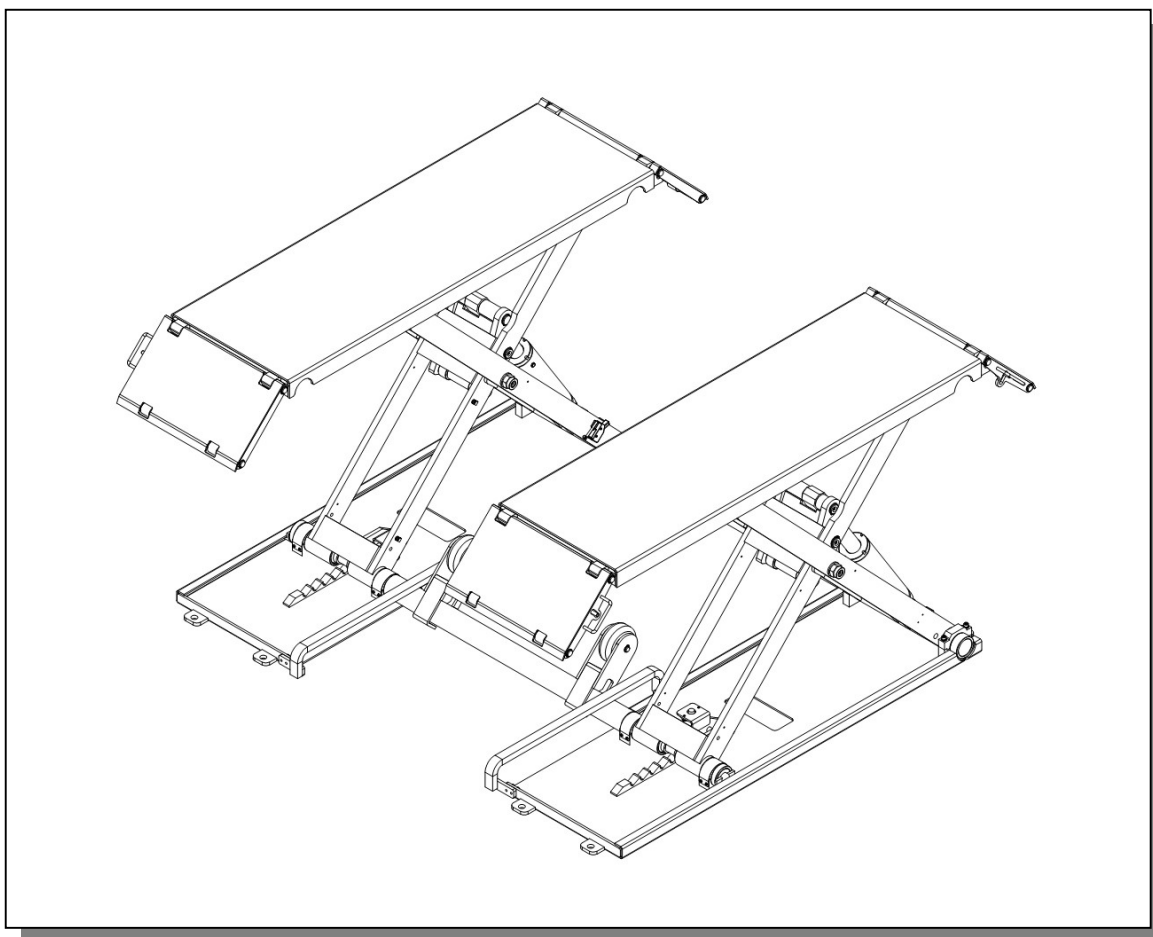


MMUZ30LM

Movable SCISSOR LIFT



INSTRUCTION & MAINTENANCE MANUAL



Read this entire manual carefully and completely
before installation or operation of the lift

SCISSOR LIFT INSTRUCTION MANUAL

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1. Packing, transport and storage



All packing, lifting, handling, transport and unpacking operations are to be performed exclusively by expert personnel.

1.1.Packing:

Standard equipment:

Accessory box (3# CTN), main and sub beam (1 # CTN), control box 2# CTN).

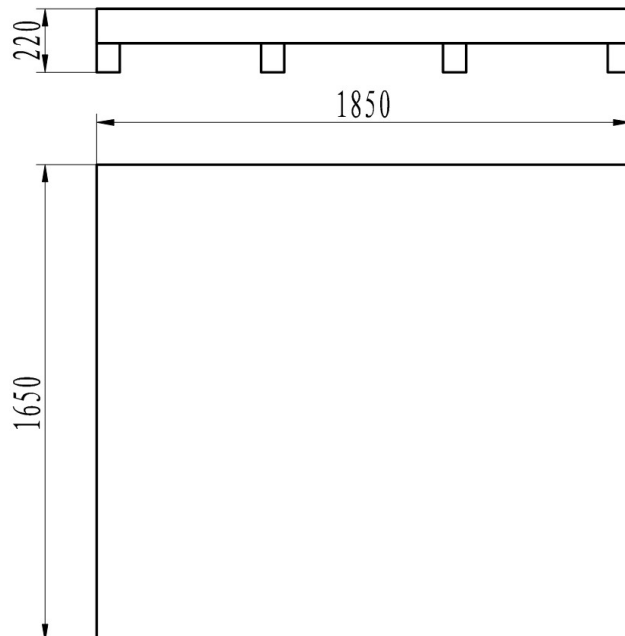
Packing List

NO.	Name	Accessory name and quantity
1	Lift	1 piece
2	Control Station	1 set
3	Accessory box	1 set(details are in the accessories packing list)

Table 1

Packing dimension picture

Scissor lift:1850X1650X220



Picture 1

1.2. Transport:



Packing can be lifted or moved by lift trucks, cranes or bridge cranes. In case of slinging, a second person must always take care of the load, in order to avoid dangerous oscillations.

During loading and unloading operation, goods must be handled by vehicles or ships.

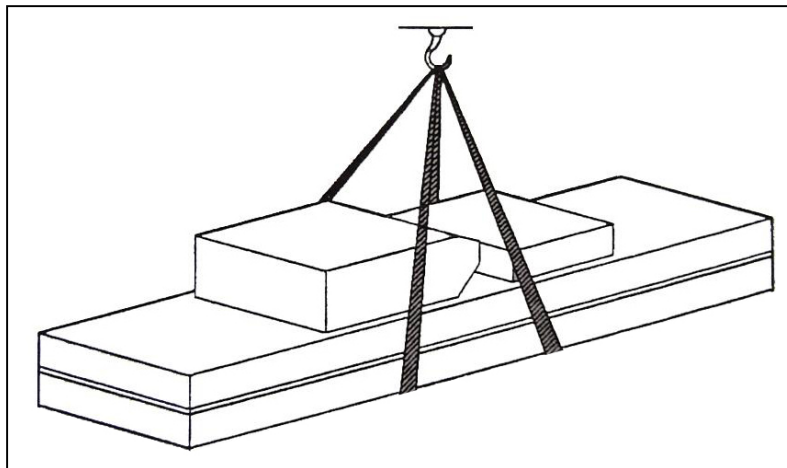
At the arrival of the goods, verify that all items specified in the delivery notes are included. In case of missing parts possible defects or damage may due to transport operations.

If finding missing parts, possible defects or damage due to transport, one should examine damaged cartons according to <<Accessories Packing List>> to verify the condition of damaged goods and missing parts, also the person in charge or the carrier must be immediately informed.



The machine is heavy goods! Don't take manpower load and unload and transporting way into consideration, the safety of working is important.

Furthermore, during loading and unloading operation goods must be handled as shown in the picture. (Picture 2)



Picture 2 (Goods-lifted)

1.3.Storage:

-The machine equipment should be stocked in the warehouse, if stocked outside should do the disposal well of waterproof.

-Use box truck in the process of transport, use container storage when shipping.

-The control box should be placed perpendicularly during the transport; and prevent other goods from extrusion.

-The temperature for machine storage : -25°C-- 55°C

2. Manual introduction



This manual has been prepared for workshop personnel expert in the use of the lift operator and technicians responsible for routine maintenance fitter.

Workers should read the <<Instruction & Maintenance Manual>> carefully before carrying out any operation with the lift. This manual contains important information regarding:

- The personal safety of operators and maintenance workers.
- Lift safety.
- The safety of lifted vehicles.



Several tips should be done by the operator as follow:

1. Well conserving the manual. Manufacturer owns the right to make little change for the manual owing to the improvement of technology.
2. Good disposal the used oil.
3. The machine must be demolished by authorized technicians, just like for assembling

3. Description of the machine

3.1. Machine Application



Mid-rise scissor lift can lift each kind of vehicle whose weight is less than 3000kg, suitable for use in vehicle tests, maintenance and caring for automobiles, which is particularly suitable for use in the basement or on the floor, without construction and hole.



Lifts are designed and built to lift vehicles and hold them in the elevated position in an enclosed workshop. All other uses of the lifts are unauthorized. In particular, the lifts are not suitable for:

- Washing spray work;**
- Use in outdoors;**
- Creating raised platforms for personnel or lifting personnel;**
- Use as a press for crushing purposes;**
- Use as elevator;**
- Use as a lift jack for lifting vehicle bodies or changing wheels.**

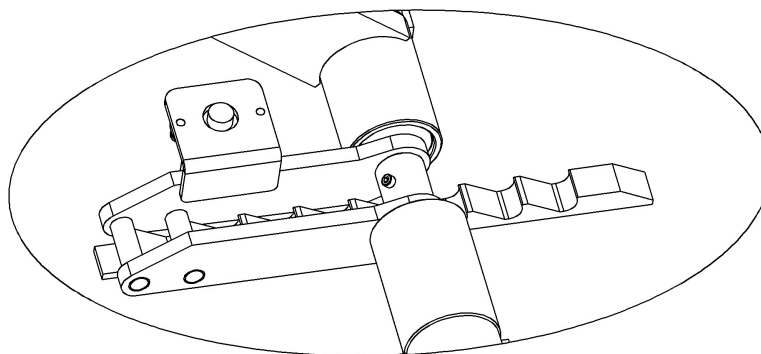


The manufacturer is not liable for any injury to persons or damage to vehicles and other property caused by the incorrect and unauthorized use of the lifts.

3.2. Structure Features

- Use hidden and thin scissor structure, dispense with construction and ground hole, the occupation is small
- Independent control box, low-voltage controlling, good security
- Same hydraulic cubage and in-phase cylinder, the synchronization of platform
- With hydraulic lock and mechanical dual-gear safety-claw lock double safety device automatically open when lowering. Lock operation can has the safety-claw located, adversely, safe & reliable.
- Own protection of safety valve and burst-proof equipment for hydraulic failure and over loading. So when the oil pipe bursts, the machine will not fall quickly.
- Sliding blocks adopt oil free super-wearable materials.
- Use high quality hydraulic or electric element parts made in Italy, Germany, Japan and so on.
- Own manual lowering operation when the power is cut.

Safety lock structure



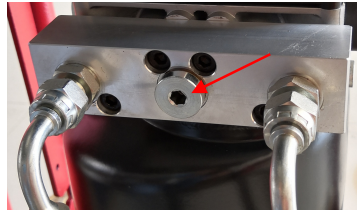
Picture 3

Safety valve

Each hydraulic oil cylinder has one safety valve. It is at the inner position of the oil cylinder joint. It can prevent the sudden explosion of oil hose to cause the platform decline. Avoid the unnecessary safety incidents.

CE test point

Position of this CE test point is shown at below picture. In normal situation, there is a plug in this position; if you need to do the pressure testing, you can unscrew the plug and connect with a pressure gauge to test.

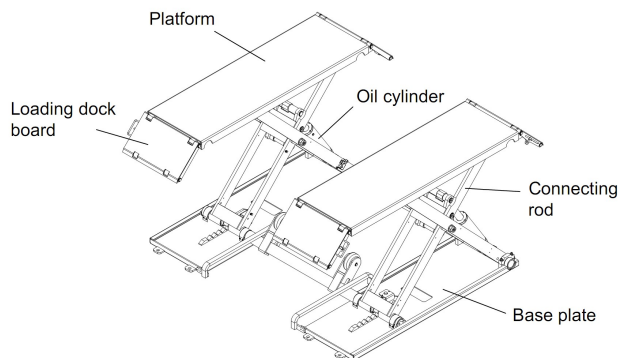


3.3. Equipment

- Machine basement (The position and space of equipment installation)
- Machine frame (The main structure of lift and insurance institution)
- Control box (Machine-controlled part)

3.4. Frame

Make of base plate, connecting rod, main lifting platform, hydraulic oil cylinder and loading dock board



Picture 4

3.5. Control box

Under the control box is hydraulic oil tank and hydraulic pump, valve and other control system. On the control box is electrical system.

