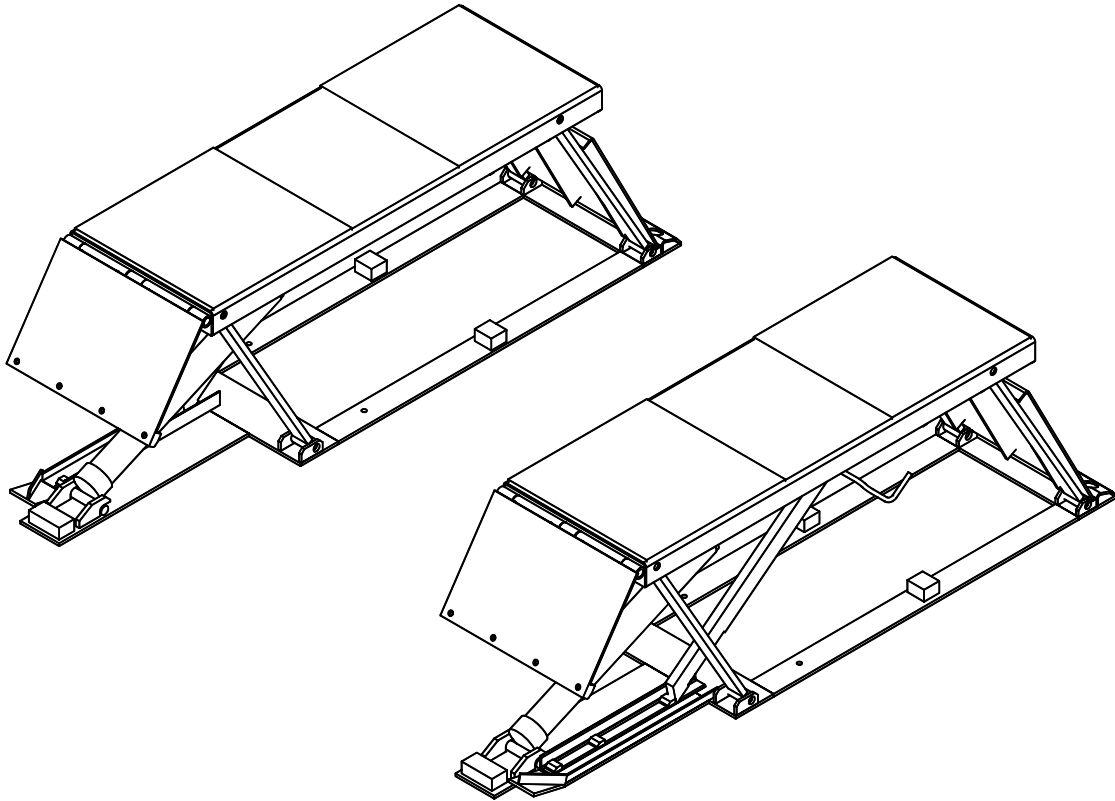


INSTALLATION, OPERATION & MAINTENANCE MANUAL

Pad Engaging Surface Mounted Pit Lift



MODEL 68000

6,000 LBS. CAPACITY

200 Cabel Street, P.O. Box 3944 Louisville, Kentucky 40201-3944

Email: sales@challengerlifts.com Web site: www.challengerlifts.com

Office 800-648-5438 / 502-625-0700 Fax 502-587-1933

**IMPORTANT: READ THIS MANUAL COMPLETELY BEFORE
INSTALLING or OPERATING LIFT**

GENERAL SPECIFICATIONS

Rise Height	25"
Three Locking Heights	14 1/2", 19, & 24"
Lowered Height	5"
Rearward Movement	12"
Overall Length	86"
Adjustable Distance Between Structures	39" max.
Overall Width (at max. width setting)	76"
4 Adapter Blocks (included)	1 1/2" x 4" x 6 1/4"
* Maximum Capacity	6,000 lbs.
Lifting Time	40 Sec. (approximate)
Motor	1HP, Single Phase, 60Hz, 115V

* Lift capacity ratings are based on loads equally distributed on all four pads.

