



INSTRUCTION MANUAL

D9-2 - D9-2X



LOW CEILING 2-POST LIFTS - FLOOR PLATE SURFACE MOUNTED

SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased by proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.

Date Installed _____

Serial # _____

Forward this manual to all operators

Models: D9-2 and D9-2X Low Ceiling 2-Post Surface Mounted Lifts

This instruction manual has been prepared especially for you. Your new lift is the product of continuous research, testing and development and is the most technically advanced lift on the market today.

READ THIS ENTIRE MANUAL BEFORE OPERATION BEGINS.

RECORD HERE THE FOLLOWING INFORMATION
WHICH IS LOCATED ON THE SERIAL NUMBER DATA PLATE

Serial No. _____

Model No. _____

Manufacturing date _____

WARRANTY

Your new lift is warranted for two years on equipment structure; one year on all operating components to the original purchaser, to be free of defects in material and workmanship. The manufacturer shall repair or replace at their option for this period those parts that have been pre-authorized and returned to the factory freight prepaid which prove upon inspection to be defective. This warranty does not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, or lack of required maintenance.

This warranty is exclusive and in lieu of all other warranties expressed or implied. In no event shall the manufacturer be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty. The manufacturer reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously. Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims.

D9-2 and D9-2X PARTS INVENTORY

Located in Parts Box

<i>Check</i>	<i>Qty.</i>	<i>Description</i>	<i>Where Used</i>
<input type="checkbox"/>	4	Lift Pads	Lift Pads For Arms
<input type="checkbox"/>	4	3" Lift Pad Adapters	Lift Pad Extensions
<input type="checkbox"/>	4	6" Lift Pad Adapters	Lift Pad Extensions
<input type="checkbox"/>	4	Arm Pins	Arm Pins
<input type="checkbox"/>	2	Cables	Equalizer Cables
<input type="checkbox"/>	10	3/4" x 4-3/4" Anchor Bolts	Concrete Anchors
<input type="checkbox"/>	1	Lot Shims	To Shim / Level Lift
<input type="checkbox"/>	2	Short Hose	Power Unit Hose
<input type="checkbox"/>	1	Long Hose	Cylinder Hose
<input type="checkbox"/>	4	M10 x 40mm Hex Bolts	To Secure Top Beam
<input type="checkbox"/>	4	M10 Lock washers	To Secure Top Beam
<input type="checkbox"/>	4	M16 Nylon Locknuts	Equalizer Cable Adjusting Nuts
<input type="checkbox"/>	4	M8 x 25mm Hex Bolts	For Mounting Power Unit
<input type="checkbox"/>	4	M8 Hex Nuts	For Mounting Power Unit
<input type="checkbox"/>	1	90° O-Ring Fitting	Hydraulic Fitting For Power Unit
<input type="checkbox"/>	2	90° Fitting For Cylinder	Hydraulic Fitting For Offside Cylinder
<input type="checkbox"/>	1	Hydraulic Tee Fitting	Hydraulic Fitting to connect cylinder hose's to power unit hose
<input type="checkbox"/>	1	Can Spray Paint	Touch Up Paint
<input type="checkbox"/>	1	Instruction Manual	Instruction Manual
<input type="checkbox"/>	1	ALI Safety Instructions	Safety Instructions

Shipment Parts

<i>Qty.</i>	<i>Description</i>	<i>Where Used</i>	<i>Check</i>
<input type="checkbox"/>	1 Power Unit	Electric / Hydraulic Power Source	
<input type="checkbox"/>	1 Power-side Column with Mount Plate	Power-side Column	
<input type="checkbox"/>	1 Offside Column - No Mount Plate	Offside Column	
<input type="checkbox"/>	4 Lift Arms	Lift Arms	

**BE SURE TO TAKE A COMPLETE INVENTORY OF PARTS BEFORE
STARTING INSTALLATION**

INTRODUCTION

1. Carefully remove the crating and packing materials. **CAUTION!** Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury.
2. Inspect the lift for any signs of concealed shipment damage or shortages. Remember to report any shipping damage to the carrier and make a notation on the delivery receipt.
3. Check the voltage, phase and proper amperage requirements for the motor shown on the motor plate. Wiring should be performed by a certified electrician only.

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely!

1. Read and understand all safety warning procedures before operating lift.
2. Keep hands and feet clear. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
3. Keep work area clean. Cluttered work areas invite injuries.
4. Consider work area environment. Do not expose equipment to rain. Do not use in damp or wet locations. Keep area well lighted.
5. Only trained operators should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift. !
6. Use lift correctly. Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
7. Do not override self-closing lift controls.
8. Remain clear of lift when raising or lowering vehicle.
9. Clear area if vehicle is on danger of falling.
10. Always insure that the safeties are engaged before any attempt is made to work on or near vehicle.
11. Dress properly. Non-skid steel -toe footwear is recommended when operating lift.
12. Guard against electric shock. This lift must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.
13. **Danger!** The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.
14. **Warning!** Risk of explosion. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.
15. Maintain with care. Keep lift clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.
16. Stay alert. Watch what you are doing. Use common sense. Be aware.
17. Check for damaged parts. Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
18. Never remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.

