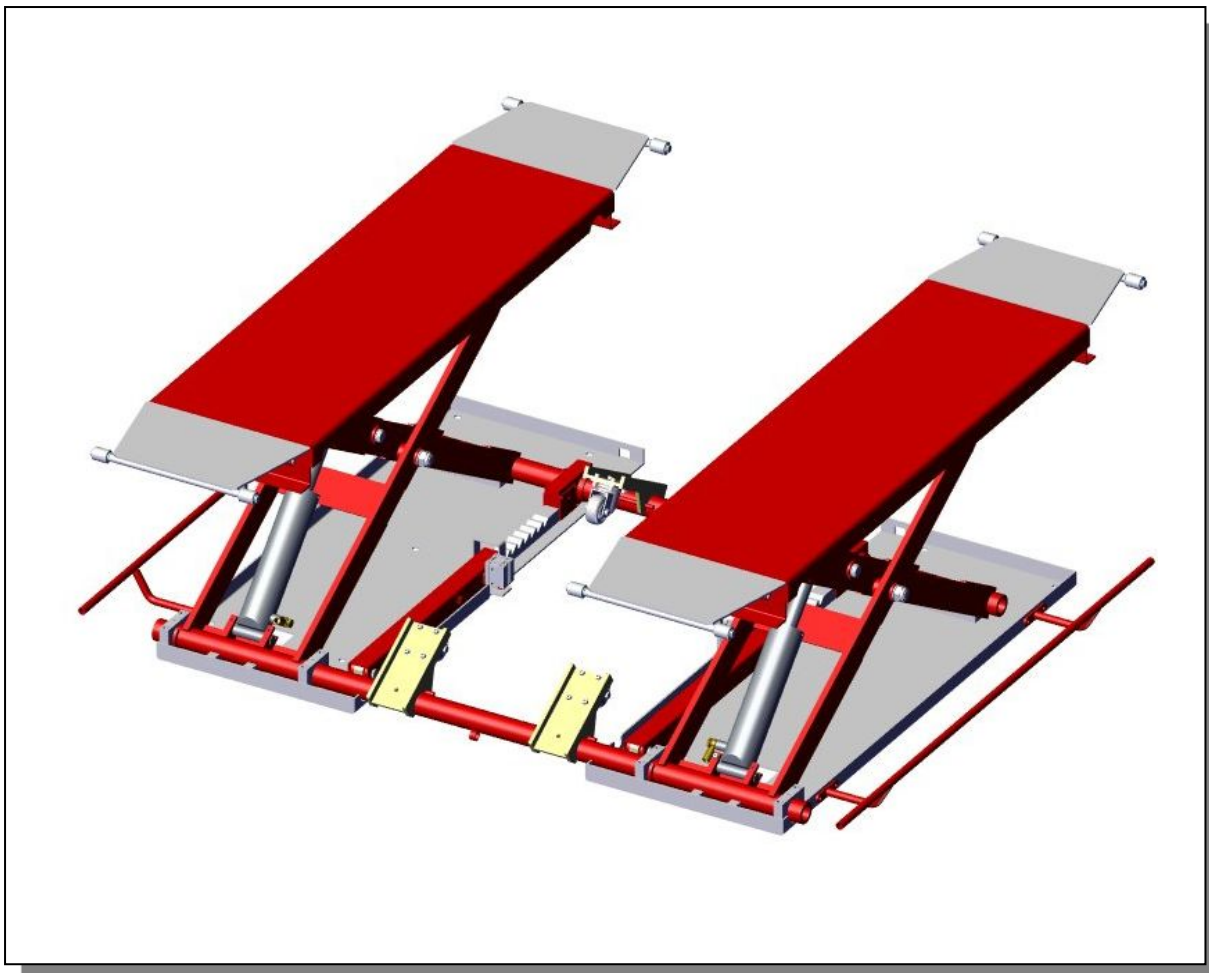




Low Small Scissor Flat Hydraulic Lifter



Scissor Hydraulic Lifter for Vehicles

Model:

Manufacturing code:

Manufactured on:

DD	MM	YY
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Authorized Distribution Center

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The company is never responsible for equipment damage or other problems caused by using other accessories or consumables instead of original products of our Company or products approved by our Company.

The equipment here shall be used by specialized technicians or maintenance personnel.

The products are underwritten by PICC

Cautions



Warning

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

Cautions

- The machine here must be operated, used or maintained by qualified personnel, who has obtained specialized training, and arbitrary change of machine parts or application scope may result in damage to machine directly or indirectly if there is never approval by manufacturer or the behavior is not in line with the manual.
- The person beyond operators shall never approach the machine when the machine is in operation.
- Never make lifter in extreme temperature or humid environment. The installation shall be far from water tap, air humidifier or furnace.
- The lifter shall be prevented from much dust, ammonia, alcohol, diluents or spray adhesive and others.
- The routine inspection for lifer shall not be conducted when the lifer is in failure or there is damage to parts and the original equipment parts shall be used when the part is repaired or exchanged.

- The lifer shall never be in overload and the rated bearing capacity of lifer is marked on nameplate.
- It is forbidden to hoist the lifer when there is person in vehicle. The client or spectators shall be beyond the lifting scope in operation.
- Make sure that there is no obstacle, grease, machine oil, refuse or other impurities in lifter area.
- As for some vehicles, the removal (installation) of parts may result in severe gravity shift and instability of vehicle. The vehicle shall be balanced by support.
- Use proper equipment, tools and safety protection facilities, such as, uniform, safety shoes and others.
- Please pay special attention to different safety identifiers on machine.
- It is forbidden to touch moving parts with hands or other parts when lifer is in operation.
- It is forbidden to remove safety device of the machine or makes it useless.
- The hydraulic oil for the machine is N32 or N20 wear-resistance hydraulic oil. Please make sure to use it in safety scope and refer to appendix for safety data.
- **Our Company is dedicated to continual improving product quality continually and updating technical specification. The further notice for change will never be provided.**

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Packaging, Transportation and Storage



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

Package refer to the following pictures

Standard Configurations:

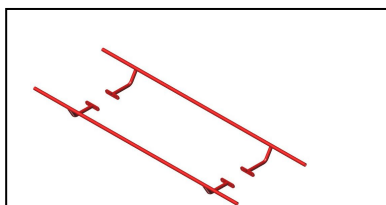
1. There are five main categories for standard configurations as 1. Oil pipe; Air pipe and joints are completely installed in the machine; 2. Expansion bolt, rubber gasket, cable tie and instruction book are placed in control box; 3. Respectively one for main platform and assistant platforms; 4. A control box; 5. Four pieces of approach spans

