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The product consists of the People's Insurance Company underwriting

i



(14) keep feet clear when lowering!



(15) When lifting or lowering, don't stand under the lift!



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1 Note



Warning

- This manual is an important part of the product. Please read and understand it thoroughly.
- Keep the manual for future use in inspection and maintenance.
- Do not use the product for any other purposes.
- The manufacturer is not responsible for any damage caused by improper use or uses other than the designed purpose.

Precautions

- Only well-trained personnel can operate the lift. Any changes to the components or use for other purpose without the consent of the manufacturer may cause direct or indirect damage to the product.
- Do not expose the lift to extreme temperature or humidity. Keep it away from heating device, faucet, humidifier or furnace.
- Do not install the lift outdoors or expose it to rain. If it is really necessary to do so, a special order should be made from the manufacturer.
- Keep the lift away from the dust, ammonia, alcohol, thinner and spray adhesive.
- Keep away from the lift when it is in operation.
- Inspection of the lift should be carried out regularly. Do not operate a damaged lift or a lift with broken parts. All the parts are only replaceable with the parts provided by the manufacturer.
- Do not overload the lift. The maximum lifting weight is clearly marked on the nameplate.
- Do not operate the lift when there are personnel in the vehicle.
- Keep the lifting area clear of obstacle, grease, oil, garbage and other substances.
- Use the lifting point recommended by the auto manufacturer. Keep the support in close contact with the vehicle.
- Use appropriate tools and safety protection equipments such as overall and working boots.
- Pay special attention to the safety labels on the control desk.
- Keep hands and other body parts away from the moving parts of a lift in operation.
- Do not remove or override safety protection of the lift.
- Hydraulic oil for the lift is N32 or N46 mechanical oil. Pay attention to the safe data as described in this manual.
- For the sake of technical improvements, Launch (Shanghai) Machinery Co., Ltd reserves the right to change the specifications without prior notice.

2 General Information

2.1 Purpose

This lift is designed for the purpose of lifting light vehicles under 3.2 tons for vehicle test, service and cleaning.

2.2 Features

- 1 The lift features advanced design, durability, and compact layout.
- 2 The installation of base frames in the pits can save space in the workshop.
- 3 Hydraulic system keeps both platforms level.
- 4 Mechanical protection device throughout the travel distance.
- 5 Automatic lubricating system and oil-less bearings.

2.3 Technical Specifications

Max.	Max.	Liftin	Loweri	Pow	Num	Platform Size	Overall	Synchro	Height
Lifting	Lifting	g	ng	er	ber	(mm) (")	Weight	nization	differen
Weight	Height	Time	Time	(kw)	of		(kg)(lb)	Precisio	ce (mm)
(kg) (lb)	(mm)(")	(sec	(sec)		Platf			n (mm)	
)			orms			(")	
3200 (7055)	1990 (78.3)	≤60	≥20	2.2	2	1460x2060×620 (57.5x81.1×24.4)	820 (1804)	<40 (1.6)	≤8 (0.3)

Electric specifications:

Motor (Optional): 2.2kw

Voltage options: According to customer demand

Single-phase/3-phase 110v/220v 60Hz

Single-phase/3-phase 220v/380v 50Hz

Noise

Noise emission at workstations < 70dB (A)

Hydraulic System

Max. Working Pressure: 28 MPa, Flow rate: 4.5L/min.

Pneumatic System

Working Pressure: 5 kgf/cm²

! Notice: At the bottom position, the max load of the lift is 1.0T.

2.4 Environment requirements

Temperature: 0°C **~ +40°**C

Relative Humidity: ≤80% Temperature ≥30°C

Transportation/Storage Temperature: -25 $^\circ\!\mathrm{C}$ ~+55 $^\circ\!\mathrm{C}$

Altitude: ≤2000m(78740″)

3 Structure and Working Principle

3.1 Structure





3.2 Electrical Diagram



Fig2

Lifting process: Press UP button SB1, The motor will drive the pump and send oil to the cylinder, which will in turn raise the platform upward. Release button SB1, the platform will stop rising. Keep pushing button SB1, when the platform reaches at the Max. Height, release valve will be activated and protect the lift.

