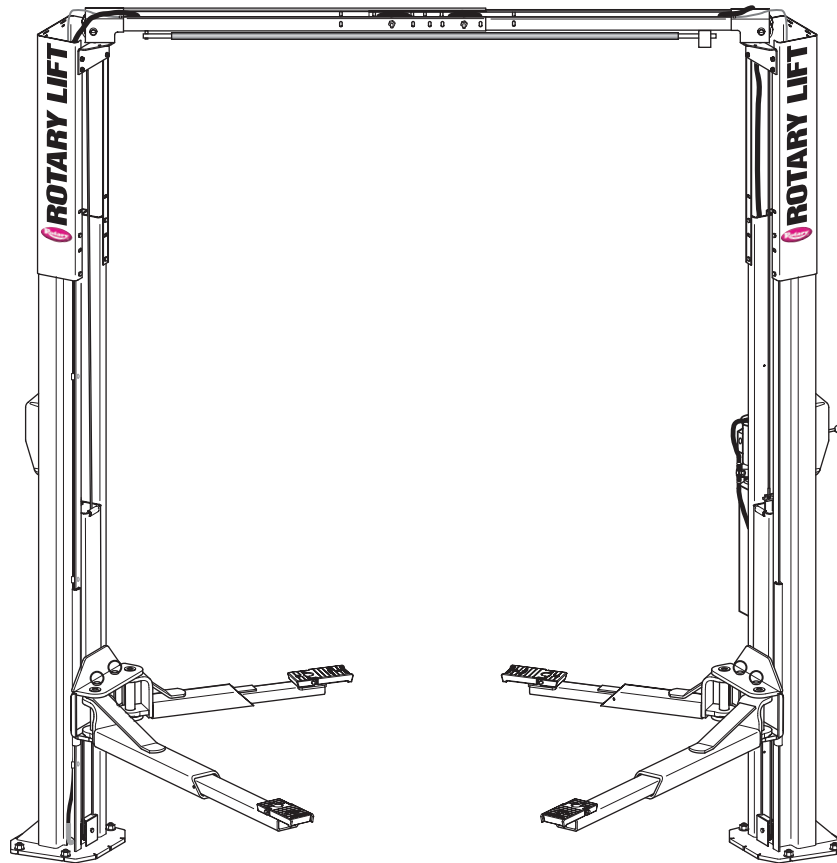




SPOA10NB, SPOA10, SP010 SPOA7, SPOA9, SP09 (500 And 700 Series Lifts)

SPOA7 Capacity 7,000 lbs.
SPOA9, SP09 Capacity 9,000 lbs.
SPOA10NB, SPOA10, SP010 Capacity 10,000 lbs.

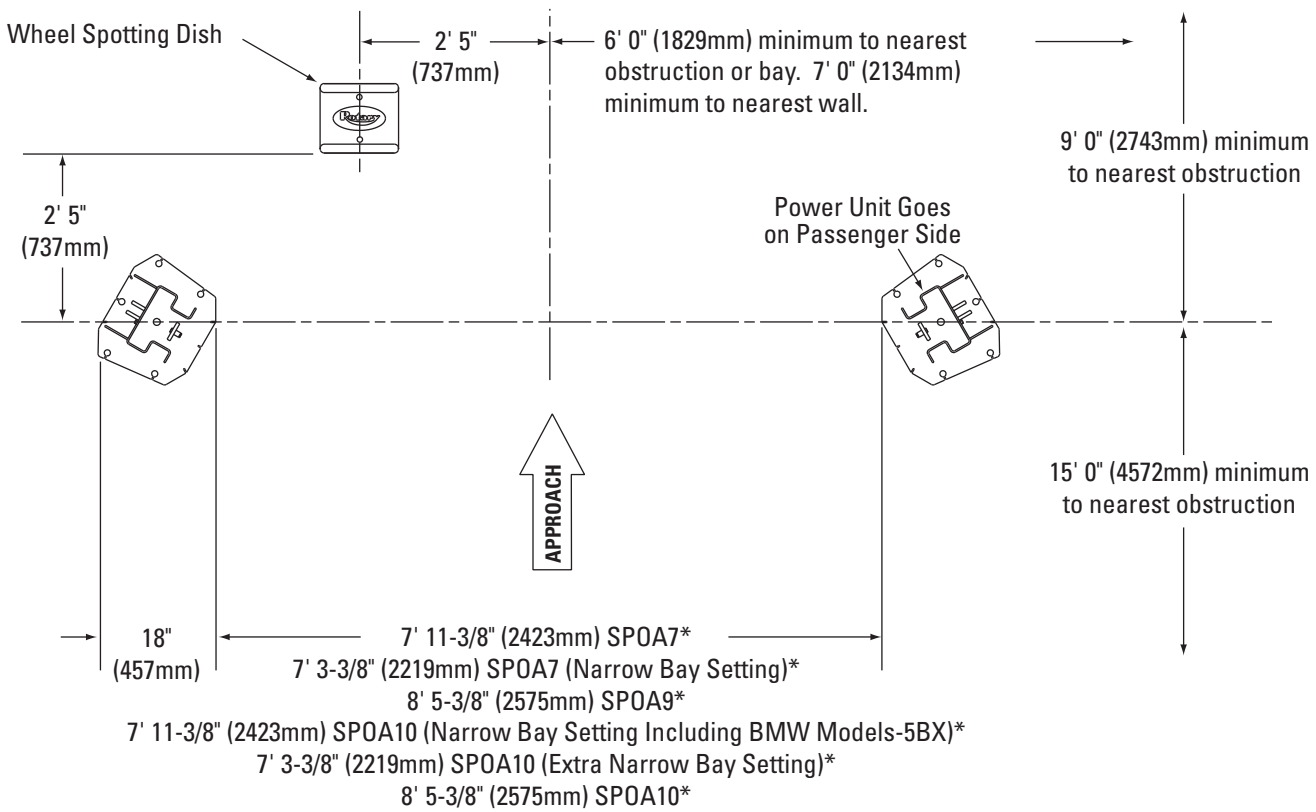
▲ IMPORTANT Reference ANSI/ALI ALIS,
Safety Requirements for
Installation and Service of Automotive Lifts
before installing lift.



LP20314

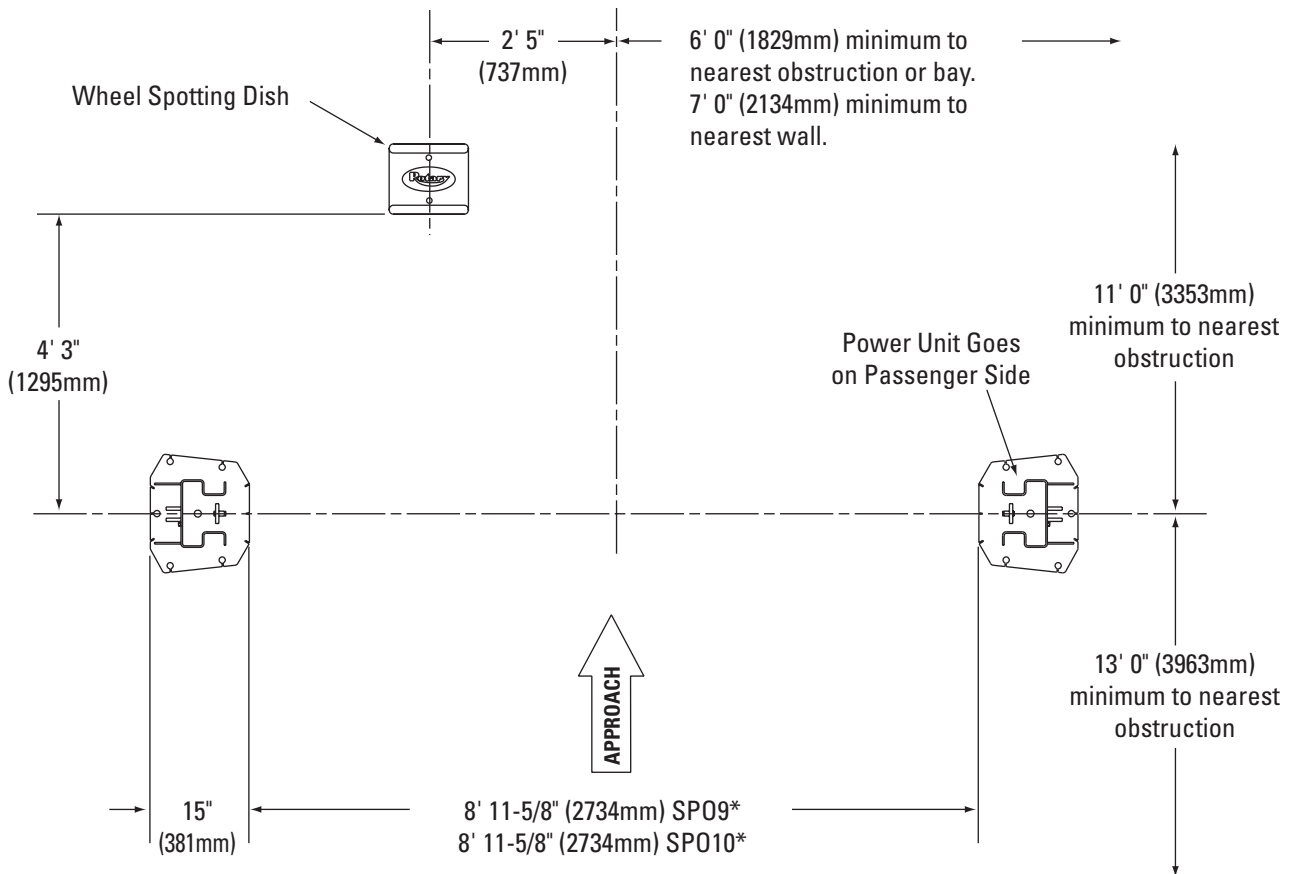
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*NOTE: Dimension is from Inside of Baseplate to Inside of Baseplate.

Fig. 1a



*NOTE: Dimension is from Inside of Baseplate to Inside of Baseplate.

Fig. 1b

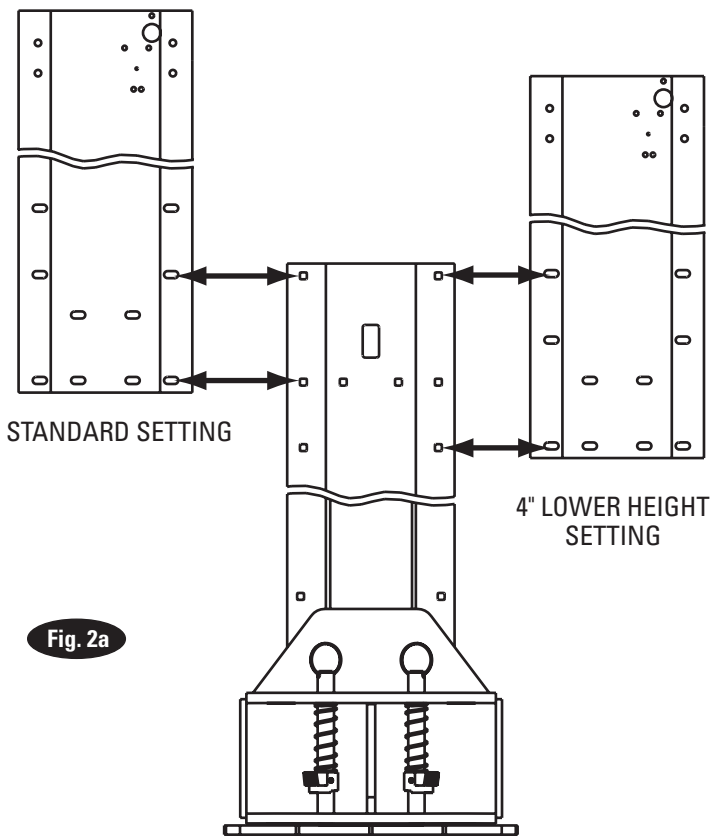


Fig. 2a

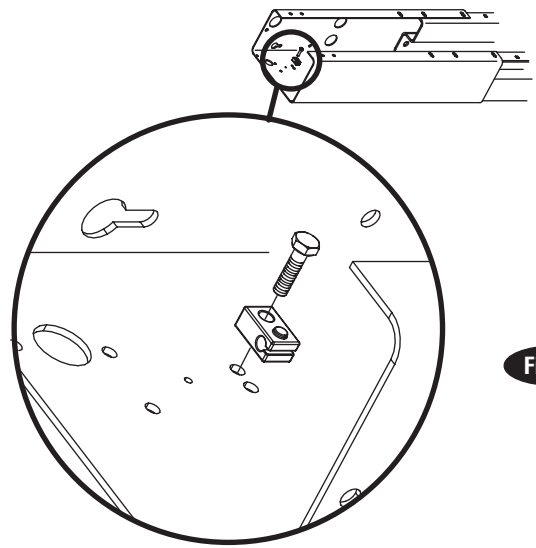


Fig. 2b

1. Lift Location: Use architects plan when available to locate lift. Fig. 1a & Fig. 1b shows dimensions of a typical bay layout.