Function of each valve on the power unit	
Name	Function
Gear pump	Extract hydraulic oil and provide high pressure.
Connecting block	Connect the motor and the gear pump.
Motor	Provide power for the gear pump.
Overflow valve	Adjust oil pressure.
Lowering solenoid valve	Control flow of the hydraulic oil.
One-way valve	Control the one-way flow of hydraulic oil.
Ball valve	Debugging and control the returned oil.

Table 2

4. Specifications

4.1 Main technical parameter

Machine type	Scissor lift
Drive	Electrical hydraulic
Lifting capacity	3000kg
Machine lift height	1010mm
Platform initial height	105mm
Platform length	1480mm
Platform width	480mm
Lifting time	≤35s
Descent time	≤35s
Whole machine length	2030mm
Whole machine width	1810mm
Power supply	3/N/PE~380V, 50Hz, 10A
Whole machine power	2.2kw
Hydraulic oil	6L corresponds to wearable hydraulic oil
Working temperature	5-40℃
Working humidity	30-95%
Noisy	< 70db
Storage temperature	-25℃~55℃

Table 3

Motor:

Type.....Y90L
Max power..... 2.2kw
Max voltage...AC 220 \pm 5%
Max electricity..... 380V:5A
.....220V:16A
Max Frequency.....50Hz
Poles..... 4
Speed.....2800rpm/min
Building shape..... B18
Insulation class.....F

When connecting the motor refer to the enclosed diagrams, and the motor direction is clockwise.

Pump:

Type.....P4.3
Model.....gear pump
Max flux.....1.2cc/r
Joint type.....joint overfull valve
Continuous working pressure.....210bar
Intermittent working pressure...150~300bar
Inject 6 liters of wearable hydraulic oil into the oil tank.

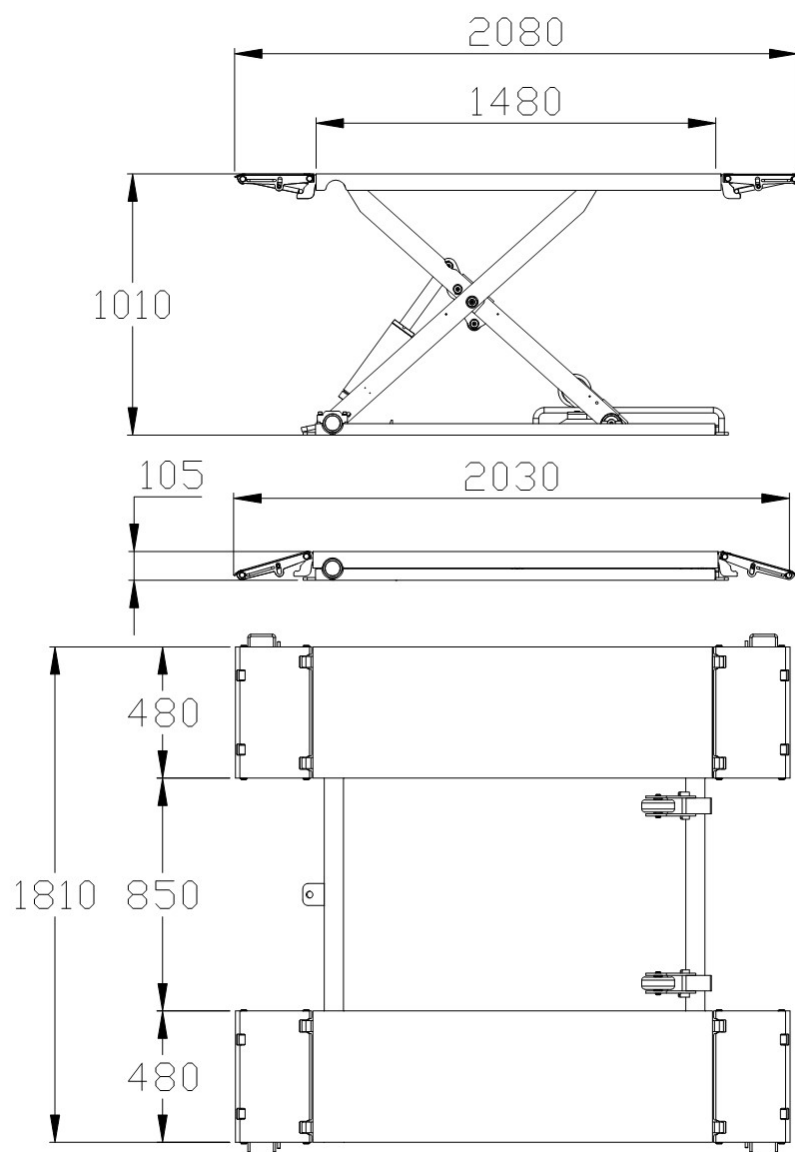
Requirements

- Concrete type 425#, the period of desiccation is 15 days
- Clean the basic layer, thickness of concrete ≥ 150 mm, the levelness of whole length ≤ 10 mm

Supply at the same time

- Connect to the power supply jack of control box (220V)

4.2 External dimension drawing



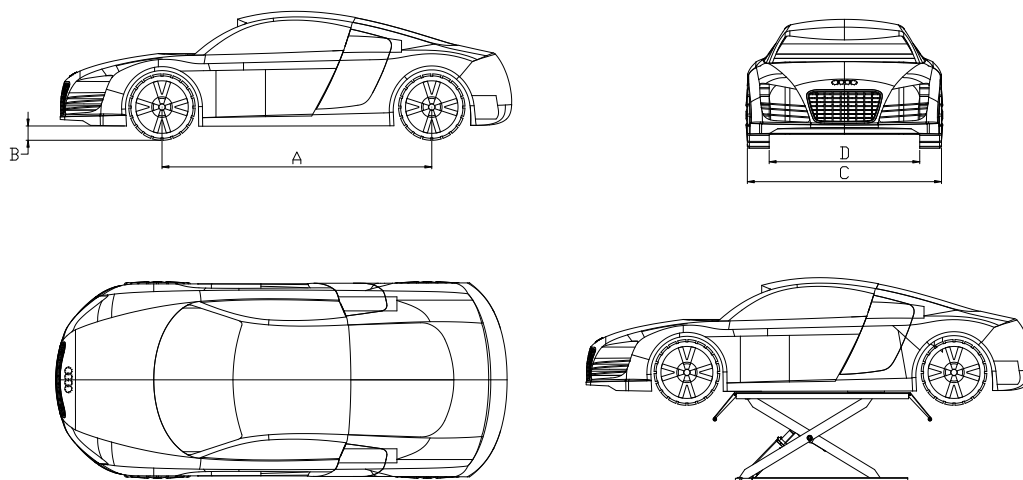
Picture 5 (Lift dimension picture)

4.3 Types of vehicles suitable for

This lift is suitable for virtually all vehicles with total weight and with dimensions not exceeding the below data. **Maximum weight not exceed than 3000kg.**

The max dimension of vehicle:

The following diagrams illustrate criteria used to define the operating limits of the lift.



Picture 5

	Scissor lift	
	Min	Max.
A	2000	4000
B	110	
C		1900
D	900	



The lower parts of the vehicle underbody could interfere with structural parts of the lift. Take particular parts of the sports-car.

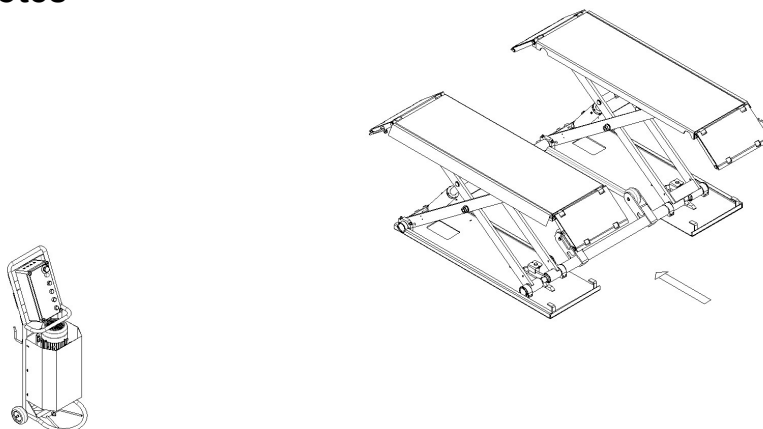
The lift will also handle customized or non-standard vehicles provided they are within the maximum specified carrying capacity.

Also the personnel safety zone must be defined in relation to vehicle with unusual dimensions.

Do not use the lift without protection devices or with the protection devices inhibited.

Failure to comply with this regulation can cause serious injury to persons, and irreparable damage to the lift and the vehicle being lifted.

5. Safety notes



Picture 7



General precautions

The operator and the maintenance fitter are required to observe the prescriptions of safety regulation in force in the country of installation of the lift.

Furthermore, the operator and maintenance fitter must:

- Always work in the stations specified and illustrated in this manual;
- Never remove or deactivate the guards and mechanical, electrical, or other types of safety devices;
- Read the safety notices placed on the machine and the safety information in this manual.



In the manual all safety notices are shown as follows:

Warning: indicates following operations that are unsafe and can cause minor injury to persons and damage the lift, the vehicle or other property.



Risk of electric shock: a specific safety notice placed on the lift in areas where the risk of electric shock is particularly high.



Risk and protection devices

For optimal personal safety and safety of vehicles, observe the following regulations:

- Do not enter the safety and safety of vehicles is being lifted. (**Picture 7**)
- Be sure to lift only approved vehicles, never exceed the specified carrying capacity, maximum height, and projection (vehicle length and width);
- Make sure that there is no person on the platforms during up and down movements and during standing



Picture 8



General risks for lifting or descent

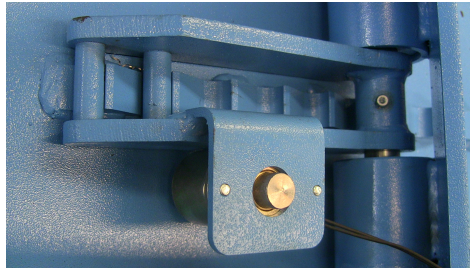
The following safety equipments are used to protect over loading or the possibility of engine failure.

In the condition of over loading, the over-flow valve will open and directly return oil to the oil tank. (Picture 8)

Safety tooth and gear module are parts which guarantee the safety of personnel beneath the machine in failure condition of other protections.

So make sure the integrity of gear module and that the safety tooth has occluded completely. (Picture 9)

There is nothing abnormal should be left on the safety modules to prevent safety gear from occlude normally.



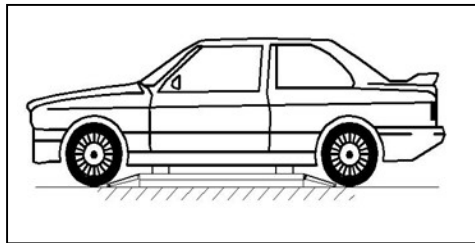
Picture 9



Risk for extrusion

During up and down operations, personnel leave the said area without following the rule and instruction.

During up and down operations, no person is admitted to work beneath the movable parts of the lift, should work in the safe zone. (Picture 10)

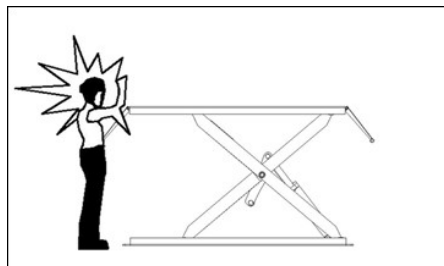


Picture 10



Risk of impact

Before the operator begins up and down movements, make sure that there are no personnel inside the danger zone. When, due to operational reasons, the lift is stopped at relatively low elevations (lower than 1.75m above the ground) personnel must be careful to avoid impact with parts of the machine not marked with special colors. (Picture 11)



Picture 11

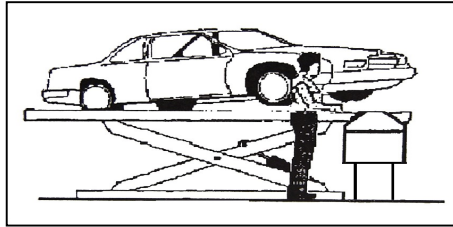


Risk of falling (vehicle)

This hazard may arise in the case of incorrect positioning of the vehicle on the platforms, overweight of the vehicle, or in the case of vehicles of dimensions that are not compatible with the capacity of the lift.

