



ACAUTION

The safe operating temperature range for this product is 41° F. - 104 °F.

PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

REV A 06-13-08

INSTALLATION AND OPERATION MANUAL

6000 POUND CAPACITY LOW RISE PIT LIFT

Models:

P-6

P-6F





machine at all times. Make sure that ALL USERS read this manual.

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.



1645 Lemonwood Dr. Santa Paula, CA. 93060, USA Toll Free 1-800-253-2363 Tel: 1-805-933-9970

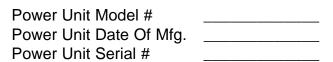
Fax: 1-805-933-9160 www.bendpak.com

6,000 POUND CAPACITY LOW RISE PIT LIFT

This instruction manual has been prepared especially for you. Your new lift is the product of over 35 years of continuous research, testing and development; it is the most technically advanced lift on the market today.

READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.

RECORD HERE THE LIFT AND
POWER UNIT INFORMATION WHICH IS LOCATED ON
THE SERIAL NUMBER
DATA PLATES ON THE LIFT AND
ON THE POWER UNIT





This information is required when calling for parts or warranty issues.

PRODUCT WARRANTY

BendPak Low Rise Lifts are covered under warranty for one years on equipment structure, to be free of defects in material and workmanship. Power units, hydraulic cylinders, and all other assembly components such as turnplates, slip plates, cables, chains, valves, switches etc. are covered under warranty for one year against defects in material or workmanship under normal use. BendPak Inc. shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. BendPak Inc. will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A BENDPAK INC. PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

WARRANTY IS NOT VALID UNLESS WARRANTY CARD IS RETURNED.

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.

DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



DANGER!

Watch for this symbol: It Means: Immediate hazards which will result in severe personal injury or death.



WARNING!

Watch for this symbol: It Means: Hazards or unsafe practices which could result in severe personal injury or death.



CAUTION!

Watch for this symbol: It Means: Hazards or unsafe practices which may result in minor personal injury or product or property damage.

OWNER'S RESPONSIBILITY

To maintain the lift and user safety, the responsibility of the owner is to read and follow these instructions:

- ♦ Follow all installation and operation instructions.
- Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the lift for correct initial function.
- ♦ Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- Allow unit operation only with all parts in place and operating safely.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized or approved replacement parts.
- ♦ Keep all instructions permanently with the unit and all decal's on the unit clean and visible.

BEFORE YOU BEGIN

Receiving:

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by your invoice. If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY THE CARRIER AT ONCE if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. If the carrier will not do so, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT. File your claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make BendPak responsible for collection of claims or replacement of lost or damaged materials.

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INSTALLER / OPERATOR PLEASE READ AND FULLY UNDERSTAND. BY PROCEEDING YOU AGREE TO THE FOLLOWING.

- ♦ I have visually inspected the site where the lift is to be installed and verified the concrete to be in good condition and free of cracks or other defects. I understand that installing a lift on cracked or defective concrete could cause lift failure resulting in personal injury or death.
- ♦ I understand that a level floor is required for proper installation and level lifting.
- ♦ I understand that I am responsible if my floor is of questionable slope and that I will be responsible for all charges related to pouring a new level concrete slab if required and any charges.
- ♦ I understand that the lifts are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).
- ♦ I will assume full responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are to be installed. Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.
- ♦ I understand that BendPak lifts are designed to be installed in indoor locations only. Failure to follow installation instructions may lead to serious personal injury or death to operator or bystander or damage to property or lift.



Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.



Please read entire manual prior to installation.

Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual. For additional copies or further information, contact:

BendPak Inc. / Ranger Products

1645 Lemonwood Dr., Santa Paula, CA. 93060 1-805-933-9970 www.bendpak.com

INSTALLER / OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps makes installation and operation safer, however, does not take the place of safe operating practices. Always wear durable work clothing during any installation and/or service activity. Shop aprons or shop coats may also be worn, however loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect technician hands when handling parts. Sturdy leather work shoes with steel toes and oil resistant soles should be used by all service personnel to help prevent injury during typical installation and operation activities. Eye protection is essential during installation and operation activities. Safety glasses with

side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing worker protection. Consideration should also be given to the use of hearing



protection if service activity is performed in an enclosed area, or if noise levels are high.



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

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. 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!

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.

- 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 in 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 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 safer 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.

TOOLS REQUIRED

- Rotary Hammer Drill Or Similar
- 3/4"; 1 1/4" Masonry Bits
- Hammer
- 4 Foot Level
- Open-End Wrench Set: 1/2"",15/16" 1-1/8"
- Socket And Ratchet Set: 1-1/8"

- Medium Crescent Wrench
- Crow Bar
- Chalk Line
- Medium Flat Screwdriver
- Tape Measure: 25 Foot Suggested

IMPORTANT NOTICE
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 1

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



- 4. **OPERATING TEMPERATURE.** Operate lift only between temperatures of 41° -104° F.
- 5. Lift is designed for **INDOOR INSTALLATION ONLY.**

STEP 2

(Floor Requirements)



This lift must be installed on a solid level concrete floor with no more than 3-degrees of slope. Failure to do so could cause personal injury or death.

A level floor is suggested for proper use and installation and level lifting. 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 or use this lift on any asphalt surface or any surface other than concrete.
- DO NOT install or use this lift on expansion seams or on cracked or defective concrete.
- DO NOT install or use this lift on a second/elevated floor without first consulting building architect.
- **DO NOT** install or use this lift outdoors.

CONCRETE SPECIFICATIONS

LIFT MODEL

CONCRETE REQUIREMENT

P-6 4" Min. Thickness

P-6F 4" Min. Thickness



DANGER!

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.



CAUTION!

This lift should be installed by qualified lift installers only who are familiar with this particular lift model and the requirements thereof. The frame on this lift MUST NOT be twisted, bent or misaligned by unlevel floors or improper anchoring. Misalignment may cause damage to the lift.



