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This equipment is for the use of professional technical personnel or maintenance personnel.

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## PRECAUTION

### WARNING



- This instruction manual is an essential integral part of this product. Please read all instructions.
- Properly keep this manual for use during the maintenance.
- Use only manufacturer's recommended adapters.
- This equipment is only used for its clearly designed purpose, and never use it for other purposes.
- The manufacturer is not responsible for any damage caused as a result of improper use or use it for other purposes.

## IMPORTANT SAFETY

### INSTRUCTIONS

When using your garage equipment, basic safety precautions should always be followed, including the following:

- Only the qualified personnel having undergone special training can operate this machine. Without the permission of the manufacturer or not following the requirement of the manual, any changes in the machine part and in the usage scope may cause direct or indirect damage to the machine.
- Don't keep the lift in the extreme temperature and humidity environment. Avoid installation beside the heating equipment, water tap, air humidifier or stove.
- Prevent the lift from contacting large amount of dust, ammonia, alcohol, thinner or spray adhesive, and prevent it from rain shower.
- Always disconnect equipment from electrical supply when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
- To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
- During the machine operation, non-operators should be kept away from the machine.
- Do not operate equipment with a damaged cord or the equipment has damaged or lost parts, until examined by a qualified serviceman.
- The lift can't be overloaded. The rated load of the lift is already marked on the nameplate.
- Please don't raise the lift when there are people in the vehicle. During the operation, the customer and spectators should not be in the lifting area.
- Keep the lifting area free from obstacle, grease, machine oil, garbage and other impurities.
- Contact the lifting point as recommended by the manufacturer.
- For some vehicles, the parts dismantling (or installation) will cause severe deviation of the center of gravity, leading to unstable vehicle. The support is needed to keep the balance of the vehicle.
- Before moving the vehicle away from the lifting area, please position the rolling jack in front of the runway to avoid blockage during the movement.
- Use appropriate equipment and tools as well as safety protection facilities, e.g. working uniform, safety boot, etc.
- Pay special attention to various safety marks attached to the machine body.
- Keep hair, loose clothing, fingers, and all parts of body away from moving parts
- Pay special attention not to dismantling the safety devices of the machine or making it not functioning.
- The hydraulic oil used for this lift is N32 or N46. Please refer the safety data of grease and oil shown in the manual.

Launch Shanghai is dedicated to improve the product quality and upgrade the technical spec. They are subject to change without notice.

### Caution labeling exemplify

(1) Read operating and safety manuals before using lift!



(2) Lift can be used by trained operators ONLY!



(3) Proper maintenance and inspection is necessary for safe operation!



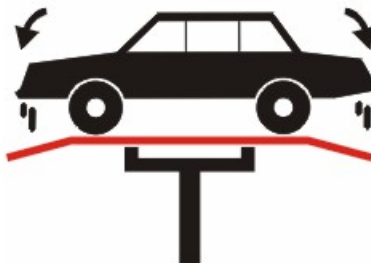
(4) Don not operate a damaged lift !



(5) Authorized personnel only in the lift area!



(6) The vehicle should be chocked while lifting and lowering



(7) Keep the area clear when there is risk of vehicle falling.



(8) Keep away from any moving parts of the lift while lifting or lowering the vehicle.



( 9 ) Don't adjust the hydraulic pressure without permission.



( 10 ) Keep the feet away from the lift while lowering the lift!



( 11 ) When lifting or lowering the runways, don't stand on the lift or under the lift.



## Table of contents

Chapter 1 General	1
1.1 Model	1
1.2 Purpose	1
1.3 Functions and features	1
1.4 Technical specifications	1
1.5 Environment Requirements	1
Chapter 2 Structure	2
Chapter 3 Operating instruction	4
3.1 Precautions for Operation	4
3.2 Operating preparation	4
3.3 Inspection before Operation	4
3.4 Lifting the vehicle	4
3.5 Lowering the vehicle	4
Chapter 4 Solutions to FAQ	5
Chapter 5 Repair and Maintenance	6
Chapter 6 Storage and Scrap	8
6.1 Storage	8
6.2 Scrap	8
Chapter 7 Hydraulic system, electrical system and pneumatic system	8
7.1 hydraulic system	8
7.2 pneumatic system	9
7.3 electrical system	10
Safety datasheet for lift oil and grease	11

# Chapter 1 General

## 1.1 Model description

Model	Description
TLT440 Four-Post Lift	4-T (9000 lbs) Economy Four-Post lift
TLT440W Wheel Alignment Four-Post Lift	4-T (9000 lbs) Wheel Alignment Four-Post Lift
TLT455 Four-Post Lift	5.5-T (12000 lbs) Economy Four-Post lift
TLT455W Wheel Alignment Four-Post Lift	5.5-T (12000 lbs) Wheel Alignment Four-Post Lift

## 1.2 Purpose

This machine is used for lifting of various small and medium-sized vehicles with total weight below 4.0t/5.5t in garage and workshop.

