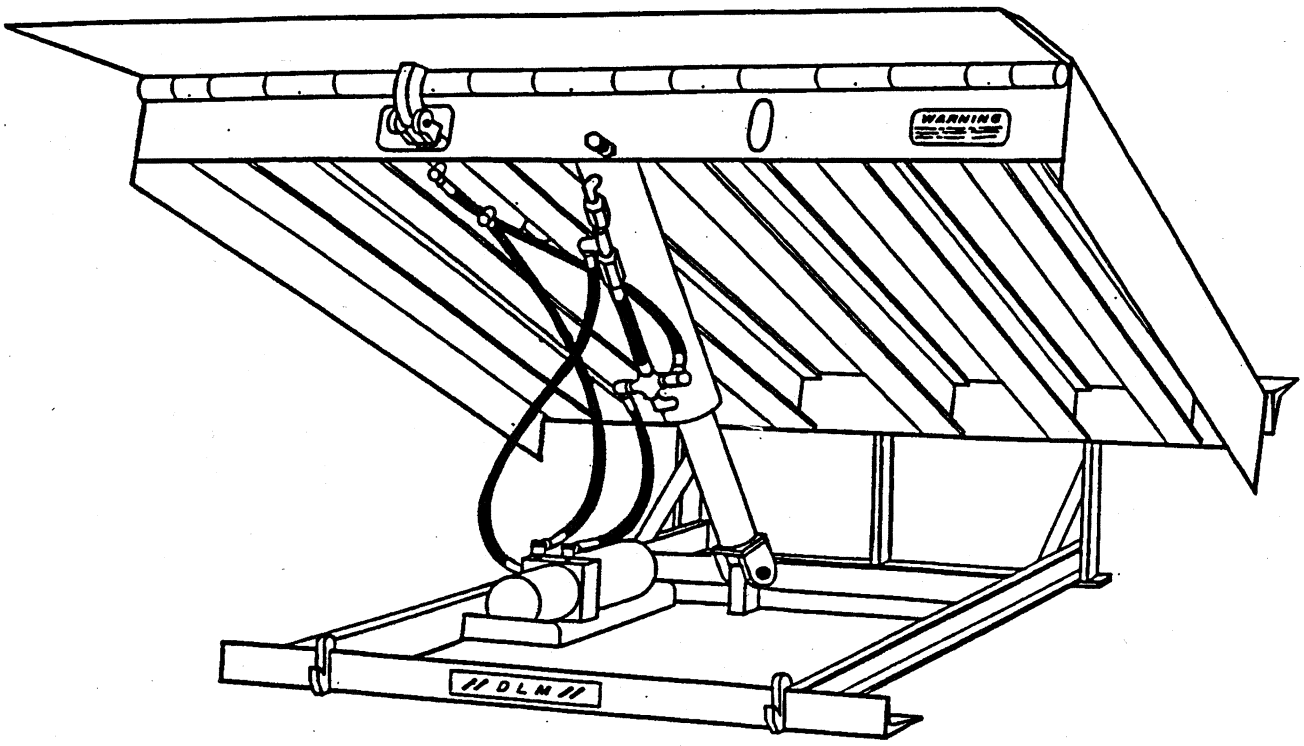
DLM
DOCK LEVELER
MANUFACTURING

"CH" SERIES HYDRAULIC DOCK LEVELERS



WARNING: Read and understand all warnings and instructions before attempting to install or operate the leveler. Always use the maintenance strut when working under the open deck. Failure to observe these and other safe work habits may result in personal injury and/or property damage.

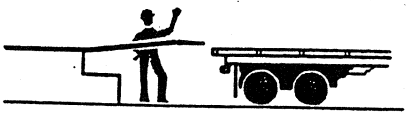
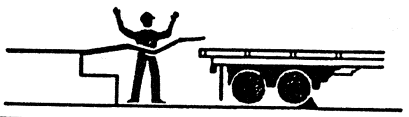
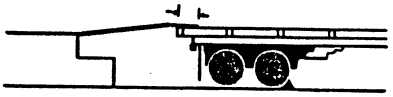
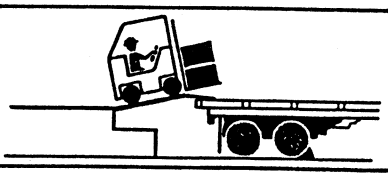
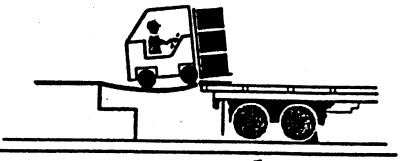
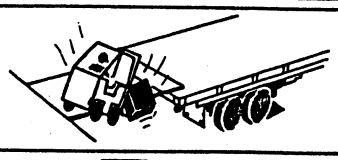
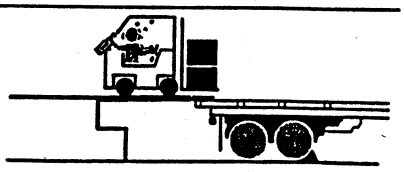
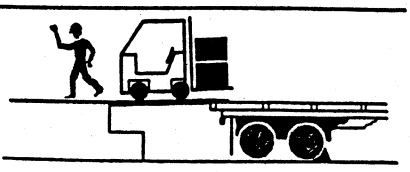
INSTALLATION AND OPERATING INSTRUCTIONS

9535 February 1992

GOOD SAFETY PRACTICES

DOCK LEVELING DEVICES

LEARN THE SAFE WAY TO OPERATE THIS EQUIPMENT. READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS. IF YOU HAVE ANY QUESTIONS, ASK YOUR SUPERVISOR.