When the platform is being tested, the vehicle engine can not be turned on.

There is nothing should be placed on the lift-lowering area and the movable parts of the lift.

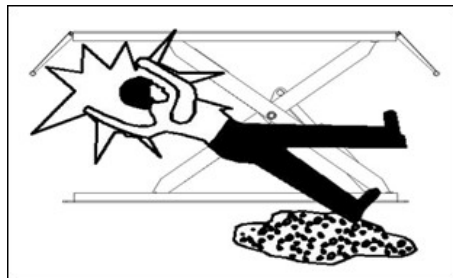


Picture 12



Risk of slipping

The floor caused by lubricant contamination of around the lift. The area beneath and immediately surrounding the lift and also the platforms must be kept clean. Remove any oil spills immediately. (Picture 13)



Picture 13



Risk of electric shock

Risk of electric shock in areas of insulated and shattered electric equipments

Do not use jets of water, steam solvents or paint next to the lift, and take special care to keep such substances clear of the electrical control panel.



Risks related to appropriate lighting

The operator and the maintenance fitter must be able to assure that all the areas of the lift are properly and uniformly illuminate compliance with the laws in force in the place of installation.

During up and down operations, the operator should continually observe the lift and can operate it only in the position of operator. When lifting and lowering the vehicle, the cushion needs being put in the bottom of chassis.



The handling of safety devices is strictly forbidden. Never exceed the maximum carrying capacity of the lift, make sure the vehicles to be lifted have no load.

It is therefore essential to adhere scrupulously to all regulations regarding use, maintenance and safety contained in this manual.

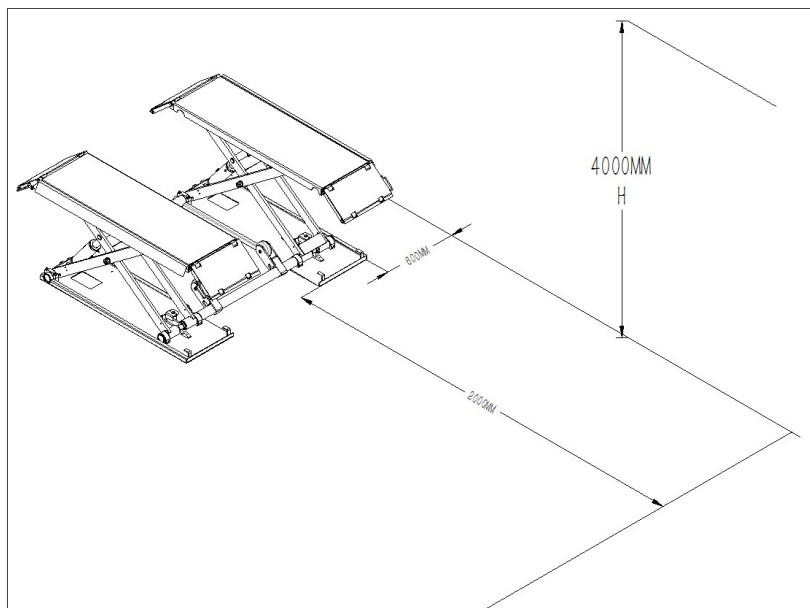
6. Installation



Skilled and authorized personnel only should be allowed to perform these operations, follow all instructions shown below carefully, in order to prevent possible damage to the car lift or risk of injury to people.

Installation requirements (Picture 14)

- The car lift must be installed according to the specified safety distances from walls, pole
- The specified safety distances from walls must be 600 mm at least, taking into consideration the necessary space to work easily. Because space for the control site and for possible runways in case of emergency is also necessary.
- The room must be previously arranged for the power supply and pneumatic feed of the car lift.
- The room must be 4000 mm in height, at least.
- The car lift can be placed on any floor, as long as it is perfectly level and sufficiently resistant. ($\geq 250 \text{ kg/cm}^2$, the thickness of concrete $\geq 150 \text{ mm}$)
- All parts of the machine must be uniformly lit with sufficient light to make sure that the adjustment and maintenance operations can be performed safely, and without reflected light, glare that could give rise to eye fatigue.
- The integrality of arrived goods should be checked before the lift is installed.
- Moving and installing lift should follow the process as the picture instructs.



Picture 14

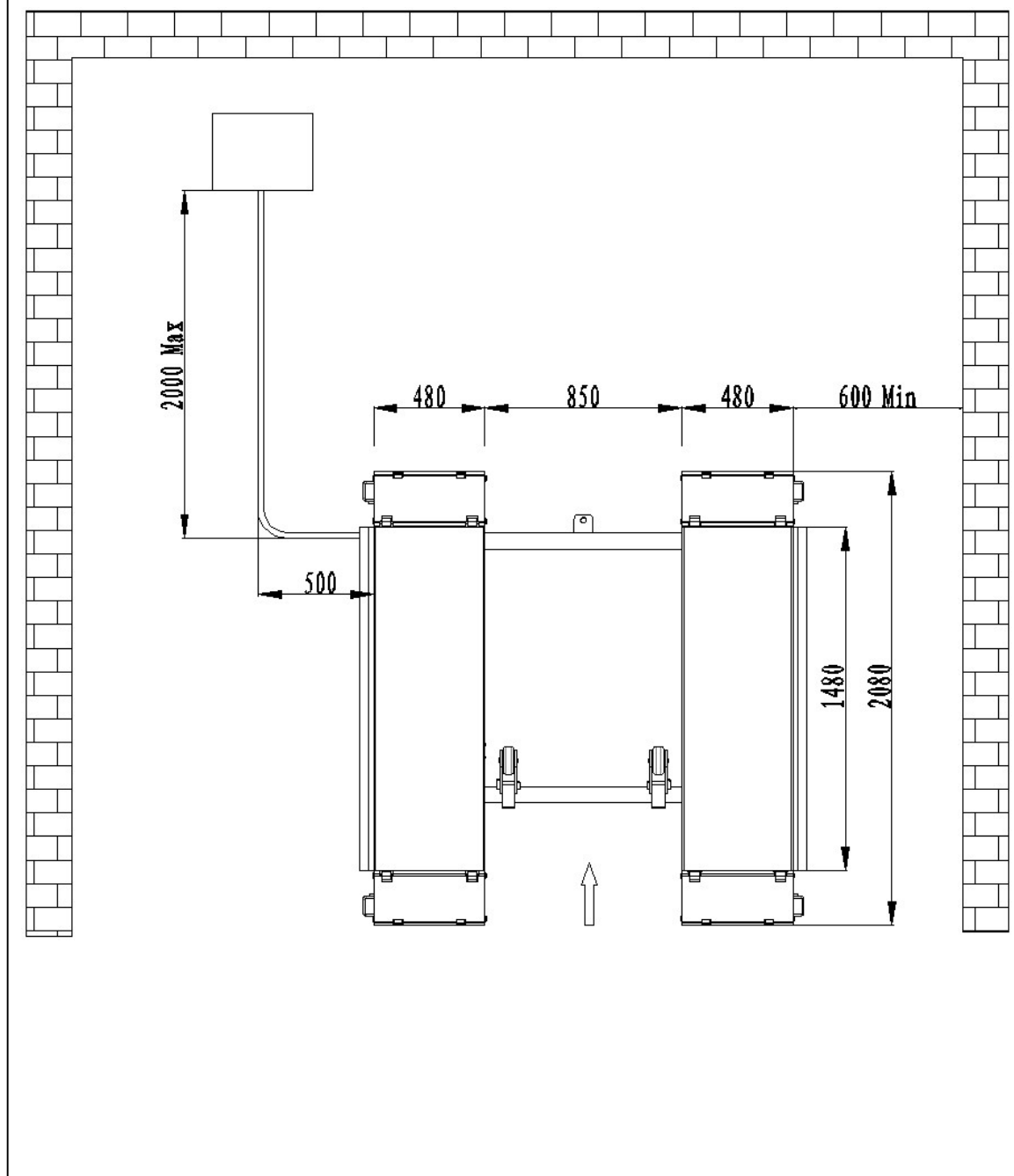


Note: The foundation of the end of the lift platform P1, P2 is the structure of concrete. When the thickness of inside level ground is less than 150mm, the end of P1, P2 should be irrigated the acreage: 6000×2500mm and thickness of concrete $\geq 150 \text{ mm}$

The basic thickness of concrete and leveling are keys, shouldn't egregiously expect the ability of level adjustment of machine-self.

Equipment basic picture

Picture 15 (The control box can be placed on the left or right)



Platform Installation:

Place two lift platforms on the position of the location

-The bottom of oil cylinder is located in the frontage of machine (the direction of getting on the vehicle)



To avoid failure of machine safety equipment, can insert a wood in the middle part of joint-pole.
Prohibit working beneath the lift when hydraulic system is not completely equipped with hydraulic oil and take the action of up and down operations.
-When moving the lift platform, adjust the space between two platforms; make sure that the two platforms are parallel.

Line connection

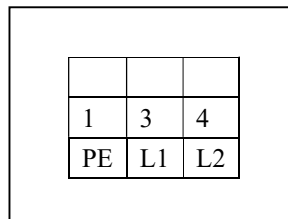
Connect the electrical and oil line according to << circuit diagram>> and <<oil hose connection diagram>>.



Only after connecting the hydraulic system can connect the air loop, can not damage oil pipe, wire, and air pipe.
In the process of connecting oil pipe and air pipe, pay particularly attention to the protection of pipe tie-in to prevent abnormal thing from entering oil loop and air loop, then damaging hydraulic system.

Electric circuit connection

Follow the stated line-diameter and line-number of <<the circuit diagram>> to connect electric circuit.



Picture 21



Only skilled special person is allowed to perform the operations.

- open the control station's front cover
-connection of power supply: the 220VAC single-phase and three-line connection wires (2×2.5mm² cable wire) for power supply are connected to L1,L2, and PE labeled entering-wire terminal in control station.

Hydraulic pipeline connection

Follow <<oil hose connection diagram >> to connect the hydraulic oil hoses



Only skilled and authorized person is allowed to perform the operations. And pay particularly attention to the protection of vita head.

-Following tubing number to lead the high-pressure tubing out from the “working stop valve G” and “H” of control station and then connect it to oil cylinder. (Refer to <<oil hose connection diagram>>)

-When connecting tubing, pay attention to the protection of tubing tie-in to prevent impurities from entering hydraulic circuit.



When connecting the tubing, be care of the mistake of each tubing number.

During the standard installation, control station is in the nearside of vehicle-entering direction. If placed on the right should adjust relevant tubing.

7. Adjustment

Preparation



Add oil and check the order of phase.

After installing lift as Picture 15 required and connecting hydraulic circuit, electric circuit , operate it as following:

-open the hydraulic oil tank, add 6L of hydraulic oil into the oil tank, the hydraulic oil is provided by the user.



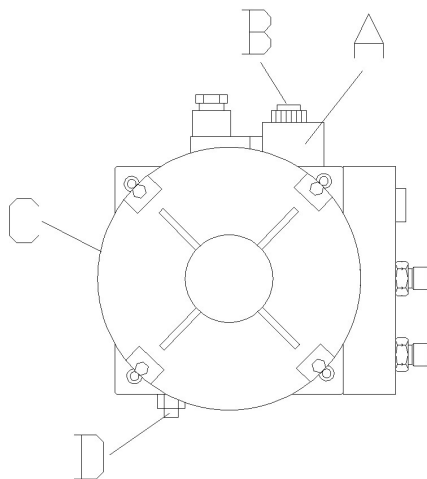
Make sure the clean of hydraulic oil, prevent any impurity into the oil line, lead the digest of the oil line and no working of the solenoid valve.

-Press the "POWER" button to turn on power, clicking the "UP" button, check whether the motor turns clockwise (looking downward), if not press "POWER" button, change the phase of the motor.

When turn on power, the high voltage will exist in the control station, only authorized person can operate it.



When conducting oil make-up operation, the platforms must not be load.



Picture 22

No load of main machine test:

-Turn on the power QS.

-Press "UP" button SB1, pay attention to the synchronization and placidity of the lifting.

-Check whether highest limit of platforms is correct and reliable.

-Press "LOCK" button SB3, check whether safety pawl is correctly located, the oil line and the air line are leakage.



When testing the lift, no person or other things are allowed to stand or be put near the two sides and beneath the machine. If any abnormal is found, stop it timely. After clearing obstacles, do the test again.

