

Operation and Service Manual

Mobile Work Positioner

ESX05, ESX08, ESX10, ESX10L ESX21, ESX21L, ESX40, ESX60

Read this manual carefully and understand completely before operating Mobile Work Positioner. 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 occurrence of the danger is lower than "Warning" articles.

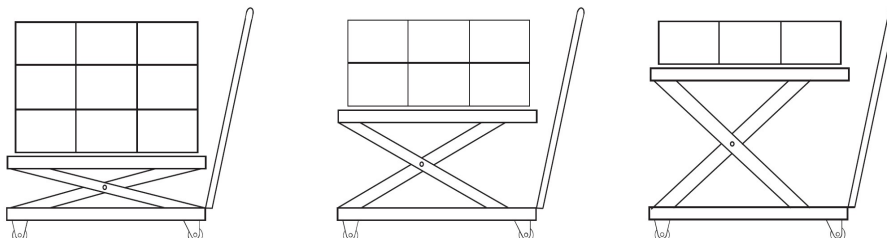
⚠ Warning !

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

			
DO NOT slide cargo to unload off the table. Table would spring up suddenly and very dangerous. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result	When performing Maintenance or Inspection, remove all cargo on table and make sure to put Roller Stopper. SEVERE PERSONAL INJURY could result	DO NOT put hand or foot near Scissor Mechanism or other moving parts. SEVERE PERSONAL INJURY could result	DO NOT modify table such as extend, add conveyor etc. which may cause unbalance and turn over unit etc. SEVERE PERSONAL INJURY or DEATH could result
			
DO NOT use on the slope. Loss of control and SEVERE PERSONAL INJURY could result	NEVER sit, stand or ride on table. SEVERE PERSONAL INJURY or DEATH could result	USE ONLY in areas clear of all personnel and objects. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result	KEEP FEET CLEAR of rolling wheels SEVERE PERSONAL INJURY could result

1. Intended Use

This product is a Mobile Self-Leveling Work Table which will progressively lower when loaded, and will rise when unloaded to reduce the need for harmful bending, lifting and stretching. And it features an easily accessible gauged weight selector knob that adjusts the spring resistance to adjust and keep the height of table for easier load handling.



⚠ Caution !

© 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. DO NOT overload this work positioner. Or it may damage the positioner. And DO NOT use for any other purpose than its intended use.
3. Mobile Work Positioner 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.
4. Use only in areas clear of all personnel and objects.
5. ALWAYS observe positioner and ALWAYS stay at the controls while the positioner is in motion. STOP moving positioner immediately if load on the positioner appears to become unstable, and restack the load.
6. Set the parking brake and park the positioner when moving the load onto the table. Or the unit may start to move all of a sudden during moving of the load and may result in falling of the load.
7. DO NOT use work positioner with unstable, unbalanced or loosely stacked load. Unbalanced loads may become unstable and fall. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result.
8. DO NOT handle unsecured or unstable load that could fall backwards.
9. Make sure to perform the inspection following to the instructions of Operation Manual.
10. DO NOT alter or modify the Work Positioner in any way.
11. ALWAYS keep feet, hands and fingers away from casters, load wheels and all moving parts and components. SEVERE INJURY could result.
12. Distribute the load evenly on the table. DO NOT put load on the corner or edge of the table.
13. Work Positioner is NOT waterproof and is intended to be used in a dry environment and at a moderate temperature range.

2. Name of Components



3. Pre-Operation Check

Perform the Pre-Operation checks before operating everyday.

⚠ Caution

If any abnormality is found, **DO NOT** use positioner until repaired and abnormality is fully removed. Or it may result in damage to the positioner and serious injury and accidents

Check below before operating.

1. Any damage, distortion or crack in the positioner frame, table ?
2. Do wheels roll smoothly ?
3. Does brake work properly ?
4. Are bolts and nuts fastened firm ?

4. Operation

⚠ Warning

Never sit, stand, or ride on table. Or severe personal injury or death could result.

⚠ Warning

DO NOT put hand or foot near Scissor Mechanism or other moving parts. Or severe personal injury or death could result.

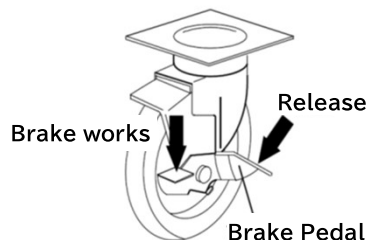
⚠ Caution

Always observe positioner and always stay at the controls while the positioner is in motion. STOP moving positioner immediately if load on the positioner appears to become unstable, and restack the load.

