

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

bendpak.com

# Double- and Triple-Wide Parking Lifts Installation and Operation Manual

Manual P/N 5900056 — Manual Revision C2 — June 2019

## Models:

- PL-6KDT
- PL-6KDTX
- PL-6KT
- PL-6KDT-S
- PL-6KDTX-S
- PL-6KT-S



Model PL-6KDT-S 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.

**Manual.** PL-6K Series Parking Lifts, *Installation and Operation Manual*, Manual P/N 5900056, Manual Revision C2, Released June 2019.

**Copyright.** Copyright © 2019 by BendPak Inc. All rights reserved. You may make copies of this document if you agree that: you will give full attribution to BendPak Inc., you will not make changes to the content, you do not gain any rights to this content, and you will not use the copies for commercial purposes.

**Trademarks.** BendPak and the BendPak logo are registered trademarks of BendPak Inc. All other company, product, and service names are used for identification only. All trademarks and registered trademarks mentioned in this Manual are the property of their respective owners.

**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 Lift was designed and manufactured with safety in mind. However, your safety also depends on proper training and thoughtful operation. Do not install, 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 maintain your product properly and to ensure everyone's safety, it is the responsibility of the product owner to read and follow these instructions:

- Follow all installation, operation, and maintenance instructions.
- Make sure product installation 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 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:	



# **Table of Contents**

Introduction	3	Installation	15
Shipping Information	4	Operation	52
Safety Considerations	4	Maintenance	55
Components	6	<b>Troubleshooting</b>	57
FAQs	7	Wiring Diagrams	59
Will My Car Fit?	8	Cable Routing Diagrams	61
Safety Lock Positions	9	Seismic Models	65
Specifications	10	Labels	66
Orientation	13	Parts Drawings	68
Installation Checklist	14		

# Introduction

This Manual describes the PL-6K Series of parking lifts, which let you park double or triple the number of vehicles in a parking area. Each platform supports up to 6,000 lbs (2,722 kg).

There are three models in the PL-6K Series:

- **PL-6KDT**: Parking Lift with two independent Platforms.
- **PL-6KDTX**: *extra wide* Parking Lift with two independent Platforms.
- **PL-6KT**: Parking Lift with three independent Platforms.
- PL-6KDT-S: Parking Lift with two independent Platforms. Comes with seismic base plates; special order only.
- **PL-6KDTX-S**: *extra wide* Parking Lift with two independent Platforms. Comes with seismic base plates; special order only.
- **PL-6KT-S**: Parking Lift with three independent Platforms. Comes with seismic base plates; special order only.

All models are similar, so if no distinction is made, then the information applies to all models. If information applies to only one model, that distinction is mentioned in text. Seismic models are not mentioned specifically in text unless they are different from the standard models, other than the base plates. So if you see "PL-6KDT" in text, it means "PL-6KDT and PL-6KDT-S", and so on.

More information about the full line of BendPak products can be found at **bendpak.com**.

This Manual is mandatory reading for all users of PL-6K Series Lifts, including anyone who installs, uses, maintains, repairs, or wants to know more about them.



Be extremely careful when installing, 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 **techsupport@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 a bill of lading, it tells the carrier that the items on the invoice were received in good condition. *To protect yourself, do not sign until after you have inspected the shipment.* If any of the items listed on the bill of lading are missing or are 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, if available. 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 installing or using your new product**. Do not install or operate the product until you are familiar with all operating instructions and warnings. Do not allow anyone else to operate it until they are familiar with all operating instructions and warnings. Keep this Manual on or near the product for future reference.

Read and follow the warnings and instructions on the labels on the product. Contact BendPak at **(800) 253-2363** or **techsupport@bendpak.com** if you need replacement labels or a replacement Manual.

## **Safety Information**

The following safety information applies to all models in the PL-6K Series:

- The product is a Parking Lift. Use it only for its intended purpose. If you are looking for a service lift, visit the **Bendpak website**.
- The product must be operated by authorized, trained persons only. Keep children and untrained personnel away from the product.
- When the product is in use, keep people and especially body parts away from it.
- Do not make any modifications to the product; this voids the warranty and increases the chances of injury or property damage.
- Make sure all operators read and understand this Installation and Operation Manual. Keep the Manual near the Lift at all times.
- Make a visual inspection of the product before using it. Check for damaged, worn, or missing
  parts. Do not use the product if you find any of these issues. Instead, take the Lift out of service,
  then contact an authorized repair facility, your dealer, or BendPak at (800) 253-2363 or
  techsupport@bendpak.com.
- BendPak recommends making a **thorough** inspection of the product at least once a year. Replace any damaged or severely worn parts, decals, or warning labels.

## **Symbols**

NOTICE

Following are the symbols used in this Manual:

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

CAUTION Calls attention to a hazard or unsafe practice that could result in minor personal injury, product damage, or property damage.

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** 

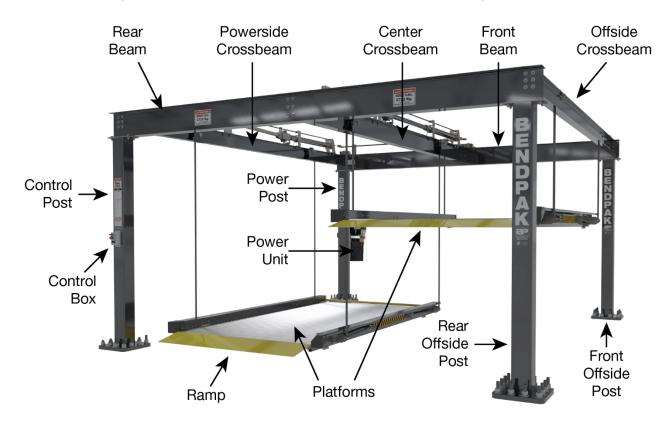
BendPak Inc. assumes **no** liability for damages resulting from:

- Use of the equipment for purposes other than those described in this Manual.
- Modifications to the equipment without prior, written permission from BendPak.
- Damage to the equipment from external influences.
- Incorrect operation of the equipment.

# **Components**

The components of your Lift include:

- **Control Box**. Houses the controls that raise and lower Platforms.
- **Control Post**. The Post on which the Control Box is mounted.
- **Power Unit**. Provides hydraulic power to the Hydraulic Cylinders that raise and lower Platforms.
- Power Post. The Post on which the Power Unit is mounted.
- Ramps. One for each Platform. Use them to drive onto and off of Platforms.
- **Platforms**. The metal surface that holds raised vehicles.
- **Front and Rear Beams**. Part of the structure of the Lift. The Front Beam is on the opposite side from the ramps. The Rear Beam is above the ramps.
- **Crossbeams**. Also part of the structure of the Lift. The Powerside Crossbeam and the Center Crossbeam(s) both support a Hydraulic Cylinder and Safety Lock on top. The Offside Crossbeam is part of the structure of the Lift.
- **Offside Posts**. All four posts are part of the structure of the Lift. The Control Post and the Power Post have special functions, mentioned above; the Offside Posts are part of the structure.



Model PL-6KDT-S shown; the PL-6KDTX is wider and the PL-6KT has a third Platform and a second Center Crossbeam. Standard models have different base plates.

# **Frequently Asked Questions**

Question: What kinds of vehicles can I park on my PL-6K Series Lift?

**Answer**: Cars, light trucks, and SUVs; up to 6,000 lbs (2,722 kg) per Platform.

**Q**: How long will it take to raise or lower my vehicle?

A: 30 to 45 seconds, approximately.

**Q**: Does the Lift have to be anchored in place?

A: Yes. The Posts must be anchored.

**Q**: Can I install my Lift outside?

**A**: Yes, but the Lift is designed for indoor installation, so there are some additional things you will need to do. Cover the Power Unit (*required*), put a canopy over the Lift, keep it clean and dry, and increase maintenance. Contact BendPak Customer Service (web **bendpak.com/support**, email **techsupport@bendpak.com**, phone **(800) 253-2363**) for additional information.

**Q**: Can I use my Lift to store boxes of stuff instead of a Vehicle?

**A**: No. This is *not* the intended use of the Lift; it is *not* designed to be used this way.

**Q**: How high does my garage ceiling have to be to support my Vehicles?

**A**: It depends on the height of the Vehicles you are putting on the Platforms. If you are parking low-slung Vehicles, then your ceiling does not have to be as high as it would need to be if you are parking taller Vehicles. Refer to **Will My Car Fit?** for additional information.

Q: Does the Control Box have to be on the Control Post?

A: Yes. That location gives the operator a clear view of the Platforms as they are raised and lowered.

**Q**: Does it matter if I drive my Vehicles in front first or back them in?

A: No. Your Lift works great either way.

**Q**: How are the seismic models different from the regular models?

**A**: They come with different, sturdier base plates and Threaded Rods with Epoxy instead of Anchor Bolts. These differences give the seismic models enhanced stability in the event of an earthquake and in high-vibration environments.

Q: Will the 'cables' really hold my vehicles?

**A**: Yes. PL-6K Series Lifts use 3/8 inch, aircraft-quality **wire rope** that runs through oversized Sheaves, reducing friction on them and extending their life with minimal maintenance.

Q: How long can I leave a Vehicle on a raised Platform?

**A**: As long as you want. Once a Safety Lock is engaged, gravity holds it in position, so a loss of power does not impact it. Your Vehicle is going to stay where you left it. Remember to **always leave Platforms either on the ground or engaged on their Safety Locks**.

Q: How many Safety Lock positions does my Lift have?

**A**: Two available, one is selected during installation. You are not restricted to just two Platform heights, however. There are adjustments that can be done during installation to get you the exact space you want under each Platform. See **Safety Lock Positions** for more information.

# Will My Car Fit?

Your Lift accommodates a wide variety of cars, light trucks, and SUVs.

#### Width

Considerations for Vehicle width include:

- **Platform width**. The usable width of the Platform is 86 inches (7.1 feet, 2184 mm); your tires cannot be wider than this. **All four tires must be fully on the Platform**; they cannot be on the side structure or on the Ramp.
- **Mirrors**. Mirrors and other accessories may mean that some parts of a Vehicle are much wider than the rest of the Vehicle. Parking lifts are designed to have lots of open space, but if you are parking two Vehicles next to each other that both have wide mirrors or other accessories, make sure they do not hit each other.
- **Car doors**. Opening Vehicle doors makes the Vehicle wider while they are open. Generally you want to avoid opening the doors of multiple Vehicles parked next to each other at the same time. You cannot open a car door while the Vehicle is raised, so this is not an issue for raised Vehicles.

## Length

Considerations for Vehicle length include:

- **Platform length**. The usable length of the Platform is 154.6 inches (12.9 feet, 3927 mm); your wheelbase cannot be longer than this. **All four tires must be fully on the Platform**; they cannot be on the Ramp or the Tire Stop.
- **Overhang**. If a Vehicle's tires are fully on the Platform, then the parts of the Vehicle hanging over the Front Tire Stop or the Ramp are not a concern, as long as they do not hit anything.

# Height

Considerations for Vehicle height include:

- **Ceiling height**. The height of your ceiling determines how much space you can allocate to the two Vehicles. If you want to park a tall Vehicle on a Platform *and* under the Platform, your ceiling is going to have to be higher than if you want to park two low-slung Vehicles.
- **Formula**. There's a formula for figuring out how much height you need, based on the Vehicles you want to park.

Height of Vehicle on Platform + 9 inches (6 inches for the height of the Platform plus 3 inches to get off the Safety Lock) + height of Safety Lock position of Platform

Add these together; your garage height needs to be higher than the sum of these values.



To find the "height of Safety Lock position of Platform", raise a Platform and lock it on its Safety Lock position, then measure from the ground to the bottom of the raised Platform. Note that the Maximum Rise height listed in **Specifications** is how high the mechanism can go before stopping; the Safety Lock height is close to, but not the same as, Maximum Rise.

Remember that the height of a Safety Lock position can be adjusted down during installation to a range of heights, to suit your specific needs. See **Safety Lock Positions** for more information.

# **Safety Lock Positions**

Each Platform can be set to a High or Low Safety Lock position. Each Platform is set independently of the other Platform(s) on the Lift.

The two settings are:

• **High setting**: Moves the Platform higher, leaving **more room under** the Platform (and thus less room above the Platform) when it is on its Safety Lock. The High setting is generally the best choice for parking higher-profile Vehicles underneath the Platform; SUVs, large trucks, or other high-profile Vehicles.

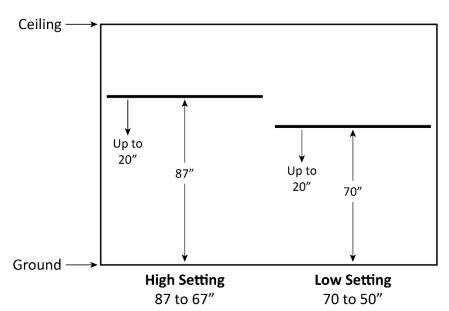
The High setting leaves approximately 87" (2,210 mm) of height under the Platform, thus allowing Vehicles up to 86" (2,184 mm) high to park under the Platform.

• **Low setting**: Keeps the Platform lower, leaving *less room under* the Platform (and thus *more room above* the Platform) when it is on its Safety Lock. The Low setting is generally the best choice for parking lower-profile Vehicles underneath; passenger vehicles or small trucks, for example.

The Low setting leaves approximately 70" (1,778 mm) of height under the Platform, thus allowing Vehicles up to 69" (1,753 mm) high to park under the Platform.

It is possible to **adjust down** the High and Low settings up to 20" (508 mm) by manipulating the cables that hold the Platforms.

Being able to adjust down from the default High and Low settings gives you a *range* for each: 87" to 67" for the High setting range, 70" to 50" for the Low setting range.



High and Low settings based on *Safety Lock* height.

Up to 20" down adjustment based on *Platform Cables*.

Height decisions must be made prior to installing Lift.

**Bottom Line**: Platforms can be installed with anywhere from 87" to 50" of height underneath.

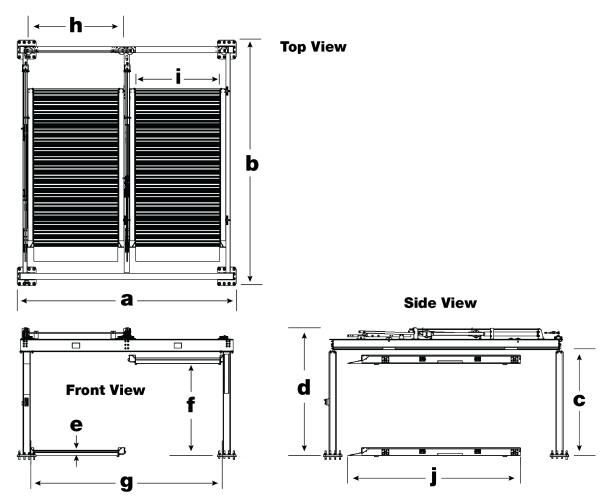
The High or Low settings, and their ranges, is set during installation, so you need to **make your height decisions before installation begins**.

**Important**: Installers, Lift owners need to make the height decisions before installation begins.

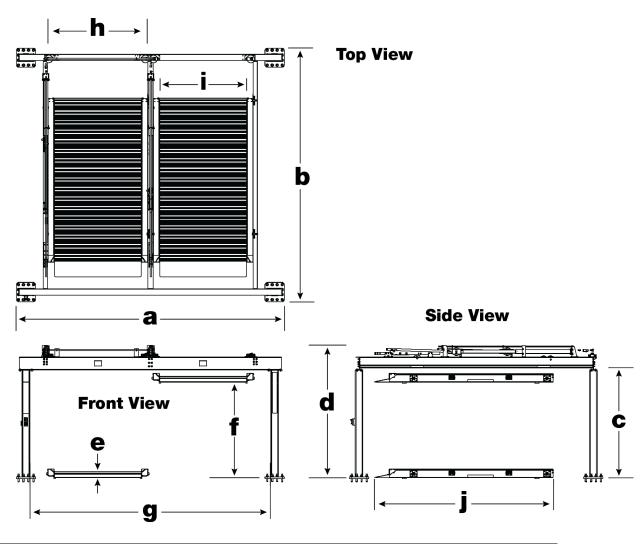
The method for setting a Platform to the High or Low setting is found in **Prepare the Center Crossbeam(s)**. The method for adjusting the cabling to get the High and Low ranges is found in **Assemble the Platform Structures**.

