

# RUNWAY SCISSOR LIFT

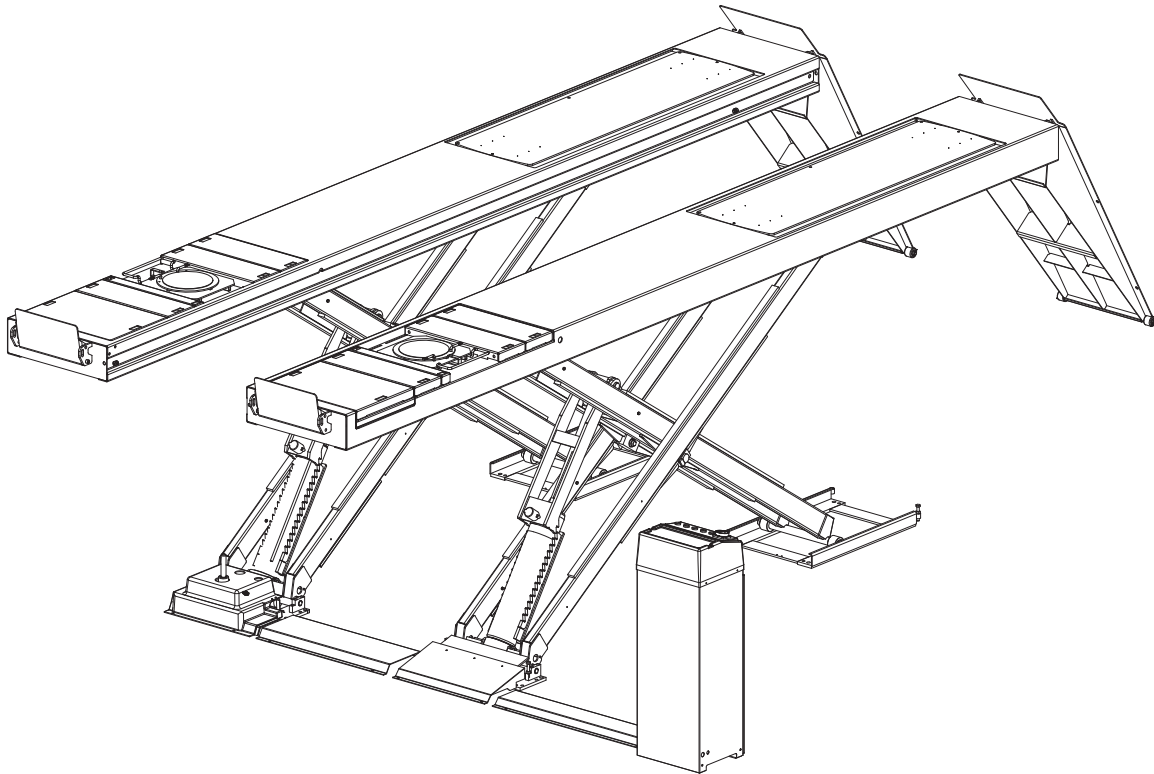
SURFACE AND FLUSH MOUNTED LIFT

(000 SERIES)

14,000 lb. Capacity

(7,000 lbs. per axle)

