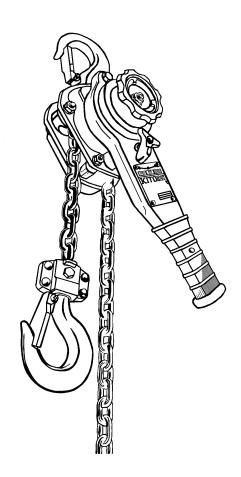




Original Instruction

Manually Lever Operated Chain Hoist Model L5 Owner's (Operator's) Manual and Safety Instructions





This equipment must not be installed, operated or maintained by any person who has not read and understood all the contents of this manual. Failure to read and comply with the contents of this manual can result in serious bodily harm or death, and/or property damage.

[Only for customers who purchased our chain locks]

When using this equipment with the chain lock, read the owner's manual of the chain lock to correctly use it.

Model Code:	
Serial Number:	
Date of Purchase:	
Dealer:	

Fill in the following product information for identification and future reference to avoid referring to the wrong manual for information or instructions on installation, operation, inspection, maintenance, or parts.

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1. Important Information and Warnings

1.1 Regarding this instruction's manual

This manually lever-operated chain hoist model L5 is designed to lift and lower a load by using manual force and hold it by using the braking device under normal working conditions, not intended to transport a person.

The following symbols are used in this manual to identify the degree or level of hazard seriousness.

A DANGER

This symbol indicates an imminently hazardous situation which, if not avoided, *will* result in *death or serious injury*, and property damage.

WARNING

This symbol indicates a potentially hazardous situation which, if not avoided, *could* result in *death or serious injury*, and property damage.

A CAUTION

This symbol indicates a potentially hazardous situation which, if not avoided, *may* result in *minor or moderate injury*, or property damage.

Even the caution situations may result in serious injury or death depending on conditions. Therefore, notice should be taken whenever encountering them.

Always keep this manual in a convenient place for operator's reference.

1.2 Prohibited practices

1.2.1 General

Improper usage or negligent maintenance of the hoist may result in dangerous situations arising such as a lifted load dropping. Before installing, operating or maintaining, read and comply with both this manual for the safety and operation instructions, and notes for all the equipment.

KITO will not be held liable for any malfunction, lack of performance or accident if the product is being used in conjunction with any other equipment. If the product is to be used for unintended purposes, please confirm with your dealer in advance.

A DANGER



Do not use the hoist to support, lift or transport people.



Do not go under a lifted load or its path, and do not move the lifted load over people.

WARNING



Do not lift more than the rated load. ■ Do not modify the product or its accessories.

A CAUTION

- Before moving the load, warn all people in the vicinity.
- Do not operate the hoist unless the contents of this operating manual and the warning labels are fully understood.

1.2.2 Prior to operation

A CAUTION

■ This manual is intended for the operator who will use the hoist. Prior to operation, all of the safety and operating instructions must be fully understood.

WARNING

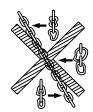
- Do not use a deformed or scarred hook.
- Replace components with new ones authorized by KITO.

A CAUTION

- Be sure to wear the proper clothing and personal protective equipment when using and operating the product.
- Make sure that the nameplate is readable
- Before operation, make sure to perform all inspections given in **5.1 Inspection classification**.
- Use a proper hoist for your purpose, capacity and lift.
- Ensure to check that the hook latches are not deformed or scarred and are moving smoothly.
- Ensure to check that the brake and free chaining functions properly work.
- Ensure to check that the load chain is well-lubricated.
- Ensure to avoid welding sparks on the hoist and load chain.

1.2.3 Operation

WARNING



 Do not use the hoist with deformed or scarred load chain.



 Do not use the load chain as a sling.



 Do not use the hoist as a fulcrum.



 Do not support a load on the tip of the hook.



 Do not impede the chain on any surface e.q. a steel plate.



 Do not perform welding or cutting operation on the load being suspended.



Do not use the hoist by stepping on the lever.



- Do not extend the lever by attaching a pipe to it.
- Do not swing a lifted load.
- Do not use the load chain as an earth for welding.
- Do not lift excessively until the bottom yoke comes into contact with the hoist body.
- Do not lower excessively until the chain stopper comes into contact with the hoist body.
- Do not use a damaged hoist or one having abnormal sounds.
- Do not use a hoist with a loose lever grip.
- Do not leave a lifted load unattended for a long time.
- In lowering mode, do not pull the no-load-side chain which could cause a hazardous situation arising the grip revolving.

A CAUTION

- Ensure to place a load properly on the middle of the hook saddle.
- Before lifting, ensure to eliminate load chain slack to avoid a shock load.
- There are risks of overheating of the braking system during prolonged lowering of loads. If you are considering the use under such condition, consult KITO.
- When any abnormality is observed during the operation, stop the operation immediately, indicate "FAILURE" and contact with the maintenance engineers.
- When inspecting and repairing, be sure to indicate "INSPECTION" and carry out without lifting a load.

1.2.4 After operation

A CAUTION

■ After operating, ensure to put a load down securely to avoid dropping it.

WARNING

■ Do not drag or throw the hoist when carrying it.

1.2.5 Inspection and Maintenance

CAUTION



- Ensure that competent people periodically conduct inspections and maintenance corresponding to **5 Inspection** and **6 Maintenance** otherwise please confirm with your dealer.
- Indicate "CHECKING" when performing the inspection.
- Wear protection equipment such as protection goggles and gloves depending on the work contents.
- Pay attention to work method, work procedure and work posture.
- Wear helmet and safety belt when carrying the high lift work.
- Remove the oil or grease attached to the product or spilt on the floor.
- Keep the work area clean when disassembling the product.

WARNING

■ Do not extend or weld the load chain.

1.2.6 Others

A CAUTION

■ In case of use in special environments such as salt water, seawater, acidic, alkaline or explosive atmospheres, confirm with your dealer in advance.

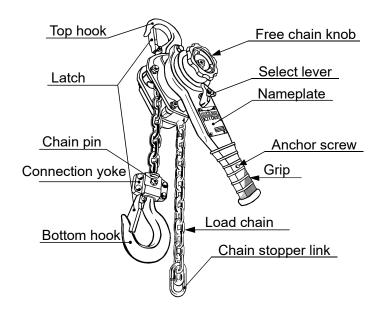
WARNING

- Do not use the hoist which is out of order or under repair.
- Do not use the hoist with warning labels or tags missing.

2. Technical Information

2.1 Specifications

2.1.1 Schematics



2.1.2 Operating conditions and environment

Temperature range: -40° to +60°C (-40° to +140°F)

Humidity: 100% or less, this is not an underwater device.

Not applicable for explosive atmosphere (No special materials such as sparkless used)

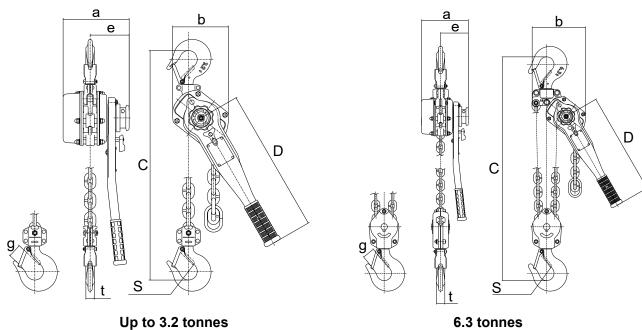
Table 2-1 Hoist Specifications

Capacity (t)	Product Code	Standard Lift (m)	Pull to Lift Rated Load (N)(kgf)	Load Chain Diameter x Pitch (mm)	Chain Fall Lines	Test Load (t)	Net Weight (kg)	Weight for Additional One Meter of Lift (kg)
0.8	LB008	1.5	284(29)*	5.6 × 15.7	1	1.2	5.7	0.7
1	LB010	1.5	353(36)*	5.0 × 15.7	1	1.5	5.9	0.7
1.6	LB016	1.5	333(34)*	7.1 × 19.9	1	2.4	8.0	1.1
2.5	LB025	1.5	363(37)*	8.8 × 24.6	1	3.8	11.2	1.7
3.2	LB032	1.5	363(37)*		1	4.8	15.0	2.3
6.3	LB063	1.5	372(38)*	10×28.0	2	7.9	26	4.7
9	LB090	1.5	382(39)*		3	11.3	40	7.0

This device was tested according to the required static and dynamic load test provided on the European standard EN 13157.

 ^{*}marked "Pull to Lift Rated Load" does not comply with the requirement of EN 13157.
 (5.2.6 Operating effort)

2.2 Dimensions



Up to 3.2 tonnes

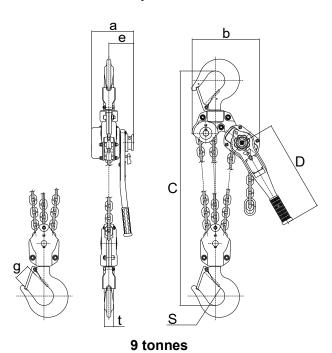


Table 2-2 Hoist Dimensions

Units: mm

Hoist Code	а	b	С	D	е	g	S	t
LB008	114	119	280	245	97	23.5	35.5	14
LB010	114	119	300	245	97	29	42.5	15
LB016	159	126	335	265	100	32	42.5	19
LB025	173	150	375	265	102	36.5	47	21
LB032	190	159	395	415	112	39	50	24.5
LB063	190	217	540	415	112	50	60	34
LB090	190	304	680	415	112	72.5	85	41.5

3. Mounting

WARNING

Avoid the following when mounting the hoist.