**Important**: Do not make your height calculations too precise; *cable stretch* can impact them.

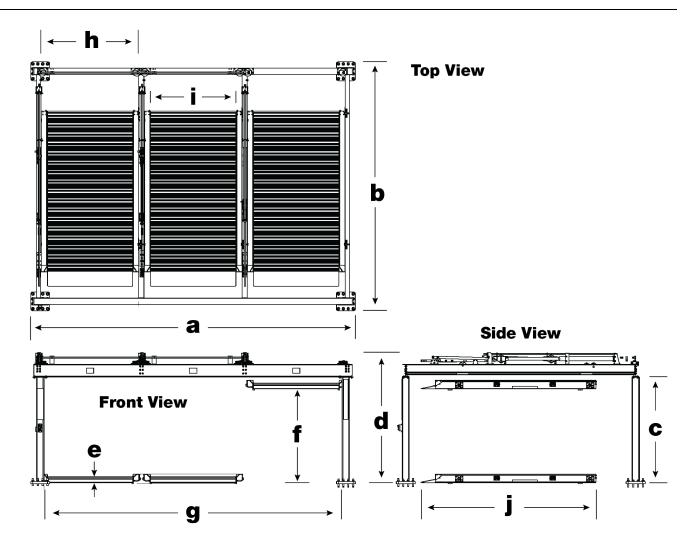
# **Specifications**



Model	PL-6KDT
Platforms	2 Platforms
Lifting capacity per Platform	6,000 lbs / 2,722 kg
a Total width	210.7" (17.5 feet) / 5,352 mm
<b>b</b> Total depth	236.5" (19.7 feet) / 6,008 mm
<b>c</b> Post height	103.3" (8.6 feet) / 2,625 mm
d Total height	123.6" (10.3 feet) / 3,140 mm
e Minimum runway height	4.5" / 115 mm
<b>f</b> Maximum rise	89" (7.4 feet) / 2,261 mm
g Width between posts	185.6" (15.4 feet) / 4,715 mm
h Platform width	93.5" (7.75 feet) / 2,374 mm
i Usable Platform width	86" (7.1 feet) / 2,184 mm
j Platform length (with ramp)	166.6" (13.9 feet) / 4,232 mm
Lifting time	30 to 45 seconds
Motor	220 VAC, 50/60 Hz, 1 Ph



Model	PL-6KDTX
Platforms	2 Platforms
Lifting capacity per Platform	6,000 lbs / 2,722 kg
a Total width	250" (20.8 feet) / 6,350 mm
<b>b</b> Total depth	236.5" (19.7 feet) / 6,008 mm
C Post height	103.3" (8.6 feet) / 2,625 mm
d Total height	123.6" (10.3 feet) / 3,140 mm
Minimum runway height	4.5" / 115 mm
<b>f</b> Maximum rise	89" (7.4 feet) / 2,261 mm
<b>g</b> Width between posts	225" (18.7 feet) / 5,713 mm
h Platform width	93.5" (7.75 feet) / 2,374 mm
i Usable Platform width	86" (7.1 feet) / 2,184 mm
j Platform length (with ramp)	166.6" (13.9 feet) / 4,232 mm
Lifting time	30 to 45 seconds
Motor	220 VAC, 50/60 Hz, 1 Ph

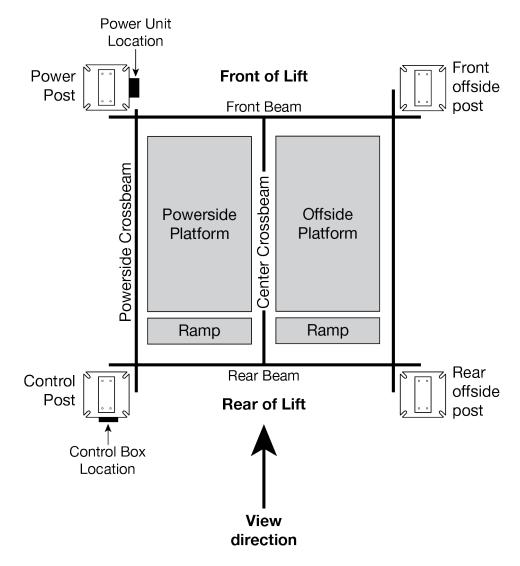


Model	PL-6KT
Platforms	3 Platforms
Lifting capacity per platform	6,000 lbs / 2,722 kg
a Total width	308.4" (25.7 feet) / 7,834 mm
<b>b</b> Total depth	236.5" (19.7 feet) / 6,008 mm
C Post height	103.3" (8.6 feet) / 2,625 mm
d Total height	123.6" (10.3 feet) / 3,140 mm
Minimum runway height	4.5" / 115 mm
<b>f</b> Maximum rise	89" (7.4 feet) / 2,261 mm
<b>g</b> Width between posts	283.3" (23.6 feet) / 7,197 mm
h Platform width	93.5" (7.75 feet) / 2,374 mm
i Usable platform width	86" (7.1 feet) / 2,184 mm
j Platform length (with ramp)	166.6" (13.9 feet) / 4,232 mm
Lifting time	30 to 45 seconds
Motor	220 VAC, 50/60 Hz, 1 Ph

# **Orientation**

The Front of your Lift, as with many Lifts, is the end *opposite* the Ramps.

In the case of the PL-6K Series, the Power Unit and Power Post are at the Front, while the Ramps, the Control Post, and the Control Box are at the Rear.



Drawing not necessarily to scale. The PL-6KT has a second Center Crossbeam and a third Platform called the Center Platform. Seismic models have different base plates.

# **Installation Checklist**

Following are the steps needed to install a PL-6K Series Lift. Perform them in the order shown.
☐ 1. Review the installation Safety rules.
☐ 2. Make sure you have the necessary Tools.
☐ 3. Plan for electrical work.
☐ 4. Select the installation Location.
☐ 5. Unload and unpack the Lift Components.
☐ 6. Review the installation Orientation.
☐ 7. Create Chalk Line Guides for the Posts.
☐ 8. Move the Posts into position.
☐ 9. Set up and install the Front Beam.
☐ 10. Set up the Rear Beam.
☐ 11. Set up the Offside Crossbeam.
☐ 12. Set up the Center Crossbeam(s).
☐ 13. Set up the Powerside Crossbeam.
☐ 14. Install the Power Unit.
☐ 15. Install and Connect the Hydraulic System.
☐ 16. Contact the Electrician.
$\square$ 17. Connect a Power Supply to the Power Unit (Electrician required).
$\square$ 18. Install the Power Disconnect Switch and the Thermal Disconnect Switch (Electrician required).
☐ 19. Connect the Controls (Electrician required).
☐ 20. Anchor the Posts.
☐ 21. Assemble the Platform Structures.
☐ 22. Assemble the Platform pieces.
☐ 23. Lubricate the Lift.
☐ 24. Perform an Operational Test.
☐ 25. Review the Final Checklist.
☐ 26. Leave the Manual for the owner/operator.

# Installation

The installation process includes multiple steps. Perform them in the order listed.

#### **⚠** 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.

## Safety

While installing this equipment, 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 crane, to lift heavy components. Do not install this equipment without reading and understanding this Manual and the safety labels on the unit.

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



**MARNING** You must wear appropriate protective equipment: gloves, steel-toed work boots, eye protection, back belts, and hearing protection.

#### **Tools**

You may need some or all of the following tools:

- Rotary hammer drill (or similar)
- 34 inch carbide bit (conforming to ANSI B212.15-1994)
- Hammer and crow bar
- Four-foot level
- Open-end wrench set, SAE and metric
- Socket and ratchet set, SAE and metric
- Hex key wrench set
- Medium crescent and pipe wrenches
- Torque wrench
- Chalk line
- Medium-sized flat screwdriver
- Tape measure, 25 feet or above
- Needle-nose pliers
- Forklift, crane, or heavy-duty rolling dolly
- Sawhorses
- 12-foot ladder

#### **Electrical Work**

You will need to have a licensed, certified Electrician available at some point during the installation.

Notify your Electrician in advance so that they come prepared with an appropriate wiring for connecting the Power Unit to the power source, a Power Disconnect Switch, a Thermal Disconnect Switch, and the wiring for the Control Box, Junction Box, and solenoids. Refer to **Contact the Electrician** for more information.

Note that most wiring needs to be provided by the Electrician; it is **not** supplied with the Lift.

**⚠** DANGER

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

The Electrician needs to:

- Connect a 220 VAC power source to the Power Unit. A power source is required.
- **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.
- **Connect the Controls**. The Control Box houses the Controls that raise and lower each Platform. The Controls must be wired appropriately; refer to **Connect the Controls** for more information.

#### Select a Location

When selecting the location for your Lift, consider:

- **Architectural plans**. Consult the architectural plans for your desired installation location. Make sure there are no conflicts between what you want to do and what the plans show.
- **Available space**. Make sure there is enough space for the Lift: front, back, sides, and above. Refer to **Specifications** for measurements.
- **Overhead obstructions**. Check for overhead obstructions such as building supports, heaters, electrical lines, low ceilings, hanging lights, and so on. **You do not want your vehicles hitting obstructions**.
- Power. You need a 220 VAC power source available for the Lift's Power Unit.
- Outdoor installations. PL-6K Series Lifts are not designed to be installed outdoors. Outdoor installation is prohibited. If you are still considering installing your Lift outdoors, contact BendPak Customer Service (email techsupport@bendpak.com, webbendpak.com/support, phone (800) 253-2363).
- **Floor**. Only install the Lift on a flat, concrete floor; do not install on asphalt or any other surface. The surface must be level; do not install if the surface has more than three degrees of slope.

**MARNING** 

Installing your Lift on a surface with more than three degrees of slope could lead to injury or even death. Only install PL-6K Series Lifts on a level floor (defined as no more than 3/8 of an inch difference over the installation area). If your floor is not level, consider making the floor level or using a different location.

• **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 a minimum of 28 days.

# **⚠** CAUTION

BendPak Lifts are supplied with installation instructions and concrete anchors that met the criteria set by the American National Standard "Automotive Lifts – Safety Requirements for Construction, Testing, and Validation", ANSI/ALI ALCTV-2011. You 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).

Be sure to check your floor for the possibility of it being a post-tension slab. In this case, contact the building architect before drilling. Using ground penetrating radar may help you find the tensioned steel.

# **⚠ WARNING**

Cutting through a tensioned cable can result in injury or death. Do not drill into a post-tension slab unless the building architect confirms you are not going to hit tensioned steel or you have located it using ground penetrating radar. If colored sheath comes up during drilling, stop drilling immediately.

## **Unload and Unpack**

Try to have the components of the Lift unloaded near the location where you will be installing it.

Once the components are unloaded, they are your responsibility to move around. As the Lift includes a number of heavy pieces, the closer you unload them to the installation location, the better off you are.

## **⚠ WARNING**

Some Lift components are heavy; if handled incorrectly, they can damage materials like tile, sandstone, and brick. Try to handle the Lift components just twice: once when delivered and once when moved into position. You must have a forklift or crane to move them into position. Use care when moving them around.

# **⚠ WARNING**

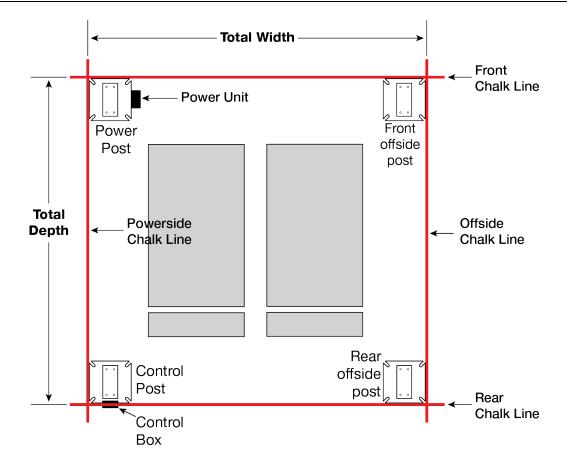
The posts and beams are delivered with stabilizing structures on each end. Be very careful when removing these stabilizing structures; the Posts and Beams could shift or even fall.

#### **Put in Chalk Line Guides**

Using Chalk Line Guides helps ensure the Posts get installed correctly.

Refer to **Specifications** to determine the Total Width and Total Depth values for your Lift model. Your Lift has four Posts:

- Control Post: Located on the Left Rear. The Control Post holds the Control Box used to control the Platforms. *The Control Post is unique; it has drilled holes that hold the Control Box*. Make sure to orient the Control Post so that the drilled holes face the Rear of the Lift. The image in Orientation shows the correct orientation of the Control Post.
- Power Post: Located on the Left Front of the Lift. The Power Post holds the Power Unit. The
   Power Post is unique; it has a mounting bracket on one side that holds the
   Power Unit. The Power Post must be oriented so the mounting bracket is on the inside. The
   image in Orientation shows the correct orientation of the Power Post.
- **Front Offside Post**: Located on the Right Front of the Lift. Not unique. Interchangeable with the Rear Offside Post.
- **Rear Offside Post**: Located on the Right Rear of the Lift. Not unique. Interchangeable with the Front Offside Post.



#### To create the four Chalk Line Guides:

- Create the Front Chalk Line where you want the Front of the Lift.
   Make the Front Chalk Line longer than the Total Width setting for your Lift model.
- 2. Create the Powerside and Offside Chalk Lines at 90° angles to the Front Chalk Line and parallel to each other.

Make the Powerside and Offside Chalk Lines longer than the Total Depth setting for your Lift model.

The Powerside and Offside Chalk Lines must also be exactly **x** distance from each other, **at both ends**, where **x** is the Total Width setting for your Lift model. *Measure to verify that this is true*.

- 3. Create the Rear Chalk Line parallel to the Front Chalk Line.
  - Make the Rear Chalk Line longer than the Total Width setting for your Lift model.
  - The Front and Rear Chalk Lines must also be exactly **x** distance from each other, **at both ends**, where **x** is the Total Depth setting for your Lift model. *Measure to verify that this is true.*
- 4. Before moving the posts into position, measure diagonally to make sure the two diagonals are the same. This ensures your layout is correct. *Do not forget to check the diagonals.*
- 5. When you move the posts into position, put the corners of the base plates inside the corners created by the four chalk lines.

#### **Move the Posts into Position**

BendPak strongly recommends using a Forklift or Crane to move the Posts. You need to have at least three people work together to stand up the Posts.

**⚠ DANGER** 

The Posts are extremely heavy; be **very** careful when handling them.

#### To move the Posts into position:

1. Using a Forklift or Crane, move the Posts, one at a time, to the Chalk Line Guides you created.

Important:

The Power Post and the Control Post are different from the Offside Posts. Make sure to position them at their *required* locations and orientations. Refer to the images in **Orientation** and **Components** for the locations and orientations of the Power and Control Posts. The Offside Posts are interchangeable; put them at either of the remaining Post locations.

2. Stand up each Post. You must have at least three people work together to stand up a Post.



You can shim and plumb the Posts now or later. Doing it now means the weight of the beams and crossbeams is *not* on the Posts (which makes it easier to shim them if you do it now). Doing it later means you have some play in the Posts when you install the Beams and the Crossbeams.

3. Do not anchor the Posts at this point.

#### **About the Beams**

The next several sections describe how to prepare and install the Lift's Beams, Crossbeams, and Cabling.

There are two methods that are generally used to prepare and install the Beams/Crossbeams and route the Cables:

Prepare each Beam/Crossbeam and raise them into place separately.

In other words, prepare the Front Beam and raise it into place, prepare the Rear Beam and raise it into place, and so on until all the Beams and Crossbeams are in place. Most people who use this method route the Cables, as much as they can, for each Beam on the ground as they prepare it.

This method is generally best when you are tight on space. It requires some additional work on ladders.

• Prepare the Beams/Crossbeams on the ground **all at one time** before raising them, including routing the Cables, then raise the entire structure into place all at once.

This method works if there is adequate space to raise the entire structure into place at one time. The advantage is that it reduces the amount of work you have to do on ladders at the end. This method requires at least one Crane and one Forklift; your installation may require additional lifting devices.

Choose the method that is best for your particular installation.



BendPak recommends putting the Beams/Crossbeams on a raised platform, like sawhorses, when preparing the Beams/Crossbeams, no matter which method you choose. This generally makes them easier to prepare, compared to if they were on the ground.

The procedures in the next several sections assume the first method, preparing each Beam/Crossbeam separately, but they can be easily adapted to the second method.

## **Set Up and Install the Front Beam**

Set up and install the Front Beam first.

To set up the Front Beam, you need to install the Sheaves on top.

#### To set up and install the Front Beam:

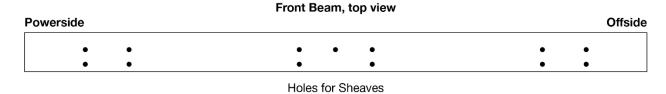
1. Using a Forklift or Crane, put the Front Beam onto a heavy-duty rolling dolly and move it, on the ground, into location between the two Posts at the Front of the Lift.

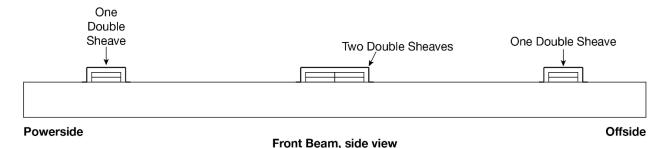
#### Make sure to orient the Front Beam correctly.

2. Bolt the Sheaves at the correct locations on the top of the Front Beam.

Two Sheaves on the Powerside, four Sheaves in the center (two double Sheaves), and two more Sheaves on the Offside.

This drawing shows where the Sheaves go on the Front Beam. Note that the Front Beam also holds the Hydraulic Lines, but they are not shown here for clarity.





Sheaves and Sheave covers come assembled. Drawing not necessarily to scale; some components not shown. View is from the Rear of the Lift, looking towards the Front.

