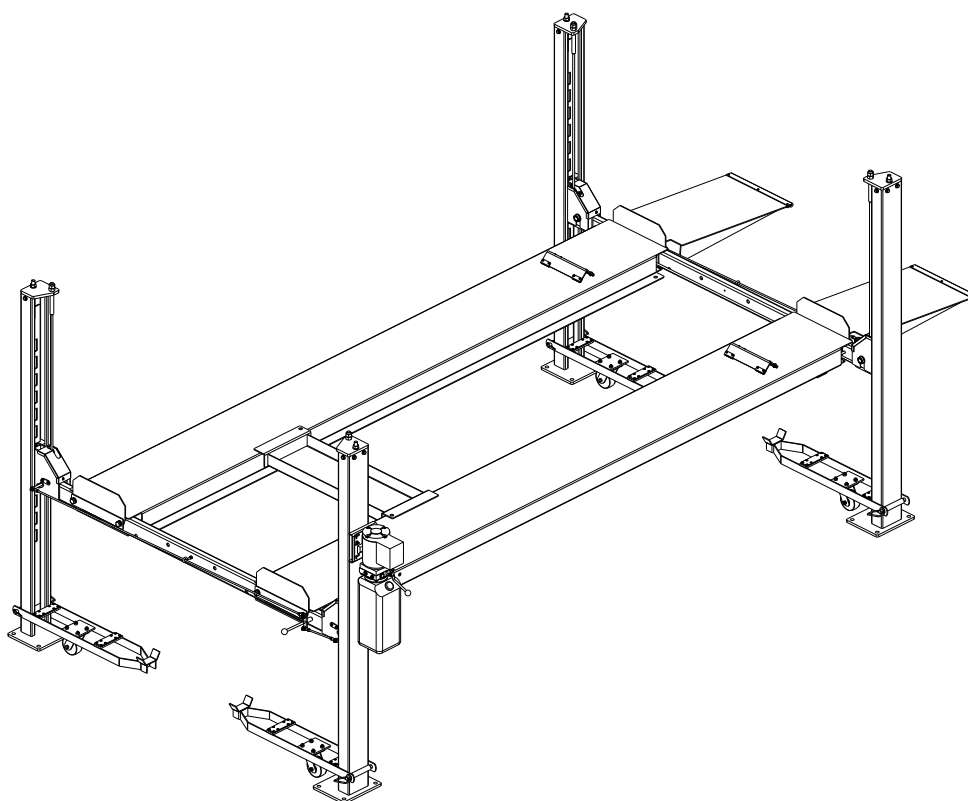


USE AND MAINTENANCE MANUAL





PARKING FOUR POST LIFT


APEX 8EXT-L



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.
---	--

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CHAPTER 1 – 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.
---	---


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
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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.

CHAPTER 2 – 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 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.

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.

CHAPTER 3 - PACKING, TRANSPORT AND STORAGE

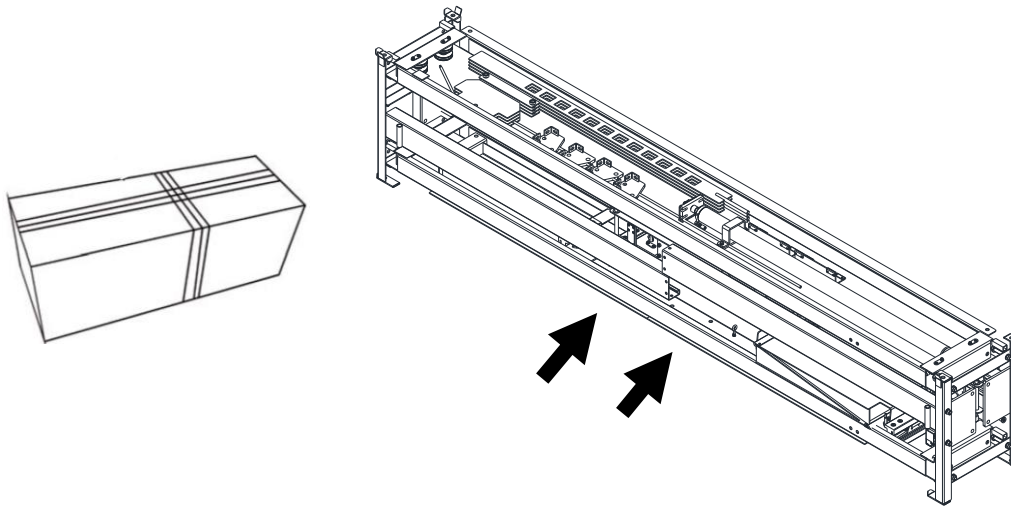
3.1 PACKING

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 920kg.

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 °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).

CHAPTER 4 - 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.

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: N.1 power-side column (1), N.3 off-side columns (2) and (3), two platforms: the power-side platform (4) and the off-side platform (5), and two transverse beams (6), anchored to the ground by means of the column base plates.

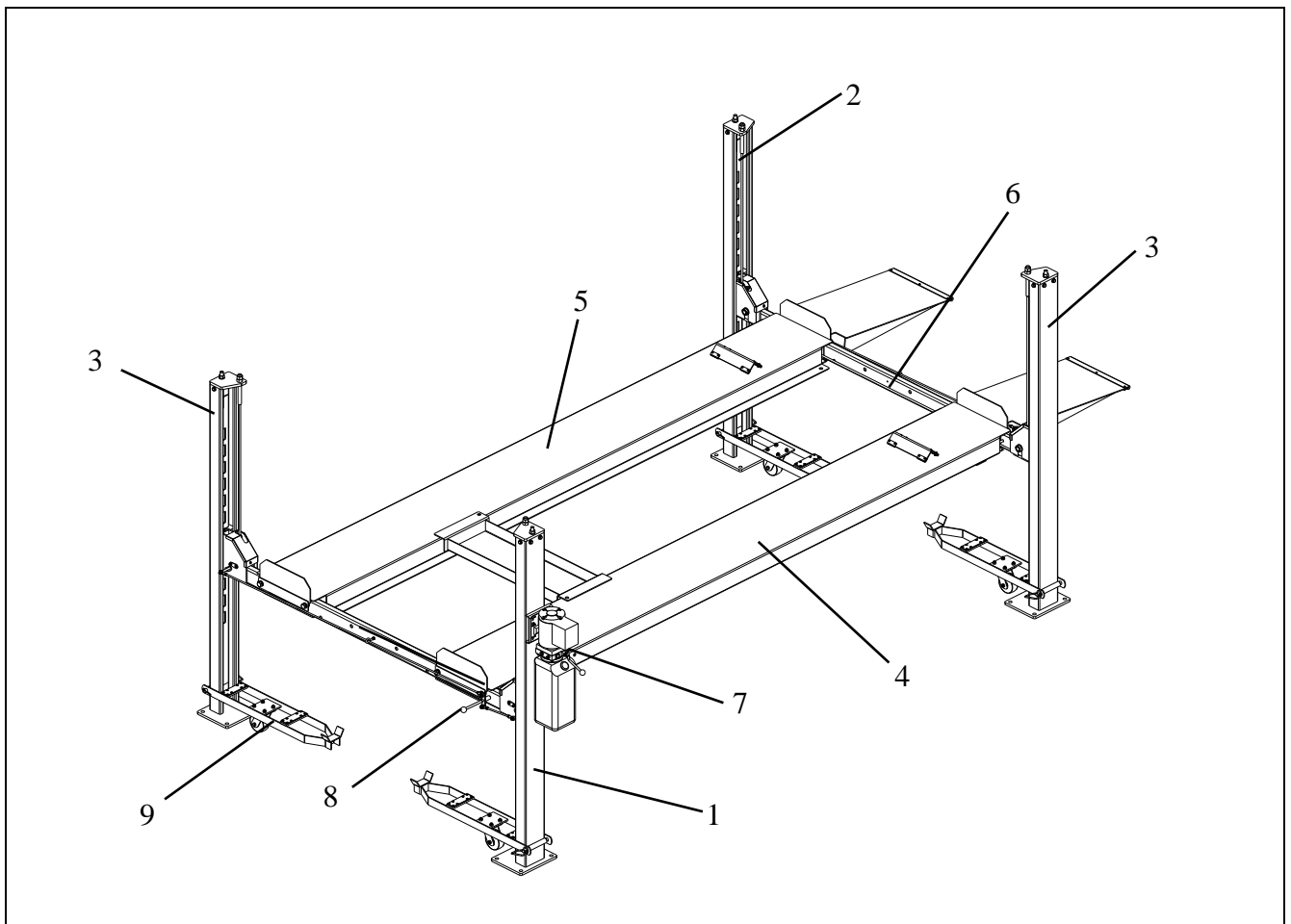
Raising motion is carried out by pushing the lifting button on the power unit (7) to operate a power unit delivering the hydraulic fluid to cylinders to act on cable lifting system.

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 (8). 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 (9) can be ordered as an option to move the lift.

Figure 2 – LIFT



5.1 SIZE AND MAIN FEATURES (Ref. fig. 3)

LIFT CAPACITY	3600kg (8,000lbs)
Max. raised height	2149mm
Min. Lowered height	129mm
Runway length	4580mm
Runway width	475mm
Free width between runways	834mm
Max. overall length	5663mm
Overall height	2520mm
Overall width	2866mm
Raised time	110s
Noise level	80 dB(A)/1m
Rated pneumatic pressure	6bar – 8bar
Working temperature	5 °C - 40 °C
Average weight of package	920kg

5.2 ELECTRIC MOTOR

Voltage	115V/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).

