



World Leader in Lift Systems

Model: SPO12

SPO12-10 thru SPO12-12 & SPO12-20 thru SPO12-28 Series
Two Post Surface Mounted
Swing Arm Frame Engaging Lift
Capacity: 12,000 lbs. (3,000 lbs. per arm)

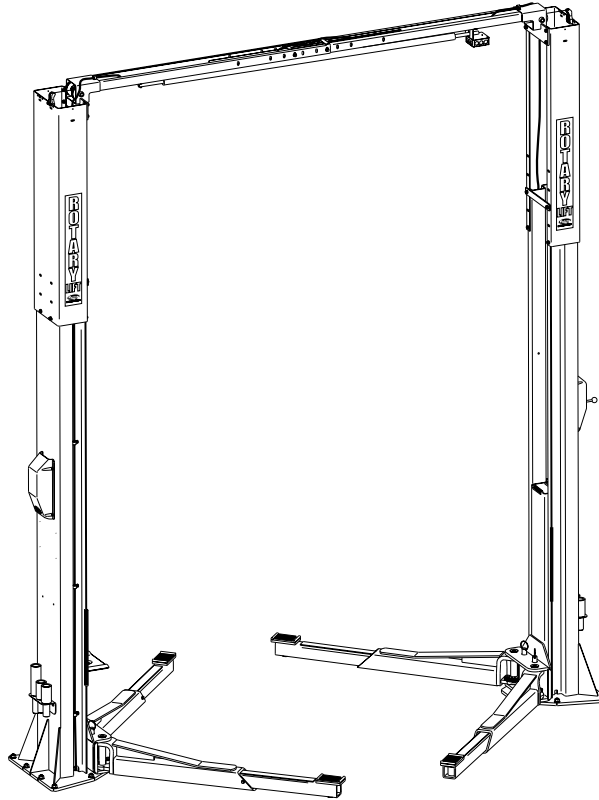


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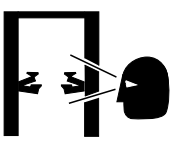
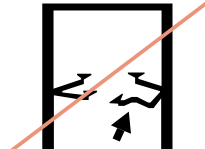
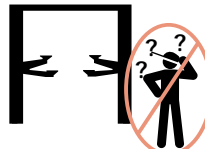
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INSTALLER: Please return this booklet to literature package and give to lift owner/operator.


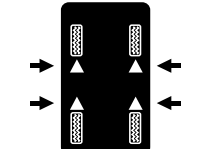
ROTARY
LIFT

OPERATION & MAINTENANCE MANUAL

SAFETY INSTRUCTIONS

<p>SAFETY INSTRUCTIONS</p>  <p>Proper maintenance and inspection is necessary for safe operation. ©</p>	<p>SAFETY INSTRUCTIONS</p>  <p>Do not operate a damaged lift. ©</p>	<p>CAUTION</p>  <p>Lift to be used by trained operator only. ©</p>
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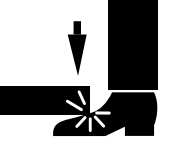

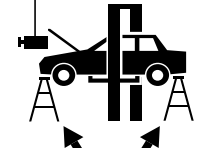
<p>CAUTION</p>  <p>Authorized personnel only in lift area. ©</p>	<p>SAFETY INSTRUCTIONS</p>  <p>Read operating and safety manuals before using lift. ©</p>
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<p>WARNING</p>  <p>Position vehicle with center of gravity midway between adapters. ©</p>	<p>CAUTION</p>  <p>Use vehicle manufacturer's lift points. ©</p>
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WARNING



