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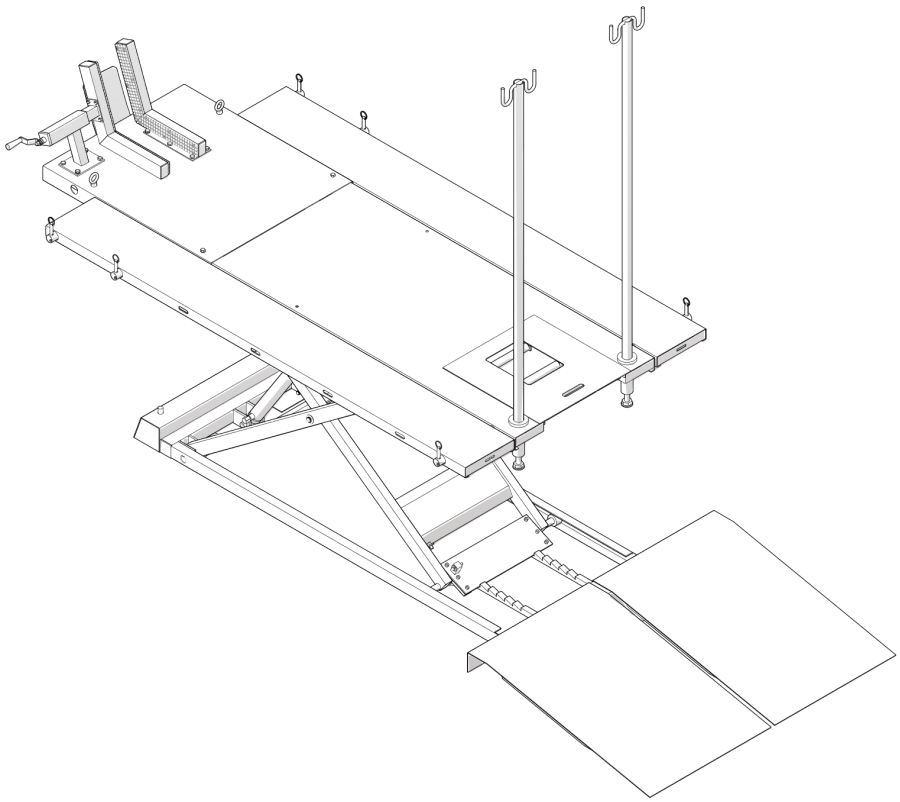
ATV / Motorcycle Lift
Installation and Operation Manual

Manual P/N 5900183 — Manual Revision F — April 2025

Model:

- **RML-1500XL**



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

⚠ DANGER

IMPORTANT SAFETY INSTRUCTIONS, SAVE THESE INSTRUCTIONS! **Read the *entire* contents** of this manual ***before*** using this product. Failure to follow the instructions and safety precautions in this manual can result in 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. RML-1500XL ATV/Motorcycle Lift, *Installation and Operation Manual*, Manual P/N 5900183, Revision F, released April 2025.

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

Warranty. The BendPak Ranger warranty is more than a commitment to you: it is also a commitment to the value of your new product. For full warranty details, contact your nearest BendPak Ranger dealer or visit **bendpak.com/support/warranty**.

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

Registration. Go to **bendpak.com/support** to register your product.

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 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 this product if it can be used safely!***

Table of Contents

Introduction

The RML-1500XL ATV/Motorcycle Lift is rated to lift Motorcycles or ATVs up to 1,500 pounds (680 kg).

More information about the full line of BendPak Ranger products is available online at **rangerproducts.com**.

This manual is mandatory reading for all users of the RML-1500XL, including anyone who installs, operates, maintains, or repairs it.

⚠ 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.

Keep this manual on or near the equipment so that anyone who uses or services it can read it.

Technical support and service for your product is available directly from your distributor, by emailing **support@bendpak.com**, or by calling **BendPak Ranger at (805) 933-9970**.

You may also contact BendPak Ranger for consultation on parts replacement (please have the serial number and model 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. Refer to ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service of Automotive Lifts* for more information about safely installing your Lift.

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

IMPORTANT SAFETY INSTRUCTIONS! SAVE THESE INSTRUCTIONS!

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with damaged pneumatic or hydraulic hoses and fittings or if the equipment has been dropped or damaged – until it has been examined by a qualified service person.
4. Do not let pneumatic or hydraulic hoses hang over the edge of a table, bench, or counter or come in contact with hot manifolds or moving fan blades.

5. To reduce the risk of fire, do not operate in the vicinity of open containers of flammable liquids (gasoline).
6. Adequate ventilation should be provided when working on operating internal combustion engines.
7. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
8. Do not use on wet surfaces or expose to rain.
9. Use only as described in this manual. Use only BendPak recommended attachments.
10. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
11. To reduce the risk of injury, close supervision is necessary when this product will be used around children.
12. To reduce the risk of injury, ***never*** attempt to lift more than the rated capacity.
13. The Lift uses pneumatic and hydraulic pressure; if your organization has Lockout/Tagout policies, make sure to implement them after connecting the Lift to a power source.
14. Only operate your Lift between temperatures of +41°F to +104°F (+5°C to +40°C).
15. The Lift should ***only*** be operated by authorized personnel. Keep children and untrained personnel away from the Lift.
16. Do not make any modifications to the Lift; this voids the warranty and increases the chances of injury or property damage.
17. Do not use the Lift while tired or under the influence of drugs, alcohol, or medication.
18. Consider the work environment. Keep the work area clean. Cluttered work areas invite injuries. Keep areas well lit.
19. **Always** make sure the Lift is secured on Safety Locks before attempting to work on or near a Vehicle.
20. Make a thorough inspection of the product at least once a year. Replace any damaged or severely worn parts, decals, or warning labels. Replace worn or damaged parts with BendPak or BendPak approved parts and assemblies only.
21. BendPak recommends referring to the ANSI/ALI ALIS Standard *Safety Requirements for Installation and Service* for more information about safely installing, using, and servicing your Lift.
22. RML-1500XL is an ATV/ Motorcycle Service Lift. ***Use it only for its intended purpose.***
23. You ***must*** wear OSHA-approved (publication 3151) personal protective equipment at all times when installing, using, maintaining, or repairing the Lift. Leather gloves, steel-toed work boots, eye protection, back belts, and hearing protection are ***mandatory.***
24. Keep loads balanced on the Lift. Clear the area immediately if a Vehicle is in danger of falling off the Lift. Do not make any modifications to the Lift.
25. Modifications void the warranty and increases the chances of injury or property damage. ***Do not modify any safety-related features in any way.***

26. Make sure all operators read and understand this Installation and Operation Manual. ***Keep the manual near the Lift at all times.***
27. While handling a Hydraulic Cylinder or a Hydraulic Hose, ***always*** wear gloves. In rare cases, a needle-like stream of hydraulic fluid (even at low pressure) can penetrate fingers, hands, or arms; such a puncture can feel like a bite, electric shock, or a needle prick. While it may seem like a minor issue, any amount of Hydraulic Fluid injected into the human body is a serious issue. Anyone suffering such a puncture wound should be ***immediately*** taken to a hospital emergency room to determine the extent of the injury. Explain the circumstances of the injury to the attending physician, including what kind of Hydraulic Fluid was involved. Do not assume a puncture wound that could have been caused by Hydraulic Fluid is a minor issue; it could be life threatening.
28. Make an inspection of the Lift ***before*** using it. Check for damaged, worn, or missing parts. Do not use it if you find any of these issues. Take it out of service, then contact an authorized repair facility, your dealer, or BendPak at **(877) 432-6627** or **support@BendPak.com**.

⚠ DANGER When handling Hydraulic Fluid, always observe the manufacturer's safe handling instructions found in their Material Safety Data Sheet (MSDS).

Symbols

Following are the symbols used in this manual:

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

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

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

NOTICE Calls attention to a situation that, if not avoided, could result in product or property damage.

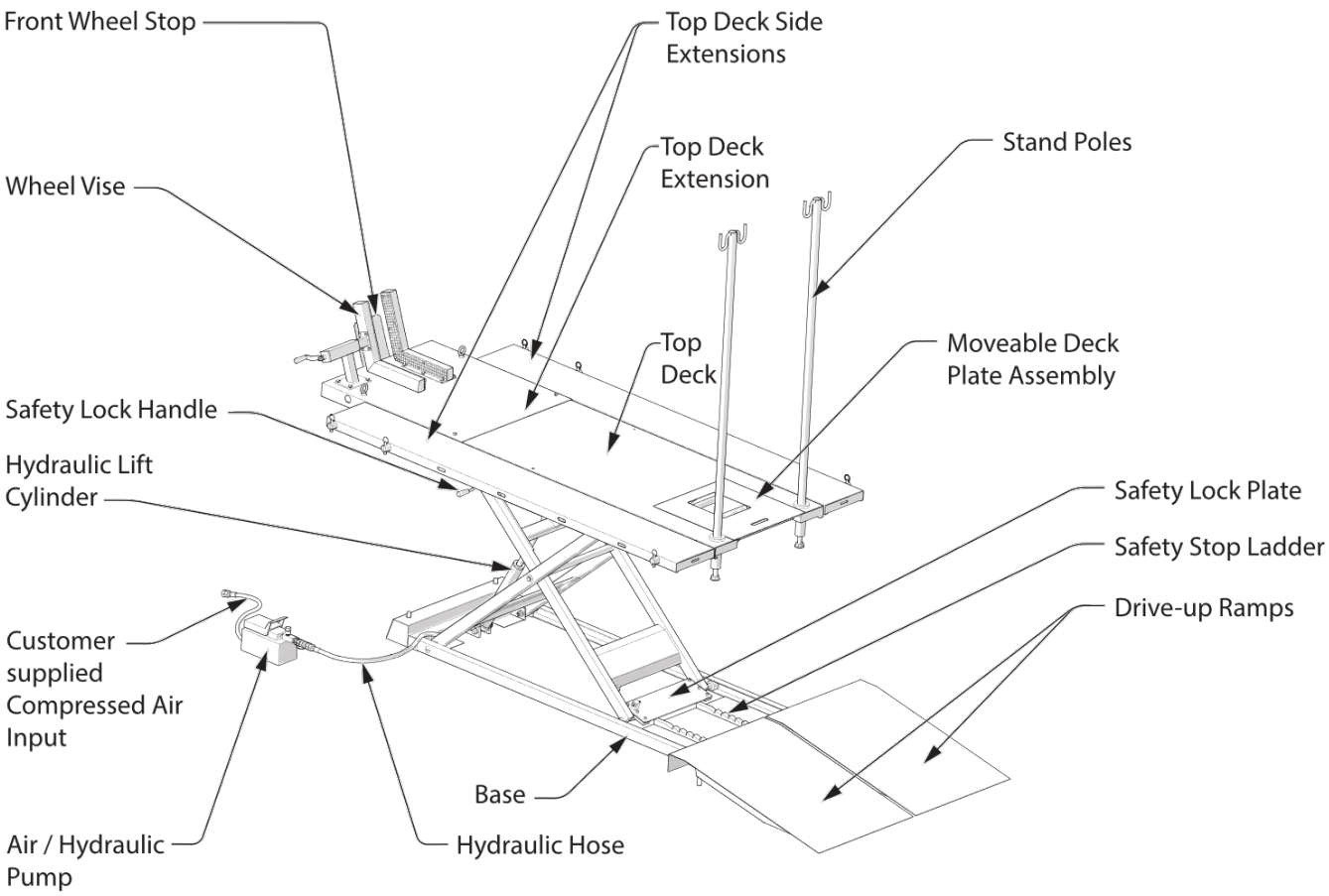
Tip Calls attention to information that can help you use your product better.

Liability Information

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

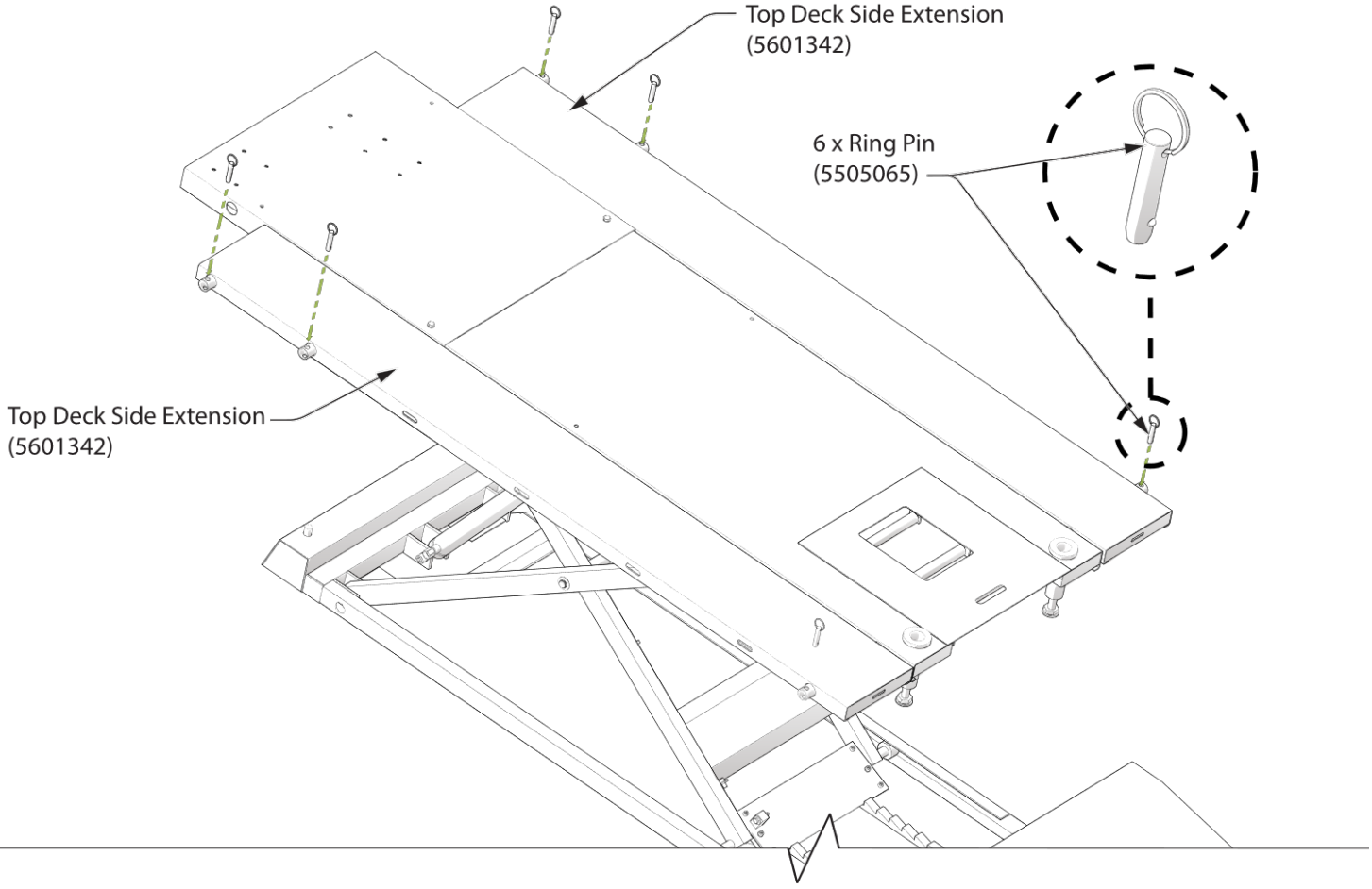
- Use of the product for *any purposes* other than those described in this manual.
- Modifications to the equipment without prior, written permission from BendPak Inc.
- Injury or death caused by modifying, disabling, overriding, or removing safety features.
- Damage to the equipment from external influences.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

Components



- **Top Deck**. The flat section on which to secure the ATV or Motorcycle. Includes the Front Wheel Vise (for clamping the front tire). The Top Deck is used when lifting Motorcycles, or with the Side Extensions installed for lifting an ATV.
- **Top Deck Side Extensions**. Removable. Makes the Top Deck *wider*. Use for lifting an ATV.
- **Top Deck Front Extension**. Removable. Makes the Top Deck *longer*.
- **Wheel Vise**. Opens and closes to let you securely hold the front tire of the Vehicle on the Top Deck. Can be bolted to the Top Deck or to the Front Deck Extension.
- **Front Wheel Stop**. Prevents the Motorcycle Wheel from running over the front of the Top Deck.
- **Base**. The bottom section of the Lift. It includes the Adjustment Rods, the Safety Lock Plate, the Safety Locks, Lift Cylinder and the Ramps.
- **Safety Lock Release Handle**. Controls the location of the Safety Lock Plate. When in the Lock position, lowering the Lift engages the Lift on a Safety Lock. When in the Release position, lowering the Lift moves the Lift all the way to the ground.

- **Safety Stop Ladder**. Holds the Lift in position at the desired height ***once engaged***.
- **Safety Lock Assembly**. The part of the Lift that engages on the Safety Locks.
- **Hydraulic Cylinder**. Raises and lowers the Top Deck using hydraulic energy from the Air/Hydraulic Pump.
- **Drive-Up Ramps**. Two ramps, wide enough (when both are installed) to accommodate ATVs.
- **Air/Hydraulic Pump**. Uses pneumatic (air) power to provide hydraulic power to raise the Lift. If you have a pressurized air supply available (40 to 120 psi at 105 in^3), you can connect it to the Pump to raise the Lift.
- **Stand Poles**. Tall poles on the Ramp end of the Lift that provide anchor points to assist in rigging, tie-downs and lifting the Motorcycle or ATV on the Top Deck.
- **Top Deck Side Extension Tubes and Ring Pins**. Three long Rods that support and connect the Top Deck Side Extensions and the Front Extension to the Top Deck. Each Connecting Rod has a Ring Pin on each end (to lock the tube in place).