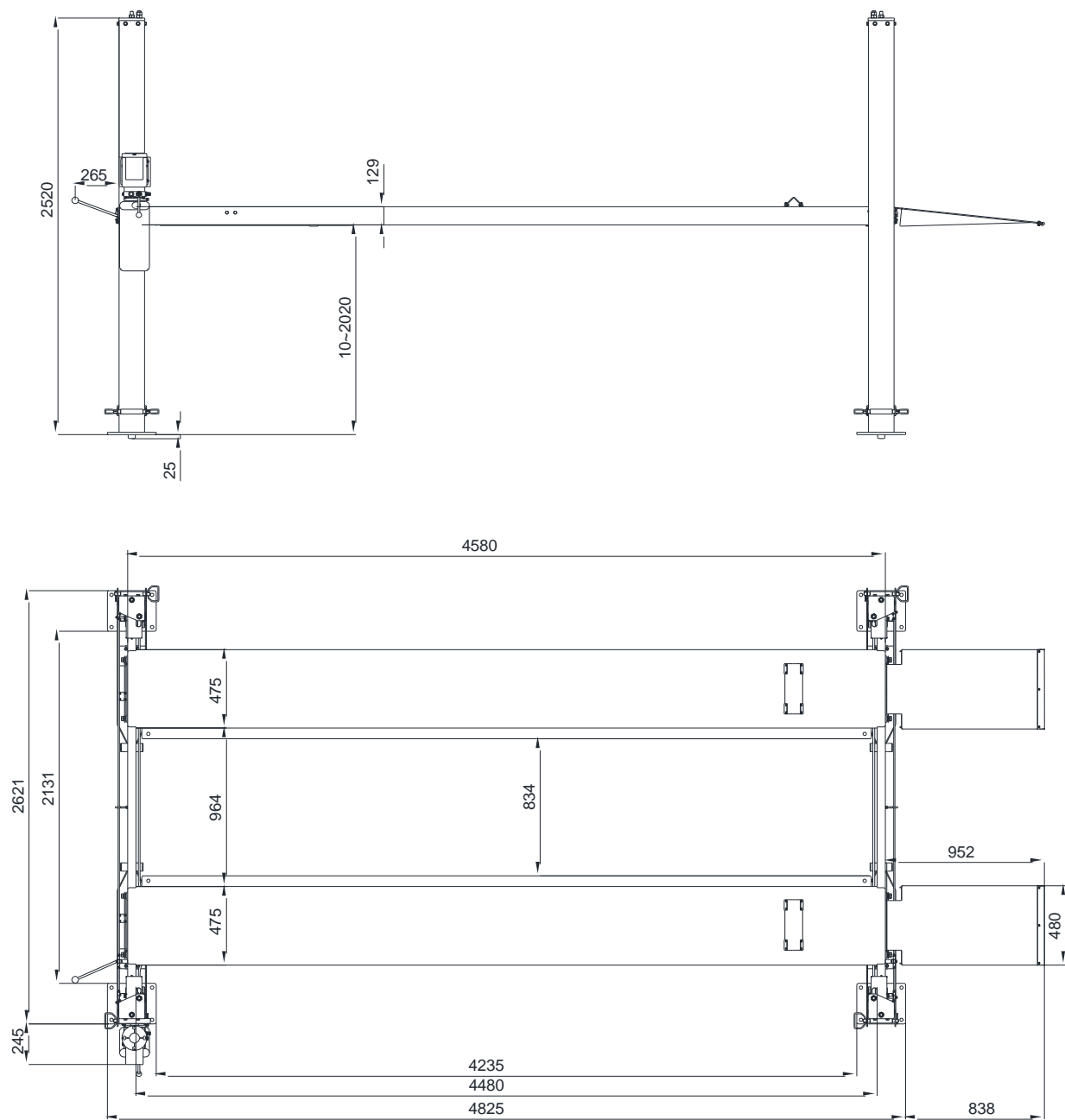
The motor direction of rotation is shown in the label placed on the motor.

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	200 bar

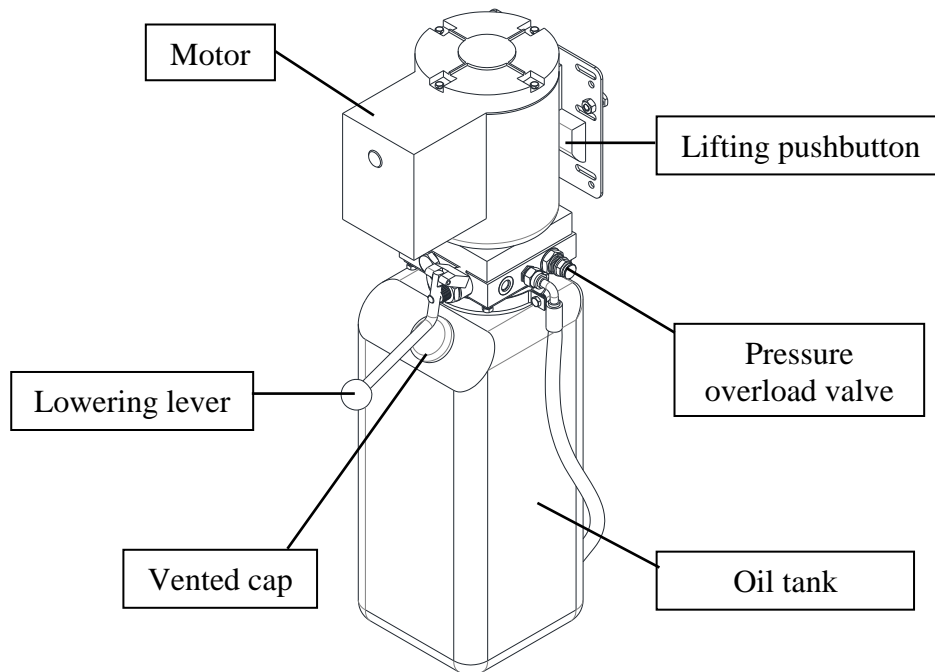
Figure 3 – LIFT LAYOUT



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
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Figure 5 -HYDRAULIC PLAN