3. When the Sheaves are bolted, you can raise the Front Beam and bolt it in place.

Do not torque the bolts at this point.

#### **Install the Rear Beam**

Install the Rear Beam after installing the Front Beam.

There are no components that go on top of the Rear Beam; you simply need to raise it into position and put the bolts in place.

**Make sure the orientation is correct**, the labels on the Rear Beam need to be facing out so they can be seen as Vehicles drive onto the Platforms. They are an additional reminder that there is a weight limit for the Vehicles on each Platform.

#### To install the Rear Beam:

1. Using a Forklift or Crane, put the Rear Beam onto a heavy-duty rolling dolly and move it, on the ground, into location between the two Posts at the Rear of the Lift.

#### Make sure to orient the Rear Beam correctly.



Offside Front Beam, side view Powerside

Drawing not necessarily to scale; some components not shown. View is from the Front of the Lift, looking towards the Rear.

- 2. Raise the Rear Beam into position on top of the two Posts, then bolt it into place.
- 3. Do not torque the bolts at this point.

#### **About the Crossbeams**

Crossbeams connect to the Front Beam on one end and to the Rear Beam on the other end.

Your Lift will have either three or four crossbeams:

- PL-6KDT and PL-6KDTX. Three crossbeams: one Powerside, one Center, and one Offside.
- PL-6KT. Four crossbeams: one Powerside, two Center, and one Offside.

## **Prepare and Install the Offside Crossbeam**

Prepare and install the Offside Crossbeam after installing the Rear Beam.

Before you can raise the Offside Crossbeam into place, you must prepare it by adding two Sheaves.

**Note**: Unlike the Sheaves on the top of the Front Beam, the Sheaves in the crossbeams do not come installed; you must remove the Sheave cover, put the Sheave in place, then replace the cover. Also, they are installed on the side of the beam, not on the top.

#### To prepare the Crossbeam Sheaves:

1. Using a Forklift or Crane, put the Offside Crossbeam onto a heavy-duty rolling dolly and move it, on the ground, into location between the Front Beam and the Rear Beam.

# Make sure to orient the Offside Crossbeam correctly. The Sheaves go on the inside.

This drawing shows the Sheave locations on the Offside Crossbeam.



Drawing is not necessarily to scale; not all components shown. The view is from the Center Crossbeam looking towards the Offside Crossbeam.

**Note**: The Sheave covers and Sheaves are not interchangeable; they are similar but not the same. Some appear higher than others; this is by design.

2. Remove a Sheave cover, put a single Sheave into place, replace the Sheave cover.

**Note**: Put the wider spacer closer to the outside of the beam, nearer to the Sheave cover, and the narrower spacer closer to the middle of the beam.

- 3. Remove the other Sheave cover, put a second single Sheave into place, and replace the Sheave cover.
- 4. When both Sheaves are installed, raise the Offside Crossbeam into the space between the Front Beam and the Rear Beam.
- 5. Attach the front end of the Offside Crossbeam to the Front Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.
- 6. Attach the rear end of the Offside Crossbeam to the Rear Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.

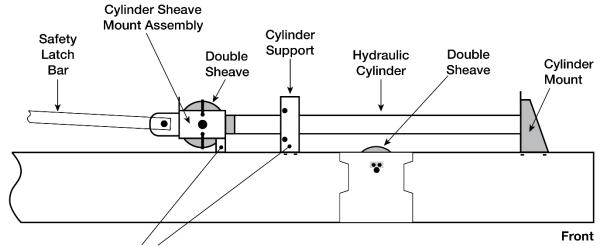
# **Prepare the Center Crossbeam(s)**

The PL-6KDT and the PL-6KDTX each have one Center Crossbeam.

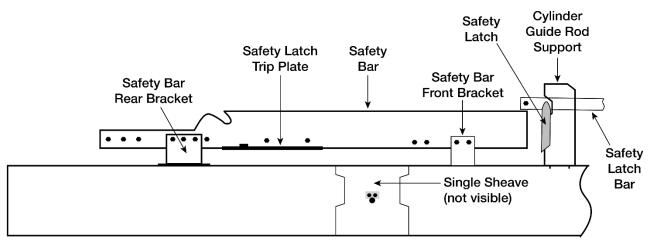
The PL-6KT has **two** Center Crossbeams, so you will be preparing and installing two Center Crossbeams. The process is the same for the second Center Crossbeam.

**Note**: Center Crossbeams are taller than the other Crossbeams.

The following drawing shows the Center Crossbeam and its components. The view is from the Offside Crossbeam looking towards the Center Crossbeam.



Route Cables 1 and 2 on **inside** of vertical pieces on other side of these locations.



Rear

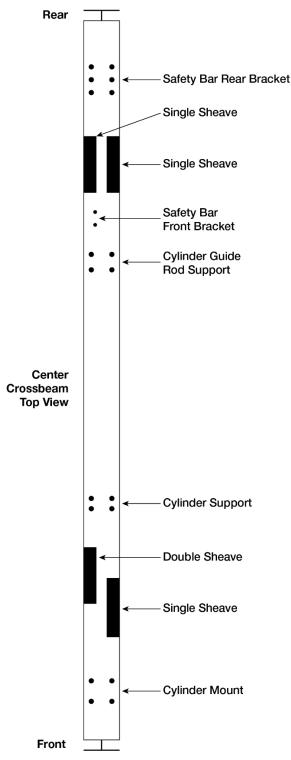
Drawing not necessarily to scale. Not all components shown. Because of the length of the Crossbeam, it is shown in two pieces.

#### To install components on a Center Crossbeam:

1. Using a Forklift or Crane, put the Center Crossbeam onto a heavy-duty rolling dolly and move it, on the ground, into location between the Front Beam and the Rear Beam.

#### Make sure to orient the Center Crossbeam correctly.

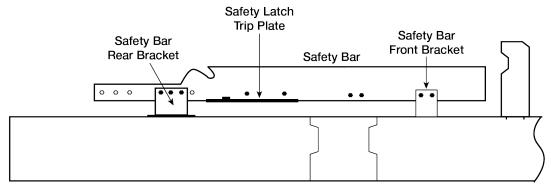
This drawing shows a Center Crossbeam from above.



Drawing not necessarily to scale. Not all components shown. Be sure to orient correctly.

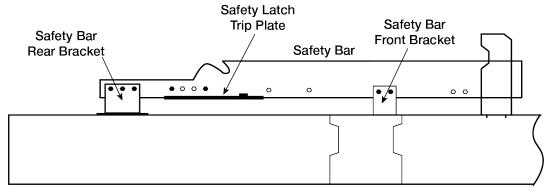
- 2. Locate the Cylinder Mount, then take four nuts and bolts and connect it to the Center Crossbeam.
- Locate the Cylinder Support, then take four more nuts and bolts and connect it to the Center Crossbeam.
- 4. Locate the Cylinder Sheave Mount Weldment and move it into position.
  - The Cylinder Sheave Mount Weldment does not get connected to the Center Crossbeam. Rather, it connects to the Cylinder Rod on one end and the Safety Latch on the other end.
- 5. Find the Hydraulic Cylinder and move it into position, then connect it to the Cylinder Mount using four nuts and bolts.
- 6. Rest the Hydraulic Cylinder on the Cylinder Support, then install the horseshoe to hold it in place.
- 7. Connect the Cylinder Rod to one end of the Cylinder Sheave Mount Weldment using one screw.
- 8. Locate the Safety Bar; the Safety Bar Front Bracket, the Safety Bar Rear Bracket, and the Safety Latch Trip Plate come installed.
- Attach the Safety Bar to the top of the Center Crossbeam in either the High or the Low setting.
   Refer to Safety Lock Positions for more information about the High and Low settings.

The following diagram shows the Safety Bar in the *High setting*.



Rear

The following diagram shows the Safety Bar in the **Low setting**.



Rear

Important:

To switch from one setting to the other, unbolt both brackets from the Safety Bar (not from the beam), reverse the orientation of the Safety Latch Trip Plate, adjust the location of the Safety Bar as needed, then bolt both brackets in their new locations on the Safety Bar.

- 10. Locate the Safety Latch Bar and attach one end to the circular end of the Cylinder Sheave Mount Weldment using a cotter pin.
- 11. Put the other end of the Safety Latch Bar through the inside of the Cylinder Guide Rod Support and rest it on the end of the Safety Bar.
- 12. Make sure that both Safety Latches are swinging freely.
- 13. Install the Sheaves on the Center Crossbeam. There are five: three on the offside and two on the powerside of the beam.

The Sheave on the offside in the Front is a double Sheave; the other three are single Sheaves.

When installing the Sheaves, put the wider spacer closer to the outside of the beam, nearer to the Sheave cover, and the narrower spacer closer to the middle of the beam.

## Route the Cables on the Center Crossbeam(s)

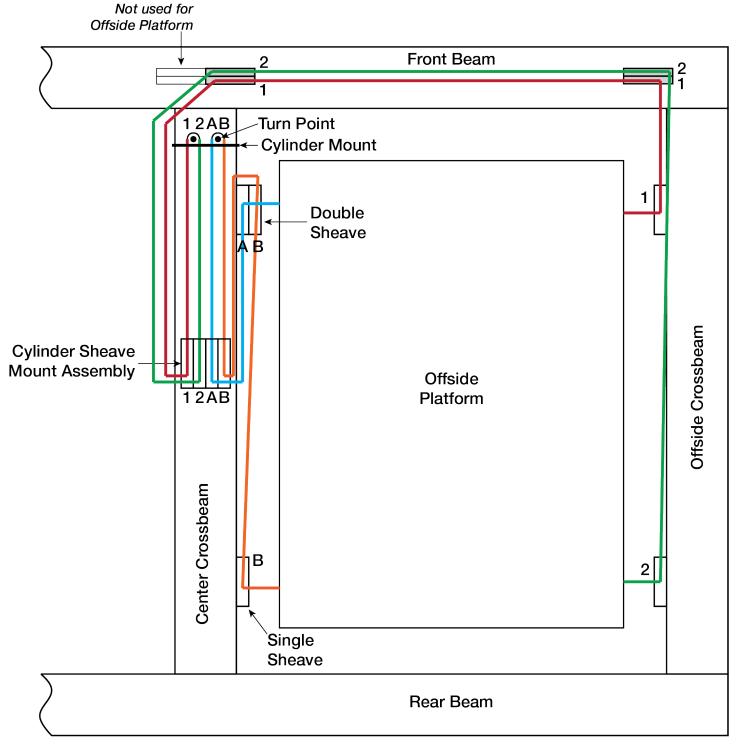
This section describes how to route the Cables on the Center Crossbeam.

If you are installing a PL-6KDT or PL-6KDTX, this Cabling is done once for the Offside Platform.

If you are installing a PL-6KT, you will be performing this procedure twice: once for the Offside Platform and once for the Center Platform.

**Note**: If you are installing and raising each Beam separately, you cannot finish routing the Center Crossbeam Cables until after the Beam is raised into position.

The following drawing shows all four Cable routes in one drawing. Refer to **Cable Routing Diagrams** for separate drawings for each Cable route.



This drawing shows the components involved in routing the Cables for the Offside Platform. Some components have been moved slightly to enhance understanding. It does not include all Lift components. It is not to scale. It includes both side and top views. Use for Cable routing only.

**⚠** CAUTION

BendPak strongly recommends wearing leather gloves specifically designed for Cable handling while you are routing the Cables.

#### To route the Cables on a Center Crossbeam:

1. Take one long Cable (90 feet / 27,584 mm) and one short Cable (60 feet / 18,085 mm) and stretch them out on the ground.



**Tip** BendPak recommends taping off the ends of the Cables; if they fray, they are much harder to route and more likely to cut your hands.

2. Clearly mark the Long Cable at 50 feet (15,240 mm).

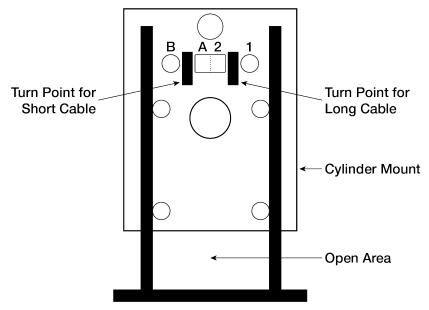
You can use spray paint or tape; when you start routing the cables, you will need to be able to find the marked location, which is where you must wrap the Long Cable around the Turn Point.

The Long Cable has two sections: one is 50 feet, the other is 40.5 feet (12,344 mm).

3. Clearly mark the Short Cable at 35 feet (10,668 mm).

The Short Cable now has two sections: one is 35 feet, the other is 24.25 feet (7,417 mm).

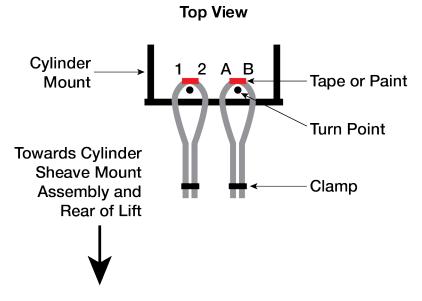
- 4. There are now four Cable lengths, designated in the drawings in this section as:
  - **1**: 40.5 feet (12,334 mm) of the Long Cable (we're going to call this the "40 foot" section)
  - 2: 50 feet (15,240 mm) of the Long Cable
  - **A**: 24.25 feet (7,417 mm) of the Short Cable (we're going to call this the "25 foot" section)
  - **B**: 35 feet (10,668 mm) of the Short Cable
- 5. Take the Long Cable and route the 40 foot section through **1** of the Cylinder Mount and route the 50 foot section through **2**.



This drawing is a side view of the Cylinder Mount, from the Front Beam looking towards the Rear Beam. The Hydraulic Cylinder is on the other side of the Cylinder Mount. This is the side you will be pushing the Cables in from. Note that the location identifiers appear backwards, as this view is from the opposite direction of the views in most of the other drawings.

Make sure the 40 foot section ends up as 1 and the 50 foot section ends up as 2. If you reverse them, the Lift will not work correctly.

- 6. Once each section is through the Cylinder Mount, route them to **1** and **2** on the Cylinder Sheave Mount Assembly, going over the top of the Sheave and then down under the Sheave, on the way back towards the Cylinder Mount.
  - Make sure cables **1** and **2**, on their way back towards the Front Beam, are routed on the inside of the vertical piece under the Cylinder Sheave Mount Assembly and inside the rounded bar on the bottom of the Cylinder Support.
- 7. Pull both sections of the Long Cable through the Open Area at the bottom of the Cylinder Mount.
  - If you are installing and raising each beam separately, put the Long Cable sections off to the side; you cannot route them any further until the Center Crossbeam is raised into position.
  - If you are installing and raising all of the beams at the same time, route **1** and **2** first through the double Sheave on the Front Beam next to the Cylinder Mount, then through the double Sheave near the Offside Crossbeam, then to the appropriate Sheaves on the Offside Crossbeam, then down. After that, put them off to the side, as you cannot do anything else with them until you have the Offside Platform structure assembled.
- 8. Return to the Cylinder Mount and make sure the location you marked with spray paint or tape on the long Cable is at the Turn Point, as shown in this drawing.



If the paint or tape mark is not at the Turn Point, adjust the Long Cable until the mark is at the Turn Point. **Do not proceed with Cable routing until the mark is at the Turn Point.** 

- 9. When the mark is at the Turn Point, clamp the two sections of the Long Cable together so that the mark will stay at the Turn Point.
- 10. Take the Short Cable and route the 25 foot section through **▲** of the Cylinder Mount and route the 35 foot section through **■**.

Make sure the 25 foot section ends up as A and the 35 foot section ends up as B. If you reverse them, the Lift will not work correctly.

11. Once each section is through the Cylinder Mount, route them to **A** and **B** on the Cylinder Sheave Mount Assembly, going first over the top of the Sheave and then under the Sheave, heading back towards the Cylinder Mount.

- 12. Before getting to the Cylinder Mount, route them to the double Sheave on the Offside Platform side of the Center Crossbeam:
  - Route A over the Sheave closest to the Center Crossbeam and then down.
  - Route B over the Sheave furthest from the Center Crossbeam and then over to the single Sheave near the Rear Beam.
- 13. Pull both sections of the Short Cable as far as you can towards their destinations and then put them off to the side. You cannot do anything more with them until you have the Offside Platform structure assembled.
- 14. Return to the Cylinder Mount and make sure that the location you marked with paint or tape on the Short Cable is at the Turn Point.
  - If the paint or tape mark is not at the Turn Point, adjust the Short Cable until the mark is at the Turn Point. *Do not proceed with Cable routing until the mark is at the Turn Point.*
- 15. When the mark is at the Turn Point, clamp the two sections of the Short Cable together so that the mark will stay at the Turn Point.
- 16. Find a Threaded Stabilizing Rod and run it from the hole at the top of the Cylinder Mount, through the Cylinder Support, the Cylinder Sheave Mount Assembly, and finally through the Cylinder Guide Rod Support; secure it in place with washers and nuts at each end.
  - The Threaded Stabilizing Rod goes through the holes at the top of each of these components.

## Raise the Center Crossbeam(s) into Position

This procedure assumes the Center Crossbeam has all components in place, including as much Cable routing as can be done to this point.

