30440 Agoura Rd.
Agoura Hills, CA 91301 USA
Toll Free: (888)-262-3880
bendpak.com

HD-9 Four-Post Lift

Installation and Operation Manual

Manual P/N 5900123 — Manual Revision N3 — October 2025

Models:

- HD-9
- HD-9ST
- HD-9XL
- HD-9STX
- HD-9XW
- HD-9EWT

HD-9ST shown.

Original instructions in the English language

⚠ DANGER

IMPORTANT Safety Instructions, save these instructions! 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 severe injury or death. Make sure all other operators also read this manual. Keep the manual near the product for future reference. ***By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility for product use.***

Manual. HD-9 Four-Post Lifts, *Installation and Operation Manual*, P/N 5900123, revision N3, released October 2025.

Limitations. Every effort has been made to make sure 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. You can always find the latest version of the **manual for your product on the BendPak website**.

SCAN FOR DIGITAL PDF

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/products/register/** and fill out the online form to register your product (be sure to click **Submit**).

Safety. Your product 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 ensure operator safety and maintain your product properly, it is the responsibility of the product owner to read and follow these instructions:

- Follow all setup, operation, and maintenance instructions.
- Make sure product setup and use 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 all parts are in place and operating correctly.
- Carefully inspect the product on a regular basis and perform all maintenance as specified.
- Service and maintain the unit only with approved replacement parts.
- Keep all instructions permanently with the product and make sure all labels are clean and visible. BendPak makes no promises, guarantees or assurances that our products meet any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate other than what is listed or shown on BendPak website(s), or any BendPak or Ranger online or published catalog. Not all BendPak lift models meet the standards as prescribed by ANSI/ALI ALCTV-(current edition) or ANSI/UL 201. Consult **www.autolift.org** for a complete list of lift models that meet ANSI/ALI ALCTV-(current edition) or ANSI/UL 201, or contact BendPak via **contact@bendpak.com**. The buyer assumes full responsibility for any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate required related to the installation and/or operation of any BendPak or Ranger product. BENDPAK will not be responsible for any charges, fines, liens, or other levies imposed on the Buyer related to any special or regional structural, seismic or any other building code and/or codes such as the Uniform Building Code (UBC), International Building Code (IBC), or any other state, county, federal or international mandated permit, license, code, standard, certification, or other mandate, law, rule, regulation or directive by any other agency, government, administrations, or corporations whether state, county, federal, or international mandated.

Only use the Lift if it can be used safely!

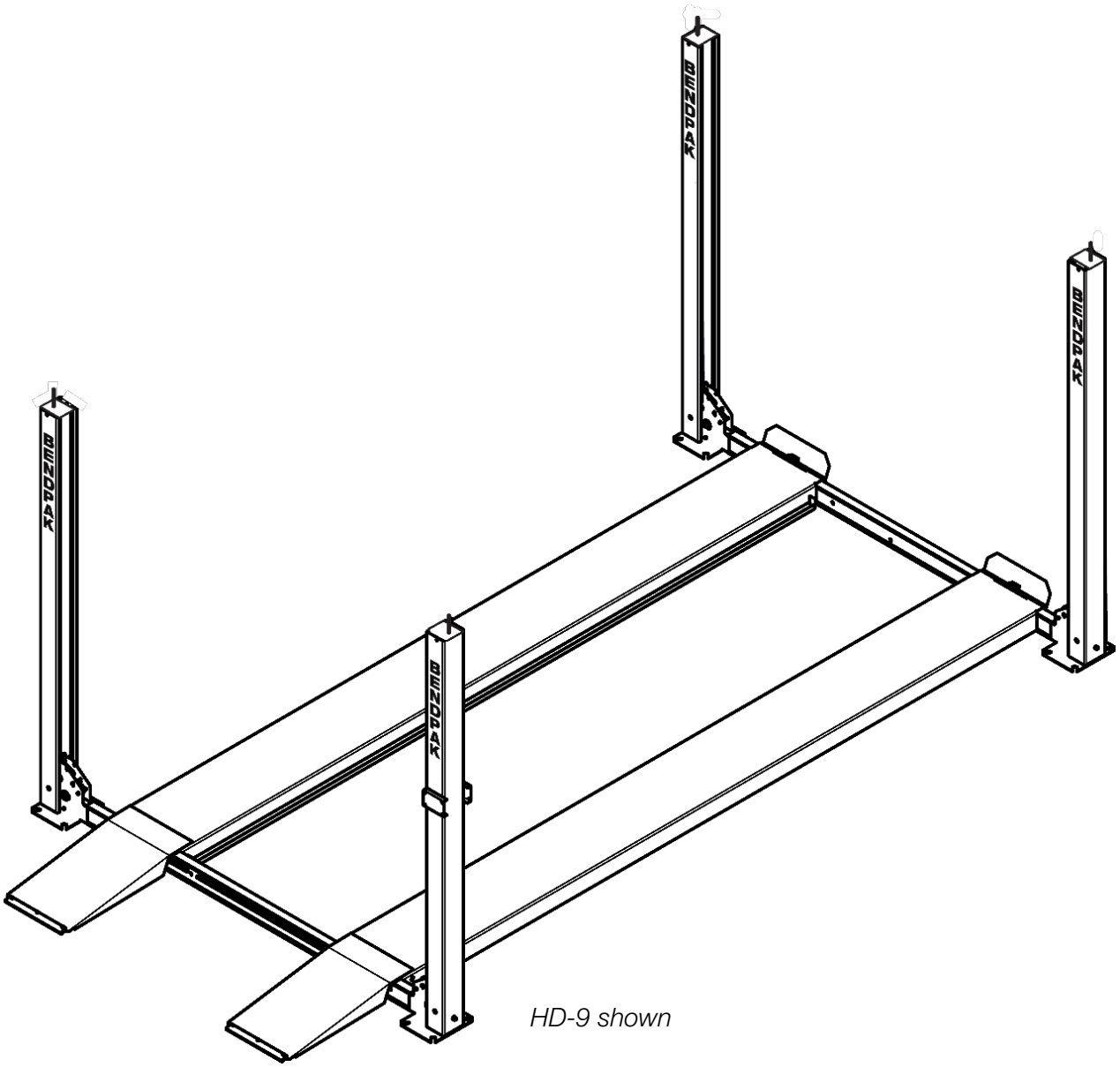
Unit Information. Enter the Model Number, Serial Number, and the Date of Manufacture from the label on your unit. This information is required for part or warranty issues.

Model: _____

Serial: _____

Date of Manufacture: _____

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



HD-9 shown

Table of Contents

Introduction

This manual describes the following ALI- and CE-certified Four-Post Lifts:

- **HD-9**. Four-Post Lift with an overall width of 111.83 in. (2840 mm), raising Vehicles up to 9,000 lbs. (4,082 kg).
- **HD-9ST**. Four-Post Lift with an overall width of 100.25 in. (2546 mm), raising Vehicles up to 9,000 lbs. (4,082 kg).
- **HD-9XL**. Four-Post Lift with the same overall width as the HD-9, but with ***an extended length*** of 198 in. (5029 mm).
- **HD-9STX**. Four-Post Lift with the same overall width as the HD-9ST but with ***a higher rise*** of 82.165 in. (2087 mm) and ***extended length*** of 198 in. (5029 mm).
- **HD-9XW**. Four-Post Lift with an extended overall width and includes ***a higher rise*** of 82.165 in. (2087 mm) and ***extended length*** of 198 in. (5029 mm).
- **HD-9EWT**. Four-Post Lift that is more than 6 in. (152 mm) wider than the HD-9XW, accommodates wide and off-road vehicles.

⚠ **DANGER** Use care when installing, operating, maintaining, or repairing this equipment as 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 as this voids the warranty and increases the chances of injury or property damage. Make sure to read and follow the instructions in this manual and on the labels on the unit.

This manual is mandatory reading for all users of HD-9 Series Two-Post Lifts, including anyone who installs, operates, maintains, or repairs them. Always keep this manual on or near the equipment. Technical support and service is available from your dealer, on the Web at **bendpak.com/support**, by email at **support@bendpak.com**, or by phone at **(800) 253-2363**, then follow the prompts. Online chat is also available. Visit **www.bendpak.com** click the chat icon. Scan this QR Code for up-to-date information and videos on the HD-9 Lift series.

SCAN FOR VIDEO

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, 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 entire manual carefully before using your new product. Do not install or operate the product until you are familiar with all operating instructions and warnings. Refer to ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service of Automotive Lifts* for more information about safely installing your Lift.

⚠ **WARNING** **California Proposition 65**. This product can expose you to chemicals including styrene and vinyl chloride which are on the list of over 900 chemicals identified by the State of California to cause cancer, birth defects or reproductive harm. **ALWAYS** use this product in accordance with BendPak BendPak's instructions. For more information go to **www.P65Warnings.ca.gov**.

Important Safety Instructions!

Save these instructions!

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged – until it has been examined by a qualified service person.
4. Do not let a power cord hang over the edge of a table, bench, or counter, or come in contact with hot manifolds or moving fan blades.
5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Power cords with a current rating less than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. Always unplug the equipment from the electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp the plug itself and pull to disconnect.
7. Let the equipment cool completely before putting it away. Loop cord loosely around equipment when storing.

8. To reduce the risk of fire, do not operate in the vicinity of open containers of flammable liquids (gasoline).
9. Adequate ventilation should be provided when working on operating internal combustion engines.
10. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
11. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
12. Use only as described in this manual. Use only BendPak recommended attachments.
13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
14. Guard against electric shock. This Lift must be grounded while in use to protect the operator. Never connect the green power cord wire to a live terminal.
15. To reduce the risk of injury, close supervision is necessary when this product is used around children.
16. To reduce the risk of injury, ***never*** attempt to lift more than the rated capacity of the Lift. Refer to loading instructions.
17. The Lift uses electrical energy. If your organization has Lockout/Tagout policies, make sure to implement them after connecting the Lift to a power source.
18. Refer to markings for proper load on electrical receptacles.
19. Only operate your Lift between working temperatures of +41°F to +104°F (+5°C to +40°C).
20. The Lift should ***only*** be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
21. Do not make any modifications to the Lift as this voids the warranty and increases the chances of injury or property damage.
22. Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
23. Keep the work area clean and well lit. Cluttered work areas invite injuries.
24. **Always** make sure the Lift is secured on Safety Locks before attempting to work on or near a Vehicle.
25. Make a thorough inspection of the product at least once a year. Replace any damaged or severely worn parts, decals, or warning labels. Replace worn or damaged parts with BendPak or BendPak approved parts and assemblies only.
26. BendPak recommends referring to the ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service* for more information about safely installing, using, and servicing your Lift.
27. **HD-9 Series Lifts** are four post vehicle lifts. ***Use them only for their intended purpose.***
28. You ***must*** wear OSHA-approved (publication 3151) personal protective equipment at all times when installing, using, maintaining, or repairing the Lift. Leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are ***mandatory***.
29. Keep loads balanced on the Lift Arms. Clear the area immediately if a Vehicle is in danger of falling off the Lift.
30. Do not make any modifications to the Lift. Modifications void the warranty and increase the chance of injury or property damage. ***Do not modify any safety-related features in any way.***
31. Make sure all operators read and understand this Installation and Operation Manual. *Keep the manual near the Lift at all times.*

32. While handling a Hydraulic Cylinder or a Hydraulic Hose, ***always*** wear gloves. In rare cases, a needle-like stream of hydraulic fluid (even at low pressure) can penetrate fingers, hands, or arms; such a puncture can feel like a bite, electric shock, or a prick. While it may seem like a minor issue, any amount of Hydraulic Fluid injected into the human body is a serious issue. Anyone suffering such a puncture wound should be ***immediately*** taken to a hospital emergency room to determine the extent of the injury. Explain the circumstances of the injury to the attending physician, including what kind of Hydraulic Fluid was involved. Do not assume a puncture wound that could have been caused by Hydraulic Fluid is a minor issue; it could be life threatening.
33. Make an inspection of the Lift ***before*** using it. Check for damaged, worn, or missing parts. Do not use it if you find any of these issues. Instead, take it out of service and contact an authorized repair facility, your dealer, or BendPak at **(800) 253-2363**, then follow the prompts to reach Service or Parts, or email **support@BendPak.com**.

⚠ **WARNING** ***Chock Wheels*** to reduce the risk of property damage, personal injury, or loss of life. ***NEVER*** park any vehicle on the Lift's runways without securely placing the included ***Wheel Chocks*** at the front and rear of one tire at the rear of the lift, so that the vehicle cannot roll backward from Lift. Vehicles parked on the Lift ***MUST*** also be placed in Park or First Gear (Manual Transmission) with the Parking Brake fully applied.

Symbols

Following are the symbols used in this manual:

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

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

⚠ **WARNING** Calls attention to a hazard or unsafe practice that **could** result in death or severe personal injury.

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

NOTICE Calls attention to a situation that could result in product or property damage.

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

Liability Information

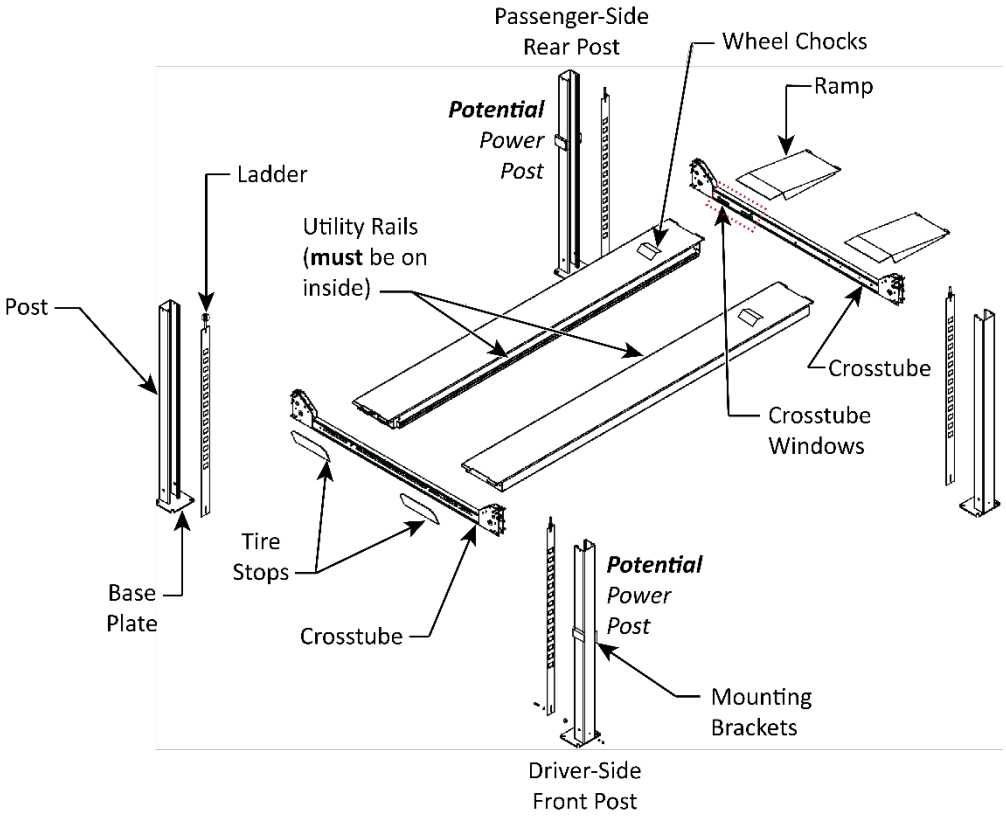
BendPak Inc. assumes **no** liability for damages resulting from:

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

Components

The main components of your Lift include:

- **Power Post**-The Post that holds the Power Unit. ***The Power Post can be in either of two locations***. You can tell the Power Post from the other Posts because it has two Mounting Brackets on it. Mount the Power Unit on one of the two Mounting Brackets.
- **The remaining three Lift Posts**-These Posts are interchangeable.
- **Power Unit**-An electric/hydraulic unit that connects to an electric power source and then provides Hydraulic Fluid to the Hydraulic Cylinder that raises and lowers the runways.
- **Power Side Runway**-On the same side as the Power Post. The power side runway includes the Hydraulic Cylinder and Lifting Cables installed under them. The power side runway ***must*** be installed next to the Power Post.
- **Offside Runway**-The remaining runway. It does not include a Hydraulic Cylinder or Lifting Cables under it.
- **Flex Tube**-*Not shown*. Used for routing the Air Line, Return Line, and Hydraulic Hose to the Power Unit. A flexible, black tube that attaches to an opening on the power side runway on one end and to the bottom of the Flex Tube Bracket Plate (near the Power Unit) on the other end.
- **Utility Rails**-Hold the optional Rolling Jacks. Utility Rails ***must*** be installed on the inside of the Lift.
- **Crosstubes**-Install at each end of the Lift. The Crosstubes are hollow. The Lifting Cables that raise and lower the runways are routed through the Crosstubes. The Crosstubes are *not* interchangeable: Each Crosstube has an opening (called a 'Window') that faces the inside of the Lift. ***Make sure to install the Lift so that the Windows open to the inside of the Lift only***.
- **Drive-up Ramps**-One for each runway. Use them to drive onto and off of the runways.
- **Tire Stops**-Located at the Front of the Lift, Tire Stops prevent the Vehicle's Front Tires from moving any further forward. Additionally, always securely chock the front and back sides of one of the Vehicle's tires positioned at the rear of the Lift.
- **Safety Locks**-Once engaged, they hold the runways in position, even if the power goes out or there is a leak in the Hydraulic Hoses. Your Lift has a column of Safety Locks in each post, spaced every four inches. This lets you lock the runways at just the right height for the work to be accomplished. This Lift also has a backup Slack Safety system; refer to **About Safety Locks** for more information. ***Only leave the runways on the ground or engaged on all Safety Locks.***
- **Pushbutton Air Valve**- A Pushbutton, usually located next to the Power Post, which allows compressed air to move the Safety Locks away from the Safety Ladder, so that they do not engage as you lower the runways. Used only to lower the runways.
- **Ladders**-Sections of steel that are installed at the back of each Post that are part of the Safety Lock system.
- **Wheel Chocks**- Always place the Wheel Chocks securely at the front and rear sides of one of the Vehicle's tires positioned at the rear of the Lift, so that the vehicle cannot roll backward and off the Lift.



The figure above shows the two possible Power Post locations. Only one Post has the Brackets for mounting the Power Unit. Not all components are shown.

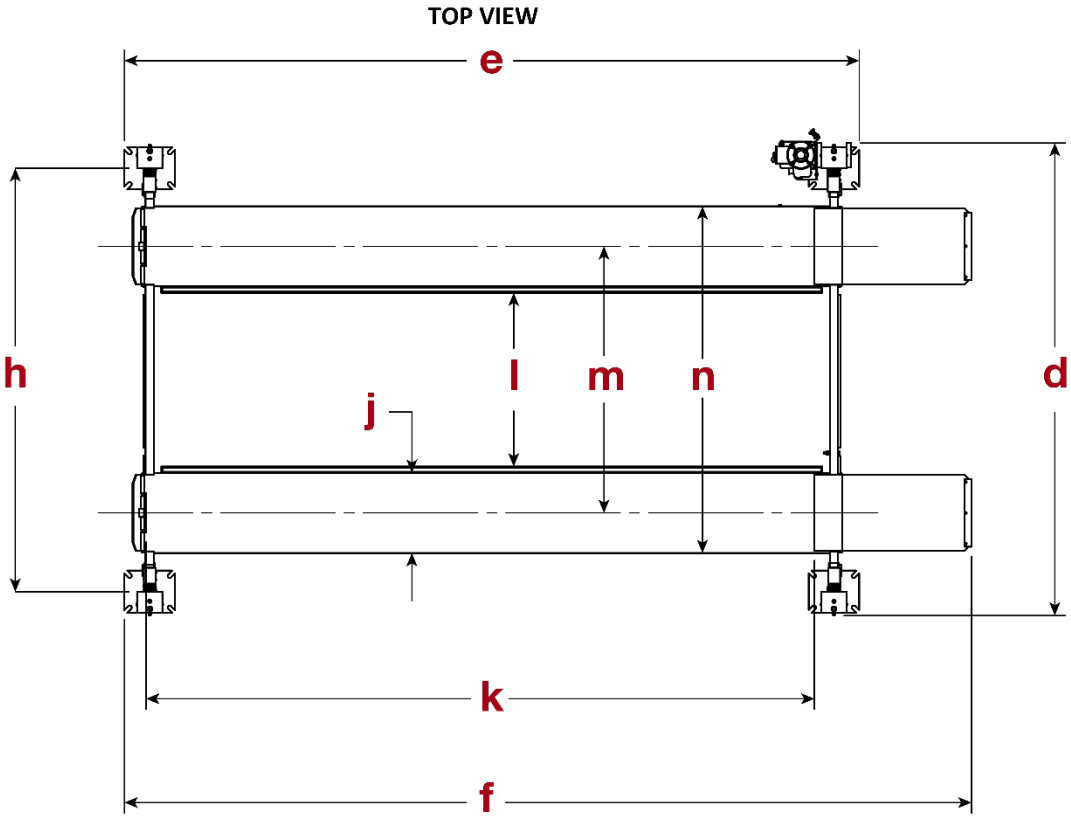
Optional Accessories

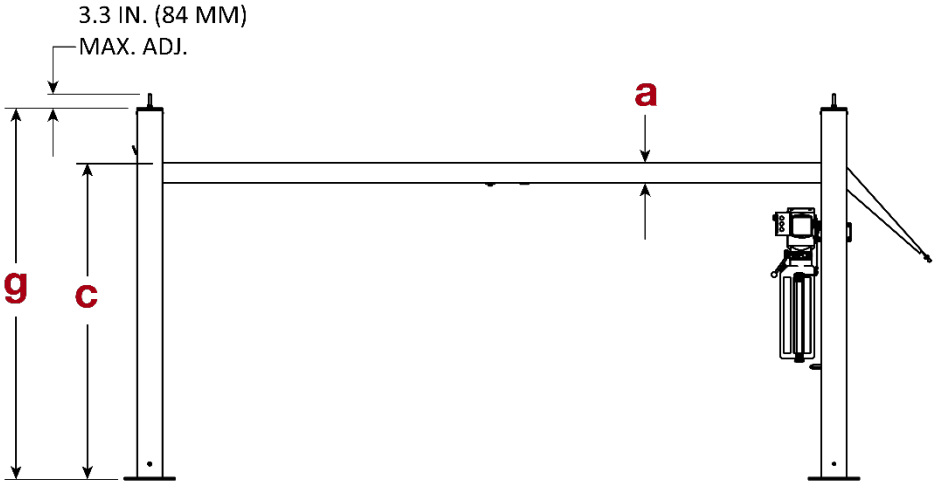
There are additional products you can use with your Lift:

- **Aluminum Drive-up Ramps**. The aluminum Drive-up Ramps are a low-profile alternative to the standard Drive-up Ramps that are included with your Lift.

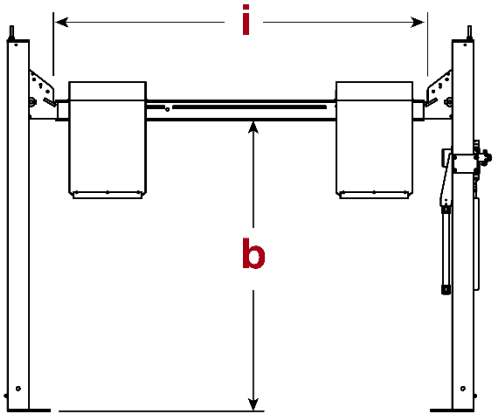
  See the **Aluminum Approach Ramps page on the BendPak website** for more information.
- **Aluminum Platforms**. Aluminum Platforms fill in the open space between the Lift's two runways and prevent liquids from dripping onto the floor or a Vehicle below the runways. See the **Aluminum Platforms page on the BendPak website** for more information.
- **Caster Kit**. The Caster Kit allows the Lift to be moved without needing to disassemble it. See the **Caster Kit page on the BendPak website** for more information.
- **Plastic Drip Trays**. Plastic Drip Trays prevent liquids from falling onto your work area or Vehicle. See the **Plastic Drip Trays page on the BendPak website** for more information.
- **Rolling Bridge Jack**. A Rolling Bridge Jack raises the wheels of a Vehicle off the runways of a Lift, making it easier to perform services such as brake jobs and suspension work while the Vehicle is still on the Lift. See the **RBJ4500 Rolling Bridge Jack page on the BendPak website** for more information.

Specifications





SIDE VIEW



APPROACH VIEW

Specifications subject to change without notice. All dimensions rounded to the nearest ¼ in. (6.3 mm)

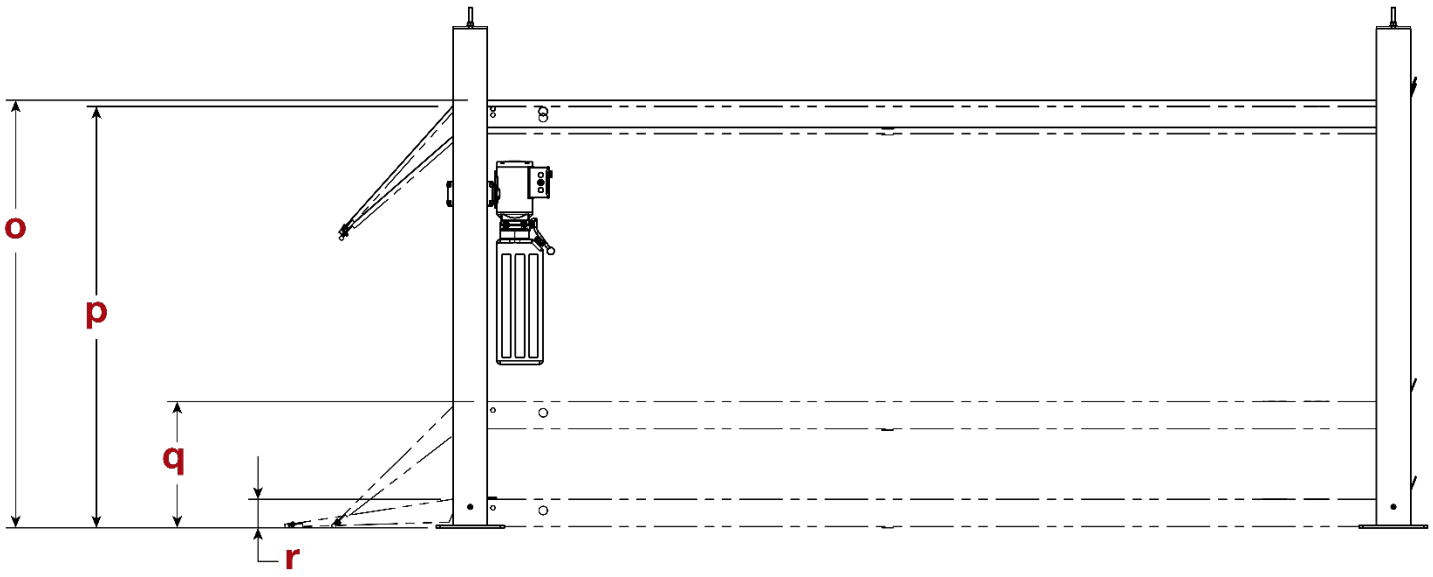
Model	HD-9	HD-9ST	HD-9XL
Lifting Capacity	9,000 lbs. (4,082 kg)		
Max capacity at Front Axle	4,500 lbs. (2,041 kg)		
Max capacity at Rear Axle	4,500 lbs. (2,041 kg)		
a Min. runway height	4.75 in. (121 mm)		
b Maximum rise	70.25 in. (1,784 mm)		
c Maximum lifting height	75 in. (1,905 mm)		
d Overall width ± .125 in. (3 mm)	111.75 in. (2,838 mm)	100.25 in. (2,546 mm)	110.25 in. (2,800 mm)
e Outside length	174 in. (4,420 mm)		198 in. (5,029 mm)
f Overall length	200.5 in. (5,093 mm)	200.75 in. (5,099 mm)	224.5 in. (5,702 mm)
g Height of post	88 in. (2,235 mm)		
h Distance between posts	100.25 in. (2,546 mm)	90.25 in. (2,292 mm)	100.25 in. (2,546 mm)
i Drive-thru clearance (Gusset to Gusset)	86.65 in. (2,201 mm)	76.65 in. (1,947 mm)	86.65 in. (2,201 mm)
j Runway width	19 in. (483 mm)		
k Runway length	158.25 in. (4,020 mm)		182.25 in. (4,629 mm)
l Width between runways (inside utility rail inner edges)	35 in. - 41.25 in. (889 – 1,048 mm)	34.5 in. (876 mm)	35 in. - 41.25 in. (889– 1,048 mm)
m Runway centerline	57 in. – 61.11 in. (1,448 – 1,552 mm)	56.5 in. (1437 mm)	57 in. – 61 in. (1,448 –1,552 mm)
n Outside edge of runways	75.75 in. – 82 in. (1,924 – 2,083 mm)	75.5 in. (1,918 mm)	75.75 in. – 82 in. (1,924 – 2,083 mm)
Max. Load Operating Pressure	2,460 psi		
Min. wheelbase @ rated cap.[1]	115 in. (2,921 mm)	135 in. (3,429 mm)	
Min. wheelbase @ 75 capacity[1]	100 in. (2,540 mm)	115 in. (2,921 mm)	
Min. wheelbase @ 50 capacity[1]	85 in. (2,159 mm)	95 in. (2,413 mm)	
Min. wheelbase @ 25 capacity[1]	70 in. (1,778 mm)	80 in. (2,032 mm)	
Safety Lock positions	14 spaced every 4 in. (102 mm)		
Lifting time	45 – 50 seconds		
Motor	220 VAC, 60 Hz, 1 Ph (*special voltages available upon request*)		
Motor Duty Cycle	60 sec. ON, 540 sec. OFF		

[1] The Lift supports less weight than its rated capacity as the Vehicle's wheelbase shortens. This is because the wheels are closer to the middle of the runways, where there is less mechanical support.
For example, the maximum weight allowed on the Lift for a Vehicle with a wheelbase of 85 in. is 50 percent of the Lift's rated capacity (or 4,500 lbs.).

Specifications subject to change without notice. All dimensions rounded to the nearest ¼ in. (6.3 mm)

Model	HD-9STX	HD-9XW	HD-9EWT
Lifting capacity	9,000 lbs. (4,082 kg)		
Max capacity at Front Axle	4,500 lbs. (2,041 kg)		
Max capacity at Rear Axle	4,500 lbs. (2,041 kg)		
a Min. runway height	4.75 in. (121 mm)		
b Maximum rise	82.165 in. (2,087 mm)		
c Maximum lifting height	87 in. (2,210 mm)		
d Overall width ± .125 in. / 3 mm	100.25 in. (2,546 mm)	110.25 in. (2,800 mm)	117 in. (2,972 mm)
e Outside length	198 in. (5,029 mm)		
f Overall length	224.50 in. (5,702 mm)		
g Height of post	100 in. (2,540 mm)		
h Distance between posts	90.236 in. (2,292 mm)	100.25 in. (2,546 mm)	107 in. (2,718 mm)
i Drive-thru clearance (Gusset to Gusset)	76.65 in. (1,947 mm)	86.65 in. (2,201 mm)	93.25 in. (2,369 mm)
j Runway width	19 in. (482 mm)		
k Runway length	182.25 in. (4,629 mm)		
l Width between runways	34.5 in. (876 mm)	35 in. – 41.25 in. (889 – 1,048 mm)	35.75 in. – 42.0 in. (910 mm Min. – 1,068 mm Max.)
m Runway centerline	56.5 in. (1,435 mm)	57 in. – 61 in. (1,448 -1,549 mm)	57.75 in. – 64.00 in. (1,468 – 1,626 mm)
n Outside edge of runways	75.5 in. (1,918 mm)	75.75 in. – 82 in. (1,924 – 2,083 mm)	76.75 in.- 83 in. (1,950 – 2,108 mm)
Max. Load Operating Pressure	2,460 psi		
Min. wheelbase @ rated cap. [1]	115 in. (2,921 mm)	135 in. (3,429 mm)	
Min. wheelbase @ 75 capacity [1]	100 in. (2,540 mm)	115 in. (2,921 mm)	
Min. wheelbase @ 50 capacity [1]	85 in. (2,159 mm)	95 in. (2,413 mm)	
Min. wheelbase @ 25 capacity [1]	70 in. (1,778 mm)	80 in. (2,032 mm)	
Safety Lock Positions	17 spaced every 4 in. (107 mm)		
Motor	220 VAC, 60 Hz, 1 Ph (*special voltages available upon request*)		
Motor Duty Cycle	60 sec. ON, 540 sec. OFF		

[1] The Lift supports less weight than its rated capacity if the Vehicle's wheelbase is shorter; this is because the wheels are closer to the middle of the runways, where there is less support. For example, the maximum weight allowed on the Lift for a Vehicle with a wheelbase of 85 in. (2159 mm) is 50 percent of the Lift's rated capacity (or 4,500 lbs.).



Specifications subject to change without notice. All dimensions rounded to the nearest ¼ in. (6.3 mm)

Model	HD-9	HD-9ST	HD-9XL	HD-9STX	HD-9XW	HD-9EWT
o Max. Height	75 in. (1,903 mm)			87 in. (2,208 mm)		
p Top Lock	73.75 in. (1,875 mm)			86 in. (2,181 mm)		
q Lowest Lock	22.25 in. (562 mm)			22.25 in. (565 mm)		
r Lowered	5 in. (127 mm)			5 (125 mm)		

Frequently Asked Questions

Question: What kinds of Vehicles can I put on my Lift?

Answer: Cars, trucks, SUVs, or any vehicle that fits on the runways, up to 9,000 lbs. (4,082 kg).

Q: Can any of the four Posts locations be the 'Power Post'?

A: No; the only two possible locations for the Power Post are either the *Front Driver-Side* or the *Rear Passenger-Side*. This will be explained later.

Q: How can my Lift fit both narrow and wide Vehicles on the runways?

A: The offside runway (the runway without the Hydraulic Cylinder or Lifting Cables underneath) can be easily switched between the narrow and wide settings. The offside runway on both ends would need to be unbolted, then slid over to the other position, and then bolted back into position. ***The adjustable offside runway does not apply to the HD-9ST or HD-9STX models***.

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

A: Yes, BendPak ***strongly*** recommends that you anchor the Lift, as it will be less stable if not anchored at the bases, and ALI certification may be voided. When using the optional Rolling Bridge Jack, the Lift ***must*** be anchored.

Q: How high does the ceiling have to be?

A: It depends on the height of the Vehicles being put on the runways and how high the runways are raised. When putting a tall Vehicle on the Lift, and attempting to raise it all the way up, check to make sure there is enough room.

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

A: BendPak strongly recommends driving your Vehicle in front first, because it will be much easier to center the wheels on the runways. Also, remember to put the front wheels up against the Tire Stops and chock both sides of one of the Vehicle's tires positioned at the rear of the Lift.

Q: Will the Lifting Cables really hold my Vehicles?

A: Yes. Your Lift has 0.40 in. (10 mm) thick aircraft-quality wire rope that runs through oversized Sheaves, reducing friction on them and extending their life with minimal maintenance.

Q: How many Safety Locks does my Lift have?

A: Depending on the model, your Lift has either 14 or 17 Safety Locks. See **Specifications** for more information about your specific Lift model.

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

A: Indefinitely, ***as long as it rests on a Safety Lock***. Once the Lift is engaged on a Safety Lock, gravity holds it in position, so a loss of power will not impact it. ***Always leave the runways either fully lowered or engaged on a Safety Lock***.

Q: Can I install my Lift outside?

A: No. Your Lift is approved for indoor installation and use only. Outdoor installation is prohibited.

Q: How many Rolling Bridge Jacks can I use on my Four Post Lift?

A: Two. ***Never*** place a Rolling Bridge Jack towards the middle of the runways; they ***must*** be positioned at the Front or Rear of the Lift only.

Installation Checklist

The following steps are required to install your Lift. Perform each step in the order shown.

☐ 1. Review the safety rules thoroughly.
☐ 2. Have all the necessary tools and supplies available.
☐ 3. Plan ahead for Electrical work.
☐ 4. Select the installation location.
☐ 5. Check the Clearances.
☐ 6. Determine the Lift Orientation.
☐ 7. Create Chalk Line Guides.
☐ 8. Unload and unpack the Lift components.
☐ 9. Move the Posts into position.
☐ 10. Install the Crosstubes.
☐ 11. About Safety Locks.
☐ 12. Install the Ladders and Top Caps.
☐ 13. Raise the Crosstubes.
☐ 14. Secure the Ladders.
☐ 15. Remove the Sheaves.
☐ 16. Install the runways.
☐ 17. Route the Lifting Cables.
☐ 18. Working with Compression Fittings and Tubing.
☐ 19. Install the Air Line.
☐ 20. Install the Return Line.
☐ 21. About Hydraulic Contamination.
☐ 22. About Thread Sealants.
☐ 23. Install the Hydraulic Hose.
☐ 24. Install the Power Unit and Fill the Reservoir
☐ 25. Install the Flex Tube Bracket Plate and Angle Plate.
☐ 26. Install the Flex Tube.
☐ 27. Install the Pushbutton Air Valve and connect the Air Lines.
☐ 28. Connect the Return Line.
☐ 29. Connect the Hydraulic Hose.
☐ 30. Contact the Electrician.
☐ 31. Connect to a power source (***Electrician required***).
☐ 32. Install the Power Disconnect Switch and Thermal Disconnect Switch (***Electrician required***).
☐ 33. About Effective Embedment.
☐ 34. Anchor the Posts.
☐ 35. Perform final leveling.
☐ 36. Install the Accessories.
☐ 37. Lubricate the Lift.
☐ 38. Test the Lift.
☐ 39. Review the final checklist. (Where is this?)

Installation

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

Read the entire Installation section before beginning the installation, to provide a better understanding of the entire process.

⚠ **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** and follow the prompts.

Practice Safety

While installing this equipment, your safety depends on proper training and thoughtful operation.

⚠ **WARNING** Do not install this equipment unless you have automotive Lift installation training. Always use proper lifting tools, such as a Forklift or Shop Crane, to move 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.

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

⚠ **WARNING** You ***must*** wear OSHA-approved (publication 3151) personal protective equipment at all times when installing, using, maintaining, or repairing the Lift. Leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are ***mandatory***.

⚠ **DANGER** Always refer to the lubricant and hydraulic fluid manufacturer's Material Safety Data Sheet (MSDS) for proper handling and disposal of chemicals.

Tools and Supplies Required

You may need some or all of the following tools:

- Rotary hammer drill or similar
- ¾ inch carbide bit (conforming to ANSI B212.15)
- Hammer, crowbar, and two sawhorses
- 4 ft. (1.2 m) level and 12-ft. (3.67 m) ladder
- Open-end wrench set, SAE, and metric
- Socket and ratchet set, SAE, and metric
- Red and white lithium grease
- Torque Wrench
- Hex key wrench set
- Medium crescent wrench, torque wrench, and pipe wrench
- Chalk line tool
- Medium-sized flat screwdriver and needle-nose pliers
- Tape measure - 25 ft. (635 mm) or longer
- Forklift or Shop Crane

Planning for Electrical Work

You will need to have a licensed Electrician available at some point in the installation.

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

Notify the Electrician in advance so that they come prepared with an appropriate Power Cord, one with a plug for connecting to the power source, a Power Disconnect Switch, and a Thermal Disconnect Switch. Refer to **Contacting the Electrician** for more information.

The Electrician will need to:

- **Connect the Power Unit to an electric power source**. An electric power source is required. The Power Unit comes with a pigtail for wiring to a power source. The Electrician should remove the pigtail and wire from inside the Electrical Box on the Power Unit to a Power Cord and Plug. Otherwise, have them wire it directly into the electrical system at the Lift location.

  Note: Installing the Power Unit and connecting it to the power source are *separate* procedures and are completed at different times in the installation process. An Electrician is not needed to install the Power Unit but is ***required*** to connect the Power Unit to the power source.