Frequently Asked Questions

Question: How much weight can the RML-1500XL raise?

Answer: The RML-1500XL can raise ATVs or Motorcycles up to 1,500 pounds (680 kg).

Q: What if I want to raise an ATV or Motorcycle that is slightly **over** the weight capacity?

A: **Do *not* do this**! This is ***not*** an intended use of the product; you could damage the Lift and injure bystanders. You must ***not*** raise any loads that exceed the rated capacity of the Lift.

Q: How far off the ground will the RML-1500XL raise my Vehicle?

A: It depends on which Safety Lock you engage. The RML-1500XL has six Safety Lock positions, so you can raise the Top Deck of the Lift anywhere from 24 in (610 mm) to 40.25 in (1,022 mm) off the ground, whichever height is the right height for the work you are doing.

Q: Can the RML-1500XL be installed or used outside?

A: Yes. That being said, an outside environment is harder on the Lift. Our recommendation is to use the Lift inside. If you have to use it outside, we recommend storing it inside, moving it outside while you are using it, then moving it back inside when not in use. Keep the Lift clean and dry as much as possible, especially the Air/Hydraulic Pump. Remove snow and ice promptly, Top Deck, extensions, and Drive-up Ramps may be slippery when wet or icy.

Q: Can I put the Air/Hydraulic Pump on either side of the Lift?

A: Yes. The Air/Hydraulic Pump can be located on either side, as far away as the Hose allows.

Q: What do Safety Locks do?

A: Safety Locks use gravity to hold the Top Deck up, once the Lift is ***engaged*** on a Safety Lock. Even if the Lift loses power, the Top Deck stays where it is if you *engaged* on a Safety Lock. *When you raise a Vehicle, make sure to engage the Lift on a Safety Lock*.

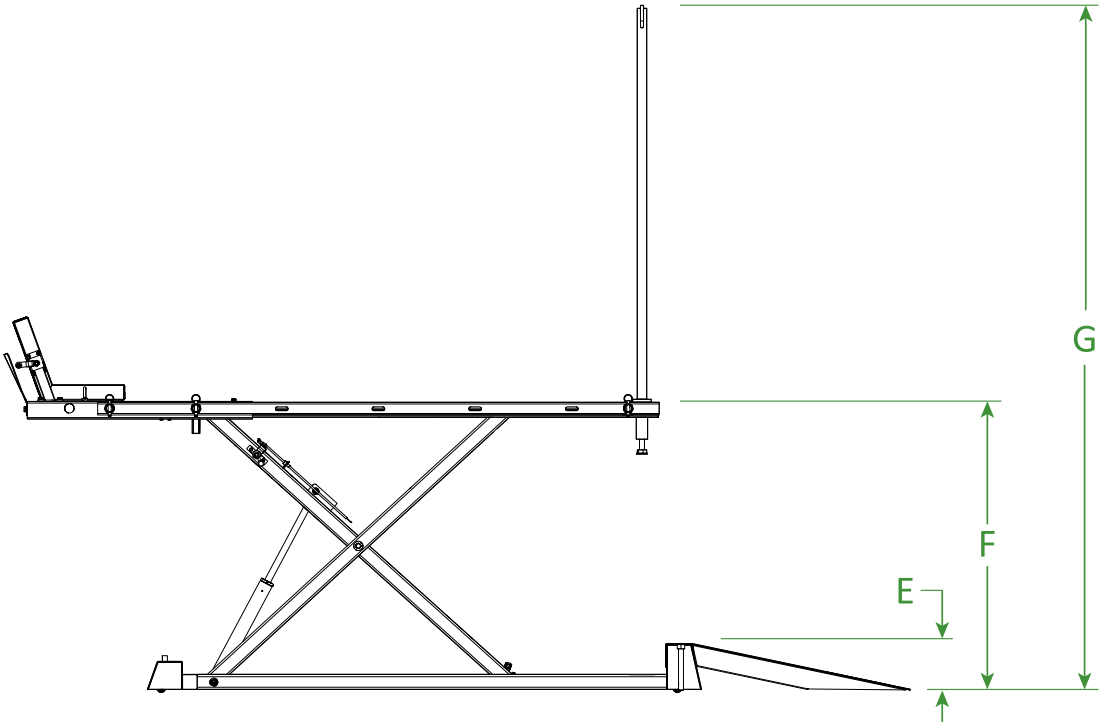
Q: Which end of the Lift is the “front”?

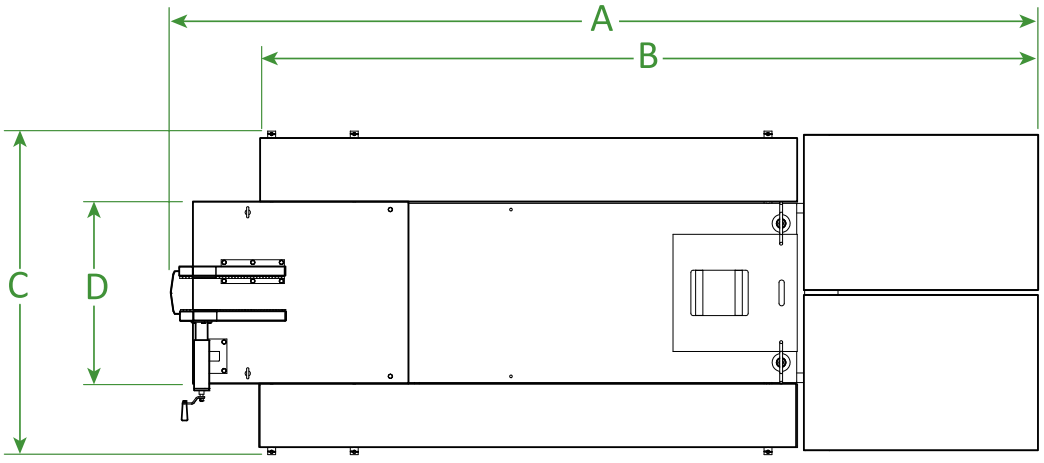
A: The end with the Wheel Vise is the Front. The Drive-Up Ramps are located at the rear.

Q: Anything else I should be aware of?

A: Be careful around the Lift. Be safe. Do not ride the Vehicle onto it. Do not let people sit on a Vehicle while it is on the Lift. Pay attention and use common sense, and the Lift will be a long-lasting, useful tool. Use it only for its intended purpose, as described in this manual – the lifting of motorcycles and ATVs up to 1,500 pounds (680 Kg).

Specifications





Specification	RML-1500XL
A - Overall Length with Extension and Ramp	141.8 in. (3,603) mm
B - Overall Length with Ramp, ***No Extension***	123.75 in. (3,142) mm
C - Overall Width with Side Extension Decks	53.3 in. (1,354) mm
D - Overall Width with ***No Side Extension Decks***	31.9 in. (810) mm
E - Lowered Height	7.5 in. (188) mm
F - Full Rise - Top Deck	45.3 in. (1,153) mm
G - Top of Stand Poles at Full Rise	108 in. (2,740) mm
Top Deck – 1st Lock Position	24.5 in. (625) mm
Top Deck – 6th Lock Position	40.3 in. (1,023.5) mm
Lifting Capacity	1,500 lbs. (680) kg
Air Supply	40 to 120 psi (2.75-8.27 bar) at 98 to 105 in^3 (1.6-1.72l)/min
Power Supply / Pump	Compressed Air / Hydraulic

Specifications subject to change without notice.

Installation

This section describes how to prepare your ATV/Motorcycle Lift for normal operation. Perform the tasks in the order listed.

Installation Safety Rules

Pay attention at all times during installation. Use appropriate tools and equipment. Stay clear of moving parts. Keep hands and fingers away from pinch points. ***Safety is a top priority***.

Use caution when unpacking the Lift. The unit is heavy and the weight is not evenly distributed; dropping or knocking over components could cause equipment damage and personal injury.

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

Only experienced, trained technicians are allowed to install the Lift.

⚠ **CAUTION** Certain parts of installing the Lift are difficult for just one person. Ranger strongly recommends having two or more persons work together to install the Lift.

Get the Right Tools

You may need some or all of the following tools and supplies:

- Metric Wrench Set
- Metric Socket and Ratchet Set
- Metric Hex Key Set
- Forklift or Shop Crane, with Lifting Strap
- White Lithium Grease
- Pneumatic fittings and hose to connect to the shop's compressed air supply

Finding a Location

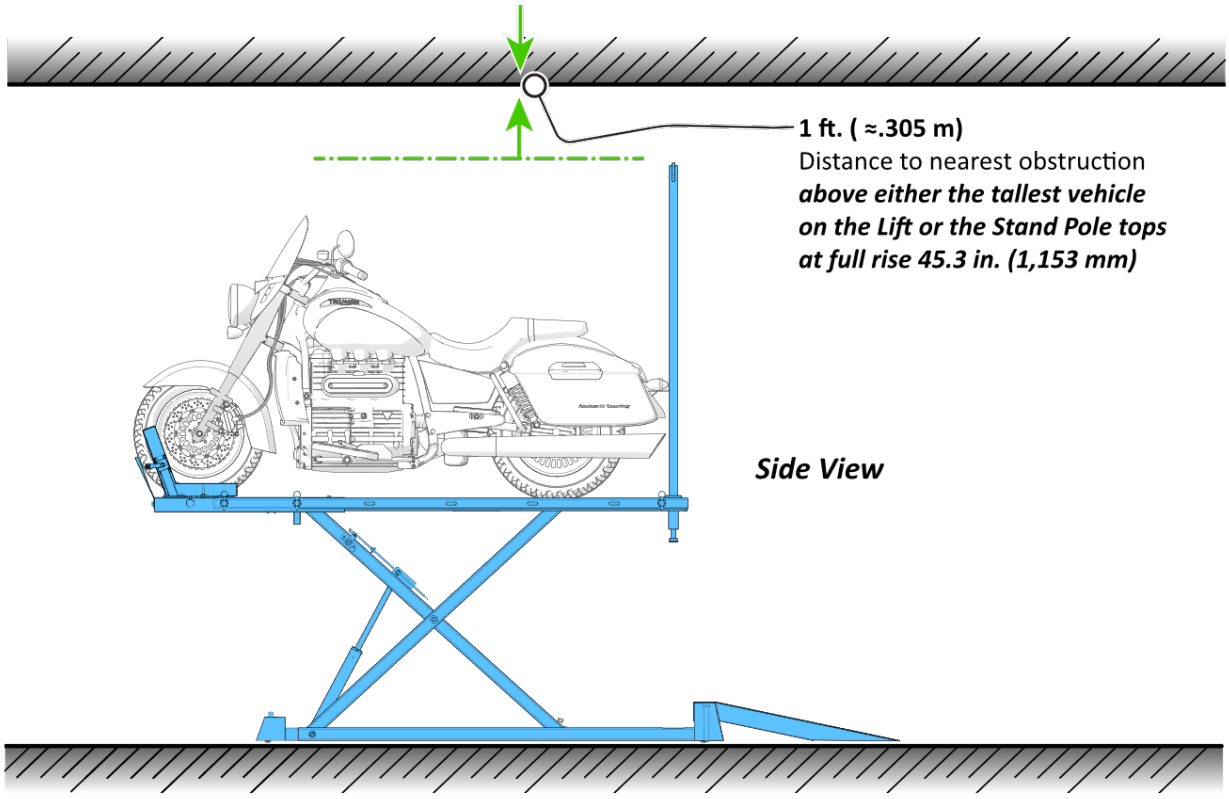
Keep the following in mind when deciding on a location:

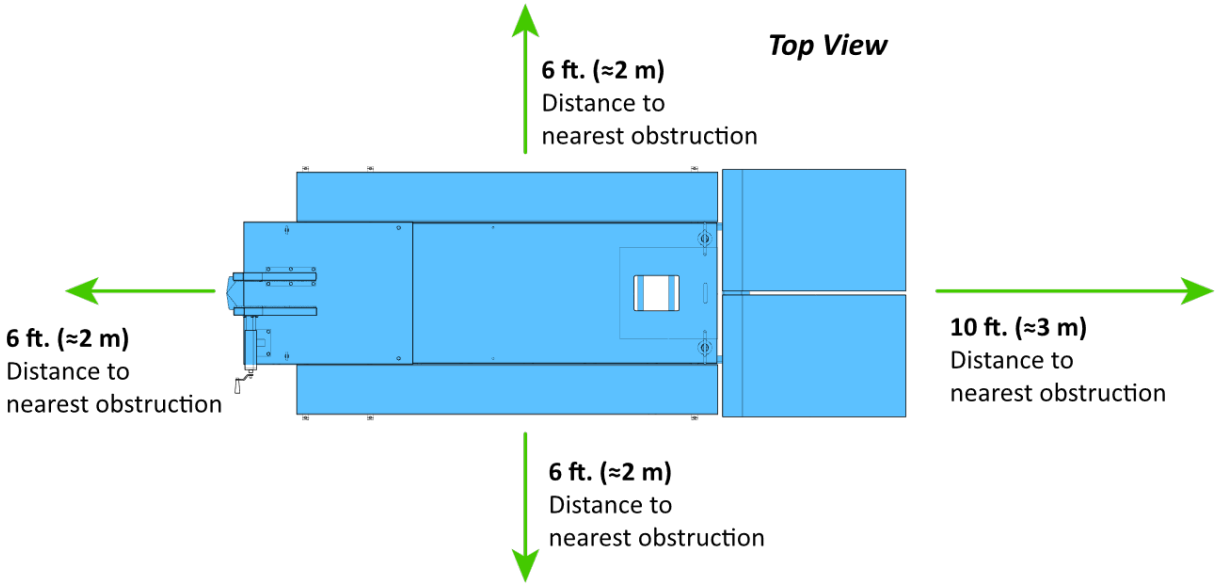
- **Air Supply**. An Air Supply of 40 to 120 psi psi (2.75-8.27 bar), at 98 to 105 in3 (1.6-1.72l)/min is required to raise and lower the Lift, you need to locate the Lift so that the Air Supply can connect to the Pump. ***Your Air Supply must not exceed 150 psi (10.34 bar)***; if it does, you could damage the Lift and put bystanders in danger.
- **Floor**. The Lift is best used on a flat, Concrete floor. ***Do not*** install or use on asphalt or wood surfaces. ***Do not*** install or use on a floor with 3 degrees of slope or more.
- **Movement**. Your Lift has built-in Casters you can use to move the Lift to different locations.
- **Accessibility**. You need space at the Ramp end to move Vehicles on to and off of the Lift.
- **Danger**. When the Lift is in use, keep everyone away from it. Only the operator should be within 30 feet (10 meters) of the Lift during use. Do ***not*** set up the Lift in a well-travelled area.

Clearances

The drawing below shows the amount of space required around the Lift to ***operate*** it safely effectively.

⚠ WARNING For safety purposes, only the operator should be within 30 feet (10 meters) of the Lift during use.





Do not scale figure. Not all components shown.

Unpack the Components

Use caution when unpacking Lift components. You do not want to damage or misplace anything.

Tip Consider unpacking the components in the area where you are going to set up the Lift. The fewer times you move the components, the fewer opportunities there are for them to get lost, get damaged, or damage the surface they are on.

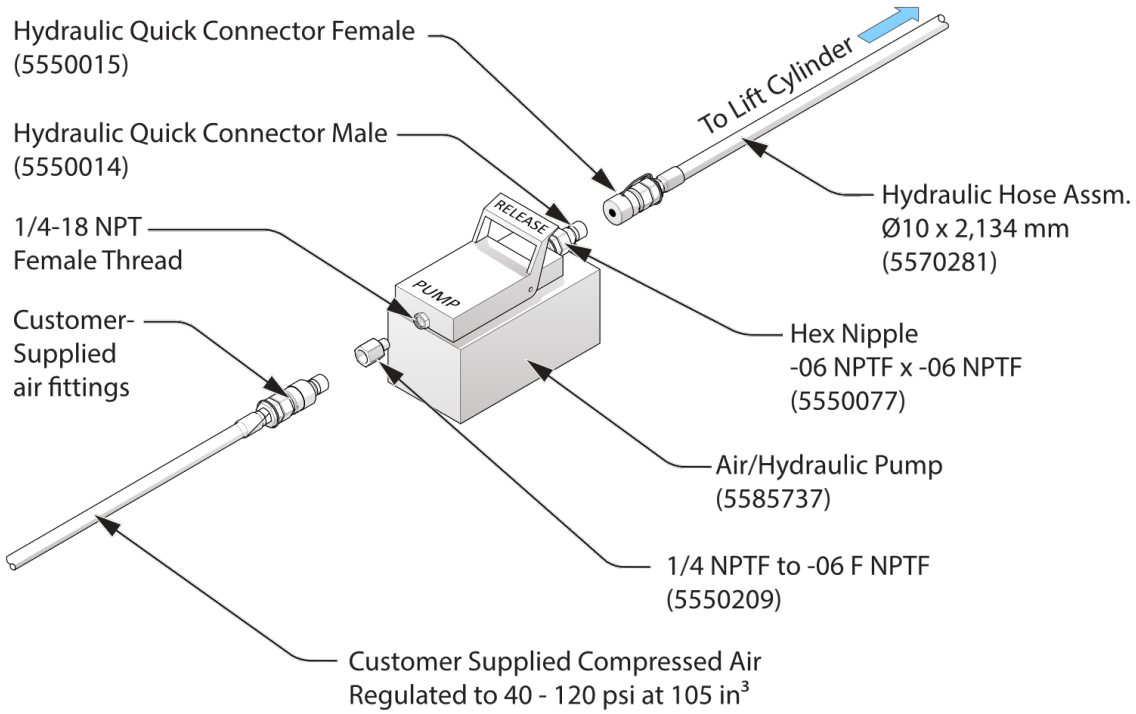
To unpack the Lift components:

1. Move the box holding the Lift as close as possible to where it will be used.
2. Use appropriate tools to remove the top of the box.