2. Lift Height: See Fig. 3 for overall lift height of each specific lift model. Add 1" min. to overall height to lowest obstruction.

⚠ WARNING DO NOT install this lift in a pit or depression due to fire or explosion risks.

3. Column Extensions: Before standing columns upright, install the column extensions using (12) 3/8"-16NC x 3/4" Carriage HHCS and Flanged Locknuts, Fig. 3, and Fig. 2a.

4. Latch Cable Guides: Install the latch cable conduit guide brackets to column extensions with (1) 1/4"-20NC x 1" HHCS and 1/4"-20NC Flanged Locknuts, Fig. 2. HHCS should go through hole nearest the edge as shown, Fig. 2b.

5. Overhead Mounting Bracket: Install Mounting Brackets to column extensions as shown, Fig. 3.

6. Lift Setting: Position columns in bay using dimensions shown in Fig. 1a & Fig. 1b. Place column with power unit mounting bracket on vehicle passenger side of lift. Both column base plate backs must be square on center line of lift. Notches are cut into each base plate to indicate center line of lift. Use appropriate equipment to raise carriage to first latch position. Be sure locking latch is securely engaged.

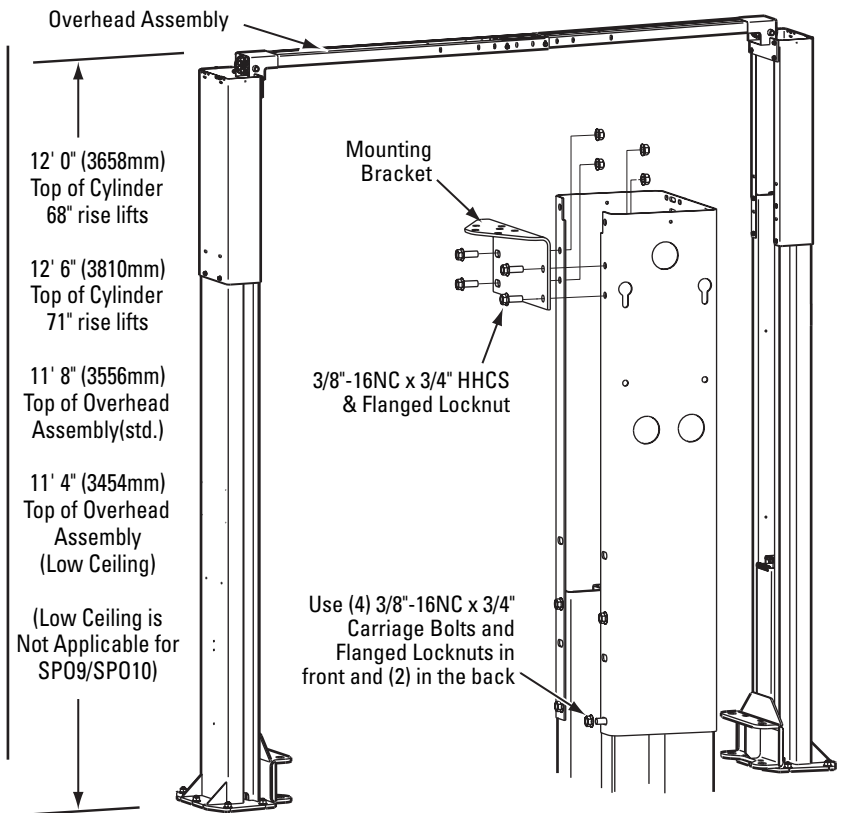
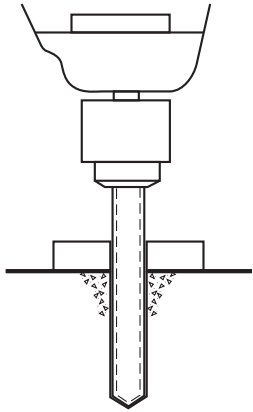
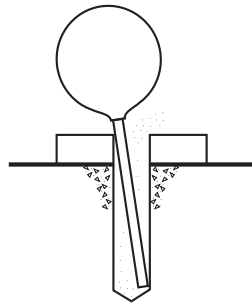


Fig. 3

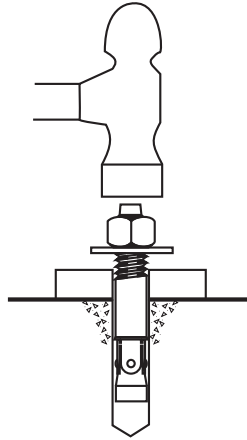
Concrete and Anchoring:



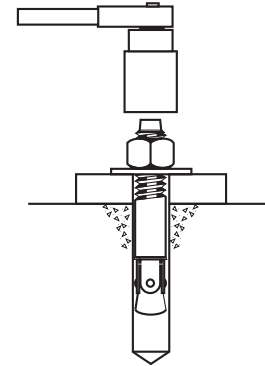
Drill holes using 3/4" carbide tipped masonry drill bit per ANSI B212.15-1994 (R2000)



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 150 ft.-lbs.

Fig. 4

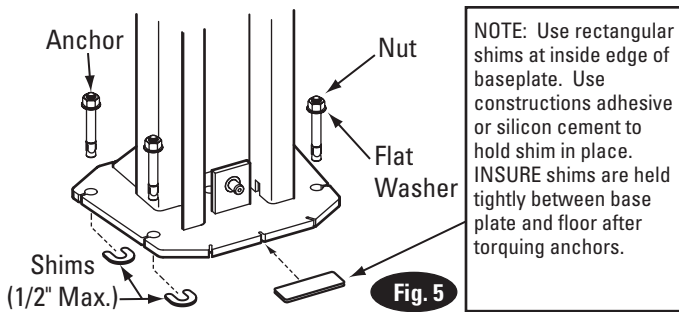
CONCRETE AND ANCHORING REQUIREMENTS				
STANDARD	ANSI/ALI ALCTV:2006	IBC 2006		SEISMIC
Minimum Floor Thickness	4-1/4 INCHES	5 INCHES	6 INCHES	Varies with Location
Anchor	Hilti Kwik Bolt III* 3/4" x 5-1/2"	Hilti HIT-HY 150MAX-SD Adhesive; Hilti HIT-HY 150 MAX Adhesive; HILTI HIT-RE 500-SD Adhesive	Hilti 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	
*Note: This anchor along with the installation instructions are supplied with the lift. For other anchors and/or adhesive installation instructions contact customer service at: 800.445.5438				

Drill (10) 3/4" dia. holes in concrete floor using holes in column base plate as a guide. See Fig. 4 for hole depth, hole spacing, and edge distance requirements.

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

IMPORTANT Using the horse shoe shims provided, shim each column base until each column is plumb. If one column has to be elevated to match the plane of the other column, full size base shim plates should be used (Reference FA5112 Shim Kit). Recheck columns for plumb. Tighten anchor bolts to an installation torque of 150 ft-lbs. Shim thickness MUST NOT exceed 1/2" when using the 5-1/2" long anchors provided with the lift, Fig. 5. Adjust the column extensions plumb.

If anchors do not tighten to 150 ft-lbs. installation torque, replace concrete under each column base with a 4' x 4' x 6" thick 3000 PSI minimum concrete pad keyed under and flush with the top of existing floor. Let concrete cure before installing lifts and anchors.



NOTE: Use rectangular shims at inside edge of baseplate. Use construction adhesive or silicon cement to hold shim in place. INSURE shims are held tightly between base plate and floor after torquing anchors.

NOTE: If more than 2 horse shoe shims are used at any of the column anchor bolts, pack non-shrink grout under the unsupported area of the column base. Insure shims are held tightly between the baseplate and floor after torquing anchors.

7a. Overhead Assembly: Fig. 11: Adjust overhead to appropriate dimension. Install (4) 3/8"-16NC x 3/4" HHCS & 3/8"-16NC Flanged Locknuts, do not tighten. Slide Switch Box over switch bar ensuring knock out holes face the power unit column. Use (2) 1/4"-20NC x 3/4" lg. HHCS, 1/4"-20NC Nuts and 1/4" Star Washers to mount switch box to overhead, see Fig. 7. For SPOA10 Extra Narrow Bay Setting installation, see step 7b, all others go to step 7c.

7b. For Extra Narrow Bay installation only: Cut off 11" from the length of the bar and cushion on the end opposite the 1/4" mounting hole(s). Continue to step 7c.

7c. Continued Overhead Assembly:

For single phase lifts: Insert 1/4"-20NC x 2-3/4" HHCS through pivot hole in end of switch bar. Insert opposite end of bar through slot in switch mounting bracket. Then secure HHCS and Switch Bar to overhead as shown, Fig. 11, using (2) 3/4" spacers and 1/4"-20NC Locknut. Tighten Hex bolt leaving 1/16" gap between the spacer and the overhead assembly.

For three phase lifts: Remove Limit Switch cover, Fig. 8. Insert Actuator end of Switch Bar into slot located inside Limit Switch, Fig. 8. A small amount of silicone sealant on the lower part of the actuator will help hold it in place. Insert 1/4"-20NC x 2-3/4" HHCS through pivot hole in end of Switch Bar. NOTE which hole to use, Fig. 11. Then secure HHCS and Switch Bar to overhead as shown, using (2) 3/4" spacers and 1/4"-20NC Locknut. Tighten Hex bolt leaving 1/16" gap between the spacer and the overhead assembly, Fig. 11. Replace limit switch cover.

8. Overhead Installation: Install overhead assembly to Mounting Bracket with (2) 3/8"-16NC x 3/4" Flanged HHCS, (2) 3/8"-16NC Flanged Locknut, and (2) 3/8" star lockwashers, Fig. 6. Use middle holes for SPO9/SPO10 and outside holes (marked L for Left and R for Right) for SPOA7/SPOA9/SPOA10NB/SPOA10. Tighten bolts at center of overhead assembly.

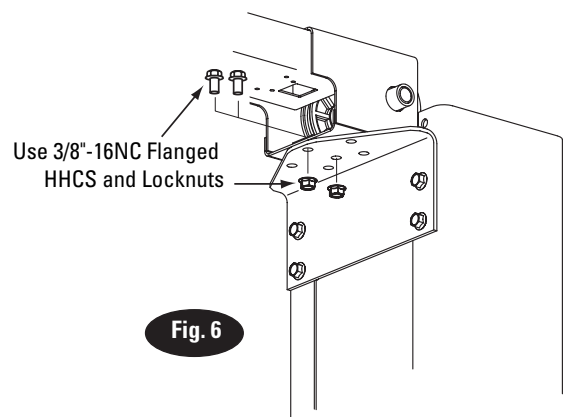


Fig. 6

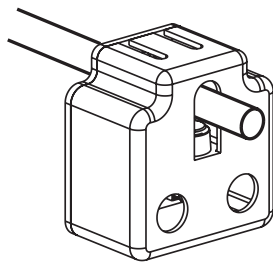
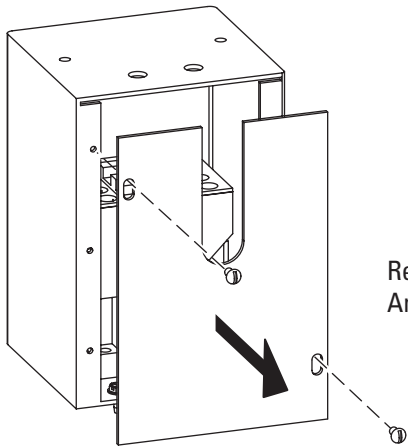


Fig. 7

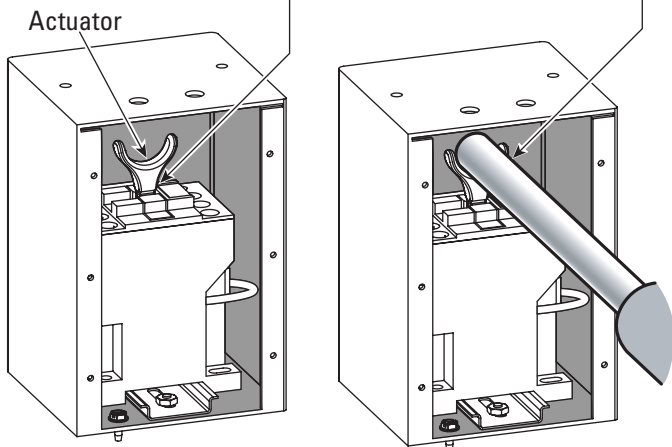


Remove Screws
And Cover

Fig. 8

Place Actuator Here.
A Small Amount Of Silicone Sealant
On The Lower Part Of The Actuator
Will Help Hold It In Place.

