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OctaFlex™ Two-Post Service Lift

Installation and Operation Manual

Manual P/N 5900591 — Revision A2— May 2026

Models:

- OctaFlex 12DPS

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. OctaFlex™ 12DPS Two-Post Service Lift, *Installation and Operation Manual*, part number 5900591, revision A2, released May 2026.

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

Limitations. Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. 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 **https://www.bendpak.com/support/warranty/** for full warranty details.

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** 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**. ***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 nameplate 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.

Shown with optional equipment.

Table of Contents

Introduction

This manual describes the BendPak OctaFlex Two-Post Lift model:

- The OctaFlex™ is a Direct-Drive Two-Post Frame Engaging Service Lift with an overall height of 173.5 in. (4,405 mm) that raises vehicles up to 12,000 Lbs. (5,443 kg) on the Primary Lifting Arms and raises vehicle components up to 6,000 lbs. (2,722 kg) on the integrated Auxiliary Lift Arms.

  The OctaFlex Lift provides clear floors, a top trough assembly and a drive-through dimension of 102.75 in. (2,613 mm). The auxiliary lifting arms are designed to assist with EV battery, drivetrain, and cab-off vehicle service tasks.

⚠ **DANGER** Use care 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 all instructions on the labels on the unit.

This manual is mandatory reading for all users of OctaFlex 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 at **https://www.bendpak.com** click the chat icon.

Scan this QR Code for up-to-date information and videos on the OctaFlex Lifts.

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**.

⚠ **WARNING** BendPak does not supply hydraulic fluid or lubricants with this Lift. **Always** refer to the Safety Data Sheet (SDS) for safe handling and disposal information. SDS are available from the hydraulic fluid or lubricant supplier or manufacturer.

Important Safety Information

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

1. Read all instructions. Use only as described in this manual.
2. Only operate your Lift between temperatures of 41°F to 104°F (5°C to 40°C).
3. Make sure all operators read and understand this *Installation and Operation Manual*. ***Keep the manual near the Lift at all times***.
4. 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. Contact the American Lift Institute (ALI) for more information on safe lifting.

5. The Lift should only be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
6. 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.
7. Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
8. Do not touch hot parts; you could be burned. Always use care with the equipment.
9. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged – until a qualified service person has examined it.
10. 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.
11. 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.
12. 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.
13. To reduce the risk of a fire, do not operate equipment in the vicinity of open containers of flammable liquids (like gasoline).
14. Adequate ventilation should be provided when working on operating internal combustion engines.
15. Keep hair, loose clothing, fingers, and all parts of the body away from moving parts.
16. To reduce the risk of electric shock, do not use the unit on wet surfaces or expose to rain.
17. **Always wear safety glasses**! Everyday glasses only have impact resistant lenses; they are not safety glasses.
18. The **OctaFlex Lift** is a two-post service Lift. ***Use it only for its intended purpose.***
19. 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***.
20. ***Never*** exceed the rated capacity of the Lift.
21. When the Lift is in use, keep hands and all body parts well away from it.
22. Keep loads balanced on the lift arm assemblies. Clear the area immediately if a vehicle is in danger of falling off the Lift.
23. Modifications void the warranty and increases the chances of injury or property damage. ***Do not modify any safety-related features in any way***.
24. This Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting the Lift to a power source.
25. 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 from 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.

26. 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 the Lift out of service, then contact an authorized repair facility, your distributor, or BendPak at **(888) 856-5820** or email **support@bendpak.com**.
27. 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.
28. The OctaFlex is not designed to lift personnel and should not be used to do so.

Save these instructions!

Symbols

Following are symbols used in this manual:

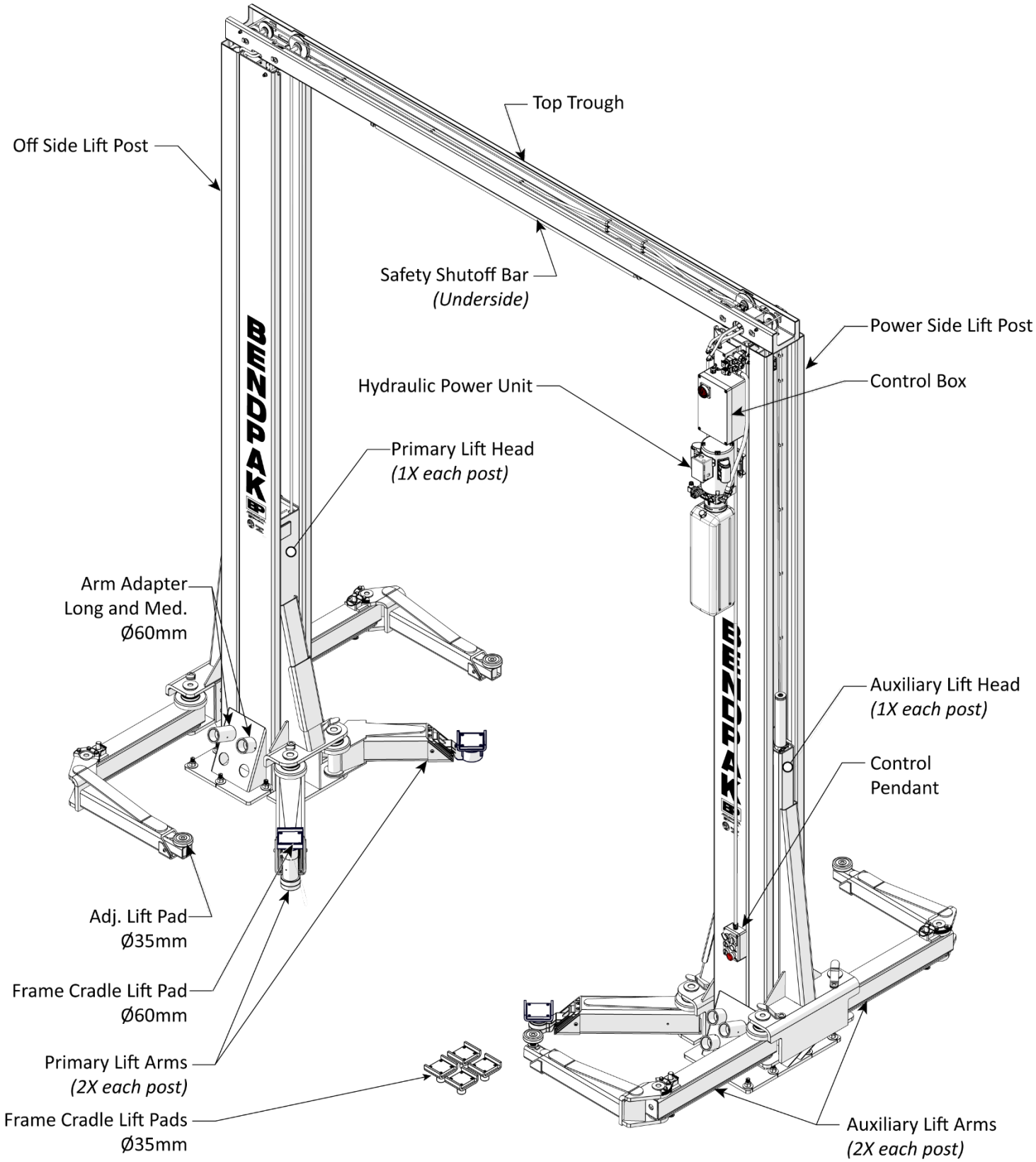
⚠ **DANGER**	Calls attention to an immediate hazard that **will** result in injury or death.
⚠ **DANGER**	Calls attention to an immediate **electrical** hazard that **will** result in injury or death.
⚠ **WARNING**	Calls attention to a hazard or unsafe practice that **could** result in death or injury.
⚠ **CAUTION**	Calls attention to a hazard or unsafe practice that could result in 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 ease the installation or make better use of the Lift.

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.

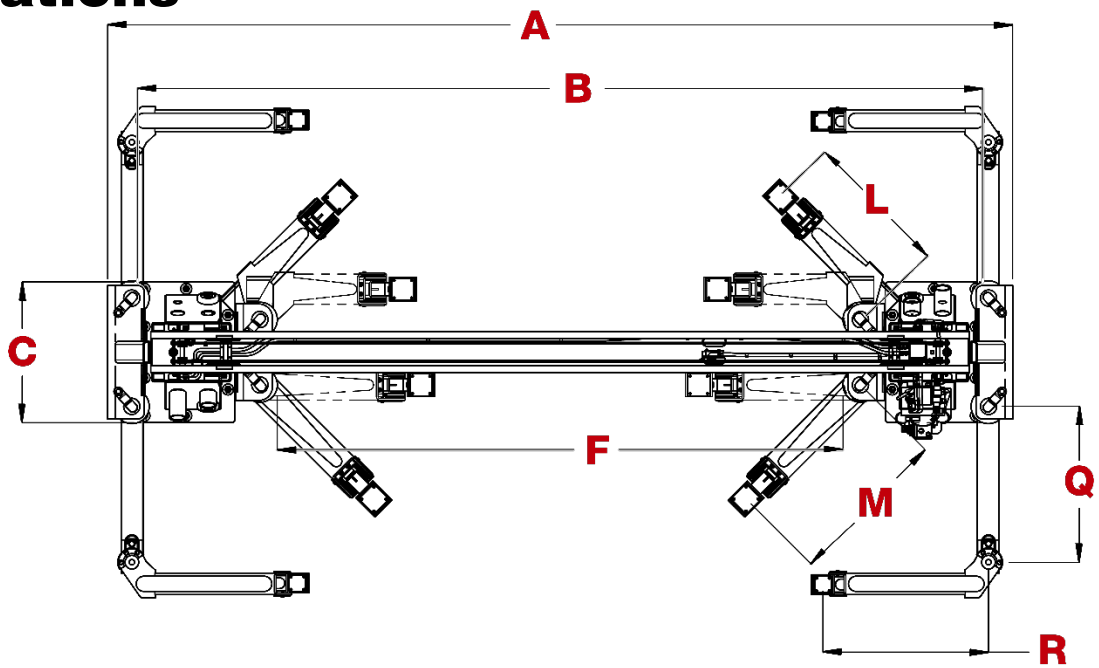
Major Components



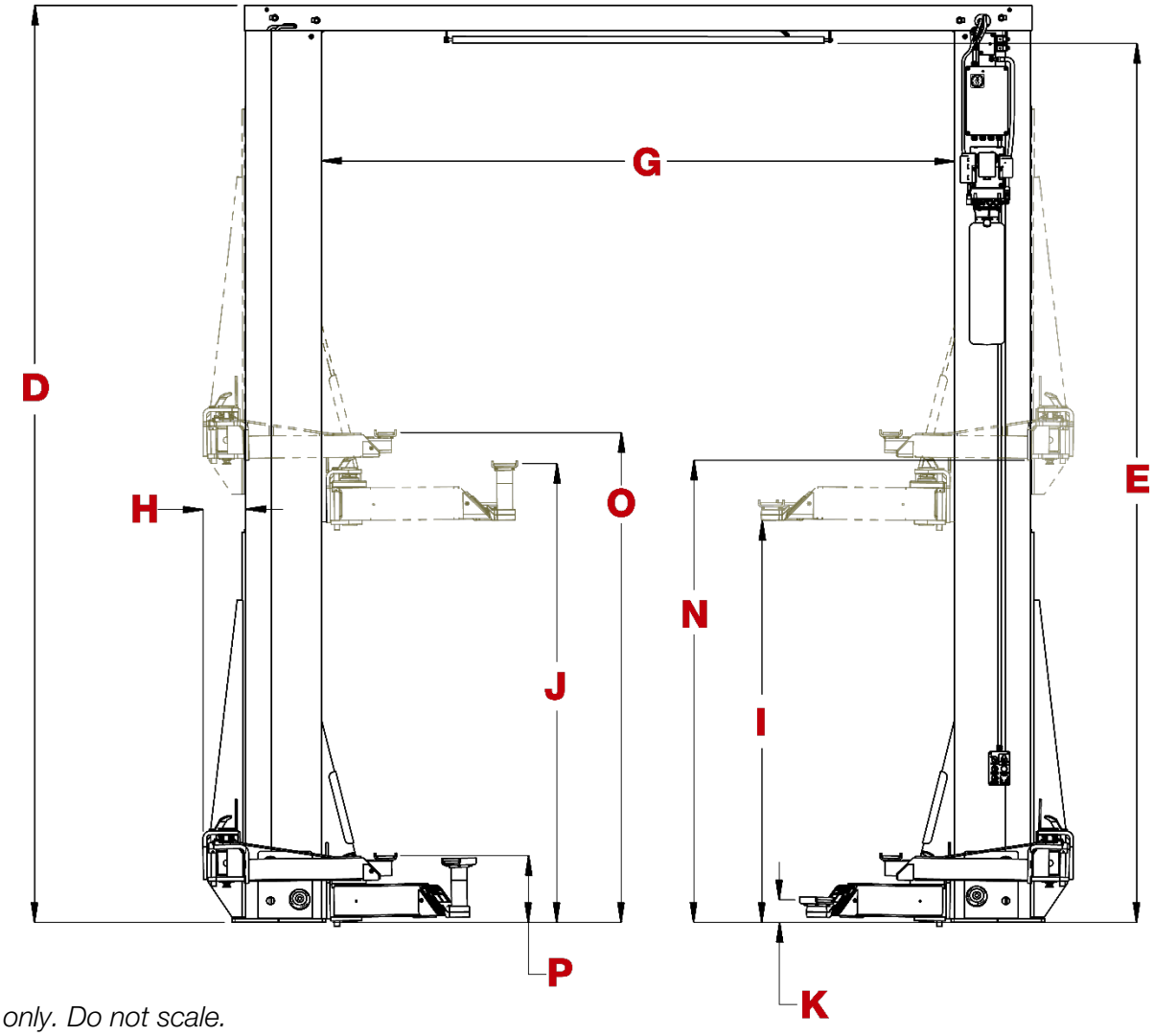
Shown with optional equipment.

Specifications

Top View



Approach View



Reference only. Do not scale.

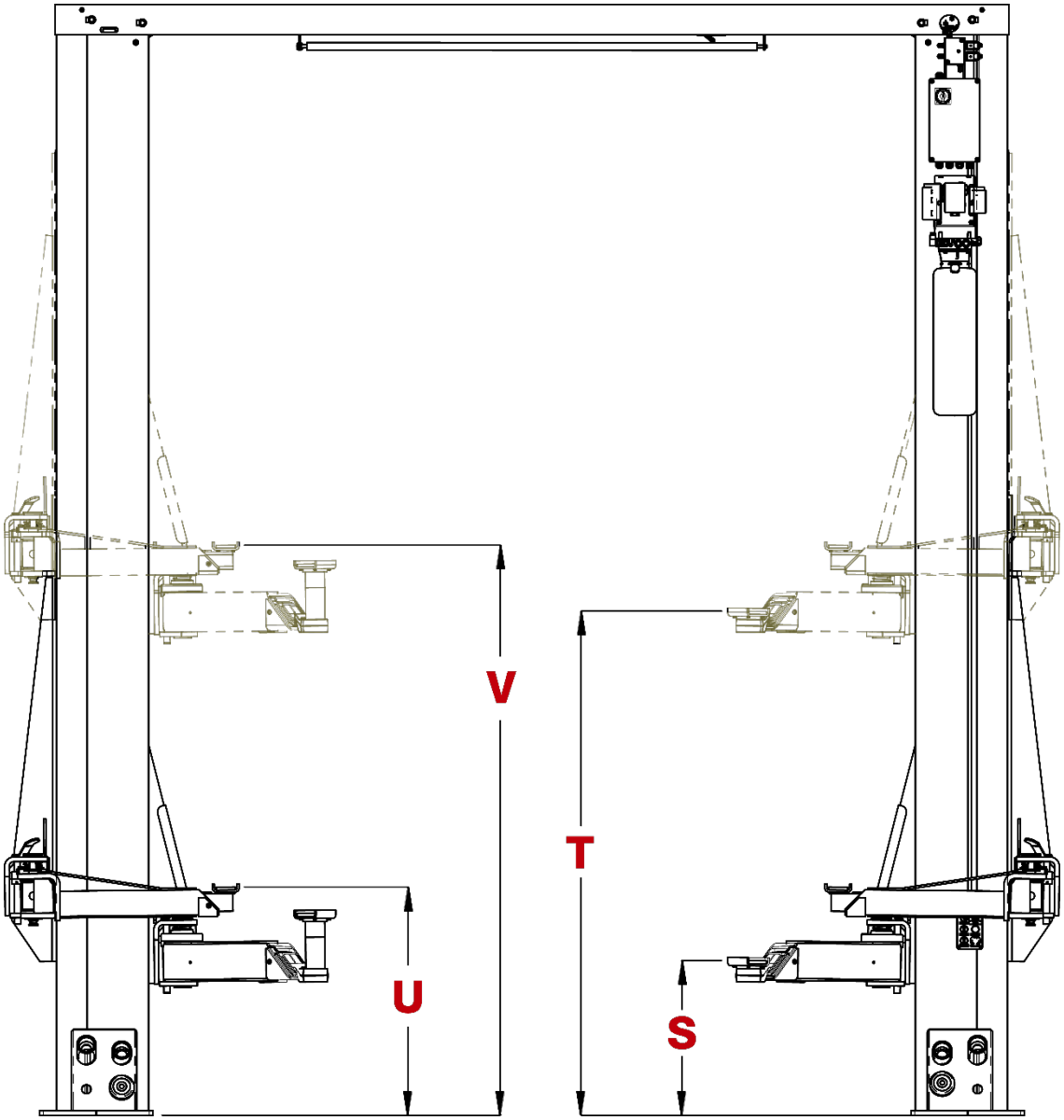
Specifications subject to change without notice. All dimensions rounded to the nearest .25 in. (6 mm)

	Specifications	OctaFlex
Lift	**A** – Length, overall	164.75 in. (4,182 mm)
	B – Length, base plate to base plate	153.75 in. (3,905 mm)
	C – Width, Base Plate	25.5 in. (650 mm)
	D – Height, overall	173.5 in. (4,405 mm)
	E – Height, floor to limit switch	166.25 in. (4,223 mm)
	F– Drive thru	102.75 in. (2,613 mm)
	G– Inside Posts	119.75 in. (3,041 mm)
	H – Aux. Carriage to Lift Post	8 in. (205mm)
	Hydraulic Pressure at Max. Load Primary Arms	2,250 psi (15.51 MPa)
	Hydraulic Pressure at Max. Load Auxiliary Arms	2,200 psi (15.17 MPa)
	Time to Full Rise	≈ 45 seconds
	Voltage[2]	230 V, 50/60 Hz., 1 Phase
	Motor FLA	17Amps
	Sound	<70 dB
Primary Lift Arms	Lift Capacity Primary Arms	12,000 lbs. (5,443 kg)
	Max. Capacity Primary Arms — Front Axle	6,000 lbs. (2,722 kg)
	Max. Capacity Primary Arms — Rear Axle	6,000 lbs. (2,722 kg)
	Max. Load per Primary Lift Arm	3,000 lbs. (1,361 kg)
	I – Max. Rise, Primary Arms	76 in. (1,930 mm)
	J – Max. Lifting Height, Primary Arms [1]	86.75 in. (2,203 mm)
	K – Min. Height w/ Frame Cradle Primary Arms	4.25 in. (109 mm)
	L – Primary Front Arm Length (min. / max.) [3]	26 in. to 55.25 in. (659 to 1,403 mm)
	M – Primary Rear Arm Length (min. / max.) [3]	29.25 in. to 60 in. (745 to 1,525 mm)
Auxiliary Lift Arms	Lift Capacity Auxiliary Arms	6,000 lbs. (2,722 kg)
	Max. Capacity Auxiliary Arms — Front	3,000 lbs. (1,361 kg)
	Max. Capacity Auxiliary Arms — Rear	3,000 lbs. (1,361 kg)
	Max. Capacity per Auxiliary Arm	1,500 lbs. (680 kg)
	Screw Pad Adjustment Auxiliary Arm	1.5 in. (40 mm)
	N – Max. Rise Aux. Arms	87.5 in. (2,220 mm)
	O – Max. Lifting Height Aux. Arms	92.5 in. (2,562 mm)
	P – Min. Height w/ Frame Cradle Aux. Arms	12.5 in. (320 mm)
	Q – Aux. Arm Length [3]	28.25 in. (720 mm)
	R – Aux. Arm Extension Length (min. / max.) [3]	30 in. to 44 in. (764 to 1,120 mm)

[1] *Max. Lifting Height, Primary Arms* is the maximum lifting height with a frame cradle, and both a medium and a tall adapter.
[2] Special voltages available upon request.
[3] Lift Arm length is measured from the pivot center to the center of the lift pad.

Specifications continued

Specifications	OctaFlex
S – Lowest Lock, Primary Lift Arms	24.25 in. (614 mm)
T – Top Lock, Primary Lift Arms	78.75 in. (2,000 mm)
Number of Safety Lock Positions, Primary Lift Arms	15 Spaced 4 in. (99 mm) apart
U – Lowest Lock, Auxiliary Lift Arms	35.75 in. (906 mm)
V – Top Lock, Auxiliary Lift Arms	89 in. (2,262 mm)
Number of Safety Lock Positions, Auxiliary Lift Arms	13, Spaced 4.5 in. (113 mm) apart



Installation Checklist

Following are the steps required to install the OctaFlex Two-Post Service; perform them in this order.

- ☐ 1. Review the Safety Rules.
- ☐ 2. Make sure the required tools and supplies are available.
- ☐ 3. Plan for Electrical Work.
- ☐ 4. Site selection.
  - ☐ 4a. Lift Orientation. Make a dry run with a vehicle to verify measurements.
  - ☐ 4b. Check clearances.
  - ☐ 4c. Additional site considerations, concrete level and condition, architectural plans, access to electrical.
- ☐ 5. Create Chalk Line Guides for the lift posts.
- ☐ 6. Unload the Lift Posts. Remove the lift posts, lift arms, parts box, and parts bag from the shipping restraints.
- ☐ 7. Prepare the Lift Posts.
  - ☐ 7a. Install the Safety Release Solenoids
  - ☐ 7b. Route the Safety Release Cables
  - ☐ 7c. Install the Valve Block
  - ☐ 7d. Mount the Control Box with Pendant Assembly
- ☐ 8. Raise and Anchor the Lift Posts
- ☐ 9. Prepare the Top Trough
  - ☐ 9a. Thread Sealants
  - ☐ 9b. Install the Hydraulic Block
  - ☐ 9c. Install and Adjust the Limit Switch
  - ☐ 9d. Install the Top Trough
- ☐ 10. Make Safety Lock Solenoid Connections and Wire Routing
- ☐ 11. Route and Connect the Hydraulic Hoses
- ☐ 12. Hydraulic System Dangers and Warnings
- ☐ 13. Mount the Power Unit and Fill with Hydraulic Fluid
- ☐ 14. Route the Equalizing Cables
- ☐ 15. Secure the Cylinder Clamps
- ☐ 16. Install the primary and Auxiliary Lift Arms
  - ☐ 16a. Install the Primary Lift Arms
  - ☐ 16b. Install the Auxiliary Lift Arms
- ☐ 17. Install Four Double Threaded Rods
- ☐ 18. Leveling
- ☐ 19. Control Box VDC Terminations *(Electrician required)*
  - ☐ 19a. Connect the primary and Auxiliary safety lock solenoids (DCS1 & 2) (DCS3 & 4)
  - ☐ 19b. Connect the limit switch (09) and (11)
  - ☐ 19c. Connect the solenoid valves (YA1), (YA2), (YA3), (YA4)
- ☐ 20. Connect to the Electrical Service *(Electrician required)*
  - ☐ 20a. Connect the Power Unit Motor to the Control Box (U1), (N1), (PE).
  - ☐ 20b. Install a UL-Listed Power Disconnect Switch.
  - ☐ 20c. Install a thermal disconnect switch *(if required)*
  - ☐ 20d. Connect to facility power
  - ☐ 20e. Prepare the Control Pendant
- ☐ 21. Lubricate the Lift
- ☐ 22. Perform an Operational Test
- ☐ 23. Review the Final Checklist before Operation. *Deliver the Installation and Operation Manual to the owner/user/employer along with any additional instructional materials furnished with the lift.*

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**, email **support@bendpak.com** or contact BendPak technical support by phone at **(800) 253-2363** follow the prompts to reach sales. Online chat is also available at **www.bendpak.com** click the chat icon.

1. Review 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. Review the safety information on pages 5-7.

⚠ **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 install 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.

2. Tools and Supplies

- Rotary hammer drill (or similar)
- 3/4-inch carbide drill bit for masonry use
- Hammer
- Tape measure, 25 feet or more
- Four-foot digital level (1° min. res.)
- Plumb bob or equal
- Open-end wrench set, SAE, and metric
- Socket and ratchet set, SAE, and metric.
- Crowfoot open end wrench
- Hex-key wrench set.
- Prybar
- Crescent and pipe wrenches
- Chalk line
- Forklift, hoist and/or personnel lift
- Cable ties
- Medium-sized flat screwdriver
- Needle-nose pliers.
- Forklift or Shop Crane
- Two 12-foot ladders or personnel lift
- Two sawhorses or sturdy work stands.
- Torque wrench
- White and red lithium grease
- Hydraulic Fluid ≈3.5 gallons (13 Liters) Any general-purpose ISO-32, ISO-46, or ISO-68 hydraulic oil
- 90-WT gear oil or ALMASOL® Wire Rope Lubricant
- 14-18AWG Insulated crimp wire (butt) splices
- Heat shrink tubing to protect wire splices
- Braided split sleeving or equal
- Electrical tape
- Electrical connector crimping tool
- Loctite (removable) or equal

3. Plan for Electrical Work

A licensed Electrician must be available at some point during the installation of the OctaFlex. There are many legitimate variations in wiring, local codes, and downright dangerous errors out in the real world that cannot be addressed in this manual. A licensed electrician has the proper equipment and training to ensure safe installation.

Notify the Electrician in advance so that they arrive prepared with appropriate components for connecting to the power source, a power disconnect switch, and a thermal disconnect or overload device.

NOTICE The Electrician must provide and adequately protect the wire required to bring the facility electrical power service to the Lift, wire is not supplied with the Lift.

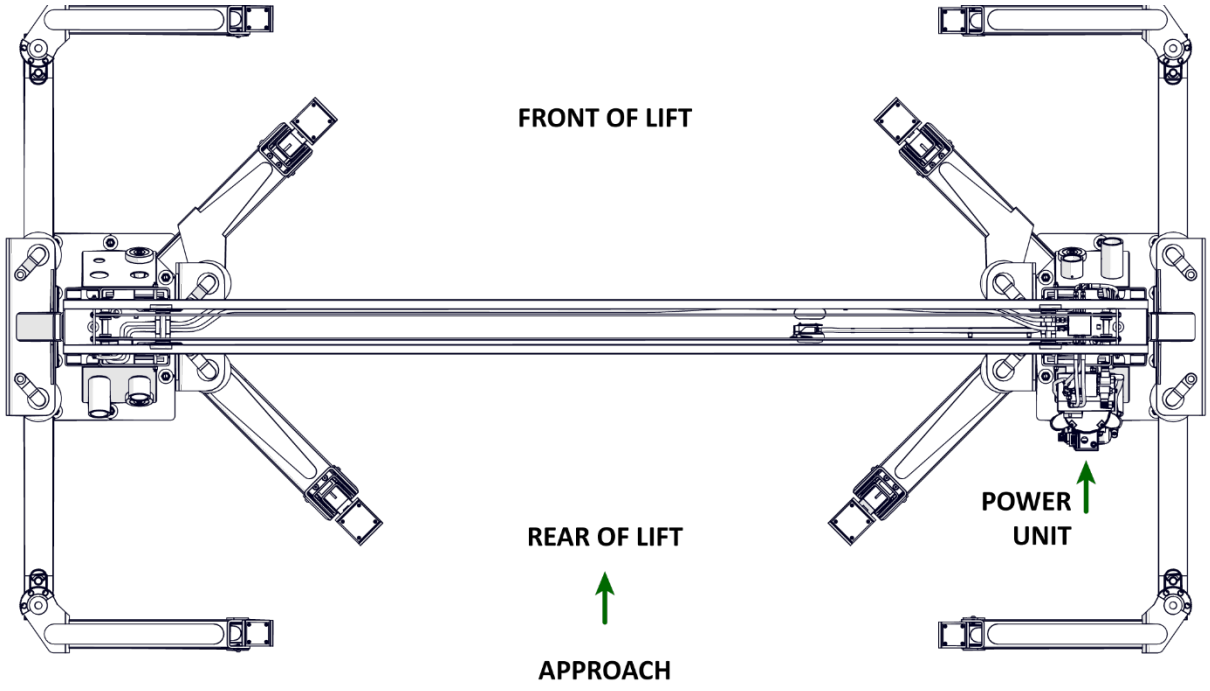
DANGER All electrical work ***must*** be performed by a licensed Electrician. Verify all electrical work conforms to all applicable local and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.

4. Site Selection

4a. Lift Orientation

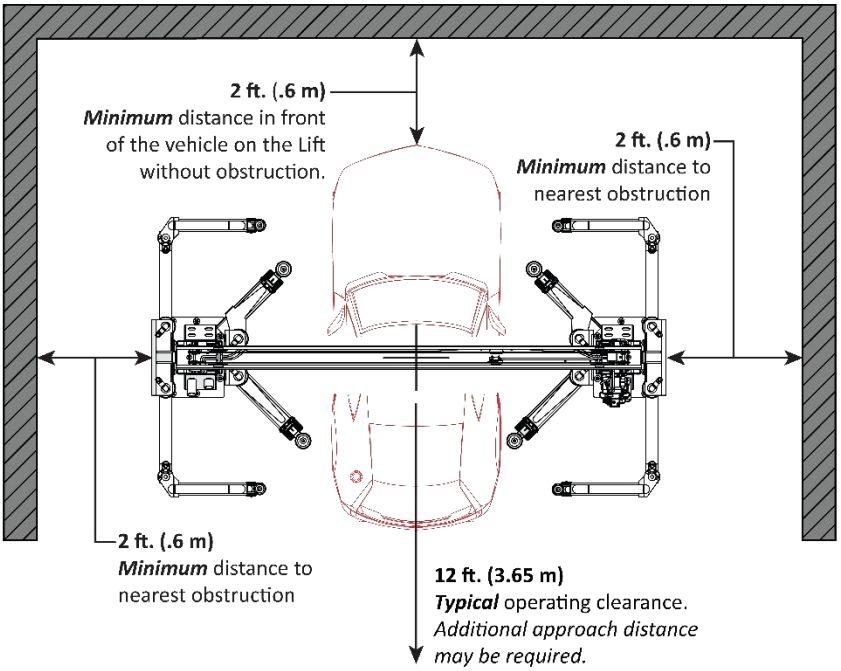
Keep these factors in mind when deciding how to orient the Lift:

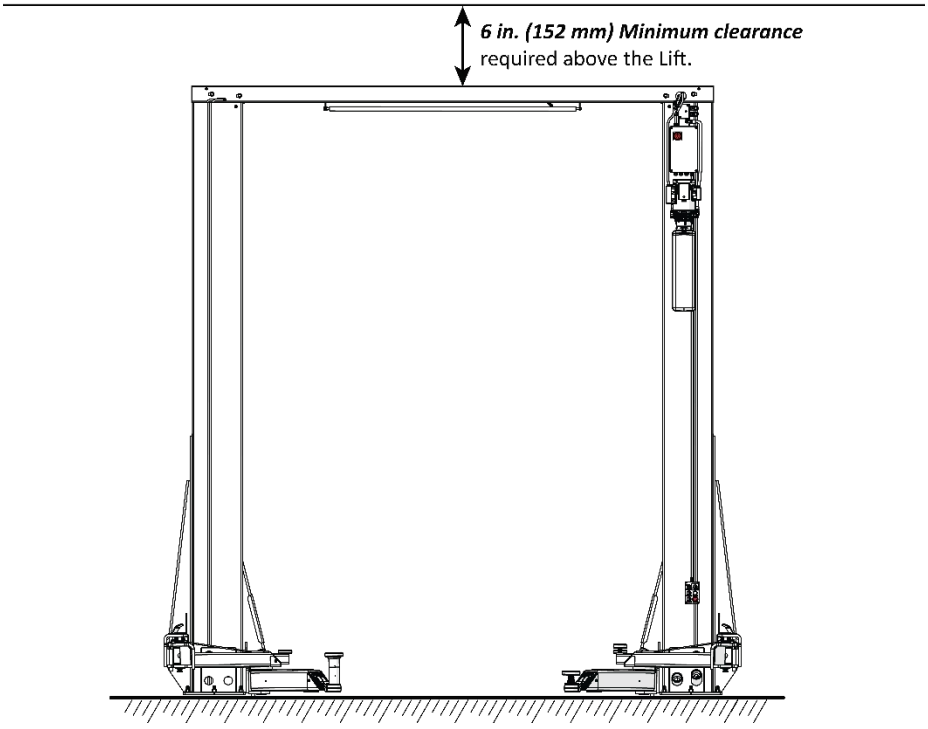
- The direction from which vehicles drive into the Lift is termed the approach.
    - In most cases a driveway is on one side of the Lift and a wall on the other. The driveway is the approach. The wall side is the front of the Lift and the driveway side the rear of the Lift.
    - If both sides are open, make the primary direction vehicles will be driven onto the Lift the approach.
- It is advisable to sketch the Lift outline in chalk or tape on the floor and make a dry run with a typical vehicle to ensure the location is safe and suitable for moving vehicles into and out of the Lift.
- Note that the power unit may be mounted on *only one* lift post.



4b. Check Clearances

Clearance around and above the Lift is ***required for safety***. Provide adequate clearance around the lift to ensure safe operation, vehicle positioning, and service access. Surrounding equipment, walls, and structural elements should be arranged to allow free and unobstructed movement of personnel, vehicles, and service equipment such as oil drains, tool carts, and other shop apparatus through adjacent work areas and access lanes. Auxiliary and utility services should be routed so they do not interfere with lift operation or prevent removal of access covers or service panels. For proper anchor performance, position the lift no closer than 6 in. (150 mm) from any foundation expansion joint, control joint, or edge of the concrete slab. Refer to the figures below.





Additional distance may be required to the Front and Rear, allowing vehicles to be driven in or out.

4c. Additional Site Considerations

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 structural conditions, utilities, obstructions, or code requirements that would interfere with the installation.
- **Power**. The site must have access to an appropriate electrical power source for the Lift.

⚠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. Mount the motor at least 18 in. (457 mm) above the floor. Never expose the motor to rain or other damp environments; damage to the motor caused by water is not covered by the warranty.

- **Outdoor installations**. The OctaFlex Two-Post Lift is approved for indoor installation and use only. ***Outdoor installation is prohibited.***
- **Floor**. Only install the Lift on a flat, steel reinforced 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°.

⚠ DANGER 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. Level defined as no more than 3/8 in. (9.5 mm) difference over the installation area. If the floor is not level, consider pouring new concrete or using a different location.

4d. Concrete Specifications. *These specifications are minimum requirements.*

BendPak strongly recommends consulting a Concrete Specialist early in the planning process for Lift installations. A Concrete Specialist will make adjustments to account for national, state, and local building codes/requirements as well as local weather conditions, soil composition, base preparation, load bearing, seismic requirements, and any other structural concerns that may arise.

The concrete must be steel reinforced, a *minimum* 8 in. (203 mm) 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 in. (152 mm) 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).

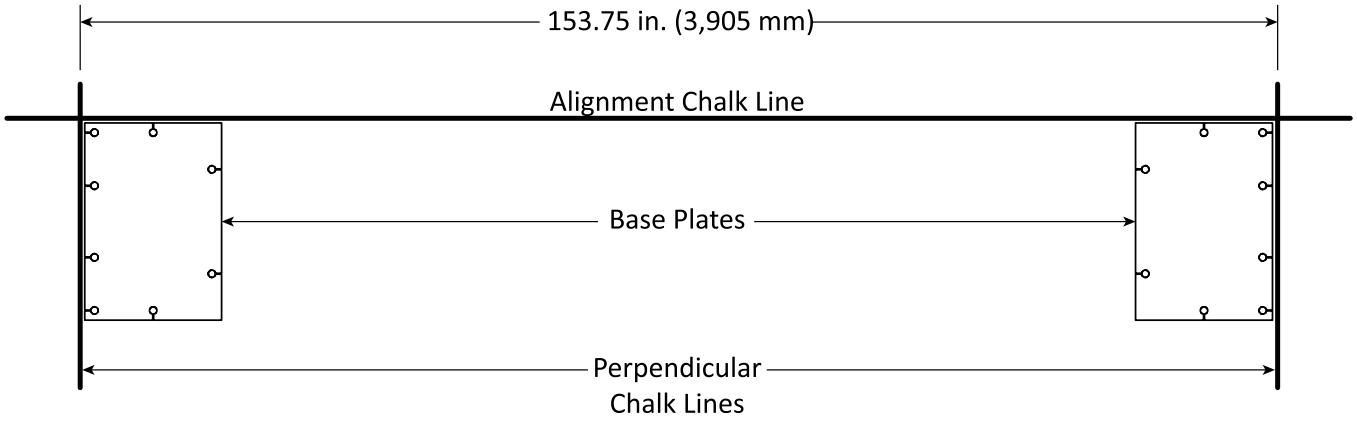
Verify the floor is not a post-tension slab. If the floor is suspected of being post tensioned, contact the building architect ***before*** drilling. Using ground penetrating radar may help locate tensioned steel. If the architect is not available, the local department of building and safety may have the building specifications.

⚠ 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 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***.

5. Create Chalk Line Guides

Based on the Base Plate to Base Plate dimension listed in the **Specifications** section, create chalk line guides on the ground for the two lift posts prior to moving them into position.

The figure below details the chalk line guides for an OctaFlex Lift.



Top View of the base plates. Components removed for clarity.

To create Chalk Line Guides:

29. Verify the clearances around the proposed Lift area.
30. Create an Alignment Chalk Line at the Front of the Lift.

    Make the Alignment Chalk Line longer than the **Base Plate to Base Plate** dimension.
31. Create two Perpendicular Chalk Lines at a 90° angle to the Alignment Chalk Line and 153.75 in. (3,905 mm) apart.
32. When moving the lift posts into position, place the base plate corners into the corners created by the Chalk Line Guides, as shown in the figure above.

Once the chalk lines are completed, it is advisable to make a dry run using a typical vehicle to ensure the location and orientation of the lift is acceptable.

6. Unload the Lift Components

Unload the Lift components as close to the installation location as possible. The Lift includes several heavy components. Carefully remove the posts and components from the shipping restraints.

⚠ **WARNING** Be cautious when removing the shipping restraints. Support the large components with a forklift or equal. The load may shift when released from its restraints.

⚠ **WARNING** Installation personnel should have knowledge, training, and experience in lifting, rigging, and securing heavy objects. Some Lift components are very heavy; if handled incorrectly, they can damage materials. Try to handle the Lift components just twice, once when they are delivered and once when they are moved into position. You must have a forklift or shop crane to move some of the Lift components into position. Installation should be accomplished by competent personnel ensuring all heavy components are properly rigged and balanced for lifting.

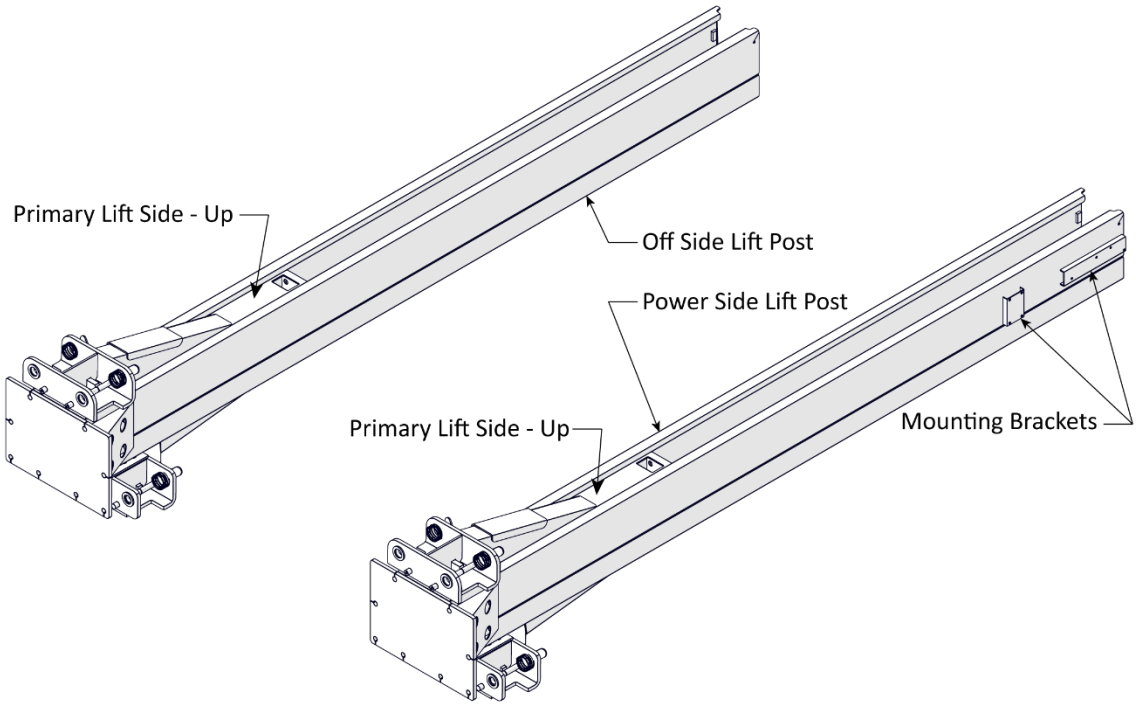
7. Prepare the Lift Posts

Install the components in the four sections below.

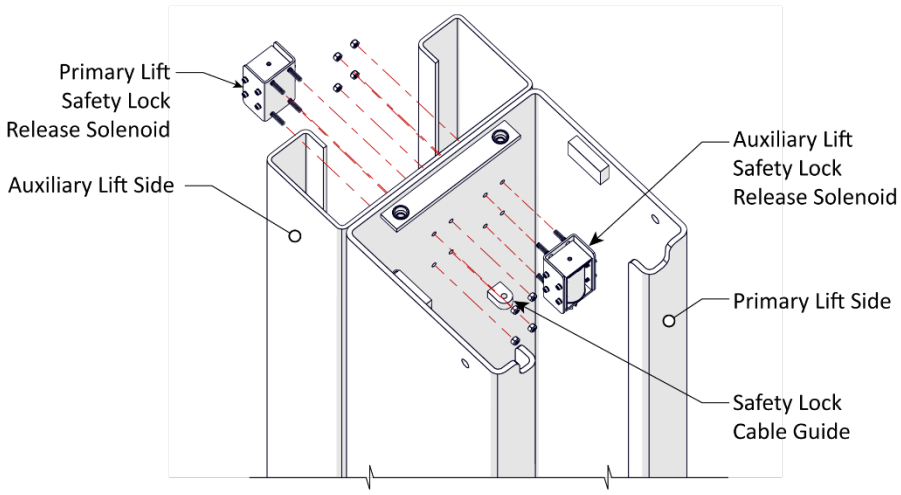
7a. Install the four safety release solenoid bracket assemblies (5216394).
7b. Route the safety release cables to the primary and auxiliary safety locks safety locks.
7c. Install the valve block on the power side lift post.
7d. Install the control box with pendant assembly on the power side lift post.

7a. Install the Four Safety Release Solenoids

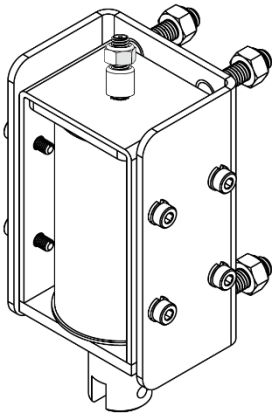
1. Place both lift posts on sturdy work rests or on the ground allowing access to the interior of the lift posts as shown below.



2. Retrieve the four solenoid mount bracket assemblies (5216394) with M5 hex nuts from the parts box.
3. Install the solenoids at the top of both lift posts in line with the cable guides.



5216394 Solenoid
Mount Bracket Assm.



7b. Route the Safety Release Cables

The figure on the next page details the *auxiliary* lift safety cable connection and solenoid located on the *primary* side of the lift post. The safety lock end is connected at the factory. Always ensure the loop clamp (5580042) is secured just below the solenoid with a minimum cable loop as shown. This position will allow the cable to travel upwards when the safety release is commanded by the operator. The cable should be adjusted to allow no slack and any upward cable movement will cause the lock to move clear of the safety blocks on the lift head.

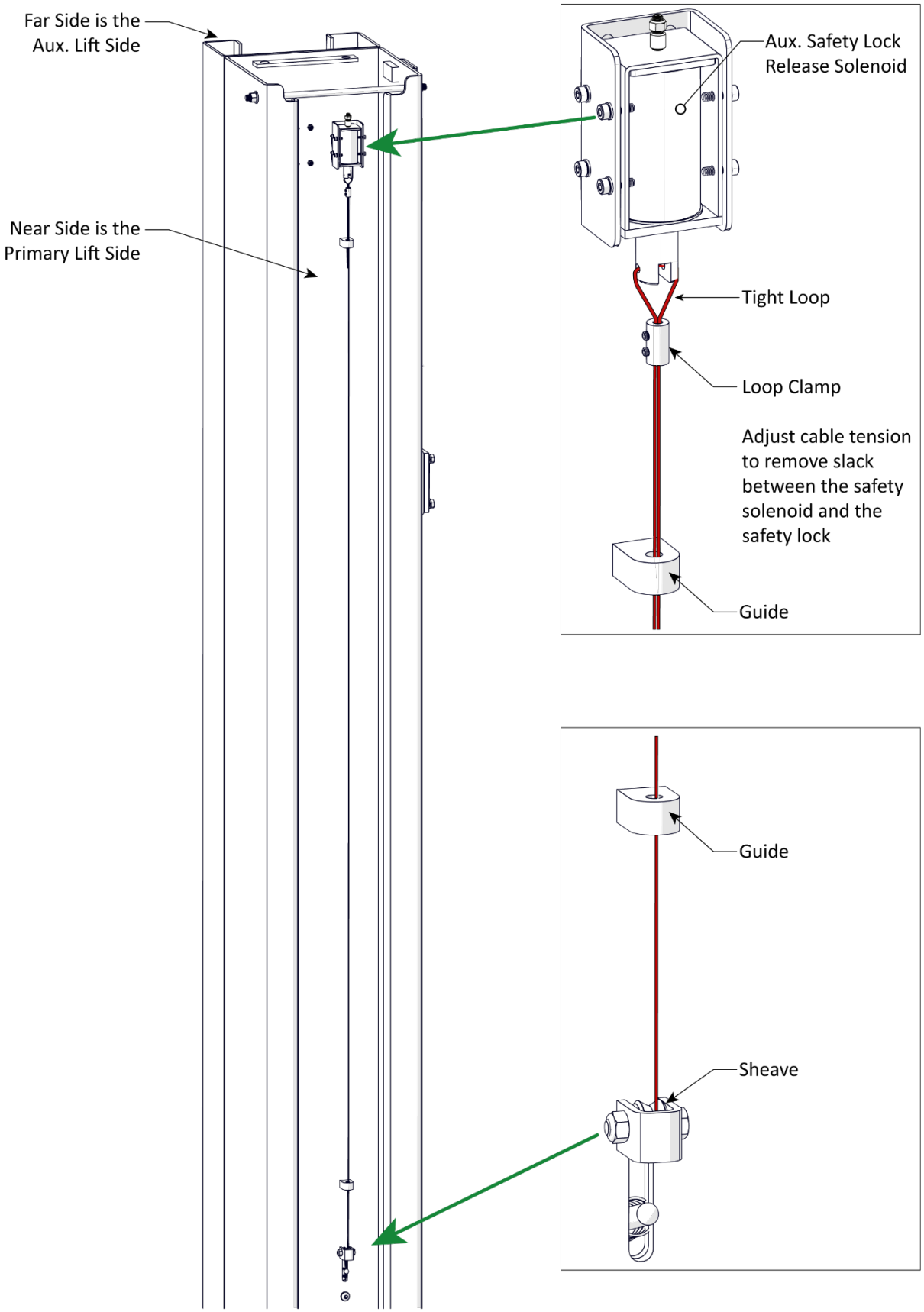
NOTE: This procedure must be completed on *both lift posts*.

Refer to the figure on the next page when performing the procedure below.

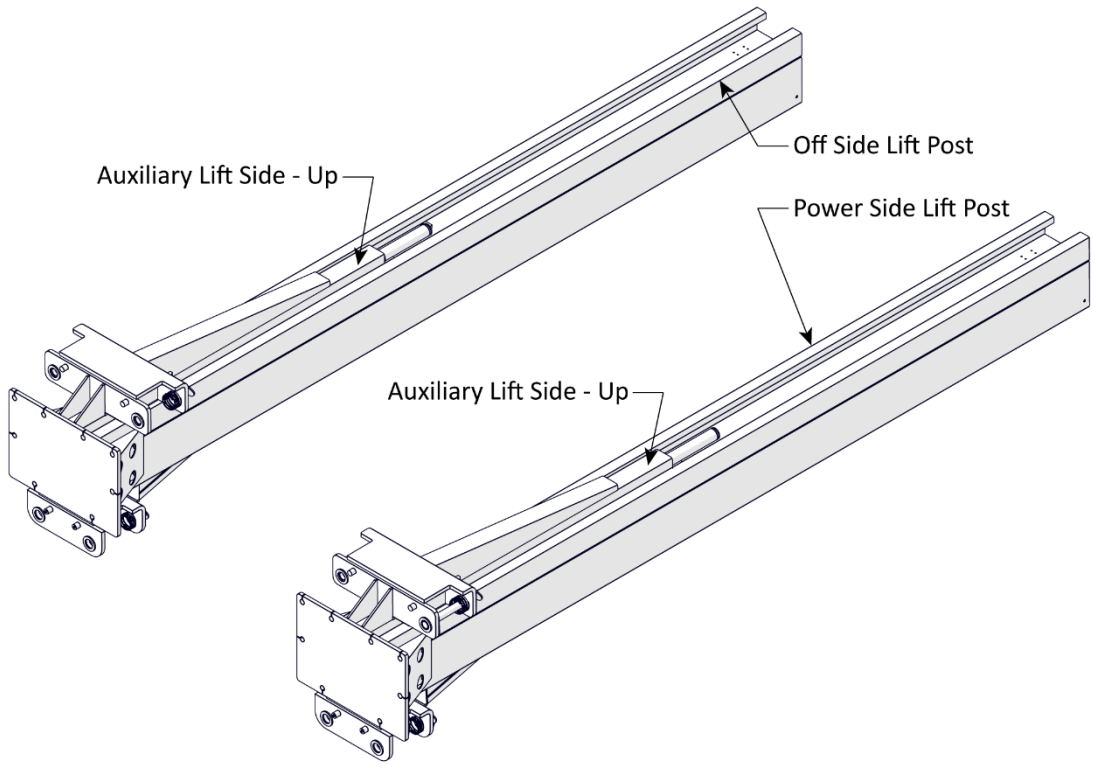
1. Arrange both lift posts to allow access to the interior of the *primary lift side*. *Refer to the figure below.*
2. Locate the *auxiliary* lift arm safety release solenoid located near the top of the lift post on the *primary* lift side.
3. Locate the *auxiliary* lift arm safety release cable assembly (5595870) exiting the lift posts just above the top of the *primary* lift cylinder.
4. Route the cable up to the solenoid through the two guides welded onto the post.
5. Verify the cable remains routed around the sheave as shown on the next page.
6. Loop the cable through the solenoid shaft.
7. Pull on the cable to remove slack *without pulling the lock away from its rest position*.
8. Adjust the loop clamp (5580042) to remove the slack, then tighten the clamp to secure. The excess cable should be routed back through the guide as shown in the figure on the following page.
9. Secure with the loop clamp (5580042) as shown.
10. Repeat steps 1 through 8 on the remaining lift post.

⚠ **DANGER** ***ALWAYS*** Verify both the power side and the off side safety assemblies engage and disengage properly ***before*** operating the Lift.

The auxiliary lift head safety lock release solenoid is pictured below installed on the primary side of the lift post.

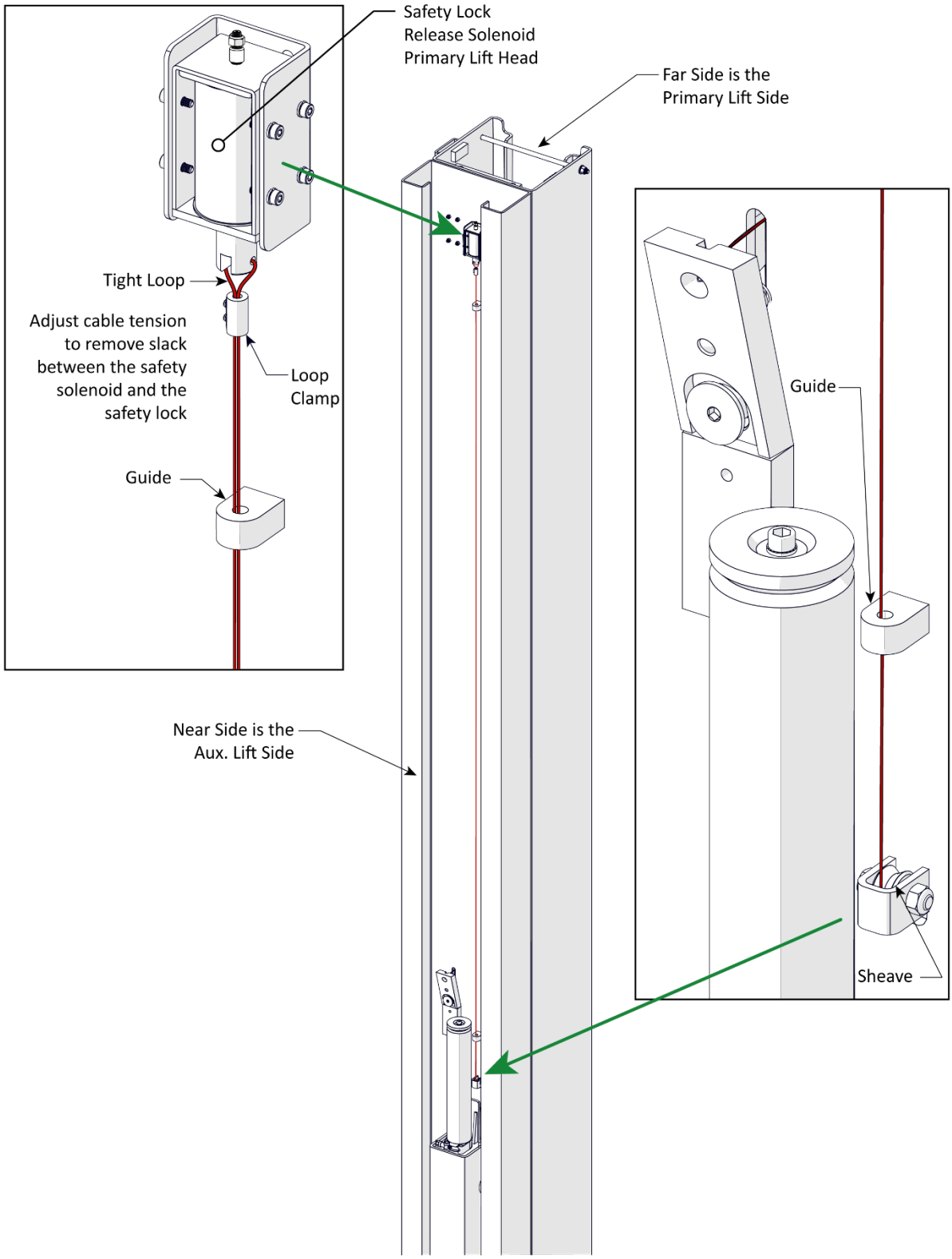


11. Rotate the posts to enable access to the interior of the *auxiliary lift side* of the posts as shown below.



12. Locate the *primary* lift arm safety release cable assembly (5595871) exiting the lift posts just below the top of the *auxiliary* lift cylinder. Refer to the illustration on the following page.
13. Route the cable up to the solenoid through the two guides welded onto the post.
14. Verify the cable remains routed around the sheave as shown below.
15. Locate the *primary* lift arm safety release solenoid located near the top of the lift posts on the *auxiliary* lift side.
16. Loop the cable through the solenoid shaft. Pull on the cable to remove slack without pulling the lock away from its rest position.
17. Adjust the loop clamp (5580042) to remove the slack, then tighten the clamp to secure. The excess cable should be routed back through the guide as shown in the figure on the following page.
18. Secure the cable with the loop clamp (5580042) as shown.
19. *Repeat steps 10 through 18 on the remaining lift post.*

⚠ **DANGER** ***ALWAYS*** Verify both the power side and the off side safety assemblies engage and disengage properly ***before*** operating the Lift.



The figure above details the *primary* lift safety cable connection and solenoid located on the *auxiliary side* of the lift post. The safety lock end is connected at the factory. Always ensure the loop clamp (5580042) is secured just below the solenoid with a tight cable loop as shown above. This position will allow the cable to travel upwards when the safety lock release is commanded by the operator. The cable should be adjusted to allow about 1 in (25 mm) of travel upwards.

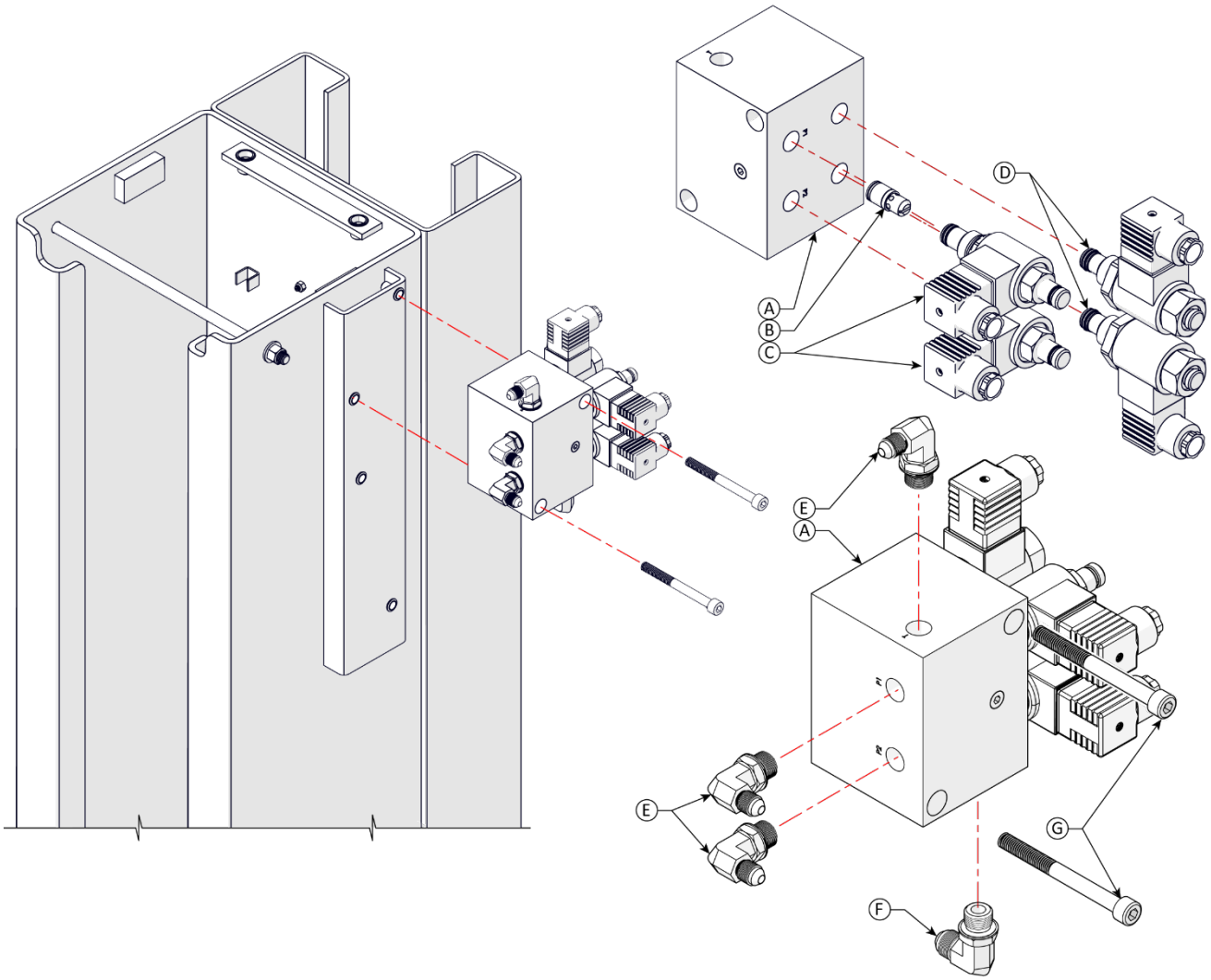
7c. Install the Valve Block

The valve block includes four solenoid valves that control the flow, direction and speed of hydraulic fluid provided to the primary and auxiliary lift arms. The Electrician will connect the valve wiring.

⚠ **CAUTION** Keep the hydraulic system contaminant free. Always assemble hydraulic components in a clean environment.

1. Retrieve the valve block assembly, fittings, and socket head cap screws as detailed in the table and figure below.
2. In a clean workspace, remove any shipping plugs from the valve block.
3. Place a few drops of hydraulic fluid or O-ring lubricant on all O-rings to prevent damage while tightening.

