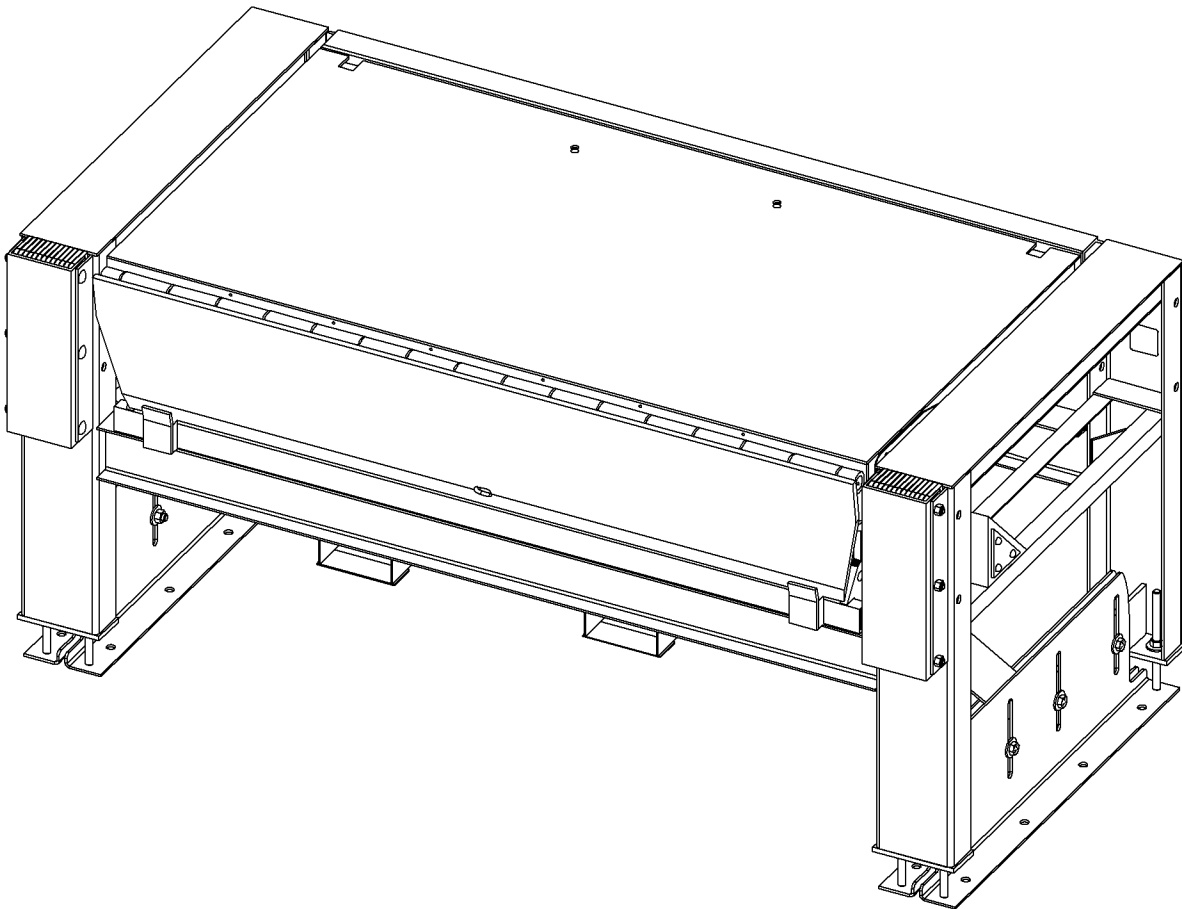




MODULAR DOCK LEVELER, 4x7 OWNER'S MANUAL



⚠ WARNING

Do not install, operate, or service this product unless you have read and understand the Safety Practices, Warnings, Installation and Operating Instructions contained in this User's Manual. Failure to do so could result in death or serious injury.

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INTRODUCTION

The Modular Dock Leveler is designed to safely bridge the gap between building and trailer bed during the loading and unloading process. This dock leveler is hydraulically operated for ease of use and operator safety. Its adjustable frame allows for use with various dock heights and its ± 6 " dock service range allows for safe travels between building and many different trailer heights.

WARRANTY

See Back of Owner's Manual.

IMPORTANT

Read and understand the content of this manual prior to installation or operation of this equipment.

DIMENSIONS & CAPACITY

Model	Length	Width	Capacity	Weight
MDLR4716115V1-XX*	101.75 in.	48 in.	16,000 lbs (7250 kg)	2300 lbs (1045 kg)
MDLR4732115V1-XX*	101.75 in.	48 in.	32,000 lbs (14,500 kg)	2600 lbs (1800 kg)

* Represents the nominal height of the leveler.



WARNING

NEVER exceed rated capacity

SAFETY WARNING DEFINITIONS



DANGER

DANGER statements indicate an imminently hazardous situation. Failure to follow the listed instructions will result in serious injury or death!



CAUTION

CAUTION statements indicate a potentially hazardous situation. Failure to follow the listed instructions may result in minor to moderate injury or property damage!



WARNING

WARNING statements indicate a potentially hazardous situation. Failure to follow the listed instructions may result in serious injury or death!



NOTICE

NOTICE statements are used to indicate procedures that must be followed to avoid equipment or property damage.

OWNER RESPONSIBILITY

1. The owner should recognize the inherent danger of the interface between dock and transport vehicle. The owner should, therefore, train and instruct operators in the safe use of dock equipment in accordance with the information provided below. The manufacturer shall provide to the initial purchaser, and make the following information readily available to the owner:
 - Installation instructions
 - Recommended initial and periodic inspections procedures.
 - Maintenance procedures
 - Operating instructions
 - Descriptions/specifications for replaceable/repairable parts

It shall be the responsibility of the owner to verify that the material listed in this section has been received and that it is made available for the instruction and training of personnel entrusted with the use or maintenance of the dock equipment.
2. When a transport vehicle is parked at a loading dock, it is important that the vehicle is relatively perpendicular to the dock face and in close contact with at least one of the dock bumpers
3. Nameplates, cautions, instructions, and posted warnings shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.
4. The manufacturer's recommended periodic maintenance and inspection procedures in effect at date of shipment shall be followed, and written records of the performance of these procedures should be kept.
5. Dock equipment that is structurally damaged shall be removed from service, inspected by a manufacturer's authorized representative, and repaired as needed before being placed back in service.
6. The manufacturer shall make available replacement nameplates, caution/instruction labels, and operating/maintenance manuals upon request of the owner. The owner shall see that all nameplates, caution/instruction markings or labels are in place and legible, and that the appropriate operating/maintenance manuals are provided to users.
7. Modifications or alterations of dock equipment shall be made only with written permission of the original manufacturer. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the application of the dock equipment.
8. When industrial trucks are driven on and off transport vehicles during the loading and unloading process, the brakes on the transport vehicle shall be applied and wheel chocks or a positive restraining device shall be engaged.

