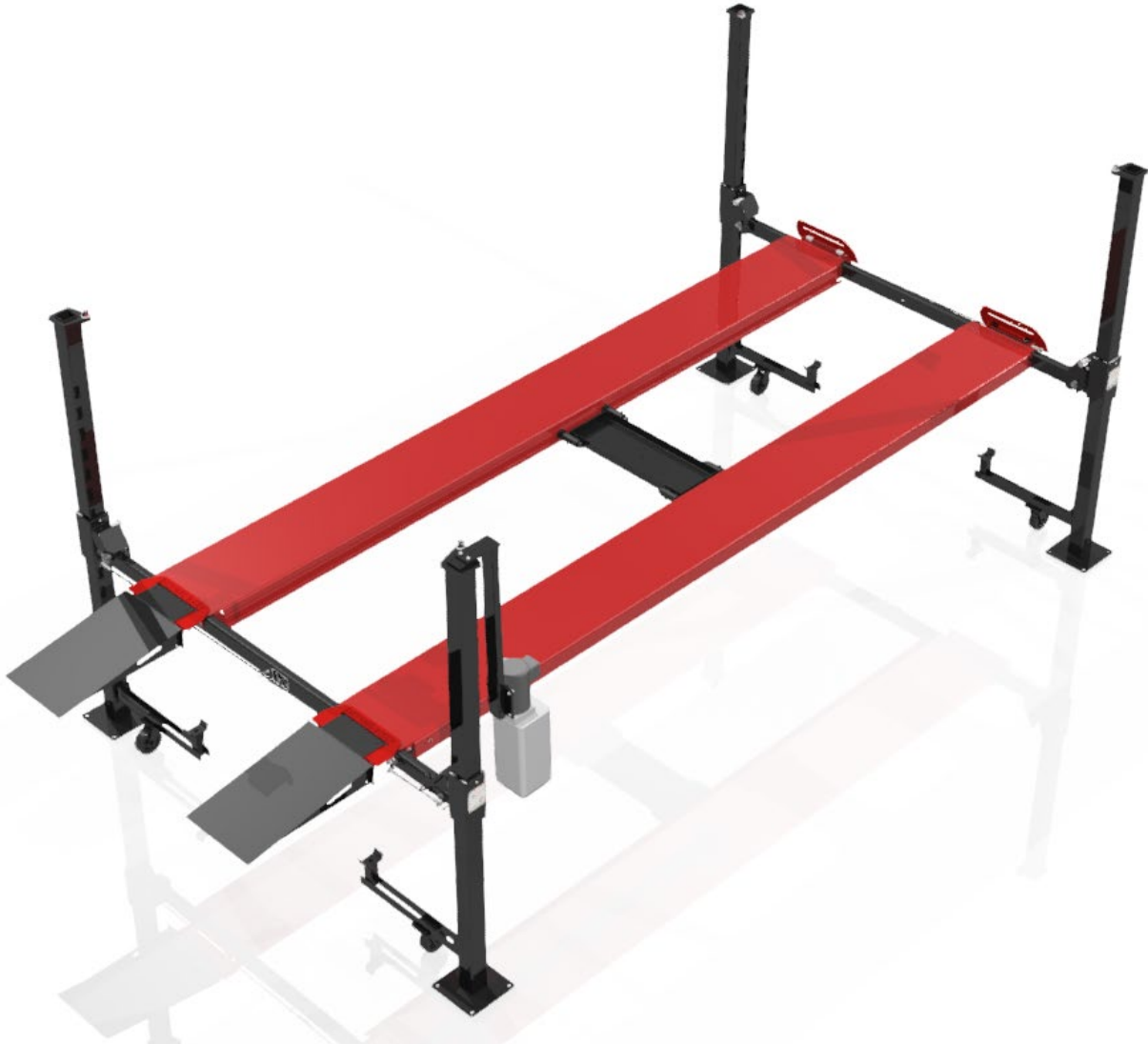




33 Amy Way
Hanover, PA 17331
Phone: 763-300-5730
Sales@AdvantageLifts.com
www.AdvantageLifts.com

Backyard Buddy Installation and Operations Manual



DANGER

IMPORTANT SAFETY INSTRUCTIONS. Please read the entire contents of this manual prior to installation, operation, servicing or maintaining the lift. Reference ANSI/ALI ALIS "Safety Requirements for Installation and Service of Automotive Lifts" & ALI "Lifting it Right". By proceeding you agree that you fully understand and comprehend the full contents of this manual and other included materials that came with your lift. Make this manual available to all operators. Failure to operate this equipment as directed may cause injury or death. **SAVE THESE INSTRUCTIONS.**

Designed and Engineered in Warren, Ohio USA

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged - until it has been examined by a qualified service person.
4. Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
7. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
8. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
9. Adequate ventilation should be provided when working on operating internal combustion engines.
10. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
11. To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
12. Use only as described in this manual. Use only manufacturer's recommended attachments.
13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
14. To reduce the risk of injury, close supervision is necessary when this product will be used around children. (Pertains to cabinets only.)
15. To reduce the risk of injury, never overload the drawers or shelves. Refer to loading instructions.
16. To reduce the risk of electric shock or fire, never overload receptacles. Refer to markings for the proper load on receptacles.

SAVE THESE INSTRUCTIONS.

Make sure the owner and each user of this lift receives the lift specific operation, inspection, and maintenance instructions along with any other provided or recommended safety materials.

Safety Placard Installation

This lift contains a safety placard which must be mounted to one of the mounting bolts on the power unit. This placard must be positioned in a conspicuous location, easily visible to the lift operator.

Table of Contents

Warranty	1
Lift Information.....	1
Safety	2
Owner’s Responsibilities	4
Hazard Level Definitions	4
Shipping Information	5
Receiving your lift:	5
Tools for Assembly	6
STEP 1: Selecting a Site	6
Overhead Obstructions:.....	6
Electrical Requirements:.....	6
Floor Requirements:	7
Notes:.....	7
Power Unit Locations/Assembly View:	7
Site Planning.....	8
Minimum Clearance	8
Calculate Ceiling Height.....	8
Specifications.....	9
Elevation Drawings:	10
Classic (CL).....	10
XT, WF, WB, BB, BT.....	10
Overall Dimensions:	11
Classic (CL) B-4P7CL.....	11
Classic Extra Tall (XT) B-4P7XT	12
Workforce (WF) B-4P8WF	13
Wide Buddy & Big Buddy (WB/BB) B-4P8WB and B-4P8BB	14
Boat/Trailer (BT) B-4P8BT.....	15
STEP 2: Unloading and Unpacking:	16
STEP 3: Legs, Crossmember & Guide Block Installation.....	19
Components in the lift.....	20
Hardware Bag Contents	21
Crossmember Preparation and Installation.....	21
Front and Back Locations.....	23
STEP 4: Runway Installation.....	24
Automatic Wheel Stops	24
STEP 5: Lock Linkage Installation	25
Square Rods.....	25

Lock Linkage Rod Installation	26
Primary lock adjustment	27
Tips and Troubleshooting Lock Linkages.....	27
STEP 6: Installing Top Caps & Power Unit Mount.....	28
STEP 7: Hydraulic Hose & Drain Kit.....	28
Drain Kit	29
STEP 8: Installing Cables	30
STEP 9: Cable Keepers and Pulley Guard.....	32
STEP 10: Pre-Operation and Maintenance Checks	33
Maintenance Information	33
Replacement Parts	33
Daily Checks.....	34
Monthly Checks	34
Yearly Checks.....	34
STEP 11: First Start Up (At Installation)	35
Before Loading	36
STEP 12: Operation	36
Cable Inspection Guide	37
Anchoring Instructions	38
Troubleshooting Guide	40
Accessories	41
Rolling Jack Platform (ALI Certified).....	41
Casters.....	41
Ramps.....	42
Drip Pans	42
Solid Decks (ALI Certified).....	42
Rolling Jack Air Over Hydraulic	43
Available Accessories	44
Replacement parts	44
Maintenance Log:.....	44
Parts List.....	47
Main Lift Overview	47
Legs, Top Caps, Power Unit.....	48
Crossmembers	50
Runways	52

Not all Lifts in this user manual are ALI certified. Please visit

AdvantageLifts.com for current listing of ALI Certified lifts.

Warranty

	Residential Use	Commercial Use
Structure (Ex. Runways Columns, Crossmembers)	5 Years	5 Years
Cylinder (Ex Cylinder & Seal Kits)	5 Years	2 Years
Power Unit (Ex. Motor, Capacitors & Switches)	5 Years	2 Years
Operational Components (Ex. Pulleys & Cables)	5 Years	2 Years
Free Shipping on Warranty Parts	1 Year	1 Years

Rolling Jacks (RJP & RJA) have a 2-year residential warranty, and a 1-year commercial warranty

Advantage Lifts warranty only applies to the original purchaser of the lift.

Advantage Lifts shall repair or replace at their option any defective part, as soon as the part becomes available, during the warranty period. Part(s) in question may be required to be returned to the factory freight prepaid for inspection prior to being considered defective.

This warranty does not extend to defects caused by outside use, ordinary wear, abuse, misuse, overloading, improper installation, shipping damage, improper concrete floor, and lack of required maintenance, or an Act of God.

This warranty also does not cover parts needed for normal maintenance, wear parts, which include but are not limited to, cables, hoses, and slider blocks. On-site labor is not covered by this warranty. No part will be replaced for cosmetic blemishes unless it affects the safety or functionality of the lift.

Advantage Lifts reserves the right to make product design changes or other improvements without obligation to update previously sold equipment.

Advantage Lifts shall not be liable for loss of use, inconvenience, lost time, commercial loss or other incidental or consequential damages. This warranty is governed by the laws of the State of Pennsylvania.

Lift Information

Record the information from the name plate for your lift. This is required for warranty issues.

Model: _____

Serial: _____

Date Installed: _____

**BACKYARD
BUDDY**
AUTOMOTIVE LIFTS
Quality • Safety • Strength

Model: _____ Capacity: _____

Serial: _____ Electrical: _____

Date: _____ Assembled in the USA with US and Imported Parts

Manufactured for Backyard Buddy by Advantage Lifts
33 Amy Way • Hanover, Pennsylvania 17331
763-300-5730 • AdvantageLifts.com

Safety

Read these safety instructions entirely, Check advantagelifts.com for manual updates. Advantage recommends reviewing the current version of the ANSI/ALI ALIS “*Safety Requirements for Installation and Service*” to provide additional safety information for installing and using your lift. Additionally, the ALI “*Lifting it Right*” and “*Safety Tips*” documents are recommended reading for every lift operator (autolift.org). For installation reference ANSI/ALI ALOM, “*Safety Requirements for Operation, Inspection and Maintenance*”.

Always keep the Installation & Owner’s Manual, ALI Lifting it Right safety manual, and any other safety instruction accessible. Post these safety tips where they will be a constant reminder to an authorized lift operator.

The Owner/Employer shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer’s operating instruction; ALI/SM, ALI Lifting it Right safety manual; ALI/ST ALI Safety Tips card; ANSI/ALI ALOIM (current edition), American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards. (autolift.org)

The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer’s instructions or ANSI/ALI ALOIM (current edition), American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift. ([pg. 33](#))

The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer’s instructions or ANSI/ALI ALOIM (current edition), American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift. ([pg. 33](#))

The Owner/Employer shall maintain the periodic inspection and maintenance records recommended the manufacturer or ANI/ALI ALOIM (current edition), American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance. ([pg. 44](#))

The Owner/Employer shall display the lift manufacturer’s operating instructions; ALI/SM, ALI Lifting it Right safety manual; ALI/ST, ALI Safety Tips cards; ANSI/ALI ALOIM (current edition), American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lifts, ALI/LP- Guide, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator. (autolift.org)

The Owner/Employer shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1, Safety Requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs or maintenance.

The Owner/Employer shall ensure the lift is not modified in any manner without the prior written consent of the manufacturer.

The Owner/Employer shall ensure worn, damaged, or broken parts are replaced with parts approved by the original equipment manufacturer or with parts meeting original manufacturer specifications.

MAINTAIN your lift. Keep the lift clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil. Always follow proper lockout/tagout procedures per ANSI Z244.1.

NEVER overload your lift. The manufacturer's rated capacity is shown on the nameplate affixed to the lift.

NEVER use the lift to raise one end or one side of vehicle.

NEVER raise vehicle with anyone inside it. No one should be in the lift area during operation.

NEVER operate the lift if it malfunctions or if there are broken, damaged or missing parts. Repairs must be made with the manufacturer's replacement parts and by authorized personnel only.

NEVER modify or remove components from the lift. Only use manufacturer's recommended attachments and replacement parts.

NEVER block open or override the operating controls. They are designed to close when released.

NEVER allow untrained or unauthorized individuals to operate the lift. Never allow children to operate the lift.

ALWAYS have the lift setting on the locks before going under the lift. Never allow anyone to go under the lift when raising or lowering.

ALWAYS have a spotter assist in aligning the vehicle. The vehicle must be centered on the runways in both directions to maintain a stable, even load.

ALWAYS keep accessible the Installation & Owner's Manual, and any other safety information.

ALWAYS know the gross weight of the vehicle you are lifting.

ALWAYS follow OSHA and ALI guidelines including but not limited to wearing safety glasses.

ALWAYS provide adequate ventilation when working on internal combustion engines.

STAY ALERT. Before lowering the lift be sure tool trays, stands, etc. are removed from under the vehicle, and that any rolling jacks are in the lowered position. Release locking devices before attempting to lower lift. Care must be taken as burns can occur from touching hot parts.

Note to Installers: Verify that all factory installed fittings are tight.

KEEP HANDS AND FEET CLEAR. Remove hands and feet from any moving parts. Keep your feet clear of the lift when lowering. Avoid pinch points.

GUARD AGAINST ELECTRIC SHOCK. This lift must be grounded while in use to protect the operator from electric shock. On 240V power units never connect the green power cord to a live terminal. This is for ground only.

WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.

IMPORTANT NOTICE. Do not attempt to install this lift if you have not been trained in basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. 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 harm and void product warranty. The manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

Owner's Responsibilities

To maintain the lift and user safety, the responsibility of the owner is to read and follow these instructions:

- Follow all installation and operation instructions.
- Make sure installation conforms to all applicable local, state, and federal codes, rules, and regulations, such as state and federal OSHA regulations and electrical code.
- Carefully check the lift for correct initial function.
- Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained and know how to operate the lift and any accessories safely and correctly.
- Allow operation only with all parts in place and operating safely.
- Carefully inspect on a regular basis and perform all maintenance as required.
- Service and maintain the lift only with authorized or approved replacement parts.
- Keep all instructions permanently with the lift and all decals on the unit clean and visible.

Hazard Level Definitions



Immediate hazard which **will** result in severe injury or death.



Hazards or unsafe practices which **could** result in severe personal injury or death.



Hazards or unsafe practices which **may** result in minor personal injury, product, or property damage.

Shipping Information

Receiving your lift:

Great care was taken in the preparation and packaging of your lift. Before receiving your lift inspect it for any visible damage to the packaging. Any visible damage must be noted on the bill of lading. All freight claims must be communicated to Advantage Lifts.

Advantage Lifts recommends picking up your lift at a local freight terminal with a trailer at least 18 feet long. Prior to arrival, communicate with the freight carriers and arrange for them to load the lift directly on your trailer. Your lift may also be delivered to a commercial location with forklift access.

As you are unpacking your lift make sure you have all components before beginning installation. Ensure all required tools are available to complete the installation. Do not discard the cardboard packing material until you have completed installing the lift. Cardboard can be used to protect lift components while installing.

For detailed instructions on receiving, unloading, and unpacking the lift see [page 16](#).

Freight Damage:

NOTIFY THE CARRIER AT ONCE if any hidden loss or damage is discovered after receipt. Request that the carrier perform an inspection at the first available opportunity. If the carrier will not do so, 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.

1) ACCEPTING AN ITEM WITH FREIGHT DAMAGE

Choose this option if you only have minor cosmetic damage or a part that needs replaced to make the unit complete. Make note of the damage on the freight bill prior to signing and accepting delivery. You will be responsible for contacting Advantage Lifts to file the freight damage claim with the carrier; the driver can provide a number for you to call his terminal to begin the process. Take pictures and document any damage that is found for future reference. Once you have filed the claim, Advantage Lifts can provide any replacement parts or touch up paint needed should you choose this option, and the carrier should reimburse you for the cost of these items. If you have any questions or need further assistance, please call our customer service department **(763) 300-5730**.

2) REFUSE THE DAMAGED ITEM.

Choose this option if the carrier has severely damaged the freight beyond your judgment of a simple repair. Advantage Lifts will file all freight claims if refused due to severe damage. Make a copy of the freight bill email it to shipping@advantagelifts.com with a brief explanation of the damage. Take pictures and document any damage that is found. If this is not possible, call Advantage Lifts at **(763) 300-5730** to notify us of the damage so that we can arrange to have a replacement lift shipped.

Tools for Assembly

- Gloves
- Box knife
- Strap cutters/side cutters
- Vice grips
- Paper towels
- Dead blow hammer
- Allen wrench set (SAE)
- Tape measure (25')
- Open end wrench set, must include:
 - 7/16", 1/2", 9/16", 3/4", 1 1/8"
- 1/2" or 3/8" ratchet drive socket set:
 - 7/16", 1/2", 9/16", 3/4", 1 1/8"
- Flathead and Phillips screwdrivers
- Adjustable wrench
- Snap-ring pliers
- Cordless impact
- Step ladder
- Bottle of spray car wax
- 1 Can of spray lube
- 5 Gallons of AW-32 or AW-46 hydraulic oil
- Grease gun
- Wood blocks (Included)
- Bottle of spray car wax
- Optional - Car dollies
- Optional - Material handler
- Optional - Prybar/ratchet strap



USE PROPER LIFTING TECHNIQUES

The Backyard Buddy Lifts have components that weigh beyond 300 lbs. At least one assistant is required to assist with lifting heavy components. Three assistants (4 total people) and/or material handling equipment is preferred.

Improper installation can accelerate wear, resulting catastrophic failure which may cause property damage and/or bodily injury. Advantage Lifts assumes no liability for loss or damage of any kind, expressed or implied, resulting from improper installation or use of this product. Read this installation manual in its entirety before attempting to install or operate the lift.

STEP 1: Selecting a Site

Before installing your new lift, check for the following.



Overhead Obstructions:

The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines, lighting, garage door rails/openers etc. Calculate the lift height based on the full raised height of the lift plus the vehicle height. Measure and check for clearance. Failure to do so may cause personal injury or property damage.

Electrical Requirements:

This lift uses an electrically driven hydraulic Power Unit. Follow the manufacturer's instructions supplied in the Power Unit box. Wiring **must** be performed by a qualified electrician and meet local, state, and national requirements. Disconnect power from the lift before performing maintenance. Follow proper lockout/tagout procedures while servicing. The Power Unit requires a dedicated 120 VAC 60Hz 20-amp single phase circuit. Improper installation may damage the Power Unit which is not covered under the warranty. Never expose the Power Unit to any water or damp environment, this will void the warranty.

Floor Requirements:

Visually inspect the floor where the lift is to be installed and check for cracked or defective concrete. This lift must be installed on a level concrete floor with no more than 3 degrees of slope and in good condition. Consult a qualified person to address concrete conditions, seismic loads and local or state requirements. This lift has been designed to be installed on a minimum of 4-inch thick, 3000 psi concrete cured 28 days. Do not install this lift on asphalt, wood, or any other surface other than described.

Notes:

DO NOT use this lift outdoors, doing so will void the warranty. The lift is not designed to be used in a wet or damp environment or sit in standing water. Ensure drainage to keep water away from the lift.

DO NOT begin installation in a tight area; give yourself plenty of space to work safely. It is recommended to leave at least 24 inches on each side of the lift and 24 inches behind the lift to install the safety rod under the runway (*figure 1.3 & 1.4*). The minimum ceiling height required for installation is 9-feet for XT, WF, WB/BB & BT lifts and 8-feet for CL lifts. Calculate clearance based on your vehicle height plus the maximum lifting height.

It is **NOT** recommended to anchor this lift. If you must anchor the lift, follow the instructions on [page 38](#). The owner is responsible for following any local or state seismic anchoring requirements. If the concrete floor is a post-tensioned slab, contact the architect before drilling.

Power Unit Locations/Assembly View:

The Power Unit may be placed on one of two legs, either driver's side front or passengers side rear (*figure 1.1*). On the chosen leg, the Power Unit may be rotated to either the inside, next to the runway or outside, next to the leg.

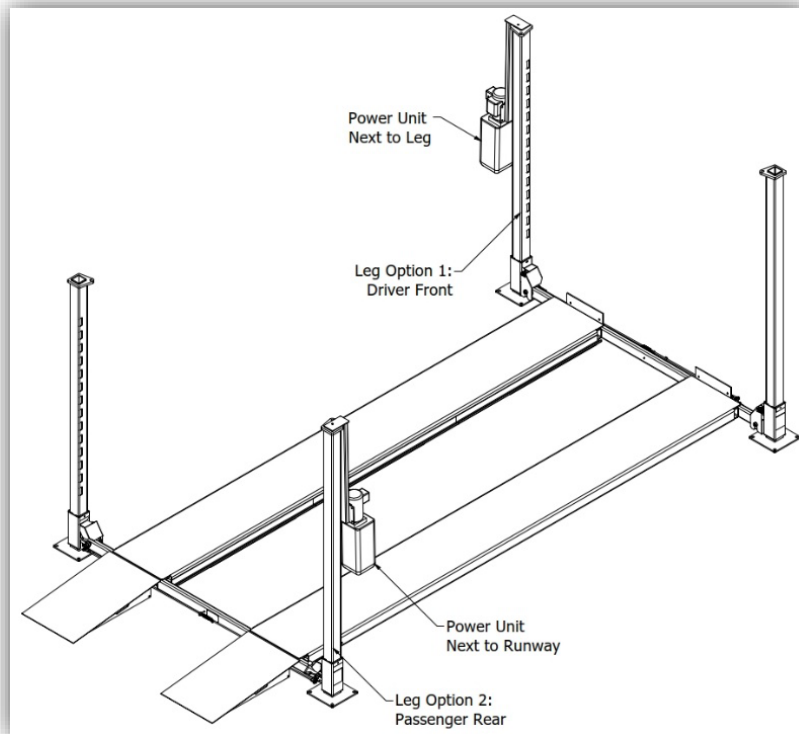


Figure 1.1 Lift Overview

Site Planning

Minimum Clearance

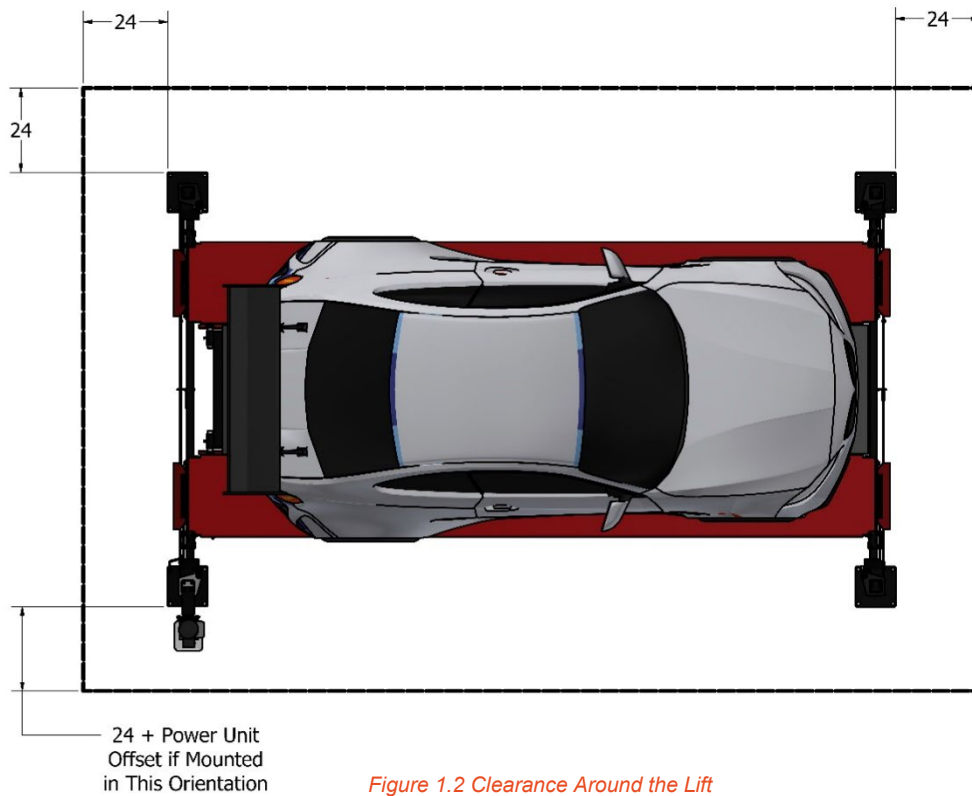


Figure 1.2 Clearance Around the Lift

Calculate Ceiling Height



Figure 1.3 Lift Clearance (Height)

- Step 1: Measure the lower vehicle height.
- Step 2: Round up to the next lock (see page 10).
- Step 3: Measure the Upper vehicle height.

$$\text{Minimum Ceiling Height} = \text{Clearance Lock Height} + 4.5 + \text{Upper Vehicle Height}$$

Specifications

	Specification	Imperial
Capacity	*Lifting Capacity CL, XT, BT	7,000 lbs.
	*Lifting Capacity WB/BB, WF	8,000 lbs.
	Max Capacity / Front Axel	50% of Lifting Capacity.
	Max Capacity / Rear Axel	50% of Lifting Capacity.
Height	Leg Height CL	80.375 in.
	Leg Height XT, WB/BB, WF, BT	102.375 in.
	Top Lock Clearance CL	63 in.
	Top Lock Clearance XT, WB/BB, WF, BT	82 in.
Width	Track Width CL, XT, WF, BT	19.25 in.
	Track Width WB/BB	23.25 in.
	Overall Width CL, XT	108.0 in
	Overall Width WB/BB, WF	124.0 in
	Overall Width BT	139.0 in.
	Width Between Tracks CL, XT, WB/BB, WF	34.5 in.
	Width Between Tracks BT	67.75 in.
	Width Between Columns CL, XT	92.313 in.
	Width Between Columns WB/BB, WF	108.313 in.
	Width Between Columns BT	123.00 in.
	Width Between Cables CL, XT	88.6 in.
	Width Between Cables WB/BB, WF	104.6 in.
	Width Between Cables BT	119.3 in.
Length	Track Length CL, XT	155.5 in.
	Track Length WB/BB, WF, BT	195.75 in.
	Overall Length CL, XT	168.0 in.
	Overall Length WB/BB, WF, BT	208.0 in.
Locks	Locking Positions CL	10
	Locking Positions XT, WB/BB, WF, BT	14
	Lock Spacing CL	5.75 in.
	Lock Spacing XT, WB/BB, WF, BT	5 in
General	Wheelbase	115 in.
	Vehicle Ground Clearance	5.3 in.
	**Standard Motor	120V 20-amp
	Rise Time (120v) CL	124 up/ 106 down (seconds)
	Rise Time (120v) XT	160 up/ 170 down (seconds)
	Rise Time (120v) WB/BB, WF, BT	160 up/ 135 down (seconds)
	s Power Unit Operating Pressure (Max)	2150 PSI

**Optional 240v power unit is available

* Lifting capacity decreases by 25% for wheelbases shorter than 115 inches for each 15-inch increment. With a minimum wheelbase of 70-inches having a lifting capacity of 75% less or 2,500 lbs. This is due to the wheels moving closer to the center of the runway where there is less support.