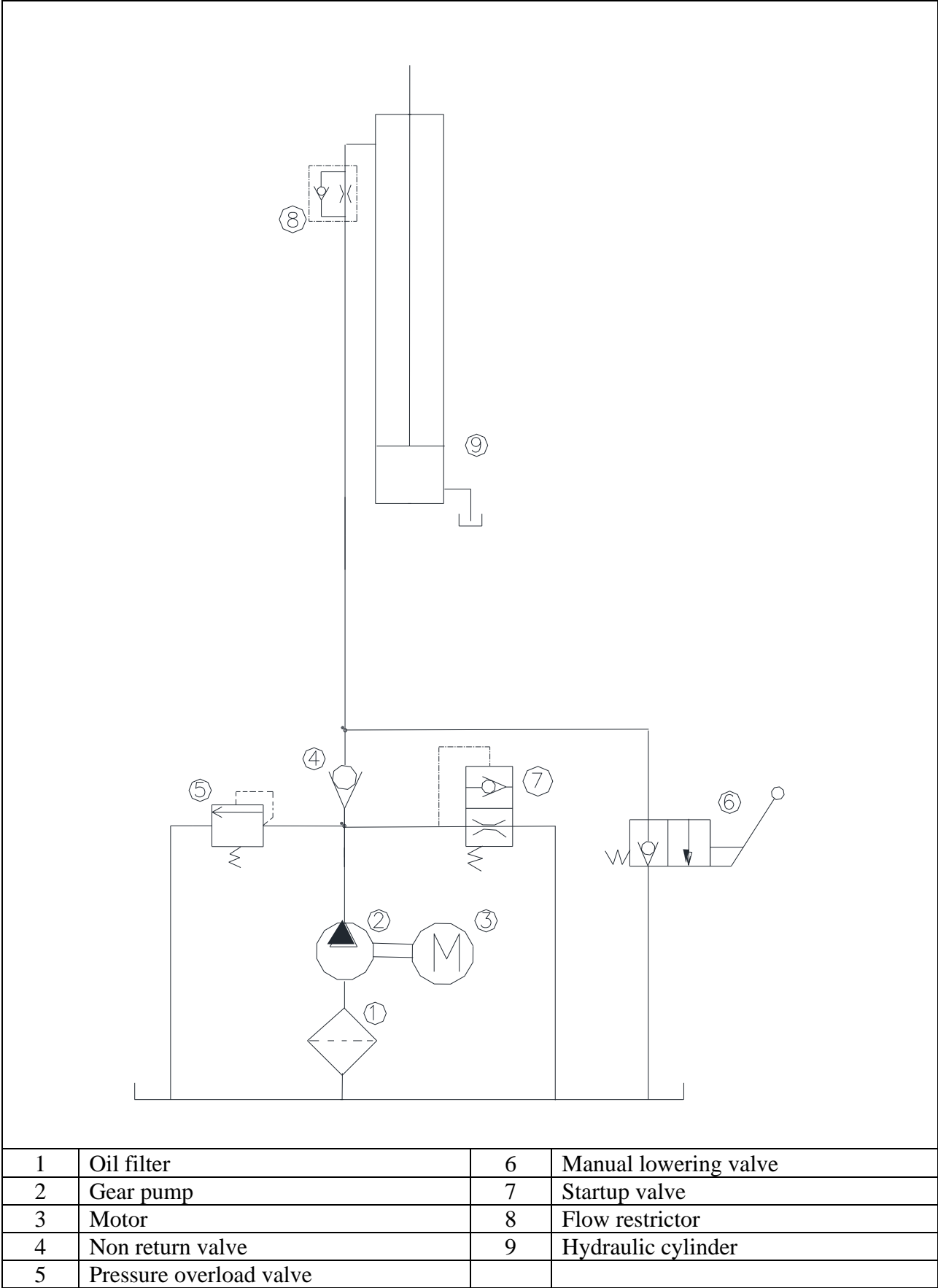
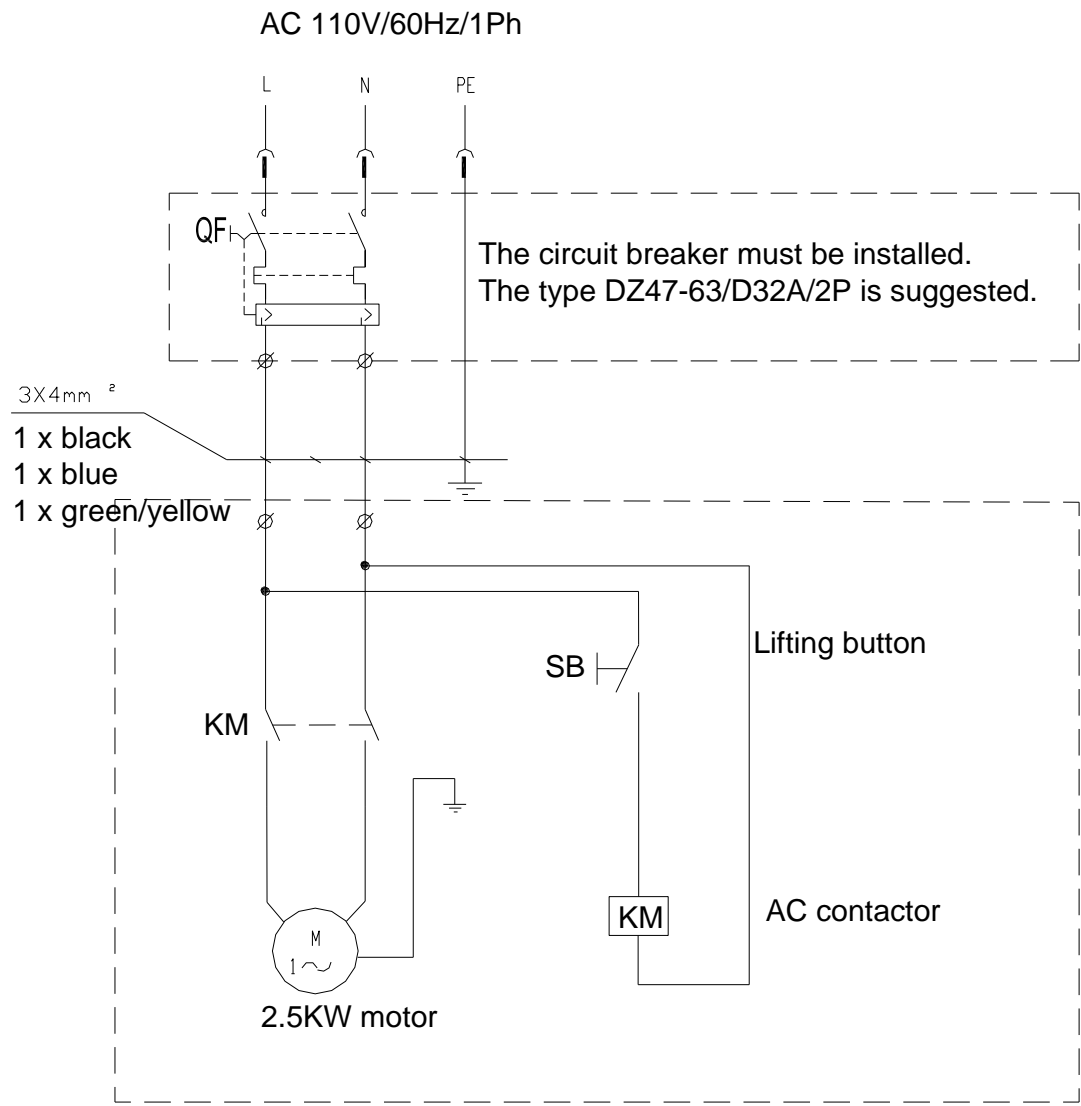



Figure 6 – ELECTRICAL DIAGRAM (110V/60Hz/1Ph)



CHAPTER 6 – 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>
---	--

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>
---	--

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>
---	---

Compressed air supply

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

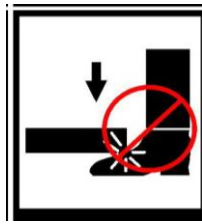


Fig. 7b



Fig. 7c

6.5 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. 8a



Fig. 8b



Fig. 8c

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 ELECTROCUTION 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. 9

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. 10

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. 11


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 back-up lock 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.
---	---

CHAPTER 7 – 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, 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.

7.2 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 160mm with an extension of at least 1.5m from anchoring point.

7.3 SITE LAYOUT

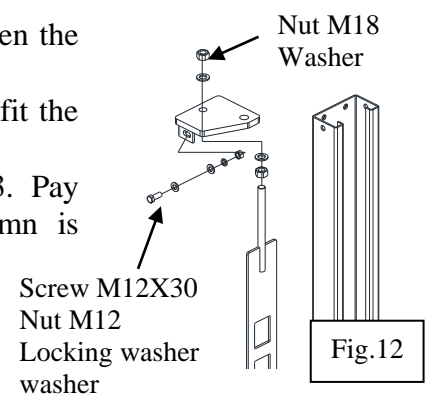
- Determine which end of the lift will be approach side;
- Determine which side the power-side runway (with the hydraulic cylinder attached) will be located on. Remember that the power-side runway must be installed on the same side as the power-side column.

7.4 ASSEMBLY OF COLUMN (ref. fig. 12)



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

- Mount the top plate on the respective column as shown. Tighten the screws and nuts;
- 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. Pay attention that the off-side diagonal to the power-side column is different from other two off-side columns.



7.5 CONNECTING COLUMN TO TRANSVERSE BEAM (ref. fig. 13)



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

- 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.

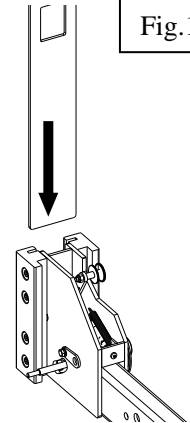


Fig.13

7.6 BOLTING RUNWAY TO TRANSVERSE BEAM (ref. fig. 14)



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 falling and pay attention that the runway is upside;
- Place the runways on transverse 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 transverse beam.

