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

D2-10 Series Two-Post Lifts

Installation and Operation Manual

Manual P/N 5900249 — Manual Revision B — February 2021

Models:

- D2-10A
- D2-10C

Model D2-10C shown.

Reference ANSI/ALI ALIOM safety requirements for installation and service of Automotive Lifts before installing lift.

Designed and engineered in Southern California, USA. Made in China.

⚠ DANGER

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

Manual. D2-10A and D2-10C Two-Post Lift, *Installation and Operation Manual*, Manual Part Number 5900249, Manual Revision B, released February 2021.

Limitations. Every effort has been made to ensure complete and accurate instructions are included in this manual. However, product updates, revisions, and/or changes may have occurred since this manual was published. BendPak reserves the right to change any information in this manual without incurring any obligation for equipment previously or subsequently sold. BendPak Dannmar is not responsible for typographical errors in this manual. You can always find the latest version of the **manual for your product on the Dannmar website**.

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 Dannmar BendPak dealer or visit **www.dannmar.com/support/** for full warranty details. Be sure to register your warranty with Dannmar.

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.
- **Only use the Lift if it can be used safely!**

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

Model: _____

Serial: _____

Date of Manufacture: _____

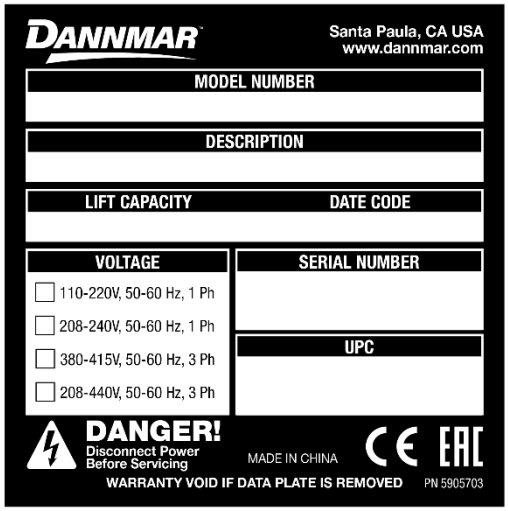


Table of Contents

Introduction

This manual describes two D2-10 Series Two-Post Lift models:

- **D2-10C**. A Two-Post *Symmetrical* Lift that raises Vehicles up to 10,000 pounds (4,536 kg).
- **D2-10A**. A Two-Post *Asymmetrical* Lift that raises Vehicles up to 10,000 pounds (4,536 kg).

All models have Overhead Assemblies and clear floors. **All models are ALI certified**.

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

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

This manual is mandatory reading for all users of D2-10 Series Lifts, including anyone who installs, operates, maintains, or repairs them. Keep this manual on or near the equipment at all times.

Technical support and service is available from your dealer, on the Web at **dannmar.com/support**, by email at **support@dannmar.com**, or by phone at **(877) 432-6627**.

You may also contact Dannmar for parts replacement information (please have the model and serial number of your unit available).

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.

Safety Information

Please note the following:

- D2-10 Series Lifts are Two-Post service Lifts. ***Use them only for their intended purpose.***
- Only operate your Lift between temperatures of 41°F to 104°F (5°C to 40°C).
- The Lift should only be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
- Do not make any modifications to the Lift; this voids the warranty and increases the chances of injury or property damage. ***Do not modify any safety-related features in any way.***
- Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
- Make sure all operators read and understand this *Installation and Operation Manual*. Keep the manual near the Lift at all times.
- Make a visual inspection of the Lift before using it. Do not use the Lift if you find any missing or damaged parts. Instead, take it out of service, then contact an authorized repair facility, your distributor, or Dannmar at **(877) 432-6627** or by email at **support@dannmar.com**.
- BendPak recommends making a ***thorough*** inspection of the Lift at least once a year. Replace any damaged or severely worn parts, decals, or warning labels.

Symbols

Following are the symbols used in this manual:

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

⚠ 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 you use your unit better.

Liability Information

Dannmar 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 Dannmar.
- Modifying, disabling, overriding, or removing safety features.
- Damage to the equipment from external influences.
- Incorrect operation of the equipment.

Electrical Information

⚠ DANGER All wiring ***must*** be performed by a licensed, certified Electrician. Do not perform any maintenance until main electrical power has been disconnected from the Lift and cannot be re-energized until all procedures are complete.

Important electrical information:

- Improper electrical installation can damage the Power Unit motor, which is not covered by the warranty.
- The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them after connecting to a power source.
- Use a separate circuit breaker for each Power Unit.
- Protect each circuit with a time delay fuse or circuit breaker:
  - For a 208 to 230 VAC, *single phase* circuit, use a 30 amp fuse.
  - For a 208 to 230 VAC, *three phase* circuit, use a 30 amp fuse.
  - For a 460 VAC, *three phase* circuit, use a 30 amp fuse.

Frequently Asked Questions

Question: What kinds of Vehicles can I raise on my D2-10 Series Lift?

Answer: Cars, trucks, SUVs, and so on; up to 10,000 lbs (4,536 kg) each.

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

A: Anywhere from 60 to 70 seconds, depending on how high you raise it.

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

A: Yes. Two-Post Lifts ***must*** be anchored. Your Lift comes with high-quality Anchor Bolts; use only the Anchor Bolts that came with your Lift.

Q: How thick does my Concrete have to be?

A: 4.25 inches thick, 3,000 PSI, cured for a minimum of 28 days. Do not install the Lift on cracked or defective Concrete. ***Do not install on asphalt or any surface other than Concrete***.

Q: Can I install my Lift outside?

A: No. All D2-10 Series Lifts are approved for indoor installation and use only.

Q: How long can I leave a Vehicle raised up on my Lift?

A: For a long time, as long as you leave the Lift *engaged* on its Safety Locks. Once the Lift is engaged on its Safety Locks, gravity holds it in position. ***Only leave your Lift either on the ground (fully lowered) or engaged on its Safety Locks***.

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

A: Fourteen, spaced every 3 inches.

Q: Does the Lift have a Front and Rear?

A: Yes and no. Because you can drive onto a two-post Lift from either opening, there is technically no Front and Rear. However, most garages have an Approach side and a Wall side, so in that case, the Wall side is the Front and the Approach side is the Rear. If you have an Asymmetric Lift, the long Lift Arms are on the Approach side.

Q: What is the difference between a Symmetric and an Asymmetric Lift?

A: The Bases of Symmetric Lifts face each other directly and when a Vehicle is on the Lift, it is more or less balanced; the same amount of weight on either side of an imaginary line drawn between the Posts. The Bases of Asymmetric Lifts are angled 30 degrees towards the Approach, making it easier to open the doors of some Vehicles. When a Vehicle is on an Asymmetric Lift, about 30 percent of the weight is in front of the Posts and about 70 percent is behind the Posts.

Q: Are Vehicles on an Asymmetric Lift balanced?

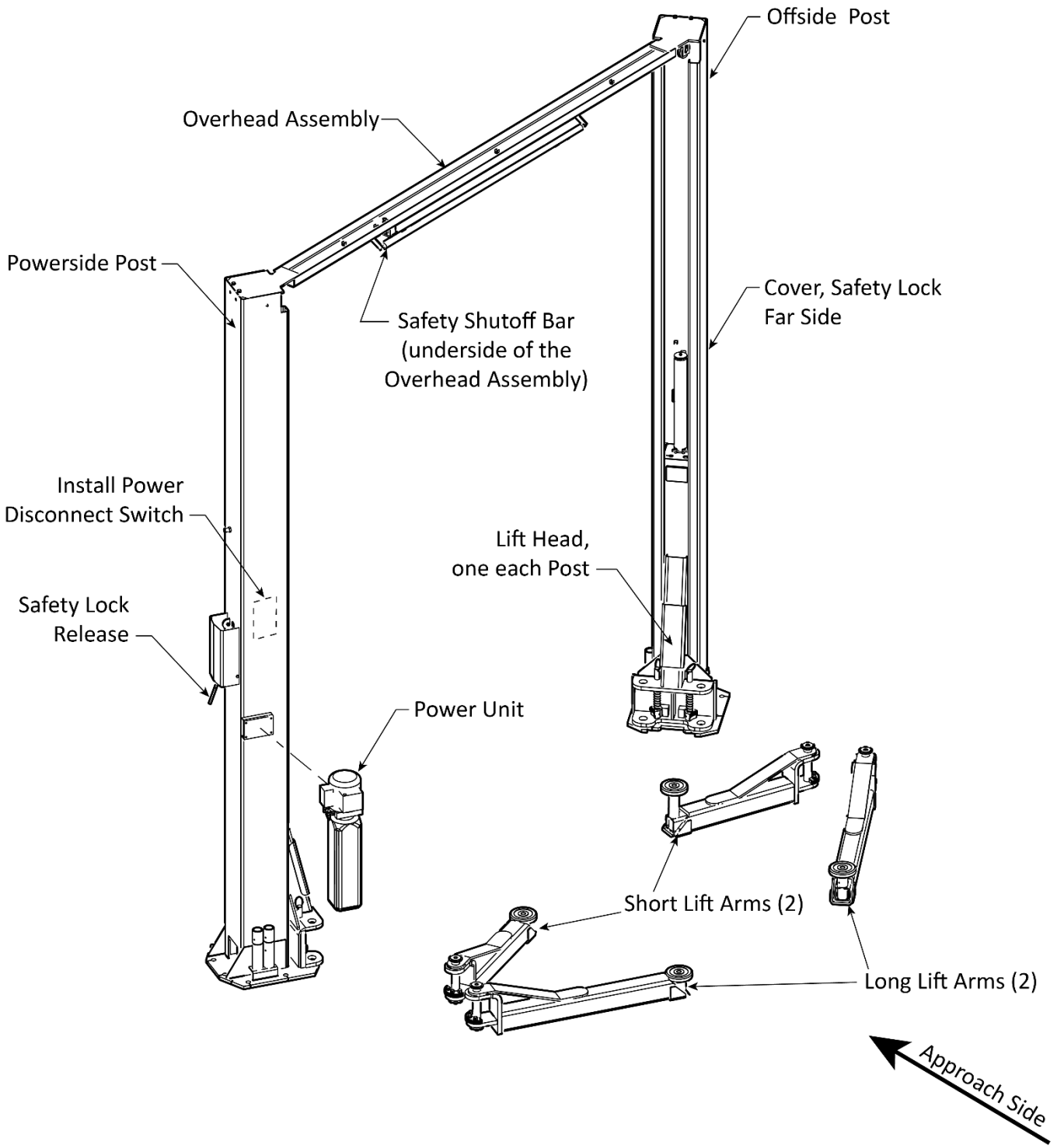
A: Yes. Even though Asymmetric Lifts are angled, the Arms are positioned such that the Vehicle is still balanced when raised on the Lift.

Q: How do I know where to put the Adapters when I want to raise a Vehicle?

A: The Vehicle needs to be balanced, so you must put the Adapters (sometimes called Pads) so that they contact the manufacturer's recommended Lifting Points. ***If you do not know where the manufacturer's recommended Lifting Points are on a Vehicle, you must find out before you raise it***. Your Lift came with books that will help: *Vehicle Lifting Points for Frame Engaging Lifts* shows the Lifting Points for hundreds of Vehicles. *Lifting It Right* includes information about how to raise Vehicles correctly.

Components

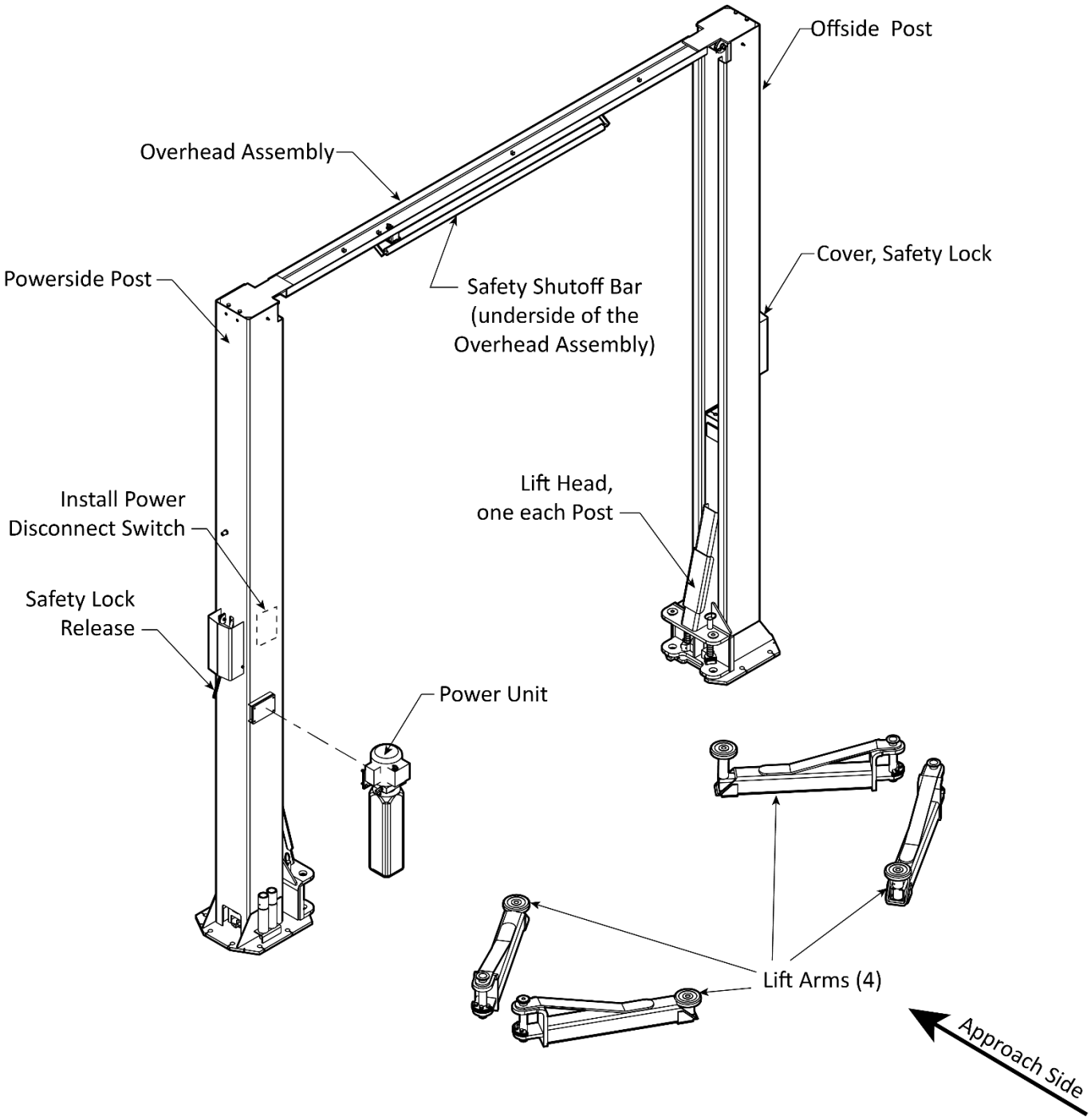
D2-10A



D2-10A model shown above. Not to scale. Posts angled at 30˚ towards the Approach Side. Not all components shown. Powerside Post shown on the Left when viewed from the Approach side.

Components

D2-10C



D2-10C model shown. Not to scale. Not all components shown. Powerside Post shown on the Left when viewed from the Approach side.

D2-10 Series Lift components include:

- **Powerside Lift Post**: The Powerside Post holds the Power Unit, the Safety Lock Release Handle, the Lowering Handle (which is on the Power Unit), and the Power Disconnect Switch. The Powerside Post must be on the Left (looking at the Lift from the Approach) for Asymmetric models; it can be on the Left or the Right for Symmetric models.
- **Offside Lift Post**: The Post without the Power Unit.
- **Power Unit**: Provides Hydraulic Fluid to the Lift and connects to an appropriate power source. Includes the Up Button, the Lowering Handle, and the Hydraulic Fluid reservoir.
- **Up Button**: Press and hold to raise the Vehicle on the Lift.
- **Safety Lock Release Handle**: Located on the Power Post above the Power Unit, it disengages the Safety Locks so you can lower the Lift.
- **Lowering Handle**: Lowers the Lift when used at the same time as the Safety Lock Release Handle. Located on the Power Unit.
- **Power Disconnect Switch**: Immediately interrupts main electrical power to the Lift. Used for electrical circuit faults, emergency situations, or when Lift is undergoing service or maintenance. This switch is not provided with the D2-10 Series lifts, and must be installed by a licensed Electrician.
- **Lift Heads**: Sometimes called carriages. Lift Heads move up and down in the Posts. They connect to the Lift Arms, so when the Lift Heads move up, the Lift Arms also move up, thus raising any Vehicle on the Lift Arms.
- **Lift Arms**: Extendable steel arms that attach to the Lift Heads. Adapters (also called Pads) attach at the end of each Lift Arm; they contact the Lifting Points on the underside of the Vehicle.
- **Adapters**: Pads that contact the Lifting Points on the underside of the Vehicles you raise. Four Screw Lift Adapters are included with your Lift, as are a set of four Auxiliary Adapters that can be used with the Screw Lift Adapters to add an additional 2.5 to 6 inches of height (to make better contact with the Lifting Points on some Vehicles).

  Frame Cradle Pads, which are well-suited for raising and holding trucks and SUVs (body-on-frame style), are available separately.

- **Safety Locks**: Hold the Lift Heads up when engaged. Multiple Safety Lock heights let you select the best one for your needs. Once engaged on its Safety Locks, the Lift Heads stay up, even if the Lift loses power. ***Only leave your Lift fully lowered or engaged on Safety Locks.***

  Safety Locks are hidden by the Posts, but you can hear them as the Lift rises. Refer to **About Safety Locks** for more information.

- **Overhead Assembly**: The steel beam that sits between the tops of the two Posts, it functions to support the Lift's structure, as well as protects and holds Cables and Hydraulic Hoses.
- **Safety Shutoff Bar**: Located on the underside of the Overhead Assembly, the Safety Shutoff Bar stops upward movement of the Lift if the top of a Vehicle hits it.
- **Equalizing Cables**: Two cables that keep the Lift Heads synchronized. Equalizing Cables prevent one Lift Head lowering or raising faster than the other Lift Head; they keep them synchronized. For Symmetric Lifts, the two Equalizing Cables are the same length; for Asymmetric Lifts, the two Equalizing Cables are different lengths.

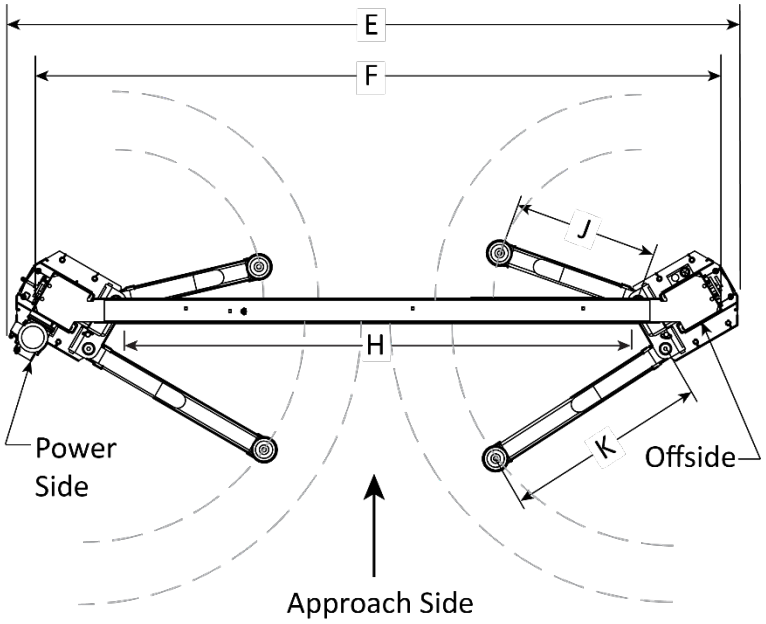
Specifications

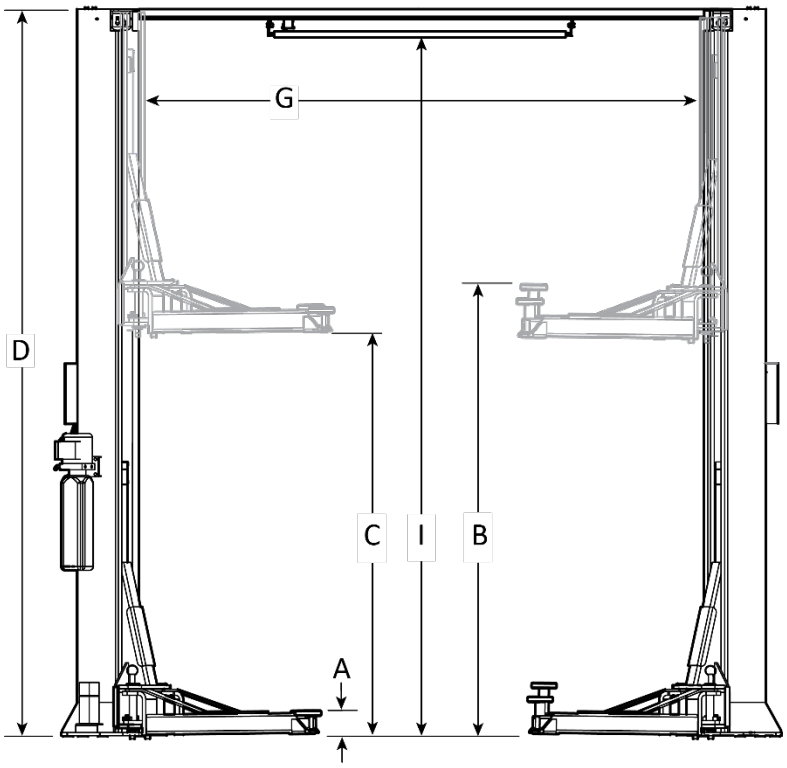
Model	**D2-10A**	**D2-10C**
Lifting Capacity	10,000 lbs / 4,536 kg	
Maximum Capacity Front Axle	5,000 / 2,268 kg	
Maximum Capacity Rear Axle	5,000 / 2,268 kg	
A – Lowered Height with Pad	5" / 127 mm	
B – Max. Lift Height (Top Lock)	78.5" / 1,994 mm	
C – Max. Rise	69" / 1,753 mm	
D – Height Overall	145" / 3,683 mm	
E – Width Overall	143.5" / 3,645 mm	145.25” / 3,690 mm
F – Width Outside of Lift Posts	137.25” / 3,486 mm	137.25" / 3,486 mm
G – Width Inside of Lift Posts	120.75" / 3,067 mm	118.25” / 3,004 mm
H – Drive-Thru Clearance	100” / 2,540 mm	106” / 2,692 mm
I – Floor to Top Switch	141" / 3,581 mm	141” / 3,581 mm
J – (Front) Arm Reach (Min.)	29.25" / 743 mm	32.25” / 819 mm
J – (Front) Arm Reach (Max.)	43.75" / 1,111 mm	52.5” / 1,334 mm
K – (Approach) Arm Reach (Min)	40.25" / 1,022 mm	32.25” / 819 mm
K – (Approach) Arm Reach (Max.)	58" / 1,473 mm	52.5” / 1,334 mm
Time to Full Rise	~60-70 seconds	
Power Unit	220 VAC, 30 Amp, 60 Hz, 1 Phase	
Noise	45 dB	
Shipping Weight	1,665 lbs. / 755.2 kg	1,470 lbs. / 666.8 kg

***** *Lifting Height w/Pad* is maximum lifting height with Pads at lowest height, no adapter. *Maximum Lifting Height* is maximum lifting height with Pads at top height and with the 6 in. / 152 mm Adapter.

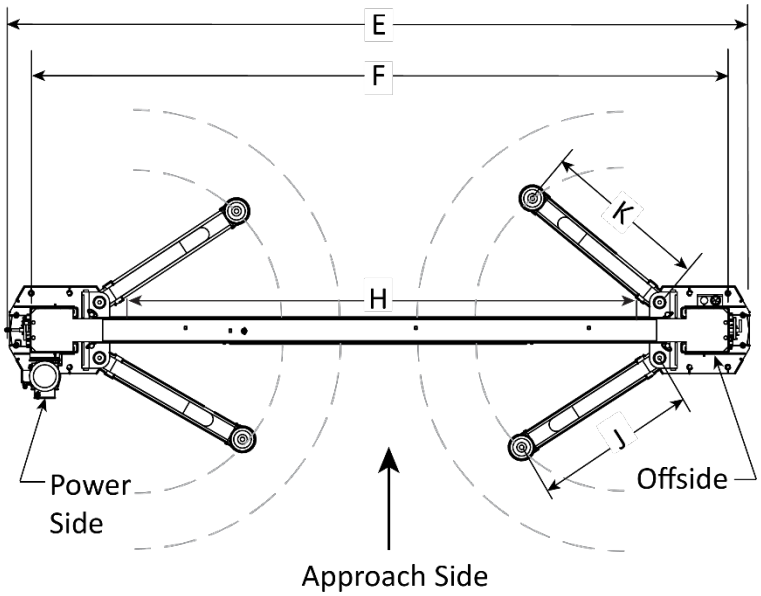
Specifications subject to change without notice.

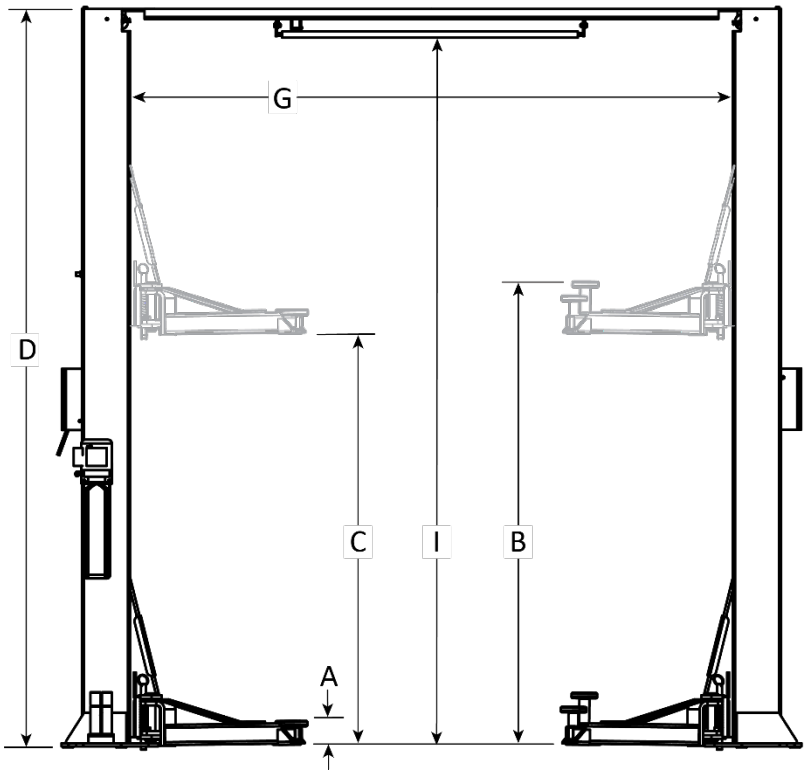
D2-10A Specifications





D2-10C Specifications





Installation Checklist

Following are the steps needed to install a D2-10 Series Lift; perform them in this order.

☐ 1. Review the Safety Rules.

☐ 2. Plan for Electrical work.

☐ 3. Make sure you have the necessary Tools.

☐ 4. Review the Installation Orientation.

☐ 5. Review Clearances around the Lift.

☐ 6. Select the Installation Location.

☐ 7. Put Equalizing Cables into position in the Lift Posts.

☐ 8. Read about Hydraulic Fluid contamination.

☐ 9. Put Hydraulic Hoses into position in the Lift Posts.

☐ 10. Create Chalk Line Guides for the Posts.

☐ 11 Install the Posts.

☐ 12. Prepare and install the Overhead Assembly, Safety Shutoff Bar, and the Microswitch.

☐ 13. Route the Safety Lock Cable.

☐ 14. Install the Equalizing Cables.

☐ 15. Mount the Power Unit on the Lift Post (*do not connect it yet*).

☐ 16. Install the Safety Assemblies and the Safety Lock Cable.

☐ 17. Connect the Hydraulic Hoses.

☐ 18. Learn about Arm Restraint Gears.

☐ 19. Install the Lift Arms.

☐ 20. Perform final Leveling.

☐ 21. Contact the Electrician.

☐ 22. Wire the Microswitch (***requires an Electrician***).

☐ 23. Connect the Power Unit (***requires an Electrician***).

☐ 24. Install the Power Disconnect Switch (***requires an Electrician***).

☐ 25. Install the Thermal Disconnect Switch (***requires an Electrician***).

☐ 26. Install the Safety Covers.

☐ 27. Lubricate the Lift.

☐ 28. Perform an Operational Test.

☐ 29. Review the final Checklist.

Installation

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

Reviewing the Safety Rules

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

⚠ **WARNING** Do not install this equipment unless you have Automotive Lift installation training. Always use proper lifting tools, such as a Forklift or Shop Crane, to raise heavy components. Do not install this equipment without reading and understanding this Manual and the Labels on the unit.

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

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

Preparing for Electrical Work

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

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

Make sure all electrical work conforms to applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical codes.

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

The Electrician needs to:

- **Connect to power**. The Power Unit comes with a pigtail for wiring to a power source. Have your Electrician connect a power cord with plug to the electrical box on the Lift (for connection to a power outlet) or have them wire it directly into the electrical system at the Lift location.

  Note that *installing* the Power Unit and *connecting* the Power Unit to a power source are separate procedures and are done at different times in the installation process. You do ***not*** need an Electrician to *install* the Power Unit, but an Electrician is ***required*** to *connect* the Power Unit to the power source.
- **Connect the Microswitch wiring to the Power Unit**. The Microswitch has to be wired to the Power Unit. The necessary wiring is included with the Lift.
- **Install a Power Disconnect Switch**. A Power Disconnect Switch is used to shut down the Lift in the event of an electrical circuit fault, emergency situation, or when the Lift is being serviced. Refer to **Installing a Power Disconnect Switch** for more information.
- **Install a Thermal Disconnect Switch**. A Thermal Disconnect Switch automatically shuts down the equipment in the event of an overload or an overheated motor. Refer to **Installing a Thermal Disconnect Switch** for more information.

Gathering Your Tools

You may need some or all of the following tools:

- Rotary hammer drill (or similar)
- ¾ inch carbide bit (conforming to ANSI B212.15)
- Hammer
- Four-foot level
- Open-end wrench set, SAE and metric
- Socket and ratchet set, SAE and metric
- Hex key wrench set
- Crescent wrenches
- Torque wrench
- Crow bar
- Chalk line
- Medium flat screwdriver
- Tape measure, 25 feet or more
- Needle-nose pliers
- Forklift or Shop Crane
- Two 12-foot ladders
- Two saw horses

Checking the Installation Orientation

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

- The first thing to determine is which direction you will be driving the Vehicles onto the Lift, called the Approach.

  In some cases, this is very easy: there's a driveway on one side and a wall on the other side. The driveway is your Approach. This makes the wall side the Front of the Lift and the driveway side the Rear of the Lift.

  If both sides are open, decide which way you will be driving the Vehicles onto the Lift. This is the Approach. The drive-***on*** side is the Rear of the Lift and the drive-***off*** side is the Front.

