Electric Chain Hoist
Instruction Manual

CNAS
ISO9001-2008

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Safety Comes First

There are potential dangers when operating any cranes. Incorrect usage can cause damage to property, bodily injury and possible loss of life. To ensure proper operation of equipment and avoid any damages please read carefully and be familiar with all instructions detailed in the manual before any attempt is made to operate the Electric Chain Hoist.

Attention:
This product cannot be used in the dusty orsandy environment!

The warning signs are shown on the right and/or the left side to indicate the safety regulations for your special attention. Operators must observe, and adhere to the safety rules and regulations.

Contents

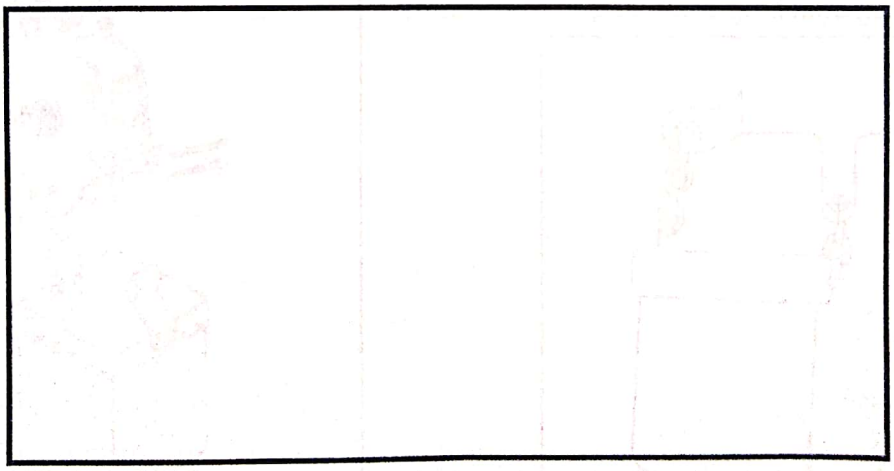
I. Introduction

The contents in this manual will provide information regarding your purchase of the Chain Electric Hoist, and all matters related to installation, operating and maintaining the Chain Electric Hoist to ensure the crane operates in an efficient and economical manner. Preventive maintenance ensures the crane will give years of reliable service.

If replacement parts are required please advise the following information so there are no delays in fulfilling your requirements.

1. Model type of electric chain hoist
2. Serial Number of electric chain hoist
3. Required part/parts you are going to purchase（it would be appreciated if the part instruction is enclosed.）

If there are any further questions you may please have them included in your request so we can give you our complete service in the operation of the Chain Hoist.



Please ensure your purchase is signed by the distributor as to proof of purchase and warranty

II. Notice for Installation and Operation

1. Basic device components

1) Chain bag(one)

2) Power supply cable with on/off control switch (one set)

2. Voltage

Before operating the hoist, please make sure that the voltage value is within operating parameters. If the voltage value is 10% higher than maximum capacity, the machine could malfunction and damage the electric machinery.

Before operating the hoist make sure that the voltage requirements meet the regulatory standards for the machine to operate correctly and meet power supply levels. Any voltage higher than 10% of the acceptable level may result in damage to the equipment.

III. Installation

1. Remove the upper hook screw and separate it from the hoist.

2. Attach the upper hook to the cart.

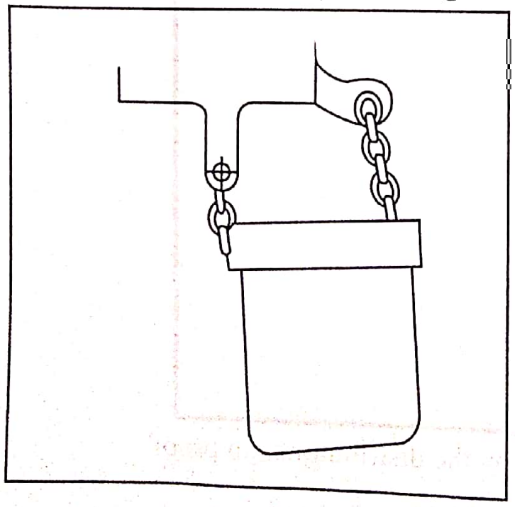
3. Join the upper hook and the hoist, lock the screw cap in place and reinstall the cotter pin. (Separation of the upper hook and the hoist is not always necessary.)

4. Connect electrical cord to power source.

5. The hoist comes equipped with an electrical safety device. If the machine has power but does not respond, you can safely exchange any of the two power cables (R, S or T).

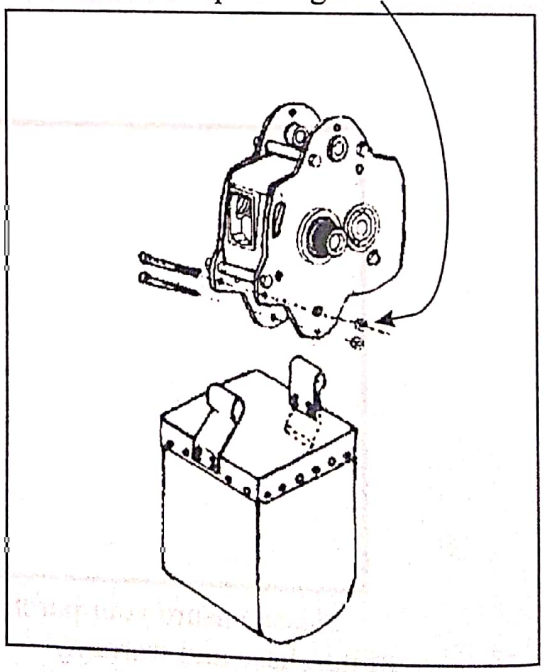
6. Attach chain bag to the hoist.

Do not turn the anti-loose screw-cap too tight when attaching chain bag.



1T 2T

Do not turn the anti-loose screw-cap too tight.



3T 5T

7. Operation Test

1) Press and hold the "down" button. When the hoist has reached its limit, it will automatically stop.

2) Press the "up" button until the chain returns to its original point and the hoist stops.

3) Before operation check lubrication of the load chain. The load chain is lubricated before shipment but due to change in temperatures and transportation it may become dry.Any ready market available lubrication may be used. We strongly suggest that some oil be kept in the chain bag so that the chain remains immersed when not used.

4) If the hoist has more than one chain, do not turn the lower hook over or serious In juries and damage may occur.

5) Check the direction of the link heads to ensure they are all in the same direction.

6) Attach each cable to its proper home position

a. Hoist Power Supply and Outgoing Cables:

Cable specification: $3.5mm^2 \times 8C$

Cables colours	Number cover	Function
White	Ⓡ	Outlet cable of power
Red	Ⓢ	Outlet cable of power
Black	Ⓣ	Outlet cable of power
Red	①	Common (all types); 36 V control
Black	②	Chain up; 36 V control
White	③	Chain down; 36V control
Yellow	⑧	Double-speed control; 36V control
Blue	⓪	to reduce cart voltage, 36V
Yellow and Green	⏚	Ground cable

b. Switch Outgoing Cables

Cables colours	Number covers	Functions
Red	①	Common cable, 36 V control
Black	②	Chain up, 36 V control
White	③	Chain down, 36V control
Yellow	④	East
Green	⑤	West
Blue	⑥	South
Grey	⑦	North
Orange	⑧	For double-speed control, 36V control
Orange/Coffee	⓪	Controls power supply for east, west, south and north cables

Following Is Very Important:

- Ensure power supply cable matches cover number.
- Before supplying power ensure outgoing hoist cables match their respective buttons①–①, ②–②, ③–③ and ⑧–⑧, and are correctly and firmly attached and well insulated. After this has been followed then plug in power supply cord.

IV. Safety Regulations

1. Only trained personnel should operate the hoist.
2. Do not operate machine in a fire hazard environment.
3. Ensure the cargo is placed within the safe tongue only.
4. Use only certified load chains or steel cables.
5. Do not operate the hoist outside of the stated voltage hertz (HZ).
6. Ensure the machine is grounded before operating. If not grounded an electric shock may occur.
7. GIVE SPECIAL ATTENTION to power supply (either three phase or single phase only) and voltage.
8. Ensure proper support is used for the electric chain hoist.
9. It is important and required to shut off the machine before changing directions.
10. Do not elevate or descend the hoist in a sudden manner.
11. Do not place power supply cables through the ring on top of the gearbox.
12. Do not exceed abuse the maximum chain limit or the control switch may malfunction.
13. Do not allow hoist to move when attaching cargo.
14. Do not attach unstable cargo.

15. The hoist is to be stabilized to avoid tipping over.

16. Do not use the hoist chain as welding electrode.

17. Do not do any electrical melting work on any cargo attached to the hoist. This may cause serious damage to the hoist

18. Do not change the hoist's internal operational machinery or structure.

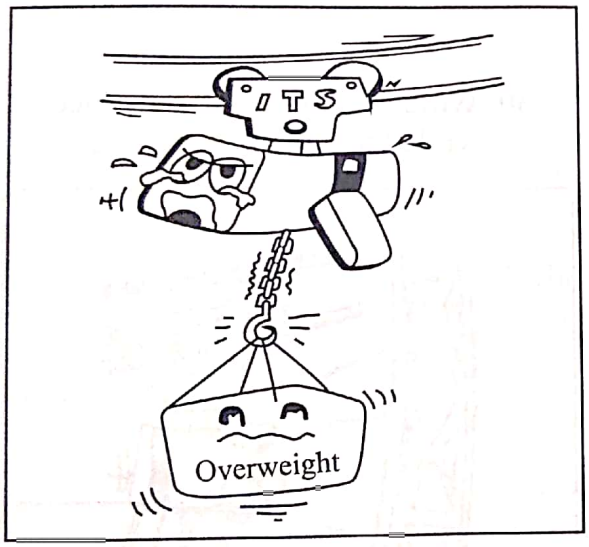
19. When the hoist is not in use, be sure to keep the lower hook elevated. Failure to elevate hoist may cause personal injury.

20. To ensure Safety First procedures, when hoist is not in operation ensure the control switch and the lower hook chain are kept vertical.

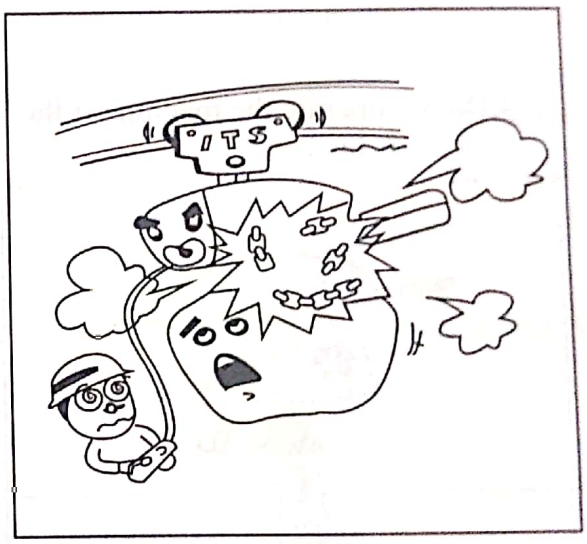
21. When the hoist is operational do not grease the track or the chain.

22. Replacement of chain bag is to be according to size and specifications.

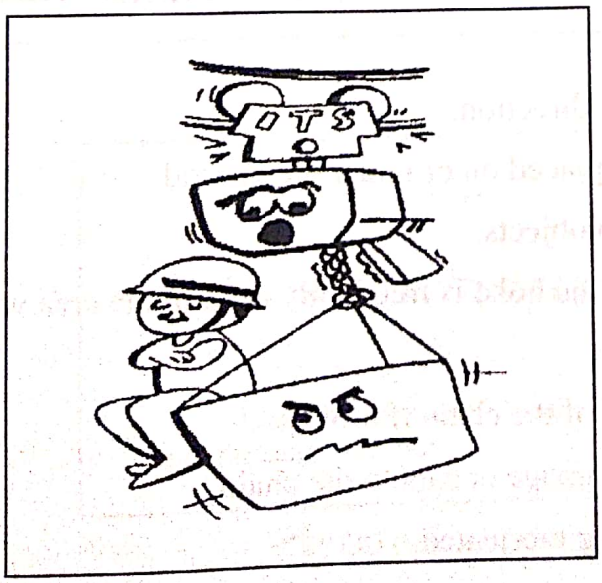
23. Under no any circumstances overload Hoist. This can result in injury and damageto hoist.



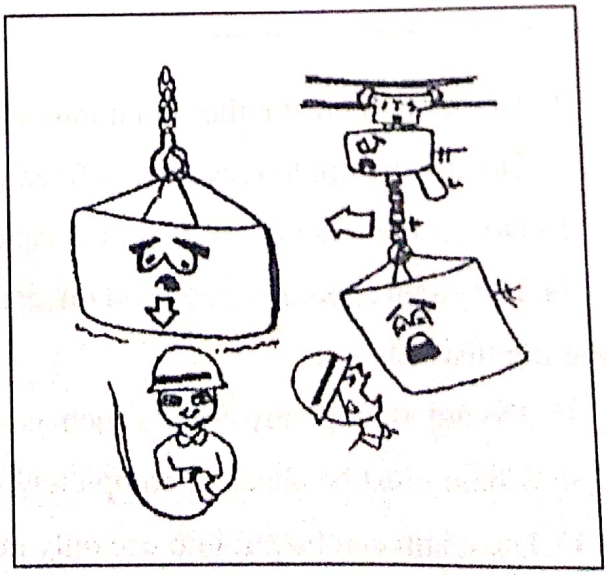
24. Ensure there is adequate space between the top of cargo and the chain bag.



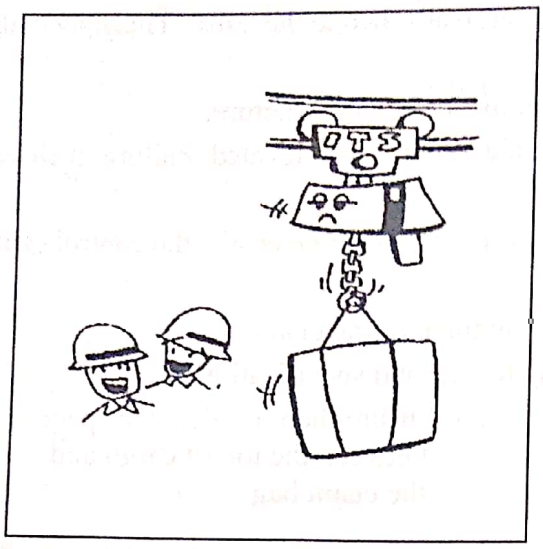
25. Do not use the hoist to transport any persons.



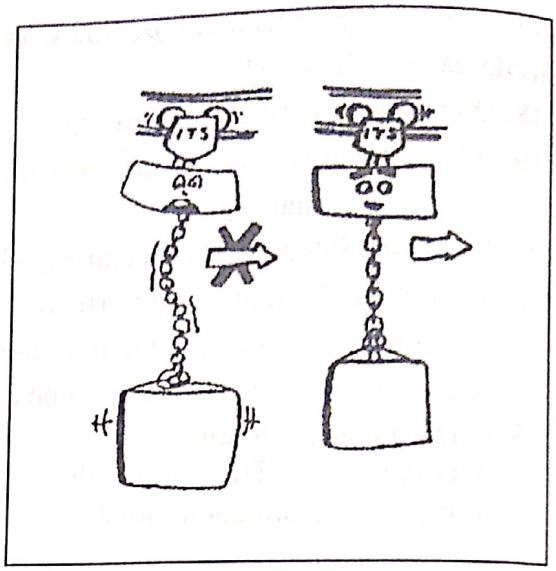
26. Do not stand directly under the hoist or in the direction it is moving.



