

Operation and Service Manual

LX25SA	LX100N	LX300N	LX25SB
LX25LA	LX100W	LX300WM	LX25LB
LX50SA	LX200N	LX300WL	LX50SB
LX50LA	LX200WM		LX50LB
	LX200WL		

Read this manual carefully and understand completely before operating. Keep filing this manual for future reference. If this copy is lost, please contact your local supplier for a replacement.

Explanation of Terms and Symbols




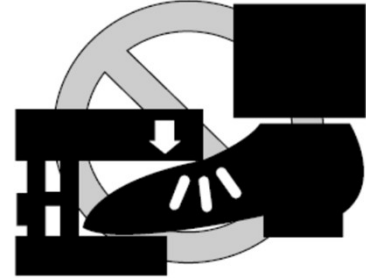


In this manual, 「Warning」, 「Caution」 are defined and specified as below. Notice of Warnings are very important for safe operations. As these are very Important to protect operators from accidents resulting in personal injury and death, and damage to property, so make sure to read thoroughly and understand fully before operation.

Warning Incorrect operation may result in serious injury or death of the operator.

Caution Incorrect operation may result in injury and damage to the property.
The

⚠ Warning !

© Hazard or unsafe practice which, if not avoided, may result in DEATH or SEVERE PERSONAL INJURY and PROPERTY DAMAGE.

		
<p>NEVER sit, stand or ride on the Lift Table. SEVERE PERSONAL INJURY could result.</p>	<p>NEVER go under raised Lift Table until load is removed and scissor mechanism is securely blocked. SEVERE PERSONAL INJURY could result.</p>	<p>KEEP clear of all moving parts. NEVER put hands or feet in or near any moving parts of Lift Table SEVERE PERSONAL INJURY could result.</p>
	<p>No Overload !</p> 	
<p>NEVER put feet or hands under platform when raising or lowering Lift table. SEVERE PERSONAL INJURY could result.</p>	<p>DO NOT overload the Lift table. SEVERE PERSONAL INJURY AND PROPERTY DAMAGE could result</p>	<p>DO NOT modify Lift Table such as enlarging platform, installing big size conveyor etc. which may cause overturning Lift Table. SEVERE PERSONAL INJURY could result.</p>

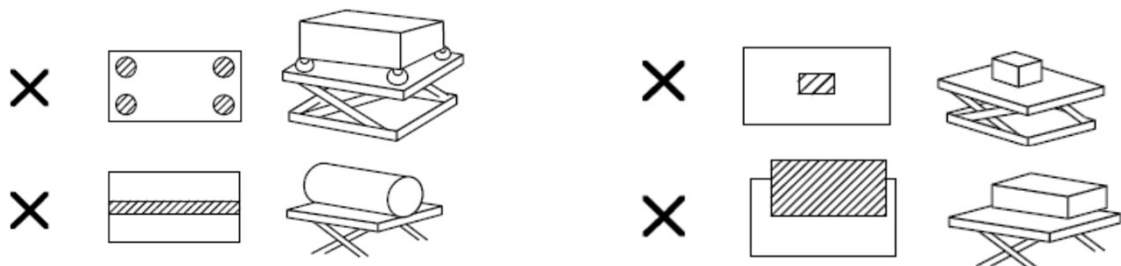
1. Warning and Cautions

⚠ Warning and Cautions !

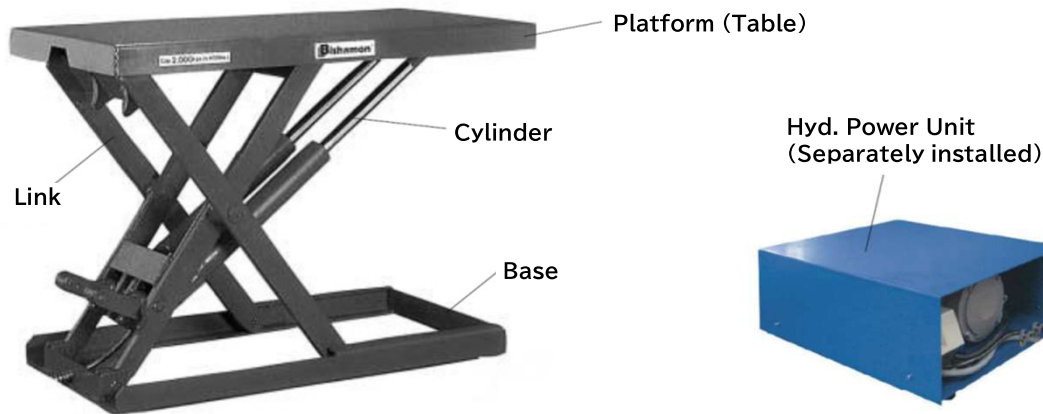
⊙ Hazard or unsafe practice which, if not avoided, may result in MINOR or MODERATE PERSONAL INJURY and PROPERTY DAMAGE.

