

INSTALLATION & OPERATION MANUAL



Atlas Apex 14 14,000 lb. Capacity Four-Post Commercial Lift



Atlas Automotive Equipment
www.atlasautoequipment.com
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Read this entire manual before operation begins.

Record below the following information which is located on the serial number data plate.

Serial No. _____

Model No. _____

Date of Installation _____

———— Contents ————

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Operations And Maintenance Manual: 4-Post Lifts

Please read this manual in its entirety before installing or operating your lift. By proceeding, you agree that you fully understand the contents of this manual and the installation, operation, and maintenance instructions contained within. Please deliver this manual to the lift owner and/or operator along with all other documentation provided with the lift. Failure to operate this equipment as intended may cause injury or death.

Check for any freight damages. 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 your bill of lading are shorted or damaged, do not accept to unload until the carrier makes a notation on the freight bill of the missing or damaged goods. Do this for your own protection. Check the contents of the accessory and hardware boxes to make sure no parts are missing.

Important Notice And Operating Conditions

- This lift is not intended for outdoor use. It is intended for indoor installation only, with an operating temperature range of 41 – 104 °F (5 – 40 °C).
- Concrete flooring must be 4 ¼" minimum thicknesses with 3,000 psi. Do not install on asphalt or other similar unstable surface type.
- Check ceiling height and electrical requirements as described in this manual.
- Reference ANSI/ALI ALIS, Safety Requirements for Installation and Service of Automotive Lifts.
- Consult a qualified expert to address all seismic load concerns and other local or state requirements.
- Atlas Automotive Equipment and its distributors will assume no liability for loss or damage of any kind, express or implied, resulting from improper installation, operation or maintenance of this lift.

Owner, Operator, & Employer Responsibilities:

- 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 the 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 the 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 lift manufacturer's instructions 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; 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 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 and maintenance.
- Shall not modify the lift without the prior written consent of the manufacturer.

IMPORTANT SAFETY INSTRUCTIONS

Please read carefully

- Read all instructions and warnings thoroughly before servicing, or maintaining the lift.
- Inspect the lift daily. Never operate if there are broken or damaged parts or if the lift is malfunctioning.
- Do not operate if there are damaged cords or if any piece of the equipment has been dropped or damaged until it has been examined by a qualified professional.
- Do not touch hot parts as burns can occur.
- Keep area well lit at all times and do not use in damp or wet locations.
- Do not let any cords come in contact with hot manifolds or moving blades.
- A cord with a current rating equal to or more than that of the equipment should be used if an extension cord is necessary. Cords rated for less current than the equipment may overheat. Be careful to avoid putting in an area where it could be tripped over or interfered with.
- Always unplug equipment when not in use. Do not attempt to grab the cord, grasp plug to disconnect.
- Allow equipment to cool completely before storing away. Loop cord loosely around the equipment when storing.
- To reduce the risk of fire, never operate near open containers of flammable liquids (for example, gasoline).
- Adequate ventilation should be provided when working on or operating internal combustion engines.
- Always keep loose clothing, hair, fingers, and all parts of the body away from any moving parts.
- To reduce the risk of electric shock, never use on wet surfaces or expose to rain.
- Always wear safety glasses. Everyday glasses are not safety glasses and do not provide adequate protection.
- Use only as described in this manual – use only Atlas Automotive Equipment optional accessories and attachments.
- Never attempt to overload the lift. The rated capacity is shown on the identification label.
- Never modify the lift or attempt to override the operating controls.
- Do not attempt to raise a vehicle until installation is completed per instructions in this manual.

- Only trained and qualified personnel are to operate, maintain, service or repair the lift.
- Keep hands and feet clear of any moving parts and avoid pinch points.
- Always use all four arms to raise and support the vehicle.
- Never work under or near the lift unless the mechanical safety locks are securely engaged.
- Always keep the work area free of spills and debris.
- Never permit anyone in a vehicle or on the lift when it is either being raised or lowered.
- Always check for obstructions before lowering the lift.
- Never remove hydraulic fittings while the lift is under pressure.
- Clear the work area immediately if a vehicle is in danger of falling.
- Do not hit or drive over arms or adapters. Always provide an unobstructed entrance between columns prior to loading vehicle onto the lift.
- Always ensure that the lift is grounded while in use to protect the operator from electric shock.
- Disconnect power unit before performing any electrical repairs.
- Avoid rocking a vehicle while it is on the lift.
- Always use safety and/or support stands when removing or installing heavy vehicle components.
- Never remove or tamper with safety components.
- Use common sense and always stay alert.
- **SAVE THESE INSTRUCTIONS**






Record the following information which can be located on the serial number data plate: Serial No, Model No, and Date of Installation.

The Following Are Included With Your Lift:

- ALI/SM Lifting it Right
- ALI/ST Safety Tips
- ALI/ALOIM
- ALI/ALIS
- ALI/LPG Lifting Point Guide
- Attachment/accessory Notice labels

Printing Characters And Symbols

Throughout this manual, the following symbols and printing characters are used to facilitate reading:

	Indicates the operations which need proper care
	Indicates prohibition
	Indicates a possibility of danger for the operators
	Indicates the direction of access for motor vehicles to the lift
BOLD TYPE	Important information
	WARNING: before operating the lift and carrying out any adjustment, read carefully chapter 7 “installation” where all proper operations for a better functioning of the lift are shown.

General Information

This chapter contains warning instructions to operate the lift properly and prevent injury to operators or objects. This manual has been written to be used by shop technicians in charge of the lift (operator) and routine maintenance technician (maintenance operator). The operating instructions are considered to be an integral part of the machine and must remain with it for its whole useful life.

Read every section of this manual carefully before operating the lift and unpacking it since it gives helpful information about:

- **safety of people**
- **safety of the lift**
- **safety of lifted vehicles**

The company is not liable for possible problems, damage, accidents, etc. resulting from failure to follow the instructions contained in this manual.

Only skilled technicians of AUTHORISED DEALERS or SERVICE CENTRES AUTHORISED by the manufacturer shall be allowed to carry out lifting, transport, assembling, installation, adjustment, calibration, settings, extraordinary maintenance, repairs, overhauling and dismantling of the lift.

The manufacturer is not responsible for possible damage to people, vehicles or objects if said operations are carried out by unauthorized personnel or the lift is improperly used.

Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.


1.1 Manual Keeping

For a proper use of this manual, the following is recommended:

- keep the manual near the lift, in an easily accessible place.
- keep the manual in an area protected from the damp.
- use this manual properly without damaging it.
- Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.


This manual is an integral part of the lift: it shall be given to the new owner if and when the lift is resold.

1.2 Obligation In Case Of Malfunction


	In case of machine malfunction, follow the instructions contained in the following chapters.
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1.3 Cautions For The Safety Of The Operator

Operators must not be under the influence of sedatives, drugs or alcohol when operating the machine.

	Before operating the lift, operators must be familiar with the position and function of all controls, as well as with the machine features shown in the chapter "Operation and use"
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1.4 Warnings

	Unauthorized changes and/or modifications to the machine relieve the manufacturer of any liability for possible damages to objects or people. Do not remove or make inoperative the safety devices, this would cause a violation of safety at work laws and regulations.
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	Any other use which differs from that provided for by the manufacturer of the machine is strictly forbidden.
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	The use of non genuine parts may cause damage to people or objects
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Declaration Of Warranty And Limitation Of Liability

The manufacturer has paid proper attention to the preparation of this manual. However, nothing contained herein modifies or alters, in any way, the terms and conditions of manufacturer agreement by which this lift was acquired, nor increase, in any way, manufacturer's liability to the customer.

To The Reader

Every effort has been made to ensure that the information contained in this manual is correct, complete and up-to date. The manufacturer is not liable for any mistakes made when drawing up this manual and reserves the right to make any changes due the development of the product, at any time.

Product Identification

The identification data of the machine are shown in the serial plate placed on the power side column.



Machines may be updated or slightly modified from an aesthetic point of view and, as a consequence, they may present different features from those shown, this without prejudicing what has been described herein.

2.1 Warranty Certificate

The warranty is valid for a period of 12 months starting from the date of the purchase invoice.

The warranty will come immediately to an end when unauthorized modifications to the machine or parts of it are carried out.

The presence of defects in workmanship must be verified by the Manufacturer's personnel in charge.

2.2 Technical Servicing

For all servicing and maintenance operations not specified or shown in these instructions, contact your Dealer where the machine has been bought or the Manufacturer's Commercial Department.

Only skilled personnel who are familiar with the lift and this manual shall be allowed to carry out packing, lifting, handling, transport and unpacking operations.

Packing / Transport / Storage

3.1 Packing

The packing of the lift is shown in the figure 1: N. 1 base unit packed in a steel frame, wrapped up in non-scratch material, and N.1 package of power unit.

The package weight is about 2735 lbs.

If requested, optional accessories are available to satisfy each customer's requirements.

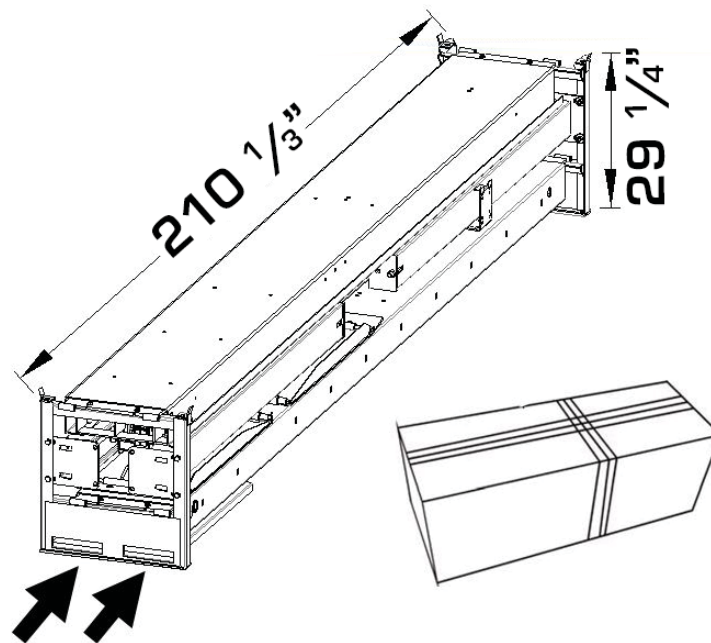


Figure 1 - Package

3.2 Lifting And Handling

When loading/unloading or transporting the equipment to the site, be sure to use suitable loading (e.g. cranes, trucks) and hoisting means. Be sure also to hoist and transport the components securely so that they cannot drop, taking into consideration the package's size, weight and centre of gravity and its fragile parts.

3.3 Storage And Stacking Of Packages

Packages must be stored in a covered place, out of direct sunlight and in low humidity, at a temperature between -10°C and $+40^{\circ}\text{C}$.

Stacking is not recommended: the package's narrow base, as well as its considerable weight and size make it difficult and hazardous.

3.4 Delivery And Check Of Packages

When the lift is delivered, check for possible damages due to transport and storage; verify that what is specified in the manufacturer's confirmation of order is included. In case of damage in transit, the customer must immediately inform the carrier of the problem.

Packages must be opened paying attention not to cause damage to people (keep a safe distance when opening straps) and parts of the lift (be careful the objects do not drop from the package when opening).

Product Description

Lift Description (Ref. Figure 2)

The lift is suitable for lifting motor vehicles having maximum weight as described in the nameplate on the power side column of the lift. All mechanical parts have been built in steel plate to make the frame stiff and strong while keeping a low weight. The electro hydraulic operation is described in detail in chapter 8.

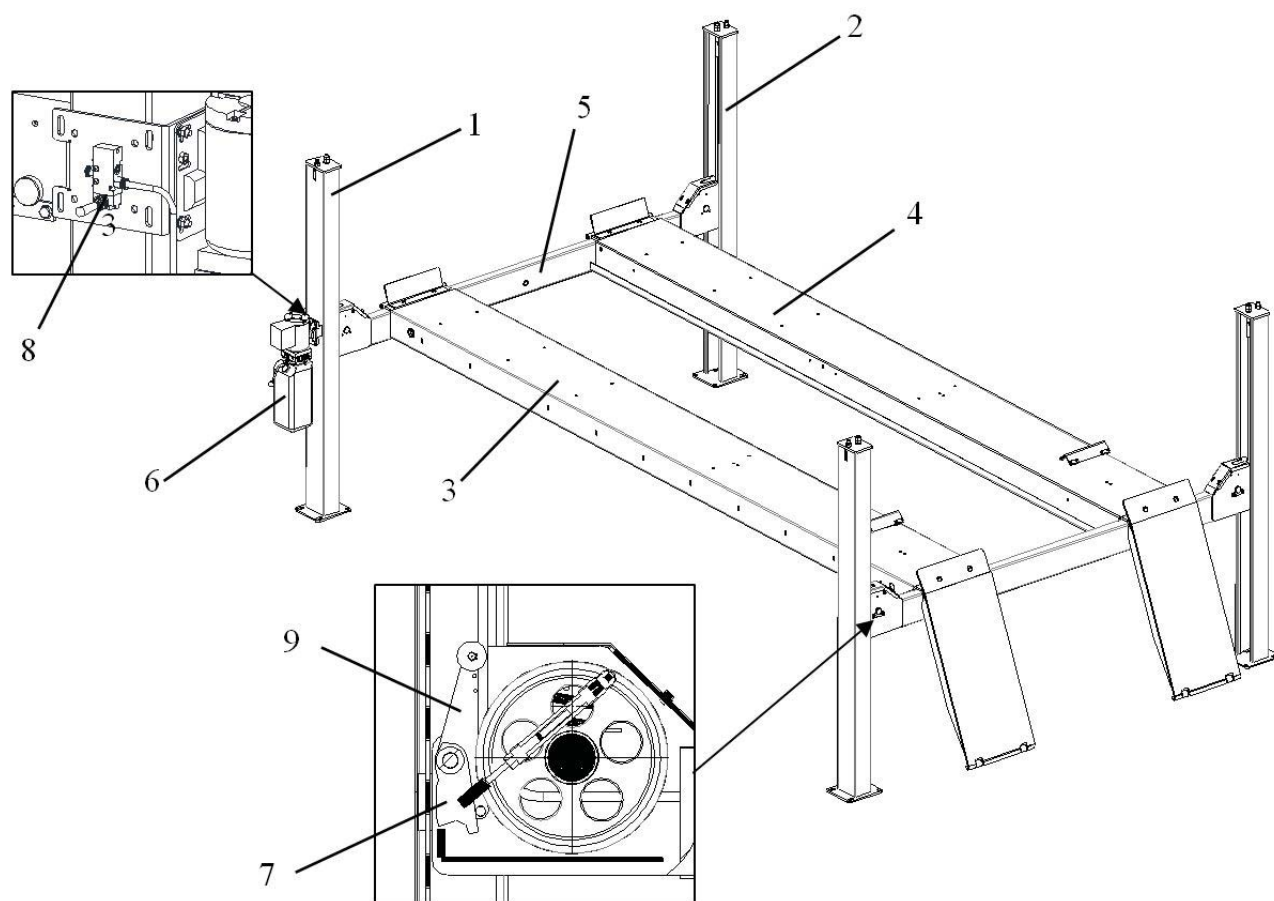


Figure 2 – Lift

This chapter describes the lift's principal elements, allowing the user to be familiar with the machine.

As shown in figure 2, the lift is composed of four columns: N.1 power-side column (1), N.3 off-side columns (2), two platforms: the power-side platform (3) and the off-side platform (4), and two transverse beams (5), anchored to the ground by means of the column base plates.

Raising motion is carried out by pushing the lifting button on the power unit (6) to operate a power unit delivering the hydraulic fluid to cylinders to act on cable lifting system.

Lowering motion is controlled by pushing the lowering lever on the power unit and carried out under the weight of the load lifted.

The automatic mechanical back-up safety (7) holds on the lift in the elevated position, can be released by pushing the lever of the control valve (8). The slack cable safety (9) can hold on the lift in event of cable slackening and/or failure.

Technical Specification

5.1 Size And Main Features (Ref. Figure 3)

LIFT CAPACITY	6400kg (14,000lbs)
Maximum raised height	78 2/3" (2000mm)
Runway length	205 1/2" (5219mm)
Runway width	20 1/8" (510mm)
Free width between runways	42 3/4" (1086mm)
Width between two columns	116 1/3" (2955mm)
Max. overall length	252" (6400mm)
Overall height	92 1/2" (2349mm)
Overall width	131 2/3" (3345mm)
Raised time	66s
Noise level	80 dB(A)/1m
Rated pneumatic pressure	6bar – 8bar
Working temperature	5 °C - 40 °C
Average weight of package	2670lbs

5.2 Electric Motor

Voltage	208V-240V/50Hz/60Hz/1Ph
Power	3HP
N° Poles	2
Speed	2880/3450 rpm
Motor enclosure type	B14
Insulation class	IP 54

Motor connection must be carried out referring to the attached wiring diagrams (fig.6). The motor direction of rotation is shown in the label placed on the motor.