OPERATION & MAINTENANCE MANUAL



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**LP20652**


# 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.

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## SAFETY INSTRUCTIONS

- **Daily** inspect your lift. Never operate if it malfunctions or if it has been broken or damaged parts. Use only qualified lift service personnel and genuine Rotary parts to make repairs.
- **Thoroughly** train all employees in the use and care of lift and wheels free device, using manufacturer's instructions and "Lifting It Right" and "Safety Instructions" supplied with the lift.
- **DO NOT** permit employees or customers on lift when it is either being raised or lowered.
- **Never** allow unauthorized or untrained persons to operate lift or wheels free device.
- **Prohibit** customers or non-authorized persons from being in shop area while lift is in use.
- **DO NOT** stand in front or behind lift while vehicle is being driven onto or backed off the lift.
- **Load** vehicle on lift carefully, align vehicle with runways before driving on.
- **DO NOT** allow rear tires or portion of vehicle to interfere with ramp/chocks.
- **Never** allow front wheels to strike the front wheel stops.
- **Never** raise or lower the lift while the vehicle is supported by the wheels free device. Only raise or lower the lift when all 4 tires of the vehicle are supported by the runway.
- **Always** stand clear of lift when raising or lowering and observe "Pinch Points" Warning.
- **Never** overload lift: capacity of lift is 12,000 lbs. (6,000 lbs. per axle.) CAPACITY SHOULD NOT BE EXCEEDED.
- **Always** engage parking brake and use the rear wheel chocks to keep the vehicle from rolling freely on the runways.
- **Always** lower lift on locks before working on vehicle.

 **CAUTION** If you are working under vehicle, lift should be raised high enough for locking latches to engage.

# SAFETY INSTRUCTIONS

- **Always** keep area around lift clean of tools, debris, grease, and oil.
- **Always** keep runway clean.
- **Replace** all caution, warning, or safety related decals on the lift when unable to read or missing.
- **For Wheels Free Device Safety Instructions** see Wheels Free Device Installation, Operation and Maintenance Instructions in the wheels free device box.
- **Never** use work step while lift is in a raised position.
- **DO NOT** perform any maintenance on the power unit, control valves, air or fluid lines, hydraulic cylinders, or check fluid level until lift has been fully lowered and all pressure has been released from system. Follow OSHA Lockout/Tagout procedures as they apply, reference ANSI Z244.1.
- **DO NOT** block open or override self-closing lift controls, they are designed to return to the off or neutral position when released.
- **Clean** area if vehicle is in danger of falling.
- **Remove** tools, and other equipment from on or below lift before lowering lift.

**CAUTION** Lowering lift legs onto an obstruction may cause damage to lift.



# OPERATING INSTRUCTIONS

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

**IMPORTANT** Always lift vehicle using all four tires. Never raise just one end, corner or one side of vehicle.

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

**⚠ WARNING** If lift is not operating properly, **DO NOT** use until adjustments or repairs are made by a qualified lift service technician.

Observe and heed SAFETY and WARNING labels on the lift.

**Note:** This lift was designed for 118" or longer wheelbase at the rated 14,000 lb.

## 1. Loading:

- A. Lift must be fully lowered and service bay clear of all personnel before the vehicle is brought on lift. Do not stand in front of a moving vehicle.
- B. If lift is equipped with wheels free device, it must be fully lowered and the rear wheels free device pushed toward center of lift to provide under car clearance.
- C. 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.
- D. Place triangular wheel chocks on each side of one of the rear tires, Fig. 1.

## 2. To Raise Lift:

- A. Push the **"UP"** button on the control panel. Release button at desired height, Fig. 2.
- B. Lower lift to locking latches by pushing the **"DOWN"** button until lift rests on the locks, Fig. 2.

**IMPORTANT** Always lower lift on locking latches before alignment readings are measured.

- C. For Wheels Free Device Operating Instructions see Wheels Free Device Installation, Operation and Maintenance Instructions in the wheels free device shipping carton.

**⚠ CAUTION** **DO NOT** go under vehicle or lift if locking latches are not engaged.

**⚠ WARNING** Never raise lift while vehicle is supported above the runway by the wheels free device.

## 3. Before Lowering Lift:

- A. Be sure no one is in the lift area and that all tools, tool trays, etc. have been removed from under the lift and vehicle.

**⚠ WARNING** Observe pinch point warning decals, Fig. 3.

- B. If lift is equipped with wheels free device, it must be fully lowered and the rear wheels free device pushed toward center of lift to provide under car clearance.

## 4. To Lower Lift:

- A. Raise lift off locking latches by pushing the **"UP"** button, Fig. 2.
- B. Push the **"DOWN"** button to lower lift, Fig. 2.
- C. Observe lift and vehicle to be sure lift is level while being lowered. If not, **STOP** and raise the lift by pressing the **"UP"** button until runways are level and repeat the lowering process.
- D. Fully lower lift, remove the triangular wheel chocks and check to be sure area is clear before removing vehicle from lift, Fig. 1.