Cradle Bar
On Actuator



Use (4) 5/16"-18NC
x1-1/2" lg. HHCS
and Nuts

Push nuts hold bolts to brackets.

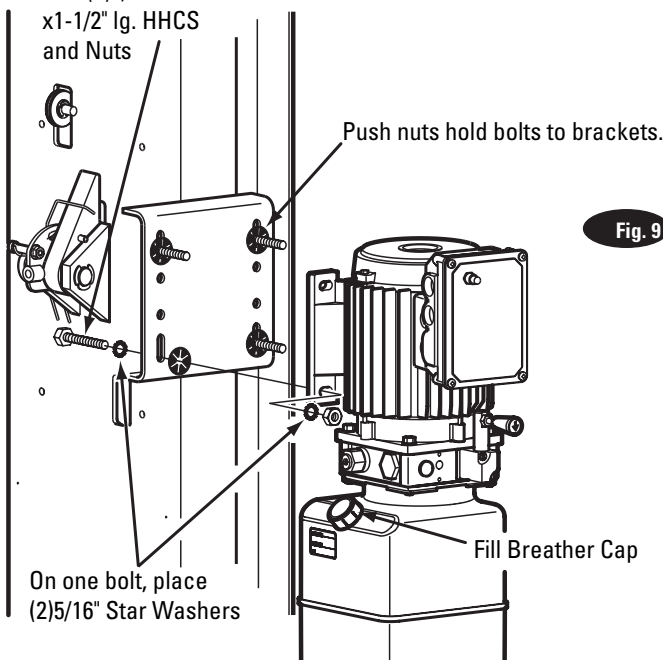


Fig. 9

On one bolt, place
(2) 5/16" Star Washers

Fill Breather Cap

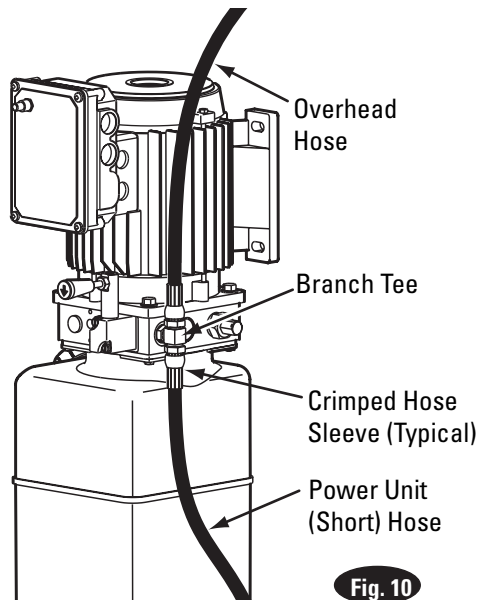


Fig. 10

9. Power Unit: First install (1) star washer onto one of the (4) 5/16"-18NC x 1-1/2" HHCS. *This is very important for grounding.* Put the (4) 5/16"-18NC x 1-1/2" HHCS thru holes in power unit bracket using Push-Nuts to hold in place, Fig. 9. Mount unit with motor up to column bracket and install (4) 5/16" star washers and 5/16" Nuts. Install and hand tighten Branch Tee to pump until O-ring is seated. Continue to tighten the locknut to 10-15 ft-lbs., or until the nut and washer bottom out against the pump manifold. **NOTE:** You may still be able to rotate the Branch Tee. This is acceptable unless there is seepage at the O-ring. If so, slightly tighten the locknut.

CAUTION Over tightening locknut may tear O-ring or distort threads in pump manifold outlet.

10. Hoses: Clean adapters and hose. Inspect all threads for damage and hose ends to be sure they are crimped, Fig. 10. Install hose and hose clamps, Fig. 12 & Fig. 16.

Flared Fittings Tightening Procedure

1. Screw the fittings together finger tight. Then, using the proper size wrench, rotate the fitting 2-1/2 hex flats.

IMPORTANT Flare seat **MUST NOT** rotate when tightening. Only the nut should turn.

2. Back the fitting off one full turn.
3. Again tighten the fittings finger tight; then using a wrench, rotate the fitting 2-1/2 hex flats. This will complete the tightening procedure and develop a pressure tight seal.

CAUTION Overtightening will damage fitting resulting in fluid leakage.

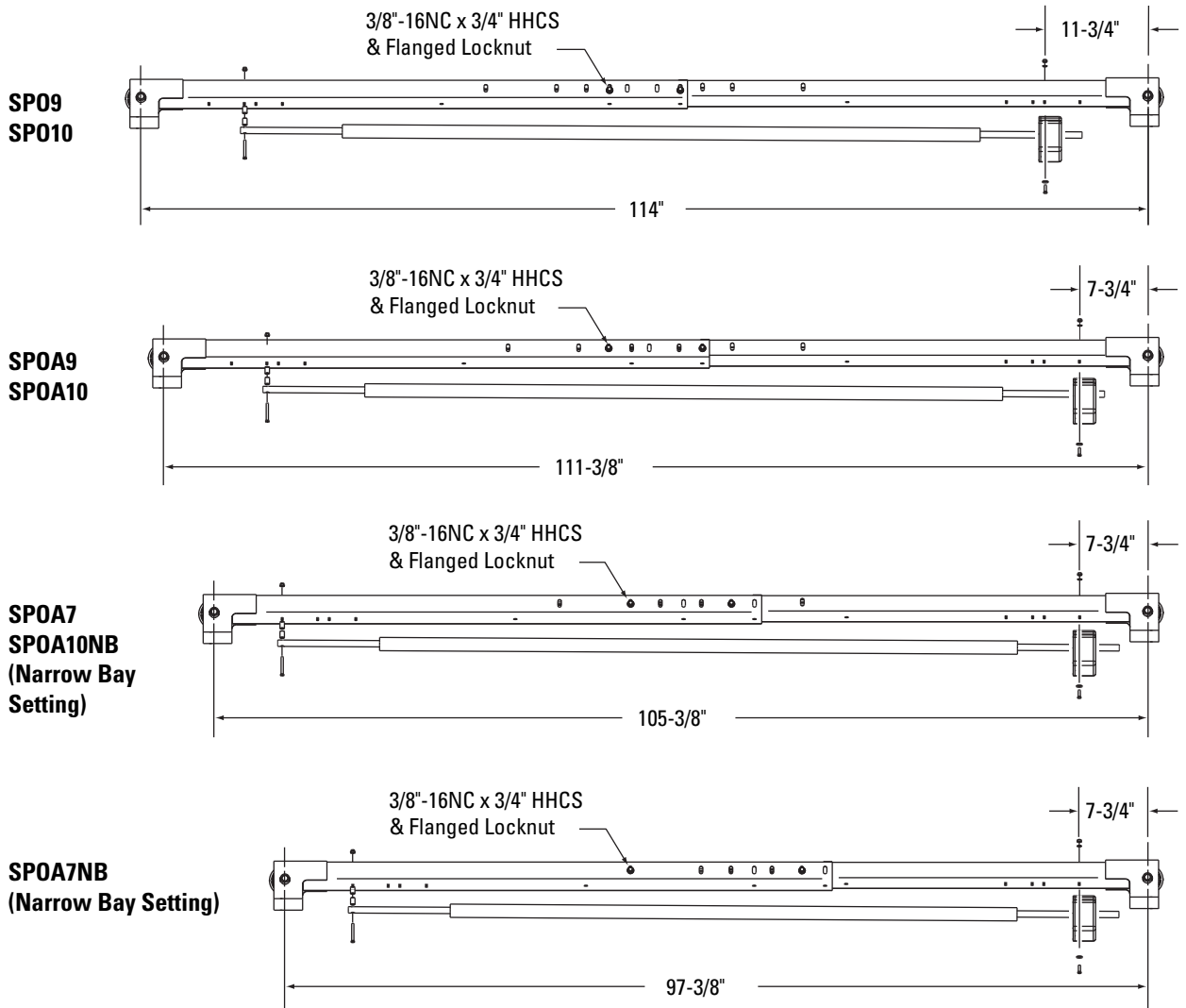
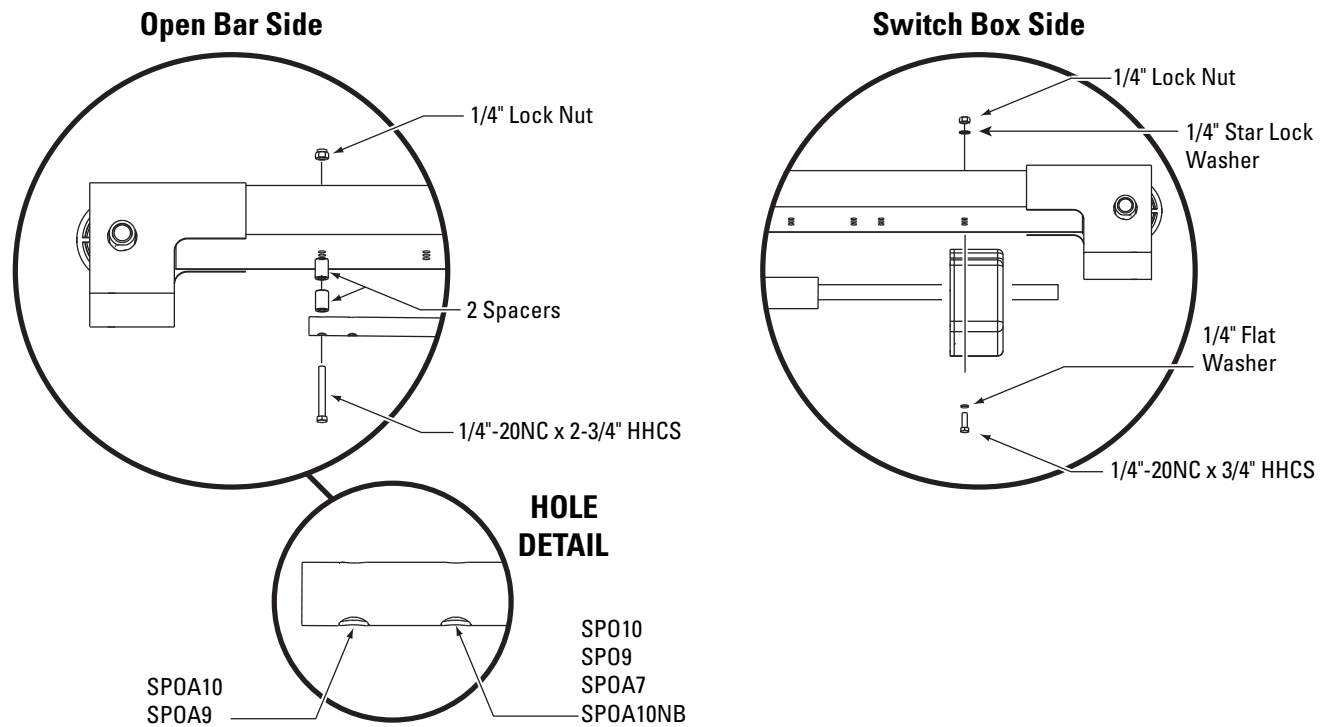


Fig. 11

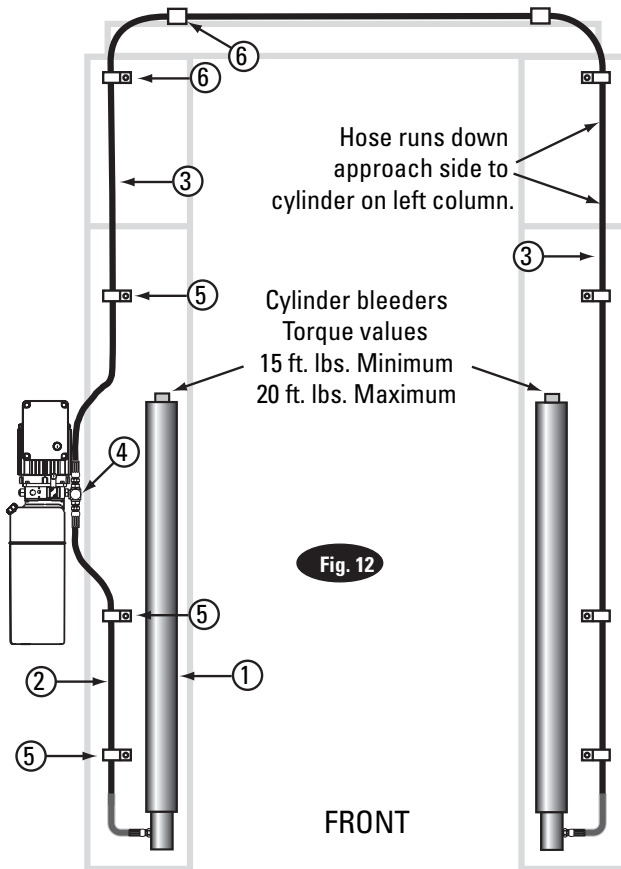
Hardware Detail For Overhead Assembly



Adapter & Hose Installation (see Fig. 12)

1. Install Pc. (2) with hose clamps, on power unit column side connecting it to the cylinder (1) first.
2. Install Pc. (3) with hose clamps starting at left column cylinder (5) and working toward the right column. All excess hose should be at bends & inside overhead assembly. **DO NOT try to use optional column extension mounting holes, Fig. 2a, when attaching hose clamps. They will NOT work. Use lower set of holes.**
3. Install Pc. (4) into power unit.
4. Connect Pc. (2) & Pc. (3) to Tee (4).