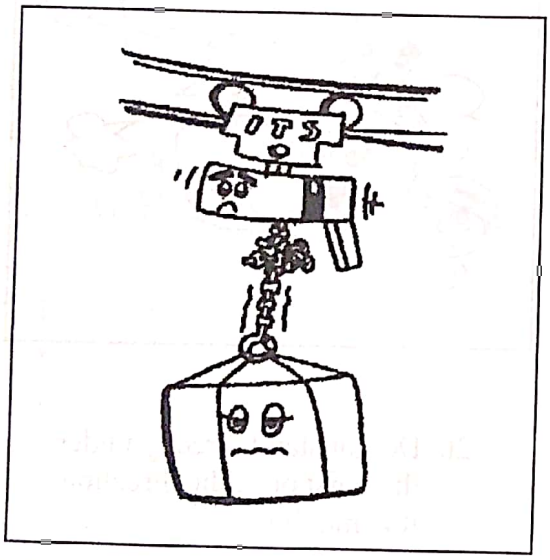
27. If the hoist does not work do not leave the cargo suspended.



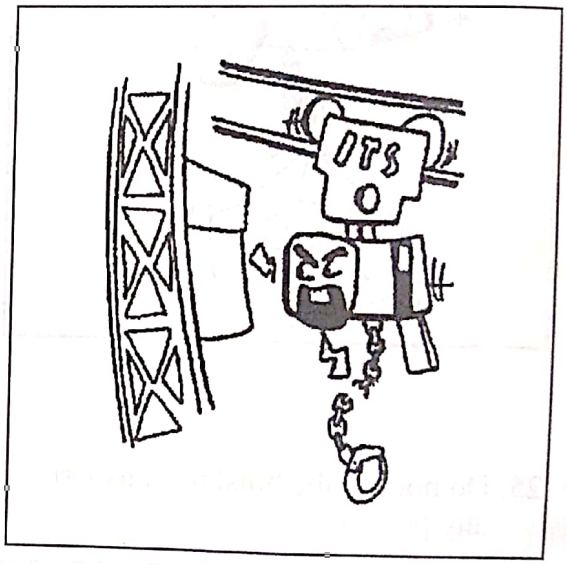
28.Cease operation of the hoist if the chain becomes too stretched.



29.Do not operate the machine if the chain is buckled.



30.Avoid striking any fixed object while the hoist is operating.



31.Do not pull hoist either in lateral or slanting direction.

32.Do not attempt to elevate any fixed objects placed on or under the ground.

33.Do not use chain(s) as ropes for fastening to objects.

34.The chain should be replaced once a year if the hoist is frequently used in the area with strong impulsive force.

35. Do not attempt any repairs such as welding of the chain if broken.

36. Chain must be changed completely if any damage occurs to the chain.

37.The chain can be put into use only after being lubricated.

38.All gears and bearings require routine lubrication.

39. Anti-rust measures are necessary if the hoist is not in use for long durations.

40.Do not use the loading elevator as hoist.

V. Operation

1) Press and hold the button ⬇ .When the hoist has reached its limit, it will automatically stop.

2) Press and hold the button ⬆ until the chain returns to its home and the hoist stops.

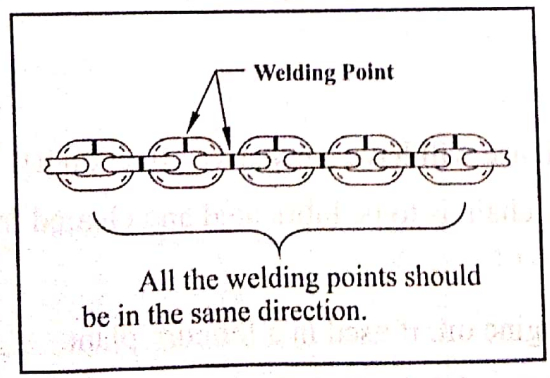
3) Test emergency-stop switch (if this switch is purchased). Press and hold either the button ⬆ or ⬇ and emergency-stop switch, and then examine whether the hook stops. When the emergency-stop switch is held down, all other switches will fail to operate due to emergency stop. Then turn the emergency-stop switch clockwise to its original place. After following these instructions the hoist can be restarted. If any one of the above fails to follow the procedure advised then inspection must be performed for the cables and automatic-locked function of the emergency-stop switch.

4) Check lubrication of the load chain (The chain is lubricated prior to shipment but due to transportation conditions and the chain may become dry). Check chain prior to starting and if required lubricate with market lubrication. It is also suggested that some oil be kept in the chain bag so that the chain remains immersed when not in use.

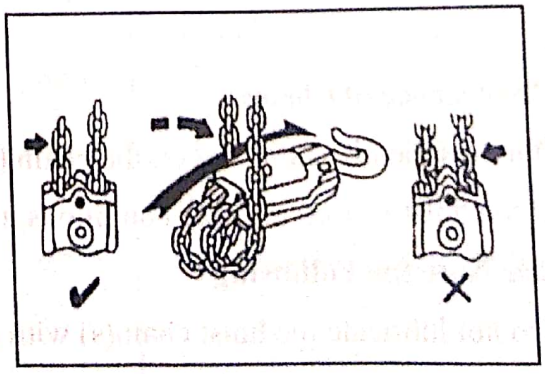
5) Check the direction of the link heads to make sure all the welding points are in the same direction (see picture 8). If in same direction the operation can proceed.

Attention

To avoid any problems do not hang the down hook in opposite way when links are even-numbered. (see picture 9)



Picture 8



Picture 9

If the above instructions have been followed the hoist can be operated in a safe manner.

Attention

Due to the operation of this machine when fully loaded, Safety Rules and Regulations must be followed to avoid any injuries or dangerous situations (see Chapter IV). Besides, operators must observe the following details:

1) Before working, operators must have a clear vision of the whole working area, without any blind spots or obstacles.

2) Before working, operators must ensure the working area is safe.

3) When operating the electric gliding cart, operators must ensure the lateral and/or vertical force will not outweigh the cart when changing direction.

VI. Maintenance, Inspection and Repair

Maintenance

1.Check the gearbox after every 500 hours of use to ensure the correct level of engine oil. The oil level is to be checked every 3 months and oil added if required.(The filling area for the oil is located on top of the gearbox; the oil plug/drain is on the bottom of the gearbox; the amount of oil in the reservoir can be viewed on the side.)

2.Water-proof the hoist before operating outdoors.

3.The hoist is to be stored in a dry environment and at room-temperature in order to maintain optimal performance.

4.Anti-rust cleaning measures are required if the hoist is not operating for extended periods of time.

5.Maintenance of Chains

1)Only engine oil is allowed on the chain (grease will have a negative affect on it).

2) If the hoist is used in dusty conditions, the chain is to be lubricated and cleared frequently.

Please Note the Following

- Do not lubricate the hoist chain(s) with engine oil, if used in a foundry plant.
- If squeaking, oil the hoist chain(s); do not over-lubricate.

Inspection and Repair

1 The hoist is to be inspected every day before operating. Please examine the following items:

1) Is the power supply and voltage normal?

2) Can the hoist operates "up" and "down" without cargo?

3) Are there any problems with the engine?

4) Is noise level normal?

5) Does the safety tongue of lower hook function correctly?

6) Ensure lower hook can turn 360° . Are the movable parts, limit switches and brakes operational?

7) Is the chain lubricated correctly to required specifications?

8) Has the chain bag been installed correctly?

9) Are both the wheels and the power supply cables in proper working condition and glide correctly?

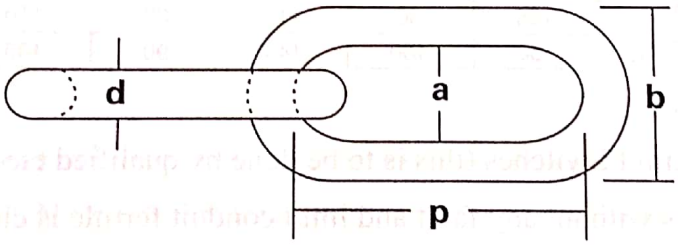
2 Monthly Inspection

1) Inspection of Chains

If the chains are stretched, not aligned or worn , they will not match the drive sprockets; If not replaced immediately, the chains will break, or dislocate from the track and damage the hoist.When any of the following happens, replace the chain:

a.If the internal length (P) wears and tears and becomes stretched, and sustains a value of 5% or over of the numbers listed in the table.

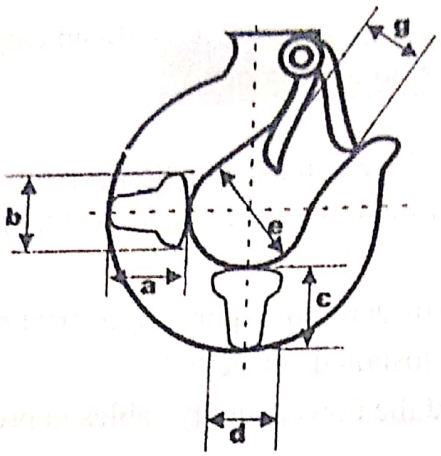
b. If the chain wears and tears and its diameter fails to reach the number listed in the following table (that is to say, 10% or over of the chain has been worn and torn).



Model	Capacity (ton)	D (mm)	A (mm)	B (mm)	P (mm)	Usable load	Secure load	Maximum load
0.3-01	0.3	6	8	20	19	1250	2400	4800
0.5-01	0.5							
01-01	1	7.1	8.9	23.6	21.0	1600	3150	6300
02-02	2							
03-03	3							
02-01	2	10.0	12.5	33.2	30.0	3150	6300	12500
03-02	3							
2.5-01	2.5	11.2	14.0	37.2	34.0	4000	8000	16000
05-02	5							
7.5-03	7.5							
10-04	10							
16-06	16							
20-08	20							
26-10	26							
30-12	30							
35-16	35							

2) Inspection of the Hooks

If the hoist is overloaded the hook will open. If this occurs the hook must be rep-laced when the opening value is bigger than the number in the list "g".



Load(T)	T B	A	B	C	D	E	G
0.3,0.5	T B	27	18	25	17	32	25
1	T B	36	25	30	24	42	32
2	T B	46	29	39	30	49	40
3	T B	56	36	49	34	59	45
5	T B	67	43	57	44	60	45
7.5	T B	82	55	80	50	90	70
10	T B	82	55	80	48	90	70
16	T B	110	70	95	60	95	65
20,26	T B	142	95	155	98	150	115
30	T B	125	90	115	85	110	80
35	T B	150	100	140	90	130	100

T–upper hook/B–lower hook

3) Inspection of Limit Switches (this is to be done by qualified electric technicians) If the limit switch operates without any fault and limit conduit ferrule is clean, add a thin layer of lubrication to maintain its good performance.

4) Inspect the surrounding power supply and ensure screws are fixed.

3. Yearly Inspection (This must be done by a qualified technicians from the manufacturer)

1) Is the gear abused or damaged?

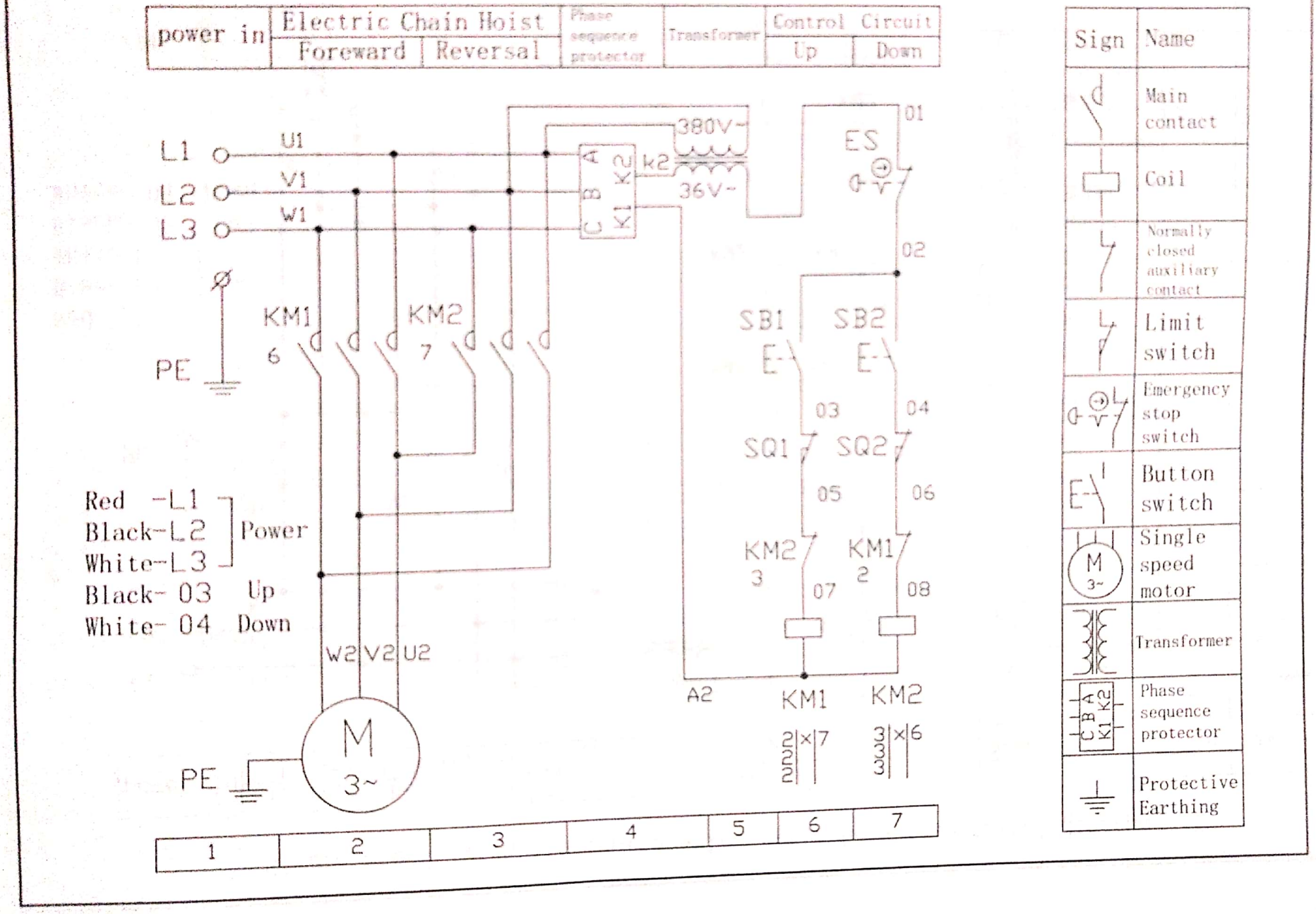
2) Is all the engine oil replaced in the gearbox?

3) Has the brake and ratchet been worn and torn?

4) Does the rachet work well?

