

**6.3T MODELS
FOUR POST CAR LIFT
INSTALLATION MANUAL**

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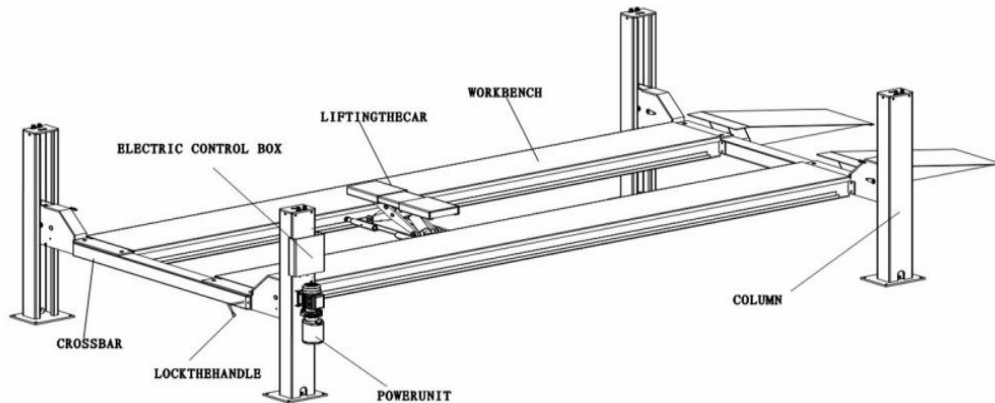


图 1

1safety precautions

- 1.1. Please read this instruction carefully before using the equipment. It is strictly for bidden to operate this machine without reading this instruction.
- 1.2. Remove barriers around and below the platform before working.
- 1.3. Lift type, lift the left, right and up and down can not stand people, lift the car al so can not ride personnel.
- 1.4. The weight of the lifted vehicle shall not exceed the lifting capacity of the lifting machine.
- 1.5. Lift, should be the car's manual zhi pull, pad good anti - skid triangle wood and other anti - skid devices (user self - provided).
- 1.6. Only when the lock core of the four safety locks is determined to enter the squar e hole of the lock plate, the maintenance personnel can enter the working area.
- 1.7 When the lift is not used, cut off the power supply.
- 1.8 After the lifting machine is used for a period of time, the wire rope will be stretched in different degrees to cause uneven work table. At this time, the length of the wire rope should be adjusted in time.
- 1.9 The machine should be maintained in strict accordance with this manual, and the main

parts should be checked and maintained carefully.

1.10 Fire protection devices, such as fire extinguishers, should be equipped on the site of

equipment use (users' own)

2 Characteristics of the profile

The lifting machine has been carefully designed, reasonable structure, safe and reliable,

hydraulic drive of work table, stable work, easy operation, low noise; Adopt new safety

lock and pneumatic unlock mechanism, sensitive and reliable; And equipped with a new

type of wire rope break insurance, with double middle insurance performance.

3 Main Lifting Capacity:6300 kg

Platform Length:5500MM

Overall Height :2280MM

Minimum Height :240MM

Platform Width:650MM

Width Between Platforms:1100MM

Motor Power:3.0KW

Electricity Supply : 380V/220v/ (50HZ)

Lifting Time:110S

Max. Lifting Height:1500mm-1700mm

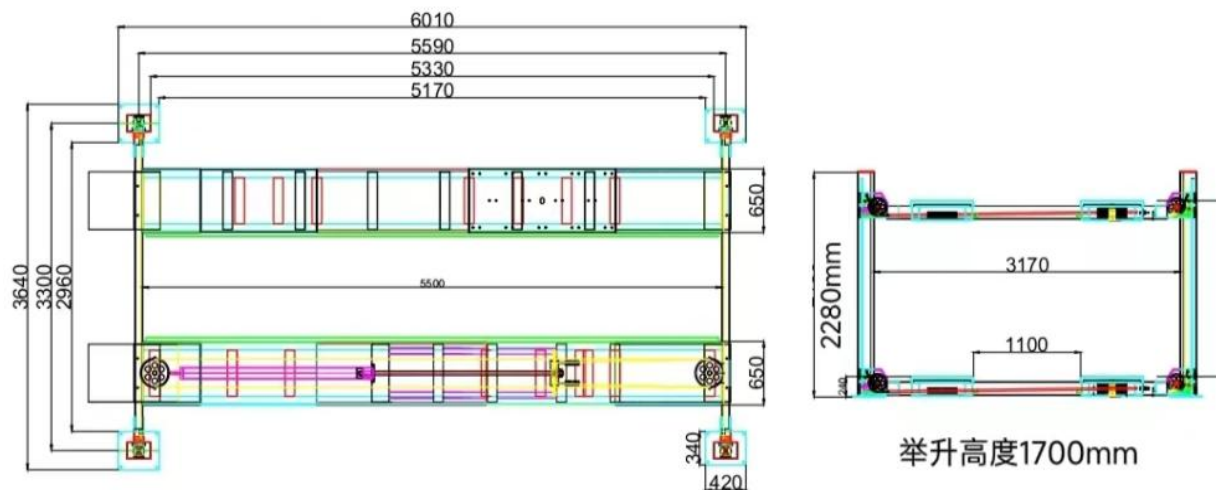
Weight:2200KG

Note: items marked with "*" symbol can provide products with different voltages and

frequencies according to user requirements (for specific parameters, please refer to the

equipment label)

4 Overall dimensions of the lift (find picture 2)



5 THE STRUCTURE AND WORKING PRINCIPLE OF THE MACHINE

The machine is composed of column, longitudinal working table, beam, wire rope pulley block, lifting car, hydraulic power unit, etc. (see figure 1, figure 2 and figure 3 for details). Table drive principle: rises motor driven oil pump, oil cylinder

hydraulic oil input, because the machine is driven by the piston rod pull, the hydraulic oil input cylinder cavity, in under the action of hydraulic oil cylinder piston rod slowly income, at this time, fixed in front of the piston rod pull institutions under the tension of the piston rod, smooth drag four wire rope tightening at the same time. As the other end of the wire rope is fixed at the top of the four columns, with the piston rod retraction, four wire rope at the same time shorter, under the action of pulley group, tighten the wire rope makes the work table in the middle of the four columns slowly rise, complete the lifting work. When

descending, the return oil valve of the hydraulic system is opened, the work table under the effect of its own gravity, the hydraulic oil in the cavity of the cylinder is slowly discharged back to the tank, the piston rod is restored to the initial state, the