Safety Locking process: press Safety button SB3, solenoid valve YV1, YV2 will be engaged, the platform will lower to make safety lock tooth locked, and the safety system then works

Lowering process: Press UP button SB2, platform will automatically rise (the rising time can be set), safety lock tooth will be unlocked, the motor will stop running, solenoid valve YV1, YV2, YV3 will be engaged, and the platform begin to lower. ! When platforms descend to be 440mm high from the base, the lift will automatically stop lowering. The DOWN button needs to be pressed again to make the lift lower to its bottom.

3.3 HydraulicDiagram



Fig3
3.4 Hydraulic Components in Control Desk



Fig4

Under normal working condition, equalization valves (1,2) are closed. Press "One-key" leveling button (the button is in the control box), the valve will automatically open. When there is a power failure, open the emergency down valves on both sides (1, 2), the lift will get down to its initial position (this operation must be done by specialized lift service person). If hydraulic system breakdown makes the lift unable to get down, please contact after-sale supporters to handle it. The lowering speed of the system can be adjusted through the throttle valve.

Hydraulic leveling:

Screw off the cap nut of the balance adjustment valve (1, and 2), then clockwise unscrew the balance adjustment valve (fill valve), only spin 1 or 2 circle, then rise and lowering the lift 1 or 2 times, until two platforms fell to lowest position, then screw tight two balance valves. See if two plats reach the balance, if not, repeat the above operations until balance is reached. Screw the cap nuts, no oil leakage. (See Figure 4)





Fig5

3.6 Operation description



4 Tools

Please get the following tools ready for installation:

Tools	Specifications	
Level Bar	L=400mm (15.7")	
Chalk Line	10mm (0.4")	
Taper Plunger Chip		
Hammer	1.5 kg(3 lb)	
Crescent Wrench	40mm (1.6")	
Open end Wrench Set	11mm-23mm (0.43"-0.9")	
Allen Wrench Set	2mm~12mm	
Screwdriver	150mm (5.9")	
Rotary Hammer Drill	20mm (0.8")	
Hard Alloy Drill Bit	Φ18mm (0.71")	
Frame Level	L*W*H=300mm×40mm×300mm	
(JB3239-83)	(11.8"×0.16"×11.8")	

5. Unpacking

The lift is delivered in a whole package: Electric control box, tubing and platforms

Unpack according to the instructions on the packages. Remove the packing materials and check for damage and loss of components.

To avoid accidents from occurring, keep the packing material away from children. The packing materials need to be disposed of properly if they may contaminate the environment.

6 Equipment installation

6.1 Basic requirements

- The lift can only be installed on concrete floor with a minimal thickness of 200mm (7.9") and at least 7 days of solidification time.
- The strength of the concrete ground should exceed 3000PSI (2.1kgf/mm²)
- The tolerance of the concrete floor levelness should not exceed 5mm (0.2"). Slight slope can be corrected with shims. Excessive slope on the ground will greatly affect the performance of the lift. In this case, new concrete slab should be made.
- Inspect for possible hindrance such as low ceiling, overhead pipelines in the work area, passageways and escapes. The working area of the lift should be 4.2m (165.4") high to give enough space.
- Allow enough space (1.5m/59") at the front and back and left and right of the lift so that operation should not be hindered. (Figure 6).
- Power supply: Put the power source in place before installation. All the wiring should be performed by a qualified electrician.



Fig.6

It is default installation; the control unit could be installed at the right side of lift as well. The installation should be performed by qualified people Foundation drawing of ditch-type installation



Fig.7

6.2 Base Frame Installation

- Layout plan: Refer to the Total width 2020mm (79.5"), drawing two parallel lines (1# and 2#) on the concrete floor, the tolerance should less than 3mm (0.1").
- Draw four parallel lines (a, b, c, d), vertical with 1# and 2#.
- Follow the drawing; put two platforms into the frame.



