Reference ANSI/ALI ALIOM safety requirements for installation and service of automotive lifts before installing lift.
12,000 POUND CAPACITY, COMMERCIAL GRADE
FOUR POST AUTO / TRUCK LIFT

This manual has been prepared for you by Dannmar Inc.
Your new lift is a product from years of research and engineering.
You are now a proud owner of the most advanced lifting technologies on the planet.

READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.

RECORD HERE THE LIFT AND
POWER UNIT INFORMATION WHICH IS
LOCATED ON THE SERIAL NUMBER
DATA PLATES ON THE LIFT AND
ON THE POWER UNIT

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<tr>
<th>Power Unit Model #</th>
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<th>Lifting Capacity</th>
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www.dannmar.com
Tel: 1-877-432-6627 Fax: 1-805-530-1909
646 Flinn Ave. Suite A Moorpark, CA 93021

This information is required when calling for parts or warranty issues.

PRODUCT WARRANTY

Dannmar 4-Post Lifts are warranted for 3 years on equipment structure, to be free of defects in material and workmanship. Power Units, hydraulic cylinders, and all other assembly components such as cables, chains, valves, switches etc. are warranted for one year against defects in material or workmanship under normal use. Dannmar Inc. shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective.

The warranty does not extend to...

♦ defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
♦ damages resulting from operator neglect or failure to operate products in accordance with instructions provided in this manual 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 DANNMAR PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.

LIFT INTENDED FOR INDOOR USE ONLY - OUTDOOR USE PROHIBITED.
IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Reference ANSI/ALI ALIOM safety requirements for installation and service of automotive lifts. Never attempt to lift components without proper lifting tools, such as a forklift or crane. These instructions must be followed to ensure proper installation and operation of your lift. Failure to comply with these instructions can result in serious injury 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:

⚠️ DANGER

DANGER
Watch for this symbol. It Means: Immediate hazards which will result in severe personal injury or death.

⚠️ WARNING

WARNING
Watch for this symbol. It Means: Hazards or unsafe practices which could result in severe personal injury or death.

⚠️ CAUTION

CAUTION
Watch for this symbol. 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 properly.
- Carefully inspect the unit on a regular basis and perform all maintenance as required. Including weekly lubrication of grease fittings with oil or WD-40.
- A qualified person should be consulted to address seismic loads and other local or state requirements.
- 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:

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 your 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 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. File your 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 Dannmar responsible for collection of claims or replacement of lost or damaged materials.
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INTRODUCTION

1. Carefully remove the crating and packing materials. 
   CAUTION! Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury.

2. Check the voltage, phase and proper amperage requirements for the motor shown on the motor plate. Wiring should be performed by a certified electrician only.

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely!

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures.

Never attempt to lift components without proper lifting tools such as forklift or cranes.

Stay clear of any moving parts that can fall and cause injury.

1. READ AND UNDERSTAND all safety warning procedures before operating lift.

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

3. KEEP WORK AREA CLEAN. Cluttered work areas invite injuries.

4. Consider work area environment. Do not expose equipment to rain. DO NOT use in damp or wet locations. Keep area well lighted.

5. 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.

6. USE LIFT CORRECTLY. Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.

7. DO NOT override self-closing lift controls.

8. REMAIN CLEAR of lift when raising or lowering vehicle.

9. CLEAR AREA if vehicle is in danger of falling.

10. ALWAYS ENSURE that the safeties are engaged before any attempt is made to work on or near vehicle.

11. DRESS PROPERLY. Non-skid steel-toe footwear is recommended when operating lift.

12. GUARD AGAINST ELECTRIC SHOCK. This lift must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.

13. DANGER! The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.

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

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. STAY ALERT. Watch what you are doing. Use common sense. Be aware.

17. CHECK FOR DAMAGED PARTS. Check for alignment of moving parts, breakage or wear of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.

18. NEVER remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
READ ALL INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely!

(Cont'd)

IMPORTANT NOTICE

19. Care must be taken as burns can occur from touching hot parts.

20. Adequate ventilation should be provided when working on operating internal combustion engines.

21. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.

22. Use only as described in this manual. Use only manufacturer's recommended attachments.

23. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

SAVE THESE INSTRUCTIONS

Standard ANSI/ALI ALCTV: 2011, Clause 11.1.6

All worn, damaged, or broken parts must be replaced by parts approved by Dannmar, or with parts meeting Dannmar’s specifications.

Standard ANSI/ALI ALCTV: 2011, Clause 11.1.6

The maximum operating hydraulic pressure developed upon lifting the rated capacity is 3030 psi. The relief value should not exceed 20% over this value.
TOOLS REQUIRED

- Rotary Hammer Drill or Similar
- 3/4" Masonry Bit
- Hammer
- Level - 4 Foot Minimum
- Open-End Wrench Set: 7/16" - 1-1/8"
- Socket And Ratchet Set: 7/16" - 1-1/8"
- Hex-Key / Allen Wrench Set
- Large Crescent Wrench
- Large Pipe Wrench
- Crow Bar
- Chalk Line
- Medium Flat Screwdriver
- Tape Measure: 25 Foot Minimum
- Needle Nose Pliers

IMPORTANT NOTICE

These instructions must be followed to insure 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.

STEP 1
( Selecting Site )

Before installing your new lift, check the following.

1. LIFT LOCATION: Always use architects plans when available. Check layout dimension against floorplan requirements making sure that adequate space if available.

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 cracked or defective concrete.

STEP 2
( Floor Requirements )

WARNING

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.

DANGER

- DO NOT install or use this lift on any asphalt surface or any surface other than concrete.
- DO NOT install or use this lift on expansion seams or on cracked or defective concrete.
- DO NOT install or use this lift on a second / elevated floor without first consulting building architect.
- DO NOT install or use this lift outdoors unless special consideration has been made to protect the power unit from inclimate weather conditions.