PRODUCT SAFETY WARNINGS

DANGER

ALWAYS communicate with the transport vehicle driver to ensure an understanding of the loading or unloading procedure.

CAUTION

Follow the maintenance schedule to ensure that there are no broken parts that might cause injury to workers or damage to the equipment.

WARNING

NEVER perform maintenance without barricading the work area to warn that work is being done.

NEVER exceed the rated load capacity.

If a malfunction occurs contact Dockzilla Co. or local representative and discontinue use of ramp until the issue has been resolved.

FEATURES

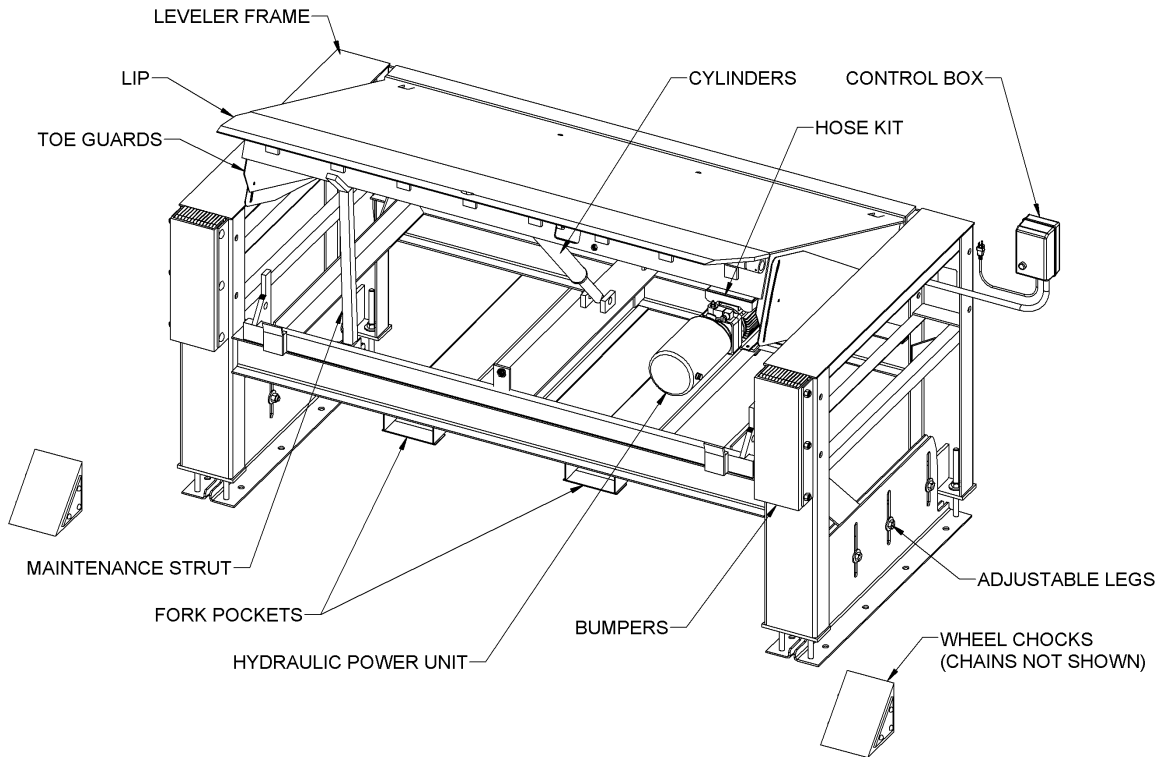


Figure 1: Modular Dock Leveler Features

INSTALLATION INSTRUCTIONS

Installation instructions are provided to installers at time of installation and can be requested from Dockzilla at any time. Please reach out to service@dockzilla.com to request installation instructions. In your email, please include the serial & model number of your leveler and the width of your frame. This will help the service department to provide the correct instructions for your set-up. The serial number can be found on the inside of the leveler leg as shown below in Figure 2.

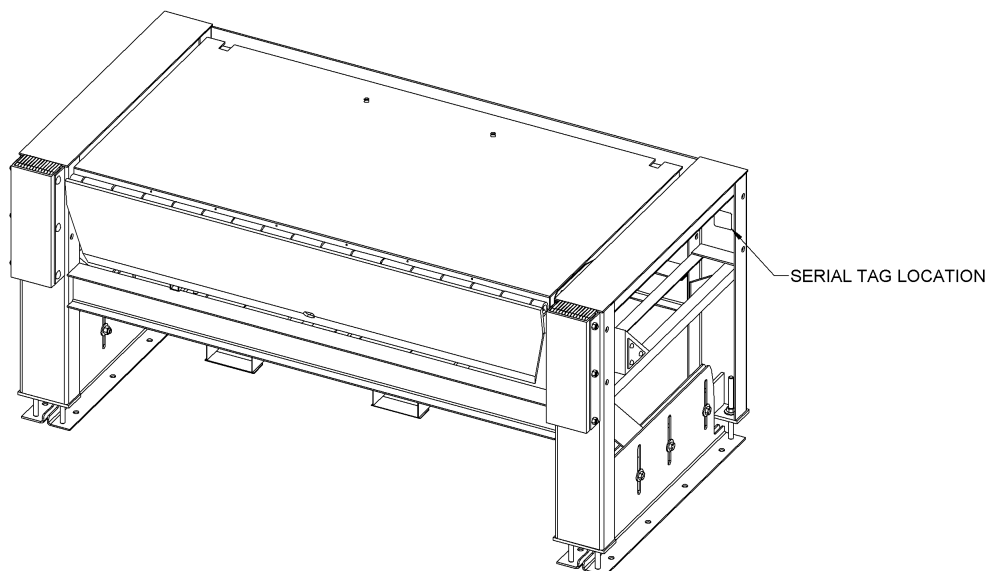


Figure 2: Serial Tag Location

OPERATION INSTRUCTION

⚠ WARNING

NEVER operate with anyone standing on or in front of the dock leveler.

DO NOT operate the leveler until the truck/trailer is parked against the bumpers and the truck/trailer has been secured.

NEVER enter a truck/trailer until its brakes are set, air has been dumped from the air ride suspension (if applicable), and the truck/trailer is securely held in place by a vehicle restraint or wheel chocks per OSHA regulations.

DO NOT drive on dock leveler or lip until it is fully extended and supported by the vehicle bed.

NEVER release the vehicle restraint or remove the wheel chocks until loading/unloading is complete, the leveler lip has been stored.

DEPLOYING LEVELER

1. Restrain the vehicle per OSHA standards with wheel chocks or a mechanical restraint before loading or unloading the vehicle (Figure 4).
2. Press the UP button until the leveler is fully raised and the lip is fully extended (Figure 4).
3. When the lip is fully extended, release the UP button to lower the leveler onto the truck bed (Figure 5). Verify the lip is in full contact with the truck bed before loading/unloading.

