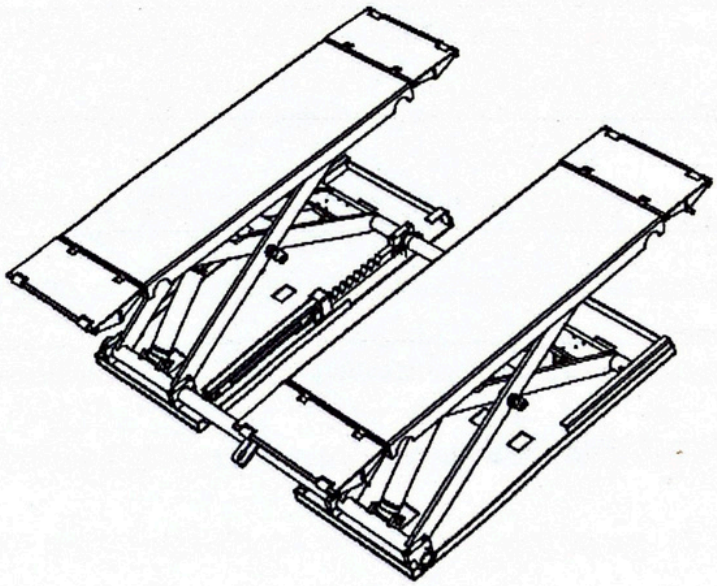
MID-RISE SCISSOR LIFT

USER'S MANUAL

FORCE CANADA



CONTENTS

SAFETY PRECAUTIONS

1. Please read and understand this manual carefully before using the equipment. The lift may only be used by qualified staff properly trained for the specific use of machine,
2. The lift surrounding area must be free from people or objects which could be a danger for lifting operation.And the passengers must get out of the lifted car.
3. The weight of the lifted vehicle should not exceed the lifting capacity.
4. Always insure the safety devices are engaged before any attempt to work on or near vehicle.
5. Make sure that the machine and its devices are working correctly, according to the specific instructions for maintenance.
6. Lower the lift to its lowest position when service finished.
7. Do not modify the equipment without manufacturer's advice.
8. If the equipment is not to be used any more, owners are suggested to make it unusable by removing the power supply connections, emptying the oil tank and disposing the liquids by right way.

9. If the lift is to be left unused for a long period, proceed as follows:

   a. Disconnect the energy source;

   b. Empty the oil tank.

   c. Grease the moving parts which might be damaged by dust or drying out.

10. Fire-fighting devices (provided by user) should be equipped on site.

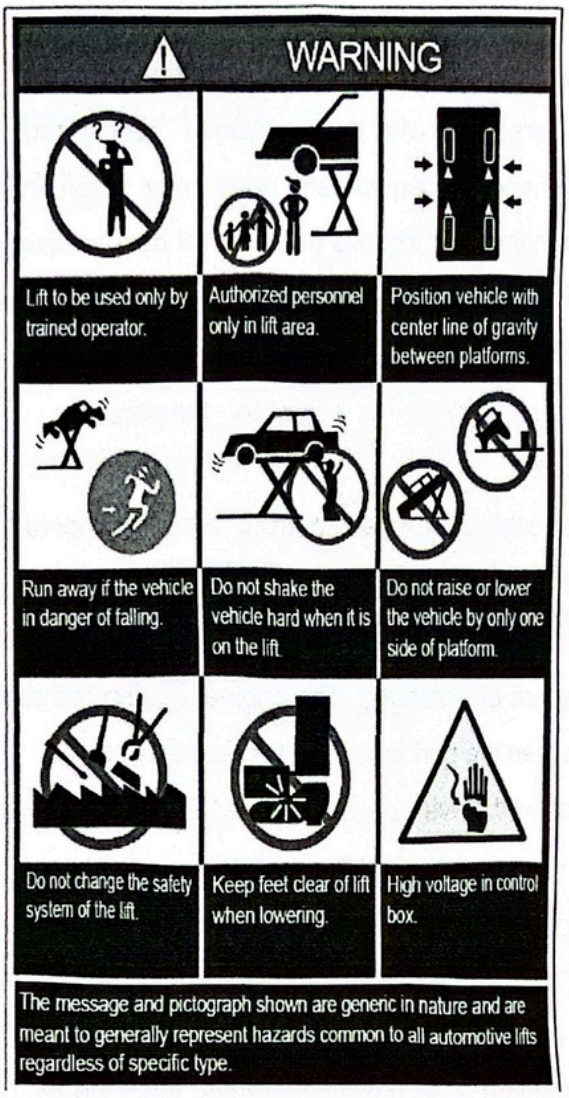
Warning

- The manual is indispensable part of the product and please read it carefully.
- Please conserve the manual well for reference in overhaul.
- The equipment should be only used for the purpose specified in design.
- The manufacturer never takes any responsibility for damage caused by misuse or other use.

