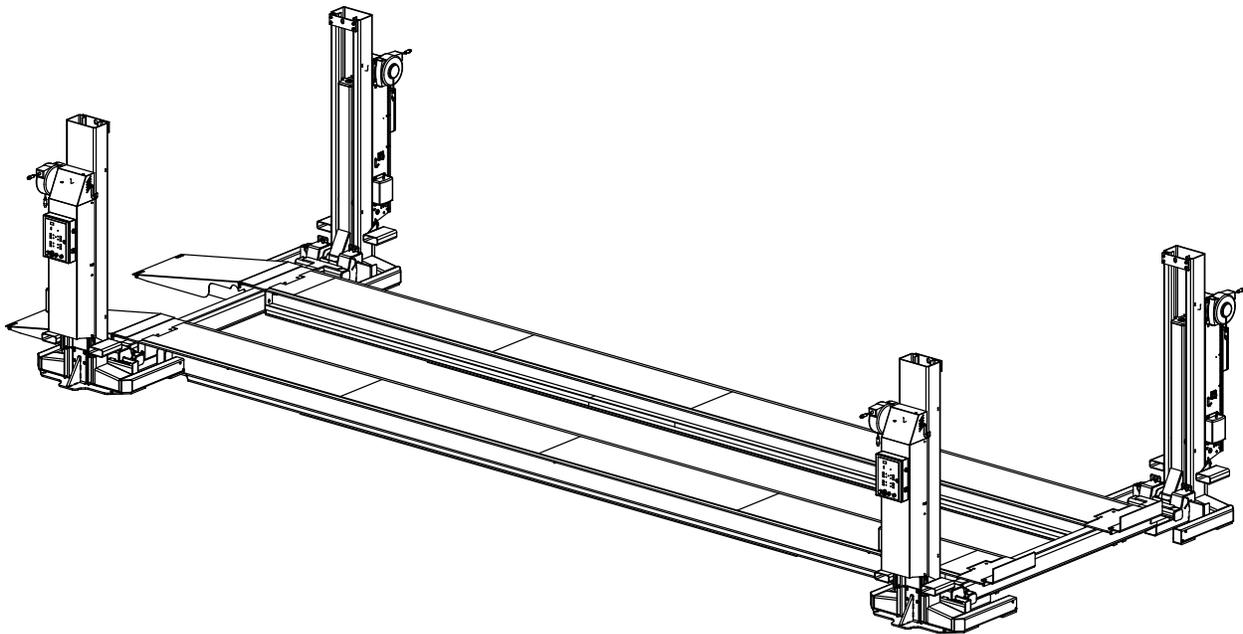




CR50/CR60
Mobile Column Runway Accessory
Capacity 50,000 lbs. (22,680 kg)
Capacity 60,000 lbs. (27,216 kg)

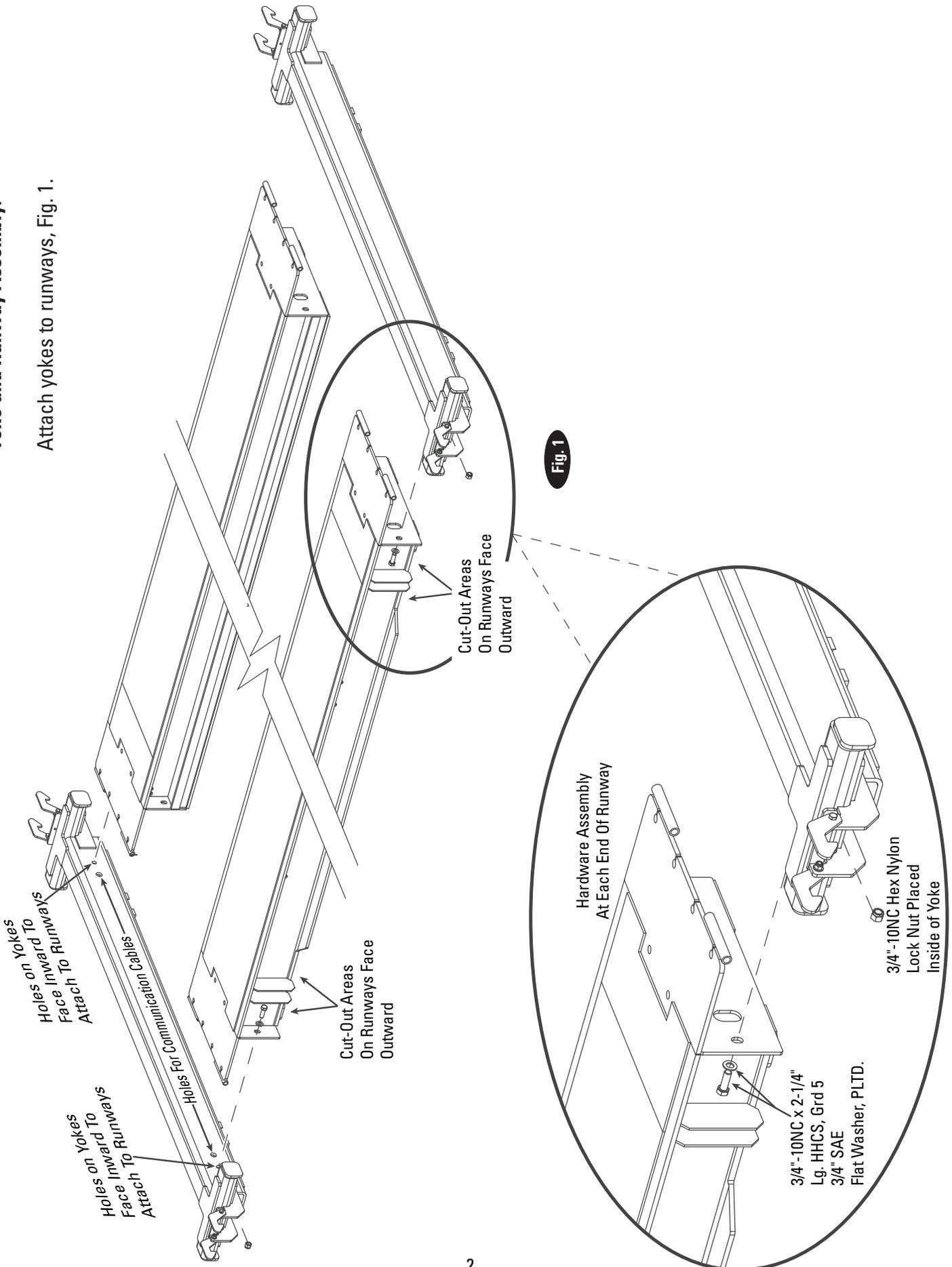


▲ IMPORTANT Reference ANSI/ALI ALIS,
Safety Requirements for
Installation and Service of Automotive Lifts
before installing lift.

Parts Breakdown Page 16
LP60031

Yoke and Runway Assembly:

Attach yokes to runways, Fig. 1.



Ramp and Wheel Chock Assembly:

Install ramps and wheel chocks to ends of runways, Fig. 2. Runways are the same so placement of ramps and chocks may be installed at either end.