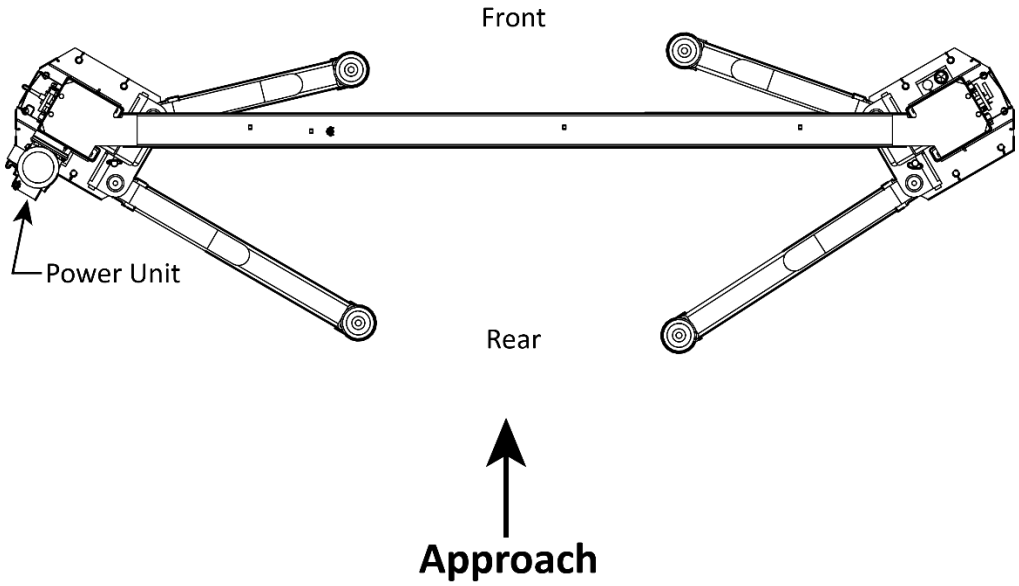
  Designating Front and Rear is important on Asymmetric Lifts because the shorter Lift Arms go on the Front of the Lift and the longer Lift Arms go on the Rear.

  To determine the Front of your Lift, drive a Vehicle straight in (do not back it in) and stop. The Front of the Lift is where the Front of the Vehicle is.

- The Power Unit must go on the Powerside Post. You can identify the Powerside Post by the Mounting Bracket to which the Power Unit attaches; only one Post that came with your Lift has a Mounting Bracket.

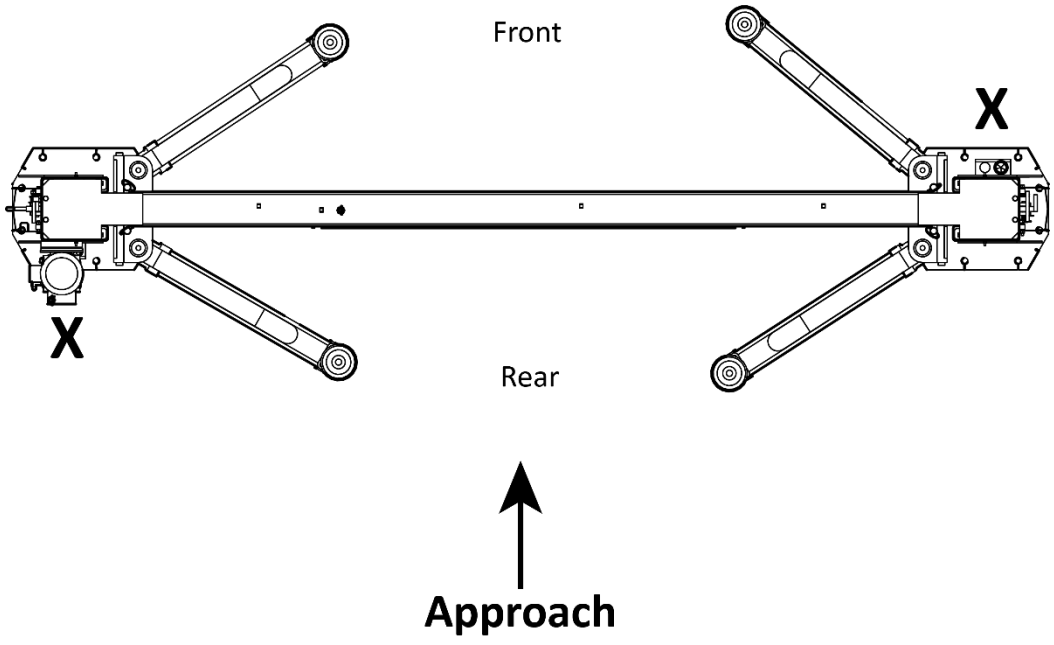
- If you are installing an Asymmetric Lift, the Powerside Post and the Power Unit must go on the left when viewed from the Approach side.

D2-10A, Asymmetric Lift. Power Side Lift Post must be installed on the left.



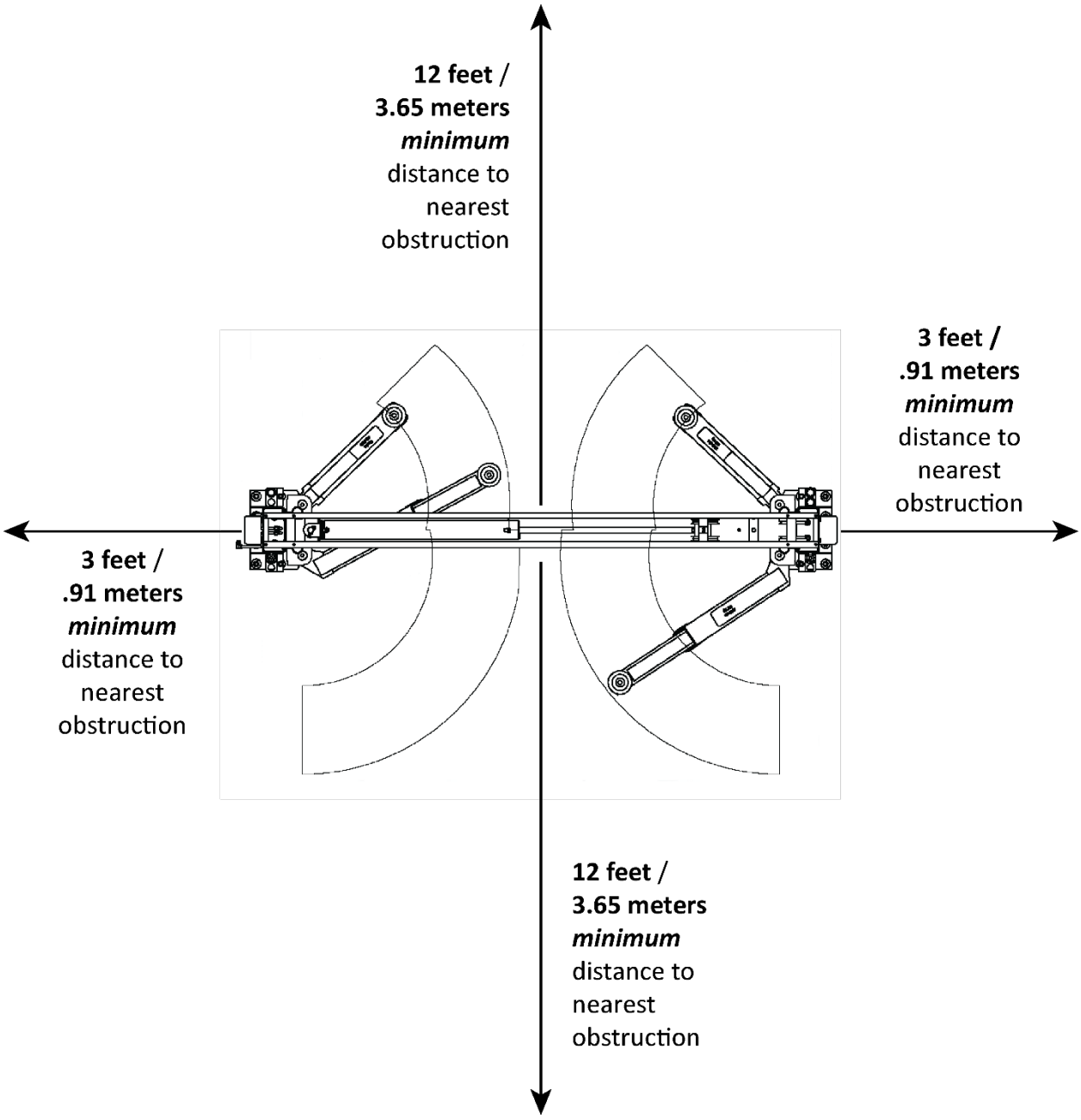
- If you are installing a Symmetric model, the Powerside Post can be installed on either side as you are looking at the Lift. Put the Powerside Post with the Mounting Bracket on the side you want, no other changes are necessary. You generally want the power source as close as possible to the Power Unit. Otherwise, pick the side that works best for the site.

D2-10C, Symmetric Lift. Power Side Lift Post may be installed at either X.



Checking Clearances

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



Drawing is a top view. Not to scale. Not all components shown. Additional distance is required for the Front and Rear as Vehicles can be driven in or driven off from these directions.

Selecting a Location

When selecting the location for your Lift, consider:

- **Architectural plans**. Consult the architectural plans for the desired location. Make sure there are no contradictions between what you want to do and what the plans show.
- **Available space**. Make sure there is enough space for the Lift: front, back, sides, and ***above***. Refer to **Specifications** for exact measurements.
- **Symmetric or Asymmetric**. Asymmetric models may be installed with the Front a little closer to a wall, as only approximately 30 percent of the length of the Vehicles will be in Front of the Posts.
- **Overhead obstructions**. Check for overhead obstructions such as building supports, heaters, lights, electrical lines, low ceilings, and so on.
- **Power**. You need an appropriate power source for the Lift's Power Unit.
- **Outdoor installations**. D2-10 Series Lifts are approved for ***indoor installation and use only***. *Outdoor installation is prohibited*.
- **Floor**. Only install the Lift on a flat, concrete floor; do not install on asphalt or any other surface. The surface must be level; do not install if the surface has more than three degrees of slope.

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

- **Concrete specifications**. Make sure the concrete is at least 4.25 inches thick, 3,000 PSI, cured for a minimum of 28 days, and steel reinforced. Do not install the Lift on cracked or defective concrete. Anchor Bolts must be more than 6 inches from cracks in the concrete, expansion joints 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 "Automotive Lifts – Safety Requirements for Construction, Testing, and Validation", ANSI/ALI ALCTV. Consult with an expert for any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

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

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

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

⚠ **WARNING** Some Lift components are very heavy; if handled incorrectly, they can damage materials like tile, sandstone, and brick. Try to handle the Lift components just twice: once when delivered and once when moved into position. You must have a

Forklift or Shop Crane to move some of the Lift components into position. ***Use care when moving Lift components***.

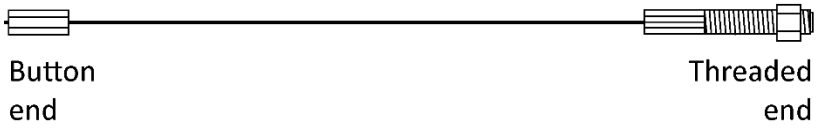
Putting Equalizing Cables into Position

It is much easier to put the Equalizing Cables into position ***before*** you stand up the Posts. Note that this is *not a full install* of the Equalizing Cables, just putting them into position.

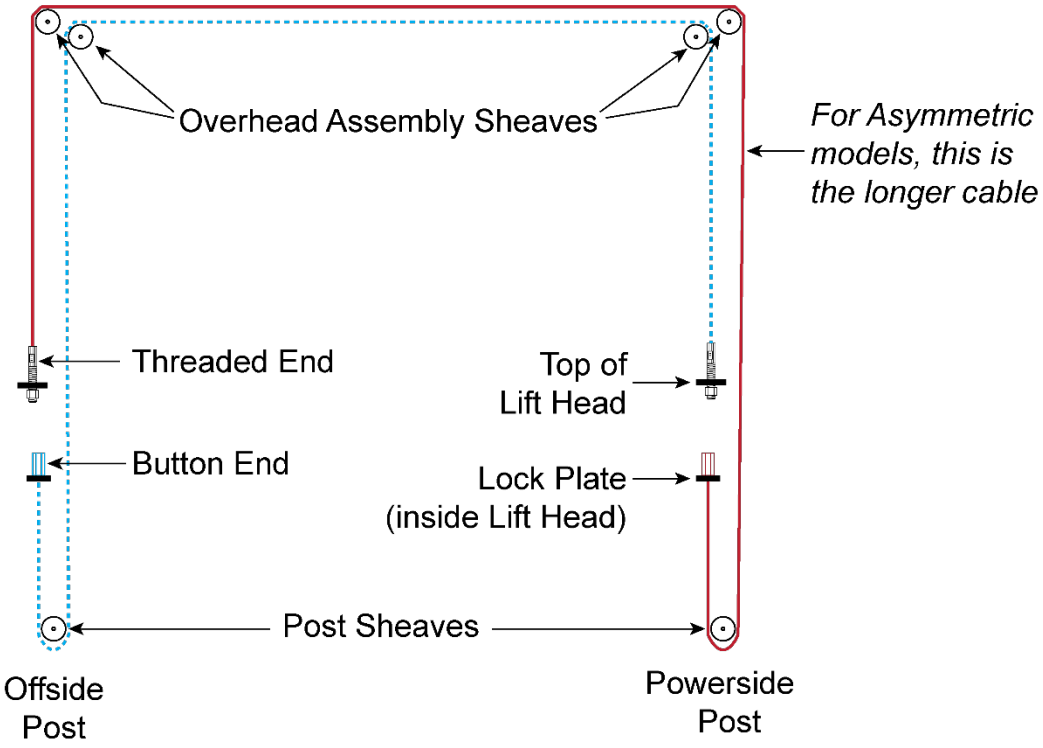
⚠ **CAUTION** Dannmar recommends wearing gloves while handling the Equalizing Cables.

The Equalizing Cables keep the Lift Heads synchronized. If one Lift Head lowers or raises faster than the other Lift Head; the Vehicle on the Lift would become unstable and could fall.

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



Important: For Symmetric models, the two Equalizing Cables are the same length. ***For Asymmetric models, the two Equalizing Cables are different lengths***. For Asymmetric models, the longer cable is routed over the Overhead Assembly Sheaves on the Approach side of the Lift (the Overhead Assembly Sheaves that are furthest apart from each other).



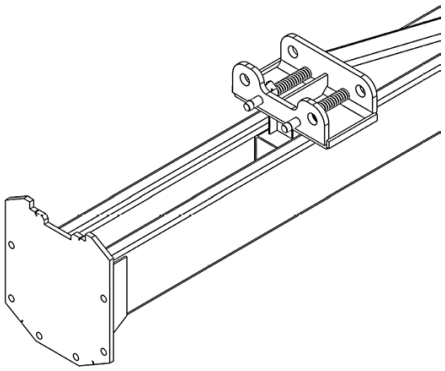
Not to scale. Not all components shown. Some components exaggerated for clarity. Asymmetric model shown, with one cable longer than the other.

The following procedure puts the two Equalizing Cables into place at the bottom of the Post; *it is not a full install of the Equalizing Cables*.

To put the Equalizing Cables into position:

1. Put both Posts either flat on the ground or with their tops elevated on a sawhorse or similar.

   The ***inside*** of the Posts need to be accessible, facing up. (See figure to the right.)

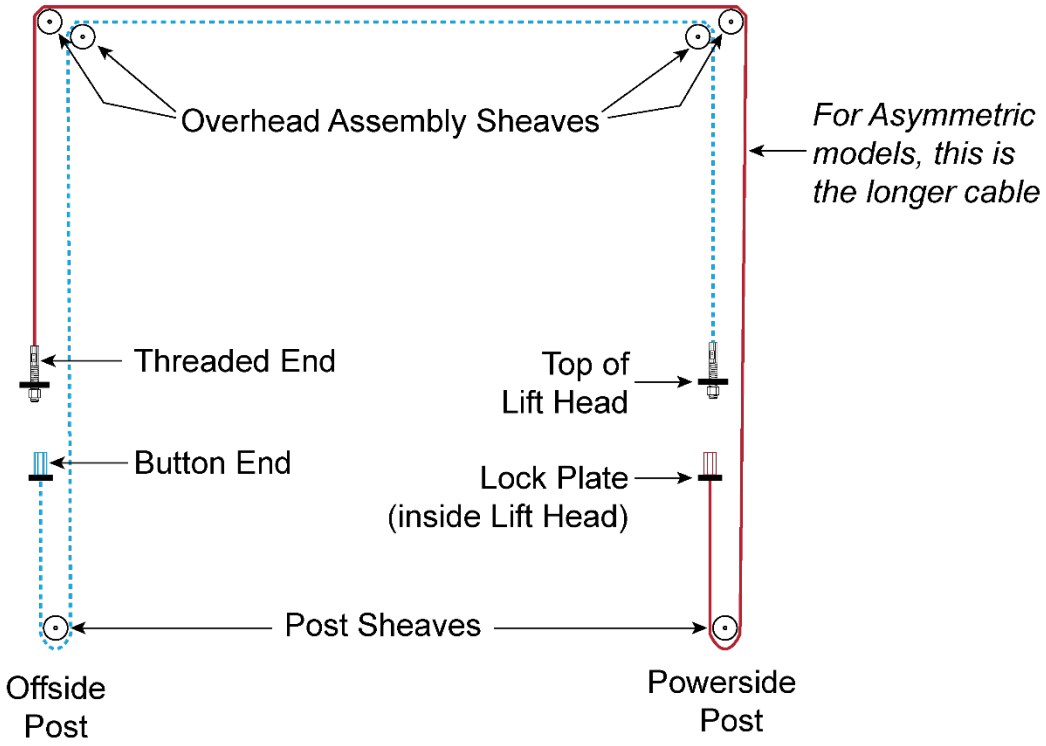
   Slide the Lift Heads away from the bottoms of both Posts by at least 24 inches / 610 mm, to provide some space to work.

   For Symmetric models, both Equalizing Cables are the same length, so it does not matter which one you install first.

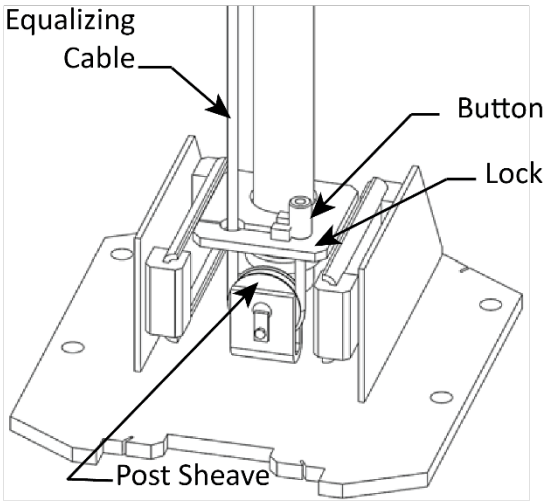
   For Asymmetric models, the Equalizing Cables are different lengths. You must route the longer Equalizing Cable over the Overhead Assembly Sheaves closer to the Approach side of the Lift.

   The shorter Cable will be routed on the Powerside Post and the longer cable will be routed on the Offside Post.

Important: The lengths of each Equalizing Cable are shown on a tag attached to the cable. If the tags have fallen off, lay the cables out to determine which is longer. The difference may be only a few inches. However, if you mix them up, the Lift will not work correctly and you will have to remove them and then re-install them correctly.



2. Remove the Post Sheave from the bottom of the Post. (See figure below.) Keep the Post Sheave, the pin, and the bolt nearby; you will be re-installing them soon.



Lift Post Wall
removed for clarity.

3. Find the two Equalizing Cables.
4. Take an Equalizing Cable and locate the Button end.

- If you are installing an Asymmetric model, install the longer Equalizing Cable on the Offside Post and the shorter Equalizing Cable is mounted on the Powerside Post.
- If you are installing a Symmetrical Lift both Equalizing Cables are the same length.

5. Push the Button end up through the bottom of the Lift Head up towards the Lock Plate.
6. Put the Button end of the Equalizing Cable into the Slot in the Lock Plate.

   It can be difficult to get the Button End into the Slot, as it may be hard to reach the Lock Plate. You may want to use a metal rod or a long tool to push the Button End into the Slot.

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

Only the Button end goes above the Lock Plate; the rest of the cable goes under the Lock Plate. (refer to the figure above.)

7. Route the Equalizing Cable down to where the Post Sheave used to be and then up again towards the top of the Post.
8. Re-install the Post Sheave, making sure the Equalizing Cable is routed under it and in the Sheave.
9. Push the Threaded end of the Equalizing Cable through the Lift Head and out the Hole at the Top of the Lift Head.
10. Coil up and bind the rest of the Equalizing Cable (the portion above the Hole at the Top of the Lift Head), then leave it resting on top of the Post until later in the installation.
11. Move both Lift Heads back down to the bottom of each Post.

IMPORTANT! PLEASE READ NOW

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

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

There are several ways to clean Hydraulic Hoses and Fittings:

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

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

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

About Thread Sealants

We recommend using a Liquid Thread Sealant (like Loctite™ 5452 or similar PTFE Thread Sealant) to seal the NPT threaded Hydraulic components on your Lift.

Liquid Thread Sealant lubricates and fills the gaps between the Fitting threads, and leaves no residue that could contaminate the Hydraulic Fluid. Other types of Thread Sealants (like Teflon Tape) can shred during installation or removal and eventually enter the Hydraulic System.

Thread Sealant is not the same as a *Threadlocker*, Threadlocker holds assemblies tightly in place to prevent them from loosening over time, and is not easily removed.

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

To apply Thread Sealant:

1. Make sure the Fittings and connectors you are going to use are clean and dry.

   If you are adding Thread Sealant to a Fitting or connector that has already been used with a different Sealant, use a wire brush to thoroughly remove the old sealant before adding more.

2. Apply a small amount of Thread Sealant to the first four threads of the Fitting.

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

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

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

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

Routing the Hydraulic Hoses

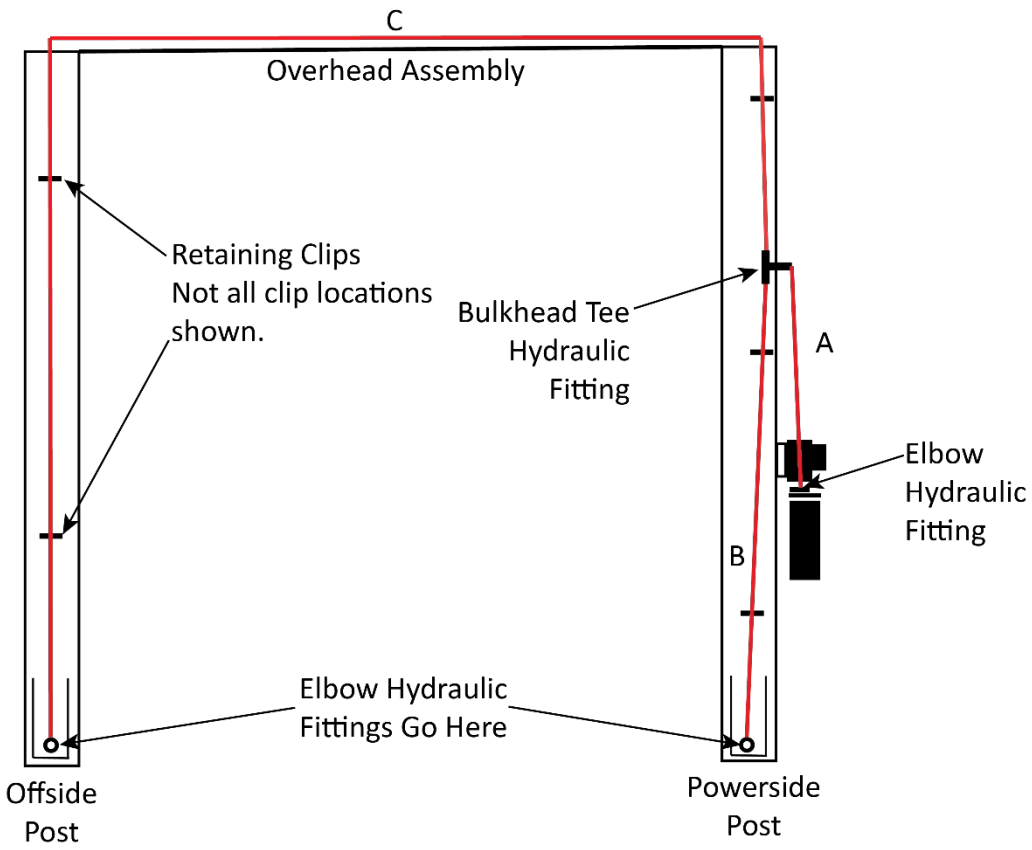
It is easier to put some hydraulic components into position ***before*** you stand up the Lift Posts.

Hydraulic Hoses move Hydraulic Fluid to and from the Hydraulic Cylinders at the bottom of each Lift Post. Hydraulic Fittings are used to make connections.

All D2-10 Series Lifts use three Hydraulic Hoses:

- **One Short Hydraulic Hose (A in drawing below)**. Routed from the Power Unit up to the Bulkhead Tee Fitting on the Powerside Post; connects on the ***outside*** of the Post.
- **One Medium Hydraulic Hose (B)**. Routed from the Bulkhead Tee Hydraulic Fitting on the ***inside*** of the Powerside Post down to the bottom of the Powerside Hydraulic Cylinder. The straight end connects to the Bulkhead Tee Hydraulic Fitting and the curved end to the bottom of the Cylinder.
- **One Long Hydraulic Hose (C)**. Routed from the ***inside*** of the Powerside Post the top of the Bulkhead Tee Fitting, over the Overhead Assembly, and down the Offside Post to the bottom of the Offside Hydraulic Cylinder. The straight end connects to the Bulkhead Tee Hydraulic Fitting and the curved end to the bottom of the Cylinder.

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



Drawing not to scale. Not all components shown. Some components exaggerated for clarity. Drawing shows Long Hydraulic Hose (C) in place across the Overhead Assembly, but that cannot be done until later in the installation. The Elbow Hydraulic Fitting on the Power Unit is not the same as the Elbow Hydraulic Fittings on the bottom of each Hydraulic Cylinder.

The following procedure covers installing the Bulkhead Hydraulic Tee Fitting, the Medium and Long Hydraulic Hoses, and the Elbow Hydraulic Fittings that are installed at the bottom of the Hydraulic

Cylinders. It does ***not*** cover the Short Hydraulic Hoses or the Elbow Fitting that connects to the Power Unit (they are covered later).

To put the Hydraulic Hoses and Hydraulic Fittings into position:

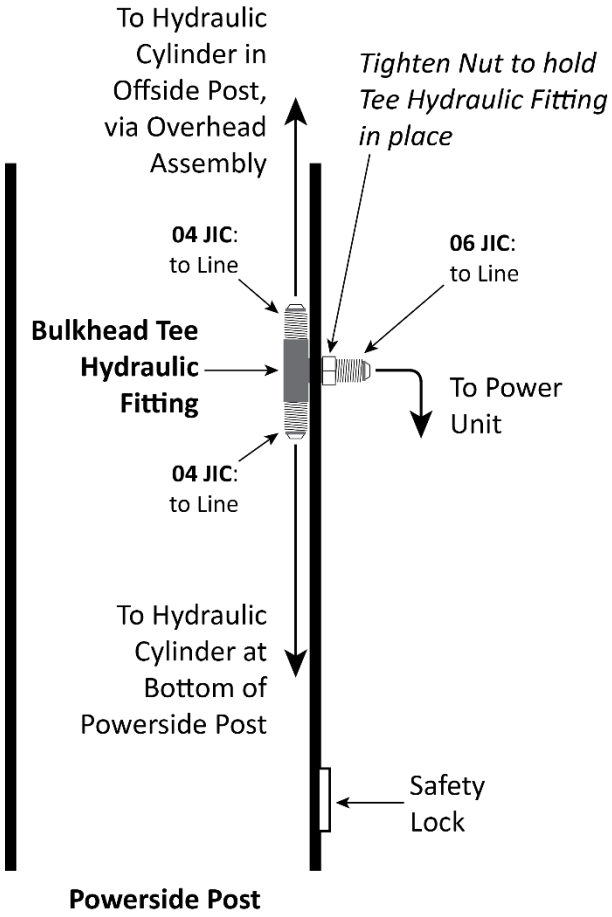
1. Locate the necessary Hydraulic Hoses: One Short, one Medium, and one Long.
2. Locate the necessary Hydraulic Fittings: Two interchangeable Elbows, one Bulkhead Tee Fitting (and a Nut that holds it in place).

   Note: The Elbow Hydraulic Fitting on the Power Unit and the Short Hydraulic Hoses cannot be installed at this point, as the Power Unit is not yet in place.

3. ***On the Powerside Post above the Safety Lock and approximately 90 inches from the floor***, push the single fitting (06 JIC) on the Bulkhead Tee Hydraulic Fitting (04 JIC to 04 JIC to 06 JIC) through the hole ***from inside the Powerside Post***.

   Note: There is only one Bulkhead Tee Hydraulic Fitting and it is installed on the Powerside Post *above* the Safety Lock.

   The end result of installing the Bulkhead Tee Hydraulic Fitting is two connectors inside the Powerside Post, one connector protruding outside the Powerside Post, as shown in figure below.



Drawing not to scale. Not all components shown. Some components exaggerated for clarity.

4. Tighten the Nut on the ***outside*** of the Powerside Post to hold the Bulkhead Tee Hydraulic Fitting in place.

5. ***Switching to the bottom of the Powerside Post***, remove the Shipping Plug from the Hydraulic Hose Connector on the ***bottom*** of the Hydraulic Cylinder (located at the bottom of the Powerside Post).