ALWAYS

Failure to comply with these instructions may result in death or severe injury.

- Ensure that only trained or competent persons install the hoist.
- Do not install the hoist within the range of movement of other devices (equipment), such as a trolley.

Comply with the following instructions when installing the hoist.

ALWAYS

Failure to comply with these instructions may result in death or severe injury.

- The hoist may lift and hold a load more than the rated load. Check that the structure for mounting the hoist has sufficient strength.
- Fix the Top Hook to the structure securely.

A CAUTION

Comply with the following instructions when installing the hoist.

ALWAYS

Failure to comply with these instructions may result in injury or damage to property.

- Install the hoist to avoid impeding the hoist.
- Install the Load Chain with sufficient length for lifting work.

4. Operation

4.1 Introduction

Operating a heavy load may result in hazardous situations. Before operating, read and comply with all of the information in this clause and **1.2 Prohibited practices**. Before operating the hoist, secure the workplace as follows:

- Ensure to arrange the workplace to work smoothly.
- Ensure to keep a good view to monitor the operation, otherwise arrange watch personnel.

4.2 Free chaining

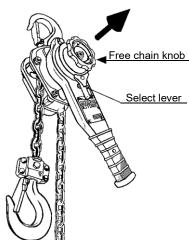
DANGER

■ Do not operate the hoist in free chaining mode under a load.

4.2.1 Features

- Free chaining can freely feed the load chain as the brake is released under no load situations.
- Pulling the free chain knob moves the internal spring to release the mechanical brake and to pull the load chain in either direction to its needed length.

4.2.2 How to operate



- 1. Set the select lever to the neutral ('N') position.
- 2. Pull the free chain knob upwards.
- 3. In this mode, the load chain can be pulled through the to its required length.

A CAUTION

- Do not pull the load chain suddenly in free chaining mode.
 - Excessive pulling may make a brake and cannot feed the chain.
 - In this case, reset the hoist (see 4), make some lowering operations, and then start over.
- 4. To reset the hoist for load operation, turn the free chain knob clockwise with the load-side chain pulled lightly. The knob will come into contact again to operate the hoist with the grip.

When a load under the minimum load for each capacity shown in the following table is applied to the load chain, the brake does not operate.

Do not apply any load to the load chain in free chaining mode, except for the positional adjustment of the load chain by an operator.

Capacity (t)	0.8, 1	1.6	2.5	3.2	6.3	9
Minimum Load for the Automatic Closing of the Brake (kg)	25	38	54	35	90	130

4.3 Load operation

4.3.1 Features

Operating the grip with the select lever set to the lifting ('UP') or the lowering ('DN') position, the hoist performs as follows:

- In lifting mode, the tightened mechanical brake rotates as one and supports a load on the pawls when the grip stops.
- In lowering mode, grip operation un-tightens the mechanical brake and lowers the load chain, and when the grip stops, the mechanical brake is tightened and supports the load instantly.
- In lifting and lowering, braking always acts.

4.3.2 How to operate

A DANGER

■ Do not operate the free chain knob in lifting or lowering.

A CAUTION

■ Before operating, make sure that the hoist is out of the free chaining mode and the select lever position meets your operation demands.

The following table shows select lever position and grip operation for lifting and lowering.

Table 4-1 Hoist & Grip Operation

Hoist Operation	Select Lever	Grip Operation
Lifting	UP	Clockwise
Lowering	DN	Counterclockwise

A CAUTION

■ Under no load conditions, in the case that the load chain does not lower against your lowering operation, operate the grip with the load-side chain pulled lightly. (This is a standard manner.)

4.4 Load signal (as option)

This load signal is designed as an overload detecting device to warn an operator that an excessive load has been applied which could cause a hazardous situation.

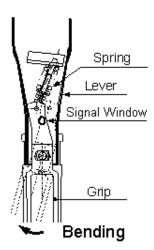
CAUTION

■ Disregarding the overload sign could cause bodily harm or damage to the hoist. Do not lift an overload. Warn all the people in the vicinity and remove the causes.

A DANGER

- Do not leave dust or foreign objects in the load signal.
- Disassembling the hoist or changing the signal setting will invalidate your product warranty. Contact your dealer for disassembly or repair.
- Excessive impact on the grip may result in a malfunctioning signal or damage to the components.
- Using the hoist recklessly may cause the load signal to work improperly.

4.4.1 Features



- Lifting pull is transmitted to the grip through the spring inside the lever.
- A pull over the designed limit* compresses the spring and bends the grip. (*in response to 100 to 120 % of the rated capacity)
- Then the color of the signal window on the lever changes to warn the operator of an overload.
- The signal colors are identified as shown in the following table.

Table 4-2 Signal Warning

Signal Color	Load Status	Instructions		
Green	Safe load	Continue operation		
Red	Overload	Do not continue operation		

4.4.2 How to operate

- 1. Operate the hoist by holding the grip in the middle.
- 2. The following events of the load signal warn you of an overload.
 - The grip is bent.
 - The lever clicks.
 - The signal window changes from green to red.
- 3. Stop lifting and lower immediately when an overload is detected.
- 4. Reset the grip into its straight position (back in place) before operation commences.
- 5. Reduce the load to less than the rated load.

Check that the structure for mounting the hoist has no damage.

5. Inspection

To maintain continuous and satisfactory operation, a regular inspection procedure must be initiated to replace worn or damaged parts before they become unsafe.

5.1 Inspection classification

Inspection intervals must be determined by the individual application and are based on the type of service to which the hoist will be subjected and the degree of exposure to wear, deterioration or malfunction of the critical components.

The type of service to which the hoist is subjected can be classified below:

- **Normal Service** service that involves operation with randomly distributed loads within the rated load limit, or uniform loads less than 65% of rated load for not more than 15% of the time.
- **Heavy Service** service that involves operation within the rated load limit which exceeds normal service.
- Severe Service service that involves normal or heavy service with abnormal operating conditions.

The three general classifications are herein designated as DAILY, FREQUENT and PERIODIC, with respective intervals between inspections as defined below.

DAILY Inspection – by the operator or other designated people before daily operation.

FREQUENT Inspection – by the operator or other designated people with intervals per the following criteria:

- Normal service monthly
- Heavy service weekly to monthly
- Severe service daily to weekly

Records are not required.

PERIODIC Inspection – by a designated people with intervals per the following criteria:

- Normal service yearly
- Heavy service semiannually 6 months
- Severe service quarterly 3 months

Records are to be kept for continuing evaluation of the condition of the hoist.

5.2 Daily inspection

Table 5-1 Daily Inspection Methods and Criteria

Item	Method	Criteria	Action		
Nameplate, Warning Tag	Visual	Should be affixed properly and readable.	Replace.		
Function – Lifting	Set the select lever to 'UP' and make lifting operation with the load-side chain pulled slightly.	Moving the lever forward and backward should make clicking sounds.	Repair or replace as necessary.		
Function – Lowering	Set the select lever to 'DN' and make lowering operation with the load-side chain pulled slightly.	Moving the lever only backward, not forward, should make clicking sounds.	Repair or replace as necessary.		
Function – Free Chaining	Set the select lever to 'N' and pull the free chain knob upward into free chaining mode to adjust the chain length.	- The chain should be pulled smoothly The free chain knob should be easily pulled or reset.	Repair or replace as necessary.		
Hooks – Condition	Visual, Function	Should be not deformed.Should turn smoothly.	Replace		
Hooks – Latches	Visual	Should be not deformed or scarred.	Replace		
Load Chain	Visual	- Should be free of severe rust Should be coated with lubricant Should not be deformed or scarred.	Replace Clean/Lubricate Replace		
Others	Visual	Nuts, split pins, grip or screws should not be loose or missing. Hoist should not be scarred or damaged. Chain stopper link at no-load side should not be missing or deformed.	Replace		
		- Bottom hook on multiple chain fall line models should not be capsized.	Correct all chain irregularities as shown in the following picture.		
		Twis	sted Chain		
		Capsized Hook a Double Fall M			

5.3 Frequent Inspection

Evaluation and resolution of the results of the frequent inspections shall be made by a designated person so that the hoist is maintained in safe working condition.

WARNING

■ Do not use components beyond the stated criteria or KITO-unauthorized ones.