• Warnings:

All size should be based on the outer edge of the base.

The tolerance should less than 6mm(0.24")

Drawing the frame is very important. Poor drawing will cause many problems about assembly and operation.

6.3 Control Desk Installation

- Place the control desk in place according to the ground layout.(Fig.6)
- Use cover plate to protect the wires if there is no wire channel on the concrete floor.
- Fill appropriate amount of hydraulic oil into oil tank (using oil dipstick to check the level). Pay special attention to avoid dust and contaminants into the oil.

6.4 Power supply connection

- Open the control desk; connect the wires according to the electrical diagram. After check the connection, switch on the power. Turn on the power supply switch which is on the panel of control desk. The indict light will turn on.
- Power switch is needed, and installed near control desk. Cut the power when maintenance or emergency. The damage which is caused by wrong wire connection is not covered by warranty.
- Make sure the oil level is above the standard level. DO NOT operate the lift if oil tank is empty.
- Fix all the oil hoses and press UP button, test the electrical parts: if motor does not operate, abnormal sound, platform does not rise, motor is hot, STOP operating immediately and check the wire connection.



Fig.9

Notice:

High voltage in control desk, ground lead must be safe.

Notice:

8 leters oil is needed in the first use, fill the oil and make sure the oil level is above the standard level.

6.5 Anchoring

- Wrap the oil fittings, cable connections and joints of the lift to prevent dusts from getting in.
- Raise the platforms to 1.5m, and then install the anchor bolts.
- With the help of the holes on the base plate, drill and install the anchor bolts. In the process of drilling, make sure that there is no movement at the base frames. Fasten the base frames of the lift to the pits with 8 M16*120(M0.7"x6.3") anchor bolts.(Figure 10)

- Rotate the adjusting bolts, adjust the platform to same level, the equalization should less than 3mm (0.1"). Choose a right shim and place it under frame. Insert the shims at both sides of anchor bolt.
- Tighten out the nuts to fix the base frames on the floor.

Cautions: To ensure safety and performance, follow the installation procedures step by step.

- Wear safety goggles.
- Use strong alloy drill bit with a diameter of 18mm (0.71"). Do not use worn-out drill bit.
- Keep the hammer drill upright with the surface of the hole.
- Keep hammer drill going by itself. Do not apply extra pressure.
- The depth of the hole depends on the length of the bolt. It is advisable that the bolts above the base frames should be around 30mm (1.2").
- Remove the dust from the holes.



Fig10

- Tap the bolt into the hole, insert and hit the core until the bolt fully expands
- Adjust the levelness and height of platform, insert shims properly.
- Use torque wrench to tighten nuts, torque wrench's torque should not be less than 50N.m.

7 Adjusting

7.1 Preparations

- Move the contact surface of in roller filling in 2# lithium grease, from left to right scrolling surface evenly.
- Add 2# lithium grease at the joints of the machines.
- · Check the hydraulic oil inside the hydraulic oil tank is adequate

7.2Adjustment Procedures

- Check if all the connection bolts are tightly fastened.
- Press UP button, the platforms are raising; release the UP button, the platforms stop rising. Press DOWN button, the platforms are lowering.
- If there is air in hydraulic system due to new installation, air bleeding performance is needed. The air in the master cylinder can be bled after the platform goes up and

down several times. The air in the slave cylinder can be bled by following steps: lift Master Platform close to the maximal height; unscrew the two exhaust screws severally. Screw the exhaust screw when the all the air are ejected.

• Refer to Fig.4; use Hydraulic leveling system to make the plat on the same level.

ANotice:

Attention should be paid to the position of oil pipes and hydraulic hose when the platforms move to the minimal height for the first time. Make sure they do not get stuck with platforms moving downwards.

When bleeding the air, do not make the lift reach the maximal height instantly, must inching forward. Release the pressure when the main cylinder finish the whole run.

When bleeding the air in the slave cylinder, do not remove the two breathing screw at the same time.