Load of main machine test

- Drive the vehicle whose weight doesn't exceed maximum lift weight to the platform, and then the driver leave it.
- Press "UP" button SB1, lift the platform and pay attention to the synchronization and placidity of the lifting.
- Check whether rack and hydraulic pump work normally .
- Check whether highest limit of platforms is correct and reliable.
- Press "LOCK" button SB3,check whether safety pawl is correctly located,the oil line and the air line are leakage.



When beginning load of machine test, no person or other things are allowed to stand or be put near the two sides and beneath the machine.

Test vehicle whose weight doesn't exceed maximum lift weight.

Check whether the oil line and the air line are leakage. If any abnormal is found, stop it timely.

After clearing obstacles, do the test again.

8. Operation



Only skilled and having been trained personnel is allowed to perform the operations. Check proceedings as following.

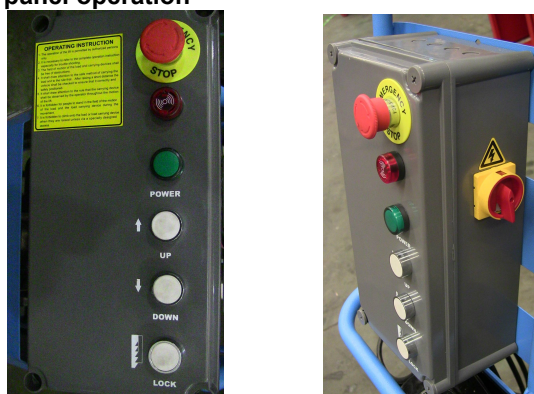
Text before operation:

- Clear obstacles around the lift before operation.
- Pay attention to the synchronization and placidity of the lifting.
- Check whether the safety claw is flexible and reliable.
- Check whether the lift will stop automatically when it lift to the highest position
- Check whether the working sound of motor and gear pump are normal.
- Check whether the lifting vehicle or other goods exceed the capacity of the lift.

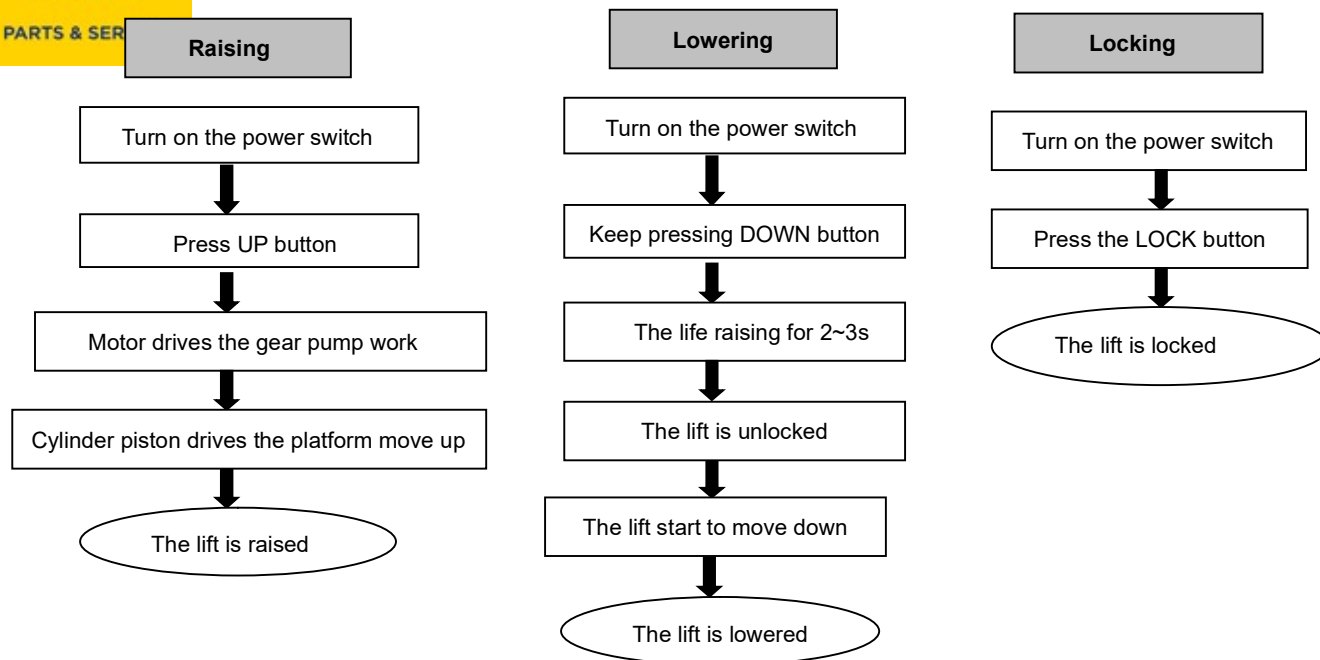
Operation notices

- Speed of vehicle should be kept in 5km/h when vehicle drives on the lift.
- The front wheel lies on the middle of the groove of turntable(the position of groove is adjustable) and the rear wheel lies on the sliding plate when vehicle stop.
- Tighten the brake and stack up antiskid(equipped by user) for vehicles.
- Press up button to lift the vehicle for 200-300mm, pay attention to the synchronization of the lifting.
- Go on press up button to lift the vehicle to the needed height.
- The chassis of vehicle should be filled up with rubber mat when the sub machine is lifting and lowering.
- The telescopic boom of sub machine should be taken back when the lift lowers.
- Pay attention to the synchronization of the lifting and lowering. If any abnormal is found, stop the machine timely, check and remove the trouble.
- The lift should be locked to keep the two insurance claw of platform in the same horizontal height during maintenance and four wheel alignment adjustment. Only after locking operation, personnel can enter below the lift and vehicle.
- Check whether the insurance claw is out of the insurance gear entirely and personnel is around the vehicle and the platform.
- Press down button to lower the vehicle to the ground or needed height.
- When the equipment is not used for a long time or over night, the machine should be lowered to the lowest position on ground, and remove vehicle, and cut off power supply.

Instructions on control panel operation



Picture 23



9. Maintenance and care



Skilled personnel only is allowed to perform the operations

Daily checking items

The user must perform daily check. Daily check of safety system is very important – the discovery of device failure before action could save your time and prevent you from great loss, injury or casualty.

- Always wipe clean, keep the machine clean.
- Clear barriers and ground oil, keep the working condition clean.
- Check the integrity of each safety devices, ensure the motion is flexible and reliable.
- Check the reliability of limit switch motion.
- Check whether oil leakage of the machine exist.

Weekly checking items

- All bearings and hinges on this machine must be lubricated once a week by using an oiler
- Check the working conditions of safety parts.
- Check the amount of oil left in the oil tank. Oil is enough if the carriage can be raised to highest position. Otherwise, oil is insufficient.
- Check whether the expansion bolts well anchored.

Monthly checking items

- The safety gear, the upper and lower sliding blocks and other movable parts must be lubricated one month.
- Check whether the foundation bolts well anchored.
- Check the abrasion and leakage of oil hose.

Yearly checking items

- The hydraulic oil must be replaced one time each year. The oil level should always be kept at upper limit position.
- Check abrasion and damage of all the active parts.
- Check the lubrication of roller. Lubricate it if drag phenomenon exist.



The machine should be lower to the lowest position when replace hydraulic oil, then let the old oil out, and should be filtering the hydraulic oil.

- Each team checks the agility and reliability of pneumatic safety equipment.

Storage after use

When the machine does not use for a long time:

- Cut off the power supply and air source and lubricate all the active parts.
- Drain the hydraulic oil of oil cylinder, oil hose and oil tank.
- Sheathe the machine with dust-proof cover.

10. Trouble shooting table

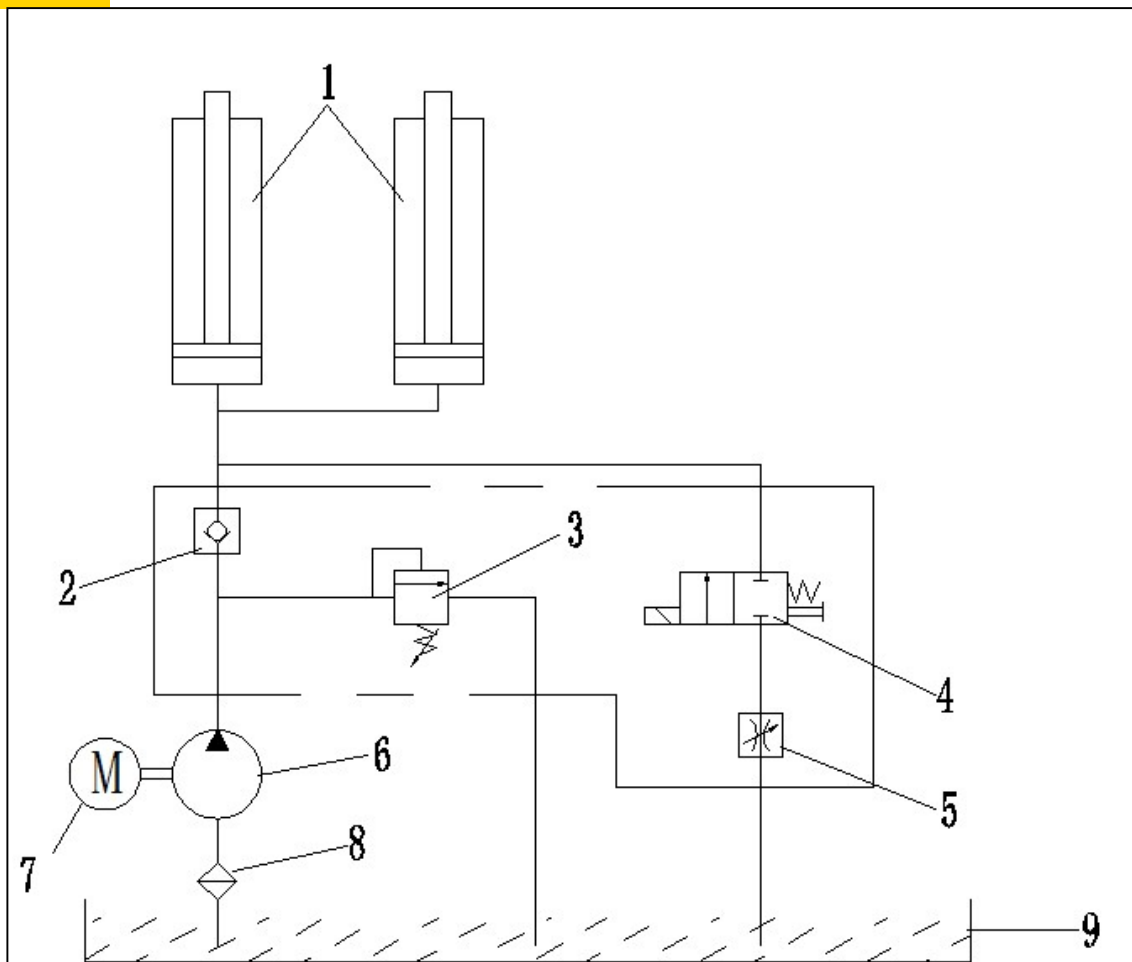


Skilled personnel only is allowed to perform the operations

Failure Phenomena	Cause and Phenomena	Resolutions
The motor does not run in lifting operation.	① Connection of power supply wires is not correct.	Check and correct wire connection
	② The AC contactor in the circuit of the motor does not pick up.	If the motor operates when forcing the contactor down with an isolation rod, check the control circuit. If the voltage at two ends of the contactor coil is normal, replace the contactor.
	③ The limit switch is not closed.	Check the limit switch, wires and adjust or replace the limit switch.
In lifting operation, the motor runs, but there is no lifting movement.	① The motor turns reverse.	Change the phases of the power supply wires.
	② Lifting with light load is normal but no lifting with heavy load.	Lift is overloaded and is unable to carry the load being attempted. Carefully lower and remove vehicle from lift. The spool of the lowering solenoid valve is stuck by dirt. Clean the spool.
	③ The amount of hydraulic oil is not enough.	Add hydraulic oil.
	④ The "operation stop valve" is not closed.	Screw down the "Operation stop valve"
When press "DOWN" button, the machine is not lowered.	① The safety pawl are not released from the safety teeth.	First lift a little and then lowering
	② The safety pawl is not lifted.	The air pressure is not enough, the safety pawl is stuck or the air pipe is broken off, adjust pressure, check the air pipe and replace it.
	③ The solenoid air valve does not work.	If the solenoid air valve is energized, but does not open the air loop, check or replace the solenoid air valve.
	④ The lowering solenoid valve is energized but does not work.	Check the plug and coil of the lowering solenoid valve and check the right turn tightness of its end copper nut and so on.
	⑤ The "antiknock valve" is blocked.	Remove the "antiknock valve" from the oil supply hole at the bottom of the oil cylinder, and clean the "antiknock valve".
The machine lowers extremely slowly under normal loads.	① The hydraulic oil has too high viscosity or frozen, deteriorated (in Winter).	Replace with hydraulic oil in accordance with the instruction book.
	② The "antiknock valve" for preventing oil pipe burst is blocked.	Remove or close air supply pipe and thus lock the safety pawl of the machine without lifting of the safety pawl. Remove the "antiknock valve" from the oil supply hole at the bottom of the oil cylinder, and clean the "antiknock valve".
The right and left platforms are not synchronous and not in the same height.	① The air in the oil cylinder is not vent completely.	Refer to "Oil Make-up 'Adjust' Operation".
	② Oil leakage on oil pipe or at its connections.	Tighten oil pipe connections or replace oil seals and then make-up oil and adjust levelness.
	③ The "oil make-up stop valve" can not be closed tightly and almost make-up oil and adjust every day.	Replace oil make-up stop valve, and then make-up oil and adjust.
Noisy lifting and lowering.	① Lubrication is not enough.	Lubricate all hinges and motion parts (including piston rod) with machine oil
	② The base or the machine is twisted.	Adjust again the levelness of the machine, and fill or pad the base.