TOOLS REQUIRED

- Rotary Hammer Drill Or Similar
- 3/4" Masonry Bit
- Hammer
- 4 Foot Level
- Open-End Wrench Set: 11mm - 29mm
- Socket And Ratchet Set: 11mm - 29mm
- Hex-Key / Allen Wrench Set
- Medium Crescent Wrench
- Medium Pipe Wrench
- Crow Bar For Shim Installation
- Chalk Line
- Medium Flat Screwdriver
- Tape Measure: 25 Foot Minimum
- Needle Nose Pliers

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

STEP ONE (Selecting Site)

Before installing your new lift, check the following.

1. LIFT LOCATION:

Always use architects plans when available. Check layout dimension against floorplan requirements making sure that adequate space is available.

2. OVERHEAD OBSTRUCTIONS:

The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.

3. DEFECTIVE CONCRETE:

Visually inspect the site where the lift is to be installed and check for cracked or defective concrete.



STEP TWO (Floor Requirements)

Specifications of concrete must be adhered to. Failure to do so could cause lift failure resulting in personal injury or death.

A level floor is suggested for proper installation. Small differences in floor slopes may be compensated for by proper shimming. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab.

DO NOT install this lift

1. on any asphalt surface or any surface other than concrete.
2. on expansion seams or on cracked or defective concrete.
3. on a second / elevated floor without first consulting building architect.
4. outdoors unless special consideration has been made to protect the power unit from inclement weather conditions.

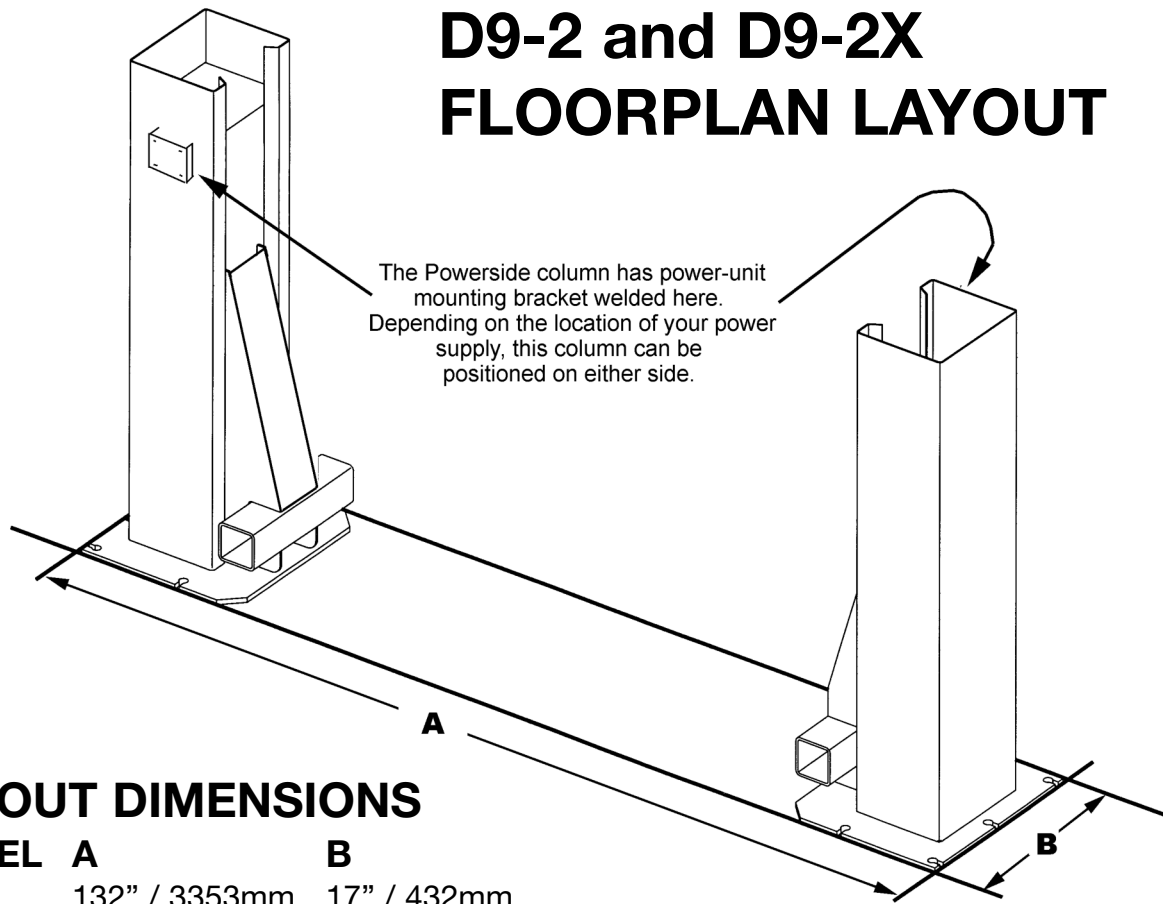
CONCRETE SPECIFICATIONS

LIFT MODEL CONCRETE REQUIREMENT
9,000 Lb. 4" Min. Thickness / 3000 PSI

NOTE

All models **MUST** be installed on 3000 PSI concrete **ONLY** conforming to the minimum requirements shown above. New concrete must be adequately cured by at least 28 days minimum.