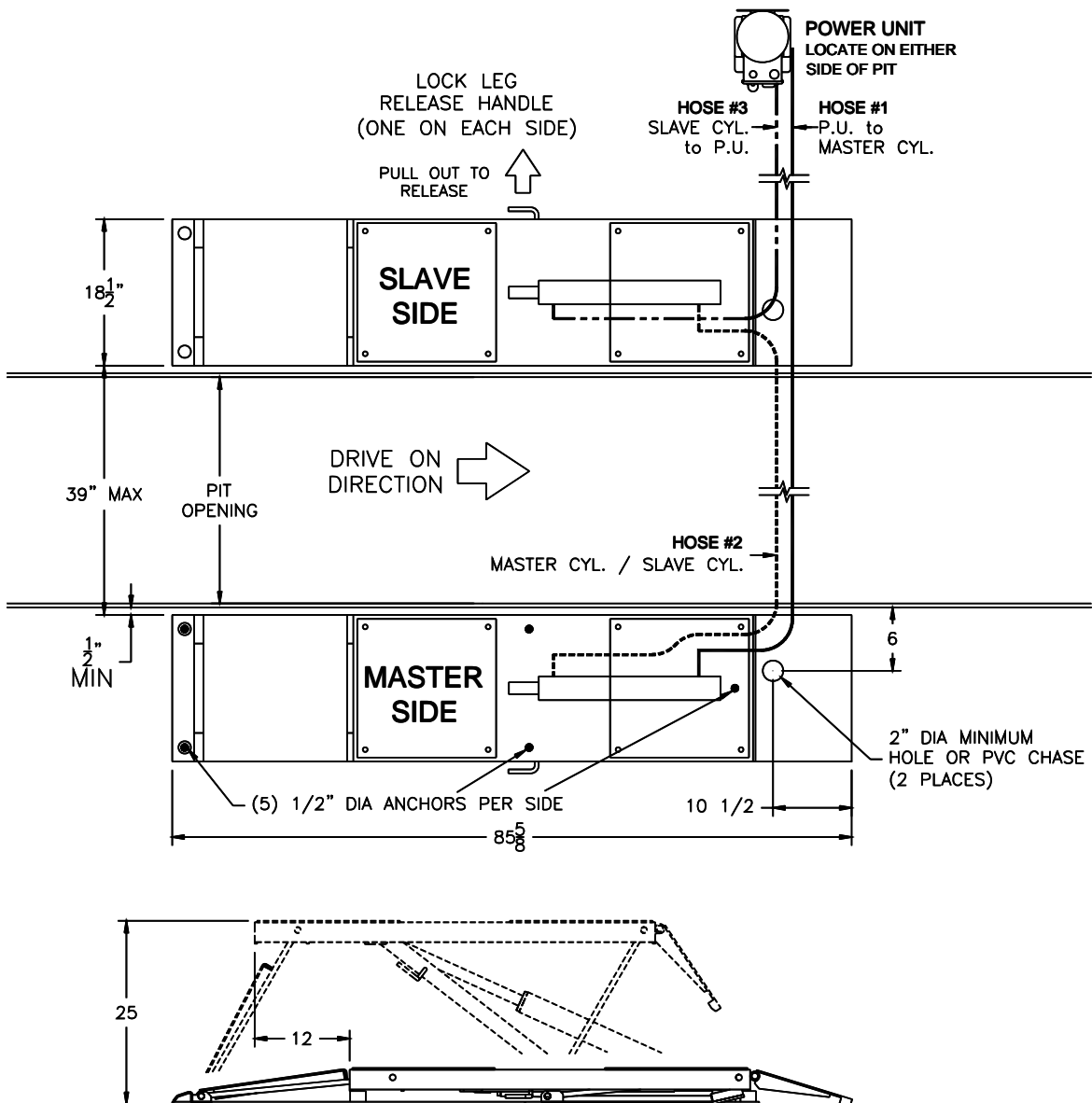


Fig 1 – General Specifications and Service Bay Layout

VERTICAL CLEARANCE

Check the height of the area where the lift is to be installed. Clearance should be calculated based on the full raised height of the lift.

