

## Clear Floor Two-Post Lifts

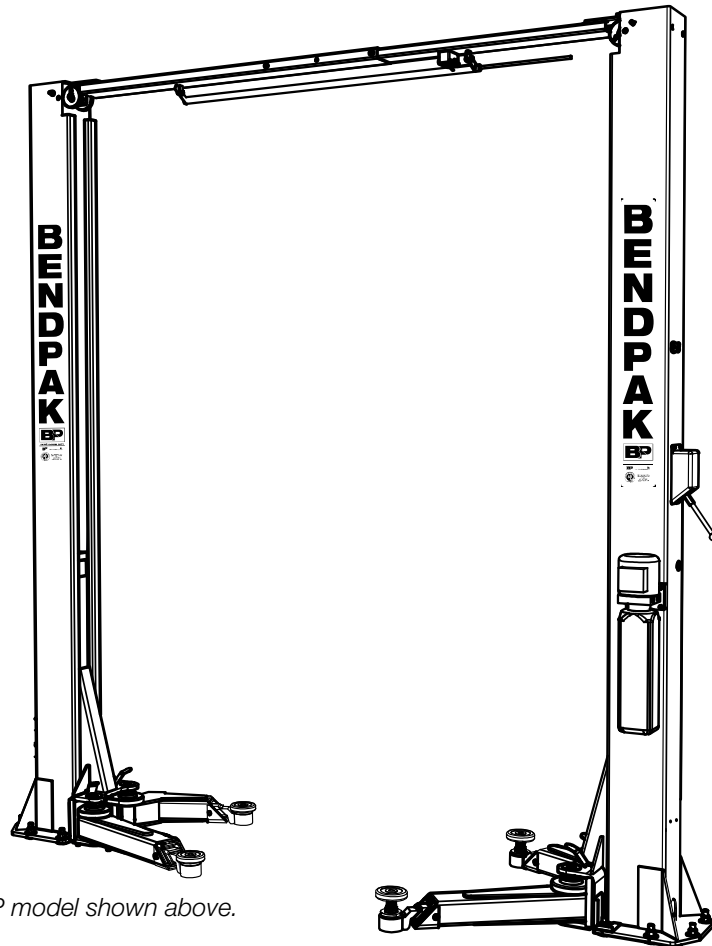
# Installation and Operation Manual

Manual P/N 5900265 — Manual Revision A10 — September 2023

Models:

- 10AP
- 10AP-168
- 10APX
- 10APX-181

*Original instructions in  
the English language*



10AP model shown above.

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



**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.** 10AP Series Two-Post Lifts, *Installation and Operation Manual*, Manual Part Number 5900265, Manual Revision A10, released September 2023.

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**Limitations.** Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. All drawings are reference only – do not scale. 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.**



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**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](http://www.bendpak.com/support/warranty) for full warranty details. Go to [bendpak.com/support/register-your-product/](http://bendpak.com/support/register-your-product/) and fill out the online form to register your product (be sure to click **Submit**).

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

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

- Follow all installation, operation, and maintenance instructions.
- Make sure product installation conforms to all applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.
- Read and follow all safety instructions. Keep them readily available for operators.
- Make sure all operators are properly trained, know how to safely operate the unit, and are properly supervised.
- Do not operate the product until you are certain all parts are in place and operating correctly.
- Carefully inspect the product on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with approved replacement parts.
- Keep the manual 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](http://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](mailto:contact@bendpak.com). **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 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!**

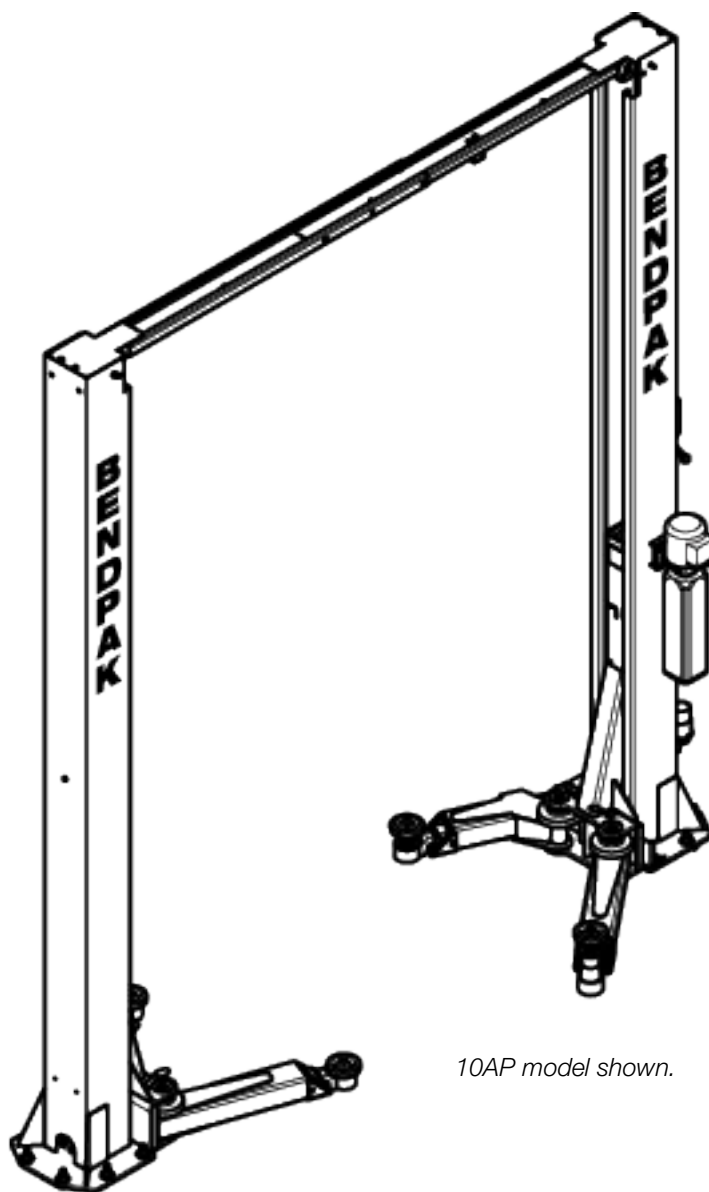
**Unit Information.** Enter the Model Number, Serial Number, and the Date of Manufacture from the ID label on your unit. This information is required for part or warranty issues.

Model: \_\_\_\_\_

Serial: \_\_\_\_\_

Date of Manufacture: \_\_\_\_\_

<b>BP BendPak</b>		Santa Paula, CA USA www.bendpak.com	
<b>MODEL NUMBER</b>			
<b>DESCRIPTION</b>			
<b>LIFT CAPACITY</b>		<b>DATE CODE</b>	
<b>VOLTAGE</b>		<b>SERIAL NUMBER</b>	
<input type="checkbox"/> 110-120V, 50-60 Hz, 1 Ph			
<input type="checkbox"/> 208-240V, 50-60 Hz, 1 Ph			
<input type="checkbox"/> 380-415V, 50-60 Hz, 3 Ph			
<input type="checkbox"/> 208-440V, 50-60 Hz, 3 Ph			
		<b>UPC</b>	
<b>DANGER!</b> Disconnect Power Before Servicing			
MADE IN CHINA		WARRANTY VOID IF DATA PLATE IS REMOVED	
		PN 5905950	



10AP model shown.

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## Introduction

This manual describes the four BendPak Two-Post Lift models:

- **10AP.** A Two-Post Lift with overall height of 145 in. / 3,683 mm that raises Vehicles up to 10,000 pounds (4,536 kg).
- **10AP-168.** A taller version of the 10AP with overall height of 168 in. / 4,267 mm, designed to accommodate taller Vehicles.
- **10APX.** A Two-Post Lift with overall height of 157 in. / 3,988 mm that raises Vehicles up to 10,000 pounds (4,536 kg).
- **10APX-181.** A taller version of the 10APX with overall height of 181 in. / 4,597 mm, designed to accommodate taller Vehicles.

*All models have Overhead Assemblies and clear floors. All models may be adjusted to a narrow 92-inch (2,337 mm) or a wide 102-inch (2,591 mm) drive-through dimension.*

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

***This manual is mandatory reading for all users*** of 10AP 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](https://bendpak.com/support), by email at [support@bendpak.com](mailto:support@bendpak.com), or by phone at **(800) 253-2363**, option 7 then 4.

Online chat is also available at [www.bendpak.com](https://www.bendpak.com) click the chat icon.



Scan this QR Code for up-to-date information and videos on the 10AP Lift series.



SCAN FOR VIDEO

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# Shipping Information

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


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

If you discover missing or damaged goods **after** you receive the shipment and have signed the bill of lading, notify the carrier at once and request the carrier to make an inspection. If the carrier will not make an inspection, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

It is difficult to collect for loss or damage after you have given the carrier a signed bill of lading. If this happens to you, file a claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make us responsible for collection of claims or replacement of lost or damaged materials.

## Safety Considerations

**Read this 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. Do not allow anyone else to operate the product until they are familiar with all operating instructions and warnings.

 **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's instructions. For more information, visit [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

### Important Safety Information

When using this equipment, basic safety precautions should always be followed, including:

- Read all instructions. Use only as described in this manual.
- Only operate your Lift between temperatures of 41°F to 104°F (5°C to 40°C).
- Make sure all operators read and understand this *Installation and Operation Manual*. **Keep the manual near the Lift at all times.** The Lift should only be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
- 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.
- The Lift should only be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
- Do not make any modifications to the Lift; this voids the warranty and increases the chances of injury or property damage. Use only factory-approved attachments.
- Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
- Do not touch hot parts; you could be burned. Always use care with the equipment.

- 
- 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.
  - Do not let a cord hang over the edge of a table, bench, or counter or come in contact with hot manifolds or moving fan blades. Loop the power cord around equipment when storing.
  - If an extension cord is necessary, a cord with a current rating equal to or greater than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled out.
  - Always unplug equipment from electrical outlets when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
  - To reduce the risk of a fire, do not operate equipment in the vicinity of open containers of flammable liquids (like gasoline).
  - Adequate ventilation should be provided when working on operating internal combustion engines.
  - Keep hair, loose clothing, fingers, and all parts of the body away from moving parts.
  - To reduce the risk of electric shock, do not use the unit on wet surfaces or expose to rain.
  - **Always wear safety glasses!** Everyday glasses only have impact resistant lenses, they are not safety glasses.

**Save these instructions!**

## **Additional Safety Information**

The following safety information applies to all BendPak 10AP models:

- 10AP Series Lifts are Two Post Service Lifts. **Use them only for their intended purpose.**
- 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**.
- **Never** exceed the rated capacity of the Lift.
- When the Lift is in use, keep hands and all body parts well away from it.
- Keep loads balanced on the Lift Arm Assemblies. Clear the area immediately if a Vehicle is in danger of falling off the Lift.
- Modifications void the warranty and increases the chances of injury or property damage. **Do not modify any safety-related features in any way.**
- 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.
- When handling the Hydraulic components, **always wear safety 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 as an emergency to the hospital to determine the extent of the injury. Explain the circumstances of the injury to the attending physician, including what type 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.
- Make a visual inspection of the Lift before using it. Do not use the Lift if you find any missing or damaged parts. Instead, take it out of service, then contact an authorized repair facility, your distributor, or BendPak at **(805) 933-9970** or email [support@bendpak.com](mailto:support@bendpak.com).
- BendPak recommends making a **thorough** inspection of the Lift at least once a year. Replace any damaged or severely worn parts, decals, or warning labels.

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## Symbols

Following are symbols used in this manual:



Calls attention to a hazard that **will** result in death or injury.



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



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



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

## Liability Information

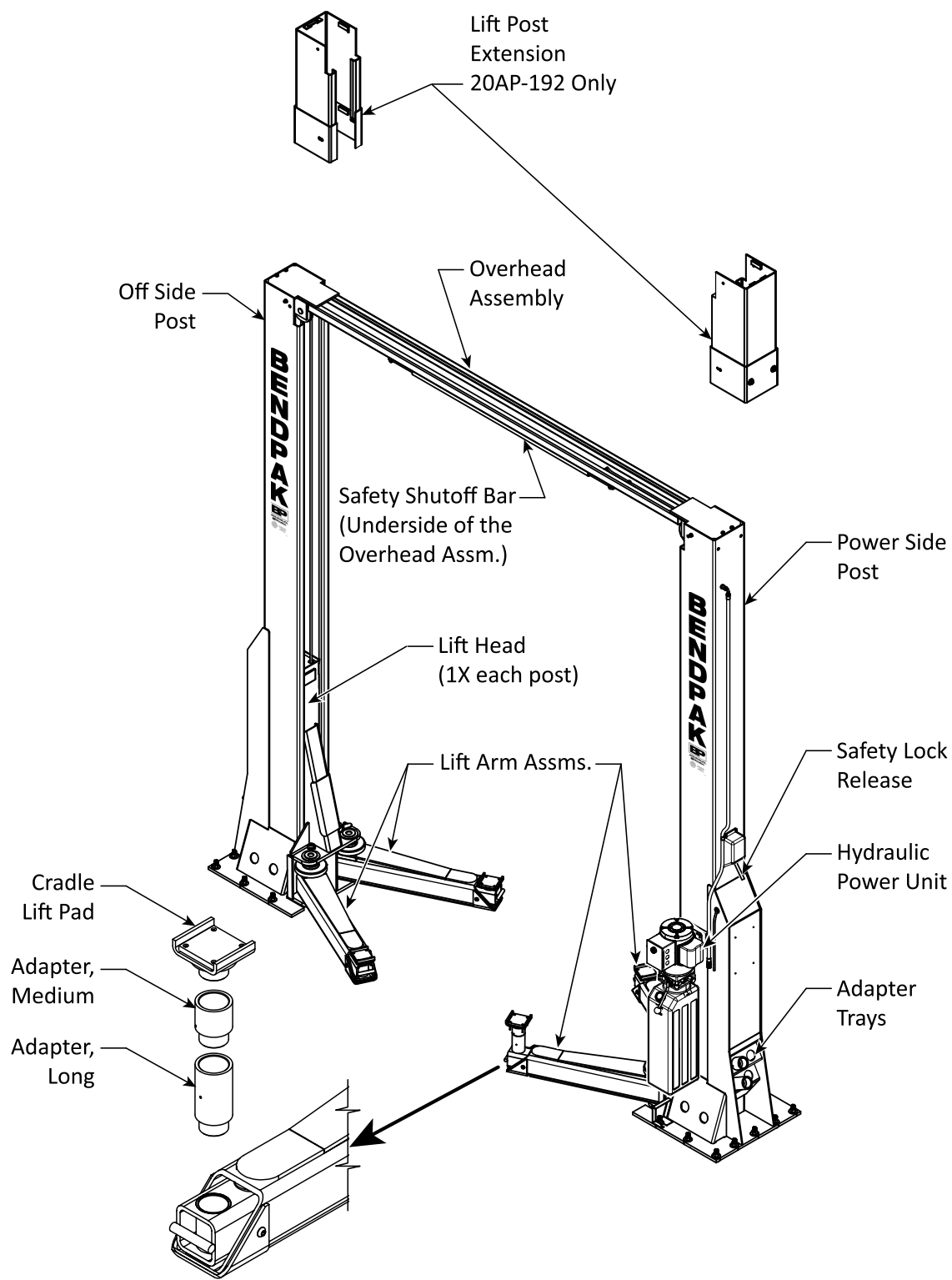
BendPak assumes **no** liability for damages resulting from:

- 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

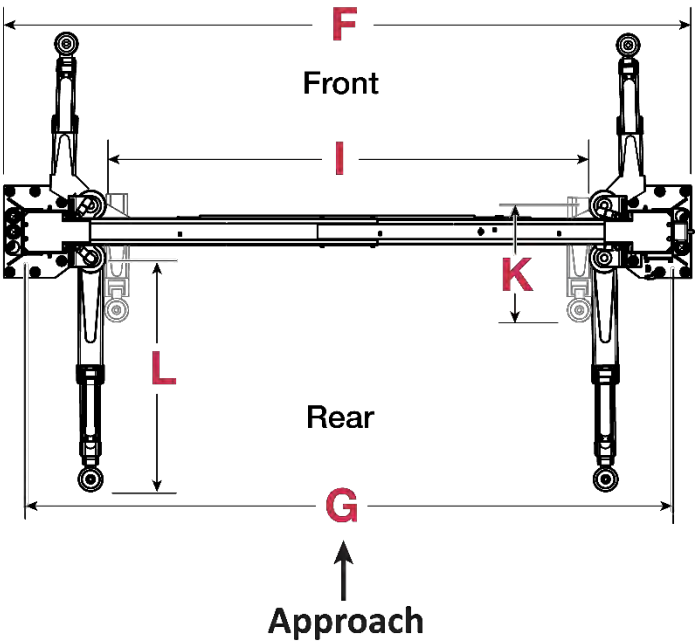
*Not all components shown. Models with extensions are taller. Reference only – do not scale.*



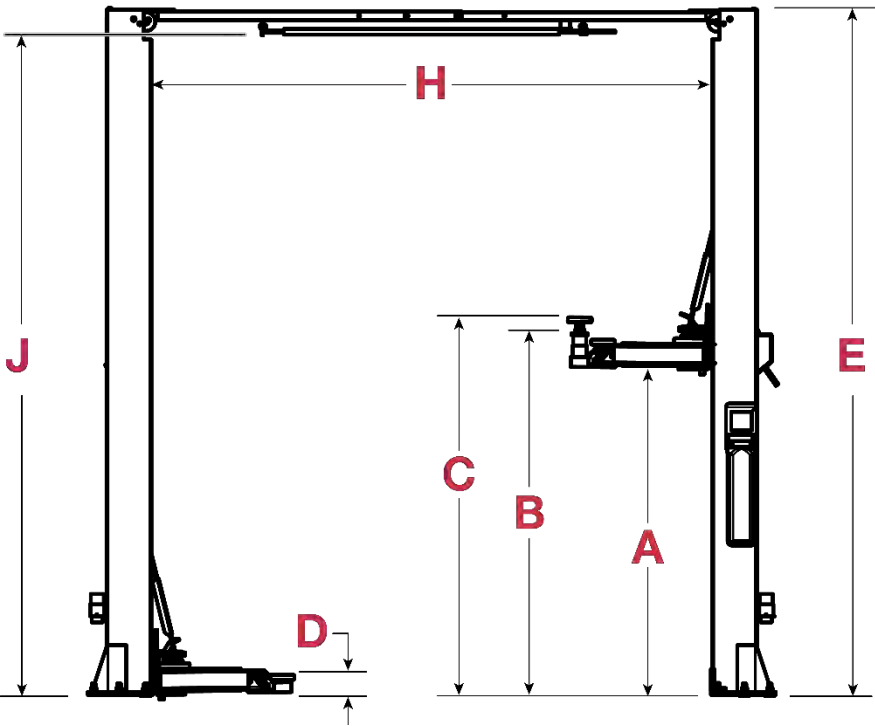


# Specifications

Top View



Approach View



Reference only – do not scale. Shown with Optional Accessories.