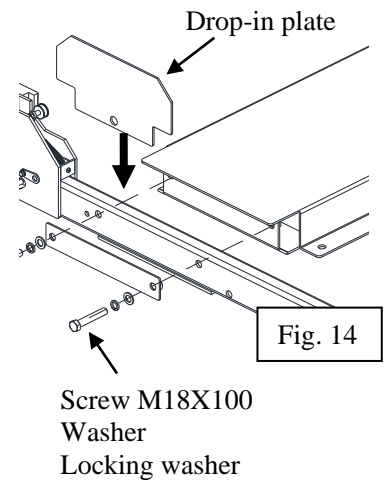


Fig. 14

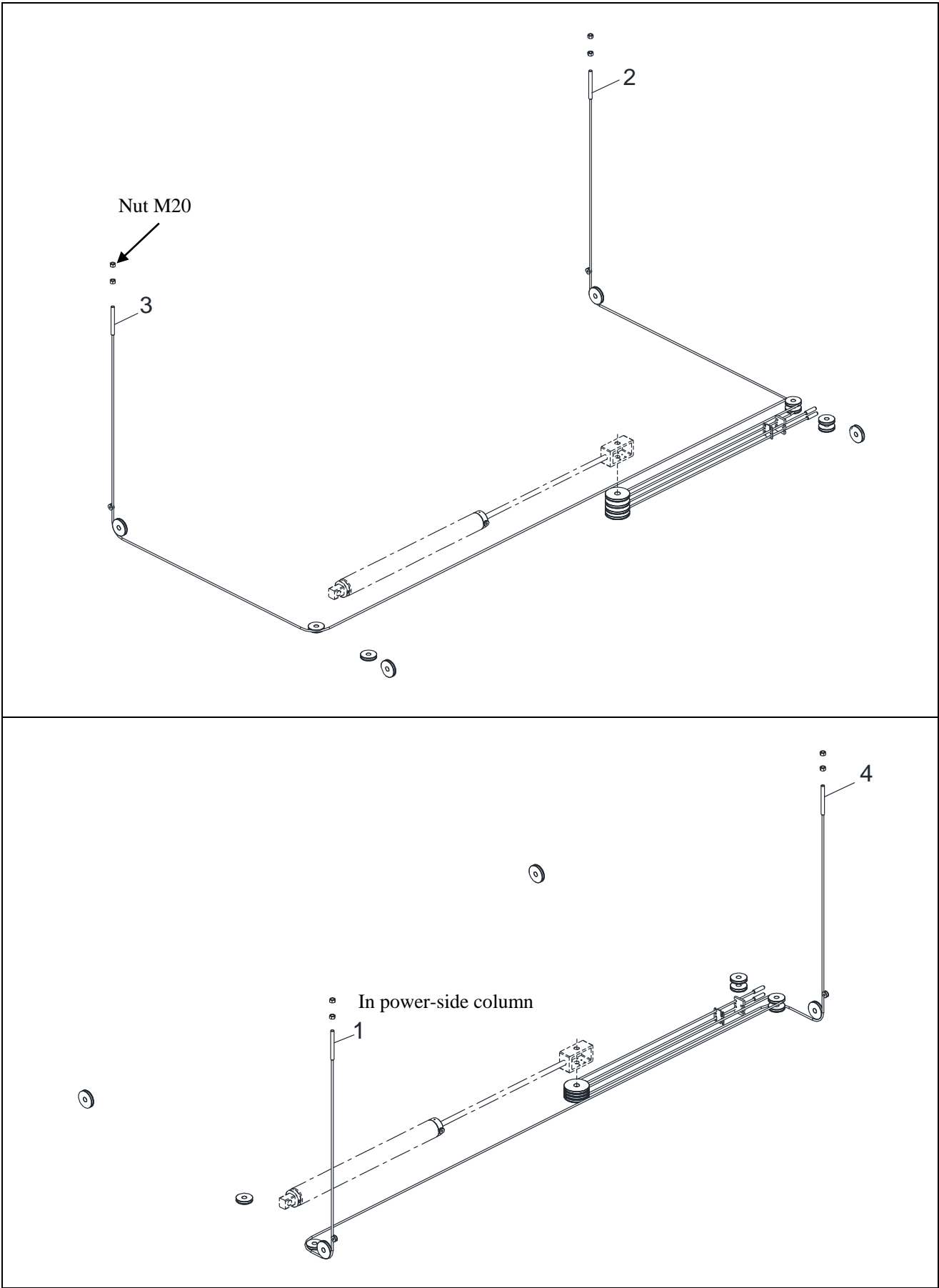
7.7 ROUTING STEEL CABLE (ref. fig. 15)



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.

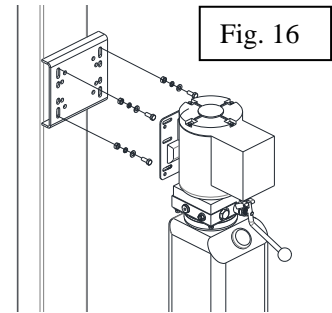
- Slide the cables from the end of power-side runway and route the cables through the pulleys in transverse beams referring to the routing diagram (fig. 15). Make sure that the cables are not twisted during routing and are in the proper pulley grooves. Make sure the cables are routed correctly on the 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.

Figure 15 – CABLE ROUTING DIAGRAM



7.8 INSTALLATION OF POWER UNIT (ref. fig. 16)

- Attach the power unit onto the bracket on the power side column;
- Secure it using M8X20 screws, M8 nuts and the washers;
- Make sure to keep the power unit clean.



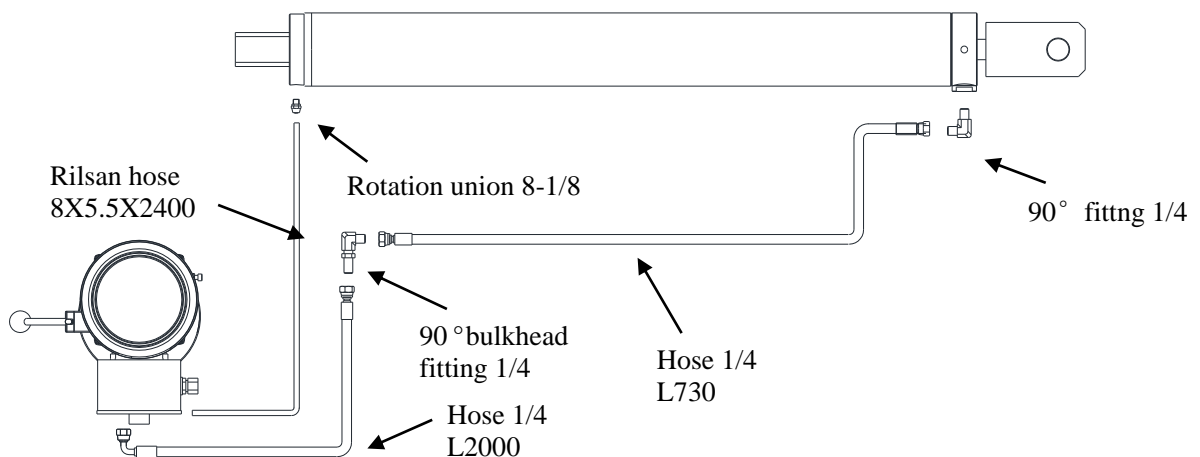
7.9 CONNECTION OF HYDRAULIC HOSES (ref. fig.17)



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

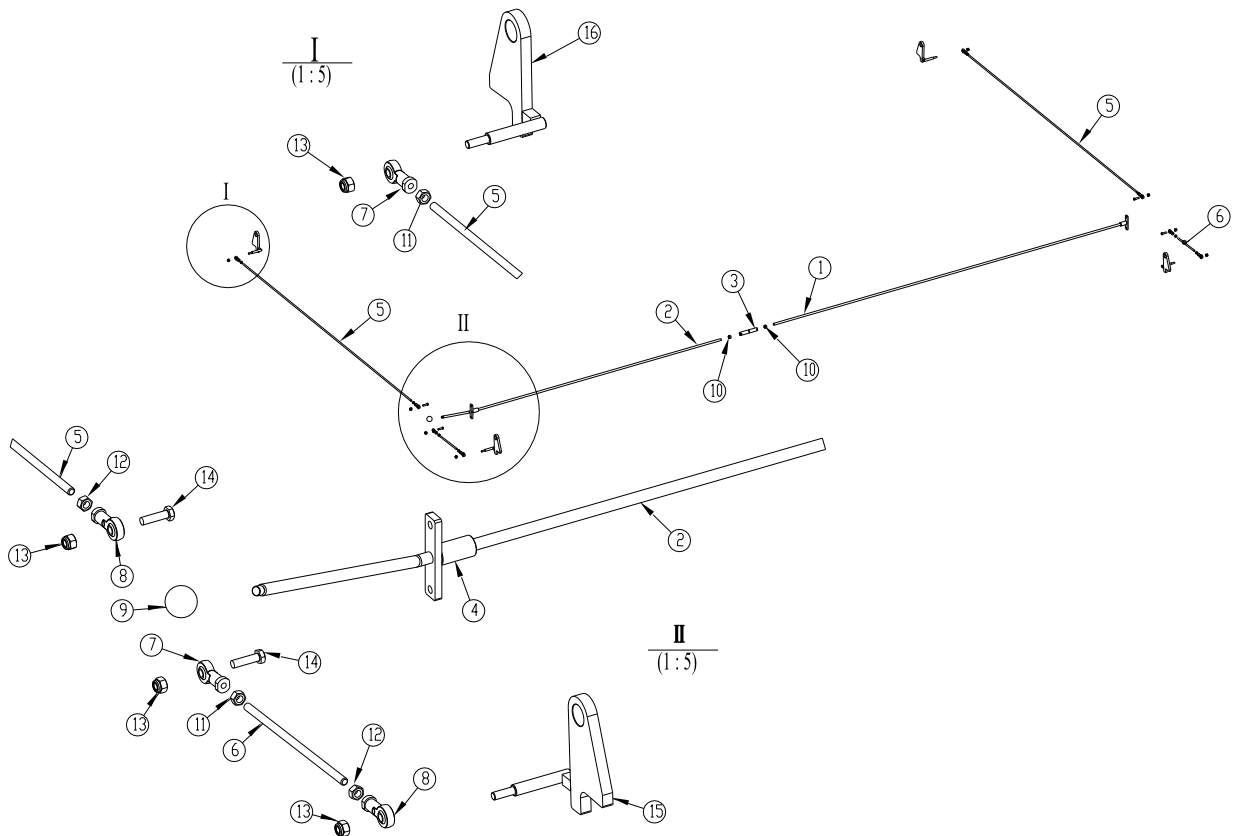


7.10 LOCK SYSTEM ASSEMBLY (ref. fig. 18)

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.

Figure 18 – LOCK SYSTEM ASSEMBLY



Item	Description	Qty	Item	Description	Qty
1	Latch release rod B	1	9	Knob M12X40	1
2	Latch release rod A	1	10	Nut M12	2
3	Coupler	1	11	Nut M8 – left handed	4
4	Spacer	2	12	Nut M8	4
5	Long stud	2	13	Self-locking nut M8	8
6	Short stud	2	14	Screw M8X30	4
7	Bearing M8 – left handed	4	15	Right latch	2
8	Bearing M8	4	16	Left latch	2

7.11 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.

7.12 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 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.

7.13 FINAL INSTALLATION

7.13.1 RUNWAY LEVELING ADJUSTMENT



**Runways must be leveled side to side, front to rear.
The maximum tolerance cannot be over 3mm.**

- 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.

