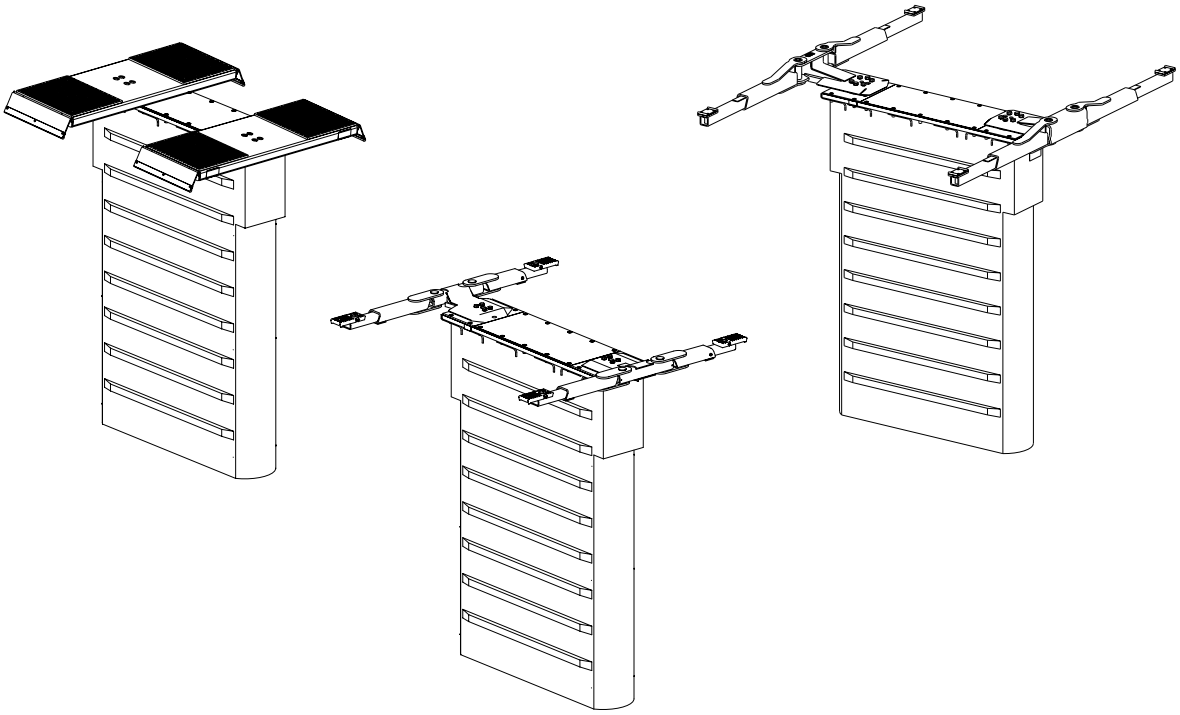
INSTALLATION INSTRUCTIONS

SL210i/SL212i

(700 Series)

SL210i Fixed Pad Capacity 9,000 lbs.
SL210i Capacity 10,000 lbs.
SL212i Capacity 12,000 lbs.



These Instructions Contain General Data. Any Deviation From Customers Prints Or Specifications Should Be Clarified Before Proceeding With Lift Installation.

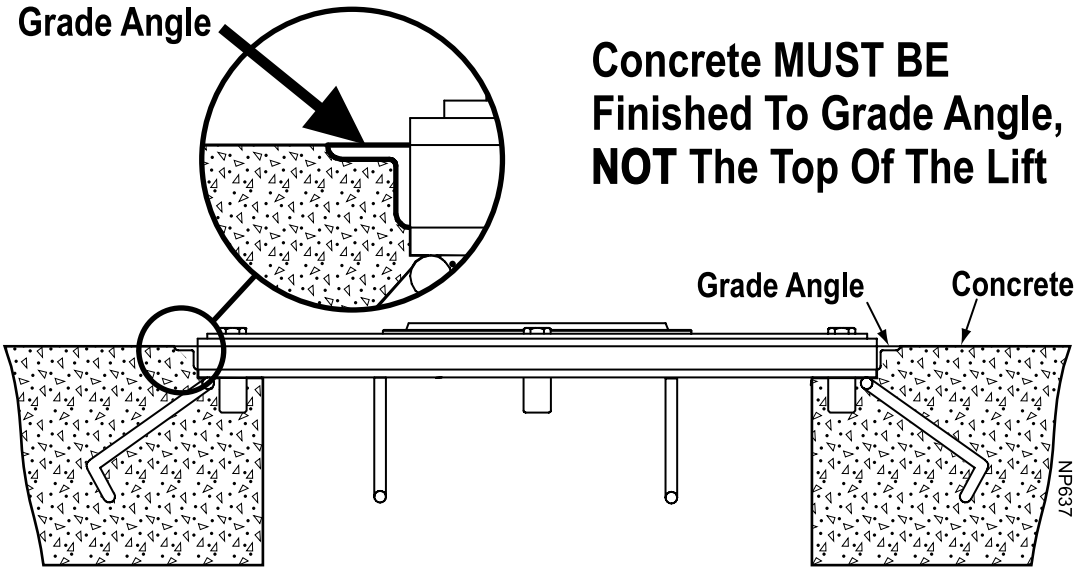
IMPORTANT Check the containment tube for holes due to shipping damage. Do not install a damaged containment tube. Contact Rotary Lift Customer Service For Advice On How To Proceed. If the lift is where it has a chance to be exposed to the elements, **protect the lift.**

LP20390

IN20431
Rev. -- 03/09/2006

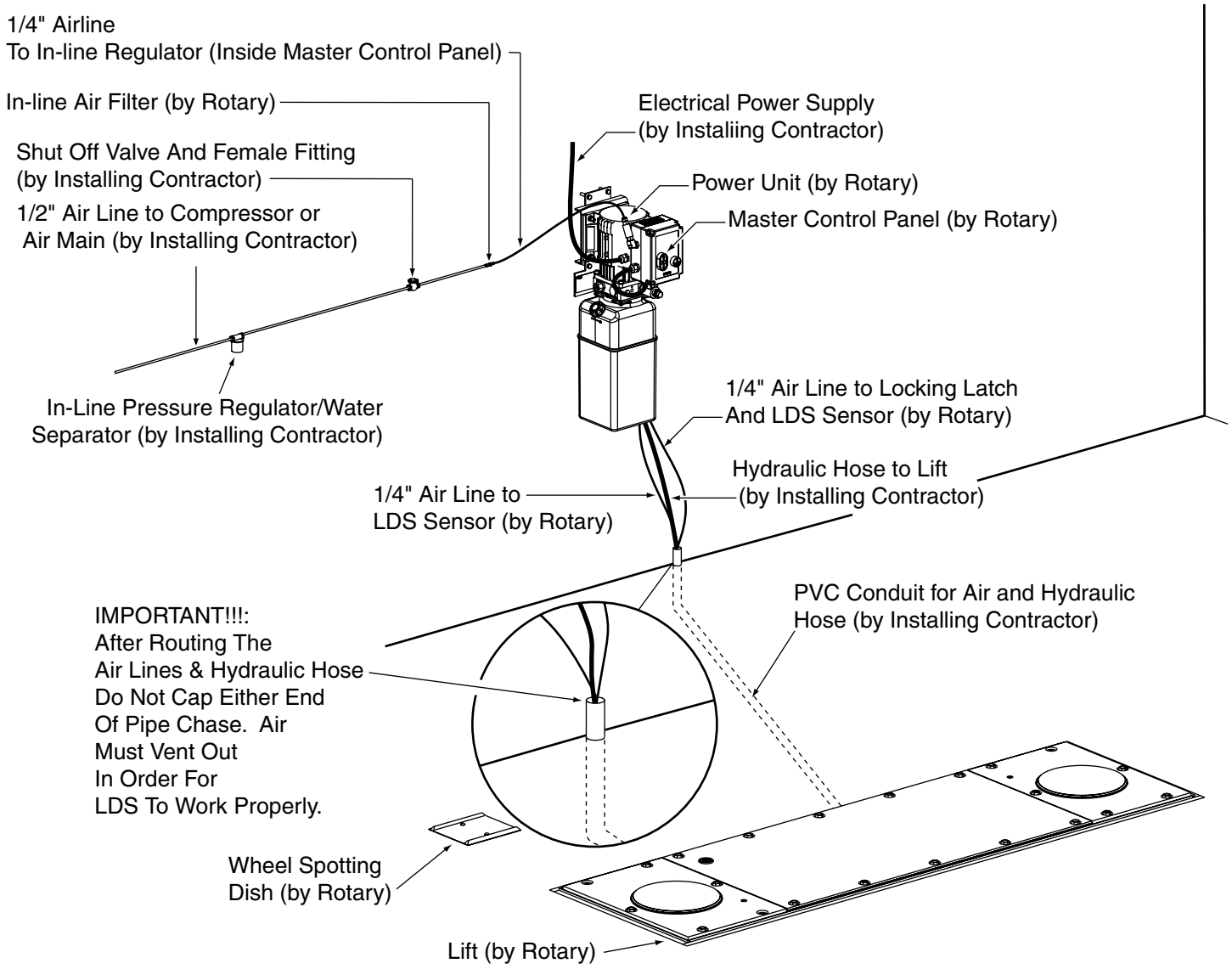
IMPORTANT

Failure To Comply Will Void Warranty

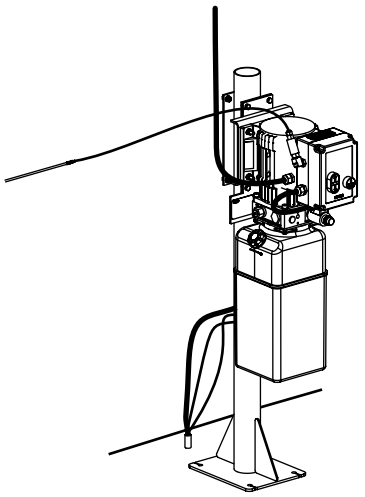


Owner: Your Installer Is Responsible For The Concrete Floor Being Finished To Grade Angle, NOT To The Top Of The Lift. Failure To Comply Will Void Warranty

IMPORTANT Contact with the electrical heating coils could cause electrolysis and damage the lift and/or its components. Make sure the lift frame concrete anchors do not contact electrical heating coils, or re-bar that may be in contact with other embedded electrical sources. The lift being physically connected to any source which promotes electrolysis will void the warranty.



