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ELECTRIC CHAIN HOIST OPERATING MANUAL

WX4400LBS-2

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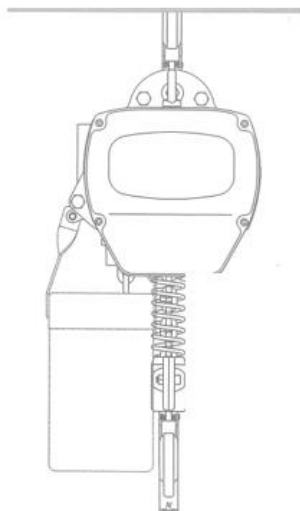
"Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and does not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.

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NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:



CustomerService@vevor.com

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.



The symbols used in this manual are intended to alert you of the possible risks. Please fully read the safety signs and instructions below. The warning themselves do not prevent the risks and can not be a substitute for proper methods of avoiding accidents.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Safety First

Any hoisting equipment may have potential risks to cause personal injuries or property damage.

If operators do not follow the proper operation instructions and pay no attention to precaution, the occurrence of risks will greatly increase. Thus it is required that every operator should read through and be familiar with the operation manual and precautions before operation to ensure the safe operation.



If any part of the manual has the alarming signs as indicated at the right and left and the part is underlined, it indicates that the part is vital safety description or precaution. And operators must fully followed, otherwise, it may endanger the operators or others or property.

Hence, before operate electric chain hoist, please read through the manual and precautions.

1. Preface

The manual can assist you in correct installing operating and maintaining your electric chain hoist. Ensure your hoist to operate safely with the highest efficiency. Before you use the hoist, please read through the manual to know about the correct procedure and operation, as well as preventative maintenance to guarantee you to have faithful and reliable service.

2. Main Specifications

2.1 Table of Specifications

Item	
Range of working humidity(%)	
Range of working temperature('C)	
Protection class	Hoist
	Push button
Power supply	
Noise degree(dB)	Single speed hoist
Chain specifications	Limit working load
	4400 LBS

Specification	
50 or below50	
-10-+40	
Ip54	
Ip54	
3 phase,220V,60Hz	
70	
Nominal diameter(mm)	Chain Internal length(mm)
10	30

Remarks

- (1) If your working temperature and humidity are out the range of the value in the table, please ask your distributor for related data.
- (2) Expected operation ways:The hoist is designed to vertically lift in normal atmosphere and working conditions.
- (3) The standard of noise degree is the value measured at 1 meter from the machine under the normal operation.

2.2 Safety Devices

1) Side magnetic braking device

It is a unique design which is characterized with the ability that the brake acts immediately as soon as the electric power is cut off.

2) Hooks and Safety Latch

The hook is hot forging with high tensile steel and heat treated to meet the demands on strength and hardness. The operation safety of the lower hook is ensured by its 360° degrees rotation and safety latch.

3) Anti-phase Protecting Device

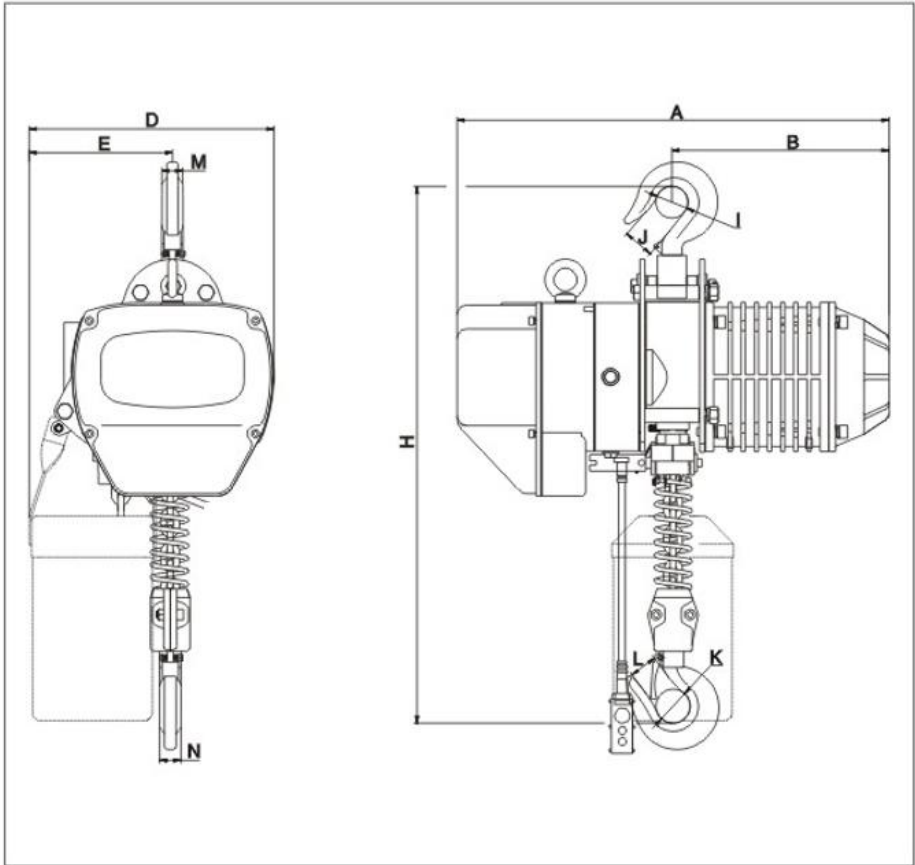
It is special design to control the circuit not to work and protect the electric motor from being burned in case of wiring error in the power supply.