Before use of the lift, make sure to check if the motor specification shown in the nameplate of the motor conforms to the local electric supply.

5.3 Pump

Type	Gear
Flow rate	2.5 cm ³ /g
Continuous working pressure	160 bar

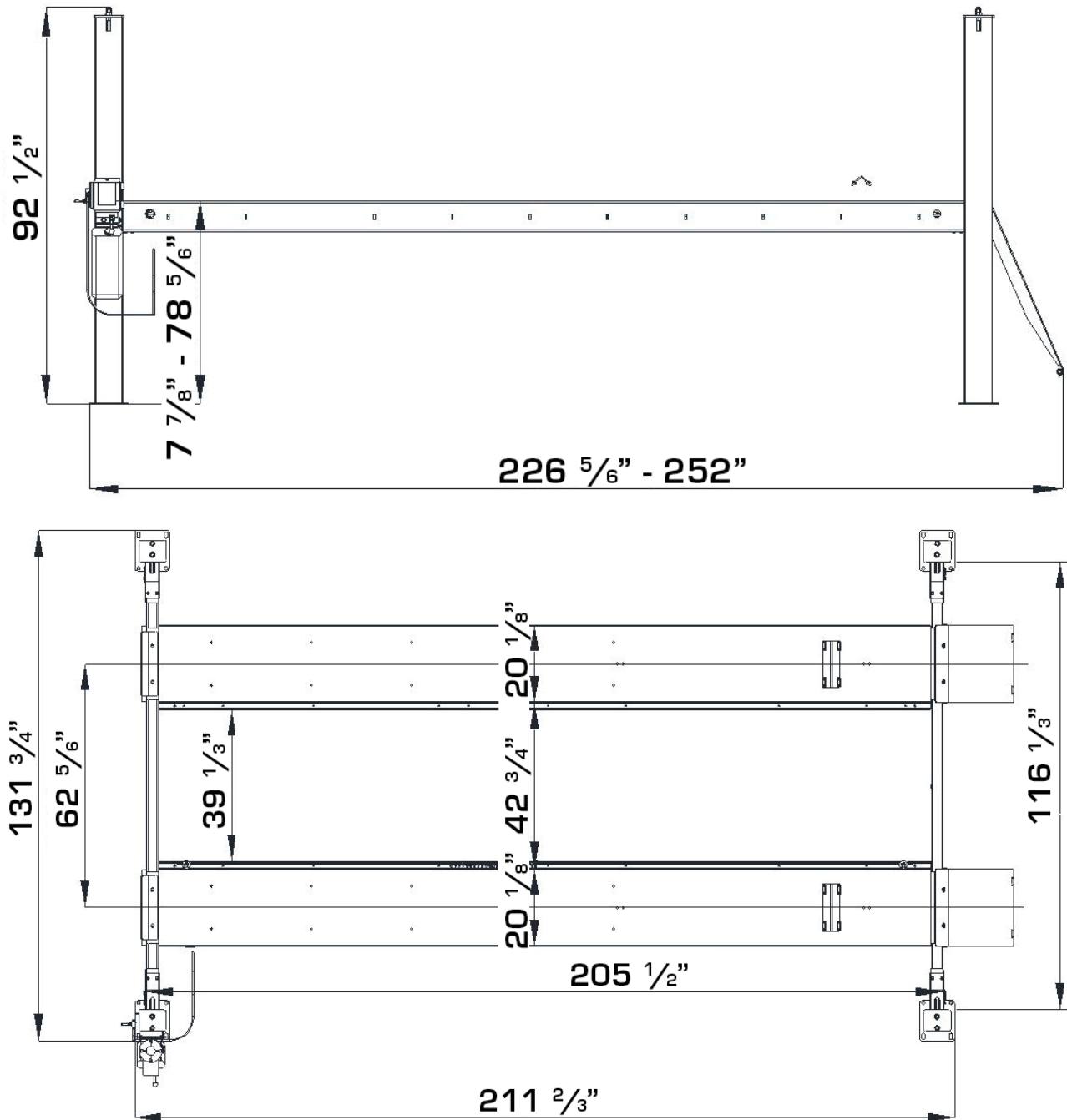


Figure 3 – Lift Layout

NOTE: You will need at least 9' of clearance from the opposite end of the power unit end of the lift and 6' at the power unit end.

5.4 Hydraulic Power Unit

The hydraulic unit is equipped with:

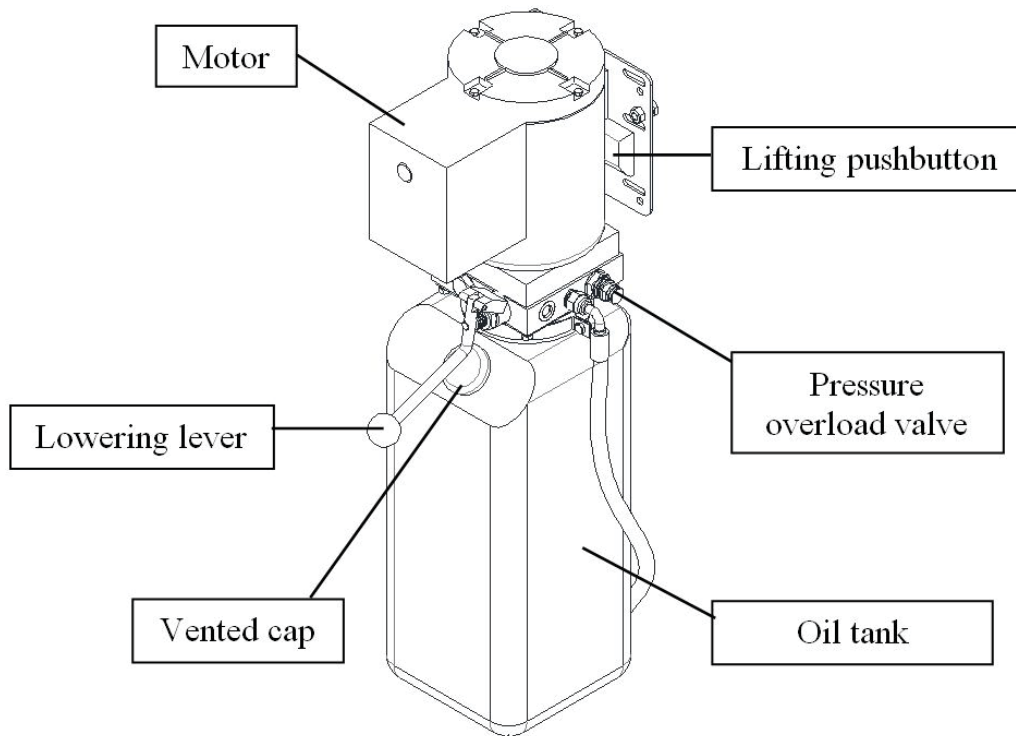


Figure 4 – Hydraulic Power Unit

5.5 Oil

Use wear proof oil for hydraulic drive, in conformity with ISO 6743/4 rules (HM class). The oil with features similar to those shown in the table is recommended.

Test standards	Features	Value
ASTM D 1298	Density 20°C	0.8 kg/l
ASTM D 445	Viscosity 40°C	32 cSt
ASTM D 445	Viscosity 100°C	5.43 cSt
ASTM D 2270	Viscosity index	104 N°
ASTM D 97	Pour point	~ 30 °C
ASTM D 92	Flash point	215 °C
ASTM D 644	Neutralization number	0.5 mg KOH/g



Change hydraulic oil at 1 year intervals

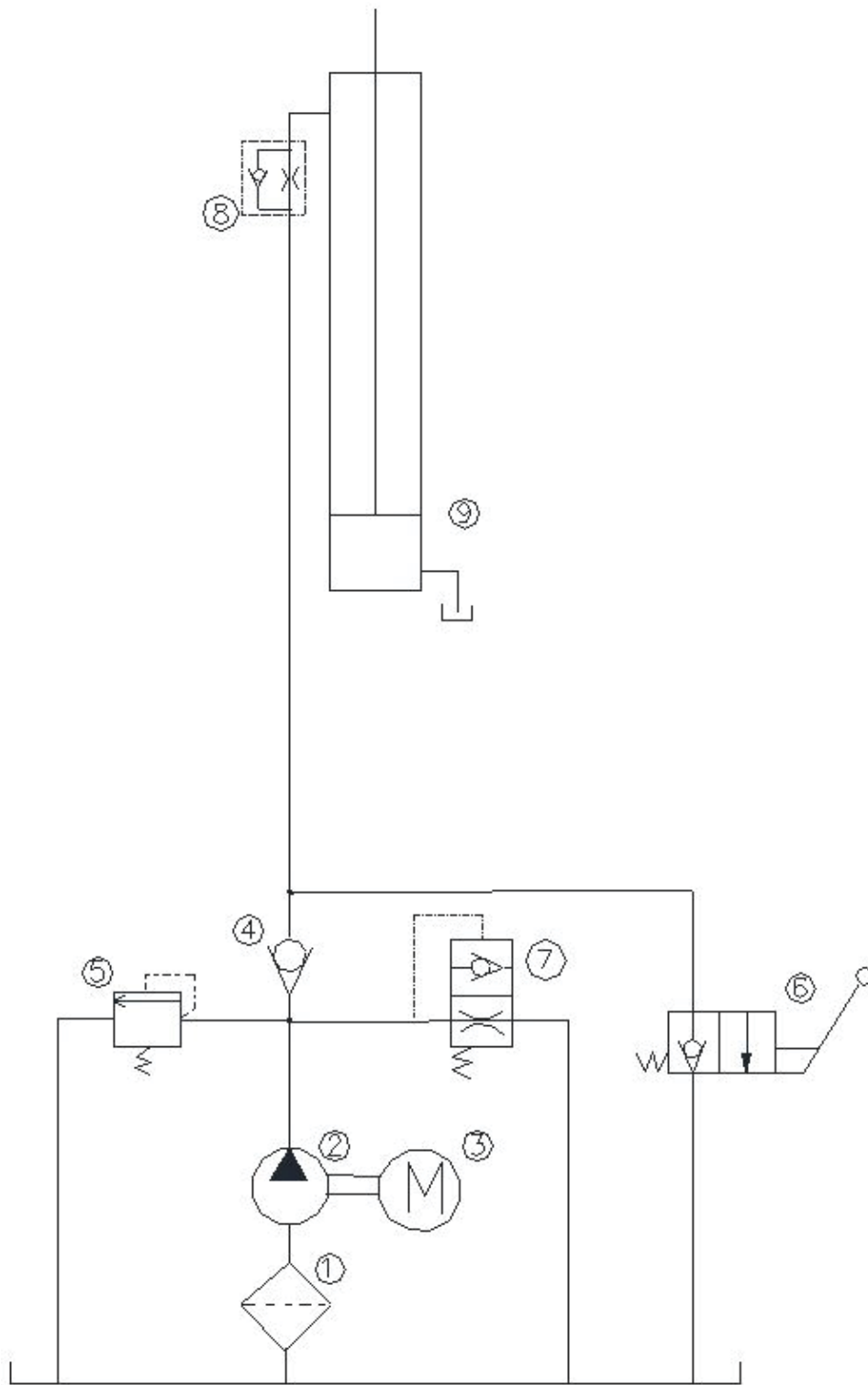


Figure 5 -Hydraulic Plan

1	Oil filter	6	Manual lowering valve
2	Gear pump	7	Startup valve
3	Motor	8	Flow restrictor
4	Non return valve	9	Hydraulic cylinder
5	Pressure overload valve		

AC 220V/50Hz/60Hz/1Ph

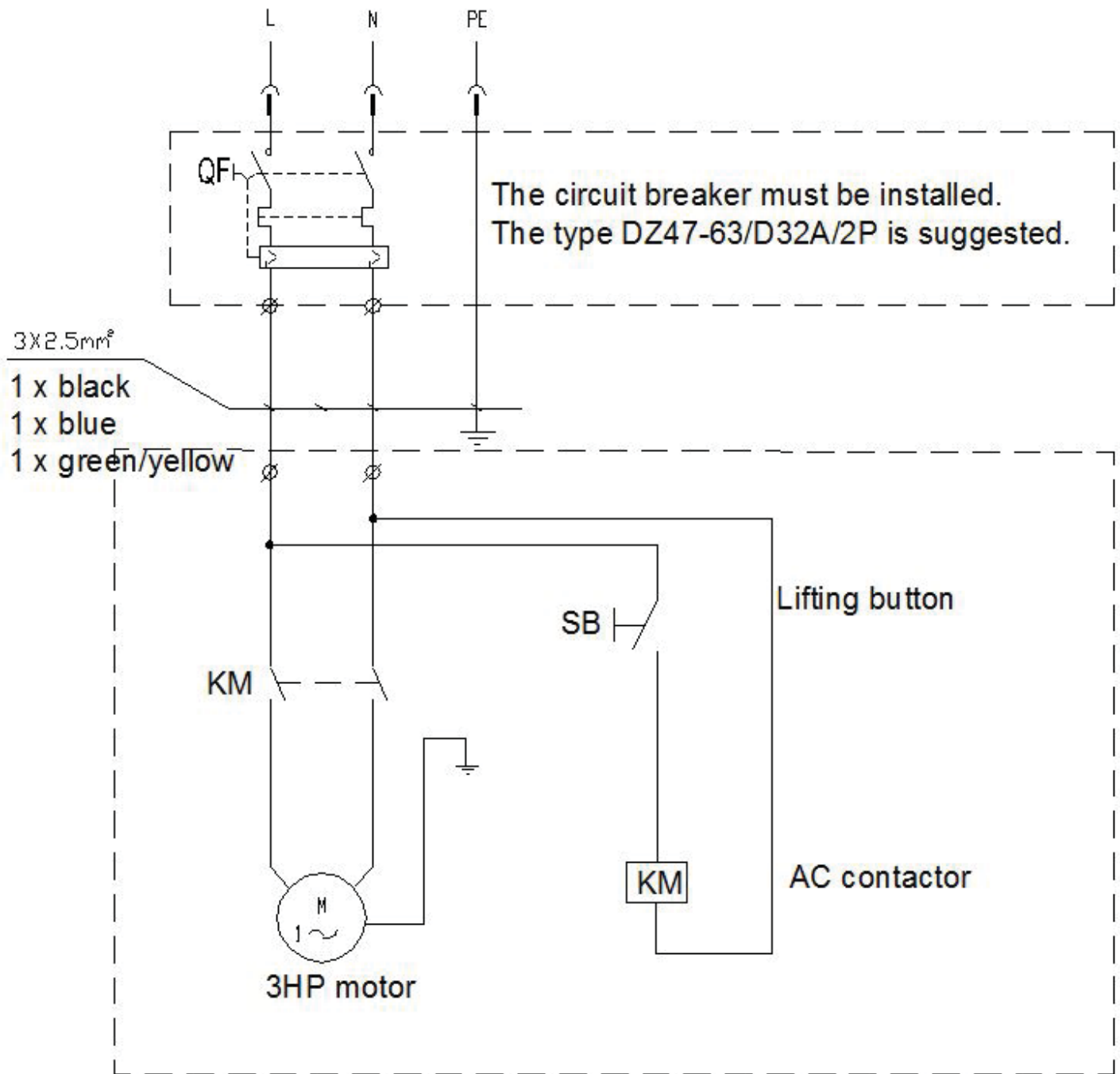


Figure 6 – Electrical Diagram (220V/50Hz/60Hz/1Ph)