## 1.3 Functions and features

- Designed based on the international standard, meeting the demand of the garage and workshop.
- Driven by hydraulic cylinder in stable lifting and lowering.

- Offering full-range mechanical safety protection by using the safety latches.
- Connected by four steel cables; forced synchronized movement of the lift in order to effectively prevent the sloping of the vehicles.
- Equipped with rolling jack, turntable and sideslip, suitable for wheel alignment. ( 440W, 455W)
- The minimum lifting height of TLT440 is 170mm, TLT440W is 220mm, TLT455 is 200mm, TLT455W is 248mm.
- Adjustable distance between runways to accommodate different wheel track.

## 1.4 Technical specifications

Model	Rated capacity Tonnage(lbs)	Lifting height mm	Lifting time Second	Lowering time Second	Motor power Kw	Width between columns mm	Overall width mm	Overall height mm
TLT440	4 (9000)	1900	≤60	≥20≤40	2.2	3000	3445	2172
TLT440W	4 (9000)	1900	≤60	≥20≤40	2.2	3000	3445	2172
Rolling jack	2 (4500)	250						
TLT455	5.5 (12000)	1900	≤75	≥20≤40	3	3045	3445	2172
TLT455W	5.5 (12000)	1900	≤75	≥20≤40	3	3045	3445	2172
Rolling jack	2 (4500)	250						

Noise  
 Operating noise: ≤ 80dB (A)

Hydraulic unit  
 Working pressure: 16MPa

**Electrical parameters:**

Motor:  
 Voltage: The motors of different voltages can be selected based on customer's requirements.

Single phase: 110v/60Hz 2.2KW; 220V/50Hz 2.2Kw

Single phase: 220V/60Hz, 2.2KW

Three phase: 380V/50Hz, 2.2Kw

**1.5 Environment requirements**

Operating temperature: -5°C ~ +40°C Relative humidity:

Temp. +30°C, relative humidity 80%

Transportation/storage temperature: -5°C ~

+40°C Applicable altitude: no more than 2000m

**Chapter 2 Structure of lift**

TLT440, TLT455

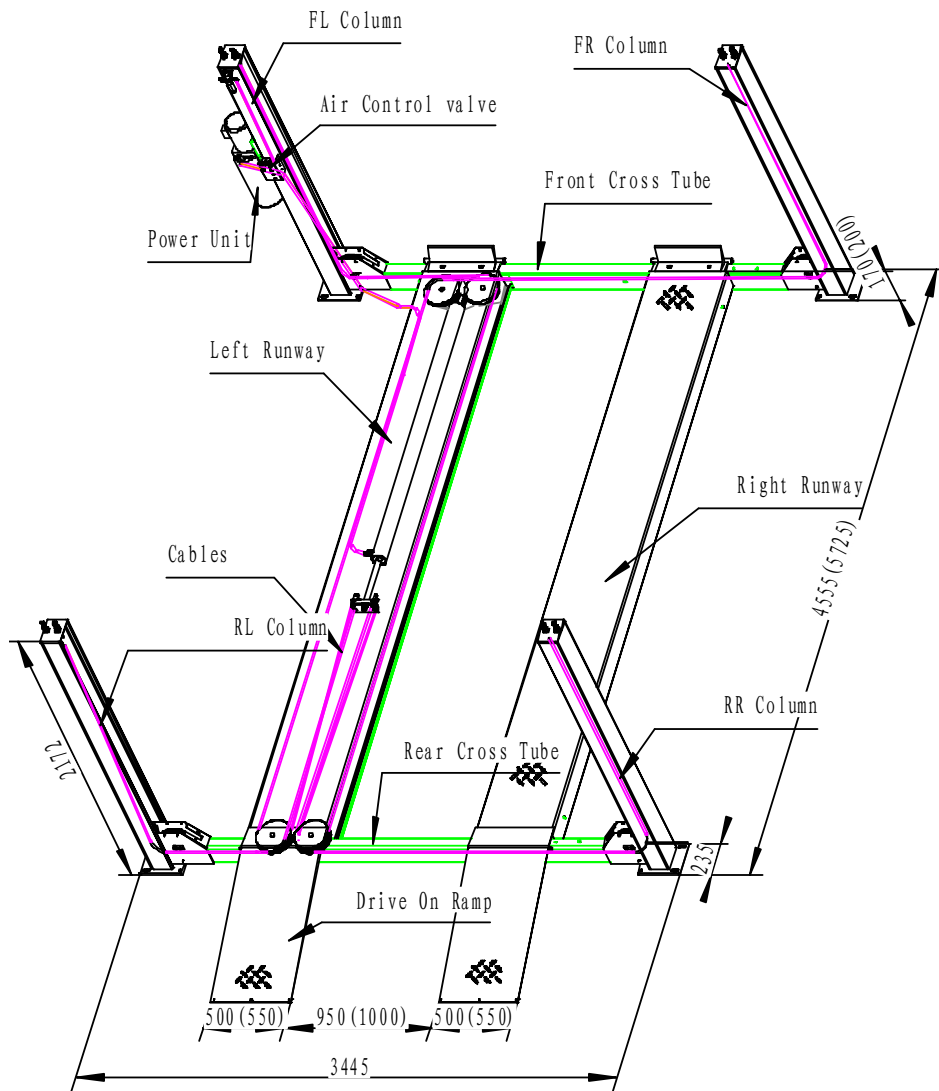


Fig.1

TLT440W,TLT455W

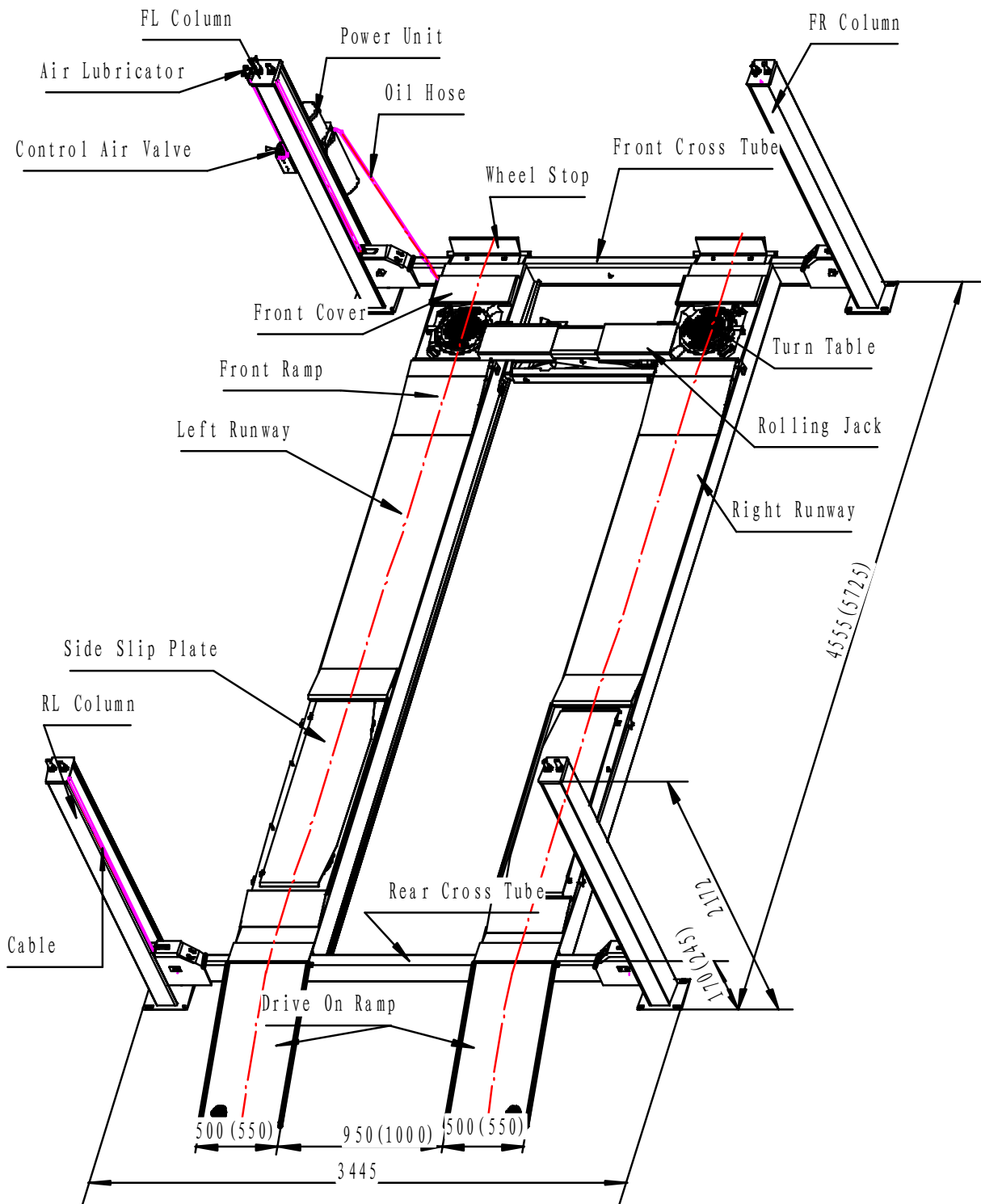


Fig.2

## Chapter 3

### Operating instruction

#### 3.1 Precautions for Operation

- The gravity position and wheel distance are different for various vehicles. When the vehicle drives on the lift, try best to put its gravity in the middle of the lift. When doing the turntable operating, put the front wheel in the middle of the turntable.
- Carefully read the warning decals.
- The hydraulic valves have been properly adjusted before ex-works, so the users shall not make unauthorized adjustment, otherwise, all the consequences shall be borne by user.
- Based on the production demand, some parameters in the instruction manuals may be modified.

#### 3.2 Operating preparation

- Lubricate the all moving parts in the front and rear cross tubes and the rolling jack mechanism.
- The power unit oil tank shall be filled with 12 L N32 or N46 applied for hydraulic system.

#### 3.3 Inspection before Operation

- Check to see if the power supply is installed properly.
- Check to see the compressed air supply.
- Check to see if all the bolts are fastened.
- Check to see if the cable tension is well adjusted.
- Check to ensure no air or hydraulic leakage in the lift.

#### 3.4 Lifting the vehicles

- Remove the foreign articles around the lift.
- Lower the lift to the bottom.

- Move the vehicle to the middle of the lift.
- Press the start button on the power unit to lift the vehicle slowly in order to ensure the loading balance and then raise the lift up to the required height.
- Release the start button.
- Press the lowering handle to lock the lift, then the vehicle can be repaired.



#### Notes:

- ◇ *When lifting the vehicle, the chocks must be used to block the wheel.*
- ◇ *Prior to the lifting of the vehicle, check for the oil leakage of all the hoses and joints. In case of leakage, the lift shall not be used. Dismantle the leaking joints for resealing. Re-mount the joint and recheck for the oil leakage.*
- ◇ *When the vehicle is lifted, please confirm the safety devices are under working conditions.*

#### 3.5 Lowering the vehicle

- Remove the obstacles from under
- For lowering the lift, If the locking latches are engaged, lift must be raised enough for all 4 latches to clear the latch plates slots inside the columns. Actuate the air control valve to disengage all 4 locking latches and push the lowering handle on the power unit to lower the lift.
- Lower the lift down to the bottom and release the lowering handle.
- To lower the rolling jack, raise jack and release locking latch by lifting release handle, and then depress lowering valve.