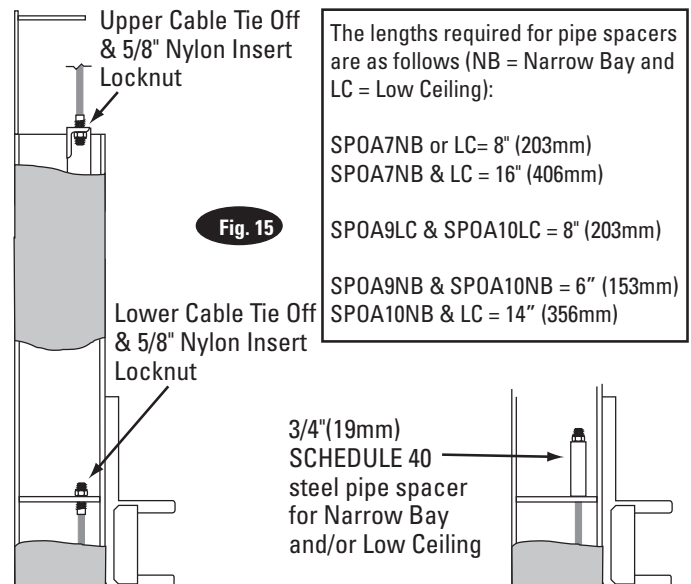
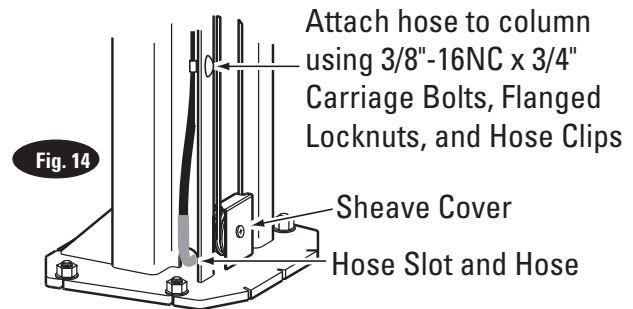
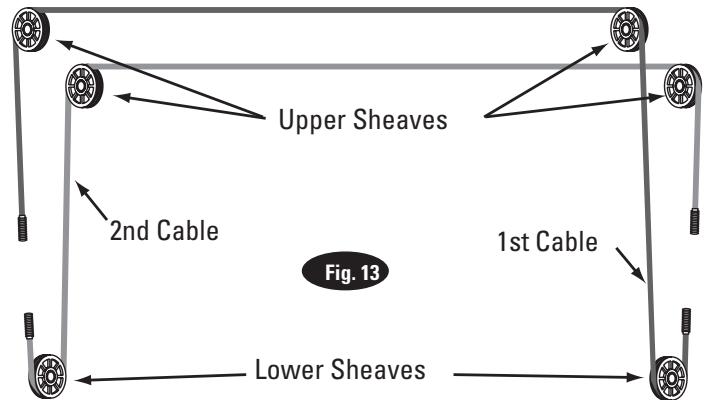
NOTE: Route Power Unit hose inside columns using slots provided at column base, Fig. 14. Route Overhead Hose in column channel on outside of column, Fig. 14. Overhead hose goes over top end of overhead assembly, Fig. 12 & Fig. 16a & Fig. 16b.



ITEM	QTY.	DESCRIPTION
1	2	Hydraulic Cylinder
2	1	Power Unit Hose
3	1	Overhead Hose
4	1	Branch Tee
5	6	Hose Clips
6	6	3/8"-16NC x 3/4" Ig. Carriage Bolts
6	6	3/8"-16NC Flanged Locknuts
6	4	Hose Clips
4	4	3/8"-16NC x 3/4" Ig. Flanged HHCS
4	4	3/8"-16NC Flanged Locknuts

11. Equalizing Cables

- Refer to Fig. 13 for the general cable arrangement. First, run a cable end up through the small hole in the lower tie-off plate. Fig. 15.
- Push the cable up until the stud is out of the carriage top opening.
- Run a nylon insert locknut onto the cable stud so 1/2" (13mm) of the stud extends out of the locknut.
- Pull the cable back down, Fig. 15.
- Run cable around the lower sheave, then up and around overhead sheave and across and down to the opposite carriage, Fig. 13. Install sheave cover, Fig. 14.
- Fasten the cable end to the carriage upper tie-off bracket, Fig. 15. Tighten the locknut enough to apply light tension to the cable.
- Repeat procedure for the second cable. Complete lift assembly. Adjust the tension of both cables during the final adjustments in Paragraph 21.



12. Locking Latch Cable

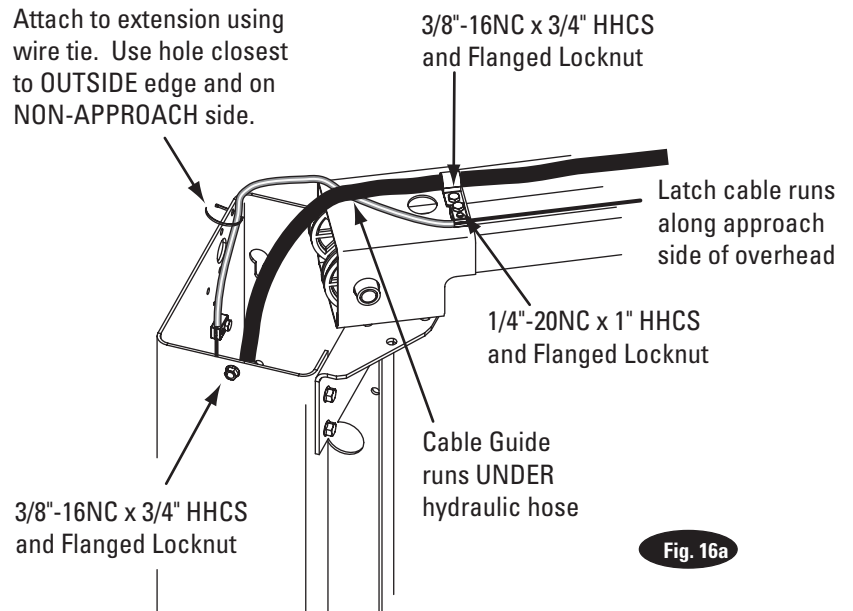
- A) Install latch cable sheave and retaining rings in upper slot of power unit column as shown, Fig. 17.
- B) Slip loop end of cable over end of shoulder screw on right side latch control plate, Fig. 17.
- C) Feed the other end of the cable through the latch cable sheave slot making sure that the cable is running under the bottom side of the latch cable sheave and inside the right column, Fig. 17.
- D) Attach latch cable conduit guide brackets to overhead as shown, Fig. 16a & Fig. 16b. Always use the holes on the approach side of the lift. HHCS should be in hole nearest the center of the overhead, Fig. 16b.
- E) Route cable up inside column and through the latch cable guide, Fig. 16a & Fig. 18.

IMPORTANT Using wire ties provided, tie off cable guide to column extension as shown, Fig. 16a. Guide must be attached in hole closest to the outside edge of the column on the NON-APPROACH side.

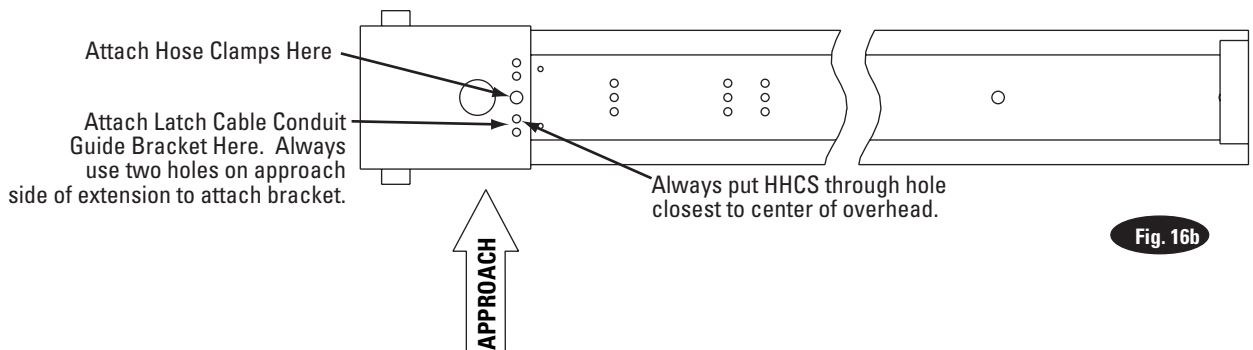
- F) Continue routing cable to the left column latch cable guide, Fig. 16a & Fig. 18, routing the cable through the left column latch cable guide, Fig. 16a.

IMPORTANT Using wire ties provided, tie off cable guide to column extension as shown, Fig. 16a. Guide must be attached in hole closest to the outside edge of the column on the NON-APPROACH side.

- G) Bring the cable down inside the left column and feed the end of the cable through the lower latch cable sheave slot so that the cable is now back outside the column, Fig. 19.
- H) Install latch cable sheave and retaining rings in lower slot of non-power unit column as shown, Fig. 19.



- I) Route cable under the bottom side of the latch cable sheave, Fig. 19.
- J) At this point you **MUST** install the latch handle, jam nut, and right column latch cover Fig. 17 & Fig. 20. Install latch handle ball, Fig. 20.
- K) Insert cable in cable clamp along one side, loop around shoulder screw and back down, inserting cable along other side of cable clamp, Fig. 19. Place top back on clamp, barely tightening.
- L) Next, pull the control plate down, Fig. 18 & Fig. 19, to eliminate any clearance between the control plate slot and the latch dog pin, Fig. 18.
- M) Using Pliers, pull cable tight and secure the clamp close to the shoulder screw. Tighten clamp.