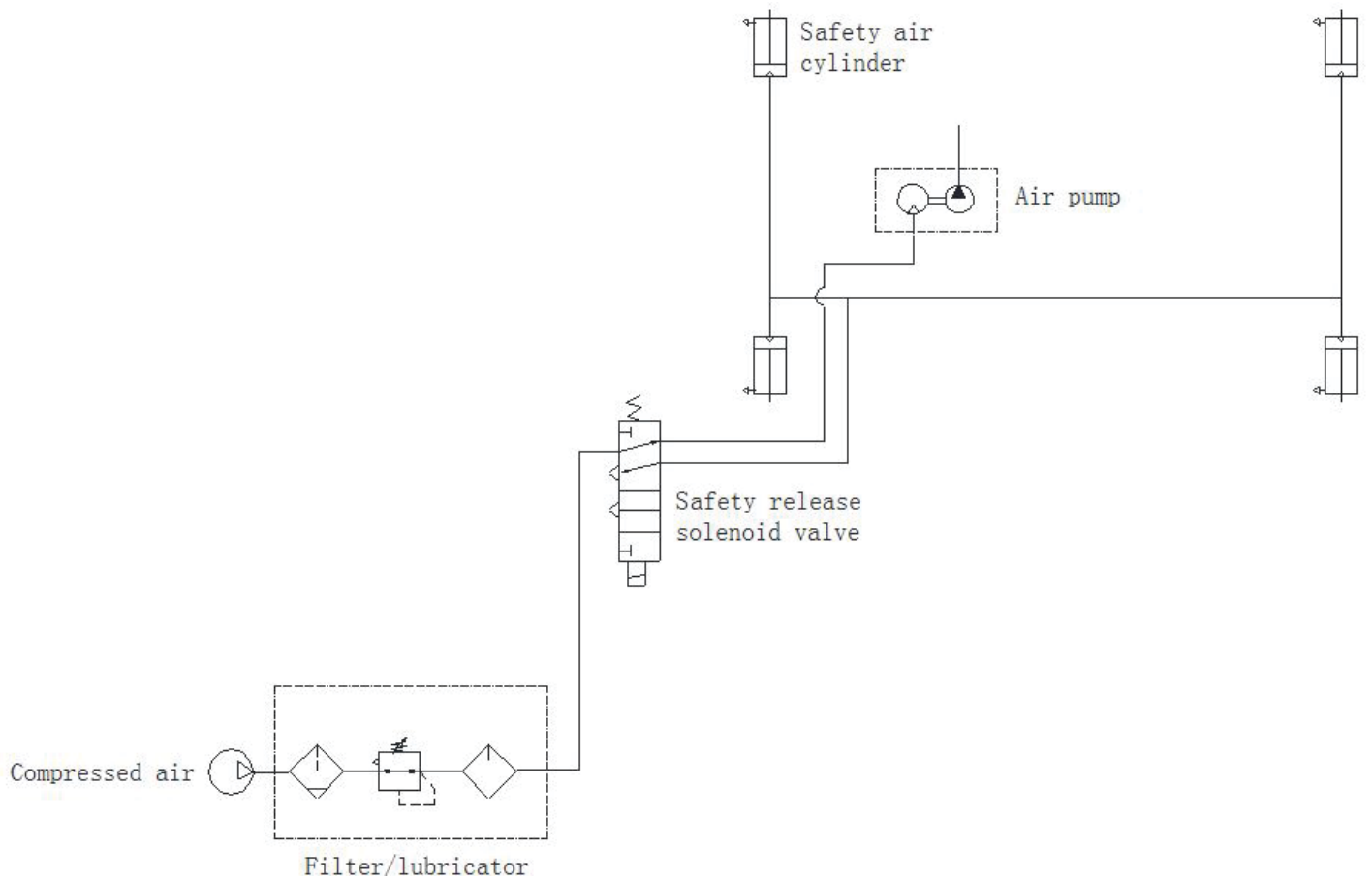




Figure 7 – Pneumatic Plan

	<p>Filter/regulator must be equipped on the air circuit and the air pressure is to be set at 6-8bar.</p> <p>Filter/regulator is not supplied by the manufacturer if no special order.</p>
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Safety

Read this chapter carefully and completely because it contains important information for the safety of the operator and the person in charge of maintenance.

	<p>The lift has been designed and built for lifting vehicles and making them stand above level in a closed area. any other use is forbidden.</p> <p>The manufacturer is not liable for possible damages to people, vehicles or objects resulting from an improper or unauthorized use of the lift.</p>
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For operator and people safety, a safety area at least 1m free away from the lift must be vacated during lifting and lowering. The lift must be operated only from the operator's control site in this safety area.

Operator's presence under the vehicle, during working, is only admitted when the vehicle is lifted and runways are not running.

	<p>Never use the lift when safety devices are off-line. People, the lift and the vehicles lifted can be seriously damaged if these instructions are not followed.</p>
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6.1 General Warnings

The operator and the person in charge of maintenance must follow accident-prevention laws and rules in force in the country where the lift is installed

They also must carry out the following:

- neither remove nor disconnect hydraulic, electric or other safety devices;
- carefully follow the safety indications applied on the machine and included in the manual;
- observe the safety area during lifting;
- be sure the motor of the vehicle is off, the gear engaged and the parking brake put on;

- be sure only authorized vehicles are lifted without exceeding the maximum lifting capacity;
- Verify that no one is on the runways during lifting or standing.

	<p>Any use of the lift other than that herein specified can cause serious accidents to people in close proximity of the machine.</p>
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6.2 Risks For People

All risks the personnel could run, due to an improper use of the lift, are described in this section.

6.3 Personnel Crushing Risks

During lowering of runways and vehicles, personnel must not be within the area covered by the lowering trajectory. The operator must be sure no one is in danger before operating the lift.



Fig. 8a

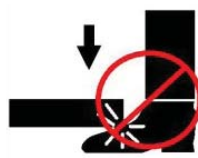


Fig. 8b



Fig. 8c

6.5 Risk Of The Vehicle Falling From The Lift

Vehicle falling from the lift can be caused when the vehicle is improperly placed on platforms, and when its dimensions are incompatible with the lift or by excessive movement of the vehicle.

In this case, keep immediately away from the working area.



Fig. 9a



Fig. 9b



Fig. 9c

6.6 Slipping Risks

The risk of slipping can be caused by oil or dirt on the floor near the lift.



Keep the area under and around the lift clean. Remove all oil spills.

6.7 Electrocutation Risks

Avoid use of water, steam, and solvent, varnish jets in the lift area where electric cables are placed and, in particular, next to the electric panel.



Fig. 10

6.8 Risks Resulting From Improper Lighting

Make sure all areas next to the lift are well and uniformly lit, according to local regulations.

6.9 Risks Of Breaking Component During Operation

Materials and procedures, suitable for the designed parameters of the lift, have been used by the manufacturer to build a safe and reliable product. Operate the lift only for the use it has been designed for and follow the maintenance schedule shown in the chapter "Maintenance".



Fig. 11

6.10 Risks For Unauthorized Uses

The presence of unauthorized persons next to the lift and on the platforms is strictly forbidden during lifting as well as when the vehicle has been already lifted



Fig. 12

6.11 Risks During Vehicle Lifting And Working

To avoid overloading and possible breaking during lifting and working, the following safety devices have been used:

- A pressure valve placed inside the hydraulic unit to prevent excessive weight.



The maximum pressure valve has been preset by the manufacturer to a proper pressure. DO NOT try to adjust it to overrun the rated lifting capacity.

- Automatic mechanical back-up safety holds on the lift in the elevated position.
- Slack safety in event of cable slackening and/or failure.



It is strictly forbidden to modify any safety device. Always ensure the safety device for proper operation during the service.

Installation



Only skilled technicians, appointed by the manufacturer, or by authorized dealers, must be allowed to carry out installation. Serious damage to people and to the lift can be caused if installations are made by unskilled personnel.

Always refer to the exploded views attached during installation.

7.1 Tool Required

Rotary Hammer Drill D.16	Hex-Key/Allen Wrench Set
Masonry Bit	Crow Bar For Shim Installation
Hammer	Chalk Line
Level	Medium Cross Screwdriver
Open-End Wrench Set	Medium Flat Screwdriver
Medium Crescent Wrench	Tape measure

7.2 Checking For Room Suitability

The lift has been designed to be used in covered and sheltered places.

The place of installation must not be next to washing areas, painting workbenches, solvent or varnish deposits. The installation near to rooms, where a dangerous situation of explosion can occur, is strictly forbidden.

The relevant standards of the local Health and Safety at Work regulations, for instance, with respect to minimum distance to wall or other equipment, must be observed.


7.3 Lighting

Lighting must be carried out according to the effective regulations of the place of installation. All areas next to the lift must be well and uniformly lit.

7.4 Installation Surface

The lift **MUST** be installed on 3000 PSI concrete with the minimum thickness 6" and an extension of at least 5' from anchoring points.

New concrete must be adequately cured by at least 21 days minimum.

	<p>A level floor is suggested for proper installation. Small differences in floor slope may be compensated for by proper shimming. Any major slope change will affect the level lifting performance. If a floor is of questionable slope (more than 3 degrees), considering to pour the new concrete slab.</p>
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7.5 Site Layout

- Determine which end of the lift will be approach side.
- Determine which side the power-side runway (with the hydraulic cylinder attached) will be located on. Remember that the power-side runway must be installed on the same side as the power-side column.

7.6 Installation Of Runways To Transverse Beams



It is important to position the power-side runway (with the hydraulic cylinder) on the same side as the power unit location.

Elevate runways off the floor with blocks of wood to prevent any damage.

Before installation, make sure that all accessories have been installed in the runways and transverse beams.

- Place each runway in the predetermined location. Make sure that the rails on each side must be installed to the inside. Pay attention to the location of the power-side runway;
- Place the front and rear transverse beams on each ends of runways. The runways and transverse beams should be laid out as shown in figure 13. Make sure the cables are in the proper pulley grooves as shown in the figure 14;
- Slide the cables from the end of power-side runway and route the cables through the transverse beams referring to the routing diagram (fig. 15). Make sure that the cables are not twisted during routing and routed on the correct pulleys in runways. Make sure to route the cables through the retainer before attaching them to the holder.

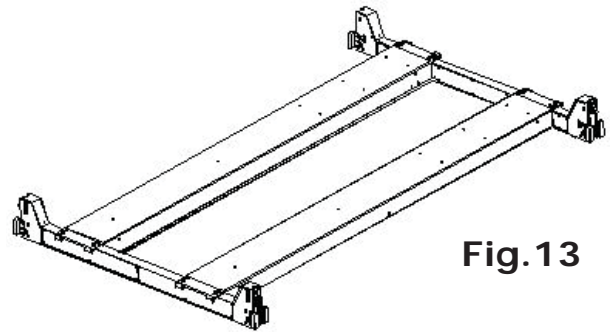
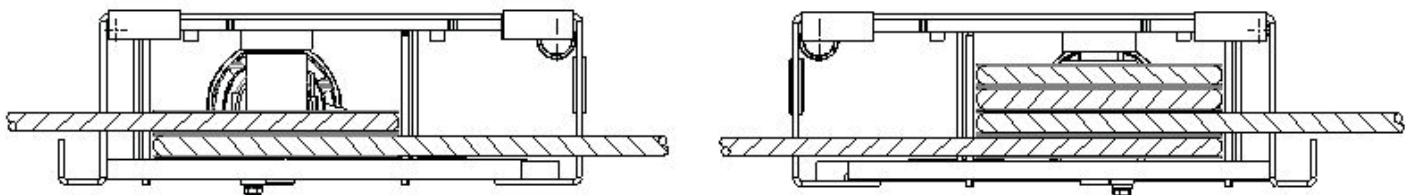


Fig.13



FRONT

Fig. 14

REAR

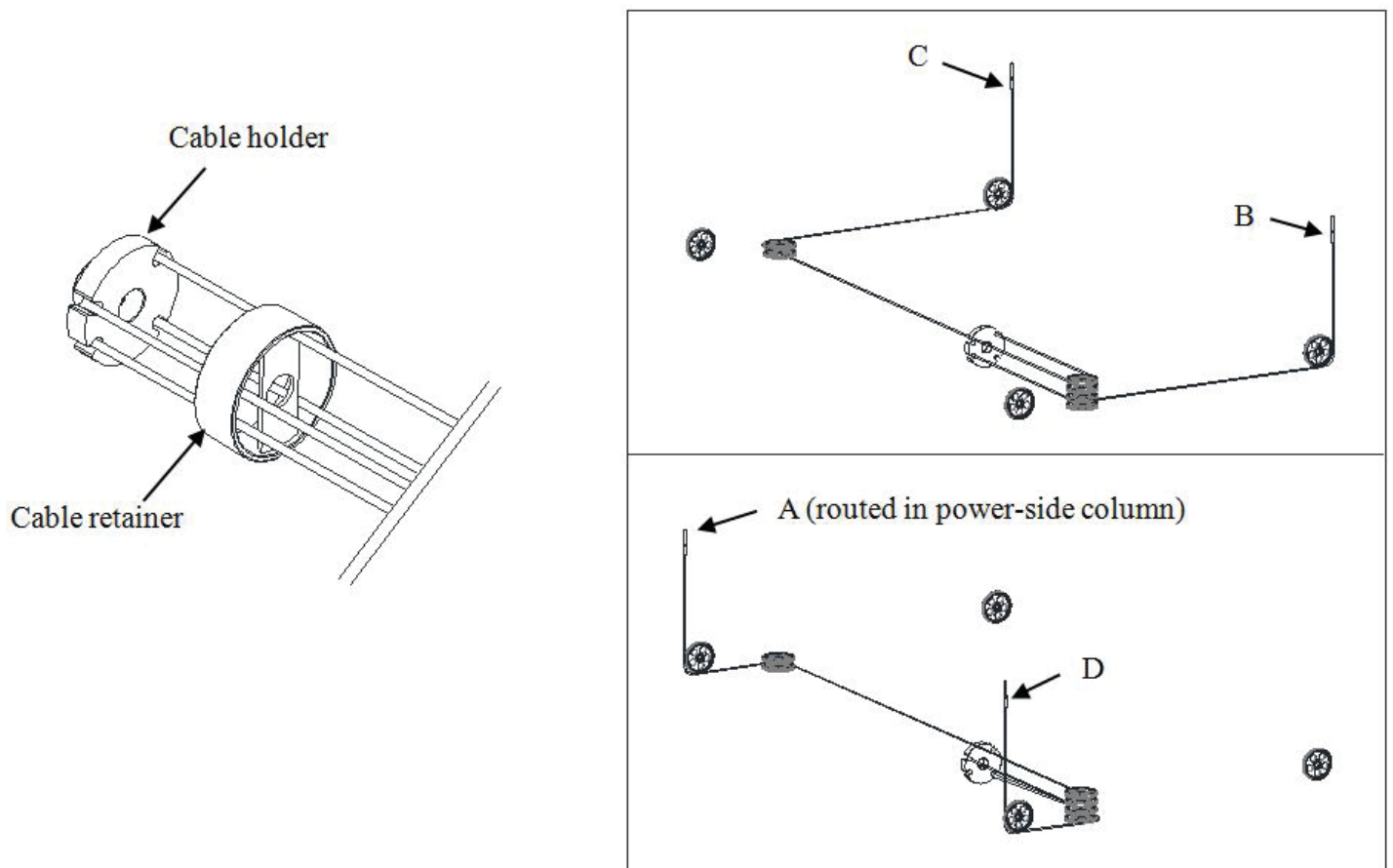


Figure 15 – Cable Routing Diagram

- Bolt the runways with the wheel stops onto the front transverse beam as shown in the figure 16;
- Bolt the runways onto the rear transverse beam.

