INSTALLATION & OPERATION MANUAL

Atlas 408-SL Super Deluxe

8,000 lb. Capacity
Four-Post Hobbyist Lift



Atlas Automotive Equipment
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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 _____

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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 AUTHORIZED DEALERS or SERVICE CENTERS AUTHORIZED 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.**

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"**

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.**

	**Any other use which differs from that provided for by the manufacturer of the machine is strictly forbidden.**

	**The use of non genuine parts may cause damage to people or objects**

1.5 Scrapping

When your machine's working life is over and it can no longer be used, it must be made inoperative by removing any connection to power sources.

These units are considered as special waste material, and should be broken down into uniform parts and disposed of in compliance with current laws and regulations.

If the packing are not polluting or non-biodegradable, deliver them to appropriate handling station.

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.

	**The removal of the serial plate is strictly forbidden.**

Machines may be updated or slightly modified from an aesthetic point of view and, as a consequence, they may present different features from these 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.

Packing, Transport, Storage

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.

3.1 Packing

The packing of the lift is shown in the figure 1. Base unit packed in a steel frame, wrapped up in non-scratch material. Power unit packed in a carton box. The package weight is about 1984 LBS. If requested, optional accessories are available to satisfy each customer's requirements.

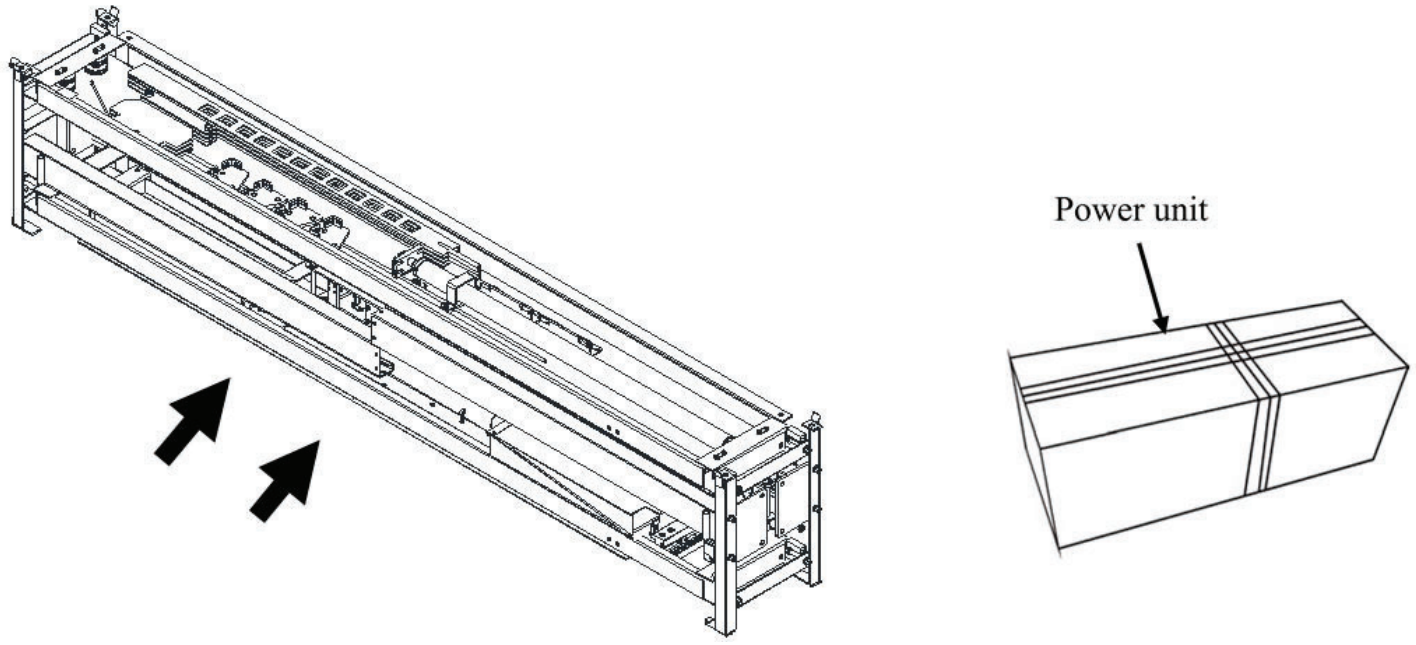


Figure 1 – Package

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, center of gravity, and it's 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 14°F and +104°F. 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).

Lift Description

The lift is suitable for lifting motor vehicles having maximum weight as described in the nameplate on the power side column of the lift. The electro hydraulic operation is described in detail in chapter 8.

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: 1 power-side column (1), 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 pressing the lowering lever on the power unit and carried out under the weight of the load lifted.

The automatic back-up lock holds on the lift in the elevated position, can be released by pressing the latch release lever (7). The slack cable lock in each end of transverse beam can hold on the lift in event of cable slackening and/or failure. The caster kit (8) can be ordered as an option to move the lift.

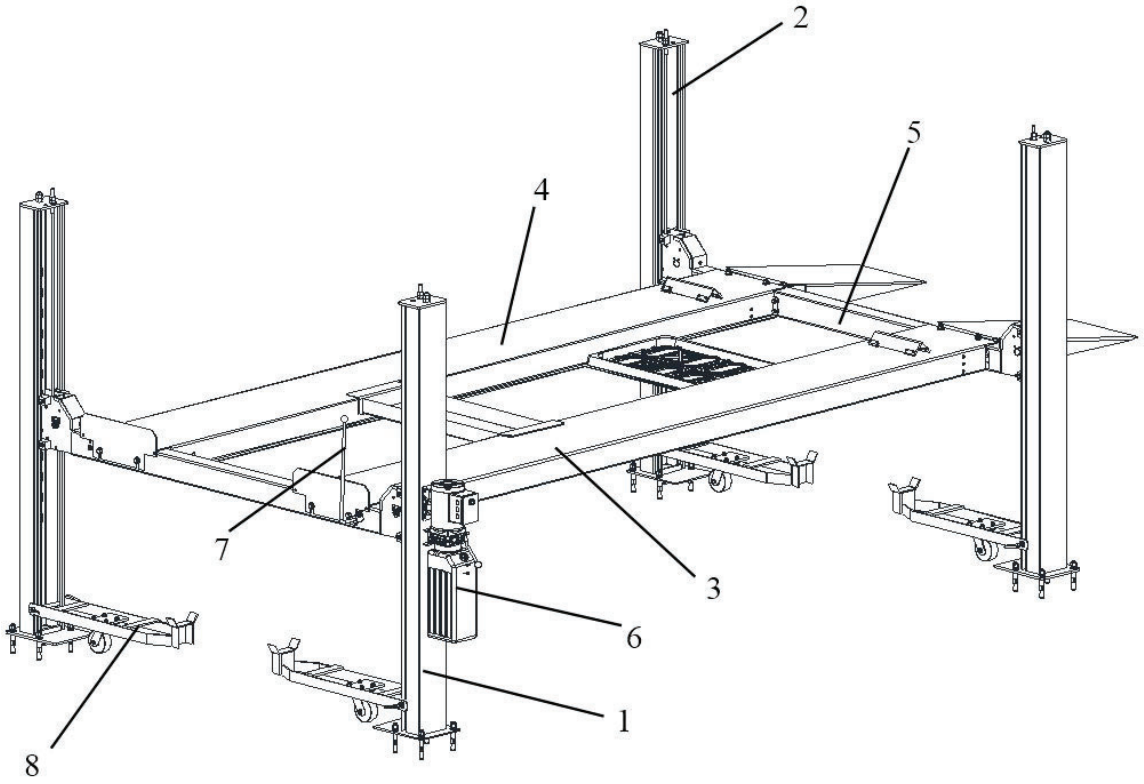


Figure 2 – Lift

Technical Specification

5.1 Size And Main Features

Lift Capacity	8,000lbs (3500kg)
Max. raised height	73 1/4” (1860mm)
Min. Lowered height	6 1/8” (156mm)
Runway length	167 1/2” (4256mm)
Runway width	18 3/4” (475mm)
Free width between runways	37 1/4” (945mm)
Max. overall length	205 3/8” (5217mm)
Overall height	82 7/8” (2105mm)
Overall width	109 5/8” (2786mm)
Raised time	55s
Noise level	80 dB(A)/1m
Rated pneumatic pressure	6bar – 8bar
Working temperature	5 °C - 40 °C
Average weight of package	1984 LBS (900kg)

5.2 Electric motor

Voltage	110V/60Hz/1Ph
Power	1.5HP
N° Poles	2
Speed	3450rpm
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	0.8 cm^3/g
Continuous working pressure	160 bar