CAUTIONS

- The equipment must be operated, used or maintained by qualified personnel who has obtained specialized training. Arbitrary change of equipment parts may result in damage directly or indirectly if there is no approval by manufacturer.
- The person except for operator should not approach the equipment when it is in operation.
- Do not put the lift in extreme temperature or humid environment.
- The lift should be prevented from dust, ammonia, alcohol, diluents, spray adhesive and others.
- The routine inspection for lift should not be conducted when the lift is in failure or damaged. The original equipment part should be used when the part is repaired or exchanged.
- The lift should never be in overload and the rated loading capacity is marked on the lift.
- It is forbidden to raising the lift when there is person in the lifted vehicle. The client or spectator should be beyond the lifting scope in operation.
- Make sure there is no obstacle, grease, machine oil, refuse or other impurities in lifting area.
- As for some types of vehicles, the removal (installation) of parts may result in sever gravity shift or instability, so the vehicles should be balanced by support.
- Use proper equipment, tools and protection facilities.
- Please pay special attention to the different safety identifiers on the lift.
- It is forbidden to touch the moving parts in operation.

- It is forbidden to remove safety device or make it useless.



INTRODUCTION

This guide has been made in order to supply the owner as well the user with the basic instructions for correct installation, operation and maintenance of the lift.

Read this guide carefully before using the machine and follow the instructions given by this guide carefully to grant the machine a correct function, efficiency and a long service life.

INTENDED USE

The lift has been designed and constructed for lifting vehicles with the sole purpose of performing service, repairing and inspection. Any other use not described is to be considered as improper and irrational, and thus it will be under the whole responsibility of the operator.

The middle rise scissor lift is mainly used for tire service or other quick service around vehicles.

This appliance must be only used for the purpose of which it is expressly designed. It is forbidden to lift people or others not

specified in this manual. Any other use is to be considered improper and irrational and thus highly forbidden.

The constructor cannot be held responsibilities for any damage or injuries caused by an improper use or by the non-observance of the following instructions:

SAFETY SYSTEM:

Electric safety lock.

PACKAGING, TRANSPORTATION AND STORAGE

All the operations such as packaging, handling, transportation and dismounting should be operated by specialized technicians.

Note:

Wooden base may be selected for package according to the requirements from customer.

Transportation:

Goods should be handled and moved by crane or fork lift truck weighing over 1 ton. To prevent goods from falling down, during the lifting operation, one person should be in charge of observing the goods intently, so as to avoid accidents.

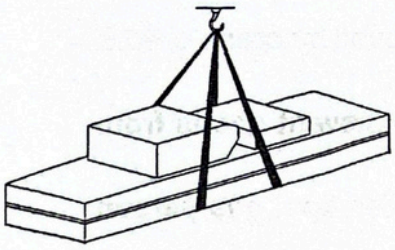
The goods should be transported by vehicles or liners.

When the goods arrive at the destination, it is necessary to check whether the goods are complete to prevent damage and loss during the transportation.

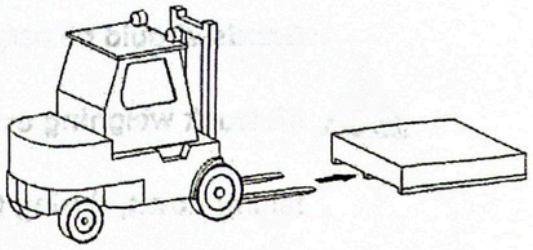
If there is any damage in the package, inspection to the damaged box should be conducted by the packing list to confirm the situation about the damage and loss of goods. Meanwhile, it is necessary to notify the person that undertakes the transportation immediately.

The equipment is heavy! Manual loading, unloading and handling should be beyond the consideration.