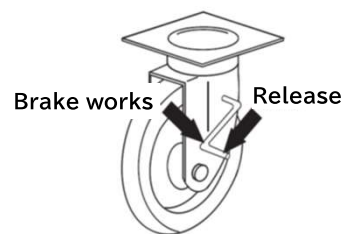
4-1 Brake

⚠ Warning

Make sure to lock the brake except when maneuvering. Or lifter may move all of sudden and could result in accidents.



【 ESX05, 08, 10, 21L, 40 】



【 ESX10L, 21, 60 】

Right side flexible wheels have brake to lock wheel

- ① To lock - Push down of Brake Pedal in the front
- ② To release - Push down the Pedal in the back

4-2 Maneuver (Move)

⚠ Warning

- **DO NOT** maneuver or stop positioner on the slope
- **DO NOT** move/manuever positioner with unstable, or excessively piled cargo

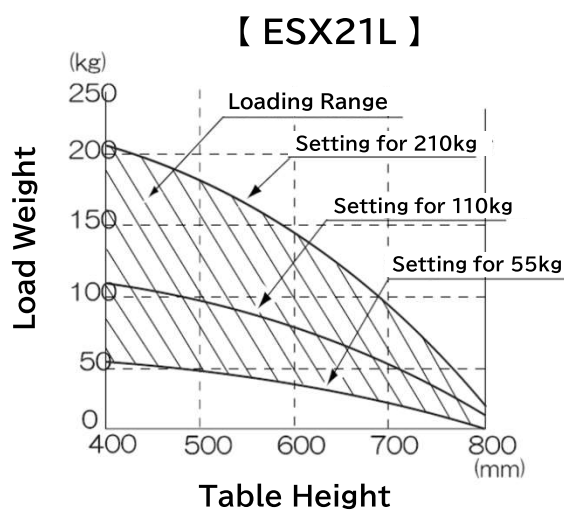
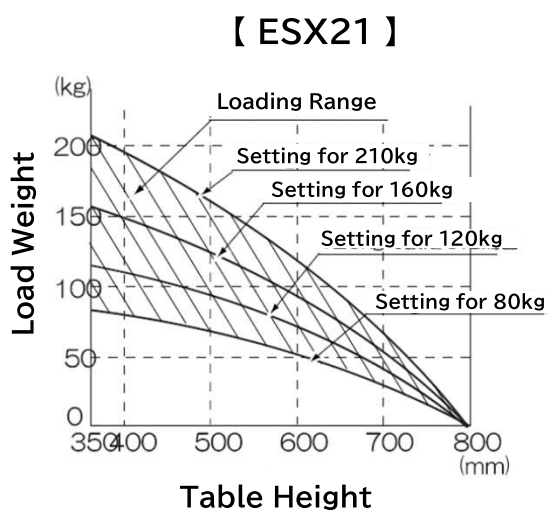
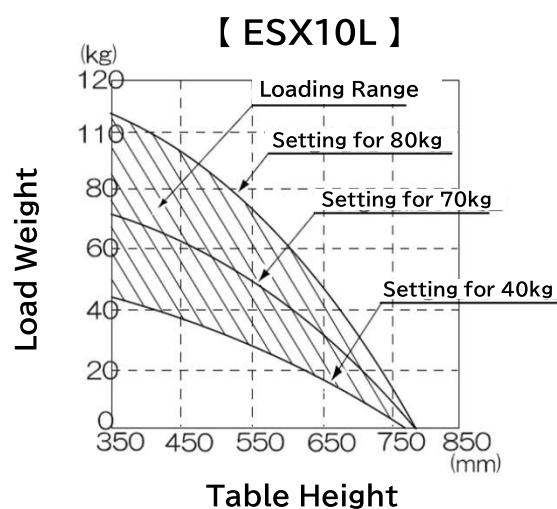
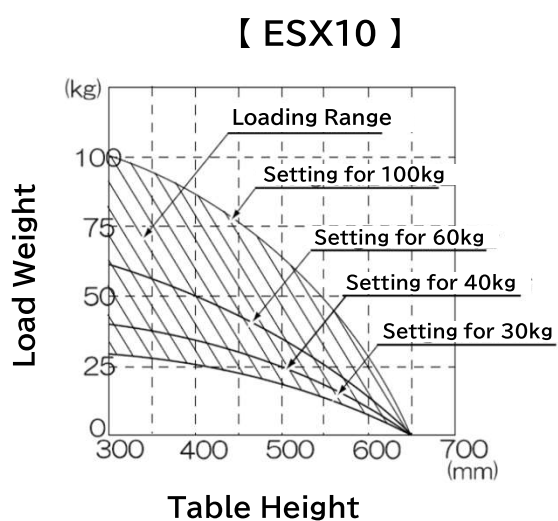
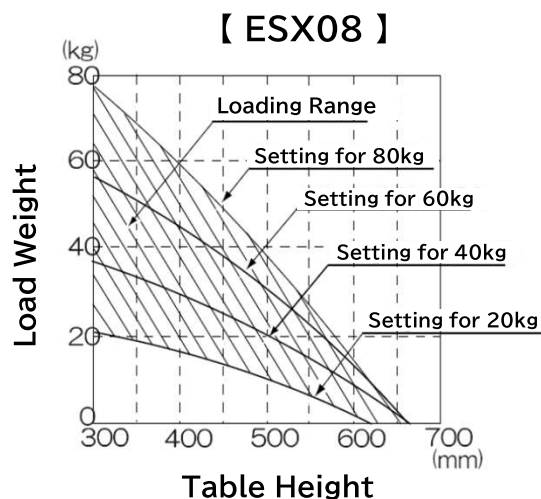
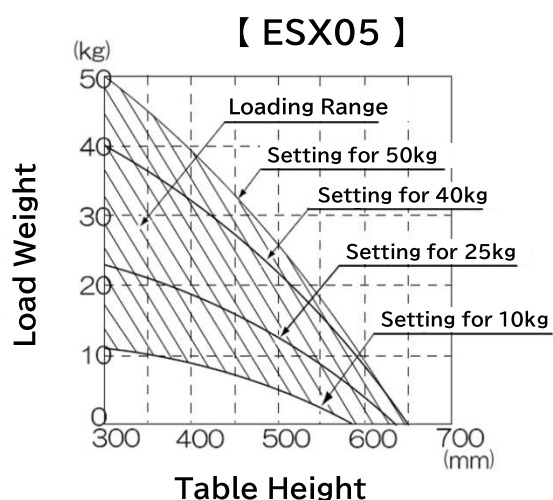
It may result in unbalance of the cargo and positioner, and could lead to collapse of the cargo and positioner.

