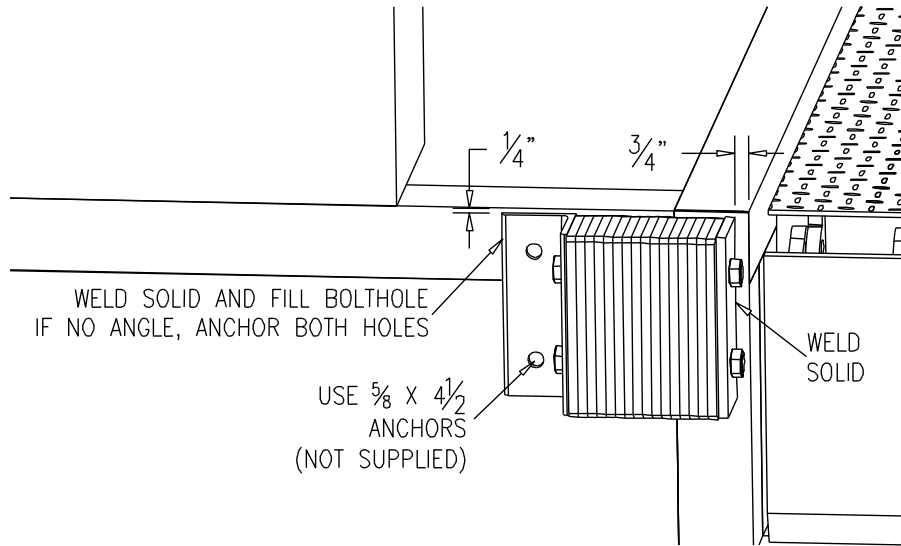
- **Must be installed to maximum depth**
- **Holes evacuated prior to anchor install**
- **Torque: 5/8" 80 ft-lb, 3/4" 110 ft-lb, 1" 300 ft-lb**

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

Note: It is the installer's responsibility to complete any paint touch-up and dock area clean up that may be required.

Bumper Install

Bumpers should be installed as follows to prevent damage from trucks backing into the dock leveler.



Install bumper so that it is 1/4" below floor level for proper securing, and 3/4" away from the edge of the pit so that the heads of the bolts will clear the lip as it passes the bumper.

Weld the bumper wherever possible to the pit curb angle, and use 5/8" x 4-1/2" wedge anchors in the angle holes.

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.

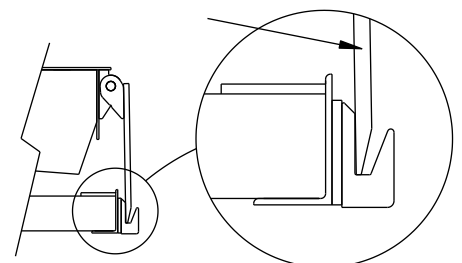
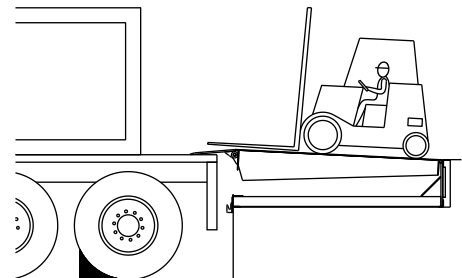
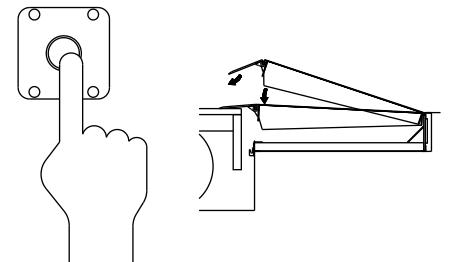
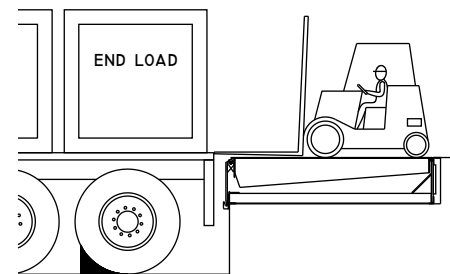
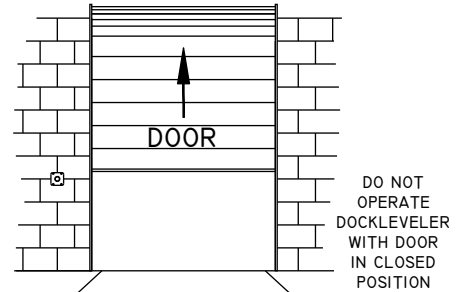
Note: If the truck to be serviced is further below dock then the effective dock leveler service range, please see the additional instructions for Below Dock Control.

Standard (Single Pushbutton) Control Panel

1. Open the door and wait until the truck is in position against the dock bumpers.
2. Tell the truck driver “**Your truck must stay at the dock**”.
3. Confirm placement of wheel chock or vehicle restraint.
4. Open overhead door fully.
5. Remove “end load” with the ramp in the stored position if there is not enough room at the rear of the trailer to fit the dock leveler lip.
6. To extend the dock leveler lip into the truck, press and hold the control station button until the deck reaches its maximum height. Release the button and the lip will extend as the deck lowers.

NEVER STAND OR DRIVE ON MOVING RAMP.

7. Proceed with loading or unloading.
8. To return the dock leveler to the stored position when loading or unloading is complete, or to load end loads:
 - a. Press and hold the control station button to raise the dock. Release the button once the lip retracts clear of the truck bed. **The dock will now lower to the stored position.**
 - b. Check that the dock is even with floor level and that the lip is properly stored in the lip keepers. See Figure 4.
9. Confirm removal of wheel chock or vehicle restraint.
10. Tell truck driver “**Your truck may now leave the dock**”.