CONCRETE SPECIFICATIONS

- 4" minimum thickness
- 3000 psi minimum compressive strength
- Maximum of 3-degree slope

DANGER

All models MUST be installed on 3000 PSI concrete only conforming to the minimum requirements shown above. New concrete must be adequately cured by at least 28 days minimum.
### D-12 FOUR-POST LIFT DETAILS

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FLOORPLAN - SPECIFICATIONS

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<th>MODEL</th>
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<tr>
<td>Lifting Capacity:</td>
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<tr>
<td>Overall Width:</td>
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<tr>
<td>Overall Length:</td>
<td>235&quot; / 5968 mm.</td>
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<tr>
<td>Height of Columns:</td>
<td>89&quot; / 2238 mm.</td>
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<tr>
<td>Min. Runway Height:</td>
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<tr>
<td>Max. Rise:</td>
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<tr>
<td>Max. Lifting Height:</td>
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<tr>
<td>Width Between Columns:</td>
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<tr>
<td>Runway Width:</td>
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<td>Width Between Runways:</td>
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<td>Length of Runways:</td>
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<td>Lock Spacing:</td>
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<td>Shipping Weight (lbs):</td>
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<tr>
<td>Max. Rise:</td>
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<td>Max. Lifting Height:</td>
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<td>Runway Width:</td>
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<td>Min. Wheelbase @ 50% Capacity:</td>
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<tr>
<td>Lifting Time:</td>
<td>60 Seconds</td>
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* This dimension may be limited with the addition of rolling jacks.
† May vary depending on wheel size.
‡ Special voltages available upon request.
IMPORTANT

The D-12A Alignment Lift **MUST** be installed in the configuration shown in Figure 1.

For the D-12 **ONLY**, the power unit can be located at either “X” locations shown in Figure 1 or 2. It is important to locate the POWERSIDE runway (with cylinder) on the SAME SIDE as the power unit location. Utility rails on the side of each runway MUST be installed to the inside. **NOTE:** In order to change the location of the power unit, the cross tubes and the powerside runway must be reversed.

Fig 1

![Fig 1 Diagram](image1.png)

Fig 2

![Fig 2 Diagram](image2.png)
STEP 3
(Column & Cross Tube Installation)

1. Place a chalk line on the floor according to the floorplan layout. Pay attention to the power unit location. Locate and stand the columns at their respective locations. **DO NOT BOLT** columns down at this time. Use caution to prevent the columns from falling over. (See Fig. 1.)

![Fig. 1.](image)

2. To estimate the shim requirements, place a target on floor at each column position and record the readings. Find the highest of the four locations then find the difference between each of the remaining columns. This difference is the estimated amount of shim thickness that will be required at each column. (See Fig. 2.)

![Fig. 2.](image)

Note: The maximum shim thickness recommended by the factory is no more than 1/2" per column using shims and anchors provided with the lift.

3. With the columns standing and the cross tubes in position, install the safety ladders. Pass the ladders through the column openings and drop down through the slide block guide slots on the cross tube until the ladders come to rest on the base plates. **DO NOT BOLT** columns down at this time. (See Fig. 4-5.)

![Fig. 3.](image)

**IMPORTANT NOTE:**
Position a nut on the threaded rod as shown PRIOR to installing the column top caps. This nut will secure the ladder and prevent it from raising upwards while the lift is being operated.

![Fig. 4.](image)

2. Using a forklift or crane, raise the cross tubes (making sure the plastic slide blocks are still in position) and drop down into the top of the columns. **NOTE:** The sheave windows should be positioned inward and adjacent the power unit column. (See Fig. 3.)

![Fig. 5.](image)
4. The columns and cross tubes will now be in position and spaced properly for the runways.

5. Install the column TOP CAPS using the M10 X 1.50 X 50 hex bolts, nuts & washers. Install the nut on each safety ladder until 1/2” of threads are exposed and the ladder is raised at least 1/2” off of the base of the column. 

**NOTE:** Raise the ladder at least 1/2” off of the base of the column or damage to the lift will occur. Be sure to position the cable hole INWARD. (See Fig. 6-7.)

**Fig. 6**

**Fig. 7.**

Install the nut on each safety ladder until approximately one inch of threads are exposed.

Elevate the ladder one inch off of the base of the column.

**WARNING**

DO NOT raise the ladder more than one inch off of the base of the column or damage to the lift will result.

**Fig. 8.**

2. Manually raise the cross tubes until the primary safety locks engage and rest on the lock position second down from the top of the ladder or approximately 66” off the ground. It is important that the SLACK SAFETY LOCK IS CLEARED. The slack safety lock must never rest on the safety ladder. (See Fig. 8.)

**IMPORTANT NOTE**

It is important that the SLACK SAFETY LOCK IS CLEARED. The slack safety lock must never rest on the safety ladder.

3. The columns and cross bars will now be in position and spaced properly for the runways. Be very careful not to disturb the columns and cross tubes at this time as they may tip over causing personal injury or harm. (See Fig. 9.)

**Fig. 8.**

**Fig. 9.**

---

**STEP 4**

( Raising The Cross Tubes )

1. Before proceeding it will be necessary to first raise the cross tubes off the ground to facilitate cable routing and final assembly.

**DANGER**

Be careful not to disturb the columns and cross tubes as they may tip over causing personal injury or harm.
STEP 5
(Powerside Runway Installation)
1. Locate the powerside runway easily identified by the cylinder and sheave roller mounting structures welded on the underside. The powerside runway will be positioned on the side of the lift where the power unit is installed. (See Fig 10)

Fig 10

2. Install cylinder and cable block as shown. (See Fig 11-12)

Fig 11

Fig 12

3. Remove any pre-installed cable sheaves from the powerside runway making sure to pay attention to the order in which they are removed. (This will help at the time of re-installation.) (See Page 15)

Fig 13

Fig 14

STEP 6
(Offside Runway Installation)
1. Position the offside runway on top of the cross tubes with the utility rail located inside. (See Fig 14)

WARNING
1 1/4" minimum threads must protrude through nut.

Cylinder Clevis Pin

Cylinder Roll Pin

Cylinder Guide Assy.