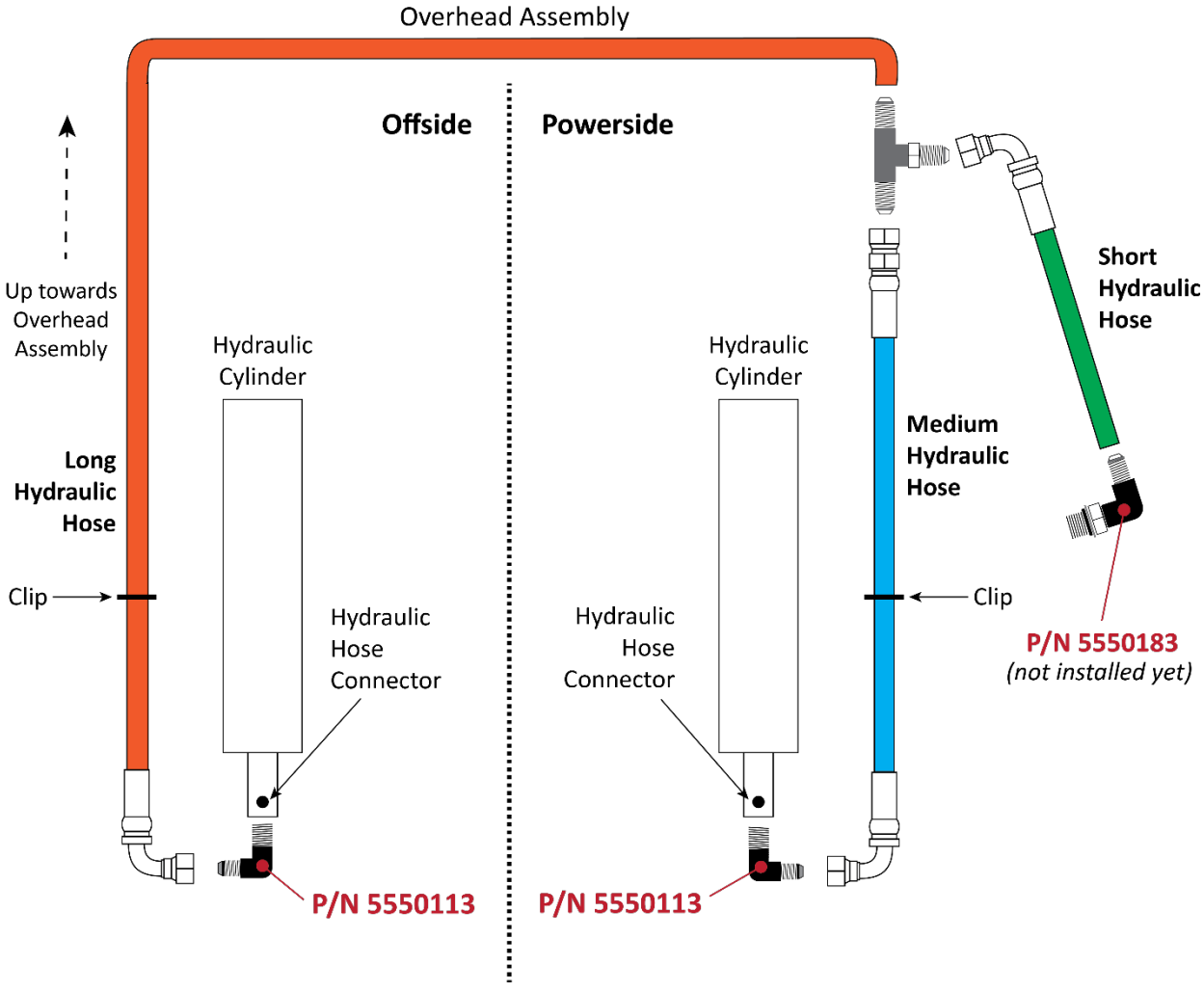
   You can turn or move the Hydraulic Cylinder if necessary to access the cylinder port.

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

6. Connect one of the two interchangeable Elbow Hydraulic Fittings (NPT to JIC) to the Hydraulic Hose Connector at the bottom of Hydraulic Cylinder on the Powerside Post. Exercise care to prevent cross-threading the NPT side of the Fitting

   Note: Use PTFE Thread Sealant only on the NPT threads where they connect to the Hydraulic Cylinder. There is no need to use the Thread sealant on JIC Flared Fittings.

7. Point the JIC connector towards the side of the Lift Post with the Clips (refer figure below).



Not to scale. Not all components shown. Some components shown exaggerated.

8. Tighten the Elbow Hydraulic Fitting appropriately; make sure to leave the unconnected end of the fitting pointing towards the side of the Powerside Post that has the Clips for the Hydraulic Hose (the same fitting on the Offside Post also needs to point towards the side with the Clips).
9. Turn the Hydraulic Cylinder so that the Elbow Hydraulic Fitting is accessible from the bottom back side of the Powerside Post.

Important: When routing Hydraulic Hoses, after they are positioned correctly, put them into the nearby Clips and lightly crimp the Clips together. When all Hydraulic Hoses have been installed, go back and fully crimp all of the Clips. You need to make sure the Clips are tight enough to hold the Hydraulic Hoses in place but not so tight that the flow of Hydraulic Fluid in the Hydraulic Hoses is affected. *There are Clips only along one side of each Post*.

10. Take the Medium Hydraulic Hose and connect the Straight End to the bottom of the Bulkhead Tee Hydraulic Fitting and tighten securely.
11. Push the Curved End of the Medium Hydraulic Hose down to the bottom of the Powerside Post and connect it to the JIC connector on the Elbow Hydraulic Fitting on the Cylinder; tighten securely.
12. ***Switching to the Offside Post***, connect the other Elbow Hydraulic Fitting (NPT to JIC) to the Hydraulic Hose Connector at the bottom of the Hydraulic Cylinder.
13. Tighten the Elbow Hydraulic Fitting securely; make sure to leave the unconnected end of the fitting pointing towards the side of the Lift Post with the Clips.
14. Take the Long Hydraulic Hose, push the Curved End down through the Lift Post until it is at the bottom of the Post, then connect the Curved End to the Elbow Hydraulic Fitting you just connected and tighten securely.

    Be sure to clip the Long Hydraulic Hose to the Clips in the Post.
15. Carefully coil up and bind the rest of the Long Hydraulic Hose, then leave it resting on top of the Offside Post until later in the installation. Cover the end of the Hydraulic Hose to prevent dirt or debris from entering the Hydraulic System.

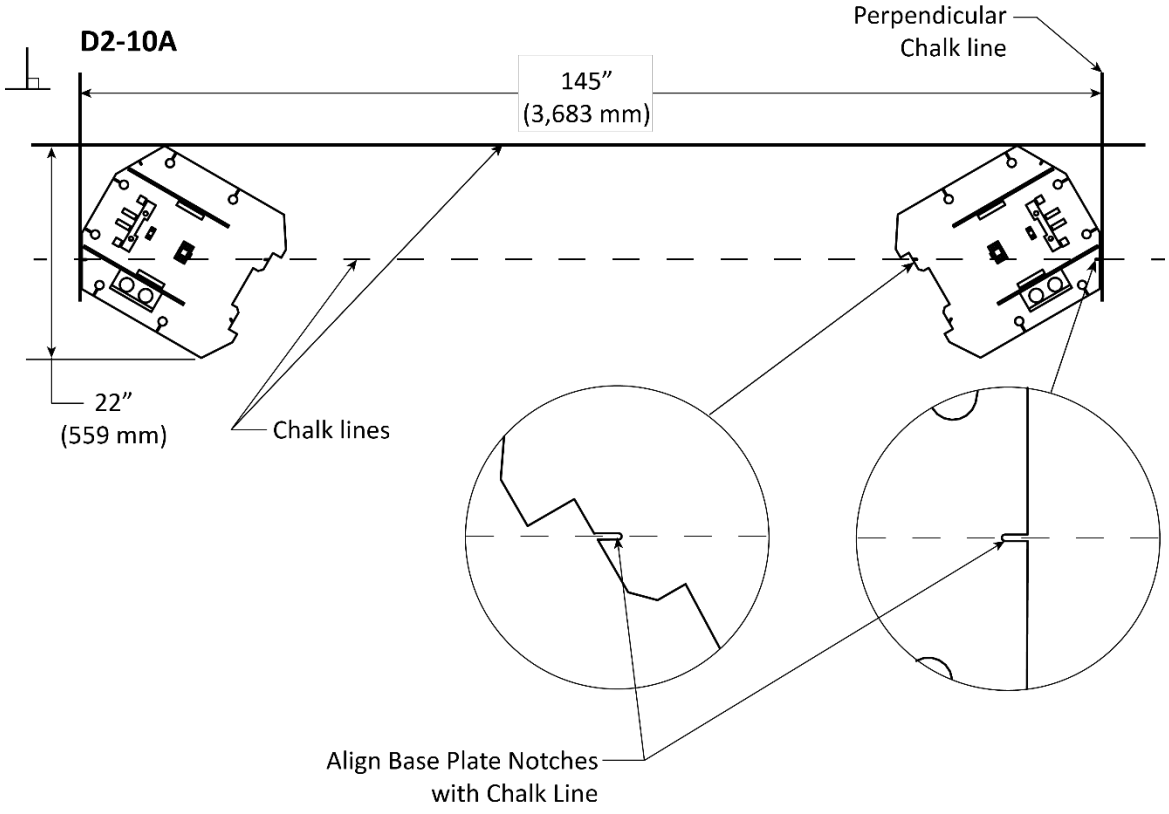
Important: You should now have the Long Hydraulic Hose connected to the bottom of the Hydraulic Cylinder in the Offside Post, with the rest of the Long Hydraulic Hose coiled up at the top of the Offside Post. It will be connected to the rest of the Hydraulic System later in the installation.

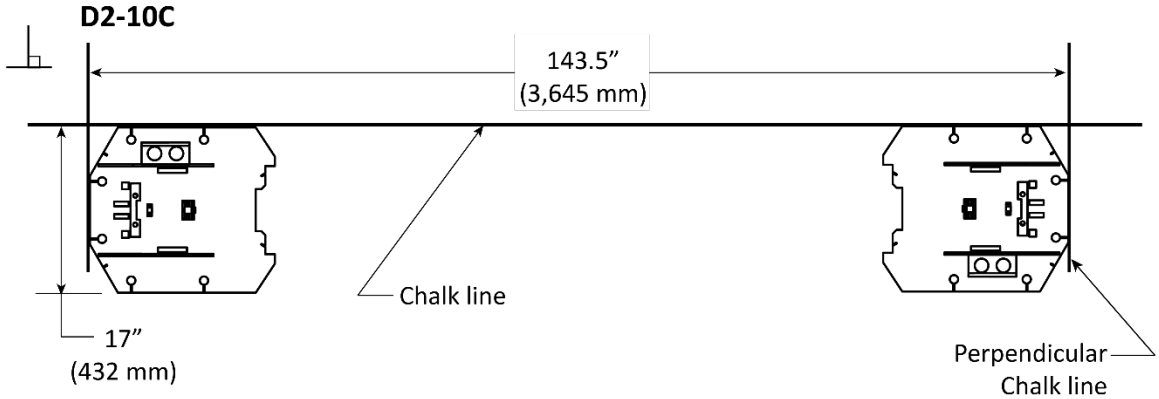
Creating Chalk Line Guides

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

Use the values in the Table and drawing below to create Chalk Line Guides.

Model	Width	Depth	Recommended Bay Dimensions
D2-10A	145” (3,683 mm)	22” (559 mm)	16’ wide x 24’ deep x 12’ 6” tall
D2-10C	143.5” (3,645 mm)	17” (432 mm)	16’ wide x 24’ deep x 12’ 6” tall





Not to scale. Not all components shown.

To add Chalk Line Guides:

1. Decide where you want to locate the Lift. Which side will be the Approach Side?
2. Create an Alignment Chalk Line at the Front of the Lift. For Symmetric Lifts, see the drawing on the previous page.

   For Asymmetric Lifts, put the Alignment Chalk Line through the notches, see the drawing on the previous page.

   Make the Alignment Chalk Line longer than the Width for your Lift model.
3. Create two Perpendicular Chalk Lines at 90° angles to the Alignment Chalk Lines at the Width distance for the Lift model you are installing.
4. When you move the Posts into position for a ***Symmetric*** Lift, put the Base Plates into the corners created by the Chalk Line Guides, as shown in the drawing on this page.
5. When you move the Posts into position for an ***Asymmetric*** Lift, align the correct notches in each of the Bases Plates with the Alignment Chalk Line, as shown in the drawing on the previous page.
6. After the Lift Posts locations are properly marked, use chalk or crayon to make an outline of the Base Plate on the floor at each location. Use the base plates as templates.
7. Double check all dimensions and verify that the layout is perfectly square.

Installing the Posts

We strongly recommend having multiple people work together to install the Posts.

⚠ **DANGER** Pay ***special*** attention when installing the Lift Posts. If done incorrectly, the Lift could fall over, potentially causing damage to the Vehicle, the Lift, and injuring bystanders.

Concrete specifications:

- **Depth**: 4 inches / 108 mm thick, minimum
- **PSI**: 3,000 PSI, minimum
- **Cured**: 28 days, minimum

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

- The floor must be a flat, 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 or within 6 in (152 mm) of an expansion joint.
- Do not install on a post-tension slab, unless you have verified where the tension cables are located. Contact the building architect before drilling. Using ground penetrating radar may help determine the tensioned cable location.

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

Anchor Bolt specifications are:

- **Length**: 6.3 inches / 160 mm
- **Diameter**: .75 inch / 19 mm
- **Anchor torque**: 85 – 95 ft. lbf (never less than 80 or more than 110)
- **Effective embedment**: 3.25 inches / 82.5 mm or more

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

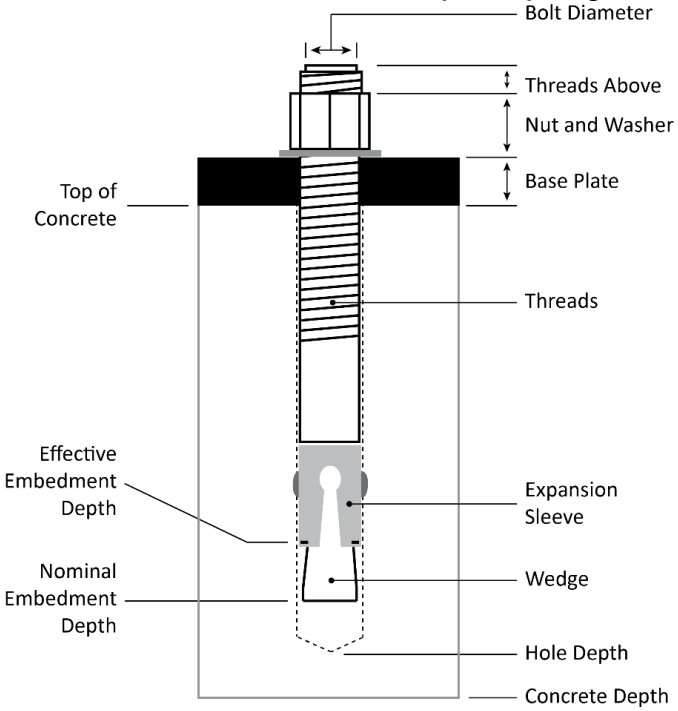
BendPak Lifts are supplied with installation instructions and concrete fasteners meeting the criteria as prescribed by the latest version of the American National Standard "Automotive Lifts – Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV.

⚠ WARNING Use only the ALI-certified Anchor Bolts that came with your D2-10 Series 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.

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

Effective Embedment is the location in the Hole where the Expansion Sleeve presses into the Concrete. This is where the Anchor Bolts get their holding strength; the further down into the Hole, the greater the holding strength. Nominal Embedment is how far down into the Hole the bottom of the Anchor Bolt is, which does not tell you anything about the holding strength.

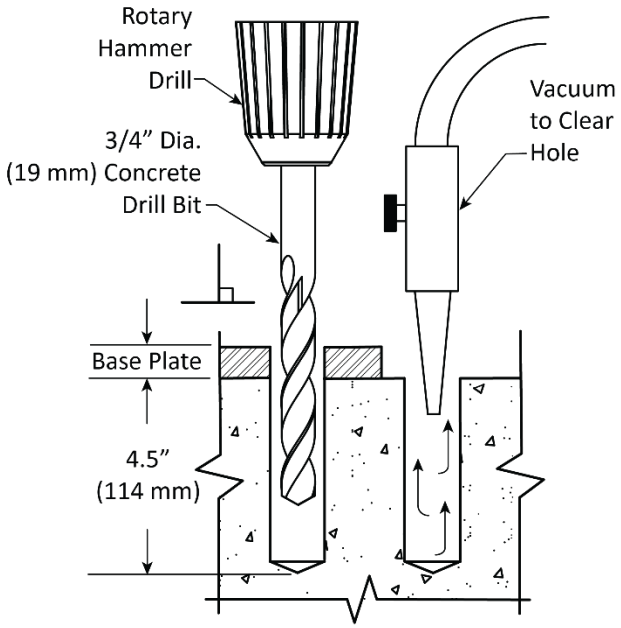


Not to scale. Not all components shown.

To install the Posts:

1. Using a Forklift or Shop Crane, move the Posts to the Chalk Line Guides you created earlier.
2. Stand up each Post, one at a time, and move it to the appropriate location relative to the Chalk Line Guides.
3. Double check your measurements against the **Specifications** for your Lift model:
   - Distance from the back of one Base Plate to the back of the other Base Plate: **Width Overall** value
   - Distance from the inside of one Post to the inside of the other Post: **Inside Posts** value
4. Using the Base Plates as guides, drill each hole **4.5 inches** deep.

⚠ **CAUTION** Safety Glasses are required for all drilling operations.



Drill in straight; do not let the drill wobble.

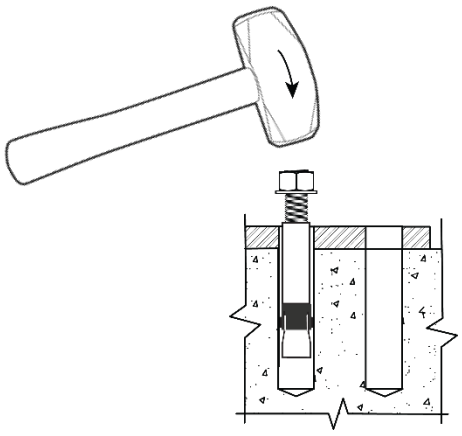
Use a carbide bit (conforming to ANSI B212.15).

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

5. Vacuum each hole clean. BendPak recommends using a vacuum to get the hole very clean.
6. You can also use a wire brush, hand pump, or compressed air; just ***make sure to thoroughly clean each hole***.
7. Do ***not*** ream the hole. Do ***not*** make the hole any wider than the drill bit made it.

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

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



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

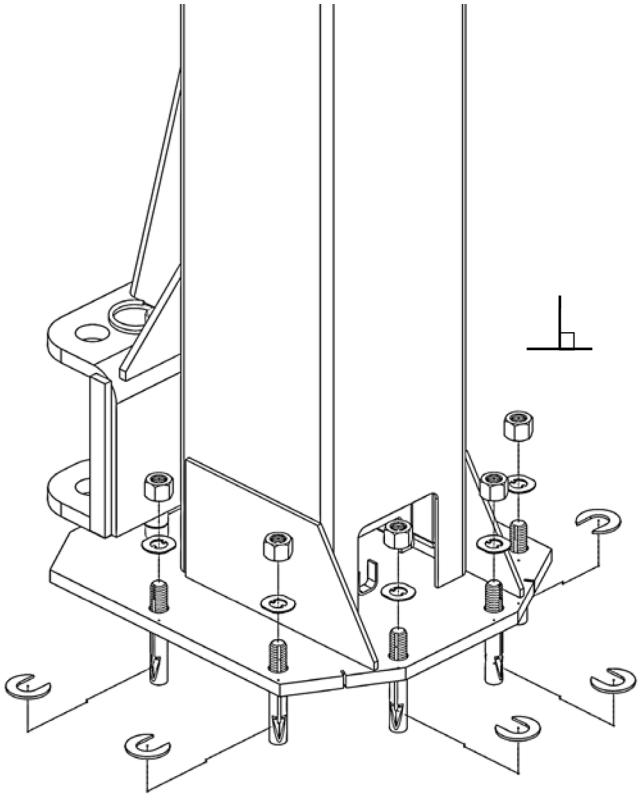
Even using a hammer or mallet, the Anchor Bolt should only go into the hole part of the way; this is normal. If the Anchor Bolt goes all the way in with little or no resistance, the hole is too wide.

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

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

   Stop when the Washer is snug against the Base Plate.

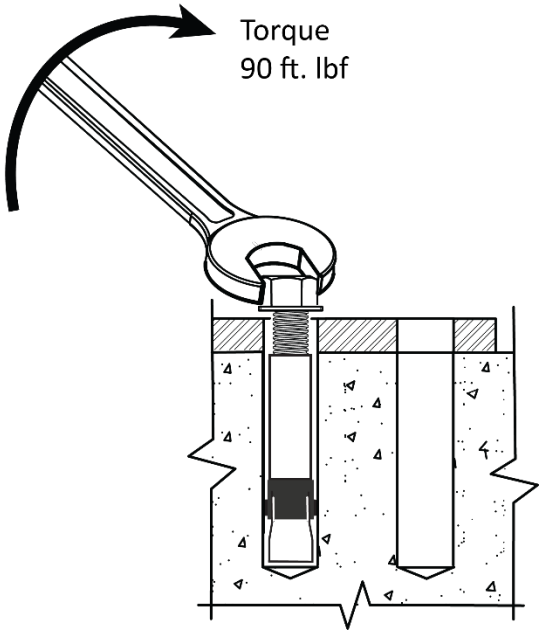
10. Plumb each Post; install any required Shims.



Tip If you are going to torque the Anchor Bolts later so that installing the Overhead Assembly and doing final leveling is a little easier, skip the next step. Instead, make sure the Anchor

Bolts are securely in position; you do not want the Posts moving too much during the rest of the installation procedure.

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



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

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

Installing the Overhead Assembly

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

The Safety Shutoff Bar and the Microswitch (or two Microswitches if you ordered a three-phase Power Unit) are installed on the underside of the Overhead Assembly.

The Safety Shutoff Bar shuts off power to the Lift if the top of a Vehicle hits it; this trips the Microswitch, which cuts off power to the Lift, preventing it from going any higher.

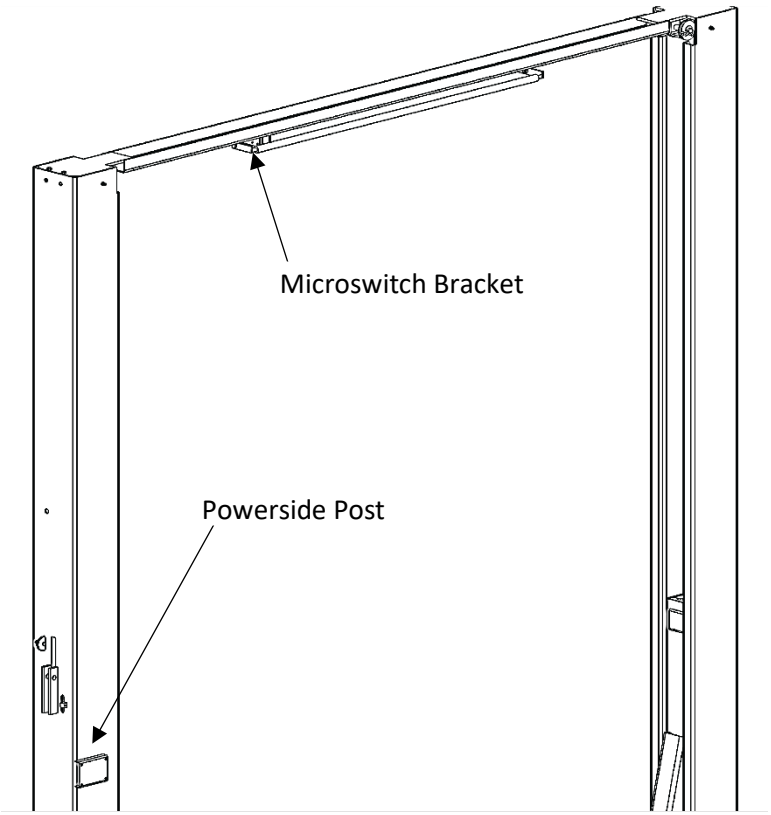
The Microswitch ***wiring*** goes over the Overhead Assembly and down the Powerside Post to the Power Unit. Wiring the Microswitch is not covered in this section; it is covered in **Wiring the Microswitch**. Have your Electrician connect the Microswitch wiring to the Power Unit when they come out to perform the other electrical tasks.

The Overhead Assembly is two pieces that are bolted together. The Overhead Assembly and the Safety Shutoff Bar come from the factory already assembled. On rare occasions, the two pieces could come from the factory unassembled.

To install the Overhead Assembly:

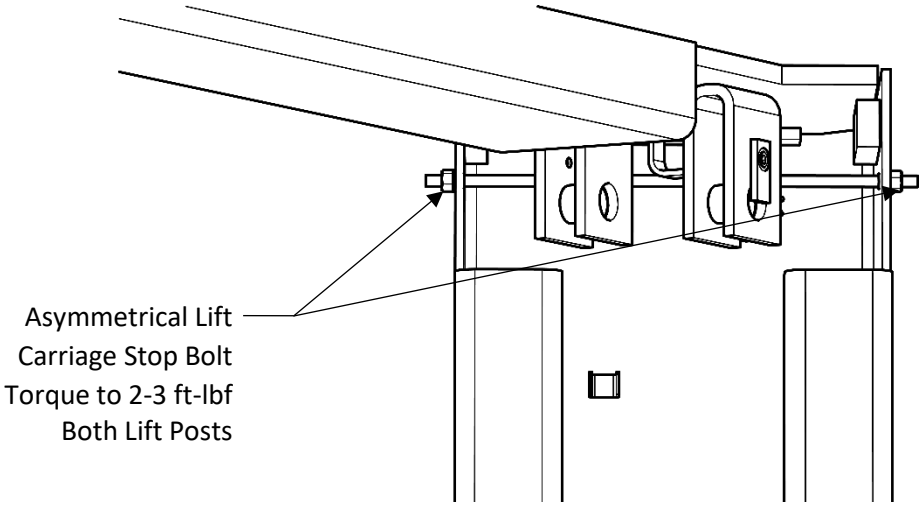
1. If the Overhead Assembly came unassembled, locate the two Overhead Assembly pieces and the four M10 x 1.5 x 25 Hex Head Bolts, four M10 x Ø20 Flat Washers, four M10 x Ø18 Split Lock Washers, and four M10 x 1.5 Nuts needed to connect them.
2. Put the Overhead Assembly together in the desired configuration.
3. Remove all four Overhead Assembly Equalizer Sheaves and their Pins and Bolts from the ends of the Overhead Assembly pieces.

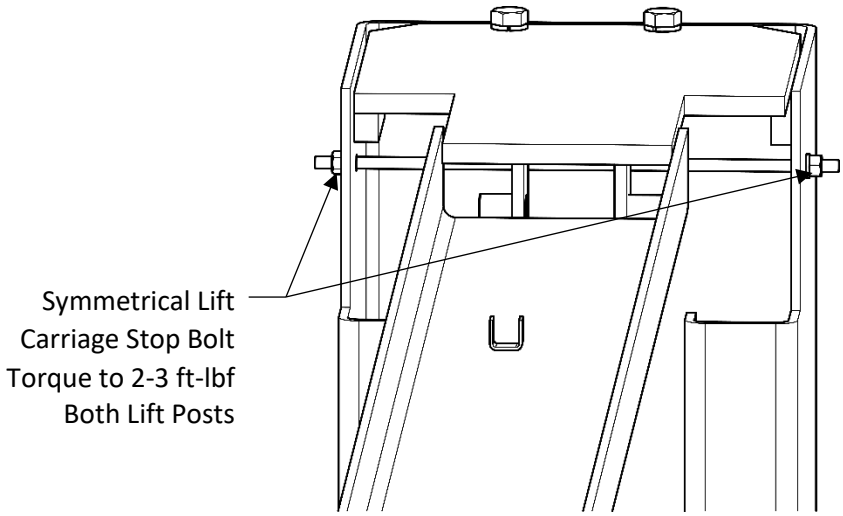
   Keep them nearby, you will be putting them back into place in the next section of the installation.
4. Using a lifting device, raise the Overhead Assembly into position on top of the Posts. Bolt the Overhead to the Posts using the 10 mm Hex nuts and Washers.
5. The Microswitch ***must*** be positioned adjacent to the Powerside Post. See the figure to the right.
6. After installing the Overhead Assembly, tighten the Anchor Bolts as detailed in steps 8 and 9 of the Post Installation Procedure, if they were loosened to aid the installation of the Overhead Assembly.



7. Reinstall the Top Carriage Stop Bolt (shown below). Torque the Carriage Stop Bolt to 2-3 ft.-lbf upon final installation.

⚠ WARNING You **must** reinstall the Top Carriage Stop Bolt on both Lift Posts after the Overhead Assembly has been installed and secured. Torque the Carriage Stop Bolt to 2-3 ft.-lbf upon final installation. These instructions must be followed to ensure proper installation and operation of your Lift. Failure to comply with these instructions can result in serious bodily injury and or death and or void product warranty. Manufacturer assumes no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.





Mounting the Power Unit

This section describes how to mount the Power Unit for your Lift. You do ***not*** need an Electrician to ***mount*** the Power Unit, but you do need an Electrician to ***connect*** the Power Unit.

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

Your Lift came with the Power Unit that was ordered. In order to support a wide variety of applications, that Power Unit could be one of multiple Power Units that are available. Because of this, the Power Unit that came with your Lift may look slightly different from the drawings in this Manual.

Refer to **Connecting the Power Unit** for Electrical installation information and specific information about the Power Unit that came with your Lift.

The Power Unit ***must*** be mounted on the Mounting Bracket on the Powerside Post.

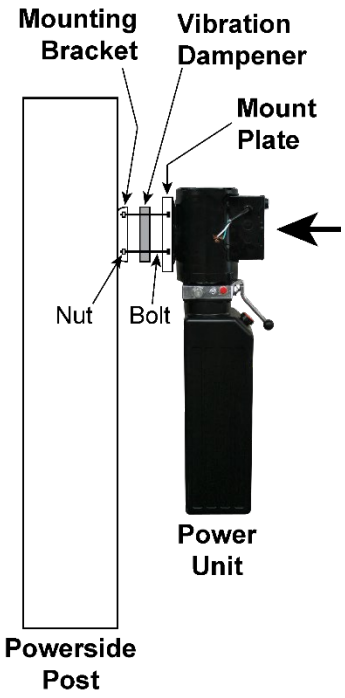
To mount the Power Unit:

1. Find the supplied four Hex Bolts, four Nuts, and one Vibration Dampener.

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

2. Put the Vibration Dampener into place next to the Mounting Bracket on the Powerside Post.

   Both the Vibration Dampener and the Mounting Bracket have four holes, one in each corner. Make sure to use all four holes to hold the Power Unit.



3. Move the Vibration Dampener next to the Mounting Plate on the back of the Power Unit.

   There are multiple holes on the Mount Plate you can use. You must use four holes to secure the Power Unit.

4. Push one of the Bolts through a hole in the Power Unit Mount Plate, through the Vibration Dampener, and into the Mounting Bracket on the Powerside Post; attach a Nut to the thread end of the Bolt, then tighten the Nut.
5. Repeat Step 4 for the other three Bolts and Nuts.
6. Fill the reservoir with approved Hydraulic fluid.

   Use care to keep the fluid clean when filling the reservoir.

   Important: Do not connect the Power Unit to the Hydraulic System or the power source at this point.

Installing the Safety System

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

The Safety Lock Cable connects to the Safety Assembly on the Offside Post, goes over the Overhead Assembly, then to the Safety Assembly on the Powerside Post.

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

The following procedure describes how to put the Safety Lock Cable into place; it does ***not*** describe how to attach it to the Safety Lock Releases.

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

One end of the Safety Lock Cable has a loop on it, the other does not. The loop end must be installed on the Offside Post, the other end on the Powerside Post.

