71575-05
JULY 2010

ACCOLIFT®

ELECTRIC CHAIN HOIST

INSTRUCTION MANUAL

for

Installation / Operation / Maintenance / Parts

SERIAL NUMBER

⚠WARNING

This equipment should not be installed, operated or maintained by any person who has not read all the contents of these instructions. Failure to read and comply with these instructions or any one of the limitations noted herein can result in serious bodily injury or death, and/or property damage.

There are no other warranties which extend beyond the description on the Order Acknowledgement and as it may apply to the specifications provided in this publication. The IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. Acco shall in no event be liable for any special, direct, indirect, incidental or consequential damages to anyone beyond the cost of replacement of the goods sold hereby.

ACCOLIFT®

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NOTICE

TO ORDER PARTS: Provide part number, part description, quantity required, and Product Number or Serial Number of Hoist.

SAFETY ALERT SYMBOL ⚠

The Safety Alert Symbol is used in this manual to indicate hazards and to alert the reader to information that should be known, understood, and followed in order to avoid DEATH or SERIOUS INJURY.

Read and understand this manual before using the hoist.

Important issues to remember during operation are provided at the hoist control stations, at various locations on the hoist and in this manual by DANGER, WARNING, or CAUTION instructions or placards, that alert personnel to potential hazards, proper operation, load limitations, and more.

⚠ DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ CAUTION

These general instructions deal with the normal installation, operation, and maintenance situations encountered with the equipment described herein. The instructions should not be interpreted to anticipate every possible contingency or to anticipate the final system, crane, or configuration that uses this equipment.

This manual includes instructions and parts information for a variety of hoist types. Therefore, all instructions and parts information may not apply to any one type or size of specific hoist. Disregard those portions of the instructions that do not apply.

Record hoist serial number on the front cover of this manual for identification and future reference to avoid referring to the wrong manual for information or instructions on installation, operation, maintenance, or parts.

Use only Acco authorized replacement parts in the service and maintenance of this hoist.

⚠ WARNING

Equipment described herein is not designed for and should not be used for lifting, supporting, or transporting humans.

Equipment described herein should not be used in conjunction with other equipment unless necessary and/or required safety devices applicable to the system or application are installed by the system designer, system manufacturer, crane manufacturer, installer, or user.

Modifications to upgrade, rerate, or otherwise alter this equipment shall be authorized only by the original equipment manufacturer or qualified professional engineer.

Equipment described herein may be used in the design and manufacture of cranes or monorails. Additional equipment or devices may be required for the crane or monorail to comply with applicable crane design and safety standards. The crane designer, crane manufacturer, or user is responsible to furnish these additional items for compliance. Refer to ASME B30.17, Safety Standard for Top-Running Single Girder Cranes; ASME B30.2 Safety Standard for Top-Running Double Girder Cranes; and ASME B30.11 Safety Standard for Underhung Cranes and Monorails. If a below-the-hook lifting device or sling is used with a hoist, refer to ASME B30.9, Safety Standard for Slings, or ASME B30.20, Safety Standard for Below-the-Hook Lifting Devices.

Hoists and Cranes, used to handle molten material may require additional equipment or devices. Refer to ANSI Z241.2, Safety Requirements for Melting and Pouring of Metals in the Metalcasting Industry.

Electrical equipment described herein is designed and built in compliance with ACCO Material Handling Solutions interpretation of ANSI/NFPA 70, National Electrical Code. The system designer, system manufacturer, crane designer, crane manufacturer, installer, or user is responsible to assure that the installation and associated wiring of these electrical components is in compliance with ANSI/NFPA 70, and all applicable Federal, State, and Local Codes.

Failure to read and comply with any one of the limitations noted herein can result in serious bodily injury or death, and/or property damage.

⚠ DANGER

HAZARDOUS VOLTAGES ARE PRESENT IN THE CONTROL BOX, OTHER ELECTRICAL COMPONENTS, AND CONNECTIONS BETWEEN THESE COMPONENTS

Before performing ANY mechanical or electrical maintenance on the equipment, de-energize (disconnect) the main switch supplying power to the equipment; and lock and tag the main switch in the de-energized position. Refer to ANSI Z244.1, Personnel Protection - Lockout/Tagout of Energy Sources.