WARNING Failure by purchaser to provide adequate clearance could result in unsatisfactory lift performance, property damage, or personal injury.

FLOORING

Be certain the floor is capable of handling the loaded lift, see Fig 1. Floor should be in generally good condition with no large cracks, spalling or deterioration.

The supplied anchor bolts may be used for the following minimum concrete specifications: 4 inches minimum depth, with steel reinforcement, 3500 psi, cured for 28 days per local commercial practice. Floor should be level within 1/4 inch over the installation area.

Check with local building inspectors and/or permits office for any special instructions or approvals required for your installation.

WARNING Failure by purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.

ELECTRICAL REQUIREMENTS

For lift installation and operation, it is necessary to have a dedicated 115V single phase 60 cycle circuit with a 15 amp circuit breaker or time delay fuse.

SAFETY NOTICES AND DECALS

For your safety, and the safety of others, read and understand all of the safety notices and decals included here.

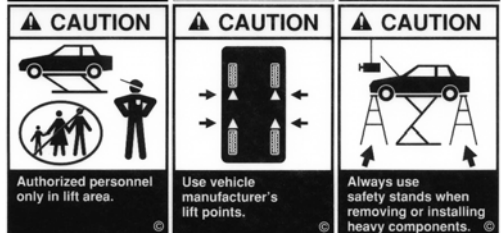
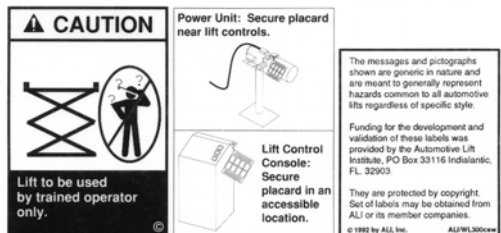
READ ENTIRE MANUAL BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT. PROPER MAINTENANCE AND INSPECTION IS NECESSARY FOR SAFE OPERATION. DO NOT OPERATE A DAMAGED LIFT.

Safety decals similar to those shown here are found on a properly installed lift. Be sure that all safety decals have been correctly installed on the Power Unit reservoir. Verify that all authorized operators know the location of these decals and fully understand their meaning. Replace worn, faded, or damaged decals promptly.

WARNING Do not attempt to raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in this manual.

SAFETY WARNING LABELS FOR HINGED FRAME ENGAGING LIFTS
Lift Owner/User Responsibilities:

- A. This Safety Warning placard SHALL be displayed in a conspicuous location in the lift area.
- B. Use one of the mounting arrangements illustrated on back of this placard.
- C. These Safety Warning labels supplement other documents supplied with the lift.
- D. Be certain all lift operators read and understand these labels, operating instructions and other safety related information supplied with the lift.



RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by our invoice.

If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY **Challenger Lifts** AT ONCE if any hidden loss or damage is discovered after receipt.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.

File your claim with **Challenger Lifts** promptly. Support your claim with copies of the bill of lading, freight bill, and photographs, if available.

INSTALLATION

IMPORTANT: Always wear safety glasses while installing lift.

TOOLS (MINIMUM REQUIRED)

NOTE: HOSES ARE NOT SUPPLIED (see "Layout" section for details)

- a. Hammer drill with 1/2" diameter carbide tipped bits
- b. Tape measure, 16ft
- c. Chalk line
- d. 4ft level
- e. 10" & 12" adjustable wrench
- f. Standard open end wrenches (2) 1/2", 9/16", (2) 11/16", 3/4"
- g. Hammer
- h. Torque wrench: 40 foot pounds minimum with 3/4" socket

LAYOUT

- 1) Lay out the service bay according to the architect's plans or owner's instructions (**see Fig 1**). Be certain that the proper conditions exist, see page 3.