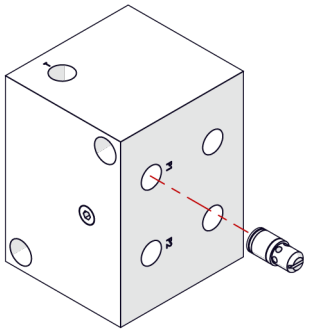
Item	Description	Part Number	Qty.
A	Valve Block	5710155	1
B	Flow Control Valve	5590111	1
C	Solenoid Valve 2-Way	5590006	2
D	Solenoid Spool Valve 2-Way	5590007	2
E	-04JIC -06ORB Elbow	5550103	3
F	-06JIC -06ORB Elbow	5550418	1
G	M6 x 85 SHCS	5530693	2



4. Install the push-in flow control valve (B). Note the direction of installation. Refer to the figure on the right.
5. Install the two solenoid valves (C).

   Note the solenoid valve the torque specifications listed on this page.
6. Install the two remaining solenoid spool valves (D).

   Note the solenoid valve the torque specifications listed below.



Valve Component	Torque Specification
Solenoid Valve Cartridge	19-21 ft-lbs (25.8 – 28.5 Nm)
Solenoid Coil Hex Nut	4-5 ft lbs (5.4-6.8 Nm)

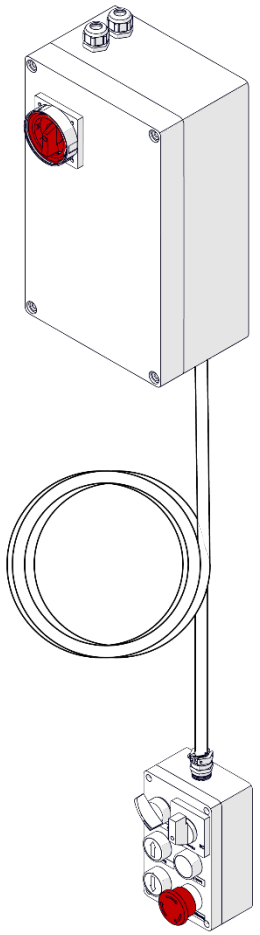
7. Install the four hydraulic fittings into the valve block and make finger tight.
8. Mount the valve block at the top of the power side post as shown in the figure on the previous page.
9. Tighten the hydraulic fittings and orient their approximate direction as shown in the figure on the previous page.

7d. Mount the Control Box with Pendant Assembly

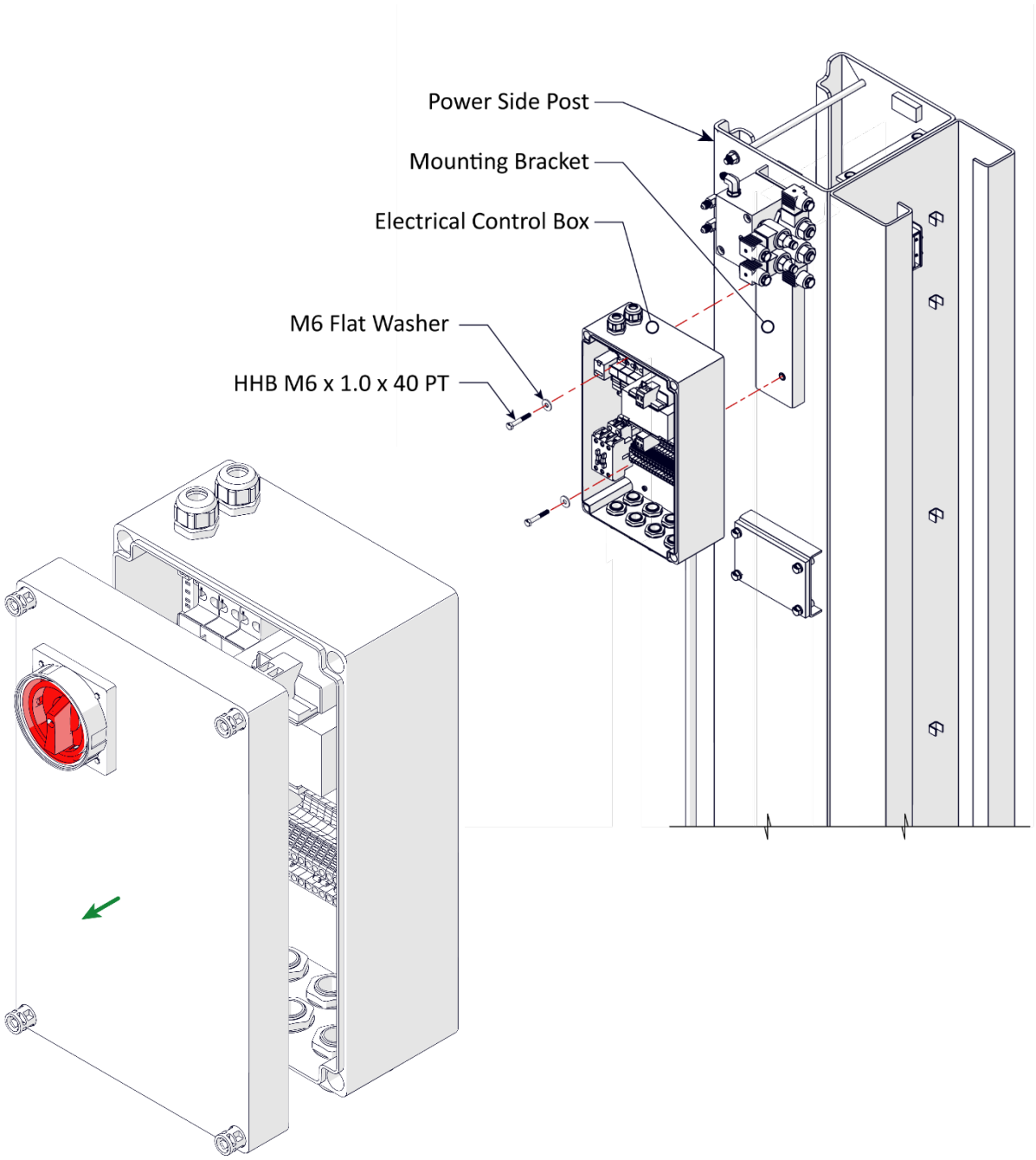
Retrieve the electrical control box with control pendant.

1. Retrieve two M6 x 1.0 x 40PT hex head bolts (5530757) and M6 flat washers (5545339) from the parts bag.
2. Loosen the four fasteners on the corners of the enclosure to access the interior of the control box. Take care not to damage the interconnecting wire bundles when opening the box.

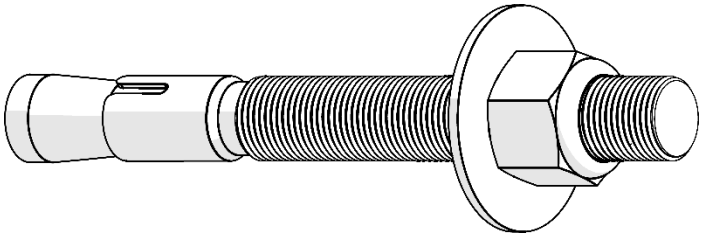
   Refer to the figure on the next page.
3. Use the M6 flat washer and M6 x 1 x 40 HHB to secure the electrical control box below the valve block as shown below.
4. Return and secure the cover of the control box with the four fasteners.
5. Carefully remove the ties binding the pendant cable and allow the pendant to hang down the side of the post.



⚠ **CAUTION** Do not drop the pendant or allow it to strike the lift post with force. This could damage the pendant controls or place excessive stress on the interconnecting wiring.


Power Side Post
Mounting Bracket
Electrical Control Box
M6 Flat Washer
HHB M6 x 1.0 x 40 PT

8. Raise and Anchor the Lift 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 severely injuring bystanders. BendPak strongly recommends consulting a Concrete Specialist early in the planning process for Lift installations. A Concrete Specialist will make adjustments to account for national, state, and local building codes/requirements as well as local weather conditions, soil composition, base preparation, load bearing, seismic requirements, and any other structural concerns that may arise.*

Concrete minimum specifications:

- **Depth**: 8 in. (203 mm) thick, *minimum*, steel reinforced.
- **PSI**: 3,000 PSI, minimum
- **Cured**: 28 days, minimum

Anchor Bolt specifications:

- **Length**: 7 in. (178 mm)
- **Diameter**: .75 in. (19 mm)
- **Anchor torque**: 85 – 95 ft. lb.
- **Effective embedment**: 3.25 in. (82.5 mm) or more

The Concrete floor where you want to install your Lift *must meet the following minimum 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.
- Verify the floor is not a post-tension slab. If the floor is suspected of being post tensioned, contact the building architect ***before*** drilling. Contact a qualified professional to locate the tensioned cables before drilling.

⚠ **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 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***.

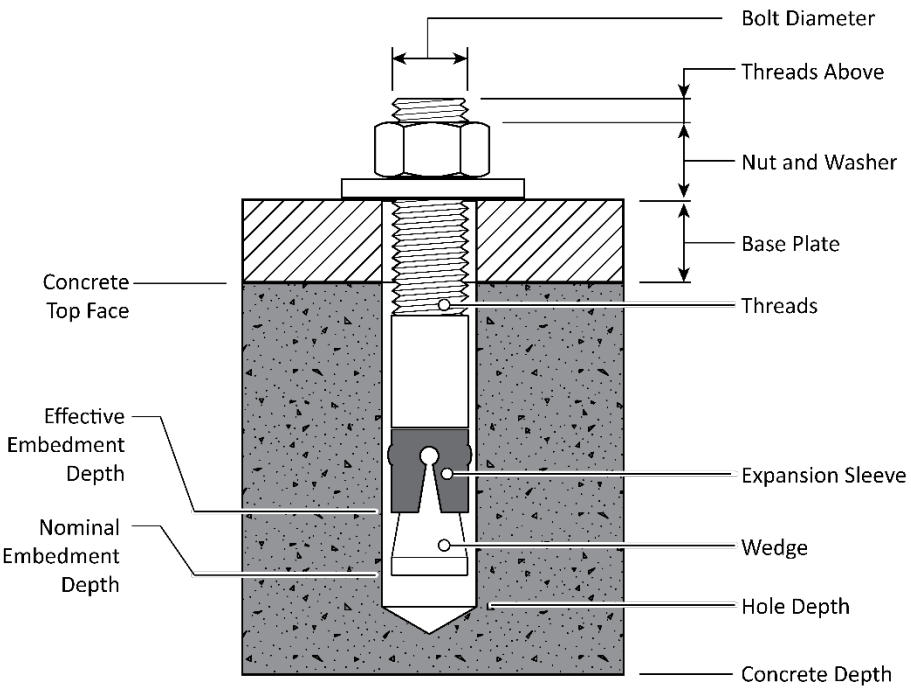
⚠ **DANGER** Your concrete and Anchor Bolts ***must*** meet the specifications described above. Only install your Lift on a Concrete surface. If you install a Lift on asphalt or any other surface, or your Concrete or Anchor Bolts do not meet these specifications, it could lead to product damage, vehicle 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.”

⚠ **DANGER** Use ***only*** the ALI-certified Anchor Bolts that came with your OctaFlex 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 top trough assembly and doing final leveling may be easier if there is some play in the posts.



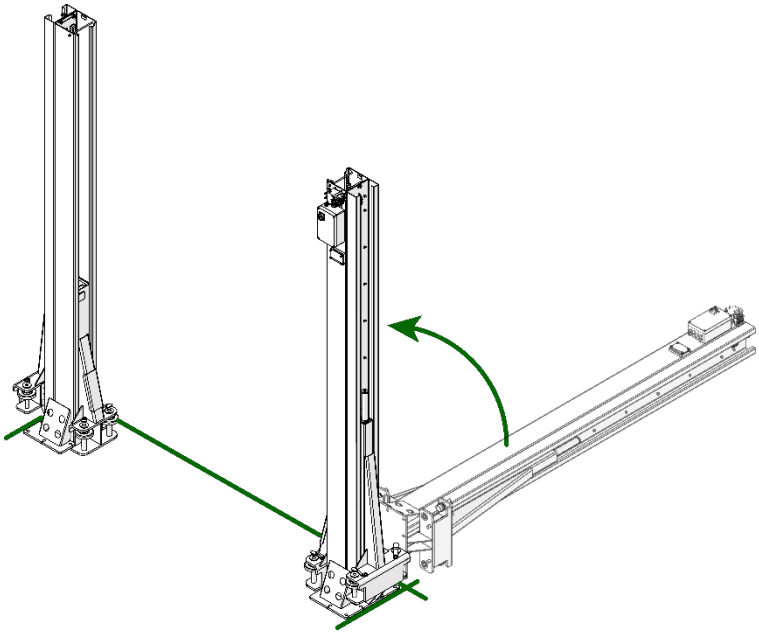
Effective Embedment is the location in the hole where the expansion sleeve presses into the concrete. This is where the anchor bolts get their holding strength, the further down into the hole, the greater the holding strength.

Nominal Embedment is how far down into the hole the bottom of the anchor bolt is, which does not indicate anything about the holding strength.

To install and anchor the Lift Posts:

⚠ **WARNING** Many of the Lift components are heavy and awkward to work with. Installation requires heavy lift equipment (forklift or hoist). Installation should be accomplished by competent personnel ensuring all heavy components are properly rigged and balanced for lifting. Installation personnel should have knowledge, training, and experience in lifting, rigging, and securing heavy objects.

1. Using a forklift, crane, or hoist carefully 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 chalk lines. See pg. 14 for lift post orientation. *Ensure the power side post (control box) is accessible to the planned electrical service feed.*
3. Double check your measurements against the **Specifications** for the Lift.



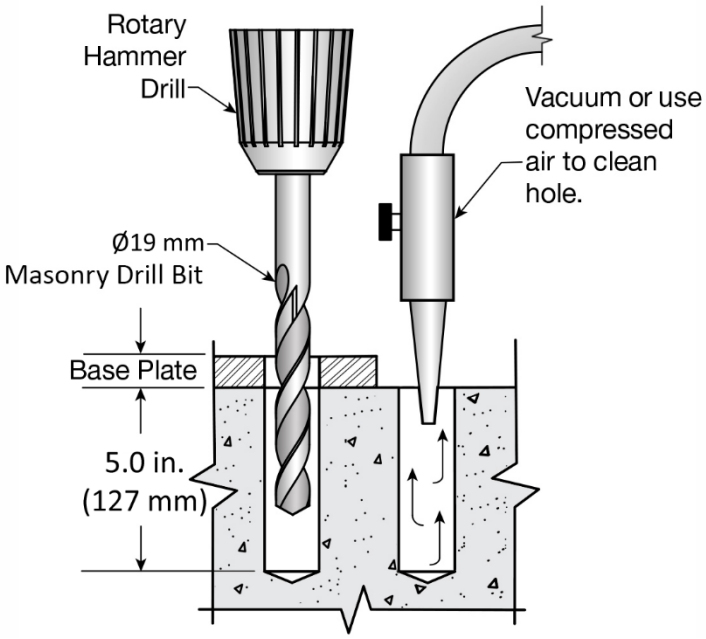
⚠ **WARNING** You ***must*** use the appropriate safety gear including safety glasses, dust masks, gloves, steel-toed work boots, and heavy work clothes when anchoring the posts.

4. Using the base plates as guides, drill each hole **5.0 in. (127 mm) min.** deep using a masonry drill bit.

   Drill 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 ¾ in. diameter (19 mm) Anchor Bolt, for example, use a ¾ in. 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.

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

   A wire brush, hand pump, or compressed air may be used. ***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.

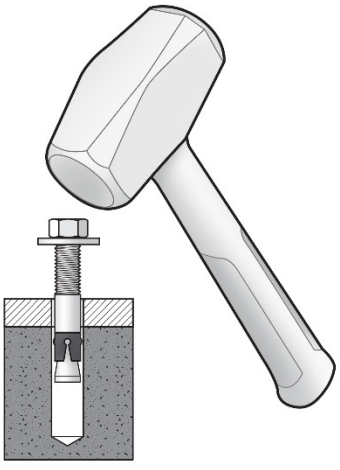
NOTICE The holding strength of an Anchor Bolt is partially based on the how cleanly the Expansion Sleeve presses against the Concrete. If the hole is dirty or too wide, there is less holding strength.

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 drops 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 greater than or equal to .5 in. (13 mm).
9. Tighten each nut ***clockwise*** to the recommended installation torque, 85 – 95 ft-lbs (115 – 129 Nm), using a Torque Wrench.

Tip If you plan to torque the Anchor Bolts later in the process, so that installing the Top Trough Assembly and final leveling is easier, skip to 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.

⚠ CAUTION Do ***not*** use an impact wrench to torque the Anchor Bolts. An impact wrench can damage the concrete.

9. Prepare the Top Trough

Prior to installing the top trough, review the thread sealants information and install the following:

9b. Assemble and mount the hydraulic block.

9c. Install and route the limit switch and its wiring

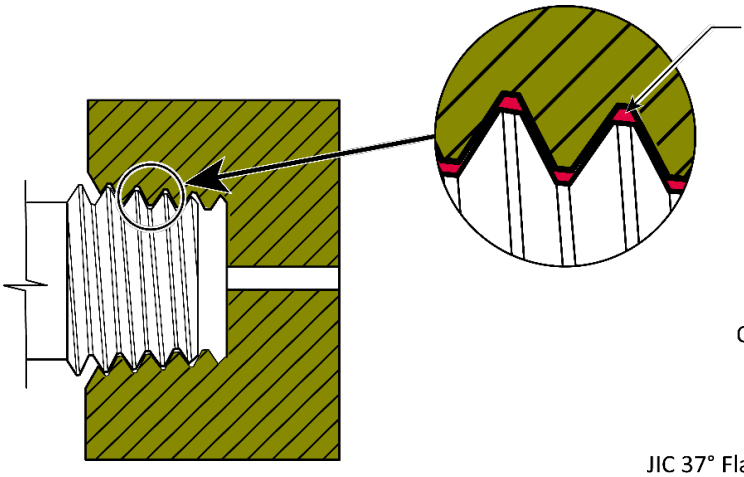
9a. Thread Sealants

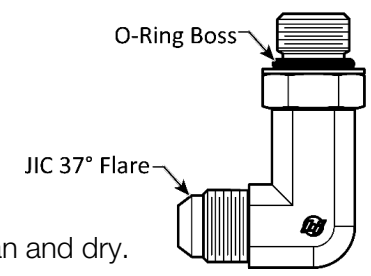
Liquid Thread Sealant lubricates and fills the gaps between the fitting threads and leaves no residue that could contaminate the hydraulic fluid.

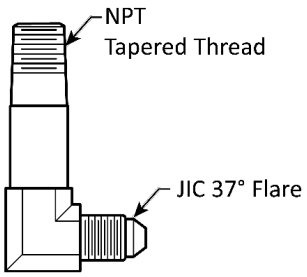
Other types of Thread Sealants (like Teflon Tape) can shred during installation or removal and eventually enter the hydraulic system.

Only use Thread Sealant on NPT fittings.

Apply the thread sealant when the ambient temperature is between +46.5°F to +70°F (+8°C to 21°C).







To apply the Thread Sealant:

1. Ensure all fittings and connectors are clean and dry.

If 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 and wipe clean 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 of sealant is required. The sealant spreads to the other threads as it is tightened into place.

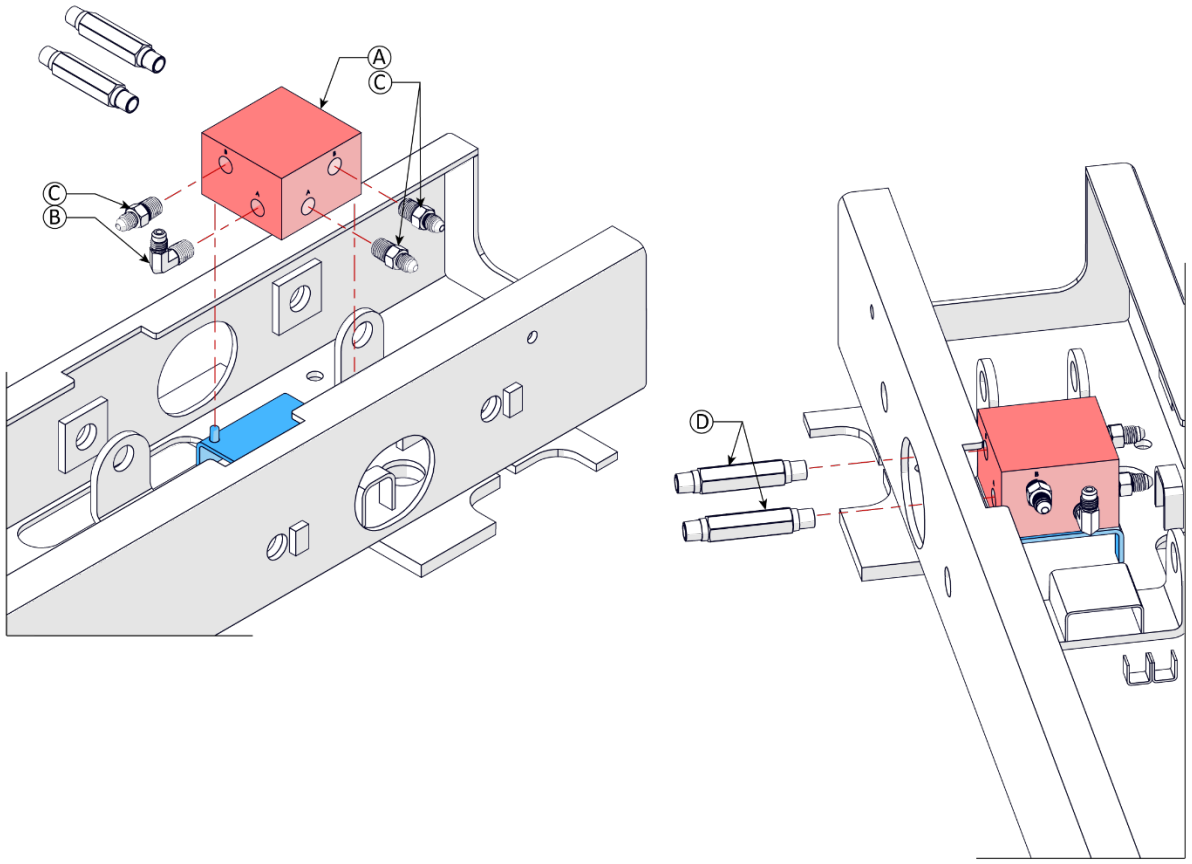
If too much sealant is applied, the excess liquid will be pushed out as the fitting is tightened. Use a shop towel to wipe away the excess sealant.

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

9b. Install the Hydraulic Block

1. **Retrieve the top trough assembly (5216388) and arrange it on a work stand or bench.**
2. Retrieve the hydraulic block and the components listed in the table below.

Item	Description	Part Number	Qty.
A	Hydraulic Block	5710099	1
B	Elbow -04 NPT x -04 JIC	5550086	1
C	Nipple -04 JIC x -04 NPT	5550147	3
D	Nipple, -04 NPTF x -04 JIC 3.25 Long	5550228	2

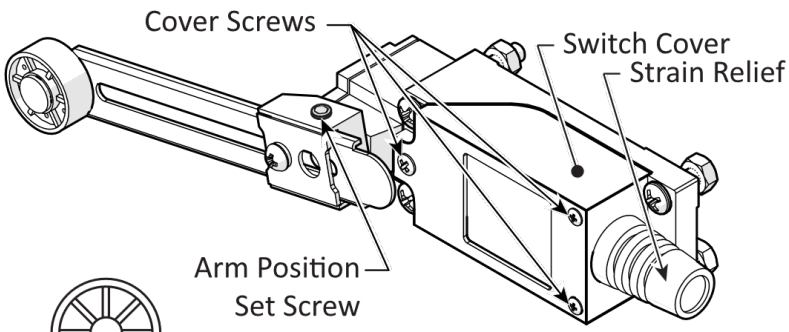


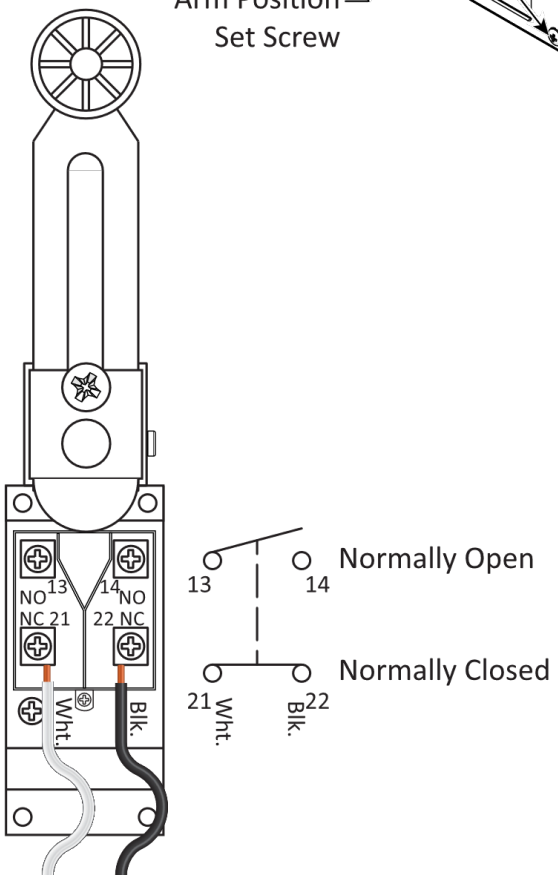
3. Remove any shipping plugs from the hydraulic block, then clean all fittings and port threads to remove any possible debris that may contaminate the hydraulic system.

4. Apply thread sealant to the NPT threads on fittings B and C.
5. Thread fittings B and C into the hydraulic block as shown above.
6. Rotate fitting B to point straight up as indicated in the figures above.
7. Place the hydraulic block into the top trough fitting on the two locating pins as shown above.
8. Apply thread sealant to the NPT threads on item D.
9. Thread both item D fittings into the hydraulic block.

9c. Install and Adjust the Limit Switch

1. Retrieve the limit switch (5520088) from the parts bag. The switch includes two long and two short M4 fasteners and hex nuts.
2. Retrieve the 4 conductor cable #14-4 SOOW (5520116) from the parts box.
3. Remove the cover and strain relief from the limit switch. Retain all fasteners.
4. Remove 2 to 3 inches of the insulating jacket from the cable to expose the conductors.
5. Select the black and white conductors to be connected to the limit switch. Strip back the insulation about .5 in (12 mm) to expose the wire.
6. Cut and discard the remaining green and red conductors.
7. Insert the exposed wires and cable into the strain relief and switch cover.
8. Connect the white and black wires to the normally closed terminals 21 and 22 as shown in the figure to the right.
9. Inspect the wiring and ensure there are no stray wires or other conductive material that may bridge across the terminals preventing proper electrical operation.

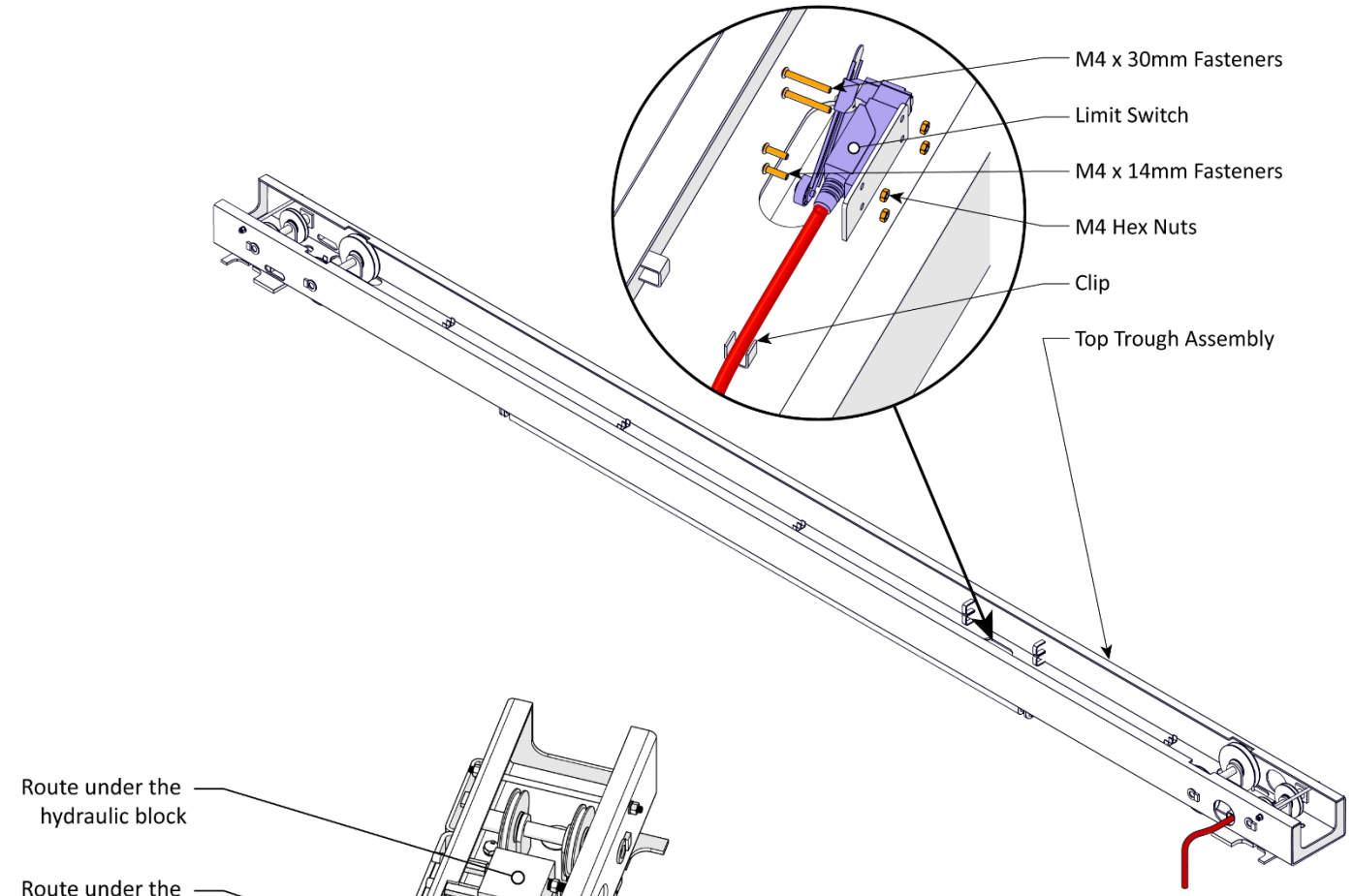


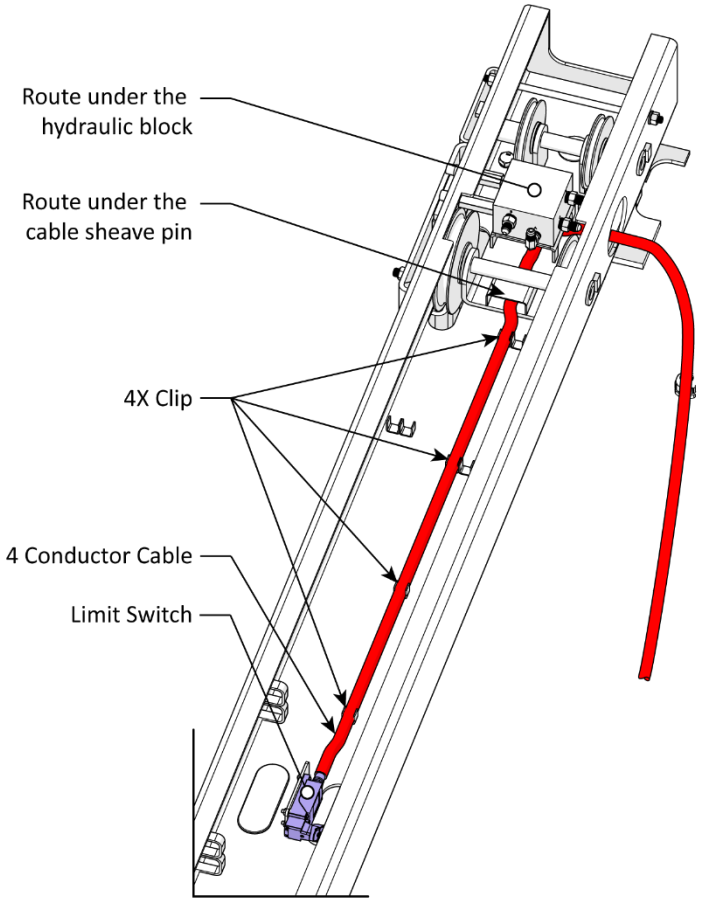


10. Secure the cover and strain relief to the limit switch with the fasteners removed in step 4.
11. Secure the limit switch in the bracket on the top trough as shown on the next page.
12. Route the cable from the limit switch through the clips, under the equalizing cable sheave pin and under the hydraulic block.

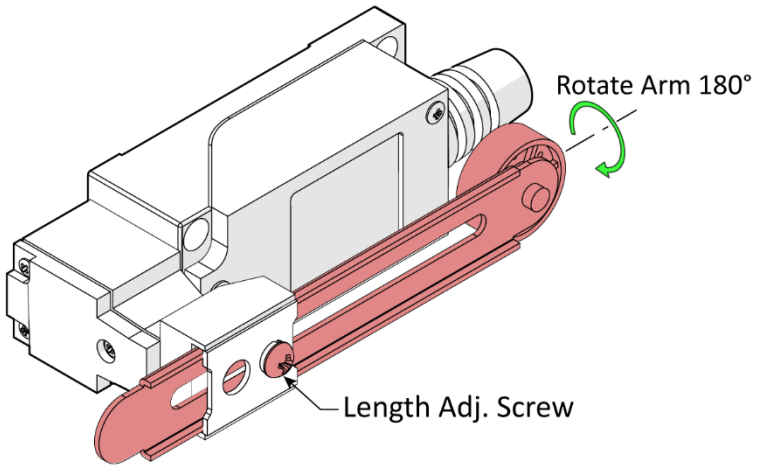
13. Route the cable out the side of the top trough. Leave enough cable to reach the bottom of the control box plus a short service loop. The Electrician will terminate the cable inside the control box.

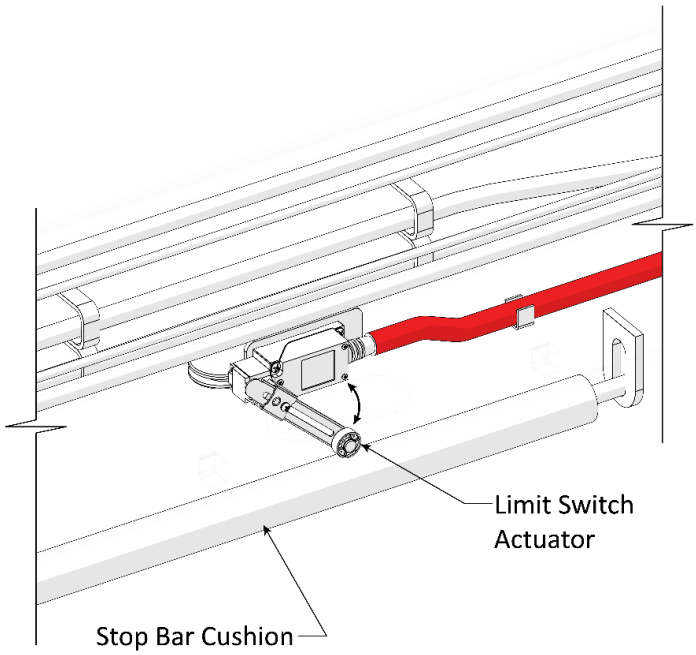
14. Secure the limit switch cable in the top trough by crimping the clips inside the trough. *Do not damage the cable jacket when crimping the cable.*

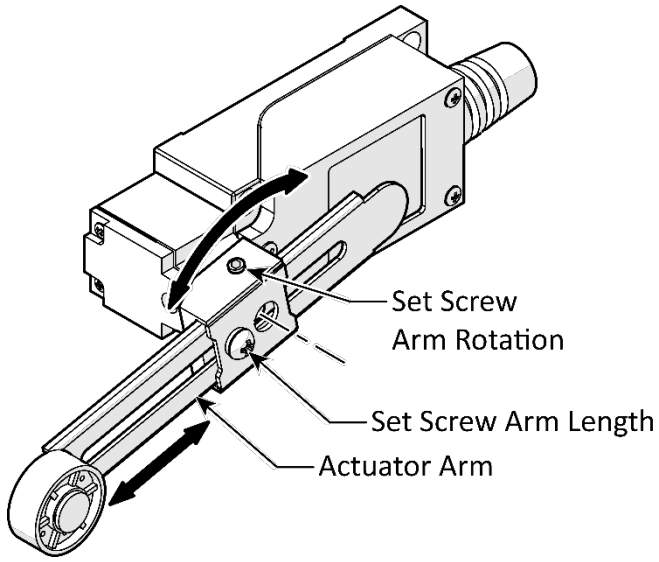




15. Remove the arm length adjustment set screw.
16. Rotate the actuator arm 180° until the roller faces away from the switch body as shown to the right
17. Loosen the arm rotation and length set screws to adjust the actuator arm position until the arm is in contact with the stop bar cushion. Refer to the figure below.
18. Tighten the set screws in this position.
19. Ensure the limit switch actuator arm travels up and down when the stop bar is moved up and down.







9d. Install the Top Trough

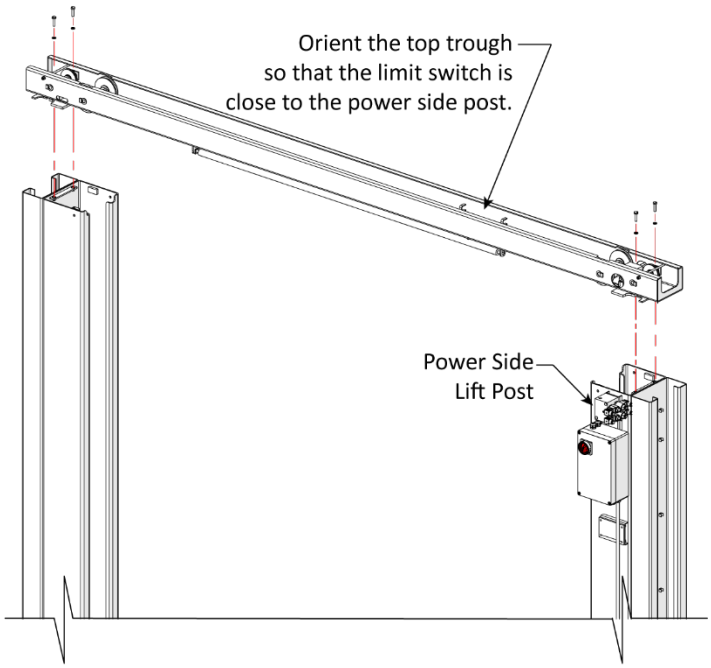
1. To provide access for the fasteners used to secure the top trough, remove the e-ring, equalizing cable pin and sheaves for the auxiliary lift arms from ***both*** ends of the trough as shown below.
2. Retrieve four M10 x 40 hex head bolts, and M10 split lock washers from the parts bag.
3. Lift and support the top trough assembly onto the top of the lift posts using a forklift or other appropriate lifting device.

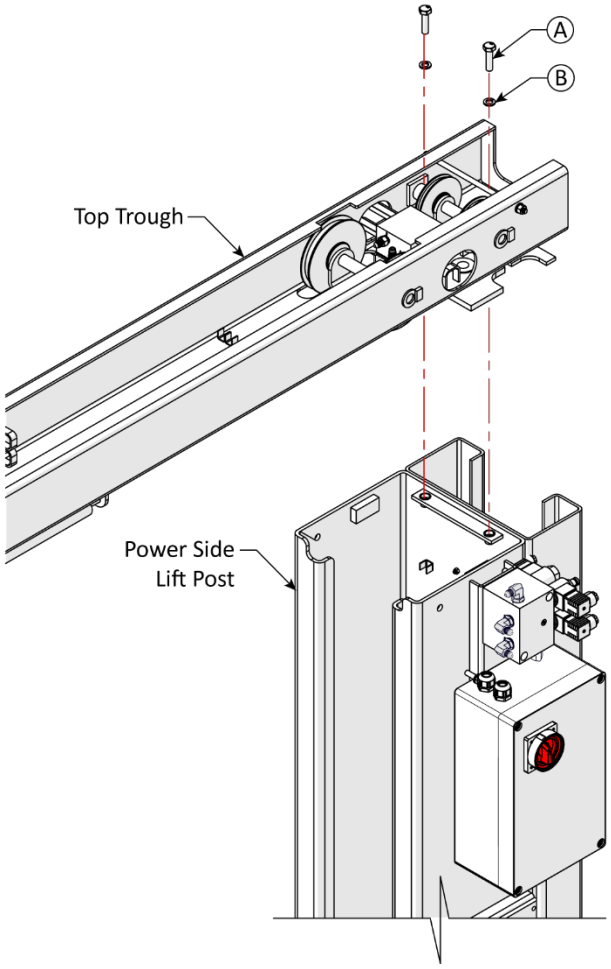
⚠ **WARNING** Use appropriate lifting equipment. This component is heavy and could cause damage or injury if dropped.

IMPORTANT! *Orient the top trough so that the limit switch is closest to the power side post.*

4. Secure the top trough onto the lift posts using two M10 fasteners and split lock washers on *each* end of the trough and secure into each lift post as described in the figures below.
5. Replace all sheaves and pins on both top trough ends, then secure with the e-rings removed in step 1.

Item	Description	P/N	Qty.
A	M10 x 1.5 x 40mm	5530302	4
B	M10 Split Lock Washer	5545200	4



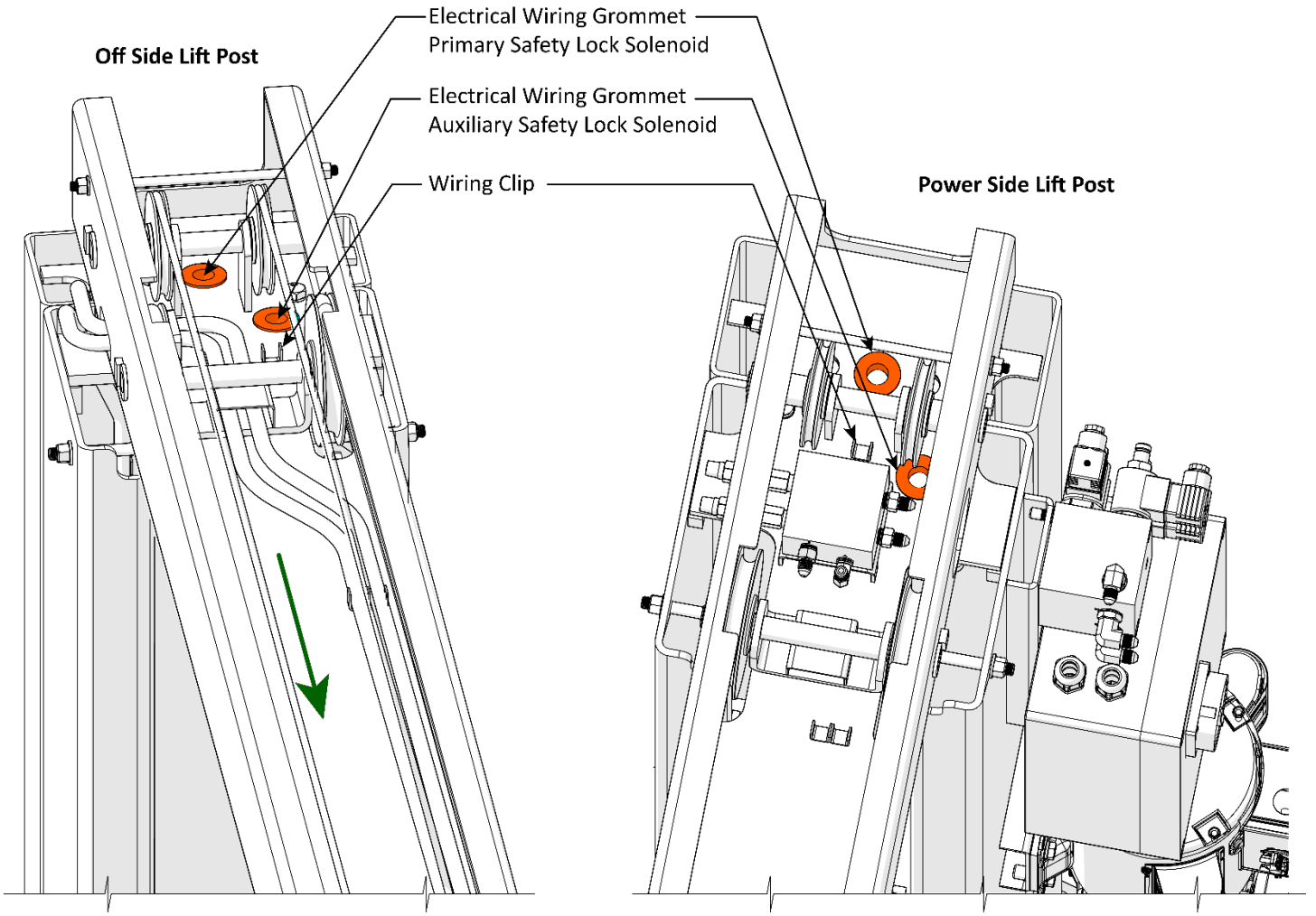


10. Safety Lock Solenoid Connections and Wire Routing

⚠DANGER A licensed Electrician is required to install all wiring in accordance with national and local electrical codes.

The safety lock release solenoids are powered by 24VDC supplied from the control box and are engaged/disengaged via a push button on the control pendant. These solenoids are connected to the electrical control box via a 14-4 SOOW cable.

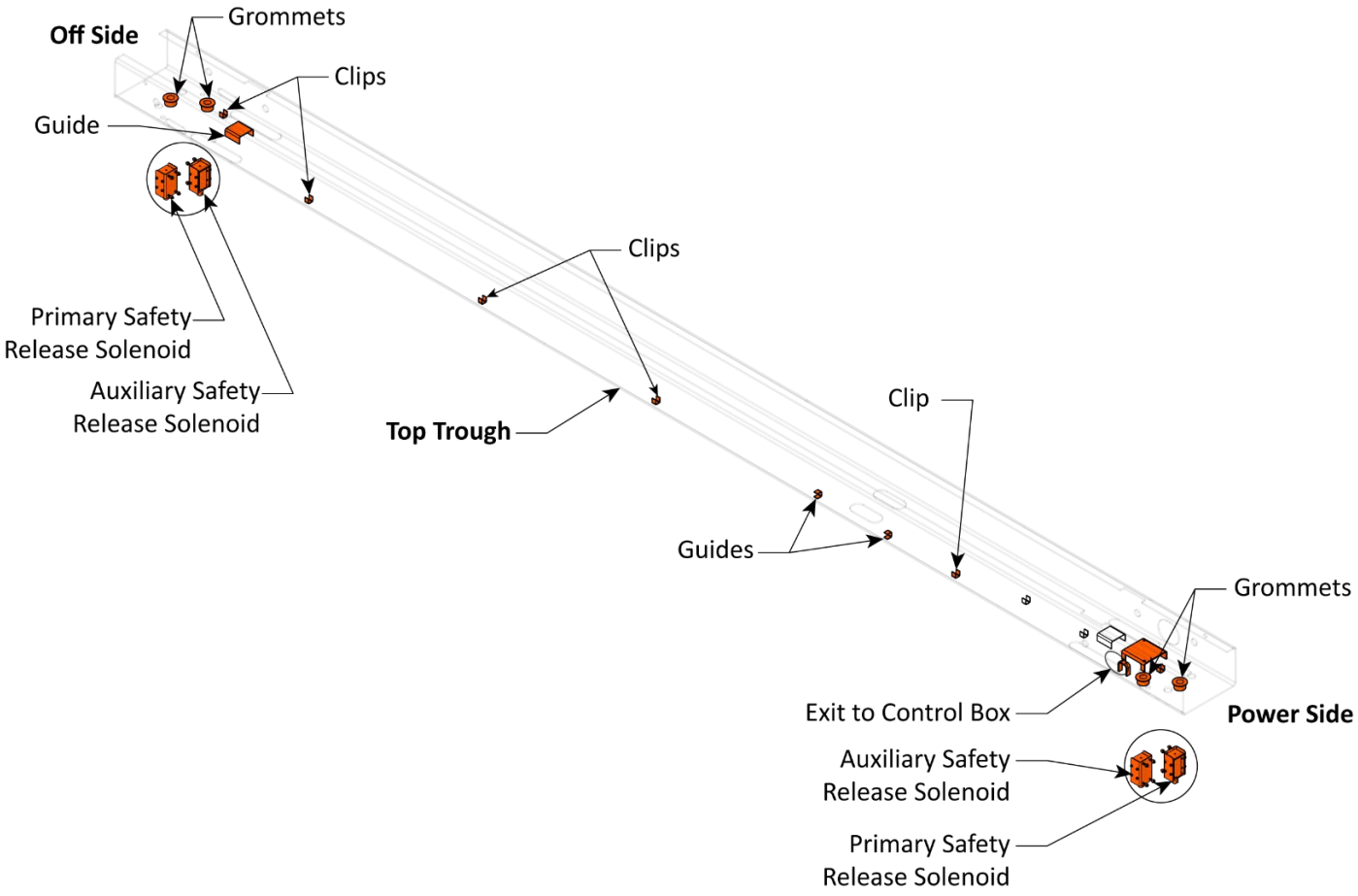
1. Retrieve four push-in grommets (5716210) from the parts bag.
2. Push the wiring grommets into place as shown below.



IMPORTANT! Be aware that the *Auxiliary Lift* safety release solenoid is mounted in the *Primary Lift* side of the lift post. The *Primary Lift* safety release solenoid is mounted in the *Auxiliary* Lift side of the lift post.

3. Retrieve the 14-4 cable (5520116) from the parts box.
4. Measure enough cable to reach from the control box to the safety solenoids on each lift post using two lengths of the 14-4 cable. Follow the route described on the next page. Measurement is to include enough cable to reach from the solenoid to the control box connections including a short service loop.
5. Cut two lengths of the 14-4 cable as measured.

6. Route the two four-conductor 14-4 SOOW cables from the control box to the top trough and then to each lift post. Route the cable through the cable guides provided. These guides will support and keep the cable clear of moving components that may damage the cable. Clips welded into the top trough are used to secure the cable position after routing.
7. Ensure enough cable is available to reach down to the safety solenoids with a small service loop on both lift post ends.
8. Ensure enough 14-4 cable is present to make the connections in the control box and provide a small service loop.



9. Strip back the cable jacket insulation to expose the wires inside. Separate the red and green wires from the black and white wires.
10. Route the black and white pair down to the *primary* safety lock solenoids on each lift post.

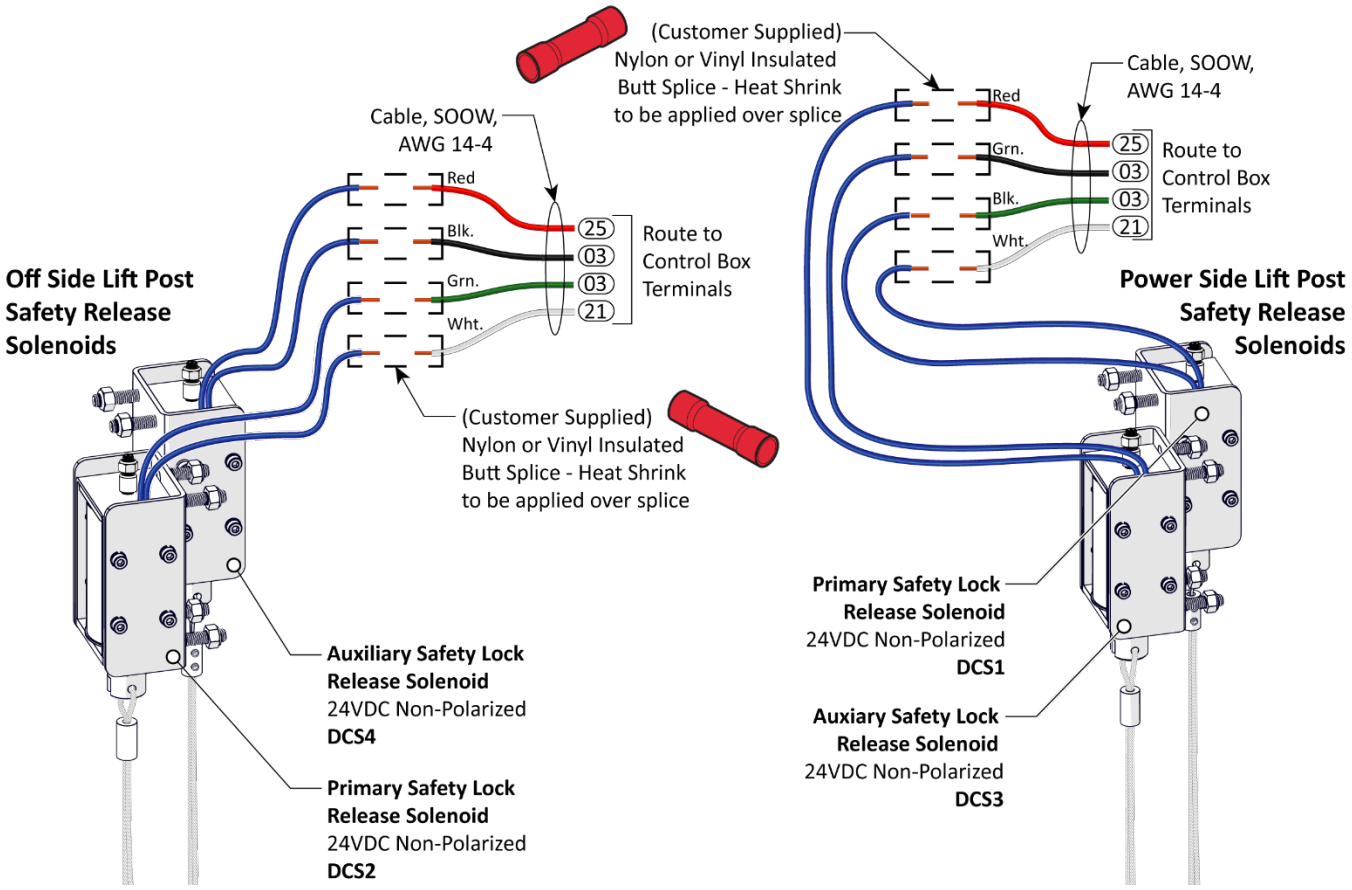
IMPORTANT! *Primary* safety lock solenoids are mounted on the *auxiliary side* of the post.

11. Route the red and green pair down to the *auxiliary* safety lock solenoids on each lift post.

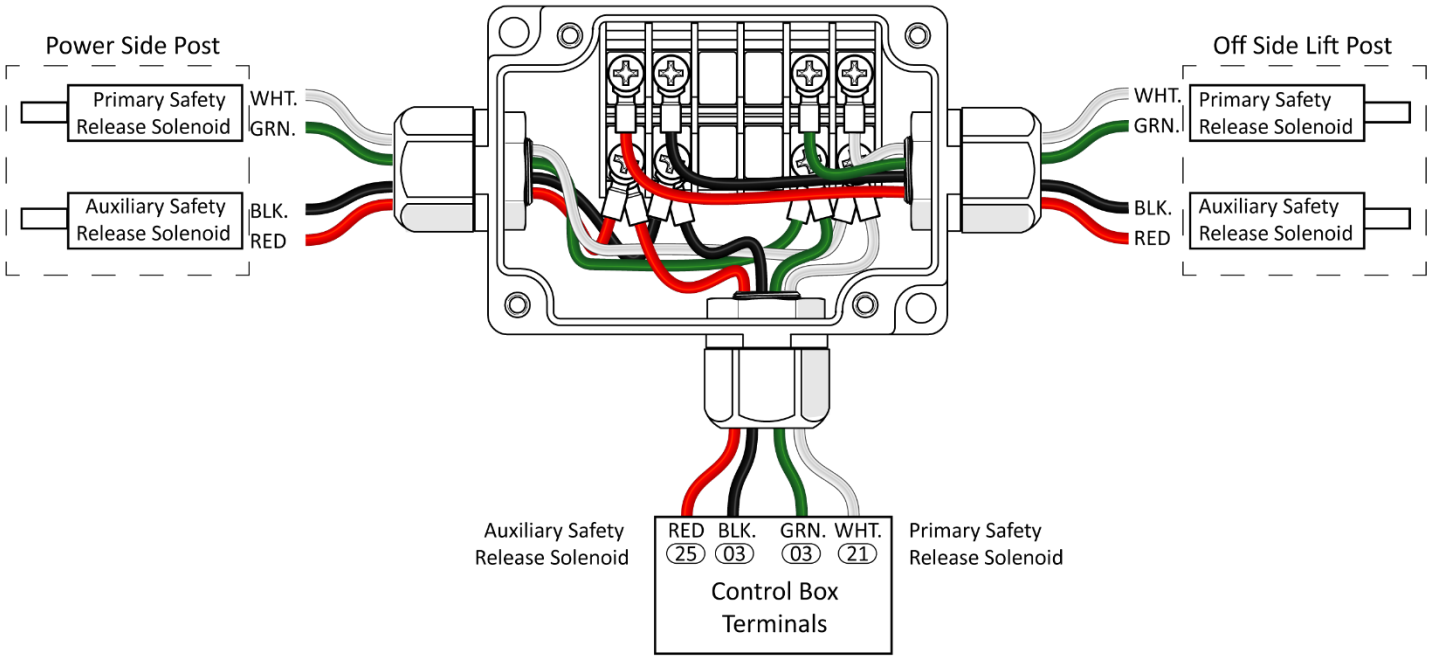
IMPORTANT! *Auxiliary* safety lock solenoids are mounted on the *primary side* of the lift post.

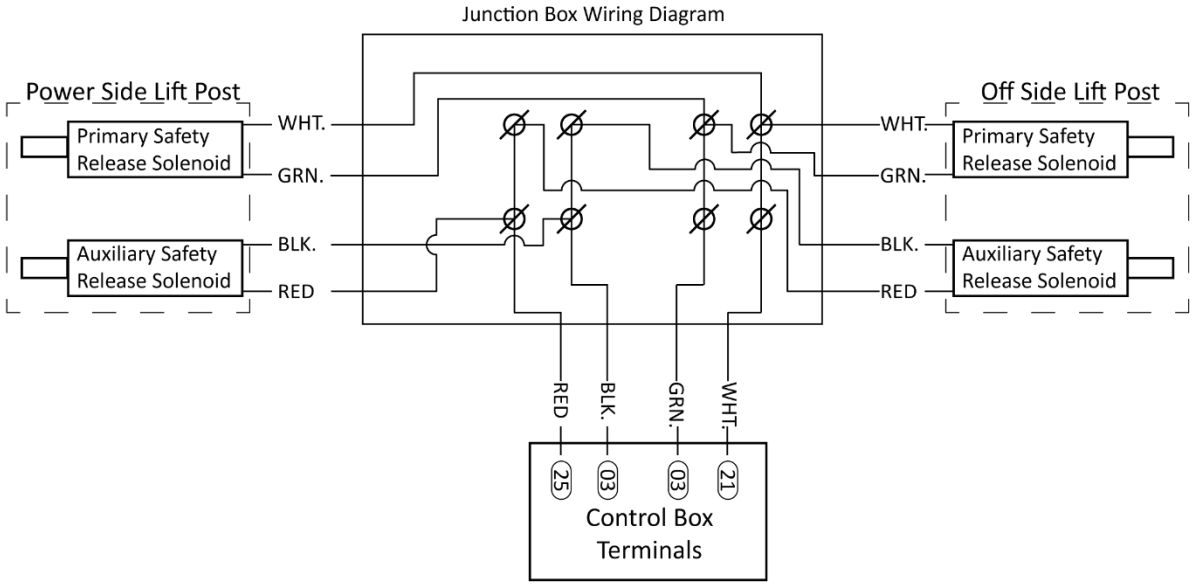
IMPORTANT! *All crimp connections are to be protected with heat shrink tubing after crimping*.

12. Strip back the 14-4 red wire insulation and connect to one lead from the auxiliary safety solenoid using insulated crimp splices (not supplied). Ensure a solid mechanical connection has been made by tugging lightly on the wires.
13. Strip back the 14-4 green wire and connect to the remaining lead from the auxiliary solenoid using insulated crimp splices (not supplied). Ensure a solid mechanical connection has been made by tugging lightly on the wires.
14. Strip back the 14-4 black wire insulation and connect to one lead from the primary safety solenoid using an insulated crimp splice (not supplied). Terminate the white wire to the remaining lead from the primary solenoid. Ensure a solid mechanical connection has been made by tugging lightly on the wires.
15. Strip back the 14-4 white wire insulation and connect to the remaining lead from the primary safety solenoid using an insulated crimp splice (not supplied). Ensure a solid mechanical connection has been made by tugging lightly on the wires.
16. Protect all crimp connections with heat shrink tubing. Wrap all conductors with braided split sleeving or equal. Secure the sleeving with wire harness tape at both ends.
17. Dress the wiring neatly to ensure that it is out of the path of moving components that could cause chafing to the cable.
18. Ensure there is no mechanical strain on the electrical crimp connections.
19. Finally, secure the 14-4 cable in the top trough by lightly crimping the clips.
20. The terminations in the control box will be covered in the **Control Box Terminal Connections**.



