



IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING WITH LIFT INSTALLATION AND OPERATION 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.

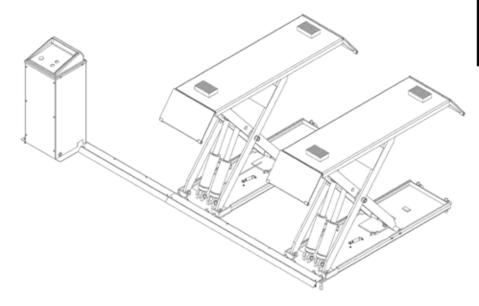
Rev B 11/03/16

P/N 5900966

INSTALLATION AND OPERATION MANUAL

6,000 LB. CAPACITY / 2722 KG. MID-RISE SCISSOR LIFT

Models: MDS-6K MDS-6KF



Do not operate this machine until you read and understand all the dangers, warnings and to utions in this manual.

RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed Bill of Lading is acknowledgment by the shipping carrier as receipt of this product as listed in your invoice as being in a good condition of shipment. If any of these goods listed on this Bill of Lading are missing or damaged, do not accept goods until the shipping carrier makes a notation on the freight bill of the missing or damaged goods. Do this for your own protection.

BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased with 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. Keep this operation manual near the lift at all times. Make sure that <u>ALL USERS</u> read and understand this manual.



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

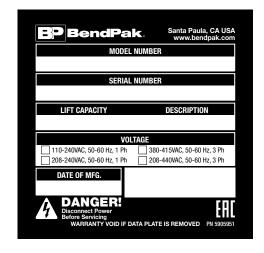
6,000 POUND CAPACITY LOW RISE PIT LIFT

This instruction manual has been prepared especially for you.

Your new lift is the product of over 40 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

Our comprehensive product warranty means more than a commitment to you; it's also a commitment to the value of your new MDS-6K/MDS-6KF BendPak lift. For full warranty details and to register your new lift contact your nearest BendPak dealer or visit:

http://www.bendpak.com/support/warranty/

What is not covered under this warranty:

- a. Any failure that results from Purchaser's abuse, neglect or failure to operate, maintain or service product in accordance with instructions provided in the owner's manual(s) supplied.
- b. Any damage caused by overloading lift beyond rated capacity.
- c. Items or service normally required to maintain the product, i.e. lubricants, oil, etc.
- d. Items considered general wear parts such as rubber pads, lifting cables, etc. unless wear or failure is a direct result of manufacturer defect due to material and/or workmanship.
- e. Any component damaged in shipment or any failure caused by installing or operating lift under conditions not in accordance with installation and operation guidelines or damaged by contact with tools or surroundings.
- f. Motor or pump failure caused by rain, excessive humidity, corrosive environments or other contaminants.
- g. Rusted components due to improper maintenance or corrosive environments.
- h. Cosmetic defects that do not interfere with product functionality.
- i. Damage due to incorrect voltage or improper wiring.
- j. Any incidental, indirect, or consequential loss, damage or expense that may result from any defect, failure or malfunction of BendPak Inc. product.
- k. All electrical components (excluding power unit) are guaranteed for one year against defects in workmanship and/or materials when the lift is installed and used according to specifications.

NOTE:

Every effort has been taken to ensure complete and accurate instructions have been included in this manual, however, possible product updates, revisions and or changes may have occurred since this printing. BendPak Ranger reserves the right to change specifications without incurring any obligation for equipment previously or subsequently sold. Not responsible for typographical errors.

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 ensure 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:



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



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



Watch for this symbol. It means: Hazards or unsafe practices which may result in minor personal injury, 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 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 decals 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 acknowledgment 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 some Bendpak 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-2011, 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, it 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 essenti







operation activities. Eye protection is essential during installation and operation activities. Safety glasses with side shields, goggles, or face shields are acceptable. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses. 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

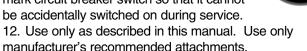
IMPORTANT NOTICE

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 instructions and all safety warnings before operating lift.
- 2. Care must be taken as burns can occur from touching hot parts.
- 3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
- 4. Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
- 5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
- 6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
- 7. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
- 8. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
- 9. Adequate ventilation should be provided when working on operating internal combustion engines.
- 10. Keep hair, loose clothing, fingers, and all parts of body away from moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- 11. DANGER. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain. The power unit used on this lift contains high voltage. Disconnect power at the receptacle or at the circuit breaker switch before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service. or mark circuit breaker switch so that it cannot be accidentally switched on during service.



- 13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
- 14. Consider work environment. Keep work area clean. Cluttered work areas invite injuries. Keep areas well lit.
- 15. Guard against electric shock. This lift must be grounded while in use to protect operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.
- 16. Only trained employees should operate this lift. All non-trained personnel should be kept away from the work area. Never let non-trained personnel come in contact with, or operate lift.
- 17. DO NOT override self-closing lift controls.
- 18. Clear area if vehicle is in danger of falling.
- 19. ALWAYS make sure the safeties are engaged before attempting to work on or near a vehicle.
- 21. 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.
- 22. 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.
- 23. Check for damaged parts. Check for alignment of moving parts, breakage of parts or any condition that may affect operation of lift. Do not use lift if any component is broken or damaged.
- 24. NEVER remove safety-related components from the lift. Do not use lift if safety-related components are missing or damaged.
- 23. STAY ALERT. Use common sense and watch what you are doing. Remember, SAFETY FIRST.

SAVE THESE INSTRUCTIONS

TOOLS REQUIRED

- ♦ Rotary Hammer Drill Or Similar
- ♦ 3/4"; 3/8"; 1 1/4" Masonry Bits (for pit installation)
- **♦** 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

NOTE:

An air supply (50 PSI Min / 10 CFM Min.) will be required for the safety-lock mechanisms. See Step 11.

IMPORTANT NOTICE

These instructions must be followed to ensure 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 floor plan requirements making sure that adequate space if available.
- 2. **OVERHEAD OBSTRUCTIONS**: The area where 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.** Outdoor use permitted only if covered and dry. Always follow warnings illustrated on equipment labels.

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.

CONCRETE SPECIFICATIONS

LIFT MODEL CONCRETE REQUIREMENTS

MDS-6K 4" Min. Thickness MDS-6KF 4" Min. Thickness



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.

IMPORTANT NOTE:

BendPak lifts are supplied with installation instructions and concrete fasteners meeting the criteria as prescribed by the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-2011. Lift buyers are responsible for 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).



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 UN-LEVEL FLOORS OR IMPROPER ANCHORING.

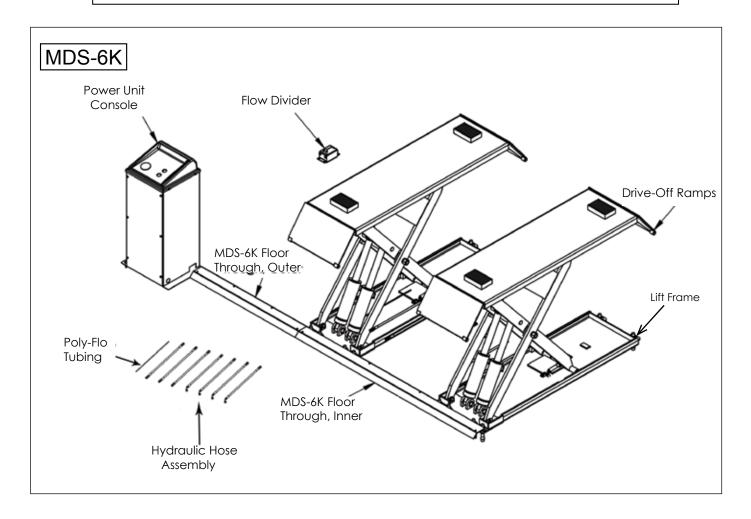
MISALIGNMENT MAY CAUSE DAMAGE TO THE LIFT.



WHEN REMOVING THE LIFT FROM SHIPPING PALLET / ANGLES PAY CLOSE ATTENTION AS 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 DEVICE.

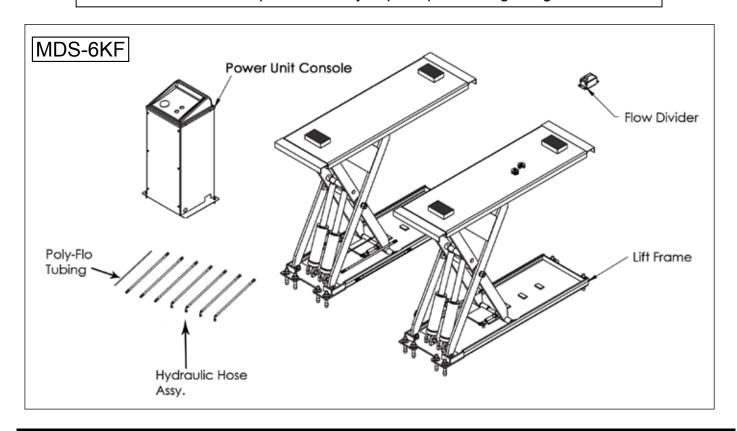
PARTS INVENTORY

Be sure to take a complete inventory of parts prior to beginning installation.