7.13.2 LOCKING POSITION ADJUSTMENT

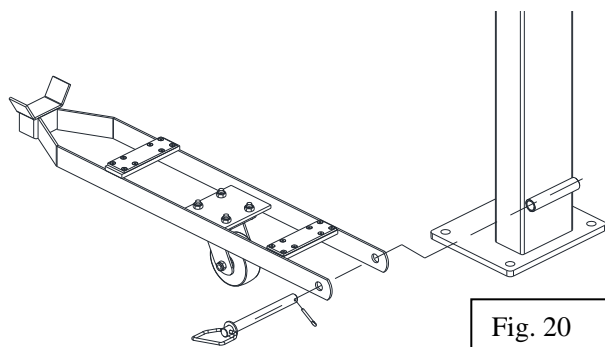
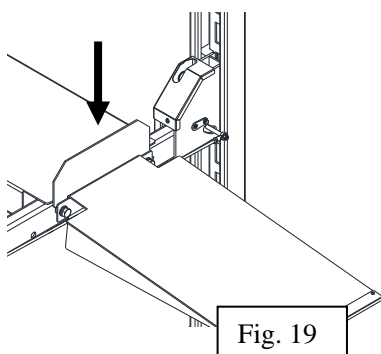


All latches must be engaging uniformly before any attempt is made to work on or near the vehicle.

- Raise the lift from bottom to top and verify if 12 locking latch clicks can be heard;
- 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 12.

7.13.3 ACCESSORY INSTALLATION (ref. fig. 19)

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




7.13.4 CASTER KIT INSTALLATION (ref. fig. 20, if available)

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


- Raise the lift about 500mm high;
- Install it in the column as shown and secure with the pin and split pin.

7.14 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 160mm with an extension of at least 1.5m from anchoring point.
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- Using the base plate as guide, drill each hole in the concrete approximately 120mm 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.


7.15 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 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:

7.15.2 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 the lock engagement and release 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

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

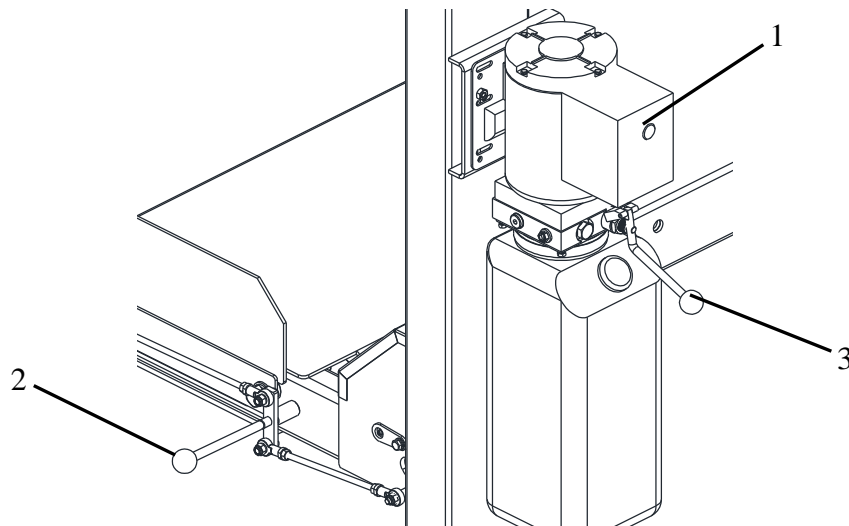
- Repeat the checks provided for by 7.15.
- Check no strange noise during lifting and lowering.
- If the runways weren't leveled, readjust.

CHAPTER 8 - OPERATION AND USE

	<p>Never operate the lift with any person or equipment below.</p> <p>Never exceed the rated lifting capacity.</p> <p>Always ensure that all latches are engaged well before any attempt is made to work on or near the vehicle.</p> <p>Never leave the lift in an elevated position unless the safeties are engaged.</p> <p>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.</p>
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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 the all personnel must be exit before the lift is raised;
- Raise the lift by pushing the lifting button until reaching the desired 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.

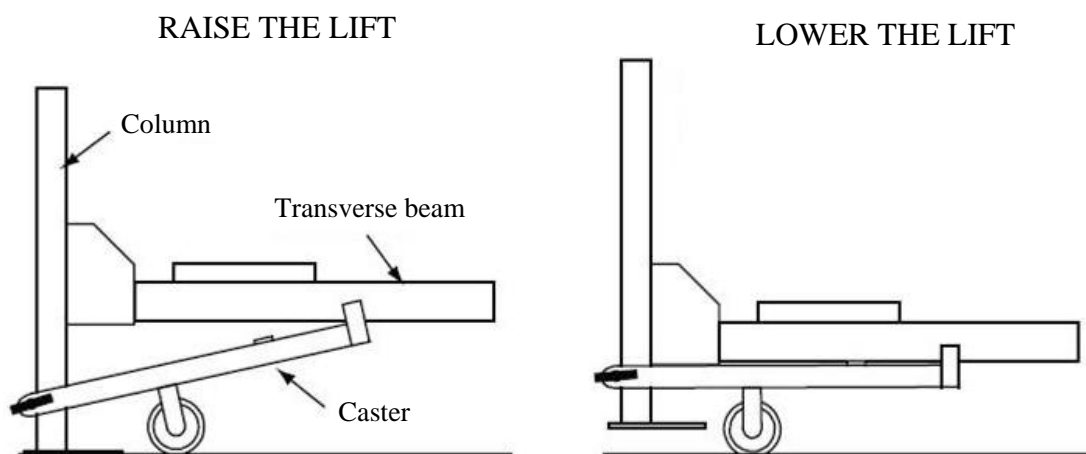
8.1.3 LOWERING

- 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 (ref. fig. 22, if available)

- 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



CHAPTER 9 - 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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