Utility Rail

Cylinder Retainer Plate

Hydraulic Fitting Here

Fig 11

Fig 12

DO NOT PROCEED with cable installation or go near the lift work area unless visual confirmation is made of ALL safety locks. ALL locks MUST be engaged before proceeding. Failure to comply with these instructions may result in severe personal injury or death. (See page 11.)
IMPORTANT
It will be necessary to remove the pins, and spacers prior to cable installation. You MUST re-install these components back in the same order as they are removed.

CAUTION!
Tighten shaft set screws securely after routing cables. Failure to do so may result in injury or damage to lift.

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<td>Cable D</td>
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STEP 7
(Cable / Sheave Installation)

1. Inspect cables to ensure proper lengths. All cables should have ID tags showing proper cable lengths.

2. In order to install the cables it is necessary to first extend the hydraulic cylinder. Remove both cylinder port plugs then use an air gun or come-along to extend the cylinder.

IMPORTANT! - Be careful not to damage the chrome rod during this step. (See Fig 15)

3. You must reinstall the sheaves, spacers and pins in the same order as they are removed. (See Fig 16)

STEP 8
(Cable Installation)

1. Make sure the cylinder flange plate is installed with the guide assembly facing down and the cylinder retainer plate on the outside of the guide. Lug ends of cables start at cylinder. (See Fig 17)

2. Route the threaded cable ends through the ends of each cross tube, over the slack safety sheave then to the top of each column. Secure using the M22 hex nuts and flat washers. Tighten each nut until there is at least one inch of threads protruding through the top of the nut. The cables will remain loose until start up and final cable adjustments are made. (See Fig 18-19)
3. After routing the cables double-check to make sure all are properly positioned and remain within the grooves of ALL sheaves. (See Fig 20-21)

**STEP 9**
( Power Unit Installation )

1. Mount the power unit to the mounting bracket using the M10 hex bolts and nylon nuts then fill the reservoir with 12 quarts of AW32 hydraulic oil or Dexron III or VI automatic transmission fluid. (See Fig 22)

**STEP 10**
( Routing Hydraulic Hoses )

1. Install the two 90-degree hydraulic fittings to the POWER PORT and RETURN PORT of the power unit and connect the hoses as described below. It will be necessary to remove the shipping plugs from both ports prior to installing the fittings. (See Fig 23-24)
2. Install the 90-degree Hydraulic Fittings in the port at the ram end of the cylinder. On the pipe thread side of the Fitting it is recommended to use Teflon tape or pipe sealer. DO NOT USE TEFILON TAPE on the JIC flared end. (See Fig 25)

3. Install the 90-degree Air Fitting fitting in the port at the base end of the Cylinder. On the pipe thread side of the Fitting it is recommended to use Teflon tape or pipe sealer. (See Fig 26)

4. Install one end of Flex Hose into hole in the POWERSIDE RUNWAY adjacent to the Power Unit. Install the other end of the Flex Hose to the Flex Hose Bracket Assy. Tighten securely. (See Fig 27)

5. Connect Hoses as shown below making sure to pass through the retaining rings. MAKE SURE HOSES ARE KEPT CLEAR OF CABLES. (See Fig 28)

6. Run the Power Unit Hydraulic Hose (90° fitting end towards HPU) and the Return Hydraulic Air line through the Flex Hose to the Power Unit. (See Fig 29)

7. Connect the Power Unit Hydraulic Line (90° End) to the 90° Power Unit Fitting. Connect the Return Air Line to the 90° Air Fitting. (See Fig 30)
STEP 11
(Routing Air Lines)

Route the air line as shown below making sure to position the push button air valve with the INLET facing towards the AIR SOURCE and the OUTLET facing the direction of the LIFT.

A filter/regulator/lubricator must be installed on air supply at lift. Failure to do so will void the warranty. Cut the provided 1/4" air line tubing with a sharp blade to lengths as required. Tubing must be cut square with no burrs.

Note: To assemble air line tubing into fitting, use firm, manual pressure to push tubing into the fitting until it bottoms out. To remove air line tubing from the fitting, hold push sleeve in (against fitting) and, at the same time, pull out on tubing. Pay careful attention to keep air line clear of any pinch points. Improper assembly may result in safety lock failure.

AIR PRESSURE SHOULD BE REGULATED TO 65 PSI MAX. (See Fig 31)

An air supply (30 PSI Min / 3 CFM Min.) will be required for the safety-lock mechanisms.

Fig 31

- Diagram showing the routing of the air line through pipes underneath the runway, with a push button air valve, tee fittings, and an air cylinder.

Feed Airline Through Tubing On Outside Of Cross Tubes
STEP 12
(Power Unit Hook Up)

1. Have a certified electrician run the power supply to motor. Refer to the data plate found on the motor for proper power supply and wire size.

⚠️ DANGER

RISK OF EXPLOSION!
This equipment has internal arcing or parts that may spark and should not be exposed to flammable vapors. Motor should not be located in a recessed area or below floor level. NEVER expose motor to rain or other damp environments. DAMAGE TO MOTOR CAUSED BY WATER IS NOT COVERED UNDER WARRANTY.

IMPORTANT NOTE:
CAUTION Never operate the motor on line voltage less than 208V. Motor damage may occur which is not covered under warranty. Have a certified electrician run appropriate power supply to motor. Size wire for 25 amp circuit. See Motor Operating Data Table.

IMPORTANT: Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 25 amp fuse. Three phase 208-240V, use 25 amp fuse. For three phase 400V and above, use 15 amp fuse. All wiring must comply with NEC and all local electrical codes.

POWER UNIT

Push-Button Switch
PRESS TO RAISE

Wiring Schematic

Filler Cap
FILL WITH AW32 HYDRAULIC OIL OR DEXRON III OR VI ATF

Reservoir

Lowering Handle
PRESS TO LOWER LIFT

STEP 13
(Inspecting The Slack Safety Springs)

⚠️ DANGER

The following steps involve the SLACK CABLE SAFETY DEVICE and MAIN SAFETY. Failure to follow these steps could result in serious injury or death in the event of cable failure.