   The Air/Hydraulic Pump is delivered in a separate box; remove that from its box as well.
3. Remove all of the components except the Base/Top Deck.
4. Remove the bubble wrap from around those components that are wrapped; lay them out near where the Lift will be set up.
5. Locate the plastic bag that holds the Nuts, Bolts, Washers, and any other items that will be needed during installation.

   BendPak Ranger recommends carefully laying them out near where the Lift will be installed so that they are easily accessible when needed.
6. Find the Hydraulic Hose coming from between the Base and the Top Deck and connect it to the Hydraulic Connector on the ***side*** of the Air/Hydraulic Pump.

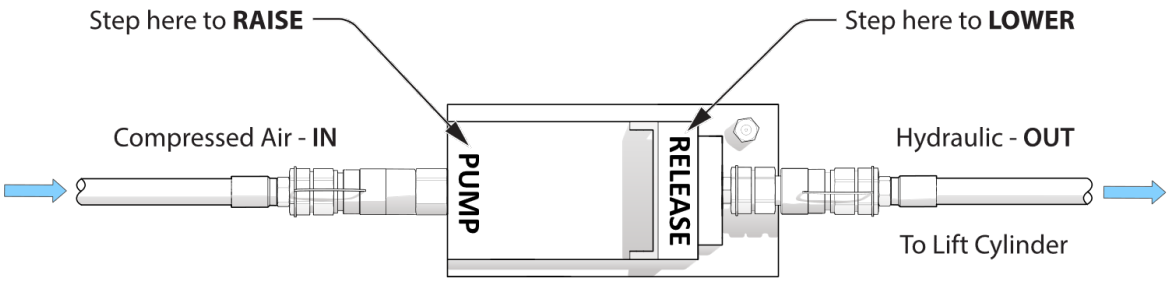
   The Lift is delivered with the Hydraulic Hose already connected to the Hydraulic Cylinder; connect it to the Hydraulic Quick Connector on the Air/Hydraulic Pump. Refer to the figure below.



7. Connect to a compressed air supply (40-120 psi at 105 in^3) using appropriate fittings to connect to the 1/4-18 NPT input on the Pump. Refer to the previous figure.

⚠ **WARNING** This Lift uses pneumatic (air) energy; if your organization has Lockout/Tagout policies, implement them once the Lift is connected to a pressurized Air Supply.

8. Step down on the pedal where it is labelled **PUMP** to raise the Lift. Continue to step on the pedal until the Lift reaches ***full rise*** ≈45.4 in. (1153 mm) then cease pushing the pedal.

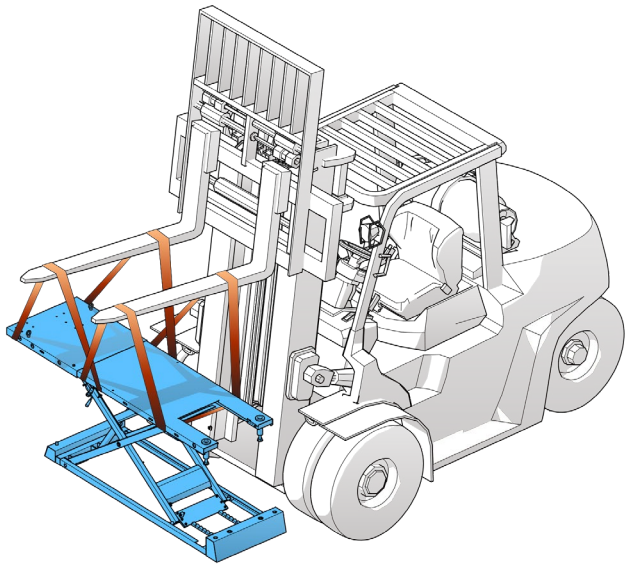


As the Top Deck rises, the Safety Lock Plate falls into each Safety Lock Ladder position; an audible clank can be heard when this happens. This is normal operation; it also gives a clear indication that the Top Deck is rising normally and lets operators know when a Safety Lock has been passed.

9. Put a Lifting Strap around the middle of the Top Deck; BendPak recommends use of a Forklift. Alternately, a Shop Crane or other appropriate lifting device could be used to raise the Lift up and then move it away from away from the Shipping Box or remove the shipping box.

⚠ **WARNING** Only allow trained personnel to put the Strap in position or use the lifting device. Be careful moving the Lift; it is heavy and awkward. Take all the time necessary to be safe. If the Lift falls, it could damage the Lift or injure anyone nearby.

10. Move the Shipping Box and any other tripping hazards away from the area where the Lift is being set up.
11. Be sure there is nothing underneath the Lift before lowering the bottom section; if using a shop crane, extend the arm to get the Lift clear of the shop crane feet.
12. Step on the Pedal section labelled **RELEASE** to lower the Lift until it engages on the top Safety Lock.



⚠ **CAUTION** ***Always*** leave the Lift either fully lowered or engaged on a Safety Lock.

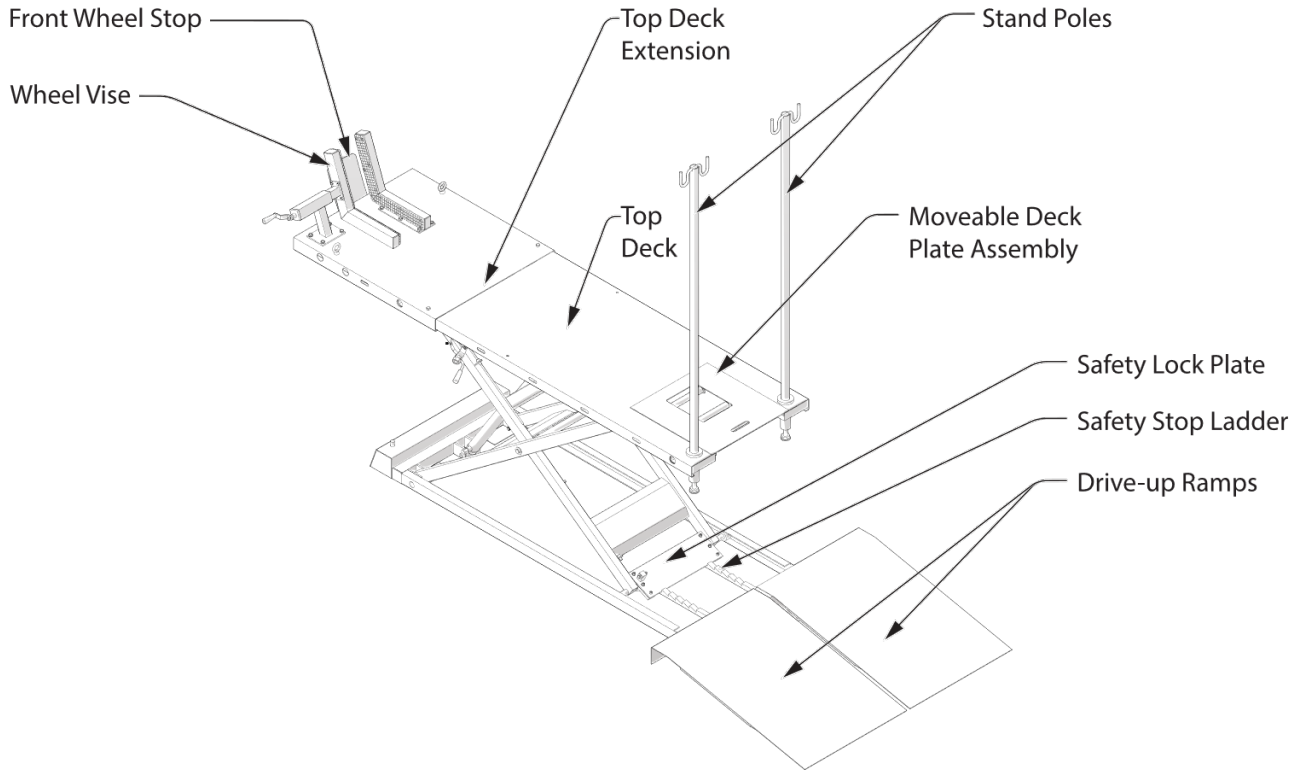
13. Once correctly locked on top Safety Lock, lower the Lift until the base is resting on the floor.

Configure the Lift

The Lift may be configured to service Motorcycles or All-Terrain Vehicles (ATV).

- **Motorcycle Configuration**. This configuration is ***not wide enough*** to accommodate ATVs.

  To install the Lift in the Motorcycle service configuration, install the Movable Deck Plate, the two Ramps, then bolt the Tire Vise Assembly onto the front of the Top Deck. Refer to the figure below.



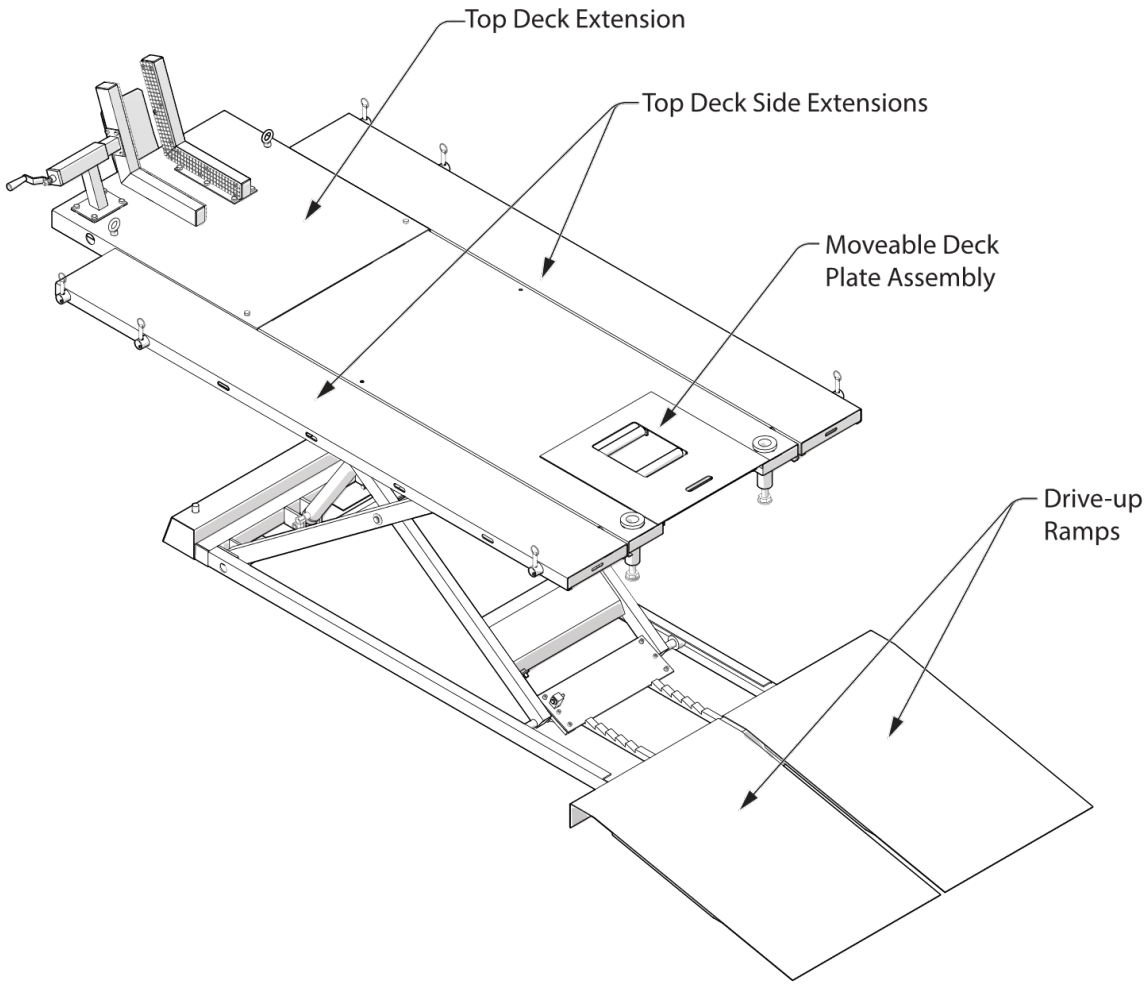
Note: If you want you use the Lift configured for Motorcycle service, you will still require the two Drive-Up Ramps to be installed.

If you are configuring for Motorcycle service, do ***not*** install the Side Extensions or the Front Extension. You will also not need to use the Extension Tubes.

If you are configuring the Lift for Motorcycle service, you will have components left over (Side Extensions, Extension Tubes, Ring Pins and the Top Deck Extension. BendPak Ranger recommends keeping them in a dry location protected from damage, in case you want to switch to ATV service in the future.

- **ATV Configuration**. This configuration is wider and will function with both ATVs and Motorcycles. The only drawback to using the ATV configuration for Motorcycles is that you cannot get as close to the sides of the Motorcycle as you can when in the Motorcycle configuration.

  To install the Lift in ATV Mode, add the Extension Tubes, Side Extensions and Ring Pins on both sides of the Top Deck, the Front Extension over the front of the Top Deck, and the two Ramps. Refer to the figure below.

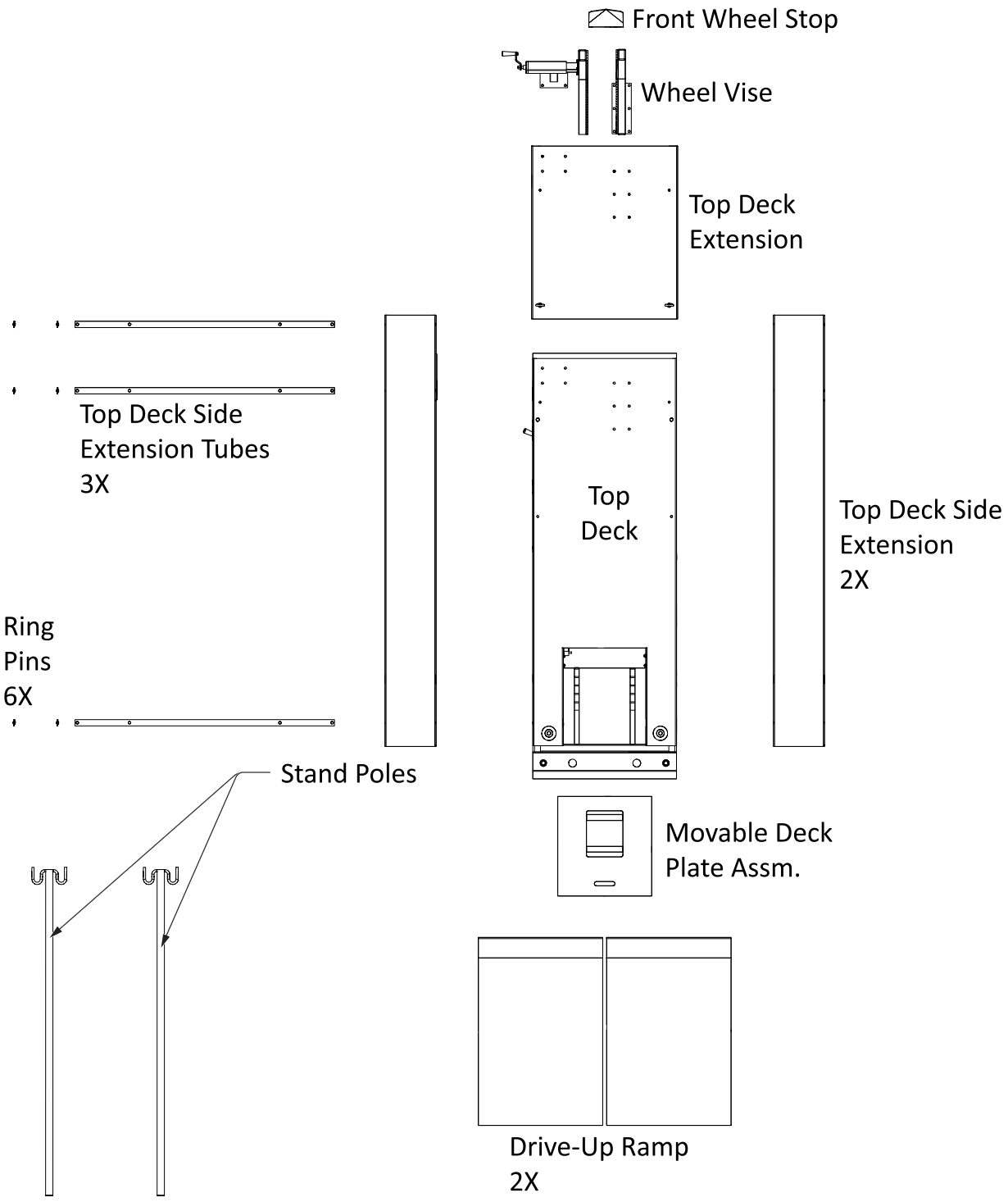


The procedures in this Manual assume you are installing the Lift in an ATV configuration. If you are installing the Lift for Motorcycle service, ignore the instructions for components that are only used in the ATV configuration.

Putting the Lift Components into Place

The following procedure assumes you have unpacked the Lift components and decided on a configuration to use. Begin by arranging the components roughly as shown below.

The Wheel Vise Assembly is covered in the next section.