- **Install a Power Disconnect Switch**. This ensures that electrical power to the Lift can be quickly and completely interrupted in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance. It should be located within sight of and reach of the Lift operator.
- **Install a Thermal Disconnect Switch**. If required by applicable electrical codes. It ensures that the equipment shuts down in the event of an overload or an overheated motor.

Note: None of these components listed above are included with the Lift.

Electrical Information

⚠ DANGER All wiring ***must*** be performed by a licensed Electrician. Do not perform any maintenance until the 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 and is not covered by the warranty.
- The Lift uses electrical energy. If your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.
- Use a separate circuit breaker for each Power Unit.
- Protect each circuit with an appropriate time delay fuse or circuit breaker in accordance with the wiring diagram for the power unit you receive.

Select the Installation Location

When selecting the location for your Lift, consider:

- **Architectural plans**. Consult the architectural plans for your desired installation location. Ensure there are no issues between where you would like to install the Lift 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 Clearance**. Check for overhead obstructions such as building supports, heaters, electrical lines, low ceilings, hanging lights, and so on. Use the maximum lifting height of your Lift model plus the height of the tallest Vehicle you plan on raising to determine how much height you will need at the Lift location.

- **Power**. An appropriate power source is needed for the Power Unit.
- **Outdoor installations**. Your Lift is approved for indoor installation and use ***only***.
- **Floor**. Only install the Lift on a flat, concrete floor. Do not install the Lift on asphalt or any other surface. The surface must be level. Do not install if the surface has more than three degrees of slope.

⚠ WARNING Installing your Lift on a surface with more than three degrees of slope could lead to injury or even death. Only install the Lift on a level floor. If your floor is not level, consider making the floor level or using a different location.

- **Shimming**. If your concrete floor is not completely level, you can use Shims under the bases of the Posts, as needed, to level the Lift. To estimate your Shim requirements, use a transit level and targets to check for flatness. Use the provided Shims as necessary.

NOTICE Do not shim a Post more than 1/2 in. (12.7 mm) using the provided Shims and Anchor Bolts. A maximum shim of 2 in. (50.8 mm) is possible by ordering optional Shim Plates. Contact BendPak at **(800) 253-2363** and follow the prompts.

- **Concrete specifications**. Do not install the Lift within 6 in. (152 mm) of cracked or defective concrete or Expansion Joints. Make sure the concrete is at least 4.25 in. (108 mm) thick, 3,000 PSI, and cured for a minimum of 28 days.

⚠ CAUTION BendPak lifts are supplied with installation instructions and Concrete anchors that meet the criteria set by the current version of the American National Standard "Automotive Lifts – Safety Requirements for Construction, Testing, and Validation", ANSI/ALI ALCTV. 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).

It is important to check the floor for the possibility of it being a ***post-tension slab***. In this case, you must contact the building architect ***before*** drilling. Ground penetrating radar can help in locating any tensioned steel.

⚠ DANGER Cutting through a tensioned Cable can result in injury or death. Do not drill into a post-tension slab unless the building architect confirms that no tensioned steel will be hit, or you have located it using ground penetrating radar. ***If colored sheath comes up during drilling, stop drilling immediately***.

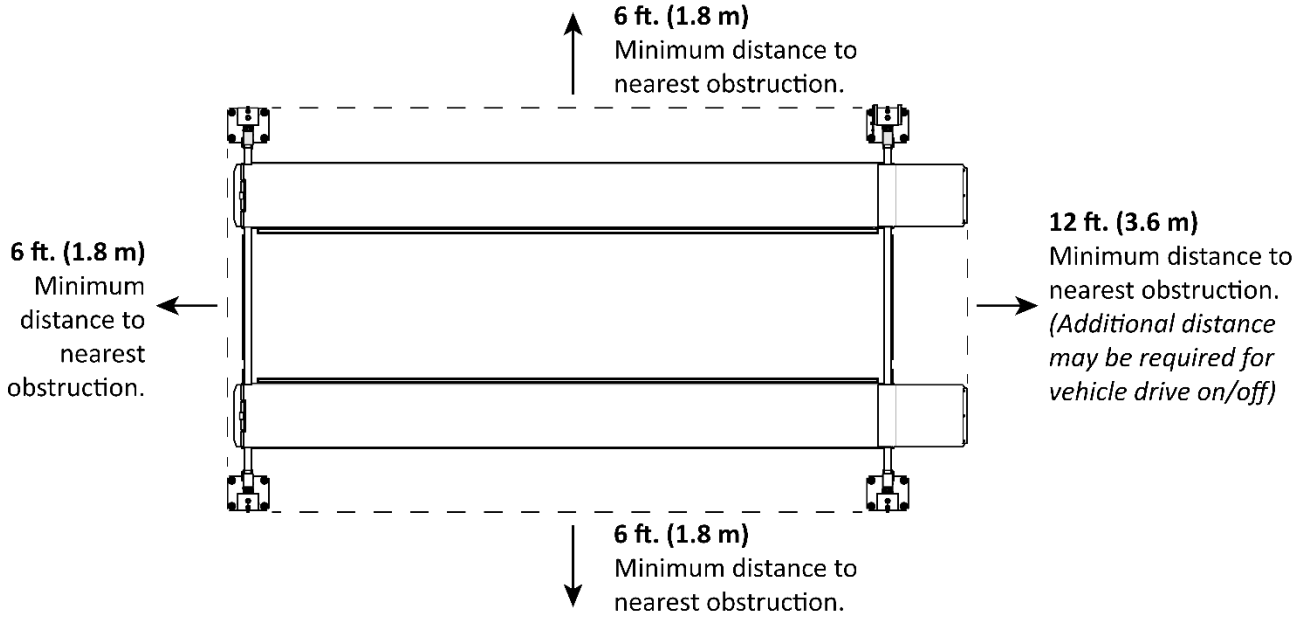
- **Multi-Lift installations**. In a multi-lift layout, there must be a *minimum* spacing of 5 in. (127 mm) from the edge of the Baseplates on one Lift to the edge of the Baseplates on the next Lift.

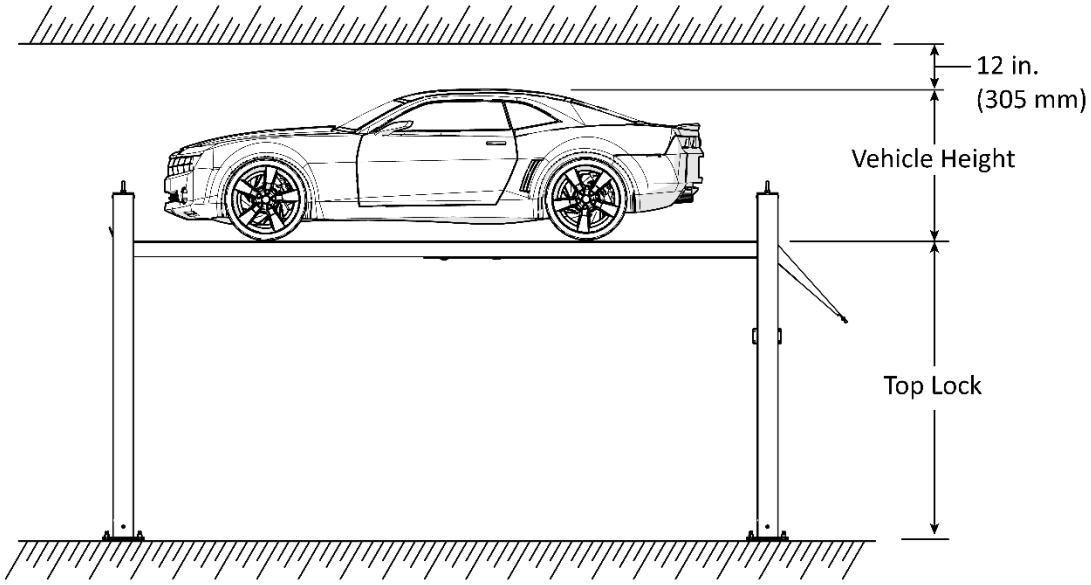
⚠ WARNING Installing a Lift closer than 5 in. (127 mm) from the next Lift compromises the holding strength of the Anchor Bolts, putting anyone near the Lifts in danger.

- **Non-Slip Rubber Pads**. If you do not plan to anchor the Lift (and want to use the optional Caster Kit), visit your local hardware store and purchase non-slip Rubber Pads and size them to fit the bottom of the Base Plates. These Pads will protect against scratches on special flooring if the Lift accidentally shifts as a result of not anchoring the Lift. Use the Caster Kit to raise the Lift and then put the Pads into place.

Check the Clearances

A dedicated working space around the Lift is ***required***.





Determine the Lift Orientation

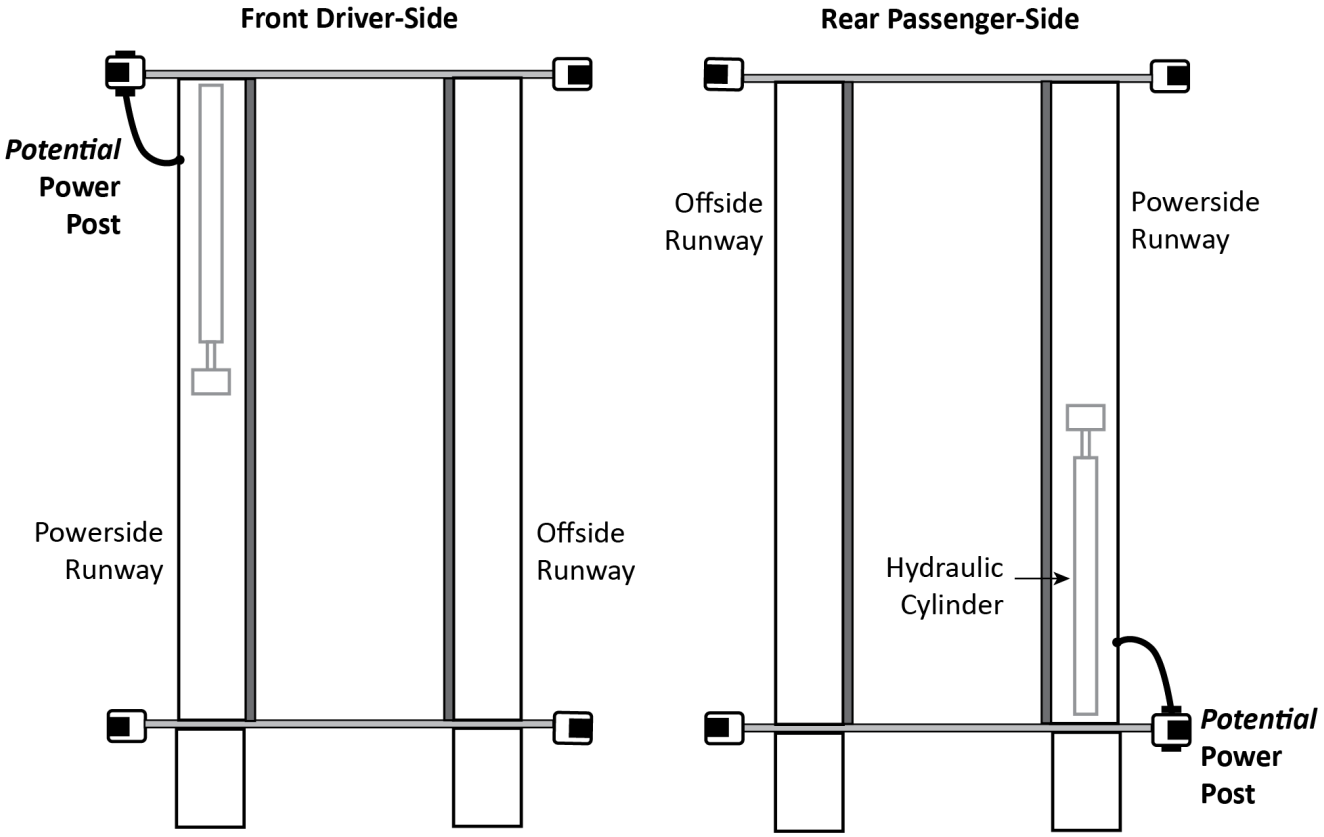
Before going any further, determine how you want to orient your Lift. This decision affects where you will place your Power Post, and the positioning of the runways, which are ***not*** interchangeable.

The power side runway has the Hydraulic Cylinder underneath it and is the starting point for the Lifting Cables. The other one is the offside runway and does not have anything underneath it. The power side runway ***must*** be installed next to the Power Post.

You can choose to position your Power Post at either the **Front Driver-Side** or the **Rear Passenger-Side**.

The drawings in this manual show the Power Post at the **Rear Passenger-Side**, but that position is optional. In many cases, the main factor in determining the Power Post location is the location of the power source. If power is not an issue, choose the option below that best suits your setup.

Important: Installers need to have the Lift owner make this decision before moving the Power Post into position.



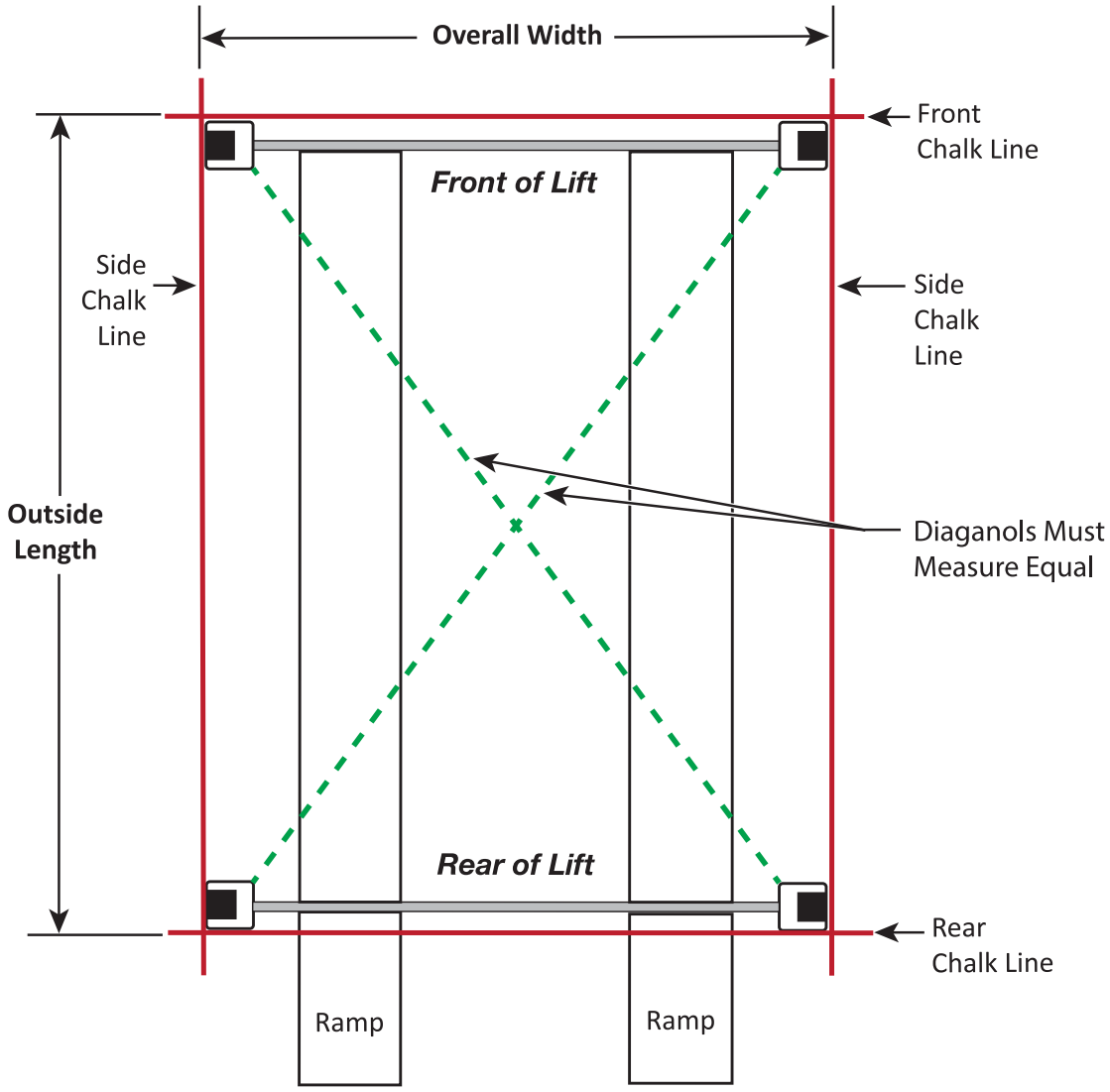
Hydraulic Cylinder is underneath the power side runway. Drive-up Ramps are not affected by Power Post location. Not to scale. Not all components shown.

Create Chalk Line Guides

Create the Chalk Line Guides so that the outside edges of all four Posts fit into the four corners created by the Chalk Line Guides.

See **Specifications** to determine the **Overall Width** and **Outside Length** values for your Lift.

Note: Do ***not*** use the ***Overall*** **Length** value as this includes the Ramps, which are not taken into consideration for creating Chalk Line Guides.



Top View. Not drawn to scale. Not all components shown.

To create Chalk Line Guides:

1. Create the Front Chalk Line where you want the Front of the Lift located.

   The Front of the Lift is the end opposite the Drive-up Ramps.

   Make the Front Chalk Line *longer* (about 12 in. (305 mm) on each end) than the **Overall Width** setting.

2. Create the two Side Chalk Lines at 90° angles to the Front Chalk Line and parallel to each other. Make the Side Chalk Lines longer (about 12 in. (305 mm) on each end) than the **Outside Length** setting.

   The Side Chalk Lines ***must*** be parallel to each other. *Measure to verify that they are parallel*.

3. Create the Rear Chalk Line parallel to the Front Chalk Line. Make the Rear Chalk Line longer than the **Overall Width** setting as described above.

   The Front and Rear Chalk Lines ***must*** also be parallel to each other. *Measure to verify that they are parallel*.

4. Before moving the Posts into position, measure ***diagonally*** to make sure the two diagonal measurements 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.

Unloading and Unpacking

The Lift includes several heavy sections, so it is recommended that they are unloaded as close to the installation location as possible.

⚠ **CAUTION** Some Lift components are very heavy, and if handled incorrectly they can damage materials like tile, sandstone, and brick. Use care when moving them. A forklift or shop crane is required to move these heavy components into position.

⚠ **WARNING** The Posts and runways are delivered with stabilizing structures on each end. Be very careful when removing these stabilizing structures as the Posts and runways can shift or even fall. If they fall on a person, they could cause serious injury.

Move the Posts into Position

Use a forklift or shop crane to move the Posts, one at a time, to the inside corners of the Chalk Line Guides.

Important: Position the Power Post at your chosen location. Remember, the Power Post can only be installed in two possible locations: the ***Front Driver-Side*** or the ***Rear Passenger-Side***. The other three Posts can be installed at any of the remaining Post locations. Refer to **Selecting the Lift Orientation** for more information.

Do not stand the Posts up yet as some of the following procedures are easier and safer to complete if the Posts are lying on the ground.

Install the Crosstubes

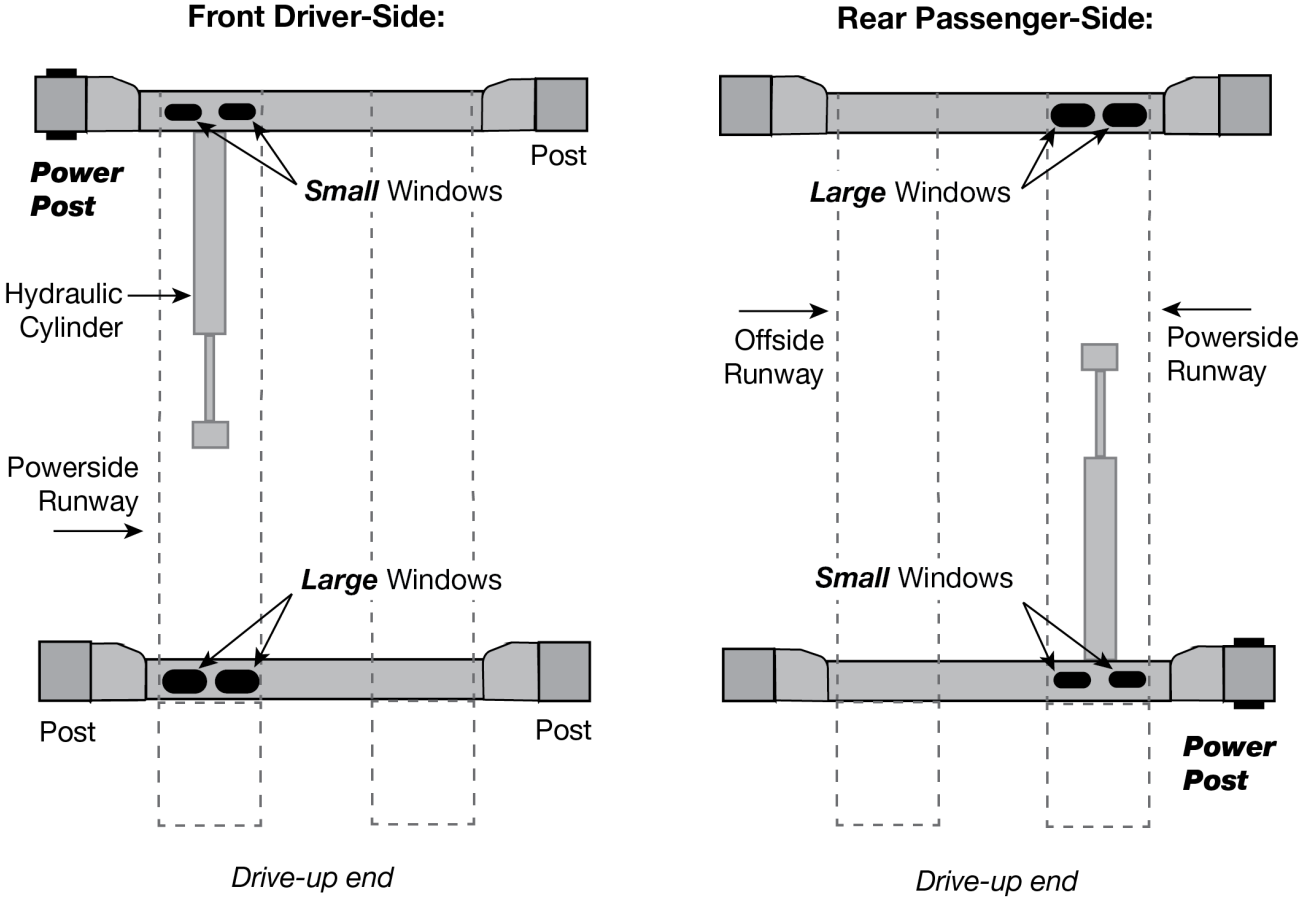
Your Lift has two Crosstubes, both hollow, which allows the Lifting Cables to run through them to the Posts. The two Crosstubes are:

- **Crosstube with Large Windows**: This Crosstube goes on the end of the Lift *opposite* of the Power Post, with the Windows facing the inside.
- **Crosstube with Small Windows**: This Crosstube goes next to the Power Post, with the Windows facing the inside.

Important: It is possible to install the Crosstubes ***incorrectly*** in several different ways. Take the time now to ensure they are oriented correctly.

The Crosstubes ***must*** be installed so that their Windows open to the ***inside*** of the Lift facing the opposite Crosstube. The Crosstubes ***must*** also be installed so that their Windows are on the power side runway side of the Lift (the runway with the Hydraulic Cylinder).

The following drawing shows the two Crosstube setups based on the Power Post location.



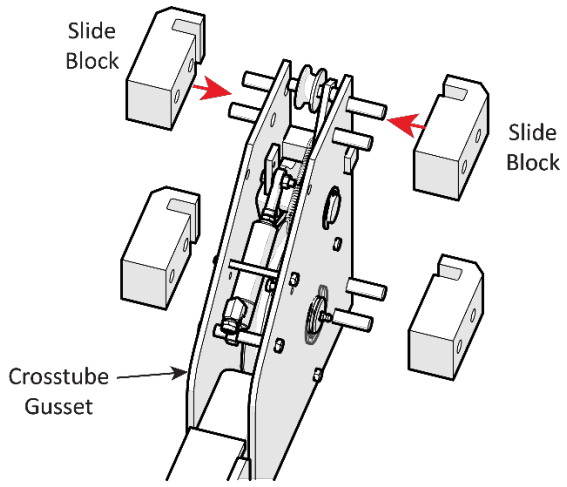
Top View. Not to scale. Some components not shown or exaggerated for clarity.

To install the Crosstubes:

1. Orient the Crosstubes in their required locations.
   Both Windows ***must*** be on the ends of the power side runway and facing the inside of the Lift.
2. Put the black Slide Blocks into place on the outside ends of each Crosstube Gusset (4 Slide Blocks per Gusset, 8 per Crosstube, 16 total for the Lift).

   Align the holes in the Slide Blocks with the rods on the side of the Gusset, then press the Slide Blocks in. Make sure the Slide Blocks are oriented so that they create a Slot when pushed in.

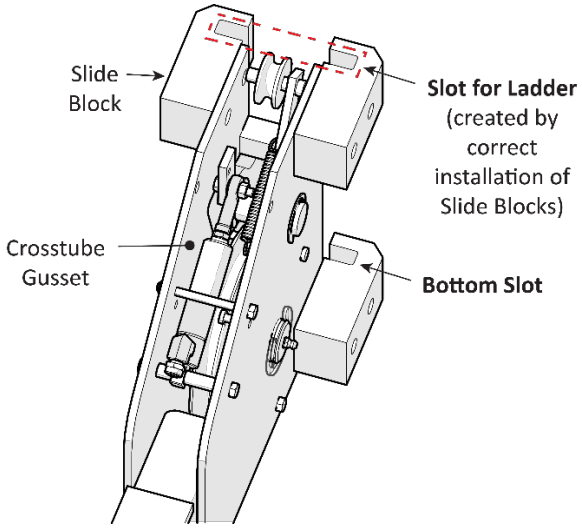
   The following drawing shows how to correctly install the Slide Blocks onto a Gusset.



   The four Slide Blocks mounted on a Crosstube Gusset, when put into place, create two Slots about 4 in. (102 mm) wide and 1/2 in. (12.7 mm) deep. There is one Slot at the top of the Gusset and a second Slot at the bottom. The Ladder ***must*** travel through ***both*** Slots on the Gusset.

⚠ **WARNING** If the Slide Blocks are not correctly installed, then the Slots for the Ladder are not created. In such a case, the Safety Locks will not work correctly, which endangers anyone who uses the Lift. Make sure to correctly install the Slide Blocks.

   The following drawing shows the Slot created by two Slide Blocks.



3. Using a Forklift or Shop Crane, raise the Crosstube with the Slide Blocks installed above the top of the two Posts that it goes between, lower it to just over the top of the Post, orient the Slide Blocks over the openings in the Post, then slide the Crosstube down.
4. Perform Steps 2 and 3 for the other Crosstube.

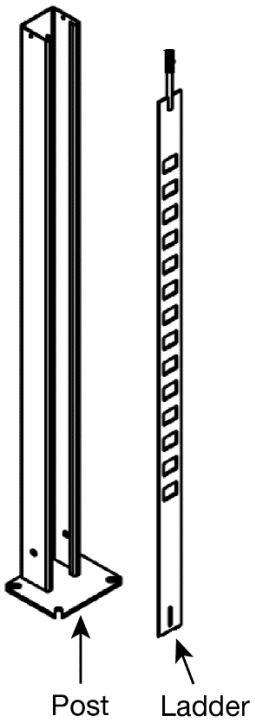
About Safety Locks

Safety Locks hold the runways in place. Once engaged the Safety Locks hold the runways in place, even if the power goes out or the Hydraulic Hoses break or leak. The Safety Locks are spaced every 4 in. (102 mm). Each Post has its own Ladder and set of Safety Locks.

Important: Simply raising the runways does ***not*** engage them on the Safety Locks. You must back the runways down onto the Safety Locks to engage them.

⚠ **WARNING** Safety Locks are dependent on correct installation of the 'Ladders'. Pay careful attention when installing the Ladders, thus ensuring the correct operation of the Safety Locks on the Lift.

The Ladders, one per Post, are steel sections with holes spaced every 4 in. (102 mm). As the runways are raised, the Safety Locks move into the holes in the Ladder. When the runways are lowered back down a little after passing a Safety Lock, the Safety Lock engages. Once engaged, the Safety Locks stay engaged until you are ready to lower the runways.



⚠ **WARNING** Always leave the runways either fully lowered or engaged on their Safety Locks. Once the runways are set at the desired height, check the Safety Locks to make sure that all four (one per Post) are engaged.

To lower the runways, *raise* them a few inches (to move them off the Safety Locks), then ***press and hold*** the pushbutton on the Pushbutton Air Valve. While holding down the pushbutton, the Safety Locks are moved away from the Ladders, and in this position they cannot engage, which allows the runways to be lowered.

The Lift also has a second, independent Safety Lock system called the Slack Safety. In total, your Lift has two Safety systems:

- **Safety Locks**: The primary system to hold up the runways on your Lift are the Safety Locks. When you move the runways up, you can hear clicks as the Safety Locks pass the holes in the Ladders. When you want to keep the runways at a certain height, raise the lift slightly past the height you want, then back the Safety Locks down into the holes in the Ladders to engage them.
- **Slack Safety**: The Slack Safeties are next to the Safety Locks on the ends of the Crosstube Gussets. They are different from the Safety Locks in that when the Cables are taut (which they are during normal operation), they hold the Slack Safeties away from the Ladder so that the Slack Safeties cannot engage. However, if a Cable were to break (which very rarely happens), the Slack Safety for the broken Cable immediately engages, preventing the runways from falling.

The Slack Safety Locks become engaged during installation when you raise the Crosstubes (see **Raising the Crosstubes**). Make sure to disengage them immediately after raising the Crosstubes.

Install the Ladders and Top Caps

Each Post has a Ladder, and each Ladder is installed on the inside back of a Post. Ladders are secured at the top and the bottom. All four Ladders are identical.

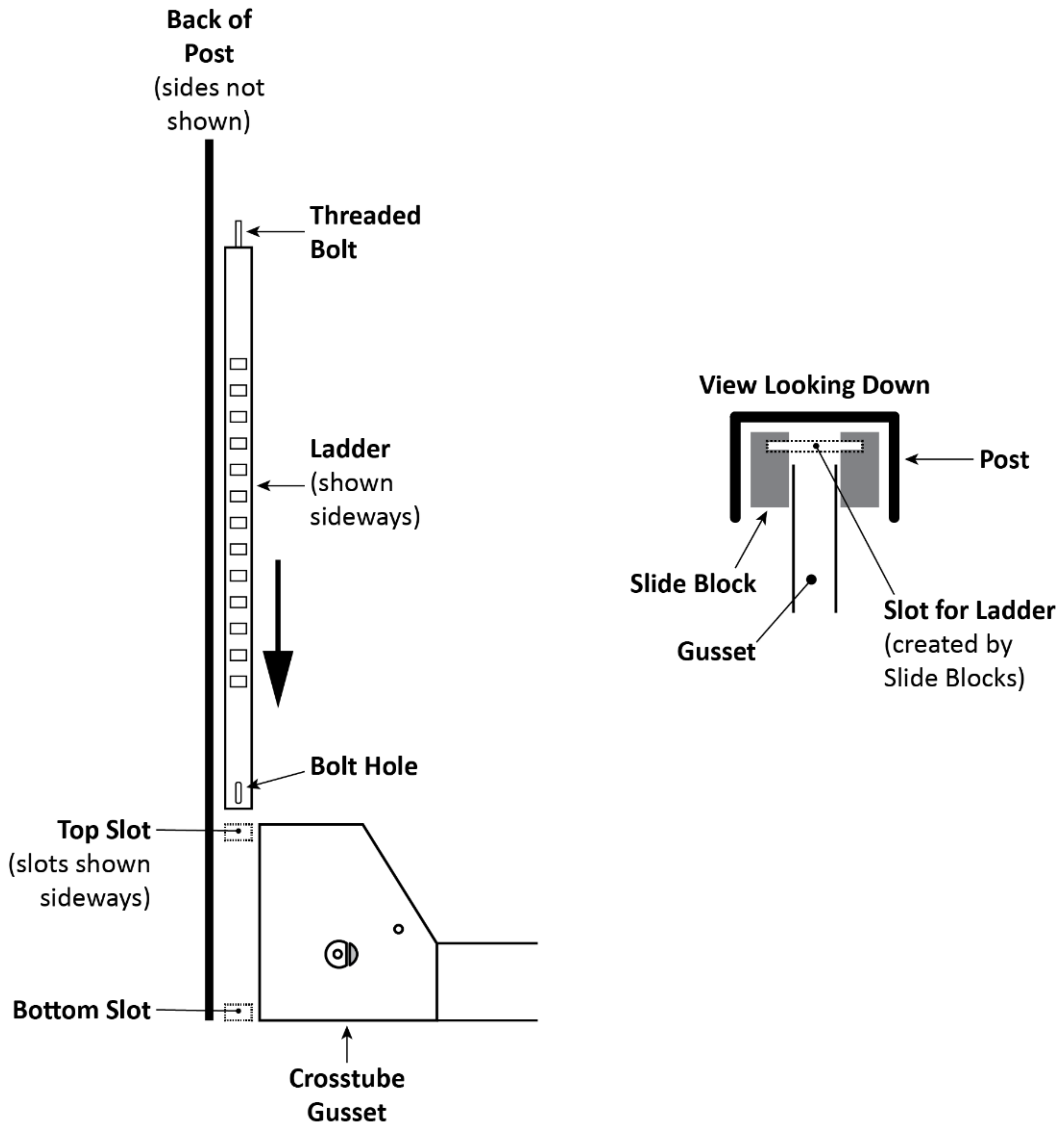
It is ***not*** necessary to slide the Ladders in from the very top of the Post.

The Top Caps secure the Ladder at the top of each Post and hold the ends of the Lifting Cables.

Make sure to install each Ladder through ***both slots*** on each Crosstube Gusset.

Note: It is much easier to secure the bottom of the Ladders once the Crosstubes have been raised, so that portion of installing the Ladders is described in **Securing the Ladders**.

⚠ **WARNING** Make sure to install the Ladders correctly. If they are not installed correctly, the Safety Locks on the Lift may not hold the weight of a Vehicle, putting anyone under the Lift in danger.



Top and Side view. Not necessarily to scale. Not all components shown.

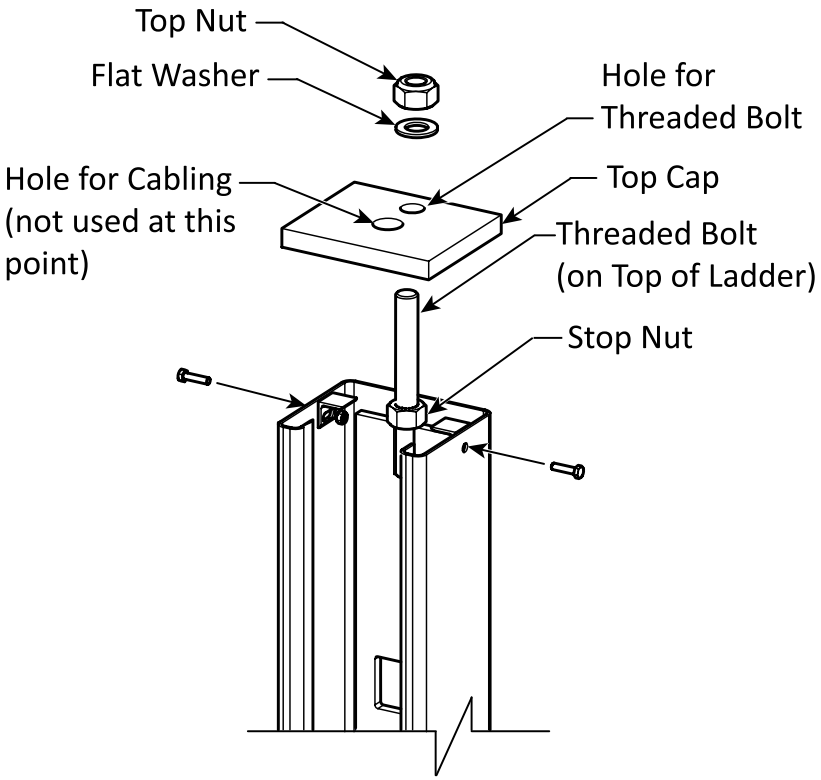
To install the Ladders and the Top Caps:

1. Take a Ladder and slide it down the back of the Post, with the Bolt Hole end at the bottom.

   Make sure the Ladder goes through both Slots on each Gusset. There is a Slot at the top of the Gusset and another Slot at the bottom of the Gusset, both formed by the Slide Blocks.

⚠ **WARNING** It is easy to see the top Slot created by the Slide Blocks. It is difficult to see the bottom Slot, but it is ***required*** that the Ladder goes through *both* Slots. If the Ladder misses a Slot or the Slide Blocks are not installed correctly, the Safety Locks will ***not*** function correctly.

2. Install the remaining Ladders the same way.
3. ***At the top of the Ladders***, put the Stop Nut on the Threaded Bolt at the top, then move the Stop Nut down 1/2 in. (12.7 mm) from the top of the Post.



4. Put the Top Cap onto the top of the Post. First, put the Threaded Bolt at the top of the Ladder through the appropriate hole, then put the tabs on the side of the Top Cap inside of the Post. Finally, secure the Top Cap on both sides with one Hex Head Bolt and one Nyloc Nut per side.
5. Once the Top Cap is secure, move the Stop Nut up until it contacts the underside of the Top Cap, then add a Flat Washer and Nyloc Nut to the top of the Top Cap and tighten it. Only hand tighten at this point.

   You are looking for about 1 in. (25.4 mm) of thread above the top of the Top Nut.

   Note: The other hole in the middle of the Top Cap is for the Lifting Cable, installed later.

6. Install the remaining Top Caps the same way.

Raise the Crosstubes

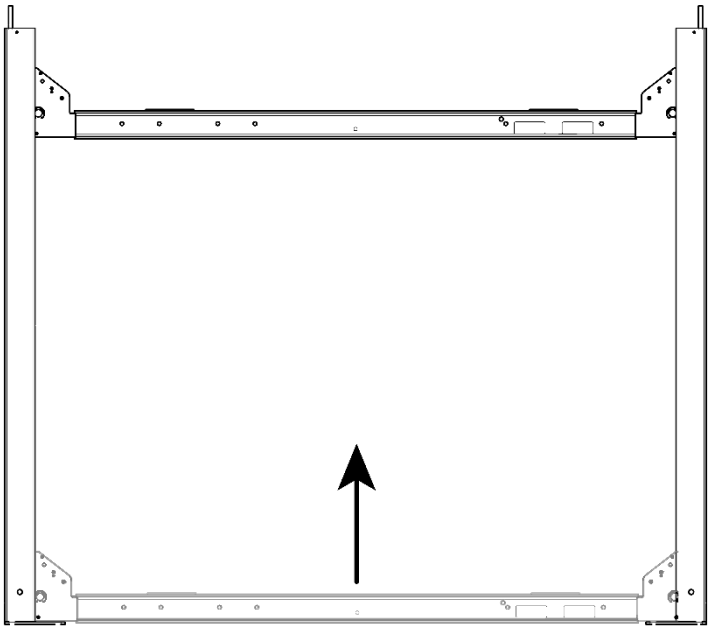
Do not stand up the Posts yet; some of the following procedures are easier and safer to complete if the Posts are lying on the ground or positioned to safely lean against sawhorses.

The next step is to manually move up the Crosstubes, which will make it easier to complete the rest of the installation. The Crosstubes need to be moved up to the same height, to the same Safety Lock.