Power Unit
&
Master Control Panel
Mounted On Optional Pedestal

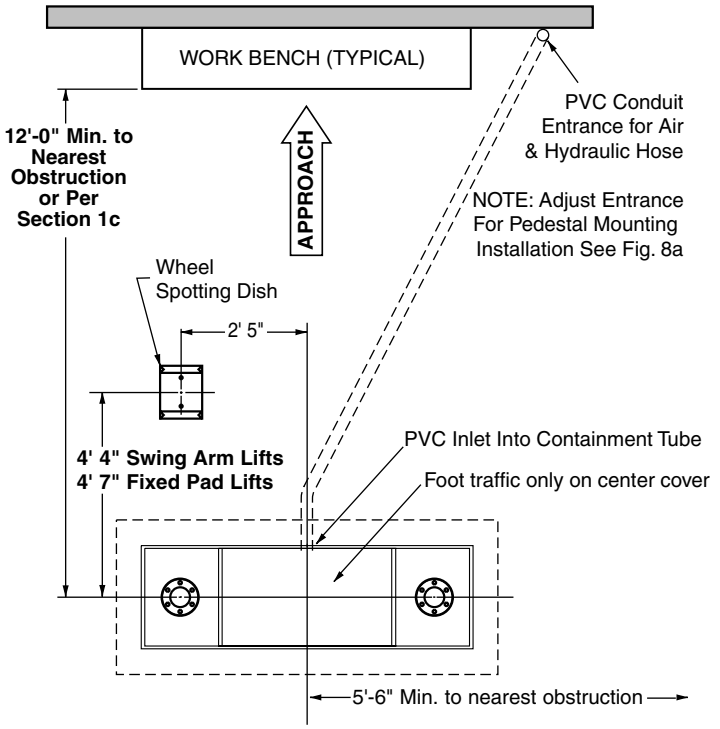


Please follow these instructions to ensure a good installation and satisfactory operation of the lift. Check your shipment against the product load list and shipping papers. Enter claims for damage or shortage with the delivering carrier at once.

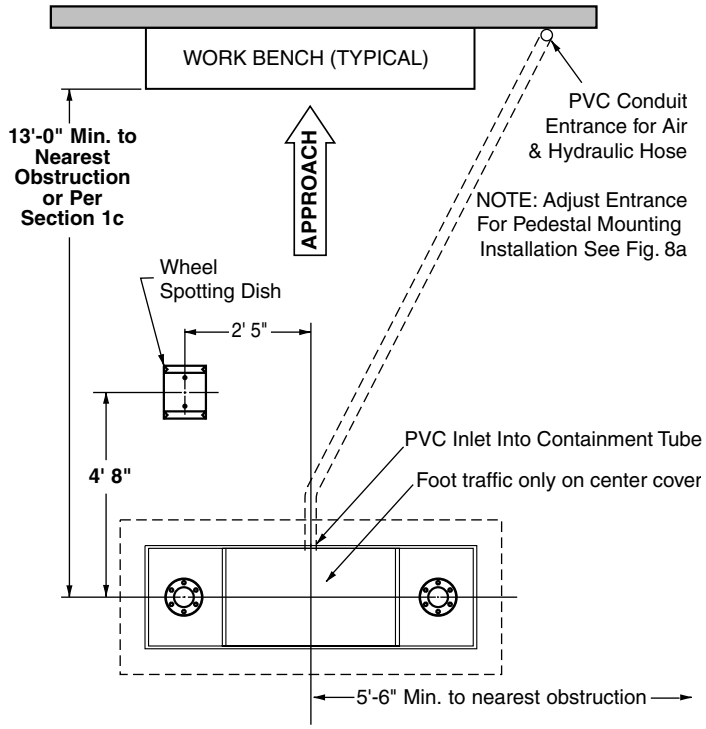
- After installation, please return this booklet to the literature package and give to lift owner/operator.
- Literature package should be kept attached to power unit for easy access.
- Review entire installation instructions before beginning excavation.

IMPORTANT The center cover is designed for foot traffic only.

IMPORTANT Restrict all unauthorized persons from going near excavation. OSHA standard restricts anyone from getting in excavated hole, unless OSHA guidelines are followed. See OSHA Excavating Standard CFR 1926.



SL210i Series

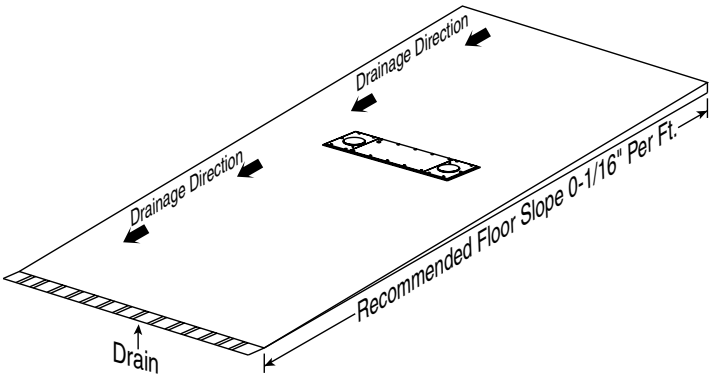


SL212i Series

Fig. 1

1. Lift Location:

A. Check architect's layout if available. Lay out lift as shown in Fig. 1. Recommended floor slope is 1/16" per foot.



B. ***SL210i:*** The 5' 6" centerline to side and 12' 0" centerline to front and rear dimensions should be maintained to provide adequate working space. The minimum overhead clearance should be 85" plus height of highest vehicle to be raised. 24' 0" length bay recommended. Other lengths may be used, provided ample clearance is maintained at each end of lift.

SL212i: The 5' 6" centerline to side and 13' 0" centerline to front and rear dimensions should be maintained to provide adequate working space. The minimum overhead clearance should be 88" plus height of highest vehicle to be raised. 26' 0" length bay recommended. Other lengths may be used, provided ample clearance is maintained at each end of lift.

C. Base Unit Lifts: If you are planning to install roll-on/ wheel alignment runways, locate lift per instructions from superstructure manufacturer. Use superstructure manufacturer's instructions for fore and aft, side to side, and ceiling clearances.

2. Excavation: Excavate hole to dimensions shown in Fig. 2. Dig trench for 2" PVC pipe between lift and power unit location. Trench should be dug 11" below finished floor grade. Air line and hydraulic hose to be contained in this 2" PVC pipe.

3. Concrete Preparation:

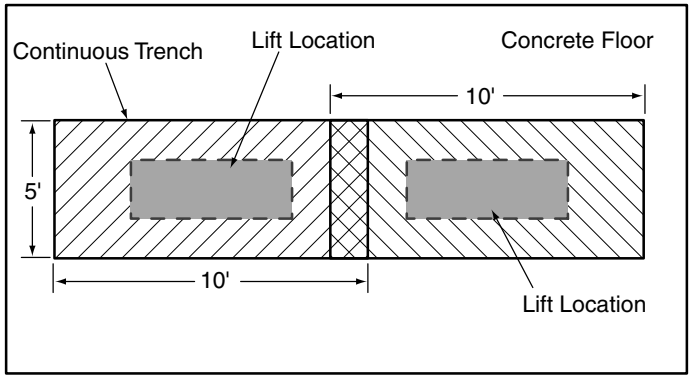
A. Run 2" PVC from Control Area to Containment Tube. PVC will enter the Containment Tube 9-1/2" below finished floor grade. Hole is centered horizontally in Containment Tube, Fig. 1.

B. Box out a 5' x 10' area around where lift is to be located.

NOTE: For multiple lift installations, boxed out areas will overlap. Dig continuous trench, see illustration below.

C. Pour concrete floor ensuring not to get concrete in boxed out area.

NOTE: By using this installation method, the RAI can more accurately set lift to proper grade relative to finished floor. Reference Page 2.



4. Lift Setting:

IMPORTANT Check the containment tube for holes due to shipping damage. Do not install a damaged containment tube. Contact Rotary Lift Customer Service.

A. Chain hoist must have capacity of 2,500 lbs. with a clear swing of 9' 0". Rig sling for unit, attaching to the shipping strap, Fig. 3, and lower assembly into hole. Center lift and be sure lift containment inlet is located as shown in Fig. 1.

IMPORTANT Owner: Your Installer Is Responsible For The Concrete Floor Being Finished To Grade Angle, NOT To The Top Of The Lift, Fig. 5. Failure To Comply Will Void Warranty.

B. Bend frame anchors out perpendicular to concrete frame and downward approximately 45° to floor level, Fig. 2.
C. Remove and retain (4) 1/2"-13NC x 2" HHCS (marked with **X**, Fig. 3). Insert 1/2" Threaded Rods x 18" lg. into the holes and secure in place using 1/2" flat washers and nuts, Fig. 4.
D. Attach 6 x 6's to support unit on existing floor and secure in place with 1/2" flat washers and nuts, Fig. 4. Remove shipping straps and install guide barrel bolts in open holes and torque to 60 ft-lbs. Remove protective covers from top of jacks.

NOTE: Make sure rubber thread protectors are still in place on all nuts welded to the concrete frame, including where the hardware was just added, Fig. 5.

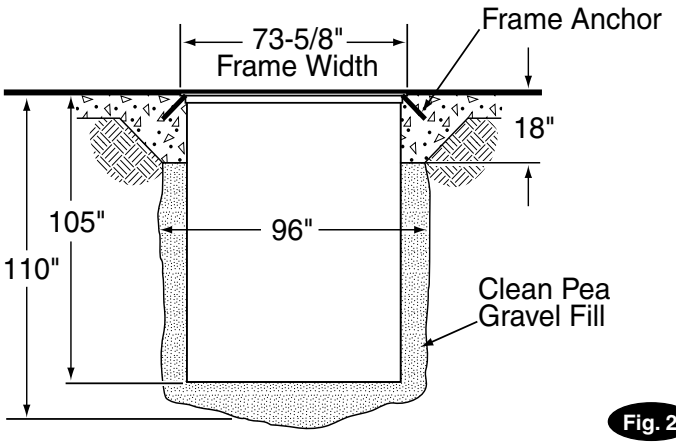
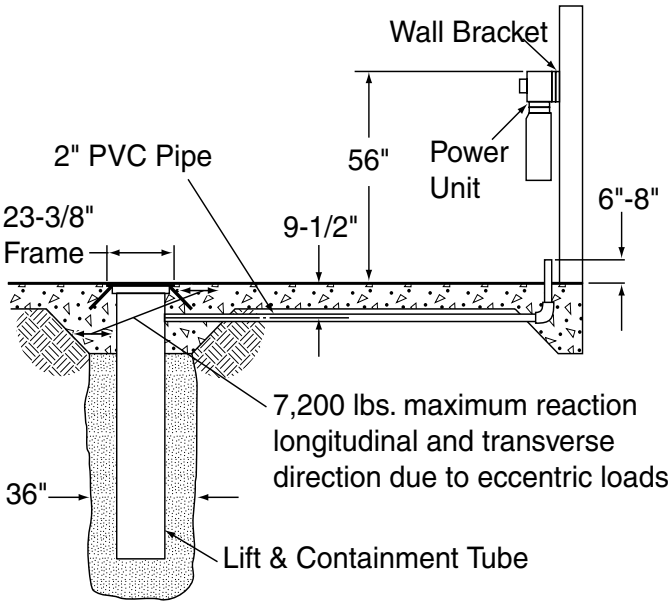