# OPERATING INSTRUCTIONS

**⚠️ WARNING** Keep hands clear of linkages while the lift is being raised or lowered, Fig. 3.

**⚠️ WARNING** Never lower lift while vehicle is supported above the runway by the wheels free device.

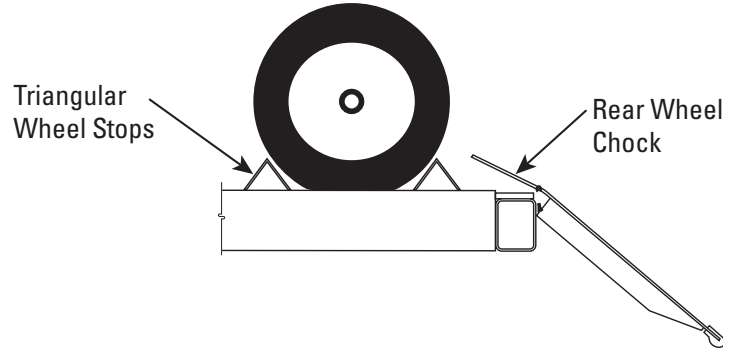
**⚠️ WARNING** Before attempting to lift pick-up trucks or other truck frame vehicles, be sure that:

- A. Vehicle individual axle weight does not exceed one-half lift capacity.
- B. Adequate overhead clearance is provided to raise vehicles to desired height.

**Note:** Allow 2 seconds between motor starts. Failure to comply may cause motor burnout.

\*Maximum operation pressure is:  
3916 psi for X14/XA14

**Fig. 1**



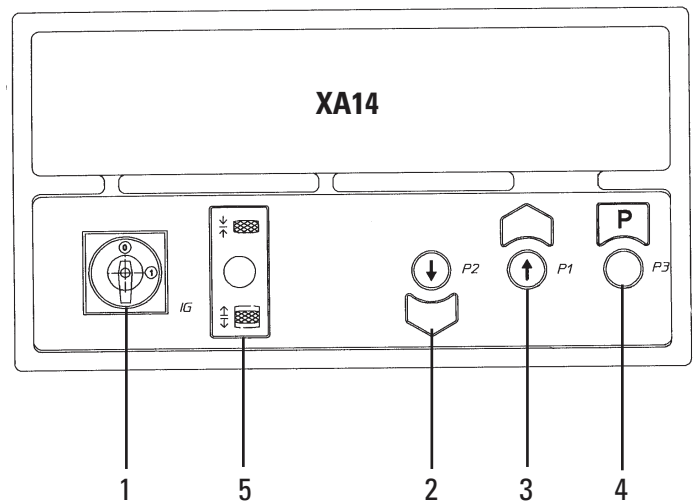
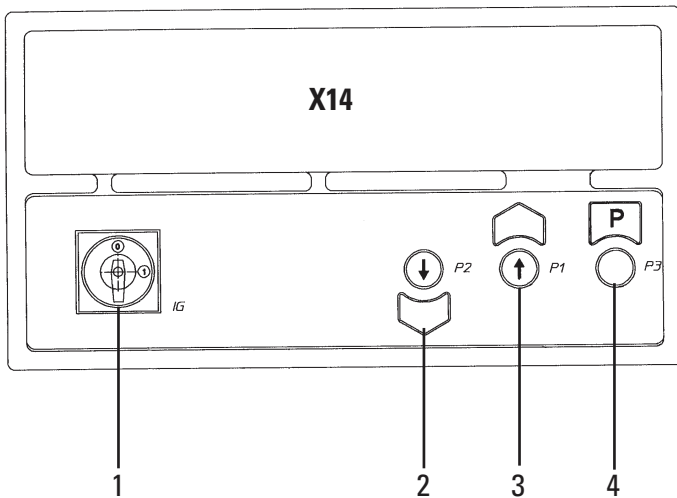
**Fig. 2** **Controls**  
Control box containing hydraulic control unit, with main switch and control buttons listed below. In case of emergency, turn the main switch to 0.