1. READ THIS OPERATION MANUAL COMPLETELY BEFORE USING AND THOROUGHLY UNDERSTAND AND FOLLOW ALL SAFETY INSTRUCTIONS. Wrongful use may result in accident.
2. This Lo-Profile Lift Table (**Lift**) is designed for use with stable, uniformly distributed loads on a solid level floor. **DO NOT** use the Lift for any other purpose than its intended use.
3. Distribute the load evenly on the platform surface. **DO NOT** concentrate the load on the edge or the side of the platform unless the Lift is fully lowered position. Put the load evenly on more than 80% surface of the platform. Unbalanced load could damage the Lift and reduce the lift life.
4. This Lift is not designed for high frequency or high speed use applications.
5. This Low-Profile Lift Table shall be operated by **TRAINED** personnel only. **OPERATOR** shall read "Operation Manual" completely and thoroughly understand the controls and operation of this equipment BEFORE operating the Lift.
6. **DO NOT** use the lift with an unstable, unbalanced or loosely stacked load. Unbalanced loads may become unstable and fall. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
7. Perform periodic inspection according to instructions of this manual.
8. **DO NOT** install the Lift on an unlevel or soft surface. The Lift base frame must be supported along its entire length. Failure to completely support base frame could result in damage to the Lift.
9. **DO NOT** overload the Lift. Always stay within designated capacity. Overloading the Lift could cause the load to suddenly fall. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
10. **Keep** clear of all moving parts. **NEVER** put hands or feet in or near all moving parts of the Lift. **SEVERE PERSONAL INJURY** could result.
11. **NEVER** put feet or hands under the platform when raising or lowering the Lift. **SEVERE PERSONAL INJURY** could result.
12. **NEVER** go under the raised Lift platform until the load is removed and scissor mechanism is securely blocked in the open position. **SEVERE PERSONAL INJURY** could result.
13. **NEVER** place any load on the platform while the scissor mechanism is blocked in the open position.
14. **NEVER** sit, stand or ride on the Lift platform. **NEVER** allow another person to sit, stand or ride on the Lift platform. Moving components could cause loss of balance. **SEVERE PERSONAL INJURY** could result.
15. The Lift is provided with a remote hyd. power unit and has an electric line and hydraulic line connecting the power unit to the Lift. Use **CAUTION** not to trip over the lines and **DO NOT** run over the lines with mobile equipment. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
16. **NEVER** leave the loaded Lift unattended unless the Lift is in the fully lowered position.
17. **ALWAYS** remove the load before servicing the Lift.
18. **ALWAYS** disconnect the power cable before servicing the Lift.
19. Any service done on the power unit should be performed by a qualified electrician.

※ Unbalanced Load means the concentrated load on localized or platform edge area as below.

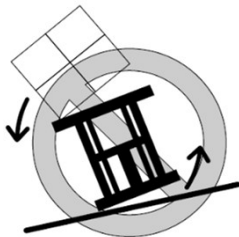


2. Name of Components



3. Installation of Lift Table

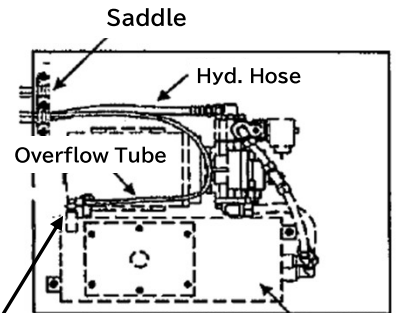
⚠ Warning !