⚠ DANGER

Do not operate the equipment without control enclosure cover or covers in place.

Only trained and competent personnel should inspect and repair this equipment

NOTICE

It is the responsibility of the owner/user to install, inspect, test, maintain, and operate a hoist in accordance with ASME B30.16, Safety Standard for Overhead Hoists, OSHA Regulations, and ANSI/NFPA 70, National Electric Code. If the hoist is installed as part of a total lifting system, such as an overhead crane or monorail, it is also the responsibility of the owner/user to comply with the applicable ASME B30 volume that addresses that type of equipment.

It is the responsibility of the owner/user to have all personnel that will install, inspect, test, maintain, and operate a hoist read the contents of this manual and applicable portions of ASME B30.16, Safety Standard for Overhead Hoists, OSHA Regulations, and ANSI/NFPA 70, National Electrical Code. If the hoist is installed as part of a total lifting system, such as an overhead crane, the applicable ASME B30 volume that addresses that type of equipment must also be read by all personnel.

Any ANSI Standards referenced in this manual may be obtained from the American National Standards Institute, 1430 Broadway, New York, New York 10018.

This manual contains information for safe operation of an overhead hoist. Taking precedence over any specific rule, however, is the most important rule of all - "USE COMMON SENSE." Operation of an overhead hoist involves more than operating the controls. The operator must consider and anticipate the motions and actions that will occur as a result of operating the controls.

If the hoist owner/user requires additional information, or if any information in the manual is not clear, contact Acco Material Handling Solutions York, Pennsylvania or the distributor of the hoist. Do not install, inspect, test, maintain, or operate this hoist unless this information is fully understood.

When contacting Acco Material Handling Solutions or the distributor of the hoist, always make reference to the serial number of the hoist.

A regular schedule of inspection of the hoist in accordance with the requirements of ASME B30.16 should be established and records maintained.

⚠WARNING

Before installing, removing, inspecting, or performing any maintenance on a hoist, the main switch shall be de-energized. Lock and tag the main switch in the de-energized position in accordance with ANSI Z244.1. Follow other maintenance procedures outlined in this manual and applicable ASME B30 volumes.

Additional WARNINGS are listed in various portions of this manual. Personnel shall read and follow these WARNINGS. Failure to read and comply with these WARNINGS as well as other instructions or any limitations noted in this manual and applicable ASME B30 volumes could result in serious bodily injury or death, and/or property damage.

1. Features

ACCOLIFT® heavy-duty hoists feature faster speeds and higher capacities than conventional hoists. Workers in automotive plants, heavy equipment manufacturing, paper mills, and related rugged working environments will experience dependability and versatility. Careful consideration has been given to optimize performance.

All hoists are equipped with quality parts and mechanisms to provide proper lifting and traversing of the load. Components undergo numerous tests and inspections, while our production processes meet stringent quality requirements.

Dual Brake System.....by electro-magnetic brake
Overload Alert Sound Limiter.....with " beep" sound when overloaded.
Double Action Over-winding Limiter.....preventing over-lifting or lowering of chain
Push Button Pendant Control Switch....with emergency stop button

1.1. Mechanism group

ACCOLIFT® Electric Chain Hoists are allocated to mechanism groups in accordance with the following regulations. Under the allowance of the following mechanism groups, the hoist should be operated and should not exceed the nominal values. On each identification plate, the following is indicated.

Hook suspension chain hoist: FEM9.511 (Hoist = FEM 2m 40% ED)
Motor trolley mounted series: FEM9.511 (Hoist / Trolley = FEM 4m / 1Bm 40 / 25% ED)

* FEM Mechanism Group 9.511 (Rules for Design of Serial Lifting Equipment: Classification of Mechanism)

Mechanism group	1 Bm	1 Am	2m	3m	4m	5m
Load group	Average operating period per day (h)					
Light k 0.50	2	2-4	4-8	8-16	16	-
Medium 0.50 k 0.63	1	1-2	2-4	4-8	8-16	16
Heavy 0.30 k 0.80	0.5	0.5-1	1-2	2-4	4-8	8-16
Very Heavy 0.80 k 1.00	0.25	0.5	0.5-1	1-2	2-4	4-8

NOTICE

Under the allowance of the above FEM determination, ACCOLIFT® electric chain hoist should be operated. After checking the operating conditions, the operator shall operate the products. The above mechanism group is valid for the entire period of operation and for reasons of operational safety shall not Remove This Word be modified or altered.