Model	10AP	10AP-168	10APX	10APX-181
Lifting Capacity	10,000 lbs. / 4,536 kg			
Max. Capacity — Front Axle	5,000 lbs. / 2,268 kg			
Max. Capacity — Rear Axle	5,000 lbs. / 2,268 kg			
<b>A</b> – Max. Rise	69 in. / 1,753 mm		75.5 in. / 1,918 mm	
<b>B</b> – Lifting Height w/ Pad <sup>1</sup>	73 in. / 1,854 mm		79.5 in. / 2,007 mm	
<b>C</b> – Max. Lifting Height <sup>1</sup>	82.5 in. / 2,095 mm		89 in. / 2,261 mm	
<b>D</b> – Min. Height w/ Pad	4 in. / 102 mm			
<b>E</b> – Overall Height	145 in. / 3,683 mm	168 in. / 4,267 mm	157 in. / 3,988 mm	181 in. / 4,597 mm
<b>F</b> – Width Overall (Narrow)	135 in. / 3,431 mm			
<b>F</b> – Width Overall (Wide)	145 in. / 3,683 mm			
<b>G</b> – Outside Posts (Narrow)	127.5 in. / 3,238 mm			
<b>G</b> – Outside Posts (Wide)	137.5 in. / 3,492 mm			
<b>H</b> – Inside Posts (Narrow)	108.5 in. / 2,756 mm			
<b>H</b> – Inside Posts (Wide)	118.5 in. / 3,010 mm			
<b>I</b> – Drive-Thru Width (Narrow)	92. in. / 2,338 mm			
<b>I</b> – Drive-Thru Width (Wide)	102 in. 2,592 mm			
<b>J</b> – Floor to Top Switch	139.5 in. / 3,540 mm	163.5 in. / 4,155 mm	151.5 in. / 3,850 mm	175.75 in. / 4,464 mm
<b>K</b> – Front Arm Reach (min)	24.5 in. / 622 mm			
<b>K</b> – Front Arm Reach (max)	50 in. / 1,270 mm			
<b>L</b> – Rear Arm Reach (min)	32 in. / 812 mm			
<b>L</b> – Rear Arm Reach (max)	59.25 in. / 1,504 mm			
Max. load per Lift Arm	2,500 lbs. / 1,134 kg			
Screw Pad Adjustment	2 in. / 51 mm			
Time to Full Rise	≈ 45 seconds			
Motor <sup>2</sup>	220 VAC, 60 Hz, 1 Phase			
Sound	<70 dB			

<sup>1</sup>Lifting Height w/Pad is maximum lifting height with Pads adjusted to the lowest setting and no adapter(s). *Maximum Lifting Height* is maximum lifting height with Pads adjusted to high setting and with both tall and medium Adapters (optional equipment) installed.

<sup>2</sup>Special voltages available upon request.

<sup>3</sup>Lift Arms measured from the pivot center to the end of the Lift Arm.

**Specifications subject to change without notice.**

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# Installation Checklist

Following are the steps needed to install a 10AP Series Two-Post Lift; perform them in this order.

- ☐ 1. Review the Safety Rules.
- ☐ 2. Make sure you have the necessary tools.
- ☐ 3. Plan for Electrical Work.
- ☐ 4. Review the Installation Orientation.
- ☐ 5. Review Clearances around the Lift.
- ☐ 6. Select the Installation Location.
- ☐ 7. Choose a Wide or Narrow Configuration (**do not proceed until you have chosen**).
- ☐ 8. Install the Safety Assemblies and position the Safety Cable.
- ☐ 9. Put Equalizing Cables into position.
- ☐ 10. Add Extension Pieces (10AP-168 or 10AP-181 Models only).
- ☐ 11. Learn about Hydraulic Fluid contamination.
- ☐ 12. Learn about Liquid Thread Sealant.
- ☐ 13. Routing the Hydraulic Hoses.
- ☐ 14. Create Chalk Line Guides for the Posts.
- ☐ 15. Anchor the Posts.
- ☐ 16. Prepare and install the Overhead Assembly and Safety Shutoff Bar.
- ☐ 17. Install the Microswitch.
- ☐ 18. Install the Equalizing Cables.
- ☐ 19. Mount the Power Unit (*but do not connect it to power yet*).
- ☐ 20. Route and install the Safety Lock Cable.
- ☐ 21. Connect the Hydraulic Hoses.
- ☐ 22. Install the Lift Arm Assemblies.
- ☐ 23. Perform final Leveling.
- ☐ 24. Contact the Electrician.
- ☐ 25. Wire the Microswitch (**Electrician required**).
- ☐ 26. Connect the Power Unit (**Electrician required**).
- ☐ 27. Install the Power Disconnect Switch and Thermal Disconnect Switch (**Electrician required**).
- ☐ 28. Lubricate the Lift.
- ☐ 29. Perform an Operational Test.
- ☐ 30. Review the Final Checklist.
- ☐ 31. Leave the Manual at the Lift for the Owner/Operator.

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# Installation

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


 **WARNING** Use only the factory-supplied parts shipped with your Lift. If you use attachments, accessories, or configuration modifying components that are in the path and/or affect the operation of the equipment, affect the equipment's electrical listing, or affect the intended Vehicle accommodation, and if they are not certified for use with this Lift, then you void the warranty of the Lift as well as compromising the safety of everyone who sets up or uses the Lift. If you are missing parts, visit [BendPak.com/Support](https://www.bendpak.com/Support), email [support@bendpak.com](mailto:support@bendpak.com) or contact BendPak technical support by phone at **(800) 253-2363**, option 7 then 4. Online chat is also available at [www.bendpak.com](https://www.bendpak.com) click the chat icon. 

## Reviewing the Safety Rules

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

 **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 raise heavy components. Do not install this equipment without reading and understanding this Manual and the Labels on the unit.

Only fully trained personnel should be involved in installing this equipment. Always pay attention. Use appropriate tools and lifting equipment. Stay clear of moving parts.

 **WARNING** You must always wear appropriate protective equipment during installation: leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection.

## Gathering Your Tools


You may need some or all of the following tools:

- Rotary hammer drill (or similar)
- 3/4-inch carbide bit (conforming to ANSI B212.15)
- Hammer
- Four-foot level
- Open-end wrench set, SAE, and metric
- Socket and ratchet set, SAE, and metric
- Hex-key wrench set
- Crescent and pipe wrenches
- Crowbar
- Chalk line
- Medium-sized flat screwdriver
- Tape measure, 25 feet or more
- Needle-nose pliers
- Forklift or Shop Crane
- Two 12-foot ladders
- Two sawhorses
- Torque wrench

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## Preparing for Electrical Work

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

 **DANGER** All wiring **must** be performed by a licensed, certified Electrician in accordance with applicable local, state, and federal electrical codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.

**NOTICE** Notify your Electrician in advance so they come prepared with the items required to connect to the facility's power system, or an appropriate power cord with plug to connect to an appropriate VAC power source, a Power Disconnect Switch, and a Thermal Disconnect Switch. **These items are not supplied with the Lift.**

The Electrician needs to:

- **Connect to the VAC power source.** The Power Unit comes with a pigtail for wiring to a power source. Have your Electrician connect a power cord with plug to the electrical box on the Lift for connection to a power outlet or have them wire it directly into the electrical system at the Lift location. The Lift's Power Unit must be protected by an appropriate circuit breaker.
- **Connect the Microswitch wiring to the Power Unit.** The Microswitch must be wired to the Power Unit. The required wiring is included with the Lift.
- **Install a Power Disconnect Switch.** A Power Disconnect Switch is used to shut down the Lift in the event of an electrical circuit fault, emergency, or when the Lift is being serviced. Refer to [Installing a Power Disconnect Switch](#) for more information.
- **Install a Thermal Disconnect Switch.** A Thermal Disconnect Switch automatically shuts down the equipment in the event of an overload or an overheated motor. Refer to [Installing a Thermal Disconnect Switch](#) for more information.

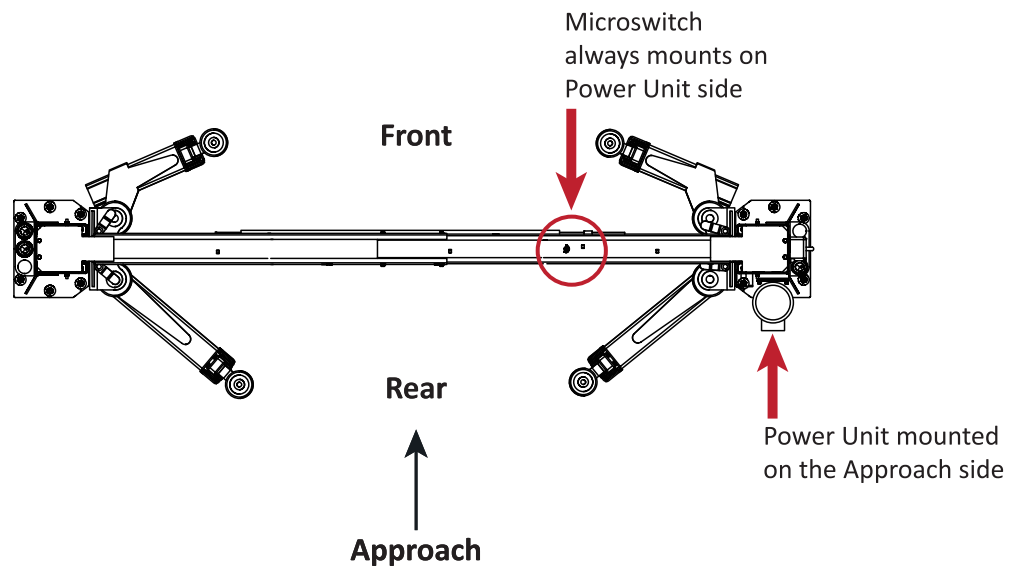
## Reviewing the Installation Orientation

Keep these factors in mind when deciding how to orient the Lift:

- The first thing to figure out is which direction you will be driving the Vehicles in, called **the Approach**.
  - In most cases, this is simple: there's a driveway on one side and a wall on the other side. The driveway is your Approach. This makes the wall side the Front of the Lift and the driveway side the Rear of the Lift.
  - If both sides are open, decide which way you will be driving Vehicles onto the Lift. This is the Approach; the drive-**on** side is the Rear of the Lift and the drive-**off** side is the Front.
- While the Power Unit **must** be installed on the Powerside Post, that Powerside Post may be mounted on either side of the Lift. You can identify the Powerside Post by the Mounting Bracket to which the Power Unit attaches. Refer to the figures below.

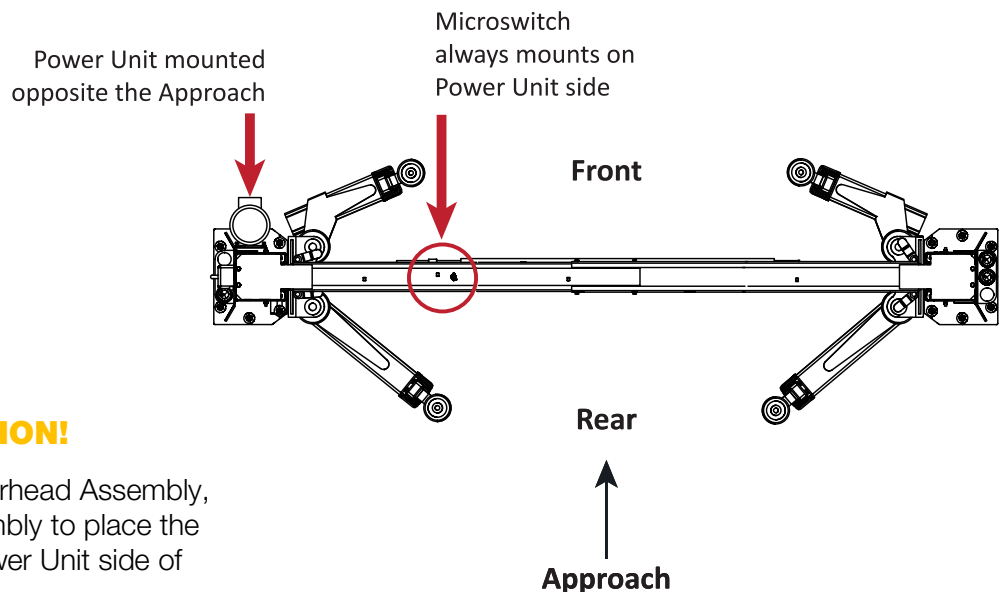
### Top View

#### Approach Side



### Top View

#### Opposite Approach



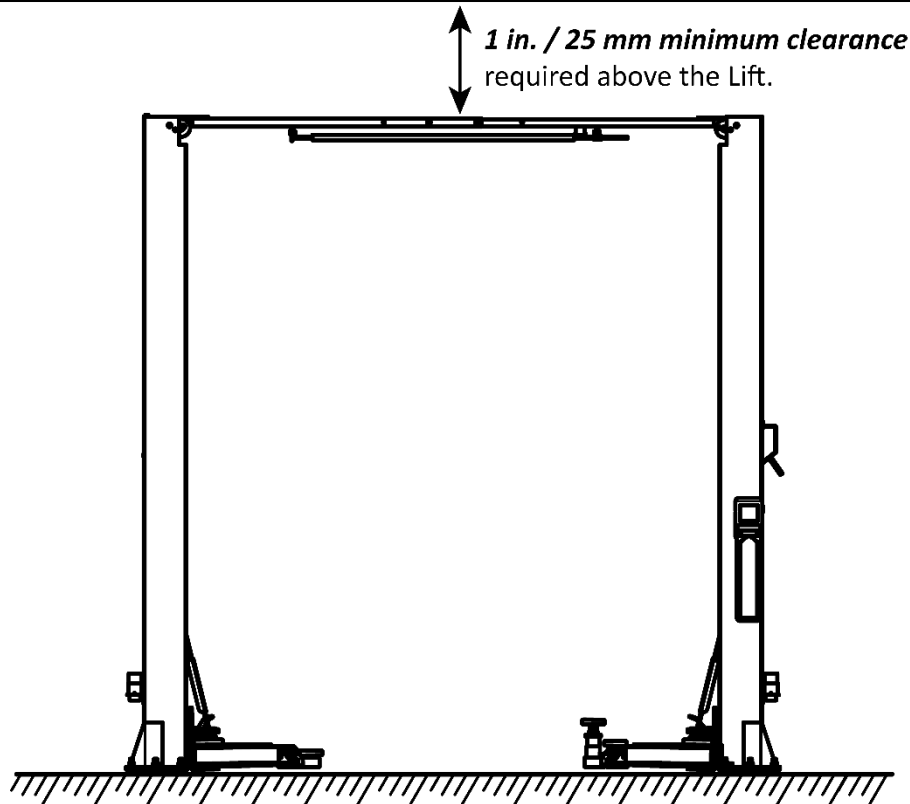
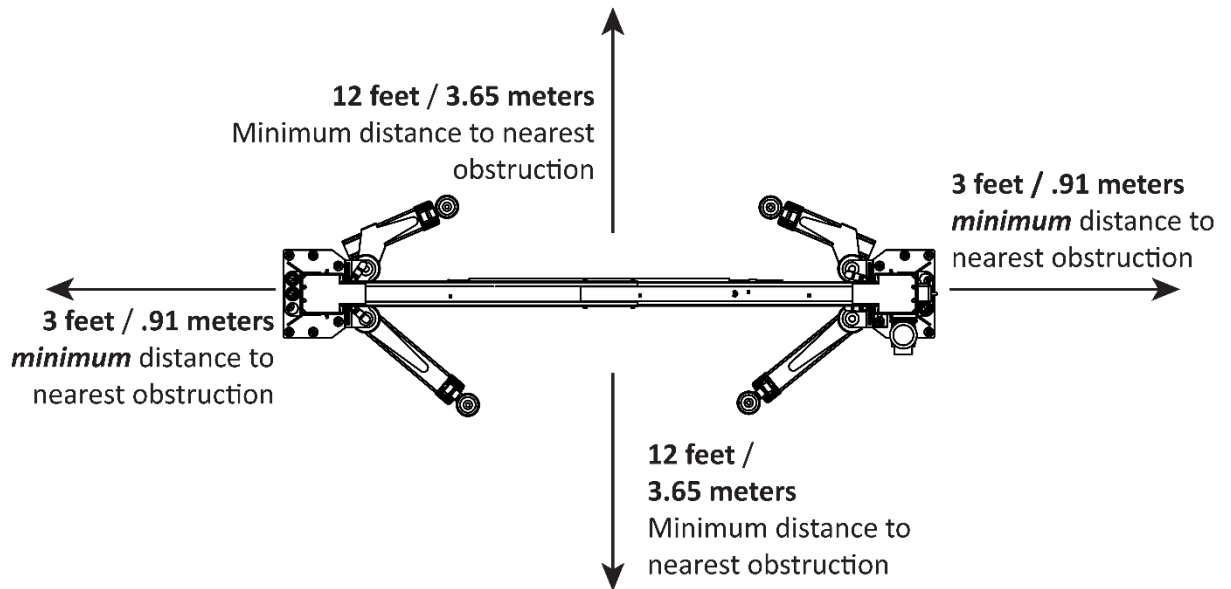
### ⚠ CAUTION!

When installing the Overhead Assembly, always orient the assembly to place the Microswitch on the Power Unit side of the Lift.

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## Checking Clearances

Clearance around and above the Lift is **required for safety**. Refer to the figures below.



*Figures are not to scale, shown with optional accessories. Additional distance may be required on the Front and Rear to allow Vehicles to be driven in or out from these directions.*




---


## Selecting a Location

When selecting the location for your Lift, consider the following:


- **Architectural plans.** Consult the architectural plans for the desired location. Make sure there are no contradictions between what you want to do and what the plans show.
- **Available space.** Make sure there is enough space for the Lift: front, back, sides, and **above**. Refer to **Specifications** for exact measurements. Check for overhead obstructions such as building supports, heaters, lights, electrical lines, low ceilings, and so on.
- **Power.** You need an appropriate VAC power source for the Lift's Power Unit.
- **Outdoor installations.** 10AP Series Two-Post Lifts are approved for indoor installation and use only. **Outdoor installation is prohibited.**
- **Floor.** Only install the Lift on a flat, concrete floor; do not install on asphalt or any other surface. The surface must be level; do not install if the surface has a slope greater than or equal to 3°.

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


- **Concrete specifications.** The concrete must be a minimum 4.25 inches thick, 3,000 PSI minimum compressive strength, and cured for a minimum of 28 days. Do not install the Lift on cracked or defective concrete. Anchor Bolts must be more than 6 inches from cracks and expansion joints in the concrete or from a wall.

 **CAUTION** BendPak Lifts are supplied with installation instructions and concrete anchors that meet the criteria set by the latest version of the American National Standard in Automotive Lifts – Safety Requirements for Construction, Testing, and Validation in., ANSI/ALI ALCTV. Consult with an expert 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).

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

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

- **Unloading the components.** Unload the Lift components as close to the installation location as possible. The Lift includes several heavy pieces, so the closer you unload them to the installation location, the better off you will be.