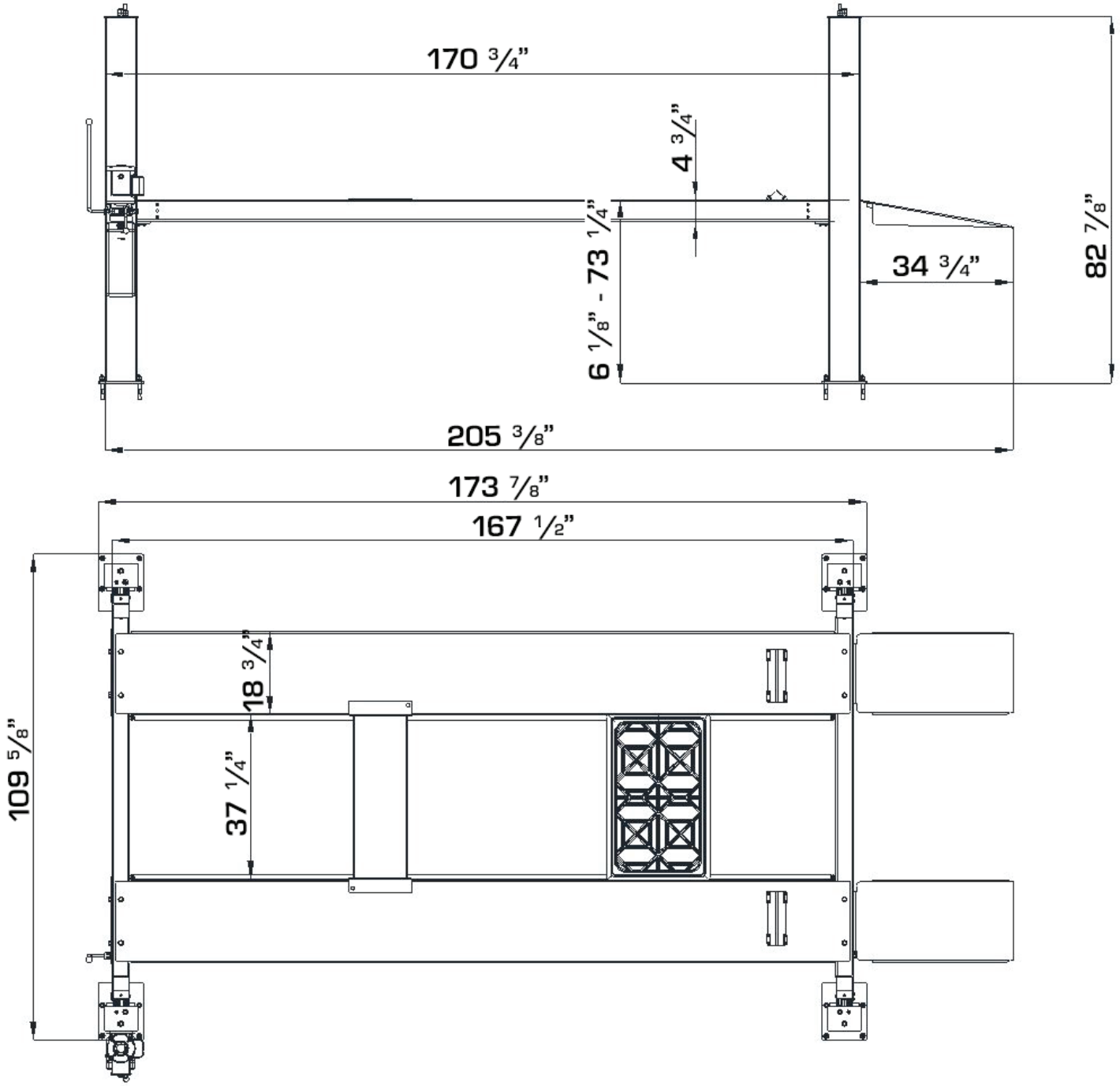


Figure 3 – Lift Layout

Hydraulic Power Unit

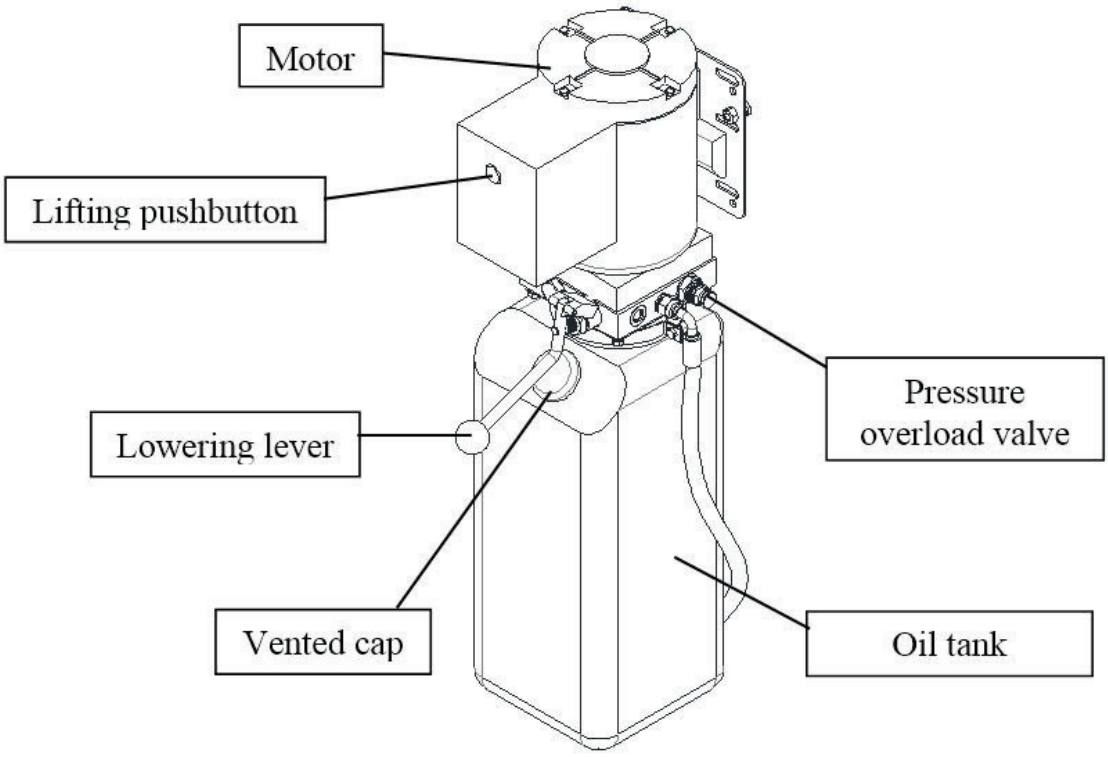


Figure 4 – Hydraulic Power Unit

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

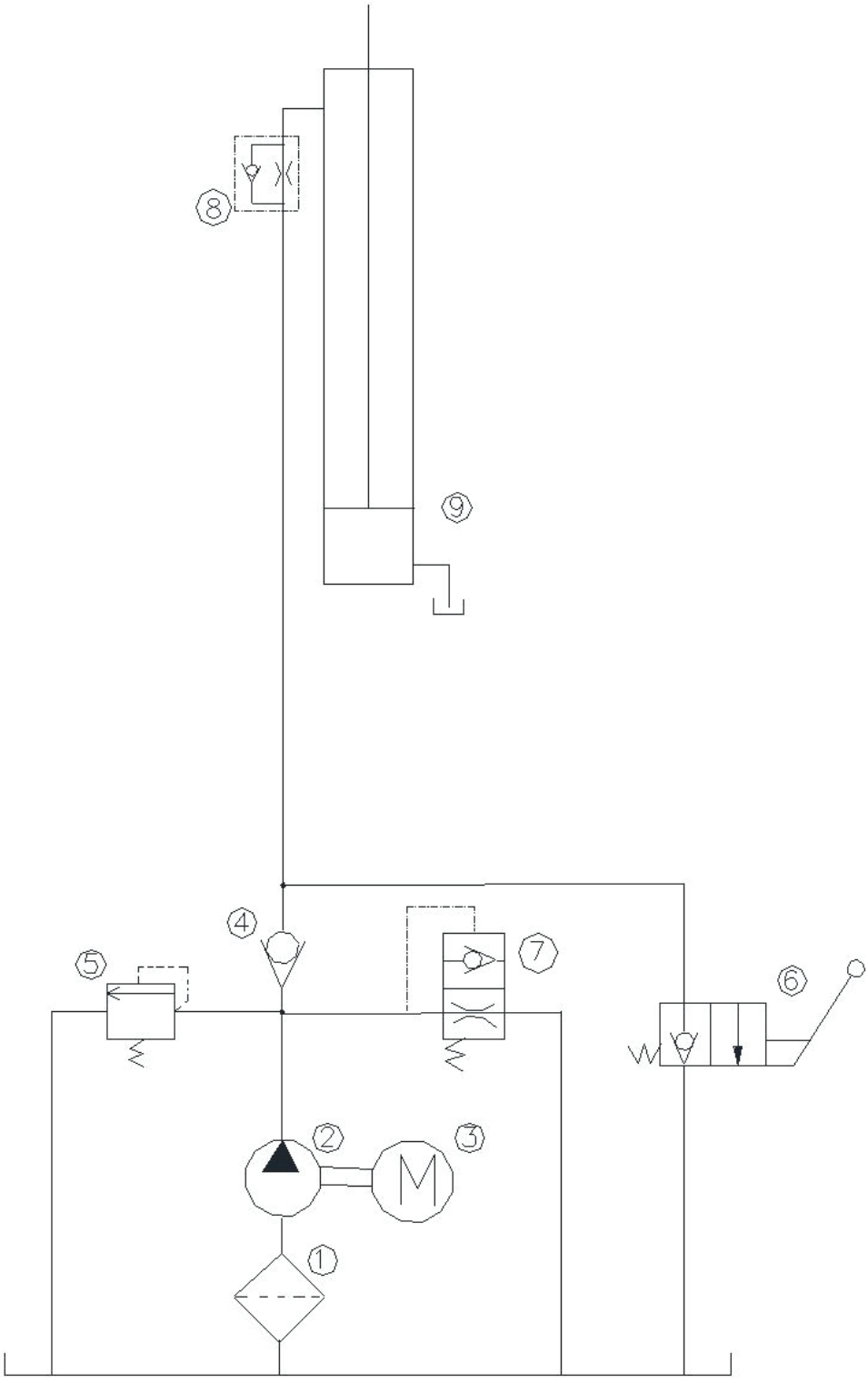


Figure 5 – Hydraulic Plan

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		

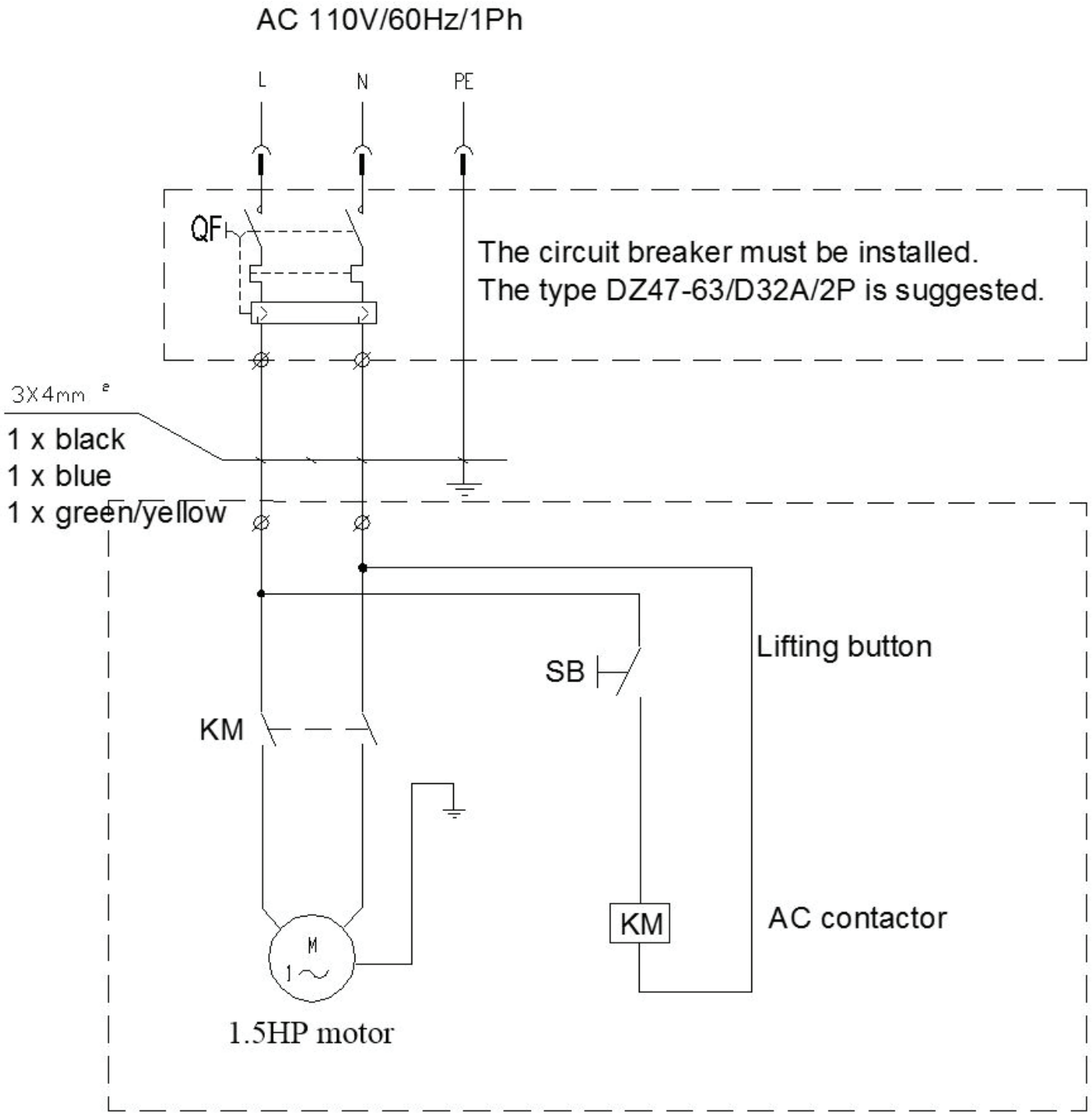


Figure 6 – Electrical Diagram (110V/60Hz/1Ph)

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.

	**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.** **The manufacturer is not liable for possible damages to people, vehicles, or objects resulting from an improper or unauthorized use of the lift.**

For operator and people safety, a safety area at least 3 feet 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 the safety lock is engaged.

	**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.**

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.

	**Any use of the lift other than that herein specified can cause serious accidents to people in close proximity of the machine.**

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 is 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.

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. 7a

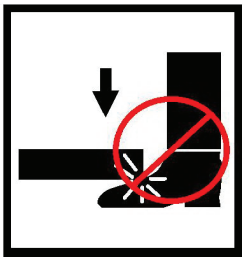


Fig. 7b



Fig. 7c

6.4 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. 8a

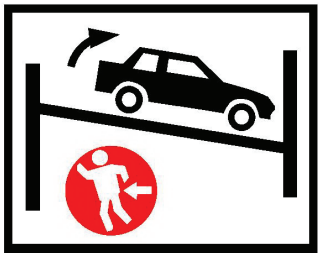


Fig. 8b

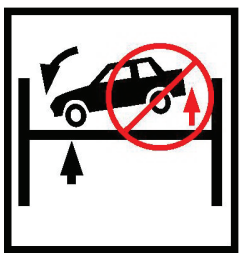


Fig. 8c

6.5 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.**

6.6 Electrocution Risks

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



Fig. 9

6.7 Risks Resulting From Improper Lighting

