



Hydraulic Mast Guide Lift Model MG

Operation and Maintenance Manual

P/N 47146-OM

This manual **ONLY** applies to mast guide lifts with the following serial number(s): **44468**

NORDOCK INC.

Website: Nordockinc.com ~ Email: Sales@Nordockinc.com ~ Toll free: 866-885-4276
Nordock Inc. reserves the right to make changes to specifications without notice or obligation. Nordock products may be covered by various U.S. and foreign patents or pending applications.

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 rail lift for reference whenever needed.

If you have any questions about this manual, the rail lift, 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 rail lift 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 insure 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.

Lift 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 rail lift whenever you contact us. Below is the same serial number decal that will be found on the inside of the platform guard rail assembly. Please copy the information from the decal on the rail lift to this area. 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

The operators of this unit must read these safety practices before installing, operating or servicing the rail lift. 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 rail lift. If you do not understand the instructions, contact your supervisor for explanation and instruction on the safe operation of this unit. The following guidelines are to be used in conjunction with all laws, governances and codes in effect where the rail lift is installed.

1. Inspect the rail lift daily to ensure that all parts are undamaged and in good working order. If the unit does not appear to function properly, or if it looks damaged, disconnect the power supply, lock out the control panel and report it immediately to your supervisor and safety representative.
2. Ensure there are no obstructions that will interfere with the motion of the rail lift at any point of its travel.
3. Stay clear of the rail lift when it is in motion.
4. Where handrails and safety chains are provided, they must be fastened at all times across any side or portion thereof where there is no traffic.
5. Keep hands and feet clear of hinges and underside of platform at all times. If the unit fails to operate using the procedures contained in this manual, do not use it. 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.
6. Use extreme caution when installing/removing the Maintenance pins. Stay clear of the underside of the rail lift when the maintenance pins are not in position. Be sure that both maintenance pins have been **fully inserted** and the power has been disconnected with the control panel locked out before entering the area under the rail lift.
7. Do not use the maintenance pins with a load on the platform.
8. A secondary support capable of holding the carriage assembly in place must be used when any work other than regular inspection and maintenance is performed.
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. If you have any questions, contact your supervisor or your local Nordock Inc. Representative.

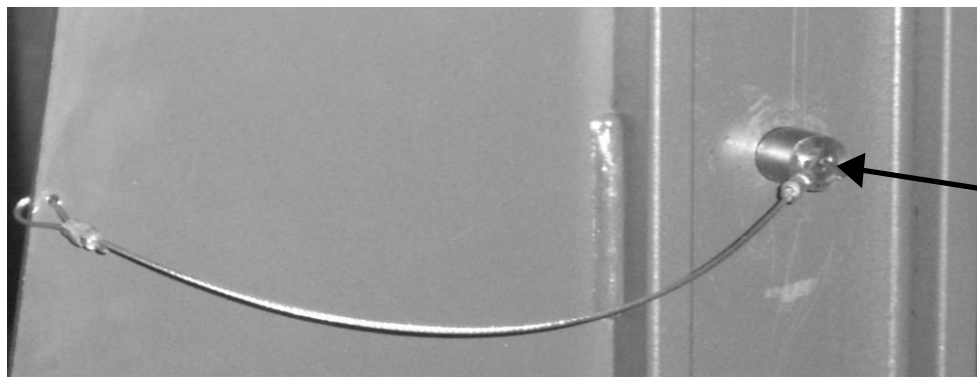
Installation

WARNING

Before operating or maintaining the rail lift, 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.

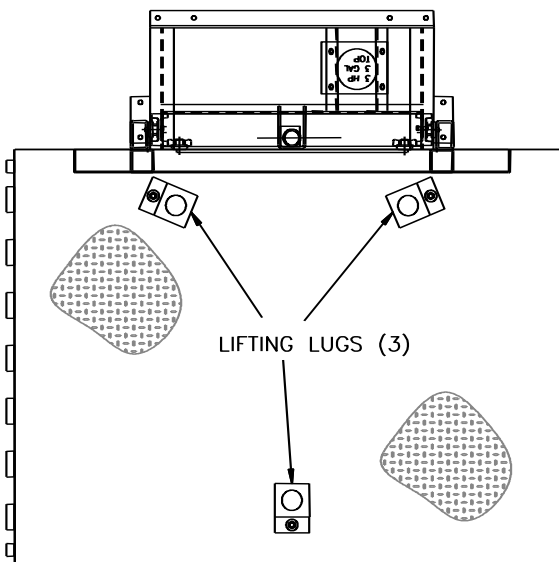
Rail Lift Installation

NOTE: Prior to lifting the rail lift with a crane or boom truck, make sure that the maintenance pins are fully inserted into both mast rail sections. See picture below. For installation, the maintenance pins are used to trap the guide rollers to allow the platform and mast rail assembly to be picked up as a complete unit.