In addition, the lifting of goods during loading and unloading should be operated according to the figure.



Handled by crane



Handled by fork-lift truck

Storage:

The machinery and equipment should be placed in indoor warehouse, and outdoor storage should make good water-proof treatment.

Van truck should be adopted during the transportation and goods should be stored in containers if they are shipped by liners.

The control trolley should be kept upright during the transportation. In addition, extrusion of goods should be avoided.

Environmental temperature for storage of equipment: -25℃~55℃.

LIFT STRUCTURE

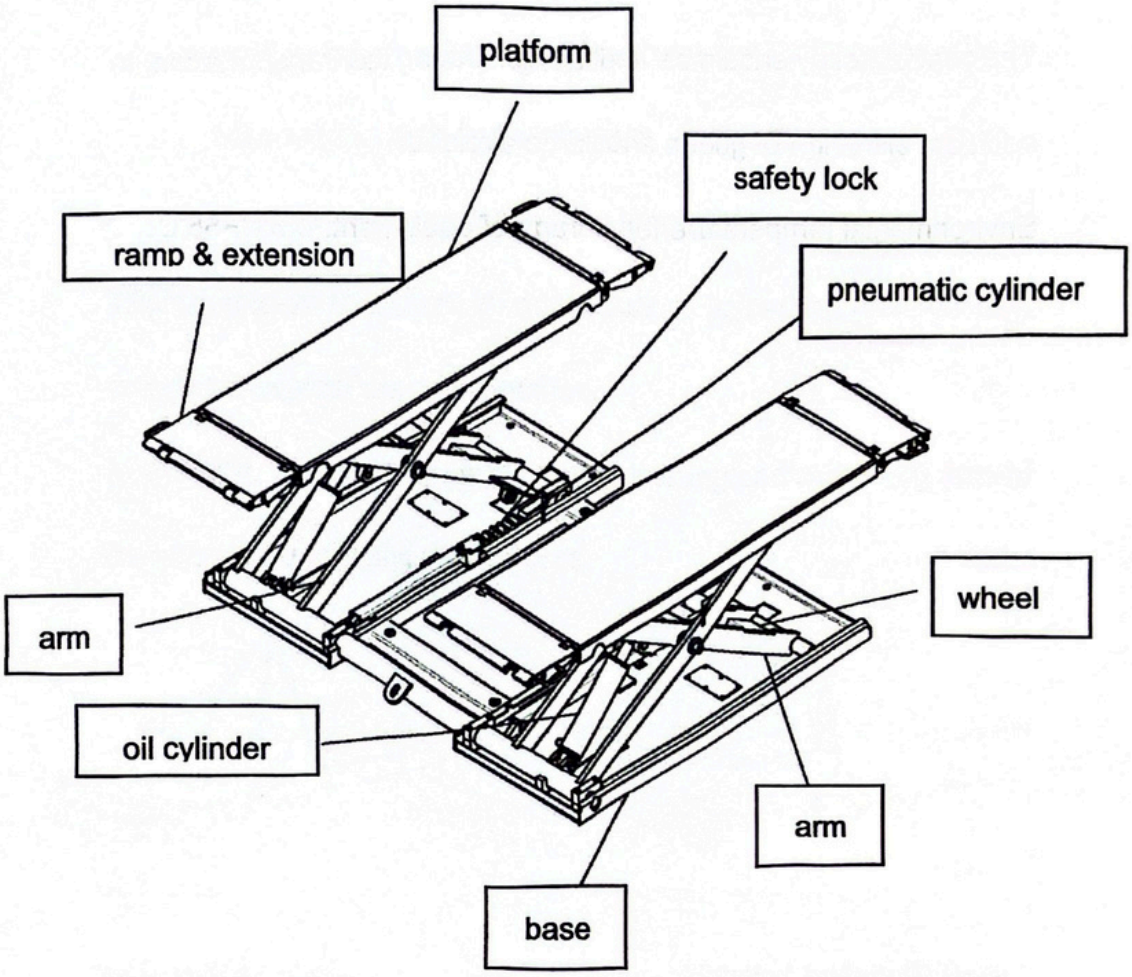


Figure 1: lift structure diagram

Features:

1. The lift is equipped with a easily-disassembled moving roller for easy movement.

2. With electric unlocking device: before descending, rising and unlocking firstly to ensure unlocking simultaneously.
3. Initial height 120mm, on-ground mounted, self-contained ramps.
4. Double cylinder, more powerful.
5. The hydraulic system uses imported solenoid valves and engineering machinery grade seals.
6. The customer can choose the manual pump used in the power outage to drop the car;
7. The lift consists of four parts: rack, hydraulic system, electrical system and safety device.