Tip Some installers may prefer to utilize a junction box (customer supplied) as described below and located in the top trough.





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 a 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:

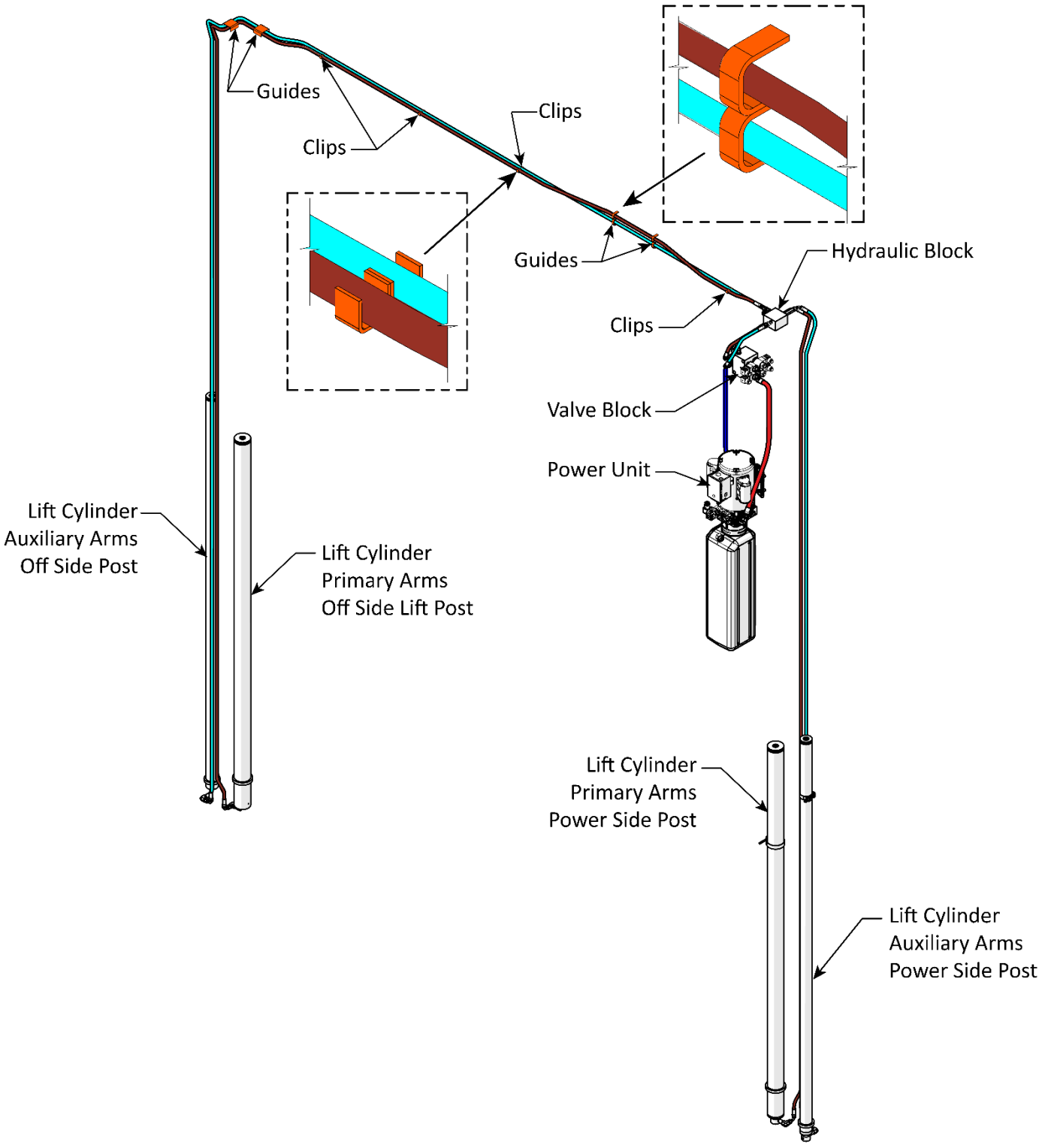
- **Compressed Air**. Use an air compressor to blow out contaminants from each Hydraulic hose and fitting prior to installation. Clean, dry air is preferred. Wear ANSI-approved eye protection (safety glasses, goggles, or face shield) when using compressed air for cleaning. Never point an air hose nozzle 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).
- ***NEVER* mix different types of Hydraulic Fluid**. If the hydraulic fluid requires replacement, flush the hydraulic system to remove old fluid before adding the replacement fluid. Mixing different hydraulic fluids can lead to seal degradation, pump damage, sludge formation, orifice, and/or filter obstructions and other systemic damage.

11. Route and Connect the Hydraulic Hoses

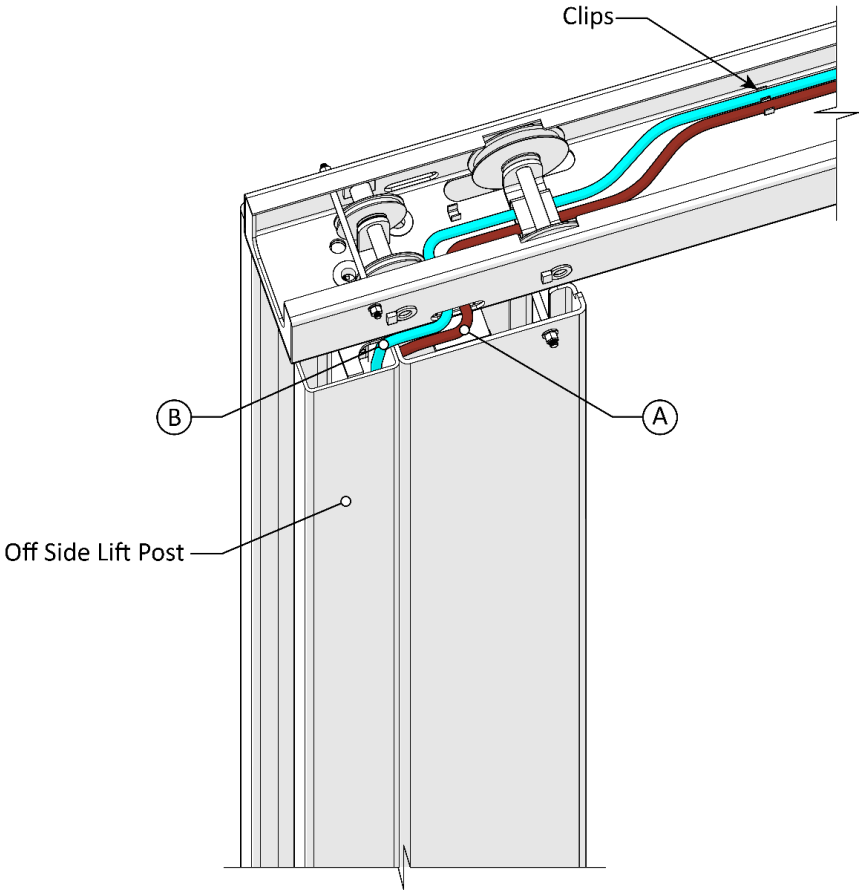
The hydraulic hoses are connected to the lift cylinders and preinstalled in the lift posts. They must be routed over the top trough through a series of clips and guides to the hydraulic block in the top trough above the power unit. An overview of the hydraulic hose routing with the lift posts and top trough removed is provided in the figure below.



To route the hydraulic hoses:

1. Retrieve the two hydraulic hoses (A and B) coiled inside the off side lift post.
2. ***Keep track of which hoses are connected to the primary and auxiliary cylinders.*** Mark the hoses with tape or a permanent marker to indicate which hose leads to the auxiliary and which leads to the primary lift cylinders.
3. Remove the ties securing the hydraulic hoses and carefully route the hoses up through the top of the off side lift post and into the top trough. Refer to the figure below.

Item	Description	P/N	Qty.
A	Hydraulic Hose, Primary Lift Cylinder, Off Side Post	5570591	1
B	Hydraulic Hose, Auxiliary Lift Cylinder, Off Side Post	5570592	1

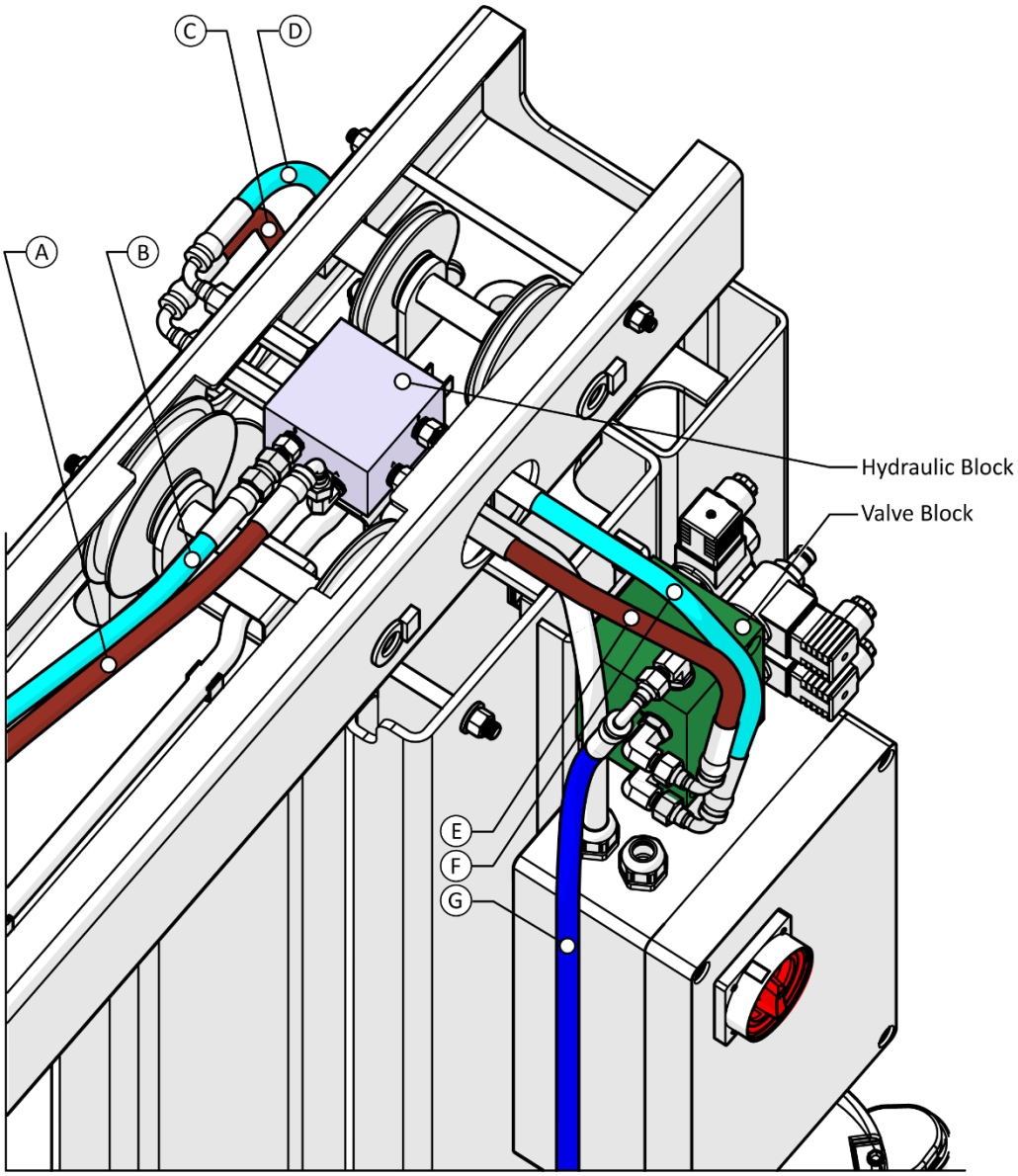


4. Route the hoses from the off side lift post through the clips and guides to the hydraulic block. Refer to the previous two figures and the figure on the next page.
5. Repeat steps 1-4 on the power side post (hoses C and D). Refer to the figure on the next page.
6. Secure the off side and power side hydraulic hoses in the lift post and the top trough by crimping the clips provided around the hoses. Take care not to damage the hoses.

Important! The hydraulic hoses inside the lift posts must be held flat against the side of the post using the clips provided to keep them clear of the lift head.

7. Connect the short hydraulic hose (E) between the hydraulic block Port A and the valve block port P1.

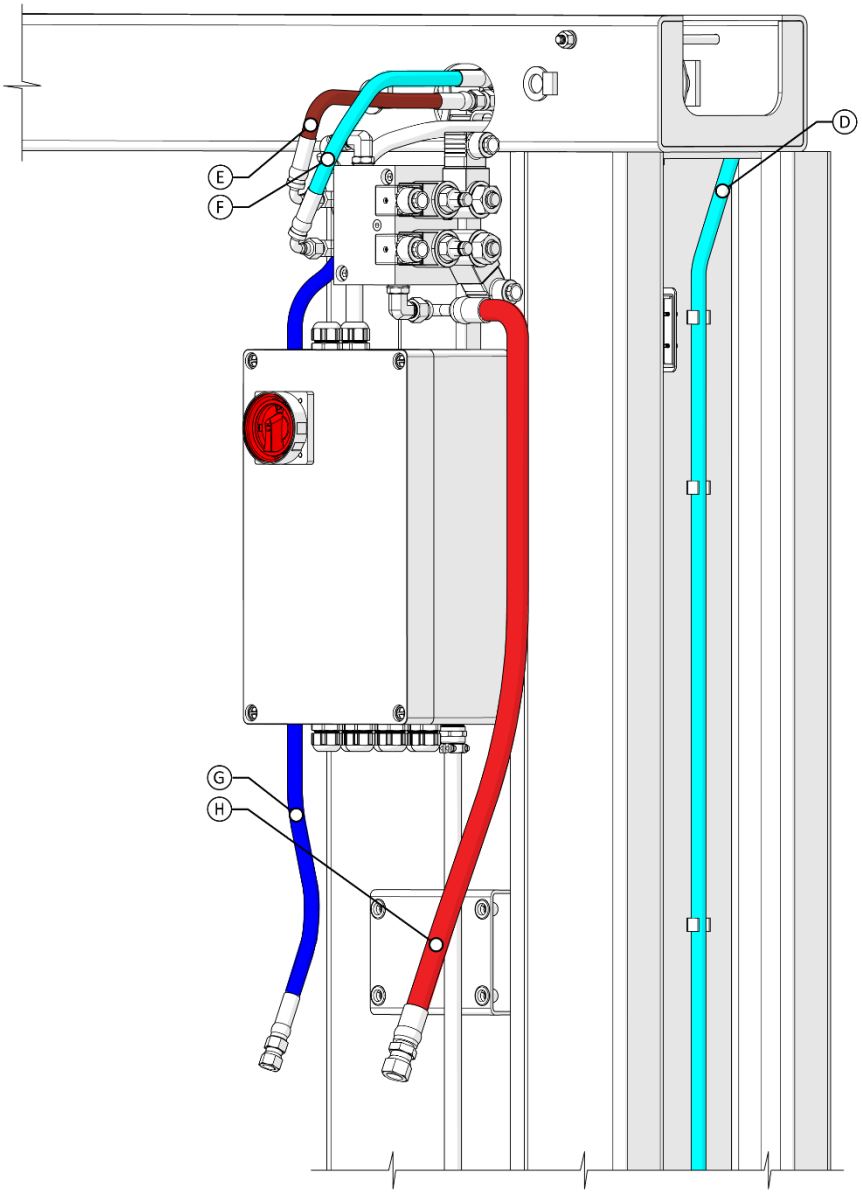
8. Connect the short hydraulic hose (F) between the hydraulic block Port B and the valve block port P2. Refer to the figure below.
9. Connect the hydraulic hose (G) to the valve block port (T). This hose will be connected to the power unit vent/return port T when the power unit is mounted later in the process.



Hose ID	Connects to Hydraulic Block Port	Description	Part Number	Qty.
A	**A**	Hydraulic Hose, primary lift cylinder, off side post Ø6.35 x 7,683 mm	5570591	1
B	**B**	Hydraulic Hose, auxiliary lift cylinder, off side post Ø6.35 x 7,805 mm	5570592	1
C	**A**	Hydraulic Hose, primary lift cylinder, power side post Ø6.35 x 4,514 mm	5570594	1
D	**B**	Hydraulic Hose, auxiliary lift cylinder, power side post Ø6.35 x 4,490 mm	5570593	1

10. Connect the hydraulic hose (G) to the valve block port (P). This hose will be connected to the power unit operating pressure port P1 when the power unit is mounted.

Hose ID	Connects to Hyd. Block Port	Connects to Valve Block Port	Description	Part Number	Qty.
E	**A**	**P1**	Hydraulic Hose, hydraulic block to valve block Ø6.35 x 310 mm	5570595	1
F	**B**	**P2**	Hydraulic Hose, hydraulic block to valve block Ø6.35 x 310 mm	5570595	1
G	Power Unit connection	**T**	Hydraulic Hose, system vent to power unit reservoir Ø6.35 x 915mm	5570805	1
H	Power Unit connection	**P**	Hydraulic Hose, operating pressure from power unit Ø10 x 940mm	5570596	1



12. Hydraulic System Dangers and Warnings

Before applying power to the Hydraulic System, note the following Dangers and Warnings:

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

⚠ **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 maintain the pressure at the desired level. Tampering with, adjusting, modifying, or removing the relief valve is extremely dangerous and is not permitted. Only trained hydraulics technicians are permitted to 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, severe personal injury, or death.

⚠ **DANGER** The hydraulic system can contain high pressure which, if suddenly released, can cause severe injury or death.

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

⚠ **WARNING** Ensure all hydraulic hose connections and fittings, including unused auxiliary port plugs on the power unit, cylinders and anywhere else in the hydraulic system are tightened.

⚠ **WARNING** 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.

⚠ **WARNING** Keep bare hands away from hydraulic fluid; always wear gloves when handling hydraulic fluid, cylinders, or hydraulic hoses.

⚠ **WARNING** When handling hydraulic fluid, always observe the manufacturer's safe handling instructions found in their Safety Data Sheet (SDS).

⚠ **WARNING** **Always** promptly clean any hydraulic fluid spills. If a leak is the source of the spill, lockout the Lift to prevent use until the hydraulic system is repaired.

13. Mount the Power Unit and Fill with Hydraulic Fluid

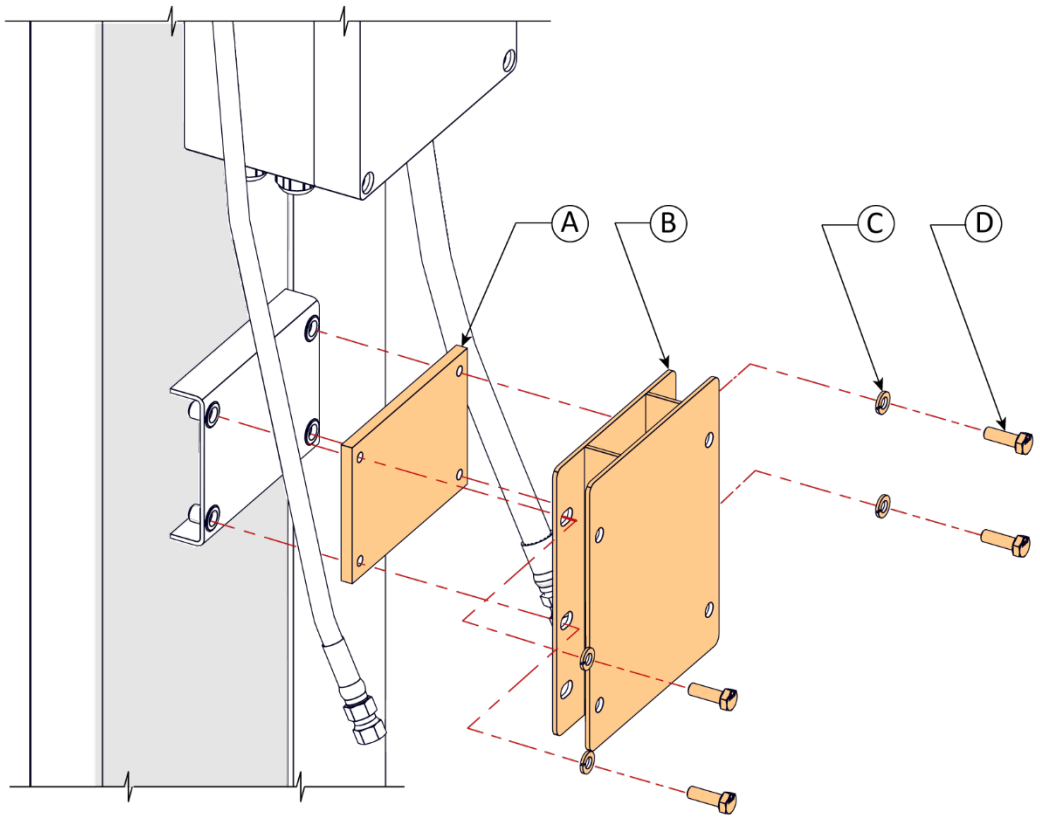
This section describes mounting the power unit to the power side post. An Electrician is not required to ***mount*** the power unit but will be required to ***connect*** the power unit to the control box. Refer to **Connect to Facility Power** for control box termination information.

NOTICE Do not connect the power unit to the facility power at this point in the installation; those connections will be made later.

⚠ **CAUTION** The power unit is top heavy and awkward to handle. Two person lifting is recommended. Proper lifting equipment and personnel experienced in rigging, lifting, and securing heavy equipment are required.

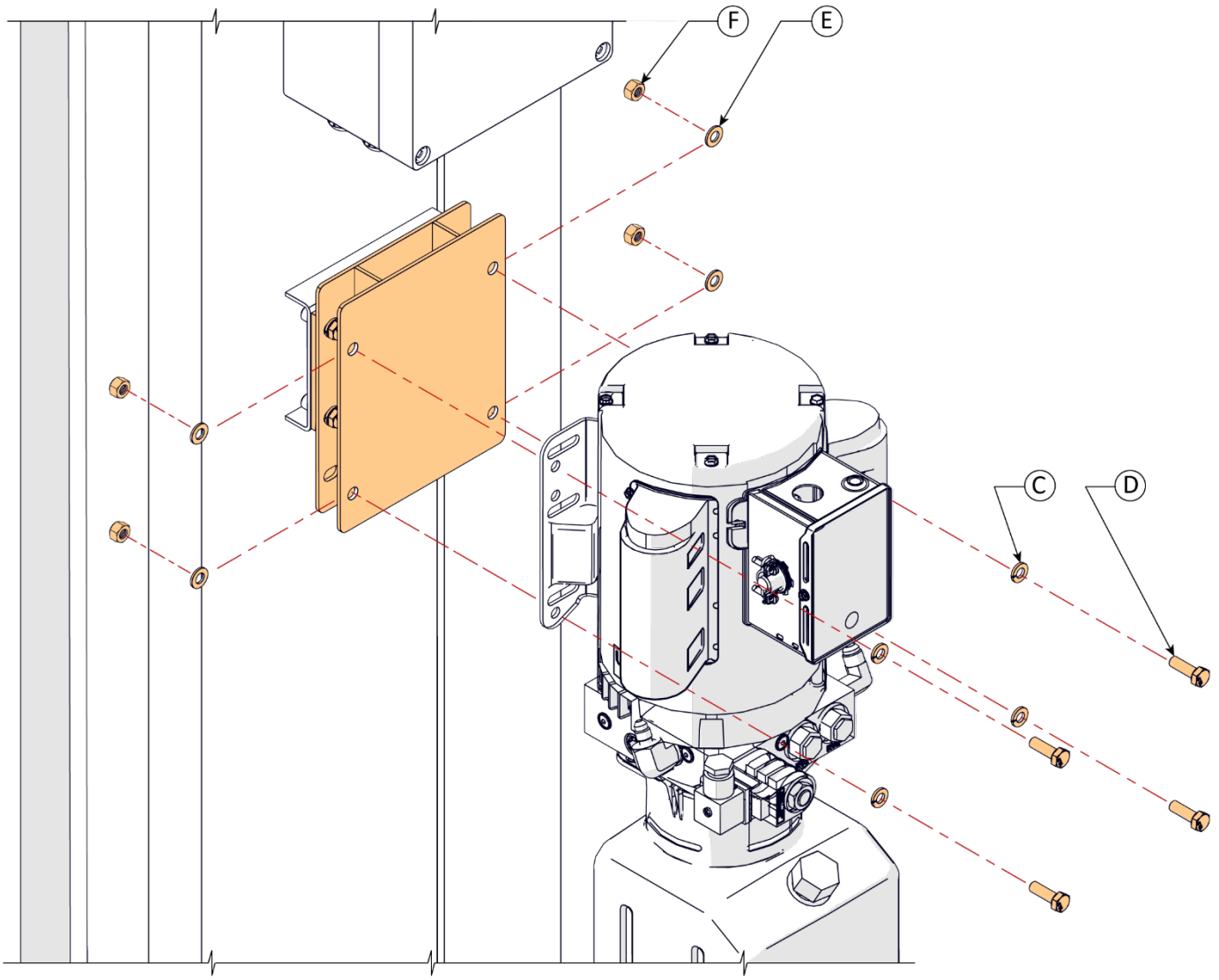
1. Retrieve the vibration dampener (A), M8 fasteners (B, C, D, E, F) and hydraulic fittings (G, H) listed in the table and figures below.
2. Install the vibration dampener (A) and adapter bracket (B) on the power side post using the fasteners and lock washers (C, D). Refer to the illustration and table below.

Item	Description	Part Number	Qty.
A	Vibration Dampener	5715003	1
B	Pwr. Unit Adapter Bracket	5602981	1
C	M8 Lock Washer	5545202	8
D	M8 x 25 Hex Head Bolt	5530010	8
E	M8 x Ø16 Flat Washer	5545012	4
F	M8 Hex Nut	5535001	4



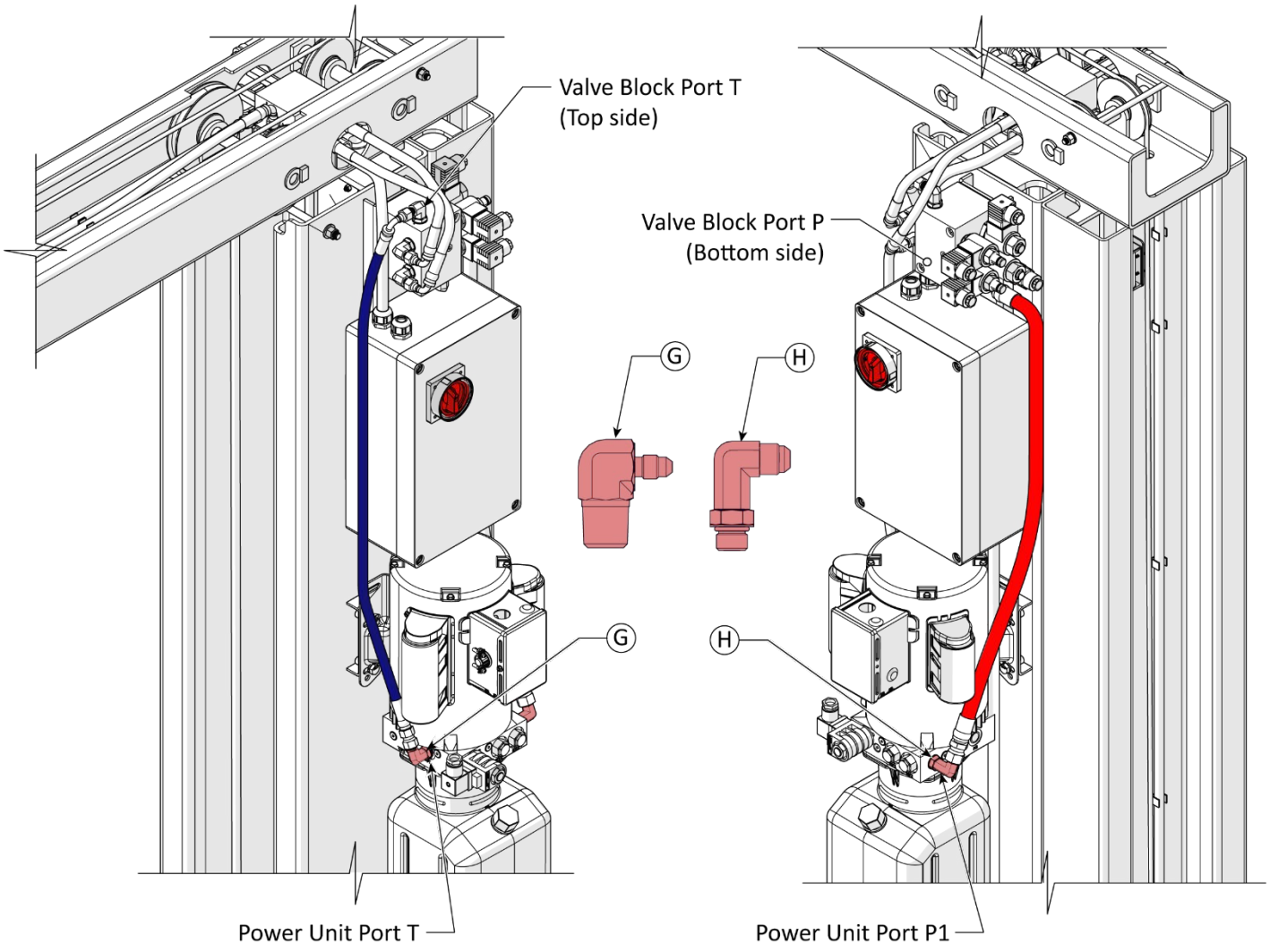
3. Remove the power unit from its packaging material.
4. Lift the power unit up to the power unit mounting bracket just below the control box.
5. Secure the power unit to the adapter bracket using the fasteners listed below. Use all four bolts to secure the power unit. Refer to the figure and table below.

Item	Description	Part Number	Qty.
A	Vibration Dampener	5715003	1
B	Pwr. Unit Adapter Bracket	5602981	1
C	M8 Lock Washer	5545202	8
D	M8 x 25 Hex Head Bolt	5530010	8
E	M8 x Ø16 Flat Washer	5545012	4
F	M8 Hex Nut	5535001	4
G	Elbow fitting -06JIC -06LORB Connect to Power Unit Port P1	5550183	1
H	Elbow fitting -04JIC -08NPT Connect to Power Unit Port T	5550379	1



6. Retrieve the 06JIC -06LORB long hydraulic elbow fitting (H).
7. Apply a few drops of hydraulic fluid or silicone O-ring lubricant to the O-ring.
8. Install the fitting into the power unit P1 port. Refer to the figure below.
9. Connect the hose from the valve block port P to the power unit port P1 on the long JIC elbow fitting just installed.
10. Retrieve the -04 JIC-08NPT hydraulic elbow (G).
11. Apply thread sealant to the fitting NPT threads.
12. Install the fitting into the power unit return port marked T.
13. Connect the hose from the valve block port T to the power unit port T on the JIC elbow fitting (G) just installed. Refer to the figure below.
14. Fill the power unit reservoir with any general-purpose ISO-32, ISO-46, or ISO-68 hydraulic oil ≈3.5 gal. (13 L)

Item	Description	Part Number	Qty.
G	Elbow fitting -04JIC -08NPT Connect to Power Unit Port T	5550183	1
H	Elbow fitting -06JIC -06LORB Connect to Power Unit Port P1	5550379	1

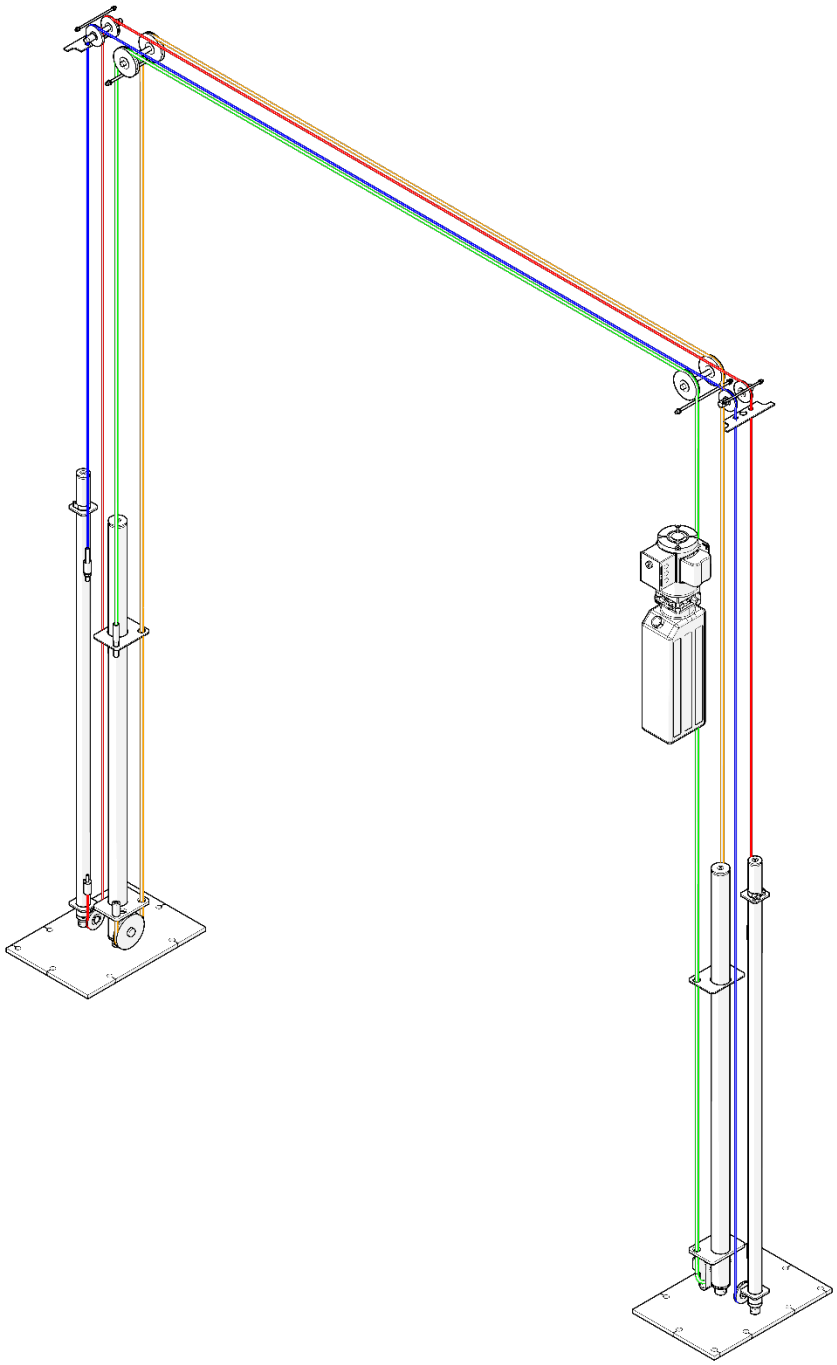


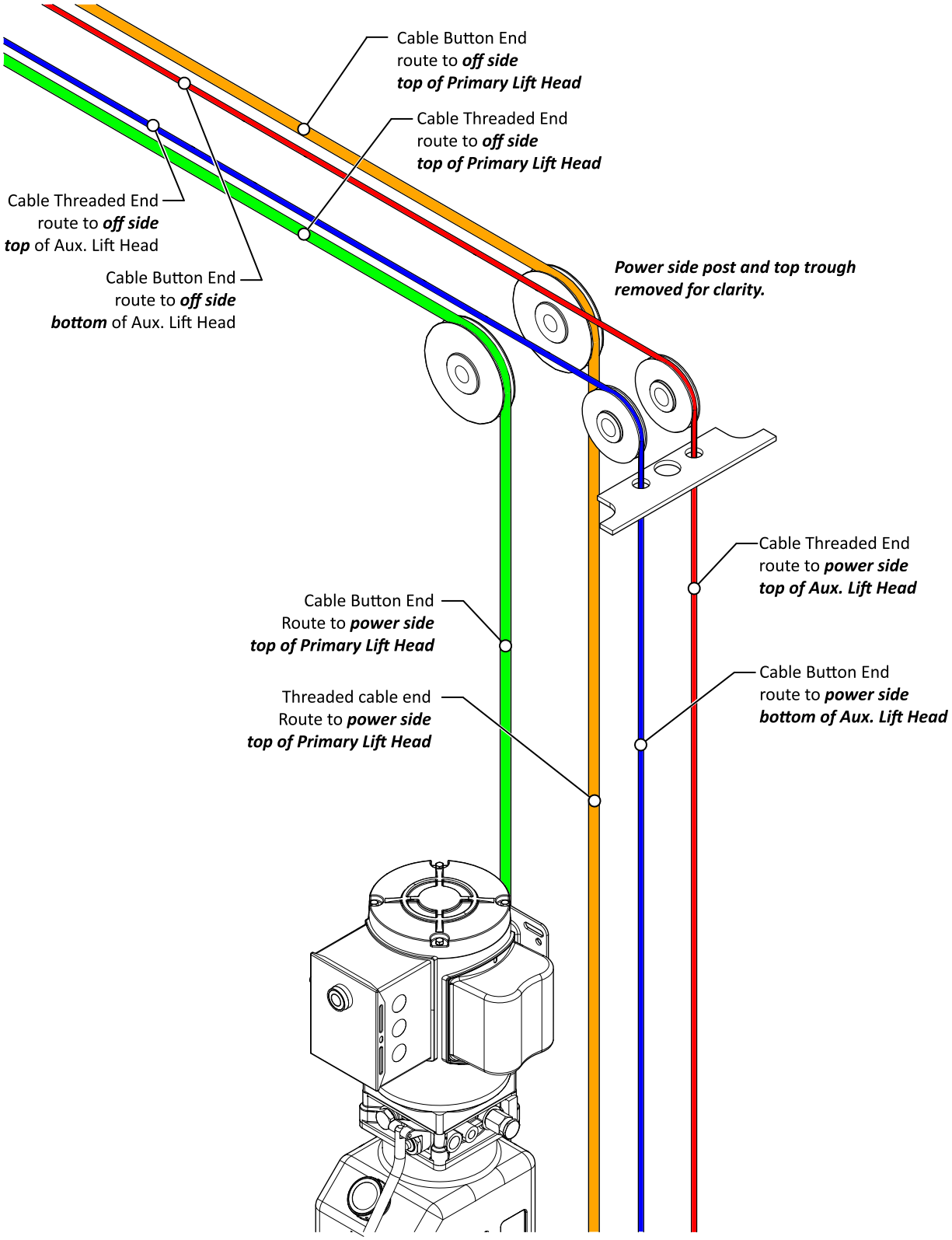
14. Route the Equalizing Cables

The Equalizing Cables ensure the lift heads move together and prevent an imbalance between the two sides of the Lift. Each equalizing cable is connected at the top of one lift head by a threaded connection and the bottom of its opposite lift head by a swaged button that is locked into a retainer. Two equalizing cables are required for both the primary and auxiliary lift heads.

The Lift is delivered with the equalizing cables attached at the button end inside the lift heads and the balance of the cable coiled in the lift posts. All that remains is to route the cables around their sheaves, across the top trough and down the opposite lift post to be secured at the opposite lift head.

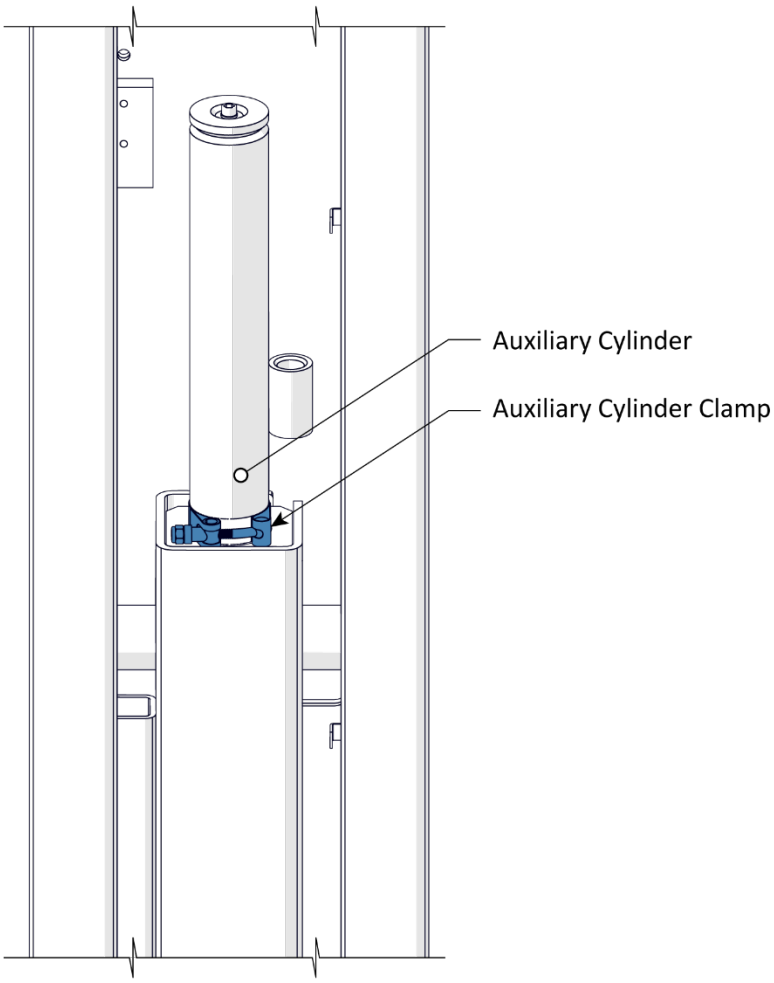
When equalizing cables are fully routed, they are mirror images of each other. Refer to the figure below. Components have been removed to clarify the routing.

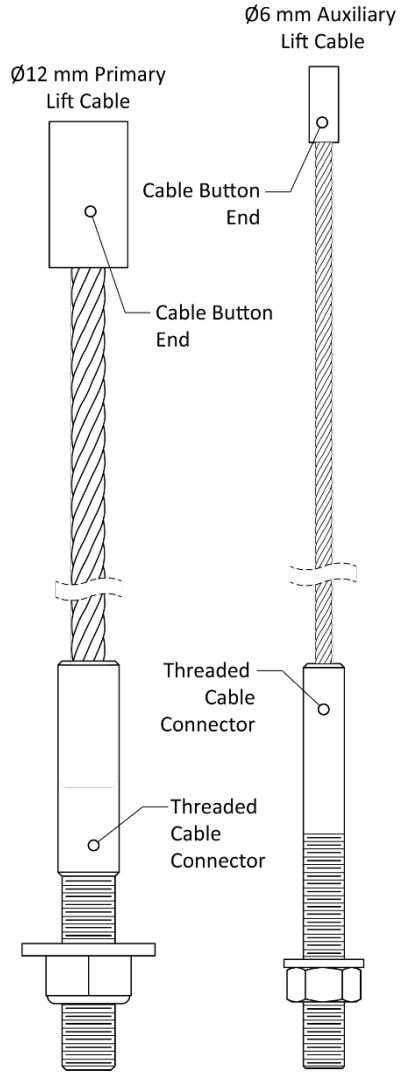



Cable Button End
route to **off side**
top of Primary Lift Head
Cable Threaded End
route to **off side**
top of Primary Lift Head
Cable Threaded End
route to **off side**
top of Aux. Lift Head
Cable Button End
route to **off side**
bottom of Aux. Lift Head
Power side post and top trough removed for clarity.
Cable Threaded End
route to **power side**
top of Aux. Lift Head
Cable Button End
Route to **power side**
top of Primary Lift Head
Cable Button End
route to **power side**
bottom of Aux. Lift Head
Threaded cable end
Route to **power side**
top of Primary Lift Head

Equalizing Cable Connections at the Lift Post

1. Loosen, then remove and retain the cylinder clamp at the top of both auxiliary lift cylinders. Refer to the figure below.

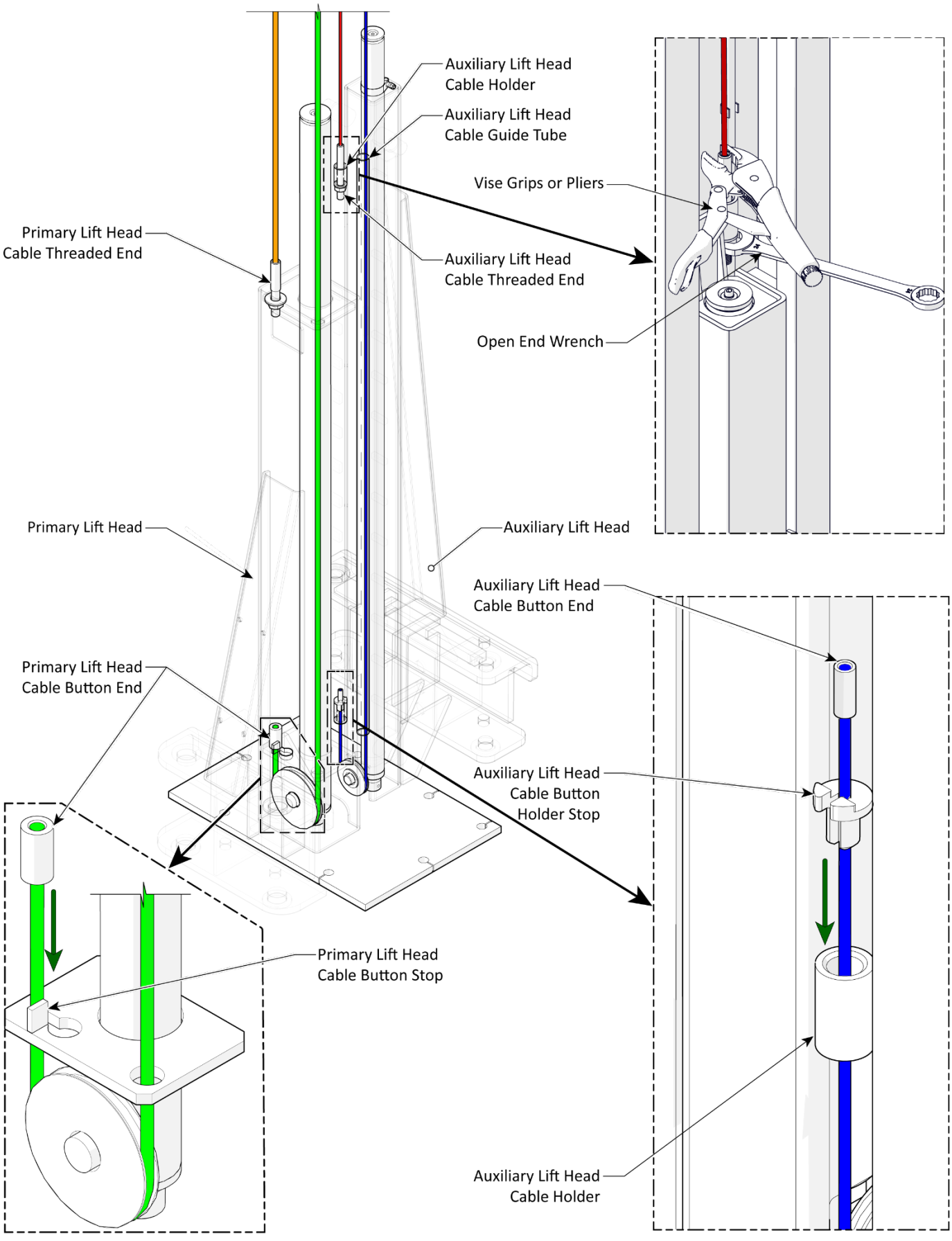




2. Using a forklift or hoist, lift the auxiliary lift head up approximately one foot (305 mm). The cylinder should still be visible at the top of the auxiliary lift head.

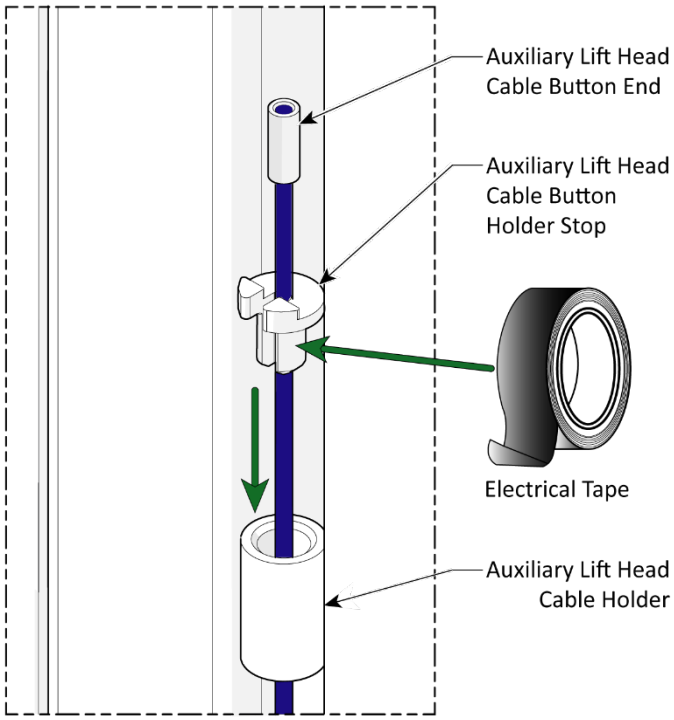
⚠ **WARNING** **Always** support the lift head with a forklift or safety stands to prevent injury.

3. Remove the M16 nut and washer from the threaded cable connector on the auxiliary equalizing cable.
4. Route the auxiliary equalizing cable's threaded connector as shown on the previous diagrams.
5. Insert the threaded connector end into the cable holder on the top of the auxiliary lift head as shown on the next page.
6. Grasp the top of the threaded cable connector with a vise grip and tighten the hex nut with an open end wrench.
7. Lower the auxiliary lift head and repeat steps 1 through 6 on the remaining auxiliary lift head and equalizing cable.


Auxiliary Lift Head
Cable Holder
Auxiliary Lift Head
Cable Guide Tube
Vise Grips or Pliers
Primary Lift Head
Cable Threaded End
Auxiliary Lift Head
Cable Threaded End
Open End Wrench
Primary Lift Head
Auxiliary Lift Head
Auxiliary Lift Head
Cable Button End
Primary Lift Head
Cable Button End
Auxiliary Lift Head
Cable Button
Holder Stop
Primary Lift Head
Cable Button Stop
Auxiliary Lift Head
Cable Holder

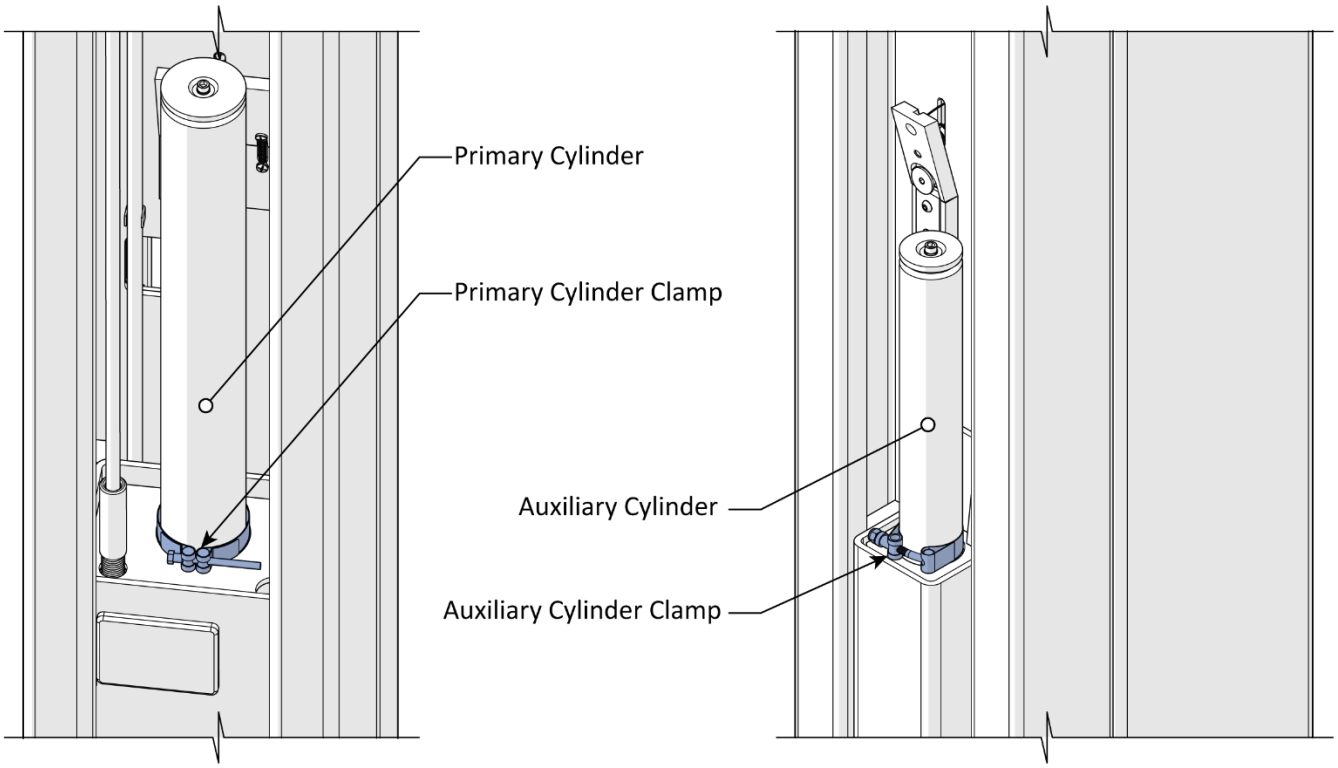
Tip The OctaFlex Auxiliary Cable Button End is installed prior to delivery. If the cable button becomes dislodged during shipment:

1. Raise the lift head with a forklift and retrieve the cable button holder stop.
2. Push the cable up the lift post until visible above the lift head.
3. Replace the button holder stop on the cable.
4. Use electrical tape to wrap around the cable button holder stop and secure the holder on the cable.
5. Pull the cable down the lift post until it engages with the auxiliary cable holder.



15. Secure the Cylinder Clamps

⚠ WARNING Verify the cylinder clamps are positioned on ***all four cylinders*** at the top of the primary and auxiliary lift heads and secured to the cylinders. ***Do not operate the Lift if the cylinder clamps are not secured on all four hydraulic cylinders!***



16. Install the Primary and Auxiliary Lift Arms

The Lift Arms contact the vehicle or component assemblies at their lift points to raise them off the ground. The OctaFlex Lift provides four primary and four auxiliary lift arms.

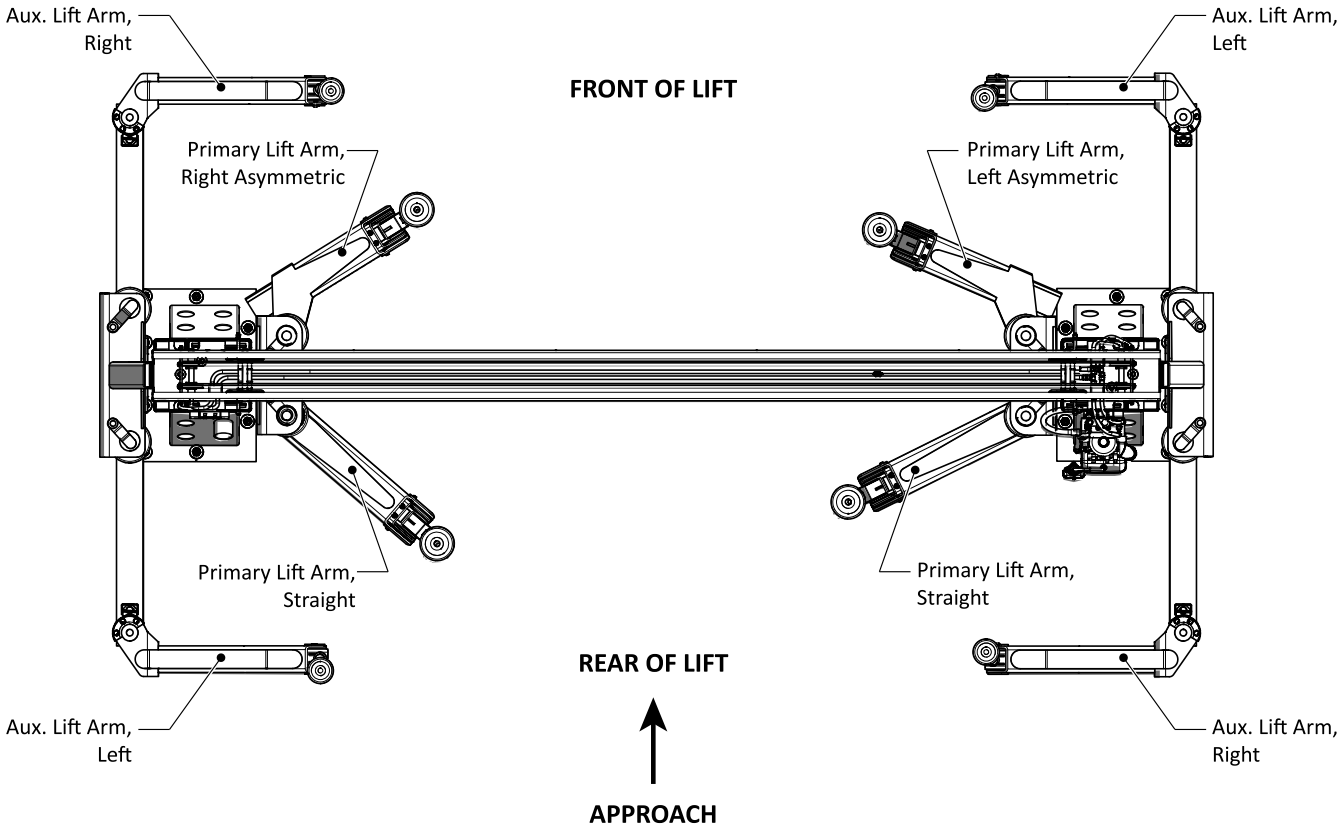
16a. Install the Primary Lift Arms

Install the primary lift arms as indicated in the following instructions and figures. Begin by determining the front and rear of the lift.

i. **If the vehicle can only be driven into the lift from one direction,** the approach side is the rear, the opposite side is the front of the lift as in the figure below.

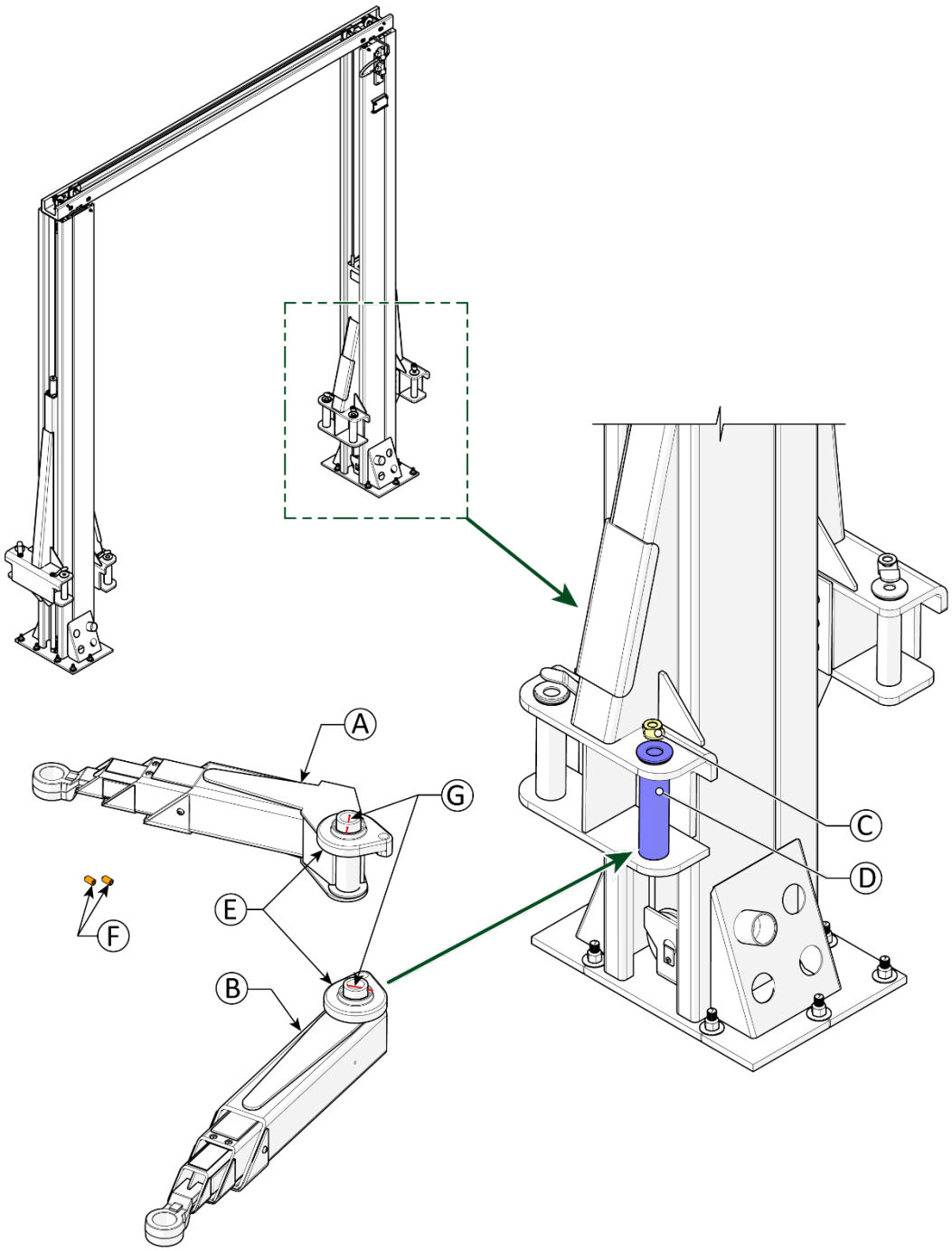
ii. **If the vehicle may be driven into the lift from either direction,** Choose one side as the front and the other side as the rear. Also, consider the ease of backing out of from the chosen approach.

