



PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

REV. B 10-16-14
P/N 5900183

INSTALLATION AND OPERATION MANUAL

1,500 POUND CAPACITY MOTORCYCLE / ATV LIFT Model: RML-1500XL

REV. B



SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

BE SAFE

Ranger™ Motorcycle Lifts's are designed and built with safety in mind. However, proper training and thoughtful operation on the part of the operator can increase your overall safety. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.



1645 Lemonwood Dr.
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1,500 POUND CAPACITY MOTORCYCLE / ATV LIFT

This instruction manual has been prepared specifically for you. Your new Ranger Motorcycle Lift is the product of over 40 years of continuing research, testing and development; it is the most technically advanced motorcycle lift on the market today. The manner in which you care for and maintain your motorcycle lift will have a direct effect on it's overall performance and longevity.

READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.

PRODUCT WARRANTY

Ranger Motorcycle / ATV Lifts are warranted for one year to be free of defects in material and workmanship. Ranger Products Inc. shall repair or replace at their option for the warranty period those parts returned to the factory freight, pre-paid, which prove upon inspection to be defective. Ranger Products Inc. will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- ◆ Defects caused by ordinary wear, abuse, misuse, negligence, shipping damage, improper installation, voltage or lack of required maintenance;
- ◆ Damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- ◆ Normal wear items or service normally required to maintain the product in a safe operating condition;
- ◆ Any component damaged in shipment;
- ◆ Other items not listed but may be considered general wear parts;
- ◆ Damage caused by rain, excessive humidity, corrosive environments or other contaminants.

THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A RANGER PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

**WARRANTY IS NOT VALID UNLESS
WARRANTY CARD IS RETURNED.**

IMPORTANT NOTICE

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. MANUFACTURER WILL ASSUME NO LIABILITY FOR LOSS OR DAMAGE OF ANY KIND, EXPRESSED OR IMPLIED, RESULTING FROM IMPROPER INSTALLATION OR USE OF THIS PRODUCT.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic motorcycle lift installation procedures. Never attempt to lift components without proper lifting tools such as a forklift or crane. 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. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



Watch for this symbol as it means: Immediate hazards which will result in severe personal injury or death.



Watch for this symbol as it means: Hazards or unsafe practices which could result in severe personal injury or death.



Watch for this symbol as it means: Hazards or unsafe practices which may result in minor personal injury, product or property damage.

OWNER'S RESPONSIBILITY

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 Codes.
- ◆ 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, know how to safely and correctly operate the unit, and are properly supervised.
- ◆ Allow unit operation only with all parts in place and operating safely.
- ◆ Carefully inspect the unit on a regular basis and perform all maintenance as required.
- ◆ Service and maintain the unit only with authorized or approved replacement parts.
- ◆ Keep all instructions permanently with the unit and all decals on the unit clean and visible.

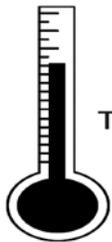
BEFORE YOU BEGIN

NOTIFY THE CARRIER AT ONCE if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. 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.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT. Support claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Ranger's willingness to assist in helping you process your claim does not make Ranger responsible for collection of claims or replacement of lost or damaged materials.

**INSTALLER / OPERATOR
PLEASE READ AND FULLY
UNDERSTAND. BY PROCEEDING
YOU AGREE TO THE FOLLOWING.**

- ◆ I have visually inspected the site where the lift is to be installed and verified the concrete to be in good condition and free of cracks or other defects. I understand that installing a lift on cracked or defective concrete could cause lift failure resulting in personal injury or death.
- ◆ I understand that a level floor is required for proper installation and level lifting.
- ◆ I understand that I am responsible if my floor is of questionable slope and that I will be responsible for all charges related to pouring a new, level concrete slab if required.
- ◆ I will assume full responsibility for the concrete floor and condition thereof, now or later, where the above equipment model is to be installed. Failure to follow Danger, Warning, and Caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.
- ◆ I understand that Ranger lifts are designed to be operated in indoor locations only. Failure to follow installation instructions may lead to serious personal injury or death to operator or bystander or damage to property or lift.



CAUTION

The safe operating temperature range for this product is 41° F. - 104 °F.



Failure to follow Danger, Warning, and Caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.



Please read the entire manual prior to installation. Do not operate this machine until you have read and have understood all of the Danger, Warning and Caution alerts in this manual. For additional copies or further information, contact:

Ranger Products

1645 Lemonwood Dr.

Santa Paula, CA. 93060

1-805-933-9970

www.rangerproducts.com

**INSTALLER / OPERATOR
PROTECTIVE EQUIPMENT**

Personal protective equipment helps makes installation and operation safer, however, it does not take the place of safe operating practices. Always wear durable work clothing during any installation and/or service activity. Shop aprons or shop coats may also be worn, however loose-fitting clothing should be avoided.

Tight-fitting leather gloves are recommended to protect the technician's hands when handling parts. Sturdy leather steel-toe work shoes and oil resistant soles should be used by all service personnel to help prevent injury during typical installation and operation activities.

Eye protection is essential during installation and operation activities. Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing worker protection. Consideration should also be given to the use of hearing protection if service activity is performed in an enclosed area, or if noise levels are high.



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OR YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.



Ranger
PRODUCTS

IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely. Do not attempt to install this lift if you have never been trained on basic motorcycle lift installation procedures. Never attempt to lift components without proper lifting tools such as forklifts or cranes. Stay clear of any moving parts that may fall and cause injury. When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions and all safety warnings before operating lift.
2. Care must be taken as burns can occur from touching hot parts.
3. Do not operate equipment with a damaged pneumatic hose or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
4. Do not let the pneumatic hose hang over the edge of the table or come in contact with hot manifolds or moving fan blades.
5. Care should be taken to arrange the pneumatic hose so that it will not be tripped over or pulled.
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. Keep feet clear of lift when lowering. Avoid pinch points.
8. Use only as described in this manual. Use only manufacturer's recommended attachments.
9. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
10. Consider work environment. Keep work area clean. Cluttered work areas invite injuries. Keep areas well lit.
11. Only trained operators should operate this lift. All non-trained personnel should be kept away from the work area. Never let non-trained personnel come in contact with, or operate lift.