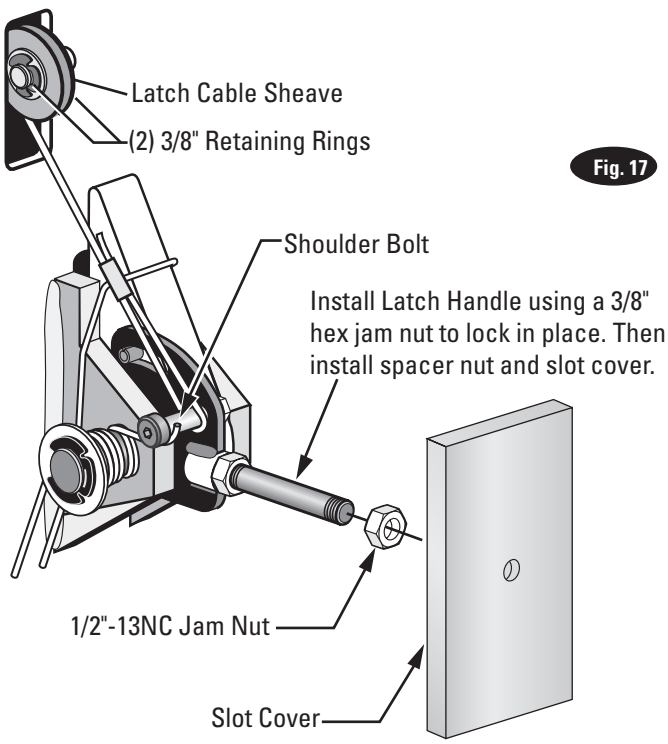


Fig. 17

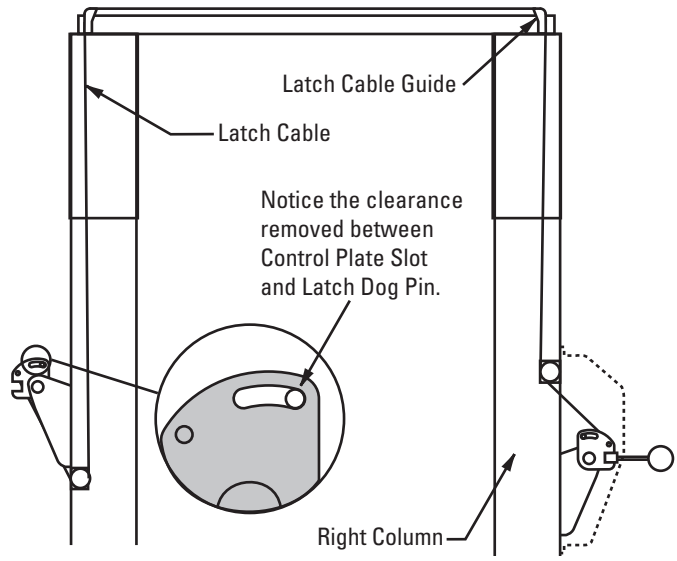


Fig. 18

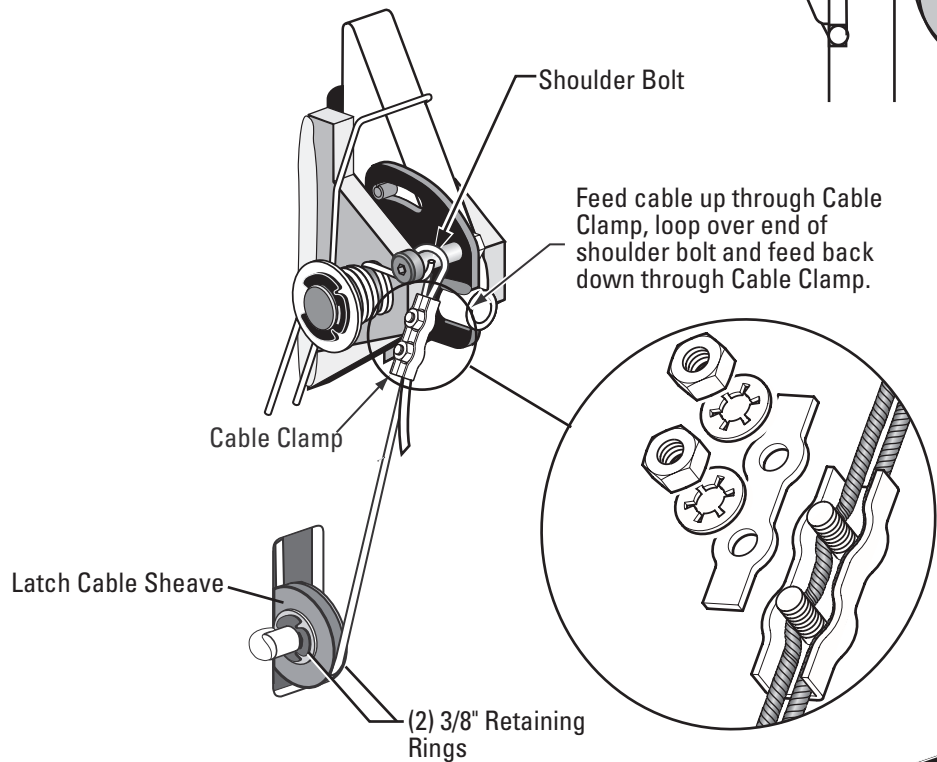


Fig. 19

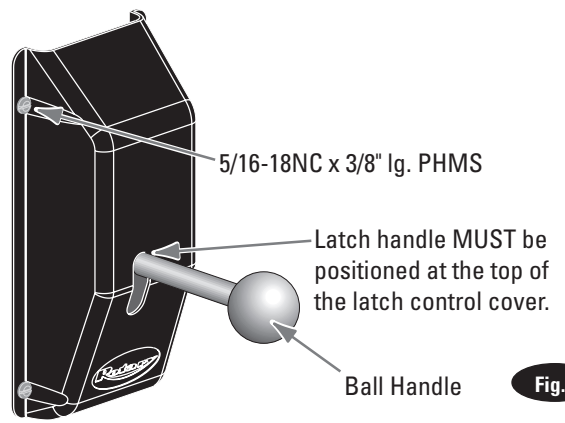


Fig. 20

13. Electrical: Have a certified electrician run appropriate power supply to motor, Fig. 21 & 22. Size wire for 20 amp circuit. See Motor Operating Data Table.

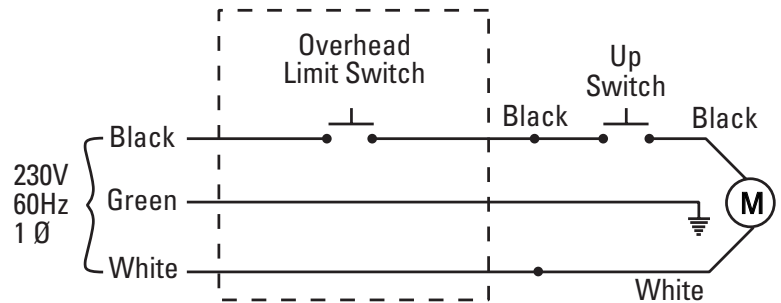
CAUTION Never operate the motor on line voltage less than 208V. Motor damage may occur.

IMPORTANT: Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 20 amp fuse. Three phase 208-240V, use 20 amp fuse. For three phase 400V (*E Model) and above, use 10 amp fuse. For three phase 380V (*S Model) use 16 amp fuse. For wiring see Fig. 22 & Fig. 23. All wiring must comply with NEC and all local electrical codes.

Note: 60Hz. single phase motor **CAN NOT** be run on 50Hz. line without a physical change in the motor.

Single Phase Power Unit

MOTOR OPERATING DATA TABLE - SINGLE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208-230V 50Hz.	197-253V
208-230V 60Hz.	197-253V



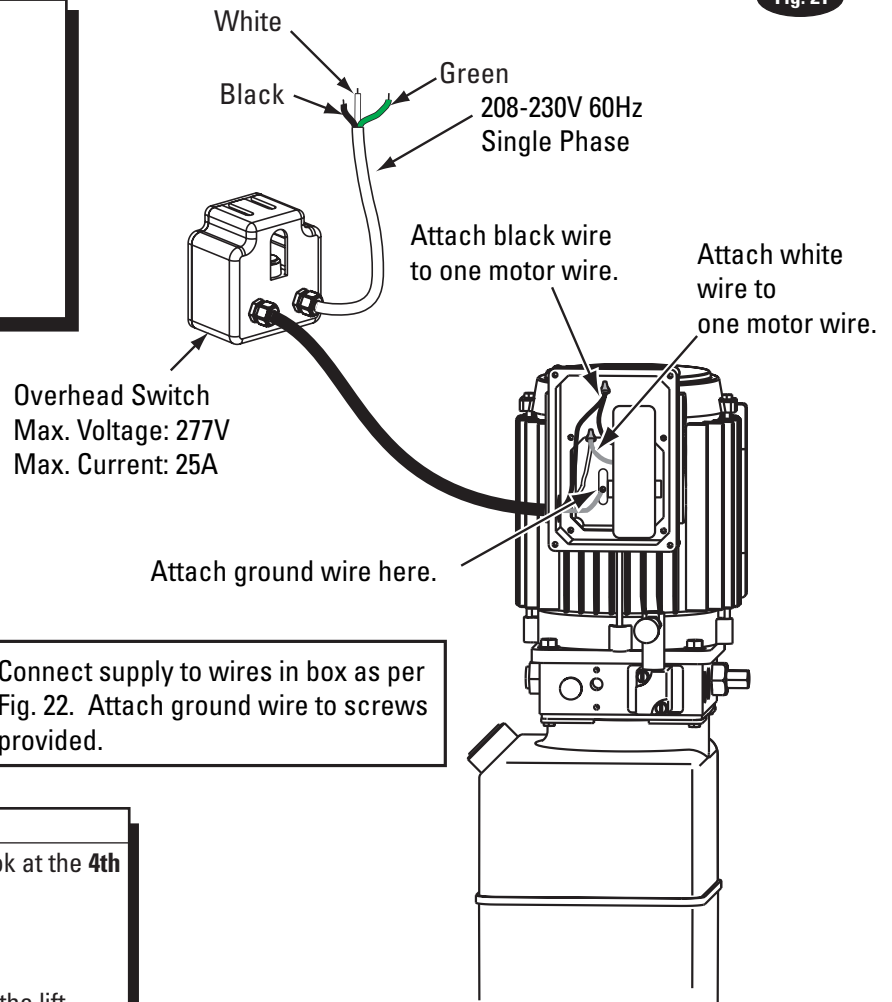
Note: 60Hz. Single phase motor **CAN NOT** be run on 50Hz. line without a physical change in the motor.

NOTE: Assure cord used for connection between the overhead switch and power unit is of the type specified in:

UL201, Sections 10.1.1.3 & 10.1.1.4

(Example: SO, G, ST0) Size for 25 amp circuit. See UL 201, Section 15 for proper wiring requirements for this connection.

Fig. 21



***Notes: E or S Model?**

To find out if you have a **E or S** model Power Unit look at the **4th letter from the end** of your lift model number.

EXAMPLE: SPOA10**E**585 would be a **E Model**.

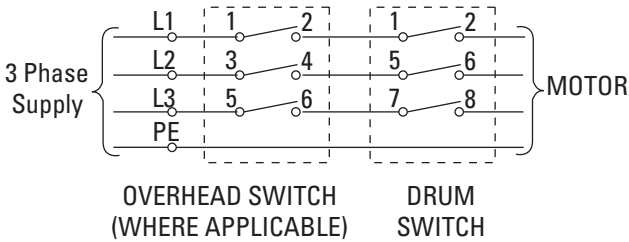


Model number can be found on a tag on the side of the lift.

NOTE: Two Different Drum Switches were used please select one of the two options below.

NOTES:

1. Unit not suitable for use in unusual conditions. Contact Rotary for moisture and dust environment duty unit.
2. Control Box must be field mounted to power unit.
3. Motor rotation is counter clockwise from top of motor.



FOR 3 Ø POWER UNITS: Attach Box using M5 x 10 PHMS, Plated

Capacitor Box Attachment Option One

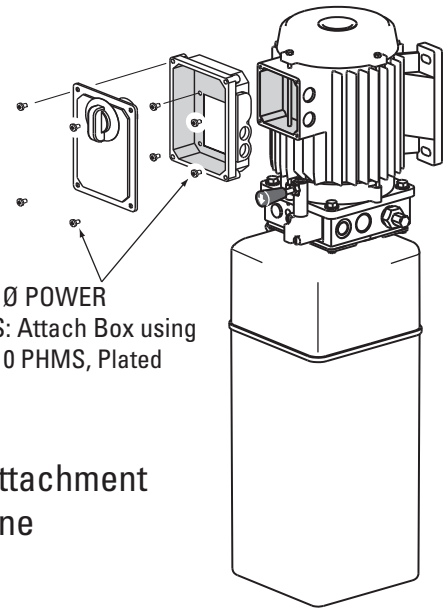
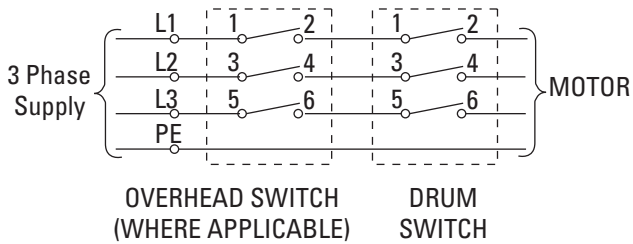
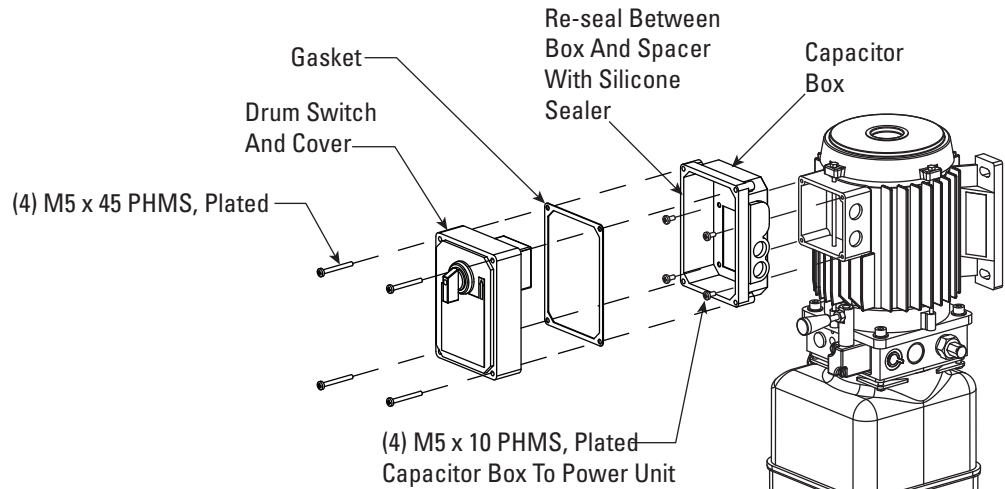
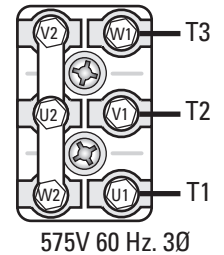
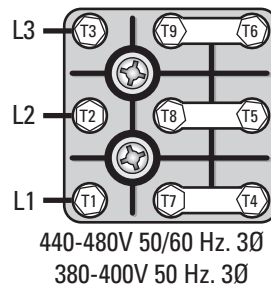
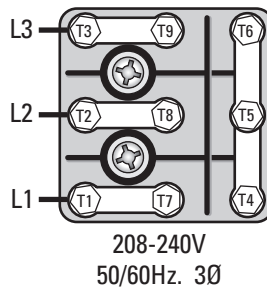