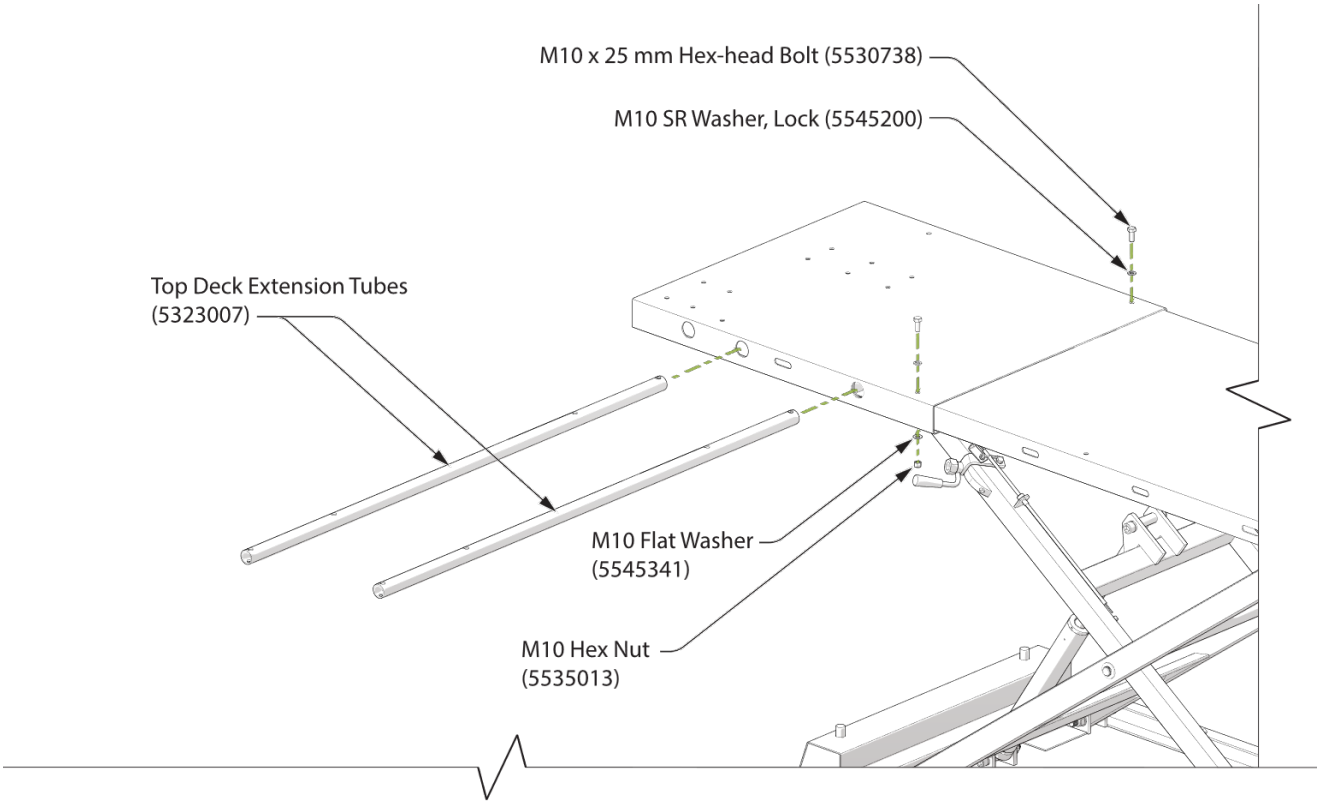
BendPak Ranger strongly recommends two people assemble the ATV/Motorcycle Lift. Many components are heavy and the weight may be awkwardly distributed.

Refer to the figure on the previous and following pages during installation.

To install Lift components:

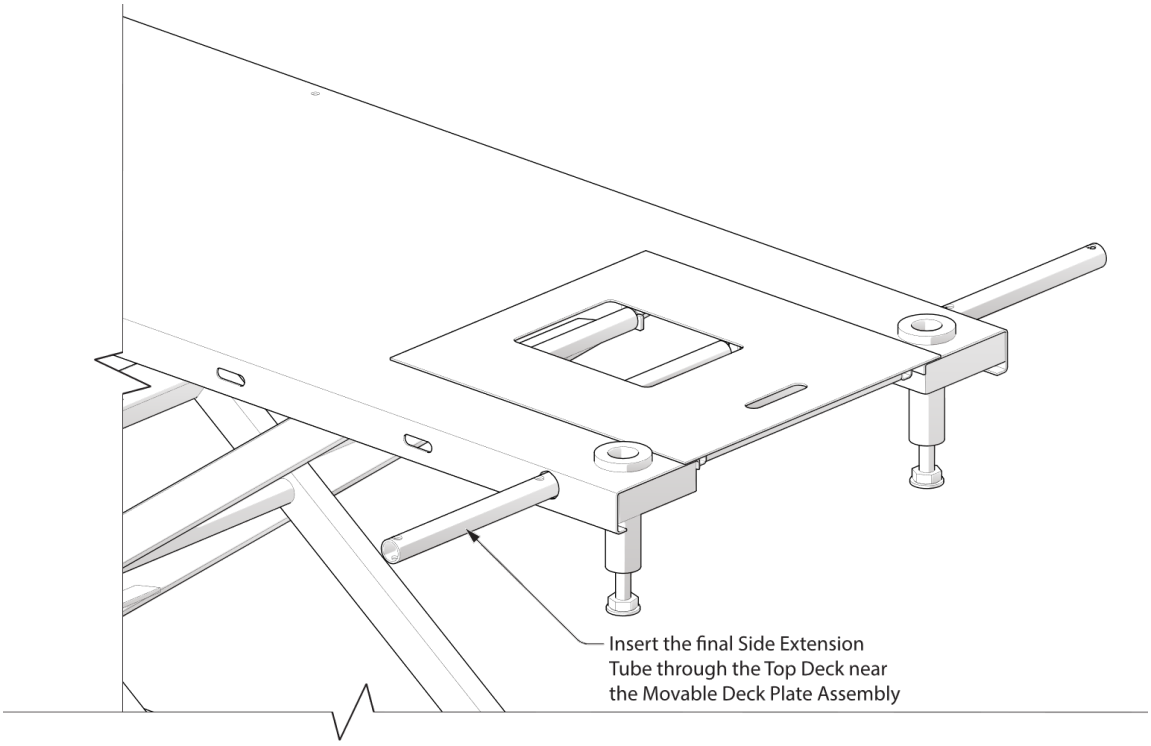
1. Install the Movable Deck Plate Assembly in place on the Top Deck at the Ramp end of the Lift. This Deck Plate is not secured.
2. Slide the Top Deck Extension over the Top Deck at the opposite end of the Ramps.

   You can easily identify this end of the Lift because it has the drilled holes used later to install the Wheel Vise Assembly.
3. Align the holes in the ***side*** of the Front Extension with the holes in the **side** of the Top Deck.
4. Locate the three Top Deck Extension Tubes.
5. Push Two Extension Tubes through the holes in the sides of the Front Extension and Top Deck. Refer to the figure below.



Do not scale. Components removed for clarity.

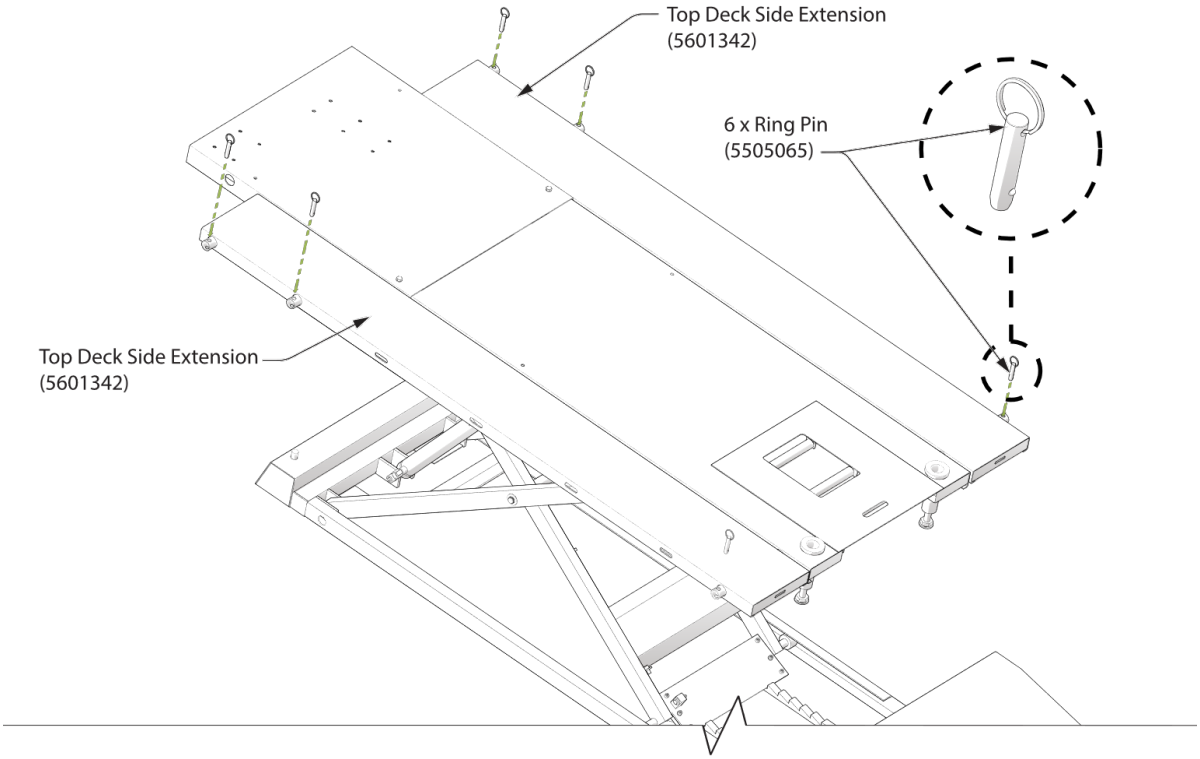
6. Locate two M10 x 25 Hex Head Bolts (5530738), Lock Washers (5545200), Flat Washers (5545341) and Hex Nuts (5535013). Insert and secure as shown in the figure above.
7. Insert the third Side Extension Tube in the Top Deck opening near the Moveable Deck Assembly. Refer to the figure below.



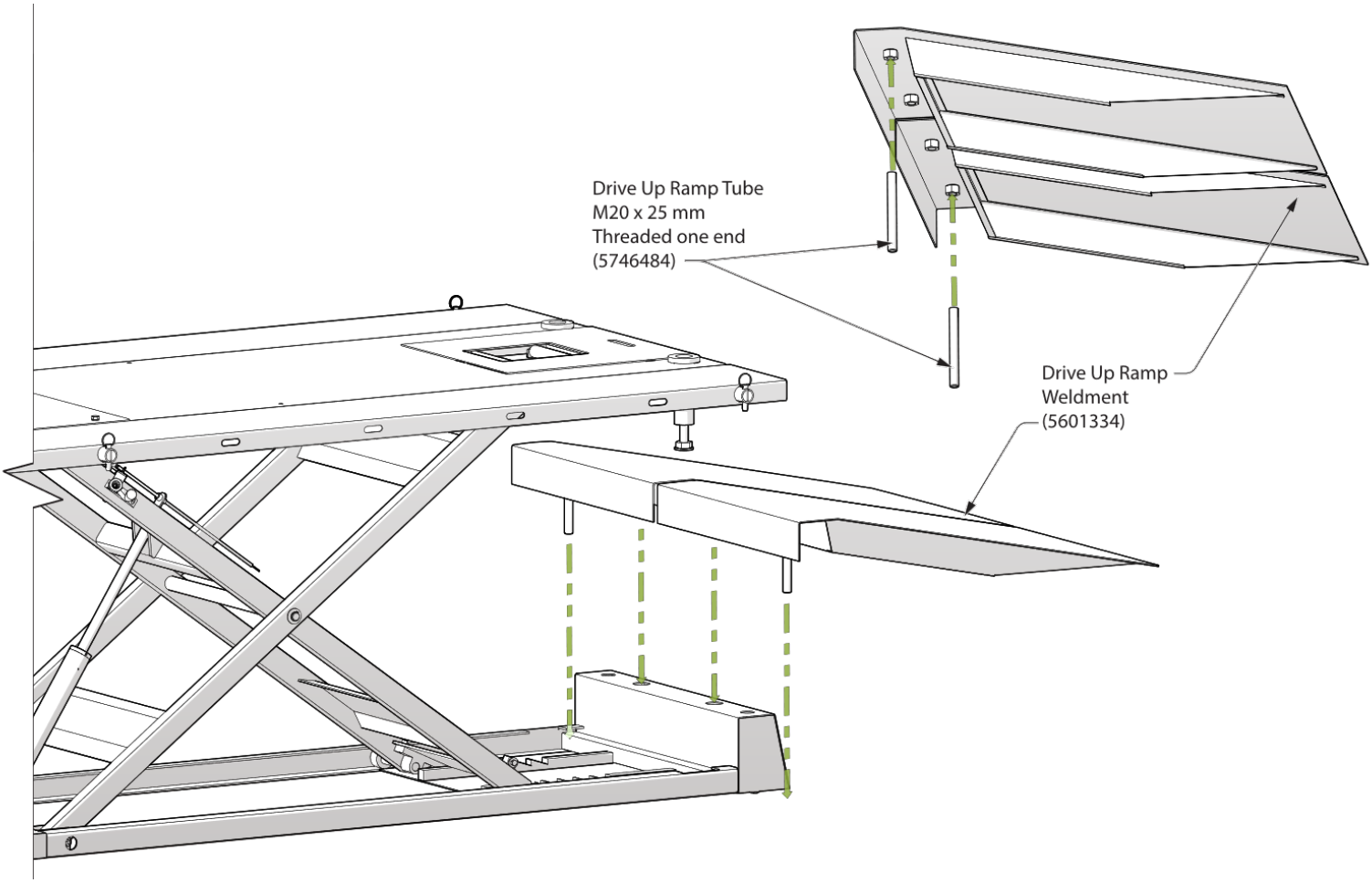
8. Locate the two Top Deck Side Extensions.
9. Place one Top Deck Side Extension on the Side Extension Tubes. Place one Extension on at a time, one Side Extension on each side of the Top Deck.

   Do not knock the Side Extension Tubes out when you put on the Side Extensions.
10. Locate the six Ring Pins (5505065). These should be located in the Parts Bag that came with the Lift.

    Put the Ring Pins through the holes in both ends of the three Connecting Rods.



11. Locate the two Drive-Up Ramps (5601334) and two Drive-Up Ramp Tubes (5746484).
12. Thread one Drive-Up Ramp Tube into the bottom of each Drive-Up Ramp hand-tight in the outside position on each Ramp.
13. Place the Drive-Up Ramps on the Ramp end of the Lift. Orient and verify the Drive-Up Ramps are securely engaged in the guide holes in the Lift's Base. Refer to the figure below.
14. Test each Drive-Up Ramp to verify is stable.

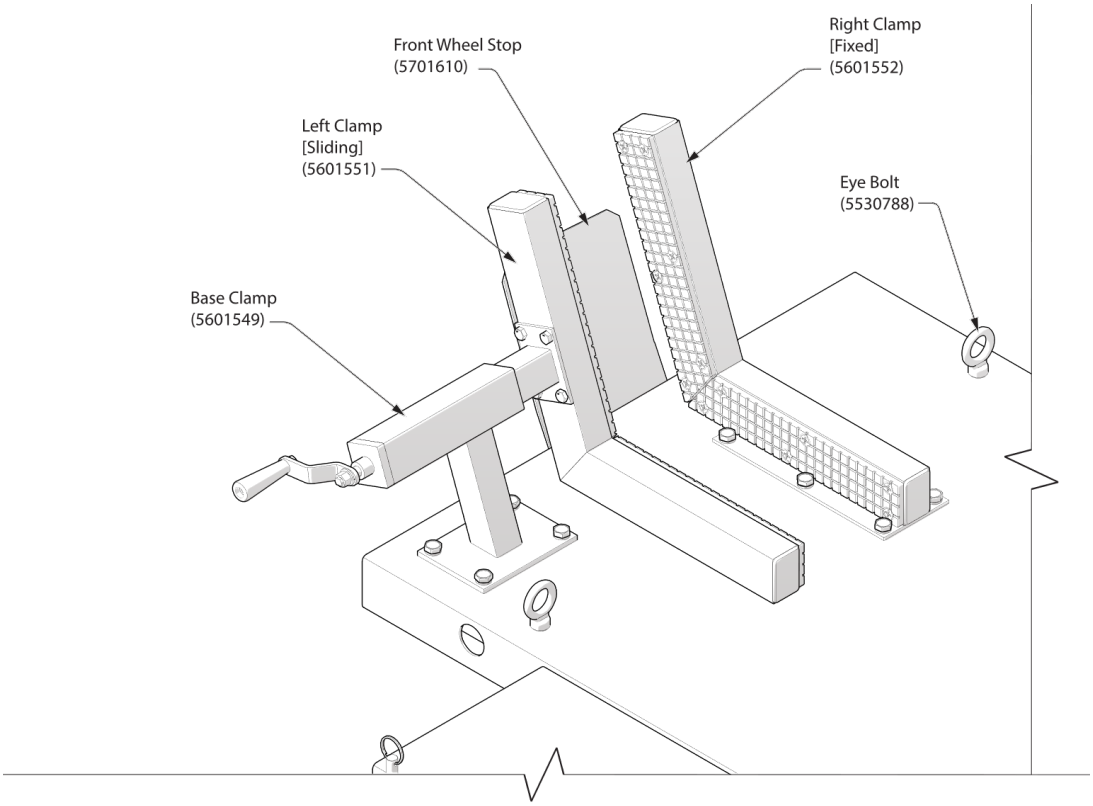


Installing the Wheel Vise Assembly, Eye Bolts and Tire Stop

The Wheel Vise Assembly (5323219) holds the front tire of the ATV or Motorcycle in place while it is on the Lift.