STAY CLEAR OF DOCK LEVELING DEVICE WHEN FREIGHT CARRIER IS ENTERING OR LEAVING AREA.	
CHOCK / RESTRAIN ALL FREIGHT CARRIERS.	
DO NOT USE A BROKEN OR DAMAGED DOCK LEVELING DEVICE.	
DO NOT MOVE OR USE THE DOCK LEVELING DEVICE IF ANYONE IS UNDER OR IN FRONT.	
KEEP HANDS AND FEET CLEAR OF PINCH POINTS.	
LIP MUST REST SECURELY ON FREIGHT CARRIER BED.	
DO NOT USE DOCK LEVELING DEVICE IF FREIGHT CARRIER IS TOO HIGH OR TOO LOW.	
DO NOT OVERLOAD THE DOCK LEVELING DEVICE.	
KEEP A SAFE DISTANCE FROM BOTH SIDE EDGES.	
DO NOT OPERATE ANY EQUIPMENT WHILE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.	
DO NOT LEAVE EQUIPMENT OR MATERIAL UNATTENDED ON DOCK LEVELING DEVICE.	

LODEM
LOADING DOCK EQUIPMENT MANUFACTURERS

MHI
THE MATERIAL HANDLING INSTITUTE, INC.

DLM
DOCK LEVELER
MANUFACTURING

INSTALLATION INSTRUCTIONS FOR HYDRAULIC DOCK LEVELERS

WARNING

Always use safe work habits.

Always secure leveler before attempting any procedure where personnel or equipment will enter the area around the leveler. Failure to observe these and other safety rules may result in personal injury and/or property damage.

1. Check pit for proper construction. For a hydraulic system there must be a junction box in the pit with conduit running to a near wall where a control box is to be mounted. Refer to Figure 1 for typical set-up. Check to make sure walls are square and plumb. Clean out all debris.

NOTE
CONDUIT MAY BE RUN FROM EITHER SIDE.

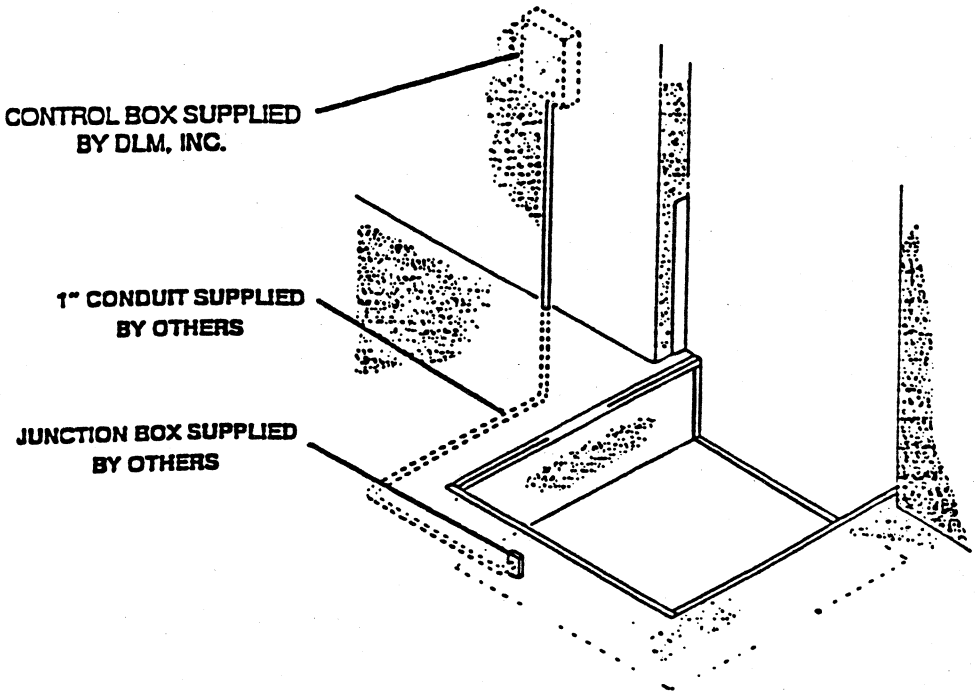


Figure 1

2. There are six (6) load bearing points related to the main frame. Three (3) are at the rear of frame under the three (3) support posts, two (2) are at the front of frame under the cross-traffic supports, and one (1) is under the cylinder mounting angle at the center of frame. (See Figure 2)

3. Refer to Figure 3 and use the following method to measure pit depth at specific load-bearing points:
   a. Place a straight-edge across the width of the pit 6 1/2" from the back wall.
   b. Measure down from the bottom of the straight-edge to the bottom of the pit at two (2) rear corner load-bearing points.
   c. Move the straight-edge 2" from the front of pit and take a measurement for the two (2) front load bearing points.

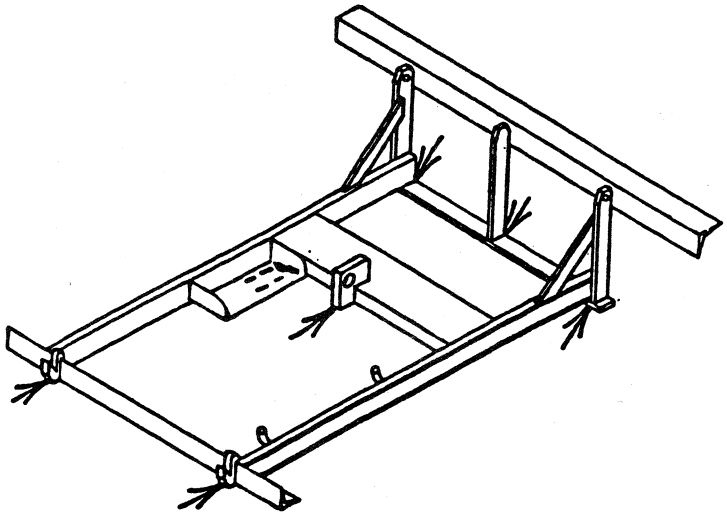


Figure 2

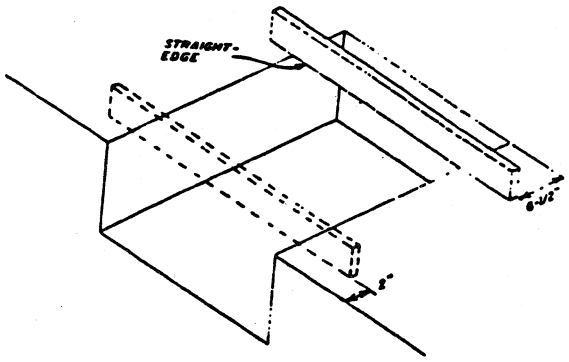


Figure 3

4. If any point measurement is larger than 18 5/8" shim up the difference at that point.
5. If any point measurement is less than 18 5/8" chisel out the bottom of the pit at that point.
6. Position the dock leveler in the pit (See Figure 4) making sure the electrical wire coming out of junction box at the rear of pit does not become crimped between the unit frame and pit. (See Figure 5)