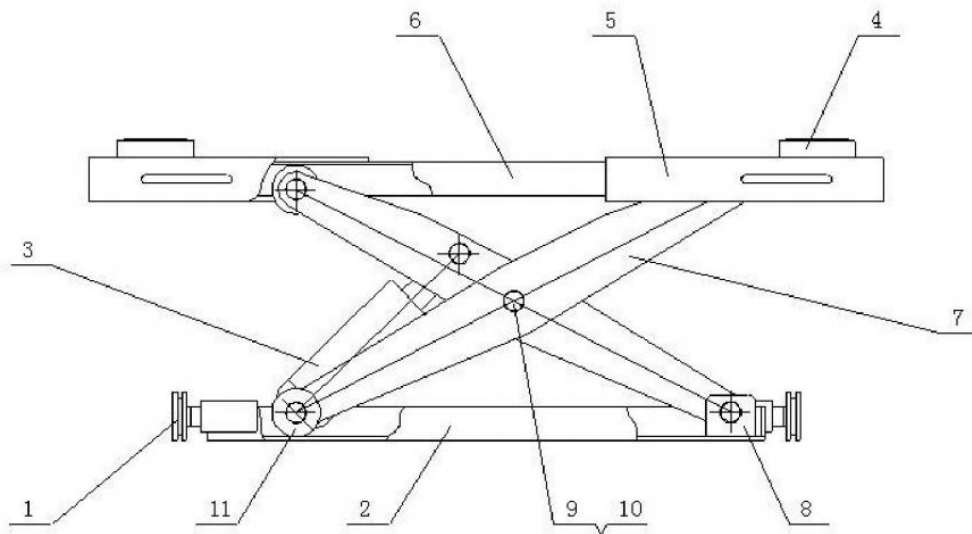
wire rope is restored to the original length, the work table is returned to the original position, completed the drop work.

The working principle of the secondary lifting trolley is shear type connecting rod mechanism (see the picture below). When the trolley is rising, the

cylinder of the trolley pushes the connecting rod arm to make the trolley rise. When

the trolley is falling, the oil return pipeline is opened.

(According to the needs of users can choose two cars)



1、guide wheel 2、The car chassis 3、 Small oil cylinder 4、 rubber blanket 5、 Moving board on top
6、 Car board 7、 support plate 8、 dead plate 9、 center pin 10、 spring washer 11、 Supporting pulley

6EQUIPMENT INSTALLATION AND DEBUGGING

Before installing the machine, read the manual carefully, make clear the structure of

the machine, check whether the machine is damaged in the process of transportation

and loading and unloading, and whether the accessories are complete, and then follow the following steps:

6.1.The equipment shall be installed in an indoor environment free from dust and other pollution and with sufficient illumination (the illumination shall not be less than 100 lx).

6.2 Choose the installation site and location of the equipment according to the provisions of the manual, and do the concrete casting of the equipment according to the provisions, and carry out the health preservation for a week.

6.3 Lay out the line according to the position of the equipment foundation, determine the exact position of the installation column, and put the column next to the exact position to be installed.The column with pump station is no. 1, and the rest

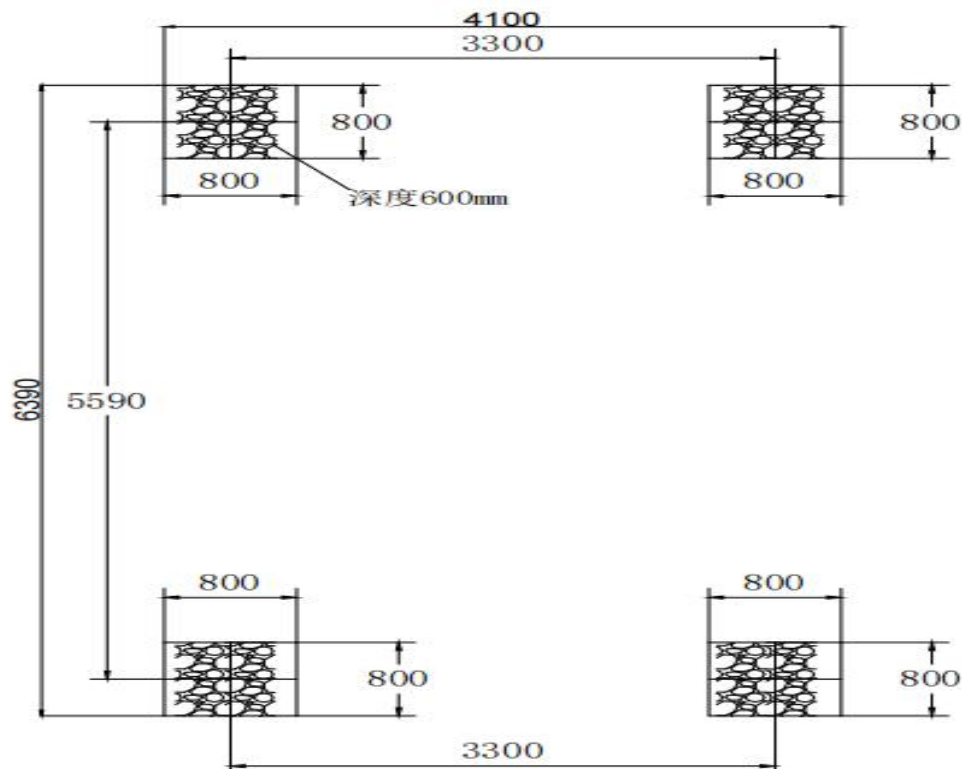
columns are arranged according to the position of no. 2, 3 and 4 (see picture 4).

6.4. Unpack the beam and place it in the area to be installed. Place a beam assembly

in the direction of "1" and "2" columns.Also place a beam assembly in the direction

of "3" and "4" columns.

6.5. Place the work table, and place the main work table (with oil cylinder and groove wheel) between the "1" and "4" columns;The sub table (without cylinder and pulley block) is placed between "2" and "3" columns.No te: the main table should be placed with the bottom facing up for easy installation of wire rope.



6.6 Install steel cable

First make the cylinder piston rod extended to the longest position.