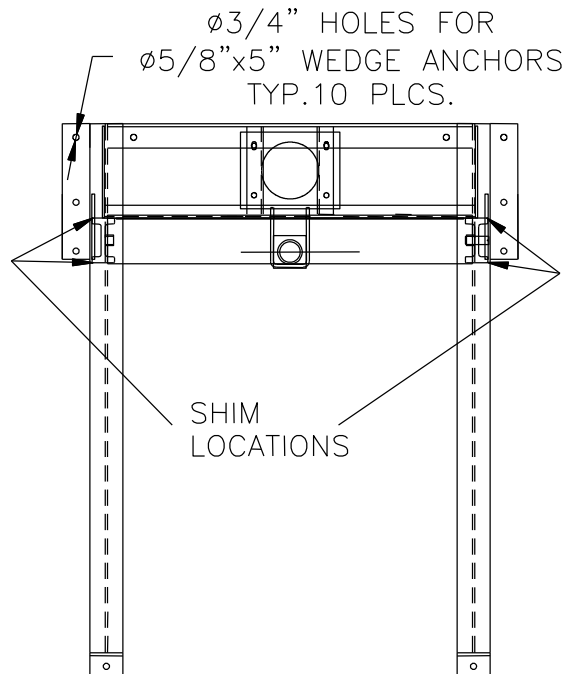
FULLY INSERT
MAINTENANCE PINS
INTO HOLES IN BOTH
MAST RAILS

1. The rail lift is provided with 3 lifting lugs. See diagram below. These lugs are the only approved method of safely lifting the rail lift. Using a forklift, sling or other means to lift the unit may cause damage to the rail lift.



NOTE: The crane or boom truck and lifting chains being used to install the rail lift must have a rated lifting capacity of at least 4,000 lbs over the required installation distance.

2. Using a crane or boom truck and lifting chains, lift the rail lift using the three lugs provided. Adjust the chain lengths and lifting position as required to lift the unit as straight as possible.
3. Lift the unit into the desired position.
4. Remove the maintenance pins from the holes in both mast rails.
5. The receptacle for the pushbutton control is pre-wired to a junction box located at the rear of the mast rail assembly. A qualified electrician is required to mount the control box, wire the incoming power, pushbutton receptacle and the hydraulic power unit to the control box. (See wiring schematic on page 17)
6. To compensate for out-of-level floors, it may be necessary to place shims under one or more points on the mast rail assembly. Operating the rail lift, when the mast rails are not vertical and parallel with one another will cause binding and squealing of the guide rollers.

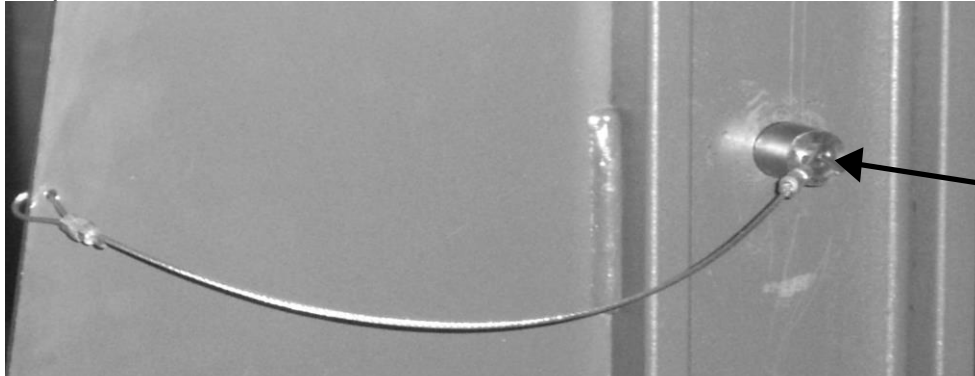


7. Using a level, check both mast rails for plumb in both vertical planes.
8. Shim as required in the locations shown to achieve a plumb condition.
9. Connect the hose from the lift cylinder to the hydraulic power unit.