**X14**

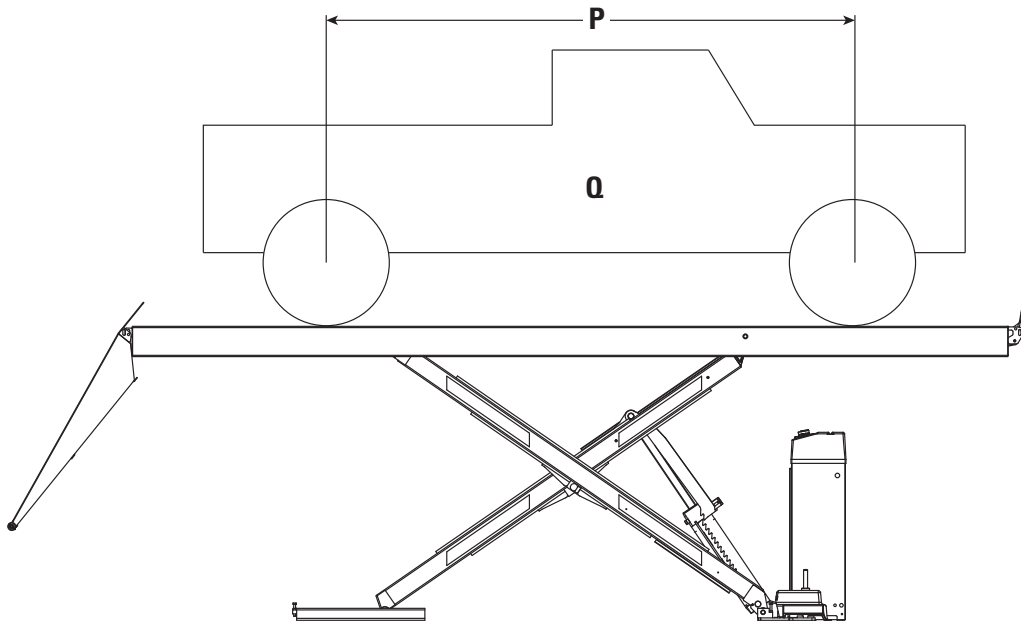
- 1. Master Switch
- 2. Down
- 3. Up
- 4. Park

**XA14**

- 1. Master Switch
- 2. Down
- 3. Up
- 4. Park
- 5. Rear Slip-Plate Control Lever