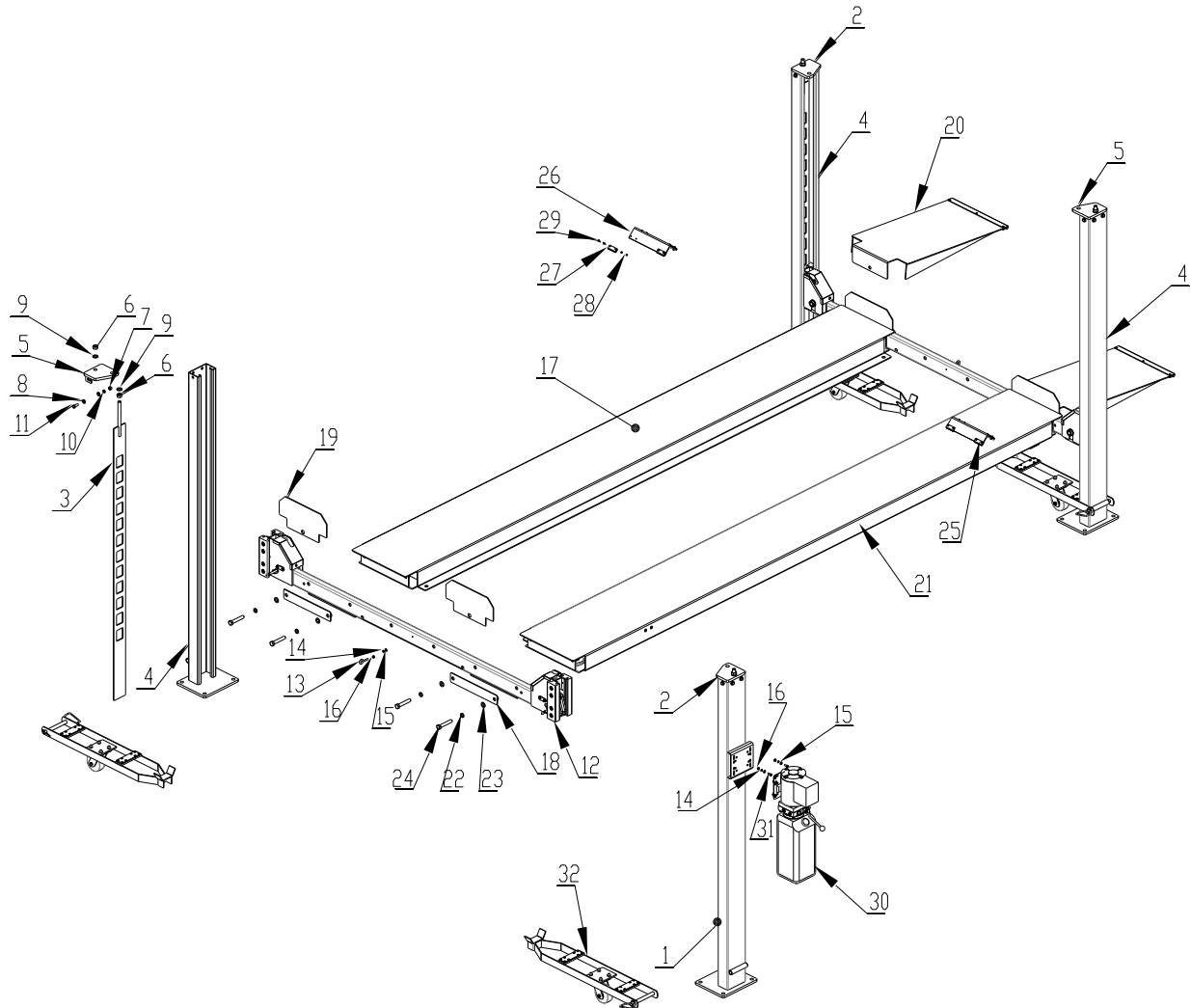
CHAPTER 10 – TROUBLESHOOTING

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

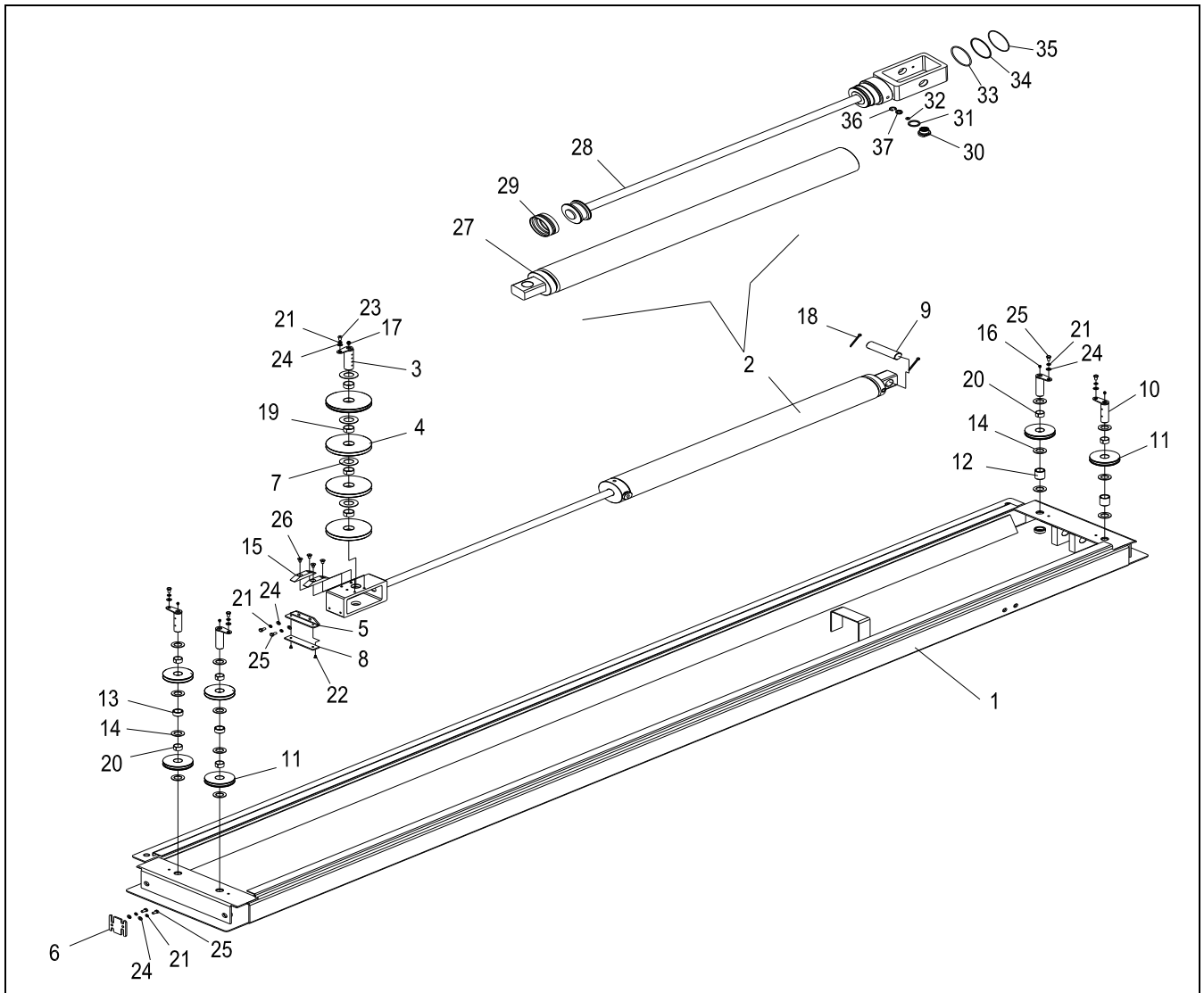
CHAPTER 11 – PART LIST

Figure 23 – GENERAL PART LIST



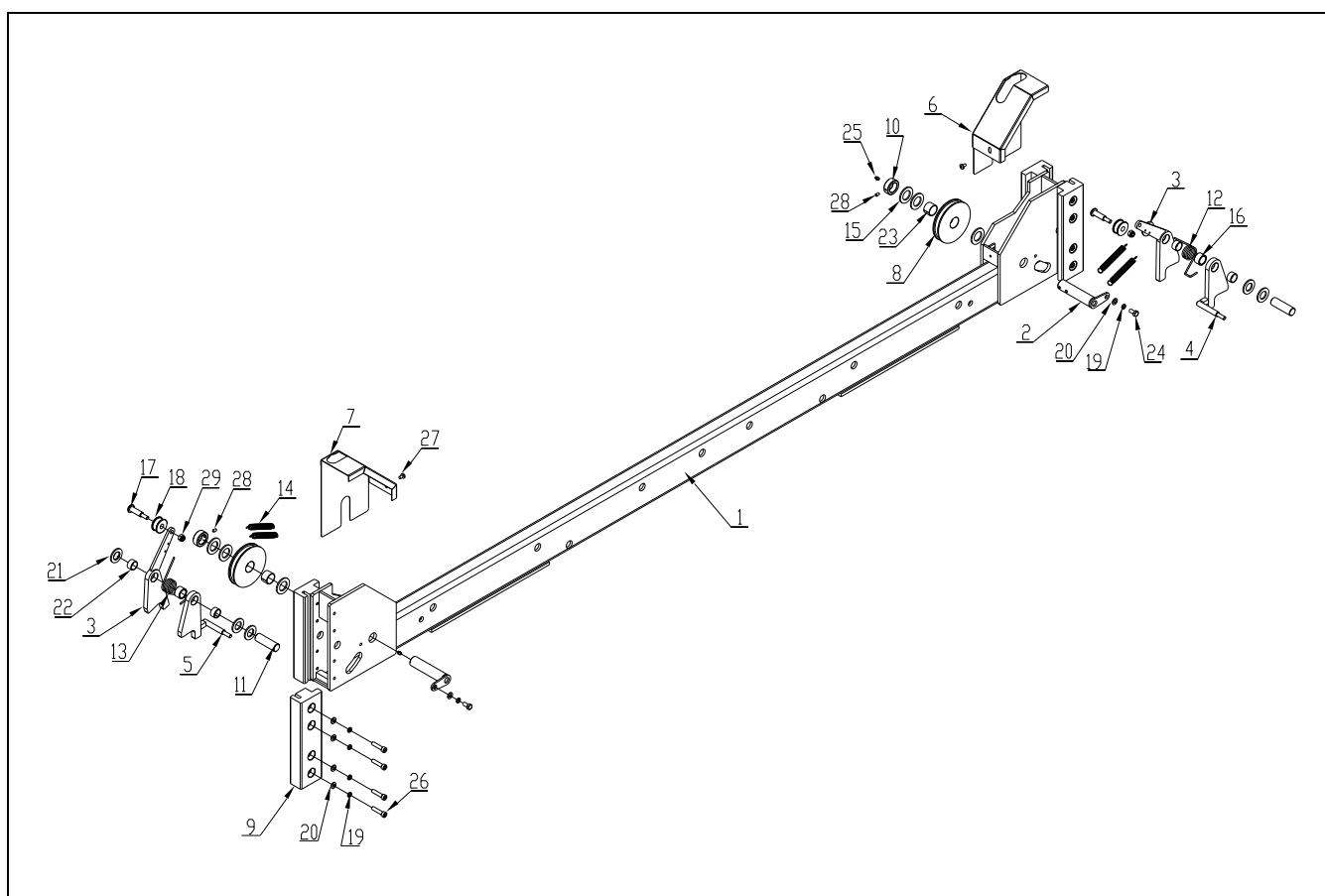
Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z92B110100	Column weldment A	1	17	Z92C330200	Off-side runway	1
2	Z92A110400A	Top plate A	2	18	Z92A823700	Link frame	4
3	Z92B110300	Latch rack	4	19	Z92A330238	Wheel stop plate	4
4	Z92B110200	Column weldment B	3	20	Z92A810000	Drive-on ramp	2
5	Z92A110400B	Top plate B	2	21	Z92C330000	Power-side runway	1
6	0203015	Nut M18	8	22	0208018	Locking washer D.18	16
7	0203023	Nut M12	16	23	0205021	Washer D.18	16
8	0205013	Washer D.12	32	24	0201124	Screw M18X100	16
9	0205021	Washer D.18	8	25	Z92A300100	Wheel chock	2
10	0208009	Locking washer 12	16	26	Z92A300101	Angle plate	2
11	0201061	Screw M12X30	16	27	Z92A300102	Rubber	8
12	Z92A220000	Transverse beam	2	28	0203031	Nut M5	16
13	0215116	Bolt M8X45	2	29	0206025	Screw M5X18	16
14	0208006	Locking washer D.8	42	30	0302011	110V/1.5PH power unit	1
15	0205008	Washer D.8	42	31	0201038	Screw M8X25	4
16	0203029	Nut M8	6	32	Z92A100300	Caster kit	4

