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bendpak.com

Mid-Rise Scissor Lift

Installation and Operation Manual

Manual P/N 5900030 — Manual Revision C1 — July 2020

Models:

MDS-6EXT

MDS-6EXTF

• MDS-6LP

MDS-6LPF



Model MDS-6EXT shown.

Designed and engineered by BendPak Inc. in Southern California, USA. Made in China.



Read the *entire* contents of this manual *before* using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Make sure all other operators also read this manual. Keep the manual near the product for future reference. *By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility of product use.*

Manual. MDS-6 Series Mid-Rise Scissor Lifts, *Installation and Operation Manual*, Manual Part Number 5900030, Manual Revision C1, Released July 2020.

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Limitations. Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. BendPak is not responsible for typographical errors in this manual. Feel free to contact us at any time to get the latest information about any product: **bendpak.com**.

Warranty. The BendPak warranty is more than a commitment to you: it is also a commitment to the value of your new product. Contact your nearest BendPak dealer or visit **www.bendpak.com/support/warranty** for full warranty details. Go to **bendpak.com/support/register-your-product/** and fill out the online form to register your product (be sure to click **Submit**).

Safety. Your new product was designed and manufactured with safety in mind. Your safety also depends on proper training and thoughtful operation. Do not set up, operate, maintain, or repair the unit without reading and understanding this manual and the labels on the unit; **do not use your Lift unless you can do so safely!**

Owner Responsibility. In order to ensure operator safety and maintain your product properly, it is the responsibility of the product owner to read and follow these instructions:

- Follow all setup, operation, and maintenance instructions.
- Make sure product setup conforms to all applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.
- Read and follow all safety instructions. Keep them readily available for operators.
- Make sure all operators are properly trained, know how to safely operate the unit, and are properly supervised.
- Do not operate the product until you are certain that all parts are in place and operating correctly.
- Carefully inspect the product on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with approved replacement parts.
- Keep all instructions permanently with the product and make sure all labels are clean and visible.
- Only use the Lift if it can be used safely!

Unit Information. Enter the Model Number, Serial Number, and the Date of Manufacture from the label on your unit. This information is required for part or warranty issues.

Model:			
Serial: _			
Date of	Manufacture:		



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Introduction

This manual describes the following Mid-Rise Scissor Lift models:

- **MDS-6EXT**: Mid-Rise Scissor Lift with extended length Platforms that can raise up to 6,000 lbs (2,722 kg). ALI certified.
- MDS-6EXT F: The flush-mount version of the MDS-6EXT, ALI certified.
- MDS-6LP: Mid-Rise Scissor Lift with normal length Platforms but a higher rise that can raise up to 6,000 lbs (2,722 kg). ALI certified.
- MDS-6LPF: The flush-mount version of the MDS-6LP. ALL certified.

More information about the full line of BendPak products is available at **bendpak.com**.

This manual is mandatory reading for users of the MDS-6EXT/F and MDS-6LP/F models, including anyone who sets up, operates, maintains, or repairs them.



Be very careful when setting up, operating, maintaining, or repairing this equipment; failure to do so could result in property damage, product damage, injury, or (in very rare cases) death. Make sure only authorized personnel operate this equipment. All repairs must be performed by an authorized technician. Do not make modifications to the unit; this voids the warranty and increases the chances of injury or property damage. Make sure to read and follow the instructions on the labels on the unit.

Keep this manual on or near the equipment so that anyone who uses or services it can read it.

If you are having issues, refer to the **Troubleshooting** section of this manual for assistance.

Technical support and service is available from your dealer, on the Web at **bendpak.com/support**, by email at **support@bendpak.com**, or by phone at **(800) 253-2363**, extension 196.

You may also contact BendPak for parts replacement information (please have the model and serial number of your unit available) at **(800)** 253-2363, extension 191.

Shipping Information

Your equipment was carefully checked before shipping. Nevertheless, you should thoroughly inspect the shipment *before* you sign to acknowledge that you received it.

When you sign the bill of lading, it tells the carrier that the items on the invoice were received in good condition. *Do not sign the bill of lading until after you have inspected the shipment.* If any of the items listed on the bill of lading are missing or damaged, do not accept the shipment until the carrier makes a notation on the bill of lading that lists the missing and/or damaged goods.

If you discover missing or damaged goods **after** you receive the shipment and have signed the bill of lading, notify the carrier at once and request the carrier to make an inspection. If the carrier will not make an inspection, 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 signed bill of lading. If this happens to you, file a claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs. Our willingness to assist in helping you process your claim does not make us responsible for collection of claims or replacement of lost or damaged materials.

Safety Considerations

Read this manual carefully before using your new product. Do not set up or operate the product until all installers/operators are familiar with all operating instructions and warnings.

General Safety Information

- The products are mid-rise Scissor Lifts. Use them only for their intended purpose.
- The products should only be operated by authorized, trained personnel.
- You **must** wear OSHA-approved (publication 3151) personal protective equipment at all times when installing, using, maintaining, or repairing the Lift: leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are **mandatory**.
- When the product is in use, keep people and body parts well away from it.
- Make sure all operators read and understand this Installation and Operation Manual. Keep the manual near the device at all times.
- Make a visual inspection of the product before using it. Check for damage or missing parts. Do not use the product if you find any issues. Instead, take it out of service, then contact your dealer, email support@bendpak.com, visit bendpak.com/support, or call (800) 253-2363.
- Make a thorough inspection of the product at least once a year. Replace any damaged or severely worn parts or warning labels.

Symbols

Following are the symbols used in this manual:

⚠ DANGER Calls attention to an immediate hazard that will result in injury or death.

MARNING Calls attention to a hazard or unsafe practice that **could** result in injury or death.

⚠ CAUTION Calls attention to a hazard or unsafe practice that could result in minor personal

injury, product, or property damage.

NOTICE Calls attention to a situation that, if not avoided, could result in product or property

damage.

Tip Calls attention to information that can help you use your product better.

Liability Information

BendPak Inc. assumes **no** liability for damages resulting from:

- Use of the product for purposes other than those described in this manual.
- Modifications to the equipment without prior, written permission from BendPak Inc.
- Injury or death caused by modifying, disabling, overriding, or removing safety features.
- Damage to the equipment from external influences.
- Incorrect operation of the equipment.

Frequently Asked Questions

Question: How much weight can MDS-6 Series Lifts raise?

Answer: They can raise Vehicles up to 6,000 pounds (2,722 kg).

Q: What is the difference between the MDS-6EXT and MDS-6LP Lifts?

A: The MDS-6EXT has **extended-length Platforms**, so it can raise Vehicles with longer wheelbases. The MDS-6LP can **raise Vehicles higher**.

Q: How high does a "mid-rise" Scissor Lift raise a Vehicle?

A: There are differences between the four models, but they all raise in the neighborhood of three feet, plus a little extra height from the Lift Blocks.

Q: What does "flush mount" mean?

A: It means the Frames of the MDS-6EXT**F** and MDS-LP**F** are installed below the surface of the Concrete, in a Concrete Cutout, so Vehicles drive straight onto the Platforms without having to go up a Ramp (the tops of the Platforms are "flush" with the floor).

Q: Can the Lifts covered in this manual be installed outdoors?

A: No. Both Lifts are approved for indoor installation and use only. Outdoor installation is prohibited.

Q: Can I put the Console on either side of the Lift?

A: Yes. The Hydraulic Hoses and the Covers that come with the Lifts are long enough to support the Console being up to 40 inches away on either side. Make sure to position the Console next to the Side Holes in the Bases; the Air Line, Return Line, and Hydraulic Hoses are routed through them.

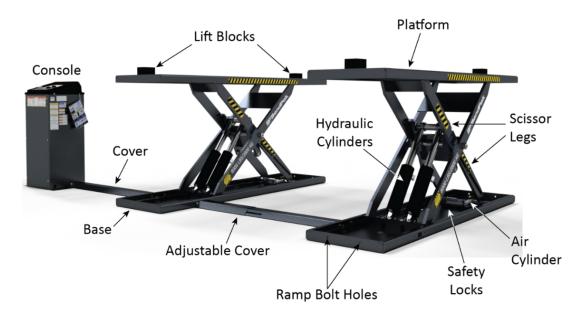
Q: What does a Safety Lock do?

A: Safety Locks hold the Platforms up, **once they are engaged**. Even if the Lift loses power, the Platforms stay where they are if they were left engaged on a Safety Lock. **Only leave your Lift either fully lowered or engaged on a Safety Lock.**

Q: How many Safety Locks do the Lifts have?

A: Three.

Components



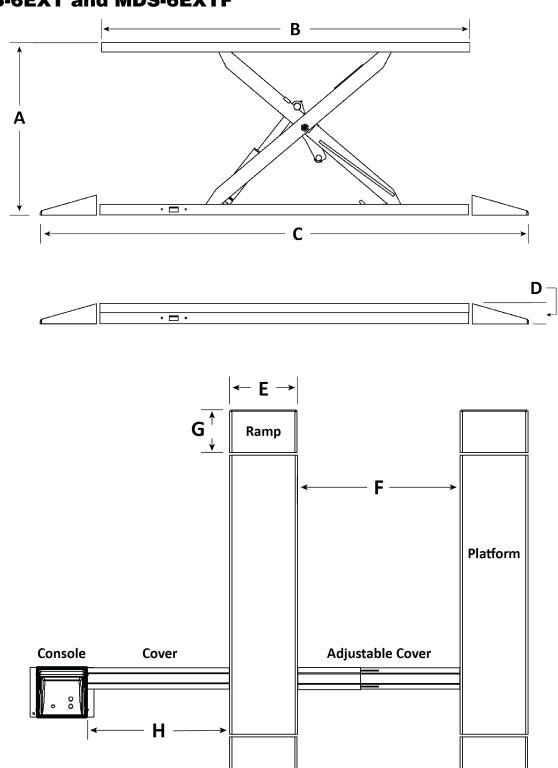
MDS-6EXT shown without Ramps. Power Unit and Flow Divider are inside the Console. Air and Hydraulic Hoses are routed under the two Covers.

Lift components include:

- **Console**. Hosts the Lift Controls (on top) and the Power Unit and Flow Divider (inside). The Air and Hydraulic Hoses connect to the Power Unit inside the Console.
- **Power Unit**. Provides Hydraulic Fluid to the Hydraulic Cylinders. Housed inside the Console. Connects to an external power source and to the Lift Controls.
- **Flow Divider**. Evenly splits the Hydraulic Fluid coming from the Power Unit so that the Platforms raise and lower together.
- **Ramps**. Used to drive onto and off of the Platforms for the MDS-6EXT and MDS-6LP. Not included with the MDS-6EXT**F** or the MDS-6LP**F**.
- **Platforms**. The tops of the Lift. Flat steel plates that raise and lower.
- **Lift Blocks**. Rubber blocks that make contact with the lifting points on the underside of the Vehicle being raised. Eight tall and eight medium Lift Blocks are included.
- **Base**. The bottoms of the Lift. They hold the Hydraulic Cylinders, the Scissor Legs, the Safety Locks, and the Air Cylinder. You anchor the Lift in place using the Anchor Bolt holes in each Base.
- **Frames**. A Platform, Base, and Scissor Legs taken together are called a Frame. All four models described in this manual have two Frames.
- **Scissor Legs**. The parts of the Lift that raise and lower, powered by the Hydraulic Cylinders.
- **Hydraulic Cylinders**. Push the Platforms up to raise a Vehicle, move them down to lower it.
- **Safety Locks**. Hold the Platforms in place. Each Lift has multiple Safety Lock positions, which let you select the best Platform height for your needs.
- **Air Cylinders**. Push the Platforms off their Safety Locks so you can lower the Lift. You must provide an air pressure supply (minimum 50 psi / 10 CFM, regulated to a maximum of 125 psi).
- Cover and Adjustable Cover. Cover the Air and Hydraulic Hoses.
- **Side Holes**. Holes in the sides of the Base through which the Air Line, Return Line, and Hydraulic Hoses are routed.

Specifications

MDS-6EXT and MDS-6EXTF

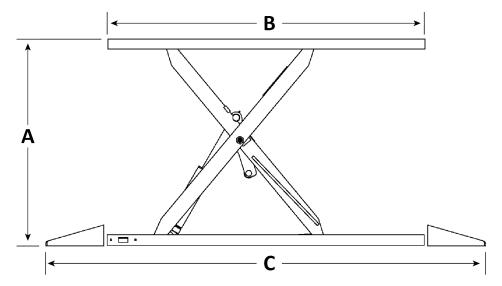


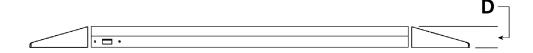
The MDS-6EXT **F** does not have Ramps or Covers.

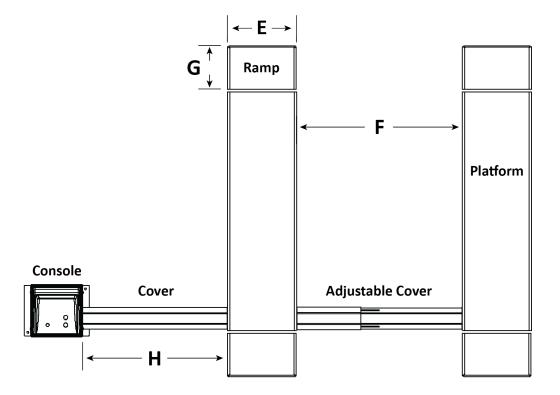
Model	MDS-6EXT	MDS-6EXTF	
Туре	Surface	Flush-Mount	
Lifting capacity	6,000 lbs. / 2,722 kg	6,000 lbs. / 2,722 kg	
A Lifting height (no blocks)	36.5" / 925 mm	31.5" / 799 mm	
Lifting height (short lift blocks)	37.25" / 945 mm	32.25" / 819 mm	
Lifting height (med lift blocks)	38.5" / 980 mm	33.5" / 854 mm	
B Platform length	78.75" / 2,000 mm	78.75" / 2,000 mm	
C Total length	104.25" / 2,650 mm (ramps)	78.75" / 2,000 mm (no ramps)	
D Lowered height	5" / 126 mm	Flush with ground	
■ Platform width	19" / 484 mm	19" / 484 mm	
F Width between Platforms	40 to 46" / 1,018 to 1,168 mm	40 to 46" / 1,018 to 1,168 mm	
G Ramp Length	12.75" / 325 mm	No ramps	
H Max. Platform to Console	40" / 1,024 mm	40" / 1,024 mm	
Lifting time	35 seconds	35 seconds	
Motor	220 VAC at 50 Hz, 1 Ph	220 VAC at 50 Hz, 1 Ph	
	208-230 VAC at 60 Hz, 1 Ph	208-230 VAC at 60 Hz, 1 Ph	

Specifications subject to change without notice.

MDS-6LP and MDS-6LPF







The MDS-6LP F does not have Ramps or Covers.

Model	MDS-6LP	MDS-6LPF	
Туре	Surface	Flush-Mount	
Lifting capacity	6,000 lbs. / 2,722 kg	6,000 lbs. / 2,722 kg	
A Lifting height (no blocks)	43.5" / 1,108 mm	38.75" / 982 mm	
Lifting height (med lift blocks)	45.75" / 1,163 mm	40.75" / 1,037 mm	
Lifting height (tall lift blocks)	46.5" / 1,183 mm	41.5" / 1,057 mm	
B Platform length	67" / 1,701 mm	67" / 1,701 mm	
C Total length	92.5" / 2,351 mm (ramps)	67" / 1,701 mm (no ramps)	
D Lowered height	5" / 126 mm	Flush with ground	
■ Platform width	19" / 484 mm	19" / 484 mm	
F Width between Platforms	40 to 46" / 1,018 to 1,168 mm	40 to 46" / 1,018 to 1,168 mm	
G Ramp Length	12.75" / 325 mm	N/A	
H Maximum Distance Platform to Console	40" / 1,024 mm	40" / 1,024 mm	
Lifting time	35 seconds	35 seconds	
Motor	220 VAC at 50 Hz, 1 Ph	220 VAC at 50 Hz, 1 Ph	
	208-230 VAC at 60 Hz, 1 Ph	208-230 VAC at 60 Hz, 1 Ph	

Specifications subject to change without notice.