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

6.8 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. 10

6.9 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. 11

6.10 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 back-up safety holds on the lift in the elevated position.
- Slack cable lock 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 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 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, or solvent and 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.

7.2 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.

7.3 Installation Surface

The lift does not require to be anchored to floor. But, despite if it is anchored or not, a level floor is suggested. 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. The new concrete slab must be adequately cured by at least 21 days.

	**If the lift is chosen to be anchored to floor, the concrete slab should have the compression strength of at least 3000 PSI and the minimum thickness 6” with an extension of at least 4 feet from anchoring point.**

7.4 Site Layout

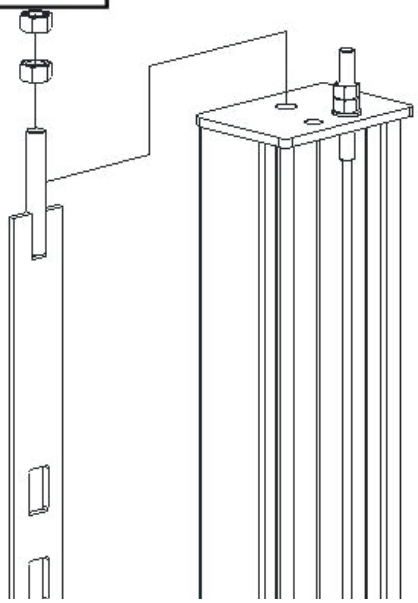
- Determine which end of the lift will be approach side.
- Determine which side the power-side runway (with the hydraulic cylinder attached) will be located on. Remember that the power-side runway must be installed on the same side as the power-side column.

7.5 Assembly Of Column

	**Pay attention to use caution to prevent columns from falling over.**

- Slide the latch rack through the top plate of each column and fit the nuts into the thread end. Do not tighten them at this time;
- Transport each to the located site referring to the figure 3.