To position the Crosstubes:

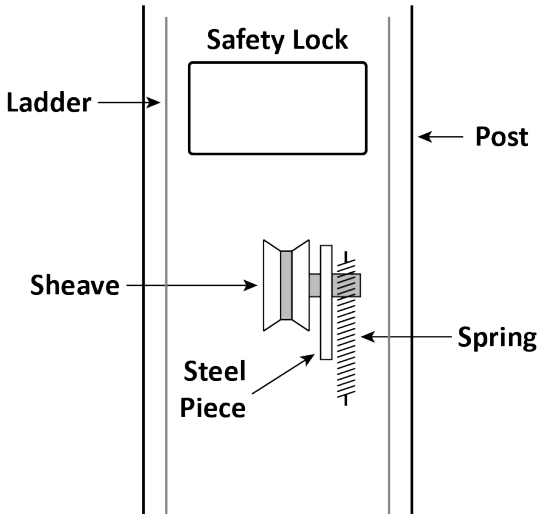
1. Use a suitable lifting device such as a Forklift or Shop Crane to carefully move each Crosstube.

   With a **suitable lifting** device safely and properly attached, **and at least two capable assistants**, position both Crosstubes at the top lock or close to it, allowing enough room to work, as this will make it easier to route the Lifting Cables and Lines.



Important: ***The Slack Safeties cannot be engaged as you continue with the installation***. Because the Cables are not in place yet, the Slack Safeties are going to engage when you manually raise the Crosstubes. You need to disengage them to lower the Crosstube. The Primary Safeties are not impacted; they will engage normally when you manually raise each Crosstube.

2. To disengage the Slack Safeties after raising a Crosstube: raise and hold one end of a Crosstube so the Primary and Slack Safety Locks are disengaged, push, and hold the Sheave or the Steel Arm in towards the Ladder and the back of the Post (this moves the Slack Safety Lock so it cannot to engage), lower the end of the Crosstube, then release the Sheave or Steel Arm.
3. Disengage the other three Slack Safety Locks as done in Step 2.



4. Once both Crosstubes are in position, ***all four Primary Safeties are engaged***, and all four Slack Safeties have been **disengaged**, the installation can continue.

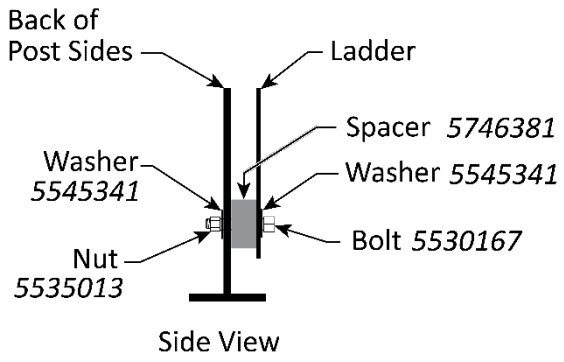
Secure the Ladders

Because it is much easier to secure the Ladders at the bottom of each Post ***after*** the Crosstubes have been raised, that procedure is described here.

The following procedure assumes that the Ladders are in place and secured at the top. If this is ***not*** the case, return to **Installing the Ladders and Top Cap**.

To secure the Ladders:

1. Locate the Bolt, Washer, Spacer, second Washer, and Nut for each Ladder.



Side view of the Post. Not all components shown.

2. Put a Washer next to the Bolt head, then insert the Bolt just through the elongated hole near the bottom of the Ladder.
3. Put the Spacer into position between the Ladder and the back of the Post, then push the Bolt through the Spacer and through the back of the Post.
4. Take the second Washer and the Nut and install them on the end of the Bolt and secure the Nut.
5. Repeat Steps 1 through 5 for the three remaining Ladders.

Note: Do not securely tighten the Top Nut at the top of the Top Cap at this point. The Top Nut and the Stop Nut will be used later to make sure the Lift is level. They can be securely tightened after the final leveling. Refer to **Final Leveling** for additional information.

6. Make sure the Primary Safety Locks are engaged.

⚠ **WARNING** Do not continue with the installation until you have visually confirmed that all four Primary Safety Locks are engaged. If they are not engaged, the runways could move or fall, possibly causing injury (even death) or product damage.

7. Stand up the Posts with Crosstubes in place. **Two people are recommended.**

⚠ **CAUTION** Use extreme caution when working on the Posts as they are not anchored down at this point and it is possible to knock them over, causing damage, severe injury, or loss of life. Only those actively working on the lift should be in the area. No children or pets.

8. Use a Transit Level to estimate the Shim requirements. Use a target to find the differences in height between the Posts. The differences become the estimated Shim thickness.

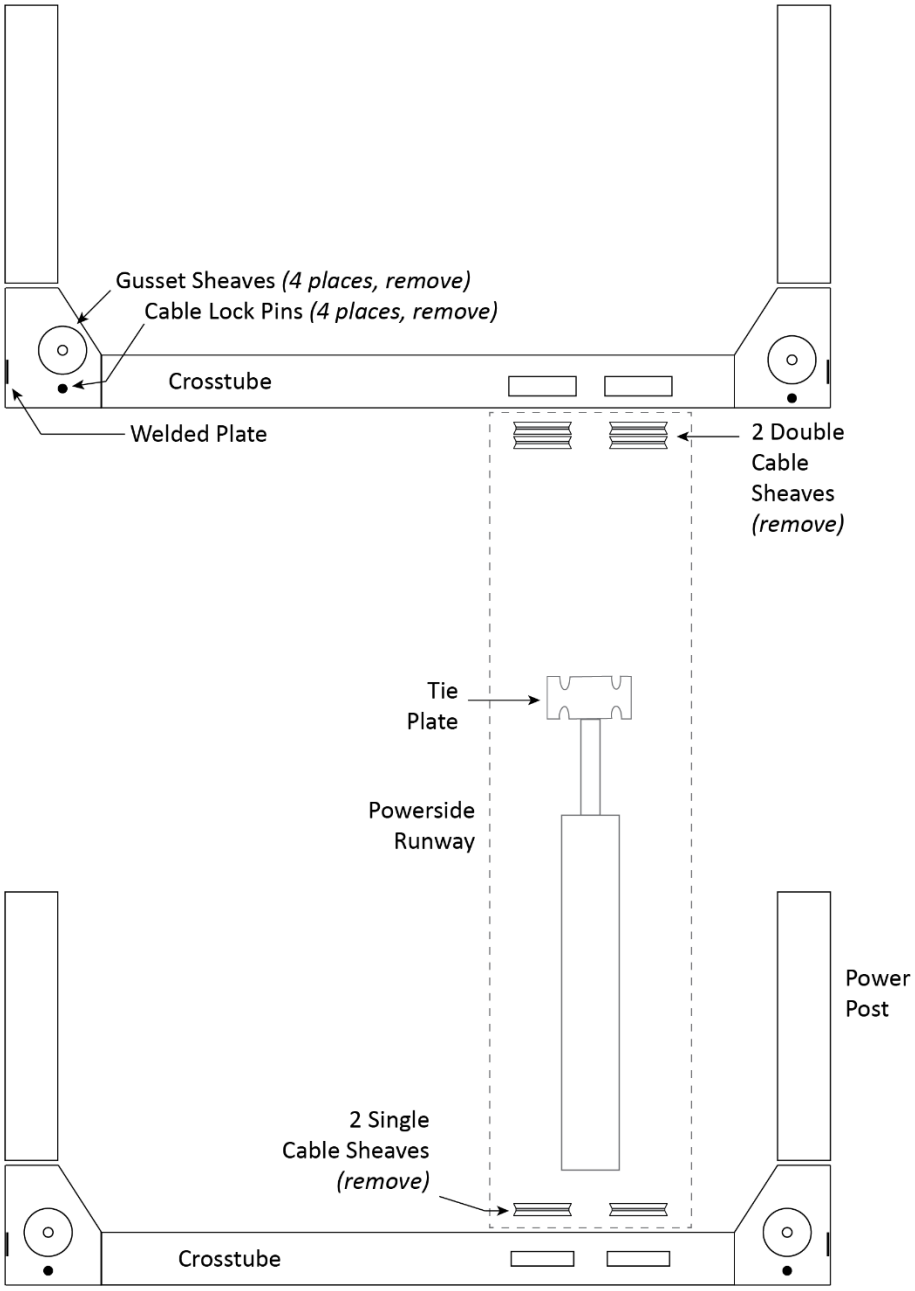
Do not use Shims and/or Anchor Bolts to shim more than 1/2 in. (12.7 mm).

Do not anchor the Posts at this point. You may or may not be anchoring the Posts at all, depending on whether you are going to use the optional Caster Kit or not. If your plans include anchoring the Posts *eventually*, do not anchor the Posts now.

Remove the Sheaves

In order to route the Lifting Cables, remove the Cable Sheaves on the underside of the power side runway, the four Gusset Sheaves and their Lock Pins.

When removing the Sheaves, ***keep the components together***. They will be reinstalled later.



Drawing combines Top and Side views. Not necessarily to scale. Not all components shown.

Install the Runways

Your Lift has two runways:

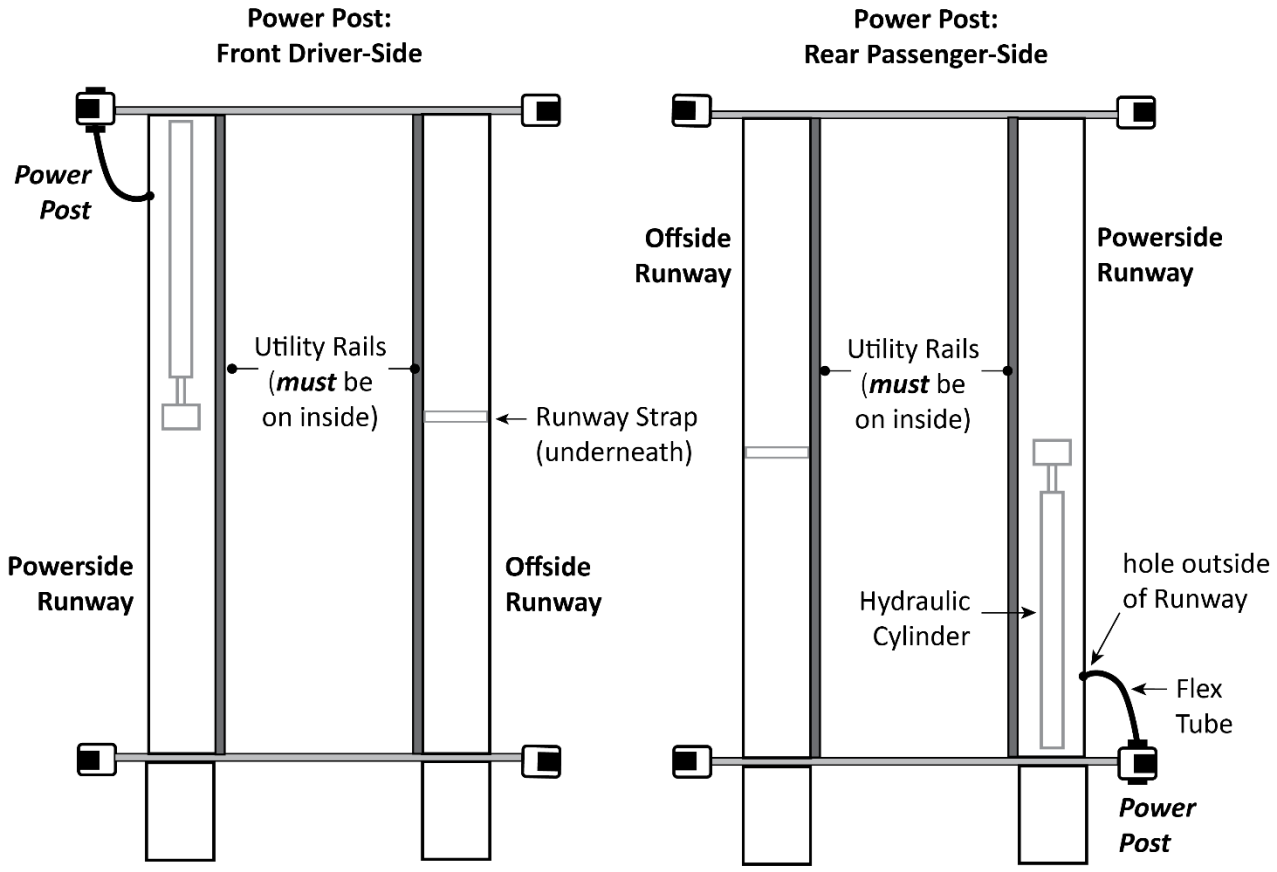
- **Power Side Runway**: Holds the Hydraulic Cylinder underneath it. It has a hole in the outside rear that allows the routing of the Hydraulic Hose, Air Lines, and Return Line to the Power Unit. Cable routing starts under the power side runway.
- **Offside Runway**: The offside runway does not have a Hydraulic Cylinder under it, nor are there any Lifting Cables under it. It can be installed in the wide or narrow setting; ***the adjustable setting does not apply to the HD-9ST or HD-9STX models***.

Orient the two runways as follows:

- The Utility Rails must be positioned on the inside.
- Locate the power side runway by looking under the two runways (only the power side runway has a Hydraulic Cylinder underneath it) and position it next to the Power Post.

There is also an appx.1.5 in. (38 mm) wide hole in the side of the power side runway at the Power Post for the Flex Tube (which holds the Air, Return, and Hydraulic Hose).

The following drawing shows the correct orientation of the runways for both Power Post locations.



Top View. Not drawn to scale. Not all components shown.

Use a Forklift or Shop Crane to raise the runways and move them into position.

⚠ WARNING Pay close attention when moving the runways into position as they are very heavy and long, and could shift position or fall, potentially causing serious injury.

To install the runways:

1. Correctly orient the power side runway and the offside runway.

   The power side runway must be installed next to the Power Post.

2. On the underside of the power side runway, verify the Sheaves have been removed.
3. Use a Forklift or Shop Crane with two capable assistants to pick up the power side runway and move it into position.

   Make sure the Utility Rail is on the inside.

4. Bolt the power side runway into place. There are two Bolts on each end that go into each Crosstube.

   Use four M12 by 1.75 by 90 Hex Head Bolts.

5. Use a Forklift or Shop Crane to pick up the offside runway and move it into position.
6. Bolt the offside runway into place. The two Bolts on each end go into the Crosstubes.

   Make sure the Utility Rail is on the inside.

Important: The offside runway ***must*** be bolted on both ends when using the optional Rolling Jack.

7. Make sure that the Primary Locks are engaged.

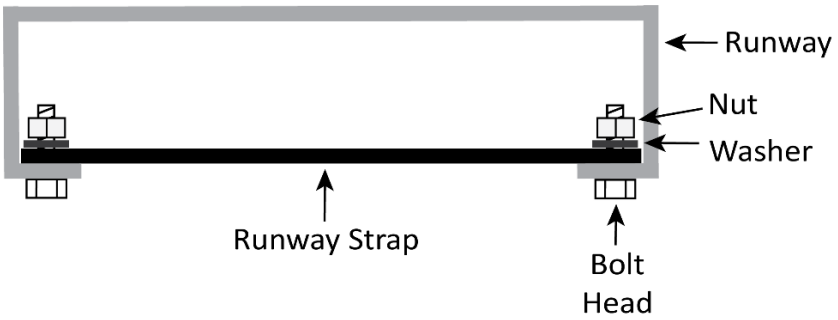
⚠ WARNING Do not continue with the installation until you have visually confirmed that all four Safety Locks are engaged. If they are not engaged, the runways could move or fall, possibly causing personal injury, loss of life, or product damage.

8. Locate the runway Strap from the Parts Box.

   The runway Strap is approximately 19 in. (483 mm) long and 2 in. (51 mm) wide, with a hole on either end of the Strap.

9. Align the runway Strap with the holes underneath the offside runway, and then secure it in place with a M12 x 25 mm Bolt, M12 Washer, and M12 Nut.

   The following drawing shows how to install the runway Strap.



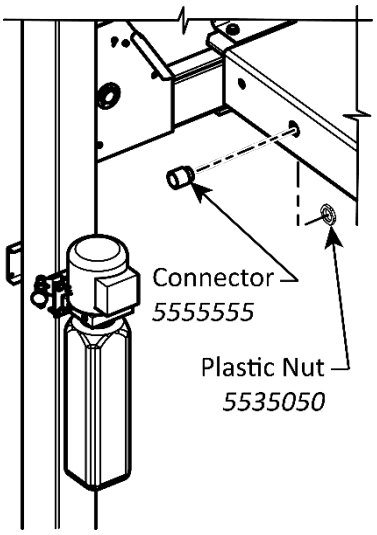
Runway Strap goes inside runway Rails. Not drawn to scale. Not all components shown.

Four-Post Lift Flex Tube Kit

The following provides installation guidance for the Flex Tube Kit (5216139) on HD-9 Series four-post Lifts. The Flex Tube is designed to route and protect Hydraulic, Pneumatic and in some cases Electrical lines from becoming entrapped and damaged under a Lift Platform.

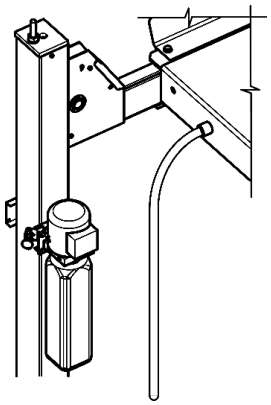
Installing the Flex Tube Kit

The Flex Tube Kit consists of a 78.7 in. (2 m) Flexible Tube (5570053), two Connectors (5555555) and two Plastic Nuts (5535050).



To install the Flex Tube Kit:

1. Use a Forklift or Shop Crane to raise the runways to the Top Lock as described in the Installation Manual.
2. Install one Connector on the power side Platform opening near the Power Unit and secure. Refer to the figure on the right.
3. Install one end of the Flex Tube into the connector. Refer to the figure below/right.
4. Note the recommended length of the Flex Tube for your Lift in the **Flex Hose Length Table**; below.
5. Cut to provide an appropriate "service-loop" with the flex tube. Then measure twice, mark, then cut the Flex Tube to the correct length indicated ±25mm (±1 in.). The free end of Flex Tube should hang in place for now.



Note: The ideal Flex Tube length has a moderate service loop to keep the lines away from the moving platform.

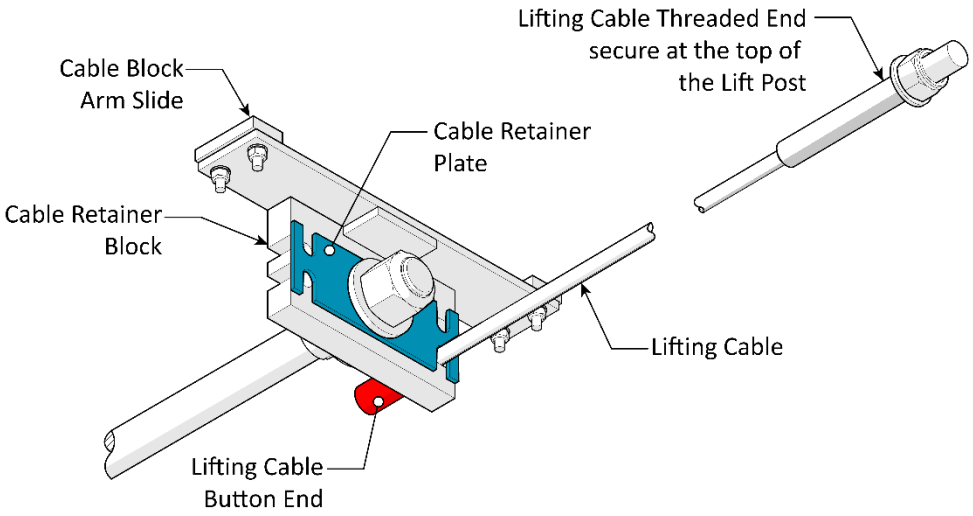
Flex Hose Length Table

Models	mm	in.
HD-9ST	2,438 mm	96 in.
HD-9STX	2,026 mm	79.75 in.
HD-9	1,320 mm	52 in.
HD-9XL	1,320 mm	52 in.
HD-9XW	1,320 mm	52 in.
HD-9EWT	1,320 mm	52 in.

Route the Lifting Cables

Before routing the Lifting Cables, the following is required:

- BendPak strongly recommends using protective gloves when working with the Lifting Cables.
- Each Lift has four lifting cables of varying lengths and each must be routed correctly.
- All lifting cables have a button end and a threaded end. The threaded end has a label on it that identifies the lift model the cable is designed for, the part number, and its length (in millimeters).



- The button end of each lifting cable connects at the cable retainer block on the underside of the power side runway. The button ends of each lifting cable remain on one side of the cable retainer block (as shown above), while the rest of the cable routes through the cable retainer block and the retainer plate on its way toward the appropriate sheaves and then to the lfit post to which it terminates.
- The threaded end of each lifting cable is routed around the appropriate sheaves and then to the top cap of the correct lift post, where it is secured.
- Before routing each lifting cable, remove the nut from the threaded end, as the cable cannot be routed around the sheaves with the Nut in place.
- The Lift is delivered with a retainer plate on one side of the cable retainer block. The retainer plate locks the cable button ends in the cable retainer block. ***Do not remove the cable retainer plate to install the lifting cables***. Instead, loosen it so that the button end of the cable may be slipped into its correct slot. When all four lifting cables are installed, tighten the nut to secure the retainer plate and the cables in position.
- There are two kinds of Sheaves: *Cable Sheaves* and *Gusset Sheaves*. There are four Cable Sheaves (two Double Cable Sheaves) in the Crosstube with Large Windows and two Single Cable Sheaves in the Crosstube with Small Windows, for a total of six Cable Sheaves. There are four Gusset Sheaves, one per Crosstube Gusset.
- The Lift is delivered with all Sheaves come installed. They should have been removed earlier in the installation prior to installing the runways.
- A Lifting Cable and its corresponding Cable Sheave (or Sheaves) are put into place one at a time, starting from the top of the Post to the Cable Retainer Block.
- The Crosstube with Large Windows has two Double Cable Sheaves (also called twin Cable Sheaves), so the two Lifting Cables that share a Double Cable Sheave are routed around the same time; for example, Lifting Cables A and C are routed around the same time because they share a Double Cable Sheave, and same for Cables B and D.

- Each Crosstube Gusset has a Cable Lock Pin underneath the Gusset Sheave. Each Cable Lock Pin needs to be removed when routing the Cable to its Post and then reinstalled once the Cable is in place.
- The Cable Lock Pin prevents the Cable from coming out later, as there is not enough space between the bottom of the Gusset Sheave and the Cable Lock Pin for the Cable to slip out.
- In the following tables for each Lift, cables are listed A, B, C, or D. These letters are ***not*** on the label on the Threaded end. Simply match the respective Cable letter with the length.

HD-9ST			HD-9STX		
Cable	**Description**	**Part Number**	**Cable**	**Description**	**Part Number**
A	Ø10 x 2,926 mm	5595900	**A**	Ø10 x 3,240 mm	5595902
B	Ø10 x 4,356 mm	5595905	**B**	Ø10 x 4,663 mm	5595908
C	Ø10 x 7,048 mm	5595910	**C**	Ø10 x 7,978 mm	5595912
D	Ø10 x 8,476 mm	5595915	**D**	Ø10 x 9,404 mm	5595918

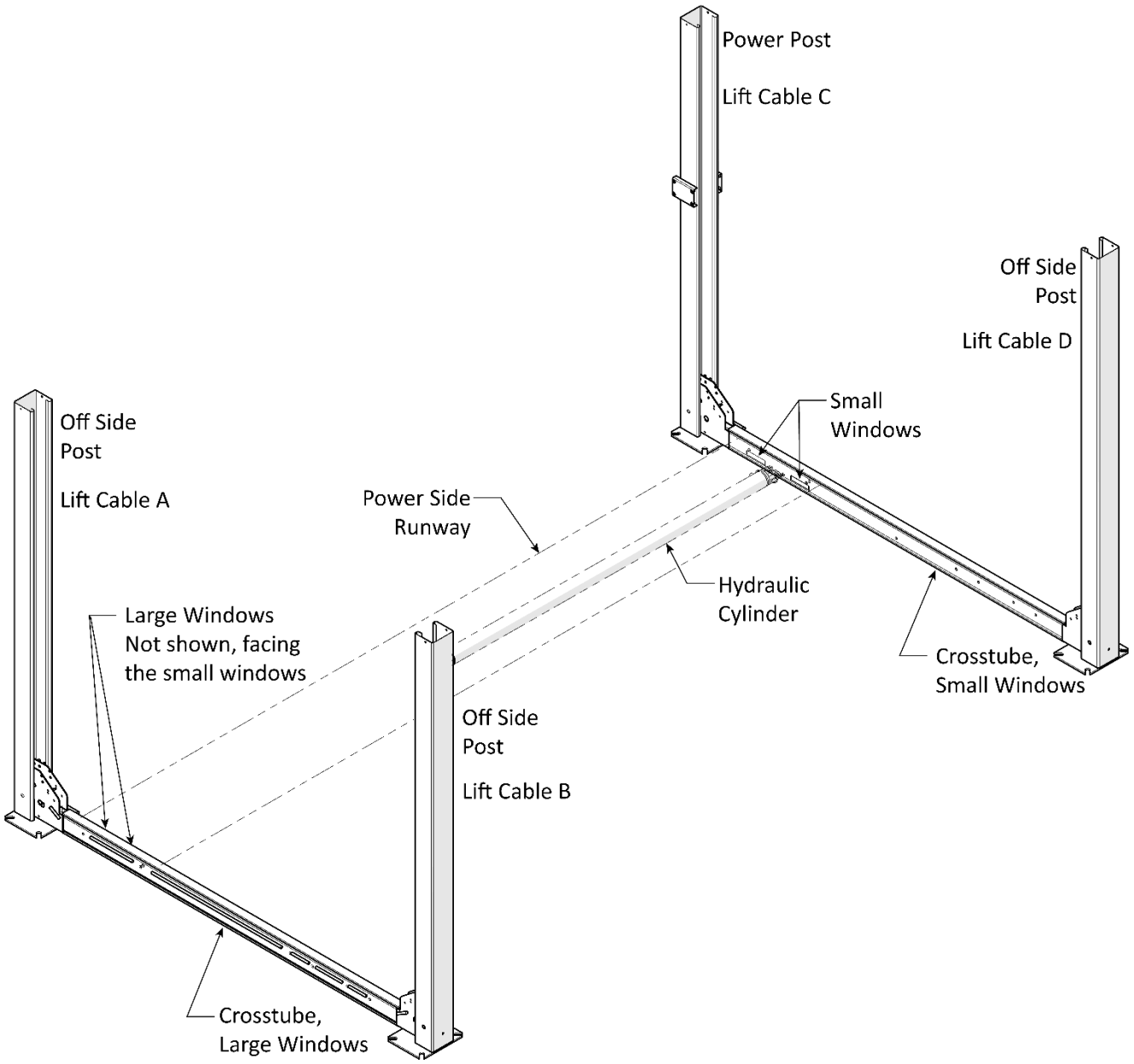
HD-9			HD-9XL		
Cable	**Description**	**Part Number**	**Cable**	**Description**	**Part Number**
A	Ø10 x 2,958 mm	5595474	**A**	Ø10 x 3,582 mm	5595471
B	Ø10 x 4,578 mm	5595906	**B**	Ø10 x 5,195 mm	5595397
C	Ø10 x 7,094 mm	5595457	**C**	Ø10 x 8,332 mm	5595472
D	Ø10 x 8,706 mm	5595916	**D**	Ø10 x 9,932 mm	5595399

HD-9XW			HD-9EWT		
Cable	**Description**	**Part Number**	**Cable**	**Description**	**Part Number**
A	Ø10 x 3,263 mm	5595478	**A**	Ø10 x 3,313 mm	5595421
B	Ø10 x 4,883 mm	5595909	**B**	Ø10 x 5,005 mm	5595766
C	Ø10 x 8,007 mm	5595479	**C**	Ø10 x 8,054 mm	5595423
D	Ø10 x 9,613 mm	5595919	**D**	Ø10 x 9,735 mm	5595767

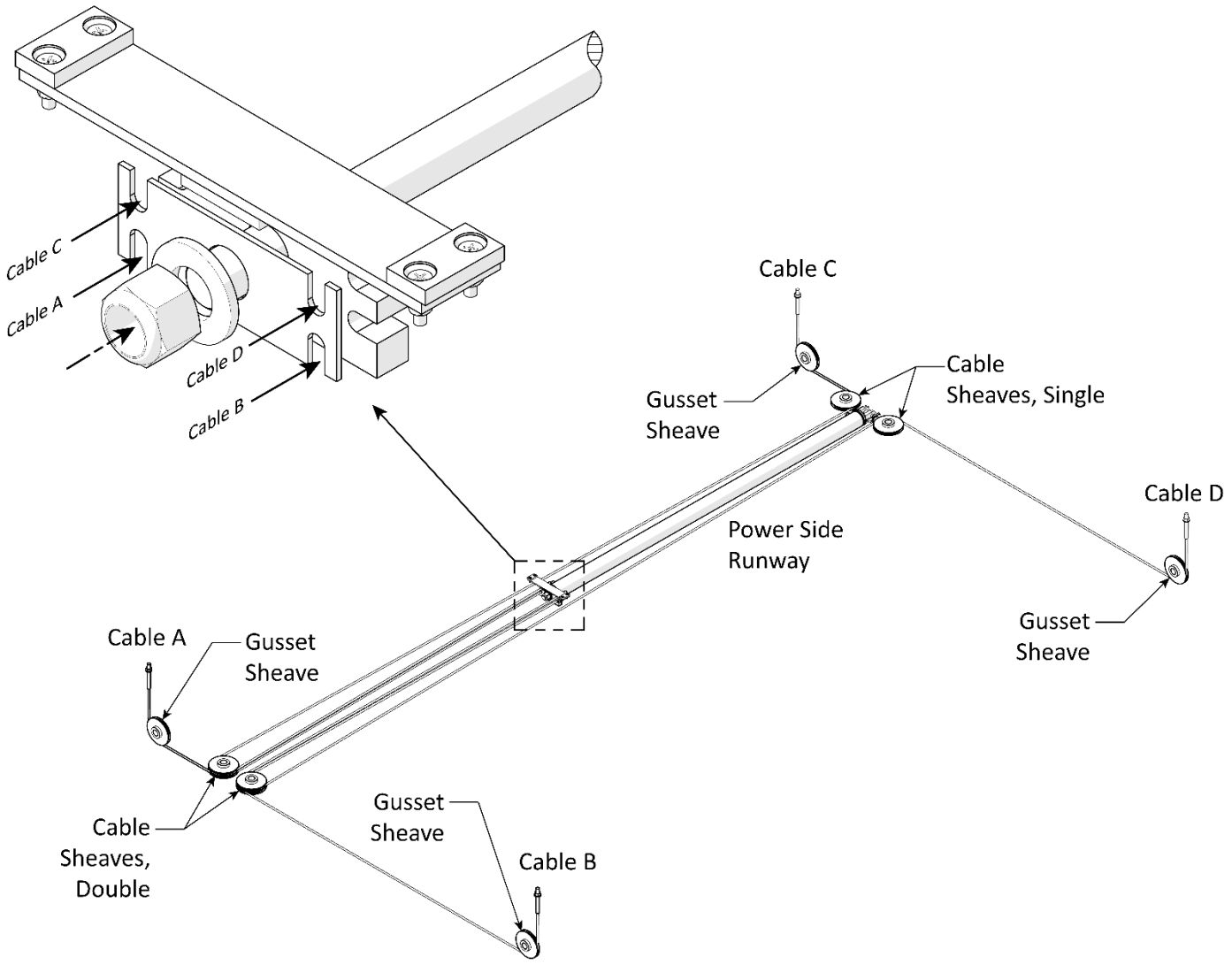
Important: Make sure to use the correct Lifting Cable for each routing. If a Cable is installed in the wrong place, it will be too short or too long. Remember that the length of each Cable is printed on the label on the threaded end.

See the figures and instructions on the following pages for cable routing information.

The following figure displays the lift posts, crosstubes and the power side runway orientation.



Cable Routing Diagram, Cable Routing instructions



Before routing the Cables, extend the Piston on the Hydraulic Cylinder.

To extend the Piston:

1. Remove the Shipping Plug from the Return Line Connector, which is located on the Cylinder end closest to the Power Unit.
2. Attach an air pressure source to the Return Line Connector.
3. Use the air pressure to extend the Hydraulic Cylinder's Piston and Retaining Plate.

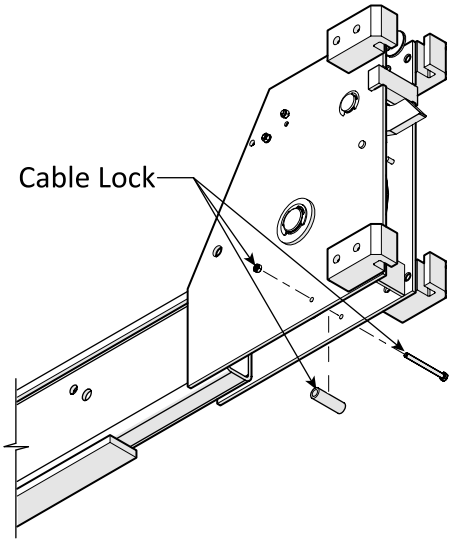
   Do not exceed 50 psi.

   If the Cylinder does not move, stop using air pressure. Instead, use a pulling device (such as a Come Along Tool) to extend the Piston and Retaining Plate, being careful not to damage the Piston.
4. Reinstall the Shipping Plug to the Return Line Connector.

The following procedure assumes you have nearby the four Lifting Cables and Sheaves you removed prior to installing the runways.

To route Lifting Cables A and C:

1. ***Starting with Lifting Cable A***, move the assembly to just under the Large Window it is to route through, near the bottom of Post A.



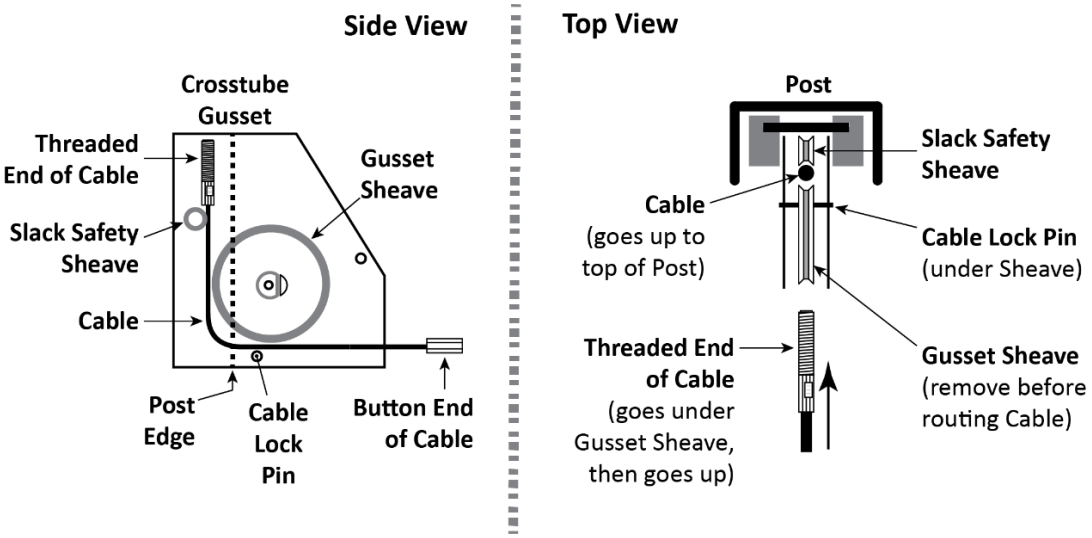
Check the label to verify the correct lifting cable.

2. Remove the nut and washer from the threaded end. Keep it nearby as you will need it soon.

3. Route the threaded end of lifting cable A into its large window on the crosstube, push it towards post A, and then pull the threaded end out of the crosstube at the bottom of the gusset.

4. Route the threaded end of lifting cable A under where the gusset sheave will be when it is reinstalled, then route it up past the top of the crosstube gusset.

The following drawing shows how to route the lifting cable through the gusset.



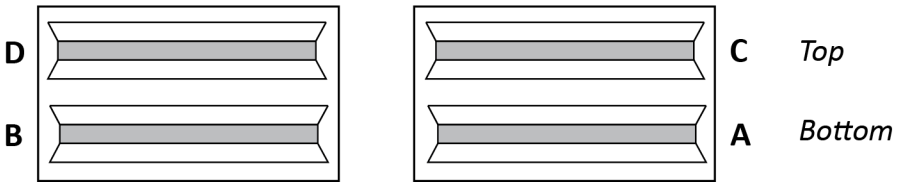
Important: When routing a Lifting Cable in its Post, the Cable must run ***under*** the Gusset Sheave and be on the side of the Slack Safety Sheave. When the Cables are pulled tight, the Cable prevents the Slack Safety from engaging, which is what is required. If the Cable is ***not in this exact location***, the Slack Safeties will ***not*** work correctly.

5. With the lifting cable in place, reinstall the gusset sheave and the cable lock pin in post A.
6. Make sure lifting cable A is correctly positioned in between the gusset sheave and the slack safety sheave, with the cable lock pin ***under*** it.
7. Push the threaded end of lifting cable A up to and through the top cap (at the top of the post) and ***hand tighten*** it in place with the nut and washer removed earlier.

   Only hand tighten the nut at this point so that there is little play in the cabling. All four nuts will be securely tightened later in the installation procedure.

8. ***For Lifting Cable C***, repeat Steps 1 through 7, starting at the small window near the bottom of post C (the power post).
9. Reinstall a single cable sheave and then ensure lifting cable C is correctly positioned in the cable sheave in the small window.
10. Under the power side runway, move the rest of lifting cable C back towards the crosstube with the large windows.
11. Reinstall the double cable sheave in the large window and power side runway, making sure lifting cable A is seated in the bottom sheave and lifting cable C is seated in the top sheave, as shown below.

    The figure below details the cable/cable sheave pairs in the Crosstube with large windows.



Front view. double cable sheaves separated for easier understanding. Not all components are shown. Not to scale.

12. On the cable retaining block, loosen the retainer plate enough to allow the Button End of each Cable to slip into place on the cable retainer block.

    Do not remove the retaining plate! Loosen the retaining plate until there is room to slip the button end of each lifting cable into place.
13. Pull the button ends of lifting cables A and C back towards the middle of the runway, past the retaining plate, and into their individual slots on the cable retainer block.

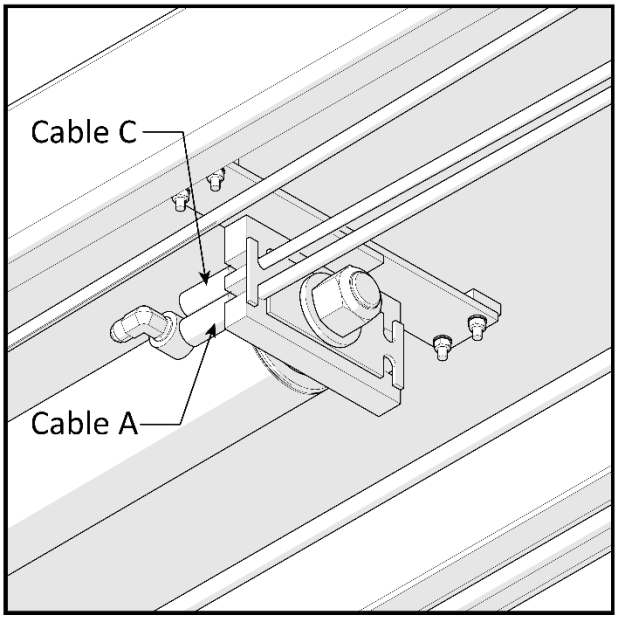


Figure above details the cable retainer block with cables A and C button ends installed.

Routing lifting cables B and D follows the same process as routing lifting cables A and C, using the remaining two lift posts and using a different set of Sheaves. Refer to the figures in the previous section.

To route Lifting Cables B and D:

1. ***Lifting Cable B***. Move the assembly under the large window it is to route through, next to cables A and C (already in place).

   Check the cable label to verify the correct lifting cable.

2. Remove the nut and washer from the threaded end but keep it nearby.
3. Route the threaded end of lifting cable B into its large window, push it towards post B, and then pull the threaded end out of the crosstube at the bottom of the gusset.
4. Route the threaded end of lifting cable B just under where the gusset sheave will be positioned when it is reinstalled, then route it up past the top of the crosstube gusset.

