

**VITAL®**

# Nice Lever NR2

## Operating Instructions

Before operating this product, please read the instructions carefully to ensure correct use and keep it in a safe place for later reference.



— Table of Contents —

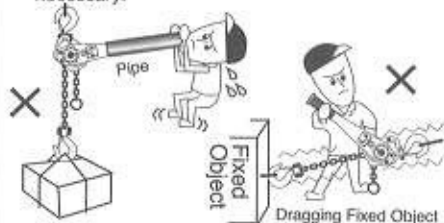
Eight Important Safety Regulations .....	2
Preparations Before Use .....	3
Operation Method .....	3
Preparation for Idling .....	4
Idling Release .....	4
Treatment After Use .....	4
Parts Diagram .....	5
Disassembly and Assembly Method .....	6
Maintenance and Inspection Method .....	6
Specifications .....	7
NR2-60 (6.3 ton)Bottom Hook Parts Diagram .....	8
NR2-90 (9 ton)Top/Bottom Hook Parts Diagram .....	8
Criteria for Use .....	9
Inspection Standard .....	9
Guideline of Inspection .....	10 • 11
Limit Dimension of Load Chain .....	11
Limit Dimension of Hook .....	11
MEMO .....	12 • 13

# Eight Important Safety Regulations



Lever Hoist is used to handle heavy objects. Careless operation can result in damage to the load being lifted as well as significant physical injury, or loss of life. **REMEMBER:** Use with the utmost caution when operating the "Lever Hoist".

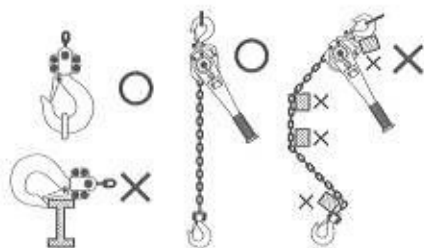
- ① Do not overload chain block.  
Do not extend the lever any further than is necessary.



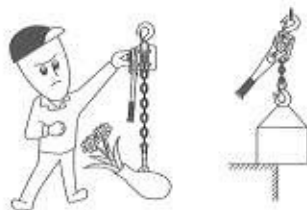
- ② Do not use the parts deformed due to excessive load operation.



- ③ Keep top/bottom hook and chain straight.



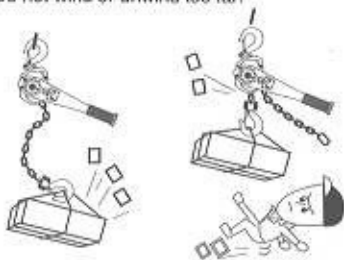
- ④ When the load is lowered in unwinding operation, do not leave the load unloaded on an obstacle.



- ⑤ Do not use the chain with kinks and twists.



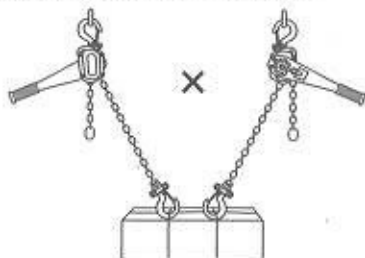
- ⑥ Do not wind or unwind too far.



- ⑦ Do not step in under suspended load.

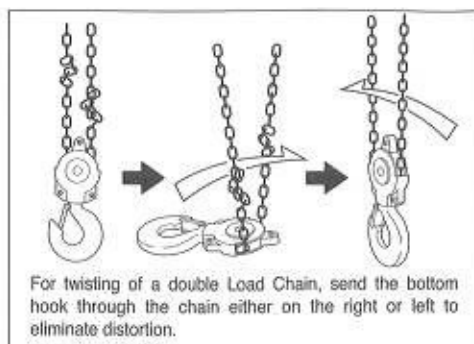
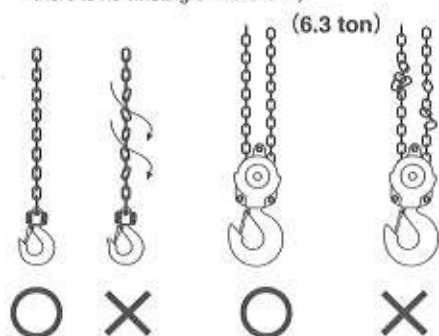


- ⑧ Do not suspend a load with two blocks.