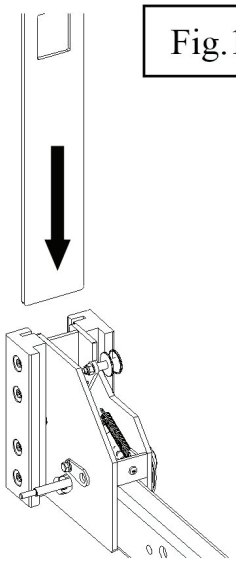
Fig.12



7.6 Connecting Column To Transverse Beam

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

Fig.13



- Transport each transverse beam to the located site;
- Slide a transverse beam into the front or rear two columns by holding the lock lever down, to allow the latch rack to slide past the locking positions. Make sure the latch rack is inside the groove of the slider;
- Leave the transverse beam locked in the lowest position on the column, tighten the nuts on the thread end of latch rack;
- With both sliders attached, move the column toward the column until stopped by the slides;
- Repeat the same procedure for another transverse beam;
- Square the lift by measuring diagonally between the right, front column to the same position on the left rear column.

7.7 Bolting Runway To Transverse Beam

	Before installation, make sure that all accessories have been installed correctly in the runways.

- Lift each runway onto the transverse beam. Make sure to secure the runway with a hoist to prevent it from fallig and pay attention that the runway is upside;
- Place the runways on transevers beams with the rails toward the inside. Pay attention to the location of power-side runway;
- Bolt them in place using M18X100 screws and washers as shown with the drop-in plates as spacers facing outside of transervrse beam.

7.8 Routing Steel Cable

	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.

- Slide the cables from the end of power-side runway and route the cables though the pulleys in transverse beams referring to the routing diagram (fig. 15). Make sure that the cables are not twisted during routing and are in the proper pulley grooves. Make sure the cables are routed correctly on the slack cable rollers;
- Insert the thread end of steel cable through the top plate of the column and fit two M20 nuts on the thread end, then tighten them.

Fig. 15

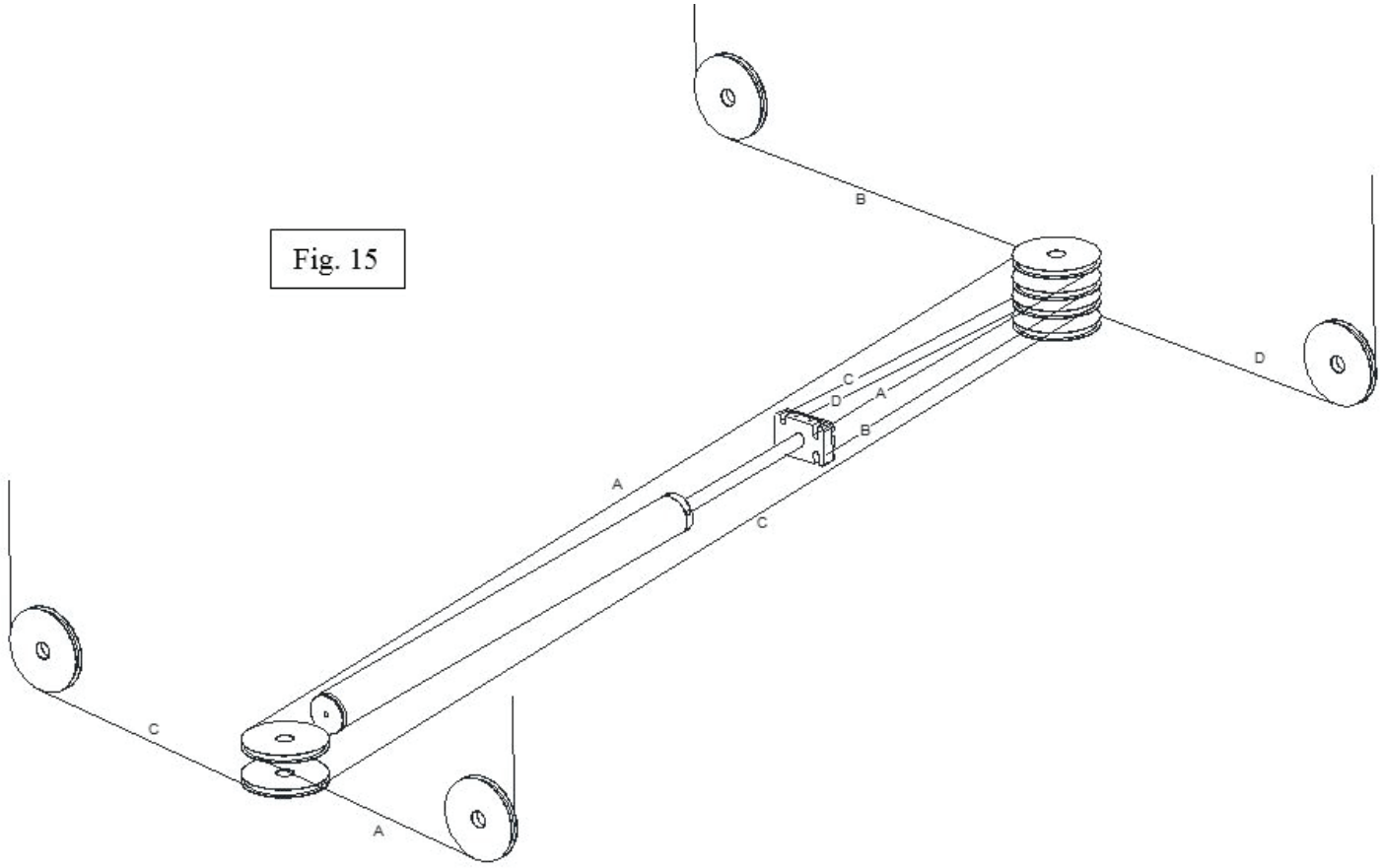
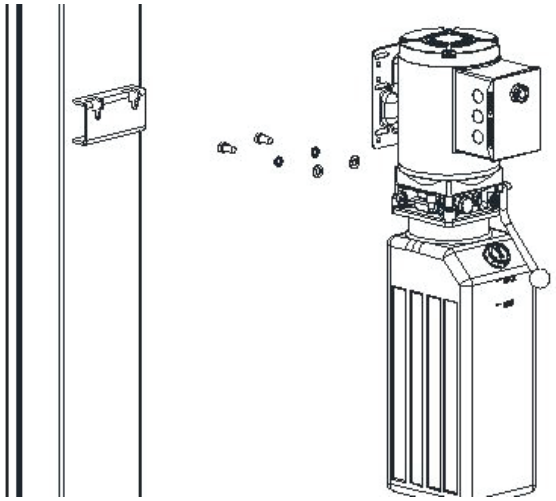


Figure 15 – Cable Routing Diagram

7.9 Installation Of Power Unit

- Attach the power unit onto the bracket on the power side column;
- Secure it using M8X20 screws, M10 nuts and the washers;
- Make sure to keep the power unit clean.



7.10 Connection Of Hydraulic Hoses

⚠	**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 hydraulic hoses from the power unit to the cylinder as shown through the 90° bulkhead fitting fitted in the power-side runway;
- Route the rilsan hose from the power unit to the cylinder as shown through the hole on the power-side runway;
- Tighten the hose fittings thoroughly. Make sure not to over-tighten the hose fittings so as to result in oil leakage.