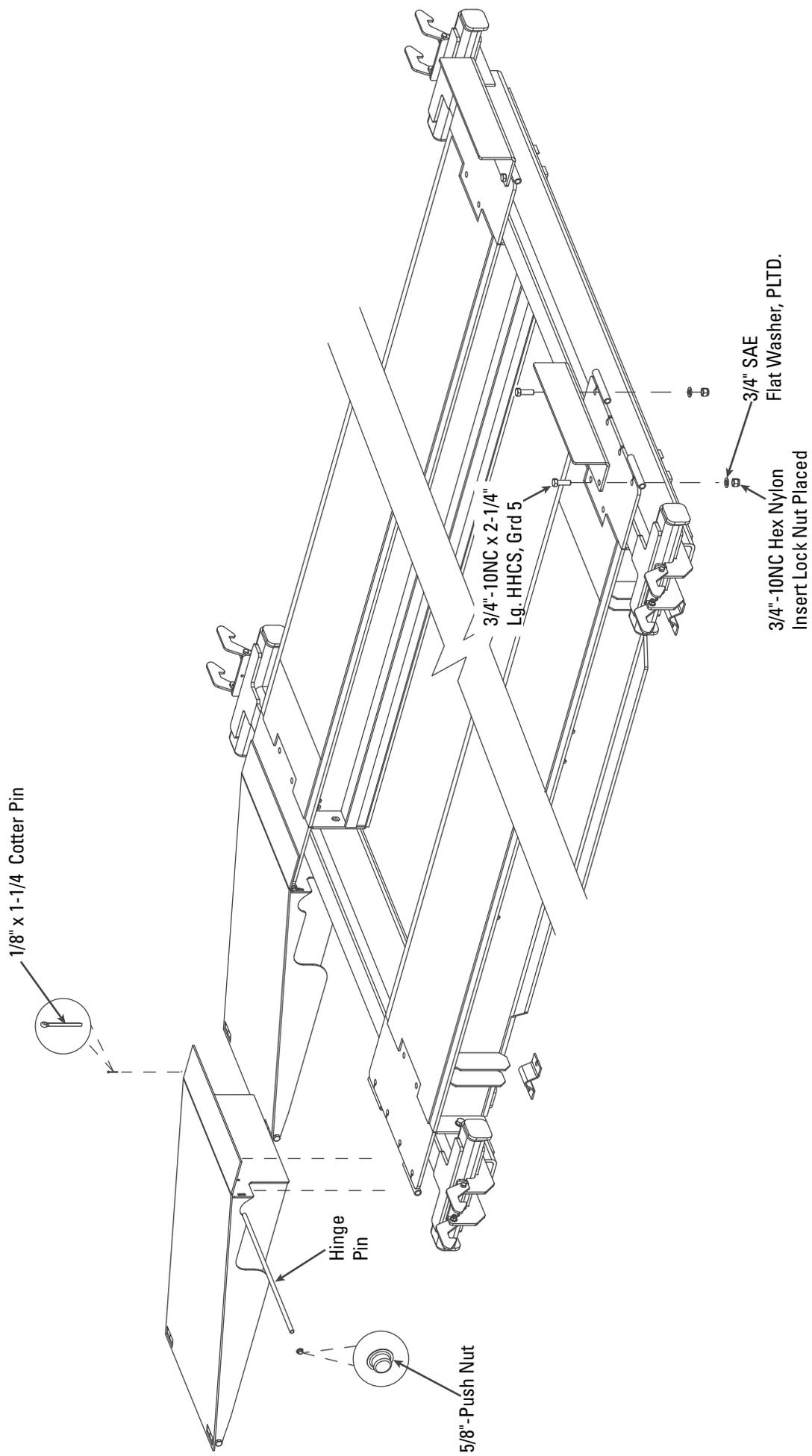


Fig. 2

1. Lift Location: Use architects plan when available to locate lift. Fig. 10 shows a typical bay layout. Lift floor area should be level.

⚠️ WARNING DO NOT install on asphalt or other similar unstable surfaces. Columns are supported by anchors in floor.

2. Ceiling or overhead clearance must be 80" plus height of tallest vehicle.

3. Estimating Column Shim requirements:
In the following section, the terms "highest" and "lowest" refer to elevation of floor, Fig. 3.

A. Mark locations where lift columns will be positioned in bay.

B. Place target at column positions and record readings.

C. Find the highest of the four (4) locations. Find the difference between the reading at each of the remaining three (3) columns and the highest reading.

D. The difference is the estimated amount of shim thickness needed at each column.

E. Columns need to be in plane.

F. Maximum shim thickness of 2" is possible by using shim kit M140105 and anchors provided with lift. If more shimming is required, consult factory for additional shim packages including longer anchor bolts.

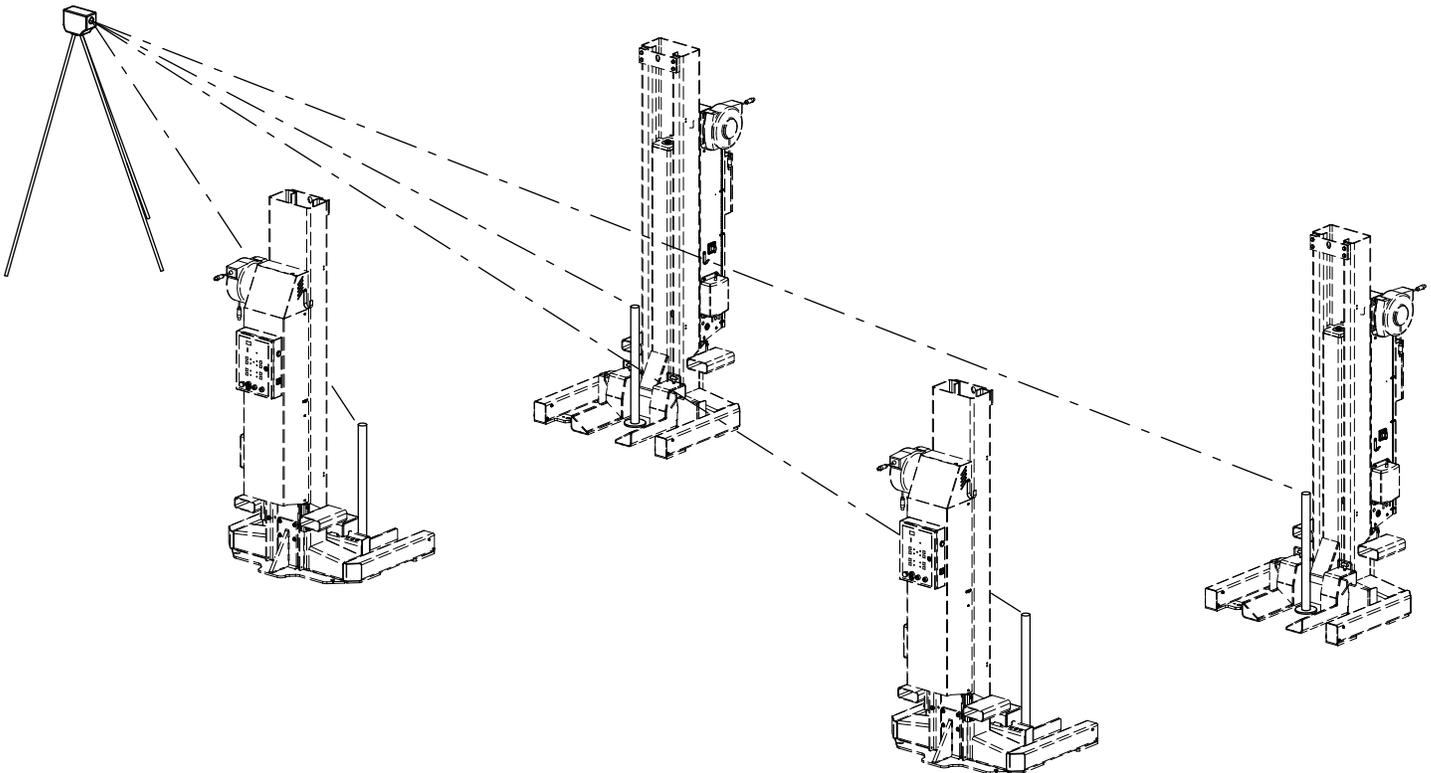
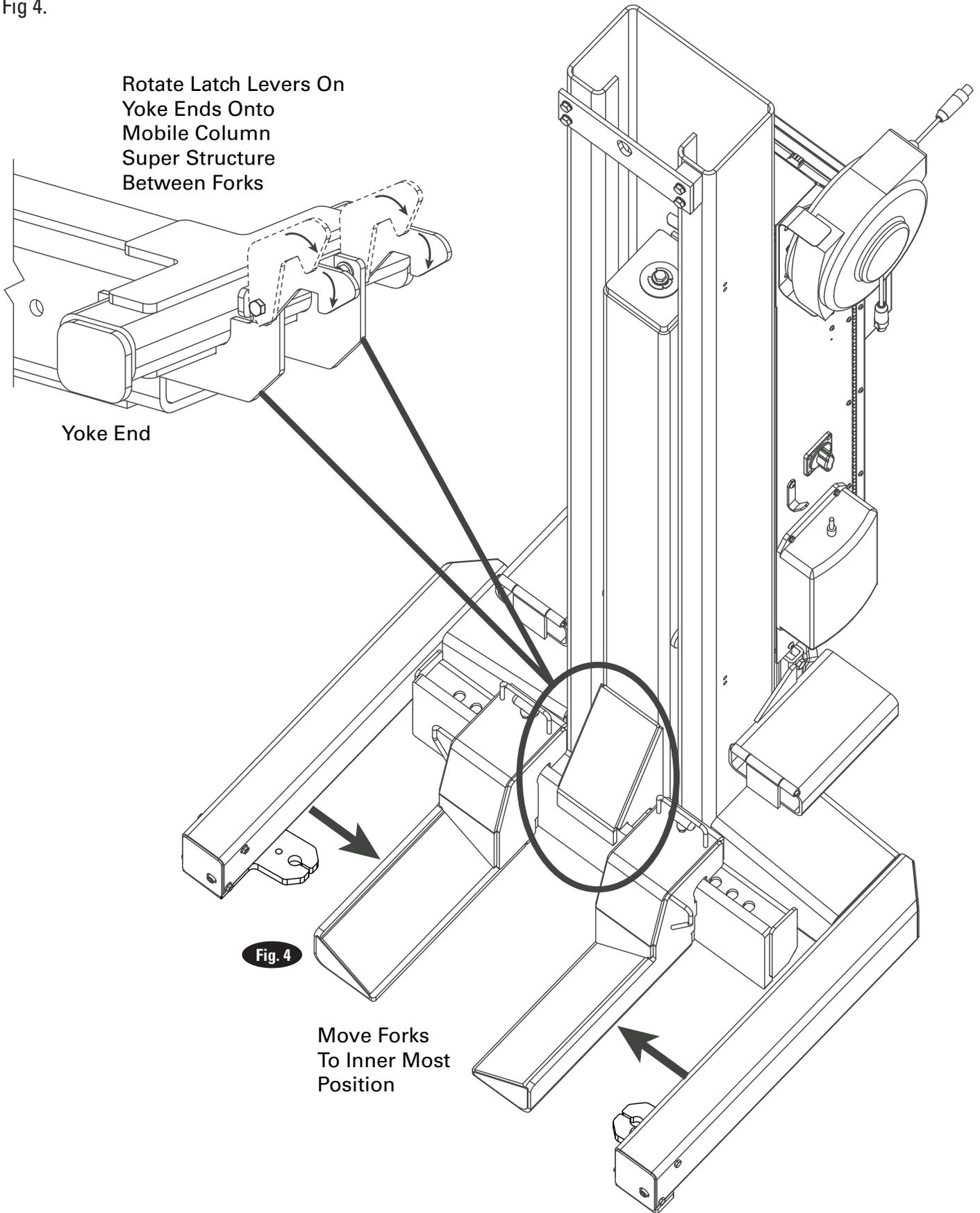