Standard packing list:

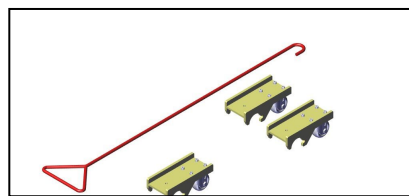
NO.	Name	Name and quantity of accessories
1.	Oil pipe and joint	A set of air pipe; three pieces of oil pipes; three pieces of joints; one piece of manifold block;
2.	Accessories	There are 10 sets of collision bolts, four pieces of bubble pads, one instruction book, 10 pieces of cable ties in control box
3.	Lift platform	Respectively one for main and assistant platforms
4.	Control box	One
5.	Approach span	4 sets of car guiding plates

List of optional fittings:

NO.	Name	Name and quantity of accessories
1	Foot protective device	Two pieces of foot protective guard; four pieces of M8x16 socket hexagon screws; four pieces of M8 plain washers; four pieces of M8 spring washers
2	Moving shelf	Three sets of moving wheels; one piece of moving tension rod; respectively four pieces of M8x20 socket hexagon screws, M8 plain washers, and M8 spring washers

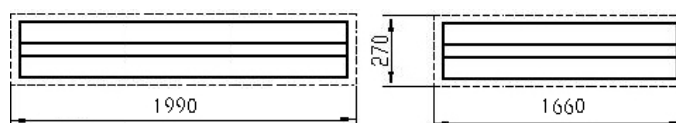


Optional foot protective device



Optional moving shelf

Package size drawing



Note: Wooden case may be selected for package according to the requirements from customer

Transportation



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

The goods shall be transported by vehicles or liners.

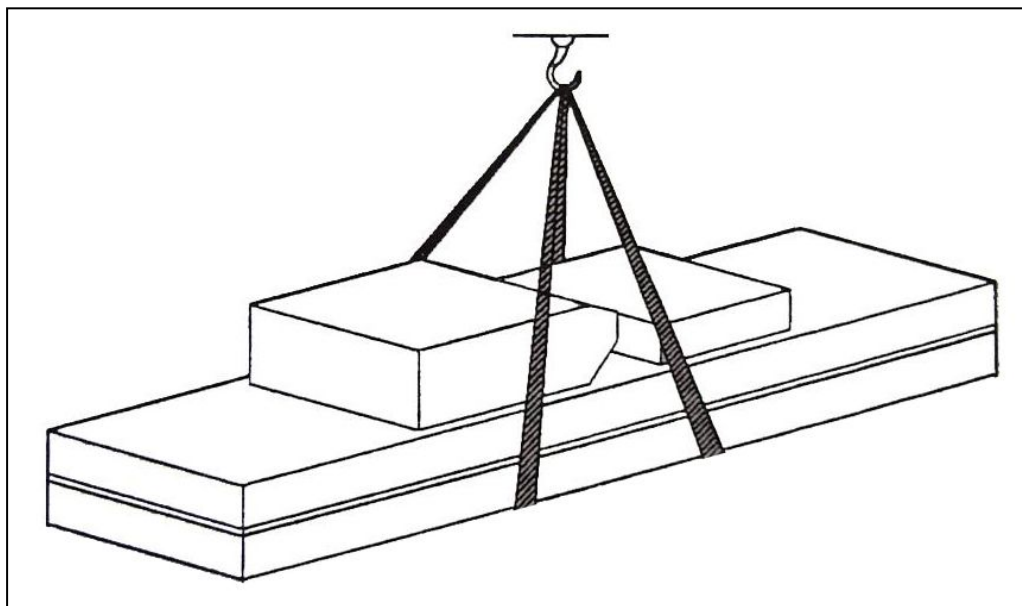
When the goods arrive at the destination, it is necessary to check whether the goods are complete to prevent damage and loss during the transportation.

If there is any damage in the package, inspection to the damaged box shall be conducted by the Encasement 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 machine is heavy goods! Manual loading, unloading and handling shall be beyond the consideration, safety during the operation is of great importance.

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



Storage:

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

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

The control panel shall be kept upright during the transportation; in addition, extrusion of goods shall be avoided.

Environmental temperature for storage of machine: -25°C~55°C.

Introduction of User's Manual



This manual is intended for operators of vehicle maintenance enterprise and routine maintenance personnel.

Before the lifter is operated, relevant personnel shall carefully read the User's Manual. There is important relevant information in the manual:

- Personal safety of operators and maintenance personnel
- Safety in installation
- Safety operation of lifter

Please keep this manual



- This manual is an important part of the lifter
- The manual shall be place around the lifter, so that the operator and maintenance personnel can read it at any time
- Please carefully read Chapter of Specification Parameters & Spare parts, which contains important information on application and safety.

The lifter is designed and manufactured by European Standard



Loading and unloading, transportation, dismounting, assembling, commissioning and testing; specially the maintenance, repair, overhaul, transportation and dismounting of lifter shall executed by professionals with license.

Injury of human and damage of the machine caused by operation of no-authorized personnel or operation not in accordance with the operating rules occur, the manufacturer bears no liability for this.



The manual suggests: operation and safety is guarantee for operator and maintenance personnel. To better understand the structure and operating rules of the machine, please carefully read the *User's Manual* before you use the machine.



To better understand the terms in the manual, operator shall possess experience on service at factory, maintenance and repair, etc. and can read the explanations in drawings and the manual and relevant special national safety ordinance on equipment installation. This is also applicable to maintenance and the maintenance personnel shall possess special knowledge on machinery engineering

- Operator: Personnel that have been trained and authorized to use the lifter
- Maintenance personnel: Routine maintenance personnel that have been trained and authorized



The manufacturer keeps the right of the minor modification of the manual due to

advancement of technology

Description of Machine

Purpose of machine

Low small scissor Flat Hydraulic Truck Lifter, applicable to car inspection, repair, tire dis assembly as well as vehicle maintenance, especially for the use in basement or on the floor, without the need of working pit, can lift various kinds of automobiles of the weight under 3000kg.

Structural features:

- Employ hidden scissor ultrathin structure, no need of working pit, with small space occupation
- With independent control cabinet and low-voltage control, the safety performance of the machine is excellent
- Hydraulic co-content oil cylinder, mechanical conjoined drive, to make synchronous and stable operation of the platform by force
- With double safety devices of hydraulic lock and mechanical double-tooth safety claw, it is safe and reliable.
- The machine adopts good quality hydraulic and electric components from Italy, Germany and Japan, etc.
- Use directly without the need of installation in selection of shifting device
- Shifting device may be optional for user convenience.