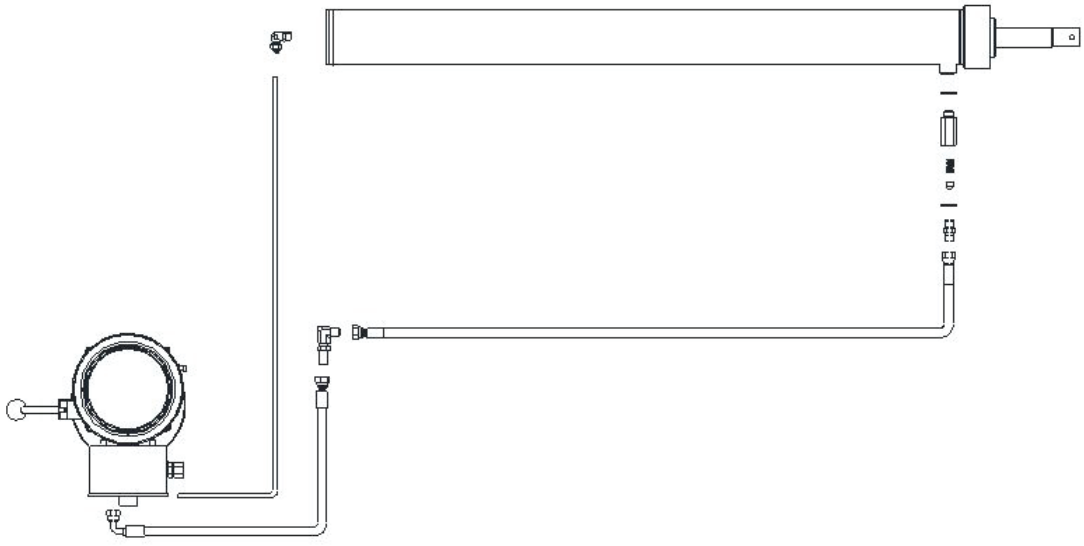
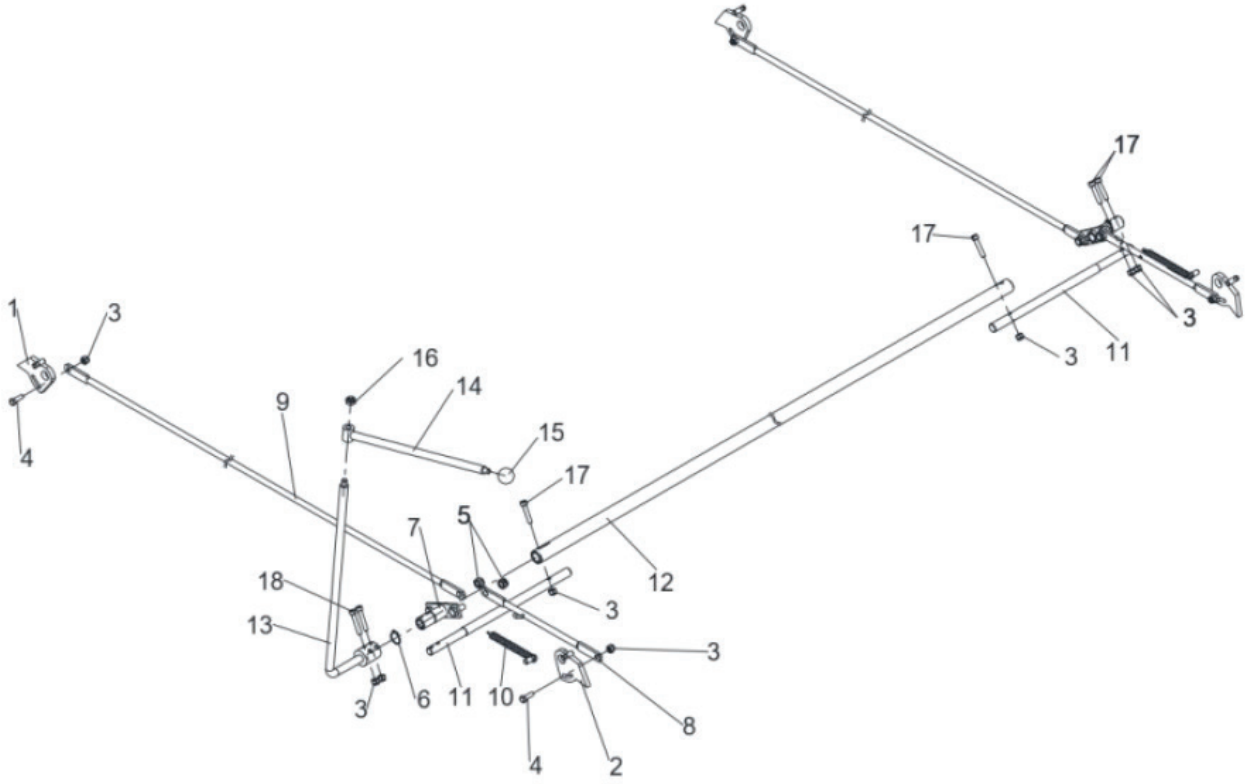


Figure 17 – Hydraulic Line Connection

7.11 Lock System Assembly

The single point safety lock is a system of connecting rods and linkage that disengage the four lock latches that secure the lift to each column.

- Locate the parts in the package and preassembled in the lift referring to the figure 18 and the sheet below;
- Assemble the lock system referring to the figure 18 and tighten the respective screws and nuts;
- Make sure that all four latches can be released by depressing the lock release lever.



Item	Description	Qty	Item	Description	Qty
1	Safety Rack	2	10	Spring	2
2	Safety Rack	2	11	Connection Rod	2
3	Nut M8	10	12	Cover	1
4	Screw M8x25	4	13	Handle Release Lever	1
5	Nut M12	4	14	Extension Lever	1
6	Seeger D.25	2	15	Knob M10x33	1
7	Manual Release Unit	2	16	Nut M10	1
8	Short Rod	2	17	Screw M8x40	4
9	Long Rod	2	18	Screw M8x45	2

FIgure 18 – Lock System Assembly

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.**

- 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 110V);
- Make sure the lift is grounded well.

7.13 Oil Filling And Bleeding

⚠	**DO NOT run power unit without 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 11 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 manually by depressing the lock release lever;
- 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 1/8”.**

- 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 15.

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 12 locking latch clicks can be heard;
- Raise the lift to the topmost latch position to verify if four latches are engaging uniformly. If not, make the adjustment referring to the figure 12.

7.14.3 Accessory Installation

- Mount the pulley cover on each end of transverse beam using a M6X10 screw.
- Attach each drive-on ramp on the rear transverse beam as shown.

7.14.4 CASTER KIT INSTALLATION

The caster kit is to be ordered optionally. Install it in the following steps:

- Raise the lift about 20” high;
- Install it in the column as shown and secure with the pin and split pin.

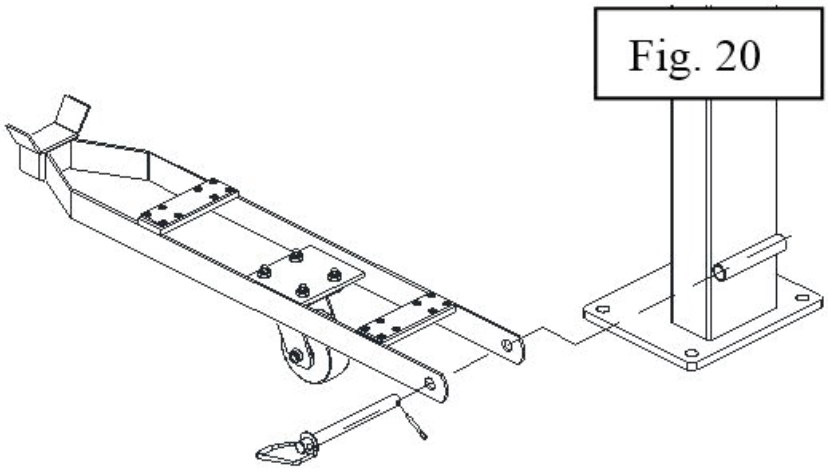


Fig. 20

7.15 Anchoring Columns

	**If the lift is chosen to be anchored to floor, the concrete slab should have the compression strength of at least 3000 PSI and the minimum thickness 6” with an extension of at least 4 feet from anchoring point.**

- Using the base plate as guide, drill each hole in the concrete approximately 6” 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.

7.16 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.**

7.16.1 General Checks

- Make sure to check that the columns are plumb;
- 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 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:

7.16.2 Steel Cable For Proper Installation

- 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.

	**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.**

7.16.3 Safety Lock For Proper Installation

- Check to make sure that the lock engages and releases properly.
- Check if four latches are engaging uniformly. If not, make the adjustment.

7.16.4 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 hose connections have 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.**

7.17 Check With Load

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

Carry out two or three complete cycles of lowering without and with the vehicle loaded 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

