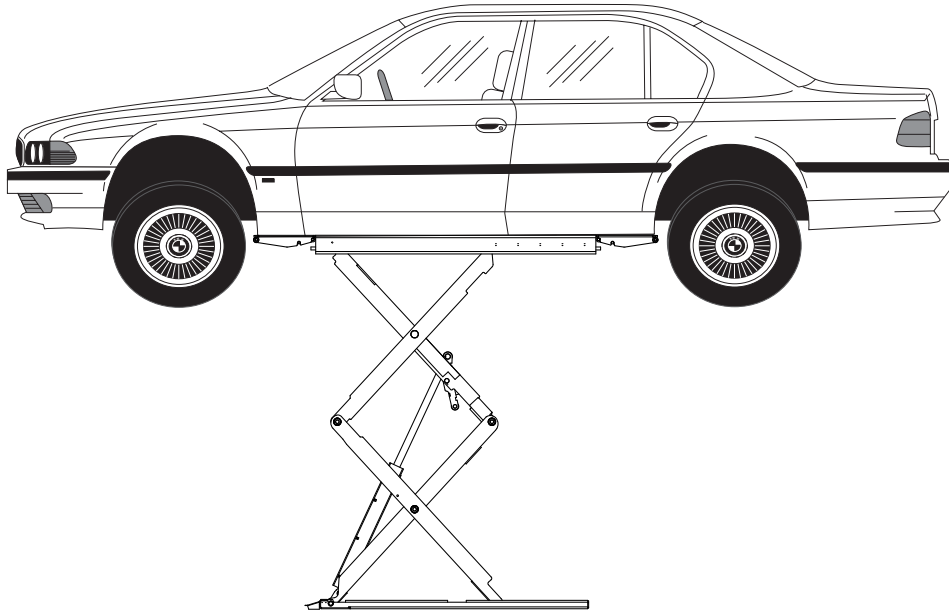


# Operations and Maintenance Manual

## Double Section Scissor Lift

### (000 Series)

**Capacity 7,700 lbs (3,500 kg)**  
(Maximum 3,850 lbs (1,750 kg) per pad)



Intended for unibody vehicles and  
some frame vehicles within the rated  
lift capacity.

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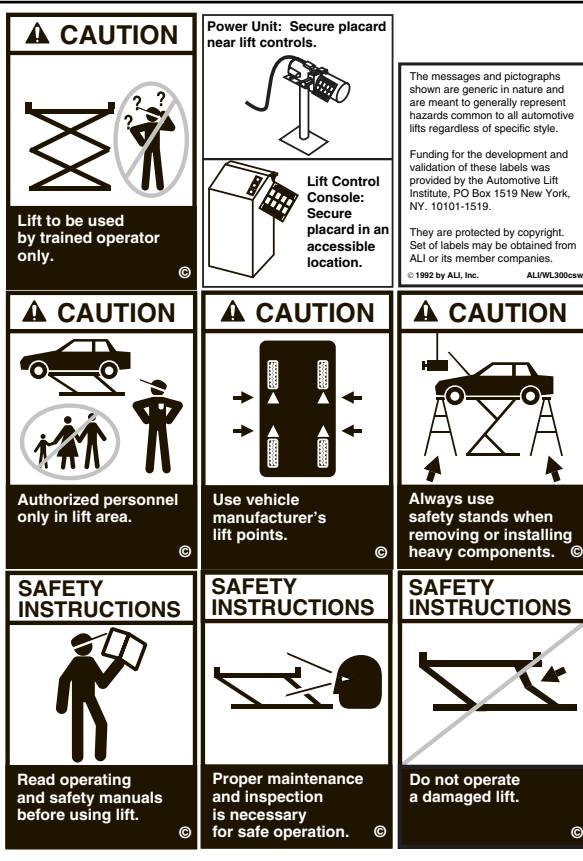
# SAFETY INSTRUCTIONS