10. With NO LOAD on the platform, press and hold the RAISE pushbutton to raise the lift to the top of its travel.

If the lift is shimmed properly, there should be no squeals or other unusual noises coming from the lift. Adjust shims as required to achieve smooth quiet operation of the lift.

11. Fully insert the two maintenance pins in the upper two holes of the mast rail. See picture below.



FULLY INSERT
MAINTENANCE PINS
INTO HOLES IN BOTH
MAST RAILS

12. Lower the lift to rest on the maintenance pins.
13. Jog the raise button briefly to pressurize the cylinder but not enough to raise the platform.
14. Loosen the bleeder plug in the top of the cylinder through the access hole in the back of the mast rail assembly. A mixture of air and oil will come out.
15. Close bleeder plug being careful not to tear the o-ring seal.
16. Repeat the bleeding procedure several times until air is no longer heard escaping.
17. Clean up any oil that is on the lift or the pit floor.
18. Verify that there are no people, tools or other equipment under the rail lift platform. Anchor the lift to the floor using 5/8"x5" wedge anchors (provided by others) in the six (6) holes located at the rear and sides of the mast rail assembly. Anchors must be installed and properly torqued according to the manufacturer's recommendations.

WARNING: Failure to properly install all of the required anchors may result in anchor failure causing damage to the rail lift and possible death or serious injury to personnel near the lift.

NOTE: If there are any gaps between the bottom of the mast rail base plates and the floor at the anchor location, shims must be inserted prior to setting the anchors. Failure to do this may pull the frame out of square resulting in noisy operation and premature bearing failure.

19. Press and hold the "RAISE" pushbutton to bring the lift to the top of its travel.
20. Lower the platform to rest on the maintenance pins
21. Install two (2) anchors (5/8"x5" wedge anchors (provided by others)) in the remaining holes located at the end of each mast rail stabilizing angle.
22. Raise the lift to the top of its travel.
23. Verify that there are no people, tools or other equipment under the rail lift platform. Remove the secondary support and the two maintenance pins.
24. Press and hold the LOWER button until the lift is fully lowered. Verify that the lift lowers fully. The bottom of the lift should be touching the floor at all four corners when the lift is fully lowered.

This may not happen if the floor is not level. If this is the case, shims must be placed under the corners of the deck as necessary to support all four corners when the deck is fully lowered.
25. If the lift was supplied with a fixed approach ramp, position as required and anchor in place.
26. Raise and lower the rail lift fully to check for interferences.
27. Record model and serial number information from tag on lift in the front of this manual.
28. Show the customer (end user) how to operate the lift and how to insert the maintenance pins.
29. Give this manual to the customer.

Operation



WARNING

Before operating or maintaining the rail lift, 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.

Operation

1. Push and hold the “UP” button on the handheld pushbutton control. The platform will rise as long as the button is depressed, until it reaches the upper travel limit. Release the button when the platform is at the desired elevation.
2. Push and hold the “DOWN” button on the handheld pushbutton control. The platform will lower as long as the button is depressed, or until it contacts the floor.

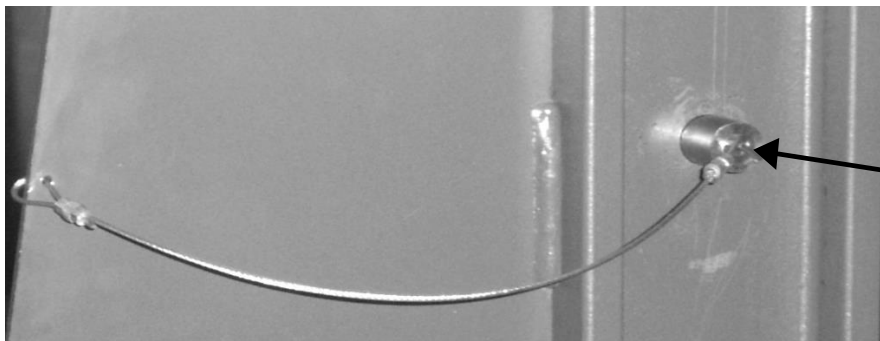
NOTE: If the lift is equipped with perimeter safety stops (electric toe guards), the lift will stop lowering if the toe guard is deflected by an object in its path. To reset the toe-guard, raise the lift slightly, remove the object and then press the lower button to continue lowering the lift.