4) Limit Switch

It is installed where the weights are lifted on and off to make the motor stop automatically so as to prohibit the chains from exceeding for safety.

Model	Rating lifting	Lifting height	Chain diameter	Lifting speed	Power supply
WX4400LBS-2	4400LBS	20FT	10mm	26Ft/min	3 phase, 220v, 60HZ, 3.0kw

Model	Rating lifting	H	A	B	D	E	I	J	K	L	M	N
WX4400 LBS-2	4400LBS	800MM	620MM	310MM	430MM	265MM	Φ49	35	Φ49	35	30	30



3.Safety Rules



Danger

The hoist is not designed for supporting loading persons .Any modification, which includes upgrade and lifting speed change or any hoist designchange, must be done by original manufactory or qualified professional engineer.

Danger

It is forbidden to operate the hoist under the explosive environment.

- 1) Person who have related training and experience can operate the hoist
- 2) Before operation , please confirm the followings:
 - a) Use the proper lifting rope .
 - b) The location of the cable should be as indicated in the following diagram (fig.3.1)

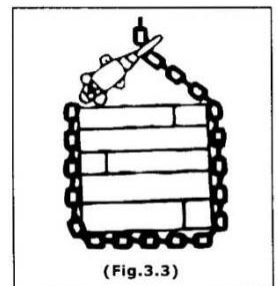
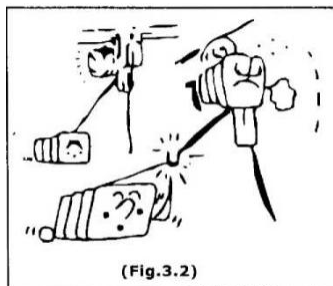
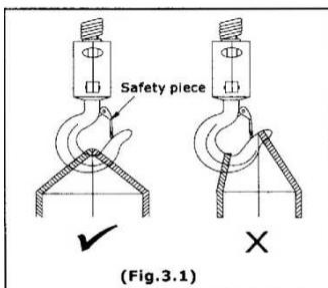
and the safety latch must lock the hook correctly .

- c) Make sure the weights safe and firm ,then lift it
- 3) The button must be operated stably and firmly .
- 4) Try my best to avoid excessive inching operation .
- 5) Be sure that the motor has been completely stopped before operating in the reverse direction.
- 6) When having finished operation, keep the control cable and the lower hook vertically and statically.
- 7) When lifting, the weights must be kept balance .Never lift the weight which are not in balance .
- 8) It is forbidden to drag the weights horizontally.(see Fig 3.2)
- 9) It is forbidden to lift the weights by using the chain to bind the weights .(see Fig 3.3)
- 10) When in operation, the operators must face and pay attention to the weights .Be sure not to turn back to or overlook it .

(11)It is risky to lift the weights over the rated load capacity. And it should not be tried .

(12)Do not lift goods when the chain is twined .

(13)Regular inspection to ensure chain is in a good condition, if the chain is damaged, don't operate hoist to lift the weights.