#### To raise a Center Crossbeam into position and secure it:

- 1. Raise the Center Crossbeam into the space between the Front Beam and the Rear Beam.
- 2. Attach the *front end* of the Center Crossbeam to the Front Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.
- 3. Attach the **rear end** of the Center Crossbeam to the Rear Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.
- 4. Route the **1** and **2** cables through the double Sheaves on the Front Beam and then through the single Sheaves on the Offside Crossbeam (or the other Center Crossbeam, if you are working on the second Center Crossbeam on a PL-6KT).

**Note**: There are two sets of double Sheaves on the Front Beam next to the Cylinder Mount. Do not use the double Sheaves on the left; instead, use the double Sheaves on the right, closest to the Offside Platform.

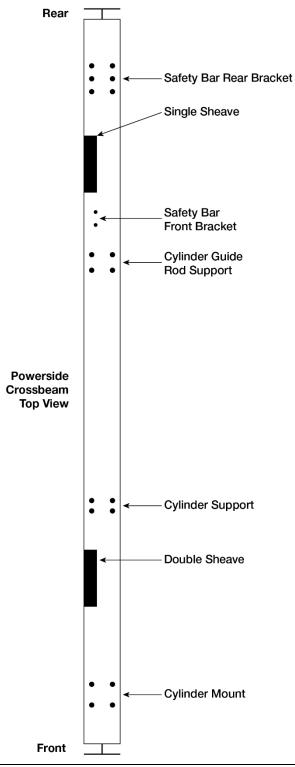
- 5. Route the **A** and **B** cables through their respective Sheaves on the Center Crossbeam.
- 6. Secure the Cables that are hanging down; you will not need to use them again until the Platform structures are assembled.
- 7. Torque the bolts that hold the Center Crossbeam to the Front Beam and the Rear Beam.

# **Prepare the Powerside Crossbeam**

The components on the top of the Powerside Crossbeam are exactly the same as the components on the top of the Center Crossbeam(s).

Because they are exactly the same, simply repeat the same process for the Powerside Crossbeam as you performed for the Center Crossbeam(s).

There are a couple of small differences in the Powerside Crossbeam itself, so it is shown below, but those differences involve the Sheaves and have no impact on this part of the installation.

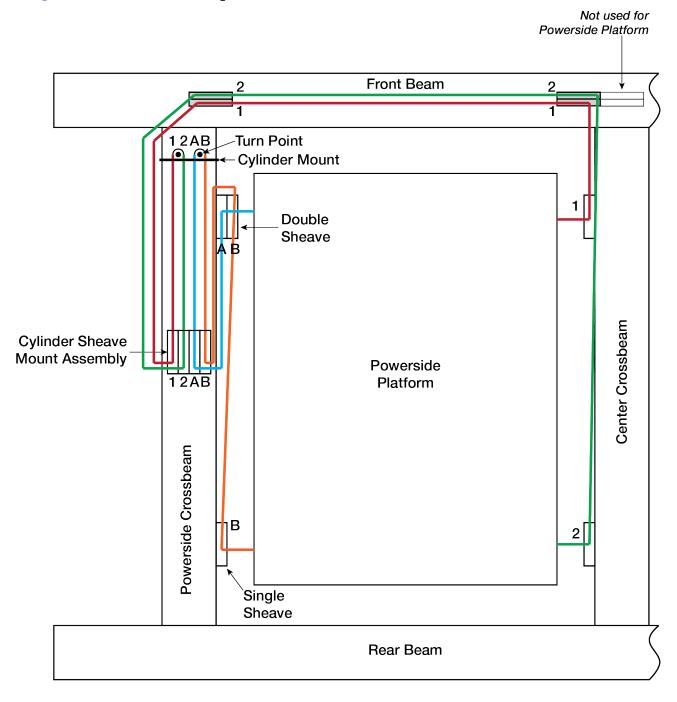


## **Routing the Cables on the Powerside Crossbeam**

Routing the Cables on the Powerside Crossbeam is almost exactly the same as routing the Cables on the Center Crossbeam(s); the Sheave locations on the Front Beam are the only differences.

Because they are almost exactly the same, simply repeat the same process for the Powerside Crossbeam as you performed for the Center Crossbeam(s), noting the slightly different Sheave locations shown below.

The following drawing shows all four Cable routes in one drawing. Refer to **Cable Routing Diagrams** for additional drawings.



#### **Raise the Powerside Crossbeam into Position**

This procedure assumes the Powerside Crossbeam has all components in place, including as much Cable routing as can be done to this point.

#### To raise the Powerside Crossbeam into position and secure it:

- 1. Raise the Powerside Crossbeam into the space between the Front Beam and the Rear Beam.
- 2. Attach the **front end** of the Powerside Crossbeam to the Front Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.
- 3. Attach the **rear end** of the Powerside Crossbeam to the Rear Beam; put the nuts and bolts into position, but do not torque them yet.
  - Insert the bolts from the outside; put on the nuts on the inside.
- 4. Route the **1** and **2** cables through the double Sheaves on the Front Beam and then through the single Sheaves on the Center Crossbeam.
- 5. Route the **A** and **B** cables through their respective Sheaves on the Powerside Crossbeam.
- 6. Secure the four Cables that are hanging down; you will not need to use them again until the Platform structures are assembled.
- 7. Torque the bolts that hold the Center Crossbeam to the Front Beam and the Rear Beam.

#### **Install the Power Unit**

This section describes how to install (**but not connect**) the Power Unit for your Lift. An Electrician is **not** required to just install the Power Unit.

The Power Unit **must** be installed on the Power Post, attached to the Mount Plate.



Risk of explosion: This equipment has internal arcing or parts that may spark and should not be exposed to flammable vapors. Never expose the motor to rain or other damp environments. Damage to the motor caused by water is not covered by the warranty.

The Power Unit's Hydraulic Fluid reservoir must be filled with Hydraulic Fluid or automatic transmission fluid before you begin operation of the Lift. **When you receive the Lift, the oil reservoir is empty.** The Power Unit will not work correctly until it is filled with approved Hydraulic Fluid.

Approved Hydraulic Fluids are:

- any general purpose ISO-32, ISO-46, or ISO-68 hydraulic oil
- automatic transmission fluids, such as Dexron® III and VI; Mercon® V and LV; Tellus S2 / S3 / S4
- synthetic multi-vehicle automatic transmission fluid



Do not run your Power Unit without Hydraulic Fluid; you will damage it. Keep the Power Unit dry; damage to the Power Unit caused by water, detergents, acid, and other liquids is *not* covered by the warranty.

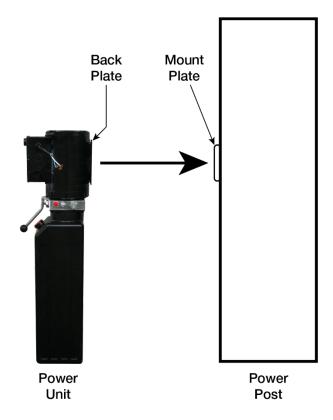
#### To install the Power Unit:

- 1. Find the four supplied nuts and bolts.
- 2. Line up the holes on the Power Unit Back Plate with the four holes in the Power Post Mount Plate.

  There are multiple locations on the Power Unit Back Plate you can use to attach to the Mount Plate. Choose the ones that best center the Power Unit on the Mount Plate.



The Power Unit is heavy. BendPak recommends having one person hold the Power Unit while another person bolts it into place.



- 3. Connect the Power Unit to the Power Post using the four nuts and bolts.
- 4. Fill the Hydraulic Reservoir on the Power Unit with approved fluids.

The Hydraulic Reservoir holds approximately 3.7 gallons (14 litres). Use care to keep the fluid clean when filling the reservoir.

Approved fluids are:

- any general purpose ISO-32, ISO-46, or ISO-68 hydraulic oil
- automatic transmission fluids, such as Dexron® III and VI; Mercon® V and LV; Tellus S2 / S3 / S4
- synthetic multi-vehicle automatic transmission fluid

Do not connect the Power Unit to a power source at this point.

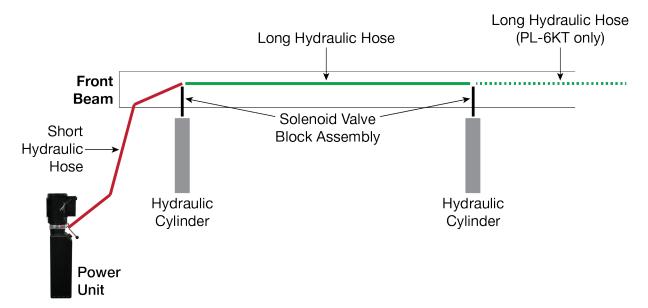
# **Install and Connect the Hydraulic System**

The Hydraulic System moves hydraulic force from the Power Unit to the Hydraulic Cylinders, which use that force to raise and lower the Platforms.

The Hydraulic System includes:

- **Power Unit**. Creates the hydraulic force that needs to be moved to the Hydraulic Cylinders.
- **One Short Hydraulic Hose**. Connects the Power Unit to a tee fitting at the closest Hydraulic Cylinder.
- One or two Long Hydraulic Hoses. For a PL-6KDT or PL-6KDTX, there is one Long Hydraulic Hose. It connects the first Hydraulic Cylinder to the furthest (and last) Hydraulic Cylinder.
  - For a PL-6KT, there are two Long Hydraulic Hoses. One connects the first Hydraulic Cylinder to the second Hydraulic Cylinder; the second connects the second Hydraulic Cylinder to the furthest (and last) Hydraulic Cylinder.
- Two or three Solenoid Valve Block Assemblies. One per Hydraulic Cylinder. The Assembly includes a Solenoid to control which Platform is the active Platform). There is a drawing of the Solenoid Valve Block Assembly on the next page.

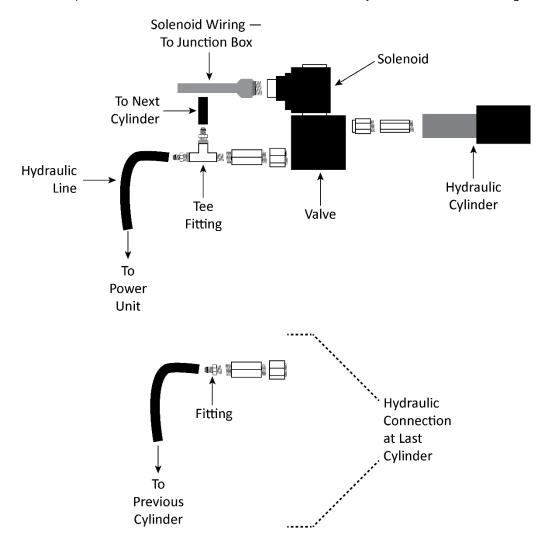
The following drawing shows the major components of the Hydraulic System.



Drawing not to scale. Not all components shown. Includes both top and side views. A detailed drawing of the Solenoid Valve Block Assembly is shown on the next page.

#### To connect the Hydraulic System:

1. Locate the components for the Solenoid Valve Block Assembly, shown in the following drawing.



Drawing not to scale. Components that are not part of the Solenoid Valve Block Assembly (Hydraulic Hose and Cylinder) shown to enhance understanding.

- 2. Prepare two or three Solenoid Valve Block Assemblies, depending on what model you are installing; connect one to each Hydraulic Cylinder just above the Front Beam.
- 3. Connect the Short Hose to the Hydraulic Power Out port on the Power Unit on one end and to the Tee fitting on the closest Solenoid Valve Block Assembly.

There is a drawing of the Power Unit that shows the Hydraulic Power Out port in **Connect the Power Source**.

- 4. Connect a Long Hydraulic Hose between the Tee fitting on the closest Solenoid Valve Block Assembly to either the fitting on the last Solenoid Valve Block Assembly (for Models PL-6KDT and PL-6KDTX) or to the Tee fitting on the next Solenoid Valve Block Assembly (for Model PL-6KT).
- 5. **Model PL-6KT only**: Connect the second Long Hydraulic Hose to the final Solenoid Valve Block Assembly.

### **Contact the Electrician**

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

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

The Electrician needs to:

- Connect a 220 VAC power source to the Power Unit. A power source is required. Refer to Connect the Power Source for more information.
- **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.
- **Connect the Controls**. The Controls are used to raise and lower the Platforms. The Controls must be wired appropriately; refer to **Connect the Controls** for more information.

These installation tasks are described in detail in the following four sections.

The Electrician is responsible for providing:

- an appropriate cable for connecting to the power source
- a Power Disconnect Switch
- a Thermal Disconnect Switch
- wiring for the Controls

All wiring for the Controls must be minimum of #16 AWG (note that local codes may require heavier gauge). BendPak recommends encasing all wiring to protect it from the elements and anchoring it so that it stays in place.

The wiring for the Controls requires:

- **Control Box to Junction Box**: 7 or 8 wires, depending on model. PL-6KDT/X requires 7 wires, PL-6KT requires 8 wires. The wires are: one per button (Up, Down, Emergency Stop, Key) and one wire per Platform plus Off (on the Selector Switch).
- Motor to Junction Box: 6 wires; see Wiring Diagrams for details.
- **Junction Box to Solenoids**: 2 wires per solenoid, so 4 or 6 wires, depending on model. PL-6KDT/X requires 4 wires, PL-6KT requires 6 wires.

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

Additional information is supplied in the section describing these tasks.

## **Connect the Power Source**

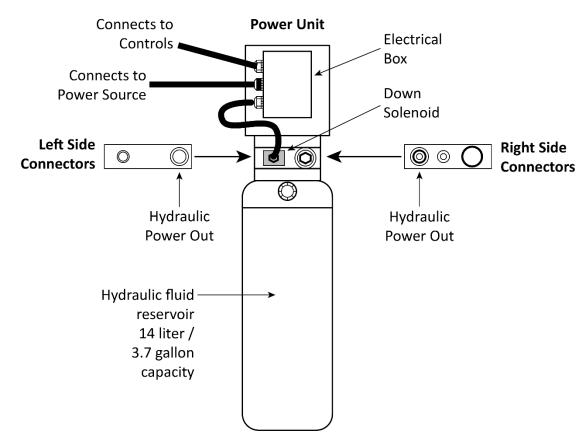
The Power Unit must be connected to an appropriate power source.

The standard Power Unit for your Lift is 220 VAC, 50/60 Hz, single phase.

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

## **⚠ DANGER**

All wiring **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.



Important electrical information:

- Improper electrical installation can damage the Power Unit motor; this damage is not covered by the 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.
- As you require an Electrician on site to connect the Power Unit to a power source, you might also
  want to have them install the Power Disconnect Switch, Thermal Disconnect Switch, and the
  Controls on the same visit.

### **Install a Power Disconnect Switch**

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

Note:

Your Lift has an Emergency Stop Button, which can stop the Lift immediately when pressed. This is a valuable safety tool, but it is not the same thing as a Power Disconnect Switch.

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

BendPak strongly recommends that you install a Power Disconnect Switch that is properly rated for the incoming power supply.

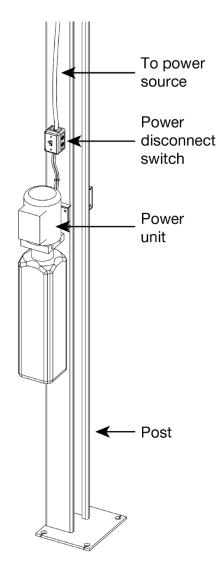
⚠ DANGER All wiring must be performed by a licensed, certified Electrician.

Your Power Disconnect Switch must be readily accessible and installed so that it is in easy reach of the Lift operator. It must be clearly and legibly marked to indicate its purpose.

The figure to the right shows a toggle Power Disconnect Switch between the Lift's power source and its Power Unit. A quick flip of the switch immediately cuts power to the Lift.

Make sure to have a certified Electrician install the Power Disconnect Switch.

Make sure the Electrician selects a UL-listed Power Disconnect Switch.



# Install a Thermal Disconnect Switch

**↑** WARNING

The Lift's motor does **not** have thermal overload protection.

Be sure to 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** 

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

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 Lift's motor.

### **Connect the Controls**

The Controls allow the operator of the Lift to select the desired Platform and then raise and lower it. Refer to **Wiring Diagrams** and the drawing on the next page for additional wiring information.

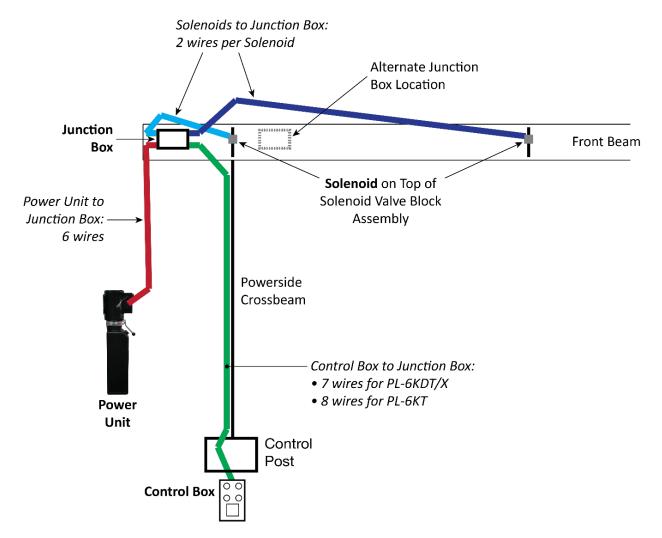
⚠ DANGER All wiring *must* be performed by a licensed, certified Electrician.