Fig. 2



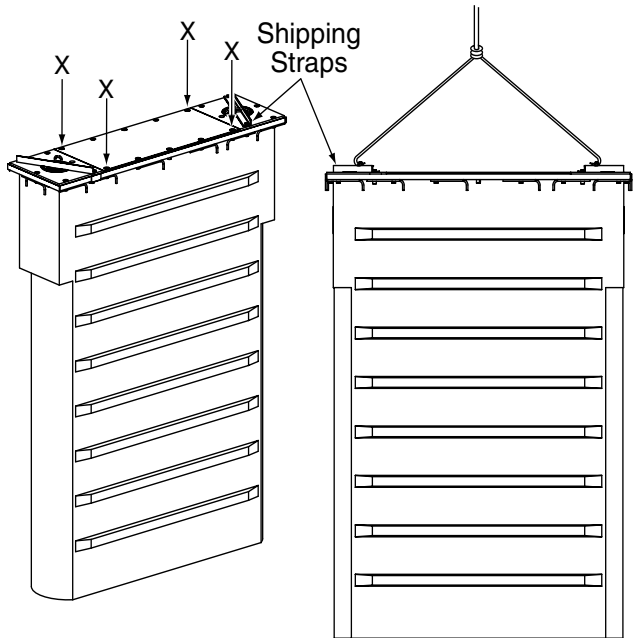


Fig. 3

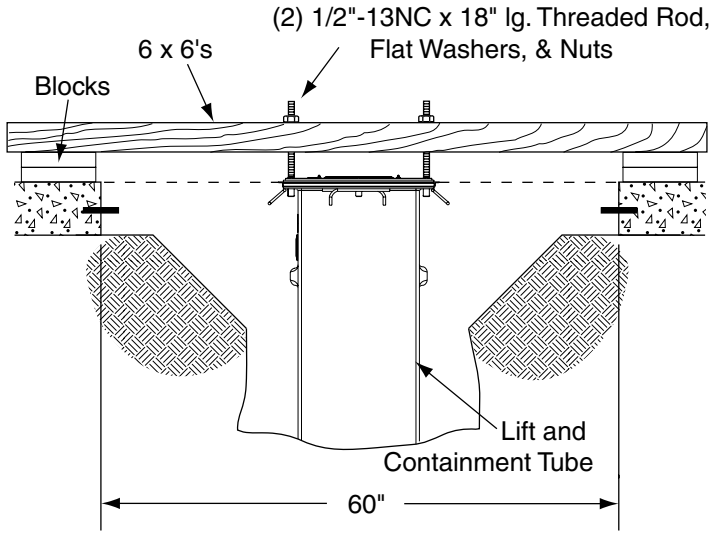


Fig. 4

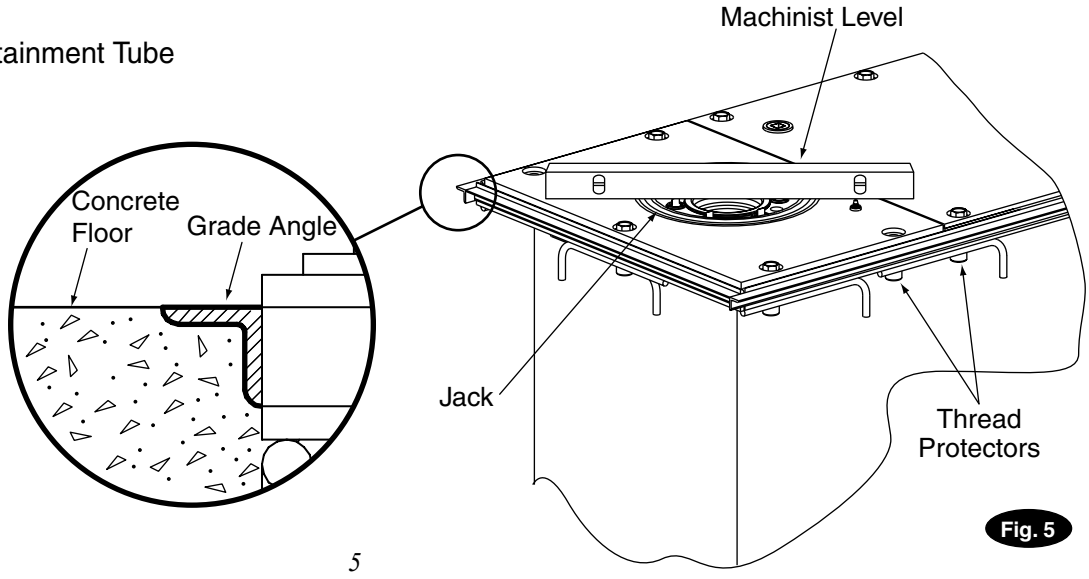


Fig. 5

E. Plumb and level by placing machinist level on top of jack. Do Not plumb or level off unit frame. See Fig 5.
F. Shore Lift Securely!
G. Connect 2" PVC to containment tube, chamfer PVC entering containment tube seal and lubricate I.D. of seal with grease or oil to ease entry of PVC into seal. PVC pipe should extend into containment tube 1" maximum.

NOTE: If your PVC pipe and containment inlet do not align, you may have to cut back PVC pipe, and attach 2" Flexible PVC to make connection. All PVC joints MUST be leak proof.

H. Recheck plumb.

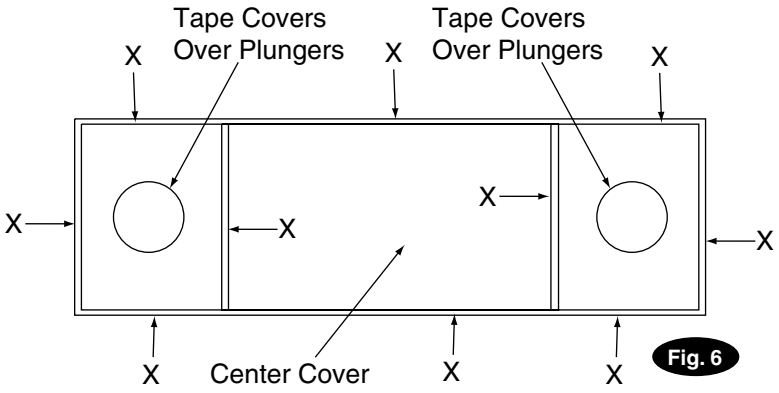


Fig. 6

5. Backfill:
A. Duct tape joint areas indicated by **X**, Fig. 6, to protect these areas during backfill and concrete work. Backfill around unit using only pea gravel to within 18" of top of finished floor.

IMPORTANT Make sure thread protectors (supplied by Rotary) are on the underneath side of the concrete frame on all the bolts in the guide barrel and cover, Fig. 5.

⚠CAUTION Do not use a mechanical tamper or saturate the backfill material to achieve compaction. This could cause lift containment sides to bend inward, HAND TAMP ONLY.

IMPORTANT **Do Not** fill plunger with any ballast material.

B. Complete backfill and tamp pipe trench.

C. After lift is backfilled, make final elevation and plumb checks, Fig 5.
D. Make sure frame anchors are bent out, Fig. 7.

6. Concrete Work:
A. Leave 6 x 6's in place.
B. New concrete around the lift must be keyed into existing floor with rebar or stud anchors, Fig. 7.
C. A minimum concrete strength of 3,000 PSI is suggested. DO NOT use calcium chloride as a curing accelerator. If using a curing accelerator, we recommend a non-chloride additive such as High Early* or equivalent.
D. Pour concrete floor, being careful not to run concrete in and around top surface of lift unit.

IMPORTANT Owner: Your Installer Is Responsible For The Concrete Floor Being Finished To Grade Angle, NOT To The Top Of The Lift, Fig. 7. Failure To Comply Will Void Warranty.

IMPORTANT It is imperative that lift be set level regardless of floor slope or other factors. Trowel smooth and allow to harden.

E. After concrete is set-up, remove 6 x 6's and threaded rods.
F. Reinstall the guide barrel bolts, use Loctite 242 (blue) on bolts and torque to 60 ft.-lbs.
G. Do not use lift until concrete has achieved 3,000 PSI.

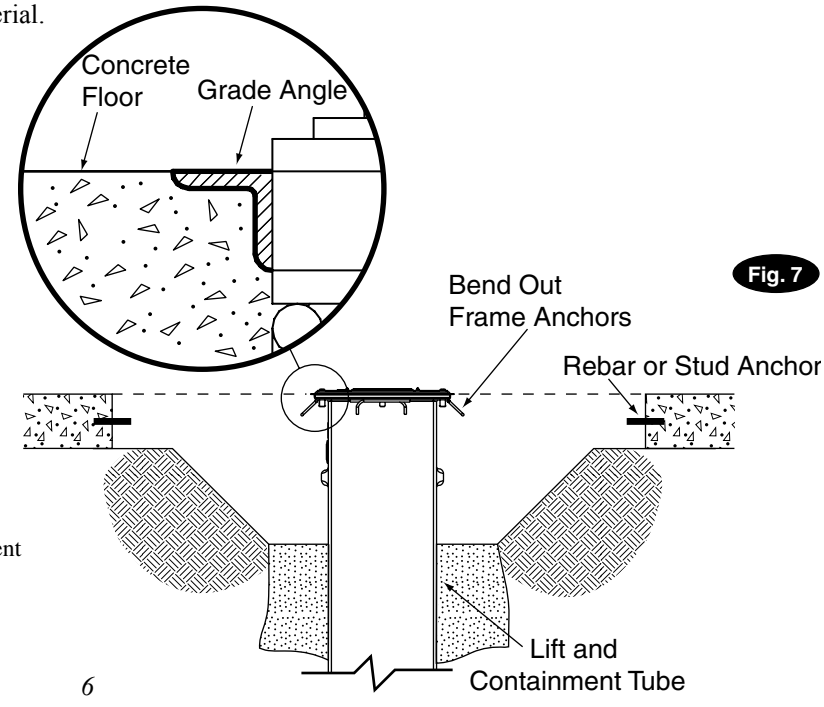


Fig. 7

*High Early is a registered trademark of General Portland Cement Company.