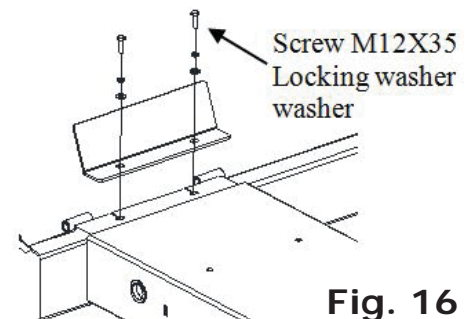
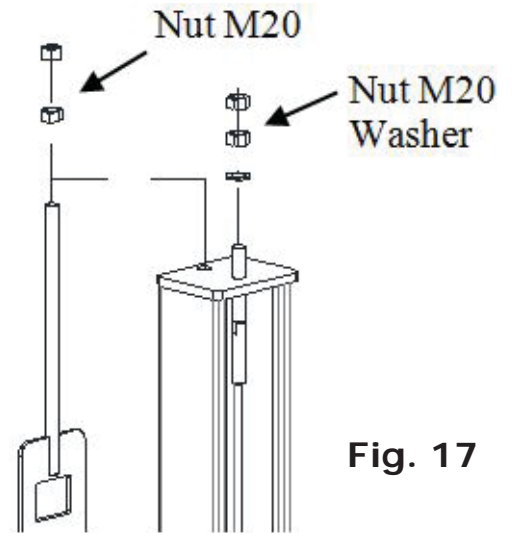



Fig. 16

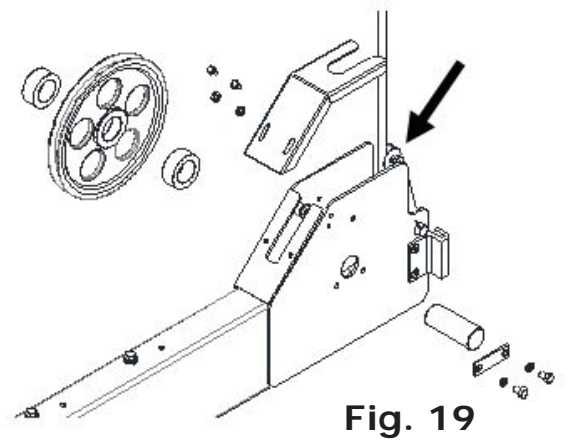
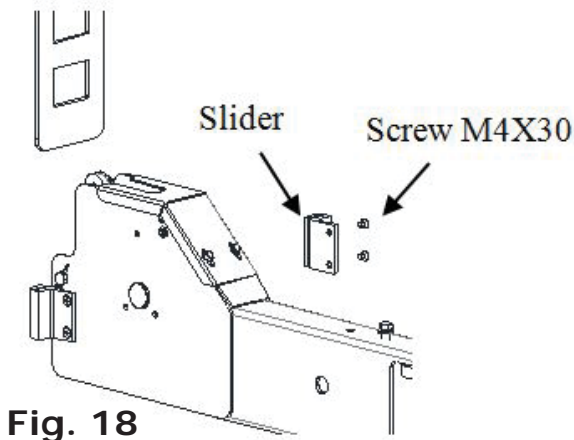
7.7 Installation Of Columns To Transverse Beam

- Transport the columns to the located site.
- Insert the thread end of latch rack through the top plate of each column as shown in the figure 17;
- Move each column closed to the respective end of the transverse. Make sure that all columns are positioned in the correct location (ref. fig.3). Make sure to use caution to prevent columns from falling over. If necessary, use the shims;

- Keep the latch rack locked in the lowest locking position and mount the sliders on the transverse beam as shown in the figure 18. Make sure the latch rack is inside the groove of the slider;
- With both sliders attached, move the column toward the column until stopped by the slides;
- Insert the steel cable through the top plate of the column as shown in the figure 17. Make sure the cable is routed correctly on the slack cable roller as shown in the figure 19.
- Mount the guard on the end of the transverse beam using M8X12 screws and washers as shown in the figure 19;
- Repeat the same procedures for each column and transverse beam.



 **Each cable must be routed through the column hole toward to the lift center. The lift cannot work properly and thus damage the cable if failure to do so.**



7.8 Anchoring Columns

- Before proceeding, check the measurement referring to the figure 20 and make sure to keep columns square to the center line of lift;
- Using the base plate as guide, drill each hole in the concrete approximately 5" deep with the rotary hammer drill D.16. To assure full holding power, do not ream the hole or allow drill to wobble.
- After drilling, remove dust thoroughly from each hole using compressed air or wire brush.

- Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure if shimming is required, enough threads are left exposed.
- If shimming is required, insert the shims as necessary around the anchor bolts, the columns will be plumb.
- With the shims and anchor bolts in place, tighten by securing the nut to the base.
- If anchors do not tighten to 150 ft-lbs. installation torque, replace the concrete under each column base with a 4' x 4' x 6" thick 3000 PSI minimum concrete pad keyed under and flush with the top of existing floor. Allow concrete to cure before installing lifts and anchors (typically 2 to 3 weeks).

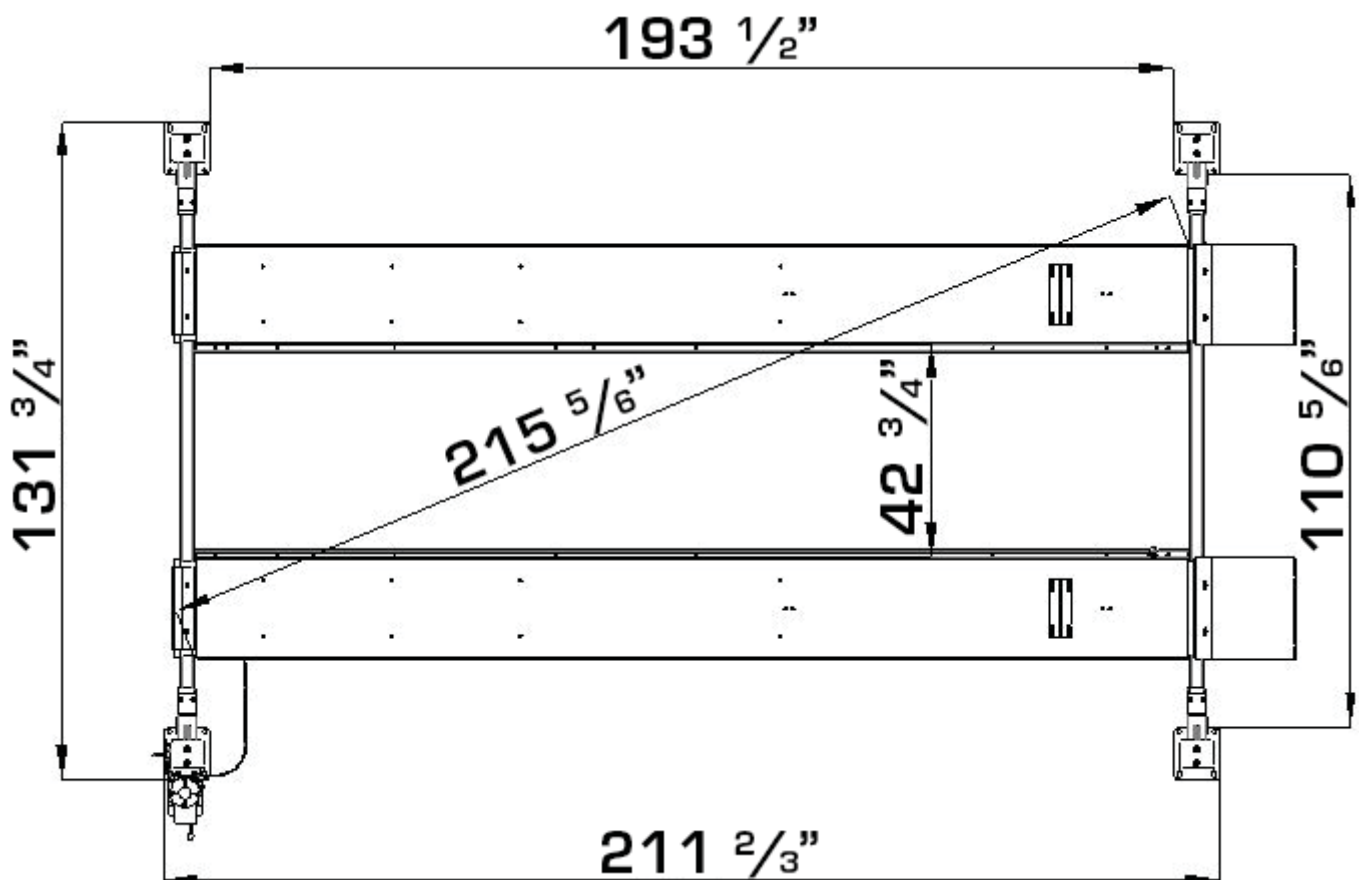


Figure 20 – Square And Diagonal Measurement

7.9 Installation Of Power Unit

- Attach the power unit onto the bracket on the power side column;
- Secure it using M8X25 screws, M8 nuts and the washers;
- Make sure to keep the power unit clean.

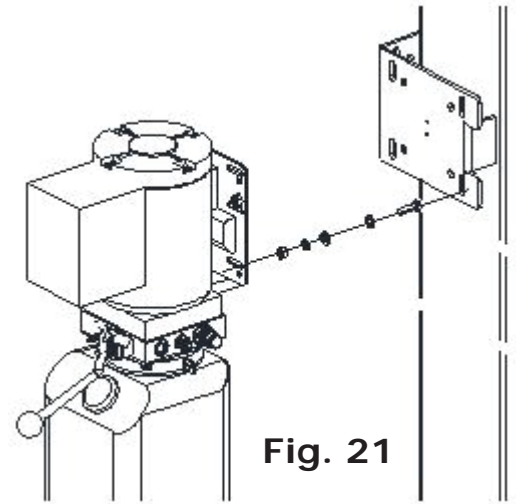


Fig. 21

7.10 Connection Of Hydraulic Hoses (Ref. Fig.22)



When routing the hydraulic hose, make sure that the hose is clear of any moving part, make sure to keep the hose and fittings clean from dust.

- Clean the hoses and fittings;
- Inspect all threads for damage and make sure that all hose fittings are in good condition;
- Route the hoses as shown;
- Tighten the hose fittings thoroughly. Make sure not to over-tighten the hose fittings so as to result in oil leakage.

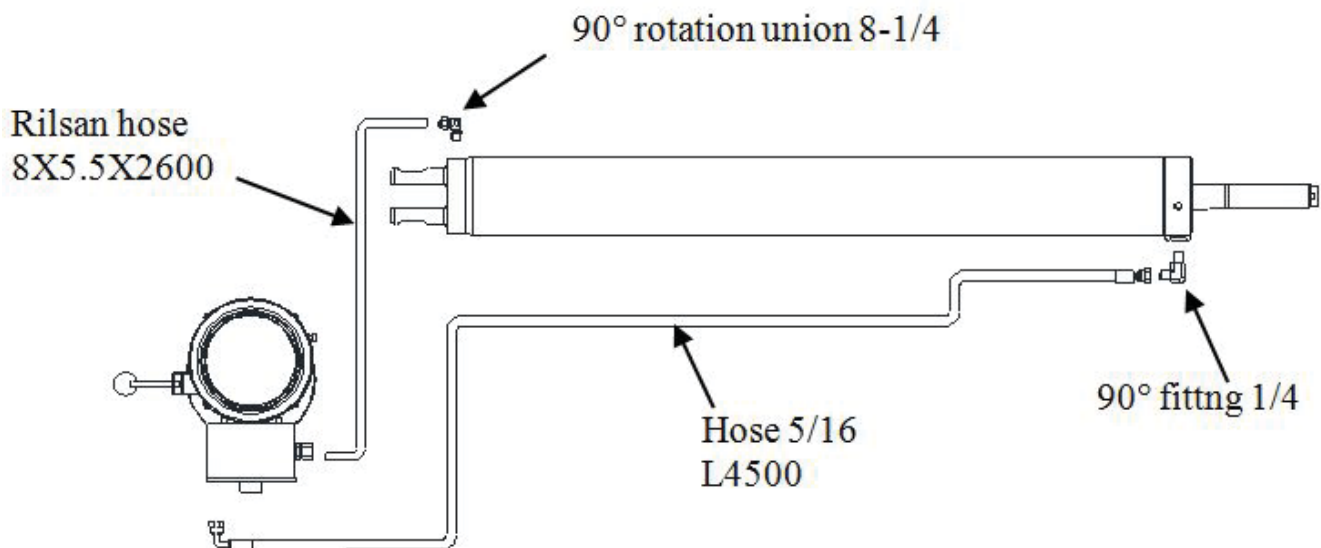


Figure 22 – Hydraulic Line Connection

7.11 Pneumatic System Connection



When routing the air tubes, make sure that the tubes are clear of any moving part. It may necessary to tie the hoses clear by using nylon tie straps or wire.

Filter/regulator must be equipped on the air circuit and the air pressure is to be set at 6-8bar.

The pneumatic supply at site (to which the pneumatic system of the lift is connected) must be equipped with a servicing unit composed of water separator, lubricator and pressure reducer. These devices can be supplied by the manufacturer on request.

For the connection of the pneumatic lines proceed as follow:

- Install the control valve on the motor bracket using screws M4X30 (ref. fig. 23);
- Connect the pneumatic lines referring to the diagram (fig.24);
- Connect the air valve to the pneumatic supply at site;
- Check for the air leaks by depressing the air valve.

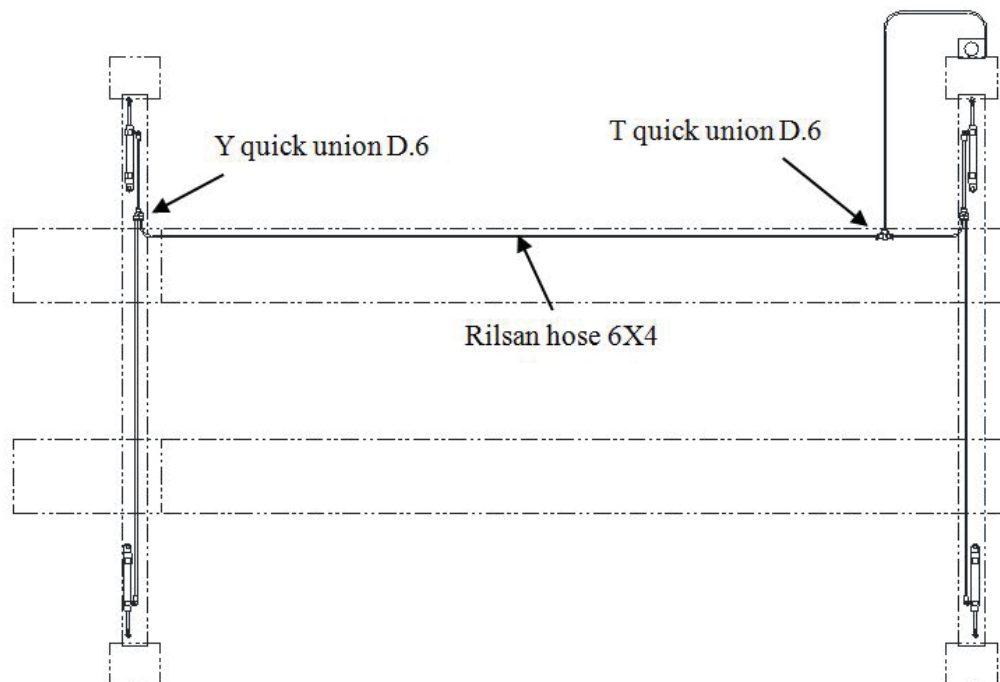
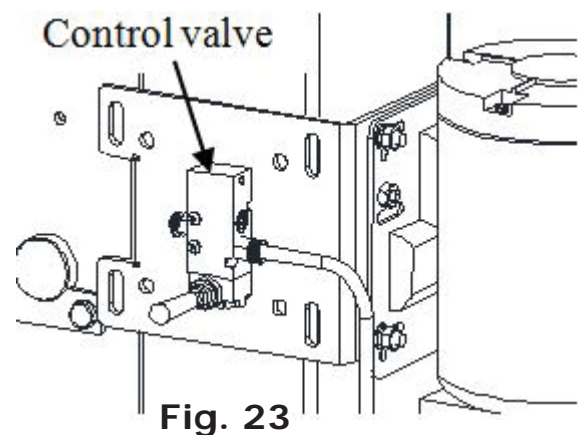


Figure 24 – Pneumatic Connection Diagram

7.12 Make The Electrical Hookup To The Power Unit



The hookup work must be carried out by a qualified electrician.
Make sure that the power supply is right.
Make sure the connection of the phases is right.
The power unit must be kept dry.



It is strictly forbidden to use 60Hz motor on 50Hz power supply.
Never operate the motor on the power less than 208V. Motor damage may occur.

- Make the electric hookup to the hydraulic power unit referring to the wiring diagram (fig. 6);
- Make sure to install a proper circuit breaker on the circuit (DZ47-63/ D32A/2P is suggested for single phase 208-240V);
- Make sure the lift is grounded well.

7.13 Oil Filling And Bleeding



DO NOT run power unit with no oil. Damage to pump can occur.
If motor gets hot or sounds peculiar, stop immediately and recheck the electric connection.

- Use the hydraulic fluid recommended in the chapter 5.5;
- Remove the vented cap on the oil tank and pour oil in the tank about 17 liters;
- Cycle the lift up and down several times to bleed the hydraulic system until the lift is lowered smoothly. To lower the lift, latches must be released by depressing the air valve;
- Fill the more fluid if necessary till the tank is full.

7.14 Final Installation

7.14.1 Runway Leveling Adjustment



**Runways must be leveled side to side, front to rear.
The maximum tolerance cannot be over 1.5mm.**

- Raise the lift off all latches until the cables are supporting the lift and check that all cables are adjusted in the same tension;
- Verify if both the runways are leveled horizontally by means of a water gauge or a leveling instrument. If not make the adjustment referring to the figure 17.