D9-2 and D9-2X FLOORPLAN LAYOUT



LAYOUT DIMENSIONS

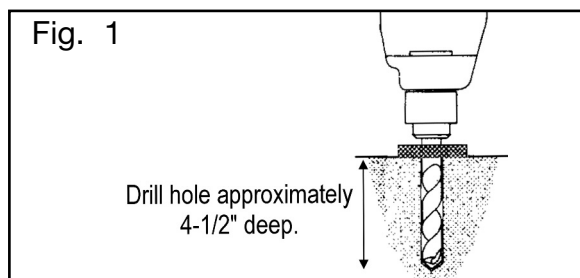
MODEL	A	B
D9-2	132" / 3353mm	17" / 432mm
D9-2X	145" / 3683mm	17" / 432mm

STEP THREE (Site Layout)

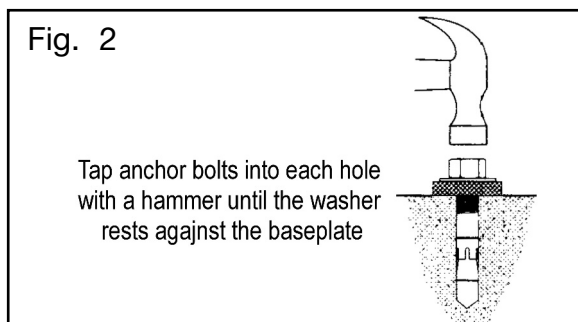
1. Determine which side will be the approach side.
2. Now determine which side you prefer the power unit to be located on. The POWER-SIDE column has the power-unit mounting bracket attached to the side. (See diagram above for power unit location.)
3. Once a location is determined, use a carpenter's chalk line to layout a grid for the post locations. Keep all dimensions and squareness within 1/8" or malfunctioning of the lift will occur.
4. After the post locations are properly marked, use a chalk or crayon to make an outline of the posts on the floor at each location using the post base plates as a template.
5. Double check all dimensions and make sure that the layout is perfectly square.
6. Before continuing with the installation it is helpful to stand the posts up at their respective locations and get a visual of the shop, aisles and other clearances. Also, this is a good time to drive a vehicle into position and check for adequate clearance.

STEP FOUR (Install POWERSIDE Column)

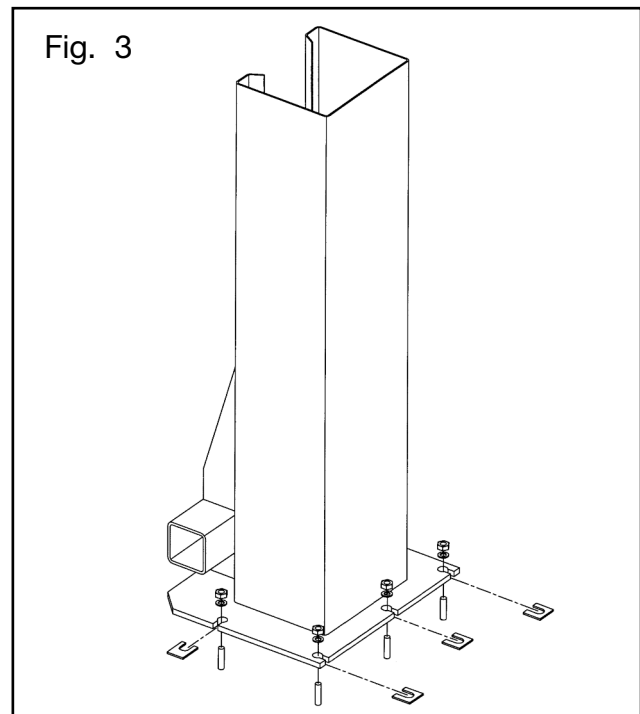
1. Before proceeding, double check measurements and make certain that the bases of each column are square and aligned with the chalk line.
2. Using the base plate on the POWERSIDE column as a guide, drill each anchor hole in the concrete approximately (4-1/2" deep / 9K models & 6-1/2" deep / 12K models) using a rotary hammer drill and 3/4" concrete drill. To assure full holding power, do not ream the hole or allow drill to wobble. (See Fig. 1)