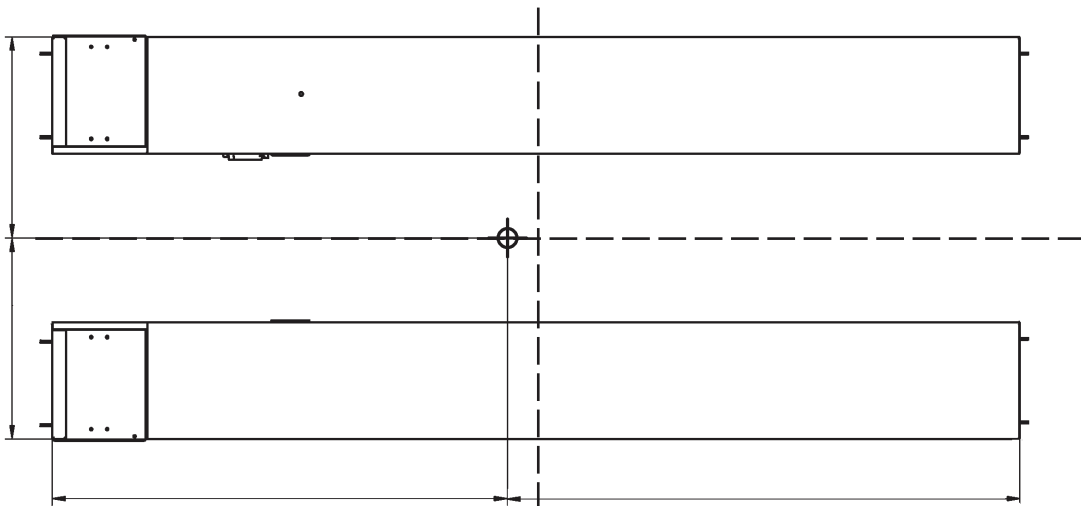






**Wheelbase Limits**

<b>P</b> <b>inch (mm)</b>	<b>max Q</b> <b>lbs (kg)</b>
$\geq 118$ (3000)	14000 (6000)
$> 118$ (3000)	9000 (4000)
$\geq 98$ (2500)	5500 (2500)
$< 98$ (2500)	4000 (1800)
$\geq 78$ (2000)	
$< 78$ (2000)	



# 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.

- **Always:** Keep attaching bolts tight.
- **Always:** Keep locking latches free and oiled.
- **Always:** Raise lift when cleaning floor area with solvents and/or cleaning compounds.
- **Always:** Always keep runways and linkages clean. In salt belt or other corrosive environments, the lift must be washed down weekly.
- **Daily:** Inspect front wheel stops and ramp/chocks for damage or excessive wear. Replace as required with genuine Rotary Lift parts.
- **Daily:** Check locking latch operation and reset. Adjust per instructions or repair if required with genuine Rotary parts.
- **Weekly:** Clean foreign debris from rear wheel slip plates and turning radius gauges by blowing out with shop air. **DO NOT GREASE BALL BEARINGS.**
- **Monthly:** Check anchor bolts to ensure they are torqued to 36 ft-lbs.
- **Monthly:** Check level of runway. Adjust per instructions.
- **Monthly:** Lubricate Guide on each turning radius with a dry film lubricant. Clean and lubricate more often as conditions warrant.
- **Semi-Annually:** Check fluid level of lift power unit and refill if required. If fluid is required, inspect all fittings, hoses and seals. Repair as required.
- **Semi-Annually:** Lubricate ramp/ chock hinge pins.
- **For Wheels Free Device** Maintenance Instructions see Wheels Free Device Installation, Operation and Maintenance Instructions in the wheels free device box.
- **Replace** all caution, warning, or safety related decals on the lift if unable to read or missing. Reorder labels from Rotary Lift - See parts breakdown.
- **Replace** hydraulic fluid after every 4 months of use.



# TROUBLE SHOOTING

Troubleshooting Description	Possible Cause	Remedy
Lift Stops Short Of Full Rise	Low Oil Level	1. Refill reservoir per the install instructions and with the recommended oil grade.
Lift Chatters	Low Oil Level	1. Check for leaks. 2. Refill reservoir per the installation instructions and with the recommended oil grade.
Cylinder Groaning	1. Air in hydraulic system. 2. Dry hydraulic cylinder rod	1. Cycle lift to full stroke. 2. Spray with silicon lubricant.
Anchors Will Not Stay Tight	1. Holes Drilled Oversize  2. Concrete Floor Not Thick Enough  3. Concrete Floor Not Strong Enough	1. Relocate lift using a new bit to drill holes. Reference installation instructions for proper anchoring method and minimum spacing requirements. 2. Break out old concrete and re-pour per lift installation instructions. 3. Break out old concrete and re-pour per lift installation instructions.
Lift Going Up Unlevel	1. Lock obstructed       2. Lift Installed On Unlevel Floor	1. Check obstructions/locks- the lift must be raised manually to move the lift to within operating limits. Refer to Manually raising and lowering runways.       2. Shim lift to level per installation instructions. If over 1/2" (13mm) use grout to shim bases per installation instructions.
Lift will not raise off of latches.	1. Motor, pump, or cylinder failure.	1. Contact lift manufacturer's Customer Service.