- **Daily** inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use **only** qualified lift service personnel and genuine Rotary parts to make repairs.
- **Thoroughly** train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.
- **Never** allow unauthorized or untrained persons to position vehicle or operate lift.
- **Prohibit** unauthorized persons from being in shop area while lift is in use.
- **Do Not** permit anyone on lift or inside vehicle when it is either being raised or lowered.
- **Do Not** perform any maintenance on the power unit, control valves, air or fluid lines, hydraulic cylinders, or check fluid level until lift has been fully lowered and all pressure has been released from system. Follow OSHA Lockout/Tagout procedures as they apply, reference ANSI Z244.1.
- **Always** keep area around lift free of tools, debris, grease and oil.
- **Always** keep platforms and ramps clean.
- **Never** overload lift. Capacity of lift is 7,700 lbs/3500kg., 3850 lbs/1750kg. per platform.
- **Do Not** stand in front of the lift or vehicle while it is being positioned in lift bay.
- **Before** driving vehicle into lift bay, BE SURE lift is fully lowered.
- **Load** vehicle on lift carefully. Check for secure contact with vehicle. Raise lift to desire working height.
- **Do Not** block open or override air lock controls; they are designed to return to the "Off" or Neutral position when released.
- **Always** stand clear of lift when raising or lowering and observe "pinch points" warnings.
- **Remain** clear of lift when raising or lowering vehicle.
- **Always** lower lift completely and disconnect power source before disconnecting hydraulic lines.
- **Always** lower lift on locks before working on vehicle.
- **Avoid** excessive rocking of vehicle while on lift.
- **Clear** area if vehicle is in danger of falling.
- **Completely** lower lift before removing vehicle from lift area.
- **Normal** operating temperature range is 7° C (45° F) to 38° (100° F).
- **Replace** all control warnings, or safety related decals on the lift when unable to read or missing.

## SAFETY WARNING LABELS FOR HINGED FRAME ENGAGING LIFTS

### Lift Owner/User Responsibilities:

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



### The Owner/Employer:

- Shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; *ALI/SM 93-1, ALI Lifting it Right* safety manual; *ALI/ST-90 ALI Safety Tips* card; *ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; *ALI/WL Series, ALI Uniform Warning Label Decals/Placards*; and in the case of frame engaging lifts, *ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts*.
- Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or *ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and The Employer Shall ensure that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.
- Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or *ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and The Employer Shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.
- Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or *ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*.
- 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-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and in the case of frame engaging lifts, *ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts*; in a conspicuous location in the lift area convenient to the operator.
- Shall provide necessary lockout/tagout means for energy sources per *ANSI Z244.1-1982 (R1993), Safety Requirements for the Lockout/Tagout of Energy Sources*, before beginning any lift repairs.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.

# LOCKOUT/TAGOUT PROCEDURE

## Purpose

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of lifts in need of repair or being serviced. All employees shall comply with this procedure.

## Responsibility

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Rotary Installers, contactors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

## Preparation

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in close proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

## Sequence of Lockout Procedure

- 1) Notify all affected employees that a lockout is being performed and the reason for it.
- 2) Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift.
- 3) The authorized lockout person operates the main energy isolation device removing power to the subject lift.
  - If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional reactivation. An appropriate tag is applied stating the person's name, at least 3" x 6" in size, an easily noticeable color, and states not to operate device or remove tag.
  - If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
- 4) Attempt to operate lift to assure the lockout is working. Be sure to return any switches to the "OFF" position.
- 5) The equipment is now locked out and ready for the required maintenance or service.

## Restoring Equipment to Service

- 1) Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.
- 2) At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the lift may again be placed into operation.

## Rules for Using Lockout Procedure

Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the lift when the energy isolating device is locked out.

# OPERATING INSTRUCTIONS

**⚠ WARNING** To avoid personal injury and/or property damage, permit only trained personnel to operate lift. After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift.

**IMPORTANT** Always lift the vehicle using all four blocks. NEVER raise just one end, one corner, or one side.

Observe and heed **SAFETY, CAUTION** and **WARNING** labels on the lift.

## 1. Before Loading:

- Inspect lift to assure it is in good operation condition.

**⚠ WARNING** If lift is not operating properly, **DO NOT** use until adjustments or repairs are made by a qualified lift service technician.

**⚠ WARNING** Keep hand and feet clear of linkages while the lift is being raised or lowered, Fig. 1.

**⚠ WARNING** Ensure overhead clearance is provided to raise vehicles to desired height.

## 2. Loading:

- Assure lift is fully lowered and service bay is clear of all personnel.