12. DO NOT override self-closing lift controls.
13. Clear area if vehicle is in danger of falling.
14. ALWAYS make sure the safety is engaged before attempting to work on or near a vehicle.
15. MAINTAIN WITH CARE. Keep lift clean for better and safer performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.
16. Check for damaged parts. Check for alignment of moving parts, breakage of parts or any condition that may affect operation of lift. Do not use lift if any component is broken or damaged.
17. NEVER remove safety related components from the lift. Do not use lift if safety related components are missing or damaged.
18. STAY ALERT. Use common sense and watch what you are doing. Remember, SAFETY FIRST.



FOR ADDITIONAL COPIES OF THIS MANUAL
PLEASE CONTACT:

Ranger Products

1645 Lemonwood Dr.

Santa Paula, CA. 93060

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www.rangerproducts.com

SAVE THESE INSTRUCTIONS

TOOLS REQUIRED

◆ Open-End Wrench Set: Metric

◆ Socket And Ratchet Set: Metric

IMPORTANT NOTICE

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PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION

STEP 1 (Selecting Site)

Before installing your new lift, check the following.

1. **LIFT LOCATION:** Always make sure that adequate space is available for your new lift.
2. **OVERHEAD OBSTRUCTIONS:** The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.
3. **DEFECTIVE FLOOR:** Visually inspect the site where the lift is to be installed and check for defective concrete.
4. Your new Ranger Motorcycle / ATV Lift is designed for **INDOOR INSTALLATION ONLY.**

STEP 2 (Floor Requirements)

This lift must be installed on a solid level concrete floor with no more than 3-degrees of slope. Failure to do so could cause personal injury or death.

A level floor is suggested for proper use and installation and level lifting. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab.

STEP 3 (General Specifications)

Main Lifting Table.....	30" W x 81" L
Width with Side Extensions	51" W
Length with Front Extension	101" L
Extended Approach Ramp.....	13 3/4" W x 14" L
Lowered Height.....	7 1/2"
Capacity.....	1500 lb

 **DANGER**

DANGER!

READ ENTIRE MANUAL AND COMPLY WITH ALL SAFETY AND SERVICE PRECAUTIONS. DEATH, PERSONAL INJURY AND / OR PROPERTY DAMAGE MAY OCCUR UNLESS INSTRUCTIONS ARE FOLLOWED CAREFULLY.

STEP 4 (Unpacking and Setup)

5. Open carton, then remove the shipping boards. Carefully unpack the lift making sure that all the parts have been included.



WARNING!

THE LIFT MAY BE DAMAGED AND/OR PERSONAL INJURY MAY RESULT IF THE PRESSURE EXCEEDS THE MAXIMUM 160 PSI RATING.

6. Remove the end of the black air hose from underneath the lift and connect it to the hydraulic / pneumatic pump assembly.
7. Connect the pump assembly to an air supply with a pressure setting between 90 - 160 PSI , if air is not available proceed to the next step.
8. Raise the lift with either the hand valve connected to your air source or the foot valve, raise and rest the lift on the first lock.
9. Use the provided Allen wrench and place it in the caster adjustment screws located on the lift base in all four corners. Turn the screws counter clockwise until all four casters roll freely.
10. Move the lift into its final position and lower the casters by turning the screws clockwise.

TO LOWER LIFT:

1. Raise the lift slightly and lift the safety latch and lower to next position or to the floor.

 **DANGER**

DANGER!

VISUALLY CONFIRM THAT SAFETY LOCK IS ENGAGED BEFORE ENTERING WORK AREA. REMAIN CLEAR OF ELEVATED LIFT UNLESS VISUAL CONFIRMATION IS MADE THAT SAFETY LOCK IS FULLY ENGAGED AND THE LIFT IS LOWERED ONTO THE SAFETY LOCK, REFER TO INSTALLATION / OPERATION MANUAL FOR PROPER SAFETY LOCK PROCEDURES AND / OR FURTHER INSTRUCTION.

Optional - Step 5 (Front Extension Installation)

1. See fig. 1 to assist you in the process of this installation. Slide the front extension over the front of the lift deck until first set of connecting bar holes on the side of the extension line up with the holes on the side of the lift.
2. If you are not using the side extensions secure the front extension with the short connecting bar thru the first set of holes. Secure the bar in place by inserting the quick pins.
3. If you are using the side extensions you will need to center two of the long connecting bars thru the 2 sets of holes on the front extension.

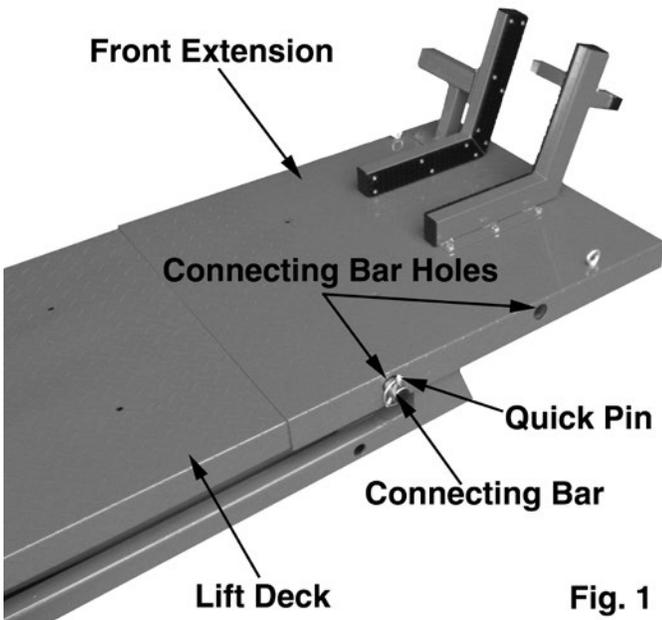


Fig. 1

Optional - Step 6 (Side Extension Installation)