Do not override self-closing lift controls. ©

<p>WARNING</p>  <p>Keep feet clear of lift while lowering. ©</p>	<p>WARNING</p>  <p>Remain clear of lift when raising or lowering vehicle. ©</p>	<p>CAUTION</p>  <p>Always use safety stands when removing or installing heavy components. ©</p>
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<p>WARNING</p>  <p>Avoid excessive rocking of vehicle while on lift. ©</p>	<p>WARNING</p>  <p>Clear area if vehicle is in danger of falling. ©</p>	<p>CAUTION</p>  <p>Auxiliary adapters may reduce load capacity. ©</p>
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- **Daily** inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use **only** qualified lift service personnel and genuine Rotary parts to make repairs.
- **Thoroughly** train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.
- **Never** allow unauthorized or untrained persons to position vehicle or operate lift.
- **Prohibit** unauthorized persons from being in shop area while lift is in use.
- **Do Not** permit anyone on lift or inside vehicle when it is either being raised or lowered.
- **Always** keep area around lift free of tools, debris, grease and oil.
- **Never** overload lift. Capacity of lift is shown on nameplate affixed to the lift.
- **Do Not** stand in front of the lift or vehicle while it is being positioned in lift bay.
- **Do Not** hit or run over lift arms or adapters. This could damage lift or vehicle. Before driving vehicle into lift bay, position arms and adapters to provide unobstructed entrance onto lift.
- **Load** vehicle on lift carefully. Position lift adapters to contact at the vehicle manufacturer's recommended lift points. Raise lift until adapters contact vehicle. Check adapters for secure contact with vehicle. Raise lift to desired working height.

CAUTION DO NOT go under vehicle if locking latches are not engaged.

- **Do Not** block open or override self-closing lift controls; they are designed to return to the "Off" or Neutral position when released.
- **Do Not** remove or disable arm restraints.
- **Remain** clear of lift when raising or lowering vehicle.
- **Always** use safety stands when removing or installing heavy components.
- **Avoid** excessive rocking of vehicle while on lift.
- **Clear** area if vehicle is in danger of falling.
- **Remove** tool trays, stands, etc. before lowering lift.
- **Release** locking latches before attempting to lower lift.
- **Position** lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.

OWNER/EMPLOYER RESPONSIBILITIES

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-2000, *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*.
- Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, *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.
- Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-1994, *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.
- Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2000, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*.
- 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.
- 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.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.



OPERATING INSTRUCTIONS

Surface Mounted Frame Engaging Lifts

⚠ 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.

IMPORTANT Always lift the vehicle using all four adapters. **NEVER** raise just one end, one corner, or one side of vehicle.

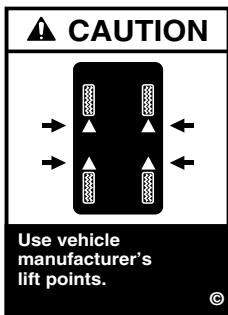


- F. **DO NOT** go under vehicle if all four adapters are not in secure contact at vehicle manufacturer's recommended lift points.
- G. Repeat complete spotting, loading and raising procedures if required.
- H. Lower lift onto locking latches.

Observe and heed SAFETY, CAUTION and WARNING labels on the lift.



DO NOT go under vehicle if locking latches are not engaged.

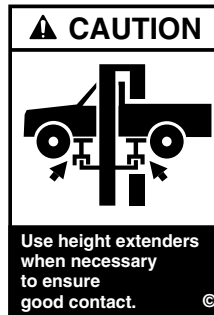


1. Lift must be fully lowered and service bay clear of all personnel before the vehicle is brought on lift. Swing arms out to full drive-thru position.
2. Spot vehicle over lift with left front wheel in proper spotting dish position, Fig. 1.



Before attempting to lift pickup trucks or other truck frame vehicles, be sure that:

3. **Loading:** Swing arms under vehicle and position adapters at vehicle manufacturer's recommended lift points, Fig. 2. Use optional adapter extensions for under body clearance when required.



- A. Vehicle frame is strong enough to support its weight and has not been weakened by modification or corrosion.
- B. Vehicle individual axle weight does not exceed one-half lift capacity.
- C. Adapters are in secure contact with frame at vehicle manufacturer's recommended lift points.
- D. Vehicle is stable on lift and neither front nor "tail" heavy.
- E. The overhead switch bar will contact the highest point on the vehicle.



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

4. To Raise Lift:

- A. Push RAISE switch on power unit, Fig. 3.
- B. Stop before making contact with vehicle. Check arm restraint pins for engagement. If required, slightly move arm



Adapter extensions are furnished in 4" & 8" increments. The stack-up height should not exceed 12". Use adapter extension combination to keep vehicle as level as possible while it is being supported by the lift.