1.2. Working environment data

Ambient temperature: from -20 to + 40
Protection class: IP54 as standard, IP55 as option
Side pulling angle: max. 3 degrees
Sound level: 80dB (A)

⚠ WARNING

ACCOLIFT® electric chain hoists are designed for indoor use. For outdoor use, the hoist shall be located under roof to assure rainproof operation. The operator SHALL

* NOT expose the hoist to rain or condensation.
* NOT store the hoist in a humid place.
* COVER the hoist or MOVE it back under roof after use, when it is used outdoors.
* HANG the hoist on a suitable beam or crane or from the ceiling.

⚠ CAUTION

If the above normal operation conditions are exceeded, or the electric hoist is operated often under adverse conditions, the information in the operating instructions must be adapted accordingly. In this case the manufacturer is to be consulted.

1.3. Hook Suspension Series, Single Speed

Specifications

Model		2130020		2130030		2130040		2130050		2130060		2130070		2130080	
Capacity (W.L.L.)	ton	1				2				3		5		10	
Standard lift	ft	20													
Pushbutton cord length	ft	18													
Lifting speed	fpm	17		27		13		27		17		11		11	
Lifting motor	V	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460
	amps	6.5	3.4	6.5	3.4	6.5	3.4	12.7	7.2	12.7	7.2	12.7	7.2	25.4	14.4
	(KW)HP	1.8 (2.4)				1.8 (2.4)		3.5 (4.7)		3.5 (4.7)		3.5 (4.7)		3.5 (4.7)x2	
Load chain dia.(inch) x Chainfall lines		0.280" x 1				0.280" x2		0.441" x1		0.370" x2		0.441" x2		0.441" x4	
Net weight	lbs	165				198		282		337		384		964	
Weight for additional 1foot lift	lbs	0.67				1.34		1.81		2.69		3.63		7.26	

W.L.L.(working load limit): All units tested at 125% of the rated capacity.

Longer lifts affect the chain container size. Please contact the factory or the authorized distributor.

<Model no. 2130020>

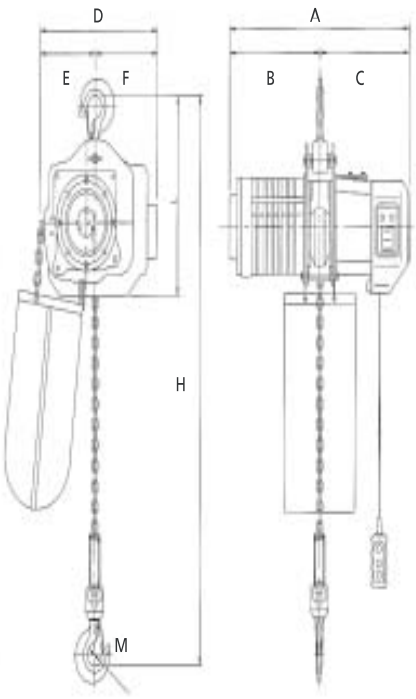
<Model no. 2130060>

<Model no. 2130080>

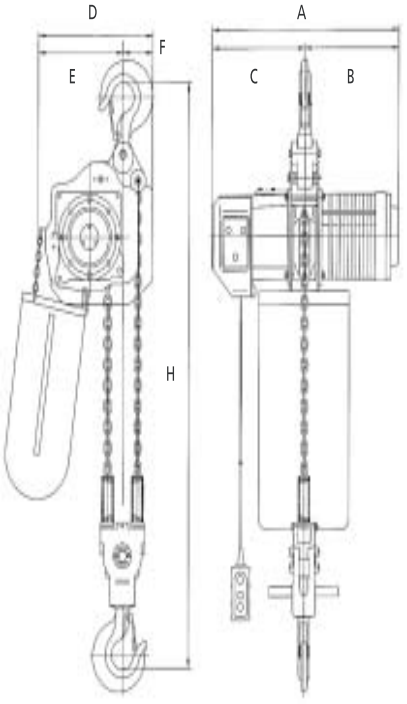
* Dimension (inch)