## Chapter 4 Solutions to FAQ

Symptom	Causes	Solutions
The motor doesn't run	<ul style="list-style-type: none"> <li>◆ Check the fuse or the circuit breaker</li> <li>◆ Check for the voltage supplied to the motor</li> <li>◆ Check all the wiring</li> <li>◆ The motor winding is burnt out</li> </ul>	<ul style="list-style-type: none"> <li>◆ Replace the burnt fuse or reset the circuit breaker</li> <li>◆ Supply the correct voltage to the motor</li> <li>◆ Repair and isolate all the wirings</li> <li>◆ Replace the motor</li> </ul>
The motor runs but doesn't lift the lift	<ul style="list-style-type: none"> <li>◆ Reverse rotation of motor</li> <li>◆ Lowering valve normally open</li> <li>◆ Air into the hydraulic pump</li> <li>◆ Air suction pipe goes off the hydraulic pump</li> <li>◆ Low oil level</li> </ul>	<ul style="list-style-type: none"> <li>◆ Change the motor rotation direction by converting the lead wire of the motor</li> <li>◆ Repair or replace the lowering valve</li> <li>◆ Tighten all the air suction piping connections</li> <li>◆ Replace the air suction pipe</li> <li>◆ Add oil into the oil tank</li> </ul>
Motor is running, the lift can be raised without load, but the vehicle can't be raised	<ul style="list-style-type: none"> <li>◆ Motor operating under low voltage</li> <li>◆ Impurities inside the lowering valve</li> <li>◆ Incorrect adjustment of the safety valve</li> <li>◆ Overloading of lift</li> </ul>	<ul style="list-style-type: none"> <li>◆ Supply the correct voltage to the motor</li> <li>◆ Remove the impurities inside the valve</li> <li>◆ Adjust the safety valve</li> <li>◆ Check the weight of the vehicle and/or balance the weight of the vehicle on the lift</li> </ul>
The lift is lowering slowly without pressing the lowering valve	<ul style="list-style-type: none"> <li>◆ Existence of impurities on the seat of the lowering valve</li> <li>◆ External oil leakage</li> <li>◆ Check-valve leakage</li> </ul>	<ul style="list-style-type: none"> <li>◆ Clean the lowering valve</li> <li>◆ Repair the external leakage</li> <li>◆ Replace the check-valve</li> </ul>
Slow lifting speed or oil flowing out of the oil cap	<ul style="list-style-type: none"> <li>◆ Mixture of air and oil</li> <li>◆ Air and oil sucked air mixed</li> <li>◆ Loosening of oil return pipe</li> </ul>	<ul style="list-style-type: none"> <li>◆ Replace the hydraulic oil</li> <li>◆ Tighten all the connections for the air suction pipe</li> <li>◆ Re-install the oil return pipe</li> </ul>
The lift can't rise horizontally	<ul style="list-style-type: none"> <li>◆ The 4 cables is not well-adjusted</li> <li>◆ The lift is installed on the floor where levelness can't meet the requirements</li> </ul>	<ul style="list-style-type: none"> <li>◆ Adjust the cables to the proper tension</li> <li>◆ Shimming the columns to level the lift, If exceeding 12mm, pour new concrete floor and make it leveled. Refer to installation description</li> </ul>
The anchor bolt is not tightened	<ul style="list-style-type: none"> <li>◆ Oversized drilled hole</li> <li>◆ Insufficient thickness or tightening force of the concrete floor</li> </ul>	<ul style="list-style-type: none"> <li>◆ Pour the fast curing concrete into the big hole and reinstall the anchor bolt, or use new drill to drill the hole for re-positioning the lift</li> <li>◆ Cut open the old concrete and make new concrete slab for the lift. Refer to installation description.</li> </ul>

# Chapter 5 Repair and Maintenance

## Keep clean

- The working environment of this unit should be clean. In case of dust in the working environment, it will speed up the parts wearing and shorten the service life of the lift.
- This unit should be cleaned with dry cloth frequently to keep it clean. Before cleaning, first switch off the power to ensure the safety

## Daily:

- Before the operation, carefully check the safety mechanism of the lift to ensure the lock and release action is proper, and the safety latch is in good condition. When finding any abnormal situation, make adjustment, repair or replacement immediately.

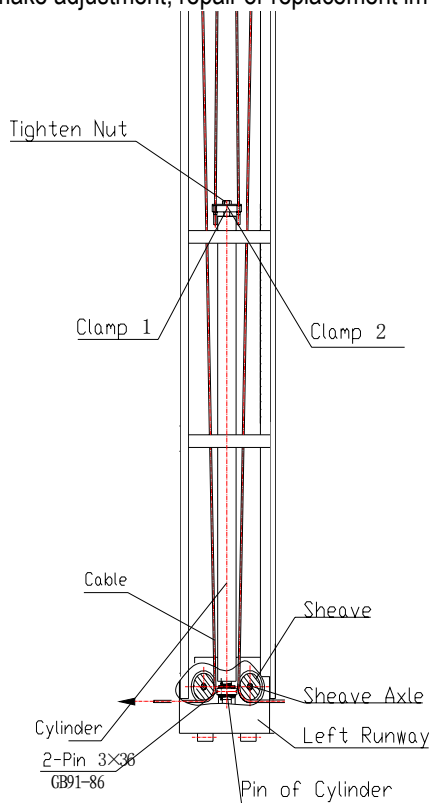


Figure 3

- Check for the normal connection between the hydraulic cylinder and the cylinder runway front plate, and whether the lock nuts and the connections of the

oil cylinder are loosened off or not. See Figure 6.