7.14.2 Locking Position Adjustment

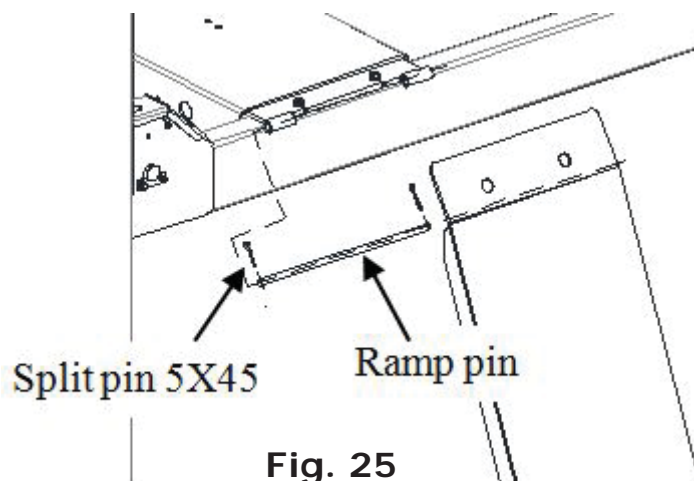


All latches must be engaging uniformly before any attempt is made to work on or near the vehicle.

- Raise the lift from bottom to top and verify if 18 locking latch clicks can be heard;
- Lower the lift to the topmost latch position to verify if four latches are engaging uniformly. If not, make the adjustment referring to the figure 17.

7.14.3 Ramp Installation

- Install the ramps on the rear runways as shown in the figure 25.



7.15 Check Before Start-Up



During START UP procedure, observe all operating components and check for proper installation and adjustment. DO NOT attempt to raise vehicle until a thorough operation check has been completed.

7.15.1 General Checks

- Make sure to check that the columns are plumb;
- Make sure to check the lift anchored to the ground and all anchor bolts tightened.
- Make sure to check the electrical system feeding voltage is equal to that specified in the nameplate on the motor;
- Make sure to check the electric system connection in conformity of the electric plan shown as the electric diagram (fig. 6) and for proper grounding.
- Make sure to check all plastic sliders are on the position and greased properly.
- Make sure to check all pins are installed correctly and greased properly.
- Make sure to check all bolts, nuts and screws are tightened securely.
- Particularly, below checks must be followed:

7.15.2 Steel Cable For Proper Installation



There will be some initial stretching of the cables in the beginning. It will be necessary to re-adjust the cables a week after the first week, then three months thereafter. Failure to do this will cause uneven lifting.

- Check to make sure that all cables are routed correctly and are on the correct pulleys.
- Check that all cables are adjusted in the same tension and the lift can be raised evenly. If not, make the adjustment.

7.15.3 Safety Lock For Proper Installation

- Check to make sure that all air hoses are connected properly and the air pressure is set to 6-8bar.
- Check to make sure that the control valve for proper operation.
- Check if four latches are engaging uniformly. If not, make the adjustment.

7.15.4 Hydraulic System For Proper Operation

- Proper oil level in the tank, refill if needed.
- Raise the lift to the full height and keep the motor running for 5 seconds and check all hoses connections no leakage. Tighten the connections or reseal if necessary.
- Check the lift for reaching its maximum height.



If the vented cap is lost or broken, order the replacement. The oil tank must be vented well.

7.16 Check With Load



WARNING: please follow carefully the instructions in the coming paragraph for avoiding damages on the lift.

Carried out two or three complete cycles of lowering with the vehicle loaded and lifting and:

- Repeat the checks provided for by 7.15.
- Check no strange noise during lifting and lowering.
- If the runways weren't leveled, readjust.

Operation And Use



Never operate the lift with any person or equipment below.

Never exceed the rated lifting capacity.

Always ensure that all latches are engaged well before any attempt is made to work on or near the vehicle.

Never leave the lift in an elevated position unless the safeties are engaged.

If an anchor bolt becomes loose or any component of the lift is found to be defective, **DO NOT USE THE LIFT** until repairs are made.

8.1 Controls Of Lift

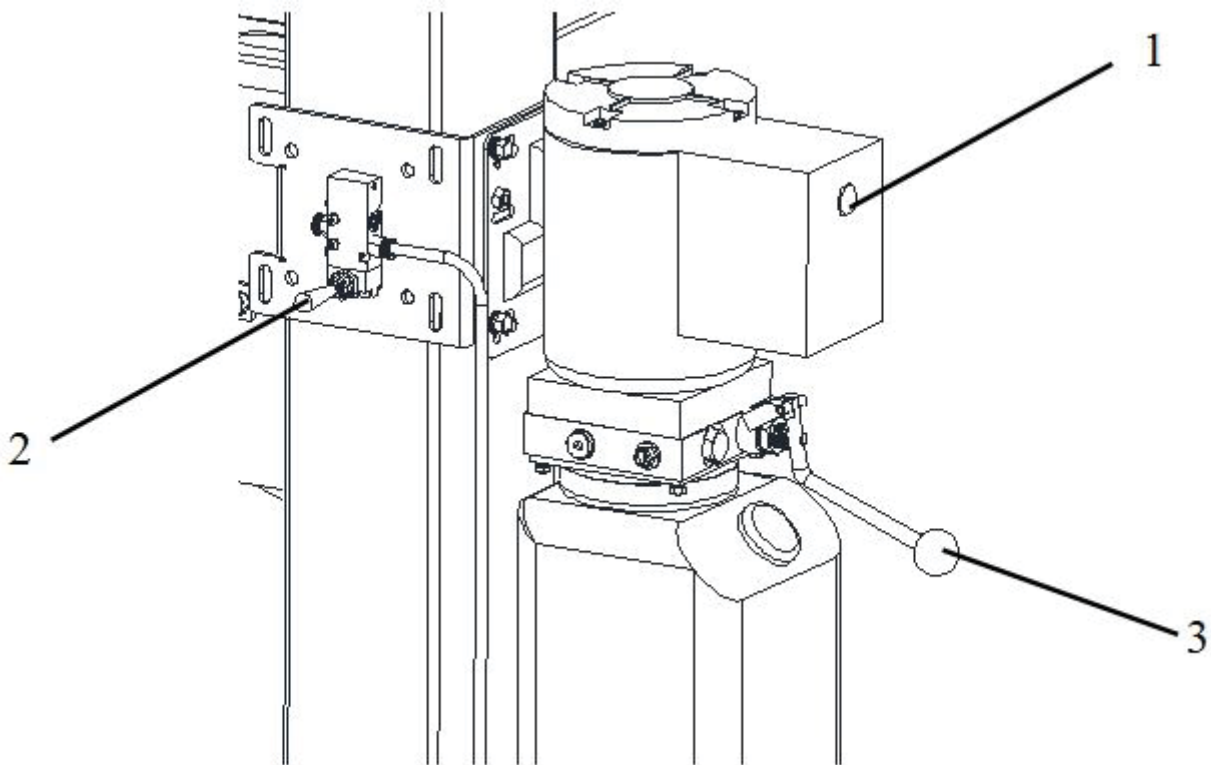


Figure 26 – Controls Of Lift

Controls for operating the lift are:

LIFTING BUTTON (1)

- When pressed, the power unit is running and the lift can be raised to a desired height until the button is released.

AIR CONTROL VALVE (2)

- When pressed, the lock latches will be released so that the lift can be lowered.

LOWERING HANDLE (3)

- When the air control valve is not pressed, press the lowering handle to lower the lift to engage the nearest latch rack.
- When the latches are released by pressing the air control valve, press the lowering handle in the meantime to lower the lift to the desired height under its weight and the load lifted until the handle is released.

Lift operation can be summarized into three steps:

8.1.1 Lifting

- Pay attention to overhead clearance;
- The lift must be fully lowered and no one in the service area while the vehicle is driven onto the lift;
- Position the wheels in center of each runway;
- Stop the vehicle when it contacts the front stops or at the desired position;
- Set the parking brake or place the wheel chocks on each side of the rear wheels;
- Make sure the all personnel must be exit before the lift is raised;
- Raise the lift by pushing the lifting button until reaching the desire height.

8.1.2 Standing

- Press the lowering handle to engage the nearest latch position;
- Always ensure that the latch in each column is engaged before any attempt is made to work on or near the vehicle.

8.1.3 LOWERING

- Be sure the safety area is free of people and objects;
- Raise the lift high enough by pushing the lifting button to clear off the locks;
- Lower the lift by pressing both the air control valve and the lowering handle;
- Observe the lift and the vehicle to be sure the lift is level while being lowered;
- Lower the lift fully;
- Remove the wheel chocks and check to be sure that the area is clear before removing the vehicle off the lift.

Maintenance



Only trained personnel who knows how the lift works, must be allowed to service the lift.

To service properly the lift, the following has to be carried out:

- use only genuine spare parts as well as equipment suitable for the work required;
- follow the scheduled maintenance and check periods shown in the manual;
- discover the reason for possible failures such as too much noise, overheating, oil blow-by, etc.
- refer to documents supplied by the manufacture or dealer to carry out maintenance.



Before carrying out any maintenance or repair on the lift, disconnect the power supply, padlock the general switch and keep the key in a safe place to prevent unauthorized persons from switching on or operating the lift.

9.1 Ordinary Maintenance

The lift has to be properly cleaned at least once a month using self-cleaning clothes.



The use of water or inflammable liquid is strictly forbidden.

Be sure the rod of the hydraulic cylinders is always clean and not damaged since this may result in leakage from seals and, as a consequence, in possible malfunctions.

9.2 Periodic Maintenance

Daily pre-operation

- Check hydraulic connections and hoses for leaks
- Check air connections and hoses for leaks
- Check safety lock audibly and visually while in operation
- Check bolts, nuts and screws are tight

Every 1 month

- Check all cable connections, pins and bolts to insure proper mounting
- Check all anchor bolts and retighten if necessary
- Check columns for square-ness and plumb
- Check steel cable tension, adjust if necessary
- Check all lifting pads, replace if necessary
- Lubricate sliders with grease
- Lubricate all pivot pins
- Check the hydraulic oil, fill or replace if necessary
- Check hydraulic systems for proper operation

Every 12 months

- Verify that all components and mechanisms are not damaged
- Verify the equalizer cables are not worn, change if necessary
- Check the electrical system to verify that the motors operate properly (this work must be carried out by skilled electricians)
- empty the oil tank and change the hydraulic oil

Troubleshooting

A list of possible troubles and solutions is given below

Trouble:	Possible Cause:	Solution:
The lift does not work	There is no power	Check Power on to restore if necessary
	The electrical wires are disconnected	Reconnect
	The circuit breaker are blown	Check for correct voltage Replace
The lift does not raise	The lift is overloaded	Check the vehicle weight
	The motor direction of rotation is not correct.	Interchange the two phases on the main switch
	The oil in the power unit is not sufficient.	Add some hydraulic oil
	The UP button is faulty.	Check UP button and connection for proper operation. Replace if needed
	The lowering valve does not close.	Check and clean, if dirty or replace if faulty
	The suction tube or pump filter is dirty.	Check and clean if needed.
	Presence of air in the hydraulic system	Bleed the hydraulic system
The lifting capacity is not sufficient	The pump is faulty	Check the pump and replace if needed.
	Oil leakages in hydraulic circuit	Check the circuit for any leakage
The lift does not lower when the lowering lever and the safety release lever are pressed	The lowering valve does not work properly	Check the valve and replace if needed.
	The equalizer cables are not in the same tension.	Readjust the equalizer cables.
The lift does not lower smoothly	Presence of air in the hydraulic system	Bleed the hydraulic system
	Lubrication of sliders is not enough.	Grease
	Sliders are damaged	Replace

Additional Information

Final Check of Assembled Lift

	Final dimension check after anchoring.
	Base and columns properly shimmed and stable.
	Anchor bolts tightened.
	Runways properly attached, secured, and level.
	Check for hydraulic leaks.
	Ensure cables are properly routed and free from obstructions.
	Check jam nuts on cables are tightened.
	Check oil level and look for leaks.
	Check adjustment of safety release cable to ensure both sides are working properly.
	Re-check level of towers.
	Check torque of anchor bolts.
	Check all fasteners, tighten if necessary.
	Electric power supply confirmed.
	Check for overhead obstructions.
	Check shut off at top of stroke to ensure lift shuts off.
	Check proper operation of arm restraints.
	Operate lift to full stroke then lower to ground while checking for proper functionality.
	Check proper operation of arm restraints.
	Operation and Safety Manual at site.
	Ensure all documents listed below are given to the owner.
	ANSI / ALI Lift It Right Manual
	ANSI / ALI Safety Tip Card
	ANSI / ALI ALIS Safety Requirements for Installation
	ALI/LP Lifting Points Quick Reference Guide
	Train end user on operation of lift.

Operation Test with Vehicle

Prior to starting this section, please refer to the important safety instructions at the beginning of this manual. Reference Automotive Lift-Safety Requirements for Operation, Inspection, and Maintenance (ANSI/ALI ALOIM)

After finishing the above assembly instructions and adjustments, perform an operation test of the lift using a typical vehicle.

1. Lower lift to ground.
2. Drive vehicle on to lift and position the arms as per the "Lift it Right" manual and "Lifting Points Quick Reference" guide.
3. Raise lift to and lower onto 3-4 lock positions during full rise to ensure all locks are working correctly.
4. Re-adjust cables if necessary while vehicle is on.
5. Check lowering speed and smooth decent rate.
6. Lower lift to ground and drive vehicle off lift.

Run the lift in the low position several times, and then run the lift to the top completely.

If any problems occur during the final checkout or operation test of the lift with a vehicle, please contact your lift distributor, sales representative or manufacturer immediately.

Operating Instructions

Please reference enclosed ANSI/ALI ALOIM – Current Edition and ALI/LP Guide before proceeding.

1. Ensure lift is fully lowered and service bay is clear.
2. Move swing arms to full drive thru position.
3. Center the vehicle between the lift posts and position the arms in accordance with the supplied “Lifting it Right” and “Lifting Point” guides. Be sure you are using the proper adapters.
4. Push the raise switch on the power unit and ensure that the arm restraint pins for engagement.
5. Raise the vehicle until the suspension and tires clear the floor.
6. Stop and check the adapters for secure contact in accordance with the vehicle manufacturer recommended lifting points and “Lifting Point” guide.
7. Moderately shake vehicle by pushing on the front or rear bumper to ensure that vehicle is safely positioned on the lift.
8. After confirmation that vehicle is securely positioned, continue to raise the lift to the desired lift height.
9. Lower the lift onto the mechanical locking latches.
10. Avoid excessive rocking of the vehicle while it on the lift.
11. Always use safety support stands when removing or installing heavy vehicle components.
12. To lower the lift, first be sure that all objects and all personnel are free from lift area. Observe pinch point and other warning decals.
13. Raise the lift off the locking latches.
14. Pull down and hold the safety release while pressing the hydraulic lowering valve handle until the lift has fully lowered to the ground and the arm restraints have disengaged.
15. Remove adapters and position arms in full drive thru position before removing vehicle from the service bay.

Inspection and Maintenance

Please refer to the ANSI/ALI ALOIM – Current Edition “AMERICAN NATIONAL STANDARD for Automotive Lifts – Safety Requirements for Operation, Inspection and Maintenance”.

Periodic inspections and maintenance shall be performed only by trained lift service personnel. Never operate a lift that is damaged or in disrepair. Proper inspection and maintenance is necessary for the safe operation of the lift. Contact a local service or factory representative immediately if any issues arise or if you are not completely familiar with automotive lift maintenance procedures.

Daily Procedures

- Check to ensure bolts are tightened
- Check lift components and keep clean and free of debris
- Check for oil leakage
- Check all electrical components and wiring
- Check cables and sheaves
- Check all hydraulic lines and fittings
- ***Repair or replace all damaged, defective, worn, frayed or broken components immediately. Only use parts approved by the original equipment manufacturer or parts meeting original manufacturer specifications.***

Monthly Procedures

- Check equalizer cable tension and adjust accordingly
- Check lubrication points and lubricate accordingly
- Check anchor bolts for tightness and appropriate torque
- Check fluid levels
- ***Repair or replace all damaged, defective, worn, frayed or broken components immediately. Only use parts approved by the original equipment manufacturer or parts meeting original manufacturer specifications.***

Lockout and Tagout Procedures

Please refer to ANSI Z244.1

Purpose: This procedure establishes the minimum requirements for lockout of energy sources that could cause injury to personnel by the operation of the lift. All employees and/or operators shall comply with the procedure.

Responsibility: The responsibility for seeing that this procedure is followed is binding upon all owners, employees and lift operators. All owners, employees and operators shall be instructed in the safety significance of the lockout procedure by the owner, supervisor or appropriate personnel. Each new or transferred affected employee or operator shall be instructed by appropriate personnel in the purpose and use of the lockout procedure.

Preparation for Lockout: Employees authorized to perform lockout shall be certain as to which switch, valve, or other energy isolating devices applies to the lift. More than one energy source (electrical, mechanical, or others) may be involved. Any questionable identification of sources shall be cleared by the employees, their supervisors, or appropriate personnel. Assure that job authorization has been obtained before lockout commences.