Important Note the asymmetric primary lift arms and all four of the auxiliary lift arms are identified as left and right. To determine left and right, stand between the two posts, then turn to face one lift post. From this viewpoint, the right-hand side of the post accepts the right lift arms, and the left-hand side of the post accepts the left arms.



Primary Lift Arm Installation – Component Identification:

Item	Description	Part Number	Qty.
A	Asymmetrical Arm, Triple Telescoping, Left	5216197	1
	Asymmetrical Arm, Triple Telescoping, Right	5216198	1
B	Long Arm, Triple Telescoping	5216203	2
C	Arm Lock Guide Rod	5602030	4
D	Arm Lock Pin	5601910	4
E	Full Circle Gear Stop	5701954	4
F	Set Screw M6 x 1 x 12mm NL	5530551	12
G	Bent Clevis Pin	5505086	4

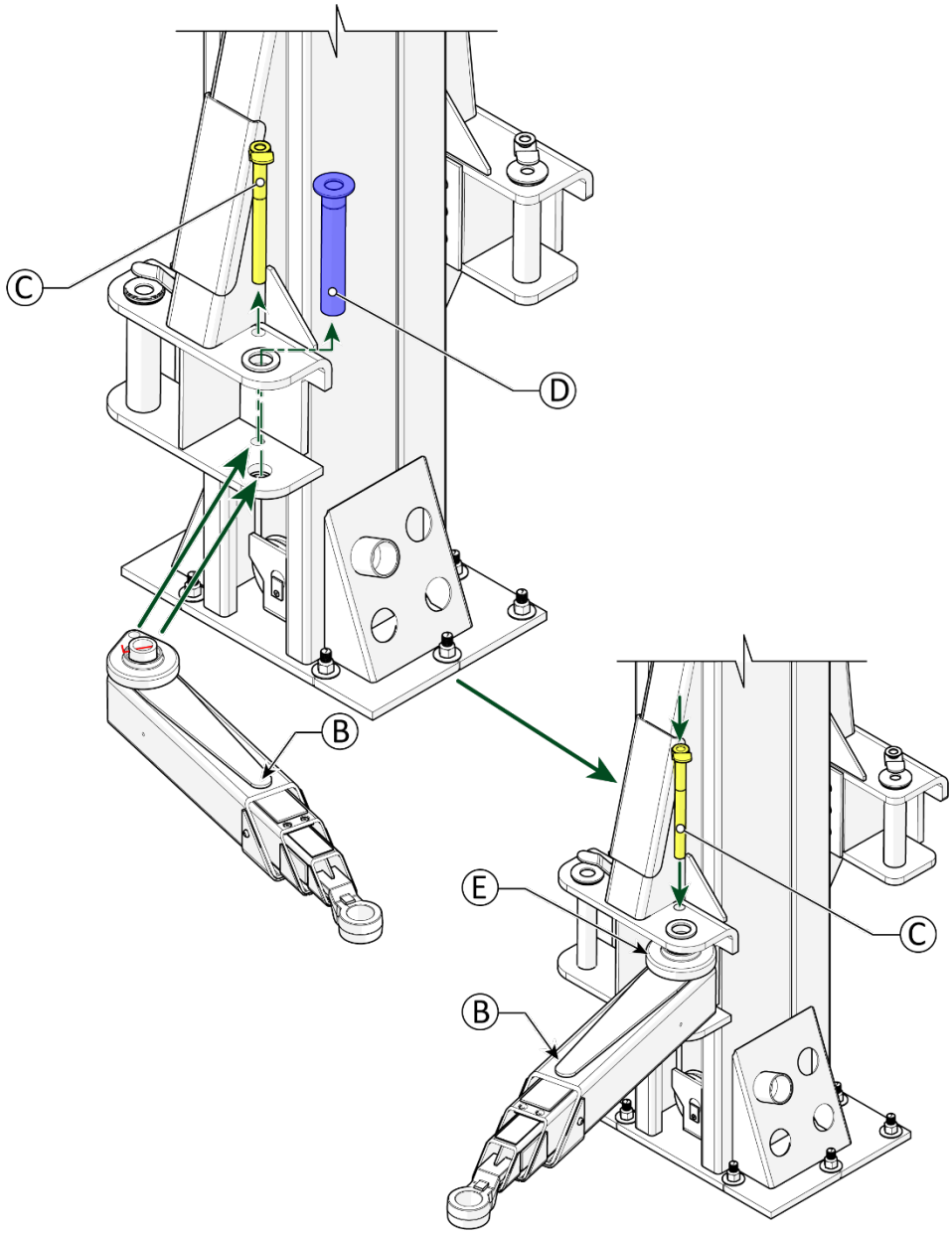


Install the Primary Lift Arms in the Lift Head:

1. Using a Forklift or Shop Crane, raise the primary lift heads to the first locking position.

   ⚠ **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.

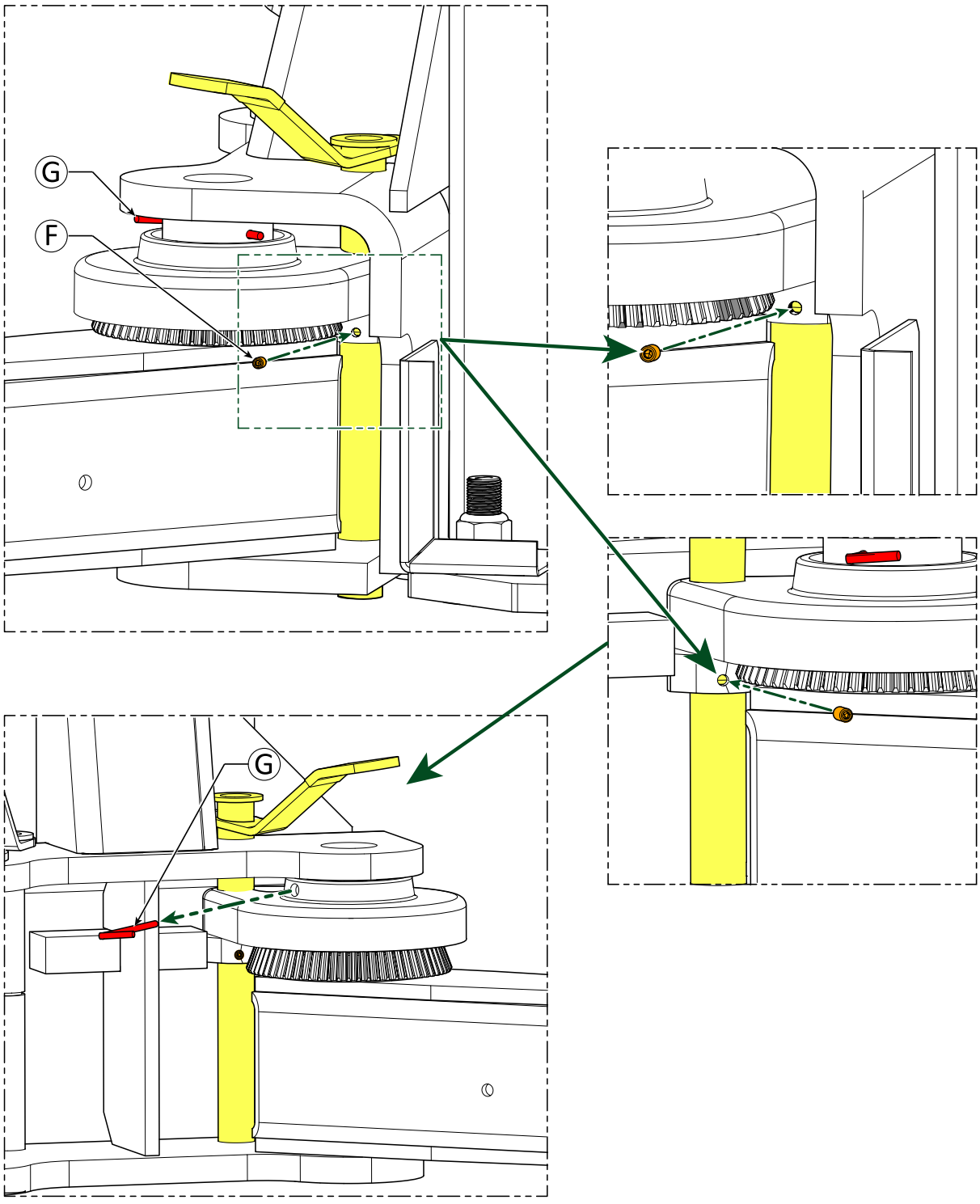
2. Retrieve the primary lift arms and move them near their intended installation locations.
3. Remove the arm lock guide rod and handle (C).
4. Remove the arm lock pin (D).
5. Insert the long arm (B) with full circle gear stop (E). Position the arm and full circle stop gear to mate with the arm lock guide rod and arm lock pin as shown below.
6. Re-insert the arm lock guide rod (C).



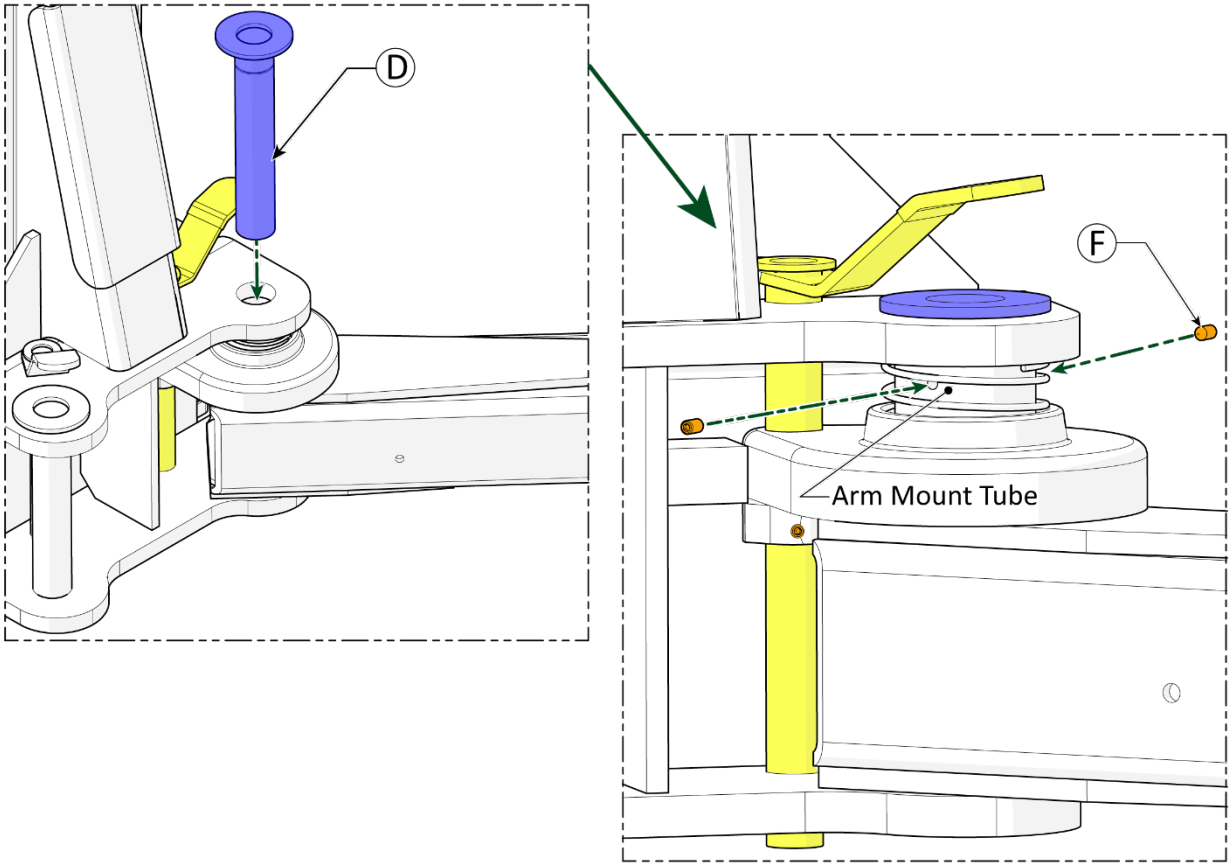
1. Insert the two M6 set screws to lock the full circle stop gear onto the arm lock guide rod (C). Ensure the set screws engage the groove cut into the arm guide rod.
2. Secure the set screws with drop of removable thread lock (similar or equal to Loctite® 242).

⚠ CAUTION Keep fingers clear of pinch points. Removing the bent clevis pin in the next step will release a compression spring forcing the full circle stop gear upwards.

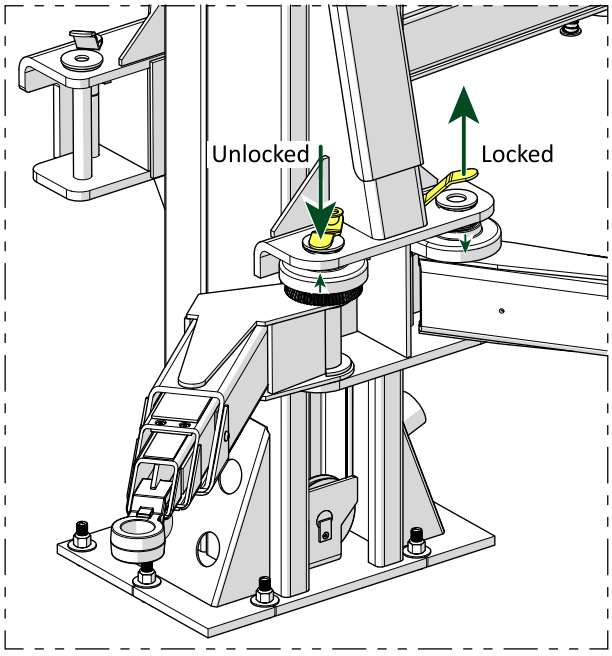
3. Remove the bent clevis pin (G).



7. Insert the arm lock pin (D) into the lift head, through the full circle stop gear and the lift arm mount tube. It may be necessary to rock the arm to assist the pin through.
8. Secure the lock arm pin using two M6 set screws. Ensure the set screws engage the groove cut into the arm lock pin.
9. Secure the set screws using a drop of removable thread lock (similar or equal to Loctite® 242).



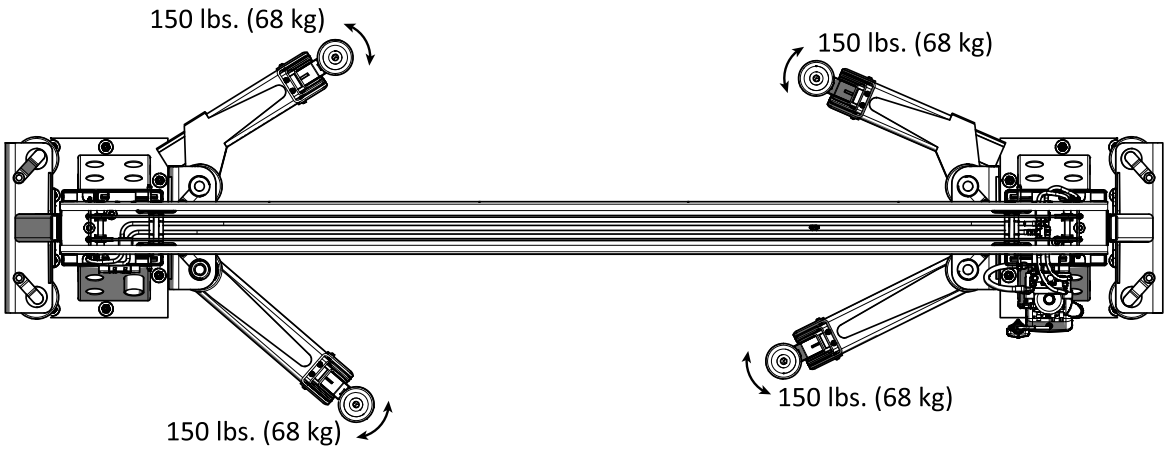
10. Repeat Steps 1 – 12 for the three remaining primary lift arms.
11. Inspect the primary lift arms Automatic Swing Arm Restraint System (ASARS) for proper function.
    a. To unlock the lift arm, push down on the arm lock guide rod handle.
    b. To lock the lift arm, pull up on the arm lock guide rod handle.



To Unlock the Primary Lift Arms, push down on the arm lock guide rod handle.

To Lock the primary lift arms, pull up on the arm lock guide rod handle.

⚠ WARNING Ensure that the arm restraint gears and the gear stops are meshing and remain in place when up to 150 pounds of lateral force is applied before putting the Lift into normal operation.

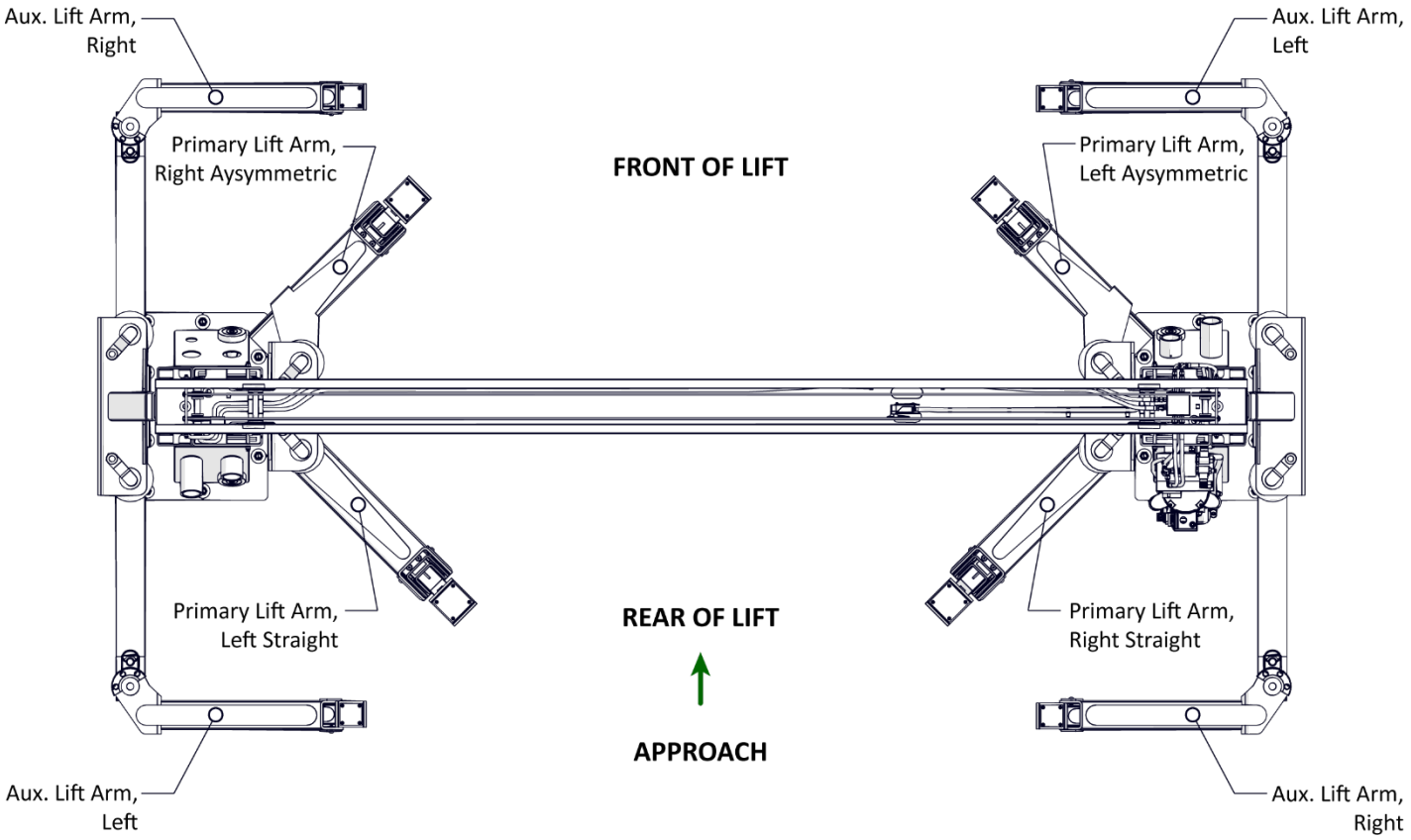


⚠ DANGER Each lift arm assembly **must** be inspected and adjusted as required before each use. Do not operate the Lift if any of the four lift arm restraint systems are not functioning correctly. Replace any damaged components with approved replacement parts only.

16b. Install the Auxiliary Lift Arms

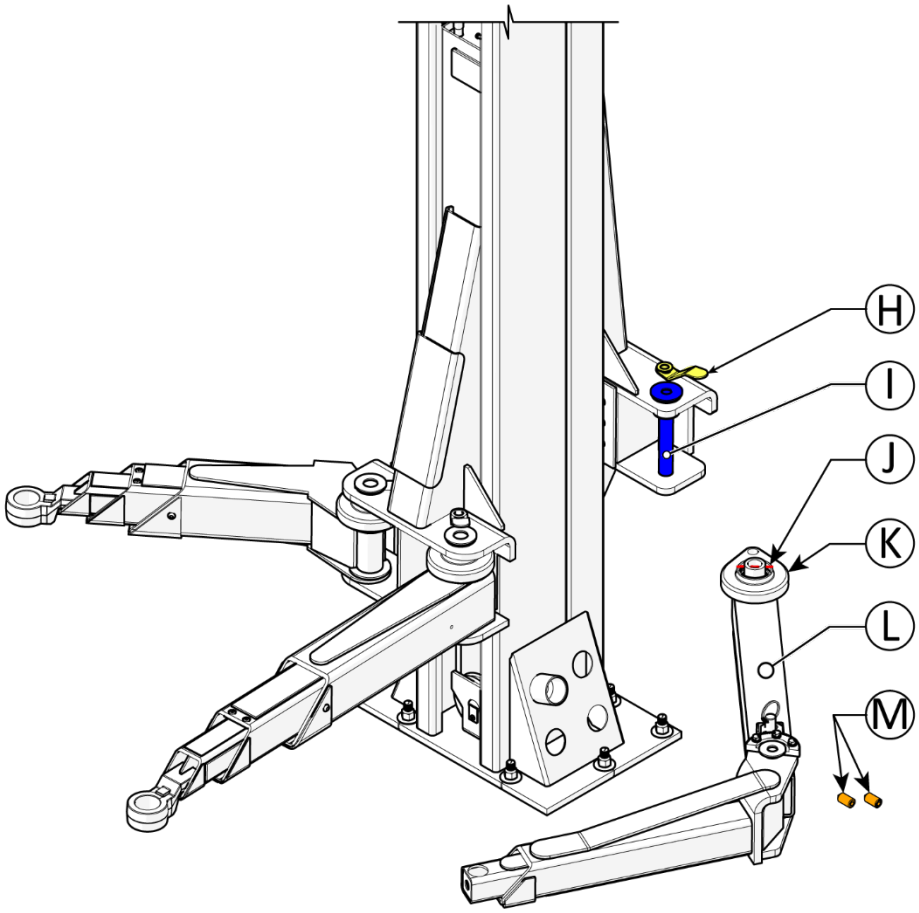
Install the auxiliary lift arms as indicated in the following instructions and figures.

Important Note the auxiliary lift arms are identified as left and right. To determine left and right, stand between the two posts, then turn to face one of them straight on. From this viewpoint, the right-hand side of the post accepts the right lift arms, and the left-hand side of the post accepts the left arms. Review the figure below.



Auxiliary Lift Arm Installation – Component Identification:

Item	Description	Part Number	Qty.
H	Aux. Arm Lock Guide Rod	5602187	4
I	Aux. Arm Lock Pin	5602178	2
J	Bent Clevis Pin	5505086	4
K	Full Circle Gear Stop	5701954	4
L	OctaFlex Auxiliary Arm, Right	5216393	2
M	Set Screw M6 x 1 x 12mm NL	5530551	8

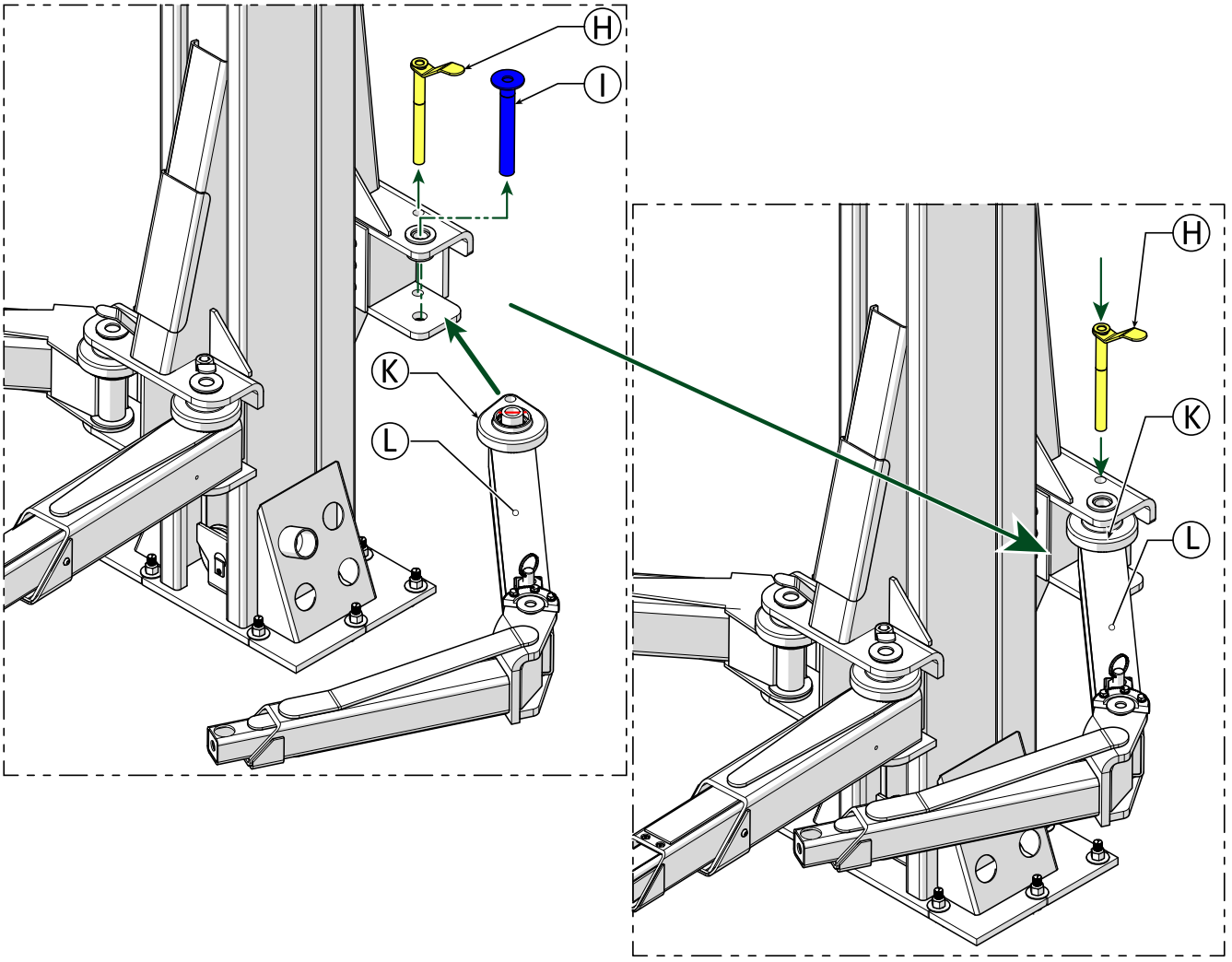


Install the Auxiliary Lift Arms in the Lift Head:

1. Using a Forklift or Shop Crane, raise the auxiliary lift heads to the first locking position.

⚠ **CAUTION** The lift heads and lift arms are heavy. Exercise caution when raising the lift head to the first locking position using a Forklift or Shop Crane.

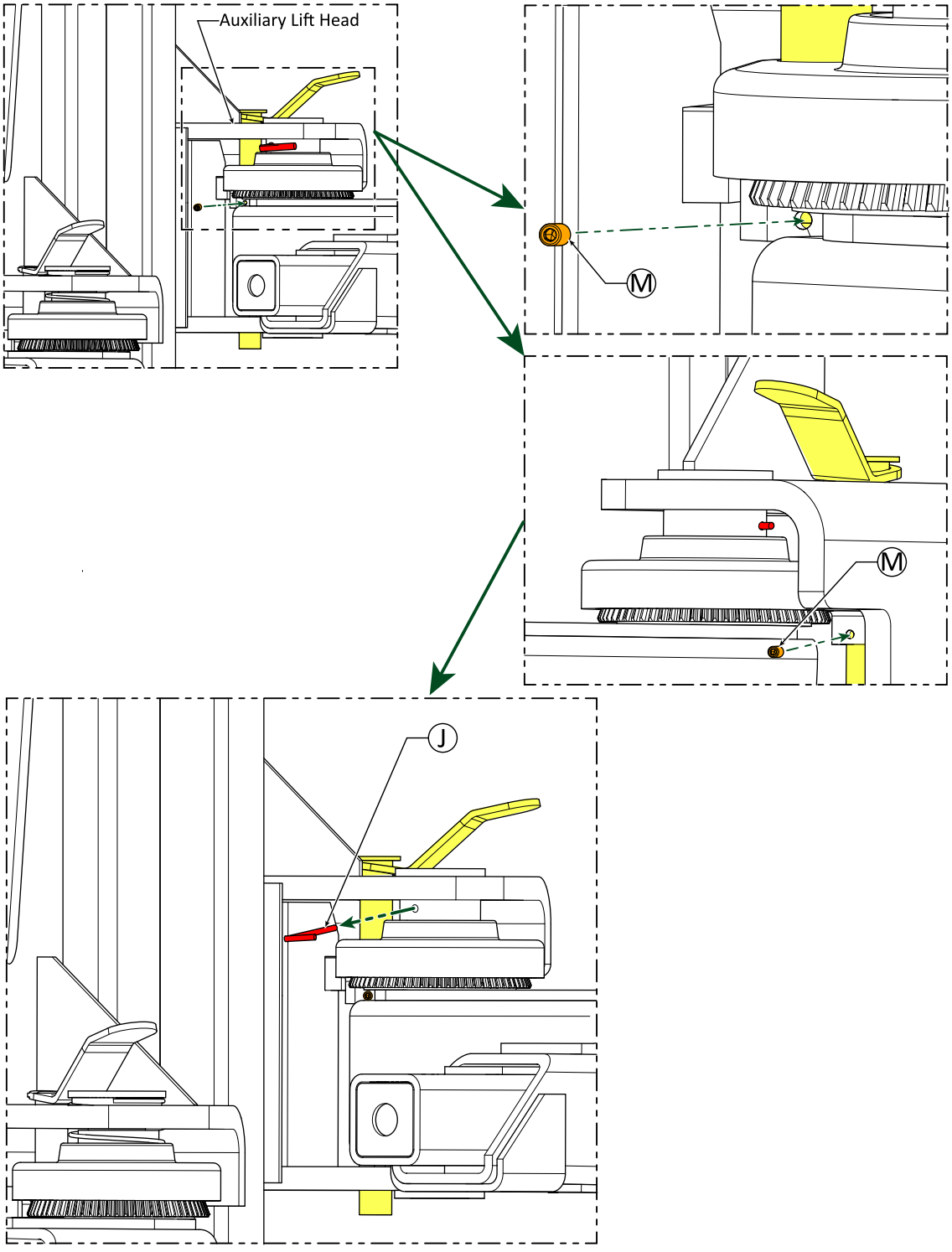
2. Retrieve the auxiliary lift arms and move them near their intended installation locations.
3. Remove the arm lock guide rod and handle (H).
4. Remove the arm lock pin (I).
5. Insert the auxiliary lift arm (L) with full circle gear stop (J). Position the arm and stop gear to mate with the arm lock guide rod (H) and the arm lock pin (I).
6. Re-insert the arm lock guide rod and handle (H).



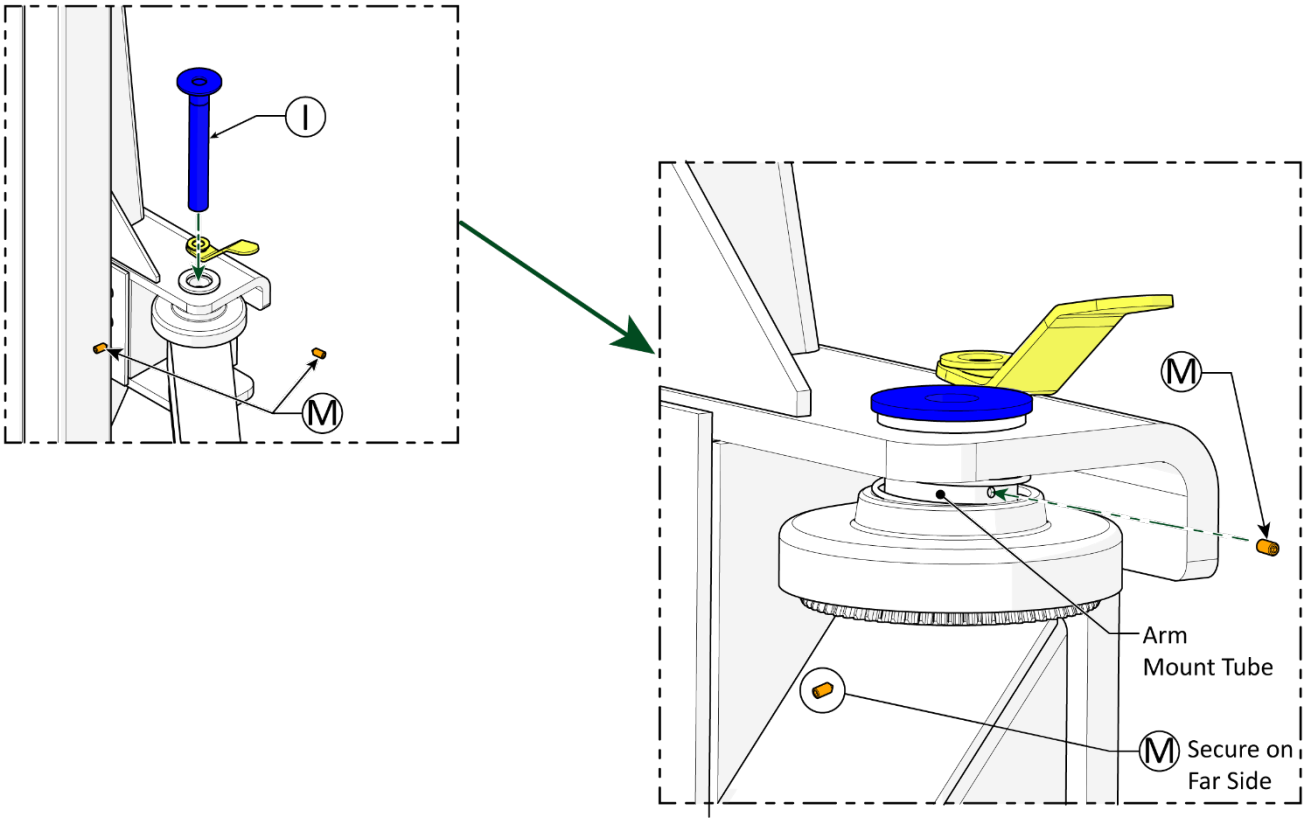
7. Insert the two M6 set screws to lock the full circle stop gear onto the aux. arm lock guide rod (H). Ensure the set screws engage the groove cut into the aux. arm guide rod.
8. Secure the set screws with drop of removable thread lock (similar or equal to Loctite® 242).

⚠ **CAUTION** Keep fingers clear of pinch points. Removing the bent clevis pin in the next step will release a compression spring forcing the full circle stop gear down.

9. Remove the bent clevis pin (J).



1. Insert the arm lock pin (I) 5602178 into the lift head, through the full circle stop gear and the lift arm mount tube. It may be necessary to rock the arm to assist the pin through.
2. Secure the lock arm pin using two M6 set screws. Ensure the set screws engage the groove cut into the arm lock pin.
3. Secure the set screws using a drop of removable thread lock (similar or equal to Loctite® 242).



4. Repeat Steps 1 – 12 for the three remaining auxiliary lift arms.

⚠ WARNING Before putting the Lift into normal operation, ensure that the auxiliary arm restraint gears and the gear stops are meshing and remain in place when up to 150 pounds of lateral force is applied.

⚠ DANGER Each auxiliary 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 only.

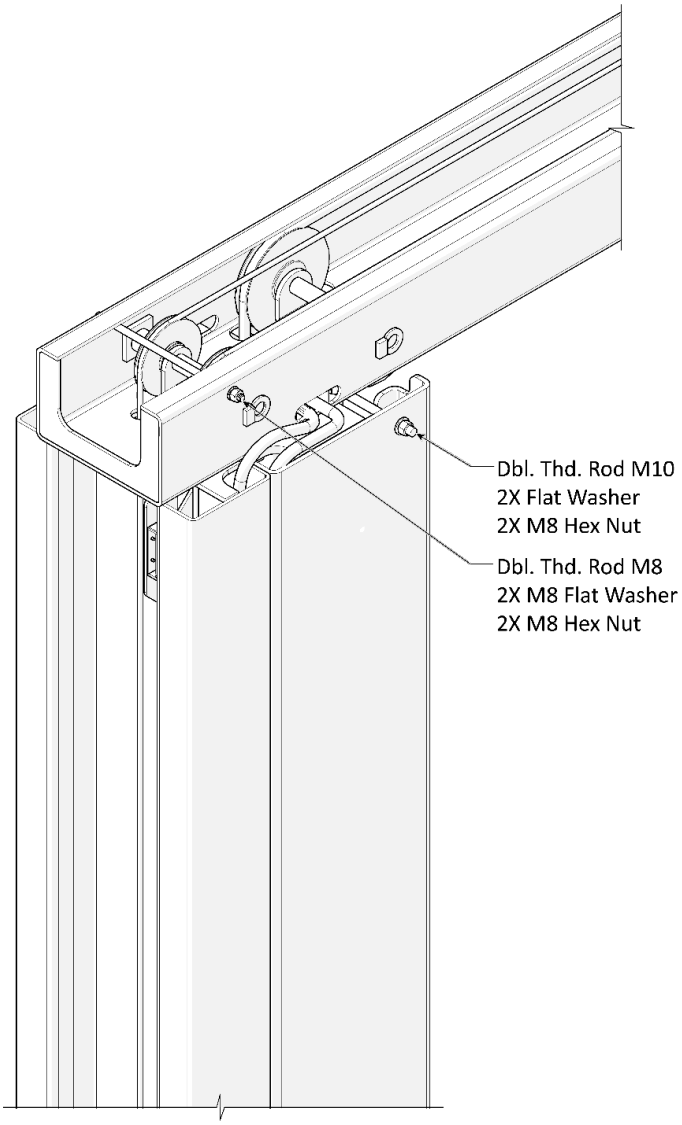
17. Install Four Double Threaded Rods

Two M10 double threaded rods *(5530515)* must be installed at the top of ***each*** lift post using two M10 flat washers *(5545341)* and M10 hex nuts *(5535013)*. Torque the Hex Nuts to 2-3 ft. lb.

Another set of two M8 double threaded rods *(5530514)* are delivered installed. Ensure these rods are installed and secured at each end of the top trough using two M8 flat washers *(5545012)* and M8 hex nuts *(5535001)*. Torque the Hex Nuts to 2-3 ft. lb.

Description	Part Number	Qty.
Dbl. Threaded Rod M10 x 310 mm	5530515	2
M10 Flat Washer	5545341	4
M10 Hex Nut	5535013	4
Dbl. Threaded Rod M8 x 220 mm	5530514	2
M8 Flat Washer	5545012	4
M8 Hex Nut	5535001	4

⚠ WARNING All four double threaded rods must be installed to ensure proper operation of the Lift.



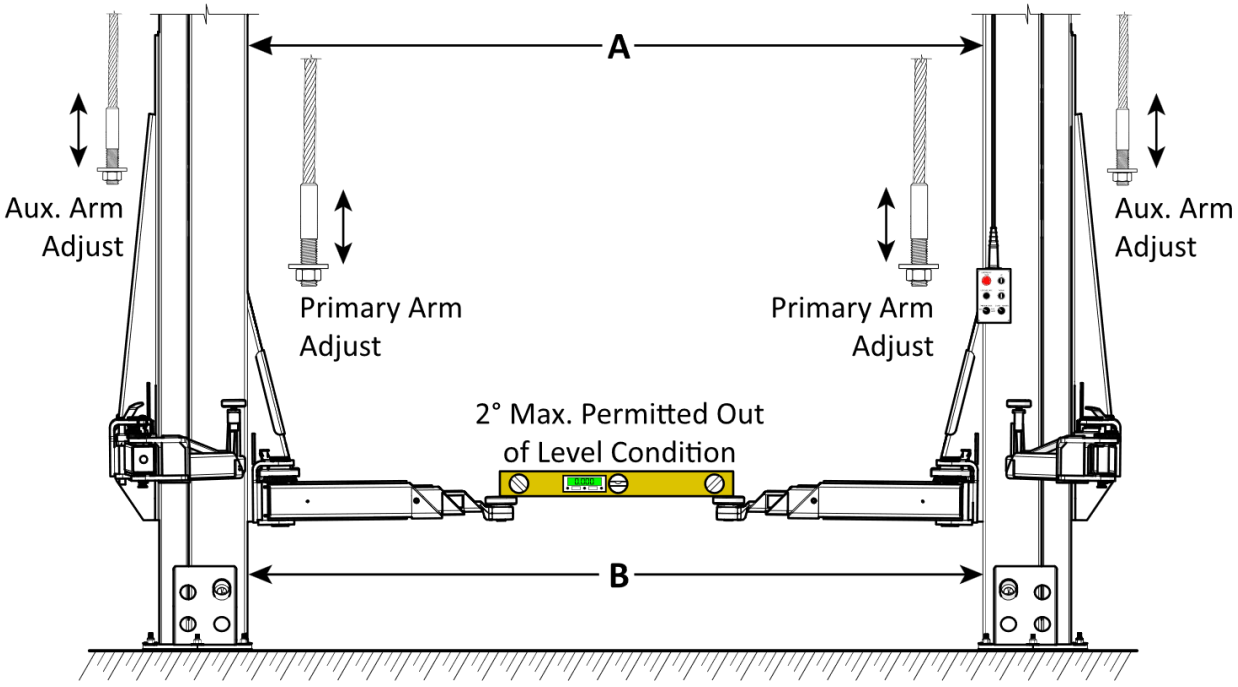
18. Leveling

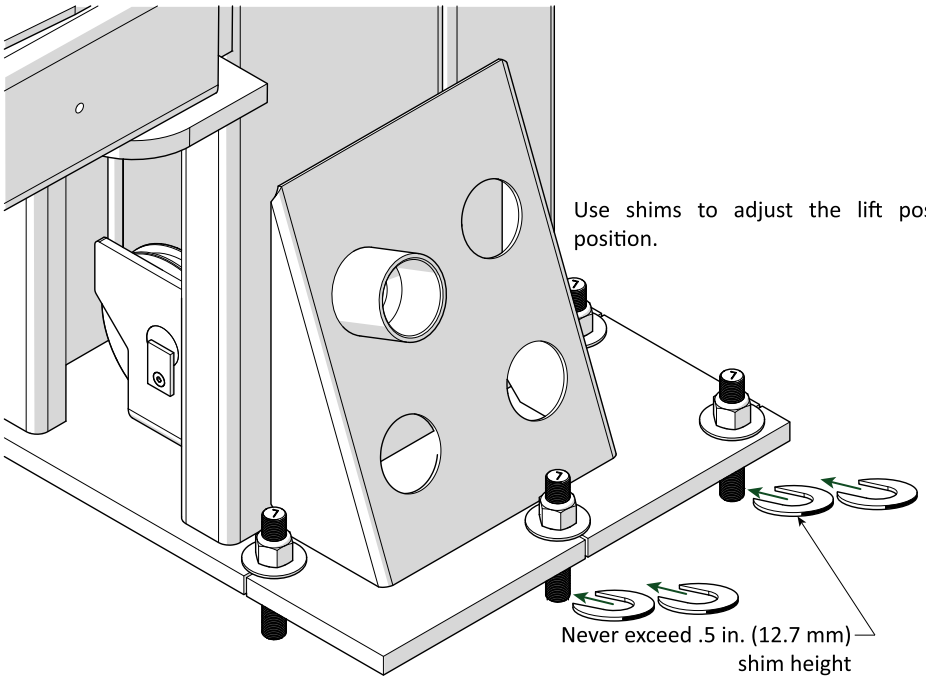
Before operating this Lift, ensure the posts are parallel to each other, and that the lift arms are even:

Lift Posts: The two lift posts ***must*** be parallel to each other.

To adjust the lift posts:

1. Measure the distance between the two posts six inches below the top trough assembly and one foot off the ground. The two measurements (**A** and **B** in the figures below) must be equal.
2. If the measurements are not equal, shim as required at the anchor bolts. Never exceed .5 in. (12.7 mm) shim height.





⚠ **DANGER** Lift posts that are not straight and parallel or lift arms that are not even with each other present a safety risk. Vehicles placed on the Lift will be less secure; they could fall and cause severe injuries to personnel or damage to the vehicle, and/or the Lift.

NOTICE Ensure the anchors have been torqued to (85 – 95 ft lb.) after ensuring the posts are parallel.

NOTICE A crowfoot open end wrench and ratchet will make adjusting the auxiliary equalizing cables much easier.

Lift Arms: When the lift posts are parallel, ensure the lift arms are even with each other.

- **Lift Arms**: When the Lift posts are parallel, verify the lift arms are even with one another at the contact pads. To ensure they are even, raise them to the first locking position and put a ruler across the pads.
- **Adjust the equalizing cables to remove slack**. Access the equalizing cables adjustment at the top of the lift heads. Adjust the hex nut on the threaded end of the equalizing cable until the cables are without slack. Raise the Lift and listen for the lift heads' stop blocks striking the safety locks (there is a distinct thump). The thumps from each post should be nearly simultaneous.

19. Control Box Terminal Connections

⚠DANGER All electrical work ***must*** be performed by a licensed Electrician. Verify electrical work conforms to all applicable local and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.

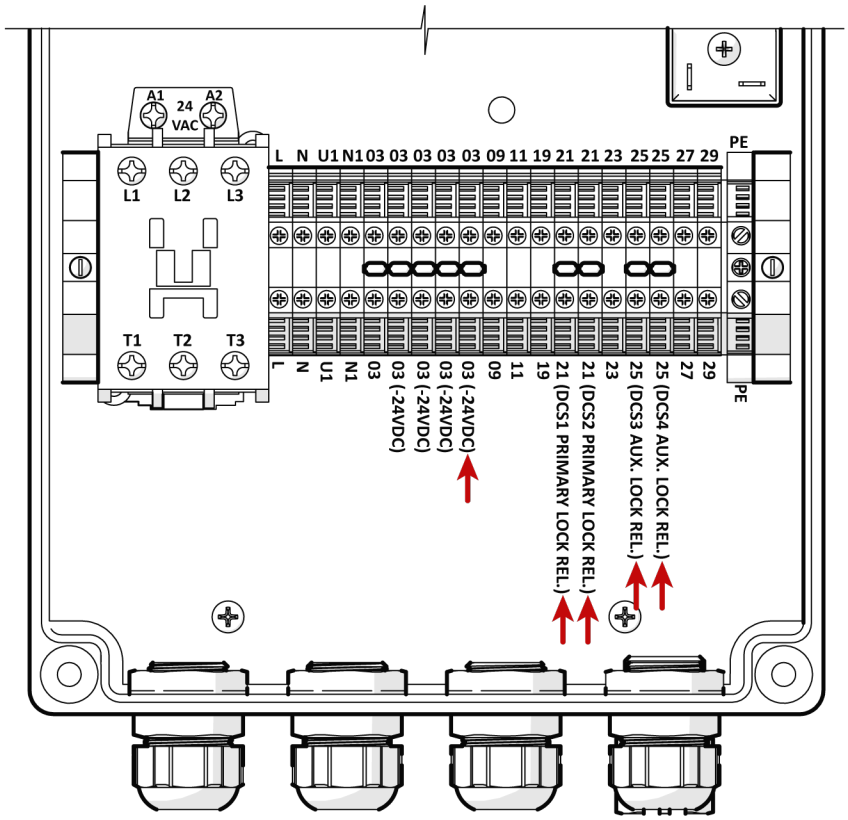
The control box houses the electrical components, controls, and connections for the Lift. This section covers electrically connecting:

- The primary and auxiliary safety lock release solenoids
- The limit switch
- The solenoid valves
- Facility power

Refer to the **Wiring Diagram** when completing the connections described below.

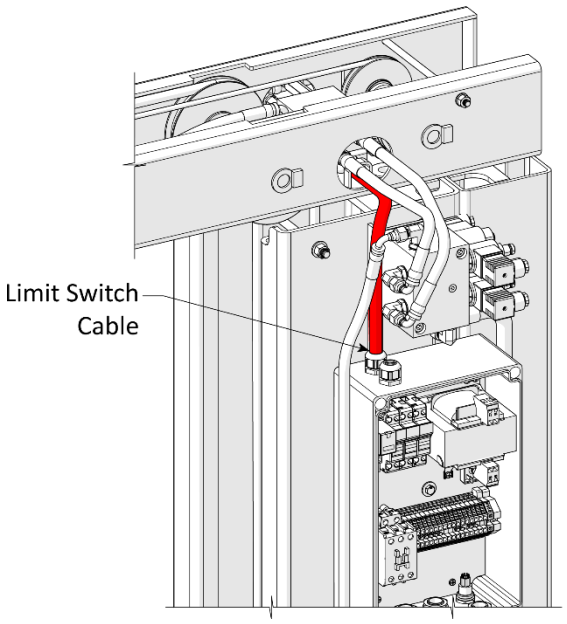
19a. Connect the Primary and Auxiliary Safety Locks

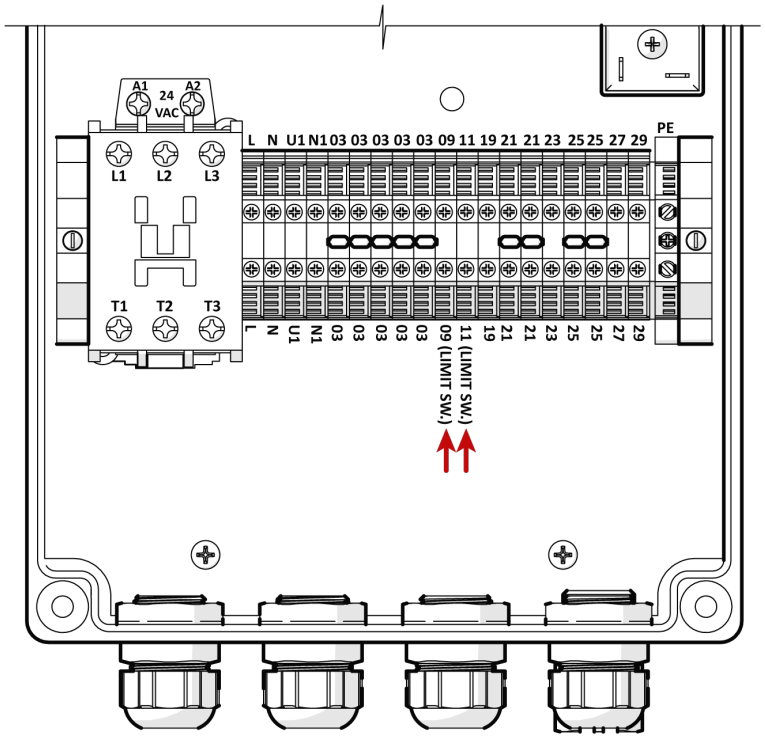
1. Locate the two 14/4 cables routed from the power side and off side posts routed to the safety release solenoids.
2. Feed the cables through the cable grips on the bottom of the control box and secure.
3. Strip back the cable jacket to expose the individual conductors. Do NOT damage the internal wire insulation.
4. Strip back ≈1/2 in. (13 mm) insulation from the two white and two green wires, then connect both to terminal 03.
5. Strip back ≈1/2 in. (13 mm) insulation on the two red wires then route and connect to the two terminals labelled 25.
6. Strip back ≈1/2 in. (13 mm) insulation off the two black wires then route and connect to the two terminals labelled 21. Refer to the figure below.
7. Dress and secure wiring neatly for clarity and serviceability using cable ties.
8. Tighten the cord grip to secure the cable.



19b. Connect the Limit Switch

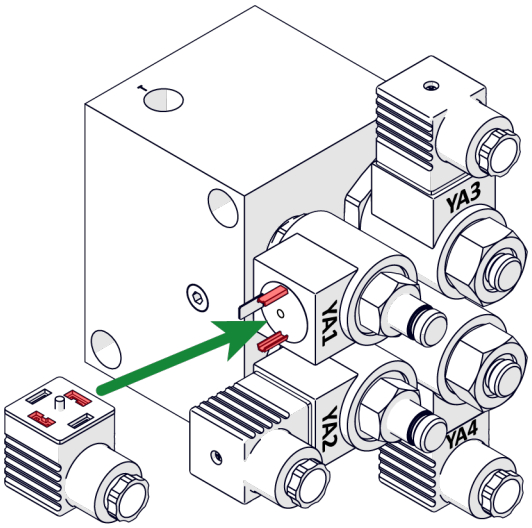
1. Locate the 14-4 limit switch cable at the control box.
2. Route the cable through the cord grip found on top of the control box as shown on the right.
3. Run the cable to the bottom of the control box.
4. Strip back the cable jacket to expose the wires.
5. Strip back ≈1/2 in. (13 mm) insulation off the white and black wires then connect one to terminal 09 and one to terminal 11. Refer to the figure below.
6. Dress and secure wiring neatly for clarity and serviceability using cable ties.
7. Tighten the cord grip to secure the cable.



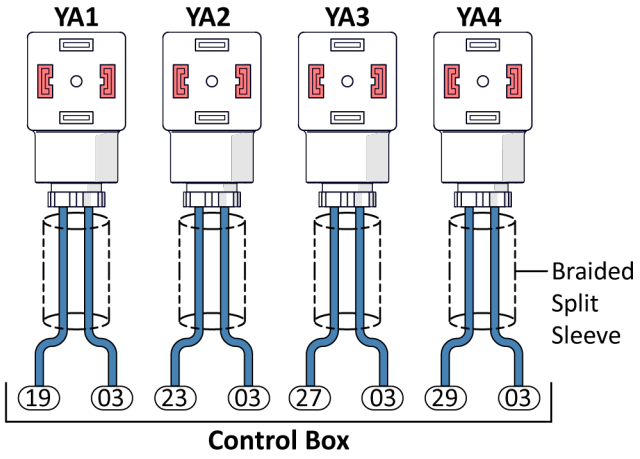


19c. Connect the Solenoid Valves to the Control Box

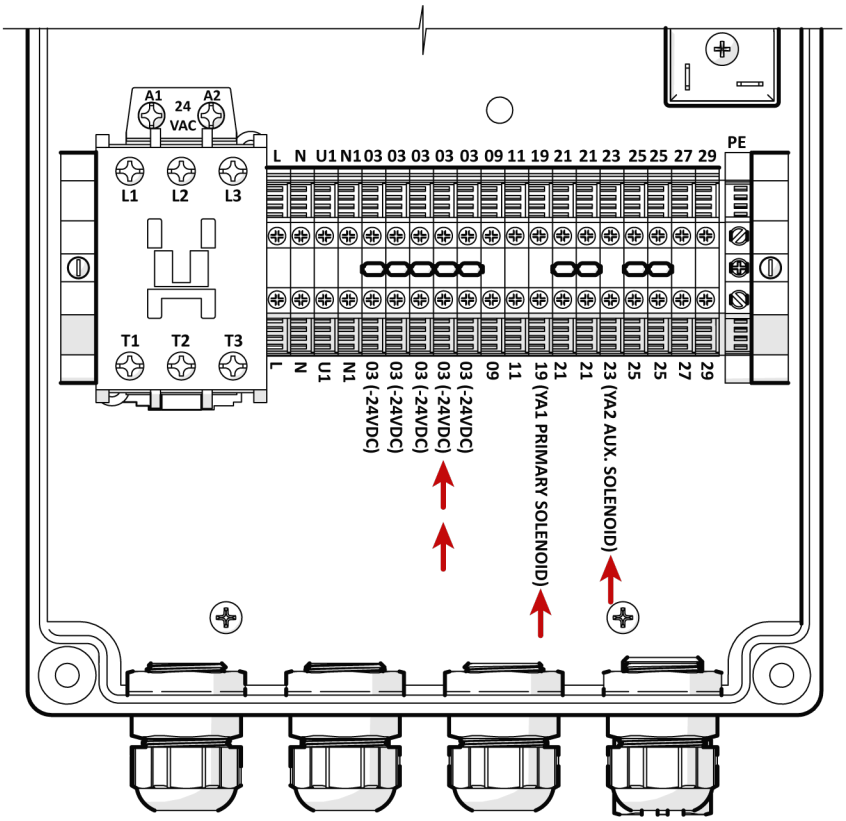
All Solenoid Valves 24VDC Non-Polarized
DIN 43650 Connector - Screw Terminals



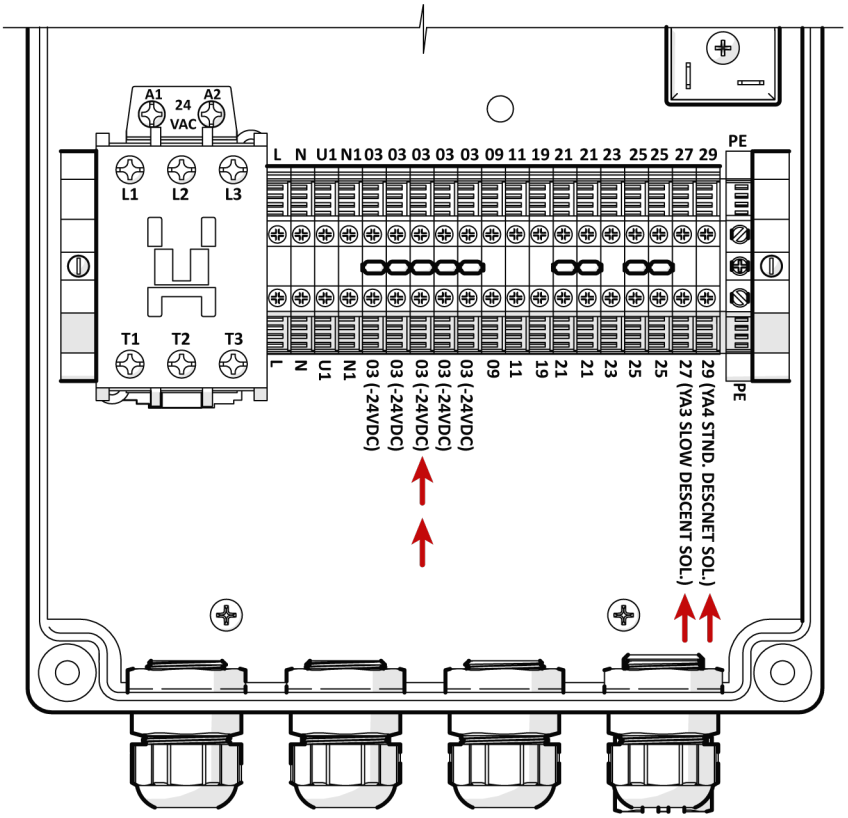
Route all solenoid wiring to control box terminals as defined below. Wrap all wiring with braided split sleeving and secure with cloth wire harness tape at both ends.



1. Retrieve the braided split sleeve and cloth wire harness tape from the parts box.
2. Locate the two wires exiting the **YA1** valve (primary lift cylinders).
3. Route the two wires to the bottom of the control box and push them through the cord grip closest to the **YA1** valve terminals **19** and **03**.
4. Measure wire length, include a short service loop, and cut to length.
5. Strip back ½ in. (13 mm) of the wire insulation to expose the copper.
6. Connect one wire to terminal 19 and one to terminal 03. Refer to the figure on the right. *Note: polarity is not a concern on DC solenoid coils.*
7. Route the two YA1 valve wires exposed between the control box and valves through the braided split sleeve and secure with wire harness tape at both ends.
8. Dress and secure the wiring neatly for clarity and serviceability using cable ties.
9. Tighten the cord grip to secure the cable wiring.