To install the Eye Bolts, Wheel Vise Assembly and Tire Stop:

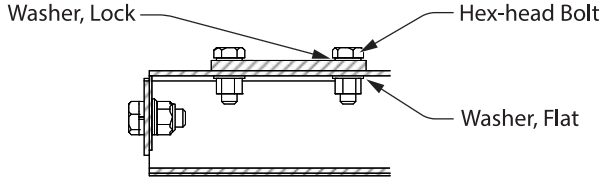
1. Retrieve the two Eye Bolts (5530788) and secure to the Top Deck using a Lock Washer, Flat Washer and Nyloc Nut.
2. Retrieve the components of the Tire Vise Assembly (The Base Clamp Assembly, Left Clamp, and the Fixed Right Clamp).



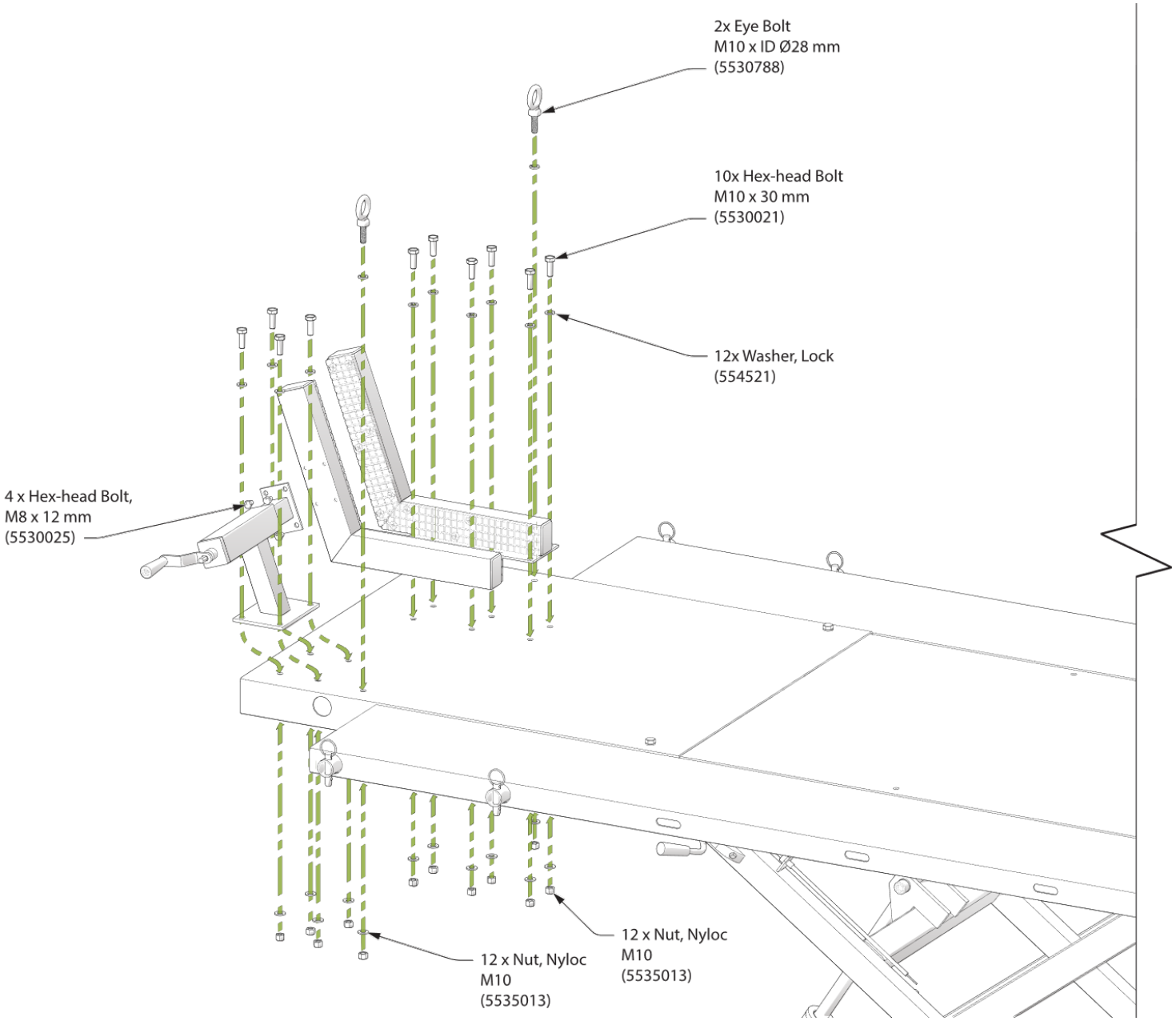
3. Retrieve the 10 M10 Bolts (5530788), Flat Washers (5535013), Split-Lock Washers (5545201), and M10 Nuts (5535013).

   These Bolts, Washers, and Nuts are located in the Parts Bag that came with the Lift.
4. Orient the Base Clamp Assembly so that the four holes in the base are aligned over the four holes in the Top Deck.
5. Use four of the Bolt, Washer, and Nut sets to secure the Base Clamp Assembly to the Top Deck.

   BendPak Ranger recommends orienting your Bolts, Washers, and Nuts as shown in the figure below.

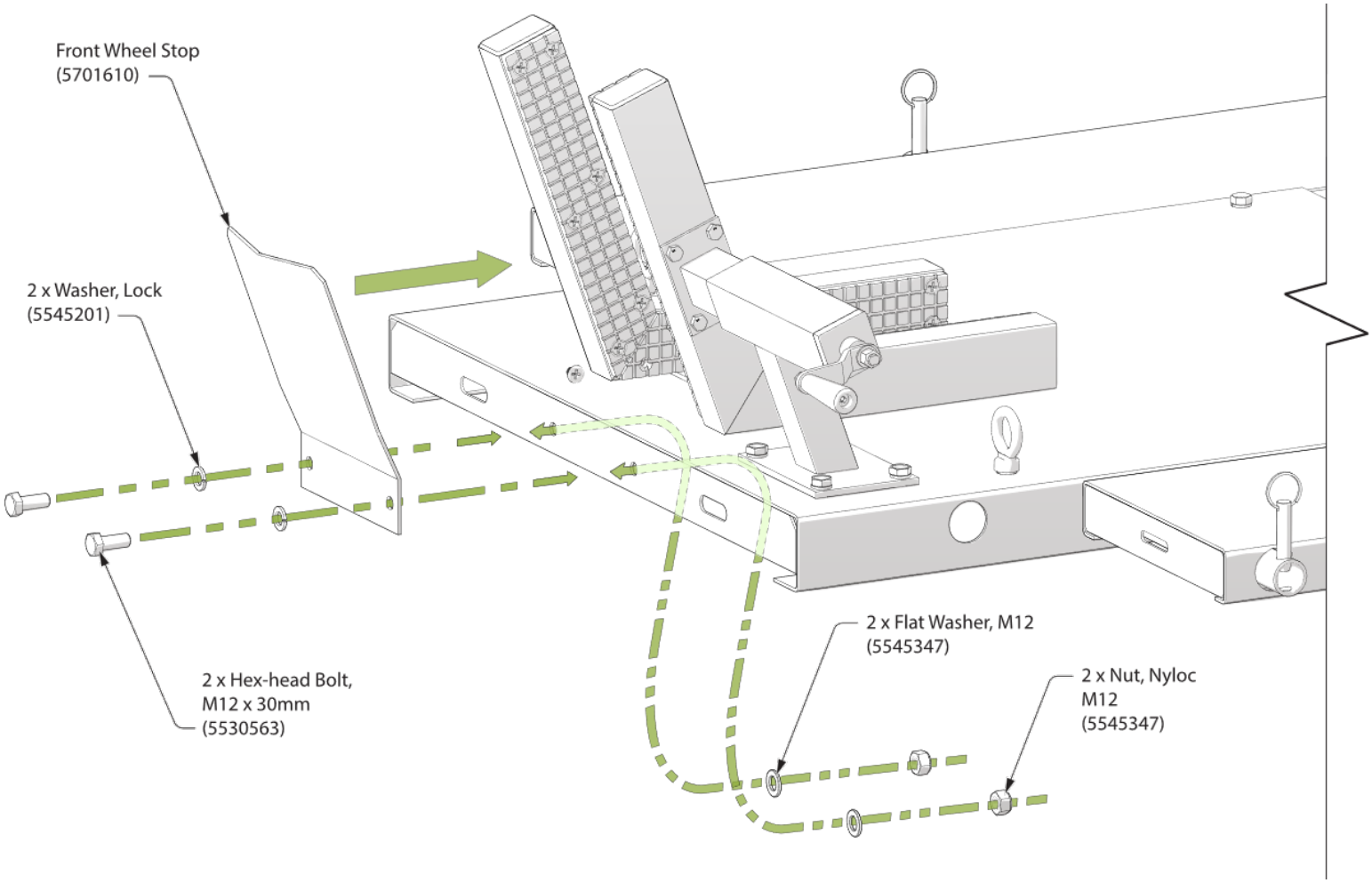


6. Retrieve four M8 Hex Head Bolts from the Parts Bag.
7. Use four M8 Bolts, to secure the Base Clamp Assembly to the Left Clamp Arm.
8. Use six Bolt, Washer, and Nut sets to secure the Right Clamp to the Top Deck. Refer to the figure below.



Do not scale. Components removed for clarity.

9. Retrieve the Front Wheel Stop and use two M12 Bolts (5530563), M12 Lock Washers (5545201), M12 Flat Washers (5545347), and M12 Nyloc Nut (5535012) sets to secure it to the end of the Top Deck. Refer to the figure below.



Operation

This section describes how to operate the ATV/Motorcycle Lift safely during normal operation.

Safety Rules

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

To use the Ranger ATV/Motorcycle Lift safely:

- Every time, before raising a Vehicle, inspect the Lift. Check for kinked hoses, worn or missing parts, or any other abnormalities. If anything seems wrong, take the Lift out of service, disconnect it from its air supply, and then contact an authorized repair facility, the distributor, or BendPak Ranger by phone at **(805) 933-9970** or by email at **support@bendpak.com**.
- The Concrete on which the Lift is installed is to be level and in good condition (free of defects).
- Check the area around, under and above the Lift for anything that might block the Lift from going up or going down normally. If an obstruction is found, move it out of the way.
- Center and secure the Vehicle on the Lift *before* raising.
- Keep all body parts and objects away from pinch points when Lift is in motion. Take care to ensure that the pump is not positioned under the Top Deck to prevent the deck from crushing operator's feet while operating the Pump.
- If your organization has Lockout/Tagout policies, make sure to implement them once the Lift is connected to an air supply. Never exceed air line pressure ratings.
- The Pump is a tripping hazard if kept on the ground; make certain *everyone* who uses the Lift *or works near it* is aware of the location of the Pump.
- Only allow trained, supervised personnel to operate the Lift. Do not allow children or untrained personnel to operate the Lift. Do not let anyone under the influence of drugs, alcohol, or medication to operate the Lift.
- Other than the person operating the Lift, keep all other people a minimum of 30 feet (10 meters) away from the Lift while it is being used.

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

- Never exceed the Lift's weight rating. Do not allow people on or inside a Vehicle to be raised. Before raising a Vehicle, make sure it is centered, balanced and secure on the Top Deck.
- ***Always*** walk a Vehicle onto the Lift. ***Never*** drive the Vehicle onto the Lift.
- If the Lift seems to be having difficulty raising a Vehicle, stop operation immediately, lower the Lift down to the ground, check the Lift and review the published weight of the Vehicle and make any necessary adjustments, then try again.
- Do not begin work until the Lift is fully lowered or engaged on Safety Locks. Visually confirm the Lock Position and verify the load is centered, balanced and secure.

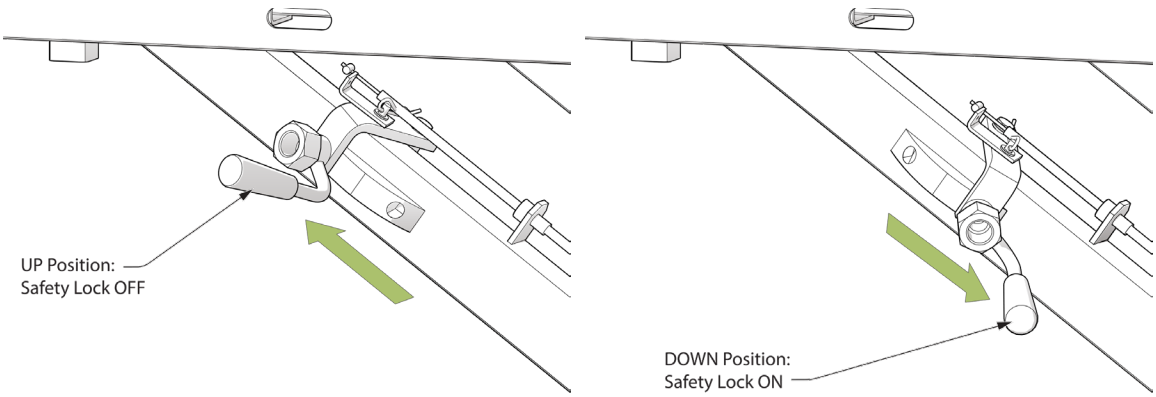
⚠ **DANGER** Do **not** put and part of your body *under* the Lift while it is in motion! Serious injury may occur. **Pay attention at all times while using the Lift. Safety is your top priority at all times.**

Raising a Vehicle

The Top Deck is raised using the Air/Hydraulic Pump.

IMPORTANT *Pay careful attention to the Safety Release Handle Position!* Safety Locks allow the Lift to be mechanically held aloft without the hydraulics. The Safety Release Handle controls the Safety Lock Plate's position, allowing the plate to engage or disengage the Safety Lock Ladder. *There are only two positions on the Safety Release Handle, both have detents that mark and lock their position.*

- The Release Handle in the **UP** position puts the Lift's Safety Lock in the **Off** position. The Lift will ***not*** engage any Safety Locks and may be lowered to the ground. Refer to the figure below.
- The Release Handle in the **Down** position puts the Lift's Safety Locks in the **On** position. The Lift will engage the nearest Safety Lock ***only*** when ***lowering*** the Lift.



To raise a Vehicle:

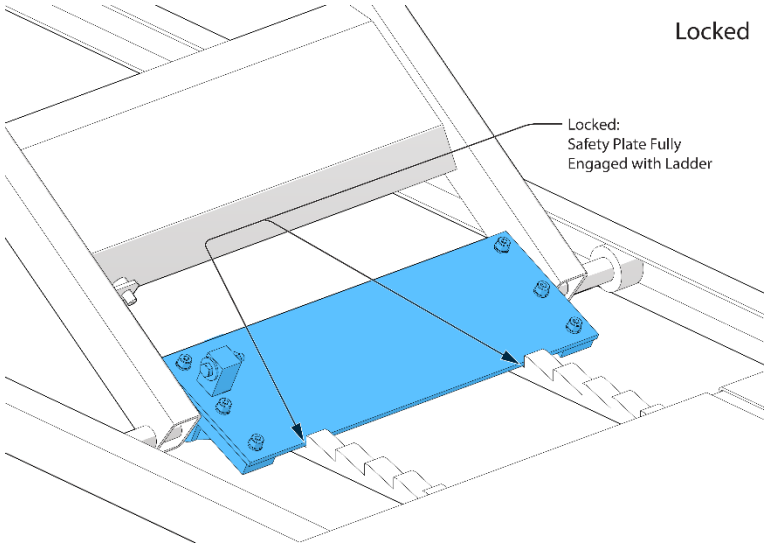
1. Make sure to wear OSHA-approved (publication 3151) Personal Protective Equipment: leather gloves, steel-toed work boots, back belts, hearing protection, and ANSI-approved eye protection (safety glasses, face shield, or goggles).
2. Verify Compressed Air is being supplied to the Hydraulic Pump.
3. Verify the Top Deck is fully lowered, the area around the Lift is clear of any personnel, and obstructions around and above the Lift.
4. Open the Wheel Vise wide enough to accommodate the front tire of the Vehicle about to be moved onto the Top Deck.
5. ***Push*** a Vehicle onto the Top Deck. ***Never drive*** the Vehicle onto the Lift.

6. Close the Wheel Vise to secure the front wheel.
7. Use the Tie-Down Eye Bolts, the Stand Poles, and any additional restraints to make the Vehicle secure on the Top Deck.
8. ***Before raising***, make sure the Vehicle is *centered, balanced and secure* on the Top Deck.

⚠ **WARNING** Do not raise a Vehicle until sure all components are in place and working normally. If a Vehicle is raised without making a safety check first, this can endanger the operator and anyone else nearby and risks damage to the Vehicle and the Lift.

9. Always stand clear of the Lift when raising or lowering.
10. Push down on the **PUMP** Pedal to raise the Top Deck and the Vehicle.

    Operator will hear the Safety Lock Plate clank as it passes each Safety Lock Ladder Position.
11. Go just past the desired height, then stop raising the Top Deck by releasing the PUMP Pedal.
12. Verify the Safety Release Handle is in the DOWN position to enable the Lift to engage the closest Safety Lock Ladder Position.
13. Press the RELEASE Pedal to back the Top Deck down onto the most recently passed Safety Lock.
14. When the Deck stops moving, hold the RELEASE Pedal down for several more seconds, then verify the Safety Lock Plate is firmly engaged on the Safety Lock Ladder. See figure below.