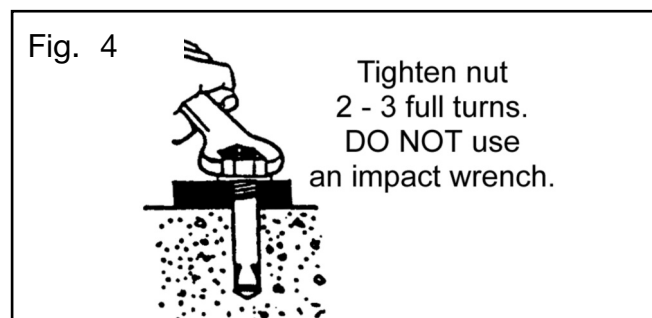
3. After drilling, remove dust thoroughly from each hole using compressed air and/or wire brush. Make certain that the column remains aligned with the chalk line during this process.
4. Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure that if shimming is required that enough threads are left exposed. (See Fig. 2)



5. If shimming is required, insert the shims as necessary under the base plate so that when the anchor bolts are tightened, the columns will be plumb. (See Fig. 3)



6. With the shims and anchor bolts in place, tighten by securing the nut to the base then turning 2 -3 full turns clockwise. DO NOT use an impact wrench for this procedure. (See Fig. 4)



STEP FIVE (Mounting OFFSIDE column.)

1. Position the OFFSIDE column at the designated chalk locations and secure to the floor following the same procedures as outlined in STEP FOUR.

STEP SIX

(Mount TOP PULLEY Assembly)

1. Using a lifting devise, raise the OVERHEAD beam in position on top of the columns. Bolt to the columns using the M10 x 40mm Hex Bolts, Nuts and Washers. (See Fig. 6)

STEP SEVEN (Mount The POWER UNIT)

1. Attach the power unit to the POWERSIDE COLUMN using four M8 x 25mm hex bolts and nylock nuts supplied. Fill the reservoir with 10 weight. HYDRAULIC OIL OR DEXTRON TYPE III ATF. Make sure the funnel used to fill the power unit is clean. (See Fig. 7)

STEP EIGHT

(Route The EQUALIZER CABLES)

1. Raise and lock each carriage approximately 28" above the ground. (See Fig. 8)
2. Make sure that the safety locks on each column are fully engaged before attempting to route equalizer cables. Carriages must be equal height from the floor before proceeding.
3. With the carriages in equal position from the floor, route the equalizer cables as shown below. (See Fig. 9)
4. After the equalizer cables have been routed, adjust each cable so that they are equal tension.

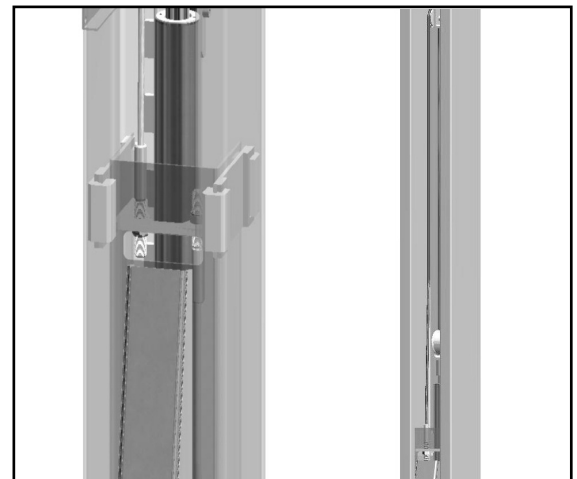
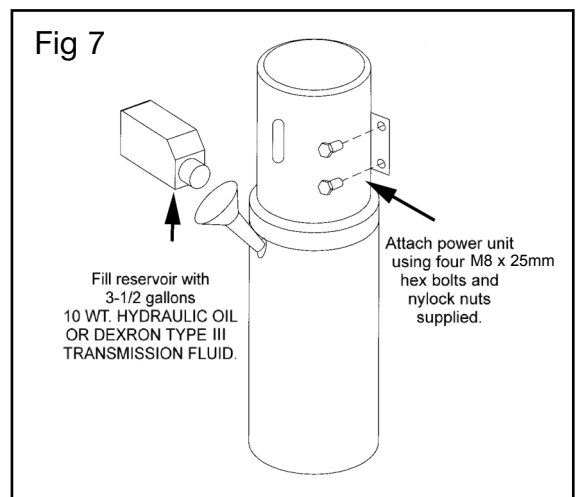
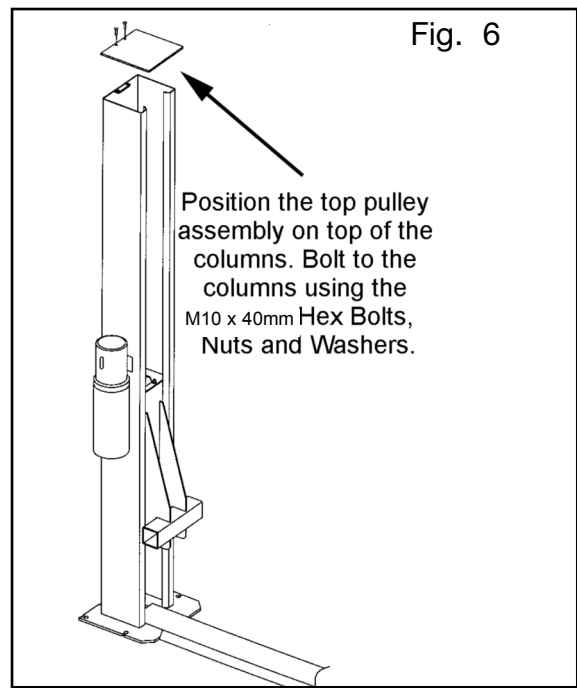