Fig. 22



Three Phase Power Unit

MOTOR OPERATING DATA TABLE - THREE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208-240V 50/60Hz.	197-253V
400V 50Hz.	360-440V
440-480V 50/60Hz.	396V-528V
575V 60Hz.	518V-632V



14. Oil Filling & Bleeding: Use Dexron III ATF, or Hydraulic Fluid that meets ISO 32 specifications. Remove fill-breather cap, Fig. 10. Pour in (8) quarts of fluid. Start unit, raise lift about 2 ft. Open cylinder bleeders approximately 2 turns, Fig. 12.

Close bleeders when fluid streams. Torque values for the bleeders are 15 ft. lb. minimum and 20 ft lb. maximum. Fully lower lift. Add more fluid until it reaches the MIN _____ mark on the tank. Replace fill-breather cap.

CAUTION If fill-breather cap is lost or broken, order replacement. Reservoir must be vented.

15. Overhead switch: Check overhead switch assembly to assure that switch bar is depressing switch plunger sufficiently to actuate the switch. The overhead switch is wired normally open, see Fig. 21 & Fig. 22. Lift will not operate until weight of switch bar is depressing switch plunger. Verify that Power Unit stops working when switch bar is raised, and re-starts when the bar is released.

16. Arms & Restraints: Before installing arms, raise carriages to a convenient height. Grease swivel arm pins and holes with Lithium grease. Slide arm into yoke, Fig. 23a. Install 1-3/4" diameter arm pin(s), Fig. 23a.

After installing arms and pins, install arm Restraint Gears as follows: Install Restraint Gear onto arm clevis, as shown, Fig. 23b. Ensure side of gear marked **TOP** is facing upward, Fig. 23b.

NOTE: TOP is stamped on top side of gear. You may need to pull up on the pin-ring to allow enough room to install Restraint Gear.

Arms With 5 Holes In Bearing Bar: Then, install the (2) 3/8"-16NC x 1-1/2" HHCS (8 total for all 4 arms) and 3/8" Spring Lock washers into the gear and arm, but do not tighten. Reference Fig. 23c, Fig. 24a, and Fig. 24b.

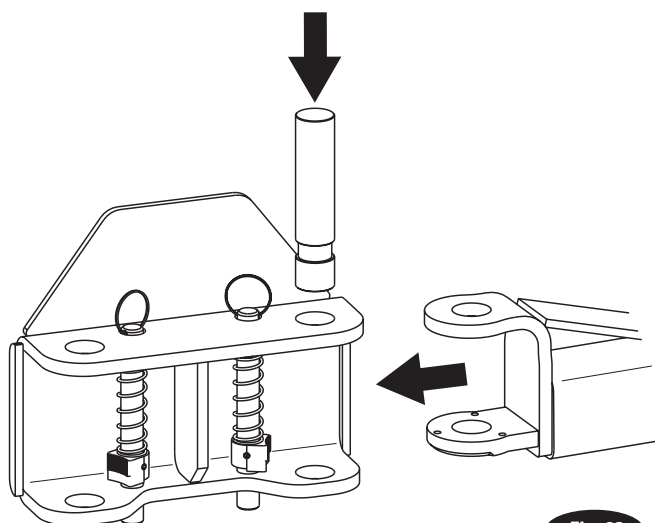
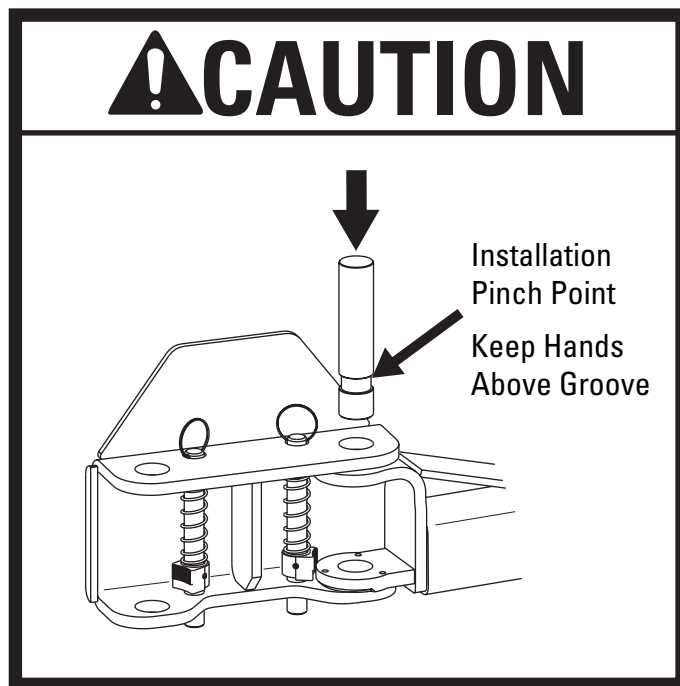


Fig. 23a



Arms With 3 Holes In Bearing Bars: Then, install the (2) 3/8"-16NC x 1-1/2" Lg. HHCS ((8) total for all (4) arms) into the gear and arm. Using 3/8" hex jam nuts, secure restraint gears to arms. Reference Fig. 23c and Fig. 24b.

Torque the Restraint Gear bolts to 30-34 ft.-lbs.

NOTE: Once arm is installed in yoke, pull up actuator pin and swing arm fully around, being sure that the Restraint Gear and Gear Block always stay aligned. If they do not stay aligned, remove restraint gear and install in the opposite position.

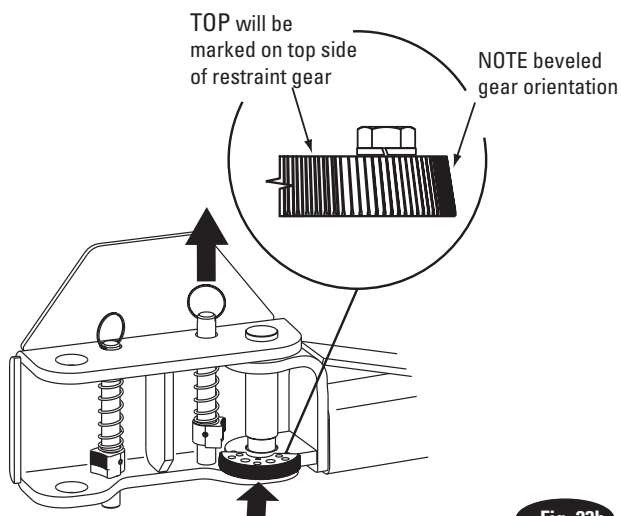
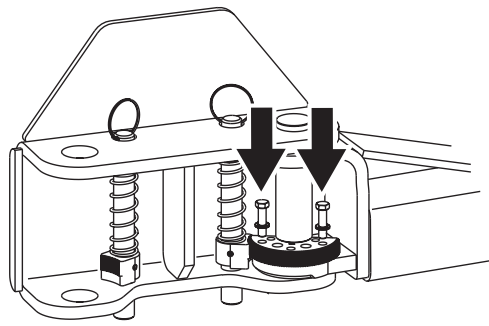
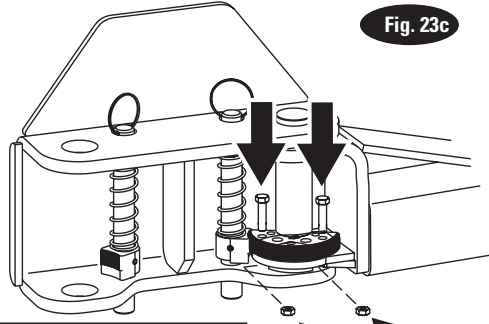


Fig. 23b



BEARING BAR WITH 5 HOLES

Fig. 23c



BEARING BAR WITH 3 HOLES

BEARING BAR WITH 5 HOLES

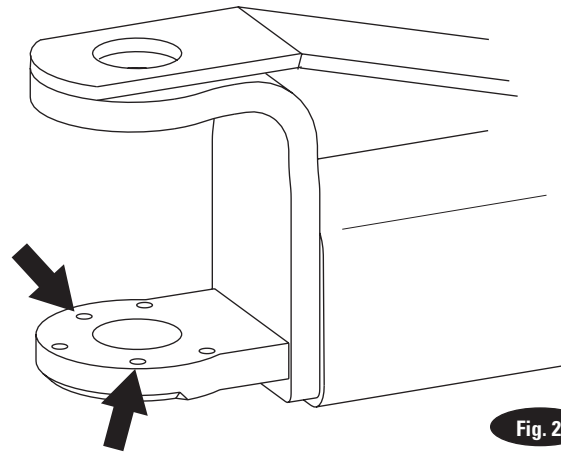
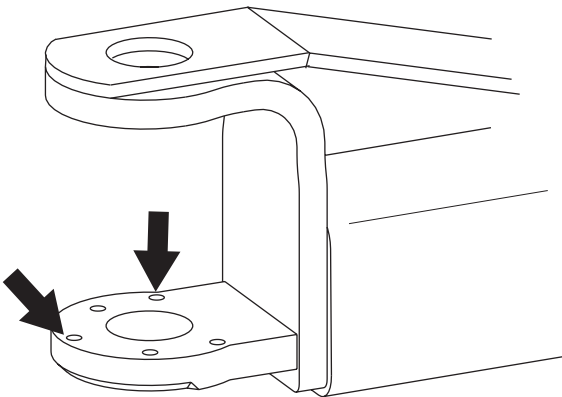


Fig. 24a

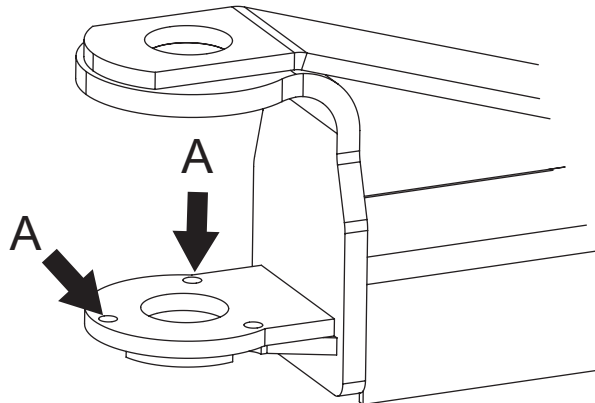
DO NOT use holes marked with arrows.

BEARING BAR WITH 5 HOLES



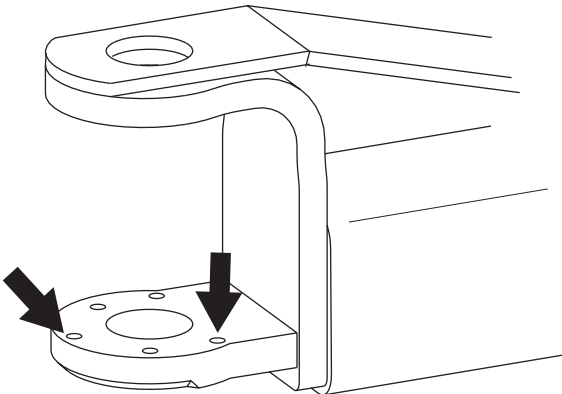
Use holes marked with arrow for Right Front and Left Rear.