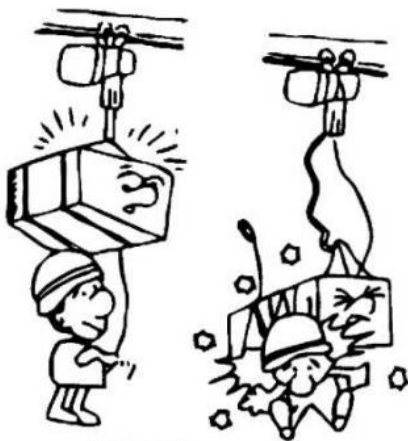


Warning

Never use the chain as a welding electrode

Warning

Never stand under when lifting



4. Installation

4.1 Voltage



Note

If the voltage of power supply is over or less 10% than standard voltage to operate hoist under the abnormal voltage will result in motor damage , hence , before operation , be sure to confirm whether the voltage of power supply is within the standard range.

4.2 Installation



Warning

It is forbidden to link the power supply before the completion of installation .

Before installing the hoist , please confirm the whole upper hook assembly has been firmly assembled to the hoist body (ensure the chain connection pin is installed properly).

Remarks :If the hoist is equipped with electric trolley, the first step (to separate the upper hook from the hoist body) can be omitted, and it is only required to install the

hoist between two side plates of trolley, and lock the upper hook.

Assemble chain bag (Fig.4.1)

Link the power supply and operate the push button. The procedure should be performed by professional trained person .(Fig.4.2)

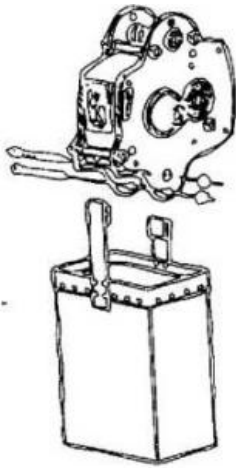
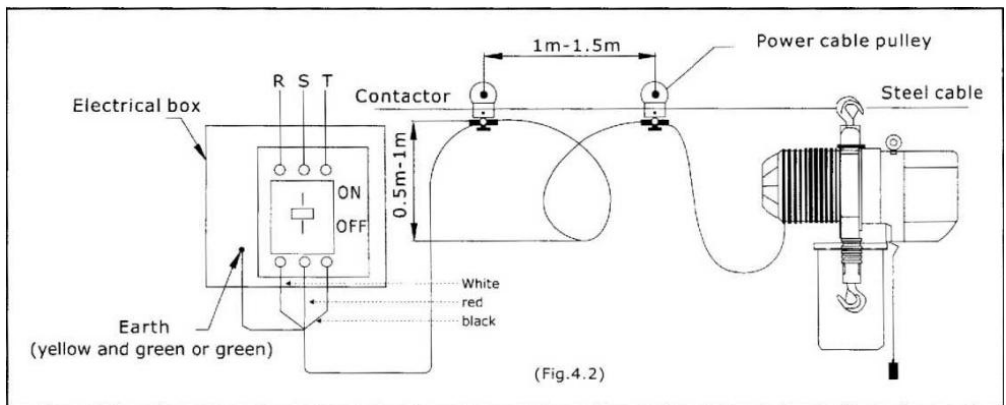


Fig 4.1



(Fig. 4.2)

4.3 Operation Test

- Press the(S) push button to lower the hoist until the limit spring touches the limit switch, and the motor will stop automatically .
- Press the(D) button until the chain are totally in chain bag and the motor stops .
- Test the function of the emergency stop switch (if the emergency stop switch is selectively purchased)Press button (J) or (S), and press the emergency stop switch at the same time to check whether the hook can stop immediately .When the emergency switch is pressed ,there will be no response when any other button

is pressed .Finally ,turn the emergency switch in clockwise and it will bounce back to the original position .When it bounces back, the hoist can be operated again if any of the above -mentioned tests is abnormal , it is required to check the distribution circuit and the self-locking of the emergency switch .

d) Check the direction of chain. All welding points should be of the same direction .(Fig 4.3). The operation can not be utterly proper unless all the welding points of chain are in the same line .