Fig 8

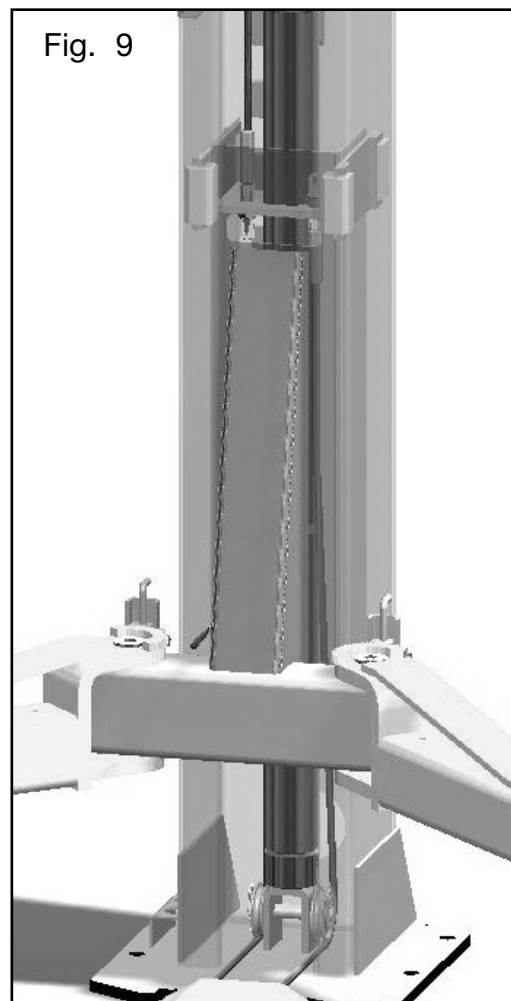
STEP NINE

(Installing The Hydraulic Lines.)

1: Connect the straight side of the long hose to the Power Unit Pressure Port with a red plastic plug. Route the opposite side of the hose (90 degree side) through the cylinder access hole in the back of the post, under the cylinder cradle and out to the middle of the Cover Plate.

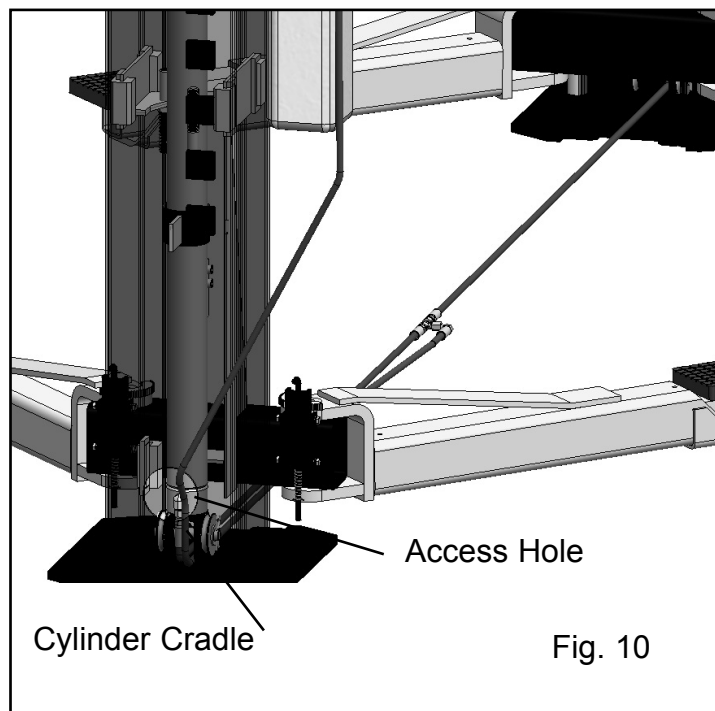
2: Route the 2 short hoses from the center of the Cover plate to each cylinder and connect them to the cylinder using the 90 degree fittings provided. See Figure 10.