Fig. 3

Fork Adjustment:

Position forks to the innermost position, Fig. 4. Roll mobile columns into position, Fig. 5 and rotate latch levers of yoke ends onto superstructure of mobile columns, Fig 4.



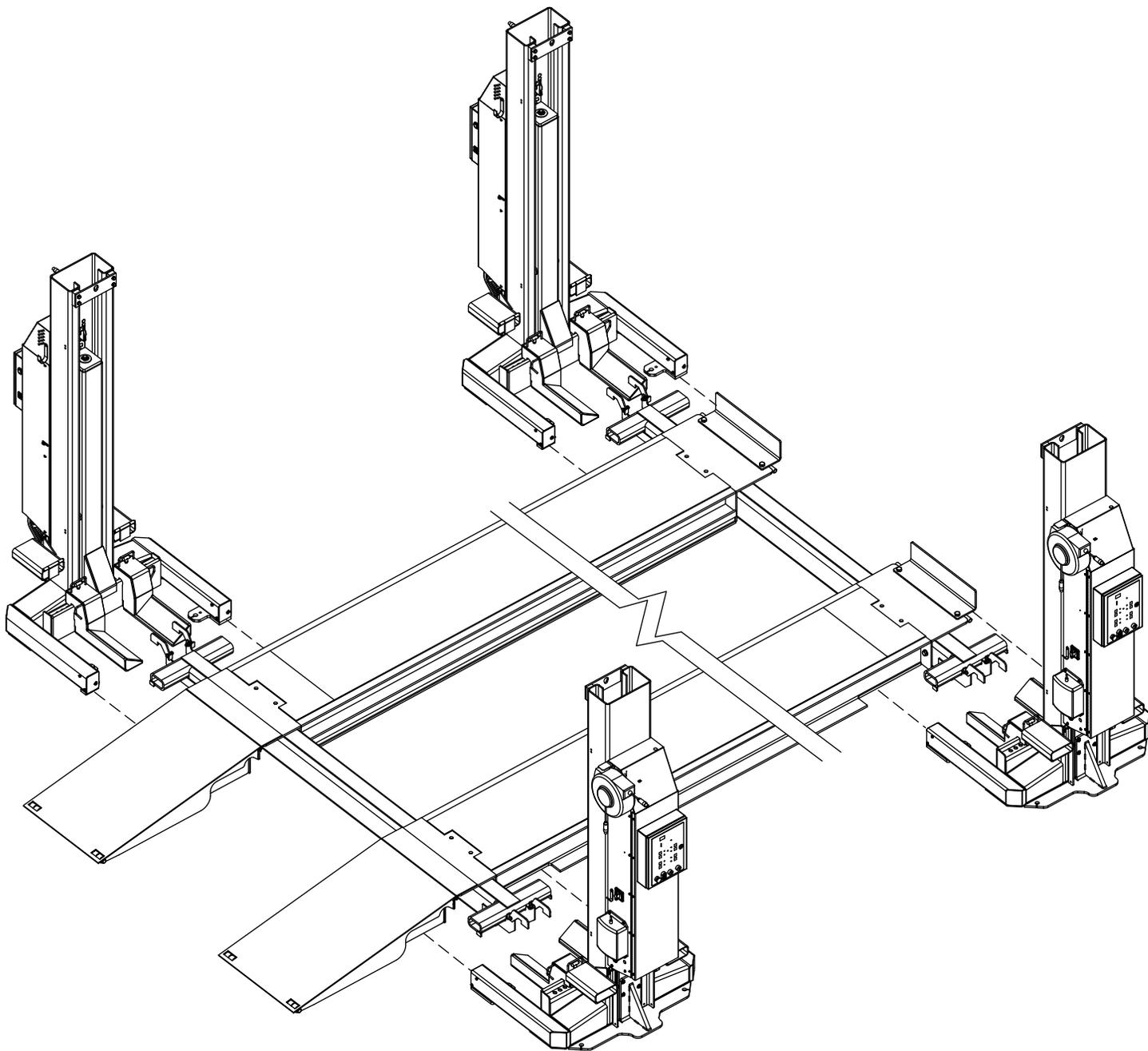


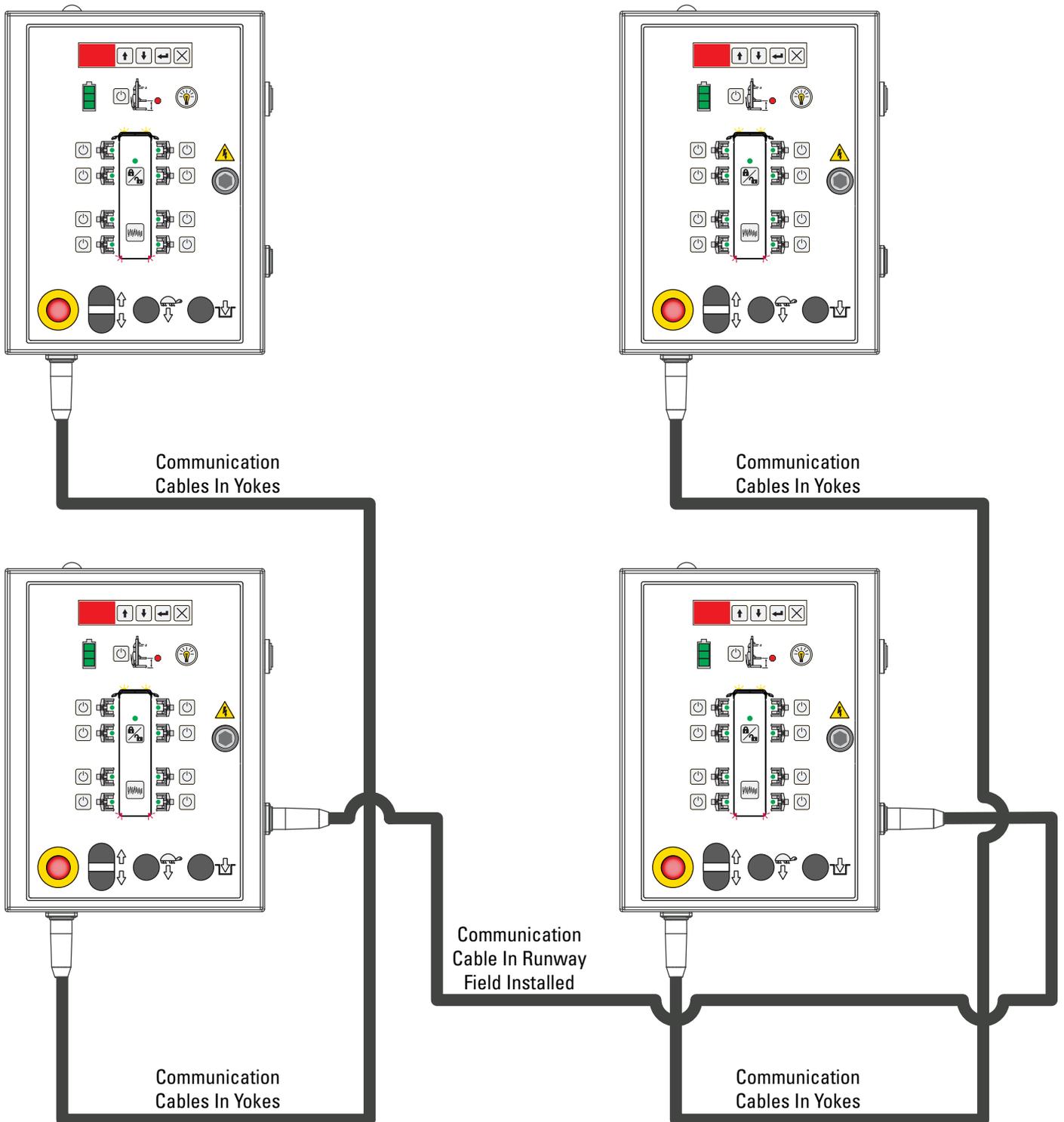
Fig. 5

Communication Cable Connections:

1. Use mobile column cord reels to raise runway to a comfortable working height for routing runway cables.

Note: Ignore cable routing for wireless columns.

2. Route runway communication cable through runway of your choice, Fig. 6.
3. After routing runway communication cable lower runways disconnect mobile column communication cables.



Runway communication cable can be routed through either runway.

Route cable inside gusset of runway through holes inside runway and yoke following installed yoke communication cables out to the mobile column control panel.

Leave approximately equal lengths of cable slack on either side of yoke.

Fig. 6

4. Route communication cables out through yokes and connect to control panel Figs. 6 & 7. Wrap connection cables with provided wrap where there are two cables.