Note

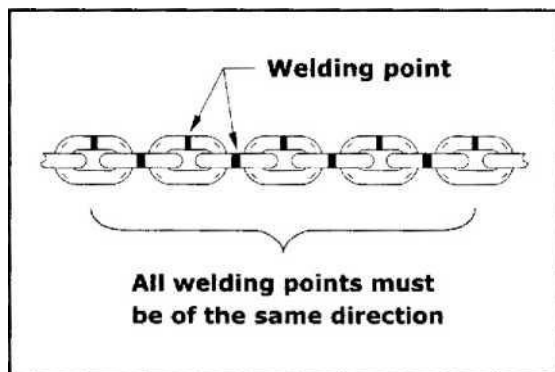
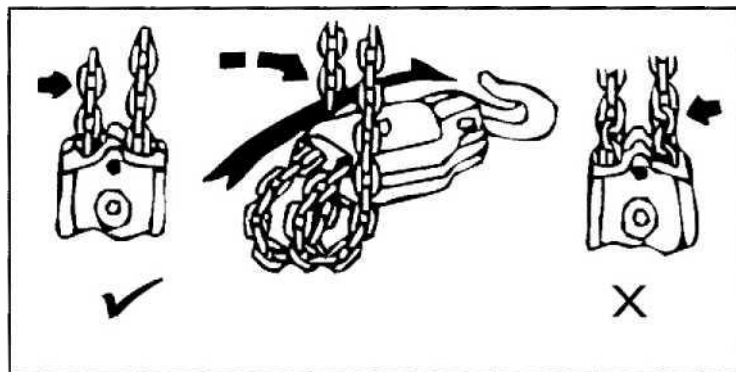


Fig.4.3



If the chain fall is double or ever number, it is forbidden to hang the lower hook in the reverse direction to avoid dangers(Fig. 4.4).

e) Chain lubrication

The degree of chain lubrication plays an important role on chain's service life .It needs to apply machine oil or gear oil regularly to prolong the chain's service life.

The process of lubrication:

- Keep chain vertically without load .
- Erase dust and water stains on chain .
- Lubricate each link of chain connection and load pulley. After the lubrication, lift the chain up and down without load in order to daub lubrication equably. (Fig.4.5)

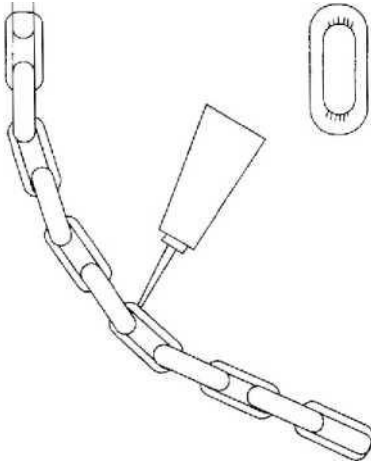


Fig.4.5

Danger

5. Operation

After the above-mentioned test and operation testing, the hoist can be normally operated.



Warning

It is forbidden to link the power supply before the completion of installation.

6.Maintenance and Overhaul

Except monthly examination about performance of brake and limit switch, never have it maintained under loading condition.

Danger

Before maintenance, be sure to label "danger" and "overhaul" on the power supply and controller.

6.1 Maintenance

1) When the gear operation times reaches more than 500 hours, check the amount of lubrication, and later check the lubrication every 3 months regularly.

Remarks: we recommend that using the engine oil same as grade ISOVG46 oil.

2) Check the dryness of the hoist parts frequently, and forbid to abuse the hoist; otherwise, its durability may be reduced.

3) If it is operated outdoors, please add a protection cover.

6.2 Overhaul

(1) Daily inspection: before daily operation, please check the following items:

- 1) Proper power supply.
- 2) Test the "up", "down" and "emergency stop" (if installed) without load.
- 3) The motor works normally.
- 4) There is no abnormally or excessively high noise.
- 5) The safety latch of the lower hook functions properly and is free of faults.
- 6) The rotatable or movable parts and the limit switch as well as the brake function normally.
- 7) The chain is lubricated well.

(2) Monthly inspection



Warning

In maintenance, please use the original parts recommended by the manufacturer.

(a) Chain

Any distorted, extended, or worn chain will not be good locked with chain wheel,

result in the breakdown or disengaging of the chains. To ensure the safe and normal operation, the internal length and width, external width of the chain must be checked monthly. If in the following situation, the chain must be replaced.

1) The internal length of the chain (p) is worn and extended 5% higher than the values as listed in Table 6.1

2) The wearing of the diameter of the chain link (d) is lower than the value listed in table 6.1 (The wearing of nominal diameter reaches 10% higher than the original one)