The machine is configured according to the following assembly conditions:

- Foundation of machine (position for equipment installation and space)
- Frame of lifter (main structure of lifter and safety mechanism)
- Control cabinet (control part of the machine)

Basic structure

The foundation of machine is composed by concrete structure

Frame of lifter

It is composed by solid steel connecting leveler, main lifting platform, pneumatic double-tooth safety components and hydraulic oil cylinder components.

Control cabinet

At the bottom of the control panel, there is a hydraulic control system such as hydraulic oil tank, hydraulic pump, hydraulic motor and hydraulic valve, etc. While the upper part is electrical control system.



Scissor Lifter is designed to lift vehicles. It is not suitable for other occasions, especially for operation of washing and spraying. In addition, it shall not lift things heavier than the rated load.

Specification Parameters & Spare parts

Main technical parameters:

Machine type	CW630L
Driving method	Electronic hydraulic
Rated lifting weight of host	3000kg
height of host	1000mm
Original height of platform	115±5mm
Length of platform	1450mm
Width of platform	460mm
Lifting time	≤30s
Falling time	≤40s
Total width of platform of the whole machine	1800mm
Total length of the whole machine	2012 mm
Weight of the whole machine	460kg
Power supply	AC 400V or 230V±5% 50Hz
Power of the whole machine	2.2kw
Hydraulic oil	10L The same as that of 20# wear-resistance hydraulic oil (user prepares it by himself/herself)
Pressure of air supply	6-8kg/cm ²
Temperature of working environment	5-40℃
Humidity of working environment	30-95%
Noise of machine	< 60db
Height of installation of machine	Altitude≤1000M
Temperature for storage of machine	-25℃~55℃

Rotating speed.....2800rpm/min
Connecting form.....B14
pressure...150~300bar
Insulation class.....F

Successive working pressure...210bar
Intermittent working
Fill 10L that is the same as 20#
wear-resistance hydraulic oil into oil tank of
the pump station that

Specification Parameters & Spare parts

Note: 1. Voltage: The electric motors with different voltages may be selected according to customer requests

Single phase/Three phase: 110V/380V 60Hz

Single phase/Three phase: 220V/380V 50Hz (standard configuration)

2. The user who adopt hydraulic power unit of 220V voltage shall prepare power stabilizer by itself to ensure that there is no under-voltage damage to the motor and relevant electrical components.

3. There is great difference in hydraulic oil due to the area and season. It is suggested that employ 32# antiwear hydraulic oil for 10~40℃, and 20# antiwear hydraulic oil for —5~10℃

4. Environmental requirements:

Working temperature: —5℃~+40℃

Relative humidity: +30℃, relative humidity≤80%

Shipping and storing temperature: -25℃~+55℃

Relative altitude: no more than 1000M

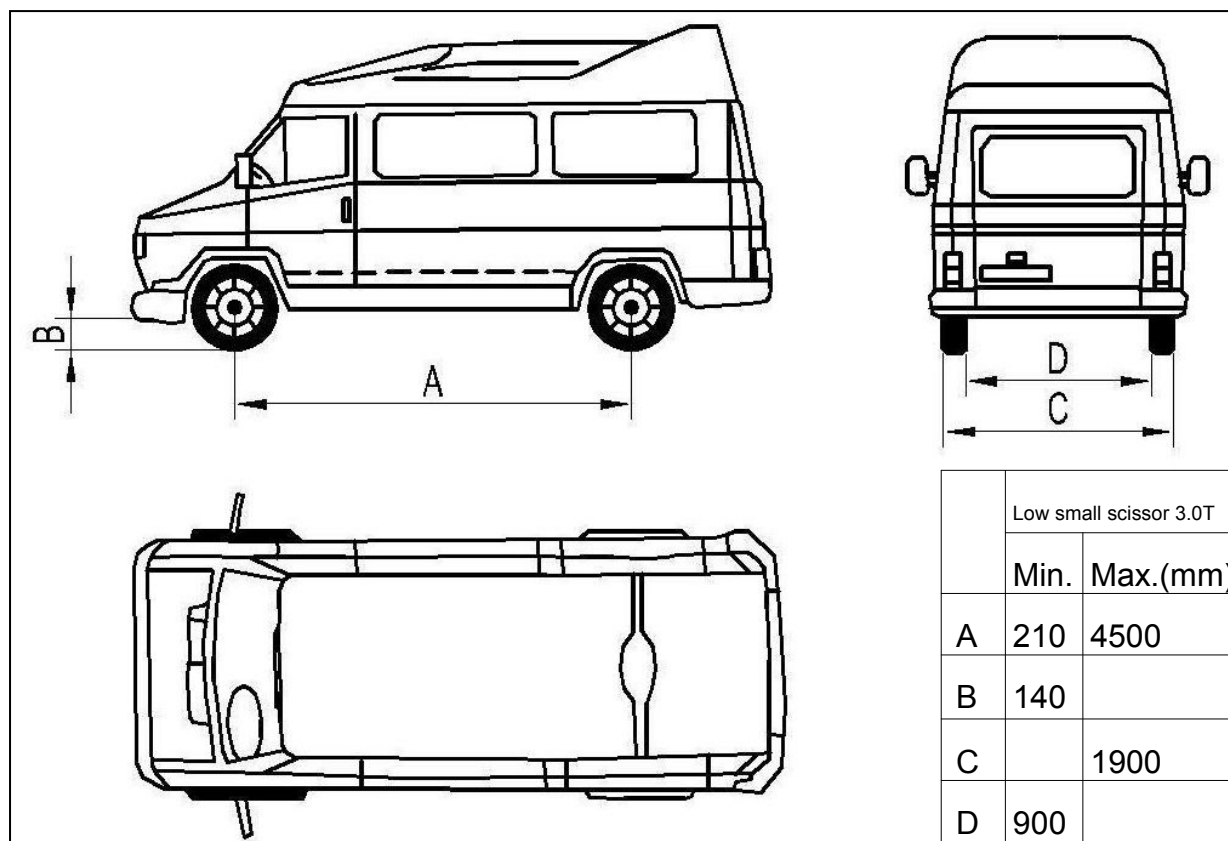
Operating noise of the machine is lower than 60dB (A)

Applicable type of vehicle for lift:

This lift is applied for vehicles with weights and measures in the scope of data below:

Maximum lifting capacity: No more than 3000kg

Maximum size of the vehicle: The table below is used to define the standards of operational limitation of the lift.