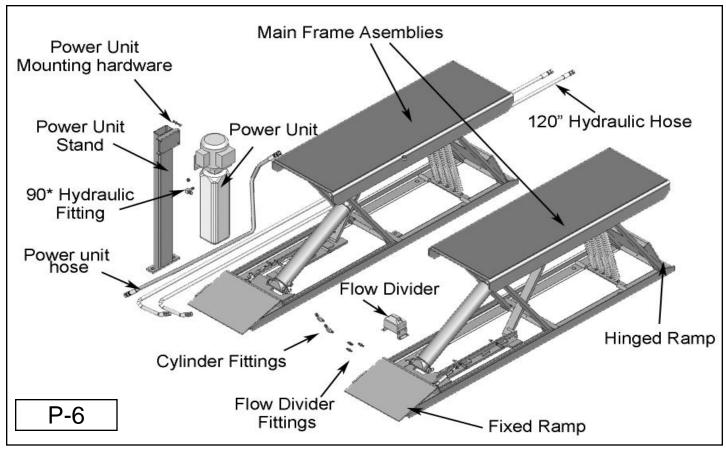
When removing the lift from shipping pallet / angles pay close attention as the lift assemblies can slide and can cause injury.

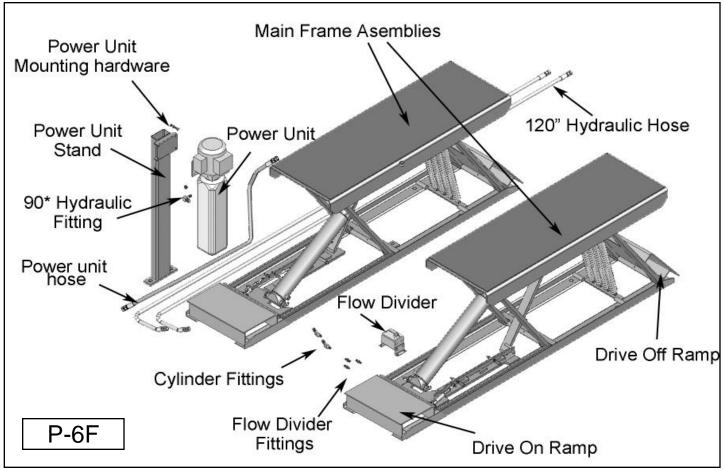
Prior to removing any strapping or shipping bolts make sure the lift is held securely by a fork lift or some other heavy lifting devise.

PACKING LIST

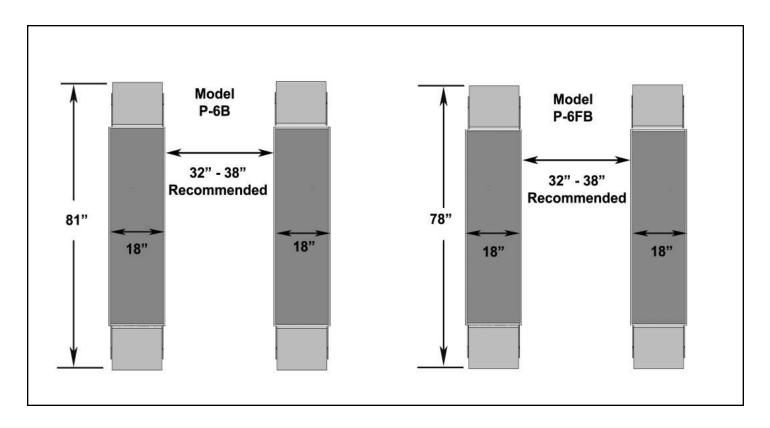
QTY	DESCRIPTION	PART#	CHECK
2	Main Frame Asemblies	5215001 LH 5215002 RH	
1	Hydraulic Power Unit	5585094	
1	Motor Stand	5600001	
4	1 1/2" Rubber Blocks	5300845	
1	1/2" JIC 90° 1/4" SAE; 6801-8-6; 90* Fitting (Power Unit)	5550497	
3	3/8" NPT - 1/2" S.A.E.; 2404-8-6; Straight Fitting; (Flow Divider)	5550132	
1	Flow Divider	5590135	
4	Hex Nut M8 x 1.25	5535356	
4	HHB M 8 x 1.25 x 20	5530304	
4	Spring Lock Washer M8	5545202	
1	Hyd. Hose Assy. 12.7mm x 3640mm; DS; P-6,P-6F	5570147	
2	Hyd. Hose Assy. 12.7mm x 3130mm; DS; P-6,P-6F	5570148	
8	3/4" x 4" WEJIT Anchor bolts	5530455	

Main Assembly Views





FLOORPLAN

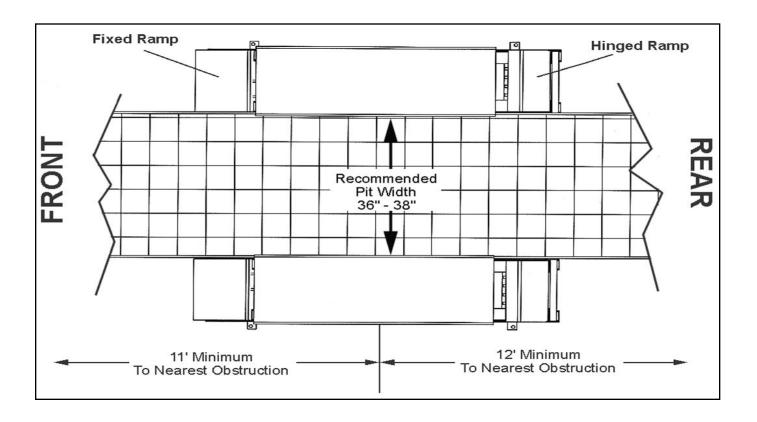


NOTE:

The maximum recommended width between pads is 38". Consult the factory for applications that require installations wider than 38".