**⚠ WARNING** Before attempting to lift vehicle be sure that:

- Vehicle is positioned over pads as shown in Fig. 3 & 4.
- Vehicle unibody is strong enough to support its weight and has not been weakened by modification or corrosion.
- Vehicle individual axle weight does not exceed 1/2 lift capacity.
- Use front ramp for vehicle support as necessary to reach front lift points.
- If pickup points can still not be reached, use both front and rear ramps for vehicle support.
- Use auxiliary rubber blocks to create clearance between vehicle chassis and lift pad, Fig. 4.
- Auxiliary rubber blocks/pads are in secure contact with vehicle manufacture's recommended lift points.
- Vehicle is stable on lift; neither front nor tail heavy.

## 3. To Raise Lift:

- Actuate RAISE BUTTON.
- Raise vehicle until tires clear the floor.
- STOP: Check pads for secure contact with vehicle. Shake car moderately at front or rear bumper.
- Continue to raise to desired height **ONLY** if vehicle is secure on lift. If necessary, lower lift and reposition using vehicle manufacture's recommended pick-up points.
- Lower lift to locks before working on vehicle.

**⚠ CAUTION** Do not go under vehicle or lift if locking latches are not engaged.

## 4. Before Lowering Lift:

- Remove all obstacles from under vehicle and lift.
- Assure personnel are not in lift area.

**⚠ WARNING** Observe pinch point warning decals, Fig. 1.

## 5. To Lower Lift:

- Remain clear of lift.
- Actuate the RAISE BUTTON for a second to disengage the locks.
- Actuate the LOWER BUTTON and the lock release button to lower lift while keeping feet clear.
- When lift has been lowered to the ground, hold lower to lock button until green light appears.

## 6. Unloading:

- Assure lift is fully lowered.
- Remove any rubber blocks used when raising the vehicle.
- Carefully remove vehicle from lift area.

Fig. 1



**⚠ WARNING**

Keep feet clear of lift while lowering.



**⚠ WARNING**

Always make sure ramp is fully engaged.