10. Locate the two wires exiting the YA2 valve (auxiliary lift cylinders).
11. Route the two wires to the bottom of the control box and push them through the cord grip closest to the YA2 valve terminals 23 and 03.
12. Measure the wire and cut to length include a short service loop and strip back ½ in. (13 mm) of the insulation to expose the copper.
13. The two wires from solenoid valve YA2 connect to terminals 23 and 03. Refer to the figure on the previous page. Use the same 03 terminal for the YA1 and YA2 valves.
14. Route the two YA2 valve wires exposed between the control box and valves through the braided split sleeve and secure with wire harness tape at both ends.
15. Dress and secure the wiring neatly for clarity and serviceability using cable ties.
16. Tighten the cord grip to secure the cable wiring.
17. Locate the two wires exiting the YA3 valve (slow descent).
18. Route the two wires to the bottom of the control box and push them through the cord grip closest to the YA3 valve terminals 27 and 03.
19. Measure the wire, include a short service loop, and cut to length.
20. Strip back ½ in. (13 mm) of the insulation to expose the copper.
21. The two wires from solenoid valve YA3 connect to terminals 27 and 03. Refer to the figure on the right. Use the same 03 terminal for the YA3 and YA4 valves.
22. Route the two YA3 valve wires exposed between the control box and valves through the braided split sleeve and secure with wire harness tape at both ends.
23. Dress and secure the wiring neatly for clarity and serviceability using cable ties.
24. Tighten the cord grip to secure the cable wiring.
25. Locate the two wires exiting the YA4 valve (standard descent).
26. Route the two wires to the bottom of the control box and push them through the cord grip closest to the YA4 valve terminals 29 and 03.
27. Measure the wire, include a short service loop, and cut to length.



28. Strip back ½ in. (13 mm) of the insulation to expose the copper.
29. The two wires from solenoid valve YA4 connect to terminals 27 and 03. Refer to the figure on the right. Use the same 03 terminal for the YA3 and YA4 valves.
30. Route the two YA4 valve wires exposed between the control box and valves through the braided split sleeve and secure with wire harness tape at both ends.
31. Dress and secure the wiring neatly for clarity and serviceability using cable ties.
32. Tighten the cord grip to secure the cable wiring.

20. Connect to Facility Power

⚠DANGER All wiring must be completed by a licensed Electrician. Do not perform any maintenance or installation on the Lift without first ensuring that main electrical power has been disconnected from the Lift and cannot be re-energized until all procedures are complete. This Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.

⚠DANGER All electrical work ***must*** conform to applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.

⚠ 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 other damp environments; damage to the motor caused by water is not covered by the warranty.

⚠ WARNING **NEVER** run the power unit without hydraulic fluid. The power unit will be damaged. Running electrical current that exceeds the motor's full load ampere rating (FLA) rating may result in permanent damage to the motor.

⚠ WARNING BendPak strongly recommends you ***not*** exceed the rated duty cycle of the Lift motor. Duty cycle of this power unit is 2 minutes on and 10 minutes off.

- **208-230 VAC, 50/60 Hz, 1 Phase, 5HP** (5585970).

NOTICE 110 VAC power units are currently ***not*** available for OctaFlex Lifts.

The specific power unit delivered with this Lift may look somewhat different from the illustrations in the manual.

NOTICE Refer to the wiring diagram in this manual for connections inside the control box. Wiring information for the power unit is located either on the outside of the power unit or inside the cover of its Electrical Junction Box. Have the Electrician use that wiring information to connect the power unit to the power source.

The Electrician is required to:

- **Connect the power unit** to the correct terminals in the control box. See the **Wiring Diagram**.
- **Provide and install a UL listed power disconnect switch**. The disconnect ensures power may be quickly interrupted to the Lift in the event of an electrical circuit fault, emergency, or when equipment is undergoing service. The disconnect must be both within the operator's line of sight and easy to access for quick operation. Refer to **Installing a Power Disconnect Switch** for more information.

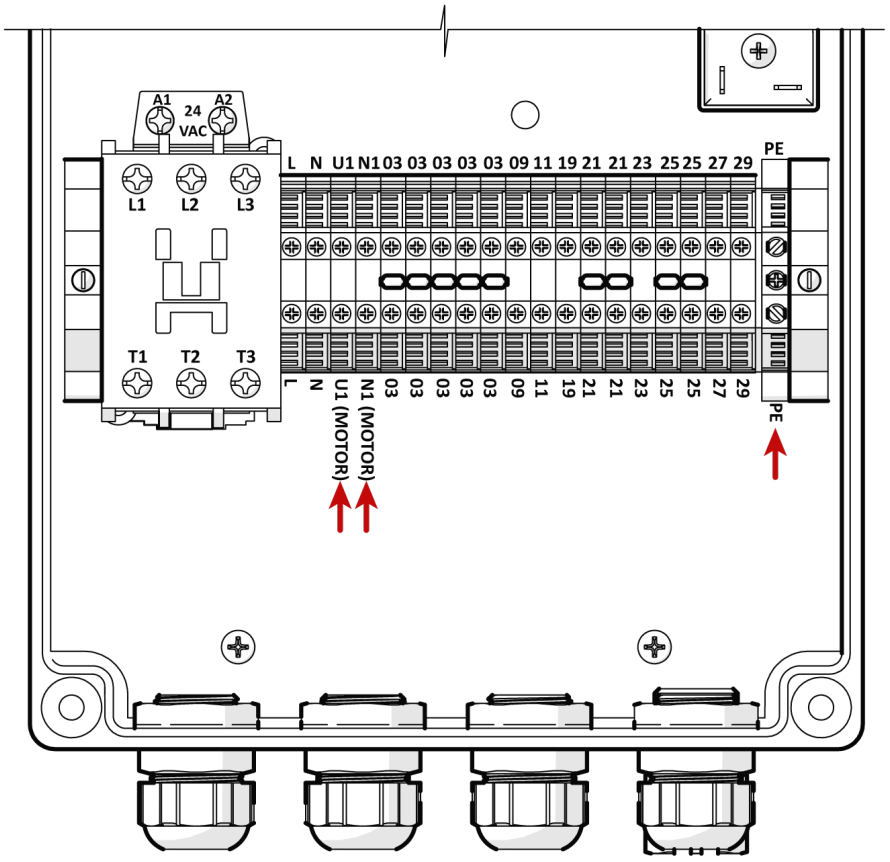
- **Provide and install an appropriate thermal disconnect switch or overload device.** The power unit supplied with this Lift ***does not*** include thermal overload protection. Refer to **Installing a Thermal Disconnect Switch** for more information.
- **Provide Electrical power to the lift** through wire of an appropriate gauge based on the voltage, amperage, and distance from the service entrance. The electrician is responsible for determining the appropriate wiring and necessary protective measures in accordance with both national and local electrical codes.

Important Electrical Information:

- This Lift and must be connected to a properly grounded circuit by a licensed electrician. Improper electrical installation can damage the power unit motor, which is not covered by the warranty.
- This Lift uses electrical energy. If your organization has lockout/tagout policies, 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:
  - For a 208 to 230 VAC, *single phase* circuit, 5 HP motor, protect with a 30 Amp fuse or circuit breaker for the power unit delivered with the Lift.

20a. Connect the Power Unit Motor to the Control Box

1. The Electrician is to locate the pigtail exiting the junction box on the power unit.
2. Open the junction box, replace the pigtail with appropriate wire gauge, and protect with flexible conduit or as required by NEC and local electrical code.
3. Connect the black line wire (L) from the motor to the U1 terminal in the control panel. Refer to the figure on the right.
4. Connect the white N wire from the motor to the N1 terminal in the control panel.
5. Connect the green or green/yellow ground wire from the motor to the ground terminal PE in the control box.
6. Dress and secure the wiring neatly for clarity and serviceability using cable ties.
7. Secure and protect all electrical cable and wiring as required by NEC and local electrical code.



20b. Install a UL-Listed Power Disconnect Switch

⚠DANGER Installing an appropriately rated Power Disconnect Switch must be supplied and installed by a licensed Electrician in accordance with local and national electrical codes.

The Electrician is to select a UL-listed power disconnect switch. This switch is ***not*** provided with this equipment.

The power disconnect switch is a National Electrical Code (NEC) requirement. They are designed to allow the operator to interrupt the main electrical power in the event of an emergency, a circuit fault, or when the equipment is undergoing service or maintenance. Install a UL listed power disconnect switch that is properly rated for the incoming power voltage and amperage. The power disconnect must:

a. Be readily accessible to the operator
b. Be installed within easy reach of the operator and in their line of sight
c. Be clearly marked to indicate its purpose.

20c. Install a Thermal Disconnect *(if required)*

The Power Unit supplied with this Lift ***does not*** include thermal overload protection. Under NEC 430, UL 201, and CSA C22.2 No. 68 intermittent duty motors are not required to include thermal protection. Local electrical codes may vary, and other requirements may exist that the installing electrician will address, if required.

⚠ DANGER If local Electrical codes require the installation of a Thermal Disconnect, the disconnecting device and the installation ***must*** be provided by a licensed Electrician in accordance with local electrical codes. Do not perform ***any*** maintenance or installation on the Lift without first verifying that main electrical power has been disconnected from the Lift and ***cannot*** be re-energized until all procedures are complete.

Have a licensed Electrician connect a thermal disconnect switch or overload device that will ensure the equipment shuts down in the event of an overload or an overheated motor.

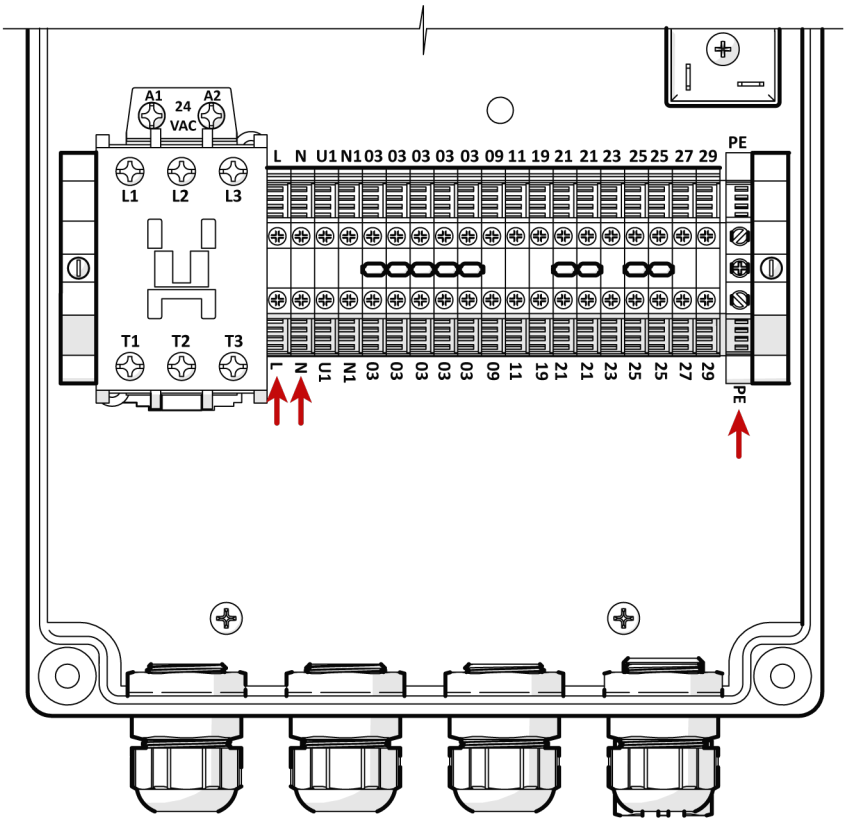
Electrical current that exceeds the motor's full load ampere (FLA) rating may result in permanent damage to the motor. BendPak strongly recommends ***not*** exceeding the rated duty cycle of the OctaFlex motor.

20d. Connect to the Electrical Service

⚠DANGER All electrical work is to be carried out by a licensed Electrician in accordance with local and national electrical codes. This Lift is rated to 230VAC, 17 Amps, 50/60Hz. The Lift must be connected to a supply circuit of proper voltage and frequency. Circuit protection and wire size must conform to the National Electrical Code (NEC) or the prevailing local code for this voltage and current rating.

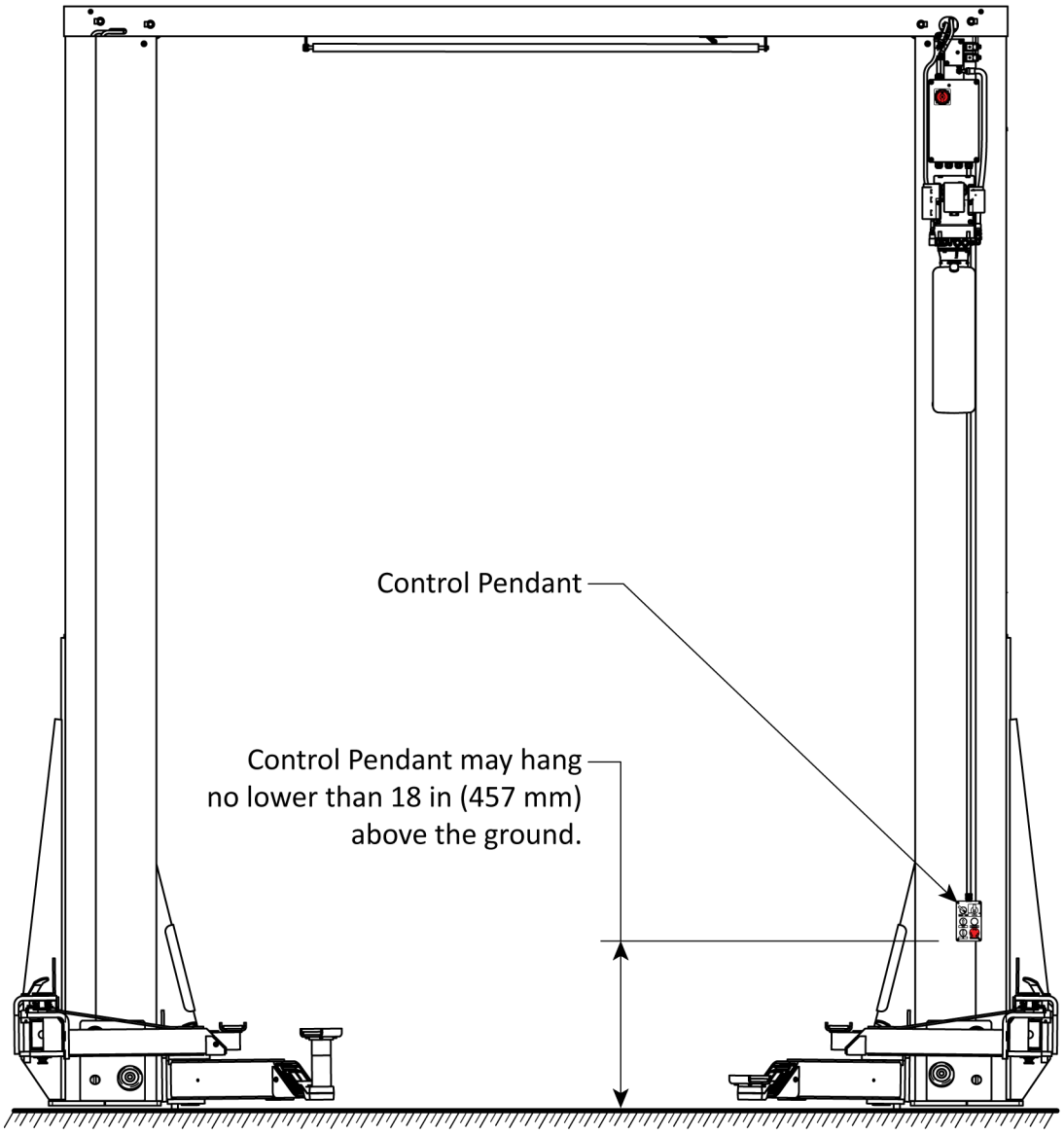
Both current carrying conductors from the electrical service, Line (L1), Neutral N (L2), and a ground wire are to be connected to the terminal block. The Electrician is required to select and supply a circuit breaker and an appropriate gauged wire based on voltage, current and distance from the service entrance. The Electrician is to route and provide the necessary protection for the wiring in accordance with national and local electrical codes.

1. L1 from the electrical service is to be run to the control box and connected to terminal L.
2. N or (L2) from the electrical service is to be run to the control box and connected to terminal N.
3. Ground from the electrical service is to be run to the control box and connected at terminal PE.
4. Wiring should be run and secured in a neat and logical manner that does not interfere with the operation of the Lift or with access to service areas.
5. After all electrical connections are complete and properly tightened, ensure all electrical access points, doors, access panels, and openings are closed to prevent unintended access to live terminals.



20e. Prepare the Control Pendant

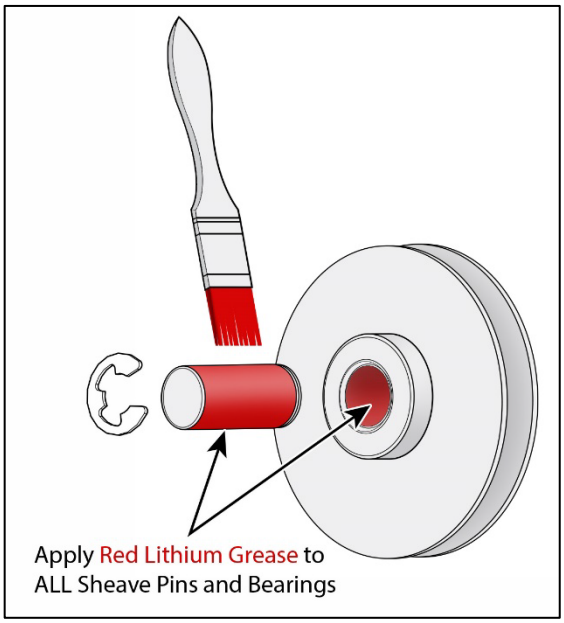
The control pendant wiring is preinstalled. Remove any protective packaging from the control pendant and verify that the pendant hangs ***no lower than 18 in. (457 mm) above the ground***. The control pendant includes magnets on the back of the unit to allow the operator to secure the pendant onto the lift post at a convenient location.



21. Lubricate the Lift

Lubricate the following with a white or red lithium grease or equivalent as described below:

- All cable sheaves and cable sheave pins.
- The four inside corners of both primary and auxiliary lift posts
- All safety sheaves
- All lift arm pivot points
- Lubricate all sheave pins with red lithium grease



⚠ **WARNING** BendPak does not supply hydraulic fluid or lubricants with this Lift. **Always** refer to the Safety Data Sheet (SDS) for safe handling and disposal information. SDS are available from the hydraulic fluid or lubricant supplier or manufacturer.

22. Perform an Operational Test

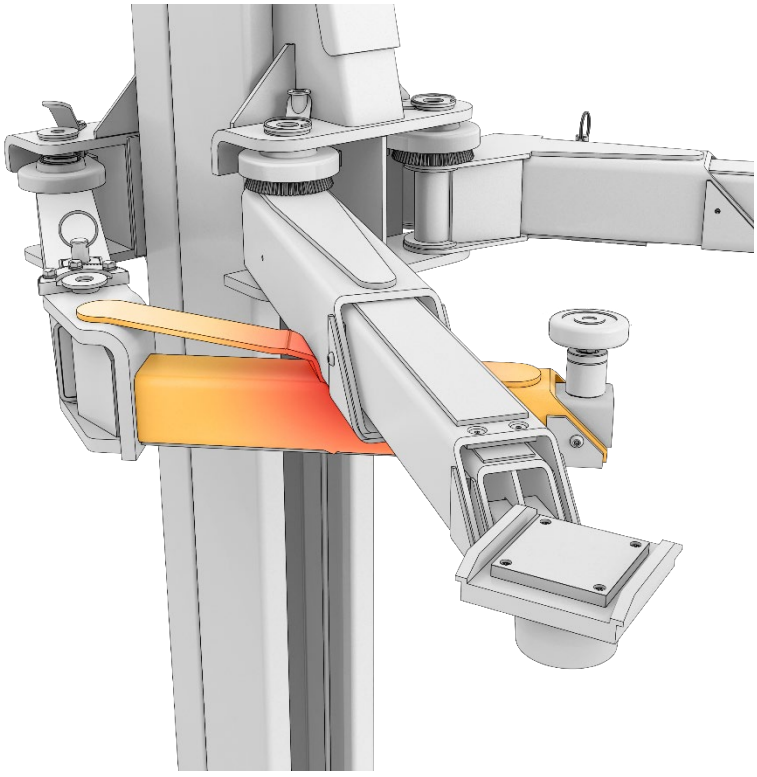
Before putting the Lift into normal operation, it is recommended to raise and lower the lift arms several times with a typical vehicle on the lift. This will help the operators acquaint themselves with the operation of the controls and aid in the removal of air from the hydraulic system.

⚠ DANGER Automotive Lifts are dangerous tools when used by inexperienced or impaired technicians. When you even hear the words “automotive lift,” your brain should automatically register the fact that lifting a vehicle is a serious endeavor with life-threatening risks if mandatory lifting precautions are ignored.

During the operational test, check for proper installation and operation. Do not raise any additional vehicles until a thorough operational test has been completed with a typical vehicle.

⚠ WARNING Never raise a vehicle whose weight exceeds the rated capacity of the Lift. Do not leave the lift controls until ***both*** the primary and auxiliary lift heads are engaged on their safety locks on ***both*** posts. Only trained personnel should operate this Lift.

⚠ WARNING ***It is the Operator’s responsibility to ensure there is sufficient lift arm clearance on all eight arms. The primary and auxiliary lift arms can be positioned to overlap each other, and if raised or lowered in this condition may come into contact, causing severe damage to the lift! Be aware there is no mechanical or other device to prevent the arms from colliding with each other while raising or lowering.***



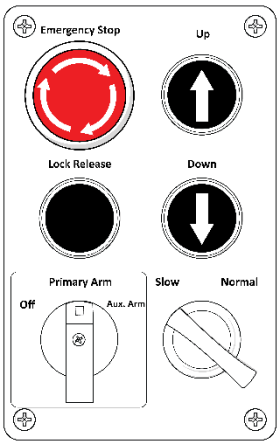
Operational Test:

1. Ensure all items in the **Review Final Checklist before Operation** are completed prior to proceeding.
2. Test both the primary and auxiliary safety lock engage/disengage functions.
   a. Apply power to the Lift.
   b. Select the primary safety locks by rotating the lift arm control to **Primary Arm**.
   c. If the Lift arms overlap, ensure the arms will not collide during the intended movement.
   d. Push and hold the **Lock Release** button.
   e. Have an assistant observe the primary safety locks to verify they are moving to the disengaged position on both posts.
   f. Release the **Lock Release** button.
   g. Select the auxiliary safety locks by rotating the lift arm control to **Aux. Arm**.
   h. Push and hold the **Lock Release** button.
   i. Have an assistant observe the auxiliary safety locks to verify they are moving to the disengaged position on both posts.
   j. If the safety locks do not move to the full release position, adjust the cable tension.
3. Follow the instructions in **Raising a Vehicle** and **Lowering a Vehicle** to safely raise and lower a vehicle on the Lift.

⚠ **DANGER** Follow the instructions carefully when it comes to contacting the manufacturer's recommended Lifting Points on the underside of the vehicle. If operator fails to do so, the vehicle could become unstable and fall, which could damage the vehicle, damage the Lift, and injure or even kill anyone under the vehicle.

4. Adjust the primary lift arms under the vehicle so that the lift pads are directly under the lifting points for the vehicle to be raised. If necessary, use auxiliary adapters **(see Optional Accessories)** for additional height.
5. Select the primary lift arms by rotating the lift arm control to **Primary Arm.**
6. Press the **Up** button to raise the Lift until ***just before*** the lift pads contact the Lifting Points.
7. Check the arm restraint gears on all four lift arm assemblies to verify they are engaged. If they are not engaged, move the arms back and forth until they engage.
8. Raise the Lift until the tires of the vehicle are a few inches off the ground.
9. Verify all four lift pads are making solid contact with all four Lifting Points.

   If any of the lift pads are ***not*** making solid contact with the Lifting Points, carefully lower the Lift and begin again. The lift pads ***must*** make solid contact with all vehicle Lifting Points.



10. Raise the vehicle approximately three feet off the ground and release the **Up** button, then *press and hold* the Safety Lock Release Button and the Down Button to lower the Lift back to the ground.

NOTICE Residual air in the Hydraulic System can cause the Lift to shake, move erratically, or squeak; this is normal when first using the Lift. It will soon stop, as the Hydraulic System is self-bleeding.

11. Wait for one minute.

⚠ **WARNING** The power unit is not a constant duty motor; ***it cannot be run continuously***.

12. Repeat the process, this time raising the Lift, engaging it on a Safety Lock position, taking it off the Safety Lock position, and then lowering it back down to the ground.
13. If the Lift is working without shaking, moving erratically, or squeaking, there is no need to repeat the procedure. If the Lift is shaking, moving erratically, or squeaking, repeat the procedure one more time. If you continue to have issues, refer to **Troubleshooting** for assistance.
14. When the Lift is on the ground and the vehicle is on all four tires, move the four lift arms to their full drive-through positions, then drive the vehicle out of the lift area.
15. With no vehicle on the lift arms, press and hold the **Up** button on the power unit.
16. Have another person push up the safety shutoff bar until it triggers the limit switch.

    If the lift arms do not stop rising when the limit switch is triggered, the limit switch is either not installed correctly or not wired correctly. Return to the sections in this manual where installation and wiring of the limit switch is described to identify and correct the issue.

⚠ **CAUTION** Do not put the Lift into normal operation until you have confirmed that triggering the limit switch prevents the lift arms from rising.

23. Review Final Checklist Before Operation

Ensure the following items have been completed before putting the Lift into normal operation:

☐ 1. Review the **Installation Checklist** and verify all steps have been performed correctly.

☐ 2. Ensure the OctaFlex power unit is supplied power.

☐ 3. Ensure the hydraulic fluid reservoir; it must be full of approved hydraulic fluid or automatic transmission fluid. ***The motor and pump may be damaged by running without sufficient fluid.***

☐ 4. Check the hydraulic system for leaks. Verify all hydraulic hose connections, hydraulic fittings, and any port plugs on the lift and power unit are secured and leak free.

☐ 5. Ensure both lift posts are properly plumbed, shimmed, and stable.

☐ 6. Ensure all anchor bolts are correctly torqued.

☐ 7. Lubricate all primary and auxiliary cable sheaves and the interior of the primary and auxiliary lift posts where the slide blocks travel.

☐ 8. Ensure all four double threaded rods are in place and secured near the top of both lift posts.

☐ 9. Ensure both primary and auxiliary equalizing cables are properly positioned in their sheaves at the top and bottom of each lift post.

☐ 10. Ensure all cable sheave retaining pins and/or clips are secure.

☐ 11. Ensure all four primary lift arm safety lock assemblies are connected and functioning normally.

☐ 12. Ensure all four auxiliary lift arm safety lock assemblies are connected and functioning normally.

☐ 13. Ensure all four cylinder clamps are secured in place above the hydraulic cylinders. One on each primary and auxiliary cylinder.

☐ 14. Ensure an operational test has been performed.

☐ 15. Deliver the *Installation and Operation Manual* to the owner/user/employer along with any other instructional materials furnished with the lift.

Operation

This section describes how to operate the BendPak OctaFlex Lift. The OctaFlex is an automotive service lift configured with two sets of fully adjustable telescoping lift arms. This configuration allows properly trained service technicians to perform tasks such as cab-off and/or electric vehicle battery removal and replacement.

The primary lift arms are intended to lift vehicles and have a maximum capacity of 12,000 lbs. (5,443 kg). The auxiliary lift arms have a maximum capacity of 6,000 lbs. (2,722 kg) and are intended to assist technicians in removing and replacing vehicle components such as drivetrains, body assemblies, and EV batteries.

⚠ DANGER Automotive Lifts are dangerous tools when used by inexperienced or impaired technicians. When you hear the words “automotive lift,” your brain should automatically register the fact that lifting a vehicle is a serious endeavor with life-threatening risks if mandatory lifting precautions are ignored.

Lift Operation Safety Rules

⚠ DANGER Your safety depends on reading, understanding, and implementing these Safety Rules. Do not skip over them. Read these rules carefully and follow them!

⚠ DANGER Never lift more than one vehicle at a time.

⚠ DANGER Never lift or store a vehicle on the auxiliary lift arms.

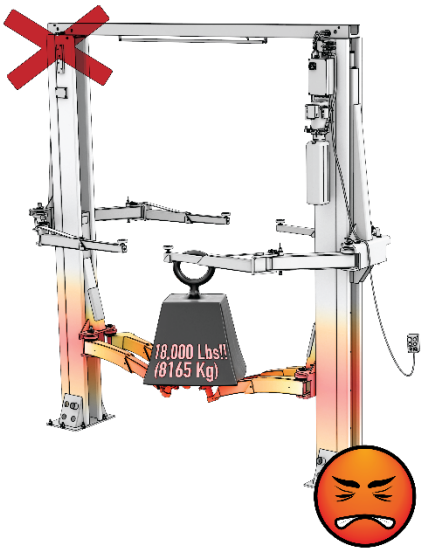
⚠ DANGER Transferring a load from the auxiliary arms to the primary arms may exceed the rated load on the primary arms! Always be aware of the total weight on the Lift. ***Never exceed the maximum rated load capacity of 12,000 lbs. (5,443 kg) on the primary lift arms and 6,000 lbs. (2,722 kg) on the auxiliary lift arms.*** Exceeding these limits will damage the Lift and may result in a loss of the load, potentially injuring or killing anyone nearby.

Primary Lift Arms ***can*** accept up to 12,000 lbs (5443 kg) maximum load

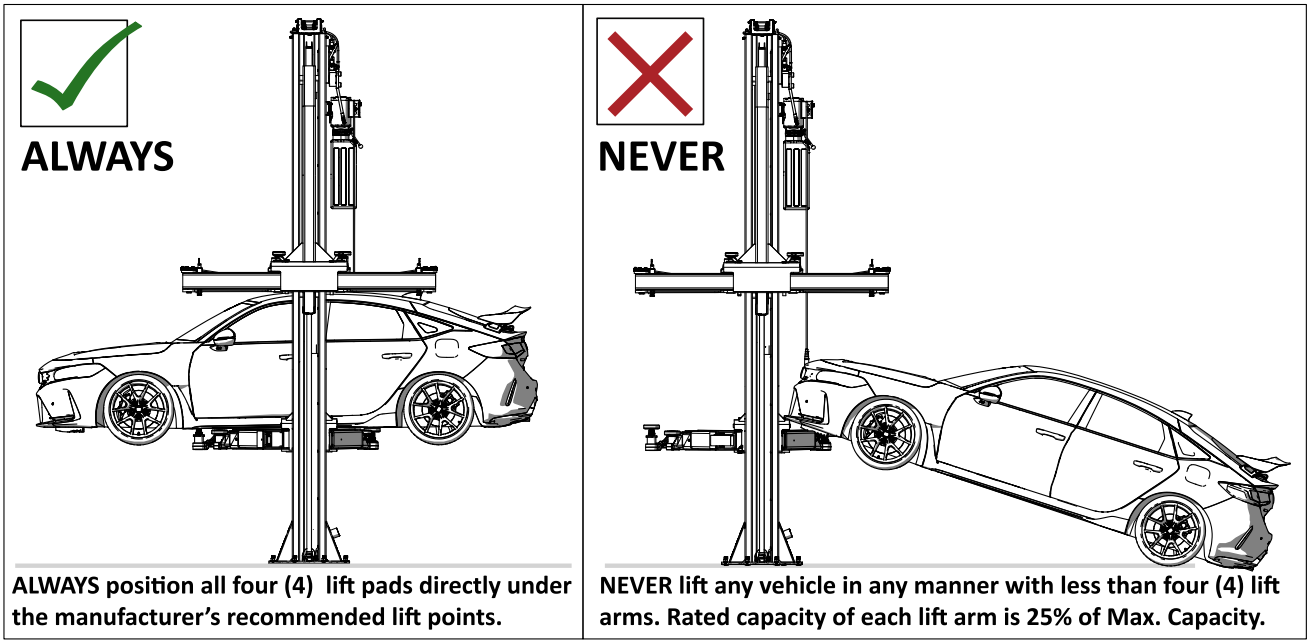
Auxiliary Lift Arms ***can*** accept up to 6,000 lbs (2,722 kg) maximum load

Do *not* lower Auxiliary Lift Arm maximum load onto Primary Arms also carrying their maximum load!

Do *not* exceed Primary Arm maximum load!



⚠ DANGER **NEVER** lift a vehicle in any manner with less than four (4) lift arms. The rated capacity of each lift arm is 25% of the maximum lift capacity. Each primary lift arm on the OctaFlex is rated to 3,000 lbs. (1,361 kg.) and each auxiliary arm is rated at 1,500 lbs. (680 kg).



ALWAYS position all four (4) lift pads directly under the manufacturer's recommended lift points.

NEVER lift any vehicle in any manner with less than four (4) lift arms. Rated capacity of each lift arm is 25% of Max. Capacity.

⚠ WARNING Never raise a vehicle whose weight exceeds the rated capacity of the Lift. Do not leave the controls until the Lift is engaged on a safety lock position or fully lowered. Only trained personnel should raise and lower the Lift.

⚠ WARNING This Lift uses two sets of lift arms termed Primary and Auxiliary. ***BEFORE commanding any up or down movement, understand which arms are selected on the control pendant for operation.***

⚠ WARNING The primary and auxiliary arms may be positioned to overlap each other. ***Be aware there is no mechanical or other device to prevent the arms from colliding with each other while raising or lowering. It is the Operator's responsibility to ensure there is sufficient lift arm clearance on all eight arms at all times.***

⚠ WARNING Always use care when working around the Lift. ***When raising or lowering a vehicle, keep all people, animals, and objects at least 30 ft. (9 m) away***.

⚠ WARNING Pinch and crush hazards. Never place yourself or others under a raised vehicle unless the Lift is engaged on its safety locks and the vehicle is stable on the Lift. Always use jack stands to secure the vehicle when work is under way or if removing components that will significantly change the vehicle's balance on the Lift.

⚠ **WARNING** Always be aware of where you are placing your hands and fingers. Serious injury can result from pinch points and crushing zones when removing or installing vehicle components.

⚠ **WARNING** Always wear proper personal protective equipment when working.

⚠ **WARNING** The Auxiliary Lift Arms are designed for the installation and removal of vehicle components only (cab-off, batteries, etc.). ***The Auxiliary Arms are not designed or rated for vehicle lifting or storage of any kind.***

Do the following ***before*** raising or lowering a vehicle on this Lift:

- **Check the Lift**. A complete inspection of the Lift is required before use. Check the hydraulic system for loose connections including Hydraulic Fittings, Hydraulic Hoses, and any Auxiliary Port Plugs. Check the Lift for any missing, heavily worn, or damaged parts. Do not operate the Lift if any issues are found; instead, take it out of service, contact your dealer, email **support@bendpak.com**, or call **(800) 253-2363**, then follow the prompts for customer service.
- **Check the area**. Keep the area around the Lift well-lit, clean, organized, and free of obstruction. A clean, organized area allows safety problems to be clearly seen.
- **Check for obstructions** around and above the Lift. Do not allow people or animals within 30 feet of the Lift while it is in operation.
- **Check the operators**. Make sure that everyone who is going to operate the Lift has been trained in its use, has read the labels on the unit, has thoroughly read the manual and understands how this equipment works. Only the operator should be within 30 feet of the Lift when it is in motion. Do not allow children to operate the Lift. Do not allow anyone under the influence of drugs or alcohol to operate the Lift.
- **Check for safety**. Make sure everyone who is going to be walking near the Lift is aware of its presence and takes appropriate safety measures.
- If working with electric vehicles review the **Working with the OctaFlex and EV Batteries Safely** section below.
- ***When raising or lowering a vehicle on the primary lift arms, do not leave the Lift until both lift heads are engaged on their Safety Locks on both posts***. Only put vehicles on the primary lift arms.
- ***When raising or lowering components or assemblies on the auxiliary lift arms do not leave the lift until both lift heads are engaged on the safety locks.***
- **When lowering** the Lift, do not leave it until it is on the ground.
- **Never** allow personnel to ride on the Lift.
- **Check the vehicle**. Never exceed the Lift's maximum capacity rating. Do not allow people inside a vehicle you are going to raise. Make sure the vehicle is not overbalanced. Use only the manufacturer's recommended Lifting Points for the vehicle. ***Never raise just one side, one corner, or one end of a vehicle.***

Working with the OctaFlex and EV Batteries Safely

⚠DANGER **High-voltage cabling and components can deliver a fatal shock. Some EV components may retain hazardous voltages well after the vehicle has been shut down. Always refer to the vehicle manufacturer's instructions for safe installation/removal procedures, techniques, required tools and training.**

⚠DANGER This Lift is ***not*** electrically insulated. The Lift will ***not*** provide protection from electrical current to anyone in contact with it. Stay away from the Lift if it is in contact with high voltage. Do not touch or operate the Lift until the electrical current is removed and made electrically safe in all respects.

⚠DANGER Often a large section of an electric vehicle's undercarriage holds the high voltage battery. ***Never breach the high voltage battery when lifting from under the vehicle***. Use every precaution to ensure that you do not breach the battery or the floor pan. Always use the vehicle manufacturer's recommended lifting points.

⚠DANGER Technicians should always be fully trained and read the Vehicle's Original Equipment Manufacturer (OEM) high voltage disabling procedures and precautions ***before*** working on hybrid and electric vehicles. Additional resources are available from **SAE International**.

⚠DANGER Avoid contact with the vehicles' high-voltage cables unless the high-voltage battery has been disconnected. Proper personal protective equipment should include heavy rubber, Class 0 rated gloves. Ordinary shop gloves are ***not*** thick enough nor designed to protect against high voltage. The gloves should be inspected to verify no pin holes, cracks, tears, or splits are present.

⚠DANGER Use caution to ensure the operator and technicians working on the vehicle ***never*** come into contact with the vehicle's high voltage battery terminals, exposed wiring, circuitry, or other high voltage components while lifting or manipulating the vehicle and/or its battery.

⚠DANGER Regardless of the disabling procedure in use, ***always*** assume that high voltage components in the vehicle are energized. ***Cutting, crushing, or simply touching high voltage components can result in severe injury or death***.

⚠DANGER The vehicles' high voltage circuit may require 15 minutes or more to fully discharge. Refer to vehicle manufacturers' guidelines for the proper de-energizing procedure.

⚠DANGER If damaged or mishandled, batteries can release explosive gases and harmful liquids.

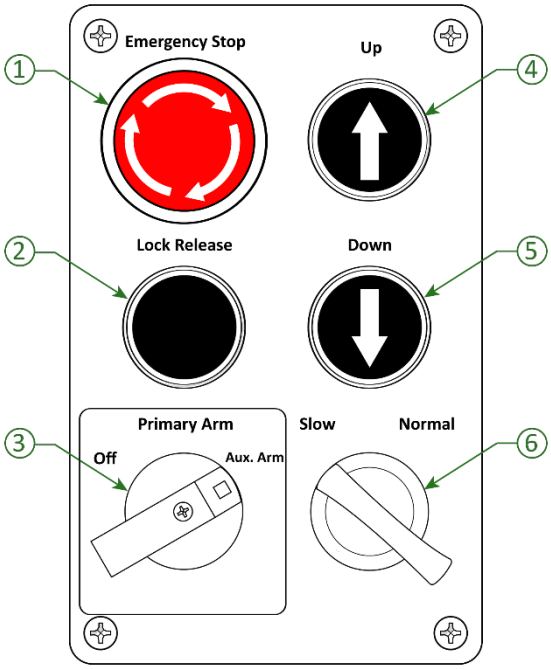
⚠DANGER Look for color-coded, high voltage cables in hybrid and electric vehicles. These colors warn of potential danger. Usually, these cables are orange, but some models use blue cables. Check with the vehicle manufacturer to identify the correct color code. Exercise extreme caution if these cables appear damaged.

⚠ WARNING Most electric vehicles with high voltage batteries include a liquid cooling system. Take precautions to ensure that the cooling system is properly drained or will not spill its contents onto the Lift or its components, Refer to the vehicle manufacturer's service instructions.

⚠ WARNING This manual cannot hope to describe or take into consideration all possible variations in vehicle design and assembly. Consult with the vehicle manufacturer to ensure all appropriate and required lift tooling and safety equipment are used.

Lift Controls

The operator controls the lift through the control pendant (refer to the figure and control definitions below). Magnets are included on the back of the control pendant so that it may be positioned for easy access.



- **1. Emergency Stop –** Pressing this button removes power from the hydraulic pump and the control pendant. To return power, rotate the Emergency Stop button clockwise and release. The lift arms will remain in position until a new command is issued. If the hydraulic system is leaking, the lift arms will come to rest on the nearest safety lock. The safety locks are spring loaded to remain in the "ready to engage position" at all times unless commanded to release by the control pendant.

  The emergency stop button does not completely remove power from the lift. Only the power disconnect will completely remove power from the lift.

- **2. Lock release –** This push button will release the safety lock on the lift arms selected by rotary switch (3).

- **3. Off – Primary Arm – Aux. Arm –** This three position rotary control will direct operator commands (up, down, slow, normal or lock release) to the selected lift arms. In the off position input commands to the lift arms and safety locks will have no effect.

- **4. Up –** This push button will apply power to the power unit and open valves to raise the lift arms (primary or auxiliary) selected by the rotary switch (3).

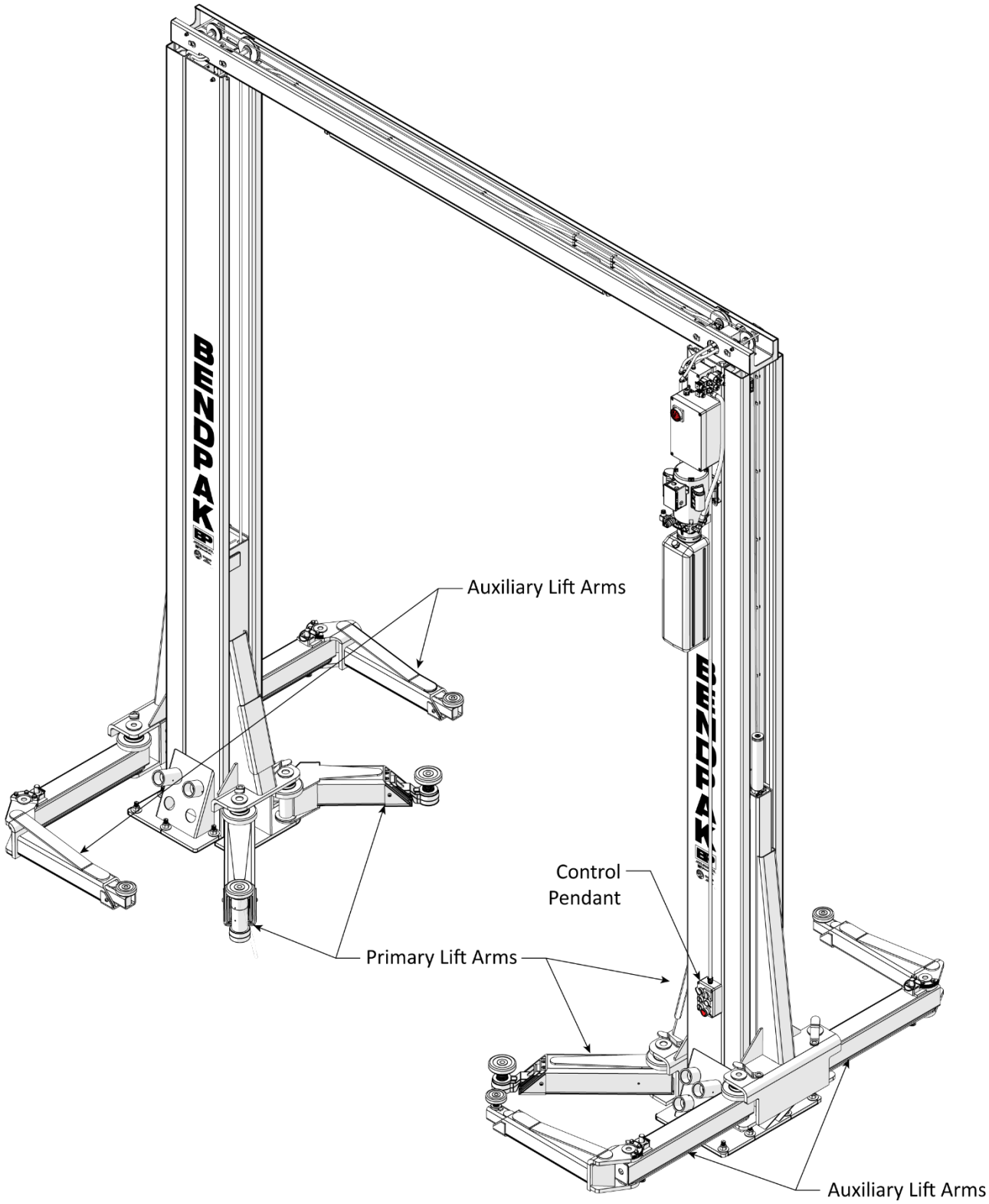
- **5. Down –** This push button will open valves to lower the lift arms (primary or auxiliary) selected by the rotary switch (3).

- **6. Slow - Normal –** This two position rotary control will open and close hydraulic valves to apply the selected speed to the up or down command.

Raising and Lowering Vehicles

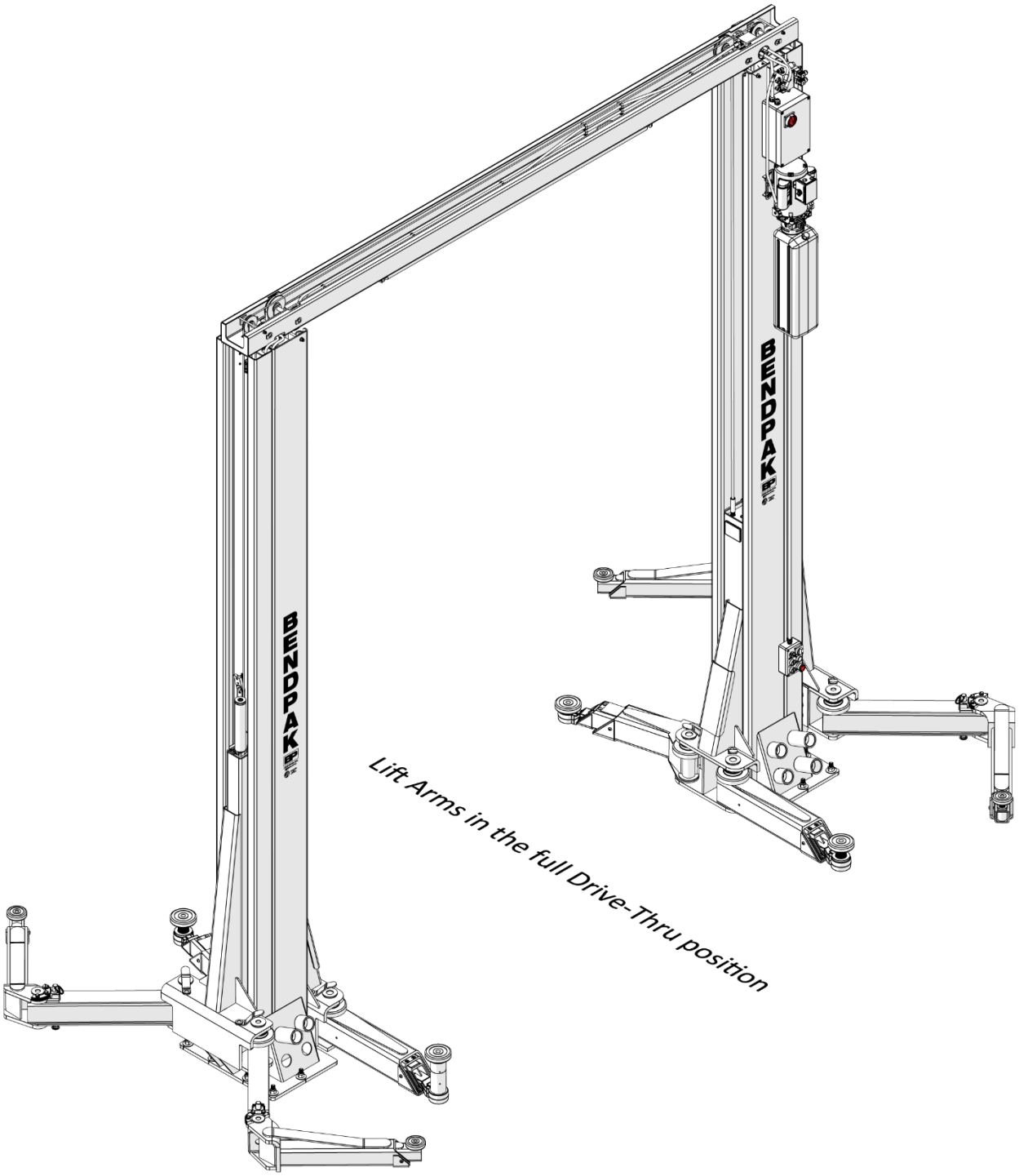
This section describes how to raise and lower a vehicle on the OctaFlex Two-Post Lift. Two cases will be presented to describe the most likely service uses.

1. Raising and lowering using the ***primary lift arms only***.
2. Raising and lowering using both the ***primary and auxiliary lift arms***.

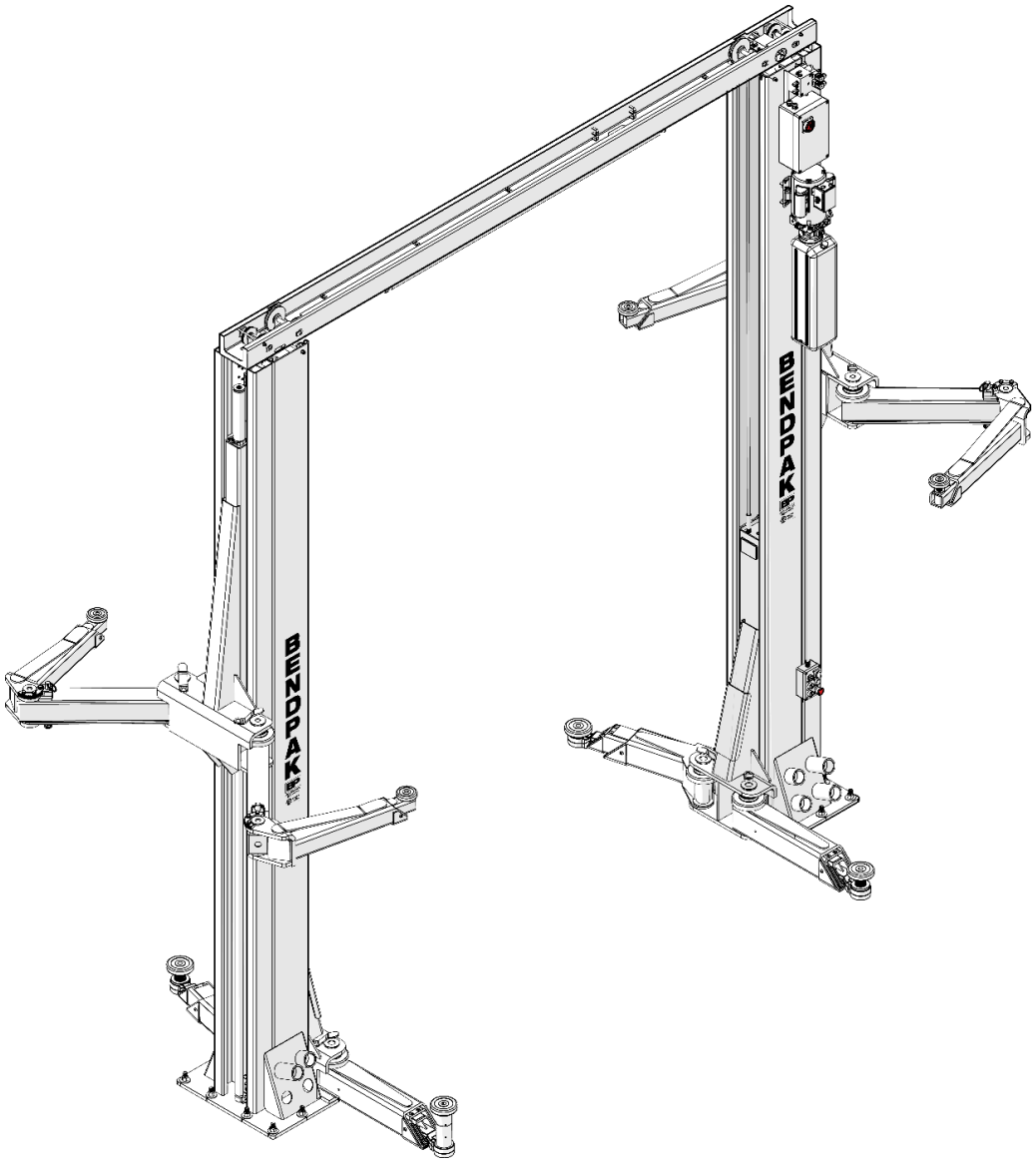


Raising a Vehicle - Primary Lift Arms Only

1. Ensure all personnel are clear of the service bay and all eight lift arms are on the ground, positioned to allow a clear drive-through of the vehicle into the Lift's service bay. Refer to the figure below.
2. Check above, under, and around the vehicle to ensure the area is clear of all obstructions. If obstructions are present, ***move them out of the way***.



3. If the Auxiliary Arms are not in use, fold the arms and position them on the top safety lock as shown below. Ensure the auxiliary arms are engaged on their safety locks on **BOTH** lift posts. This position will clear the floor and allow free movement to work around and under the vehicle.



4. Carefully drive the vehicle into the service bay.
5. When you are satisfied with the location of the vehicle, put it in park, engage the parking brake, and turn off the motor. If the vehicle is a manual transmission, put it into first or reverse gear then turn off the motor.
6. Determine the vehicle frame type and lifting points. Install the most appropriate adapters and pads or frame cradles on the lift arms.

   If you are lifting a sedan or a vehicle with a unibody construction, a Screw Lift Pad is generally the best choice. If you are lifting an SUV, truck, or other vehicle with a frame construction, Frame Cradle Pads are generally the best choice.

⚠ **WARNING** Always use the pad/adapter type best suited for the vehicle you are raising. If you use the wrong adapter type, the vehicle could become unstable on the Lift.

⚠ **CAUTION** When driving a vehicle into position, keep to the middle of the area between the posts. If a lift arm is struck by the vehicle or any other portion of the Lift, damage to the vehicle and/or the Lift is possible.

7. Exit the vehicle. Open the doors carefully to avoid damaging them on the Lift.
8. Locate the manufacturer's recommended Lifting Points for the vehicle you are raising.

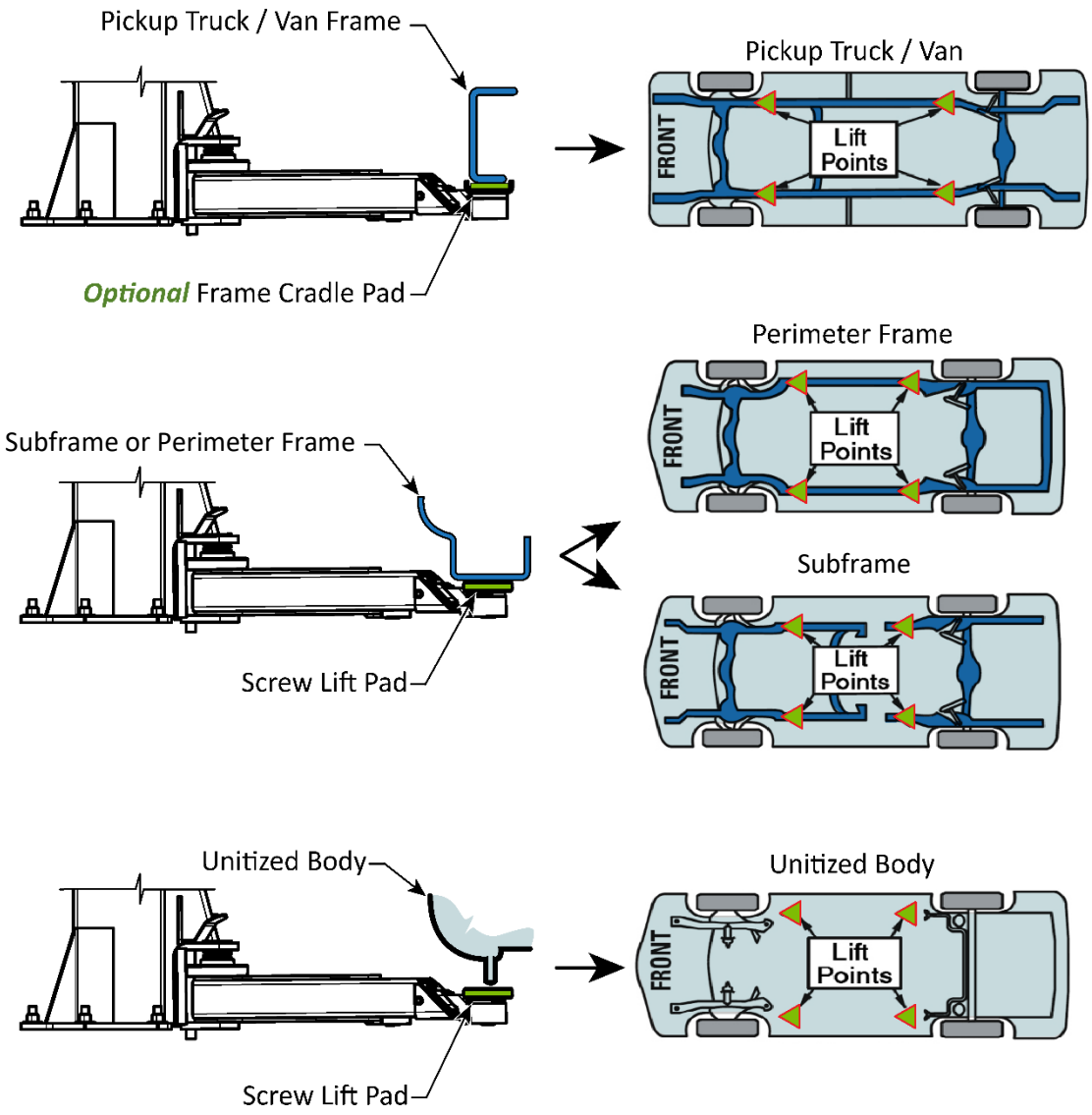
   If you are unsure where the Lifting Points are, consult ***Vehicle Lifting Points for Frame Engaging Lifts***, which is provided with the Lift, or contact the vehicle manufacturer. C***ontact BendPak*** Support to purchase replacement copies by emailing **support@bendpak.com** or call **(800) 253-2363**, follow the prompts to contact support.

   Some vehicles may have the manufacturers' recommended Service Garage Lift Point locations identified by a triangle mark on the underside of the vehicle, reference SAE J2184- (Current Edition). On some vehicles, specific lifting points are indicated by a label located on the driver's side door jamb.

⚠ **DANGER** Do not 'eyeball' the best location for the pad/adapters. ***You must use the manufacturer's recommended Lifting Points***. If not, the vehicle could become unstable and fall, damaging the vehicle, the Lift, and could injure or kill anyone under the vehicle.

⚠ **WARNING** Many specialty or modified vehicles or vehicles with unusually short or long wheelbases cannot be raised on a Two-Post Frame Engaging Lift. Contact the vehicle's manufacturer for raising, lifting or jacking guidance.

Typical Vehicle Lifting Points



⚠ WARNING Before attempting to lift a vehicle ensure:

- The vehicle's frame is strong enough to support its weight and has not been weakened or compromised by modification, damage, or corrosion.
- The vehicle's individual axle weight does not exceed one-half the Lift capacity.
- All lift pads/adapters are in secure contact with the frame at the vehicle manufacturers' recommended lift points.
- The vehicle is stable on the Lift, and the center of gravity is not shifted, making the vehicle off balance.
- The limit switch stop bar on the top trough will contact the highest point on the vehicle.

⚠ WARNING Ensure the primary and auxiliary lift arms will not interfere with one another when raising or lowering the vehicle. ***It is the Operator's responsibility to ensure there is sufficient lift arm clearance on all eight Arms.***

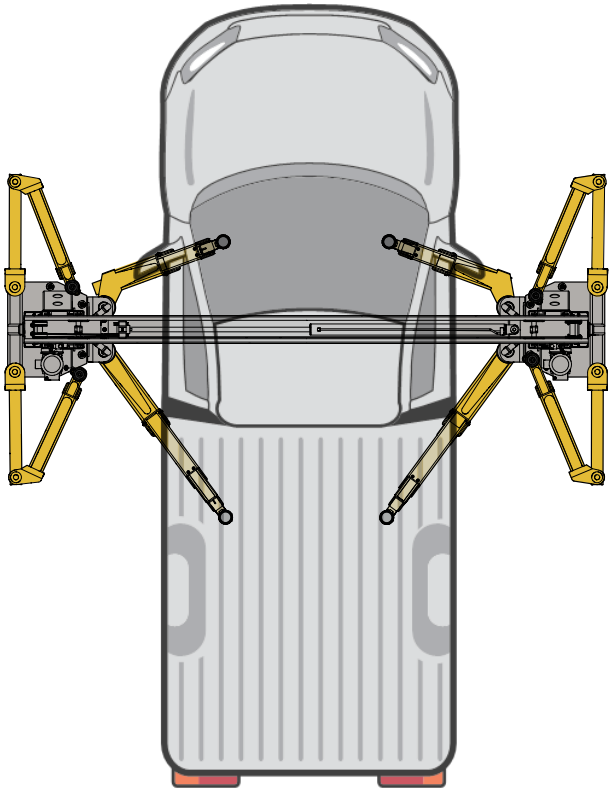
⚠ **WARNING** Always use safety stands when removing or installing any heavy components that may affect the balance of the vehicle on the Lift.

Adjust the primary lift arms under the vehicle until the pads/adapters are ***directly under*** the lifting points for the vehicle you are raising. If necessary, use auxiliary adapters to provide extra height.