1. Inspect the ends of the SLACK SAFETY LOCK SPRINGS as shown. Make sure the spring ends are secure at both ends. **DO NOT ATTEMPT TO RAISE THE LIFT UNTIL THE SLACK SAFETY SPRINGS ARE ATTACHED AND THE ROLLERS ARE PULLED CLEAR FROM THE LADDER.** (See Fig 32)

Fig 32

Inspect the slack safety springs as shown. Make sure the spring ends are secure at both ends.

STEP 14
(Lift Start Up / Final Adjustments)

Make sure the power unit reservoir is full with 12qts of AW32 hydraulic oil or Dexron III or VI automatic transmission fluid.

2. Spray the inside of the columns where the slide blocks glide with a light lubricant or WD-40.

3. Test the power unit by pressing the push-button switch. If the motor sounds like it is operating properly, raise the lift and check all hose connections for leaks. If the motor gets hot or sounds peculiar, stop and check all electrical connections.

4. Before proceeding, double-check to make sure all cables are properly positioned within the grooves of ALL sheaves. Make sure all cable sheave retaining pins and/or clips are secure.
5. Check to make sure that all slack safety locks are cleared and free. (See Fig 33)

6. Continue pressing the raise button until the cables get taught and the lift starts to move.

7. RAISE LIFT UNTIL THE CYLINDER BOTTOMS OUT AND THE LIFT STOPS. ADJUST EACH CABLE SO THAT EACH SAFETY LOCK RESTS AT ONE INCH ABOVE THE TOP SAFETY LOCK POSITION. It may be necessary to tighten or loosen each cable to reach the proper height. The cable nuts MUST be tightened until there is at least two lengths of threads protruding through the nut. (See Fig 34)

8. After connecting the air supply, press the PUSH BUTTON AIR VALVE and check that all safety locks are functioning properly. Lower the lift by pressing the push button air valve and power unit lowering valve simultaneously.

![Fig 33]

![Fig 34]

## WARNING

All cable nuts MUST be tightened on each end until there is at least two lengths of threads protruding through the nut. Failure to do so could result in serious injury or death.

NOTE:
There will be initial stretching of the cables in the beginning and/or with increased loads. Adjust the cables as outlined above a week after first use, then every three to six months thereafter depending on usage and/or to compensate for stretch.

9. Check all MAIN SAFETY LOCKS to make sure they move freely and spring back to the lock position when released. Lubricate all SAFETY PIVOT points with WD-40 or equivalent.

10. Run the lift up and down a few times to ensure that the locks are engaging uniformly and that the safety release mechanisms are functioning. Re-adjust if necessary.

### STEP 15
(Anchoring The Columns)

1. Before proceeding, double check the measurements and make certain that the bases of each column are square and aligned with the chalk line. Raise the lift up and down and make sure it operates properly at the locations prescribed by the markings on the floor. (See Fig 35)

![Fig 35]

2. Using the base plate on each column as a guide, drill each anchor hole approximately 5” deep using a rotary hammer drill and 3/4” concrete bit. (See Fig 36)

![Fig 36]

3. After drilling, remove dust thoroughly from each hole using compressed air and/or bristle brush. Make certain that the columns remain aligned with the chalk line.
STEP 16
(Attaching Approach Ramps/ Tire Stops)

1. Install the approach ramps on the entry side of the lift. (See Fig 40-41)

![Fig 40](image)

![Fig 41](image)

2. Install the front tire stops at the forward side of the lift using the M14 x 2 hex bolts, nuts and washers. (See Fig 42)

![Fig 42](image)

STEP 17
(Leveling / Synchronizing)

1. Using an engineer’s automatic Level (transit), locate the Level, at a convenient location in the shop that allows an unobstructed view of all four corners of the runways.

2. Follow the Level manufacturer’s instructions for proper setup of the Level. Be sure it is adjusted level in all directions.

3. Raise the lift approximately 30" - 40". Then lower the lift until all primary safeties are engaged in each column and the runways are completely resting on the primary safeties.
4. Place a Level target on the right/front corner of the runway. (See Fig 43)

5. Beginning with position “A”, sight the level to the target and mark the number or the graduation on the inch scale of the target that aligns to the cross hairs of the Level. (See Fig 43)

![Fig 43](image)

**Note:**

Use a pencil, marking pen or attach a paper clip onto the target scale at the crosshair reference.

6. Next, move the target and place it at point “B” on the runway. (See Fig 43)

7. Rotate the Level and focus on the target scale.

8. Adjust the adjustment nut on the safety ladder bar at the top of the column at “B” until the crosshairs of the Level align to reference mark on the target scale. (See Fig 43)

9. Repeat steps locating the target assembly at points “C” and “D” and adjusting safety ladders at each corresponding column until the reference mark on the target scale is on the crosshairs of the Level. The runways are now level at all four points. (See Fig 43)

10. To complete the leveling procedures, lock each safety ladder jam nut tightly against bottom of column top plate. (See Fig 44)

![Fig 44](image)

11. Next, load vehicle onto the lift.

12. Raise the lift to full height. Listen and watch as the primary safeties engage the safety ladder. Synchronize by adjusting the cables so that all four latches click at same time. Make necessary adjustments to the cables allowing compensation for stretch.

**WARNING**

Safety locks may not engage at exactly the same time when vehicles are being raised. They should be close. Be sure that all four corners have passed the SAME safety ladder bar slot before lowering lift on the safety locks. NEVER lower lift on different safety lock position or damage to the lift may result.

**STEP 18**

*(Bleeding)*

1. Lift must be fully lowered before changing or adding fluid.

2. Raise and lower lift six times. The cylinder is self-bleeding. After bleeding system, fluid level in power unit reservoir may be down. Add more fluid if necessary to raise lift to full height. It is only necessary to add fluid to Raise lift to full height.

3. To pressure test, run lift to full rise and run motor for approximately 3-seconds after lift stops. This will place pressure on the hydraulic system. Stop and check all fittings and hose connections. Tighten or reseal if required.