Routing the Safety Lock Cable

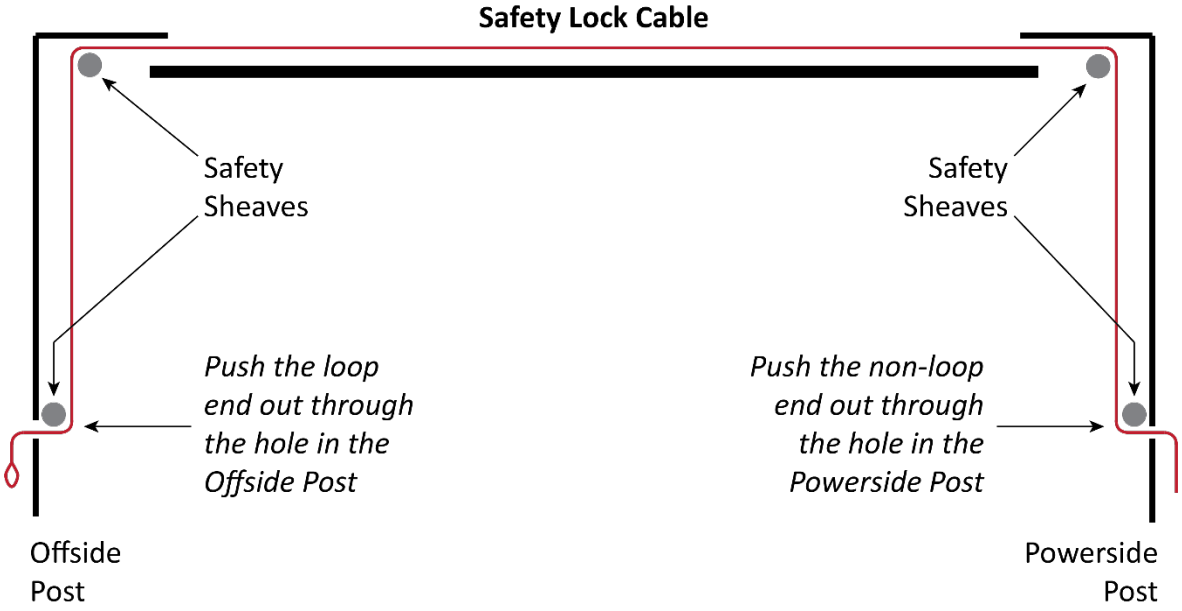
1. Locate the Safety Lock Cable.

   The Safety Lock Cable is a long, thin steel cable with a loop on one end, no loop on the other end. The two ends are ***not*** interchangeable.

   Make sure to orient the Safety Lock Cable so that the loop end goes to the Offside Post side of the Lift.

2. ***Starting on the inside of the Offside Post***, push the loop end of the Safety Lock Cable out through a hole in the Offside Post.

   The Offside Safety Assembly is not yet installed, so just leave the loop end of the Safety Lock hanging out of the hole.

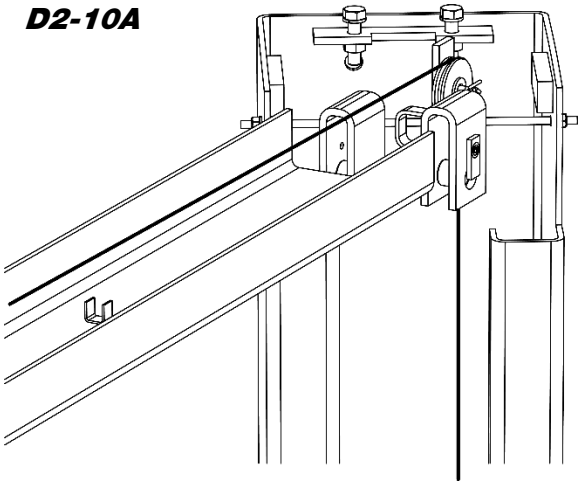


Not to scale. Not all components shown. The Safety Assemblies are not installed at this point, so the Safety Cable, after being routed, will simply stay in place until later in the installation.

3. Route the other end (the non-loop end) of the Safety Lock Cable under the Safety Sheave, upwards on the inside of the Offside Post, up and over the Safety Sheave at the top of the Offside Post, across the Overhead Assembly, over the Safety Sheave at the top of the Powerside Post, and then downwards, on the inside of the Powerside Post, towards the Mounting Bracket.

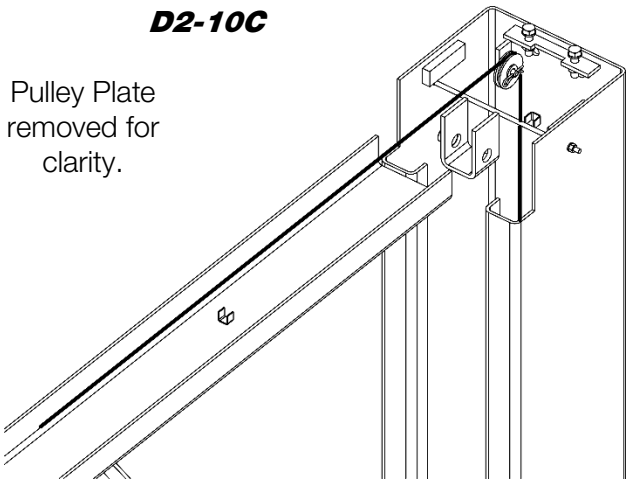
   Make sure the Safety Lock Cable stays on its Safety Sheaves; this keeps it out of the way of the Equalizing Cables and the Hydraulic Hoses.

D2-10A



D2-10C

Pulley Plate removed for clarity.



4. ***On the Powerside Post***, when the non-loop end of the Safety Lock Cable is near the Mounting Bracket, route it under the Safety Sheave, then push it out of the Powerside Post through a hole in the Post.

   The Powerside Safety Assembly is not yet installed, so just leave the non-loop end of the Safety Lock Cable hanging out of the hole.

   Important: When connecting the ends of the Safety Lock Cable later in the installation, make sure the Cable stays in all of the Safety Sheaves. This keeps it out of the way of the Hydraulic Hoses and Equalizing Cables.

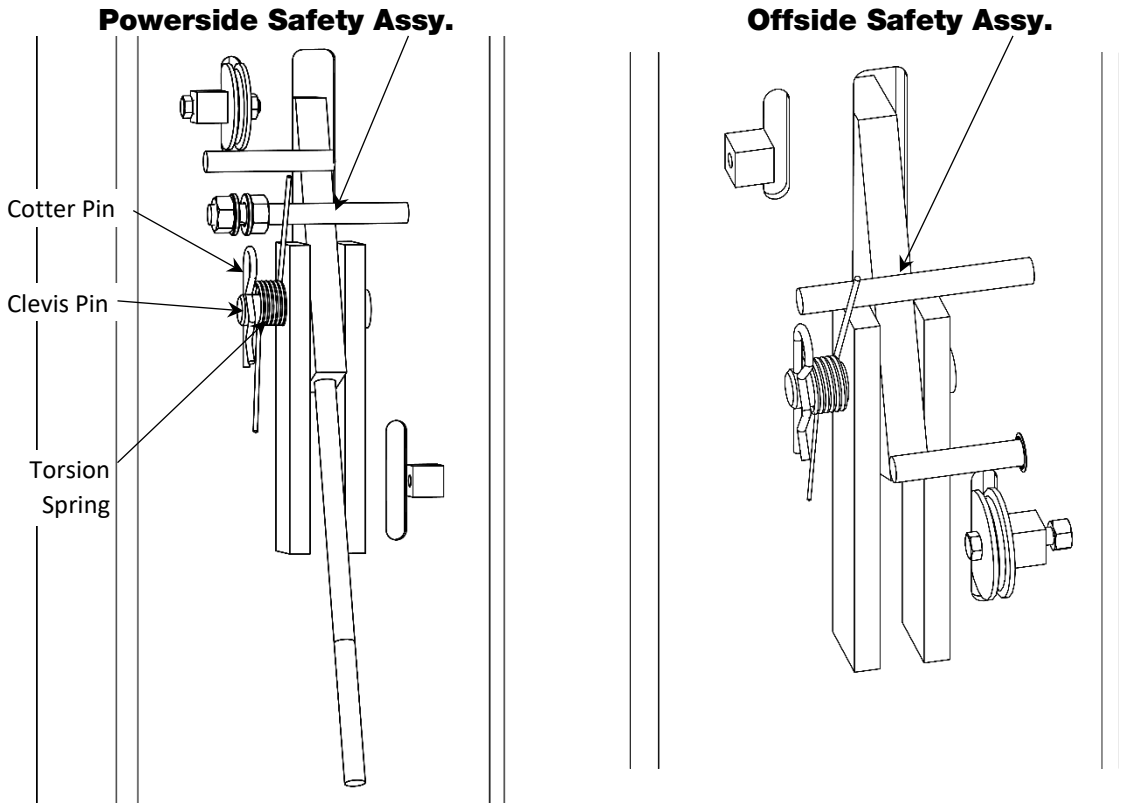
   Both ends of the Safety Lock Cable will be connected during the procedure to install the Safety Assemblies. See **Installing the Safety Assemblies** for additional information.

Installing the Safety Assemblies and the Safety Lock Cable

Your D2-10 Series Lift has two Safety Assemblies: one on the Powerside Post (above the Power Unit) and the other on the Offside Post.

The two Safety Assemblies take the Lift off of its Safety Locks so the Lift Arms can be lowered. The Safety Assemblies need to be disengaged at the same time so that the Lift Arms lower together. In order to do this, the two Safety Assemblies are connected to each other via the Safety Lock Cable, which is routed through the Overhead Assembly.

Routing the Safety Lock Cable was done earlier; refer to **Routing the Safety Lock Cable** for additional information.



To install the two Safety Assemblies:

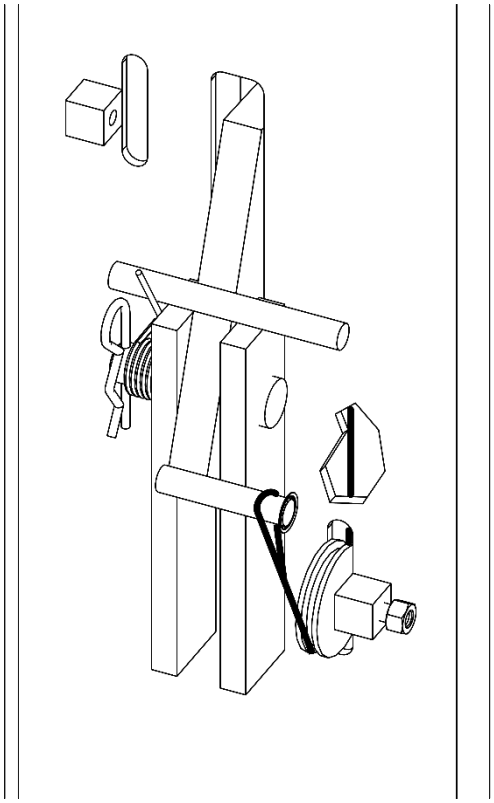
1. ***Starting on the Powerside Post***, locate the Safety Assembly ***with*** the Safety Lock Release Handle, a Safety Clevis Pin, one Torsion Spring, and one Cotter Pin. Reference the figure above.
2. Insert the Safety Clevis Pin, from the right, through the hole in the right welded plate, then through the Safety Assembly, and then through the left welded plate.
3. Put the Torsion Spring on the end of the Safety Clevis Pin, then install the Cotter Pin on the end of the Safety Clevis Pin.
4. ***Moving to the Offside Post***, locate the Safety Assembly ***without*** the Safety Lock Release Handle, a Safety Clevis Pin, Torsion Spring, and one Cotter Pin.
5. Insert the Safety Clevis Pin, from the left, through the hole in the right welded plate, then through the Safety Assembly, and then through the left welded plate.
6. Put the Torsion Spring on the end of the Safety Clevis Pin, then install the Cotter Pin.

The Safety Lock Cable connects the two Safety Assemblies together.

Note: The Safety Cable should have been put into place earlier, ***but not attached*** at either end. The following procedure describes how to connect the Safety Cable on the Offside Post and on the Powerside Post.

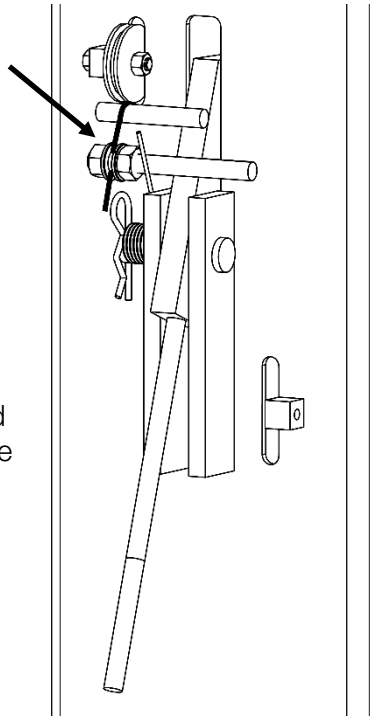
To connect the Safety Lock Cable:

1. **Starting on the Offside Post**, bring the loop end of the Safety Cable down through the *inside* of the Offside Post.
2. Pull the Safety Cable out to the outside of the Offside Post.
3. Route it up and over the short, lower Welded Pin, past the Safety Clevis Pin, and loop it over the right end of the longer, higher Welded Pin. See figure to the right.



4. ***Moving to the Powerside Post***, screw two Nuts and Washers onto the threaded end of the Welded Pin with Threads. Make sure that one Nut and one Washer is on each side of the hole in the Welded Pin with Threads.
5. Bring the straight end of the Safety Cable down through the inside of the Powerside Post and pull it out to the front of the Powerside Post.
6. Put the straight end of the Safety Cable over the front of the Welded Pin and into the hole in the Welded Pin with Threads, between the two Nuts and the two Washers.
7. Pull any slack out of the Safety Cable, then tighten the Nuts.

   When tightening the Nuts, keep tension on the Safety Cable and keep the Safety Cable centered between the two Nuts. Verify the Safety Cable is still routed through the sheves in the overhead.
8. Operate the Safety Lock Release Handle, checking for proper operation of both Safety Assemblies.



⚠ **DANGER** Make sure that both the Powerside and the Offside Safety Assemblies engage properly ***before*** using the Lift.

Connecting the Hydraulic Hoses

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

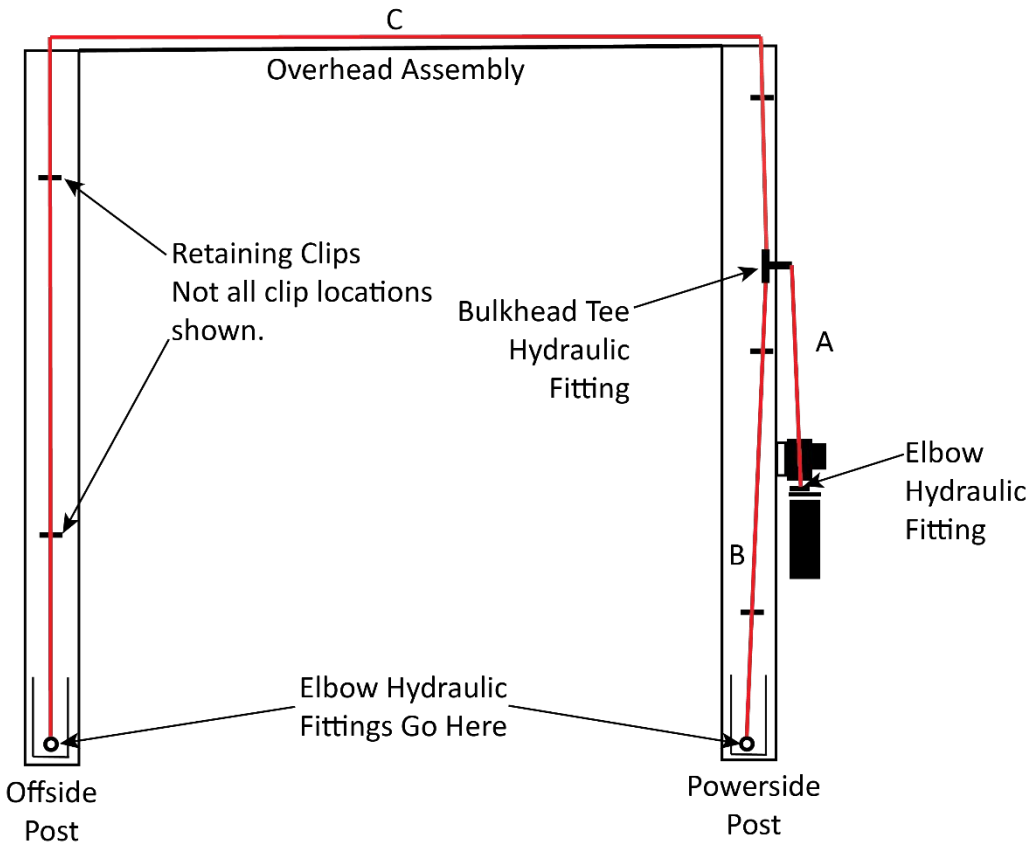
This section covers:

- Connecting the Elbow Fitting that connects to the Power Unit.
- Routing the Short Hydraulic Hose from the Power Unit to the Bulkhead Tee Hydraulic Fitting.
- Routing the Long Hydraulic Hose over the Overhead Assembly and to its connection point on the Powerside Post.

All D2-10 Series Lifts use three Hydraulic Hoses:

- **One Short Hydraulic Hose (A)**. Goes from the Power Unit up to the Bulkhead Tee Hydraulic Fitting on the Powerside Post; connects on the outside of the Post. Not yet installed.
- **One Medium Hydraulic Hose (B)**. Goes from the Tee Fitting on the inside of the Powerside Post down to the bottom of the Powerside Hydraulic Cylinder. Already installed.
- **One Long Hydraulic Hose (C)**. Goes from the inside of the Powerside Lift Post above the Tee Fitting, over the Overhead Assembly, and down the Offside Lift Post to the bottom of the Offside Hydraulic Cylinder. Already connected to the Hydraulic Cylinder, but not yet routed over the Overhead Assembly to the Tee Fitting.

All Hydraulic Hoses and Hydraulic Fitting locations are shown in the figure below.



The following procedure assumes the Hydraulic Hoses were put into position earlier in the installation. Refer to **Routing Hydraulic Hoses** for more information. If they were ***not*** put into position earlier, you must do so now, ***before*** beginning the following procedure.

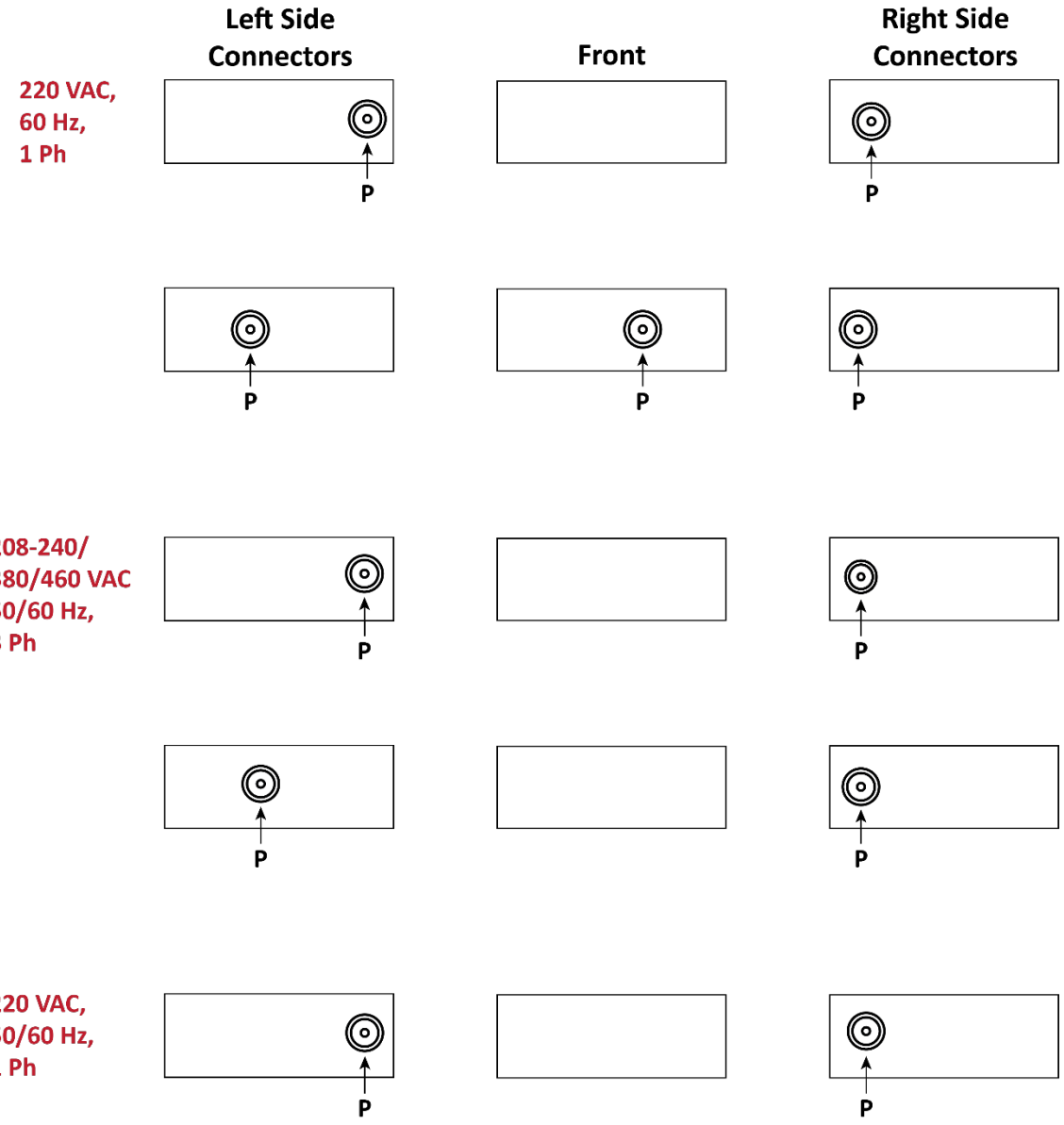
To finish connecting the Hydraulic Hoses:

1. Locate the Short Hydraulic Hose and the remaining Elbow Hydraulic Fitting.

   All other components should already be in place. If they are not, go back and install them.

2. ***On the Power Unit***, locate a Hydraulic Pressure Out Port on the Power Unit (labeled P, P1, or P2), remove the shipping plug, and install the Elbow Hydraulic Fitting (06 ORB to 06 JIC).

   The following drawing shows the locations of the Hydraulic Pressure Out Ports on the Power Units that are available for the D2-10 Series of Lifts.



Note: There are multiple ports on the Power Units that are used with D2-10 Series Lifts. However, each D2-10 Series Lift uses only one hydraulic pressure out port (labeled P in the drawing above). Do not connect to any of the other ports and do not connect to more than one Hydraulic Pressure Out Port.

3. Tighten the Elbow Hydraulic fitting appropriately; make sure to leave the 06 JIC connector facing up, towards the Tee Hydraulic Fitting.

4. Connect the Curved End of the Short Hydraulic Hose to the 06 JIC connector of the Tee Hydraulic Fitting; finger tighten the connection.

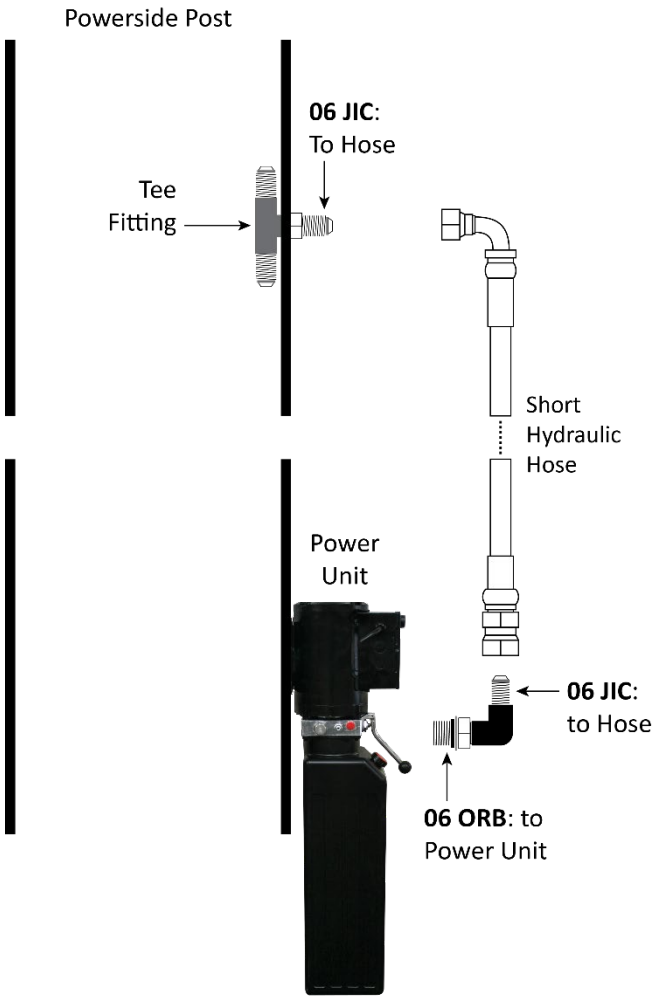
   This connection is made on the outside of the Powerside Post. If the 06 JIC connector of the Bulkhead Tee Hydraulic Fitting is not on the outside of the Powerside Post, this means the Tee Hydraulic Fitting was not installed correctly. Return to **Routing Hydraulic Hoses** for complete instructions.

5. Connect the Straight End of the Short Hydraulic Hose to the 06 JIC connector on the Elbow Hydraulic Fitting; finger tighten the connection.

6. Use appropriate tools to securely tighten all of the finger-tightened connections.

7. ***Switching to the Offside Post***, take the Long Hydraulic Hose and route it over the Overhead Assembly toward the Powerside Post.

8. Make sure to put the Line through the Clips in the Posts and in the Overhead Assembly as you route the Long Hydraulic Hose.



9. Connect the Straight End of the Long Hydraulic Hose to the 04 JIC connector facing up on the Bulkhead Tee Hydraulic Fitting; finger tighten the connection.

10. Using appropriate tools, securely tighten all of the finger-tightened connections.

Installing the Equalizing Cables

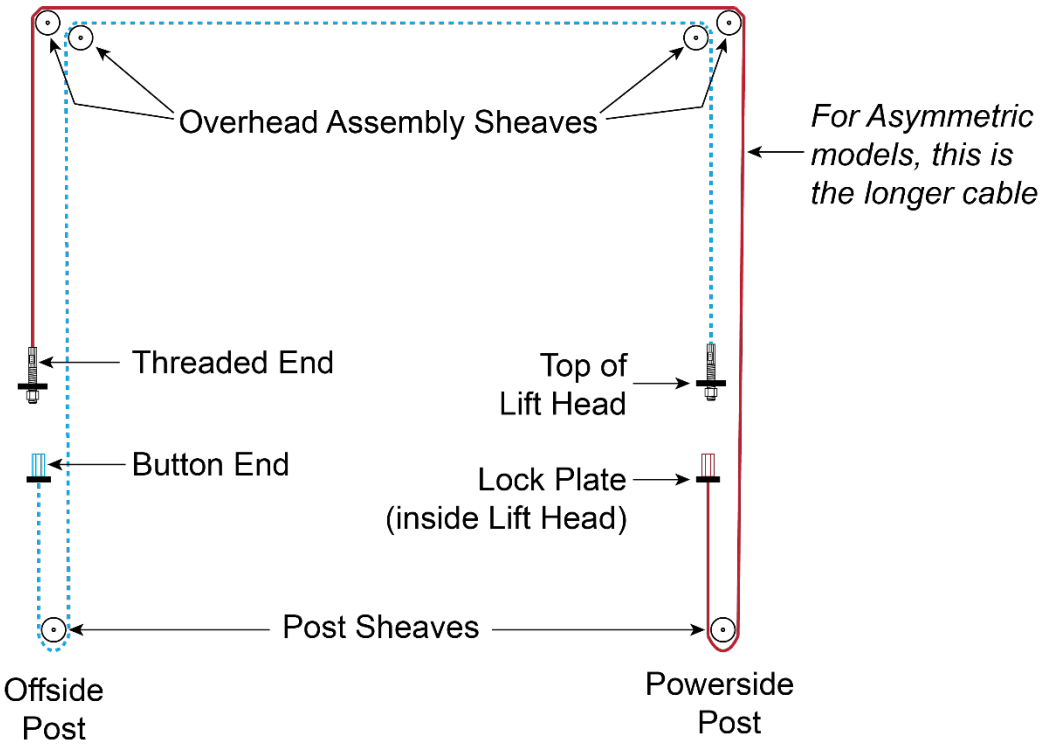
The two Equalizing Cables keep the Lift Heads synchronized as they raise and lower.

Both Equalizing Cables should have been put into position on the Posts before the Posts were raised, which was covered in **Putting Equalizing Cables into Position**.

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

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

When Equalizing Cables are fully routed, they are mirror images of each other.



Not to scale. Not all components shown. Some components exaggerated for clarity. Asymmetric model shown, one cable is longer than the other.

To route the Equalizing Cables:

⚠ **WARNING** The Lift Heads are heavy. Use a Shop Crane, Forklift or an assistant to help lift the head to the first safety stop. Work carefully, wear gloves and steel toed boots.

1. Manually raise both Lift Heads about 28 inches / 711 mm off the ground and engage them on the closest Safety Lock.

   Verify both Lift Heads are the same distance off the ground.

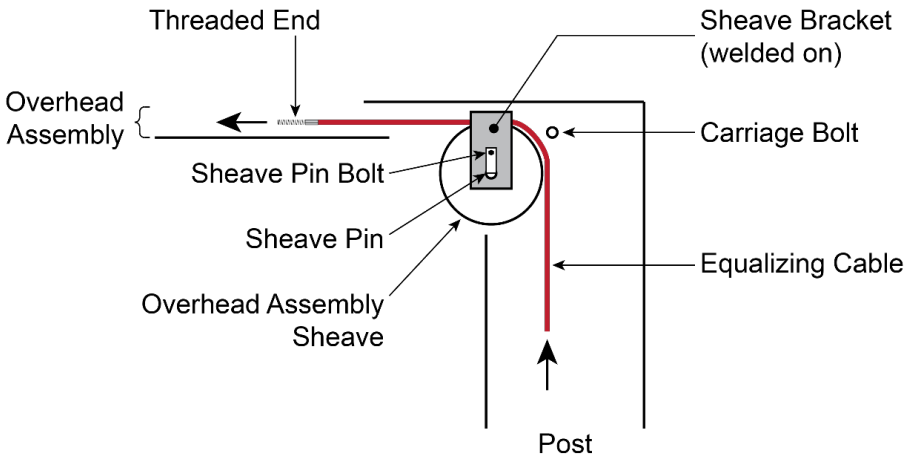
2. Make sure the Button Ends of both Equalizing Cables are still in the Slots in their Lock Plates, that both Equalizing Cables go under the Post Sheave in their Posts, and that the Threaded Ends have been routed through the Hole at the Top of the Lift Head.

   If either cable is not correct, fix it; ***you cannot continue until the Equalizing Cables are in their correct starting positions***.

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

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

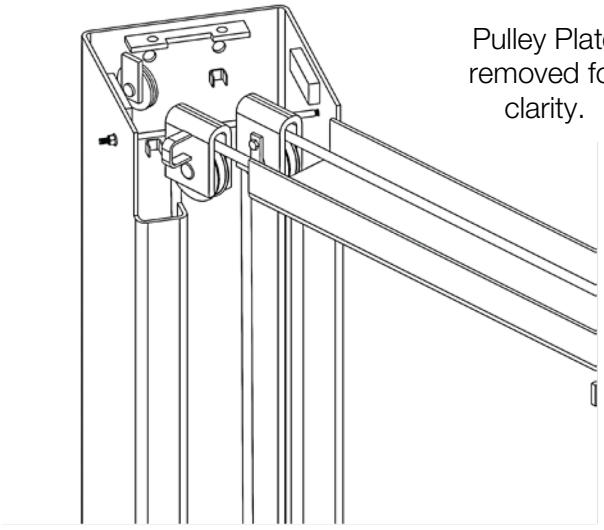
4. Route the Threaded End of the Equalizing Cable up on the inside of the Post, under the Sheave Bracket, and then out over the top of the Overhead Assembly.