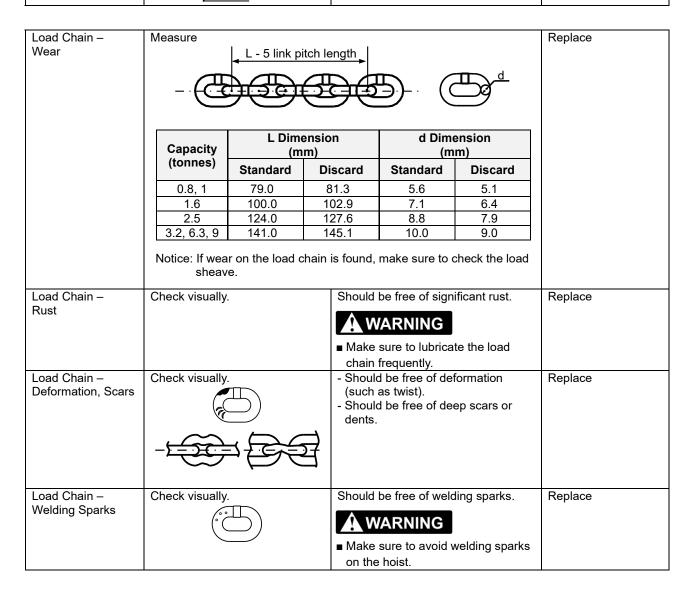
In addition to the daily inspections, perform the following checks.

Table 5-2 Frequent Inspection Methods and Criteria

Item Method		Criteria	Action					
Put the hoist under a light load and check the following items of "Function"								
Function – Lifting	Set the select lever to 'UP' and lift the load operation 20 to 30 cm.	Moving the lever forward and backward should make clicking sounds.	Repair or replace as necessary.					
Function – Lowering	Set the select lever to 'DN' and lower the load operation 20 to 30 cm.	Moving the lever only backward, not forward, should make clicking sounds.	Repair or replace as necessary.					
Function – Abnormal Sounds	Check auditorily.	Should have no damped clicking or irregular sounds.	Repair or replace as necessary.					
Function – Pull	Check function.	Should not be extremely heavy.	Repair or replace as necessary.					
Function – Braking	Check function.	Should not slip.	Repair or replace as necessary.					
	1		1 -					
Hooks –	Measure	Record the following sizes, a, b and	Replace					

Hooks – Stretch	Measure Record the following sizes, a, b and c at the time of purchase.						Replace
		M	easured wh (mm)	en New	Discard	Limit	
	h	a: b: c:			Over the mea 5 % or more 5 % or more	reduction	
Hooks –	→ ⊔ -						Replace
Abrasion	Capacity	a* (mm)	•	nm)	c (n	<u> </u>	
	(tonnes)	Nominal	Standard	Discard	Standard	Discard	
	0.8	44	14.0	13.3	19.6	18.6	
	1	52	15.0	14.3	21.0	20.0	
	1.6	55	19.0	18.1	25.7	24.4	
	2.5 3.2	63 67	21.0	20.0	29.0 31.0	27.6 29.5	
	6.3	90	24.5 34.0	23.3 32.3	41.0	39.0	
	9	111	41.5	39.4	52.0	49.4	
	tolerance. T reference o	he measure nes. Subse	ements at th quent meası	e time of p urements a	ns are not cor urchase beco re compared k deformation	me the to these	
Hooks – Deformation, Scars	Check visual	ly.	- - -	or deform The shank should be Should ha Should ha rivets, bol	evenly worn. ve no deep so	ne hook cars. r missing	Replace
Hooks – Swivel	Check visual function.	lly, and chec	ck T	he hook s	hould rotate s	moothly.	Replace

Item	Method	Criteria	Action
Hooks – Hook Latches	Check visually, and check function.	Should be held in place on the tip of the hook.Should move smoothly.	Replace the hook latch.
		■ Do not use the hook with the latch missing.	
Hooks – Idle Sheave (bottom hook on double fall hoist)	Check visually, and check function.	■ Make sure to avoid having your fingers caught. Should rotate smoothly. (If not, idle sheave or axle may be deformed or worn.)	Replace the idle sheave and axle.
Hooks – Idle Sheave	Check visually.	Pockets of idle sheave should be free of wear or scars.	Replace the idle sheave and axle.



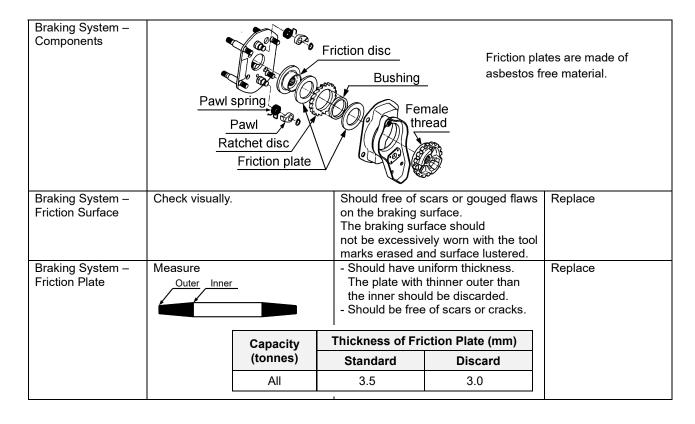
5.4 Periodic Inspection

In addition to the frequent inspections, perform the following checks.

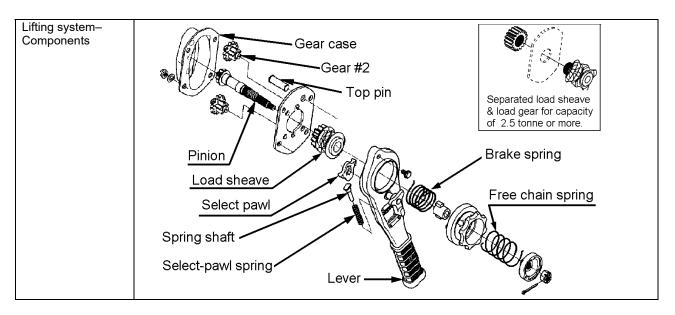
Table 5-3 Periodic Inspection Methods and Criteria

Item	Method		Criteria		Action
Chain Pin – Deformation	Check visually, and measure	- Significantl	y deformed ¡ led.	Replace	
Chain Pin – Wear	- · · ·] =		free of scars on on the thre	Replace	
	Capacity (tonnes)		d Dimens	sion (mm) Discard	
		0.8, 1	6.8	6.5	
		1.6	8.7	8.3	
		2.5	10.8	10.3	
		3.2, 6.3, 9	12.1	11.5	
Chain Pin – Rust	Check visually.	Should be free of significant rust.			Replace

Yoke – Measure Hole Deformation Check the diameters of t pin and chain pin hole.	Check the diameters of the	e top				Replace the hoo set.
	_		Diameter	(mm) for		
		(tonnes)	Chai	n Pin	То	p Pin
	D P	(torrico)	Standard	Discard	Standard	Discard
		0.8, 1	7.1	7.6	12.2	12.7
		1.6	8.9	9.4	12.2	12.7
		2.5	11.0	11.5	14.2	14.7
		3.2	12.3	12.8	16.2	16.7
		6.3, 9	12.3	12.8	16.4	16.9

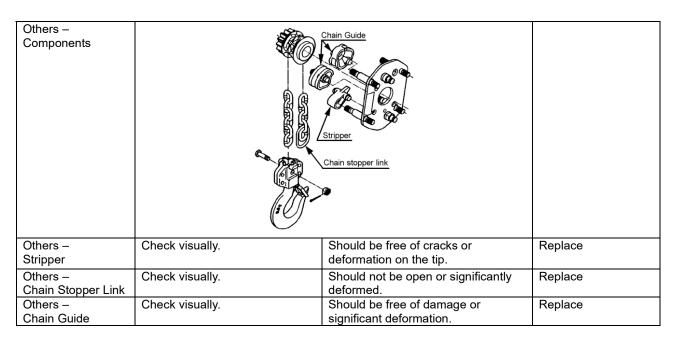


Item	Method		Criteria		Action
Braking System – Bushing Wear	Measure A	Should have dimension.	e uniform th	ickness of A	Replace
		Capacity	A dimens	ion (mm)	
		(tonnes)	Standard	Discard	
		All	4.0	3.0	
Braking System – Bushing Lubrication	Check visually. Heat with a match flame in a	Should be so			Soak the bushing in turbine oil for a day.
Bushing Lubrication	short time.			iriace.	turbine on for a day.
			NING		
		■ Even for re	pair or asse g in turbine o	-	
		before reus	•	ni ioi a day	
		■ Pay attenti	on to heat of	fire around	
Braking System –	Measure		1		Replace
Ratchet Disc	~ \	Capacity (tonnes)	Standard	Discard	
	55 1 1 1	0.8, 1	Standard	Discaru	
	국(- '-)국 미	1.6	64	61	
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2.5			
	192	3.2, 6.3, 9	74	71	
Braking System –	Check visually.			ure, the side	Replace
Pawl		of the pawl s	should not be	e worn.	
	Wear				
Braking System –	Check visually.	Should not b	e deformed	or scarred.	Replace
Pawl Spring					
Braking System -	Check visually.	The cogs sh		of	Replace
Female thread Braking System –	Check visually.	significant de All parts sho		of rust.	Replace
Rust					