If the Safety Lock Plate is engaged on the same Safety Lock position on both sides, the Top Deck is firmly engaged on its Safety Locks and is safe to use. Operator can now enter the work area.

If the Safety Lock Plate is ***not*** engaged on the Safety Lock or is engaged on different Safety Locks, carefully lower the Top Deck back down to the ground and begin again.

Do ***not*** enter the work area until it is confirmed that the Lift is engaged on its Safety Lock.

Lowering a Vehicle

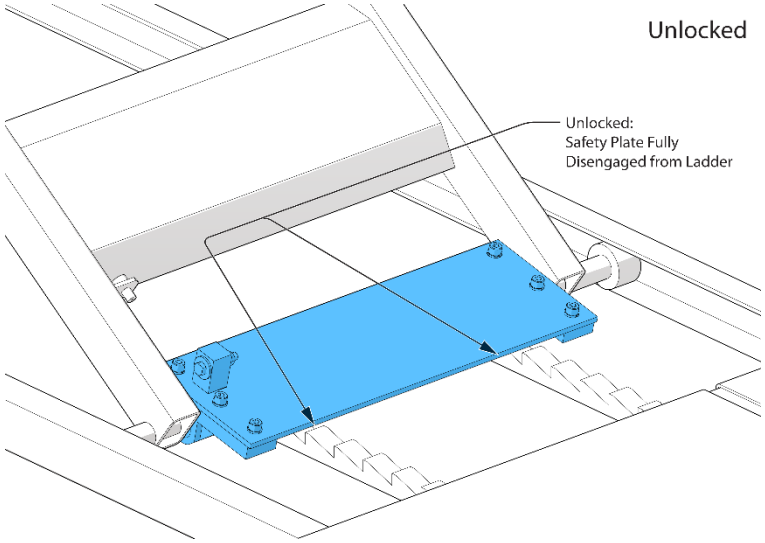
The Top Deck is lowered using the Air/Hydraulic Pump.

To lower a Vehicle:

1. Make sure to wear OSHA-approved (publication 3151) Personal Protective Equipment: leather gloves, steel-toed work boots, back belts, hearing protection, and ANSI-approved eye protection (safety glasses, face shield, or goggles).
2. ***Always*** keep a line of site on the Lift during operation.
3. Verify the Vehicle on the Lift is secured and there are no personnel, tools or other obstructions under or around the Lift.
4. Always stand clear of the Lift when lowering or raising.
5. Push the PUMP Pedal to raise the Top Deck and the Safety Lock Plate off the Safety Lock on which it was engaged. Do not go past the next Safety Lock.

   In order for the Lift to lower, the Safety Lock Plate must ***not*** be engaged on a Safety Lock. To do this, operator first has to move the Safety Lock Plate ***up*** off the Safety Lock it was engaged on.
6. Move the Safety Lock Release Handle up to the Release position, until it stops in the detent.

   This raises the Safety Lock Plate, which allows the Lift's Safety Lock Plate to clear the Lock Positions and lower to the ground.



7. Hold down the RELEASE Pedal on the Pump.

   The Lift will lower.
8. When the Lift is ***fully*** lowered, continue to hold down the Lowering Pedal for several seconds, then release it.
9. Release the Tie Downs used to secure the Vehicle and loosen the Wheel Vise.
10. ***Walk*** the Vehicle off the Top Deck.

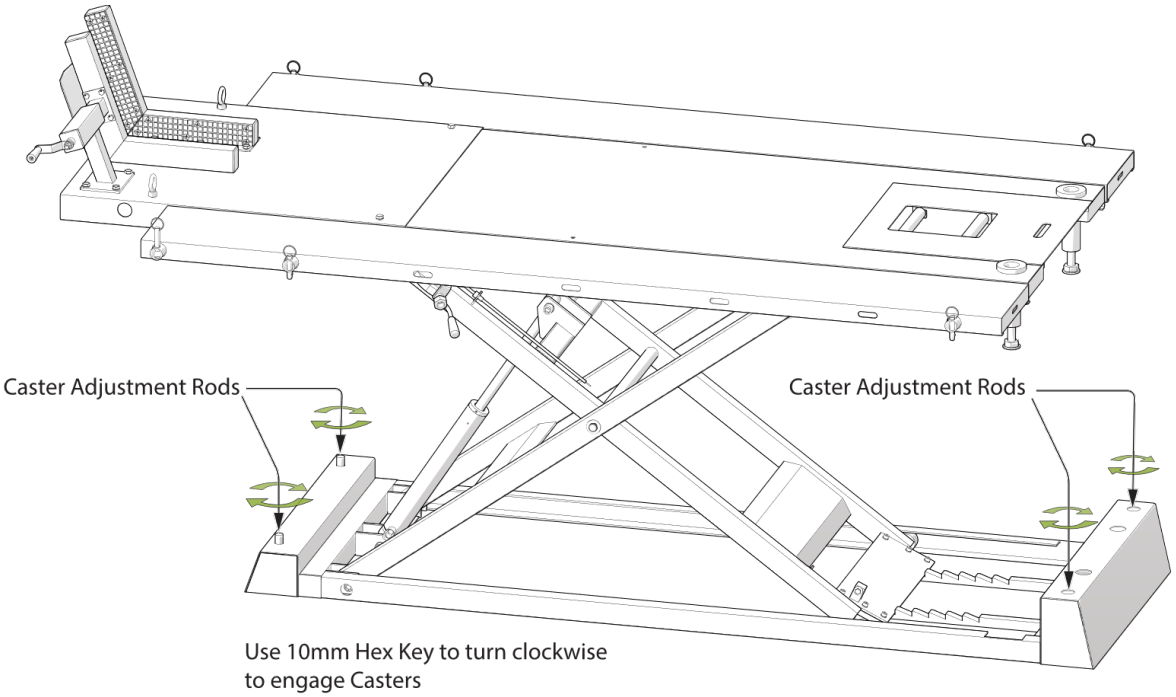
Using the Casters

The Lift has built-in Casters, making it easy to move the Lift to different locations.

To move the Lift using the Casters:

1. Retrieve a 10 mm hex key.
2. Locate the four Caster Adjustment Rods on the Base of the Lift.

   The two Caster Adjustment Rods are under the Drive-Up Ramps, if installed.



3. Turn each of the four Caster Adjustment Rods clockwise to engage the Casters.

   The Base rises slightly as the Casters engage.
4. When all four Casters are engaged, carefully roll the Lift to the desired location.
5. When the Lift is at the desired location, turn each of the four Caster Adjustment Rods counterclockwise to lower the Base back down onto the ground.

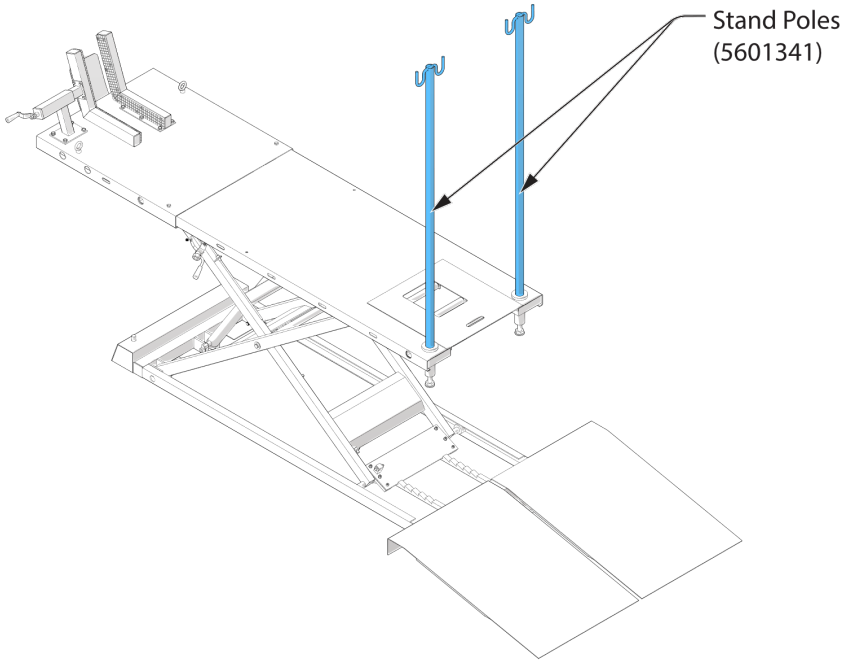
⚠ **WARNING** ***Verify*** the Lift Casters are retracted and the Lift cannot move on its Casters ***before*** raising a Vehicle at the new location. Lifting a Vehicle while the Lift is on its Casters is dangerous and may cause the Vehicle to shift or fall off of the Lift. Damage to property and injury to personnel may occur.

⚠ **WARNING** ***Verify*** the Lift is level at the new location. The concrete surface should not exceed 3° of slope whenever operating the Lift.

Using the Stand Poles

The Stand Poles are powder coated and include Hooks to assist in rigging, tie off and lifting the rear end of ATVs and Motorcycles.

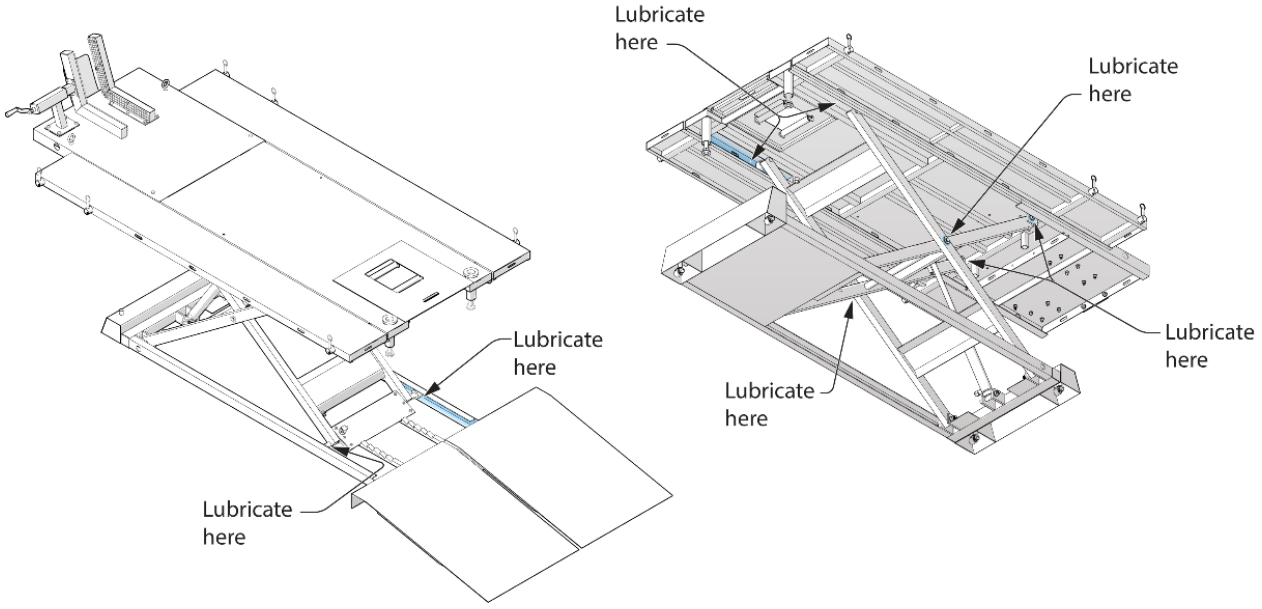
To use the Stand Poles simply insert the Poles into the two openings at the rear of the Lift near the Movable Deck Plate. Refer to the Figure below.



Lubrication

Light lubrication on a monthly basis or on an “as required” basis with frequent use is recommended. Use a White Lithium Grease on the Frame in the areas where the Scissor Rollers travel and on the Scissor Hinge points. Refer to the figure below.

Use White Lithium Grease on Frame
in areas where Scissor Rollers travel,
and on Scissor Hinges



Maintenance

⚠ DANGER Before performing any maintenance, make sure the Lift is completely disconnected from compressed air and ***cannot*** be re-connected until all maintenance is complete. If the compressed air is re-connected during maintenance, you or someone else could be injured.

If your organization has Lockout/Tag Out policies, be sure to implement them to ensure no-one can start the Lift while maintenance is in process.

Read this manual and understand how this equipment works before using, maintaining or repairing. Routine maintenance and adjustments are the responsibility of the owner/user and are not covered under warranty.

⚠ DANGER When handling Hydraulic Fluid, always observe the manufacturer's safe handling instructions found in their Material Safety Data Sheet (MSDS).

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

Routine maintenance and adjustments should be carried out on a regular basis. *Unless stated otherwise, all maintenance may be performed by the owner/employer and does not require trained lift service personnel*. Replace worn, damaged or broken parts with original BendPak or BendPak approved parts or with parts that meet or exceed the original specifications.

To maintain your Lift:

⚠ WARNING Disconnect the Lift from its pressurized Air Supply ***before*** performing any troubleshooting procedures. The Lift uses pneumatic (air) energy; if your organization has Lockout/Tagout policies, make sure to implement them once the Lift is connected to a pressurized Air Supply.

To maintain your ATV/Motorcycle Lift:

- **Cleanliness**. Keep the Lift clean, dry and free of debris. Wipe it down after each use; remove any water grease, dirt, or other debris. Pay special attention to keeping the Safety Lock Ladder and Safety Lock Plate clean and free of debris. Set up a daily, monthly and annual cleaning schedule and log, and follow it. Daily: clean and wiped free of dust and dirt; check for proper lubrication. Monthly: clean and dirt-free, check and refresh lubrication. Annually, clean thoroughly, remove old grease and re-lubricate with fresh White Lithium Grease.
- **Wheel Vise Assembly**. Be careful not to strike or bend the Clamp Assembly. If the shaft or Vise Clamps are bent, it may affect its function or efficacy.
- **Hydraulic Fluid**. The small amount of Hydraulic Fluid in the Pump generally does not need to be changed or added to. If you think your Lift has dirty or low Hydraulic Fluid, visit www.bendpak.com/support/ or call BendPak Ranger at **(805) 933-9970**.
- **Lubrication**. On a monthly basis, or as required with frequent use.
- **Lubrication – Air/Hydraulic Pump**. As required. See Troubleshooting Section for details.

Torque Chart

Fastener Torque Chart

FASTENER TORQUE CHART

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

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

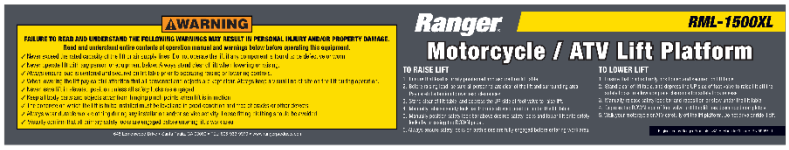
Troubleshooting

⚠ **WARNING** Disconnect the Lift from its pressurized Air Supply ***before*** performing any troubleshooting procedures. The Lift uses pneumatic energy; if your organization has Lockout/Tagout policies, make sure to implement them once the Lift is connected to a pressurized Air Supply.

Issue	**Action to Take**
Top Deck does not raise.	Verify you have a pressurized Air Supply attached. Verify the Hydraulic Hose is connected to the bottom of the Hydraulic Cylinder and to the Pump. Make sure the Lift has less than 1500 pounds / 680 kg on it. ***Do not exceed the maximum rated capacity of the Lift***.
Top Deck lowering on its own.	Verify the Safety Lock Plate is engaged on a Safety Lock. Look for hydraulic leaks and replace or repair faulty component.
Lift is making odd noises as it raises and lowers.	Verify the Lift is not overloaded. Lubricate hinge points and the Frame where the Scissor Rollers travel using white lithium grease.
Lift wobbles as it raises or lowers.	Make sure the Vehicle on the Lift is correctly secured.
Lift becomes inoperative with Vehicle raised on the Lift.	If the Lift is engaged on a Safety Lock, the Top Deck will stay raised. To lower it, use another lifting device to raise the Vehicle off the Top Deck a few inches, raise the Top Deck to get it off its Safety Lock, put the Vehicle back onto the Top Deck, then lower the Top Deck to the ground. Once the Vehicle is safely off the Lift, take the Lift out of service, determine the source of the problem, resolve the problem yourself, or visit **www.bendpak.com/support/**, email **support@bendpak.com**, or call BendPak Ranger at **(805) 933-9970**. Do not put the Lift back into service until the issue has been resolved.
Pump Stuck or non-functioning. This condition is unlikely in routine use, unless work environment is dirty, or pump in frequent use.	In some severe cases, dirt and debris may accumulate throughout pump's operating components; it may become necessary to disassemble and clean an inoperable Air/Hydraulic Pump in an orderly shop setting, so that the Pump can return to service. See Air/Hydraulic Pump Cleaning Procedure at the end of this manual.