Important: When routing a lifting cable in its post, the cable ***must*** travel ***under*** the gusset sheave and to the side of the slack safety sheave. When the lifting cables are pulled tight, the lifting cable prevents the slack safety from engaging the safety ladder. If the cable is ***not in this exact location***, the slack safeties will ***not*** function correctly.

5. With the lifting cable in place, reinstall the gusset sheave and cable lock pin in post B.
6. Make sure the lifting cable is correctly positioned in between the gusset sheave and the slack safety sheave, with a cable lock pin ***under*** it.
7. Push the threaded end of lifting cable B up to and through the top cap (at the top of the Post) and ***hand tighten*** it in place with the nut and washer that was removed earlier.

   Only hand tighten the nut at this point, so that there is a little play in the cabling. All four cable nuts will be securely tightened later in the installation.

8. ***Lifting Cable D***. Repeat steps 1 through 7 for lifting Cable D, starting at the other small window next to lifting cable C.
9. Reinstall the other single cable sheave ensuring lifting cable D is correctly positioned in the cable sheave in the small window.
10. Under the power side runway, move the rest of lifting cable D back towards the crosstube with large windows.
11. Reinstall the other double cable sheave in the large window, making sure lifting cable B is seated in the bottom sheave and lifting cable D is seated in the top sheave.
12. Pull the button ends of cable B and D back towards the middle of the runway, past the retaining plate, and into their individual slots on the cable retainer block.

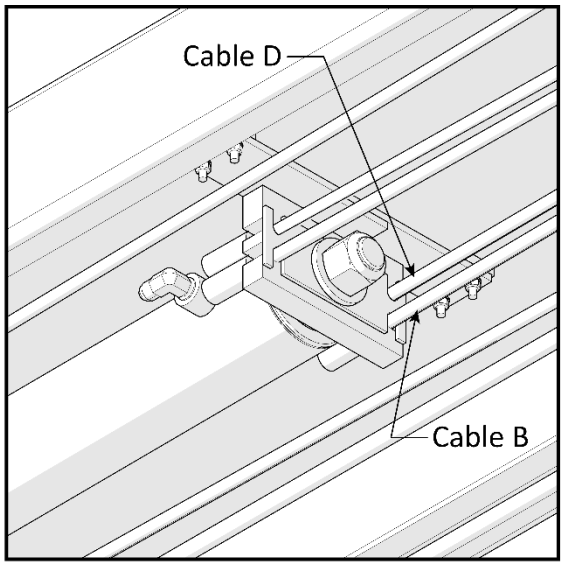


Figure above details the cable retainer block with cables B and D button ends installed.

Working with Compression Fittings and Tubing

Your Lift comes with a roll of 1/4 in. (12.7 mm) black polyethylene tubing (also called Poly-Flo® Tubing). This tubing is used with Compression Fittings in two ways: for the Return Line and for the Air Lines.

Important: While both lines use Tubing and Compression Fittings, the Return Line and Air Lines are used for completely separate purposes; DO NOT connect the two together.

Note: Compression Fittings are different from Hydraulic Fittings. This section covers Compression Fittings only.

The components involved with Compression Fittings include:

- **1/4 in. (12.7 mm) black polyethylene tubing**. Use a single section of Tubing for the Return Line. The Air Lines require multiple tubing sections. Create the tubing section for both the Return Line and the Air Lines by cutting lengths from the roll of tubing supplied with your Lift.
- **Elbow Compression Fittings**. The Hydraulic Cylinder uses an Elbow Compression Fitting, while a separate one goes on the Power Unit.
- **Tee Compression Fittings**. The Air Lines requires three Tee Compression Fittings.
- **Nuts, Ferrules, Rods, and Threads**. Each connector on the Elbow and Tee Compression Fittings have a Nut, Ferrule, Rod, and Threads (see drawing below). The Nut holds the tubing and fitting together. The Ferrule compresses when you tighten the Nut on the Threads to make a secure connection. The Rod goes inside the Tubing to prevent leakage.

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

Important: ***Ferrules can only be tightened once***. When you tighten the Nut on the Threads, the Ferrule becomes compressed, forming a unique shape and ***should not*** be used again.

To connect Tubing to a Compression Fitting:

1. Push the Tubing through the Nut and over the Rod.

   Do not push hard, as the Tubing only needs to be over the Rod. The Ferrule is not visible at this point, but the Tubing must travel through the Ferrule and over the Rod.

2. Slide the Nut on the Tubing ***away from the Fitting***. If the Nut is still on the Threads, unscrew it from the Threads and slide it away from the Fitting. See the drawing above.
3. Slide the Ferrule over the Tubing, away from the Fitting and towards the Nut.
4. With the Nut and the Ferrule out of the way, push the Tubing farther over the Rod until it stops.
5. Slide the Ferrule and the Nut back to the Threads on the Fitting.

   The Ferrule goes around the Rod and under the Threads. The Nut goes onto the Threads.

6. Tighten the Nut. Remember that the Ferrule should only be tightened once.

Install the Air Lines

An air supply (50 to 150 psi at 3 to 25 cfm) is required to disengage the safety locks.

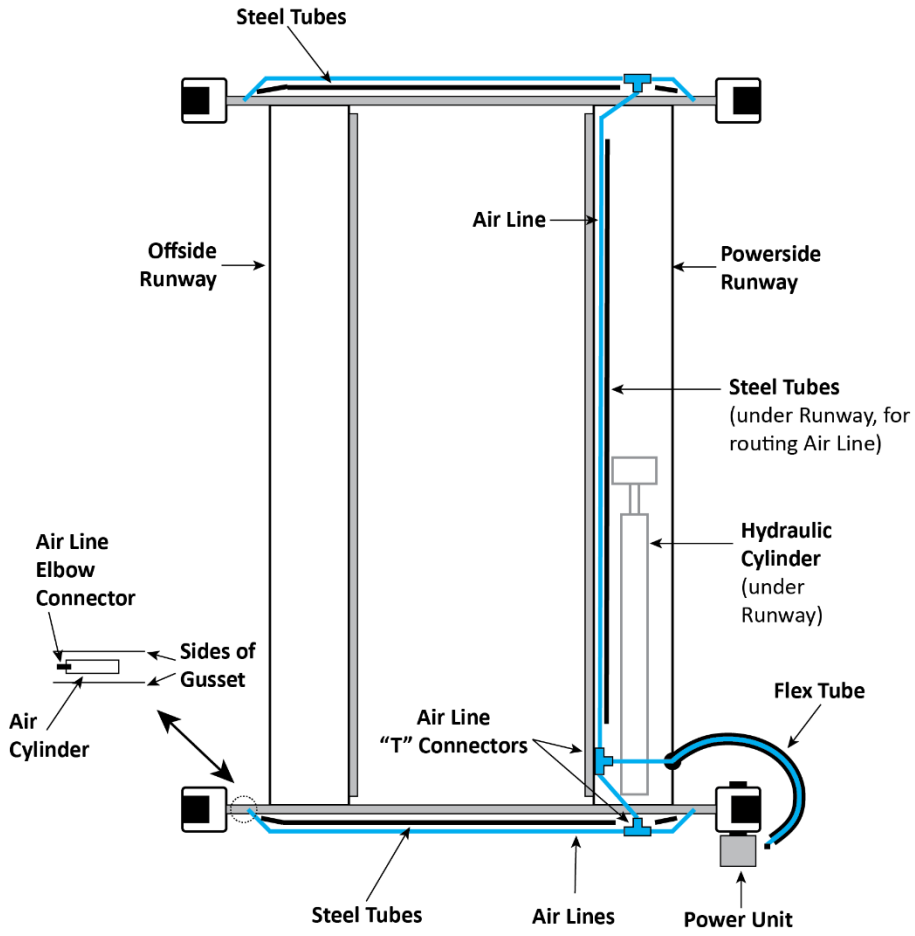
The air lines route compressed air to disengage each safety lock allowing the runways to be lowered. The 1/4 in. (6.35 mm) black polyethylene tubing and three air line tee compression fittings are required to install the Air Lines.

⚠ **CAUTION** ***Do not allow the Air Supply to exceed 150 psi***. Pressure this high could rupture the air lines or the Safety Locks may malfunction.

The GoAiR by BendPak provides a cost effective compressed air solution in a compact form factor. The GoAiR Mounts directly onto the lift post. Contact BendPak at **BendPak.com**.

Important: Do not confuse the air lines with the return line. They use the same tubing and similar-looking connectors, but they are used for completely different purposes and the two systems cannot be connected to each other.

The Air Line Elbow compression fittings on the Crosstube Gussets are installed at the factory.



Air Lines shown outside Steel Tubes for clarity. Drawing not to scale. Some components not shown.

To install the Air Lines:

1. Retrieve the supplied 1/4 in. (6.35 mm) black polyethylene tubing and three air line compression Tees.
2. Measure the distances for each of the seven (7) Tubing sections required (see the figure on the previous page) for the Air Lines.
3. Cut seven sections of polyethylene Tubing to the measured lengths.
4. Connect the various sections of Tubing to the Air Line Tee Connectors on the Lift, as shown in the drawing on the previous page, for the locations of the Tubing sections.

   Make sure to position the three Air Line Tee Connectors as shown in the drawing.

   Also, route the long Tubing section (that routes under the power side runway) through the Steel Tubes. They keep the Air Lines out of the way of where the Cables will be routed.

⚠ **WARNING** Make sure to route the tubing sections on the ***outside*** face of the front and rear Crosstubes, through the steel tubes welded to those outside crosstube faces. This keeps the tubing and the tee Connectors from being damaged as the Lift is being used. If the Air Lines are damaged, the Safety Locks on the Lift may not function correctly. If any of the Tubing has become disconnected from an Air Line Tee Connector, take the Lift out of service, and have the Air Lines checked for damage then repaired before use.

Refer to **Working with Compression Fittings and Tubing** for more information about connecting the Tubing to the Air Line Tee Connectors.

5. Leave the Power Unit end of the Air Line hanging out of the Flex Tube opening for now. It will be connected to a Tee Fitting and the Pushbutton Air Valve later.

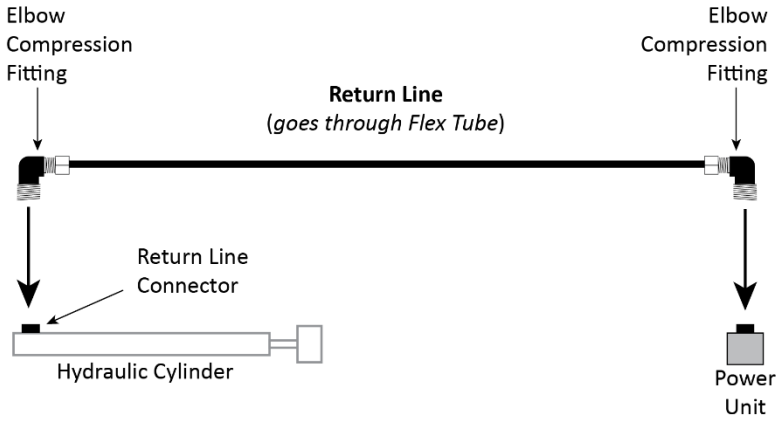
Install the Return Line

The Return Line routes excess Hydraulic Fluid from the Hydraulic Cylinder to send it back into the Fluid Reservoir on the Power Unit.

The Return Line is a single section of 1/4 in. (6.35 mm) black polyethylene tubing with Elbow Compression Fittings on each end. Cut off a section of the supplied Tubing of the right length to create the Return Line.

Important: The Return Line uses the same 1/4 in. (6.35 mm) black polyethylene tubing as the Air Lines. Be sure not to confuse the two, as the Return Line and the Air Lines do completely different things and ***must*** be kept separate from each other.

The following drawing shows where the Return Line connects on the Lift.



Front view. Drawing not to scale. Some components exaggerated for clarity.

To install the Return Line:

1. Measure the distance from the Return Line connector on the Hydraulic Cylinder to the Return Line connector on the Power Unit.
2. Cut a section of Tubing to the measured length from the roll of Tubing that comes with the Lift. It is better to cut the Tubing a little too long rather than a little too short.
3. Route the Tubing from the Hydraulic Cylinder through the Flex Tube opening and out to where the Power Unit will be installed. Let the Tubing hang out of the opening for now.
4. Remove the Shipping Plug from the Return Line Connector on the Hydraulic Cylinder.
5. Connect and tighten the Elbow Compression Fitting into the opening where the Shipping Plug was.
6. Connect one end of the Return Line to the Elbow Compression Fitting just installed.

   Refer to **Working with Compression Fittings and Tubing** for instructions.
7. Leave the Power Unit end of the Return Line hanging out of the Flex Tube opening for now. It will be connected to the Power Unit later in the installation.

IMPORTANT! PLEASE READ NOW

Hydraulic Fluid Contamination

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

Your Lift is shipped with clean components, however, BendPak strongly recommends that secondary precautions be taken to clean all Hydraulic Hoses and Fittings prior to making connections. It is a good practice, and potentially less costly to take these extra steps now so that the Lift does not need to be taken out of service later to fix issues that could have been prevented at the time of installation.

There are several ways to clean Hydraulic Hoses and Fittings:

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

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

- **Remove old thread seal tape**. Some ports on the Hydraulic Cylinders are shipped with temporary plugs secured with thread sealant tape, so make sure to thoroughly remove any leftover tape that could inadvertently enter the Hydraulic System.
- **Use liquid thread sealant only**. Teflon paste-type thread sealant or Loctite™ 5452 thread sealant is recommended for all NPT Fittings. Do not over tighten NPT Fittings or they may crack. Never use thread seal tape on JIC Fittings or ORB O-Ring Fittings.
- **Always use clean equipment**. If you use a dirty bucket or funnel to transfer the Hydraulic Fluid into the Hydraulic Fluid Reservoir, the contaminants will likely be introduced into the Fluid. Use only clean, lint-free rags.
- **Proper storage**. Keep the Hydraulic Fluid sealed in its container until ready for use, and store the fluid in a clean, dry, and cool area.
- **Cover the Hoses and Fittings**. Before installation, do not leave the ends of the Fittings exposed. The same applies for the Hydraulic Hoses. As a general rule, keep the Hydraulic Hoses and Fittings capped and kept clean until ready for use.
- **Filter the new Hydraulic Fluid**. Just because fluid is new does not necessarily mean it is *clean*. Use an offline filtration cart or kidney loop system to make sure the Hydraulic Fluid is clean before being transferred into the Hydraulic Fluid Reservoir (even using a heavy duty nylon mesh screen is better than trusting what is left at the bottom of the barrel).
- **Avoid mixing different types of Hydraulic Fluid**. If Hydraulic Fluid needs to be replaced, make sure to flush the Hydraulic System of the old Hydraulic Fluid before adding the replacement fluid; do not mix the two together.

Hydraulic System Warnings

Before applying power to the Hydraulic System note the following Warnings:

⚠ **DANGER** Failure to observe these warnings can result in serious personal injury, including, in rare cases, death.

⚠ **DANGER** Always refer to the lubricant and hydraulic fluid manufacturer's Material Safety Data Sheet (MSDS) for proper handling and disposal of chemicals.

⚠ **DANGER** The Power Unit is a Hydraulic Pump capable of developing pressures in excess of 5,000 psi (345 BAR). A pressure relief valve is used to set the pressure to the desired level. Tampering with, adjusting, modifying, or removing the relief valve is extremely dangerous and is not recommended. Only trained Hydraulics technicians should adjust the relief valve, using calibrated hydraulic pressure gauges to ensure the proper pressure setting is achieved.

⚠ **DANGER** Changes to the output pressure may render the power unit incompatible with pressure limitations of other components in the hydraulic circuit. This may cause catastrophic failure of those components, and could result in property damage, serious personal injury, or death.

⚠ **DANGER** The Hydraulic System can contain high pressures which, if suddenly released, can cause serious injury or death.

⚠ **DANGER** Do **not** attempt to connect or disconnect Hydraulic Hoses while the equipment is loaded or while a Vehicle is on the Lift, or the Hydraulic System is under pressure.

⚠ **DANGER** When handling Hydraulic Fluid, always observe the Material Safety Data Sheet and safety instructions from the manufacturer.

⚠ **WARNING** The Hydraulic hoses and connections must be inspected before any attempt to raise a Vehicle is made.

⚠ **WARNING** Verify all Hydraulic Hose connections and fittings, including unused auxiliary port plugs on the Power Unit, the Flow Divider, the Cylinders and anywhere else in the Hydraulic System are tightened.

⚠ **WARNING** Keep bare hands away from Hydraulic Fluid; always wear gloves when handling Hydraulic Fluid, Cylinders or Hydraulic Hoses.

⚠ **WARNING** **Always** promptly clean any Hydraulic Fluid spills. If a leak is the source of the spill, lock out the Lift to prevent use until the Hydraulic System is repaired.

About Thread Sealants

Liquid Thread Sealant lubricates and fills the gaps between the Fitting threads and leaves no residue that could contaminate the Hydraulic Fluid.

Other types of Thread Sealants (like Teflon Tape) can shred during installation or removal and eventually enter the Hydraulic System.

Thread Sealant must always be used with NPT connections. Apply the thread sealant when the ambient temperature is between +46.5°F to +70°F (+8°C to 21°C).

To apply Thread Sealant:

1. Make sure the Fittings and connectors are clean and dry. If Thread Sealant is being added to a Fitting or connector that has already been used with a different sealant, use a wire brush to thoroughly remove the old sealant before adding more.
2. Skipping the first thread, apply a small amount of Thread Sealant to the next four threads of the Fitting.

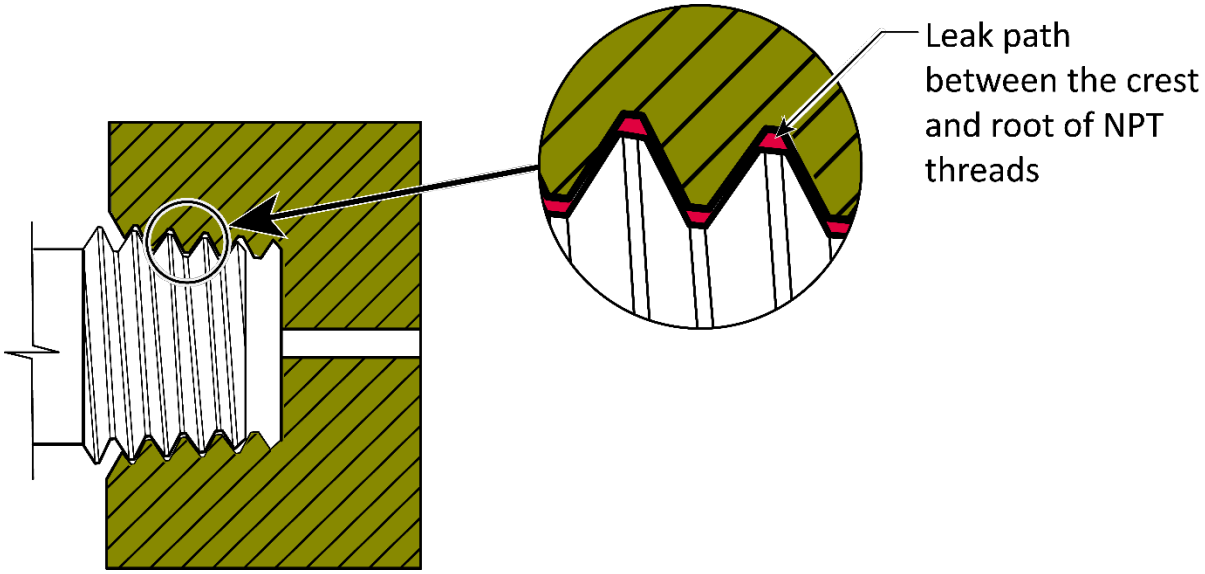
⚠ **WARNING** Always wear the proper protective equipment when handling Thread Sealant.

Only a small amount is needed since the sealant spreads to the other threads as it is tightened into place.

If too much is applied, the excess liquid will be pushed out when the Fitting is tightened. Use a clean, lint-free rag to remove the excess.

3. Tighten the Fitting into the connector; do ***not*** over tighten the Fitting.
4. Allow the **24-hour** manufacturer-recommended curing time before pressurizing the system.

⚠ **WARNING** NPT threads must have thread sealant applied to prevent leaking. The shape of NPT threads creates a small gap between the crest and root of the mating threads. This gap will allow hydraulic fluid to leak unless a thread sealant is used.



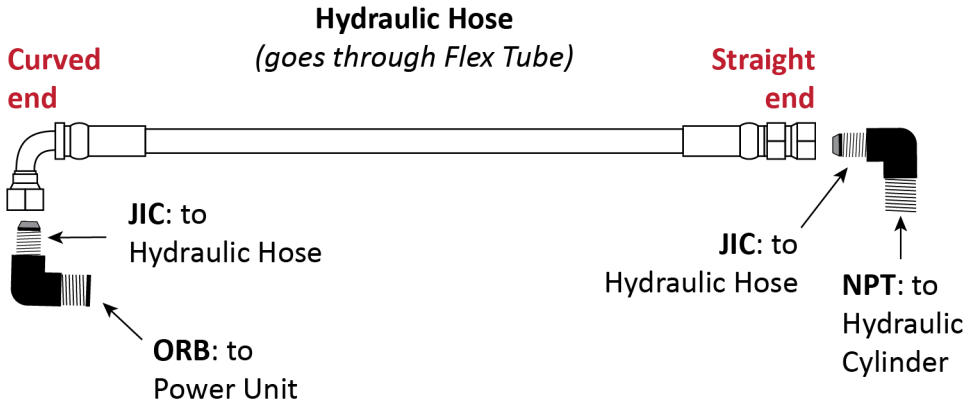
Install the Hydraulic Hose

The Hydraulic Hose moves Hydraulic Fluid from the Power Unit to the Hydraulic Cylinder.

To install the Hydraulic Hose, the following is needed:

- **The Hydraulic Hose**. The Hydraulic Hose has a curved end and straight end.
- **JIC to NPT Hydraulic Fitting**. The JIC end routes to the Hydraulic Hose and the NPT end routes to the Hydraulic Cylinder.
- **JIC to ORB Hydraulic Fitting**. The JIC connector routes to the Hydraulic Hose and the ORB end to the Power Unit.

The following drawing shows the Hydraulic Hose connections.



Drawing not to scale. Not all components are shown.

The following procedure is based on the drawing above. Either end of the Hydraulic Hose can be connected to the Power Unit; choose the option that best fits your setup.

To install the Hydraulic Hose:

1. Find the Hydraulic Hose and a Hydraulic Elbow Fitting (- 04 JIC x 06 NPT).
2. Clean the Hydraulic components using the information in **Hydraulic Fluid Contamination**.
3. On the Hydraulic Cylinder, remove the Shipping Plug from the connector at the Piston Rod end.
4. Attach the NPT end of the JIC-to-NPT Fitting to the connector on the Hydraulic Cylinder (where the Shipping Plug was just removed) and tighten it.
5. Attach the Straight end of the Hydraulic Hose to the JIC connector and tighten it.
6. Take the Curved end of the Hydraulic Hose and, starting at the Hydraulic Cylinder, route it through the Retaining Rings (along inside edge of the power side runway) and the Flex Tube opening.

   Once done, the curved end should be coming out of the Flex Tube opening near the Power Unit.
7. Leave the Curved end of the Hydraulic Hose coming out of the Flex Tube opening for now. It will be connected to the Power Unit later in the installation.

Install the Power Unit

This section describes how to ***install***, but not make the connections to, the Power Unit. An Electrician is ***not*** needed to install the Power Unit, although one is required to connect the Power Unit to its power source.

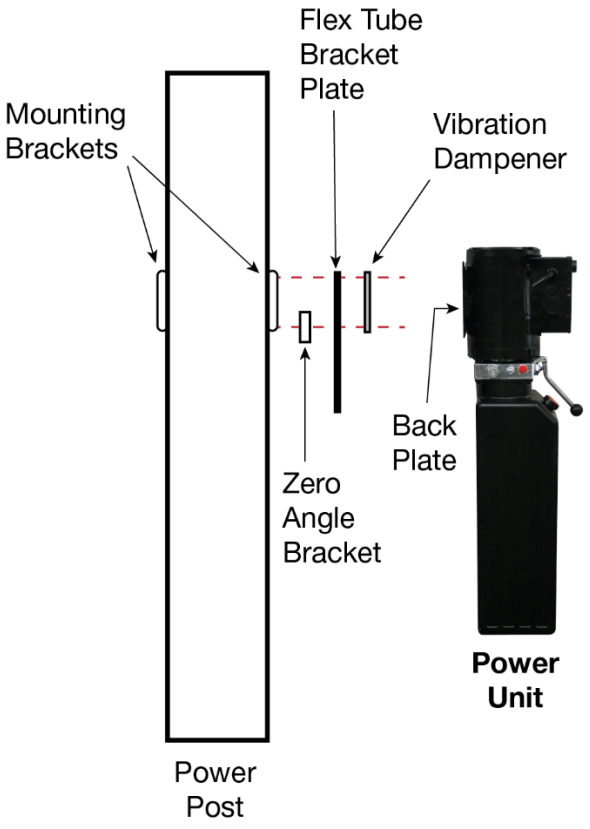
The Power Unit ***must*** be installed on the Power Post by attaching it to one of the two Mounting Brackets, whichever is more convenient for your needs.

Important: The Flex Tube Bracket Plate and/or the Zero Angle Bracket can be installed at the same time as the Power Unit. Read **Installing the Flex Tube** and **Installing the Pushbutton Air Valve** for more information and to see if this makes sense for your installation.

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

Tip The Power Unit is heavy. We recommend having one person hold the Power Unit while another bolts it in place.

The following drawing shows how to attach the Power Unit to the Power Post.



Side view of Power Post. Not drawn to scale. Not all components are shown.

To install the Power Unit:

1. Find the four supplied M8 Hex Head Bolts, M8 Locking Washers, and the Vibration Pad.
2. If the Flex Tube Bracket Plate and/or the Zero Angle Bracket is going to be installed at the same time as the Power Unit, now is the time to put those into place.
3. Place a Locking Washer onto each of the four Hex Head Bolts and slide the Bolts through the Back Plate on the Power Unit and through the holes in the Vibration Dampener.
4. Have the second person lift the Power Unit and align the four protruding bolts with the Rivet Nuts on the Power Unit Mounting Bracket you have chosen to use.
5. One by one tighten each Hex Head Bolt until the Power Unit is securely mounted to the Power Post.

Fill the Hydraulic Fluid Reservoir

The Hydraulic Fluid Reservoir on the Power Unit must be filled with Hydraulic Fluid or automatic transmission fluid before beginning normal operation. The Reservoir comes shipped empty.

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

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

⚠ **WARNING** Do not run your Power Unit without Hydraulic Fluid as damage will occur.

To fill the Hydraulic Fluid Reservoir:

1. Remove the Reservoir Cap and set it aside.

   Take care to ***keep contaminants out*** of the Hydraulic Fluid Reservoir.
2. Fill the Hydraulic Fluid Reservoir on the Power Unit with the appropriate amount of Hydraulic Fluid:

- **5585280**: 3.6 gallons / 13.5 Liters
- **5585780**: 3.7 gallons / 14 Liters
- **5585014**: 3.7 gallons / 14 Liters
- **5585247**: 3.7 gallons / 14 Liters

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

3. Once the Reservoir is filled, replace the Reservoir Cap.

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

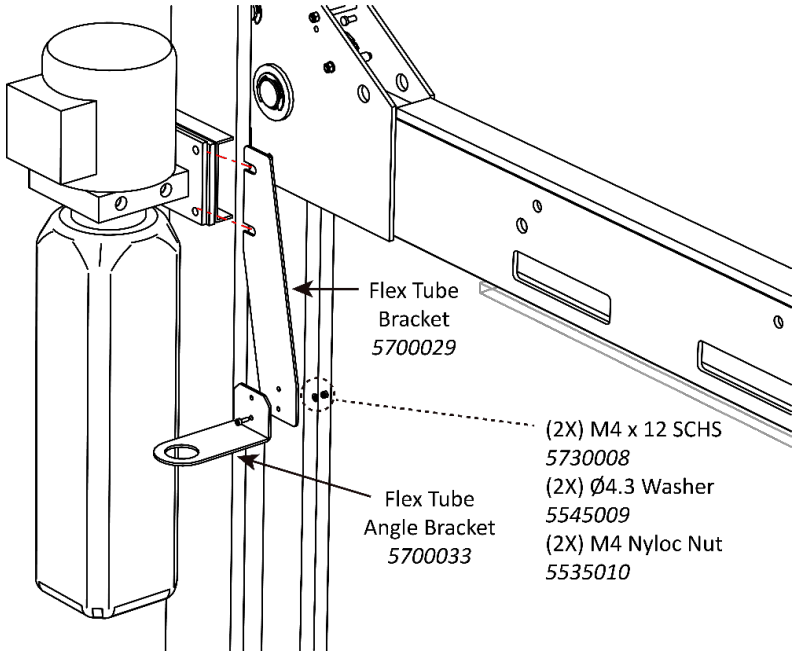
Install the Remaining End of the Flex Tube

Once the Power Unit is installed, the second end of the Flex Tube (the other end was connected to the power side runway earlier in the installation) can be connected.

The Flex Tube consolidates and protects the lines that come out from under the power side runway: the Air Line, the Return Line, and the Hydraulic Hose.

The components involved include:

- **Flex Tube**. Protects the Air Line, the Return Line, and the Hydraulic Hose. One end connects to the hole on the Flex Tube Angle Plate from underneath, the other end connects to the hole on the side of the power side runway.
- **Flex Tube Bracket Plate**. The two slide-notches at the top install to the Power Unit's Mounting Bracket on the Power Post. The two holes at the bottom connect to the Flex Tube Angle Plate.
- **Flex Tube Angle Plate**. Attaches to the Flex Tube Bracket Plate via two holes, allowing the flexibility to connect it on either side. Includes the hole to which the Flex Tube connects. Fasteners are (2) M4 Screws 5530008, (2) M4 Washers 5545009, (2) M4 Nuts 5535010.



BendPak recommends orienting the Flex Tube so that the lines coming out of it are near where it connects on the Power Unit and to the Pushbutton Air Valve.

To connect the Flex Tube to the Power Unit, connect the Flex Tube Bracket Plate and the Flex Tube Angle Plate as follows.

To connect the Flex Tubes:

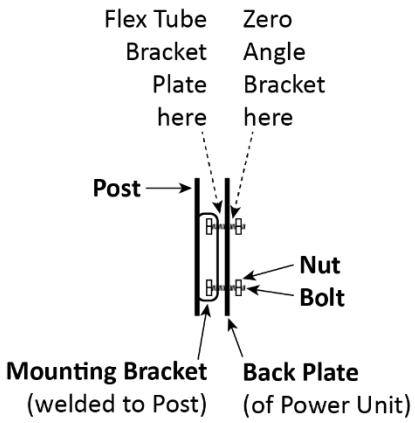
1. Find the Flex Tube Bracket Plate and the Flex Tube Angle Plate.
2. Install the Flex Tube Bracket Plate to the Power Unit post.

   Location options are: between the Mounting Bracket and the Back Plate or between the Back Plate and the retaining Nut (see the drawing on the following page).

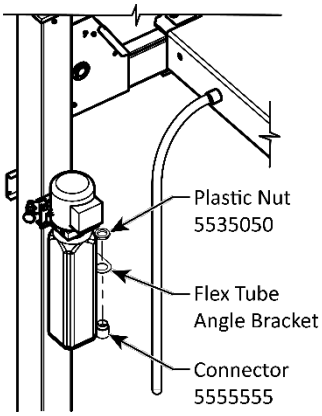
   Note: It is common to install the Flex Tube Bracket Plate between the Mounting Bracket and the Back Plate. This allows the Zero Angle Bracket (which holds the Pushbutton Air

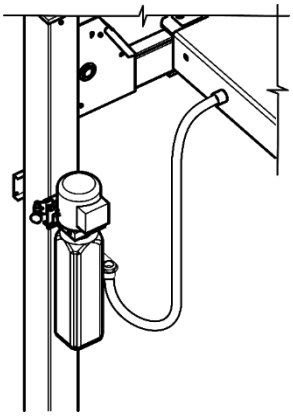
Valve and is described in the next section) to be installed between the Back Plate and the retaining Nut. This configuration is common, but not required.

The following drawing describes how to position the Flex Tube Bracket Plate between the Mounting Bracket and Back Plate.



Side view of where the Power Unit attaches to the Power Post. Not necessarily to scale.





3. Install the Flex Tube cut end into the Connector on the Flex Tube Angle Bracket.
4. Remove the Connector and feed the required Hydraulic, Pneumatic and Electrical lines through the Flex Tube and Connectors.
5. Place the Connector and the Flex Tube in the Flex Tube Bracket and then secure.
6. Proceed with the Hydraulic, Pneumatic and Electrical connections as detailed in the Installation Manual for your Lift.

IMPORTANT! When cycling the Lift Platforms up and down watch and verify that **the Flex Tube** is keeping the hoses from moving into a position that would allow the Lift Platforms to contact or damage them.

7. Connect the Flex Tube Angle Plate to the Flex Tube Bracket Plate so that the holes for the Flex Tubes are best positioned for connecting the Return Line, the Air Line, and the Hydraulic Hose.

   The Flex Tube Angle Plate can be connected on either side of the Flex Tube Bracket Plate.

8. When the Flex Tube Angle Plate is in place, unscrew the Plastic one of the Flex Tubes.
9. Holding the Flex Tube by the Plastic Collar, put the Threads through the hole on the Flex Tube Angle Plate ***from underneath***.

Screw the Plastic Nut back onto the Threads and tighten.

Technical support and service is available from your dealer, on the Web, by email at **support@bendpak.com,** or by phone at **(800) 253-2363**, option 7, then 4. You may also contact BendPak for parts replacement information (please have the model and serial number of your unit available) at **(800) 253-2363**, option 7, then 5.

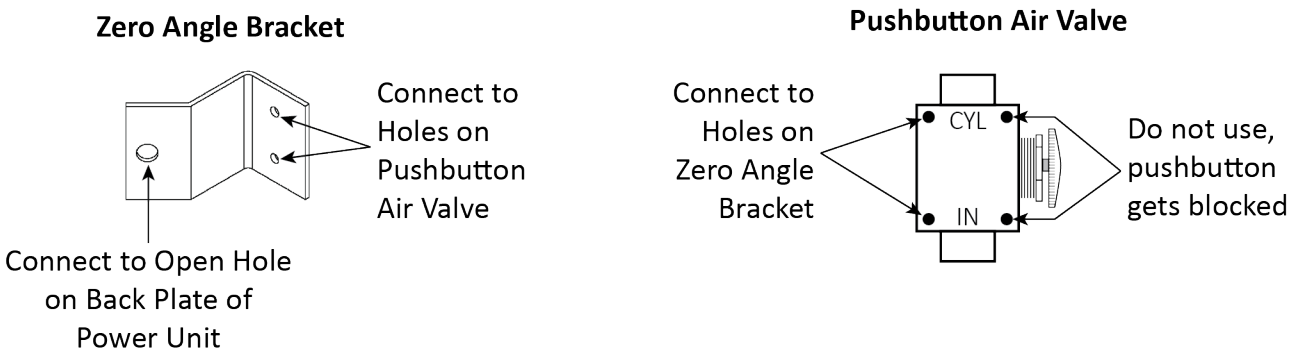
Installing the Pushbutton Air Valve

Once the Power Unit and the Flex Tube are installed, the Pushbutton Air Valve can be installed, which requires the Zero Angle Bracket (which may already have been installed).

The Pushbutton Air Valve is used to lower the runways. It can run on either side of the Power Unit, but we recommend placing it on the side facing *away* from the Lift—to be out of the way.

Once the pushbutton is in place, connect it to the Air Line on one end and the customer-supplied air pressure on the other end. ***A minimum air pressure of 50 PSI / 3 CFM is required***.

The following drawing shows the Zero Angle Bracket and where it connects.



The components involved include:

- **Zero Angle Bracket**. Attaches at the Mounting Bracket on the Power Post or to other available holes on the Back Plate of the Power Unit. Holds the Pushbutton Air Valve. Be sure to orient the Zero Angle Bracket so that the Pushbutton Air Valve can be easily reached by the Lift operator.
- **Pushbutton Air Valve**. Used to lower the runways.
- **Air Line Compression Elbow Fitting**. Connects the Pushbutton Air Valve to the Air Line coming from the Tee Fitting.
- **Straight Expander Fitting**. Connects the Pushbutton Air Valve to the customer-supplied air pressure.

To install the Pushbutton Air Valve:

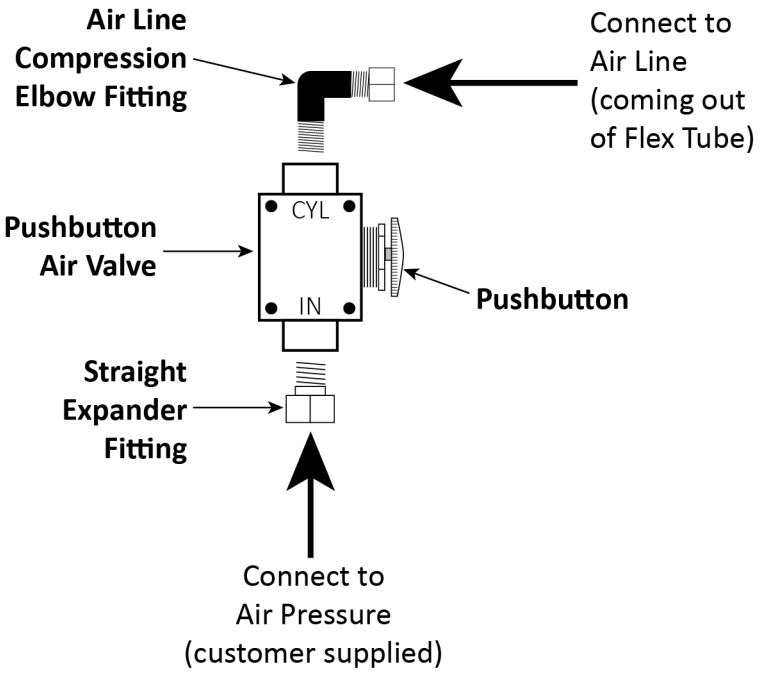
1. Find the necessary components: Zero Angle Bracket, Pushbutton Air Valve, Air Line Compression Elbow Fitting, and Straight Expander Fitting.
2. Connect the Zero Angle Bracket at the desired location (if it has not already been connected).

   It can attach to an available hole on the Back Plate of the Power Unit or to one of the Bolts that connect the Power Unit to the Mounting Bracket on the Power Post.

   The best location is one that is visible and easily reached by the Lift operator.
3. Connect the Pushbutton Air Valve to the Zero Angle Bracket.

   Use the two holes on the Pushbutton Air Valve on the side away from the actual pushbutton. If the holes next to the pushbutton are used, the Zero Angle Bracket interferes with the pushbutton.

The following drawing shows the Pushbutton Air Valve and its connections.



4. Connect the Air Line Compression Elbow Fitting and the Straight Expander Fitting to the appropriate locations on the Pushbutton Air Valve.

   The Elbow Fitting connects to the opening labelled **CYL**. The Straight Fitting to the opening labelled **IN**. See the drawing above.

5. Attach the Air Line (coming out of the Flex Tube) to the Compression Fitting on the Elbow Fitting, and the customer-supplied air to the Straight Fitting.

   Important: The Return Line also comes out of the Flex Tube and is the same kind of tubing as the Air Line. ***Do not attach the Return Line to the Pushbutton Air Valve by mistake***. Double check to make sure that the Air Line to the Pushbutton Air Valve is attached correctly.

   For the customer-supplied air pressure, a minimum of 50 to 150 psi / 3 to 25 cfm is required.

Connecting the Return Line

The Return Line should already be routed through the Flex Tube and connected to the Return Line connector on the Hydraulic Cylinder. The other end of the Return Line needs to be connected to the Power Unit.

To attach the Return Line to the Power Unit:

1. Find an Elbow Compression Fitting (-04 COMP x 06 NPT) from the Parts Bag.
2. Locate the Hydraulic Return connector on the Power Unit and remove the Shipping Plug.