***** When the wearing of chain is high, be sure to confirm the wearing of the chain wheel and chain guide *****

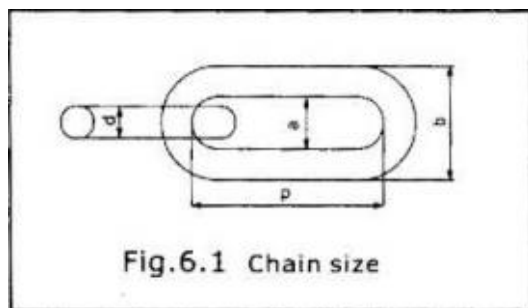
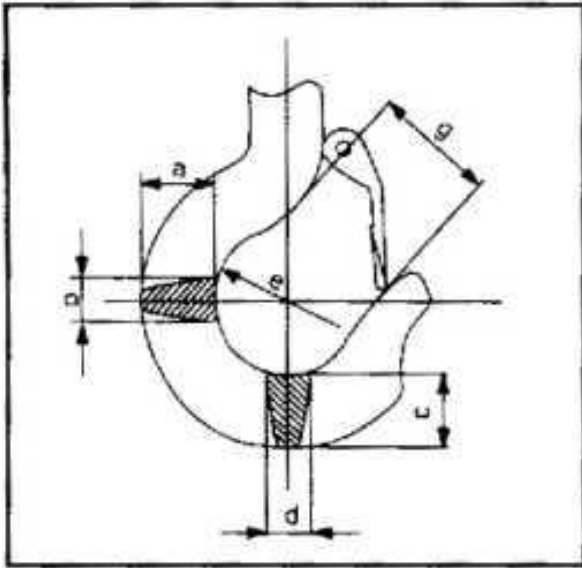


Fig.6.1 Chain size

Diameter(mm) (d)	Capacity (LBS)	Internal length (mm)(P)	Internal width (mm) (a)	External width (mm)(b)
10.0	4400	30	12.5	35

(b) Hoist hook

Check the hook carefully. Its crack or distortion is over 5% than original one, it should be replaced. (Please refer to the sizes in the following table)



Capacity (LBS)	a	b	c	d	e	g
4400	46	29	39	30	49	40

(C) Limit switch

Warning

It should be inspected by qualified electrician.

Check whether the limit switch operates normally. After clearing, make it covered with a thin layer of lubrication to ensure the normal operation.

(3)Annual overhaul

Warning

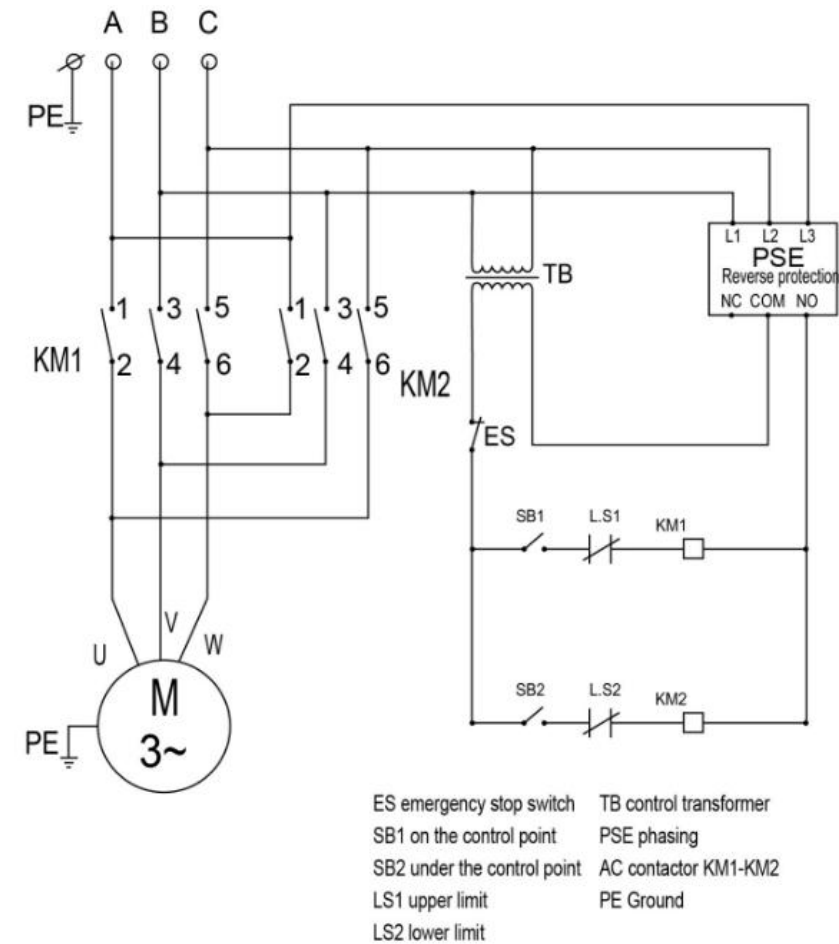
The annual maintenance should be performed by

- Check whether the locking of gear is excessive worn or damaged.
- Replace the oil gearbox thoroughly.