# TROUBLE SHOOTING

Troubleshooting Description	Possible Cause	Remedy
Slow Lifting Speed	<ol style="list-style-type: none"> <li>1. Air Mixed With Oil</li> <li>2. Air Mixed With Oil Suction</li> <li>3. Low Oil Level</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure oil is of recommended grade.</li> <li>2. Tighten all suction line fittings.</li> <li>3. Refill reservoir per the maintenance instructions and with the recommended oil grade.</li> </ol>
Oil Blowing Out Fill-Breather Cap	<ol style="list-style-type: none"> <li>1. Oil Leak/Pump Failure</li> <li>2. Incoming Motor Voltage Incorrect</li> <li>3. Vehicle Weight And Balance Not Within Lift Capacity.</li> </ol>	<ol style="list-style-type: none"> <li>1. External oil leak- locate and repair leak. Internal oil leak- have hydraulic system serviced by an authorized service representative.</li> <li>2. Incoming motor voltage incorrect- contact your local service authority.</li> <li>3. Use lift only to rated capacity.</li> </ol>
Lift Slowly Settles Down	<ol style="list-style-type: none"> <li>1. Air Mixed With Oil</li> <li>2. Air Mixed With Oil Suction</li> <li>3. Oil Return Tube Loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Change oil using ISOVG32 Hydraulic Oil or Dexron III ATF. Hydraulic tank overfilled.</li> <li>2. Tighten all suction line fittings.</li> <li>3. Reinstall oil return tube.</li> </ol>
Lift Fails To Raise/Lower	<ol style="list-style-type: none"> <li>1. Debris In Check Valve Seat</li> <li>2. Oil Leak</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean check valve.</li> <li>2. External oil leak- locate and repair leak. Internal oil leak- have hydraulic system serviced by an authorized service representative.</li> </ol>

# TROUBLE SHOOTING

Troubleshooting Description	Possible Cause	Remedy
Lift Fails To Raise When Pushing UP Button	<ol style="list-style-type: none"> <li>1. UP Button Defective</li> <li>2. Vehicle Weight And Balance Not Within Lift capacity</li> <li>3. Motor Rotation Incorrect</li> <li>4. Incoming motor voltage Incorrect Or Insufficient</li> <li>5. Loose Or Damaged Wiring</li> <li>6. Blown Fuse</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace UP button.</li> <li>2. Use lift only at rated load.</li> <li>3. Re-wire motor according to motor diagram for counter-clockwise rotation.</li> <li>4. Contact your local RAI</li> <li>5. Inspect and repair loose or damaged wiring.</li> <li>6. Check for blown fuse.</li> </ol>
Lift Fails To Lower When Pushing DOWN Button	<ol style="list-style-type: none"> <li>1. DOWN Button Defective</li> <li>2. Hydraulic Valves Malfunctioning</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace DOWN button.</li> <li>2. Check electrical connections or replace hydraulic valve(s).</li> </ol>
Lift Fails To Lower While Pushing PARK Button.	<ol style="list-style-type: none"> <li>1. PARK Button Defective</li> <li>2. Hydraulic Valves Malfunctioning</li> <li>3. Loose Or Damaged Wiring</li> <li>4. Blown Fuse</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace PARK button.</li> <li>2. Check electrical connections or replace hydraulic valve(s).</li> <li>3. Pressurize lift hydraulically then use manual override valves to release hydraulic pressure. Lower height limit not set.</li> <li>4. Check for blown fuse.</li> </ol>