NP1207 Rev. A

1. Disconnect Switch
2. Raise Button
3. Lower Button
4. Lock Release Button
5. Power Light

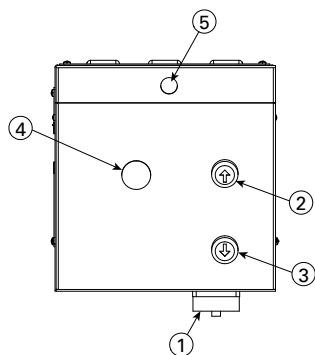


Fig. 2

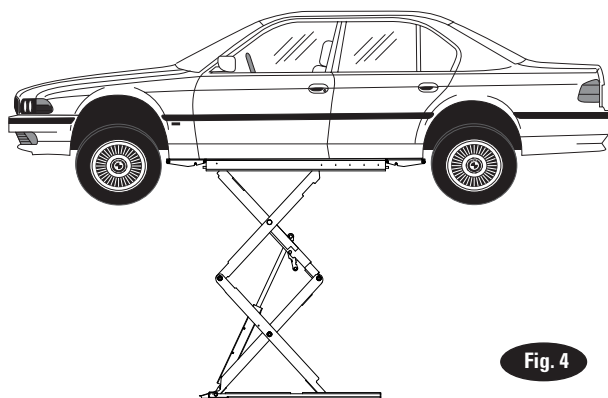
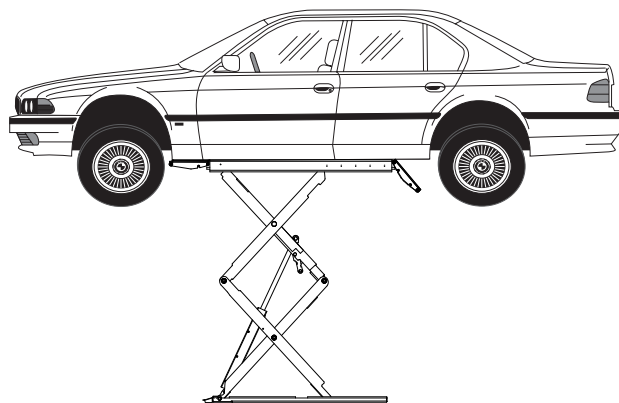
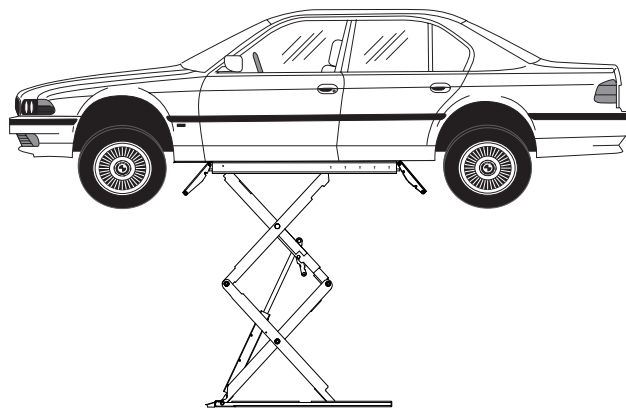
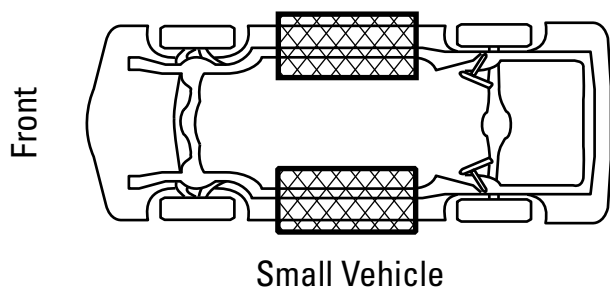
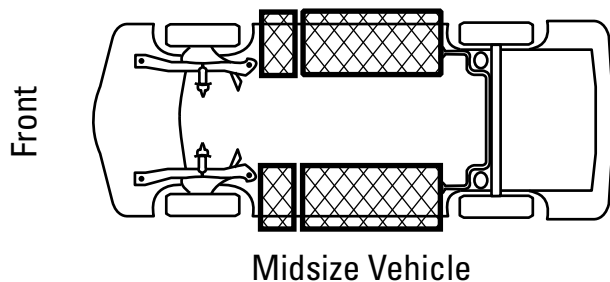


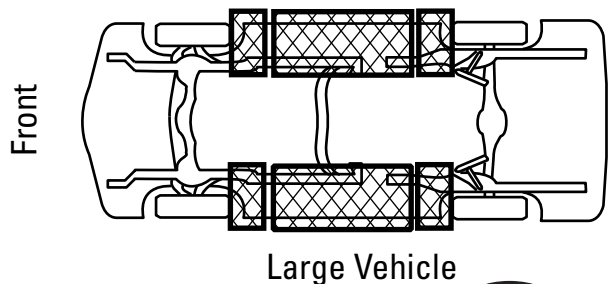
Fig. 4



Small Vehicle



Midsize Vehicle



Large Vehicle

Fig. 3

**NOTE:** Some vehicles may have the manufacturer's Service Garage Lift Point locations identified by triangle shape marks on it's under carriage (reference ANSI/SAE J2184-1992). Also, there may be a label located on the right front door lock face showing specific vehicle lift points. If the specific vehicle lift points are not identified, refer to the "Typical Lift Points" illustrated herein. ALWAYS follow the operating instructions supplied with the lift.

**⚠️ WARNING** If you are not completely familiar with automotive lift maintenance procedures **STOP:** Contact factory for instructions.

To Avoid Personal Injury, permit only qualified lift service personnel to perform maintenance on this equipment.

**Use only genuine Rotary replacement parts for repairs.**

- **Always** keep all bolts tight. Check periodically.
- **Always** raise lift when cleaning floor area.
- **Always** keep lift clean. Keep bottom weldment dry and free from corrosives such as salt and cleaning fluids.
- **Daily:** Inspect rubber blocks for damage or excessive wear. Replace as required with genuine Rotary parts.
- **Weekly:** Inspect all lift parts for signs of damage due to overloading and rough handling.
- **Weekly:** Empty water and refill oil as needed for filter regulator lubricator.
- **Weekly:** Check locks and make sure they are clean and operating correctly. The air cylinder should allow locking jaws to pivot in-out of lock bar.
- **Monthly:** Lightly grease sliding surfaces and grease pins.
- **Monthly:** Check level of platforms, re-bleed air from cylinders if needed.
- **Semi-Annually:** Check fluid level of lift power unit. Refill if required per lift installation instructions. If fluid is required, inspect all hoses and seals. Repair as required.
- **Semi-Annually:** Check anchor bolts to ensure they are torqued to 25ft.lbs.
- **If lift** stops short of full rise or chatters, check fluid level and purge both cylinders per lift installation instructions.
- **Replace** all CAUTION, WARNING, or SAFETY related decals on the lift if unable to read or missing. Reorder labels from Rotary Lift.