 **WARNING** Some Lift components are very heavy; if handled incorrectly, they can damage materials like tile, sandstone, and brick. Try to handle the Lift components just twice: once when delivered and once when moved into position. You must have a Forklift or Shop Crane to move some of the Lift components into position. **Use care when moving Lift components.**

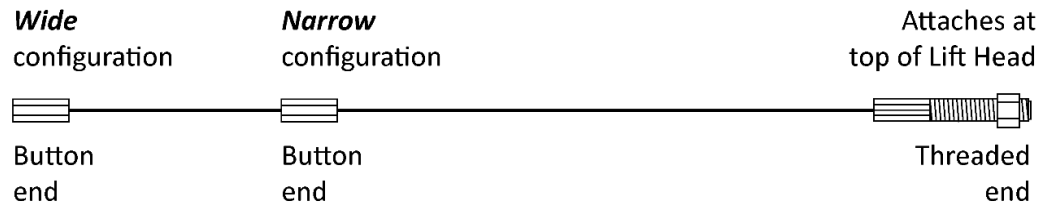
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## Choosing a Wide or Narrow Configuration

10AP Series Two-Post Lifts can be installed in a Wide or Narrow Configuration:

- **Wide Configuration.** The Posts are farther apart, which means you can raise wider Vehicles on the Lift. This is usually the best choice **if** your Lift location is wide enough to support it. When installing the Equalizing Cables, use the Button End at the very end of the cable.

The following drawing shows an Equalizing Cable; the ends are exaggerated for clarity.



- **Narrow Configuration.** The Posts are closer together. This is usually the best choice for narrower garages, as it uses less width. When you are installing the Equalizing Cables, use the Button End **away** from the end of the cable.

**NOTICE** 10AP Series Lifts are shipped from the factory with the Overhead Assembly and the Safety Shutoff Bar *already configured in the Narrow Configuration*. Refer to **Installing the Overhead Assembly and Safety Shutoff Bar** for information about switching to the Wide Configuration.

You do not need to do anything to the Overhead Assembly at this point, but you must **decide** on a Wide or Narrow Configuration **now** for two reasons:

- **Routing the Equalizing Cables.** The Equalizing Cables come with two Button ends, one for the Wide Configuration and one for the Narrow Configuration. You need to know which Button end to use when you put the Equalizing Cables into position.
- **Creating the Chalk Line Guides.** You use the Overall Width setting (in **Specifications**) to create the Chalk Line Guides, so you know how far apart to put your Posts. There are two Width Overall settings, one for the Wide Configuration and one for the Narrow Configuration. You need to know which one to use when you are creating your Chalk Line Guides.

**NOTICE** If you are installing a Lift and do not yet know if it is going to be a Wide or a Narrow Configuration, you need to **figure it out now**, before you go any further in the installation process.

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## Installing the Safety Assemblies and Positioning the Safety Lock Cable

Leaving both Lift Posts flat on the ground with access to the inside of the Post will ease the Safety Lock installation and threading of the Safety Lock Cable into position. This procedure is intended to leave the cable coiled at the top of the Offside Post, ready for routing after the Posts are standing. This position will also make it easier to put the Equalizing Cables into position.

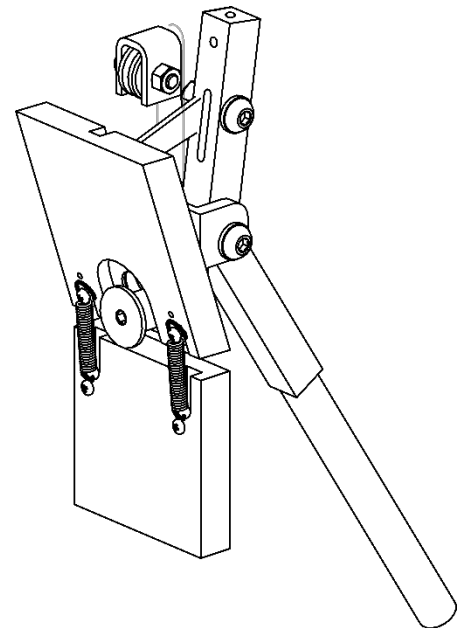
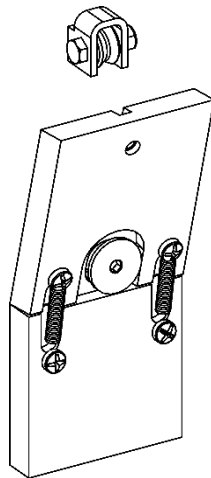
10AP Series Lifts have two Safety Assemblies: one on the Powerside Post (above the Power Unit) and the other on the Offside Post at the same height.

The two Safety Assemblies engage the Lift head and prevent it from lowering. The Safety Release mechanism allows the Lift Head to move past the Safety Locks and lower to the ground. The Safety Assemblies must be disengaged **at the same time** so that both Lift Heads lower together. To accomplish this, the two Safety Assemblies are connected to each other via a Safety Lock Cable, which is routed through the Lift Posts and the Overhead Assembly.

The following illustrations display the Offside and Powerside Safety Mechanisms.

**Offside Safety:** Similar to the Powerside Safety, except that it does not have a Safety Lock Release Handle.

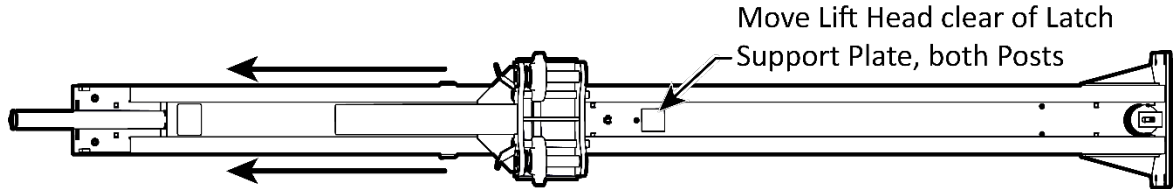
**Powerside Safety:** The Powerside Safety includes a Safety Lock Release Handle and spring, which is pushed down and used to disengage the Safety Locks when lowering the Lift.



*Not to scale. Components removed for clarity.*

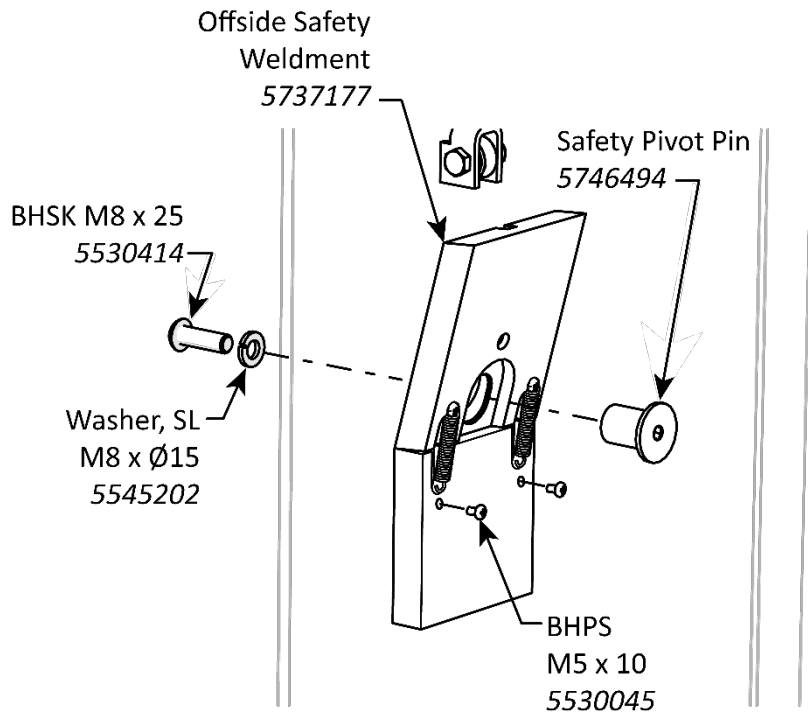
**To assemble and install the two Safety Assemblies and pre-position the safety release cable:**

1. Put both Posts either flat on the ground or elevated on a sawhorse or similar. The **insides** of the Posts must be accessible, facing up.
2. Slide the Lift Heads away from the bottom of both Posts. Far enough to clear the Latch Support Plate and provide room to work.

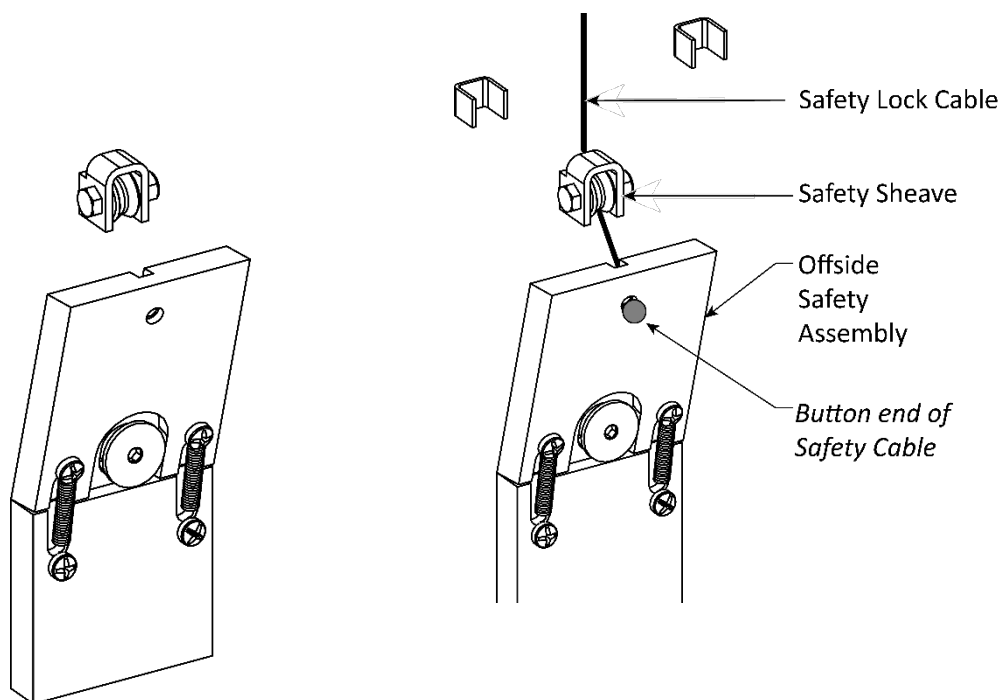


*Illustration above is a top view looking at the inside of the Lift Post. Not to Scale. Some components removed for clarity.*

3. **Begin on the Offside Post**, retrieve the Offside Safety Block (5737177), two extension springs (5540047), four M6 x 20 machine screws (5530065) and the Pivot Pin (5746494) from the Parts Bag. Overlap the Safety Block over the Latch Support Plate welded to the Offside Lift Post. Then attach the extension Springs. Overlapping these parts will ease the Extension Spring installation. Then move the Safety Block to overlap the Latch Support Plate and secure using the Safety Pivot Pin as shown below.



*Not to scale. Components removed for clarity.*



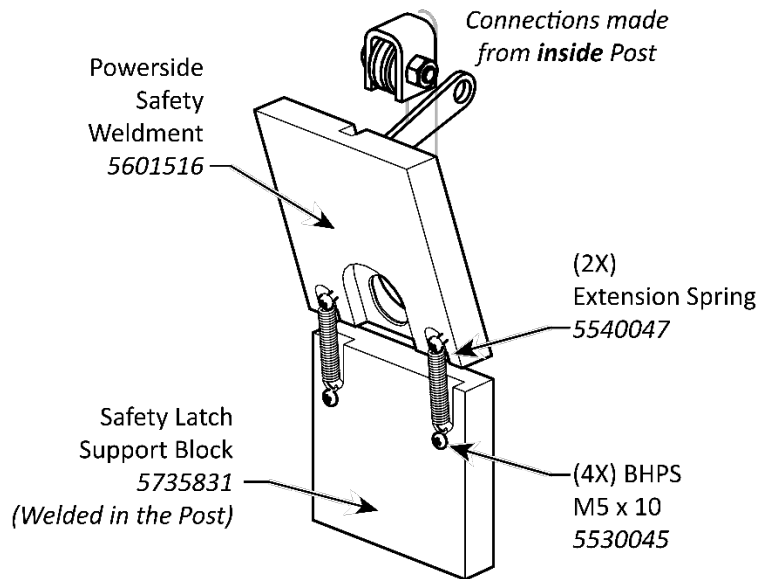
*Reference only – do not scale.*

4. Locate the Safety Lock Cable. This is a long, thin Wire Rope Cable with a Button swaged onto one end and nothing on the other end. Thread the cable through the Offside Safety Block as shown above. *Part Number and Cable length varies based on Lift Model.*

Model	Part Number	Safety Cable Dia. and Length
10AP	5595793	Ø1.8 x 7,773 mm
10AP-168	5595831	Ø1.8 x 8,865 mm
10APX	5595832	Ø1.8 x 8,103 mm
10AP-181	5595833	Ø1.8 x 9,322 mm

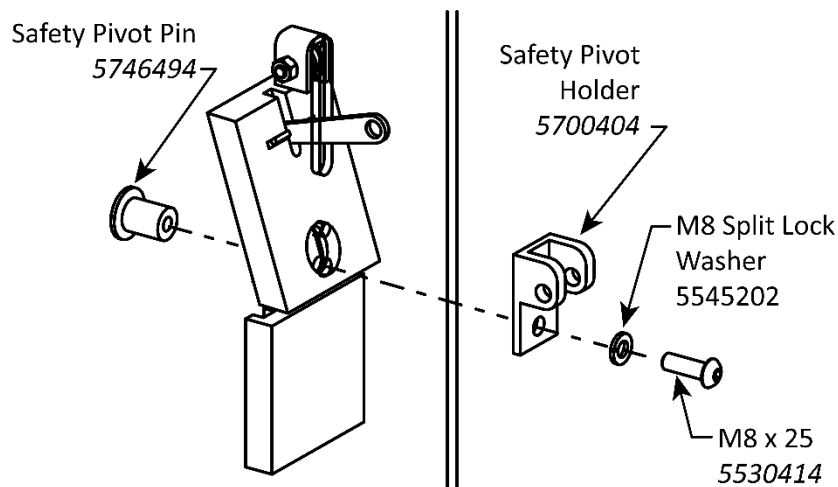
5. Thread the remainder of the Safety Lock Cable under the Safety Cable Sheave and Lift Head, then up to the top of the Offside Post. **Coil the cable and secure with tape or a Zip Tie at the top of the Offside Lift Post until called for later in the assembly.**

6. **Move to the Powerside Post**, Retrieve the Powerside Safety Weldment (5601516), the two extension springs (5540047) and four machine screws (5530045), then attach it over the Safety Latch Support Block that is welded inside the Post, as shown below. Attach the Safety Pivot Holder (5700404) to the Powerside Post, as depicted in step 7 below.

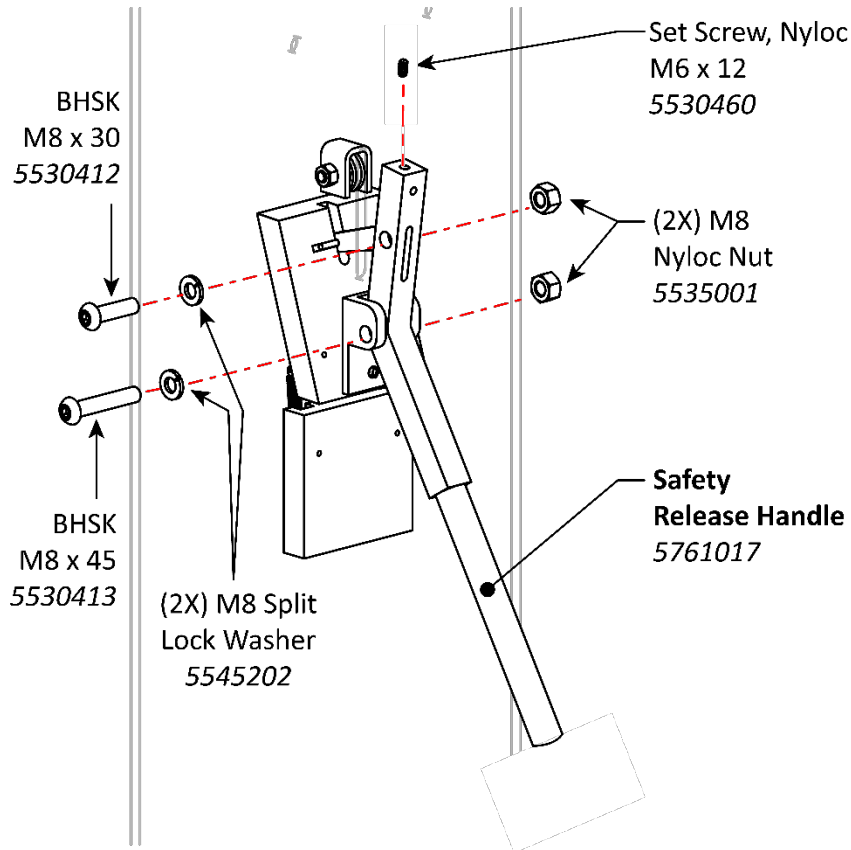


*Reference only – do not scale.*

7. Connect the Pivot Pin and Safety Pivot Holder using the M8 x 25 Machine Screw through the Powerside Post.



8. After the Safety Pivot Holder is in place, attach the Safety Release Handle (5761017) as depicted below.



*Reference only – do not scale.*

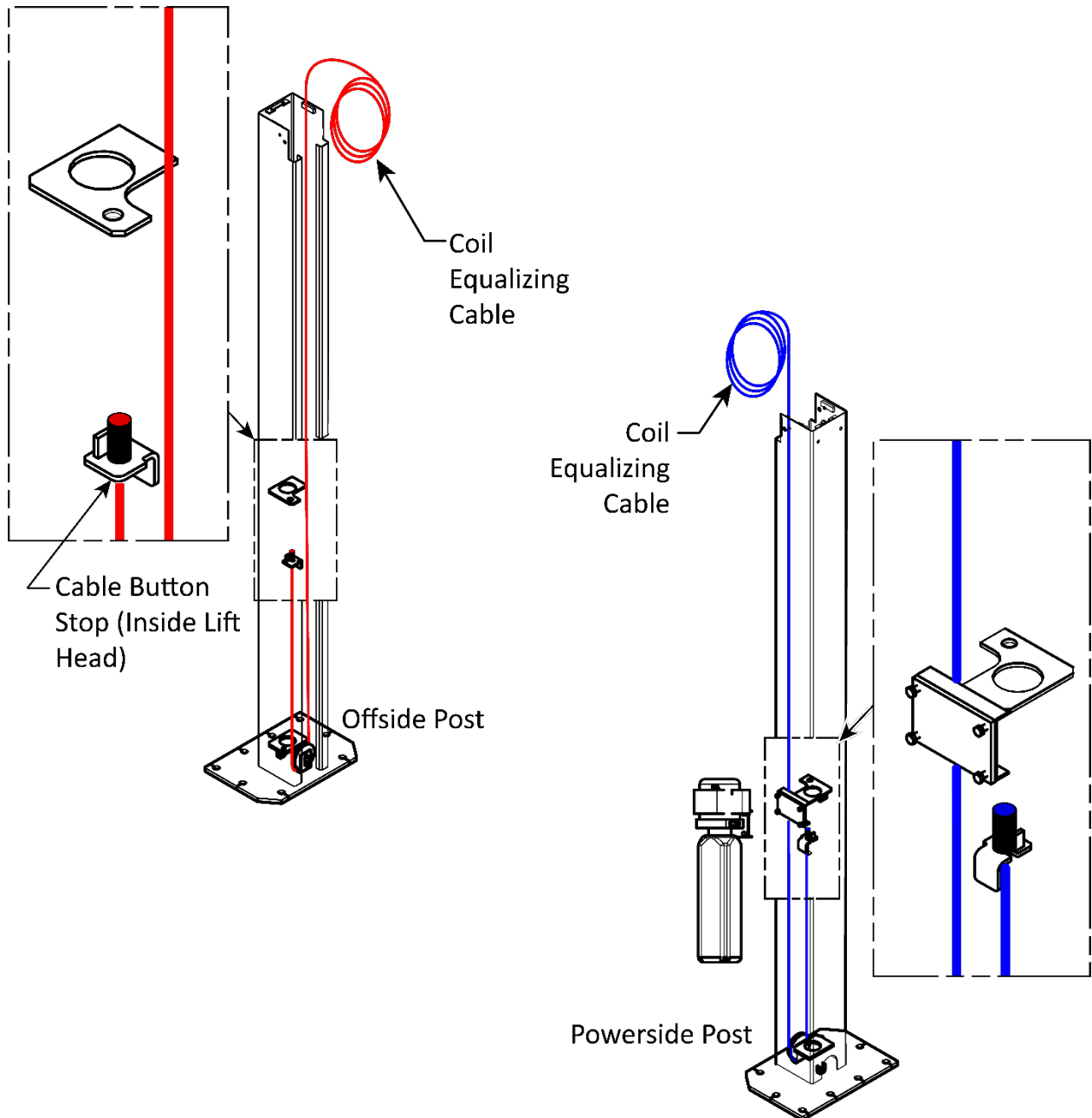


## Putting the Equalizing Cables into Position

It is much easier to put the Equalizing Cables into position **before** you stand up the Posts. Note that this is not a full install of the Equalizing Cables, just putting them into position and looping the excess at the top of the Post secured with a Zip Tie or Tape.