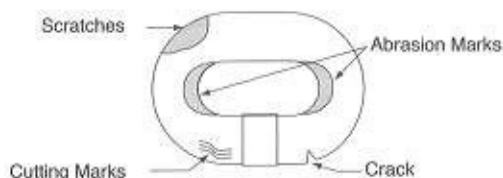


## Preparations before Use

1. Keep the chain well lubricated to improve movement of link. Use after confirming that the chain's longitudinal link is straight from one end to the other without distortion. (Especially for the 6.3t chain, please check carefully that there is no twisting of the chain.)



2. Confirm absence of scratches or abrasion marks in the Load Chain.



3. Attach top hook and suspended load as straight not applying an excessive force to top/bottom hook and chain. (As per explanation (3) in cover sheet)

## Normal Operation (Operation under loaded condition)

### Operation Method



#### 1. How to Lift

Move change lever to left (UP).

Take hold of the grip and move back and forth.

The load can be lifted according to the length moved in a clockwise direction

If chain is loosening, turn around the grip ring in a clockwise direction to take up the slack.

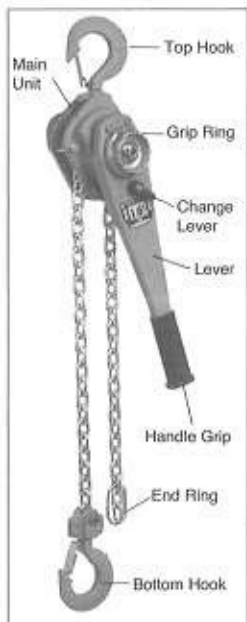
#### 2. How to Lower

Move change lever to right (DOWN).

Take hold of the grip, and move back and forth.

The load can be lowered according to the length moved in an anti-clockwise direction

\*Brake is on during normal operation even if change lever remain in center or moved to right or left.



Reference: Be sure that a load is put even in the case of test operation.

Brake is disabled when it is operated under unloaded condition. Neither lifting or lowering is possible.

## ● Idling Operation (method for adjusting chain length under unloaded condition)

### Preparation for Idling

1. Set the change lever to N (neutral position).

It is an automatic idling, so right side and left side of chain length can be adjusted through this operation.

Reference: If idling operation is difficult, turn the change lever right (DOWN), then move the handle once or twice. Then, turn the change lever to N (neutral position).

If the chain is pulled too hard during idling, it activates brake and chain does not move. When this happens, follow an instruction provided for Reference.



Preparation for Idling

Change Lever  
N



Idling Release

Change Lever  
UP

⚠ Before idling operation, do not carry out an operation with wire remained in bottom hook.  
[Reason] After vertical long load reaches the floor, turn the change lever to N and the load is turned over, which is equivalent to when the chain is pulled in idling operation.