MODEL	P-6	P-6F	
Style	Low Rise Pit Lift/ Surface Mount	Low Rise Pit Lift/ Flush Mount	
Lifting Capacity:	6000 Lbs / 2722 Kgs.	6000 Lbs / 2722 Kgs.	
Lifting Height (Less Lift Blocks)	26" / 660 mm.	26" / 660 mm.	
Lifting Height (With Lift Blocks)	29" /737 mm.	29" /737 mm.	
Overall Pad Length	53" / 1346 mm	53" / 1346 mm	
Over Width	18" / 457 mm.	18" / 457 mm.	
Overall Length	81" / 2057mm	78" / 2057mm	
Lowered Height	4" / 102mm	4" / 102mm	
Lifting Time	35 Seconds	35 Seconds	
Motor *	110-220 VAC/60HZ/ 1Ph.	110-220 VAC/60HZ/ 1Ph.	
* Special Voltage Available upon request. The design, material and specifications are subject to change without notice.			

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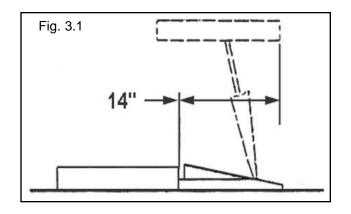
(Locating Unit)

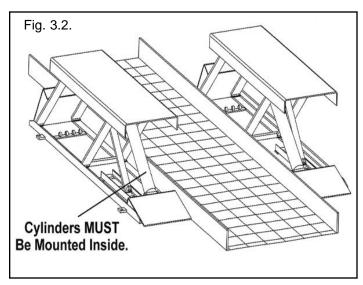
NOTE

The maximum recommended width between pads is 38". Consult the factory for applications that require installations wider than 38".

- 1. Before selecting an installation site, check for proper clearance and/or obstructions.
- 2. Remember that the lift moves rearward approximately 14" when raised. (See Fig 3.1)

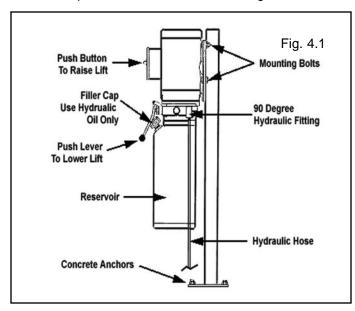
- 3. Always consult the building engineer before installing this lift to make sure the floor is capable of sustaining the load.
- 4. After selecting a site, place each unit in position making sure that the hydraulic cylinders are placed towards the inside. (See Fig 3.2)
- 5. It may be necessary to remove the tire rail adjacent to the lift pad and overhang the edge of the rail to maintain the 36"- 38" recommended width between pads.
- 6. Each lift pad can overhang the edge of the pit a maximum of two inches on each side as long as the inside anchor bolt can be installed properly.





(Locating Power Unit)

- 1. Select a site for the power unit so that operators have a full unobstructed view of the lift.
- 2. It is recommended that the hydraulic hose and air safety line for the lift be routed through the floor at the base of the power unit, so check for routing clearances.





WARNING!

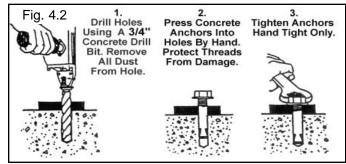
Risk of explosion. DO NOT install the power unit inside or near a paint booth. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors.



CAUTION!

Check with building plans prior to drilling any holes in floor.

- 3. Using the motor stand as a template, mark the locations of the two anchor bolt holes.
- 4. Drill two holes 3/4" x 4" deep in concrete floor.
- Remove all dust from hole.
- 6. Install anchors as shown below.. (See Fig. 4.2)

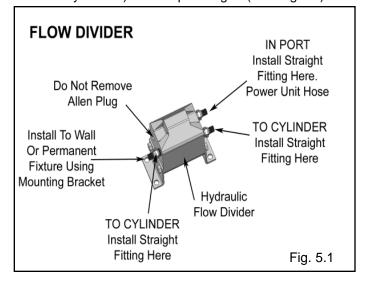


- 7. Secure stand to floor using two 3/4" anchor bolts supplied.
- 8. Attach power unit to stand using four 5/16" hex bolts and nylok nuts supplied. NOTE: Motor must be at least 18" above floor.
- 9. Install the air saftey valve "Z "bracket on the upper left mounting hole of the power unit bracket.

STEP 5

(Flow Divider / Hydraulic Hose Installation)

1. Secure the hydraulic flow divider to a permanent wall or fixture (usually below grade) in an area that will allow the power hoses (the two hoses that are installed at the lift cylinders) to be equal length. (See Fig 5.1)





CAUTION!

Power Hose more than 12" different in length may result in unequal lifting of the system.

It may be necessary to add hose extensions to accommodate installation. If so, keep the power hoses as close to equal length as possible to provide equal pressure and lifting.

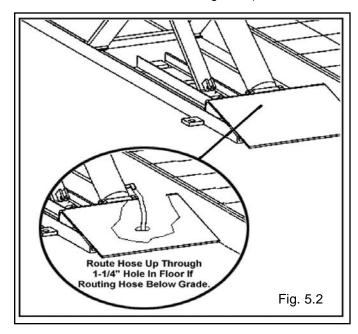
- 2. Install the 90 degree hydraulic fitting in the pressure port of the power unit. The pressure port is covered with a plastic plug.
- 3. After the fitting is installed correctly, connect the 140" hydraulic hose making sure to not over-tighten.



CAUTION!

Check with building plans prior to drilling any holes in floor.

(For below grade hose installations a 1-1/4" hole should be drilled through the floor at the base of the power unit so the hose can be routed below grade.)



- 4. Connect the other end of the power unit hose to the fitting marked "IN" on the flow divider. (See Fig 5.1)
- 5. Connect the two remaining equal length hoses to the flow divider. (See Fig 5.1)

3/8" I.D. tubing may be used rather than the hose provided as long as it is rated for 3,000 PSI operating pressure with a 12,000 PSI burst.

STEP 6

(Power Unit Installation)



WARNING!