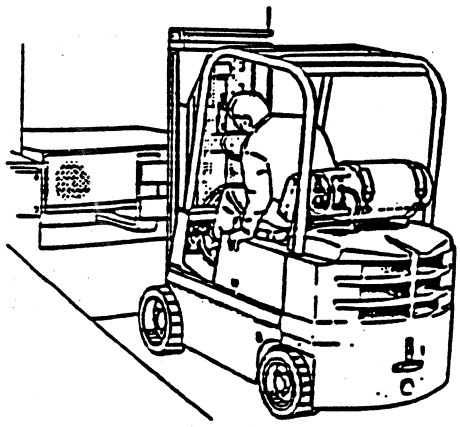


Figure 4

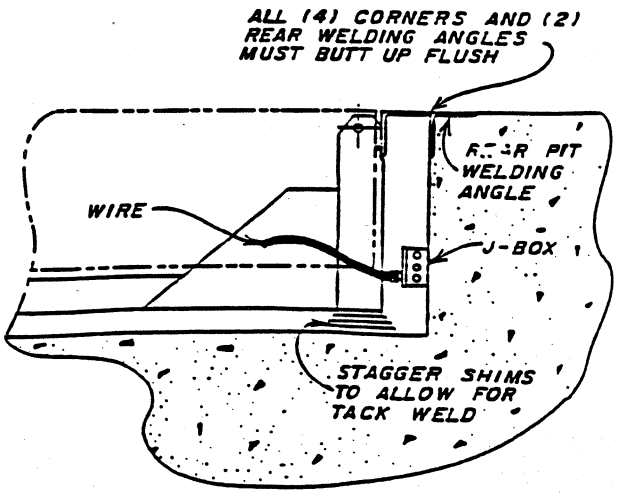


Figure 5

7. Once the leveler has been set in pit make sure all four (4) corners are flush with dock surface.
8. Once a flush fit has been obtained all around the board, tack weld the two (2) rear welding angles together. (See Figure 4)

WARNING

Leveler should not be operated until rear angle of unit is welded to pit angle.

9. Utilizing the fork lift, raise lip and deck until frame is exposed. (See Figure 5)

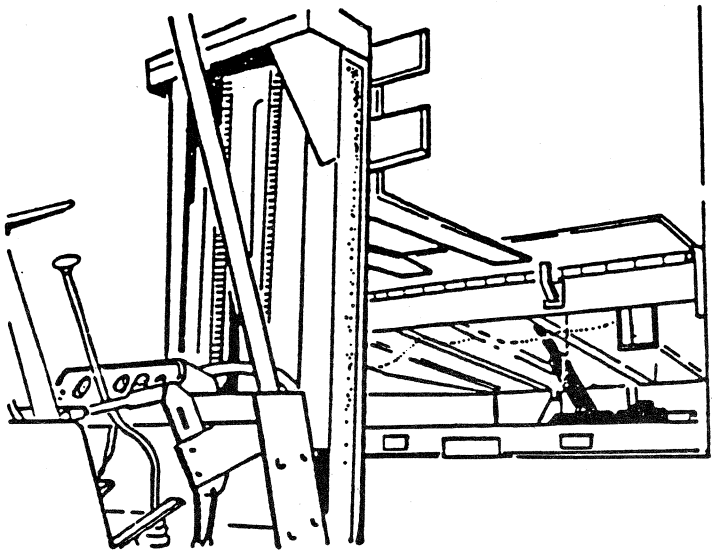


Figure 5

WARNING

When working under the open board, use the maintenance strut.

10. It is recommended that a licensed electrician perform the following:
    a. Install electrical control box on conduit to pit junction box.
    b. Make electrical connections from unit to electrical control box. (See Electrical Schematic)
11. If required, shim remaining load bearing points. Tack weld all shims to frame. To prevent shifting, weld the front shims to the angle.
12. Finish welding rear welding angles together. Remove safety bar and fork lift and installation is now complete.

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MANUFACTURING

OPERATING INSTRUCTIONS FOR HYDRAULIC DOCK LEVELERS

WARNING

Read all warnings and instructions and become familiar with operating procedures before attempting to operate leveler. Failure to follow these and other safe work habits may result in personal injury and/or property damage.

WARNING

Do not operate leveler while any equipment or personnel are standing on or in front of leveler.
Do not activate leveler until truck is situated squarely against bumpers and truck wheels are securely chocked.
Do not walk or drive any equipment on leveler until all motion has stopped and lip rests securely on bed of truck.
Always return dock leveler to safe cross traffic position after loading or unloading operations are completed
Always use safe work habits.

CHA

1. If unloading be sure to keep leveler in stored position until extreme end load has been removed. Premature operation of dock leveler may damage end load.
2. After any end load has been removed, actuate the leveler by pushing and holding the raise button on the control box until the leveler has reached its full operating height and the lip is fully extended.
3. Release the raise button and the deck will slowly fall until the lip rests on the truck bed. Complete loading or unloading operation.
4. The leveler may be retracted from the truck by pushing and holding the raise button until the lip is fully retracted, after the raise button is released, the leveler will descend to its stored position.

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DOCK LEVELER
MANUFACTURING

MAINTENANCE/LUBRICATION

Dirt is the single greatest threat to hydraulic system reliability. Each dirt particle generates additional particles due to abrasive action. Care should then be taken to prevent dirt from entering the system. Failure to follow standard hydraulic service procedures may allow foreign particles to be introduced into the system causing accelerated wear, sticking of parts, loss of efficiency, and premature failure of components.