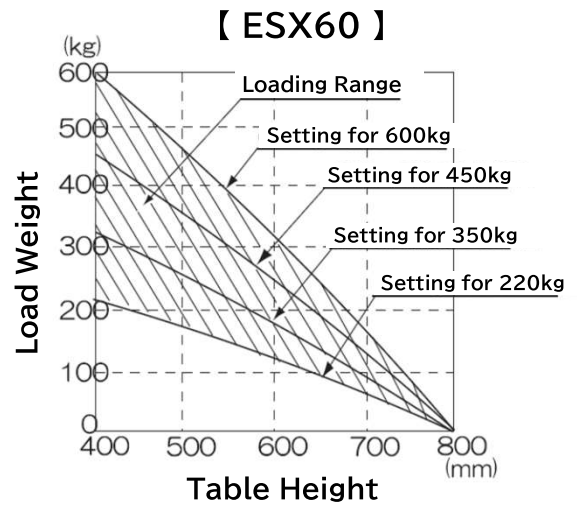
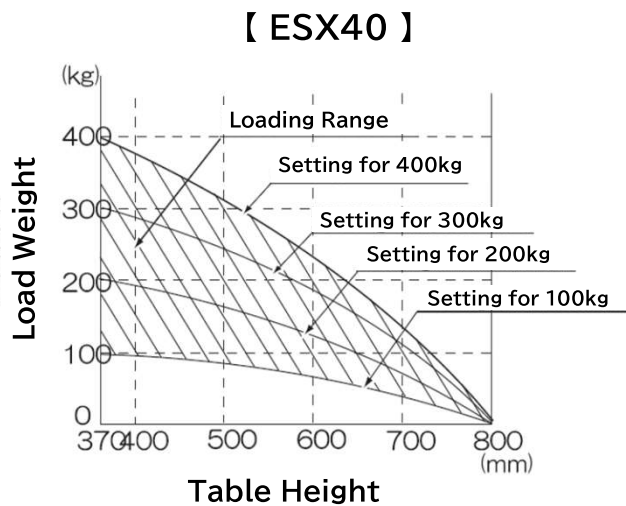
- ① If table is loaded with cargo, make sure cargo does not collapse from the vibration during maneuvering.
- ② Hold handle and release brake.
- ③ Pay close attention on positioner surroundings and possible collapse of the cargo when start maneuvering the positioner.
- ④ Lock the brake when reached destination.