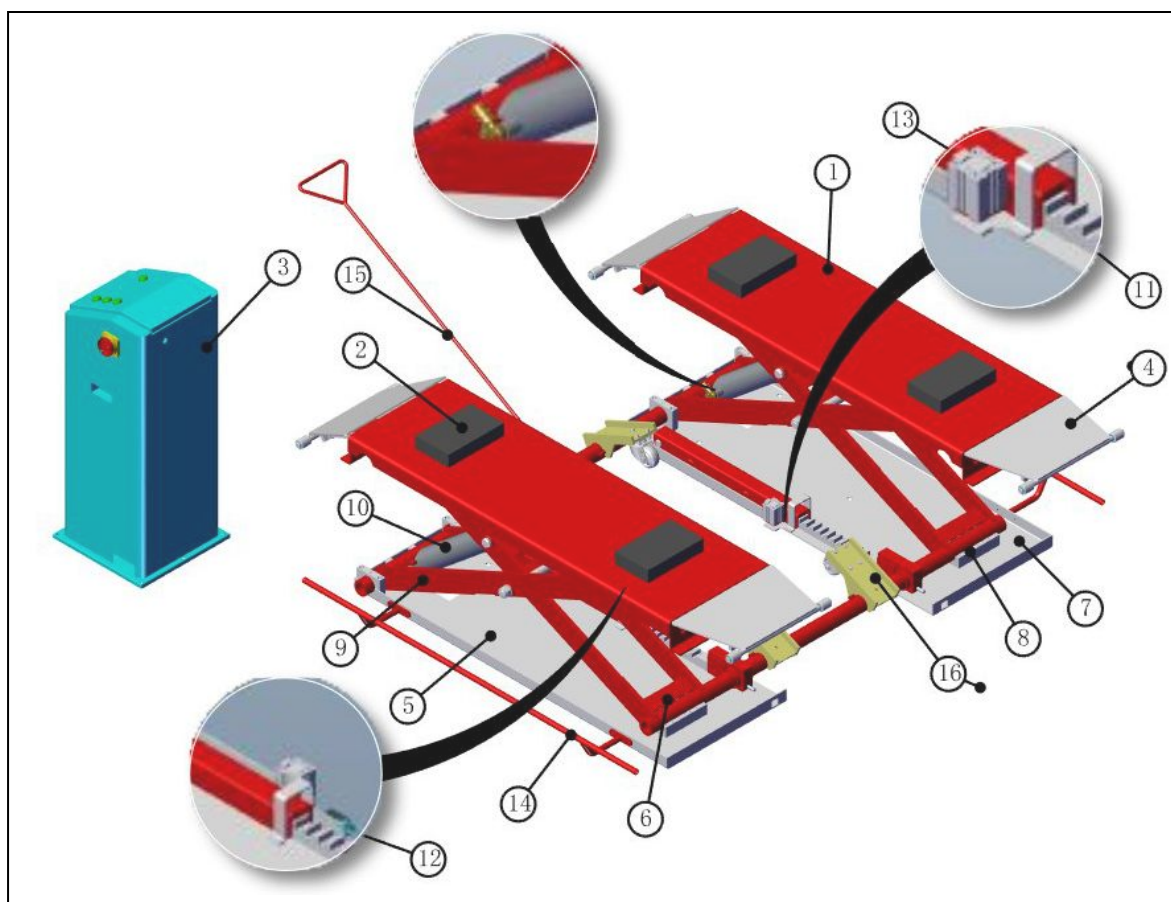


The lower bottom of the vehicle may collide with parts of the lifter. When one drives the vehicle, one shall pay special attention to this.

The lifter can also hoist ordinary or non-standard vehicles, when the weight of vehicle does not exceeds the maximum hoist capability

There shall also be different definition of dimensions in personnel safety area

Large parts diagram of the lift



Large parts and descriptions

NO.	Name	NO.	Name	NO.	Name	NO.	Name
1	Main and assistant platforms	5	Base of main platform	9	Internal scissor arm	13	Cylinder device
2	Bubble pad	6	External scissor arm	10	Master and assistant cylinder	14	Foot protective device
3	Control box	7	The base of assistant platform	11	Insurance structure	15	Moving handle
4	Approach bridge	8	Slider of internal scissor arm	12	Limiting device	16	Moving wheel carrier

Note: This configuration is high grade

1. Standard configuration does not include: foot protective device; moving handle; moving wheel carrier, except as expansion bolt.

2. Foot protective device; moving handle; moving wheel carrier are optional fittings; no expansion bolt is equipped for selection of shifting device

Safety



There is important content in this chapter. Operators shall carefully read this chapter.

The following content is explanation and description about danger and the possible danger during the operation, the correct effect and description of safety devices of equipment, other dangers, correct operating rules and potential dangers, etc.



The designing and manufacturing of lifter is intended for hoisting and maintenance of vehicles. It is inappropriate for the hoisting of other goods. It is suitable especially for the following operation:

- Washing and cleaning of vehicles
- The hoisting operation where there are persons on the platform
- The hoisting operation of goods in bulk or broken goods
- It is applied as the elevator
- It is applied in vehicles with severely tilt frame or severe deformed tire



The manufacturer bears no liability for personal injury or loss of property caused by incorrect operation or operation that violates the operating rules.

During the falling, operator shall operation within the safety area shown in the diagram.

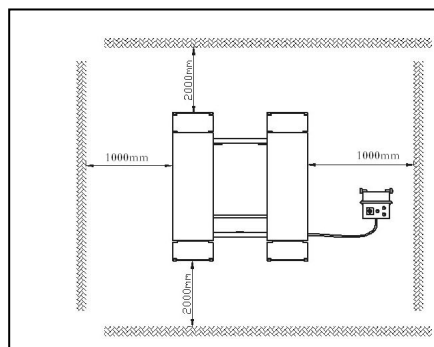
As is shown in the diagram, operations by operator or other irrelevant personnel within this dangerous area are strictly forbidden.

Only when the vehicle is completely hoisted to the required position and the operation platform becomes still and the safety devices of the machine is completely prepared (such as the insurance gear is fully locked), can the operator and maintenance personnel be permitted to conduct operation under the vehicle.



Lifter shall never be used when there are no safety protection devices.

The might be casualty of personnel, damage of machine and damage of the vehicle that is to be hoisted if the operating rules mentioned above are not observed.



Safe operation zone

Overall Prevention



Operator and maintenance personnel shall operate the machine according to the ordinance on safety formulated by the country where the lifter is located.

In addition, operator and maintenance personnel shall:

- Conduct operation in the safety area required in the manual
- Make no alteration of the safety devices casually.
- Read carefully the safety warnings on the machine and the safety information in the manual



Here are the safety warnings:

Warning: Suggests the following operation will cause personal injury, damage of the lifter and vehicle or other loss of property.