DO NOT install the Lift Table on an unlevel surface. Overturn of the Lift or damage to the Lift could result.



DO NOT hoist up platform of the Lift when moving location. Hoist up base frame for moving



There is Hex Socket Head Plug. In installation, replace with Elbow Union and connect with Overflow Tube

⚠ Caution

1. Install the Lift so that there should be no gap between base and floor to avoid bent of base and frame.
2. Electric power cable should be less than 10m and more than 2 square mm cable should be used.
3. Temperature of installation site should be over 0°C but less than 30°C
4. The Lift is not water proof nor for outside use model. Install inside building.
5. The Lift is not designed for the use with powder dust environment.

1. Make sure the installation floor is flat, and can bear the Lift weight and max load.
2. Make sure there is no gap between base and floor. If there is gap, Lift base could be bent and platform (table) could be tilted. If there is gap, fill the gap with shims etc.
3. For Model LX200 and LX300, Lift unit and Hyd. Power unit would be delivered separately. Connect the Hyd. Hose and Overflow Tube at Lift unit side to Hyd. Power unit, and fasten those with saddle securely.
4. If motor runs but Lift does not rise, there is possibility of reverse rotating of motor. If so, replace R with T.
5. For Model LX200 and LX300, fasten Lift with anchor bolts when necessary.
6. Hyd. Hose would move in lifting and lowering operation. Hyd. Hose would be pulled into the Lift in lifting, and pushed out in lowering. As it moves 50~100mm, keep enough space for the hose moving in installation. If hyd. Hose is fixed, it could damage the hose and Lift unit.

4. Pre-Operation Checks

Perform the Pre-Operation checks before operating everyday.

⚠ Caution

If it is necessary to go under the raised Lift platform for repair or servicing the Lift, make sure to remove the load and the scissor mechanism is securely blocked in the open position. For Model LX300, use Maintenance Pin.

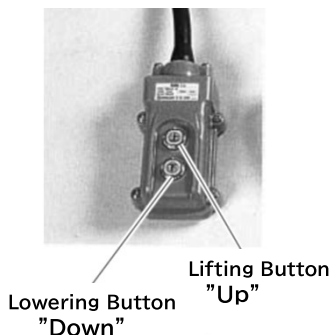
1. Any damage, distortion or crack in the Lift frame ?
2. Any obstacles inside the Lift ?
3. Does platform rise to the max height as per specification ?
4. Any oil leak from hydraulic line, cylinder or pump unit ?
5. Any abnormality in electric circuit ? Is operation smooth ?
6. Any abnormal wear in sliding portion ?
7. Any abnormal noise from Lift unit, Motor or pump ?
8. Fastening of bolts and nuts
9. Is there any dirt or obstacles at the driving portions of rollers ?

⚠ Caution

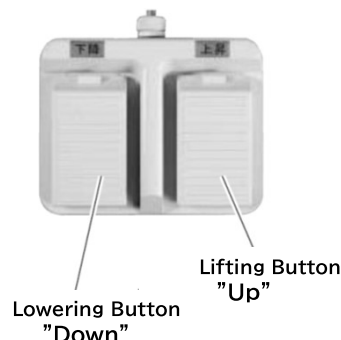
If dirt or obstacles etc. at driving portions are built up (piled up) and obstructing the driving of the rollers, damage to the Lift unit could result.

5. Operation

Push Button Switch
(Standard)



Foot Switch
(Option)



The Lift can be lifted and lowered by Push Button Switch, or by Foot Switch.

⚠ Warning !

Never put hands or feet in or near scissor mechanism and all moving part of the Lift. SEVERE PERSONAL INJURY could result.

5-1 Lifting Operation of the Lift

Press the "Up" push button, or depress the foot pedal marked "Up" and raise the platform to a convenient working height. The Lift does not stop when platform reach the max height. Stop operating the Lift when platform reached max height.

⚠ Caution

- Platform is supported by hydraulic and lowers slightly as natural lowering.
- DO NOT continue to operate the pump if a squealing noise is heard coming from

※ It is possible the Lift can not lift up full capacity in the range of booster device is working. Lower the platform and change the location of the load.