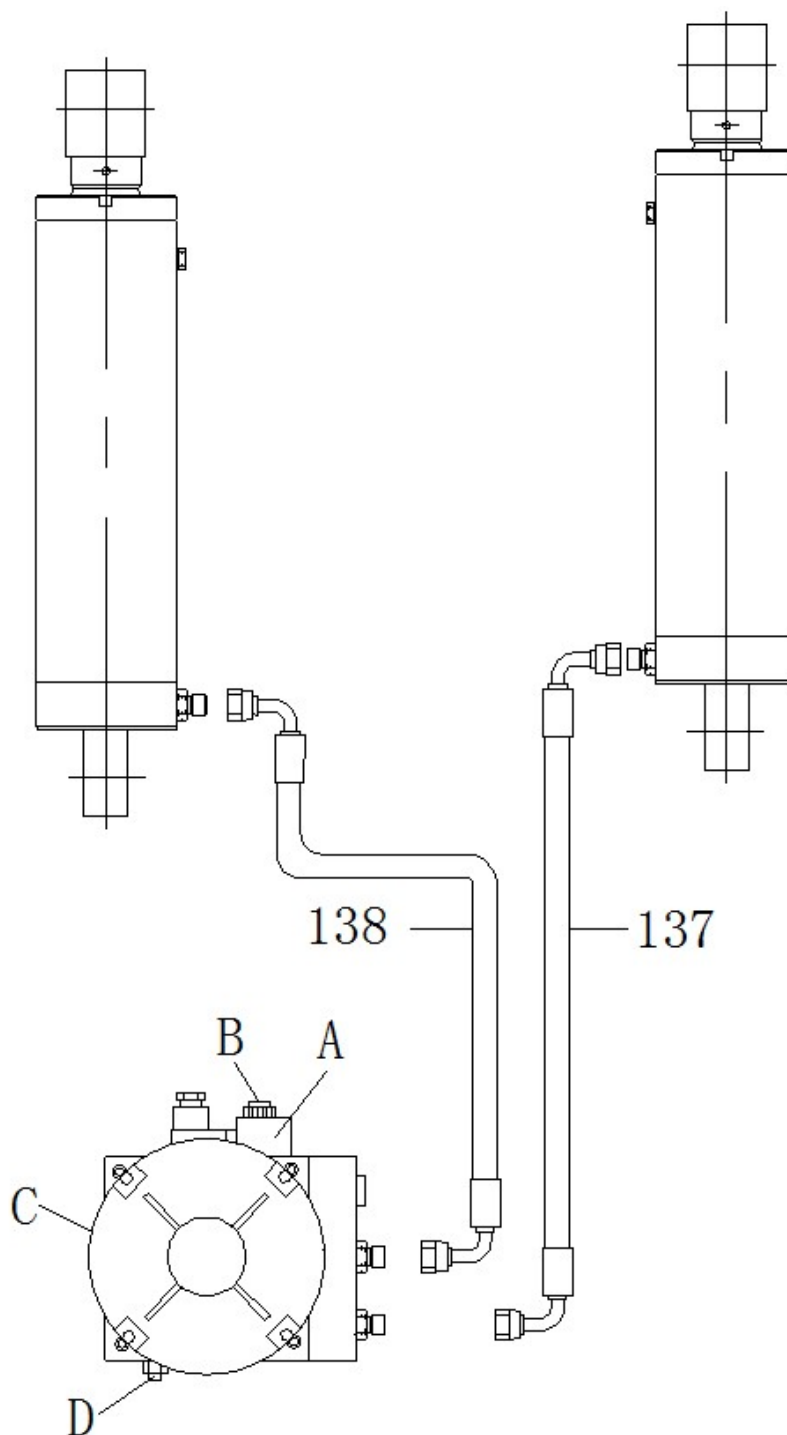
Table 3

11. Hydraulic pressure elements diagram



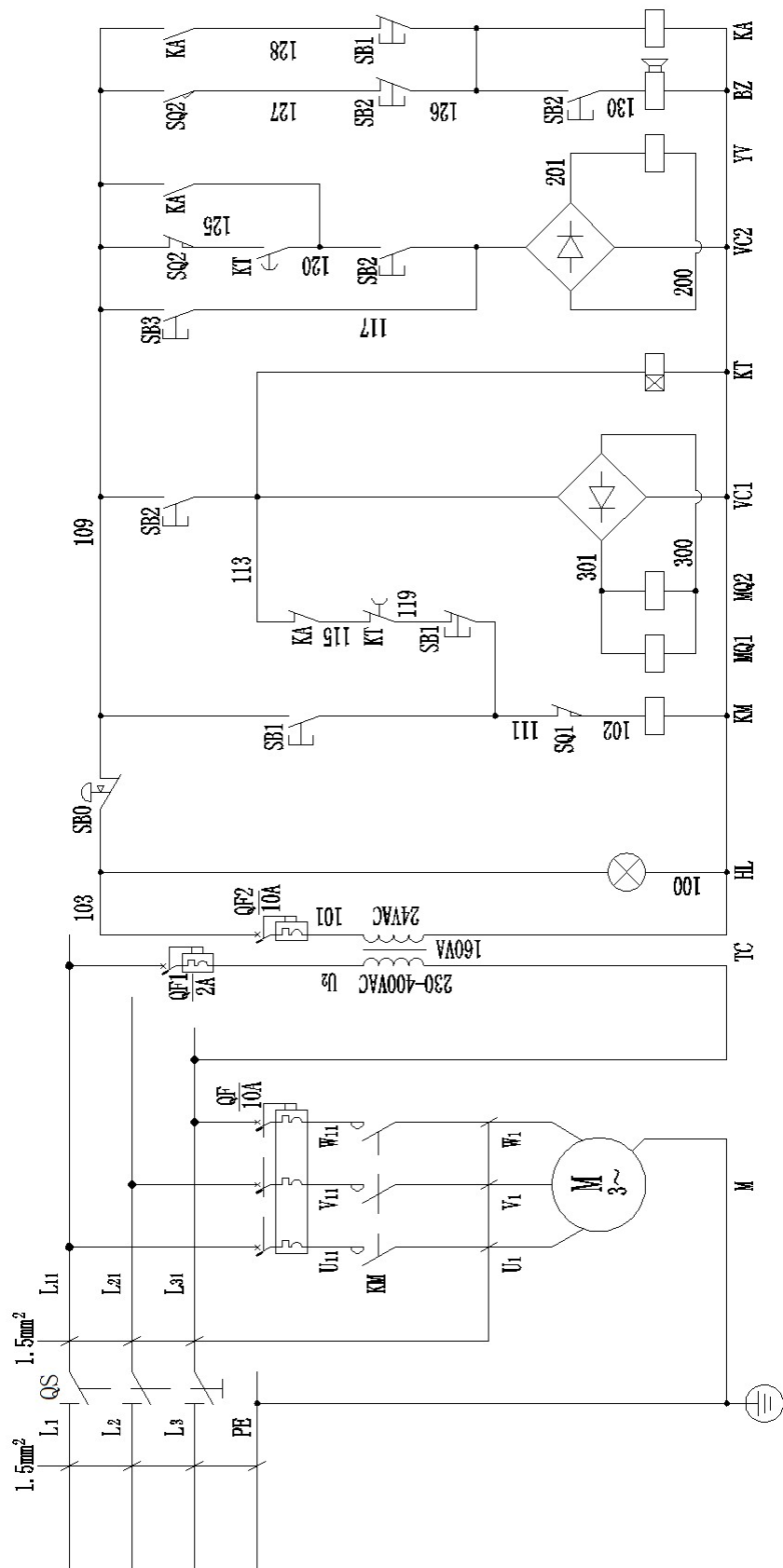
1. Cylinder
2. One-way valve
3. Overflowing valve
4. Descent valve
5. Throttling valve
6. Gear pump
7. Pump motor
8. Filter
9. Oil tank