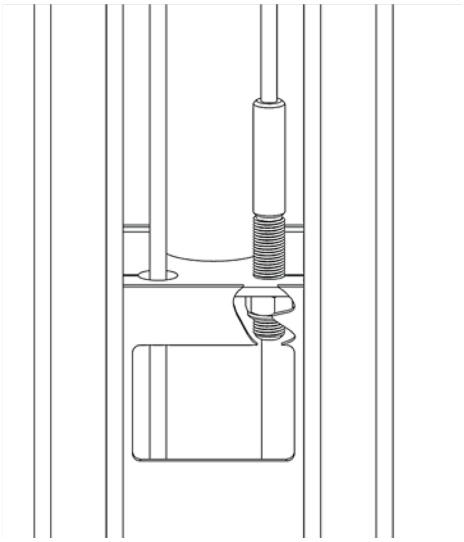


5. Re-install the Overhead Assembly Sheave, Sheave Pin, and Sheave Pin Bolt.
6. At the other Post, remove the Nut from the Threaded End of the other Equalizing Cable.

   The Overhead Assembly Sheave, Sheave Pin, and Sheave Pin Bolt were previously removed. If they were mistakenly re-installed, you need to remove them again.
7. Route the Threaded End under the Sheave Bracket, then down the Post towards the Lift Head.
8. Re-install both the Overhead Assembly Sheave, Sheave Pin, and Sheave Pin Bolt. See figures on the next page.

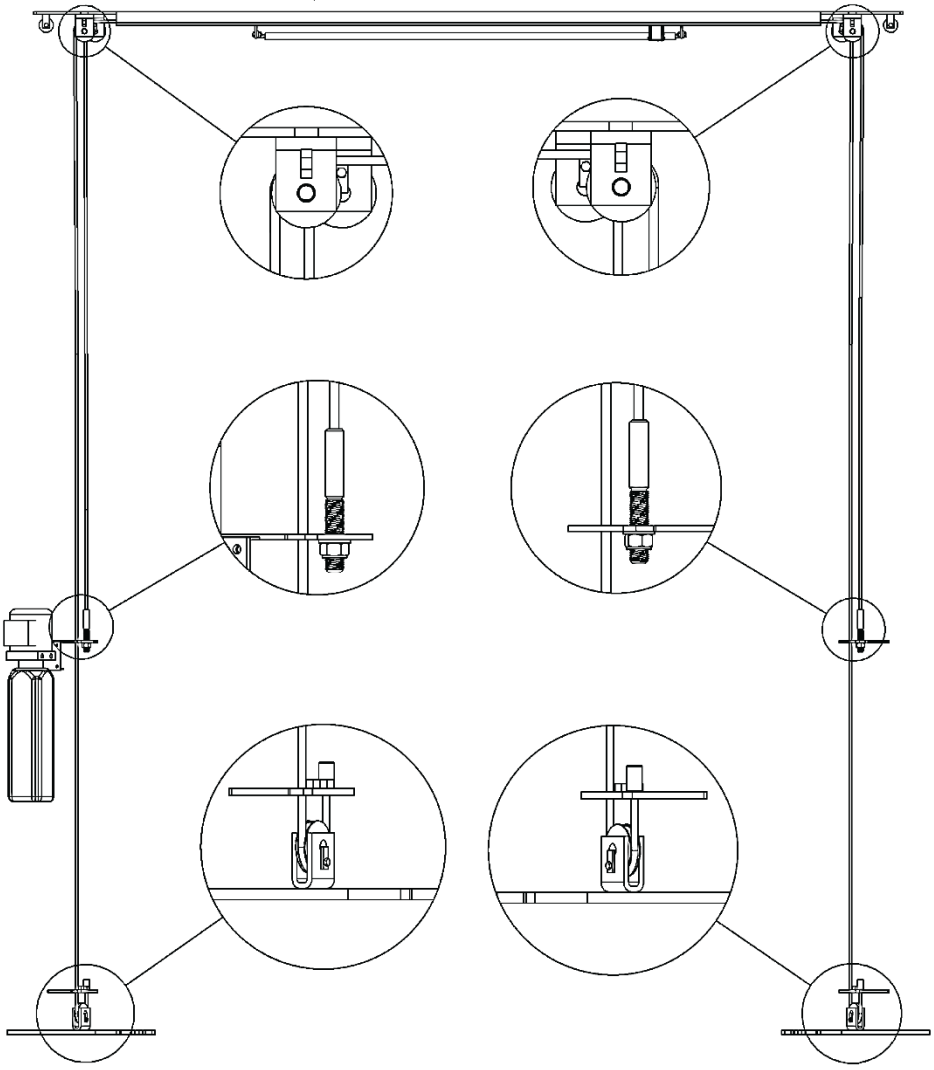
⚠ WARNING When the Cable adjusting nuts bottom out on the threaded end of the cable connector and there is slack in the Cables, this indicates the Cables have stretched beyond a safe useable length and need to be replaced with factory approved cable assemblies. Do not place Washers, spacers or other devices to shorten the effective cable length as damage to the Lift or injury to persons may occur.





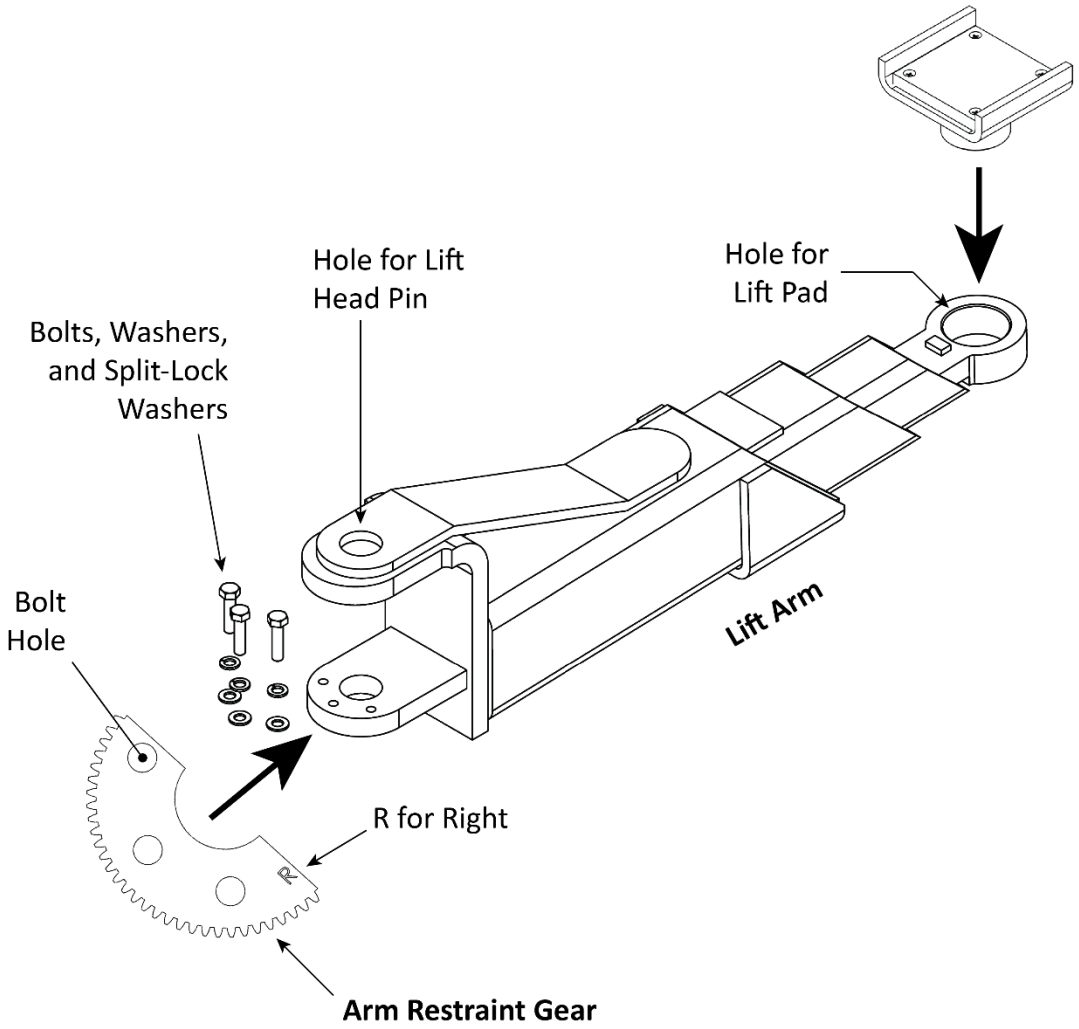
9. Put the Threaded End of the Equalizing Cable through the hole at the top of the Lift Head, then install the Nut and securely tighten.

10. Perform Steps 3 through 9 for the other Equalizing Cable. See figure below for Cable Routing.



About Arm Restraint Gears

Arm Restraint Gears are installed on each Lift Arm on the opposite end from the Lift Pad.



The purpose of the Arm Restraint Gears is to hold the Lift Arms in place laterally (once they mesh with the Gear Stops) as the Lift Arm rises from the ground up to where the Lift Pads hit the Vehicle manufacturer's recommended Lifting Points.

When the Lift is fully lowered, the Arm Restraint Gears are ***not*** meshed with the Gear Stops on the Lift Head. This allows the operator to be able to position the Lift Arms correctly under the Vehicle. When the Lift begins to rise, the Arm Restraint Gears mesh with the Gear Stops.

Important: Arm Restraint Gears do not keep the Lift Arms from moving once the weight of the Vehicle is on the Lift Arms. Arm Restraint Gears are designed to maintain the position of ***unloaded*** Lift Arms up to 150 pounds of horizontal (side to side) force. Put another way, Arm Restraint Gears keep the Lift Arms from moving laterally from just above the ground, when they mesh with the Gear Stops, until the Lift Pads start holding the weight of the Vehicle being raised.

Arm Restraint Gears for all D2-10A and C models have an R imprinted on one side and an L imprinted on the other side. Before installing an Arm Restraint Gear, determine whether it is going to be a 'left' arm or a 'right' arm (described in **Installing Lift Arms**) and install the Arm Restraint Gear accordingly.

Installing the Lift Arms

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

First, determine the Front and Rear of the Lift:

- **If you can only drive in one way**. The approach side is the Rear, the other side is the Front.
- **If you can drive in either way**. Choose one side as the Front and the other side as the Rear. The best way to make this decision is to pick one approach direction for the Vehicles you will be putting on the Lift, even though you can drive in either way. Once the decision is made, you approach the Lift from the Rear, so the other side is the Front.
- **If you have an Asymmetric Lift**. The 30° angled Lift Heads face the Rear of the Lift, so the other end is the Front.

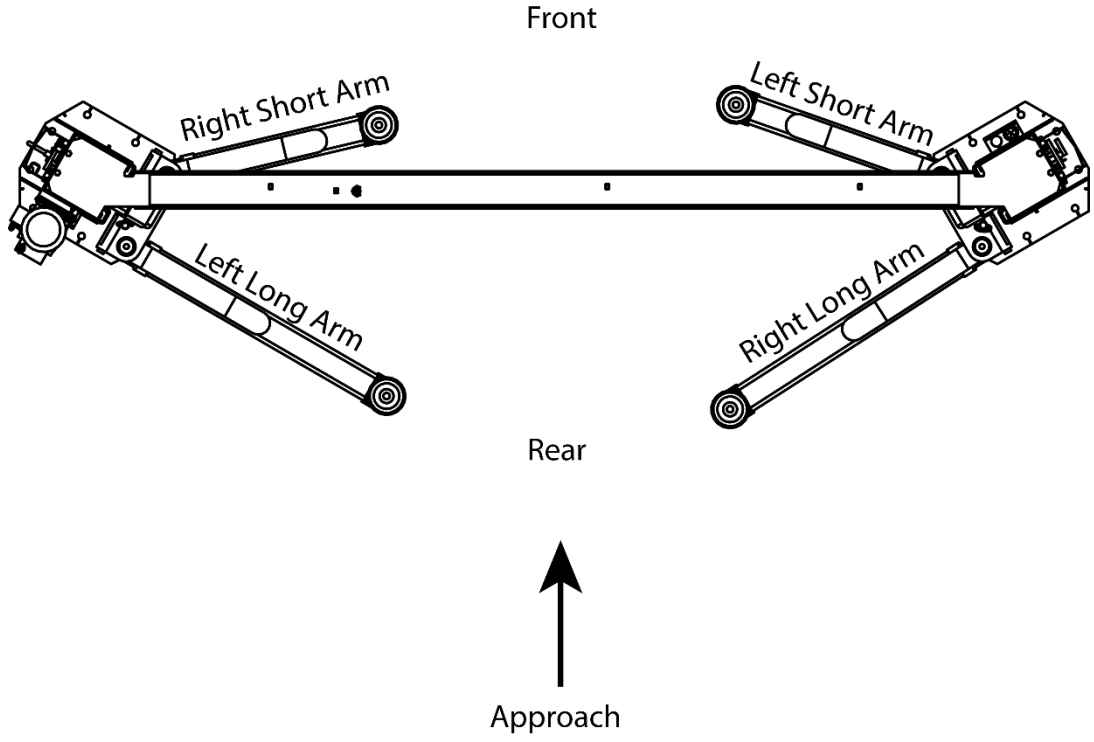
On the D2-10A, 'short' Lift Arms get installed at the Front and 'long' Lift Arms get installed at the Rear of the Lift.

On the D2-10C all four Lift Arms of the *same length*; they can be installed at the Front or the Rear of these Lifts.

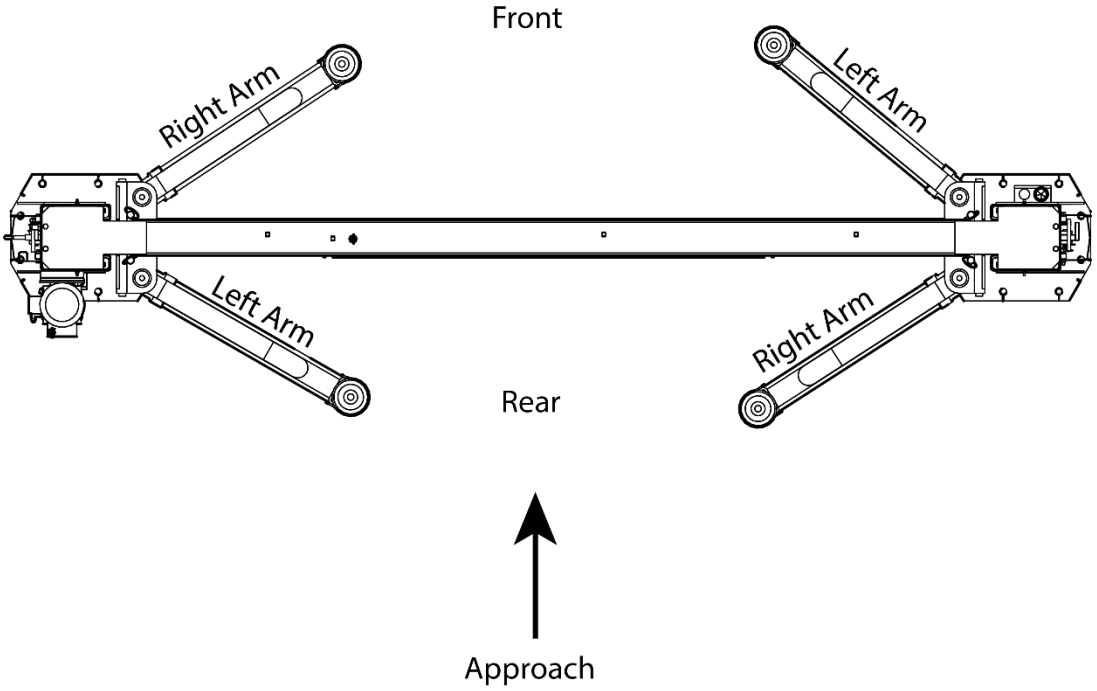
To determine right and left, stand between the two Posts, then turn to face one of them straight on. From this viewpoint, the right side of the Post is the 'right' and the left side of the Post is the 'left'.

After finishing the first Post, repeat the process for the second Post. Reference the figures below.

D2-10A Left / Right Arm Position



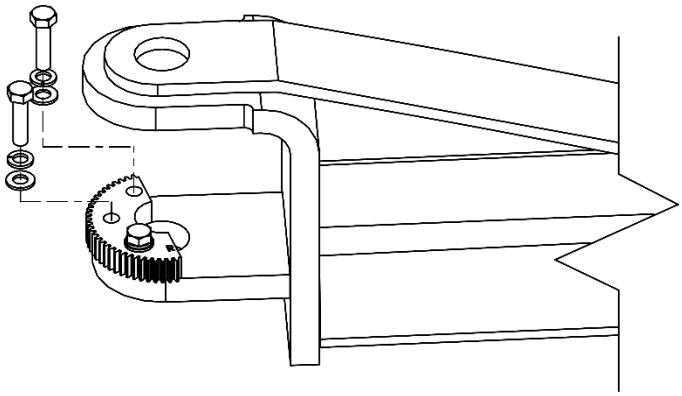
D2-10C Left/Right Lift Arm Position



The 'left' and 'right' designation comes into play when installing the Arm Restraint Gears on a Lift Arm. Once you install an Arm Restraint Gear on a Lift Arm, that Lift Arm can only be correctly used on the side you specified. For example, if you install an Arm Restraint Gear on a Lift Arm as Left, then it will not work correctly if you put that Lift Arm on the Right side of a Lift Head.

To install an Arm Restraint Gear on a Lift Arm:

1. Refer to the figures below. Find the Lift Arm, Arm Restraint Gear, three Bolts, three Washers, and three Split-Lock Washers.
2. Determine whether the Lift Arm is a 'left' or 'right' Lift Arm.
3. Turn the Arm Restraint Gear so that the L is facing up if the Lift Arm is a 'left' or the R is facing up if the Lift Arm is a 'right'.
4. Put the Arm Restraint Gear into place over the holes in the Lift Arm.
5. Put one of the Split-Lock Washers and Flat Washers onto a Bolt, then push that Bolt down through one of the holes in the Arm Restraint Gear and into the appropriate hole in the Lift Arm.



6. Using an appropriate tool, lightly tighten the Bolt into place.

   You want the Arm Restraint Gear to stay in place, but you also want to leave a little play in it. This makes it easier to mesh the Arm Restraint Gear and the Gear Stop when you are installing the Lift Arm into a Lift Head.
7. Repeat Steps 5 and 6 for the other two Bolts.

   The Lift Arm is ready to be installed into the Lift Head.

To install a Lift Arm in a Lift Head:

1. Carefully raise the desired Lift Head at least three inches off the ground.

   You need that room to work.

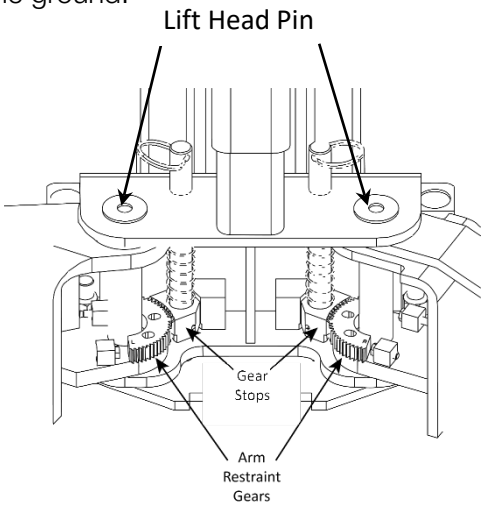
2. Move the appropriate Lift Arm into place and position in the Lift Head.

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

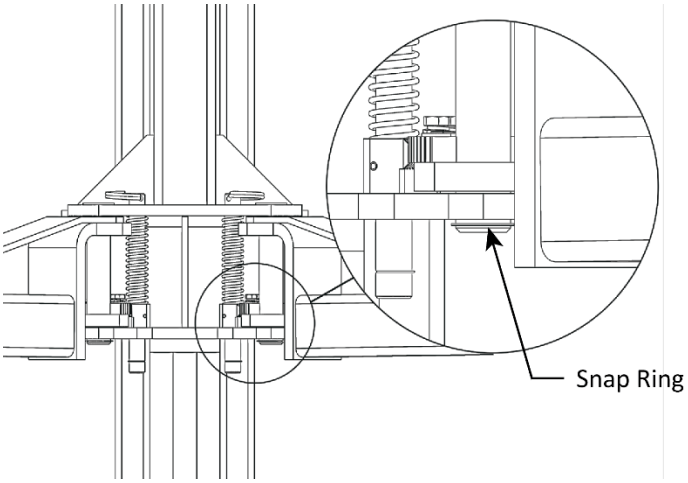
3. Slide a Lift Head Pin through the holes in the Lift Head and the Lift Arm.

   The bottom of the Lift Head Pin needs to come out below the bottom hole in the Lift Head.

   You may need to move the Lift Arm around a little to fully align the holes so that the Lift Head Pin goes through all of the holes.



4. Push a Snap Ring into its grooves on the bottom of the Lift Head Pin. See figure below.



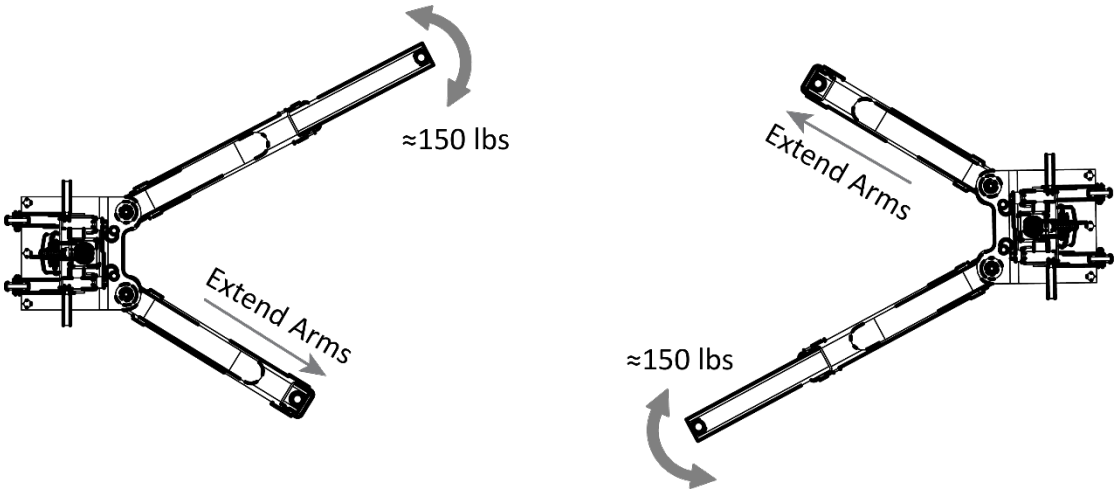
5. Make sure the Arm Restraint Gears and the Gear Stop are meshing.
6. When the Arm Restraint Gears and the Gear Stop are meshing, fully tighten the Bolts holding the Arm Restraint Gears to 60 to 70 lb ft of torque.
7. Extend the Lift Arm as far as it will go and apply approximately 150 pounds of pressure.

   The Lift Arms should not move and the Arm Restraint Gears and the Gear Stop should stay meshed.

   If they do not, take the Lift Arm off and start the process again.

8. Repeat these steps for the other three Lift Arms.

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



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

Leveling

Before operating your Lift, verify the Lift Posts are perpendicular to the ground and the Lift Arms are level:

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

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

  If the Posts are not perpendicular, shim them as required. Place shim(s) between the Post Base and the anchor to correct any out of perpendicular condition.

⚠ **CAUTION** Lift Posts that are not perpendicular or Lift Arms that are not level, constitutes a safety risk. The Vehicles you put on the Lift will be less secure; they could fall and cause injuries or damage to the Vehicle or to the Lift.

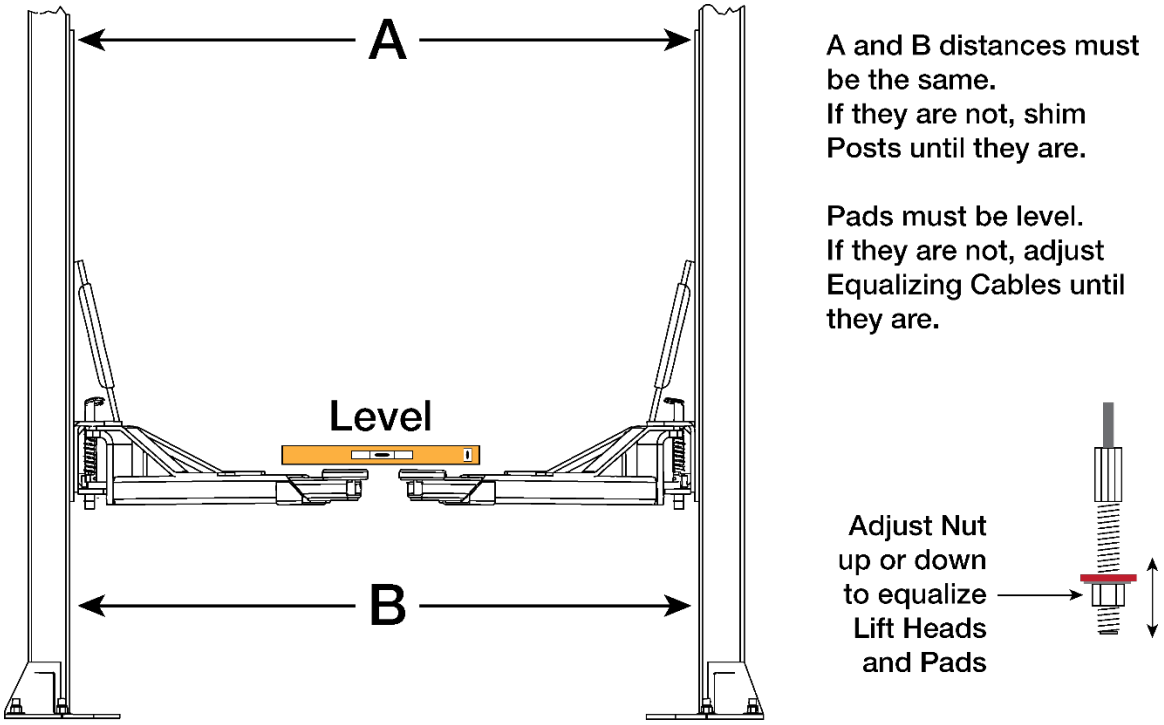
Important: If you have ***not*** yet torqued the Anchor Bolts (in order to make it easier to install the Overhead Assembly and to perform final leveling), you should torque them now.

- **Lift Arms**: When the Lift Posts are straight, make sure the Lift Arms are level. To make sure they are level, Manually raise them to the first locking position and put a level on the Pads.

⚠ **CAUTION** Lift Head and Lift arms are heavy. Carefully lift this assembly using a Forklift or Shop Crane.

What can you do if the Lift Arms are not level? Adjust the Equalizing Cables. Determine which Lift Arm is low, then adjust the Nut on the bottom of the Threaded End of the Equalizing Cable until the

Lift Arms are level. When you believe the Lift Arms to be level, raise the Lift and listen for the Lift Heads hitting the Safety Locks (there is a distinct thump). What you want is for the thumps to be simultaneous or close to it.



Contact the Electrician

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

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

The Electrician needs to:

- **Connect to power**. The Power Unit comes with a pigtail for wiring to a power source. Have your Electrician connect a power cord with plug to the electrical box on the Lift (for connection to a power outlet) or have them wire it directly into the electrical system at the Lift location.
- **Connect the Microswitch to the Power Unit**. The Microswitch (which is next to the Safety Shutoff Bar) has to be wired to the Power Unit. The necessary wiring is included.
- **Install a Power Disconnect Switch**. Ensures you can quickly and completely interrupt electrical power to the Lift in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance. You must put it within sight and easy reach of the Lift operator. Refer to **Installing a Power Disconnect Switch** for more information.
- **Install a Thermal Disconnect Switch**. Ensures the equipment shuts down in the event of an overload or an overheated motor. Refer to **Installing a Thermal Disconnect Switch** for more information.

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

The Electrician is responsible for providing:

- A power cord and appropriate 220 VAC plug for connecting to an appropriate power source or the items required to connect to the facility's power system
- a Power Disconnect Switch

- a Thermal Disconnect Switch

Additional information is supplied in the sections describing these tasks.

Wiring the Microswitch

This section describes how to wire the Microswitch; *installing* the Microswitch was described in **Installing the Overhead Assembly**.

The Lift comes with either one or two Microswitches, depending on the Power Unit:

- **Single-phase Power Units**. You need only one Microswitch, which must be wired between incoming power and the Electrical Box on the Power Unit on one of the two "hot" wires.
- **Three-phase Power Units**. You need two Microswitches, which must be wired between incoming power and the Electrical Box on the Power Unit on two of the three hot wires. Both Microswitches you receive are identical.

  Important: If wiring *two* Microswitches, they ***must*** be wired on two **different** hot wires.

Refer to the diagrams in **Wiring Diagrams** for detailed Microswitch wiring information.

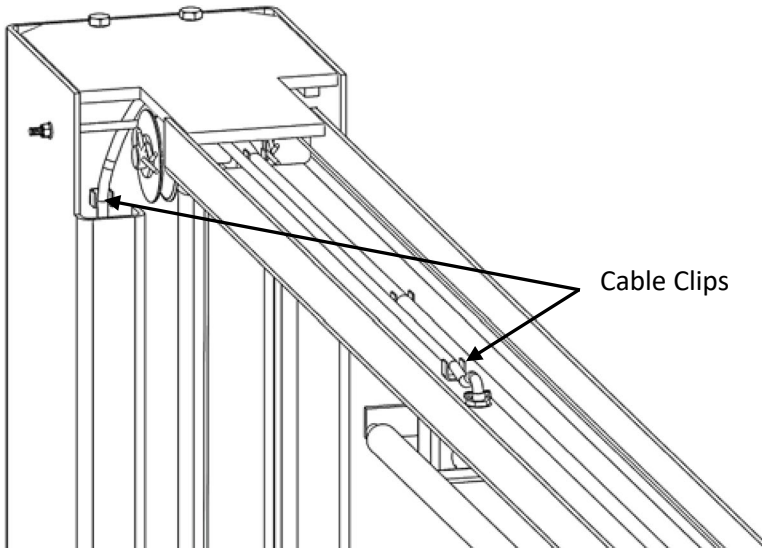
The following procedure assumes the Microswitch is already in place. If it is not, refer to **Installing the Overhead Assembly** to install it.

To wire a Microswitch:

1. Locate the Microswitch Cable (14/4 SJO, UL 62, 300 VAC) supplied with the Lift and the Powerside Safety Cover.
2. ***On the Overhead Assembly***, connect one end of the Microswitch Cable to the Microswitch (or two Microswitches, for a 3 Phase Power Unit).

   Refer to the diagrams in **Wiring Diagrams** for wiring information.
3. Route the Microswitch Cable from the Microswitch on the Overhead Assembly over to the Powerside Post, down the Powerside Post, out the hole in the Post near the top of the Safety Lock Release, and to the Electrical Box on the Power Unit.
4. Once the Microswitch Cable is routed from the Microswitch to the Power Unit, clip the Microswitch Cable using the cable clips on the Overhead Assembly and the inside of the Powerside Post.

   Securing the Microswitch Cable keeps it out of the way of the other components.



5. ***On the Power Unit***, open the Electrical Box and wire the Microswitch Cable per the instructions in **Connecting the Power Unit**.