### Idling Release

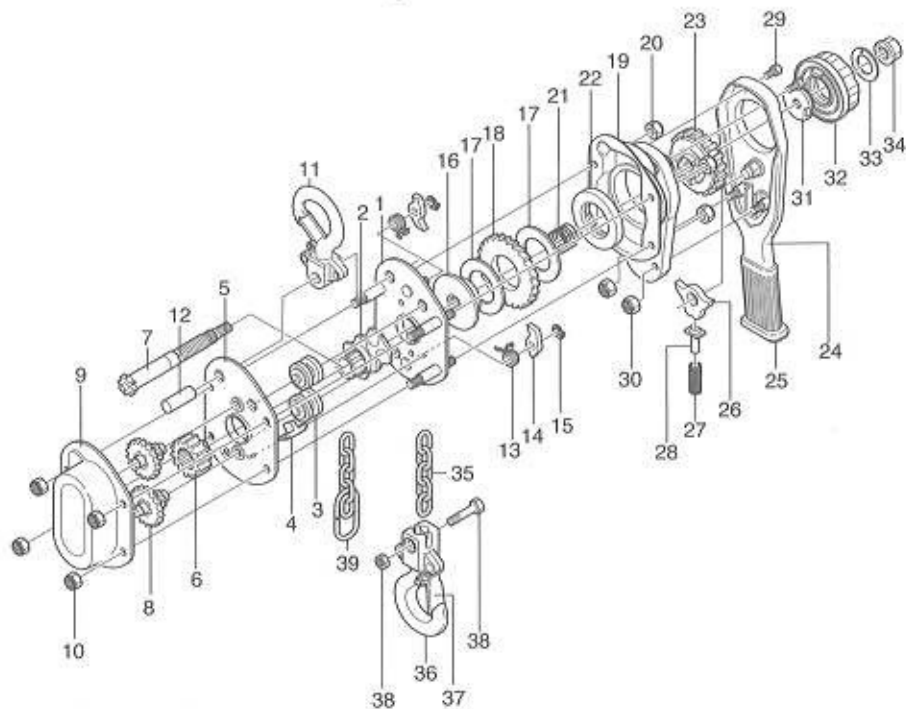
1. Pull the chain on the end side until the load is hung on the bottom hook.  
Move change lever to left (UP) and move back and forth.

Reference: If load is applied to the bottom hook even in idling condition, brake is automatically activated.

### Treatment after Use

1. Verify idling operation after use to prepare for next use.
2. Clean and wipe the lever hoist dry, and keep chain and rotary hook section well lubricated.
3. Store the lever hoist by suspending in places without humidity.

## Nice Lever NR2 Parts Diagram



Group No.	Parts Name	Quantity	Group No.	Parts Name	Quantity
1	1 set of side plate	1	22	Press Ring	1
2	Load Sheave	1	23	Change Gear	1
3	Guide	2	24	1 set of Lever Unit	1
4	Chain Stripper	1	25	Grip	1
5	2 sets of slide plate	1	26	Change Pawl	1
6	G1 Gear	1	27	Push Spring	1
7	Pinion	1	28	Push Pin	1
8	1 set of G2.3 Gear	2	29	Lever Bolt	2
9	1 set of Gear Cover	1	30	Nut	2
10	Gear Cover Nut	4	31	Check	1
11	1 set of Top Hook	1	32	Grip Ring	1
12	Hook Pin	1	33	Pinion Washer	1
13	Pawl Spring	2	34	Pinion Nut	1
14	Pawl	2	35	Load Chain	1
15	Snap Ring	2	36	1 set of Bottom Hook	1
16	Hub	1	37	Safety Clasp	2
17	Brake Van	2	38	Chain Bolt / Nut	1
18	Ratchet Gear	1	39	End Ring	1
19	1 set of Brake Cover	1			
20	Brake Cover Nut	4			
21	Spring	1			

## Disassembly/Assembly Method

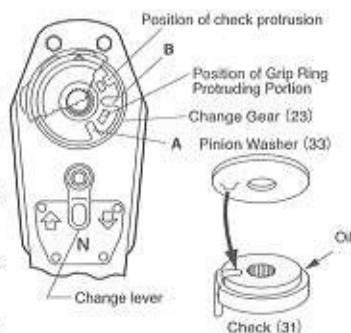
1. How to Remove Chain: Switch the change lever to neutral to keep idling. Then, remove 39 (end ring) and pull 35 (chain) through 36 (bottom hook) to remove.
2. Disassembly of Handle and Brake: Disassemble in order from the right of the parts diagram.
3. Disassembly of Gear and Center Section: Disassemble in order from the left of the parts diagram.
4. How to Assemble: Assemble in order of group number of parts diagram.
5. Disassembly and Assembly of Grip Ring

[Disassembly]

- ① Remove 34 (pinion nut) and take 32 (grip ring) and 31 (check).