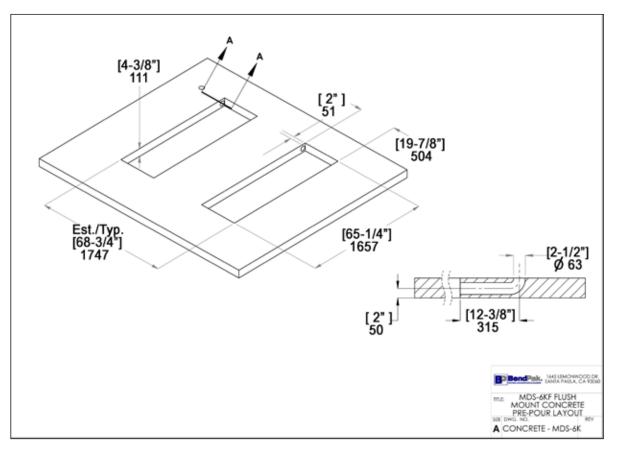


PARTS INVENTORY

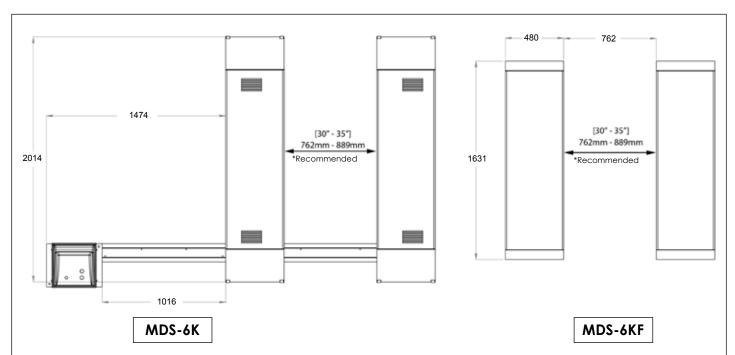
Be sure to take a complete inventory of parts prior to beginning installation.



FLOOR PLAN/LAYOUT DIMENSIONS



FLOOR PLAN/LAYOUT DIMENSIONS



^{*} **NOTE:** Vehicle jacking points do vary. Check your vehicle jacking point locations before committing to above measurement. Adjust platform width as desired. The rubber contact blocks should be positioned at the middle of the platforms during use for optimum performance.

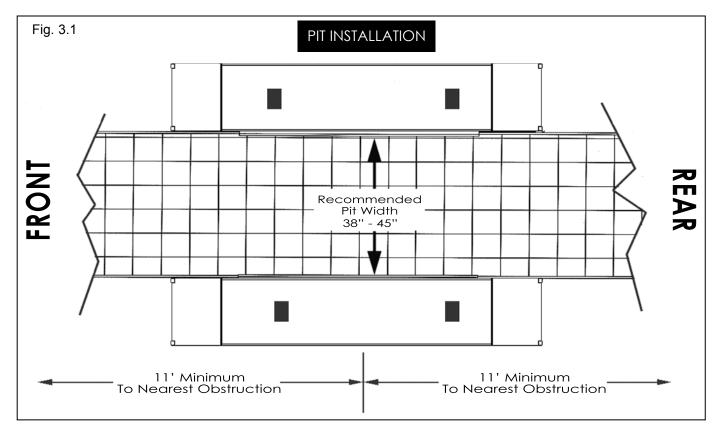
| MODEL | MDS-6K | MDS-6KF |
|-----------------------------------|-----------------------------------|--|
| Style | Mid-Rise Pit Lift / Surface Mount | Mid-Rise Pit Lift / Flush Mount |
| Lifting Capacity: | 6,000 Lbs / 2722 Kgs. | 6,000 Lbs / 2722 Kgs. |
| Lifting Height (Less Lift Blocks) | 44" / 1119 mm. | 44" / 1119 mm (-4.3/8" for sub-floor) |
| Lifting Height (With Lift Blocks) | 45.5" /1158 mm. | 45.5" /1158 mm (-4.3/8" for sub-floor) |
| Lift Platform Dimensions | 18" x 57" / 457 mm x 1448 mm | 18" x 57" / 457 mm x 1448 mm |
| Width Between Platforms | 30" / 762 mm | 30" / 762 mm |
| Over Width | 18.5" / 470mm | 18.5" / 470mm |
| Overall Length | 79.5" / 2019 mm. | 64" / 1626 mm. |
| Lowered Height | 4.25" / 105 mm. | 4.25" / 105 mm./ (-4.3/8" for sub-floor) |
| 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.

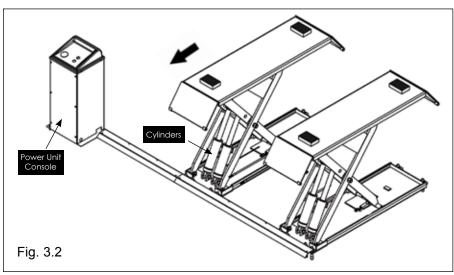
Note: An air supply (minimum: 50 psi / 10 CFM) is required for the safety-lock mechanisms to disengage.

It is solely the responsibility of the end-user to provide, install and maintain the air supply.



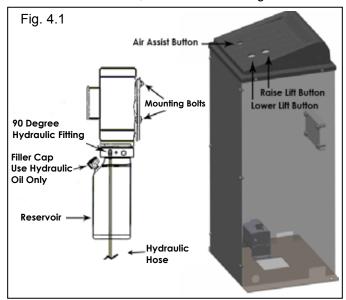
STEP 3 (Locating Unit)

- 1. Before selecting an installation site, check for proper clearance and/or obstructions. (See Fig 3.1)
- 2. Always consult the building engineer before installing this lift to make sure the floor is capable of sustaining the load.
- 3. After selecting a site, place each unit adjacent to the power unit console. Ensure frames and cylinder ports are facing the same position as shown in the image below. (See Fig. 3.2)
- 4. An air supply (minimum: 50 psi / 10 CFM) is required for the safety-lock mechanisms to disengage.
- 5. The hookup work must be carried out by a qualified electrician.
- 6. Make sure the connection of the phases is correct. Improper electrical hook-up can damage the motor and will not be covered under warranty.



(Locating Power Unit Console)

- 1. Select a site for the Power Unit Console that permits operators to 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.



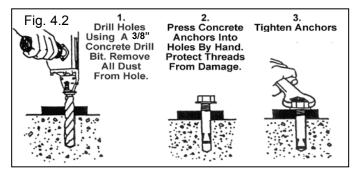


RISK OF EXPLOSION. DO NOT INSTALL THE POWER UNIT INSIDE OR NEAR A PAINT BOOTH. THIS EQUIPMENT HAS INTERNAL ARCING OR SPARKING PARTS WHICH SHOULD NOT BE EXPOSED TO FLAMMABLE VAPORS.



CHECK WITH BUILDING PLANS PRIOR TO DRILLING ANY HOLES IN FLOOR.

- 3. Using the Power Unit Stand as a template, mark the locations of the two anchor bolt holes.
- 4. Drill two holes 3/8" x 4" deep in concrete floor.
- 5. Remove all dust from hole.
- 6. Install Anchors as shown below. (See Fig. 4.2)

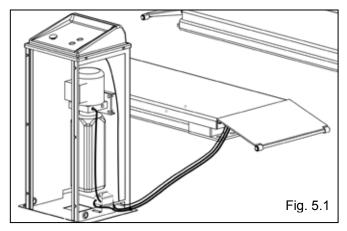


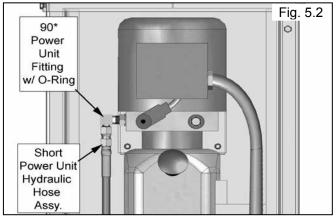
- 7. Secure Power Unit Console to the floor using two 3/8" anchor bolts supplied.
- 8. Attach Power Unit to Motor Bracket using four 5/16" hex bolts and nyloc nuts supplied. NOTE: Motor must be at least 18" above floor.
- 9. Install the Air Safety Valve "Z" bracket on the upper left mounting hole of the Power Unit Stand.

STEP 5

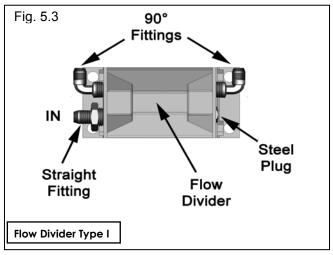
(Power Console / Hose Routing)

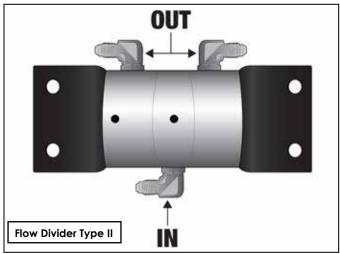
- Remove the front Panel cover on the Power Console.
- 2. Route the Hydraulic Hoses and the Air Line through the holes at the back of the Power Console. (See Fig. 5.1)
- 3. Connect the Power Unit Hydraulic Hose (shortest) to the Power Unit Fitting as shown in the image below. It is not necessary to use Teflon tape on JIC fittings. DO NOT OVERTIGHTEN. (See Fig. 5.2)



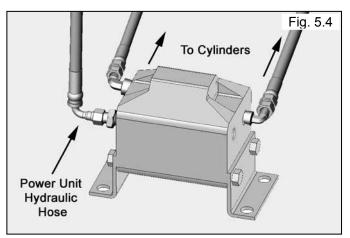


4. Install the two 90° Fittings and one Straight Fitting in the Flow Divider configured as shown. (See Fig. 5.3).

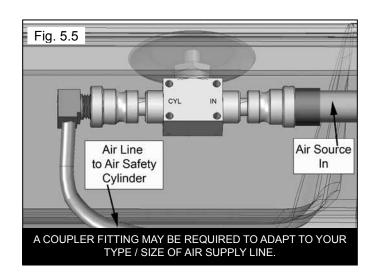




- 5. Install the Flow divider in the bottom of the Power Console.
- 6. Connect the Power Unit Hose to the Straight Fitting on the Flow Divider and connect both the Powerside and Offside Hydraulic Hoses to the 90° Fittings on the Flow divider as shown. (See Fig. 5.4)



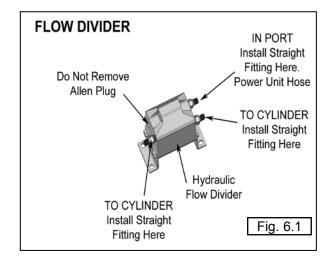
7. Route the 1/4" Poly-Flow Air Tubing through the hole at the back of the Power Console and connect to the Push Button Air Safety Switch as shown below. (See Fig. 5.5)



STEP 6

(Flow Divider / Hydraulic Hose Installation)

1. For Pit installation, secure the Hydraulic Flow Divider to a permanent wall or fixture (usually below ground level) in an area that will allow the Power Hoses (the two hoses that are installed at the lift Cylinders) to be equal length.