   See **Connecting the Power Source** for the possible connector locations.

3. Connect and tighten the threaded end of the Elbow Compression Fitting to the Hydraulic Return connector on the Power Unit.

For information about connection compression fittings, refer to **Working with Compression Fittings and Tubing**.

4. Find the Return Line coming out of the Flex Tube and connect it to the other connector on the Elbow Compression Fitting.

   Important: The Air Line, at one point, was also coming out of the Flex Tube and it uses the same kind of tubing as the Return Line. The Air Line should have been connected in the previous section, but if it was not, make sure you are attaching the Return Line to the Power Unit and not the Air Line. ***Do not attach the Air Line to the Power Unit by mistake***.

Connecting the Hydraulic Hose

The Hydraulic Hose connects to a Hydraulic Power Out connector on the Power Unit. The Curved end of the Hydraulic Hose is already connected to the Hydraulic Cylinder, while the other end should be exiting the Flex Tube.

To connect the Hydraulic Hose:

1. Find the Hydraulic Fitting (-04 JIC x 06 ORB). The Hydraulic Hose is already in place, with the Straight end coming out of the Flex Tube.
2. Locate the Hydraulic Power Out connector on the Power Unit you want to use and remove the Shipping Plug.

   See **Connecting the Power Source** for the possible connector locations.
3. Connect and securely tighten the ORB end of the JIC – ORB Fitting to the Hydraulic Power Out on the Power Unit.
4. Connect and securely tighten the JIC end of the JIC – ORB Fitting to the Hydraulic Hose coming out of the Flex Tube.

Contacting the Electrician

As mentioned previously, there are installation tasks that ***require*** a licensed Electrician.

⚠ DANGER Make clear to the Electrician that all electrical work must conform to applicable local, state, and national electrical codes, rules, and regulations.

The Electrician needs to:

- **Connect a power source to the Power Unit**. A power source is required. The Power Unit comes with a pigtail for wiring to the power source. Have your Electrician remove the pigtail and attach an appropriate Power Cord and Plug or wire directly into the facility's electrical system. Refer to **Connecting 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. It must be positioned within sight and easy reach of the Lift operator. Refer to **Install a Power Disconnect Switch** for more information.
- **Install a Thermal Disconnect Switch**. Ensures the equipment shuts down in the event of an overload or an overheated motor. Refer to **Install a Thermal Disconnect Switch** for more information. ***The motor on the Power Unit that comes with the Lift is not thermally protected***.

The Electrician is responsible for providing:

- An appropriate power cord and plug for connecting to the power source.

- The interconnecting wiring and materials to protect that wiring on its route between the Lift and the service entrance.
- A Power Disconnect Switch
- A Thermal Disconnect Switch, if required.

⚠ DANGER Risk of explosion: This equipment has internal arcing or parts that may spark and should not be exposed to flammable vapors. The Power Unit's motor should not be located in a recessed area or below floor level. Never expose the motor to rain or dampness; damage to the motor caused by water is ***not*** covered by the warranty.

Connecting the Power Source

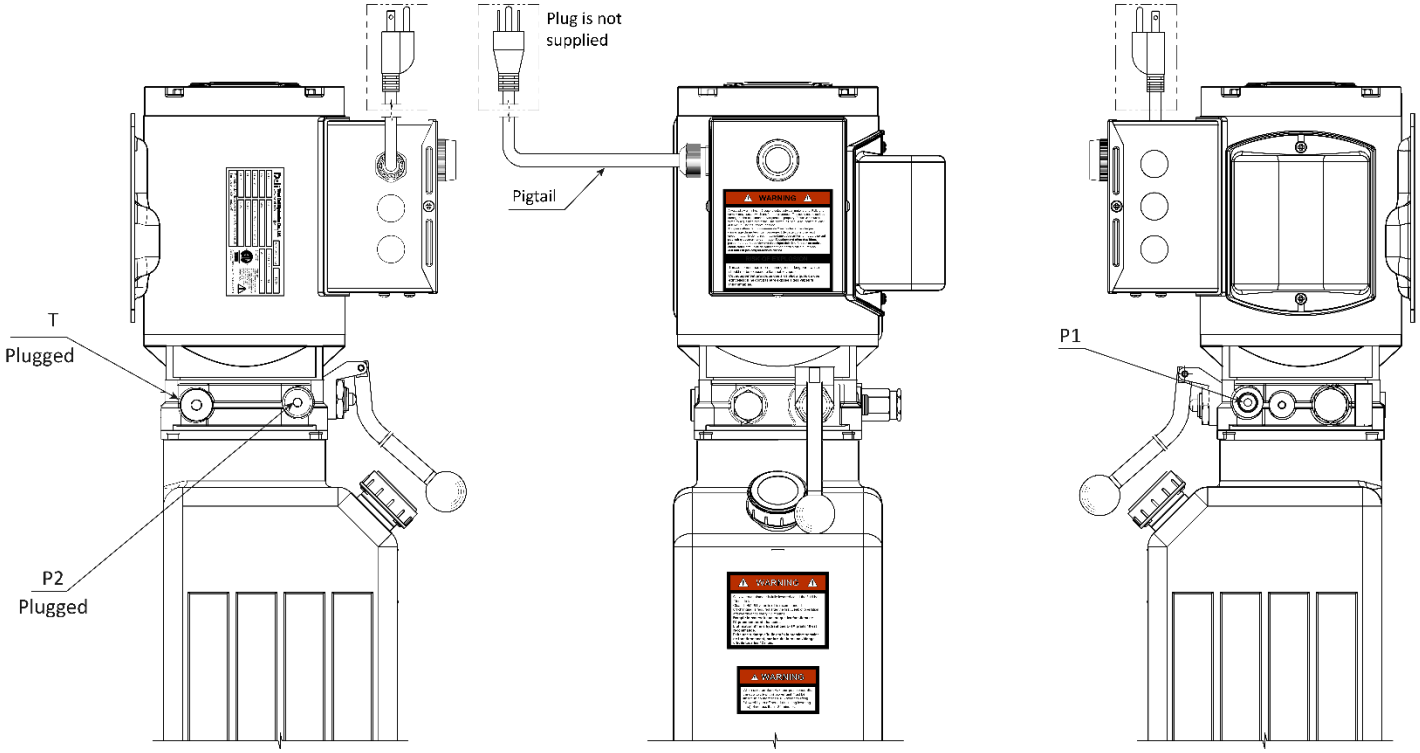
The standard Power Unit for your Lift is 220 VAC, 60 Hz, single phase. The Power Unit must be connected to an appropriate power source. Refer to **Wiring Diagrams** for wiring information.

⚠ DANGER All wiring ***must*** be performed by a licensed 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. If your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.

Important electrical information:

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

The Hydraulic Power Ports are usually labeled **P1/P2** on the Power Unit; the Hydraulic Return Ports are commonly labeled **T1/T2** or **CV1/CV2**. The figure below details the possible connector locations. Locations may vary depending on the power unit supplied with the Lift.



To connect the Lift to a power source:

1. Have a licensed Electrician locate the pigtail exiting the electrical junction box on the power unit.
2. Open the junction box, remove the pigtail, and then either:
    1. Wire the Power Unit directly into the facility's electrical system.
    2. Wire a Power Cord (with an appropriate plug) inside the junction box to the wiring that was connected to the Pigtail.

    The interconnecting wiring and or the power cord and plug are ***not*** supplied with the Lift.

    See **Wiring Diagrams** for more information.

Installing a Power Disconnect Switch

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

A Power Disconnect Switch is a National Electrical Code (NEC) requirement. They are designed to interrupt 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.

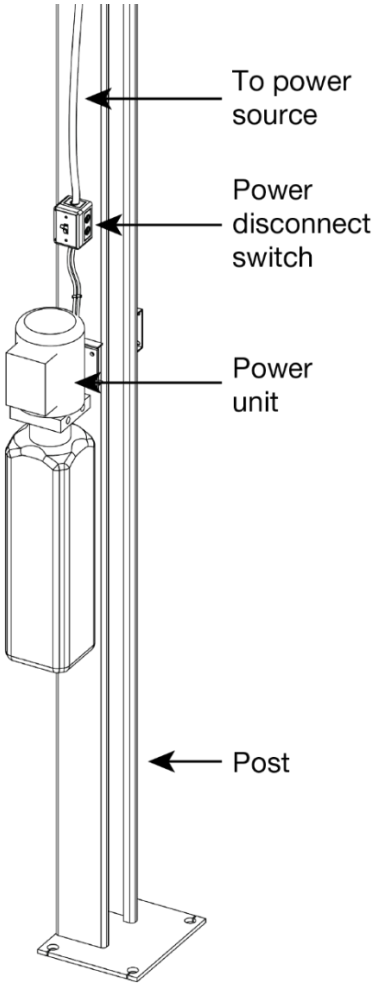
⚠ DANGER All wiring ***must*** be performed by a licensed Electrician.

The 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 drawing 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 licensed Electrician install the Power Disconnect Switch.

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



Installing a Thermal Disconnect Switch

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

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 Electrician.

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

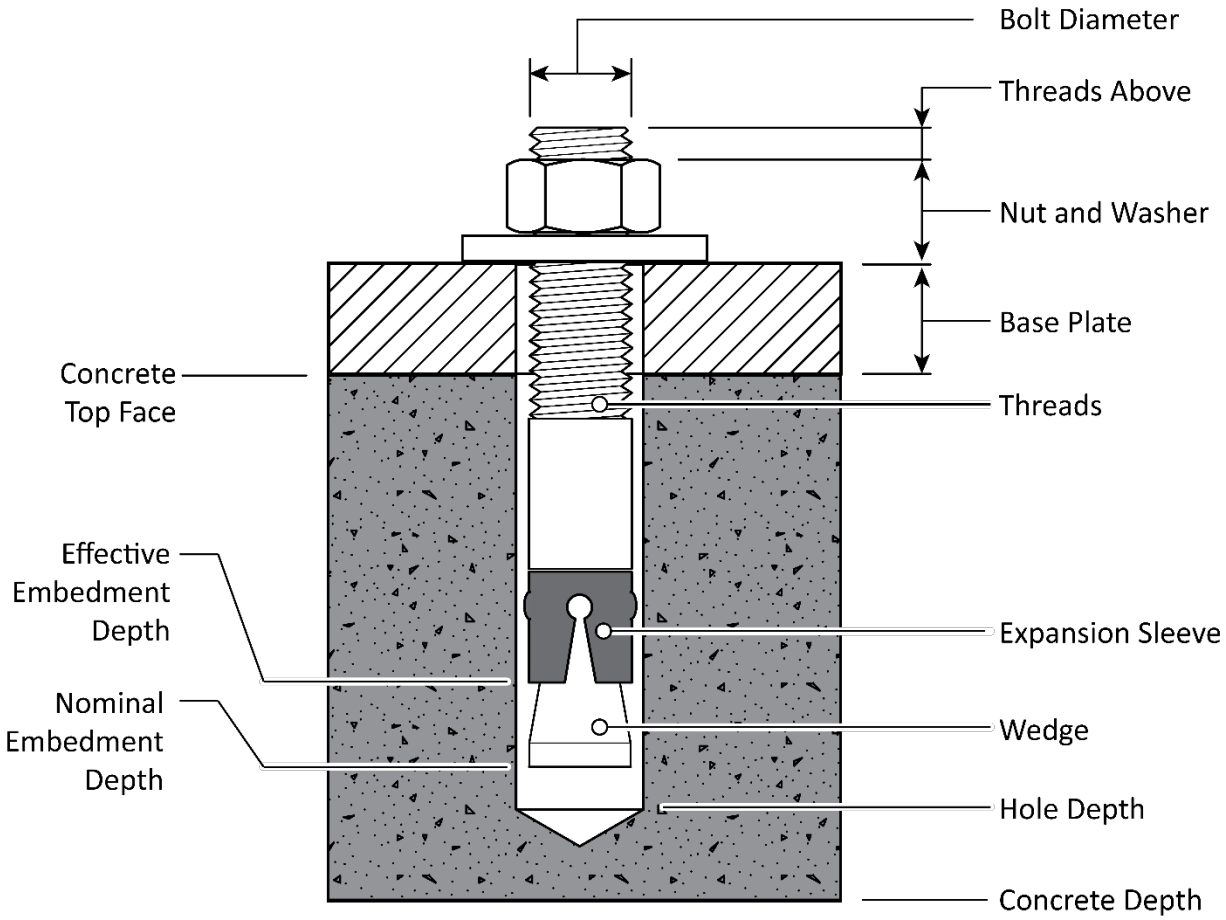
BendPak strongly recommends ***not*** exceeding the rated duty cycle of the Lift's motor.

About Effective Embedment

Anchor Bolts (also called Wedge Anchors) achieve optimized holding strength from their depth in the Hole, and how forcefully the Anchor Bolt's Expansion Sleeve presses against the clean sides of the concrete hole. Holding strength also depends on how much Torque is applied to a properly prepared concrete hole; **called Effective Embedment**.

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

Note: Some people confuse Effective Embedment with *Nominal* Embedment, which is how far down into the Hole the *bottom* of the Anchor Bolt is.



Carefully follow the specifications and instructions in the following procedure.

⚠ **WARNING** Use only the Anchor Bolts delivered with your Lift. Only install the Lift on a concrete floor. Make sure to have the correct amount of Effective Embedment and use the correct amount of torque.

Anchoring the Posts

Install one Anchor Bolt in each corner of each Base Plate, 4 per Post, 16 Anchor Bolts total.

Concrete specifications:

- **Depth**: 4.25 in. (108 mm)
- **PSI**: 3,000 PSI, minimum
- **Cured**: 28 days, minimum

Anchor Bolt specifications are:

- **Length**: 4.75 in. (121 mm)
- **Diameter**: 0.75 in. (19 mm)
- **Anchor torque**: 85-95 ft. lbs.

⚠ **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 death.

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.

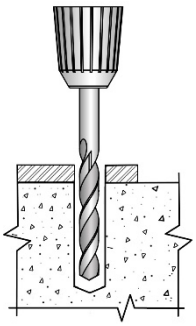
⚠ **WARNING** Use only the Anchor Bolts that came with your Lift. If you use components from a different source, you void your warranty and compromise the safety of everyone who installs or operates the Lift.

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 — one hole in each corner of the Base Plate, so four holes total per Base Plate.

Important: Do ***not*** drill all the way through the concrete; if you punch completely through the slab, you compromise the holding strength of the Anchor Bolt once put into place.

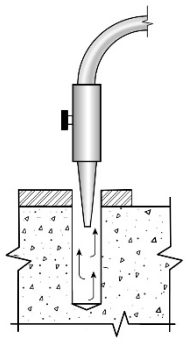


Drill straight, in the center of the hole; do not let the drill wobble.

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

The diameter of the drill bit must be the same as the diameter of the Anchor Bolt. So, if you are using a 3/4 in. (19 mm) diameter Anchor Bolt, for example, use a 3/4 in. (19 mm) diameter drill bit.

3. Vacuum each hole clean.

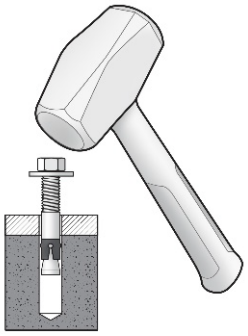


BendPak recommends using a vacuum to clean the hole. You can also use a wire brush, hand pump, or compressed air. Just ***make sure to thoroughly clean each hole***.

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 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, ***with the top of the Nut flush with the top of the Anchor Bolt***, then insert the Anchor Bolt into the hole.
5. Hammer or mallet the Anchor Bolt down into the hole.



The Expansion Sleeve of the Anchor Bolt may prevent the Anchor Bolt from passing through the hole in the Base Plate. The hammer or mallet will move the Expansion Sleeve through the Base Plate and into the hole.

Even using a hammer or mallet, the Anchor Bolt should only be set into the hole part of the way. If the Anchor Bolt moves 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 moving down into the hole as the expansion sleeve contacts the sides of the hole.

6. Hammer or mallet the Anchor Bolt the rest of the way down into the hole.

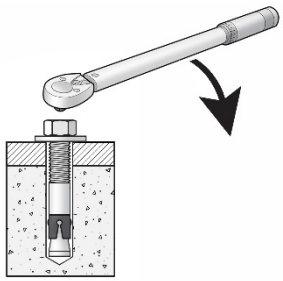
   Stop when the Washer is snug against the Base Plate.

7. Plumb each Post; install any needed Shims.

   Do not shim a Post more than half an inch using the provided Shims. A maximum of 2 in. (51 mm) is possible by ordering optional Shim Plates. Contact BendPak at **(800) 253-2363**, option 7, then 5 to order. Please have the model and serial number of your Lift available.

   Take your time while plumbing and shimming the Posts; ***it is important to make the Lift as level as possible***.

8. Wrench each Nut ***clockwise*** to the recommended installation torque, 85-95 pound feet, using a Torque Wrench.



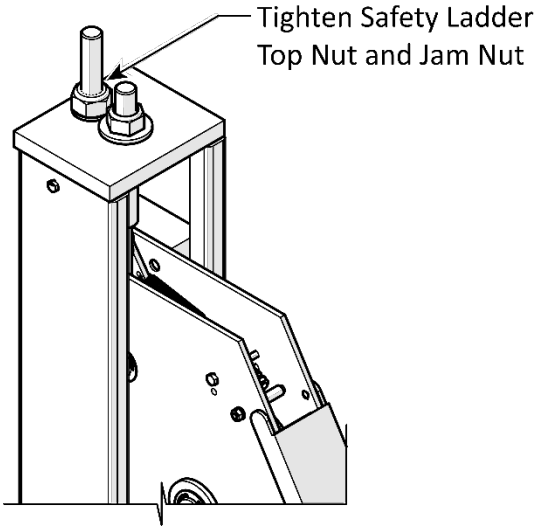
Important: Do ***not*** use an impact wrench to torque the Anchor Bolts.

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

Final Leveling

It is particularly important that the Lift's runways are level, or as close to level as possible. The following procedure describes how to correct an out of level condition.

Tools Required: Level, Step Ladder, and Open End Wrenches.

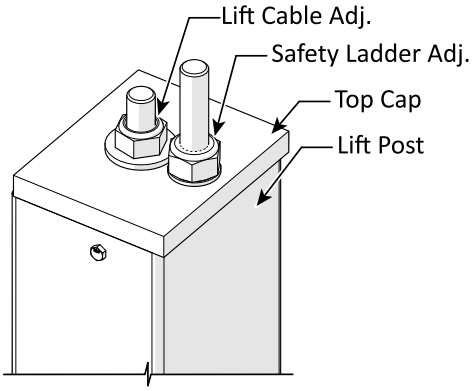


To complete the final platform leveling:

1. Raise your Lift Platforms and then lower onto the first Safety Lock position (the primary Safety Locks, not the Slack Safety Locks).
2. Verify the Crosstubes are resting *on the same Safety Lock* measured from the bottom on all four Lift Posts.
3. Use a level to verify the runways are flat *before* attempting to adjust the Cables.
    a. If a runway requires adjustment for an out of level condition, use a wrench to loosen the jam nut under the Top Cap. Adjust the Safety Ladder up and down using the Safety Ladder Adjustment nut on top of the Lift Post as required to achieve a level runway.
    b. Once level, tighten the jam nut under the top cap and verify the safety ladder adjustment nut is snug against the Top Cap as well.

IMPORTANT! Do ***not*** stand on the runways while checking for out of level conditions.

Lift Cable Adjustment Procedure



This procedure is intended to adjust the Safety Lock engagement and disengagement to compensate for cable stretch.

- All lift cables stretch over time; therefore, all lift cables will require occasional adjustment.
- Longer lift cables stretch more than shorter cables.
- All vehicles are unique and will stretch some cables more than others based on vehicle weight distribution.

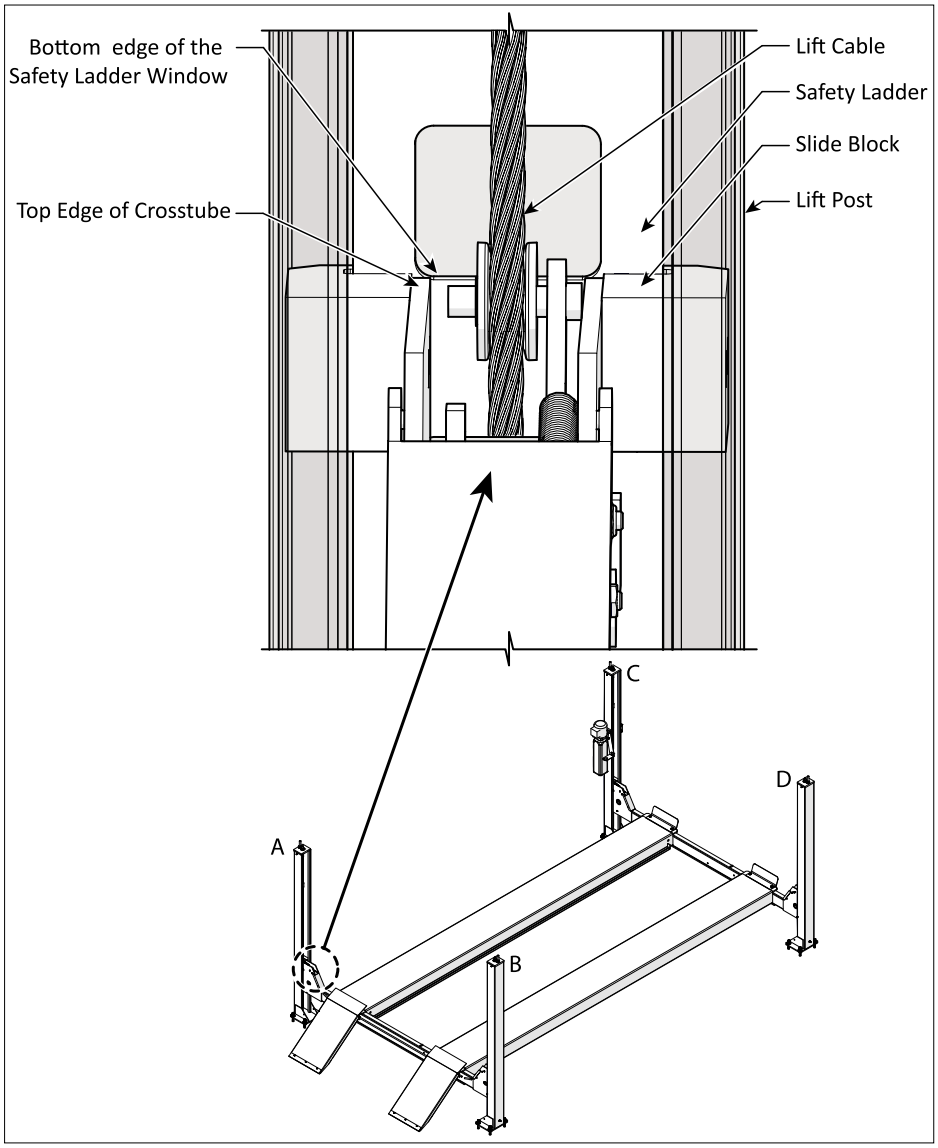
Tools Required: Step Ladder, and Open End Wrenches.

IMPORTANT! Do ***not*** stand on the runways while checking or adjusting the lift cables.

Adjust the Lift Cables:

4. Verify the threaded Lift Cable end is secured to the Top Cap on each Lift Post.
5. Verify all four Cables are under slight tension, no slack should be present anywhere in the system.
6. Use a Step Ladder to access the top of one Lift Post. *Do not stand on the runway while adjusting the Lift Cables.*
7. Loosen the Lift Cable Adjustment and Jam Nut. Adjust all four Cables until the top of the Crosstube is even with the bottom of the Safety Ladder Cutout on each Lift Post. Refer to the figure below.

8. Identify the Lift Posts A through D based on increasing cable length. Refer to the figure below.
9. A slight increase in the Crosstube position will approximate the typical initial cable stretch. Adjust the distance from the top of the Crosstube to the bottom of the safety ladder window as listed below:
    - Post A (Shortest Cable) should be even with the bottom of the safety ladder cutout.
    - Post B should measure 1/16 in. (1.5 mm) above the safety ladder cutout.
    - Post C should measure 1/8 in. (3.1 mm) above the safety ladder cutout.
    - Post D (Longest Cable) should measure 3/16 in. (4.7 mm) above the safety ladder cutout.



10. Tighten the Lift Cable and Jam Nuts to secure them in place.
11. Raise and then lower the Lift Platforms while listening for the safety latch engagement and observing all four corners to verify the Lift is descending evenly. If one corner is not descending, stop the lift immediately and refer to Troubleshooting before proceeding.
    a. If the safety locks are engaging all at the same time, no further lift cable adjustment is required. Move to step 9.

b. If one or more safety locks are delayed significantly later than the others (1 second or more), then note the late lock position(s) and stop the lift.
    - Lower the Lift onto the nearest safety lock cutout.
    - Verify all four safety locks are resting on a safety lock cutout.
    - Tighten the Lift Cable on the Safety Lock positions that engage late.
    - Secure the Lift Cable by tightening its Jam Nut and repeat the procedure from step 8 until all safety locks engage the safety ladder cutout roughly at the same time.

12. Lower the platforms to the ground when it is safe to do so
13. Carefully drive a vehicle onto the platforms. Have an assistant guide you to verify the vehicle is centered on the platforms and the Lift.
14. Put the vehicle into park (first or reverse gear, if a manual transmission).
15. Set the parking brake and exit the vehicle.
16. Chock the wheels.
17. Raise the lift platforms while listening for the safety locks to engage the safety ladder cutouts.
    a. If the safety locks are engaging all at the same time, no further lift cable adjustment is required. Move to step 15.
    b. If one or more safety locks are delayed significantly later than the others (1 second or more), then note the late lock position(s) and stop the lift.
        - Lower the Lift onto the nearest safety lock cutout.
        - Verify all four safety locks are resting on a safety lock cutout.
        - Tighten the Lift Cable on the Safety Lock position(s) that engage late.
        - Secure the Lift Cable by tightening its Jam Nut and repeat the procedure from step 14 until all safety locks engage the safety ladder cutout roughly at the same time.
18. Lower the platforms to the ground when it is safe to do so.
19. ***When you are satisfied the Lift is level and the Safety Locks are all engaging at roughly the same time, verify the Top Safety Ladder Nut, the Lift Cable and its Jam Nuts are all securely fastened at the top of each Lift Post***.

Accessories

Installing the Accessories

The accessories delivered with the lift include:

- **Tire Stops**. Installed at the front of the Lift, they hold the front tires of the vehicle in position.
- **Drive-up Ramps**. Installed at the rear of the Lift, they allow vehicles to be easily driven onto the runways.

Tire Stops

Tire Stops are placed at the Front of the Lift and prevent the tires of your vehicle from rolling too far forward.

To install the Tire Stops:


Rotor Clip

1. Find the two Tire Stops, Pins, and Rotor Clips needed.
2. Put one Tire Stop in position in between the Tubes on the front of the runway, then put the Pin through the Tire Stop and the metal Tubes.
3. Secure the Tire Stop with a Rotor Clip installed on either end of the Pin.
4. Repeat Steps 2 and 3 for the other Tire Stop.

Drive-up Ramps

The Lift uses Drive-up Ramps for vehicles to be easily driven onto the runways.

To install the Drive-up Ramps:

1. Find the required components: two Ramps, two Ramp Pins, and four Rotor Clips.
2. Put a Ramp into position at the rear of the runway, with the Ramp Tube aligned between the two tubes attached to the runway.
3. Slide a Ramp Pin through the three tubes, then put two Rotor Clips on both ends of the Ramp Pin.

Note: The Ramps are heavy and awkward, so it is recommended to have two people install them; one to hold the Ramp, the other to put the components into place.

4. Repeat Steps 2 and 3 for the other Ramp.

To apply the Anti-Slip Tape:

1. Clean the runway. Use a broom or brush to remove loose dirt and debris from the runway.
2. Thoroughly wash, rinse, and dry the runway using a mild solution of soap and clean water to remove any oils, grease, and water-soluble contamination. Dry the runway with a clean cloth and allow to air dry.
3. Cut the Anti-Slip Tape into four equal sections. Suggested length is 72 in. (1,829 mm).
4. Verify the runway is dry and clean. It is critical for maximum adhesion of the Anti-Slip Tape that the runway be dry, free of dirt, oils, and grease.
5. Measure and mark the runways with pencil guidelines to outline the tape installation area on the ramp. Refer to the figure on the next page for a suggested layout of the Anti-Slip Tape.

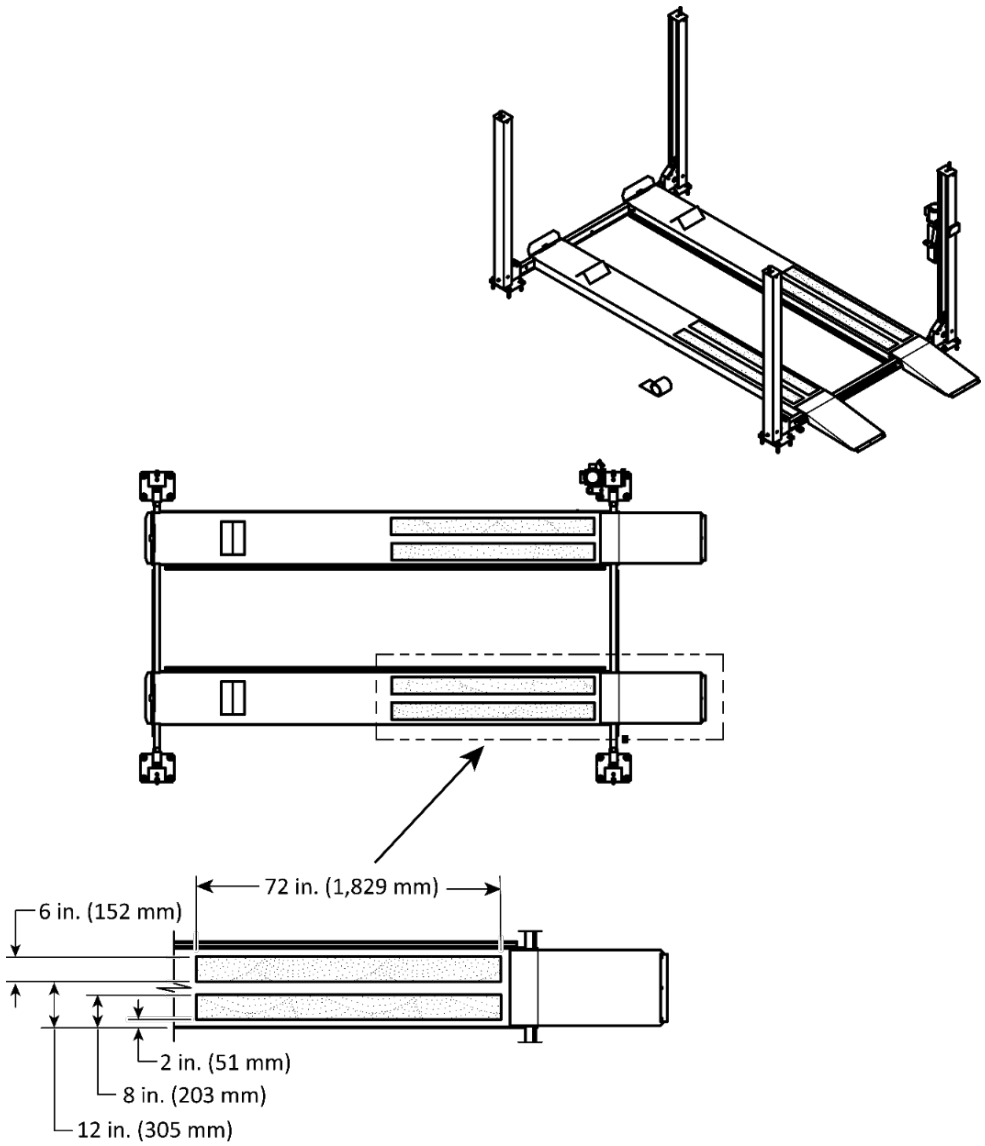
IMPORTANT! Do not install the Tape directly on the edge of a runway. Stay at least 1 in. (25 mm) away from edges. Do not attempt to bend the Tape over an edge.

6. The Anti-Slip Tape's adhesive side is protected by a paper or plastic film. This film should be removed a few inches at a time to apply the Tape to the runway.

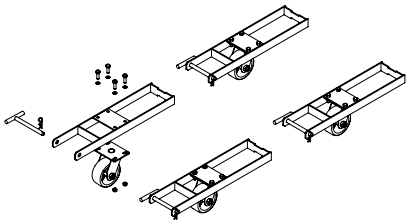
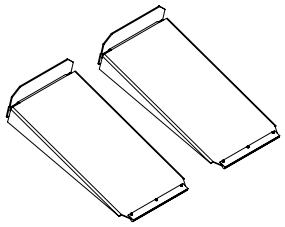
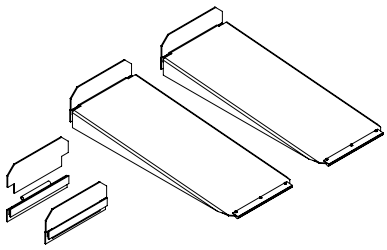
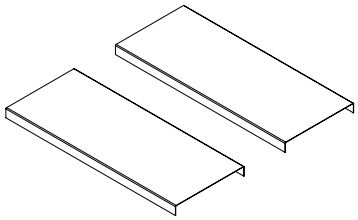
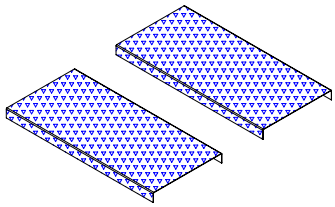
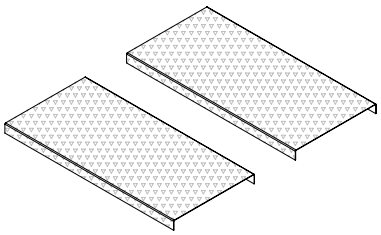
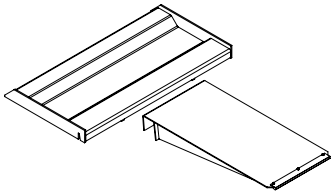
IMPORTANT! Wash your hands and handle the tape by its edges. Minimize contact between the adhesive and your hands. Any oil from your hands will reduce the adhesive's long-term effectiveness.

IMPORTANT! **BendPak recommends two people work together to install the Tape**. One person removes the backing and applies the Tape to the runway while the second holds the Tape in place over the guidelines marked on the runway.

7. Lay one section of the Anti-Slip Tape on the runway and peel back about 2 in. (51 mm) of the protective film. Apply the adhesive side to the runway inside the guidelines created in step 5.
8. Slowly remove the film while pressing the exposed Tape's adhesive side into the runway. Work slowly and apply 2 to 5 in. (51 to 127 mm) at a time, staying within the guidelines.
9. After applying the Tape use a heavy rubber roller to press the Tape onto the runway and to ensure firm contact with the adhesive.
10. Apply the Anti-Slip Tape to the remaining area of the Lift's runways similar to the figure.



Optional Accessories

HD-9 Caster Kit (5210997)	Use to move the HD-9 around the shop. ***Not compatible with the HD-9SW or HD-9SWX***	
HD-9 (36 in.) Aluminum Approach Ramp Assembly (5174497)	36 in. (914 mm) Aluminum Approach Ramps / Pair	
HD-9 Super Extended Aluminum Approach Ramp Assembly (5174705)	48 in. (1,220 mm) Extended Aluminum Approach Ramp Kit	
HD-9 Aluminum Solid Deck Kit (5210174)	Aluminum deck fits HD-9STX/XW/XL/SWX ***Narrow runway setting only***.	
HD-9ST Aluminum Solid Deck Kit (5210207)	Aluminum deck fits HD-9ST ***Narrow runway Setting only.***	
HD-9 Wide Aluminum Solid Deck Kit (5210208)	Aluminum deck fits HD-9XL/SWX ***Wide runway Setting only.***	
HD-9 Third Wheel Kit (5210247)	Used to lift and store 3-wheeled vehicles on the HD-9 Series Lift. Includes a heavy-duty wheel trough and light-weight aluminum ramp.	

Bleeding the Hydraulic Cylinder

The Hydraulic Cylinder on the HD-9 Lift is self-bleeding, which means that in most cases any air in the system can be removed by raising and lowering the runways a few times, “bleeding” the Hydraulic System of the unwanted air.

⚠ **WARNING** Before performing any maintenance on the Lift (for example, bleeding the Hydraulic Cylinder or adding Hydraulic Fluid), make sure the runways are fully lowered, and the power source has been completely disconnected. If your organization has Lockout/Tagout policies, make sure to implement them after connecting to the power source.

⚠ **DANGER** Always refer to the lubricant and hydraulic fluid manufacturer’s Material Safety Data Sheet (MSDS) for proper handling and disposal of chemicals.

Symptoms of air in the Hydraulic System include runways moving erratically and/or making odd noises. These could be caused by other situations; refer to **Troubleshooting** for more information.

To bleed the Hydraulic System:

1. Raise and lower the runways up to six times; ***pause one minute between cycles***.
   The Lift’s motor cannot run continuously; it is designed for regular use, but not continuous use.
2. Watch the runways as you raise and lower them.
   When the Lift stops moving erratically or stops squeaking, you can stop the bleeding process.
3. 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 more Hydraulic Fluid if necessary.

You can damage your motor by running it without enough Hydraulic Fluid in the reservoir.
If the Lift is still moving erratically or making odd noises after bleeding the Hydraulic System, refer to **Troubleshooting** for more information.

Test the Lift

BendPak strongly recommends doing an Operational Test of your Lift with a standard Vehicle on the runways before starting normal service (a typical Vehicle is not required, but is recommended).

During the Operational Test, watch the Lift and its components and check for proper installation and operation. If you run into an issue that is not solved, refer to **Troubleshooting**.

Note: Residual air in the Hydraulic Systems can cause the Lift to shake, move erratically, or squeak when you start using it; this is normal. This issue should diminish as the Hydraulic System is self-bleeding. If it does not, try bleeding the Cylinder of air. If it still does not cease, refer to **Troubleshooting** for additional information.

To test your Lift:

1. Before using the Lift, make sure to check for people, pets, or objects that might be in the path of the Lift as you raise and lower it.
2. Drive the Vehicle onto the runways while centering the Vehicle’s Tires in the middle of each runway.
3. Place the Vehicle in park, apply the parking brake, or in gear if a manual transmission, and chock one of the wheels positioned at the rear of the Lift, opposite the Tire Stop.
4. Press and hold the **Up** button.
5. After the runways pass three or four Safety Locks (you will hear them), release the **Up** button.
6. Press and hold the pushbutton on the Pushbutton Air Valve, then press and hold the Lowering Handle. The runways back down onto the Safety Locks they just passed.

⚠ **CAUTION** ***Never leave the Lift without making sure that all four Safety Locks have engaged on locking positions at the same height***. If one of the four Safety Locks do not fully engage, the runways will not be level, and you could risk damaging any Vehicles sitting on or underneath the runways.

7. Press the **Up** button for a few seconds to disengage the Safety Locks, then release the **Up** button.
8. Press and hold the pushbutton on the Air Valve, then press and hold the Lowering Handle.
9. When the runways reach the ground, release the Lowering Handle.
10. Wait for one minute.

⚠ **CAUTION** Always take a break between cycles. The Power Unit's motor is ***not*** constant duty.

11. Repeat the process, this time raising the runways to a higher Safety Lock.
12. If the Lift is working without shaking, or squeaking, there is no need to repeat the procedure.

    If the Lift is shaking, moving erratically, or squeaking (which is normal during the start-up period), repeat the procedure a couple more times, with at least a one-minute break between cycles.

If you continue to have issues, refer to **Troubleshooting** for assistance.