Risk of explosion. DO NOT install the power unit inside or near a paint booth. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors.

WARNING!

Motor should NOT be located in a recessed area or below floor level. NEVER expose motor to rain or other damp environments. DAMAGE TO MOTOR CAUSED BY WATER IS NOT COVERED UNDER WARRANTY.

1. Have a certified electrician run the power supply to motor. Refer to the data plate found on the motor for proper power supply and wire size.

NOTE:

The standard power unit can be run on either 110V or 220V. It is already wired for 110V and equipped with a 3-wire power cord with grounding plug. For optional 220V hook up, follow the wiring instructions as shown on the motor data plate. See electrical data below.

Line Voltage	Running Amps	Circuit Breaker
110/115 V	11.6	25A
208V	6.4	30A
230V	5.8	30A

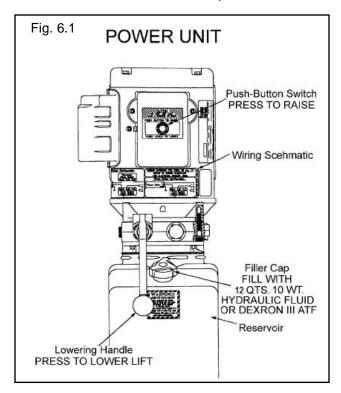


IMPORTANT!

Always use a separate circuit for each lift.

Be sure to use proper circuit breakers or time delay fuses to protect circuit.

2. Fill the reservoir with 10 WT. HYDRAULIC OIL OR DEXRON TYPE III ATF, approximately four gallons. Make sure the funnel used to fill the power unit is clean.



3. 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.

DANGER! ALL WIRING MUST BE PERFORMED BY A LICENSED ELECTRICIAN.





DANGER!

DO NOT PERFORM ANY MAINTENENCE OR INSTALLATION OF ANY COMPONENTS WITH OUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENENCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.



WARNING!

- ◆ 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.
 - ◆ Operate lift only between temperatures of 41 °- 104° F.
 - ◆ 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.

(Routing Air Lines)

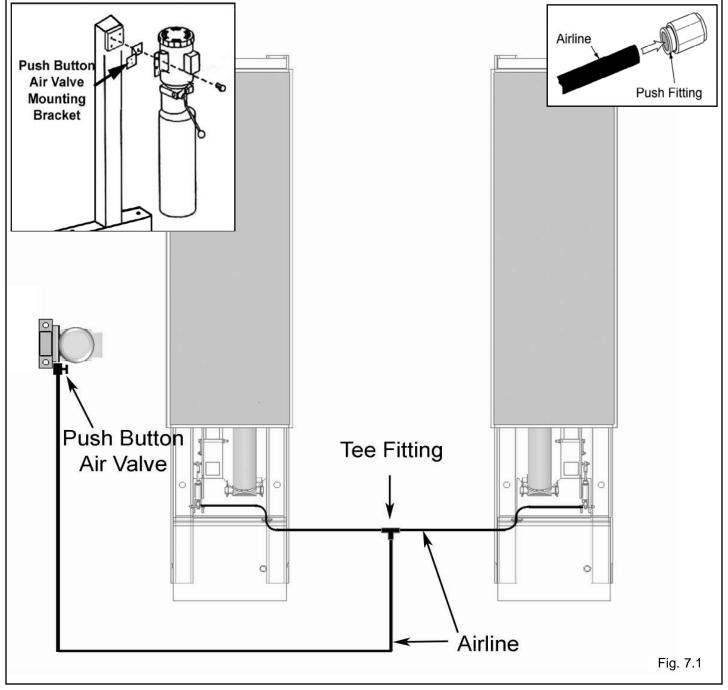
Connect the Air Safety Cylinders to the Air Safety Valve using the Tee Fitting and the Airline.

Route the air line as shown below making sure to position the push button air valve with the INLET facing towards the AIR SOURCE and the OUTLET facing towards the lift.

A filter/regulator/lubricator must be installed on air supply at lift. Failure to do so will void the warranty. Cut the provided 1/4" air line tubing with a sharp blade to lengths as required. Tubing must be cut square with no burrs.

Note: To assemble air line tubing into fitting, use firm, manual pressure to push tubing into the fitting until it bottoms out. To remove air line tubing from the fitting, hold push sleeve in (against fitting) and, at the same time, pull out on tubing. Pay careful attention to keep air line clear of any pinch points. Improper assembly may result in safety lock failure.

AIR PRESSURE SHOULD BE REGULATED TO 125 PSI MAX. (See Fig. 7.1)



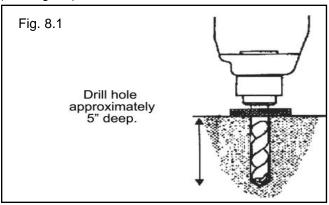
(Anchoring the Lift Assemblies)



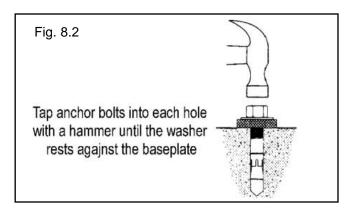
NOTE:

For "pre-fab" or steel grate floors, check with the building engineer for mounting suggestions. It may be necessary to install all-thread rods through floor and secure above and below.