After the above-mentioned checking and machine reassembling, lift up and down with the weights several times before normal operation. If it is in good condition, then restart the operation.

7. Troubleshooting

Δ/Δ Voltage Hertz	Dual Voltage	
50Hz	220V	three-phase
60Hz		



8.Common problems and Processing

Conditions	Reasons	How to solve
The hoist can not be operated	<p>1)The power phases are linked wrongly, which results in the start of the phase protection and makes it unable to operate.</p> <p>2)The power fuse is burned or the no-fuse switch is off.</p> <p>3)The fuse in the control circuit burns.</p> <p>4)The power cord or the wire of the control circuit breaks or is not linked properly.</p> <p>5)The voltage is too low.</p> <p>6)The motor makes a sound but does not rotate.</p> <p>7)The emergency switch is pressed (if installed).</p> <p>8)The contactor is bad.</p>	<p>1)Exchange the power cords of the two phases.</p> <p>2)Check whether the current is normal, replace a proper fuse or restart the non-fuse switch.</p> <p>3)Check whether the current is normal, and replace a proper fuse.</p> <p>4)Repair or replace the electricity wire that breaks or has bad contact.</p> <p>5)Measure whether the voltage is over 10% lower than the standard voltage.</p> <p>6)Check whether the motor phase is correct- repair and make proper insulation.</p> <p>7)Confirm the reason of pressing the emergency switch.</p> <p>8)a. Operate the hoist manually, if it works properly, it means that the control coil or cable has bad contact- find out the location of bad contact and have it repaired.</p> <p>b. If the hoist can not be operated manually, it is necessary to check whether the main power supply is normal. If the main power supply is ok, it is caused by bad contact. If it is unable to output normally, the contactor should be replaced.</p>
The hoist can not be stopped	The coil of the contactor fuses (it is in short circuit fault).	Replace the contactor.

The brake slides	The motor brake wears.	Replace the friction disc.
The chain/chain wheel of the lower hook makes abnormal noise	1)The chain is not lubricated enough and properly. 2)The chain wheel is worn.	1)Lubrication. 2)Replace the chain and chain wheel.
Electric leakage	1)Imperfect earth. 2)The dusts in air gather on electrical parts or the humidity is too high.	1)Provide perfect earth. 2)Keep the electrical parts clean and make humidity low.
Oil leakage	1)The oil plug is not applied. 2)The oil plug is loose. 3)The oil plug gasket is not installed. 4)The gasket is worn or deteriorated.	1)Install a proper plug. 2)Tighten the plug. 3)Install a proper plug gasket or replace a new gasket.

9.Instructions of Using and Inspecting for Electric

Chain Hoist

Caution: When using the electric chain hoist, conduct in accordance with the following items:

- 1.Confirm that the ISO level of electric chain hoist in use is in accordance with using conditions.
- 2.No overloading.

3. Electric chain hoist must be equipped with appointed chain.
4. It is forbidden to use if the lifting height of electric chain hoist is short.
5. Daily check-up before use.
6. Before use, check chains and links whether they are loose, twisted or twined. Make maintenance before use.
7. It is forbidden to use if the anti-separation device of lower hook is valid or lack.
8. It is forbidden to use if the chain is lack of up and down stop device.
9. It is forbidden to use if the chain is twined with the weights.
10. It is forbidden to use the front end of hook to lift the weights.
11. Do not make repeated operation about lifting up and down rapidly.
12. Do not lift beyond the up and down limit switch.
13. Do not walk or stand under the hoist when lifting.
14. Do not lift the weights slanting (within 15 degrees)
15. Prevent the electric chain hoist falling down.
16. If the operation frequency is high, the chain of electric chain hoist should be replaced annually.
17. Under the following special conditions, such as below -40°C , above 100°C , corrosive or explosive environment, the chain should be replaced every six months, and the lower hook should be replaced every two years. (If the operation frequency is high, the lower hook should be examined annually and replaced every two years.)
18. If in the electroplate, heat treatment plant, the surface of hoist should be do periodic inspection monthly, and chain should be replaced annually.
19. After breaking, the chain can not be welded by yourself.
20. Chain should be lubricated before operation.
21. Gears, bearings and other friction parts should be added lubricants timely.
22. When not using hoist in a long time, please safely keep after doing proper rust proofing.
23. Electric chain hoist users will not be permitted to modify, if necessary, commission factory to modify.
24. It should be avoided to lift the weights with two hoists at the same time, which is dangerous. If in extreme circumstance, it should lift carefully within the range of sufficient loading capacity.

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