5. While Using Lift:

- A. Avoid excessive rocking of vehicle while on lift.
- B. Always use safety stands as needed or when removing or installing heavy components.

6. To Lower Lift:

- A. Remove all tools or other objects from lift area.

to allow restraint gear and pawl to mesh. **DO NOT** hammer pin down as this will damage the restraint gear teeth.

- C. Raise vehicle until tires clear the floor.
- D. Stop and check adapters for secure contact at vehicle manufacturer's recommended lift points.
- E. Continue to raise to desired height **only** if vehicle is secure on lift.



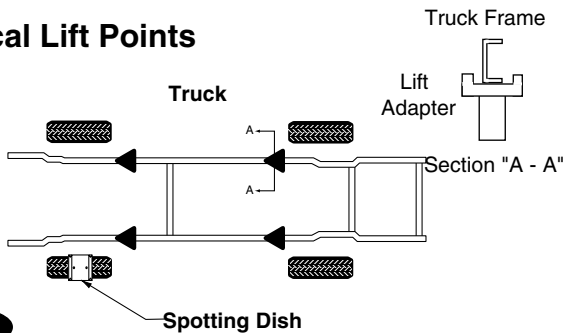
- B. Raise lift off locking latches.
- C. Pull LATCH release handle fully and hold.
- D. Pull LOWERING valve handle to lower, Fig. 3.

Note: Both LATCH release and LOWERING valve handles are deadman-type design. Each must be held down to lower lift. Do not override self-closing lift controls.

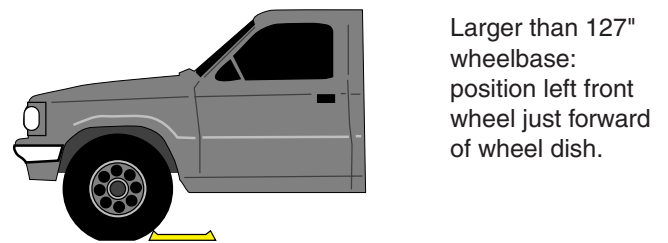
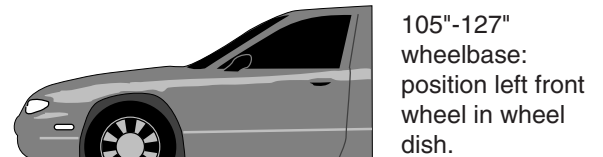
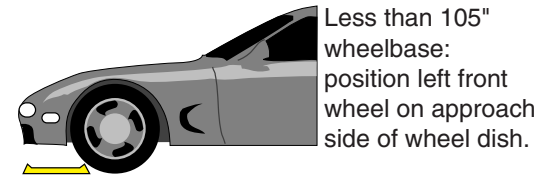
- 7. Remain clear of lift when lowering vehicle. Observe pinch point warning decals.
- 8. Remove adapters from under vehicle and swing arms to full drive-thru position before moving vehicle.
- 9. If lift is not operating properly, **Do Not** use until adjustment or repairs are made by qualified lift service personnel.



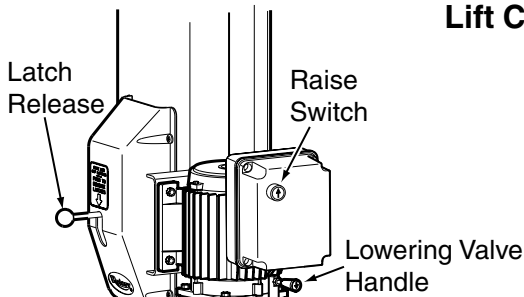
Typical Lift Points



Typical Wheel Spotting Positions

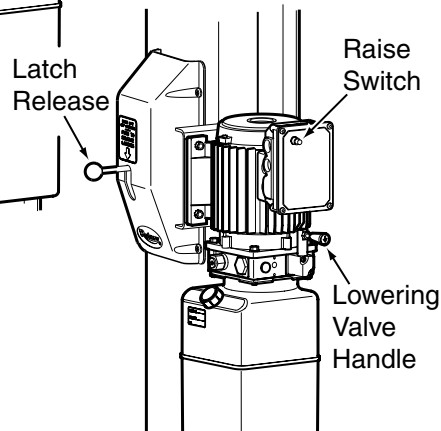


THREE PHASE



Lift Controls

SINGLE PHASE



WARNING Most specialty or modified vehicles cannot be raised on a frame engaging lift. Contact vehicle manufacturer for raising or jacking details.