Labels

A



PN 5905711

B

PN 5930609

PLACE ON BOTH SIDES

C

PN 5905179

PLACE ON BOTH SIDES

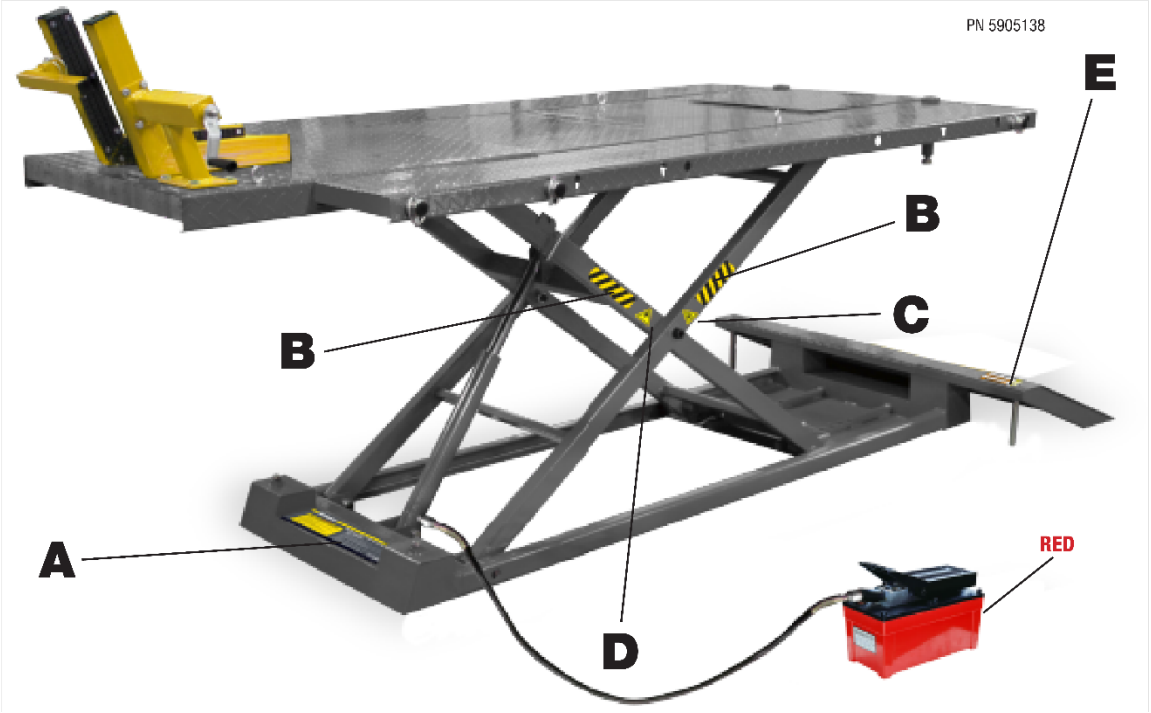
D

PN 5905178

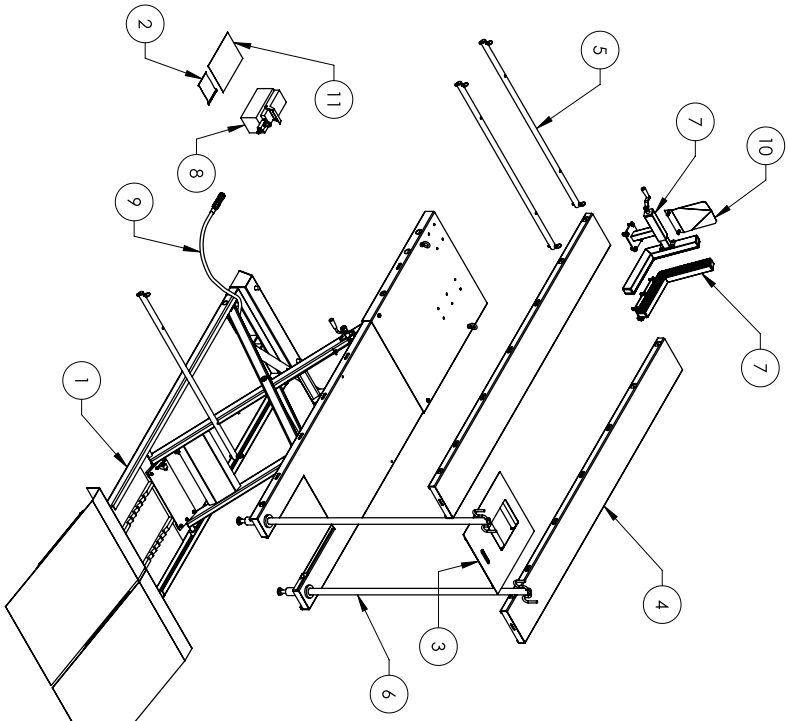
PLACE ON BOTH SIDES

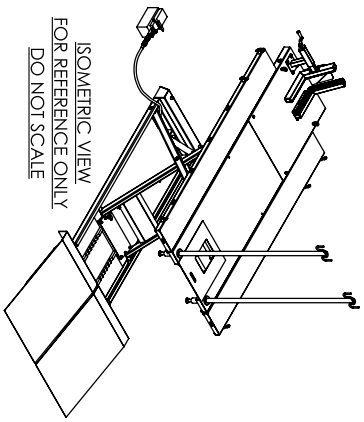
E

PN 5905138



Parts Drawings





ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5245110	RML-1500XL SUPERSTRUCTURE	1
2	5174049	RML-1500 PARTS BAG	1
3	5216018	RML-1500 MOVEABLE DECK PLATE ASSEMBLY	1
4	5601342	RML-1500 TOP DECK SIDE EXTENSION WELDMENT 1354mm	2
5	5323007	RML-1500 TOP DECK SIDE EXTENSION TUBE.	3
6	5601341	RML-1500 STAND POLE WELDMENT	2
7	5323219	WHEEL VISE ASSEMBLY	1
8	5585737	AIR HYDRAULIC PUMP RED RML-1500XL; PSI3100	1
9	5570281	HYDRAULIC HOSE ASSEMBLY Ø10 x 2134mm DS - 06 MALE	1
10	5701610	RML-1500 FRONT WHEEL STOP	1
11	5900183	RML-1500XL INSTALLATION MANUAL	1

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	TM	03/04/2019
CHECKED		

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

BendPak

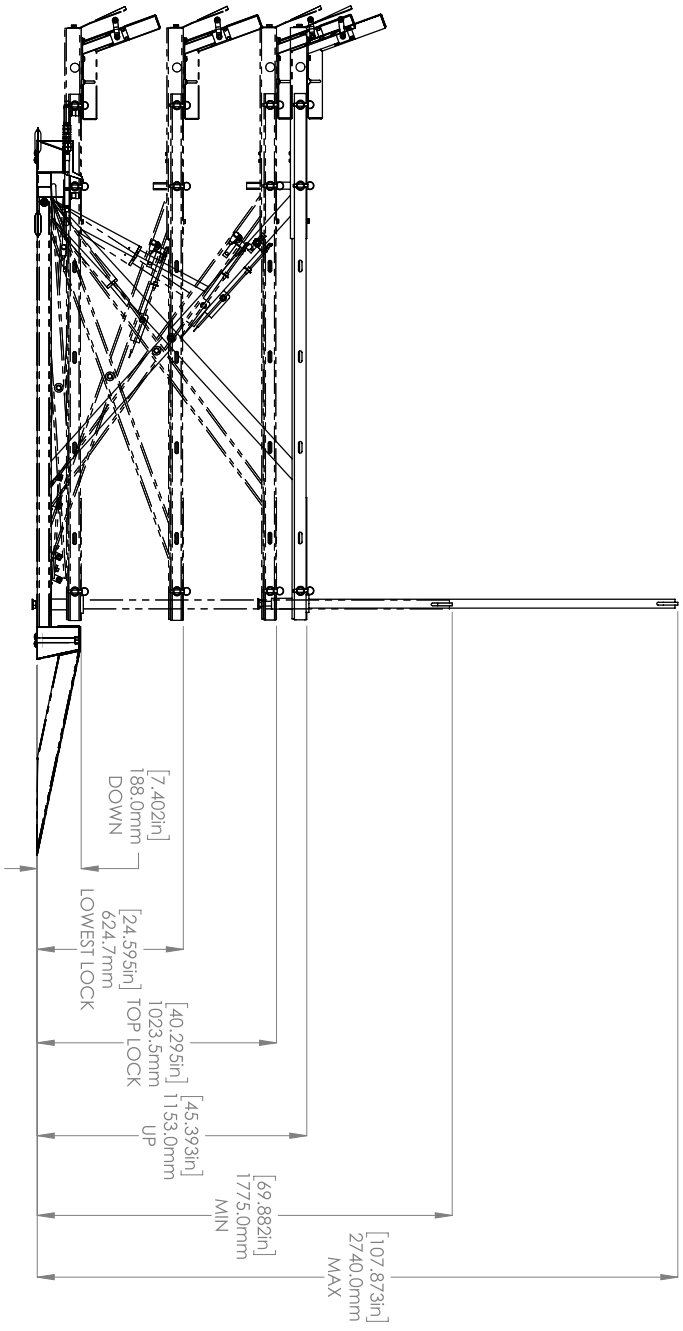
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
RML-1500XL
PRODUCTION LIFT

SIZE: A
DWG. NO.: 5260629

SCALE: 1:30

SHEET 1 OF 3



BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
RML-1500XL
PRODUCTION LIFT

SIZE: A
DWG. NO.: 5260629
SCALE: 1:22
SHEET 2 OF 3

BendPak
1445 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
RML-1500XL
PRODUCTION LIFT

SIZE: A
DWG. NO.: 5260629
SCALE: 1:20
SHEET 3 OF 3

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5216004	RML-1500XL RAMP ASSEMBLY	1
2	3601340	RML-1500 TOP DECK EXTENSION WELDMENT	1
3	5601334	RML-1500 DRIVE UP RAMP WELDMENT	2
4	5701826	TOP DECK EXTENSION STOP	2
5	5530019	HHB M6 x 1 x 16mm	4
6	5535357	NUT M6 x 1.0 NL, CL10.9	4

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

	NAME	DATE
DRAWN	CA	09/03/2020
CHECKED		

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BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
RML-1500XL
SUPERSTRUCTURE

SIZE: A
DWG. NO.: 5245110
REV:

SCALE: 1:20

SHEET 1 OF 1

NEXT ASSEMBLY
5260629

ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5601336	RML-1500 MOVEABLE DECK PLATE WELDMENT	1
2	5756045	RML-1500 DECK ROLLER	2
3	5530417	DOUBLE THREADED ROD M8 x 1.25 x 230	2
4	5565063	BALL BEARING Ø22 x 8 x 7mm DOUBLE SHIELDED	4
5	5755175	RML-1500 NUT SPACER	4
6	5533001	NUT M8 x 1.25 NL	4

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	CA	01/25/2021
CHECKED		

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

BendPak
14456 EMONWOOD DR.
SANTA PAULA, CA 93060

TITLE:
RML-1500 MOVEABLE
DECK PLATE ASSEMBLY

SIZE: A | DWG. NO.: 5216018 | SCALE: 1:5 | SHEET 1 OF 1

NEXT ASSEMBLY
5260629

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	5601332	RML-1500 LIFT BASE WELDMENT	1
2	5601331	RML-1500 INNER SCISSOR ARM WELDMENT	1
3	5601329	RML-1500 OUTER SCISSOR ARM WELDMENT	1
4	5601337	RML-1500 TOP DECK WELDMENT	1
5	5502046	CYLINDER ASSEMBLY Ø1.75 x 12.875	1
6	5601328	RML-1500 SAFETY HANDLE ARM WELDMENT	1
7	5755084	RML-1500 INNER SCISSOR ROLLER	4
8	5701593	RML-1500 SAFETY CABLE HANDLE PIVOT	1
9	5530398	RML-1500 M10 CABLE CONDUIT TERMINAL	2
10	5746482	RML-1500 MAIN SCISSOR PIN	1
11	5755078	RML-1500 SCISSOR ROLLER SPACER	2
12	5595570	PUSH PULL CABLE ASSEMBLY Ø2.4 x 1420mm	1
13	5716051	RML-1500 SAFETY HANDLE COVER	1
14	5530385	SSS M20 x 2.5 x 43 BP	1
15	5530387	HHB M8 x 1.25 x 70mm	1
16	5545340	WASHER M8 x24 FLAT	1
17	5535001	NUT M8 x 1.25 NL, CL10.9	1
18	5530248	HHB M8 x 1.25 x 45 FT, CL 10.9	1
19	5505335	HAIR PIN 3/32" x 1 5/8"	1
20	5545012	WASHER M8 x Ø16 FLAT, CL10.9	2
21	5535303	NUT M20 x 2.5, CL 10.9	1
22	5535356	NUT, M8 x 1.25mm	1
23	5545005	WASHER M6 x 12 FLAT, CL 10.9	1
24	5540022	R RING OD Ø20 TRUARC N5100-78	2
25	5545343	WASHER M20 x 37 FLAT, CL 10.9	2
26	5530388	SHCS M16 x 2.0 x 100mm	3
27	5530394	SHCS M16 x 2.0 x 110mm	1
28	5530395	HHB M16 x 2.0 x 100 PT, CL 10.9	2
29	5545029	WASHER M16 x 27.4 SL, CL10.9	6
30	5545025	WASHER M16 x 30 FLAT, CL 10.9	6
31	5535008	NUT M16 x 2.0 NL, CL 10.9	6
32	5575064	RML-1500XL THREADED STEM CASTER	4

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION

	NAME	DATE
DRAWN	CA	09/03/2020
CHECKED		

BendPak

14451 FRANKWOOD DR.
SANTA PAULA, CA 93060

TITLE: RML-1500XL RAMP ASSEMBLY

SIZE: A | DWG. NO.: 5216004

SCALE: 1:15 | SHEET 1 OF 2

NEXT ASSEMBLY
5245110

BP BendPak

1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: RML-1500XL RAMP ASSEMBLY

SIZE: A

DWG. NO.: 5216004

SCALE: 1:20

SHEET 2 OF 2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5601549	WHEEL VISE STATIONARY BASE CLAMP	1
2	5601550	WHEEL VISE THREADED CLAMP	1
3	5601551	WHEEL VISE LEFT CLAMP	1
4	5601552	WHEEL VISE RIGHT CLAMP	1
5	5530396	WHEEL VISE THREADED ROD	1
6	5737199	WHEEL VISE HANDLE	1
7	5535013	NUT M10 x 1.5 NL	1
8	5545341	WASHER M10 x Ø20 FLAT	1
9	5716043	WHEEL VISE HANDLE COVER	1
10	5530397	SHCS M8 x 1.25 x 70mm	1
11	5535001	NUT M8 x 1.25 NL	1
12	5715043	WHEEL VISE POLYETHYLENE COVER BLOCK	4
13	5716061	WHEEL VISE RUBBER PAD 1	2
14	5716062	WHEEL VISE RUBBER PAD 2	2
15	5530400	FHPS M6 x 1.0 x 12	24
16	5530025	HHB M8 x 1.25 x 12	4

NEXT ASSEMBLY
5260629
5150006
5150007

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	CA	08/06/2020
CHECKED	OR	10/01/2020

THIRD ANGLE PROJECTION

DIMENSIONS ARE IN MM

BendPak

1445 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: WHEEL VISE ASSEMBLY

SIZE: A | DWG. NO.: 5323219

SCALE: 1:6 | SHEET 1 OF 1

ITEM NO	PART NUMBER	DESCRIPTION	QTY
1	5601338	RML-1500 STAND POLE HOLDER ADJUSTMENT FOOT	2
2	5746484	RML-1500 DRIVE UP RAMP TUBE	2
3	5505065	RING PIN 1/2" x 1-1/2"	6
4	5530152	HHB M12 x 1.75 x 30 FT, CL 10.9	2
5	5530021	HHB M10 x 1.5 x 30 FT, CL 10.9	10
6	5545201	WASHER M12 x 21 SL, CL 10.9	2
7	5545200	WASHER M10 x Ø18 SL, CL10.9	14
8	5545347	WASHER M12 x 24 FLAT, CL 10.9	2
9	5545341	WASHER M10 x Ø20 FLAT, CL10.9	14
10	5535012	NUT M12 x 1.75 NL, CL 10.9	2
11	5535013	NUT M10 x 1.5 NL, CL10.9	14
12	5530788	EYE M10 x 1.5 x 28 ID	2
13	5530738	HHB M10 x 1.5 x 25 FT, CL 10.9	2
14	5930192	ANTI-SLIP TAPE, 1" x 60ft	1
15	5550077	FTG -06 NPTF x -06 NPTF, HEX NIPPLE	2
16	5550209	FTG -04 NPTF x -06 F NPTF, STRAIGHT EXPANDER	1
17	5550014	FTG NPL -06 NPT F x 3/8 QUICK-CONNECTOR COUPLER MALE; NON SPILL DESIGN	1
18	5550015	FTG NPL -06 NPT F x 3/8 QUICK-CONNECTOR COUPLER FEMALE; NON SPILL DESIGN	1
19	5590115	FLOW CONTROL VALVE, 3/8 NPT 5000psi	1
20	5580012	LIQUID PTFE THREAD SEALANT 50ml	1

NEXT ASSEMBLY
5260629

DO NOT SCALE DRAWING
DIMENSIONS ARE IN MM
THIRD ANGLE PROJECTION

	NAME	DATE
DRAWN	CA	09/04/2020
CHECKED		

BP BendPak
1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: RML-1500 PARTS BAG

SIZE: A
DWG. NO.: 5174049
SCALE: 1:6
SHEET 1 OF 1

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Air/Hydraulic Pump Cleaning Procedure

Read this entire procedure carefully and completely before beginning.

⚠ **DANGER** When handling Hydraulic Fluid, always observe the manufacturer's safe handling instructions found in their Material Safety Data Sheet (MSDS).