The Controls on a PL-6K Series Lift include:

- **Control Box**. Houses the Controls that raise and lower Platforms. Installs on the Control Post. Connects to the Junction Box on the Front Beam.
- **Power Unit**. Provides power to the controls. Makes connections to the Junction Box.
- **Junction Box**. Connects the various pieces of the Controls together.
- **Solenoids**. One per Hydraulic Cylinder. Solenoids control when hydraulic force goes to a particular Hydraulic Cylinder.

Refer to **Using the Control Box** for more information about how to use the Controls on the Control Box to raise and lower the Platforms of the PL-6 Series Lift.

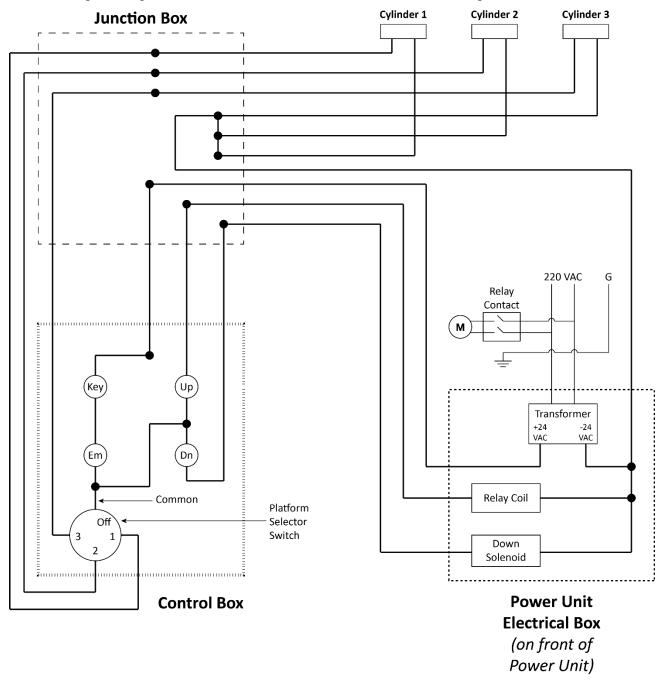
PL-6K Series Lift Control locations are shown below.



Drawing not to scale; not all components shown. Junction Box can be installed where shown for the PL-6KDTX; for the PL-6KDT and the PL-6KT, install it on the Front Beam.

**Note to Electrician**: You need to **rewire the inside of the Electrical Box** based on the following drawing and the **Wiring Diagrams**.

The following drawing shows a more detailed view of the PL-6 Series wiring.



Drawing not to scale; not all components shown. Combines physical views and wiring views.

Note that most wiring needs to be provided by the Electrician; it is **not** supplied with the Lift.

All wires must be a minimum of #16 AWG (note that local codes may require heavier gauge). BendPak recommends encasing all wiring to protect it from the elements and anchoring it so that it stays in place.

The wiring for the Controls requires:

- **Control Box to Junction Box**: 7 or 8 wires, depending on model. PL-6KDT/X requires 7 wires, PL-6KT requires 8 wires. The wires are: one per button (Up, Down, Emergency Stop, Key) and one wire per Platform plus Off (on the Selector Switch).
- **Power Unit to Junction Box**: 6 wires; see **Wiring Diagrams** and the drawing on the previous page for details.
- **Junction Box to Solenoids**: 2 wires per solenoid, so 4 or 6 wires, depending on the model. PL-6KDT/X requires 4 wires, PL-6KT requires 6 wires.

The following procedure **must** be done by, or in conjunction with, your Electrician.

**Note to Electrician**: You need to rewire the inside of the Electrical Box based on the drawing on the previous page and the **Wiring Diagrams**.

#### To connect the Controls:

- 1. Mount the Junction box on the Front Beam to the left of the Powerside Crossbeam (PL-6KDTX) or to the right of the Powerside Crossbeam (PL-6KDT and PL-6KT).
- 2. At the Control Box, connect the wiring per the drawing on the previous page and the **Wiring Diagrams**.
- 3. Route the Control Box wires through the back of the Control Box into the Control Post, then up and out through a hole at the top of the Control Post.
- 4. Run the Control Box wires along the Powerside Crossbeam and then into the Junction Box. Encase and secure the wires.
- 5. In the Electrical Box on the Power Unit, connect the wiring per the drawing on the previous page and the **Wiring Diagrams**.
- 6. Route the wires from the Electrical Box to the Junction box. Encase and secure the wires.
- 7. At each Solenoid, connect the wiring per the drawing on the previous page and the **Wiring Diagrams**.

If you are installing the PL-6KDT or PL-6KDTX, there will be four wires coming from the Solenoids to the Junction Box: 2 wires per Solenoid.

- If you are installing the PL-6KT, there will be four wires coming from the Solenoids to the Junction Box: 2 wires per Solenoid.
- 8. Route the wires from each Solenoid to the Junction box. Encase and secure the wires.
- 9. At the Junction Box, connect the wiring coming from the Control Box, from the Power Unit, and from the Solenoids per the drawing on the previous page and the **Wiring Diagrams**.

### **Anchor the Posts**

If you have not done so already, you need to anchor the four posts. Install one Anchor Bolt in each corner of each Base Plate, so 16 Anchor Bolts total.

Concrete specifications are:

• **Depth**: 4.25 inches (108 mm) thick

PSI: 3,000 PSI, minimumCured: 28 days, minimum

Anchor Bolt specifications are:

Length: 6.3 inches (160 mm)
 Diameter: ¾ inch (19 mm)

• **Effective embedment**: 3.25 inches (82.5 mm), minimum

Anchor torque: 110 – 150 foot pounds

# **⚠ WARNING**

Your Concrete and Anchor Bolts must meet these specifications. Only install your Lift on a Concrete surface. If you install a Lift on asphalt or any other surface, or your Concrete or Anchor Bolts do not meet these specifications, it could lead to product damage, vehicle damage, personal injury, or even loss of life.

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-2006.

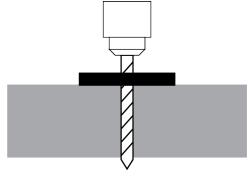
# **MARNING**

Use only the Anchor Bolts 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.

Lift buyers are responsible for conforming to all regional, structural, and seismic anchoring requirements specified by any other agencies and/or codes, such as the Uniform Building Code and/or International Building Code.

#### To anchor the posts:

- 1. Locate the hardware you will need: four Anchor Bolts, four Nuts, and four washers *per Post*.
- 2. Using the Base Plates as guides, drill the holes for the Anchor Bolts—one hole in each corner of the Base Plate, so four holes total per Base Plate.

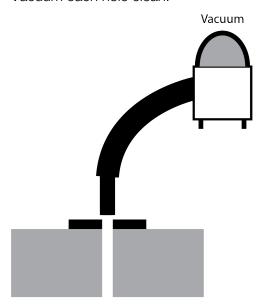


Go in straight, in the center of the hole; do not let the drill wobble.

Use a carbide bit (conforming to ANSI B212.15-1994).

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. Vacuum each hole clean.



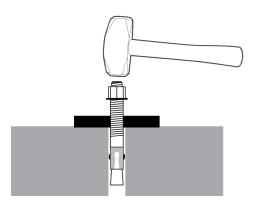
BendPak recommends using a vacuum to get the hole very clean. You can also use a wire brush, hand pump, or compressed air; just *make sure to thoroughly clean each hole*.

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

#### Important:

The holding strength of an Anchor Bolt is partially based on the how cleanly the Expansion Sleeve presses against the Concrete. If the hole is dirty, the Expansion Sleeve does not press as cleanly, which means less holding strength. If the hole is too wide, the Expansion Sleeve does not press against the Concrete with as much force, again resulting in less holding strength.

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

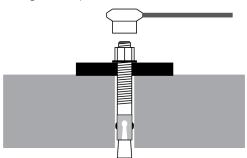


The Expansion Sleeve of the Anchor Bolt may prevent the Anchor Bolt from passing through the hole in the Base Plate; this is normal. Use a hammer or mallet to get the Expansion Sleeve through the Base Plate and into the hole.

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 Plate, 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 Anchor Bolt the rest of the way down into the hole.
  - Stop when the Washer is snug against the Base Plate.
- 6. Plumb each Post; install any needed Shims.
- 7. Wrench each Nut *clockwise* to the recommended installation torque, 110 150 foot pounds, using a Torque Wrench.



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

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

## **Assemble the Platform Structures**

Platform Structures support the Platform Sections, which together create a Platform.



BendPak recommends assembling the Platform Structure, routing the Cables, and

testing the Platform **before** putting on the Platform Sections. Adding the Platform Sections is described in a later section.



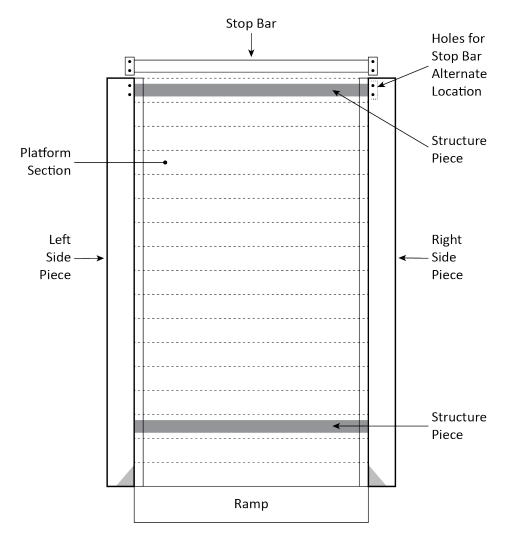
BendPak recommends assembling the Platform Structure **on a raised platform**, such as sawhorses. If the components are on the ground, it is much harder to assemble the Platform Structure.

The following procedure covers assembling one Platform Structure. You will have to perform this procedure twice for the PL-6KDT and PL-6KDTX, three times for the PL-6KT.

#### To assemble a Platform Structure:

- 1. Locate the pieces needed for one Platform Structure:
  - Two Side Pieces (one for the left side, one for the right side; they are **not** interchangeable)
  - Two Structure Pieces
  - One Stop Bar
  - Four Platform Cable Turns
  - Four Platform Cable Locks
  - 12 Cable Clamps
  - Necessary nuts, bolts, and washers (including eight black bolts)
- 2. Arrange all the pieces in their approximate positions.

**Note**: The Side Pieces are **not** interchangeable. Make sure you have one Left Side Piece and one Right Side Piece, and that they are oriented correctly.



Drawing not necessarily to scale. Not all components shown.

3. Attach the Stop Bar in the desired location.

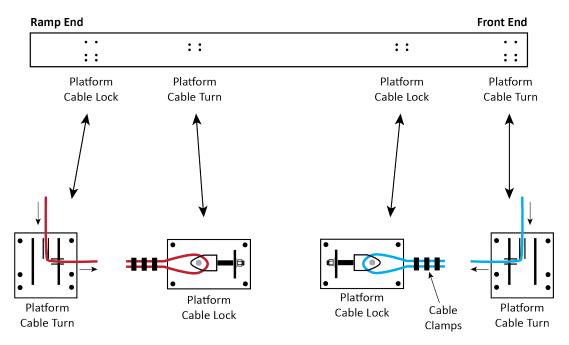
There are two possible locations for the Stop Bar: between the Side Pieces at the front of the Platform or on top of the Side Pieces. You can also put the Stop Bar in either of two orientations.

The Stop Bar acts as a Tire Stop in both locations and orientations. Choose whichever is best for your installation.

The bolts/washers go on the outside, the nuts on the inside. Do not torque the nuts yet.

4. Attach the four Platform Cable Locks.

The bolts/washers go on the inside, the nut on the outside. Do not torque the nuts yet.



Drawing not necessarily to scale. Not all components shown. Side view shown.

5. Attach the four Platform Cable Turns (two on each side), but using the **top two bolts only** on each one.

Use the black bolts.

Make sure the Platform Cable Turns are oriented correctly (there are two types); when the Cable goes through the turn, it must be going towards the Platform Cable Lock.

6. Put the Structure Piece that goes closest to the Ramp into position, then connect one end through the Side Piece and the four remaining holes in the Platform Cable Turn.

Put the nuts on but do not torque them yet.

Connect the other end the same way.

7. Put the Structure Piece that goes closest to the Stop Bar into position, then connect it through the Side Piece and the Platform Cable lock, the same as the other Structure Piece.

Put the nuts on but do not torque them yet.

8. For each of the four Cables for a Platform, route each Cable through the Platform Cable Turn, towards the Platform Cable Lock, around the pin in the Platform Cable Lock, and back towards the Platform Cable Turn.

If you want your two Safety Lock positions up to 20" shorter than the default 87" or 70" for the High and Low settings, as mentioned in **Safety Lock Positions**, do not pull the Cables all the way taut before clamping them; instead, leave slack in the Cables (the amount of distance you want lower than the default Safety Lock positions) and clamp them together while slack.

You *cannot* make the Safety Lock positions higher; that would leave the Platforms above the ground when fully lowered, preventing Vehicles from driving onto them.

9. Clamp the Cables together using the Cable Clamps; use three clamps per Cable.

### **Assemble the Platform**

Each Platform is made up of multiple steel Platform Sections and a Ramp.

#### To install the Platform Sections:

- 1. Assemble the Platform Sections, Ramps, bolts, nuts, flat washers, and spring lock washers near the Platform Structure.
- 2. Put the Platform Sections into place, starting from the Front of the Lift (at the Tire Stop) and working your way to the Rear, where the Ramp goes.

Make sure to overlap the Platform Sections as you put them into place.

Do not bolt the Platform Sections yet.



You may find it easier to bolt the Platform Sections into place if you raise the Platform Structure so that you can walk under it. You are not required to do this, but you may find that it makes it easier to bolt the Platform Sections together. Make sure to put the Platform on its Safety Lock when you raise it.

- 3. Take one bolt, spring lock washer, flat washer, and nut, and install them into the holes in the Platform Sections.
  - Make sure to put the bolt and the spring lock washer on one side of the hole, with the flat washer and the nut on the other side.
- 4. When all of the Platform Sections are in place, attach the Ramp to the last Platform Section.

## Lubrication

The only Lubrication needed for the PL-6K Series Lifts is for the bushings on the Sheaves that are on the sides of the Crossbeams.

Put a small amount of white lithium grease or similar on those bushings prior to using the Lift.

# **Operational Test**

BendPak recommends doing an Operational Test of your Lift with a typical Vehicle **before** starting normal usage (a Vehicle is not required, but is recommended).

Performing an Operational Test will help you get a feel for how to operate the Lift and helps get any residual air out of the Hydraulic System.

During the Operational Test, watch the operating components and check for proper installation and operation. If you run into an issue that does not go away, refer to **Troubleshooting** for more information.

Note:

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

#### To perform an Operational Test:

- 1. Check the area around and above the Lift for obstructions; move them if you find any.
- 2. If you are going to run the test with a typical Vehicle, drive it onto the desired Platform.
- 3. Insert the key, turn it to **On**, then select the desired Platform.
- 4. Press and hold **Up**. The selected Platform starts rising.
- 5. When the Platform is about a foot off the ground, release **Up**. The Platform stops rising.
- 6. Press and hold **Down**. The Platform starts lowering.
- 7. When the Platform gets to the ground, it will stop lowering automatically. Release **Down**.
- 8. Wait for one minute.

**CAUTION** The Power Unit's motor is **not** constant duty; it cannot be run continuously.

- 9. Repeat the process, this time raising the Platform to the Safety Lock.
- 10. If the Platform is working without shaking, moving erratically, or squeaking, there is no need to repeat the procedure.

If the Platform is shaking, moving erratically, or squeaking, this is perfectly normal during the startup period. Repeat the procedure one or two more times, with a one-minute break between.

- 11. Perform the same test with the next Platform.
- 12. If you used a Vehicle, check the Platform Sections to make sure they stayed in place.
- 13. Check the Hydraulic Fluid reservoir on the Power Unit.

Bleeding the Hydraulic System may significantly lower the amount of Hydraulic Fluid in the reservoir.

Add additional Hydraulic Fluid if necessary.

If there are issues that do not go away, refer to **Troubleshooting** for more information.

# **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 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 the Platform Sections to make they are bolted and in place.
- Make sure all Posts are properly shimmed and stable.
- Make sure all Cables are correctly routed and properly positioned in their Sheaves.
- Make sure that all Safety Locks are working normally.
- Make sure a copy of the Installation and Operation Manual is left with the Lift.

# **Operation**

This section describes how to operate your Lift.