Connecting the Power Unit

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

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

Important: Make clear to your Electrician that 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.

There are several things you need to do to get your Power Unit ready for normal operation:

- Attach the Power Unit to the Powerside Post. Already done, described in **Mounting the Power Unit**.
- Attach the Hydraulic Hose to the correct location on the Power Unit. Already done, described in **Routing Hydraulic Hoses**.
- Wire the Microswitch. Already done, described in **Wiring the Microswitch**.
- Attach the Power Unit and Microswitch to a power source. Covered in this section.
- Fill the Hydraulic Fluid reservoir. Covered in this section.

Your D2-10 Series Lift is available with one of any of the following types of Power Units:

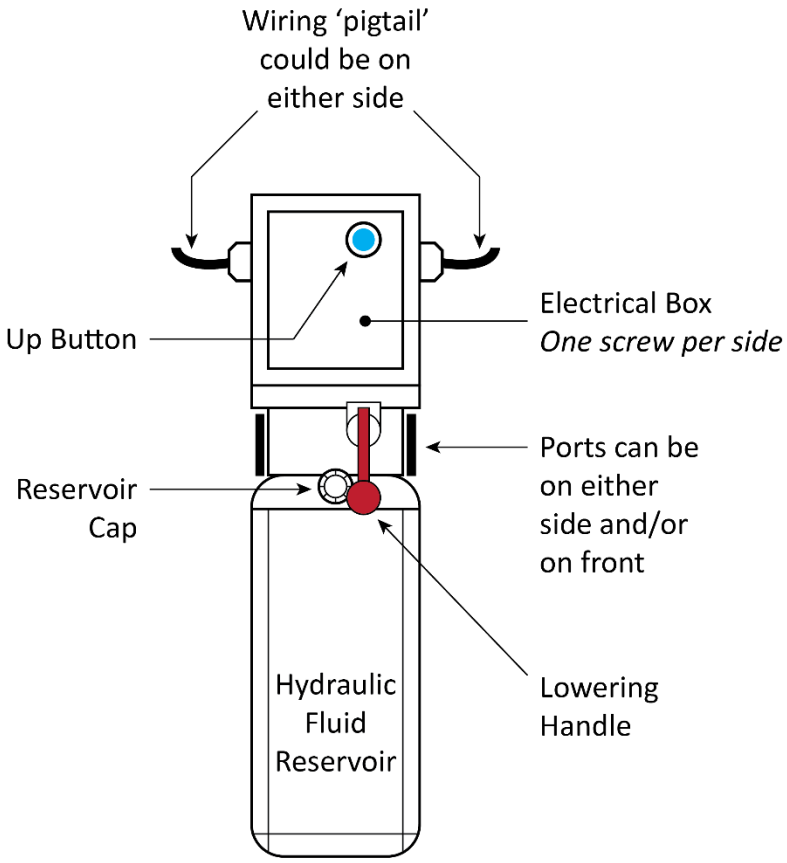
- **220 VAC, 60 Hz, 1 Phase**. Typical 220 VAC, for North American countries (U.S., Mexico, Canada).
- **208-240/380/460 VAC, 50/60 Hz, 3 Phase**. 3 Phase, multiple voltages available.
- **220 VAC, 50/60 Hz, 1 Phase**. 220 VAC, for countries *outside* North America.

110 VAC Power Units are ***not*** available for D2-10 Series Lifts.

Some Power Units are provided by different vendors so there may be minor differences in look and feel. Nevertheless, all Power Units of the same type provide the same level of functionality.

All Power Units come with a 'pigtail' coming out of the Electrical Box. To install your Power Unit, remove the pigtail and connect the Electrical Box to the electrical system at your location or to an appropriate power cord with plug.

The following drawing is a front view of a Power Unit. Your particular Power Unit may look somewhat different based on what type you purchased.



Not to scale. Your Power Unit may be slightly different.

Note: The Up Button shown in the drawing above could be in a different location on the unit or could be a switch instead of a button, depending on the Power Unit you have.

Make clear to your Electrician that 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.

To prepare the Power Unit:

1. Have the Electrician locate the Pigtail coming out of the Electrical Box on the Power Unit.
2. Open the Electrical Box, remove the Pigtail, and then either:
   - Wire the Power Unit directly into the facility's electrical system.
   - Wire a power cord (with appropriate plug) *inside the Electrical Box* to the wiring that was connected to the Pigtail.

   Wiring information is either on the outside of the Power Unit under the Electrical Box or inside the cover of the Electrical Box. Have the Electrician use that wiring information to wire the Power Unit to the power source.
3. Wire the Microswitch(es) into the incoming power.

   Refer to **Wiring Diagrams** for wiring information.
4. Fill the Hydraulic Fluid reservoir with approved Hydraulic Fluid.

   The reservoir holds ~3.5 gallons of Hydraulic Fluid, depending on which Power Unit you have.

   When you receive the Power Unit, the reservoir is empty; you need to fill it.

Approved Hydraulic Fluids are any general purpose ISO-32, ISO-46, or ISO-68 hydraulic oil or approved automatic transmission fluids such as Dexron III, Dexron VI, Mercon V, Mercon LV, Shell Tellus S4 / S3 / S2, or any synthetic multi-vehicle automatic transmission fluid.

⚠ WARNING Do not run the Power Unit without Hydraulic Fluid; you will damage it.

Important electrical information:

- Improper electrical installation can damage the Power Unit motor; this damage is ***not*** covered by the warranty.
- Use a separate circuit breaker for each Power Unit.
- Protect each circuit with a time-delay fuse or circuit breaker.
  - For a 220 VAC, single phase circuit, use a 25 amp or greater fuse.
  - For a 208-230 VAC three phase circuit, use a 20 amp or greater fuse.
  - For a 380 or 440 VAC three phase circuit, use a 15 amp fuse.
- As you require an Electrician on site to connect the Power Unit to a power source, you might also want to have them install the Power Disconnect Switch and the Thermal Disconnect Switch on the same visit.

⚠ 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.

Installing a Power Disconnect Switch

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

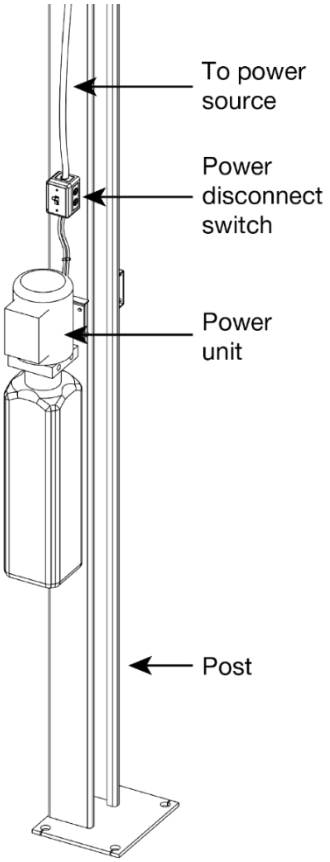
A Power Disconnect Switch is a National Electrical Code (NEC) requirement. They are designed to interrupt main electrical power in the event of an electrical circuit fault, emergency situation, or when equipment is undergoing service or maintenance.

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

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

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

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



Installing a Thermal Disconnect Switch

⚠ **WARNING** The D2-10 Series Lift motor has ***no*** thermal overload protection.

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

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

Running high current that exceeds the motor's full load amperage (FLA) rating may result in permanent damage to the motor.

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

Installing the Safety Covers

There are two Safety Covers, one for each Safety Assembly, on the outside of each Post.

Refer to **Installing the Safety Assemblies and the Safety Lock Cable** for more information about installing the Safety Assemblies.

The Safety Covers are ***not*** interchangeable:

- The Offside Safety Cover can be installed in either orientation. It does not have a slot.
- The Powerside Safety Cover can only be installed in one orientation: there is a slot on the front for the Safety Lock Release Handle.

  Note that the Microswitch Cable and the Short Hydraulic Hose need to go ***around*** the Powerside Safety Cover.

Both Safety Covers connect to their Posts via blocks in the upper left and lower right corners.

To install the Safety Covers:

1. Locate the two Safety Covers and four Cover Screws.
2. ***On the Offside Post***, install the Cover Screws in each block.

   Do not fully tighten the Cover Screws into the block: there must be enough space between the block and the Cover Screws to slide in the Safety Cover.
3. Slide the Safety Cover for the Offside Post into position, then fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.
4. ***On the Powerside Post***, install the Cover Screws in each block.

   Do not fully tighten the Cover Screws: there must be enough space between the block and the Cover Screws to slide in the Safety Cover.
5. Slide the Safety Cover for the Powerside Post into position (making sure the Microswitch Cable and the Short Hydraulic Hose go *around* the Cover), then fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.
6. Make sure the Safety Lock Release Handle is usable through the slot on the front.
7. Fully tighten both Cover Screws into their blocks so that the Safety Cover is held securely.

Lubricating the Lift

D2-10 Series Lifts work better and longer if you keep them lubricated.

Lubricate the following with a white lithium grease:

- Both Safety Cable Axle pins and Cable Sheaves.
- All 6 Cable Sheaves
- Sides of the Lift Post where the Slide Blocks make contact
- Cable sheave pins (lubricate with WD-40 or equal)

Perform an Operational Test

Before putting your Lift into normal operation, we recommend raising and lowering it several times with a typical Vehicle on the Lift. This will help you get a feel for how to operate the controls and help get any residual air out of the Hydraulic System (sometimes called “bleeding” the 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 done with a typical Vehicle.

⚠ 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 its Safety Locks. Only trained personnel should raise or lower the Lift.

To perform an Operational Test:

1. Follow the instructions in **Raising a Vehicle** and **Lowering a Vehicle** to safely raise and lower a Vehicle on the Lift.

⚠ WARNING Be sure to follow the instructions carefully when it comes to contacting the manufacturer’s recommended Lifting Points on the underside of the Vehicle. If you do not, the Vehicle could become unstable and fall, which could damage the Vehicle, damage the Lift, and injure or even kill anyone under the Vehicle.

2. Verify the Hydraulic Power Unit reservoir is full, double check that all Wire Rope, Wiring and Hydraulic Hoses are properly positioned within sheaves and clips and that all sheave retaining pins and or clips are secure.
3. Adjust the Lift Arms under the Vehicle so the Adapters are ***directly under*** the Lifting Points for the Vehicle you are raising.

   If necessary, use the included Auxiliary Adapters for extra height.
4. Raise the Lift until ***just before*** the Adapters make contact with the Lifting Points.
5. Check the Arm Restraint Gears on all four Lift Arms to make sure they are engaged.

   If they are not engaged, move the Lift Arms back and forth until they engage.
6. Raise the Lift until the tires of the Vehicle are a few inches off the ground.
7. Check to make sure all four Adapters are making solid contact with the Lifting Points.

If any of the Adapters are ***not*** making solid contact with the Lifting Points, carefully lower the Lift and start over again; the Adapters ***must*** make solid contact with the Lifting Points.

8. Raise the Vehicle approximately three feet (one meter) off the ground, then lower it back down.

   Watch and listen as the Lift raises and then lowers. The Lift may move erratically or make some odd noises the first couple of times you use it; this is normal.

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

9. Wait for one minute.

NOTICE The Power Unit is not a constant duty motor; ***it cannot be run continuously***.

10. 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.

    Again, follow the instructions in **Raising a Vehicle** and **Lowering a Vehicle** to safely raise and lower a Vehicle on the Lift, including engaging it on its Safety Locks.

11. 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.

12. 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.

13. Drive the Vehicle out.

14. With no Vehicle on the Lift Arms, press and hold the Up button on the Power Unit.

    The Lift Arms start rising.

15. Have another person push up the Safety Shutoff Bar until it triggers the Microswitch.

    The Lift Arms should stop rising.

    If the Lift Arms do not stop rising when the Microswitch is triggered, this means the Microswitch is either not installed correctly or not wired correctly. Return to the sections of this manual where installation and wiring of the Microswitch is described to find and fix the problem.

⚠ **CAUTION** Do not put the Lift into normal operation until you have confirmed that triggering the Microswitch stops the Lift Arms from rising.

Review Final Checklist Before Operation

Make sure these things have been completed before putting the Lift into normal operation:

- Review the **Installation Checklist** to make sure all steps have been performed.
- Make sure the Power Unit is getting power from the power source.
- Check the Hydraulic Fluid reservoir; it must be full of approved Hydraulic Fluid or automatic transmission fluid. ***You can harm the motor by running it without enough fluid.***
- Check the Hydraulic System for leaks.
- Make sure both Posts are properly plumbed, shimmed, and stable.
- Check to see that all Anchor Bolts are correctly torqued.
- The equalizing cables should be checked weekly for equal tension. There will be initial stretching of the cables with increasing loads.
- Apply light axle grease to the inside of the Posts where the Slide Blocks move.
- Make sure both Carriage Bolts are in place and tightened near the top of both Posts.
- Make sure all Cables are properly positioned in their Sheaves.
- Make sure all Cable Sheave retaining pins and/or clips are secure.
- Make sure both Safety Assemblies are connected and working normally.
- Make sure that all Safety Locks are clear and free.
- Make sure an Operational Test has been done.
- Leave the *Installation and Operation Manual* with the owner/operator.

Operation

This section describes how to operate your Lift.

⚠ 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.

Lift Operation Safety Rules

Important: Your safety is dependent on reading, understanding, and implementing these Safety Rules. ***Do not skip over them; read them carefully and follow them!***

Do the following before you raise or lower a Vehicle on your Lift:

- **Check the Lift**. Check the Lift for any missing, heavily worn, or damaged parts. Do not operate the Lift if you find any issues; instead, take it out of service, contact your dealer, email **support@dannmar.com**, or call **(877) 432-6627**.
- **Check the area**. Keep the area around the Lift clean and free of obstructions; anything that could cause a problem for the Lift. Do not forget to check ***above*** the Lift. If you find an obstruction, move it out of the way. Do not allow any people or animals within 30 feet of the Lift while it is in motion.
- **Check the operators**. Make sure that everyone who is going to operate the Lift has been trained in its use, has read the labels on the unit, and has read the manual. Only the operator should be within 30 feet of the Lift when it is in motion. Do not allow children to operate the Lift. Do not allow anyone under the influence of drugs or alcohol to operate the Lift.
- **Check for safety**. Make sure everyone who is going to be walking near the Lift is aware of its presence and takes appropriate safety measures. Only put Vehicles on the Lift Arms. ***When raising a Vehicle on the Lift, do not leave until it is positioned on Safety Locks***. When lowering the Lift, do not leave until it is on the ground.
- **Check the Vehicle**. Never exceed the Lift's weight rating. Do not allow people inside a Vehicle you are going to raise. Make sure the Vehicle is not overbalanced on either end. Make sure you know the manufacturer's recommended Lifting Points for the Vehicle. Never raise just one side, one corner, or one end of a Vehicle.

⚠ WARNING Always use care when you are around your Lift. When it is in a lowered position, be careful not to trip over it. When it is raised, be careful not to bang your head on the Lift Arms or the Vehicle. ***When you are raising or lowering a Vehicle, keep all people, animals, and objects at least 30 feet away from the Lift***.

About Lifting Points, Adapters, and Auxiliary Adapters

All of the Lifts in the D2-10 Series are frame-engaging Lifts, which means that the Lift uses its four Lift Arms to raise Vehicles by their frames. This leaves the Wheels of the Vehicle free to be worked on.

One of the most important things to keep in mind when using a frame-engaging Lift is that the raised Vehicle needs to 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 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 Adapters (also called Pads) contact the Vehicle on the manufacturer's recommended Lifting Points. By definition, when you raise a Vehicle by its Lifting Points, the Vehicle is balanced.

Important: The manufacturer's 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.

So how do you find the manufacturer's recommended Lifting Points? Some Vehicles have indicators on the underside that identify the Lifting Points; many do not.

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

The book *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.

The Adapters and Auxiliary Adapters (also called height adapters or extenders) included with every D2-10 Series Lift are:

- **Four Screw Lift Pads**. Best suited for Vehicles with Unibody constructions; they are also adjustable up to 3".
- **Four 2.5" / 63 mm Auxiliary Adapters**. Let you raise the height of your Auxiliary Adapters to make better contact with Vehicles.

Optional accessories for your D2-10 Series Lift include:

- **Four Frame Cradle Pads**. Best suited for trucks, SUVs, and other Vehicles with Frame constructions. Highly recommended for raising these types of Vehicles correctly and safely.
- **Four 5.5" / 125 mm Auxiliary Adapters**. Let you raise the height of your Auxiliary Adapters.

⚠ **WARNING** You can stack Auxiliary Adapters, but only up to 9". If you stack Auxiliary Adapters above 9", the Vehicle could become unstable and slip off the Lift, possibly damaging the Lift, damaging the Vehicle, and injuring anyone under it.

Raising a Vehicle

This section describes how to raise a Vehicle on your D2-10 Series Lift.

⚠ **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.

To raise a Vehicle:

1. Make sure all four Lift Arms are on the ground in their full drive-through positions.
2. Check under the Vehicle you are going to raise, check for the type of vehicle frame, and then put the most appropriate Adapters 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, a Frame Cradle Pad is generally the best choice.

⚠ **WARNING** Always use the Adapter type best suited for the Vehicle you are raising. If you use the wrong Adapter type, the Vehicle could become unstable.

3. Drive the Vehicle in.

⚠ **CAUTION** When driving a Vehicle into position, keep to the middle of the area between the Posts. If you hit a Lift Arm or any other portion of the Lift, you could damage the Vehicle and/or the Lift.

4. When you are satisfied with the location of the Vehicle, put it in park, put on the parking brake, and turn off the motor.

   If the Vehicle is a manual transmission, put it into first gear before turning off the motor.

5. Get out of the Vehicle; open the doors carefully to avoid banging them on the Lift.
6. 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. If you no longer have *Vehicle Lifting Points for Frame Engaging Lifts*, contact BendPak Support email **support@dannmar.com** or call **(800) 253-2363** to get a replacement copy.

⚠ **WARNING** Do not 'eyeball' the best location for the Adapters. ***You must use the manufacturer's recommended Lifting Points***. If you do not, the Vehicle could become unstable and fall, which could damage the Vehicle, damage the Lift, or injure or even kill anyone under the Vehicle.

7. Adjust the Lift Arms under the Vehicle so the Adapters are ***directly under*** the Lifting Points for the Vehicle you are raising.

   If necessary, use the included Auxiliary Adapters for extra height.

8. Raise the Lift until ***just before*** the Adapters make contact with the Lifting Points.
9. Check the Arm Restraint Gears on all four Lift Arms to make sure they are engaged.

   If they are not engaged, move the Lift Arms back and forth until they engage.

10. Raise the Lift until the tires of the Vehicle are a few inches off the ground.
11. Check to make sure all four Adapters are making solid contact with the Lifting Points.

If any of the Adapters are ***not*** making solid contact with the Lifting Points, carefully lower the Lift and start over again; the Adapters ***must*** make solid contact with the Lifting Points.

12. Rock the Vehicle to make sure the Vehicle is stable and balanced.

    If the Vehicle is ***not*** stable and balanced, lower the Lift back to the ground and start over.

    If the Vehicle ***is*** stable and balanced, you can 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, or injure or kill anyone under the Vehicle.

13. Press and hold the Up Button.
14. Listen as the Lift passes the Safety Locks; you should hear each side pass by the Safety Locks at approximately the same time.
15. When the Vehicle reaches the desired height, go past the next Safety Lock position (you will hear the clank as it passes), then release the Up Button.
16. Press and hold the Lowering Handle, which lowers the Lift onto the Safety Lock position you just passed. (Do not hold the Safety Lock Release Handle, that is for lowering the Lift to the ground.)
17. When the Lift stops moving down, it is engaged on its Safety Locks; release the Lowering Handle.

    Do go under the vehicle and do not leave the Lift controls unless the Lift is engaged on its Safety Locks or fully lowered.

18. Recheck the Adapters to make sure they are all still making solid contact with the Lifting Points.
19. Make sure the Lift is engaged on the same Safety Lock on both Posts. You do not want the Lift engaged on Safety Locks of two different heights or one Safety Lock engaged but the other not.
20. Begin work on the Vehicle.

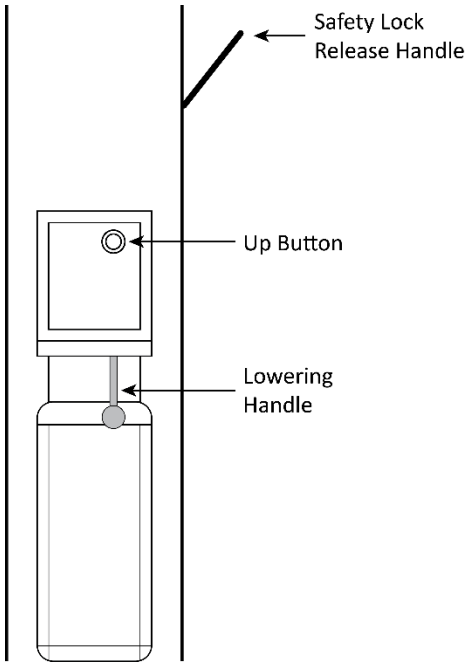
To raise Lift:

1. Press and hold Up Button.
2. When Lift is just past desired height, release Up Button.
3. Press and hold Lowering Handle.

   Do not pull down the Safety Lock Release Handle. If you do, the Lift will continue to lower and will not engage on its Safety Locks.

   Lift engages on its Safety Locks and stops moving; release Lowering Handle when Lift stops.

   Only leave Lift on Safety Locks or fully lowered.



To lower Lift:

1. Press and hold Up Button for two to three seconds.

   This moves Lift off its Safety Locks.

2. Pull down and hold Safety Lock Release Handle ***and*** Lowering Handle.

   Lift begins lowering.

3. When Lift is fully lowered, release Safety Lock Release Handle and Lowering Handle.

   Only leave Lift on Safety Locks or fully lowered.

Lowering a Vehicle

To lower a Vehicle off the Lift, first raise it a small amount to get it off its Safety Locks, then lower it.

To lower a Vehicle off the Lift:

1. Check under and around the Vehicle to make sure the area is clear of all obstructions.

   If you find any obstructions, move them out of the way.

2. Press and hold the **Up** Button for a second or two to move the Lift off its Safety Locks.

   Raise the Lift at least two inches to get clear of the Safety Locks.

3. Pull down and hold the Safety Lock Release Handle (on the Powerside Post above and to the right of the Power Unit).

4. Push and hold the Lowering Handle (on the front of the Power Unit).

   Important: Both the Safety Lock Release Handle ***and*** the Lowering Handle must be held down at the same time to lower the Lift.

   The Lift begins lowering.

   ⚠ **WARNING** Do not override the Lift controls; for safety purposes, they 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, or injury (even death) to persons near the Lift.

   Remain clear of the Lift as it comes down; obey the pinch point warning decals.

5. When the Lift is on the ground, release both Handles, then move all four Lift Arms to their full drive-through positions.

6. Drive the Vehicle out.

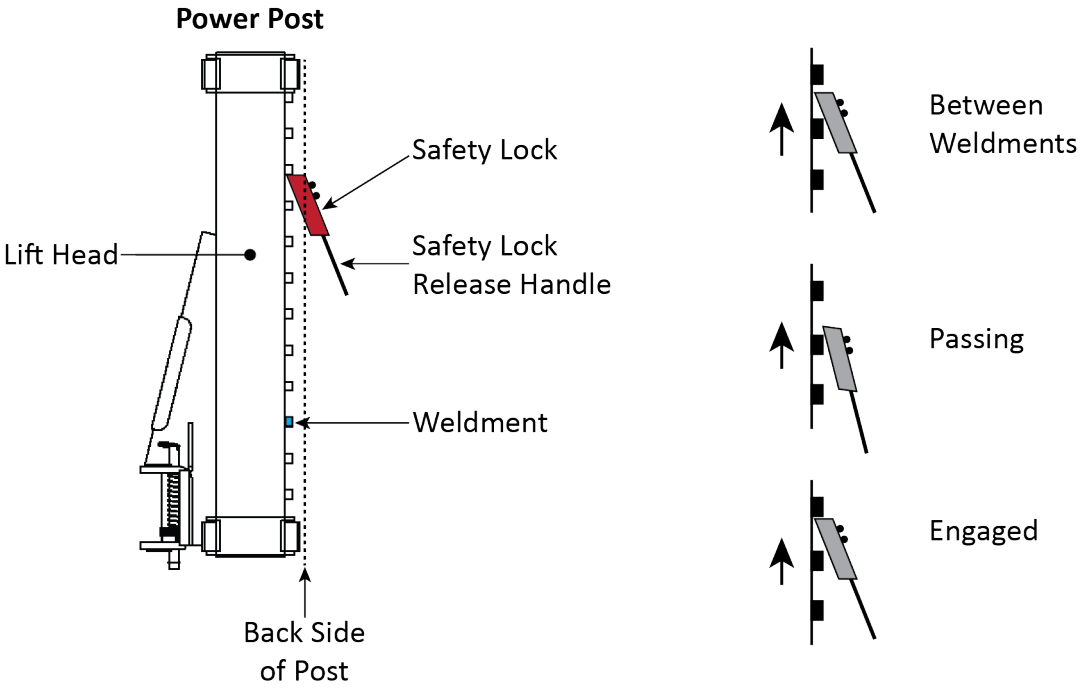
About Safety Locks

Your Lift has 14 Safety Lock positions, spaced every three inches; having multiple Safety Lock positions let you lock the Lift at the best height for what you need to do.

A Safety Lock ***position*** is defined as when the Lift is engaged on both of the Lift's Safety Locks at the same height on both Posts.

Important: Always make sure the both Safety Locks are engaged at the same height on both Posts. You do not want the Lift engaged on Safety Locks of two different heights or the Safety Lock on one Post engaged but the Safety Lock on the other Post not engaged.

Safety Lock positions are created by the Safety Lock Weldments, which are on the back of each Lift Head. Safety Lock Weldments hit the Safety Locks and then move past them as the Lift Heads rise.



Drawing not to scale. Not all components shown. Posts not shown for clarity. Offside Safety Lock not shown.

As they move past the Safety Locks, the Weldments push the Safety Lock and the Safety Lock Release Handle down (the Safety Lock Release Handle is found on the Powerside Post only). When the Weldment is completely past the Safety Locks, the Safety Locks clank back into position between Weldments. This happens each time Safety Locks are passed, so you will generally be hearing multiple clanks as the Lift rises and lowers.

To engage the Lift on a Safety Lock position, wait until the Vehicle reaches the desired height for the work you are going to do, then listen for the clank as the Weldments pass the next Safety Lock position. When you hear the clank, release the Up Button and then hold down the Lowering Handle (on the front of the Power Unit) for a second or two to back the Weldments down onto the just-passed Safety Locks; ***do not*** hold down the Safety Lock Release Handle.

⚠ **WARNING** Only leave the Lift either fully lowered or engaged on Safety Locks. ***If you leave the Lift raised but not engaged on Safety Locks, the Vehicle is not secure***. It could fall, possibly damaging the Vehicle, the Lift, and injuring anyone under the Vehicle.

Maintenance

⚠ DANGER Before performing any maintenance on your Lift, make sure it is completely disconnected from power. The 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/current, you could be injured or killed.

To maintain your Lift:

- **Daily**: Keep the Lift clean. Wipe up any spills, clean any dirt.
- **Daily**: Make a visual inspection of all moving parts and check for damage or excessive wear. Replace any damaged or worn parts before using the Lift.

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

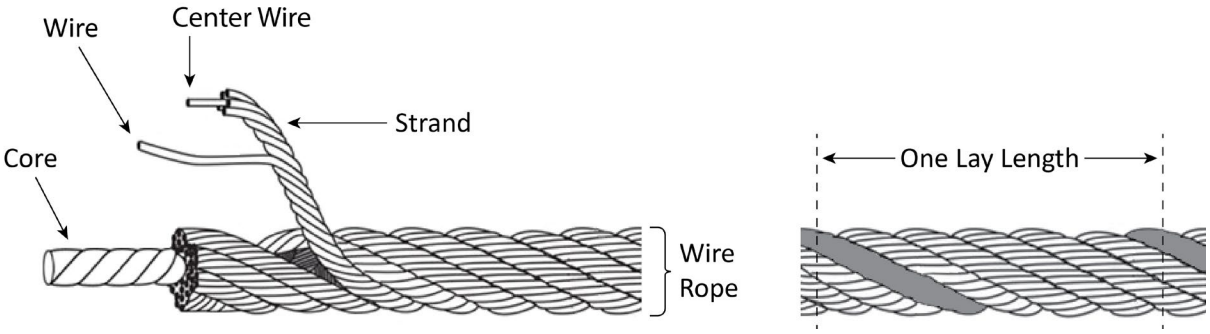
- **Daily**: Make sure Safety Locks are in good operating condition. Do not use your Lift if the Safety Locks are damaged or excessively worn.
- **Weekly**: Check all controls to make sure they are functioning normally.
- **Weekly**: Check all labels on the Lift. Replace them if they are illegible or missing.
- **Weekly:** Check Equalizing Cables to verify equal lifting. Adjust as required.
- **Monthly**: Lubricate the Posts. We recommend using white lithium grease or similar.
- **Monthly**: Lubricate the wire rope (Cables). Use a wire-rope lubricant such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant.
- **Monthly**: Check Hydraulic Fluid levels. Refill if low.
- **Monthly**: Check cable connections, bolts, and pins for proper mounting and torque.
- **Monthly**: Make sure all pivot arm pins are properly secure.
- **Every two months**: Check all Anchor Bolts to make sure they are correctly torqued. If they are not, torque them.
- **Every three to five years or as needed**. Carefully check the Equalizing Cables every three to five years, or immediately if there are signs of damage or extreme wear. See **Wire Rope Inspection and Maintenance** for additional information.

⚠ WARNING Do not operate your Lift if you find maintenance issues; instead, remove it from service, then contact your dealer or BendPak Support via the Web at **dannmar.com/support**, via email at **support@dannmar.com**, or by phone at **(877) 432-6627**.

Wire Rope Inspection and Maintenance

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

- Wire rope should be replaced when there are visible signs of damage or extreme wear. *Do not use the Lift if it has damaged or worn Cables*; ***take it out of service!***



- Wire rope should be maintained in a well-lubricated condition at all times.

  Wire rope is only fully protected when each wire strand is lubricated both internally and externally. Excessive wear shortens the life of wire rope. Use a wire-rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand, such as 90-WT gear oil or ALMASOL® Wire Rope Lubricant. To make sure that the inner layers of the rope remain well lubricated, lubrication should be done at least every three months during normal operation.

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

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

- How often should you inspect?

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

- When should you replace wire rope due to broken wires?

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

- Are there other reasons to replace your wire rope?

  Yes. Corrosion that pits the wires and/or connectors, evidence of kinking, crushing, cutting, bird-caging, or a popped core, wear that exceeds 10% of a wire's original diameter, or heat damage.

- How do you find broken wires?

  a. Relax your rope to a stationary position and move the pick-up points off the Sheaves. Clean the surface of the rope with a cloth — 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 raise any wires that appear loose.

Troubleshooting

This section describes how to troubleshoot your Lift.

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

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

⚠ **WARNING** The Lift uses electrical energy; if your organization has Lockout/Tagout policies, make sure to implement them before performing any Troubleshooting.