MAIN TECHNICAL PARAMETERS

- Rated lifting weight: 3000kg 6600 Lbs
- Lifting height: 1000mm ≈40 Inches
- Platform width: 520mm ≈20 Inches
- Platform length: 1400mm-1930mm 55"-75" (With ramp)
- Lifting time: 40s
- Initial height: 120mm ≈4 inches
- Motor power: 2.2kW

✧ Motor voltage: 220V/380V

1. Overall size: as shown in the figure (2)

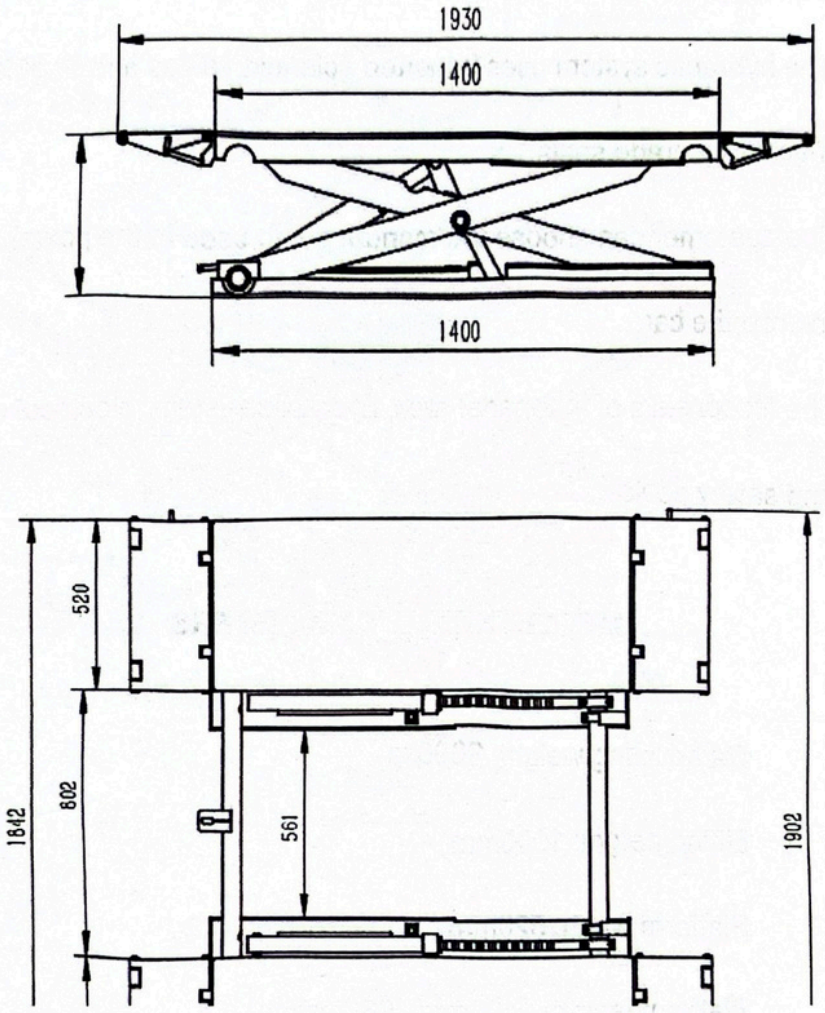


Figure 2: overall size diagram

INSTALLATION

BEFORE INSTALLATION

1. Identify the components and check for shortages. Contact us immediately if shortage discovered.
2. Installation, adjusting and testing operations are to be performed by qualified staff only.
3. The lift must be installed on a level concrete floor with minimum thickness of 200mm and an extension of at least 1.5m from anchoring points.
4. The lift installation concrete surface must be relatively smooth, leveled in all directions.
5. After unloading the lift, place it near the intended installation location.
6. Remove the shipping brands and packing materials from the unit.

SPACE REQUIRED

Prepare ground base according to the SPACE REQUIREMENT.