Maintenance Pins

The maintenance pins are provided for inspection and regular maintenance of rail lift components and removal of debris from around the lift **ONLY**. It is strongly recommended that a secondary support be used whenever any personnel are to be under the platform (e.g. anchor mounting during installation).

To insert the maintenance pins:

1. Raise the **empty** lift to the top of its travel.
2. Fully insert both pins into the mast rail as shown in the picture below.



FULLY INSERT
MAINTENANCE PINS
INTO HOLES IN BOTH
MAST RAILS

Lower the lift to rest on both maintenance pins

To remove the maintenance pins:

1. Check to make sure there are no personnel or equipment under the rail lift platform before removing the pins.
2. Raise the empty lift to the top.
3. Remove both maintenance pins.
4. Lower the platform fully.

Troubleshooting



WARNING

Before operating or maintaining the rail lift, 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. Any adjustments or repairs should be performed by qualified personnel **only**. Contact Nordock Inc. or your local Nordock representative for service.

Rail Lift fails to operate:

1. Check that the main power source is turned on.
2. Check that all installation connections are made.
3. Ensure motor is wired properly.

Motor / Pump operates but platform fails to lift:

1. Make sure rail lift is not overloaded.
2. Ensure pressure relief is properly set to lift the platform at the rated capacity.
3. Check Motor rotation direction.

Platform 'creeps' down while in a raised position:

1. Check for any leaks in the hydraulic system.
2. Check the hydraulic oil level. If it has dropped below the normal operating level, there may be air in the system.
3. Ensure the hydraulic oil is clean and free of any contaminants.
4. Check for damaged seals in the valve manifold.
5. Check for contamination or wear in the return check valve.

Platform lowers too quickly:

1. Check the flow control has been properly set, and is the correct valve for the table application.

Platform will not lower:

1. Perimeter safety stop (if equipped) deflected. Check for obstructions under lift.
2. Check lowering valve and solenoid coil.

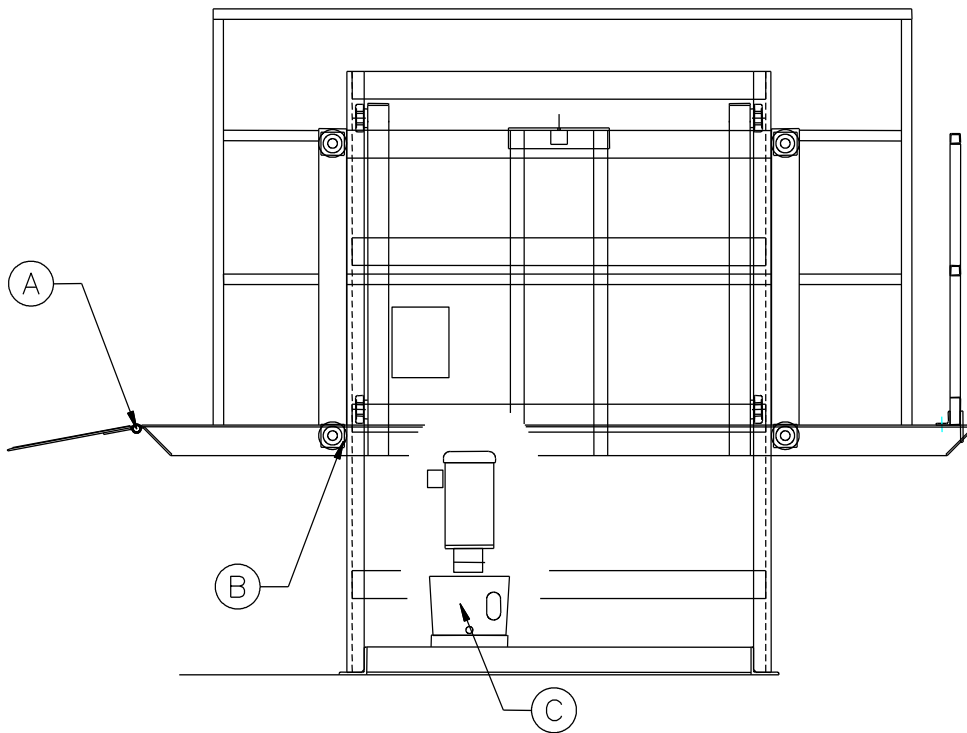
Maintenance and Lubrication

WARNING

Before operating or maintaining the rail lift, read and follow the 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.