Model		2130020	2130030	2130040	2130050	2130060	2130070	2130080
	A	14.6		22.5	26.1	26.1	26.1	25.98
	B	11.7		11.7	13.7	13.7	13.7	13.8
* H: minimum headroom	C	10.8		10.8	12.3	12.3	12.3	12.2
* Hook is produced by the hot forging process and has ± 2% variation from nominal dimensions.	D	14.2		14.3	16.9	16.9	16.9	43.30
	E	6.7		8.6	7.8	10.2	10.7	19.7
	F	7.5		3.2	9.1	6.7	5.9	19.7
	M	1.7		2.1	2.1	2.3	2.8	4.7
	H	23.6		32.1	30.1	38.0	41.7	51.58
	L	15.9		19.3	19	21.6	22.8	30.7

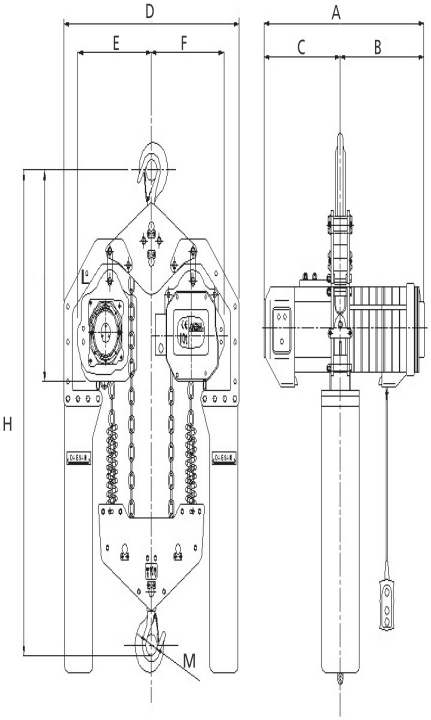
Single Chain-fall



Double Chain-falls



Four Chain-falls



1.4. Motor Trolley Mounted Series, Single Speed

Specifications

Model		2130120		2130130		2130140		2130150		2130160		2130170		2130180	
Capacity (W.L.L.)	ton	1				2				3		5		10	
Standard lift	ft	20													
Pushbutton cord length	ft	18													
Lifting speed	fpm	17		27		13		27		17		11		11	
Traversing speed	fpm	36				36				33					
Lifting motor	V	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460	208-230	460
	amps	6.5	3.4	6.5	3.4	6.5	3.4	12.7	6.5	12.7	7.2	12.7	7.2	25.4	14.4
	Kw(HP)	1.8 (2.4)				1.8 (2.4)		3.5 (4.7)		3.5 (4.7)		3.5 (4.7)		3.5 (4.7)x2	
Traversing motor	Kw(HP)	0.4 (0.54)				0.4 (0.54)		0.4 (0.54)		0.75 (1.01)		0.75 (1.01)		0.75 (1.01)x2	
Load chain dia.(inch) x Chainfall lines		0.280" x 1				0.280" x2		0.441" x1		0.370" x2		0.441" x2		0.441" x4	
Net weight	lbs	238				293		388		498		575		1503	
I-beam flange width	inch	3.25 ~ 12.00													
I-beam min. curve radius	inch	43.3				59						78.7		N/A	
Weight for additional 1foot lift	lbs	0.67				1.34		1.81		2.69		3.63		7.26	

W.L.L.(working load limit): All units tested at 125% of the rated capacity.

Longer lifts affect the chain container size. Please contact the factory or the authorized distributor.