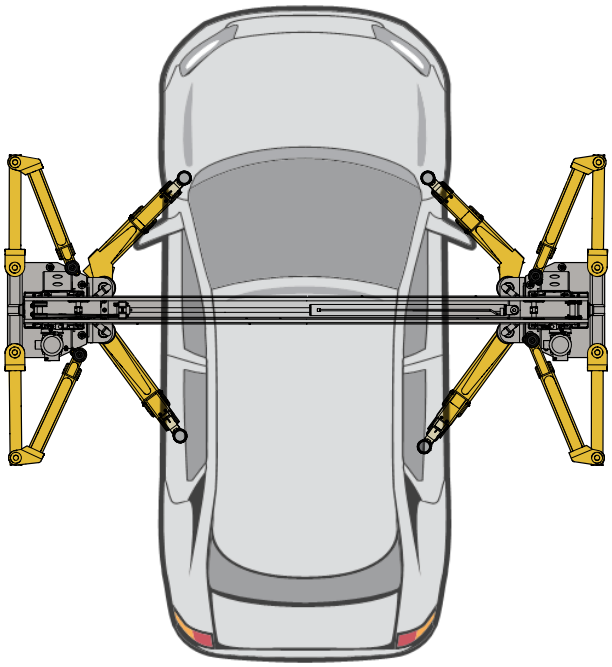
The vehicle's lifting point locations and center of gravity will determine if the Lift is configured in an asymmetric or symmetric configuration.

- In an Asymmetric Configuration the centerline of the vehicle is behind the lift posts.
- In a Symmetric Configuration the centerline of the vehicle is lined up at the lift posts. Refer to the figure below.

Asymmetric Configuration

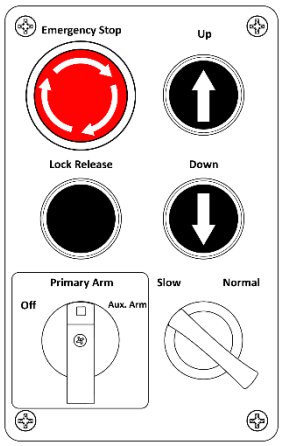


Symmetric Configuration



9. Retrieve the Control Pendant.
10. Select the primary lift arms by rotating the lift arm control to **PRIMARY**.
11. Select the SLOW speed setting.
12. Press the UP button to raise the primary lift arms until *just before* the Pads/adapters contact the vehicle's Lifting Points.
13. Check the arm restraint gears on all four lift arms to ensure they are engaged.

    If they are not engaged, move the lift arms back and forth until they engage.



14. Raise the Lift until the tires of the vehicle are a few inches off the ground.
15. Verify all four pads/adapters are making solid contact with the lifting points.

    If any of the pads/adapters are *not* making solid contact with the lifting points, carefully lower the lift by pressing the DOWN button and begin again. The pads/adapters *must* make solid contact with all lifting points.

    Gently rock the vehicle to ensure it is stable and balanced on the Lift.

    - If the vehicle is ***not*** stable and balanced, lower the Lift back to the ground and begin again.
    - If the vehicle ***is*** stable and balanced, raise it to the desired height.

⚠ DANGER Do not raise the Lift further until you are certain the vehicle on the Lift is both stable and balanced. If the vehicle is ***not*** stable and balanced, it could fall, which could damage the vehicle, damage the Lift, as well as injure or kill anyone under the vehicle.

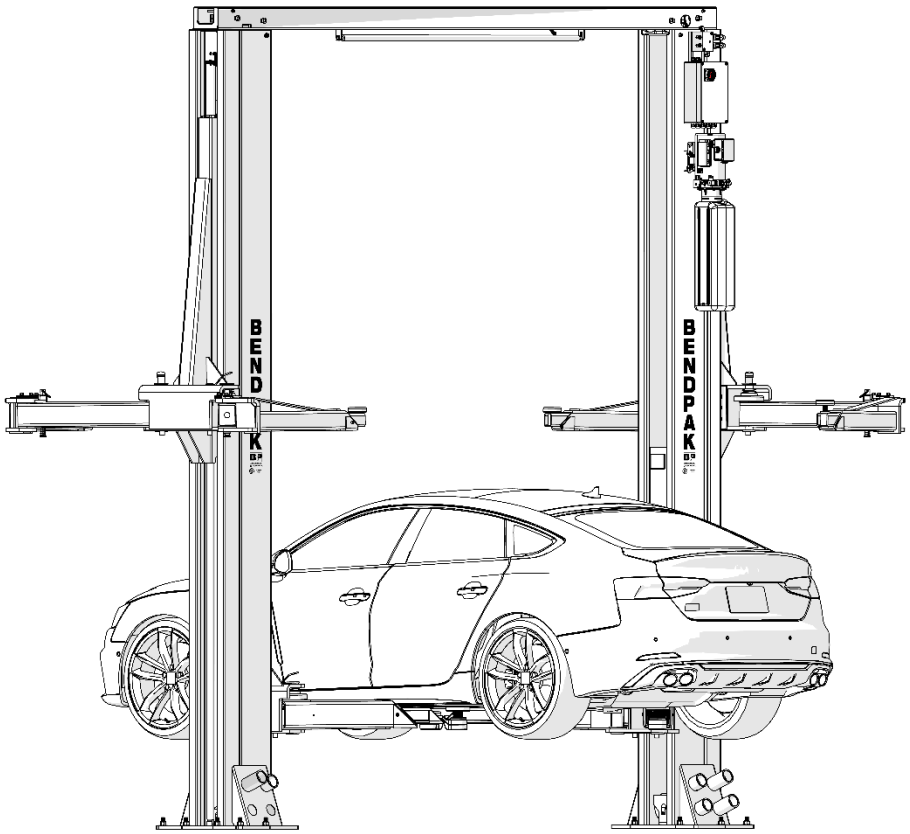
⚠ WARNING Always keep a clear line of sight to the Lift while operating it. Ensure personnel and objects are clear of the Lift.

⚠ WARNING Remain Clear of the elevated Lift until visual confirmation is made that all Safety Locks are fully engaged, and the Lift is lowered onto the Safety Locks.

16. Press and hold the **UP** Button.

    Listen as the Lift passes the Safety Locks; you should hear a thump as each side passes the Safety Locks at approximately the same time.

17. When the vehicle reaches the desired height, continue to raise it until it passes the next safety lock position (you will hear the thump as it passes), then release the **UP** button.



Press and hold the **DOWN** button, the primary lift arms will lower onto the closest Safety Lock position. Do ***not*** hold the Lock Release button.

When the Lift stops moving downward, it is engaged in its Safety Locks. Release the **DOWN** button.

⚠ **DANGER** NEVER leave the Lift controls unless the Lift is engaged on its Safety Locks or fully lowered.

18. Recheck the Pads/adapters to ensure they are all still making solid contact with the Lifting Points.
19. Verify the Lift is engaged in the ***same Safety Lock*** on ***both*** posts.

⚠ **DANGER** Always ensure all Safety Locks are engaged. If the Lift Heads are engaged on Safety Locks at two different heights or only one Safety Lock is engaged, the vehicle could become unbalanced and fall causing damage, injury, or death.

20. Rotate the lift arm control to the **OFF** position.
21. Begin work on the vehicle.

⚠ **WARNING** Always use safety stands when removing vehicle components that may affect the vehicle balance on the Lift.

Lowering a Vehicle - Primary Lift Arms Only

⚠ **DANGER** Do not override the Lift controls. For safety purposes, Lift controls are designed to stop the Lift if released. Overriding the Lift controls could lead to damage to the Lift, damage to the vehicle on the Lift, injury, or in rare cases, death to persons near the Lift.

⚠ **CAUTION** Remain clear of the Lift as it descends. Operate the Lift Safely by obeying all warnings labels and operating instructions.

To lower a Vehicle off the Lift:

1. Check above, under, and around the vehicle to ensure the area is clear of all obstructions. If you find any obstructions ***move them out of the way***.
2. Retrieve the pendant control.
3. Select the primary lift arms by rotating the lift arm control to **Primary Arm**.
4. Press and hold the **UP** button for a few seconds to move the Lift off its Safety Locks. Raise the Lift at least two inches to clear the Safety Locks.
5. Press and hold ***both*** the **Lock Release** and the **Down** button. When the Lift is on the ground, release both the **Lock Release** and the **Down** buttons.

IMPORTANT! The OctaFlex safety locks are spring loaded to remain in the “ready to engage position” until the operator uses the control pendant to release them.

⚠ **WARNING** Always rotate the Arm Control to the **OFF** position when leaving the Lift.

6. Move all four primary lift arms to their full drive-through positions to allow an unobstructed exit for the vehicle. Carefully drive the vehicle out of the service bay when the way is clear.

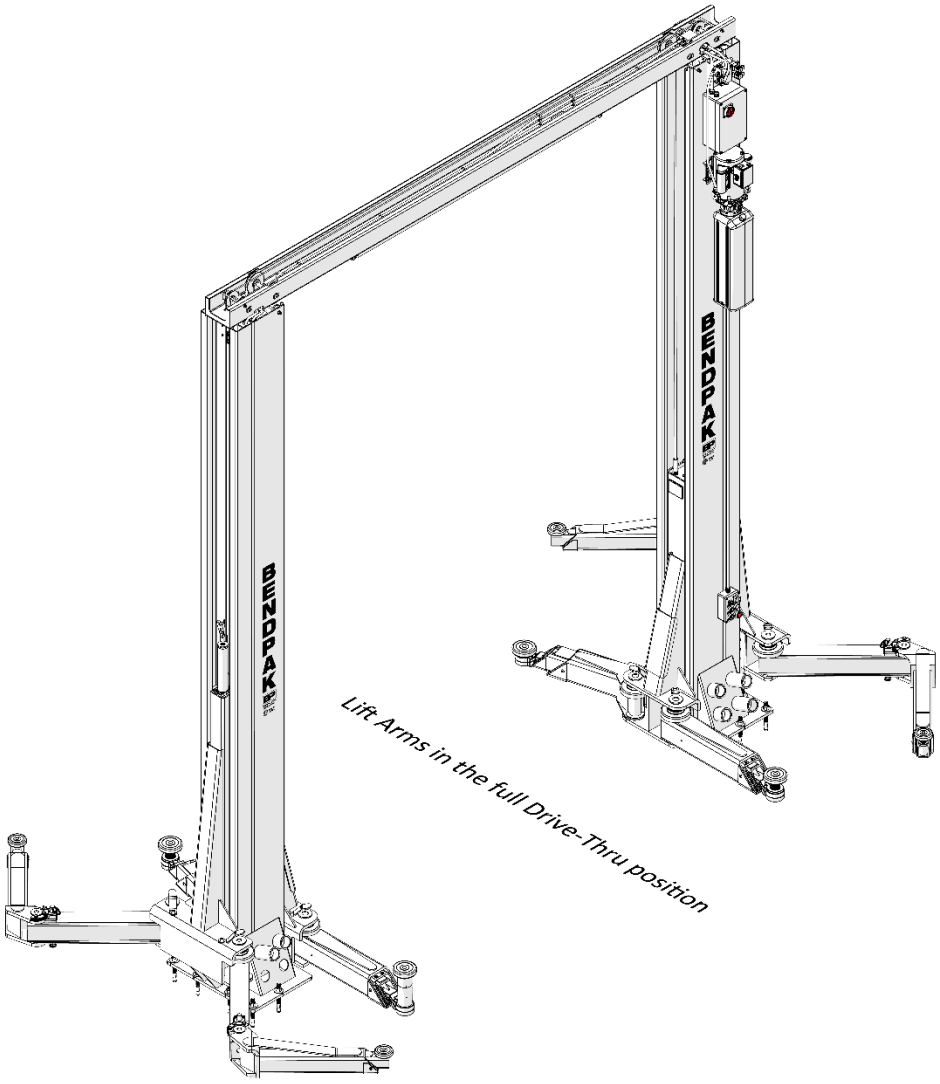
Raising a Vehicle - Primary and Auxiliary Lift Arms (Cab Off)

Do your research! Lifting the cab off any vehicle is a serious endeavor. The following procedure is an example of a “Cab Off” procedure. This example is provided to display the actions required to use both the primary and auxiliary lift arms on the OctaFlex. ***It is not intended to substitute for the manufacturer’s service guidance and instructions.***

IMPORTANT! ***The vehicle manufacturer should be your only source of valid information including lift points, vehicle balance, procedures, and any specialized tooling for safely removing the cab from the vehicle.***

⚠ **DANGER** Never exceed the maximum capacity of 12,000 lbs. (5,443 kg) on the primary lift arms and 6,000 lbs. (2,722 kg) on the auxiliary lift arms.

1. Ensure all personnel are clear of the service bay and all eight lift arms are on the ground, positioned to allow a clear drive-through of the vehicle into the Lift’s service bay. Refer to the figure below.
2. Check above, under, and around the vehicle to ensure the area is clear of all obstructions. If obstructions are present, ***move them out of the way***.



3. Carefully drive the vehicle into the service bay.
4. When you are satisfied with the location of the vehicle, place it in park, engage the parking brake, and turn off the motor. If the vehicle is a manual transmission, put it into first or reverse gear then turn off the motor.
5. Exit the vehicle. Open the doors carefully to avoid damaging them on the Lift.
6. Prepare the Cab for removal by following the manufacturer's service procedures.
7. Examine the vehicle to determine the frame type and lifting points. Install the most appropriate Pads/adapters on the primary lift arms.

⚠ DANGER Cab trucks with core support/radiators included as a part of the cab structure have a center of gravity far to the front of the vehicle. This arrangement may require additional support in the form of straps or safety stands to keep the cab balanced on the Lift's auxiliary arms.

⚠ WARNING Always use the lift pad/adapter type best suited for the vehicle or component being raised. If the wrong adapter type is used, the vehicle/component could become unstable on the Lift.

⚠ WARNING Always keep the vehicle level (parallel to the ground) when lifting. Many trucks and other vehicles include an offset in the frame geometry. This offset must be compensated for by using adapters. Lifting a vehicle at an angle to the ground is dangerous.

⚠ CAUTION When driving a vehicle into the service bay, keep to the middle of the area between the posts. If a lift arm or any other portion of the Lift is struck by the vehicle, damage the vehicle and/or the Lift is possible.

8. Locate the manufacturer's recommended Lifting Points for the vehicle you are raising.

   If you are unsure where the Lifting Points are, consult ***Vehicle Lifting Points for Frame Engaging Lifts***, which was provided with the Lift, or the manufacturer of the vehicle. C***ontact BendPak*** Support to purchase replacement copies by emailing **support@bendpak.com** or call **(800) 253-2363**, follow the prompts to contact support.

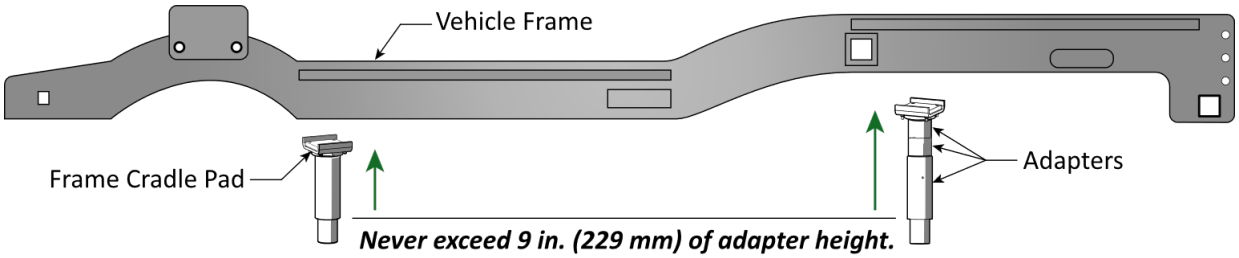
   Some vehicles may have the manufacturers' recommended Service Garage Lift Point locations identified by a triangle mark on the underside of the vehicle, reference SAE J2184- (Current Edition). On some vehicles, specific lifting points are indicated by a label located on the driver's side door jamb.

⚠ DANGER Do not 'eyeball' the best location for the Pad/adapters. ***You must use the manufacturer's recommended Lifting Points***. If not, the vehicle could become unstable and fall, damaging the vehicle, the Lift, and could injure or kill anyone under the vehicle.

⚠ WARNING Many specialty or modified vehicles or vehicles with unusually short or long wheelbases cannot be raised on a Two-Post Frame Engaging Lift. Contact the vehicle's manufacturer for Raising or Jacking guidance.

9. Adjust the primary lift arms under the vehicle until the Pads/adapters are ***directly under*** the Lifting Points for the vehicle you are raising.

10. Ensure the primary arms will not collide with the auxiliary arms.



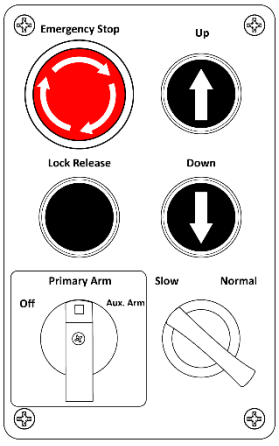
Important Ensure level lifting! Use a combination of low, medium, and tall adapters and adjustable pads to take up all available space between the adapters and the vehicle lift points. This will also add to the clearance between the primary and auxiliary Lift arms. ***Never exceed 9 in. (229 mm) of adapter height.***

Important Truck frames often include a rake or offset in the frame geometry that will require different pad adapter heights from the front of the cab to the rear bed of the vehicle. Different adapter heights are necessary to provide for level lifting of the vehicle. The cab may include a similar offset and may require additional height and adjustable lift pads on the auxiliary lift arms to ensure level lifting.

11. Retrieve the control pendant.
12. Select the primary lift arms by rotating the lift arm control to **Primary Arm**.
13. Select the **Slow** speed setting.
14. Press the **Up** button to raise the primary lift arms until ***just before*** the pads/adapters contact the vehicle's lifting points.
15. Check the arm restraint gears on all four lift arms to ensure they are engaged.

    If they are not engaged, move the lift arms back and forth until they engage.
16. Press the **Up** button until the tires of the vehicle are a few inches off the ground and stop raising.
17. Verify all four pads/adapters are making solid contact with the lifting points.

    If any of the pads/adapters are ***not*** making solid contact with the lifting points, carefully lower the Lift by pressing the **DOWN** button and begin again. The Pads/adapters ***must*** make solid contact with all Lifting Points.



IMPORTANT! If the Lift has passed a safety lock, the operator must press both the **Lock Release** and the **Down** button to lower the lift to the ground.

Gently rock the vehicle to ensure it is stable and balanced on the Lift.

- If the vehicle is ***not*** stable and balanced, lower the Lift back to the ground and begin again.
- If the vehicle ***is*** stable and balanced, raise it to the desired height.

⚠ DANGER Do not raise the Lift further until you are certain the vehicle on the Lift is both stable and balanced. If the vehicle is ***not*** stable and balanced, it could fall, which could damage the vehicle, damage the Lift, as well as injure or kill anyone under the vehicle.

⚠ WARNING Always keep a clear line of sight to the Lift while operating it. Ensure personnel and objects are clear of the Lift.

⚠ WARNING Remain Clear of the elevated Lift until visual confirmation is made that all Safety Locks are fully engaged, and the Lift is lowered onto the Safety Locks.

18. Press and hold the **Up** button.

    Listen as the Lift passes the safety locks; you should hear a thump as each side passes the safety locks at approximately the same time.

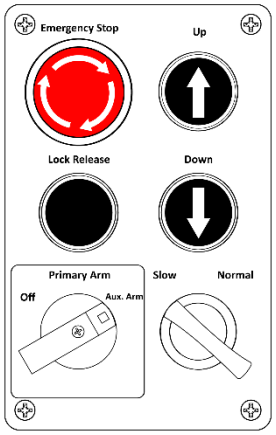
19. When the vehicle reaches the desired height, raise it past the next safety lock position (you will hear the thump as it passes), then release the **Up** button.
20. *Press and hold* the **Down** button, the primary lift arms will lower onto the closest Safety Lock position. Do ***not*** hold the lock release button.
21. When the Lift stops moving downward, it is engaged on its safety locks. Release the **Down** button.
22. Verify both primary and both auxiliary lift heads are secured on safety locks on ***both*** lift posts.

⚠ WARNING ***The Operator is responsible for Primary and Auxiliary Lift Arm clearances.*** There is nothing to prevent the auxiliary and primary lift arms from colliding with each other. Carefully evaluate the lift arm positions and verify the lift controls are set to move the correct set of lift arms ***before*** commanding any up or down movement through the lift control pendant.

23. Remove any fasteners and electrical/mechanical connections accessible from the bottom of the vehicle that are securing the vehicle cab to the chassis and drivetrain of the vehicle.
24. Select the most appropriate combination of pads/adapters to lift the cab and install them on the auxiliary arms.

⚠ CAUTION Ensure the auxiliary lift arms will not collide with the primary lift arms. Moving the auxiliary arms to the full drive-thru position will <u>*usually, but not always,*</u> clear the primary lift arms.

25. Retrieve the Control Pendant.
26. Select the auxiliary lift arms by rotating the lift arm control to **AUX. ARM**.
27. Rotate the Speed control to **SLOW**.
28. Press and hold the **UP** button to raise the Auxiliary Arms and stop just before they contact the Cab Lifting points.
29. Press the **Up** button until it contacts the Cab Lifting Points.
30. Walk around the Cab to verify all four lift pads are contacting the Cab's lift points.



31. Raise the Cab just a few inches.
32. Walk around the Cab and look into the gap created by lifting the Cab. Look for any remaining fasteners, mechanical linkages or electrical harnesses and connections that are still attached.

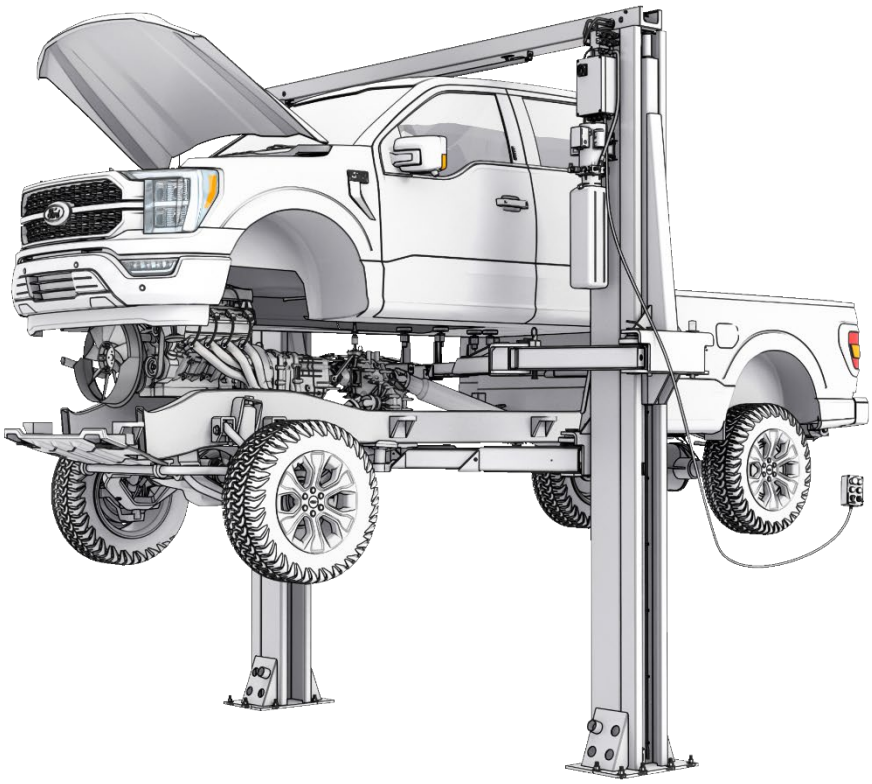
    If connections remain, then disconnect or remove before continuing.
33. Continue to lift slowly a few inches at a time until it is clear that all connections have been addressed.
34. Raise the Cab until it is at the desired height and then lower the lift arms onto a safety lock by pressing the **Down** button. The lift head will lower and stop on the closest safety lock.
35. Verify the Lift is engaged on the ***same safety lock*** on both posts.

⚠ **WARNING** Never leave the lift controls unless the Lift is engaged on its safety locks or fully lowered to the ground.

36. Recheck the pads/adapters to ensure they are all still making solid contact with the lifting points.

⚠ **DANGER** Always ensure both safety locks are engaged on ***both lift posts***. If the lift heads are engaged on safety locks at two different heights or only one safety lock is engaged, the vehicle could become unbalanced and fall, causing damage, injury, or death.

37. Begin work on the vehicle. Always use safety stands when removing components that may affect the weight and balance of the assemblies on the Lift.



Lowering a Vehicle – Primary and Auxiliary Lift Arms

⚠ DANGER Do not override the Lift controls. For safety purposes, Lift controls are designed to stop the Lift if released. Overriding the Lift controls could lead to damage to the Lift, damage to the vehicle on the Lift, injury, or in rare cases, death to personnel near the Lift.

⚠CAUTION Remain clear of the Lift as it descends. Operate the Lift safely by obeying all warnings labels and operating instructions.

⚠ WARNING Ensure the primary and auxiliary lift arms will not interfere with one another when raising or lowering the vehicle. ***It is the Operator's responsibility to ensure there is sufficient lift arm clearance on all eight Arms.***

To lower a vehicle off the Lift:

This procedure assumes the work on the vehicle is completed and it is ready to be lowered to the ground.

1. Check above, under, and around the vehicle to ensure the area is clear of all obstructions. If you find any obstructions ***move them out of the way***.
2. Ensure the primary arms will not strike the auxiliary arms.
7. Retrieve the pendant control.
8. Select the primary lift arms by rotating the lift arm control to **Primary Arm**.
9. Press and hold the **Up** button for a few seconds to move the Lift off its safety locks. Raise the Lift at least two inches to clear the safety locks.
10. Press and hold ***both*** the **Lock Release** and the **Down** button.
11. When the Lift is on the ground, release both buttons.

⚠ WARNING Always rotate the arm control to the **OFF** position when leaving the Lift.

12. Move all four primary lift arms to their full drive-through positions to allow an unobstructed exit for the vehicle.
13. Carefully drive the vehicle out of the service bay when the way is clear.

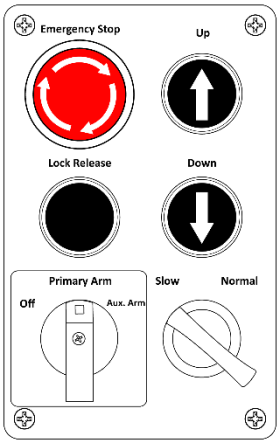
Primary Lift Arms - Raising and Lowering

To raise the Primary Lift Arms:

1. Ensure the primary arms will not collide with the auxiliary arms.
2. Rotate the lift arm Control to **Primary Arm**.
3. Press and hold the **Up** button.
4. When Lift is just past the desired height, release the **Up** button.
5. Press and hold the **Down** button until the lift engages on a safety lock and stops moving downward.
6. Release the **Down** button when the Lift stops.
7. Rotate the lift arm control to the **OFF** position.

Do ***not*** push the **LOCK RELEASE** button while lowering. *If pushed,* The Lift will continue to lower and will not engage on its Safety Locks.

Only leave the Lift on its safety locks or fully lowered.



⚠ WARNING

Always rotate the arm control to the **OFF** position when leaving the Lift.

To lower the Primary Lift Arms:

1. Ensure the primary arms will not collide with the auxiliary arms.
2. Rotate the lift arms control to **Primary Arm**.
3. Press and hold the **UP** button for two to three seconds.

   This moves Lift off its Safety Locks.
4. Press and hold **both** the **Lock Release** button *and* the **Down** button simultaneously. The Lift will begin to lower.
5. When Lift is fully lowered to the ground, release both buttons.
6. Rotate the lift arm control to the **OFF** position.
7. Move the lift arms out from under the vehicle to the full drive-thru position.

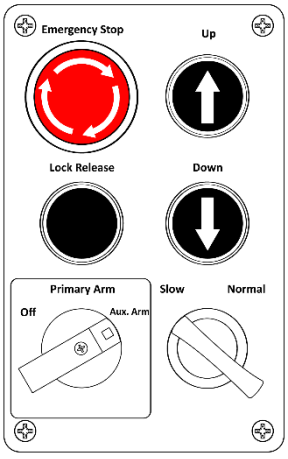
Auxiliary Lift Arms - Raising and Lowering

To raise the Auxiliary Lift Arms:

1. Ensure the auxiliary arms will not collide with the primary arms.
2. Rotate the lift arm control to **Aux. Arm**.
3. Press and hold the **Up** button.
4. When Lift is just past desired height, release **Up** button.
5. Press and hold the **Down** button until the lift engages on a safety lock and stops moving downward.
6. Ensure safety locks are engaged on both lift posts
7. Release the **Down** button when the Lift stops.
8. Rotate the lift arm Control to the **Off** position.

Do ***not*** push the **Lock Release** button while lowering. *If pushed, t*he Lift will continue to lower and will not engage on its Safety Locks.

Only leave the Lift on its Safety Locks or fully lowered.



⚠ WARNING

Always rotate the arm control to the **OFF** position when leaving the Lift.

To lower the Auxiliary Lift Arms:

1. Ensure the primary arms will not collide with the auxiliary arms.
2. Rotate the lift arm control to **Aux. Arm**.
3. Press and hold the **Up** button for two to three seconds.

   This moves Lift off its safety locks.
4. Press and hold **both** the **Lock Release** button *and* the **Down** button simultaneously. The Lift will begin to lower.
5. When Lift is fully lowered to the ground, release both buttons.
6. Rotate the lift arm control to the **OFF** position.
7. Move the lift arms to the full drive-thru position.

About Lifting Points, Adapters, and Auxiliary Adapters

An important point to keep in mind when using a frame-engaging Lift is that the raised vehicle must be balanced on the four lift arms. If the vehicle is not balanced, it is more likely to become unstable and slide off the Lift, possibly damaging the Lift, the vehicle, and anything under the Lift, including injuring people.

⚠ WARNING You ***must*** use all four primary lift arms when raising a vehicle. Never use just one, two, or three lift arms to raise a vehicle. The vehicle will be unstable and could slip off the Lift, possibly damaging the Lift, damaging the vehicle, and injuring anyone under it.

To balance a vehicle on a frame-engaging Lift, you need to have the lift pads (adapters) contact the vehicle on the manufacturer's recommended Lifting Points. When you raise a vehicle by its Lifting Points, the vehicle is balanced.

NOTICE The manufacturers' recommended Lifting Points do not take into consideration any major changes that might have been made to the vehicle. If the motor is removed, for instance, or there is a 5,000 pound (2,268 kg) weight in the trunk, the vehicle's Lifting Points will not be the best balancing points.

Some vehicles have indicators on the underside that identify the manufacturer's Lifting Points; many do not.

Your best approach is to find the vehicle in the guide provided with your Lift. *Vehicle Lifting Points for Frame Engaging Lifts* or contact the manufacturer of the vehicle. This guide also includes a page of safe lifting suggestions, which everyone who uses the Lift should read.

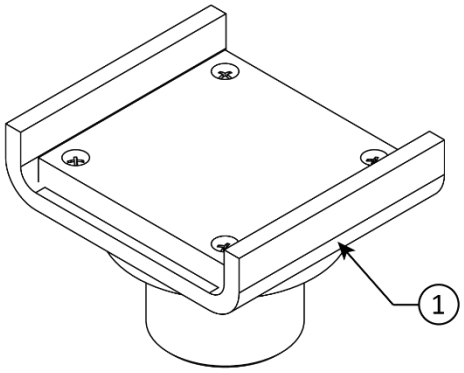
Lifting it Right: A Safety Manual from the Automotive Lift Institute, also provided with your Lift, includes a wide variety of information about Lifts and how to use them safely.

⚠ DANGER ***Never*** place Contact Pads on non-approved, non-load holding sill covers or side skirts!

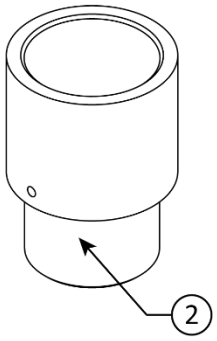
Standard Accessories

The OctaFlex is supplied with the following standard accessories:

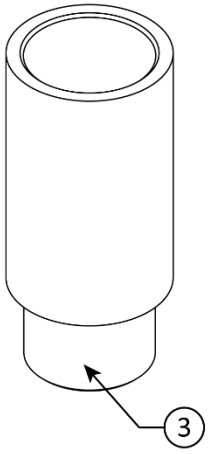
Item	Description	Part Number	Qty.
1	Frame Cradle Lift Pad Ø60 mm	5215761	Set of 4
2	Arm Adapter, Medium 2.5 in. (64 mm) Ø60 mm	5215758	Set of 4
3	Arm Adapter, Tall 5 in. (127 mm) Ø60 mm	5215759	Set of 4
4	Frame Cradle Lift Pad Ø35 mm	5215754	Set of 4
5	Round Adjustable Lift Pad Ø35mm	5210524	Set of 4



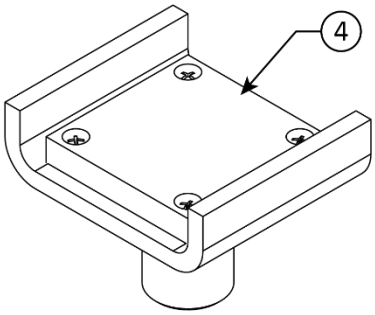
Ø60mm Frame Cradle Pad



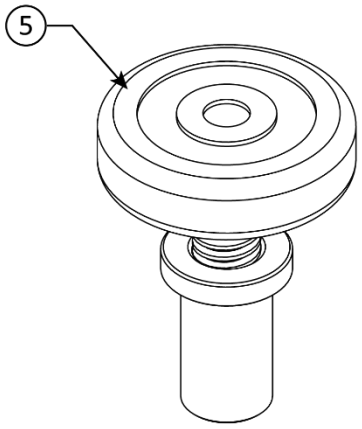
Arm Adapter, Medium



Arm Adapter, Tall



Ø35mm Frame Cradle Pad

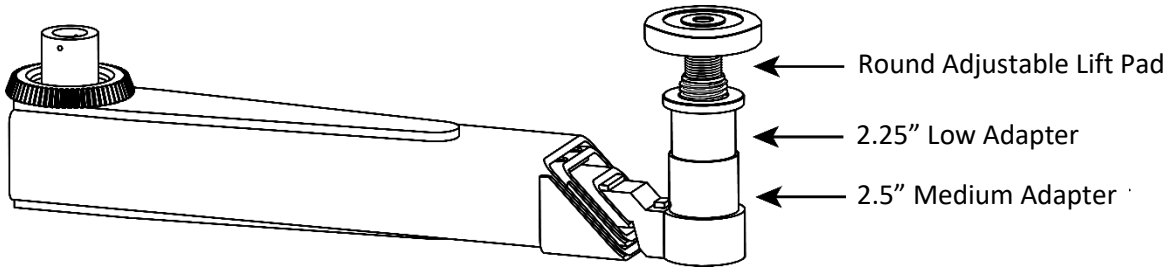


Ø35mm Round Adjustable Lift Pad Adapter

Optional Accessories

Visit **bendpak.com** for additional adapters and auxiliary adapters (also called height adapters or extenders) available adapters include the following.

- **Four Low Auxiliary Adapters – 2.25 in. (56 mm)** (5215757). Ø35mm pin. Adapters for auxiliary arms allow positioning the height of the auxiliary adapters to make better contact with vehicles.
- **Four Medium Auxiliary Adapters – 2.5 in. (64 mm)** (5215758). Ø35mm pin. Adapters for auxiliary arms.

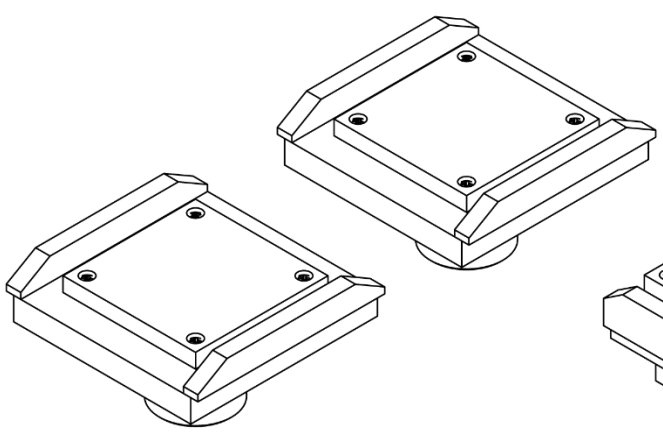


⚠ **WARNING** You can stack auxiliary adapters, but only up to 9 in. If you stack auxiliary adapters above 9 in., the vehicle could become unstable and slip off the Lift, possibly damaging the Lift, damaging the vehicle, and injuring anyone under it.

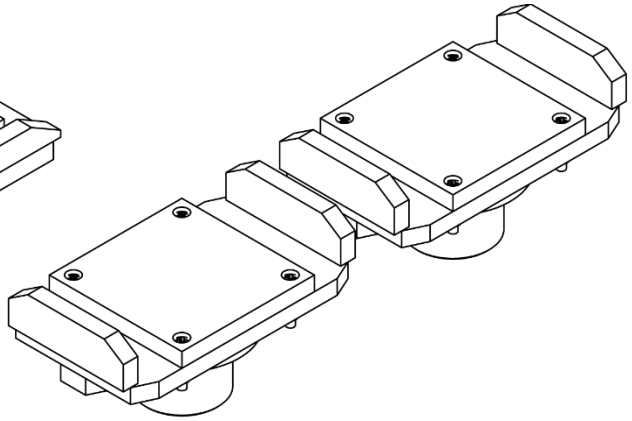
⚠ **WARNING** Use the correct adapters. Do not attempt to lift trucks or other frame type vehicles with standard Rubber Contact Pads.

⚠ **WARNING** Never use the Lift with missing or damaged rubber contact pads. Always replace rubber contact pads when worn or damaged.

- **Round Adjustable Lift Pad Assembly** — (5215704) 60mm pin. Best suited for vehicles with Unibody construction; they are height adjustable, up to 2.25 in. (55mm).
- **Wide Frame Cradle Adapters** — (5215848) Recommended for use when lifting heavy-duty wide frame vehicles on the primary arms. **Wide Frame** version fit frames up to 5.25 in. (133 mm). Ø60mm pin, set of 2.
- **Super Wide Frame Cradle Adapters** — (5210253) Fits frames up to 6.5 in. (168 mm) Ø60mm pin, set of two.

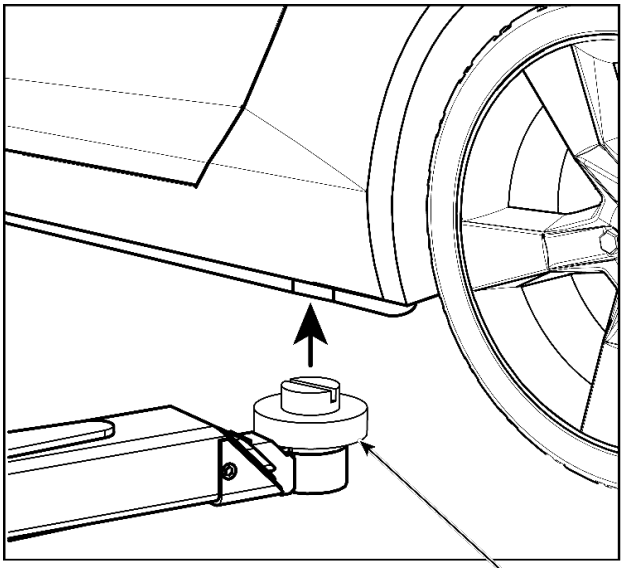


Wide Frame Cradle Adapter

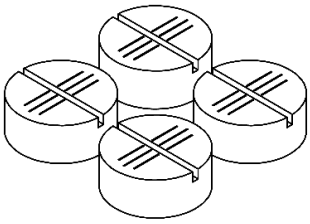


Super Wide Frame Cradle Adapter

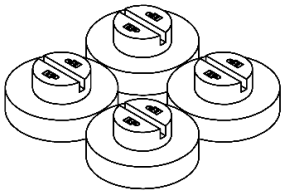
Quick-Fit Slotted Pinch-Weld Pucks or Pads — Always use slotted Pinch-Weld Pucks (5210263) or slotted Pinch-Weld Pads (5210254) on Ø60mm pin adapters for the primary lift arms when lifting vehicles on manufacturer approved pinch-weld jacking points. These convenient tear-resistant urethane adapters simply fit over the existing round contact pads.



Always use slotted Pads or Pucks when lifting Vehicles on OEM-approved Pinch Weld Jacking Points.

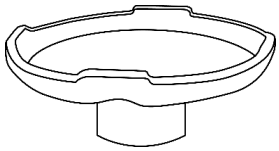


5210254 Set of 4 Slotted Pads

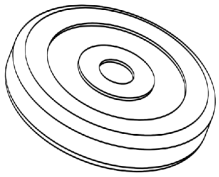


5210263 Set of 4 Slotted Pucks

Steel Lift Pads — Recommended for additional stability on all vehicles. The flanged edges grip the chassis for an extra-secure hold. Ø60mm pin (5215763) Set of 4



Replacement Polyurethane Tuf Pads™ — Never use your Lift with missing or damaged Rubber Contact Pads. Always replace Pads when worn or damaged, Ø60mm pin, (5700227) set of 4.



Visit **BendPak.com** for accessories and replacement Parts information at **(800) 253-2363**, then follow the prompts. Please have the model and serial number of the Lift available.

Maintenance

⚠DANGER Before performing any maintenance on your Lift, verify it is completely disconnected from electrical power. This Lift uses electrical energy. If your organization has Lockout/Tagout policies, make sure to implement them before performing any maintenance. If you come into contact with high voltage, you could be injured or killed.

⚠ 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, remove it from service, disconnect it from power, and make arrangements for repair.

⚠ DANGER Always wear proper Personal Protective Equipment (PPE) when working with hydraulics. Gloves and Safety Glasses are a minimum requirement. Keep your body away from suspected leaks. Use a clean piece of sheet metal to pass along hoses and fittings to detect leaks. Shut down the equipment if a leak is suspected.

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

⚠ WARNING Do not operate your Lift if you find maintenance issues; instead, remove it from service and correct the maintenance issues. 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 **(888) 856-5820**.
Online chat is also available at **www.bendpak.com** click the chat icon.

Read the Installation and Operation manual and understand how this equipment operates before using, maintaining, or repairing. Routine maintenance and adjustments are the responsibility of the owner/user and are not covered under warranty. Routine maintenance and adjustments should be carried out on a regular basis as outlined below. *Unless stated otherwise, all maintenance may be performed by the owner/employer and does not require trained lift service personnel*. Replace worn, damaged or broken parts with original BendPak or BendPak approved parts or with parts that meet or exceed the original specifications.

Maintenance and Interval Recommendations:

This lift's service life is dependent on the level and frequency of care and maintenance provided. By simply following a few guidelines, the life of this lift may be extended by many years. The following care and maintenance procedures will help achieve a long service life and also aid by ensuring safe operation and early detection of problems.
Tools required:

- Open End Wrench Set (SAE & Metric)
- Screwdrivers (Phillips and Slotted)
- Hydraulic Fluid (same type and weight as the current fluid in use.)
- Clean Shop Towels
- Digital Level (1° min. res.)
- One12-foot ladder
- Torque wrench
- Hex Key Set
- Loctite 242 or equal liquid thread locker
- Lubricants
  - White Lithium Multi-Purpose Lubricant
  - Red Lithium Grease
  - ALMASOL Wire Rope Lubricant or 90W Gear Oil
- Volt/Ohm Multimeter
- Non-contact infrared thermometer

The following maintenance and interval recommendations are based on typical workday use and operation.

Daily Maintenance

1. Primary and auxiliary lift arm leveling should be checked every 10 vehicle lifts to counter any cable stretch. Repeat the procedure in Leveling as required.
2. Keep the Lift and work area clean, to promote both safety and better problem visibility.
3. Visually inspect that the Safety Locks and controls are in good operating condition. Do not use your Lift if the Safety Locks or controls are damaged or excessively worn.
4. Check the hydraulic fluid Level in the reservoir. Add fluid, if necessary.
5. Check for hydraulic fluid leaks on hoses, fittings, and cylinders. Inspect for damage. Hose covers that are cut, cracked, blistered, show signs of abrasion, kinking or flattened are to be replaced. Cylinder ports that are cracked, show signs of leaking or other damage.
6. Start the hydraulic system and lift the arms slightly to apply pressure. Pass a clean piece of sheet metal near the hydraulic hoses, fittings, and cylinders. Hydraulic fluid on the metal indicates a leak. Shut down the system and tagout the Lift to prevent use until repaired.
7. Verify the cylinder clamp is in place and tight on the hydraulic cylinder just above the Lift head.

Monthly Maintenance

1. Equalizing cables must be checked for tightness and level lifting on a monthly basis or sooner with heavy use. Arms shall be level as indicated by a 4' level 1/8 to 1/4 bubble difference.
2. Remove, clean, and apply new Red Lithium grease to all Cable Sheave Pins as outlined in the **Lubrication Procedure**.
3. Inspect the condition of all Equalizing Cables and mechanisms. Run a shop towel over the Cable surface while watching for snags. Replace as required.
4. Inspect all hydraulic hoses, fittings, and cylinders for damage and leaks.
5. Apply 90-WT gear oil or ALMASOL® Wire Rope Lubricant to both Equalizing Cables.
6. Apply White Spray Lithium Multi-Purpose grease to the four inside contact corners of both posts.
7. Apply White Spray Lithium Multi-Purpose grease to all lift arm pivot points.
8. Inspect all lift arm pins and locking mechanisms for damage and wear. Replace as required.
9. Verify all fasteners are torqued to specifications.
10. Push the arms from side to side against the arm locks to verify all four arm locks are engaging correctly. The movement on a fully extended arm should not cause the stop gear to skip teeth, remove the covers from the gears and check that the gear teeth are not worn or damaged. If the teeth are not in good condition, **immediately take the lift out of service** and contact BendPak for replacements.
11. Verify all Warning labels are in good condition and legible.

Every Two Months

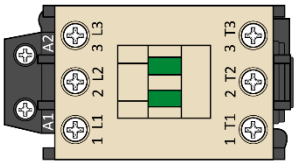
Verify all anchor bolts are secure and torque to 85-95 ft.-lbs.

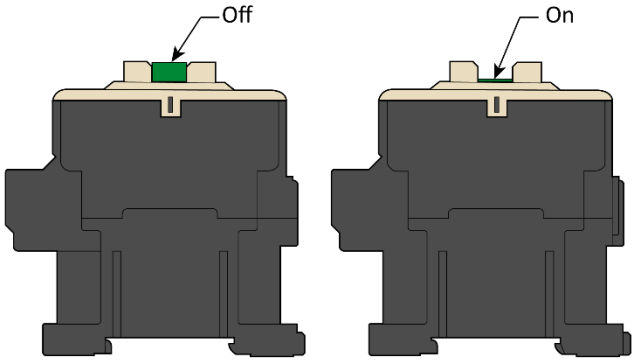
Annually

Inspect the Contactor. Regular inspection of the contactor is crucial for maintaining the efficiency and reliability of the electrical system. Faulty contactors can lead to equipment malfunctions, increased energy consumption, and safety hazards. The contactor on this lift functions as an electromechanical switch that applies and removes power to the hydraulic unit. Contactors that switch motors (inductive loads) tend to wear faster than resistive loads due to the high inrush current motors require. *Plan to replace the contactor on a 2 to 5 year basis depending on usage. Low-use conditions may see longer time between replacement.*

⚠DANGER Before performing any maintenance on this Lift, verify it is completely disconnected from electrical power. Lockout/tagout power to prevent accidental re-energization and protect technicians from potential hazards.

1. **Contactor Visual Inspection:** Pitting on contacts can result from electrical arcing during operation. Excessive pitting can lead to poor electrical contact. Burning, discoloration (usually blackened or charred appearance), or erosion on contact surfaces indicates excessive heat. All of the forgoing conditions Indicate it is time to replace the contactor.
2. **Inspect for:** Loud buzzing, humming, or chattering during operation. May indicate time to replace the contactor.
3. **Inspect for:** Loose connections. Loose wires in terminals can lead to poor electrical connection, and intermittent operational failures.
4. **Inspect for:** Mechanical alignment of the contacts. Push on the moving contact to ensure it travels freely and snaps back into place when released. If there is some mechanical obstruction/failure replace the contactor.
5. **Inspect for:** Dirt and debris. Inspect the contactor for excessive dust or debris accumulation, which can interfere with its mechanical and electrical operation. Cleaning or replacement of the contactor may be required if significant buildup is present.
6. **Overheating:** Hot spots detected via infrared (IR) non-contact thermometer may indicate high resistance/wear. Look for signs of overheating – cracks in the contactor housing, burn marks, melted plastic, etc. Indicates time to replace the contactor.





⚠DANGER A licensed electrician is required to replace the contactor.

Every three to five years or as required

1. Carefully check the equalizing cables for signs of damage or extreme wear. See **Wire Rope Inspection and Maintenance** for additional information.
2. Inspect and lubricate the wire rope, sheaves and pins.
   If the Lift becomes inoperative in a raised position, refer to the **Troubleshooting** section.

⚠DANGER Before performing any maintenance on the Lift, verify it is completely disconnected from electrical power and cannot be re-energized.

Hydraulic System Maintenance

There is no scheduled replacement period on the hydraulic components in this system. All Hydraulic System components are considered “On Condition” maintenance. Inspect periodically as outlined in the previous maintenance section and replace as required. The inspection minimum interval should not exceed one year. ***Repairs to the Hydraulic Power Unit and adjustments to the PRV are not authorized.*** Be advised, there are no drains or test points in this hydraulic system.

⚠ **WARNING** BendPak does not supply hydraulic fluid or lubricants with this Lift. **Always** refer to the Safety Data Sheet (SDS) for safe handling and disposal information. SDS are available from the fluid or lubricant supplier / manufacturer.

⚠ **WARNING** Hydraulic Fluid contains toxic components and must be disposed of in accordance with all national, state, and local regulations. See **Disposing of Used Hydraulic Fluid**. **Wear appropriate personal protective equipment for working with hydraulic fluid including gloves, and safety glasses.**

NOTICE! BendPak does not authorize field repair of the power units. Field adjustment of the Pressure Relief Valve (PRV) is not permitted.

Maintenance activities consist of:

3. Inspecting the Cylinder Rod.
3. Hydraulic Fluid Inspection for contamination and verifying the fill level.
4. Inspecting and cleaning the hydraulic fluid filter.
5. Inspecting the hydraulic hoses and/or lines.
6. Inspecting the reservoir and reservoir cap.

⚠ **DANGER** The power unit on this Lift 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 at the desired level. Tampering with, adjusting, modifying, or removing the relief valve is extremely dangerous and is not permitted.

⚠ **DANGER** All hydraulic components on this Lift are assumed to be pressurized unless the lift arms have been lowered to the ground and both primary and auxiliary lowering valves have been held open for at least ten seconds in which case the entire system is considered depressurized.

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

Tools Required:

• Clean Shop Towels • Hydraulic Fluid Spill Kit – Shop Towels and oil absorbent material • Clean clear glass container to examine the fluid sample.	• Open End Wrench Set • Torque wrench • Screwdrivers • Ladder • JIC fitting cap/plug	• Ladder • Clean Funnel • Clean tube to draw a fluid sample. • Waste Fluid Containers

Hydraulic Maintenance Start-up

1. Review the Installation and Operation Manual before attempting this procedure.
2. Read and understand all Danger, Warning, and Caution labels on the Lift. If any labels are illegible, contact BendPak to arrange for replacement labels to be sent.
3. Walk around the Lift and examine it carefully for damaged or worn mechanical components. If such components are found, have the problem components replaced or repaired.
4. Look for hydraulic fluid on the ground or the Lift that could indicate a leak in the hydraulic system.
5. Verify all hydraulic connections are tight.
6. Check the hydraulic fluid level in the power unit's reservoir.
7. Remove the polyethylene cover on each lift head to enable a view of the cylinder rod.
8. Move the power disconnect switch to the On position.
9. Verify all lift arms are on the ground. Hold in both the primary and secondary lowering valve for ten seconds to verify there is no pressure in the system.
10. Verify the area is clean and all personnel are clear of the Lift and are in no danger from the Lift.
11. Verify power is supplied to the Lift by briefly pressing the up button. The power unit will start.
12. Raise both the primary and auxiliary lift arms to the top safety lock with no load on the Lift.

Inspect the Cylinder Rods

1. A ladder may be required to access the top of the Lift Head. Visually inspect the rods for wear, corrosion, and pitting. These conditions may lead to leaking seals and moisture intrusion into the hydraulic fluid. If any of these conditions are found, the cylinder may need replacement.
2. Contact BendPak Support at bendpak.com/support, via email at support@bendpak.com, or by phone at (888) 856-5820.
3. If the Cylinder Rod is in good condition, replace the polyethylene covers and repeat the procedure on the remaining lift cylinders.
4. Lower the lift's arms until they rest on the ground.
5. Hold in the DOWN control on both the primary and secondary arms for about 10 seconds after the lift arms are resting on the ground to ensure the hydraulic system is depressurized.
6. Turn the lift's arm control to the OFF position and turn the power disconnect to the off position. Lockout/Tag Out the power disconnect to prevent unintentional start up during the maintenance procedure.

Inspect the Solenoid Valves

1. Visually inspect for cleanliness, and leaks.
2. Verify all controls operate the valves correctly.
3. Verify the coil nut is tight, the torque specifications is 4 to 5 ft-lb (5.4 to 6.8 N-m)
4. If leaking, verify the valve cartridge is tight. Installation torque 19 to 21 ft-lb (25.8 to 28.5 N-m)

Inspect the Hydraulic Fluid for Contamination and Fill Level

1. Use a ladder to access the power unit.
2. Remove the reservoir cap and draw a small sample of hydraulic fluid from the power unit. Use a small, clean tube to reach into the reservoir. Cover the end with your thumb and remove a small sample. Place the sample into a clean, clear glass container.
3. Examine the hydraulic fluid sample visually.
    a. Clean hydraulic fluid ranges from almost clear to an amber color.
    b. When the hydraulic fluid becomes dark, then it should be drained from the system and replaced with new hydraulic fluid.
    c. If solids are visible suspended in the fluid or found at the bottom of the container, the hydraulic fluid should be drained and replaced with new Fluid.
    d. Fluid with a milk-like tint indicates water in the Hydraulic System. Remove all fluid from the system and replace it with clean hydraulic fluid.
    e. A change in the smell of hydraulic fluid may indicate contamination. Excessive air trapped in the Fluid may create nitrogen compounds which can emit a turpentine-like odor. If a distinct change in the odor of the Fluid is noted, remove all fluid from the system and replace with clean hydraulic fluid.
4. Verify the reservoir fill level by visually comparing the level inside the reservoir with the markings on the exterior of the reservoir.

Inspect the Hoses/Lines and Fittings

1. Inspect all hydraulic hoses for breaks, swelling, pinching, kinking, fraying, bubbling, or other abrasions. Damaged hoses are to be replaced before they fail in service.
2. Inspect Metal Hydraulic Lines for dents, and corrosion. Damaged Hydraulic Lines are to be replaced before they fail in service.
3. Inspect Hydraulic Fittings to verify they are tight and undamaged. Tighten or replace as required.

Inspect the Reservoir and Cap

1. Reservoir caps are to be kept clean to prevent the migration of debris into the Hydraulic System.
2. Inspect the cap and reservoir for cracks, verify any filter material in the cap is clean. Rinse in clean fluid, if required.
3. If the reservoir, its cap, or seal is damaged, contact BendPak for replacement parts.

Draining The Hydraulic System

1. Draining the hydraulic system and replacing the fluid should only be undertaken if the fluid is contaminated. There are no drain valves, test points, or strainers with magnets on this Lift's hydraulic system. Gather shop towels and oil absorbent material in case of fluid spills. BendPak advises an assistant to be available to aid in keeping fluid spills to a minimum.
2. Retrieve a container capable of storing the 3.6 gal. of hydraulic fluid from the system.
3. With the lift arms resting on the ground, rotate the arm control to PRIMARY ARM hold the DOWN button for about 10 seconds to verify the primary arm system is depressurized.
4. Repeat step 3 on the auxiliary arms. All components of the Hydraulic System must be depressurized.

5. Open the system at the hydraulic hose routed from the power unit to the JIC Tee on the power side post. Quickly plug the tee fitting with a JIC cap. Use Shop Towels to minimize any spilled hydraulic fluid.
6. Place the end of the hydraulic hose just removed from the tee into the waste fluid container.
7. Press the Raise button while holding the hose in the container. Release the button when air begins to escape the hose.
8. Rotate the power disconnect to the OFF position to remove power from the Lift and lockout to prevent unintended restart of the Lift during this procedure.
9. Place a small waste oil container near each cylinder. Open the JIC Connector on the Off Side Cylinder and place that end of the Hydraulic hose into the container. Cover the Off Side Cylinder JIC connector with a rag to absorb any fluid continuing to leak from the Cylinder.
10. Open the JIC hose connection on the Power Side Cylinder and place the hose end into the waste container to capture the fluid exiting the hose.

Inspect and Clean the Filter

1. An assistant is recommended for this inspection. Gather tools for removal and oil clean-up supplies in case of a spill.
2. Remove the power unit's reservoir. The reservoir is awkward to handle. Have an assistant support the reservoir while it is loosened.
3. Remove the 100 mesh filter at the bottom of the suction pipe.
4. Inspect the filter for debris. If excessive amounts of debris are found:
    i. Thoroughly Rinse the Filter in clean hydraulic fluid to remove contaminants.
    ii. Dispose of the waste hydraulic fluid in accordance with national, state, and local regulations.
5. When the screen is clean, replace the filter on the suction pipe.
6. Use clean hydraulic fluid and Shop Towels to clean the reservoir.
7. When the reservoir is clean, install the reservoir on the power unit.
8. Fill the reservoir with clean hydraulic fluid.
9. Reconnect all Hydraulic Hoses and verify they are tight and undamaged.
10. Dispose of Shop Towels and oil absorbent material in accordance with all national and local regulations.
11. Rotate the power disconnect to the ON position to return power from the Lift.
12. Raise and lower both the primary and auxiliary arms several times with a 2-5 minute break between up and down cycles. This will self-bleed air from the system.

⚠ DANGER NEVER mix hydraulic fluids. Mixing hydraulic fluids can have a range of unpredictable negative results ranging from minor to major damage to the hydraulic system.

Hydraulic System Spare Parts

See pages 127-141.

Lubrication Procedure

⚠ **WARNING** BendPak does not supply Lubrication products with this Lift. **Always** refer to the Safety Data Sheet (SDS) for safe handling and disposal information. SDS are available from the lubricant supplier or manufacturer.

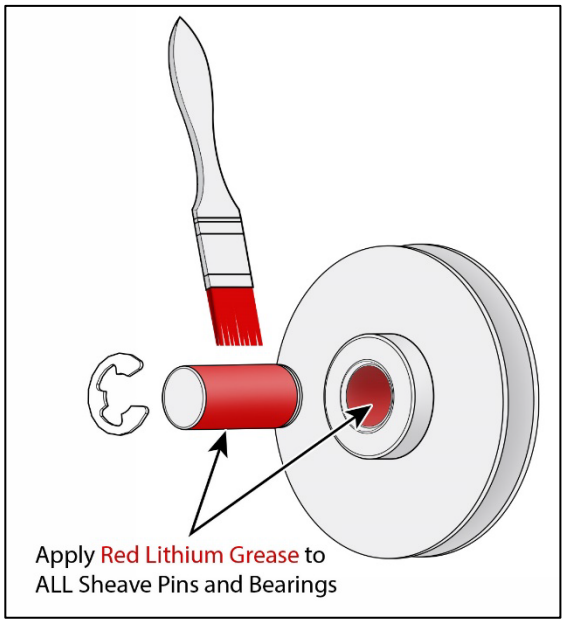
⚠ **WARNING** Some Lubricants may contain toxic components and must be disposed of in accordance with all national, state, and local regulations. **Wear appropriate personal protective equipment for working with Lubricating products including gloves, and safety glasses.**

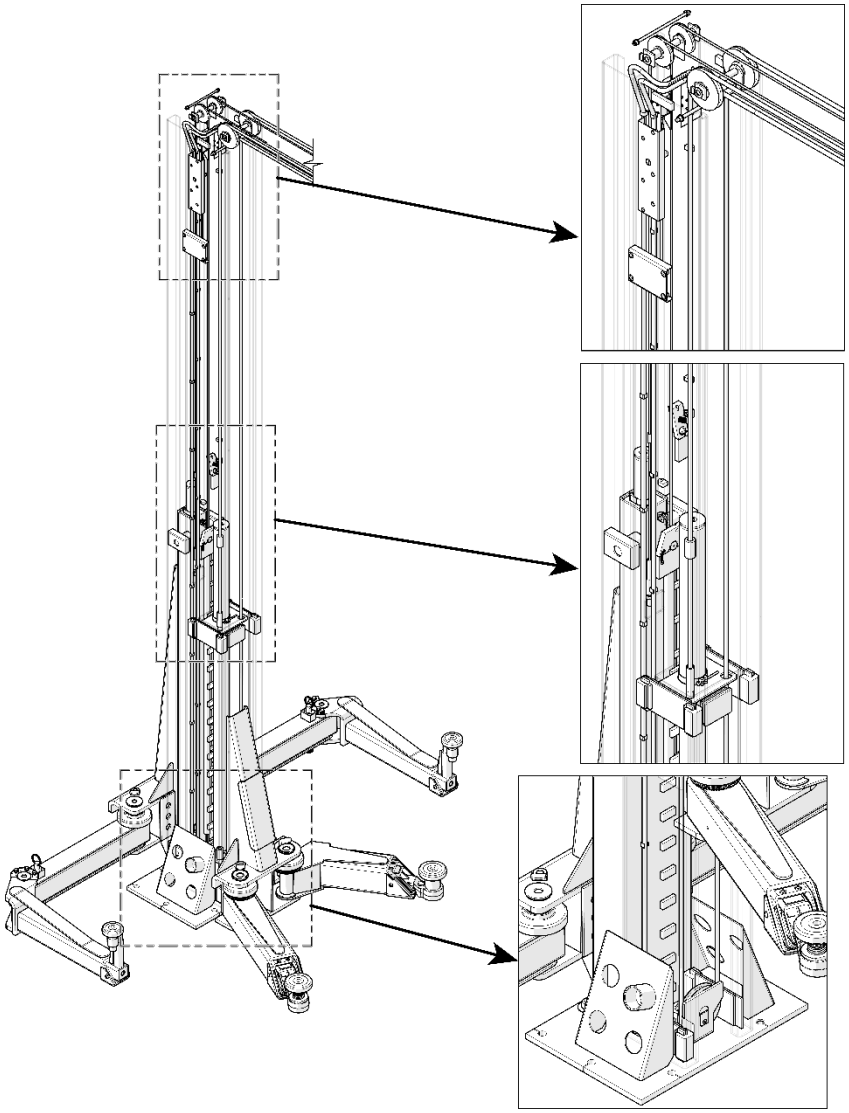
To Lubricate the Top Trough Equalizing Cable Sheaves:

1. Raise the Lift Head to rest on at least the first Safety Lock.
2. Block the Lift head with a 4 x 4 or equal to ensure the Lift Head cannot descend while lubricating the Lift.
3. Remove the Polyethylene Cover from the Lift Head then loosen the Cable Nut to relax the cable.
4. Lubricate the Top Trough Sheaves.
   a. Remove Hairpin Cotter Pin securing the Sheave Pins.
   b. Remove the Pin from the Sheaves.
   c. Apply Red Lithium Grease to the Pin.
   d. Reinstall the Sheave Pins through the Sheave then insert the Hair Pin Cotter Pin.