⚠ WARNING

If the lip is on the edge of the truck/trailer and the truck drives away, the leveler will move to its lowest position and the lip will begin to lower.

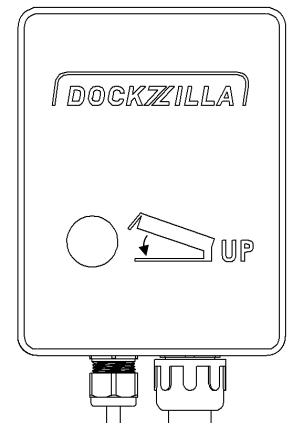


Figure 3: Control Box

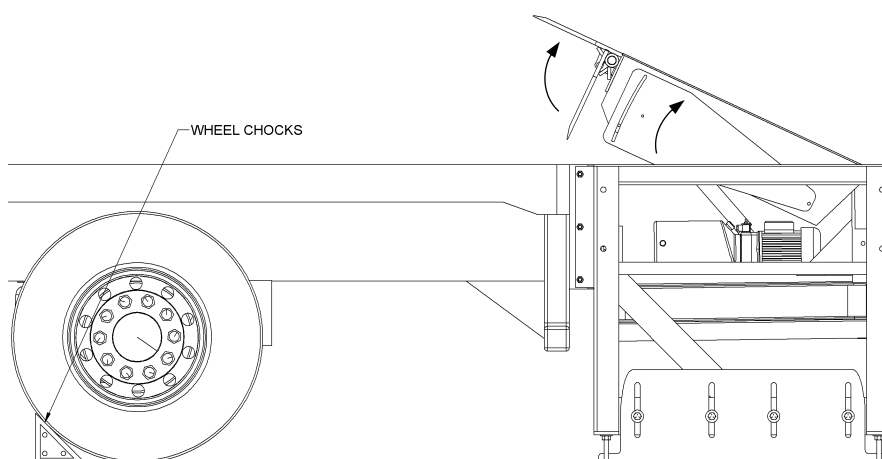


Figure 4: Activating Leveler

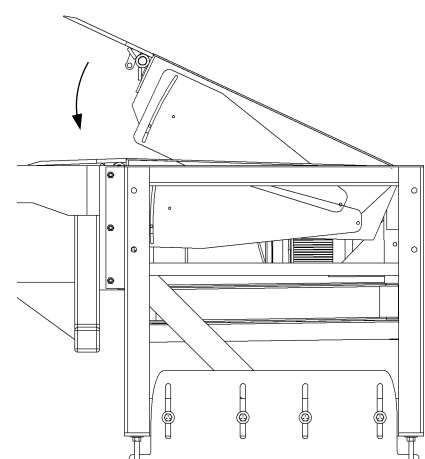


Figure 5: Lowering Leveler onto Bed

STORING LEVELER

1. Press the UP button until the lip is fully pendent (Figure 6).
 - a. If the leveler is fully raised and the lip starts to extend, release the UP button, and let the leveler lower. Slowly pulse the UP button until the lip is fully pendent.
2. Release the UP button. The leveler will lower to its stored position and rest in the lip keepers (Figure 7).

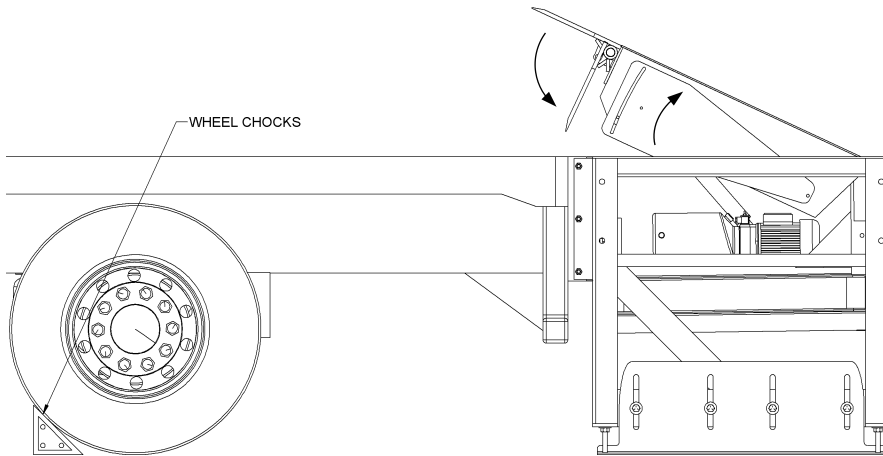


Figure 6: Raising Leveler from Trailer Bed

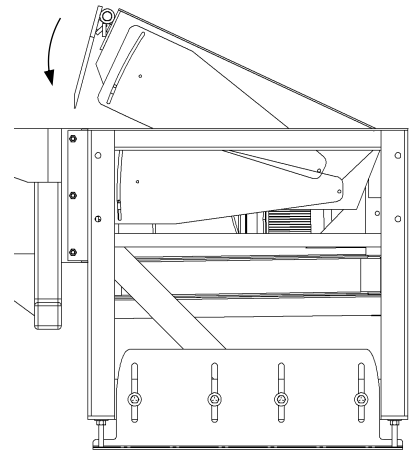


Figure 7: Storing Leveler

LEVELER MAINTENANCE

⚠ DANGER

Before performing maintenance, place suitable barriers around the leveler to prevent unauthorized personnel and vehicle traffic from entering the area while maintenance is being performed.

⚠ WARNING

DO NOT install maintenance strut with 1 person. Installation of the maintenance strut requires 2 people. The maintenance strut is required whenever accessing the area beneath the platform.

MAINTENANCE STRUT INSTALLATION

1. Press the UP button to fully raise the leveler platform. The UP button will remain pressed until step 2 is complete. See Figure 8.

⚠ DANGER

DO NOT stand directly in front of the lip when raising the leveler platform. Stand to the side of the leveler.

2. Raise the maintenance strut from its stored position to approximately vertical.
3. Release the UP button. The leveler will lower and will be supported by the maintenance strut.