NOTE: At full rise, the lift will move the vehicle rearward 12" as shown in Fig. 2.

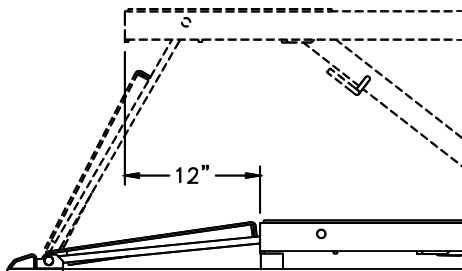


Fig. 2 – Rearward Movement

- 2) Determine hose lengths. The three (3) required **hoses are NOT SUPPLIED** because their lengths will be based on the position of the power unit with respect to the lift and the route chosen between the master and slave sides. Hoses may be routed around the front or rear of the pit opening, across the pit opening with a stationary structural member, or piped down to the basement floor, under the platform and back up. When determining the route, consider options that will best guard the hoses from damage, minimize any tripping hazards, and minimize the length. Excess hose #2 length may result in poor equalization of the two lift structures. The power unit may be mounted on either side of the lift on the stand provided or on a wall with the motor at a minimum of 18" above the floor. (Purchase the appropriate mounting hardware to match the wall construction.)

Each hose should be rated for 3000psi minimum working pressure with a 12000psi minimum burst pressure and have the same fitting on both ends, female #6 (9/16-18) J.I.C. 37° flare.

HOSE #1 (3/8" I.D.) Power Unit to Master Cyl.

.Add 30" to the distance from top of floor at power unit stand to top of floor at master cylinder base.

HOSE #2 (1/4" I.D.) Master Cyl. to Slave Cylinder

Add 45" to the distance from top of floor at master cylinder base to top of floor at slave cylinder base)

HOSE #3 (3/8" I.D.) Slave Cylinder to Power Unit

Add 55" to the distance from top of floor at slave cylinder base to top of floor at power unit stand)

POWER UNIT

- 3) Install the power unit stand using concrete anchors provided. Mount the power unit to the stand with 5/16 hardware provided.
- 4) Remove the high pressure port steel plug (#6 O-Ring port) from the left side of the valve block and reinstall in the right side in place of the plastic shipping plug, **Fig 3**. Install the 90 degree high pressure line adapter, **Fig 4**, into the left side of the valve block (#6 O-Ring port).

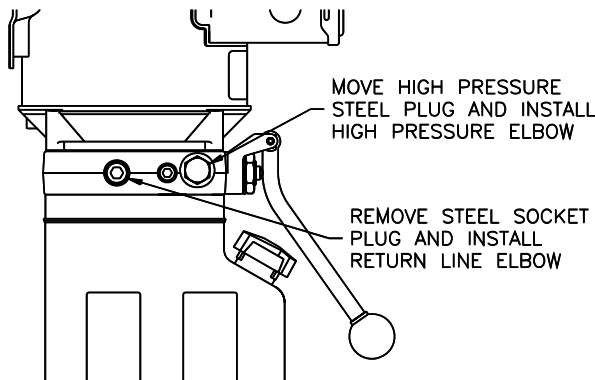


Fig. 3 – Power Unit Fittings

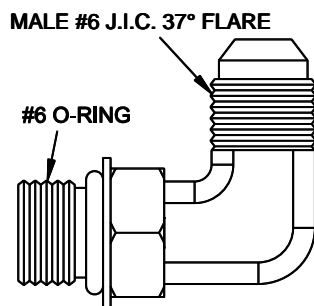


Fig. 4 – High Pressure Line Elbow

- 5) Remove the 3/8NPT steel hex socket plug from the left side of the valve block, **Fig 3**, and discard. Install the 90 degree return line adapter elbow, **Fig 5**, (male 3/8NPT x male #6 J.I.C. 37° flare) to the return port on the power unit (3/8NPT).