To Lubricate the Bottom Cable Sheaves:

5. Remove the locking fastener.
6. Remove the Sheave Pin.





7. Lubricate the Pin with Red Lithium Grease.
8. Replace the Pin in the Sheave and secure with the locking fastener.
9. Tighten the Equalizing Cable adjustment in the Lift Head.
10. See **Leveling** to readjust the lift arms.
11. Replace the Polyethylene Cover after leveling the lift arms.
12. Spray the inside of the post with White Lithium Grease
13. Spray the Safety Sheaves with White Lithium Grease.

OctaFlex Wire Rope Inspection and Maintenance

The 10AP wire ropes should be inspected regularly:

- Lifting cables should be replaced when there are visible signs of damage or extreme wear. ***Do not use the Lift if it has damaged or worn cables.***
- Lifting cables should always be maintained in a well-lubricated condition.

  Wire rope is fully protected when each wire strand is lubricated both internally and externally. Excessive wear shortens the life of wire rope. Use a wire-rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand, such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant.

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

- All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation.

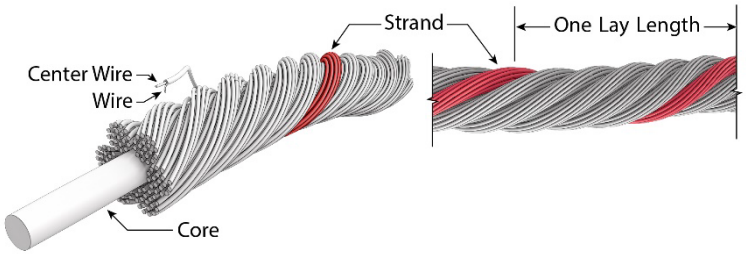
  For all sheave axles, use standard wheel bearing grease. For all sheaves and/or guide rollers, use 90-WT gear oil or a similar heavy lubricant, applied by any method including pump/spray dispensing, brush, hand, or swabbing.

- How often should you inspect?

  Lifting cables should be visually inspected at least once each day when in use, as suggested by American Petroleum Institute's Recommended Practice 54 guidelines. Any lifting cables that have met the criteria for removal must be immediately replaced.

- When should you replace lifting cables due to broken wires?

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



- Are there other reasons to replace your lifting cables?

  Yes. Corrosion that pits the wires and/or connectors, evidence of kinking, crushing, cutting, bird-caging, or a popped core, wear that exceeds 10% of a wire's original diameter, 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 — a wire brush, if necessary — so you can see any breaks.

  b. Flex the rope to expose any broken wires hidden in the valleys between the strands.

  c. Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.

  d. With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.

Torque Chart

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							
		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)	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.

Troubleshooting

This section describes how to troubleshoot your Lift.

NOTICE If your Lift is not functioning correctly, you must take it out of service until repaired.

Important: Replace worn, damaged or broken parts with original BendPak or BendPak approved parts or with parts that meet or exceed the original manufacturer specifications.

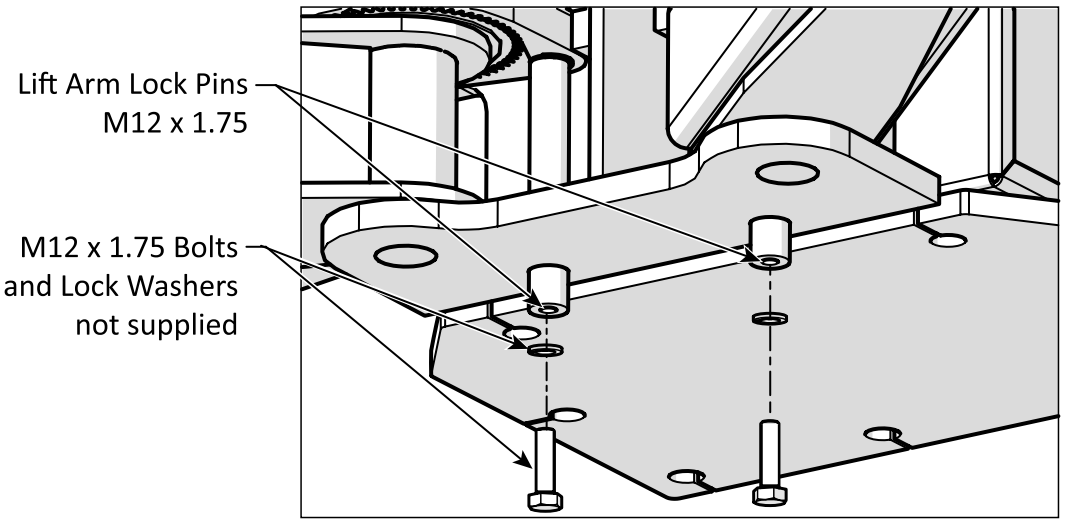
⚠DANGER Before performing maintenance on your Lift, verify it is disconnected from power. The Lift uses electrical energy; if your organization has Lockout/Tagout policies, implement them before performing any maintenance. If you come into contact with high voltage, you could be injured or killed.

Issue	Action to Take
Lift becomes inoperative in a raised position.	Verify there is sufficient hydraulic fluid in the reservoir. Verify the Lift Carriages are above and clear of the Safety Locks. Verify none of the Hydraulic Hoses are pinched or leaking. Verify the power unit is being supplied power. Make sure the Lift is not overloaded. Make sure the load on the Lift is balanced. Contact **bendpak.com/support**. or by phone at **(800) 253-2363**, follow the prompts.
Arms move erratically or squeak when in use.	Move the lift arms up and down a few times pausing between lifts to flush any residual air from the Hydraulic System.
Lift does not stay up.	Make sure to leave the Lift engaged on its Safety Locks. Check for hydraulic fluid leaks.
Vehicle on Lift not level.	Make sure Lift is engaged on Safety Locks at the same height. Make sure the Safety Locks in both posts are engaged. If either condition is not met, carefully lower the vehicle back down to the ground and raise it again. Level the lift arms.
Motor not running.	Check connection to the power source; make sure it is connected and the appropriate voltage. Check correct wiring. Check to ensure the 24VAC is present off the step down transformer.
Hydraulic Fluid is dirty.	Replace the dirty hydraulic fluid with clean, approved ISO-32, ISO-46, or ISO-68 hydraulic oil ATF fluids, such as Dexron VI, Mercon V, Mercon LV, or comparable.
Lift makes odd noises.	Lubricate hinge points using white lithium grease. Lubricate and sheave pins using red lithium grease.
Electrical Contactor • Pitting, burning, or erosion on contact surfaces. • Loud buzzing or humming, chattering during operation. • Failure to open/close • Voltage Drop: Contacts show high resistance. • Overheating: Hot spots indicate high resistance/wear. • Single-Phasing (3-Phase Only): one contact fails, it can destroy a motor, requiring immediate attention.	Replace the Contactor. **⚠DANGER** A licensed electrician is required to perform this replacement. **⚠DANGER** Before performing maintenance on this Lift, verify it is disconnected from power. Contact **bendpak.com/support**. or by phone at **(800) 253-2363**, follow the prompts.

Troubleshooting Lift Arm Lock Disengagement

⚠ **WARNING** Avoid excessive Shim heights! A new concrete cutout and steel reinforced concrete pour are recommended to correct out of level conditions in excess of 3°.

Some floors with excessive out of level conditions may require Shim heights that reach or exceed .5 in. (12.7 mm). When the shim height reaches this level, the lift arm lock pins may not function to disengage the lift arms when completely lowered. To correct this condition, the Arm Lock Pins include an M12 x 1.75 internal thread, approximately 12 mm deep. A mating M12 hex head bolt with Lock Washers, or a backing nut (not supplied) may be used to extend the contact point of the Arm Lock Pins. Adjust the Bolt head position to disengage the Lock as required. Refer to the figure below.



OctaFlex Lift Disposal - End of Service Life

Once this 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 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. The hydraulic fluid contains toxic ingredients that are harmful to the environment.

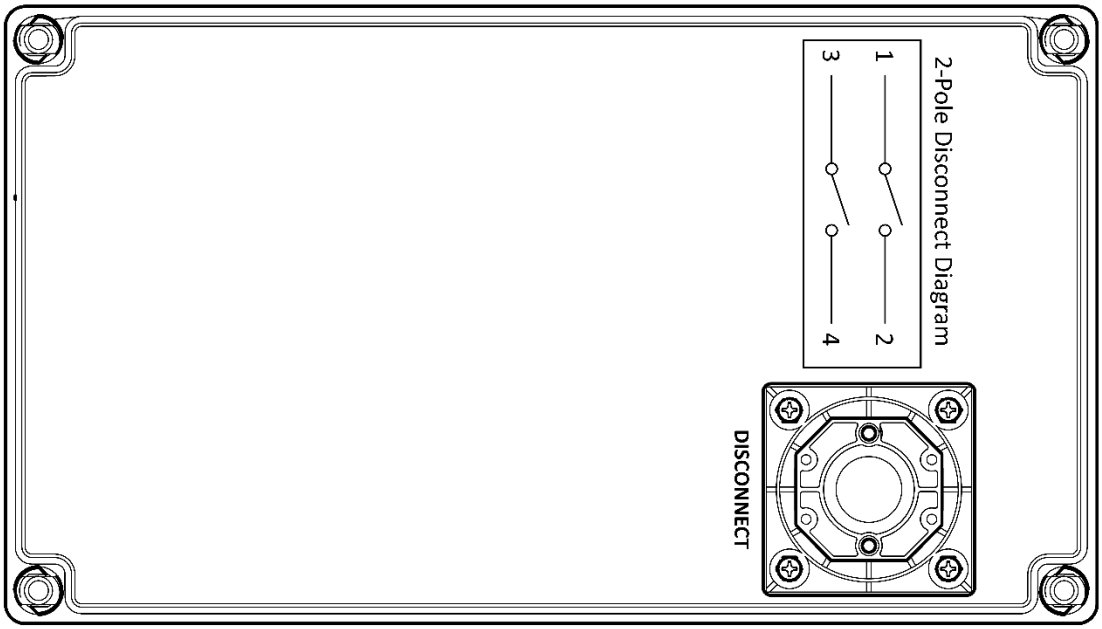
These components and the hydraulic fluid are required to be recycled or must be delivered to a hazardous waste collection facility.

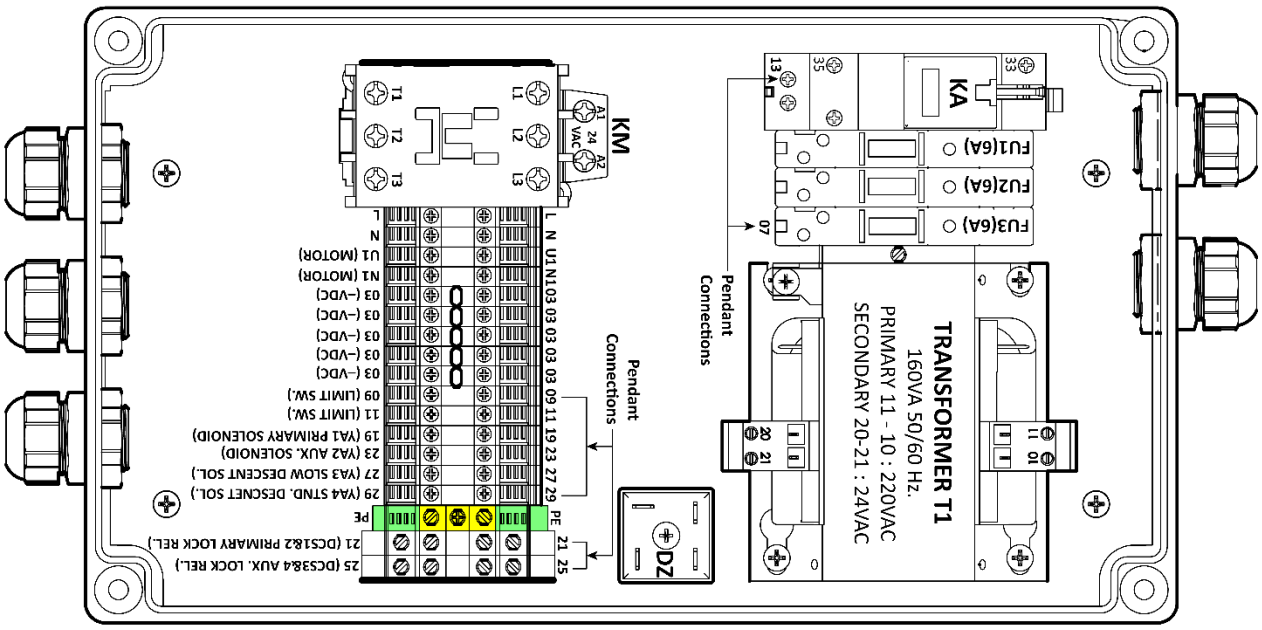
If you have large amounts of hydraulic fluid, consider contacting a commercial waste disposal company. In all cases, the best approach is to find an appropriate facility and contact them — in advance — to ask them: what kinds of fluids and materials they accept, what kind of containers they must be in, what hours they are open, their location, and any other information specific to their facility.

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

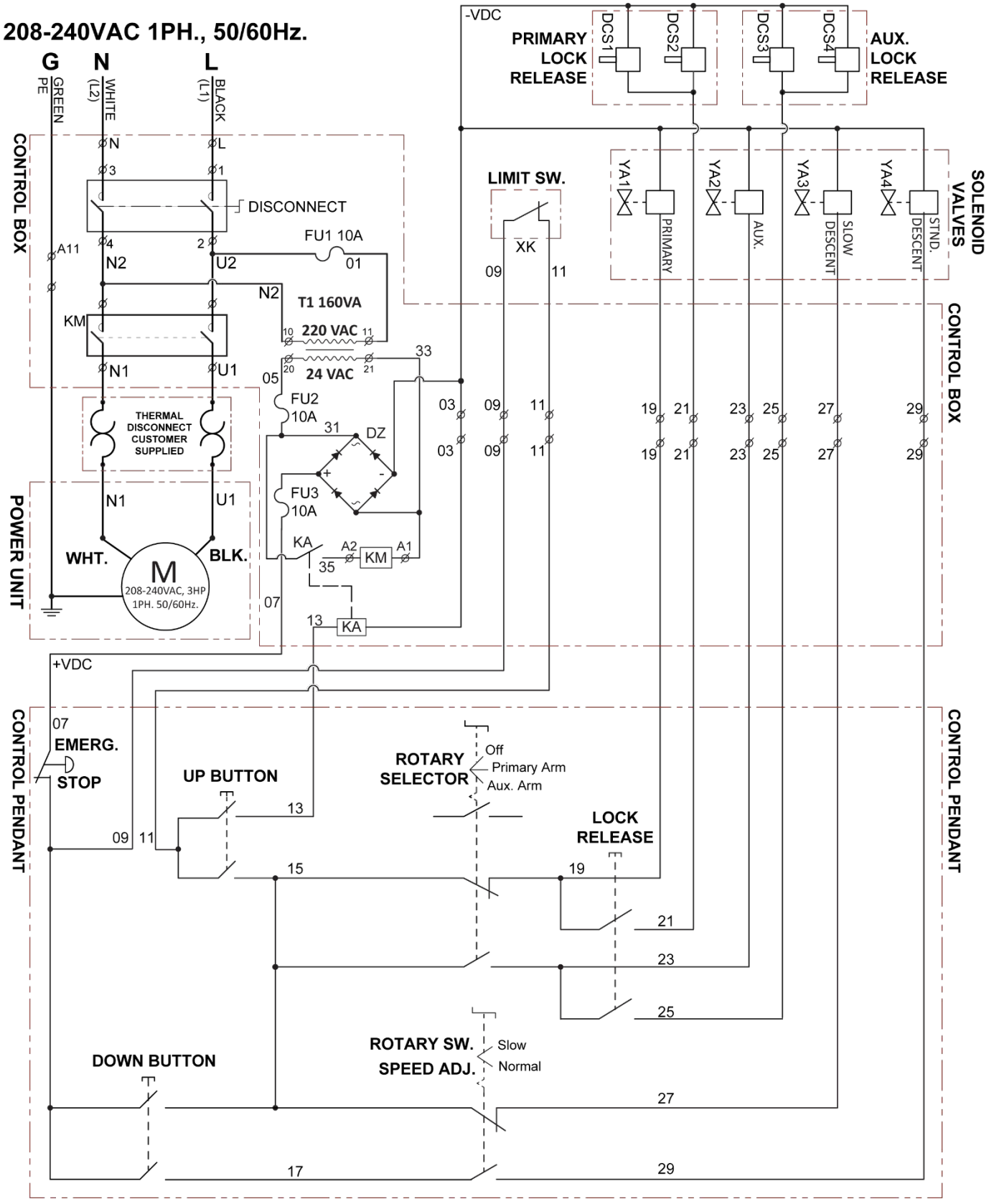
Wiring and Hydraulics Diagrams

OctaFlex Control Box Terminal Connections

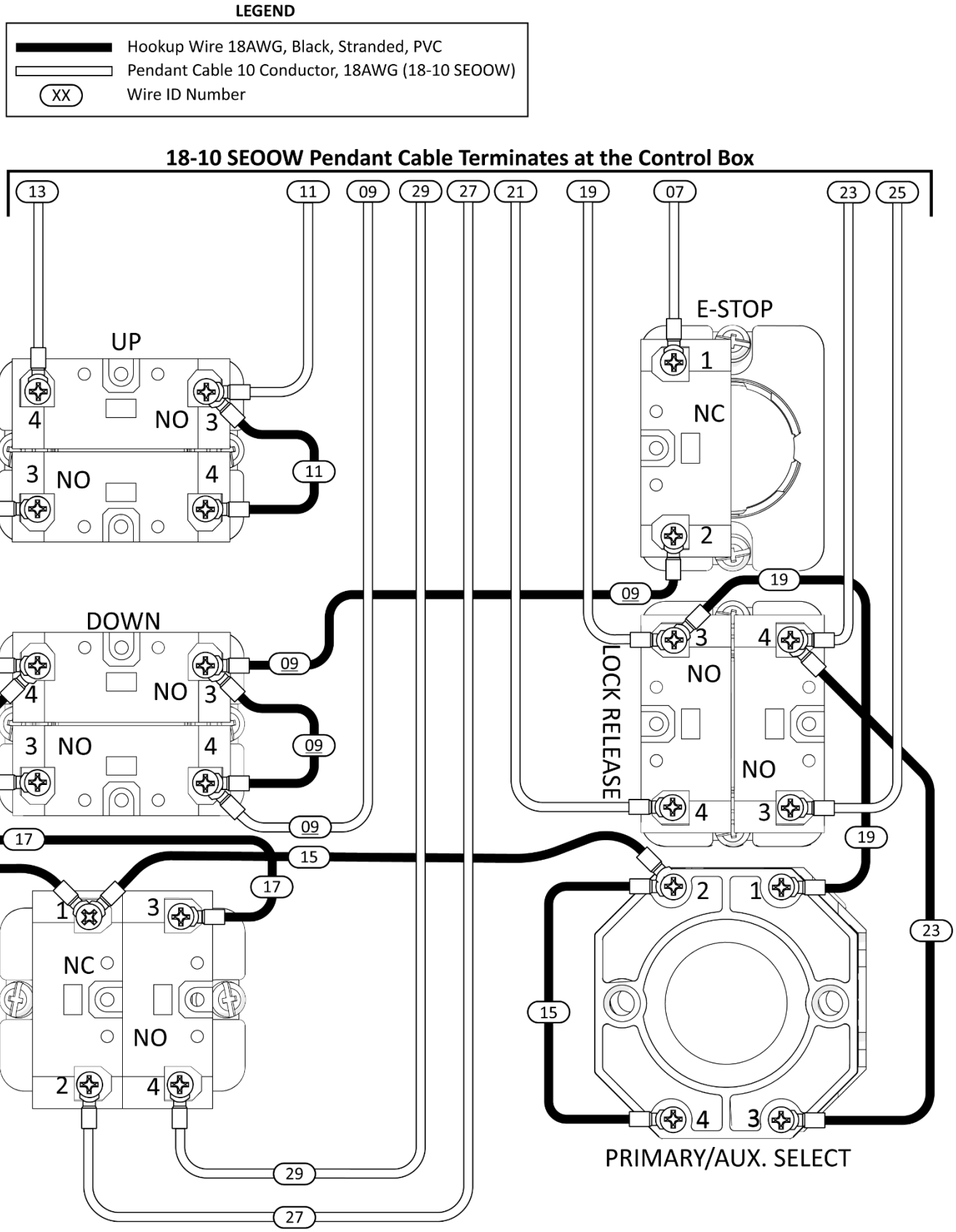




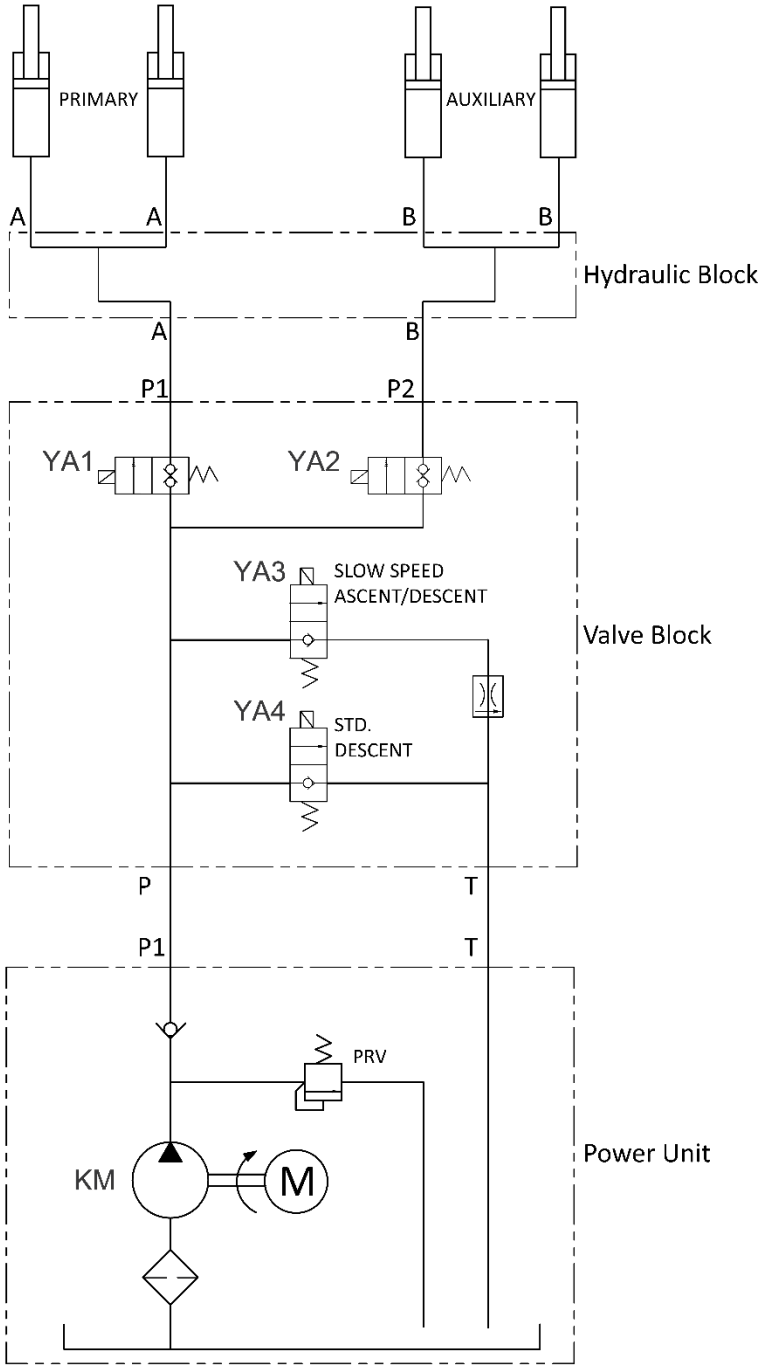
OctaFlex Electrical Diagram



OctaFlex Control Pendant Electrical Connections



Hydraulic Diagram



Hydraulic Function Table

Coil / Motion	Pump Motor	YA1 Valve Coil	YA2 Valve Coil	YA3 Valve Coil	YA4 Valve Coil
Primary arm up	+	+			
Aux. arm up	+		+		
Primary arm up (slow speed)	+	+		+	
Aux. arm up (slow speed)	+		+	+	
Primary arm down		+			+
Aux. arm down			+		+
Primary arm down (slow speed)		+		+	
Aux Arm down (slow speed)			+	+	

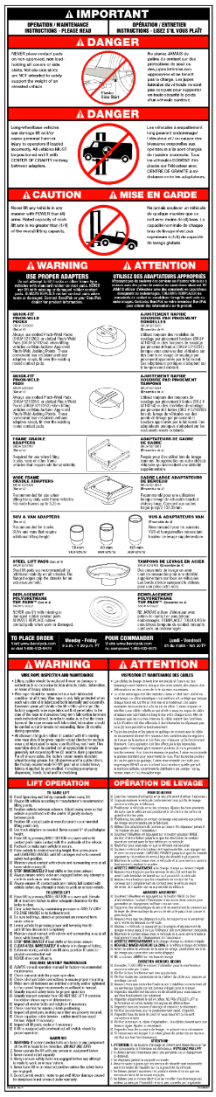
NOTE: + indicates power on. Empty cell indicates power off.

Labels

A

PN 5906112

B

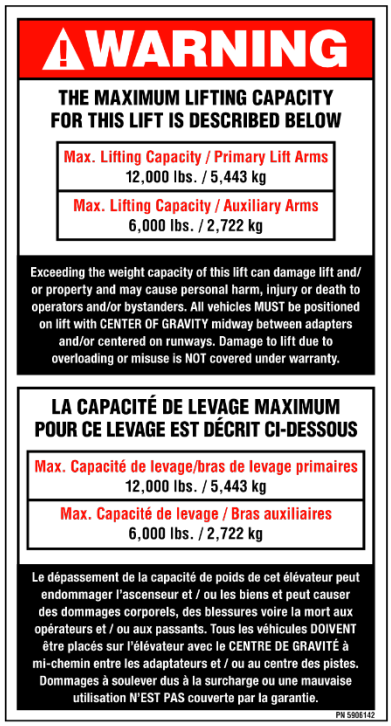


PN 5906087

C

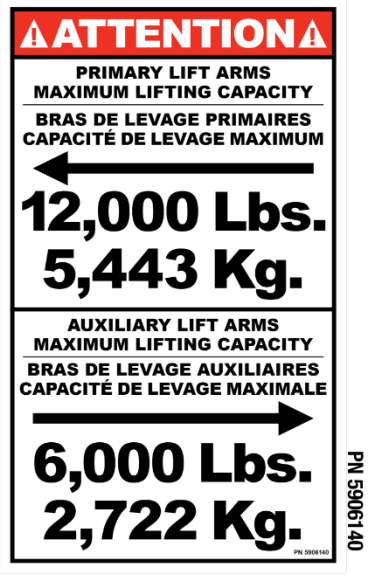
PN 5905940

D



PN 5906142

E



PN 5906140

F

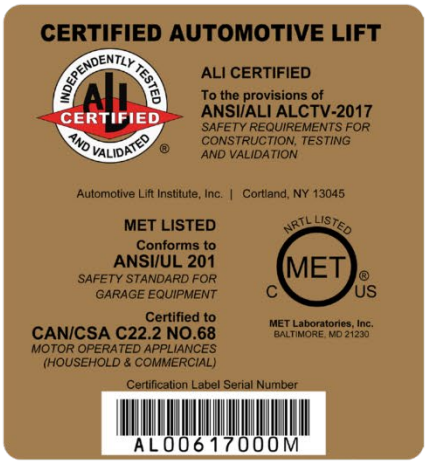
ALI Blue Label

PN 5905109
(Kit includes Blue, Yellow & Orange Labels)
(Order Labels from ALI)

ALI Yellow Label

ALI Orange Label

G



PN 5905654

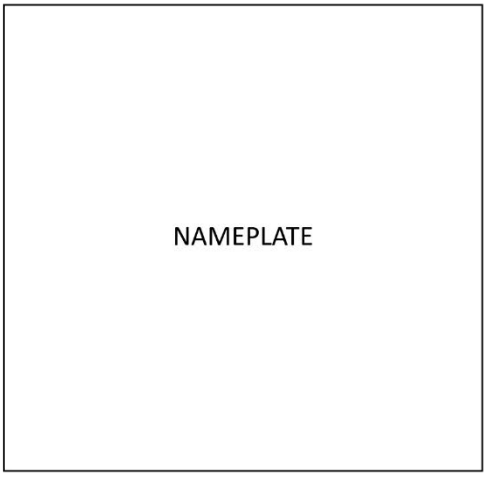
H

(Order Label from ALI)

PN 5905377

I

J



PN 5906156

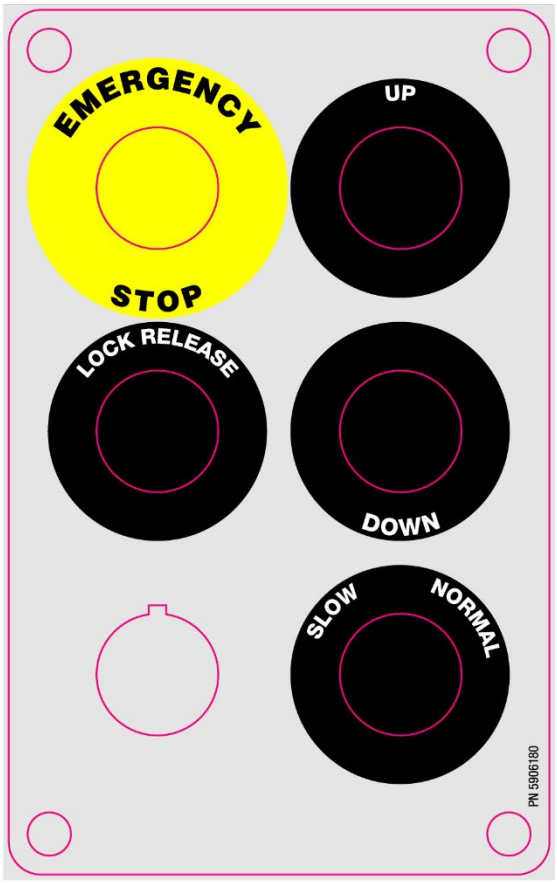
K

PN 5905775

L

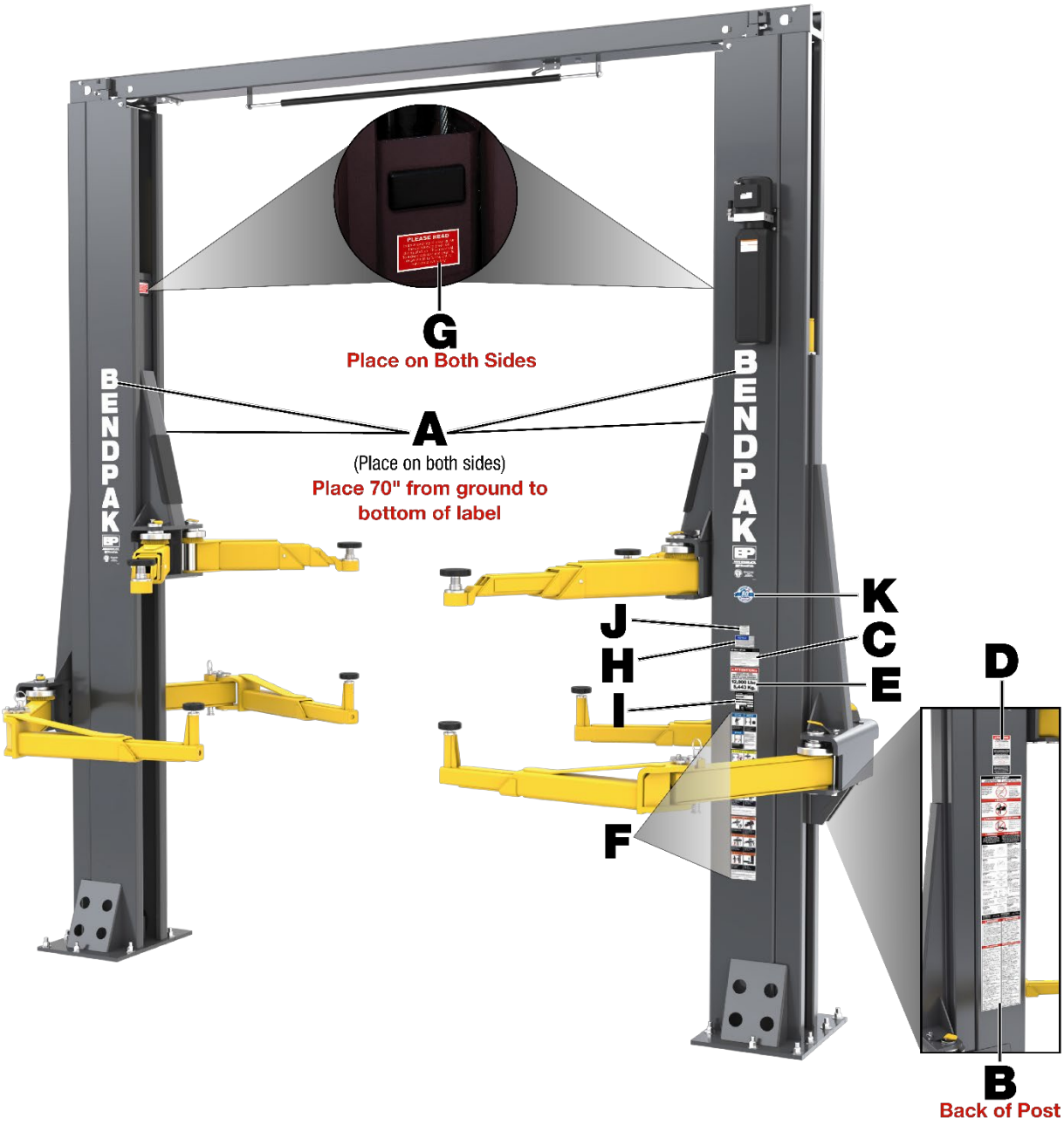
PN 5906163

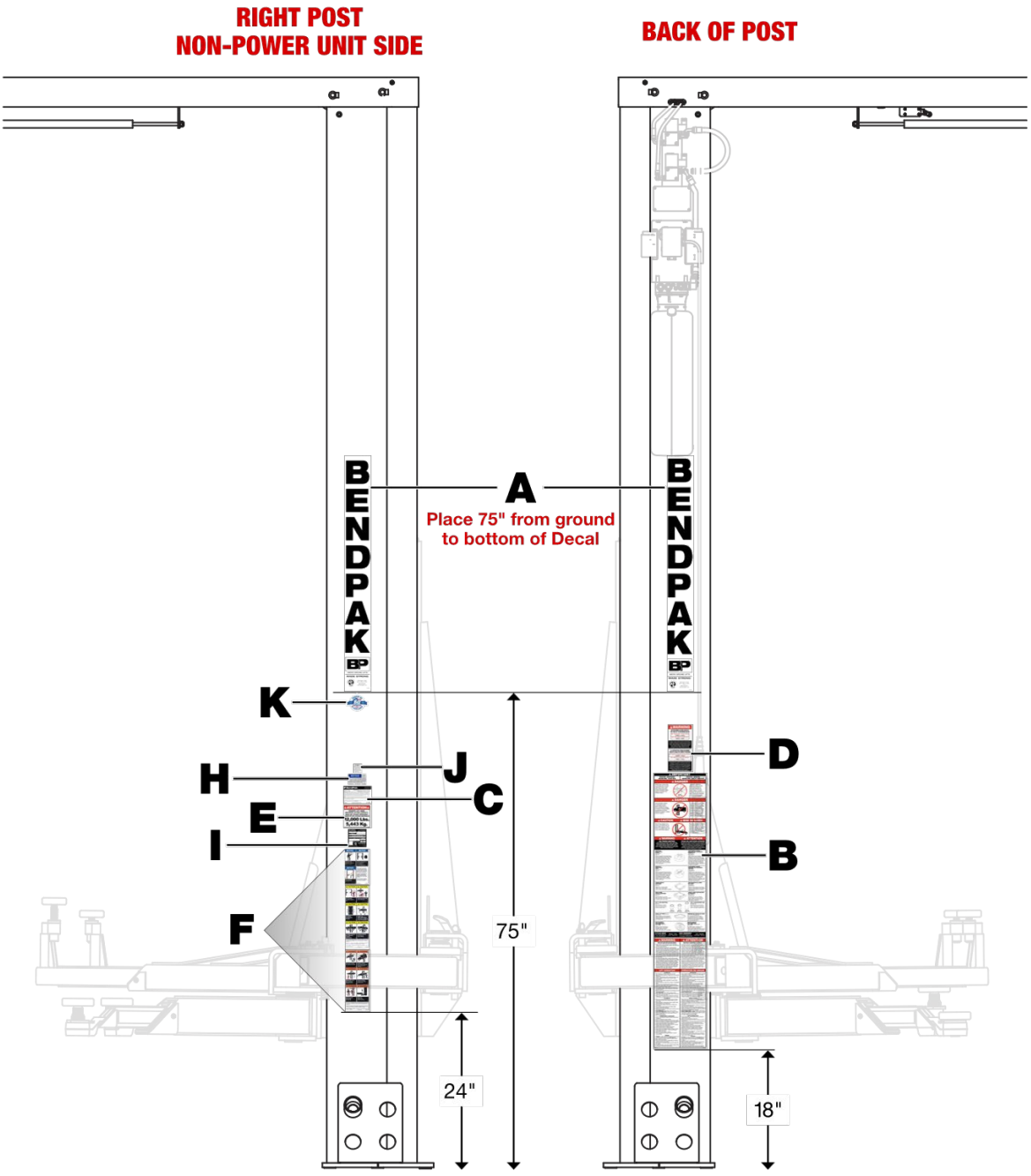
M



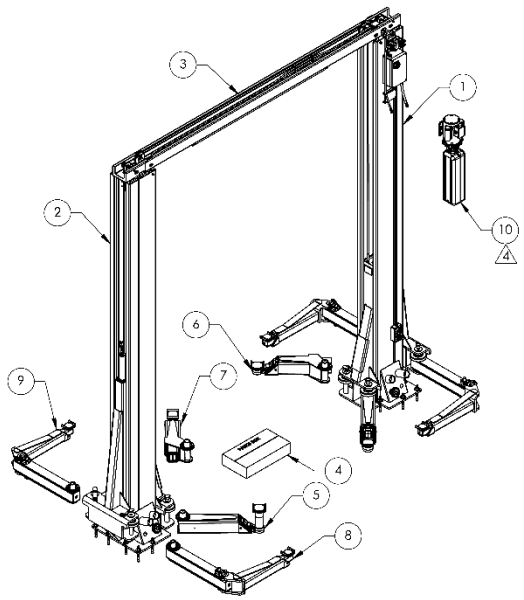
PN 5906180

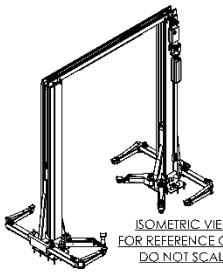
M


G
Place on Both Sides
A
(Place on both sides)
Place 70" from ground to bottom of label
K
J
C
H
E
I
D
F
B
Back of Post


RIGHT POST
NON-POWER UNIT SIDE
BACK OF POST
A
Place 75" from ground
to bottom of Decal
BENDPAK
BENDPAK
K
H
J
C
E
I
F
D
B
75"
24"
18"

Parts Drawings





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

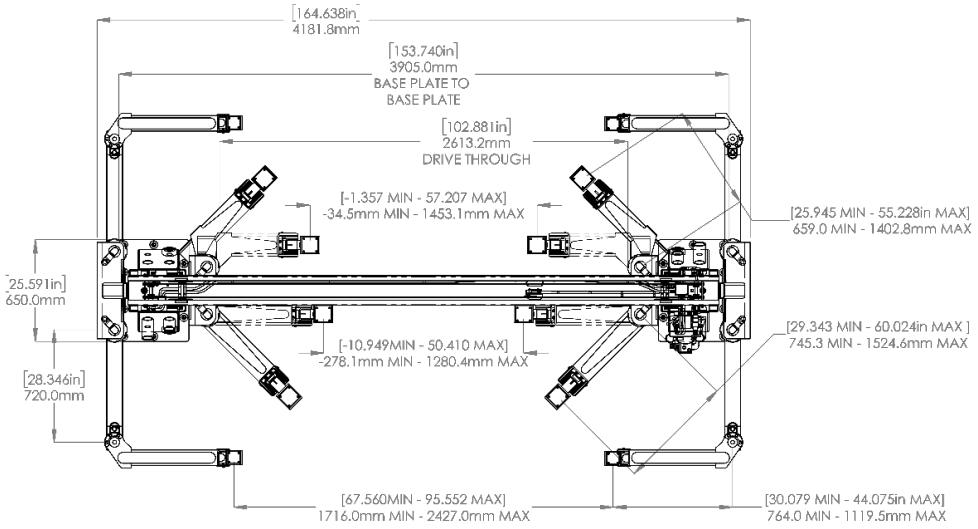
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	S2 6386	EV12PDS POWER SIDE POST ASSEMBLY	1	D
2	S2 6387	EV12PDS OFF SIDE POST ASSEMBLY	1	D
3	S2 6388	EV12PDS TOP TROUGH ASSEMBLY	1	C
4	S250414	EV12PDS PARTS BOX	1	C
5	S2 6203	12APX/SRT/APF TRIPLE TELESCOPING ARM ASSEMBLY, LONG	2	F
6	S2 6197	12APX/SRT/APF TRIPLE TELESCOPING ASYMMETRIC ARM ASSEMBLY, LEFT	1	F
7	S2 6198	12APX/SRT/APF TRIPLE TELESCOPING ASYMMETRIC ARM ASSEMBLY, RIGHT	1	F
8	S2 6392	EV12DPS LEFT ARM ASSEMBLY, OUTER LIFT	2	B
9	S2 6393	EV12DPS RIGHT ARM ASSEMBLY, OUTER LIFT	2	B
10	REF	POWER UNIT	1	-

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | TM | 10/21/2022
CHECKED
DIMENSIONS ARE IN MM | THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

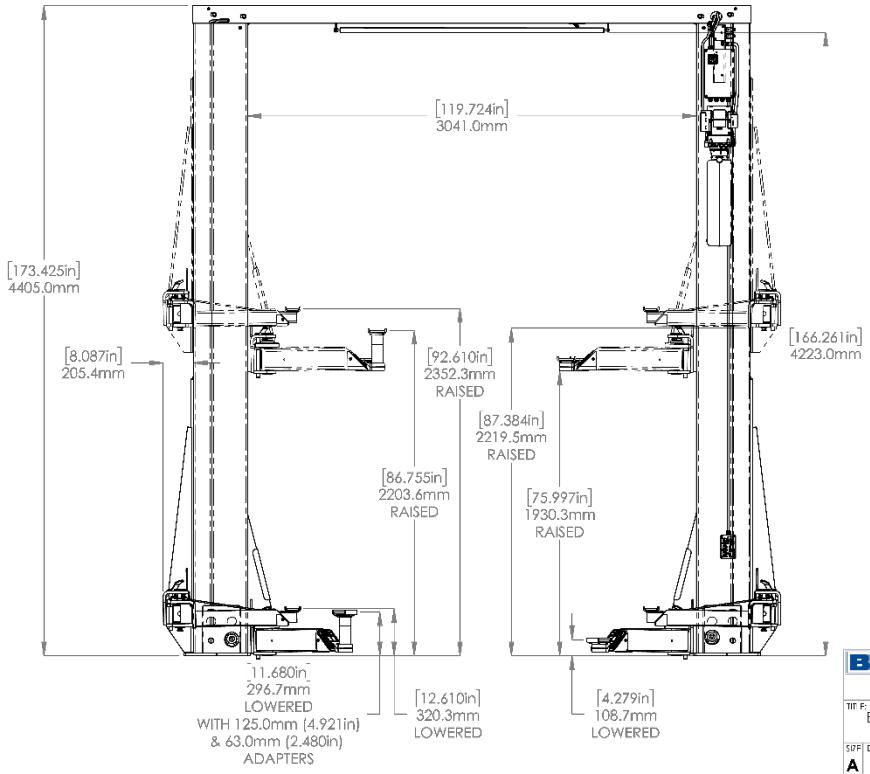
TITLE: EV12DPS PRODUCTION LIFT VER A
SIZE A | DWG. NO. 5260738 | REV D
SCALE: 1:35 | SHEET 1 OF 4

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 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: EV12DPS PRODUCTION LIFT VER A
SIZE A | DWG. NO. 5260738 | REV D
SCALE: 1:25 | SHEET 2 OF 4

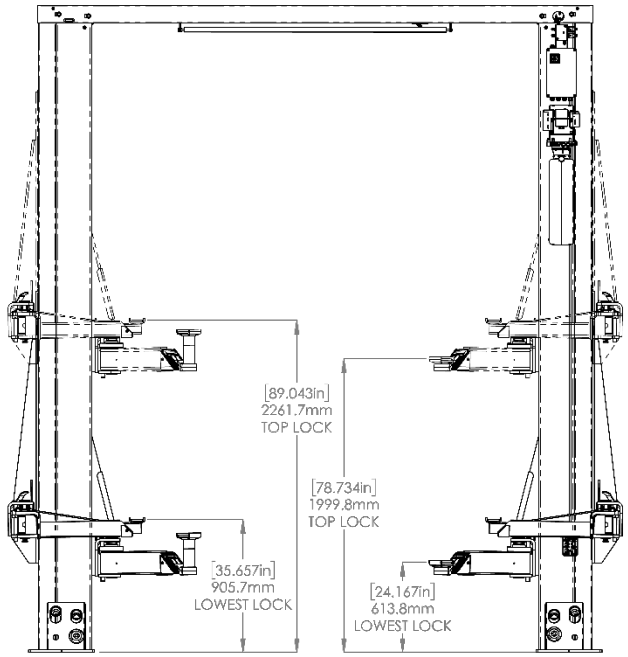


BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
EV12DPS PRODUCTION
LIFT VER A

SIZE	DWG. NO.	REV
A	5260738	D

SCALE: 1:28 SHEET 3 OF 4



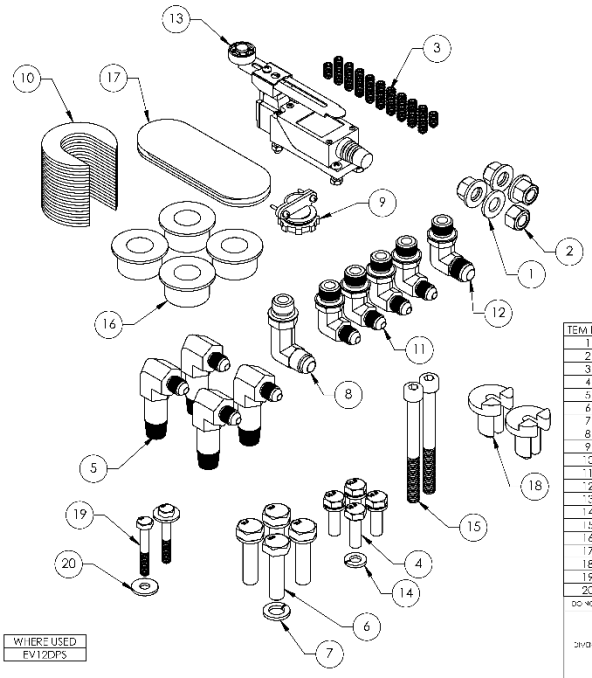
1. INNER SAFETY LOCK POSITIONS: 15
   SPACED EVERY: 99.0mm / 3.898"
2. OUTER SAFETY LOCK POSITIONS: 13
   SPACED EVERY: 113.0mm / 4.449"

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
EV12DPS PRODUCTION
LIFT VER A

SIZE	DWG. NO.	REV
A	5260738	D

SCALE: 1:28 SHEET 4 OF 4

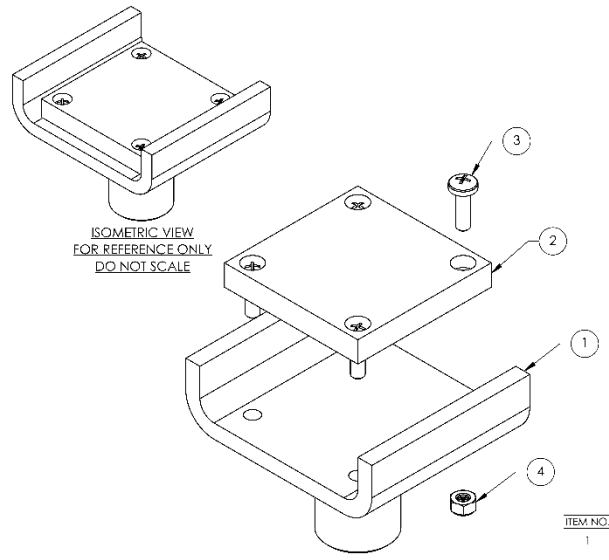


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5545341	WASHER M10 x Ø20 FLAT, CL10.9	4	-
2	5535013	NUT M10 x 1.5 NL, CL10.9	4	-
3	5532551	SSS M6 x 1.0 x 12 NL CONE	20	-
4	5530010	HHB M8 x 1.25 x 25 FT, C_ 10.9	4	-
5	5550113	FTG ELB .04 NPT LL x .04 JIC	4	
6	5530302	HHB M10 x 1.5 x 40 FT, C_ 10.9	4	
7	5545200	WASHER M10 x Ø18 SL, CL10.9	4	-
8	5550183	FTG ELB -06 JIC -06L ORB	1	-
9	5520140	ROMEX CONNECTOR 3/8 #6623	1	-
10	5545535	C WASHER SHIM FOR LIFTS	20	-
11	5550103	FTG ELB -04 JIC -06 ORB	4	-
12	5550418	FTG ELB -06 JIC x -06 ORB	1	-
13	5570088	ROCKER LIMIT SWITCH, 25A	1	-
14	5545202	WASHER M8 x Ø18 SL, CL10.9	4	
15	5530613	SHCS M8 x 1.25 x 85mm FL, CL 12.9	2	
16	5716210	PUSH-IN RUBBER GROMMET, 30mm x 18mm	4	B
17	5520720	OVAL RUBBER GROMMET, 96mm x 45mm	1	-
18	5746750	EV12DPS CABLE HOLDER STOP, OUTER LIFT	2	A
19	5530757	HHB M6 x 1.0 x 40 FT, CL 10.9	2	-
20	5545339	WASHER, M6 x 18mm FLAT	2	-

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | M | 10/01/2022
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
BendPak
1645 LEVA WOOD DR.
SANTA PAULA, CA 93060
TITLE: EV12DPS PARTS BAG
SIZE A | DWG. NO. 5174222 | REV C
SCALE: 1:2.5 | SHEET 1 OF 1
NEXT ASSEMBLY 5250414

WHERE USED
EV12DPS

NOTE: UNLESS OTHERWISE SPECIFIED
1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING

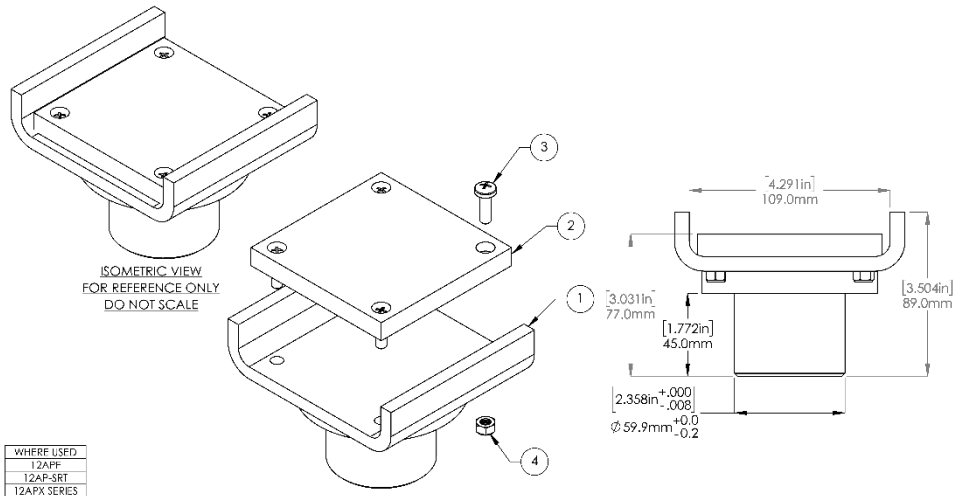


ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5600586	FRAME CRADLE LIFT PAD ADAPTER WELDMENT, Ø35mm	1	A
2	5715016	FRAME CRADLE LIFT PAD ADAPTER POLYURETHANE PAD, Ø35mm	1	D
3	5530022	PHPS M6 x 1 x 20mm ZPL	4	B
4	5535357	NUT M6 x 1.0 NL, CL10.9	4	-

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | AC | 12/30/2016
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
BendPak
1645 LEVA WOOD DR.
SANTA PAULA, CA 93060
TITLE: FRAME CRADLE LIFT PAD ADAPTER ASSEMBLY, Ø35mm
SIZE A | DWG. NO. 5215506 | REV E
SCALE: 2:3 | SHEET 1 OF 1
NEXT ASSEMBLY 5215754 5250414

WHERE USED
EV12DPS
ARMS WITH Ø35mm ARM ADAPTER HOLE

NOTE: UNLESS OTHERWISE SPECIFIED
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. ASSEMBLE ITEMS AS SHOWN
3. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING



WHERE USED
12APF
12AP-SRT
12APX SERIES
EV12DPS
16AP SERIES
20AP SERIES
D2-12C*
D2-15C*
XPR 12 SERIES*
XPR-15 SERIES*
XPR-18 SERIES*
ARMS WITH Ø60mm ARM ADAPTER HOLE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5601000	FRAME CRADLE LIFT PAD ADAPTER WELDMENT, Ø60mm	-	D
2	5715020	FRAME CRADLE LIFT PAD ADAPTER POLYURETHANE PAD, Ø60mm	1	C
3	5530022	PHPS M6 x 1 x 20mm ZPL	4	B
4	5535357	NUT M6 x 1.0 NL	4	-

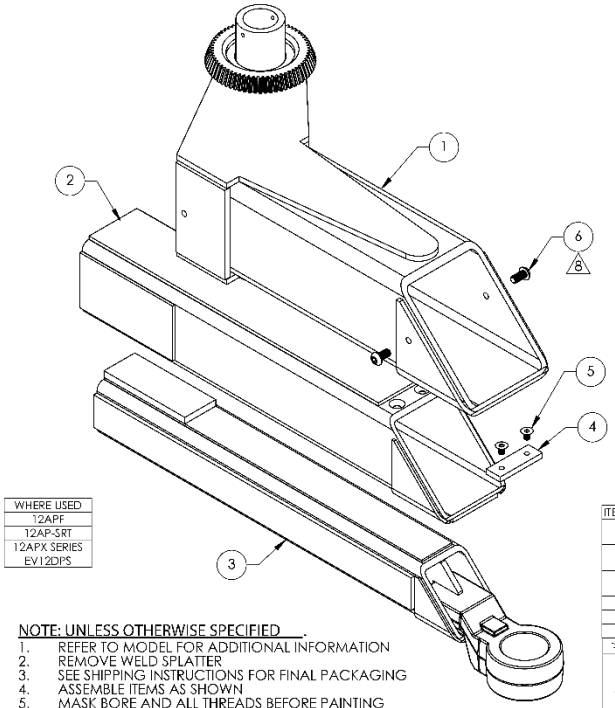
DO NOT SCALE DRAWING | NAME | DATE
DRAWN | JAL | 06/24/2013
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.

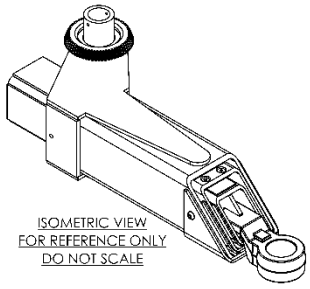
BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: FRAME CRADLE LIFT PAD ADAPTER ASSEMBLY, Ø60mm
SIZE: A | DWG. NO.: 5215702 | REV: F
SCALE: 1:2 | SHEET 1 OF 1

NEXT ASSEMBLY
5215761
5250396
5250400
5250405
5250406
5250412
5250414

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN





WHERE USED
12APF
12AP-SRT
12APX SERIES
EV12DPS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5601899	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, OUTER LEFT TUBE	1	F
2	5601898	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, MIDDLE TUBE	1	D
3	5601897	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, INNER TUBE	1	E
4	5737188	AP MIDDLE ARM SLIDE STOP	1	B
5	5530382	FHSS M8 x 1.25 x 12 CL10.9	2	-
6	5530479	BHSS M10 x 1.5 x 20 FT. CL 10.9 B.O.	2	-

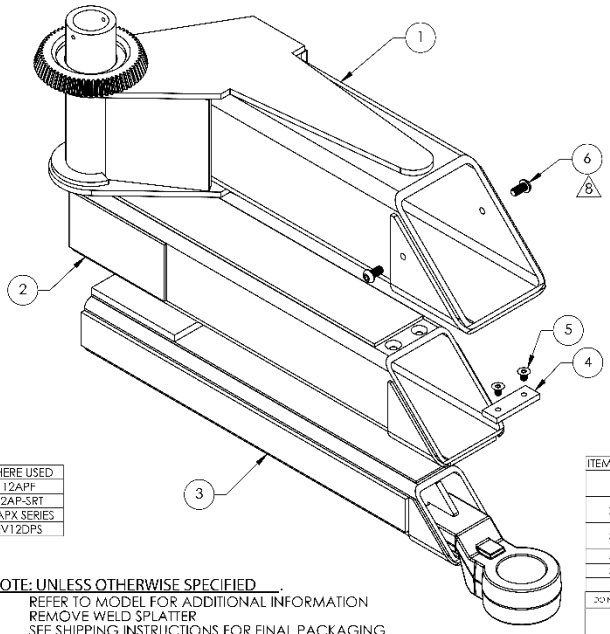
DO NOT SCALE DRAWING | NAME | DATE
DRAWN | RK | 07/22/2022
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.