6.6.1 Installation of traction mechanism: place the roller of the traction mechanism in the middle of channel steel on both sides of the main table, and thread the piston

rod into the center hole of the traction mechanism according to the direction marked

on the material, and then fix the traction mechanism on the piston rod correctly and

firmly with the piston rod's own nut (see picture 5).

6.6.2 Disassemble the packaging of the steel cable. There are two steel cable with the length of 19000mm."1" and "3" share the same steel cable;The "2" and "4" share the same steel cable.Take out any steel cable and use it as "no. 1" steel cable

and "no. 3" steel cable. First, measure the length of the steel cable, turn back at the 7093mm of the steel cable to make a sleeve, add the attached steel cable splint, cover it on the hanging shaft on the right side of the pulling mechanism (stand on one end of the four groove wheel facing the direction of the oil cylinder), confirm the accurate position, tighten the splint screw, make the steel cable firmly cover on the hanging shaft of the pulling mechanism, do not fall off.

6.6.3 Determine the length of the steel cable as "1" steel cable. Draw the end of "1"

rope into the groove of "3" wheel, and draw the groove of "6" wheel to the other end of the table (one end of the cylinder tail) after half a circle, and then straighten

it to the right after 1/4 circle, and prepare to fix it in the "1" column (at this time, pull it to the "2" column, and then it will be the "1" column after the table is turned over).

6.6.4. Determine the short section of the steel cable as "3" cable. Lead the end of "3"

" cable into the groove of "1" wheel. After 1/4 circle, straighten it to the left and pr

epare to fix it to "3" column (at this time, pull it to "4" column, which will be the di

rection of "3" column after the table is flipped).

6.6.5 Use the other steel cable as "2" cable and "4" cable. Measure the length of the rope, turn back at 5337mm to make a sleeve, add the attached wire cable splint, cover it on the hanging shaft on the left side of the pulling mechanism (stand at one

end of the four groove wheel, facing the direction of the oil cylinder), confirm the correct position, tighten the splint screw, make the wire rope firmly cover on the hanging shaft of the pulling mechanism, not fall off.

6.6.6 Determine the length of the steel cable as "2" cable. Introduce the end of "2" cable into the groove of "2" wheel, make half a circle and then pull it to the other end of the table (one end of the oil cylinder tail), introduce the groove of "5" wheel,

make a quarter of a circle and then straighten it to the left, prepare to fix it on the "2" column (at this time, pull it to the "1" column, and then it will be in the direction of "2" column after the table is turned over).

6.6.7. Determine the short section of the steel cable as "4" cable. Introduce the end of

"4" cable into the groove of "4" wheel, make a quarter of a circle and then straighten it to the right, prepare to fix it to "4" column (at this time, pull it to "3" column, which will be the direction of "4" column after the table is flipped).

6.6.8 Turn the table over, then the end of the four steel cable and the four column

number corresponding (that is, "1" cable head to "1" column, "2" cable head to "2"

column, "3" cable head to "3" column, "4" cable head to "4" column).

6.6.9 Insert the ends of the four steel cable into the beam from the empty space inside

the corresponding beam, and introduce the grooves of the corresponding steel wire

wheel, and pull them out from the upper end of the beam end after 1/4 circle of the

steel wire wheel, ready to be combined with the column.

6.6.10. Install the "steel cable limit pin" under the beam separately, so that the steel

cable can only move in the groove of the wheel without slipping out of the groove. A

small steel wheel of "broken rope safety lock" is attached to the

outside of the wire rope, which can open the safety lock under the tension of the

wire

rope.

6.6.11. Remove the four attached "steel cable lifting ring screws", one for each rope

head. Put the end of the steel cable into the round hole of the lifting ring screw, and

turn back at 180mm from the ring hole of the lifting ring screw at the end of the wire rope. Use the attached "wire rope clip" (buckle) to tighten the folded and combined rope head at 50mm from the lifting ring. Set another wire rope clip at 100mm apart, and tighten the screw to the limit

6.7 Installing the Workbench

Put the upper connecting plate on both ends of the main workbench & offside workbench on the plane of the beam, make the "mesa connecting plate" on both sides of the main and sub-workbench align with the M14 connecting screw holes inside the beam respectively, and use the attached M14 bolts to firmly connect the

workbench with the beam. Adjust the integral position of good workbench and beam at the same time, make the two ends of beam aim at the position that 4 column

place

6.8 Column mouting

6.8.1. First, use square wood to pad up the beam together with the lower part of the

main workbench and offside workbench (about 40 ~ 50mm from the ground).

6.8.2. Place the columns at their respective installation positions, so that the end of

the beam into the opening of the front of the column (for example, the safety lock

hanging plate has been placed in the middle of the column during packaging and transportation, take out the hanging plate first, and install the hanging plate after the column is in place). And make the nylon sliders at the end of the beam close to the inner wall of the front side of the column.

6.8.3. Insert the safety latch plate into the long hole at the top of the column, Insert t

he end of the beam directly, pass through the position of the safety lock in the conne

cting plate, and fall to the bottom of the column, so that the hole above the hanging

plate corresponds to the moving position of the safety lock tongue.

6.8.4. After the position is adjusted, Fasten the lower part of the hanging plate to the

fixing seat of the column bottom plate with the attached M8

screw, And adjust the hanging plate screw on the top of the column to straighten the

hanging plate, The purpose for which the safety lock can function normally when th

e beam takes off and lands.

6.8.5. After the column is in place, the hoisting ring screw of the wire rope can be p

assed through the 35 holes on the top of the column and fixed with a nut on the top.

(note: the top side by side with two 35 round holes, screw should choose and wire r

ope groove wheel groove in a corresponding hole).

6.8.6. The initial adjustment makes the tightness of four wire ropes basically consisten

t. 6.9 .Connection circuit: connect the equipment circuit well according to figure 6 in

the manual, connect the power cord well, and do the safe grounding to ensure the

smooth, safe and reliable circuit.