7. Power Unit:

A. Wall Mounting: For operating convenience, locate Power Unit bracket so top of bracket will be approximately 56" above floor, Fig. 2.

B. Locate and mount the power unit bracket, using (4) 3/8" wall anchors, on the wall, Fig. 8. Anchors must be able to hold 20 lbs. of shear force.

C. Put (4) 5/16"-18NC x 1-1/2" HHCS through wall bracket using push-nuts to hold in place, Fig. 8.

D. Mount power unit, with motor up, to the power unit bracket and install (4) 5/16" nuts and lock washers, Fig.8.

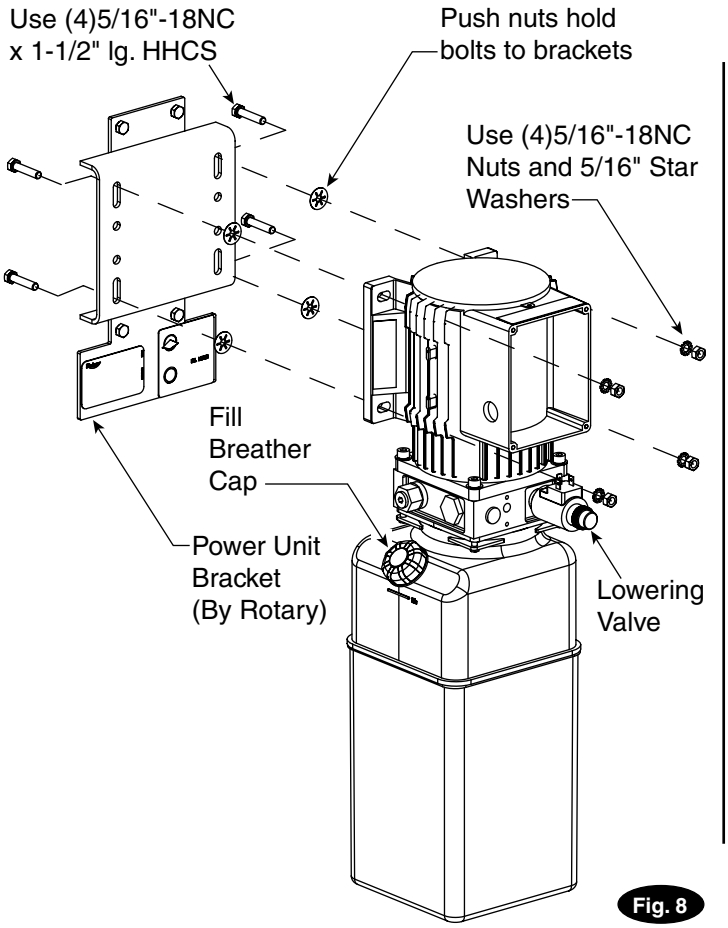


Fig. 8

E. Pedestal Mounting: Pedestal must be anchored to the floor with 3/8" anchor bolts before attaching power unit, Fig. 8a.

F. Use base for pattern to mark holes for anchoring. Pedestal must be anchored at least 30" away from the any obstacle to allow for wiring and maintenance of the power unit, Fig 8a.

G. Mount power unit bracket to pedestal with (4) 5/16"-18NC x 1-1/2" HHCS, (4) 5/16" nuts and lock washers, Fig. 8a.

H. Put (4) 5/16"-18NC x 1-1/2" HHCS through power unit bracket using push-nuts to hold in place, Fig. 8b.

I. Mount power unit, with motor up, to the power unit bracket and install (4) 5/16" nuts and lock washers, Fig.8b.

8. Hose And Elbow Attachment (Hose Provided By Installer):

A. Hose must meet Dayco EZ Flex 150 or equivalent specs. with 3,000 PSI minimum working pressure, 3/8" I.D. with 9/16-18THD, JIC fitting, female swivel ends.

B. Hose must be free of debris. Inspect all threads for damage.

C. Install hose onto elbow adapter on power unit, Fig. 9.

D. Do not route hose to lift at this time.

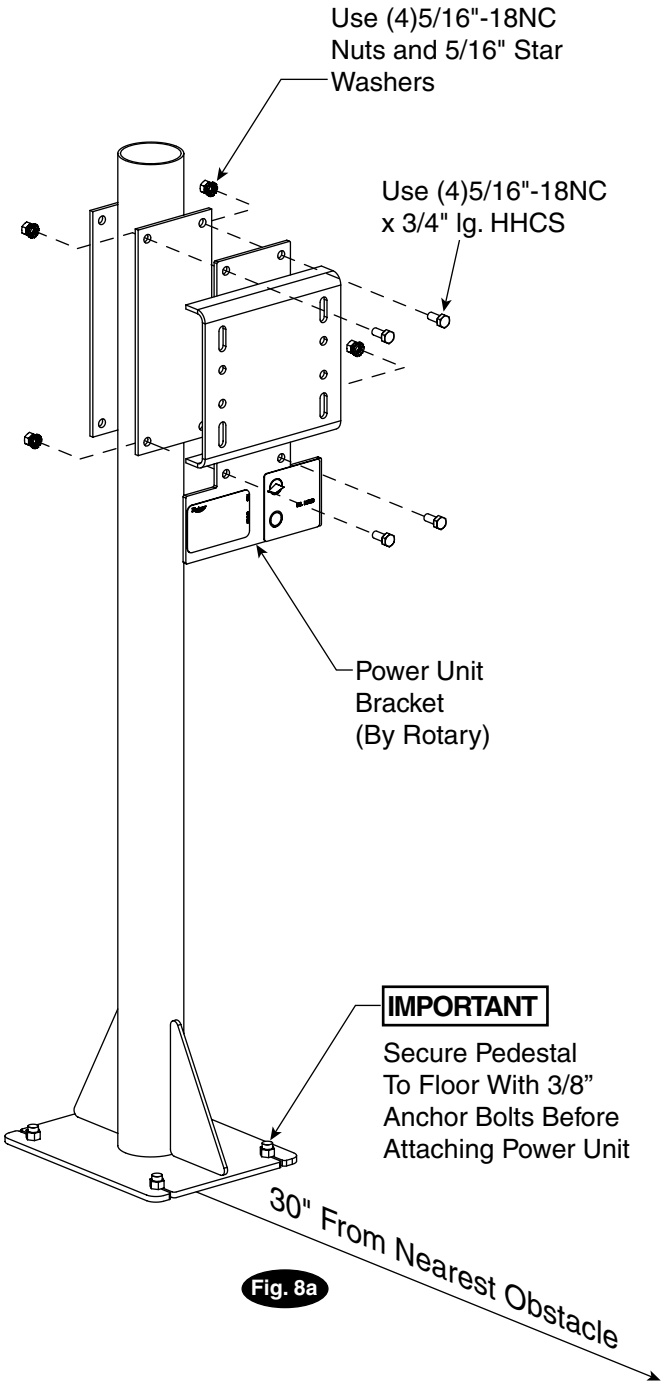


Fig. 8a

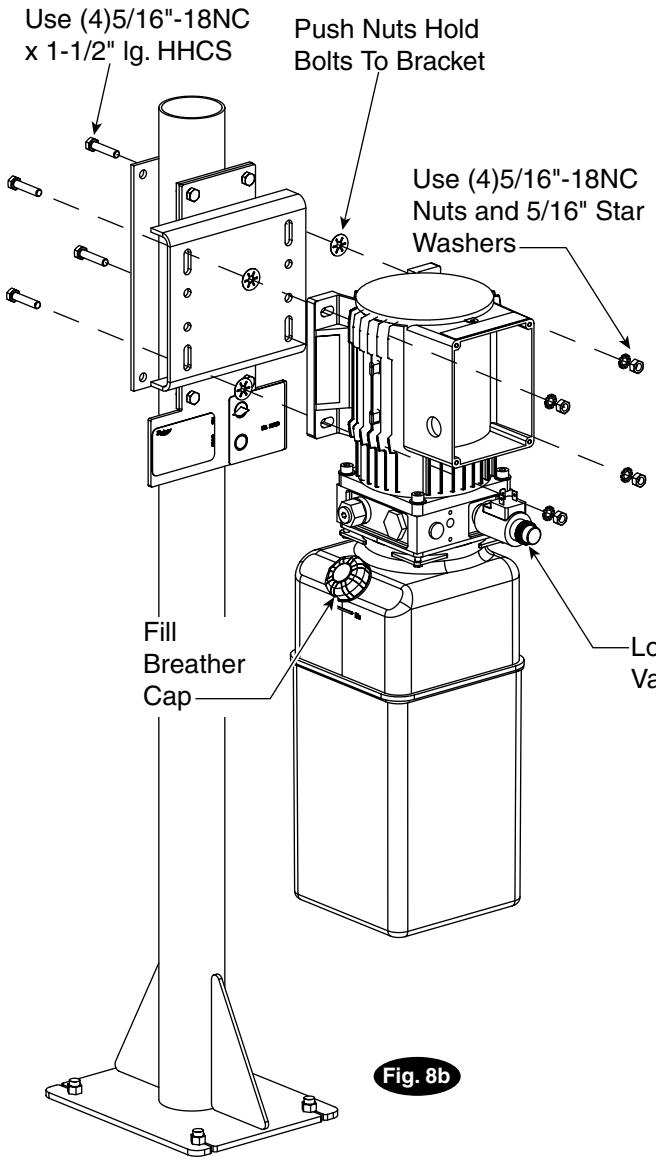


Fig. 8b

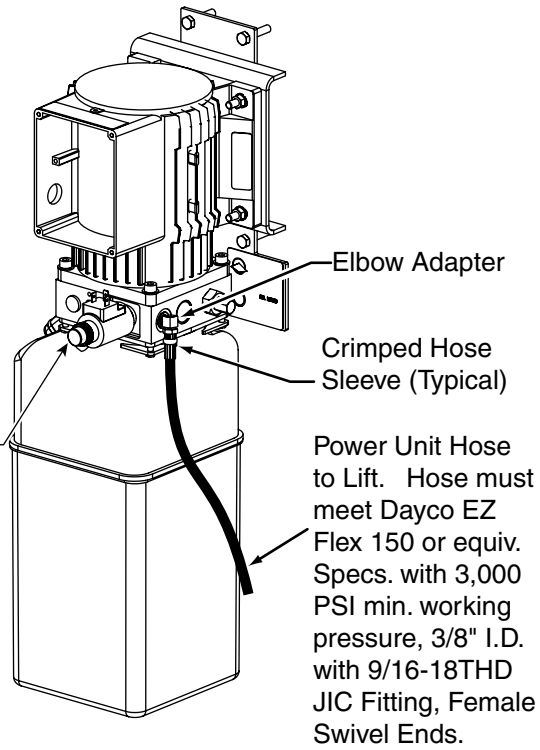


Fig. 9

9. Mounting Master Control Panel, Fig. 10:

A. Remove front cover of Master Control by unscrewing the (4) screws and unplugging the harness.

B. Remove covering over the front of the capacitor box on the motor of the power unit and find gasket.

C. Place gasket on the front of the capacitor box, Fig. 10.

D. Route (2) motor wires through gasket and the hole in the back of Master Control Box. Fasten to indicated locations on terminal block, Fig. 10.