5-2 Lowering Operation of the Lift

⚠ Warning !

Never put hands or feet under the platform when raising or lowering the Lift. SEVERE PERSONAL INJURY could result.

Press the "Down" push button, or depress the foot pedal marked "Down" and lower the platform to a convenient working height. The Lift does not stop when platform reach the floor. Stop operating the Lift when platform reached floor.

Explanation

- If "Up" button and "Down" button are pressed at same time, first pressed takes priority.
- If "Up" and "Down" foot pedal are depressed at same time, "Up" pedal takes priority.

5-3 Loading / Unloading the Lift Platform

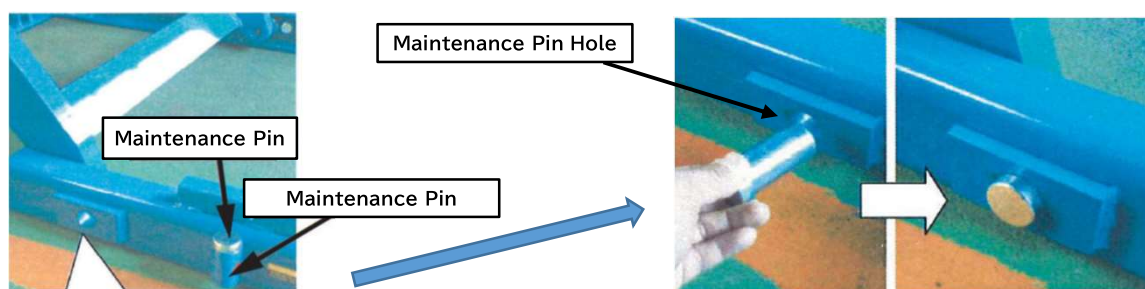
⚠ Warning !

- DO NOT overload the lift table. Always stay within the designated capacity ratings.
- DO NOT concentrate the load at one point on the pallet or platform. Always uniformly distribute each layer of load over the supporting surface.
- DO NOT use the lift table with an unstable, unbalanced or loosely stacked load.
- DO NOT modify lift table such as enlarging platform, installing big size conveyor etc.
⇒ Overturn of lift table and SEVERE PERSONAL INJURY could result.

1. Check the load or component weight to ensure the total load does not exceed the capacity of the Lift. Refer to the capacity label on the Lift platform.
2. Uniformly distribute the load over more than 80% surface of the platform or supporting surface and ensure the load is tightly stacked.
3. DO NOT drop the load on the platform with impact.

5-4 Maintenance Pin

- Model LX300 (Equipped as Standard)
- Other Models (Optional Feature))



Optional Maintenance Pin (standard feature for LX300) is available for safe service work. Maintenance Pin can be inserted into Maintenance Pin hole to stop sliding of link rollers, and prevent platform (scissor mechanism) from being lowered.

How to Engage the Maintenance Pin :

1. Remove all load from the platform and raise the lift table to its fully-raised position
2. Pull out Maintenance Pin out of Maintenance Pin Holder, and insert into Maintenance Pin hole at side of base.
3. Lower the Lift until link rollers hit Maintenance Pin and the Lift stops.
4. If the Lift stops, now ready for start servicing.
5. After finishing servicing, raise the lift table, pull Maintenance Pin out and return to Maintenance Pin Holder.

⚠ Caution !

Make sure to insert Maintenance Pin into hole after platform reached max height. If inserting at other height, it may damage the Lift.

5-5 Recommended Cycle Time (Interval)

What is Cycle Time (Interval) ? :

The time between beginning of raising lift table and the next raising operation.

It is recommended more than 3 minutes cycle time for 200V unit, and
more than 10 minutes cycle time for 100V unit

※ LX Series do not use continuous rating motor. Follow the recommended Cycle Time (Interval) before restarting.