1. See fig. 2 to assist you in the process of this installation. Insert two of the long connecting bars into the 2 sets of large holes on the side of the lift deck. If you are using the front extension you will use all three long connecting bars. Center the bars between the lift deck.
2. Line up one of the side extensions with the connecting bars, place it on the connecting bars and slide it against the lift deck. Make sure the quick pin hole on each connecting bar is showing on the outside of the side extension.
3. Secure the second side extension following the previous step 2.
4. Insert the quick pins onto each side of the connecting bars making sure the round ring on each pin is pulled over the connecting bar.

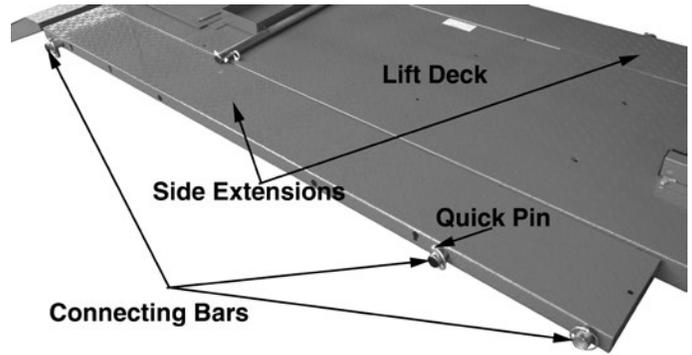


Fig. 2

Step 6 (Wheel Vise Installation)

1. See fig. 3 to assist you in the process of this installation. Locate the stationary vice arm and attach the tire stop to it using the locking pin.
2. Attach the stationary vice arm assembly to either the front extension if used or the lift deck making sure the rubber padding is facing the center of the lift. Attach using the provided m10 bolts, washers and nuts.
3. Locate the adjustable vise arm and attach the crank assembly to it using the 4 m8 bolts provided.
4. Attach the adjustable vise arm assembly to either the front extension if used or the lift deck making sure the rubber padding is facing the center of the lift. Attach using the provided m10 bolts, washers and nuts.

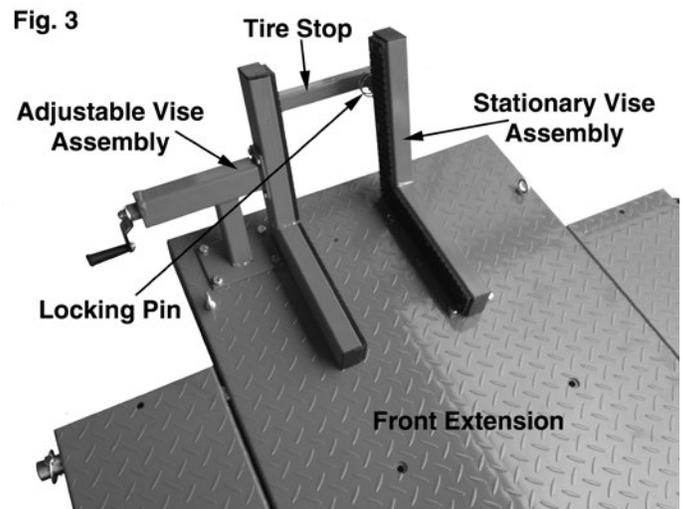


Fig. 3

Step 7 (Drive-Up Ramp Installation)

1. Locate the two side drive-up ramps with the welded nut on the bottom of them then locate the two threaded ramp supports and thread them into the welded nuts. Place these aside.
2. Locate the standard length center ramp without the supports and place it over the center of the base making sure the brackets are placed over the base securely.
3. If using the side extensions then you will need the two side ramps with the supports. The ramp with the support on the right hand side goes to the right of the center ramp and the ramp with the support on the left goes to the left. When placing these ramps down make sure the tubes attached to the bottom go inside the holes for the caster adjustment.
4. If you are working on a lowered motorcycle then you might need the extended center ramp to get the motorcycle up on the deck. In this case you would place it directly on top of the standard center ramp making sure the tubes on the bottom go inside the holes on the other ramp.