5. Slowly raise and lower runways at each mobile column making sure the communication cables are free of binding or pinching.
6. Attach safety placards, Fig. 7.

Wire Tie 1 Placard
To One Communication Cable
At Each Column Control Panel

TYPICAL PLACARD LOCATIONS

 Lift Control Console: Secure placard in an accessible location.	 Power Unit: Secure placard near lift controls.	 Push Button Controls on Electric Powered Lifts
 CAUTION Lift to be used by trained operator ONLY.	 CAUTION Authorized personnel only in lift area.	<small>The messages and photographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific make. Listing for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Corland, NY 13025. Replacement label sets may be obtained from the original lift manufacturer and authorized companies. They are protected by copyright. www.aif.org © 1989 by AIL Inc. ALMA2009e</small>
 NOTICE Read operating and safety manuals before using lift.	 NOTICE Proper maintenance and inspection is necessary for safe operation.	 NOTICE Do not operate a damaged lift.

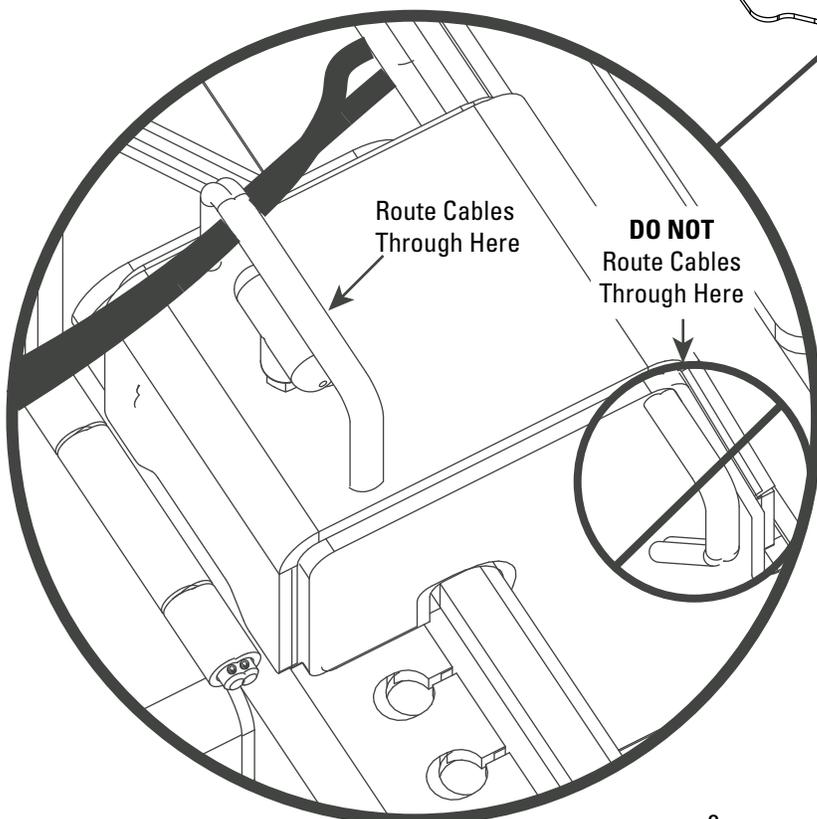
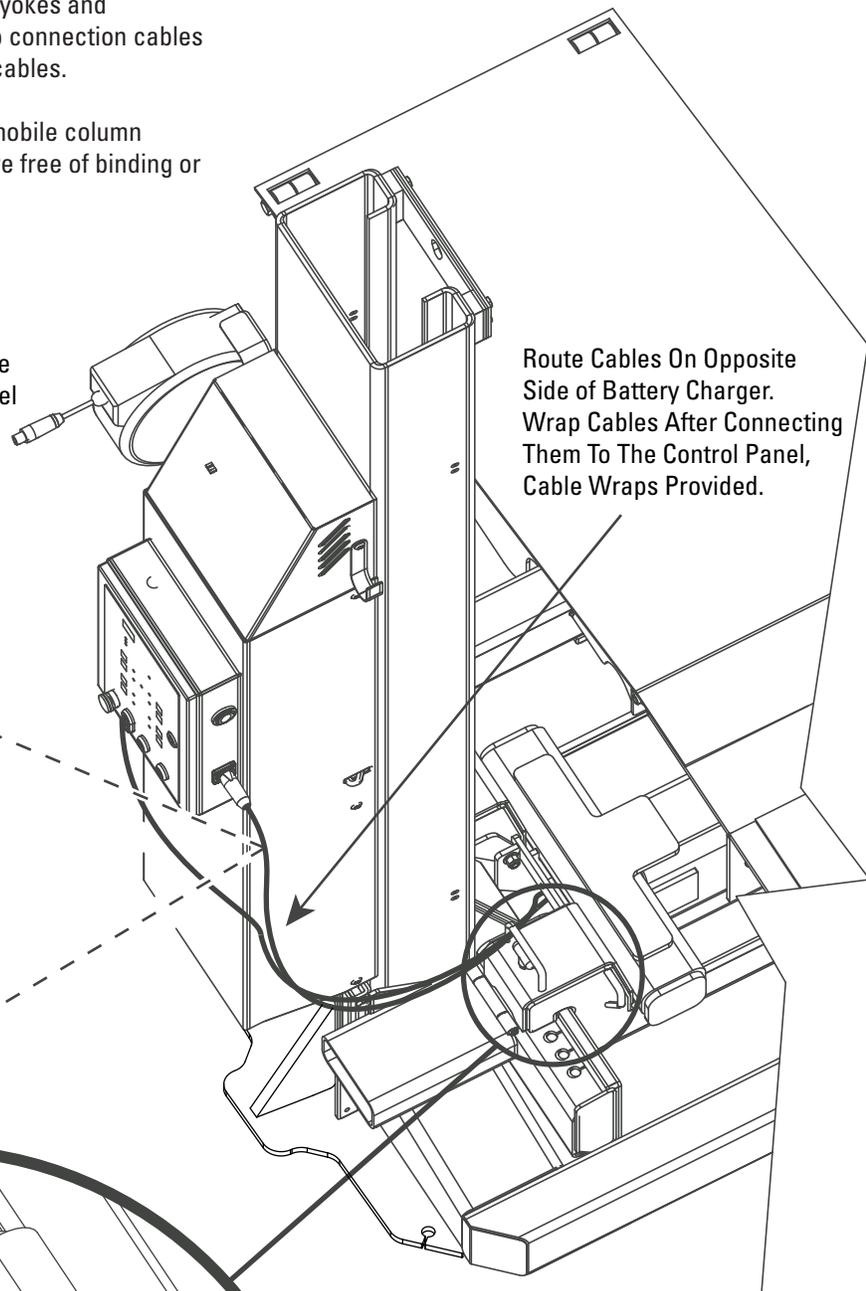
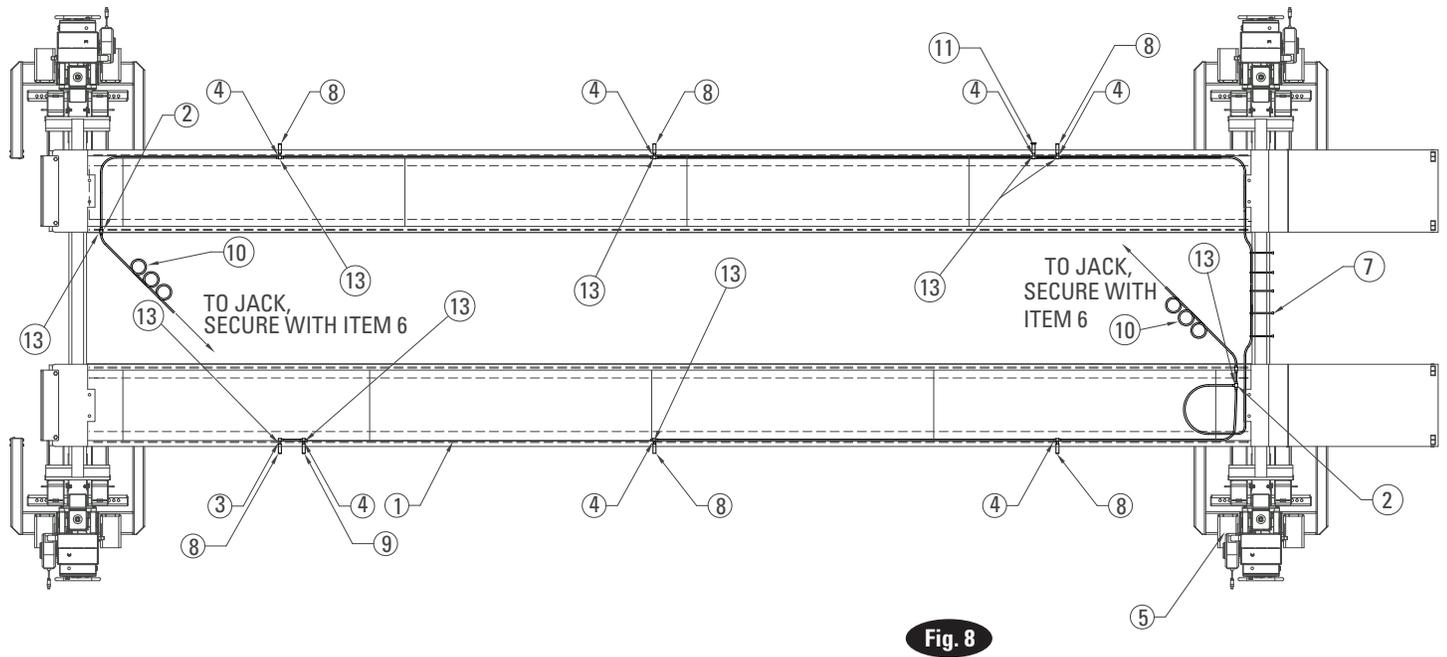