Be Careful: It is the situation that is unsafe and might cause more personal casualty and loss of property.



Electric Shock: Safety mark in the place where the lifter might have an electric shock.

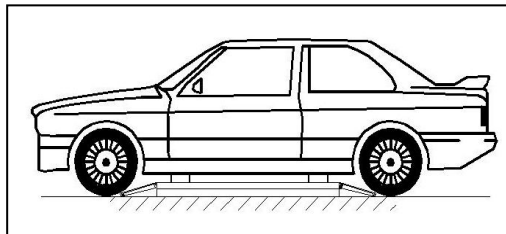
Safety protection device

When the vehicle is on the hoisting platform, operator and maintenance personnel shall check the possible danger, the manufacturer also shall adopt various protection devices to avoid and reduce the occurrence of dangers as possible.

The safety of personnel and vehicle shall operate according to the following rules:

- When the vehicle-hoisting, operator and maintenance personnel shall never enter the non-safe working area (in the lower part of the machine and the vehicle).

- Make sure that the vehicle is at the correct position on the platform.
- Make sure only vehicles with weight, height and length being within the permitted scope of weight, maximum height and length can be hoisted.
- During the vehicle-hoisting, personnel shall never stay on the platform.



The right parking position for vehicle

The potential dangers during vehicle-hoisting:

The following safety devices are intended for protecting overloading or mechanical failure protection:

Under the situation of overloading, the overflow valve at the pump station will open and return oil into the oil tank.

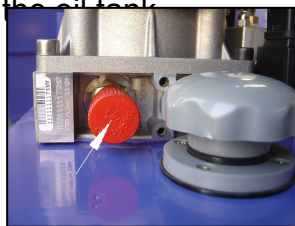
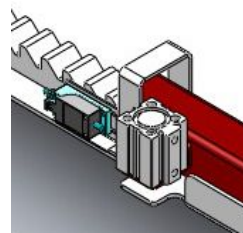


Diagram of pump station (overflow valve)



Safety tooth diagram



Safety rack and gear and rack set of host guarantees personnel under the machine when other protection measures fail. It is necessary to make sure the safety gear and rack set is of perfect occlusion and the integrity of safety gear and rack set is good.

There shall not be any foreign body on the assurance component so that the safety teeth can engage normally.



Danger of personnel:

This item suggests: the possible potential danger due to incorrect operation of operator and maintenance personnel any other personnel within the working area.

Danger of extrusion:



Danger caused by personnel's failure in leaving the area mentioned above according to the rules when the lifter is hoisting or falling.

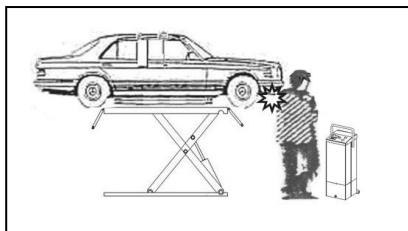
No personnel can work under the moving parts of the machine when the lifting platform is

hoisting or falling. Personnel shall stay in safety position.



Danger of impact

Operator can conduct hoisting and falling of the lifter when he/she has confirmed that there are no personnel within the dangerous area. Meanwhile, when the lifter is at a rather low height (less than 1.75 meter from the ground), since there is no color on the machine, impact of collision of personnel due to no color on the machine, shall be avoided.



Danger of personnel falling down:

There shall be no personnel on the lifting platform or inside the vehicle that is to be hoisted when the lifter is hoisting or falling, so as to prevent them from falling.



Danger of vehicle-falling:

Danger caused when vehicle is placed at the incorrect position, the over-weight of vehicle and the dimension of vehicle is not in accordance with standards.



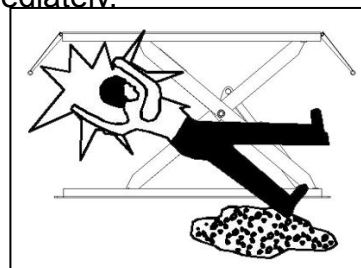
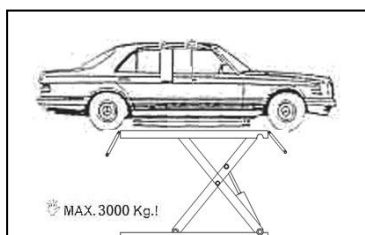
Never start the engine of vehicle to conduct hoisting or falling and testing on the lifting platform.



Never lay articles at the falling area and moving parts of the lifter.

Danger of sliding:

Danger of personnel slipping due to oil pollutant on the ground in the surrounding of the lifter, the lower part of the lifter or the surrounding area and platform shall be clean. If there is oil pollutant, please remove it immediately.





Danger of electric-shock!

Danger of electric shock caused by damage of insulation of electrical equipment.

Never use water and steam, etc. to clean the machine, never use solvent or paint, etc. to approach the control panel of the lifter.



Danger caused by insufficient lighting:

Operator and maintenance personnel shall install lighting required for working area of lifter operation in the corresponding position to prevent loss of parts and personal danger due to insufficient light.

Operator shall constantly observe the lifter and conduct operation within the position of operator due to hoisting and falling.

A rubber gasket should be arranged on the lower part of the chassis while lifting the vehicles



Never move the safety devices, Hoist weight shall not exceed the maximum hoist capability required for the machine and make sure that the machine is not over-loaded.

Installation



Only the specialized personnel can conduct installation. They shall carefully read and follow the following instructions to avoid damage of machine and personnel casualty.

Only the authorized technicians can install the lifter.

Installation Requirements:

The lifter shall be installed according to the specified distance between walls, columns and other facilities.

The minimum distance to wall surface is 1000 mm. To prevent against emergency and provide convenience to work, the sufficient space of safety channel shall also be taken into consideration.

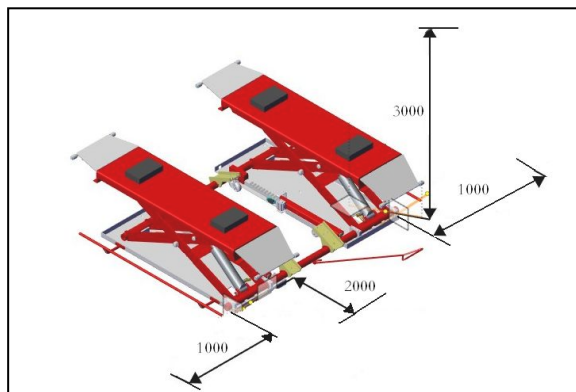
The site for installation shall be equipped with power supply and air supply, which are connected to the control panel.

Indoor height shall be no less than 4000mm.