[Assembly]

- ① Switch change lever to neutral.
- ② Turn change gear fully in a clockwise direction with fingertips to prevent change gear from reversing, as 14 (left-handed spring) always acts on 23 (change gear).
- ③ Set the 31 (check) protruding portion in the position of the diagram shown on the right.
- ④ Set the 32 (grip ring) protruding portion in the narrower groove. (between A and B)
- ⑤ Align convex portion of 33 (pinion washer) to concave portion of 31 (check), and it is fastened by 34 (pinion nut).



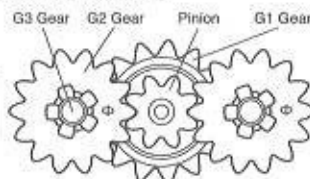
## Maintenance and Inspection Method

If deformations (elongation, scratch, wear, crack and bending, etc.) occur in parts, be sure to replace parts.

1. Check that there is no deformation in 35 (chain), 39 (end ring), 36 (bottom hook), 38 (bolt), etc. in accordance with Disassembly/Assembly Method-1.
2. Check that there is no deformation in 24 (handle), 19 (brake cover), 32 (grip ring), 31 (check), 17 (brake van), 14 (claw), etc. in accordance with Disassembly/Assembly Method-2.
3. Check that there is no deformation in 10 (gear cover), 6, 7, 8 (gear), 1, 5 (side plate), 11 (top hook), 3 (guide), 4 (Chain Stripper), 2 (load sheave), etc. in accordance with Disassembly/Assembly Method-3.
4. Before assembly, wash each parts well with washing oil, etc. Lubricate rotating part with grease.

For 0.8t, engage gears such that engraved marks ( $\oplus$ ) of 2nd gear face each other across pinion as shown in the right diagram.

5. Wipe well the 2 pieces of 17 (brake van) and the friction surface that comes into contact them. No need to grease.



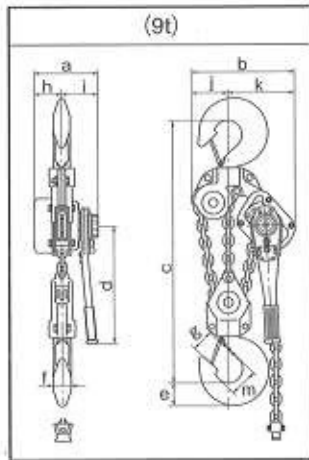
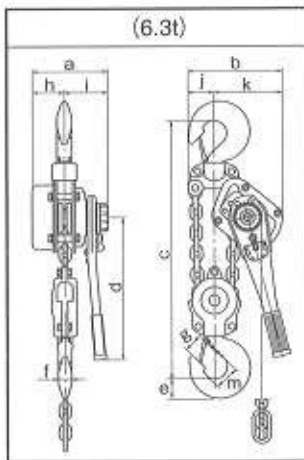
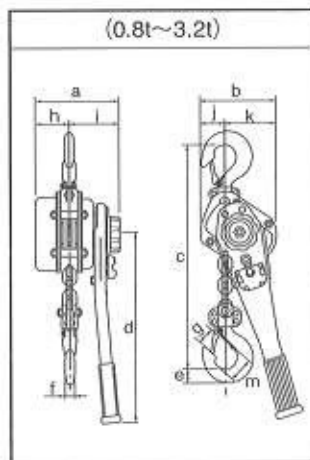
※Nos. are the group number of parts diagram.

# Specification

(The number is subject to change.)