## TROUBLE SHOOTING

| Trouble                                       | Cause                                                                                                                                                                                                                                                                                                       | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electric motor does not run.                  | <ol style="list-style-type: none"> <li>1. Check fuse or circuit breaker.</li> <li>2. Check for correct voltage to motor.</li> <li>3. Inspect all wiring connections.</li> <li>4. The motor thermic switch is activated from overheating.</li> </ol>                                                         | <ol style="list-style-type: none"> <li>1. Replace blown fuse or reset circuit breaker.</li> <li>2. Supply correct voltage to motor.</li> <li>3. Repair and insulate all connections.</li> <li>4. Wait for 10 minutes and try starting again; then, using a tester make sure contact is closed again.</li> </ol>                                                                                                                                                           |
| Electric motor runs but will not raise lift.  | <ol style="list-style-type: none"> <li>1. Motor runs in reverse rotation.</li> <li>2. Load too heavy.</li> <li>3. Low fluid level.</li> <li>4. Oil filter is clogged.</li> <li>5. Faulty hydraulic pump.</li> </ol>                                                                                         | <ol style="list-style-type: none"> <li>1. Switch the phase and make sure motor turns in the direction indicated by the arrow.</li> <li>2. Check vehicle capacity.</li> <li>3. Fill tank with Dexron III ATF or ISO32.</li> <li>4. Check and clean.</li> <li>5. Check that oil comes out from one of the A-1 - A-2 outlets on the hydraulic block after disconnecting the corresponding pipe. Replace the pump if oil does not come out from A-1 - A-2 outlets.</li> </ol> |
| Oil Blowing Out Fill-Breather Cap             | <ol style="list-style-type: none"> <li>1. Oil Leak/Pump Failure.</li> <li>2. Incoming Motor Voltage Incorrect.</li> <li>3. Vehicle Weight And Balance Not Within Lift Capacity.</li> </ol>                                                                                                                  | <ol style="list-style-type: none"> <li>1. External oil leak-locate and repair leak. Internal oil leak-have hydraulic system serviced by an authorized service representative.</li> <li>2. Incoming motor voltage incorrect-contact your local service authority.</li> <li>3. Use lift only to rated capacity.</li> </ol>                                                                                                                                                  |
| Lift Fails To Raise When Pushing Raise Button | <ol style="list-style-type: none"> <li>1. Raise button defective.</li> <li>2. Vehicle weight and balance not within lift capacity</li> <li>3. Motor rotation incorrect.</li> <li>4. Incoming motor voltage incorrect or insufficient</li> <li>5. Loose or damaged wiring</li> <li>6. Blown fuse.</li> </ol> | <ol style="list-style-type: none"> <li>1. Replace raise button.</li> <li>2. Use lift only at rated load.</li> <li>3. Use lift only at rated load.</li> <li>4. Contact your local RAI.</li> <li>5. Inspect and repair loose or damaged wiring.</li> <li>6. Check for blown fuse.</li> </ol>                                                                                                                                                                                |