E. Route green ground wire through gasket and fasten to the ground screw inside the capacitor box of the motor, Fig. 10.

F. Have a certified electrician run appropriate power supply to the side of the capacitor box of the motor and run the ground wire and power wires through the gasket and the hole in the back of the master control box. Fasten the ground wire to the additional ground screw in back plate and fasten the (2) power wires to the indicated locations on the terminal block.

ATTENTION Fasten spade terminals to the ends of the wires sized for fastening to a #8 screw, Fig. 10.

G. Fasten the Master Control Box with the (4) M5x10 PHMS included making sure the gasket seats between the capacitor box sides and the back of the Master Control Box, Fig. 10.

H. Push excess ground and power wires into the capacitor box behind the control, Fig. 10.

I. Orient bulkhead for input air to desired position and tighten securely, Fig. 10.

J. Plug harness and reattach cover of the master control box, making sure all wires are inside the box and plug is above the terminal block, Fig.10.

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

IMPORTANT Use separate circuit for each power supply. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 25 amp fuse, and three phase use 20 amp fuse. For three phase 460V, use 10 amp fuse. All wiring must comply with NEC and all local electrical codes.

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

Wire motor according to wiring diagram provided on page 10.

Single Phase Rotary Power Unit

MOTOR OPERATING DATA - SINGLE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208 - 230 Volts 60 HZ	197 - 253 Volts

NOTES:

1. Unit not suitable for use in unusual conditions. Contact Rotary for moisture and dust environment duty unit.
2. Verify Coil Rating Matches Supply Voltage
3. Motor rotation is counter clockwise when viewed from top of motor.

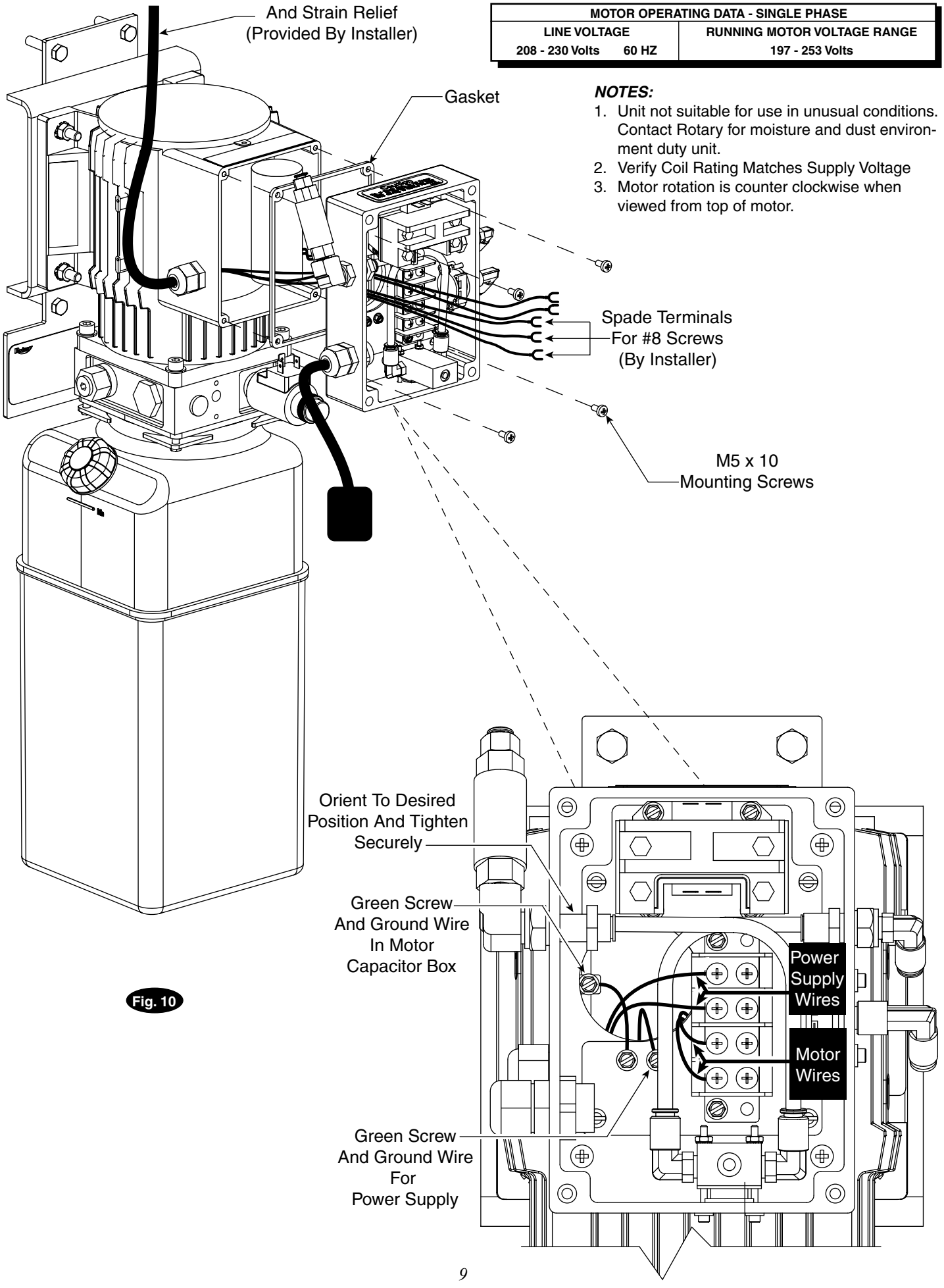


Fig. 10

10. Lowering Valve:
Plug Lowering Valve cord from master control panel into lowering valve on power unit, Fig. 11.

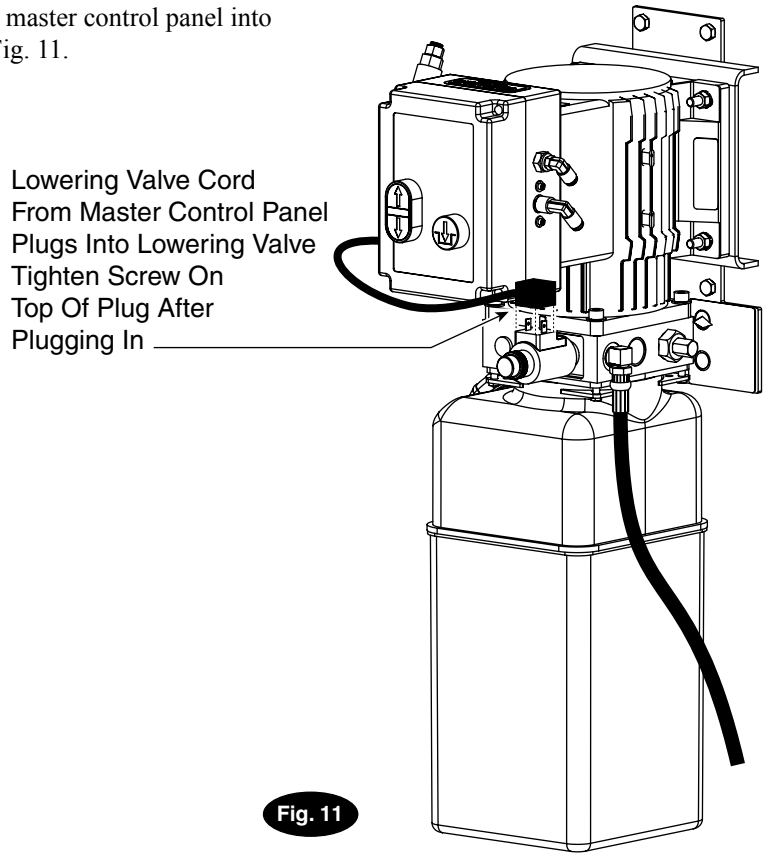
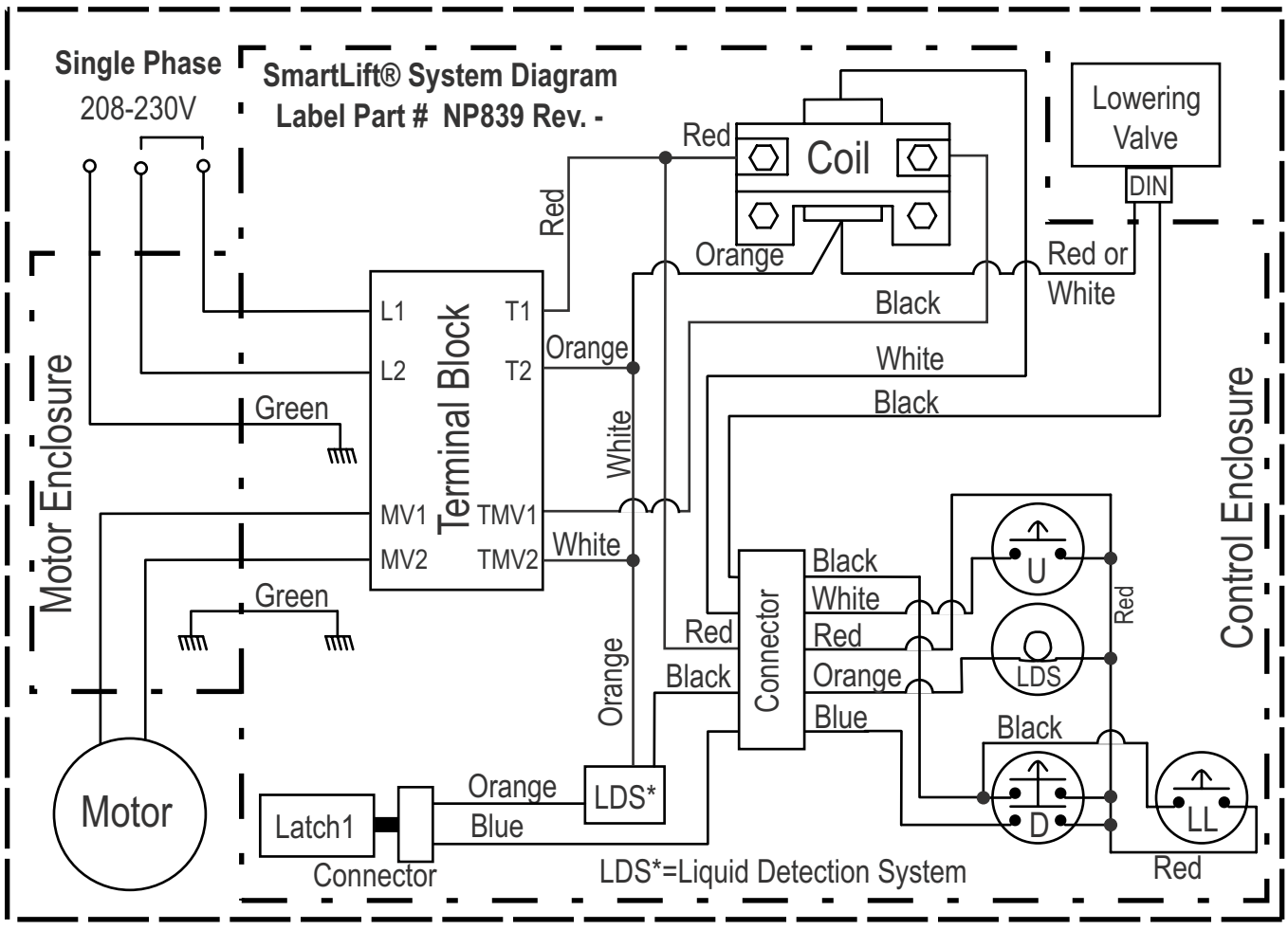