3: Connect all three hoses to the Branch "T" provided under the middle of the cover plate and be sure the hoses are routed in the middle of the cable path and tie off as needed to avoid any contact between the hose and cable.



STEP TEN (Power Unit Installation.)

1. The standard power unit for your lift is 220 volt, 60HZ, single phase. All wiring must be performed by a certified electrician only. SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS





IMPORTANT INSTALLATION NOTES

- **DO NOT** run power unit with no oil. Damage to pump can occur.
- The power unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid etc. , is not covered under warranty.
- Improper electrical hook-up can damage motor and will not be covered under warranty
- Motor can not run on 50HZ without a physical change in motor.
- Use a separate breaker for each power unit.
- Protect each circuit with time delay fuse or circuit breaker.
 - For 208-230 volt, single phase, use a 25 amp fuse.
 - For 208-230 volt, three phase, use a 20 amp fuse.
 - For 380-440 volt, three phase, use a 15 amp fuse.



RISK OF EXPLOSION!!

This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. Motor should not be located in a recessed area or below floor level.

IMPORTANT NOTES:

The equalizer cables should be checked weekly for equal tension. Failure to do this will cause uneven lifting. The cables should always be adjusted so that they are equal tension when resting on safety locks.

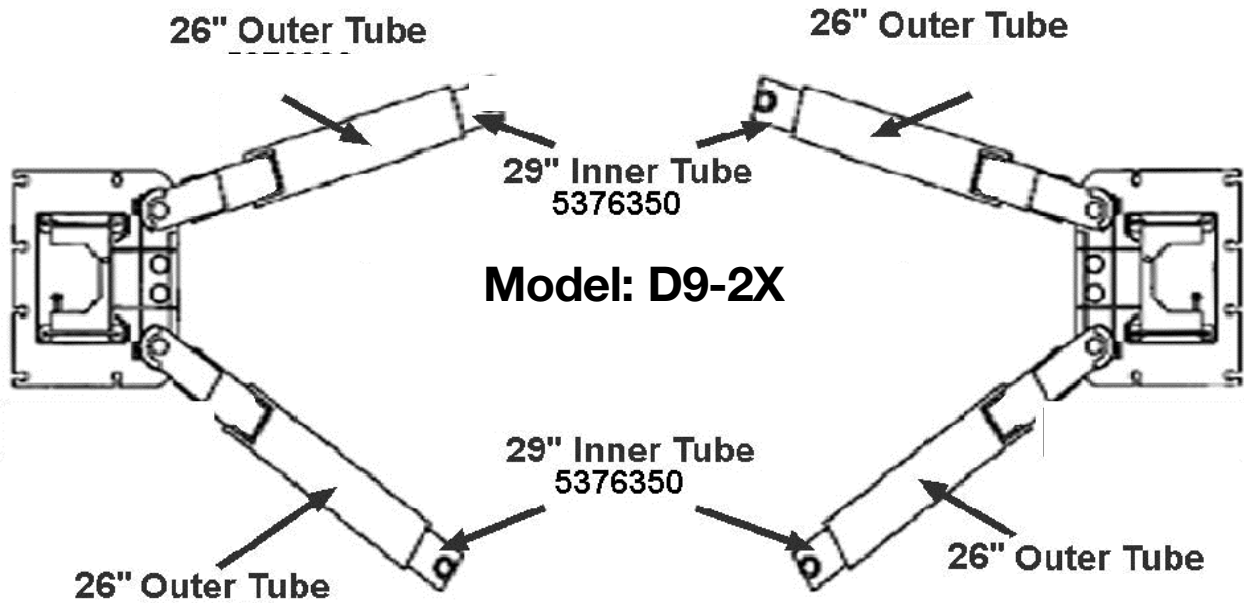
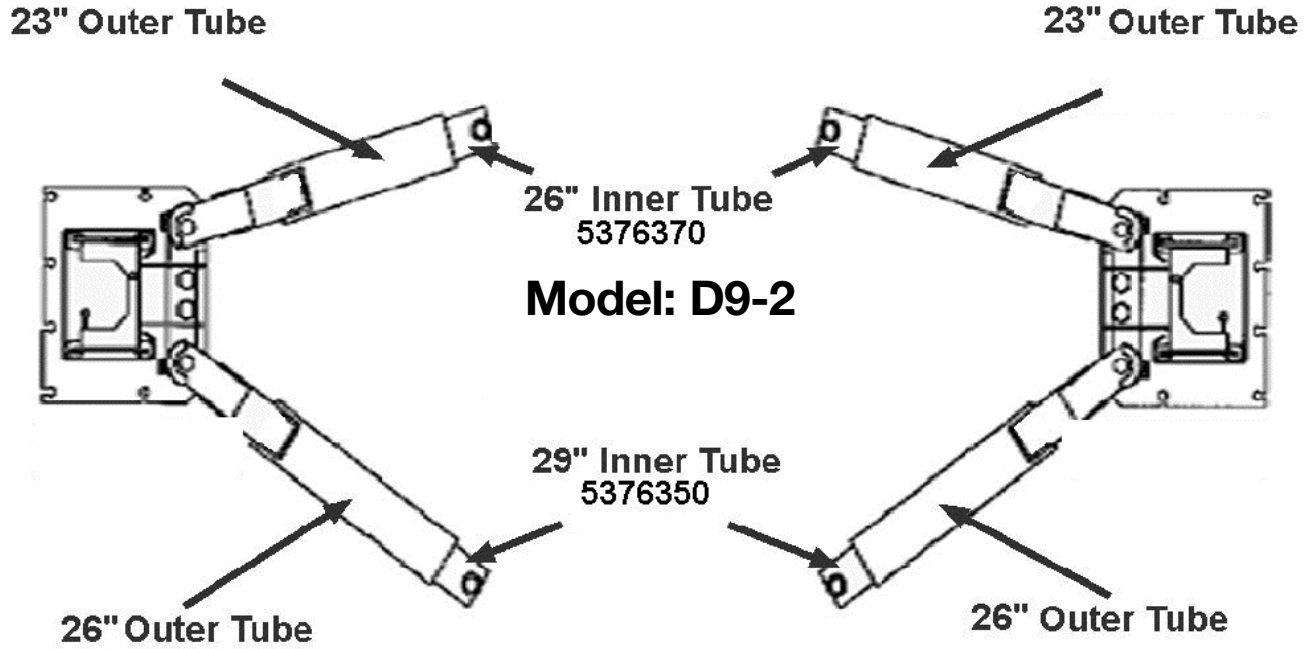
When installing hydraulic fittings and hoses it is not necessary to use Teflon tape or other sealant. Teflon tape and other sealing compounds can contaminate the system and cause malfunctioning of lift.