Fig. 7

Airline Connections:

1. Raise runways to a comfortable working height and install airline kit, Fig. 8.



ITEM	P/N	NAME	REQUIRED
1	992127	Plastic Air Line	2
2	FC147-8	Male Connector	2
3	992449	Male Elbow Swivel	1
4	992468	Male Branch Tee Swivel	7
5	992448	Mail Run Tee Swivel	1
6	991220	Tie Wrap, 5-1/2"	4
7	991082	Tie Wrap, 24"	5
8	FC147-15	Female Quick Disconnect	6
9	992416	Male Quick Disconnect	1
10	FC147-14	Coiled Air Line 3/8" x 12'	2
11	40639	1/4" Male Pipe Plug	5
12	994145	Air Line Kit	1
13	FC147-1	1/4" NPT Bulkhead Fitting	10

Runway Cable Routing:

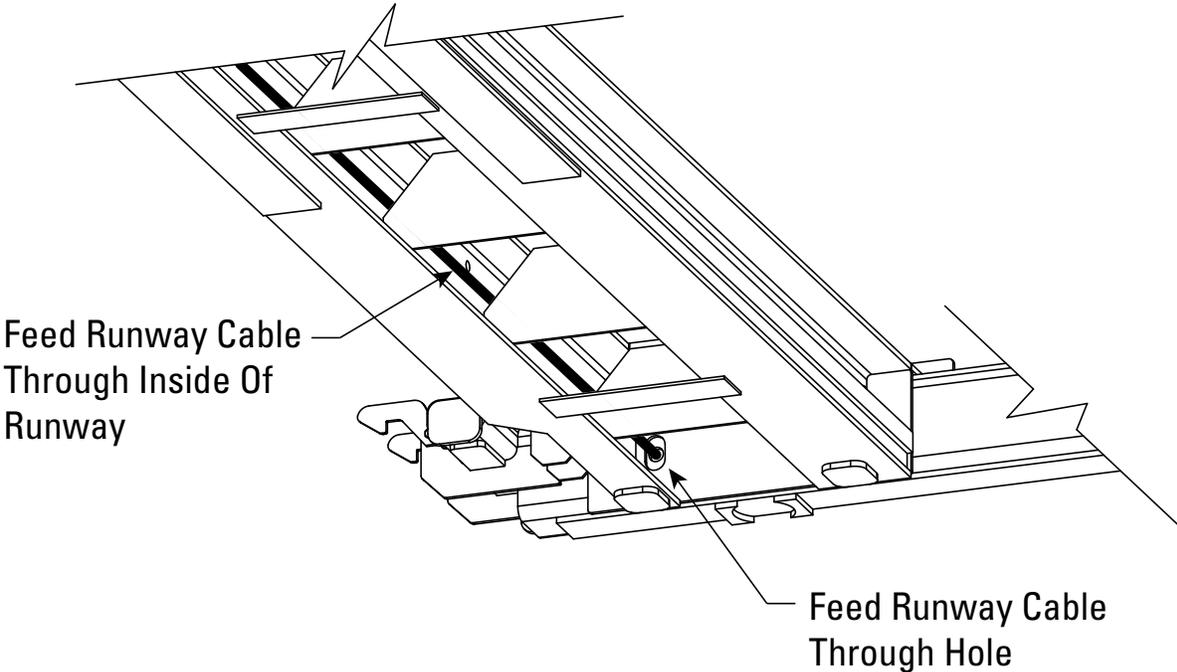


Fig. 9

1. Ensure your lift is positioned where you want it to stay, taking into account ceiling height, bay size, drive on maneuvering, distance to walls and concrete seams/cracks.
2. Keep column square to the center line of lift. Keep runway yokes centered between column forks. Ensure runway yoke latch levers are engaged and yokes are securely seated on column forks. Check lift location in the bay. Check dimensions. Diagonal must be equal within $\frac{1}{2}$ " , Fig. 10.
3. After everything is in the correct position, raise the runway until your hear it pass the first lock for all four columns. Lower to locks.
4. Place the previously estimated amount of shims under the appropriate columns (use shim kit M140105).

NOTE: To prevent the front shims from rotating, insert the included pin through the front anchor plates and into the shims. This pin used with the anchors will keep them in place. For the rear anchor plates, it is recommended to use one shim on both sides to prevent rotation when used with the anchors.