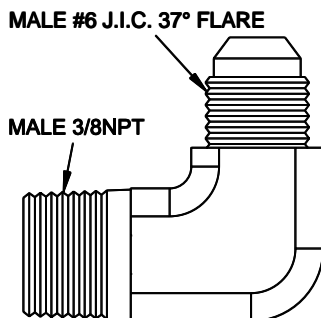


Fig. 5 – Return Line Elbow

- 6) Manually raise both structures to the second lock position and ensure that both locks are properly engaged.

- 7) Install a 90 degree cylinder adapter elbow, **Fig 6**, (male 1/4BSPT x male #6 J.I.C. 37° flare) to the upper and lower ports (1/4BSPT) of both the master and slave cylinders.

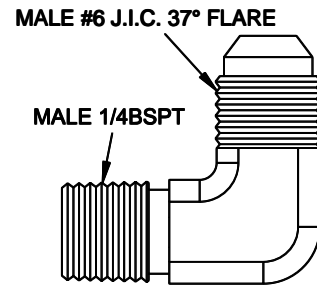


Fig. 6 – Cylinder Adapter Elbow

- 8) Install hoses. Be careful to avoid tight bends and moving parts that could damage the hose. Do not leave a hose exposed to the path of the automobile tire. Guard hoses where necessary.
- 9) Fill the reservoir with 6 quarts clean 10wt anti-foam, anti-rust hydraulic oil or Dexron III ATF. **DO NOT USE OILS WITH DETERGENTS.**
- 10) Plug power unit cord into a dedicated 115V single phase 60 cycle circuit with a 20 amp circuit breaker or time delay fuse.
- 11) Actuate the power unit and raise the lift fully. The first time the lift is raised, the master side will rise completely before the slave side even begins. This is normal. Notice that the fluid flows from the power unit to the bottom side of the master cylinder piston, from the top side of the master cylinder piston to the bottom side of the slave cylinder piston, and from the top side of the slave cylinder piston back to the power unit. Once a cylinder is at full stroke, fluid is allowed to pass thru the piston. So the power unit will not make the normal screeching sound (fluid flowing thru the relief valve) when the lift is fully raised.
- 12) After both sides have been fully raised, continue running the power unit for 30 seconds to ensure that all lines have been filled with fluid.
- 13) Release both locks (pull outward on lock release handle) and lower the lift to approximately 6" rise. Look at the position of the top structure and the front ramp and ensure that lowering the lift will not damage the hydraulic hoses or fittings. Raise lift and lower into a lock if fittings need adjustment.

ANCHORING

- 14) There are (5) holes provided in the base of both frames, **Fig 1**. The holes are sized for 1/2" anchor bolts. Use the holes as a template when drilling into floor.

NOTE:

The pad lift frame must not be twisted, bent or otherwise misaligned by unlevel floors when anchoring. This will cause damage to the lift. Maximum out-of-level is 1/4" between all anchor points. If this is exceeded, the lift must be shimmed with steel washers at the anchors and grouted under the base frame.

- 15) Drill the anchor holes and install the lift anchor bolts. Torque to 40 foot pounds.
- 16) Raise and lower lift a few times and Check for binding, misalignment or damage. Check hoses and fittings for leaks and tighten if required.

CAUTION The power unit operates at high pressure. Correct any unusual condition before raising vehicle.

Note that the hydraulic system has not developed working pressure until a load is placed on the lift.

OWNER/OPERATOR CHECKLIST

- 17) Demonstrate the operation of the lift to the owner/operator and review correct and safe lifting procedures using the **Lifting It Right** booklet as a guide.
- 18) Complete the Installation Checklist/Warranty Validation questionnaire with the owner. Review the terms of the warranty registration card, and return the card and a copy of the questionnaires to:

Challenger Lifts, Inc.
200 Cabel Street
Louisville, KY. 40206

OPERATION PROCEDURE

SAFETY NOTICES AND DECALS

This product is furnished with graphic safety warning labels, which are reproduced on page 3 of these instructions. Do not remove or deface these warning labels, or allow them to be removed or defaced. For your safety, and the safety of others, read and understand all of the safety notices and decals included.