## TROUBLE SHOOTING

| Trouble                                                                        | Cause                                                                                                                                                                                                                                                     | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The lowering and lock release buttons are pressed but the lift does not lower. | <ol style="list-style-type: none"> <li>1. Make sure there are no obstacles blocking the lowering phase.</li> <li>2. Make sure the main switch is on and power supply is not interrupted.</li> <li>3. Lift has not been raised first off locks.</li> </ol> | <ol style="list-style-type: none"> <li>1. Remove the obstacles blocking the lowering phase.</li> <li>2. Check and supply power to lift.</li> <li>3. Push raise button for a second before lowering lift.</li> </ol>                                                                                                                                                                                                                                                         |
| Locks remain engaged when lock release button is pressed.                      | <ol style="list-style-type: none"> <li>1. Lift has not been raised off locks.</li> <li>2. Lack of air supply to air cylinder when lock release button is pushed.</li> <li>3. Faulty air cylinder.</li> <li>4. Faulty lock release button.</li> </ol>      | <ol style="list-style-type: none"> <li>1. Push raise button for a second before pushing lock release button and fix.</li> <li>2. Check and fix leaks from incoming air to cylinder verify FRL gauge reads 60psi.</li> <li>3. Replace air cylinder</li> <li>4. Replace lock release button.</li> </ol>                                                                                                                                                                       |
| The lift is lowered but one of the two platforms is higher.                    | <ol style="list-style-type: none"> <li>1. Make sure there are no obstacles under the higher platform.</li> <li>2. Platforms are not level.</li> <li>3. Air is in one of the slave cylinders.</li> </ol>                                                   | <ol style="list-style-type: none"> <li>1. Remove the obstacle and carefully check the area before operating the lift.</li> <li>2. Check to see if lift is installed on unlevel floor. Level per installations if needed.</li> <li>3. Should this problem occur, check the car lift first and check for oil leaks from the cylinders or pipes.<br/><br/>Then purge slave cylinder using the "Purging Hydraulic Lines" procedure in the installation instructions.</li> </ol> |

## TROUBLE SHOOTING

| Trouble                     | Cause                                | Remedy                                                                                                                                             |
|-----------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Anchors Will Not Stay Tight | 1. Holes drilled oversized.          | 1. Relocate lift using a new bit to drill holes. Reference installation instructions for proper anchoring method and minimum spacing requirements. |
|                             | 2. Concrete floor not thick enough.  | 2. Break out old concrete and re-pour per lift installation instructions.                                                                          |
|                             | 3. Concrete floor not strong enough. | 3. Break out old concrete and re-pour per installation instructions.                                                                               |