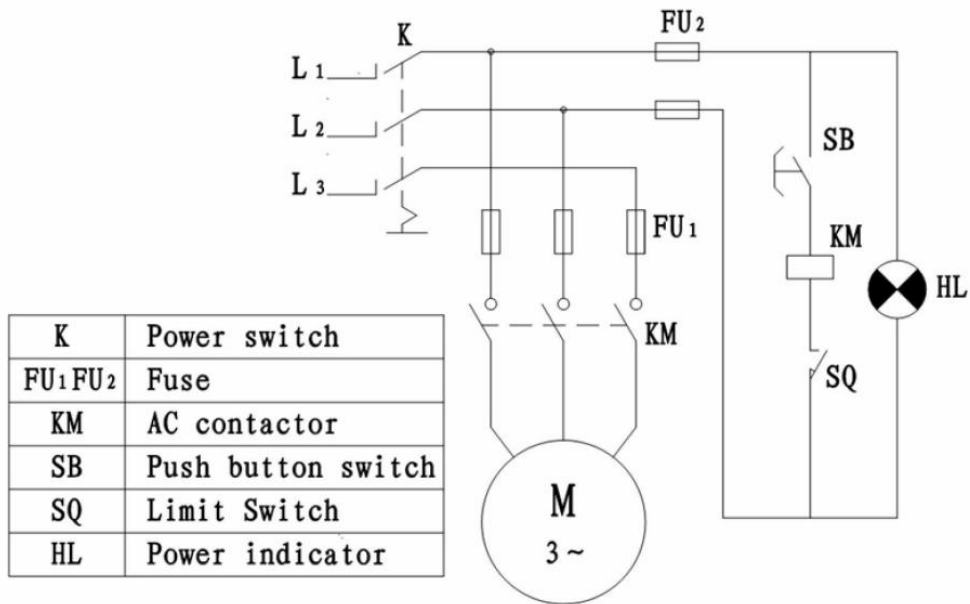


Figure 6 Schematic diagram of electrical system

6.10.Oil connection: connect according to the hydraulic system schematic diagram in FIG. 7 of the instruction manual. Please check whether the high pressure oil pipe mouth is clean and free of foreign matter before connecting.If any foreign matter is found, it must be blown clean with compressed air or cleaned with diesel oil.

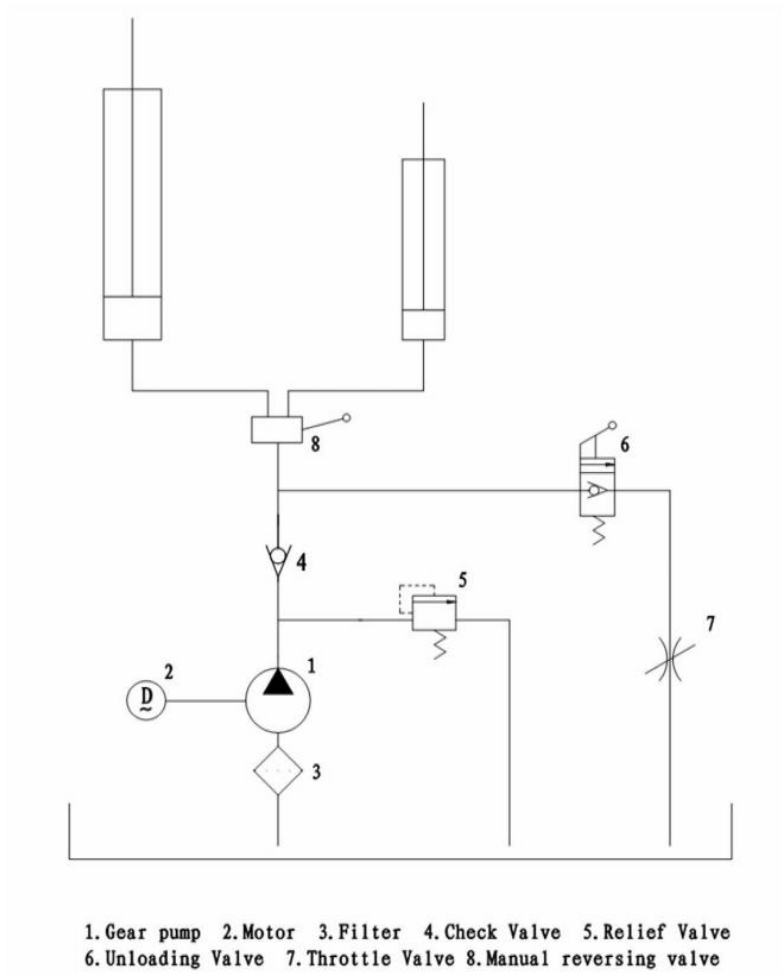


Figure 7 Schematic diagram of hydraulic system

6.11 Install gas path: as the device is unlocked by air circuit, the air connection must be unblocked and the pressure is stable at $6\text{Kg}/\text{cm}^2$. Before connecting the air passage, it is necessary to check that there is no foreign matter in the trachea before connecting the gas passage.

6.12. After the connection of electric circuit, oil circuit and air circuit, the tubing clip and air pipe clip shall be attached to properly fix the tubing and air pipe, so as not to fall off and affect the normal use.

6.13 Add 18 L L-HM32 anti wear hydraulic oil into the oil tank of the pump station. The highest oil level is about 10mm above the oil tank, and the lowest is 30mm above the oil tank (check with the gauge on the oil-filled air hood above the oil tank).

6.14. Equipment debugging: power debugging can be carried out after reconfirming

the correctness of the above installation parts (including wire rope, circuit, oil circuit, air circuit, etc.)

6.14.1. Press the "up" button to make the table rise under the action of oil pressure. On the way up, listen for the clatter of the four safety locks and remember

which one rings first and which rings later.

6.14.2. When the workbench rises to 1 meter high or so, stop to test whether the distance

between the plane on the beam and the column bottom plate is consistent. If any

inconsistency is found, it can be achieved by adjusting the tightness of the lifting ring

screw on the top of the column.

6.14.3 Press the "down" button to lower the workbench and observe whether the four corners are synchronized when the platform is falling. If not, stop

immediately

and check whether the safety lock at the backward end of the fall is opened. If it is

not opened, it can be solved by adjusting the pull rod screw and cylinder piston rod

end screw.

6.14.4 After adjustment, carry out "rise" and "fall" test again until the rise and fall is smooth and free.

6.14.5. The problem of unsynchronization of four safety locks can be solved by adjusting

the height of the safety bars. Strike the part where the sound is fast, and raise the

hanging plate by adjusting the screw on the top of the column; On the sound of slow

parts, can also be adjusted by the top of the column hanging plate screw, hanging

plate drop a little to solve. It is advisable to adjust in this way so that the time difference

of the knock sound of four lock plates is no more than 0.5 seconds (basically synchronous).