6. Regular Inspection and Maintenance

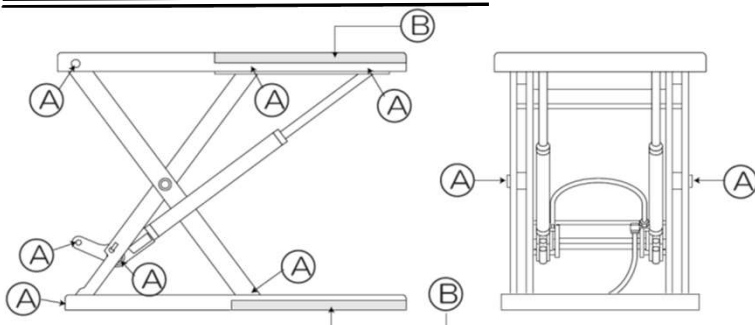
⚠ Warning !

If it is necessary to go under the raised Lift platform for inspection or servicing the Lift, make sure to remove the load and the scissor mechanism is securely blocked in the open position. For Model LX300, use Maintenance Pin.

Be sure to perform the regular inspection at least once a month in addition to pre-operation check which is performed everyday in order to ensure that Lift can be used safely. All service should be performed by a qualified service person who has an understanding of lift equipment and hydraulic diagrams. This person should be thoroughly familiar with the operation and use of this type of equipment. Or it is recommended to ask the Lift supplier to perform the services.

Inspection Spot	Inspection Point	Inspection Period
Lubrication	Lubricate the designated points	Monthly
Replace Oil	Replace all oil in the oil tank	3 months after installation then every year
Natural Lowering	Check natural lowering with fully loaded (should be less than 0.2mm/minute)	Every 6 months
Damage on the Lift	Check wear or distortion through Lift unit (Check welding especially)	Every 6 months
Shaft and Bearing Device of Lift unit	Check the wear of Shaft and Bearing Device of Lift unit	Every 6 months
Hyd. Hose	Check wear and damage from twist etc. It is recommended to replace hyd. Hose every 2 years as hyd. hose wear from stress in lifting and lowering.	Every 2 years

6-1 Lubricating Points



Ⓐ Inject grease to grease fittings

Ⓑ Apply grease

※ Use lithium grease

6-2 Hydraulic Oil to be used and Required Oil Volume

ISO VG32

Model	Oil Volume
LX25, LX50 (3Ph/200V)	1.0 L
LX25, LX50 (1Ph/100V)	1.0 L
LX100 (3Ph/200V)	1.3 L
LX200, LX300 (3Ph/200V)	5.0 L

7. Adjustment of Lowering Speed

⚠ Warning !

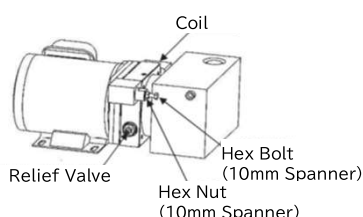
- Lowering Speed is already adjusted and set at factory with specified load. It is not recommended to change the lowering speed faster which could be danger.
- Changing lowering speed without load could result in faster speed when loaded and could be danger.
- DO NOT adjust Relief Valve for safe use. If nut is loosened, oil could be leaking.

Lowering speed can be adjusted through following procedure. Be noted that lowering speed could be varied depending on the temperature (The colder, the slower).

Procedure

Model

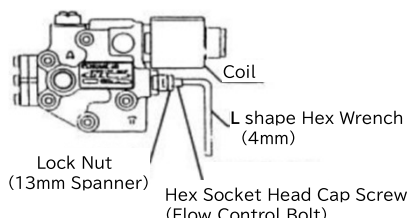
LX25SA/B
LX25LA/B
LX50SA/B
LX50LA/B
LX100



1. Unfasten Hex Nut with 10mm spanner
2. Rotate Hex Bolt with 10mm spanner to adjust speed
Clockwise → Speed become faster
Counterclockwise → Speed become slower
3. Hold Hex Bolt with 10mm spanner, and fasten Hex Nut with 10mm spanner.