**NOTICE** The two Equalizing Cables are the same length.

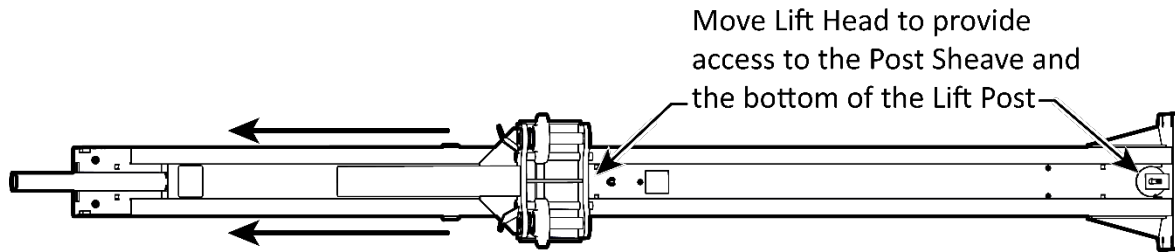
**CAUTION** BendPak recommends wearing safety gloves when handling the Equalizing Cables. The following graphic provides an overview of the Equalizer Cable routed into position.



*Not to scale, components removed for clarity.*

### To put the Equalizing Cables into position:

1. Put both Posts either flat on the ground or elevated on a sawhorse or similar. The **insides** of the Posts must be accessible, facing up.
2. Slide the Lift Heads away from the bottom of both Posts. Far enough to provide access to the bottom of the Lift Post and the Post Sheave.

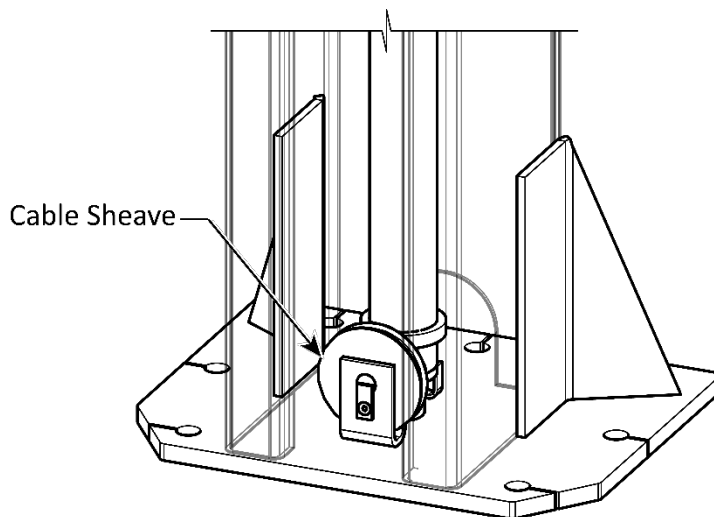


*Reference only – do not scale.*

3. Retrieve the two Equalizing Cables for your Lift. Each model has a specific Equalizing Cable length as noted in the table below.

Model	Part Number	Equalizing Cable Assembly Dia. and Length
10AP	5595752	Ø10 x 10,170 mm
10AP-168	5595753	Ø10 x 11,400 mm
10APX	5595754	Ø10 x 10,790 mm
10APX-181	5595755	Ø10 x 12,005 mm

4. Remove the Post Sheave from the bottom of both Posts.



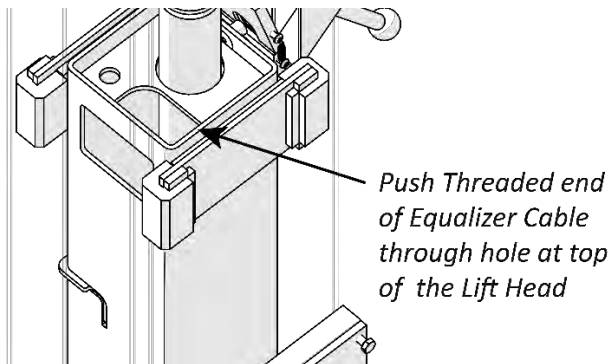
*Illustration shows the Cable Sheave near the bottom of the Post.  
Reference only – do not scale.*

**NOTICE** Keep the Post Sheave, Sheave Pin, and Bolt nearby; you will be re-installing them soon.

5. Take an Equalizing Cable and locate the Button End you are going to use:
  - For **Wide Configurations**, use the Button end at the very end of the cable.
  - For **Narrow Configurations**, use the Button end away from the end of the cable.
6. Push the Button end up through the bottom of the Lift Head up towards the Cable Button Stop, then push the Button end into the Slot in the Cable Button Stop.

**Important** If you are having problems getting the Button end into the Slot, try pushing the Button end past the Button Stop and out the Hole at the Top of the Lift Plate; now, move the Equalizing Cable around to get the Cable into the Slot. Once the cable is in the Slot, pull back on the other end of the Cable to slide the Button end into the Slot. Try to keep the Cable taut until the Equalizing Cable is connected at the other end, done later in the installation. Note that it can be difficult to get the cable back into the Slot if it comes out.

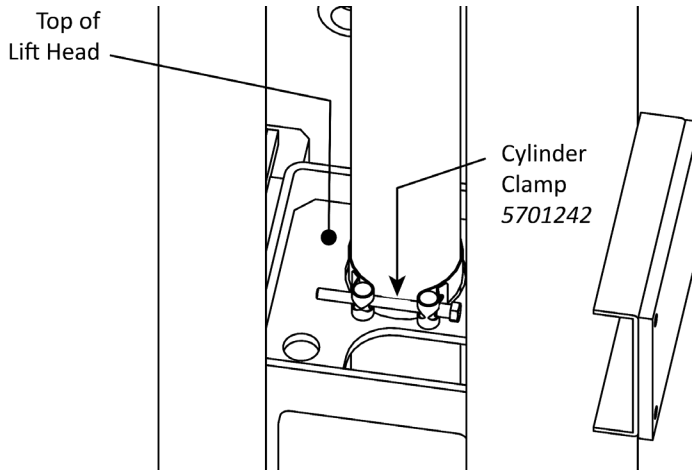
7. If you are using the Narrow configuration, bend the top of the Equalizing Cable so that it is out of the way of the other components in the Lift Head and Post.
8. Route the Equalizing Cable down to where the Post Sheave used to be and then up again towards the top of the Post.
9. Lubricate the Sheave Pin and Bearing with Red Lithium Grease, then replace the Post Sheave, making sure the Equalizing Cable is routed under it and in the Sheave.
10. Push the Threaded end of the Equalizing Cable through the Lift Head and out the Hole at the Top of the Lift Head.



*Illustration shows the opening in the Lift Head, which is where you route the Threaded end of the Equalizing Cable.*

*Not all components are shown.  
Reference only – do not scale.*

11. Coil up and bind the remainder of the Cable (the portion above the Hole at the Top of the Lift Head), then leave it resting on top of the Post until later in the installation.
12. Move both Lift Heads back down to the bottom of each Post.
13. Verify the Cylinder Clamps are in place on the Hydraulic Cylinders above the Lift Head.



*Reference only – do not scale.*



### **WARNING**

Verify the Cylinder Clamps are positioned at the top of the Lift Head and secured.  
**Do not operate the Lift if the Cylinder Clamps are not secured on the Hydraulic Cylinders.**

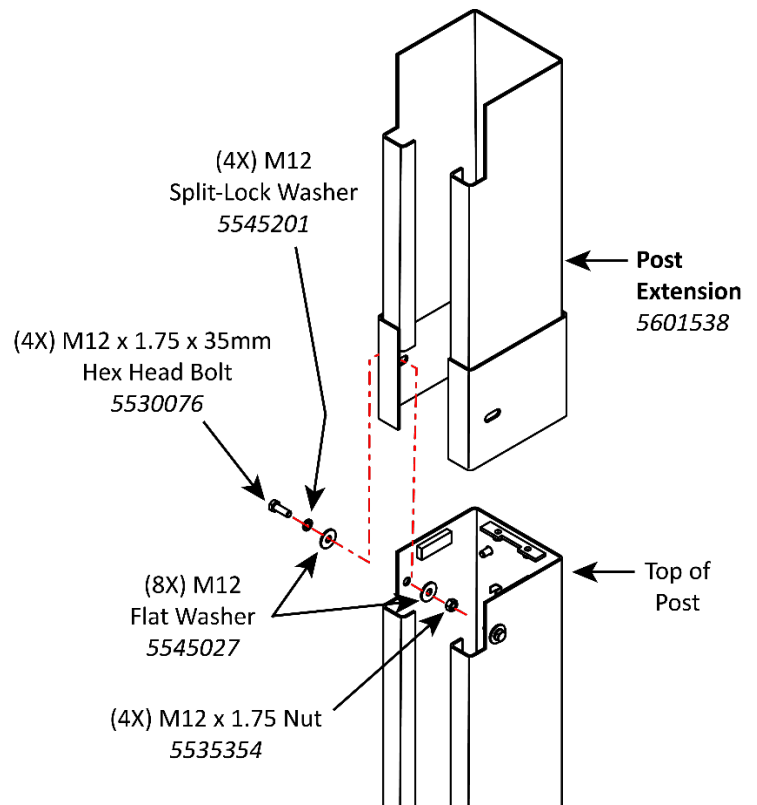
10AP Series model numbers ending with **-168** or **-181** are supplied with Post Extensions that raise the height of the Posts and allow you to raise taller Vehicles.

The Post Extensions are slipped over the top of both Posts and then bolted into place.

*Reference only – do not scale.*

### **To install the Post Extensions:**

1. Locate the two Post Extensions and the 4 Hex Head Bolts, 8 Flat Washers, 4 Split-Lock Washers, and 4 Nuts. Reference the illustration above for part numbers.
2. Slide one of the Post Extensions over the top of one of the Posts.  
The opening in the Post Extension faces the inside of the Lift.
3. Secure the Post Extension to the Lift Post, using the hardware listed in the illustration above.
4. Slide on the other Post Extension to the other Lift Post and secure it the same way.





## IMPORTANT! PLEASE READ NOW



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

Your Lift is shipped with clean components; however, BendPak strongly recommends that you take secondary precautions and clean all Hydraulic Hoses and Fittings prior to making connections. It is better and less costly to take these extra steps now so that you do not need to take your Lift out of service later to fix issues that could have been prevented at the time of 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 ANSI-approved 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.** If the Hydraulic Fluid is clean and compatible with the system fluid, you can flush Hoses and Fittings to create turbulent flow and remove particulates. Always ensure that the fluid itself is contaminant-free.

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

- **Remove old thread seal tape.** Some ports on the Hydraulic Cylinders are shipped with temporary plugs secured with thread seal tape, so make sure to thoroughly remove any leftover thread seal tape that may inadvertently enter the Hydraulic System.
- **Use a liquid thread sealant only.** Liquid thread sealant (Loctite™ 5452 or similar) is recommended. Do not use thread seal tape on any fitting. Liquid thread sealant is recommended for NPT connections, fine for JIC connections, but *not* necessary for O-ring (ORB) connections.
- **Always use clean equipment.** If you use a dirty bucket or funnel to transfer the Hydraulic Fluid into the Hydraulic Fluid Reservoir, the contaminants will likely be introduced into the Fluid. When using cleaning rags, use a lint-free rag.
- **Proper storage.** Keep the Hydraulic Fluid sealed in its container until ready for use; store the Fluid in a clean, dry, and cool area.
- **Cover the Hoses and Fittings.** Before installation, do not leave the ends of the Fittings exposed; the same applies for the Hydraulic Hoses. As a general rule, keep the Hydraulic Hoses and Fittings capped and in a clean area until ready for use.
- **Filter the new Hydraulic Fluid.** Just because it is new does not necessarily mean it is *clean*. Use an offline filtration cart or kidney loop system to make sure the Hydraulic Fluid is clean before being transferred into the 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 you add the replacement Fluid; do not mix the two together.

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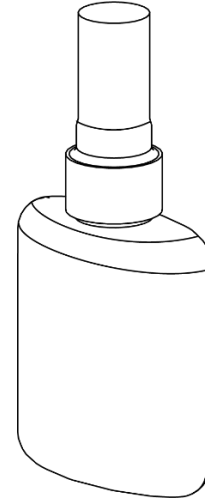
## About Thread Sealants

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 can be used with most Hydraulic Fittings, although you probably only need to use with NPT connectors.

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 you are going to use are clean and dry.  
If you are adding Thread Sealant 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.

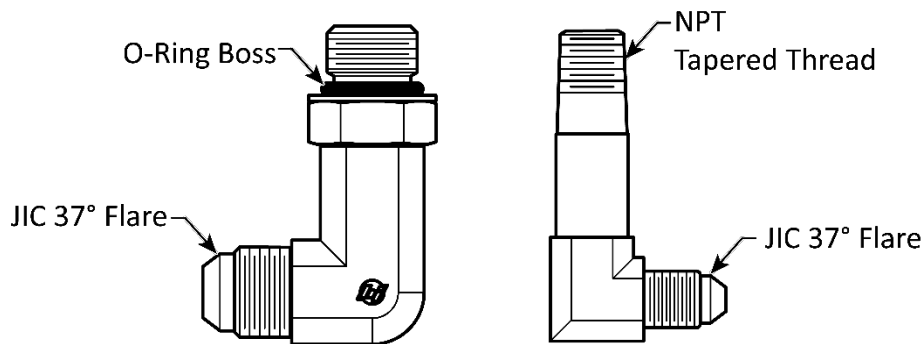
 **WARNING** Always wear the proper protective equipment when handling Thread Sealant.

You only need a small amount because the sealant spreads to the other threads as it is tightened into place.

If you put too much, the excess liquid will be pushed out when the Fitting is tightened; use a rag to wipe 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.

## Identifying Hydraulic Fittings



Joint Industry Council (JIC)

National Pipe Thread (NPT)

## Routing the Hydraulic Hoses

It is easier to put some hydraulic components into position **before** you stand up the Posts.

All 10AP Series Lifts use either three or four Hydraulic Hoses (shown in the illustration below):

Lift Model	10AP	10AP-168	10 APX	10APX-181
Hose A	5570277		5570278	
Hose B	5570279		5570023	
Hose C	5570291	5570292	5570293	5570095
Hose D	5570174 (Wide configuration ONLY)			

All Hydraulic Hoses and Hydraulic Fitting locations are detailed in the drawing below.

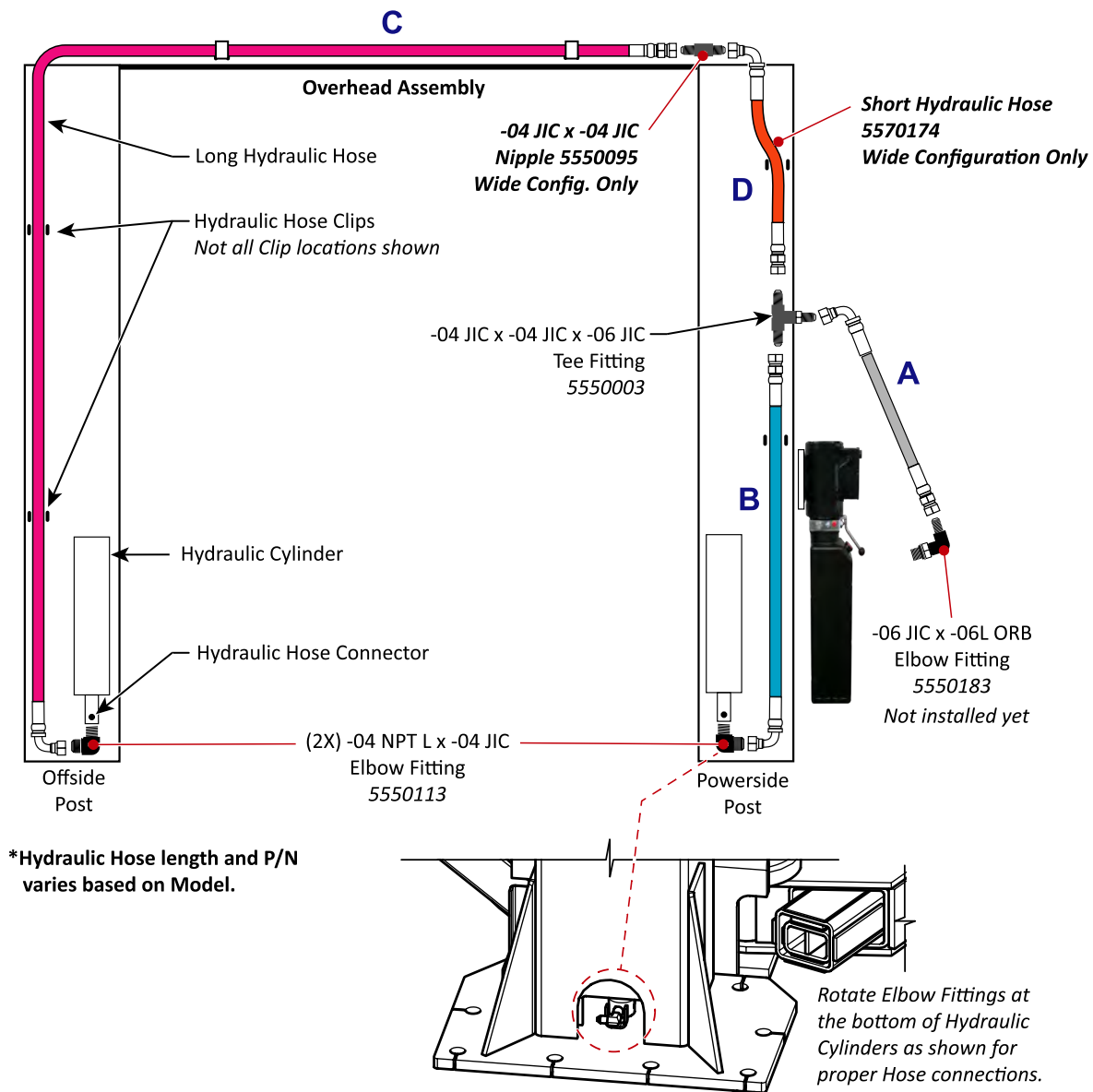


Figure for reference only – do not scale.