Item	Method	t			Cri	iteria				Action
Lifting system – Load Sheave	Check visually.	9		ould be fr ckets or s				rts.	Replac	ce
Lifting system – Cogs	Check visually.			ould not b		pped, ur	nevenly	'	Replac	ce
Lifting system – Pinion	Check visually.		A d	eformed carded.		n should	be		Replac	ce
Lifting system – Lever	Check visually. Select lever Caulking Lever upper side Spring holder		Should be free of bends or cracks of whole lever and loose swaging of select lever and stud.			Replac	ce			
Lifting system – Select Pawl	Check visually. Wear		As shown in the left picture, the sides of the pawl should not be worn.					Replac	ce	
Lifting system – Spring Shaft	Check visually.			ould be fi	ree o	f deform	ation (such	Replac	ce
Lifting system - Select-pawl Spring	Measure			Capacity (tonnes)		L dim (mm) N	ension linimu		Replac	ce
				1.6 2.5 3.2, 6.3, 9	9	4				
Lifting system –Brake Spring	Measure		<u> </u>	L		A an	gle		Replac	ce
-ыаке эрппу	A	Capacity (tonnes)	(ension mm)	Sta	(°: deg indard	ree) Disca	ard		
		0.8, 1 1.6 2.5 3.2, 6.3, 9		30 30	;	30	45			
Lifting system	Measure	,, -			I				Replac	ce
–Free Chain Spring	A A	Capac		L		ension m)				ngle gree)
		(tonne		Stand		Disc	ard	Sta	ndard	Discard
		0.8, 1.6 2.5		66		59		1	80	165
		3.2, 6.3	3, 9	71		64		1	80 I	165

Method	hod Criteria			Action
Gear case Top pin Frame A Frame B Stay bolt				
Check visually.	 Should be free of major deformation or significant scars. Should be free of loose swaging. Should be free of cracks on the welding parts. The maximum difference between a and b in the picture on previous page should be 0.5 mm. The bearing holes should not be 			Replace
Check visually.	 Should be free of major deformation or significant scars. The bearing holes for the gear #2 and the pinion should not be 			Replace
Measure	Should be free of significant deformation.			Replace
↓ □	Capacity (mm)			
	0.8, 1			
	1.6			
	3.2, 6.3, 9	16	15.2	
	Gear case Frame B Stay bolt Check visually.	Check visually. - Should be deformatio - Should be welding pa - The maxim a and b in page shoul - The bearing deformed. Check visually. - Should be deformed Should be find deformed. Should be find deformed. - Should be find deformed. - Should be find deformation. Capacity (tonnes) 0.8, 1 1.6 2.5	Check visually. - Should be free of major deformation or significant should be free of loose should be free of cracks welding parts The maximum difference a and b in the picture or page should be 0.5 mm - The bearing holes should deformed. - Should be free of major deformation or significant should be free of major deformed. - Should be free of major deformation or significant should be free of major deformed. - Should be free of significant sho	Check visually. Check visually. - Should be free of major deformation or significant scars Should be free of loose swaging Should be free of cracks on the welding parts The maximum difference between a and b in the picture on previous page should be 0.5 mm The bearing holes should not be deformed. Check visually. - Check visually. Check visualy



Item	Method	Criteria	Action
Preoperational Checks	Before reuse, reassemble properly manual and perform the following	y the hoist in accordance with section 6 the checks.	. Maintenance in this
Checks under No Load – Lifting	Check function, and check auditorily. Set the select lever to 'UP' and make lifting operation with the load-side chain pulled slightly.	- The lever should be operated smoothly Moving the lever forward and backward should make clicking sounds.	Repair or replace as necessary.
Checks under No Load – Lowering	Check function, and check auditorily. Set the select lever to 'DN' and make lowering operation with the load-side chain pulled slightly.	The lever should be operated smoothly. Moving the lever only backward, not forward, should make clicking sounds.	Repair or replace as necessary.
Checks under No Load – Free Chaining	Check function. Set the select lever to 'N' and pull the free chain knob upward into free chaining mode to adjust the chain length.	- The chain should be pulled smoothly The free chain knob should be easily pulled or reset.	Repair or replace as necessary.
Checks under the rated load	Check function. Lift and lower the rated load from 20 to 30 cm. Check the functions in accordance with "Function" of 5.3 Frequent Inspection.	See "Function" of 5.3 Frequent Inspection.	See "Function" of 5.3 Frequent Inspection.

6. Maintenance and storage

6.1 General

Improper maintenance may result in death or serious injury. Have only a trained or competent person maintained the hoist or contact your dealer.

CAUTION

- Do not drag or throw the hoist when carrying.
- Do not use the hoist which is under maintenance.
- Remove any dirt or water of the hoist.
- Perform all inspections given in **5. Inspection** if irregularity of the hoist is found after operation.
- Always ensure that lubricant is applied to the load chain, the chain pin, the top pin, the hook necks, the hook latches. Refer to 2.1.1 Schematics.
- Load chain The load chain is one of critical parts of the hoist. Ensure to lubricate the load chain well with rust preventive oil equivalent to ISO VG32.
- Others Lubricate the contacting parts as instructed in the following sections.

Storage

- When not in use, ensure that it does not encumber other works.
- Before storing the hoist, rotate the lever counterclockwise several times to lower the hook and ensure that the brake is released.
- Store the hoist in a dry and clean area.
- Do not store the hoist under a load.
- When installing outdoors, cover the hoist to avoid exposure to rain or store in a place with covering against rain. When transferring, including handling, and storing the product, carry it out carefully making sure of the product's weight and size.

6.2 Disassembly, Assembly and Adjustment

WARNING

- Perform proper disassembly or assembly in accordance with this manual.
- The friction plates are dry ones. Do not lubricate them.
- Do not extend the load chain.
- Remove old grease of the disassembled parts.
- Replace components with new ones authorized by KITO.
- To reassemble, apply new grease, and use new split pins and snap rings.

Note: The following symbols in this manual indicate the recommended lubricants.

- G1: JIS K2220 general class 1, No.2 grease (EPNOC GREASE AP(N)2, JX Nippon Oil & Energy)
- G2: JIS K2246 General Class 1, No.1 (NP-9), Lubricating oil type long-term rust preventive oil (Antirust Terami LN-H, ENEOS)
- G3: Moly Speed Grease No. 2 (SUMICO LUBRICANT)

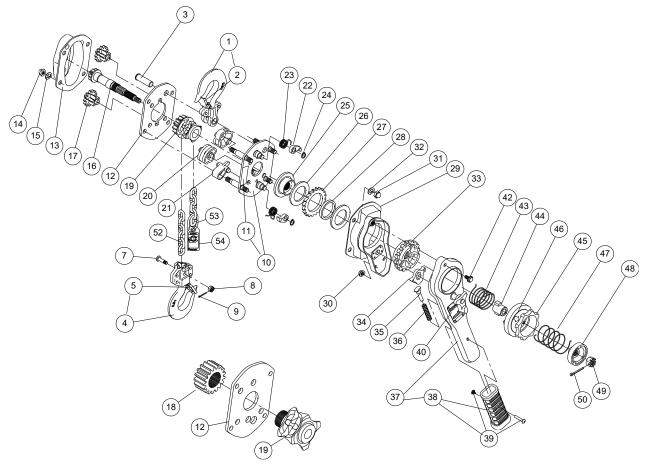
6.3 Tools

To disassemble or reassemble the hoist, prepare for the following tools:

Table 6-1 Tools

#	Tools	For
1	Snap ring pliers	(24) Opening a snap ring
2	Socket wrenches 12, 14 mm	(49) Slotted nuts
3	Hex keys 4, 5, 10, 12 mm	Socket head cap screws
4	Wrenches 10, 12, 13, 14, 17 mm	Bolts and nuts
5	Philips screwdriver	(39) Machine screws
6	Pliers	(9), (50) Split pins
7	Soft-face (plastic) hammer	

6.4 Components



Exclusive for 2.5 & 3.2 tonnes

	Fig. #	Part #	Part Name	Fig. #	Part #	Part Name	ı	Fig.	#	Part #	Part Name
1		1001	Top Hook Set	19	116	Load Sheave	36			223	Select-pawl Spring
	2	1071	Latch Assembly	20	161	Chain Guide	37			5211	Lever Assembly
3		163	Top Pin	21	162	Stripper		38		231	Grip
4		1021	Bottom Hook Set	22	155	Pawl			39	232	Binding Screws
	5	1071	Latch Assembly	23	158	Pawl Spring		40		800	Nameplate
7		41	Chain Pin	24	188	Snap Ring	42			221	Hex Cap Screw
8		49	Slotted Nut	25	153	Friction Disc	43			207	Brake Spring
9		96	Split Pin	26	151	Friction Plate	44			203	Cam Guide
10		4101	Frame A Assembly	27	152	Ratchet Disc	45			5201	Free Chain Knob Assembly
	11	806	Nameplate F	28	154	Bushing		46		810	Nameplate U
12		102	Frame B	29	5214	Brake Cover Assembly	47			205	Free Chain Spring
13		5103	Gear Case Assembly	30	281	Flange Nut	48			208	Spring Holder
14		181	Domed Cap Nut	31	184	Domed Cap Nut	49			183	Slotted Nut
15		182	Spring Lock Washer	32	185	Spring Lock Washer	50			187	Split Pin
16		111	Pinion	33	160	Female Thread	52			841	Nickel-plated Load Chain
17		112	Gear #2	34	218	Select Pawl	53			45	Chain Stopper Link
18		114	Load Gear	35	222	Spring Shaft	54			931	Warning Tag CE

6.5 Disassembly

Proceed as follows:

6.5.1 Free Chain Knob

- Pull out (50) Split pin and remove (49) Slotted nut.
- Remove (48) Spring holder, (47) Free chain spring, (45) Free chain knob assembly, (43) Brake spring and (44) Cam guide from (16) Pinion.