BEARING BAR WITH 3 HOLES

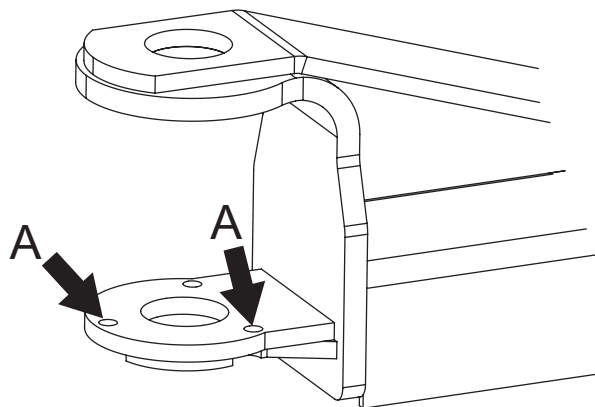


Use holes marked "A" for Right Front and Left Rear.

Fig. 24b



Use holes marked with arrow for Left Front and Right Rear.



Use holes marked "A" for Left Front and Right Rear.

NOTE: To check operation of arm restraints, raise carriage 1" min. from full down position. Pull up on pin-ring and adjust arms to desired position. To engage restraint, let pin-ring down allowing gear teeth to mesh together. It may be necessary to rotate arm slightly to engage gear teeth.

NOTE: Pin & Ring, Spring, & Gear Block are all pre-assembled.

17. Door Bumper Installation:

- A) Press long bumper on column edge, Fig. 25.
- B) Press short bumper on top edge of carriage tube, Fig. 25.

18. Latch Cable Adjustment:

- A) Check to make sure the latch will properly engage and disengage. **Slowly** release the latch handle. A 1/8" gap between the top of the latch dog and the column is allowable.
- B) When raising, listen to latches to be sure that both latch dogs fall into latch slots. If they do not, loosen clamp and adjust tension as necessary.
- C) Install left latch cover using 5/16-18NC x 3/8" lg PHMS.

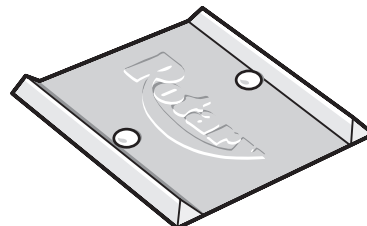
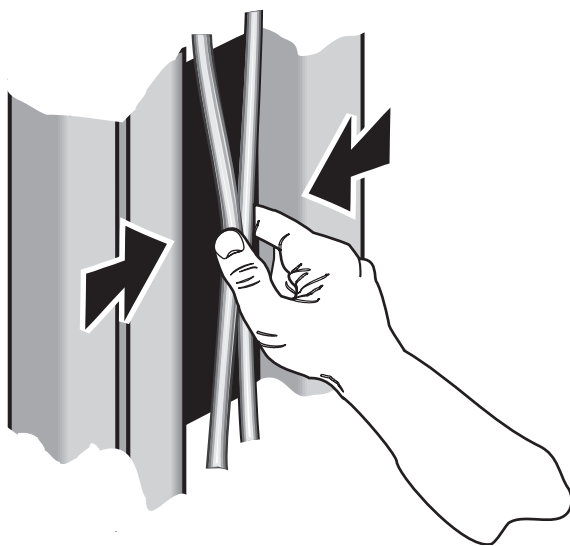
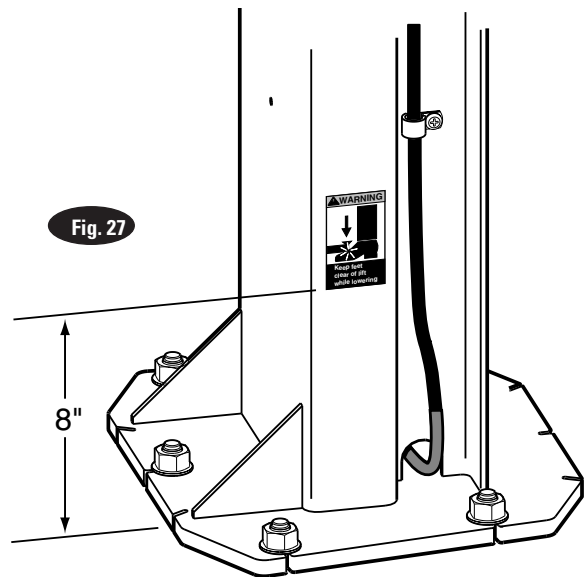
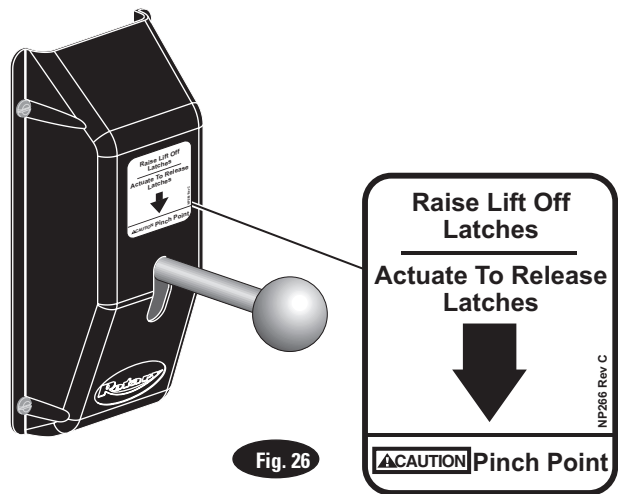
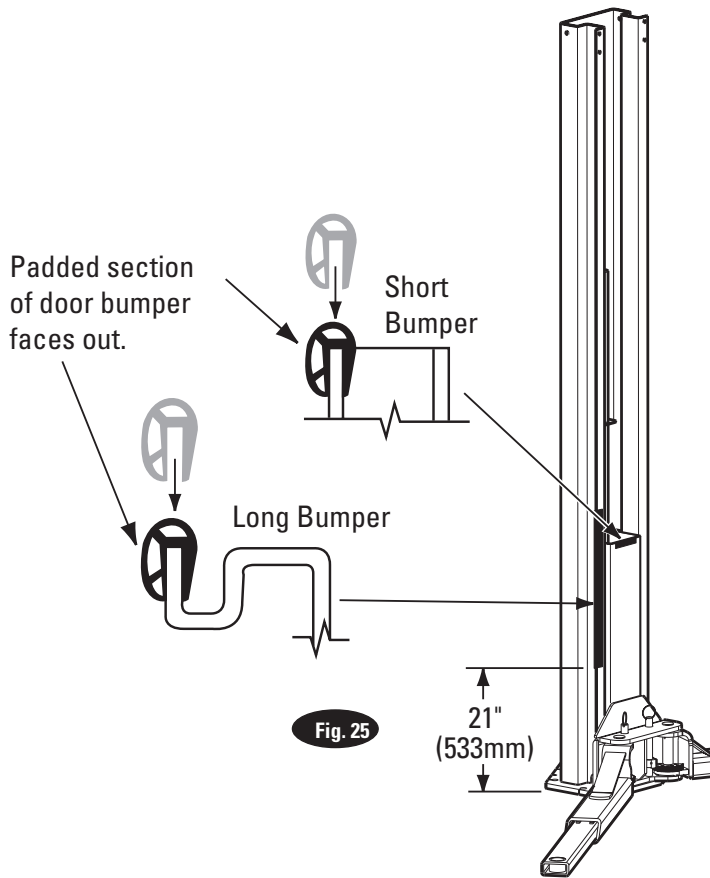
19. Pressure Test: Run lift to full rise and keep motor running for 5 seconds. Stop and check all hose connections. Tighten or reseal if required. Repeat air bleeding of cylinders.

20. Equalizer Cable Adjustment: Raise lift to check equalizer cable tension. Below carriage, grasp adjacent cables between thumb and forefinger, with about 15 lbs. effort you should just pull the cables together. Adjust at upper tie-offs Fig. 15.

21. Latch Release Decal: Install latch release decal on cover above latch release handle, Fig. 26.

22. Pinch Point Decal Location: Install enclosed pinch point decals. Place (1) decal on each column, Fig. 27. Decals should be a minimum of 8" from the bottom of decal to the ground.

23. Wheel Spotting Dish: Position wheel spotting dish as illustrated in Fig. 1a or 1b. Drill (2) 3/8" holes 2-1/2" deep in concrete floor using holes in wheel spotting dish as guide. Drive both anchors, provided, into concrete to secure dish.



NOTES

NOTES

NOTES

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

Thank You

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.

DATE	REV.	CHANGE MADE
06/29/05	-	New (700 Series) instructions.
12/6/05	A	Added S model motor voltage information to the electrical section.
01/15/07	B	Updated Breaker verbiage in the electrical section and added torque values to cylinder bleeders.
8/29/08	C	Combined 500 & 700 Series installation instructions.
9/10/08	D	Updated drum switch wiring.
7/24/08	E	Added reference to ANSI ALIS on front cover.
8/19/08	F	Updated bearing bar verbiage.
1/22/09	G	Updated wheel spotting dimensions.
11/4/10	H	Updated anchoring procedures and graphics for 3-phase motors.
1/4/11	J	Revision I skipped added BMW verbiage to narrow bay layout.
9/21/10	K	Updated electrical switch graphics.
2/17/11	L	Updated anchoring requirements.

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SPOA10NB, SPOA10, SPO10

(200-700 Series Lifts)

SPOA7, SPOA9, SPO9

(500 Series Lifts)

SPOA7 Capacity 7,000 lbs.

SPOA9, SPO9 Capacity 9,000 lbs.

SPOA10NB, SPOA10, SPO10 Capacity 10,000 lbs.

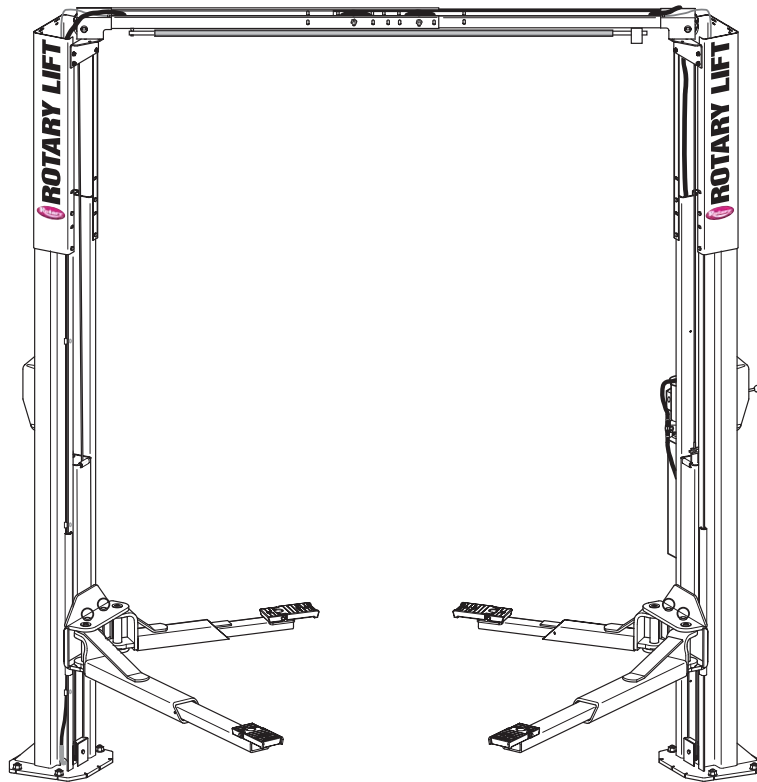
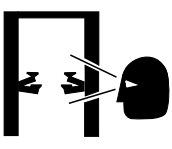
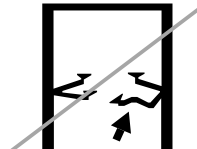
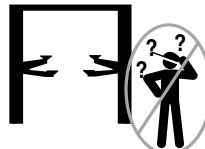


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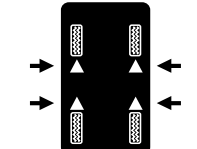
Safety Instructions	2
Owner/Employer Responsibilities	3
Operating Instructions	4
Maintenance Instructions	6
Trouble Shooting	7

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

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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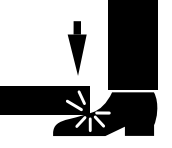

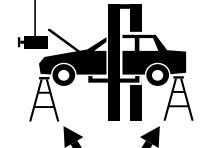
<p>CAUTION</p>  <p>Authorized personnel only in lift area. ©</p>	<p>SAFETY INSTRUCTIONS</p>  <p>Read operating and safety manuals before using lift. ©</p>
---	---

<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>
--	--

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>
---	---	---

<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>
---	---	---

- **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 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.