Caution: Wipe all foreign material from around fill port prior to removing fill port cap.

For proper operation, cleaning and lubrication should be performed every 90 days or sooner, depending on usage.

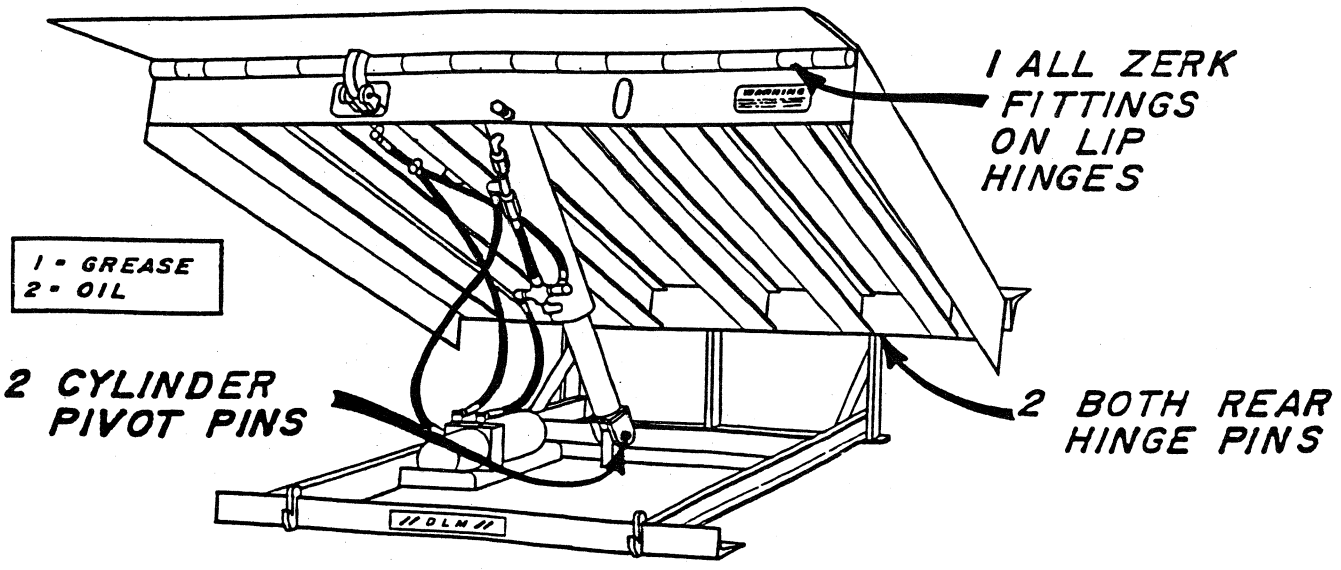
Grease all fittings on piano hinges and oil cylinder pivots every 90 days. At this time inspect all hoses and fittings, replace any worn parts. Check fluid level using dipstick. Oil level should be within 3 inches of top of reservoir with cylinders fully extended. **Use only Dexron II ATF. In colder climates use UNIVIS J-13 or equivalent.**

Caution: Do not attempt to cycle or operate leveler while personnel are in the vicinity of the under-struture or lip area of the leveler. This may result in personal injury and/or property damage.

WARNING

Always have maintenance strut in position when working under open board.

1. Set-up lubrication procedure on a regular basis approximately every three (3) months.
2. Zerk fittings are provided on all grease applications.



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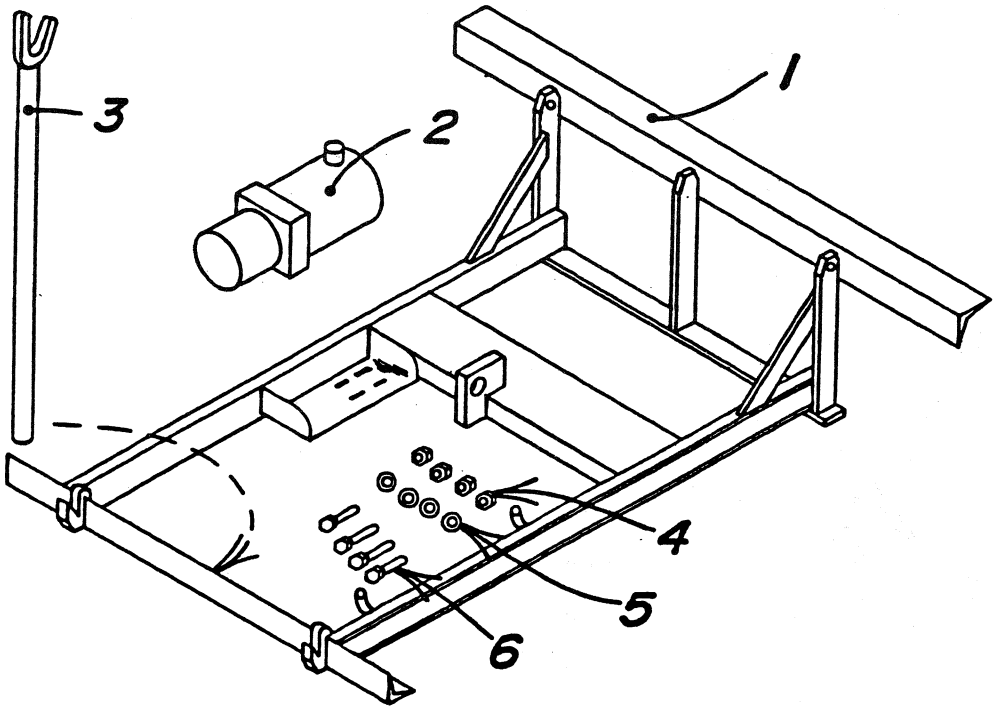

ITEM	DESCRIPTION	PART NO.
1	CH 6625 - 30	8375
1	CH 6.5625	8376
1	CH 6825 - 30	8377
1	CH 6.5825 - 30	8378
1	CH 7625 - 30	8390
1	CH 7825 - 30	8391
2	Motor & Pump, 1/2 hp - 1 ph MTE # S201T - 3425	2701
3	Maintenance Strut - 6 ft.	8409
3	Maintenance Strut - 8 ft.	8410