8 Operation

8.1 Operation Instruction

Lifting process: Press UP button, the left and right platforms go upward. Release UP button, the platforms stop rising. Keep pressing UP button, the platform will keep going upward until stopping at set height.

Safety locking process: Press LOCK button when platforms rise up to its place, then the platform will go down a little to make safety lock system engaged. The safety lock system works.

Lowering process: Press DOWN button, the platform will automatically go up a little to make safety lock system disengaged (the going up distance can be adjusted).When it stops going up, the platform will start descending under the action of its own weight and load weight

! When platforms descend to be 440mm high from the base, the lift will automatically stop lowering once. The DOWN button needs to be pressed again to make the lift lower to its bottom.

8.2 Inspection before operation

- Check for the synchronized and steady movement of the platforms.
- Check the sensibility and reliability of safety ratchet.
- Make sure the platforms would automatically stop when they reach the max lifting height.
- Check for possible leakage in the cylinder, hoses and fittings.
- Check for possible air leakage in the solenoid valve, cylinder, pressure regulator valve and fittings.
- Check for any abnormal action and sound in pump and motor.

8.3 Operational Procedures

- Keep speed below 5km/h when driving on the platforms. Make sure the drive-on plate is in free state.
- When vehicle stops on the platform, the front wheels should be located at the edge of drive-on plate. Pull the hand brake, select proper lifting pad according to the height of vehicle's chassis and place lifting pad as per vehicle manufacturer's recommended lifting points. If necessary, The drive-on plate bracket can be pulled out when the vehicle stopped right so that the drive-on plate can be used as an extension of platform. The placement of lifting pad shall be in the area included by drive-on plate and its bracket and shall not be at edge of drive-on plate.
- Press UP button, stop at the height between 200mm \sim 300mm(7.9" \sim 11.8")from ground.
- Check for levelness of vehicle and lift. Check for abnormal status.
- Keep pressing UP button, raise lift to required working height.
- When vehicle service is done, check the below and surrounded area for obstacles and foreign matters. Press DOWN button, lower lift to its initial position. Remove lifting pad, get back drive-on bracket.

8.4 Safety Precautions

• The hydraulic relief valves are well-adjusted before leaving factory. The manufacturer will not be responsible for any damage caused by unauthorized

adjustment.

- Check the safety lock ratchets are engaged before going about any under-car jobs.
- When raise the lift, if the raising height is less than 1000 mm, shall wait 30s before pressing the down button, making the vehicle fell to the ground; otherwise hydraulic damping device is not fully functioned.
- Selected the proper rubber cushion, put the cushion as far as possible, to get the most bearing area, check whether the cushioning pad matches the support point that the vehicle manufacturer's recommended.
- In case of any leakage in the hydraulic system, fix the problem and refill the oil to the proper level.
- In the mesa distance base about 440 mm in height, lifting machine in decline process will automatically stop once. This phenomenon is not lifting machine fault.

9. Safety Rules for Electrical System

- Only personnel who are properly trained and have adequate knowledge and skill should undertake all electrical/electronic troubleshooting and repair.
- Do not alter or bypass protective interlocks.
- Before starting, read and observe all warning labels.
- When trouble shooting make sure the power source has been disconnected and main switch has been locked.
- Take extra precautions in damp areas to protect you from accidental grounding.
- Before applying power to any equipment it must be established, without a doubt, that all persons are clear.
- Do not open the electrical control panel unless it is necessary to check the electrical equipment.
- Do not alter the electrical circuits unless authorized to do so by the manufacturer.
- When replacing electrical components, make sure they conform to the manufacturer's specifications, including proper color coding.
- Do not wear metal frame glasses, metallic necklaces or chains while working on any electrical equipment. Also do not wear any ring, watch or bracelet while operating electrical equipment.

10 Parts List

This parts list is only to be used by maintenance and servicing personnel. The manufacturer is not responsible in case it is used for any other purposes. If any parts get damaged, please order from your dealer or Launch Tech.