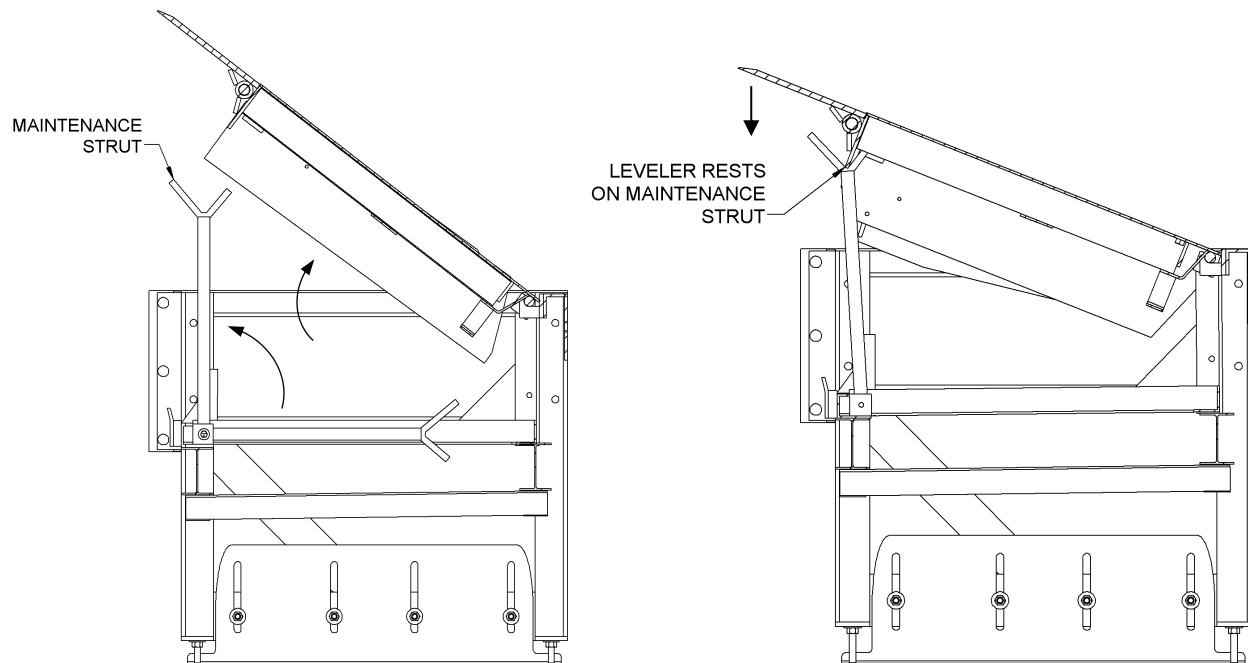


Figure 8: Installing Maintenance Strut

MAINTENANCE STRUT REMOVAL.

1. Press the UP button to fully raise the leveler. The UP button will remain pressed until step 2 is complete.
2. Lower the maintenance strut into its stored position.
3. Verify nothing is in the way of the leveler and release the UP button to lower the leveler into its stored position.

LOCKOUT / TAGOUT PROCEDURE

1. Raise platform and set the maintenance strut as instructed.
2. Unplug control box from wall outlet or shut power off at disconnect and follow OSHA 1910.147 lockout / tagout procedure to secure.

⚠ WARNING

ARC FLASH & SHOCK HAZARD. *Appropriate personal protective equipment required. Reference NFPA 70e to fully cut power to equipment and comply with OSHA 1910.147.*

⚠ DANGER

Lockout/Tagout electrical power according to OSHA regulations before performing any work on unit.

Maintenance strut must be properly installed before performing any work under the leveler.

NOTICE

Maintenance may be required more frequently on levelers exposed to harsh environments (extreme climates, corrosive chemicals, frequency of usage exceeding 8 trucks a day, etc.). Consult Dockzilla Co. if these conditions exist to determine accelerated maintenance requirements.

DO NOT USE SALT. *If necessary, use a non-corrosive ice melt product such as Ossian Select® Liquid De-Icer.*

WEEKLY MAINTENANCE

1. During normal operation, inspect and report any damaged parts or erratic operation. If there are any broken or worn parts, repair as needed.
2. Remove any debris on or around the leveler.

QUARTERLY MAINTENANCE

1. Perform all weekly maintenance.
2. Clean under leveler and remove debris.
3. Validate there is no damage to the maintenance strut and that it is working properly
4. Check that all pins have their spring pin(s) in place. Do NOT operate the ramp if any pins are missing or damaged. Replace pins if necessary
5. Inspect the following items for damage or abnormal wear:
 - a. Cylinder pins and mounting holes
 - b. Lip and platform hinge pins
 - c. Toe guards – Check for free movement
 - d. Hydraulic components – If the fluid level is low, refill and inspect hoses and fittings for damage or leaks.
6. Inspect bumpers and replace if missing or damaged.
7. Inspect the lip stop bolt for proper placement (see Figure 18 for details). Replace if missing or damaged.
8. Check for any loose fasteners. Retighten as needed. Replace any damaged or broken fasteners with SAE Grade 5 (or higher) fasteners of the same diameter.
9. Inspect leveler for structural damages, cracked welds, bent structural members, etc. If an issue is found, discontinue use until the issue is resolved.

10. Lubricate the following areas:

- a. Lip hinges – Do NOT over grease. Stop greasing when grease begins to flow from the ends of the hinge tube. Wipe off excess grease with a cloth.
- b. Deck hinge – Raise the leveler to its highest position and then apply oil to the entire length of the deck hinge.
- c. Deck cylinder and platform frame pin
- d. Deck cylinder and base frame pin
- e. Lip cylinder and deck frame pin
- f. Lip clevis and lip cylinder pin

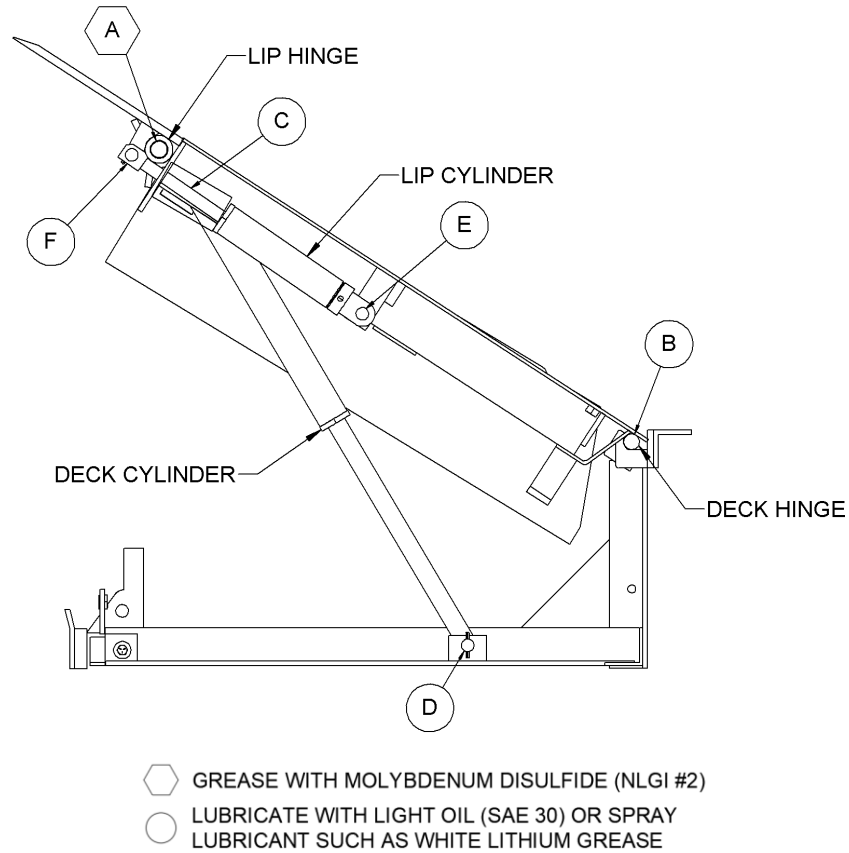


Figure 9: Lubrication Points

LEVELER TROUBLESHOOTING

⚠ WARNING

Prior to making any adjustments to the hydraulic power unit and its valves, please (1) cycle the leveler 5 times to purge the system of air and (2) verify there is no mechanical binding.

