

# COATS®

**30,000 lb. (13,636 kg)**

**33,000 lb. (14,968 kg)**

## Closed Front Four Post Lifts

Medium Duty Commercial Lifts Capable of  
Safely Servicing Vehicles Small and Large

4T430CSSR1 / 4T433CSSR1 (Standard)

4T430CXSR1 / 4T433CXSR1 (Extended)

4T430CESR1 / 4T433CESR1 (Extra Long)



#4T430CSSR1 #4T433CSSR1

## Installation Manual Operation Manual Service Parts Manual

READ the manual thoroughly before installing, operating, servicing, or maintaining the lift. SAVE this MANUAL and ALL INSTRUCTIONS.

**HENNESSY**  
INDUSTRIES

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Hennessy Canada: 2430 Lucknow Drive, Unit 9, Mississauga, Ontario L5S 1V3 (905) 672-9440 [www.coatsgarage.com](http://www.coatsgarage.com)  
HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

Manual Part No.: 85611162 00  
Revision: 6/17

Your new lift will provide years of dependable service if installed, operated and maintained properly. Follow all safety, installation, operation, and maintenance instructions in this manual before installing and operating the lift. In addition, follow all safety and other information included on and with the lift before operating the lift. Keep this manual in a secure place for future reference, training and service part identification.

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**IMPORTANT:** It is the shop owner's responsibility to provide a satisfactory installation area for the lift. Lift should only be installed on level concrete floors with no more than 3° of slope and with a minimum of 4 inches (102mm) and 3000 psi (20.7MPa) concrete that has been aged a minimum of 30 days. Please consult a qualified individual if any doubt exists concerning proper installation and subsequent safe operation of the lift. Do not install the lift on asphalt or outdoors. Failure to comply with these minimum standards could result in personal injury or death.

Prior to installation, it is the shop owner's responsibility to provide constant electrical power in the correct voltage, phase, etc., and all wiring for electrical hook-up of the lift. The shop owner must insure that the electrical installation conforms to local building and safety codes. Where required, the shop owner will provide an electrical isolation switch located in close proximity to the lift. This switch will have an emergency stop capability and isolate electrical power from the lift for servicing requirements.

Hydraulic oil cannot be shipped with the lift and will be supplied by either the shop owner or the installer. ISO 32 hydraulic oil (10W non detergent hydraulic oil) must be used to fill the reservoir tank before operating the lift.

**It is the shop owner's responsibility to train all operators in lift operation and lift safety.**

# **IMPORTANT SAFETY INSTRUCTIONS**

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read and follow all safety instructions and decals included with the lift. Read and follow all safety instructions in this manual. Read and follow the ALI "Lifting It Right" manual (included with the lift). Always use the "Vehicle Lifting Points" reference guide when lifting a vehicle. Insure all materials stay up to date >>> [www.autolift.org/](http://www.autolift.org/).
2. Only trained and authorized personnel should position a vehicle and operate the lift. Do not allow customers or bystanders to operate the lift or be in the lift area.
3. Inspect the lift daily. Do not operate if potential problems have been identified or lift malfunctions. Do not operate if lift has damaged or broken components. Never walk or work under the lift unless all safety locks are completely engaged.
4. Never overload the lift. The rated capacity decal is located on the powerpack column. The hydraulic system on this lift is not designed to be a load holding device. Mechanical safety locks must be engaged before proceeding under the lift for vehicle servicing or lift maintenance. Never override operating controls. This is unsafe and will void the warranty.
5. Before driving a vehicle onto the lift, insure that both slip plates and turn plates have all lock mechanisms securely in place. Also insure that the lift and lift area is clear of all debris and that all oil and grease has been cleaned from runway surfaces.
6. Before raising or lowering the lift, always totally secure the vehicle with wheel chocks.
7. When using a jack(s) to raise a vehicle, position jack lifting pads to contact vehicle manufacturers recommended lifting points. Raise jack slowly until all pads contact the vehicle. Confirm that the vehicle is stable on the jack(s) before raising to desired working height.
8. Some pickup trucks may require optional truck adapters to clear running boards and other installed accessories. Special care must be exercised with pick-up trucks to insure safe lifting. Always use vehicle manufacturers lifting points and insure the contents of the cargo box will not affect vehicle balance while on the jack(s).
9. Important: Removal or installation of heavier parts can change the vehicle's center of gravity on the jack(s) resulting in a critical load shift. The vehicle may then be unstable. Plan ahead for this possibility to insure continued safety and refer to the vehicle manufacturer's service manual for recommended procedures.
10. Always keep the lift area free of obstructions and debris. Grease and oil spills should be cleaned up immediately.
11. Never raise a vehicle on the lift with passengers inside. Before lowering, check the lift and lift area and remove all obstructions. Before removing vehicle from the lift or lift area, confirm an unobstructed exit.
12. DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITH OUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED (ANSI 244.1).

# **SAVE THESE INSTRUCTIONS**

# Safety Instruction and Information Decal Kit (included with the lift)

Automotive Lift Institute, Inc.		WL200 Series Label Kit	
<p><b>CAUTION</b></p> <p>Lift to be used by trained operator ONLY.</p>	<p><b>CAUTION</b></p> <p>Authorized personnel only in lift area.</p>	<p><b>WARNING</b></p> <p>Clear area if vehicle is in danger of falling.</p>	<p><b>WARNING</b></p> <p>Remain clear of lift when raising or lowering vehicle.</p>
<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org ©1992 by ALI, Inc. ALI/WL200c</p>			
<p><b>SAFETY INSTRUCTIONS</b></p> <p>Read operating and safety manuals before using lift.</p>	<p><b>SAFETY INSTRUCTIONS</b></p> <p>Proper maintenance and inspection is necessary for safe operation.</p>	<p><b>WARNING</b></p> <p>Keep clear of pinch points when lift is moving.</p>	<p><b>WARNING</b></p> <p>Keep feet clear of lift while lowering.</p>
<p><b>SAFETY INSTRUCTIONS</b></p> <p>Do not operate a damaged lift.</p>	<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org ©1992 by ALI, Inc. ALI/WL200s</p>	<p><b>WARNING</b></p> <p>Do not override self-closing lift controls.</p>	<p><b>WARNING</b></p> <p>Chock wheel to prevent vehicle movement.</p>
<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org ©1992 by ALI, Inc. ALI/WL210w</p>			

**Review all safety information daily with all lift operators**

**LIFT SAFETY and LIFT MAINTENANCE MUST BE PART OF YOUR DAILY ROUTINE**

**IMPORTANT:**

**Insure Safety Instruction Decals and Hang Card are affixed to the lift immediately following installation and before the lift is used**

## OWNER/EMPLOYER RESPONSIBILITY

**The Owner/Employer shall** ensure that all lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM 93-1, ALI SAFETY Tips card; ANSI/ALI ALOIM-1994, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

**The Owner/Employer shall** establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions and ANSI/ALI ALOIM-1994, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance. The owner/employer shall also ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

**The Owner/Employer shall** establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions and ANSI/ALI ALOIM-1994, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance. The owner/employer shall also ensure that lift maintenance personnel are **qualified** and that they **are adequately trained** by factory in the maintenance of the lift.

**The Owner/Employer shall** maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-1994, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

**The Owner/Employer shall** display the lift manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-1994, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts in a conspicuous location in the lift area convenient to the operator.

**The Owner/Employer shall** provide necessary lockout/tagout means for energy sources per ANSI Z244.1-1982 (R1993), Safety Requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs.

**The Owner/Employer shall** not modify the lift in any manner without prior written consent of the manufacturer.

# LOCKOUT/TAGOUT PROCEDUGRE

This procedure establishes the **minimum** requirements for the lockout of energy that could cause injury to personnel by the operation of lifts in need of repair or being serviced. All employees shall comply with this procedure.

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Installers, contactors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in close proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

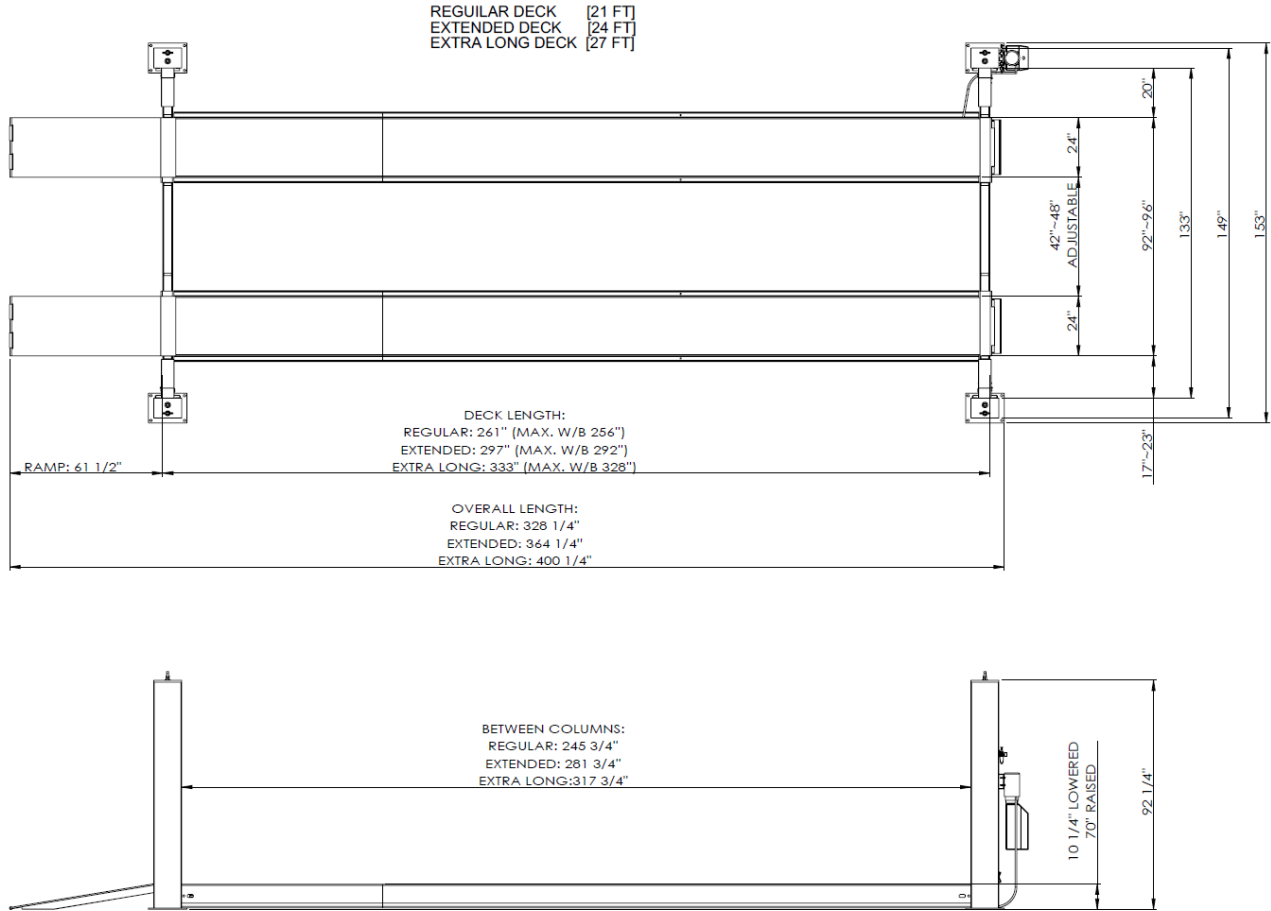
## **Lockout Procedure**

1. Notify all affected employees that a lockout is being performed and the reason for it.
2. Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift.
3. The authorized lockout person operates the main energy isolation device removing power to the subject lift. • If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional reactivation. An appropriate tag is applied stating the person's name, at least 3" x 6" in size, an easily noticeable color, and states not to operate device or remove tag. • If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
4. Attempt to operate lift to assure the lockout is working. Be sure to return any switches to the "OFF" position.
5. The equipment is now locked out and ready for the required maintenance or service.

## **Restoring Equipment to Service**

1. Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.
2. At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the lift may again be placed into operation.