OWNER/EMPLOYER RESPONSIBILITIES

This lift has been designed and constructed according to ANSI/ALI ALCTV-1998 standard. The standard applies to lift manufactures, as well as to owners and employers. The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM-2000, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

The Owner/Employer shall insure that the lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting It Right Safety Manual; ALI/ST-90 ALI Safety Tips Card; ANSI/ALI ALOIM-2000; American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift inspectors are qualified and they are adequately trained in the inspection of the lift.

The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift maintenance personnel are qualified and they are adequately trained in the inspection of the lift.

The Owner/Employer shall maintain the periodic inspection and maintenance records recommended by the lift manufacturer or ANSI/ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

The Owner/Employer shall display the lift manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting It Right Safety Manual; ALI/ST-90 ALI Safety Tips Card; ANSI/ALI ALOIM-2000; American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in case of frame engaging lift, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator.

LIFTING A VEHICLE

- 1) Be sure lift is fully lowered and service bay is clear of all personnel before the vehicle is driven on to lift.
- 2) Position the vehicle in the service bay so that the vehicle's center of gravity is centered front to rear and side-to-side over the two pad structures.

DO NOT EXCEED 3000 POUNDS PER SIDE.

DO NOT ATTEMPT TO LIFT ONLY A PORTION OF THE VEHICLE. LIFT IS INTENDED TO RAISE THE ENTIRE VEHICLE CENTERED ON THE LIFT.

ENSURE THAT THE HIGHEST POINT ON THE VEHICLE WILL NOT CONTACT THE CEILING OR ANY OBSTRUCTION ABOVE THE VEHICLE.

MOST SPECIALTY OR MODIFIED VEHICLES CANNOT BE RAISED ON A FRAME ENGAGING OR PAD LIFT. CONTACT VEHICLE MANUFACTURER FOR RAISING OR JACKING DETAILS.

DO NOT PLACE THE VEHICLE IN THE SERVICE BAY BACKWARDS.

REFER TO THE VEHICLE MANUFACTURERS SERVICE MANUAL, TECHNICAL BULLETINS, "VEHICLE LIFTING POINTS GUIDE" (ALI/LP-GUIDE) OR OTHER PUBLICATIONS TO LOCATE THE RECOMMENDED LIFTING POINTS.

- 3) Position the spacer pads (1 ½"x4"x6") so all four pads contact the vehicle simultaneously.

CAUTION Always use minimum number of spacer pads to clear obstruction. Spacer pads should never be stacked more than (2) pads high in any combination.

The vehicle should remain level during lifting.

- 4) Raise the lift until all four wheels are off the ground. Test the stability of the vehicle by attempting to rock the vehicle. Check adapters for secure contact with vehicle lift points. If the vehicle seems unstable, lower the lift and readjust. If the vehicle is stable, raise the vehicle to full height.

To ensure proper synchronization between the two lift structures, always raise the lift to the top of its stroke before lowering into locks.

- 5) Lower the vehicle until the locking legs on both sides engage. The vehicle should remain level when both locks are engaged. If one side engages and the other continues to descend, stop lowering the vehicle, raise it several inches, and try again to engage both latches.

Always lower lift into locks before entering the area beneath the vehicle.

Always use safety stands when removing or installing heavy components.

LOWERING A VEHICLE

- 1) Insure that the area under the vehicle is clear of personnel and tools.
- 2) Raise the vehicle until both latches are free.
- 3) Disengage both latches by pulling the lock leg release lever outward against the outer guide.