<Model no. 2130120>

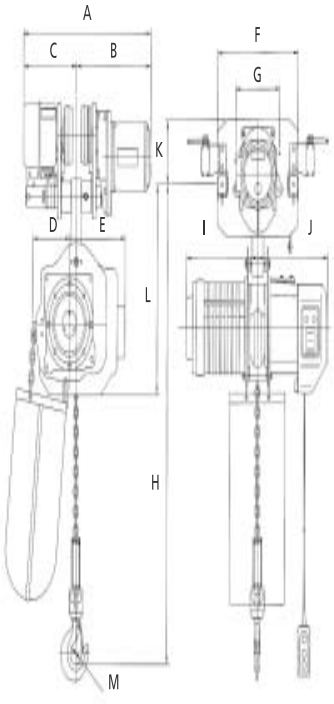
<Model no. 2130160>

<Model no. 2130180>

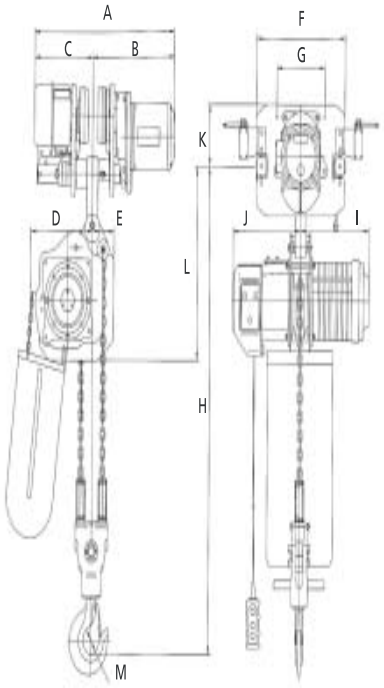
* Dimension (inch)

Model		2130120	2130130	2130140	2130150	2130160	2130170	2130180
	A	20.9 + *2B		22.0 +* 2B	22.0 + *2B	22.8 + *2B	22.8 + *2B	24.8 + *2B
* The figure *B can be	B	11.5 + *B		12.1 + *B	12.1 + *B	12.9 + *B	12.9 + *B	14.2 + *B
calculated as below.	C	9.3+ *B		9.9 + *B	9.9 + *B	9.9 + *B	9.9 + *B	10.6 + *B
*B=1/2xWidth of	D	6.7		8.9	7.8	10.2	10.7	10.7
traversing rail	E	7.5		5.3	9.1	6.6	5.9	5.9
*2B=2x1/2xWidth of	F	11.7		12.4	12.4	14.2	16.1	42.13
traversing rail	G	4.4		4.9	4.9	5.5	6.1	38.97
* H: minimum headroom	I	11.7		11.6	13.7	13.7	13.7	33.46
* Hook is produced by the	J	10.8		10.8	12.3	12.3	12.3	9.84
hot forging process and	K	5.2		5.1	5.1	5.8	6.1	6.3
has ± 2% variation from	M	1.7		2.1	2.1	2.4	2.8	4.7
nominal dimensions.	H	23.6		32.1	30.1	36.2	41.7	48.81
	L	15.5		18.8	18.1	20.9	23.2	N/A

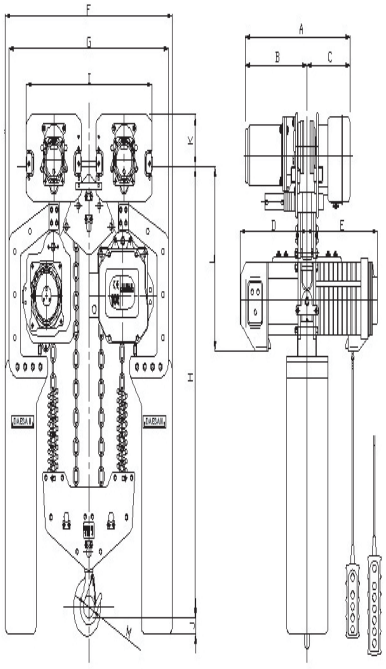
Single Chain-fall



Double Chain-falls



Four Chain-falls



2. General description of manual

The product is supplied together with the manual that is important to keep readily accessible:

- During installation or set-up
- For training operators & the maintenance of the equipment
- For " Safety Precautions" & Operation instructions

2.1. Trolley series and Classification of electric wiring

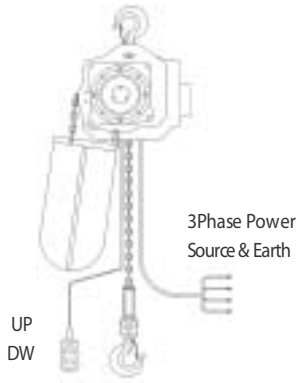
ACCOLIFT trolleys are designed to form an integral hoist/trolley combination, keeping the load equally distributed for easy traversing and long life. Motor-driven trolleys are ideal for heavier capacities and longer lift applications. Hook suspension trolleys are available in plain and hand-geared versions that enable close control of horizontal movement.