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### To put the Hydraulic Hoses into position:

1. Locate the 4 Hydraulic Hoses and necessary Hydraulic Fittings: Two Elbow Fittings (5550113), one Tee Fitting (5550003), and one Nipple Fitting (5550095 – *for wide configurations only*).

**NOTICE** The Power Unit Elbow Fitting (5550183) and the Short Hydraulic Hose cannot be installed at this point, as the Power Unit is not yet in place.

2. **Starting most of the way up the Powerside Post**, push the single fitting (-06 JIC) on the Bulkhead Tee Hydraulic Fitting (5550003) through the hole above the Power Unit Mounting Bracket from inside the Powerside Post.

**NOTICE** There is only one Tee Fitting, and it is installed on the Powerside Post above where the Power Unit will be installed.

3. Tighten the Nut on the **outside** of the Powerside Post to hold the Bulkhead Tee Fitting in place.
4. **Switching to the bottom of the Powerside Post**, remove the Shipping Plug from the Hydraulic Hose Connector on the bottom of the Hydraulic Cylinder.

**Important** Keep a rag nearby in case some fluid leaks out of the Hydraulic Hose Connector when you remove the Shipping Plug.

5. Connect one of the two Elbow Fittings (5550113) to the Hydraulic Hose Connector; tighten the Elbow Fitting appropriately.

Point the JIC end of the Fitting towards the side of the Post with the Clips. **Use liquid thread sealant on the NPT male threads only.**

6. Turn the Hydraulic Cylinder so that the Elbow Hydraulic Fitting is accessible from the bottom back side of the Powerside Post.

**NOTICE** When routing Hydraulic Hoses, after they are positioned correctly, put them into the nearby Clips and lightly crimp the Clips together along the side of each Post. When all Hydraulic Hoses have been installed, go back and fully crimp all the Clips.

7. Take the Medium Hydraulic Hose, connect the Straight End to the bottom of the Tee Fitting (5550003), and tighten securely.
8. Push the Curved End of the Medium Hydraulic Hose down to the bottom of the Powerside Post and connect it to the JIC end of the Elbow Hydraulic Fitting (5550113); tighten securely.
9. **Switching to the Offside Post**, connect the other Elbow Fitting (5550113) to the Hydraulic Hose Port at the bottom of the Hydraulic Cylinder.
10. Tighten the Elbow Fitting securely; make sure to leave the unconnected end of the fitting pointing towards the side with the Clips.
11. Take the Long Hydraulic Hose, push the Curved End down through the Post, then connect the Curved End to the Elbow Fitting (5550113) you just connected and tighten securely.

Make sure to clip the Long Hydraulic Hose to the Clips in the Post.

12. Carefully coil up and bind the rest of the Long Hydraulic Hose, then leave it resting on top of the Offside Post until later in the installation.

You should now have the Long Hydraulic Hose connected to the bottom of the Hydraulic Cylinder in the Offside Post, with the rest of the Long Hydraulic Hose coiled up at the top of the Offside Post. It will be connected to the rest of the Hydraulic System **later in the installation.**

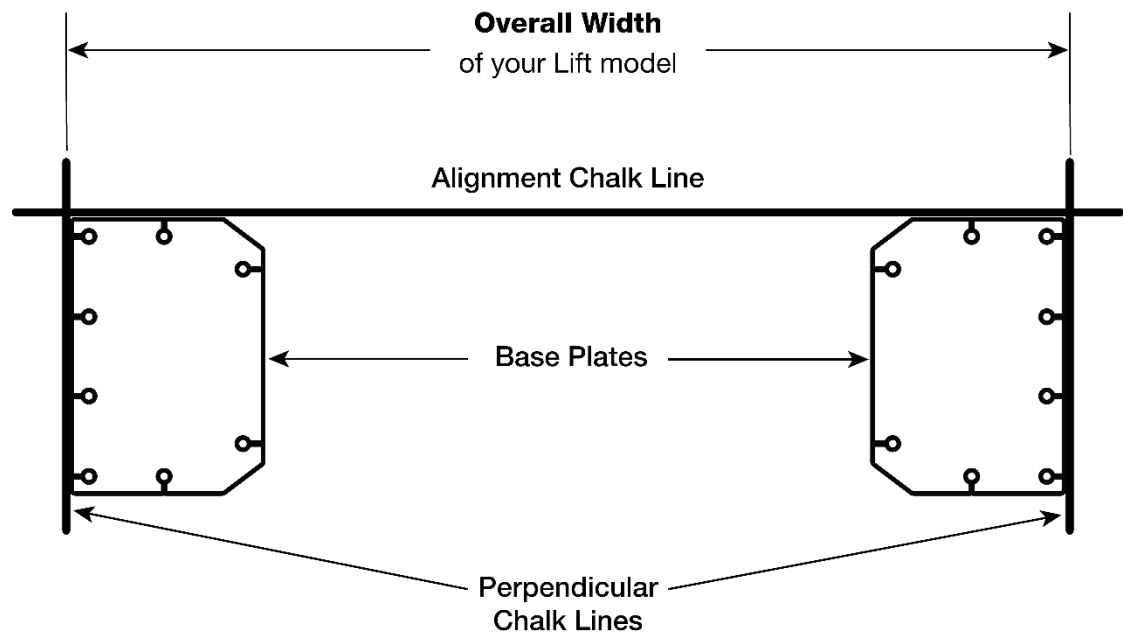
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## Creating Chalk Line Guides

Based on the Specifications for your Lift, create Chalk Line Guides on the ground for the two Posts prior to moving them into position.

Use the **Overall Width** value in **Specifications** for your Lift model to determine where to place the Chalk Line Guides. The Overall Width value is defined as the distance from the back of one base plate to the back of the other base plate. The Overall Width setting may be set to Narrow (135 in. / 3,431 mm) or Wide (145 in. / 3,683 mm), depending on the selection for your Lift model.

The following illustration shows how to create Chalk Line Guides for a 10AP Series Lift.



*Top View of the Base Plates. Not all components are shown.*

Make sure to choose the Width Overall value for the Narrow or Wide orientation, based on the selection you made earlier.

### To add Chalk Line Guides:

1. Decide where you want to locate the Lift. Verify the clearances around the Lift area.
2. Create an Alignment Chalk Line at the Front of the Lift.

Make the Alignment Chalk Line longer than the **Overall Width** setting for your Lift model.

Make sure to use the **Overall Width** setting for Narrow or Wide orientation.

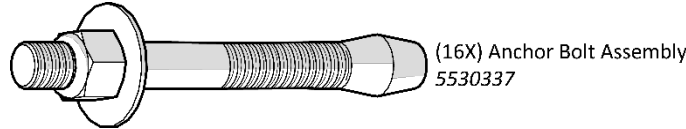
3. Create two Perpendicular Chalk Lines at 90° angles to the Alignment Chalk Lines at the **Overall Width** distance for the Lift model you are installing.

The two Perpendicular Chalk Lines must be a specified distance from each other, the Overall Width setting **Narrow (135 in. / 3,431 mm)** or **Wide (145 in. / 3,683 mm)**, depending on the selection for your Lift model.

4. When you move the Posts into position, put the Base Plates into the corners created by the Chalk Line Guides, as shown in the figure above.

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## Anchoring the Posts



### **DANGER**

*Pay special attention when installing the Posts. If done incorrectly, the Lift could fall over, potentially causing damage to the Vehicle, the Lift, and injuring bystanders. BendPak strongly recommends consulting a Concrete Specialist early in your planning process for Lift installations. A Concrete Specialist will make adjustments to account for national, state, and local building codes as well as local weather conditions, soil composition, base preparation, load bearing, seismic requirements and any other structural concerns that may arise.*

Concrete specifications are:

- **Depth:** 4.25 inches / 108 mm thick, minimum, steel reinforced.
- **PSI:** 3,000 PSI, minimum
- **Cured:** 28 days, minimum

Anchor Bolt specifications are:

- **Length:** 6.3 inches / 160 mm
- **Diameter:** .75 inch / 19 mm
- **Anchor torque:** 85 – 95 ft. lb.
- **Effective embedment:** 3.25 inches / 82.5 mm or more

The Concrete floor where you want to install your Lift must meet the following requirements:

- The floor must be a flat, level concrete floor. **Do not install the Lift on a surface with more than three degrees of slope.**
- Do not install the Lift on cracked or defective Concrete.
- Check the floor for the possibility of it being a post-tension slab. In this case, contact the building architect before drilling. Contact a qualified professional to locate the tensioned cables before drilling.

### **WARNING**

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

### **WARNING**

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

BendPak Lifts are supplied with installation instructions and concrete fasteners meeting the criteria as prescribed by the latest version of the American National Standard “Automotive Lifts – Safety Requirements for Construction, Testing, and Validation”.

### **WARNING**

Use **only** the ALI-certified Anchor Bolts that came with your 10AP Series Two-Post Lift. If you use components from a different source, you void your warranty and compromise the safety of everyone who installs or uses the Lift.

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

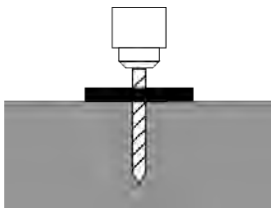
**NOTICE** Consider **not** torquing the Anchor Bolts into position yet. Installing the Overhead Assembly and doing final leveling may be easier if there is some play in the Posts.

**Effective Embedment** is the location in the Hole where the Expansion Sleeve presses into the Concrete. This is where the Anchor Bolts get their holding strength, the further down into the Hole, the greater the holding strength.

**Nominal Embedment** is how far down into the Hole the bottom of the Anchor Bolt is, which does not tell you anything about the holding strength.

#### To install the Posts:

1. Using a Forklift or Shop Crane, move the Posts to the Chalk Line Guides you created earlier.
2. Carefully stand up each Post, *one at a time*, and move them to the appropriate location.
3. Double check your measurements against the **Specifications** for your Lift model.
4. Using the Base Plates as guides, drill each hole **4 inches** deep using a carbide bit.



Go in straight; do not let the drill wobble.

The diameter of the drill bit must be the same as the diameter of the Anchor Bolt. If you are using a  $\frac{3}{4}$  inch diameter Anchor Bolt, for example, use a  $\frac{3}{4}$  inch diameter drill bit.

**Do not drill all the way through the Concrete**; if you punch completely through the slab, you could compromise the holding strength of the Anchor Bolts.

5. Vacuum each hole clean.

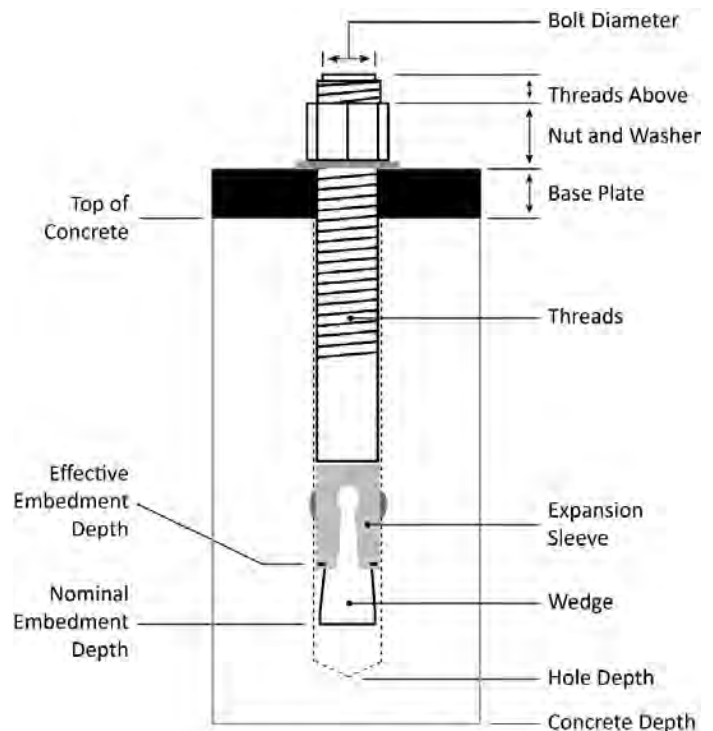
**WARNING** You **must** use the appropriate safety gear including safety glasses, dust masks, gloves, steel-toed work boots and heavy work clothes when anchoring the Posts.



BendPak recommends using a vacuum to get the hole very clean.

You can also use a wire brush, hand pump, or compressed air; just **make sure to thoroughly clean each hole**.

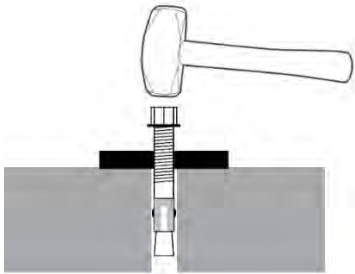
Do **not** ream the hole. Do **not** make the hole any wider than the drill bit made it.



## NOTICE

The holding strength of an Anchor Bolt is partially based on the how cleanly the Expansion Sleeve presses against the Concrete. If the hole is dirty or too wide, there is less holding strength.

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

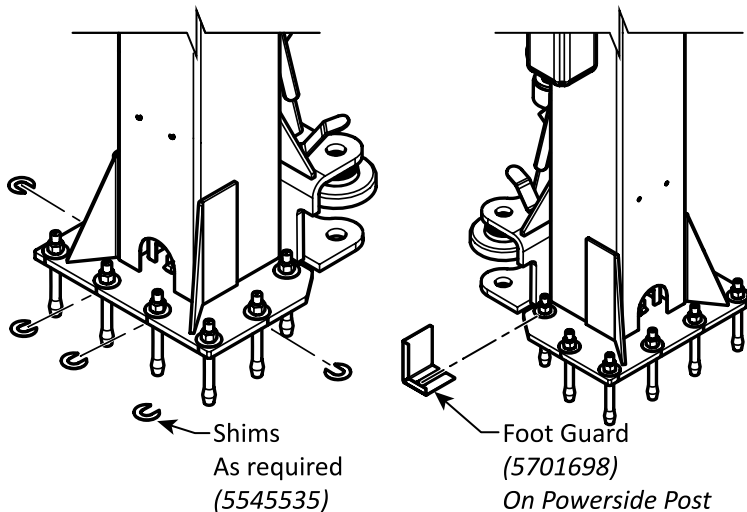


The Expansion Sleeve of the Anchor Bolt may prevent the Anchor Bolt from passing through the hole in the Base Plate; this is normal. Use a hammer or mallet to get the Expansion Sleeve through the Base Plate and into the hole.

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

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

7. Hammer or mallet the Anchor Bolt the rest of the way down into the hole, and then stop when the Washer is snug against the Base Plate.
8. Plumb each Post; install Shims as required. See **Troubleshooting Lift Arm Lock Disengagement** if you are required to shim  $\geq .5$  in / 13 mm.



*Do not scale.*



### Tip

If you are going to torque the Anchor Bolts later, so that installing the Overhead Assembly and final leveling is a little easier, skip the next step. Make sure the Anchor Bolts are securely in position; This will ensure that the Posts will not move too much during the rest of the installation.

9. Tighten each Nut **clockwise** to the recommended installation torque, 85 – 95 pound feet, using a Torque Wrench.



### CAUTION

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

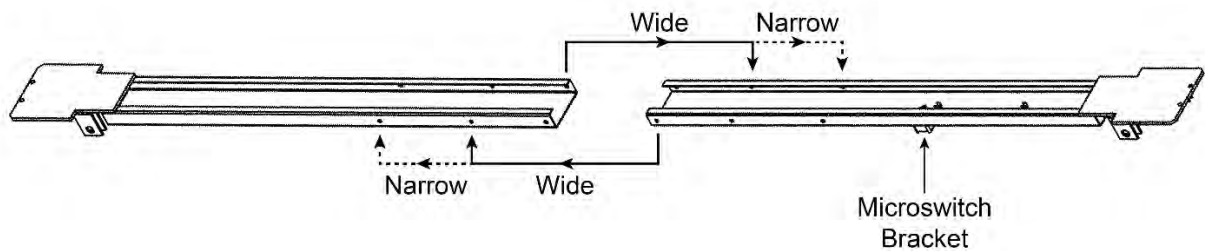
10. Install the Foot Guard on the Powerside Post as shown on the previous page.

## Installing the Overhead Assembly and Safety Shutoff Bar

The Overhead Assembly is installed above and between the Powerside and Offside Posts. It holds the Equalizing Cables, the Hydraulic Hoses, the Microswitch wiring, and the Safety Lock Cable.

The Overhead Assembly is two pieces that are bolted together. The Overhead Assembly and the Safety Shutoff Bar come from the factory already assembled in the Narrow Configuration.

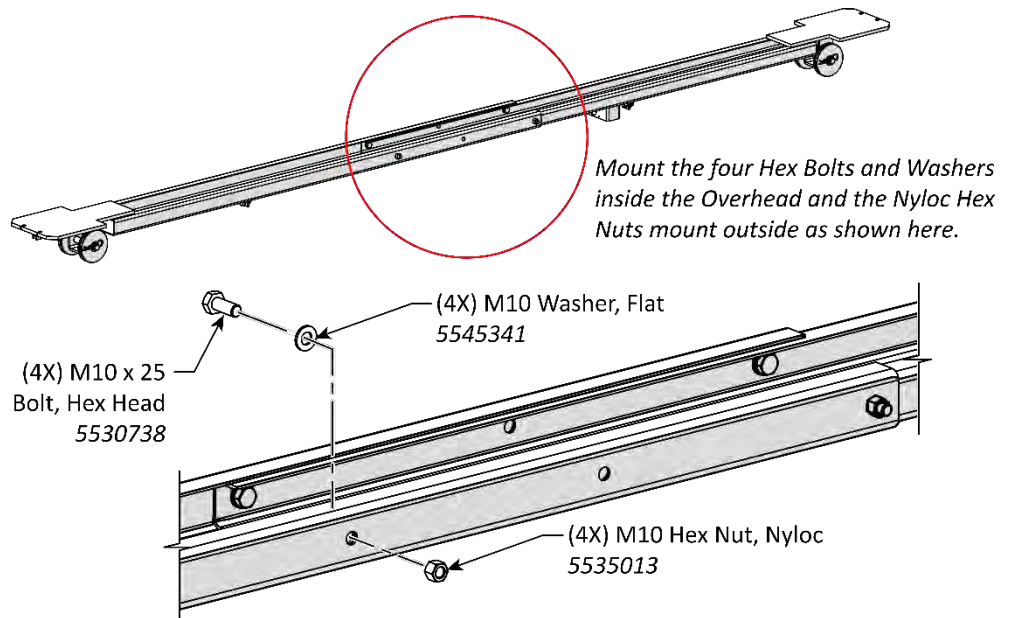
**NOTICE** BendPak recommends placing the Overhead Assembly on sawhorses to prepare it. The following graphic shows the bolting locations for both Narrow and Wide Configurations.