STEP ELEVEN

(Installation Of Swing Arms.)

1. Install swing arms as described below. Grease the carriage tube and all pivot pins prior to installation.

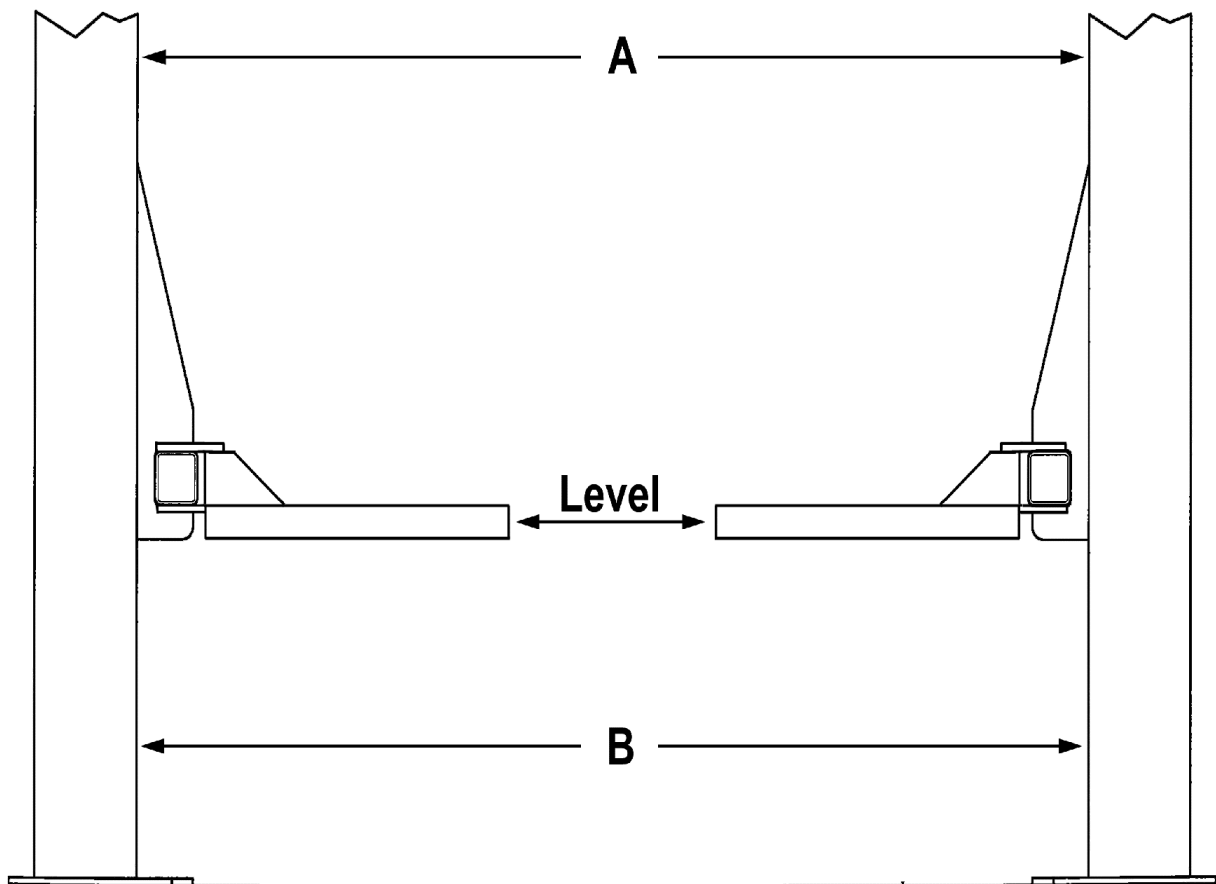


 **WARNING****IMPORTANT LEVELING INSTRUCTIONS**

Before operating your lift, check to make sure that both "A" and "B" measurements are **EQUAL**.

The swing arms must be level before operation.

If your swing arms are not level shim the columns as required.



TO RAISE LIFT

- ✓ Read Operating and Safety manuals before using lift.
- ✓ Always lift a vehicle according to the manufacturers recommended lifting points.
- ✓ Position vehicle between columns.
- ✓ Adjust swing arms so that the vehicle is positioned with the center of gravity midway between pads.
- ✓ Use truck adapters as needed. Never exceed 9" of pad height.
- ✓ Raise lift by depressing button until supports contact underside of the vehicle. Recheck to make sure vehicle is secure.
- ✓ Raise vehicle to desired working height. Lower vehicle into nearest safety.
- ✓ Always ensure safeties are engaged before any attempt is made to work on or near vehicle.

TO LOWER THE LIFT

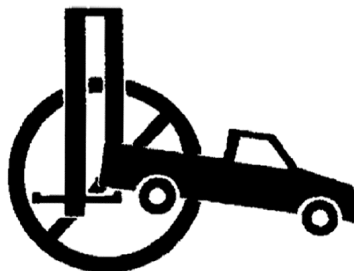
- ✓ First, raise the lift to clear the clear safeties.
- ✓ Raise safeties by pulling handles on each column.
- ✓ Be sure tool trays, stands or personnel are removed from under vehicle.
- ✓ Lower vehicle by activating lowering handle.
- ✓ Before removing vehicle from lift area, position lift arms and supports to provide an unobstructed exit.
- ✓ **NEVER**, drive over lift arms.

REQUIRED MONTHLY MAINTENANCE

- ✓ Check arm restraints for proper operation.
- ✓ Check all chain/cable connections, bolts and pins to insure proper mounting.
- ✓ Visually inspect safeties for proper operation.
- ✓ Lubricate columns with grease.
- ✓ Inspect all anchor bolts and retighten if necessary.