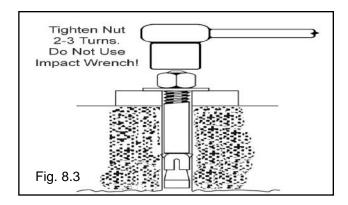
- 1. Before anchoring lift to the floor, make sure the location is satisfactory.
- 2. Using a 3/4" concrete bit, drill three holes on each pad 5" deep using the holes in the frame as a guide. NOTE: The lift must be elevated prior to drilling holes. (See Fig 8.1)



3. Remove all excess dust from holes, then install the anchor bolts. (See Fig 8.2)



4. Tighten the anchor bolts 2-3 turn using an open end wrench or manual ratchet only. DO NOT use an impact wrench to tighten concrete anchors. (See Fig 8.3)



STEP 9

(Bleeding)

- 1. Lift must be fully lowered before changing or adding fluid.
- 2. Raise and lower lift six times. The cylinders are self-bleeding. After bleeding system, fluid level in power unit reservoir may be down. Add more fluid if necessary to raise lift to full height. It is only necessary to add fluid to Raise lift to full height.
- 3. It may be neccessary to to disconnect hoses at the cylinders and run the power unit to completelty bleed the system of air. Consult a trained professional if you are not familiar with this type of bleeding procedure.
- 4. To pressure test, run lift to full rise and run motor for approximately 3-seconds after lift stops. This will place pressure on the hydraulic system. Stop and check all fittings and hose connections. Tighten or reseal if required.
- 5. Raise lift only HALF WAY then lower completely at least one dozen times. NOTE: during the initial testing, the lift will descend slowly. This is normal,. It helps to add a payload, no greater than 500 pounds to help speed up the decent during this process.
- 5. Check all hoses for leaks. Tighten if necessary.

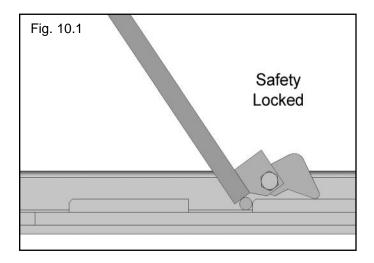
(Lift Start Up / Final Adjustments)

- 1. Make sure the power unit reservoir is full with 12 quarts of 10-WT hydraulic oil or Dexron-III automatic transmission fluid.
- 2. Test the power unit by pressing the push-button switch. If the motor sounds like it is operating properly, raise the lift and check all hose connections for leaks. If the motor gets hot or sounds peculiar, stop and check all electrical connections.
- 3. RAISE LIFT UNTIL THE CYLINDER BOTTOMS OUT AND THE LIFT STOPS.



VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.

Suspension components us on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is LOWERED onto the safety locks, Refer to installation /operation manual for proper safety lock procedures and /or further instruction.



4. Check all MAIN SAFETY LOCKS to make sure they move freely and fall back to the lock position when released. Lubricate all SAFETY PIVOT points with WD-40 or equal.

KEEP HANDS AND FEET CLEAR. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

5. Run the lift up and down a few times to insure that the locks are engaging uniformly and that the safety release mechanisms are functioning.

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POST-INSTALLATION CHECK-OFF

- Main Lift Assemblies Properly Shimmed And Stable
- ♦ Anchor Bolts Tightened
- ♦ Electric Power Supply Confirmed
- ♦ Safety Locks Functioning Properly
- ♦ Check For Hydraulic Leaks
- Oil Level
- Lubrication of Critical Components
- ♦ Check For Overhead Obstructions
- Runways Level
- ♦ All Screws, Bolts, and Pins Secured
- ♦ Surrounding Area Clean
- Operation, Maintenance and Safety Manuals on Site.

(Operating Instructions)



CAUTION!

The lift was designed to raise only passenger cars and light duty trucks. Many full size trucks, specialty or modified vehicles can not be raised with this type lift.

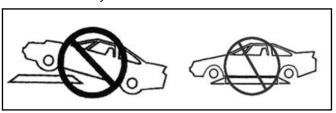
NEVER use lifting adapters other than those specifically designed for this lift.



WARNING!

Only trained operators should operate this lift. All nontrained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.

- ♦ **SERIOUS DAMAGE** to the lift can occur if used improperly.
- ♦ **NEVER** use the lift to raise just one end of the vehicle only.



- ♦ **NEVER** stop a vehicle with the wheels on top of the lift pads and attempt to raise the lift.
- ♦ **NEVER** remove all wheels off of a vehicle and lower the lift to the ground.
- ♦ Before raising a vehicle, check for leaks, and possible binding of lift components. Make sure that the hydraulic hose is clear of any possible pinch points.
- ♦ If the lift is not operating properly, DO NOT use until repairs or adjustments are made.

Loading the lift;

- ♦ Before loading or raising vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances.
- ♦ Before raising, make sure the weight of the vehicle does not exceed the rated capacity of the lift.
- ♦ Make sure lift is fully lowered position.

- ♦ Drive vehicle over the lift making sure that the centerline of the vehicle is positioned properly over the lift pads.
- ♦ Set parking brake or use wheel chock to hold vehicle in position.
- ♦ Position any pads underneath the vehicle making sure that they make secure contact with the frame or other recommended lifting point.

To Raise Lift;

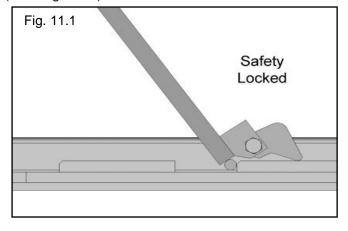
- ♦ Raise the lift by pressing the push button on the power unit.
- ♦ Raise lift until the vehicles tires clear the floor.
- ♦ Stop and check to make sure the vehicle is secure and the lifting pads are still in contact with the frame.
- ♦ Continue raising until the vehicle is at the desired height.



VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.

Suspension components us on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is LOWERED onto the safety locks, Refer to installation /operation manual for proper safety lock procedures and /or further instruction.

Raise until the safety lock bars drop into position.
 (See Fig. 11. 1)



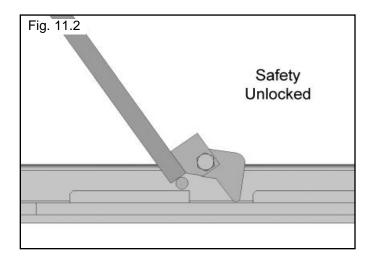
Lower the lift onto the nearest safety lock.

ALWAYS INSURE SAFETY LOCKS ARE ENGAGED before entering work area.

♦ Check to make sure safeties are engaged on the **SAME** safety lock position **BEFORE ENTERING** work area.