**Note:** When you line up the two Overhead Assembly pieces together, there will be four holes that go through both pieces. Two holes on each side of the Overhead Assembly.

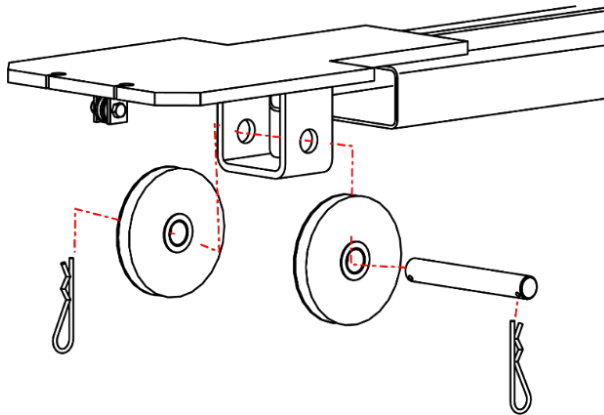
### To prepare and install the Overhead Assembly:

1. If the Overhead Assembly is delivered unassembled, locate the two Overhead Assembly pieces and the four Hex-Head Bolts, Flat Washers, and four Nyloc Nuts required to connect them.
2. Secure the Overhead Assembly together in the desired width using the hardware listed in the illustration.



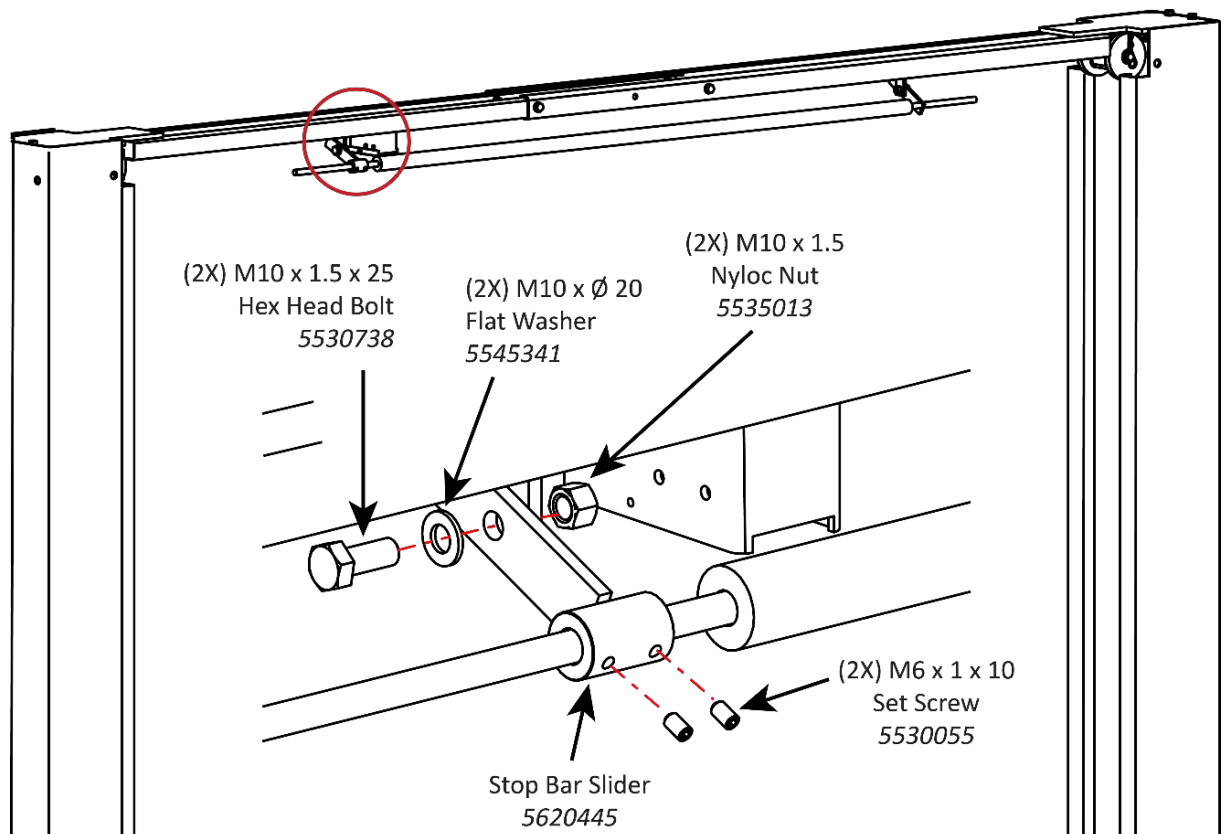
**Important:** Mount the M10 Hex Bolt Heads and Flat Washers inside the Overhead, Nyloc Nuts outside.

3. Remove all four Overhead Assembly Sheaves, their Pins and Cotter Pins from the ends of the Overhead Assembly pieces. Keep the Sheave components nearby, you will be reinstalling them in the same order in the next section.



4. Attach one end of the Safety Shutoff Bar to the Overhead Assembly, as shown below; use the same type of M10 hardware to secure the other end of the Shutoff Bar.

If you are switching the Safety Shutoff Bar from Narrow to Wide Configuration, loosen the Slider Set Screws, adjust the Safety Shutoff Bar appropriately, and then re-tighten the Slider Set Screws.



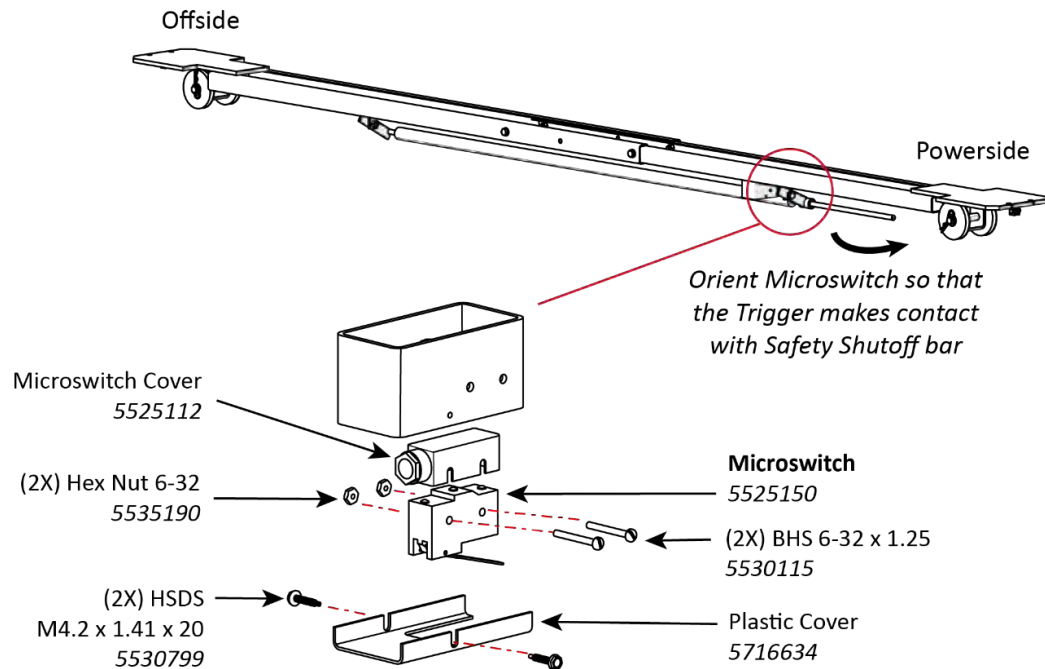
*Reference only – do not scale.*



## Installing the Microswitch

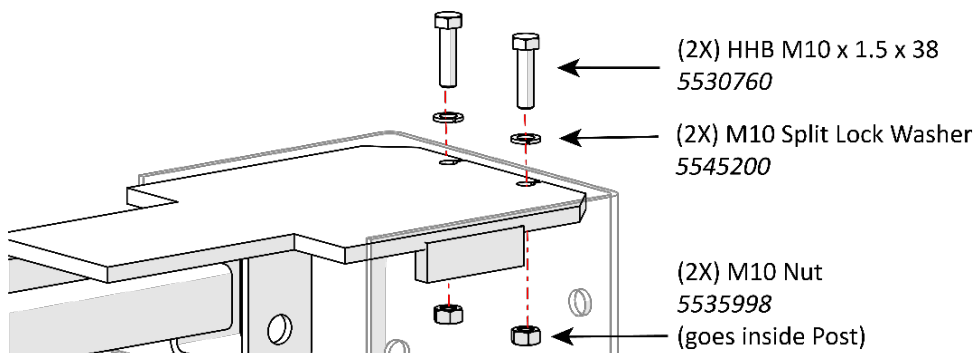
The following procedure describes how to install a Microswitch on the Overhead Assembly but does not describe how to wire it; wiring is covered later in the installation. The Microswitch **wiring** goes over the Overhead Assembly and down the Powerside Post to the Power Unit.

If you have **two** Microswitches because you are using a three-phase Power Unit, simply install the two of them next to each other in the Microswitch Bracket.



### To install the Microswitch:

1. Locate the Microswitch, the Microswitch Cover, and hardware required to install the Microswitch.
2. Put the Microswitch into position in the Microswitch Bracket such that the Safety Shutoff Bar, when moved upwards, will push up the Trigger.
3. If you are installing a second Microswitch, put it into position next to the one you just installed.
4. Use the supplied hardware to secure the Microswitch and Microswitch Cover in place.
5. Use an appropriate lifting device to put the Overhead Assembly into position, making sure to position the Microswitch Bracket on the same side as the Powerside Post.
6. Bolt the Overhead Assembly to the top of the Posts using two Bolts on each end.



*Do not scale.*

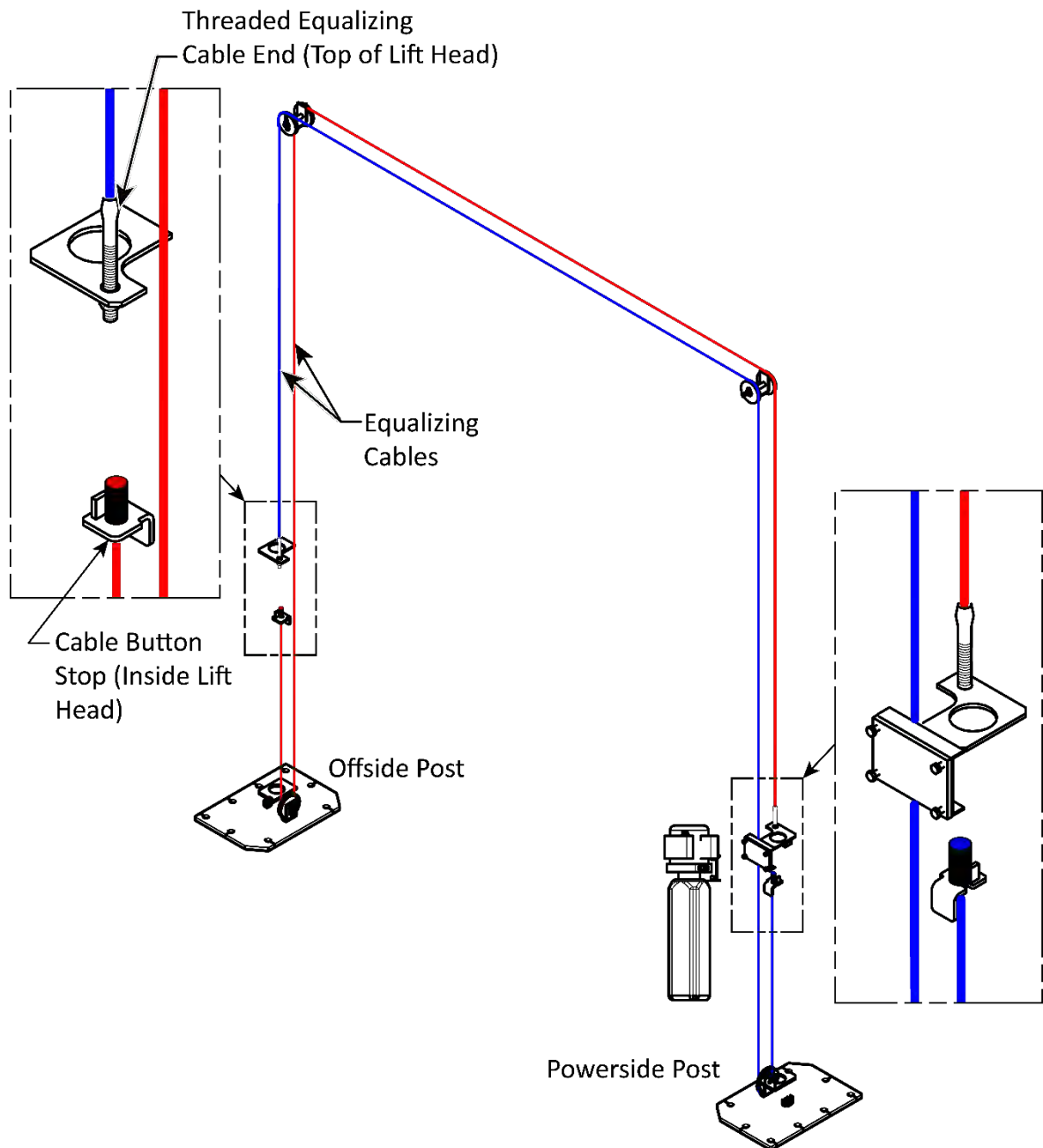
## Completing the Equalizing Cables Installation

Both Equalizing Cables should have been put into position coiled at the top of the Lift Posts before the Posts were raised, which was covered in [Putting the Equalizing Cables into Position](#).

This section picks up where that section left off: the Button Ends of the Equalizing Cables (on both Posts) have been installed, routed around the Post Sheaves, and then pushed up above the Lift Head. They now need to be routed over the Overhead Assembly and then down to the top of the Lift Head.

**NOTICE** If your Equalizing Cables are not yet in position, you must go back and put them into position before performing the following procedure.

When Equalizing Cables are fully routed, they are mirror images of each other. Refer to the figure below.



*Not to scale. Components removed for clarity.*

### To route the Equalizing Cables:

1. Using a Forklift or Shop Crane, manually raise both Lift Heads about 28 inches / 711 mm off the ground and engage them on the closest Safety Lock.

**Measure to verify both Lift Heads are the same distance off the ground.**

**⚠ WARNING** You must use a proper lifting device such as a Forklift or Shop Crane to raise and position the Lift components.

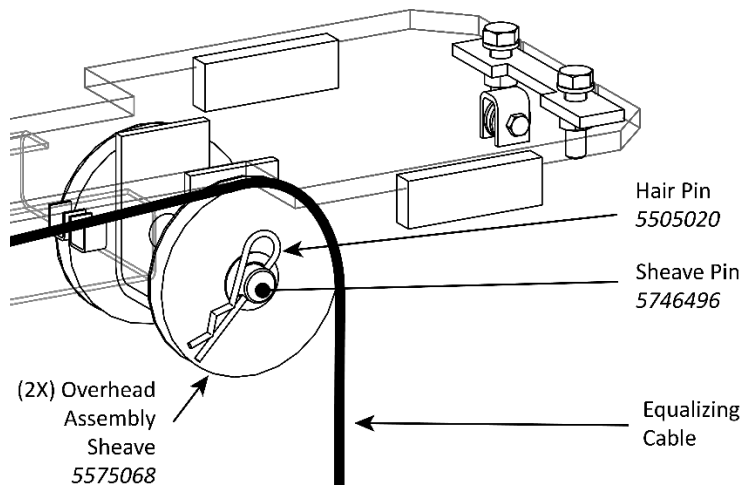
2. Make sure the Button Ends of both Equalizing Cables are still in the Slots in their Cable Button Stops, that both Equalizing Cables go under the Post Sheave in their Posts, and that the Threaded Ends have been routed through the Hole at the Top of the Lift Head.

If either cable is not correct, fix it; you cannot continue until the Equalizing Cables are in their correct starting positions. Remember, for a Wide Configuration, use the Button End at the very end of the Equalizing Cable. For a Narrow Configuration, use the Button End away from the end of the Equalizing Cable.

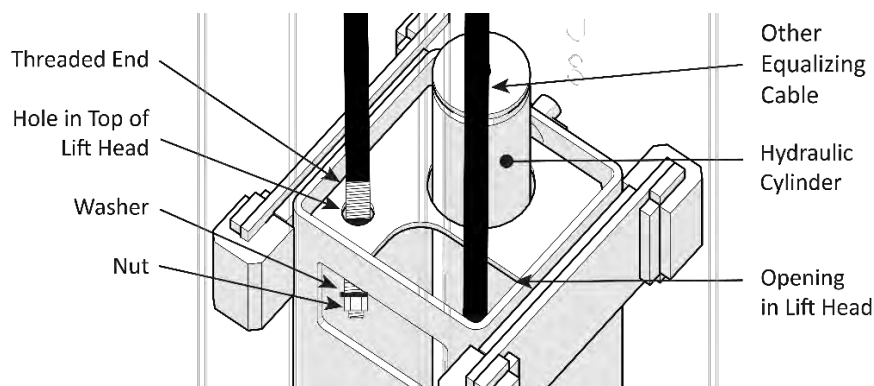
3. Choose which one of the two Equalizing Cables you are going to put into position first, then remove the Nut from the Threaded End of that Cable.

**NOTICE** The Overhead Assembly Sheave, Sheave Pin, and Hair Pin were previously removed. If they were mistakenly re-installed, you need to remove them again.

4. Route the Threaded End of the Equalizing Cable up on the inside of the Post, over the Overhead Sheave Assembly, and then out over the top of the Overhead Assembly.



5. Lubricate the Sheave Pin and Bearing with Red Lithium Grease, then re-install the Overhead Assembly Sheave, Sheave Pin, and Hair Pin.
6. At the other Post, remove the Nut from the Threaded End of the other Equalizing Cable.
7. Route the Threaded End over the top of the Overhead Assembly Sheave, and then down the Post towards the Lift Head.
8. Lubricate the Sheave Pin and Bearing with Red Lithium Grease, then re-install the Overhead Assembly Sheave, Sheave Pin, and Hair Pin.
9. Put the Threaded End of the Equalizing Cable through the hole at the top of the Lift Head, then install the Nut and securely tighten.