Issue	Action to Take
Lift does not raise or does not lower, once raised.	Make sure there is sufficient Hydraulic Fluid in the reservoir. Make sure there is no air in the Hydraulic System. Make sure none of the Hydraulic Hoses are pinched or leaking. Make sure the Power Unit is getting power. If the Hydraulic Fluid is dirty, replace it with clean fluid. Make sure the Lift is not overloaded. Make sure the load on the Lift is balanced. Verify the Microswitch is not on or shorted. Verify input voltage is present and correct.
Arms move erratically or squeak when in use.	Move the arms up and down a few times 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. Carefully remove vehicle from the Lift and run leveling procedure.
Motor not running.	Check connection to power source; make sure it is plugged in and the appropriate voltage. Check wiring diagram on Power Unit.
Hydraulic Fluid is dirty.	Replace the dirty Hydraulic Fluid with clean, approved ATF fluids, such as Dexron III, Dexron VI, Mercon V, Mercon LV, or comparable.
Lift makes odd noises.	Lubricate hinge points using white lithium grease.

If you continue to have issues with your Lift, take the Lift out of service, then contact your dealer or BendPak Support at **dannmar.com/support**, via email at **support@dannmar.com**, or by phone at **(877) 432-6627**.

Disposing of Used Hydraulic Fluid

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

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

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

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

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

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

To find an appropriate facility:

- Local automotive parts stores, auto care facilities, or automobile dealerships may accept fluid for recycling or, in some cases, for disposal. Contact them for more information.
- Cities, counties, and states often support both recycling facilities and hazardous waste collection facilities. Contact them to see if and where they have these programs.
- If you have large amounts of fluid, consider contacting a commercial waste disposal company. In all cases, the best approach is to find an appropriate facility and contact them — in advance — to ask them: what kinds of fluids they accept, what kind of containers it must be in, what hours they are open, their location, and any other information specific to their facility.

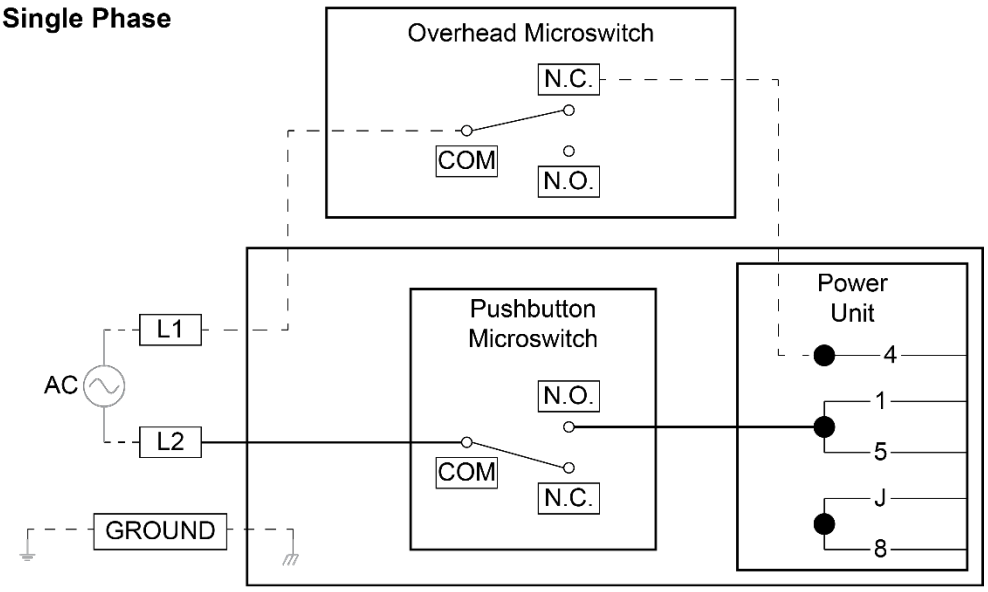
If you are unable to find an appropriate facility, the website **earth911.com** has resources that may be of help.

Wiring Diagrams

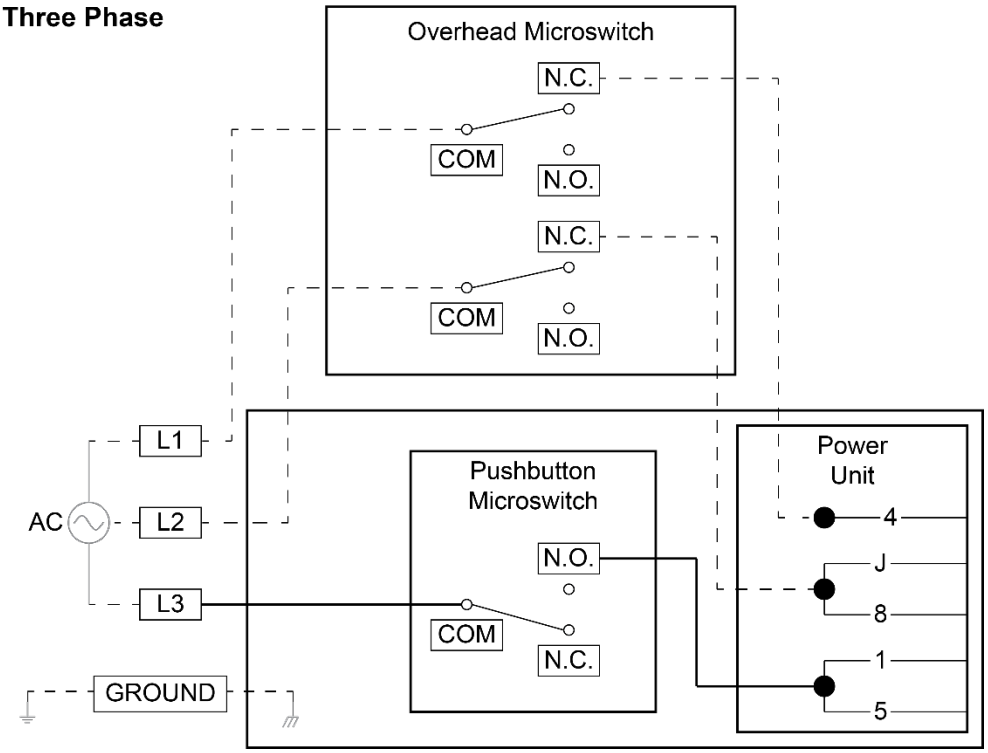
This section includes wiring information for the Microswitch(es).

⚠ DANGER All wiring ***must*** be performed by a licensed, certified Electrician. Make sure that main electrical power has been disconnected from the Lift and cannot be re-energized until all procedures are complete. If your organization has Lockout/ Tagout policies, make sure to implement them after connecting the Lift to power.

Single Phase

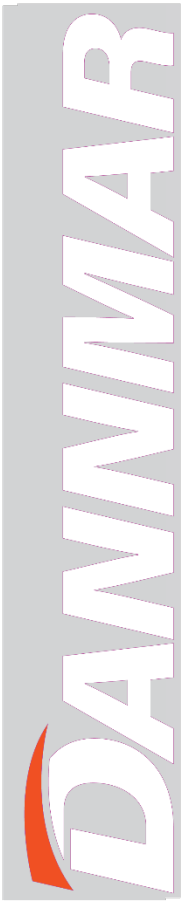


Three Phase

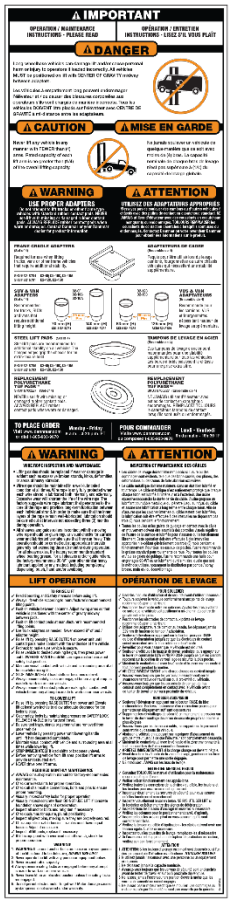


Labels

A

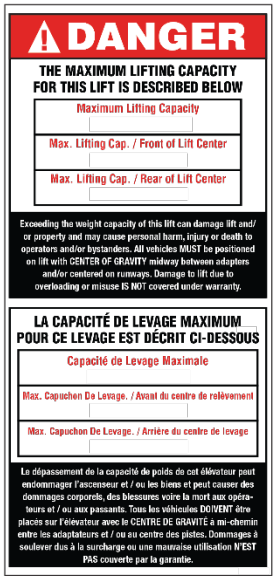


C



D

E



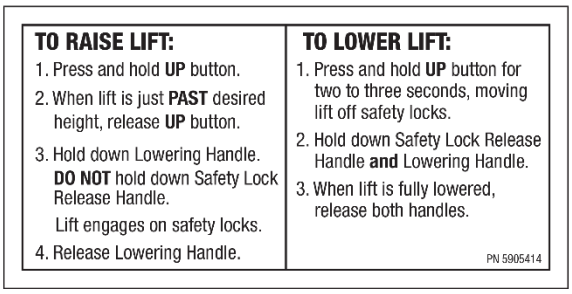
F

B

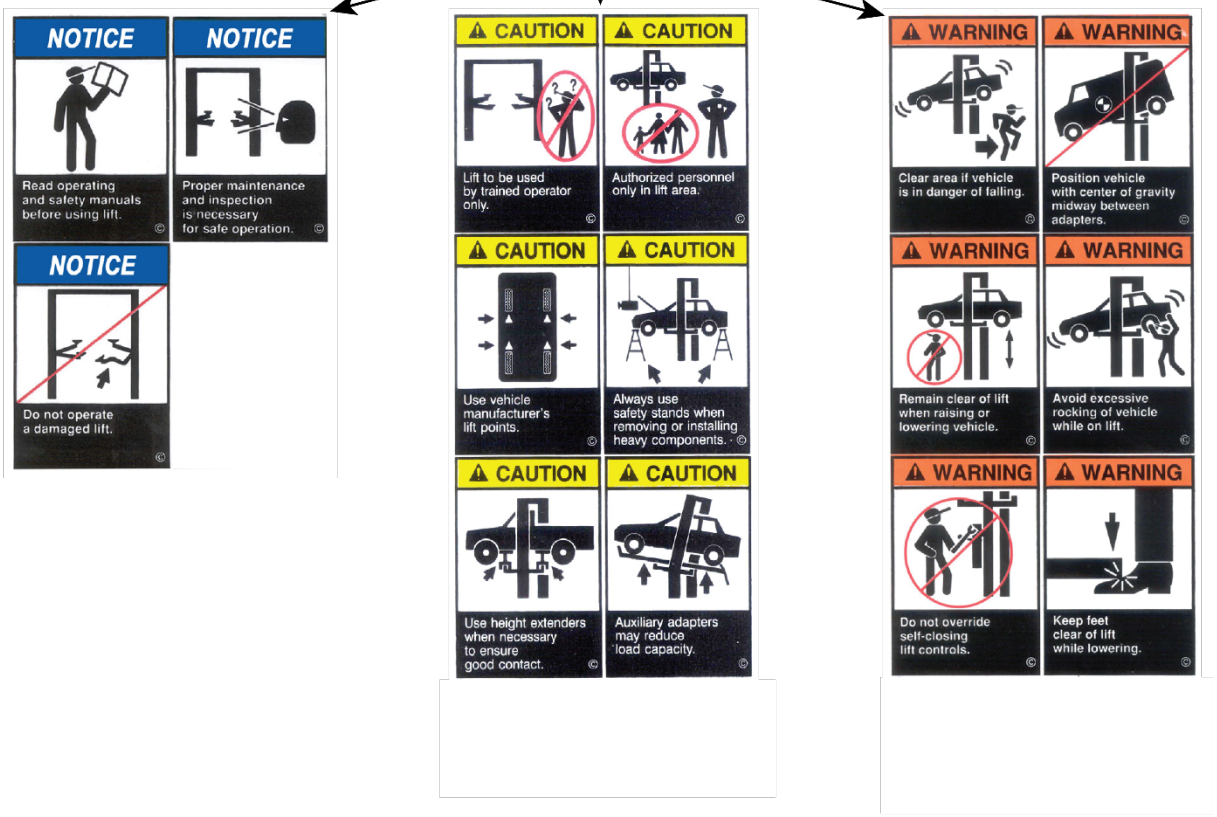
I

J

L



G



H

PLEASE READ

Internal packing oil may cause the cylinders to bleed oil during start up. This is normal. To extend cylinder and seal life, raise the lift to full height at least once every day.

K

DANNMAR
Santa Paula, CA USA
www.dannmar.com

MODEL NUMBER

DESCRIPTION

LIFT CAPACITY | DATE CODE

VOLTAGE
- ☐ 110-220V, 50-60 Hz, 1 Ph
- ☐ 208-240V, 50-60 Hz, 1 Ph
- ☐ 380-415V, 50-60 Hz, 3 Ph
- ☐ 208-440V, 50-60 Hz, 3 Ph

SERIAL NUMBER

UPC

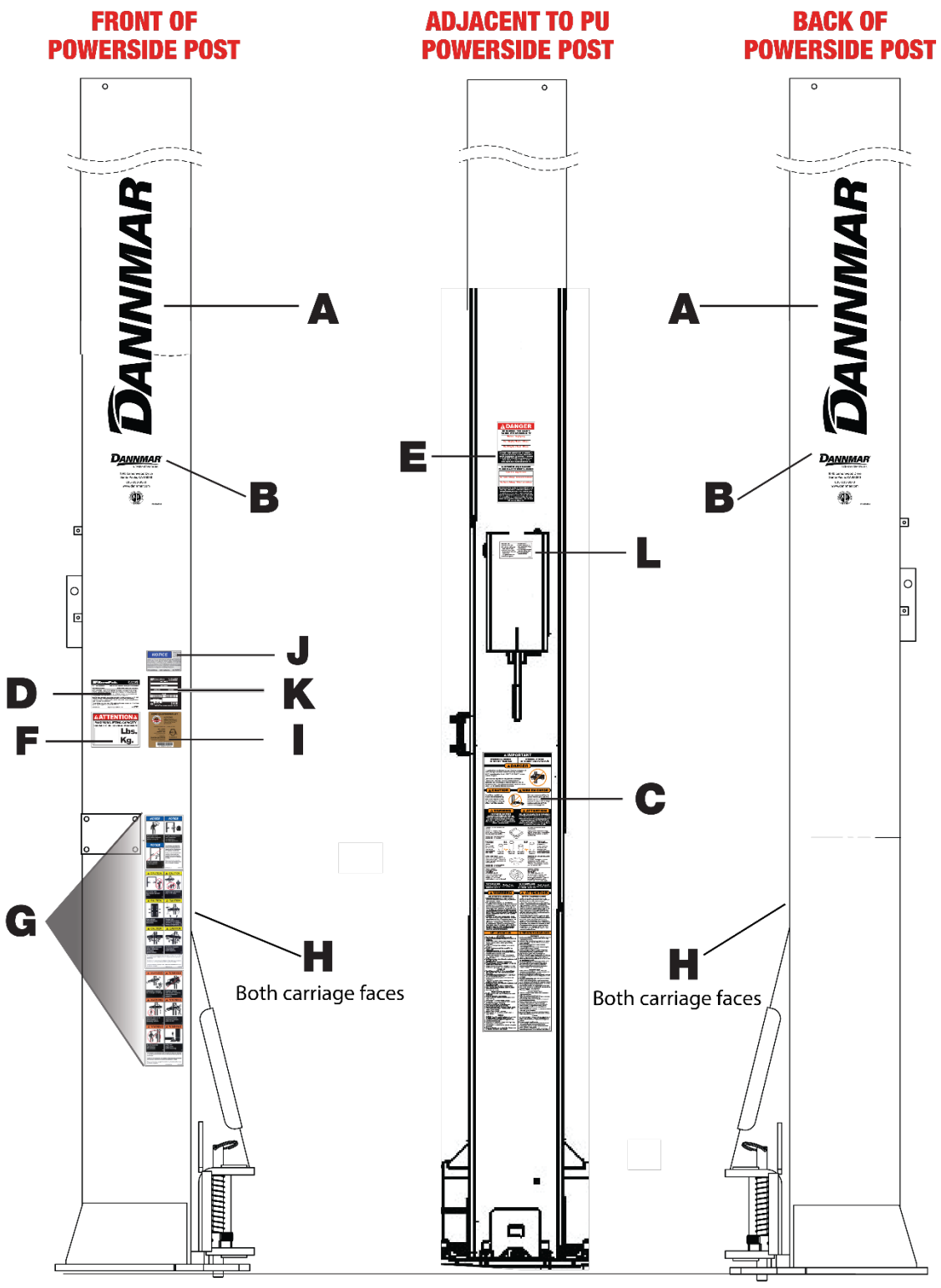
DANGER!
Disconnect Power Before Servicing

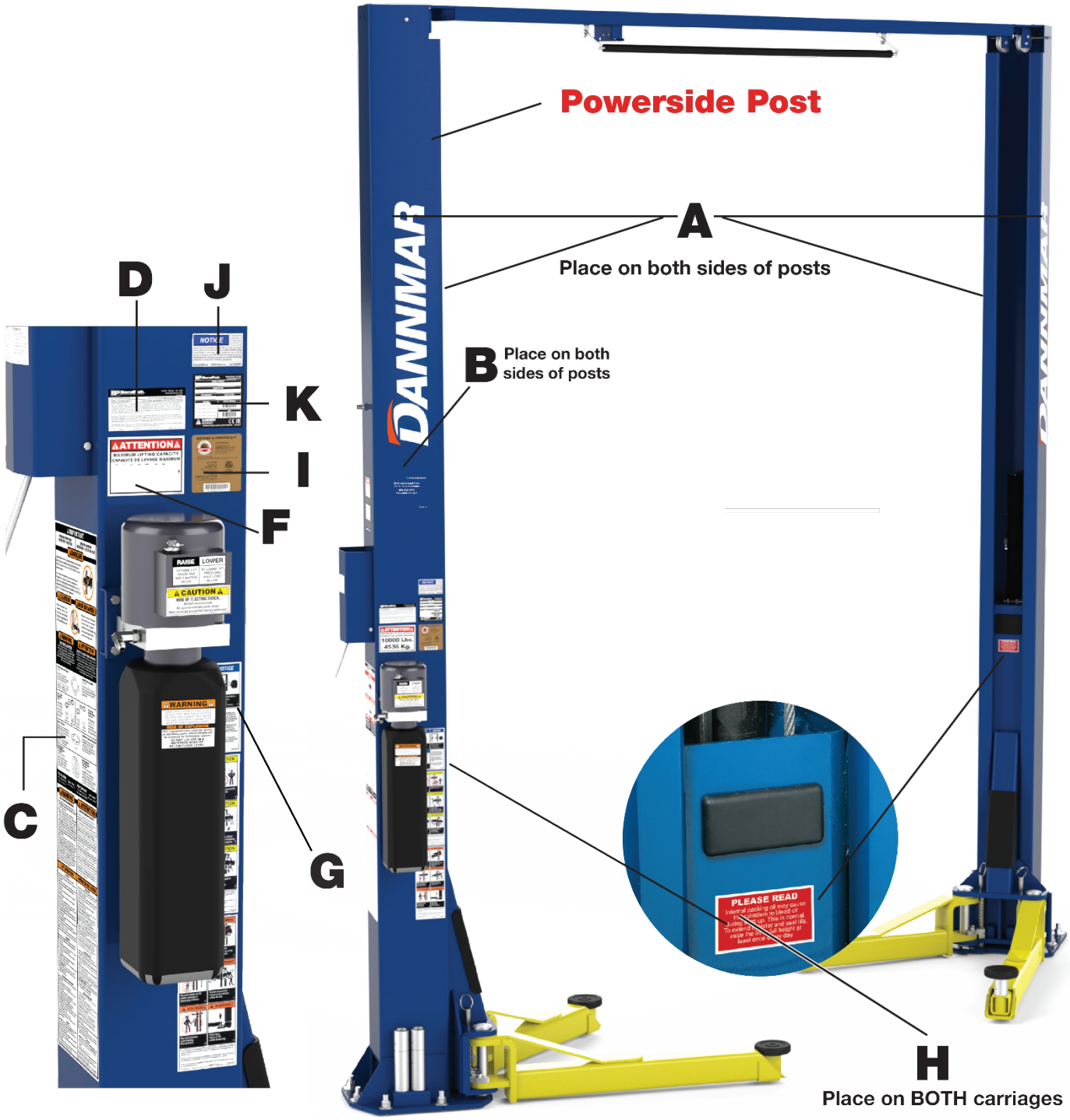
MADE IN CHINA

CE EAC

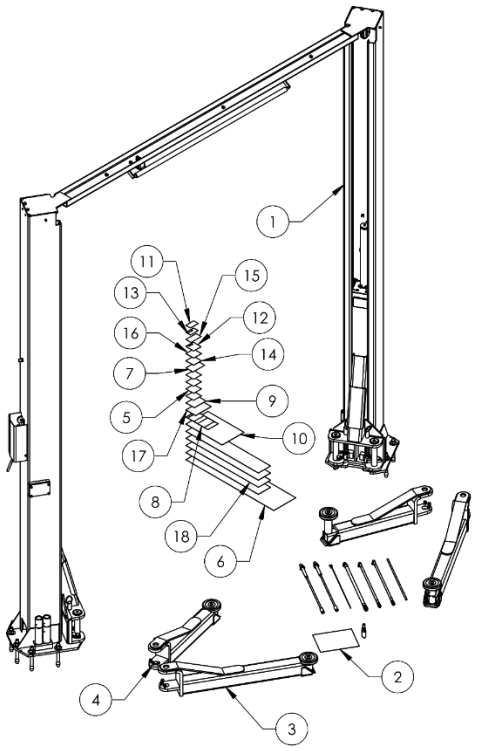
WARRANTY VOID IF DATA PLATE IS REMOVED

PN 5905703


FRONT OF POWERSIDE POST
ADJACENT TO PU POWERSIDE POST
BACK OF POWERSIDE POST
A
B
D
F
J
K
I
G
H
Both carriage faces
E
L
C
A
B
H
Both carriage faces


Powerside Post
A
Place on both sides of posts
B
Place on both sides of posts
D
J
K
I
F
C
G
H
Place on BOTH carriages
DANNMAR
RAISE
LOWER
CAUTION
WARNING
PLEASE READ

Parts Drawings



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5245098	D2-10A LIFT SUPERSTRUCTURE	1	B
2	5250298	D2-10A PARTS BOX	1	B
3	5215967	D2-10A LONG ARM ASSEMBLY	2	A
4	5215966	D2-10A SHORT ARM ASSEMBLY	2	A
5	5905701	DANNMAR POST BRANDING DECAL-INFO	4	-
6	5905702	DANNMAR 2-POST SAFETY ENG-FREN LABEL	1	-
7	5905940	PRODUCT DATA LABEL	1	-
8	5905403	MAX CAPACITY 10K DANGER LABEL, ENGLISH-FRENCH	1	-
9	5905655	MAX CAPACITY NTRL 10K LABEL, ENGLISH-FRENCH	1	-
10	5905109	WARNING ALI/WL 101	1	-
11	5905177	TO PROLONG LIFE OF TWO	1	-
12	5905654	LABEL; ALI/ALCTV 2017 GOLD LABEL, CAN-US; MET LABS	1	-
13	5905377	NOTICE LABEL, ALI/WLSIA01	1	-
14	5905703	SERIAL TAG K, DANNMAR	1	-
15	5905414	GP/XPR LOCK-RELEASE LABEL	1	-
16	5905706	DANNMAR PEEL OFF LABEL	1	-
17	5905465	MANUFACTURER LABEL	1	-
18	5905728	DANNMAR MEDIUM POST BRANDING DIE-CUT DECAL	4	-

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	CA	06/29/2020
CHECKED	OR	11/05/2020

DIMENSIONS ARE IN MM

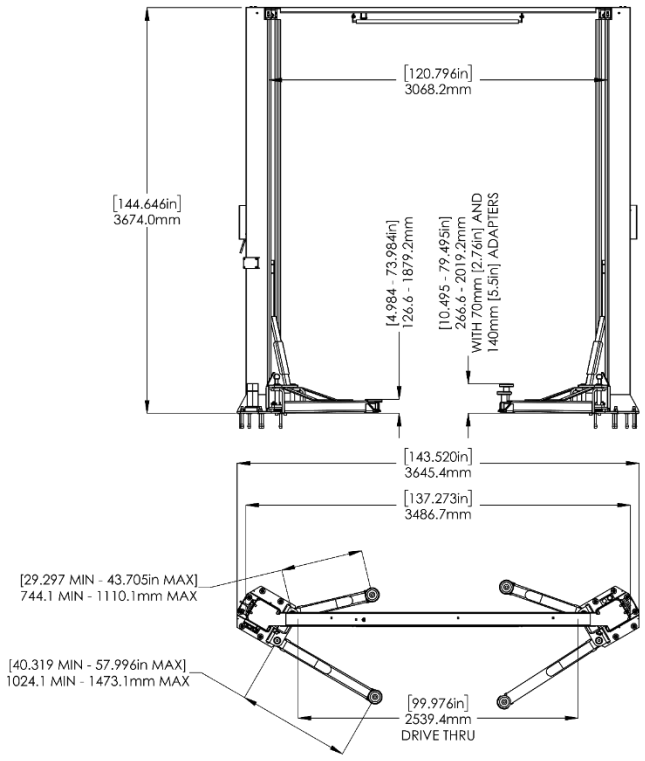
THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10A PRODUCTION LIFT

SIZE	DWG. NO.	REV
A	5260620	D

SCALE: 1:30 SHEET 1 OF 3

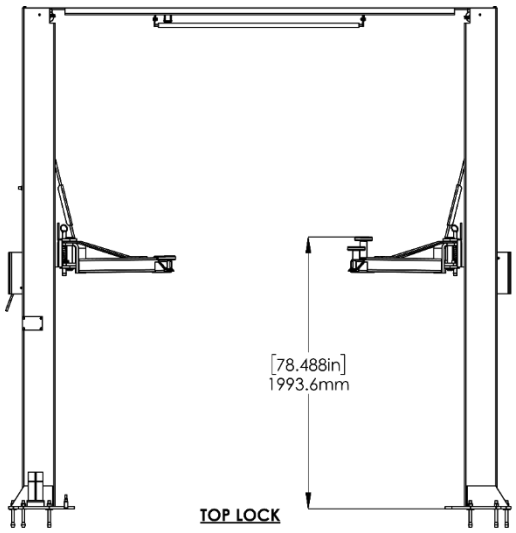


BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

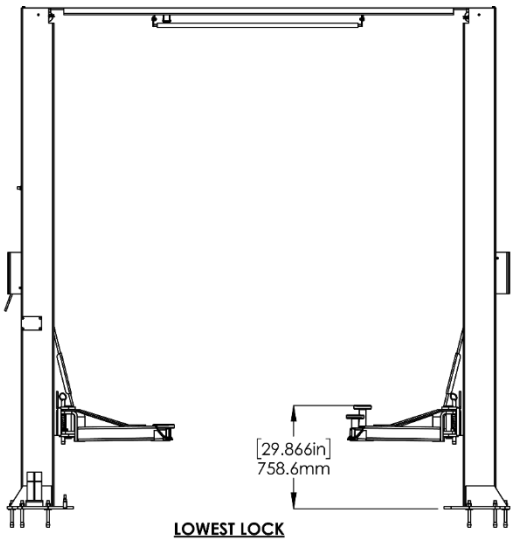
TITLE: D2-10A PRODUCTION LIFT

SIZE	DWG. NO.	REV
A	5260620	D

SCALE: 1:35 SHEET 2 OF 3



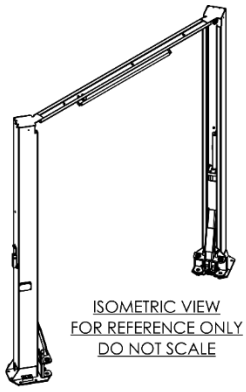
TOP LOCK



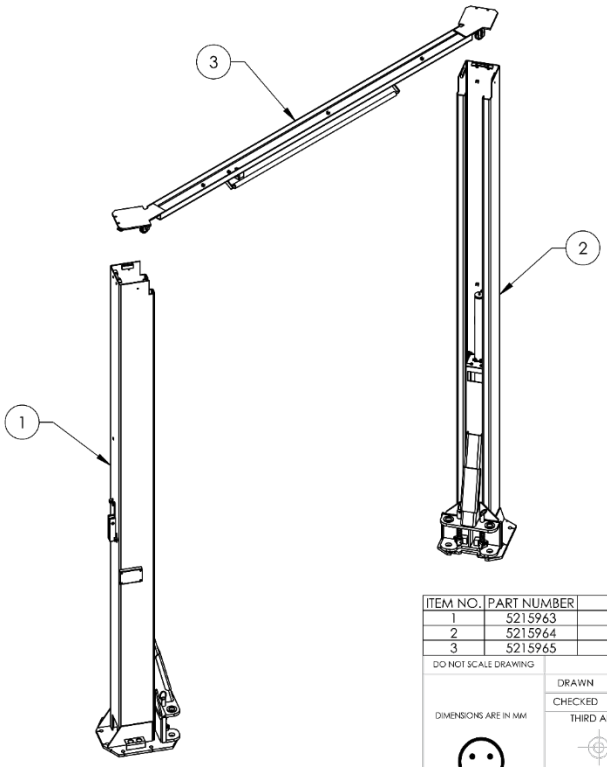
LOWEST LOCK

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:		
D2-10C PRODUCTION LIFT		
SIZE	DWG. NO.	REV
A	5260619	D
SCALE: 1:35		SHEET 3 OF 3



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5215963	D2-10 POWER SIDE POST ASSEMBLY	1	B
2	5215964	D2-10 OFF SIDE POST ASSEMBLY	1	B
3	5215965	D2-10A TOP TROUGH ASSEMBLY	1	A