To Lower Lift;

- ♦ Clear area of personnel and tools above and below before lowering lift.
- ♦ Raise the lift until at least two inches to provide adequate clearance for the saftey to operate.
- ♦ Visually confirm that the safety bar has been raised up off the safety locks. (See Fig. 11.2)



▲ WARNING

When lowering the lift PAY CAREFUL ATTENTION that all personnel and objects are kept clear. ALWAYS keep a visual line of site on the lift AT ALL TIMES. ALWAYS make sure that all LOCKS are disengaged. If one of the locks inadvertently locks on descent, the lift and/or vehicle may disrupt causing personal injury or death.

- ♦ Push the LOWERING handle until the lift starts to descend. Stay clear of lift area. Ensure that both safeties are not engaged.
- ♦ Fully lower the lift and remove all lifting adapters before driving vehicle away.

WEEKLY MAINTENANCE

- Lubricate all rollers with general purpose oil or WD-40.
- Check all cable connections, bolts and pins to insure proper mounting.
- ♦ Lubricate safety lock pivot points with general purpose oil or WD-40.

MONTHLY MAINTENANCE

- Check safety locks to insure they are in good operating condition.
- Make a visual inspection of ALL MOVING PARTS and check for excessive signs of wear
- ♦ Replace ALL FAULTY PARTS before lift is put back into operation.



- ♦ NEVER EXCEED THE RATED CAPACITY of lift.
- ◆ DO NOT USE LIFT if any component is found to be defective or worn.
- NEVER OPERATE LIFT with any person or equipment below.
- ALWAYS STAND CLEAR of lift when lowering or raising.
- ◆ ALWAYS INSURE SAFETY LOCKS ARE ENGAGED before entering work area.
- ♦ NEVER LEAVE LIFT IN ELEVATED CONDITION unless all safety locks are engaged.

Safe Lift Operation

Automotive and truck lifts are critical to the operation and profitability of your business. The safe use of this and other lifts in your shop is critical in preventing employee injuries and damage to customer's vehicles. By operating lifts safely you can insure that your shop is profitable, productive and safe.

Safe operation of automotive lifts requires that only trained employees should be allowed to use the lift.

TRAINING SHOULD INCLUDE, BUT NOT LIMITED TO:

- Proper positioning of the vehicle on the runway. (See manufacturers minimize wheel base loading requirements.)
- Use of the operating controls.
- Understanding the lift capacity.
- Proper use of jack stands or other load supporting devices.
- Proper use, understanding and visual identification of safety lock devices and their operation.
- Reviewing the safety rules.
- Proper housekeeping procedures (lift area should be free of grease, oil, tools, equipment, trash, and other debris).
- ♦ A daily inspection of the lift should be completed prior to its use. Safety devices, operating controls, lift arms and other critical parts should be inspected prior to using the lift.
- ♦ All maintenance and repairs of the lift should be completed by following the manufacturer's requirements. Lift repair parts should meet or exceed OEM specifications. Repairs should only be completed by a qualified lift technician.
- The vehicle manufacturer's recommendations should be used for spotting and lifting the vehicle.

LIFT OPERATION SAFETY

- ♦ It is important that you know the load limit. Be careful that you do not overload the lift . If you are unsure what the load limit is, check the data plate found on one of the lift columns or contact the manufacturer.
- ♦ The center of gravity should be followed closely to what the manufacturer recommends.
- ♦ Always make sure you have proper overhead clearance. Additionally, check that attachments, (vehicle signs, campers antennas, etc.) are not in the way.
- Be sure that prior to the vehicle being raised, the doors, trunk, and hood are closed securely.
- Prior to being raised, make sure there is no one standing closer than six feet from the lift.
- ♦ After positioning the vehicle on the lift runways, set the emergency brake, make sure the ignition is off, the doors are closed, overhead obstructions are cleared, and the transmission is in neutral.
- Double check that the automatic chock devices are in position and then when the lift is raised, observe the chocks.
- Put pads or adapters in the right position under the contact points that have been recommended.
- ♦ The lift should be raised just until the vehicle's wheels are about one foot off the ground. If contact with the vehicle is uneven or it appears that the vehicle is not sitting secure, carefully lower the lift and readjust.
- ♦ Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, undercoating, etc.
- ♦ Pay attention when walking under a vehicle that is up on the hydraulic lift.



- ♦ **DO NOT** Leave the controls while the lift is still in motion.
- ♦ **DO NOT** stand directly in front of the vehicle or in the bay when vehicle is being loaded or driven into position.
- ◆ DO NOT Go near vehicle or attempt to work on the vehicle when being raised or lowered. REMAIN CLEAR of lift when raising or lowering vehicle.
- DO NOT rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.
- ♦ **DO NOT** lower the vehicle until people, materials, and tools are clear.
- ALWAYS INSURE that the safeties are engaged before any attempt is made to work on or near vehicle.
- Some vehicle maintenance and repair activities may cause the vehicle to shift. Follow the manufacturer's guidelines when performing these operations. The use of jack stands or alternate lift points may be required when completing some repairs.
- ♦ READ AND UNDERSTAND all safety warning procedures before operating lift.
- ♦ **KEEP HANDS AND FEET CLEAR**. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- ♦ 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.
- ♦ USE LIFT CORRECTLY. Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
- ♦ **DO NOT** override self-closing lift controls.
- CLEAR AREA if vehicle is on danger of falling.
- ♦ STAY ALERT. Watch what you are doing. Use common sense. Be aware.
- ♦ 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.
- ♦ **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
- When the lift is being lowered, make sure everyone is standing at least six feet away.
- Be sure there are no jacks, tools, equipment, left under the lift before lowering.
- Always lower the vehicle down slowly and smoothly.

ADANGER

THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW

Maximum Lifting Capacity 6000 Lbs. / 2722 Kg.

Maximum Lifting Capacity / Front Axle 3000 Lbs. / 1361 Kg.