**POST-INSTALLATION CHECK-OFF**

- Columns Properly Shimmed And Stable
- Anchor Bolts Tightened
- Pivot / Sheave Pins Properly Attached
- Electric Power Supply Confirmed
- Cables Adjusted Properly
- Safety Locks Functioning Properly
- Check For Hydraulic Leaks
- Oil Level
- Lubrication of Critical Components
- Check For Overhead Obstructions
- Runways Level
- All Screws, Bolts, and Pins Secured
- Surrounding Area Clean
- Operation, Maintenance and Safety Manuals on Site
STEP 19
(Operation)

To Raise Lift:
1. Position vehicle tires in the center of each runway.
2. Set parking brake or use wheel chock to hold vehicle in position.
3. Before raising vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances.
4. Raise the lift to the desired height by pressing the push button on the power unit.

A. DANGER

VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.
Suspension components used on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is LOWERED onto the safety locks. Refer to installation /operation manual for proper safety lock procedures and /or further instruction.

SAFETY LOCKS ENGAGED
OK TO PROCEED
SAFETY LOCKS NOT ENGAGED
REMAIN CLEAR

5. After vehicle is raised to the desired height, lower the lift onto the nearest safety lock. Do not allow cables to become slack. ALWAYS VERIFY ALL SAFETY LOCKS ARE ENGAGED before entering work area.

To Lower Lift:
1. Before lowering vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances and any obstructions or tools under the lift.
2. Raise the lift off of the safety locks by pressing the push button on the power unit. Make sure you raise the lift by at least two inches to allow adequate clearance for the locks to clear.
3. Press the push button air safety valve and HOLD.
4. Push the LOWERING HANDLE on the power unit until the lift has descended completely.

When lowering the lift PAY CAREFUL ATTENTION that all personnel and objects are kept clear. ALWAYS keep a visual line of sight on the lift AT ALL TIMES. ALWAYS make sure that all FOUR LOCKS are disengaged. If one of the locks inadvertently locks on descent the lift and/or vehicle may disrupt causing personal injury or death.

WEEKLY MAINTENANCE
1. Lubricate all rollers with general purpose oil or WD-40.
2. Check all cable connections, bolts and pins to ensure proper mounting.
3. Lubricate safety lock pivot points with general purpose oil or WD-40.

MONTHLY MAINTENANCE
1. Check safety locks to insure they are in good operating condition.
2. Check all cables for excessive signs of wear.
3. Make a visual inspection of ALL MOVING PARTS and check for excessive signs of wear.
4. Replace ALL FAULTY PARTS before lift is put back into operation.

WARNING
♦ NEVER EXCEED THE RATED CAPACITY of lift.
♦ DO NOT USE LIFT if any component is found to be defective or worn.
♦ NEVER OPERATE LIFT with any person or equipment below.
♦ ALWAYS STAND CLEAR of lift when lowering or raising.
♦ ALWAYS VERIFY SAFETY LOCKS ARE ENGAGED before entering work area.
♦ NEVER LEAVE LIFT IN ELEVATED CONDITION unless all four safety locks are engaged.
WARNING

WIRE ROPE INSPECTION AND MAINTENANCE

- Lifting cables should be replaced every three - five years or when visible signs of damage are apparent. DO NOT USE LIFT WITH DEFECTIVE / WORN CABLES.

- Lifting cables should be maintained in a well-lubricated condition at all times. Wire rope is only fully protected when each internal and external wire strand is lubricated. Excessive wear will shorten the life of the wire rope. The factory suggested wire rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand is 90-WT gear oil or ALMASOL® Wire Rope Lubricant. In order to make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.

- All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and/or guide rollers, the factory recommends 90-WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and/or swabbing.

HOW OFTEN TO INSPECT

- Lifting cables should be visually inspected at least once each day when in use, as suggested by American Petroleum Institute (API) RP54 guidelines.

- Any lifting cables that have met the criteria for removal must be immediately replaced.

WHEN TO REPLACE LIFTING CABLES DUE TO BROKEN WIRES

- Lifting cables should be removed from service when you see six randomly distributed broken wires within any one lay length, or three broken wires in one strand within one lay length.

![Diagram of wire rope components]

The three basic components of a typical wire rope.

OTHER REASONS TO REPLACE LIFTING CABLES

- Corrosion that pits the wires and/or connectors.
- Evidence of kinking, crushing, cutting, bird-caging or a popped core.
- Wear that exceeds 10% of a wire’s original diameter.
- Evidence of heat damage.

HOW TO FIND BROKEN WIRES

- The first step is to relax your rope to a stationary position and move the pick-up points off the sheaves. Clean the surface of the rope with a cloth — a wire brush, if necessary — so you can see any breaks.

- Flex the rope to expose any broken wires hidden in the valleys between the strands.

- Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.

- With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.
WIRE ROPE INSPECTION AND MAINTENANCE

- Lifting cables should be replaced every three years or when visible signs of damage are apparent. DO NOT USE LIFT WITH DEFECTIVE / WORN CABLES.

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- All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and/or guide rollers, the factory recommends 90-WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and/or swabbing.

Failure to read, understand, and follow these instructions may cause death or serious injury. Read and understand these instructions before using lift.

THE MAXIMUM LIFTING CAPACITY FOR THIS LIFT IS DESCRIBED BELOW

<table>
<thead>
<tr>
<th>Maximum Lifting Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000 Lbs. / 5443 Kg.</td>
</tr>
<tr>
<td>Maximum Lifting Capacity</td>
</tr>
<tr>
<td>Two Axle Vehicle / Front Axle</td>
</tr>
<tr>
<td>6000 Lbs / 2722 Kg.</td>
</tr>
<tr>
<td>Maximum Lifting Capacity</td>
</tr>
<tr>
<td>Two Axle Vehicle / Rear Axle</td>
</tr>
<tr>
<td>6000 Lbs / 2722 Kg.</td>
</tr>
</tbody>
</table>

Exceeding the weight capacity of this lift can damage lift and/or property and may cause personal harm, injury or death to operators and/or bystanders. All vehicles MUST be positioned on lift with CENTER OF GRAVITY midway between adapters and/or centered on runways. Damage to lift due to overloading or misuse IS NOT covered under warranty.
A WARNING

Clear area if vehicle is in danger of falling.