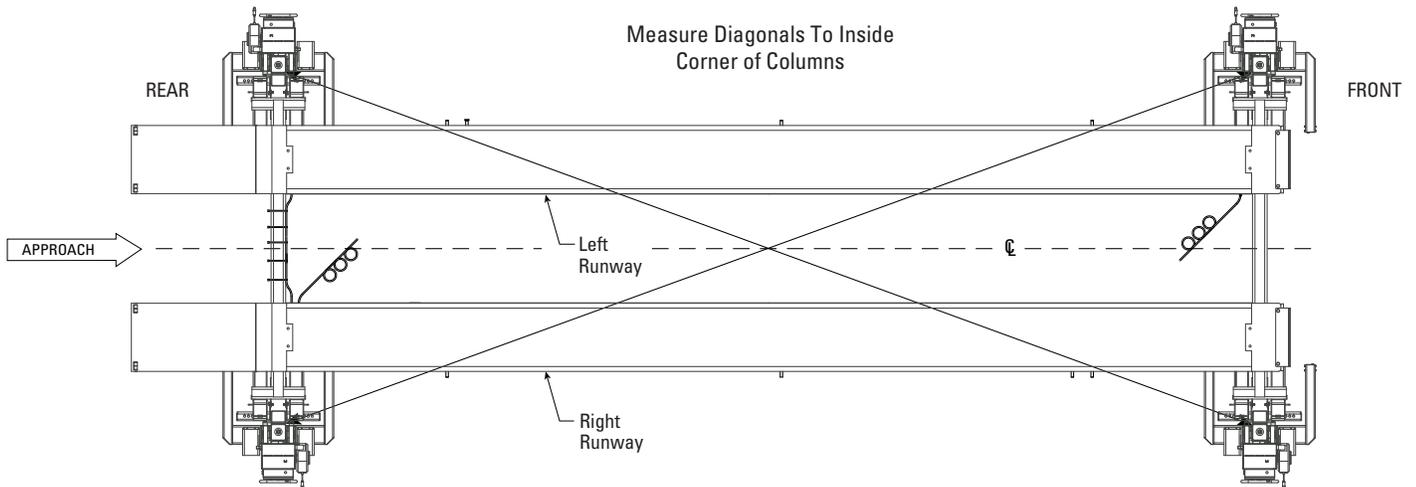
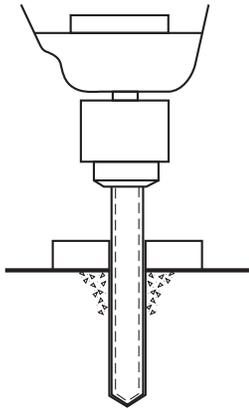
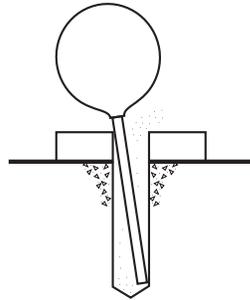


Fig. 10

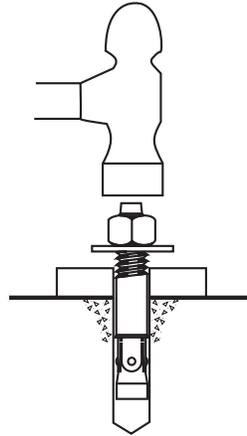
Concrete and Anchoring:



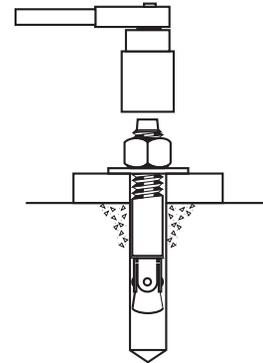
Drill holes using 3/4" carbide tipped masonry drill bit per ANSI B212.15-1994 (R2000)



Clean hole.



Run nut down just below impact section of bolt. Drive anchor into hole until nut and washer contact base.



Tighten nut with Torque wrench to 110 ft.-lbs.

CONCRETE AND ANCHORING REQUIREMENTS

STANDARD	ANSI/ALI ALCTV	IBC 2006, 2009, 2012		SEISMIC
Minimum Floor Thickness	4-1/4 INCHES	4-3/8 INCHES	5 INCHES	Varies by location consult with your structural engineer and manufacturer's representative.
Anchor	Hilti Kwik Bolt III* 3/4" x 5-1/2" Anchors* Supplied with lift	Hilti HIT-HY 150MAX-SD Adhesive; Hilti HIT-HY 150 MAX Adhesive; HILTI HIT-RE 500-SD Adhesive	Hilti Kwik Bolt III 3/4" x 7"	
Minimum Concrete Strength	3000 PSI	3000 PSI	3000 PSI	
Minimum Anchor Embedment	3-1/4 INCHES	3-1/2 INCHES	3-3/4 INCHES	
Minimum Distance to Concrete Edge, Crack, Expansion Joint, Abandoned Anchor Hole	4-1/2 INCHES	5-1/4 INCHES	3-1/4 INCHES	
<p>*The supplied concrete fasteners meet the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-2011, and the lift owner is responsible for all charges related to any additional anchoring requirements as specified by local codes. Contact customer service for further information at: 800.445.5438</p>				

1. Starting with the highest Column (from Estimating Shim requirements section):
 - A. Check for column plumb. If necessary, use shim kit (M140105) to shim column base to plumb column. Use a 4' level to check plumb of column. Adjust as necessary.
 - B. Maximum shim thickness is 2". If more shimming is required, consult manufacturer for additional shim kits and longer anchor bolts if required, Fig. 11.
 - C. When plum is achieved, make sure to keep runway yokes centered between column forks. Ensure runway yoke latch levers are engaged and yokes are securely seated on column forks.
 - D. Drill four Ø3/4" holes through concrete floor using the base plate holes as guide. Insert the four anchor bolts. Tighten nuts (DO NOT torque).
 - E. Recheck for plumb. Adjust as necessary.
 - F. Repeat A-E for the other column on the same side of lift/runway.
 - G. Recheck columns for plumb, Check for runway level fore and aft. Re-shim if necessary.
 - H. Cycle the lift. After one full cycle, raise enough to pass first lock on all four columns. Lower to locks.
2. Re-check dimensions. Diagonal must be equal within ½".
3. Repeat A-H, for the remaining columns.
4. Check for side to side level, fore and aft level and all columns plumb. Re shim/adjust as necessary.
5. Cycle the lift and ensure secure fork contact with yokes throughout cycle. Re-shim if necessary.
6. Recheck dimensions. Recheck plumb and level.
7. Torque anchor bolts to 110 ft lbs.
8. If anchor bolts do not hold or cannot achieve required torque amount, the concrete must be replaced. Saw cut and remove 6'x 6' square area under each column base. Repour with reinforced 3000psi minimum concrete to a depth of 6", keying new concrete under existing floor.

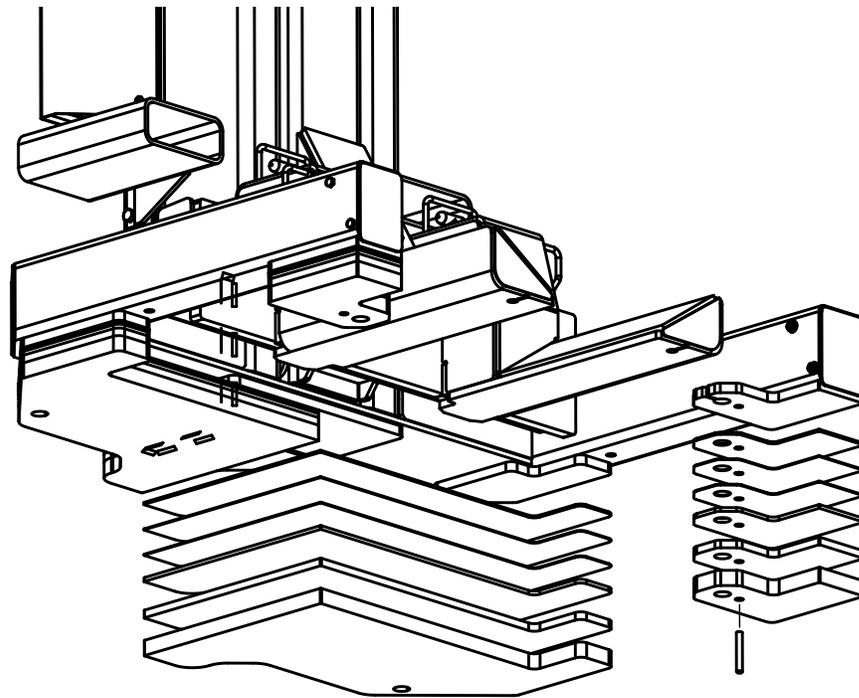


Fig. 11

Jack Stand Locators:

1. **IMPORTANT** Only use jack stand locators when using jack stands, Fig. 12.