Final Checklist

Make sure the following checks have been completed ***before*** putting the Lift into service:

- Review the **Installation Checklist** to make sure all steps have been performed.
- Make sure the Power Unit is receiving power from the power source.
- Check the Hydraulic Fluid Reservoir on the Power Unit; it must be full of approved Hydraulic Fluid or automatic transmission fluid. ***You can damage the motor by running it without enough fluid.***
- Check the Hydraulic System for leaks.
- Make sure all four Posts are properly anchored, shimmed, level, and stable.
- Make sure all Cables are properly seated in their Sheaves.
- Make sure all Safety Locks are operating normally.
- Make sure the backup Slack Safety Locks are ***not*** engaged.
- Make sure a copy of the *Installation and Operation Manual* is left with the Lift.
- If it has not been done already, perform an Operational Test of the Lift with a typical Vehicle. Refer to **Test the Lift**.

Outdoor usage

Your Lift is designed for indoor use, but if you decide to use it *outside*, you should be aware of the following:

- **You may void your warranty**. Damages to the Motor or rusted components on the Lift caused by exposure to outdoor elements are not covered by warranty.
- **Cover the Lift**. Use a canopy or something similar to block the Lift from the sun and any precipitation, reducing the impact of exposure to the weather.
- **Protect the Power Unit**. ***IMPORTANT***. The Power Unit has an electric motor, and if the motor becomes wet, it is possible for someone to be electrocuted, a fire may start, and most certainly the motor will short circuit and stop functioning. These things are not covered by the warranty. Always keep the Power Unit and all wiring covered, clean, and dry.
- **Increase the Maintenance**. Placing your Lift outside subjects it to outdoor elements like wind, rain, dust, sunlight, snow, and other corrosive elements, and the maintenance on your Lift will increase dramatically. For example, if the maintenance schedule recommends performing a particular task monthly, then expect to perform the task bi-weekly.
- **Increase the Replacement Parts**. Everything on the Lift breaks down faster if the Lift is outside, so be prepared to order replacement parts much sooner than with indoor Lifts.

Operation

This section describes how to operate your Lift.

Safety Considerations

Do the following every time ***before*** you raise a Vehicle on your Lift:

- **Check the Lift**. Walk all the way around the Lift and check for any missing, heavily worn, or damaged parts. Do not operate the Lift if you find any issues. Instead, take it out of service, then contact your dealer, email **support@bendpak.com**, or call **(800) 253-2363** option 7, then 4.
- **Check the area**. Keep the area around and under the Lift clean and free of obstructions; anything that could cause a problem. Do not forget to check ***above*** the Lift. If you find an obstruction, move it out of the way. If you find any other issues, resolve them before using the Lift. Do not allow any people or animals within 30 ft. (9.1 m) of the Lift while it is in motion.
- **Check the operators**. Make sure everyone who is going to operate the Lift has been trained in its use, has read the labels on the unit, and has read the manual. Only the operator at the Controls should be within 10 ft. (3 m) 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, alcohol, or medication to operate the Lift. Do not allow any unauthorized personnel to operate the Lift.
- **Check for safety**. Ensure everyone who will be walking near the Lift is aware of its presence and takes appropriate safety measures. Only put Vehicles on the runways.
- When raising a Vehicle, do not leave the area until the Platform is engaged on a Safety Lock. When lowering the Lift, do not leave the area until it is on the ground.
- **Check the Vehicle**. Never exceed the Lift's weight rating. Do not allow people inside the Vehicle while it is on the Lift. Double check that you have everything you need out of the Vehicle before raising the Lift. Make sure the Vehicle is not overbalanced on either end or either side.
- **NEVER** park any vehicle on the Lift's runways without placing the wheel chocks securely at the front and rear sides of one of the tires positioned at the rear of the Lift, so that the vehicle cannot roll off the Lift. Vehicles parked on Lift ***MUST*** also be placed in Park or First Gear (Manual Transmission) with the Parking Brake fully applied.

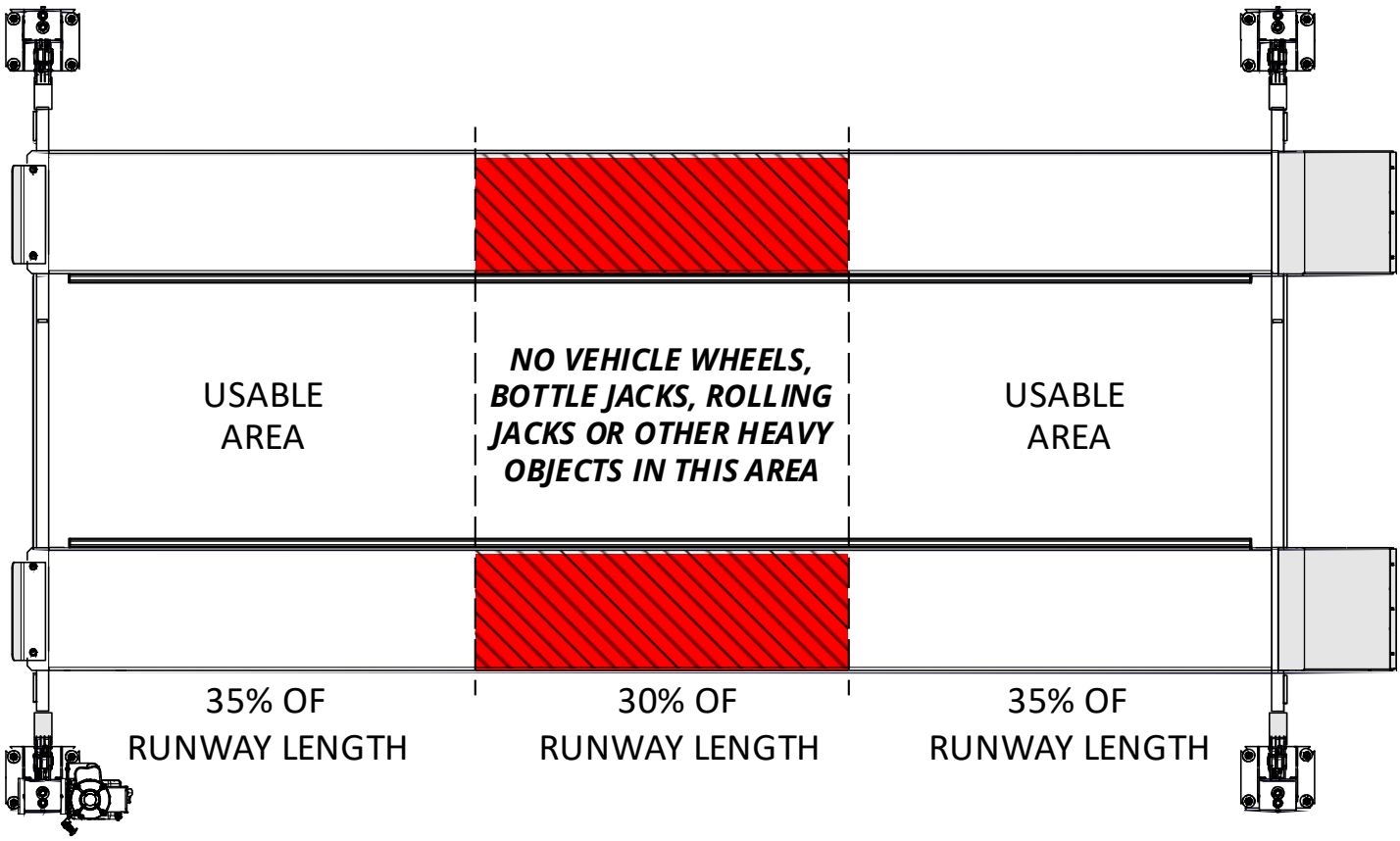
⚠ **DANGER** Never walk under any Lift unless you have verified that the Lift platforms are securely engaged on all four safety locks.

Usable Area

The strength of the runways is reduced in the middle. Do ***not*** place the wheels of a vehicle you are raising in this area. This same restriction applies to Rolling Jacks and Bottle-Jack Trays; they must ***not*** be used in this middle section of the runways.

⚠ **CAUTION** Do not load Vehicles so that the Wheels are in the middle of the runways or use Rolling Jacks or Bottle-Jack Trays in that area; it could permanently damage the runways. Damage caused by this **unsupported** use of the Lift is ***not*** covered by the Warranty.

This will not impact the use of the Lift in most cases, as the wheelbase length of most Vehicles put the Wheels in the Usable Areas.



Top view. Do not scale. Not all components shown.

Using the Controls

The Controls for your Lift include:

- **Up button**. Press and hold to raise the runways. Located near the top of the Power Unit.

  To put runways onto a Safety Lock position: Raise the runways a little above where you want them, then press and hold the Lowering Handle to back the runways down onto the Safety Locks position (do not press and hold the pushbutton on the Pushbutton Air Valve). runways stop going down when they are engaged on a Safety Lock.

  Before leaving the Lift, make sure all four corners are engaged on their Safety Locks.

- **Lowering Handle**. Press and hold to lower the runways. Located in the middle of the Power Unit, the Lowering Handle is long and has a ball at the end.

  To lower raised runways down to the ground press and hold the Pushbutton on the Pushbutton Air Valve first, then ***press and hold*** the Lowering Handle.

  Watch the runways as they move down to make sure they are coming down evenly. If they are not, stop lowering the Lift and troubleshoot the problem.

- **Push Button Air Valve**. Releases the Safety Locks when depressed.

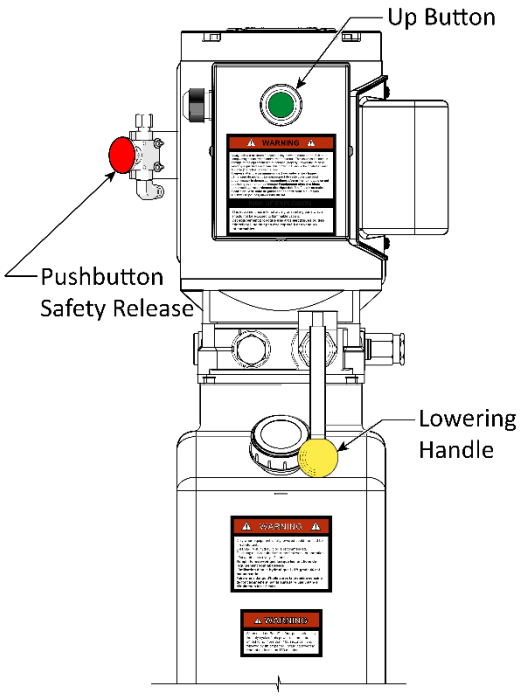
⚠ **WARNING** Only leave the runways either engaged on a safety lock position or fully lowered.

Pushbutton Air Valve. Press and hold the pushbutton safety release air valve as part of the process to lower the runways. It is located on either side of the Power Unit (depending on where it was installed). Pressing and holding the pushbutton safety release disengages the safety locks, required to lower the runways.

To raise the runways to a safety lock:

1. Press and hold up button.
2. When just past the desired height, release the up button.
3. Press & hold lowering handle.
4. Runways stop descending when engaged on a safety lock; release lowering handle when they stop.

   Do not press and hold the pushbutton safety release.



To lower runways:

1. Press the up button for a second or two.

   This disengages the runways from the Safety Locks.
2. Press and hold the *pushbutton and lowering handle at the same time*. runways will begin to lower.
3. When runways are fully lowered, release the pushbutton and lowering handle.
4. Drive the vehicle off runways.

Pay close attention while lowering the Lift!

Verify all four corners are descending evenly! If one corner remains on its Safety Lock while the other three corners descend, stop lowering immediately and raise the Lift Platforms to return the runways to the Safety Lock where all the Locks are engaged. Refer to the **Troubleshooting Section**.

Raising and Lowering Vehicles

Keep the following in mind when operating the 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. If there is something in the way, stop the Lift and move the object out of the way. Watch the Lift carefully as it raises and lowers.

⚠ **DANGER** Pay careful attention when raising or lowering vehicles. If a person or pet becomes stuck under the Lift, they could be injured or, in rare cases, killed.

- **The Power Disconnect Switch exists for a reason**. If something unexpected occurs while using the Lift, use the **Power Disconnect Switch** to immediately stop the Lift from moving.
- **Retrieve what you need from the Vehicle before lifting it**.
- ***Never raise your Lift with people in the Vehicle***.
- **Make sure the Vehicle is balanced**. If there is extra weight on one end or the other, remove the items or balance out the load before raising the Vehicle.
- **Center the Vehicle's wheels on the runway**. Centered wheels keep the Vehicle balanced.

To raise a Vehicle:

1. Make sure the runways are on the ground. If they are not, move them to the ground.
2. Drive the Vehicle onto the runways.

   Make sure all four Wheels are fully on the runways, as close to the center of the runways as possible.

   Put the Vehicle into Park and apply the parking brake. If your Vehicle has a manual transmission, place the transmission in first gear, not in neutral.
3. Securely chock one of the tires at the rear of the Lift to prevent rearward movement of the vehicle.
4. Walk around the Lift to make sure no obstructions will interfere with the Vehicle being lifted.
5. Press and hold the **Up** button.
6. When the runways arrive at the desired locking position, raise them slightly more, then release the **Up** button and *press and hold* the Lowering Handle.

   The runways engage on the most recently passed Safety Locks.

   How do you know if one of the four Safety Locks has not engaged? The non-engaged corner of the Lift will continue to move down, while the others stay where engaged. This results in a runway that is not flat.

   Always check to make sure that all four Safety Locks are engaged at the same height before working under or near the raised Vehicle.

⚠ **WARNING** Only leave your Lift engaged on all Safety Locks or fully lowered. Never walk under the lift unless the runways are engaged on all Safety Locks.

7. With the runways engaged on the Safety Locks, check around the Vehicle to make sure everything looks good.

   If you see anything wrong, fix it before anyone is near or beneath the runways.

To lower a Vehicle:

⚠ **DANGER** ***Pay close attention while lowering the Lift! Verify all four corners are descending evenly!*** If one corner remains on its Safety Lock while the other three corners descend, stop lowering immediately and raise the Lift Platforms to return the runways to the Safety Lock where all the Locks are engaged. Refer to the **Troubleshooting Section**.

⚠ **DANGER** **Crushing hazard and pinch points**. Do not place any part of your body between the top platform and any moving part of the Lift unless visual confirmation is made that the safety locks are fully engaged.

8. Double check that no one except the Lift operator is within 10 feet of the Lift.
9. Press the **Up** button to disengage the runways from the Safety Locks.
10. After a second or two, release the **Up** button.
11. Press and hold the Pushbutton Air Valve ***and*** the Lowering Handle *at the same time*.
12. If all four corners of the Lift are descending evenly, bring the runways all the way to the ground then release the Pushbutton Air Valve and the Lowering Handle.
13. Remove the Tire Chocks, then carefully drive the Vehicle off the runways.

Maintenance

DANGER Before performing any maintenance on your Lift, ensure it is ***completely*** disconnected from power. If your organization has Lockout/Tagout policies, make sure to implement those procedures after connecting to the power source.

DANGER Always refer to the lubricant and hydraulic fluid manufacturer's Material Safety Data Sheet (MSDS) for proper handling and disposal of chemicals.

To maintain your Lift:

- **Daily**: Keep the Lift clean. Wipe up any spills and clean any dirty surfaces.
- **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, take the Lift out of service, disconnect it from power, and make arrangements to fix the damage or wear.

- **Daily**: Make sure all Safety Locks are in good operating condition. Do not use your Lift if the Safety Locks are damaged or excessively worn.
- **Monthly**: Check all labels on the Lift. Replace them if they are illegible or missing.
- **Monthly**: Grease all lubrication points on the Lift.
- **Monthly**: Check Hydraulic Fluid levels. Refill if low.
- **Monthly**: Lubricate the wire rope (Cables). Use a wire-rope lubricant such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant.
- **Monthly**: Check cable connections, bolts, and pins for proper mounting and torque.
- **Every two months**: Check all Anchor Bolts to make sure they are properly torqued. If they are loose, tighten them.
- **As needed**. If the Lifting Cables show signs of damage or extreme wear, take the Lift out of service and replace them.

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

Fastener Torque Table

FASTENER TORQUE CHART

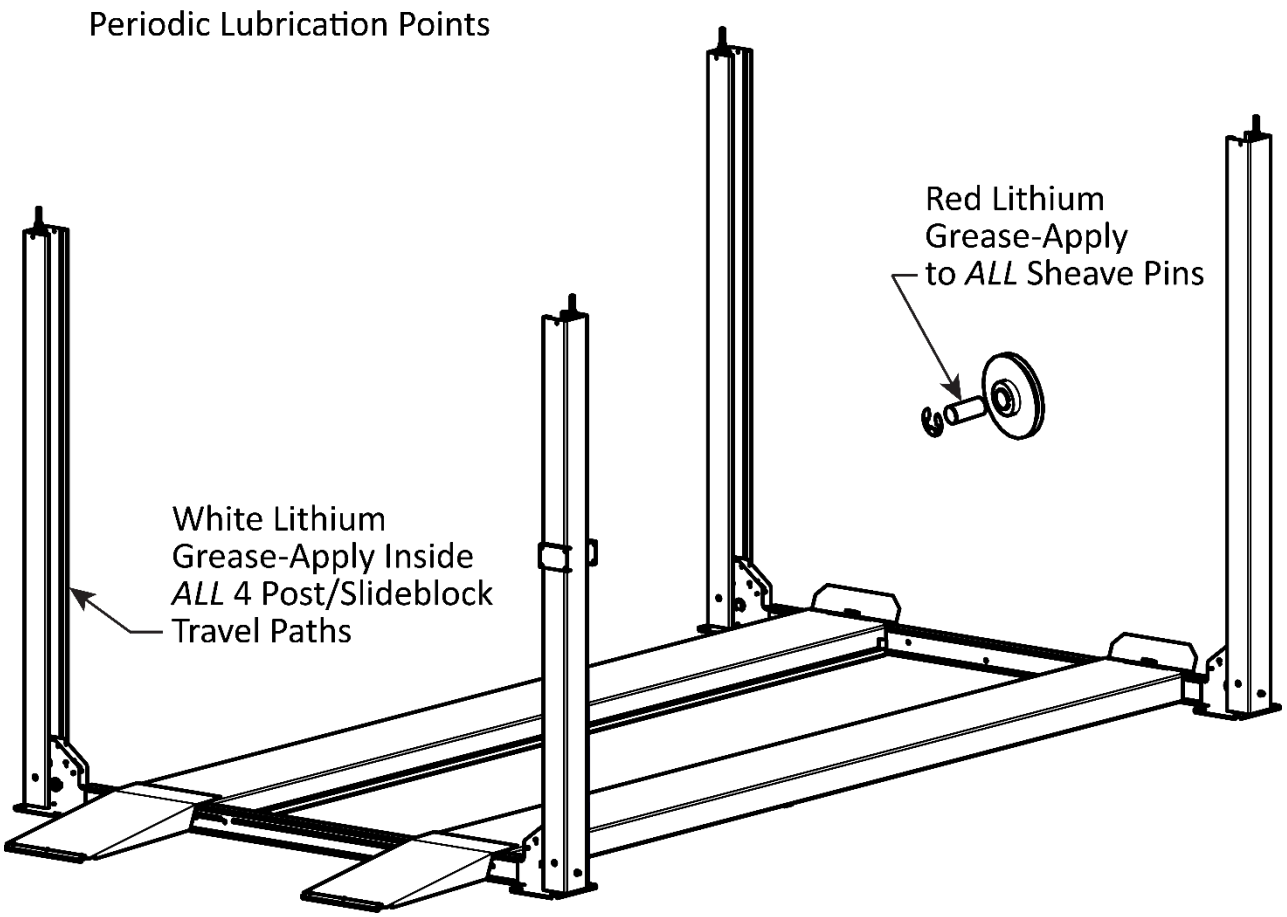
Bolt Grade (SAE)		SAE Grade 0-1-2			SAE Grade 5			SAE Grade 8			Socket Head Cap Screw SAE Grade		
Bolt Class (Metric)		4.6	Metric Class 4.6		8.8	Metric Class 8.8		10.9	Metric Class 10.9		12.9	Metric Class 12.9	
Bolt Size (SAE)	Bolt Size (Metric)	Tightening Torque			Tightening Torque			Tightening Torque			Tightening Torque		
		Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)	Lubricated (ft-lbs)	Zinc Plated (ft-lbs)	Plain & Dry (ft-lbs)
1/4-20	M6 x1.0	2.3	2.6	3.0	5.8	6.6	7.7	8.3	9.4	11.1	9.7	11.0	13.0
5/16-18	M8 x 1.25	3.8	4.3	5.0	9.7	11.0	13.0	13.9	15.8	18.5	16.3	18.4	21.7
3/8-16	M10 x 1.50	10.8	12.3	14.4	27.9	31.6	37.2	39.9	45.2	53.2	46.7	52.9	62.2
7/16-14	N/A	24.0	27	30.0	35.0	42	50.0	55.0	59	70.0	61.0	68	76.0
1/2-13	M12 x 1.75	18.9	21.4	25.2	48.7	55.1	64.9	69.6	78.9	92.8	81.4	92.2	108.5
9/16-12	M14 x 2.00	30.2	34.2	40.2	77.8	88.1	103.7	111.3	126.1	148.4	130.0	147.4	173.4
5/8-11	M16 x 2.00	47	53	62	121	137	161	173	196	230	202	229	269
3/4-10	M18 x 2.50	65	73	86	167	189	222	239	270	318	279	316	372
7/8-9	M22 x 2.50	136	155	182	320	365	430	460	515	600	510	575	640

WARNING! Prior to Installation, inspect all accompanying manuals, parts lists and catalogs to ensure you have all the necessary parts. Identify all fasteners and their proper torque settings as illustrated on this chart. Proper torquing practices cannot be over emphasized. Torque values are provided as a convenient method of achieving correct pre-loading of highly stressed fasteners. If the fasteners are not properly plated, the fastener threads are not clean and free of deformation, or are not properly lubricated, the correct fastener pre-load will not be achieved even though the given torque value is reached. For this reason, it is critical that all fasteners be inspected for proper plating, thread form and correctly lubricated prior to torquing. Failure to verify a fastener's serviceability or to correctly lubricate the fastener prior to assembly and torquing will result in the fastener not being properly pre-loaded and subsequent failure of the fastener may occur. The torque values can only be achieved if the nut (or tapped hole) has a proof load greater than or equal to the bolt's minimum ultimate tensile strength. Clamp loads estimated as 75% of proof load for specified bolts. Torque values are listed in foot-pounds. Torque wrenches should be calibrated on an annual basis. Never use an impact driver on a torque multiplier.

Lubricating the Lift

To properly maintain your Lift, so that it provides years of service, it is important to periodically inspect and lubricate key areas as needed. There are several lubrication points on the Lift.

- **Inside of the Crosstube Gussets**. Lubricate monthly the area inside each post, where the Crosstube Gussets ride (a total of eight areas) with white lithium grease.
- **Under the Cable Sheaves**. Sheave pins under the power side runway (apply red lithium grease during assembly and as required thereafter). Put a small amount of red lithium grease on each lubrication point before you use the Lift and monthly after putting the Lift into service. The following graphic shows the lubrication points on the lift.



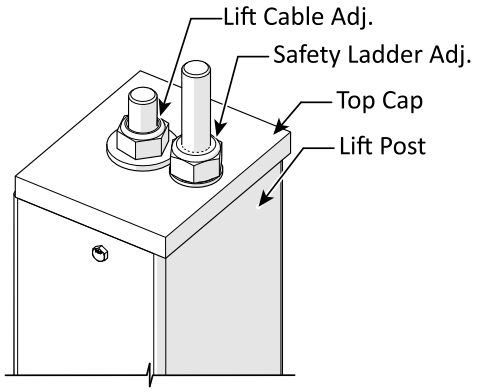
Lift Cable Adjustment Procedure

All Lift Cables will stretch over time. Longer cables will stretch more than shorter cables. This procedure is designed to adjust the Safety Lock engagement and disengagement to compensate for this effect.

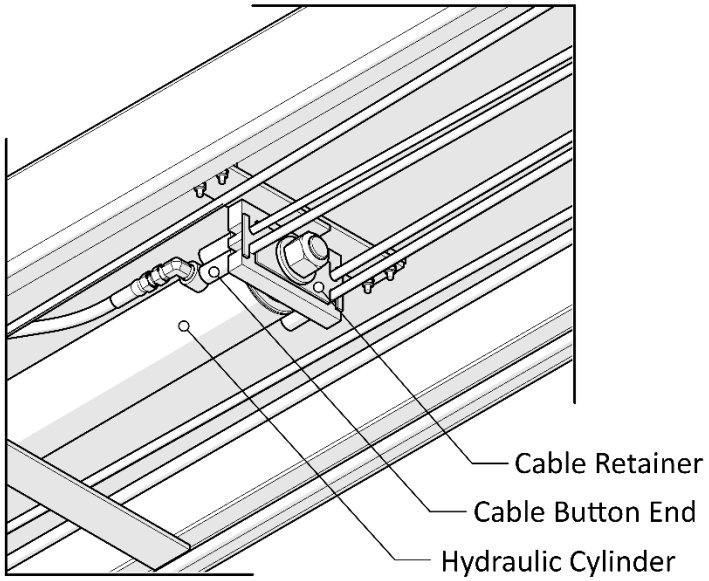
Tools Required: Step ladder, level, and open-end wrenches.

⚠ **WARNING** You ***must*** always wear OSHA-approved (publication 3151) personal protective equipment when maintaining or repairing the Lift: leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are ***mandatory***.

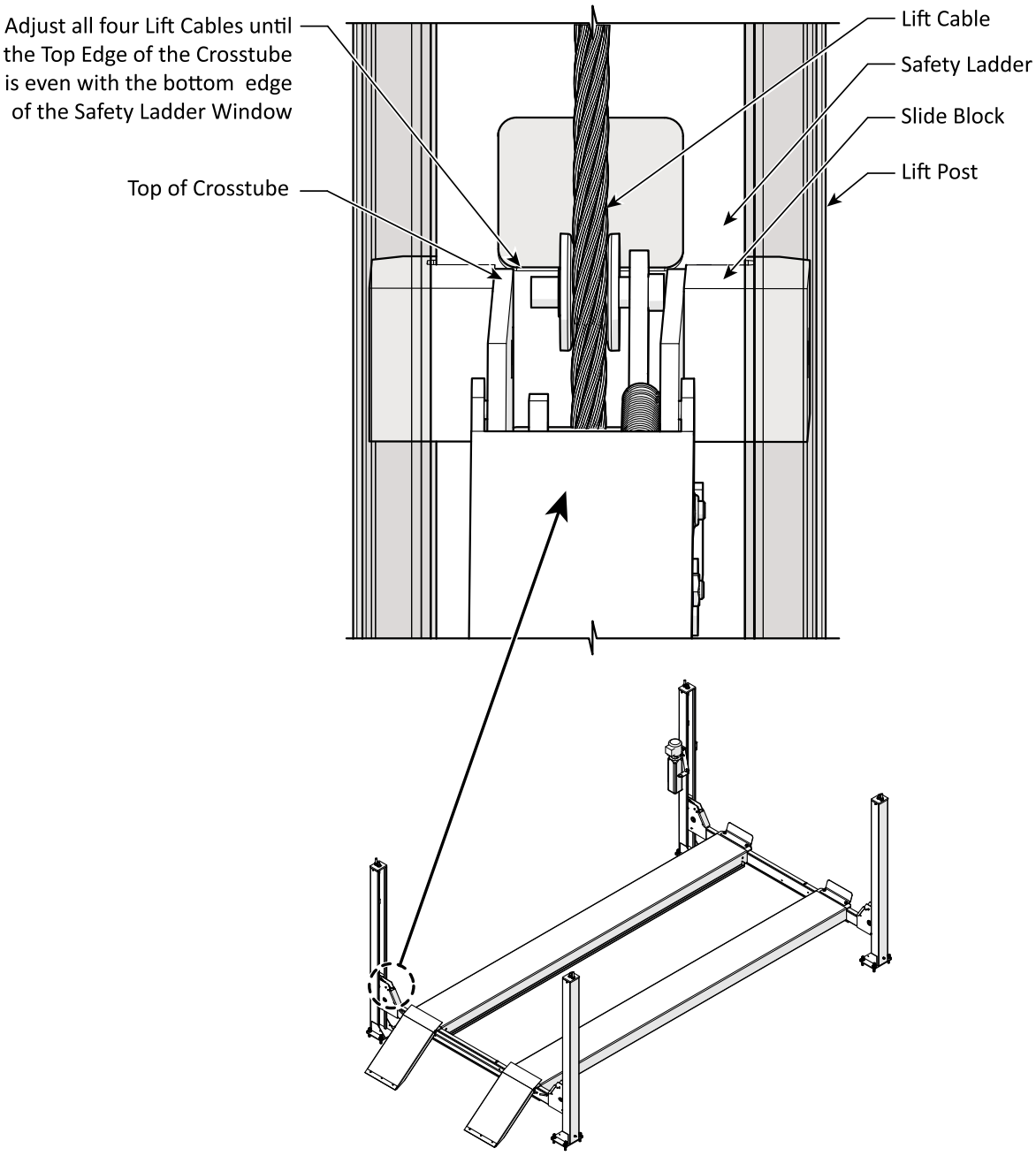
1. Verify the Crosstubes are resting on the same safety lock measured from the bottom on all four lift posts.
2. Use a level to verify the runways are level before attempting to adjust the cables.
3. If a runway requires adjustment, use a wrench to loosen the stop nut under the top cap. Adjust the safety ladder up and down using the safety ladder adjustment nut on top of the lift post as required to achieve a level runway.
4. Once level, tighten the stop nut under the top cap and verify the safety ladder adjust nut is snug against the top cap as well.



5. Verify the threaded Lift Cable End is secured to the Top Cap on each Lift Post.
6. Verify *all four Cables* are under ***slight*** tension, no slack should be present anywhere in the system.
7. Use a ladder to access the top of one lift post. ***Do not stand on the runway*** while adjusting the lift cables.



8. Adjust *all four Cables* until the top of the Crosstube is even with the bottom of the Safety Ladder Window on each Lift Post. Refer to the figure below.

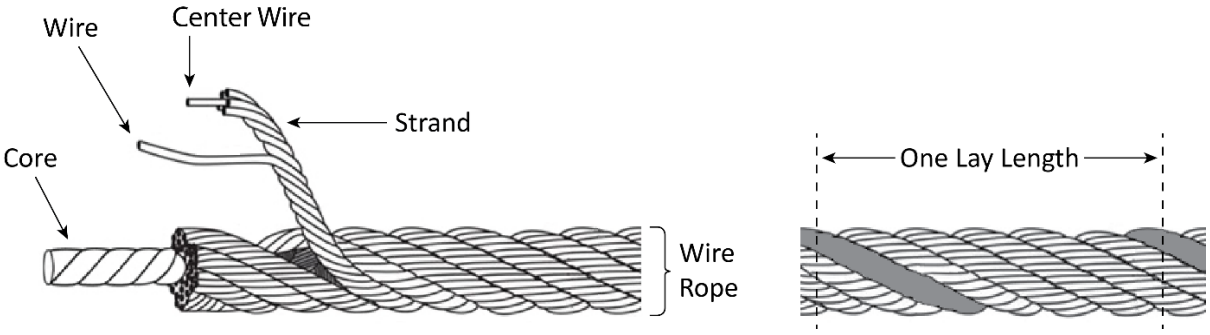


9. Raise and then lower the Lift Platforms while observing all four corners to verify the Lift is descending evenly. If one corner is ***not*** descending, stop the Lift and refer to **Troubleshooting**.

Wire Rope Inspection and Maintenance

Your Lift's Cables, which are wire rope, should be inspected regularly:

- Wire rope 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*; ***take it out of service!***



- Wire rope must always be maintained and in a well-lubricated condition.

  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 done at least every three months during normal operation.

- All Sheaves and guide rollers that contact moving wire rope should be given regular visual checks for surface wear and then lubricated to make sure they run freely. This should be done 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, such as: pump/spray dispensing, brush, hand, or swabbing.

- How often should the wire rope be inspected?

  Wire rope should be visually inspected at least once daily when in use, as suggested by American Petroleum Institute's Recommended Practice 54 guidelines. Any wire rope that meets the criteria for removal must be immediately replaced.

- When should wire rope be replaced due to broken wires?

  Wire rope should be removed from service if you see six randomly distributed broken wires within any one lay length (where a single strand makes a full turn around the rope) or three broken wires in one strand within one lay length.

- Are there other reasons to replace the wire rope?

  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, or 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 or wire brush 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 raise any wires that appear loose.

Lift and Hydraulic Fluid Disposal - End of Service Life

Once your Lift has reached the end of its service life it must be disposed of properly. Metal recyclers will be able to advise on methods and costs to remove the Lift and will *reuse* the materials, diverting them from landfills. The best option is to contact a metal recycling center and discuss the size and weight of the Lift to determine if the facility can deconstruct and recover the usable components and metals.

The Hydraulic Fluid, Cylinders, Hoses, Fittings, and the Power Unit itself must be disposed of in accordance with current national, state, and local regulations governing the use and disposal of hazardous materials. These components and any used Hydraulic Fluid ***must not*** be disposed of by dropping it into the trash or dumping it into the street. Hydraulic Fluid contains toxic ingredients that are harmful to the environment.

These components and the Hydraulic Fluid are required to be recycled or must be delivered to a hazardous waste collection facility.

If you have large amounts of Hydraulic 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 and materials 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.

Troubleshooting

This section describes how to troubleshoot your Lift.

⚠ **WARNING** If your Lift is ***not*** functioning correctly, ***you must take it out of service until it is repaired***. All repair work must be accomplished by qualified personnel. If your organization has Lockout/Tagout policies, make sure to implement them after connecting to the power source.

Runways do not raise or do 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 Hoses are pinched or leaking. Make sure the Power Unit is receiving power. If the Hydraulic Fluid is dirty, replace it with clean fluid. Make sure Lift is not overloaded.
Runways do not lower past the nearest Safety Lock even when pressing and holding the pushbutton.	Check to make sure all sections of the Air Line are connected and not leaking.
One corner of a Platform is lower than the other three corners.	The Safety Lock on the lower corner is not engaged. Raise the runways up, then lower them down onto the Safety Locks. Check to make sure all four Safety Locks are engaged on Safety Locks of the same height.
Runways move erratically or squeak when in use.	Move the runways up and down a few times to flush any residual air from the Hydraulic System. Make sure to pause for at least 2 minutes between cycles.
Runways do not stay up.	Check for leaking Hydraulic Fluid. Make sure the runways are left on their Safety Locks.
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.
Runways make odd noises.	Lubricate the Bushings on the Sheaves on the sides of the Crosstubes 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.

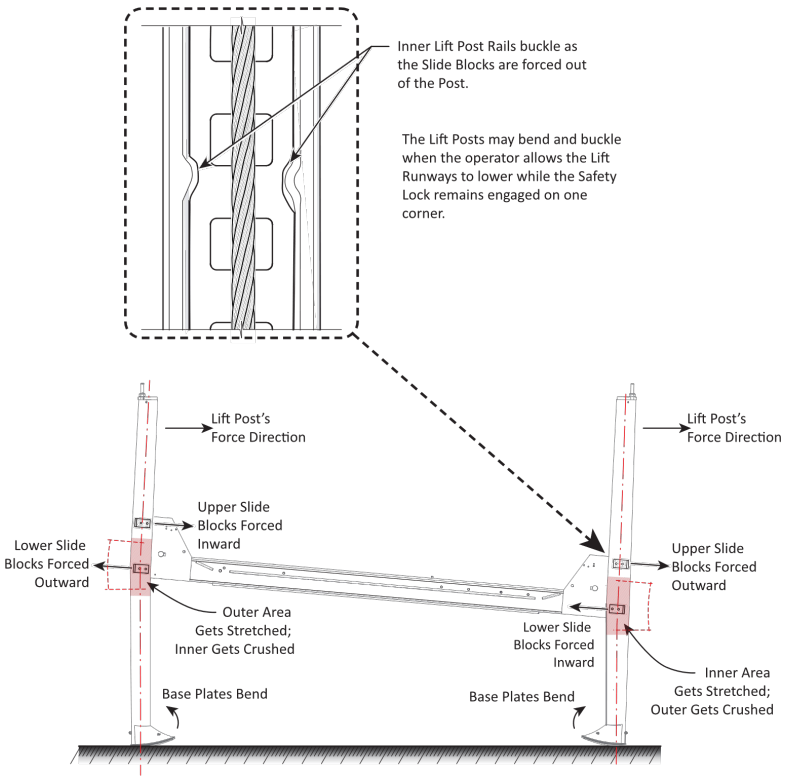
If you continue to have issues with your Lift, take it out of service, then contact your dealer, visit **bendpak.com/support**, email **support@bendpak.com**, or **(800) 253-2363** option 7, then 4.

One Corner of the runway is higher than the other three corners.

⚠ **DANGER** ***Stop lowering immediately! Clear the area of personnel!*** This condition indicates one Safety Lock has not disengaged while the operator has allowed the Lift to descend.

1. Place the Lift into a safe condition by raising the Lift until all four corners are equal.
2. Once all four corners are equal, attempt to lower the Lift until it rests on the closest Safety Lock. This puts the Lift into a safe condition with all 4 Crosstube ends on their Safety Locks.
3. If the Lift cannot be put into a safe condition, then contact BendPak support, go to **bendpak.com/support**, email **support@bendpak.com**, or call **(800) 253-2363,** then follow the prompts.
4. Once the Lift is in a safe condition, inspect to verify no damage has occurred. It is critical to Inspect the inner rails of the Lift Post. If any significant bending or distortion to the formed rails has occurred, then the Lift Post(s) may need to be replaced.

The figure below describes the forces and damage that can be expected if the operator allows one safety lock to remain engaged while the other three are allowed to descend. ***Failure to operate or maintain the Lift properly can lead to damage of the columns as illustrated in the figure below.***

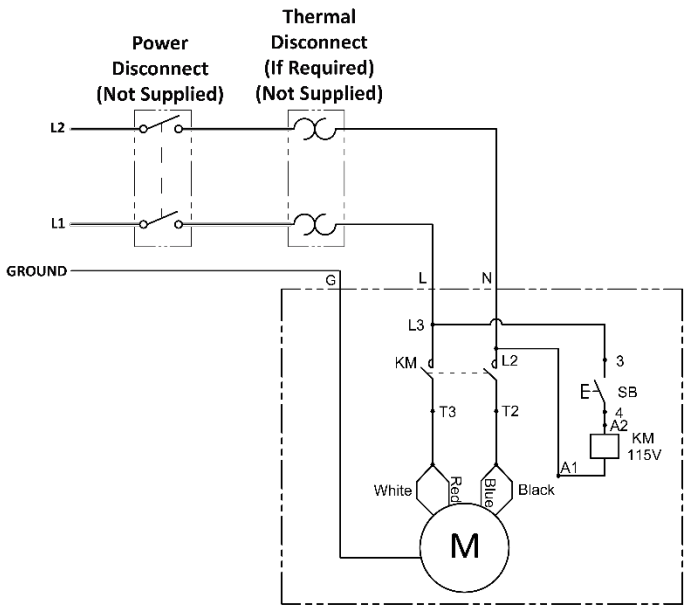


5. If no damage is found, perform the **Lift Cable Adjustment Procedure** found in the **Maintenance** section.

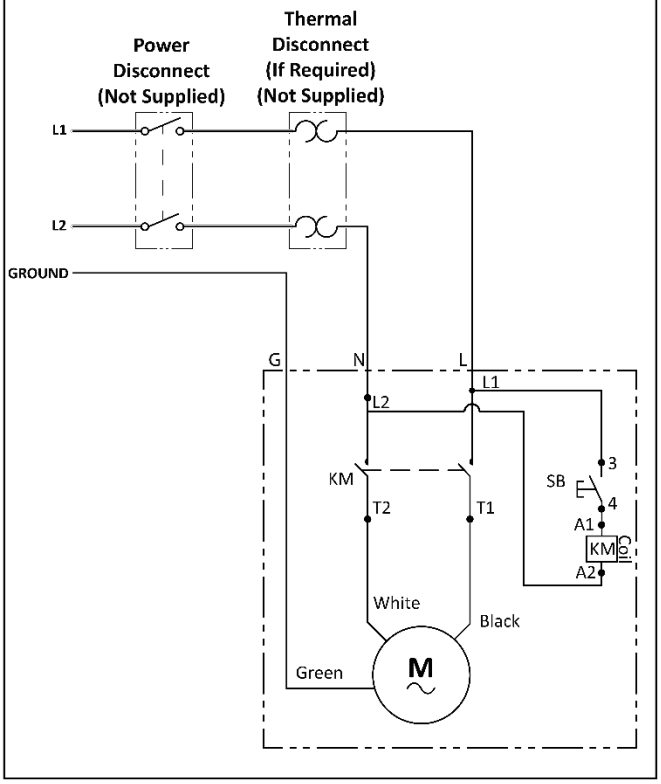
If you continue to have issues with your Lift, take it out of service, then contact your dealer, go to **bendpak.com/support**, email **support@bendpak.com**, or call **(800) 253-2363**.