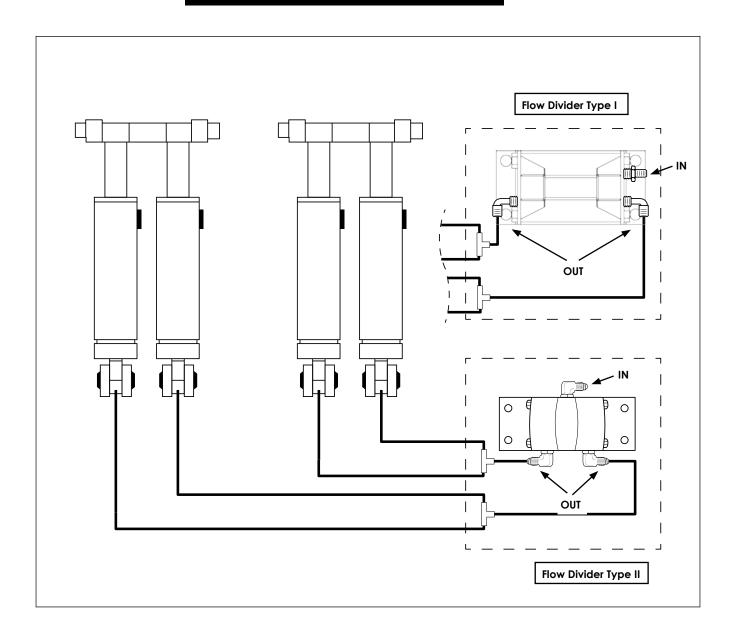


POWER HOSES MORE THAN 12" DIFFERENCE IN LENGTH MAY RESULT IN UNEQUAL LIFTING OF THE SYSTEM.

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. Use Teflon tape on pipe fittings ONLY.
- 3. After the fitting is installed correctly, connect the 140" Hydraulic Hose making sure to not over-tighten.

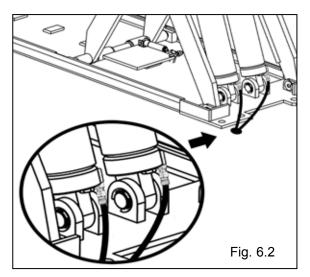
ROUTING HYDRAULIC HOSES





CHECK WITH BUILDING PLANS PRIOR TO DRILLING ANY HOLES IN FLOOR.

(For below ground level 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 ground.)



- 4. Connect the other end of the Power Unit Hose to the fitting marked "IN" on the Flow Divider. (See Fig 6.1)
- 5. Connect the two remaining equal length Hoses to the Flow Divider. (See Fig 6.1)
- 3/8" I.D. hydraulic tubing / hose 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 pressure rating.

STEP 7

(Power Unit Installation)



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.

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 the motor. Refer to the data plate found on the motor for proper power supply and wire size.

NOTE:

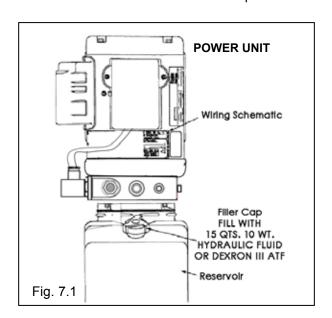
The standard power unit can be run on either 110V or 220V. It is already wired for 110V and equipped with a 3-wire power cord with grounding plug. For optional 220V hook up, follow the wiring instructions as shown on the motor data plate. See electrical data below.

| Line Voltage | Running Amps | Circuit Breaker |
|--------------|--------------|-----------------|
| 110/115 V | 9.0 | 20A |



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 6 quarts. Make sure the funnel used to fill the tank and power unit is clean.



3. The standard power unit for your lift is 110 volt, 60HZ, single phase. All wiring must be performed by a certified electrician only. SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS.



ALL WIRING MUST BE PERFORMED BY A LICENSED ELECTRICIAN.





DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITHOUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.



DO NOT RUN POWER UNIT WITHOUT OIL. DAMAGE TO POWER UNIT 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.

ANY IMPROPER ELECTRICAL INSTALLATION MAY DAMAGE POWER UNIT MOTOR AND RESULTING DAMAGE WILL NOT BE COVERED UNDER WARRANTY. MOTOR CAN NOT RUN ON 50HZ WITHOUT A PHYSICAL CHANGE IN MOTOR. USE A SEPARATE CIRCUIT 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 Hoses)

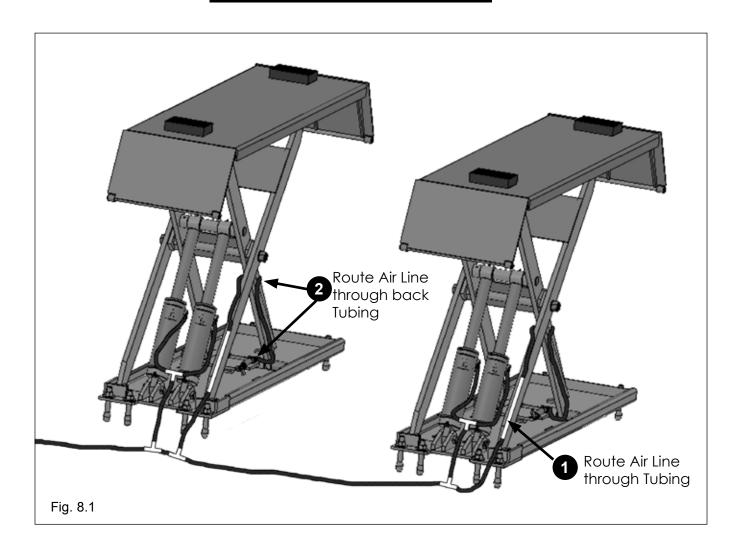
Connect the Air Safety Cylinders to the Air Safety Valve using the Tee Fitting and the Air line. Route the air line as shown in the image below (See Fig. 8.1), making sure to position the push button air valve with the INLET facing towards the AIR SOURCE and the OUTLET facing towards the lift. A filter/regulator/lubricator 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: Improper assembly may result in safety lock failure. Connect Air Supply Hose to push air release valve inside Power Unit Console. On opposite side of air release valve connect 1/4" Poly-Flow Air Tubing. Route the 1/4" Poly-Flow Air Tubing through the hole on the Powerside of the Lift Frame connect it to the Tee Fitting. Connect Air line to each Air Safety Cylinder.

NOTE: An air supply (minimum: 50 psi / 10 CFM) is required for the safety-lock mechanisms to disengage. It is solely the responsibility of the end-user to provide, install and maintain the air supply.

AIR PRESSURE SHOULD BE REGULATED TO 125 PSI MAX.

ROUTING AIR LINE HOSES



(Anchoring Lift Assemblies)

NOTE:

BENDPAK LIFTS ARE SUPPLIED WITH INSTALLATION INSTRUCTIONS AND CONCRETE FASTENERS MEETING THE CRITERIA AS PRESCRIBED BY THE AMERICAN NATIONAL STANDARD "AUTOMOTIVE LIFTS - SAFETY REQUIREMENTS FOR CONSTRUCTION, TESTING, AND VALIDATION" ANSI/ALI ALCTV-2011. LIFT BUYERS ARE RESPONSIBLE FOR 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).

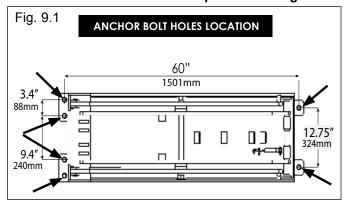


NOTE:

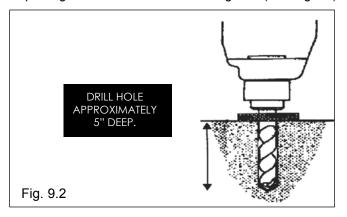
For "pre-fab" or steel grate floors, check with the building engineer for mounting suggestions. It may be necessary to install all-thread rods through the floor and secure above and below.

- 1. Before anchoring lift to the floor, make sure the location is satisfactory. Refer to Section 3.
- 2. Locate the six Anchor Bolt holes in the Lift Base Frame. (See Fig 9.1)

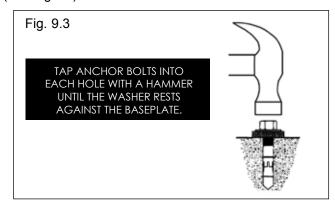
NOTE: The lift must be elevated prior to drilling holes.



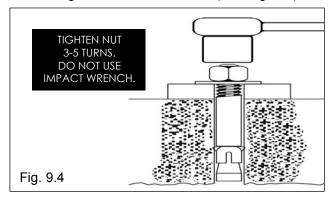
3. Using a 3/4" concrete bit, drill six holes on each pad 5" deep using the holes in the frame as a guide. (See Fig 9.2)



4. Using Compressed air or vacuum, remove all excess dust from holes, then install the anchor bolts. (See Fig 9.3)



5. 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 9.4)



STEP 10 (Bleeding)

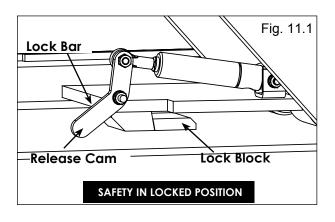
- 1. Lift must be fully lowered before changing or adding fluid.
- 2. Raise and lower lift six times. The Cylinders are self-bleeding. After bleeding system, the fluid level in power unit reservoir may be down. Add more fluid if necessary to raise lift to full height. It is only necessary to add fluid to Raise lift to full height.
- 3. It may be necessary to disconnect Hoses at the Cylinders and run the Power Unit to completely 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 6 quarts /1.5 gallons of 10-WT hydraulic oil or Dexron-III automatic transmission fluid. Other approved options are: Dexron VI, Mercon V, Mercon LV or comparable.
- 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.





ALWAYS ENSURE THAT THE SAFETY IS IN LOCKED POSITION BEFORE ANY ATTEMPT IS MADE TO WORK ON OR NEAR THE VEHICLE.