4-3 How To Use Work Positioner

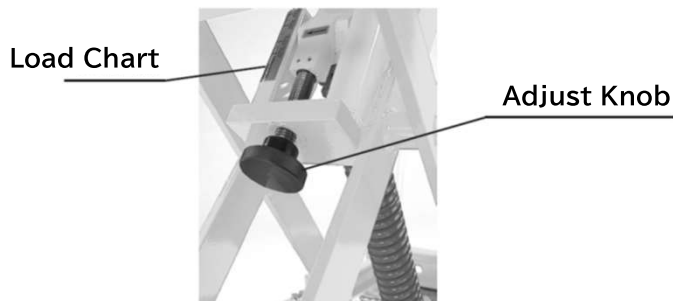
Bishamon ESX Work Positioner requires adjust and setting of Spring depending on the load weight. Refer to the below Load and Table Height Chart Diagram, and fully understand.

Load and Table Height Chart Diagram





Load Setting Adjust Knob (Dimple Knob) - **Except ESX60**



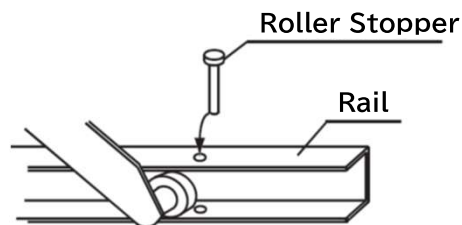
Load capacity increases when turning Adjust Knob counterclockwise, and decreases when turning clockwise. Load can be adjusted to any capacity within loading diagram range.

Note : Refer to [Page 6](#) for the Load Setting procedure of Model ESX60

Procedure to Adjust Load Setting - **Except ESX60**

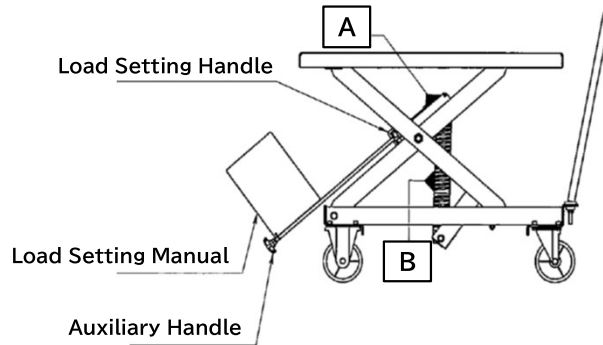
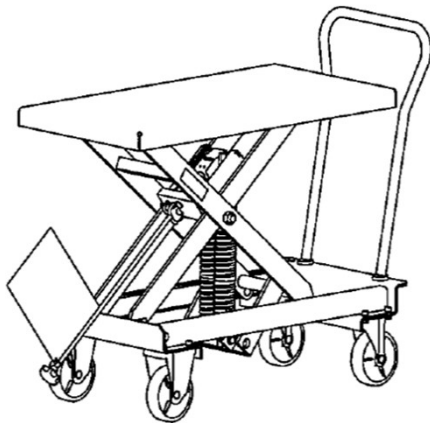
⚠ Warning

When adjusting load setting, make sure to remove all load on the table and insert Roller Stopper into the hole on the rail



- ① Remove all load (cargo) on the table
- ② Insert Roller Stopper into the hole on the rail
- ③ Turn the Adjust Knob until load setting arrow match the load capacity.
- ④ Return Roller Stopper to the Roller Stopper Holding Hole (or Pipe)

Procedure to Adjust Load Setting for Model ESX60 Only



- A** Load Setting Label is pasted
- B** Spring

- ① Put load on the table so that **A** face and **B** Spring become right angle (90°). It is recommended to reduce load on the table approx. 10% if try to set for higher load for easier setting. But if try to set for lower load, it is recommended to increase (add) load on the table approx. 10% for easier setting.
(E.X.) If A-B becomes right angle with 400kg, use 360kg load to set for higher load setting, and use 440kg load to set for lower load setting.
- ② Insert Auxiliary Handle into Load Setting Handle. Load can be adjusted for higher load by turning clockwise, and can be adjusted for lower load by turning counterclockwise.
- ③ If Load Setting Handle becomes heavier for turning, follow the same procedure of adjusting load on the table.

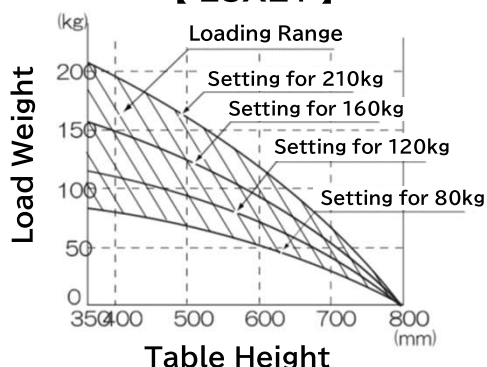
⚠ Caution

- Do Not get under table when putting load on the table
- Make sure to use Auxiliary Handle when adjusting load setting.