# GENERAL REQUIREMENTS AND LIFT SPECIFICATIONS



**Max. Capacity 30,000 lb. (13,636 kg) - 15,000 lbs. (6,818 kg) each Runway**  
**Max. Capacity 33,000 lb. (15,000 kg) - 16,500 lbs. (7,500 kg) each Runway**

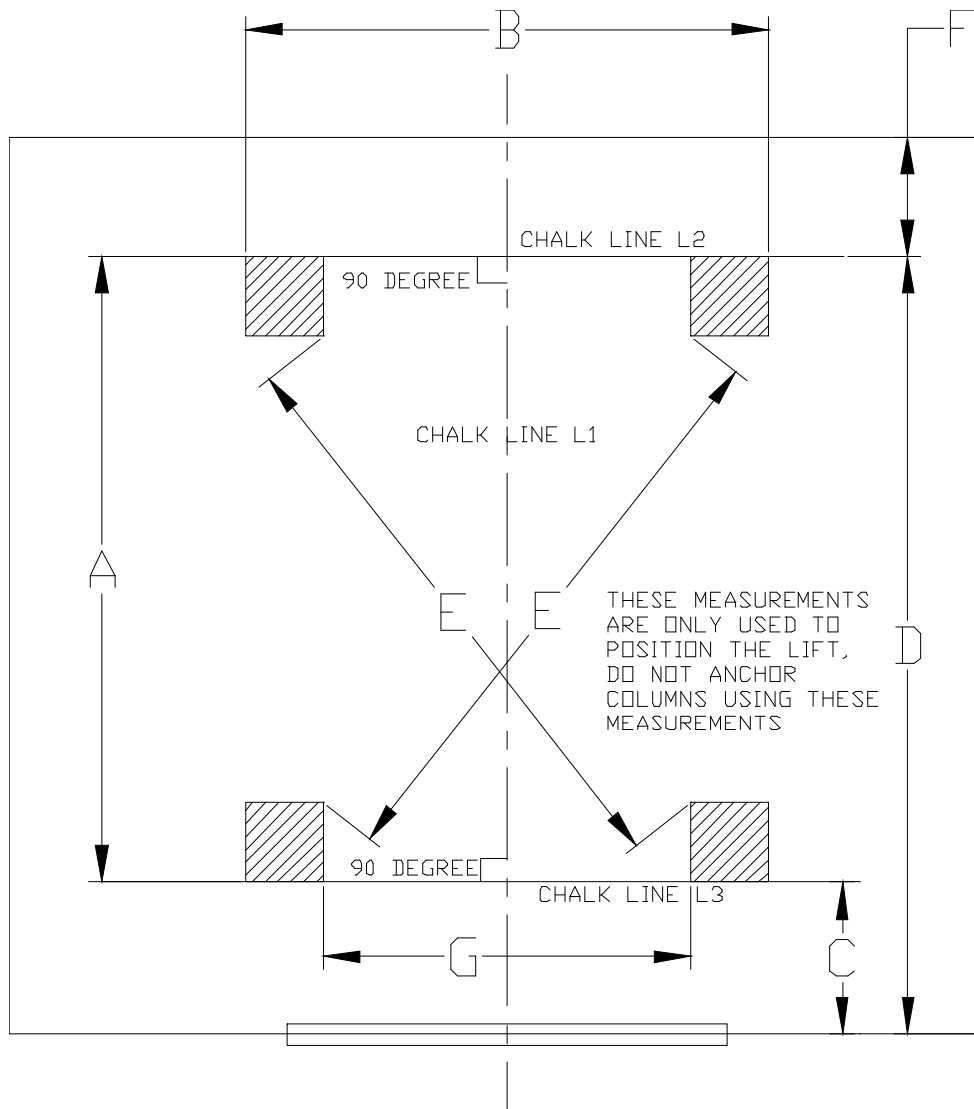
MODEL	Standard	Extended	Extra Long
Min. Wheelbase @ Rated Capacity	230"	230"	230"
Min. Wheelbase @ 75% Capacity	195"	195"	195"
Min. Wheelbase @ 50% Capacity	165"	165"	165"
Min. Wheelbase @ 25% Capacity	130"	130"	130"

**Lift should only be installed on level concrete floors with no more than 3° of slope and a minimum of 4 inches (102mm) and 3000 psi (20.7MPa) concrete that has been aged a minimum of 30 days. A qualified person should be consulted to address seismic loads and other local or state requirements. Do not install the lift on asphalt or outdoors.**

**A constant supply of 230 volt – 1 phase – 60 Hz – 30 amp electrical power is required for this lift.**

Ongoing design modifications and quality improvements may change specifications listed in this manual without notice

## RECOMMENDED BAY DIMENSIONS



	DESCRIPTION	Standard	Extended	Extra Long
A	Baseplate to baseplate	272.5"	308.5"	344.5"
B	Baseplate to baseplate	153"	153"	153"
C	Rear baseplate to door	Min. 60"	Min. 60"	Min. 60"
D	Front baseplate to door	Min. 332.5"	Min. 368.5"	Min. 404.5"
E	Diag. measurement	EQUAL	EQUAL	EQUAL
F	Baseplate to obstacle	Min. 60"	Min. 60"	Min. 60"
G	Baseplate to baseplate	129"	129"	129"

**Note: Each column must have at least 3ft clearance to obstacles (or consult local building code). Minimum ceiling height  $H = 70'' + \text{Greatest Vehicle Height}$ .**



# UNLOADING PROCEDURE and LIFT PACKAGE CONTENTS

All lift components are packaged together in one module held together by steel frames  
Optional accessories (rolling jacks and turnplates) are packaged separately.

## **When the lift arrives on site:**

- ✓ If possible have lift unloaded in the installation area and on two 4"x4"x24" Wooden Blocks (required for unpacking)
- ✓ Check for freight damage and report immediately to shipping company who delivered the lift
- ✓ Check for missing parts and report immediately to the factory 1-877-799-LIFT(5438) or (905)847-1198

## **Main Components include:**

- ✓ Columns – 4 pcs
- ✓ Runway Assemblies – 2 pcs
- ✓ Crossmember – 2 pcs (1 front – 1 rear)
- ✓ Approach Ramps – 2pcs
- ✓ Accessory and Hardware Box (see list below)
- ✓ Powerpack – 1 pc

## **Optional Accessories: (included only if ordered)**

- ✓ Rolling Air/Hydraulic Jacks (1 jack per box c/w coiled air line)

## **Accessory Box includes:**

- ✓ Hydraulic Hose – 1 pc
- ✓ Wheel Stops - 2
- ✓ WL 200 Series Safety Information Label Kit – 1pc
- ✓ ALI - "Lifting It Right " Manual – 1pc
- ✓ ALI - "Vehicle Manufacturer's Lifting Point Guide" (CD) – 1pc
- ✓ Automotive Lift Safety Tips Hang Card – 1pc
- ✓ Automotive Lift, Operation, Inspection and Maintenance Manual – 1pc
- ✓ Owner's Manual – 1pc

## **Hardware Box includes:**

- ✓ fittings, bolts, washers, nuts, anchor bolts, etc.



## **Important Notice**

**Krown Rust Proofing has been applied to specific areas of your new lift to ensure protection from corrosion.**

- Please do not be alarmed if fluid is noticed dripping from openings of the Drive on Runways. This is normal.
- The application of the Krown Rust Proofing is completed in the final stage of the lift assembly process. To ensure protection and coverage, a generous amount is sprayed and may still be in a more fluid phase of its setup when your new lift is put into service. This will diminish over time, while maintaining protection of areas that are unable to be otherwise protected with paint coating.

# TOOLS REQUIRED AND PRE INSTALLATION PROCEDURES

## Tools Required:

- ✓ 35ft. Measuring Tape - Chalk Line and Chalk
- ✓ 4"x 4" x 28" Wooden Blocks
- ✓ Fork Lift - Floor Jacks (2) - or engine crane
- ✓ Work Stands - 4 (runway set-up and installation)
- ✓ Metric and SAE Wrenches and Ratchet Sets
- ✓ Metric and SAE Allen Key Sets
- ✓ Crow Bar - Hammer - Screwdrivers
- ✓ 2 x 4 ft. Level (laser level also suggested)
- ✓ Rotary Hammer Drill c/w 3/4 inch diameter Masonry Drill Bit
- ✓ Step Ladder

## PRE-INSTALLATION PROCEDURE

Before proceeding with installation, read the installation manual and insure all instructions are fully understood and all component parts listed on page 3 are accounted for.

Identify bay center line near the front and mark the floor. Also mark center of the bay entrance. Connect these two points with a chalk line "L1". Refer to diagram on the next page for minimum clearance from bay entrance door and draw a second chalk line "L3" at 90° to the centerline. Refer to diagram and mark approximate locations of two rear columns. Refer to the diagram at right for measurements and minimum clearance from front wall or work bench and draw a third chalk line "L2" at 90° to the centerline. Refer to diagram and mark the locations of all four columns. **These locations will be used to initially position each column, however, the 4 most critical measurements will be inside column to inside column measurements confirmed later in the installation process.**

Confirm that the column baseplate locations you have marked are a minimum distance of six (6) inches from any floor seam. Do not install if floor has cracks or deterioration that could affect lift stability. The shop owner is responsible for confirming there are no obstructions in the installation area like floor drains, under floor piping or electrical conduit that could be damaged or prevent safe lift installation and secure lift anchoring. Check ceiling for beams or heating ducts and walls for protruding structures, etc. (overhead clearance must be 84 inches plus the height of the tallest vehicle you want to lift). Insure that the lift can be safely installed in the position you have marked out on the bay floor.

# INSTALLATION PROCEDURE

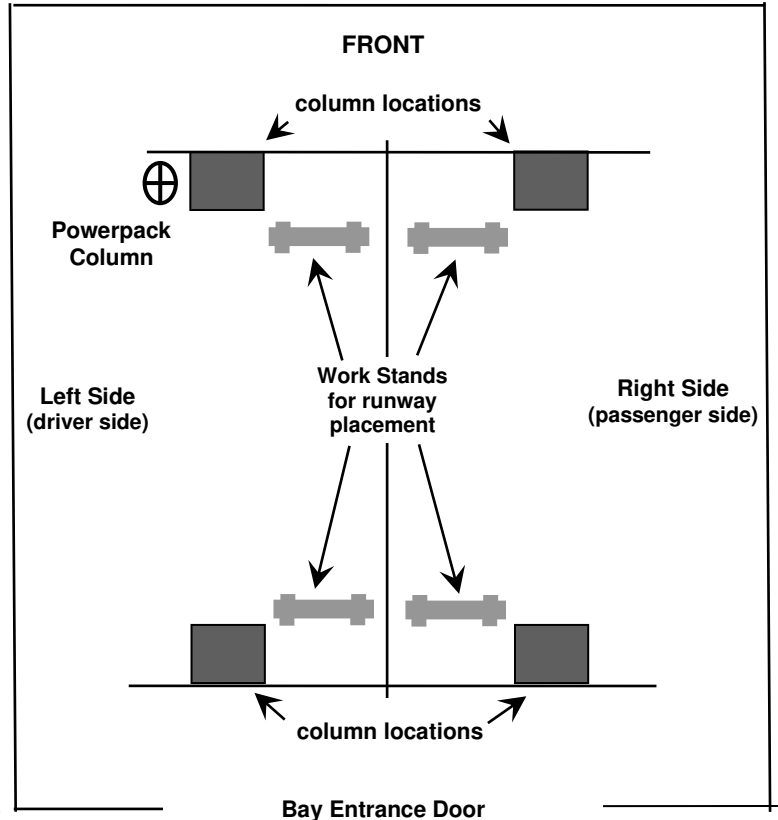
Insure the lift installation complies with ANSI/ALI/ALIS, Safety Requirements for Installation and Service of Automotive Lifts.

1. Remove protective wrapping from the lift and clear installation area of packaging materials. Place two 4"x4"x 24 " wooden blocks under the lift to enable fork lift or other access and to allow for removal of shipping frames. Unbolt steel shipping frames and remove from installation area. Take adequate precautions when working with runways, columns and other components.

2. Work stands are recommended for safety and ease of runway and carriage assembly. As an alternative, use wooden blocks to raise runways off the floor. Position work stands (or wooden blocks) as shown in the diagram to the right.

3. Identify front crossmember and set it securely on top of front work stands. Insure the end with 2 single pulleys is next to the powerpack (driver side) column. Unbolt one of the guide blocks on each end of the front crossmember.

4. Place one front column into each end of the front crossmember insuring the guide blocks are centered in the grooves of the column walls. (To do this, safety ladder must be pulled out from the tower and then put back into the crossmember).



5. Slide the unbolted guide blocks you removed in step 3 down from the top of each column and bolt back in place on the crossmember ends.

6. Carefully lift rear crossmember and set it securely on top of the rear work stands. Insure the end with 2 double pulleys is on the same side as the powerpack (driver side) column and in line with the front crossmember single pulley (see diagram #6 - cable routing).

7. Unbolt one of the guide blocks on each end of the rear crossmember.

8. Place one rear column into each end of the rear crossmember insuring the guide blocks are centered in the grooves of the column walls.

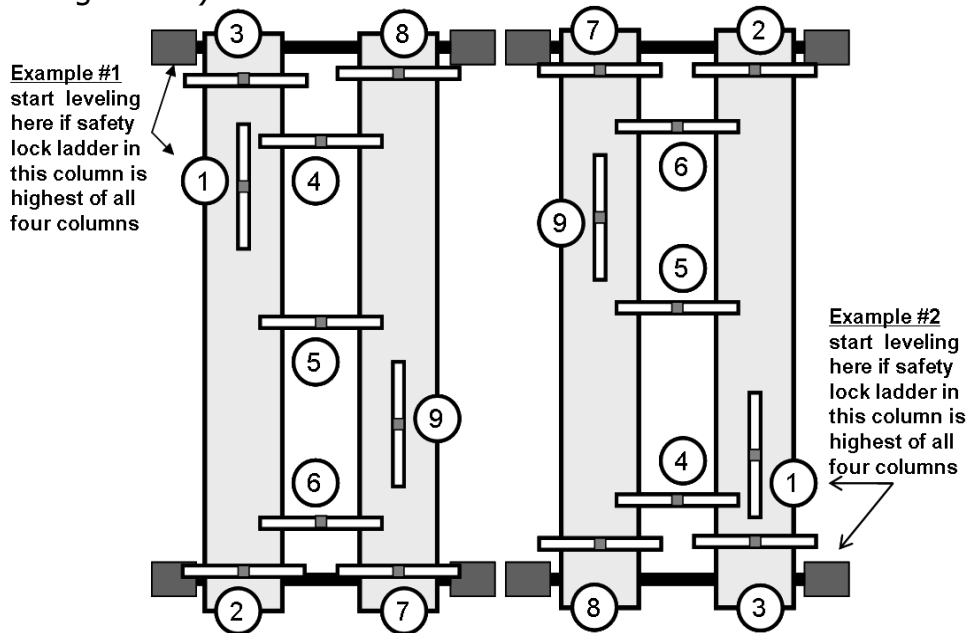
9. Slide the unbolted guide blocks you removed in step #7 down from the top of each column and bolt back in place on the crossmember ends.