Installation Checklist

Following are the steps needed to install the Lift. Perform them in the order shown.
☐ 1. Review the installation Safety Rules.
☐ 2. Plan for Electrical Work.
☐ 3. Make sure you have the necessary Tools.
☐ 4. Select the installation Site.
☐ 5. Check Clearances around the Lift.
☐ 6. Create Concrete Cutouts; flush-mount models only.
☐ 7. Create a Floor Plan.
☐ 8. Lift the Platforms off the Bases.
☐ 9. About Effective Embedment.
☐ 10. Anchor the Bases.
☐ 11. Set up and anchor the Console.
☐ 12. Avoiding Hydraulic Contamination.
☐ 13. Connect the Hydraulic Hoses.
☐ 14. Understand Compression Fittings and Tubing.
☐ 15. Connect the Air Lines.
☐ 16. Connect the Return Lines.
☐ 17. Contact the Electrician.
☐ 18. Connect and prepare the Power Unit (Electrician required for some parts).
☐ 19. Fill the Hydraulic Fluid Reservoir.
☐ 20. Install a Power Disconnect Switch (Electrician required).
☐ 21. Install a Thermal Disconnect Switch (Electrician required).
☐ 22. Lubricate the Lift.
☐ 23. Add the Ramps.
$\hfill\square$ 24. Anchor the Console (if it is not already anchored).
☐ 25. Perform an Operational Test.
☐ 26. Review the Final Checklist.
☐ 27. Leave the Manual for the Owner/Operator.

Installation

This section describes how to install your Lift. Perform the steps in the order listed. Correct operation of the Lift requires correct installation. Take your time, read the instructions, do it right.

⚠ WARNING

Only use the factory-supplied parts that came with your Lift. If you use parts from a different source, you void your warranty and compromise the safety of everyone who installs or uses the Lift. If you are missing parts, visit bendpak.com/support or call (800) 253-2363, extension 191.

Lift owners are responsible for any special regional, structural, or seismic anchoring requirements specified by any agencies or codes, such as the Uniform Building Code or International Building Code.

Safety Rules

When installing your Lift, your safety depends on proper training and thoughtful operation.



MARNING Do not install this equipment unless you have automotive Lift installation training. Always use proper lifting tools, such as a Forklift or Shop Crane, to raise heavy components. Do not install this equipment without reading and understanding this manual and the safety labels on the unit.

BendPak recommends referring to the current version of the ANSI/ALI ALIS Standard Safety Requirements for Installation and Service for more information about safely installing, using, and servicing your Lift.

Only fully trained personnel should be involved in installing this equipment. Pay attention at all times. Use appropriate tools and lifting equipment, when needed. Stay clear of moving parts.



MARNING You *must* wear OSHA-approved (publication 3151) Personal Protective Equipment at all times when installing the Lift: leather gloves, steel-toed boots, eye protection, back belts, and hearing protection are *mandatory*.

Electrical Work

You will need to have a licensed, certified Electrician available at some point during the installation. The things the Electrician needs to do are grouped together near the end of the installation.



All wiring **must** be performed by a licensed, certified Electrician.

The Electrician needs to:

- Connect the 220 VAC power source to the Power Unit. The Electrician will need to provide a power cable with an appropriate plug. The power cable and plug are not included.
- Install a Power Disconnect Switch. A Power Disconnect Switch ensures that the equipment shuts down in the event of an electrical circuit fault or emergency situation. Refer to Install a Power Disconnect Switch for more information.
- Install a Thermal Disconnect Switch. A Thermal Disconnect Switch ensures that the equipment shuts down in the event of an overload or an overheated motor. Refer to Install a Thermal Disconnect Switch for more information.

It is the responsibility of the Electrician to bring the necessary components.

Tools

You may need some or all of the following tools:

- Rotary hammer drill or similar
- 3/4", 3/8", 1 1/4" masonry bits
- Hammer
- Open-end wrench set: 1/2", 15/16" 1 1/8" or adjustable wrench
- Socket and ratchet set, 1 1/8"
- Medium crescent wrench
- Level (4 foot recommended)
- Crow bar
- Chalk line
- Medium flat screwdriver
- Tape measure (25-foot recommended)
- Forklift or Shop Crane

Select a Site

Keep the following in mind when selecting a site for your Lift:

- **Enough space**. Make sure there is adequate space on all sides, plus enough room above for the Vehicles you will be raising. Refer to **Clearance Around the Lift** for more information.
- **No overhead obstructions**. Make sure the site is free of low-hanging overhead obstructions.
- **Concrete specifications**. Do not install the Lift on cracked or defective concrete. Make sure the concrete is at least 4.25 inches thick, 3,000 psi, and cured for at least 28 days (if newly poured). Make sure the floor is defect-free, dry, and level. Only install the Lift on concrete. Note that flush-mount Lifts require a greater depth of concrete.



Do not install your Lift on a surface with 3° of slope or greater. A 3° slope or greater could lead to property damage, personal injury, or death.

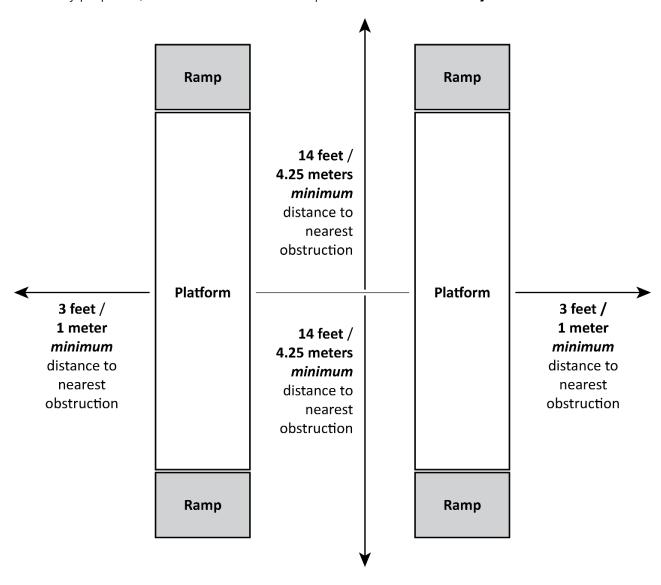
- **Power**. You need an appropriate power source near the Console. If you are using the Lift at 220 VAC at 50 Hz, use a 25 amp or greater fuse. If you are using the Lift at 208-230 VAC at 60 Hz, use a 25 amp or greater fuse.
- **Operating temperature**. The Lift is designed to be used between temperatures of 41° to 104°F (5° to 40°C).
- Outdoor installation. All Lift models are approved for installation and use only. Outdoor installation is prohibited.-
- **Second floor installs**. Do not install the Lift on a second floor or elevated floor without first consulting the building architect and getting their permission.
- **Dress properly**. Wear protective gear (safety goggles, helmet, heavy gloves, suitable working clothes, safety boots, ear protection, and so on) at all times when installing the Lift. Do not wear loose clothing or jewelry; contain long hair; keep hair, clothing, and gloves away from moving parts.



Always wear appropriate protective gear when working on the Lift.

Clearance Around the Lift

For safety purposes, a certain amount of clear space around the Lift is *required*.

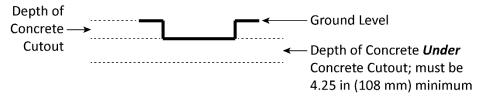


Prepare the Concrete Cutouts: Flush-Mount Models Only

Important: BendPak *strongly* recommends working with a Concrete Specialist to plan and create the Concrete Cutouts for your Flush-Mount Lift.

It is important to understand the following **before** creating the Concrete Cutouts for your Lift:

- **Concrete Cutouts**. The Frames of a Flush-Mount Lift are installed in a recessed section of the floor, called a Concrete Cutout. Concrete Cutouts **must** be created in advance.
- **Depth of the Concrete Cutouts**. Concrete Cutouts must be a specific depth below floor level so that when the Frames are put down into the Concrete Cutouts, the tops of the Platforms are flush with the floor; a minimum of 5.25 inches (136 mm).
- **Concrete Curing Time**. Concrete Cutouts must cure for a minimum of 28 days before they are strong enough to support Anchor Bolts.
- **Floor Material**. Concrete Cutouts must be created in a *Concrete* floor; no other surface (asphalt, dirt, anything else) is acceptable.
- **Decisions**. There are certain decisions you must make **before** creating your Concrete Cutouts: Lift location, Console location, and how far apart the two Frames will be. Incorporate your decisions into the Plan you create with your Concrete Specialist.
- **Cutout Size**. Concrete Cutouts need to be slightly larger than the Frames. The values listed at the end of this section add about .5 inch (~12.75 mm) on all four sides of each Frame.
- **Concrete Depth**. The Concrete depth *below the bottom* of the Concrete Cutouts must be deep enough for the Anchor Bolts; a minimum of 4.25 inches (108 mm).



• **Hydraulic Hoses, Air Lines, and Return Lines**: Because the Frames are recessed, the Air Line, Return Line, and Hydraulic Hoses start out recessed as well. Your plan for the Concrete Cutouts need to account for how these Lines will be routed to the Console.

Some people use PVC tubing to create a hole between the two Bases when creating their Concrete Cutouts. This allows the Lines to be routed between the two Bases below floor level.

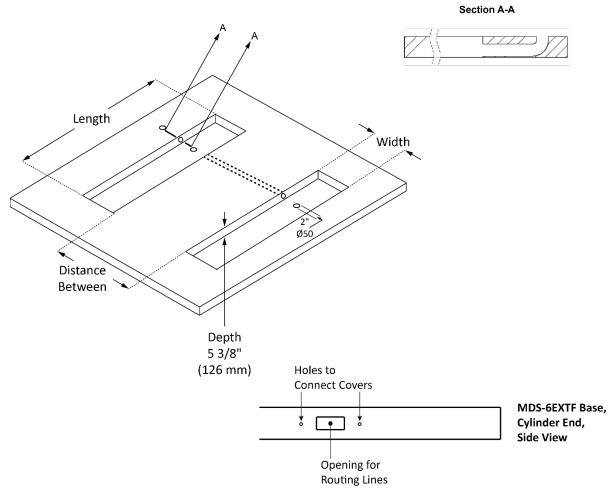
Some people also use PVC tubing to create a hole from the Base towards the Console. This allows the Lines to be routed below floor level for at least part of the way from the Base to the Console.

Both Bases come with rectangular openings for routing the Hydraulic and Air Lines; two per Base, both on the Cylinder end. There is also one circular opening in the bottom of each Base, also on the Cylinder end, that can be used for routing the Hydraulic Hoses, Air Lines, and Return Lines.

These openings are for your convenience. If they work for your environment, use them. If they do not work for your environment, you are not required to use them.

- **Lift Location**. Use care when selecting a location for a Flush-Mount Lift. Once you create your Concrete Cutouts, the Lift location is fixed.
- **Console Location**. The Console can go on either side of the Lift. The supplied hosing allows you to put it up to a certain distance away from the closest Base.
- **Distance Between Frames**. Most Scissor-Lift Frames can be a variable distance apart, allowing you to pick the best width for the Vehicles you will be lifting. Determine the distance you want, then add that to your Plan.

You and your Concrete Specialist can use the following diagram as a guide if you are creating Concrete Cutouts for an MDS-6EXTF.



Drawing not necessarily to scale. Not all components shown.

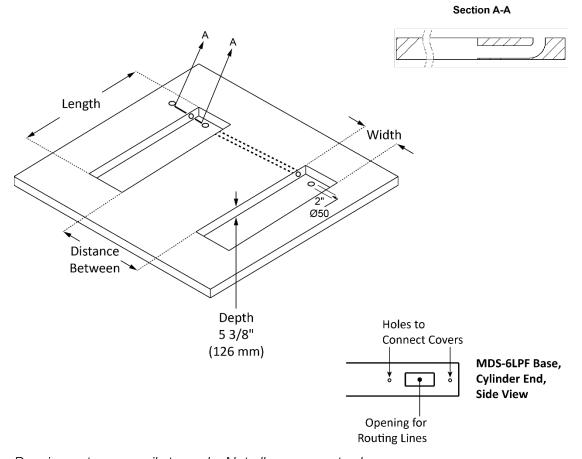
The Flush-Mount Lift settings for the **MDS-6EXTF** are:

- Length. The Length of each Frame is 78.75 inches / 2,000 mm; add 1 inch / 25 mm to get ~78.75 inches / 2,025 mm.
- Width. The Width of each Frame is 19 inches / 484 mm; add 1 inch / 25 mm to get ~20 inches / 509 mm.
- **Depth**. The Lowered height of each Frame is **5 inches / 126 mm**. You do *not* add an extra inch to this value.
- **Distance Between**. The two Bases can be from **40** to **46 inches / 1,018** to **1,168 mm** apart. You do *not* add an extra inch to this value.
- **Distance to Console**. The supplied hosing allows the Console to be up to **40 inches / 1,024 mm** from the nearest Base. You do **not** add an extra inch to this value.

NOTICE

If you create your Concrete Cutouts and then change your mind about the Distance Between or find out you made a mistake with one of the numbers, it is very difficult to fix. BendPak recommends double checking your plan several times before pouring your Concrete Cutouts.

You and your Concrete Specialist can use the following diagram as a guide if you are creating Concrete Cutouts for an MDS-6LPF.



Drawing not necessarily to scale. Not all components shown.

The Flush-Mount Lift settings for the MDS-6LPF are:

- **Length**. The Length of each Frame is 67 inches / 1,701 mm; add 1 inch / 25 mm to get ~68 inches / 1,726 mm.
- Width. The Width of each Frame is 19 inches / 484 mm; add 1 inch / 25 mm to get ~20 inches / 509 mm.
- **Depth**. The Lowered height of each Frame is **5 inches / 126 mm**. You do *not* add an extra inch to this value.
- **Distance Between**. The two Bases can be from **40** to **46 inches / 1,018** to **1,168 mm** apart. You do *not* add an extra inch to this value.
- **Distance to Console**. The supplied hosing allows the Console to be up to **40 inches / 1,024 mm** from the nearest Base. You do **not** add an extra inch to this value.

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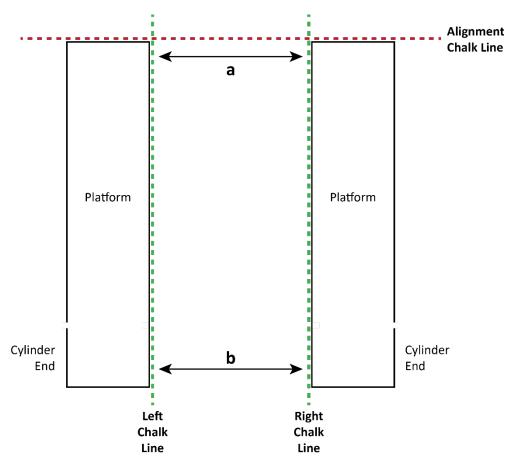
Create a Floor Plan

Make sure to plan out, in advance, where the Lift and Console are going to go:

- Clearance. Make sure there is clearance on all sides and above.
- **Console**. The Console must be near the Lift; it can be installed on either side. The Hydraulic Hoses that come with the unit can support up to 40 inches between the Lift and the Console.
- Operator. The operator at the Console must have a full, unobstructed view of the Lift.
- **Power**. The Console must be positioned near an appropriate power source.
- **Set up Chalk Line Guides**. Create Chalk Line Guides for the Lift to make sure the Lift is properly aligned.

To create Chalk Line Guides:

- 1. Decide where you want to locate the Lift. Keep in mind the Console needs to be within 40 inches.
- 2. Create an Alignment Chalk Line where you want the front of the Lift. Note that the drawing below does not show the Ramps.
 - Make the Alignment Chalk Line longer than the width of the Platforms and the space between.
- 3. Add two more Chalk Lines perpendicular to the Alignment Chalk Line and the same distance apart that you want your Platforms to be (within the range of 40" to 46" / 1,018 mm to 1,168 mm).
 - The following drawing shows the Alignment Chalk Line at the front of the Lift and Left and Right Chalk Lines perpendicular to the Alignment Chalk Line.