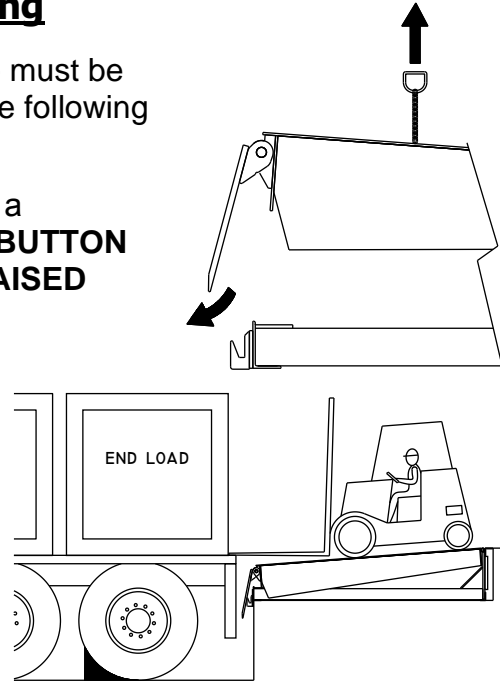


IN STORED POSITION

Below Dock Control (BDC) End Loading

If end loading is required below dock level, the ramp must be lowered without fully extending the lip. Substitute the following steps in for step 5 of the previous list.

1. Press the “RAISE” button until the ramp reaches a minimum of 4” above the floor. **RELEASE THE BUTTON BEFORE THE RAMP REACHES ITS FULLY RAISED POSITION.**
2. Release the “RAISE” button, pull and hold the BDC chain located in the pocket at the end of the deck as the leveler lowers below level and rest on the frame stops. Do not walk or drive on the dock until it has completely stopped lowering. Release the BDC chain.
3. Load or unload the item to make clearance for lip extension.



Troubleshooting



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: The following section should be used as a reference guide only. **Only** qualified personnel should perform any adjustments or repairs. Contact Nordock Inc. or your local Nordock representative for service.

Motor does not operate when button is pressed

1. Check that the main power source is turned on.
2. Check that all installation connections are made.
3. Ensure motor voltage matches the incoming service.
4. Ensure pushbutton is functioning.

Motor operates but Dock Leveler does not raise

1. Check motor rotation.
2. Make sure dock leveler is not loaded.
3. Check cylinder and pump connection, ensuring there are no leaks.
4. Check for any damaged or broken components.

Dock leveler fails to lower



WARNING

DO NOT ENTER THE AREA UNDER THE DOCK LEVELER IF IT FAILS TO LOWER

1. Check that there are no obstructions beneath the dock.
2. Check that the lip extension mechanism is not jammed in the extended position.
3. Check that there are no bent or broken components.

Note: DO NOT FORCE THE DOCK LEVELER DOWN BY ANY MEANS FOR ANY REASON.

Lip fails to extend, lock or retract



WARNING

DO NOT ENTER THE AREA UNDER THE DOCK LEVELER OR LIP IF THE LIP FAILS TO EXTEND OR FAILS TO UNLOCK.

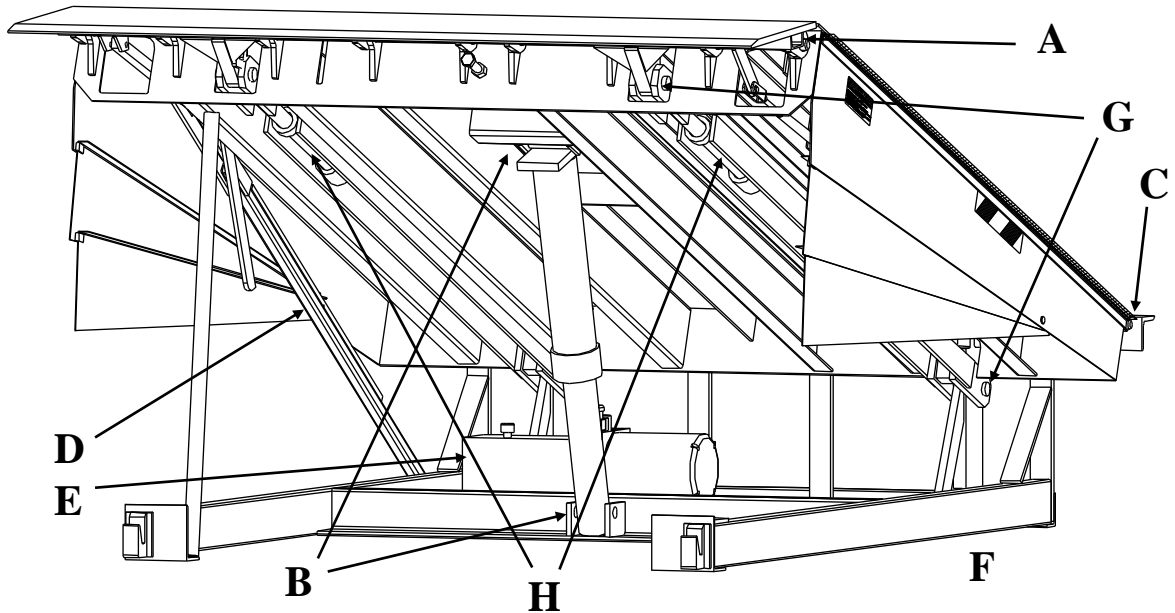
1. For the lip to extend, the deck must be raised until it hits the stop on the frame **before** the “RAISE” button is released.
If the deck does not reach full elevation, the lip extend mechanism will not engage and the lip will not extend;
 - i. Check that there is not a hydraulic leak.
 - ii. Check that there is not something mechanical obstructing the deck.
2. Once the deck has reached its full elevation the lip extend mechanism will engage and the “RAISE” button should be released.
If the lip does not extend as the deck lowers;
 - i. Check that the roller in the front lip pushbar turns freely on the axle and that the axle turns freely in the brackets.
 - ii. Check that the rear pushbar fork notches are square, sharp and parallel with each other.
 - iii. With the deck fully raised, check that there is enough tension on the rear pushbar by the spring to hold the roller against the roller block when the deck begins to lower. (Note: The spring becomes slack after the lip begins to extend.)
3. As the dock lowers the lip will extend and lock in position.
If the lip falls back in and/or fails to lock;
 - i. Check items **i & ii** from **step 2**.
 - ii. Check that the front of the roller block is square to the deck and free of burrs and debris.
 - iii. Check that the kick-out lever block rest flat against the deck.
4. When the roller has slipped in front of the roller block, the lip locks in the extended position. The lip mechanism will release once a truck bed has supported the lip or once the deck has fully lowered and the frame has activated the kick-out lever.
If the lip fails to release:
 - i. Check that the front pushbar pivots freely in the brackets on the lip
 - ii. Check that the kick-out bar engages with the landing pad on the frame