Positioning the vehicle

Due to varying centers of gravity within different vehicle classes, use the dish as a guide only and locate the arms between the vehicle pickup points. Always position vehicle with its center of gravity in line with lift columns. Slightly raise vehicle and check for stability. Do this by pushing up & down on the front and rear bumpers. The vehicle should sit firmly on all pickup points. If necessary, relocate arms and/or vehicle to attain a stable condition. Also refer to the ALI Safety Manual included with the lift.

Fig. 3

Fig. 1

MAINTENANCE INSTRUCTIONS

If you are not completely familiar with automotive lift maintenance procedures; **STOP:** Contact factory for instructions. To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment.

- **Always** keep bolts tight. Check periodically.
- **Always** keep lift components clean.
- **Always** if oil leakage is observed, call local service representative.
- **Always** if electrical problems develop, call local service representative.
- **Daily:** Check cables and sheaves for wear. Replace worn parts as required with genuine Rotary parts.
- **Daily:** Inspect adapters for damage or excessive wear. Replace as required with genuine Rotary parts.

- **Monthly:** Check equalizer cable tension. Adjust per lift installation instructions.
- **Monthly:** Lubricate locking latch shafts. Push latch handle several times for oil to penetrate joints.
- **Every 3 Months:** Check anchor bolts for tightness. Anchors should be torqued to 90 ft/lbs.
- **Semi-Annually:** Check fluid level of lift power unit and refill if required per lift installation instructions.
- **If Lift** stops short of full rise or chatters, check fluid level and bleed both cylinders per lift installation instructions.
- **Replace** all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from Rotary Lift.
- **Monthly:** Coat the cable contact surface with a light grease such as "Tufoil®."

 Clear area if vehicle is in danger of falling.	 Position vehicle with center of gravity midway between adapters.
 Remain clear of lift when raising or lowering vehicle.	 Avoid excessive rocking of vehicle while on lift.
 Do not override self-closing lift controls.	 Keep feet clear of lift while lowering.

 Lift to be used by trained operator only.	 Authorized personnel only in lift area.
 Use vehicle manufacturer's lift points.	 Always use safety stands when removing or installing heavy components.
 Use height extenders when necessary to ensure good contact.	 Auxiliary adapters may reduce load capacity.

INSPECTION and MAINTENANCE
See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

 Read operating and safety manuals before using lift.	 Proper maintenance and inspection is necessary for safe operation.
 Do not operate a damaged lift.	<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 33116 Indialantic, FL. 32903-3116.</p> <p>They are protected by copyright. Set of labels may be obtained from ALI or its member companies.</p>