6.5.2 Lever

- Remove (31) Domed cap nut and (32) Spring lock washer which fix (29) Brake cover assembly to (10) Frame A assembly, and then remove (29) Brake cover assembly.
- While holding (37) Lever assembly horizontally by hand, turn (33) Female thread counterclockwise and remove the lever assembly from the hoist.
- Remove (42) Hex cap screw and (30) Flange nut, and separate (37) Lever assembly and (29) Brake cover assembly.

A CAUTION

■ Use manually operated tools, including spanners, or electric screwdrivers to remove (42) Hex cap screw and (30) Flange nut.

CAUTION

- Do not use an impact wrench to remove (42) Hex cap screw or (30) Flange nut.
- Doing so could loosen stud bolt or damage the threads, making disassembly impossible.
- Remove (33) Female thread from (29) Brake cover assembly.
- Remove (34) Select pawl, (35) Spring shaft and (36) Select-pawl spring from (37) Lever assembly.

6.5.3 Brake

- Remove the parts from (16) Pinion in the following order, (26) Friction plate (one piece), (27) Rachet disc, (28) Bushing, (26) Friction plate (one piece) and (25) Friction disc.
- Remove (24) Snap ring from the pawl shaft with snap ring pliers and remove (22) Pawl and (23) Pawl spring.

6.5.4 Gears

- Remove (14) Domed cap nut and (15) Spring lock washer and detach (13) Gear case assembly.
- Remove (17) Gear #2, (16) Pinion, (18) Load gear.

Note: For capacity 1.6 tonnes or less, the load gear and (19) Load sheave is as one, and the load gear will not be detached.

- Pull out (3) Top pin and remove (1) Top hook set.

6.5.5 Load Chain

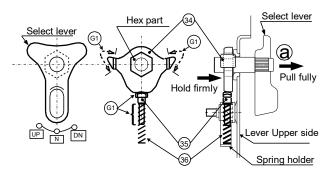
- Remove (12) Frame B, (20) Chain guide and (21) Stripper.
- Remove (52) Load chain from (19) Load sheave.
- Remove (9) Split pin, (8) Slotted nut and (7) Chain pin from yoke part of (4) Bottom hook set and remove (52) Load chain.
- Remove (19) Load sheave.

6.6 Assembly

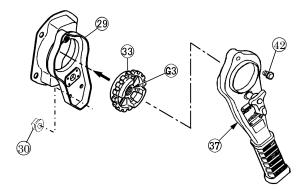
WARNING

- Do not reconnect components beyond the stated criteria as a result of inspection.
- Ensure to secure the nuts and bolts firmly.
 If torque values are specified, tighten the parts to the values.
- Ensure to secure also the split pins. Proceed as follows:

6.6.1 Lever



- Set the select lever on the lever upper side to 'N' position.
- With the select lever pulled in the 'a' direction, as shown in the left picture, insert the hex part of the select lever into (34) Select pawl.
- Apply (G1) grease lightly to the pawl of (34) Select pawl.
- Apply (G1) grease lightly to the part of (35) Spring shaft as shown in the above picture.
- Insert (35) Spring shaft into (36) Select-pawl spring and attach them into the spring holder.



WARNING

 Do not apply oil to the friction side of the female thread.

A CAUTION

 Ensure to clean the friction side of the female thread.

- Apply (G3) grease lightly to the thread of (33) Female thread.
- Attach the friction side of (33) Female thread to (29) Brake cover assembly and set (37) Lever assembly on them.
- Secure it with (42) Hex cap screw and (30) Flange nut.
- Fasten (42) Hex cap screw and (30) Flange nut firmly, using manually operated tools, including spanners, or electric screwdrivers. The tightening torques are as specified below:

Part Name	LB008、LB010、LB016、LB025	LB032、LB063、LB090
(30) Flange nut, (42) Hex cap screw	6 to 8N∙m	13 to 14N∙m

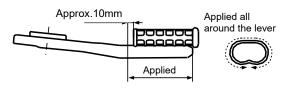
A CAUTION

■ Do not use an impact wrench to tighten (42) Hex cap screw or (30) Flange nut. Doing so could loosen stud bolt or damage the threads.

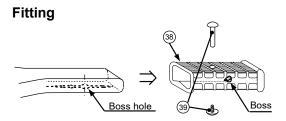
A CAUTION

■ New glue accompanies the lever grip when it is ordered for repair. Read and comply with its instruction manual and remove dirt such as water, oil and rust from the part glue-applied on the lever.

Applying glue



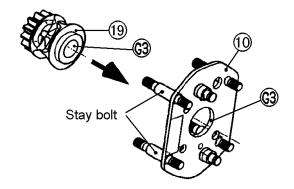
- Make a quick and even application of the glue on the all around the lever assembly as shown in the above picture.
- As instructed below, attach (38) Grip to the lever within 10 seconds after applying the glue. (Note: It will be difficult to attach if the glue dries or hardens.)



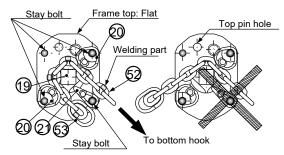
- Place (38) Grip with its inside boss (rising part) downward.
- Insert the boss of (38) Grip until it completely fits into the boss hole of the lever.
- Tighten the binding screws firmly.

6.6.3 Load Sheave & Chain

- Attach (4) Bottom hook set to (52) Load chain with (8) Slotted nut and (7) Split pin.



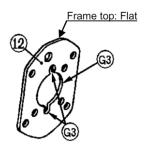
- Use a new split pin.
- Apply (G3) grease to the inner parts of the bearing hole of (10) Frame A Assembly and (19) Load sheave as shown in the left picture.
- Attach (19) Load sheave to (10) Frame A Assembly at the stay-bolt longer side of the frame. Note: Face the side of the load sheave where it has no gear or serration.



 Set (52) Load chain to (19) Load sheave as shown in the left picture and attach (20) Chain guide and (21) stripper.

CAUTION

- Keep (53) Chain stopper link in parallel with the frame and set (52) Load chain with its welding part directed outward.
- Reeve (52) Load chain through (19) Load sheave and (20) Chain guide.

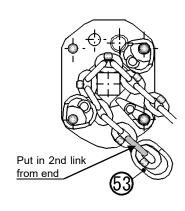


- Apply (G3) grease to the bearing part of (12) Frame B.
- Make sure of proper fitting before attaching (12)
 Frame B to the stay bolts.

A CAUTION

Make sure to set the flat parts of (10) Frame A Assembly and (12) Frame B in the same position with the holes for the top pin arranged.

6.6.4 Chain stopper link



- If the no-load side of the load chain is disengaged from the load sheave by free chaining and excessive rewinding, you are exposed to an extremely dangerous state. To avoid this, attach a (53) chain stopper link.

A DANGER

- When attaching the (53) chain stopper link afresh, be sure to use new one and attach it to the second link of the load chain from the no-load side. If attached to the end link, it may be deformed or fractured, failing to prevent disengagement of the load chain.
- The gaps when the link is closed shall be as per table.



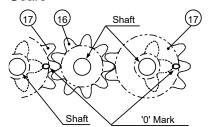
Product Code	LB008	LB016, LB025, LB032 LB063, LB090
Gap(mm)	1±1	2±1

6.6.5 Top Hook



- Fit (1) Top hook set between (10) Frame A assembly and (12) Frame B.
- Insert (3) Top pin from the side of (12) Frame B to fasten (1) Top hook set.

6.6.6 Gears



 For capacity of 2.5 tonnes or more, attach (18) Load gear to the serration part of (19) Load sheave.
 Note: Make sure that the load sheave is inserted to the load

with (17) Gear #2 as shown in the left picture.

gear completely. If necessary, use a plastic hammer.

- Insert (16) Pinion into (19) Load sheave and arrange the pinion

A CAUTION

- If '0' mark alignment on two of the gear #2 do not match to the above picture, the gears will not rotate.
 - Apply (G1) grease to gear cogs and shafts of e.g. (16) Pinion, (17) Gear #2 and (18) Load gear.

A CAUTION

- Apply grease good enough to the cogs. (approx. 20 g for 0.8 & 1 t, 30 g for 1.6 & 2.5 t, 60 g for 3.2 t or more)
- Attach (13) Gear case assembly onto the gear portion, and fasten (15) Spring lock washer and (14) Domed cap nut to the stay bolt firmly. The tightening torque is as specified below:

Part Name	Common to All Capacities
(14) Domed cap nut	17 to 18N⋅m

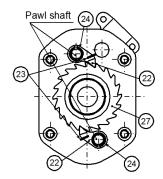
A CAUTION

■ (14) Domed cap nut is an important nut to secure the functions and performance of this product. If you forget to put it on or loosen it, it may lead to a serious accident. Always tighten it.