WARNING: BOTH MAINTENANCE PINS MUST BE FULLY INSERTED IN THE MAST RAIL PRIOR TO PERFORMING ANY MAINTENANCE ON THE RAIL LIFT

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 rail lift.



Item	Lubrication	Adjustment	Cleaning
- A - Lip Hinge	Every 90 days Using light oil	None	Remove debris as required
- B - Mast Rail	Every 90 days Using grease	None	Remove debris as required
- C - Hydraulic oil reservoir	Check level daily Change oil yearly	None	Remove and clean strainer and magnet yearly

Acceptable Lubricants and Oils

Hydraulic

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

CHEVRON AW22

Grease

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

CHEVRON DURA-LITH EP-2

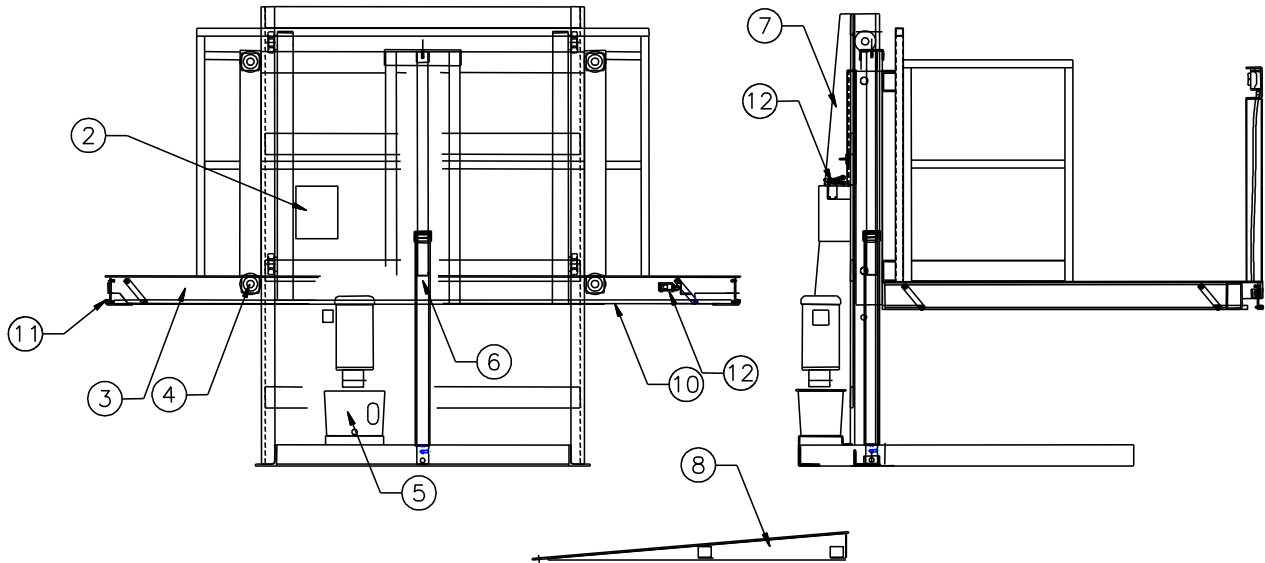
Light Oil

Light oils used should have a good penetrating quality, with water repelling and good adhesion qualities.