6.14.6. After repeatedly "rising" and "falling" operate freely, raise the working table

to the specified height (1700mm), and adjust the travel switch to the limit height

accordingly.

Additional expansion bolts may be used to secure the column to the concrete foundation.

ion.

6.15 Load trial test

6.15.1. The lubrication points of each part are injected with grease; Check whether the limit switch is sensitive; Whether oil leak. After all the above items are normal, the

load test can be carried out for 2-3 times without any abnormal conditions. Add the

rated load and run it for 2-3 times without abnormal noise and leakage, and the lifting

height and lifting time are in line with the technical parameters, and the test load ends

6.15.2. After the load test, the wire rope may be slightly elongated. After unloading the

table again after leveling, the machine can be put into normal use.

7 SAFETY MECHANISM

7.1 The safety locking plate is hung in the column. The safety locking mechanism and pneumatic unlocking mechanism are installed in the beam. When the working

platform rises, the locking mechanism will rise accordingly. When the platform to the required height, can press the lock/unlock button on the control panel, make through pneumatic actuators or lock the lock tongue in a square hole hangs

Taiwan,

then workbench down a little, that hangs Taiwan under the weight of the whole workbench and car, the workbench safely to stay for a long time in the height, in all

kinds of maintenance operations. When the table needs to drop, just press the "lock/unlock" button on the control panel, then the table will automatically rise a little, and then the pneumatic device to execute the operation instructions, the

lock

tongue in the action of the connecting rod from the hanging plate, the table will drop

under the self-weight. When the table descends to the required height, press the "lock/unlock" button again and insert the lock core into the square hole on the hanging plate to ensure safety.

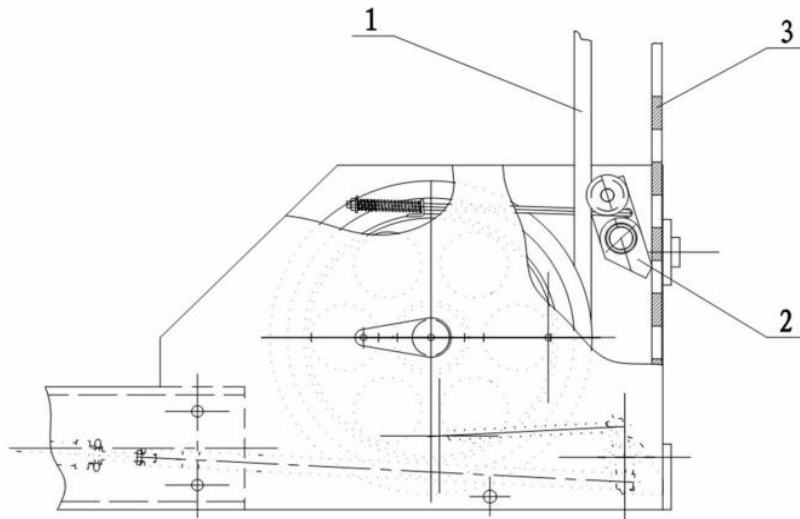
7.2 Steel cable fracture protection (see picture)

Rope safety lock "2" ground in beams, lock plate attached roller abuts on the steel

cable "1", while working roller movement up and down on the tension of steel cable, the rope insurance tip of the lock plate and hangs Taiwan to maintain a certai

n gap, when once the steel wire rope fracture, roller lost, broken rope safety lock pl

ate under the spring tension, rapid reverse rotation insert insurance lock plate, pointed hangs Taiwan "3" square hole, can effectively avoid the workbench's fall.



1. Wire Rope 2. Rope-breaking safety lock plate 3. Safety padlock panel

Figure 5

8 Lift hydraulic system

The hydraulic system of lifting machine is divided into single hydraulic system and double hydraulic system according to the selection of users. When installing and using the lift machine for the first time, attention should be paid to the rotation direction of the motor when wiring (see the fan blade of the motor is counterclockwise). If the motor rotates in the wrong direction for too long, the gear pump may be damaged.

8.1 The hydraulic pump station of the lifting machine is hung on the column. See figure X for the links of motor, integrated block, valve and oil cylinder. Hydraulic system schematic diagram is shown in figure X. Adjust the "overflow valve" to change the system pressure (which has been adjusted in the factory) to change the lifting capacity (but not the rated oil pressure of 18MPa). By turning the handle of "three way ball valve" (90°), the system can connect with the main engine oil cylinder and trolley oil cylinder respectively.

9 Operating instructions for car lifting

According to the different functions, now the big car (the whole lifting platform) and

small car (the second lifting) are explained respectively.

9.1 Operation instructions for hydraulic system of large truck

First, according to the direction of the car shown in the figure into the car, and the car's manual zhi pull, pad good anti-skid triangle wood and other anti-skid devices (self-provided by the user). Turn on the "power switch" and press the "up button".

At this time, the motor M will start running immediately and the main machine will rise immediately. Release the "up button" motor to stop running, and the machine immediately stops rising. When the lifting height is reached, as long as release the "rise button" and press "lock button", the lock tongue of the safety lock enters the square hole of the hanging plate, the lifting platform is locked at the required height, and the maintenance personnel can enter the bottom of the car for maintenance.