Jack Stand Locators are part of the yoke weldment and are centrally placed under the runways. Only place jack stands in these locations

Jack Stand Locators
On Each Yoke

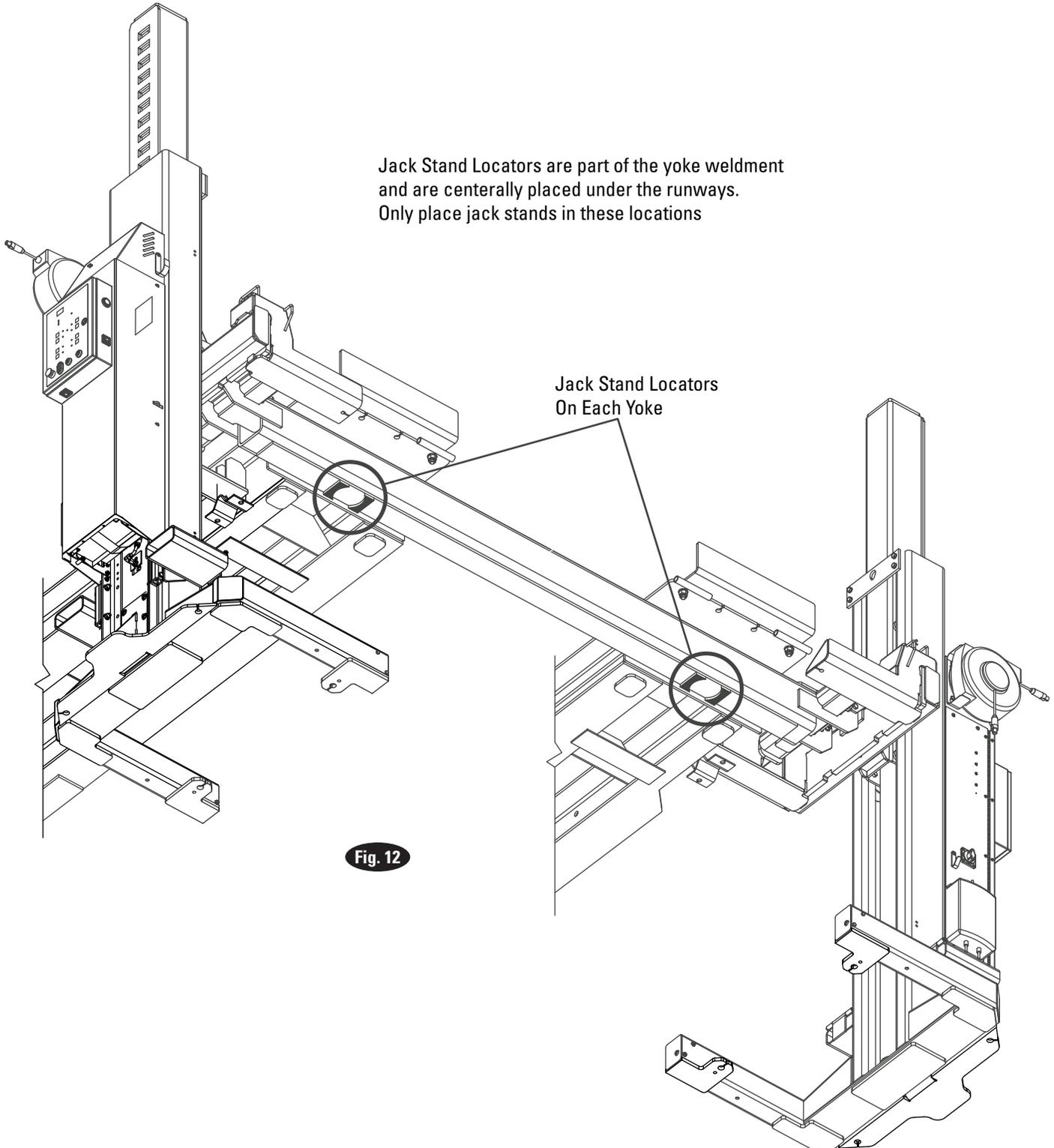


Fig. 12

The Owner/Employer:

- **The Owner/Employer shall** ensure that 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 Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2008, 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 or ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer Shall 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 or ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer Shall ensure that lift maintenance personnel are qualified and that they are adequately trained 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-2008, 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-2008, 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 the prior written consent of the manufacturer.

SAFETY INSTRUCTIONS

- **Never** allow unauthorized or untrained persons to operate lift or rolling jacks.
- **Shop** Policy should prohibit customers or non-authorized persons from being in shop area while lift is in use.
- **Thoroughly** train all employees in the use and care of lift and rolling jacks.
- **Be Sure** no one is standing in front or behind lift while vehicle is being driven onto or backed off the lift.
- **DO NOT** allow rear tires or portion of vehicle to interfere with ramp/chocks.
- **Never** allow front wheels to strike the front wheel stops.
- **DO NOT** permit employees or customers on lift when it is either being raised or lowered.
- **Never** overload lift: capacity of lift is 60,000 lbs. (30,000 lbs. per axle). CAPACITY SHOULD NOT BE EXCEEDED.

CAPACITY: 50,000 LBS. (22,680 KG.)

**25,000 LBS.
(11,340 KG.)
PER END**

**12,500 LBS.
(5,670 KG.)
PER CORNER**



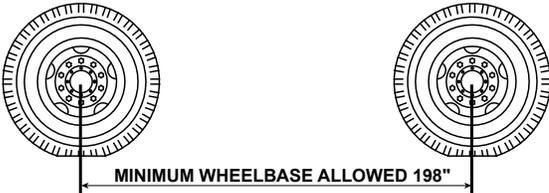
MINIMUM WHEELBASE ALLOWED 138"

NP1143 REV. -

CAPACITY: 60,000 LBS. (27,216 KG.)

**30,000 LBS.
(13,608 KG.)
PER END**

**15,000 LBS.
(6,804 KG.)
PER CORNER**



MINIMUM WHEELBASE ALLOWED 198"

NP1003 REV. -

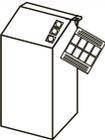
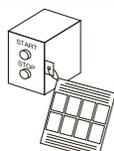
- **Always** engage parking brake and use the wheel chocks, Fig. 1, to keep the vehicle from rolling freely on the runways.
- **Always** lower lift on locks before working on vehicle.
- **Keep** area around lift clean of tools, debris, grease, and oil.
- **Always** keep runways clean.
- **Replace** all caution, warning, or safety related decals on the lift when unable to read or missing.
- **For Rolling Jack Safety Instructions** see Rolling Jack Installation, Operation and Maintenance Instructions in the rolling jack box.

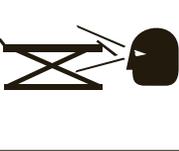
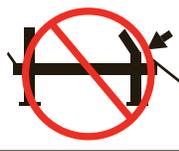
SAFETY INSTRUCTIONS

Safety Placards

1. Read safety placards and replace them if they become unreadable.

TYPICAL PLACARD LOCATIONS

 <p>Lift Control Console: Secure placard in an accessible location.</p>	 <p>Power Unit: Secure placard near lift controls.</p>	 <p>Push Button Controls on Electric Powered Lifts</p>
---	--	--

<p>CAUTION</p>  <p>Lift to be used by trained operator ONLY.</p>	<p>CAUTION</p>  <p>Authorized personnel only in lift area.</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. ALIWL2200csw</p>
<p>NOTICE</p>  <p>Read operating and safety manuals before using lift.</p>	<p>NOTICE</p>  <p>Proper maintenance and inspection is necessary for safe operation.</p>	<p>NOTICE</p>  <p>Do not operate a damaged lift.</p>

SAFETY WARNING LABELS FOR WHEEL ENGAGING SURFACE LIFTS

Lift Owner/User Responsibilities:

- This Safety Warning placard **SHALL** be displayed in a conspicuous location in the lift area.
- Use one of the mounting arrangements illustrated on back of this placard.
- These Safety Warning labels supplement other documents supplied with the lift.
- Be certain all lift operators read and understand these labels, operating instructions and other safety related information supplied with the lift.

<p>WARNING</p>  <p>Clear area if vehicle is in danger of falling.</p>	<p>WARNING</p>  <p>Remain clear of lift when raising or lowering vehicle.</p>	<p>WARNING</p>  <p>Keep clear of pinch points when lift is moving.</p>
<p>WARNING</p>  <p>Keep feet clear of lift while lowering.</p>	<p>WARNING</p>  <p>Do not override self-closing lift controls.</p>	<p>WARNING</p>  <p>Chock wheel to prevent vehicle movement.</p>

www.autolift.org

OPERATING INSTRUCTIONS

⚠️ WARNING To avoid personal injury and/or property damage, permit only trained personnel to operate lift.

After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift.

Observe and heed SAFETY and WARNING labels on the lift.