This lift and ramps are designed around a 5.3-inch ground clearance. Longer, shallower ramps may be needed for vehicles with less clearance.

Please refer to the user manual found in the Power Unit to review the duty cycle. Operating the Power Unit outside the manufacturer's specifications will void the Power Unit warranty.

Elevation Drawings:

Classic (CL)

*Note: Slot dimensions are the distance from the ground to the bottom of the runway.
This is the vehicle clearance for each lock.*

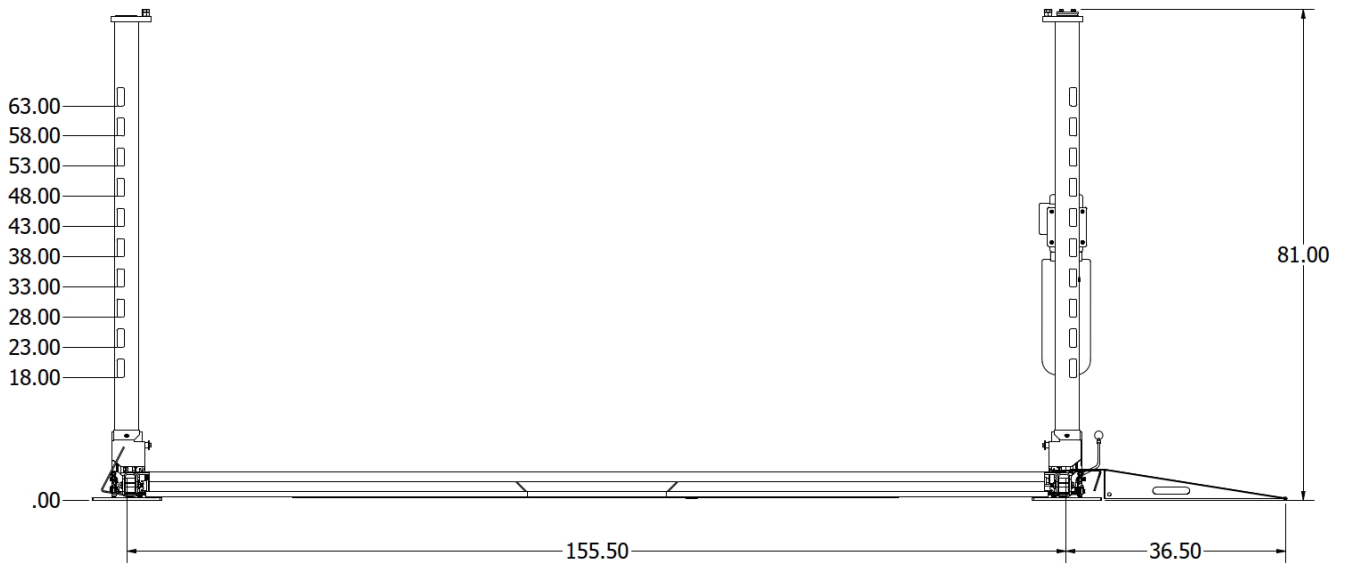


Figure 1.4 Lift Elevation & Lock Holes

XT, WF, WB, BB, BT

*Note: Slot dimensions are the distance from the ground to the bottom of the runway.
This is the vehicle clearance for each lock.*

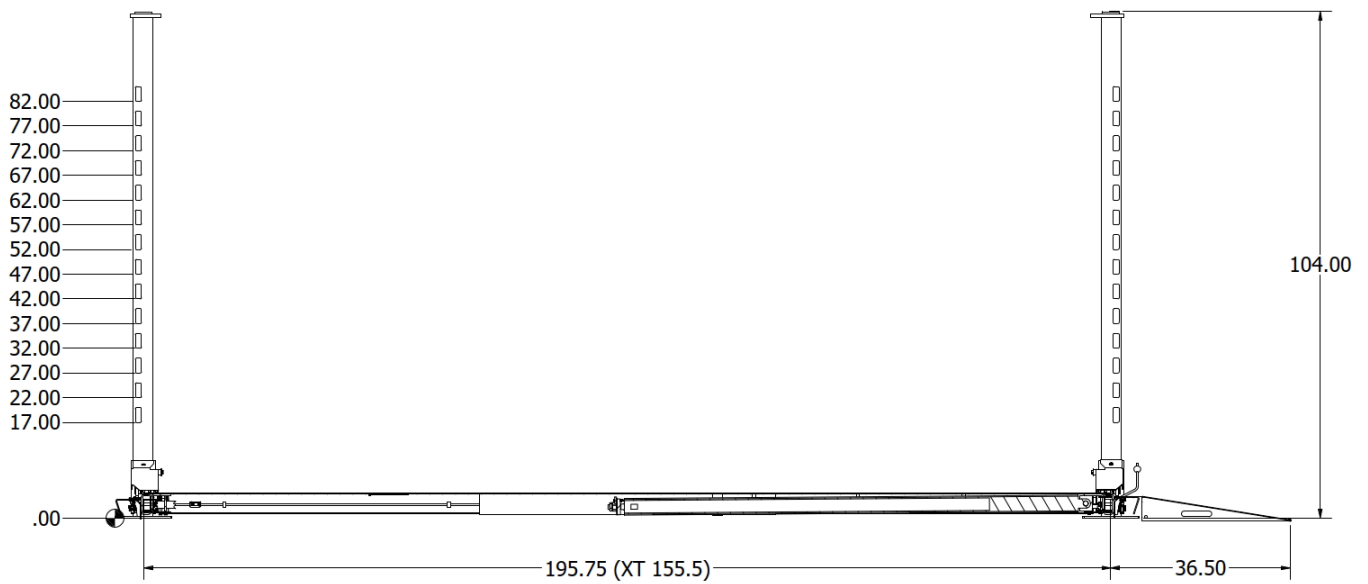


Figure 1.5 Lift Elevation & Lock Holes

Overall Dimensions:

Classic (CL) B-4P7CL

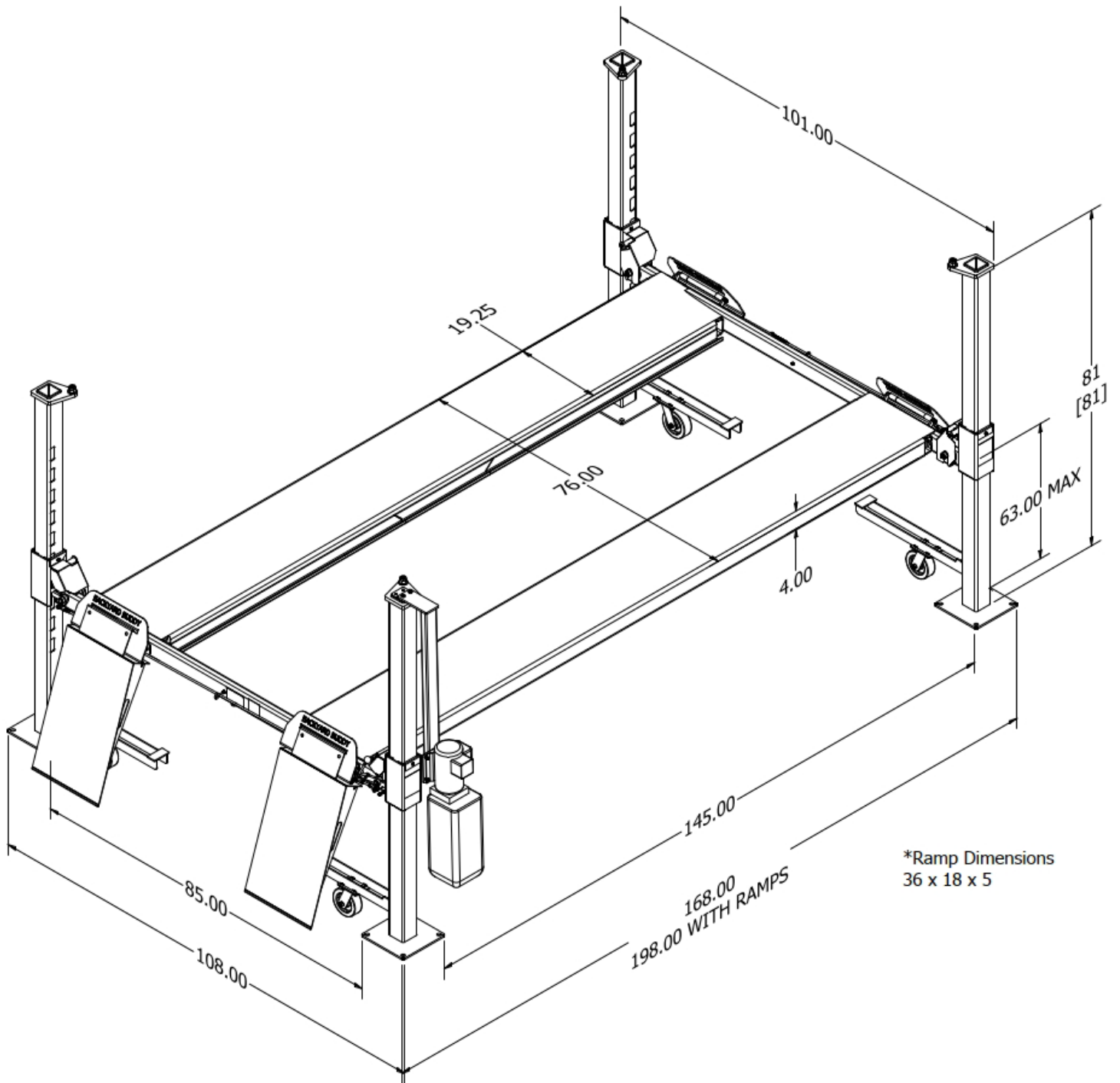


Figure 1.6 Classic Lift Overview

Classic Extra Tall (XT) B-4P7XT

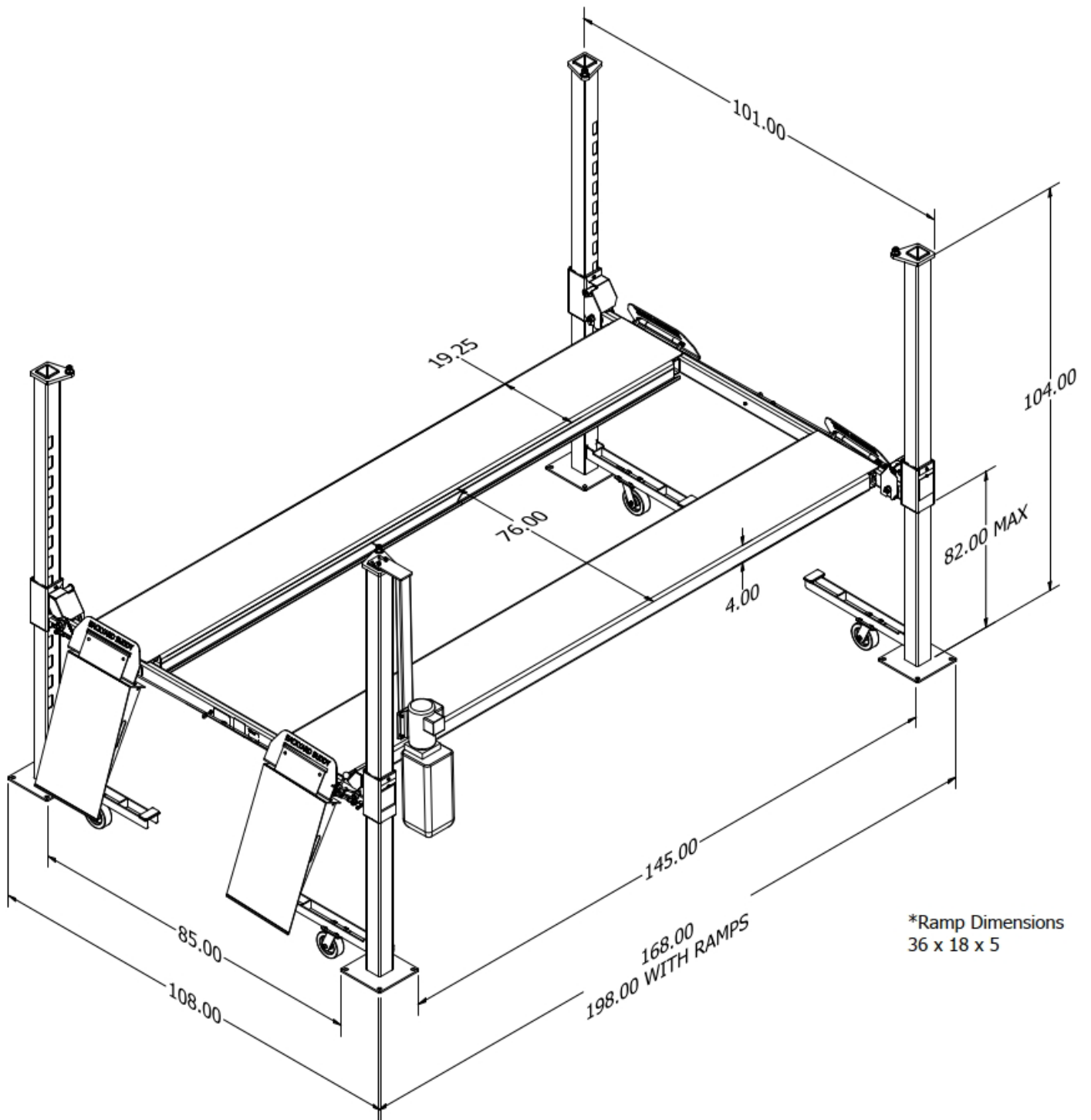


Figure 1.7 Classic Extra Tall Lift Overview

Workforce (WF) B-4P8WF

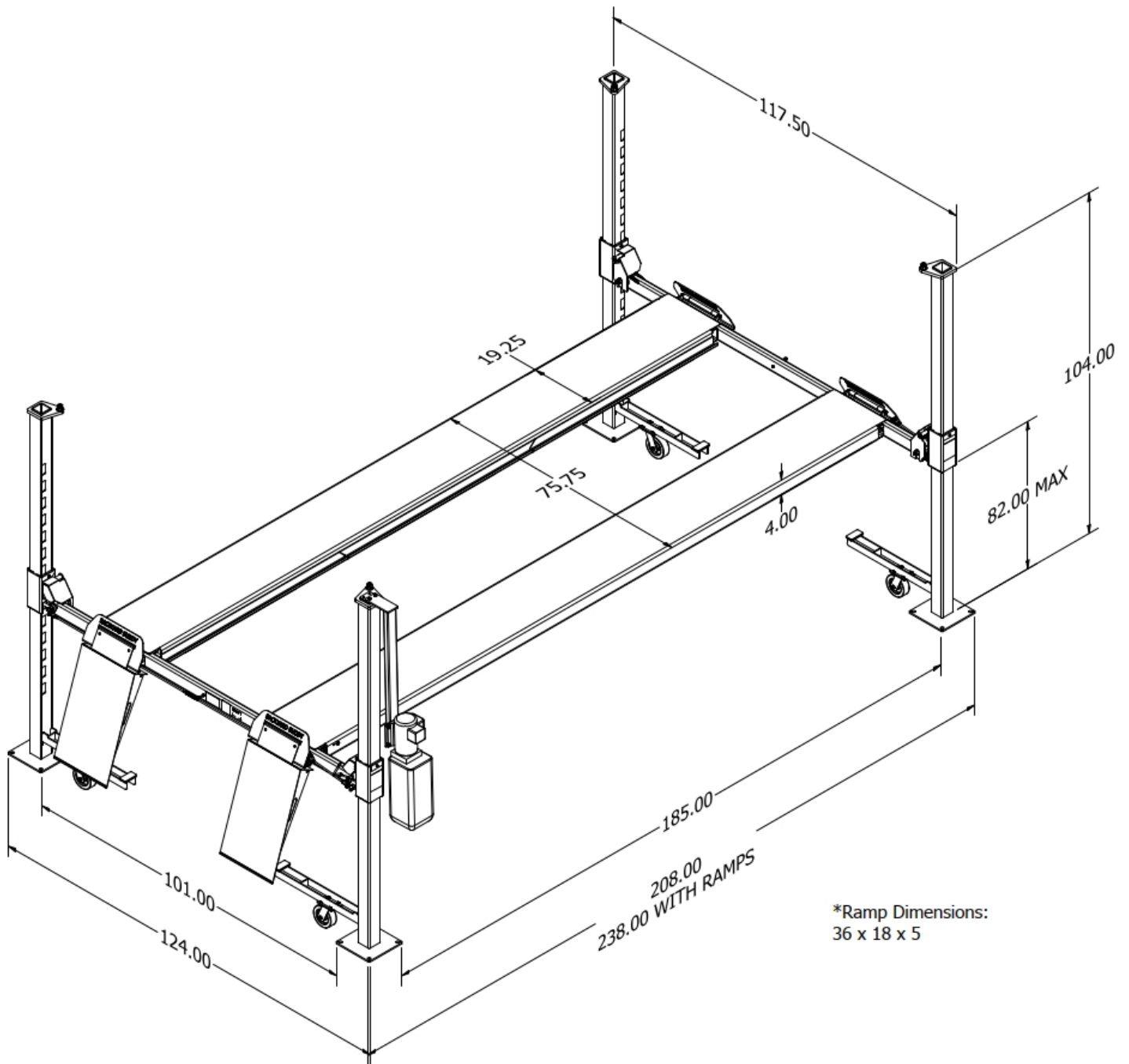


Figure 1.8 Workforce Lift Overview

Wide Buddy & Big Buddy (WB/BB) B-4P8WB and B-4P8BB

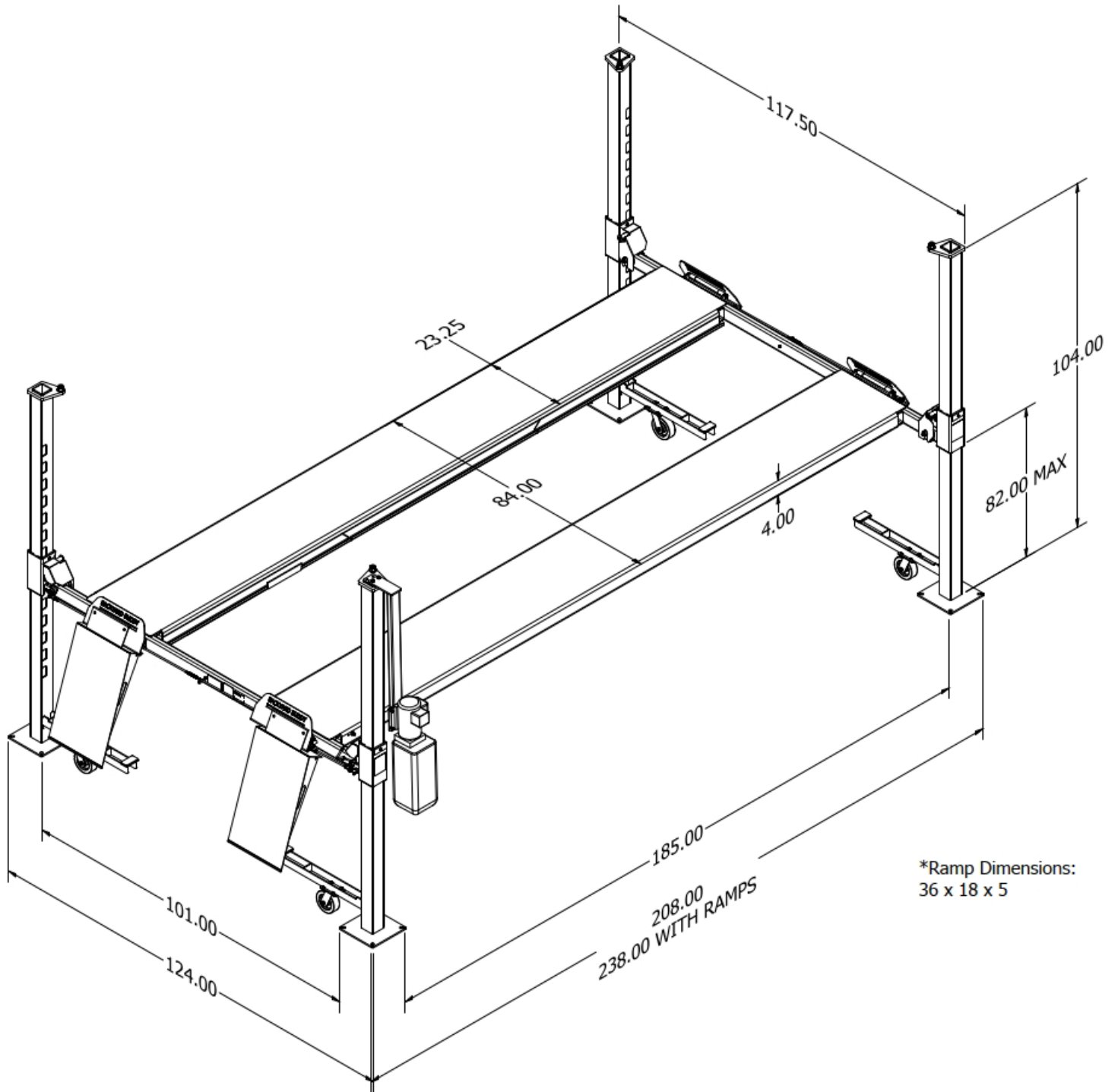


Figure 1.9 Wide Buddy/ Big Buddy Lift

Boat/Trailer (BT) B-4P8BT

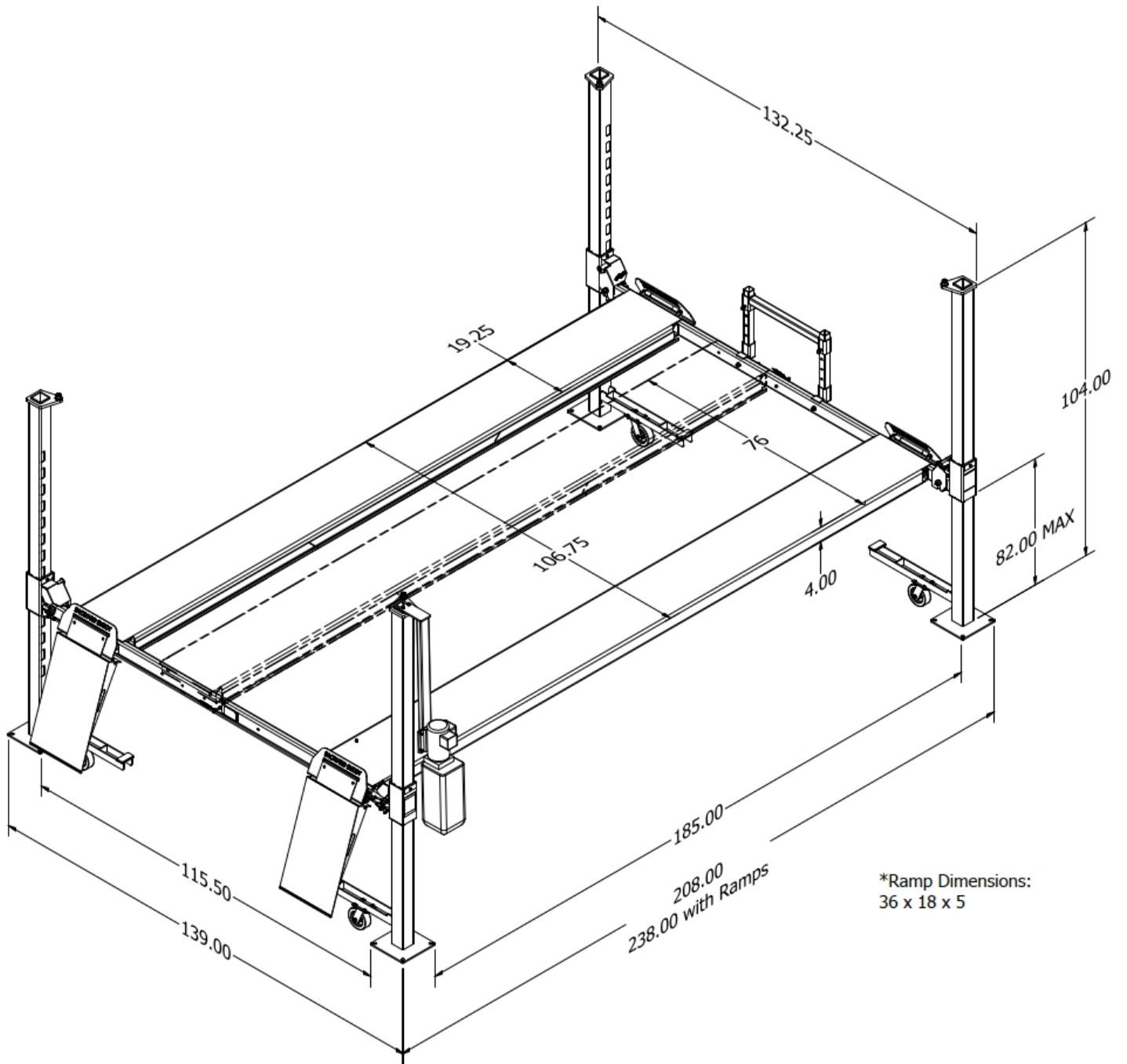


Figure 1.10 Boat Trailer Lift Overview

STEP 2: Unloading and Unpacking:

Freight carriers may have restrictions on delivering to residential addresses requiring freight terminal pick-up. Please contact the freight carrier to coordinate delivery to a terminal where the terminal personnel will load the lift onto the customer's trailer or truck. Lifts will not be shipped to an address without a fork-lift. Lifts cannot be unloaded using a lift gate vehicle due to size restrictions.



Since many lift purchasers do not have access to a fork-lift, these instructions will highlight methods to unload the lift from a trailer or truck using readily available components. It is the sole responsibility of the owner to ensure that the methods employed and any equipment to be used are of the proper capacity and type to ensure the safety of personnel performing the work.

The shipping brackets and protective packaging were engineered to provide safe shipping, unloading and assembly. **DO NOT REMOVE** until the lift is at the installation site and when indicated in this document. Exterior wrappings may be removed to inspect for shipping damage.

Links to assembly videos of our products can also be found at our website AdvantageLifts.com. The videos can often provide additional details and updated information about any new features or assembly methods that may have been adopted since this manual was printed.

General Packaging dimensions and weights are shown in *Figure 2.1* & *Figure 2.2*.

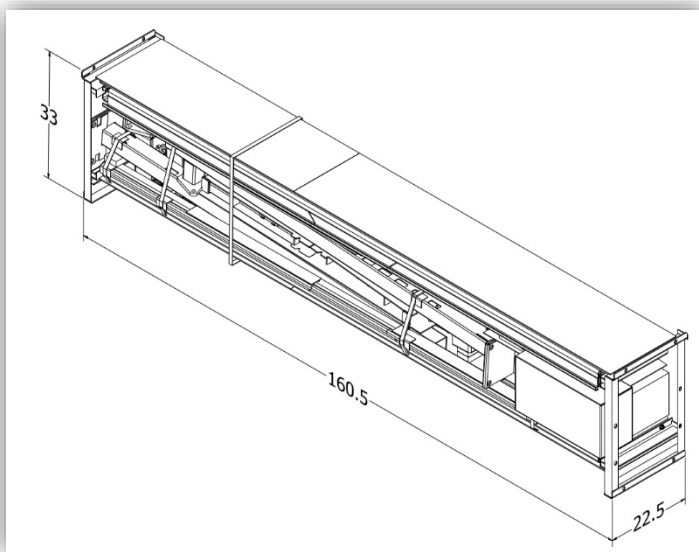


Figure 2.1: CL (1790 lbs.) & XT (1950 lbs.)

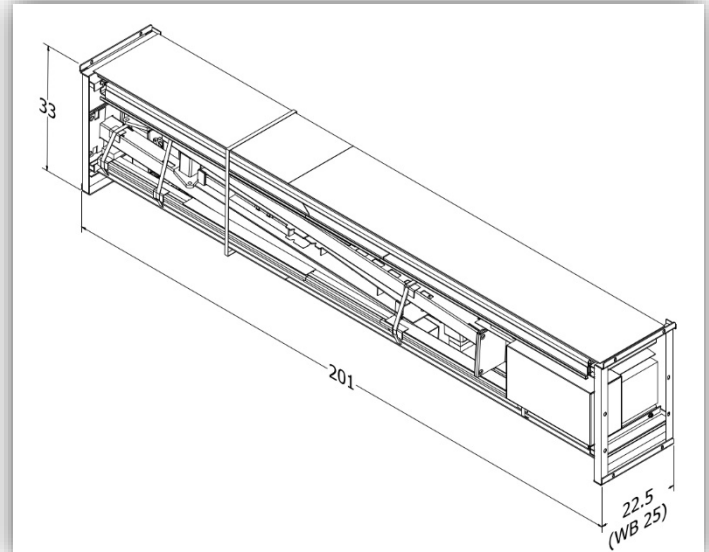


Figure 2.2: WB/BB, WF, BT (2450 lbs.)

Maneuver the trailer so it is close to the installation site and position it so any lifting devices that will be used to unload the packaged lift from the trailer are on a hard and smooth improved surface. For this installation, a hand operated material handling lift was used. Confirm the material handler, strap and dollies are sufficiently rated for the weight of each package.

With the lift assembly still on the trailer position the material handler to lift the portion of the package closest to the trailer tongue (*figure 2.3*) using a strap as shown. Position a wheeled car dolly underneath the shipping bracket and lower on to the dolly. Wood blocking may be necessary.

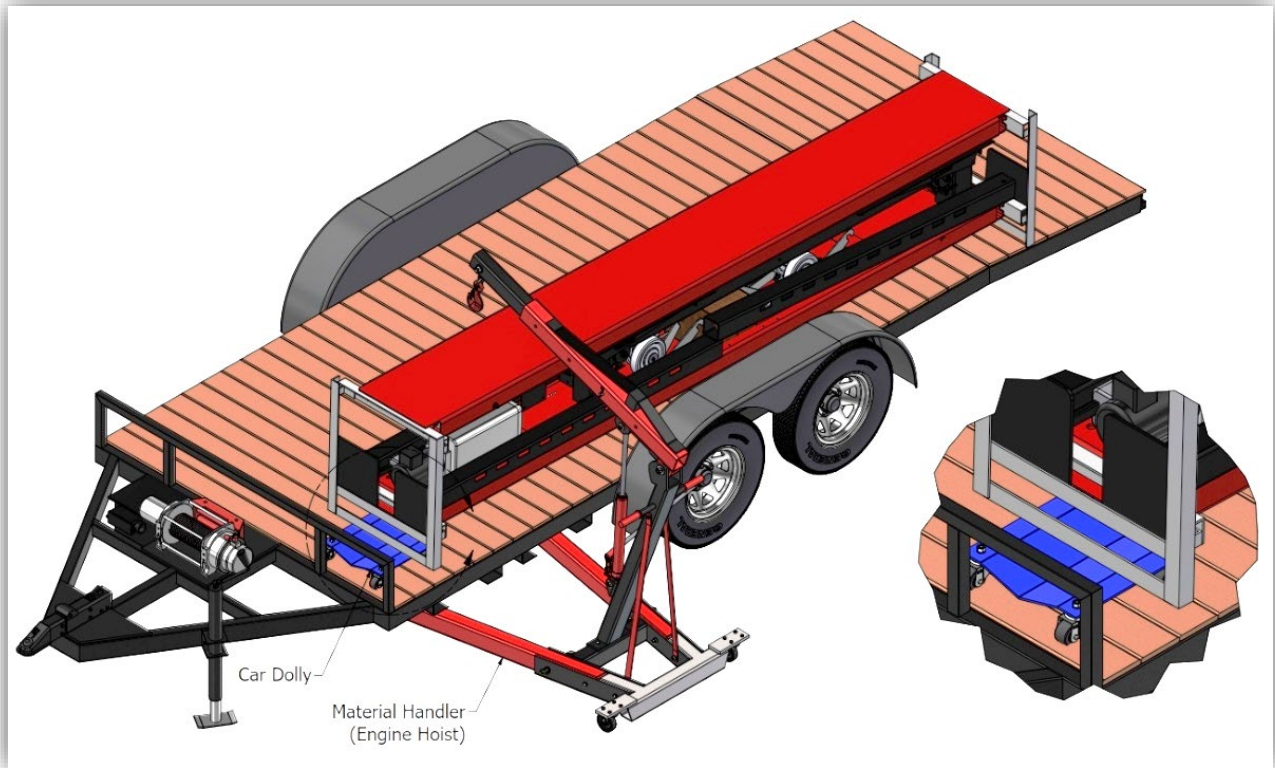


Figure 2.3: Material Handling Lift in Position



With the one side of the package assembly securely resting on the car dolly, the material handler may now be re-positioned to the rear of the trailer and the strap attached to the rear section of the package. Raise the packaged assembly upward so the rear section clears the car trailer and carefully roll the entire lift assembly backwards bringing the front of the packaged assembly safely short of the rear of the car trailer. The lifted end may now be carefully lowered and placed on a car dolly that is positioned on the ground. (*Figure 2-4*)

With one end of the packaged assembly on the ground, the material handler can now be re-positioned and secured to lift the opposite end that is resting on the car trailer. Raise the packaged assembly to clear the car trailer and drive the trailer out from under the supported assembly. Place a car dolly underneath the raised end so that both ends rest on dollies on the ground. (*Figure 2-5*)

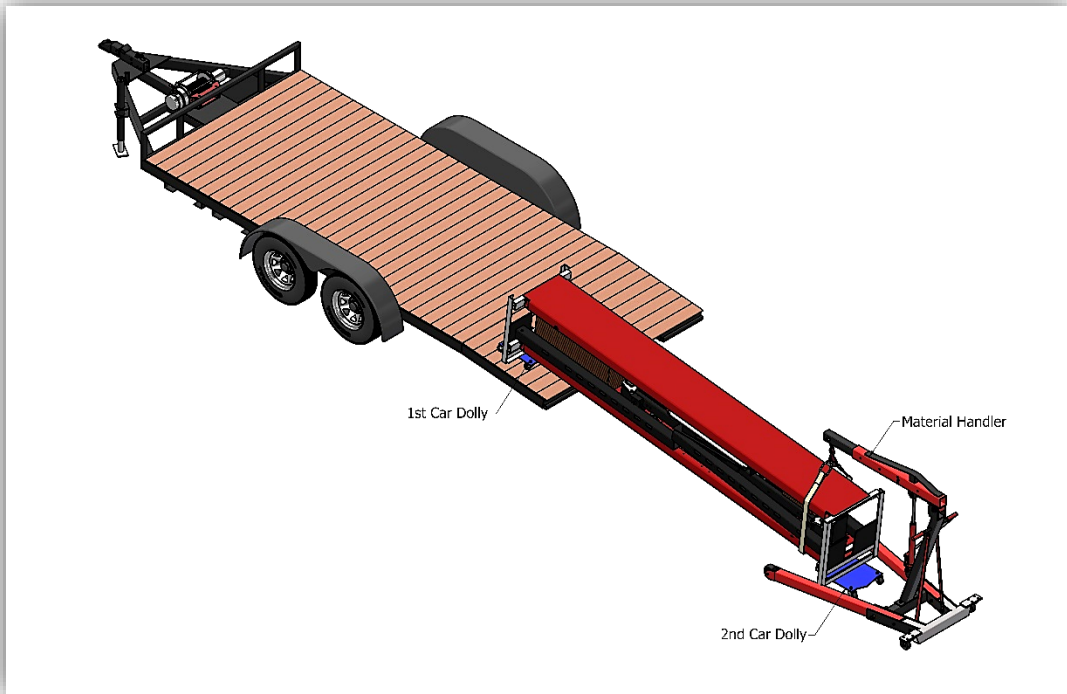


Figure 2.4

Finally, the car dolly and blocking can be positioned on the ground between the legs of the material handler, directly under the packaged assembly. It can now be safely lowered to rest on the dolly. If possible, leave the packaged lift assembly securely resting on the car dollies. This will allow the assembly and sub-components to be positioned closer to the final assembled location. (Figures 2.9 thru 2.11)

Before unpacking the lift plan the location and position of the lift. Consult [figure 1.1 \(pgs. 7-15\)](#) for the Power Unit locations.

The information there will help you to finalize your intended layout for positioning of the lift to regard with critical clearances required during assembly and to determine where your Power Unit will be positioned.

The Power Unit can only be mounted on either the driver's side front or passengers side rear. Keep in mind the lift is easily repositioned after it is fully assembled with the optional caster kit.

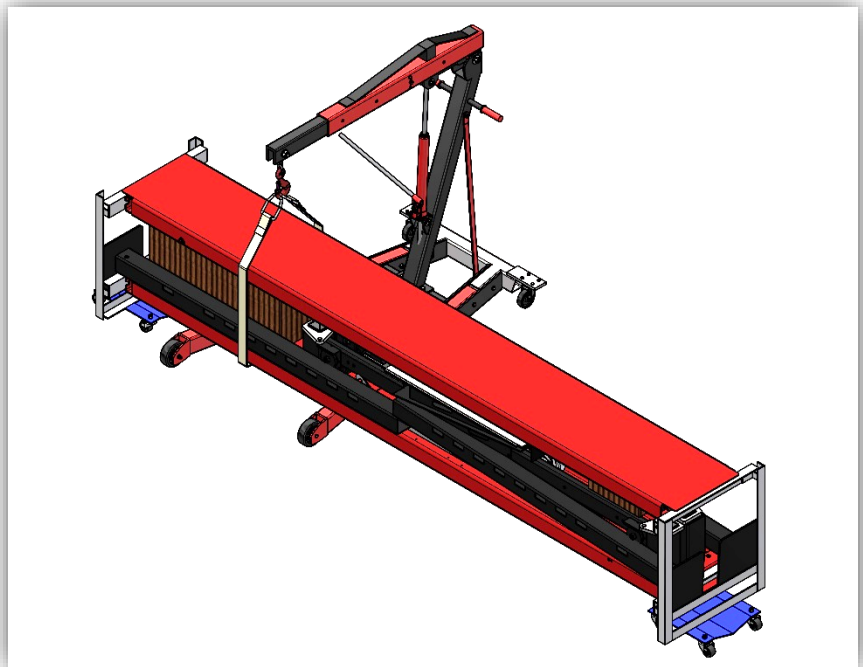


Figure 2.5

STEP 3: Legs, Crossmember & Guide Block Installation

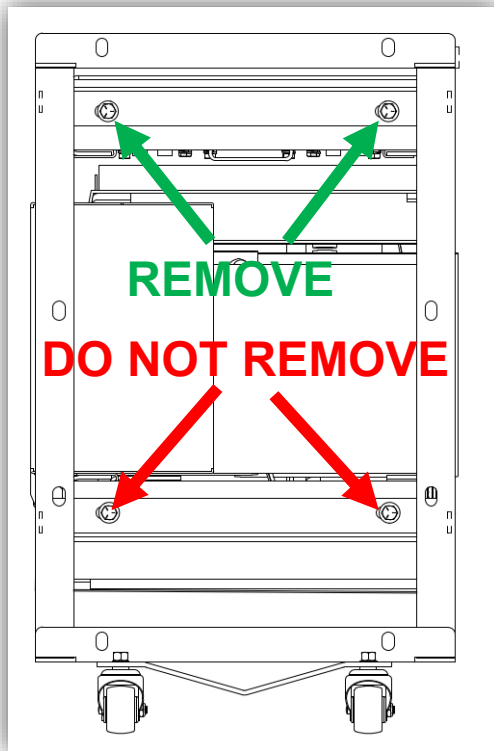


Figure 3.1

Once the layout has been determined, remove the cardboard and shrink wrap if still attached and cut the metal banding with caution as it is under tension. Remove the top runway and leg bolts using a 3/4 box wrench and socket (or impact).

Do not remove the 4 bolts that hold the bottom runway in place, these holds the package together (Figure 3.2)

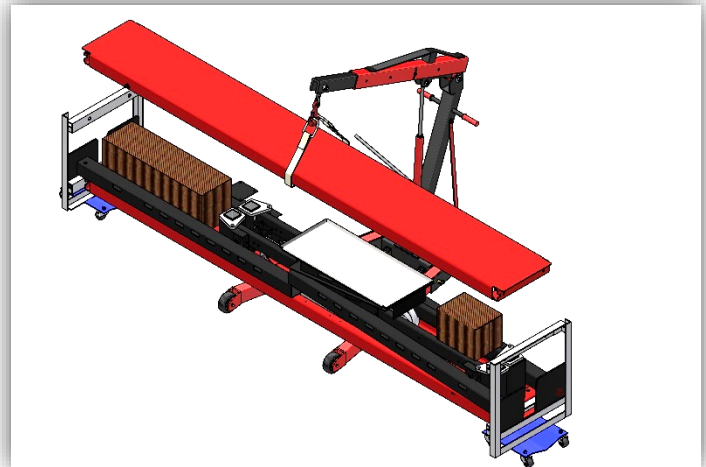


Figure 3.2

Using the material handler remove the top powered runway from Package 1. Make sure the load is centered and at least 2 people are present to stabilize the ends while moving. Place out of the way on top of 2x4s.

Remove the components packaged with the lift and then a set of legs. There are 2 left legs and 2 right legs. The legs can be placed where the lift will be assembled.

Position the legs so the lock cut outs are facing each other, and that the lock cut outs are on the outer edge of the leg.

Crossmember distance (center to center)

- CL/XT: 79.125 in.
- WB/BB/WF: 112.375 in.
- BT: 172 in.

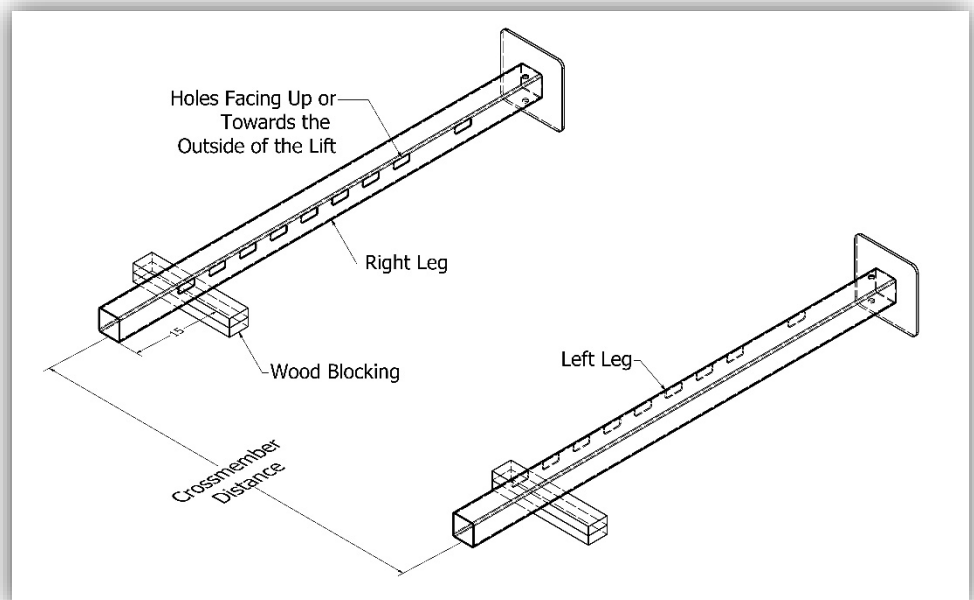


Figure 3.3 Leg Layout

Components in the lift

The components in the lift are now accessible to view. the contents list to verify that all the parts are present. Some of the smaller components found nested under the lips of the lower runway.

Take the time to review each item before continuing the build. See Figure 3.4 to view the items packed between the runways, Figure 3.5 for items inside the hardware box and the hardware list provided.