# TROUBLE SHOOTING

Troubleshooting Description	Possible Cause	Remedy
RJ Pump Will Not Start	<ol style="list-style-type: none"> <li>1. Insufficient air supply at pump</li> <li>2. Leak in air supply line</li> <li>3. Plugged air filter</li> <li>4. Bad air motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Pump requires 100-120psi at 20cfm.</li> <li>2. Locate and correct leakage.</li> <li>3. Remove and install a new filter.</li> <li>4. Repair or replace air motor.</li> </ol>
RJ Pump Starts But Stalls Under Load	<ol style="list-style-type: none"> <li>1. Insufficient air supply at pump</li> <li>2. Leak in air supply line</li> <li>3. Plugged air filter</li> <li>4. Bad air motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Pump requires 100-120psi at 20cfm.</li> <li>2. Locate and correct leakage.</li> <li>3. Remove and install a new filter.</li> <li>4. Repair or replace air motor.</li> </ol>
RJ Pump Runs But Will Not Lift Load	<ol style="list-style-type: none"> <li>1. Lift loaded beyond capacity</li> <li>2. External Oil Leaks</li> <li>3. Internal leakage.</li> <li>4. Release mechanism damaged or parts missing.</li> <li>5. Wrong pump installed on lift.</li> <li>6. Pump low on fluid</li> <li>7. Fluid blowing out rear cover of air motor</li> <li>8. Pump malfunctioning</li> </ol>	<ol style="list-style-type: none"> <li>1. Use lift only to rated capacity.</li> <li>2. Repair leak, refill reservoir. CAUTION Do Not overfill reservoir. Lift must be completely lowered.</li> <li>3. Have pump serviced by an authorized service center.</li> <li>4. Replace damaged or missing parts.</li> <li>5. Verify pressure rating of pumps meets pressure requirements of lift.</li> <li>6. Lower lift and check fluid complying with MIL-H-5606. Locate and correct leak. CAUTION: DO NOT OVERFILL RESERVOIR. Lift must be completely lowered.</li> <li>7. Pump piston seal leaking, have pump serviced by an authorized service center.</li> <li>8. Have pump serviced by an authorized service center.</li> </ol>
RJ Pump Runs But Not To Full Rise	<ol style="list-style-type: none"> <li>1. Pump malfunctioning</li> </ol>	<ol style="list-style-type: none"> <li>1. Have pump serviced by an authorized service center.</li> </ol>
RJ Drifts Down - Will Not Hold	<ol style="list-style-type: none"> <li>1. Release mechanism damaged or parts missing.</li> <li>2. External leakage</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace damaged or missing parts.</li> <li>2. Locate leak and repair. Refill reservoir. CAUTION: DO NOT OVERFILL RESERVOIR. Lift MUST be completely lowered.</li> </ol>

# TROUBLE SHOOTING

<b>Troubleshooting Description</b>	<b>Possible Cause</b>	<b>Remedy</b>
RJ Drifts Down - Will Not Hold -Continued	<ol style="list-style-type: none"><li>1. Internal leakage</li><li>2. Lift locking latch not released</li><li>3. Release mechanism damaged or parts missing</li><li>4. Return flow of fluid restricted or blocked</li></ol>	<ol style="list-style-type: none"><li>1. Have pump serviced by an authorized service center.</li><li>2. Release locking latch.</li><li>3. Replace damaged or missing parts.</li><li>4. Eliminate blockage. <b>WARNING</b> If wheels free device is the raised position, be sure to engage the mechanical locking device prior to attempting to service the unit. Failure to do so may cause lift to lower.</li></ol>
RJ Lowers Slow Or Not At All	<ol style="list-style-type: none"><li>1. Internal return flow restrictor is plugged</li></ol>	<ol style="list-style-type: none"><li>1. Replace damaged or missing parts.</li></ol>

# 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 Rotary 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.

## 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.

## NOTES

Installer: Please return this booklet to literature package and

## **GIVE TO LIFT OWNER/OPERATOR.**

Trained Operators and Regular Maintenance Ensures  
Satisfactory Performance of Your Rotary Lift.

Contact Your Nearest Authorized Rotary Parts Distributor for Genuine Rotary Replacement Parts. See  
Literature Package for Parts Breakdown.

**Vehicle Service Group<sup>SM</sup>**  
2700 Lanier Drive  
Madison, IN 47250, USA  
1-800-640-5438  
[www.vsgdover.com](http://www.vsgdover.com)



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