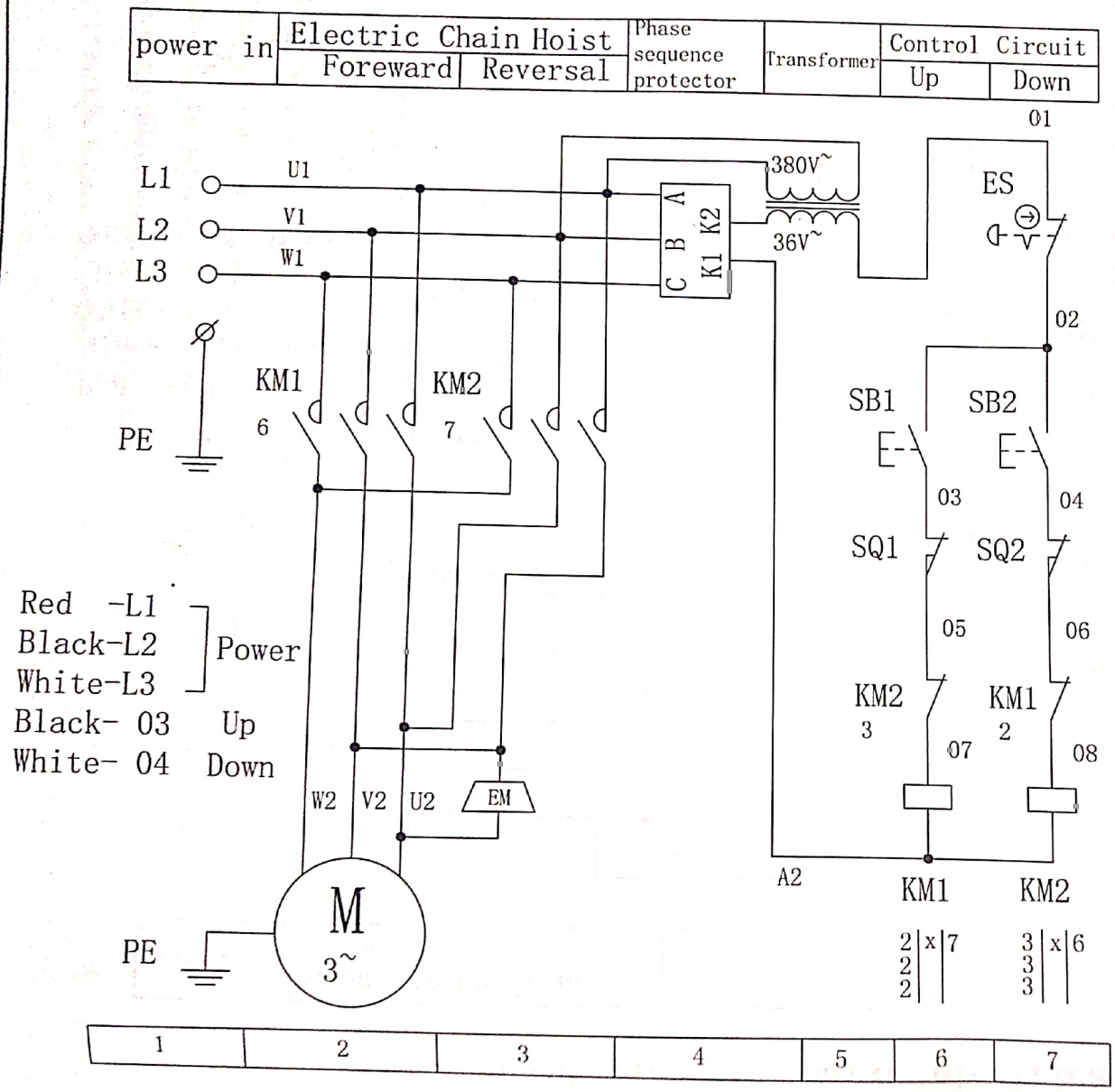
5) After the above-stated items are inspected, re-assemble the hoist. Before re-operating hoist, it must be loaded and tested in an up-and-down motion to ensure correct working.

Single speed electric hoist electrical diagram



Sign	Name
	Main contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Button switch
M 3~	Single speed motor
	Transformer
C B A K1 K2	Phase sequence protector
	Protective Earthing

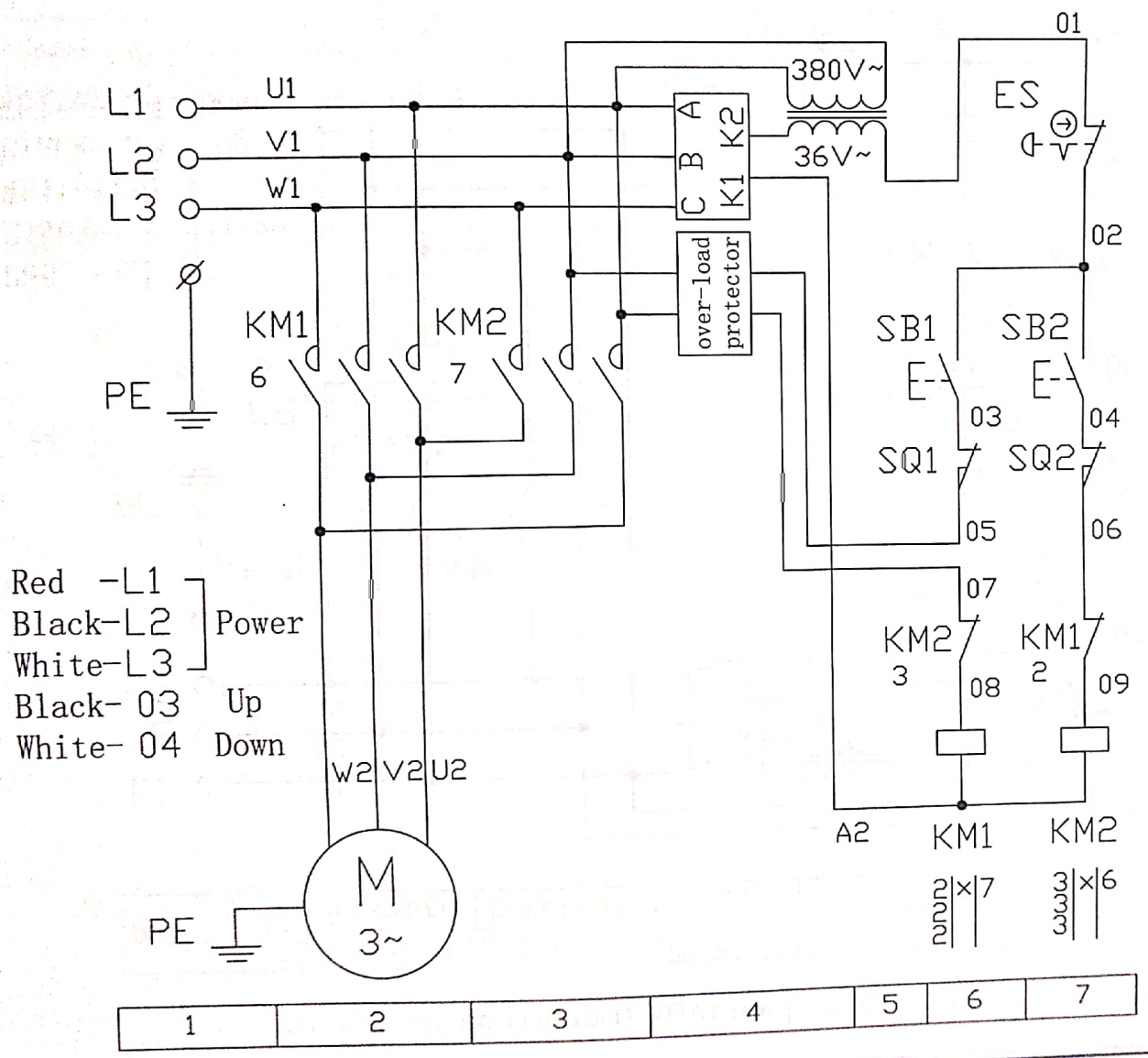
Single speed (with electromagnet) electric hoist electrical diagram



Sign	Name	Sign	Name
	Main contact	EM	electromagnet
	Coil		
	Normally closed auxiliary contact		
	Limit switch		
	Emergency stop switch		
	Button switch		
M 3~	Single speed motor		
	Transformer		
C B A K1 K2	Phase sequence protector		
	Protective Earthing		

Single speed(over-load protector)electric hoist electrical diagram

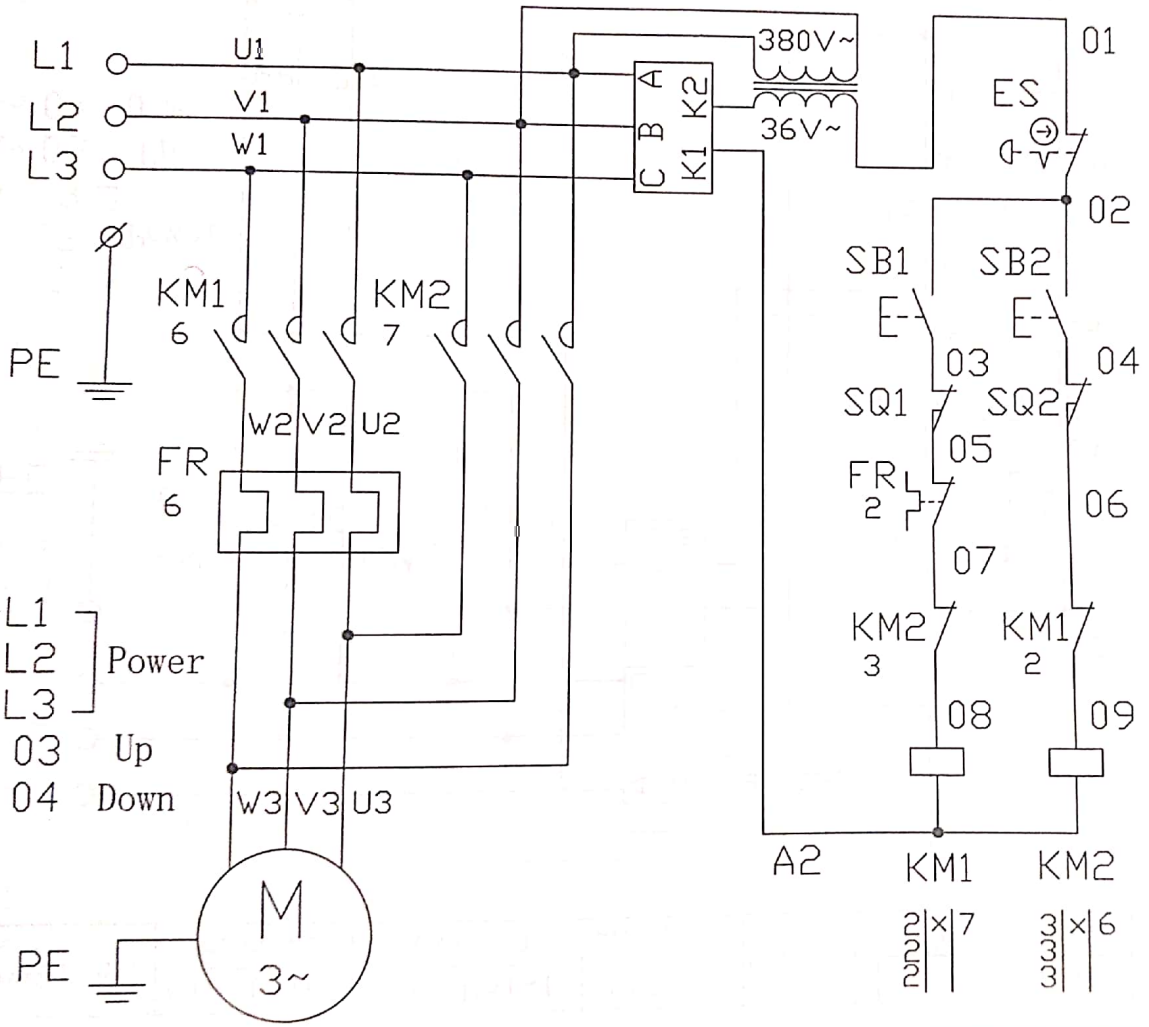
power in	Electric Chain Hoist		Phase sequence protector	Transformer	Control Circuit	
	Foreward	Reversal			Up	Down



Sign	Name	Sign	Name
	Main contact	over-load protector	over-load protector
	Coil		
	Normally closed auxiliary contact		
	Limit switch		
	Emergency stop switch		
	Button switch		
M 3~	Single speed motor		
	Transformer		
C B A K1 K2	Phase sequence protector		
	Protective Earthing		

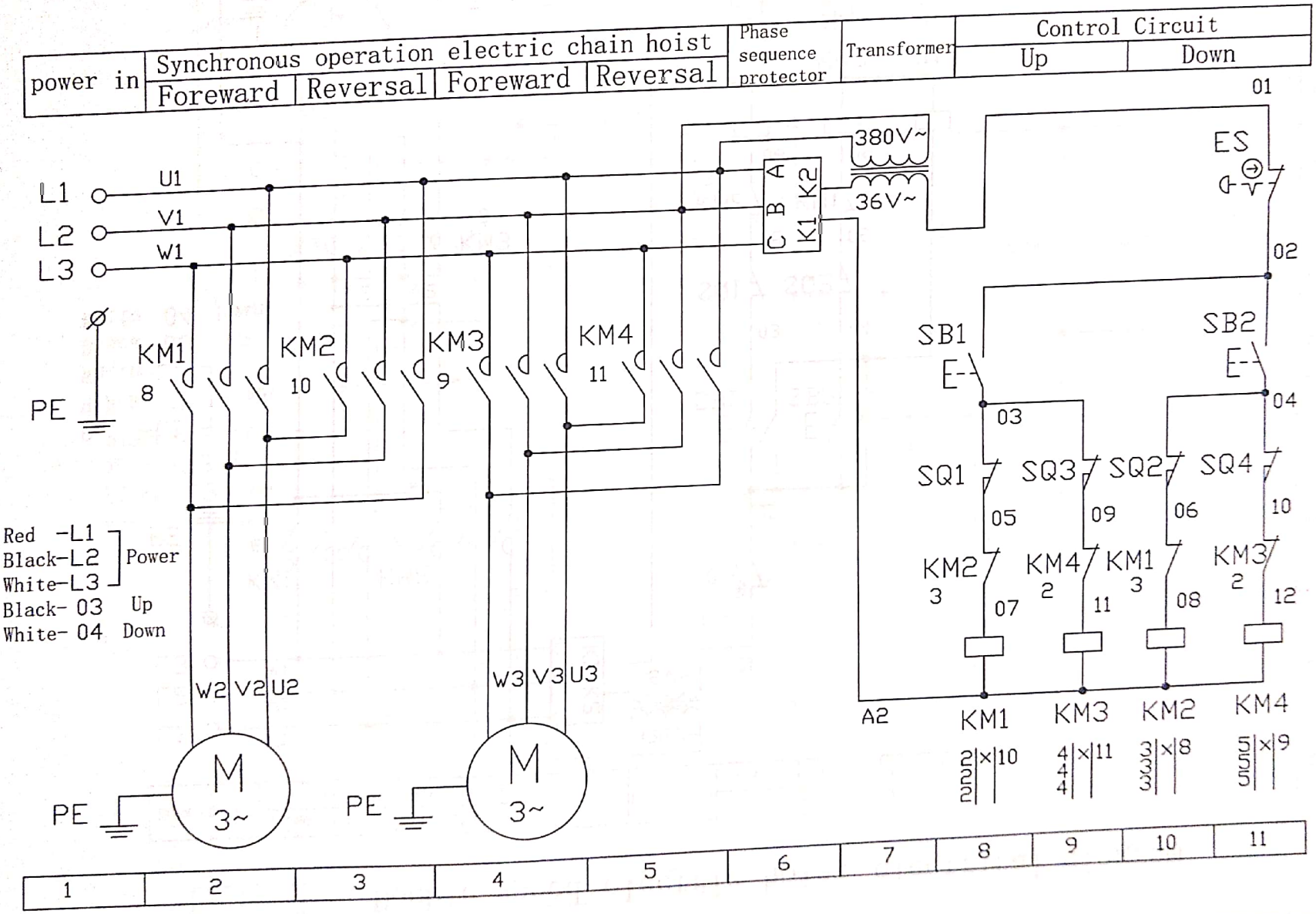
Single speed (thermal overload relay)electric hoist electrical diagram

power in	Electric Chain Hoist		Phase sequence protector	Transformer	Control Circuit	
	Foreward	Reversal			Up	Down