Item	Qty	PN	Description
1	4	20039	Drip Trays
2	3	40005	Top Cap Assembly
3	2	40036	Approach Ramp
4	2	40184	Crossmember Rods (Zip tied to #11)
5	4	40202	Wheel Stop Plate
6	2	40220	Right Leg
7	2	40221	Left Leg
8	1	40223	Power Unit Mount
9	1	40224	Power Unit Top Cap
10	1	40226	Non-Power Runway
11	1	40233	Cylinder Runway
12	1	40242	Crossmember
13	4	40246	Caster (1 shown)
14	1	40249	Crossmember
15	1	40252	Shipping Bracket A
16	1	40253	Shipping Bracket B
17	2	60069	Wheel Chock
18	1	90010	Power Unit
19	1	See Below	Hardware box

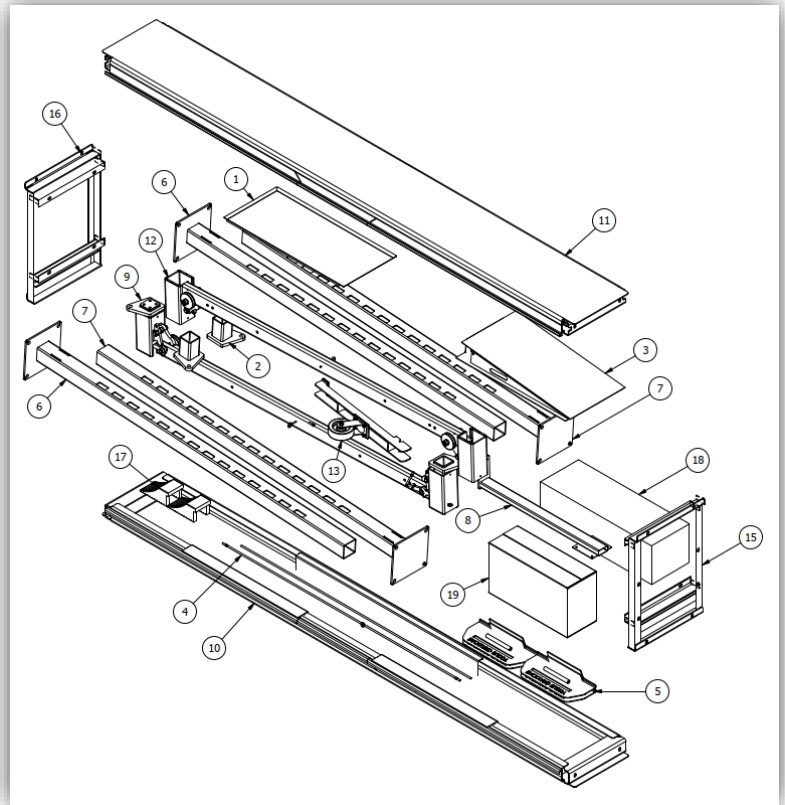


Figure 3.4: Shipping Assembly Overview

Hardware Box Contents:

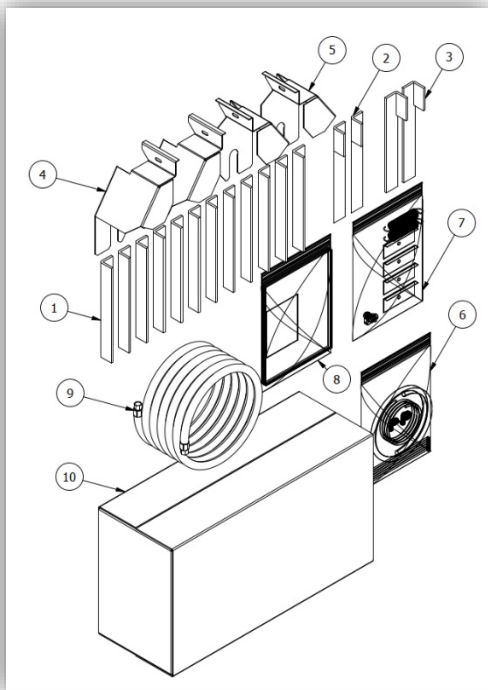


Figure 3.5: Hardware Box Contents

Item	Qty	Description	P/N
1	12	20297	Common Slider
2	2	20298	Left Slider
3	2	20299	Right Slider
4	2	20440	Pulley Cover Right
5	2	20441	Pulley Cover Left
6	1	40040	Drain Kit Assembly
7	1	40256	Hardware Bag
8	1	40271	Documentation Packet
9	1	90003	Hydraulic Hose 3/8 hose, 72 long
10	1	90106	Hardware Box Cardboard

Hardware Bag Contents: *Contained within the hardware box

PN	QTY	Type	Fastener	Location
60032-01	8	Flat Washer	1/4	Pulley Covers & Nylon Retainers
60015-01	8	HHCS	1/4-20 x 1/2	Pulley Covers & Nylon Retainers
60007-01	4	Lock Washer	5/16	Power Unit
60006-01	13	Hex Nut	5/16-18	Power Unit (8) & Cable Keepers
60019-03	4	HHCS	5/16-18 x 1	Power Unit
60052-01	1	Acorn Nut	5/16-18	Cable/Lock Keeper
60132-01	3	HHCS	5/16-18 x 3-1/4	Cable Keeper
60133-01	1	Threaded Stud	5/16-18 x 5	Lock Keeper
60021-01	10	Lock Washer	3/8	Hiem Joint & Power Mount/Top Cap
60001-04	2	HHCS	3/8-16 x 1 3/4	Power Unit to Top Cap
60014-01	4	Threaded Stud	3/8-16 x 13 1/2	Automatic Wheel Stops
60134-01	8	Flange Nut	3/8-16	Automatic Wheel Stops
60022-01	16	Hex Nut	3/8-24	Hiem Joints
60023-01	8	Ball Joint	3/8-24	Crossmember Rod Linkage
60097-01	8	SHCS	3/8-24 x 1-1/2	Crossmember Rod Linkage
60137-01	2	Threaded Stud	3/8-24 x 3-7/8	Crossmember Rod Linkage
60058-01	1	Ball Knob	3/8-24	Lock Handle
60051-01	16	Flat Washer	1/2	Runway to Crossmember
60013-01	8	Lock Washer	1/2	Runway to Crossmember
60050-08	8	HHCS	1/2-13 x 3 1/2	Runway to Crossmember
60055-01	8	Hex Nut	1/2-13	Runway to Crossmember
60018-01	4	Flat Washer	3/4	Cables to Top Caps
60028-01	4	Hex Nut	3/4-10	Cables to Top Caps
60028-02	4	Jam Nut	3/4-10	Cables to Top Caps

Crossmember Preparation and Installation

Review both crossmembers, one has the primary lock release handle, the other does not. Select the crossmember based on your desired layout. Remember the release handle must be placed next to the power unit.

Remove a crossmembers using the material handler. Crossmembers are heavy, two persons are required in addition to the material handlers to stabilize the load.

Place a couple wood blocks or 2x4's from the packaging as show in *figure 3.3*.

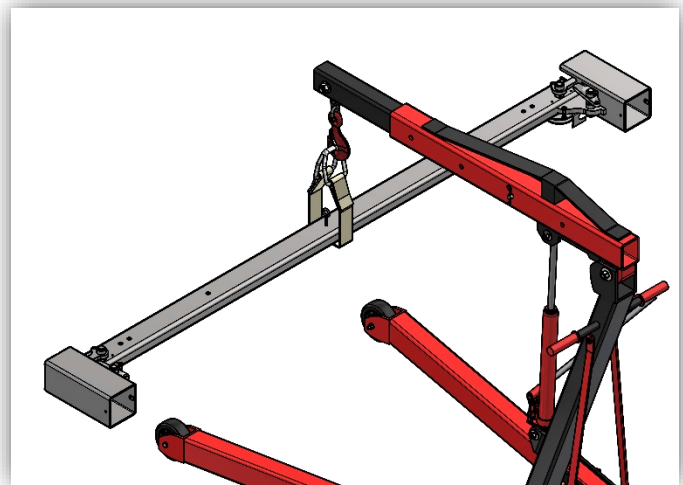


Figure 3.6 Lifting the Crossmember



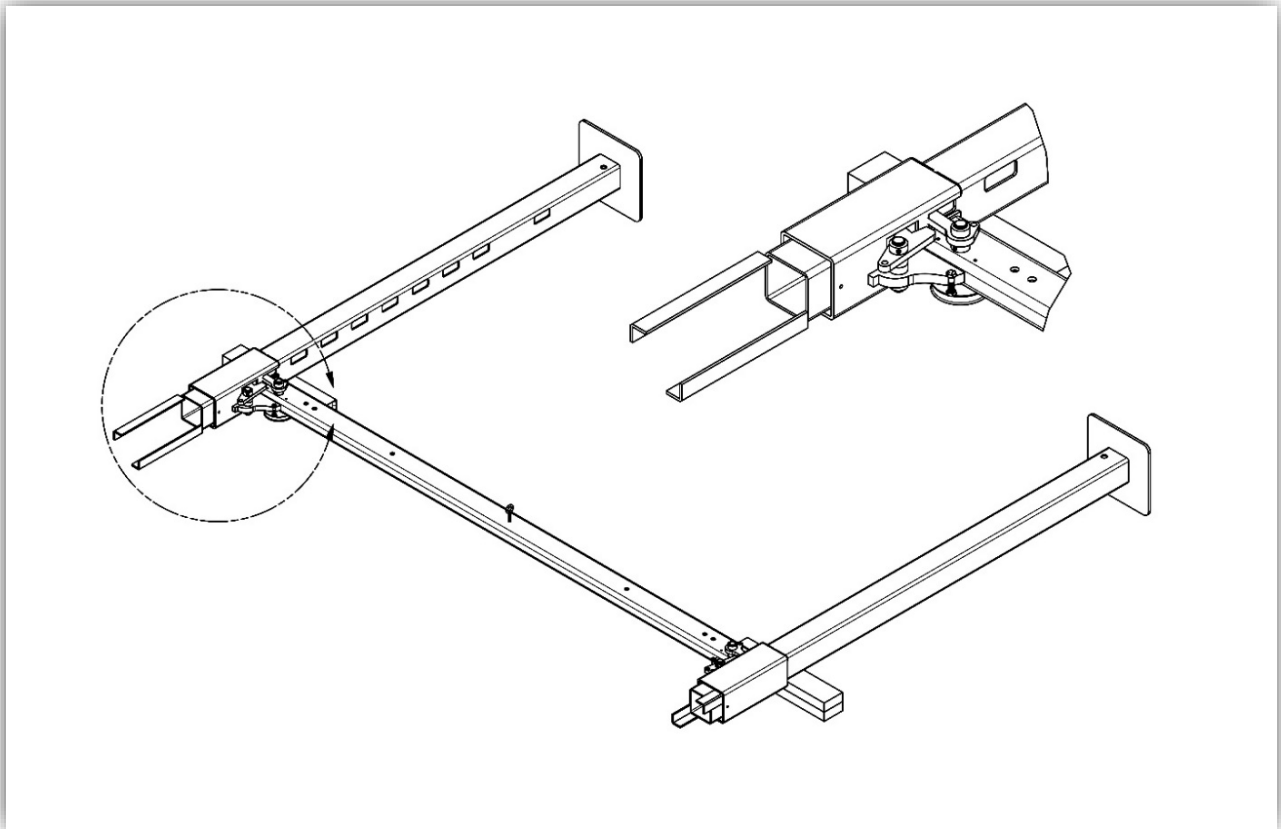


Figure 3.7 Lifting the Crossmember

Using wood blocks, prop the leg up so there is clearance to slide the crossmember down the legs. Position the crossmember so the guide blocks align with both columns, adjust the leg spacing as necessary to match them up.

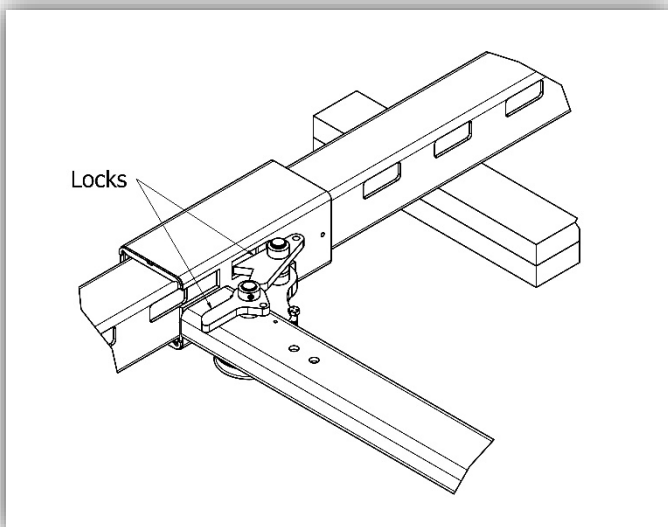


Figure 3.8 Positioning Locks

Place two glide blocks in the corners as shown in *figure 3.7*. Do not install all 4 glide blocks at this time. A dead blow hammer may be used to gently tap in the blocks, do not force into place. Rotate the locks as to not catch in the leg holes.

Gently slide one leg into the crossmember sleeve, slightly wiggling if needed. Stop when around 40 inches from the foot pad or the 5th lock hole up. This provides a good working height for installing the runways.

Rotate the locks on the first leg to lock into position and repeat the process for the second leg. Once the primary locks are engaged on both legs, the leg/crossmember assembly is ready to raise into position.

The crossmember and legs are extremely heavy, a material handler may be used to assist in raising the assembly. To prevent the crossmember from riding up the legs place a stop in the lock hole directly above the crossmember. The stop can be a piece of metal, prybar screwdriver, etc. take care not to drop the stop into the leg while lifting.

The next section can be assembled and raised. Take note the leg holes must face towards the outside of the lift on both sides (*figure 3.7*)

Install the remaining UHMW glide blocks. Remember 4 are cut to fit the locks (*figure 3.9*).

The UHMW glide blocks may be a tight fit. Wiggle the legs slightly to help with alignment, making it easier to install.

If it's still snug, use a wood block and a hammer to tap them down flush. Install the Glide Block Retainers as shown in *figure 3.19* with 1/4-20 bolts and washers.



Front and Back Locations

The front and back sections (shown as "Runway Width" in Figure 3.9) should be positioned *approximately* to the dimensions below.

CL, XT: 152.625

WF, WB, BB, BT: 192.875

After positioning, check squareness by measuring diagonally between the front and back sections. Adjust until both numbers are the same. This will square up the lift.

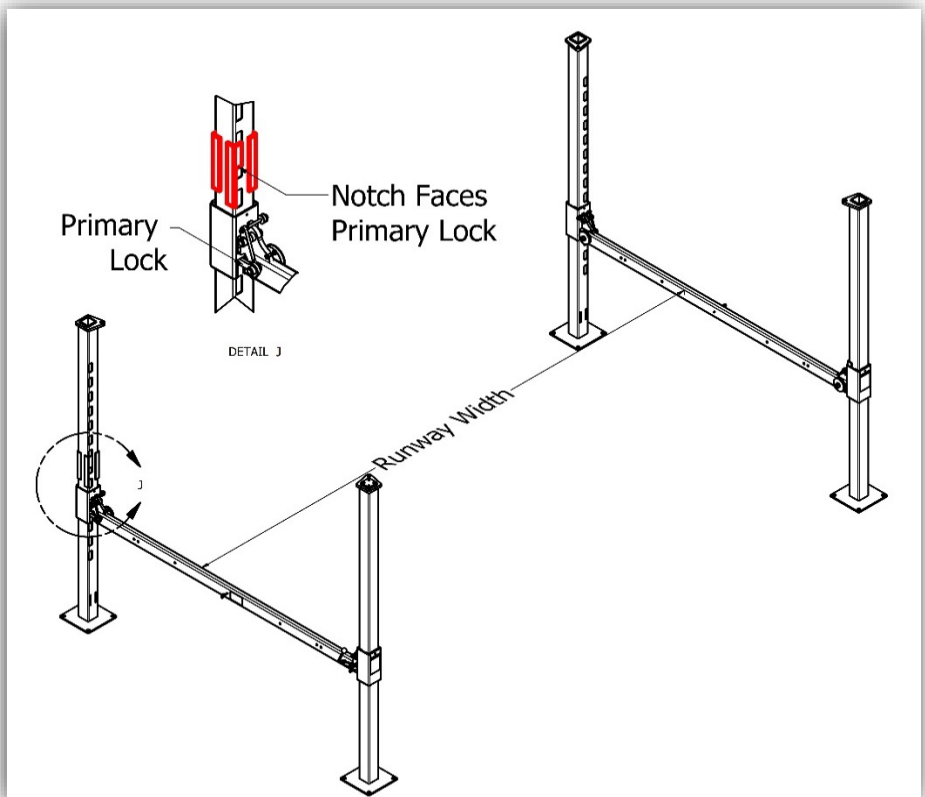


Figure 3.9 Up righting one Section

STEP 4: Runway Installation

The powered runway will be installed first, this is the upper runway that was removed and set on blocks. Take note to visually locate the hole for the hydraulic fitting exiting the side of the powered runway, this fitting must be located next to the column the power unit will be bolted to, front left or rear right. Rotate the package assembly, if needed, so the hole is pointed outward and the accessory rail welded to the side of the track is inward, towards the center. Roughly align the holes in the track with the holes in the crossmember. Danger, these parts are heavy, work slowly and cautiously as they are placed.

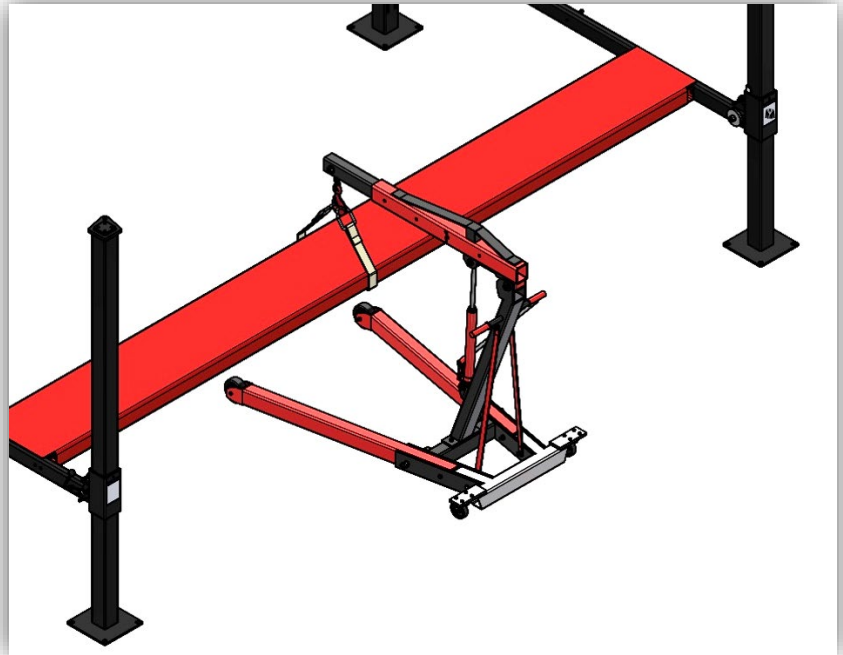


Figure 4.1



DANGER

Automatic Wheel Stops

Find the automatic wheel stop mounting plates (2) and 1/2-13 x 3-1/4 bolts (4), 1/2-inch washers (8), 1/2-13 nuts (4) and 1/2-13 lock washers (4). Assemble as shown in figure 4.2. The nut and washer may be installed by placing through the window where the cables exit the runway and held with an open-ended box wrench. Repeat on the opposite side of the runway. Once the powered runway is secured, repeat the process for the next runway. Ensure the accessory rails are both facing each other.

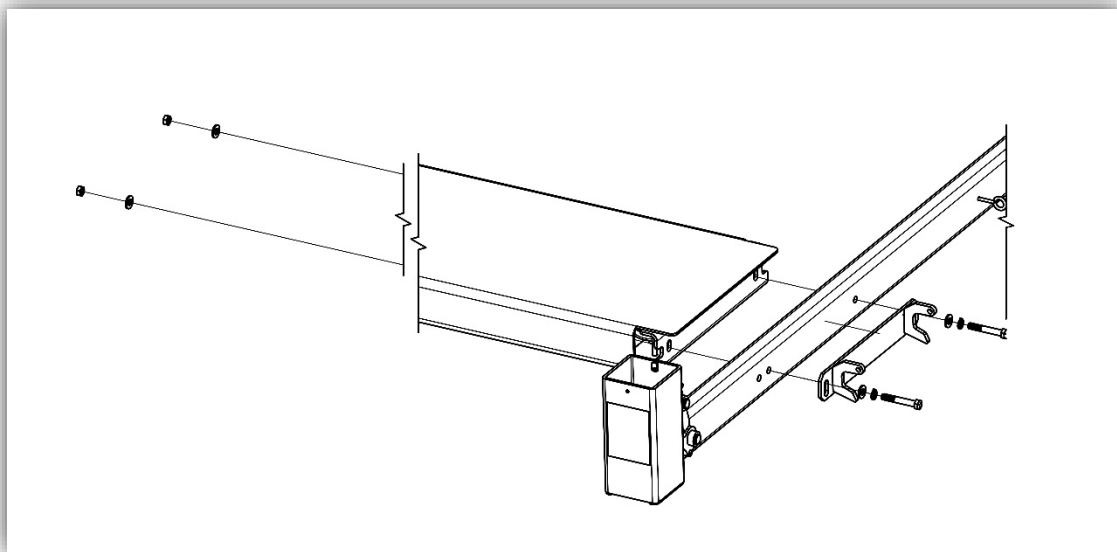


Figure 4.2

Once the runways are secured, attach the wheel stop front plate to the wheel stop mounting plate. For all lifts except the WB, a spacer will be placed on either side of the tube welded to the wheel stop front plate. For the WB lift, the spacers will be offset towards the left and right as shown to allow the ramp to be centered with the runway.

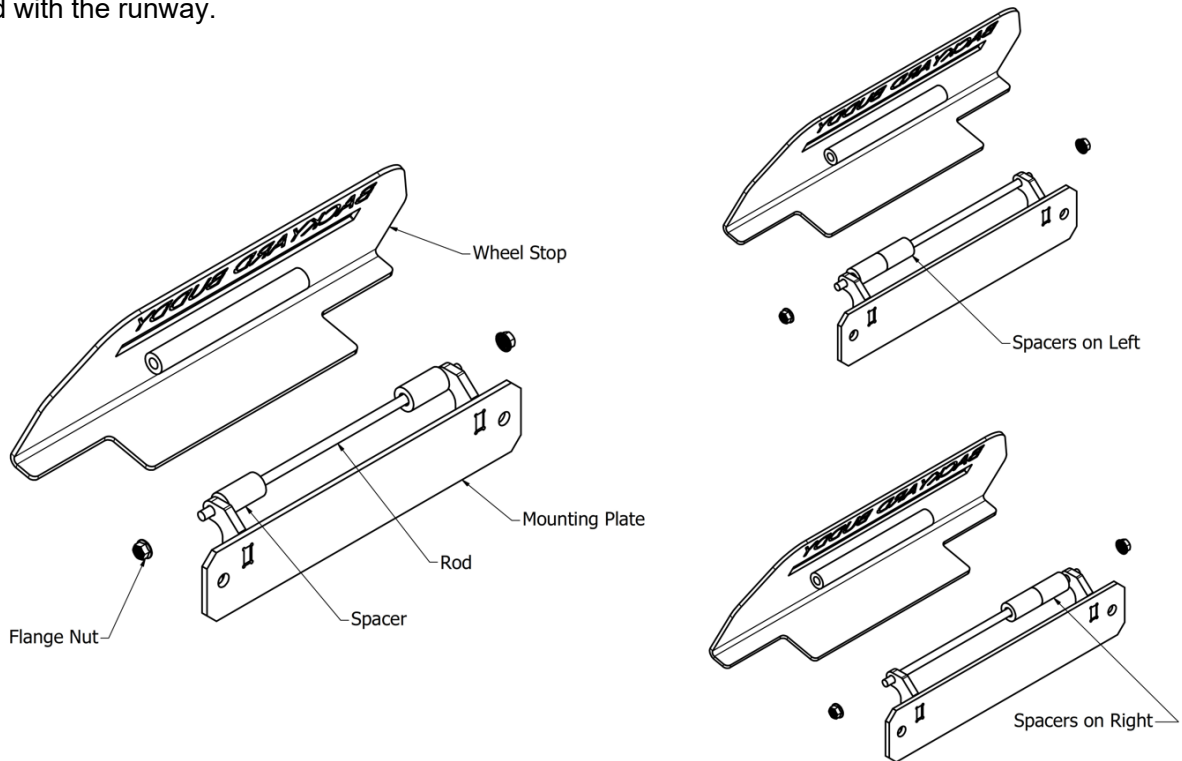


Figure 4.3

STEP 5: Lock Linkage Installation

Square Rods

Select the two 12-inch square rods from the hardware box. Locate the 2 holes (one in each crossmember) where powered runway mounts to the crossmember. The hole will be next to the automatic wheel stops.

Install the zinc coated spacer onto the square rod and slide through crossmember hole.

Rotate the pre-installed square rod coupler so the bolts are easily accessible (Figure 5.2). Use the coupler to attach the 12-inch square rod to the pre-installed square rod on the runway.

When installing make sure both end plates are pointing upward to 12 o'clock, then tighten the bolts in the coupler.