NOTE:

The lock bar will reset automatically only when the lift is fully lowered. If during the lowering process the lift is stopped before it gets to the fully lowered position. The lock bar **MUST** be reset by raising the lock release handle and pushing the locking leg inward.

- 4) Lower the vehicle by depressing the lowering valve handle. Continue to lower the vehicle until both sides have completely lowered.

CAUTION Lowering handle must be held down to continue to lower lift. **DO NOT** override self-closing lift controls.

- 5) Be sure lift is fully lowered and service bay is clear of all personnel before the vehicle is driven off the lift.

MAINTENANCE

To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment.

The following maintenance points are suggested as the basis of a preventive maintenance program. The actual maintenance program should be tailored to the installation. See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

- If lift stops short of full rise or chatters, check fluid level and bleed both cylinders by raising empty lift to full rise and continue running the power unit for 1 minute.
- Replace all Safety, Warning or Caution Labels if missing or damaged (**See page 3.**)

Daily

- Keep lift components clean.
- Check for loose or broken parts.
- Check hydraulic system for fluid leaks.
- Check spacer blocks for damage or excessive wear. Replace as required with genuine Challenger Lifts parts.
- Check lock mechanism for damage or binding.

Weekly

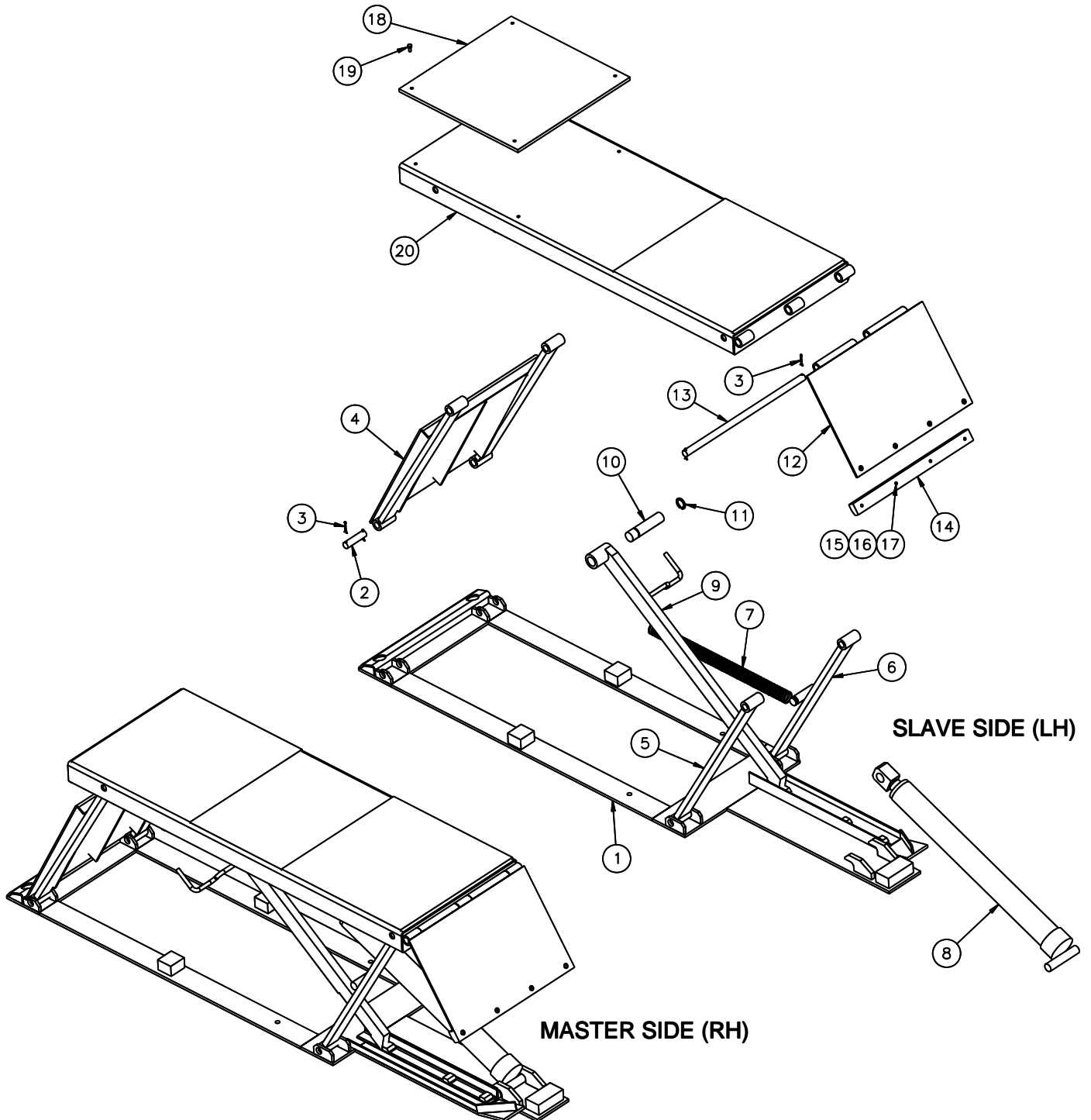
- Inspect all lift parts for signs of damage due to improper use.