Model

LX200
LX300



1. Loosen Hex Nut with 13mm spanner
2. Rotate Hex Screw with 4mm Hex Wrench to adjust speed
Clockwise → Speed become faster
Counterclockwise → Speed become slower
3. Fasten Lock Nut

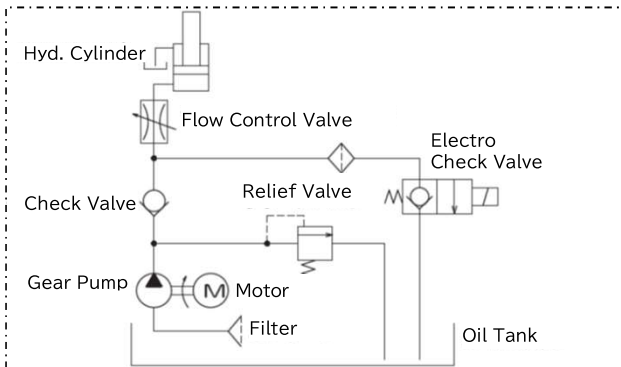
8. Specifications

Model No.	Capacity	Vertical Travel	Table Size (mm)		Table Height (mm)		Motor	Rising Speed (Seconds)		Machine Weight(Kg)		Power Unit
	(Kg)	(mm)	Width	Length	Min. Height	Max Height		(KW)	50Hz	60Hz	Lift Unit	
3Ph/200V (380~415V)												
LX25SA-B	250	470	518	810	59	529	0.375	13	11	98	28	Separate
LX25LA-B		700		1,010		759		18	15	116	28	
LX50SA-B	500	470	520	810	60	530		22	19	104	28	
LX50LA-B		700		1,010		760		33	28	123	28	
LX100N-B	1,000	900	780	1,280	76	976	0.75	29	24	199	37	
LX100W-B				1,350		995				220	37	
LX200N-B	2,000		732	1,500	95	995	1.5			423	45	
LX200WM-B			1,000	2,000							450	
LX200WL-B	3,000			732	1,350			134	31		26	
LX300N-B	861	1,000	1,500	493	45							
LX300WM-B			2,000	525	45							
LX300WL-B												
1Ph/100V (115V)												
LX25SB-B	250	470	518	810	59	529	0.4	11	9	93	28	Separate
LX25LB-B		700		1,010		759		16	13	111	28	
LX50SB-B	500	470	520	810	60	530		21	18	99	28	
LX50LB-B		700		1,010		760		31	26	118	28	