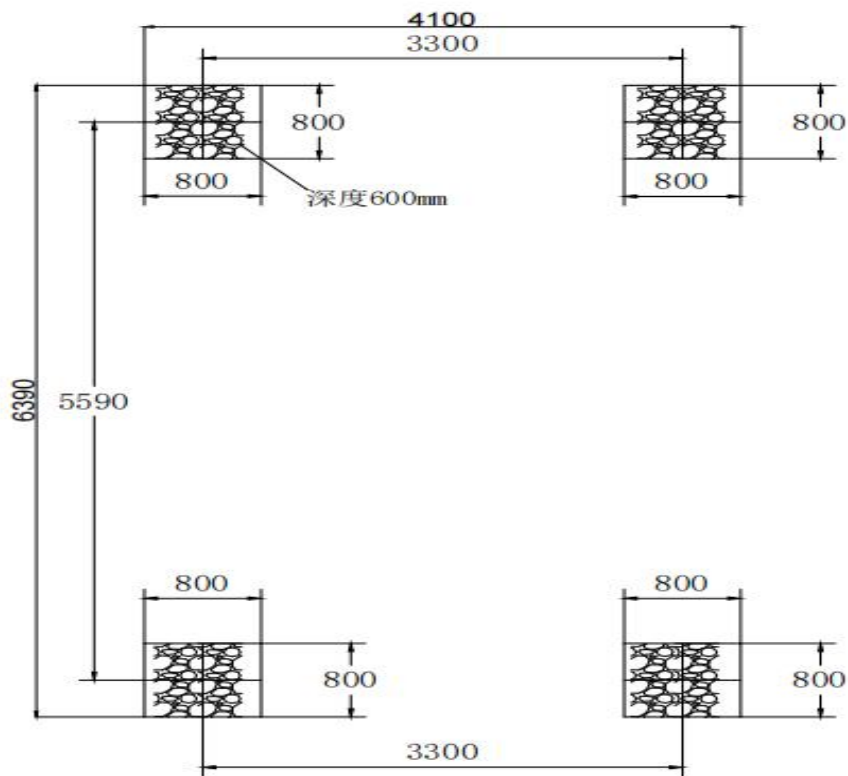
9.2. When the workbench needs to descend, the "unlock button" must be pressed first and then the "descend button" should be pressed to lift the platform up slightly. The

pneumatic unlocking device will pull the lock tongue out of the square hole of the hanging plate. At the same time, the oil return valve will be opened to lower the platform.

9.3 When it is necessary to lift the car, just rotate the handle of three-way ball valve 90° and press the "up button", the car will rise. When the car rises to the required height and maintenance personnel need to enter the work area, the car's safety lock plate must be raised and stuck on the safety fulcrum (manual).

9.4. When the car needs to drop, just press the "drop button", the pump station starts to move, lift the car first a little, the operator quickly open the safety lock support plate, the car will slowly drop.

9.5 When the trolley is finished, the handle of three way ball valve must be turned back to the original position.



10 Care and maintenance

10.1. first time use or Don't use it for a long time (more than one month),LHM32 anti

wear hydraulic oil should be added before normal operation, and maintain the oil level.

10.2. The operator should check the visible and fixed parts of the steel cable regularly. If any of the following conditions is found, the steel cable should be scrapped and replaced in time.

10.2.1 When the whole steel cable breaks.

10.2.2. In the range of 80mm length, external broken wires exceed 9 or 350mm length exceeds 20.

10.2.3. Due to wear outside diameter reduction in excess of 15%.

10.2.4 When broken wires gather in the same strand or are concentrated in a very short range.

10.3. The length of wire rope should be adjusted periodically or irregularly according to its situation. When the working table is in the lowest position, all four

wire ropes are pulled tight.

10.4 The four safety locks shall always be synchronously entered into the square

hole of the lock plate, and shall be adjusted in time to ensure the safe operation of the machine.

10.5 The oil filter in the oil tank should be cleaned every three months, the hydraulic

oil should be replaced after the first use of three months, and the hydraulic oil should be replaced every half a year. The oil tank and the oil filter should be cleaned with gasoline when the oil is changed.

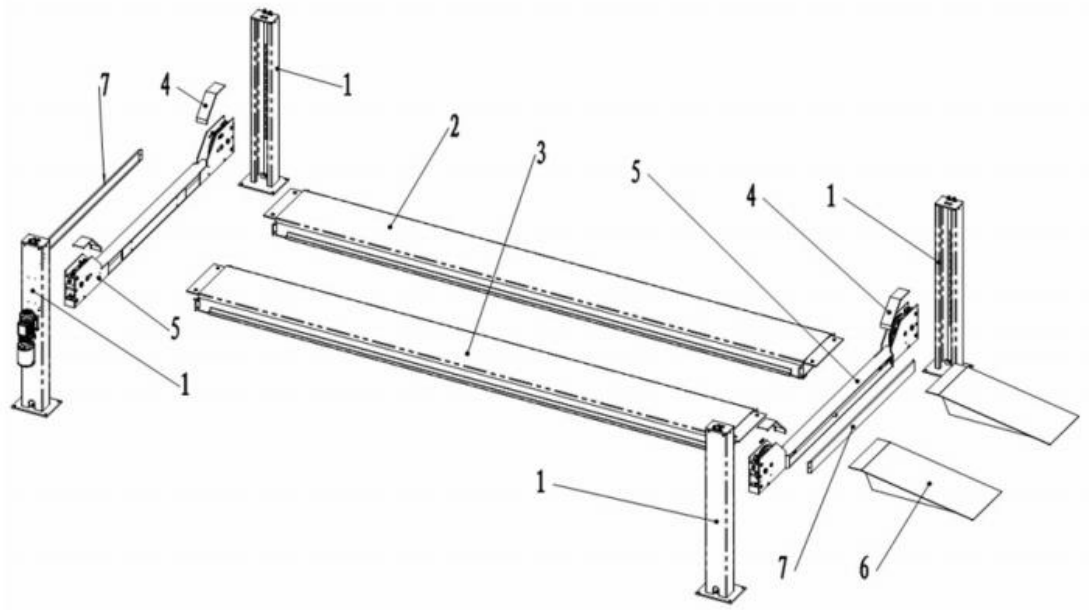
10.6 If the local voltage fluctuation value exceeds 10%, a voltage regulator should be installed.