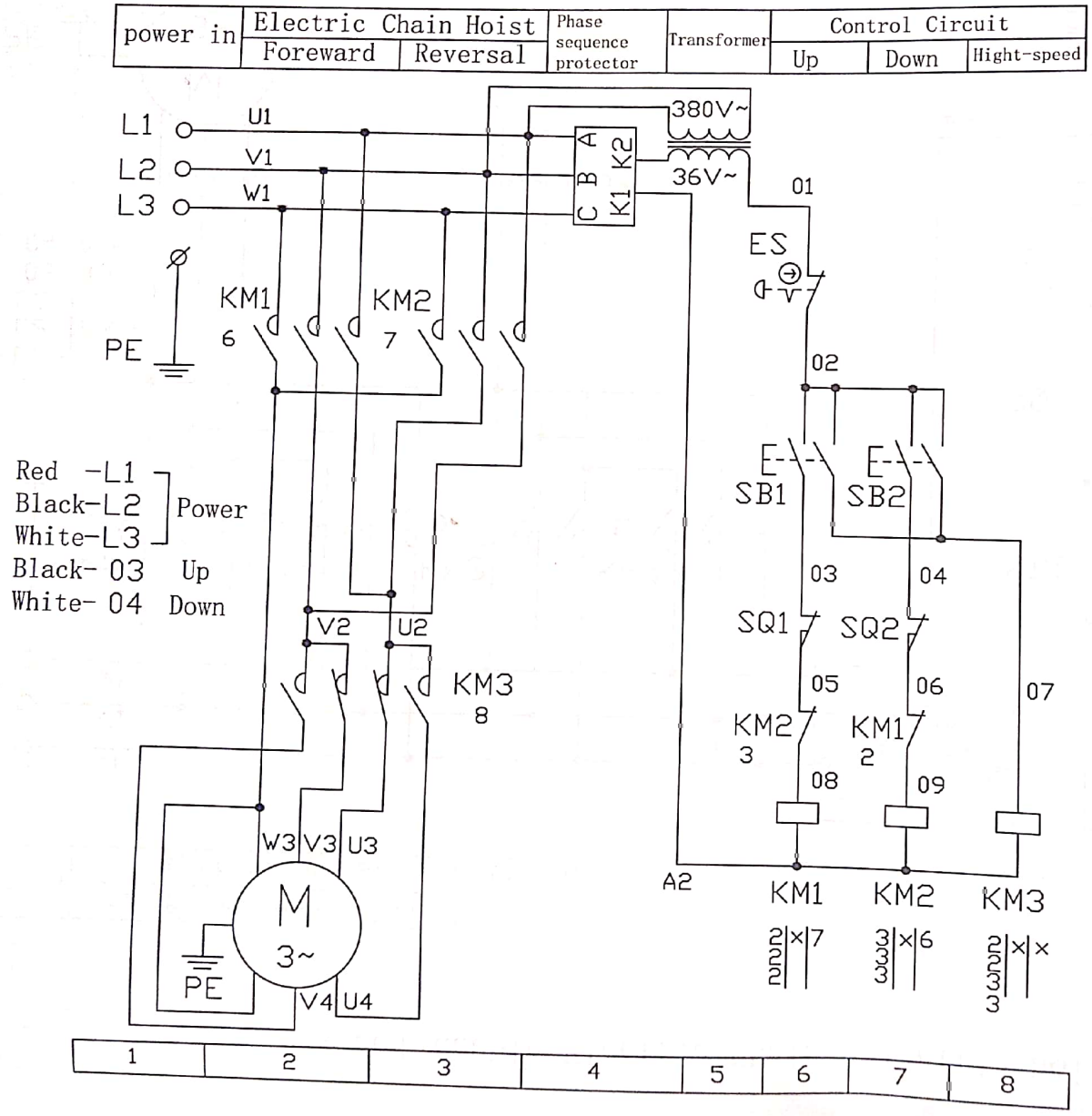
Sign	Name	Sign	Name
	Main contact		Heat element driving
	Coil		Closed auxiliary contact
	Normally closed auxiliary contact		
	Limit switch		
	Emergency stop switch		
	Button switch		
M 3~	Single speed motor		
	Transformer		
C B A K1 K2	Phase sequence protector		
	Protective Earthing		

Single speed (double Electric Chain)electric hoist electrical diagram



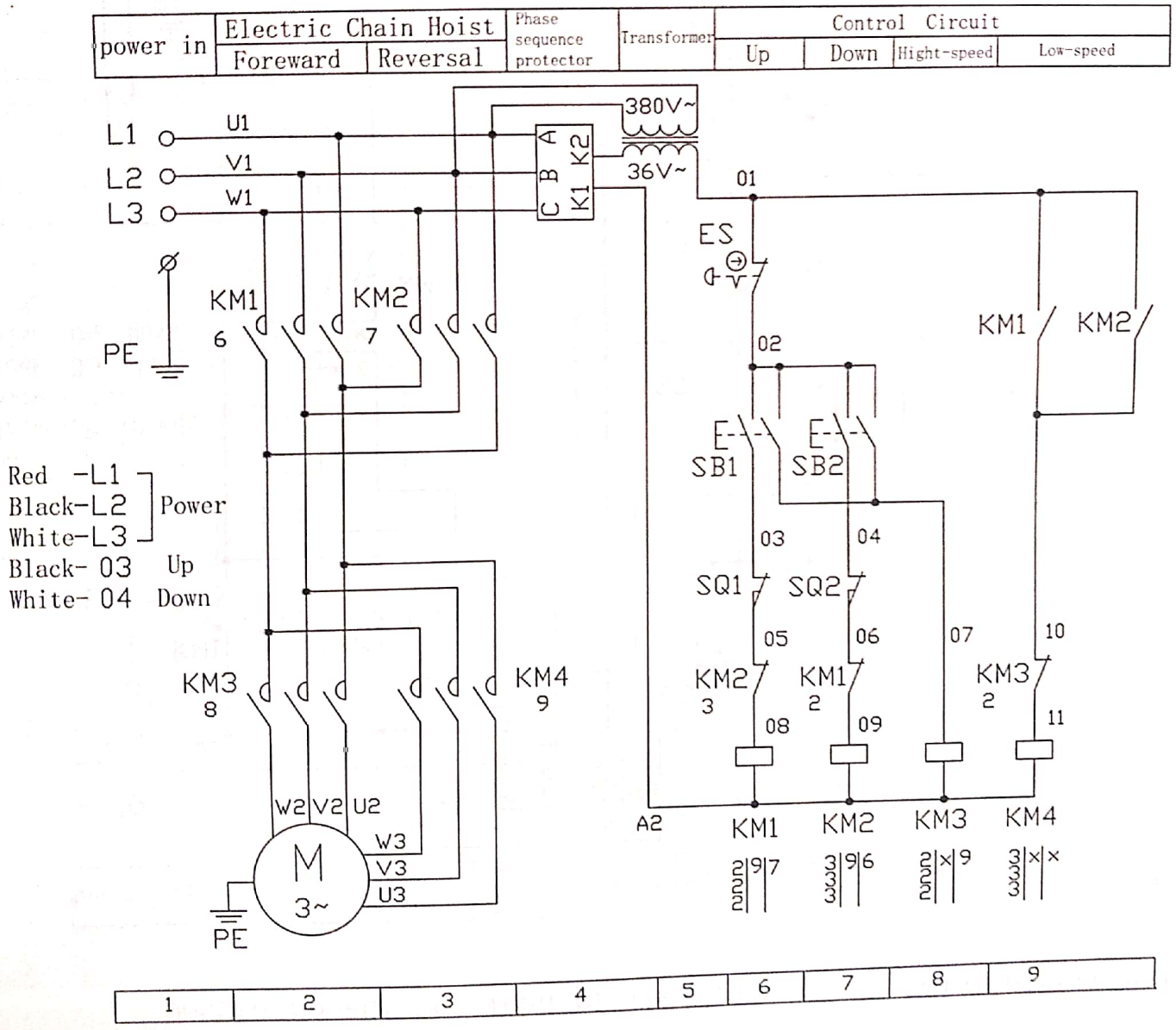
Sign	Name
	Main contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Button switch
M 3~	Single speed motor
	Transformer
C B A K1 K2	Phase sequence protector
	Protective Earthing

Double speed electric hoist electrical diagram



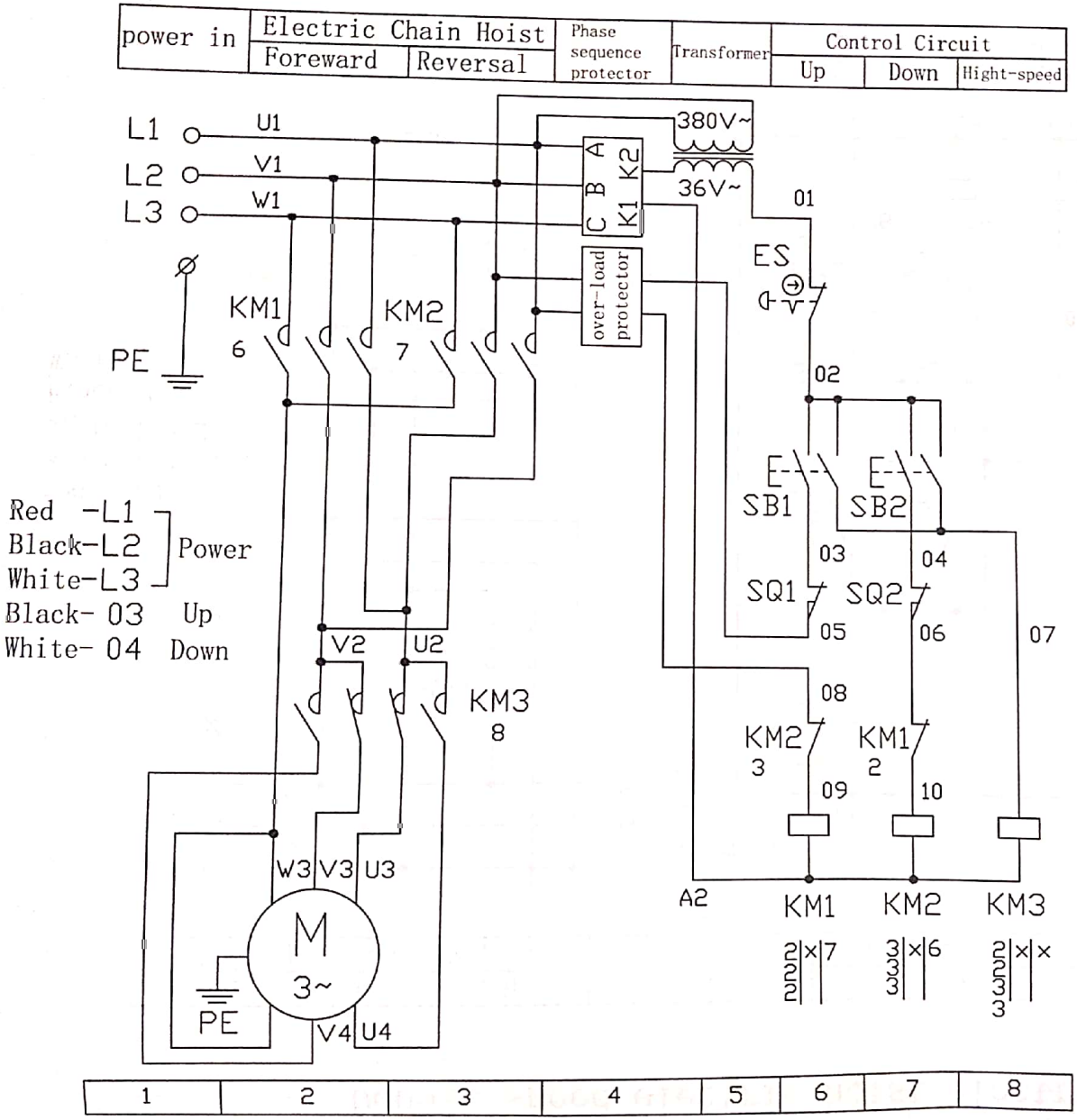
Sign	Name
	Main contact
	Closed contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Double Button switch
	Double speed motor
	Transformer
	Phase sequence protector
	Protective Earthing

Double speed electric hoist electrical diagram



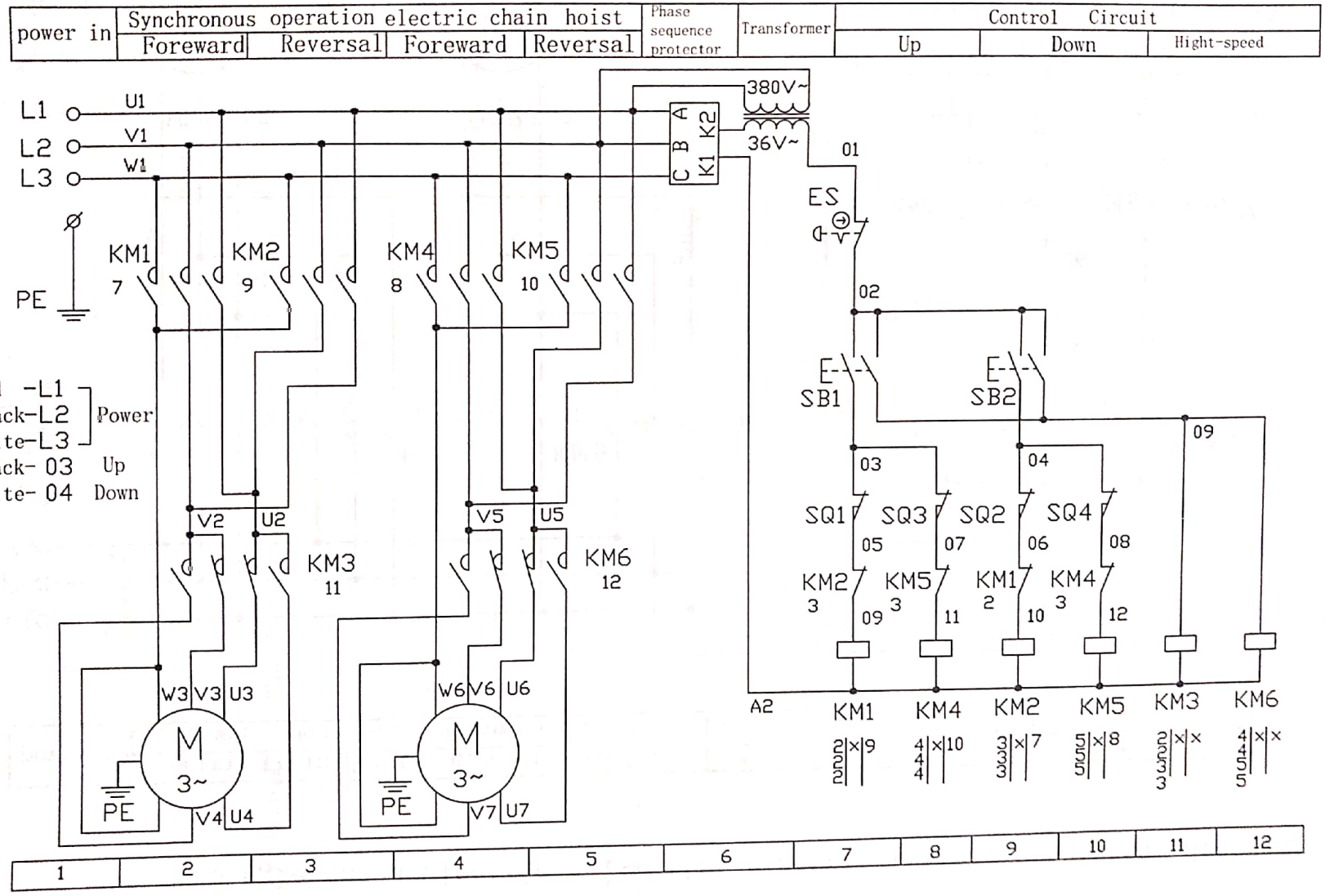
Sign	Name
	Main contact
	Normally opened auxiliary contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Double Button switch
	Double speed motor
	Transformer
	Phase sequence protector
	Protective Earthing

Double speed(over-load protector)electric hoist electrical diagram



Sign	Name
	Main contact
	Closed contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Double Button switch
	Double speed motor
	Transformer
	Phase sequence protector
	Protective Earthing
	over-load protector