Monthly

- Check concrete anchor bolt torque (30 ft-lbs.)
- Lubricate all hinge joints if any signs of rust.

If any problems are encountered, contact your local service representative.

PARTS BREAKDOWN



Model 68000
Installation, Operation and Maintenance

ITEM #	PART #	QTY/LIFT	DESCRIPTION
1	68003 - 1LH	1	BASE FRAME WELDMENT (SLAVE SIDE)
	68003 - 1RH	1	BASE FRAME WELDMENT (MASTER SIDE)
2	68002 - 3	16	LEG HINGE PIN
3	68002 - 4	32	COTTER PIN
4	68002 - 1	2	REAR LEG / RAMP
5	68002 - 2IS	2	FRONT LEG (INSIDE)
6	68002 - 2OS	2	FRONT LEG (OUTSIDE)
7	68002 - 5	2	SPRING
8	68006 - 0	1	SLAVE CYLINDER (LH)
	68007 - 0	1	MASTER CYLINDER (RH)
9	68008 - 1LH	1	LOCKING LEG (SLAVE SIDE)
	68008 - 1RH	1	LOCKING LEG (MASTER SIDE)
10	68006 - 13	2	CYLINDER / LOCK LEG PIN
11	68006 - 15	2	SNAP RING
12	68004 - 1	2	FRONT RAMP WELDMENT
13	68004 - 2	2	RAMP HINGE PIN
14	68004 - 4	2	RAMP SLIDE
15	68004 - 5	8	SCREW (M6 x 20)
16	68004 - 6	8	NUT (M6)
17	68004 - 7	8	LOCK WASHER (M6)
18	68001 - 3	4	RUBBER PAD
19	68001 - 4	32	SCREW (M6 x 10)
20	68001 - 1LH	1	SUPERSTRUCTURE WELDMENT (SLAVE SIDE)
	68001 - 1RH	1	SUPERSTRUCTURE WELDMENT (MASTER SIDE)
	67010	1	POWER UNIT 115VAC, 60Hz
	16167	1	90° ELBOW ADAPTER (#6 O-RING x #6 J.I.C.) (PU pressure port)
	68031	4	90° ELBOW ADAPTER (1/4BSPT x #6 J.I.C.) (upper & lower cylinder ports)
	68032	1	90° ELBOW ADAPTER (3/8NPT x #6 J.I.C.) (PU return line port)
	68009 - 20	2	CYLINDER RESTRICTOR VALVE

Replace all worn or broken parts with genuine **Challenger Lifts Inc.** parts.
Contact your local Challenger Lifts Parts Distributor for pricing and availability.
(Call Challenger Lifts Inc. (502) 625-0700 for the Parts Distributor in your area)