11 NOISE STATEMENT

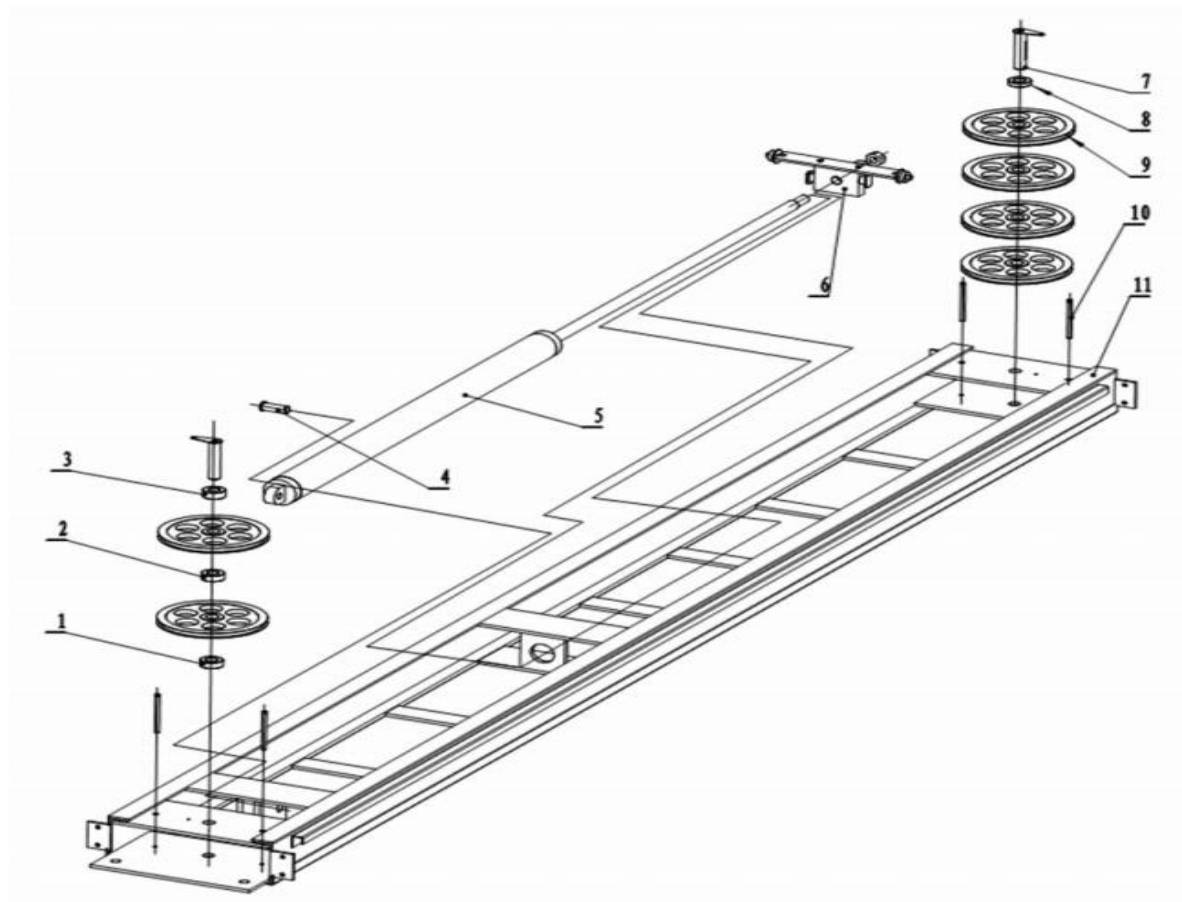
The working noise of the lift is less than 80dB(A).

12 TROUBLE SHOOTING

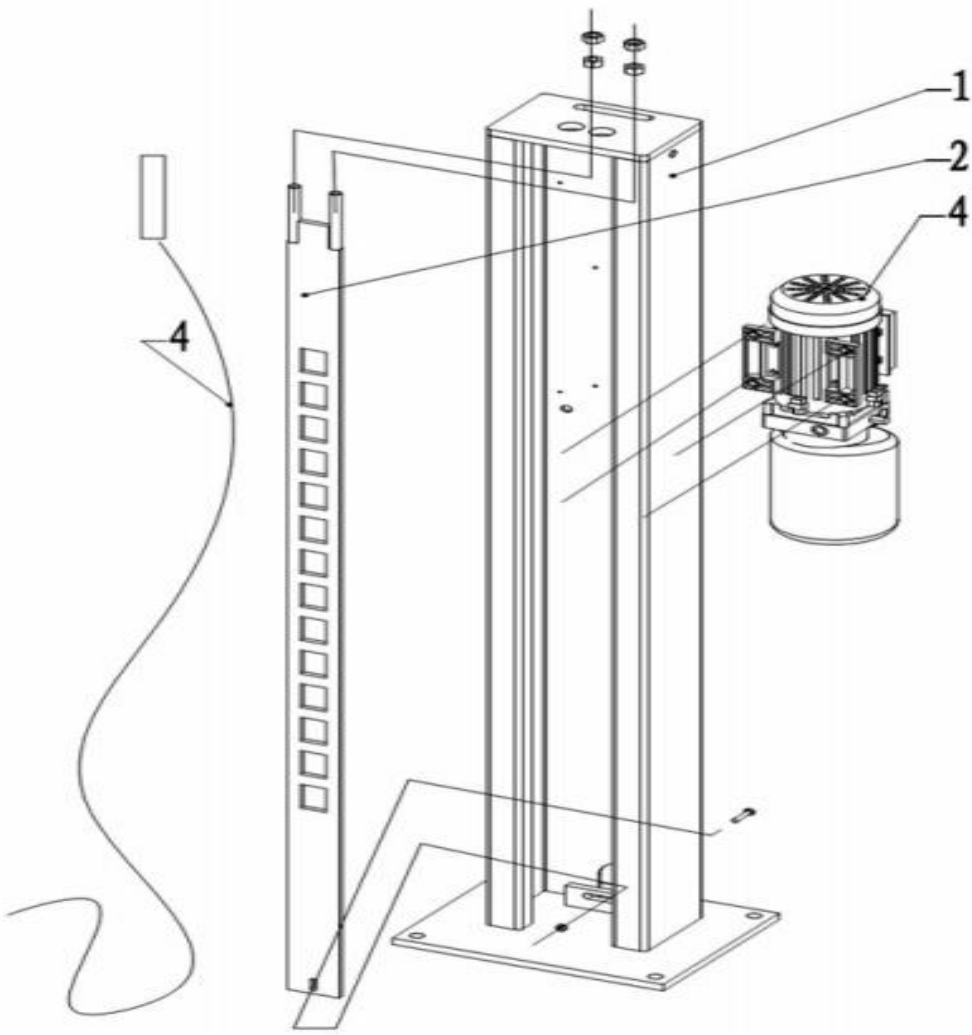
TROUBLES	CAUSE	SOLUTION
Press the up button and the motor won't turn	Power supply failure	<p>Troubleshoot power supply problems, such as missing zero lines</p> <p>Look for electrical system faults, such as fuses, etc</p>
Press the up button and the workbench will not rise	<ol style="list-style-type: none"> 1. Motor reversal 2. The hydraulic system is leaking badly 3. Safety valve failure 4. Severe wear on oil pump and insufficient output pressure 5. Cylinder seal is damaged 	<ol style="list-style-type: none"> 1. Replace the phase sequence of the power supply 2. Locate and rule out leaks 3. Repair or replace 4. replace 5. Replace seals
Press the down button and the workbench will not drop	<ol style="list-style-type: none"> 1. The safety lock is not open 2. Electrical system failure 3. Too little clearance between column and beam 	<ol style="list-style-type: none"> 1. Adjust the lock core pull rod to make the handle, When pressing down, the lock core is detached from the hanging plate 2. Find the cause and rule it out 3. Adjust the clearance between the beam and the column
The hydraulic system is too noisy	<ol style="list-style-type: none"> 1. The oil filter is blocked 2. Oil level is too low 3. Poor sealing of suction pipe 	<ol style="list-style-type: none"> 1. Clean or replace 2. Added refueling 3. Find and solve