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TROUBLE SHOOTING

Trouble	Cause	Remedy
Motor does not run.	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker. 2. Incorrect voltage to motor. 3. Bad wiring connections. 4. Motor up switch burned out. 5. Overhead limit switch burned out. 6. Motor windings burned out. 	<ol style="list-style-type: none"> 1. Replace blown fuse or reset circuit breaker. 2. Supply correct voltage to motor. 3. Repair and insulate all connections. 4. Replace switch. 5. Replace switch. 6. Replace motor.
Motor runs but will not raise lift.	<ol style="list-style-type: none"> 1. Open lowering valve. 2. Pump sucking air. 3. Suction stub off pump. 4. Low oil level. 	<ol style="list-style-type: none"> 1. Repair or replace lowering valve. 2. Tighten all suction line fittings. 3. Replace suction stub. 4. Fill tank with Dexron III ATF or ISOVG32 Hydraulic Oil.
Motor runs—raises unloaded lift but will not raise vehicle.	<ol style="list-style-type: none"> 1. Motor running on low voltage. 2. Debris in lowering valve. 3. Improper relief valve adjustment. 4. Overloading lift. 	<ol style="list-style-type: none"> 1. Supply correct voltage to motor. 2. Clean lowering valve. 3. Replace relief valve cartridge. 4. Check vehicle weight and/or balance vehicle weight on lift.
Lift slowly settles down.	<ol style="list-style-type: none"> 1. Debris in check valve seat. 2. Debris in lowering valve seat. 3. External oil leaks. 	<ol style="list-style-type: none"> 1. Clean check valve. 2. Clean lowering valve. 3. Repair external leaks.
Slow lifting speed or oil blowing out filler breather cap.	<ol style="list-style-type: none"> 1. Air mixed with oil. 2. Air mixed with oil suction. 3. Oil return tube loose. 	<ol style="list-style-type: none"> 1. Change oil to Dexron III ATF. 2. Tighten all suction line fittings. 3. Reinstall oil return tube.
Lift going up unlevel.	<ol style="list-style-type: none"> 1. Equalizer cables out of adjustment. 2. Lift installed on unlevel floor. 	<ol style="list-style-type: none"> 1. Adjust equalizer cables to correct tension. 2. Shim lift to level columns (Not to exceed 1/2"). If over 1/2" break out floor and level per lift installation instructions.
Anchors will not stay tight.	<ol style="list-style-type: none"> 1. Holes drilled oversize. 2. Concrete floor thickness or holding strength not sufficient. 	<ol style="list-style-type: none"> 1. Relocate lift using a new bit to drill holes. 2. Break out old concrete and repour new pads for lift per lift installation instruction.
Locking latches do not engage.	<ol style="list-style-type: none"> 1. Latch shafts rusted. (Usually occurs on outside installations or in high humidity areas such as vehicle wash bays.) 2. Latch spring broken. 3. Latch cable needs adjustment. 	<ol style="list-style-type: none"> 1. Remove covers, oil latch mechanism. Depress latch release handle several times to allow oil to coat shaft. 2. Replace broken spring. 3. Adjust clamps at cable end per lift installation instructions.
Locking latches do not disengage.	<ol style="list-style-type: none"> 1. Latch cable is broken. 2. Cable is off sheaves. 3. Latch cable is loose. 	<ol style="list-style-type: none"> 1. Replace cable. 2. Check position of upper sheaves; adjust cable tension. 3. Adjust cable tension.

Certificate of Compliance

Rotary Lift is authorized to apply ETL & cETL Listing Marks/Labels to this AC Motor. Authorization: ETL Report No. J98007541-003, FAM -UL73. This ETL test certifies that this AC Motor complies with Underwriters Laboratories, Inc. standard ANSI/UL 73, 8th Edition & CSA standard C22.2 No. 68-92.



SV0021 A Rev. 6/9/99

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

Replacement Parts: See installers package for parts breakdown sheet. Order Genuine Rotary replacement parts from your nearest Authorized Parts Distributor.

Maintenance Assistance: Contact your local Rotary distributor.

Should further assistance be required, contact Rotary Lift, at one of the phone numbers listed below.



World Headquarters:
ROTARY LIFT
A DOVER INDUSTRIES COMPANY
2700 Lanier Drive
Madison, IN 47250-1753 USA
Phone toll-free: 1-800-445-5438
Phone: (812) 273-1622
Fax toll-free: 1-800-822-6502
Fax: (812) 273-6502
E-mail: userlink@rotarylif.com
Web site: www.rotarylif.com

For Canada:
DOVER CORP. CANADA, LTD.
ROTARY LIFT DIVISION
130 Bridgeland Avenue Unit 210
Toronto, Ontario M6A 1Z4
Phone: (416) 256-4100
Fax: (416) 256-3924

For United Kingdom & Republic of Ireland:
ROTARY LIFT LIMITED
Madison House
2 Park Road
Dartford, Kent
DA1 1SL
Phone: +44 (0) 1322 223323
Fax: +44 (0) 1322 222454

For Europe:
ROTARY LIFT EUROPE
Berlinger Ring 163 B
D-64625 Bensheim
Phone: +49 (0) 6251 787037
Fax: +49 (0) 6251 787038



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