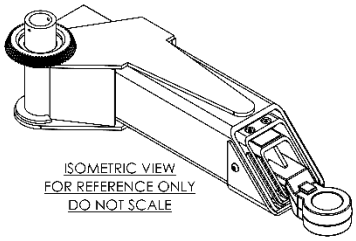
BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: 12APX/SRT/APF TRIPLE TELESCOPING ASYMMETRIC ARM ASSEMBLY, LEFT
SIZE: A | DWG. NO.: 5216197 | REV: F
SCALE: 1:5 | SHEET 1 OF 2

NEXT ASSEMBLY
5211007
5260738

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. REMOVE WELD SPLATTER
3. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
4. ASSEMBLE ITEMS AS SHOWN
5. MASK BORE AND ALL THREADS BEFORE PAINTING
6. DIMENSIONS SHOWN ARE AFTER WELDING AND PAINTING
7. PAINT YELLOW (RAL-1018) 20% GLOSS
8. APPLY LOCTITE BLUE 242 AND CURE PER MANUFACTURE SPECIFICATION





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

WHERE USED
12APF
12AP-SRT
12APX SERIES
EV12DPS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5601900	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, OUTER RIGHT TUBE	1	F
2	5601898	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, MIDDLE TUBE	1	D
3	5601897	12APX/SRT/APF ASYMMETRIC ARM WELDMENT, INNER TUBE	1	E
4	5737188	AP MIDDLE ARM SLIDE STOP	1	B
5	5530382	FHSS M8 x 1.25 x 12 CL10.9	2	-
6	5530479	BHSS M10 x 1.5 x 20 FT. CL 10.9 B.O.	2	

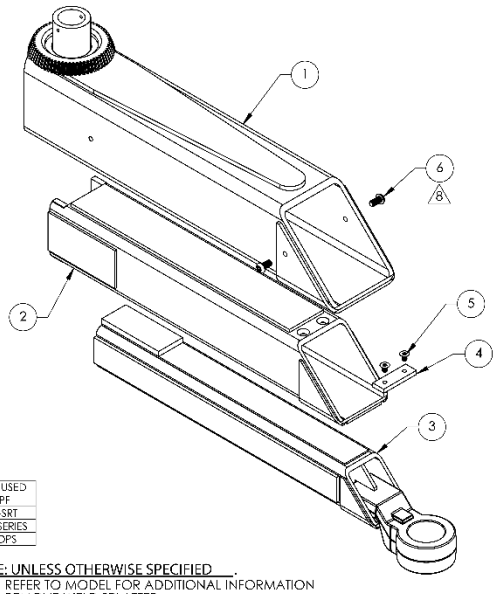
NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. REMOVE WELD SPLATTER
3. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
4. ASSEMBLE ITEMS AS SHOWN
5. MASK BORE AND ALL THREADS BEFORE PAINTING
6. DIMENSIONS SHOWN ARE AFTER WELDING AND PAINTING
7. PAINT YELLOW (RAL-1018) 20% GLOSS
8. APPLY LOCTITE BLUE 242 AND CURE PER MANUFACTURE SPECIFICATION

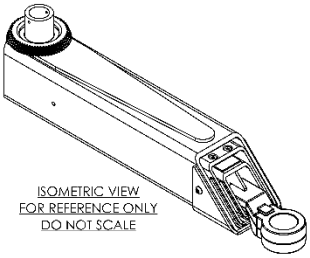
NEXT ASSEMBLY
5211008
5260738

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | RK | 07/22/2022
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

BendPak
1645 PALOMINO DR.
SANTA PAULA, CA 93060

TITLE: 12APX/SRT/APF TRIPLE TELESCOPING ASYMMETRIC ARM ASSEMBLY, RIGHT
SIZE A | DWG. NO. 5216198 | REV F
SCALE: 1:5 | SHEET 1 OF 2





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

WHERE USED
12APF
12AP-SRT
12APX SERIES
EV12DPS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5601907	12APX/SRT/APF LONG ARM WELDMENT, OUTER TUBE	1	F
2	5601908	12APX/SRT/APF LONG ARM WELDMENT, MIDDLE TUBE	1	E
3	5601909	12APX/SRT/APF LONG ARM WELDMENT, INNER TUBE	1	E
4	5737188	AP MIDDLE ARM SLIDE STOP	1	B
5	5530382	FHSS M8 x 1.25 x 12 CL10.9	2	
6	5530479	BHSS M10 x 1.5 x 20 FT. CL 10.9 B.O.	2	

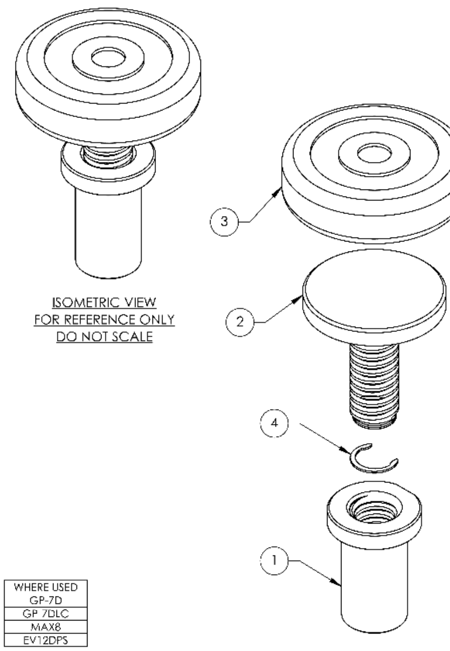
NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. REMOVE WELD SPLATTER
3. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
4. ASSEMBLE ITEMS AS SHOWN
5. MASK BORE AND ALL THREADS BEFORE PAINTING
6. DIMENSIONS SHOWN ARE AFTER WELDING AND PAINTING
7. PAINT YELLOW (RAL-1018) 20% GLOSS
8. APPLY LOCTITE BLUE 242 AND CURE PER MANUFACTURE SPECIFICATION

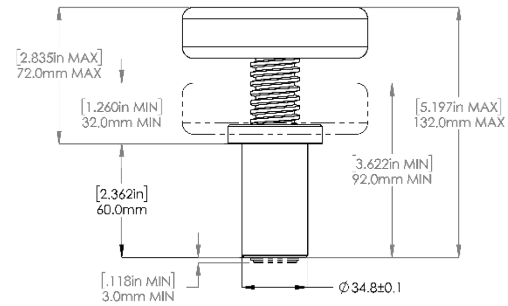
NEXT ASSEMBLY
5211009
5260738

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | RK | 05/23/2022
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

BendPak
1645 PALOMINO DR.
SANTA PAULA, CA 93060

TITLE: 12APX/SRT/APF TRIPLE TELESCOPING ARM ASSEMBLY, LONG
SIZE A | DWG. NO. 5216203 | REV F
SCALE: 1:6 | SHEET 1 OF 2





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5746749	ADJUSTABLE LIFT PAD FEMALE SCREW ADAPTER, Ø35mm	1	B
2	5602154	ROUND LIFT PAD MALE SCREW ADAPTER WELDMENT, Ø35mm	1	A
3	5715045	ROUND LIFT PAD ADAPTER POLYURETHANE PAD, Ø75mm	1	A
4	5540114	C RING 7/8" ID TRUARC 5103 87	1	

WHERE USED
GP-7D
GP 7DLC
MAX8
EV12DPS

NOTE: UNLESS OTHERWISE SPECIFIED.
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN

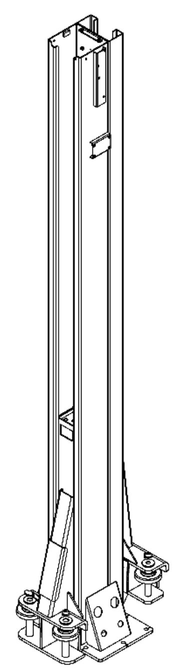
NEXT ASSEMBLY
5210524
5250414

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | IM | 10/27/2025
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: ROUND ADJUSTABLE LIFT PAD ADAPTER ASSEMBLY, Ø35mm

SIZE: A | DWG. NO. 5216375 | REV B
SCALE: 1:2 | SHEET 1 OF 1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602172	EV12DPS POWER SIDE POST WELDMENT	1	C
2	5216391	EV12DPS LIFT HEAD ASSEMBLY, INNER LIFT	1	C
3	5502142	CYLINDER ASSEMBLY Ø2.5" x 75", Ø.0787" ORIFICE	1	A
4	5701115	CYLINDER CLAMP ASSY 74-79	1	
5	5575113	12/16/20AP SHEAVE ASSEMBLY, Ø152mm	1	E
6	5602184	EV12DPS POST CABLE SHEAVE PIN WELDMENT, Ø34.90, INNER LIFT	1	B
7	5565350	SAFETY SHEAVE SPACER, 11.5mm	2	C
8	5575074	AP SAFETY CABLE ROLLER	2	A
9	5737354	12APX OFF SIDE SAFETY BLOCK	1	C
10	5746494	AP SAFETY PIVOT PIN	2	C
11	5540047	EXTENSION SPRING Ø6.35 x 38mm	2	-
12	5216389	EV12DPS LIFT HEAD ASSEMBLY, OUTER LIFT	1	C
13	5716215	EV12DPS SLIDE BLOCK, OUTER LIFT	4	A
14	5502143	CYLINDER ASSEMBLY Ø1.75" x 80"	1	B
15	5701982	CYLINDER CLAMP ASSEMBLY, Ø52-60mm	1	-
16	5216396	EV12DPS POST SHEAVE ASSEMBLY, Ø90mm, OUTER LIFT	1	B
17	5602183	EV12DPS POST CABLE SHEAVE PIN WELDMENT, Ø24.90mm, OUTER LIFT	1	B
18	5737569	EV12DPS SAFETY LATCH, OUTER LIFT	1	B
19	5540295	COMPRESSION SPRING Ø14.3 x 24.5mm	1	B
20	5701981	EV12DPS SAFETY LATCH BRACKET, OUTER LIFT	1	B
21	5530512	FHSS M6 x 1.0 x 10mm FT, CL 10.9	1	-
22	5530366	FHSS M6 x 1.0 x 8	1	-
23	5530045	BHPS M5 x 0.8 x 10 FT, CL 8.8	4	-
24	5545202	WASHER M8 x Ø15 SL, CL10.9	2	
25	5530414	BHSK M8 x 1.25 x 25 CL10.9	2	-
26	5530756	HHB M6 x 1.0 x 25 FT, CL 10.9	2	-
27	5535357	NUT M6 x 1.0 NL, CL10.9	2	-
28	5535057	NUT M8 x 1.25 x 17.5, RIVET	4	
29	5535058	NUT M6 x 1.0 x 18, RIVET	4	-
30	5530472	BHSS M6 x 1.0 x 12 FT, CL 10.9	2	-
31	5535059	NUT M10 x 1.5 x 20.5, RIVET	2	-
32	5505266	DOWEL PIN M8 x 50mm	1	

WHERE USED
EV12DPS

NOTE: UNLESS OTHERWISE SPECIFIED.
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN

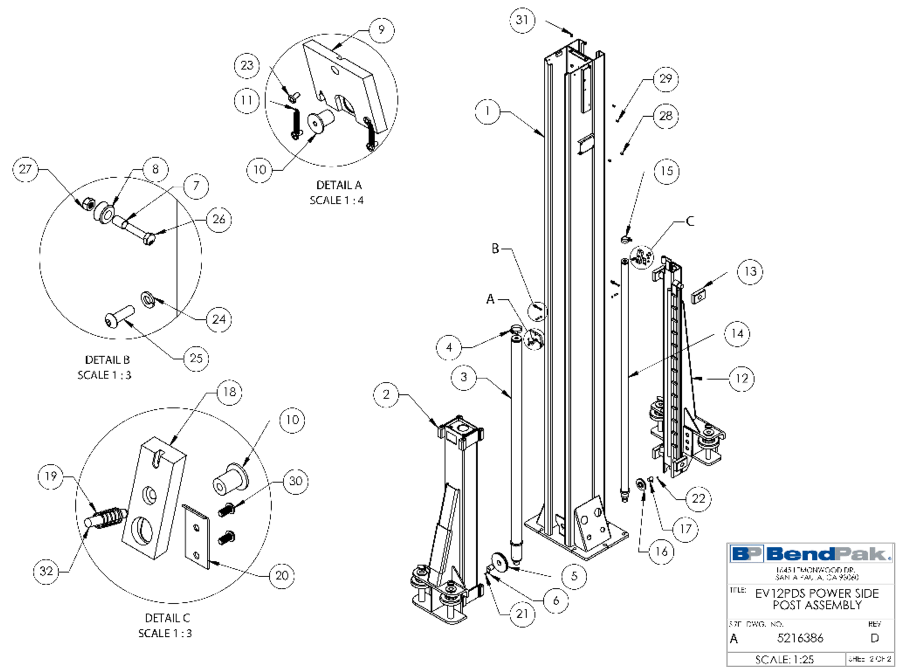
NEXT ASSEMBLY
5260738

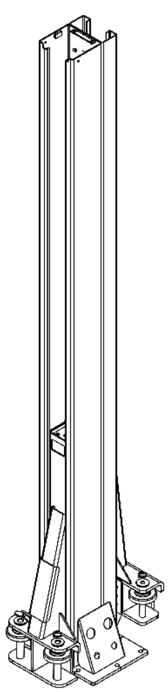
DO NOT SCALE DRAWING | NAME | DATE
DRAWN | IM | 08/26/2022
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: EV12PDS POWER SIDE POST ASSEMBLY

SIZE: A | DWG. NO. 5216386 | REV D
SCALE: 1:22 | SHEET 1 OF 2





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602173	EV12DPS OFF SIDE POST WELDMENT	1	C
2	5216391	EV12DPS LIFT HEAD ASSEMBLY, INNER LIFT	1	C
3	5502142	CYLINDER ASSEMBLY Ø2.5" x 75", Ø.0787" ORIFICE	1	A
4	5701115	CYLINDER CLAMP ASSY 74 79	1	
5	5575113	12/16/20AP SHEAVE ASSEMBLY, Ø152mm	1	E
6	5602184	EV12DPS POST CABLE SHEAVE PIN WELDMENT, Ø34.90, INNER LIFT	1	B
7	5565350	SAFETY SHEAVE SPACER, 11.5mm	2	C
8	5575074	AP SAFETY CABLE ROLLER	2	A
9	5737354	12APX OFF SIDE SAFETY BLOCK	1	C
10	5746494	AP SAFETY PIVOT PIN	2	C
11	5540047	EXTENSION SPRING Ø6.35 x 38mm	2	-
12	5216389	EV12DPS LIFT HEAD ASSEMBLY, OUTER LIFT	1	C
13	5716215	EV12DPS SLIDE BLOCK, OUTER LIFT	4	A
14	5502143	CYLINDER ASSEMBLY Ø1.75" x 80"	1	B
15	5701982	CYLINDER CLAMP ASSEMBLY, Ø52-60mm	1	-
16	5216396	EV12DPS POST SHEAVE ASSEMBLY, Ø90mm, OUTER LIFT	1	B
17	5602183	EV12DPS POST CABLE SHEAVE PIN WELDMENT, Ø24.90mm, OUTER LIFT	1	B
18	5737569	EV12DPS SAFETY LATCH, OUTER LIFT	1	B
19	5540295	COMPRESSION SPRING Ø14.3 x 24.5mm	1	B
20	5701981	EV12DPS SAFETY LATCH BRACKET, OUTER LIFT	1	B
21	5530512	FHSS M6 x 1.0 x 10mm FT, CL 10.9	1	-
22	5530366	FHSS M6 x 1.0 x 8	1	-
23	5530045	BHPS M5 x 0.8 x 10 FT, CL 8.8	4	-
24	5545202	WASHER M8 x Ø15 SL, CL10.9	2	-
25	5530414	BHSK M8 x 1.25 x 25 CL10.9	2	-
26	5530756	HHB M6 x 1.0 x 25 FT, CL 10.9	2	
27	5535357	NUT M6 x 1.0 NL, CL10.9	2	-
28	5530472	BHSS M6 x 1.0 x 12 FT, CL 10.9	2	-
29	5535059	NUT M10 x 1.5 x 20.5, RIVET	2	-
30	5505266	DOWEL PIN M8 x 50mm	1	-

WHERE USED
EV12DPS

NOTE: UNLESS OTHERWISE SPECIFIED

1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5260738

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	TM	08/26/2022
CHECKED		

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

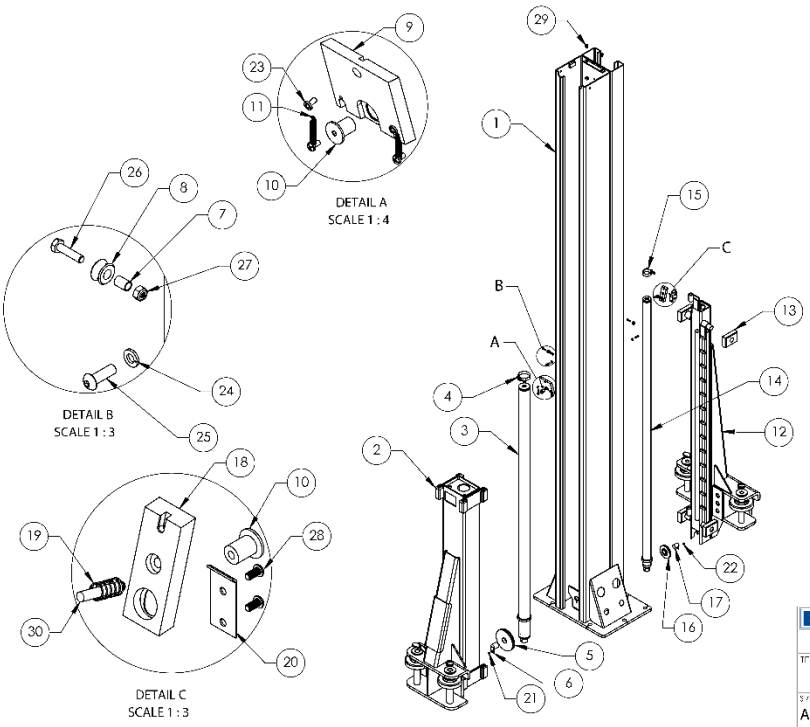
PROPRIETARY AND CONFIDENTIAL

BendPak.
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

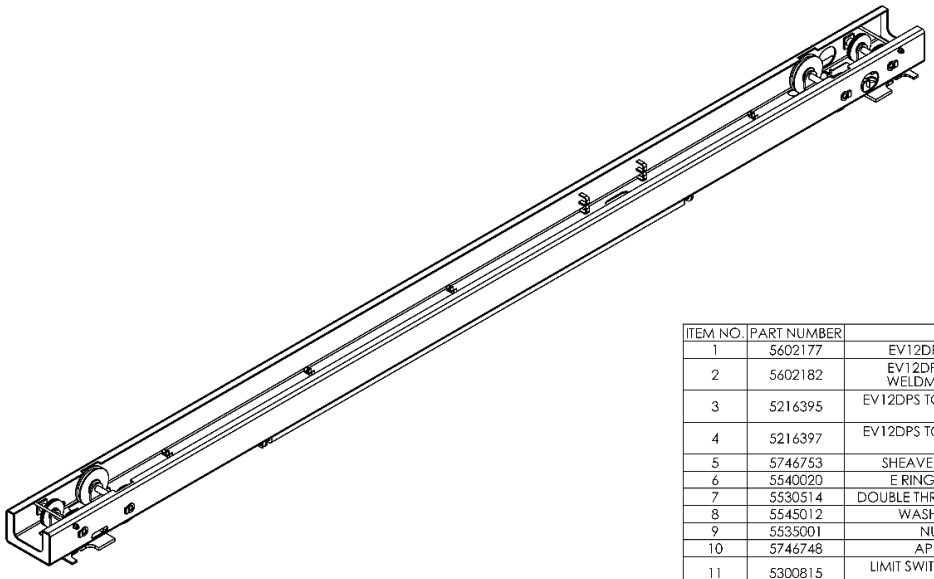
TITLE: EV12PDS OFF SIDE POST ASSEMBLY

SIZE: A | DWG. NO.: 5216387 | REV: D

SCALE: 1:22 | SHEET 1 OF 2



BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
TITLE:	EV12PDS OFF SIDE POST ASSEMBLY	
S/H A	DWG. NO. 5216387	REV D
SCALE: 1:25		SHEET 2 OF 2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602177	EV12DPS TOP TROUGH WELDMENT	1	C
2	5602182	EV12DPS TOP TROUGH SHEAVE PIN WELDMENT, Ø18.90mm, OUTER LIFT	4	B
3	5216395	EV12DPS TOP TROUGH SHEAVE ASSEMBLY, Ø90mm, OUTER LIFT	4	C
4	5216397	EV12DPS TOP TROUGH SHEAVE ASSEMBLY, Ø125mm, INNER LIFT	4	B
5	5746753	SHEAVE SPACER, Ø26 x Ø20 x 32mm	4	C
6	5540020	E RING Ø19 OD ROTORCLIP DE-19	4	-
7	5530514	DOUBLE THREADED ROD M8 x 1.25 x 220mm	2	B
8	5545012	WASHER M8 x Ø16 FLAT, CL10.9	4	-
9	5535001	NUT M8 x 1.25 NL, CL10.9	4	-
10	5746748	AP LIMIT SWITCH STOP BAR	1	B
11	5300815	LIMIT SWITCH STOP BAR CUSHION, Ø13 x 1785mm	1	E
12	5505087	EXTERNAL CLIP, Ø12mm	2	-

DO NOT SCALE DRAWING		NAME	DATE
DIMENSIONS ARE IN MM	DRAWN	TM	08/26/2022
	CHECKED		
	THIRD ANGLE PROJECTION		

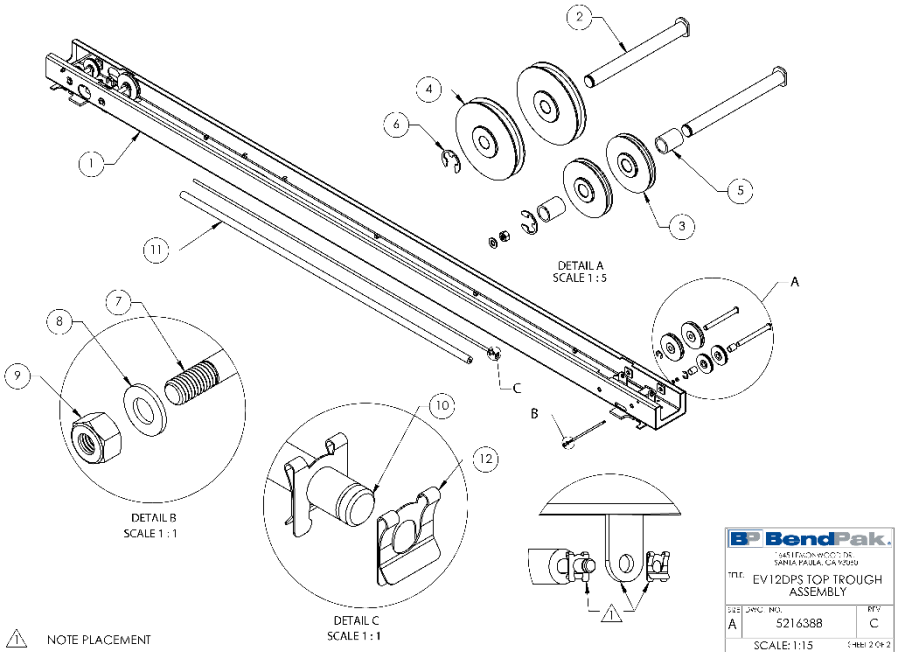
BendPak	1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
TITLE:	EV12DPS TOP TROUGH ASSEMBLY	
SIZE A	DWG. NO. 5216388	REV C
SCALE: 1:15		SHEET 1 OF 2

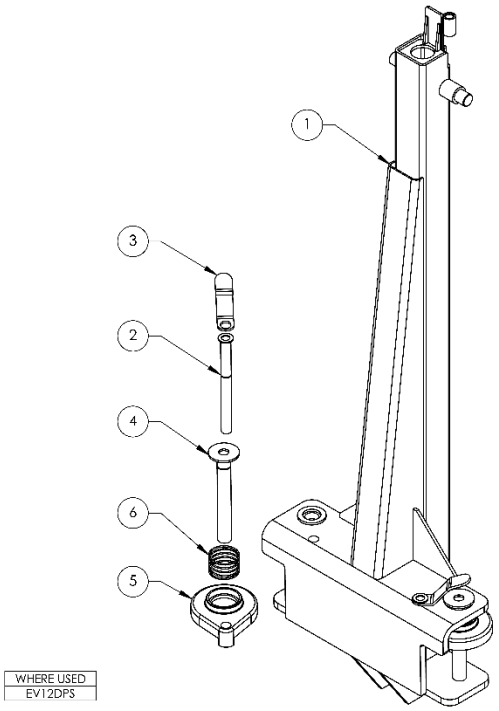
WHERE USED
EV12DPS

NEXT ASSEMBLY
5260738

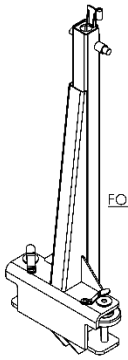
NOTE: UNLESS OTHERWISE SPECIFIED .

1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN





WHERE USED
EV12DPS



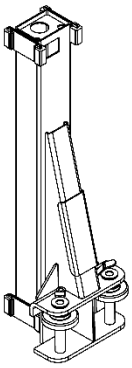
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602174	EV12DPS LIFT HEAD WELDMENT, OUTER LIFT	1	C
2	5602187	EV12DPS ARM LOCK GUIDE ROD WELDMENT, Ø24.97mm, OUTER LIFT	2	C
3	5701700	AP ARM LOCK RELEASE HANDLE	2	C
4	5602178	EV12DPS ARM LOCK PIN WELDMENT, Ø33.02mm, OUTER LIFT	2	C
5	5701954	10/12AP ARM INTERNAL FULL CIRCLE GEAR STOP, THREADED HOLES	2	A
6	5540044	COMPRESSION SPRING Ø74 x 40mm	2	-

DO NOT SCALE DRAWING | NAME | DATE
DRAWN | RK | 01/25/2024
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

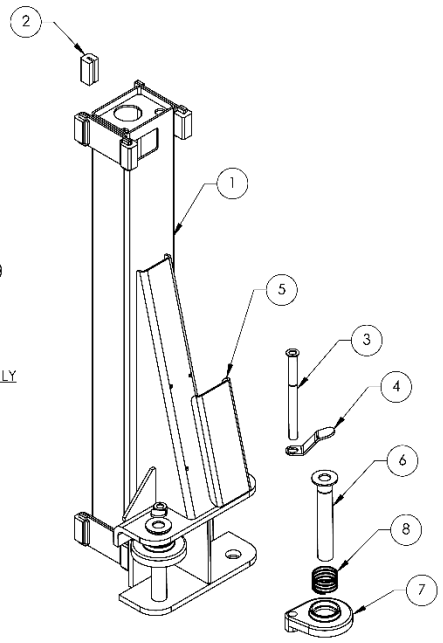
BendPak. 30440 AGOURA RD. AGOURA HILLS, CA 91301
TITLE: EV12DPS LIFT HEAD ASSEMBLY, OUTER LIFT
SIZE A | DWG. NO. 5216389 | REV C
SCALE: 1:10 | SHEET 1 OF 1

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5216386
5216387



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602176	EV12DPS LIFT HEAD WELDMENT, INNER LIFT	1	B
2	5716001	2 POST GUIDE BLOCK	8	H
3	5602030	12APX/SRT/APF ARM LOCK GUIDE ROD WELDMENT, Ø25mm, GROOVE	2	B
4	5701700	AF ARM LOCK RELEASE HANDLE	2	C
5	5930004	12/16/20AP LIFT HEAD GUSSET COVER	1	B
6	5601910	12APX/SRT/APF ARM LOCK PIN WELDMENT, Ø44mm	2	B
7	5701954	10/12AP ARM INTERNAL FULL CIRCLE GEAR STOP, THREADED HOLES	2	A
8	5540044	COMPRESSION SPRING Ø74 x 40mm	2	-

WHERE USED
EV12DPS

NEXT ASSEMBLY
5216386
5216387

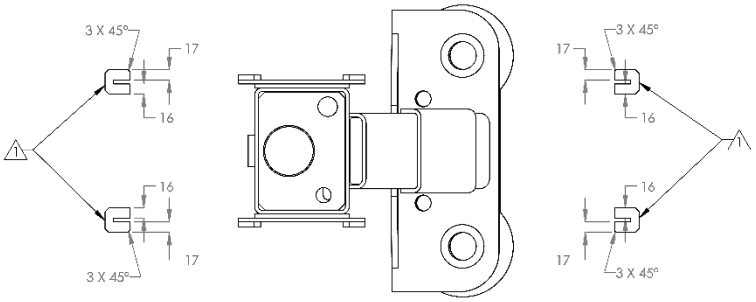
DO NOT SCALE DRAWING | NAME | DATE
DRAWN | RK | 01/10/2024
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL

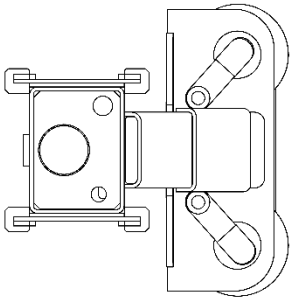
BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS LIFT HEAD ASSEMBLY, INNER LIFT

SIZE A | DWG. NO. 5216391 | REV C
SCALE: 1:12 | SHEET 1 OF 2

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN





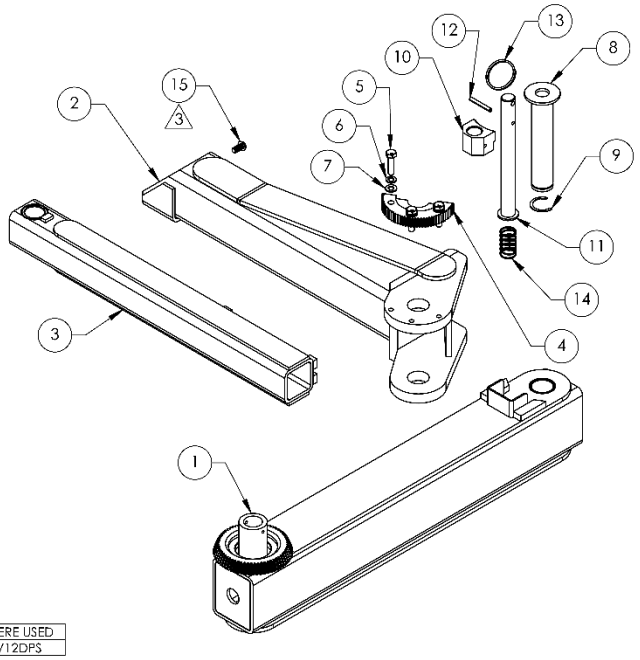
TOP VIEW

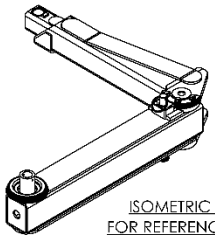
NOTE: UNLESS OTHERWISE SPECIFIED .
1. NOTE ORIENTATION OF PLASTIC GUIDE BLOCK

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS LIFT HEAD ASSEMBLY, INNER LIFT

SIZE A | DWG. NO. 5216391 | REV C
SCALE: 1:10 | SHEET 2 OF 2





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602192	EV12DPS OUTER ARM WELDMENT, OUTER LIFT	1	C
2	5602188	EV12DPS MIDDLE SECTION ARM WELDMENT L.H., OUTER LIFT	1	B
3	5602193	EV12DPS INNER ARM WELDMENT, OUTER LIFT	1	B
4	5736605	D2-12C/XPR-12 BOLT ON ARM RESTRAINT GEAR	1	E
5	5530302	HHB M10 x 1.5 x 40 FT, CL 10.9	3	-
6	5545200	WASHER M10 x Ø18 SL, CL10.9	3	-
7	5545341	WASHER M10 x Ø20 FLAT, CL10.9	3	-
8	5602179	EV12DPS MIDDLE SECTION ARM PIN WELDMENT, Ø37.92mm, OUTER LIFT	1	B
9	5540281	C RING Ø38mm OD 5103-150	1	-
10	5701052	D2/GP/M7K/XPR ARM INTERNAL GEAR STOP	1	G
11	5602181	EV12DPS ARM GEAR STOP PIN WELDMENT, Ø24.97mm, OUTER LIFT	1	C
12	5505106	SPRING PIN M6 x 50	1	-
13	5580219	KEYRING 56mm x 3mm	1	-
14	5540296	COMPRESSION SPRING Ø28.7 x 49.5mm	1	B
15	5530479	BHSS M10 x 1.5 x 20 FT, CL 10.9 B.O.	1	-

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	RK	01/23/2024
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

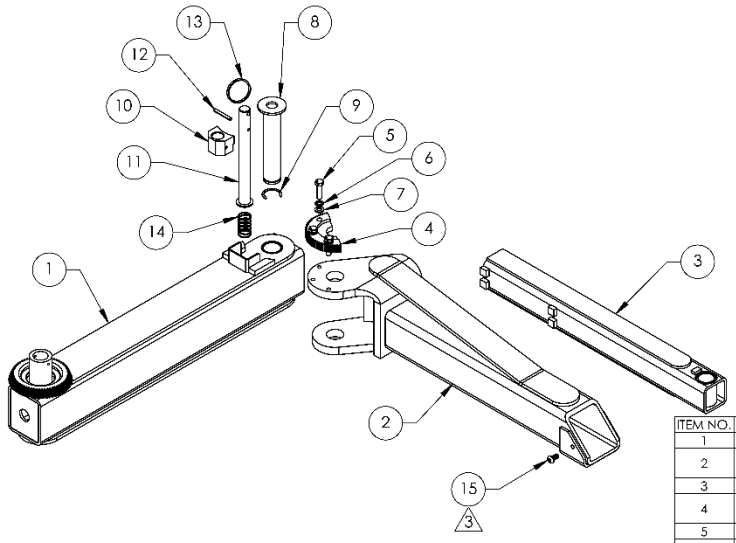
TITLE: EV12DPS LEFT ARM ASSEMBLY, OUTER LIFT

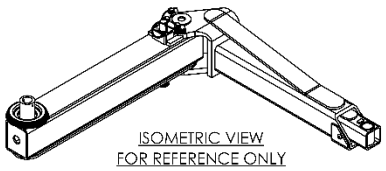
SIZE	DWG. NO.	REV
A	5216392	B
	SCALE: 1:8	SHEET 1 OF 2

WHERE USED
EV12DPS

NEXT ASSEMBLY
5260738

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. APPLY BLUE LOCTITE 242 AND CURE PER MANUFACTURE SPECIFICATION





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5602192	EV12DPS OUTER ARM WELDMENT, OUTER LIFT	1	C
2	5602191	EV12DPS MIDDLE SECTION ARM WELDMENT R.H., OUTER LIFT	1	B
3	5602193	EV12DPS INNER ARM WELDMENT, OUTER LIFT	1	B
4	5736605	D2-12C/XPR-12 BOLT ON ARM RESTRAINT GEAR	1	E
5	5530302	HHB M10 x 1.5 x 40 FT, CL 10.9	3	-
6	5545200	WASHER M10 x Ø18 SL, CL10.9	3	-
7	5545341	WASHER M10 x Ø20 FLAT, CL10.9	3	-
8	5602179	EV12DPS MIDDLE SECTION ARM PIN WELDMENT, Ø37.92mm, OUTER LIFT	1	B
9	5540281	C RING Ø38mm OD 5103-150	1	-
10	5701052	D2/GP/M7K/XPR ARM INTERNAL GEAR STOP	1	G
11	5602181	EV12DPS ARM GEAR STOP PIN WELDMENT, Ø24.97mm, OUTER LIFT	1	C
12	5505106	SPRING PIN M6 x 50	1	-
13	5580219	KEYRING 56mm x 3mm	1	-
14	5540296	COMPRESSION SPRING Ø28.7 x 49.5mm	1	B
15	5530479	BHSS M10 x 1.5 x 20 FT, CL 10.9 B.O.	1	-

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	RK	01/23/2024
	CHECKED		
DIMENSIONS ARE IN MM	THIRD ANGLE PROJECTION		

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

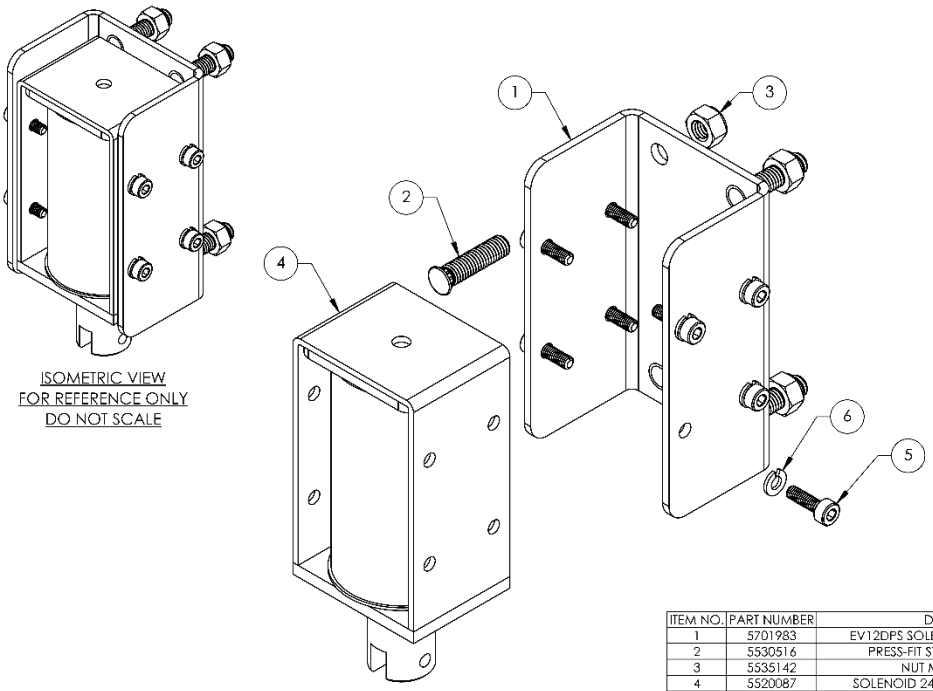
TITLE: EV12DPS RIGHT ARM ASSEMBLY, OUTER LIFT

SIZE	DWG. NO.	REV
A	5216393	B
	SCALE: 1:10	SHEET 1 OF 2

WHERE USED
EV12DPS

NEXT ASSEMBLY
5260738

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. APPLY BLUE LOCTITE 242 AND CURE PER MANUFACTURE SPECIFICATION



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5701983	EV12DPS SOLENOID MOUNT BRACKET	1	B
2	5530516	PRESS-FIT STUD M5 x 0.8 x 20mm	4	-
3	5535142	NUT M5 x 0.8, NL CL8	4	-
4	5520087	SOLENOID 24VDC PULL, 1.00 STROKE	1	-
5	5530059	SHCS M3 x 0.5 x 10 FT, CL 8.8	8	-
6	5545035	WASHER M3 x Ø6.2 SL	8	-

DO NOT SCALE DRAWING | | NAME | DATE
DRAWN | RK | 09/29/2023
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL
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BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

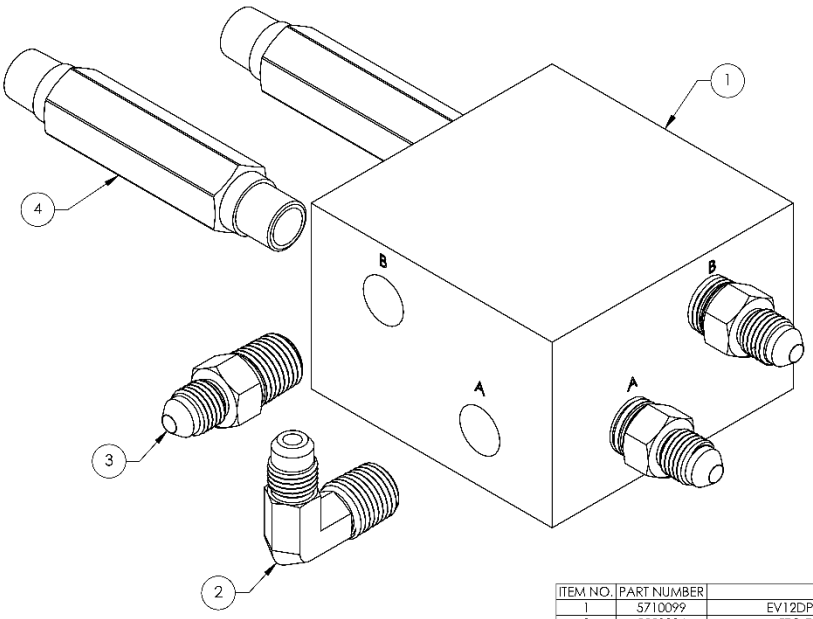
TITLE: EV12DPS SOLENOID MOUNT BRACKET ASSEMBLY

SIZE A | DWG. NO. 5216394 | REV A
SCALE: 1:1 | SHEET 1 OF 1

WHERE USED
EV12DPS

NEXT ASSEMBLY
5250414

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. ASSEMBLE ITEMS AS SHOWN



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5710099	EV12DPS HYDRAULIC BLOCK	1	A
2	5550086	FTG ELB -04 NPT x -04 JIC	1	-
3	5550147	FTG NPL -04 JIC x -04 NPT	3	-
4	5550228	FTG NPL -04 NPTF x -04 JIC, 3.25 LONG	2	-

DO NOT SCALE DRAWING | | NAME | DATE
DRAWN | CA | 10/18/2024
CHECKED
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION
PROPRIETARY AND CONFIDENTIAL
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BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

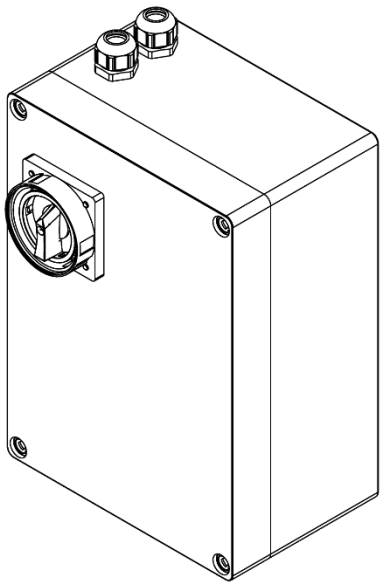
TITLE: EV12DPS HYDRAULIC BLOCK ASSEMBLY

SIZE A | DWG. NO. 5216398 | REV A
SCALE: 1:1 | SHEET 1 OF 1

WHERE USED
EV12DPS

NEXT ASSEMBLY
5250414

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. APPLY ONE OR TWO WRAPS OF TEFLON TAPE TO MALE NPT THREADS PRIOR TO ASSEMBLY
4. CHECK FOR METAL CHIPS IN HOLES BEFORE ASSEMBLY
5. ASSEMBLE ITEMS AS SHOWN
6. PORTS: A = INNER LIFT / B = OUTER LIFT



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5520705	EV12DPS ELECTRICAL CONTROL BOX	1	-
2	5701980	EV12DPS ELECTRICAL CONTORL BOX INSIDE PLATE	1	A
3	5520468	DIN 3 RAIL - 35mm	263mm	-
4	5520707	DISCONNECT SWITCH, 25A 4-POLE	1	-
5	5520708	CONTROL TRANSFORMER, 220VAC/24VAC, 160VA	1	-
6	5520709	FUSE, 5A TIME DELAY 250VAC	3	-
7	5520438	TERMINAL BLOCK END BRACKET, SCREW DOWN, 9mm WIDE	1	-
8	5530511	PHPS M4 x 0.7 x 10mm FT	4	-
9	5530320	BHPS M4 x 0.7 x 6mm FT	8	-
10	5520436	TERMINAL BLOCK 10AWG, 30A, GRAY	15	-
11	5520901	DOUBLE-LAYER TERMINAL BLOCK END COVER	1	-
12	5520439	JUMPER, MULTIPLE DINNECTOR TERN BLKS	5	-
13	5520432	GROUNDING TERMINAL 24-10 AWG	1	-
14	5520612	LIQUID-TIGHT CORD GRIP	9	-
15	5520713	WIRE, AWG 14, BLACK, STRANDED, PVC	2700mm	-
16	5520139	WIRE, AWG 18, BLACK, STRANDED, PVC	2700mm	-
17	5520712	BRIDGE RECTIFIER, 1PH, 1KV, 50A	1	-
18	5520710	RELAY DPDT, DC24V, 5A	1	-
19	5520711	RELAY SOCKET DIN RAIL MOUNT, 8 PIN 2P	1	-
20	5530241	PHPS 8-32 x .75	1	-
21	5520243	FUSE HOLDER 1 POLE, 500VAC, 6.3A	3	-
22	5520241	CORD GRIP CLAMP, Ø13.0-18.0mm	1	-
23	5520242	CONTACTOR, 24VAC 25A	1	-
24	5520900	TERMINAL BLOCK, DOUBLE-LAYER, 300V 20A	2	-

WHERE USED
EV12DPS

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING

NEXT ASSEMBLY
5250414

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	TM	05/07/2024
	CHECKED		

DIMENSIONS ARE IN MM

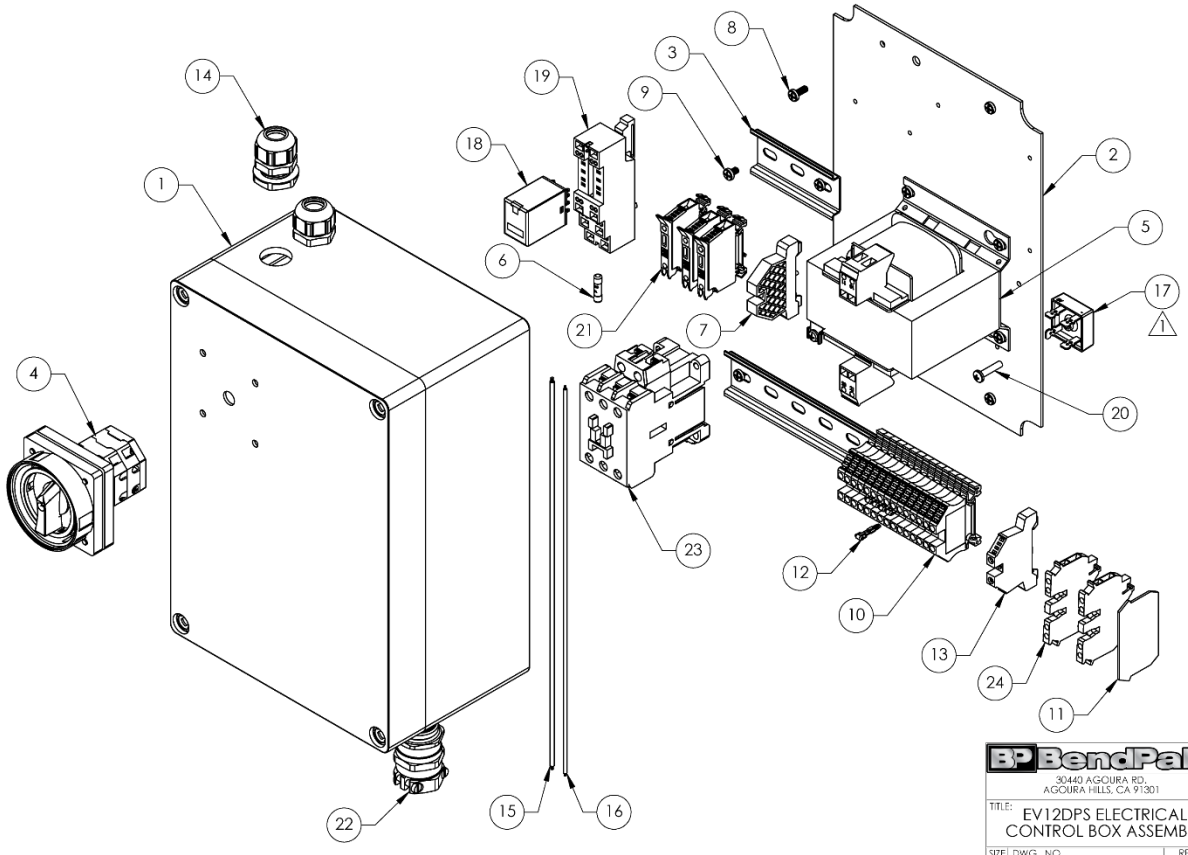
THIRD ANGLE PROJECTION

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS ELECTRICAL CONTROL BOX ASSEMBLY

SIZE	DWG. NO.	REV
A	5216399	B

SCALE: 1:3 SHEET 1 OF 4



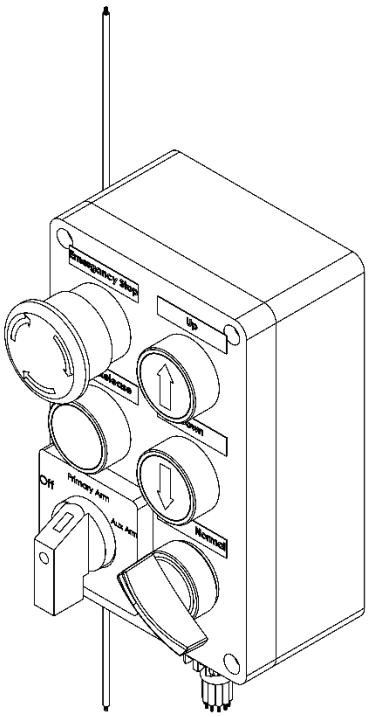
1 APPLY SILVER THERMAL PASTE SILICONE HEAT TRANSFER COMPOUND BEFORE FASTENING

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS ELECTRICAL CONTROL BOX ASSEMBLY

SIZE	DWG. NO.	REV
A	5216399	B

SCALE: 1:3 SHEET 2 OF 4



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5520706	EV12DPS PENDANT BOX	1	-
2	5520714	EMERGENCY STOP PUSH SWITCH, 600V 10A	1	-
3	5520715	PUSH BUTTON, UP/DOWN, 600V 10A	2	-
4	5520716	PUSH BUTTON, 600V 10A	1	-
5	5520717	CAM SWITCH 3 POSITION, 25A 2-POLE	1	-
6	5520718	SELECTOR SWITCH 2 POSITION, 600V 10A	1	-
7	5520241	CORD GRIP CLAMP, Ø6.0-12.0mm	1	-
8	5520719	CABLE, AWG 18-10, SEOOW	3000mm	-
9	5520139	WIRE, AWG 18, BLACK, STRANDED, PVC	800mm	

DO NOT SCALE DRAWING		NAME	DATE
DIMENSIONS ARE IN MM	DRAWN	CA	08/04/2025
	CHECKED		
	THIRD ANGLE PROJECTION		

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BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS PENDANT ASSEMBLY

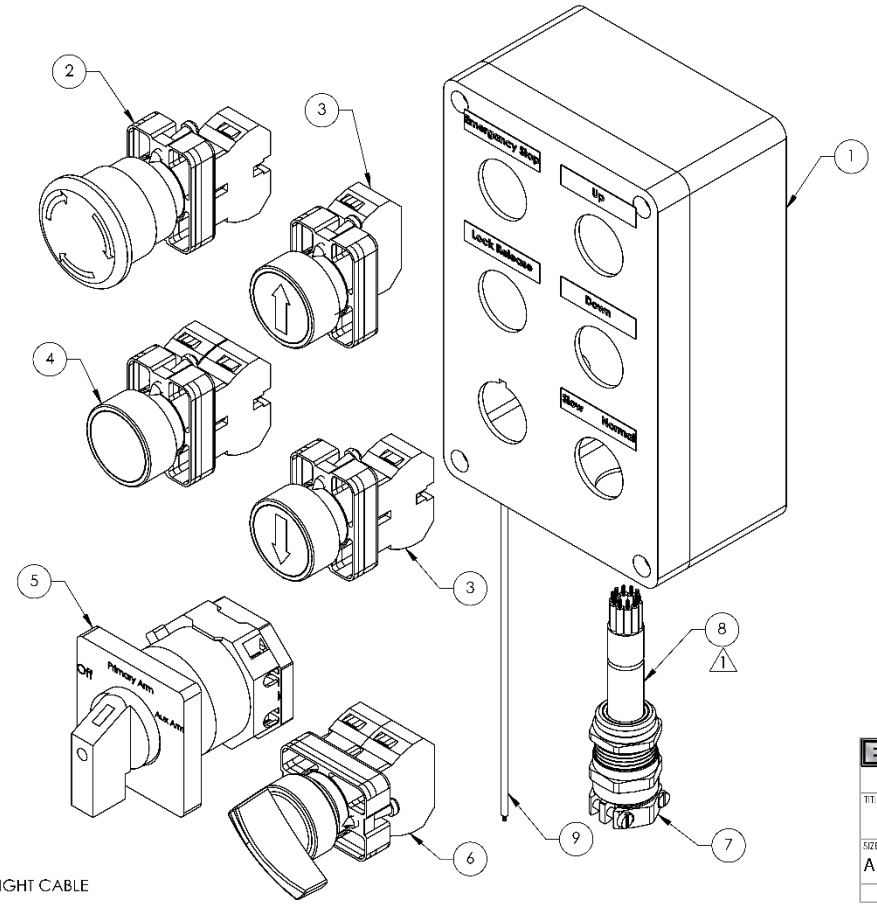
SIZE	DWG. NO.	REV
A	5216400	A

SCALE: 2:3 SHEET 1 OF 4

WHERE USED
EV12DPS

NEXT ASSEMBLY
5250414

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN



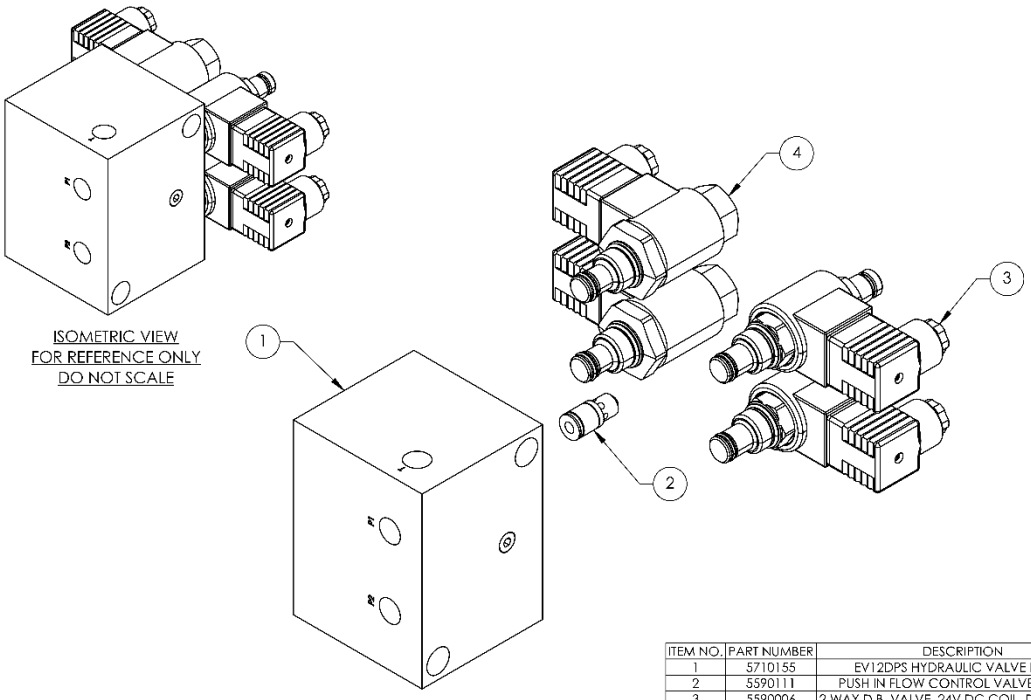
1 STRAIGHT CABLE

BP BendPak
30440 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS PENDANT ASSEMBLY

SIZE	DWG. NO.	REV
A	5216400	A

SCALE: 2:3 SHEET 2 OF 4



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5710155	EV12DPS HYDRAULIC VALVE BLOCK	1	-
2	5590111	PUSH IN FLOW CONTROL VALVE, 5 L/MIN	1	-
3	5590006	2 WAY D.B. VALVE, 24V DC COIL, DUAL CHECK	2	-
4	5590007	2 WAY D.B. VALVE, 24V DC COIL	2	-

	NAME	DATE
DRAWN	CA	10/10/2025
CHECKED		

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

BP BendPak

3040 AGOURA RD.
AGOURA HILLS, CA 91301

TITLE: EV12DPS HYDRAULIC VALVE BLOCK ASSEMBLY

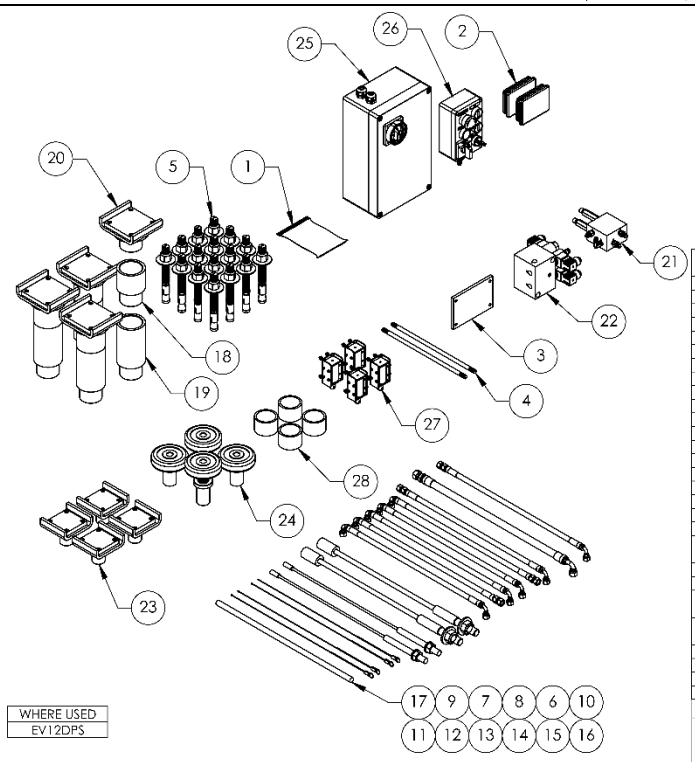
SIZE	DWG. NO.	REV
A	5216401	A

SCALE: 1:2 SHEET 1 OF 1

WHERE USED
EV12DPS

NEXT ASSEMBLY
5250414

NOTE: UNLESS OTHERWISE SPECIFIED .
1. REFER TO MODEL FOR ADDITIONAL INFORMATION
2. ASSEMBLE ITEMS AS SHOWN



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV.
1	5174222	EV12DPS PARTS BAG	1	C
2	5715196	POLYETHYLENE COVER BLOCK 105 x 80	2	D
3	5715003	POWER UNIT VIBRATION DAMPENER	1	B
4	5530515	DOUBLE THREADED ROD M10 x 1.5 x 310mm	2	B
5	5530308	AB 3/4" x 7"	16	-
6	5595868	CABLE ASSEMBLY Ø12 x 10717mm ST	2	C
7	5595869	CABLE ASSEMBLY Ø6 x 10861mm ST	2	C
8	5595870	SAFETY CABLE ASSEMBLY Ø1.2 x 2175mm	2	C
9	5595871	SAFETY CABLE ASSEMBLY Ø1.2 x 18460mm	2	B
10	5570591	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 7683mm DB	1	C
11	5570592	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 7805mm SB	1	B
12	5570593	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 4490mm DB	1	B
13	5570594	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 4514mm DB	1	C
14	5570595	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 310mm SB	2	B
15	5570596	HYDRAULIC HOSE ASSEMBLY Ø10 x 940mm SB	1	B
16	5570805	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 915mm SB	1	B
17	5520116	CABLE, AWG 14 4, SOOW	15000mm	-
18	5746192	ARM ADAPTER, MEDIUM	4	F
19	5746193	ARM ADAPTER, LONG	4	E
20	5215702	FRAME CRADLE LIFT PAD ADAPTER ASSEMBLY, Ø60mm	4	F
21	5216398	EV12DPS HYDRAULIC BLOCK ASSEMBLY	1	A
22	5216401	EV12DPS HYDRAULIC VALVE BLOCK ASSEMBLY	1	A
23	5215506	FRAME CRADLE LIFT PAD ADAPTER ASSEMBLY, Ø35mm	4	E
24	5216375	ROUND ADJUSTABLE LIFT PAD ADAPTER ASSEMBLY, Ø35mm	4	B
25	5216399	EV12DPS ELECTRICAL CONTROL BOX ASSEMBLY	1	B
26	5216400	EV12DPS PENDANT ASSEMBLY	1	A
27	5216394	EV12DPS SOLENOID MOUNT BRACKET ASSEMBLY	4	A
28	5746751	EV12DPS ARM GEAR SPRING SPACER, OUTER LIFT	4	A

	NAME	DATE
DRAWN	IM	10/28/2022
CHECKED		

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

BP BendPak

1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: EV12DPS PARTS BOX

SIZE	DWG. NO.	REV
A	5250414	C

SCALE: 1:12 SHEET 1 OF 1

WHERE USED
EV12DPS

NEXT ASSEMBLY
5260738

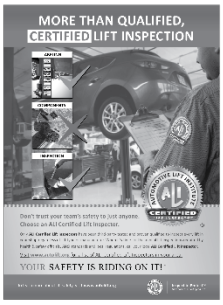
NOTE: UNLESS OTHERWISE SPECIFIED .
1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. HOSES AND CABLES ARE IN REPRESENTATIONAL FORM
3. FOR ELECTRICAL SPECIFICATIONS REFER TO PART SPECIFICATION FORMS. (mm) QTY FOR REFERENCE ONLY

Automotive Lift Institute (ALI) Store

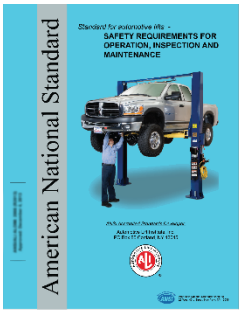
You probably checked the **ALI's Directory of Certified Lifts** (www.autolift.org/ali-directory-of-certified-lifts/) before making your most recent Lift purchase, but did you know the **ALI Store** (**www.autolift.org/ali-store/**) offers a wide variety of professional, easy-to-use, and reasonably priced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

The ALI Store is your trusted source for workplace safety!

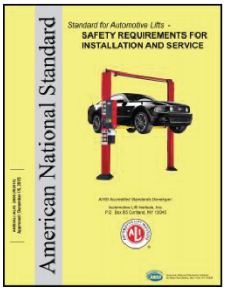
Lifting It Right Online Certificate Course. Make *sure* you and your people are lifting vehicles the right way.



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.

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

Maintenance Log

Maintenance Log

Maintenance Log

30440 Agoura Hills Dr.
Agoura Hills, CA 91301 USA
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