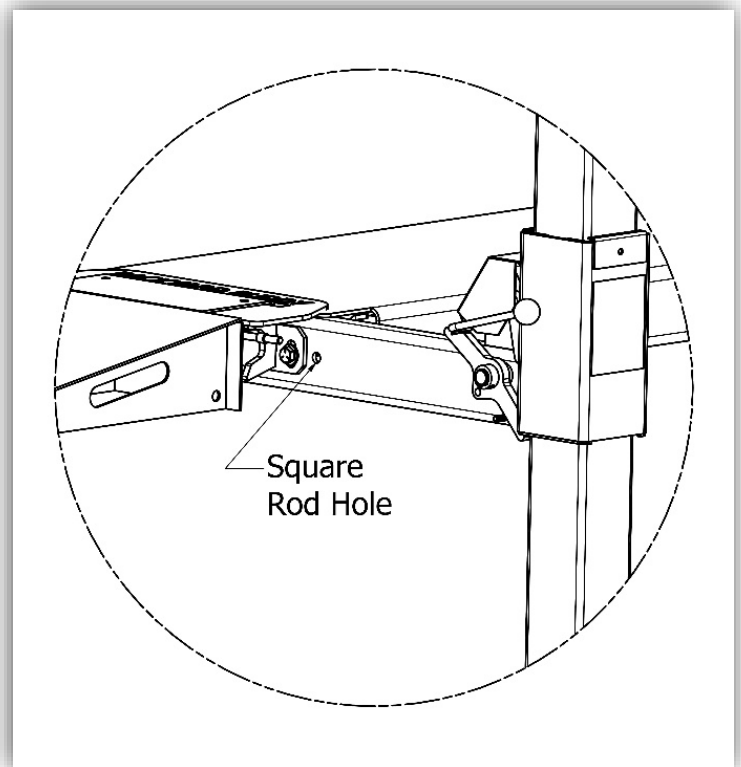


Figure 5.1

Lock Linkage Rod Installation

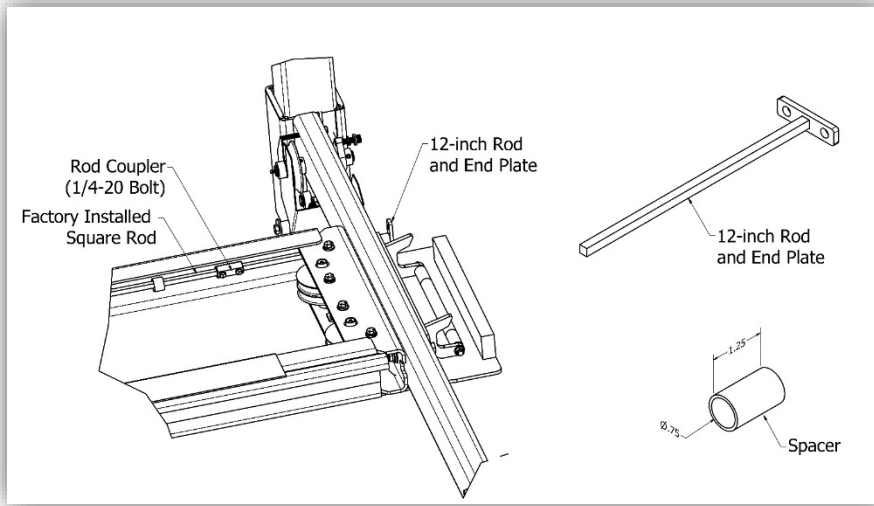


Figure 5.2

Gather the parts shown in Table 5-1 from the hardware bag.

Select the (2) 3/8 x 3.875 or 11.875 pieces of all thread. Install a 3/8-24 nut and then a 3/8 hiem joint on to each end (*figure 5.3*).

Select the (2) 3/8 long Round Rods (zip tied to the square rod in the power runway) and slide through the eyebolts (*Figure 5.4*). After installed, thread a 3/8-24 jam nut and hiem joint on either end of the rod.

Insert the opposite end of the all-thread assembly into the primary lock as shown (*figure 5.4 & 5.5*).

Table 5-1

Description	Qty	Type	P/N
Square Coupler (pre-installed)	2	1/4-20	20037
Square Rod End Plate	2	3/8 Square x 12-inch	40179
Crossmember Rods	2	3/8 Round Rod	Lift Dependent
All-thread (CL/XT/BT)	2	3/8-24 x 3-7/8	60137-01
All-thread (WF/WB/BB)	2	3/8-24 x 11-7/8	60034-04
Ball Joint	8	3/8-24 Thread	60023-01
Bolt	8	3/8-24 x 1-1/2 SHCS	60097-01
Hex Nut	16	3/8-24 Nut	60022-01
Spacer	2	3/4 dia. x 1/16 wall	20229
Lock Washer	8	3/8 Split Washer	60021-01

Attach with a split washer **BETWEEN** the hiem joint and lock and install the nut on the back side of the lock.

Note: Leave the jam nuts loose until all 4 ends are installed.

Install the hiem joint on the opposite side of the 3/8 Round Rod using the same 3/8 split washer between the T-Bar and Hiem, then install the 3/8-24 nut. Perform this on both crossmembers.

Rotate the lock/handle assembly so that the safety rod end plate side points to 12 o'clock (*Figure 5.3*)

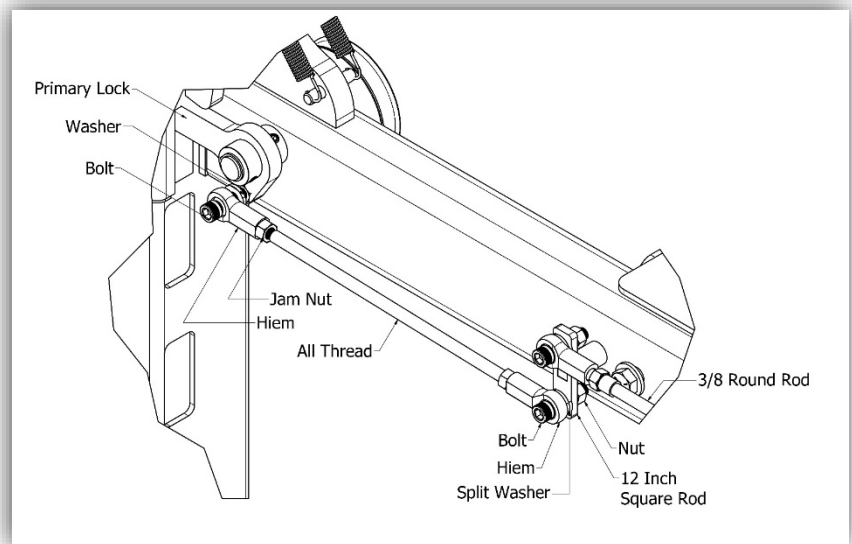


Figure 5.3

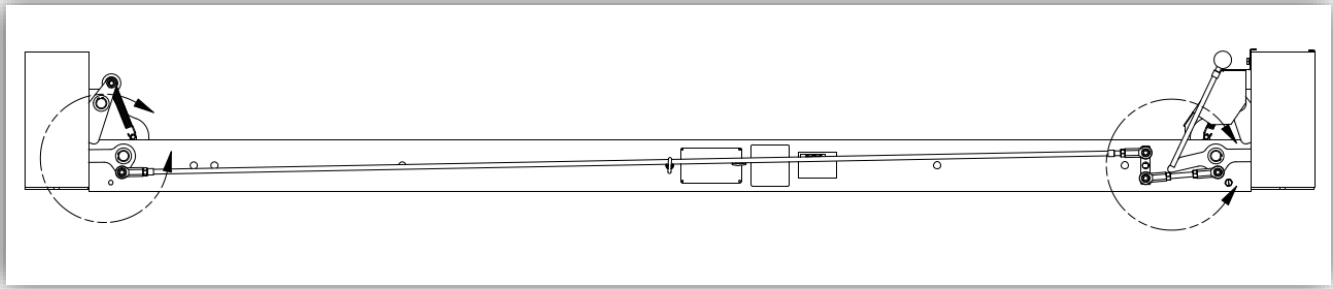


Figure 5.4

Install the spring from the hardware box onto the eyebolt and washer welded on the long 3/8 Round Rod. With the lock opposite the T-bar installed and the T-bar pointed up and down (12'o clock) on both the front and back Crossmembers, adjust the top hiem in *figure 5.5* so the hole in the hiem and T-bar line up. Install the 3/8-24 SCHC and nut, placing the split washer *BETWEEN* the T-bar and Hiem joint.

Primary lock adjustment

Once installed, the lock linkages will need adjusted. Start with the dimensions shown below for the all-thread pieces on both Crossmembers. These dimensions are just a starting point.

NOTE: the dimensions shown are taken from the end of the hiem to the end of the opposite hiem.

CL/XT/BT: **DIM** = 2.4375 (2-7/16)

WF/WB/BB: **DIM** = 10.5 (10-1/2)

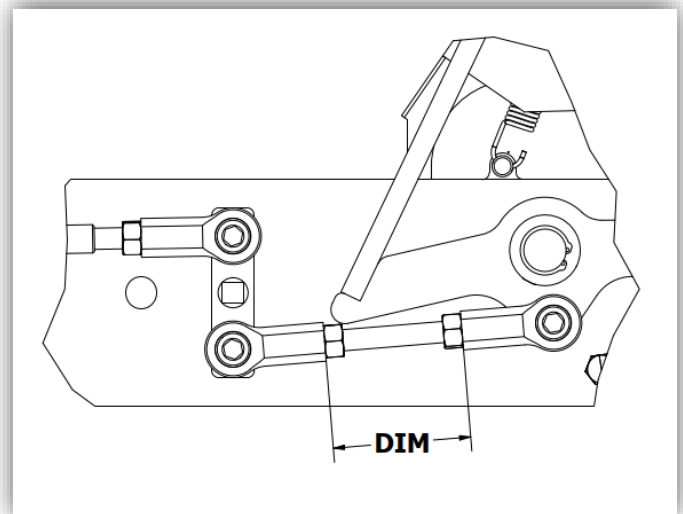


Figure 5.5

Tips and Troubleshooting Lock Linkages

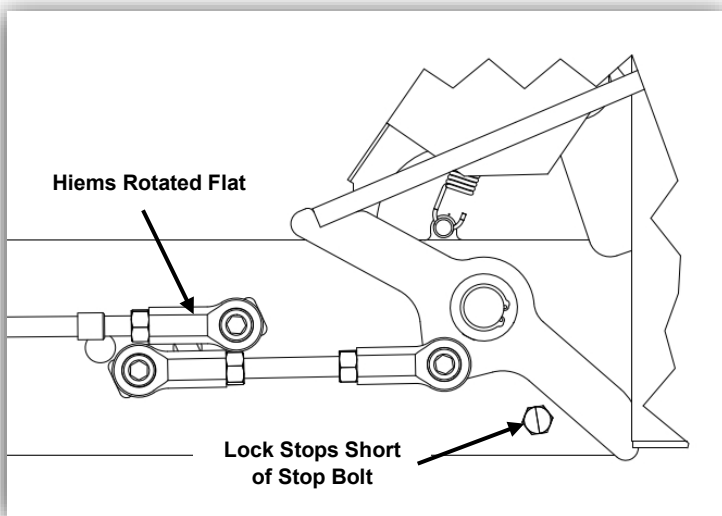


Figure 5.6

TIP 1: The T-bar needs to fully collapse to produce the most amount of travel. Ideally the T-bar should be almost horizontal when the Lock Handle is pulled to release the Locks (see *figure 5.6*).

Tip 2: To get MORE lock travel, the All-thread needs to be LENGTHENED. The longer the All-thread, the more travel. **CAUTION:** if the All-thread assembly is adjusted is too long, it may bend the T-bar. Always make minor adjustments and test.

Tip 3: When properly adjusted, all locks will release, and the Lock Handle will not touch the Stop Bolt (see *figure 5.6*).

Tip 4: If the Hiem joints do not fully rotate, make sure the split washer is installed between the hiem and mating surface NOT on next to the nut.

STEP 6: Installing Top Caps & Power Unit Mount

There is a Top Cap for each of the four columns that secures the ends of the lift cables. The Top Cap with the holes (used to attach the power unit arm) mounts on the leg where the hydraulic fitting exits the runway.

Orient the holes for the cables so they are pointing inward to the inside corner of the post (figure 6.1 & 6.2).

Note that the longest flat side of the Top Cap is flush with the outside of the column as referenced from the front or rear (figures 6-3 & 6-4).

	Description	Qty	P/N
1	Power Unit Mount	1	40004
2	Top Cap with Holes	1	40224
3	3/8-16 x 1 3/4 HHCS	2	60001-04
4	5/16-18 Nut	8	60006-01
5	5/16 Split Lock Washer	4	60007-01
6	3/4 Flat Washer	4	60018-01
7	5/16-18 x 1 HHCS	4	60019-03
8	3/8 Split Lock Washer	2	60021-01
9	3/4-10 Nut	4	60028-01
10	3/4-10 Jam Nut	4	60028-02
11	Hydraulic Power Unit	1	90010/90043

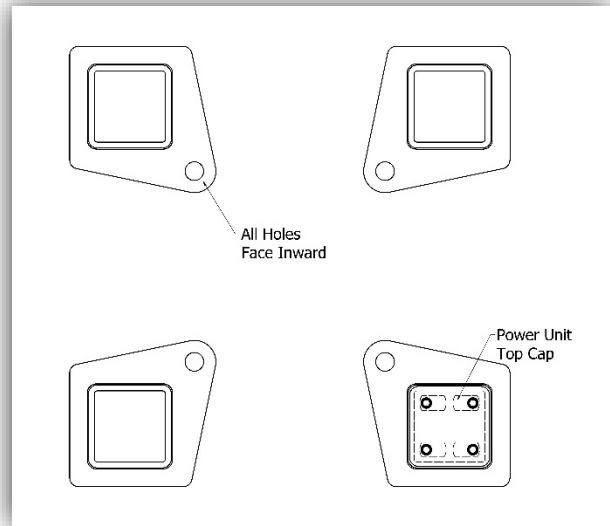


Figure 6.1 – Top Cap Orientation

The Power Unit Mounting Bracket can be mounted in two positions, on the outer side of the column or turned to the inside for a narrower width profile (figure 1.1)

Select the position that favors the layout of your shop or the desire operator position. Using (2) 3/8-16 HHCS bolts and (2) split washers, install the power unit (Figure 6.3).

Install the power unit mount the top cap using two OUTER MOST HOLES to provide proper clearance between the power unit mount and leg.(Figure 11.4)

To mount the power unit to the bracket, install the 5/16-18 nuts and bolts first. This will allow the power unit to hang on the bolts. Then attach with the (4) lock washers and (4) remaining 5/16 nuts.

STEP 7: Hydraulic Hose & Drain Kit

Find the 90° bulkhead fitting (90005) attached to the end of the hose on the cylinder runway. Remove the packing nut and insert into the hole provided, secure with previously removed packing nut.

Next connect the hose from the hardware box to the bulkhead fitting. Remove the plastic shipping plug from the base of Power Unit pump and attach the 3/8 Male JIC-3/8 ADJ O-Ring, 90 Degree EL hydraulic fitting (60066-01) from the hardware box to the power unit and attach the hose.

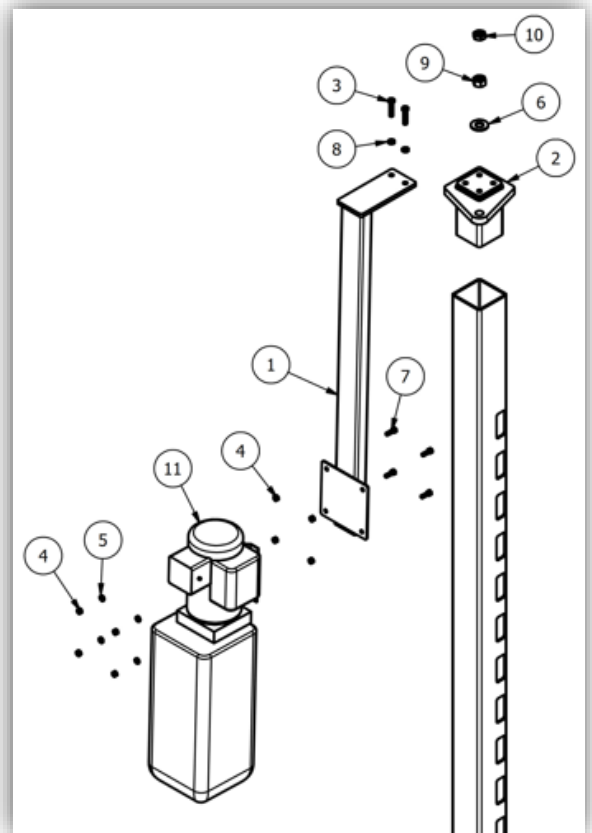


Figure 6.2 – Top Cap Orientation

DO NOT OVER TIGHTEN. TEFLON IS NOT NEEDED FOR O-RING FITTINGS

Fill the hydraulic reservoir of the Power Unit with Hydraulic Fluid to a point about two inches below the fill cap of the reservoir. Use AW-32 for cold climates or AW-46 for warmer climates. The tank will hold approximately 12 quarts, leave room for hydraulic oil expansion. **DO NOT** top-off or overfill the system until after the lift has made a few non-full-rise cycles and any air in the system has been allowed to escape.



Drain Kit

Open the drain kit with the 1/4 inch and push to connect fitting.

Remove the plug from the end of the hydraulic cylinder and install the 1/4 thread to 1/4 hose push to connect fitting (90023)

Remove the plug from the power unit and install the 3/8 thread to 1/4 hose push connect fitting (90024)

Route the 1/4-inch nylon hose behind the pulley on the runway towards the power unit. Make sure to place in a position that it will not get caught or pinched. (Figure 7.1)

Attach the opposite end to the fitting on the power unit. Wrap both cables together with the provided nylon sleeve and zip tie each end with the provided ties.

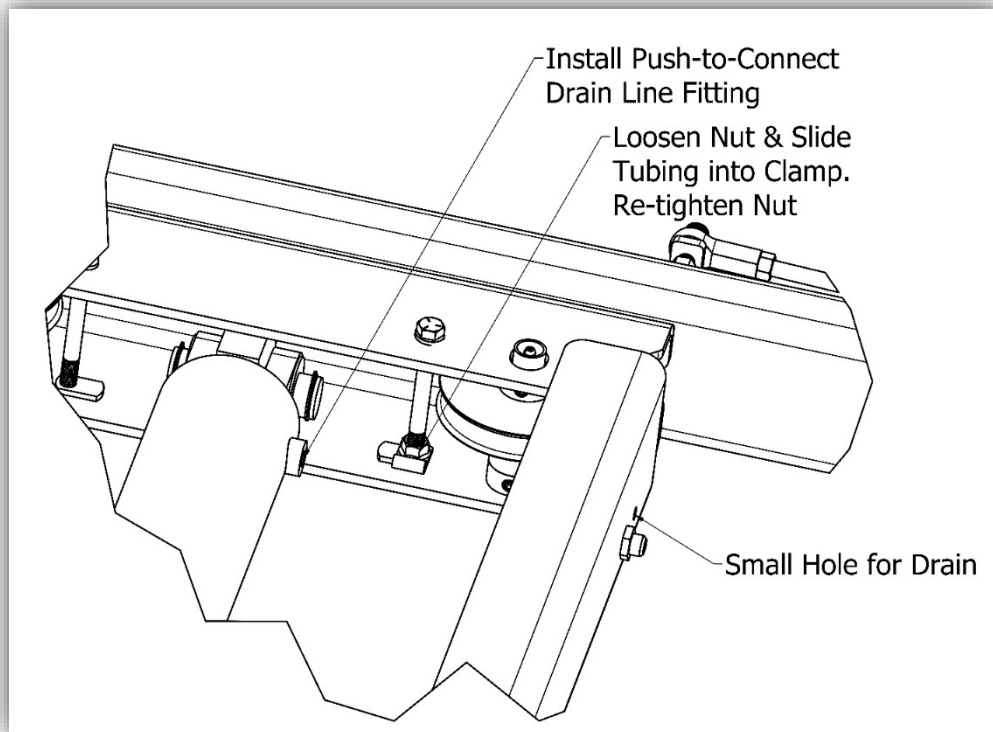


Figure 7.1 Hydraulic Hose Install

STEP 8: Installing Cables

The cables come pre-installed and pre-routed on the cylinder runway. Begin by finding the zip ties and cutting with a pair of side cutters. Caution, the cables may be under tension. Make sure to cut the cable tie only (Figure 8.1 or 8.2 for XT).



Next, feed the threaded ends of the cables wrapped around the pulleys from each end and side of the Cylinder Runway towards each end of the Crossmember. Two of the cables will need to pass through the openings in the non-power track just below the attaching bolts. (Figures 8-4)

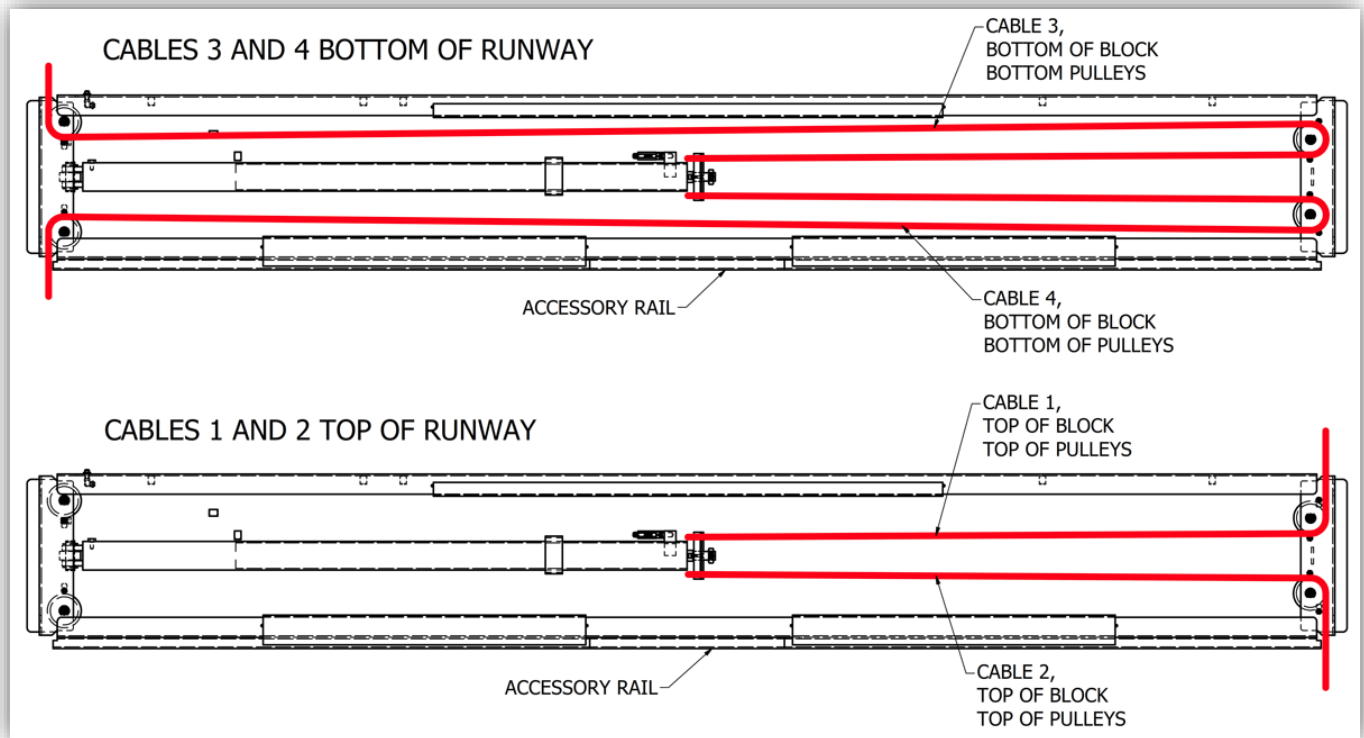


Figure 8.1 Cables Routing CL, WF, WB, BB, BT

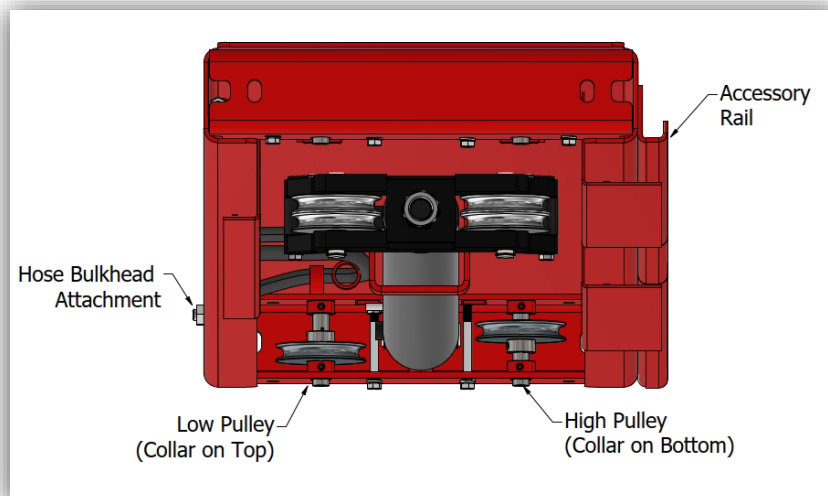


Figure 8.2 XT Pulley Location

Figure 8.2 shows the single pulley location on the XT runway only.