Remain clear of lift when raising or lowering vehicle.

WARNING

Keep clear of pinch points when lift is moving.

Keep feet clear of lift while lowering.

WARNING

Do not override self-closing lift controls.

Chock wheel to prevent vehicle movement.

SAFETY INSTRUCTIONS

Read operating and safety manuals before using lift.

Proper maintenance and inspection is necessary for safe operation.

SAFETY INSTRUCTIONS

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

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL 32903.

They are protected by copyright. Set of labels may be obtained from ALI or its member companies.

CAUTION

Lift to be used by trained operator ONLY.

Authorized personnel only in lift area.

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

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL 32903.

They are protected by copyright. Set of labels may be obtained from ALI or its member companies.
Safe Lift Operation

Automotive and truck 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 insure that your shop is profitable, productive and safe.

Safe operation of automotive lifts 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 runway. (See manufacturers minimize wheel base loading requirements.)
- 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.
- Reviewing the safety rules.
- 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.
- 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, check the data plate found on one of the lift columns 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, campers antennas, etc.) are not in the way
- Be sure that prior to the vehicle being raised, the doors, trunk, and hood are closed securely
- 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 runways, set the emergency brake, make sure the ignition is off, the doors are closed, overhead obstructions are cleared, and the transmission is in neutral
- Double check that the automatic chock devices are in position and then when the lift is raised, observe the chocks
- Put pads or adapters in the right position under the contact points that have been recommended (as necessary)
- The lift should be raised just until the vehicle's wheels are about one foot off the ground. If contact with the vehicle is uneven or it appears that the vehicle is not sitting secure, carefully lower the lift and readjust
- Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, undercoating, etc
- Pay attention when walking under a vehicle that is up on the hydraulic 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 or driven 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 INSURE that the safeties are engaged and lowered on to the safety ladders 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 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. Never use lifting adapters other than what is approved by the manufacturer

DO NOT override self-closing lift controls

CLEAR AREA if vehicle is in 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
TROUBLESHOOTING

LIFT WILL NOT RAISE

POSSIBLE CAUSE
1. Air in oil, (1,2,8,13)
2. Cylinder binding, (9)
3. Cylinder leaks internally, (9)
4. Motor run backward under pressure, (11)
5. Lowering valve leaks, (3,4,6,10,11)
6. Motor runs backwards, (7,14,11)
7. Pump damaged, (10,11)
8. Pump won't prime, (1,8,13,14,3,12,10,11)
9. Relief valve leaks, (10,11)
10. Voltage to motor incorrect, (7,14,11)

REMEDY INSTRUCTION
1. Check for proper oil level. . . . . . . . . . . . . . . . . . . . . . . . . . . . . The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Bleed cylinders. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . See Installation Manual
3. Flush- Release valve to get rid of. .................... Hold release handle down and start unit; allowing it possible contamination for 15 seconds.
4. Dirty oil. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Replace oil with AW32 hydraulic oil or Dexron III or VI automatic transmission fluid only.
5. Tighten all fasteners. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Tighten fasteners to recommended torques.
6. Check for free movement of release. ................ If handle does not move freely, replace bracket or handle assembly.
7. Check motor is wired correctly. . . . . . . . . . . . . . . . . . . . . . . . . . . . . Compare wiring of motor to electrical diagram on drawing.
8. Oil seal damaged or cocked . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Replace oil seal around pump shaft.
9. See Installation Manual . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Consult Lift Manufacturer.
10. Replace with new part . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Replace with new part.
11. Return unit for repair . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Return unit for repair.
12. Check pump-mounting bolts . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Bolts should be 15 to 18 ft. lbs.
13. Inlet screen clogged . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Clean inlet screen or replace.
14. Check wall outlet voltages and wiring . . . . . . . . . . . . . . . . . . . . . . . . . Make sure unit and wall outlet are wired properly.
MOTOR WILL NOT RUN

POSSIBLE CAUSE
1. Fuse blown, (5,2,1,3,4)
2. Limit switch burned out, (1,2,3,4)
3. Microswitch burned out, (1,2,3,4)
4. Motor burned out, (1,2,3,4,6)
5. Voltage to motor incorrect, (2,1,8)

REMЕDY
1. Check for correct voltage ..........................................
   INSTRUCTION
   .Compare supply voltage with voltage on motor
ameetag. Check that the wire is sized correctly.
   N.E.C. table 310-12 requires AWG 10 for 25 Amps.

2. Check motor is wired correctly ..................................
   Compare wiring of motor to electrical diagram on
drawing.

3. Don’t use extension cords ....................................... .According to N.E.C. : “The size of the conductors...
   should be such that the voltage drop would not exceed
   3% to the farthest outlet for power...” Do not run motor
   at 115 VAC – damage to the motor will occur.

4. Replace with new part ............................................. .Replace with new part.


8. Check wall outlet voltage and wiring ...................... Make sure unit and wall outlet is wired properly. Motor
   must run at 208/230 VAC.

LIFT LOWERS SLOWLY OR NOT AT ALL

POSSIBLE CAUSE
1. Cylinders binding, (1)
2. Release valve clogged, (5,4,2,3)
3. Pressure fitting too long, (6)

REMЕDY

2. Replace with new part ............................................. .Replace with new part.


4. Check oil .............................................................. Use clean AW32 hydraulic oil or Dexron III or VI
   automatic fluid only. If ATF is contaminated, flush
   entire system and replace with clean oil.

5. Clean release valve ............................................... Wash release valve in solvent and blow out with air.