*Reference only – do not scale.*

10. Perform Steps 3 through 9 for the other Equalizing Cable.

## Mounting the Power Unit

This section describes how to mount the Power Unit to the Powerside Post. You do **not** need an Electrician to **mount** the Power Unit, but you do need an Electrician to **connect** the Power Unit. Refer to **Connecting the Power Unit** for installation information for your Electrician and specific information about the Power Unit that came with your Lift.

### NOTICE

Do not connect the Power Unit to the Hydraulic System or to the power source at this point in the installation; those connections will be made later.

### CAUTION

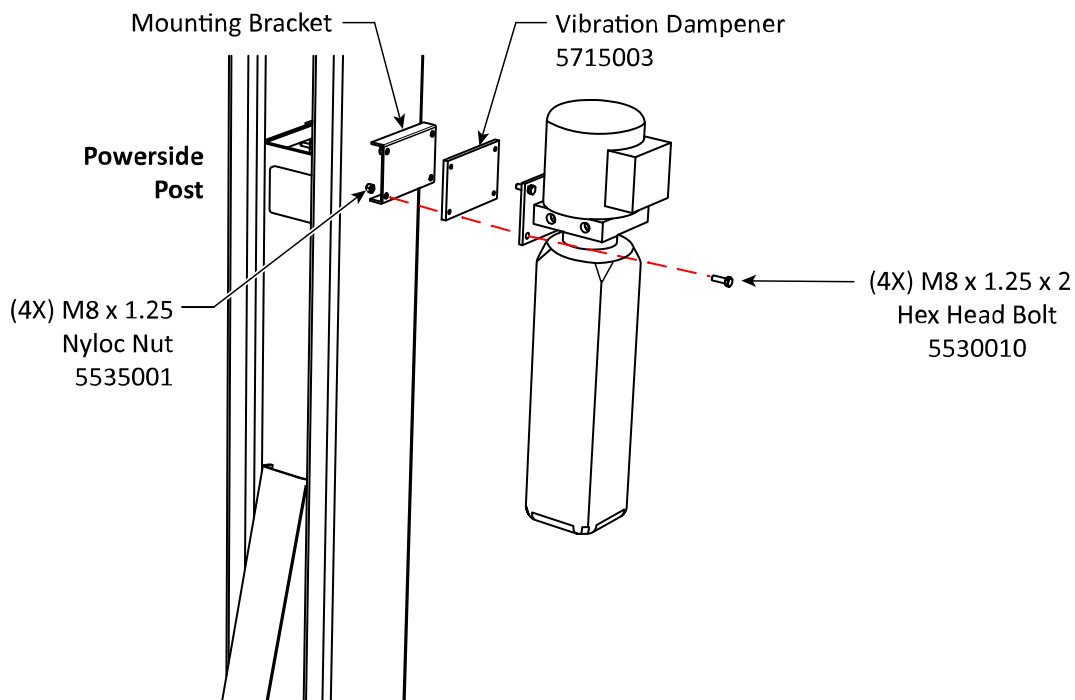
The Power Unit is heavy. BendPak recommends having one person hold the Power Unit while a second person bolts it into place.

### To mount the Power Unit:

1. Find the supplied four Hex Head Bolts, four Nyloc Nuts, and one Vibration Dampener.
2. Remove the Power Unit from the packaging material.

**Important** The Power Unit is heavy. BendPak recommends having one person hold the Power Unit while a second person bolts it into place.

3. Put the Vibration Dampener into place next to the Mounting Bracket on the Powerside Post.
4. Move the Power Unit Mount Plate next to the Vibration Dampener.
5. Secure the Power Unit and Vibration Dampener using the hardware listed below, using all four holes to secure the Power Unit.

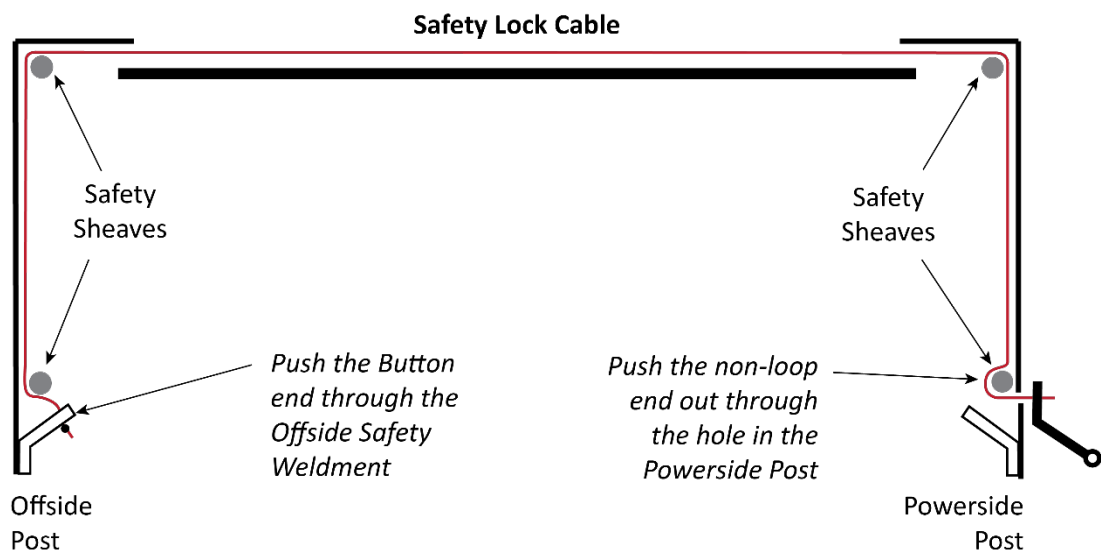


## Installing the Safety Lock Cable

The Safety Lock Cable and the Safety Lock Release Handle are used to release the Safety Locks, allowing the Lift to be lowered.

The Safety Lock Cable should have been installed and left in place in the [Installing the Safety Assemblies](#) section,

The following drawing shows the path the Safety Lock Cable travels from Safety Assembly on the Offside Post to the Safety Assembly on the Powerside Post.

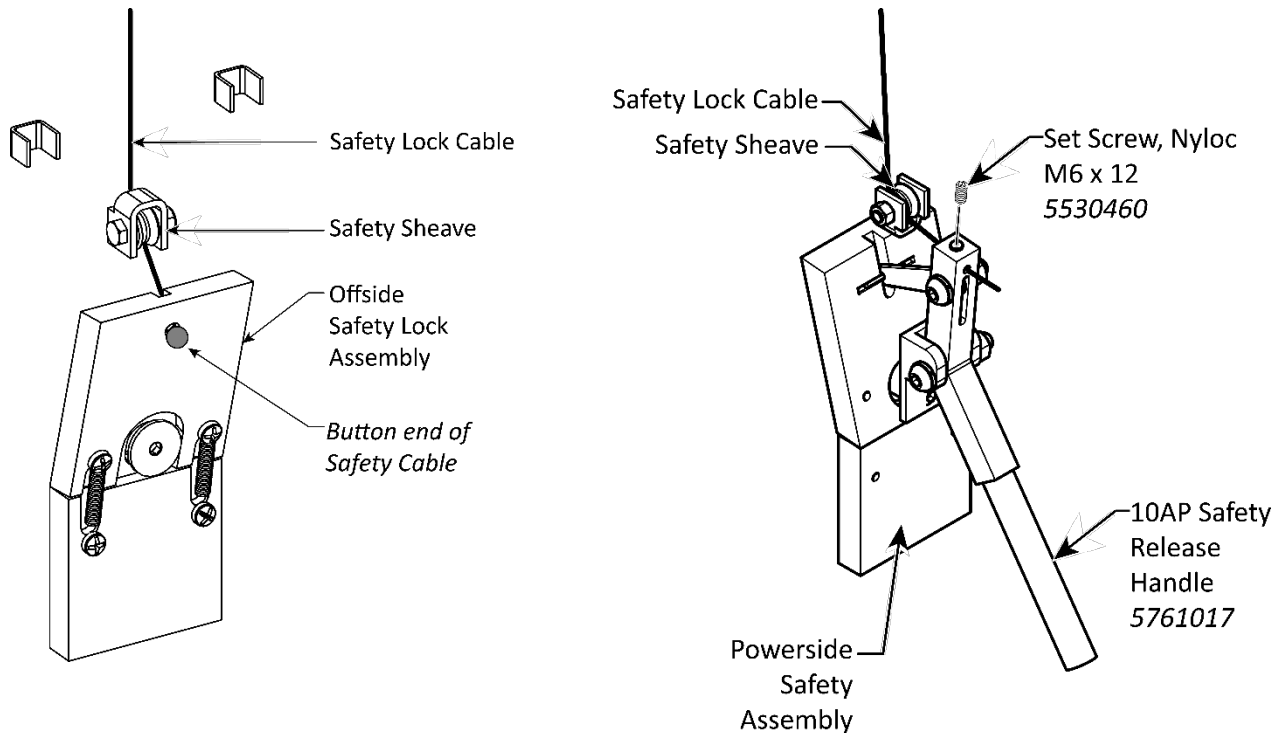


*Not drawn to scale. Some components exaggerated or not shown for clarity.*

The following illustration shows the Safety Lock Cable connections to the Safety Assemblies.

**Offside Safety:**

**Powerside Safety:**

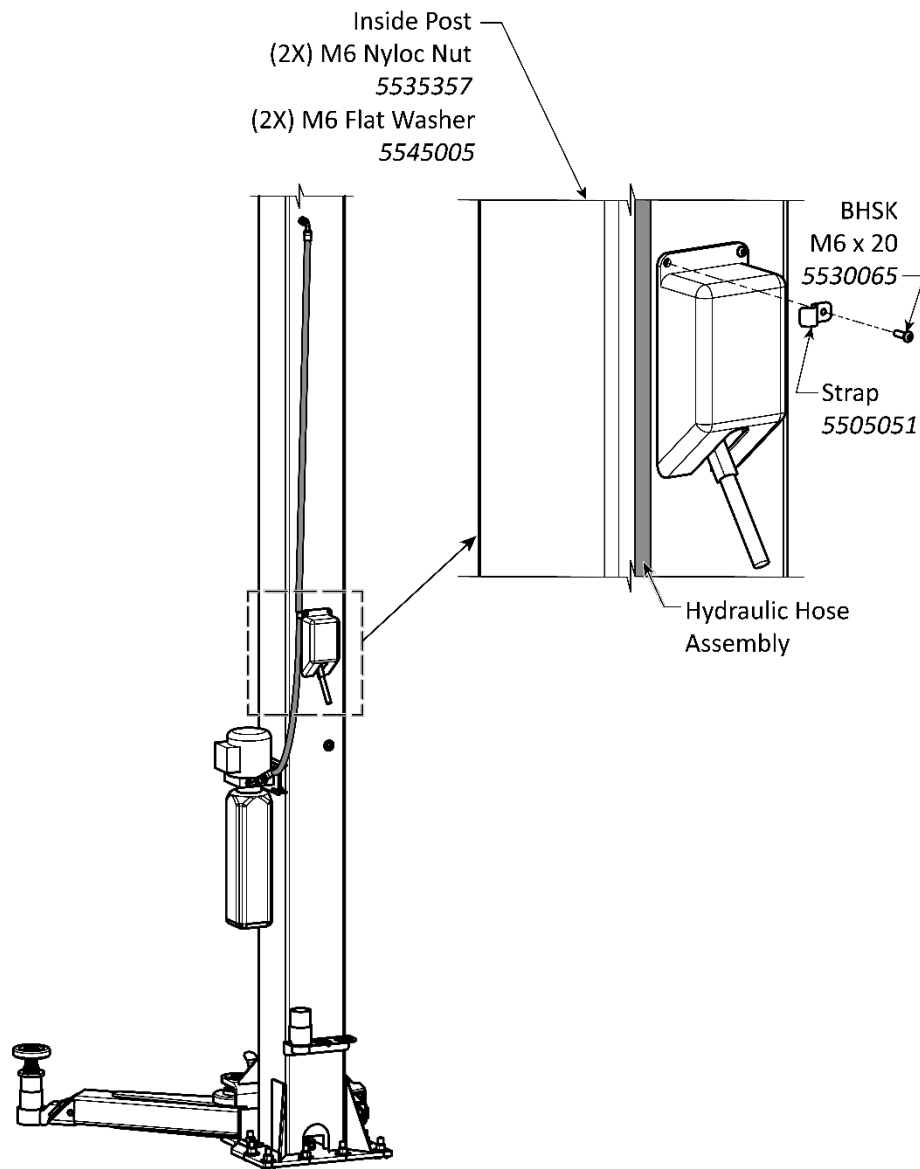


*Reference only – do not scale.*

**⚠ WARNING** You will need to access the Overhead Assembly to route the Safety Lock Cable. Use care to avoid falling when working on a ladder or other lifting device.

### **To route and connect the Safety Lock Cable:**

1. Locate the Safety Lock Cable. This should be coiled at the top of the Offside Post.
2. Route the non-button end under the Safety Sheave, upwards on the inside of the Offside Post, up and over the Safety Sheave at the top of the Offside Post, across the Overhead Assembly, over the Safety Sheave at the top of the Powerside Post, and then downwards, on the inside of the Powerside Post, towards the Powerside Safety Assembly.
3. **Switching to the Powerside Post**, route the non-button end of the Safety Lock Cable through the Safety Sheave.
4. Temporarily remove the M6 Hex Head Bolt (5530031) and M6 Split Lock Washer (5545026) that is loosely secured to the Safety Lock Release Handle.
5. Route the Safety Lock Cable through the hole in the Safety Release Handle, then replace the Bolt and Split-Lock Washer. Tightly secure the connection.
6. Install the Safety Cover (5716072) to the Powerside Post; there is no Safety Cover for the Offside Post. Make sure the Safety Lock Release is usable through the slot on the front.



*Figure not to scale. Shown with optional equipment.*

**CAUTION**

Verify the Safety Lock Cable stays on its Safety Sheaves; this keeps it out of the way of the Equalizing Cables and the Hydraulic Hoses.

**DANGER**

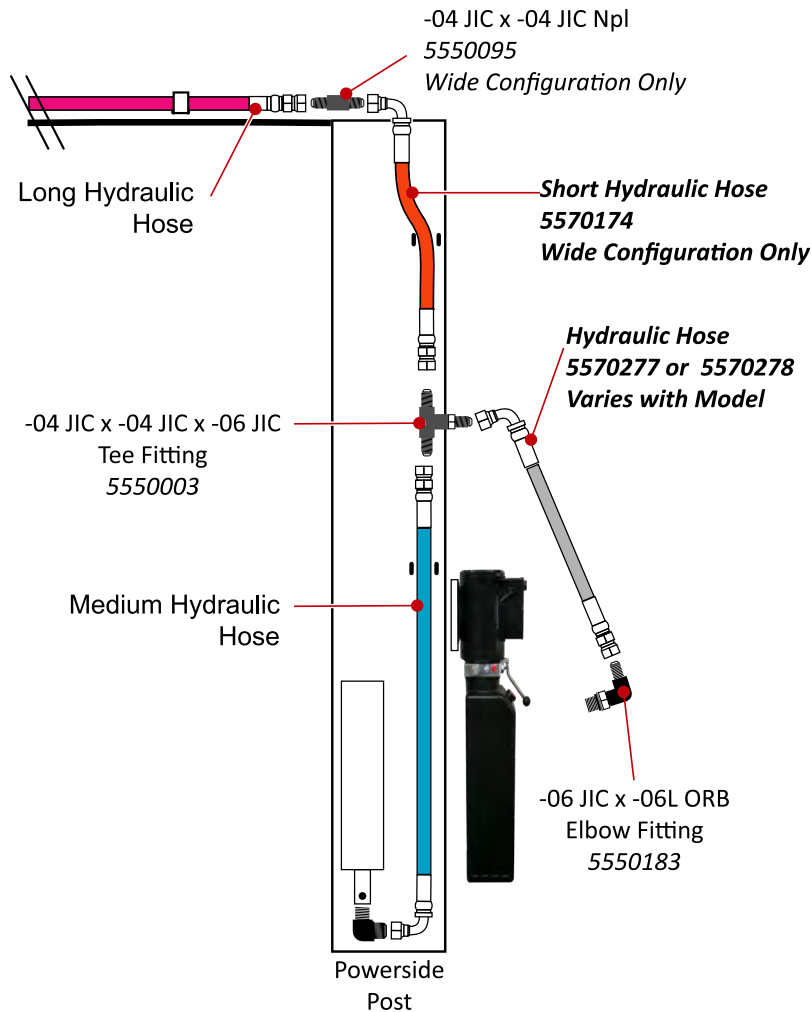
Verify both the Powerside and the Offside Safety Assemblies engage properly **before** operating the Lift.

## Connecting the Hydraulic Hoses

Some of the Hydraulic Hoses were put into place much earlier in the installation. It is now time to finish installing the Hydraulic Hoses and connect them to the Power Unit.

If they were **not** put into position earlier, you must do so now, **before** beginning the following procedure. Refer to **Routing the Hydraulic Hoses** for full instructions.

The following illustration shows how to connect the Hydraulic Hoses in both Lift configurations.



*Drawing shows side of Powerside Post. Not drawn to scale. Not all components shown.*

### To finish connecting the Hydraulic Hoses:

1. Locate the Ø10mm Short Hydraulic Hose and the remaining Elbow ORB Hydraulic Fitting (5550183).
2. **On the Power Unit**, locate a Hydraulic Pressure Port on the Power Unit (labeled P, P1, or P2), remove the shipping plug, and then install the Elbow Hydraulic Fitting. Place a few drops of hydraulic fluid on the O-ring before installing on the Power Unit.

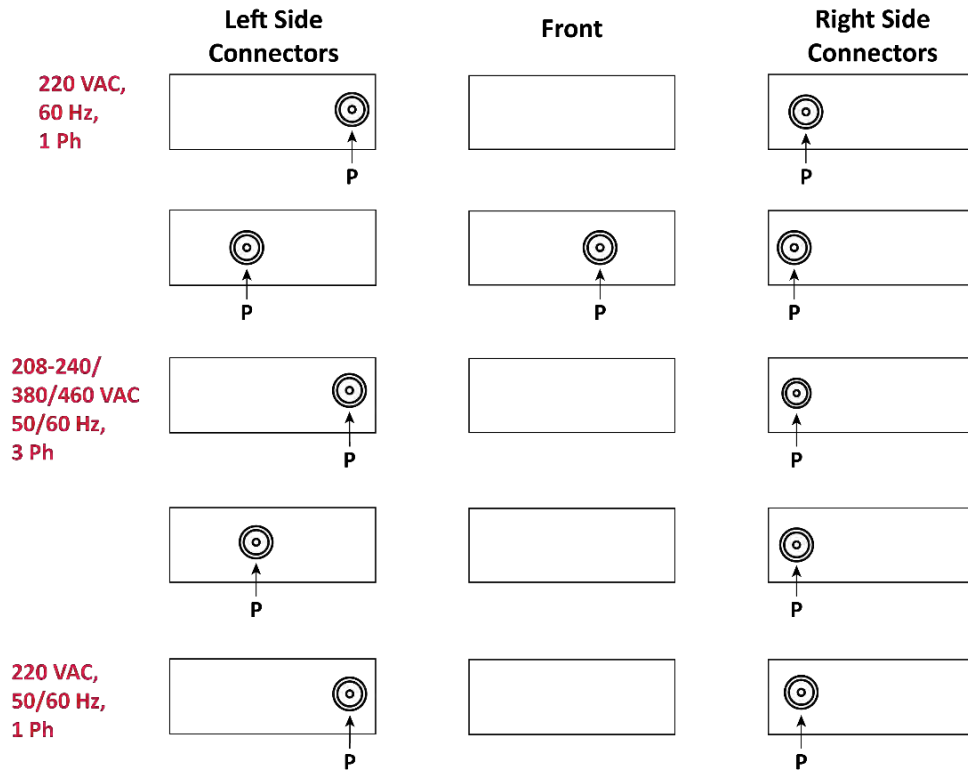
See the drawing on the following page for possible Hydraulic Pressure Port locations.