10. Carefully lift the left (driver side) runway and set it securely on top of both front and rear crossmembers. Confirm this runway has the hydraulic cylinder underneath. Also confirm this runway has the hydraulic hose connection located at the front next to the powerpack column. Make sure the cylinder bottom hinge is close to rear columns (see diagram #6 for cylinder direction). Insure that both the front and rear of the runway is seated properly on both crossmembers. If the runway does not seat properly on both crossmembers, carefully move one or both crossmember and column assemblies slightly to fit on its crossmember support.
11. Carefully lift the right (passenger side) runway and set it securely on its support on top of both front and rear crossmembers.
12. Route the lifting cables as shown in diagram #6. Insure that no cable is crossed during this process. **IMPORTANT:** Insure all cables are completely contained and properly seated in each sheave groove. (Install pulleys under the deck after properly laying the cable.)
13. Secure each of the four cables in the wire rope anchor located at the shaft end of the hydraulic cylinder. Put cable retainer(diagram #9, item 5) to secure cables.
14. Attached each cable to the proper column top plate using a washer and 3/4" nuts (reference diagram #4).
15. Use a 4 ft. level to insure each column is vertically plumb and at a 90° angle to the crossmember. Also insure opposite columns for each crossmember are symmetrical in configuration. Make only minor adjustments to accomplish this.
16. Reconfirm column level and symmetric position relative to crossmember and opposite column. Starting with the left front (powerpack) column, drill anchor bolt holes and install anchor bolts (reference diagram #8).
17. Reconfirm column level and symmetric position relative to crossmember and opposite column for each of the three remaining columns. Drill and install anchor bolts (reference diagram #8). Shim anchor bolts if necessary.
18. Install runway approach ramps and wheel stops to the runways (diagram #15 and #16).
19. Install powerpack (diagram #5).
20. Route and connect hydraulic hose (diagram #7).
21. Route air line and connect to air solenoid (diagram #5 and diagram #14).
22. Fill powerpack reservoir with ISO grade 32 hydraulic oil (19 liters or 5 U.S. gallons).
23. Confirm electrical wire is sized for a minimum 30 amp circuit and supplying 208/230 volts. Use a separate circuit for each powerpack. Protect each circuit with a time delay fuse or circuit breaker. For single phase power use a 30 amp fuse. For three phase power use a 20 amp fuse. All wiring must comply with national and local codes.

**NOTE:** All electrical wiring should be installed and connected by a **certified electrician**.

24. Connect powerpack to shop electrical system.

25. Connect air solenoid to shop air system (90~120 psi).
26. Press the manual over-ride button on the air solenoid and confirm that all four safety latches are working properly. Confirm there are no leaks in the air system.
27. Raise the lift 2 ~ 3 ft. while checking for proper direction of rotation on the electric motor. Confirm there are no leaks in the hydraulic system.
28. Lower the lift (you may first have to raise the lift slightly to disengage the mechanical safety locks). When lowering, continuously hold down both the air valve and hydraulic lowering valve.
29. Raise and lower the lift several times to remove any air from the hydraulic system.
30. Raise the lift 3 ft. and confirm that all four safety latches engage and disengage completely.
31. Refer to diagram at bottom. Commence adjusting the level of both runways by tightening or loosening the wire rope (cables) using the  $\frac{3}{4}$ " NC Hex Nut at the top of each column. (reference diagram #4).



33. Lower the lift and allow it sit at same locking position on each safety ladder, adjust bolts on those ladders to make sure the lift is leveled at each corner.
32. FINAL TEST: Raise the lift to its highest limit and continue to hold the "UP" switch on the powerpack for about four (4) seconds. This will test the lifting system for maximum load capacity. Following this test, check for leaks and tighten any loose connections.
33. Use plastic ties and clamps to secure all hydraulic and air lines that droop or hang down from the lift. Install a hose protector if required. **Insure that no hydraulic or air line comes in contact with any lifting cable.**
34. **Operate the lift with a vehicle.** Raise and lower the lift three times. Confirm all the operational functions, equalizing cables and safety lock work well.

## **PRE-OPERATION CHECK LIST**

### **Trained Lift Operator**

- ✓ All lift operators must be fully trained and qualified to safely and effectively operate the lift described and covered in this manual.

### **Absence of All Obstructions**

- ✓ The total work area must be free of any and all obstructions and be generally clean of oil and debris.

### **Visual Inspections**

- ✓ Every lift operator must thoroughly inspect the lift noting any problem area. An inspection of the floor area and anchor bolts must also be completed. Report any questionable item.

### **"No Load" Performance Check**

- ✓ All mechanical safety locks are operating properly and consistently
- ✓ No External Fluid Leaks
- ✓ No Lift "Bleed Down".
- ✓ Effortless and Simultaneous Movement
- ✓ Level Lifting
- ✓ All Controls Function Properly
- ✓ Safety Mechanisms all functional

### **Previous Operator's Report**

- ✓ Verify with previous operator and/or supervisor that there is no problem with the lift. If problems have been reported, insure all necessary repairs have been completed.

**Insure this manual along with all operation, inspection and maintenance instructions are delivered to the owner, user and employer.**

# OPERATING INSTRUCTIONS

## To Load a Typical Vehicle

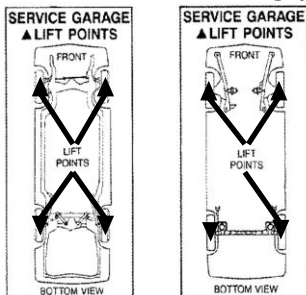
- ✓ Identify vehicle wheelbase and refer to page 8 to determine the capacity of the lift, the gross weight of the vehicle must not exceed the capacity shown in the table.
- ✓ Check the **flip-up style wheel stop** at the front are developed in place.
- ✓ Position vehicle on the lift runways by using the approaching ramp. Make sure the center of gravity is located evenly between the columns. The individual axle weight should not exceed 50% of the lift capacity.
- ✓ Set vehicle parking brake and chock tires.
- ✓ Make sure vehicle is neither front nor rear heavy.

## To Load a unusual Vehicle

- ✓ Call factory for technical support with vehicle spec before loading.

## To Raise the Lift

- ✓ Push "up" at the motor button to raise the lift by about 10".
- ✓ Check the vehicle movement and weight distribution. Raise to desired height if secure.
- ✓ Press "down" handle to lower lift on to the mechanical safeties. Make sure all safety locks sit on the same position of the safety ladders.
- ✓ When using air/hydraulic rolling jacks, always use vehicle manufacturer's recommended lifting points



Typical Label Drawings  
Reprinted with permission from SAE J2184  
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## To Lower the Lift

- ✓ Inspect the lifting area to insure all personnel and debris have been cleared away.
- ✓ Raise the lift slightly and then disengage all safety locks by pulling the air operated safety release handle.
- ✓ Press the lowering lever on the power unit to begin lowering. Safety locks must be all disengaged during the lowering.
- ✓ Lower lift completely to the floor and carefully drive off the vehicle from the lift runways.

**Warning: Never allow anyone under the lift when raising or lowering. Always insure mechanical safety locks are completely engaged on all four columns before proceeding under the lift or a vehicle.**

**Note: Always lock both slip plates and turnplates following alignment adjustments and before removing vehicle from the lift.**



# MAINTENANCE INSTRUCTIONS

The maintenance is to be performed by factory trained lift service personnel only.

**Important:** Regularly inspect the hydraulic pressure developed upon the rated capacity, and make sure the pressure doesn't exceed the operating pressure (**2,500 psi**).

**LIFT MAINTENANCE:** The following is a minimum maintenance schedule:

**DAILY:**

- ✓ Raise and lower the lift (with no vehicle) at the beginning of each shift to verify the runways are level, safety locks are engaging, and the lift is operating properly.
- ✓ Check all hydraulic fittings and lines for damage and leaks. Check electrical wiring for damage. Check all moving parts for uneven or excessive wear. Repair or replace all damaged, worn, or broken components immediately.
- ✓ Clean all debris from the base frame area
- ✓ Remove oil/grease on runways and rolling jack lift pads.

**WEEKLY:**

- ✓ Check hydraulic fluid in reservoir and top up if required.
- ✓ Check cables, cable pulleys and lifting cylinder.

**MONTHLY:**

- ✓ Check that all anchor bolts are torqued to 110 ft-lbs (150Nm).
- ✓ Clean and lubricate moving parts (diagram 18).

**EVERY YEAR:**

- ✓ Have a certified lift technician inspect and certify all aspects of the lift as per "Automotive Lift Operation, Inspection and Maintenance" (ALOIM) guidelines.

**EVERY TWO YEARS:**

- ✓ Change and replace hydraulic oil in cylinders and powerpack reservoir.

**LUBRICATION SPECIFICATIONS:**

- ✓ Where grease is required use a multi-purpose lithium grease
- ✓ Where lubricating oil is required use a SAE 30 oil
- ✓ Where hydraulic oil is required use ISO 32 hydraulic oil (10W non detergent)

## **WARNING:**

**FAIL TO LUBRICATE MAY CAUSE PERMENENT DAMAGE TO THE LIFT**

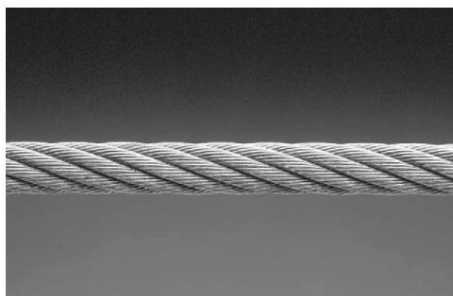
**The following criteria will determine when a lifting cable is no longer acceptable for service:**

- ✓ 12 randomly distributed broken wires in one lay or four broken wires in one strand in one lay in running ropes
- ✓ one outer wire broken at the contact point with the core of the rope, which has worked its way out of the rope structure and protrudes or loops out from the rope structure
- ✓ wear of one-third the original diameter of outside individual wires
- ✓ kinking, crushing, birdcaging, or any other damage resulting in distortion of the rope structure
- ✓ evidence of heat damage from any cause

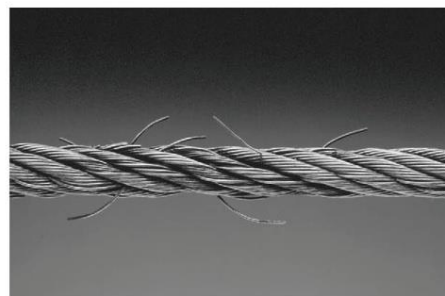
Reduction from nominal diameter greater than those listed in the following table:

<b>Rope Diameter (inch)</b>	<b>Maximum allowable reduction from Nominal Diameter (inch)</b>
Less than or equal to 5/16	1/64
More than 5/16 to 1/2	1/32
More than 1/2 to 3/4	3/64

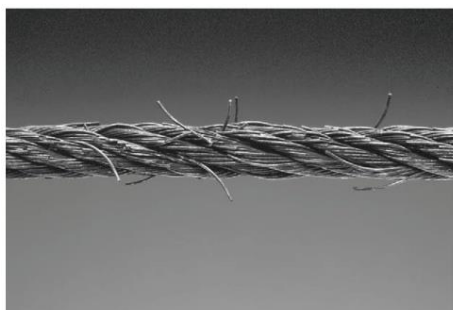
**Note:** Attention shall be given to end connections. Upon development of two broken wires adjacent to socket end connections, the rope shall be resocketed or replaced. Resocketing shall not be attempted if the resulting rope length will be insufficient for proper operation. If any of the cable is as shown in the following pictures, do not use.



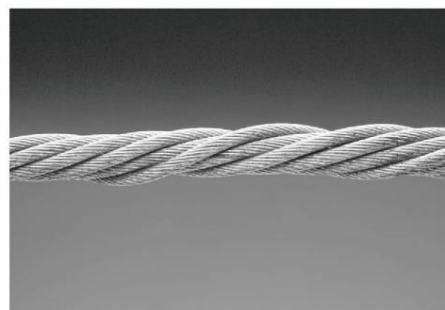
Typical Good Cable



Cable With Broken Wires



Cable With Severe Corrosion



Cable With Necking

# TROUBLESHOOTING GUIDE

The following are suggestions to consider if you have problems with the lift. Please call a qualified lift technician and/or a qualified electrician for further clarification and information.

<b>Problem</b>	<b>Possible Causes</b>	<b>Solution</b>
Lift Will Not Raise or Lower	<ol style="list-style-type: none"> <li>1. Blown fuse or circuit breaker</li> <li>2. Tripped thermal overload</li> <li>3. Incorrect voltage to motor</li> <li>4. Bad wiring connections</li> <li>5. "UP" switch burned out</li> <li>6. Motor windings burned out</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace fuse or reset/replace circuit breaker</li> <li>2. Reset thermal overload</li> <li>3. Supply correct voltage to motor</li> <li>4. Repair and insulate all connections</li> <li>5. Replace switch</li> <li>6. Replace motor</li> </ol>
Lift Will Not Raise	<ol style="list-style-type: none"> <li>1. Air in oil or low oil level</li> <li>2. Lowering Valve leaks</li> <li>3. Motor runs backward</li> <li>4. Pump damaged</li> <li>5. Pump will not prime</li> <li>6. Relief Valve leaks</li> <li>7. Voltage to motor incorrect</li> <li>8. Lift overloaded</li> </ol>	<ol style="list-style-type: none"> <li>1. Check fluid level, oil seal, bleed system</li> <li>2. Clean valve or replace</li> <li>3. Check for correct wiring</li> <li>4. Repair or replace pump</li> <li>5. Check fluid level and pick-up tube - replace pump</li> <li>6. Clean Relief Valve (replace if necessary)</li> <li>7. Supply correct voltage to motor</li> <li>8. Verify that loaded vehicle weight does not exceed rated lift capacity</li> </ol>
Lift Will Not Lower	<ol style="list-style-type: none"> <li>1. Mechanical locks are engaged</li> <li>2. Obstruction under lift or in glide block tracks</li> <li>3. Faulty lowering solenoid valve</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise unit slightly and disengage mechanical locks</li> <li>2. Carefully remove obstruction - clean glide block tracks</li> <li>3. Replace valve</li> </ol>
Lift Will Not Hold Pressure	<ol style="list-style-type: none"> <li>1. Contamination in system</li> <li>2. Internal Cylinder leaks</li> <li>3. Lowering Valve leaks</li> <li>4. Check Valve leaks</li> <li>5. External leaks</li> </ol>	<ol style="list-style-type: none"> <li>1. Check oil level - bleed cylinders - remove contamination - replace oil seal</li> <li>2. Check fitting, replace cylinder</li> <li>3. Contaminated fluid, handle binds, clean valves</li> <li>4. Clean check valve (replace if necessary)</li> <li>5. Check all fittings and repair leaks</li> </ol>
Lift Will Not Raise A Vehicle	<ol style="list-style-type: none"> <li>1. Low hydraulic fluid</li> <li>2. Malfunction of pressure relief valve</li> <li>3. Insufficient electrical voltage</li> <li>4. Lift overload</li> <li>5. Motor is running backwards</li> <li>6. Air in hydraulic oil</li> <li>7. Pump will not prime</li> <li>8. Pump is damaged</li> <li>9. Faulty lowering valve</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower lift. Using ISO grade 32 hydraulic oil, fill the powerpack reservoir to 1" below the top</li> <li>2. Clean pressure relief valve. if problem continues, call a service technician</li> <li>3. Confirm a 208/230 volt power supply to the lift</li> <li>4. Check that vehicle weight is evenly distributed and does not exceed rated capacity.</li> <li>5. Confirm proper motor rotation - rewire if required</li> <li>6. Check oil seal and bleed hydraulic system</li> <li>7. Check hydraulic oil level and pick-up tube. Replace pump if required</li> <li>8. Repair or replace pump</li> <li>9. Clean or replace valve</li> </ol>