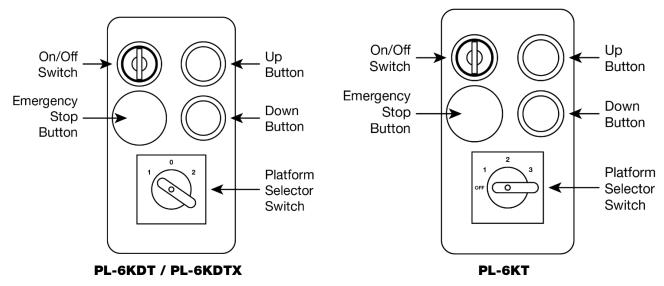
# **Safety Considerations**

Do the following before you raise or lower a Vehicle:

- **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 **techsupport@bendpak.com**, or call **(800) 253-2363**.
- **Check the area**. Keep the area around the Lift clean and free of obstructions; anything that could cause a problem for the Lift. Do not forget to check **above** the Lift. If you find an obstruction, move it out of the way. Do not allow anyone or anything within 30 feet of the Lift while it is in motion.
- **Check the operators**. Make sure that 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. Do not allow children to operate the Lift. Do not allow anyone under the influence of drugs or alcohol to operate the Lift.
- 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 Platforms. When
  raising a Vehicle, do not leave it until it is on the Safety Lock. When lowering the Lift,
  do not leave it until it is on the ground.
- **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. Never raise just one part of a Vehicle.

# **Using the Control Box**

This section describes how to use the Control Box.



The **Control Box** controls your Lift:

- The **On/Off Switch** is a security device; you must have the key in and turned to On to operate the Lift.
- The **Emergency Stop Button** stops the Lift immediately when pressed. Use this if an unexpected and/or dangerous situation arises. When pressed, the button physically goes in and locks. To release the **Emergency Stop Button**, twist it clockwise until it pops back out.
- The **Up** and **Down** buttons raise and lower the selected Platform.
- The **Platform Selector Switch** selects which Platform can be raised or lowered. The PL-6KDT and the PL-6KDTX have a three-position switch: select **1** to control the Powerside Platform, select **2** to control the Offside Platform, select **0** when not using the Lift.

The PL-6KT has a four-position switch: select **OFF** when not using the Lift, select **1** to control the Powerside Platform, select **2** to control the Center Platform, select **3** to control the Offside Platform.

# **Raising and Lowering Vehicles**

Keep the following in mind when operating your Lift:

• **Be safe**. Make sure to check for people, pets, and objects that might be in the path of the Lift as you raise or lower it. Watch the Lift carefully as it raises and lowers.

**⚠ DANGER** 

Pay careful attention when you are raising or lowering your Lift. If a person or pet gets stuck under the Lift, they could be injured or, in rare cases, killed.

- **Platforms operate independently**. Each Platform on the Lift operates independently; be sure to double check the **Control Box** and make sure you are raising or lowering the desired Platform.
- The Emergency Stop button is there for a reason. We hope you never have to use it, but if something unexpected happens, use the **Emergency Stop** button to immediately stop the Lift from moving.
- **Get what you need out of the Vehicle before lifting it**. It is annoying to raise a vehicle and then realize you left something inside.

#### To raise a Vehicle:

- 1. On the Control Box, make sure the On/Off Switch is On and the desired Platform is selected.
- 2. Make sure the Platform is on the ground. If it is not, move it all the way down to the ground.
- 3. Drive a Vehicle onto the Platform.

Make sure all four wheels are fully on the Platform, not on the ramp or the side structure. Put the Vehicle into park and put on the parking brake. If it is a manual transmission, make sure it is in a gear, not in neutral.

4. On the Control Box, press and hold Up.

The Platform begins rising and the Safety Latch begins moving towards the Safety Lock Cavity on the Safety Bar.

When the Release Cam contacts the Lock Block, the Safety Latch gets pushed up and then comes down.

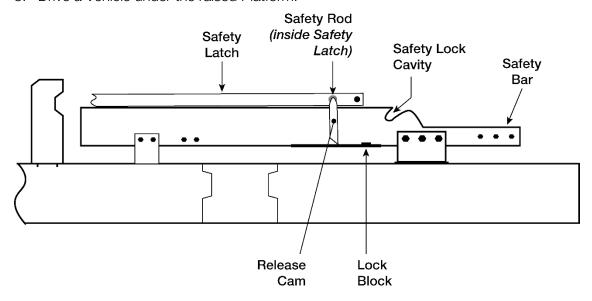
When the Safety Latch comes down, the Safety Rod is positioned directly over the Safety Lock Cavity.

5. Release **Up**, then press and hold **Down** for two or three seconds to push the Safety Rod down into the Safety Lock Cavity.

The Platform is now engaged on its Safety Lock.

**Note**: If you do not release **Up** quickly enough, the Safety Rod will go past the Safety Lock Cavity, and you will not be able to engage the Platform on its Safety Lock. What happens when you go back **Down** for two or three seconds is that the Safety Rod will go past the Safety Lock Cavity, not into it. If this happens, simply repeat Steps 4 and 5, making sure to release **Up** when the Safety Latch comes down.

- 6. Check around the Vehicle and the Platform to make sure everything looks good, then set the **Control Box** to **O** or **OFF**, depending on the Model you are using. If you see an issue, fix it.
- 7. If you are not going to be using the Lift any further, turn the **On/Off Switch** to **Off** and then remove the key.
- 8. Drive a Vehicle under the raised Platform.



#### To lower a Vehicle:

- 1. Make sure there is nothing under the Platform you are about to lower. If there is, move it out of the way.
- 2. Insert the key into the **On/Off Switch**, turn it to **On**, and select the desired Platform.
- 3. On the **Control Box**, press and hold **Up** for four or five seconds, then press and hold **Down**.

Pressing and holding **Up** for four or five seconds is required. It moves the Safety Rod out of the Safety Lock Cavity and puts the Release Cam in the right place in relation to the Lock Block, both of which are needed for the Safety Lock to be bypassed, allowing the Platform to go down.

- 4. When the Platform gets to the ground, release **Down**.
- 5. If you are not going to be using the Lift any further, turn the **On/Off Switch** to **Off** and then remove the key.
- 6. Drive the Vehicle off the Platform.

# **Maintenance**

# **⚠** DANGER

Before performing any maintenance on your Lift, make sure it is completely disconnected from power. Do not reconnect it until all maintenance procedures are finished.

## To maintain your Lift:

- **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. Replace any damaged or worn parts before using the Lift.

# **⚠** DANGER

Do not use the Lift if the cables are damaged or extremely worn. If a Vehicle is raised when you notice the damage or extreme wear, very carefully lower the Vehicle to the ground. When the Lift is on the ground, disconnect it from power and make arrangements to fix the damage or wear.

- **Daily**: Make sure the Safety Lock is working correctly. Do not use a Platform if its Safety Lock is damaged or excessively worn.
- **Weekly**: Check all Controls, including Emergency Stop, to make sure they are functioning.
- **Weekly**: Check all Labels on the Lift. Replace them if they are illegible or missing.
- **Monthly**: Grease the lubrication points on the Lift; only the bushings on the Sheaves on the sides of the Crossbeams need lubrication. Use white lithium grease or similar.
- Monthly: Check Hydraulic Fluid levels. Refill if low.
- **Monthly**: Check Cable connections, bolts, and pins for proper mounting and torque.
- **Every two months**: Check all Anchor Bolts to make sure they are correctly tightened. If they are not, tighten them.
- **As needed**. Take the Lift out of service and then replace the lifting Cables if there are signs of damage or extreme wear.

# **⚠ WARNING:**

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

# **Wire Rope Inspection and Maintenance**

Your Lift's wire rope should be inspected regularly:

- Lifting Cables should be replaced when there are visible signs of damage or extreme wear. Do
  not use the Lift if it has damaged or worn cables; you must take it out of service!
- Lifting Cables should be maintained in a well-lubricated condition at all times.

Wire rope is only fully protected when each wire strand is lubricated both internally and externally. Excessive wear shortens the life of wire rope.

Use a wire-rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand, such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant.

To make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.

All Sheaves and guide rollers in contact with the moving rope should be given regular visual checks
for surface wear and lubricated to make sure they run freely. This should be done at least every
three months during normal operation.

For all Sheave axles, use standard wheel bearing grease. For all Sheaves and/or guide rollers, use 90-WT gear oil or a similar heavy lubricant, applied by any method including pump/spray dispensing, brush, hand, or swabbing.

How often should you inspect?

Lifting Cables should be visually inspected at least once each day when during normal operation, as suggested by American Petroleum Institute's Recommended Practice 54 guidelines.

Any lifting Cables that have met the criteria for removal must be immediately replaced.

When should you replace lifting Cables due to broken wires?

Lifting Cables should be removed from service if you see six randomly distributed broken wires within any one lay length or three broken wires in one strand within one lay length.

Are there other reasons to replace your lifting Cables?

#### Yes:

- Corrosion that pits the wires and/or connectors
- Evidence of kinking, crushing, cutting, bird-caging, or a popped core
- Wear that exceeds 10% of a wire's original diameter
- Evidence of heat damage
- How do you find broken wires?
  - a. Relax your rope to a stationary position and move the pick-up points off the Sheaves. Clean the surface of the rope with a cloth a wire brush, if necessary so you can see any breaks.
  - b. Flex the rope to expose any broken wires hidden in the valleys between the strands.
  - c. Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.
  - d. With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.

# **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.

Lift does not raise or does not lower, once raised.	Make sure there is sufficient Hydraulic Fluid in the reservoir.  Make sure there is no air in the Hydraulic System.  Make sure none of the Hydraulic Lines are pinched or leaking.  Make sure the Power Unit is getting power.  If the Hydraulic Fluid is dirty, replace it with clean fluid.  Make sure Lift is not overloaded.
Platforms move erratically or squeak when in use.	Move the platforms up and down a few times to flush any residual air from the Hydraulic System.
Lift does not stay up.	Check for leaking Hydraulic Fluid.  Make sure the Lift is left on its Safety Lock.
Motor not running.	Check the connection to the power source; make sure it is plugged in and of the appropriate voltage.  Check the wiring diagram.
Hydraulic Fluid is dirty.	Replace the dirty fluid with clean, approved Hydraulic Fluid: any general purpose ISO-32, ISO-46, or ISO-68 hydraulic oil; Dexron III, Dexron VI, Mercon V, Mercon LV, Shell Tellus S4 / S3 / S2; or a synthetic, multi-vehicle automatic transmission fluid.
Lift makes odd noises.	Lubricate the bushings on the Sheaves on the sides of the crossbeams using white lithium grease. If the Lift is new, a break-in period may be needed; run the Lift several times each day. If the noises persist, contact BendPak Support.

If you continue to have issues with your Lift, take it out of service, then contact your dealer, go to **bendpak.com/support**, email **techsupport@bendpak.com**, or call **(800) 253-2363**.

# **Disposing of Hydraulic Fluid**

Hydraulic Fluid *cannot* be disposed of by dropping it into the trash or dumping it into the street. It has toxic ingredients that are harmful to the environment.

Instead, you need to either recycle it or drop it off at a hazardous waste collection facility.

First, note that there is a difference between dirty and contaminated Hydraulic Fluid:

- **Dirty** means it has been used for some time and it would benefit your equipment if new fluid was used.
- **Contaminated** means it has been mixed with other fluids or other components, rendering it unsuitable for recycling. Contaminated fluid must be treated as hazardous waste.

Dirty fluid should be recycled, which is beneficial to the environment. Contaminated fluid cannot be recycled; it must be disposed of at a hazardous waste collection facility.

Rags and/or granular absorbents that have soaked up Hydraulic Fluid should be treated like hazardous waste and be disposed of at a hazardous waste collection facility.

To find an appropriate facility:

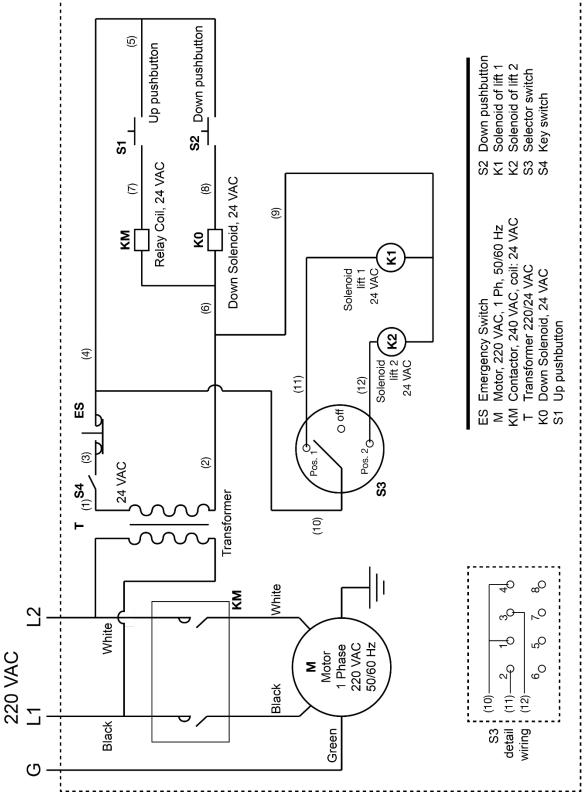
- Local automotive parts stores, auto care facilities, or automobile dealerships may accept fluid for recycling or, in some cases, for disposal. Contact them for more information.
- Cities, counties, and states often support both recycling facilities and hazardous waste collection facilities. Contact them to see if and where they have these programs.
- If you have large amounts of fluid, consider contacting a commercial waste disposal company.

In all cases, the best approach is to find an appropriate facility and contact them — in advance — to ask them: what kinds of fluids they accept, what kind of containers it must be in, what hours they are open, their location, and any other information specific to their facility.

If you are unable to find an appropriate facility, the website **earth911.com** has resources that may be of help.

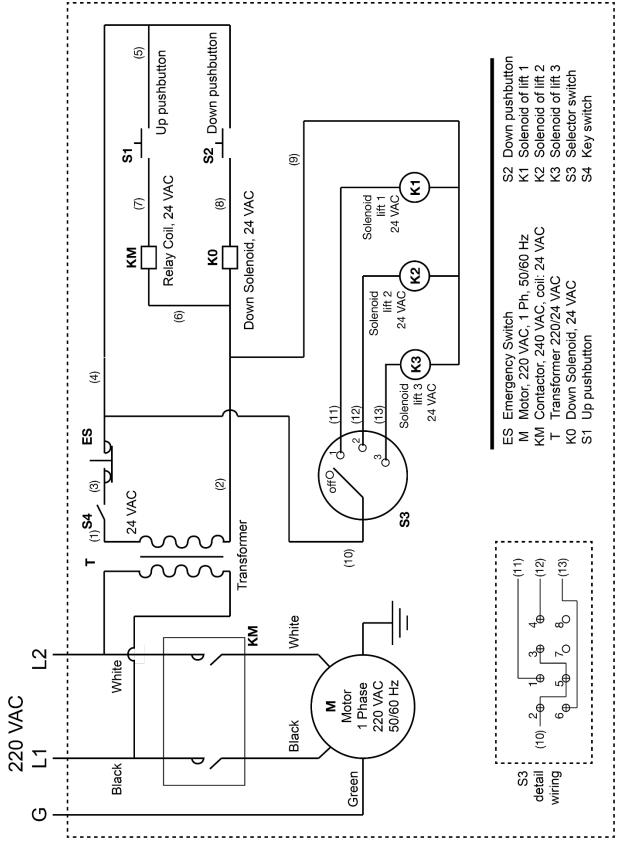
# **Wiring Diagrams**

#### PL-6KDT and PL-6KDTX



Your Power Unit, when delivered, has different wiring for the control system. Your Electrician needs to rewire the Power Unit based on this drawing and other electrical information in this manual.