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. READ THE ENTIRE
CONTENTS OF THIS MANUAL PRIOR TO
INSTALLATION AND OPERATION. FAILURE TO
FOLLOW DIRECTIONS AS INSTRUCTED MAY CAUSE
INJURY OR DEATH.

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

POST-INSTALLATION CHECK-OFF

- Columns properly shimmed and stable
- Anchor Bolts tightened
- Pivot / Sheave Pins properly attached
- Electric power supply confirmed
- Safety Locks functioning properly
- Check for hydraulic leaks
- Oil level
- Lubrication of critical components
- Check for overhead obstructions
- All Screws, Bolts, and Pins securely fastened
- Surrounding area clean
- Operation, Maintenance and Safety Manuals on site.
- Perform an Operational Test with a typical vehicle

STEP 12 (Operation Instructions)

OWNER/EMPLOYER RESPONSIBILITIES

The Owner/Employer:

- Shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM01-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.
- Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer shall ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.
- Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

- Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection, and Maintenance.
- Shall display the lift manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting It Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI AL-OIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator.
- Shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1-1982 (R1993), Safety requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.



LIFT OPERATION SAFETY

- **DAILY** inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use **only** qualified lift service personnel and genuine BendPak parts to make repairs.
- THOROUGHLY train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.
- **NEVER** allow unauthorized or untrained persons to position vehicle or operate lift.
- **PROHIBIT** unauthorized persons from being in shop area while lift is in use.
- **DO NOT** permit anyone on lift or inside vehicle when it is either being raised or lowered.
- ALWAYS keep area around lift free of tools, debris, grease, and oil.

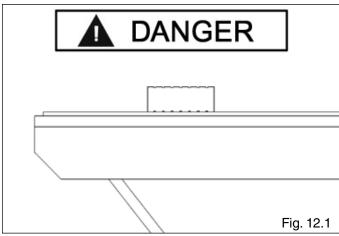
- **NEVER** overload lift. Capacity of lift is shown on nameplate affixed to the lift.
- **DO NOT** stand in front of the vehicle while it is being positioned in lift bay.



THE LIFT WAS DESIGNED TO RAISE ONLY
PASSENGER CARS AND LIGHT DUTY TRUCKS.
MANY FULL-SIZE TRUCKS, SPECIALTY OR
MODIFIED VEHICLES CANNOT BE RAISED
ON THIS TYPE OF LIFT.
CONTACT VEHICLE MANUFACTURER FOR RAISING
OR JACKING DETAILS. NEVER USE LIFTING
ADAPTERS OTHER THAN THOSE SPECIFICALLY
DESIGNED FOR THIS LIFT.

LIFT OPERATION SAFETY (CONT'D)

• ALWAYS load vehicle onto lift carefully. Position the lift adapters to contact at the vehicle manufacturer's recommended lift points. Raise lift until adapters contact vehicle. Check adapters for secure contact with vehicle. Raise lift to desired working height. (See Fig.12.1)



- DO NOT block open or override self-closing lift controls; they are designed to return to the "Off" or Neutral position when released.
- ALWAYS remain clear of lift when raising or lowering vehicles.
- ALWAYS use safety stands when removing or installing heavy components.
- DO NOT go under raised vehicle if safety locks are not engaged.



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

- NEVER LEAVE LIFT IN ELEVATED CONDITION unless all Safety Locks are engaged.
- AVOID excessive rocking of vehicle while on lift.
- ALWAYS CLEAR AREA if vehicle is in danger of falling.

 ALWAYS REMOVÉ tool trays, stands, etc. before lowering lift.



WHEN LOWERING THE LIFT PAY CAREFUL ATTENTION THAT ALL PERSONNEL AND OBJECTS ARE KEPT CLEAR. ALWAYS KEEP A VISUAL LINE OF SIGHT ON THE LIFT AT ALL TIMES. ALWAYS MAKE SURE THAT ALL LOCKS ARE DISENGAGED. IF ONE OF THE LOCKS INADVERTENTLY LOCKS UPON DESCENT THE VEHICLE MAY DISMOUNT CAUSING PERSONAL INJURY OR DEATH.

- ALWAYS RELEASE safety locks before attempting to lower lift.
- ALWAYS POSITION the lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.
- NEVER use the lift to raise just one end of the vehicle Before loading or raising vehicle, be sure all personnel is clear of the lift and surrounding area. Pay careful attention to overhead clearances.

TO LOAD THE LIFT



TO AVOID PERSONAL INJURY AND/OR PROPERTY DAMAGE, PERMIT ONLY TRAINED PERSONNEL TO OPERATE LIFT. AFTER REVIEWING THESE INSTRUCTIONS, PRACTICE USING LIFT CONTROLS BY RUNNING THE LIFT THROUGH A FEW UNLOADED CYCLES BEFORE LOADING VEHICLE ON LIFT. ALWAYS LIFT THE VEHICLE USING ALL FOUR ADAPTERS. **NEVER** RAISE JUST ONE END, ONE CORNER, OR ONE SIDE OF VEHICLE.

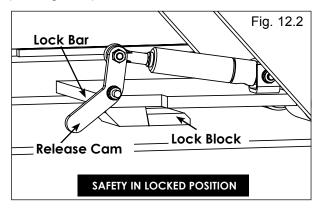
Before Loading: Lift must be fully lowered and service bay clear of all personnel before the vehicle is brought on lift.

- 1. Make sure lift is fully lowered position.
- 2. Drive vehicle over the lift making sure that the center-line of the vehicle is positioned properly over the lift pads.
- 3. Set parking brake or use wheel chock to hold vehicle in position.

4. Position any pads underneath the vehicle making sure that they make secure contact with the frame or other recommended lifting point.

TO RAISE THE LIFT

- 1. Some vehicles may have the manufacturer's Service Garage Lift Point locations identified by triangle shape marks on the undercarriage (reference ANSI/SAE J2184-1992). Also, there may be a label located on the right front door jamb area showing specific vehicle lift points.
- 2. Raise the lift by pressing the UP button on the power unit.
- 3. Raise lift until the vehicles tires clear the floor.
- 4. Stop and check to make sure the vehicle is secure and the lifting pads are still in contact with the frame.
- 5. Continue raising until the vehicle is at the desired height.
- 6. Raise until the safety lock bars drop into position. (See Fig. 12.2)



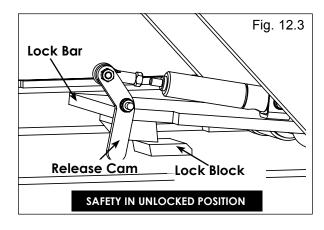
7. Lower the lift onto the nearest safety lock.



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TO LOWER THE LIFT

- 1. Remove all tools or other objects from the lift area.
- 2. Raise the lift until at least two inches to provide adequate clearance for the safety to operate.
- 3. Push the Air Safety Release Button and hold.
- 4. Visually confirm that the safety bar has been raised up off the safety locks. (See Fig. 12.3)



5. Push LOWERING valve handle to lower. Note: Both SAFETY LOCK release and LOWERING valve handles must be held down simultaneously to lower lift. Do not override self-closing lift controls.



YOU MUST RELEASE THE AIR SAFETY BUTTON WHEN LIFT IS 10 INCHES OFF THE GROUND. FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE LIFT'S SAFETY COMPONENTS.

- 6. Remain clear of lift when lowering vehicle. Observe pinch point warning decals.
- 7. Continue pressing the Lower Handle to Fully lower the lift. Remove all lifting adapters before driving vehicle away.
- 8. If lift is not operating properly, DO NOT use until adjustment or repairs are made by qualified lift service personnel.

MAINTENANCE INSTRUCTIONS

- Always keep bolts tight. Check periodically.
- Always keep lift components clean.
- If oil leakage is observed, always call local service representative.
- Always call local service representative if electrical problems develop.
- Replace ALL FAULTY PARTS before lift is put back into operation.
- Daily: Make a visual inspection of ALL MOVING PARTS and check for excessive signs of wear.
- Daily: Check safety locks to ensure they are in good operating condition.
- Daily: Inspect lift pads for damage or excessive wear. Replace as required with genuine BendPak parts.

- Weekly: Check all bolts and pins to ensure proper mounting.
- Monthly: Lubricate locking latch shafts. Push latch handle several times for oil to penetrate pivot points.
- Every 3 Months: Check anchor bolt torque. Anchors should be torqued to 90 ft/lbs.
- Semi-Annually: Check fluid level of lift power unit and refill if required per lift installation instructions.
- Replace all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from BendPak.
- Refer to ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

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 customers' vehicles. By operating lifts safely you can ensure 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 manufacturer's minimum wheelbase 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.

SAFE LIFT OPERATION

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, verify 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 the vehicle that may cause excessive weight shift.
- ◆ DO NOT lower the vehicle until people, materials, and tools are clear
- ♦ ALWAYS ENSURE that the safeties are engaged and lowered on to the safety stops 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.

SAFE LIFT OPERATION

- 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 indanger 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 slowly and smoothly.