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 light oil	None	Remove debris as required
-B- Cylinder Pins	Every 90 Days Using Grease	None	Remove debris as required
- C - Rear Hinge	Every 90 Days Using light oil	None	Remove debris as required
- D - Lip Extend Mechanism	Every 90 Days Using light oil	None	Remove debris as required
-E- Hydraulic Oil Reservoir	Check level every 90 days Change oil yearly	None	Remove and clean strainer and magnet yearly
-F - Pit Area	None	None	Every 90 days or as required to remove debris
-G – Tension Rod Pins	Every 90 days Using light oil	None	Remove debris as required
- H – Tension Rods	Every 90 Days Using Grease	None	Remove debris as required

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.:

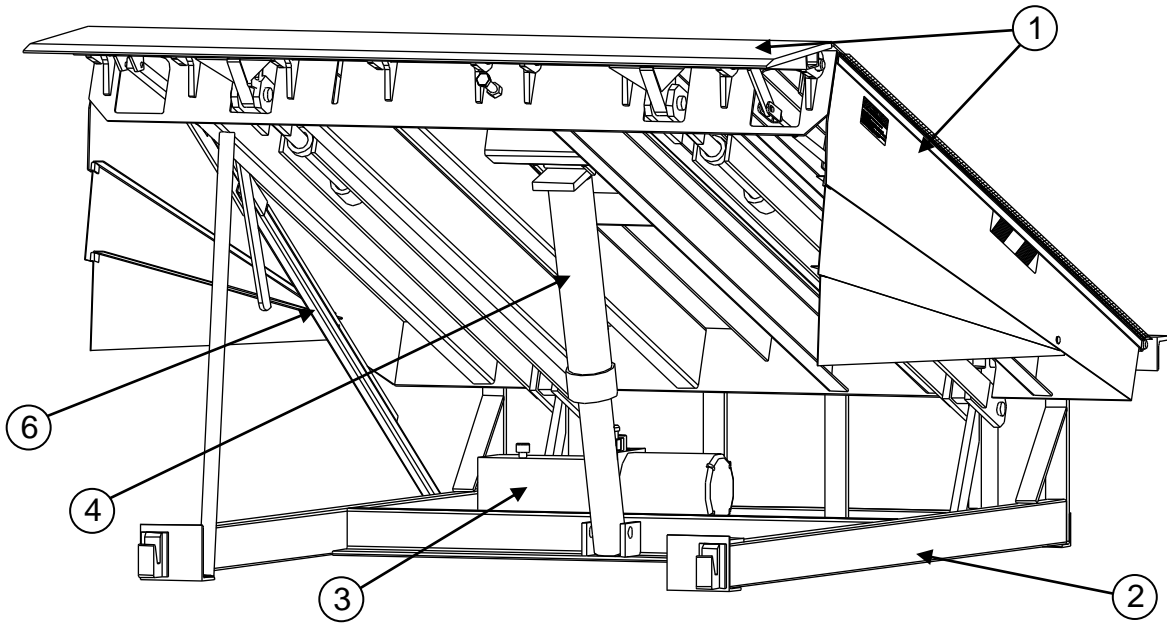
CHEVRON DURA-LITH EP-2

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.

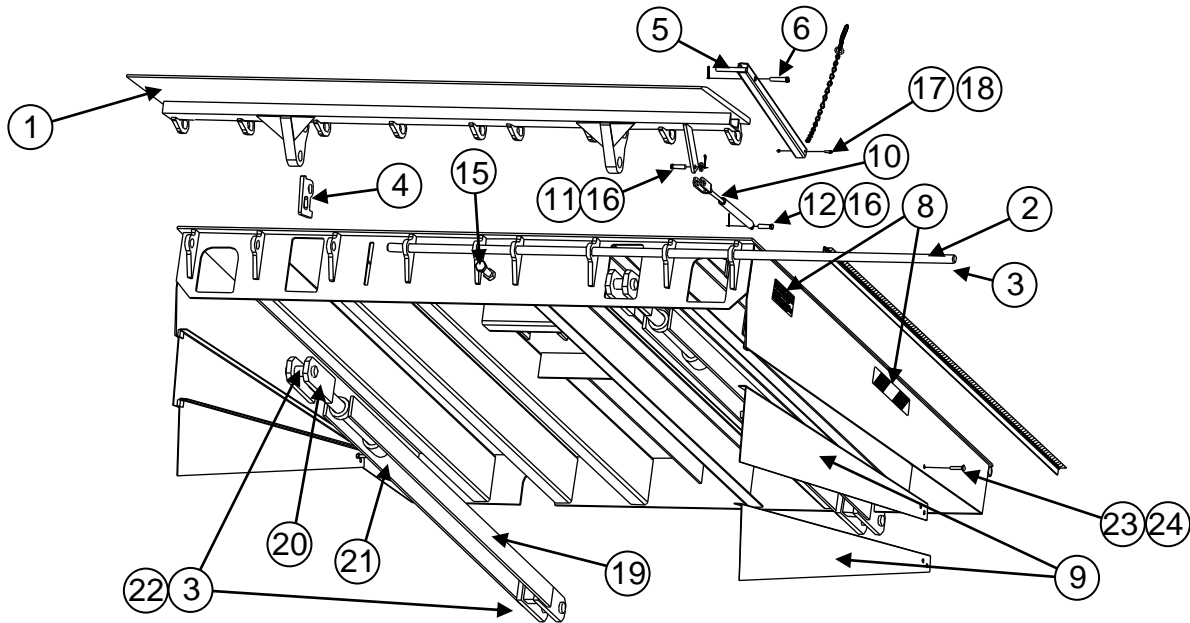
Parts and Service Tables



Item Number/ Section	Description
1	Deck and Lip Assemblies
2	Frame Assembly
3	Power Pack and Related Hydraulic Components
4	Hydraulic Lift Cylinder
5	Hydraulic Lines and Fittings (not shown)
6	Lip Extension Mechanism
7	Optional Equipment (not shown)
8	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 and Lip Assembly