The concrete's thickness should be ≥200mm and the error of levelness should be ≤5mm when the ground condition is good.

ELECTRICAL SYSTEM

Any work on the electrics must be carried out by qualified personnel only.

Equip the electric system of installation place with effective ground circuit.

The electric system adjusting must be made in accordance with the nameplate showing.

CONNECTING

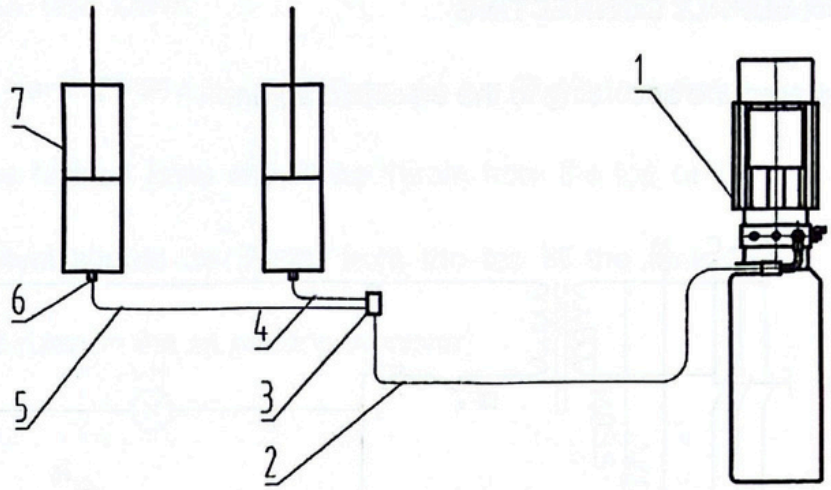
You may start to connect oil hose, and power after the above preparations.

Tools and equipment needed

- ✓ Electrical drill
- ✓ Open wrenches
- ✓ Screw drivers
- ✓ Adjustable spanners

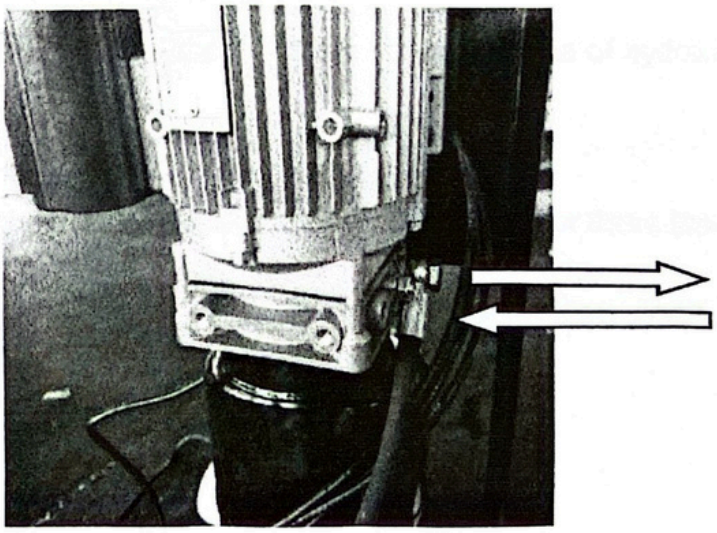
1. OIL HOSE CONNECTING AND POWER SUPPLY CONNECTION

See the hydraulic diagram for oil hose connecting (figure 5)



1. motor	5. Oil cylinder hose 01
2. Main oil hose	6. Oil cylinder joint
3. diverting valve	7. Oil cylinder
4. Oil cylinder hose 01	

Figure 5



2. POWER SUPPLY CONNECTING

Connect power line according to the electric diagram.