MDS-6K & MDS-6KF MODELS LABELS



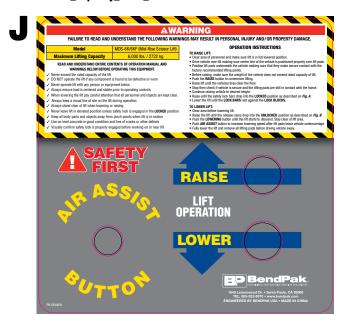
BendPak_Cylinder_Decal_New

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PN 5905940

6000 LBS/2800 KG

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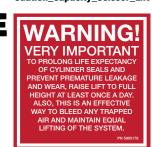


 $MDS\text{-}6K_Warning_Label$



PN 5905307

Caution_Capacity_Scissor_Lift



PN 5905176

Scissor_Cylinder_Warning-Red



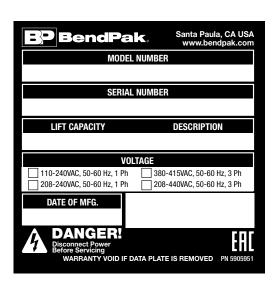
G



Lube_Label

Pinch_Point_Label







nazaru_beca



Hazard_Decal



Warning_Drive_Car_Over

PN 5930629

L5 Ш M **L**5 Ш

* A, C, D, F, G, H, I: Place labels on all 4 sides of lifts (inside and outside)

LIFT WILL NOT RAISE

POSSIBLE CAUSE

- 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)

| REMEDY1. Check for proper oil level | | INSTRUCTION The oil level should be up to the bleed screw | |
|--|---|---|--|
| 2. | Bleed cylinders | See Installation Manual | |
| 3. | Flush- Release valve to get rid of possible contamination | Hold release handle down and start unit allowing it to run for 15 seconds. | |
| 4. | Dirty oil | Replace oil with clean Dexron ATF fluids such as: Dexron III, Dexron VI, Mercon V, Mercon LV or comparable. | |
| 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 lbs / ft | |
| 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 name tag. 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

POSSIBLE CAUSE

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

| | EMEDY See Installation Manual | INSTRUCTION .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

POSSIBLE CAUSE

- 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. |

IMPORTANT

If the vehicle becomes stranded in the air, follow all operation instructions as shown on pages 18 - 20. If after observing that all mechanical locks are released and the lift still fails to move following all standard operating procedures, immediately stop using the lift and contact factory or factory approved service center for further instructions.

LIFT WILL NOT STAY UP

POSSIBLE CAUSE

- 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)

REMEDY INSTRUCTION

reservoir with the lift all the way down.

2. Oil seal damaged and cocked Replace oil seal around pump shaft.

run for 15 seconds.

5. Replace with new valve Replace with new valve.

6. Return unit for repair Return unit for repair.

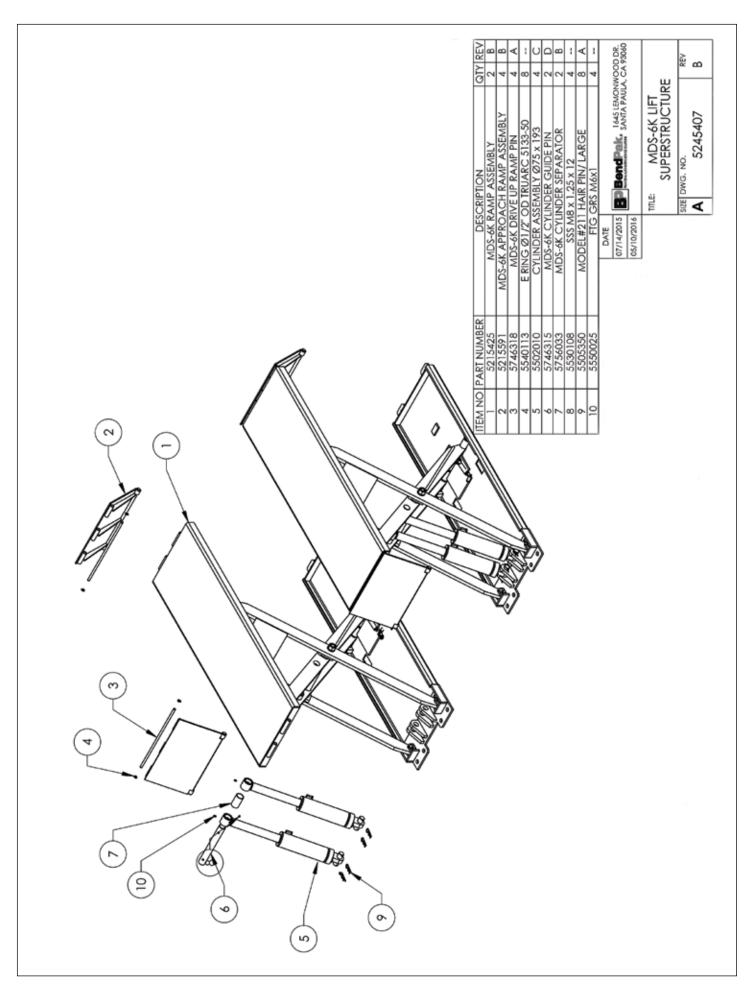
8. Check complete hydraulic system for leaks. Tighten all hydraulics fittings and inspect all hoses.

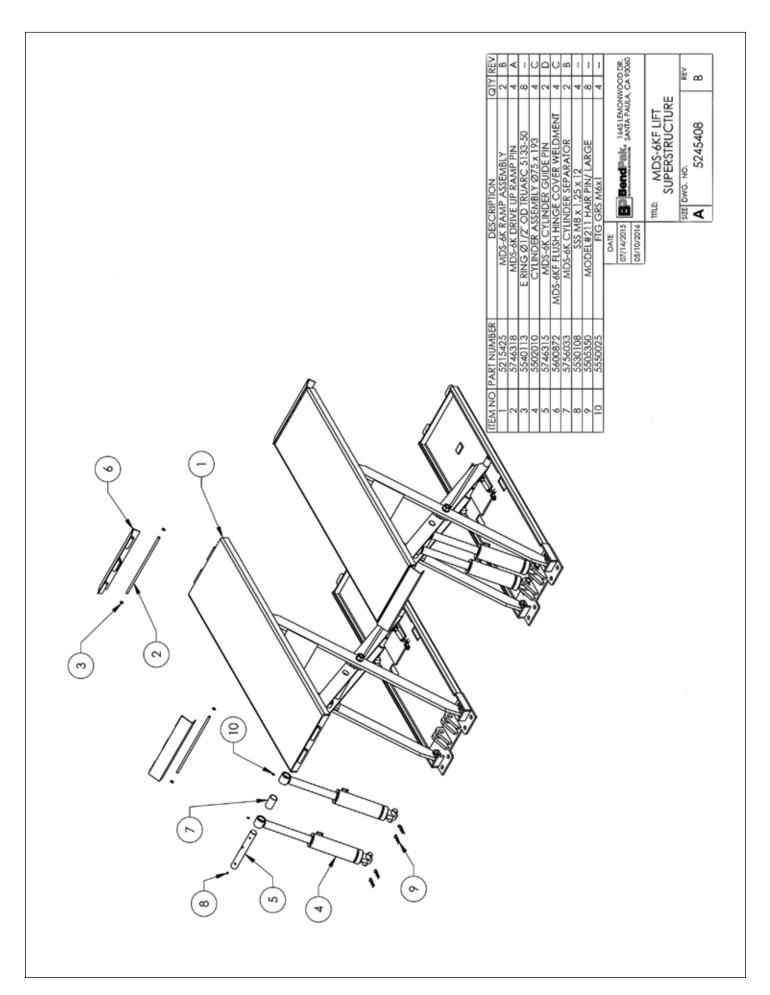
Torque Recommendations

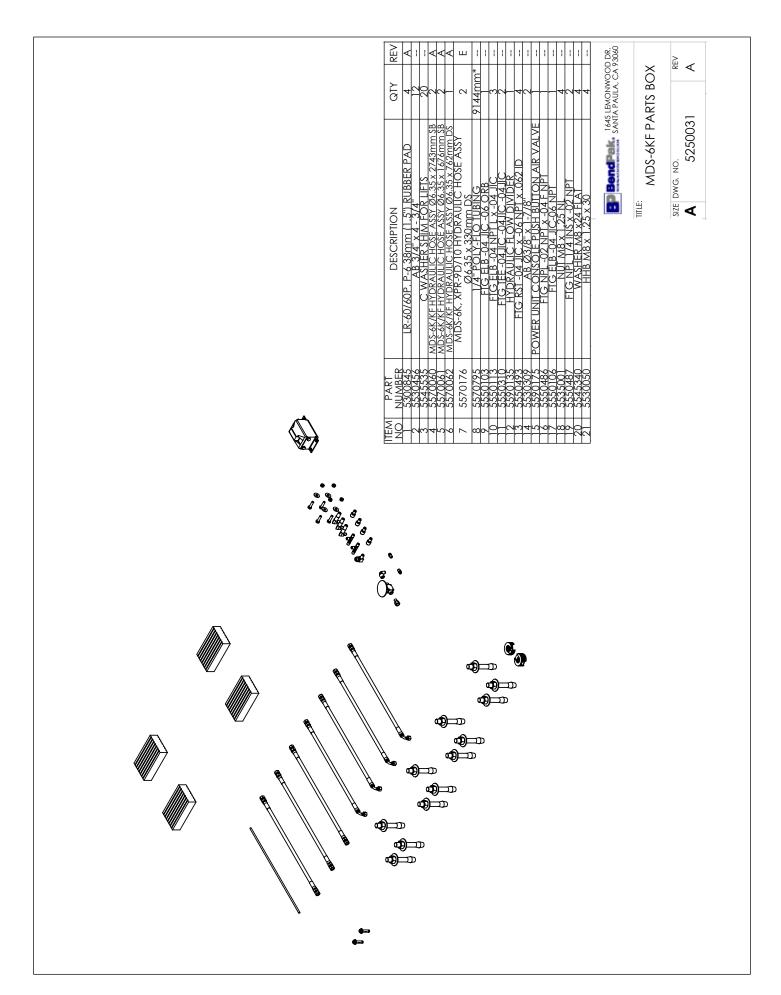
| VALUES ARE STATED IN FOOT POUNDS (ft-lb) | | | | | |
|--|-----------------------|----------------|-------------|-------------|-----------------------|
| | | | | | |
| | | SAE 0-1-2 | SAE Grade 5 | SAE Grade 8 | SOCKET HEAD CAP SCREW |
| | | CLASS 4.8 | CLASS 8.8 | CLASS 10.9 | CLASS 12.9 |
| Bolt Size (SAE) | Bolt Size (Metric) | | | | |
| 1/4-20 | M6 x 1.0 | 6 | 10 | 14 | 13 |
| 5/16-18 | M8 x 1.25 | 12 | 19 | 29 | 31.4 |
| 3/8-16 | M10 x 1.50 | 20 | 33 | 47 | 62 |
| 7/16-14 | | 32 | 54 | 78 | |
| 1/2-13 | M12 x 1.75 | 47 | 78 | 119 | 108 |
| 9/16-12 | M14 x 2.00 | 69 | 114 | 169 | 173 |
| 5/8-11 | M16 x 2.00 | 96 | 154 | 230 | 269 |
| 3/4-10 | M18 x 2.50 | 155 | 257 | 380 | 372 |
| 7/8-9 | M22 x 2.50 | 2.50 206 382 | | 600 | 716 |
| 3/4 An | chor Bolts | 75 MIN 110 MAX | | | |