12. Oil hose connection diagram

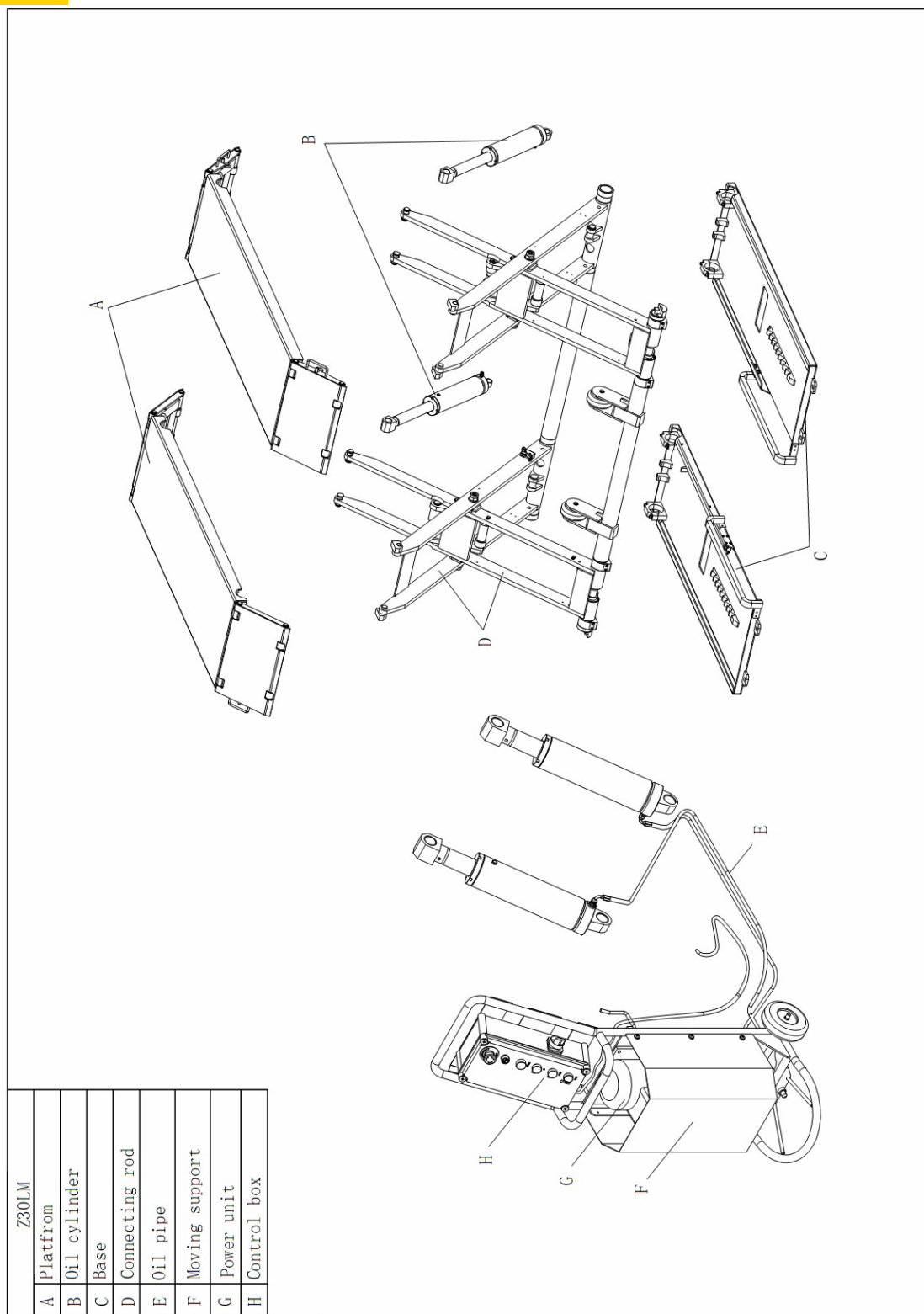


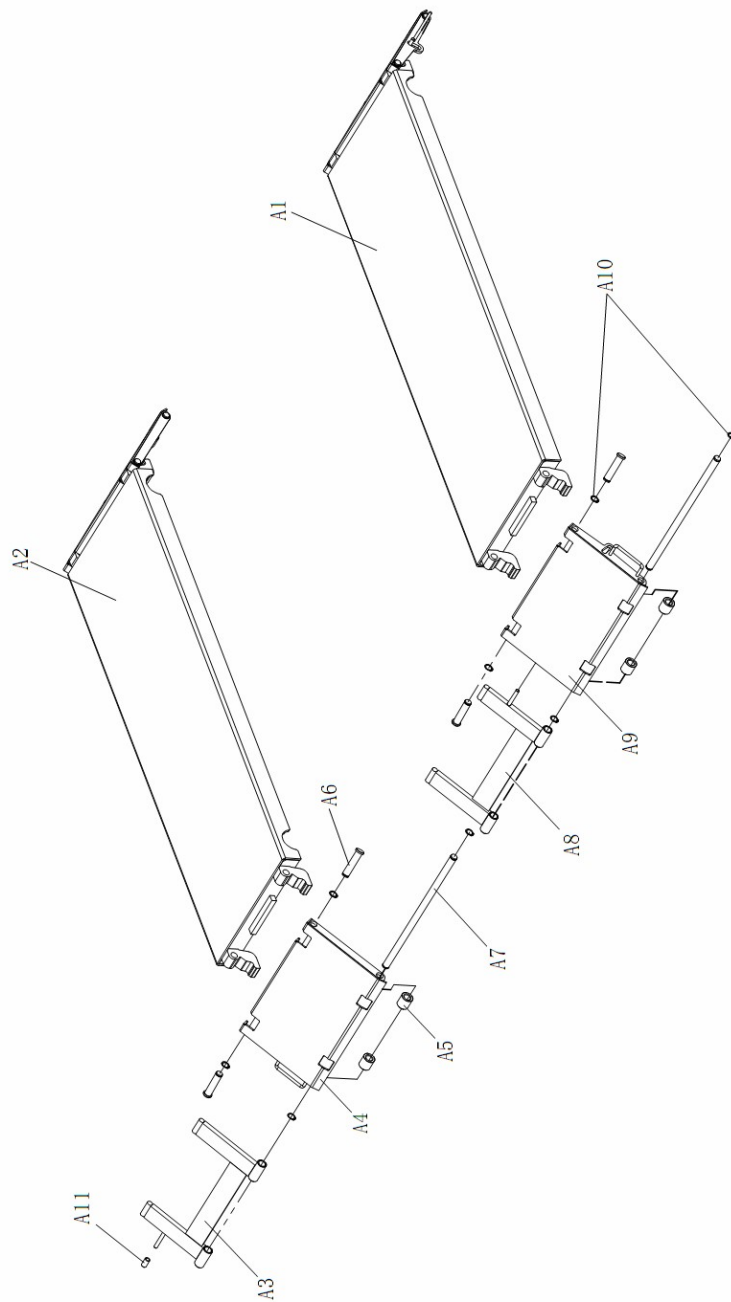
1. 137#、138# High pressure pipe
2. A: Descent valve; B: Descent coil; C: Motor; D: Over flow valve;