A CAUTION

(13) Gear case should be installed in a specified direction. Secure (13) Gear case in such a direction that (12) Frame B and the rim of the case will overlap each other precisely.

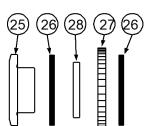
6.6.7 Brake



- Apply (G2) grease to the pawl shaft and (22) Pawl.

A CAUTION

- For (22) Pawl, just coat it with the grease, not too much.
 - Fasten two sets of (23) Pawl spring and (22) Pawl with (24) Snap ring.
- While holding two pawls outward, set (25) Friction disc, (26) Friction plate, (28) Bushing, (27) Ratchet disc and (26) Friction plate properly in this order.



- Make sure that the pawl spring fits into the pawl.
- Make sure that the pawl comes into good contact with the rachet disc.
- The friction plates are dry ones. Do not apply oil to them.
- Make sure that (28) Bushing has sufficient oil. If the bushing oil is not enough, soak the bushing in turbine oil for a day and wipe extra oil for reuse.

6.6.8 Lever & Body

- Attach the lever assembled in 0 to the previously assembled bake.

A CAUTION

- Fit the rims of (10) Frame A assembly and (29) Brake cover assembly in right direction.
 - Fit (29) Brake cover assembly and (10) Frame A assembly by screwing (33) Female thread of the lever assembly clockwise to the thread of (16) pinion until making clicking sounds.
- Attach (29) Brake cover assembly onto the stay bolt and fasten (32) Spring lock washer and (31) Domed cap nut firmly. The tightening torque is as specified below:

Part Name	Common to All Capacities		
(31) Domed cap nut	17 to 18N·m		

A CAUTION

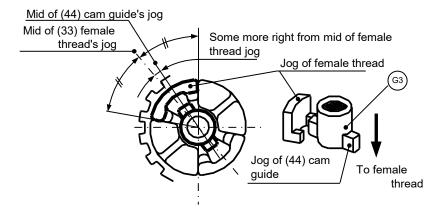
(31) Domed cap nut is an important nut to secure the functions and performance of this product. If you forget to put it on or loosen it, it may lead to a serious accident. Always tighten it.

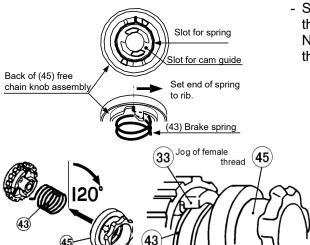
A CAUTION

- Tighten the nut firmly. If the nut is left untightened or loose, it could cause serious accidents.
 - Fasten (29) Brake cover assembly firmly to the stay bolts with (14) Domed cap nut and (15) Spring lock washer.

A CAUTION

- To eliminate a clearance in the brake section, perform the following procedures before moving to the next step.
 - (1) Set the select lever to 'N' position.
 - (2) Turn (33) Female thread clockwise to tighten the brake lightly with (52) Load chain at the
 - side held by hand firmly without (19) Load sheave's rotation.
 - Insufficient hold of the chain makes clicking sounds. Even in this case, the clearance is eliminated. After tightening, make sure that the female thread will not rotate counterclockwise
 - To attach (44) Cam guide to (16) Pinion, set a jog of the guide to right a bit from the middle of (33) Female thread's jog as shown in the following picture.
 - Apply (G3) grease lightly to the side of (44) Cam guide.

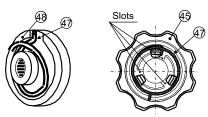




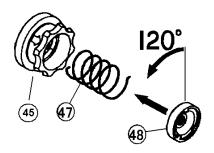
 Set (43) Brake spring (silver color) into the slot of the back of (45) Free chain knob assembly.
 Note: As indicated in the left picture, set the end of the spring to the rib of the knob.

- Fit the other end of the jog of the female thread.
- Hold the load chain in the hook side firmly to prevent (19) Load sheave from rotating.
- Turn (45) Free chain knob assembly 120° clockwise while pressing it lightly on (33) Female thread.

Note: As the free chain knob turns, the cam parts of (44) Cam guide fit into the slots of the knob to set the knob down.



 With (45) Free chain knob assembly pressed, hook the outward-projecting end of (47) Free chain spring onto the slot at the back of (48) Spring holder, and hook the other end (inward-projecting) of the spring onto the slot of (45) Free chain knob assembly.



- Turn (48) Spring holder 120° **counterclockwise** while pressing it lightly toward (45) Free chain knob assembly to insert it along the pinion serration.

Note: (47) Free chain spring raises (48) Spring holder. Hold and do not loosen it.

- With (48) Spring holder held, fasten it with (49) Slotted nut and (50) Split pin.
- Set the select lever to 'N' position and pull the free chain knob into the free chaining mode. Ensure to perform the free chaining operation.

A CAUTION

■ If the free chaining can not be performed, the hoist has been misassembled. Ensure to reassemble in accordance with this instruction.

6.7 Preoperational Checks

- After assembly, ensure to perform the preoperational checks with the following points before reuse.
 - Check defects in appearance, any parts left to be assembled.
 - Perform lifting and lowering operation and check the following items.
 - · Should be free of irregular clicking sounds in lifting or abnormal sounds
 - Should be free of heavier pull to lift
 - Should be free of brake slipping
 - Ensure that the hoist operate properly under no load before checking the hoist under a load.

7. Troubleshooting

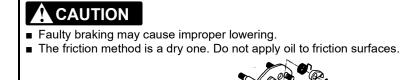
WARNING

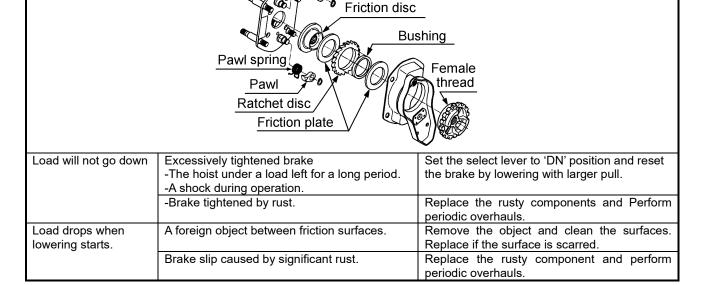
- If a defect is found in the hoist, stop using it immediately and check the cause of the defect.
- Read and comply with instructions in this manual and use the hoist properly.
- Ensure that competent people conduct repairs, otherwise please confirm with your dealer.
- Replace components with new ones authorized by KITO.

Symptom	Cause	Remedy			
For lifting					
CAUTION	Checking sounds from the hoist is a critical i operation For lifting, moving the lever forward and backv - For lowering, moving the lever only backward,				
Hoist will not lift -Slight clicking	Improper assembly of rachet disc, i.e. incorrect contact with the pawl caused by its wrong side fitting. Pawl Rachet disc Rachet disc	Reassemble the pawl and rachet disc properly and ensure to check click sounds before reuse. Pawl Rachet disc			
Hoist will not lift -Not clicking	Faulty pawl contact -The pawl or pawl shaft stuck with dust or oil caused by long-term negligent maintenance may make poor contact for the pawl and rachet discFaulty pawl spring may cause this symptom.	Perform periodic overhauls. Faulty contact: Pawl shaft Pawl			
	Improper select-lever fitting -Missing select-pawl spring -Assembly in wrong direction -Clogged with rust	Reassemble it properly and ensure to check click sound of the select lever before reuse. Select pawl Select-pawl spring Lever upper side Spring holder			
	Loose select-pawl spring	Perform periodic overhauls.			
Hoist will not lift -Impossible lever operation	Improper assembly of gear #2 -Mis-located '0' mark	Reassemble it properly and ensure to check smooth operation before reuse. CAUTION Ensure to set the '0' marks of the gear #2 as shown in the following picture. Gear #2 Pinion '0' Mark			

Symptom	Cause	Remedy
Hoist will lift intermittently	Poor pawl movement caused by faulty pawl springThe spring is loose or damaged.	Perform periodic overhauls.
-Slight or irregular clicking	Mis-assembly of pawl spring.	Reassemble it properly and ensure to check click sound of the pawl before reuse.
During operation, hoist idles or load drifts	Poor contact of load sheave and load chain caused by improper chain-reeving such as the following picture. Frame A Chain guide Load sheave Load chain To bottom hook	Reassemble it properly and ensure to check proper lifting before reuse. Chain guide Load sheave To bottom hook Chain stopper link
Hoist will not lift under no load	Mis-assembly of brake spring -Insufficient angle to set the spring will cause a poor braking. Slot for spring Back of free chain knob assembly Brake spring	Reassemble it properly. CAUTION Turn the free chain knob 120° clockwise and set the brake spring. Brake spring Free chain knob
Hoist will not lift all over the way	Capsized hook	Reset the capsized hook. Check the chain for any damage. Twisted Chain Capsized Hook and Chain Double Fall Models