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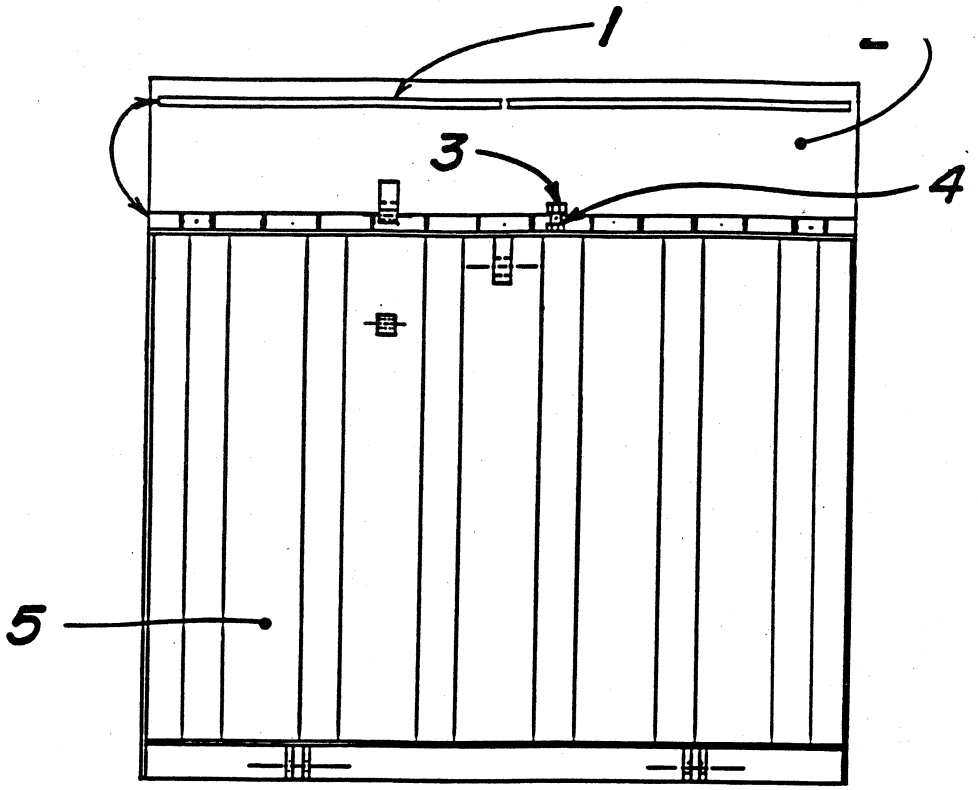
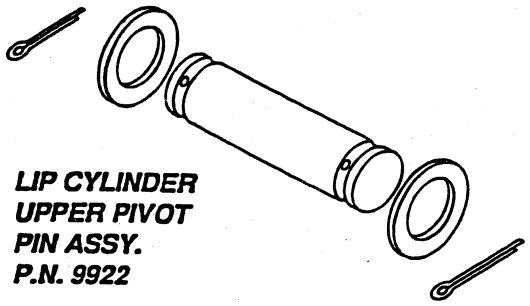
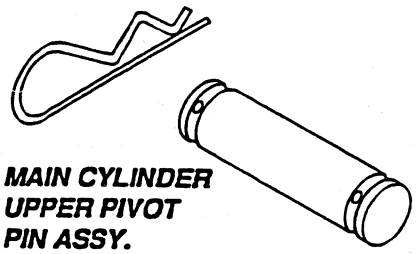
DECK ASSEMBLY

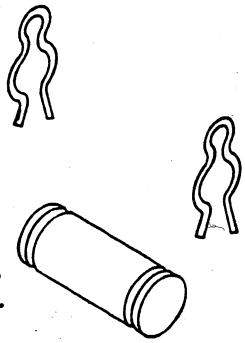




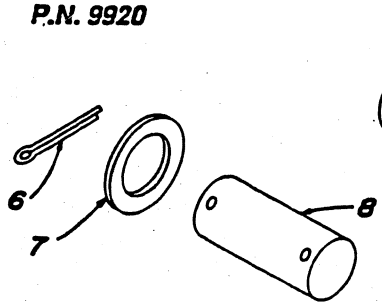
LIP CYLINDER
UPPER PIVOT
PIN ASSY.
P.N. 9922



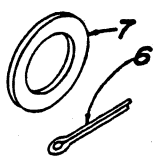
MAIN CYLINDER
UPPER PIVOT
PIN ASSY.
P.N. 9920