13. Circuit diagram



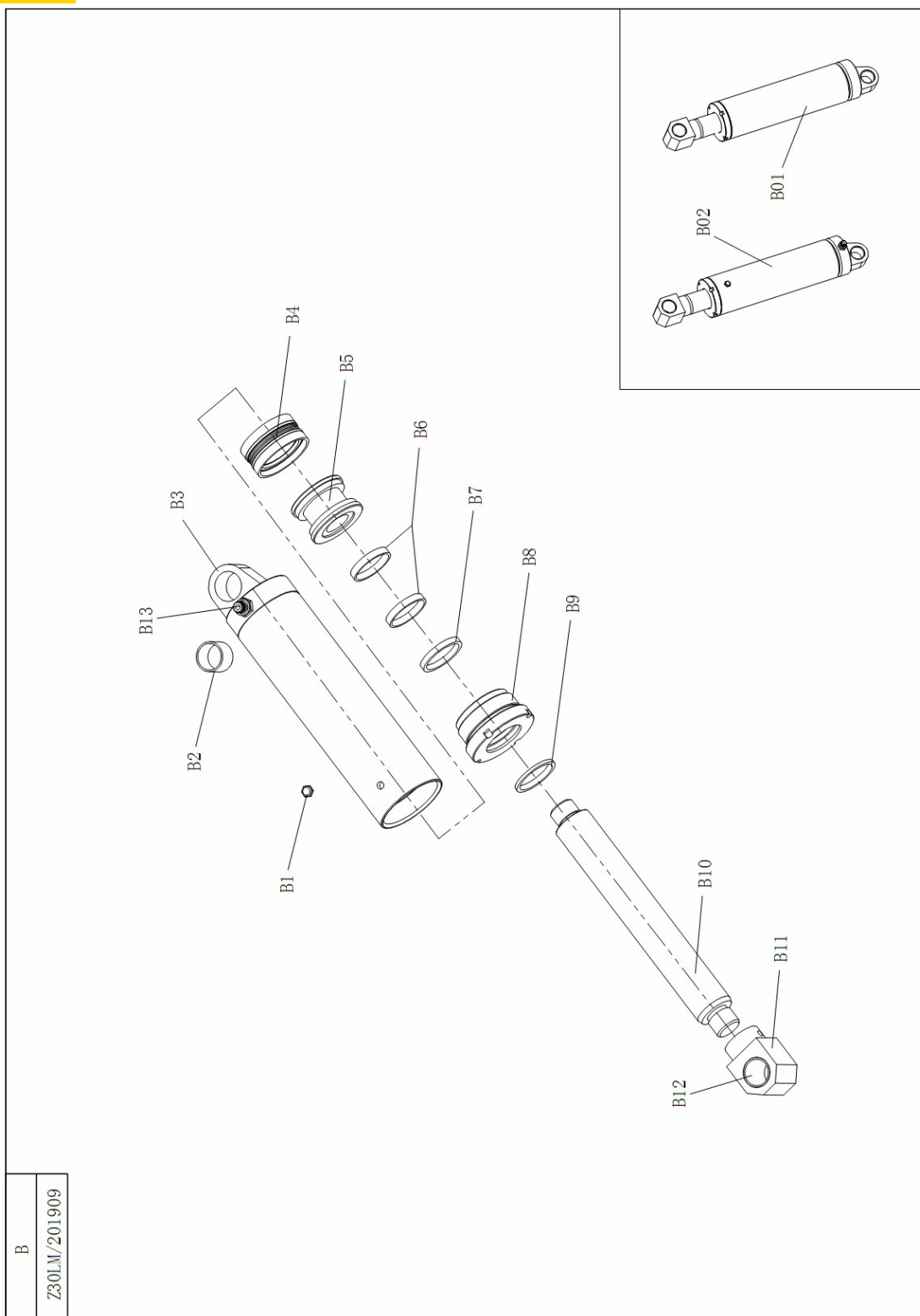
14. Explosion drawing

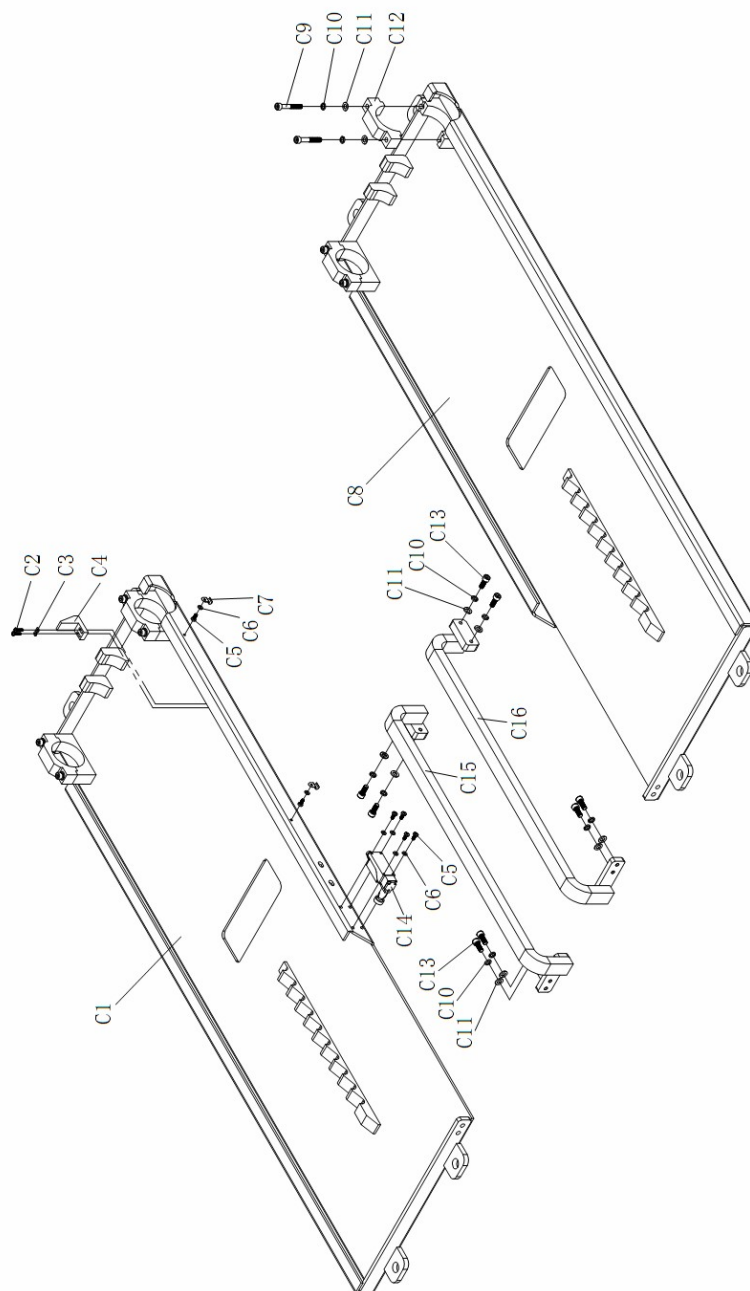




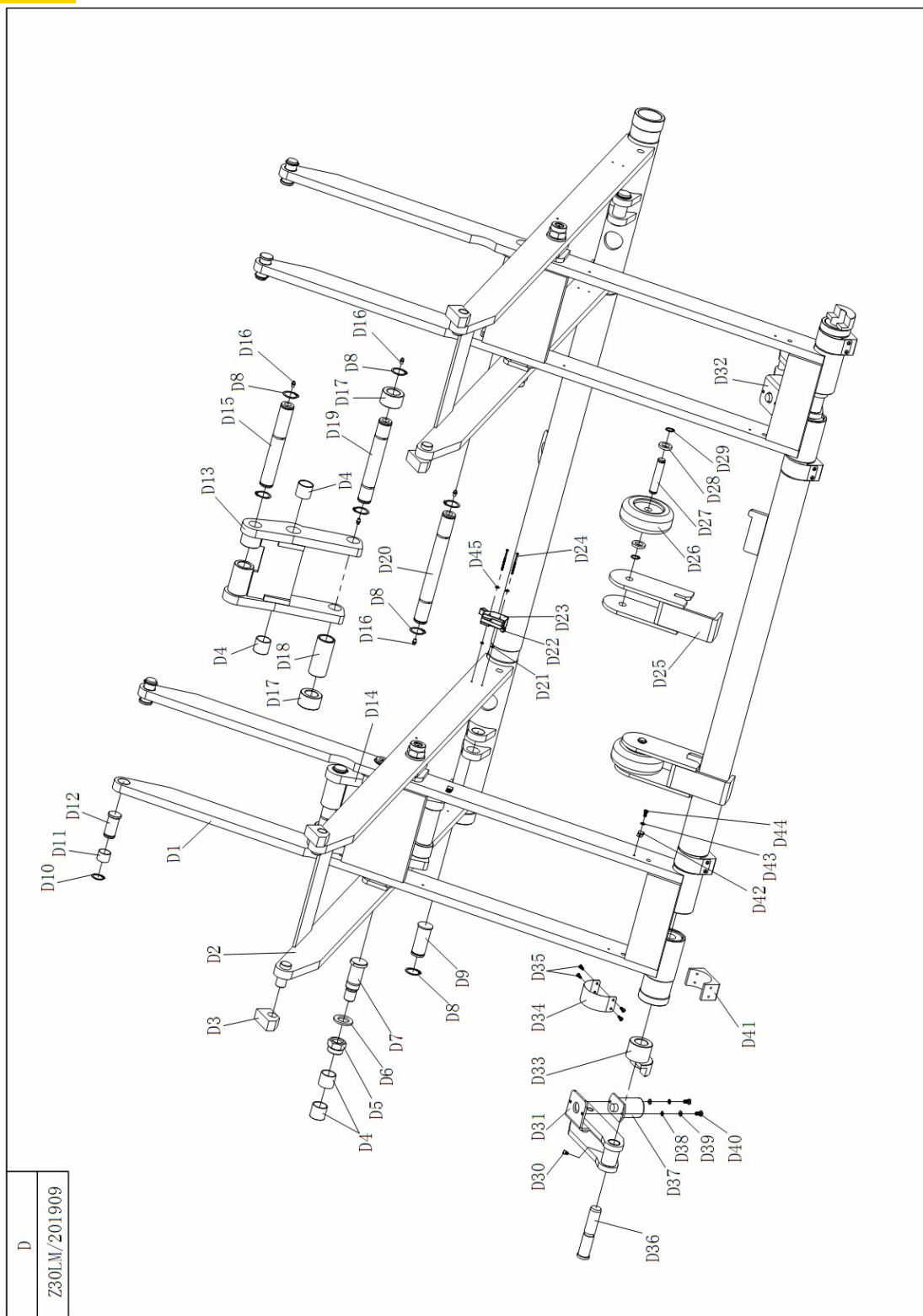
A

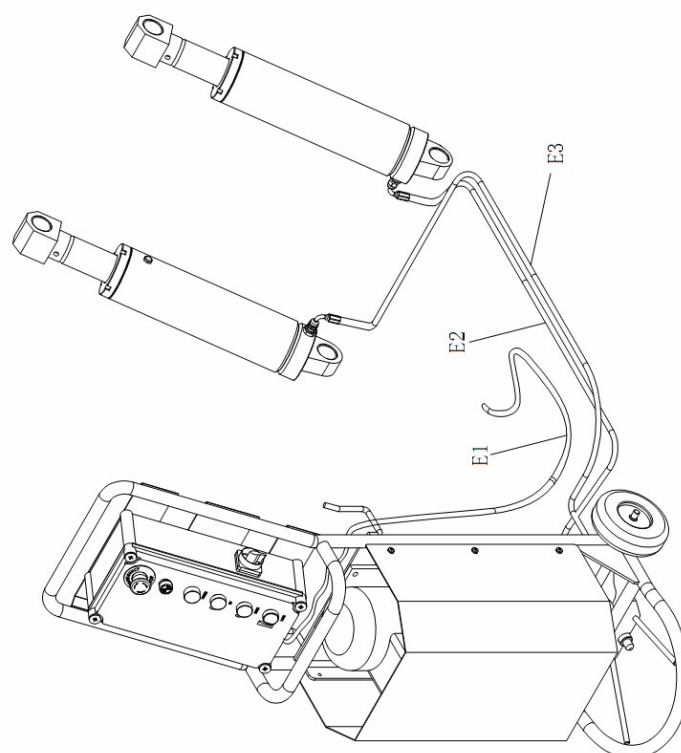
Z30LM/201909





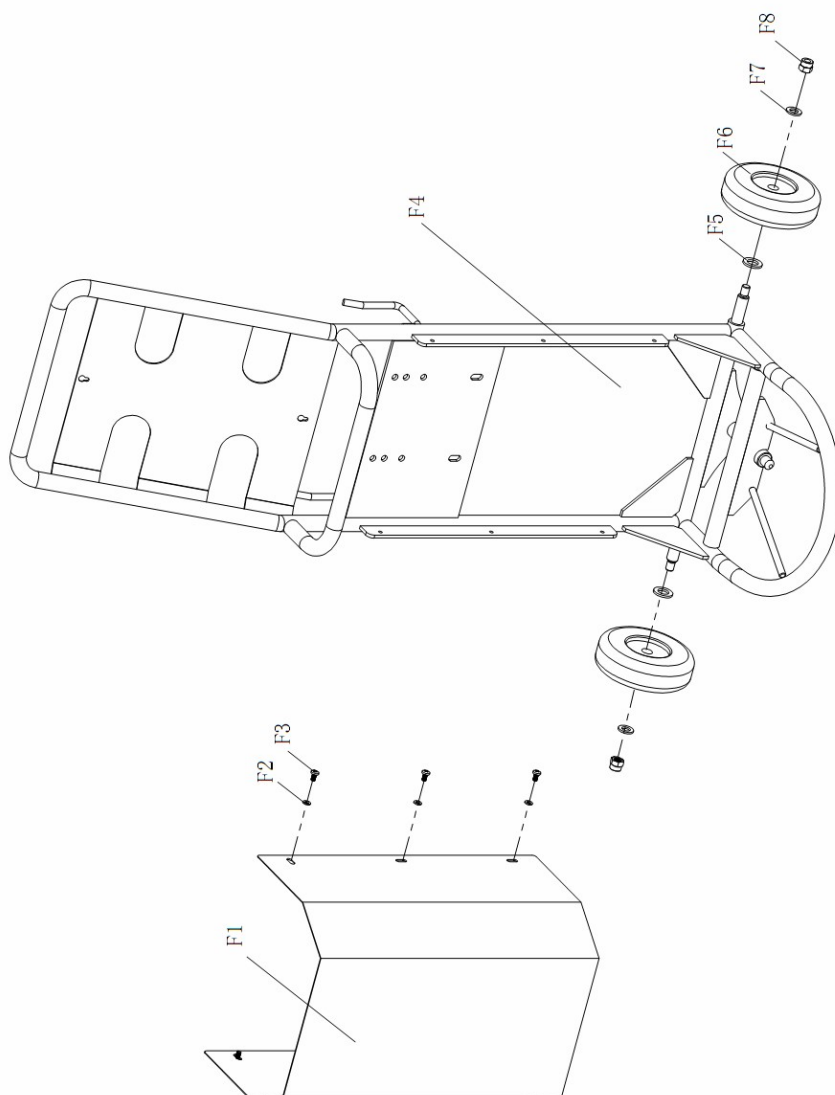
C
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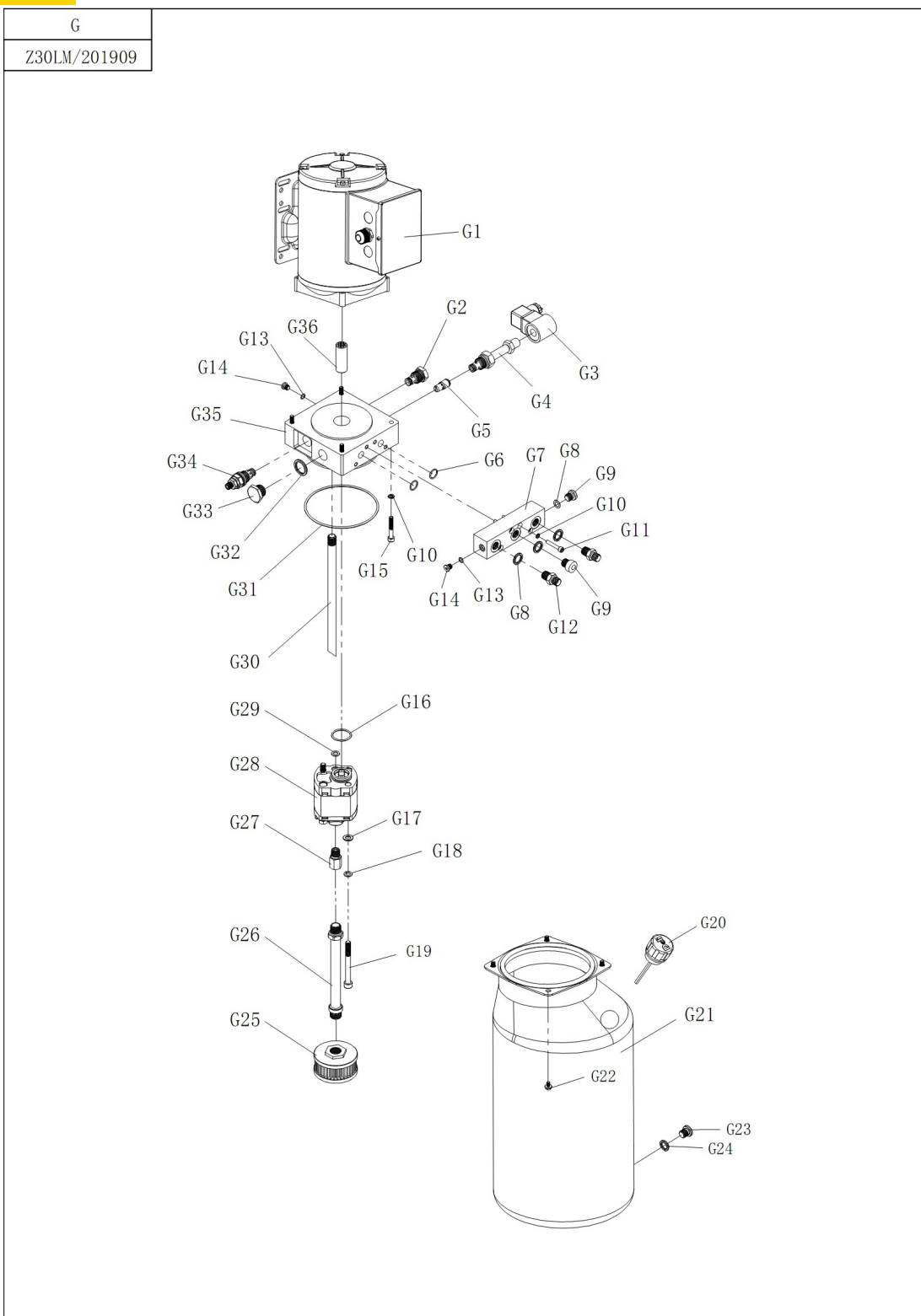
E

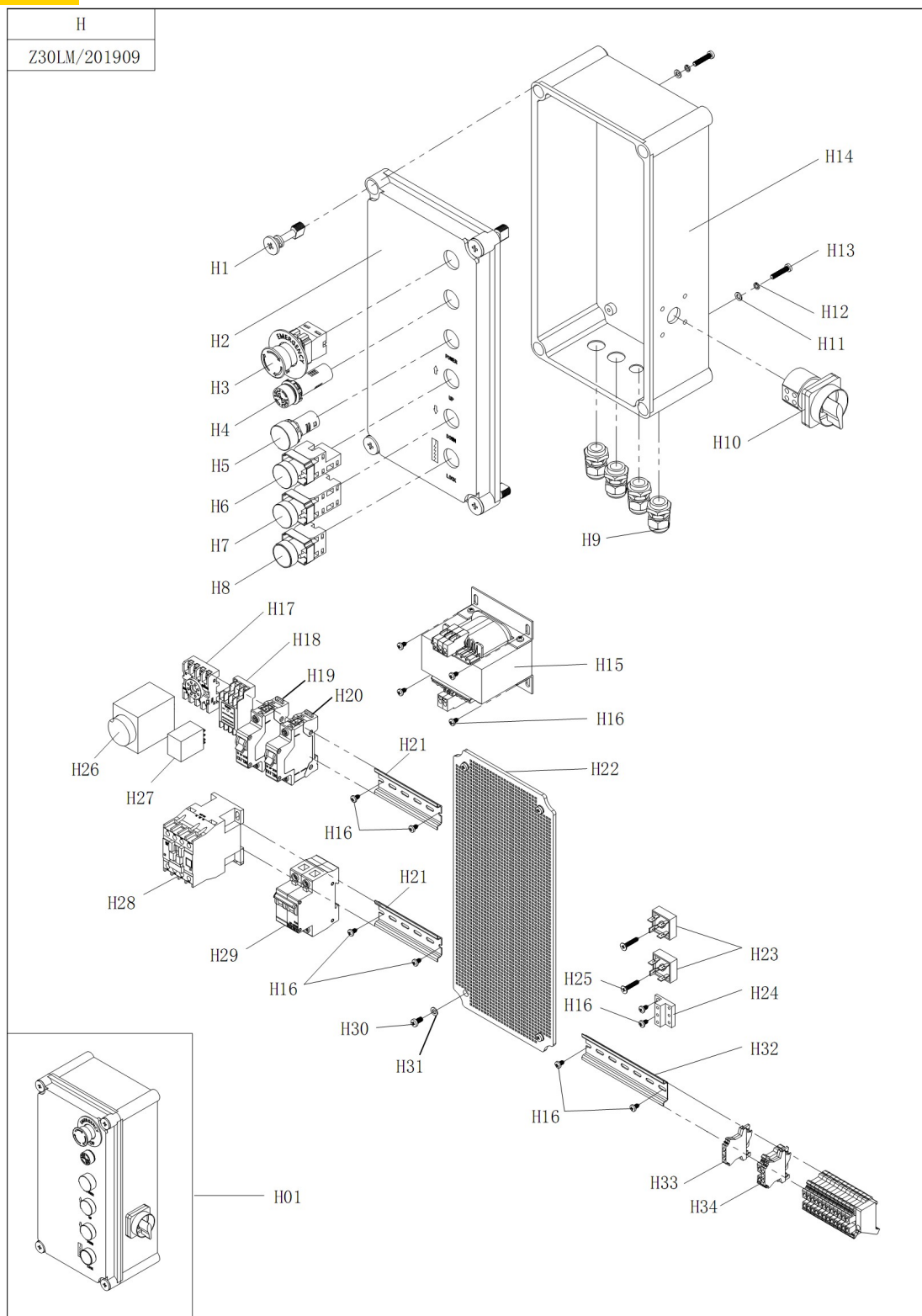
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Explosion List