Parts and Service Tables

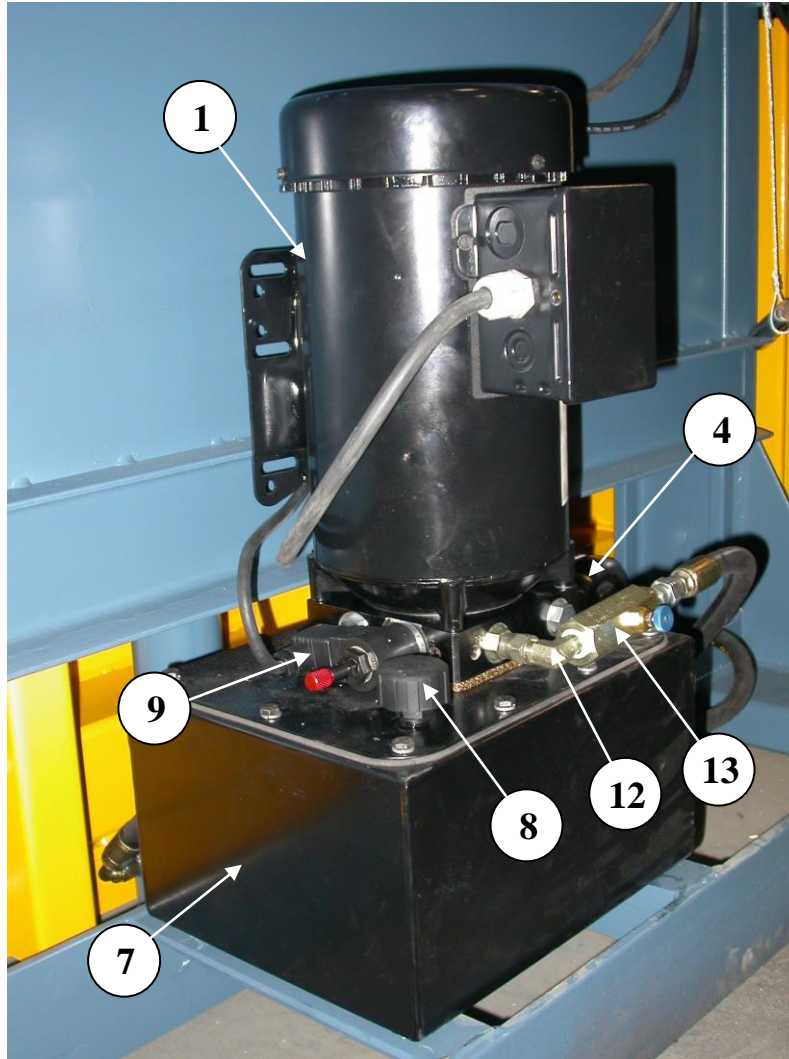
The following gives listings for all serviceable parts and assemblies that apply to the rail lift. For additional information please contact Nordock at 1-866-885-4276.