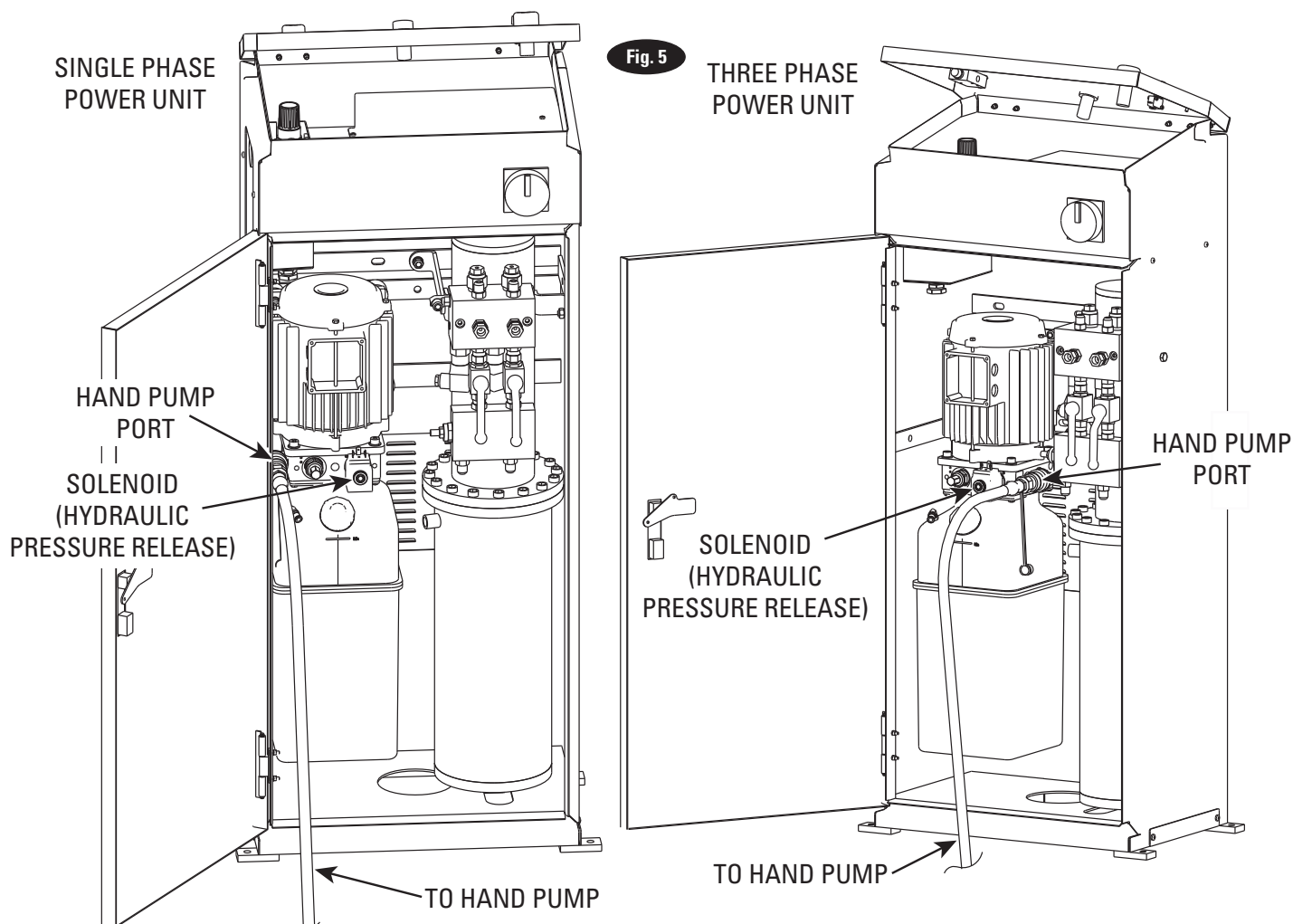
### MANUAL LOWERING

If the car lift cannot perform lowering operations because of power supply interruption, faulty hydraulic valves or electric trouble in the system, the lift can be lowered manually. For manual lowering operation (emergency), perform the following:

- Make sure there are no obstacles blocking the lowering phase; remember that the car lift may not be lifted again to remove possible obstacles.
- Disconnect main power supply.

Note: Manual lowering (emergency) operations should be preformed by authorized personnel specially trained for operating the car lift only.

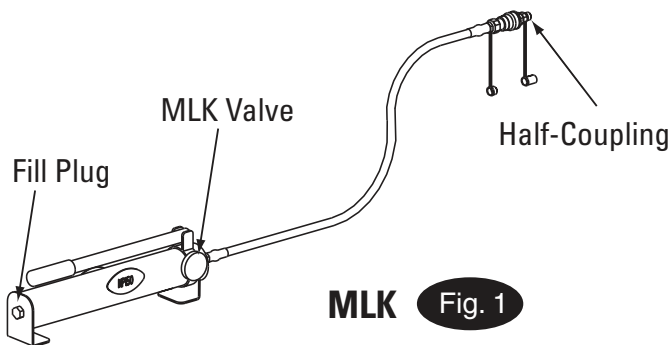
- See page 12 for hand pump operating instructions before using hand pump.
- Hook up hand pump to hand pump port shown in fig.5.
- Pump hand pump enough to raise lift enough to release locks.
- For operational air perform step 1 and with manual locks perform step 2 for lock release.
  1. Release lock by pressing lock button found on control panel.
  2. Manually remove locking bar.
- Press electric solenoid with screw driver to release hydraulic pressure and lower lift. See location of solenoid in fig.5 below.