Symptom	Probable Causes	Remedy
Deck does not raise or does not raise all the way	Power supply has been disconnected	Verify the power supply is connected. Check the operation of the control system.
	Motor is wired incorrectly	Verify the motor is properly connected. See Figure 25 for details.
	Not enough hydraulic fluid	Check the fluid level & add additional fluid as necessary
	There is a load on the deck	Remove any items from the leveler deck
	Bumpers are damaged or missing, causing the leveler lip to contact trailer bed and stop	Inspect bumpers and replace if necessary. Bumpers should be at least 4" in front of the lip hinge.
	Foreign material is present in the deck hinge	Remove any foreign material from the deck hinge
Deck raises very slowly	There is a load on the deck	Remove any items from the leveler deck
	Not enough hydraulic fluid	Check the fluid level & add additional fluid as necessary
	Low operating voltage	Validate there is sufficient voltage when the leveler is operating
	Faults in the power unit/pump/motor	Repair or replace damaged components and necessary.
	Foreign material is present in the deck hinge	Remove any foreign material from the deck hinge
Deck does not lower	Foreign material is present in the deck hinge	Remove any foreign material from the deck hinge
	Needle valve requires adjustment	See Figure 15 for valve adjustment instructions
Lip extends very slowly or does not extend	Lip extension valve requires adjustment	See Figure 17 for valve adjustment instructions
	Not enough hydraulic fluid	Check the fluid level & add additional fluid as necessary
	Foreign material is present in the lip hinge	Remove any foreign material from the lip hinge
	Hinge pin is seized or corroded	Lubricate the pin and rotate manually to loosen. Replace hinge pin if necessary.
	Lip is bent	Straighten lip and replace if necessary
Lip does not lower completely into its lip keepers	Foreign material is preventing the lip from storing properly	Remove any foreign material from the lip hinge and/or the lip keepers
	Needle valve requires adjustment	See Figure 17 for valve adjustment instructions
	Lip stop bolt is not adjusted correctly	See Figure 18 for lip stop adjustment instructions

LEVELER TROUBLESHOOTING, CONTINUED

Symptom	Probable Causes	Remedy
When the leveler lowers, the lip lowers very fast and does not lower onto the trailer bed	Needle valve requires adjustment	See Figure 16 for valve adjustment instructions
Deck and lip lower very slowly onto the trailer bed	Needle valve requires adjustment	See Figures 15&16 for valve adjustment instructions
	Foreign material is present in the deck or lip hinges	Remove any foreign material from the deck and/or lip hinges

ADJUSTING THE DECK LOWERING SPEED

⚠ WARNING

Adjust the needle valve only as necessary. Be sure to only make small adjustments before testing. Adjusting the valve too much in one direction may cause issues with leveler operation. Additionally, adjusting the valve too much can cause a hydraulic fluid leak at the valve.

1. Locate the deck cylinder needle valve
2. Using an Allen wrench, turn the valve as appropriate. **Adjust 1/4 turn at a time.** Check the leveler operation between each 1/4 turn until the desired lowering speed is reached.
 - a. Turn clockwise to decrease the deck lowering speed
 - b. Turn counterclockwise to increase the deck lowering speed

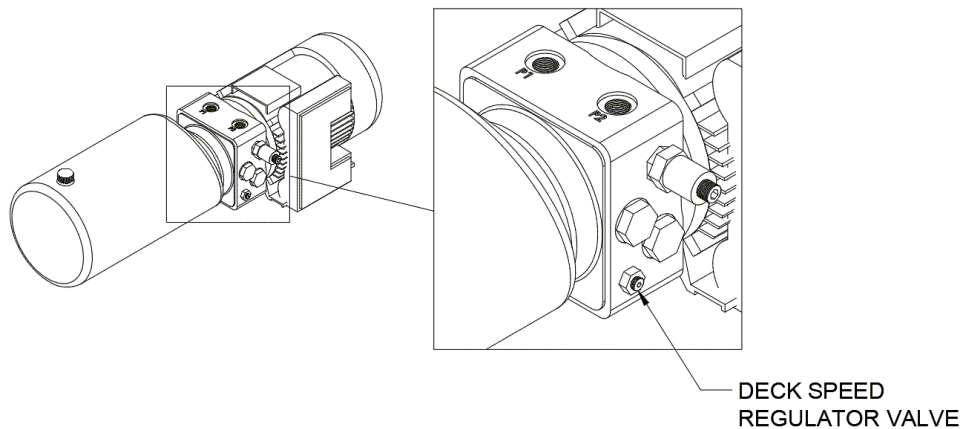


Figure 10: Adjusting the Deck Lowering Speed

ADJUSTING THE LIP LOWERING SPEED

WARNING

Adjust the needle valve only as necessary. Be sure to only make small adjustments before testing. Adjusting the valve too much in one direction may cause issues with leveler operation. Additionally, adjusting the valve too much can cause a hydraulic fluid leak at the valve. There is no mechanism to prevent the set screw from being fully removed.

1. Locate the lip cylinder needle valve
2. Using an Allen wrench, turn the valve as appropriate. **Adjust 1/4 turn at a time.** Check the leveler operation between each 1/4 turn until the desired lowering speed is reached.
 - a. Turn clockwise to decrease the lip lowering speed
 - b. Turn counterclockwise to increase the lip lowering speed

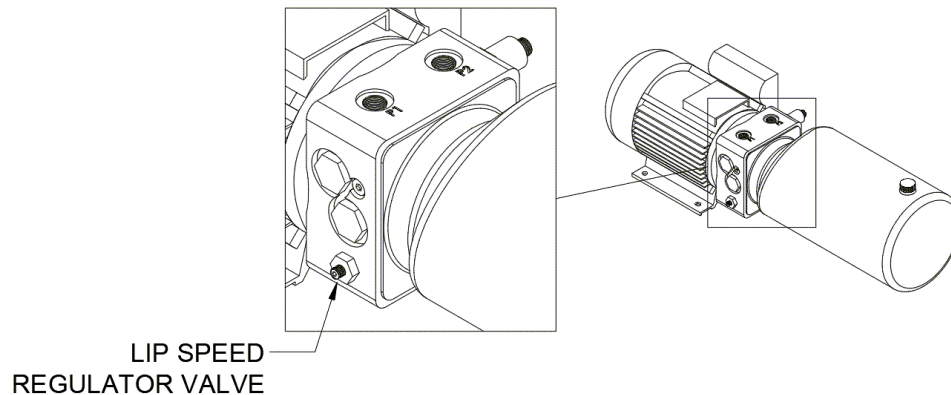


Figure 11: Adjusting the Lip Lowering Speed

ADJUSTING THE LIP EXTENSION SPEED

WARNING

This valve is preset at the factory for proper ramp operation. Do NOT attempt to adjust unless you fully understand the operation of the ramp's hydraulic system; failure to do so may cause problems with the ramp's operating cycle.