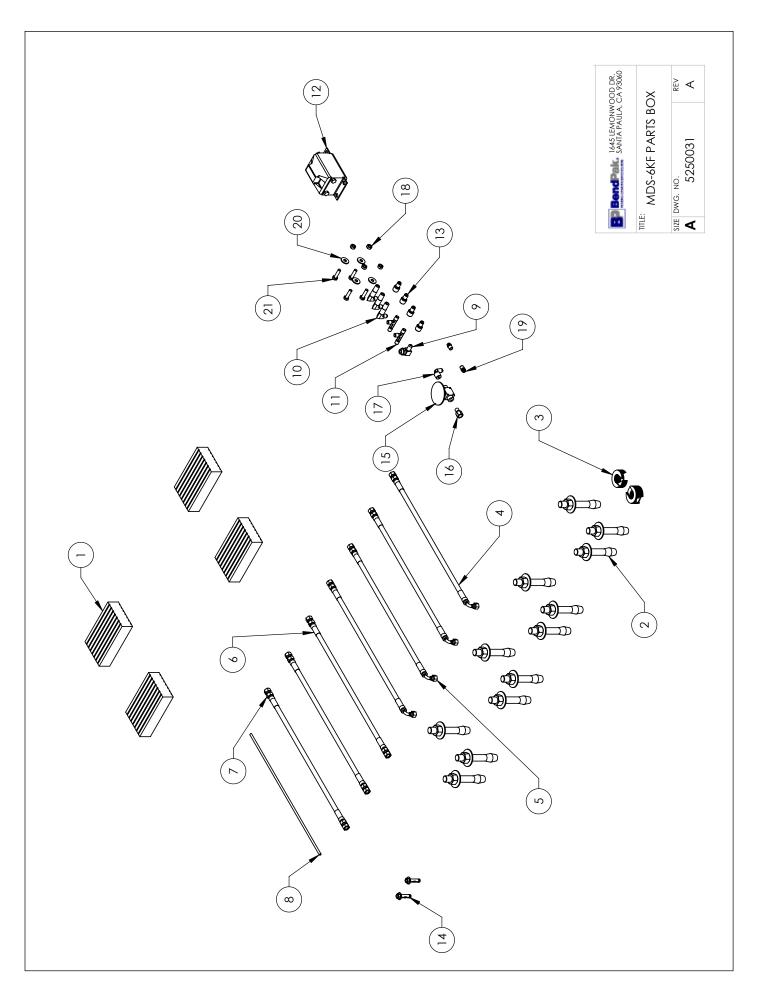
INSTALLATION FORM

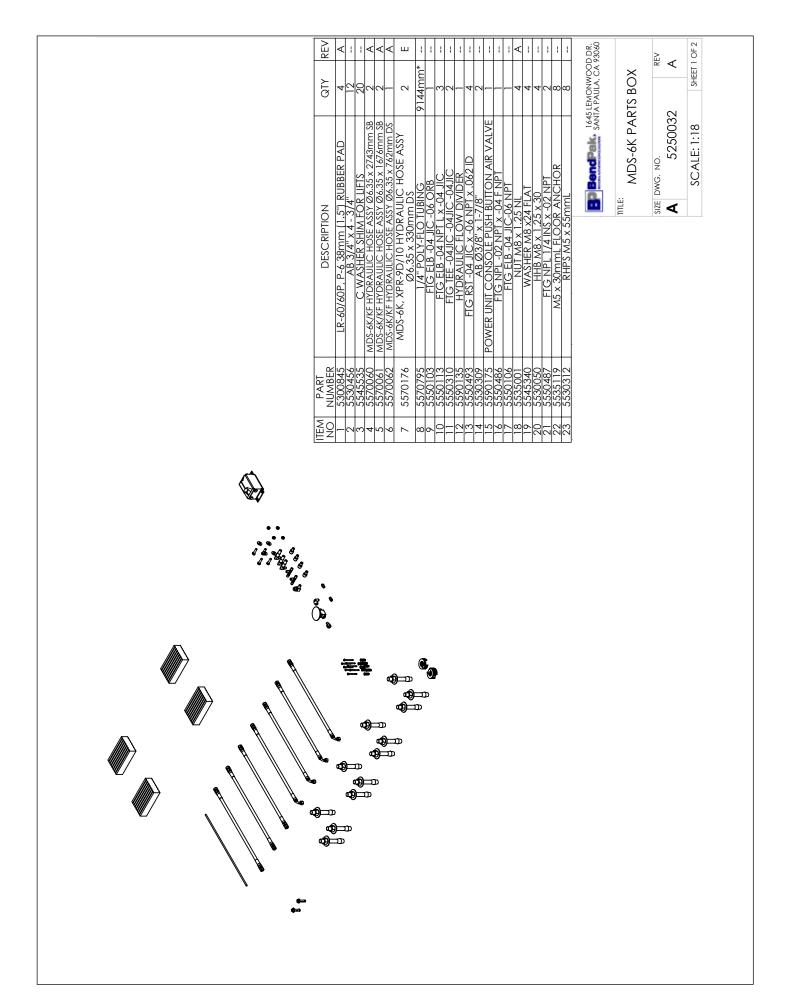
| Customer Name: Date of Installation: | | | | |
|--|---------------------|-------------------------|---------------------------------|--|
| Company Name: | | | | |
| Street Address: | | | | |
| City: | State: | | Zip: | |
| Phone: | | Fax: | | |
| | Pre-In | stall Agreement | | |
| I, (the undersigned) 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: | Print | Name: | Date: | |
| | Post-Inst | allation Check-Off | | |
| ☐ Base and Columns Properly Shimme | ed And Stable | Lubrication of Critical | Components | |
| ☐ Anchor Bolts Tightened ☐ Lift Adapters | | | | |
| Runways Properly Attached and Secured Check For Overhead Obstructions | | | | |
| ☐ Electric Power Supply Confirmed ☐ Runways Level | | | | |
| Cables / Chains Adjusted Properly | | All Screws, Bolts, and | d Pins Secured | |
| ☐ Safety Locks Functioning Properly | | Surrounding Area and | d Lift Clean In Appearance | |
| ☐ Check For Hydraulic Leaks | | Proper Operation, Ma | aintenance and Safety Explained | |
| ☐ Oil Level | | Operation and Safety | Manual(s) Left at Site | |
| I, (the undersigned) confirm that the above installation procedure(s) were completed. I understand that I will be responsible for maintaining this equipment as outlined in the accompanied <i>Installation and Operation Manual</i> and <i>ANSI/ALI ALOIM Safety Requirements for Operation, Inspection and Maintenance</i> . I understand that personal injury and/or damage to property can occur if the above equipment model(s) are not maintained or used improperly and take full responsibility for training my employees on proper use and maintenance of this equipment. I hold the manufacturer and installation company harmless of all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or related to improper use, improper training, or lack of required maintenance. I understand that the warranty does not cover replacement of parts worn or damaged due to normal use or lack of required maintenance | | | | |
| Customer Signature: | Print | Name: | Date: | |
| Installer Signature: | nature: Print Name: | | Date: | |
| Installer Company Name: | | | | |
| Street Address: | | | | |
| City: | | State: | Zip: | |
| Phone: | | Phone (Other): | | |