Maximum Lifting Capacity / Rear Axle(s) 3000 Lbs. / 1361 Kg.

Exceeding the weight capacity of this lift can damage lift and/or property and may cause personal harm, injury or death to operators and/or bystanders. All vehicles MUST be positioned on lift with CENTER OF GRAVITY midway between adapters and/or centered on runways. Damage to lift due to overloading or misuse IS NOT covered under warranty.





Read operating and safety manuals before using lift.

INSTRUCTIONS

SAFETY

SAFETY INSTRUCTIONS



Proper maintenance and inspection is necessary for safe operation.

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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Clear area if vehicle

is in danger of falling.

WARNING



Keep clear of pinch points when lift is moving.

WARNING



Remain clear of lift when raising or lowering vehicle.

WARNING



WARNING



Keep feet clear of lift while lowering.

A CAUTION

Do not operate

a damaged lift.



Lift to be used by trained operator ONLY.

A CAUTION

ALI/WL200s

They are protected by copyright. Set of labels may be obtained from

ALI or its member companies.



Authorized personnel

only in lift area.

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

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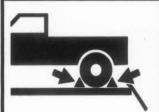
ALI/WL200c

WARNING



Do not override self-closing lift controls.

WARNING



Chock wheel to prevent vehicle movement.

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

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ALI/WL200v

LIFT WILL NOT RAISE

- 1. Air in oil, (1,2,8,13)
- 2. Cylinder binding, (9)
- 3. Cylinder leaks internally, (9)
- 4. Motor run backward under pressure, (11)
- 5. Lowering valve leaks, (3,4,6,10,11)
- 6. Motor runs backwards, (7,14,11)
- 7. Pump damaged, (10,11)
- 8. Pump won't prime, (1,8,13,14,3,12,10,11)
- 9. Relief valve leaks, (10,11)
- 10. Voltage to motor incorrect, (7,14,11)

	EMEDY	INSTRUCTION
1.	Check for proper oil level	The oil level should be up to the bleed screw
2.	Bleed cylinders	See Installation Manual
3.	Flush- Release valve to get rid of	. Hold release handle down and start unit allowing it to run for 15 seconds.
4.	Dirty oil	. Replace oil with clean Dexron ATF.
5.	Tighten all fasteners	. Tighten fasteners to recommended torques.
6.	Check for free movement of release	. If handle does not move freely, replace bracket or handle assembly.
7.	Check motor is wired correctly	. Compare wiring of motor to electrical diagram on drawing.
8.	Oil seal damaged or cocked	.Replace oil seal around pump shaft.
9.	See Installation Manual	. Consult Lift Manufacturer.
10	Replace with new part	. Replace with new part.
11	Return unit for repair	. Return unit for repair.
12	Check pump-mounting bolts	. Bolts should be 15 to 18 ft. lbs.
13	Inlet screen clogged	. Clean inlet screen or replace.
14	Check wall outlet voltages and wiring	.Make sure unit and wall outlet are wired properly.

MOTOR WILL NOT RUN

POSSIBLE CAUSE

- 1. Fuse blown, (5,2,1,3,4)
- 2. Limit switch burned out, (1,2,3,4)
- 3. Microswitch burned out, (1,2,3,4)
- 4. Motor burned out, (1,2,3,4,6)
- 5. Voltage to motor incorrect, (2,1,8)

RE	MEDY	INSTRUCTION	
1.	Check for correct voltage	. Compare supply voltage with voltage on motor nametag. Check that the wire is sized correctly. N.E.C. table 310-12 requires AWG 10 for 25 Amps.	
2.	Check motor is wired correctly	.Compare wiring of motor to electrical diagram on drawing.	
3.	Don't use extension cords	.According to N.E.C.: "The size of the conductors should be such that the voltage drop would not exceed 3% to the farthest outlet for power" Do not run motor at 115 VAC – damage to the motor will occur.	
4.	Replace with new part	.Replace with new part.	
5.	Reset circuit breaker/fuse	.Reset circuit breaker/fuse.	
6.	Return unit for repair	Return unit for repair.	
7.	See Installation Manual	.See Installation Manual.	
8.	Check wall outlet voltage and wiring	. Make sure unit and wall outlet is wired properly. Motor must run at 208/230 VAC.	

LIFT LOWERS SLOWLY OR NOT AT ALL

- 1. Cylinders binding, (1)
- 2. Release valve clogged, (5,4,2,3)
- 3. Pressure fitting too long, (6)

REMEDY		INSTRUCTION	
1.	See Installation Manual	.Consult Lift Manufacturer.	
2.	Replace with new part	.Replace with new part.	
3. 4.	Return for repair	•	
5.	Clean release valve	.Wash release valve in solvent and blow out with air.	
6.	Replace fitting with short thread lead	. Replace fitting with short thread lead.	

WILL NOT RAISE LOADED LIFT

- 1. Air in oil, (1,2,3,4)
- 2. Cylinder binding, (5)
- 3. Cylinder leaks internally, (5)
- 4. Lift overloaded, (6,5)
- 5. Lowering valve leaks, (7,8,1,5,9)
- 6. Motor runs backwards, (10,12,9)
- 7. Pump damaged, (5,9)
- 8. Pump won't prime, (1,2,3,4,5,11,9)
- 9. Relief valve leaks, (8,5,9)
- 10. Voltage to motor incorrect, (10,12,5)

	MEDY Check oil level	INSTRUCTION The oil level should be up to the bleed screw in the reservoir [with the lift all the way down.]
2.	Check/Tighten inlet tubes	Replace inlet hose assembly.
3.	Oil seal damaged or cocked	Replace oil seal and install.
4.	Bleed cylinders	See Installation Manual.
5.	See Installation Manual	. Consult Lift Manufacturer.
6.	Check vehicle weight	Compare weight of vehicle to weight limit of the lift.
7.	Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
8.	Replace with new part	. Replace with new part.
9.	Return unit for repair	. Return unit for repair.
10.	Check motor is wired correctly	.Compare wiring of motor to electrical diagram on power
11.	Inlet screen clogged	Clean inlet screen or replace.
12.	Check wall outlet voltage and wiring	.Make sure unit and wall outlet is wired properly.