Figure 24 – POWER-SIDE RUNWAY ASSEMBLY



Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z92C330100	Runway weldment	1	20	0210007	Bush 2518/SF-1	6
2	Z92BY90000	Cylinder unit	1	21	0208006	Locking washer D.8	9
3	Z92B330800	Cable pulley shaft B	1	22	0207008	Screw M5X10	2
4	Z92B330401	Cable pulley A	4	23	0206070	Screw M8X16	1
5	Z92B330315	Upper slider support	1	24	0205008	Washer D.8	9
6	Z92B330314	Cable lock plate B	1	25	0201026	Screw M8X16	8
7	Z92B330313	Copper washer	4	26	0207070	Screw M8X16	4
8	Z92B330312	Upper nylon slider	1	27	Z92BY90100	Cylinder liner	1
9	Z92B310003	Cylinder pin	1	28	Z92BY90200	Complete cylinder shaft	1
10	Z92A330800	Cable pulley shaft A	4	29	0312018	Gasket 90X70X22.4 *	1
11	Z92A330401	Cable pulley A	6	30	Z72BY90008	Restrictor body	1
12	Z92A330310	Spacer	2	31	0313076	Washer 3/4 *	1
13	Z92A330309	Spacer	2	32	Z11AY63807	Flow restrictor	1
14	Z92A220204	Steel shim	14	33	0309122	O-ring 82.5X3.55 *	1
15	Z92B330316	Lower nylon slider	2	34	0313074	Sacer 90X84.6X1.5 *	1
16	0215072	Greaser M6X1	1	35	0309123	O-ring 90X2 *	1
17	0215041	Greaser 8X1	1	36	0311025	Seeger D.19 *	1
18	0213113	Split pin 5X50	2	37	Z72BY90007	Seager ring	1
19	0210065	Bush 3018/SF-1	4	*	Z92BY9000S	Seal kit	1

Figure 25 – TRANSVERSE BEAM ASSEMBLY



Item	Part number	Description	Qty	Item	Part number	Description	Qty
1	Z92A220100	Beam weldment	1	16	Z92A220219	Spacer	2
2	Z92A220400	Cable pulley shaft	2	17	Z92A220212	Roller shaft	2
3	Z92A220600	Cable slack latch	2	18	Z92A220211	Nylon roller	2
4	Z92A220700	Left safety latch	1	19	0208006	Locking washer D.8	18
5	Z92A220800	Right safety latch	1	20	0205008	Washer D.8	18
6	Z92A221600	Left pulley cover	1	21	0205022	Washer D.20	6
7	Z92A221700	Right pulley cover	1	22	0210058	Bush 2012/SF-1	4
8	Z92A220901	Cable pulley	2	23	0210007	Bush 2518/SF-1	2
9	Z92A220202	Nylon slider	4	24	0201026	Screw M8X16	2
10	Z92A220203	Spacer	2	25	0215041	Greaser M6X1	2
11	Z92A220205	Latch shaft	2	26	0202041	Screw M8X35	16
12	Z71P211809	Left return spring	1	27	0206031	Screw M6X10	2
13	Z71P211810	Right return spring	1	28	0209010	Screw M6X10	2
14	Z71P211811	Spring	4	29	0204004	Self-locking nut M8	2
15	Z92A220204	Steel shim	6				