【 Estimate the Expected Load weight 】

If the expected load weight is not clear, it can be estimated through Load Chart.

【 ESX21 】



(E.X. - In case using Model ESX21)

- ① Remove all load off the table
- ② Put Roller Stopper into the hole of rail.
- ③ Turn the Adjust Knob to max load, 210 kgs.
- ④ Return Roller Stopper to holding spot.
- ⑤ Put expected load on the table gently.
- ⑥ Measure the table height from the floor.
- ⑦ If, for example, height is 550mm, draw a line perpendicular from 550mm spot. and draw horizontal line to find crossing point. In this case, it is approximately 125kg.
- ⑧ Follow the "Procedure to Adjust Load Setting"

Load Setting is only a guide. If it is not comfortable in the actual usage, perform slight adjustment by Adjust Knob through same procedure

⚠ Warning

DO NOT load or unload very large load at one time, and **DO NOT** put load on the table vigorously. Or table could change height (jump up) suddenly and result in injury.

⚠ Caution

DO NOT put load heavier than capacity.

⚠ Caution

Distribute the load evenly on the table. **DO NOT** put the load on the corner or edge of the table. Or could result in table tilting and cause accident.

5. Regular Inspection

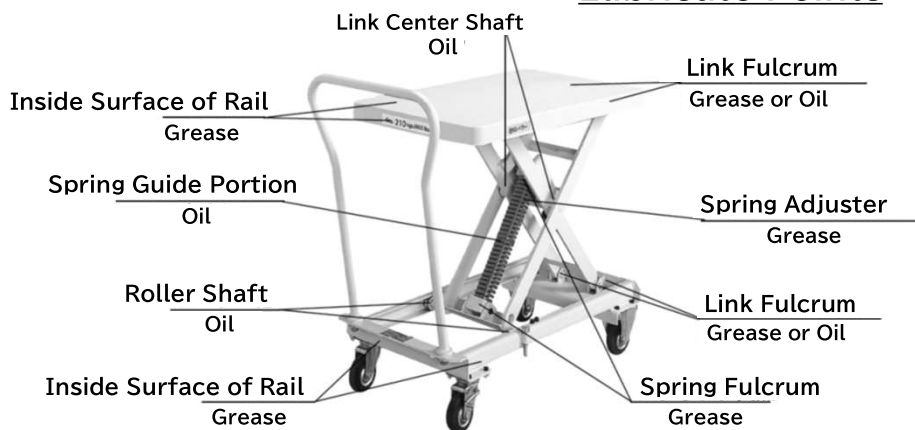
Perform regular periodic inspection for the long life of the unit.

- 1) Damage, distortion on external appearance
- 2) Loosening of Bolts & Nuts
- 3) Wear and smooth rotation of wheels
- 4) Lubrication (refer to 『 6. Lubrications 』)

6. Lubrications

1. Insert Roller Stopper into the hole of rail before lubrications
 2. Lubricate (grease up, put lubrication oil) on sliding portion of link roller etc.
- Every Month

Lubricate Points



7. Specification



Model No.	Capacity Adjust Range (kg)	Table Size (mm)	Table Height (mm)	Overall H X W X L (mm)	Wheel	Machine Weight(kg)
ESX05	10 ~ 50	450X700	262 ~ 659	798X450X836	Φ100 Rubber	38
ESX08	20 ~ 80		262 ~ 650			
ESX10	30 ~ 100		262 ~ 659			
ESX10L	40 ~ 100	500X813	352 ~ 787	898X500X998		63
ESX21	80 ~ 210		352 ~ 772			
ESX21L	55 ~ 210	518X1,010	374 ~ 803	941X520X1,191	Φ125 Polyurethane	104
ESX40	100 ~ 400		374 ~ 794			
ESX60	220 ~ 600		393 ~ 813	961X520X1,191	Φ150 Polyurethane	

8. Disposal

When disposing of this positioner, 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 positioner.

9. 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 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 positioner 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 dealer. The dealer 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.

10. 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 lifter supplier for any information regarding after service.

When contacting your lifter supplier, provide following information.

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

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

Model	
Serial No.	
Purchase Date	
Lifter Supplier	
Installer	
Trouble Date and conditions	Date :
	Date :
	Date :