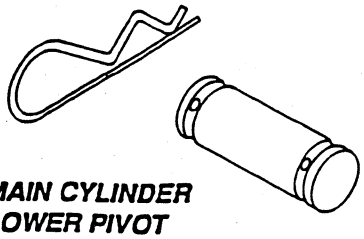


LIP CYLINDER
LOWER PIVOT
PIN ASSY.
P.N. 9923



REAR HINGE
ASSY.
P.N. 6441





MAIN CYLINDER
LOWER PIVOT
PIN ASSY.
P.N. 9921

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DOCK LEVELER
MANUFACTURING

DECK ASSEMBLY

ITEM	DESCRIPTION	MODEL	ASSY NO.
1	Hinge Pin Assy (Lip)	6 ft.	6450
1	Hinge Pin Assy (Lip)	6.5 ft.	6451
1	Hinge Pin Assy (Lip)	7 ft.	7162
2	Lip Plate Assy	6 ft. - 16/25K	8310
2	Lip Plate Assy	6 ft. - 18/25K	8311
2	Lip Plate Assy	6 ft. - 16/30K	8312
2	Lip Plate Assy	6 ft. - 18/30K	8313
2	Lip Plate Assy	6.5 ft - 16/25 K	8314
2	Lip Plate Assy	6.5 ft. - 18/25K	8315
2	Lip Plate Assy	6.5 ft. - 16/30K	8316
2	Lip Plate Assy	6.5 ft. - 18/30K	8317
2	Lip Plate Assy	7 ft . - 16/25K	8331
2	Lip Plate Assy	7 ft. - 18/25K	8332
2	Lip Plate Assy	7 ft. - 16/30K	8333
2	Lip Plate Assy	7 ft. - 18/30K	8334
3	Lip Adjustment Bolt	ALL	2074
4	Jam Nut	ALL	2160
5	Deck Assy	CH 6625K	8172
5	Deck Assy	CH 6630K	8173
5	Deck Assy	CH 6.5625K	8174
5	Deck Assy	CH 6.5630K	8175
5	Deck Assy	CH 6825K	8176
5	Deck Assy	CH 6830K	8177
5	Deck Assy	CH 6.5825K	8178
5	Deck Assy	CH 6.5830K	8179
5	Deck Assy	CH 7625K	8195
5	Deck Assy	CH 7630K	8196
5	Deck Assy	CH 7825K	8197
5	Deck Assy	CH 7830K	8198

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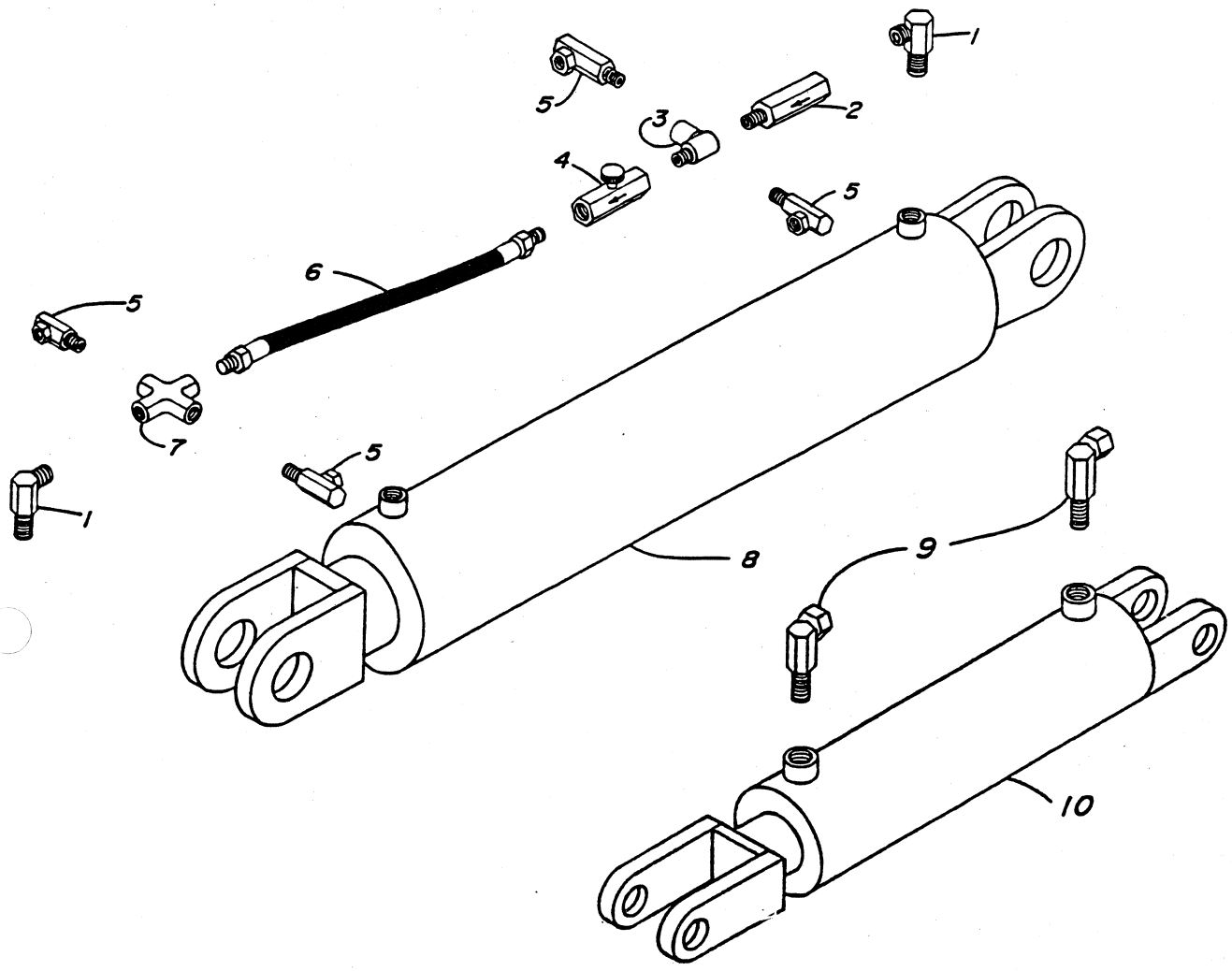
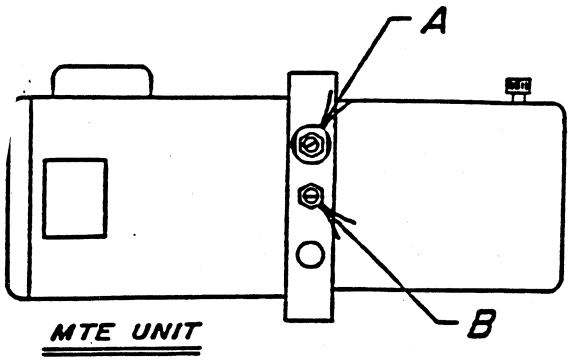
DOCK LEVELER
MANUFACTURING

ILLUSTRATED PARTS BREAKDOWN - HYDRAULIC CYLINDER ASSEMBLIES



ITEM	DESCRIPTION	PART NO.
1	90 degree elbow, 3/8" x 3/8"	2740
2	Velocity Fuse	2765
3	Runtee, 3/8"m x 3/8"f x 3/8"f	2741
4	Flow Control, 3/8"f x 3/8"f	2768
5	90 degree swivel, 3/8"m x 1/4"f	2739
6	Hose Assy., 3/8" x 11-1/2" 3/8"m (Ridget) x 3/8"m (Swivel)	8486
7	4 Way Cross, 3/8" all female	2742
8	Main Cylinder, 3 x 20	2726
9	90 Degree Swivel, 1/4"m x 1/4"f	2738
10	Lip Cylinder, 2 x 6	2725

Figure 5



TROUBLE SHOOTING

Basically,there are only three adjustments that can be made to any hydraulic power unit that DLM, Inc. installs on its hydraulic powered dock levelers. To help simplify the adjustment of these power u ;, the three main adjustment valves will be labeled A, B, C,. These same three valves will also be color coded in the event one or more of the tag labels is removed. Tag "A" will be color coded in red. Tag "B" will be color coded in white, and tag "C" will be color coded in blue. The following is a list of possible problems and the correct adjustments for solving these problems. Valve C should not be adjusted before first contacting the customer service department at DLM, Inc.