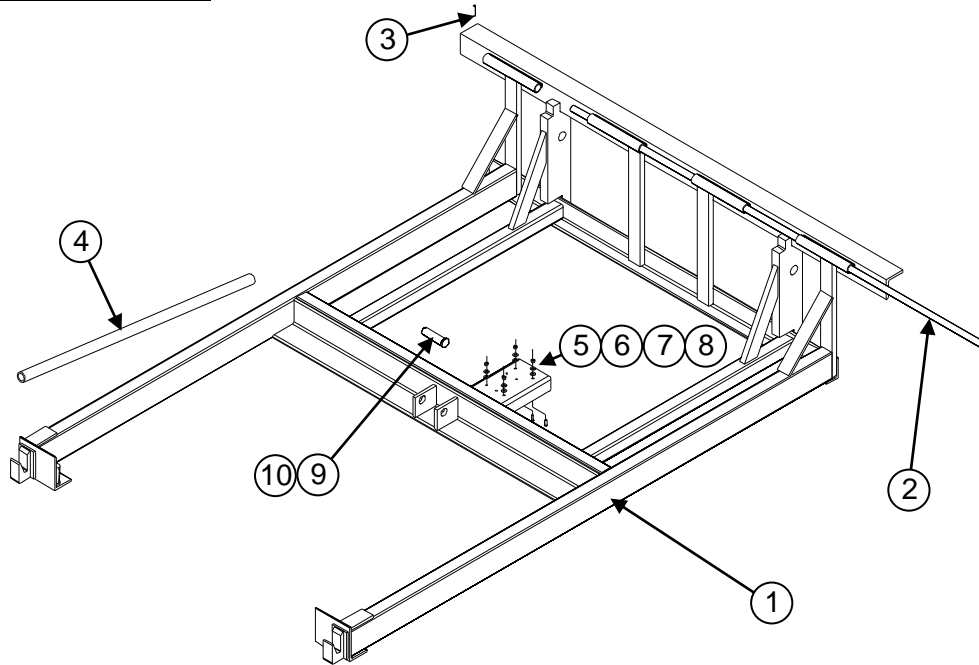


Item	Qty.	Description / Model						Note	
1	1	Lip Weldment		P/N					
		Capacity	Length	6'	6.5'	7'	7'T	70"	
		20-25K	16"	42-2819	42-2828	42-2837	42-2846	42-2810	
			18"	42-2820	42-2829	42-2838	42-2847	42-2811	
			20"	42-2821	42-2830	42-2839	42-2848	42-2812	
		30-35K	16"	42-2822	42-2831	42-2840	42-2849	42-2813	
			18"	42-2823	42-2832	42-2841	42-2850	42-2814	
			20"	42-2824	42-2833	42-2842	42-2851	42-2815	
		40K	16"	42-3164	42-3167	42-3170	42-3173	42-3161	
			18"	42-3165	42-3168	42-3171	42-3174	42-3162	
			20"	42-3166	42-3169	42-3172	42-3175	42-3163	
		45-50K	16"	42-2825	42-2834	42-2843	42-2852	42-2816	
18"	42-2826		42-2835	42-2844	42-2853	42-2817			
20"	42-2827		42-2836	42-2845	42-2854	42-2818			
2	1	Lip Hinge Rod	43-1333	43-1334	43-1177	43-1177			

Item	Qty.	Description / Model	P/N	Note		
3	10	Cotter Pin, 1/4" x 1-3/4" Lg.	13-0992			
4	1	Lip Safety Lock Lug	43-1165			
5	1	Below Dock Control Lever – Handle to Lip	42-2016			
6	1	Clevis Pin – Lip Extend, 1/2" x 2-1/4" Lg.	13-0288			
7	1	Below Dock Control Chain – Deck to Handle (15")	42-0299			
8	1	Dock leveler Decal Kit	42-0392	1		
9	1	Telescoping Side Skirt Kit	6' Long Docks	42-0393		
			8' Long Docks	42-0394		
			10' Long Docks	42-0395		
10	1	Gas Spring – Lip Extend c/w Clevis End	42-1568			
11	1	Clevis Pin – Gas Spring to Lip 1/2" x 1-1/4" Lg.	13-2111			
12	1	Clevis Pin – Gas Spring to Deck 3/8" x 1-5/8" Lg.	13-0500			
13	3	Cotter Pin – 1/8" x 1" Lg.	13-0171			
14	2	Washer, 3/8" SAE Flat	13-0203			
15	1	Lip Stop Bolt	13-0302			
16	1	Washer, 1/2", plated	13-0267			
17	1	Screw, 10-24 x 1" Lg., plated	13-0841			
18	1	Nut, Nylock, 10-24 plated	13-1858			
19	2	Tension Rod Sleeve	6'	20-35K 40-50K	42-2807 42-2804	
			8'	20-35K 40-50K	42-2803 42-2801	
			10'	20-35K 40-50K	42-2808 42-2806	
20	2	Tension Rod Threaded	20-35K 40-50K	42-2802 42-2800		
21	2	Nut	20-35K 40-50K	13-2822 42-3210		
22	4	Tension Rod Pivot Pin	20-35K 40-50K	43-1162 43-1152		
23	2	Bolt, 3/8-16 x 1-1/4" Lg., Carriage Head		13-0122		
24	2	Nut, 3/8-16, Grade 5, Nylock		13-0707		

1 – For correct decal placement, see safety section.