For all other lifts both single pulleys will be towards the bottom of the runway with the collars above the pulley.

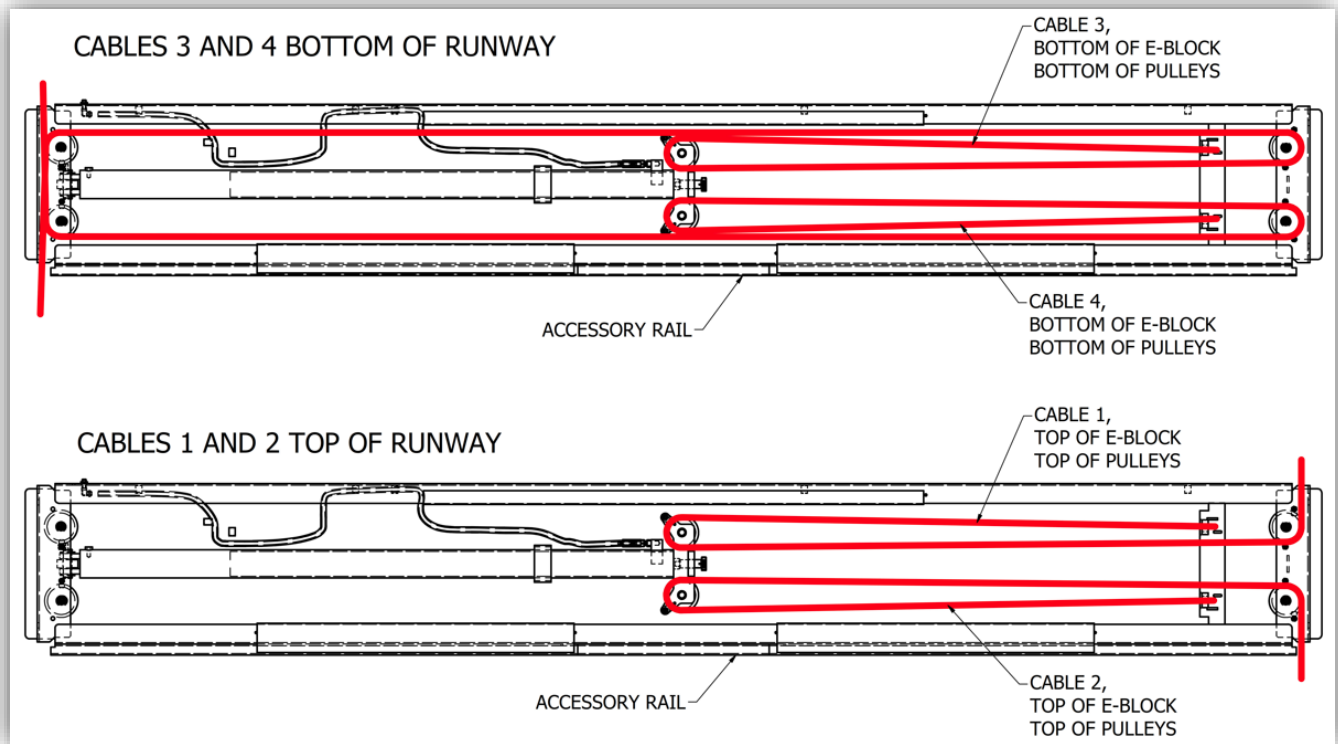


Figure 8.3 Cables Routing XT

Pull on the cables where attached to the cylinder under the power runway to extend the rod on the lift cylinder.

Pull until you have the rod cylinder extended about 3/4 of the way out.

This will gain enough free cable length to wrap around the various pulleys and attach the cables to the Top Caps.

Note: If the cylinder is fully collapsed into the internal hydraulic cushion, some force may be required.

If this is the case, you may need to use a ratcheting strap or come-along to aid with the pull or get an assistant to pull on another cable simultaneously.

If you are still not able to get the cylinder to extend, you will need to take a pry bar and put it between the cylinder case and cable block and pry the cylinder rod out at least an inch.

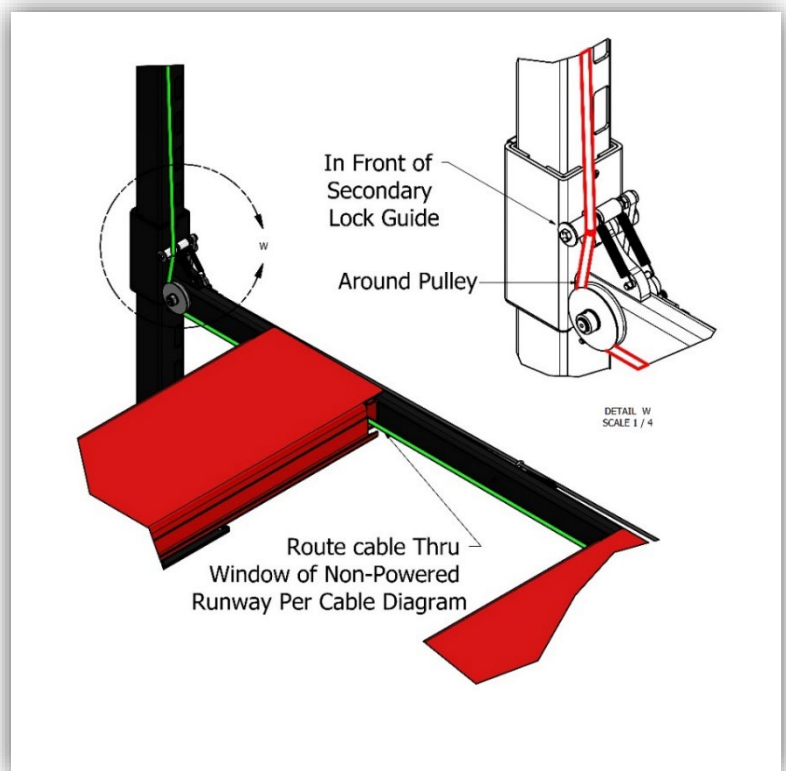


Figure 8.4 Routing Cables

Pass the cable through the hole in the Top Cap. Install the washer first then the 3/4-10 jam nut followed by the 3/4-10 full nut. Ensure at least 1/4 inch of threads are exposed above the nylon hex nut (*figure 8.8*).

Repeat this procedure for each of the four cables. Do not fully tighten the nylon lock nut. This will be adjusted prior to set up.

Check all the cable routing underneath the Cylinder Runway to ensure all cables are running straight and parallel to the lift cylinder without excessive slack, and the cable flange and retainer are square with the track.

STEP 9: Cable Keepers and Pulley Guard

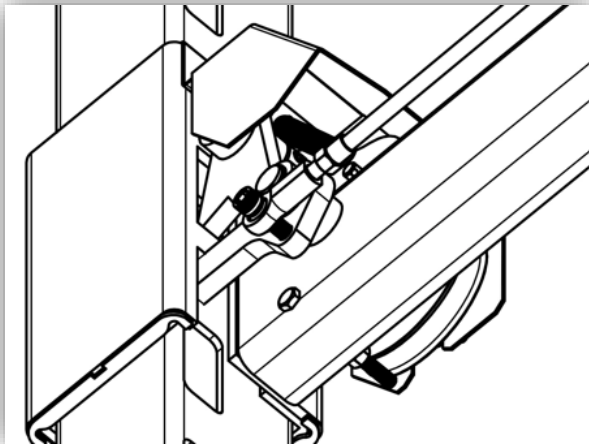


Figure 9.1 Cable Keeper Bolt (x3)

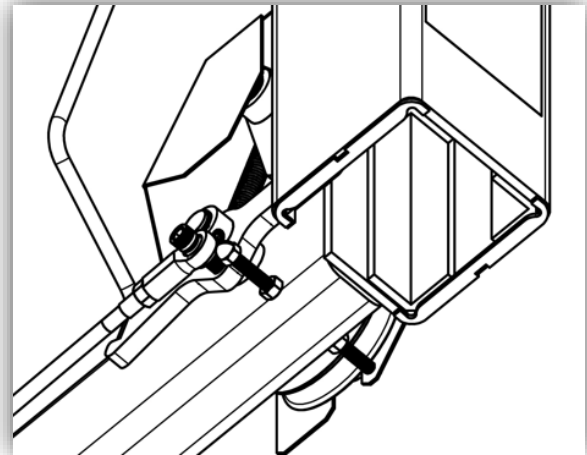


Figure 9.2 Cable Keeper Bolt (Handle Lock)

Locate the (3) 5/16-18 x 4 cable keeper bolts, (5) 5/16 nuts, (1) 5/16-18 all-thread and acorn nut. Install the bolt into the crossmember from the lock side. Install the nut on the pulley side of the crossmember (*figure 9.1*). The 5/16 all-thread will install in the crossmember hole under neath the lock with the handle attached. See *figure 9.2* for orientation.

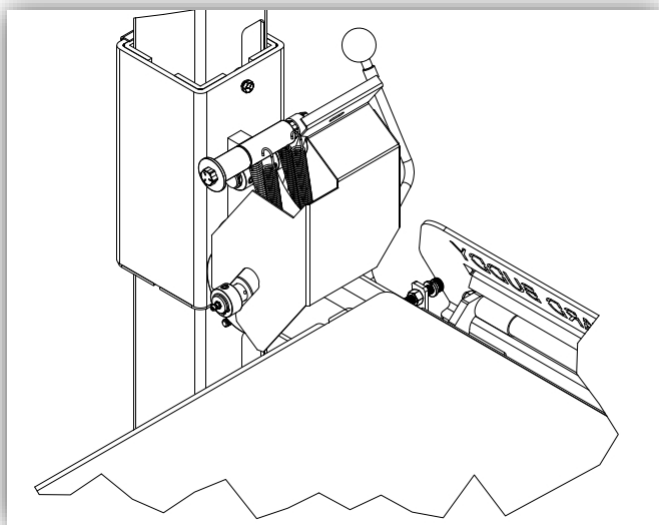


Figure 9.3 Pulley Cover Install

Located in the hardware box are 4 pulley covers, 2-left and 2-right.

The pulley cover slides around the primary lock pin and in between the pulley and collar.

The set screw on the collar may need loosened to fit the cover over the pin. Slide the cover onto the pin at an angle as shown in *figure 9.3*.

Ensure the plastic washer sits between the pulley and inside of the cover.

Use the 1/4-20 bolts and split washer to attach the cover to the threaded hole in the crossmember sleeve.

STEP 10: Pre-Operation and Maintenance Checks

Perform the following checks at the required intervals and before initial operation during install. If any items are worn or in question perform appropriate lock out/tag out procedure and contact Advantage Lifts for replacement parts. Do not operate a lift with worn or questionable components.



Follow lock out/tag (ANSI Z244.1 recommended) during maintenance. The owner shall maintain inspection and maintenance records. It is recommended to follow inspection and maintenance record standards.

The most common cause of hydraulic system malfunction or failure is contamination of the hydraulic fluid. The hydraulic system (hose and pipe, cylinders, valves, etc.) must be clean to prevent contamination problems.

For unusual vehicles (limousines, RV's, long wheelbases, short wheelbases, etc.) contact Advantage Lifts for loading instructions.

If Lift Does Not Rise

Check hose connections. Fluid should be pumping through hoses. Check fluid level. Run the lift up and down a few times to make sure the safety latches are engaging uniformly and that the safety latch release is functioning properly. Readjust if necessary.

When lowering

When lowering the lift PAY CAREFUL ATTENTION. ALWAYS make sure that all FOUR SAFETY LATCHES are disengaged. If one of the latches locks on descent STOP immediately and rise until it is clear of the stop and adjust the Heim end on that latch.

Maintenance Information

OSHA AND ANSI REQUIRE USERS TO INSPECT LIFTING EQUIPMENT. THESE AND OTHER PERIODIC INSPECTIONS ARE THE RESPONSIBILITY OF THE USER.

The maintenance schedule represents the minimum requirements and maximum time intervals. If you hear a noise or see any indication of impending failure – **stop operation immediately** – inspect, correct and/or replace parts as required. Do not replace any parts without contacting technical support. Only use authorized individuals may replace components using authorized parts.

Replacement Parts

The following items should only be performed by trained lift service personnel. Consult the factory before performing any of the following tasks.

- Replace hydraulic hoses.
- Replace cables and sheaves.
- Replace or rebuild hydraulic cylinders as required.
- Replace or rebuild pumps / motors as required.
- Replace cylinder or hydraulic components.



Daily Checks are the responsibility of the owner or qualified operator.

<input type="checkbox"/>	Confirm all fasteners are in place and tight. (Snap rings, collars, bolts, nuts etc.)
<input type="checkbox"/>	Check that the hoses are not kinked, are clear of the cables and do not hang up on the tank.
<input type="checkbox"/>	All secondary locks move freely and return to home position.
<input type="checkbox"/>	Check all primary locks for free movement and full engagement with leg holes.
<input type="checkbox"/>	Check all hydraulic connections and components for leaks.
<input type="checkbox"/>	Check wiring and switches for damage.
<input type="checkbox"/>	Check columns, cables, runways, and base plates are free of dirt, grease, or damage.

Monthly Checks may be completed by the owner/qualified operator or trained lift service personnel.

<input type="checkbox"/>	Check cable connections on the top cap and cylinder block.
<input type="checkbox"/>	Grease Zerk fittings.
<input type="checkbox"/>	Wax columns.
<input type="checkbox"/>	Check wire ropes for wear or cracks. (See pg. 37)
<input type="checkbox"/>	Check pump fluid level, refill if low.
<input type="checkbox"/>	Check anchor bolts (if used, See pg. 38).
<input type="checkbox"/>	Check the cylinder is rod and rod end threads for deformation or damage.
<input type="checkbox"/>	Check cylinder mount for looseness and damage.

Yearly Checks

<input type="checkbox"/>	Empty the pump reservoir and refill with new fluid (See pg. 28).
<input type="checkbox"/>	Thoroughly check each cable (See pg. 37).

STEP 11: First Start Up (At Installation)

Wax the outside of the columns where the UHMW Guide Blocks will make contact to the column. The wax will reduce friction and make for smooth operation (*figures 11.1 & 11.2*). **Grease the zerk fittings** (4 on the powered runway and 2 on each crossmember).

Confirm that power to the lift has been installed by a licensed electrician and is safe to operate. Press the power switch on the Power Unit to take slack out of the cables. Once the slack is taken out, raise the lift slightly to release the primary locks then pull the primary lock release handle. The locks should all clear the legs by the same distance. Have your assistant walk around and check for good clearance between the locks and columns. If not, adjust by threading in or out the 3/8-24 threaded rods attached to the hiem ends installed in [Step 5](#). Lower the lift by releasing the primary lock handle and pressure relief handle on the power unit.

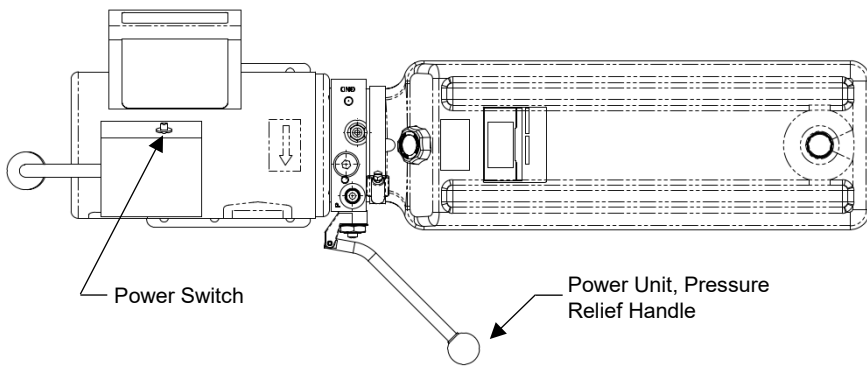


Figure 11.1 Power Unit Features

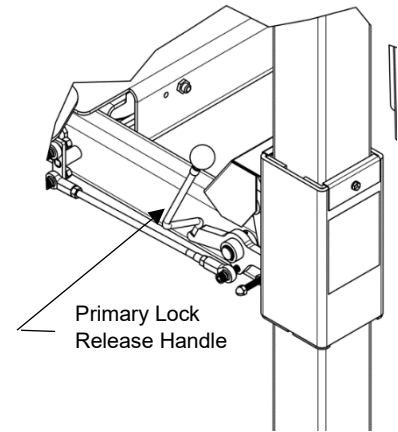


Figure 11.2 Primary Lock Release

With the primary locks adjusted, raise the lift again by pressing the power unit's power switch. Pay careful attention to the crossmembers to ensure all 4 are sliding on the legs. If one corner gets bound up, STOP. Pull the primary lock release handle and at the same time press the pressure relief handle on the Power Unit to lower the lift to a position where the runways and crossmembers are level. Once level, wax the bound leg and attempt to lift again.

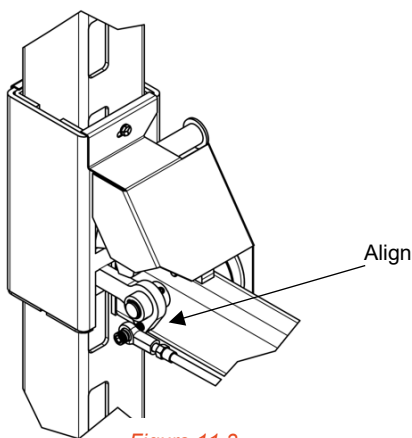


Figure 11.3

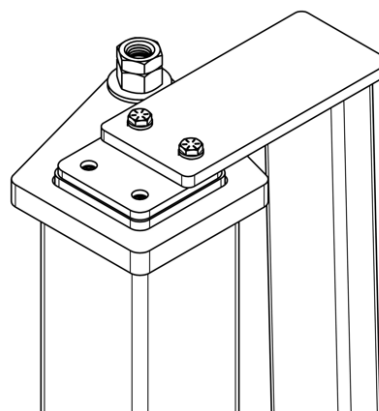


Figure 11.4 Top Cap Nut

Raise the lift until the top of the highest lock cover is flush with the bottom of a lock cutout (*figure 11.3*). Adjust the cables on the other three posts to raise up them so all 4 corners are equal. Adjust the cables by tightening the cable adjusting nut on the top of each post top cap, then tighten the jam nut to the adjusting nut to lock the cable in place (*figure 11.4*).

Lower again, then raise the lift. If cables are adjusted properly the lift should be raising level and all four primary locks engage or audibly “click” simultaneously. If not adjust a low cable by tightening the adjusting nut on the top cap, locking it into place with the jam nut.

Before Loading

- Check that the primary locks and hiem joints are adjusted correctly.
- Check the secondary locks move freely and return to their home position.
- Check that the lift is “timed” (primary locks click simultaneously & the deck is level when raised).
- Check all nuts, bolts and snap rings are in place and tightened.

There will be some initial stretching of the cables in the beginning. It may be necessary to re-adjust the cables a week after first use.

- Once the lift is timed, drive a typical vehicle on to the lift and slowly raise. If the lift is not lifting the vehicle level, place onto the locks and re-time the lift by tightening/loosening the nut/cable on the top cap. This is normal operation as the cables stretch.

STEP 12: Operation

Do not use this lift unless you know the proper operation of the lift and its safety devices, and the hazards involved. See Safety Instructions [page 2](#) of this manual.

- Read and follow all safety instructions in this document and the power unit before operation. Advantage Lifts also recommends ALI’s “Lifting it Right” and “Safety Tips” from autolift.org.
- Drive the vehicle onto the lift platform using a spotter. It is recommended to center the wheelbase on the runways. Set the vehicle’s parking brake and leave the transmission in park / gear. Chock the vehicles wheels.
- Stand clear – Push the power switch on the power unit (*figures 11.1 & 11.2*) to raise vehicle to desired height. When the desired height is reached, release the power button then push the hydraulic release lever on the Power Unit and lower runways until it stops, check all four latches for full engagement in the square holes on each leg.
- To lower – push the power button to raise – rotate primary lock release handle and hold – push hydraulic release lever on Power Unit to lower (*figures 11.1 & 11.2*).
- Any hydraulic oil leakage, unusual noise, or excessive wear must be fixed before using lift.



Warning: Make sure all four latches release – if not STOP, raise higher until latch is clear, if a latch still does not release, adjust the threaded rod attached to the hiem joint end on the appropriate latch.

Cable Inspection Guide



Good Condition



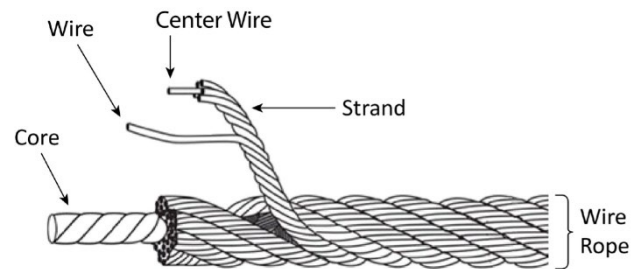
Broken Wires



Necking

How to Check Your Cables:

- Visually check for any cable deficiencies.
- Run a rag along the cables. This will check for any snags.
- Flex the cable to check for broken wires that may be concealed in between the strands of the cable.



When to Replace Your Cables:

- No adjustment is left.
- There are multiple broken wires.
- When heat damaged has occurred.
- Cable wear exceeds 10% of the diameters original size (necking).
- Evidence of corrosion pitting the wires or connectors.
- If you notice kinking, flattening, bird caging, cuts or other possible defects of a cable.
-

If you have any questions regarding the condition of your cables that may not be listed above, contact Advantage Lifts for assistance.

Always check the full length of the cable

Notes:

- When you replace one cable inspect the others to see if they need to be replaced as well.
- Small cable adjustments periodically will be required, but if frequent adjustments are required the cables may need to be replaced.
- Cables should be replaced when damage or other factors listed above are present.
- Visually inspect your cables **daily**. Perform an in-depth inspection **monthly**.

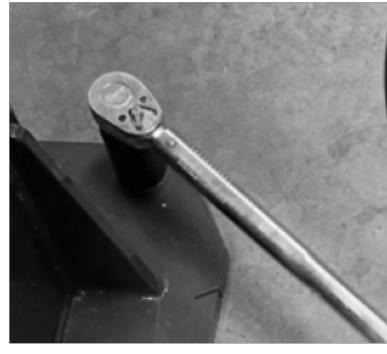
Anchoring Instructions



A



B



C

This lift does not require anchoring to the floor. If you choose to anchor the lift, which is **not** recommended, follow the instructions below.

- Make sure anchors are 8 inches from any wall, crack, or seam.
- Make sure the concrete has properly cured at least 28 days.
- Concrete shall have a compress strength of 3500 PSI and a minimum depth of 3-1/2 inches.

Concrete fasteners must meet criteria as set in the ANSI/ALI ALCTV “*Safety Requirements for Construction, testing and Validation*”. It is the owner’s responsibility to adhere to any local or seismic anchoring requirements that may be required by other agencies or codes. The following steps are a general guide, if in doubt use the fastener manufacturer’s & ANSI/ALI ALCTV requirements.