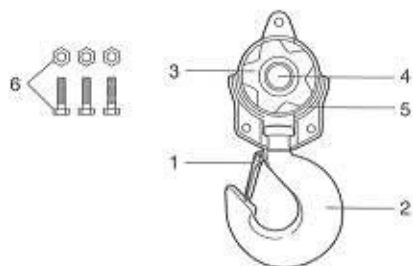
Abbreviation			NR-08	NR-10	NR-15	NR-30	NR-60	NR-90
Load	Rating	(t)	0.8	1	1.6	3.2	6.3	9
Standard Lifting Height		(m)	1.5	1.5	1.5	1.5	1.5	1.5
Empty	Weight	(kg)	6.0	7.2	9.8	16.6	27.0	47.3
Shortest Distance between Hooks		(mm)	295	325	350	425	565	680
Attraction Force in Hand		(kgf)	21	23	27	38	39	40
		(N)	206	226	265	373	382	392
Chain	Diameter	(mm)	5.6	6.3	7.1	9.0	9.0	9.0
Dimension	a	(mm)	146	146	161	195	195	195
	b	(mm)	119	126	146	180	243	318
	c	(mm)	295	325	350	425	565	680
	d	(mm)	256	256	368	368	368	368
	e	(mm)	20	22	27	37.5	49	67
	f	(mm)	14	16	19.5	27	36	52
	g	(mm)	27	30	34	43	47	67
	h	(mm)	52.5	52.5	64	84	84	84
	i	(mm)	93.5	93.5	97	111	111	111
	j	(mm)	37	38	46	54	68	113.5
	k	(mm)	82	88	100	126	175	204.5
	m	(mm)	36	41	47	56	63	87

• Lifting height may be changed by request.





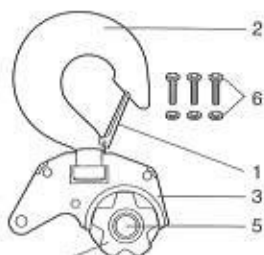
### < Nice Lever NR2-60 (6.3 ton) Bottom Hook Parts Diagram >



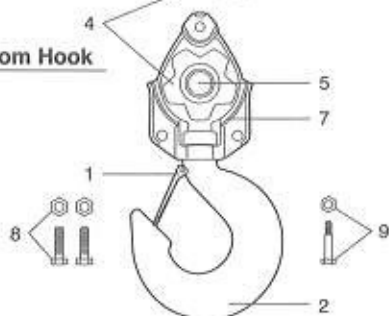
	Parts No.	Parts Name	Quantity
1	L740a-60	1 Set of Safety Clasp	1
2	L701-60	Hook only	1
3	L725-60	Sheave	1
4	L726-60	Sheave Axis	1
5	L721-60	Frame	2
6	L922a-60	Frame Bolt Nut	3
	Z709a-60	1 Set of Bottom Hook	1

### < Nice Lever NR2-90 (9 ton) Top/Bottom Hook Parts Diagram >

#### Top Hook





#### Bottom Hook



	Parts No.	Parts Name	Quantity
1	L740a-90	1 Set of Safety Clasp	2
2	L701-90	Hook only	2
3	L710A-90	Arm A	1
	L710B-90	Arm B	1
4	L725-90	Sheave	2
5	L726-90	Sheave Axis	2
6	L922a-90	Frame Bolt Nut	3
7	L721-90	Frame	2
8	Z922a-75	Frame Bolt Nut	2
9	L705a-90	Chain Bolt Nut	1
	L701a-90	1 Set of Top Hook	1
	L709a-90	1 Set of Bottom Hook	1