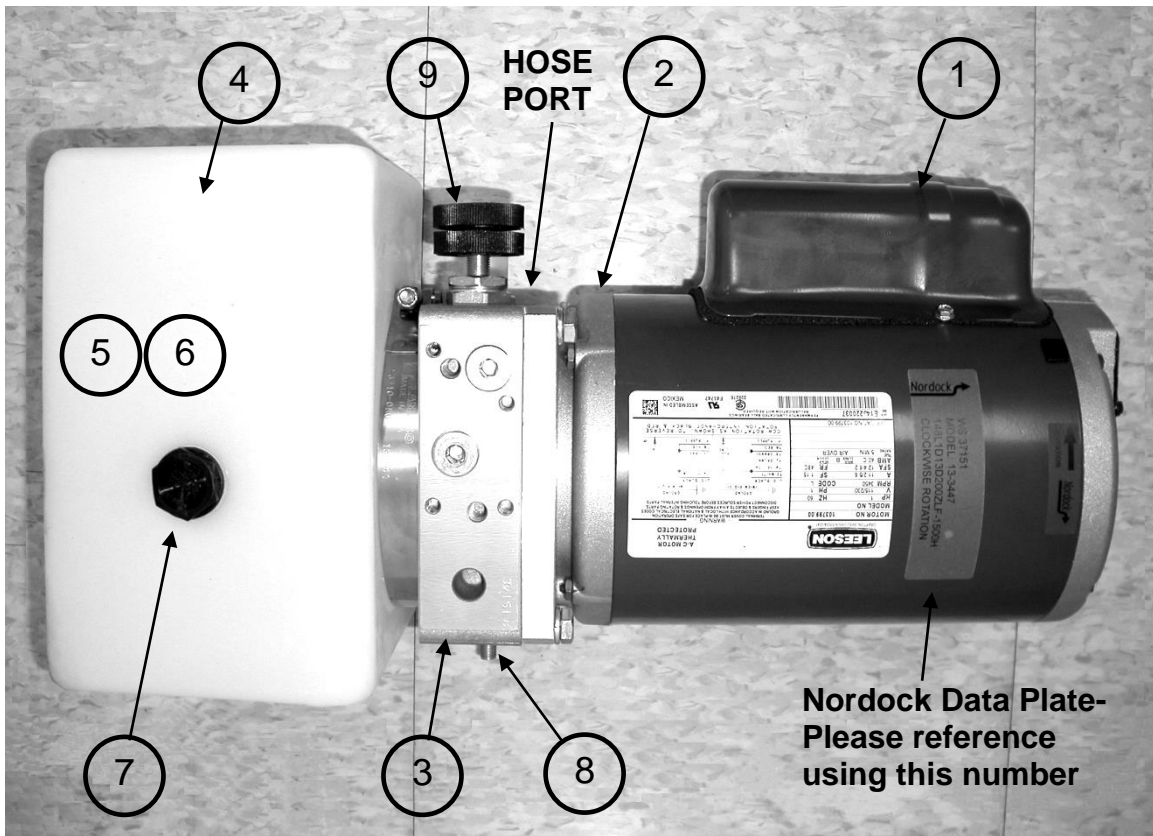
Section 2 – Frame



Item	Qty.	Description / Model	P/N	Note
1	1	Frame Weldment	C/F	
2	1	Rear Hinge Rod	6' Wide Docks 6.5' Wide Docks 7' Wide Docks 70" Wide Docks	43-0154 43-0155 43-0156 43-0462
3	2	1/4" x 2" Roll Pin	13-0555	
4	1	Maintenance / Support Stand	43-0262	
5	4	Bolt, 1/4" - 20 UNC x 1, Plated	13-0623	
6	4	Nut, 1/4" - 20 UNC Plated	13-0334	
7	4	Washer, 1/4" SAE Flat	13-0272	
8	4	Washer, 1/4" Lock	13-0335	
9	1	Lower Cylinder Pin	43-0312	
10	4	Cotter Pin, 1/4" x 1-3/4" Lg.	13-0992	
11	1	Upper Cylinder Pin (not shown)	43-0310	

C/F – Consult Factory.

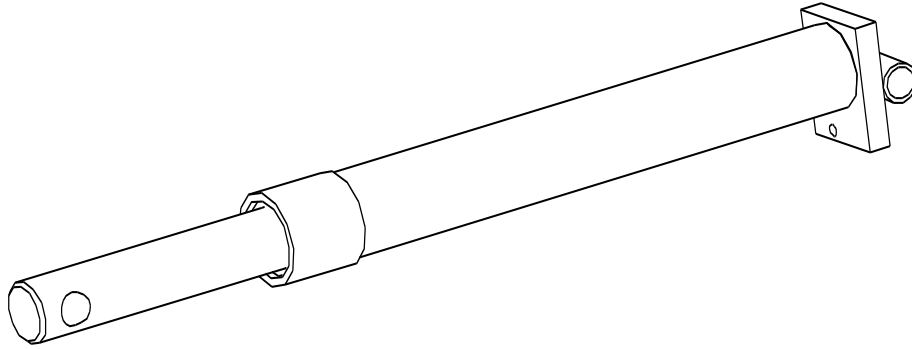
Section 3 – Power Pack and Related Hydraulic Components



Item	Qty.	Description / Model		P/N	Note
		Complete Power Pack Assembly (Parts 1-9 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			
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			

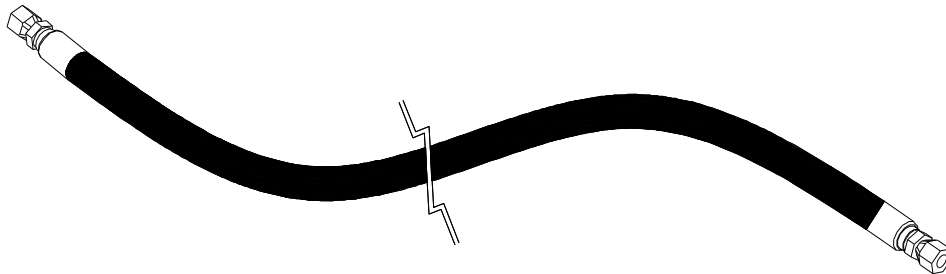
Note 1 – Consult factory when ordering individual power pack components.