1. Choose a concrete fastener that meets ANSI standards for Automotive Lifts. Drill a hole as specified by the fastener manufacturer using a concrete hammer drill and a new drill bit.
2. When drilling the hole ensure the drill is perpendicular to the floor while periodically moving the drill in an up and down motion. Do not force the drill by over applying pressure. (A)
3. Blow the dust from the hole to increase the anchor's effectiveness.
4. Assemble the washers and nuts on the threaded end of the anchor. Tap anchor with a hammer (B) so the washer and nut are resting on the baseplate.
5. Hand tighten each nut and then using socket wrench (NOT an impact wrench) tighten each nut 2-4 turns. (C)

Approximate initial anchor torque is 100-pound feet, and re-torque is 70-pound feet. Check the bolt manufacturer specifications.

Automotive Lift Institute, Inc.

WL200 Series Label Kit

⚠ CAUTION	⚠ CAUTION
Lift to be used by trained operator only.	Authorized personnel only in lift area.
©	©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85, Cortland, NY 13045. These labels are protected by copyright.

www.autolift.org © 2006-2017 ALI/WL200

⚠ WARNING	⚠ WARNING
Clear area if vehicle is in danger of falling.	Remain clear of lift when raising or lowering vehicle.
©	©

⚠ WARNING	⚠ WARNING
Keep clear of pinch points when lift is moving.	Keep feet clear of lift while lowering.
©	©

NOTICE	NOTICE
Read operating and safety manuals before using lift.	Proper maintenance and inspection is necessary for safe operation.
©	©

⚠ WARNING	⚠ WARNING
Do not override self-closing lift controls.	Chock wheel to prevent vehicle movement.
©	©

NOTICE	NOTICE
Do not operate a damaged lift.	Proper maintenance and inspection is necessary for safe operation.
©	©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85, Cortland, NY 13045. These labels are protected by copyright.

www.autolift.org © 2006-2017 ALI/WL200

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85, Cortland, NY 13045. These labels are protected by copyright.

www.autolift.org © 2006-2017 ALI/WL200

Pictographs and Warning Labels used with permission of Automotive Lift Institute www.autolift.org.

Troubleshooting Guide

This system contains components that have stored electrical and mechanical energy. If the lift is not operating correctly follow proper lock out/tag out procedures. If possible place the lift on the locks to release mechanical energy stored in the cables and unplug the power unit and call Advantage Lifts at 763-300-5730 for further assistance. Repair work must be performed by a qualified person.

Trouble	Cause	Solution
Pump/motor does not start	<ul style="list-style-type: none"> • Improper electrical hook-up. • Blown fuse or breaker tripped. • Pump binding or stuck. • Motor thermal overload tripped. 	<ul style="list-style-type: none"> • Review electrical requirements. • Replace fuse/reset breaker. • Flush unit/replace pump. • Let motor cool.
Pump/motor operates but no pressure	<ul style="list-style-type: none"> • Wrong rotation of motor (air bubbles in outlet) 	<ul style="list-style-type: none"> • Rewire (qualified electrician)
Pump/motor operate low flow and/or low Pressure or does not hold the system.	<ul style="list-style-type: none"> • Clogged inlet strainer (cracking noise). • Relief valve leaking. • Dirt on seat. • Release valve leaking or out of adjustment • O-Ring missing or cut. • Relief valve setting too low • Defect in blowhole in motor end head internally. 	<ul style="list-style-type: none"> • Clean strainer in solvent • Tighten relief valve • Flush seat • Readjust stem setting. • Replace o-ring. • Readjust relief valve. • Replace motor.
Failure to lower	<ul style="list-style-type: none"> • Release valve stem sticking. • Lift out of adjustment. 	<ul style="list-style-type: none"> • Replace or readjust stem/cartridge. • Readjust lift
Air in oil	<ul style="list-style-type: none"> • Loose inlet connection. • Low fluid level. • Bad seals in pump. • Siphon check does not seat. 	<ul style="list-style-type: none"> • Tighten connections. • Add fluid. • Replace seals. • Replace pump.
Oil blows out the breather/filter port	<ul style="list-style-type: none"> • Oil reservoir was overfilled. • Vehicle has been lowered too fast. • Seal damage in cylinder. 	<ul style="list-style-type: none"> • Relieve pressure and reduce oil level. • Lower the lift slowly while under load. • Restrict lowering with manually controlled release valve • Replace cylinder seals
Motor functions, but lift will not rise	<ul style="list-style-type: none"> • Debris may be under check valve. • Oil levels are too low. 	<ul style="list-style-type: none"> • Simultaneously push the handle down and push the rise button; hold for 10-15 seconds • Check the reservoir and fill as needed.
Runways will not raise or lower, once raised	<ul style="list-style-type: none"> • Lift over capacity • Low oil levels 	<ul style="list-style-type: none"> • Remove load, try lifting again. • Add fluid. • Check hoses for pinches or leaks. • Remove air from the hydraulic system. • Replace hydraulic oil if contaminated
One corner of the lift runways is lower than the other three	Safety lock on the lower corner is not engaged.	<ul style="list-style-type: none"> • Raise the lift, and make sure are all locks are engaged on the same safety lock height. Adjust the hiem joint linkages.
Lift is stuck up in air past top lock.	<ul style="list-style-type: none"> • The cylinder has maxed out causing the check valve to lock up. 	<ul style="list-style-type: none"> • Hold in the power unit button for a few seconds and then slowly push down on the lowering handle.
Lift is making noise	<ul style="list-style-type: none"> • Check functional parts for wear. 	<ul style="list-style-type: none"> • Lubricate bushings and sheaves.
Lift chatters when in operation	<ul style="list-style-type: none"> • Legs are binding in the sleeves. 	<ul style="list-style-type: none"> • Wax the legs to allow the sliders to glide easily.

Lockout instructions: If the lift becomes inoperable in the raised position, lower the lift as to rest it on the nearest lock position and call Advantage Lifts at 763-300-5730 for further assistance. In the event of a mechanical issue that creates a safety concern disconnect the lifts power source and place a tag on the power unit stating "Do Not Use" until the issue is resolved.

Advantage Lifts offers technical support with all of our products. Call 763-300-5730 with any questions on the operation and maintenance of your lift. Our knowledgeable staff will be glad to help you.

Accessories

Rolling Jack Platform (ALI Certified)

Loosen the set screw on one set of wheels (axles that ride on the same track channel). Confirm the other 2 wheels are tight then place tightened wheels of the Rolling Jack Tray on one set of accessory rails. Slide the loosened axles in or out to allow the wheels to seat properly on the opposite accessory rail. Leave the wheels loose, this will allow the roller shafts for the other side to travel in and out slightly to take up any misalignment or skew. Lubricate the 4 wheels on the Rolling Jack Tray. (PN 40032). Rated for 4000lbs when placed within 48-inch of a crossmember. Rating decreases 50% for distances greater than 48-inches.

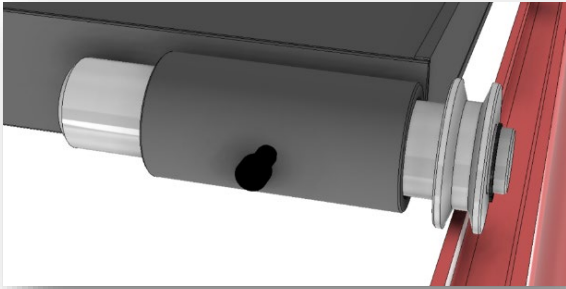


Figure 10.1 RJP

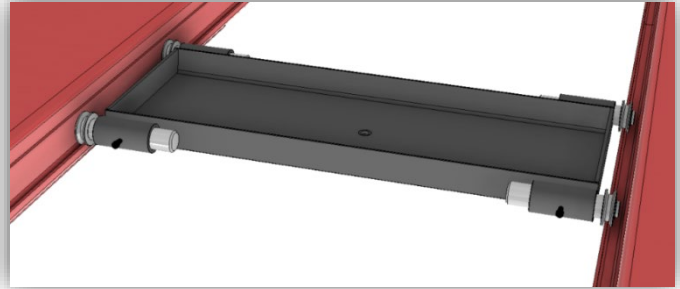


Figure 10.2 RJP

Casters

Place the caster bracket inside the slot features of the leg. Rotate the caster bracket inside the slot features until the base of the V is touching the top of the slot. The lift may only be moved if completely empty. Remove all vehicles, accessories, or stored items before moving. To lift, lower the crossmember on to the caster cradle until the legs are lifted off the ground. (PN 40247, set of 4).

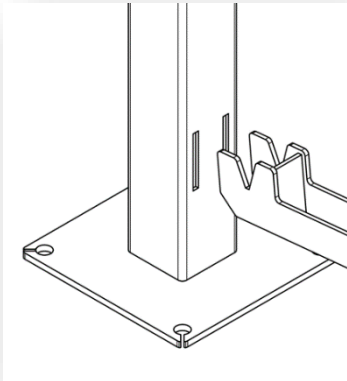


Figure 10.3 Casters

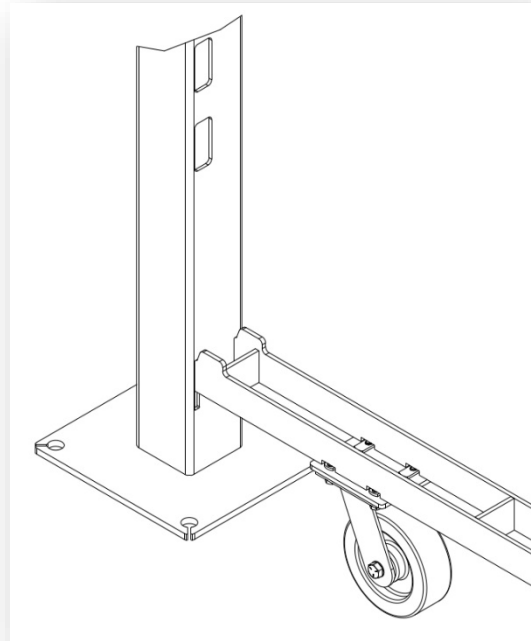


Figure 10.4 Casters

Ramps

To place the ramps on the lift, lower the lift to the ground. Hook the ramp tongue onto the slot on the automatic wheel stops.

Ramps **MUST BE REMOVED** during lift operation to avoid floor or ramp damage. (PN 40273, Set of 2)

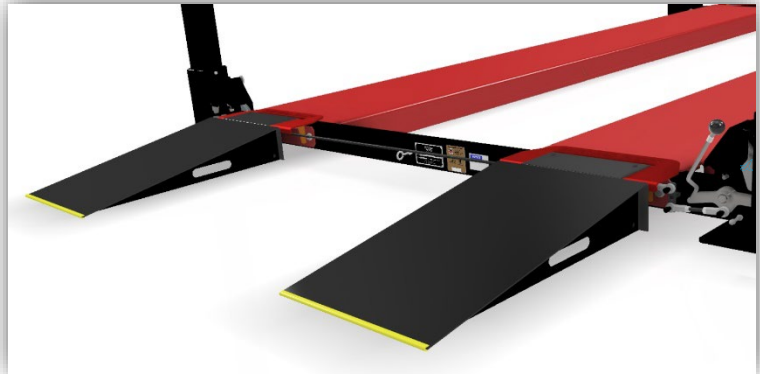


Figure 10.5 Ramps

Drip Pans

Drip pans rest on the accessory rails. They are not designed to support any weight. They should be used to catch drips, do not fill with fluid, use as a tool tray, or place anything onto the trays. As with all plastics an increase in heat decreases the structural stability of the tray. (PN 40199, set of 4)



Figure 10.5 Drip Trays

Solid Decks (ALI Certified)

Solid Decks rest on the accessory rails. They are designed to support 800lbs across a 10 x 10 section. Do not overload a deck or the lift capacity. Place all heavy items on the runways. (PN 40228 for WB/BB, & WF, PN 40254 for CL & XT)

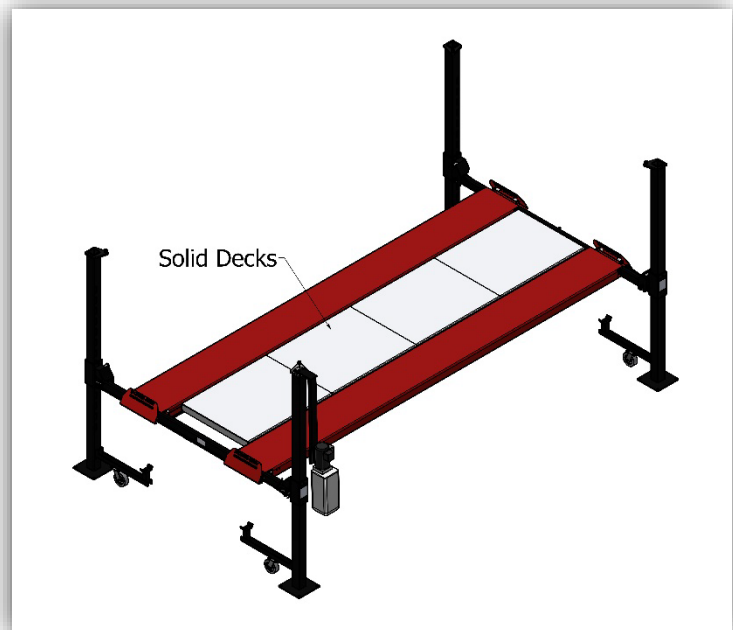


Figure 10.7 Solid Decks

Rolling Jack Air Over Hydraulic

Loosen the set screw on one set of wheels (axles that ride on the same track channel). Confirm the other 2 wheels are tight then place tightened wheels of the Rolling Jack Tray on one set of accessory rails. Slide the loosened axles in or out to allow the wheels to seat properly on the opposite accessory rail. Leave the wheels loose, this will allow the roller shafts for the other side to travel in and out slightly to take up any Placed on the accessory rails, the RJA allows the user to roll the jack the length of the lift and lift the front or rear of the vehicle. (PN 40130)

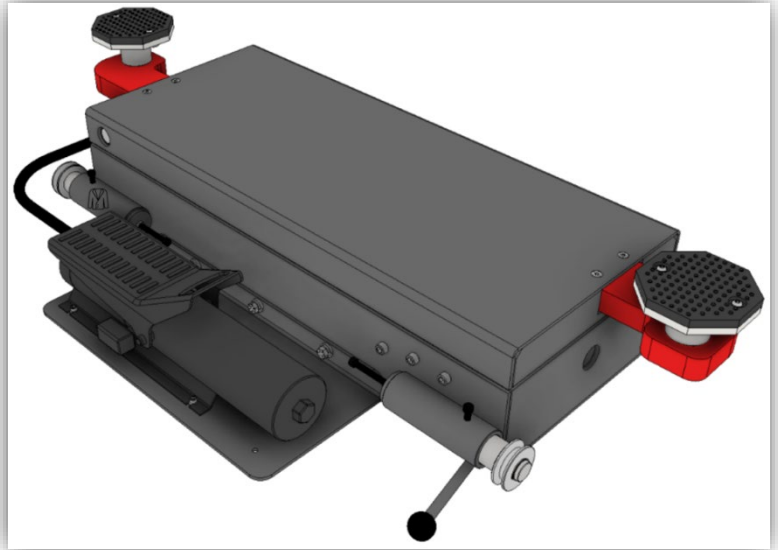


Figure 10.8 Rolling Jack

Boat – Trailer Tongue Rest

Install the two tongue crossmember mounts (3) using the 1/2-13 hardware in the holes shown. The assembly will be centered on the crossmember.

Next slide the vertical posts (2) into the crossmember mounts (3). Finally slide the cross bar (1) overtop the two vertical posts (2). The cross bar (1) will be held in place using the supplied quick release pins (4).

BT Tongue Rest Assembly (PN 40133) is supplied and only fits the BT lift. If the movable runway is shifted to it's narrowest track-width position. One of the tongue crossmember mounts (3) must be removed.

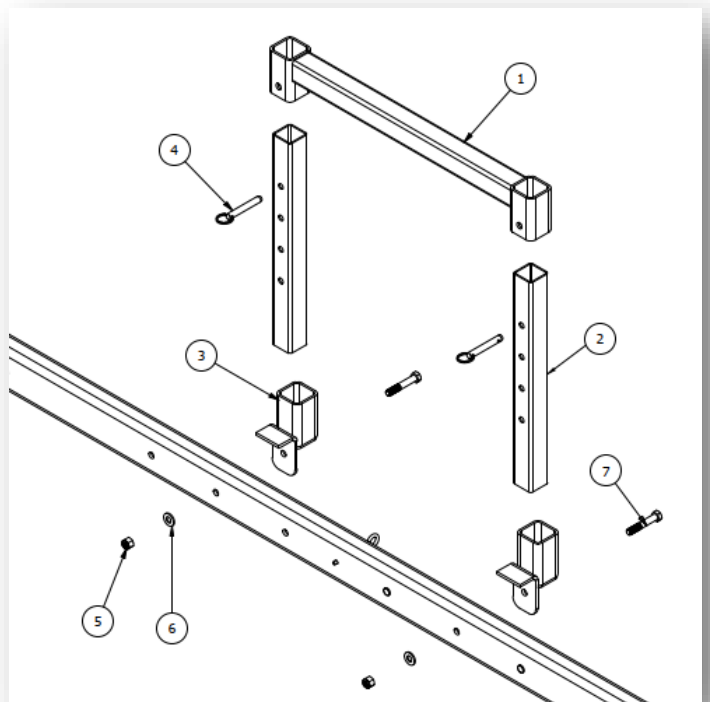
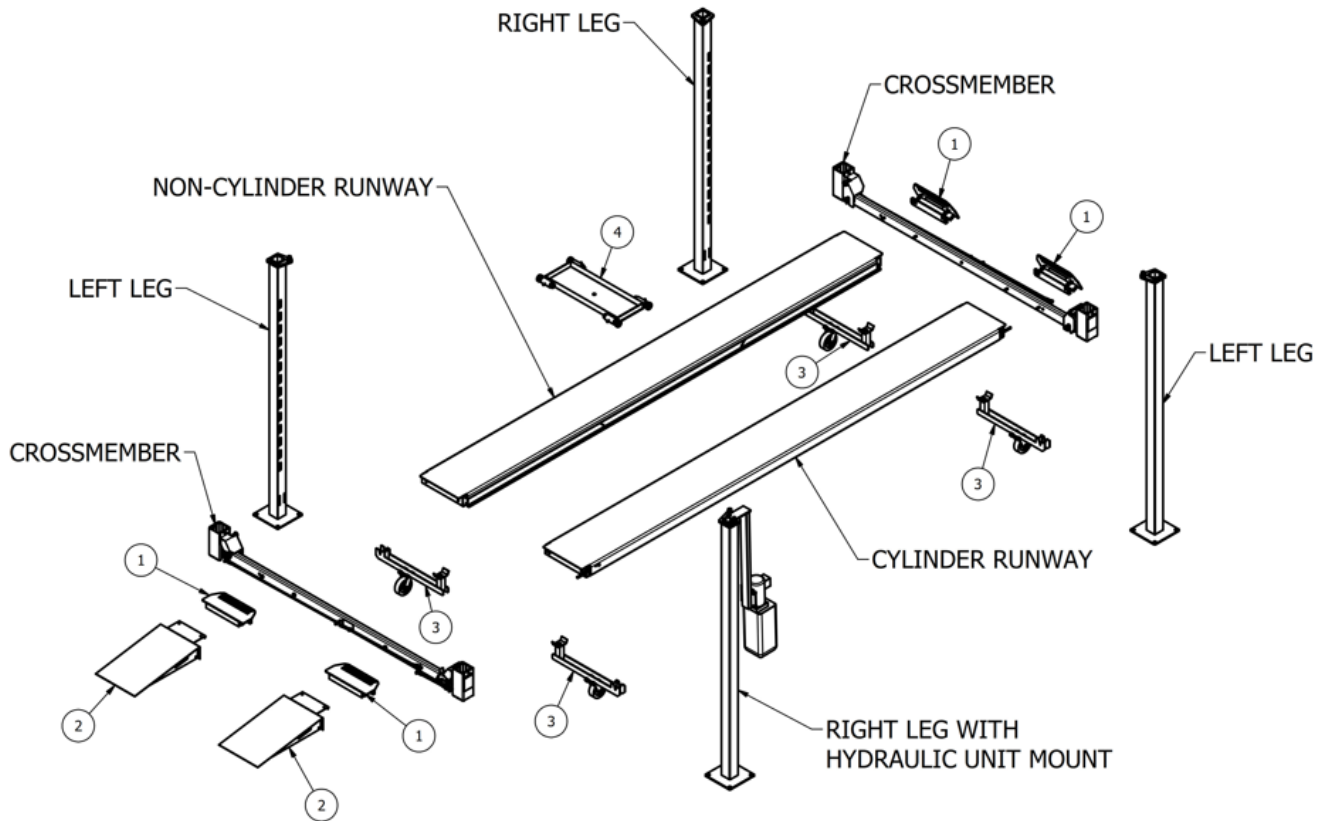


Figure 10.9 Tongue Rest

Item	Qty	PN	Description
1	1	40100	Tongue Rest Cross Bar Weldment
2	2	20086	Tongue Rest Vertical Post
3	2	40099	Tongue Crossmember Mount Assembly
4	2	60068-01	Pin Quick Release, Ring Grip 1/2 Diameter
5	2	60050-05	HHCS Grade 5 1/2-13 x 3 Zinc Plated Steel
6	2	60051-01	Flat Washer Grade 2 1/2 Zinc Plated Steel
7	2	60063-01	Nylon-Insert Lock Nut Grade 5 1/2-13 Zinc