1. Locate the lip extension valve
2. Using an Allen wrench, turn the valve as appropriate. **Adjust 1/4 turn at a time.** Check the leveler operation between each 1/4 turn until the desired lowering speed is reached.
 - a. Turn clockwise to decrease the lip extension speed
 - b. Turn counterclockwise to increase the lip extension speed

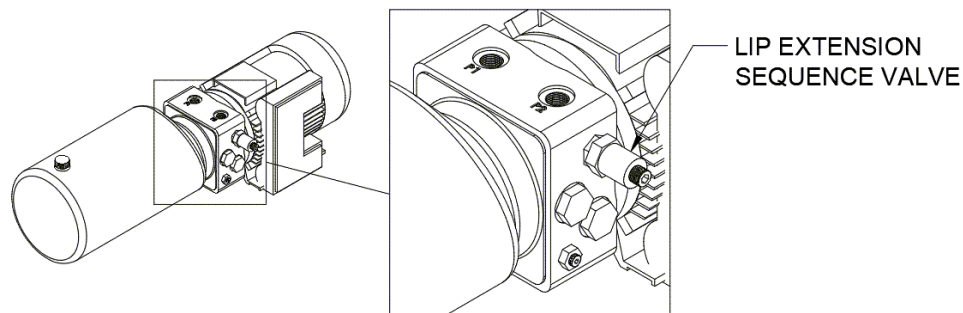


Figure 12: Adjusting the Lip Extension Speed

ADJUSTING THE LIP STOP BOLT

The lip stop bolt is used to limit the lip drop, allowing the lip to be properly stored in the lip keepers. The lip stop bolt may need to be adjusted if the lip is not seating properly in the lip keepers

1. Loosen the locking nut on the lip stop bolt.
2. Turn the lip stop bolt as appropriate. Adjust 1 turn at a time. Check the leveler operation between each turn until the lip stores properly in the lip keepers.
 - a. Turn clockwise to decrease the lip clearance distance
 - b. Turn counterclockwise to increase the lip clearance distance.
3. Once the lip stop bolt is adjusted to the proper location, tighten the locking nut.

THE LIP STOP BOLT IS USED TO PREVENT THE LIP FROM FOLDING TOO FAR IN AND GETTING STUCK ON THE INSIDE OF THE LEVELER FRAME. WHEN THE BOLT IS PROPERLY ADJUSTED, IT WILL HOLD THE LIP JUST ENOUGH TO PREVENT THE LIP FROM GETTING CAUGHT AND ALLOW IT TO SIT IN THE LIP KEEPERS