No	ERP Code	Name
1	307041259	Base frame
2	103202084	Down supporting axle
3	307041260	Down inner scissor bracket
4	104991231	Slide block
5	103202086	Down outside scissor long axle
6	307041261	Down outside scissor bracket
7	103202087	Connecting axle
8	103202088	Connecting axle I
9	103202091	Long connecting axle
10	307041262	Up outside scissor bracket
11	307041263	Up inner scissor bracket
12	103202092	Up supporting axle
13	104991232	Bushing for up sliding block axle
14	103202238	Platform limit axle
	103202093	Sliding block axle(platform)
15	104991233	Sliding block(platform)
16	307041264	Platform
17	307041265	Pin
18	307041266	Drive-on ramp
19	103202246	Support
20	103202794	The connecting axle of Drive-on ramp
21	103990245	Turning handle
22	103202063	Piston cylinder assembly
23	103202062	Plunger cylinder assembly
24	103202085	Cylinder ending axle
25	103202792	Safety rod
26	103202089	Axle of auxiliary arm
27	103202090	Cylinder pushing axle
28	103202095	Roller axle of auxiliary arm
29	103203169	Auxiliary arm bracket
30	103200865	Roller

31	307041267	Auxiliary arm bushing
32	103202789	Safety bushing II
33	103202788	Safety bushing I
34	103202790	Safety bushing III
35	307041268	Locking hinge
36	103202097	Locking claw
37	103203171	Locking device supporting assembly
38	103202083	Air cylinder assembly
39	103100292	Y connector
40	307041269	Supporting ear cover for cylinder
41	103202791	Spacer between scissor arm
42	103260111	Bushing 2020
43	103260106	Bushing 2525
44	103260195	Bushing 2025
45	103260108	Bushing 3025
46	103260194	Bushing 2825
47	307041270	Roller of drive-on ramp
48	307041271	Long supporting axle
49	307041272	Limit axle
50	103202094	Travel switch hoop
51	102100139	Micro switch
52	103202793	Shaft with lock piece
53	103202822	Drop alarm induction tablet
54	102100075	Travel switch ME9101



Hydraulic Diagram

NO	ERP CODE	NAME
		C type 4M end high pressure oil hose/
		C type 3.8M end high pressure oil
101	103260191/103260223	hose
		C type bending head 3.5M high
		pressure oil hose/ C type bending
102	103260190/103260222	head 2.9M high pressure oil hose
		C type 2M high pressure oil hose / C
103	103260188/103260220	type 1.5M high pressure oil hose
		C type bending head 2.4M high
		pressure oil hose / C type bending
104	103260189/103260221	head 2.65M high pressure oil hose
		C type 0.65M high pressure oil hose /
		C type bending head 1.2M high
105	103260193/103260219	pressure oil hose
106	103990055	T fitting
		C type 2.5M end high pressure oil
107	103260192/103260224	hose/ C type 2.4M end high pressure

		oil hose		
108	/103260225	/C type 1.1M high pressure oil hose		
		Power unit assembly (380V/50Hz		
	103990185	three phase)		
		Power unit assembly (220V/50Hz		
	103990188	single phase)		
		Power unit assembly (200V/60Hz		
	103990187	three phase)		
		Power unit assembly (110V/60Hz		
	103990186	single phase)		
		Power unit assembly (220V/50Hz		
	103990190	three phase)		
		Power unit assembly (220V/60Hz		
	103990191	three phase)		
		Power unit assembly (220V/60Hz		
	103990192	single phase)		
		Power unit assembly (200V/60Hz		
109	103990193	single phase)		



Electrical Diagram

NO.	ERP CODE	NAME
201	102130034	Transformer
202	102270004	Rectifier
203	103180018	Connecting board
204	102110059	Contactor
205	102150053	Fuse
206	102240039	Solenoid valve
207	102100137	Button
208	102990109	Power switch
209	102140018	Alarm
210	102990065	Indicating light
211	103160033	Solenoid air valve
212	102100135	Button
213	102100136	Button
214	102110067	Time relay