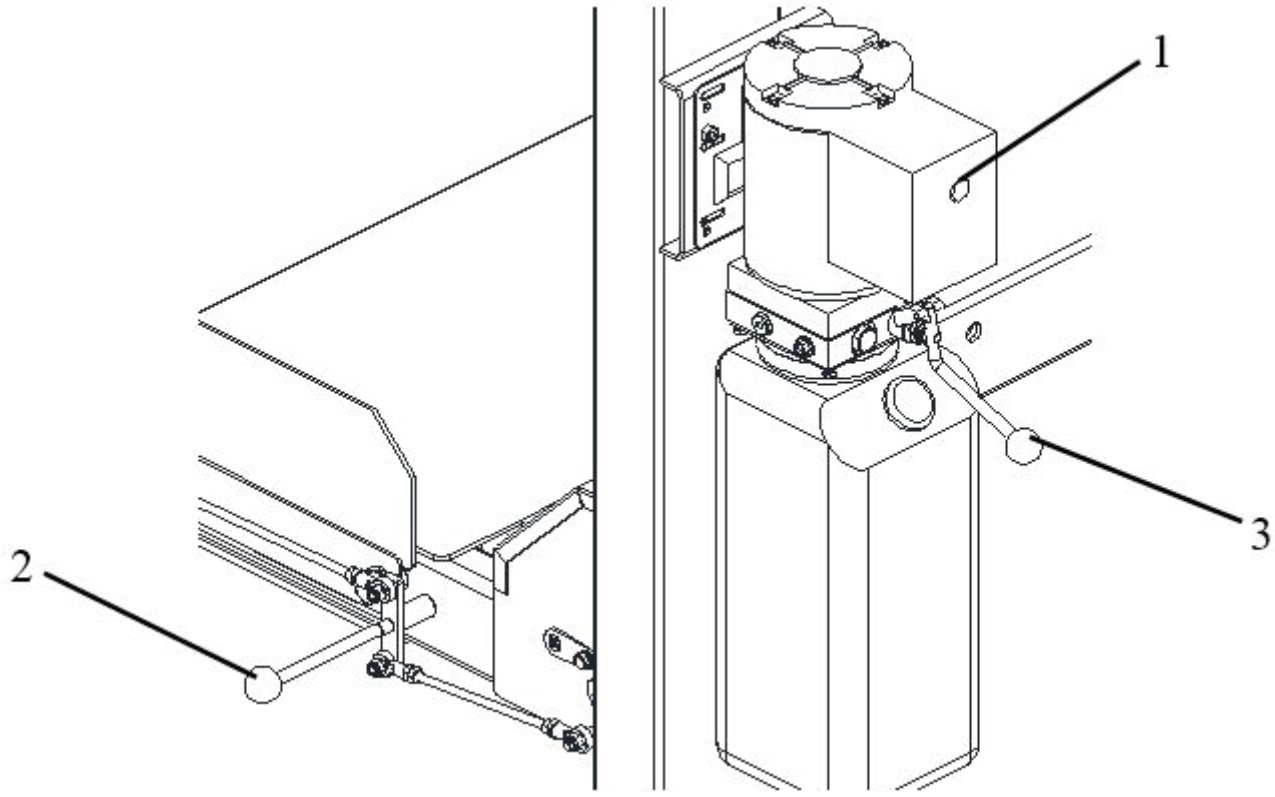


Figure 21 – Controls Of Lift

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.

LATCH RELEASE LEVER (2)

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

LOWERING HANDLE (3)

- When latches are not released, press it to lower the lift to engage the nearest latch rack.
- Press it and in the meantime press the latch release lever, the lift descends 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 all personnel exits the area 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 latch release lever 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.

8.2 Moving With Caster Kit

- When the lift is lowered, the columns will automatically rise off the floor so that the lift can be moved.
- When the lift is raised, the columns will automatically be grounded for working.

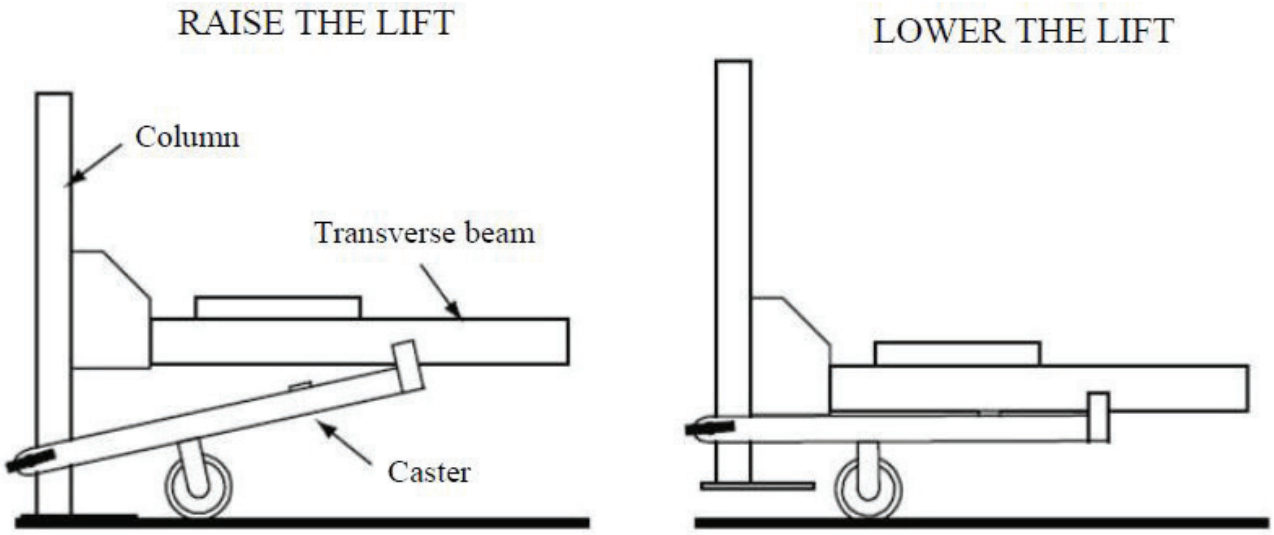


Figure 22 – How To Use Caster Kit

Maintenance

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

To properly service 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 a clean cloth.