Sequence of Lockout Procedure

- Notify all affected employees and operators that a lockout is required and the reason therefore.
- If the lift is operating, shut it down by the normal stopping procedure (such as assuring the disconnect switch is off)
- Operate the switch, valve, or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, and other) are disconnected or isolated from the lift.
- If it is a lockable device, lockout with an assigned individual lock. If it is not a lockable device, replace with a dummy device and tag accordingly. If more than one individual is required to lock out the lift, each shall place their own personal lock on the energy isolating device(s).
- Adequately label or tag the lift stating not to operate or tamper with the tag or label
- Stored energy (such as that in capacitors and hydraulic systems) must also be addressed

- After ensuring that no personnel are exposed and as a check to ensure the lockout is working, operate the push button or other normal operating controls to make certain the lift will not operate. Return the lift operating controls to neutral position after the test.
- The equipment is now locked out.

Restoring Equipment to Service

- When the job is complete and equipment is ready for testing or normal service, check the lift area to see that no one is exposed.
- When lift is clear, remove all locks. The energy isolating devices may be operated to restore energy to lift.

Rules for Using Lockout Procedure: The lift shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Never attempt to operate any switch, valve, or other energy isolating device bearing a lock.

Wire Ropes

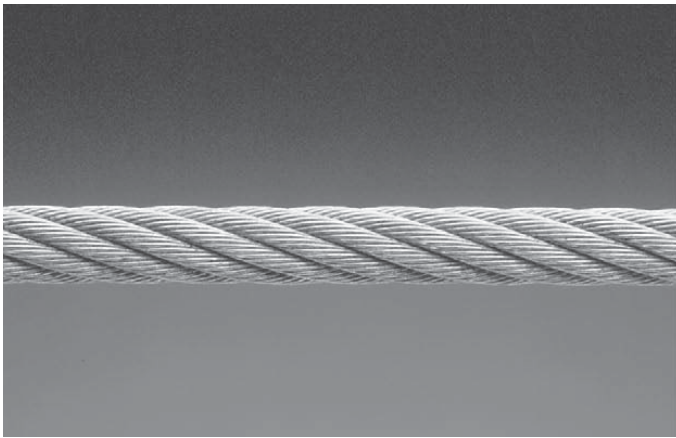


- Wire ropes are critical to the safe and reliable performance of your lift.
- Cables are expendable items and should be replaced as a set.

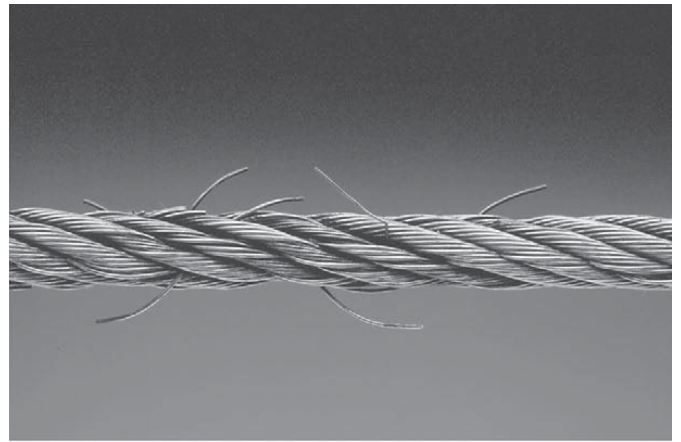
Cable Condition Guide

Maximum Allowable Cable Necking

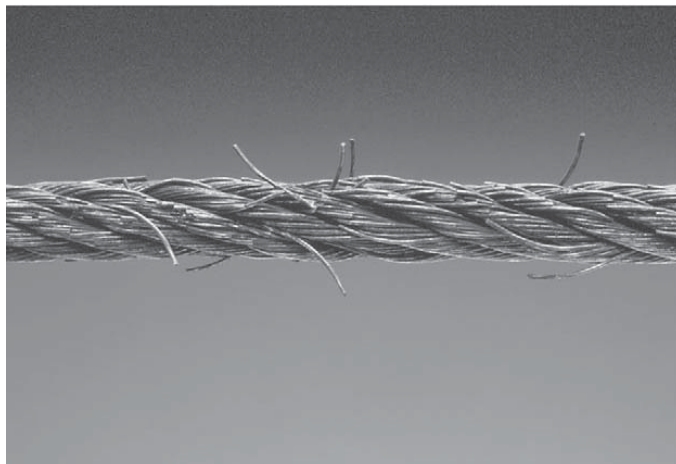
Nom. Cable Diameters Max. Reduction in Diameter	
Up to 5/16"	1/64"
3/8" to 1/2"	1/32"
9/16" to 3/4"	3/64"
7/8" to 1-1/8"	1/16"
1-1/4" to 1-1/2"	3/32"



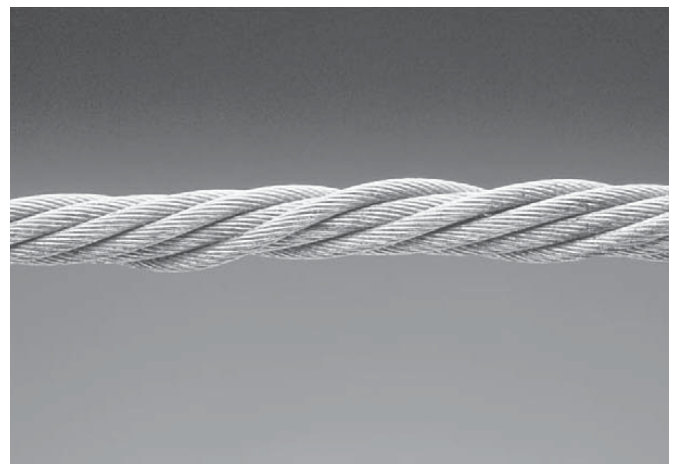
Typical Good Cable



Cable with Broken Wires



Cable with Severe Corrosion



Cable with Necking

Wire Rope Replacement Criteria



If any cable is found to be in need of replacement, the entire cable set, pulleys and safety rollers, must be replaced immediately. See *Cable Condition Guide*.

The Wire Rope **MUST** be Replaced if One or More of the Following Criteria Are Met:

- More than six (6) randomly distributed broken wires in one rope lay or 6xd length.
- More than three (3) broken wires in one strand in one rope lay or 6xd length.

- Three (3) or more broken wires at rope terminations.
 - One outer wire broken at the point of contact with the core of the rope which has worked its way out of the rope structure and protrudes or loops out from the rope structure.
 - Heavy rusting, corrosion, or pitting. A light surface corrosion on outer wires is normal.
 - Wear or scraping of one-third (1/3) of the original diameter of outside individual wires.
 - Excessive stretch. It is normal for new cable to require adjustment during "break-in," after which small periodic adjustments may be required. However, if a cable that has been in service for 6 months should suddenly require frequent adjustments or has used all the cable adjustments available, all cables must be replaced immediately.
 - Deformed strands, kinking, crushing, bird-caging, or any other damage or distortion of wire rope structure.
 - Variations in diameter (necking) or any change from normal appearance.
 - Reductions from nominal diameter of more than 1/32" (for cables 3/8" to 1/2" diameter inclusive.)
 - End attachments cracked, deformed or worn.
- * *Lay is the distance measured, parallel to the rope axis, in which a single strand makes one complete turn around the rope axis, or the wires make a complete turn around the axis of the strand.*

Please reference ANSI /ALI ALOIM standard for more information on wire rope cable inspection.

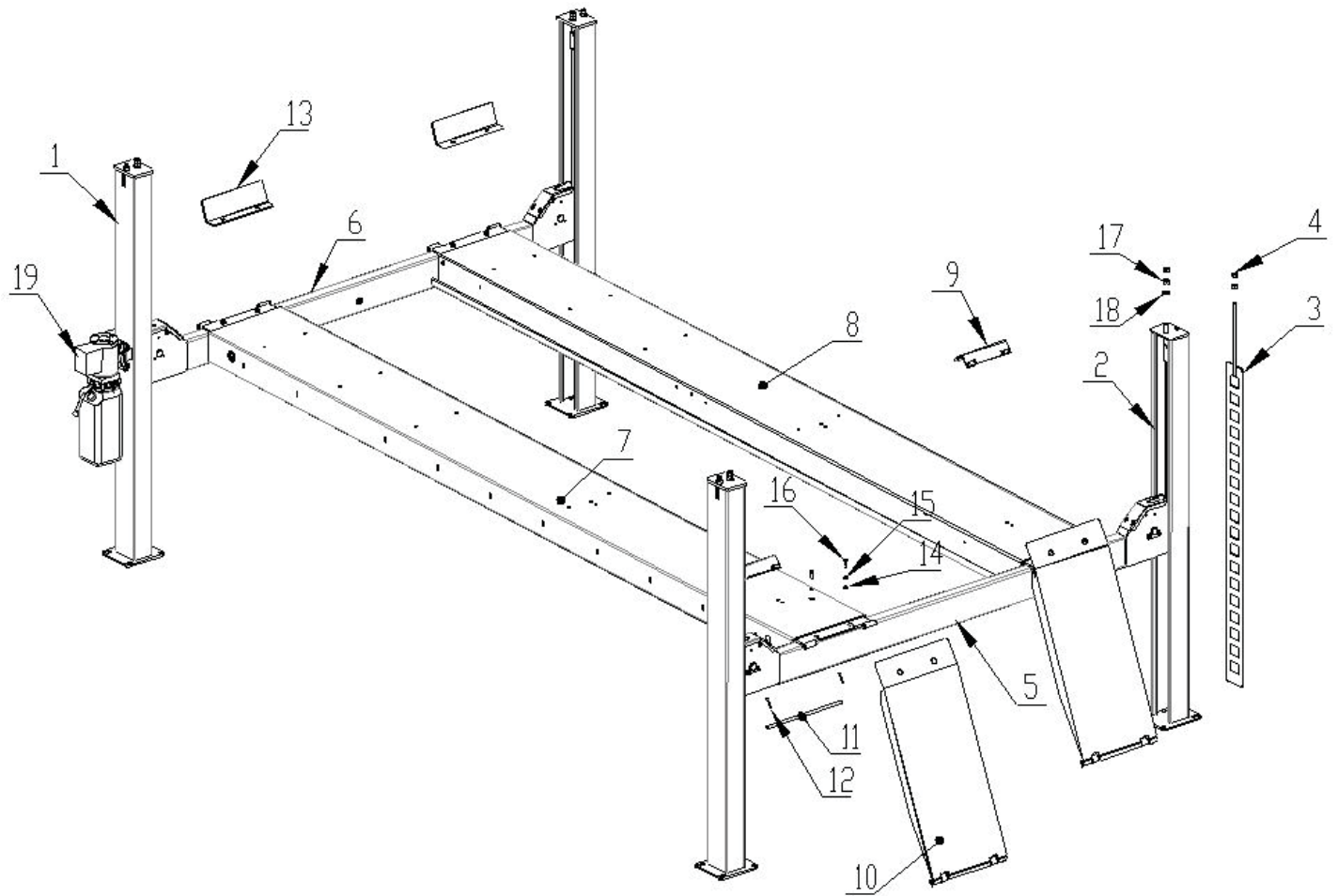
EMERGENCY OPERATION IF LIFT BECOMES INOPERABLE IN RAISED POSITION

If the lift becomes inoperable in the raised position, wait until electrical power is restored to the lift before attempting to lower the vehicle. If it is crucial for reasons of safety that the vehicle be lowered, please **DO NOT** attempt to do so on your own without first contacting your local authorized service representative or distributor, who can verbally walk you through the process or assist, in person, where necessary.



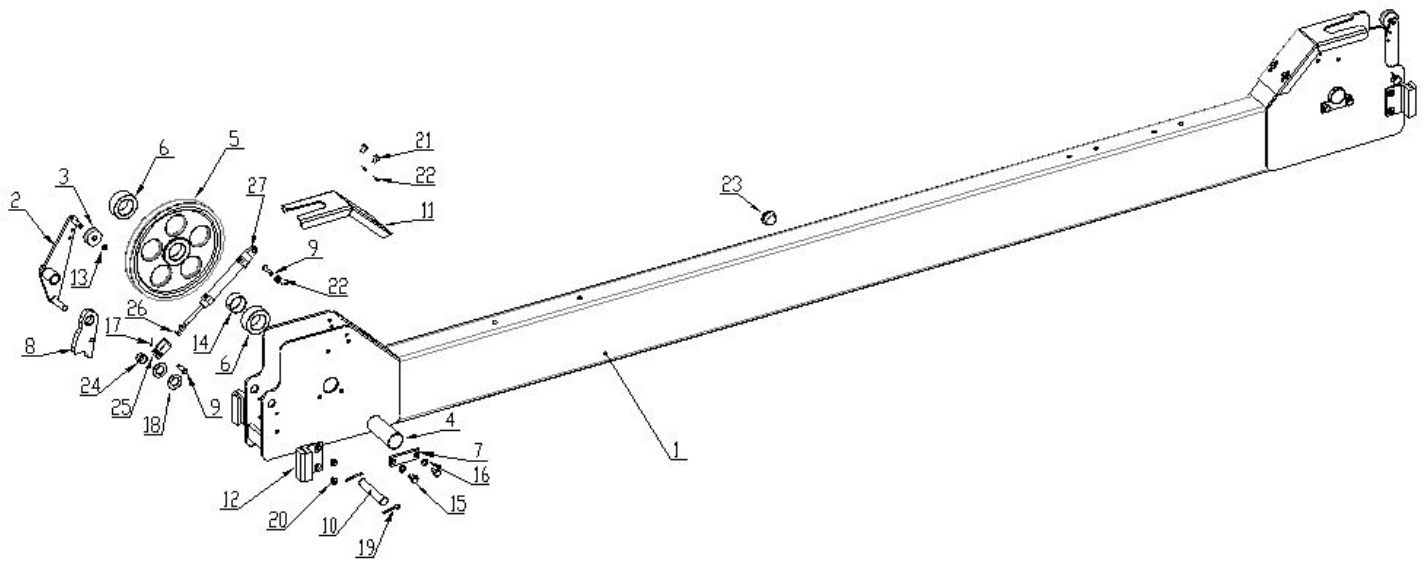
WARNING: DO NOT LOOSEN OR REMOVE HYDRAULIC CONNECTIONS OR FITTINGS UNDER PRESSURE. SERIOUS INJURY OR DEATH COULD OCCUR.