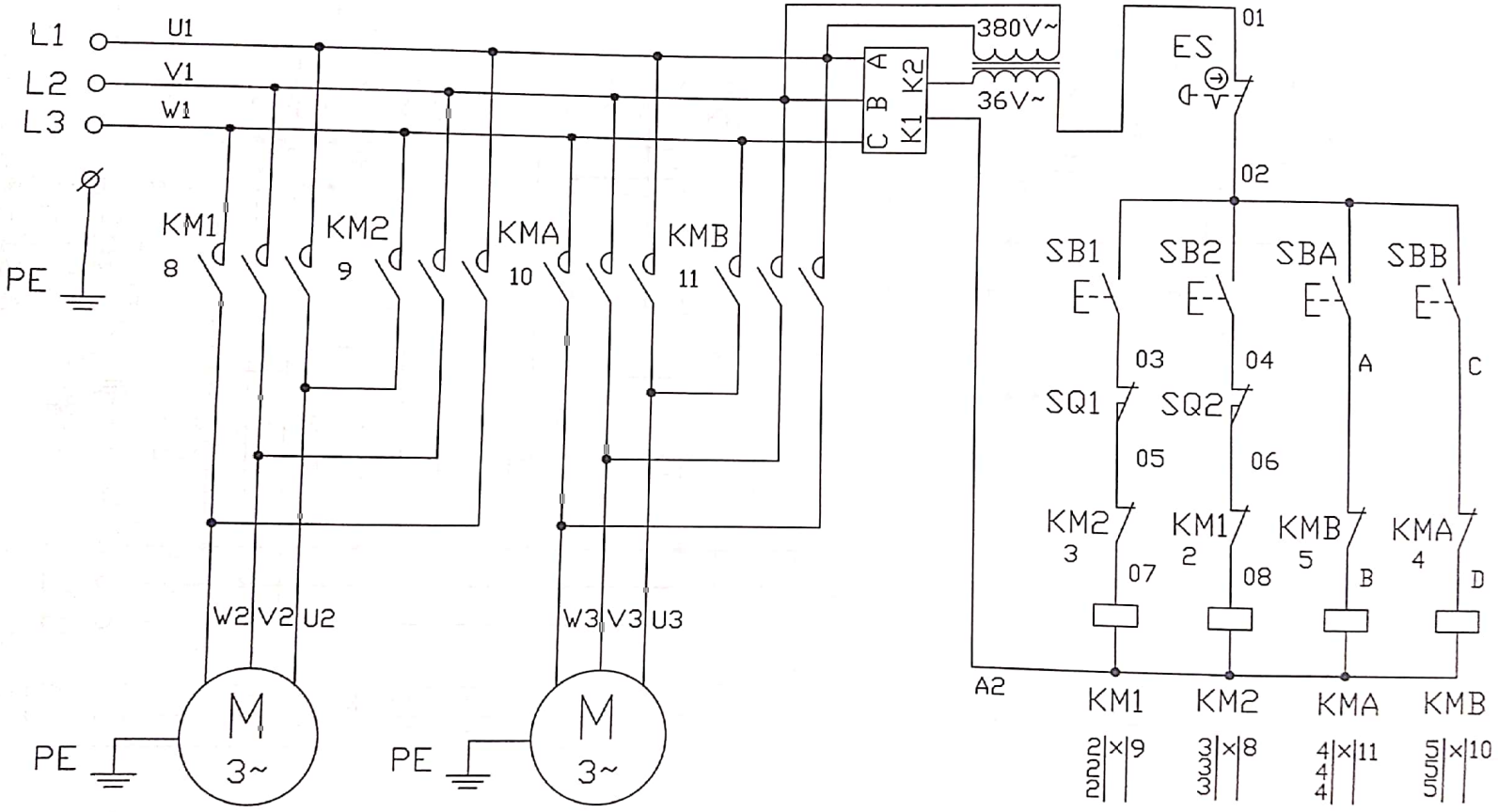
Double speed(Double Electric Chain)electric hoist electrical diagram



Sign	Name
	Main contact
	Closed contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Double Button switch
	Double speed motor
	Transformer
	Phase sequence protector
	Protective Earthing

Single speed electric hoist with electric Trolley electrical diagram

power in	Electric Chain Hoist		Electric Trolley		Phase sequence protector	Transformer	Control Circuit		Control Circuit	
	Foreward	Reversal	Foreward	Reversal			Up	Down	Left	Right



1	2	3	4	5	6	7	8	9	10	11

Sign	Name
	Main contact
	Coil
	Normally closed auxiliary contact
	Limit switch
	Emergency stop switch
	Button switch
M 3~	Single speed motor
	Transformer
C B A K1 K2	Phase sequence protector
	Protective Earthing

Problems and suggested solutions

Problems	Causes	Suggested solutions
The hoist doesn't work	(1) Phase position protector is on due to its wrong connection of power cables.	Exchange the two power cables of phase position.
	(2) Power fuse is blown or nofuse switch is on.	Does the current meet the requirement? If not, replace the fuse or re-switch on the no-fuse.
	(3) Circuit-controlling fuse has blown.	Is the fuse in good condition? If not, replace it.
	(4) Power cables or circuit-controlling wire is broken or poor-connected.	Repair or replace the broken or poorcontacting wire.
	(5) Voltage is very low.	Make sure voltage value is not 10% lower than standard one.
	(6) There is sound emmiting from electric motor but motor is not operational.	Is phase position is correct? If not, repair and insulate it.
	(7) Emergency switch (if installed) is on.	Locate the reason why it is on.
	(8) There is something wrong with contactor.	Operate the hoist by hand. ● If it works, controlling coil or wire is in poor contact; find out the corresponding position and repair it. ● If it fails to work, check if major power is in good condition. If yes, contactor is poor and needs to be replaced.
	(9) The contactor loop has shortcircuited	Replace the contactor.
The brake glides.	It wears away.	Replace the brake block.
Abnormal sounds emmiting from load-chain or down-hook.	(1) The chain is not well lubricated. (2) The idler pulley wears away.	(1) Lubricate it. (2) Replace the load chain and the idler pulley.
Electricity leaks.	(1) Poor grounding. (2) Hoist parts are too dusty or moist.	(1) Use grounding wire. (2) Keep them clean and dry.
Oil leaks.	(1) No oil plug. (2) Oil plug looses. (3) No oil-plug rubber gasket. (4) The rubber gasket wears away.	(1) Install a proper plug. (2) Tighten the plug. (3) Insert a proper rubber gasket. (4) Replace it with a new one.

VIII. Safety Devices and Machinery Scales and Expectancy

1. Safety Devices

1) The Electromagnetic Brake

Electromagnetic brake is featured by its unique brake design. It immediately operates when power cuts off (even if the hoist is fully-loaded).

2) The Mechanical Load Brake

The mechanical load brake effectively prevents the hoist descending too fast even if fully loaded. The Mechanical Load Brake operates independently so if the Electromagnetic Brake fails the Mechanical Load Brake will still function.

3) Hook and Safety Tongue

The hook is constructed of anti-pull and heat-treated steel and meets required standards. The lower-hook can turn 360 degree; its tongue provides a guarantee for safety.

4) The Back-Phase Protector

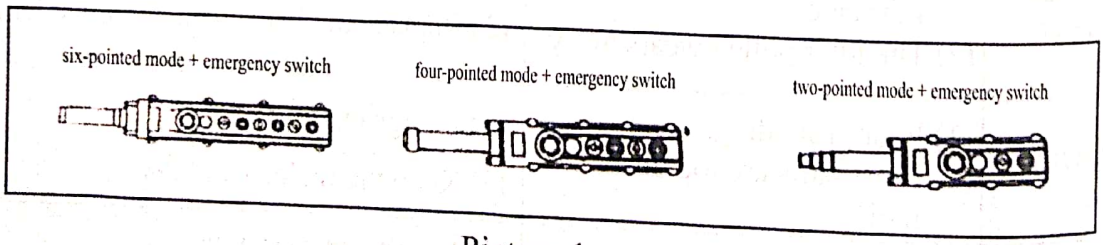
The back-phase protects the motor from overheating in the case of wrong phase position.

5) Limit Switch

The power will cut off automatically when the hoist ascends or descends to its limit.

6) The Emergency-Stop Switch (if selected)

This switch is used to stop the hoist in an emergency. The red and mushroom-shaped switch is located on the top of the switch controller. When pressed and held down, the power will be cut off and the switch will be locked. A clockwise-turn can unlock it and restart the hoist. (See picture 1)



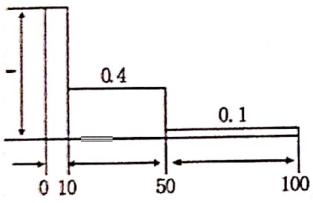
Picture 1

Machinery Scale and Continual Operational Requirements

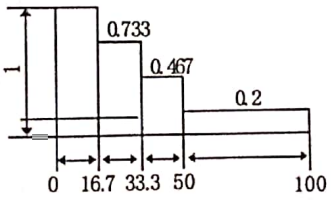
To ensure continued operation and safety of the electric chain hoist, please refer to the following for maintaining operations:

Machinery scale table

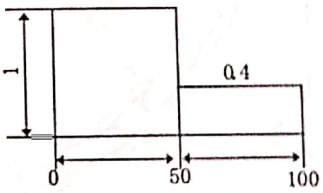
Load status	Definition	Cube value	Average working hours per day		
1 Slight	Usually the hoist is slight-loaded but occasionally it is up to maximum.	K≤0.50	0.25-0.5	0.5-1	1-2
2 Moderate	The hoist is often slight-loaded but frequently it is up to maximum.	0.50<K≤0.63	0.12-0.25	0.25-0.5	0.5-4
3 Heavy	The hoist is often moderate-loaded but frequently it is up to maximum.	0.63<K≤0.80	≤0.12	0.12-0.25	0.25-0.5
4 Overweight	The hoist is often (or almost) loaded up to maximum.	0.80<K≤1.00		≤0.12	0.12-0.25
			1Dm	1Cm	1Bm



Operating hours and load status 1



Operating hours and load status 2



Operating hours and load status 3

Operating hours and load status 4

Selection datum of motor

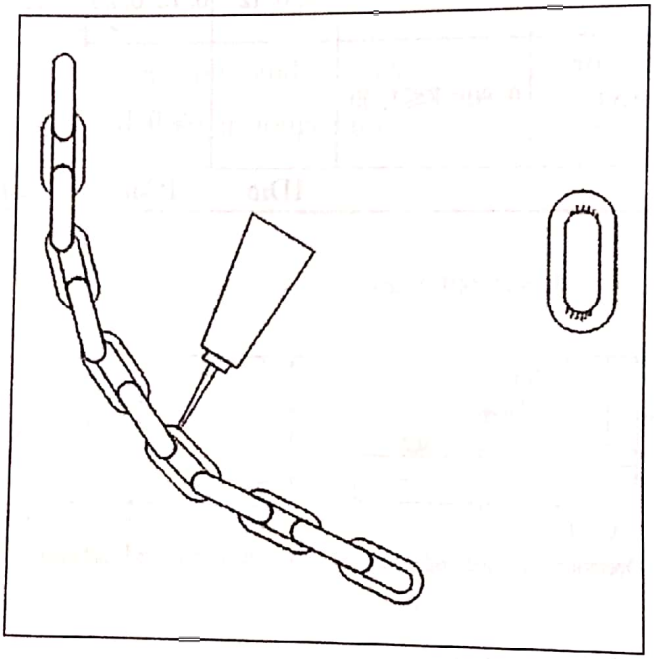
Group		Intermittent Service			Short-Time
F.E.M	ISO	Cycles/h	Starts/h	(ED%)	Operating
1Dm	M1	15	90	15	7.5
1Cm	M2	20	120	20	7.5
1Bm	M3	25	250	25	15
1Am	M4	30	180	30	15
2m	M5	40	240	40	30
3m	M6	50	300	50	30
4m	M7	60	360	60	60
5m	M8	60	360	60	60

IX. The do's and don'ts

Lubricating loaded chain

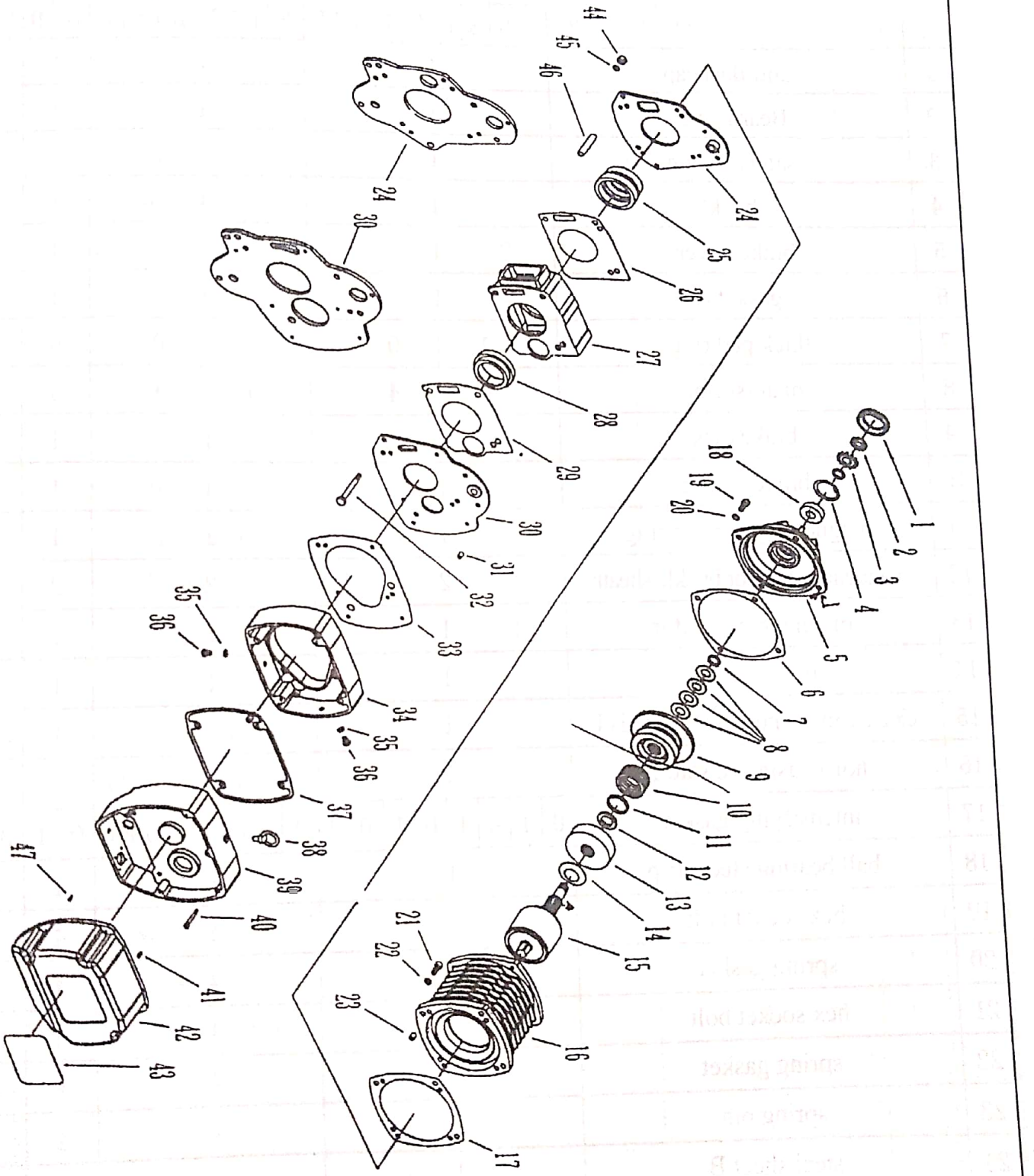
Lubrication is a key factor determining chain's life span, therefore it is necessary to lubricate the chain on a regular basis.

1. Hang the unload chain freely.
2. Clean dust and water on the chain.
3. As showed in the following picture, lubricate the chain joints and load wheels/ unload wheels, then lift or descend the unload chain to ensure its even lubrication.