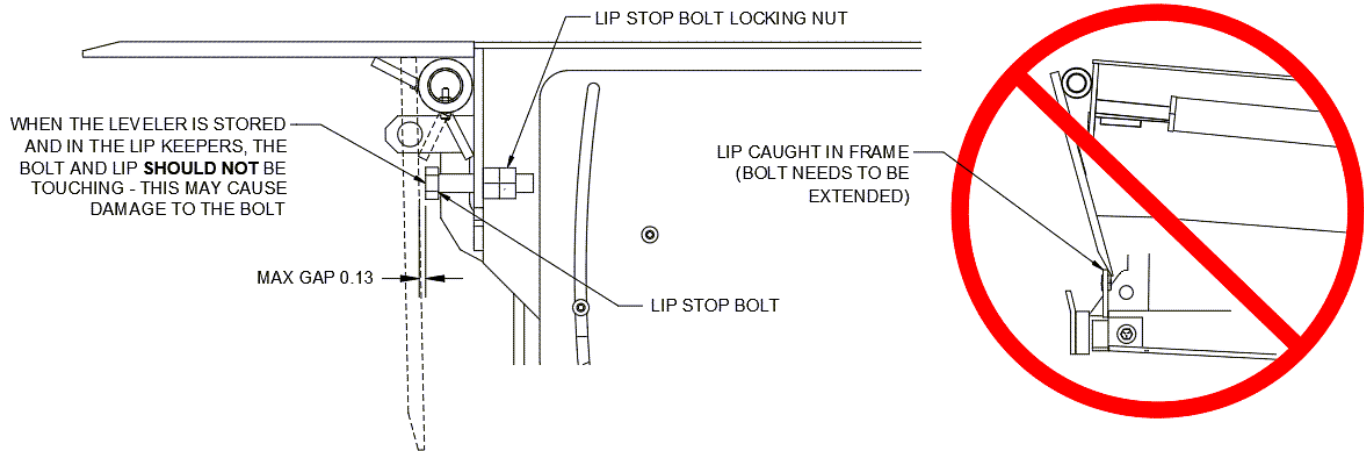


Figure 13: Lip Stop Bolt Adjustment

REPLACEMENT PARTS

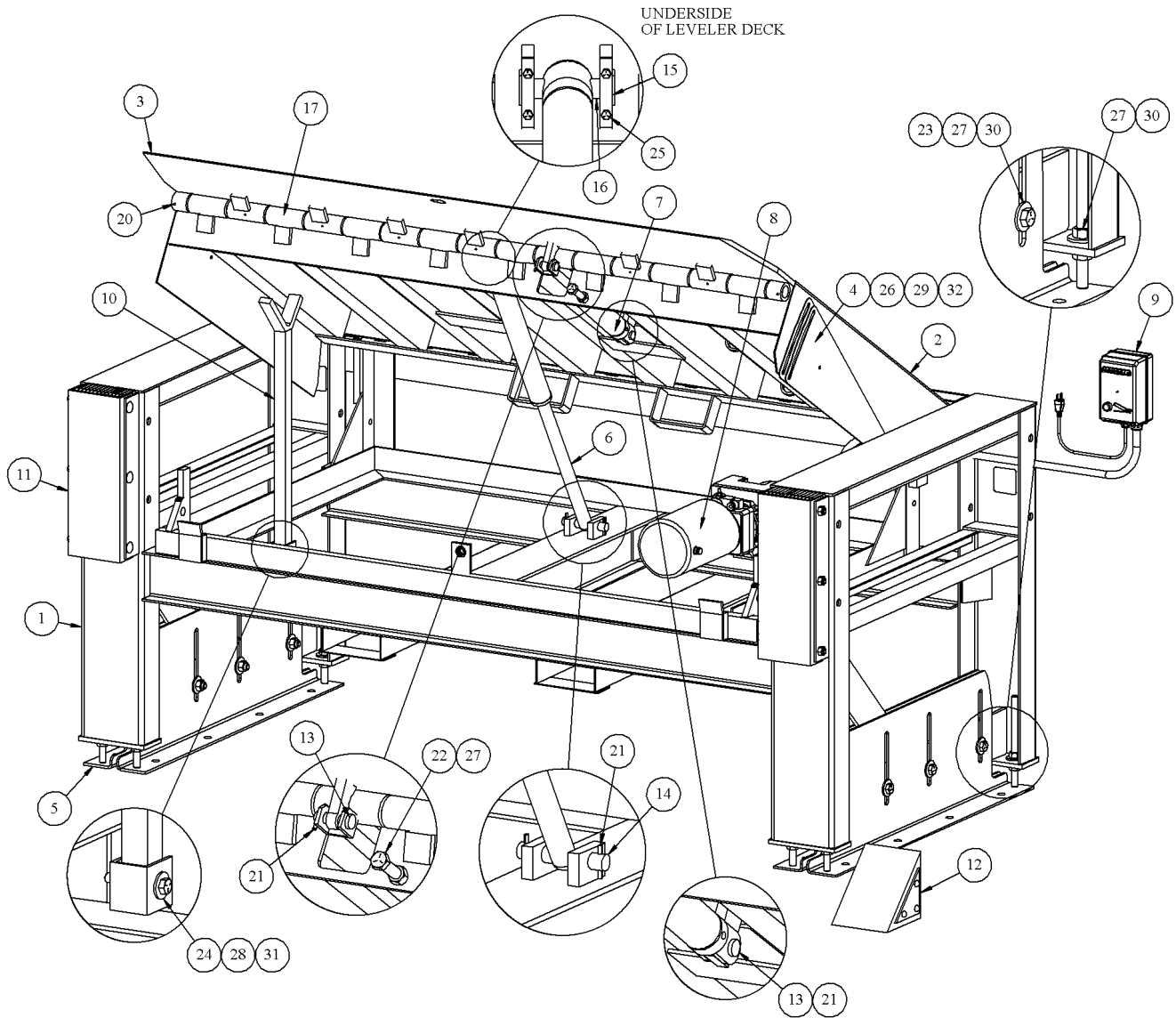


Figure 14: Leveler Replacement Parts

REPLACEMENT PARTS

Below are the replacement parts as outlined in Figures 14.

ITEM	DESCRIPTION	QTY	PART NUMBER	
			16k Capacity	32k Capacity
1	Frame Weldment	1	DZ1909	
2	Deck Weldment	1	DZ2304	DZ2305
3	Lip Weldment	1	DZ2306	DZ2307
4	Toe Guard	2	DZ2308	
5	Footpad Weldment	4	DZ1904	
6	Deck Cylinder	1	DZ2299	
7	Lip Cylinder	1	DZ2301	
8	Hydraulic Power Unit	1	DZ2298	
9	Control Box	1	DZ2303	
10	Maintenance Strut	1	DZ2302	
11	Bumper, 4" Projection X 8" Wide X 20" Tall	2	B4020-11-P2SF	
12	Wheel Chocks	2	LE 5049	
13	Lip Cylinder Pin	2	DZ2316	
14	Deck Cylinder Pin	1	DZ2317	
15	Deck Cylinder Retainer Plate	2	DZ2318	
16	Deck Cylinder Pin, No Holes	1	DZ2319	
17	Lip Hinge Rod, 1.3" Diameter X 81" L	1		
18	4x7 Leveler Hose Kit	1	DZ2314 (see Figure 23)	
19	Titan Anchor, 0.75" X 6.00"L	16	THDT75600H	
20	Slotted Spring Pin, 0.5" OD x 2.00" L	2		
21	Slotted Spring Pin, 0.21875" OD x 2.00" L	4		
22	Bolt, Hex Head, 0.75"- 10 x 4.00" L, Grade 5, Full Thread	1		
23	Bolt, Hex Head, 0.75"- 10 x 2.50" L, Grade 5	12		
24	Bolt, Hex Head, 0.50"- 13 x 3.25" L, Grade 5	1		
25	Bolt, Hex Head, 0.25"- 20 x 1.00" L, Grade 5	4		
26	Pan Head Screw, 0.38" - 16 x 1.00" L	4		
27	Nut, Hex, 0.75"- 10 UNC, Grade 5	10		
28	Nut, Hex, 0.50"- 13 UNC, Grade 5	1		
29	Lock Nut, 0.38" -16 UNC	4		
30	Washer, Flat SAE, 0.75"	22		
31	Washer, Flat SAE, 0.50"	2		
32	Washer, Flat SAE, 0.38"	4		

HOSE KIT REPLACEMENT PARTS

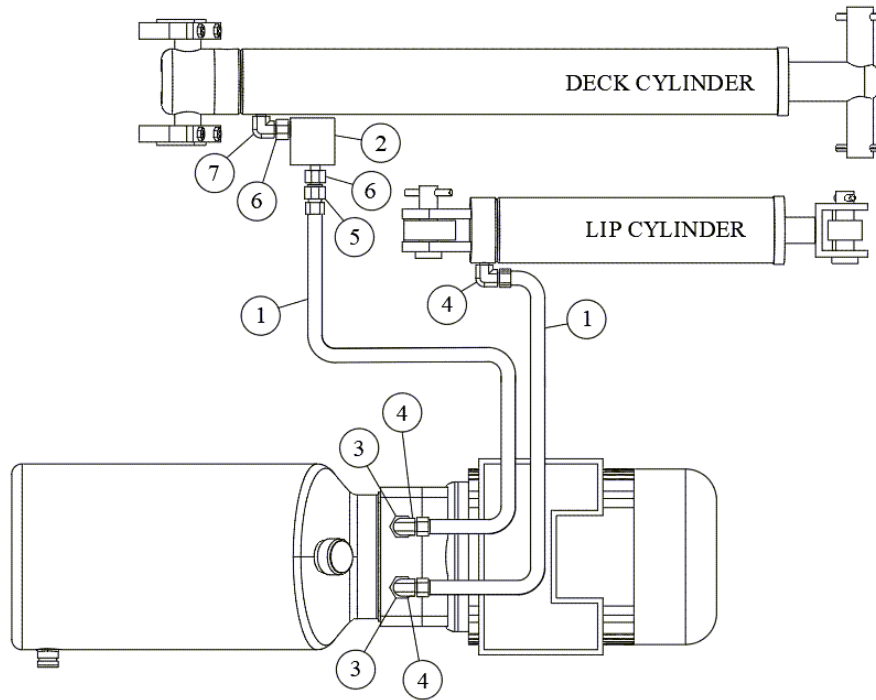


Figure 15: Hose Kit Replacement Parts

Below are the replacement parts as outlined in Figures 15.