## Criteria for Use

### Precautions when Using Nice Lever

 <b>Danger</b>	1	Do not use it if the display of load rating of name plate cannot be distinguished.
	2	Do not apply load that exceeds load rating other than for inspections.
	3	Do not use load chain other than our product.
	4	Do not apply an abrupt load during operation
	5	Do not use the lever hoist for which lifting height is insufficient
	6	Do not use top hook or bottom hook that has no safety clasp or without effect of safety clasp.
	7	Do not use damaged or deformed top hook or bottom hook
	8	When the load is hung on the hook, hang at the position on the extended line of hook axis. Do not hang the load at the tip of hook.
	9	Do not use chain block in a way that hook or main unit act as a supporting point.
	10	Do not use nice lever without end ring.
	11	Do not use damaged or deformed load chain.
	12	Do not make load chain loop around the load.
	13	Do not make load chain touch against the corner of steel sheet, etc.
	14	Load chain must not be grounded during welding operation.
	15	Do not join load chain by welding.
	16	Do not extend the lever any further than is necessary using pipe, etc.
	17	Do not operate by foot.
	18	Do not wind or unwind too far.
	19	Do not step in under suspended load.
	20	Do not operate from on suspended load.
	21	Do not idle when the load is hooked.
	22	Do not leave a load suspended.
	23	Make sure load chain is not twisted or kinked before use. Do not use lever hoist in water.
	24	Use within a range of $-40^{\circ}\text{C}\sim+60^{\circ}\text{C}$ (less than 100% for humidity).
	25	Do not alter products or parts.
	26	Do not throw or drag lever hoist.
 <b>Caution</b>	27	Conduct daily checkup before use. Periodic check(*1) is also conducted.
	28	When attraction force becomes abnormally strong during operation, immediately stop operation. Do not use the lever hoist for which attraction force became stronger than usual.
	29	Lubricate load chain before use.
	30	Lubricate gear, shaft bearing, or the place that may be worn down before use.
	31	When it is not used for a long period of time, store lever hoist using rust prevention measures and keeping out dust.
	32	When lever hoist is used for special purposes, please contact our company.

Conduct periodic check every 6 months or annually depending on the frequency of use.

## Inspection Standard

### Precautions when Inspecting Nice Lever

1	Inspection item, method and standard for daily inspection are based on "Guideline of Inspection" In case of high frequency of use, or it is used in special condition, please check regarding items other than inspection items.
2	Conduct periodic inspection based on "Guideline of Inspection"
3	If a lever hoist has been repaired, check the product in accordance with periodic inspection item of "Guideline of Inspection" after repair, and verify that the product work normally under loaded condition.
4	Always use our genuine parts for replacement parts.

"Operational Load in Operational Test" provided in JIS B 8819 is as follows.

Net Rated Load	0.8t	1t	1.6t	3.2t	6.3t	9t
Operational Load	1.2t	1.5t	2.4t	4.8t	7.9t	11.3t

(Do not put a load in the actual work)

## Guideline of Inspection

Type of Inspection		Inspection Item	Inspection Method	Inspection Standard
Daily Inspection	Periodic Inspection			

### <Display>

<input type="checkbox"/>	<input type="checkbox"/>	Display (Name Plate)	Visual Inspection	Presence/Absence of Display (Name Plate)
	<input type="checkbox"/>	Load Chain Classification		Check load chain classification

### <Operation>

<input type="checkbox"/>	<input type="checkbox"/>	Winding / Unwinding Function	Wind and Unwind with a load of approx. 20kg	Brake device should tick-tack during winding. There must be no abnormality during unwinding.
<input type="checkbox"/>	<input type="checkbox"/>	Winding/Returning Switching Unit	Operation	Must actuate smoothly.
<input type="checkbox"/>	<input type="checkbox"/>	Idling Function	Operation	Must idle smoothly under unloaded condition.

### <Hook>

<input type="checkbox"/>	<input type="checkbox"/>	Opening of Hook	Visual Inspection for Daily Inspection Measurement for Periodic Inspection	No deformation compared to standard dimension. (Major Dimension Table shall be prepared prior to use.)
<input type="checkbox"/>	<input type="checkbox"/>	Deformation	Visual Inspection	No bending or distortion.
<input type="checkbox"/>	<input type="checkbox"/>	Deformation in Shank section	Visual Inspection for Daily Inspection Measurement for Periodic Inspection	No conspicuous gap between metal hook and shank section.
<input type="checkbox"/>	<input type="checkbox"/>	Abrasion and Corrosion	Visual Inspection	No conspicuous abrasion or corrosion.
<input type="checkbox"/>	<input type="checkbox"/>	Scratch or Harmful Defects	Visual Inspection	No crack or other harmful defects.
<input type="checkbox"/>	<input type="checkbox"/>	Safety Clasp	Visual Inspection Operation	No conspicuous abrasion or deformation. It must function normally.