DO NOT SCALE DRAWING		NAME	DATE
	DRAWN	CA	06/26/2020
	CHECKED	OR	11/05/2020

DIMENSIONS ARE IN MM

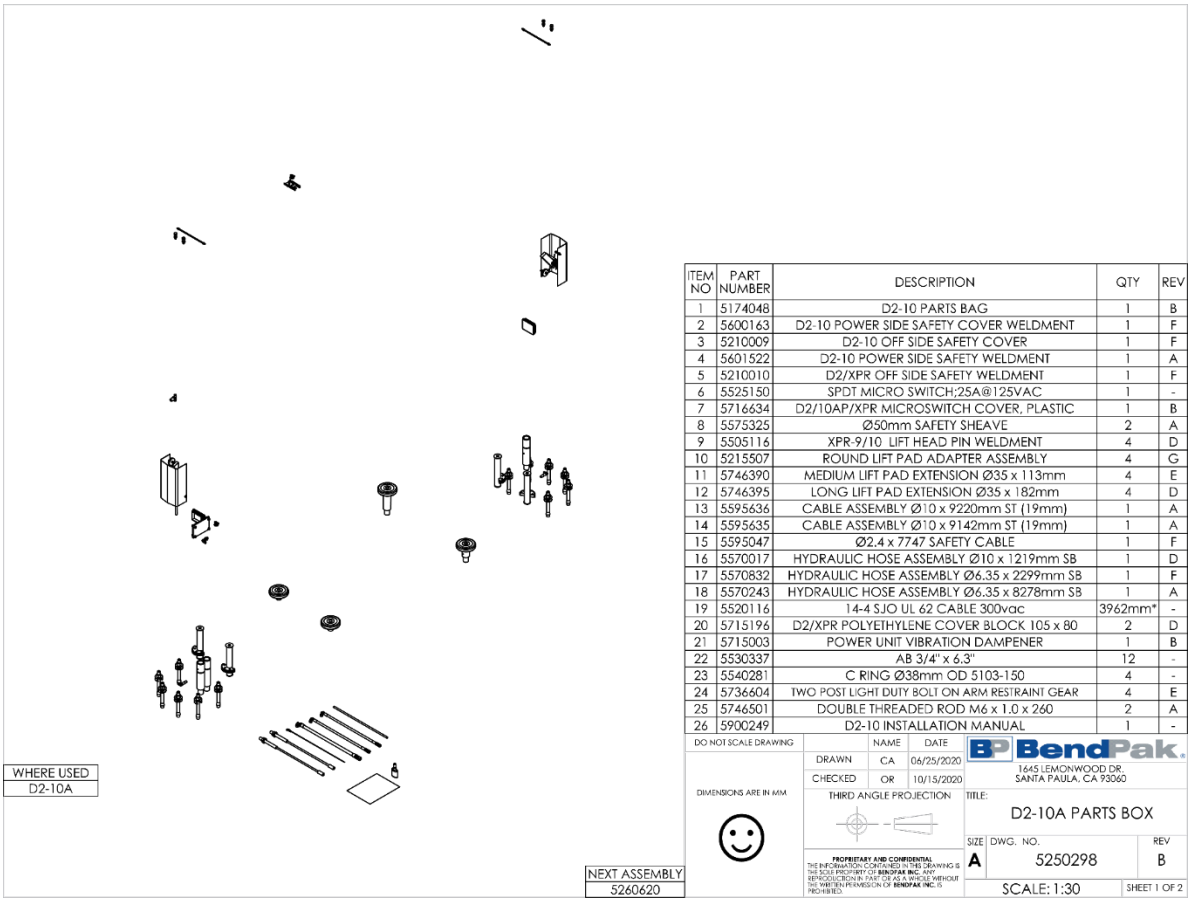
THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:		
D2-10A LIFT SUPERSTRUCTURE		
SIZE	DWG. NO.	REV
A	5245098	B
SCALE: 1:30		SHEET 1 OF 1

WHERE USED
D2-10A

NEXT ASSEMBLY
5260620



ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5174048	D2-10 PARTS BAG	1	B
2	5600163	D2-10 POWER SIDE SAFETY COVER WELDMENT	1	F
3	5210009	D2-10 OFF SIDE SAFETY COVER	1	F
4	5601522	D2-10 POWER SIDE SAFETY WELDMENT	1	A
5	5210010	D2/XPR OFF SIDE SAFETY WELDMENT	1	F
6	5525150	SPDT MICRO SWITCH;25A@125VAC	1	-
7	5716634	D2/10AP/XPR MICROSWITCH COVER, PLASTIC	1	B
8	5575325	Ø50mm SAFETY SHEAVE	2	A
9	5505116	XPR-9/10 LIFT HEAD PIN WELDMENT	4	D
10	5215507	ROUND LIFT PAD ADAPTER ASSEMBLY	4	G
11	5746390	MEDIUM LIFT PAD EXTENSION Ø35 x 113mm	4	E
12	5746395	LONG LIFT PAD EXTENSION Ø35 x 182mm	4	D
13	5595636	CABLE ASSEMBLY Ø10 x 9220mm ST (19mm)	1	A
14	5595635	CABLE ASSEMBLY Ø10 x 9142mm ST (19mm)	1	A
15	5595047	Ø2.4 x 7747 SAFETY CABLE	1	F
16	5570017	HYDRAULIC HOSE ASSEMBLY Ø10 x 1219mm SB	1	D
17	5570832	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 2299mm SB	1	F
18	5570243	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 8278mm SB	1	A
19	5520116	14-4 SJO UL 62 CABLE 300vac	3962mm*	-
20	5715196	D2/XPR POLYETHYLENE COVER BLOCK 105 x 80	2	D
21	5715003	POWER UNIT VIBRATION DAMPENER	1	B
22	5530337	AB 3/4" x 6.3"	12	-
23	5540281	C RING Ø38mm OD 5103-150	4	-
24	5736604	TWO POST LIGHT DUTY BOLT ON ARM RESTRAINT GEAR	4	E
25	5746501	DOUBLE THREADED ROD M6 x 1.0 x 260	2	A
26	5900249	D2-10 INSTALLATION MANUAL	1	-

WHERE USED
D2-10A

NEXT ASSEMBLY
5260620

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	CA	06/25/2020
CHECKED	OR	10/15/2020

DIMENSIONS ARE IN MM

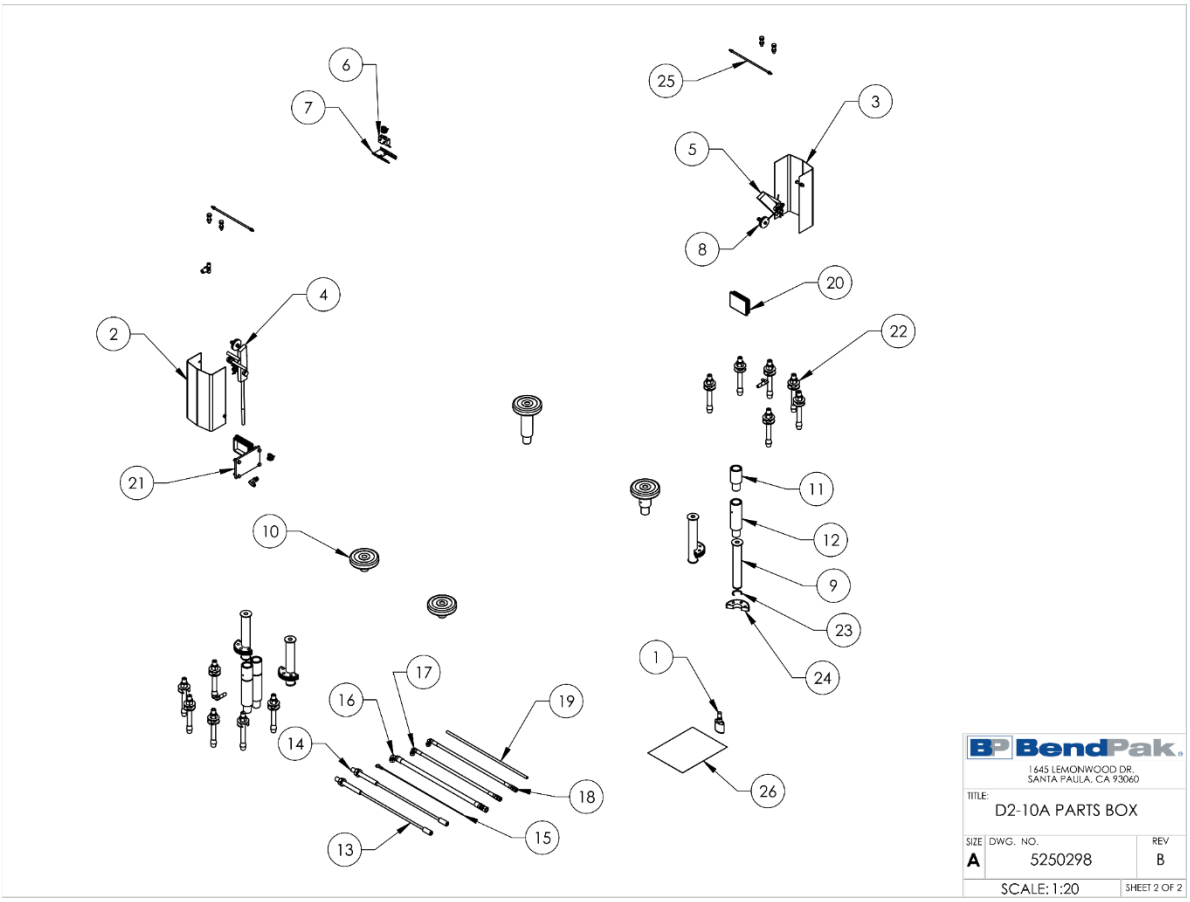
THIRD ANGLE PROJECTION

BendPak.
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10A PARTS BOX

SIZE	DWG. NO.	REV
A	5250298	B

SCALE: 1:30 SHEET 1 OF 2

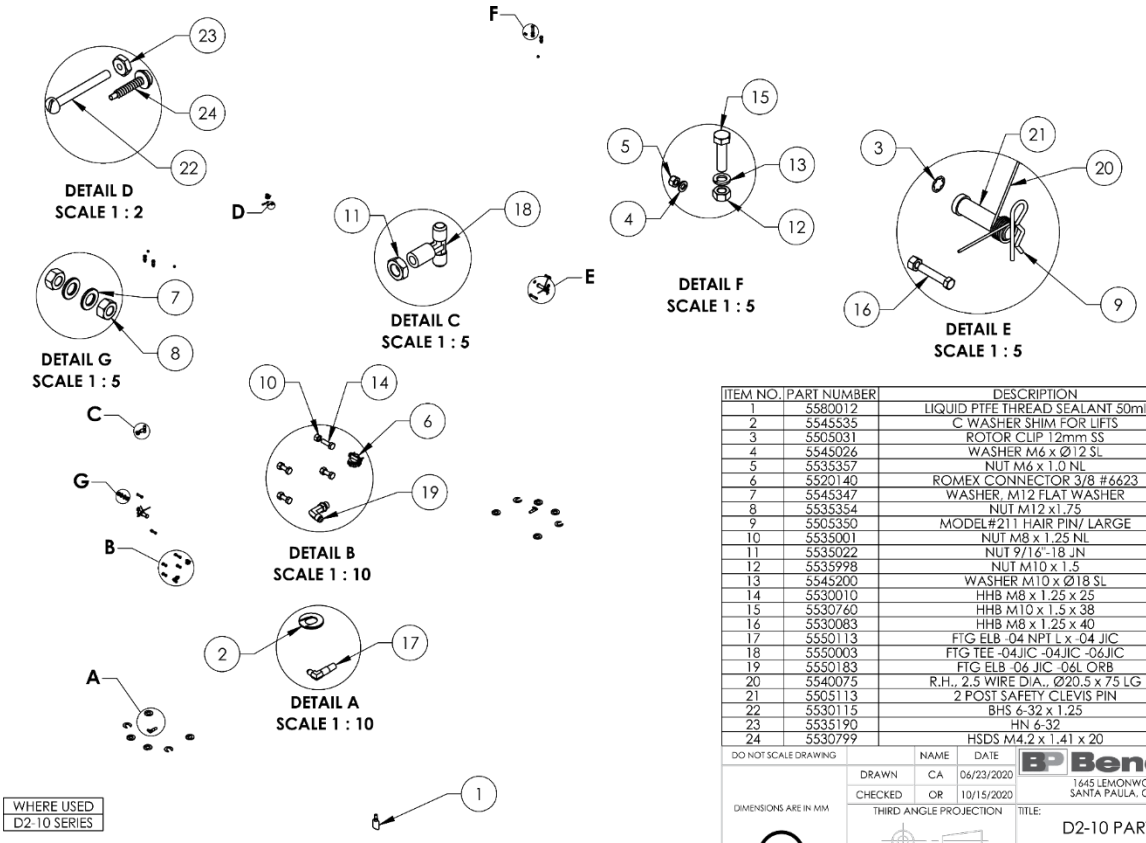


BendPak.
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10A PARTS BOX

SIZE	DWG. NO.	REV
A	5250298	B

SCALE: 1:20 SHEET 2 OF 2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5580012	LIQUID PTFE THREAD SEALANT 50ml	1	-
2	5545535	C WASHER SHIM FOR LIFTS	20	-
3	5505031	ROTOR CLIP 12mm SS	1	-
4	5545026	WASHER M6 x Ø12 SL	4	-
5	5535357	NUT M6 x 1.0 NL	4	-
6	5520140	ROMEX CONNECTOR 3/8 #6623	2	-
7	5545347	WASHER, M12 FLAT WASHER	2	-
8	5535354	NUT M12 x1.75	2	-
9	5505350	MODEL#211 HAIR PIN/ LARGE	2	-
10	5535001	NUT M8 x 1.25 NL	8	-
11	5535022	NUT 9/16"-18 JN	1	-
12	5535998	NUT M10 x 1.5	4	-
13	5545200	WASHER M10 x Ø18 SL	4	-
14	5530010	HHB M8 x 1.25 x 25	4	-
15	5530760	HHB M10 x 1.5 x 38	4	-
16	5530083	HHB M8 x 1.25 x 40	4	-
17	5550113	FTG ELB -04 NPT L x -04 JIC	2	-
18	5550003	FTG TEE -04JIC -04JIC -06JIC	1	-
19	5550183	FTG ELB -06 JIC -06L ORB	1	-
20	5540075	R.H., 2.5 WIRE DIA., Ø20.5 x 75 LG	2	B
21	5505113	2 POST SAFETY CLEVIS PIN	2	H
22	5530115	BHS 6-32 x 1.25	2	-
23	5535190	HN 6-32	2	-
24	5530799	HSDS M4.2 x 1.41 x 20	2	-

NEXT ASSEMBLY
5250297
5250298

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	CA	06/23/2020
CHECKED	OR	10/15/2020

THIRD ANGLE PROJECTION

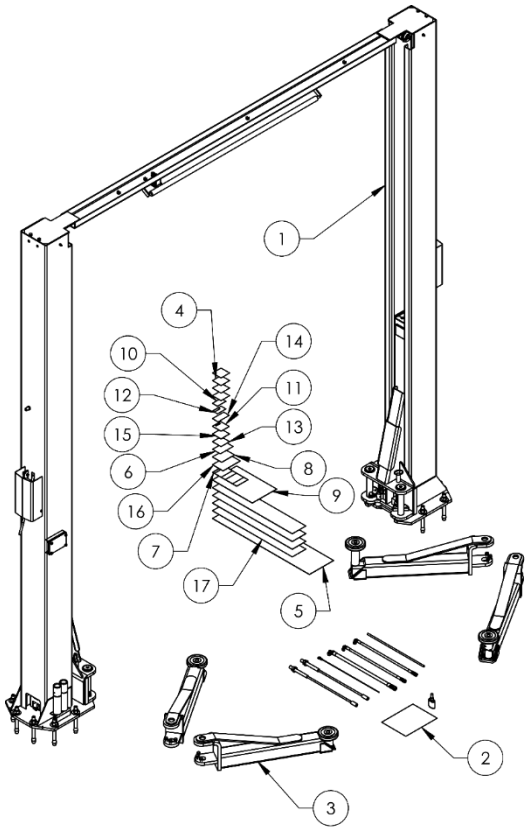
BendPak

1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10 PARTS BAG

SIZE	DWG. NO.	REV
A	5174048	B

SCALE: 1:30 SHEET 1 OF 1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5245097	D2-10C LIFT SUPERSTRUCTURE	1	B
2	5250297	D2-10C PARTS BOX	1	B
3	5215961	D2-10C MEDIUM ARM ASSEMBLY	4	A
4	5905701	DANNMAR POST BRANDING DECAL-INFO	4	-
5	5905702	DANNMAR 2-POST SAFETY ENG-FREN LABEL	1	-
6	5905940	PRODUCT DATA LABEL	1	-
7	5905403	MAX CAPACITY 10K DANGER LABEL, ENGLISH-FRENCH	1	-
8	5905655	MAX CAPACITY NTRL 10K LABEL, ENGLISH-FRENCH	1	-
9	5905109	WARNING ALI/WL 101	1	-
10	5905177	TO PROLONG LIFE OF TWO	1	-
11	5905654	LABEL; ALI/ALCTV-2017 GOLD LABEL, CAN-US; MET LABS	1	-
12	5905377	NOTICE LABEL, ALI/WLSIA01	1	-
13	5905703	SERIAL TAG K, DANNMAR	1	-
14	5905414	GP/XPR LOCK-RELEASE LABEL	1	-
15	5905706	DANNMAR PEEL OFF LABEL	1	-
16	5905465	MANUFACTURER LABEL	1	-
17	5905728	DANNMAR MEDIUM POST BRANDING DIE-CUT DECAL	4	-

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	CA	06/24/2020
CHECKED	OR	11/05/2020

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

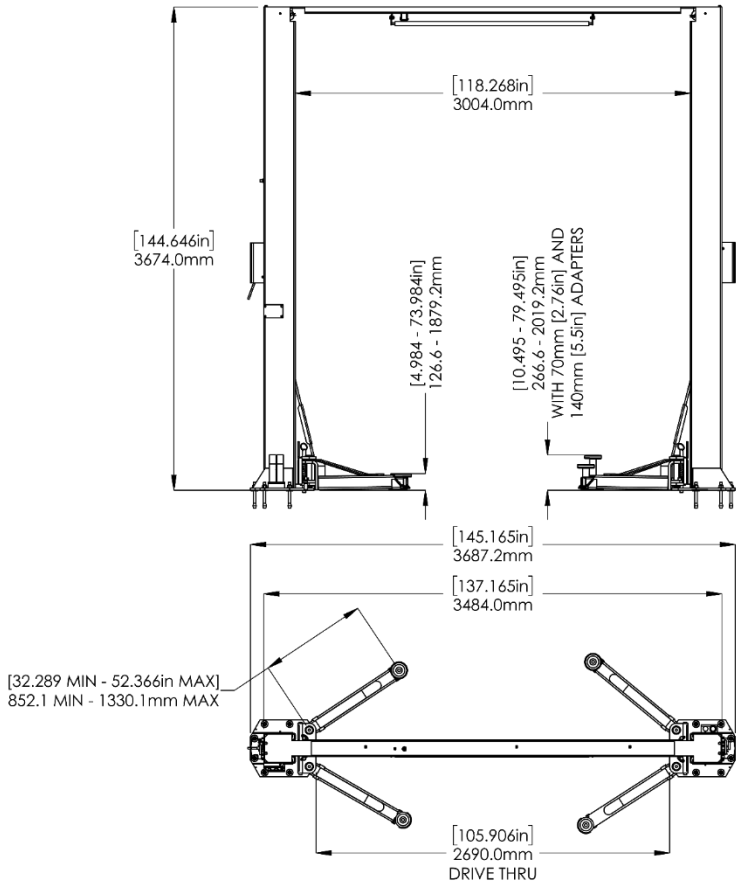
DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

TITLE: D2-10C PRODUCTION LIFT

SIZE A | DWG. NO. 5260619 | REV D

SCALE: 1:30 | SHEET 1 OF 3

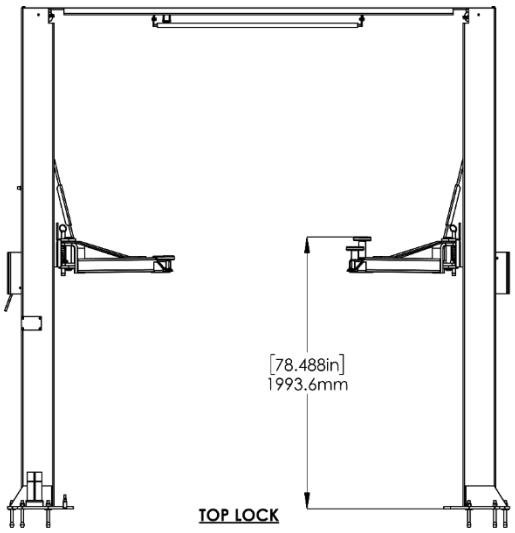


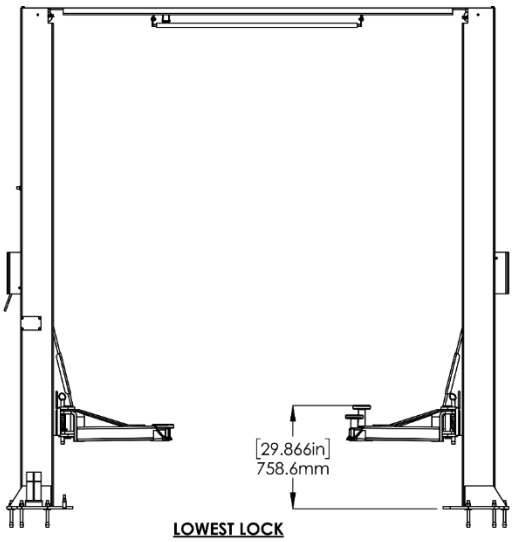
BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10C PRODUCTION LIFT

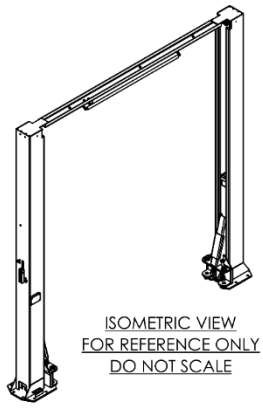
SIZE A | DWG. NO. 5260619 | REV D

SCALE: 1:35 | SHEET 2 OF 3

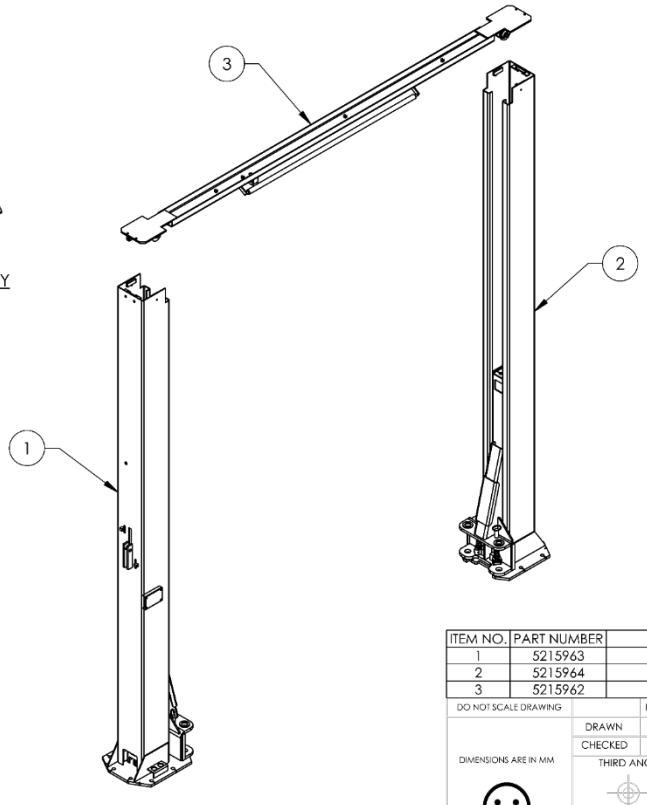




BendPak		
1645 LEMONWOOD DR. SANTA PAULA, CA 93060		
TITLE: D2-10C PRODUCTION LIFT		
SIZE: A	DWG. NO.: 5260619	REV: D
SCALE: 1:35		SHEET 3 OF 3



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5215963	D2-10 POWER SIDE POST ASSEMBLY	1	B
2	5215964	D2-10 OFF SIDE POST ASSEMBLY	1	B
3	5215962	D2-10C TOP TROUGH ASSEMBLY	1	A

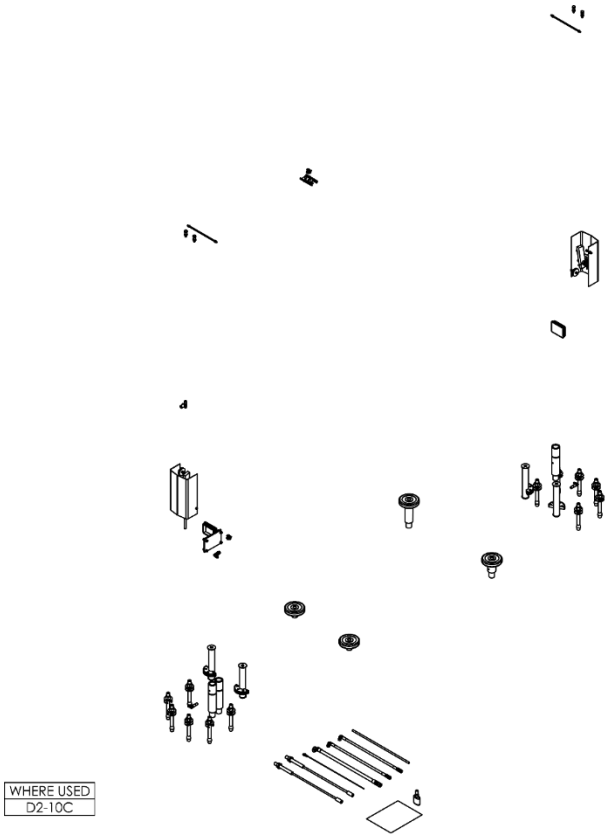
DO NOT SCALE DRAWING		NAME	DATE
DIMENSIONS ARE IN MM	DRAWN	CA	06/23/2020
	CHECKED	OR	11/05/2020
	THIRD ANGLE PROJECTION		

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: D2-10C LIFT SUPERSTRUCTURE		
SIZE: A	DWG. NO.: 5245097	REV: B
SCALE: 1:30		SHEET 1 OF 1

WHERE USED
D2-10C

NEXT ASSEMBLY
5260619



ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5174048	D2-10 PARTS BAG	1	B
2	5600163	D2-10 POWER SIDE SAFETY COVER WELDMENT	1	F
3	5210009	D2-10 OFF SIDE SAFETY COVER	1	F
4	5601522	D2-10 POWER SIDE SAFETY WELDMENT	1	A
5	5210010	D2/XPR OFF SIDE SAFETY WELDMENT	1	F
6	5525150	SPDT MICRO SWITCH;25A@125VAC	1	-
7	5716634	D2/10AP/XPR MICROSWITCH COVER, PLASTIC	1	B
8	5575325	Ø50mm SAFETY SHEAVE	2	A
9	5505116	XPR-9/10 LIFT HEAD PIN WELDMENT	4	D
10	5215507	ROUND LIFT PAD ADAPTER ASSEMBLY	4	G
11	5746390	MEDIUM LIFT PAD EXTENSION Ø35 x 113mm	4	E
12	5746395	LONG LIFT PAD EXTENSION Ø35 x 182mm	4	D
13	5595636	CABLE ASSEMBLY Ø10 x 9220mm ST (19mm)	2	A
14	5595047	Ø2.4 x 7747 SAFETY CABLE	1	F
15	5570017	HYDRAULIC HOSE ASSEMBLY Ø10 x 1219mm SB	1	D
16	5570832	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 2299mm SB	1	F
17	5570243	HYDRAULIC HOSE ASSEMBLY Ø6.35 x 8278mm SB	1	A
18	5520116	14-4 SJO UL 62 CABLE 300vac	3962mm*	-
19	5715196	D2/XPR POLYETHYLENE COVER BLOCK 105 x 80	2	D
20	5715003	POWER UNIT VIBRATION DAMPENER	1	B
21	5530337	AB 3/4" x 6.3"	12	-
22	5540281	C RING Ø38mm OD 5103-150	4	-
23	5736604	TWO POST LIGHT DUTY BOLT ON ARM RESTRAINT GEAR	4	E
24	5746501	DOUBLE THREADED ROD M6 x 1.0 x 260	2	A
25	5900249	D2-10 INSTALLATION MANUAL	1	-

WHERE USED
D2-10C

NEXT ASSEMBLY
5250297

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

	NAME	DATE
DRAWN	CA	06/24/2020
CHECKED	OR	10/15/2020

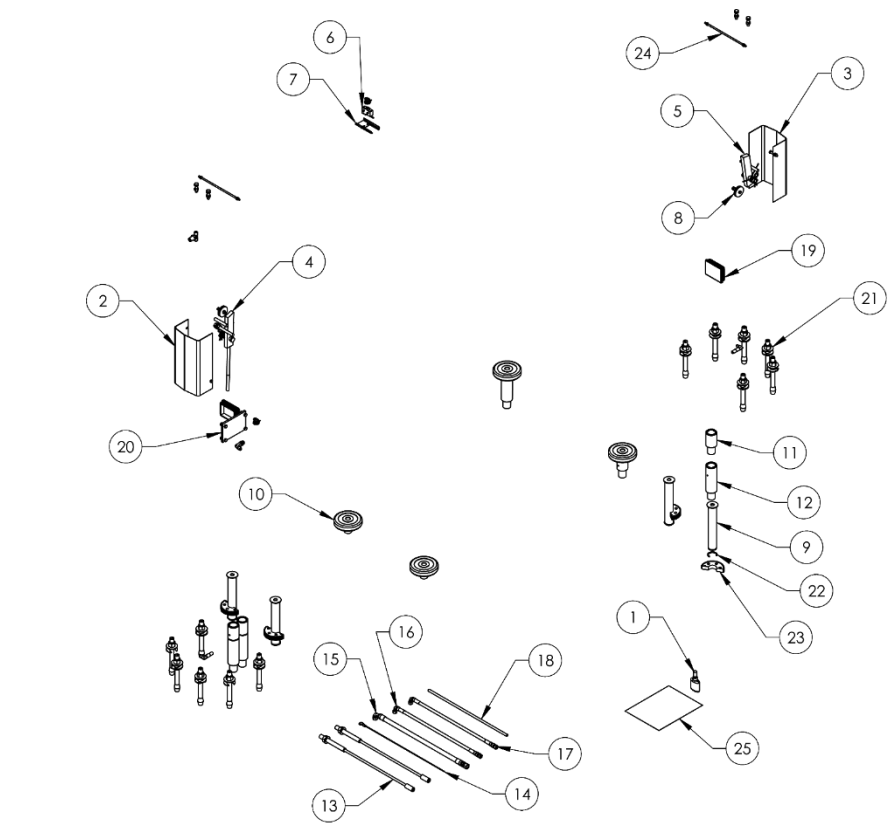
THIRD ANGLE PROJECTION

BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10C PARTS BOX

SIZE	DWG. NO.	REV
A	5250297	B

SCALE: 1:30 SHEET 1 OF 2



BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: D2-10C PARTS BOX

SIZE	DWG. NO.	REV
A	5250297	B

SCALE: 1:20 SHEET 2 OF 2

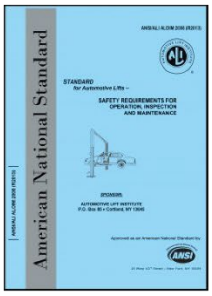
Automotive Lift Institute (ALI) Store

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

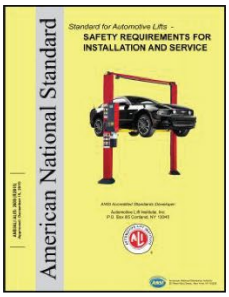
The ALI Store is your trusted source for workplace safety!

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

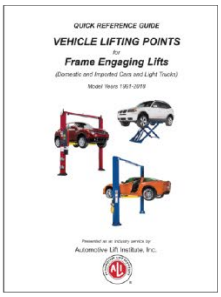
KPA Online Training Subscription. Get all of your people up to speed on automotive industry topics.



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

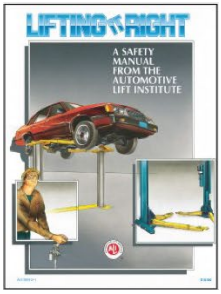


ANSI/ALI ALIS Standard. Safety Requirements for Installation and Service.

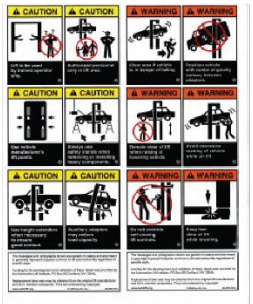


Guide to Hitting Vehicle Lifting Points for Frame-Engaging Lifts. Don't eyeball your lifting points, ***know*** where they are.

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



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



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

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

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

Maintenance Log

Maintenance Log

Maintenance Log

Maintenance Log

1645 Lemonwood Drive
Santa Paula, CA 93060 USA
dannmar.com