<b>Problem</b>	<b>Possible Causes</b>	<b>Solutions</b>
Slow Drift Down	<ol style="list-style-type: none"> <li>1. Mechanical safety locks not engaged</li> <li>2. Powerpack lowering valve contamination</li> <li>3. Hydraulic system leaks</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise lift to engage all safety locks then lower lift and confirm all safety locks are engaged</li> <li>2. Back flush powerpack by opening manual over-right valve. Engage "up" switch and down lever at the same time and run approximately 10 seconds</li> <li>3. Check cylinder and all fittings for any hydraulic oil leak</li> </ol>
Lift Going Up Out of Level	<ol style="list-style-type: none"> <li>1. Lift installed on un-level floor</li> <li>2. Cable(s) out of adjustment</li> </ol>	<ol style="list-style-type: none"> <li>1. Reinstall on level surface</li> <li>2. re-adjust cables - Call service technician if problem persists</li> </ol>
Anchors Will Not Stay Tight	<ol style="list-style-type: none"> <li>1. Holes drilled oversize</li> <li>2. Concrete floor thickness or holding strength not sufficient</li> </ol>	<ol style="list-style-type: none"> <li>1. Relocate lift using the correct bit to drill holes</li> <li>2. Break out old concrete and re-pour new foundation per lift installation instruction</li> </ol>

**Call factory for technical assistance if lift becomes inoperative in the raised position.**

**Replace all worn or broken parts and components only with manufacturer approved/supplied parts and components**

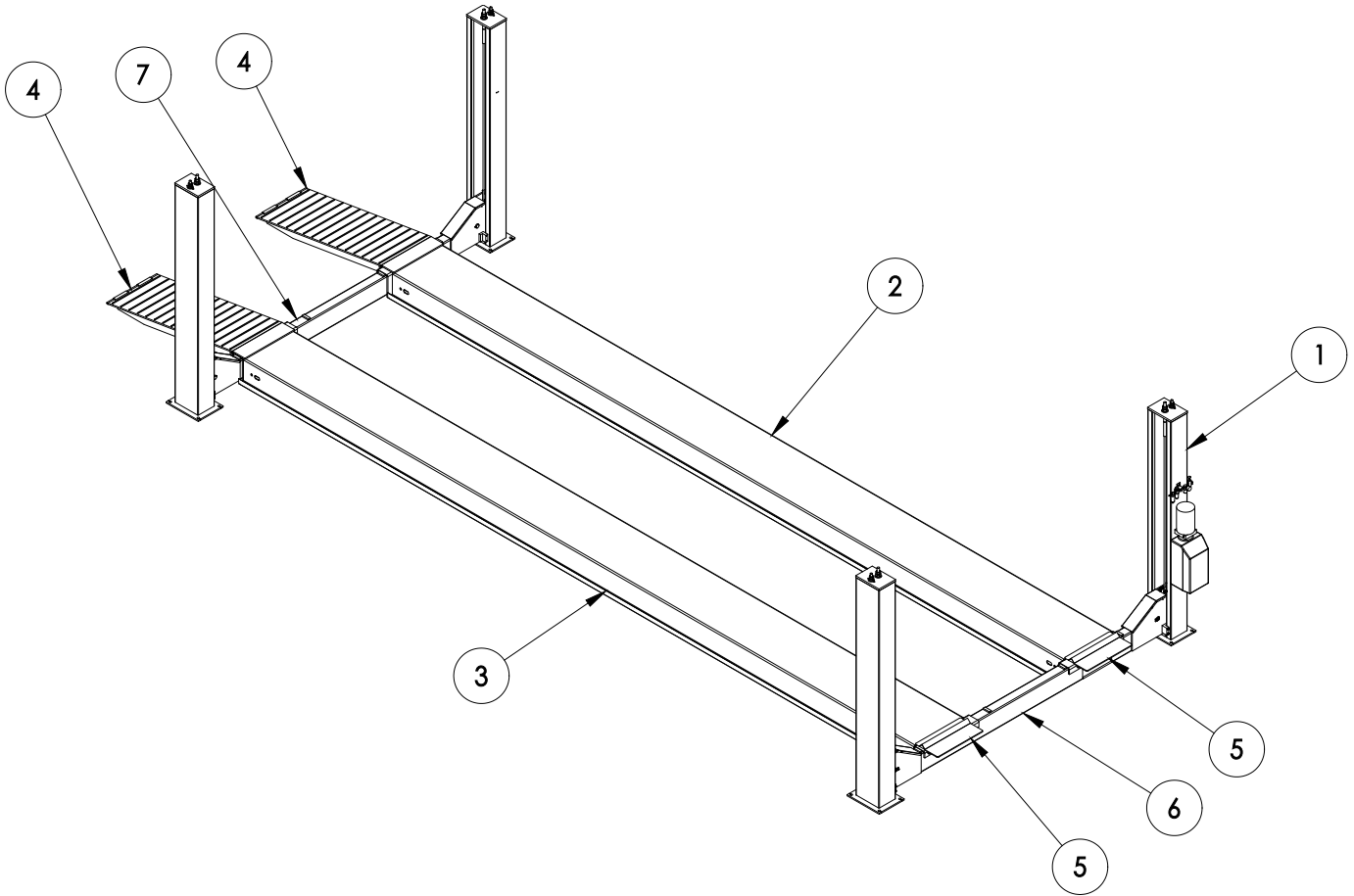
**Replacement parts may be purchased from your local lift supplier or the manufacturer at 1-877-799-LIFT (5438) or (905) 847-1198**

## LIFT ILLUSTRATIONS AND PARTS LISTS

The diagrams listed below, along with related parts lists, will assist you when installing and servicing this lift. Please ensure these lift diagrams and parts lists are kept in a secure place for quick reference.

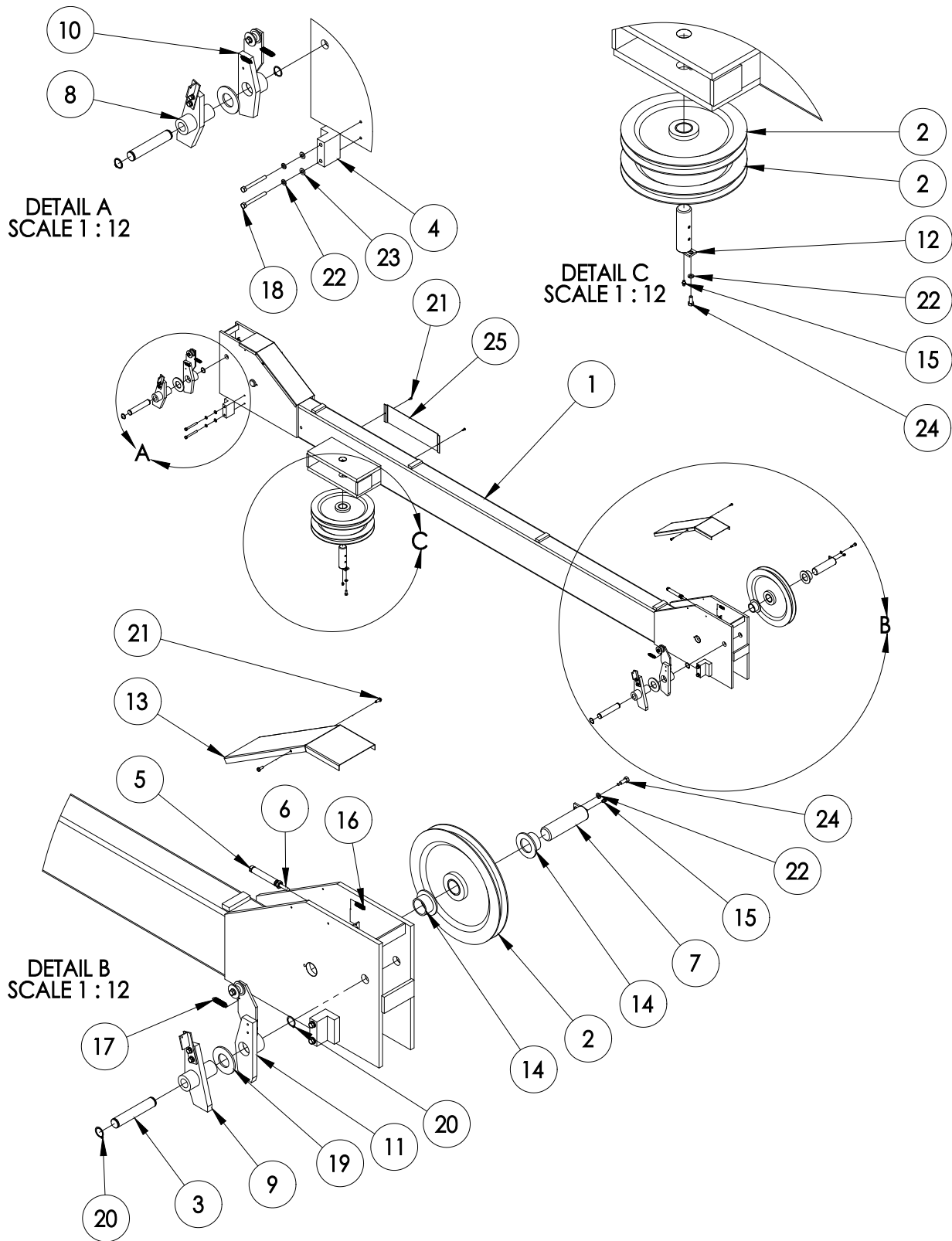
Diagram #1 - Lift Assembly.....	page 23
Diagram #2 - Front Crossmember.....	page 24
Diagram #3 - Rear Crossmember.....	page 25
Diagram #4 - Tower Assembly.....	page 26
Diagram #5 - Power Unit and Air Kit Mounting.....	page 27
Diagram #6 - Lifting Cable Routing.....	page 30
Diagram #7 - Hydraulic Line Assembly.....	page 32
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## Diagram #1: Lift Assembly



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	44300001	TOWER ASSEMBLY	4
2	44300002	DECK ASSEMBLY (DRIVER SIDE)	1
3	24300004	DECK WELDMENT (PASSENGER SIDE)	1
4	44300009	APPROCHING RAMP	2
5	44180012	WHEELSTOP ASSEMBLY	2
6	44300005	CROSSBEAM ASSEMBLY (FRONT)	1
7	44300004	CROSSBEAM ASSEMBLY (REAR)	1