Section 4 – Hydraulic Cylinders



Ram Dia.	Length	Description / Model	P/N	Note
2"	25" Closed	Seal Kit 17" Stroke, Deck Lift Cylinder	C3-0020 C1-0011	

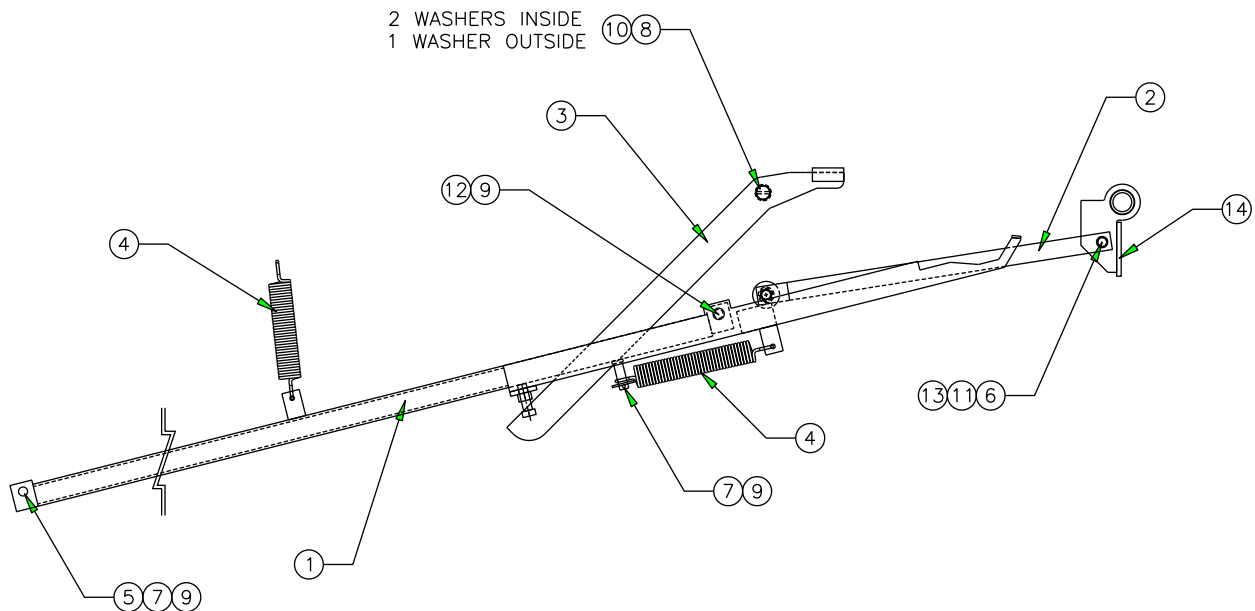
Section 5 – Hydraulic Lines and Fittings



Dock length	Dia.	Description / Model	P/N	Note
6'	3/8"	Deck Lift, x 72" long	42-0383	
8'	3/8"	Deck Lift, x 75" long	42-0384	
10'	3/8"	Deck Lift, x 87" long	42-0385	
Optional Emergency Stop:				
All	3/8"	Hose, Power Unit to Valve, x 24" long	42-1352	
All	3/8"	Hose, Deck Lift, x 72" long	42-0383	

Note: All hoses are #6 with 2 straight FJIC ends

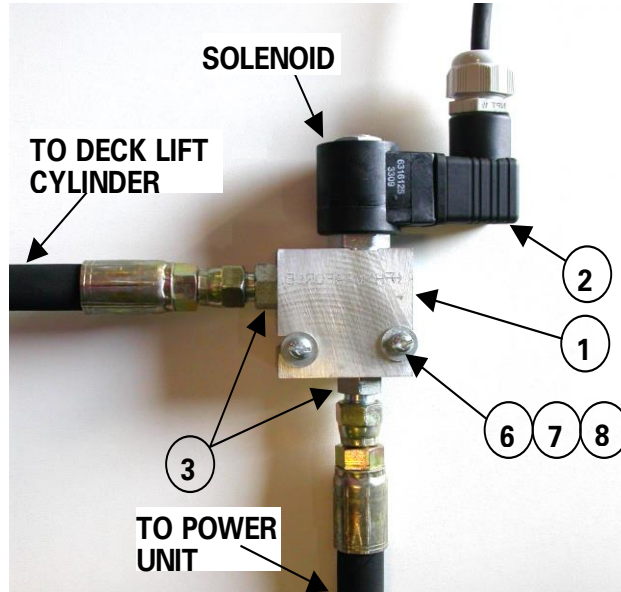
Section 6 – Lip Actuator Assembly



Item	Qty.	Description / Model	P/N	Note
1	1	Rear Push-bar Assembly (includes 4, 7, 9, 12)	6' Long Dock, 19" Frame 42-2245 6' Long Dock, 23" Frame 42-2218 8' Long Dock, 19" Frame 42-2219 8' Long Dock, 23" Frame 42-2220 10' Long Dock, 19" Frame 42-2221 10' Long Dock, 23" Frame 42-2222	
2	1	Front Push-bar Assembly (includes 11)	6' 42-3825 8' 42-3211	
3	1	Kick-out Lever	42-2182	
4	2	Spring	13-1955	
5	1	Clevis Pin – 1/2" x 2-1/2", Plated	13-1099	
6	1	Shoulder Bolt – 1/2" x 1-3/4"	13-1801	
7	2	Flat Washer, 1/2", Plated	13-0267	
8	3	Flat Washer, 3/4", Plated	13-0649	
9	3	Cotter Pin, 1/8" x 1" Lg.	13-0171	
10	1	Cotter Pin, 1/8" x 1-1/2" Lg.	13-0397	
11	1	Sleeve Bushing, 1/2" ID x 5/8" OD x 1" Lg.	13-0434	
12	1	Clevis Pin, 1/2" x 2-1/4", Plated	13-0288	
13	1	Hex Nut, 3/8 – 16, Nylock	13-0707	
14	1	Lip Cam	42-3805	
		Assembly (includes items 1-12; lip cam and cam spring selected separately)	6' Long Dock, 19" Frame 42-2249 6' Long Dock, 23" Frame 42-2250 8' Long Dock, 19" Frame 42-2257 8' Long Dock, 23" Frame 42-2258 10' Long Dock, 19" Frame 42-2259 10' Long Dock, 23" Frame 42-2260	

Section 7 – Optional Equipment

Emergency Stop Valve:



Item	Qty.	Description / Location	P/N	Note	
1	1	Solenoid Valve / Rear Frame Brace	Complete Assembly Solenoid only	13-0826 13-0595	
2	1	Receptacle, solenoid valve, Hershman		13-2371	
3	2	Hydraulic Fitting, Str. #6 JICM / 9/16 M ORB		13-1309	
4	1	Pushbutton / Control Panel, Lip Extend (not shown)		13-0317	
5	1	Mushroom Pushbutton, / Control Panel, Emergency Stop Button (not shown)		13-0318	
6	2	Screw, #10-24 x 1-1/2" Lg., plated, combo head		13-0274	
7	2	Washer, Lock, #10, plated		13-0948	
8	2	Washer, Flat, #10, plated		13-1956	

Note: See Section 5 for the hydraulic lines required for the Lip Extend/Emergency Stop valve.