6. Replace fitting with short thread lead ...................... Replace fitting with short thread lead.
WILL NOT RAISE LOADED LIFT

POSSIBLE CAUSE
1. Air in oil, (1,2,3,4)
2. Cylinder binding, (5)
3. Cylinder leaks internally, (5)
4. Lift overloaded, (6,5)
5. Lowering valve leaks, (7,8,1,5,9)
6. Motor runs backwards, (10,12,9)
7. Pump damaged, (5,9)
8. Pump won’t prime, (1,2,3,4,5,11,9)
9. Relief valve leaks, (8,5,9)
10. Voltage to motor incorrect, (10,12,5)

REMEDY
1. Check oil level ........................................ The oil level should be up to the bleed screw in the reservoir [with the lift all the way down.]
2. Check/Tighten inlet tubes .............................. Replace inlet hose assembly.
3. Oil seal damaged or cocked ............................ Replace oil seal and install.
6. Check vehicle weight ................................. Compare weight of vehicle to weight limit of the lift.
7. Flush release valve ................................. Hold release handle down and start unit allowing it to run for 15 seconds.
8. Replace with new part ............................... Replace with new part.
10. Check motor is wired correctly ..................... Compare wiring of motor to electrical diagram on power unit drawing.
11. Inlet screen clogged ............................... Clean inlet screen or replace.
12. Check wall outlet voltage and wiring ............... Make sure unit and wall outlet is wired properly.
LIFT WILL NOT STAY UP

POSSIBLE CAUSE
1. Air in oil, (1,2,3)
2. Check valve leaks, (6)
3. Cylinders leak internally, (7)
4. Lowering valve leaks, (4,5,1,7,6)
5. Leaking fittings, (8)

REMEDY

1. Check oil level ........................................... The oil level should be up to the bleed screw in the reservoir with the lift all the way down.

2. Oil seal damaged and cracked ........................ Replace oil seal around pump shaft.


4. Flush release valve ....................................... Hold release handle down and start unit allowing it to run for 15 seconds.

5. Replace with new valve ................................. Replace with new valve.


8. Check complete hydraulic system for leaks .......... Tighten all hydraulics fittings and inspect all hoses.
| MAINTENANCE RECORDS |
### INSTALLATION FORM

<table>
<thead>
<tr>
<th>Customer Name:</th>
<th>Date of Installation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Name:</td>
<td></td>
</tr>
<tr>
<td>Street Address:</td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
</tbody>
</table>

#### Pre-Install Agreement

I, (the undersigned) acting as the owner of the business listed above assume responsibility for any permits required, either state or county mandated, related to the installation and/or operation of this equipment. I assume responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are installed. I will assume all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with, or to have arisen out of the condition and/or drilling of the concrete near or adjacent to the equipment model(s) listed above. If my employee(s) offer assistance of any kind during installation of the above equipment model(s) I hold the manufacturer and installation company harmless of all liability for losses, damages, expenses, claims, and judgments in connection with or arising out of any personal injury or alleged damage to property, sustained or alleged to have been sustained in connection with the installation of the above equipment model(s).

I understand that the lifts above are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).

#### Post-Installation Check-Off

| Base and Columns Properly Shimmed And Stable | Lubrication of Critical Components |
| Anchor Bolts Tightened | Lift Adapters |
| Runways Properly Attached and Secured | Check For Overhead Obstructions |
| Electric Power Supply Confirmed | Runways Level |
| Cables / Chains Adjusted Properly | All Screws, Bolts, and Pins Secured |
| Safety Locks Functioning Properly | Surrounding Area and Lift Clean In Appearance |
| Check For Hydraulic Leaks | Proper Operation, Maintenance and Safety Explained |
| Oil Level | Operation and Safety Manual(s) Left at Site |

I, (the undersigned) confirm that the above installation procedure(s) were completed. I understand that I will be responsible for maintaining this equipment as outlined in the accompanied Installation and Operation Manual and ANSI/ALI ALOIM Safety Requirements for Operation, Inspection and Maintenance. I understand that personal injury and/or damage to property can occur if the above equipment model(s) are not maintained or used improperly and take full responsibility for training my employees on proper use and maintenance of this equipment. I hold the manufacturer and installation company harmless of all liability for losses, damages (including loss of use), expenses, demands, claims, and judgments in connection with or related to improper use, improper training, or lack of required maintenance. I understand that the warranty does not cover replacement of parts worn or damaged due to normal use or lack of required maintenance.

| Customer Signature: | Print Name: | Date: |
| Installer Signature: | Print Name: | Date: |
| Installer Company Name: | | |
| Street Address: | City: | State: | Zip: |
| Phone: | Phone ( Other ): |
GENERAL DISCLAIMER

In addition to all claims listed on each of the following individual WARRANTY pages, the following GENERAL DISCLAIMERS apply.

1. The purchaser of any DANNMAR product (Buyer) assumes the risk of verifying all materials or resources used or relied on. In no event will DANNMAR be liable to the Buyer or to anyone else for any decision made or action taken in reliance on information obtained from any DANNMAR website or from any DANNMAR dealer, or third-party website, or any online or published catalog.

2. DANNMAR has exclusive title and ownership rights including all intellectual property right throughout the world for all material and content contained on any DANNMAR website or from any DANNMAR online or published catalog.

3. DANNMAR warrants that all products shown on any DANNMAR website or in any online or published catalog conform to DANNMAR published specifications only and are free from defects in material or workmanship as more fully set forth in the Warranty for the specific product.

4. DANNMAR websites may contain hypertext or other links to websites not owned or controlled by DANNMAR. Links to other computer systems or websites are not supervised nor regularly reviewed by DANNMAR. DANNMAR specifically disavows legal responsibility for any information, personal opinions, guidance, advice or instruction that a Buyer receives from others or other websites.

5. Materials, design, specifications, images and other content from any DANNMAR website, or any other DANNMAR affiliate or dealer website, or any DANNMAR online or published catalog are subject to change. DANNMAR takes no responsibility for improper use or any results therof. DANNMAR reserves the right to make changes to all published warranties, website content, or published content without incurring any obligation to notify the Buyer or public that changes were made.

6. DANNMAR products are provided and sold as is without any express or implied warranties including warranties of merchantability or fitness for particular purpose, other than the published written limited Warranty for the specific product or as required by law.