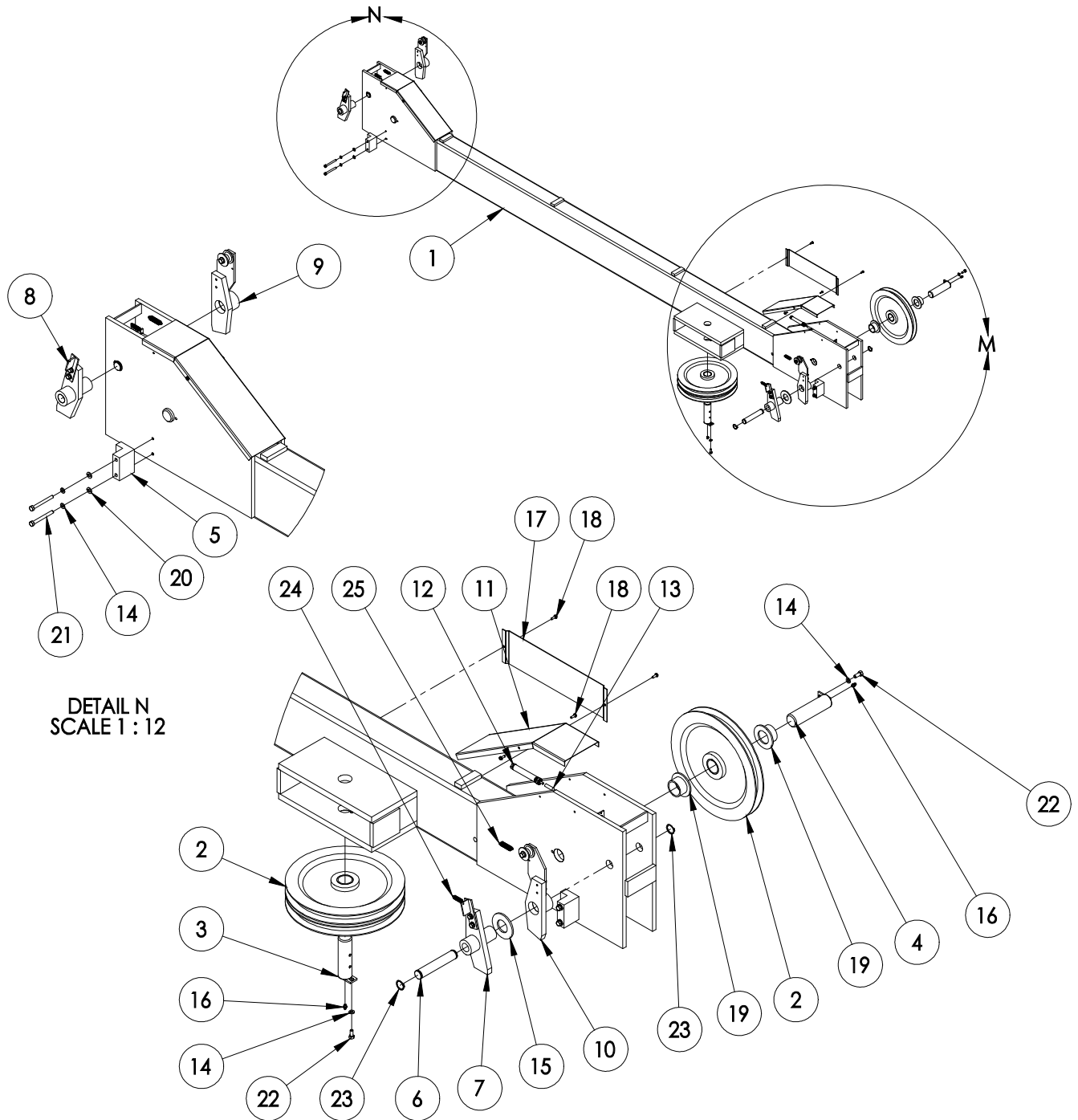
## Diagram #2: Front Crossmember



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300005	FRONT BEAM WELD.	1
2	44300006	PULLEY ASSEMBLY	10
3	14300051	SAFETY PIN	4
4	14180049	SLIDER BLOCK	8
5	34180000	BIMBA CYLINDER	4
6	14180031	AIR CYLINDER TAPPET	4
7	24300013	CROSSBEAM PULLEY SHAFT WELD.	4
8	44300007	SAFETY LOCK ASSEMBLY A	2
9	44300007	SAFETY LOCK ASSEMBLY B	2
10	44300008	CABLE LOCK ASSEMBLY A	2
11	44300008	CABLE LOCK ASSEMBLY B	2
12	24300015	FRONT & REAR PULLEY SHAFET WELD.	2
13	14300037	SHEAVE COVER	4
14	24300017	PULLEY SPACER WELD.	8
15	31140013	GREASE FITTING	6
16	14180078	SAFETY LOCK SPRING	4
17	14180089	CABLE LOCK SPRING	4
18	3C000039	5/16"-18X3" HEX BOLT	16
19	3C000185	1 1/2" FLAT WASHER	4
20	3C000053	1" RETAINING RING	8
21	3C000182	#10 SELF TAPPING SCREW	12
22	3C000000	5/16" SPRING LOCK WASHER	33
23	3C000023	5/16" FLAT WASHER	20
24	3C000001	5/16"-18X3/4" HEX BOLT	7
25	14300202	PULLEY COVER	2

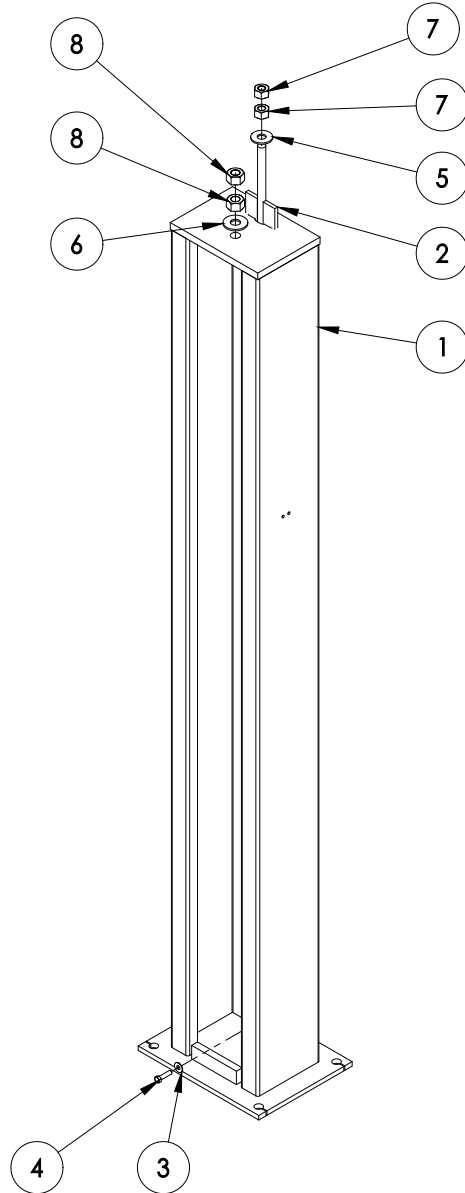


# Diagram #3: Rear Crossmember



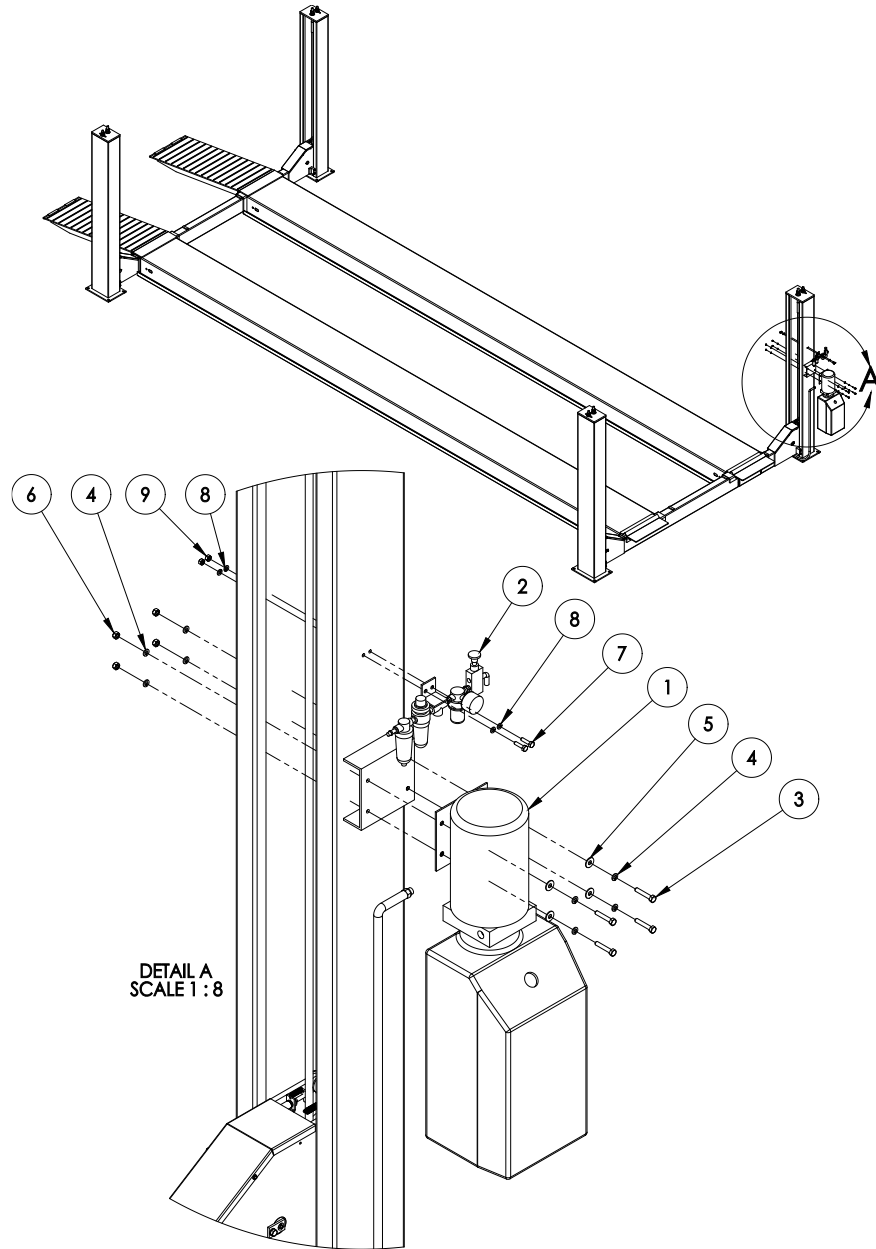
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300006	REAR BEAM WELD.	1
2	44300006	PULLEY ASSEMBLY	10
3	24300015	FRONT & REAR PULLEY SHAFT WELD.	2
4	24300013	CROSSBEAM PULLEY SHAFT WELD.	4
5	14180049	SLIDER BLOCK	8
6	14300051	SAFETY PIN	4
7	44300007	SAFETY LOCK ASSEMBLY B	2
8	44300007	SAFETY LOCK ASSEMBLY A	2
9	44300008	CABLE LOCK ASSEMBLY A	2
10	44300008	CABLE LOCK ASSEMBLY B	2
11	14300037	SHEAVE COVER	4
12	34180000	AIR CYLINDER	4
13	14180031	AIR CYLINDER TAPPET	4
14	3C000000	5/16 SPRING LOCK WASHER	33
15	3C000185	1 1/2" FLAT WASHER	4
16	31140013	GREASE FITTING 1/4-20 UNC	6
17	14300202	PULLEY COVER	2
18	3C000182	#10 SELF TAPPING SCREW	12
19	24300017	PULLEY SPACER WELD.	8
20	3C000023	5/16 REGULAR WASHER	20
21	3C000039	5/16"-18 X3" HEX BOLT	16
22	3C000001	5/16"-18 X 3/4" HEX BOLT	7
23	3C000053	1" RETAINING RING	8
24	14180078	SAFETY LOCK SPRING	4
25	14180089	CABLE LOCK SPRING	4

### Diagram #4: Tower Assembly



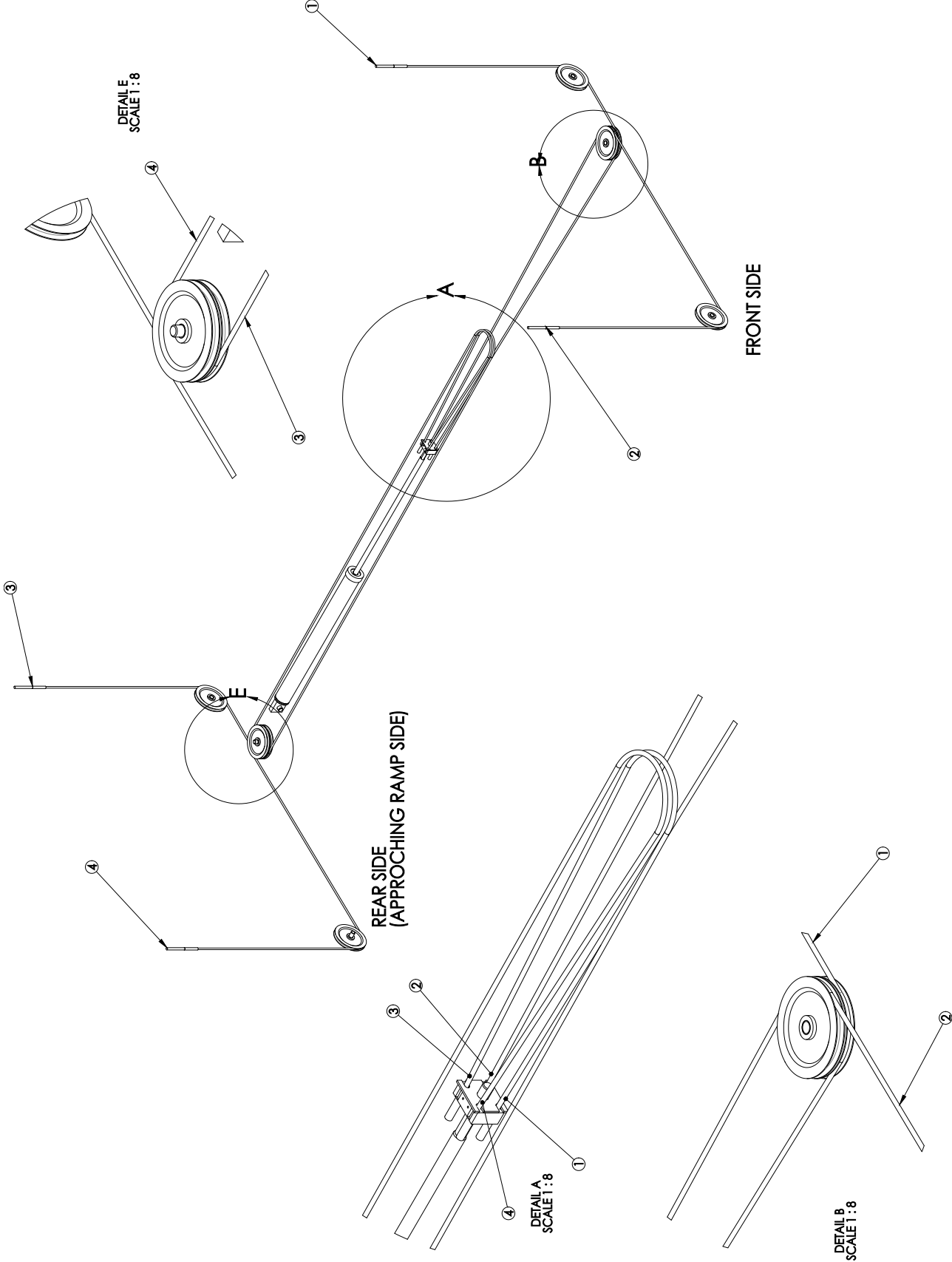
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300001	TOWER WELDMENT	4
2	24300002	SAFETY LADDER	4
3	3C000152	3/8" WASHER	4
4	3C000141	3/8"X1 1/2" BOLT	4
5	3C000035	3/4" WIDE WASHER	4
6	3C000046	7/8" WIDE WASHER	4
7	3C000036	3/4" HEX NUT	8
8	3C000047	7/8" HEX NUT	8