For lowering





Symptom	Cause	Remedy
Load drops when lowering starts.	Mis-assembly of friction plates, i.e. friction plates at one side as shown in the following picture or one lost. Bushing Friction plate Friction disc Rachet disc	Reassemble it properly as shown in the following picture and ensure to check hoist functions before reuse. Friction plate Bushing Rachet disc
	Cracked friction plate caused by overload.	Replace the friction plate and use the hoist properly within rated capacity.
Load drifts.	A foreign object between friction surfaces.	Remove the object and clean the surfaces. Replace if the surface is scarred.
	Friction plate wear -Caused by high frequent and long term use.	Perform periodic overhauls.
Load drifts.	Mis-assembly of female thread and cam guide -Attaching cam guide without tightening female thread may cause an un-tightened brake.	Reassemble it properly. CAUTION Secure the female thread firmly before attaching cam guide.
	Mid of cam guide's jog Mid of female thread's jog Jog of cam guide Jog of cam guid	To female thread

For free chaining

For free chaining							
Free chain knob does not rise.	Damaged or deformed friction plate.	Perform periodic overhauls.					
Load chain is not pulled in free chain	Load chain pulled with free chain knob held.	Pull the load chain without holding the free chain knob.					
mode. Note: Not defect	Load chain pulled with excessive force (brake excessively tightened).	Pull the load chain with smaller force. CAUTION This prevents the load from dropping even with unintentional operation to free chain mode.					
	Mis-assembly of free chain spring -Twisted with excessive angle.	See the symptom of "Hoist will not lift under no load."					
Load drops when select lever is set in free chain mode.	Mis-assembly of free chain spring -Poorly tightened brake caused by insufficient twist angle.	See the symptom of "Hoist will not lift under no load."					
Hard to reset the hoist out of free chain mode.	Mis-assembly of free chain spring -Insufficient twist angle.	Reassemble it properly. 120° Free chain spring Spring holder					

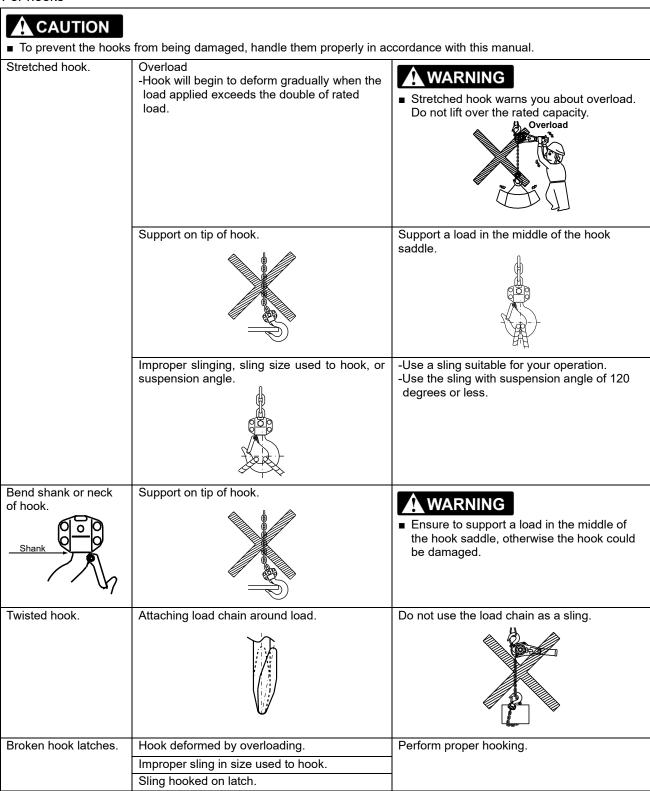
Symptom Cause	Remedy
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For load chain

CAUTION ■ The load chain is one of critical parts of the hoist. Ensure to maintain the chain carefully including proper handling, good maintenace and inspection. ■ Replace the chain pin for the load chain replacement. Load chain wear. Lack of lubricant Keep the load chain lubricated. -Caused by high frequent and long term use. Deformed or scarred Twisted load chain caused by Reeve the load chain into hoist properly. mis-assembling. load chain. Replace as needed. Deformed or scarred Capsized hook Reset the capsized hook. Replace as needed. load chain. Capsized Hook and Chain Double Fall Models Contact with load or an obstacle. Replace as needed. Do not use the load chain as a sling. Replace as needed. Extended pitch of load chain caused by overload. WARNING ■ Do not lift over the rated capacity. Overload Rusty load chain. Lack of lubricant. Handle and maintain the hoist properly corresponding to your operating conditions. Exposed to rain. Exposed to seawater or chemicals. CAUTION ■ Keep the hoist hooked indoors when out of use. Broken load chain. Caused often by a combination of the three WARNING symptoms as mentioned above and shock load. ■ Broken load chain could result in death or serious injury. Ensure to maintain the chain carefully including proper handling, good maitenace and inspection.

Symptom	Cause	Remedy
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For hooks



8. Warranty

KITO Corporation (referred to after as KITO) extends the following warranty to the original purchaser (referred to after as Purchaser) of new products manufactured by KITO (KITO's Products)

KITO warrants that KITO's Products, when shipped, shall be free from defects in workmanship and/or materials under normal use and service and KITO shall, at the election of KITO, repair or replace free of charge any parts or items which are proven to have said defects, provided that all claims for defects under this warranty shall be made in writing immediately upon discovery and, if there is anything within one(1) year from the date of purchase of KITO's Products by Purchaser and provided, further, that defective parts or items shall be kept for examination by KITO or its authorized agents or returned to KITO's factory or authorized service center upon request by KITO.

KITO does not warrant components of products provided by other manufacturers. However, to the extent possible, KITO will assign to Purchaser applicable warranties of such other manufacturers.

Except for the repair or replacement mentioned above which is KITO's sole liability and purchaser's exclusive remedy under this warranty, KITO shall not be responsible for any other claims arising out of the purchase and use of KITO's Products, regardless of whether Purchaser's claims are based on breach of contract tort or other theories, including claims for any damages whether direct, indirect incidental or consequential.

This warranty is conditional upon the installation, maintenance and use of KITO's Products pursuant to the product manuals prepared in accordance with content instructions by KITO. This warranty shall not apply to KITO's Products which have been subject to negligence, misuse, abuse, misapplication or any improper use or combination or improper fittings, alignment or maintenance.

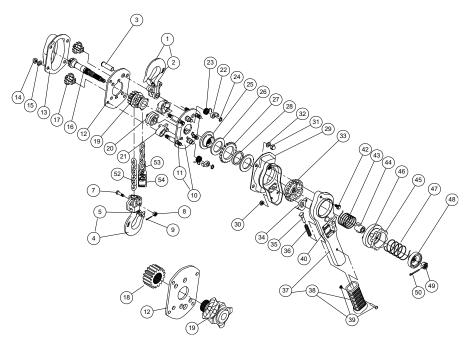
KITO shall not be responsible for any loss or damage caused by transportation, prolonged or improper storage or normal wear and tear of KITO's Products or for loss of operating time.

This warranty shall not apply to KITO's Products which have been fitted with or repaired with parts, components or items not supplied or approved by KITO or which have been modified or altered.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES. EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