Wiring Diagrams

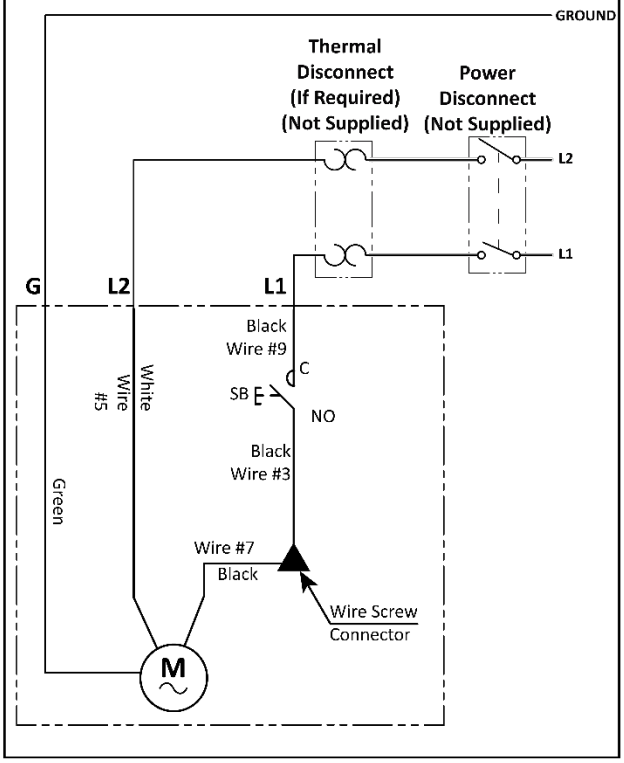
5585014
115VAC, FLA 14.6/15.5, 1-Phase, 60 Hz. 1.5 HP



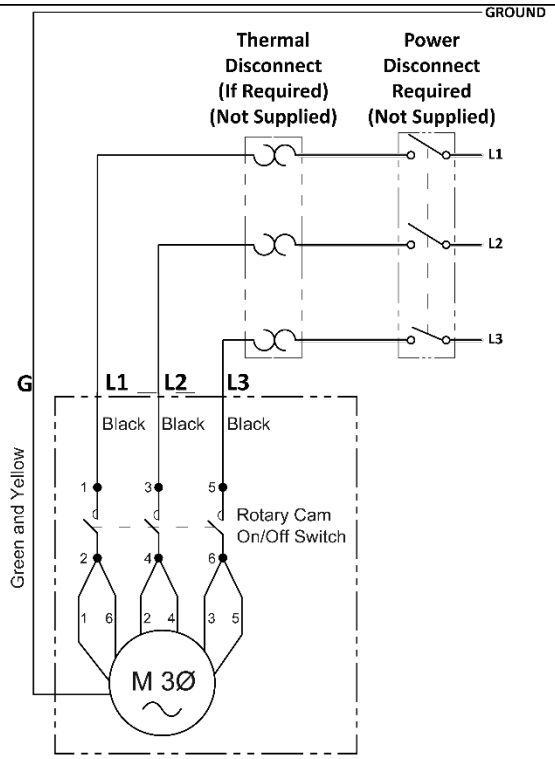
5585280
208-230VAC, FLA 12.7/12.9, 1-Phase, 50/60 Hz. 3 HP



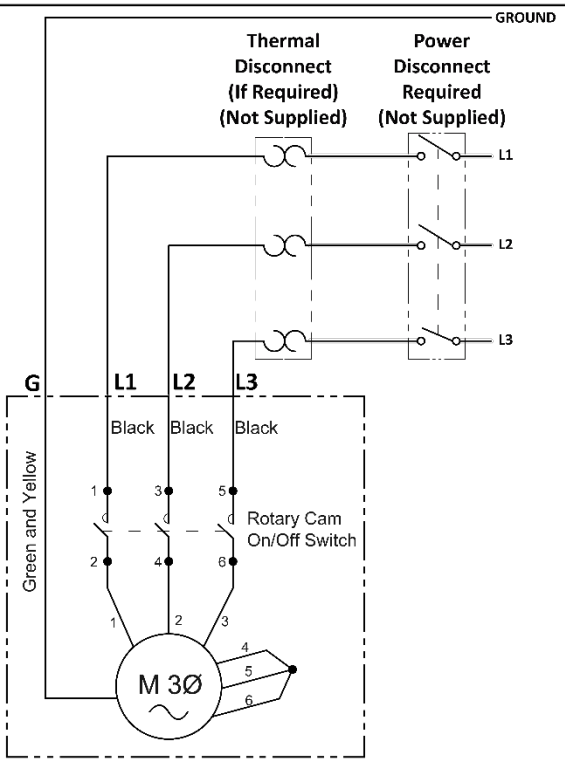
5585780
208-230VAC, FLA 8.8/8.4, 1-Phase, 50/60 Hz. 2 HP



5585247
208-240VAC, FLA 12.6A, 3-Phase, 50/60 Hz., 3 HP



5585247
380-460VAC, FLA 6.4A, 3-Phase, 50/60 Hz., 3 HP



Labels

A

BENDPAK
ABOVE-GROUND LIFTS
BendPak
1646 Lemonwood Drive
Santa Paula, CA 93060
U.S.A.
(805) 933-9970
www.bendpak.com

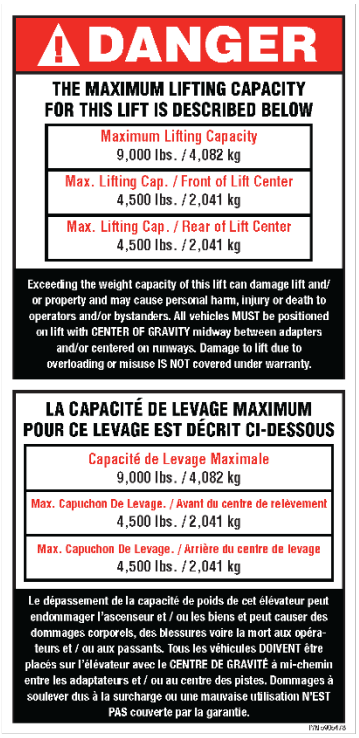
B


DANGER
VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.
Suspension components on this lift are intended to raise and lower lifts; they are NOT load-holding devices. Do not go under an elevated lift until visual confirmation is made that the lift is engaged on its Safety Locks. Refer to the manual for proper Safety Lock procedures and additional instructions.
VÉRIFIER VISUELLEMENT QUE TOUS LES VERROUS DE SÉCURITÉ PRIMAIRES SONT ENGAGÉS AVANT D'ENTRER DANS LA ZONE DE TRAVAIL.
Les composants de suspension de cet élévateur sont destinés à élever et abaisser l'ascenseur; ce ne sont PAS des dispositifs de maintien de la charge. Ne passez pas sous un ascenseur surélevé avant d'avoir obtenu la confirmation visuelle que l'ascenseur est engagé sur ses serrures de sécurité. Reportez-vous au manuel pour connaître les procédures de verrouillage de sécurité et les instructions supplémentaires.
WARNING
Wire Rope Inspection and Maintenance
Failure to read, understand, and follow these instructions may cause death or serious injury. Read and understand these instructions before using lift.
ATTENTION
Inspection et maintenance des câbles
Lisez et comprenez ces instructions avant d'utiliser l'ascenseur. Ne pas lire, comprendre et suivre ces instructions peut provoquer des blessures graves, voire mortelles.
IMPORTANT
OPERATION / MAINTENANCE
INSTRUCTIONS - PLEASE READ
TO RAISE LIFT
TO LOWER LIFT
REQUIRED MONTHLY MAINTENANCE
WARNING
ATTENTION

C


CAUTION
Lift to be used by trained operator ONLY.
CAUTION
Authorized personnel only in lift area.
WARNING
Clear area if vehicle is in danger of falling.
WARNING
Remain clear of lift when raising or lowering vehicle.
WARNING
Keep clear of pinch points when lift is moving.
WARNING
Keep feet clear of lift while lowering.
WARNING
Do not overide self-closing lift controls.
WARNING
Chock wheel to prevent vehicle movement.
NOTICE
Read operating and safety manuals before using lift.
NOTICE
Proper maintenance and inspection is necessary for safe operation.
NOTICE
Do not operate a damaged lift.

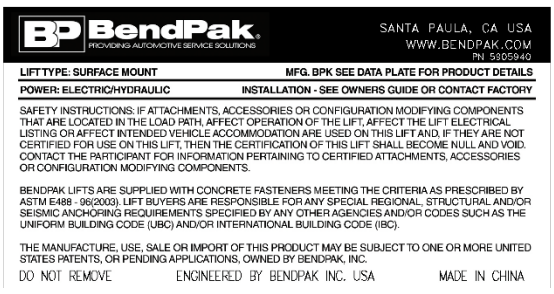
D


DANGER
THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW
Maximum Lifting Capacity
9,000 lbs. / 4,082 kg
Max. Lifting Cap. / Front of Lift Center
4,500 lbs. / 2,041 kg
Max. Lifting Cap. / Rear of Lift Center
4,500 lbs. / 2,041 kg
Exceeding the weight capacity of this lift can damage lift and/ or property and may cause personal harm, injury or death to operators and/or bystanders. All vehicles MUST be positioned on lift with CENTER OF GRAVITY midway between adapters and/or centered on runways. Damage to lift due to overloading or misuse IS NOT covered under warranty.
LA CAPACITÉ DE LEVAGE MAXIMUM POUR CE LEVAGE EST DÉCRIT CI-DESSOUS
Capacité de Levage Maximale
9,000 lbs. / 4,082 kg
Max. Capuchon De Levage. / Avant du centre de relèvement
4,500 lbs. / 2,041 kg
Max. Capuchon De Levage. / Arrière du centre de levage
4,500 lbs. / 2,041 kg
Le dépassement de la capacité de poids de cet élévateur peut endommager l'ascenseur et / ou les biens et peut causer des dommages corporels, des blessures voire la mort aux opérateurs et / ou aux passants. Tous les véhicules DOIVENT être placés sur l'élévateur avec le CENTRE DE GRAVITÉ à mi-chemin entre les adaptateurs et / ou au centre des pistes. Dommages à soulever dus à la surcharge ou une mauvaise utilisation N'EST PAS couverte par la garantie.

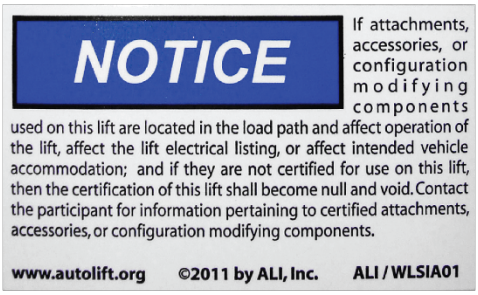
E


ATTENTION
MAXIMUM LIFTING CAPACITY
CAPACITÉ DE LEVAGE MAXIMUM
9000 Lbs.
4082 Kg.
P/N 5905477

F

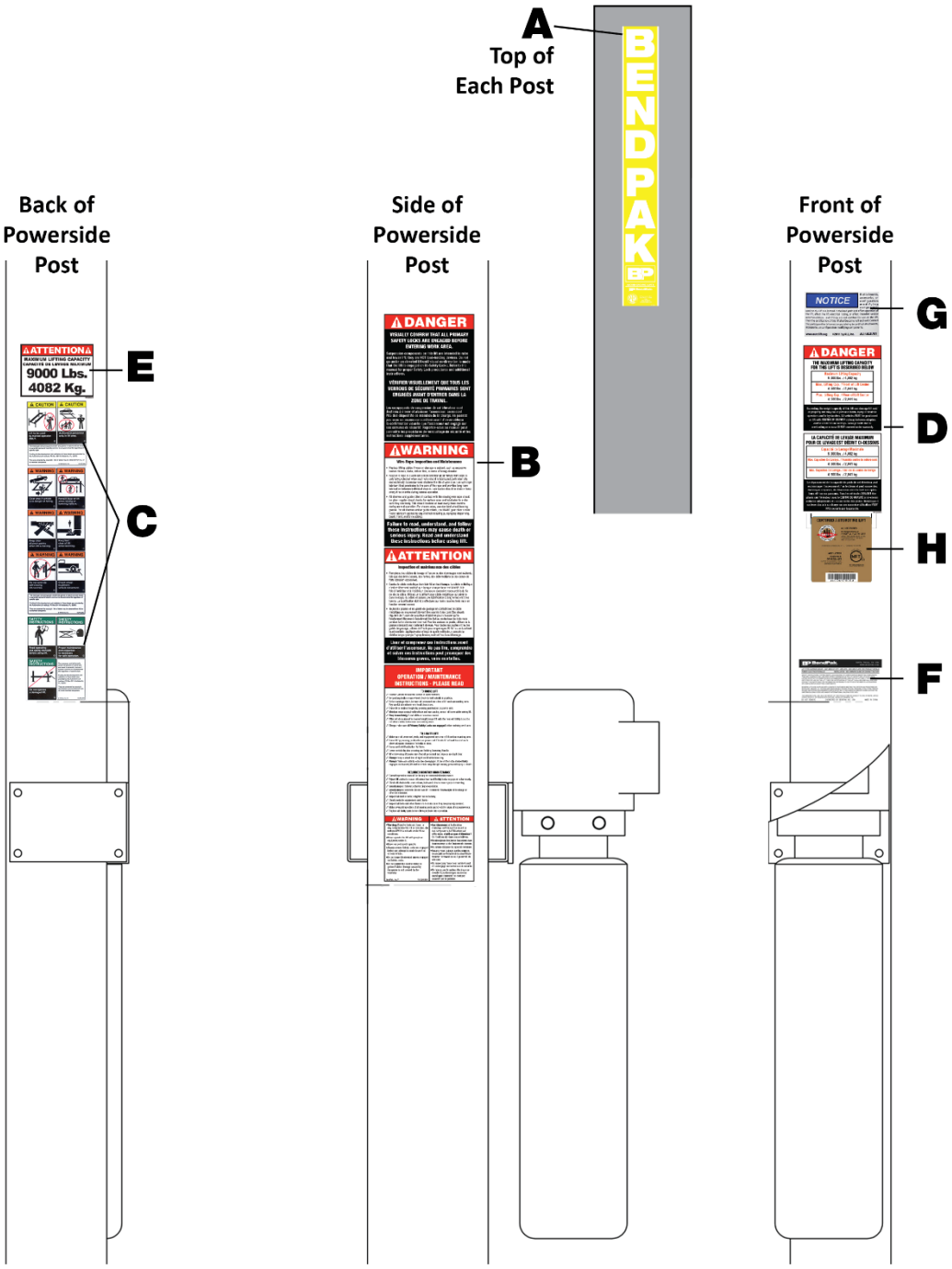

BendPak
PROVIDING AUTOMOTIVE SERVICE SOLUTIONS
SANTA PAULA, CA USA
WWW.BENDPAK.COM
PN 5905940
LIFT TYPE: SURFACE MOUNT
MFG. BPK SEE DATA PLATE FOR PRODUCT DETAILS
POWER: ELECTRIC/HYDRAULIC
INSTALLATION - SEE OWNERS GUIDE OR CONTACT FACTORY
SAFETY INSTRUCTIONS: IF ATTACHMENTS, ACCESSORIES OR CONFIGURATION MODIFYING COMPONENTS THAT ARE LOCATED IN THE LOAD PATH, AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL LISTING OR AFFECT INTENDED VEHICLE ACCOMMODATION ARE USED ON THIS LIFT AND, IF THEY ARE NOT CERTIFIED FOR USE ON THIS LIFT, THEN THE CERTIFICATION OF THIS LIFT SHALL BECOME NULL AND VOID. CONTACT THE PARTICIPANT FOR INFORMATION PERTAINING TO CERTIFIED ATTACHMENTS, ACCESSORIES OR CONFIGURATION MODIFYING COMPONENTS.
BENDPAK LIFTS ARE SUPPLIED WITH CONCRETE FASTENERS MEETING THE CRITERIA AS PRESCRIBED BY ASTM E488 - 96(2003). LIFT BUYERS ARE RESPONSIBLE FOR ANY SPECIAL REGIONAL, STRUCTURAL AND/OR SEISMIC ANCHORING REQUIREMENTS SPECIFIED BY ANY OTHER AGENCIES AND/OR CODES SUCH AS THE UNIFORM BUILDING CODE (UBC) AND/OR INTERNATIONAL BUILDING CODE (IBC).
THE MANUFACTURE, USE, SALE OR IMPORT OF THIS PRODUCT MAY BE SUBJECT TO ONE OR MORE UNITED STATES PATENTS, OR PENDING APPLICATIONS, OWNED BY BENDPAK, INC.
DO NOT REMOVE
ENGINEERED BY BENDPAK INC. USA
MADE IN CHINA

G


NOTICE
If attachments, accessories, or configuration modifying components used on this lift are located in the load path and affect operation of the lift, affect the lift electrical listing, or affect intended vehicle accommodation; and if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories, or configuration modifying components.
www.autolift.org
©2011 by ALI, Inc.
ALI / WLSIA01

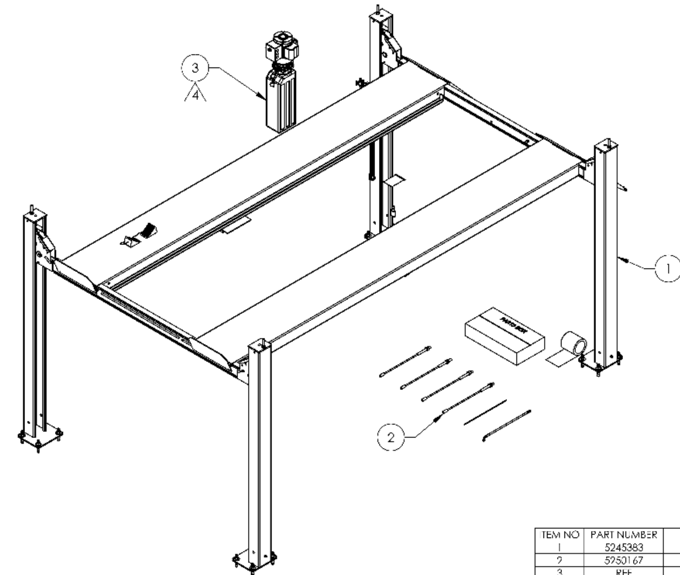
H


CERTIFIED AUTOMOTIVE LIFT
INDEPENDENTLY TESTED ALI CERTIFIED AND VALIDATED
ALI CERTIFIED
To the provisions of
ANSI/ALI ALCTV-2011
SAFETY REQUIREMENTS FOR CONSTRUCTION, TESTING AND VALIDATION
Automotive Lift Institute, Inc. | Cortland, NY 13045
MET LISTED
Conforms to
ANSI/UL 201
SAFETY STANDARD FOR GARAGE EQUIPMENT
NRTL LISTED
MET US
MET Laboratories, Inc.
BALTIMORE, MD 21220
Certification Label Serial Number
AL00617000J


A
Top of
Each Post
BENDPAK
Back of
Powerside
Post
Side of
Powerside
Post
Front of
Powerside
Post
ATTENTION
MAXIMUM LIFTING CAPACITY
9000 Lbs.
4082 Kg.
E
C
DANGER
WARNING
ATTENTION
B
NOTICE
G
DANGER
D
H
F

Parts Drawings

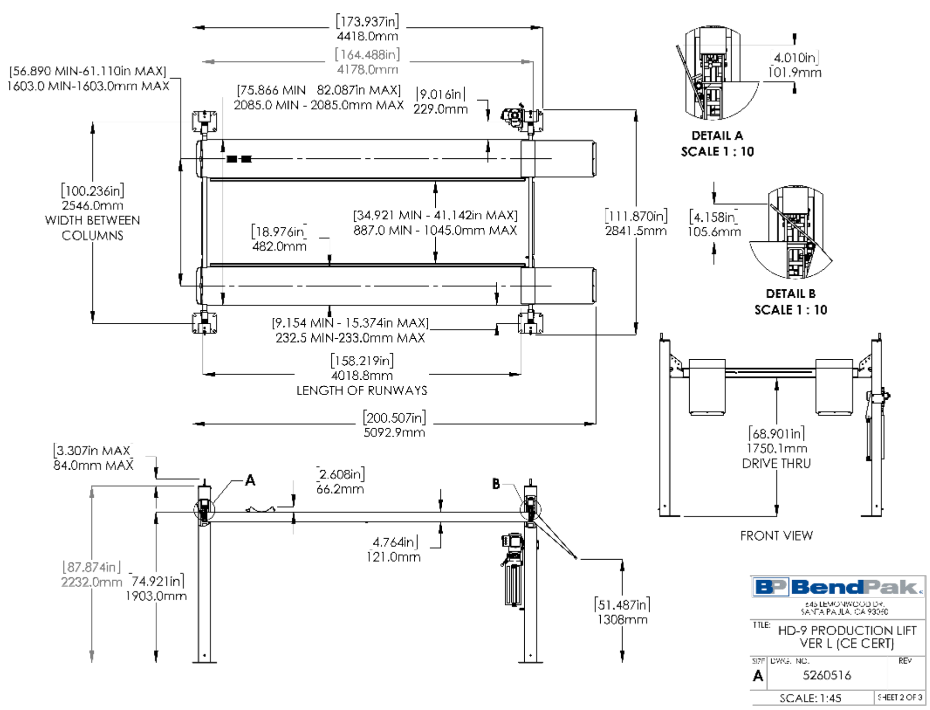
HD-9

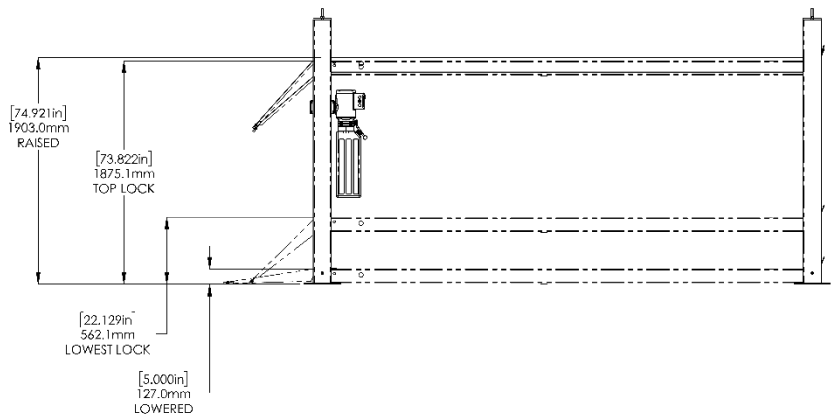


ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245383	HD-9 LIFT SUPERSTRUCTURE	1
2	5950167	HD-9 PARTS BOX	1
3	REF	POWER UNIT	1

NOTE: UNLESS OTHERWISE SPECIFIED.
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. SEE COLORS & GRAPHICS FOR LABEL PLACEMENT
4. POWER UNIT REFERENCE ON PURCHASE ORDER

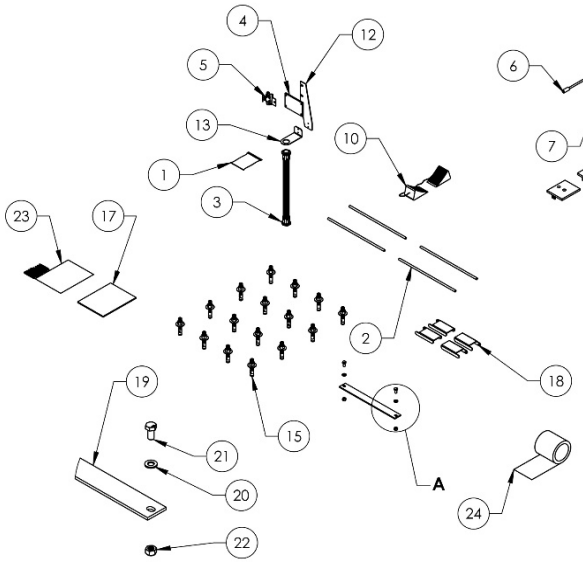
DO NOT SCALE DRAWING | NAME | DATE
DRAWN TM 08/12/2014
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
BendPak
1645 LEMONWOOD DR
SANTA PAULA, CA 93060
TITLE: HD-9 PRODUCTION LIFT VER L (CE CERT)
SIZE A DWG. NO. 5260516 REV
SCALE: 1:30 SHEET 1 OF 3





BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060
TITLE:	HD-9 PRODUCTION LIFT VER L (CE CERT)
SIZE	DWG. NO. 5260516 REV A
SCALE: 1:30	SHEET 3 OF 3

1. DIMENSIONS SHOWN ARE WITH THE LOCK LADDERS ADJUSTED ALL THE WAY UP



DETAIL A
SCALE 1 : 8

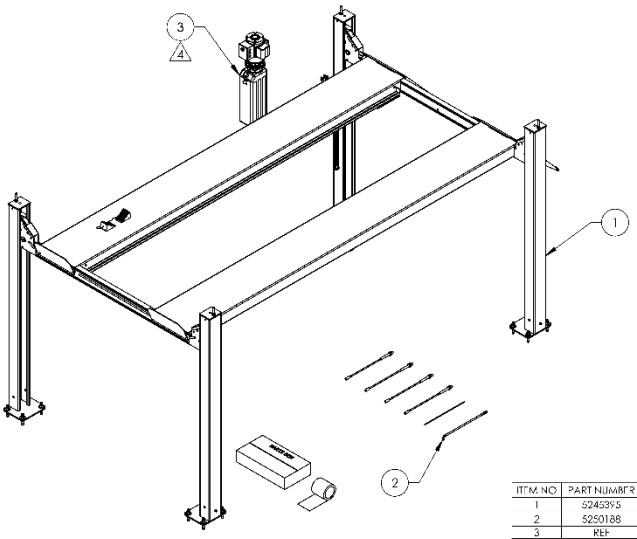
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5174092	HD-7/9/7500 PARTS BAG	1
2	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
3	5216139	FLEX TUBE KIT, UP TO 2000mm	1
4	5715003	POWER UNIT VIBRATION DAMPENER	1
5	5215096	PUSH BUTTON AIR ASSEMBLY	1
6	5595474	CABLE ASSEMBLY Ø10 x 2958mm ST	1
7	5595906	CABLE ASSEMBLY Ø10 x 4578mm ST	1
8	5595457	CABLE ASSEMBLY Ø10 x 7094mm ST	1
9	5595916	CABLE ASSEMBLY Ø10 x 8706mm ST	1
10	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1
11	5570795	1/4" POLY-FLO TUBING	17000*mm
12	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
13	5700033	FLI 4/HD/HDS FLEX TUBE ANGLE	1
14	5570022	HYDRAULIC HOSE ASSEMBLY Ø6.4 x 3380mm	1
15	5530456	AB 3/4" x 4 - 3/4"	16
16	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
17	5900123	HD-9 INSTALLATION MANUAL	1
18	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
19	5735663	HD-9 RAMP STRAP, BOLT ON	1
20	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
21	5535375	HHB M12 x 1.75 x 25 CL12.9	2
22	5535012	NUT M12 x 1.75 NL, CL 10.9	2
23	5210241	4 POST LIGHT DUTY CE PARTS BAG	1
24	5930195	ANTI-SLIP TAPE, 6" x 24ft	1

		NAME	DATE
DO NOT SCALE DRAWING	DRAWN	TM	05/07/2013
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		

BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060
TITLE:	HD-9 PARTS BOX
SIZE	DWG. NO. 5250167 REV A
SCALE: 1:25	SHEET 1 OF 1

NEXT ASSEMBLY
5260516

HD-9ST



ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245395	HD 9ST LFT SUPERSTRUCTURE	1
2	5250188	HD-9ST PARTS BOX	1
3	REF	POWER UNIT	1

	NAME	DATE
DRAWN	TM	08/19/20 4
CHECKED		

BendPak
1645 LINDEN WOOD DR
SANTA PAULA, CA 93060

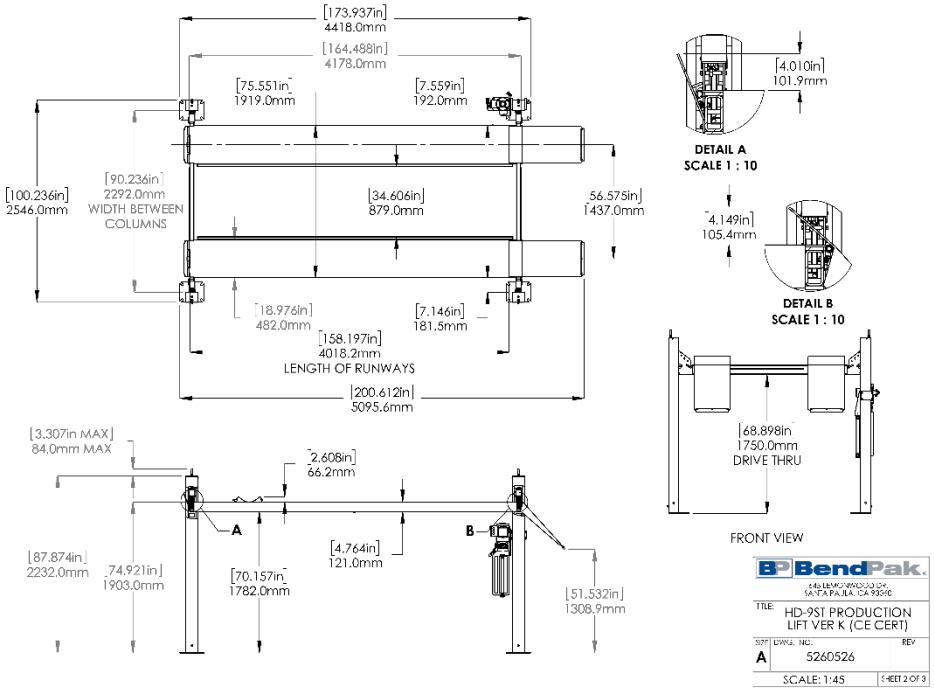
THIRD ANGLE PROJECTION

TITLE: HD-9ST PRODUCTION LIFT VER K (CE CERT)

SIZE: A | DWG. NO.: 5260526 | REV:

SCALE: 1:32 | SHEET 1 OF 3

NOTE: UNLESS OTHERWISE SPECIFIED
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE COLORS & GRAPHICS FOR LABEL PLACEMENT
3. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
4. POWER UNIT REFERENCE ON PURCHASE ORDER

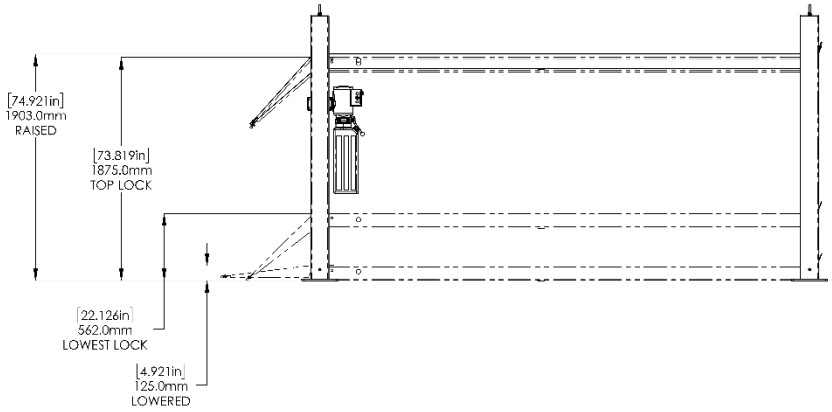


BendPak
1645 LINDEN WOOD DR
SANTA PAULA, CA 93060

TITLE: HD-9ST PRODUCTION LIFT VER K (CE CERT)

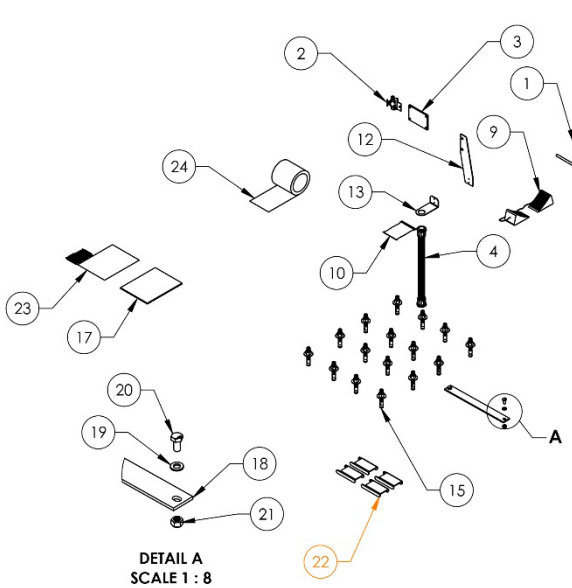
SIZE: A | DWG. NO.: 5260526 | REV:

SCALE: 1:45 | SHEET 2 OF 3



BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
TITLE:	HD-9ST PRODUCTION LIFT VER K (CE CERT)	
SIZE: A	DWG. NO.: 5260526	REV:
SCALE: 1:30		SHEET 3 OF 3

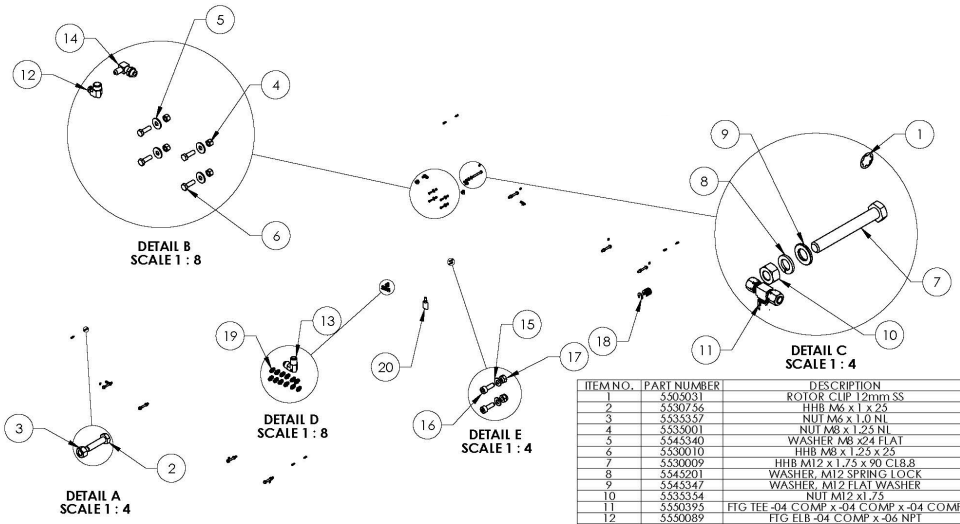
1. ALL DIMENSIONS SHOWN ARE WITH LOCK LADDER ADJUSTED ALL THE WAY UP



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
2	5215096	PUSH BUTTON AIR ASSEMBLY	1
3	5715003	POWER UNIT VIBRATION DAMPENER	1
4	5216139	FLEX TUBE KIT, UP TO 2000mm	1
5	5595900	HD-9ST CABLE ASSEMBLY Ø10 x 2926mm ST	1
6	5595905	HD-9ST CABLE ASSEMBLY Ø10 x 4356mm ST	1
7	5595910	CABLE ASSEMBLY Ø10 x 7048mm ST	1
8	5595915	HD-9ST CABLE ASSEMBLY Ø10 x 8476mm ST	1
9	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1
10	5174092	HD-7/9/7500 PARTS BAG	1
11	5570795	1/4" POLY-FLO TUBING	17000*mm
12	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
13	5700033	FL14/HD/HDS FLEX TUBE ANGLE	1
14	5570022	HYDRAULIC HOSE ASSEMBLY Ø6.4 x 3380mm	1
15	5530456	AB 3/4" x 4 - 3/4"	16
16	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
17	5900123	HD-9 INSTALLATION MANUAL	1
18	5735663	HD-9 RAMP STRAP, BOLT ON	1
19	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
20	5530375	HHB M12 x 1.75 x 25 CL12.9	2
21	5535012	NUT M12 x 1.75 NL, CL 10.9	2
22	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
23	5210241	4 POST LIGHT DUTY CE PARTS BAG	1
24	5930195	ANTI-SLIP TAPE, 6" x 24ft	1

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	TM	05/09/2013
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		
NEXT ASSEMBLY: 5260526	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		

BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
TITLE:	HD-9ST PARTS BOX	
SIZE: A	DWG. NO.: 5250188	REV:
SCALE: 1:25		SHEET 1 OF 1

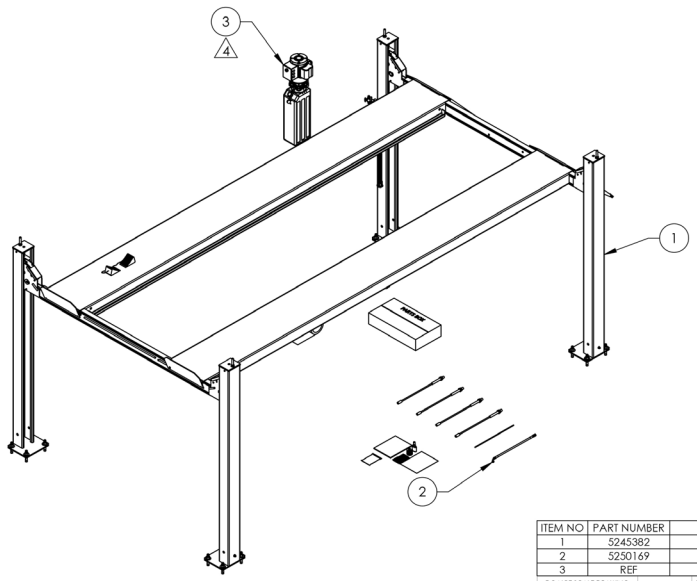


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5505031	ROTOR CLIP 12mm SS	8
2	5530756	HHB M6 x 1 x 25	8
3	5535357	NUT M6 x 1.0 NL	8
4	5535001	NUT M8 x 1.25 NL	4
5	5545340	WASHER M8 x24 FLAT	4
6	5530010	HHB M8 x 1.25 x 25	4
7	5530009	HHB M12 x 1.75 x 90 C8.8	8
8	5545201	WASHER, M12 SPRING LOCK	8
9	5545347	WASHER, M12 FLAT WASHER	8
10	5535354	NUT M12 x1.75	8
11	5550395	FTG TEE -04 COMP x -04 COMP x -04 COMP	3
12	5550089	FTG ELB -04 COMP x -06 NPT	2
13	5550106	FTG ELB -04 JIC x 3/8" NPT	1
14	5550008	FTG ELB -04 JIC -06L ORB	1
15	5545009	WASHER, Ø4.3 x Ø9mm x 0.8mm	2
16	5530008	SHCS M4 x 0.7 x 12 BOC	2
17	5535010	NUT M4 X 0.7 NL	2
18	5545535	C WASHER SHIM FOR LIFTS	20
19	5550025	FTG GRS M6 x 1.0	12
20	5580012	LIQUID PTFE THREAD SEALANT 50ml	1

		NAME	DATE	
DO NOT SCALE DRAWING	DRAWN	AC	08/08/2008	BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060
	CHECKED	OR	4/20/2020	
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION			TITLE: HD-7/9/7500 PARTS BAG
				SIZE: A — DWG. NO.: 5174092 — REV
				SCALE: 1:30 — SHEET 1 OF 1

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.