A MMUZ 30LM/2 01909	A1	MMUZ30LM-03	top plate 1
	A2	MMUZ30LM-04	top plate 2
	A3	3SZ2-03	loading dock board roller 1
	A4	3SZ2-02	loading dock board 1
	A5	3SB2-00-2	plate pulley
	A6	3SZ2-00-3	connecting short shaft
	A7	3SZ2-00-1	loading dock board shaft
	A8	3SZ2-03	loading dock board roller 2
	A9	3SZ2-02	loading dock board 2
	A10	GB/T894.1-1986 Ø20	circlip for shaft Ø20
	A11	Ø10×20	round rubber sleeve Ø10×20
B MMUZ 30LM/2 01909	B1	PSV-01 G1/8	muffler G1/8
	B2	343025	shaft steel sleeve 343025
	B3	MMUZ30LM-07.01	oil cylinder
	B4	K03-75×55	combined seal ring Ø75× 55×22.4
	B5	UZ30MA-03-1	piston
	B6	Ø45×8×2.5	wear ring Ø45×8×2.5
	B7	AD48-45×53	dust-proof ring Ø45×53×6.5
	B8	UZ30MA-03-2	oil cylinder cover
	B9	Ø75×4	o ring Ø75×4
	B10	MMUZ30LM-07-1	piston rod
	B11	3SB1-11-4	oil cylinder support block
	B12	343048	shaft steel sleeve 343048
	B13	G1/4--R1/4	oil pipe straight union inner cone G1/4--R1/4
	B01	MMUZ30LM-07	oil cylinder 1
	B02	MMUZ30LM-07	oil cylinder 2
C MMUZ 30LM/2 01909	C1	MMUZ30LM-02	base 2
	C2	GB/T818-2000 M4×16	cross recessed pan head screw M4×16
	C3	GB/T95-2002 Ø4	plain washer Ø4
	C4	3SB1-00-27	lower limit switch block
	C5	GB/T818-2000 M5×12	cross recessed pan head screw M5×12
	C6	GB/T95-2002 Ø5	plain washer Ø5
	C7	Ø6	steel clip Ø6
	C8	MMUZ30LM-01	base 1
	C9	GB/T70.1-2000 M8×50	hexagon socket head cap screw M8×50
	C10	GB/T93-1987 Ø8	spring washer Ø8
	C11	GB/T95-2002 Ø8	plain washer Ø8
	C12	UZ25M-00-3	upper bearing
	C13	GB/T70.1-2000 M8×20	hexagon socket head cap screw M8×20
	C14	LXJM1-8104	upper limit switch 8104
	C15	MMUZ30LM-11	depression bar 2
	C16	MMUZ30LM-10	depression bar 1
D Z30LM	D1	MMUZ30LM-05	inside connecting rod
	D2	MMUZ30LM-06	outer connecting rod

261909	D3	UZ25M-00-6	upper sliding block
	D4	343030	shaft steel sleeve 343030
	D5	GB/T6182-2000 M24	hexagon locking nut M24
	D6	GB/T95-2002 Ø24	plain washer Ø24
	D7	MMUZ30LM-00-6	center shaft
	D8	GB/T894.1-1986 Ø30	circlip for shaft Ø30
	D9	3SB1-00-7	oil cylinder stationary shaft
	D10	GB/T894.1-1986 Ø25	circlip for shaft Ø25
	D11	282520	shaft steel sleeve 282520
	D12	3SZ1-00-3	inner scissor stationary shaft(up&down)
	D13	MMUZ30LM-08	starting rod 1
	D14	MMUZ30LM-09	starting rod 2
	D15	MMUZ30LM-00-3	piston rod stationary shaft
	D16	JB/T 7940.1-1995 M6	grease nipple M6
	D17	3SB1-00-13	starting rod sliding sleeve
	D18	MMUZ30LM-00-2	starting rod spacer sleeve
	D19	MMUZ30LM-00-4	starting rolling shaft
	D20	MMUZ30LM-00-5	starting rod center shaft
	D21	GB/T41-2000 M3	hexagon nut M3
	D22	LXW5-11G1	lower limit switch
	D23	XAP-Y	protective jacket
	D24	GB/T818-2000 M3×50	cross recessed pan head screw M3×50
	D25	UZ25M-10	nylon caster support complete
	D26	Ø150×45 (6×2)	nylon caster 6203
	D27	UZ25M-00-8	nylon caster shaft
	D28	UZ25M-00-7	locating sleeve for caster
	D29	GB/T894.1-1986 Ø17	circlip for shaft Ø17
	D30	GB/T70.1-2000 M5×6	hexagon socket head cap screw M5×6
	D31	UZ25M-08	safety gear complete 2
	D32	UZ25M-08	safety gear complete 1
	D33	MMUZ30LM-00-1	heteromorphism block
	D34	UZ25M-00-9	thin plate
	D35	GB/T818-2000 M4×10	cross recessed pan head screw M4×10
	D36	UZ25M-00-2	safety pawl stationary shaft
	D37	MQZ2-20N-10	electromagnet
	D38	GB/T95-2002 Ø6	plain washer Ø6
	D39	GB/T93-1987 Ø6	spring washer Ø6
	D40	GB/T818-2000 M6×12	cross recessed pan head screw M6×12
	D41	UZ25M-00-1	slide block
	D42	GB/T818-2000 M5×12	cross recessed pan head screw M5×12
	D43	GB/T95-2002 Ø5	plain washer Ø5
	D44	Ø6	steel clip Ø6
	D45	GB/T96.1-2002 Ø3	plain washer Ø3
E MMUZ	E1	3×1.5+1	single phase power supply wire
	E1(optional)	2×2.5+1	three-phase power supply wire

30LM/2 01909	E2	137# 3500mm	high-pressure oil pipe1 3500mm
	E3	138# 4600mm	high-pressure oil pipe2 4600mm
F MMUZ 30LM/2 01909	F1	Z25M-09-1	power nut shield
	F2	GB/T95-2002 Ø6	plain washerr Ø6
	F3	GB/T818-2000 M6×12	cross recessed pan head screw M6×12
	F4	Z25M-09	pumping station bracket assembly
	F5	GB/T95-2002 Ø16	plain washerr Ø16
	F6	Ø150×45 (6×2)	nylon caster 6203
	F7	GB/T95-2002 Ø12	plain washerr Ø12
	F8	GB/T6182-2000 M12	hexagon locking nut M12
G MMUZ 30LM/2 01909	G1	1PH/2.2KW	1ph motor
	G1(optional)	3PH/2.2KW	3ph motor
	G2	DF08-01-00	one-way valve
	G3	24VDC	normally closed solenoid valve coil
	G4	LSV-08-2NCP-M-2H	normally closed solenoid valve spool
	G5	BL-I2	pressure-compensated valve
	G6	Ø14×1.7	o-ring Ø14×1.7
	G7	30×40×130	additional valve block 30×40×130
	G8	GB/T9074-1-2002 Ø14	combined seal ring Ø14
	G9	G1/4	plug G1/4
	G10	GB/T93-1987 Ø6	spring washer Ø6
	G11	GB/T70.1-2000 M6×30	hexagon socket head cap screw M6×30
	G12	G1/4--R1/4	oil pipe straight union inner coneG1/4--R1/4
	G13	Ø6.5×1.5	o-ring Ø6.5×1.5
	G14	M8×1	plug M8×1
	G15	GB/T70.1-2000 M6×40	hexagon socket head cap screw M6×40
	G16	Ø32×2.4	o-ring Ø32×2.4
	G17	GB/T95-2002 Ø8	plain washer Ø8
	G18	GB/T93-1987 Ø8	spring washer Ø8
	G19	GB/T70.1-2000 M8×75	hexagon socket head cap screw M8×75
	G20	G3/8	oil tank cover
	G21	YBZ-D5B4H2/1-03 6L	oil tank 6L
	G22	M5×8	hexagon flang bolt M5×8
	G23	M12	plug M12
	G24	JB982-1977 Ø12	combined seal ring Ø12
	G25	YBZ-E2D3I1/1-10	filter
	G26	YBZ-F2.14G26/1-05 L=180mm	suction tube
	G27	HCF-Z1/4	cushion valve
	G28	CBK-F1.2DF2	gear pump 1.2C.C
	G29	Ø9.5×1.7	rectangle seal ring Ø9.5×1.7
	G30	YBZ-G3J4H43/1-03 L=240mm	return tube
	G31	Ø114×3	O-ring Ø114×3
	G32	GB/T9074-1-2002 Ø20	combined seal ring Ø20

H
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G33	M20	plug M20
G34	LRV-08-36	overflow valve
G35	YLBZ-N2FK-1	valve block
G36	YBZ-E2.1Y1W14/1-01 L=54mm	coupling
H1	M16	locking screw M16
H2	380×190×30	control box cover
H3	XB2-BS542	emergency stop button
H4	AD16-22SM AC24V	buzzer
H5	LD11-22D/21 AC24V	signal light
H6	LAY5-1NO2NC	lift button switch 1NO2NC
H7	LAY5-3NO1NC	down button switch 3NO1NC
H8	LAY5-2NO	locking button switch 2NO
H9	PG13.5	cable screw joint
H10	LW26GS-20/04	power switch
H11	GB/T95-2002 Ø5	plain washer Ø5
H12	GB/T93-1987 Ø5	spring washer Ø5
H13	GB/T818-2000 M5×12	cross recessed pan head screw M5×12
H14	380×190×100	control box body
H15	JBK160	transformer
H16	ST4.2×9.5	cross recessed pan head tapping screw
H17	CZF08A	relay socket
H18	PF113A	relay socket
H19	DZ47-63/C2 1P	circuit breaker
H20	DZ47-63/C16 1P	circuit breaker
H21	DG-01 L=100	lead rail
H22	UT40E-00-14	power panel
H23	KBPC25	rectifier bridge
H24	JDG-A-2	grounding strip
H25	ST4.2×25	self tapping screw
H26	AH3-3 AC24V	time relay
H27	MY4N-GS AC24V	intermediate relay
H28	CJX2s 1210	AC contactor
H29	DZ47-63/C25 2P for 1phase	circuit breaker 1phase
H29 (optional)	DZ47-63/C16 3P for 3phase	circuit breaker 3phase
H30	GB/T818-2000 M4×10	cross recessed pan head screw M4×10
H31	GB/T95-2002 Ø4	plain washer Ø4
H32	DG-01 L=130	lead rail
H33	USLKG2.5	earth terminal
H34	UK2.5B	phoenix terminal
H01	380×190×130	control box complete

16. Accessories Packing List

Name	Pic	Spec.	Qty
1.Rubber mat(thin)		160mm*120mm*35mm	4pc
2.Loading dock board		(including shaft, shaft snap ring and roller of loading dock board)	4set
3.Use manual		(including instruction manual, certificate of soundness, warranty bill and packing list)	1pc
4.Oil pipe straight union		End face G1/4 19 inner cone G1/4 1pc	1pc
5.Ribbon		4*200mm	10pc