X. Diagrams and Parts

1. Hoist Casing and Electric Motor



1. Hoist Casing and Electric Motor

T_2 Chain numbers
S: Single-speed model
D: Double-speed model

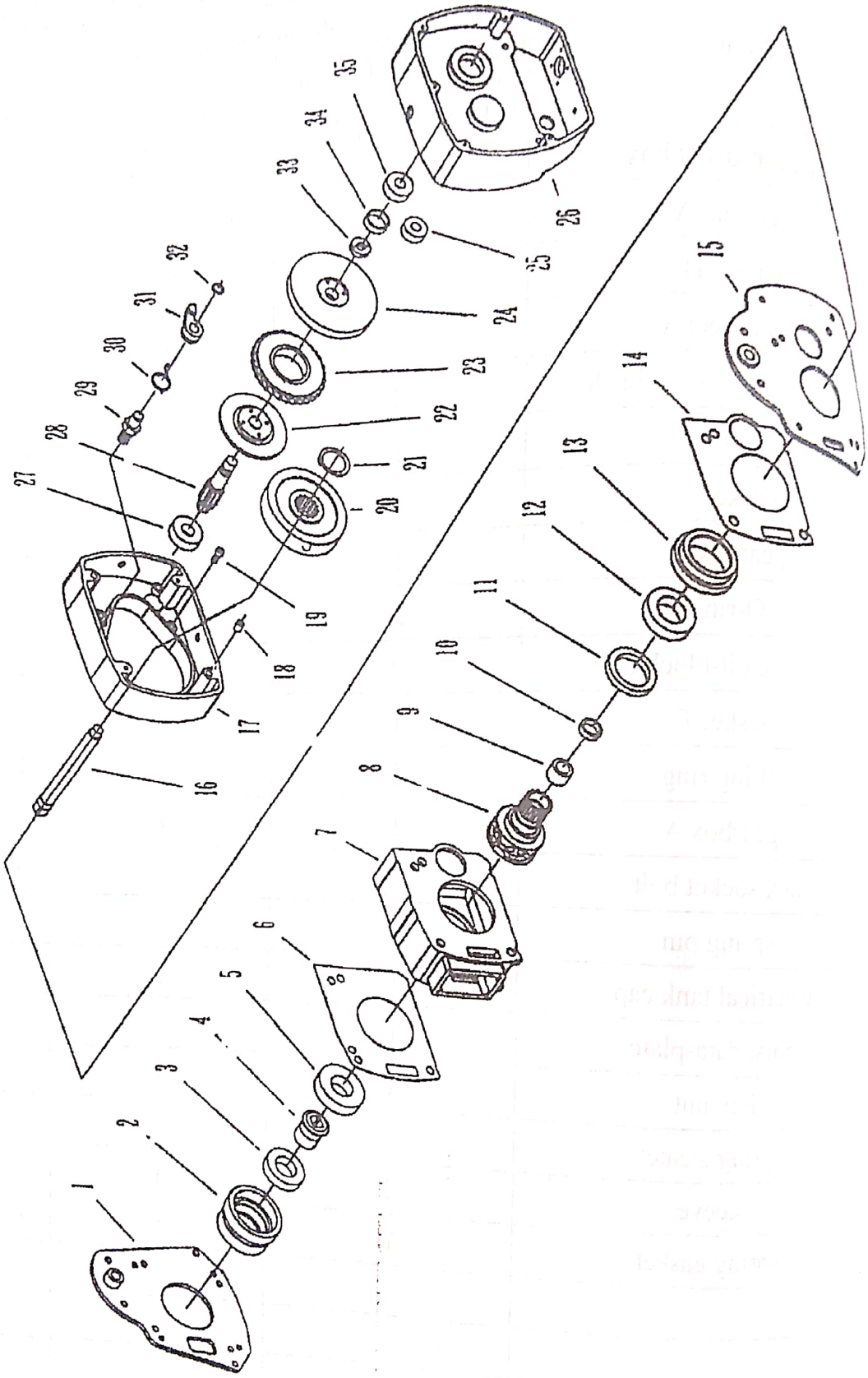
No.	Name	Amount for each hoist																	
		0.5T_2		1T_2		2T_2		2.5T_2		2T_2		3T_2		5T_2		7.5T_2		10T_2	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	anti-dust cap	1								1						1		2	
2	Bearing nut	1								1						1		2	
3	safety button	1								1						1		2	
4	c-buckle	1								1						1		2	
5	brake cover	1								1						1		2	
6	gasket A	1								1						1		2	
7	thick pad ring	1			0					1			0			0		0	
8	plate-spring	0			4					0			4			4		8	
9	brake disk	1								1						1		2	
10	brake spring	1								1						1		2	
11	magnetic generator ring	1								1						1		2	
12	magnetic generator buckle sheath	2								2						2		2	
13	magnetic generator	1								1						1		2	
14	plate-spring	1								1						1		2	
15	electric machinery rotor & axis I	1								1						1		2	
16	hoist casing & stator	1								1						1		2	
17	intensifying gasket	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
18	ball bearing steel strip	1								1						1		2	
19	hex socket bolt	4								4						4		8	
20	spring gasket	4								4						4		8	
21	hex socket bolt	4								4						4		8	
22	spring gasket	4								4						4		8	
23	spring pin	1								1						1		2	
24	steel sheet B	1								1						1		2	
25	104 pedestal support B	1								1						1		2	
26	gasket C	1								1						1		2	

1. Hoist Casing and Electric Motor

T_2 Chain numbers
S: Single-speed model
D: Double-speed model

No.	Name	Amount for each hoist																	
		0. $5T_1$		$1T_1$		$2T_1$		2. $8T_1$		$2T_2$		$3T_2$		$5T_2$		7. $5T_3$		$10T_4$	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
27	chain sprocket box	1								1						1		2	
28	pedestal A	1								1						1		2	
29	gasket D	1								1						1		2	
30	steel sheet A	1								1						1		2	
31	upper hook bearing bush	2								2						2		4	
32	hex bolt	4								4						4		8	
33	gasket E	1								1						1		2	
34	gearbox B	1								1						1		2	
35	O-ring	2								2						2		4	
36	slot-type oil-block blot	2								2						2		4	
37	gasket-E	1								1						1		2	
38	lifting ring	1								1						1		2	
39	gearbox A	1								1						1		2	
40	hex socket bolt	4								4						4		8	
41	spring pin	1								1						1		1	
42	electrical tank cap	1								1						1		2	
43	hoist data-plate	1								1						1		2	
44	hex nut	4								4						4		8	
45	spring gasket	4								4						4		8	
46	sleeve	4								4						4		8	
47	spring gasket	1								1						1		1	

2. Gear Structure（Double brake system）



2. Gear Structure（Double brake system）

T_2 Chain numbers
S: Single-speed model
D: Double-speed model

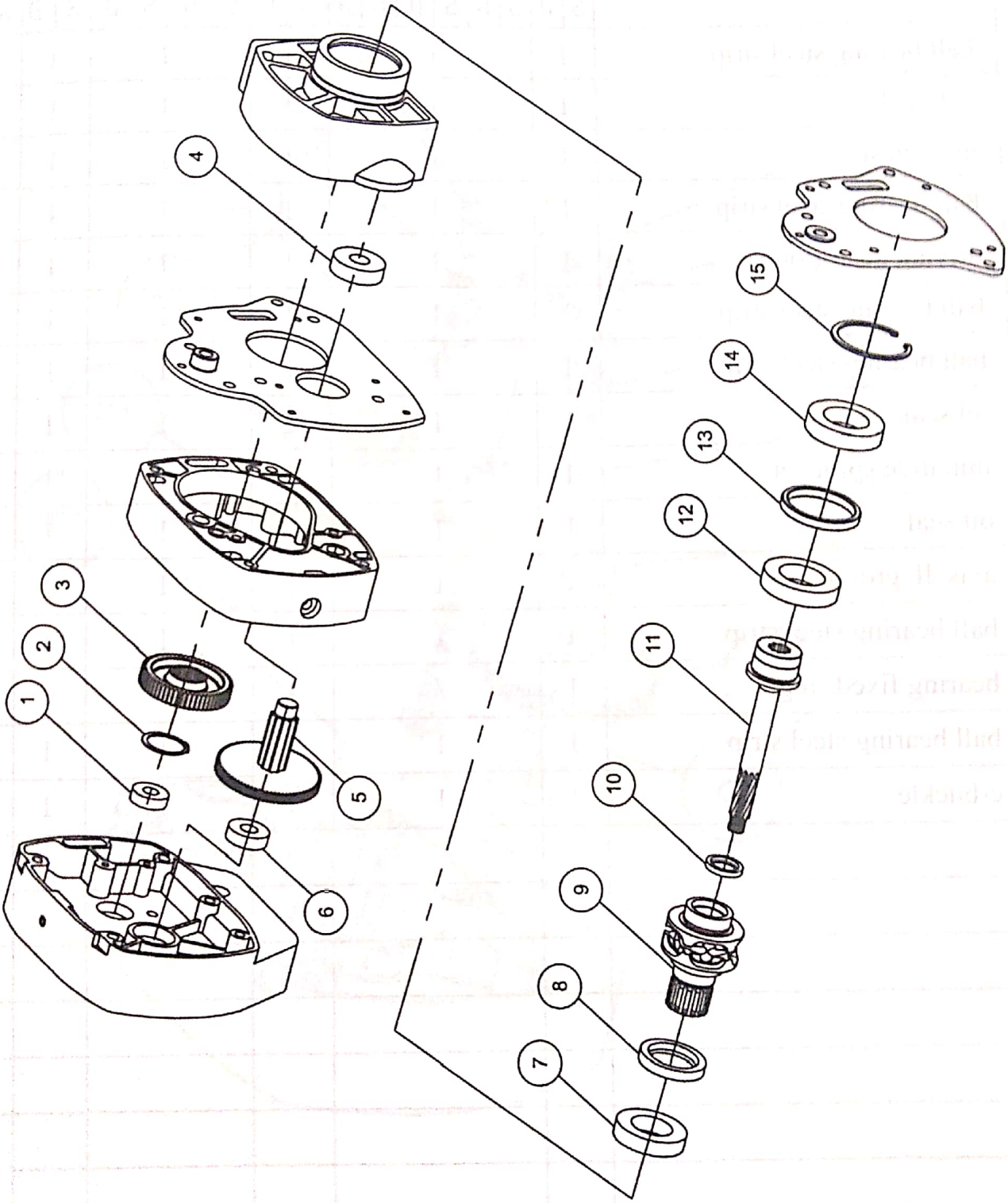
No.	Name	Amount for each hoist																	
		0.5T_1		1T_1		2T_1		2.8T_1		2T_2		3T_2		5T_2		7.5T_3		10T_4	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	steel sheet B	1								1						1		2	
2	104 pedestal support B	1								1						1		2	
3	ball bearing steel strip	1								1						1		2	
4	connecting seat	1								1						1		2	
5	ball bearing steel strip	1								1						1		2	
6	gasket C	1								1						1		2	
7	sprocket box	1								1						1		2	
8	initiative sprocket	1								1						1		2	
9	O-ring	1								1						1		2	
10	oil seal	1								1						1		2	
11	oil seal	1								1						1		2	
12	ball bearing steel strip	1								1						1		2	
13	pedestal A	1								1						1		2	
14	gasket D	1								1						1		2	
15	steel sheet A	1								1						1		2	
16	axis II	1								1						1		2	
17	gearbox B	1								1						1		2	
18	hollow pin	1								1						1		2	
19	hex socket bolt	1								1						1		2	
20	main gear	1								1						1		2	
21	C-buckle	1								1						1		2	
22	brake pan	1								1						1		2	
23	brake ratchet	1								1						1		2	
24	brake driving gear	1								1						1		2	
25	ball bearing steel strip	1								1						1		2	
26	gearbox A	1								1						1		2	

T_2 Chain numbers
S: Single-speed model
D: Double-speed model

2. Gear Structure（Double brake system）

No.	Name	Amount for each hoist																	
		0.5T_1		1T_1		2T_1		2.8T_1		2T_2		3T_2		5T_2		7.5T_3		10T_4	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
27	ball bearing steel strip	1								1						1		2	
28	axis III	1								1						1		2	
29	tripping pawl axis	1								1						1		2	
30	torque spring	1								1						1		2	
31	tripping pawl	1								1						1		2	
32	C-buckle	1								1						1		2	
33	buckle sheath of axis III	1								1						1		2	
34	buckle of axis III	1								1						1		2	
35	ball bearing steel strip	1								1						1		2	

2. Gear Structure (single break system of single speed hoist)

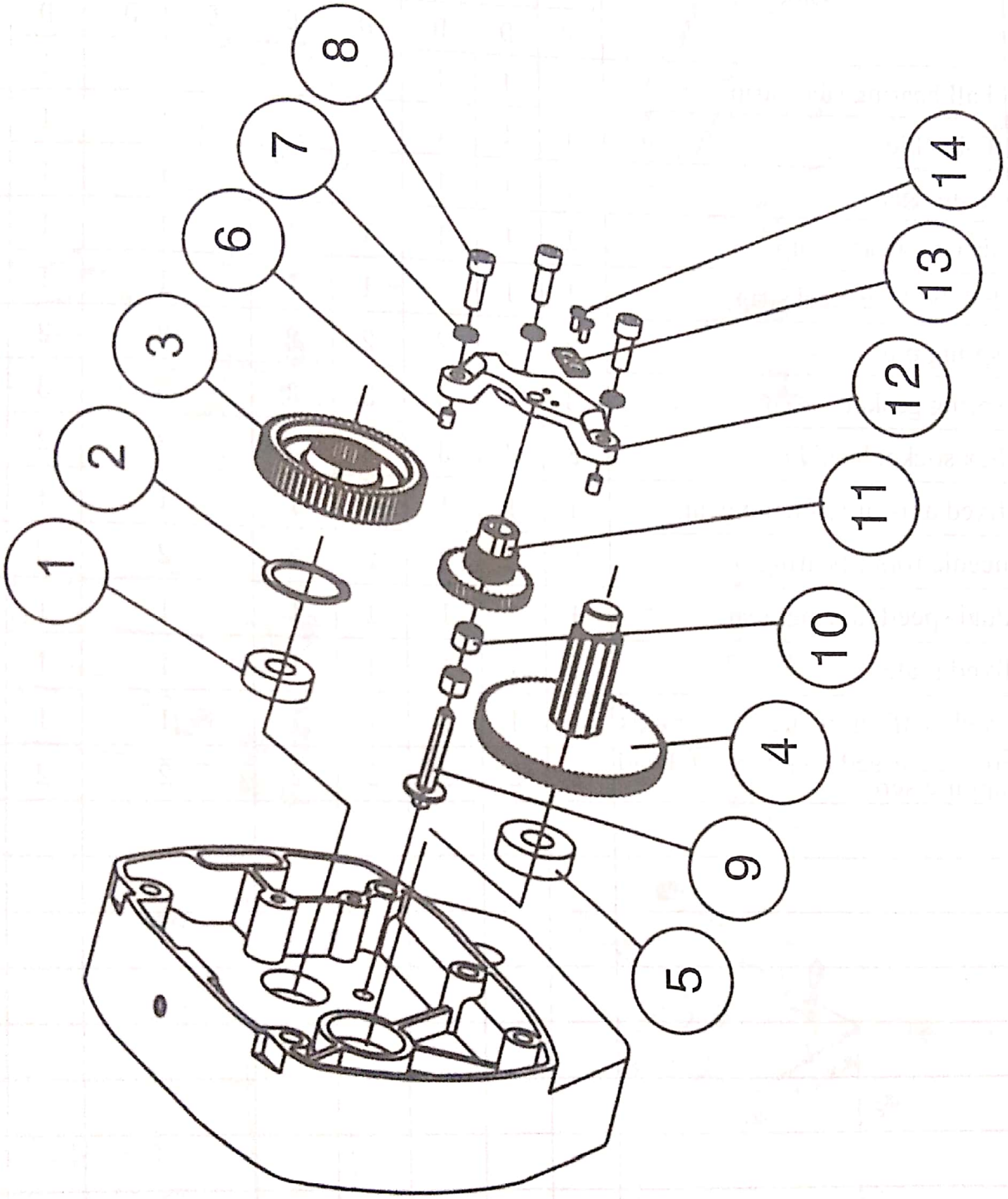


T_2 Chain numbers
S: Single-speed model
D: Double-speed model

2. Gear Structure (single break system of single speed hoist)

NO	Name	Amount for each hoist															
		0. $5T_1$		$1T_1$		$2T_1$		$3T_1$		$2T_2$		$3T_2$		$5T_2$		7. $5T_2$	10T
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	ball bearing steel strip	1		1						1		1				1		2	
2	C-buckle	1		1						1		1				1		2	
3	main gear	1		1						1		1				1		2	
4	ball bearing steel strip	1		1						1		1				1		2	
5	driving gear group	1		1						1		1				1		2	
6	ball bearing steel strip	1		1						1		1				1		2	
7	ball bearing steel strip	1		1						1		1				1		2	
8	oil seal	1		1						1		1				1		2	
9	initiative sprocket	1		1						1		1				1		2	
10	oil seal	1		1						1		1				1		2	
11	axis II group	1		1						1		1				1		2	
12	ball bearing steel strip	1		1						1		1				1		2	
13	bearing fixed ring	1		/						1		/				/		/	
14	ball bearing steel strip	1		1						1		1				1		2	
15	c-buckle	1		1						1		1				1		2	