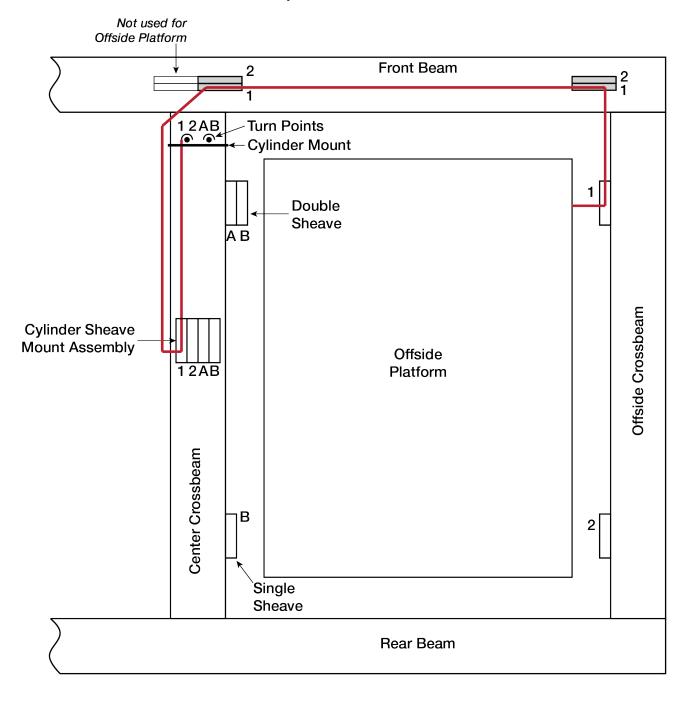
## PL-6KT

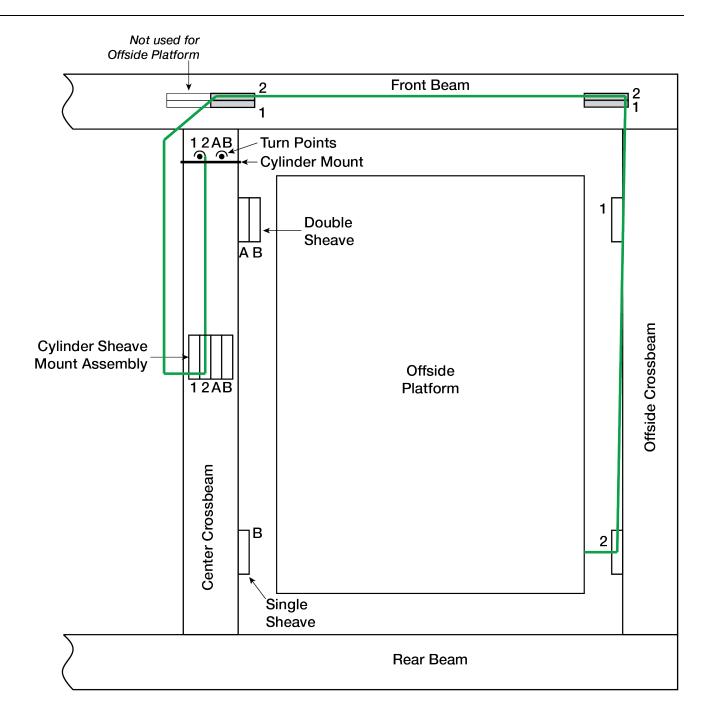


Your Power Unit, when delivered, has different wiring for the control system. Your Electrician needs to rewire the Power Unit based on this drawing and other electrical information in this manual.

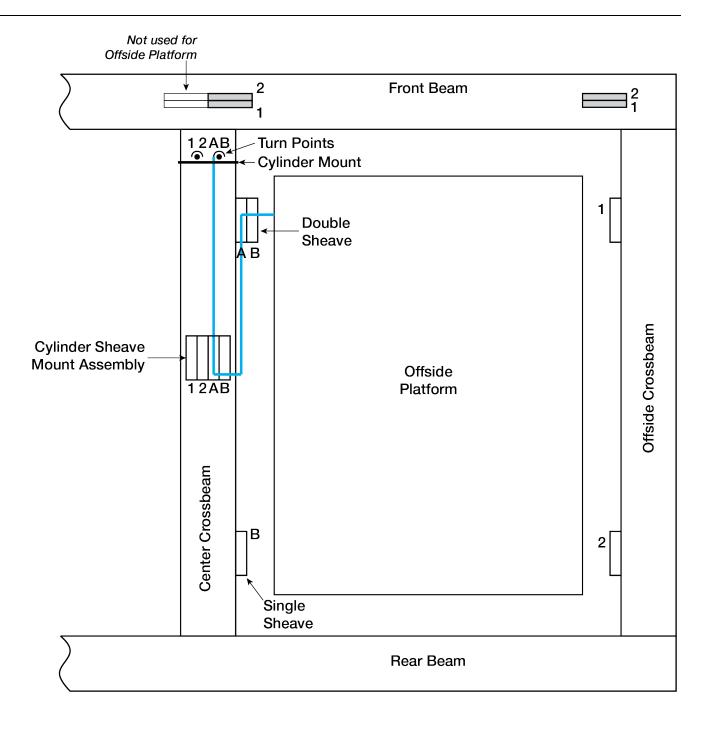
# **Cable Routing Diagrams**

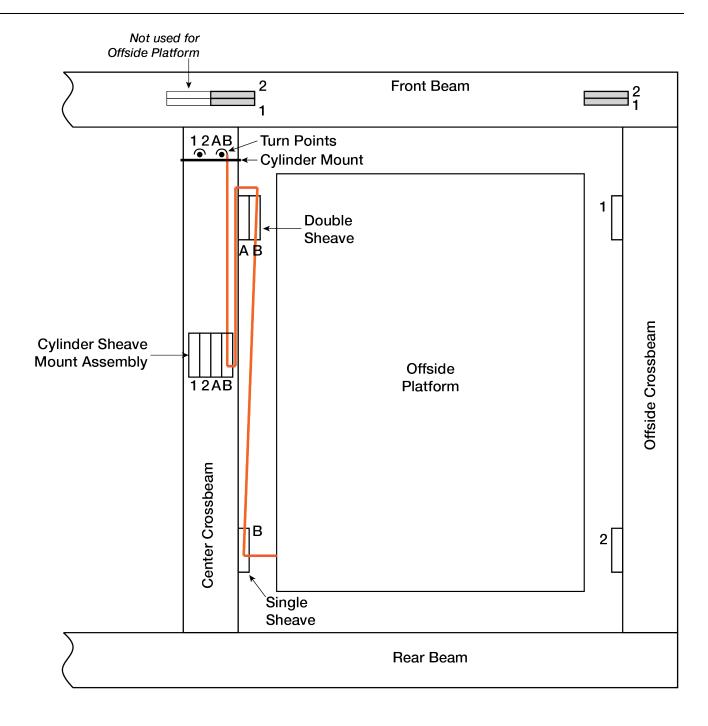
This section shows Cable routing diagrams for the Offside Platform. The Cable routing for Powerside Platforms and Center Platforms are virtually the same.





PL-6K Series of Parking Lifts





# **Seismic Models**

Models that end in **-S** are seismic models, which means they have enhanced holding strength in high-vibration environments and during earthquakes.

The differences between standard and seismic models are:

- Thicker bases on the bottoms of the Posts
- Threaded Rods (instead of Anchor Bolts)
- Epoxy (used to hold the Threaded Rods)

The installation procedure for the Posts is slightly different because of the Threaded Rods and Epoxy in place of Anchor Bolts.

**Note**: The following procedure is general in nature. Make sure to read and follow the instructions that come with the Epoxy and the Dispensing Gun. Adjust the procedure as necessary for your install.

To install the Posts using Threaded Rods and Epoxy:

1. Drill a hole 1/16" to 1/4" (1.59 to 6.35 mm) wider than the diameter of the Threaded Rod.

The hole depth should be a minimum of 4.5 times the diameter of the Threaded Rod (a .5" / 12.7 mm Threaded Rod would require a hole depth of 2.25" inches / 57.15 mm).

**Note**: For applications that are subject to heavy loads or vibration, increase the depth of the hole to a minimum of 9 times the diameter of the Threaded Rod (a .5" / 12.7 mm Threaded Rod would require a depth of 4.5" / 114.3 mm).

- 2. Blow out the dust from the bottom of the hole using compressed air.
- 3. Remove any remaining debris from the hole using a nylon brush. Rotate the brush a quarter of a turn as it is removed from the hole. Use compressed air to remove any remaining dust.
- 4. Insert the anchoring Epoxy cartridge into the caulk gun.
  - Use a high-quality, high-strength dispensing gun due to the significant amount of force required to dispense the Epoxy through the static mixer nozzle.
- 5. Remove the plastic cap from the tip of the cartridge.
- 6. Dispense a small amount of Epoxy into a disposable container until you get an even flow of both the black and white material.
- 7. Attach the static mixer nozzle on to the cartridge and dispense enough Epoxy into the disposable container until a consistent gray color is achieved with no streaks.
- 8. Place the tip of the dispensing nozzle into the bottom of the hole and fill the hole about 5/8 full while slowly withdrawing the nozzle.
- 9. Insert the Threaded Rod to the bottom of the hole while turning clockwise.
- 10. Remove any excess Epoxy from around the hole with a putty knife or piece of cardboard.
- 11. Leave the Threaded Rod undisturbed until the **full** cure time has passed.
- 12. Remove and discard the static mixer nozzle and replace the cartridge cap.

# Labels



В



#### **AWARNINGS**

- Read the entire operation names, warnings and operation instructions before using this it?

  If any operations are as in the safety or covarient of the IRL contain year program runnings, before

  \$1.50 to see that the program of the IRL contains are proposed in the IRL contains and the IRL contains are program of the IRL contains are proposed in the IRL contains are all contains the operating that it lever allow children or persons used for the intervent of the IRL contains are all contains and the IRL contains are all the IRL contains a

- Guard against electric shock. This Bit must be growner where we have been added in the clerk shock. Risk of application. This Bit has internal arching or sporking parts which should not be exposed to Barmanble vapors.

# **OPERATION INSTRUCTIONS**

- ANAMICA—INSTR accountly since the lift beyond the porting position. If the lift platforms are naised to be for two study resease decrease will reagge which was and described the foliation stress. After rescribing the principal source seems are 10° forms the limit and source the principal source and the 500 kM and the 10° forms and the 500 kM and 10° forms and 10

- \*\*WINDOWS THE LATE AND ADMINISTRATION OF THE PROPERTY OF THE P





# PARKING LIFT WIRE ROPE INSPECTION

C



D

# DANGER

#### THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW

Max Lifting Capacity / Total All Decks 12,000 lbs. / 5443 kg

Max Lifting Capacity / Per Deck 6,000 lbs. / 2722 kg

Exceeding the weight capacity of this lift can damage lift and/or property and may cause personal harm, injury or death to operators and/or bystanders. All vehicles MUST be centered on lifting platforms. Damage to lift due to overloading or misuse IS NOT covered under warranty.

E

# DANGER

#### THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW

Max Lifting Capacity / Total All Decks 18,000 lbs. / 8165 kg

Max Lifting Capacity / Per Deck 6,000 lbs. / 2722 kg

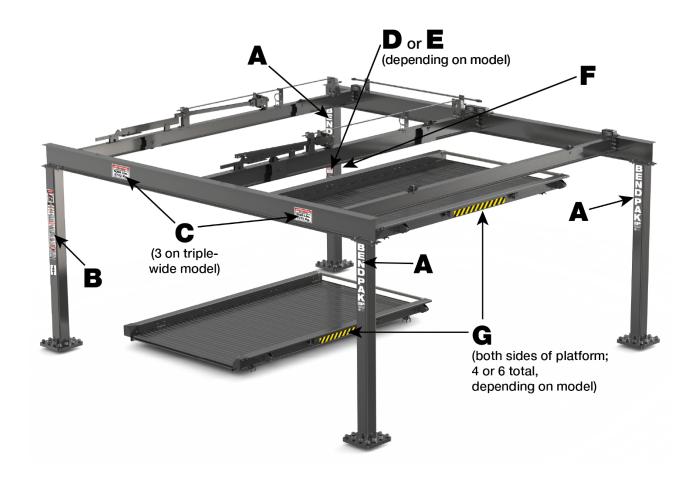
Exceeding the weight capacity of this lift can damage lift and/or property and may cause personal harm, injury or death to operators and/or bystanders. All vehicles MUST be centered on lifting platforms. Damage to lift due to overloading or misuse IS NOT covered under warranty.