Not necessarily to scale. Not all components shown. Ramps not shown.

4. Move the two Platforms into position where the Left and Right Chalk Lines intersect the Alignment Chalk Line.



If you are installing the Lift over a pit, you can skip the Left and Right Chalk Lines and just use the edges of the pit as guides. Do not overhang the pit.

- 5. Measure the distance between the two Platforms at points **a** and **b**; the two Platforms need to be the same distance apart at both points.
 - If **a** and **b** are not the same, adjust the Platform locations; make sure they are the same distance apart and parallel to each other (or the pit, if installing over a pit).
- 6. When the Platforms are in the correct locations, they can be anchored into place.

Lift the Platforms Off the Bases

You must raise the Platforms off their Bases in order to anchor the Lift into position and connect the Hydraulic Hose, Air Line, and Return Line. **Be sure to leave the Lift on a Safety Lock when you raise it.**

Important:

BendPak recommends using the Eyelet that comes with the Lift to raise the Platforms off the Bases.



BendPak strongly recommends using **at least three people** to lift the Platforms off their Bases: one person on each end to hold down the Base and one person to operate the Forklift or Shop Crane to raise the Platform. **Use care when raising the Platforms off their Bases; they are heavy and sometimes difficult to hold.**

To lift the Platforms off the Bases:

- 1. Install the Eyelet in the middle of the Platform you want to raise.
- Attach a rope to the Eyelet and use a Forklift or shop crane to raise the Platform off of its Base.Make sure to hold down the Base while you raise the Platform.



Once the Platform and Base are separated by more than half an inch (~13 mm), you can put industrial slings (straps) around each end to continue raising the Platform off the Base. You can continue using the Eyelet, if you prefer.

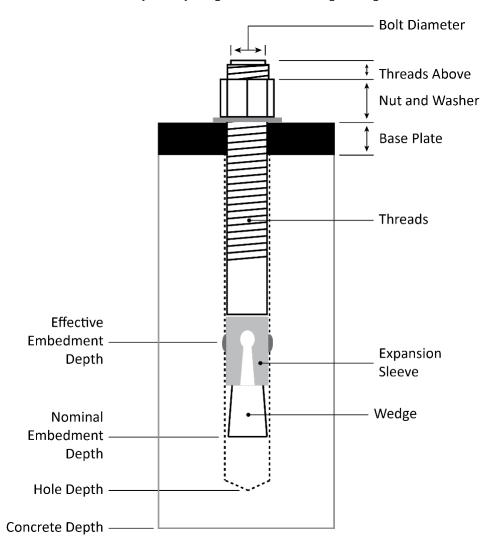
- 3. When the Platform gets above the top Safety Lock, lower it back down onto the top Safety Lock. Do not raise the Platform a random distance; leave it on the top Safety Lock.
- 4. Remove the Eyelet from the first Platform, install the Eyelet on the second Platform, then perform the same procedure on the second Platform.

About Effective Embedment

Anchor Bolts (also called Wedge Anchors) get their holding strength from how far down into the Hole the Anchor Bolt's Expansion Sleeve presses into the Concrete (called Effective Embedment) and how forcefully the Expansion Sleeve presses into the Concrete (based on the width of the hole and how much Torque is applied).

The further down into the Hole you get the Expansion Sleeve, the greater the Effective Embedment and thus the greater the holding strength of the Anchor Bolt. The hole should be drilled the same width as the Anchor Bolt with no wobbling. The correct amount of Torque is a range; too little Torque and the Anchor Bolts hold with less strength, too much Torque and you could damage the Concrete and lessen the Anchor Bolt's holding strength.

Note: Some people confuse Effective Embedment with *Nominal* Embedment, which is how far down into the Hole the *bottom* of the Anchor Bolt is. The two are *not* the same; Nominal Embedment does not tell you anything about the holding strength of the Anchor Bolt.



Make sure to carefully follow the specifications and instructions in the following procedure.



Use only the Anchor Bolts that came with your Lift. Only install your Lift on a Concrete floor. Make sure to get the correct amount of Effective Embedment and use the correct amount of Torque.

Anchor the Bases

Each Base has holes for anchoring it to the Concrete.

Before you anchor your Lift, make sure the two Platforms are correctly aligned. BendPak recommends double checking the work done when creating your Chalk Line Guides.

⚠ CAUTION

Poor alignment can impact how the Lift raises and lowers. Take the time now, before you anchor the Lift in place, to make sure it is correctly aligned.

Anchor Bolt specifications are:

Length: 5 inchesDiameter: .75 inch

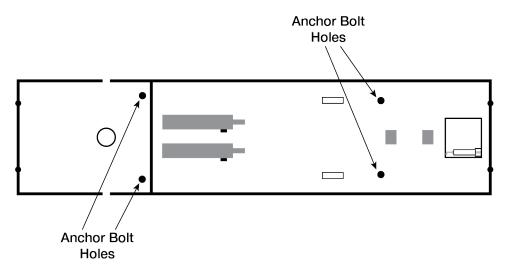
• Effective embedment depth: 2.75 inches, minimum

• **Anchor torque**: 85 – 95 pound feet (do *not* Torque less than 80 or more than 105)

⚠ WARNING

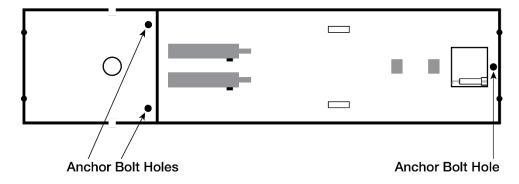
Only use the factory-supplied parts that came with your Lift. If you use components from a different source, you void your warranty and compromise the safety of everyone who installs or uses the Lift.

The following drawing shows the locations of the Anchor Bolt holes for the MDS-6EXT/F.



Not necessarily to scale. Not all components shown.

The following drawing shows the locations of the Anchor Bolt holes for the MDS-6LP/F.



Not necessarily to scale. Not all components shown.

To anchor the Bases:

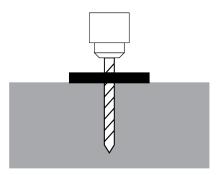
1. Make sure the Bases are where you want them.

Once you anchor the Bases into place, it is difficult to change the location. Once the Anchor Bolts are torqued into position, they are not easily removed. BendPak strongly recommends making sure the Bases are in the correct location *before* anchoring the Bases into place.

2. Using the holes in the Bases as guides, drill the holes for the Anchor Bolts.

Note: If you prefer, you can mark the Anchor Bolt hole locations, move the Platforms out of the way, drill the holes, and then move the Platforms back into position over the holes.

Go in straight; do not let the drill wobble.

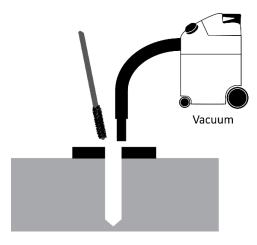


Use a carbide bit (conforming to ANSI B212.15).

The diameter of the drill bit **must** be the same as the diameter of the Anchor Bolt. So if you are using a ¾ inch diameter Anchor Bolt, for example, use a ¾ inch diameter drill bit.

3. Clean each hole.

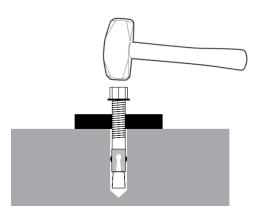
Use a vacuum to completely clean the hole. If a vacuum is not available, you could use a wire brush, hand pump, or compressed air.



Do **not** ream the hole. Do **not** make the hole any wider than the drill bit made it.

4. Make sure the Washer and Nut are in place, then insert the Anchor Bolt into the hole.

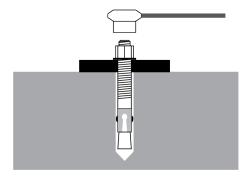
The Expansion Sleeve of the Anchor Bolt may prevent the Anchor Bolt from passing through the hole in the Base; this is normal. Use a hammer or mallet to get the Expansion Sleeve through the Base and into the hole.



Even using a hammer or mallet, the Anchor Bolt should only go into the hole part of the way; this is normal. If the Anchor Bolt goes all the way in with little or no resistance, the hole is too wide.

Once past the hole in the Base, the Anchor Bolt eventually stops going down into the hole as the Expansion Sleeve contacts the sides of the hole; this is normal.

- 5. Hammer or mallet the Wedge Anchor the rest of the way down into the hole.
 - Stop hammering when the Washer is snug against the Base.
- 6. Wrench each Nut *clockwise* to the recommended installation torque, 85 95 pound feet, using a Torque Wrench.



Important: Do **not** use an impact wrench to torque the Anchor Bolts.

Wrenching the Nut forces the Wedge up, pushing out the Expansion Sleeve and pressing it tightly against the Concrete.

Set Up and Anchor the Console

The Console comes assembled from the factory.

Important: You still have to make connections to the Power Unit.

The Hydraulic Hoses, Air Line, and Return Line require the Console to be within 40 inches of the cylinder end of the Lift.



If you want to set up the Console further than 40 inches from your Lift, you will need to get Hydraulic Hoses that are long enough to reach the Lift from the desired location. You may be able to obtain these Hoses from the local hydraulics shop, once you know how long you need them. You will also need longer Air and Return Lines. *For safety purposes, the Console operator must be able to see the Lift during operation*.

The following procedure describes anchoring the Console into place. If you prefer, you can defer anchoring the Console.

Why would you defer anchoring the Console? Anchoring the Console is a relatively permanent decision. Delaying the anchoring gives you a chance to evaluate how well you like your first choice for the location of the Console. It is easier to change the Console location later if it is not anchored.

When you want to anchor the Console into place, return to this section and follow the instructions.

To set up and anchor the Console:

- 1. Select a site for the Console that permits operators to have a full, unobstructed view of the Lift.

 If you are going to use the included Hydraulic Hoses, the Console can go on either side of the Lift, up to 40 inches away from the Cylinder end.
- 2. Remove the Console from its packaging and move it to the selected location.

Important:

The Console is now in place, but it is not yet connected. **Do not make any of the connections to the Power Unit at this point**. You still need to connect the Hydraulic Hoses, Air Lines, the Console Controls, and a power source to the Power Unit. To do this, you are probably going to need to remove both the Top and the Front of the Console. Refer to **Connect and Prepare the Power Unit** for connection instructions.

3. If you are ready to anchor the Console in place, locate the two 3/8" by 2 1/4" Anchor Bolts.

Note: There are four holes in the bottom of the Console, two on each side. You only need to anchor two of the four holes. BendPak recommends installing them diagonally from each other; one in the front left, the other in the right rear, for example.

- 4. Using the holes in the base as a guide, drill two holes 3/8" wide by 3" deep into the Concrete. Go in straight; do not let the drill wobble. Use a carbide bit (conforming to ANSI B212.15).
- 5. Remove all dust from the holes.
 - Use a wire brush, vacuum, hand pump, or compressed air. Do *not* ream the hole. Do *not* make the hole any wider than the drill bit made it.
- 6. Insert an Anchor Bolt with Washer into each hole, then tap it down into the hole.
- 7. Turn the Anchor Bolt *clockwise* to the recommended installation torque, 85 95 pound feet, using a Torque Wrench.

IMPORTANT! PLEASE READ NOW





Hydraulic Fluid Contamination

Hydraulic Fluid Contamination poses a **serious** issue for your Lift; contaminants such as water, dirt, or other debris can get into the Hydraulic Hoses and Fittings on your Lift, making your new Lift inoperable and unusable.

Your Lift is shipped with clean components; however, BendPak strongly recommends that you take secondary precaution and clean all Hydraulic Hoses and Fittings prior to making connections. It is better and less costly to take these extra steps now so that you do not need to take your Lift out of service later to fix issues that could have been prevented at the time of the installation.

There are several ways to clean Hydraulic Hoses and Fittings:

- **Compressed air**. Use an air compressor to blow out contaminants from each Hydraulic Hose and Fitting prior to installation. Clean, dry air is preferred. Wear eye protection (safety glasses, goggles, or face shield) when using compressed air for cleaning. Never point an air hose nozzle at any part of your body or any other person.
- **Fluid flushing**. As long as the Hydraulic Fluid is clean and compatible with the system fluid, you can flush Hoses and Fittings to create turbulent flow and remove particulates. Always ensure that the fluid itself is contaminant-free.

Some additional steps that will help keep the Hydraulic Fluid clean:

- **Remove old thread seal tape**. Some ports on the Hydraulic Cylinders are shipped with temporary plugs secured with thread seal tape, so make sure to thoroughly remove any leftover thread seal tape that may inadvertently enter the Hydraulic System.
- **Use a liquid thread sealant only**. Teflon paste-type thread sealant or Loctite[™] 5452 thread sealant is recommended for all NPT Fittings. Do not over tighten NPT Fittings or they may crack. Do **not** use thread seal tape on flare-end JIC 37-degree bevel Fittings or ORB O-Ring Fittings.
- **Always use clean equipment**. If you use a dirty bucket or funnel to transfer the Hydraulic Fluid into the Hydraulic Fluid Reservoir, the contaminants will likely be introduced into the Fluid. When using cleaning rags, use a lint-free rag.
- **Proper storage**. Keep the Hydraulic Fluid sealed in its container until ready for use. Store the Fluid in a clean, dry, and cool area.
- **Cover the Hoses and Fittings**. Before installation, do not leave the ends of the Fittings exposed; the same applies for Hydraulic Hoses. As a general rule, keep the Hydraulic Hoses and Fittings capped and kept in a clean area until ready for use.
- **Filter the new Hydraulic Fluid**. Just because it is new does not necessarily mean it is *clean*. Use an offline filtration cart or kidney loop system to make sure the Hydraulic Fluid is clean before being transferred into the Reservoir (even using a heavy duty nylon mesh screen is better than trusting what is left at the bottom of the barrel).
- Avoid mixing different types of Hydraulic Fluid. If Hydraulic Fluid needs to be replaced, make sure to flush the Hydraulic System of the old Hydraulic Fluid before you add the replacement fluid: do not mix the two together.

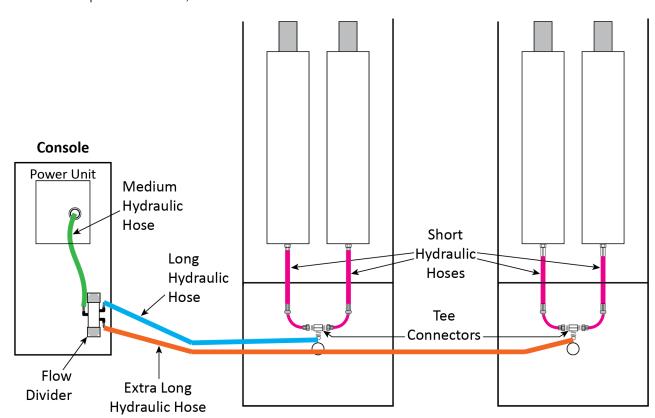
Connect the Hydraulic Hoses

Hydraulic Hoses provide Hydraulic Fluid to the Hydraulic Cylinders, which is used to raise and lower the Platforms.

The Lift comes with seven Hydraulic Hoses:

- **Four Short Hydraulic Hoses** (10 inches / 254 mm, two per Platform): go from the bottom of the Hydraulic Cylinders to a Tee connector. *These lines, and the Tee Connector to which they connect, come from the factory already connected.*
- **One Medium Hydraulic Hose** (18 inches, 458 mm): goes from the Power Unit (inside the Console) to the **In** connector on the Flow Divider at the bottom of the Console.
- **One Long Hydraulic Hose** (87 inches, 7.25 feet, 2,212 mm): goes from the Tee connector on the Platform *closest to* the Console to one of the Out ports on the Flow Divider.
- One Extra Long Hydraulic Hose (132 inches, 11 feet, 3,352 mm): goes from the Tee connector on the Platform furthest from the Console to the other Out port on the Flow Divider.