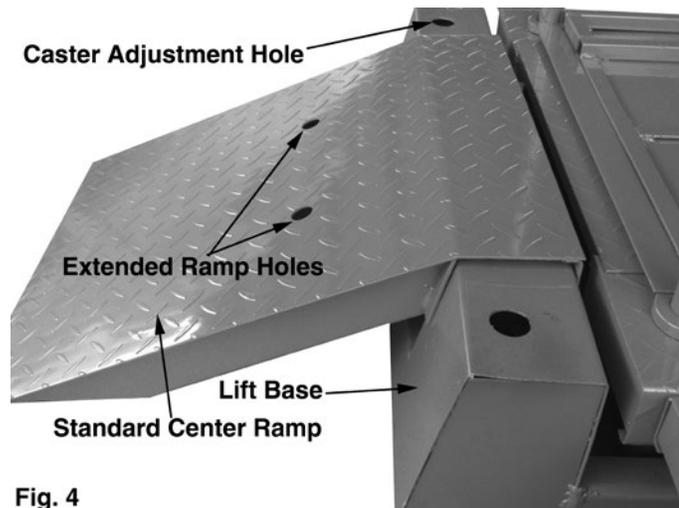


Fig. 4

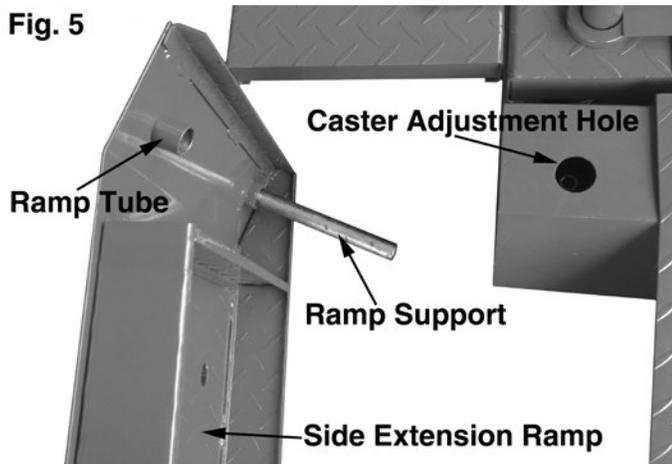


Fig. 5



DANGER!

WHEN LOADING THE MOTORCYCLE DO NOT ATTEMPT TO RIDE IT ONTO THE LIFT. DAMAGE TO THE BIKE AND OR LIFT MAY OCCUR. PUSH IT ON INSTEAD.

LOCKING MECHANISM

1. The lock release mechanism is located on the left side of the lift if facing it as you would push your bike onto the lift.
2. There are two positions for the lock release lever. The upper position is the unlocked position and the lower position is the locked position.
3. While raising the lift place the lock release lever in the lower position so the lock is engaged as you raise the lift.
4. When you get to the desired height, press the Release side of the pump foot pedal and lower the lift into a locked position. When using the lift in the up position rest the lift in a locked position. The hydraulics are used for raising and controlled lowering only and should not be used as a load holding device. The mechanical lock is used for maintaining the lift in the up position.
5. To lower the lift raise it about 1.00" off of the locked position. Move the lock release lever to the upper position.
6. Make sure your feet, tools and all objects are removed from under and around the lift.
7. Press and hold the release pedal on the pump assembly to lower the lift. (The Lock handle will reset when the lift is lowered all the way down.)

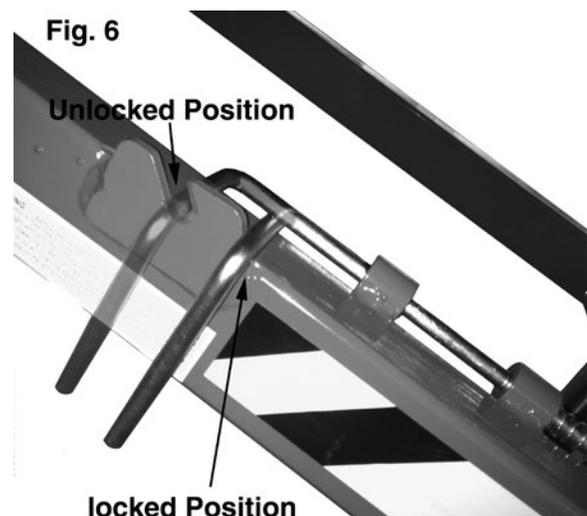
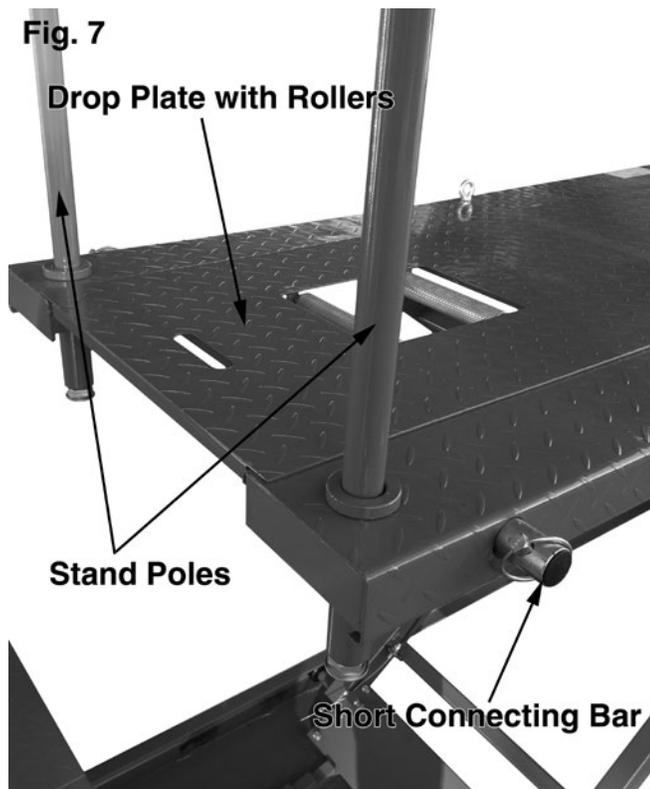


Fig. 6

REAR DROP-OUT PLATE

1. The rear drop plate is required to get your bike onto the lift. Place the rear drop plate in between the wheel opening on the lift deck, make sure the handle on the plate is facing towards the drive-up ramps.
2. If you are going to be moving the rear wheel while it is on the lift you would want to use the drop plate with the wheel rollers built in. Please note if you are using this plate you must hold it in place with one of your short connecting bars.
3. If you plan on removing your rear drop plate after the bike is on the lift please make sure your stand poles are in place and the rear of your motorcycle is strapped to them.

Fig. 7



Safe Lifting / Maintenance

1. Loads must be centered on table at all times.
2. Connect to 90 - 160 PSI maximum shop air.
3. Keep safety bar in position at all times – except when lowering.
4. Keep hands and tools from under table.
5. Do not attempt to climb on the lift when it is in a elevated position.
6. Do not ride the vehicle onto lift.
7. Secure the motorcycle in place by first tightening the wheel vise and second by strapping it down.