F

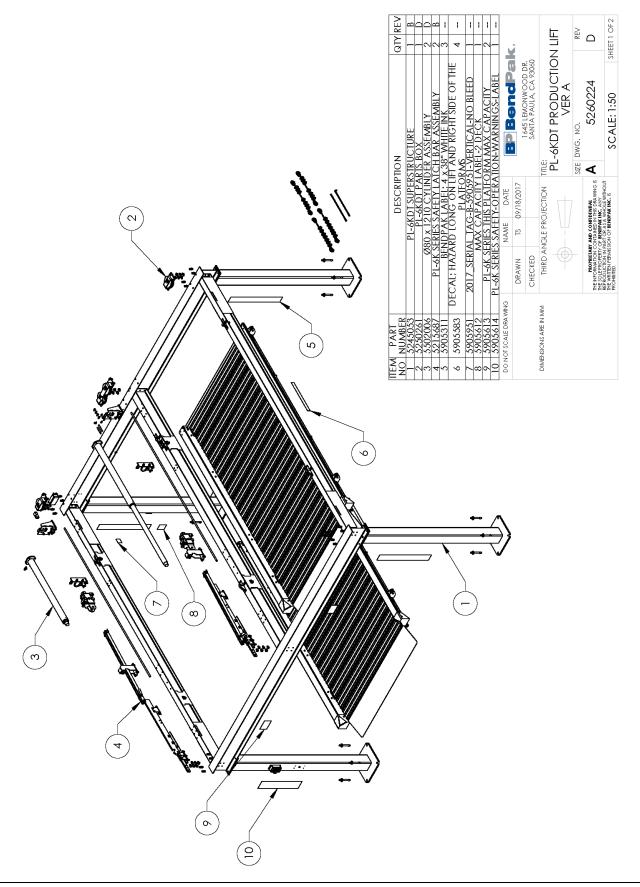


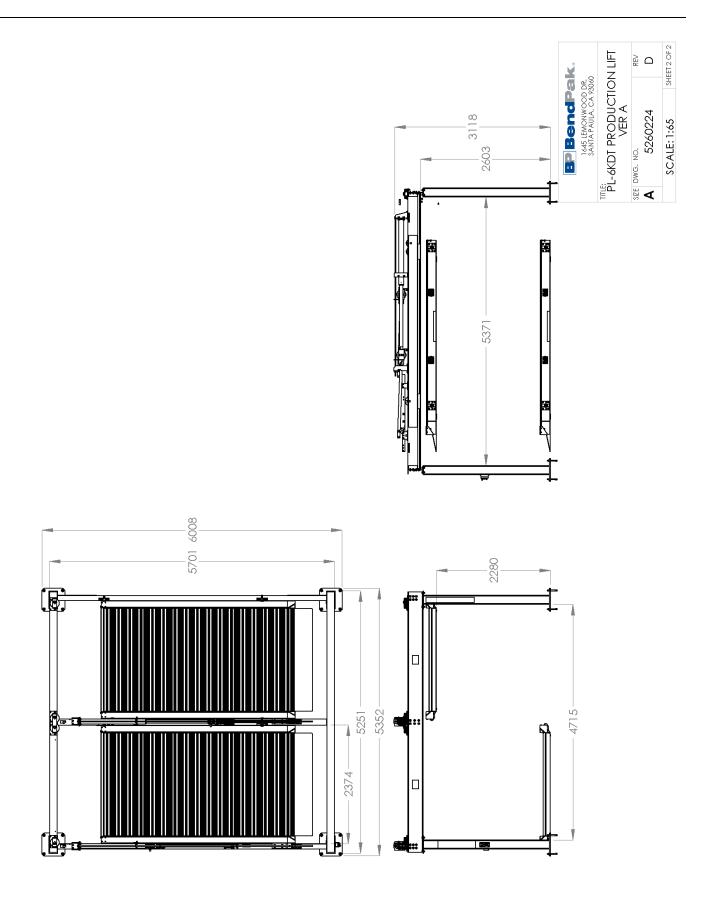
G

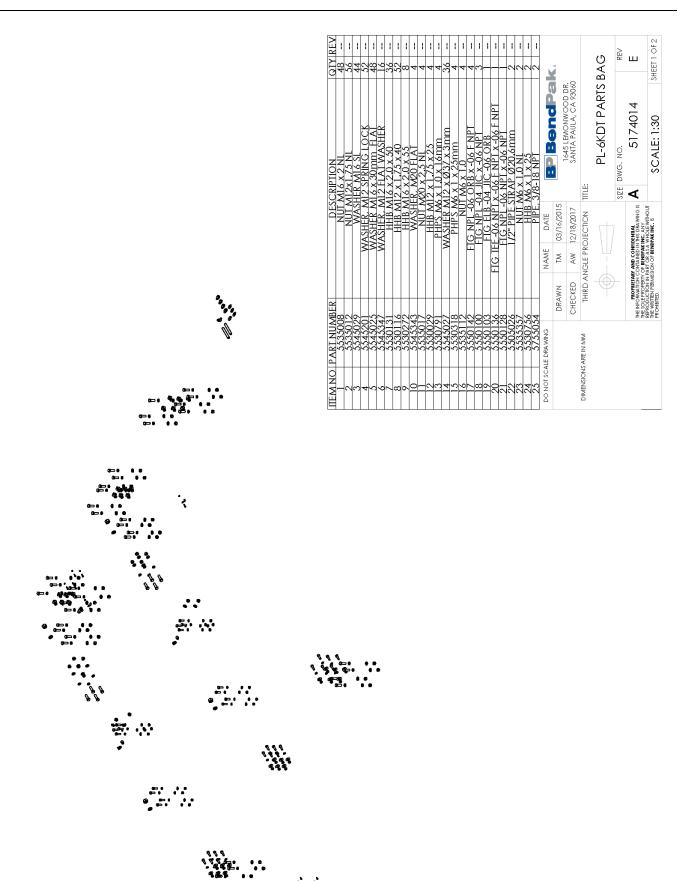


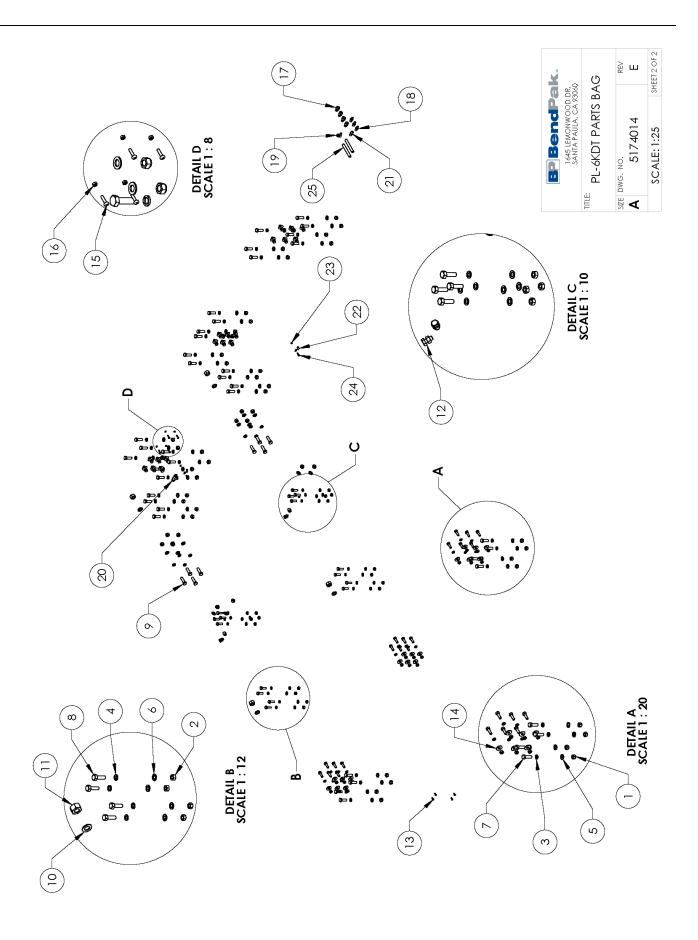


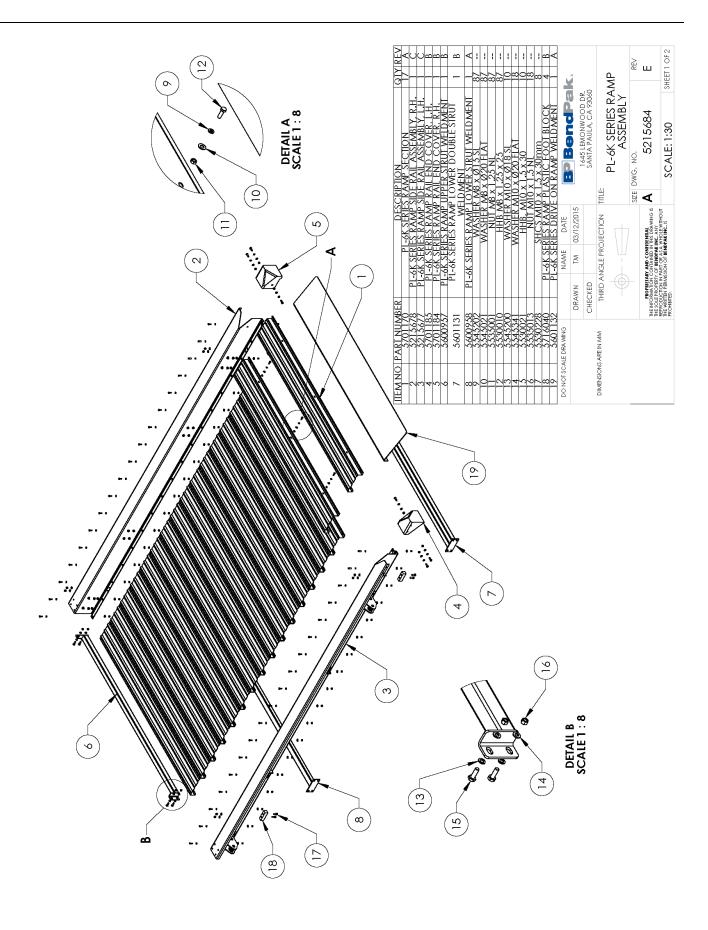
# **Parts Drawings**

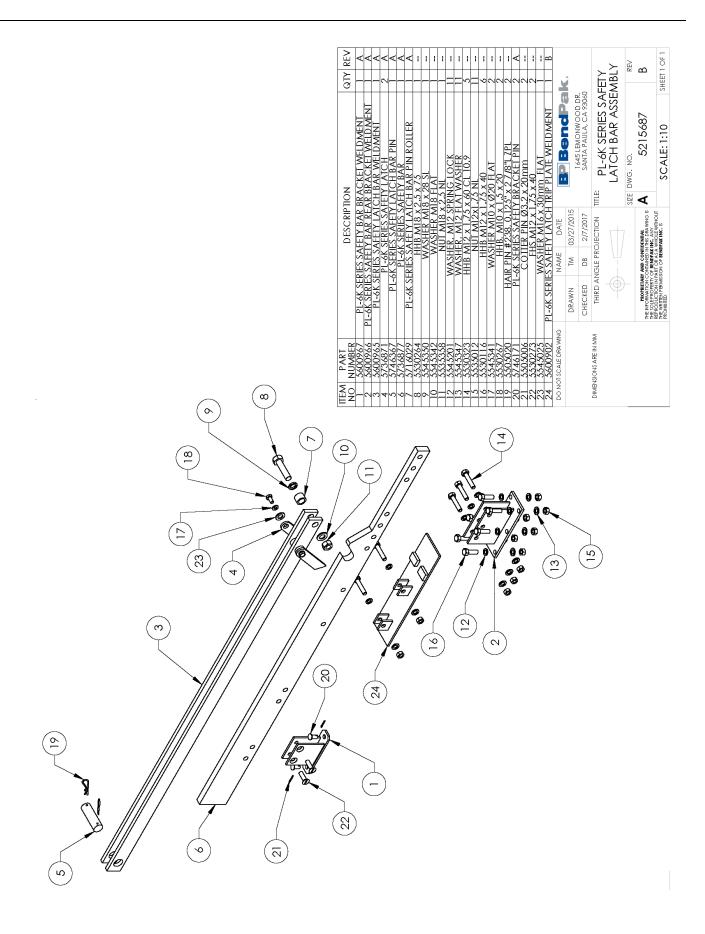


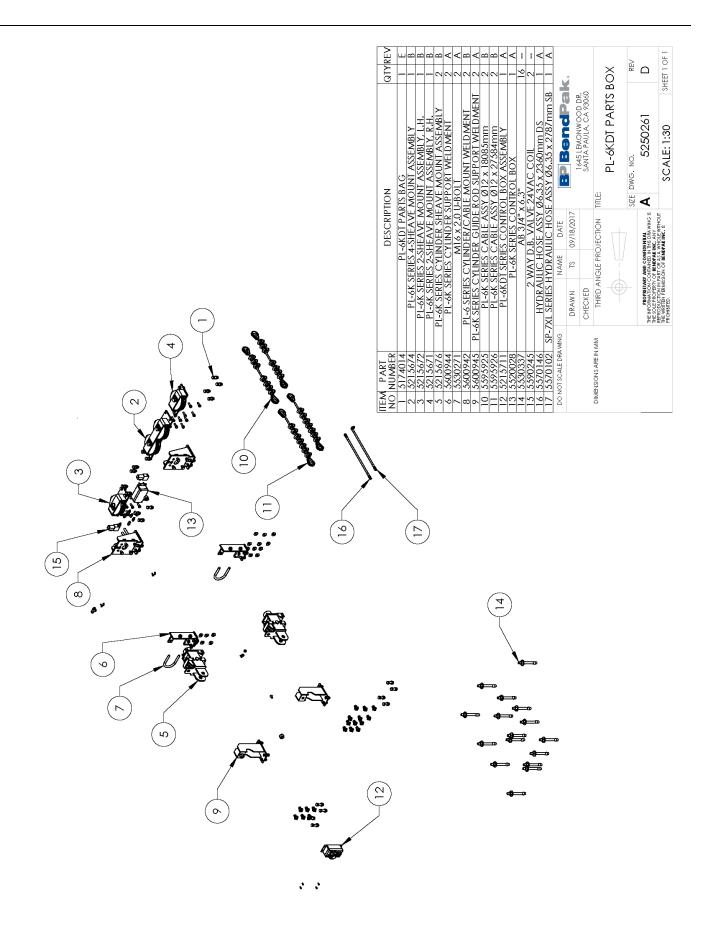


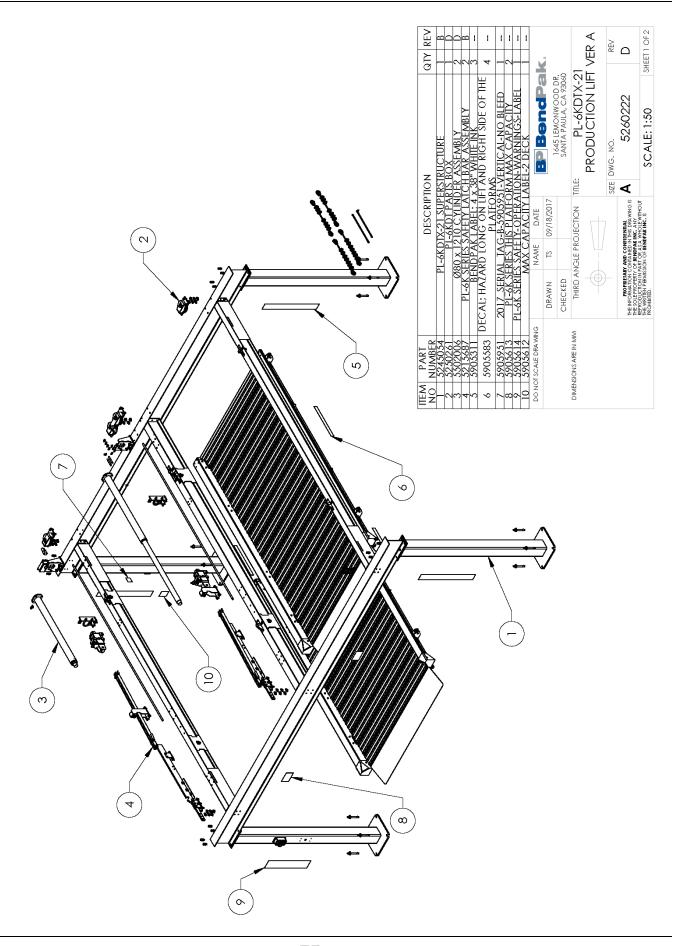


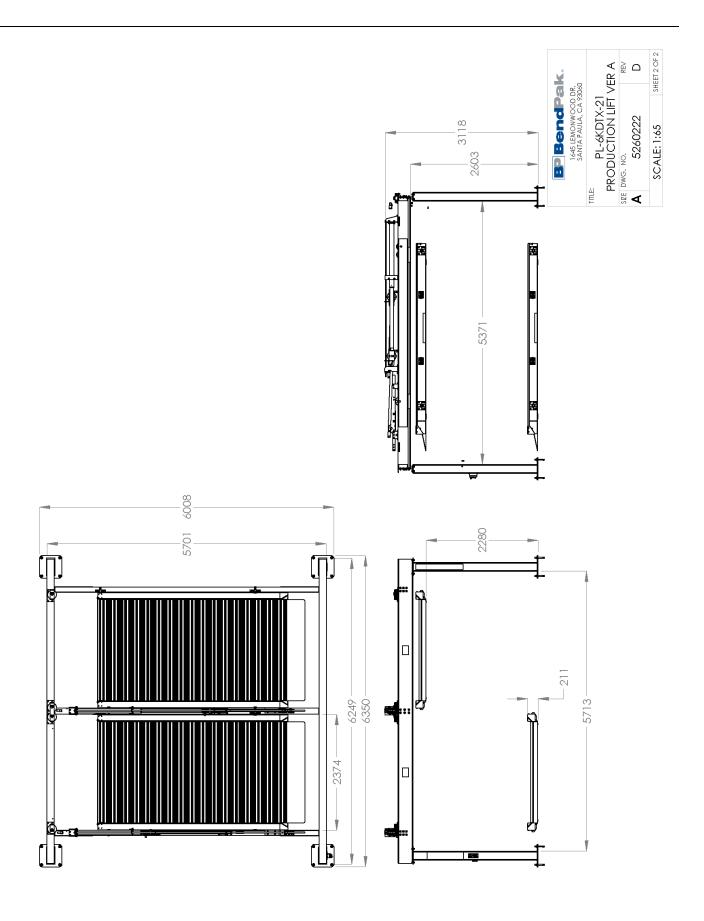


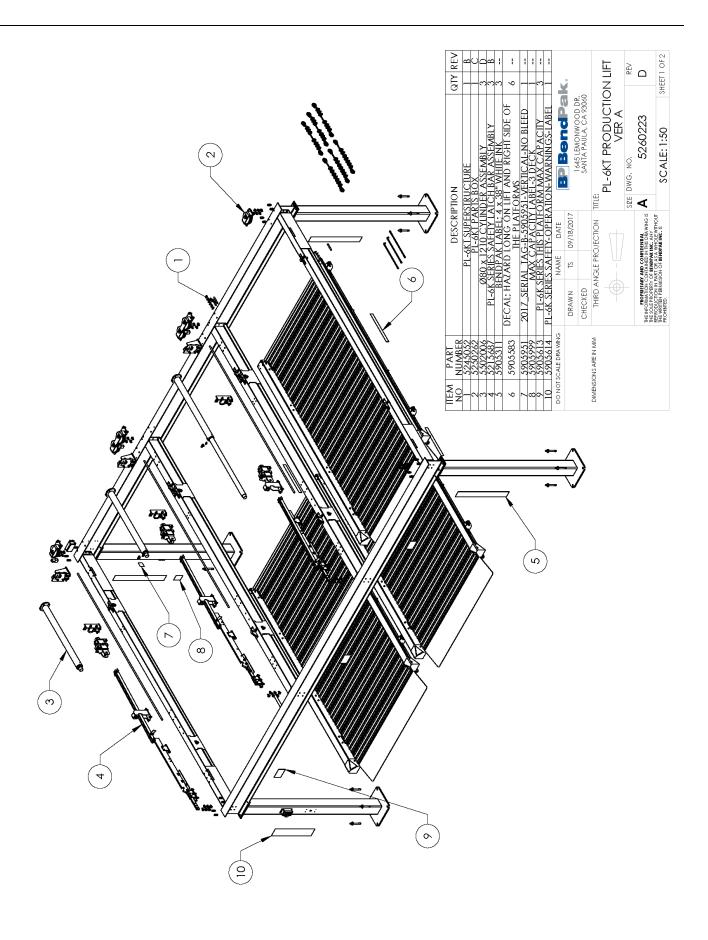


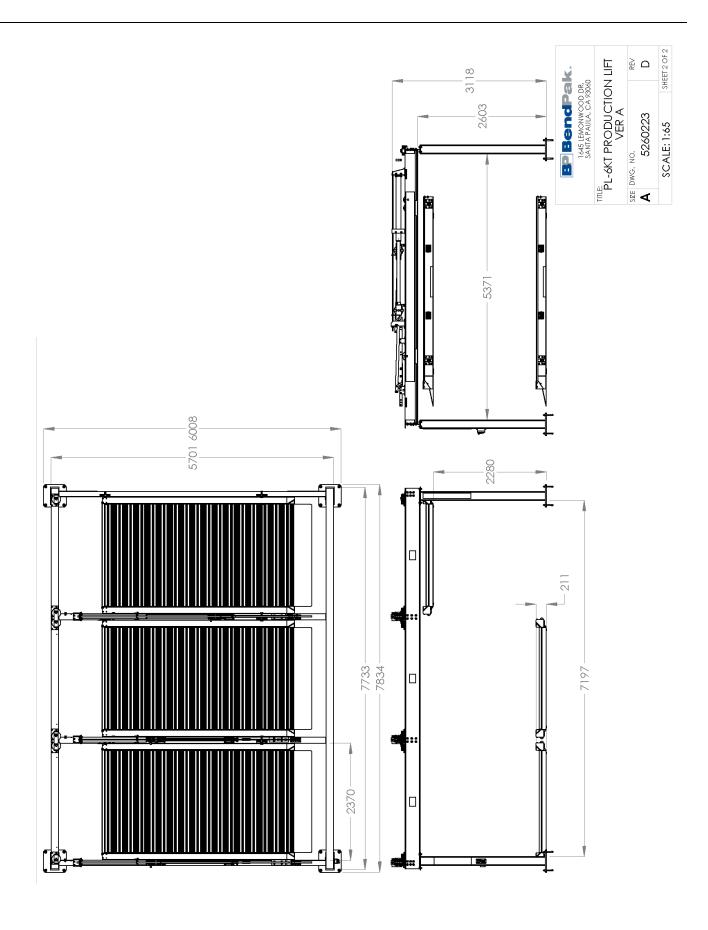












# **Automotive Lift Institute (ALI) Store**

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!



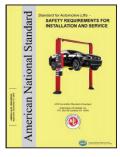
**Lifting It Right Online Certificate Course**. Make *sure* you and your people are lifting vehicles the right way.



**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.



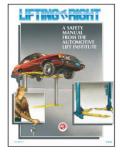
ANSI/ALI ALIS Standard. Safety Requirements for Installation and Service.



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/.