WARNING

Before making any adjustments to hydraulic powered dock levelers, first, raise the leveler to the upright position and install the maintenance strut.

PROBLEM: Unit raises but the lip plate will not retract.
SOLUTION: Turn valve "A" (Red) clockwise approximately 1/2 turn and retest unit. If the lip plate still will not retract, repeat the above adjustment until unit operates properly. Unit raises but the lip plate will not extend.

PROBLEM: The unit raises slowly, the motor is extremely noisy, and the hydraulic hoses are vibrating.
SOLUTION: Check the fluid level in power unit reservoir, if low, add fluid and operate leveler several times to remove any air from the system.

PROBLEM: Lip Plate will not stay extended.
SOLUTION: Turn valve "B" (White) clockwise in 1/2 turn increments until lip plate remains extended, but is still yieldable to approximately thirty pounds of downward force.

PROBLEM: The lip plate extends before the unit reaches full dock height.
SOLUTION: Turn valve "A" (Red) clockwise in 1/2 turn increments until lip plate operates properly.

PROBLEM: The motor runs but the unit will not raise.
SOLUTION: Check the motor for reverse polarity wiring. Consult the wiring diagram located on the motor and reverse polarity according to the diagram.

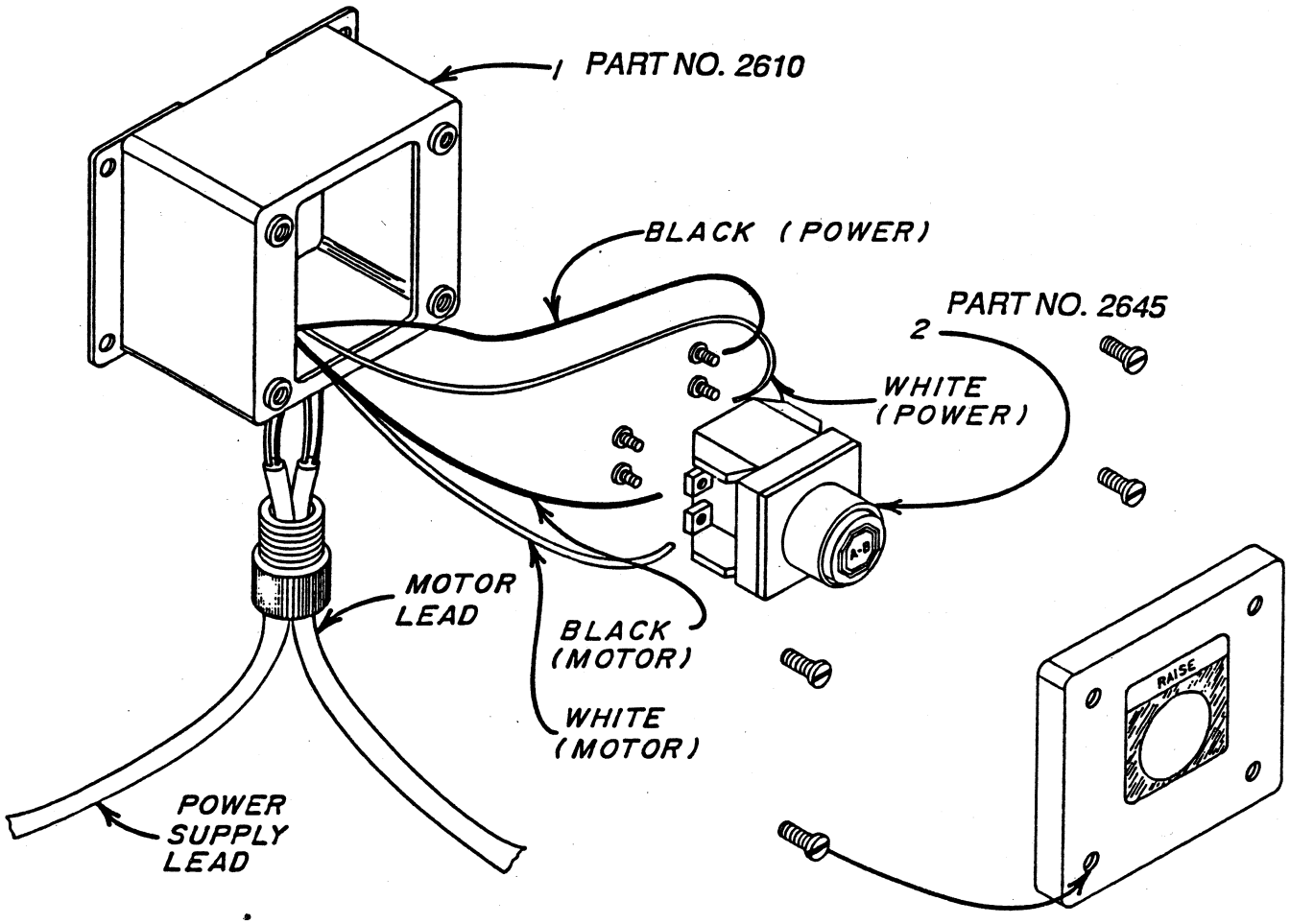
HYDRAULIC LEVELER TROUBLE SHOOTING (continued)

PROBLEM: Unit raises very slow.
SOLUTION: Check for voltage drop due to wrong size wiring. Check fluid level.