- 1. Loading:** Lift must be fully lowered and no one in service bay while the vehicle is brought on lift.
- If lift is equipped with rolling jacks, jacks must be fully lowered and the rear jack pushed toward center of lift to provide under vehicle clearance.
- Stop vehicle when it contacts the front wheel stops. At all times, be sure rear wheels are forward of the ramp/chocks and the ramp/chocks will clear tires when the lift is raised, Fig. 1. Driver and passengers must exit before raising.
- Place triangular wheel chocks on each side of one of the rear tires, Fig. 1.

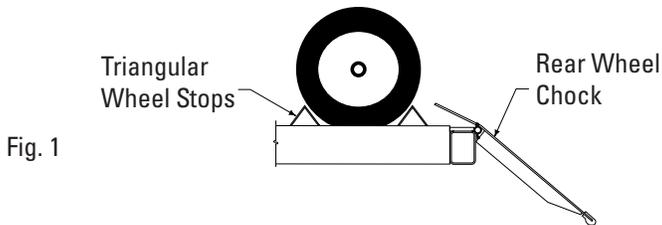


Fig. 1

5. To Raise Lift:

A. Ensuring that the System Configuration Lock/Unlock light is green, press the Raise Button. Raise the vehicle until runways clear the floor.

Check Fork Contact: Stop and check for secure fork contact with yokes, at all columns.

B. Continue to raise the vehicle to desired height.

NOTE: While cycling the lift, you may observe the individual columns slowing down and speeding up at various stages of travel. This is a normal characteristic of the lift leveling system.

Do Not go under vehicle unless all locks are engaged. Lower lift and repeat vehicle and/or lift spotting and loading procedure if required.

C. Press the Lower To Locks Button to lower columns onto the locking latches.

6. While Using Lift: Avoid excessive rocking of vehicle while on the lift.

7. **Before Lowering Lift:** Remove tool trays, safety stands, etc. from area.

8. To Lower Lift:

A. Ensuring that the System Configuration Lock/Unlock light is green, press the Raise Button to raise lifts off the locks.

B. Press the Lower Button to lower lift. The Slow Lower Button (1/3 speed) can be used if desired. Observe that all columns are lowering and vehicle remains level.

C. Remain clear of forks, runways, yokes and ramps when lowering. Observe pinch point WARNING decals.

D. Reset the parking brake.

MAINTENANCE INSTRUCTION

⚠ WARNING If you are not completely familiar with automotive lift maintenance procedures, STOP. Contact factory for instructions.

To Avoid Personal Injury, permit only qualified lift service personnel to perform maintenance on this equipment.

- **Periodically:** Check all runway attaching bolts for tightness.
- **Always** raise lift when cleaning floor area with solvents and/or cleaning compounds.
- **Daily:** Inspect front wheel stops, ramp/chocks and latch levers for damage or excessive wear. Replace as required with necessary parts.
- **For Rolling Jack** Maintenance Instructions see Rolling Jack Installation, Operation and Maintenance Instructions in the rolling jack box.
- **Refer** to mobile column manual for maintenance requirements of each unit.

LIFT LOCKOUT/TAGOUT PROCEDURE

Purpose

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.

Responsibility

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, Contractors, 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.

Preparation

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.

Sequence of 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.

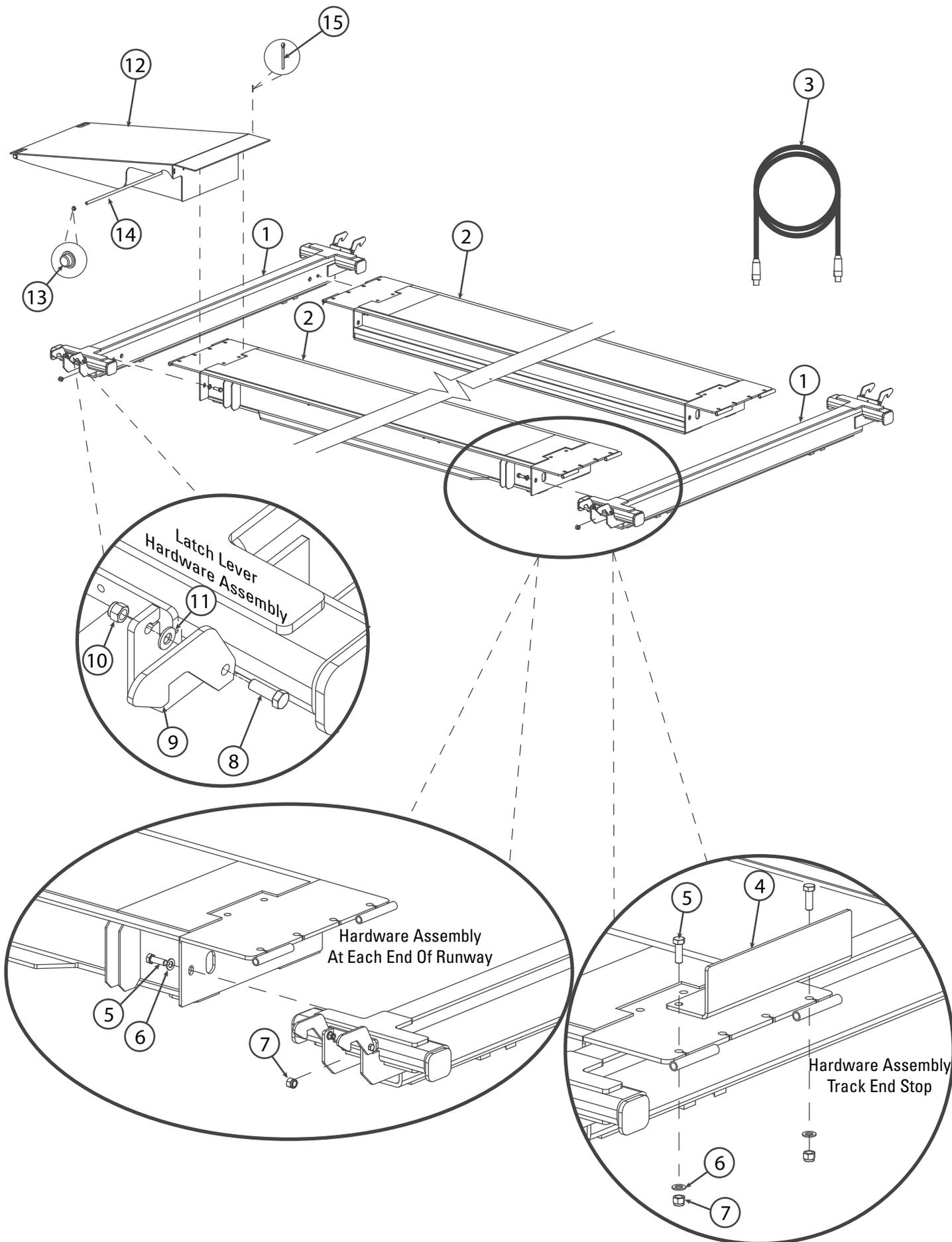
Rules for Using Lockout Procedure

Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the lift when the energy isolating device is locked out.

OPERATING CONDITIONS

Lift is not intended for outdoor use and has an operating ambient temperature range of 41°-104°F (5°-40°C).

Parts Breakdown			
Item	Description	Part Number	Part Number
1	Yoke Assembly	M110028	
2	Runway Weldment (60,000LB / 50,000LB)	M120259	S121121
3	Yoke Communication Cable	FA7958-41	
	Runway Communication Cable	FA7958-42	
4	Track End Stop	250530	
5	3/4" -10NC x 2-1/4" Lg. HHCS, GRD. 5	40446	
6	3/4" SAE Flat Washer	41021	
7	3/4" -10NC Hex Nylon Insert Lock Nut	40790	
8	1/2" -13NC x 1-1/2" Lg. HHCS, Grd. 5	40302	
9	Latch Lever	M120234	
10	1/2" -13NC Hex Nylon Insert Lock Nut	40703	
11	1/2" SAE Flat Washer	40920	
12	Ramp Assembly	M110027	
13	5/8" Push Nut	FC5179-4	
14	Hinge Pin	FC5388-54	
15	1/8" -1-1/4" Lg. Cotter Pin	41201	



NOTES



Forward Lift
996 Industrial Drive
Madison, IN. 47250

Phone: 800.445.5438
Fax: 800.578.5438
www.forwardlift.com

© 2010 Forward Lift; forward lift is a brand of RL Consolidated, A Dover Company. All rights reserved Unless otherwise indicated. Forward lift, RL Consolidated, Dover, and all other trademarks are property of Dover Corporation and its affiliates.