- ✓ Check columns for squareness and plumb.
- ✓ Inspect all arm pivot pins making sure they are properly secured.
- ✓ Check equalizer cable tension, adjust if necessary.
- ✓ Inspect all lift pads, replace if necessary.
- ✓ If lift is equipped with overhead cut-off switch, check for proper operation.

WARNING

1. **WARNING:** If cement anchor bolts are loose, or any component of the lift is found to be defective, **DO NOT USE LIFT!**
2. Never operate the lift with any person or equipment below.
3. Never exceed rated capacity.
4. Always insure safeties are engaged before any attempt is made to work on or near vehicle.
5. Never leave lift in an elevated position unless the safeties are engaged.
6. Do not permit electric motor to get wet! Motor damage caused by dampness is not covered under warranty.



NEVER LIFT ANY VEHICLE IN ANY MANNER WITH LESS THAN FOUR (4) ARMS. RATED CAPACITY OF EACH LIFT ARM IS NO GREATER THAN ONE FOURTH (1/4) OF THE OVERALL LIFTING CAPACITY.



Clear area if vehicle is in danger of falling.



Position vehicle with center of gravity midway between adapters.

CAUTION



Lift to be used by trained operator only.

CAUTION



Authorized personnel only in lift area.

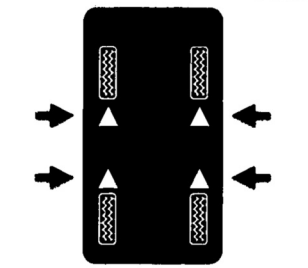


Remain clear of lift when raising or lowering vehicle.



Avoid excessive rocking of vehicle while on lift.

CAUTION



Use vehicle manufacturer's lift points.

CAUTION



Always use safety stands when removing or installing heavy components.

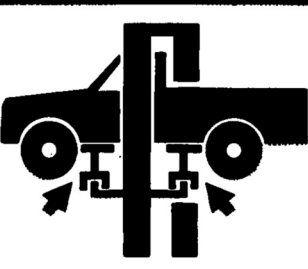


Do not override self-closing lift controls.



Keep feet clear of lift while lowering.

CAUTION



Use height extenders when necessary to ensure good contact.

CAUTION



Auxiliary adapters may reduce load capacity.

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.

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