Fig. 11



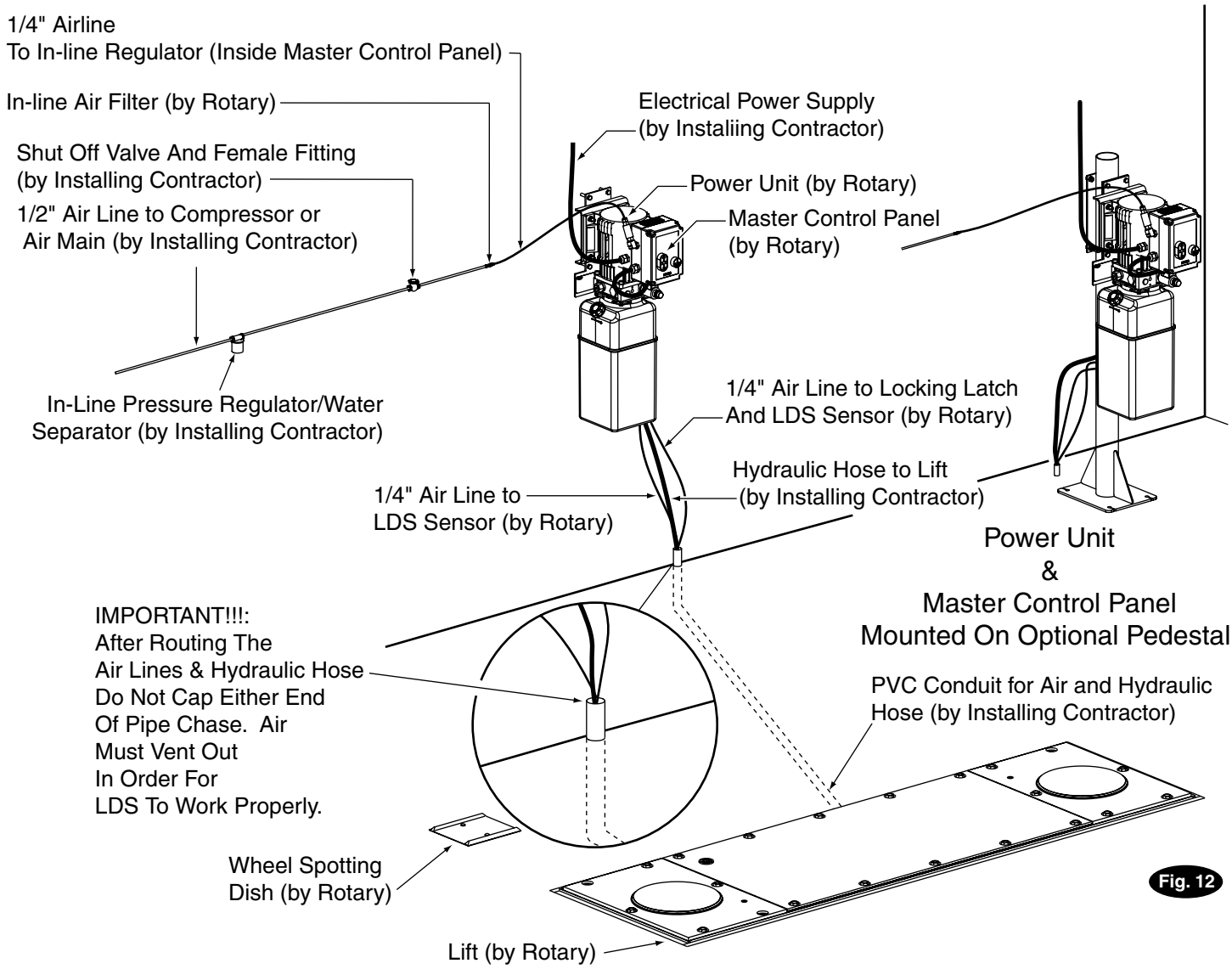


Fig. 12

*LDS = Liquid Detection System

11. Supply Lines (By Installer): Remove duct tape and center cover. Set Bolts and seal aside, taking care not to damage seal.

A. Hose:

1. Push the hose through the 2" PVC pipe chase from power unit to lift unit, Fig 12 & Fig. 14.

2. Install to hydraulic fitting in lift containment inlet.

B. Air Lines:

IMPORTANT **Shop air supply pressure must be between 90 to 120 psi.**

1. Install in-line air filter and female 1/4" pipe to 1/4" tube fitting, Fig. 12.

2. Cut to fit 1/4" air line and attach it to the in-line air filter and inline regulator on master control panel, Fig. 13.

3. Attach 1/4" polypropylene tubing into (2) elbows on the side of the Master Control Panel, Fig 13.

4. Push the tubing through the 2" PVC pipe chase to the LDS* valve assembly, Fig. 14.

5. Cut to fit 1/4" air line and run it from air line attached to vertical hose using the union tee to the top elbow of the LDS* assembly, Fig.14, inside the lift.

NOTE: All 1/4" polypropylene air line must have a 300 PSI working pressure.

IMPORTANT Failure to connect air lines properly will cause a fault error on the master control panel.

IMPORTANT After routing the air lines and hydraulic hose DO NOT cap either end of the PVC conduit. Air must vent out in order for the LDS* to work properly, Figs. 14.