8. Straps must be used to secure the motorcycle to the lift. The wheel vise is for temporary holding only.
9. Lift must be in the lowered position when transporting.
10. Only trained operators should use lift.
11. The working area should be sufficiently lit.
12. Foot controller should be at least 3 feet away from lift during raising and lowering operation.
13. Lift is for indoor use only.
14. Loads must be firmly positioned and secured on table at all times.
15. All moving parts have been lubricated at the factory and should be re-lubricated every 6 months to prevent galling.
16. Lightly oil cylinder rod when it becomes dry.
17. Pivot shaft set screws should be checked frequently to ensure they are tight. These are located at the top end of the inside frame assembly.

Safe Lift Operation

Motorcycle lifts are critical to the operation and profitability of your business. The safe use of this and other lifts in your shop is critical in preventing employee injuries and damage to customer's vehicles. By operating lifts safely you can ensure that your shop is profitable, productive and safe. Safe operation of a motorcycle lift requires that only trained employees should be allowed to use the lift.

TRAINING SHOULD INCLUDE, BUT NOT LIMITED TO:

- ◆ Proper positioning of the vehicle on the table.
- ◆ Use of the operating controls.
- ◆ Understanding the lift capacity.
- ◆ Proper use of jack stands or other load supporting devices.
- ◆ Proper use, understanding and visual identification of safety lock devices and their operation.
- ◆ Proper housekeeping procedures (lift area should be free of grease, oil, tools, equipment, trash, and other debris)
- ◆ A daily inspection of the lift should be completed prior to its use. Safety devices, operating controls, lift arms and other critical parts should be inspected prior to using the lift.

Safe Lift Operation Continued

- ◆ All maintenance and repairs of the lift should be completed by following the manufacturer's requirements. Lift repair parts should meet or exceed OEM specifications. Repairs should only be completed by a qualified lift technician.
- ◆ The vehicle manufacturer's recommendations should be used for spotting and lifting the vehicle.

LIFT OPERATION SAFETY

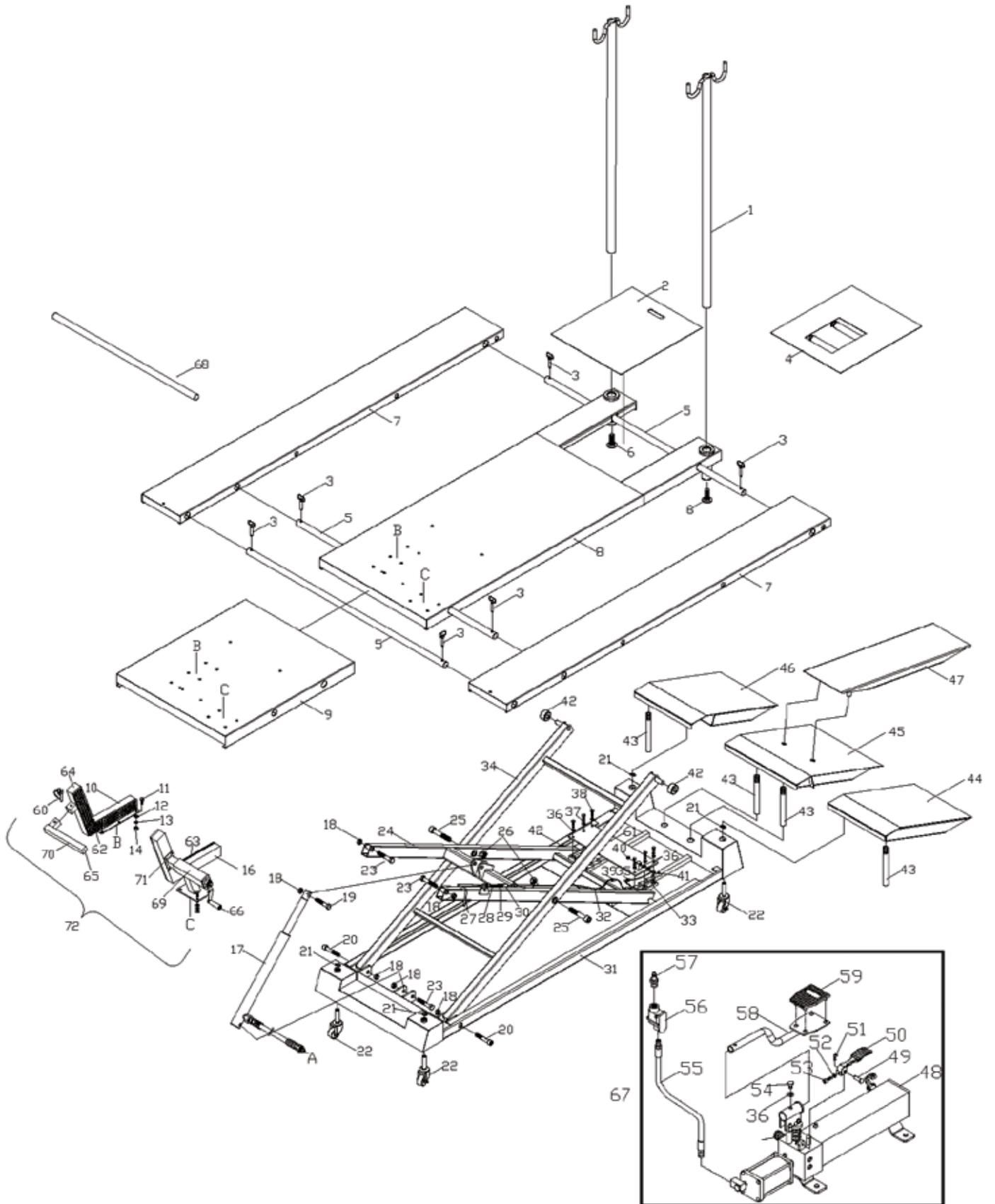
- ◆ It is important that you know the load limit. Be careful that you do not overload the lift. If you are unsure what the load limit is, refer to this manual or contact the manufacturer.
- ◆ The center of gravity should be followed closely to what the manufacturer recommends.
- ◆ Always make sure you have proper overhead clearance. Additionally, check that attachments, (vehicle signs, pipes, antennas, etc.) are not in the way.
- ◆ Be sure that prior to the vehicle being raised the motorcycle is secured to the table.
- ◆ Prior to being raised, make sure there is no one standing closer than six feet from the lift
- ◆ After positioning the vehicle on the lift, make sure the ignition is off, overhead obstructions are cleared, and the transmission is in neutral.
- ◆ Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, etc.
- ◆ Pay attention when walking around a vehicle that is up on the lift.