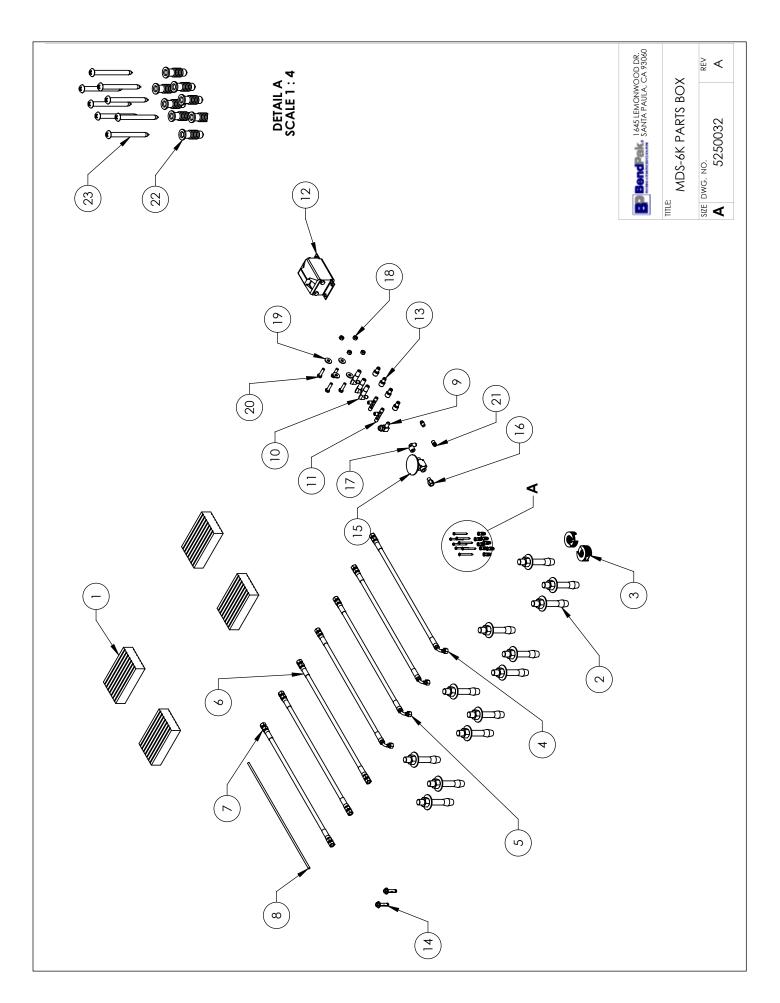


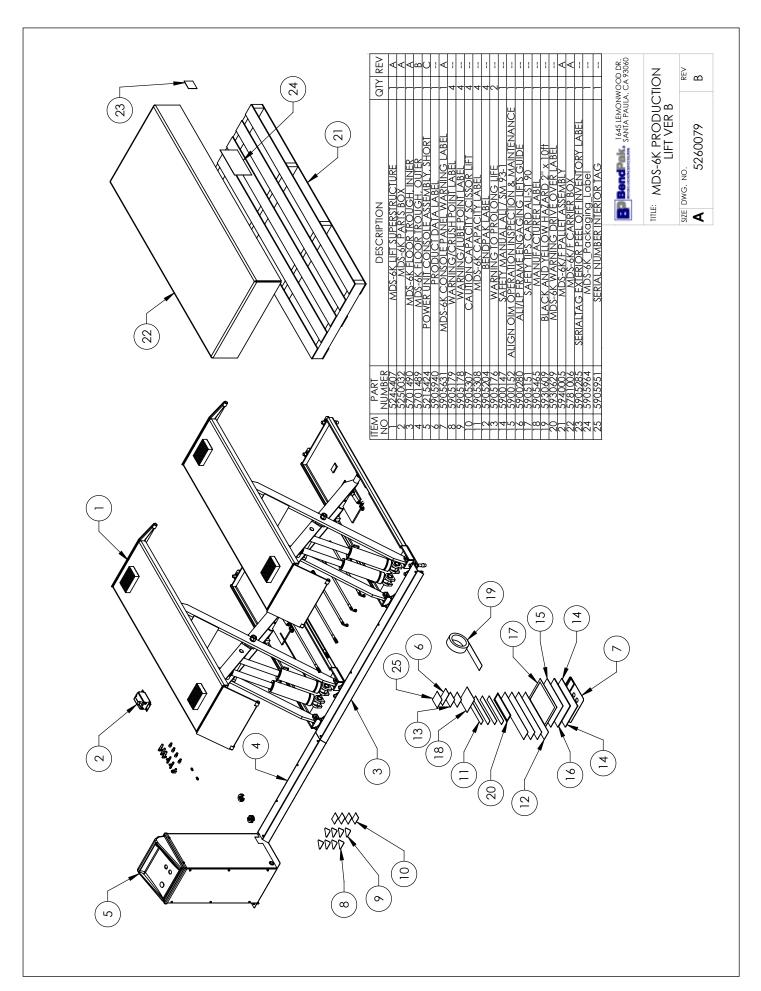


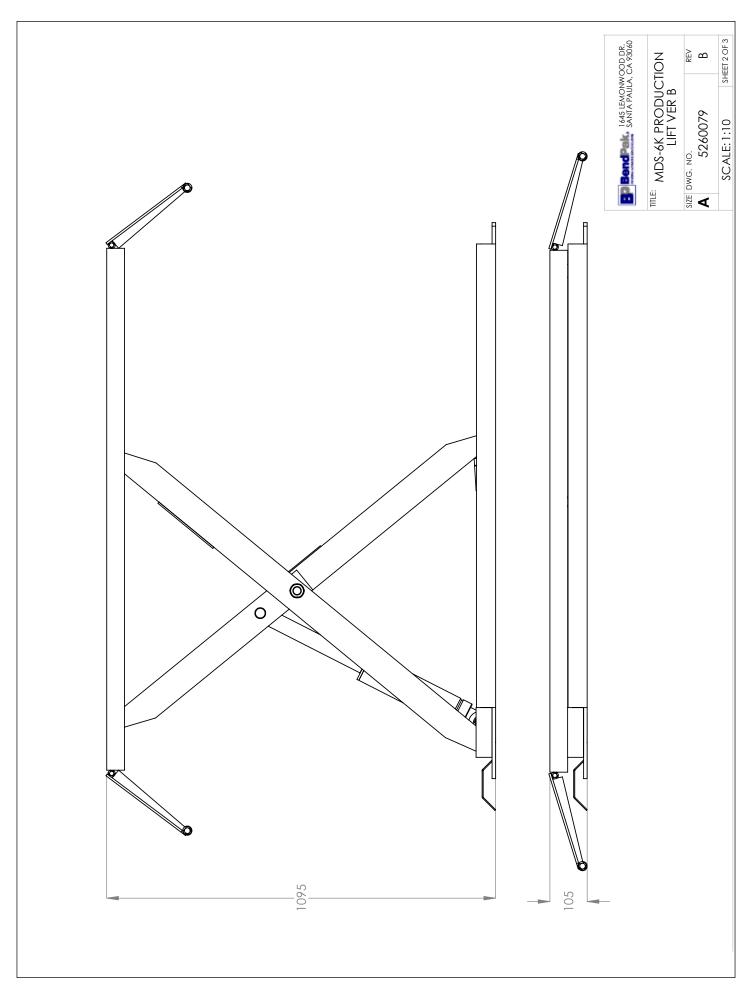


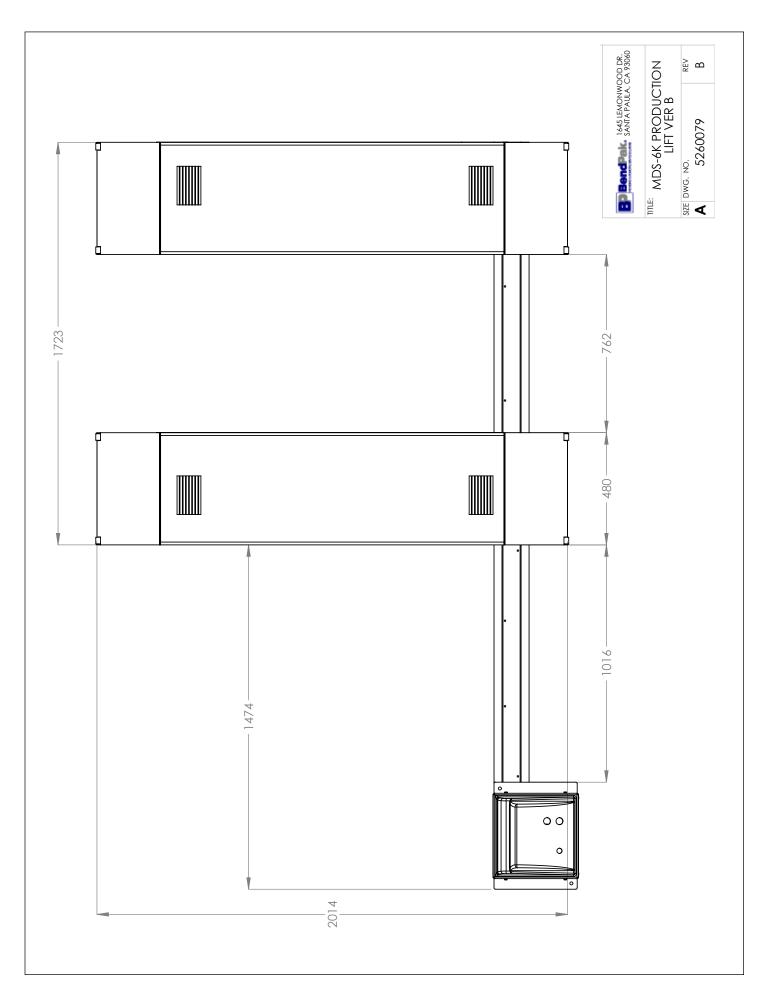


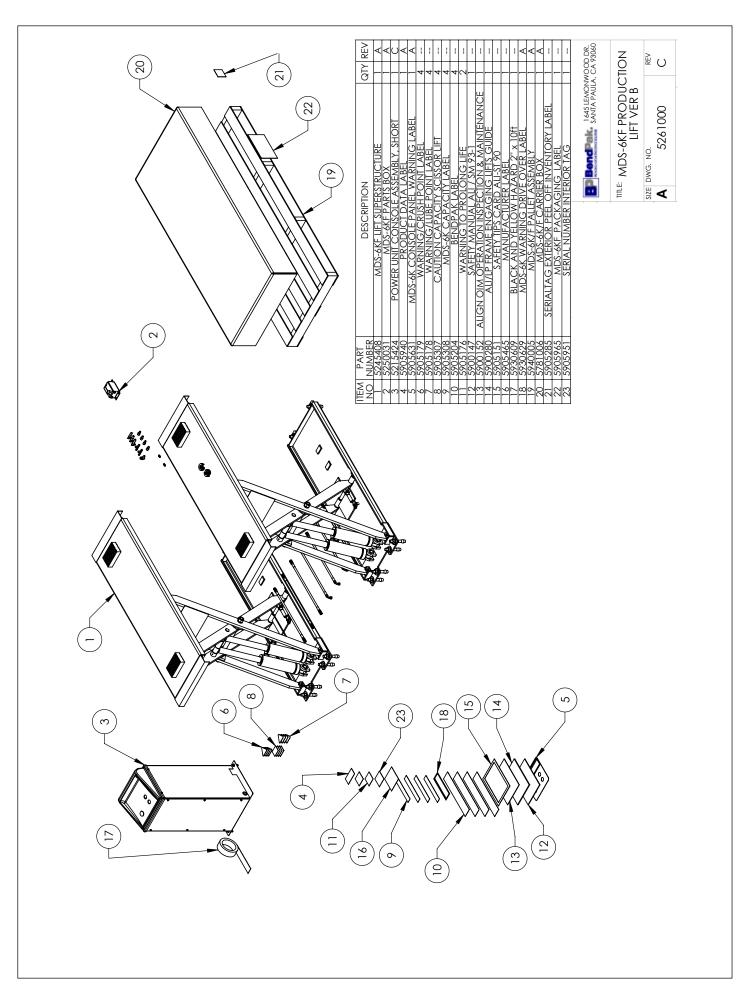


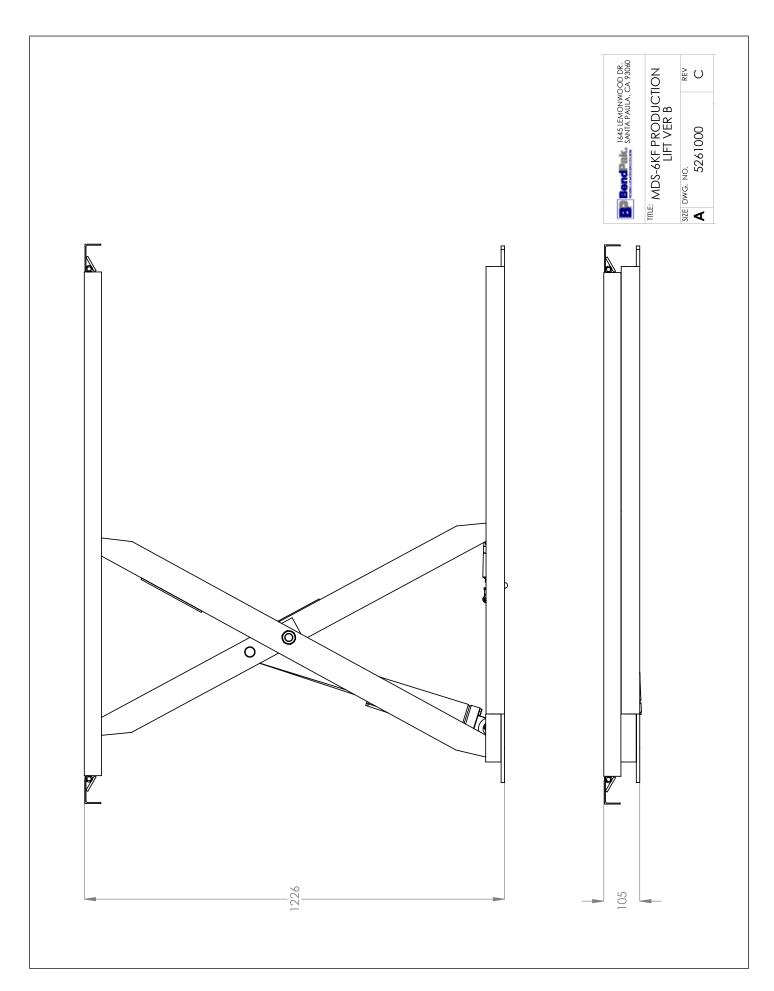