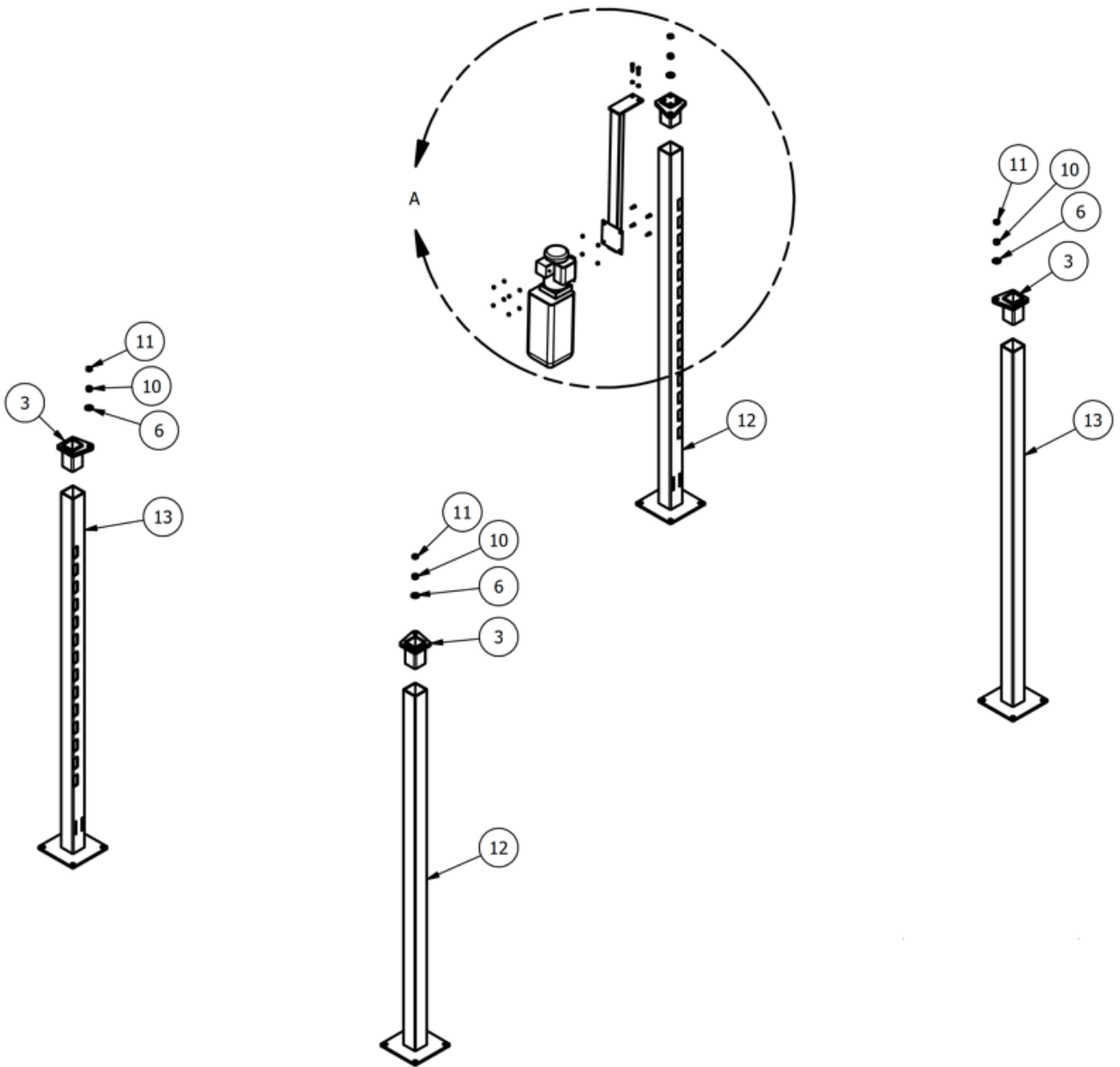
Parts List

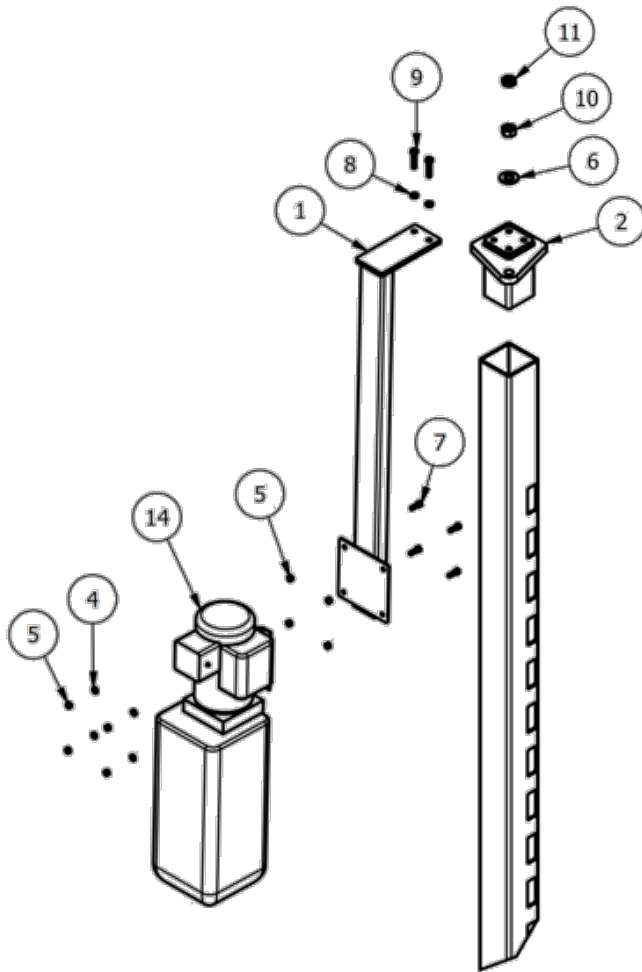
Main Lift Overview



Item	Qty	PN	Description
1	4	40204	Assembly, Wheel Stop
2	2	40205	Ramps
3	4	40246	Caster Assembly
4	1	40247	Rolling Jack Platform

Legs, Top Caps, Power Unit





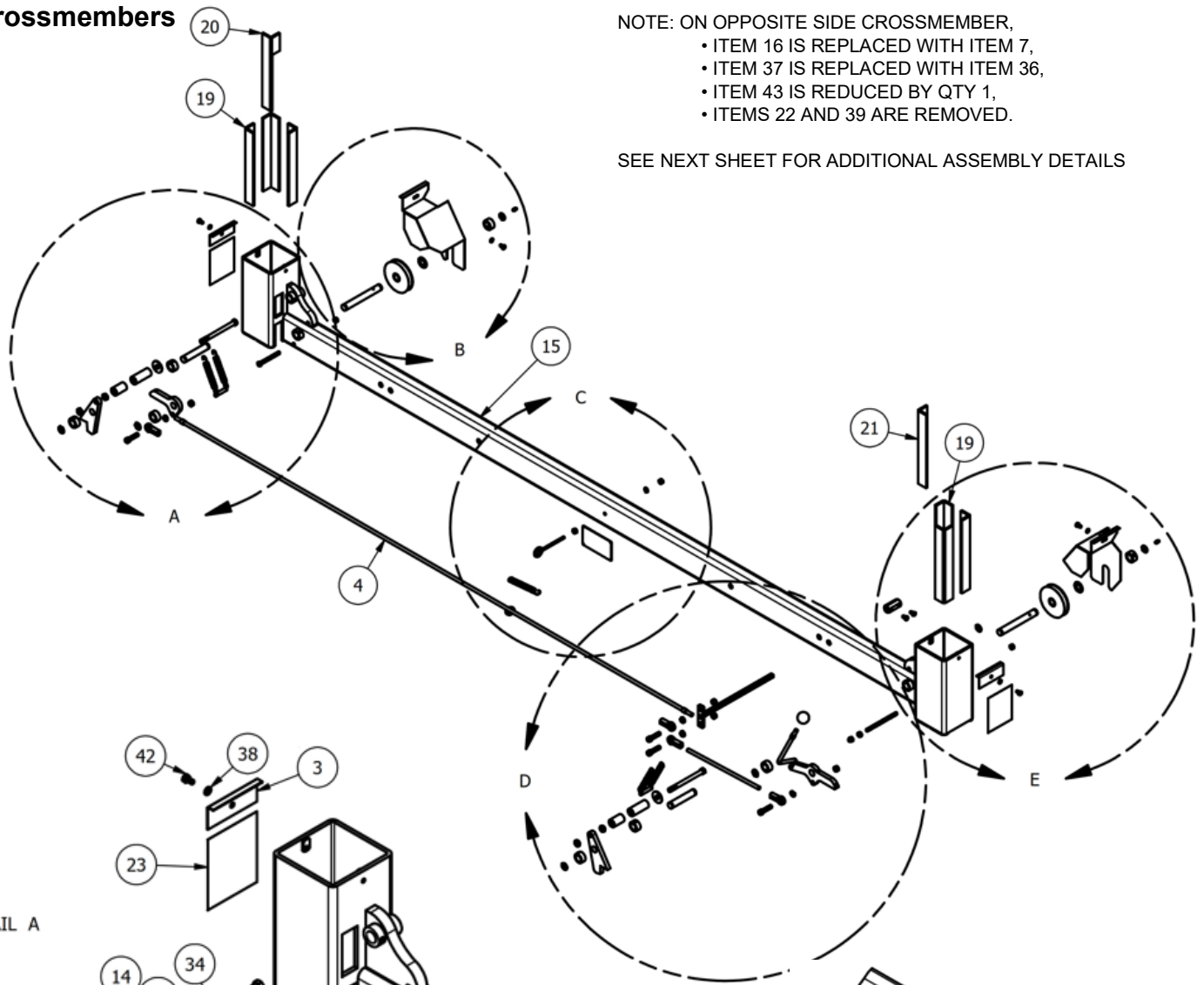
ITEM 14 HYDRAULIC UNIT	
110V UNIT	90010
220V UNIT	90043

Item	Qty	PN	Description
1	1	40223	Power Unit Mount
2	1	40224	Top Cap w/ Holes
3	3	40005	Top Cap
4	4	60007-01	5/16 Split Lock Washer
5	13	60006-01	5/16-18 Nut
6	4	60018-01	3/4 Flat Washer
7	4	60019-01	5/16-18 x 1 HHCS
8	2	60021-01	3/8 Split Lock Washer
9	2	60001-04	3/8-16 x 1 3/4 HHCS
10	4	60028-01	3/4-10 Nut
11	4	60028-02	3/4-10 Jam Nut
12	2	40220	101" Right Leg Post
12	2	40218	79" Right Leg (CL Only)
13	2	40221	101" Left Leg Post
13	2	40219	79" Left Leg (CL Only)

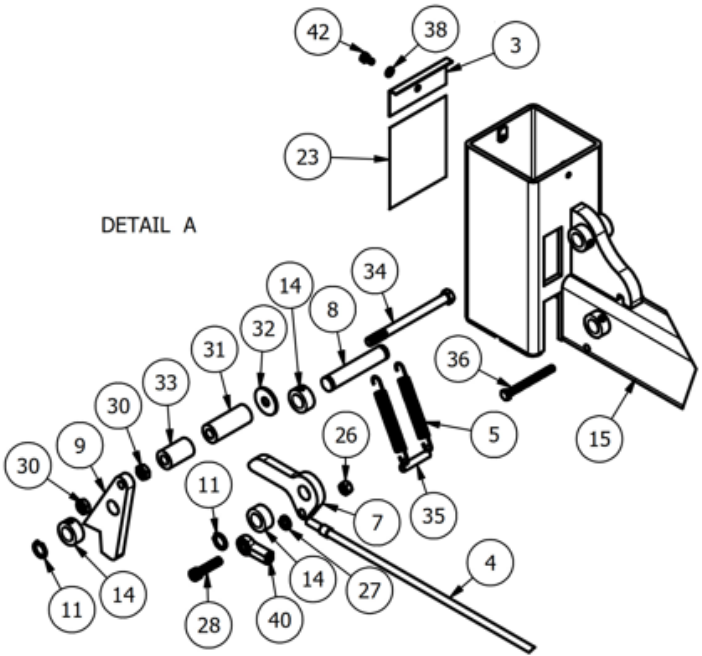
Crossmembers

NOTE: ON OPPOSITE SIDE CROSSMEMBER,
 • ITEM 16 IS REPLACED WITH ITEM 7,
 • ITEM 37 IS REPLACED WITH ITEM 36,
 • ITEM 43 IS REDUCED BY QTY 1,
 • ITEMS 22 AND 39 ARE REMOVED.

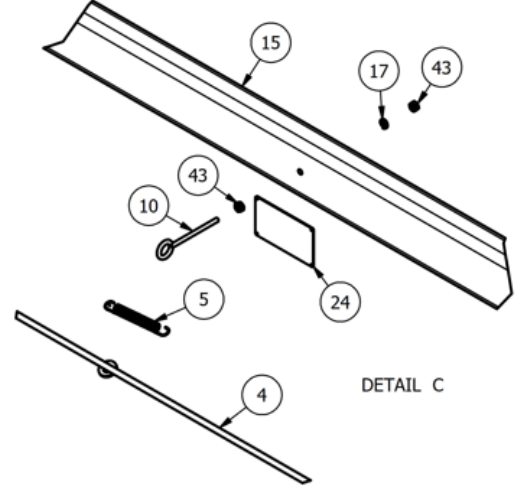
SEE NEXT SHEET FOR ADDITIONAL ASSEMBLY DETAILS



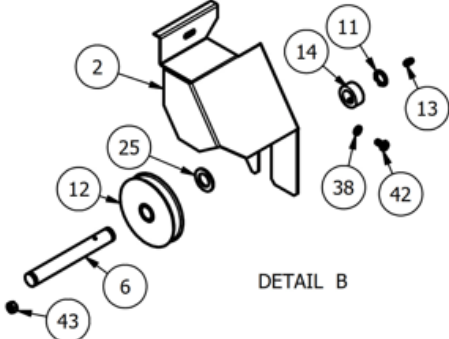
DETAIL A



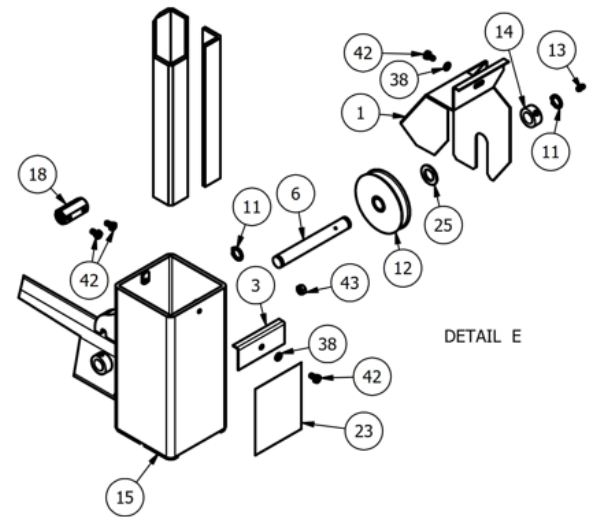
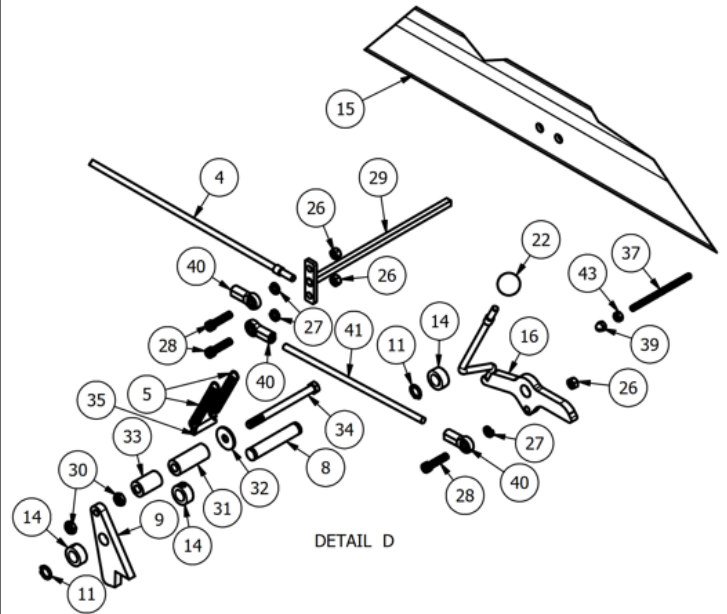
DETAIL C



DETAIL B



Item	Qty	PN	Description
1	1	20440	Pulley Cover (Right)
2	1	20441	Pulley Cover (Left)
3	2	20112	Nylon Retainer Bracket
4	1	TABLE	Crossmember Rod
5	5	60061-01	Extension Spring
6	2	20160	Primary Pulley Shaft
7	1	20021	Primary Lock
8	2	20020	Secondary Pulley Shaft
9	2	20022	Secondary Lock
10	1	60038-02	5/16-18 x 3-1/2 Eyebolt
11	8	60053-01	0.75 Snap Ring
12	2	40009	Single Pulley Assembly
13	2	60010-01	1/4-28 Grease Fitting
14	8	60004-01	3/4" Locking Collar
15	1	TABLE	Crossmember Weldment
16	1	40236	Handle Lock Weldment
17	1	60007-01	5/16 Split Lock Washer
18	1	20037	Square Rod Coupler 7K
19	6	20297	Common Slider
20	1	20298	Left Slider
21	1	20299	Right Slider
22	1	60058-01	Ball Handle 3/8-24
23	2	90009	Cross Member Label
24	1	90055	Serialized Metal Tag
25	2	60131-01	Washer UHMW
26	4	60022-01	3/8-24 Nut
27	4	60021-01	3/8 Split Lock Washer
28	4	60097-01	3/8-24 x 1-1/2 SHCS
29	1	40179	BYB Square Rod Ends
30	2	60124-01	7/16-14 Jam Nut
31	1	20179	Secondary Lock Pulley
32	1	60125-01	7/16 Zinc-Plated Washer
33	1	20181	Secondary Lock UHMW
34	1	60128-01	7/16-14 x 5-1/2 HHCS
35	2	60129-01	0.375 Headless Pin
36	1	60132-01	5/16-18 x 3-1/4 HHCS SS
37	1	60133-01	5/16-18 Threaded Rod
38	8	60032-01	1/4 Flat Washer
39	1	60052-01	5/16-18 Acorn Nut
40	4	60023-01	Ball Joint Rod End
41	1	TABLE	Crossmember All thread
42	6	60015-01	1/4-20 x 1/2 HHCS
43	5	60006-01	5/16-18 Nut

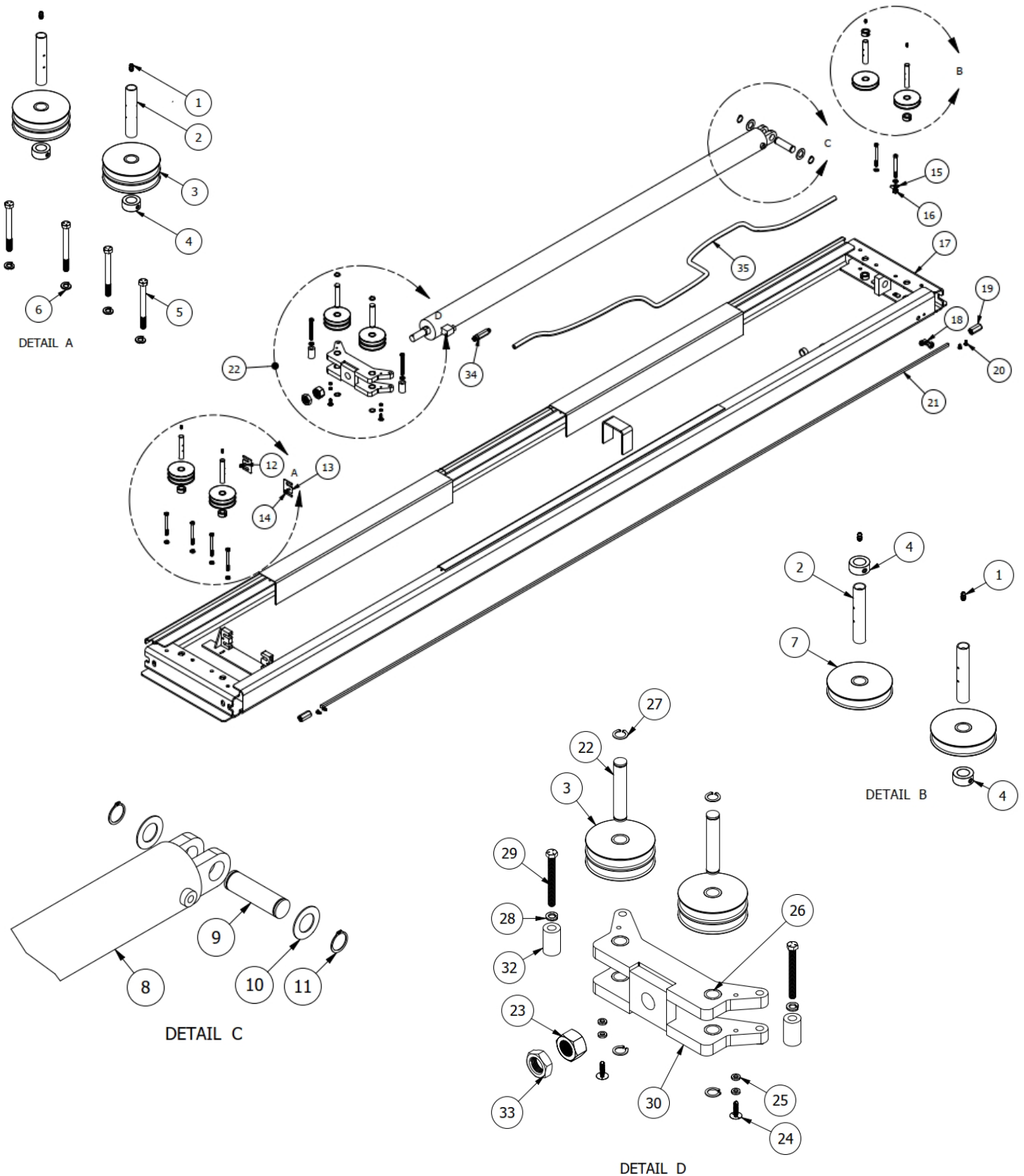


Crossmember Part Variations			
Model	4	15	42
CL/XT	40184	40238	60137-01
WF	40152	40237	60034-04
WB	40152	40237	60034-04
BT	40185	40240	60137-01

Powered Runway Parts List for CL, WB, BB, WF, BT			
Item	Qty	PN	Description
1	1	20049	Cable Keeper
2	4	20161	4 Pulley Pin BYB
3	1	20218	Cylinder Pin
4	1	20419	Cable Block
5	2	20421	UHMW Plastic Single Pulley Spacer
6	2	20422	UHMW Plastic Double Pulley Spacer
7	2	40009	Single Pulley Assembly
8	2	40045	Double Pulley Assembly
9	1	SEE TABLE	Cylinder Runway Weldment
10	2	60009-01	1 Inch Retaining Ring
11	4	60010-01	1/4-28 Grease Fitting
12	1	60015-03	1/4-20 x 1-1/4 HHCS
13	6	60021-01	3/8 Split Lock Washer
14	1	60033-01	Hydraulic Cylinder Nut
15	2	60059-01	Cylinder Washer, 1 Inch
16	1	60064-01	1/4-20 Nut
17	6	60127	3/8-16 x 3 3/4 HHCS
18	1	60130	1"-14 Hex Nut
19	1	60134	3/8-16 Flange Nut
20	1	60135-01	Galvanized Steel Loop Clamp
21	1	SEE TABLE	3/8 Hydraulic Hose Assembly
22	1	90005	Hydraulic Bulkhead 3/8 JIC
23	1	90032	2 GPM Flow Regulator (BT uses PN 90031)
24	1	SEE TABLE	Hydraulic Cylinder
25	1	20227	Nylon Cable Block Slider
26	1	SEE TABLE	Cable 1 (60138-)
27	1	SEE TABLE	Cable 2 (60138-)
28	1	SEE TABLE	Cable 3 (60138-)
29	1	SEE TABLE	Cable 4 (60138-)
30	1	SEE TABLE	Non-Cylinder Runway (Not Shown)

Part Numbers Per Lift Type								
Model	9	21	24	26	27	28	29	30
CL	40227	90003	90036	-01	-02	-03	-04	40226
WF	40214	90002	90008	-09	-10	-11	-12	40225
WB	40231	90002	90008	-09	-10	-11	-12	40230
BT	40214	90002	90008	-13	-14	-15	-16	40225

XT Runway



Powered Runway Parts List for XT			
1	4	60010-01	Grease Fitting
2	4	20161	Runway Pin
3	4	40045	Double Pulley Assembly
4	4	60004-02	Set Screw Collar
5	6	60127-01	HHCS Grade 5 3/8-16 X 3 3/4 Zinc Plated
6	6	60021-01	Lock Washer 3/8 Zinc Plated Steel
7	2	40009	Single Pulley Assembly
8	1	90036	Hydraulic Cylinder
9	1	20218	Cylinder Pin
10	2	60059-01	Cylinder Washer, 1 Inch
11	2	60009-01	External Retaining Ring Standard for 1 OD
12	2	60015-03	1/4-20 x 1-1/4 HHCS
13	2	20056	E-Block Retainer
14	2	60064-01	Hex Nut 1/4-20 Zinc Plated Steel
15	1	60135-01	Loop Clamp
16	1	60134-01	Serrated Flange Nut 3/8-16
17	1	40229	XT Powered Runway Weldment
18	1	90005	Bulkhead fitting 3/8 JIC
19	2	20037	Square Rod Coupler
20	4	60015-01	HHCS 1/4-20 x 1/2 Zinc Plated Steel
21	1	20182	Runway Square Rod
22	1	40073	Double Pulley Block Assembly
23	1	60033-01	Hex Nut 1-14 Zinc Plated Steel
24	2	60036-01	Push-In Rivet Black
25	4	60037-01	Plastic Washer White
26	4	60065-01	Sleeve Bearing Press Fit .75 ID x 1.00 OD
27	4	60053-01	External Retaining Ring Standard For 3 /4
28	2	60021-01	Lock Washer 3/8 Zinc Plated Steel
29	2	60001-06	HHCS 3/8-16 x 3 1/2 Zinc Plated Steel
30	1	40072	Double Pulley Block Weldment
31	2	20181	UHMW Spacer
32	2	20020	Secondary Pulley Shaft
33	1	60130-01	Jam Nut 1-14 Zinc Plated Steel
34	1	90031	Inline Flow Regulator 1.0 GPM
35	1	90003A	Hydraulic Hose Assembly 3/8 hose, 72 long
36	1	60138-05	Cable 1 (Not Shown)
37	1	60138-06	Cable 2 (Not Shown)
38	1	60138-07	Cable 3 (Not Shown)
39	1	60138-08	Cable 4 (Not Shown)
40	1	40226	Non-Cylinder Runway (Not Shown)