- Check whether the steel cables are in normally condition and whether the tension is under the optimum conditions. Replace the worn or damaged cables immediately.

## Monthly:

- Re-tighten the anchor bolts.
- Lubricate the shaft and wheel of each rotating part.
- Check all the connection bolts and pins in order to ensure correct installation.
- Check for the wear and damages of the hydraulic hoses.



*Note: all the anchor bolts shall be completely tightened; in case of failure of the anchor bolts, the lift shall be stopped until the replacement of the anchor bolts.*

## Every six months:

- Check for the wear, interference or damage to all the moving parts.
- Check for the lubrication of all the sheaves. In case of hauling of the sheaves occurring during the lifting and lowering operation, suitable amount of lube oil shall be added to the axles.
- If necessary, check and adjust the balancing tension in order to maintain the horizontal lifting and lowering.
- Check the verticality of the column.

Maintenance and preservation of the hydraulic system:

- Cleaning, replacing the oil  
After six months upon the initial operation of this machine, the hydraulic system shall be cleaned once a year and the oil shall also be changed. See Figure 4.
- Replacing the sealing parts  
After certain time use of this machine, if the oil leakage is found, careful check shall be conducted; if the leakage is caused due to the wear of the sealing materials, the timely replacement shall be made based on the original specification. See Figure 4.

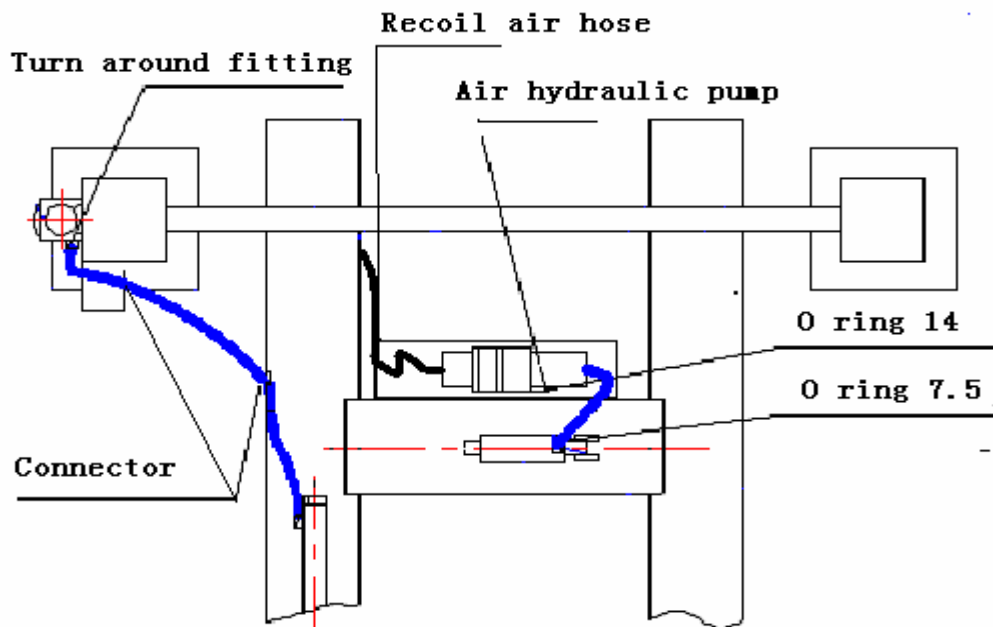
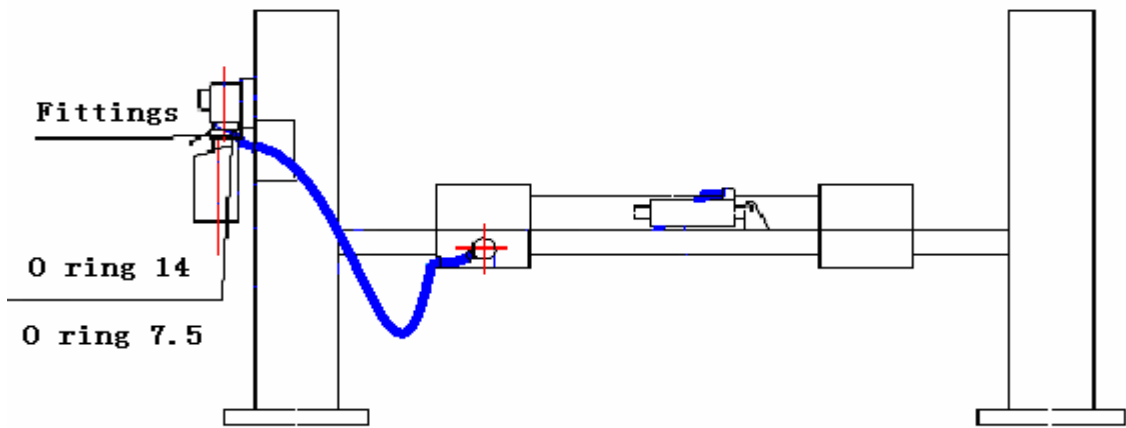