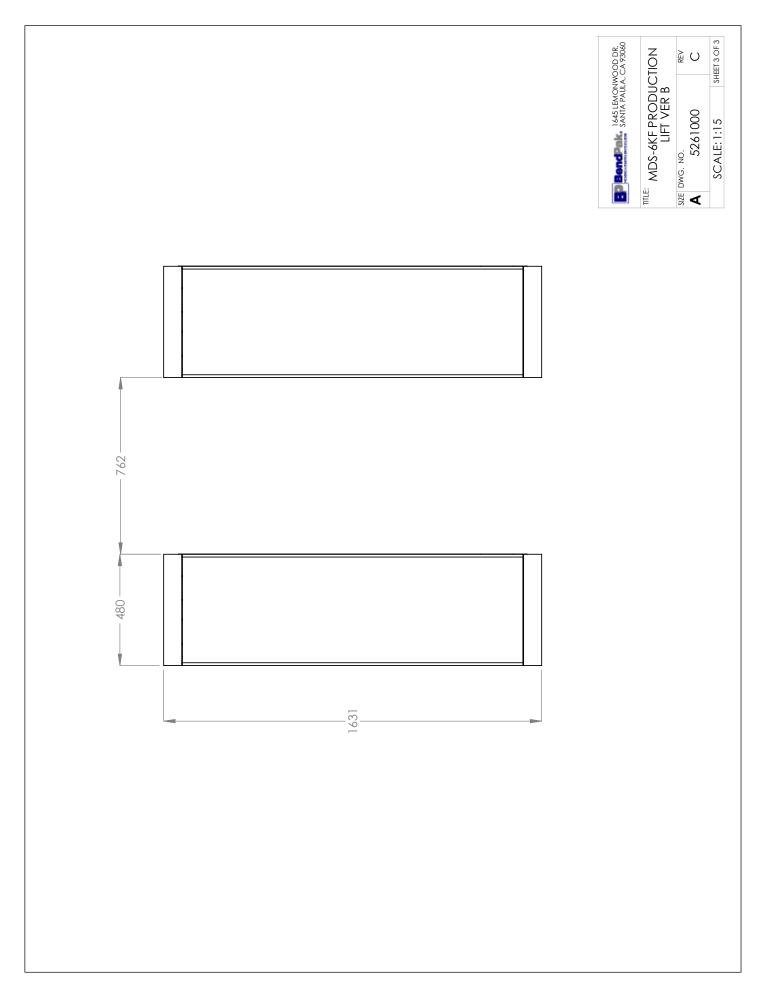


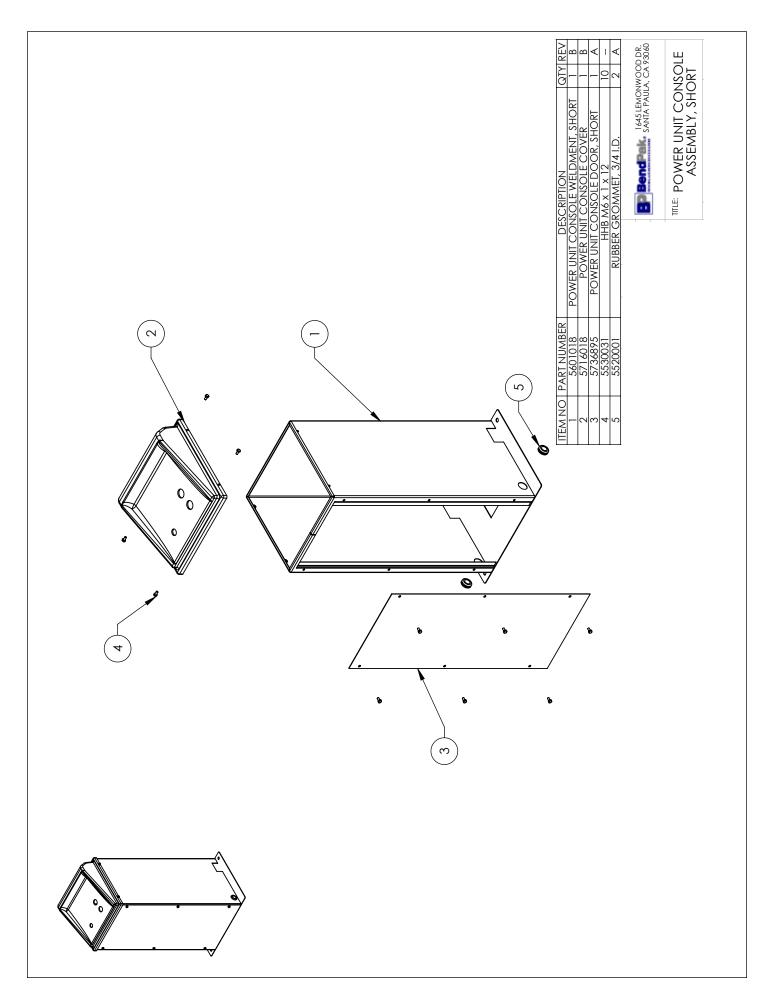


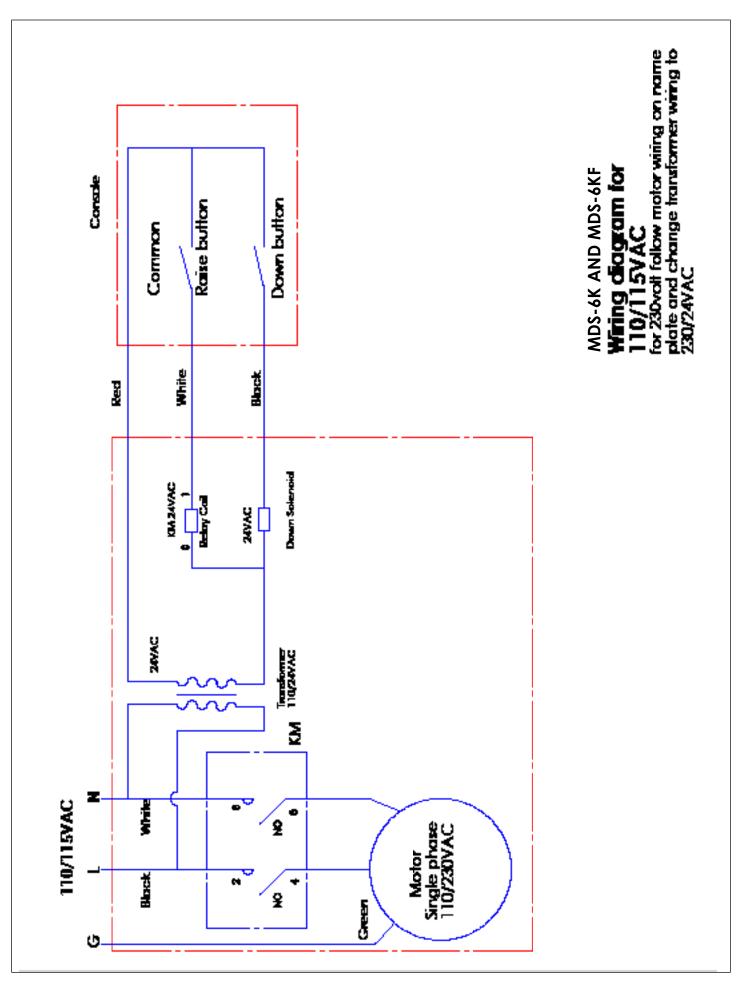












| MAINTENANCE RECORDS |
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