9. Parts List

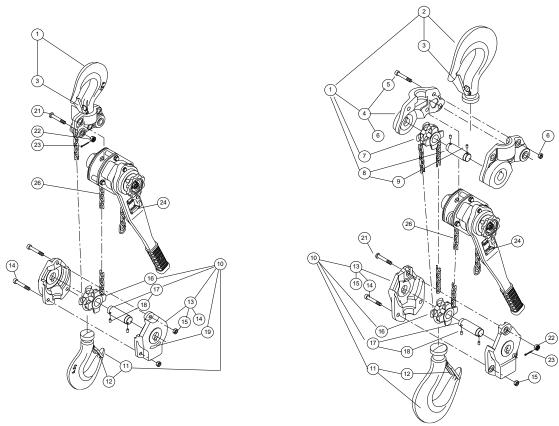
9.1 Up to 3.2 tonnes



Exclusive for 2.5 & 3.2 tonnes

Fig.#		Part #	Part Name	Nos. per Hoist	(tonnes)					
				HOIST	0.8	1	1.6	2.5	3.2	
1		1001	Top Hook Set	1	L5BA008-1001	L5BA010-1001	L5BA016-1001	L5BA025-1001	L5BA032-1001	
2		1071	Latch Assembly	1	L5BA008-1071	L5BA010-1071	L5BA016-1071	L5BA025-1071	L5BA032-1071	
3		163	Top Pin	1	L5BA0	08-9163	L5BA016-9163	L5BA025-9163	L5BA032-9163	
4			Bottom Hook Set	1	L5BA008-1021	L5BA010-1021	L5BA016-1021	L5BA025-1021	L5BA032-1021	
5			Latch Assembly	1	L5BA008-1071		L5BA016-1071	L5BA025-1071	L5BA032-1071	
7			Chain Pin	1	L4BA0	08-9041	C3BA015-9041	L5BA025-9041	L4BH030-9041	
8			Slotted Nut	1		05-9049	C3BA010-9049		20-9049	
9			6 Split Pin			I-016010	J1PW01-020012	J1PW0	1-020014	
10			Frame A Assembly	1		08-4101	L5BA016-4101	L5BA025-4101	L5BA032-4101	
11	1		Nameplate F	1		C3BA0				
12			Frame B	1	L5BA0	08-9102		L5BA025-9102	L5BA032-9102	
13			Gear Case Assembly	1		08-5103	L5BA016-5103	L5BA025-5103	L5BA032-5103	
14			Domed Cap Nut	4	202710	00 0 100	J1ND002-30080		LOD/ 1002 0 100	
15			Spring Lock Washer	4			J1WS012-20080			
16			Pinion	1	I 5RAO	08-9111		L5BA025-9111	L5BA032-9111	
17			Gear #2	2		08-9112	L5BA016-9111	L5BA025-9111	L5BA032-9111	
18			Load Gear	1	LODITO	JO 5112	L3DA010-3112	L5BA025-9114	L5BA032-9114	
19			Load Sheave	1	I SRAO	08-9116	L5BA016-9116	L5BA025-9116	L5BA032-9114	
20			Chain Guide	2		08-9161	L5BA016-9161	L5BA025-9161	L5BA032-9110	
21			Stripper	1			L5BA016-9161	L5BA025-9161	L5BA032-9161	
22			Pawl	2	L5BA008-9162 L4BA008-9155		L3DAU10-9102	L5BA025-9162 L5BA025-9155	L4BA030-9155	
23			Pawl Spring	2	LEDAO	08-9158	L5BA016-9158	L5BA025-9158	L5BA032-9158	
24				2	LODAU					
25	188 Snap Ring			1			00-00009 08-9153		J1SS000-00011	
26	153 Friction Disc		2			125-9151		L5BA032-9153		
27		151 Friction Plate 152 Ratchet Disc		1			108-9152		L5BA063-9151	
28							108-9154		L4BA015-9152	
			Bushing	1	LEDAG			L ED A 00E E044	L4BA015-9154	
29 30			Brake Cover Assembly	2	L5BA008-5214			L5BA032-5214		
			Flange Nut			JINFU	J1ND002-30080		J1NE002-10080	
31 32			Domed Cap Nut	4						
			Spring Lock Washer			J1WS012-20080 L5BA008-9160				
33 34			Female Thread	1		L5BA032-9160				
			Select Pawl	1		L4BA015-9218				
35			Spring Shaft	1		L3BA015-9222				
36			Select-pawl Spring	1	L2BA008-9223 L5BA008-6211 L5BA016-6211				L2BA015-9223	
37	_		Lever Assembly	1					L5BA032-6211	
38		1231		1	L5BA0	08-1231		08-1231	L4BA015-1231	
	39		Binding Screws	1			08-9232	I	L5BA032-9232	
40	F		Nameplate (Other)	1		L5BA010-9800		L5BA025-9800	L5BA032-9800	
			Nameplate (Europe)	1	L5BG008-9800			L5BG025-9800	L5BG032-9800	
42			Hex Cap Screw	1	1		08-9221		L4BA015-9221	
43			Brake Spring	1			08-9207		L4BA015-9207	
			Cam Guide	1	L5BA008-9203				L4BA015-9203	
45			1		L4BA0	08-9201 L5BA008-9810		L4BA015-9201		
46			1			T				
			Free Chain Spring	1	L4BA008-9205			L4BA015-9205		
48 208 Spring Holder			1		L5BA0	08-9208		L5BA032-9208		
			Slotted Nut	1			C3BA020-9049			
50			Split Pin	1		· ·	J1PW01-020014			
		Nickel-plated Load Chain	1		56J0000		KAQN100J0000			
53		45	Chain Stopper Link	1	L5BA0	08-9045	L5BA016-9045	L5BA025-9045	L5BA032-9045	
		931	Warning Tag CE (Other)	1			E7AR003S9886	3		
54			Warning Tag CE-G (Europe)	1			ER1BS9686			



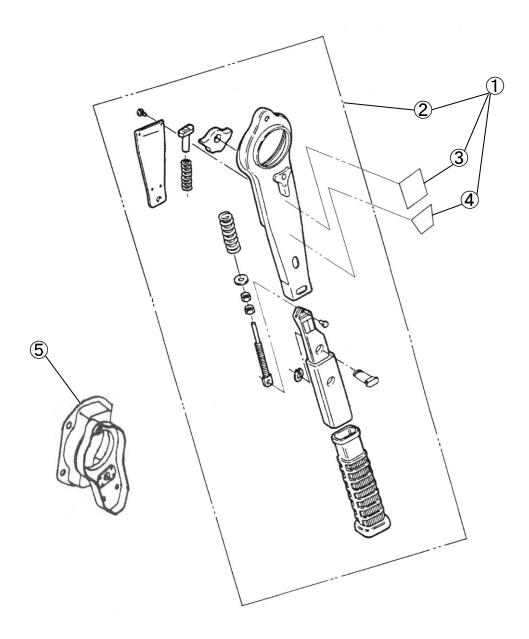


Note: These basic bodies are the same as 3.2 tonnes.

Fig. #		Part # Part Name		Nos. per Hoist	Capacity (tonnes)			
						6.3	9	
1				Top Hook Set	1	L5BA063-1001	L5BA090-1001	
	2		2001	Hook Assembly	1		L5BA090-2001	
		3	1071	Latch Assembly	1	L5BA063-1071	L5BA090-1071	
	4		2011	Top Hook Yoke A & B Assembly			L5BA090-2011	
		5	81	Socket Bolt	3		J1BE1-1204040	
		6	82	Lever Nut	3		C2BA400-9074	
	7		51	Idle Sheave	1		L5BA063-9051	
	8		53	Shaft Assembly	1		L4BA060-9053	
		9	83	Shaft Stopper Pin	2		L4BA060-9083	
10			1021	Bottom Hook Set	1	L5BA063-1021	L5BA090-1021	
	11		2001	Hook Assembly	1	L5BA063-2001	L5BA090-2001	
		12	1071	Latch Assembly	1	L5BA063-1071	L5BA090-1071	
	13		1031	Bottom Hook Yoke Assembly	2	L5BA063-9031	L5BA090-9031	
		14	81	Socket Bolt	2		J1BE1-1204040	
					3	J1BE1-1003232		
		15	82	Lever Nut	2		C2BA400-9074	
		15			3	C2BA200-9074		
	16		51	Idle Sheave	1	L5BA0	63-9051	
	17		53	Shaft Assembly	1	L4BA0	60-9053	
		18	83	Shaft Stopper Pin	2	L4BA060-9083		
	19		805	Nameplate C	1	C3BA030-9805		
21			41	Chain Pin	1	L4BH060-9041		
22			49	Slotted Nut	1	C2BA020-9049		
23	96 Split Pin 1 J1PW01-02		1-020014					
24			800	Nameplate (Other)	1	L5BA063-9800	L5BA090-9800	
24		İ		Nameplate (Europe)		L5BG063-9800	L5BG090-9800	
26 841 Nickel-plated Load Chain 1 KAQN100J				00J0000				

9.3 Optional Parts

Lever assembly for load signal type



F	ig.#	Part Part per				Capacity (tonnes)					
			Name	Hoist	0.8	1	1.6	2.5	3.2	6.3	9
	1	5211	Lever Set	1	Y3SS008-5211	Y3SS010-5211	Y3SS016-5211	Y3SS025-5211	Y3SS032-5211	Y3SS063-5211	Y3SS090-5211
	2	6211	Lever Assembly	1	Y3SE008-6211	Y3SE010-6211	Y3SE016-6211	Y3SE025-6211	Y3SE032-6211	Y3SE063-6211	Y3SE090-6211
	3	800	Name Plate With Rivets	1 *1	Y3SG008-9800	Y3SG010-9800	Y3SG016-9800	Y3SG025-9800	L5BG032-9800	L5BG063-9800	L5BG090-9800
	4	801	Name Plate B	1	Y3SS008-9801						
	5	5214	Brake Cover Assembly	1 *2	Y3SE00	08-5214	_	_		_	

^{*1.} Four rivets are also supplied to fasten the nameplate.
*2. Since Brake Cover Assembly is exclusive for LOAD SIGNAL 0.8 tonne and 1 tonne, their standard Brake Cover Assembly needs to be exchanged for LOAD SIGNAL installation.

10. Contents of EC Declaration of Conformity

We, KITO Corporation,

2000 Tsuijiarai, Showa-cho,

Nakakoma-gun, Yamanashi-ken, 409-3853,Japan

declare under our sole responsibility that the products:

Manually lever operated chain hoist LB, model L5

in capacity range of 800 kg up to 9 tonnes

to which this declaration relates is in conformity with the following EC directives and standards.

EC directives:

Machinery Directive 2006/42/EC

Harmonized standards:

EN ISO 12100:2010 Risk assessment and risk reduction

EN 13157:2004+A1:2009 Hand powered lifting equipment,

except for the requirement of "5.2.6 Operating

effort"





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