The machine can be installed in any indoor ground, as long as the ground is level and coincident to the requirements and the ground has sufficient weight tolerance ($\geq 250\text{kg/cm}^2$, and the thickness of the horizon cement concrete is $\geq 150\text{mm}$)

When the machine is to be installed, there shall be enough light to guarantee the safe

operation of commissioning and maintenance and avoid the eyestrain of personnel caused by stimulated light.

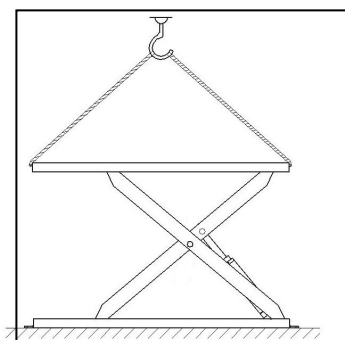


The integrity of goods should be inspected before installation of lift; moving and installation of lift should be processed in accordance with procedures represented as following.

Please see “Transportation and Storage” for the transportation and storage of machines.

Installation of lift platform:

- Place the two lift platforms on the position with need of installation.
 - The base of cylinder shall be placed in front of machine (the direction for putting vehicles on).
 - Raise the lift with fork truck or other hoisting equipment.
- And ensure the safety device of machine is opened and locked.



**Lifting drawing
Installation**



To avoid failure of safety device of the machine, one wooden block can be inserted between the connecting rod.

Never work under the lifter when hydraulic system is not fully filled with hydraulic oil and there is hoisting and falling.

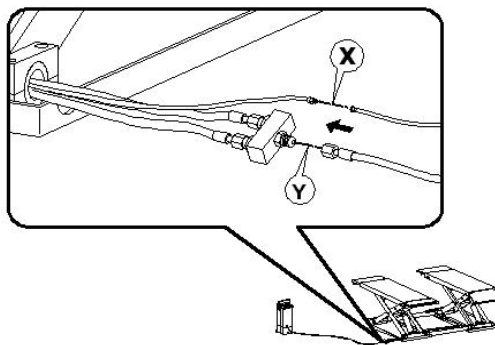
- Move the lifting platform, adjust the distance between the two platforms and make sure the two platforms are in parallel position.

Pipe connection:

The circuit, oil-way and gas-way shall be connected according to Electrical Connection Diagram and Oil-way Connection Diagram.



The connecting of air-way can be conducted only after the connecting of the hydraulic system has been completed, Oil pipe、wires and air pipe shall never be damaged, During the procedure connection of the oil pipe and air pipe, protection of connectors shall b given special attention to prevent rarities from entering the oil-way and air-way and damaging the hydraulic system.



Electric circuit connection:

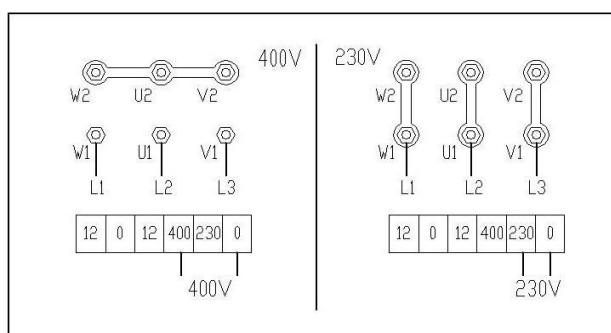
Electric circuit shall be connected in accordance with wire diameters and wire number specified in Electrical Connection Diagram.



Electric mounting operation shall be only carried by professionals with electric operation qualification.

- Open upper cover of control cabinet
- Power cord connection: connect 400V three-phase four-wire system power cord ($4 \times 2.5 \text{ mm}^2$ cable) to control panel L1, L2, L3 and incoming terminals; Connect PE ground wire to stud with grounding sign and stud with grounding sign provided at the bottom of two platforms.
- If it is 230V three-phase power supply, control transformer and wire connection of motor is required to adjust.

1	3	4	5
PE	L1	L2	L3



Connecting of hydraulic circuit Installation

Connect hydraulic oil pipes according to *Oil-way Connection Diagram*.



Only authorized specialized technicians can engage in the installation of hydraulic circuit, Pay special attention to oil pipe connector to prevent rarities from entering the compressed air circuit.



When oil pipes are connected, be careful not to commit mistakes in numbering of oil pipes. In standard installation, the control panel is at the left of the direction when vehicle enters, if it is placed on the right, correspond oil pipes shall be adjusted.

Connecting of compressed air-way:



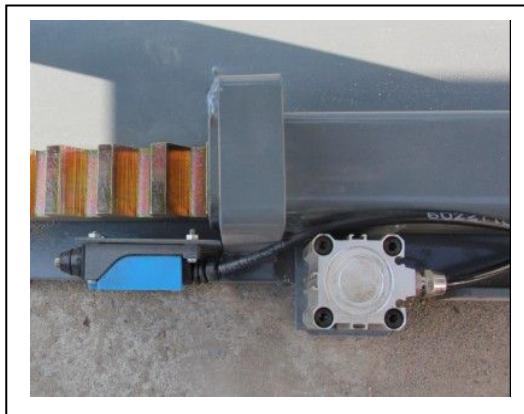
The connecting of air-way shall be in accordance with Air-way Connection Diagram.

Only the authorized technicians with specialized qualifications can engage in the installation.

- Connect the $\Phi 8 \times 6$ air inlet pipe to the air inlet port of double oil-water separator at the control panel.
- Introduce the $\Phi 6 \times 5$ compressed air pipe from the air outlet of pneumatic solenoid valve of host and connect it to the air valve of claw-lifting.
- **Pay attention to protect air pipe coupling, prevent foreign matters from entering compressed air circuit.**
- Oil water separator should be installed (prepared by user) before connecting compressed air pipe to control console, so as to lengthen the service life and action reliability of pneumatic components.



Air channel connection of control box



Safety air channel connection



Air pipe shall not be folded, tangled during installation process so as not to cause air channel difficulty or blocked

Oil water separator should be installed to separate compressed air before connecting compressed air inlet pipe to air inlet port of pneumatic electromagnetic valve in control console, so as not to cause action failure of pneumatic units

Commissioning

Add oil and check phase sequence:

After hydraulic circuit, electrical circuit and air-way are connected according to the annex, operate according to the following procedures:

- Open the cover of control box, inject 10L anti-wear hydraulic oil, which is equal to "ESSO-NUTO H32", into oil box (hydraulic oil shall be prepared by user); please choose different types of anti-wear hydraulic oil according to the temperature.