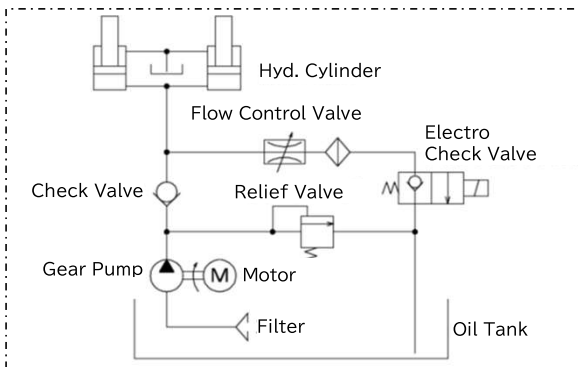
9. Circuit Diagram

【 Hydraulic Circuit 】

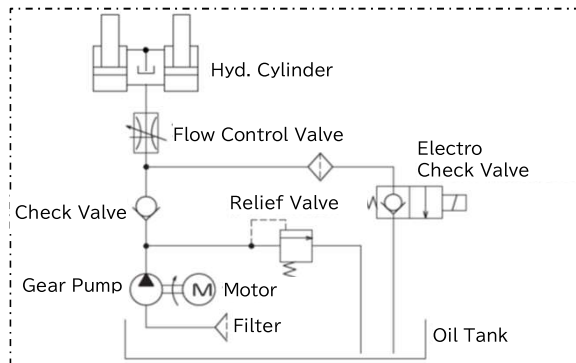
Model LX25, LX50



Model LX100

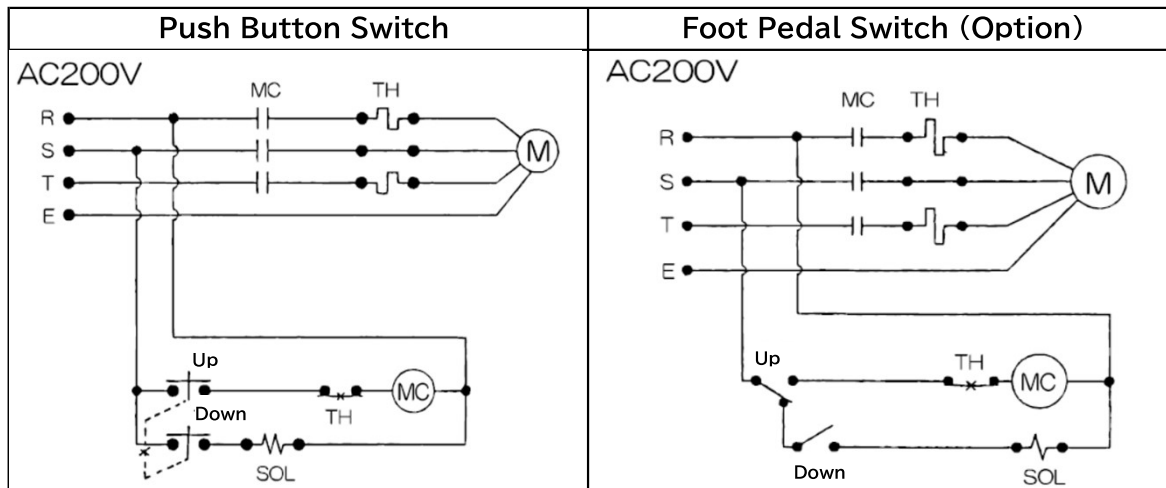


Model LX200, LX300

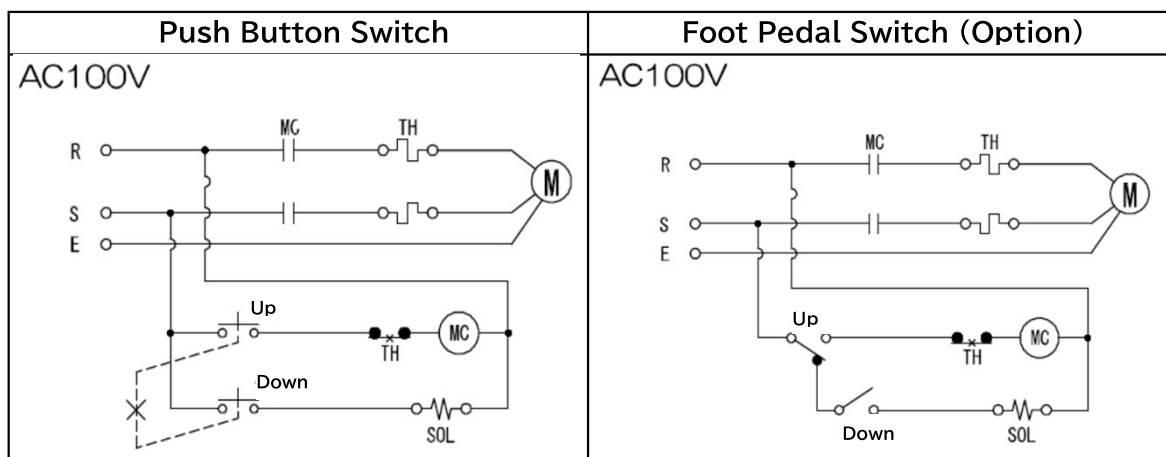


【 Electric Circuit 】

Model LX25SA, 25LA, 50SA, 50LA, LX100, LX200, LX300



Model LX25SB, 25LB, 50SB, 50LB



10. Disposal

When disposing of this Lift, dispose of the metal, non-metal, plastic, and hydraulic oil components separately. There are regulations for disposing of the hydraulic oil, so make sure to sort and follow the local rules. If you have any questions regarding disposal, please check with your supplier of the Lift.

11. Troubleshooting

The below chart show how to deal with relatively minor malfunctions. For other further issues, please contact your supplier of this Lift.