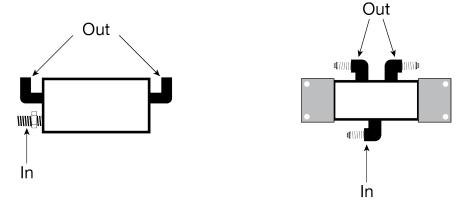
The following drawing shows the general arrangement of how Hydraulic Hoses are routed to the Hydraulic Cylinders. Your Flow Divider may look differently, but it will also have one input connector and two output connectors, as shown.



The Console is on the Left in the drawing. Not to scale. Not all components shown. Some components exaggerated for clarity.

To connect the Hydraulic Hoses:

- 1. If the Platforms are not already engaged on their top Safety Locks, raise them now. Refer to **Lift the Platforms Off the Bases** for additional information.
- 2. If the front and top of the Console are in place, remove them.
- Find a good location for the Flow Divider on or near the bottom of the Console.
 The following diagram shows two Flow Dividers. Your Lift could come with either model.



- 4. Attach an Elbow Hydraulic Fitting to one of the two Hydraulic Power Out ports on the Power Unit.
- 5. Locate the Medium Hydraulic Hose.
- 6. Connect one end of the Medium Hydraulic Hose to the Elbow Hydraulic Fitting you just installed on the Power Unit and the other end to the *input* connector on the Flow Divider. Finger tighten the connections.
- 7. Locate the Long and the Extra Long Hydraulic Hoses.
- 8. Connect the Long and Extra Long Hydraulic Hoses to the two **output** connectors on the Flow Divider. It does not matter which line connects to which output connector on the Flow Divider. Finger tighten the connections.
- 9. Route the Long Hydraulic Hose through an opening in the bottom of the Console and to the Tee Connector on the Base *closest to the Console*. Finger tighten the connection.
 - The Short Hydraulic Hoses come already connected to the appropriate Hydraulic Cylinders on one end and to the Tee Connector on the other end.
- 10. Connect the Extra Long Hydraulic Hose through an opening in the bottom of the Console and to the Tee Connector on the Base *furthest from the Console*. Finger tighten the connection.
- 11. Once all connections have been made, use appropriate tools to fully tighten all of the finger-tightened connections.

Working with Compression Fittings and Tubing

Your Lift comes with ¼ inch, black, polyethylene Tubing (also called Poly-Flo® Tubing) that is used with Compression Fittings to create the Air Lines and Return Line.

Important: Compression Fittings are not the same as Hydraulic Fittings; they work differently. **This section covers Compression Fittings only**.

The components involved with Compression Fittings include:

- 1/4 inch, black, polyethylene Tubing. The Air Lines and Return Lines require multiple Tubing pieces. Create the Tubing pieces from the long roll of Tubing supplied with your Lift.
- Elbow Compression Fittings. The Air Lines use two Elbow Compression Fittings.
- Straight Compression Fittings. The Return Lines use four Straight Compression Fittings.
- **Tee Compression Fittings**. The Air Lines use one Tee Compression Fitting; the Return Lines use three Tee Compression Fittings.
- **Nuts, Ferrules, Rods, and Threads**. Many of the connectors on the Elbow, Straight, and Tee Compression Fittings have a Nut, Ferrule, Rod, and Threads (see drawing below). The Nut holds the Tubing and Fitting together. The Ferrule compresses when you tighten the Nut on the Threads to make a secure connection. The Rod goes inside the Tubing so that nothing leaks out.

The following drawing shows the components of a connector on a Tee Compression Fitting.



Important: *Ferrules can only be tightened once*. When you tighten the Nut on the Threads, the Ferrule gets compressed; it literally changes shape and *cannot* be used again.

To connect Tubing to a Compression Fitting:

- 1. Push the Tubing through the Nut and over the Rod.
 - Do not push hard; you only need the Tubing to go a little way over the Rod. You cannot see the Ferrule at this point, but the Tubing must go through the Ferrule and over the Rod.
- 2. Slide the Nut on the Tubing **away from the Fitting**, if the Nut is still on the Threads, unscrew it from the Threads and then slide it away from the Fitting. See the drawing above.
- 3. Slide the Ferrule over the Tubing, away from the Fitting and towards the Nut.
- 4. With the Nut and the Ferrule out of the way, push the Tubing further over the Rod until it stops.
- Slide the Ferrule and the Nut back to the Threads on the Fitting.
 The Ferrule goes around the Rod and under the Threads. The Nut goes onto the Threads.
- 6. Tighten the Nut.

Remember that the Ferrule can only be used once; do not tighten the Nut until everything is ready.

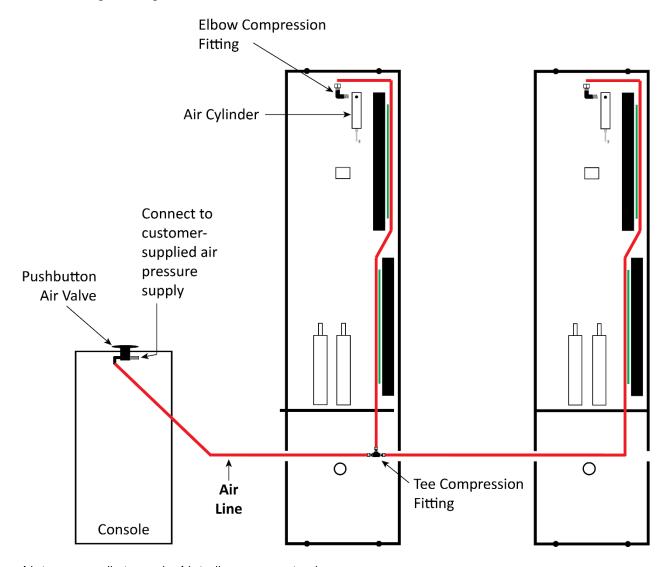
Connect the Air Lines

The MDS-6 Series Lifts use air pressure to push the Lift off the Safety Locks so you can lower the Platforms.

It is the responsibility of the Lift owner to provide an air pressure supply (minimum 50 psi / 10 CFM, regulated to a maximum of 125 psi).

The air pressure supply is distributed to the Air Cylinders using .25 inch black, plastic Tubing (also called Poly-Flo® Tubing), which is supplied with the Lift. You need to cut the Tubing into appropriate lengths based on the distance between the components you are connecting.

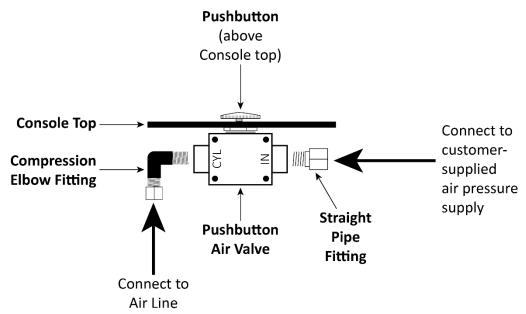
The following drawing shows how to route the Air Line.



Not necessarily to scale. Not all components shown.

To connect the Air Lines:

- 1. Locate a Tee Compression Fitting, two Elbow Compression Fittings, and the black tubing.
- 2. Connect the two Elbow Compression Fittings to the connectors on the Air Cylinders.
- 3. Cut the Tubing into appropriate lengths for your installation.
- Tip BendPak recommends planning out the path of the Air Line **before** you start cutting the Tubing.
- 4. Connect the Tubing lengths and Tee Fitting to the Tubing Fittings coming from the Air Cylinders. To get to the Air Cylinders, the Tubing goes along the Scissor arms of the Lift. The Scissor arms have tubes through which you route the Tubing, which protects them as you raise and lower the Lift.
- 5. On the underside of the Console top, attach the male end of a Compression Elbow Fitting (to the **CYL** connector on the Pushbutton Air Valve, then connect the final tubing length to the compression end of the Elbow Compression Fitting.
- 6. Also on the underside of the Console top, attach the male end of a Straight Expander Fitting to the **IN** connector on the underside of the Pushbutton Air Valve, then connect the customer-supplied air pressure to the other end of the Straight Expander Fitting.



Drawing not necessarily to scale. Not all components shown. Pushbutton is above the Console top, all other components are under the Console top.

Connect the Return Lines

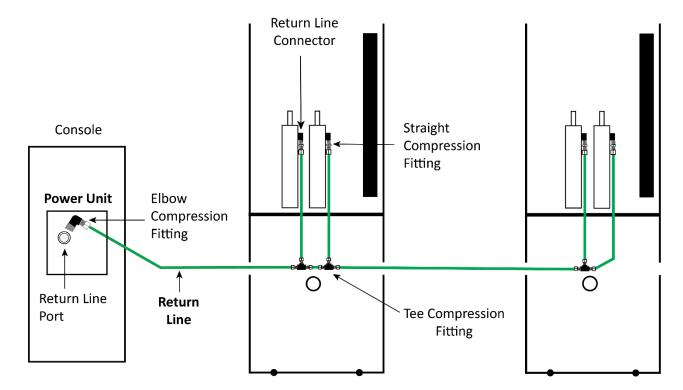
The Return Line takes extra Hydraulic Fluid from the Hydraulic Cylinders and returns it to the Power Unit's Hydraulic Fluid Reservoir.

Create the Return Line using the ½ inch black plastic Tubing that came with the Lift; you need to cut it into sections of the appropriate length.

Important:

The Air Line and the Return Line use the same ¼ inch, black, polyethylene Tubing. Be sure not to confuse the two; the Air Line and the Return Line do completely different things and **must** be kept separate from each other.

The following drawing shows how the Return Line is arranged.



Top view. Not drawn to scale. Not all components are shown.

To connect the Return Line:

- 1. Locate the Elbow Compression Fitting, three Tee Compression Fittings, four Straight Compression Fittings, and the black plastic tubing.
- 2. Attach an Elbow Compression Fitting to one of the Return Line Ports on the Power Unit.
 - There are two Return Line connectors on the Power Unit; they work the same, so choose the one that is best for you. **You only need to use one, not both**.
 - See Connect and Prepare the Power Unit for the Return Line Port locations.
- 3. Attach a Straight Compression Fitting to the Return Line connectors near the top of each Hydraulic Cylinder.
- 4. Cut tubing sections of the appropriate lengths for the Return Line segments.
- 5. Connect the tubing sections using the three Tee Compression Fittings, as shown above.

Contact the Electrician

As mentioned previously, there are certain installation tasks that require a certified Electrician.

⚠ DANGER

All wiring **must** be performed by a licensed, certified Electrician. If someone who is not a certified Electrician attempts these tasks, they could be electrocuted, resulting in serious injury or death.

The Electrician needs to:

- Attach a Power Cable with an appropriate plug. The Power Unit needs to connect to an appropriate power source; it comes with a pigtail coming out of the Electrical Box, but without a longer power cable or a plug attached. The Electrician needs to remove the pigtail and then connect a power cable with a plug that is appropriate for your location (220 VAC plugs are different in different parts of the world). This power cable and plug is not provided with the Lift.
- **Install a Power Disconnect Switch**. Ensures you can quickly and completely interrupt electrical power to the Lift in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance. You must put it within sight and easy reach of the Lift operator. Refer to **Install a Power Disconnect Switch** for more information.
- Install a Thermal Disconnect Switch. Ensures the equipment shuts down in the event of an overload or an overheated motor. Refer to Install a Thermal Disconnect Switch for more information. The motor on the Power Unit is not thermally protected.

The Electrician is responsible for providing:

- an appropriate power cable and plug for connecting to the power source
- a Power Disconnect Switch
- a Thermal Disconnect Switch (the Power Unit's motor is **not** thermally protected)

Refer to **Wiring Diagram** for additional wiring information.

Additional information is supplied in the section describing these tasks.

Connect and Prepare the Power Unit

The Power Unit comes assembled from the factory. You need to attach it to the back of the Console (described in **Set Up and Anchor the Console**) and then connect it properly, described in this section.

The standard Power Unit for your Lift is 220 VAC at 50 Hz, 1 Ph or 208-230 VAC at 60 Hz, 1 Ph.

⚠ DANGER

All wiring **must** be performed by a licensed, certified Electrician. If someone who is not a certified Electrician attempts these tasks, they could be electrocuted, resulting in serious injury or death.

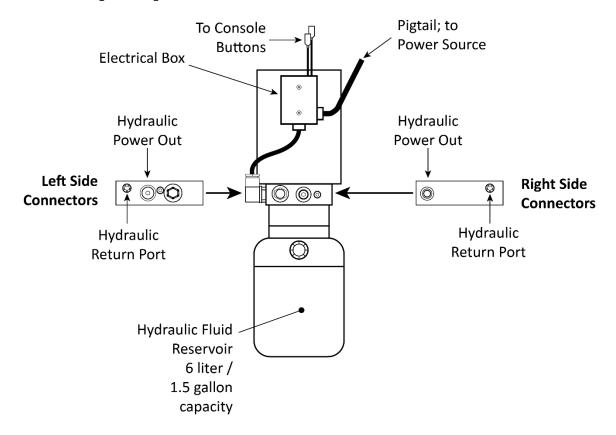
Refer to **Wiring Diagram** for wiring information.

CAUTION The Power Unit's motor is **not** thermally protected.

The Power Unit has multiple connections:

- **Hydraulic System**. The Medium Hydraulic Hose connects one of the two Hydraulic Power Out ports on the Power Unit to the Flow Divider (and eventually to the Hydraulic Cylinders).
- **Return Line**. Takes Hydraulic Fluid from the Hydraulic Cylinders and returns it to the Reservoir.
- **Power Source**. The Power Unit connects to an incoming power source.
- **Controls**. The Power Unit connects to the controls on the top of the Console (the Raise and Lower buttons).

The following drawing shows the Power Unit.



To connect and prepare the Power Unit:

- 1. Remove the front cover of the Console if it is currently in place.
- 2. For the Raise and Lower buttons on the Console, the wiring comes from the factory connected to the appropriate button. Simply connect them appropriately to the Console.
- 3. For the connection to the Hydraulic System, the Power Unit should already be connected to the **IN** connector on the Flow Divider via the Medium Hydraulic Hose.
 - If it is not, attach an Elbow Hydraulic Fitting to a Hydraulic Power Out connector on the Power Unit, connect the Medium Hydraulic Hose to this Elbow Hydraulic Fitting, and then connect the other end of the Medium Hydraulic Hose to the IN (input) connector on the Flow Divider.
- 4. For the Return Line, the Return Line should already be connected to one of the two Return Line Ports on the Power Unit and the tops of the Hydraulic Cylinders on the Lift.
 - If it is not, see Connect the Return Line for more information.
- 5. For the power source, the Electrician needs to locate the Pigtail coming out of the Electrical Box, open the Electrical Box, remove the Pigtail, and then wire a power cord (with appropriate plug) *inside* the Electrical Box.

This power cord and plug are **not** supplied with the Lift.

Refer to **Wiring Diagram** for proper wiring information.

⚠ DANGER

All wiring **must** be performed by a licensed, certified Electrician. If someone who is not a certified Electrician attempts these tasks, they could be electrocuted, resulting in serious injury or death. Do not perform **any** maintenance or installation on the Lift without first making sure that main electrical power has been disconnected from the Lift and **cannot** be re-energized until all procedures are complete.

Important electrical information:

- Improper electrical installation can damage the Power Unit motor; this damage is not covered under warranty.
- Use a separate circuit breaker for each Power Unit.
- Protect each circuit with a time-delay fuse or circuit breaker. For a 220 VAC, single phase circuit, use a 25 amp or greater fuse.

Fill the Hydraulic Fluid Reservoir

The Hydraulic Fluid Reservoir on the Power Unit must be filled with Hydraulic Fluid or automatic transmission fluid **before** you begin normal operation of the Lift. **When you receive the Lift, the Hydraulic Fluid Reservoir is empty**.

The Power Unit will not work correctly until the Reservoir is filled with approved Hydraulic Fluid.

Approved fluids are any general purpose ISO-32, ISO-46, or ISO-68 Hydraulic Fluid, approved automatic transmission fluids such as Dexron III, Dexron VI, Mercon V, Mercon LV, or any synthetic multi-Vehicle automatic transmission fluid.