## Diagram #5: Power Unit and Air Kit Mounting



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	34300200	POWER UNIT	1
2	44180011	PNEUMATIC CONTROLS	1
3	3C000144	5/16" BOLT	4
4	3C000000	5/16" SPRING LOCK WASHER	33
5	3C000143	5/16" FLAT WASHER	4
6	3C000145	5/16" HEX NUT	4
7	3C000051	1/4" HEX BOLT	2
8	3C000044	1/4 SPRING LOCK WASHER	20
9	3C000147	1/4" HEX NUT	2

# Diagram #6: Lifting Cable Routing



**Extra Long Model (27' Deck)**

ITEM NO.	PART NUMBER	Description	OAL	QTY.
1	34300100	DRIVER FRONT CABLE	299.5"	1
2	34300101	PASSENGER FRONT CABLE	368.5"	1
3	34300102	DRIVER REAR CABLE	420"	1
4	34300103	PASSENGER REAR CABLE	489"	1

**Extended Model (24' Deck)**

ITEM NO.	PART NUMBER	Description	OAL	QTY.
1	34300104	DRIVER FRONT CABLE	263.5"	1
2	34300105	PASSENGER FRONT CABLE	332.5"	1
3	34300102	DRIVER REAR CABLE	420"	1
4	34300103	PASSENGER REAR CABLE	489"	1

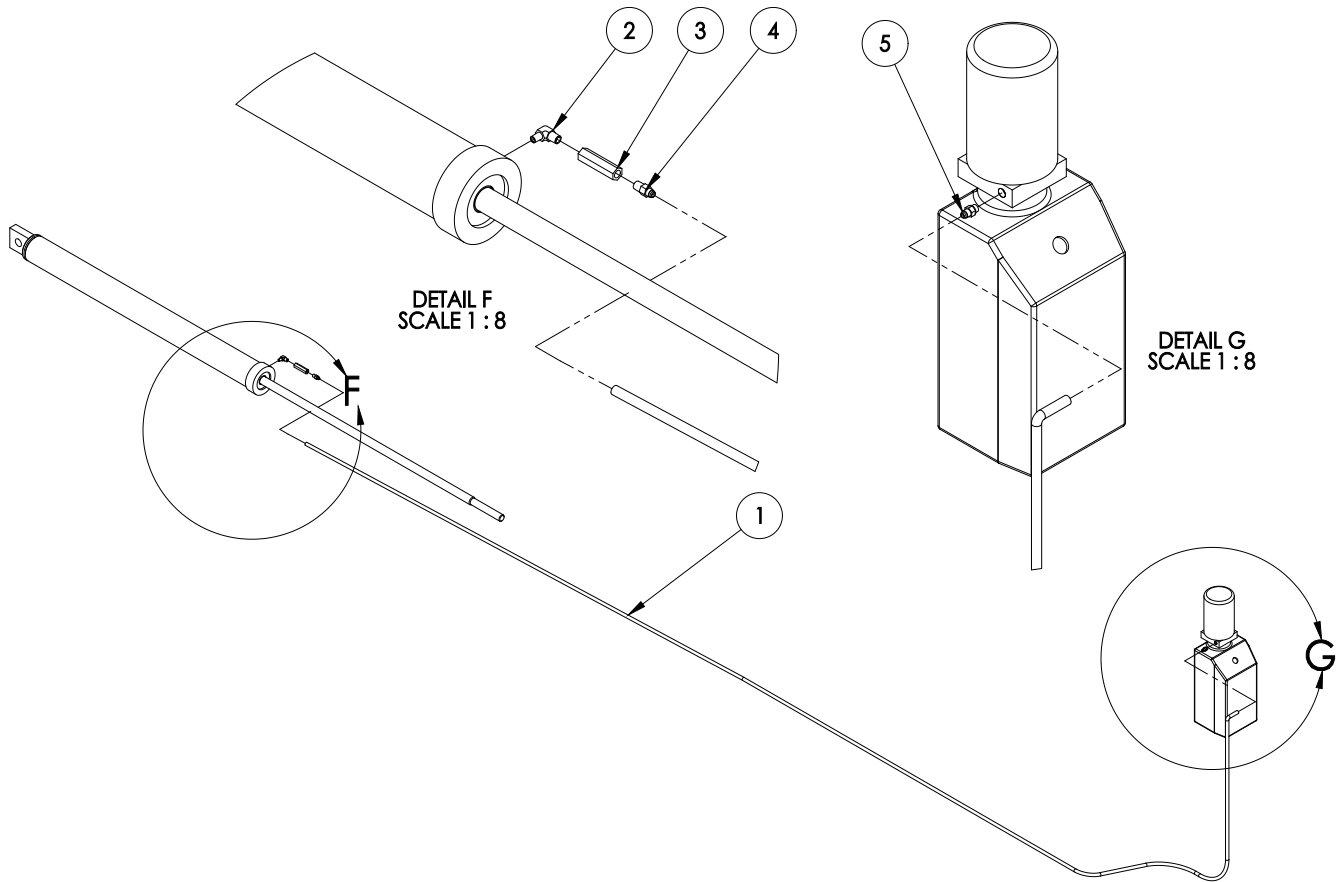
**Standard Model (21' Deck)**

ITEM NO.	PART NUMBER	Description	OAL	QTY.
1	34300108	DRIVER FRONT CABLE	227.5"	1
2	34300109	PASSENGER FRONT CABLE	296.5"	1
3	34300102	DRIVER REAR CABLE	420"	1
4	34300103	PASSENGER REAR CABLE	489"	1

**Standard Model (20' Deck)**

ITEM NO.	PART NUMBER	Description	OAL	QTY.
1	34300106	DRIVER FRONT CABLE	215.5"	1
2	34300107	PASSENGER FRONT CABLE	284.5"	1
3	34300102	DRIVER REAR CABLE	420"	1
4	34300103	PASSENGER REAR CABLE	489"	1

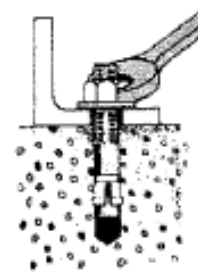
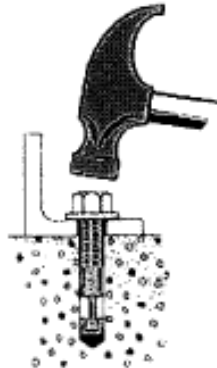
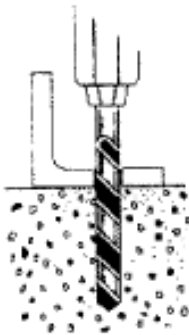
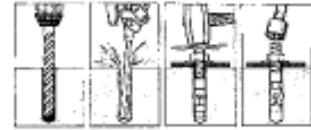
## **Diagram #7: Hydraulic Line Assembly**



ITEM NO.	PART NUMBER	Description	QTY.
1	34300002	HYDRAULIC HOSE (27' Deck)	1
1	34300003	HYDRAULIC HOSE (24' Deck)	1
1	34300006	HYDRAULIC HOSE (21' Deck)	1
1	34300004	HYDRAULIC HOSE (20' Deck)	1
2	3H000002	ELBOW FITTING, 1/4" NPT X 3/8" NPT	1
3	3H000003	FLOW CONTROL FITTING, 3/8" NPT PORT	1
4	3H000004	MALE 3/8" NPT X 3/8" JIC	1
5	3H000001	MALE #6 SAE X FEMALE 3/8" JIC FITTING	1

## Diagram #8: Anchor Bolt Installation

### Wedge Anchor Installation



- |  |  |   |
|--|--|---|
| <p><b>1.</b><br/>Drill hole in concrete (hole diameter same as thread diameter) maximum depth of hole could be any depth beyond minimum recommended depth. Clean the hole with compressed air.</p> | <p><b>2.</b><br/>Drive wedge anchor into drilled hole through fixture so that nuts is flush with fixture</p> | <p><b>3.</b><br/>Tighten nut until wrench resistance is felt (approximately 3 to 4 turns of the nut after first resistance) anchorage is now complete</p> |
|--|--|---|

#### MORE HELPFUL INSTRUCTIONS

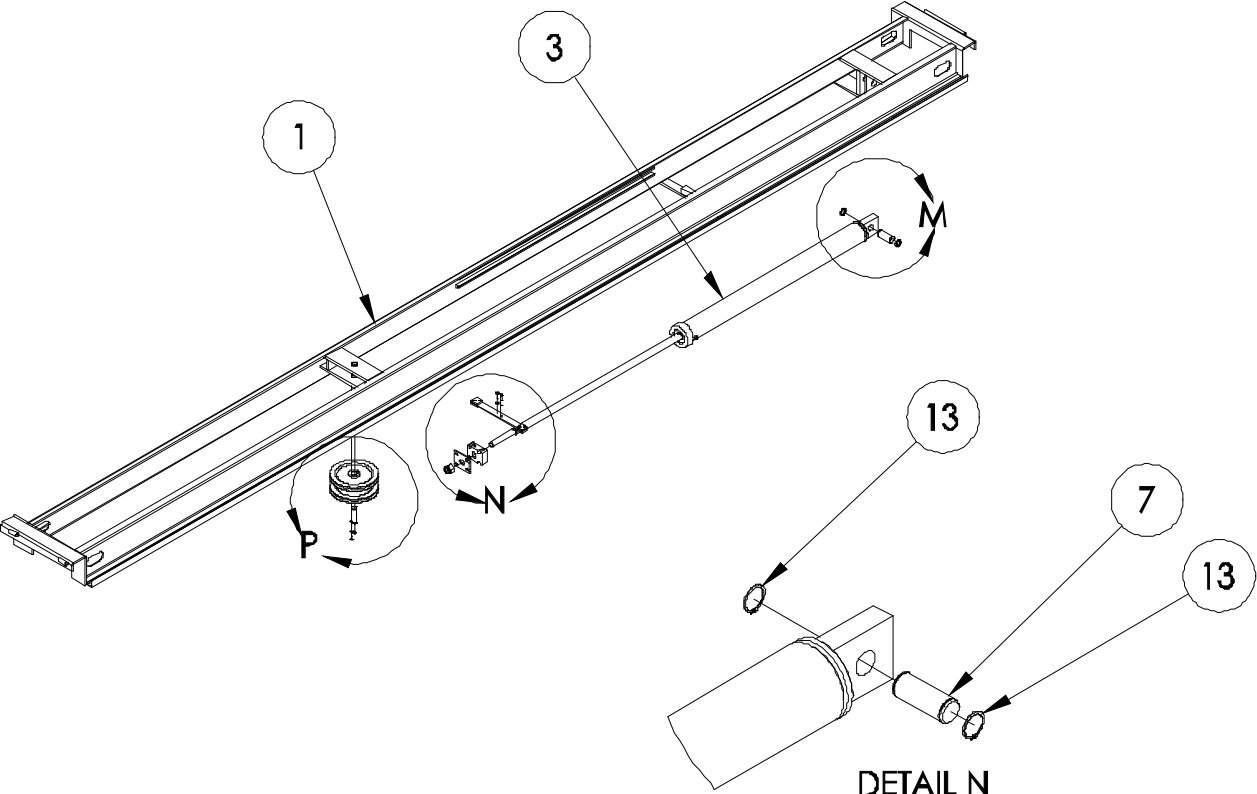
1. Always wear safety glasses.
2. Follow the drill manufacturer's safety instructions.
3. Use only solid carbide-tipped bits meeting the ANSI B94-12 tip diameter as shown below in bottom Table.
4. Drill the hole perpendicular to the work surface. To assure full holding power, do not ream the hole or allow the drill to wobble.
5. Drill the hole as deep as the full length of the anchor, but not close then two anchor diameters to the bottom (opposite surface of the concrete)
6. Clean the hole using compressed air and a wire brush. A clean hole is necessary for proper performance.
7. Assemble the washer and nut on the anchor so the nut is recessed slightly below the head of the anchor.
8. Tap the anchor thought the fixture (must be 1/8" larger then diameter of the anchor) and into the hole making sure the nut and washer rest solidly against the fixture or tap the anchor into the hole and then place bracket over the anchor.
9. Tighten the nut with a torque wrench to proper toque according to the table
10. If spinning occurs, pull up on the anchor using the claw end of a hammer and then torque.