	**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

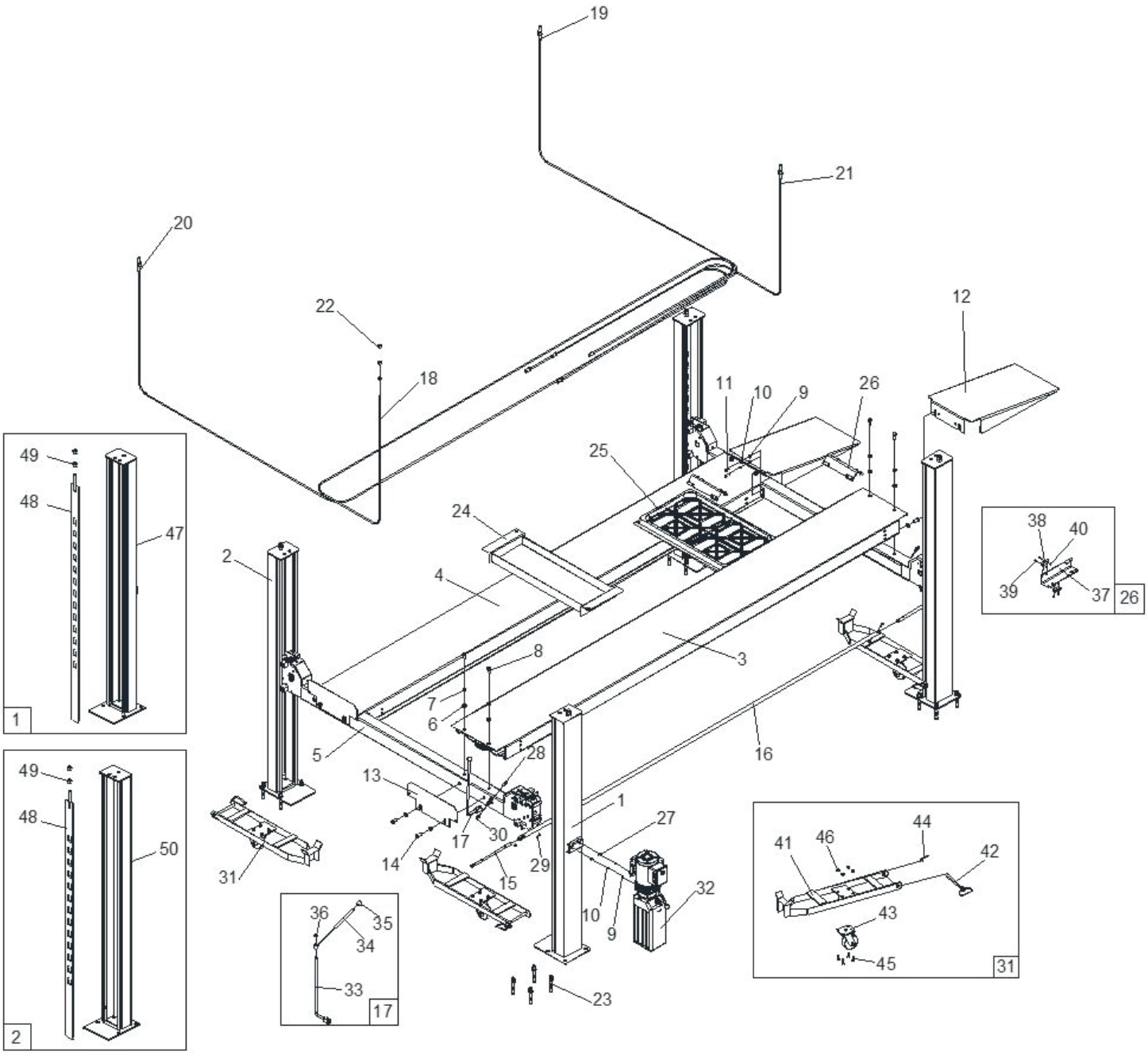
Troubleshooting

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

Parts List

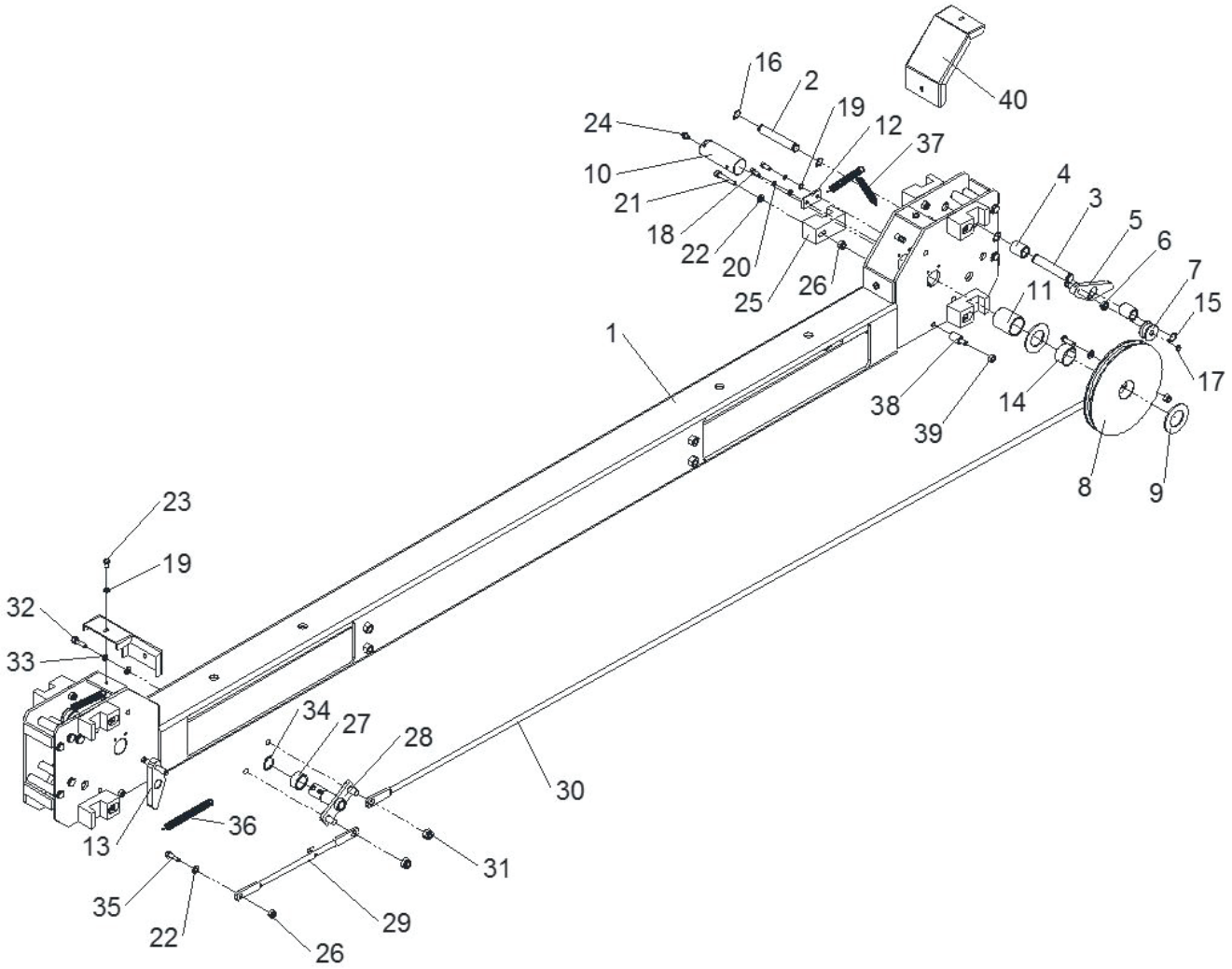
Lift



Lift			
Item	**Part No.**	**Description**	**Qty**
1	Z74A110000	Power-side column	1
2	Z74A120000	Off-side column	3
3	Z74A310000	Power-side platform assembly	1
4	Z74A320100	Off-side platform assembly	1
5	Z75A200000	Transverse beam assembly	2
6	0205020	Washer D.16 - GB/T97.1	20
7	0208011	Locking washer D.16 - GB/T93	8
8	0201097	Screw M16X35 - GB/T5783	8
9	0205011	Washer D.10 - GB/T97.1	10
10	0208007	Locking washer D.10 – GB/T93	10
11	0201064	Screw M10X25 - GB/T5783	8
12	Z74A811000	Drive-on ramp assembly	2
13	Z74A800001	Wheel stop plate	2
14	0201216	Screw M16X30 - GB/T5783	8
15	Z74A020001	Connection rod	2
16	Z74A020002	Cover	1
17	Z74A021000	Safety release lever	1
18	Z74A850100	Steel cable A	1
19	Z74A850200	Steel cable B	1
20	Z74A850300	Steel cable C	1
21	Z74A850400	Steel cable D	1
22	0203025	Nut M16 - GB/T6170	8
23	0215084	Anchor bolt M19X140	16
24	Z92A831000	Wheel kit	1
25	Z92A800001	Plastic Drip Trays	4
26	Z72A300100	wheel chock	2
27	0201062	Screw M10X20 - GB/T5783	2
28	0202046	Screw M8X45 - GB/T70.1	2
29	0202042	Screw M8X40 - GB/T70.1	4
30	0204004	Nut M8 - GB/T889.1	6
31	Z74A100300	Caster kit	4
32	0302025	Hydraulic power unit	1
33	Z74A021100	Handle release lever	1

Lift			
Item	**Part No.**	**Description**	**Qty**
34	Z74A021200	Extension lever	1
35	0603017	Knob	1
36	0204005	Self-locking nut M10	1
37	Z72A300101	Angle plate	1
38	Z72A300102	Rubber pad	4
39	0206025	Screw M5X18 - GB/T818	8
40	0203031	Nut M5 - GB/T6170	8
41	Z74A110500	Support	1
42	Z74A111500	Pulling shaft	1
43	0511201	Caster	1
44	0213113	Pin 5X50	1
45	0201049	Screw M10X30 - GB/T5783	4
46	0204005	Self-locking nut M10	4
47	Z74A110100	Post A	1
48	Z74A110200	Safety rack	1
49	0203012	Nut M20 - GB/T6170	2
50	Z74A120100	Post B	1