MARNING

Do **not** run your Power Unit without Hydraulic Fluid; you will damage it.

To fill the Hydraulic Fluid Reservoir:

- Remove the Reservoir Cap from the top of the Hydraulic Fluid Reservoir and set it aside.
 Take care to *keep contaminants out* of the Hydraulic Fluid Reservoir.
- 2. If the Hydraulic Fluid Reservoir is not full, fill it with approved fluid.
 - The Reservoir holds approximately 1.5 gallons / 6 liters of Hydraulic Fluid.
 - Approved fluids are any general purpose ISO-32, ISO-46-, or ISO-68 Hydraulic Fluid, approved automatic transmission fluids such as Dexron III, Dexron VI, Mercon V, Mercon LV, or any synthetic multi-Vehicle automatic transmission fluid.
- 3. When the Reservoir is filled, put the Reservoir Cap back on.

Install a Power Disconnect Switch

⚠ WARNING

A Power Disconnect Switch is **not** provided with this equipment.

A Power Disconnect Switch is a National Electrical Code (NEC) requirement. They are designed to interrupt main electrical power in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance.

Make sure to install a Power Disconnect Switch that is properly rated for the incoming power source.

Your Power Disconnect Switch must be readily accessible and installed so that it is in easy reach of the operator or in their line of sight. The Power Disconnect Switch must be clearly marked to indicate its purpose.

If you are not clear where to put the Power Disconnect Switch, consult with your Electrician.

⚠ DANGER

Installing a Thermal Disconnect Switch *must* be performed by a licensed, certified Electrician.

Have the Electrician select a *UL-listed* Power Disconnect Switch.

Install a Thermal Disconnect Switch

MARNING

The motor on the Power Unit supplied with your Lift has no thermal overload protection.

Have the Electrician connect a motor Thermal Disconnect Switch or overload device that will make sure the equipment shuts down in the event of an overload or an overheated motor.

⚠ DANGER

Installing a Thermal Disconnect Switch **must** be performed by a licensed, certified Electrician. Do not perform **any** maintenance or installation on the Lift without first making sure that main electrical power has been disconnected from the Lift and **cannot** be re-energized until all procedures are complete.

High running amps that exceed the motor's full load amps (FLA) rating may result in permanent damage to the motor.

BendPak strongly recommends you **not** exceed the rated duty cycle of the motor.

Lubricate the Lift

There are 10 lubrication points on the Lift:

- Four lubrication points that take straight grease fittings. All four are M6 x 1.0 straight grease fittings.
- Six lubrication points that take 45° elbow grease fittings. All six are M6 x 1.0 45° elbow grease fittings.

Put a small amount of white lithium grease or similar on each lubrication point before you use the Lift and monthly after putting the Lift into service.

Add the Ramps

The MDS-6EXT and MDS-6LP both come with four Ramps: two Drive-Up Ramps and two Drive-Off Ramps. The flush-mount versions do not come with Ramps.

The two Drive-Up Ramps attach to the Rear of the Lift; the two Drive-Off Ramps attach to the Front of the Lift.

All four Ramps come with pins that fit into holes in the Base. To put a Ramp into position, put the pins into the holes in the Base and make sure they are correctly seated.

Anchor the Console

If you have not yet anchored the Console, you must do so now.

Refer to **Set Up and Anchor the Console** for instructions.

Perform an Operational Test

Before putting your Lift into normal operation, you need to raise and lower it a few times. This will help you get a feel for how to operate it, ensures it is working correctly, and helps get any residual air out of the Hydraulic System.

Important: The installation of the Lift is not complete until the Lift passes an Operational Test.



Residual air in the Hydraulic System can cause the Lift to shake, move erratically, or squeak; this is normal. If it happens to you, do not worry; it will go away quickly as the Hydraulic System is self-bleeding.

A Vehicle on the Lift is not required for the Operational Test, but it is recommended.

To test your Lift:

- 1. Check the area around and above the Lift for obstructions; move them if you find any.
- 2. Press and hold **Raise**. The Platforms start rising.
- 3. When the Platforms go past the first Safety Lock (you can hear the mechanism click as it passes), release **Raise**. The Platforms stop rising.
- 4. Press and hold **Lower**. The Platforms lower onto the Safety Lock you just passed.
- 5. To fully lower the Platforms, press and hold the **Air Assist Button** (to disengage the Safety Lock), then press and hold **Lower**.
- 6. When the Platforms get to the ground, hold **Lower** for a couple of more seconds to make sure both Platforms are fully lowered, then release **Lower**.
- 7. Wait for one minute.
- 8. Repeat the process, this time raising the Lift higher and then lowering it.
- 9. If the Lift is working without shaking, moving erratically, or squeaking, it is ready for operation. If the Lift is shaking, moving erratically, or squeaking, repeat the procedure one more time. If you continue to have issues, refer to the **Troubleshooting** section for assistance.

Final Checklist Before Operation

Make sure these things have been done before using your Lift:

- Review the Installation Checklist to make sure all steps have been performed.
- Make sure the Power Unit is getting power from the power source.
- Check the Power Unit's Hydraulic Fluid reservoir; it must be full of approved Hydraulic Fluid or automatic transmission fluid. **You can harm the motor by running it without enough fluid.**
- Check the Hydraulic System for leaks.
- Check to see that all Anchor Bolts are correctly torqued.

Leave the Manual with the Owner/Operator

Make sure to leave the *Installation and Operation Manual* with the owner/operator so that it is available for anyone who is going to use the Lift.

Operation

This section describes how to operate your Lift.



Always use care when you are around the Lift. When it is in a lowered position, be careful not to trip over it. When it is raised, be careful not to bang into a Ramp or a Platform. When the Lift is moving, keep all people, animals, and objects at least 30 feet away from it.

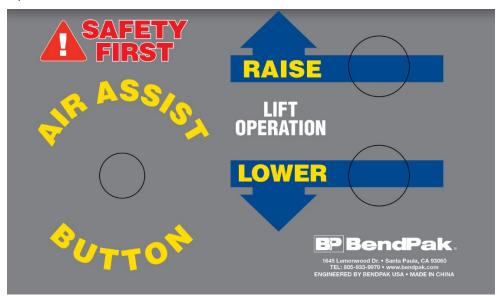
Lift Operation Safety

Before you raise or lower a Vehicle using your Lift, do the following:

- Check the Lift. Check the Lift for any missing, heavily worn, or damaged parts. Do not operate the Lift if you find any issues; instead, take it out of service, then contact your dealer, email support@bendpak.com, visit bendpak.com/support, or call (800) 253-2363, extension 196.
- **Check the area**. Check the area around the Lift for obstructions; anything that might block the Lift. Do not forget to check **above** the Lift. If you find an obstruction, move it out of the way. Do not allow people or animals within 30 feet of the Lift while it is in motion.
- **Check the operators**. Make sure everyone who is going to operate the Lift has been trained in its use, has read the labels on the unit, and has read the manual. Only the operator at the Console should be within 30 feet of the Lift when it is in motion.
- Check for safety. Make sure everyone who is going to be walking near the Lift is aware of its presence and takes appropriate safety measures. Only put Vehicles on the platform. When raising the Lift, do not leave it until it is positioned on a Safety Lock. When lowering the Lift, do not leave it until it is fully lowered. Do not allow children to operate the Lift. Do not allow anyone under the influence of drugs, alcohol, or medication to operate the Lift.
- Check the Vehicle. Never exceed the Lift's weight rating. Do not allow people inside a Vehicle you are going to raise. Make sure the Vehicle is not overbalanced on either end. Make sure you know and use the manufacturer's recommended lifting points for the Vehicle. Never raise just one side, one corner, or one end of a Vehicle.

The Console

Operation of the Lift is controlled via the Console.



The controls on the Console are:

- **Raise** button. Raises the Platforms.
- **Lower** button. Lowers the Platforms.
- Air Assist button. Releases the Safety Locks so the Platforms can be lowered. If you do not
 press the Air Assist button when pressing the Lower button, the Lift will stop at the closest Safety
 Lock.

Raising a Vehicle

This section describes how to position a Vehicle on the Platforms and raise it.

To raise a Vehicle:

- 1. Make sure both Platforms are fully lowered.
- 2. Drive the Vehicle onto the Platforms.
- **↑ CAUTION** When

When driving a Vehicle onto or off of the Platforms, try to keep the wheels in the middle of the Platforms.

- 3. Put the Vehicle in park, put on the parking brake, and turn off the engine.
 - If the Vehicle is a manual transmission, put it into first gear before turning it off. You do not want the Vehicle moving while it is raised on the Lift.
- 4. Get out of the Vehicle and make sure the wheels are securely on the Platforms.

Only raise a Vehicle if the wheels are securely on the Platforms.

If any part of any wheel is not securely on the Platform, carefully drive the Vehicle back off the Lift and then drive it back on, making sure to keep the wheels in the middle of the Platforms.

- 5. Walk completely around the Vehicle and make sure there are no obstructions or any other issues that will interfere with the raising of the Lift. If there are, fix them before raising the Vehicle.
- 6. At the Console, press and hold the **Raise** button.

- 7. Watch the Vehicle and the Lift as they rise.
 - If the Lift becomes unstable or the Vehicle begins moving, release the **Raise** button immediately and carefully lower the Lift back down to the ground.
- 8. When the Platforms are slightly past the desired height, release the **Raise** button. The Lift stops rising.
- 9. Press the **Lower** button briefly to move the Lift down onto the most recently passed Safety Lock.



If you move the Lift too far past a Safety Lock, it will not engage when you press **Lower** briefly. If this happens, move the Lift back up again, going a little less past the Safety Lock, and then lower it back down onto the Safety Lock.

About Safety Locks

Each of the two Platforms on your Lift comes with its own Safety Lock mechanism. Safety Locks hold a raised Vehicle in place once the Safety Locks are engaged.

Safety Locks serve two important functions:

• **Safety**. Safety Locks hold the Platforms in place. Once engaged on Safety Locks, the weight of the Vehicle pressing down holds the Platforms in place. If the power goes out, the Safety Locks hold the Platforms, and anything on them, in place.



Although rare, it is possible for Hydraulic Fluid in the Hydraulic Cylinders to leak, causing the Lift to slowly come down if it is not engaged on its Safety Locks. **When you are operating your Lift, only leave it on a Safety Lock or fully lowered.**

• **Adjustable height**. Having multiple Safety Lock positions means you can raise the Vehicle to just the right height for the work you are performing.

Lowering a Vehicle

This section describes how to lower a Vehicle from a raised position.

To lower a Vehicle:

- 1. Check the items listed in **Lift Operation Safety**.
 - If you find any issues, resolve them before lowering the Vehicle.
- 2. At the Console, press and hold the **Raise** button for a second or two.
 - This moves the Lift off of the Safety Locks.
- 3. Press and hold the **Safety Lock Release** button, then press and hold the **Lower** button. If you do not press and hold the Safety Lock Release, the Lift will stop at the next Safety Lock.
- 4. When the Platforms are fully lowered, release both buttons.
- 5. Carefully drive the Vehicle off the Platforms.

Maintenance

⚠ DANGER

Before performing any maintenance, make sure the Lift is completely disconnected from power and *cannot* be re-energized until all maintenance is complete. If the power is re-energized during maintenance, you or someone else could be electrocuted. BendPak strongly recommends using your Power Disconnect Switch during maintenance.

To maintain your Lift:

- After one hour of use: Check the Hydraulic Fluid levels. Refill if low.
- Daily: Keep the Lift clean. Wipe up any spills, clean any dirt.
- **Daily**: Make a visual inspection of all moving parts and check for damage or excessive wear. If you find any damaged or worn parts, take the Lift out of service until they are replaced.
- Daily: Make sure the Safety Locks are in good operating condition. If you find that the Safety Locks are damaged or excessively worn, take the Lift out of service until they are replaced. Do not use your Lift if the Safety Locks are damaged or excessively worn.
- **Weekly**: Check all controls to make sure they are functioning normally.
- **Weekly**: Check all labels on the unit. Replace them if they are illegible or missing.
- **Monthly**: Lubricate the grease fittings. We recommend using white lithium grease or similar.
- **Monthly**: Check the Hydraulic Fluid levels. Refill if low.
- **Every two months**: Check all Anchor Bolts to make sure they are tight. If not, tighten them.

⚠ WARNING:

Do not operate your Lift if you find issues; instead, take the Lift out of service, then contact your dealer, email **support@bendpak.com**, visit **bendpak.com/support**, or call **(800) 253-2363**, extension 196.

Troubleshooting

This section describes how to troubleshoot your Lift.

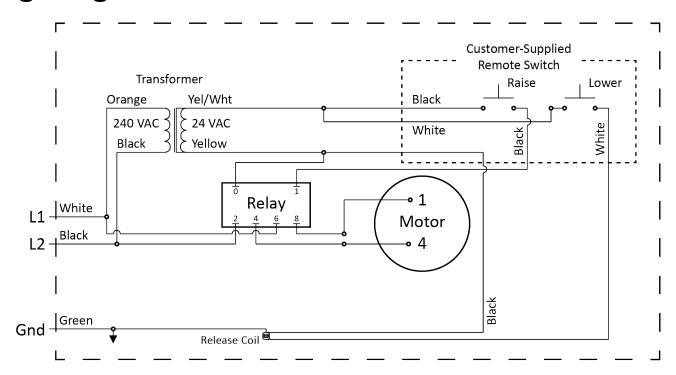
Note: If your Lift is not functioning correctly, you must take it out of service until it is fixed.

Important: All repair work *must* be done by qualified personnel.

Issue	Action to Take
Platforms move erratically or squeak when in use.	Move the Platforms up and down a few times, with a break between each; there could be residual air in the Hydraulic System. This is called bleeding the cylinders.
Platforms do not go up or down.	Make sure the Power Unit is connected to an appropriate power source.
	Make sure none of the Hydraulic Hoses are pinched or leaking.
	Make sure there is sufficient Hydraulic Fluid in the reservoir on the Power Unit.
Hydraulic Fluid is old or dirty.	Replace the dirty fluid with clean, approved Hydraulic Fluids, such as Dexron III, Dexron VI, Mercon V, Mercon LV, Shell Tellus S4 / S3 / S2, or comparable.
Platforms make odd noises when in use.	Lubricate hinge points using white lithium grease.
Platforms are slowly lowering on their own.	Make sure both Platforms are on Safety Locks.
	Only leave the Lift fully lowered or engaged on Safety Locks.

If you continue to have problems with your Lift, take the Lift out of service, then contact your dealer, visit **bendpak.com/support**, email **support@bendpak.com**, or call **(800) 253-2363**, extension 196.

Wiring Diagram



Labels



TOTAL LIFT CAPACITY / CAPACITÉ DE LEVAGE TOTALE

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INSTRUCTIONS IF ATTACHMENTS, ACCESSORIES OR CONFIGURATION MODERNIA COMPONENTS. ELOCATED IN THE LOAD BRIT, AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL OR AFFECT INTERIOR VEHICLE COMMODATION ARE USED ON THIS LIFT AND, IF THEY ARE NOT DUE ON THIS LIFT, I THE LIFT ENDER AFFECT THE FIRST AND, IF THEY ARE NOT DUE ON THIS LIFT, I THE LIFT ENDER AFFECT OF THIS LIFT SHALL BECOME WILL AND YOU ENTRY THE AFFECT OF THIS LIFT AND AFFECT AFFECT AFFECT OF THIS LIFT FAMIL BECOME SHALL AND YOU ENTRY THE AFFECT AFFECT OF THIS LIFT FAMIL BECOMES AFFECT AFFECT AFFECT OF THIS LIFT FAMIL BECOMES AFFECT AFFECT AFFECT OF THIS LIFT FAMIL BECOMES AFFECT AF

BENDRAK LIFTS ARE SUPPLIED WITH CONCRETE FASTNERS MEETING THE CRITERIA AS PRESCRIBED BY ASTM EARS.-BEYCOO), LIFT BUYERS ARE RESPONSIBLE FOR ANY SPECIAL RECIONAL STRUCTURAL AND/OR SEISMIC ANCHORING REQUIREMENTS SPECIFIED BY ANY OTHER AGENCIES AND/OR CODES SUCH AS THE UNIFORM BUILDING CODE (UEC) AND/OR INTERNATIONAL BUILDING CODE (BC).