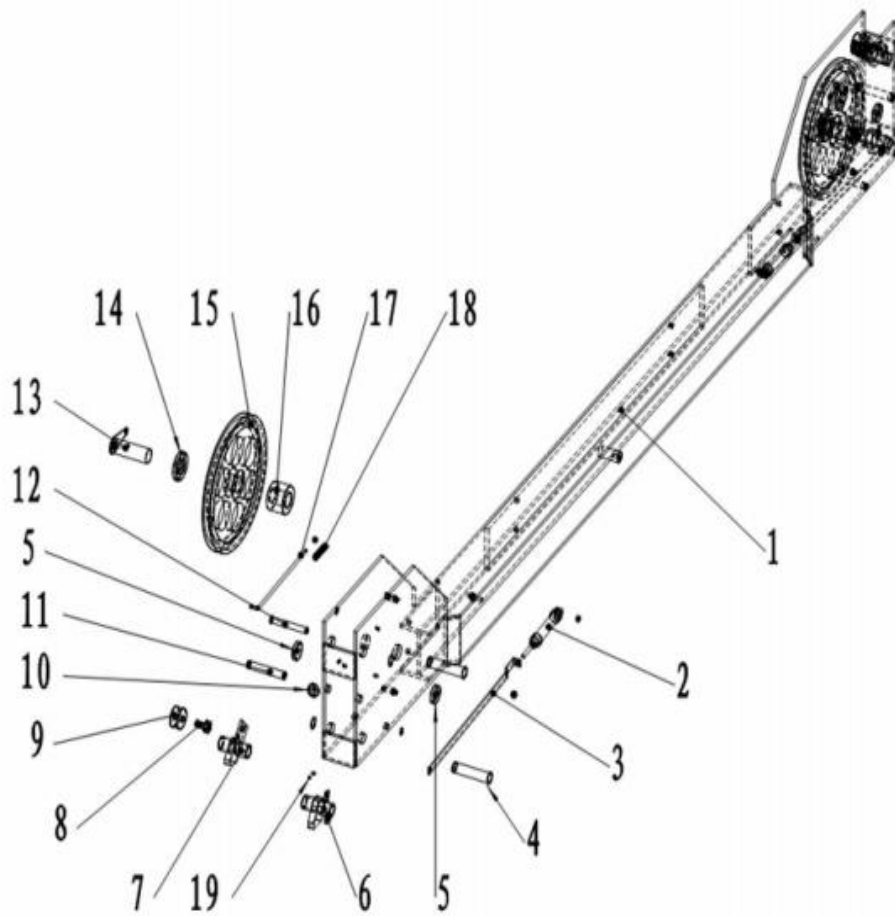
No.	Type	Name	Amount	Material	Remark
1	S12-01-00	Column assy Weld	4		
2	S12-02-00	Locating board assy	1		
3	S12-04-00	Locating layboard assy	1		
4	S12-03-17	Cover plate	4	Q235A	
5	S12-03-00-00	beam assy	2		
6	S12-05-00	Slope-plate	2	Q235A	
7	S12-03-18	Cover plate	2	Q235A	
8					
9					
10					



No.	Type	Name	Amount	Material	Remark
1	S12-02-20	SPACER sleeve	1	Q235A	
2	S12-02-19	SPACER sleeve	1	Q235A	
3	S12-02-18	SPACER sleeve	1	Q235A	
4	S12-02-23	Cylinder shaft	1	45	
5		Oil Cylinder	1		
6	S12-02-09-01	Wire Rope drawbar	1	ZG450	
7	S12-02-17-00	Wire wheel axle	2	45	
8	S12-02-21	SPACER sleeve	1	Q235A	
9	S12-02-15	pulley	6	Q235A	
10	S12-02-24	Limit Screw	4	45	
11	S12-02-01-00	Welding of main workbench	1		
12					
13					
14					



No.	Type	Name	Amount	Material	Remark
1	S12-01-01	Column Weld	4	Q235A	
2	S12-01-04-00	Lock plate assy weld	4	Q235A	
3		Pump station assy	1		
4		Wire Rope Assembly	4		
5					
6					
7					
8					
9					
10					



No.	Type	Name	Amount	Material	Remark
1	S12-03-01-00	Beam welding	2		
2		Air Cylinder	2		
3	S12-03-12	Safety Lock Lever	2	Q235A	
4	S12-03-07	Safety Shaft	2	45	
5	S12-03-15	Nylon slider	4		
6	S12-03-06	Safety Plate	2	ZG260	
7	S12-03-08	Rope-breaking safety plate	2	ZG260	
8	S12-03-10	Safety wire axle	2	45	
9	S12-03-09	Rope-breaking safety wire wheel	2	Q235A	
10	S12-03-16	Nylon slider	2	45	
11	S12-03-17	Control Shaft	2	45	
12	S12-03-05	Wire Rope Stop Pin	2	45	
13	S12-03-02-00	Wire wheel axle	2	45	
14	S12-02-21-12.5	Wire Wheel Bush	2	Q235A	
15	S12-02-15	pulley	2	Q235A	
16	S12-02-21-57	Wire Wheel Bush	2	Q235A	
17	S12-03-13	Safety Spring Lever	2	Q235A	
18	S12-03-14	Safety Spring	2	65Mn	
19	S12-03-11	Safety Spring	2	65Mn	