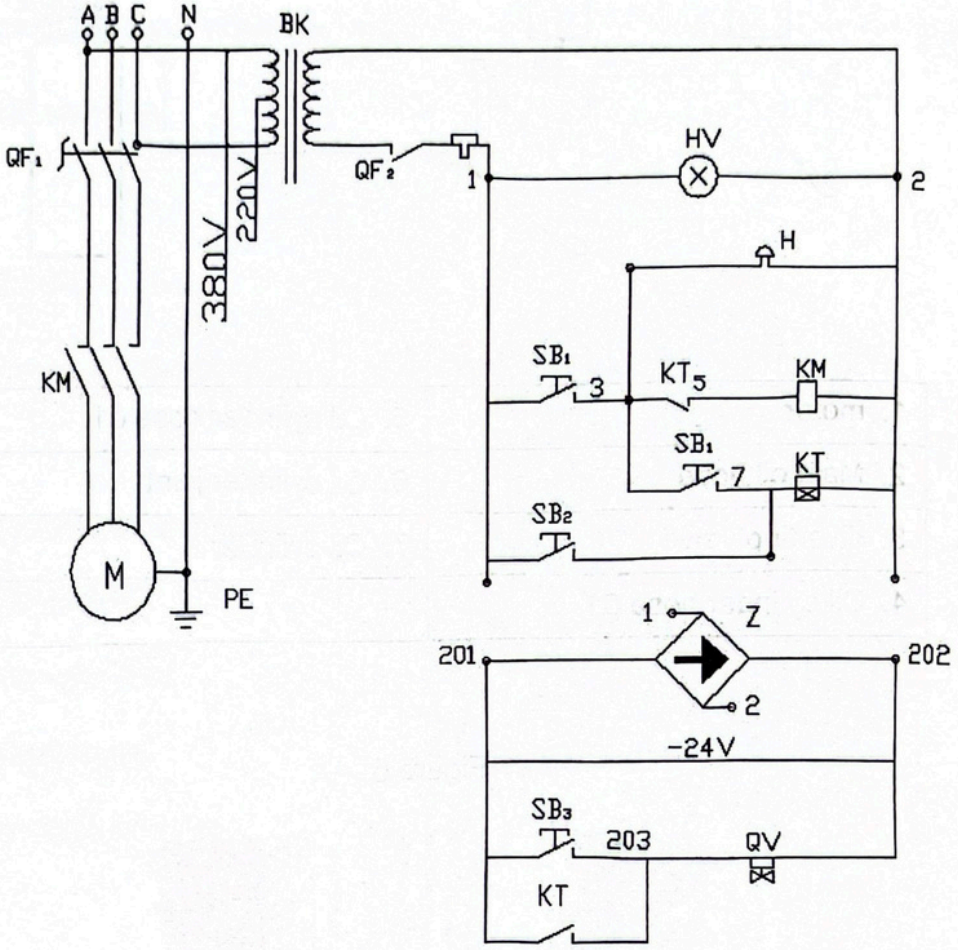


Figure 6: wiring diagram

3. REFILL THE TANK

Pour 10 liters of #46 anti-wear hydraulic car lift oil (provided by user) into oil tank. The highest level should be 15mm from the top of the tank and the lowest level should be 30mm from the top of the tank (check with the detective ruler on the oil pouring air cover).

4. BASE FRAME FIXED

The lift is designed also for portable use, which means that you may use it without fixing. If need fixing, please refer to the space requirement.

5. LOADING TEST

Never try to use the lift with vehicle on without testing.

This step is very important to check if there is any leakage of hydraulic line connectors.

If there's no abnormal noise or leakage after running two or three times, run with load never exceeding 2000kg at a low height. Then raise higher gradually.

OPERATION

RAISING THE LIFT

Turn on the power switch, turn the selector switch to the home power-on position, press "UP" button, and the lifts will rise. Meanwhile, the motor starts running, the hydraulic oil enters the cylinder, and the platforms rise. Release the "UP" button and the platforms will immediately stop rising. Meanwhile, the motor stops running, but the insurance jaw falls on the safety rack.

LOCK TEETH

When the platform is lifted to the working height, the insurance jaw may not be in the safety rack, so it is necessary to ensure that the insurance jaw sliding into the safety teeth. Once the lift locked, and the maintenance work can be performed.

Before locking, it is important to check if the insurance jaw is engaged with the safety teeth.

LOWERING THE LIFT

Press and hold the "DOWN" button, the lift will rise firstly, then the electromagnets rise the safety jaw. After a delay of 2--3 seconds (to make

insurance jaw completely rising), the unloading valve opens and the lift descends.

MAINTENANCE

We will give the user one-year warranty of quality for the equipment. If something wrong with the equipment within the term of service, we will repair or replace the product according to the user's demand. The manufacturer will not take any responsibility for damage caused by improper installation and operation, overload running, wrong concrete ground (that can not meet the requirements in the manual), normal mechanical abrasion and insufficient maintenance. The warranty will be carried out on the basis of the type and serial number of the equipment. Therefore, the users should provide them to the manufacturer without fail.