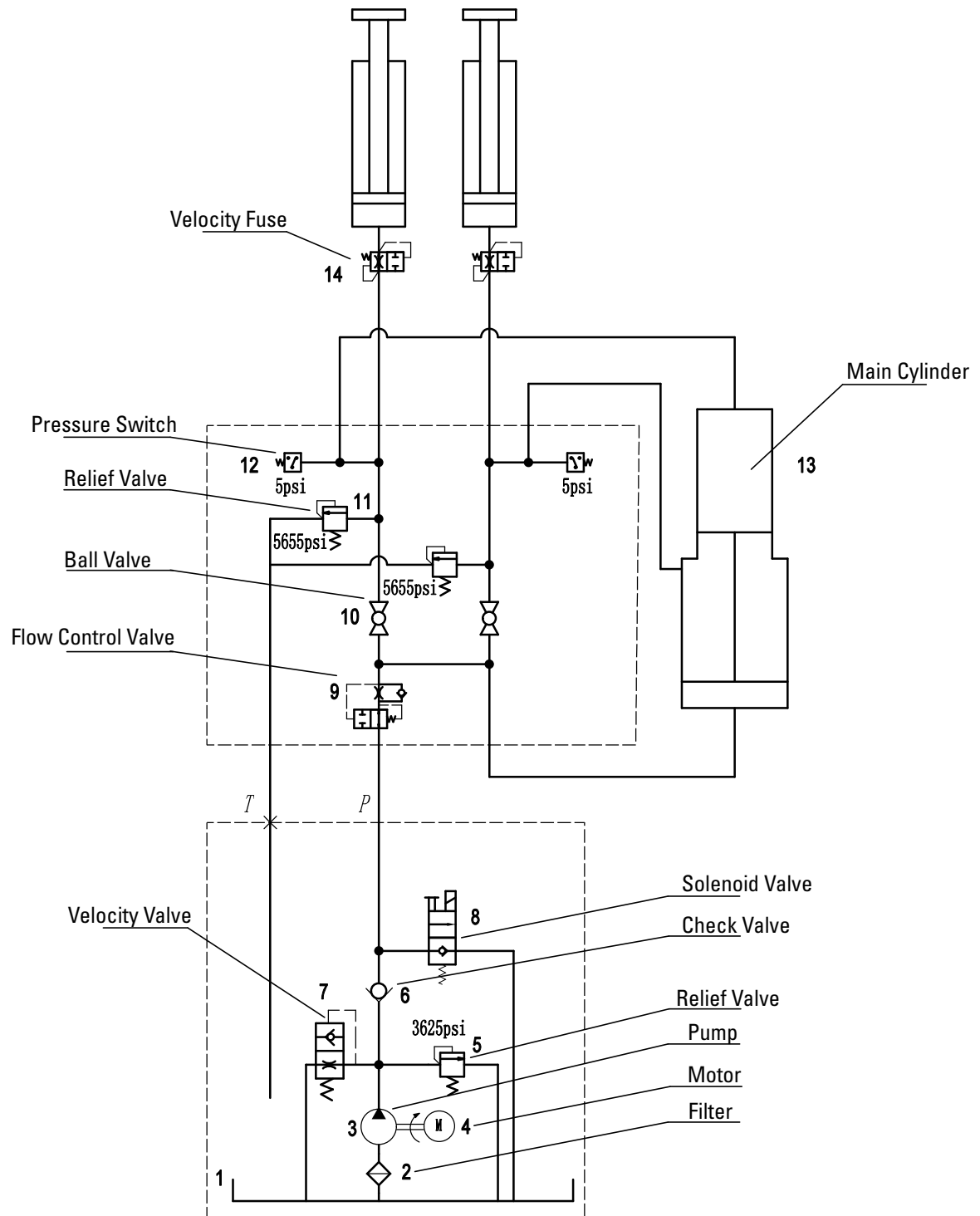
## Manual Lowering Kit Operating Instructions

**IMPORTANT** Make sure nothing is under the lifting structure or the vehicle and all unauthorized personnel are away from the lift area.

1. Review instructions before using the MANUAL LOWERING KIT (MLK)
2. Remove fill plug from MLK, Fig 6.
3. Fill with Dexron III ATF or ISOVG32 Hydraulic Oil, replace plug once unit is full.
4. Remove cap from end of hose on MLK, Fig 6.
5. Rotate the MLK Valve clockwise to open, Fig 6.
6. **IMPORTANT** **SLOWLY** hand pump MLK until fluid begins to flow from the end of the hose.
7. Hand tighten the female half coupling to the end of the MLK using pipe thread sealant, Fig 6.



8. Using wrench tighten half coupling 1.5-3.0 turns past finger tight.
9. Open power unit cover and push red handle located on solenoid, Fig 2, this will release any pressure in the lift system.
10. Remove and save plug from power unit port marked "M", Fig 1, attach and hand tighten half coupling already mated to #4 "O"-ring adapter fitting provided to port marked "M".
11. Using wrench tighten half coupling  $\frac{1}{2}$  turn after "O"-ring makes contact with power unit valve body.
12. Attach  $\frac{1}{2}$  coupling mounted on MLK to new 90° elbow just installed to power unit valve body.
13. Pump handle on MLK approximately 100-200 times to raise lift until the latch can be released.



**NOTES:**

## NOTES:



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