Fig.4

List of wear parts

No.	Title	Model	Specification	Qty.	Comments
1	"O"rubber sealing ring	GB3452.1-92	69×5.3	1	
	"O"rubber sealing ring	GB3452.1-92	53×5.3	1	
2	"O"rubber sealing ring	GB3452.1-92	14×2.65	4	
3	"O"rubber sealing ring	GB3452.1-92	7.5×1.8	9	
4	Dust proof ring		DH40	1	
5	Dust proof ring		DH40	1	
6	Axle seal ring		UHS70×80×6	1	
7	Axle seal ring		UHS53×63×6	1	

# Chapter 6 Storage and scrap

- Put the plastic cover over the equipment for dust protection.

## 6.1 Storage

When the equipment requires long-time storage:

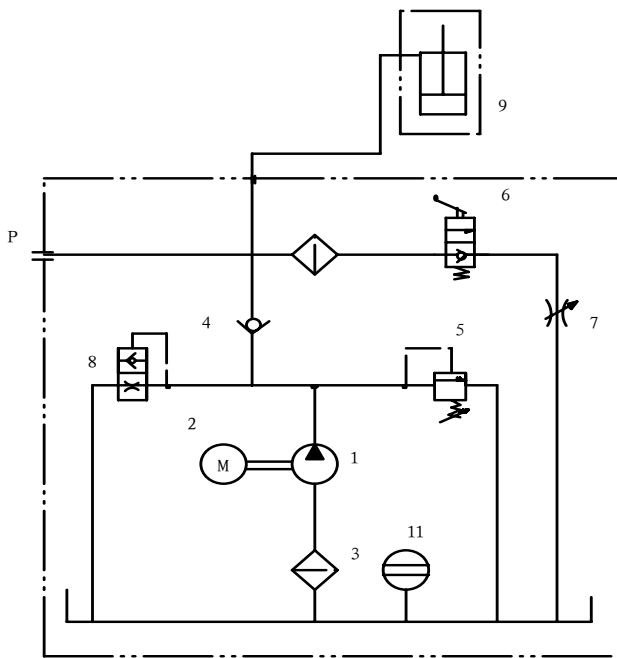
- Disconnect the power supply
- Lubricate all the parts requiring lubrication etc.
- Empty all the oil/liquid storage units

## 6.2 Scrape

When the equipment service life is expired and can no longer be used, disconnect the power supply, and properly dispose of as per relevant local regulations.

# Chapter 7 Hydraulic system, electrical system and pneumatic system

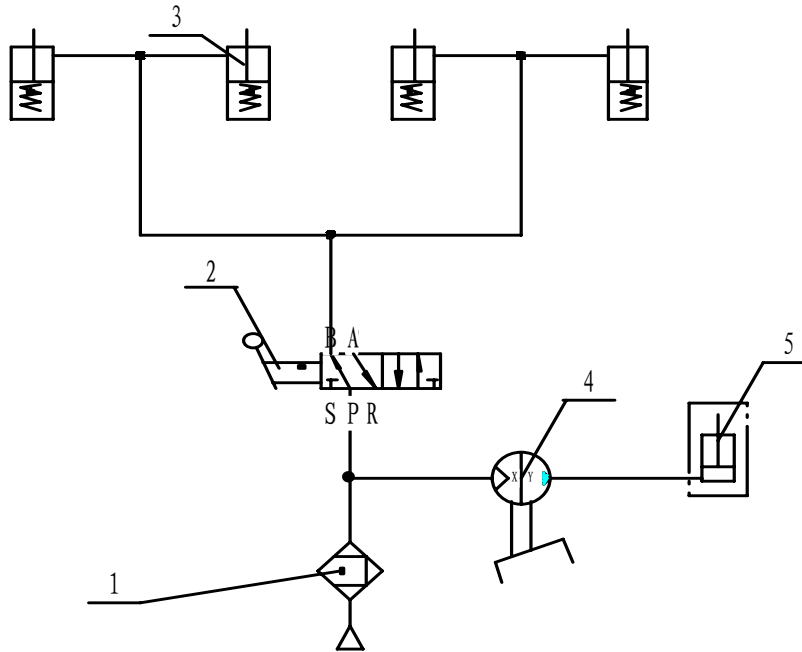
Diagram of hydraulic system:



1. Gear Pump
2. Motor
3. Filter
4. Check-Valve
5. Safety Valve
6. Release Valve
7. Flow Control Valve
8. Cylinder
10. Oil Level Gauge

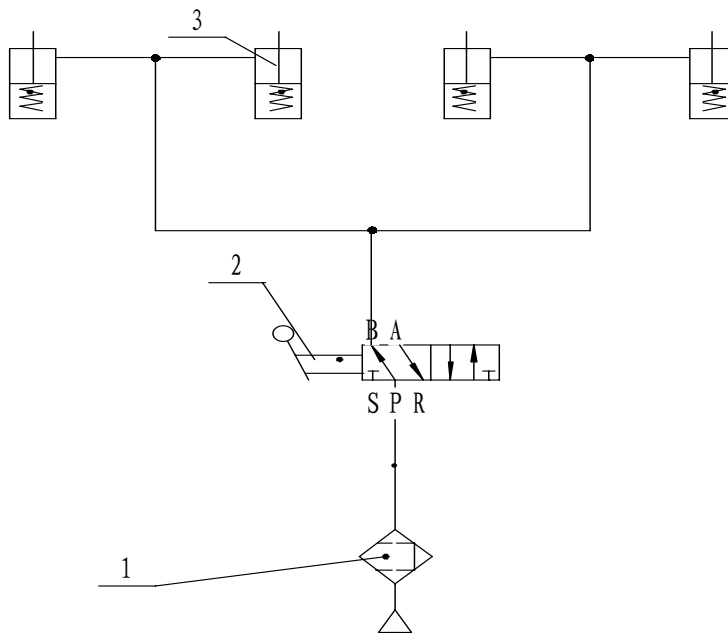
**Diagram of Pneumatic system:**

**TLT440W, TLT455W**



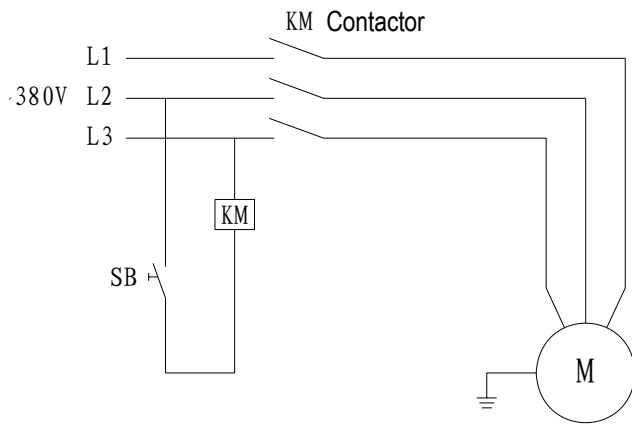
- 1. Air Source
- 2. Air Control Valve
- 3. Air Cylinder
- 4. Pneumatic Pump
- 5. Cylinder

**TLT440, TLT455**



- 1. Air Source
- 2. Air Control Valve
- 3. Air Cylinder

**Diagram of electrical system:**





## Warranty clause

This warranty clause is only applicable for the users and distributors who purchase Launch products through normal sales procedure.

Within 12 months from the date of goods delivery, Launch will make warranty on its mechanical and electrical components due to material or process defects. The equipment or parts damage caused as a result of abuse, unauthorized change, not used for the product designed purpose, operation not in accordance with method stipulated in this manual will be outside the scope of this warranty. The compensation for the automobile damage caused because of our equipment defect is only restricted to repair, and Launch doesn't undertake any indirect or incidental loss. Launch will judge the equipment damage attribute based on its stipulated inspection method. None of Launch's distributors, staffs or commercial representatives has the right to make any confirmation, prompting or commitment related to Launch's products.

## Disclaimer

The above warranty clause can replace any other forms of warranty clauses.

## Order notice

The parts and optional accessories that can be replaced can be directly ordered with suppliers authorized by Launch. When placing the order, please indicate:

Order quantity

Parts number

Parts name

## Customer service

In case of any problems during the operation of the equipment, please call: 86-21-69573179 or toll free number 8008206369.

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