### <Load Chain>

<input type="checkbox"/>	<input type="checkbox"/>	Pitch Elongation	Visual Inspection for Daily Inspection Measurement for Periodic Inspection	Do not use chain elongated even in 1 link or 5% or more. (Standard dimension shall be prepared prior to use.)
<input type="checkbox"/>	<input type="checkbox"/>	Abrasion		Do not use chains abraded 10% or more of the diameter.
<input type="checkbox"/>	<input type="checkbox"/>	Deformation	Visual Inspection	No deformation.
<input type="checkbox"/>	<input type="checkbox"/>	Scratch or Harmful Defects		No crack or other harmful defects.
<input type="checkbox"/>	<input type="checkbox"/>	Corrosion		No conspicuous rust.

# Guideline of Inspection

Type of Inspection		Inspection Item	Inspection Method	Inspection Standard
Daily Inspection	Periodic Inspection			

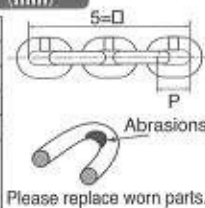
## <Main Unit>

<input type="checkbox"/>	<input type="checkbox"/>	1-2 Set of Side Plate	Visual Inspection	No deformation or conspicuous corrosion.	
<input type="checkbox"/>	<input type="checkbox"/>	Brake Cover			
<input type="checkbox"/>	<input type="checkbox"/>	Gear Cover			
<input type="checkbox"/>	<input type="checkbox"/>	Nut for each section, rivet, etc.	Visual Inspection	Check that there is no separation of nuts or rivets, etc. in the place visible outside in daily inspection, and no loosening.	
				Check that there is no abnormality in above parts outside and inside in periodic inspection.	
	<input type="checkbox"/>	1st Gear, and 2nd and 3rd Gear Set	Visual Inspection or Measurement after Disassembly	No Conspicuous Abrasion.	
				No damage.	
<input type="checkbox"/>		Load Sheave Sheave (Idler Sprocket Wheel of Bottom Hook for 6.3t and 9t)		No Conspicuous Abrasion or Deformation.	
				No Crack or Damage.	
<input type="checkbox"/>	<input type="checkbox"/>	Lever	Visual Inspection	No Conspicuous Deformation, Abrasion, Corrosion, Crack or other Harmful Defects.	
<input type="checkbox"/>	<input type="checkbox"/>	Change Claw	Visual Inspection or Measurement after Disassembly	No Conspicuous Abrasion or Corrosion.	
	<input type="checkbox"/>	Grip Ring	Visual Inspection	No Scratch or Damage.	
	<input type="checkbox"/>	Pinion	Visual Inspection or Measurement after Disassembly	No Conspicuous Abrasion and Damage or Corrosion of Screw Thread.	
	<input type="checkbox"/>	Hub			
	<input type="checkbox"/>	Change Gear			
	<input type="checkbox"/>	Shaft Bearing			No Harmful Defects such as Abrasion, Crack or Damage.
	<input type="checkbox"/>	Brake Van			No Conspicuous Abrasion.
	<input type="checkbox"/>	Claw and Latchet Gear			No Conspicuous Abrasion, Corrosion or Damage.
	<input type="checkbox"/>	Others			No Harmful Defects in Use.

\* Be sure to check that it actuates smoothly under loaded condition after it is disassembled and assembled.

### Limit Dimension of Load Chain (mm)

Load Rating	Chain Diameter	Pitch P	5 Link (ring) Standard	Dimension Limit Dimension
0.8t	5.6	17.0	85.0	86.4
1t	6.3	19.0	95.5	97.0
1.6t	7.1	21.0	105.0	107.0
3.2t	9.0	27.0	135.0	138.0
6.3t				
9t				



### Limit Dimension of Hook (mm)

Load Rating	Dimension of Opening of Hook Standard	Limit Dimension
0.8t	27	29.6
1t	30	32.9
1.6t	34	37.5
3.2t	43	47.5
6.3t	47	52
9t	67	74