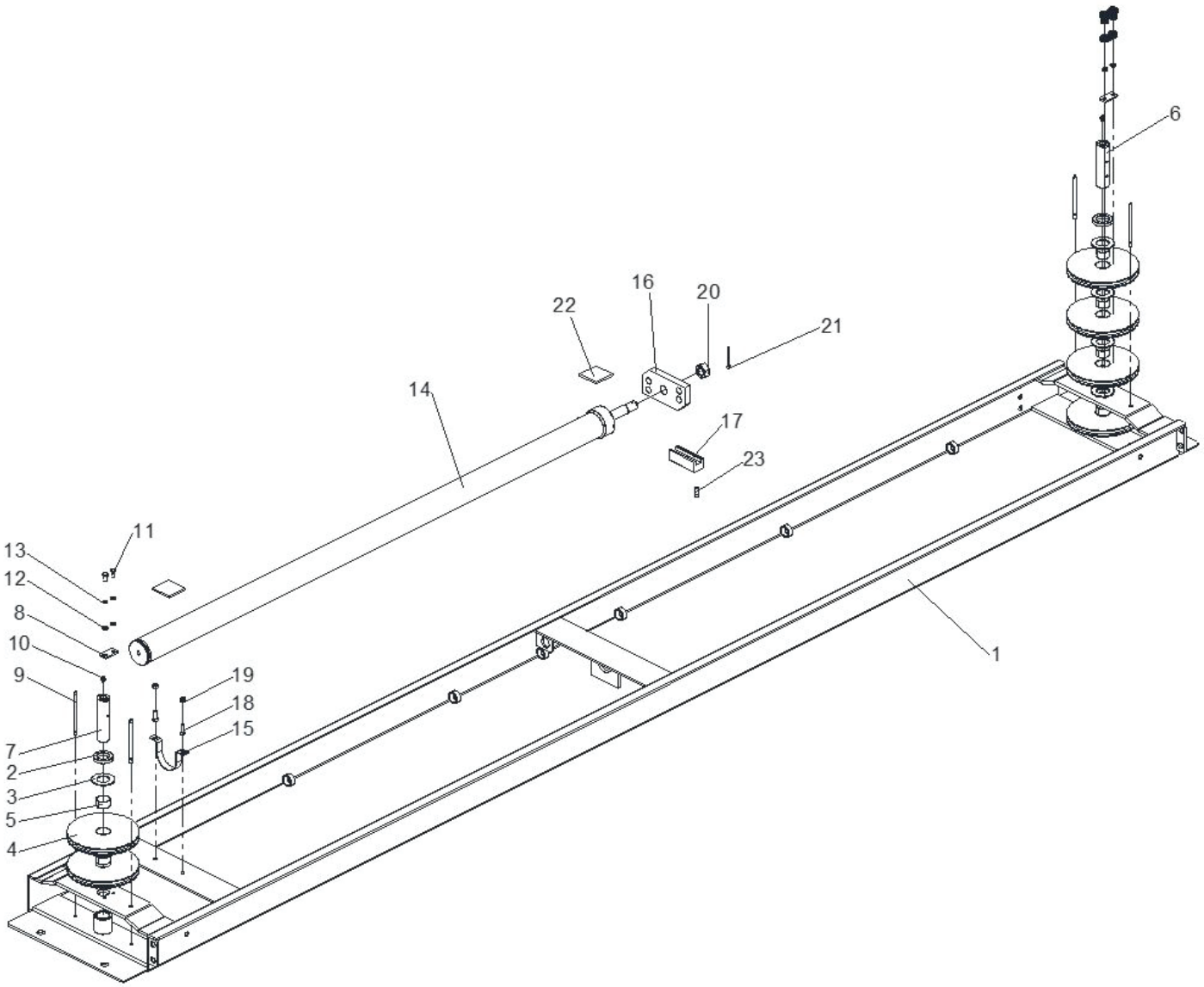
Transverse Beam



Transverse Beam			
Item	**Part No.**	**Description**	**Qty**
1	Z74A210000	Transverse beam	1
2	Z72E200001	Shaft 1	6
3	Z72E200002	Shaft 2	4
4	Z72E200003	Bush	4
5	Z72E220000	Safety pawl A	1
6	Z72E200005	Spacer	2
7	Z72E200004	Nylon roller	2
8	Z74A310002	Cable pulley	2
9	Z72E310003	Washer	4
10	Z72E200007	Shaft 3	2
11	Z72E200006	Bush	2

Transverse Beam			
Item	**Part No.**	**Description**	**Qty**
12	Z72E200008	Protective plate	2
13	Z72E230000	Safety pawl B	1
14	0210119	Bush 3520	2
15	0212016	Seeger D.18	8
16	0212002	Seeger D.16	12
17	0212013	Seeger D.10	2
18	0201013	Screw M6X16 - GB/T5783	4
19	0205006	Washer D.6 - GB/T97.1	8
20	0208005	Spring washer D.6 - GB/T93	4
21	0202046	Screw M8X45 - GB/T70.1	8
22	0205008	Washer D.8 - GB/T97.1	11
23	0206040	Screw M6X12 - GB/T818	4
24	0215021	Greaser M8X1	2
25	Z74A200005	Slider	8
26	0204004	Nut M8 - GB/T889.1	10
27	0210135	Bush bearing	1
28	Z74A220000	Manual release unit	1
29	Z74A230000	Short rod	1
30	Z74A200006	Long rod	1
31	0204007	Nut M12	2
32	0202047	Screw M8X25	1
33	0208006	Locking washer D.8 - GB/T93	1
34	0212004	Seeger D.25 - GB/T894.1	1
35	0201038	Screw M8X25 - GB/T5783	2
36	Z74A200004	Spring	1
37	Z71P211811	Spring	4
38	Z74A200009	Shaft	2
39	0203029	Nut M8	2
40	Z74A200007	Cover	2

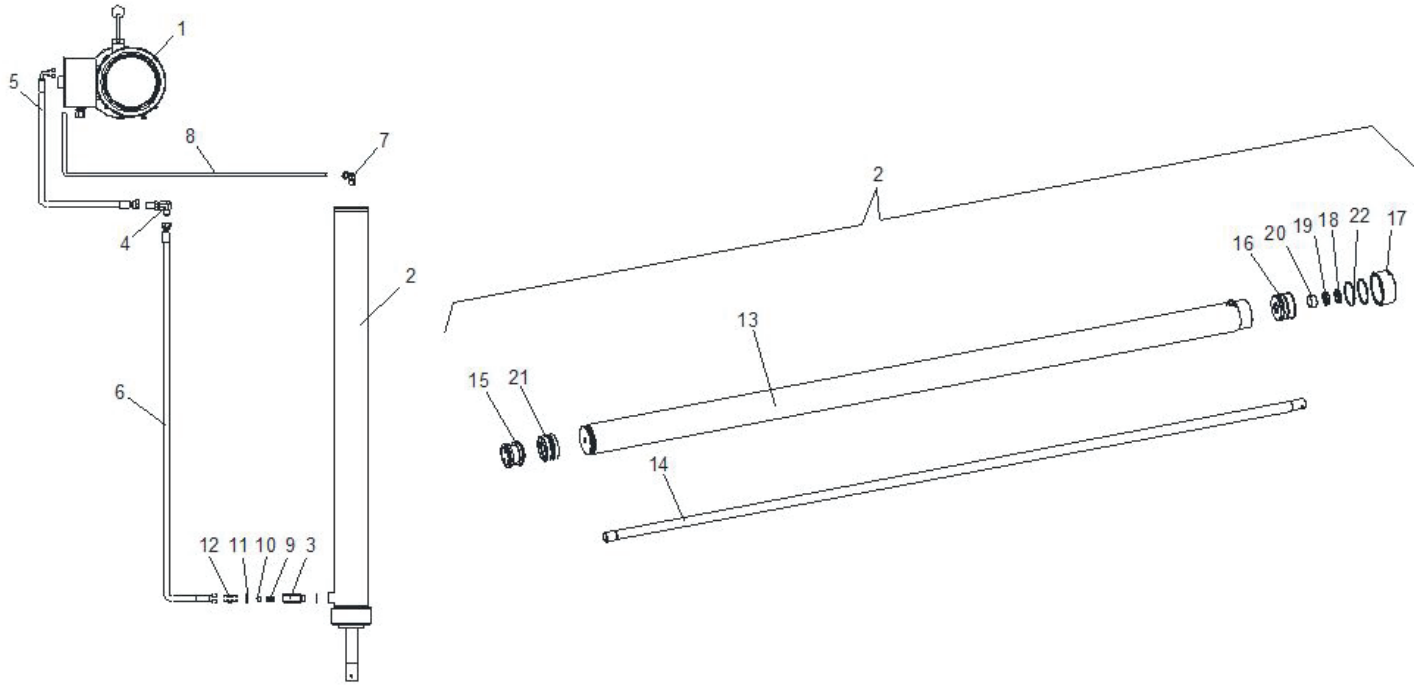
Power-Side Runway



Power-Side Runway			
Item	**Part No.**	**Description**	**Qty**
1	Z74A310100	Power-side platform	1
2	Z74A310001	Washer	2
3	Z72E310003	Washer	7
4	Z74A310002	Cable pulley	6
5	0210119	Bush 3520	6
6	Z75A310102	Pulley shaft	1
7	Z75A310101	Pulley shaft	1
8	Z71P310002	Spacer	2

Power-Side Runway			
Item	**Part No.**	**Description**	**Qty**
9	Z75A310009	Shaft	4
10	0215021	Greaser M8X1	2
11	0201026	Screw M8X16 - GB/T5783	4
12	0205008	Washer D.8 – GB/T97.1	4
13	0208006	Locking washer D.8 - GB/T93	4
14	Z74AY63000	Hydraulic cylinder	1
15	Z74A310004	Clamp	1
16	Z74A310003	Cable holder	1
17	Z74A310005	Slider	1
18	0201038	Screw M8X25 - GB/T5783	2
19	0204004	Nut M8 - GB/T889.1	2
20	0203021	Nut M24 - GB/T6170	1
21	0213113	Pin 5X50 - GB/T91	1
22	Z74A310006	Protection board	2
23	0202045	Screw M8X20 - GB/T70.1	1

Hydraulic Line



Hydraulic Line			
Item	**Part No.**	**Description**	**Qty**
1	0302025	Hydraulic power unit	1
2	Z74AY63000	Hydraulic cylinder	1
3	7532-B	Valve housing	1
4	0303075	90° bulkhead fitting 1/4	1
5	ZW1600	Hydraulic hose 1/4 L=1600	1
6	ZZ2000	Hydraulic hose 1/4 L=2000	1
7	0306065	Rotation union 8-1/4	1
8	0306096	PU hose 8X5.5X5300	1
9	7530-Y-3	Spring	1
10	7530-Y-2	Restrictor	1
11	0313001	Washer 1/4	2
12	0303065	Fitting 1/4	1
13	Z74AY63100	Cylinder liner	1
14	Z74AY63804	Piston shaft	1
15	Z74AY63801	Piston	1
16	Z74AY63802	Cylinder guiding cover	1
17	Z74AY63803	Cover	1

Hydraulic Line			
Item	**Part No.**	**Description**	**Qty**
18	0311001	Scraper 25X33X4.5/6	1
19	0310008	Sealing ring 25X33X5	1
20	0305040	Guide ring 25X15X2.5	1
21	0312012	Gasket 63X47X18.4	1
22	0309035	O-ring 63X3,1	2

Warranty



This item is warranted for two (2) years on structural components and two (2) years on hydraulic power units and cylinders from invoice date. Wear items are covered by a 90 day warranty.

This LIMITED warranty policy does **not include a labor** warranty.

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.

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.