ITEM	DESCRIPTION	QTY	PART NUMBER
1	Hose Assembly, 4 JIC F SVW - #6FC639 Hose - 4 JIC 4 90° F SWV X 96"L	2	DZ2314-ASSY
2	Velocity Fuse	1	DZ2314-FUSE
3	Straight Adapter, 3/8" ORB M X 1/4" NPT F	2	6405-06-04
4	90° Elbow, 4 JIC M X 1/4" NPT M	3	2501-04-04
5	Straight Adapter, 4 JIC M X 1/4" NPT M	1	2404-04-04
6	Reducer Bushing, 1/2" NPT M X 1/4" NPT F	2	5406-08-04
7	90° Elbow, 1/4" NPT M X 1/4" NPT M	1	5500-04-04

ELECTRICAL & HYDRAULIC SCHEMATICS

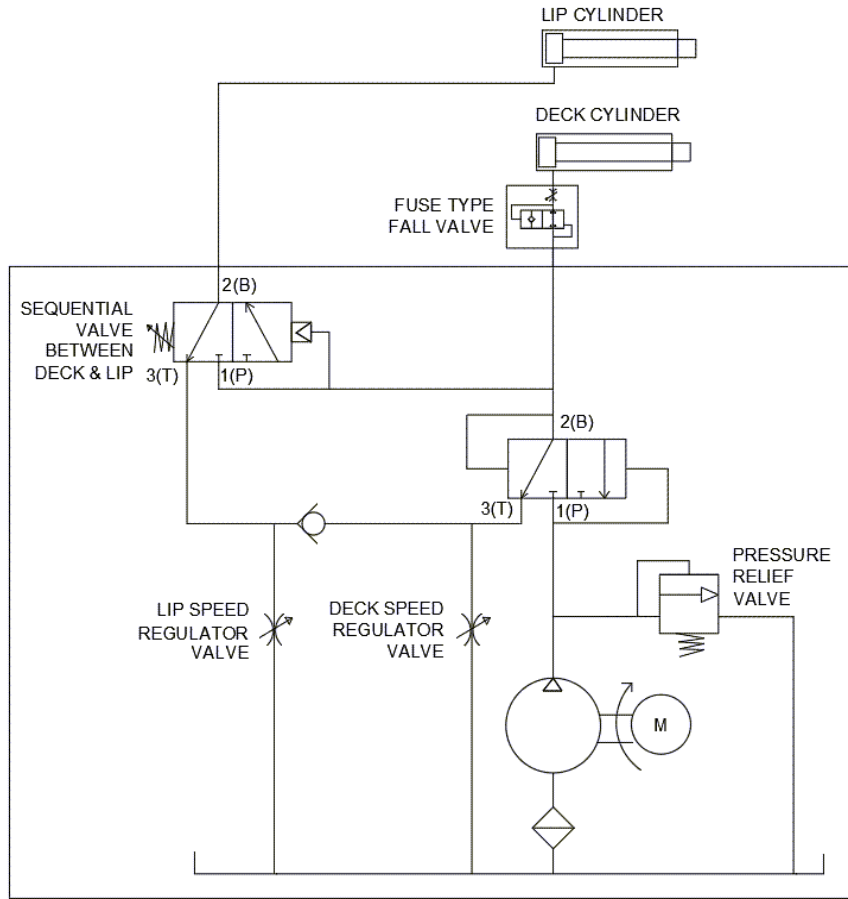


Figure 16: Hydraulic Schematic

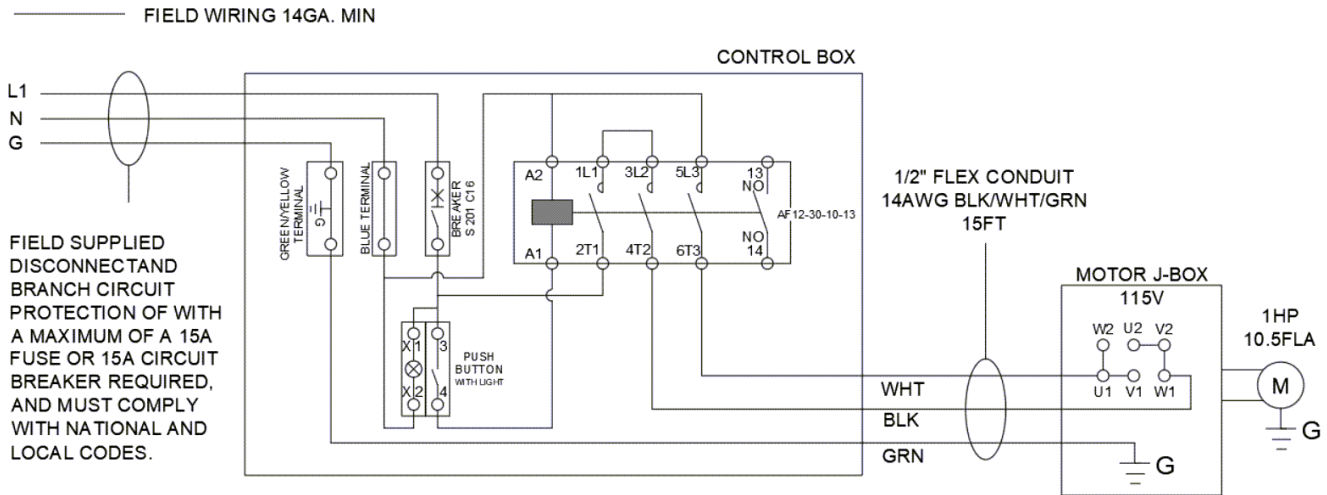


Figure 17: Hydraulic Power Unit Wiring Schematic

NOTES

STANDARD WARRANTY

Dockzilla Co. warrants that its products will be free from defects in design, materials, and workmanship for a period of 365 days from the date of shipment. All claims for breach of this warranty must be made within 30 days after defect is or can, with reasonable care, be detected and in no event no more than 30 days after the warranty has expired. In order to be entitled to the benefits of this warranty, the products must have been properly installed, maintained, and operated within their rated capacities and/or specified design parameters, and not otherwise abused. Periodic lubrication and adjustment is the sole responsibility of the owner. This warranty is Dockzilla Co. exclusive warranty. DOCKZILLA CO. EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MECHANABILITY AND FITNESS. Non-standard warranties, if any, must be specified to Dockzilla Co. in writing.

LIMITATION OF LIABILITY

DOCKZILLA CO. SHALL NOT IN ANY EVENT BE LIABLE FOR ANY LOSS OF USE OF ANY EQUIPMENT OR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.



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