THE MANUFACTURE, USE, SALE OR IMPORT OF THIS PRODUCT MAY BE SUBJECT TO ONE OR MORE UNITED STATES PRIEMTS, OR PERIONG APPLICATIONS, COWNED BY BENDRIK, INC.

DO NOT REMOVE

ENGINEERED BY SENDYSAK NO. USA

MADE IN CHINA

C WARNING VERY IMPORTANT PREVENT PREMATURE LEARAGE AND WEAR, RAISE LIFT TO FULL HEIGHT AT LEAST ONCE A DAY. ALSO, THIS IS AN EFFECTIVE WAY TO BLEED ANY TRAPPED AIR AND MAINTAIN EQUAL LIFTING OF THE SYSTEM. TRÈS IMPORTANT













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AWARNINGA Λ ATTENTION Λ

Always allow a minimum 2-second delay between motor starts. Failure to comply may cause switch and/or motor burnout. This could cause serious damage to the equipment and/or personal property.

Prévoyez toujours un délai minimum de 2 secondes entre les démarrages du moteur. Le non-respect de cette consigne peut entraîner l'épuisement des commutateurs et/ ou du moteur. Cela pourrait causer de graves dommages à l'équipement et/ou aux biens personnels.

RISQUE D'EXPLOSION **RISK OF EXPLOSION**

This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. THIS EQUIPMENT SHOULD BE LOCATED AT LEAST 460 MM 18 INCHES) ABOVE THE FLOOR.

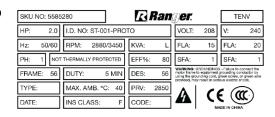
All wiring must be performed by a certified electrician only. It is the responsibility of the electrician to ensure that all field wiring systems comply with both NEC recommendations and all additional electrical codes.

Cet équipement comporte des pièces internes produisant des arcs électriques ou des étinicelles qui ne doivent pas être exposées à des vapeurs inflammables.

CET ÉQUIPEMENT DOIT ÉTRE SITUÉ AU MOINS 460 MM (18 POUCES) AUDESSUS DU SOL.

DESSUS DU SOL.

Tout le câblage doit être effectué par un électricien certifié. Il incombe à l'électricien de s'assurer que tous les systèmes de câlsus sur site sont conformes aux recommandations NEC et à tous les codes électriques supplémentaires.



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If attachments, accessories, or configuration modifying components

used on this lift are located in the load path and affect operation of the lift, affect the lift electrical listing, or affect intended vehicle accommodation; and if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories, or configuration modifying components.

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CAUTION

(1) MOTOR NOT PROTECTED -EXTERNAL OVERHEAT PROTECTION IN ACCORDANCE WITH CE CODE, PART 1, SHALL BE PROVIDED.
(2) MINIMUM CIRCUIT AMPACITY OF CONDUCTOR IS 30A

🛕 PRECAUCIÓN 🛕

(1) MOTOR NO ESTÁ PROTEGIDO -SE PROVEERÁ PROTECCIÓN CONTRA SOBRECALENTAMIENTO EXTERNO DE CONFORMIDAD CON EL CÓDIGO CE, SECCIÓN 1. (2) AMPACIDAD MÍNIMO DEL CONDUCTOR DEL CIRCUITO ES 30A

ATTENTION A

(1) MOTEUR NON PROTEGE PROTECTION EXTERIEURE CONTRE LA SURCHAFFE DOIT ETRE ASSUREE CONFORMEMENT AU CODE CE PREMERE PARTIE.
(2) COURANT ADMISSABLE MINIMAL DE LA DERIVATION 30A

Maximum Run Time: 100 Seconds. Off Time: 500 Seconds. Total: 600 Seconds.

If connected to a circuit protected by fuses use time-delay fuse Marked D

Si está conectado a un circuito protegido por fusibles, utilice fusibles de acción retardada, tipo D

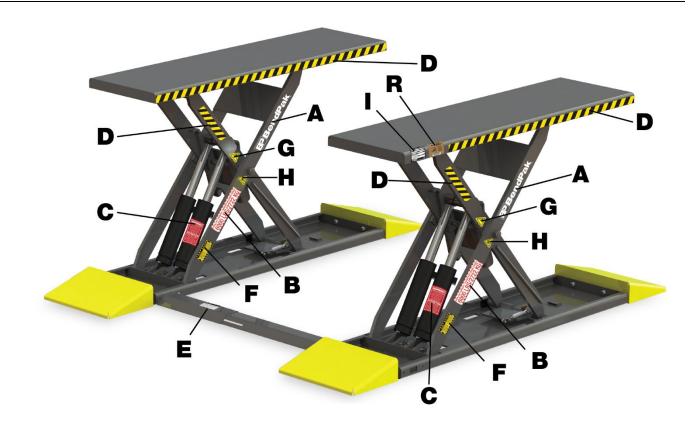
Si connecté à un circuit protégé par fusibles utilisez fusible temporisé Marqué D

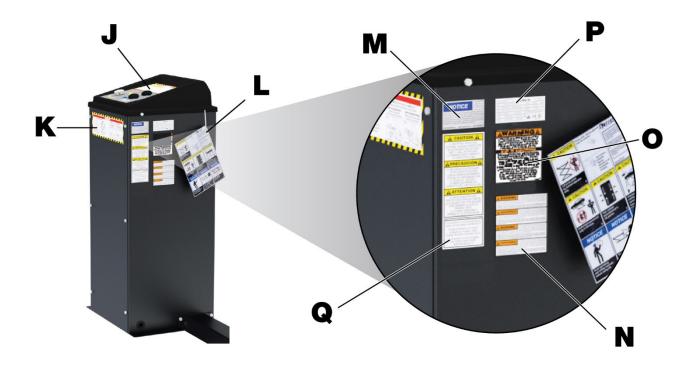




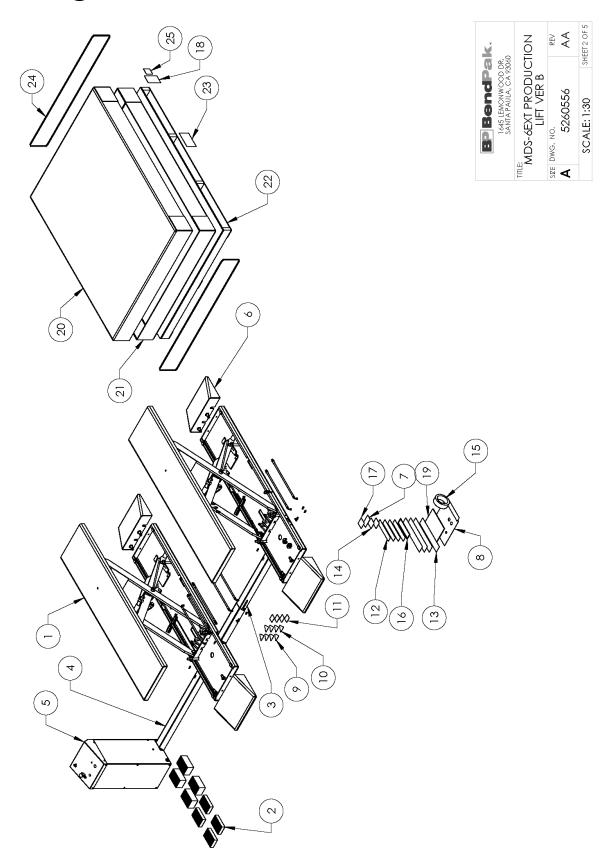
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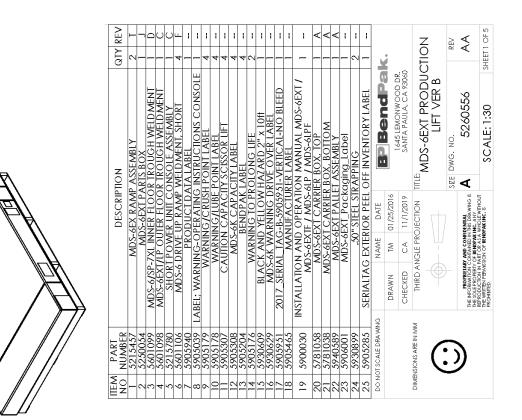