- ◆ **DO NOT** leave the controls while the lift is still in motion.
- ◆ **DO NOT** stand directly in front of the vehicle or in the bay when vehicle is being loaded into position.
- ◆ **DO NOT** Go near vehicle or attempt to work on the vehicle when being raised or lowered.
- ◆ **REMAIN CLEAR** of lift when raising or lowering vehicle.

- ◆ **DO NOT** rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.
- ◆ **DO NOT** lower the vehicle until people, materials, and tools are clear
- ◆ **ALWAYS ENSURE** that the safeties are engaged before any attempt is made to work on or near vehicle.
- ◆ Some vehicle maintenance and repair activities may cause the vehicle to shift. Follow the manufacturer's guidelines when performing these operations. The use of jack stands or alternate lift points may be required when completing some repairs.
- ◆ **READ AND UNDERSTAND** all safety warning procedures before operating lift.
- ◆ **KEEP HANDS AND FEET CLEAR.** Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- ◆ **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
- ◆ **USE LIFT CORRECTLY.** Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
- ◆ **DO NOT** override self-closing lift controls.
- ◆ **CLEAR AREA** if vehicle is on danger of falling.
- ◆ **STAY ALERT.** Watch what you are doing. Use common sense. Be aware.
- ◆ **CHECK FOR DAMAGED PARTS.** Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
- ◆ **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
- ◆ When the lift is being lowered, make sure everyone is standing at least six feet away.
- ◆ Be sure there are no jacks, tools, equipment, left under the lift before lowering.
- ◆ Always lower the vehicle down slowly and smoothly.