Other Options:

Option	Qty.	Description / Location	P/N	Note
Auto Return	1	Limit Switch / Located on Frame Rail	13-0298	
	1	Timer / Control Panel	13-0156	
	1	On / Off Selector / Control Panel	13-0316	
Bumpers	2	Standard Bumper, AF410-11	61-0001	1
Weather Seals	6'	Brush Seal and Mounting Extrusion Kit	61-0025	
	8'	Brush Seal and Mounting Extrusion Kit	61-0024	
	10'	Brush Seal and Mounting Extrusion Kit, (3 pc)	61-0037	
Fall Safe	1	Velocity Fuse / Deck Lift Cylinder	13-0306	
Remote Mount	1	Wall Mount Bracket	43-0428	
Power Pack	4	Bolt, Hex, 1/4" – 20 UNC x 1" Lg.	13-0623	
	4	Nut, 1/4" – 20 UNC, Plated	13-0334	
	4	Washer, 1/4" SAE Flat	13-0272	
	4	Washer, 1/4" Lock	13-0335	

Note 1 – For custom bumper sizes and applications, please contact your nearest Nordock representative or call 1-866-885-4276.

Section 8 – Control Panels

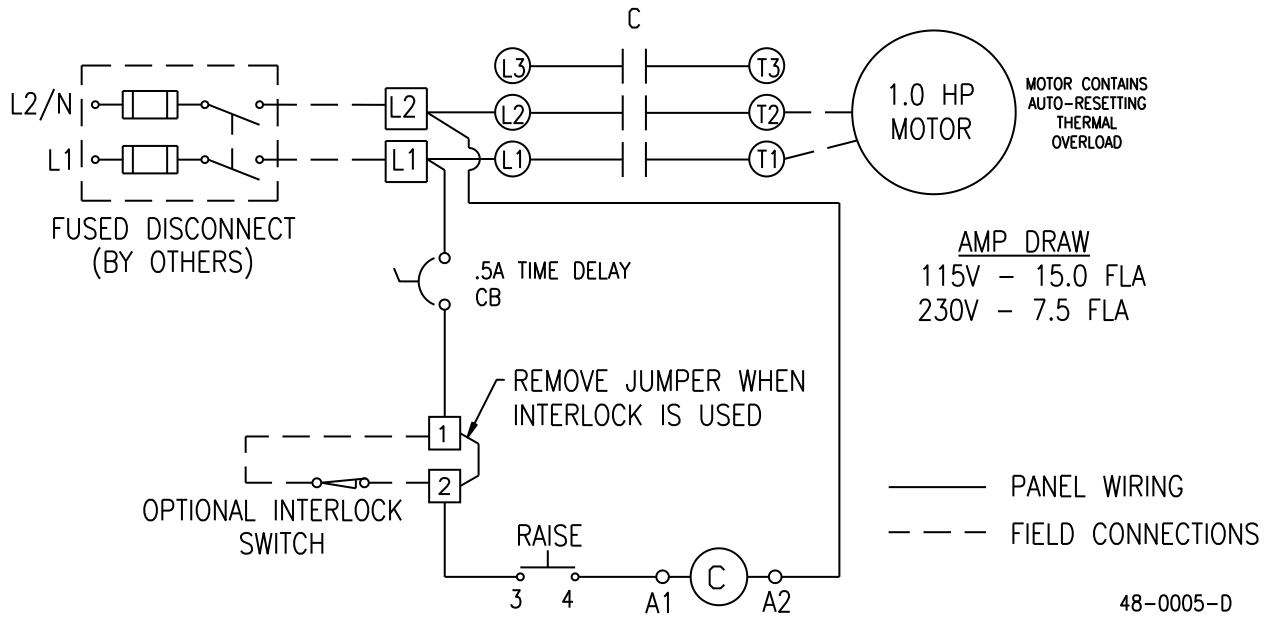
Volts/Ph	Description / Style	P/N	Note
115/1/60	Standard Panel / Single Pushbutton	48-0027	
208/230/1/60	Standard Panel / Single Pushbutton	48-0012	
208/230/3/60	Standard Panel / Single Pushbutton	48-0024	
460/3/60	Standard Panel / Single Pushbutton	48-0020	
575/3/60	Standard Panel / Single Pushbutton	48-0023	

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.