2. Gear Structure (single break system of dual speed hoist)

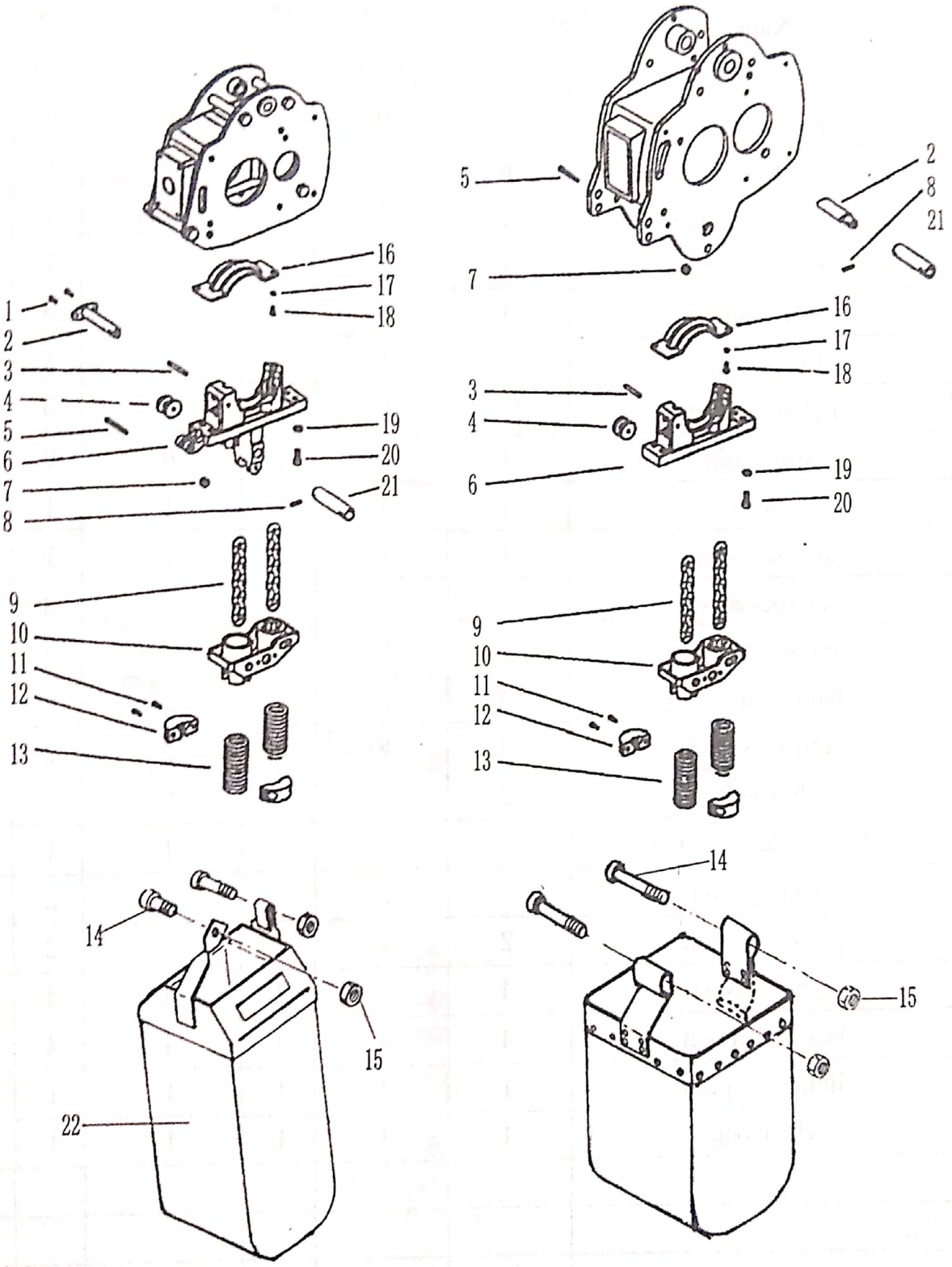


T_2: Chain numbers
D: Double-speed model

2. Gear Structure (single break system of dual speed hoist)

NO	Name	Amount for each hoist								
		0. $5T_1$	$1T_1$	$2T_1$	$3T_1$	$2T_2$	$3T_2$	$5T_2$	7. $5T_3$	$10T_4$
		D	D	D	D	D	D	D	D	D
1	ball bearing steel strip	1	1	1	1	1	1		1	2
2	C-buckle	1	1	1	1	1	1		1	2
3	main gear	1	1	1	1	1	1		1	2
4	driving gear group	1	1	1	1	1	1		1	2
5	ball bearing steel strip	1	1	1	1	1	1		1	2
6	spring pin	2	2	2	2	2	2		2	4
7	spring gasket	3	3	3	3	3	3		3	6
8	hex socket head bolt	3	3	3	3	3	3		3	6
9	fixed axis of reducing gear	1	1	1	1	1	1		1	2
10	needle roller bearing	2	2	2	2	2	2		2	4
11	dual speed driving gear	1	1	1	1	1	1		1	2
12	fixed plate	1	1	1	1	1	1		1	2
13	fixed platform reducing gear axis	1	1	1	1	1	1		1	2
14	cross recessed countersunk head tapping screw	2	2	2	2	2	2		2	4

3. Chain group



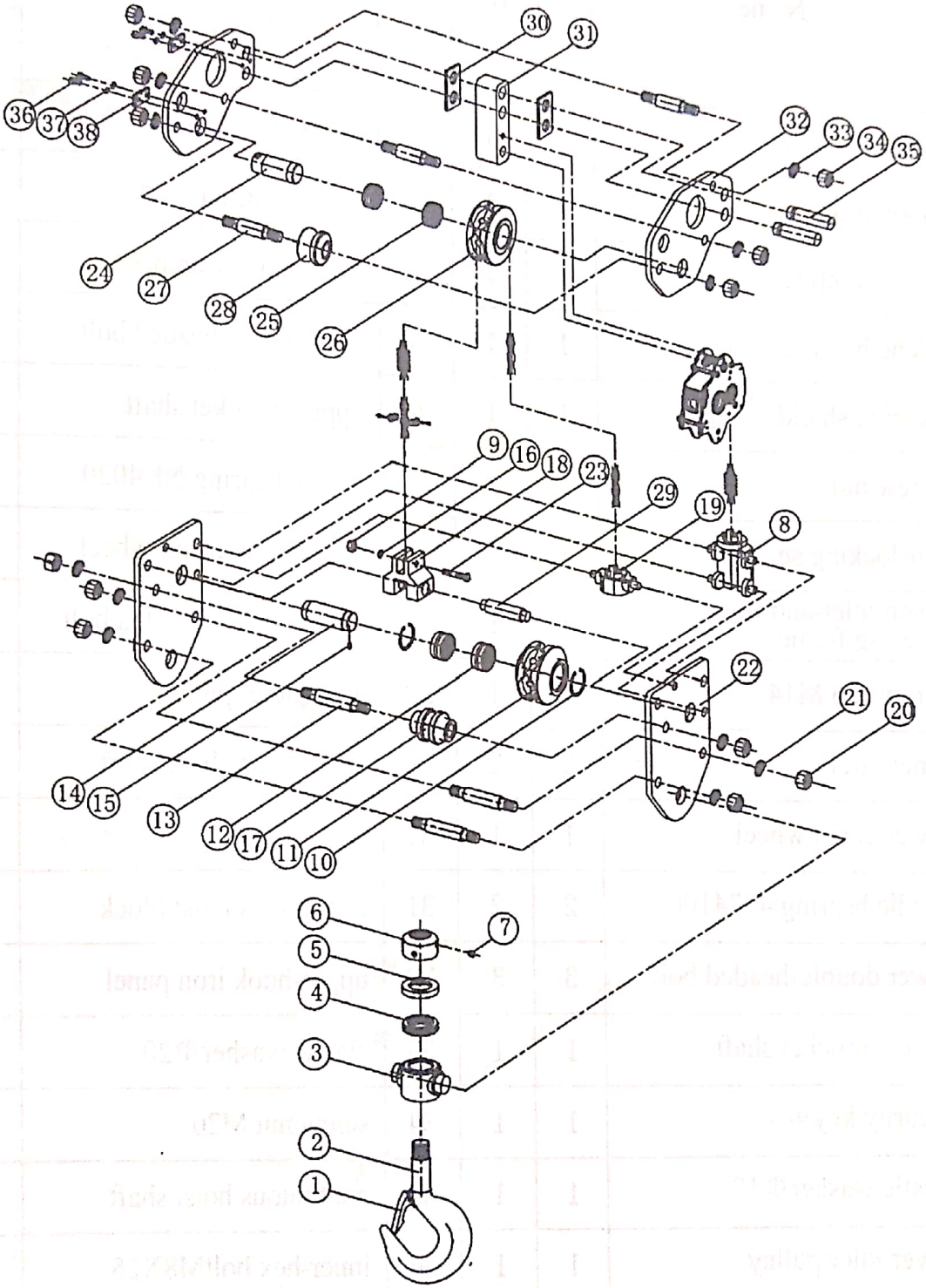
3. Chain group

T_2 Chain numbers
S: Single-speed model
D: Double-speed model

No.	Name	Amount for each hoist															
		0. $5T_1$		$1T_1$		$2T_1$		2. $8T_1$		$2T_2$		$3T_2$		$5T_2$		7. $5T_3$	10T_4
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	hex socket bolt	2			0			2		0			0			0	0		
2	limit linkage B	0			1			0		1			1			1	2		
3	guide wheel axis	1			1			1		1			1			1	2		
4	guide wheel	1			1			1		1			1			1	2		
5	hex bolt	1			0			1		0			0			0	0		
6	limit socket	1			1			1		1			1			1	2		
7	nylon lock nut	1			0			1		0			0			0	0		
8	spring pin	1			0			1		0			0			0	0		
9	chain	1			1			1		1			1			1	2		
10	guide slot socket	1			1			1		1			1			1	2		
11	hex socket bolt	2			2			4		2			2			2	4		
12	chain- stop cube	2			2			4		2			2			2	4		
13	chain-stop spring	2			2			3		3			2			6			
14	anti-loose nut	2			2			2		2			2			2	4		
15	hex bolt	2			2			2		2			2			2	4		
16	chain fairleader cover	1			1			1		1			1			1	2		
17	spring gasket	2			2			2		2			2			2	4		
18	peen cross bolt	2			2			2		2			2			2	4		
19	spring gasket	4			4			4		4			4			4	8		
20	hex socket bolt	4			4			4		4			4			4	8		
21	limit linkage B	1			1			1		1			1			1	2		
22	chain bag	1			1			1		1			1			1	2		

4. Hook group

VIII-2B Diagram of Hook group (7.5T)

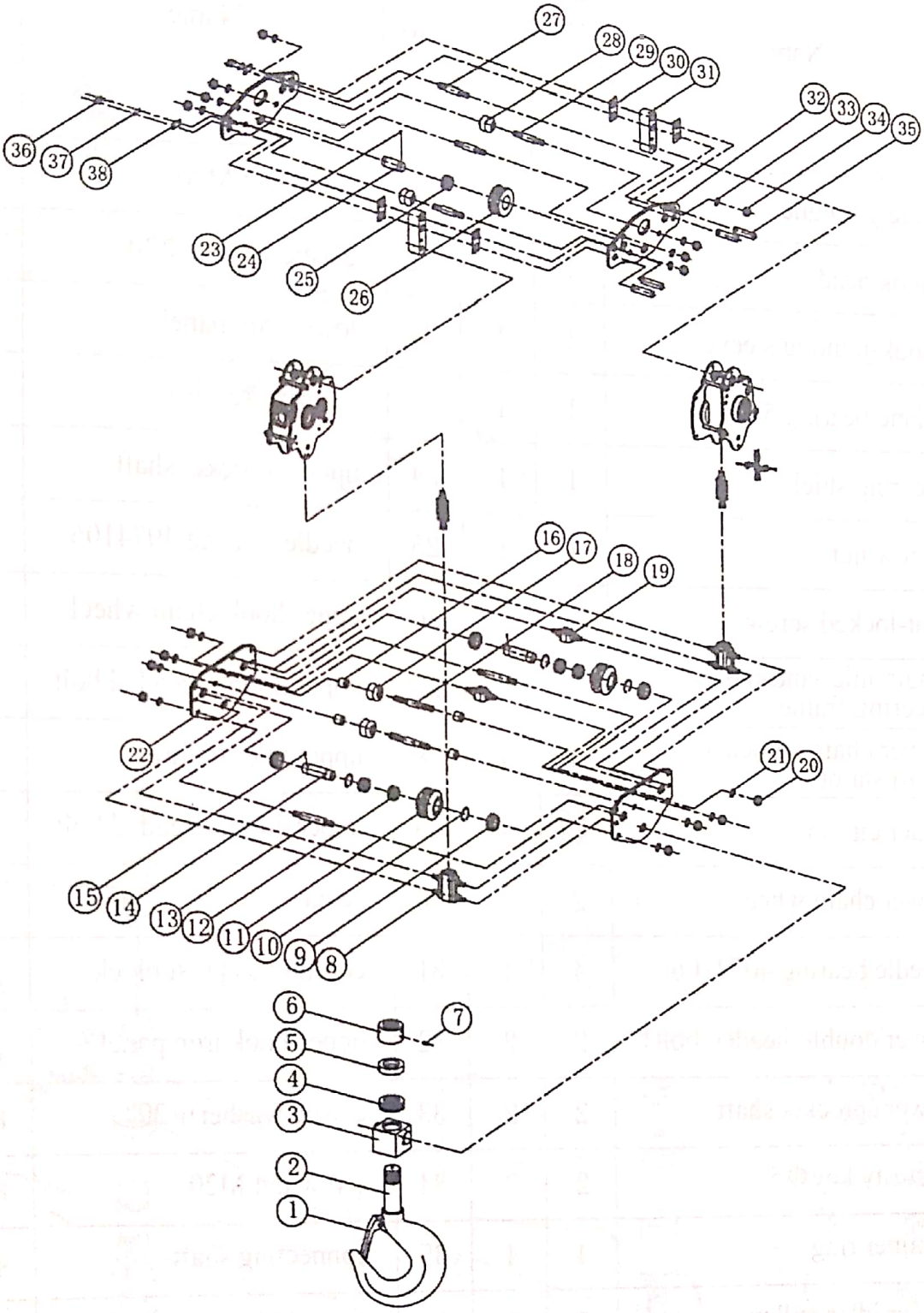


VIII-2B Parts of hook group (7.5 T)