Figure 26 – LOCK SYSTEM ASSEMBLY

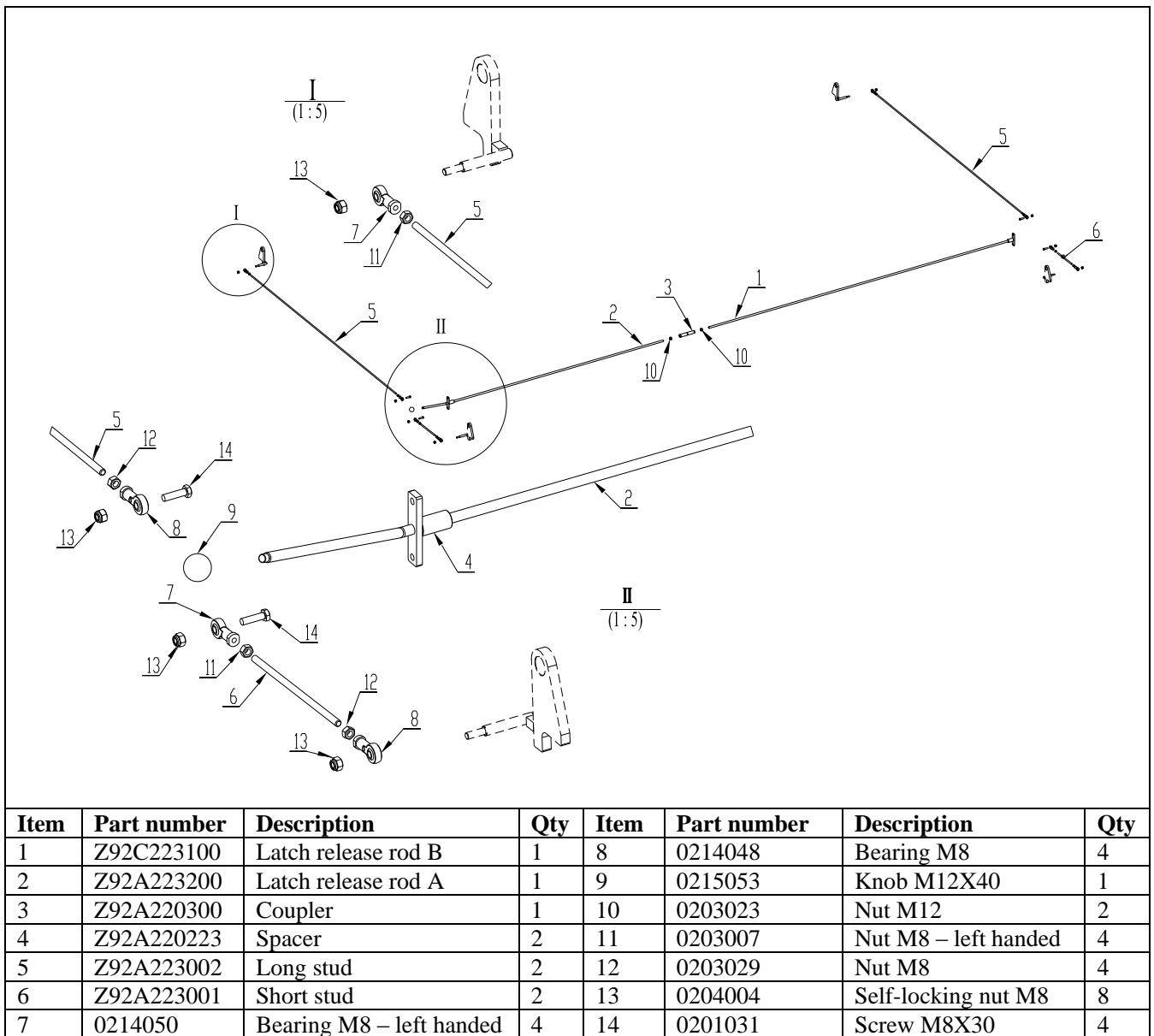


Figure 27 – STEEL CABLE ASSEMBLY

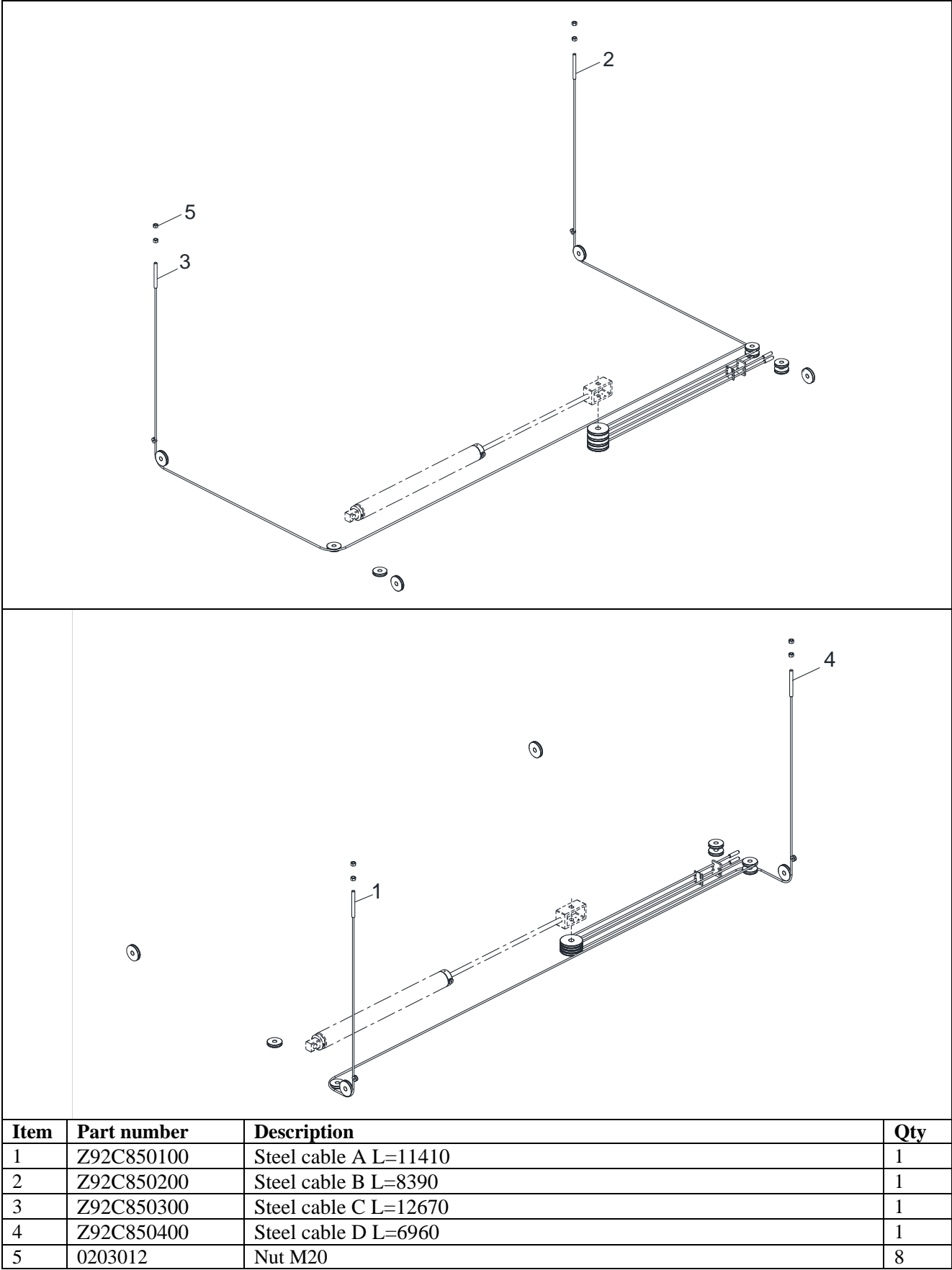


Figure 28 – HYDRAULIC LINE

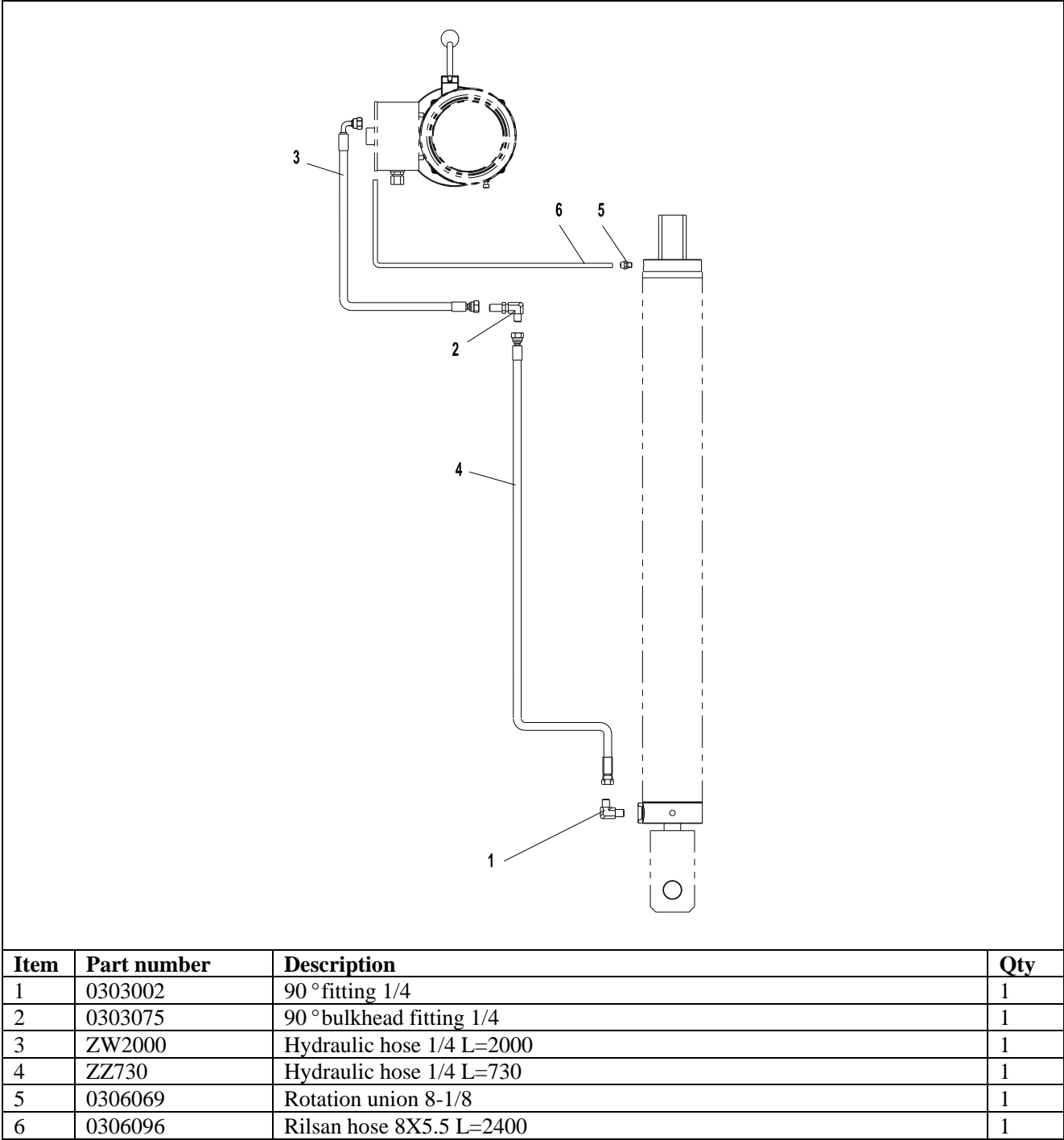
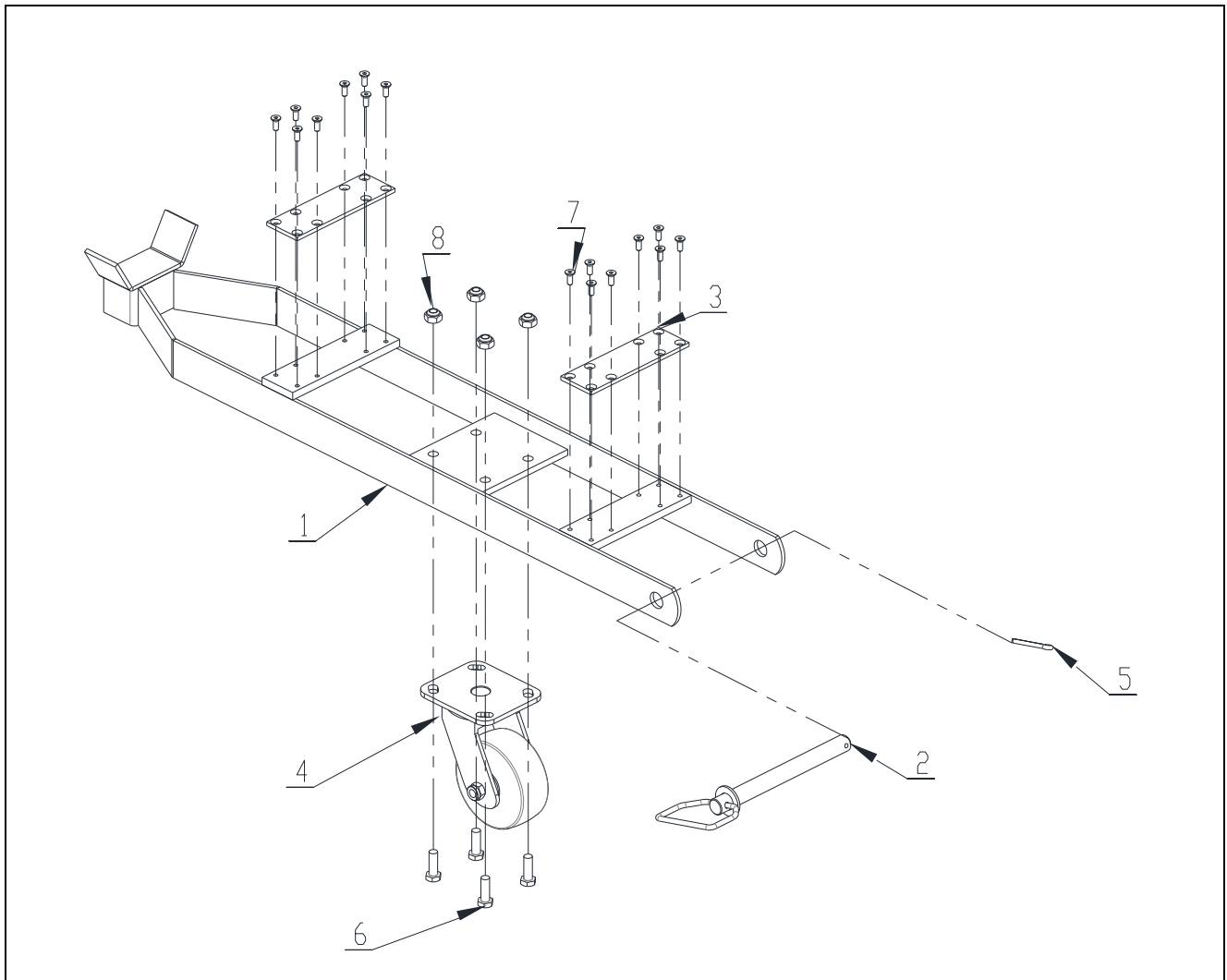


Figure 29 – CASTER KIT ASSEMBLY - OPTIONAL



Item	Part number	Description	Qty
1	Z92A110500	Caster beam	1
2	Z92A111500	Hitch pin	1
3	Z92A110504	Rubber protection	2
4	0511201	Caster	1
5	0213113	Split pin 5X50	1
6	0201049	Screw M10X30	4
7	0207024	Screw M6X16	16
8	0204005	Self-locking nut M10	4