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/SM01-1, *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-2000, *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-2000, *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.

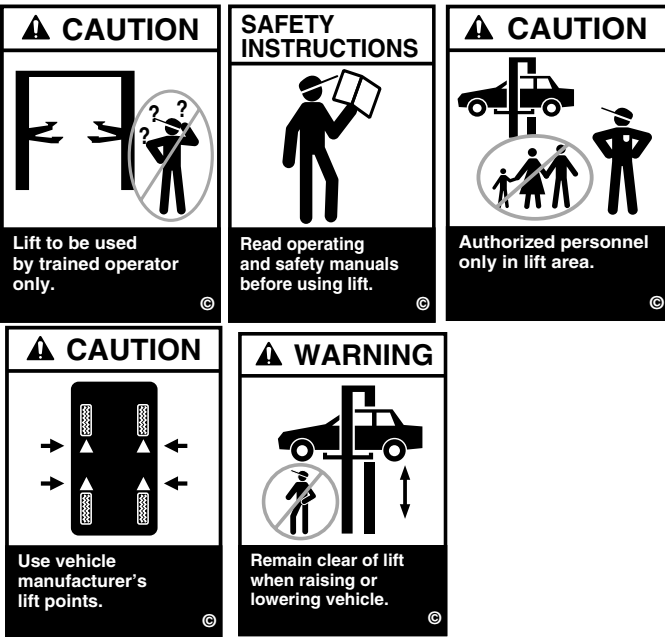
OPERATING INSTRUCTIONS

⚠️ 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.



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

- 1. Before Loading:** 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.
- Spot vehicle over lift with left front wheel in proper spotting position, Fig. 1.
- 3. Loading:** Swing arms under vehicle and position adapters at vehicle manufacturer's recommended lift points, Fig. 2. Use intermediate, high step, or optional adapters for under body clearance when required.

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

📌 IMPORTANT DO NOT rest adapter against edge of arm.

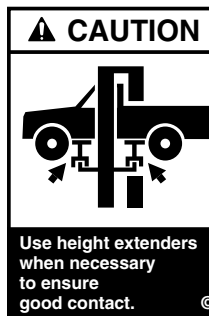
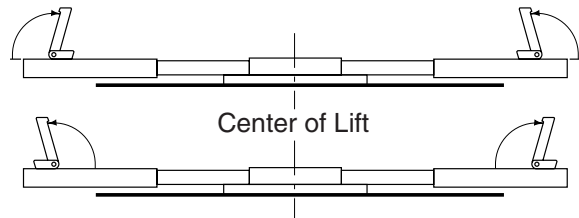


4. To Raise Lift:

- For all lifts. Push RAISE switch on power unit, Fig. 3.
- Stop before making contact with vehicle. Check arm restraint pins for engagement. If required, slightly move arm to allow restraint gear and pawl to mesh. **DO NOT** hammer pin down as this will damage the restraint gear teeth.
- Raise vehicle until tires clear the floor.
- Stop and check adapters for secure contact at vehicle manufacturer's recommended lift points.
- Continue to raise to desired height **only** if vehicle is secure on lift.
- DO NOT** go under vehicle if all four adapters are not in secure contact at vehicle manufacturer's recommended lift points.
- Repeat complete spotting, loading and raising procedures if required.
- Lower lift onto locking latches.

⚠️ CAUTION

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



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

- 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 manufacturers 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.
- F. Rotate front and rear adapter to oppose each other when using the high step adapter and/or any auxiliary height extending adapter.

5. While Using Lift:

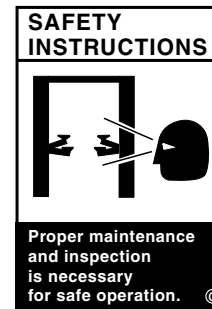
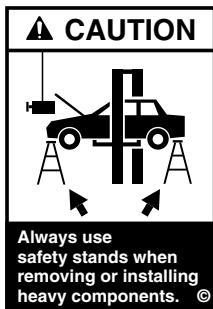
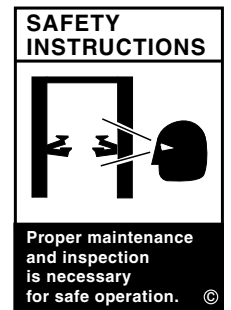
- A. Avoid excessive rocking of vehicle while on lift.
- B. Always use safety stands as needed or when removing or installing heavy components.

6. To Lower Lift:

- A. Remove all tools or other objects from lift area.
- B. Raise lift off locking latches.
- C. Pull LATCH release handle fully and hold.
- D. Push 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 Wheel Spotting Positions

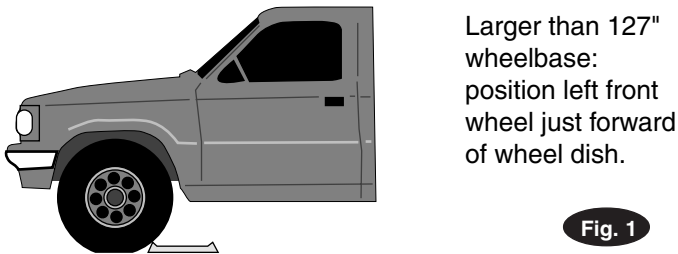
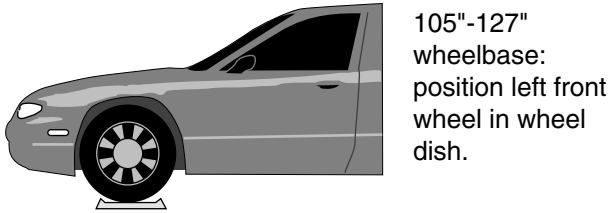
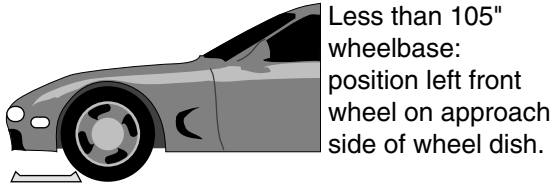
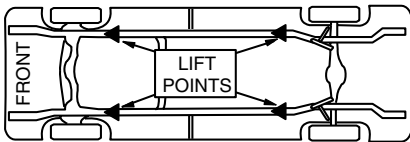


Fig. 1

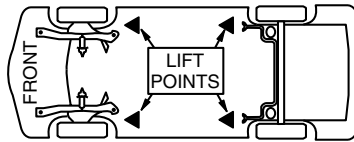


WARNING Most specialty or modified vehicles cannot be raised on a frame engaging lift. Contact vehicle manufacturer for raising or jacking details.

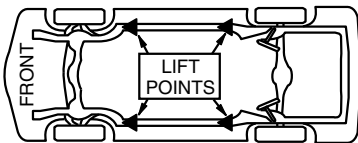
Typical Lifting Points



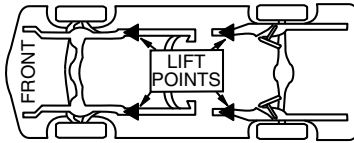
Pickup Truck



Unitized Body



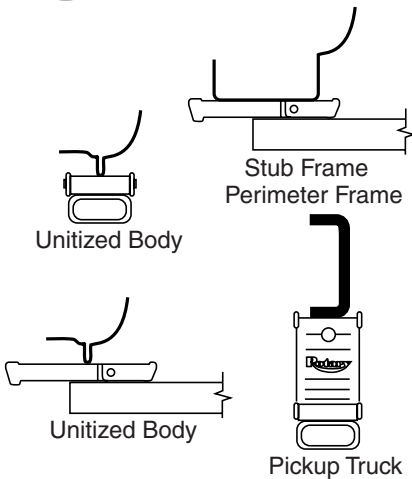
Perimeter Frame



Stub Frame

NOTE: Some vehicles may have the manufacturer's Service Garage Lift Point locations identified by triangle shape marks on it's undercarriage (reference ANSI/SAE J2184-1992). Also, there may be a label located on the right front door lock face showing specific vehicle lift points. If the specific vehicle lift points are not identified, refer to the "Typical Lift Points" illustrated herein. ALWAYS follow the operating instructions supplied with the lift.

Fig. 2



THREE PHASE

SINGLE PHASE

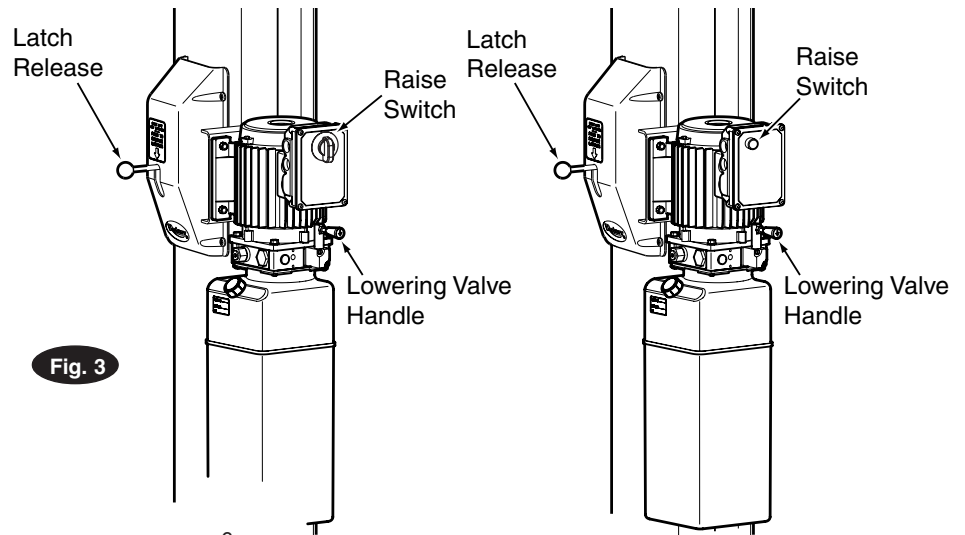


Fig. 3

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 pivot points.
- **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.
- **Replace** all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from Rotary Lift.

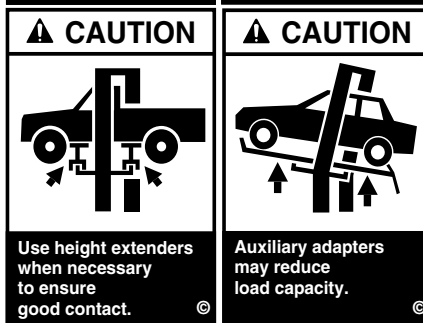
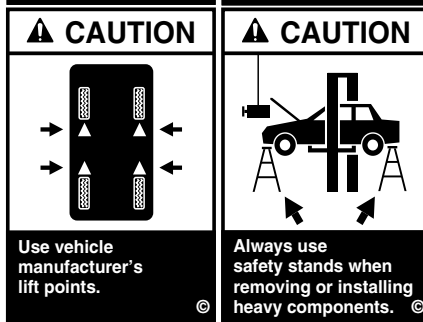


The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL. 32903-3116.

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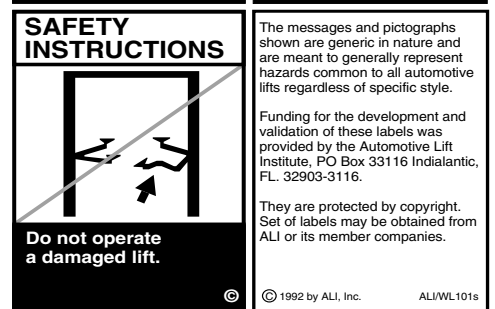
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INSPECTION and MAINTENANCE
See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.



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 to proper level with ISOVG32 Hydraulic Oil or Dexron III ATF.
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 using ISOVG32 Hydraulic Oil or 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 repour 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. Reference installation instructions for minimum spacing requirements. 2. Break out old concrete and repour new pads for lift per lift installation instructions.
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. Actuate latch release handle several times to allow oil to coat shaft. 2. Replace broken spring. 3. Adjust clamp 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/upper guides. 3. Latch cable is loose. 	<ol style="list-style-type: none"> 1. Replace cable. 2. Check position of cable on sheaves/upper guides; adjust cable tension. 3. Adjust cable tension.
Lift stops short of full rise or chatters.	<ol style="list-style-type: none"> 1. Low oil level. 2. Air in hydraulic lines/cylinder. 	<ol style="list-style-type: none"> 1. Fill tank to proper level with ISOVG32 Hydraulic Oil or Dexron III ATF. 2. Bleed lift per installation instructions.