Part List



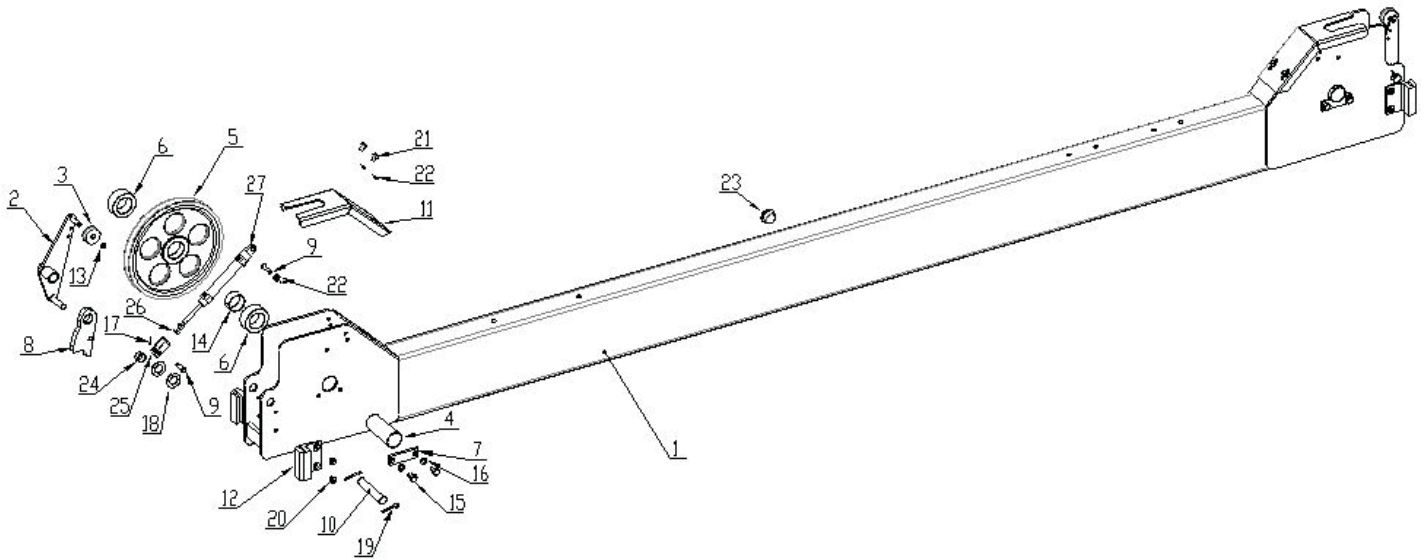
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72C102000	Column A	1	11	Z72B810001	Ramp pin	2
2	Z72B110101	Column weldment B	3	12	0213053	Split pin 5X45	4
3	Z72B111101	Latch rack	4	13	Z72C310002	Wheel stop plate	2
4	0203012	Nut M20	8	14	0205013	Washer D.12	8
5	Z72C210000	Transverse beam B	1	15	0208009	Locking washer 12	8
6	Z72C220000	Transverse beam A	1	16	0201220	Screw M12X35	8
7	Z72C310000	Power-side runway	1	17	0203012	Nut M20	8
8	Z72C321000	Off-side runway	1	18	0205022	Washer D.20	4
9	Z72A300100	Wheel chock	2	19	0302010	Hydraulic power unit	1
10	Z72C810000	Drive-on ramp	2				

Figure 27 – General Part List



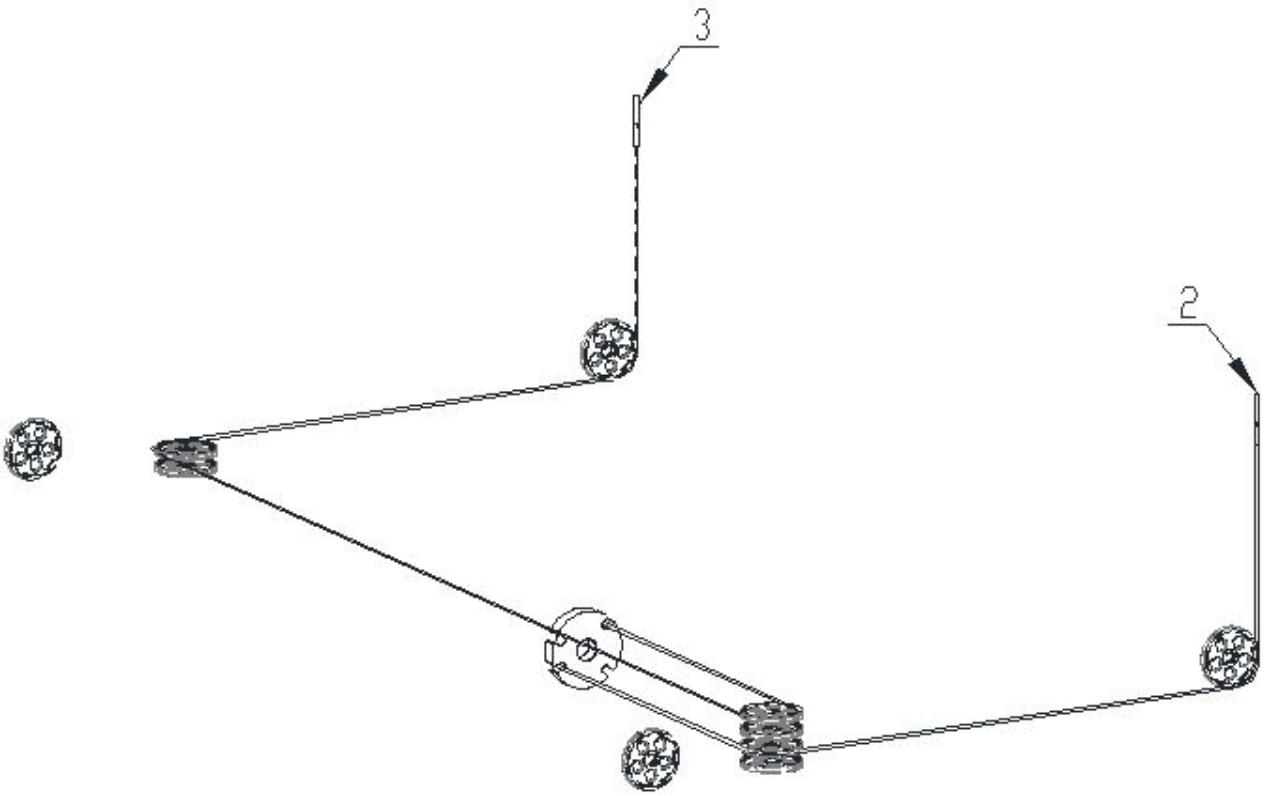
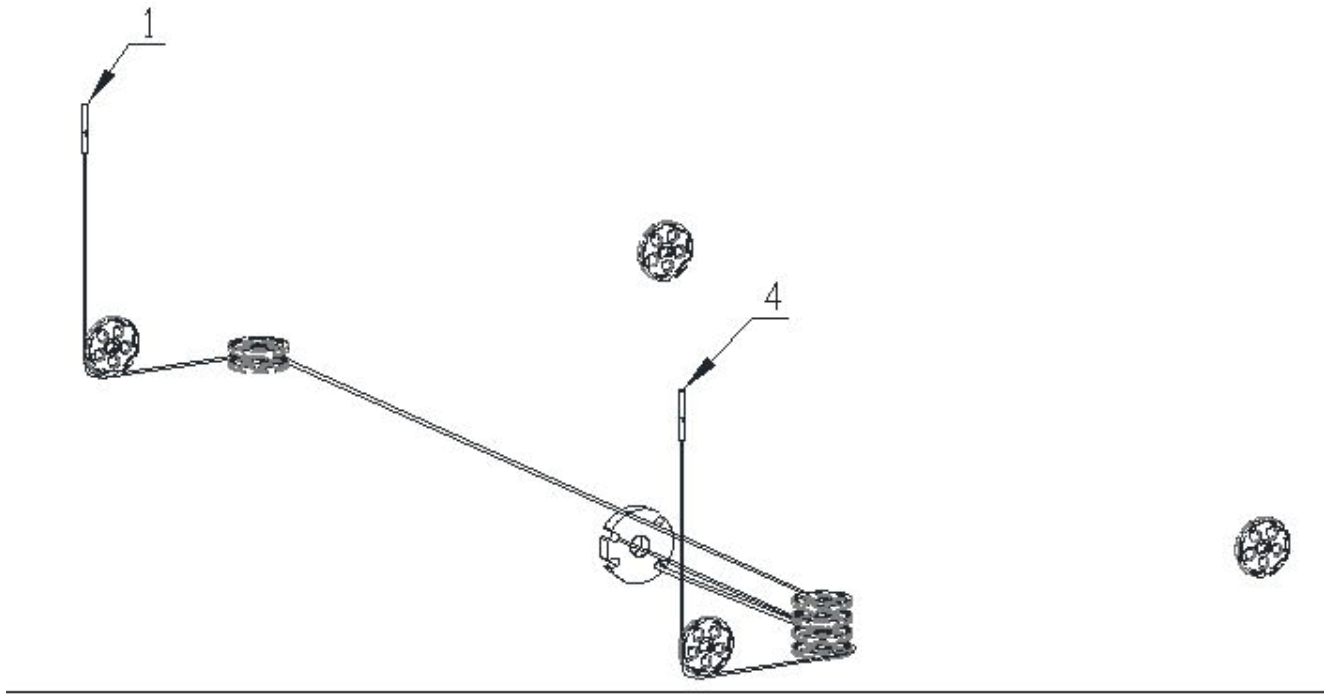
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72B211000	Beam A weldment	1	15	0201059	Screw M10X16	4
2	Z72B212000	Cable slack lever	2	16	0208007	Locking washer D.10	4
3	Z72B210005	Nylon roller	2	17	0213055	Split pin 1.6X12	4
4	Z72B210001	Pulley shaft	2	18	0205022	Washer D.20	4
5	Z72B210002	Cable pulley	2	19	0213035	Split pin 4X30	4
6	Z72B210003	Nylon spacer	4	20	0207041	Screw M8X12	8
7	Z72B210008	Fastening plate A	2	21	0201022	Screw M8X12	4
8	Z72B210004	Safety latch	2	22	0205008	Washer D.8	6
9	Z72B210007	Pin	4	23	Z72B210012	Rubber plug	1
10	Z72B210006	Latch shaft	2	24	0210058	Bush 2012/SF-1	2
11	Z72B210010	Pulley cover	2	25	Z72B210009	Cylinder joint	2
12	Z72B210011	Nylon slider	4	26	0203029	Nut M8	2
13	0212013	Seeger D. 10	2	27	CM2C20-50TZ	Latch release cylinder	2
14	0210052	Bush 4020/SF-1	2				

Figure 29 – Transverse Beam A Assembly



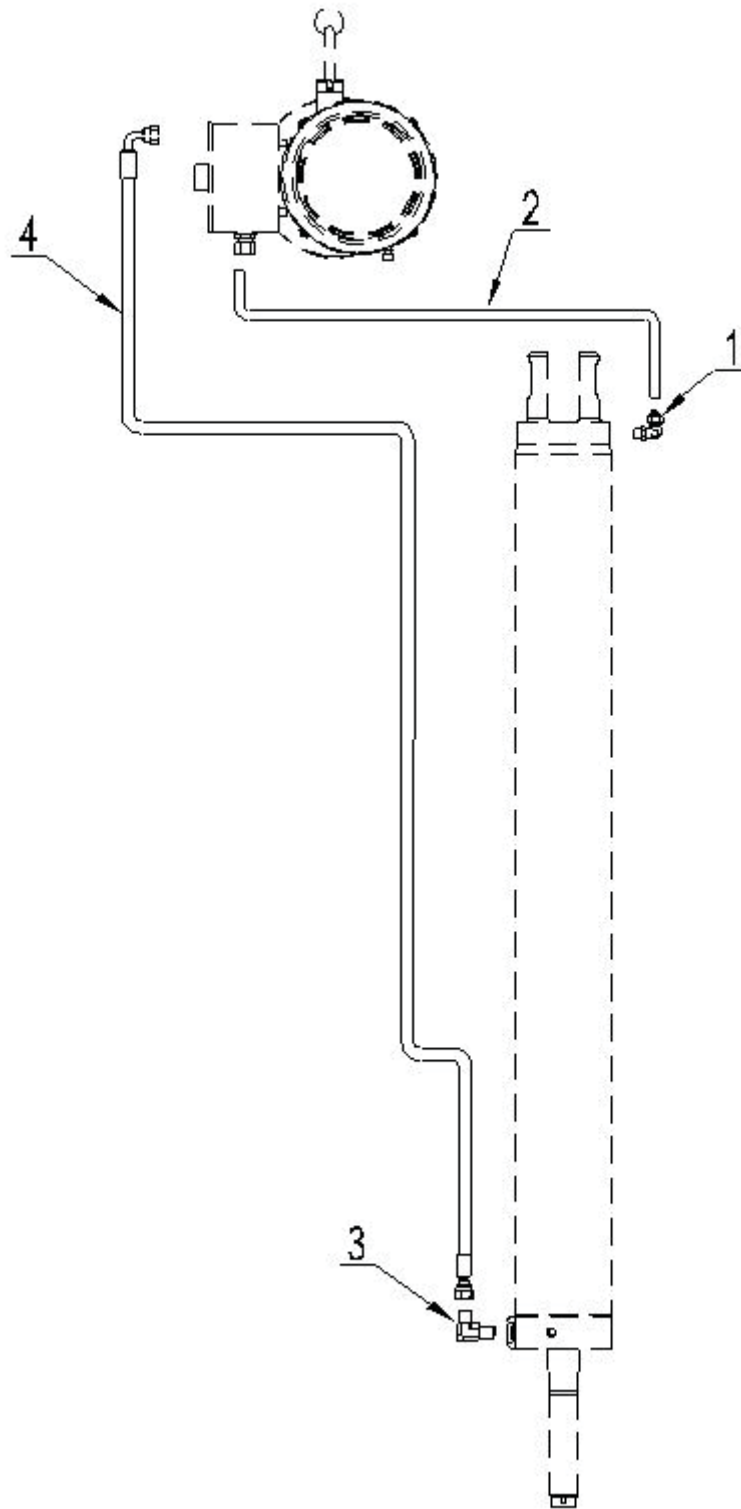
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72B221000	Beam B weldment	1	15	0201059	Screw M10X16	4
2	Z72B212000	Cable slack lever	2	16	0208007	Locking washer D.10	4
3	Z72B210005	Nylon roller	2	17	0213055	Split pin 1.6X12	4
4	Z72B210001	Pulley shaft	2	18	0205022	Washer D.20	4
5	Z72B210002	Cable pulley	2	19	0213035	Split pin 4X30	4
6	Z72B210003	Nylon spacer	4	20	0207041	Screw M8X12	8
7	Z72B210008	Fastening plate A	2	21	0201022	Screw M8X12	4
8	Z72B210004	Safety latch	2	22	0205008	Washer D.8	6
9	Z72B210007	Pin	4	23	Z72B210012	Rubber plug	1
10	Z72B210006	Latch shaft	2	24	0210058	Bush 2012/SF-1	2
11	Z72B210010	Pulley cover	2	25	Z72B210009	Cylinder joint	2
12	Z72B210011	Nylon slider	4	26	0203029	Nut M8	2
13	0212013	Seeger D. 10	2	27	CM2C20-50TZ	Latch release cylinder	2
14	0210052	Bush 4020/SF-1	2				

Figure 30 – Transverse Beam B Assembly



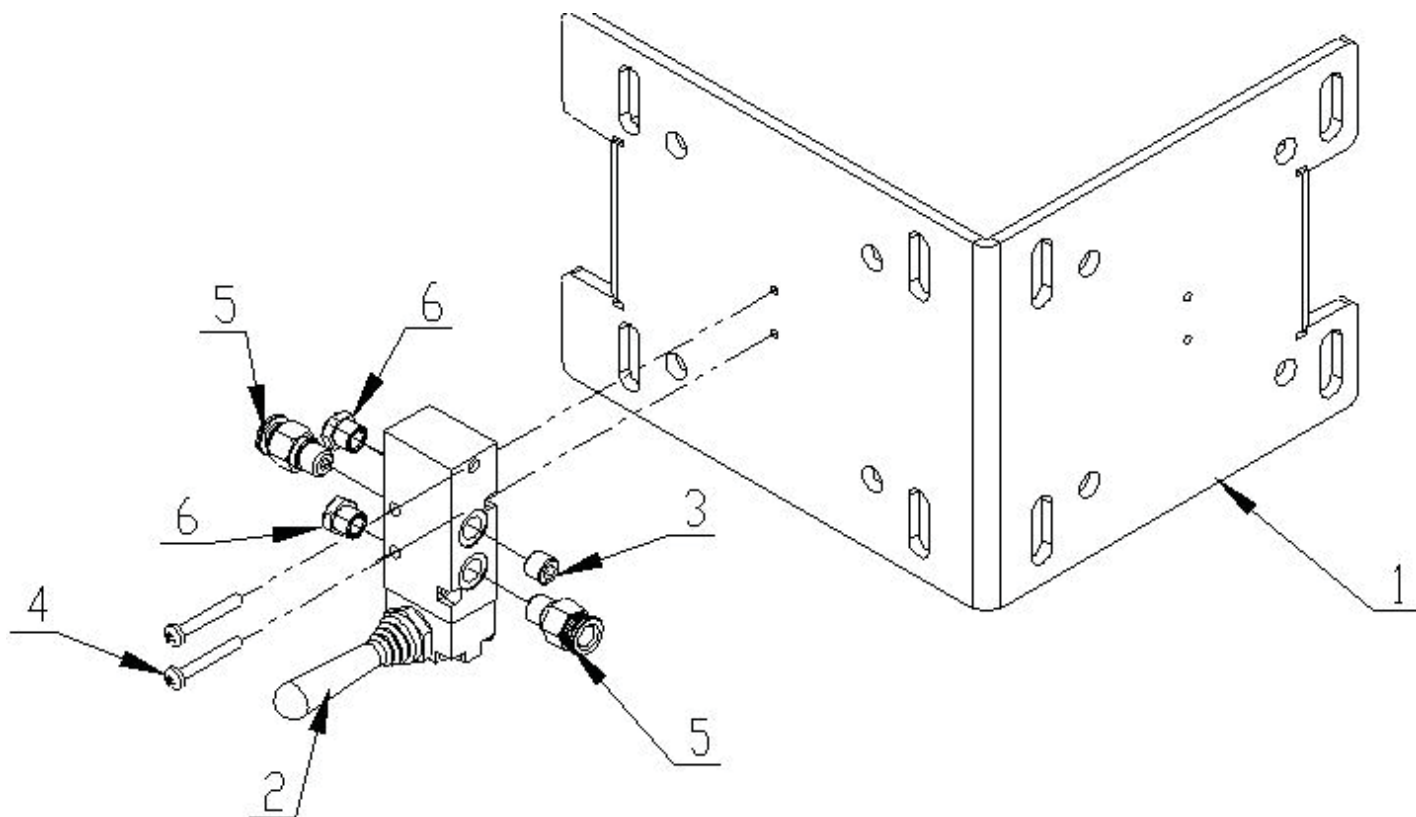
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72C2850100	Cable A L=8890	1	3	Z72C2850300	Cable C L=10345	1
2	Z72C2850200	Cable B L=5040	1	4	Z72C2850400	Cable D L=3580	1