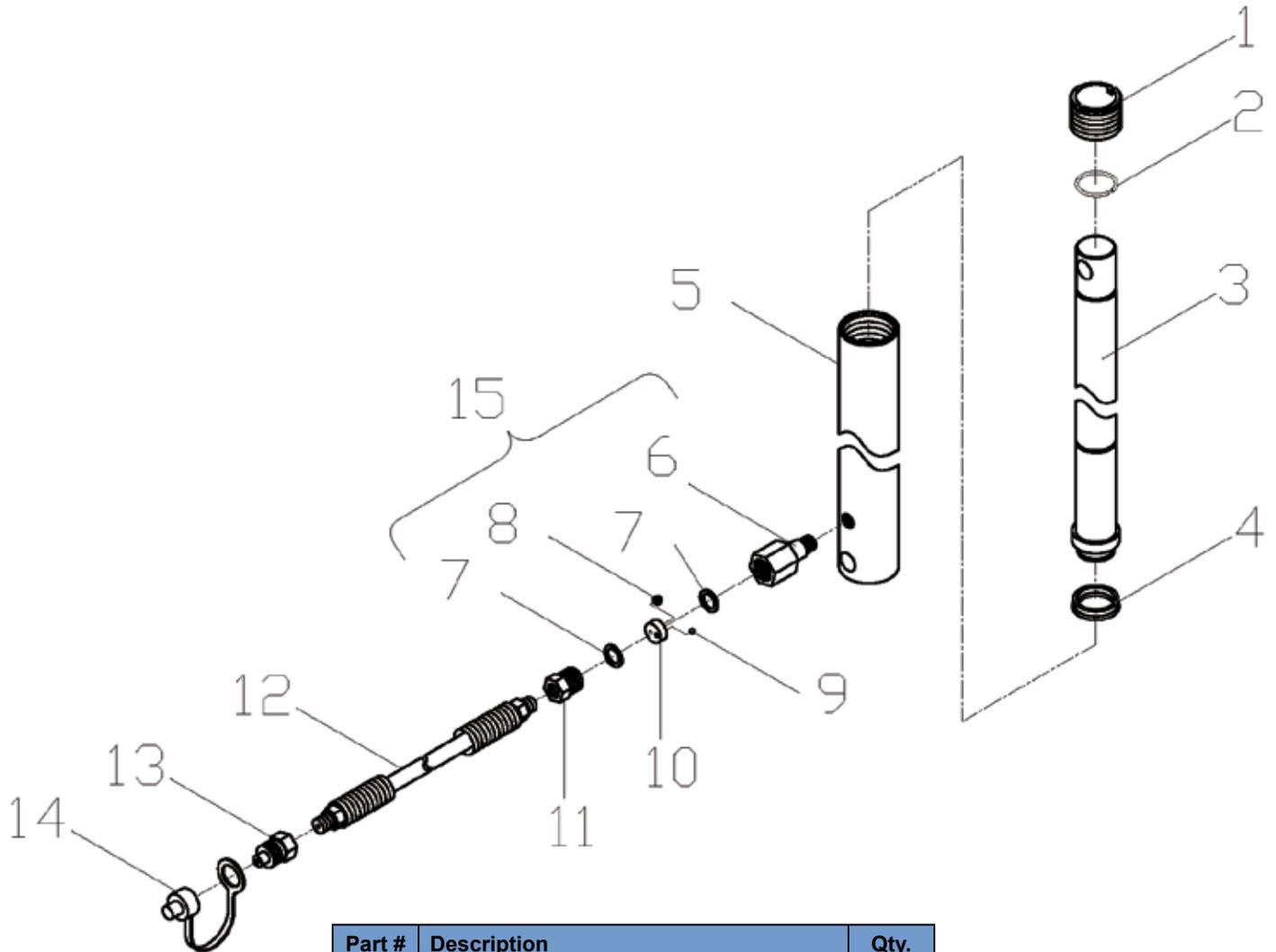
MAIN PARTS BREAKDOWN



MAIN PARTS BREAKDOWN CONTINUED

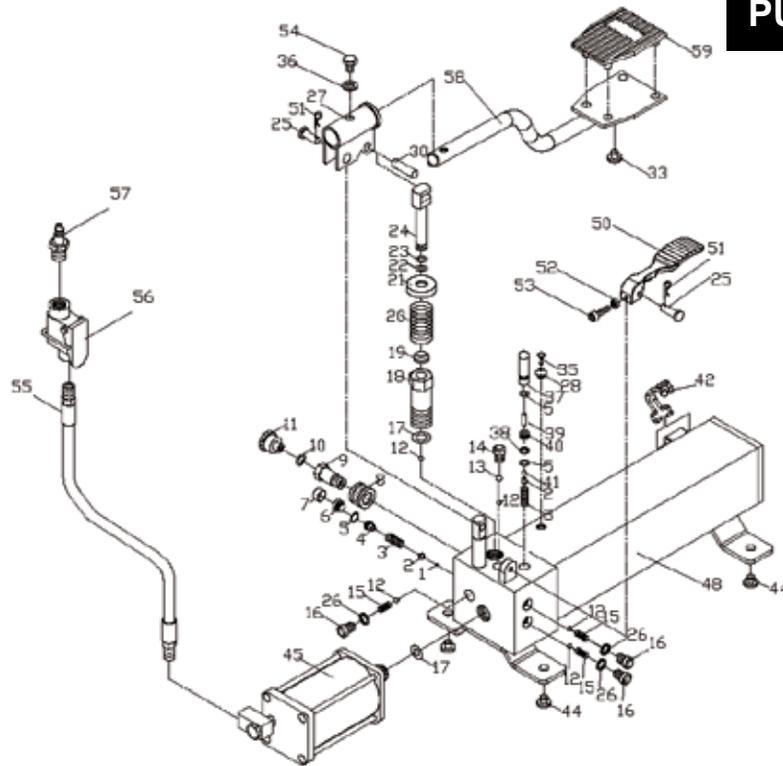
Part #	Description	Qty.	Part #	Description	Qty.	Part #	Description	Qty.
1	STAND POLE	2	25	M20 x 120 SOCKET HEAD CAP SCREW	2	49	CLEVIS PIN / RELEASE PEDAL	1
2	STANDARD DROP-OUT PLATE	1	26	M20 NYLON LOCK NUT	2	50	RELEASE FOOT PEDAL	1
3	QUICK PIN	6	27	SAFETY HANDLE	1	51	COTTER PIN	1
4	ROLLER DROP-OUT PLATE	6	28	SPRING	1	52	M6 HEX NUT	1
5	CONNECTING BAR	3	29	M8 HEX NUT	1	53	M6 x 16 SOCKET HEAD CAP SCREW	1
6	ADJUSTING LEG	2	30	BUSHING	1	54	M8 x 20 HEX BOLT	1
7	SIDE EXTENSIONS (RIGHT & LEFT)	2	31	BASE ASSEMBLY	1	55	AIR HOSE	1
8	DECK PLATE	1	32	SAFETY LOCK CABLE	1	56	AIR VALVE	1
9	FRONT EXTENSION	1	33	SAFETY LATCH	2	57	QUICK DISCONNECT AIR FITTING	1
10	STATIONARY VISE ARM	1	34	OUTER SCISSOR	1	58	LIFTING FOOT PEDAL	1
11	M10 x 25mm HEX HEAD BOLT	10	35	M8 HEX NUT	1	59	LIFTING FOOT PEDAL PAD	1
12	M10 Flat WASHER	10	36	M8 Flat WASHER	9	60	WIRE SNAPPER PIN	1
13	M10 LOCK WASHER	10	37	M8 LOCK WASHER	8	61	SAFETY SUPPORT PLATE	1
14	M10 HEX NUT	10	38	M8 x 20 HEX HEAD BOLT	6	62	RUBBER VISE PAD - RIGHT	1
15	TIRE STOP	1	39	SAFETY ADJUSTMENT SCREW	1	63	RUBBER VISE PAD - LEFT	1
16	ADJUSTABLE VISE ARM	1	40	M8 NYLON LOCK NUT	1	64	PLASTIC VISE END CAP	4
17	CYLINDER	1	41	SAFETY CABLE LOCK BOLT	1	65	PLASTIC WHEEL STOP END CAP	2
18	M16 NYLON HEX NUT	6	42	SCISSOR GUIDE WHEEL	4	66	VISE HANDLE	1
19	M16 x 80 HEX HEAD BOLT	1	43	RAMP SUPPORT	4	67	PUMP ASSEMBLY	1
20	M16 x 90 SOCKET HEAD CAP SCREW	2	44	REAR RAMP-LEFT	1	68	SHORT CONNECTING BAR	2
21	RETAINING RING	4	45	STANDARD CENTER RAMP	1	69	CRANK ASSEMBLY	1
22	CASTER	4	46	REAR RAMP-RIGHT	1	70	TIRE STOP	1
23	M16 x 90 HEX HEAD BOLT	3	47	CENTER EXTENSION RAMP	1	71	M8 x 20 HEX HEAD BOLT	4
24	INNER SCISSOR	1	48	PNEUMATIC / HYDRAULIC PUMP	1	72	COMPLETE VISE ASSEMBLY	1