The listed intervention times can be changed according to the kind of service, environment, frequency of use, etc.

1. For the first time use or long time (more than one month) after decommissioning, the #46 anti-wear hydraulic oil should be added

before normal operation, and the oil level should be maintained for a long time.

2. Lubricating oil (GB443-84 mechanical oil N15, N22 or N32) must be injected into all oil filling holes once a week.
3. Keep the upper and lower rollers clean and apply grease.
4. Clean the oil filter of the oil tank every 3 months (with gasoline), replace the hydraulic oil after 3 months for the first time use, and replace it every six months after that. When changing the oil, clean the oil tank and oil filter.
5. If the local voltage fluctuation value exceeds 10%, a voltage regulator should be installed.
6. The lift operates with less than 80dB (A) noise.

CHECK

1. DAILY PRE-OPERATION CHECK

The user should perform daily check. Daily check of safety lock system is very important.

. Check safety lock audibly and visually in operation.

. Check hydraulic connections and hoses to avoid any leakage.

. Check cable connections, wiring and switch to avoid damage.

. Check and tighten bolts, nuts and screws.

2. WEEKLY MAINTENANCE

. Check the cleanness of the moving parts.

. Check the safety device.

. Check hydraulic oil level.

.Check and tighten bolts, nuts and screws.

3. MONTHLY MAINTENANCE

. Check the tightness of screws .

. Check the hydraulic system seals and tighten the loose parts if necessary.

. Check the greasing and wear condition of pins, rollers, bushes, trolley structure as well as arms and relevant extensions, if necessary, replace the damaged parts by original spare parts.

4. YEARLY MAINTENANCE

. Empty the tank and check the conditions of the hydraulic oil. Clear the oil filter.

FAULT AND TROUBLESHOOTING

faults	Causing reason	troubleshooting
Motor fails to rotate upon rising	1. The button switch is not connected 2. AC contactor coil break 3. The limit switch is not closed.	1. Check button switch line 2. Check the AC contactor circuit 3. check if the terminal connected to the limit switch correctly
Motor is rattling but fails to rotate	1. phase loss for three-phase power	1.Check if the main circuit of the motor is disconnected (or off phase).

Motor can rotate but lift fails to rise	1. Motor rotates in reverse, 2. hydraulic oil is not sufficient , 3. Due to transportation and other reasons, the pump is filled with air and causing air blockage, 4. Overflow valve failure 5. lowering solenoid valve plug gets stuck, 6. Oil pump seals damaged and oil leaked, 7. If the motor running heavy and shaking, the filter mesh of the oil filter is seriously blocked. 8. The main solenoid valve is not open	1. Change the motor phase, 2. Supplement hydraulic oil 3. Remove the relief valve and press "UP" button (attention! The oil will spray), when the oil flow out of the hole,re-install the relief valve (and tighten), 4. Check the sealing condition of relief valve plug, clean the valve or replace the damaged sealing gasket, 5. Check the solenoid valve and clean the valve plug, 6. Remove the 4 screws connected to the pump and the tank, remove the gear pump, and then check and replace seals, 7. Clean the oil filter

	9. the manual knob of lowering solenoid valve is left loose.	8. Check or replace the solenoid valve 9. Tighten the manual knob
Lift rises too slowly	1. Oil pump seals damaged and oil leaked,	1. Remove the 4 screws connected to the pump and the tank, remove the gear pump, and then check and replace seals,
Lift shaking when working	1. There is air in the hydraulic circuit, 2. The upper part of the oil	1. Follow the instructions and exhaust air. 2. Check the oil pump suction

	pump suction pipe leaks, 3. Oil filter blocked	pipe connection and sealing condition, 3. Clean oil filter
Lift can rise but not descend	1. lowering solenoid valve is not powered, 2. lowering solenoid valve is damaged and can not work, 3. The internal contact of the button switch is improper, 4. Unloading solenoid valve is not open,	1. Check if the connection between "DOWN" button and the lowering solenoid valve has an open circuit, 2. Check and repair the solenoid valve, 3. Check button switch, 4. Check or replace the solenoid valve,