LIFT WILL NOT STAY UP

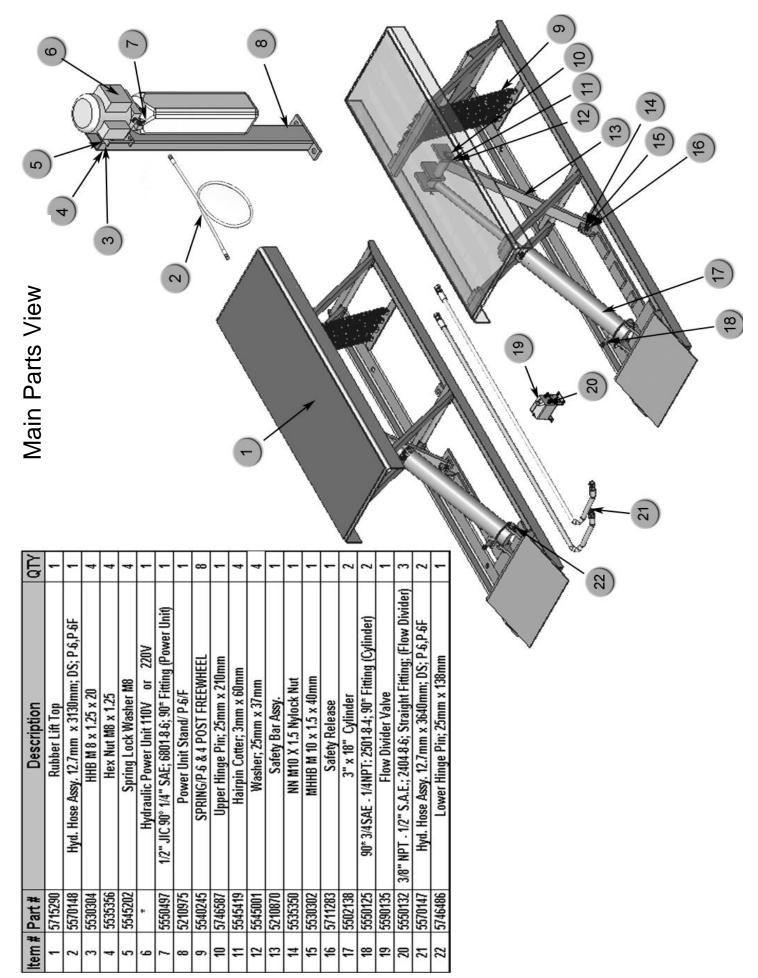
- 1. Air in oil, (1,2,3)
- 2. Check valve leaks, (6)
- 3. Cylinders leak internally, (7)
- 4. Lowering valve leaks, (4,5,1,7,6)
- 5. Leaking fittings, (8)

1. Check oil level	INSTRUCTION The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Oil seal damaged and cocked	Replace oil seal around pump shaft.
3. Bleed cylinder	Refer to Installation Manual.
4. Flush release valve	. Hold release handle down and start unit allowing it to run for 15 seconds.
5. Replace with new valve	. Replace with new valve.
6. Return unit for repair	. Return unit for repair.
7. See Installation Manual	Consult Lift Manufacturer.
8. Check complete hydraulic system for leaks	.Tighten all hydraulics fittings and inpects all hoses.

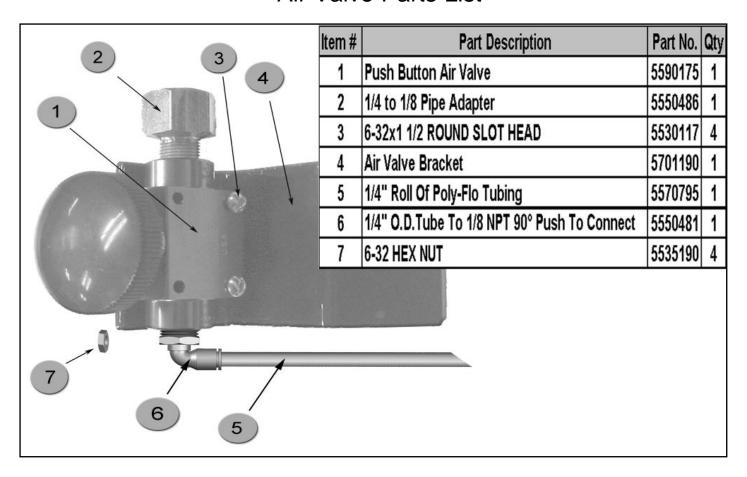
MAINTENANCE RECORDS

INSTALLATION FORM

Customer Name: Date of Installation:			
Company Name:			
Street Address:			
City:	State:		Zip:
Phone:		Fax:	
	Pre-In:	stall Agreement	
I, (the undersigned) acting as the owner of the business listed above assume responsibility for any permits required, either state or county mandated, related to the installation and/or operation of this equipment. I assume responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are installed. I will assume all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with, or to have arisen out of the condition and/or drilling of the concrete near or adjacent to the equipment model(s) listed above. If my employee(s) offer assistance of any kind during installation of the above equipment model(s) I hold the manufacturer and installation company harmless of all liability for losses, damages, expenses, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with the installation of the above equipment model(s). I understand that the lifts above are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).			
Customer Signature:		Name:	Date:
Base and Columns Properly Shimmed And Stable			
Street Address:			
City:		State:	Zip:
Phone: Phone (Other):		Phone (Other):	



Air Valve Parts List





For Parts or Service Contact:

BendPak Inc. / Ranger Products 1645 Lemonwood Dr. Santa Paula, CA. 93060

> Tel: 1-805-933-9970 Toll Free: 1-800-253-2363 Fax: 1-805-933-9160

www.bendpak.com www.rangerproducts.com