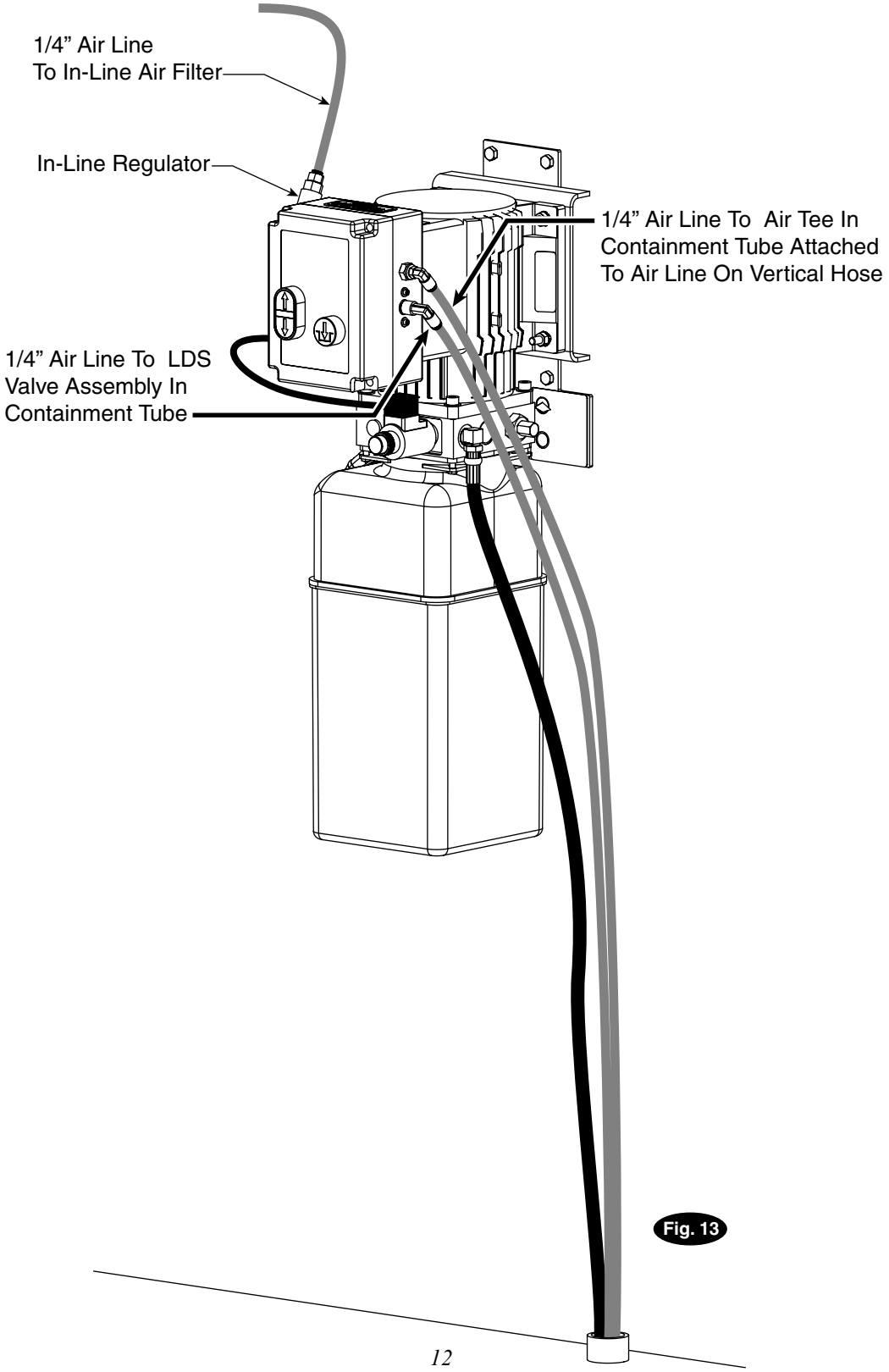


Fig. 13

CONTAINMENT
NOT SHOWN
FOR CLARITY
OF VIEW

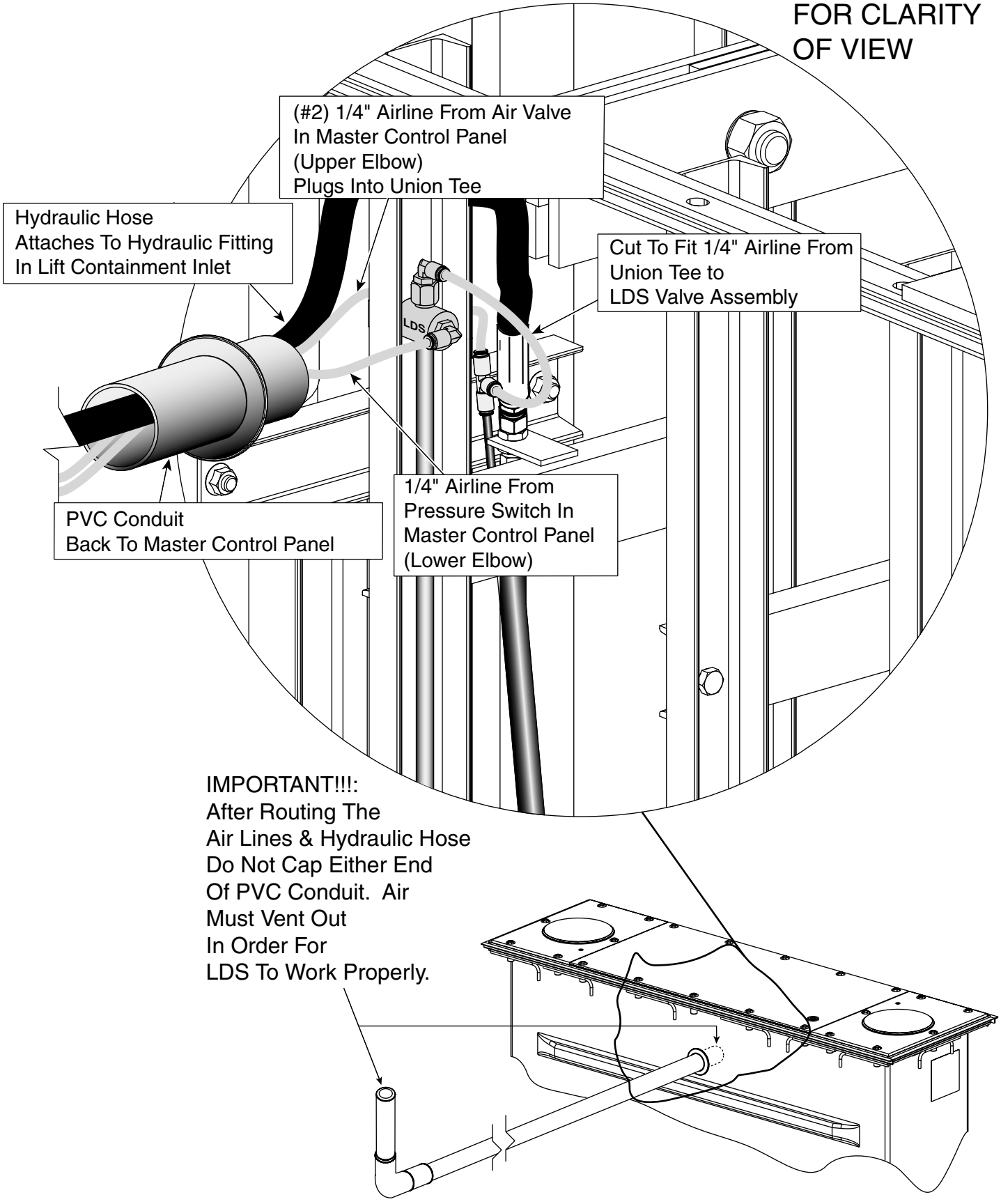


Fig. 14

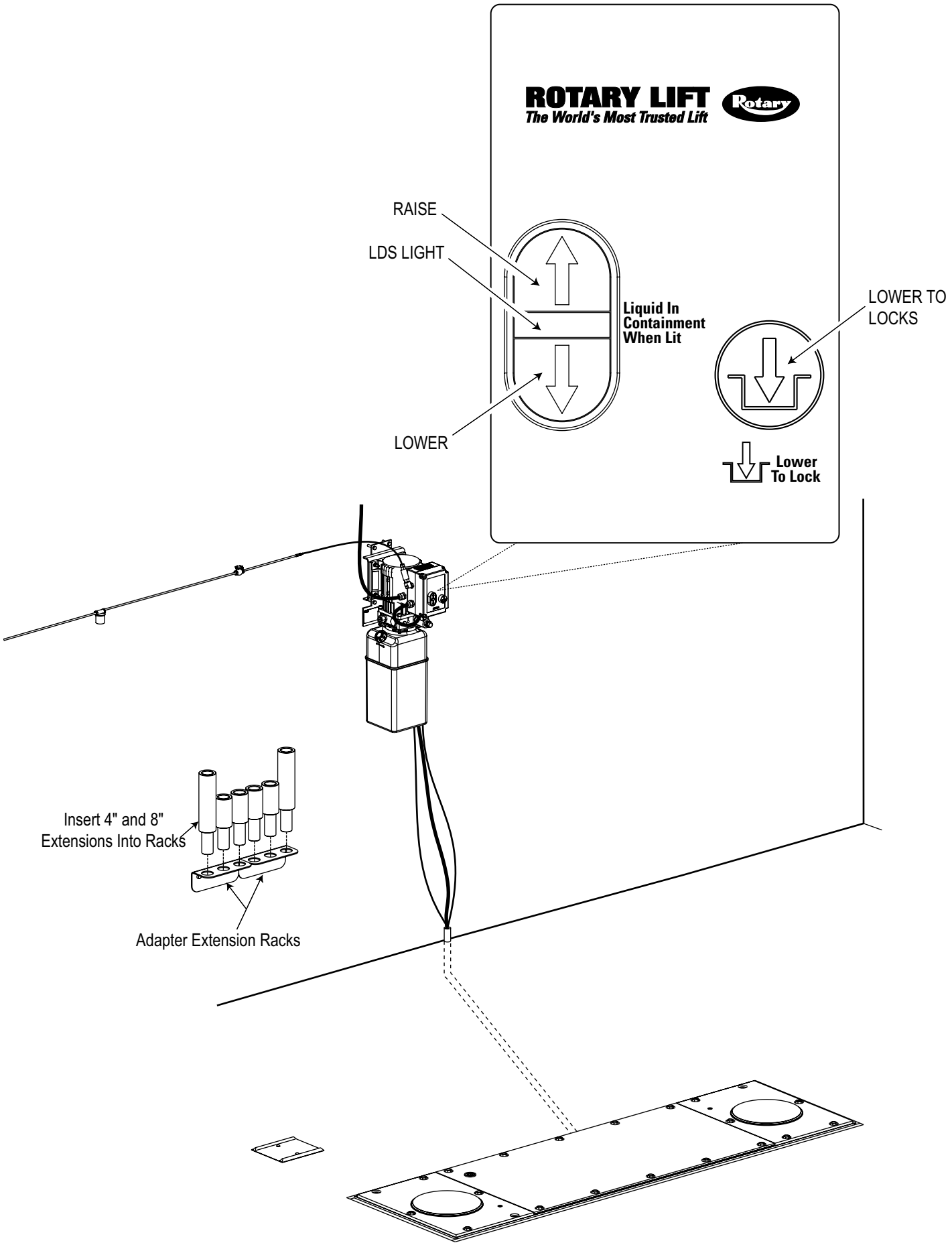

ROTARY LIFT
The World's Most Trusted Lift
Rotary
RAISE
LDS LIGHT
LOWER
Liquid In
Containment
When Lit
LOWER TO
LOCKS
Lower
To Lock
Insert 4" and 8"
Extensions Into Racks
Adapter Extension Racks

Fig. 15

12. Adapter Extension Racks (For SL212i only), Fig. 15:
A. Locate and mount adapter extension racks on the wall convenient to the bay area using (4) 3/8" wall anchors. Anchors must be able to hold 20 lbs. of shear force.
B. Place 4" and 8" extensions into racks.

13. Fluid Filling:
A. System capacity is 19 quarts. Use Dexron III ATF, or Hydraulic Fluid that meets ISO 32 specifications.
B. Remove fill-breather cap, Fig. 8.
C. Add fluid to power unit until it reaches the **MIN**_____ mark on the tank.
D. Press RAISE button and raise lift to full rise, Fig. 15.
E. Press LOWER button to fully lower lift, Fig. 15.
F. Bleed lift by cycling to full rise several times.
G. Top off fluid to power unit until it reaches the **MIN**_____ mark on the tank.

IMPORTANT All lifts must be fully lowered before changing or adding fluid.

⚠CAUTION If fill-breather cap is lost or broken, order a replacement. DO NOT substitute with a solid plug.

14. Locking Latch Test; refer to Fig. 15:
A. Press RAISE button and raise lift in up position, press LOWER TO LOCKS button and lower lift onto locks.
B. Make sure latch engages and releases.

15. Cylinder/Load Pad Test; refer to Fig. 15:
A. Press RAISE button and raise lift to full rise and press LOWER TO LOCKS button to lower onto locks.
B. Look into the containment tube to check that the high pressure cylinder rod is in the load pad hole, Fig. 16.
C. If not, use a nonmetal object (do not scratch or scar the cylinder rods), try to move the cylinder rod. If it does not move skip step D.

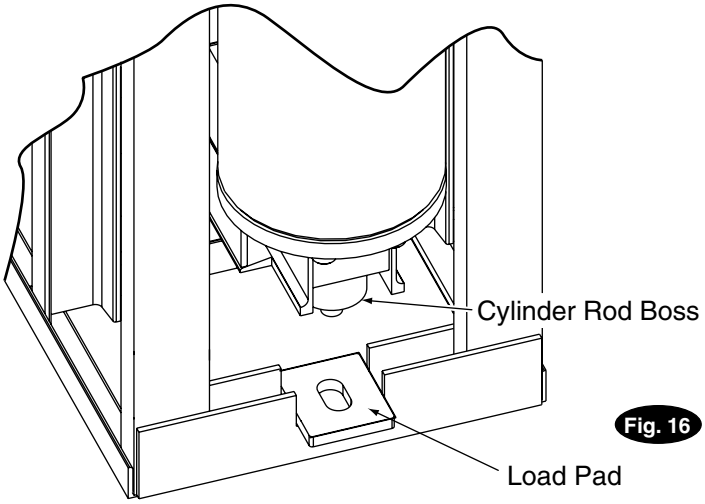


Fig. 16

16. Hose Tracking Test:
Have someone raise the lift while another watches the tracking of the hose between the bulkhead fitting and equalizer beam, Figs. 17. If the hose does not track between the members of the equalizer beam without rubbing, adjust bulkhead fitting as necessary.