<b>DRILL TOLERANCE – ANSI B-94-12 AND TORQUE REQUIREMENT</b>			
Anchor Diameter	Minimum	Maximum	Torque Range
¼"	.260"	.268"	5-10ft-lbs
3/8"	.390"	.398"	25-30ft-lbs
½"	.520"	.530"	50-60ft-lbs
5/8"	.650"	.660"	75-90ft-lbs
¾"	.775"	.787"	150-175ft-lbs
7/8"	.905"	.917"	200-250ft-lbs
1"	1.030"	1.042"	250-300ft-lbs
1 ¼"	1.285"	1.300"	400-450ft-lbs

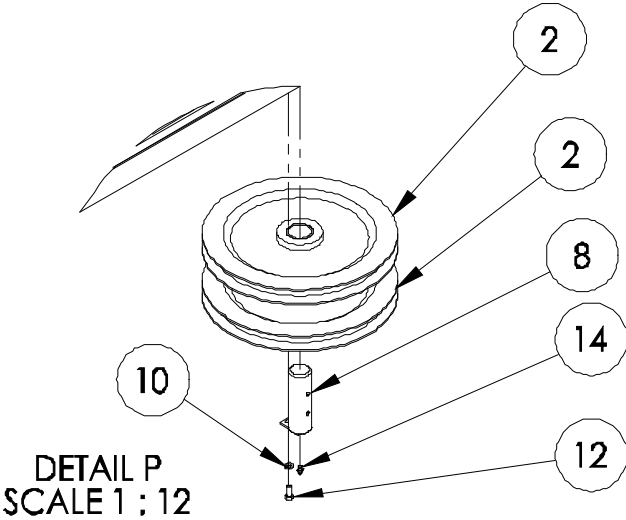
Wedge-All Dia (in)	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2
Bit Size (in)	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2
Fixture Hole (in)	5/16	7/16	9/16	11/16	7/8	1	1 1/8	1 3/8	1 5/8
Wrench Size (in)	7/16	9/16	3/4	15/16	1 1/8	1 5/16	1 1/2	1 7/8	2 1/4



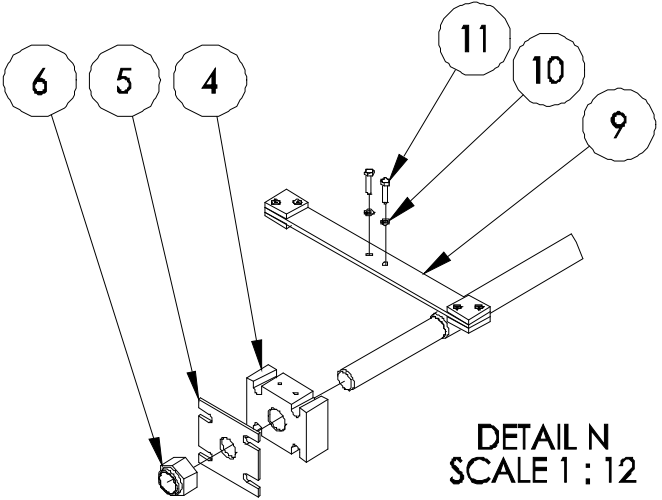
**Diagram #9: Driver Side Runway Assembly**



DETAIL N  
SCALE 1 : 12



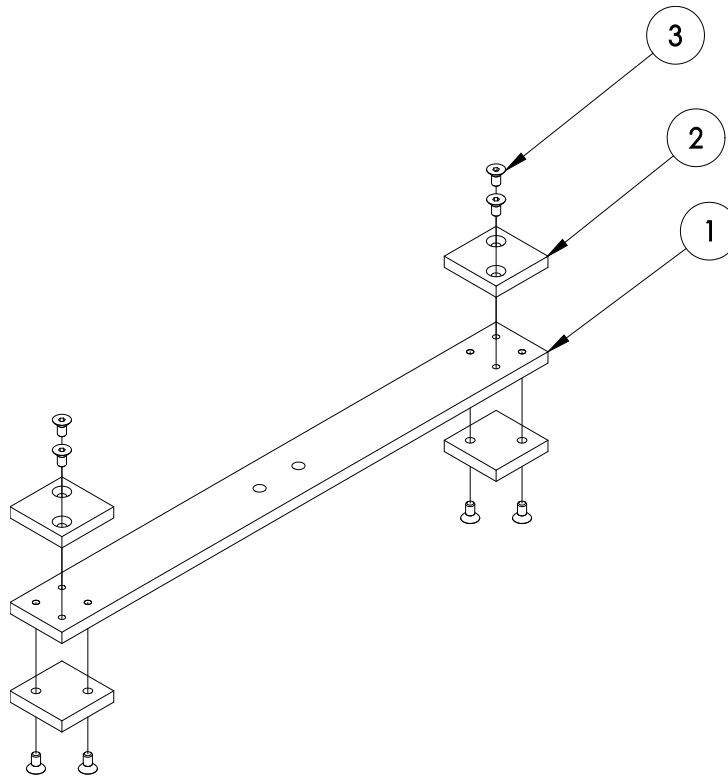
DETAIL P  
SCALE 1 : 12



DETAIL N  
SCALE 1 : 12

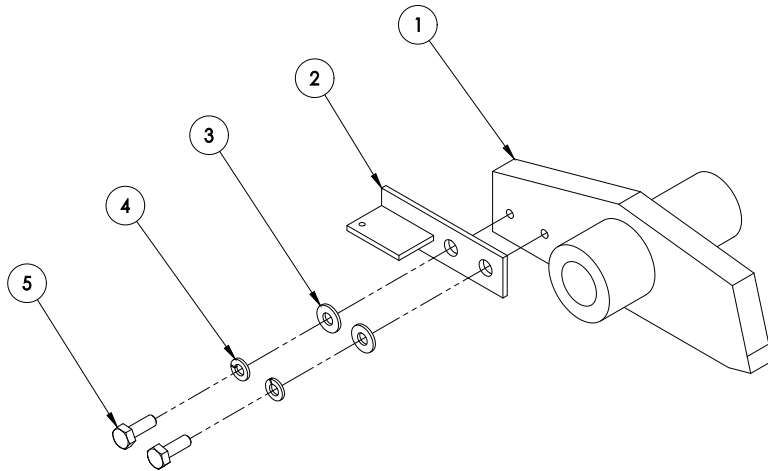
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300003	DECK WELD. CYLINDER SIDE	1
2	44300006	PULLEY ASSEMBLY	10
3	44300010	CYLINDER ASSY	1
4	14300080	CABLE HOLDER	1
5	14300081	CABLE RETAINER	1
6	34300020	1 1/2" - 12 UNF JAM NUT	1
7	14300082	CYLINDER PIN	1
8	24300016	Middle Deck Pulley Shaft Weld.	1
9	44300011	CYLINDER GUIDE	1
10	3C000000	5/16 SPRING LOCK WASHER	33
11	3C000187	5/16"-18 X 1.5" HEX BOLT	2
12	3C000001	5/16"-18 X 3/4" HEX BOLT	7
13	3C000190	1 3/4" RETAINING RING	2
14	31140013	GREASE FITTING 1/4-20 UNC	7

## Diagram #10: Cylinder Guide Assembly



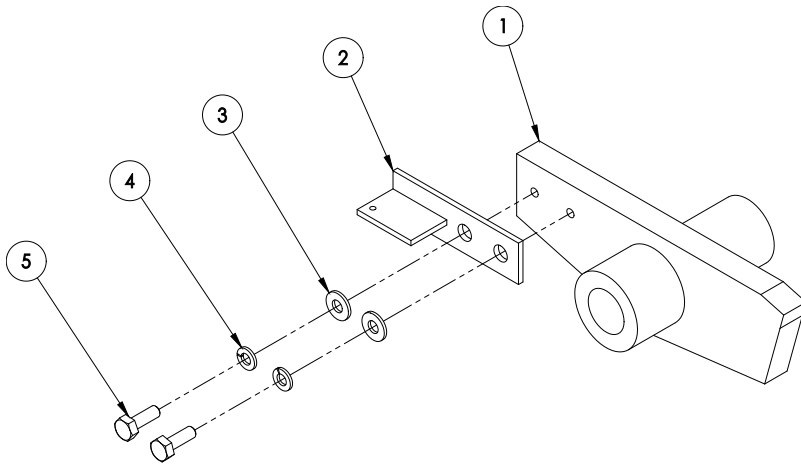
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	14180069	TRUNNION GUIDING PLATE	1
2	14180076	TRUNNION GUIDE BLOCK	4
3	3C000015	SOCKET COUNTERSUNK SCREW	8

## Diagram #11: Safety Lock Assembly (A & B)



Driver Front & Passenger Rear (A)

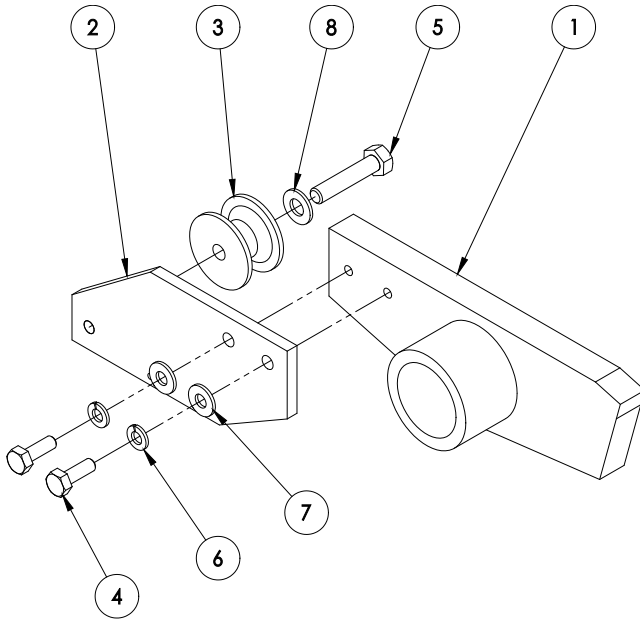
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300008-A	SAFETY LOCK WELD. A	2
2	24300014	SAFETY LOCK LEVER WELD.	4
3	3C000043	1/4" FLAT WASHER	16
4	3C000044	1/4" SPRING LOCK WASHER	20
5	3C000181	1/4-20X3/4" HEX BOLT	16



Driver Rear & Passenger Front (B)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300008-B	SAFETY LOCK WED. B	2
2	24300014	SAFETY LOCK LEVER WELD.	4
3	3C000043	1/4" FLAT WASHER	16
4	3C000044	1/4" SPRING LOCK WASHER	20
5	3C000181	1/4-20X3/4" HEX BOLT	16

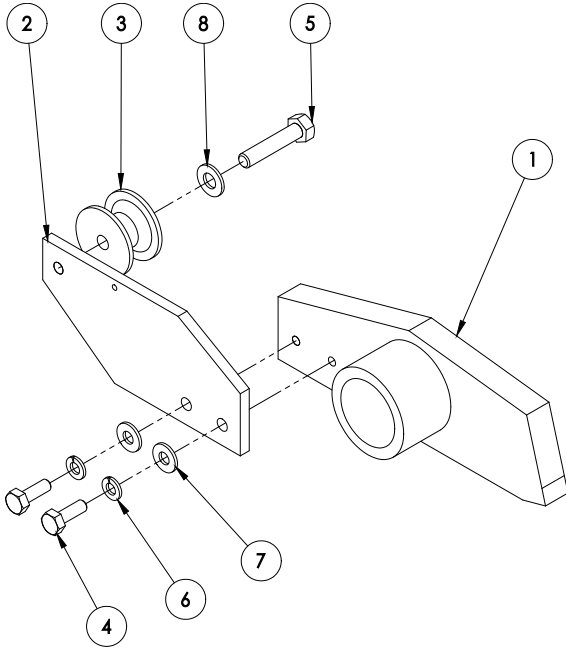
## Diagram #12: Cable Lock Assembly A



Driver Front & Passenger Rear (A)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300009-A	CABLE LOCK WELD. A	2
2	14300057	CABLE LOCK LEVER PLATE	4
3	14180056	BACK-UP LATCH ROLLER	4
4	3C000181	1/4-20 X 3/4 HEX BOLT	16
5	3C000187	5/16"-18 X 1.5" HEX BOLT	8
6	3C000044	1/4 SPRING LOCK WASHER	20
7	3C000043	1/4 REGULAR WASHER	16
8	3C000023	5/16 REGULAR WASHER	20

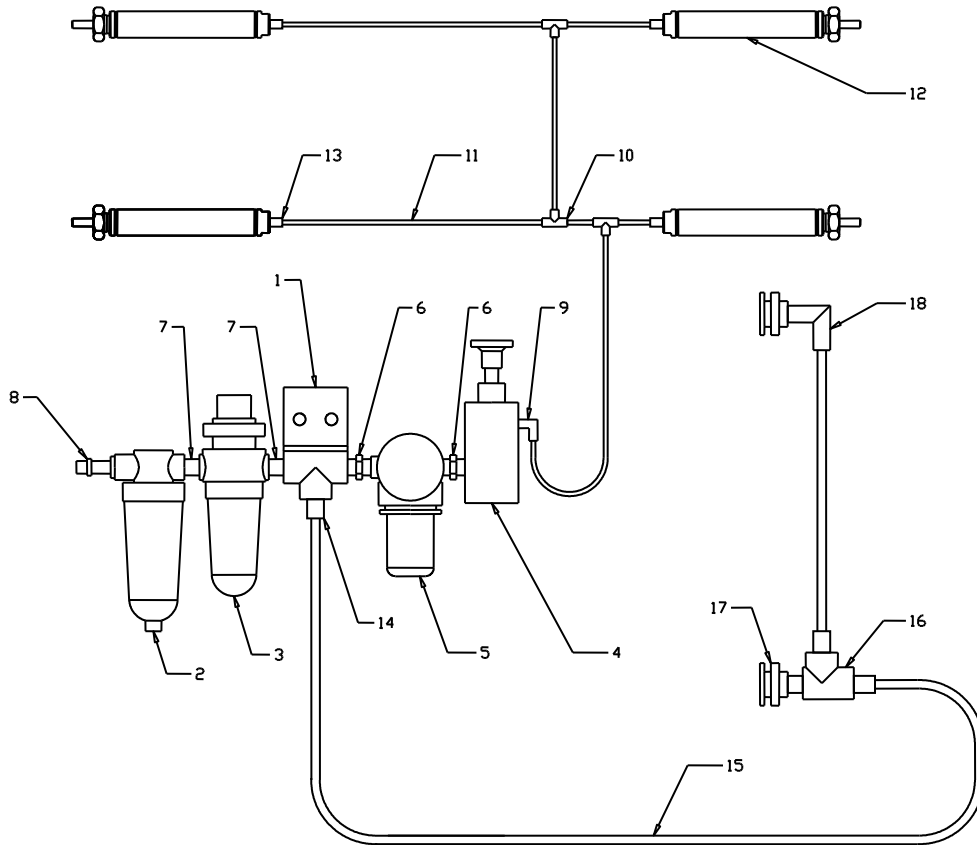
### **Diagram #13: Cable Lock Assembly B**



Driver REAR & Passenger FRONT (B)