7. DANNMAR makes no promises, guarantees or assurances that our products meet any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate other than what is listed or shown on DANNMAR website(s), or any DANNMAR online or published catalog. Not all DANNMAR lift models meet the standards as prescribed by ANSI/ALI ALCTV-(current edition) or ANSI/UL 201. Consult www.autolift.org for a complete list of lift models that meet ANSI/ALI ALCTV-(current edition) or ANSI/UL 201, or contact DANNMAR via contact@dannmar.com. Buyer assumes full responsibility for any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate required related to the installation and/or operation at any DANNMAR product. DANNMAR will not be responsible for any charges, fines, liens, or other levies imposed on the Buyer related to any special or regional structural, seismic or any other building code and/or codes such as the Uniform Building Code (UBC), International Building Code (IBC) or any other state, county, federal or international mandated permit, license, code, standard, certification, or other mandate, law, rule, regulation or directive by any other agency, government, administrations, or corporations whether state, county, federal, or international mandated.

8. In no event will DANNMAR be liable for any special, incidental, or consequential damages based on breach of warrant, breach of contract, negligence, strict tort, or any other legal theory. Damages that DANNMAR will not be responsible for include, but are not limited to: loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities, or services; downtime; the claims of third parties, including customers; and injury to property. This limitation does not apply to damages caused by breach of the warranty of title and against infringements or to claims for personal injury.

9. Unless modified in a writing signed by both parties, it is understood that DANNMAR published Warranties and
DANNMAR Terms and conditions of Sale are to be the complete and exclusive agreement (Agreement) between the parties superseding all oral or written prior agreements and all other communications between the parties relating to the subject matter of said Agreement, including statements made by sales persons. No employee of DANNMAR or any other party is authorized to make any warranty in addition to those made in the Agreement. The buyer is warned, therefore, to check all Warranties and review in full detail the Terms and Conditions of Sale carefully to see that it correctly reflects those terms that are important to the Buyer.

10. The Agreement allocates the risks of product failure between DANNMAR and the buyer. This allocation is recognized by both parties and is reflected in the price of the goods. Buyer acknowledges that they have read and fully understand the Agreement, and are bound by its terms. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to some Buyers. This warranty gives the Buyer specific legal rights. The Buyer may have other rights also which vary from State to State.

11. ANY ACTION FOR BREACH OF WARRANTY MUST BE COMMENCED WITHIN 60-DAYS FOLLOWING EXPIRATION DATE OF ANY WARRANTY PROVISION OR TERM.
LIMITED WARRANTY TWO-POST LIFTS/FOUR-POST LIFTS

Better Products - Better Service - Better Value

Duration: From the date of purchase by original Purchaser or 36/12 months from the date of shipment by DANNMAR or whichever comes first.

✓ Three Years (36-Months) Warranty on the lift structure
✓ One Year (12-Months) Warranty on operating components

Limited Warranty
1. Who gives this warranty (Warrantor): DANNMAR EQUIPMENT, 646 Flinn Ave. Moorpark, CA 93021
2. Who receives this warranty (Purchaser): The original Purchaser (other than for purpose of resale)
3. What products are covered by this warranty: Any DANNMAR Two-Post or Four-Post Vehicle Service Lift
4. What is covered under this warranty: manufacturer defects due to material and/or workmanship with the exceptions noted below.
5. What is not covered under this warranty:
   a. Any failure that results from Purchaser’s abuse, neglect or failure to install, operate, maintain or service product in accordance with instructions provided in the owner’s manual(s) supplied
   b. Any damage caused by overloading lift beyond rated capacity
   c. Items or service normally required to maintain the product, i.e. lubricants, oil, etc.
   d. Items considered general wear parts such as rubber pads, lifting cables, etc. unless wear or failure is a direct result of manufacturer defect due to material and/or workmanship
   e. Any component damaged in shipment or any failure caused in whole or in part by installing or operating lift under conditions not in accordance with installation and operation guidelines or damaged by contact with tools or surroundings
   f. Motor or pump failure caused by rain, excessive humidity, corrosive environments or other contaminants
   g. Rusted components due to improper maintenance or corrosive environments
   h. Cosmetic defects that do not interfere with product functionality
   i. Damage due to incorrect voltage or improper wiring
   j. Any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure, or malfunction of DANNMAR Inc. Product
   k. All electrical components (excluding power unit) are guaranteed for one year against defects in workmanship and/or materials when the lift is installed and used according to specifications.
   l. The cost of labor to make repairs or replacements.
   m. Shipping costs.
6. Responsibilities of Warrantor under this warranty: Repair or replace, at Warrantor’s option, component which is defective, has malfunctioned and/or failed to conform within duration of the warranty period. DANNMAR will not pay labor costs.
7. Responsibilities of Purchaser under this warranty:
   a. Provide dated proof of purchase and maintenance records
   b. In some cases, components may be required to be shipped to the nearest DANNMAR Authorized Service center. Freight costs must be borne by the Purchaser
   c. Use reasonable care in the installation, operation and maintenance of the products as described in the owner’s manual(s).
8. When Warrantor will perform repair or replacement under this warranty: Repair or replacement will be scheduled and serviced according to the normal work flow at the servicing location, and depending on the availability of replacement parts.
9. The warranty will be voided if the product is not installed in accordance with the instructions provided by Dannmar.
10. This Warranty is further limited by DANNMAR’S General Disclaimer and Terms and Conditions of Sale.

Limitation of Liability
DANNMAR shall have no obligation pursuant to this Warranty with respect to products which in our sole judgment have been altered damaged, misused, abused, badly worn, lost or improperly installed or maintained. This Warranty is null and void if the customer or any other person other than an authorized representative of DANNMAR has made any attempt to service or modify the tool prior to its return to DANNMAR under this Warranty. In no event will either party be liable for any damage caused by the other party’s failure to fulfill its responsibilities, under these terms and conditions. In no event will either party be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. DANNMAR products are provided and sold as is without any express or implied warranties including warranties of merchantability or fitness for particular purpose. No warranties, expressed or implied, will apply after the period set forth in this Limited Warranty. DANNMAR may modify these terms and conditions at any time by either providing the customer with written notice or posting such revised terms on www.DANNMAR.com. Such revised terms shall be effective thirty days from the date of such written notice or posting.
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