Symptoms of malfunction	Possible Cause		Action
Does not rise	Electric	• Motor rotate reverse	• Replace R with T
		• Wrong Phase power supply	• Check power supply
		• Motor does not run	• Breaking of cable (Replace cable) • Replace Magnet Contactor • Replace Remote Control Switch
		• Loose connection of Magnet Contactor	• Replace Magnet Contactor
	Valve	• Lowering Valve is in Normally Open due to obstacles	• Remove obstacles in Lowering Valve or replace Lowering Valve
	Hyd. Oil	• Lack of hyd. oil	• Fill the oil
	Power Unit	• Malfunction of Power Unit	• Replace Power Unit
Rising Speed is slow	Gear Pump	• Pump can not feed specified oil volume due to wear of internal gear	• Replace gear pump
	Motor	• Motor can not perform sufficient output	• Check power supply or replace motor
	Filter	• Filter is clogged	• Clean the filter and replace oil
	Cylinder	• Oil leak inside cylinder due to damaged seals	• Replace damaged seals
Does not lower	Electric	• Broken wiring of Lowering coil, or contact failure	• Check according to diagram and repair
	Lowering Valve	• Lowering Valve does not open	• Replace Lowering Valve
	Lift unit	• Obstacles at Guide Roller rail	• Remove obstacles
Lowering Speed is slow	Lowering Valve	• Filter inside Lowering Valve is clogged	• Clean the filter, or replace Lowering Valve
	Flow Control	• Insufficient flow control	• Adjust lowering speed by Flow Control Bolt
Natural lowering after the Lift stop	Cylinder	• Oil leak inside cylinder due to damaged seals	• Replace damaged seals
	Piping and Joint	• Oil leak from hyd. hose, valve etc.	• Tighten pipe joint
	Check Valve	• Obstacles inside Check Valve • Insufficient seating of Check Valve	• Remove obstacles • Replace Check Valve
	Lowering Valve	• Obstacles sticking inside Lowering Valve	• Remove obstacles, or replace Lowering Valve
Noise at rising or lowering	Lift unit	• Lack of oil lubrication at shaft and holes	• Apply the grease
		• Wear of shaft·bushing	• Replace shaft·bushing

12. Product Warranty Conditions

Warranty

Should the unit malfunction within the warranty period (Within one (1) year of purchase) when it has been operated in accordance with the user manual and the warning labels on the unit, we will adjust the defective component, repair it, or send a replacement part free of charge. However, this does not apply in the case of secondary damage or any damage to which any of the following apply :

- (1) Damage or injury resulting from incorrect operation, improper inspection, improper storage, or any other type of negligence
- (2) Damage or injuries resulting from changes (modifications) that negatively impact the product's operation mechanism
- (3) Consumable parts that are damaged and need to be replaced
- (4) Damage or injury resulting from fires, earthquakes, wind, floods, or other natural disasters or external factors
- (5) Problem resulting from specified parts not being used
- (6) Error in the warranty claim process (Ex: failure to indicate Model or Serial No. etc.)
- (7) Damage or injury resulting from installation
- (8) Repairs performed not by our company or not by our authorized dealer
- (9) Damage confirmed to be the result of overuse, user error, or accident

Furthermore, all rubber components and other naturally degradable products used in this products and its accessories, as well as all consumable products, fall outside the scope of this warranty.

This lift is not waterproof, so rust, corrosion, short circuits, and other damage caused by water is not covered under warranty.

How to Claim Warranty

If you decide to file claim for this product based on the above, please contact your supplier. The supplier will carry out the necessary procedures. In addition, we can not decide whether or not any particular situation falls within the scope of this warranty.

13. After Sales Service

•Product does not work properly	→	Review the manual and try to find solution
•Product still does not work properly	→	Contact your supplier and request repairs
•Repairs within the warranty period	→	The warranty is valid one year from the date of purchase. We will service your product in accordance with warranty conditions.
•Repairs out of warranty period	→	Consult with your supplier
•Availability of Spare Parts	→	The spare parts are available for 8 years after discontinuing manufacturing

Contact your Lift supplier for any information regarding after service.
When contacting your Lift supplier, provide following information.

- Model No.
- Serial No.
- Purchase Date
- Conditions of trouble

Record the above information in the table below for future inquiries.

Type	
Serial No.	
Purchase Date	
Lift Supplier	
Installer	
Trouble Date and conditions	Date :
	Date :
	Date :
	Date :



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