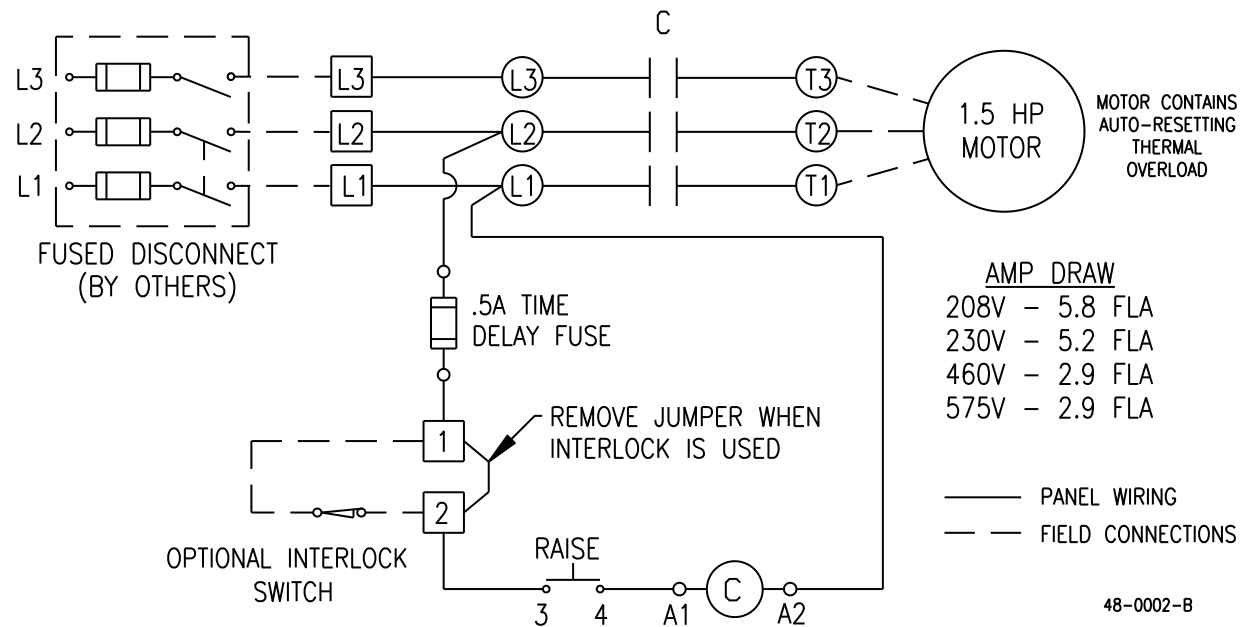
Single Phase 1 Button 110v-220v – Starter Only

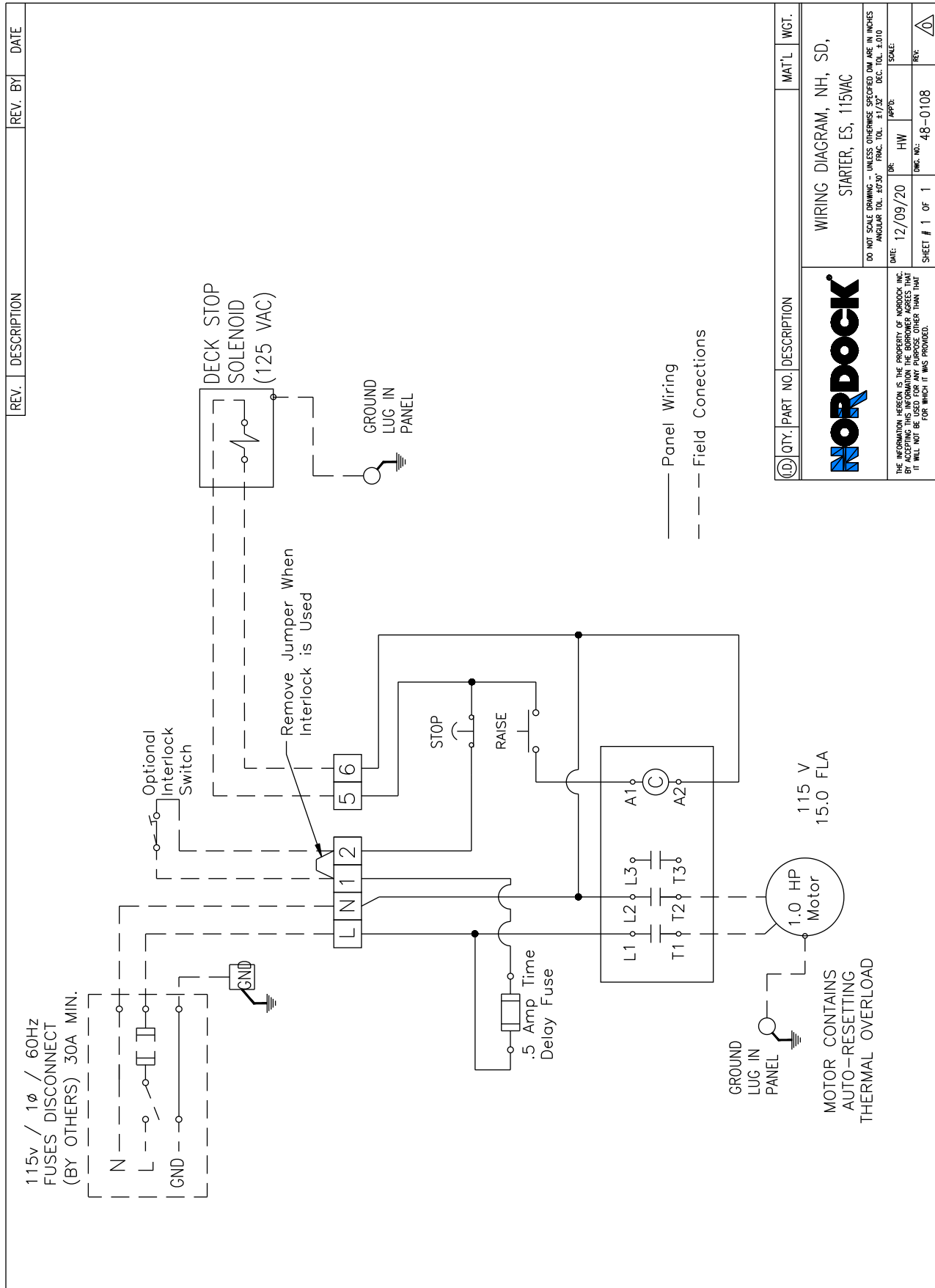
48-0005-D



3 Phase 1 Button 208v-575v – Starter Only

48-0002-B





(D) QTY.	PART NO.	DESCRIPTION	MAT'L	WGT.

NORDOCK		WIRING DIAGRAM, NH, SD, STARTER, ES, 115VAC	
DO NOT SCALE DRAWING - UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES ANGULAR TOL. $\pm 1/32"$ DEC. TOL. ± 0.010			
DATE:	12/09/20	OR:	HW
SCALE:		APP'D:	
SHEET #	1	OF	1
DWG. NO.:	48-0108		
REV.:			

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