When fill hydraulic oil, guarantee its cleanliness in order to avoid unsmooth



oil-way caused by sundries and solenoid valve failure

Commissioning:

- Power on, press the "RISING" button and check whether the motor keeps a right rotation direction (the direction shall be clockwise from up to down). If the direction is opposite, cut off the power supply and adjust power supply phase sequence.
- Connect the power supply.



After the power supply is connected, high-voltage electric shock inside the control panel is likely to occur. Operation shall be only carried out by professionals with electric operation qualification and it is necessary to prevent electric shock.

Exhaust adjusting procedures: the lift will rise after pressing "UP" button; do not press the locking button, whereas press "DOWN" button when the lift goes up to the highest point, and then there is sound in oil drum caused by the air in oil cylinder when the lift goes down to the lowest point. Repeat this operation continuously for 3-5 times, the air in oil cylinder of lift will be exhausted completely.

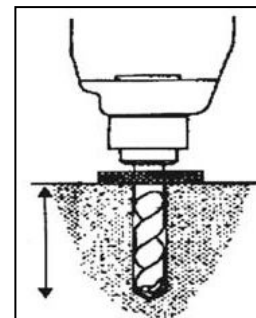
Inspection: whether the safety device of the two safety claws operates agilely and reliably and whether there exits leakage of oil-way and gas-way

Installation of foundation bolt:



The construction of foundation bolt shall be undertaken after the expiration of maintenance for concrete. Otherwise the strong quality shall be affected.

- Adjust the left and right platform in alignment and the distance of the two platforms according to the requirements.
- Impact drill hammer of $\Phi 18$ shall be drilled to the deep hole of 120mm from ground through base hole of platform with electric hammer pinch and entrance to hole shall be cleaned.
- Foundation bolt shall be installed in the holes with light hammer.
- Central expansion nail of foundation bolt shall be installed and hammered by with heavy hammer.
- Screw on the nut of foundation bolt.



When the guarantee period of concrete is not expired and central expansion nail of foundation bolt shall not be installed.

No-load test:

Operation

- Turn on the power switch QS.
- Press "UP" button SB1, and observe whether the rising process of two platforms is stable and synchronous.

-Observe whether the safety clutch can fall in place correctly, whether there is oil and air leakage of oil and air circuits.



No person and other articles allowed being on the top and bottom of lift or specified area in test.

Turn off power switch QS immediately to stop the machine once any abnormal occurs, and retest after removing failure.

Load test:

-Drive the car of the weight within maximum lifting capacity on platform, then the occupant gets out of the car.

-Place lifting rubber mat on certain parking space.

-Press “UP” button SB1, then lift platform rises; observe whether the platform is stable and synchronous.

-Observe whether the safety clutch can fall in place correctly, whether there is oil and air leakage of oil and air circuits.



Power switch QS



During test, there shall not be persons and other articles in the lifter rising and falling or regulated area.

The weight of tested vehicle can not exceed the minimum lifting capacity of the lifter.

Inspect whether there exists oil or gas leakage in oil-way and gas-way. For any abnormal conditions, shut down the machine timely and commission once again after the failure is removed.



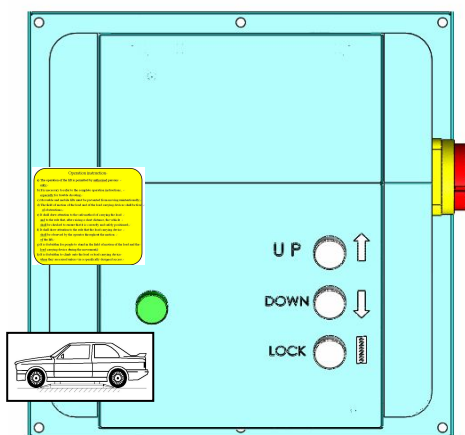
Operation

Only operator that has been trained is allowed to operate the lifter. Inspect according to the following cautions.

Operational cautions

- The obstacle around and below the machine shall be removed before work
- During rising and falling, there shall not exist persons in the regulated area for the lifter, below the machine and in the vehicle on the platform
- The lifter can not lift vehicles and other goods that weighs beyond the lifter operation scope
- In lifting process, the position under the chassis of the vehicle should be provided with a rubber mat.
- During rising and lifting, observe whether the platforms are simultaneous all the time. If abnormal conditions are found, stop the machine at once. The machine can be used again after inspection and the failure is removed.
- During falling operation, observe whether the two safety claws are separated from the safety rack completely. Stop falling operation if they are not
- When the machine will not operate for a long time or during night, the platform shall be lowered to the lowest position on the ground, the vehicle shall be driven away and the power supply shall be cut.

Electric operational instruction: (refer to operation panel diagram)



Up: - Press “UP” button (SB1), then the oil pumps runs, and hydraulic oil will be delivered to hydraulic cylinder through the block of pump station; platform will rise, meanwhile there is sound of action from safety tooth.

- Release SB1, oil pump will stop running and rising, and safety dog clutch joins into the safety rack.

Lock: Press lock button “LOCK” (SB2), the lift drops a little for the charging of oil return electromagnetic valve, meanwhile the safety tooth locks in safety rack. No normal

operation by operator until the machine is fully locked.

Down: - Press "DOWN" button SB3, the lift will rise for 1.5-2.5 seconds, then electromagnetic air valve will be electrified; afterwards, the safety air valve opens, meanwhile oil return electromagnetic valve is electrified, and the lift goes down.

The procedures above are normal operations of this lift. For operations fail in accordance with operating instructions, the company takes no charge of any loss caused by artificial factors.

Care and Maintenance

Maintenance of mechanical system

▲ This machine shall be wiped and cleaned with dry cloth, for the purpose of keeping clean. Prior to wiping and cleanup, the power supply shall be cut off to guarantee the safety.

▲ Working environment of this machine shall be normally cleaned. If there is too much dust in working environment, machine wear will be sped up, and its service life will be shortened.

-Lubricate all the hinge shafts of this machine with oil pot once a week.

-Grease the safety rack as well as upper and lower slides once a month.

-Check the flexibility and reliability of pneumatic safety device by each shift.

Maintenance of hydraulic system

Cleaning, oil change

▲ Clean hydraulic oil tank and change the oil after six months since first use of this machine, afterward, clean the hydraulic system and change the oil once a year.



The machine should bottom out and evacuate the old oil in oil tank when change hydraulic oil, while new oil should pass through the filter for filtration.

▲ Change seals

Carry out inspection carefully once oil leakage is found when the machine has been put into use for some time; in the case that leakage is caused by abrasion of sealing materials, replace the seals promptly according to original specification.