Symptoms	Reasons	Solutions
The motor does not	Thermo relay or circuit breaker	Reset the thermo relay or circuit breaker
work.	actuated	Supply power of correct voltage.
	Voltage is not correct.	Change Fuse.
	Fuse burning.	Change motor.
	Motor is broken.	
The motor works,	The motor rotates in the wrong	Change wiring of motor to change direction.
but the platforms do	direction.	Add oil.
not move.	Oil level is too low.	Check the oil hose.
	Oil leak.	
The motor works,	The voltage to the motor is too low.	Supply motor with correct voltage.
but the platforms	Pressure of relief valve is not right.	Adjust the pressure of relief valve.
can not lift the	The lift is overloaded	Check the weight of the vehicle.
vehicle.	The hydraulic pump is damaged.	Replace the hydraulic pump.
Lowering speed is	There is foreign substance in the	Clean the lowering solenoid valve.
slow.	lowering solenoid valve.	
	Lowering speed valve is turned too	Turn the lowering speed valve up.
	low.	
The platforms are	One cylinder has much more oil than	Adjust the oil in both cylinders according to
not synchronized.	another.	manual.
Lifting speed is slow	Oil and air are mixed.	Change oil or eject air.
or oil spill.		

11 .Trouble shooting

12 Maintenance

12.1 Daily Maintenance

- Keep the lift clean. Make sure power is cut off before cleaning the lift.
- Keep the working area clean. Excessive dust in the work area will shorten the lifespan of the lift.
- Before operation, inspect and keep all the safety devices of lift in order. If any problems are found, adjust, maintain or replace the parts timely.
- Make sure that the pits are kept dry and clean.
- Inspect if there is leakage in the air valve and if it is well-lubricated.

12.2 Monthly Maintenance

- Refasten the anchor bolts.
- Check all the hoses and fittings for possible wearing and leakage. If any leakage is found to be caused by worn sealing parts, replace with parts meeting the specifications.
- Check if the roller slide is well-lubricated with high-quality #2 lithium lubricant.
- Apply #2 lithium lubricants on a monthly basis.

12.3 Biannual Maintenance

- Check all the moving parts for possible wearing, interference and damage.
- Inspect the lubrication of all the rollers. If the roller is dragged along in lifting or lowering, apply lubricant to the roller shaft.
- At the end of the first six months, clean the hydraulic system and replace the hydraulic oil. Replace the hydraulic oil with N32 hydraulic oil in winter and N46 in summer.

12.4 Maintenance for 3 Years or 5000 Times Operations

- Replace the bushings at all joints.
- Replace all seals
- Replace the rollers.

13 Storage and Scrapping

13.1 Storage

When the lift needs to be stored for a long time:

- Unplug from power socket.
- Lubricate all the parts, including all the contact surface of the rollers.
- Bleed oil from tanks.
- Cover the lift with plastic hood.

13.2 Scrapping

When the lift has exceeded its lifespan and can not be used any more, disconnect it from the electrical supply and dispose of as required by the local regulations.

TLT632AF Hydraulic Oil Data

#2 Lithium Lubricants

Item	Specifications
Conical degree (1/10mm)	278
Dropping point $^\circ\!$	185
Erosion (T2 Copper Plate, 100 ℃, 24h)	No Change
Copper Screening (100°C, 22h) %	4
Evaporation (100°C, 22h) %	2
Oxidizing Stability (99°C, 100 h)	0.2
Non-corrosibility (52°C, 48)	Grade 1
Foreign substance (Microscopic method) / (number/cm³) Above 10µm Above 25µm Above 75µm Above 125µm	Fewer than 5000 Fewer than 3000 Fewer than 500 0
Relative Viscosity (-15℃,10s ⁻¹),/(Pa·s) Less than	800
Humidity Loss(38℃,1h)(%) More than	≥8

N32 Mechanic Oil (for winter)

Item	Specifications
Moving Viscosity 40℃	28.8~35
Pour /℃	≤-15
Flash point /℃	≥175

N46 Mechanical Oil (for summer)

Item	Specifications
Moving Viscosity 40℃	41.4~50.6
Pour /°C	≤-9
Flash point /℃	≥185