HD-9XL



ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245382	HD-9XL LIFT SUPERSTRUCTURE	1
2	5250169	HD-9XL PARTS BOX	1
3	REF	POWER UNIT	1

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | TM | 08/12/2014
CHECKED

BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

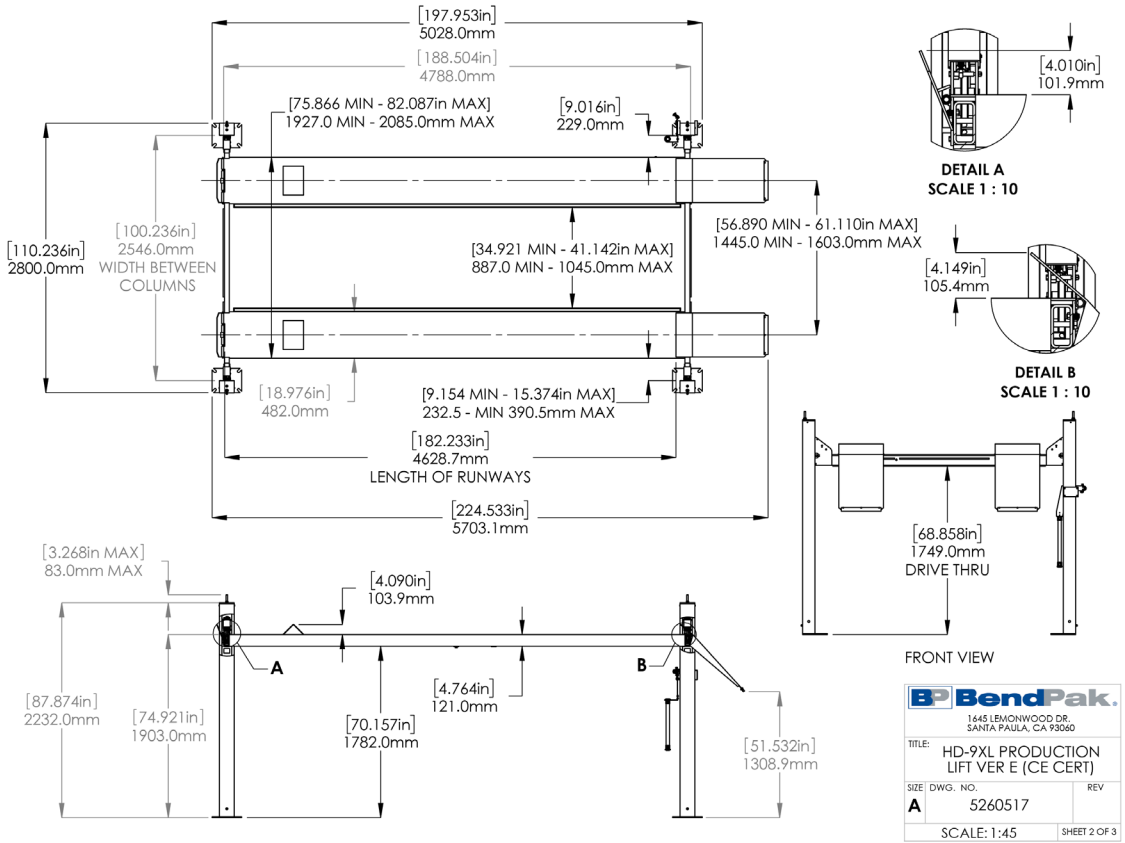
DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

TITLE: HD-9XL PRODUCTION LIFT VER E (CE CERT)

SIZE A | DWG. NO. 5260517 | REV

SCALE: 1:35 | SHEET 1 OF 3

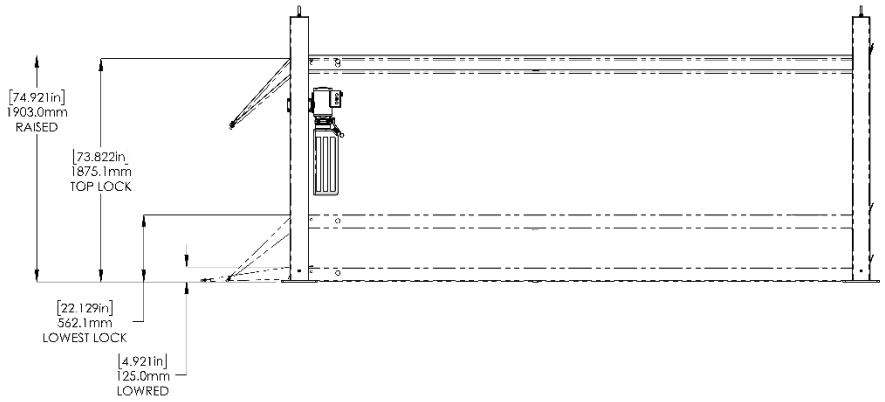


BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060

TITLE: HD-9XL PRODUCTION LIFT VER E (CE CERT)

SIZE A | DWG. NO. 5260517 | REV

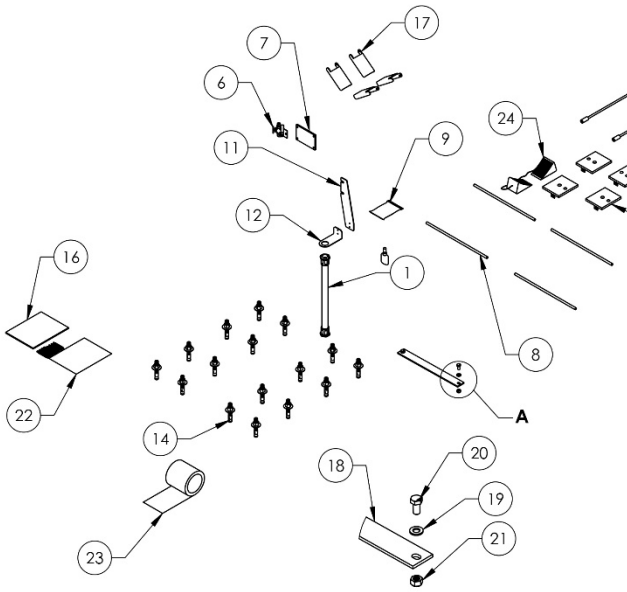
SCALE: 1:45 | SHEET 2 OF 3



BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:	HD-9XL PRODUCTION LIFT VER E (CE CERT)	
SIZE	DWG. NO.	REV
A	5260517	
SCALE: 1:30		SHEET 3 OF 3

1. ALL DIMENSIONS SHOWN ARE WITH LOCK LADDER ADJUSTED ALL THE WAY UP



DETAIL A
SCALE 1 : 8

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5216139	FLEX TUBE KIT, UP TO 2000mm	1
2	5595399	HD-9XL CABLE ASSEMBLY Ø10 x 9932mm ST	1
3	5595472	HD-9XL CABLE ASSEMBLY Ø10 x 8332mm ST	1
4	5595397	HD-9XL CABLE ASSEMBLY Ø10 x 5195mm ST	1
5	5595471	HD-9XL CABLE ASSEMBLY Ø10 x 3582mm ST	1
6	5215096	PUSH BUTTON AIR ASSEMBLY	1
7	5715003	POWER UNIT VIBRATION DAMPENER	1
8	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
9	5174092	HD-7/9/7500 PARTS BAG	1
10	5570795	1/4" POLY-FLO TUBING	17000mm*
11	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
12	5700033	FL14/HD/HDS FLEX TUBE ANGLE	1
13	5570022	HYDRAULIC HOSE ASSEMBLY Ø6.4 x 3380mm	1
14	5530456	AB 3/4" x 4 - 3/4"	16
15	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
16	5900123	HD-9 INSTALLATION MANUAL	1
17	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
18	5735663	HD-9 RAMP STRAP, BOLT ON	1
19	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
20	5530375	HHB M12 x 1.75 x 25 CL12.9	2
21	5535012	NUT M12 x 1.75 NL, CL 10.9	2
22	5210241	4 POST LIGHT DUTY CE PARTS BAG	1
23	5930195	ANTI-SLIP TAPE, 6" x 24ft	1
24	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1

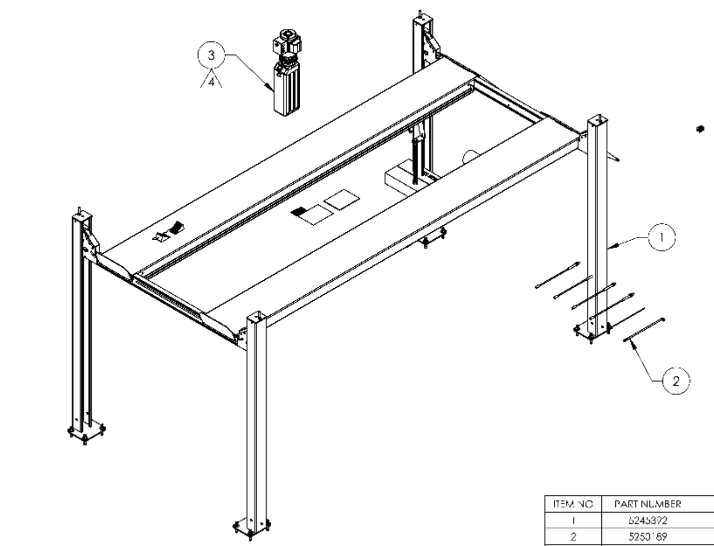
DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	TM	05/07/2013
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: HD-9XL PARTS BOX

SIZE	DWG. NO.	REV
A	5250169	
SCALE: 1:25		SHEET 1 OF 1

NEXT ASSEMBLY
5260517

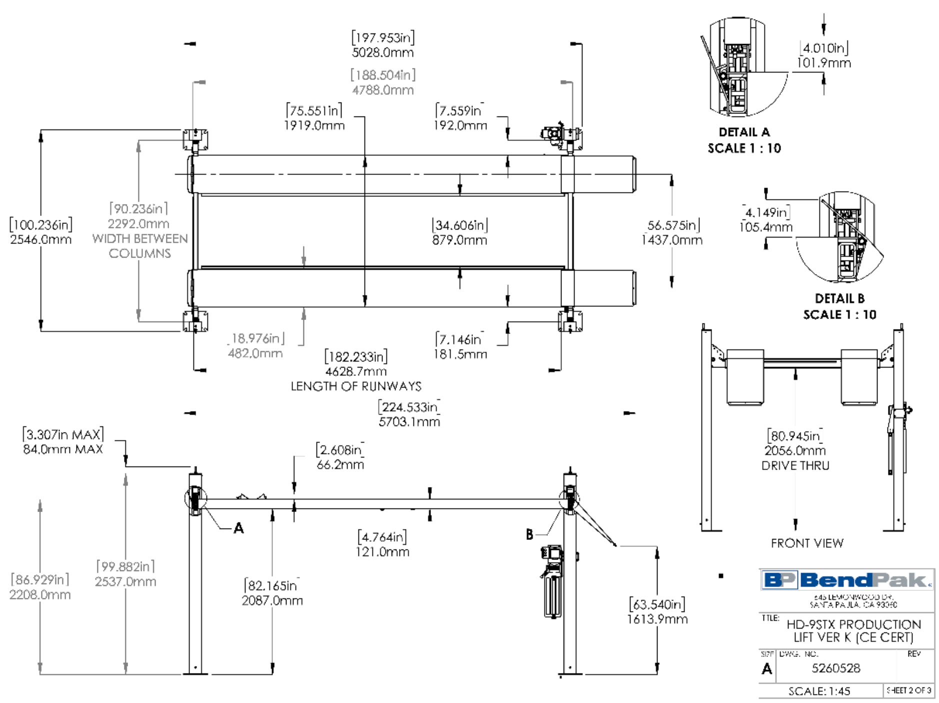


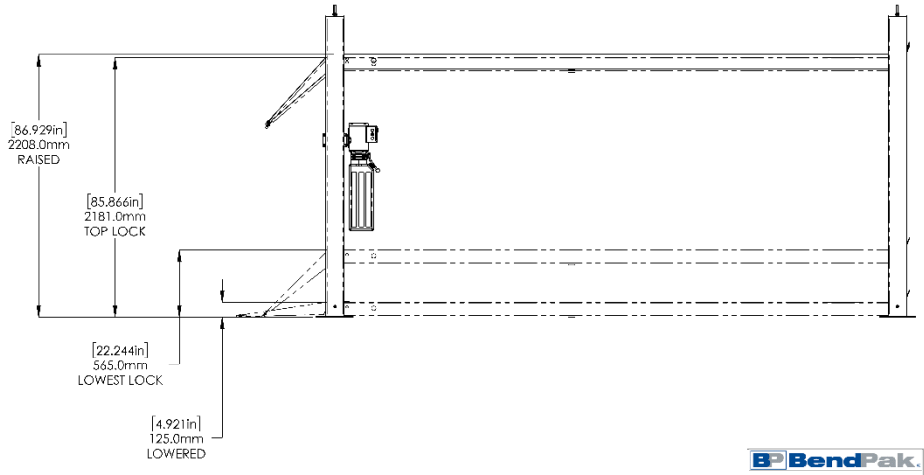
NOTE: UNLESS OTHERWISE SPECIFIED

1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. SEE COLORS & GRAPHICS FOR LABEL PLACEMENT
4. POWER UNIT REFERENCE ON PURCHASE ORDER

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245392	HD-9STX LIFT SUPERSTRUCTURE	1
2	5250189	HD-9STX PARTS BOX	1
3	REF	POWER UNIT	1

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | TM | 08/12/20_4
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
BendPak
1645 LEMONWOOD DR
SANTA PAULA, CA 93060
TITLE: HD-9STX PRODUCTION LIFT VER K (CE CERT)
SIZE A | DWG. NO. 5260528 | REV
SCALE: 1:35 | SHEET 1 OF 3

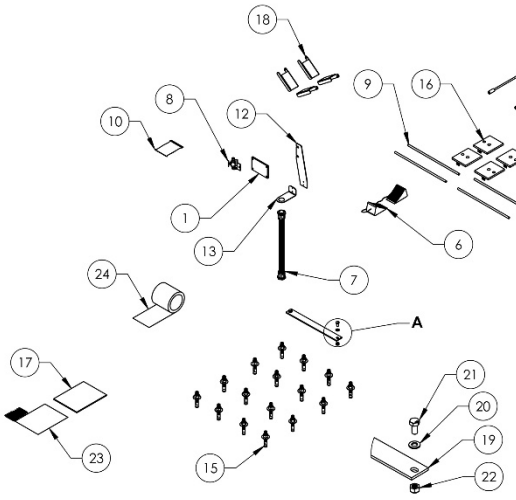




1. ALL DIMENSIONS SHOWN ARE WITH LOCK LADDER ADJUSTED ALL THE WAY UP
2. SAFETY LOCK POSITIONS: 17
3. SPACED EVERY: 101.0mm / 3.976"

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:	HD-9STX PRODUCTION LIFT VER K (CE CERT)
SIZE: A	DWG. NO.: 5260528
	REV
SCALE: 1:30	SHEET 3 OF 3



DETAIL A
SCALE 1 : 8

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5715009	POWER UNIT VIBRATION DAMPENER	1
2	5595918	HD-9STX CABLE ASSEMBLY Ø10 x 9404mm ST	1
3	5595912	HD-9STX CABLE ASSEMBLY Ø10 x 7978mm ST	1
4	5595908	HD-9STX CABLE ASSEMBLY Ø10 x 4663mm ST	1
5	5595907	HD-9STX CABLE ASSEMBLY Ø10 x 3240mm ST	1
6	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1
7	5216139	FLEX TUBE KIT, UP TO 2000mm	1
8	5215096	PUSH BUTTON AIR ASSEMBLY	1
9	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
10	5174092	HD-7/9/7500 PARTS BAG	1
11	5570795	1/4" POLY-FLO TUBING	17000"mm
12	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
13	5700033	FL14/11D/11DS FLEX TUBE ANGLE	1
14	5570036	HYDRAULIC HOSE ASSEMBLY Ø6.4 x 3683mm	1
15	5530456	AB 3/4" x 4 - 3/4"	16
16	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
17	5900123	HD-9 INSTALLATION MANUAL	1
18	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
19	5735663	HD-9 RAMP STRAP, BOLT ON	1
20	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
21	5520375	HHB M12 x 1.75 x 25 CL12.9	2
22	5535012	NUT M12 x 1.75 NL, CL 10.9	2
23	5210241	4 POST LIGHT DUTY CE PARTS BAG	1
24	5930195	ANTI-SLIP TAPE, 6" x 24ft	1

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | TM | 05/09/2013
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

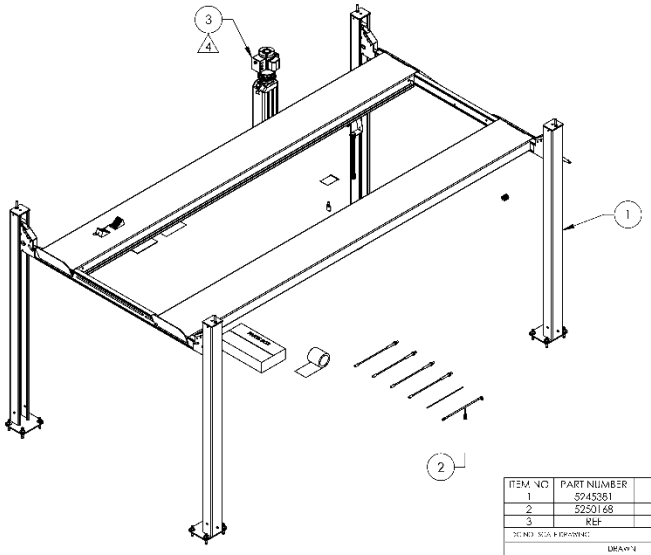
TITLE: HD-9STX PARTS BOX

SIZE: A	DWG. NO.: 5250189
	REV
SCALE: 1:25	SHEET 1 OF 1

PROPRIETARY AND CONFIDENTIAL

NEXT ASSEMBLY
5260528

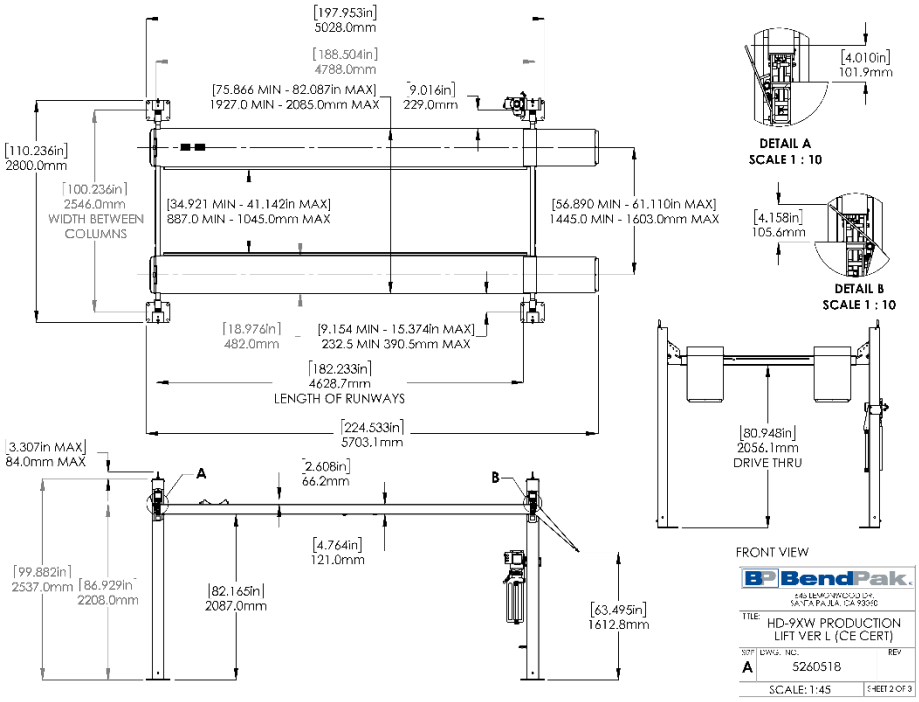
HD-9XW



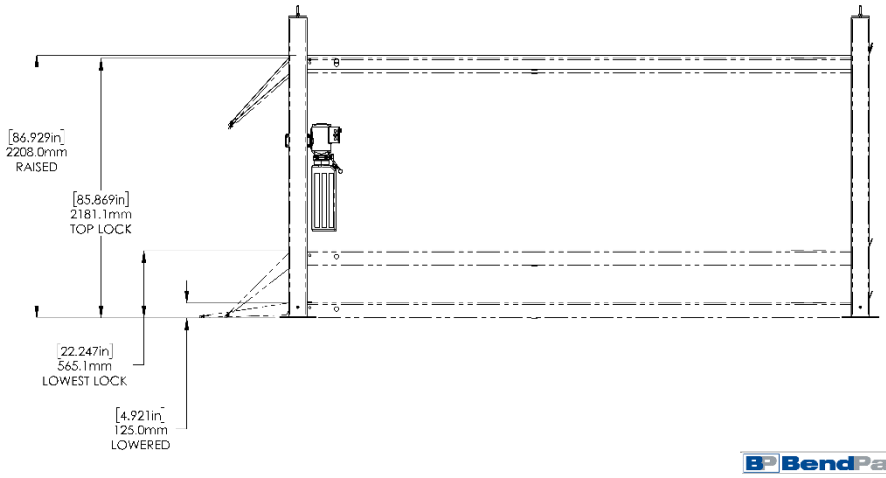
ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245361	HD-9XW LIFT SUPERSTRUCTURE	1
2	5250168	HD-9XW PARTS BOX	1
3	REF	POWER UNIT	1

NOTE: UNLESS OTHERWISE SPECIFIED
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. SEE COLORS & GRAPHICS FOR LABEL PLACEMENT
4. POWER UNIT REFERENCE ON PURCHASE ORDER

BendPak
HD-9XW PRODUCTION LIFT VER L (CE CERT)
A 5260518
SCALE: 1:35



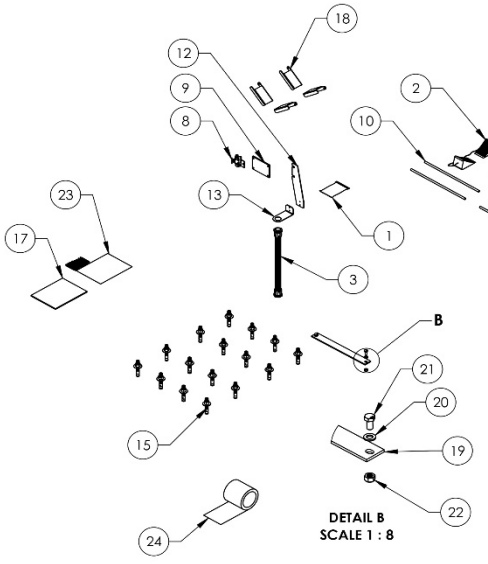
BendPak
HD-9XW PRODUCTION LIFT VER L (CE CERT)
A 5260518
SCALE: 1:45 SHEET 2 OF 3



BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:	HD-9XW PRODUCTION LIFT VER L (CE CERT)
SIZE: A	DWG. NO.: 5260518
REV	
SCALE: 1:30	SHEET 3 OF 3

1. ALL DIMENSIONS SHOWN ARE WITH LOCK LADDER ADJUSTED ALL THE WAY UP



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5174092	HD-7/9/7500 PARTS BAG	1
2	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1
3	5216139	FLEX TUBE KIT, UP TO 2000mm	1
4	5595919	CABLE ASSEMBLY Ø10 x 9613mm ST	1
5	5595479	CABLE ASSEMBLY Ø10 x 8007mm ST	1
6	5595909	CABLE ASSEMBLY Ø10 x 4883mm ST	1
7	5596478	CABLE ASSEMBLY Ø10 x 3263mm ST	1
8	5215096	PUSH BUTTON AIR ASSEMBLY	1
9	5715003	POWER UNIT VIBRATION DAMPENER	1
10	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
11	5570795	1/4" POLY-FLO TUBING	17000*mm
12	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
13	5700033	FLT4/HD7/HD9 FLEX TUBE ANGLE	1
14	5570036	HYDRAULIC HOSE ASSEMBLY Ø6.4 x 3683mm	1
15	5530456	AB 3/4" x 4 - 3/4"	16
16	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
17	5900123	HD-9 INSTALLATION MANUAL	1
18	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
19	5736663	HD-9 RAMP STRAP, BOLT ON	2
20	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
21	5530375	HHB M12 x 1.75 x 25 CL12.9	2
22	5535012	NUT M12 x 1.75 NL, CL 10.9	2
23	5210941	4 POST LIGHT DUTY CE PARTS BAG	1
24	5730175	ANTI-SLIP TAPE, 6" x 24ft	1

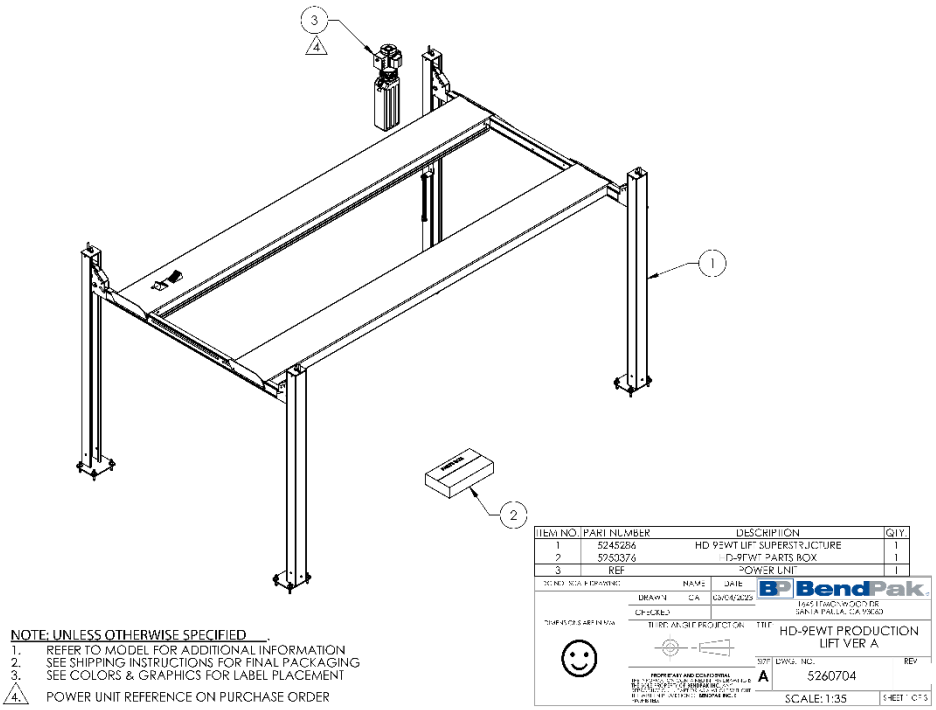
		NAME	DATE
DO NOT SCALE DRAWING	DRAWN	TM	05/07/2013
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		

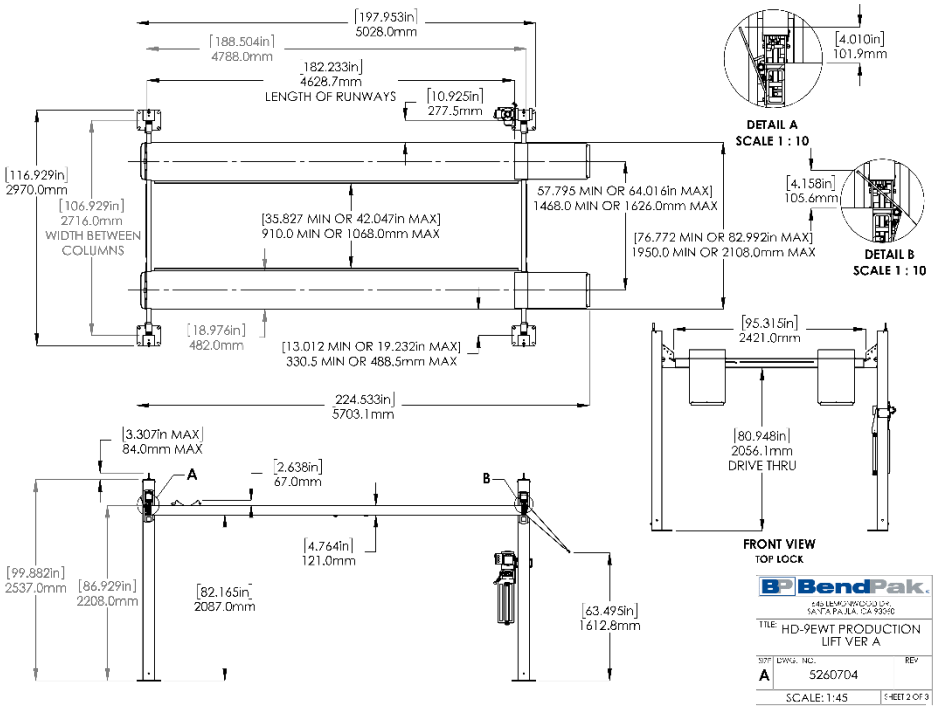
PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.

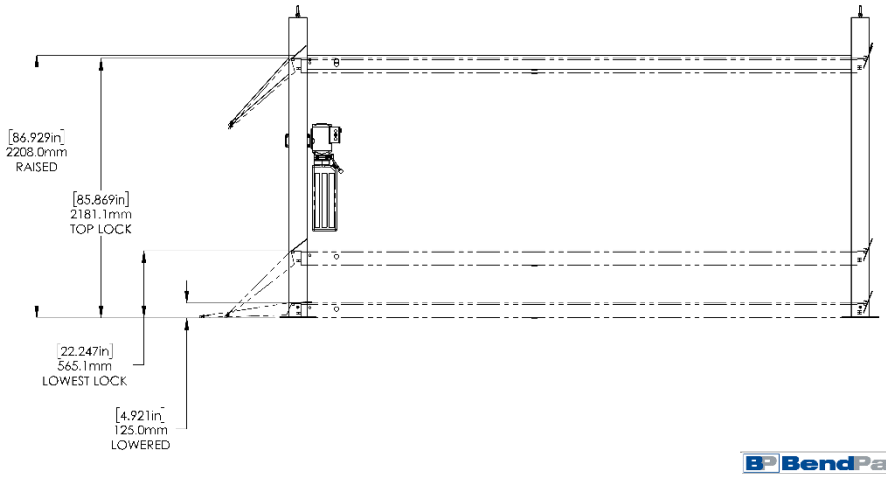
BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:	HD-9XW PARTS BOX
SIZE: A	DWG. NO.: 5250168
REV	
SCALE: 1:25	SHEET 1 OF 1

NEXT ASSEMBLY
5260518


3
4
1
2
ITEM NO. | PART NUMBER | DESCRIPTION | QTY.
1 | 5245286 | HD 9EWT LIFT SUPERSTRUCTURE | 1
2 | 5950376 | HD-9EWT PARTS BOX | 1
3 | REF | POWER UNIT | 1
BP BendPak
HD-9EWT PRODUCTION LIFT VER A
A
5260704
SCALE: 1:35
NOTE: UNLESS OTHERWISE SPECIFIED
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. SEE COLORS & GRAPHICS FOR LABEL PLACEMENT
4. POWER UNIT REFERENCE ON PURCHASE ORDER


[197.953in] 5028.0mm
[188.504in] 4788.0mm
182.233in] 4628.7mm
LENGTH OF RUNWAYS
[10.925in] 277.5mm
[116.929in] 2970.0mm
[106.929in] 2716.0mm
WIDTH BETWEEN COLUMNS
[35.827 MIN OR 42.047in MAX] 910.0 MIN OR 1068.0mm MAX
57.795 MIN OR 64.016in MAX] 1468.0 MIN OR 1626.0mm MAX
[76.772 MIN OR 82.992in MAX] 1950.0 MIN OR 2108.0mm MAX
[18.976in] 482.0mm
[13.012 MIN OR 19.232in MAX] 330.5 MIN OR 488.5mm MAX
224.533in] 5703.1mm
[4.010in] 101.9mm
DETAIL A
SCALE 1 : 10
[4.158in] 105.6mm
DETAIL B
SCALE 1 : 10
[95.315in] 2421.0mm
[80.948in] 2056.1mm
DRIVE THRU
FRONT VIEW
TOP LOCK
[3.307in MAX] 84.0mm MAX
A
B
[2.638in] 67.0mm
[4.764in] 121.0mm
[99.882in] 2537.0mm
[86.929in] 2208.0mm
[82.165in] 2087.0mm
[63.495in] 1612.8mm
BP BendPak
HD-9EWT PRODUCTION LIFT VER A
A
5260704
SCALE: 1:45
SHEET 2 OF 3



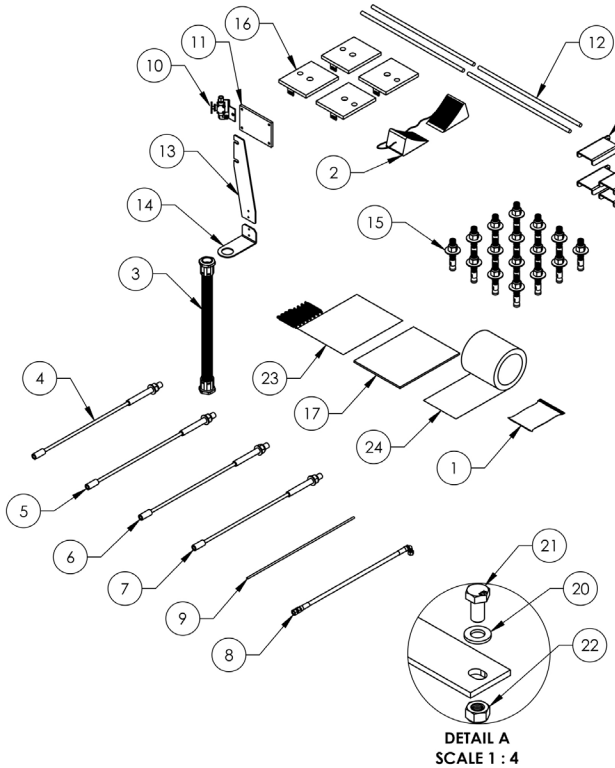
BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: HD-9EWT PRODUCTION LIFT VER A

SIZE	DWG. NO.	REV
A	5260704	

SCALE: 1:30 SHEET 3 OF 3

1. SAFETY LOCK POSITIONS: 17
2. SPACED EVERY: 101.0mm / 3.976"
3. ALL DIMENSIONS SHOWN ARE WITH LOCK LADDER ADJUSTED ALL THE WAY UP



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5174092	HD-7/9/7500 PARTS BAG	1
2	5210483	STANDARD RUBBER WHEEL CHOCKS, 30" WORKING WIDTH, PAIR	1
3	5216139	FLEX TUBE KIT, UP TO 2000mm	1
4	5595421	CABLE ASSEMBLY Ø10 x 3313mm ST	1
5	5595766	CABLE ASSEMBLY Ø10 x 5005mm ST	1
6	5595423	CABLE ASSEMBLY Ø10 x 8054mm ST	1
7	5595767	CABLE ASSEMBLY Ø10 x 9735mm ST	1
8	5570297	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 3735mm SB	1
9	5570795	1/4" POLY-FLO TUBING	17000*mm
10	5215096	PUSH BUTTON AIR ASSEMBLY	1
11	5715003	POWER UNIT VIBRATION DAMPENER	1
12	5745014	HD-7/7500/9, PL-12000 DRIVE UP RAMP PIN	4
13	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1
14	5700033	FL14/HD/HDS FLEX TUBE ANGLE	1
15	5530456	AB 3/4" x 4 - 3/4"	16
16	5600405	HD-7/9/7500/PL-12000 TOP PLATE WELDMENT	4
17	5900123	HD-9 INSTALLATION MANUAL	1
18	5716630	HD-7/7500/9 CROSSTUBE COVER, PLASTIC	4
19	5735663	HD-9 RAMP STRAP, BOLT ON	1
20	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
21	5530375	HHB M12 x 1.75 x 25 CL12.9	2
22	5535012	NUT M12 x 1.75 NL, CL 10.9	2
23	5210241	4 POST LIGHT DUTY CE PARTS BAG	1
24	5930195	ANTI-SLIP TAPE, 6" x 24ft	1

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	CA	05/04/2023
	CHECKED		

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: HD-9EWT PARTS BOX

SIZE	DWG. NO.	REV
A	5250376	

SCALE: 1:15 SHEET 1 OF 1

NEXT ASSEMBLY
5260704

6038

EC Type-Examination Certificate

(Fm 210-017, Rev.10)

For the requirements of the Machinery Directive 2006/42/EC

For Annex IV machinery

Certificate No.: CE-C-20120209-01-01-5B
Date of first issue: 2014.01.27
Date of last review: 2019.01.27
Date of next review: 2024.01.26

NAME AND ADDRESS OF THE MANUFACTURER: Bendpak Inc.
1645 E. Lemonwood Drive, Santa Paula, CA, United States of America

PRODUCT DESCRIPTION/ TYPE AND MODEL: HD-9 Range of 4 Post Vehicle Servicing Lifts 9000lb (4032kg) Capacity

HD-9	110W x 200L x 70H in
HD-9ST	100W x 200L x 70H in
HD-9STX	100W x 225L x 82H in
HD-9XL	110W x 225L x 82H in
HD-9XW	110W x 225L x 82H in

APPLICABLE STANDARDS: EN1493:2010 Vehicle Lifts
EN 60204-1:2006+A1:2009 Safety of machinery - Electrical equipment of machines - Part1:General requirements

A COPY IS AVAILABLE FROM: CCQS UK Ltd., 5 Harbour Exhange, London, E14 9GE, UK

SUBJECT TO THESE CONDITIONS: A Rolling Jack is not included in this certification.

RE-ISSUE HISTORY CE-C-20120209-01-01-5A first issue
CE-C-20120209-01-01-5B this issue – Review of original certification

The technical file, accompanying documentation and the equipment which they describe have been found to be in compliance with the requirements of the Machinery Directive 2006/42/EC.

The responsible person defined above has responsibility for ensuring that all future serial manufacture of the machinery conforms to the sample submitted for EC type-examination referenced above.

Any changes to the design of the machinery certified here must be advised to CCQS UK Ltd. for re-assessment.

A CE marking should not be fixed to the equipment until the requirements of all relevant directives have been met.

Approved by: ***Owen Bian – Office Manager*** **Date: 2019.01.27**

Appointed by UK Government
as a Notified Body
for CE Marking No. 1105

CCQS UK Ltd.,
5 Harbour Exhange, Canary Wharf,
London, E14 9GE, UK
Tel: +44 (0) 20 7868 1509
Email info@ccqs.co.uk
If in any doubt about the integrity of this certificate, please verify it on our website at
http://www.ccqs.co.uk

Automotive Lift Institute (ALI) Store

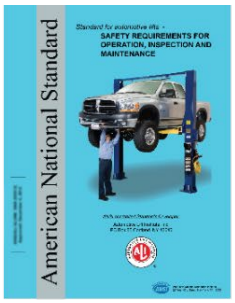
You probably checked the **ALI's Directory of Certified Lifts** (**www.autolift.org/ali-directory-of-certified-lifts/**) before making your most recent Lift purchase, but did you know the **ALI Store** (**www.autolift.org/ali-store/**) offers a wide variety of professional, easy-to-use, and reasonably 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!

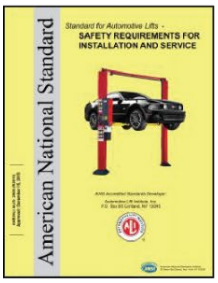
Visit today and get the training and materials needed to work safely: **www.autolift.org/ali-store/**.

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

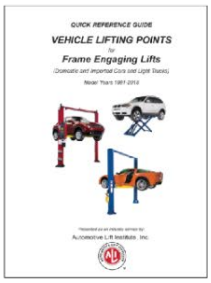
ALI Lift Inspector Certification Program Registration. Become a ALI Certified Lift Inspector.



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

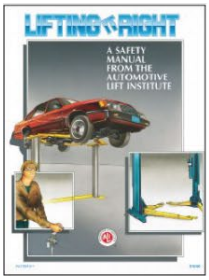


ANSI/ALI ALIS Standard. Safety Requirements for Installation and Service.



Guide to Identifying 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.

Maintenance Log

Maintenance Log

Maintenance Log

Maintenance Log

30440 Agoura Rd.
Agoura Hills, CA, 91301 USA
bendpak.com