PROBLEM: Unit has no yieldable lip. Lip will not yield to hand force.
SOLUTION: Turn valve "B" (White) counter-clockwise in 1/2 turn increments until lip plate will remain extended but still yield to approximately thirty pounds of downward force.

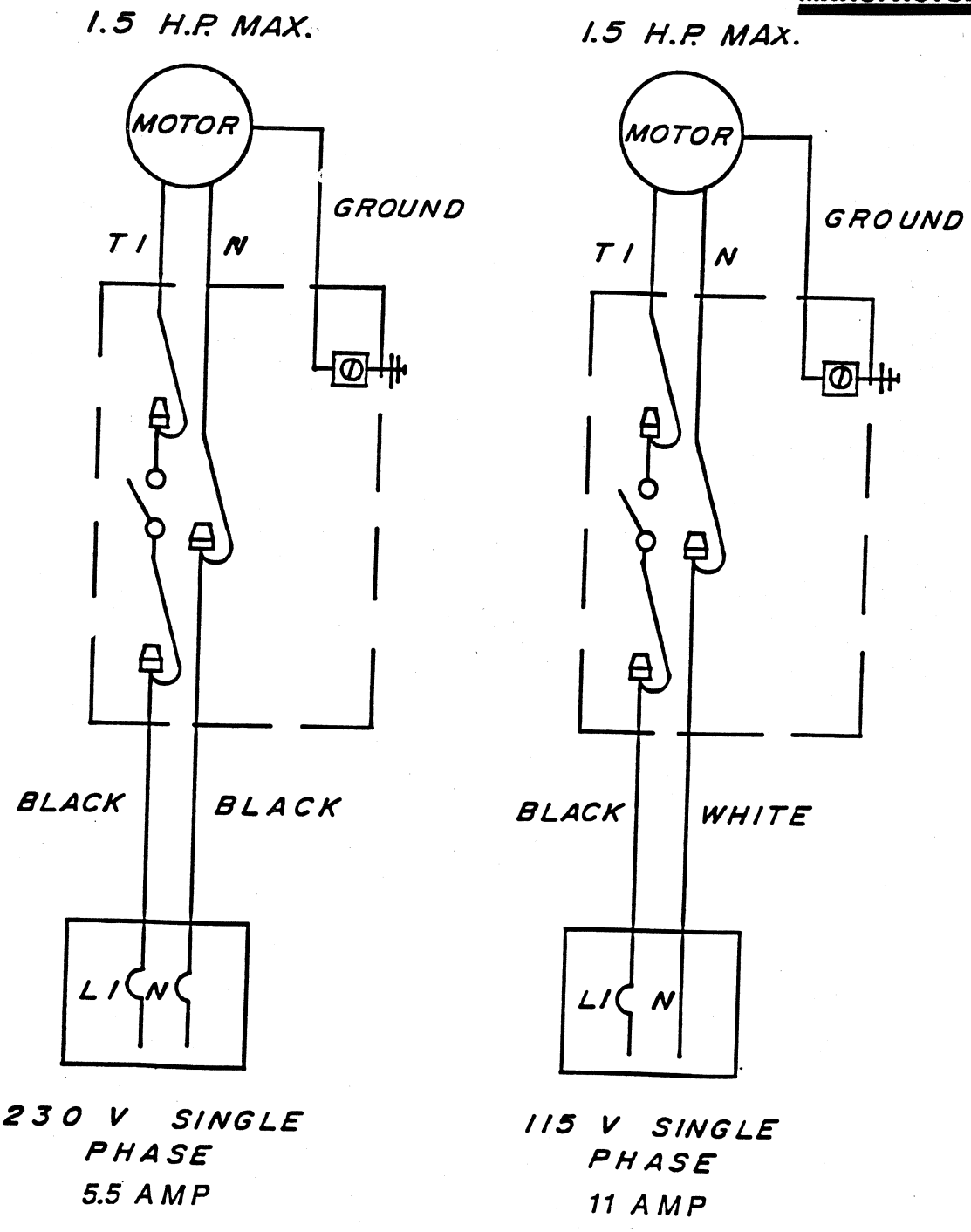
PROBLEM: Unit will not raise to full dock height.
SOLUTION: Check fluid level in reservoir. Fluid level should be three inches below the top of the reservoir with all cyclinders fully extended.

WARNING
Always be sure to use the maintenance strut and close the flow control on the main cylinder before you get under any hydraulic leveler.



CONTROL BOX ASSY.

PART NO. 4700



NOTE

BRANCH MOTOR PROTECTION PER N.E.C.

SCHEMATIC, TYPE CHA, SINGLE PH.

DLM, Inc. prides itself in offering a truly superior dock leveler at an affordable price. Our dedication to quality is represented in carefully engineered and efficient designs, superior welding and attention to details that ensure years of rugged service. For continued reliability use only genuine DLM replacement parts, this will insure the structural and operational integrity of the leveler. Please lubricate your DLM dock levelers, exercise common sense in the use and operation of the levelers and observe safe work habits.

DLM, Inc. warrants that its products will be free from defects in design, materials and workmanship for a period of one year from date of shipment. All claims for breach of this warranty must be made within thirty days after the defect is or can, with reasonable care, be detected, and in no event more than 395 days after shipment. To be entitled to the benefits of this warranty, the product must have been properly installed, maintained, operated within its rated capacity and not otherwise abused. This warranty is DLM, Inc's exclusive express warranty.

In the event of any defects covered by this warranty, DLM, Inc. will remedy such defects by repairing or replacing any parts found to be defective. This warranty is limited to parts only and does not include labor to remove, replace, install or adjust the product. This shall be the exclusive remedy for all clams whether based on contract, negligence, or strict liability. DLM, Inc. shall not in any event be liable for any loss of the use of any equipment or incidental or consequential damages of any kind.

DLM, Inc. expressly disclaims all implied warranties including the implied warranties of merchantability and fitness.

DLM
DOCK LEVELER
MANUFACTURING

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