Main Components



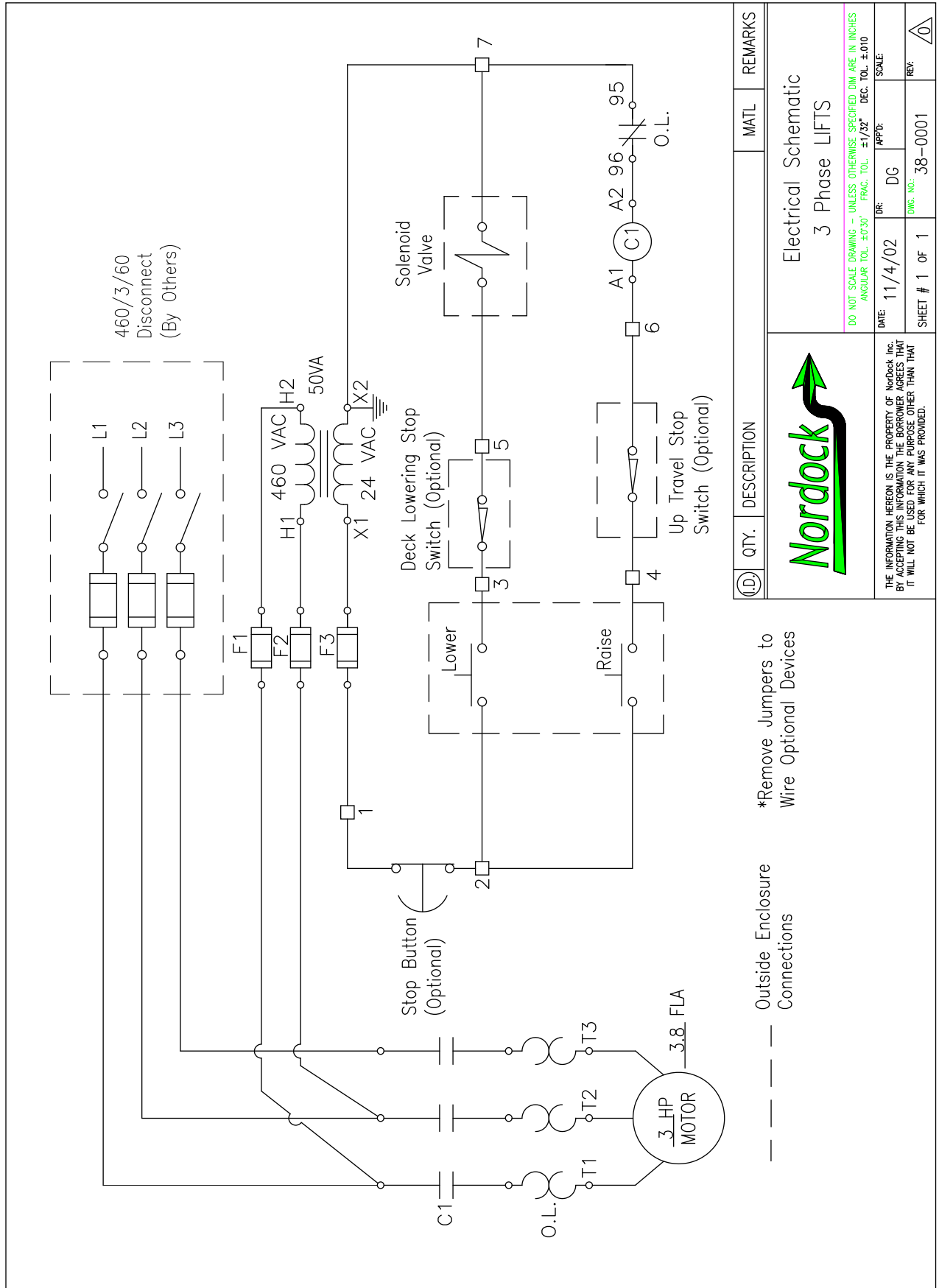
ID	Part No	Description	Qty.
1	32-0250	Lip Assembly – 18” x 66”, Steel	1
2	38-0165	Control Panel	1
3	32-0291	Car Assembly, 72 x 96 – 5K	1
4	13-0670	Mast Bearing, 4”	8
5	13-3469	Hydraulic Power Unit, 3HP, 460/3/60	1
6	C1-0090	Hydraulic Cylinder Assembly	1
7	32-0525	Mast Rail Frame Assembly	1
8	32-0417	Ramp Weldment – 30” x 66”, Steel	1
9	32-0017	Guard Rail Assembly (84”) Stake Pocket	1
10	-	Perimeter Safety Stop Assembly	N/A
11	-	Perimeter Safety Stop Assembly	N/A
12	-	Plunger Limit Switch Assembly	N/A
	32-0034	Pushbutton Control Station	1
	33-0308	Maintenance Pin	2



Hydraulic Power Unit



ID	Part No	Description	Qty.
	13-3469	Complete Motor Pump Assembly, except items 13,14,15	1
1	C/F	Motor, 3 HP, 460/3/60, 3450 RPM	1
2	C/F	Pump Bell Housing (inside reservoir)	1
3	C/F	Motor Coupler (inside reservoir)	1
4	C/F	Manifold Assembly	1
5	C/F	Hydraulic Pump, 2 GPM @ 3450 rpm (inside reservoir)	1
6	C/F	Suction Strainer (inside reservoir)	1
7	C/F	Hydraulic Reservoir, 4Gal	1
8	C/F	Filler/Breather Cap	1
9	C/F	Lowering Valve, cartridge	1
10	C/F	Solenoid Coil, 24VAC	1
11	C/F	Fitting, metric - #6 JIC	1
12	13-0742	Fitting, 90deg, #6 JIC female – 1/4NPT	1
13	13-0358	Flow Control	1
14	13-0100	Fitting, 1/4 NPT - #6 JIC male	1

Wiring Schematic



(D.) QTY.	DESCRIPTION	MATL	REMARKS
			Electrical Schematic 3 Phase LIFTS
<small>DO NOT SCALE DRAWING - UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES ANGULAR TOL. ±0.30° FRAC. TOL. ±1/32" DEC. TOL. ±.010</small>			
DATE:	11/4/02	DR:	DG
		APP'D:	SCALE:
SHEET #	1 OF 1	DWG. NO.:	38-0001
		REF:	

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