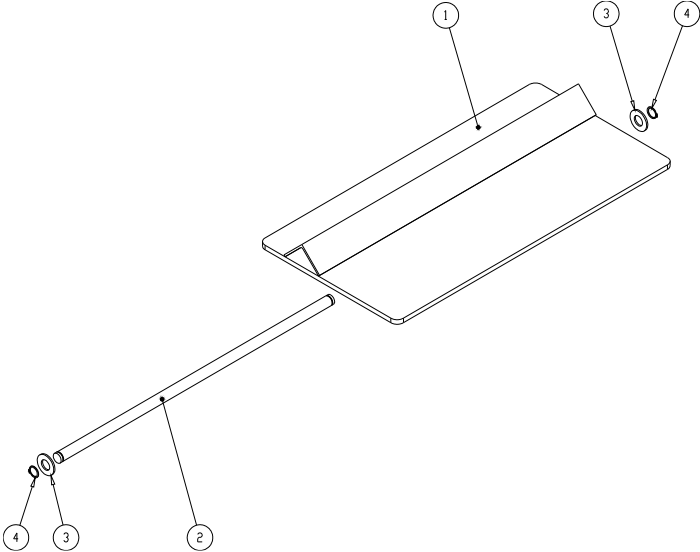
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300009-B	CABLE LOCK WELD. B	2
2	14300057	CABLE LOCK LEVER PLATE	4
3	14180056	BACK-UP LATCH ROLLER	4
4	3C000181	1/4-20 X 3/4 HEX BOLT	16
5	3C000187	5/16"-18 X 1.5" HEX BOLT	8
6	3C000044	1/4 SPRING LOCK WASHER	20
7	3C000043	1/4 REGULAR WASHER	16
8	3C000023	5/16 REGULAR WASHER	20

## Diagram #14: Pneumatic Controls



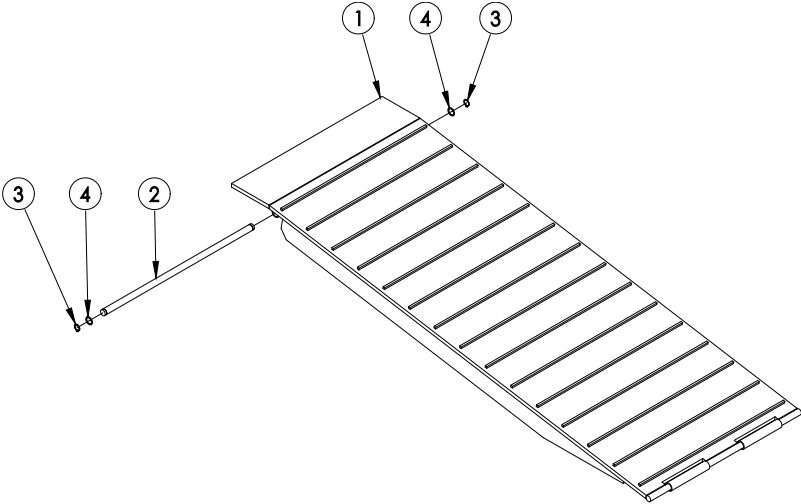
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	24180013	PNUEMATIC CONTROLS WELDMENT	1
2	34180013	FILTER	1
3	34180012	LUBRICATER	1
4	34180011	VALVE	1
5	34180010	REGULATOR	1
6	34180015	FITTING	2
7	34180016	FITTING	2
8	34180017	AIR INTAKE FITTING	1
9	31140119	ELBOW 5/32" POLY – 1/8" NPT	1
10	31141063	TEE FITTING	3
11	31140120	POLYTUBE 5/32" DIA. BLUE	
12	34180000	AIR CYLINDER	4
13	31140122	STRAIGHT 5/32" POLY - 1/8" NPT	4
14	31141062	POLY FITTING 3/8" x 1/4" NPT STRAIGHT	3
15	31141056	POLYTUBE 3/8" DIA. BLUE	
16	31141061	BRASS FORGED STEEL TEE	1
17	31141060	TERMINAL BOLT (STEEL)	2
18	31140023	Poly Elbow swivel 3/8" x 1/4" NPT	1

**Diagram #15: Wheel Stop Assembly**



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24180014	WHEELSTOP WELDMENT	2
2	11140128	PIVOTING PIN	2
3	3C000030	5/8 NARROW WASHER	4
4	3C000028	5/8" RETAINING RING	4

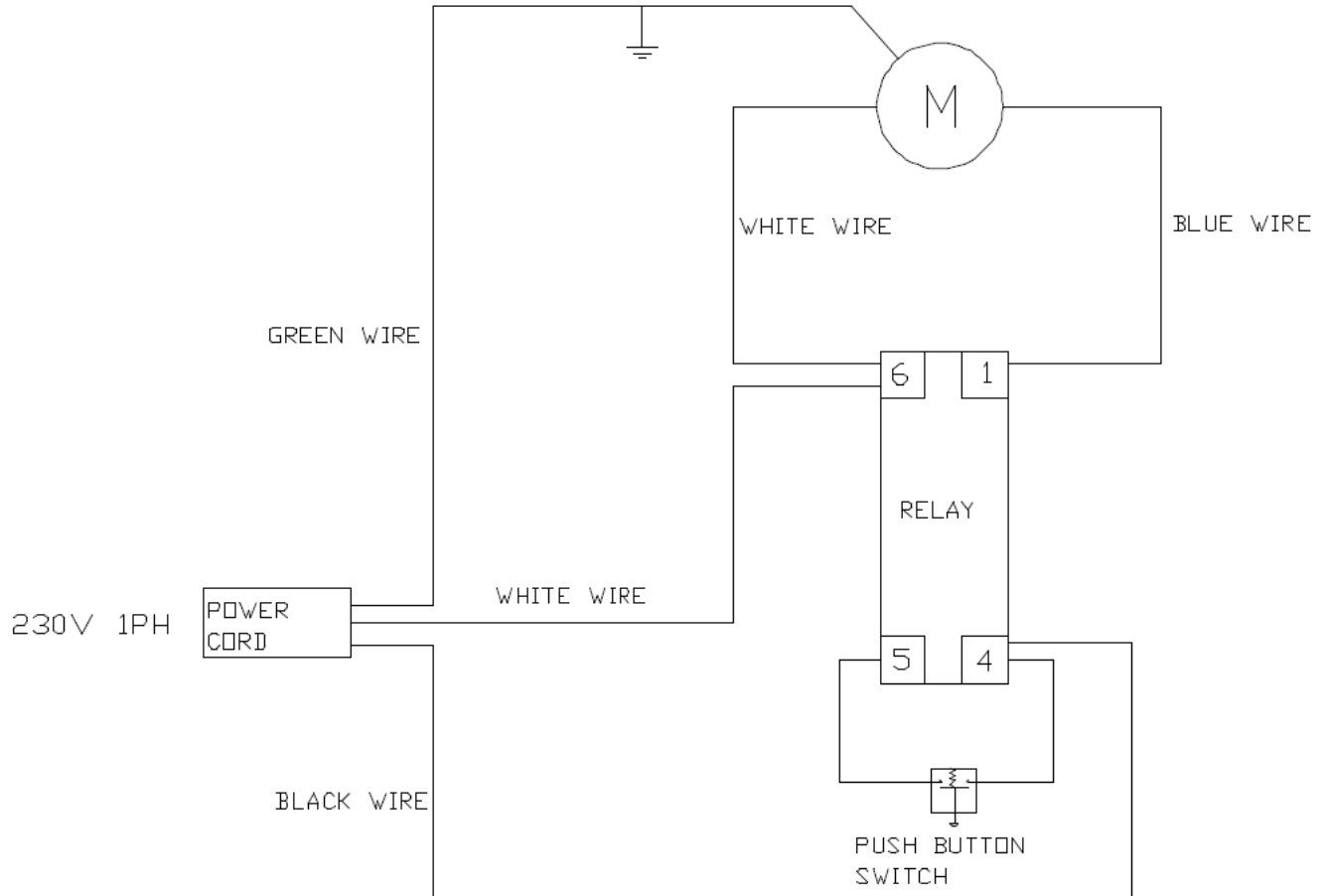
**Diagram #16: Ramp Assembly**



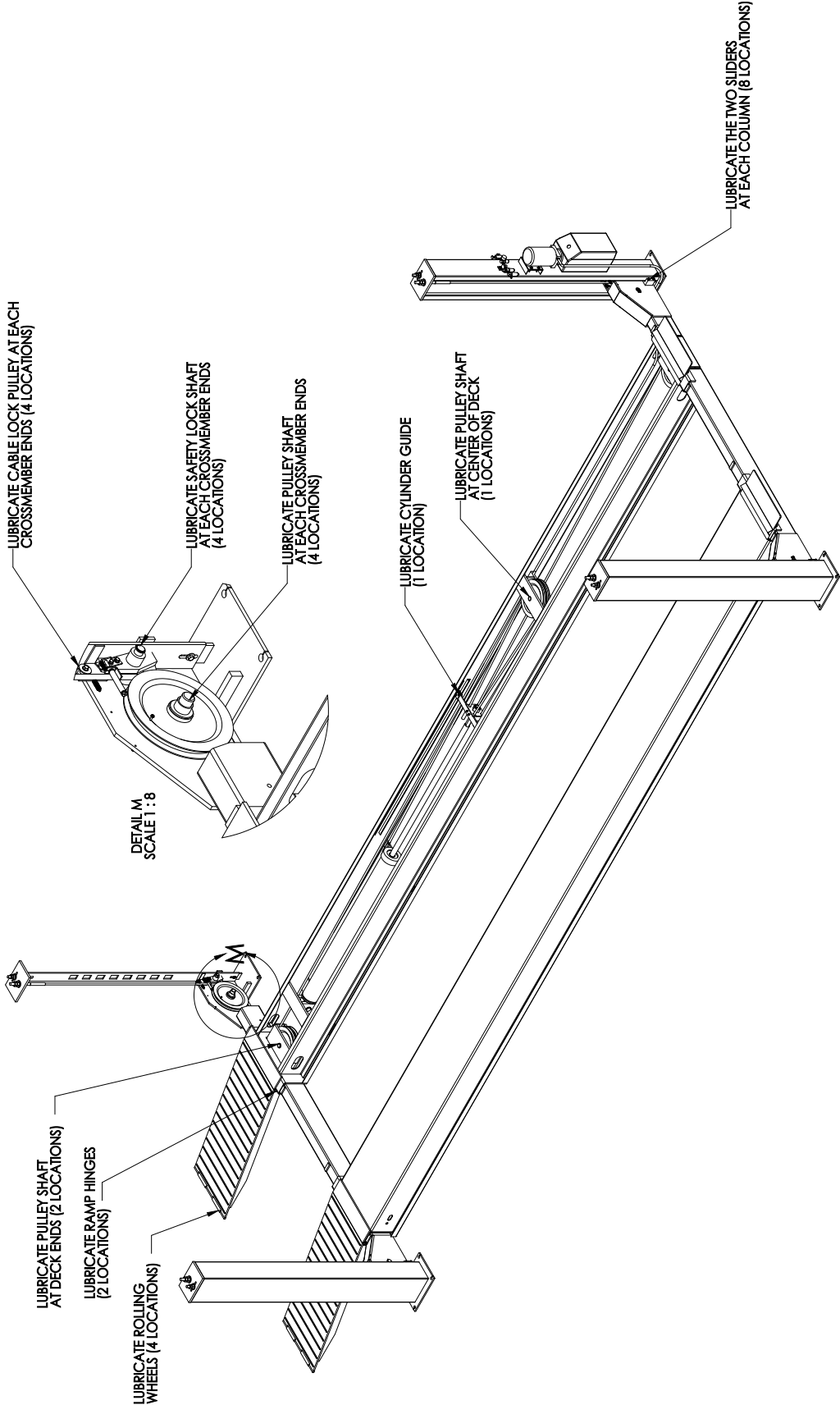
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	24300012	RAMP WELD.	2
2	14300119	RAMP HINGE SHAFT	2
3	3C000029	3/4" RETAINING RING	4
4	34300300	3/4" EXTRA NARROW WASHER	4



## Diagram #17: Power Unit Wiring Diagram





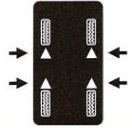









# Diagram #18: Lubrication Locations



# Diagram #19: Safety Instructions

<p><b>SAFETY INSTRUCTIONS</b></p> 	<p><b>SAFETY INSTRUCTIONS</b></p> 
<p>Read operating and safety manuals before using lift.</p>	<p>Proper maintenance and inspection is necessary for safe operation.</p>
<p><b>SAFETY INSTRUCTIONS</b></p> 	<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org © 1992 by ALI, Inc. ALI/WL101s</p>
<p>Do not operate a damaged lift.</p>	

<p><b>CAUTION</b></p>  <p>Lift to be used by trained operator only.</p>	<p><b>CAUTION</b></p>  <p>Authorized personnel only in lift area.</p>	<p><b>WARNING</b></p>  <p>Clear area if vehicle is in danger of falling.</p>	<p><b>WARNING</b></p>  <p>Position vehicle with center of gravity midway between adapters.</p>
<p><b>CAUTION</b></p>  <p>Use vehicle manufacturer's lift points.</p>	<p><b>CAUTION</b></p>  <p>Always use safety stands when removing or installing heavy components.</p>	<p><b>WARNING</b></p>  <p>Remain clear of lift when raising or lowering vehicle.</p>	<p><b>WARNING</b></p>  <p>Avoid excessive rocking of vehicle while on lift.</p>
<p><b>CAUTION</b></p>  <p>Use height extenders when necessary to ensure good contact.</p>	<p><b>CAUTION</b></p>  <p>Auxiliary adapters may reduce load capacity.</p>	<p><b>WARNING</b></p>  <p>Do not override self-closing lift controls.</p>	<p><b>WARNING</b></p>  <p>Keep feet clear of lift while lowering.</p>
<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org © 1992 by ALI, Inc. ALI/WL101s</p>		<p>The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org © 1992 by ALI, Inc. ALI/WL101s</p>	