17. Setting Cover; refer to Fig. 22:

A. Insert cover seal into lip in opening, making sure all holes align.

B. Install center cover onto seal.

C. Install and tighten cover retaining bolts. Torque to 60 ft-lbs.

IMPORTANT Clean areas indicated with **X**, Fig. 18, and seal with a premium 25 year silicone.

18. Superstructure:

Sl210i Series:

A. Base Unit Lifts: Install roll-on/wheel alignment runway per instructions from superstructure manufacturer.

B. Swing Arm Superstructures: **Note arm locations, Fig. 19.**

1. Install yokes to plungers with 7/8"-10NC x 3-1/2" HHCS and lock washer. Torque to 150 ft-lbs, Fig. 20.

2. Grease swivel arm pins and arm holes with Lithium grease.

3. Install (4) arm assemblies using the arm pins and snap rings.

Note arm locations, Fig. 19.

C. Fixed Pad Assemblies:

1. Install pads on lift using 7/8”-10NC x 3-1/2” HHCS and 3/4” external tooth lockwasher and torque to 150 ft.-lbs, Fig.21.

SL212i series:

A. Base Unit Lifts: Install roll-on/wheel alignment runway per instructions from superstructure manufacturer.

B. Swing Arm Superstructures:

1. Install yokes to plungers with 7/8"-9NC x 3-1/2" HHCS and lock washer. Torque to 150 ft-lbs., Fig. 22.

2. Grease swivel arm pins and arm holes with Lithium grease.

3. Install (4) arm assemblies using the arm pins and cotter pins, Fig. 23.

19. Final Touches:

A. Lag wheel spotting dish to floor using two 3/8” anchors provided. Verify model number of lift being installed and refer to Fig. 1 for respective dimensions.

B. Raise lift and clean sand and dirt from plunger and lift area.

C. Mount multiple power source label on or next to the power unit.

D. Double check to make sure the guide barrel and center cover are sealed per Step 17.

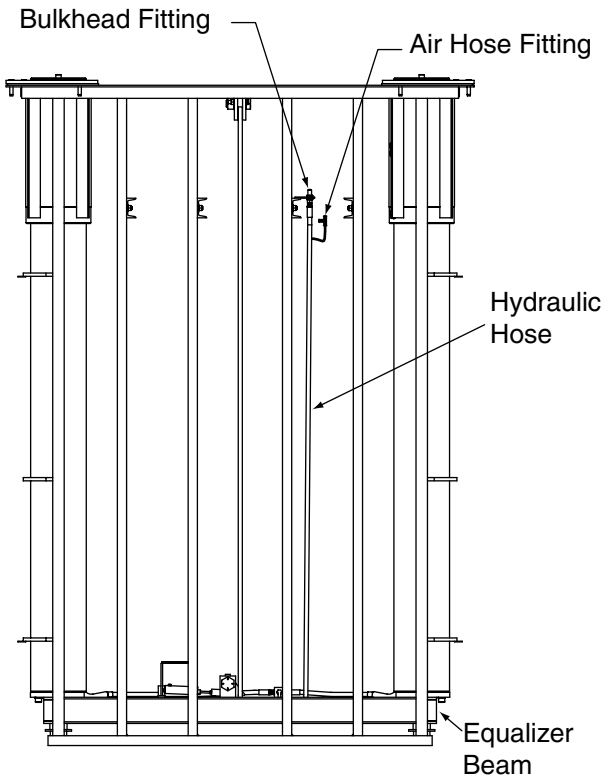


Fig. 17

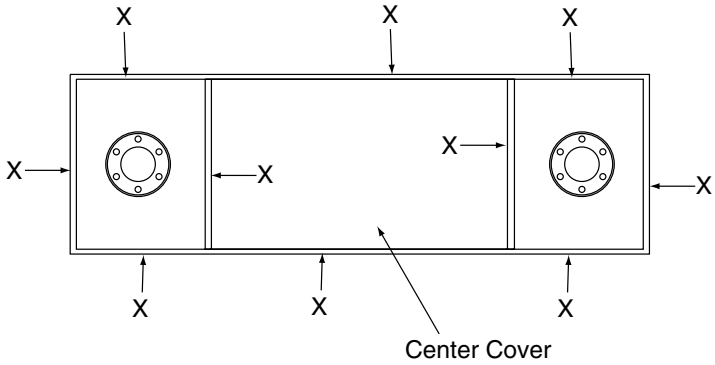


Fig. 18

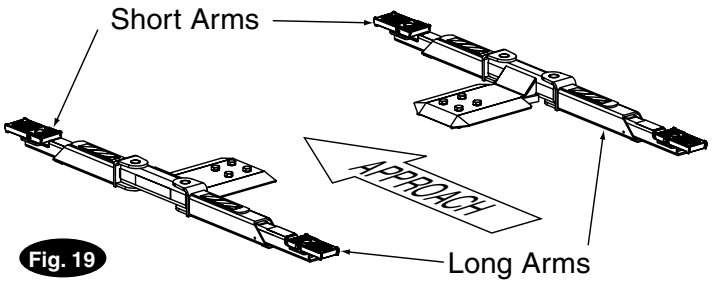
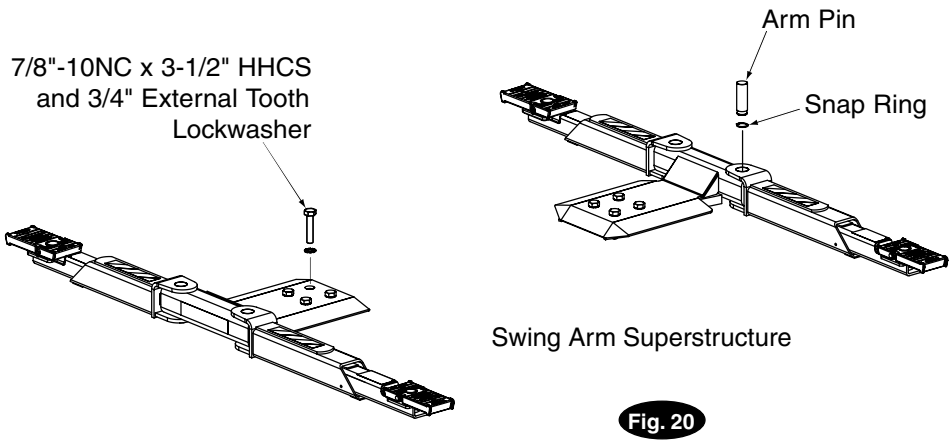


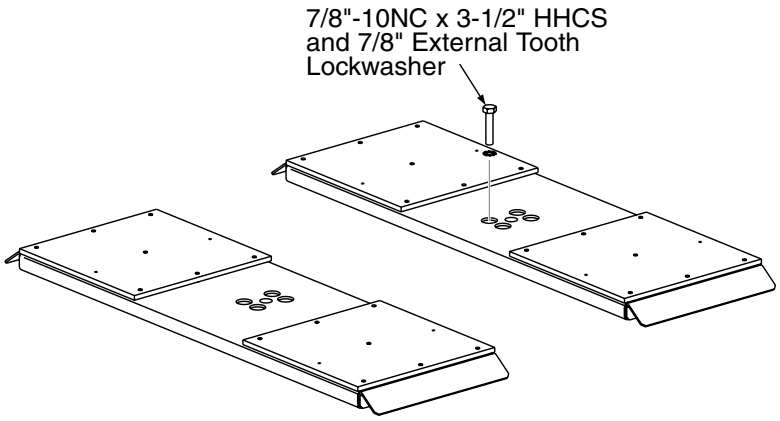
Fig. 19

Please note locations of long and short arms in relation to approach. N/A for lifts with (4) short arms.



Swing Arm Superstructure

Fig. 20



Fixed Pad Superstructure

Fig. 21

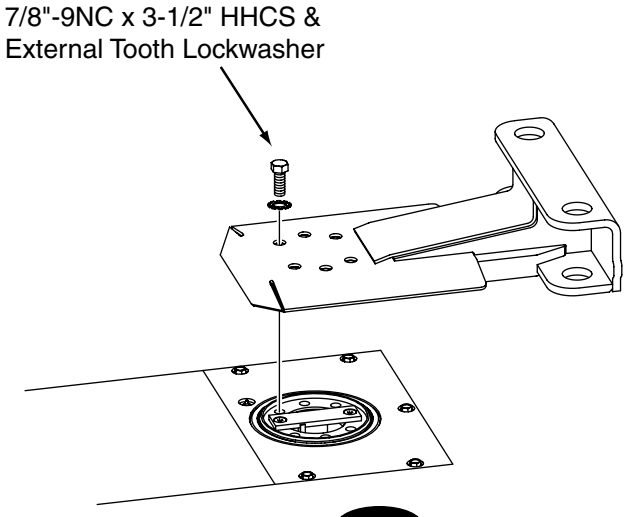


Fig. 22

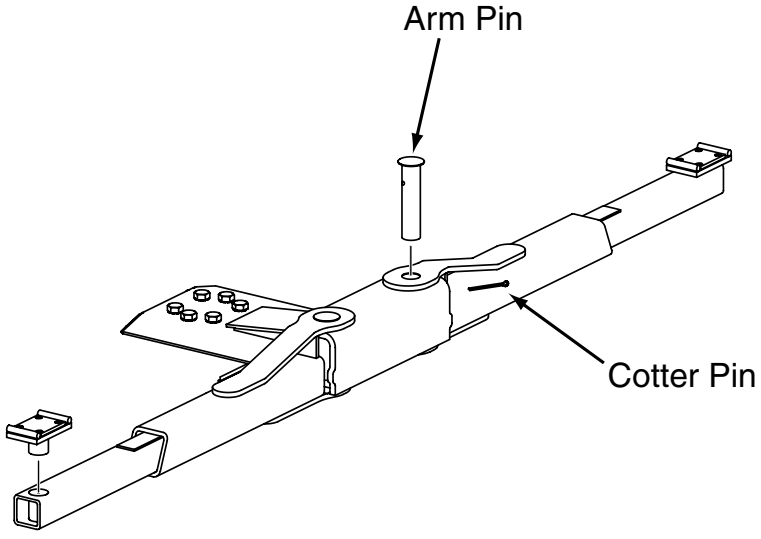


Fig. 23

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
03-09-06	-	New 700 Series.

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