Faults and Troubleshooting

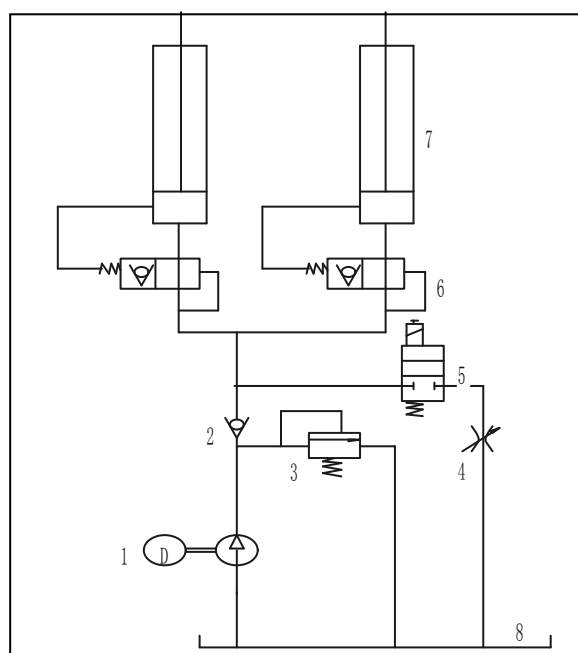
Machine faults solving shall be undertaken by operators having been trained with professional experience.



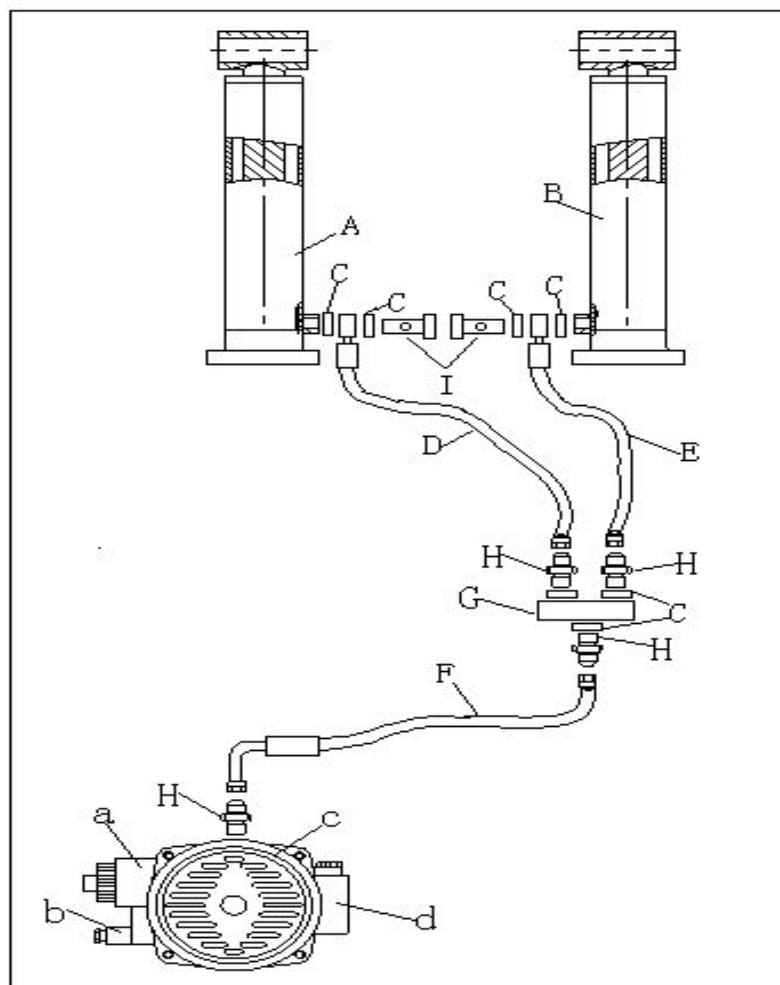
Fault phenomenon and troubleshooting:

Fault phenomenon	Phenomenon and reasons	Troubleshooting
Motor fails to rotate upon pressing rising	① Abnormal power supply or zero line	After inspecting and eliminating, wires are connected
	② AC connector of main circuit for motor of pump is not connected	If motor shall operate after pressing motor by insulating rod, inspect control circuit. If the voltage of coil end for contactor is normal, contactor is replaced.
	④ Button switch is damaged	Inspect contact point of button and wire for eliminating.
Motor can rotate but fail to rise upon pressing rising	① Motor rotates in reverse	Change incoming sequence of power supply
	② Motor shall rise with light load and it fails to rise with heavy load	Heighten the safety pressure setting of overflow valve by slightly screwing right. If there is dirt in the falling solenoid valve plug, clean the plug.
	② Hydraulic oil is not sufficient	Fill hydraulic oil.
	The releasing screw of solenoid valve for falling is not be screwed down	Screw down the releasing screw of solenoid valve for falling
Lifter fails to fall after pressing down button	① Safety claw is not separated from safety rack	The platform shall be lifted a little , then lower the platform.
	② Safety claw is not hoisted	Air pressure is insufficient, safety claw is blocked, or air pipe is broken. Regulate the pressure of air compressor and inspect air pipe for eliminating
	③ Solenoid air valve does not operate	Where since solenoid valve is power on but fails to operate, air circuit is not connected. Inspect or replace solenoid valve
	④ Solenoid valve in falling does not operate	Inspect the plug of solenoid valve in falling and coil and inspect whether the copper nut on the end is screwed or not
Lifter falls slowly under normal load	① Viscosity of hydraulic oil is too strong or frozen, goes bad(winter)	Replace with hydraulic oil or improve the temperature indoor according to the requirement of user's manual
Sound is generated when lifting and falling	① Lack of lubricating	Oil machine is applied to all hinged place and moving part(including piston) for lubricating
	② Base or machine is distorted	Adjust and level machine again and fill (pad) the base

Hydraulic schematic diagram for Low Small Scissor Flat Hydraulic Truck Lifter (Annex 1)



Oil Circuit connection diagram of Low Small Scissor Flat Hydraulic Truck Lifter (Annex 2)



Guarantee of products

Dear clients:

Firstly thank you for the trust you have put to our products! We shall give you return in best service.

If you are satisfied with our products, you do not necessarily tell us!

But if you are unsatisfied with our products, please tell us!

Since you buy the equipment, you shall enjoy one year of free guarantee. But please operate and use it normally according to User's Manual and make maintenance to it periodically.

Please fill the duplicate of guarantee and cut it along the dotted line. The guarantee is valid after it is sent to our company in registered letter.

Sales Department
March, 2012

Product model		Product No.	
User's name		Contact person	
User's address		Telephone	
Operation organization		Purchase date	