Figure 31 – Steel Cable Assembly



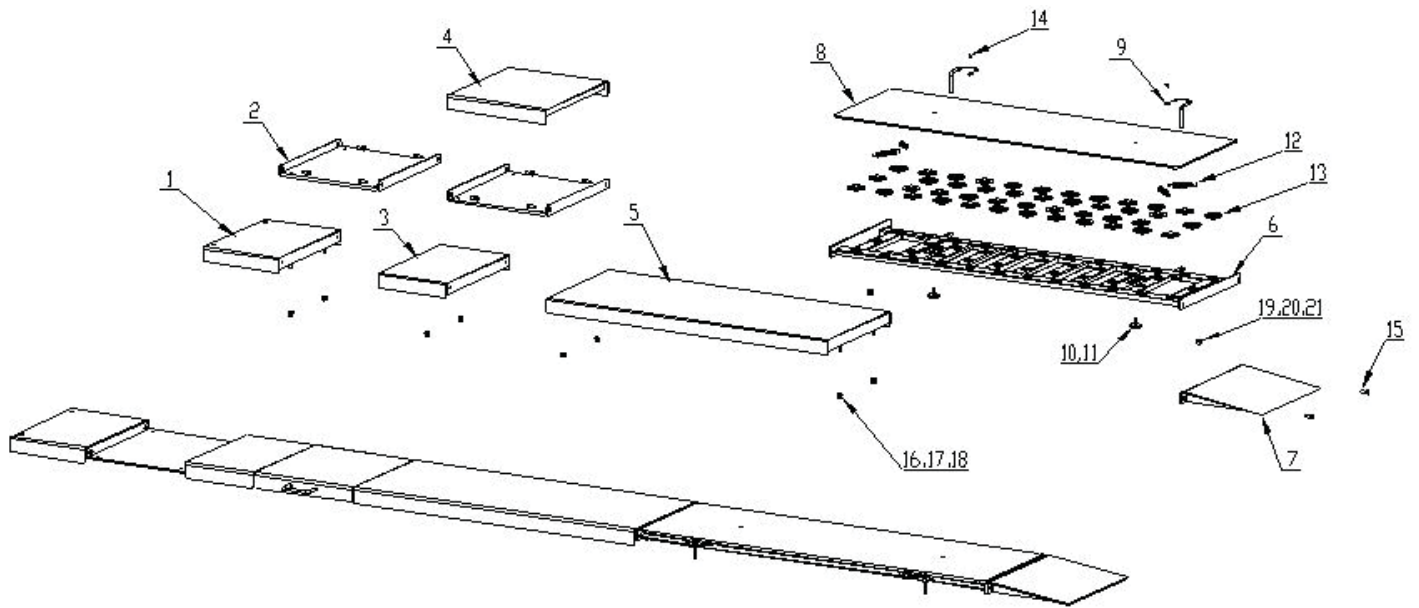
Item	Part number	Description	Qty
1	0306065	Rotation union 8-1/4	1
2	0306096	Rilsan hose 8X5.5 L=2600	1
3	0303002	90° fitting 1/4	1
4	ZW4500	Hydraulic hose 5/16 L=4500	1

Figure 32 – Hydraulic Line



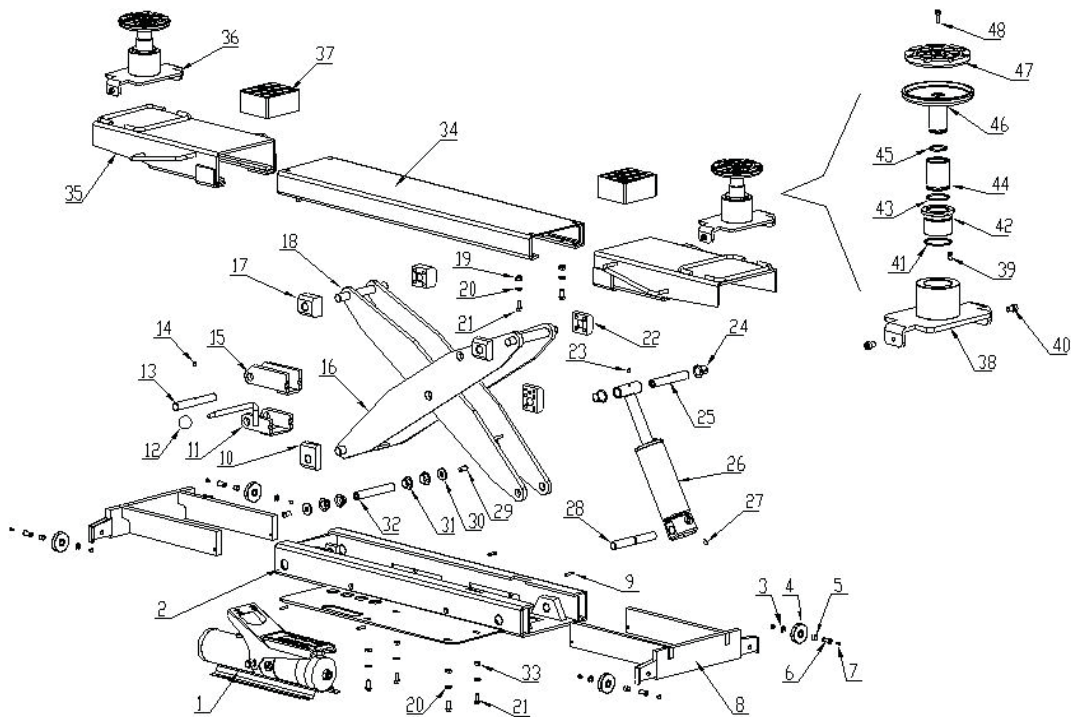
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72B110207	Motor bracket	1	4	0206018	Screw M4X30	2
2	0306258	Air control valve	1	5	0306045	Quick union 8-1/8	2
3	0305014	Plug 1/8	1	6	0306087	Silencer 1/8	2

Figure 33 – Latch Release Valve Assembly



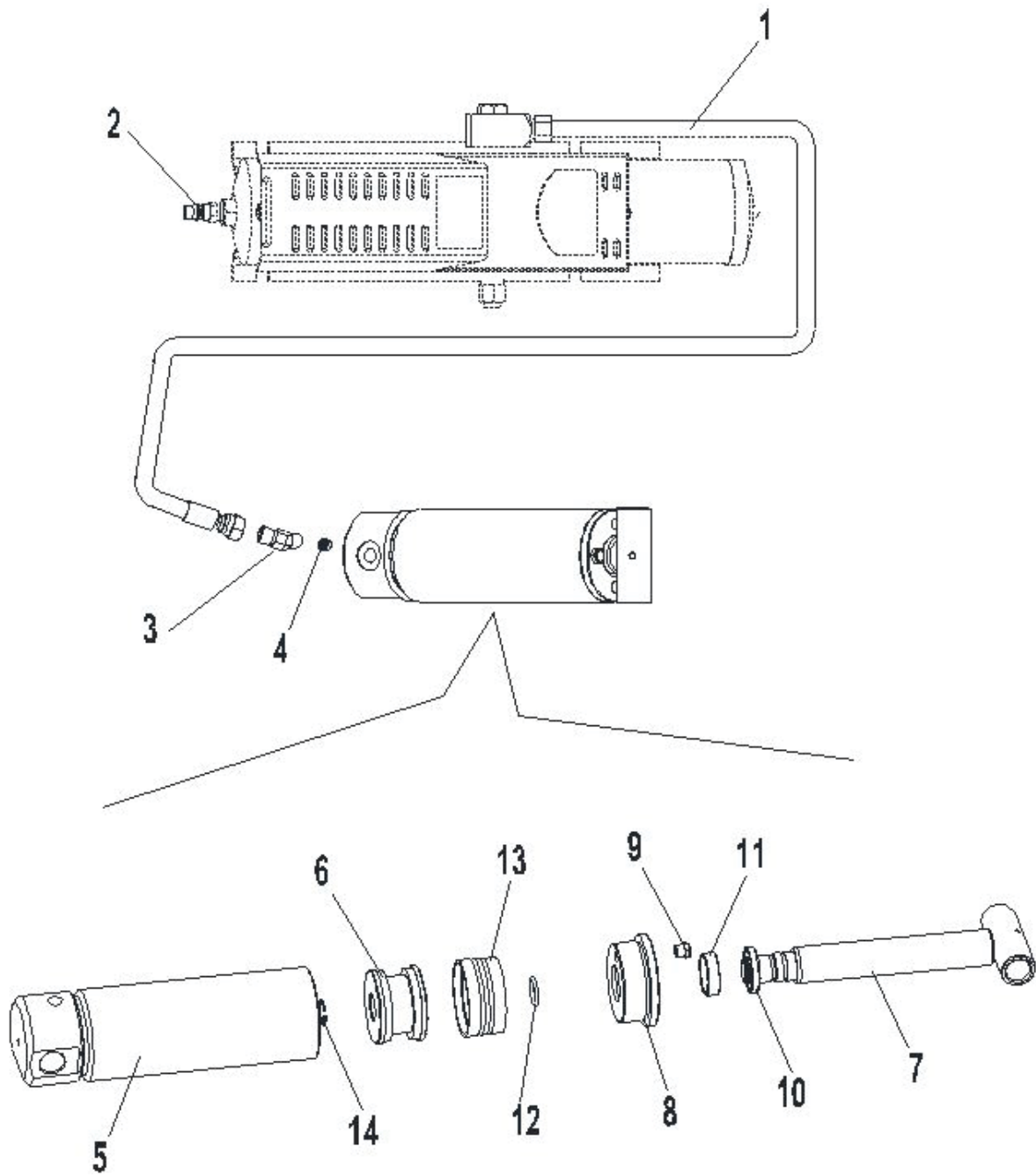
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z72A334000	Spacer 1	2	12	Z72A300004	Spring	8
2	Z72A336000	Recess spacer	4	13	0215087	Steel ball bearing	88
3	Z72A333000	Spacer 2	2	14	0206036	Screw M6X8	4
4	Z72A335000	Recess cover	2	15	0202061	Screw M10X25	20
5	Z72A332000	Platform cover	2	16	0205011	Washer D.10	16
6	Z72A338000	Ball bearing gasket	2	17	0208007	Locking washer D.10	16
7	Z72A331000	Approach ramp	2	18	0203009	Nut M10	16
8	Z72A337000	Rear slipping plate	2	19	0205013	Washer D.12	4
9	Z72A339000	Plate stop pin	4	20	0208009	Locking washer D.12	4
10	Z72A300003	Washer	4	21	0203013	Nut M12	4
11	0201049	Screw M10X30	4				

Figure 34 – Bolt-On Alignment Kit Assembly - Optional



Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	0301030	Air pedal pump	1	25	J07B000007	Cylinder upper shaft	1
2	J07B110000	Jack base	1	26	J07BY63000	Jack hydraulic cylinder	1
3	0211015	Seeger D.8	4	27	0209002	Screw M6X10	3
4	J07B100100	Wheel	4	28	J07B000006	Cylinder lower shaft	1
5	0511172	Nylon bush 1010	4	29	0206069	Screw M10X20	2
6	J07B100001	Wheel shaft	4	30	J07B000008	Washer	2
7	0511173	Nylon pin	8	31	0210086	Bush SF-1/2012F	4
8	J07B120000	Base extension	2	32	J07B000004	Middle shaft	1
9	0213109	Elastic pin 6X25	4	33	0203008	Nut M8	4
10	J07B000003	Nylon lower slider	2	34	J07B400000	Jack table	1
11	J07B000200	Safety lock 2	1	35	J07B500000	Table extension	2
12	0215017	Knob M10X33	1	36	J07B600000	Lifting adaptor	2
13	J07B000005	Shaft	1	37	0606033	Rubber pad 115X100X55	2
14	0209010	Screw M6X10	1	38	J07B600100	Adaptor base	2
15	J07B000100	Safety lock 1	1	39	0202020	Screw M5X8	2
16	J07B200000	Outer scissor arm	1	40	0202043	Screw M8X12	4
17	J07B000001	Nylon upper slider 1	2	41	0309091	O-ring 45X2.65	2
18	J07B300000	Inner scissor arm	1	42	Z23A313002	Outer thread bush	2
19	0204004	Self-locking nut M8	2	43	0212034	Seeger D.42	2
20	0205008	Washer D.8	6	44	Z23A313001	Inner thread bush	2
21	0201043	Screw M8X20	6	45	0212035	Seeger D.32	2
22	J07B000002	Nylon upper slider 2	2	46	Z23A313100	Pad tray	2
23	0209030	Screw M6X8	1	47	Z23A313202	Round rubber pad	2
24	0210089	Bush SF-1/2024F	2	48	0202032	Screw M6X16	2

Figure 35 – Rolling Jack Assembly - Optional



Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	ZY1090	Hose 1/4 L=1090	1	8	8240TX-63-3	Cylinder guiding cover	1
2	0306112	Quick union 8-1/4	1	9	0306087	Silencer 1/8	1
3	0303020	45° union	1	10	0311005	Scraper 30X38X5/6.5	1
4	0307022	Parachute valve 1/4	1	11	0305007	Guiding ring 30X10X2.5	1
5	J07BY63100	Cylinder liner	1	12	0309022	O-ring 24X2.4	1
6	8240TX-63-2	Piston	1	13	0312012	Gasket 63X47X18.4	1
7	J07BY63200	Cylinder shaft	1	14	0212005	Seeger D.20	1

Figure 36 – Jack Hydraulic Cylinder Unit And Line

Warranty



This item is warranted for five (5) years on structural components, two (2) years on hydraulic cylinders, and one (1) year on electric or air / hydraulic power units from invoice date. Wear items are covered by a 90 day warranty.

Our LIMITED warranty policy does **not include a labor** warranty. Our products are sold at such a competitive price that Greg Smith Equipment cannot afford to send technicians into the field to repair the Atlas® automotive lifts. We assume that the buyer of our automotive lifts is mechanically inclined or has employees that are mechanically inclined to perform essential repair services and or maintenance. We also have a list of service technicians that can come to your facility/house at the customer's expense.

NOTE: ALL WARRANTY CLAIMS MUST BE PRE-APPROVED BY THE MANUFACTURER TO BE VALID.

The Manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid, which prove after inspection to be defective. This warranty will not apply unless the product is installed, used and maintained in accordance with the Manufacturers installation, operation and maintenance instructions.

This warranty applies to the ORIGINAL purchaser only, and is non-transferable. The warranty covers the products to be free of defects in material and workmanship but, does not cover normal maintenance or adjustments, damage or malfunction caused by: improper handling, installation, abuse, misuse, negligence, carelessness of operation or normal wear and tear. In addition, this warranty does not cover equipment when repairs or alterations have been made or attempted to the Manufacturer's products.

THIS WARRANTY IS EXCLUSIVE AND IS LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FROM A PARTICULAR PURPOSE, AND ALL SUCH IMPLIED WARRANTIES ARE EXPRESSLY EXCLUDED.

THE REMEDIES DESCRIBED ARE EXCLUSIVE AND IN NO EVENT SHALL THE MANUFACTURER, NOR ANY SALES AGENT OR OTHER COMPANY AFFILIATED WITH IT OR THEM, BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF OR DELAY IN PERFORMANCE OF THIS WARRANTY. THIS INCLUDES, BUT IS NOT LIMITED TO, LOSS OF PROFIT, RENTAL OR SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

The warranty shall be governed under the laws of Indiana, and shall be subject to the exclusive jurisdiction of the Court in the State of Indiana in the county of Marion.

PRICES: Prices and specifications are subject to change without notice. All orders will be invoiced at prices prevailing at time of shipment. Prices do not include any local, state or federal taxes.

RETURNS: Products may not be returned without prior written approval from the Manufacturer.

DUE TO THE COMPETITIVENESS OF THE SELLING PRICE OF THESE LIFTS, THIS WARRANTY POLICY WILL BE STRICTLY ADMINISTERED AND ADHERED TO.