**Note:** There are multiple Ports on the Power Units that are used with 10AP Series Lifts. However, each 10AP Series Lift uses only one Hydraulic Pressure Port (labeled **P** in the drawing)



below). Do **not** connect to any of the other Ports and do **not** connect to more than one Hydraulic Pressure Port.

The following drawing shows the possible Hydraulic Pressure Port locations, depending on the Power Unit you have.



3. Tighten the Elbow Fitting appropriately; make sure to leave the 06 JIC connector facing up, towards the Tee Fitting.
4. Connect the Curved End of the Short Hydraulic Hose to the Tee Fitting; finger tighten the connection.

This connection is made on the outside of the Powerside Post. If the 06 JIC connector of the Tee Fitting is **not** on the outside of the Powerside Post, this means the Tee Fitting was not installed correctly. Return to **Routing the Hydraulic Hoses** for more information.

5. Connect the Straight End of the Short Hydraulic Hose on the Elbow Fitting; finger tighten the connection.
6. **Switching to the Offside Post**, take the Long Hydraulic Hose and route it over the Overhead Assembly towards the Powerside Post, making sure to put the hose through the Clips in the Post.
7. If you are installing the Lift in a **Wide** Configuration, you need to install the Short Hydraulic Hose to the top of the Tee Hydraulic Fitting, and then install a Nipple Hydraulic Fitting (5550095) to the top of the Short Hydraulic Hose.

The Short Hydraulic Hose is **not used for Narrow Configurations**.

8. Connect the Straight End of either the Long Hydraulic Hose (for Narrow Configurations) or the Very Short Hydraulic Line (for Wide Configurations) to the 04 JIC connector facing up on the Tee Hydraulic Fitting; finger tighten the connection.
9. Using appropriate tools, go back and securely tighten all the finger-tightened connections.

## Installing the Lift Arms

Lift Arms are what raise Vehicles off the ground. Your Lift comes with four Lift Arms. Lift Arms come uninstalled.

Install the Arms as detailed in the figure below.

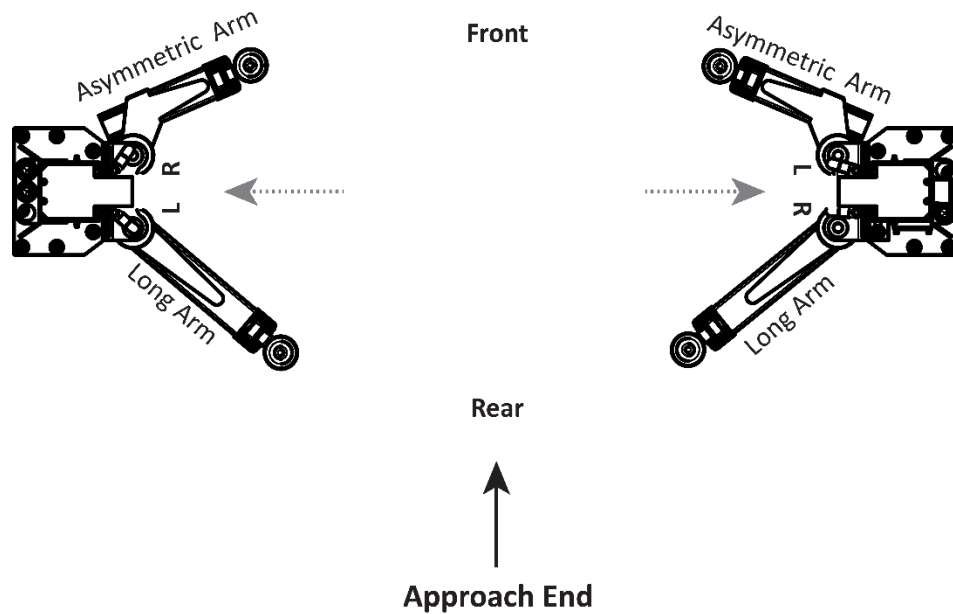
The **first task** is to determine the Front and Rear of the Lift:

- **If you can only drive in one way.** The approach side is the Rear, the other side is the Front.
- **If you can drive in either way.** Choose one side as the Front and the other side as the Rear. The best way to make this decision is to pick one approach direction for the Vehicles you will be putting on the Lift, even though you can drive in either way. Also consider the ease of backing out of from your chosen approach. Once the decision is made, you approach the Lift from the Rear, so the other side is the Front.

The **second task** is whether the Lift Arm is a 'right' or a 'left'. This is determined separately per Post.

To determine right and left, stand between the two Posts, then turn to face one of them straight on. From this viewpoint, the right side of the Post is the 'right' and the left side of the Post is the 'left'.

After finishing the first Post, repeat the process for the second Post.



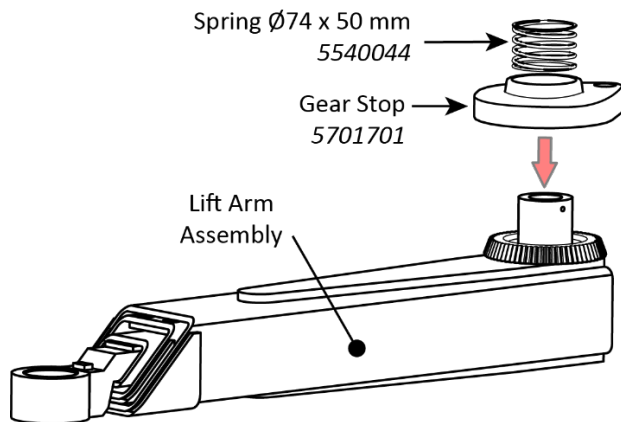
*Reference only – do not scale.*

### To install a Lift Arm in a Lift Head:

1. Using a Forklift or Shop Crane, raise the desired Lift Head to the first locking position; you need that room to work.

**⚠ CAUTION** The Lift Head and Lift Arms are heavy. Exercise caution when raising the Lift Head to the first locking position using a Forklift or Shop Crane.

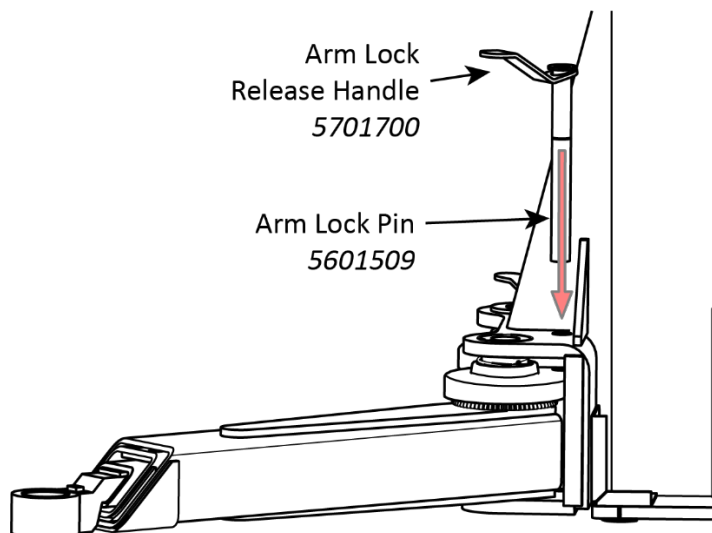
2. Place a Gear Stop and Spring on the Lift Arm Assembly.



*Reference only – do not scale.*

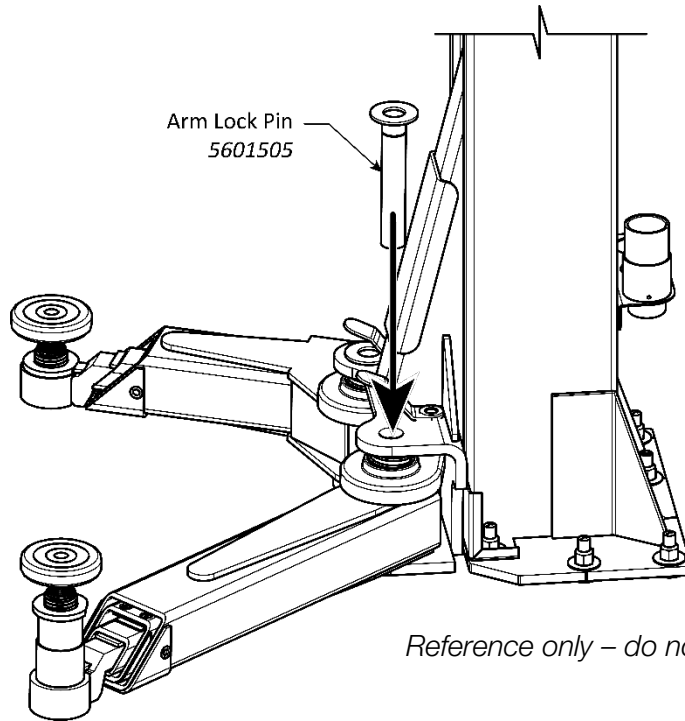
3. Move the appropriate Lift Arm into place in the Lift Head, then Slide the Arm Lock Pin and Arm Lock Release Handle through the holes in the Lift Head and Lift Arm Assembly.

The holes at the end of the Lift Arm need to be inside the Lift Head and lined up with the holes in the Lift Head.



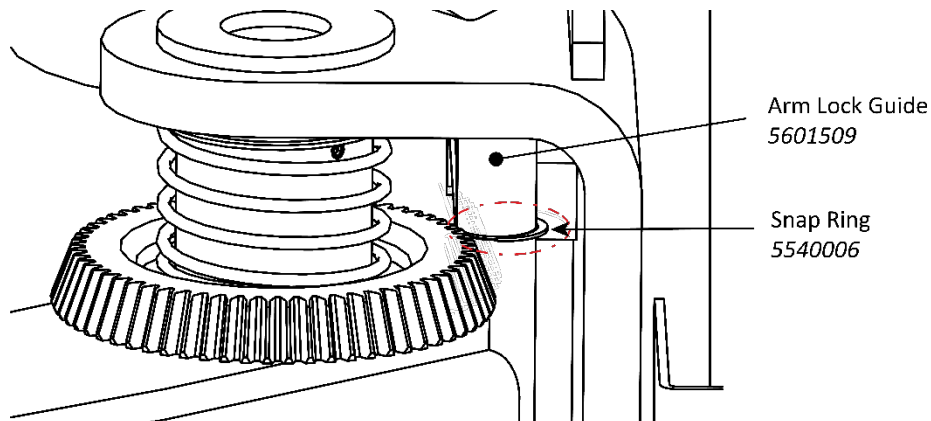
*Reference only – do not scale.*

- Slide the Arm Lock Pin through the holes in the Lift Head and the Lift Arm Assembly.

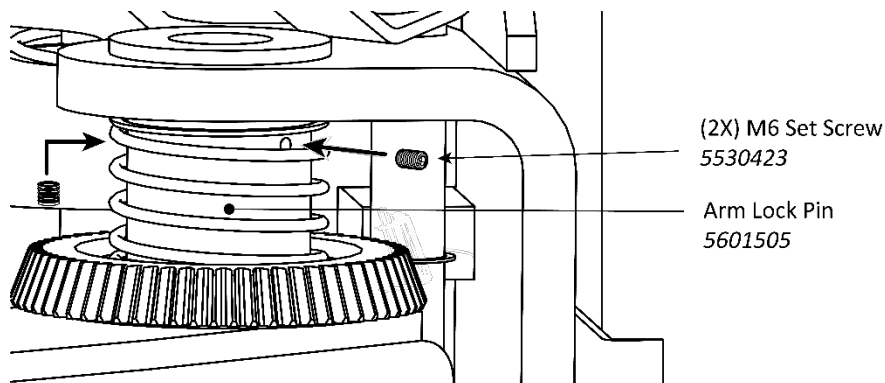


*Reference only – do not scale. Shown with optional equipment*

- Push a Snap Ring into its grooves on the bottom of the Arm Lock Guide Rod.



- Secure a Set Screw on either side of the Lift Head Pin; two Set Screws per each Lift Head Pin.



- Repeat Steps 1 – 6 for the other three Lift Arm Assemblies.

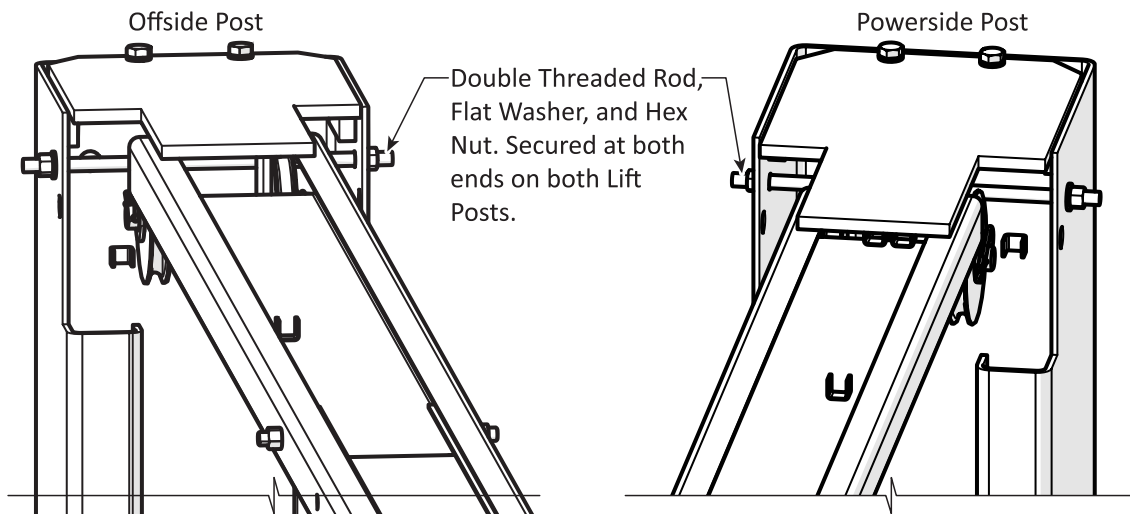
**⚠ WARNING** Make sure that the Arm Restraint Gears and the Gear Stops are meshing and staying in place when up to 150 pounds of lateral force is applied before putting the Lift into normal operation.

**⚠ DANGER** Each Lift Arm Assembly **must** be inspected and adjusted as required before each use. Do not operate the Lift if any of the four Lift Arm restraint systems are not functioning correctly. Replace any damaged components with approved replacement parts.

## Double Threaded Rod Installation

The Double Threaded Rods (5746167) as shown below, must be installed with M10 flat washers (5545341) and M10 x 1.5 Hex Nuts (5535013) on each Lift Post. Torque the Hex Nuts to 2-3 ft. lb. *Hydraulic Hoses are to be routed over the Tie Rods.*

**⚠ WARNING** The Double Threaded Rods must be installed to ensure proper operation of the Lift.



## Leveling

Before operating your Lift, you need to make sure the Lift Posts are straight, and the Lift Arms are level:

- **Lift Posts:** The Posts **must** be the same distance apart at the top and at the bottom.

To make sure the Posts are straight, measure the distance between the two Posts six inches below the Overhead Assembly and one foot off the ground (you will need to move the Lift Arms out of the way). The two measurements (**A** and **B** in the drawing below) must be the same.

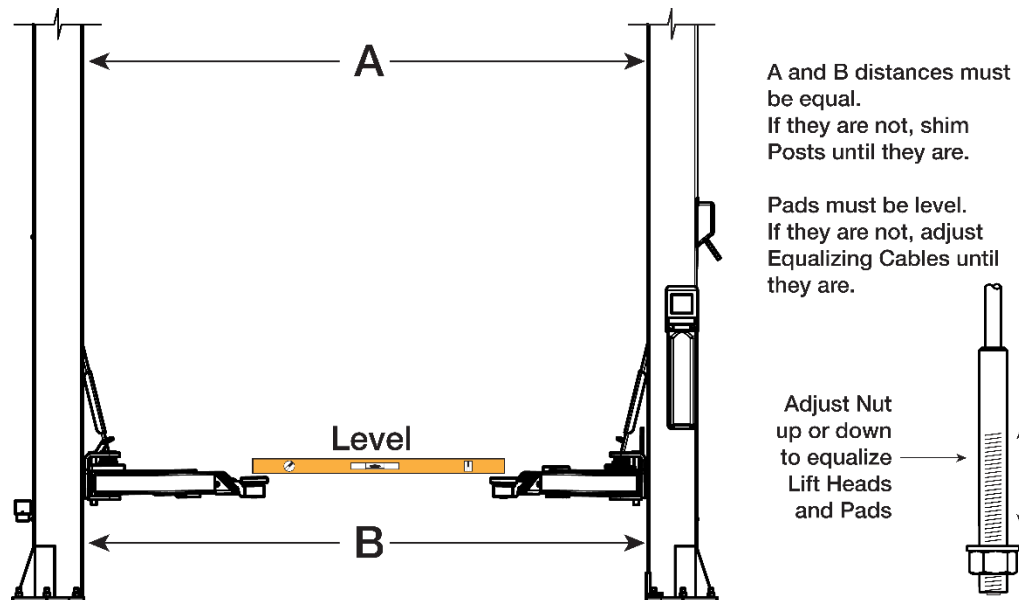
If the Posts are not straight, shim them as required.

### CAUTION

If your Lift Posts are not straight or your Lift Arms are not level, this is a safety risk. The Vehicles you put on the Lift will be less secure; they could fall and cause injuries or damage to the Vehicle or to the Lift.

- **Lift Arms:** When the Lift Posts are straight, make sure the Lift Arms are level. Raise the arms to the first locking position and put a level across the Pads.

Adjust the Equalizing Cables. Determine which Lift Arm is low, then adjust the Nut on the bottom of the Threaded End of the Equalizing Cable until the Lift Arms are level. When you believe the Lift Arms to be level, raise the Lift and listen for the Lift Heads hitting the Safety Locks (there is a distinct thump). You want the thumps to be simultaneous or close to it.



### NOTICE

If you have **not** yet torqued the Anchors you can torque them to specification (85 – 95 ft lb.) once you have completed final leveling.