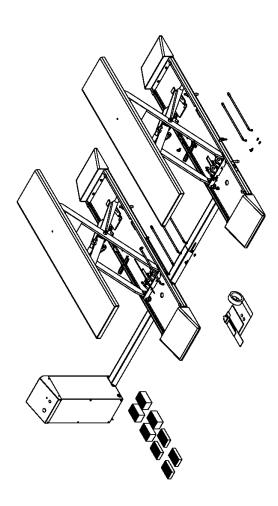




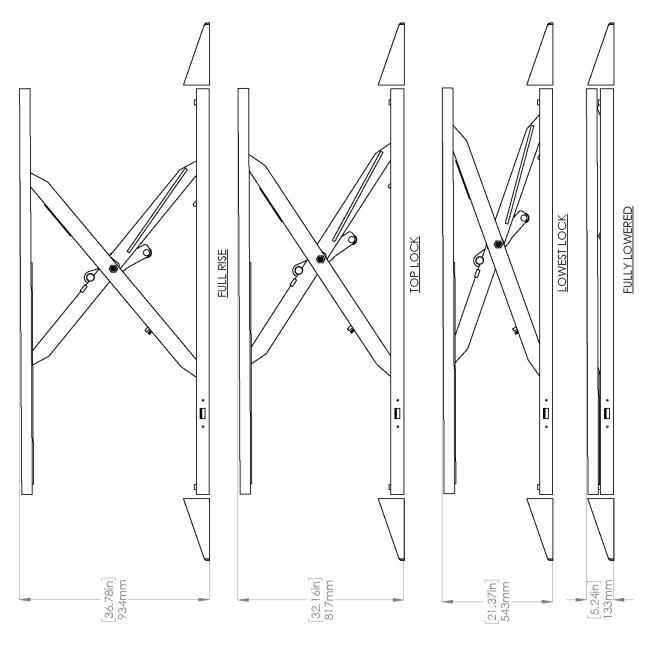
Parts Diagrams

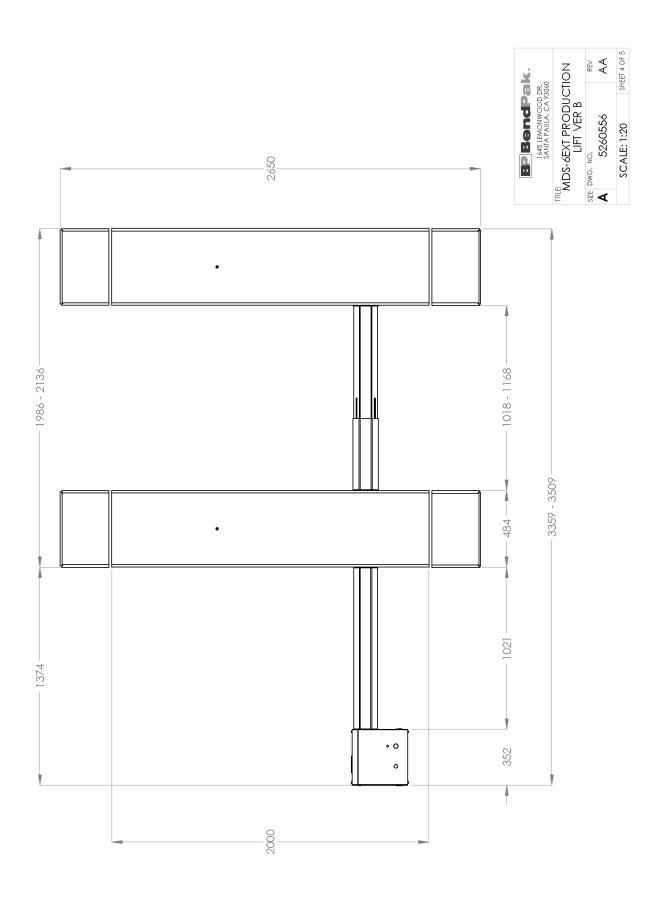


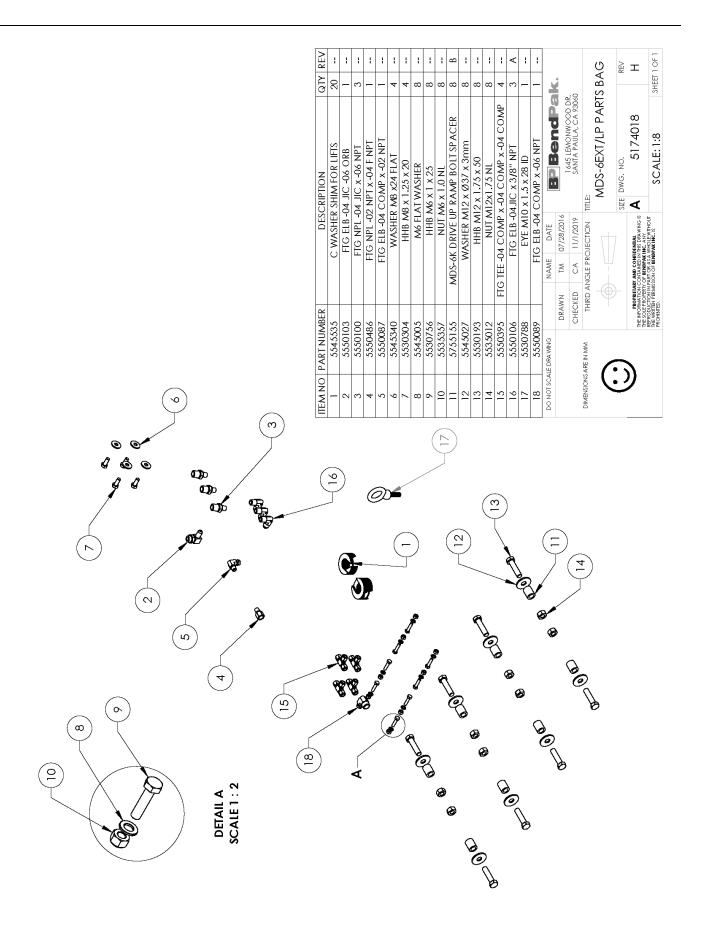


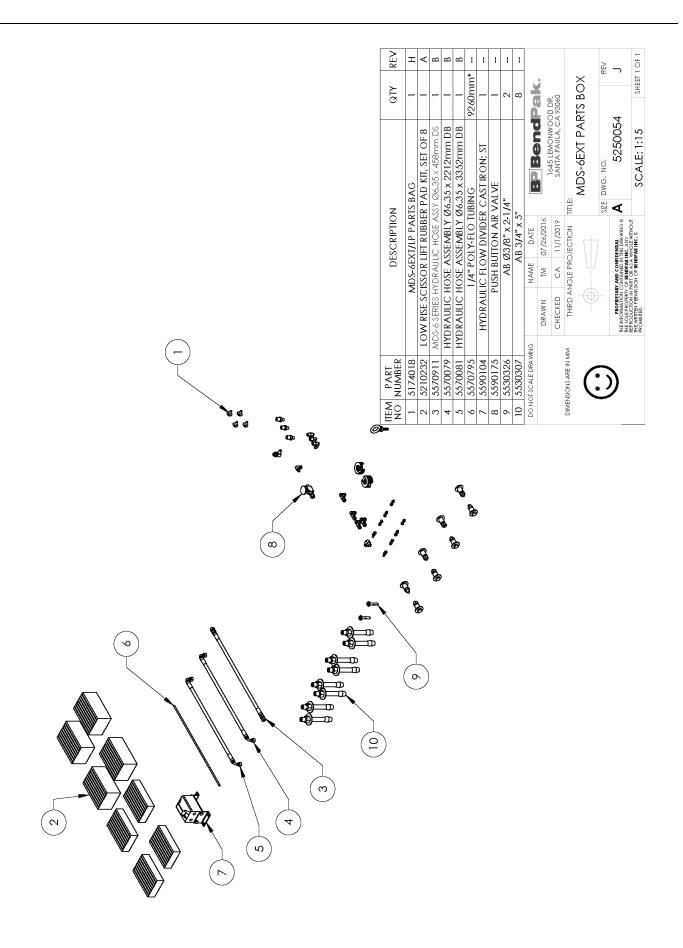


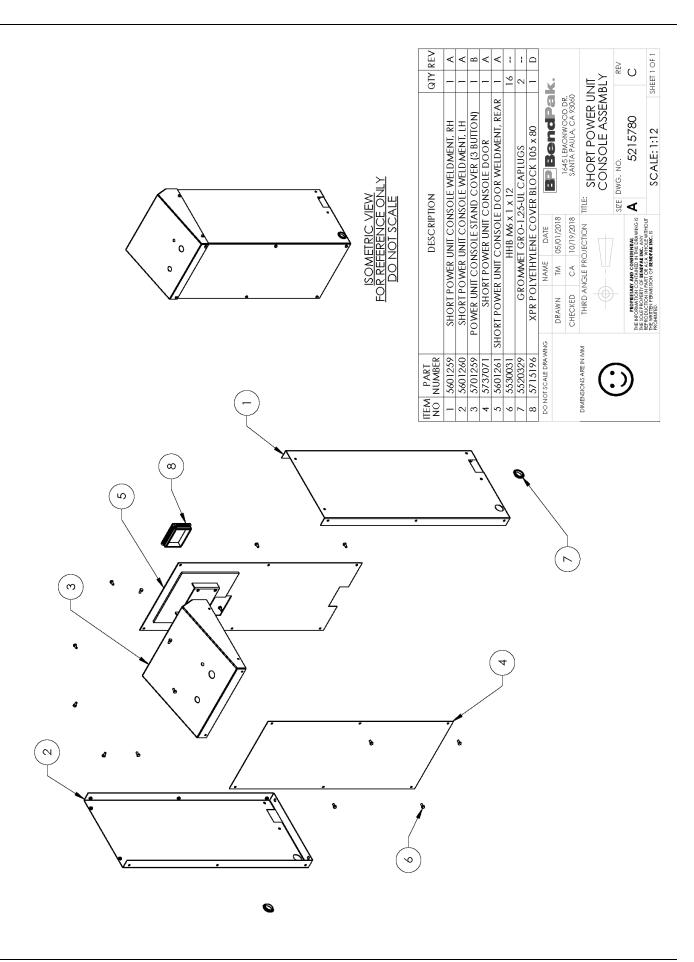


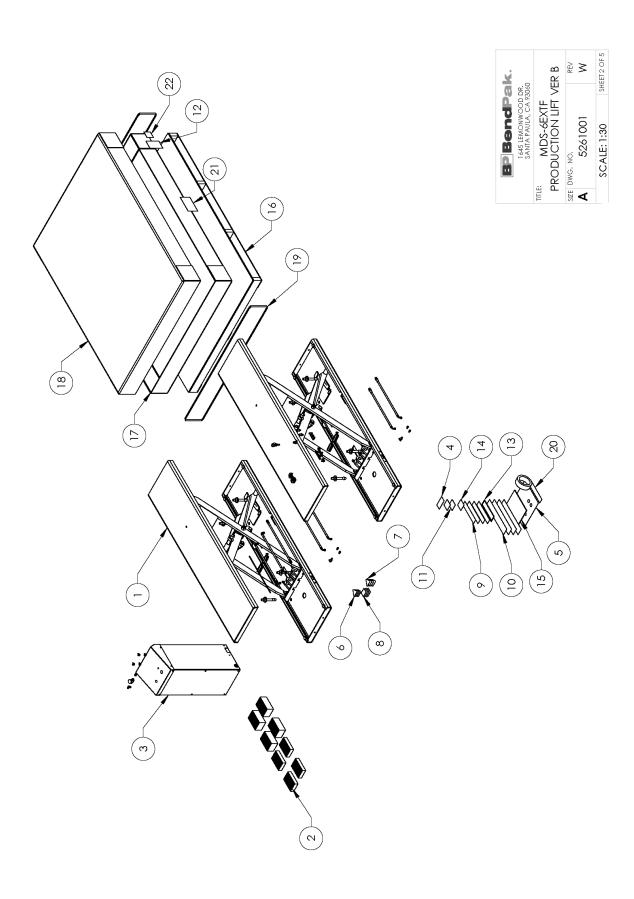


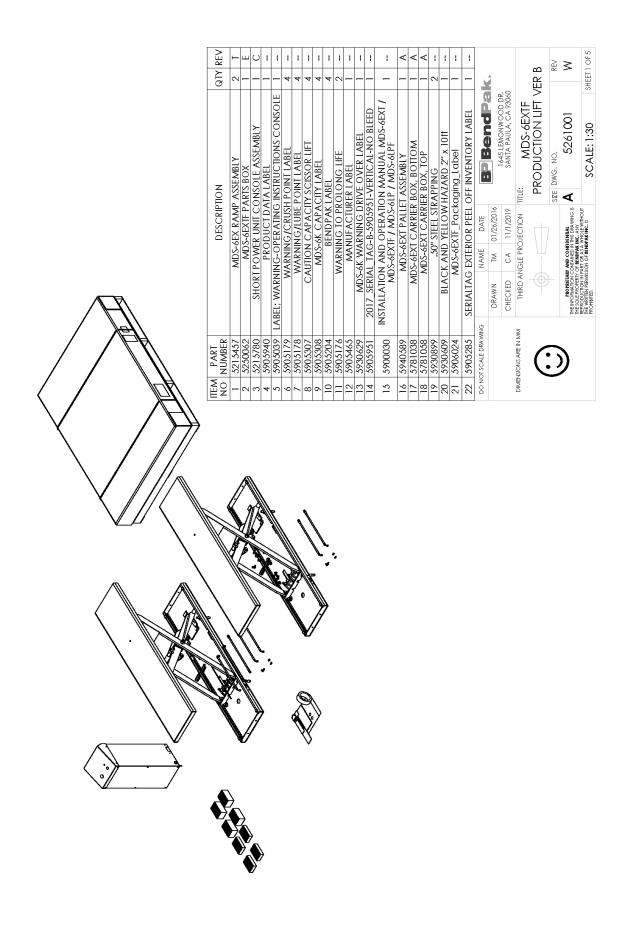




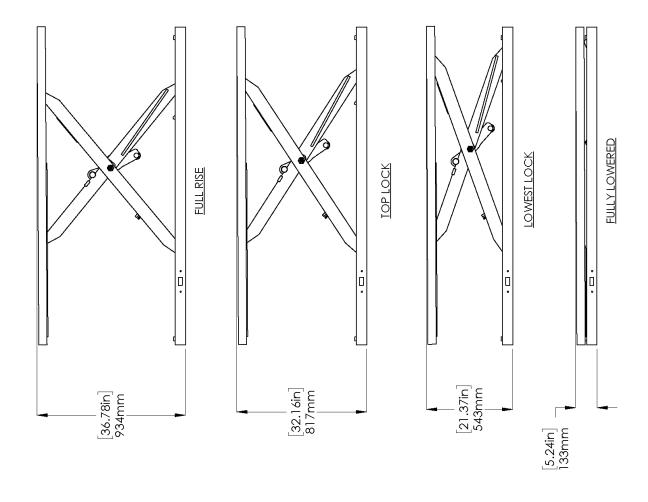


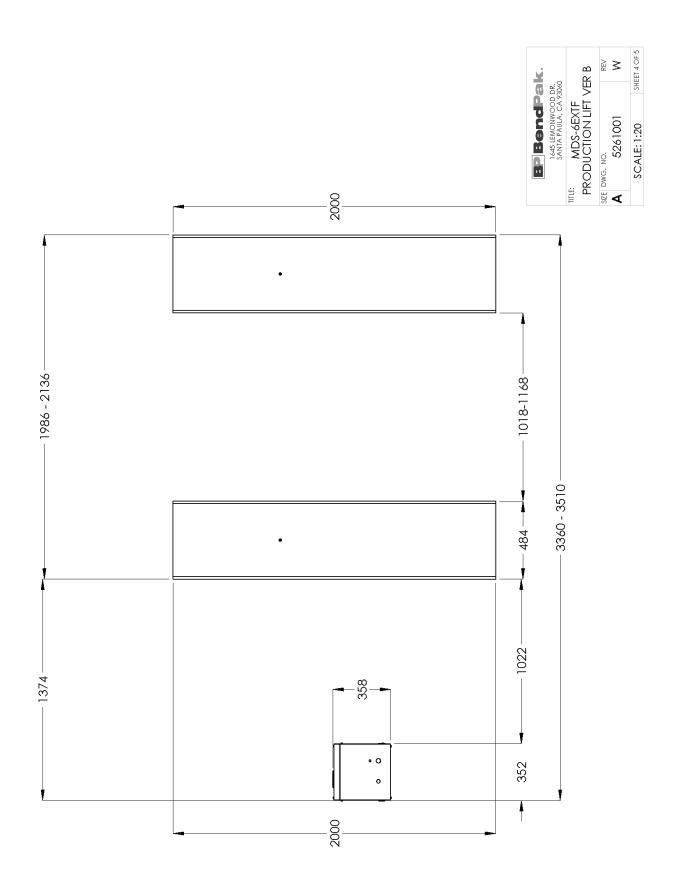


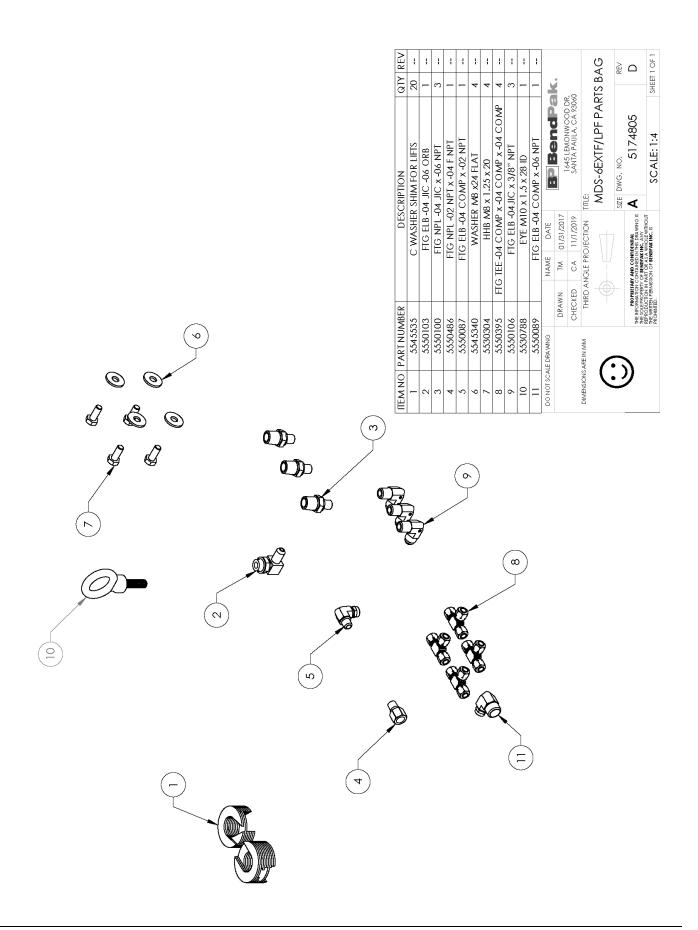


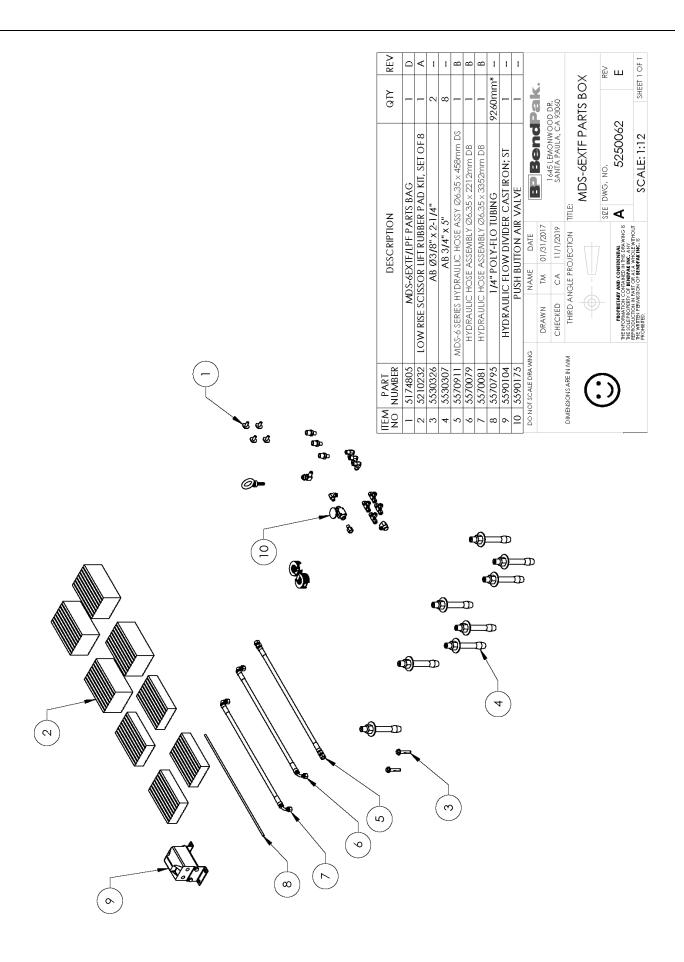


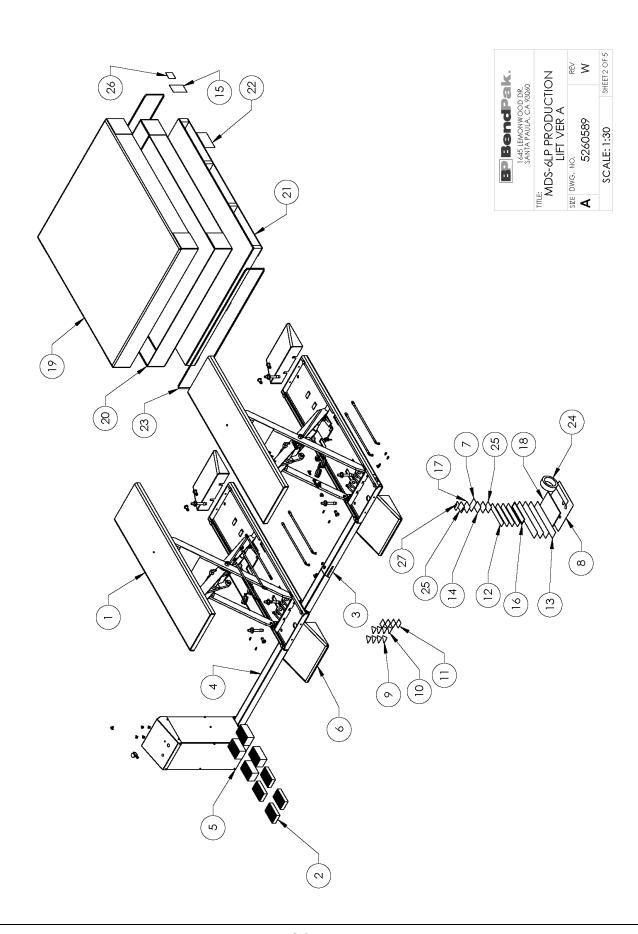


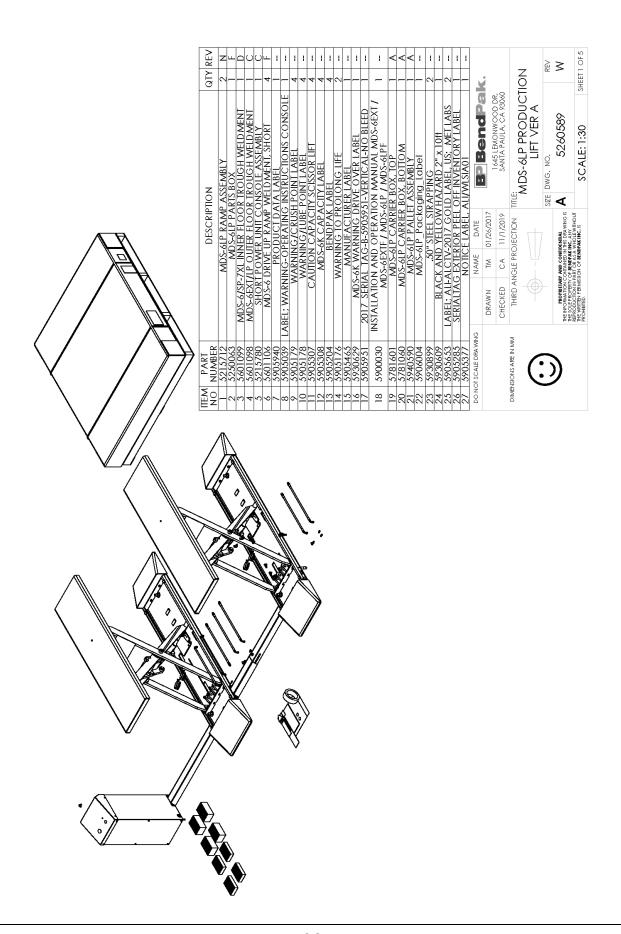




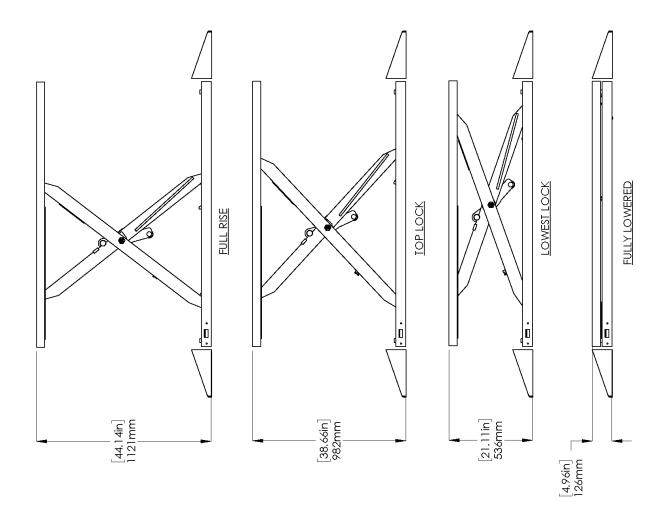


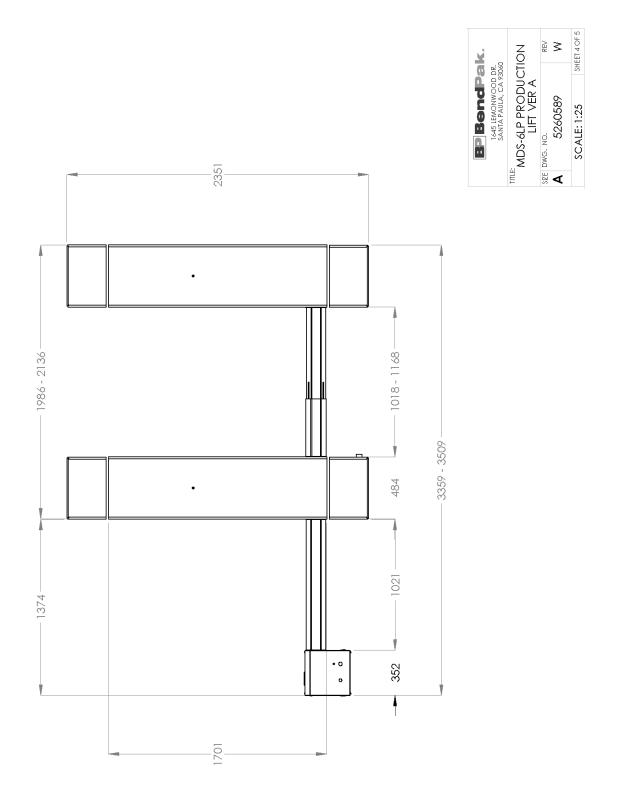


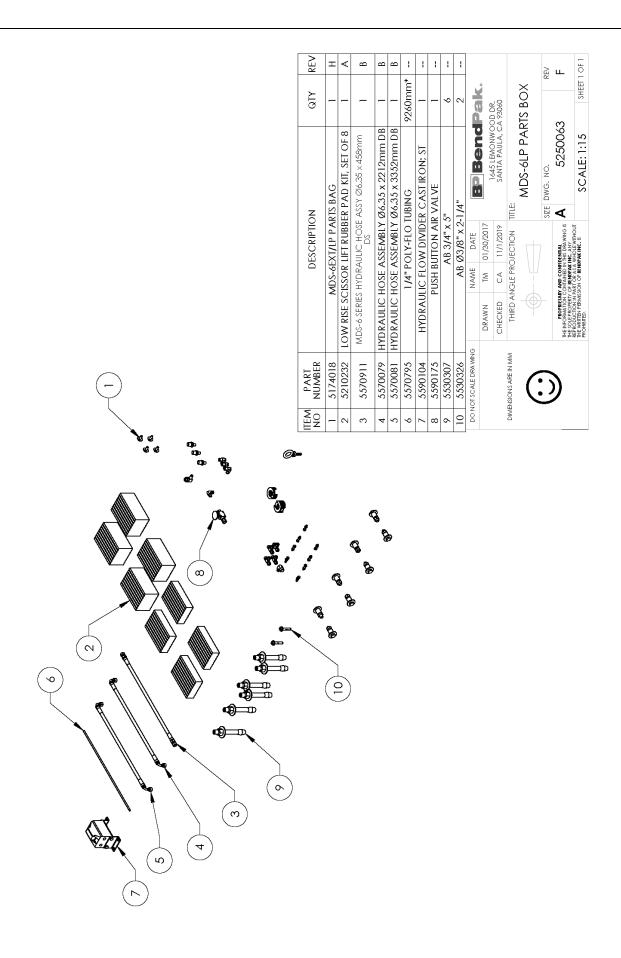


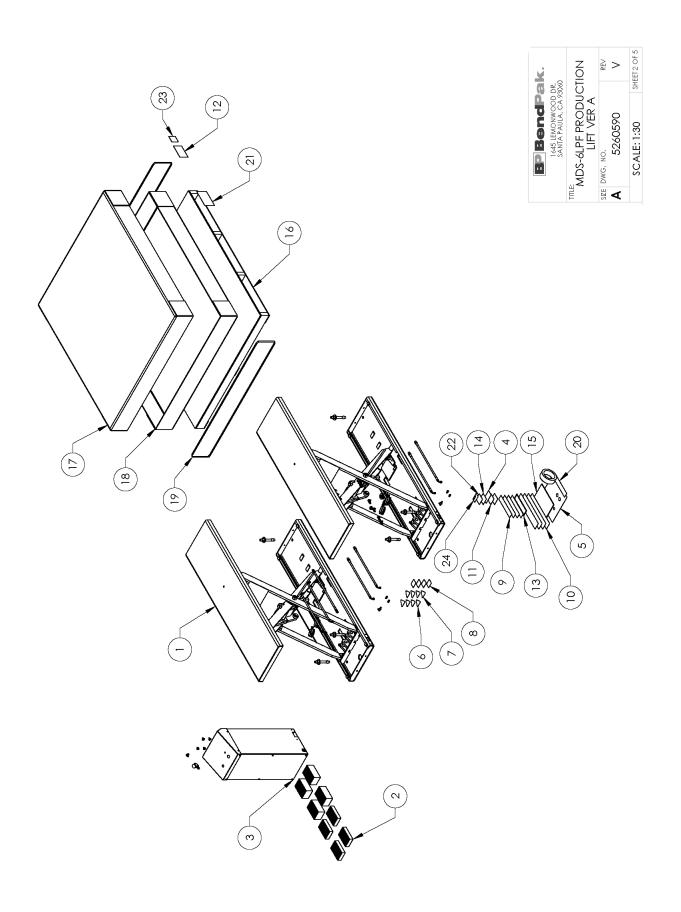


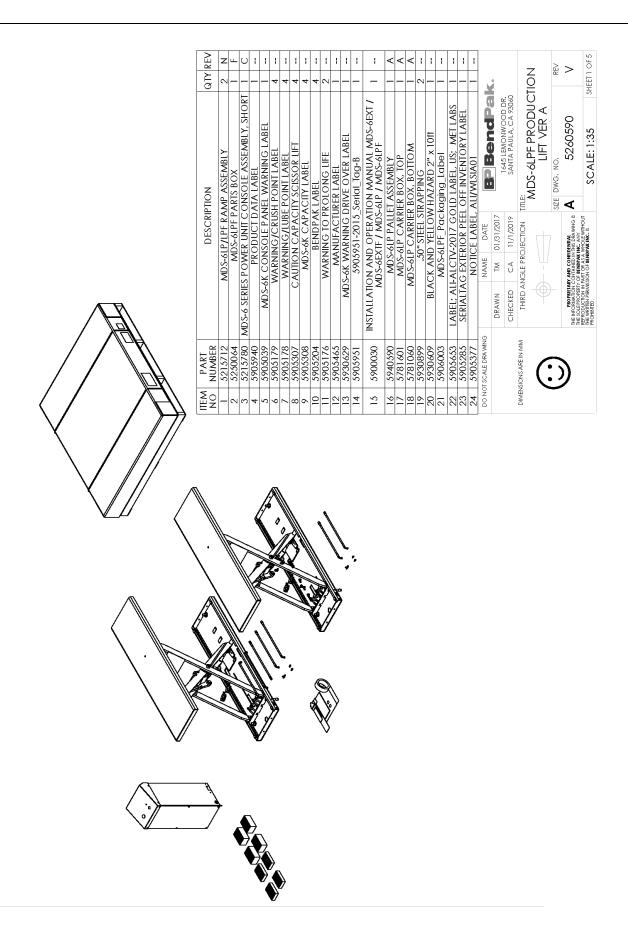




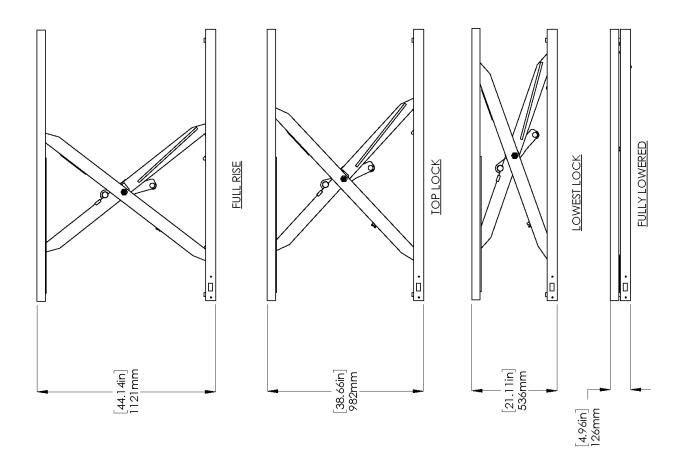


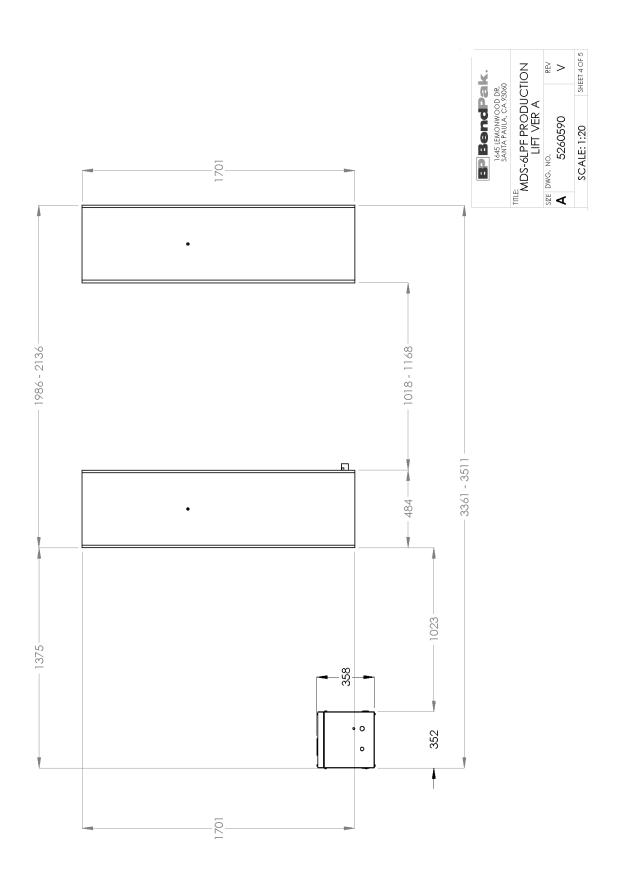


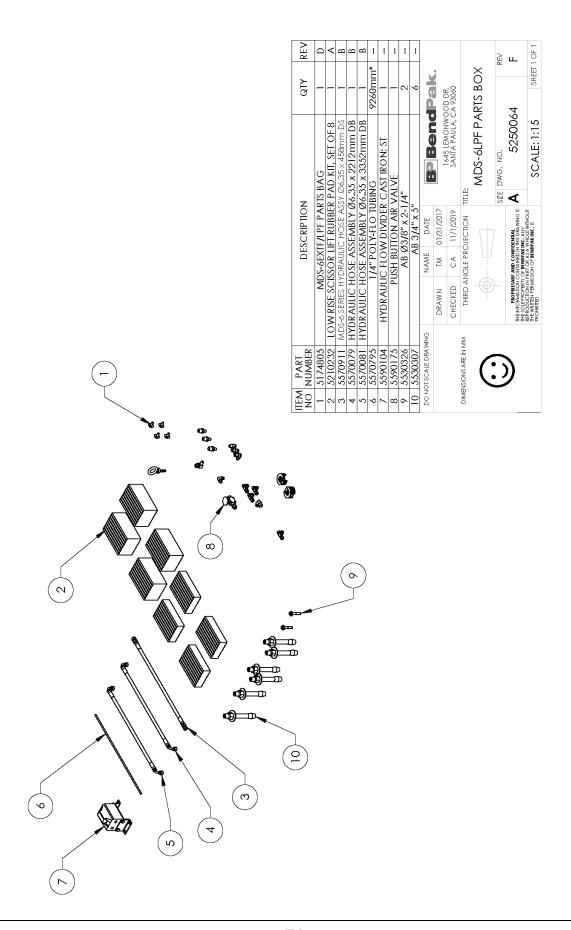












Automotive Lift Institute (ALI) Store

You probably checked the **ALI's Directory of Certified Lifts** (www.autolift.org/ali-directory-of-certified-lifts/) before making your most recent Lift purchase, but did you know the **ALI Store** (www.autolift.org/ali-store/) offers a wide variety of professional, easy-to-use, and reasonably priced training and safety materials that will make your garage a safer place to work?

The ALI Store is your trusted source for workplace safety!



Lifting It Right Online Certificate Course. Make *sure* you and your people are lifting vehicles the right way.



KPA Online Training Subscription. Get all of your people up to speed on automotive industry topics.



ANSI/ALI ALOIM Standard for Automotive Lifts. Safety Requirements for Operation, Inspection, and Maintenance.



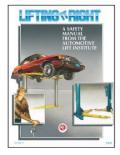
ANSI/ALI ALIS Standard. Safety Requirements for Installation and Service.



Guide to Hitting Vehicle Lifting Points for Frame-Engaging Lifts. Don't eyeball your lifting points, *know* where they are.



Lift Operator Safety Materials. Five safety documents in a single package.



Lifting It Right. A hardcopy version of the *Lifting It Right* safety manual from the Automotive Lift Institute.



Uniform Warning Labels and Placards for 2-Posts. Labels in Mandarin, French Canadian, and Spanish are also available.



Safety Tips Card. Reminds your people of 13 key safety tips to follow daily.

Visit today and get the training and materials you need to work safely: www.autolift.org/ali-store/.