CYLINDER BREAKDOWN



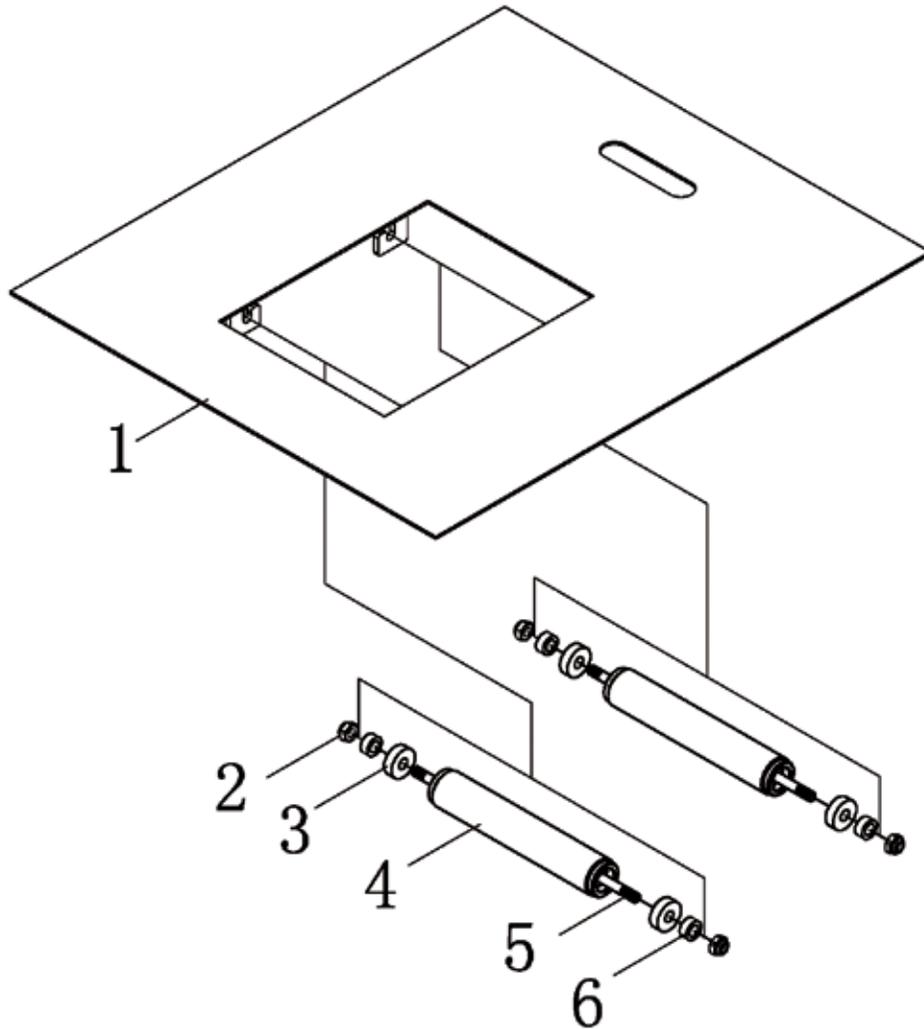
Part #	Description	Qty.
1	CYLINDER HEAD CAP	1
2	RETAINING RING	1
3	PISTON ROD	1
4	PISTON SEAL	1
5	CYLINDER TUBE	1
6	FITTING	1
7	WASHER	2
8	FILLER NET	1
9	BALL BEARING	1
10	RELEASE VALVE	1
11	ADAPTER FITTING	1
12	HYDRAULIC HOSE	1
13	HYDRAULIC HOSE FITTING	1
14	DUST CAP	1
15	VALVE ASSEMBLY (6,7,8,9,10,11)	1

PUMP BREAKDOWN



Part #	Description	Qty.	Part #	Description	Qty.
1	BALL	1	27	HANDLE SOCKET	1
2	BALL CUP	1	28	FILLER PLUG	1
3	SPRING	1	30	PIN	1
4	SCREW	1	33	RUBBER BUMPER	1
5	O-RING	1	35	BREATHER VALVE	1
6	SAFETY VALVE	1	36	WASHER	1
7	PLASTIC CAP	1	37	EXTERNAL OIL RELEASE PISTON	1
8	COUPLING RING	1	38	NYLON RING	1
9	COUPLING BOLT	1	39	INTERNAL OIL RELEASE PISTON	1
10	O-RING	1	40	BOLT	1
11	HYDRAULIC CONNECTING VALVE PLUG	1	41	BALL BEARING	1
12	BALL BEARING	5	42	HOLD DOWN LATCH	1
13	BALL BEARING	1	44	RUBBER BUMPER	1
14	SCREW	1	45	AIR MOTOR	1
15	SPRING	3	48	PUMP RESERVOIR	1
16	SCREW	3	50	RELEASE FOOT PEDAL	1
17	COPPER WASHER	2	51	COTTER PIN	2
18	PUMP CYLINDER	1	52	M6 HEX NUT	1
19	BACK UP RING	1	53	M6 x 6 SOCKET HEAD CAP SCREW	1
20	SPRING	1	54	M8 x 20 HEX HEAD BOLT	1
21	SPRING CAP	1	55	AIR HOSE	1
22	O-RING	1	56	AIR VALVE	1
23	NYLON RING	1	57	AIR HOSE FITTING	1
24	PISTON	1	58	LIFTING FOOT PEDAL	1
25	PIN	2	59	RUBBER PEDAL PAD	1
26	O-RING	3			

ROLLER DROPOUT BREAKDOWN



Part #	Description	Qty.
1	DROPOUT PLATE	1
2	M8 NYLON LOCK NUT	4
3	BEARING	4
4	ROLLER	2
5	THREADED ROD	2
6	BUSHING	4



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