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

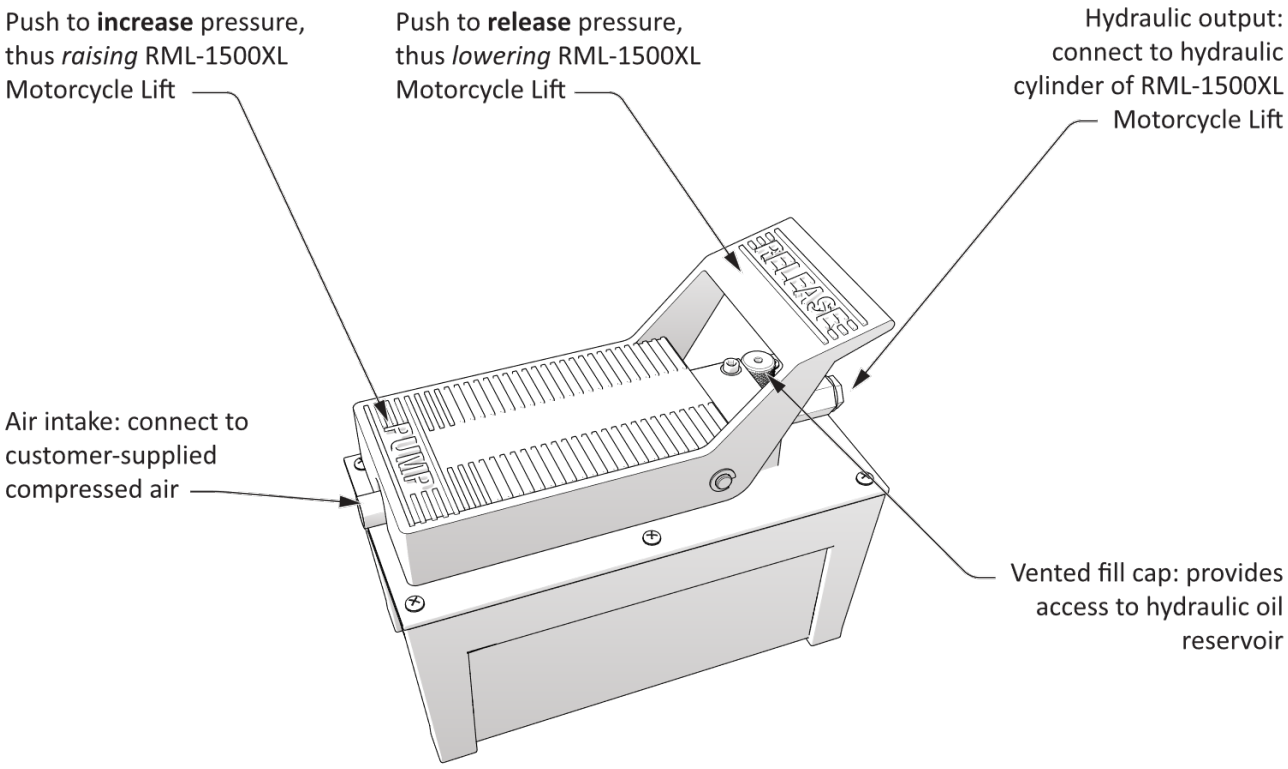
Some Air/Hydraulic Pumps used in daily service or dirty environments that receive little to no periodic lubrication, cleaning, or maintenance may experience the following symptoms:

- Not pumping
- Pump becomes stuck
- Pump is generally non-functional

This procedure to disassemble, clean and re-lubricate the Air/Hydraulic Pump is intended to repair this condition, allowing the Pump to return to service.

In most cases, the non-operation is due to a lack of lubrication inside the Air/Hydraulic Pump, thus hindering the free movement of the pump's piston. In some more severe cases, dirt and debris may have accumulated throughout the pump's operating components. Therefore, it will become necessary to completely disassemble and cleanse an inoperable Air/Hydraulic Pump, in a clean and orderly shop setting, so that the Pump can return to providing service.

Refer to the figure below.



Have the Right Tools

You may need some or all of the following tools and supplies:

- Small fixed-end flat-head screwdriver
- Small Philips-head screwdriver
- Mini pick / hook set
- Magnetic (or other) parts tray
- Hex driver set
- Several clean wipe rags and shop towels
- Flashlight (non-smartphone)
- White Lithium Grease
- Brake Cleaner
- WD40 (or Equivalent)
- Jack Oil
- Container for hydraulic fluid disposal

How to clean the assembly release plunger / air valve

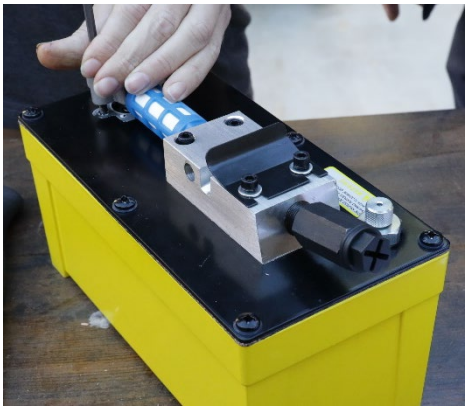
If the pump fails to operate and the upper handle is stuck in the down position, it is often because the springs fail to return the plunger back to neutral, (as if in the lowering/pressure dump mode). Therefore, the pump will fail to create pressure. Disassembling, cleaning, and relubricating the pressure release valve will be necessary. The pressure release valve (plunger) is located underneath this Spring Plate. Cleaning and lubricating the plunger *should* restore normal operation. At all times, work only with CLEAN HANDS, on a Clean Workbench, and with CLEAN TOOLS.

Disassembling your Air/Hydraulic Pump to Clean and lubricate.

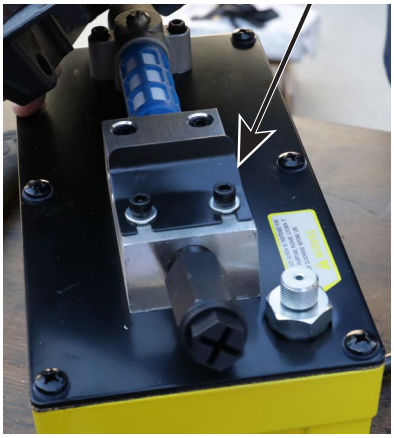
1. Place the pump unit on a clean, level surface (workbench or similar) where small parts can be removed and managed, and chemical cleaning can be performed. Remove the handle by first carefully removing the “E” clip from the handle’s pivot pin (found on one end) with a small screwdriver. Maintain all loose and small parts in a controlled area where they can be easily retrieved. A magnetic tray works well to hold metal parts. A plastic zip lock bag may be used for non-magnetic items as well. Tip: A fixed-end small screwdriver, and a mini pick/hook set, can assist in removing small parts.

2. Next, carefully drive the pin through the handle and remove.

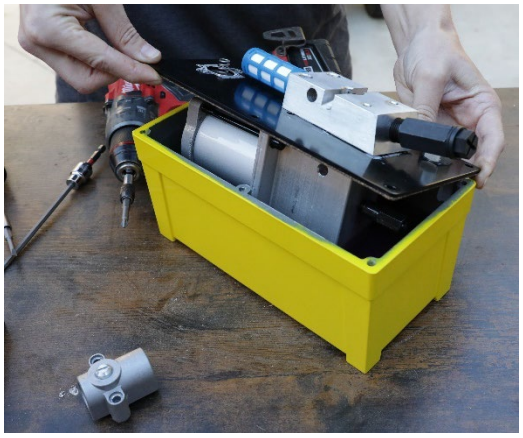




3. Lift the handle free, exposing the metal Spring Plate.



4. Remove the hex head bolts (arrow) that retain the Spring Plate. Remove the Spring Plate, noting the exposed plunger's condition and cleanliness.



5. Remove all screws from the tank's top panel.

   Check all openings and the suction screen (arrow) for cleanliness. Use a flashlight (preferred over smartphone light) to completely inspect.

6. If the suction screen (arrow) is not clean, spray it with brake cleaner or WD 40. Carefully use a rag to remove grime as lint may be transferred. If needed, re-spray with brake cleaner to remove lint. Do not damage the screen.

7. Remove the release block from the pump by removing the 4 Allen screws.

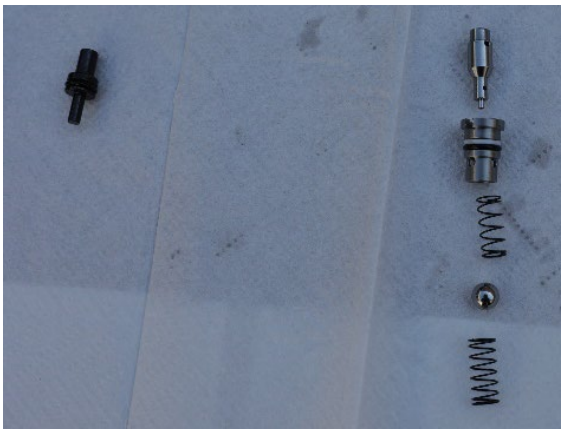
8. Remove the plunger and clean away old sludge and debris. Spray with brake cleaner.

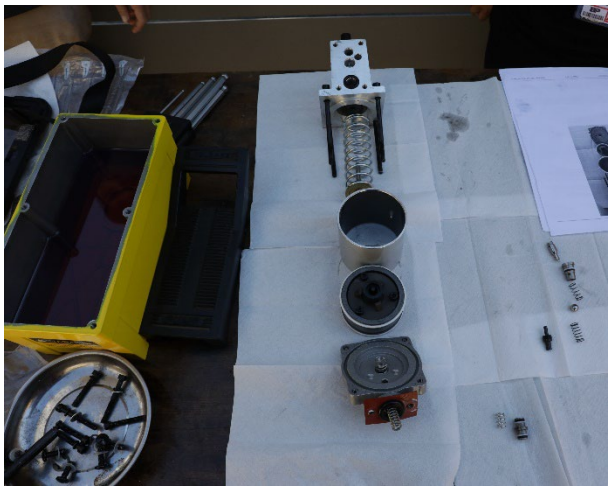
9. Pour the old fluid into a recycling container and wipe out any remaining sludge/grime. Then add new 10 Wt. Hydraulic fluid or ATF before reassembly. Fill the tank about halfway full.

10. Remove, inspect, and clean internal components. Use spray brake cleaner to ensure all orifices have no remaining debris or dirt.

11. Carefully remove, clean and reinstall all internal parts and springs to the same location.

12. Organize clean parts that are ready to reinstall. Apply WD-40 to contact surfaces before reassembling. Parts should receive new (lithium wheel bearing) grease.



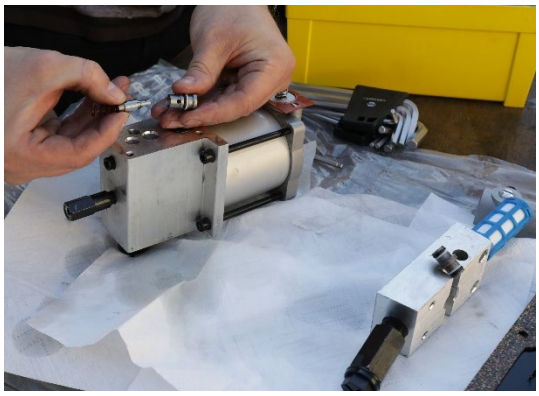


13. When reassembling the cylinder barrel, note that one end features a generous chamfer. This end is the entry side that allows the composite piston to fit through and install.

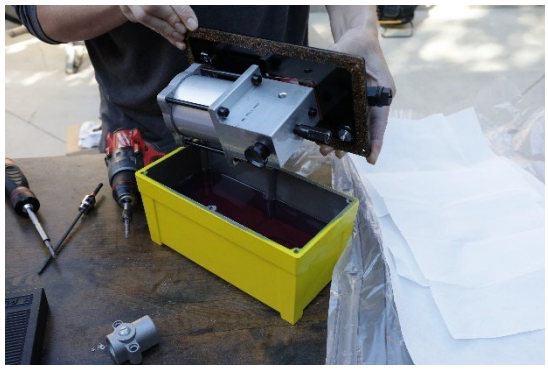
14. Apply WD-40 or jack oil to internal components and continue reassembling. Liberally spray WD-40 or coat with jack oil before reinstalling. Hands MUST be Clean from dirt or old grease.

15. Long hex screws should have WD-40 generously applied before installing. When tightening the cylinder, use a crisscross pattern and tighten firmly.

16. All pistons and other internal components should have new grease applied before reinstalling. (Keep hands clean).



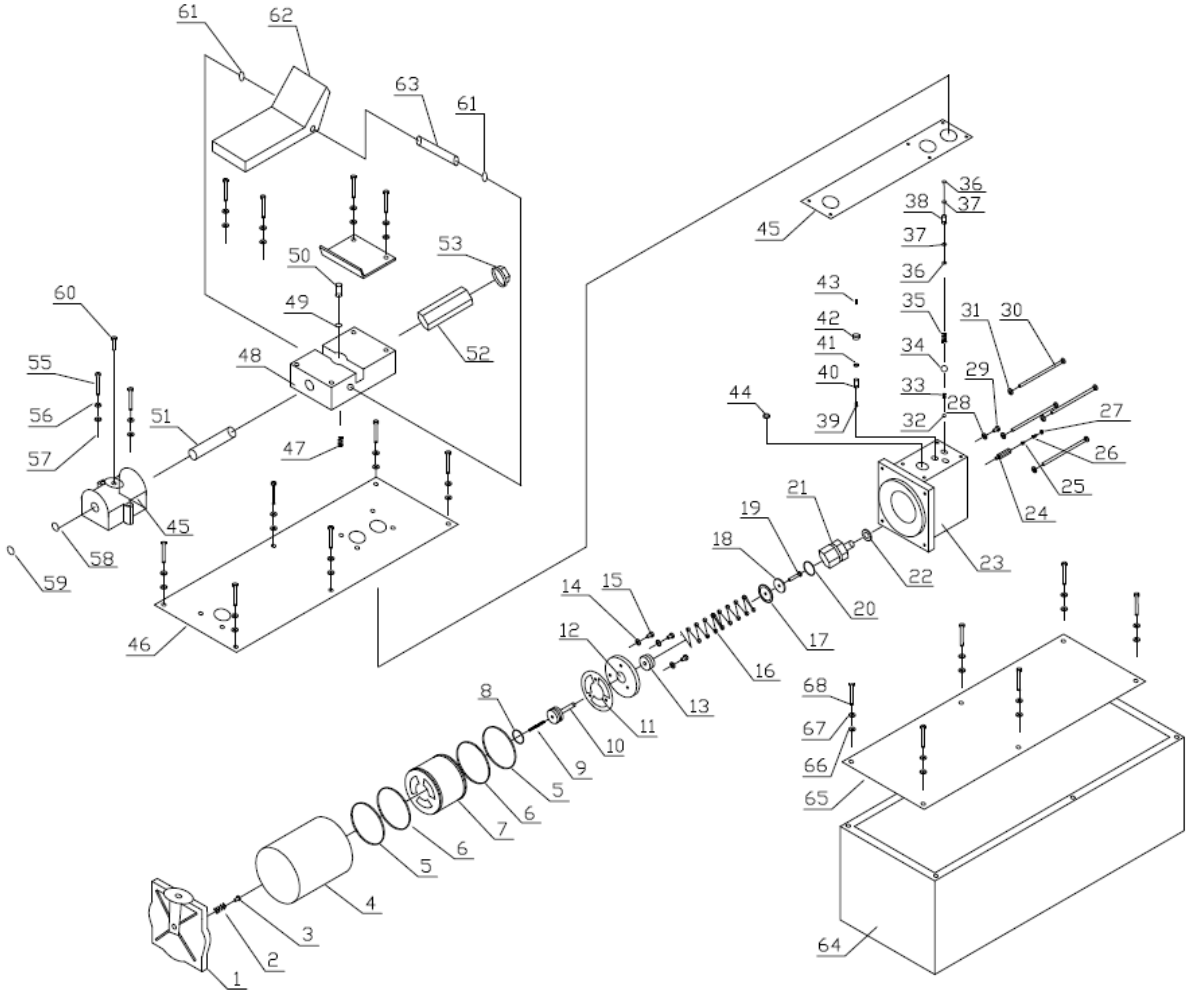
17. With all components lubed and reassembled, place the top plate onto the tank and reinstall all attaching hardware. Spray all hold down screws with WD-40 before installing.



18. Align the top handle on the top position of the pump, spray WD-40 on the pin, slip the pin through, and

19. Install the “E” clip. Wipe exterior of pump clean so it does not attract dirt. Verify proper operation.

Exploded view



Number	Name	Quantity	Number	Name	Quantity
1	Cover	1	35	Spring	1
2	Spring	1	36	O ring	2
3	Screw	1	37	Check ring	2
4	Outer cover	1	38	Shaft	1
5	Check ring	2	39	Spring	1
6	O ring	2	40	valve core	1
7	Spring	1	41	Check ring	1
8	Shaft	1	42	Fixed block	1
9	Spring	1	43	Iron core	1
10	Shaft	1	44	O ring	1
11	Rubber pad	1	45	Rubber pad	1
12	Fixed block	1	46	Top cover	1
13	Rubber block	1	47	spring	1
14	Washer	3	48	Foot plate	1
15	Bolt	3	49	Seal ring	1
16	Spring	1	50	Top shaft	1
17	Spring support	1	51	Plastic wrap	1
18	Rubber pad	1	52	Hexagonal piece	1
19	Pin	1	53	Plastic wrap	1
20	O ring	1	54	Back block	1
21	Bolt	1	55	Bolt	6
22	Flat washer	1	56	Spring washer	6
23	Bottom Base	1	57	Flat spring	6
24	Pressure adjust plug	1	58	Mesh block	1
25	square conical screw	1	59	Ring-shield	1
26	Pressure adjust spring	1	60	Adjusting screw	1
27	Pressure adjust bolt	1	61	Check ring	2
28	washer	1	62	pedal	1
29	Bolt	1	63	shaft	1
30	Bolt	4	64	Outer case	1
31	Washer	4	65	Rubber pad	1
32	Iron ball	1	66	bolt	6
33	Spring	1	67	Spring washer	6
34	Iron ball	1	68	Flat spring	6

Maintenance Log

Maintenance Log

Ranger®

30440 Agoura Road
Agoura Hills, CA 91301 USA