S: Single speed D: Double speed

No.	Name	Amount for each model		No.	Name	Amount for each model	
		7. 5T				7. 5T	
		S	D			S	D
1	safety tongue	1	1	20	screw nut M20	6	6
2	hook head	1	1	21	elastic washer Φ20	6	6
3	hook-jointing sleeve	1	1	22	lower hook iron panel	1	1
4	plane bearing 51109	1	1	23	Φ14 single-headed bolt	1	1
5	bearing shield	1	1	24	upper sprocket shaft	1	1
6	screw nut	1	1	25	needle bearing NK4020	2	2
7	nut-locking screw	1	1	26	upper-hook chain wheel	1	1
8	chain inlet-and-outlet steering frame	1	1	27	upper double-headed bolt	3	3
9	screw cap M14	1	1	28	upper idler pulley	1	1
10	inner circlip	2	2	29	continuous chain shaft	1	1
11	lower chain wheel	1	1	30	septa	2	2
12	needle bearing 4074106	2	2	31	continuous hoist block	1	1
13	lower double-headed bolt	3	3	32	upper-hook iron panel	1	1
14	lower sprocket shaft	1	1	33	elastic washer Φ20	6	6
15	security key Φ5	1	1	34	screw nut M20	6	6
16	elastic washer Φ12	1	1	35	continuous hoist shaft	2	2
17	lower idler pulley	1	1	36	inner-hex boltM8X25	4	4
18	continuous chain block	1	1	37	elastic washer Φ8	4	4
19	steering spacer mouth	1	1	38	stator	2	2

VIII-2C diagram of hook group (10T)

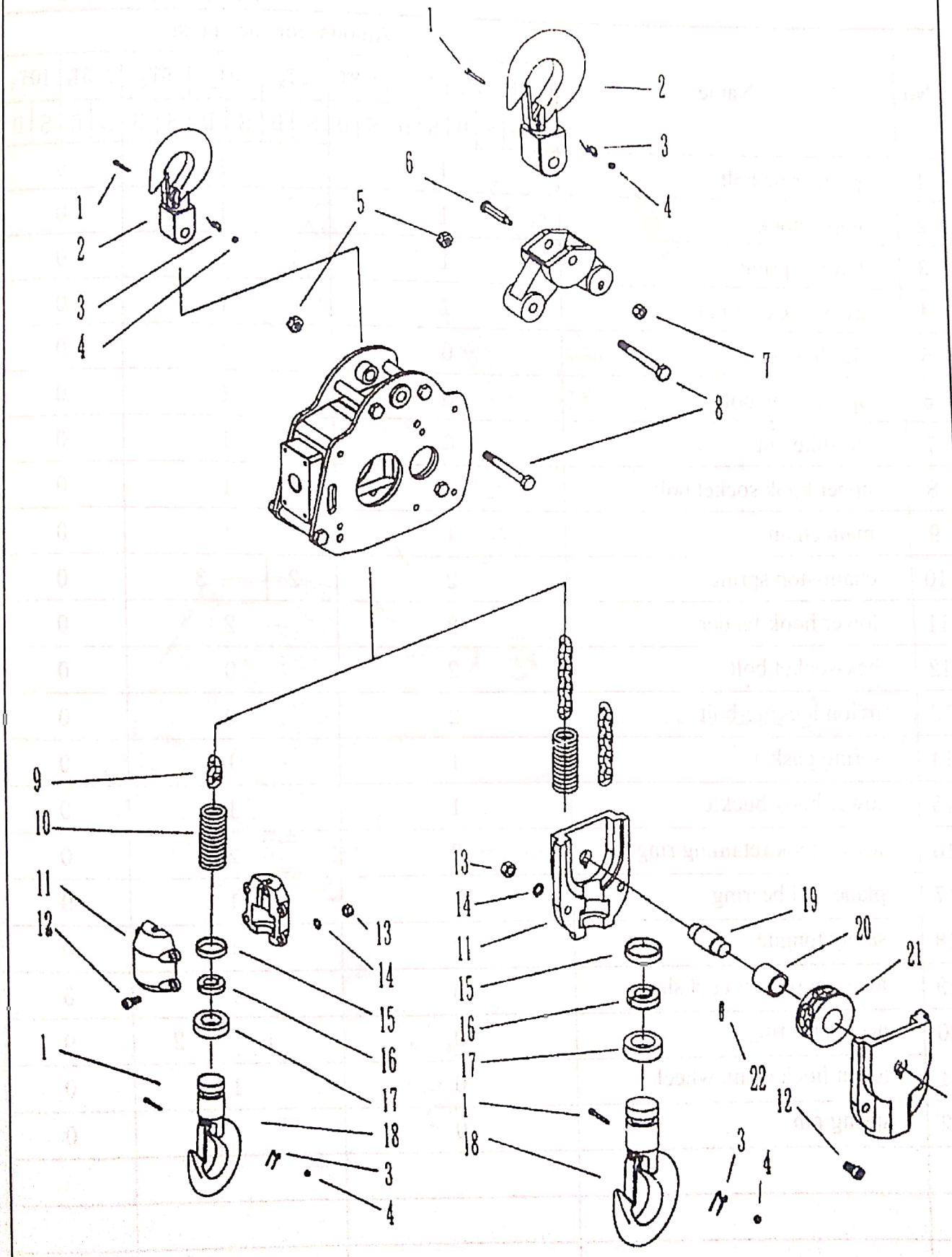


VIII-2C parts of hook group (10T)

S: Single speed D: Double speed

No.	Name	Amount for each model		No.	Name	Amount for each model	
		10T				10T	
		S	D			S	D
1	safety tongue	1	1	20	screw nut M20	8	8
2	hook head	1	1	21	elastic washer Φ20	8	8
3	hook-jointing sleeve	1	1	22	lower iron panel	2	2
4	plane bearing 51213	1	1	23	security key Φ5	1	1
5	bearing shield	1	1	24	upper sprocket shaft	1	1
6	screw nut	1	1	25	needle bearing 4074106	1	1
7	nut-locked screw	1	1	26	upper-hook chain wheel	1	1
8	chain inlet-and-outlet steering frame	2	2	27	upper double-headed bolt	2	2
9	lower chain sprocket shaft stator	4	4	28	upper idler pulley	2	2
10	inner circlip	4	4	29	upper double-headed bolt	2	2
11	lower chain wheel	2	2	30	septa	4	4
12	needle bearing 4074106	4	4	31	continuous hoist block	2	2
13	lower double-headed bolt1	2	2	32	upper-hook iron panel	2	2
14	lower sprocket shaft	2	2	33	elastic washer Φ20	8	8
15	security key Φ5	2	2	34	screw nut M20	8	8
16	retainer ring	4	4	35	connecting shaft	4	4
17	lower idler pulley	2	2	36	screw bolt M8X25	4	4
18	lower double-headed bolt2	2	2	37	elastic washer Φ8	4	4
19	steering spacer mouth	2	2	38	stator	2	2

Hook group

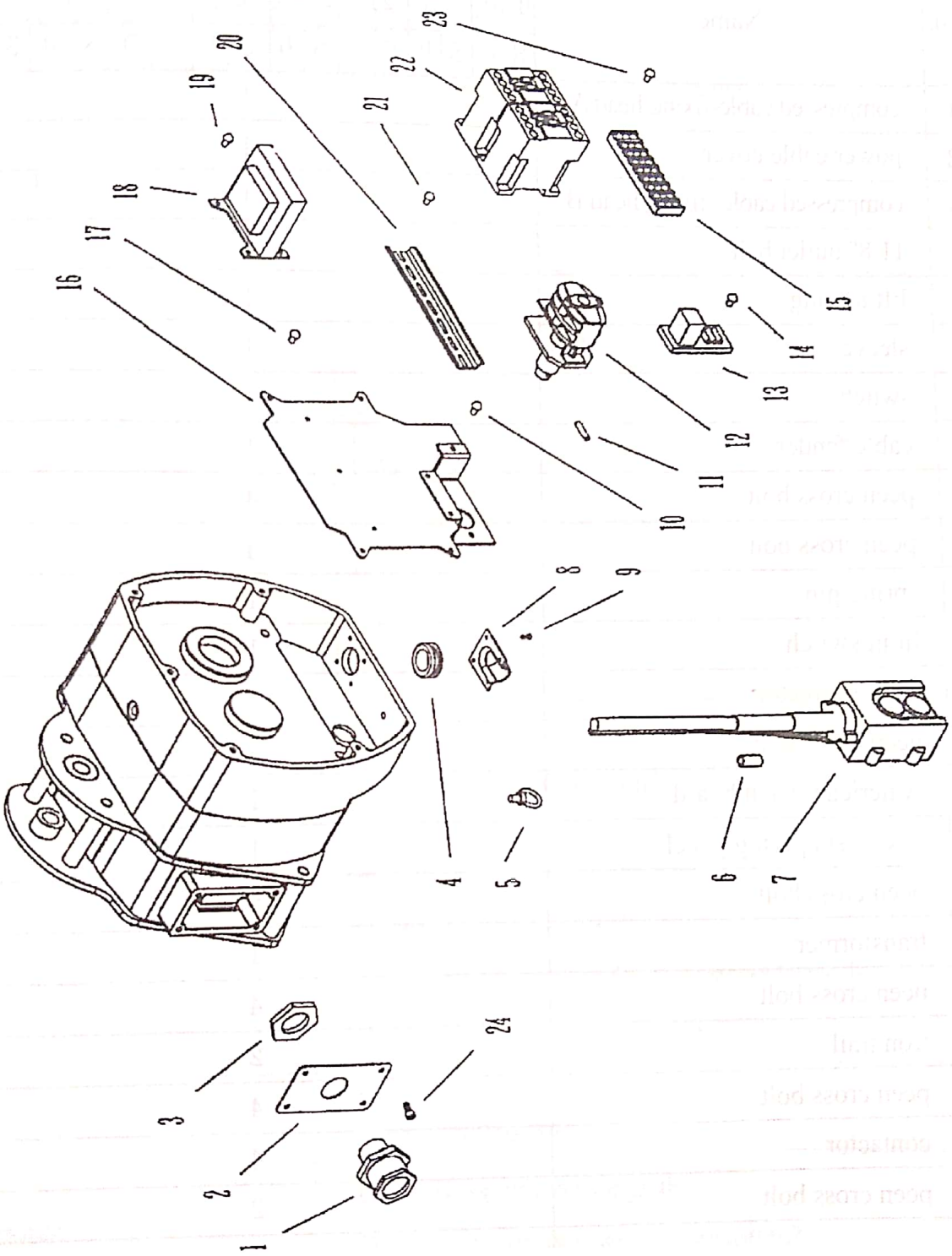


T_2 chain number
S: single-speed mode
D: Double-speed mode

4.Hook group

No.	Name	Amount for each hoist																			
		0.5T_1		1T_1		2T_1		2.8T_1		2T_2		3T_2		5T_2		7.5T_3		10T_3	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	peen cross bolt	1								1						0			
2	upper hook	1								1						0			
3	torque spring	1								1						0			
4	nylon locking-nut	1								1						0			
5	slot-like nut	0								1						0			
6	upper-hook bolt	0								1						0			
7	slot-like nut	0								1						0			
8	upper hook socket bolt	1								1						0			
9	main chain	1								1						0			
10	chain-stop spring	2								2		3				0			
11	lower hook fender	2								2						0			
12	hex-socket bolt	2								0						0			
13	nylon locking-bolt	2								0						0			
14	spring gasket	1								1						0			
15	lower hook buckle	1								1						0			
16	lower hook retaining ring	2								2						0			
17	plane ball bearing	1								1						0			
18	safety tongue	1								1						0			
19	lower hook sprocket shaft	0								1						0			
20	needle bearing	0								1				2		0			
21	lower hook chain wheel	0								1						0			
22	spring pin	0								1						0			

5. Electric appliance group



T_2 chain number
S: single-speed mode
D: Double-speed mode

5. Electric appliance group

No.	Name	Amount for each hoist																	
		0. $5T_1$		$1T_1$		$2T_1$		2. $8T_1$		$2T_2$		$3T_2$		$5T_2$		7. $5T_3$		$10T_4$	
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
1	compressed cable-fixing head A	1																2	
2	power cable cover	1																2	
3	compressed cable- fixing head B	1																2	
4	11/8" outlet ball	1																2	
5	lifting ring	1																2	
6	sleeve	1																1	
7	switch	1																1	
8	cable fender	1																2	
9	peen cross bolt	4																8	
10	peen cross bolt	4																8	
11	spring pin	1																2	
12	limit switch	1																2	
13	back-protector	1																2	
14	peen cross bolt	4																8	
15	American patch board	1																1	
16	power-supplying panel	1																2	
17	peen cross bolt	4																8	
18	transformer	1																2	
19	peen cross bolt	4																8	
20	iron trail	2																4	
21	peen cross bolt	4																8	
22	contactor	4																8	
23	peen cross bolt	2																4	

Notice:
If there are any changes to the technical aspects of the hoist you will not be properly informed of

XI. Lubrication and Replacement

It is important to lubricate or replace parts of the chain and gear box when necessary.

XII. Regular Inspection Timetable

Timetable for daily check of the Electric Chain Hoist

No. Model:

Purchasing date:

Unit: Inspection date:

No.	Section for inspection	Inspection items	Yes √ No ×
1	Motor	Does it show normal under E-class insulation temperature (or 135 degree)?	
2	Hook	Does the hook mouth open wider? Is it distorted? Does it turn correctly? Is there any breakdown?	
3	Chain	Is it stretched? Is it worn up to maximum? Is it distorted? Is it rusty? Is there any breakdown? Does it need lubricating?(grease can not be used) Is welding-point in the same direction?	
4	Brake	Does it sound normal? Does it downgrade?	
5	Switch	Can it be operated as signals? Does the cover look worn or distorted?	
6	Up-and-down limit switch	Does it operate correctly when pushed up and down?	
7	Power cable	Does it show normal? Has the cable cover worn out or hardened?	

XIII. Operation and inspection details

The following is the supplementary instruction.

Notice: When operating the electric chain hoist special attention is to be given to:

1. Ensure ISO class of the hoist you operate and working condition meet required standard
2. The cargo attached must be within required safety requirements.
3. If chain does not meet required standards it cannot be used.
4. Before operating, hoist must be test lifted.
5. Before operating, routine inspection is essential.
6. Before operating, confirm the chain is not faulty. If it stretches or is twisted, it requires repairing.
7. Do not operate if the protecting device around lower hook is not operational.
8. Do not operate the hoist if its chain hasn't stopping-device.
9. Do not tie cargoes with the chain.
10. Do not attach cargoes with the front part of the hook.
11. Do not operate ups-and-downs controls too fast.
12. Do not operate beyond bottom or top limit.
13. Do not walk under the hoist with cargoes.
14. Cargoes must be attached vertically. (within 15 degree angle is acceptable).
15. Do not drop the hoist.
16. Replace the chain once every 12 months if your hoist is operated in a stop-start environment.
17. Replace the chain every 6 months or lower hook every two years if your hoist is used in the corrosive or fire hazard environment where the temperature is below 40° C or over 100° C. (Inspect your hoist thoroughly every 12 months if used frequently and replace the lower hook when necessary.)
18. Do monthly inspections of the chain and replace every 12 months if the hoist operates in an environment as electroplate factory or heat treatment factory.
19. Do not connect the chain without assistance if there is any failure of the chain.
20. Before operating the hoist, lubricate the chain.
21. Lubricate the frictional parts like gear and bearing regularly.
22. Follow anti-rust procedures to keep your hoist in good condition when not in frequent use
23. Do not attempt to change the hoist. This must be done by the manufacturer.
24. Do not attach any cargo with two hoists. This is dangerous and may cause injury.