Motor Trolley

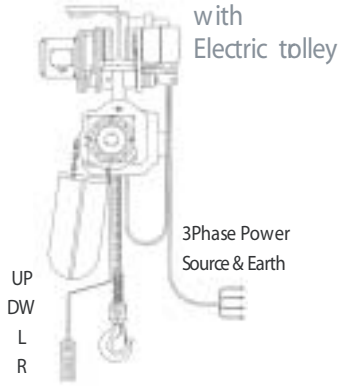
Plain Trolley

Geared Trolley

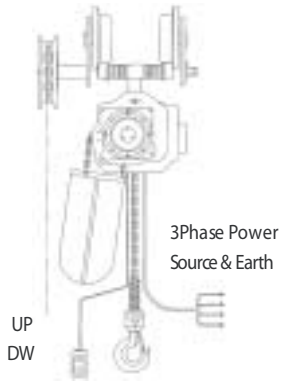
Hook suspension hoist



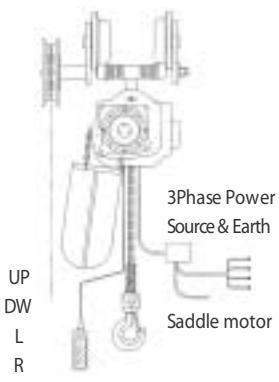
Motor trolley hoist



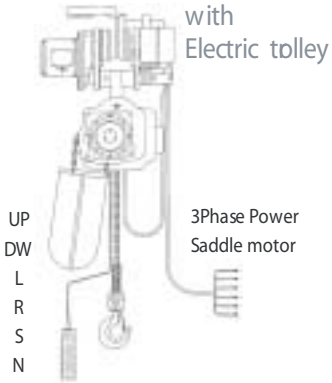
Plain trolley hoist
Geared trolley hoist



Plain trolley crane-mounted
Geared trolley crane-mounted



Motor trolley crane-mounted



3. Safety precautions

3.1. Warning and Caution

The Safety Alert Symbol is used in this manual to indicate hazards and to alert the reader to information that should be known, understood, and followed in order to avoid SERIOUS BODILY INJURY or DEATH and/or PROPERTY DAMAGE.

⚠WARNING

WARNING symbol indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury. To avoid such a potentially hazardous situation, THE OPERATOR SHALL

* NOT operate a damaged, malfunctioning or unusually performing hoist.
* NOT operate the hoist until you have thoroughly read and understand the manual.
* NOT operate a hoist which has been modified without the manufacturer's approval.
* NOT lift more than rated load for the hoist.
* NOT use hoist with twisted, kinked, damaged, or worn load chain.
* NOT use the hoist to lift, support, or transport people, nor lift or transport loads over or near people.
* NOT operate unless load is centered under hoist.
* NOT attempt to lengthen the load chain or repair damaged load chain.
* Protect the hoist's load chain from weld splatter or other damaging contaminants.
* NOT operate hoist when it is difficult to form a straight line from hook to hook in the direction of loading.
* NOT use load chain as a sling, or wrap chain around the load.
* NOT apply the load to the tip of the hook or to the hook latch.
* NOT apply load unless load chain is properly seated in the chain sheave pockets.
* NOT apply load if bearing prevents equal loading on all load supporting chains.
* NOT operate beyond the limits of the load chain travel.
* NOT leave load supported by the hoist unattended unless specific precautions have been taken.
* NOT allow the load chain or hook to be used as an electrical or welding ground.
* NOT allow the load chain or hook to be touched by a live welding electrode.
* NOT remove or obscure the warnings on the hoist.
* NOT operate a hoist on which the safety placards or decals are missing or illegible.
* NOT operate a hoist unless it has been securely attached to a suitable support.
* NOT operate a hoist unless load slings or other approved single attachments are properly sized and seated in the hook saddle.
* Take up slack carefully - make sure load is balanced and load holding action is secure before continuing.

* Shut down a hoist that malfunctions or performs unusually and report such malfunction.
* Make sure hoist limit switches function properly.
* Warn personnel of an approaching load

⚠ CAUTION

Read and understand this manual before using the hoist. Taking precedence over any specific rule, however, is the most important rule of all: "USE COMMON SENSE"

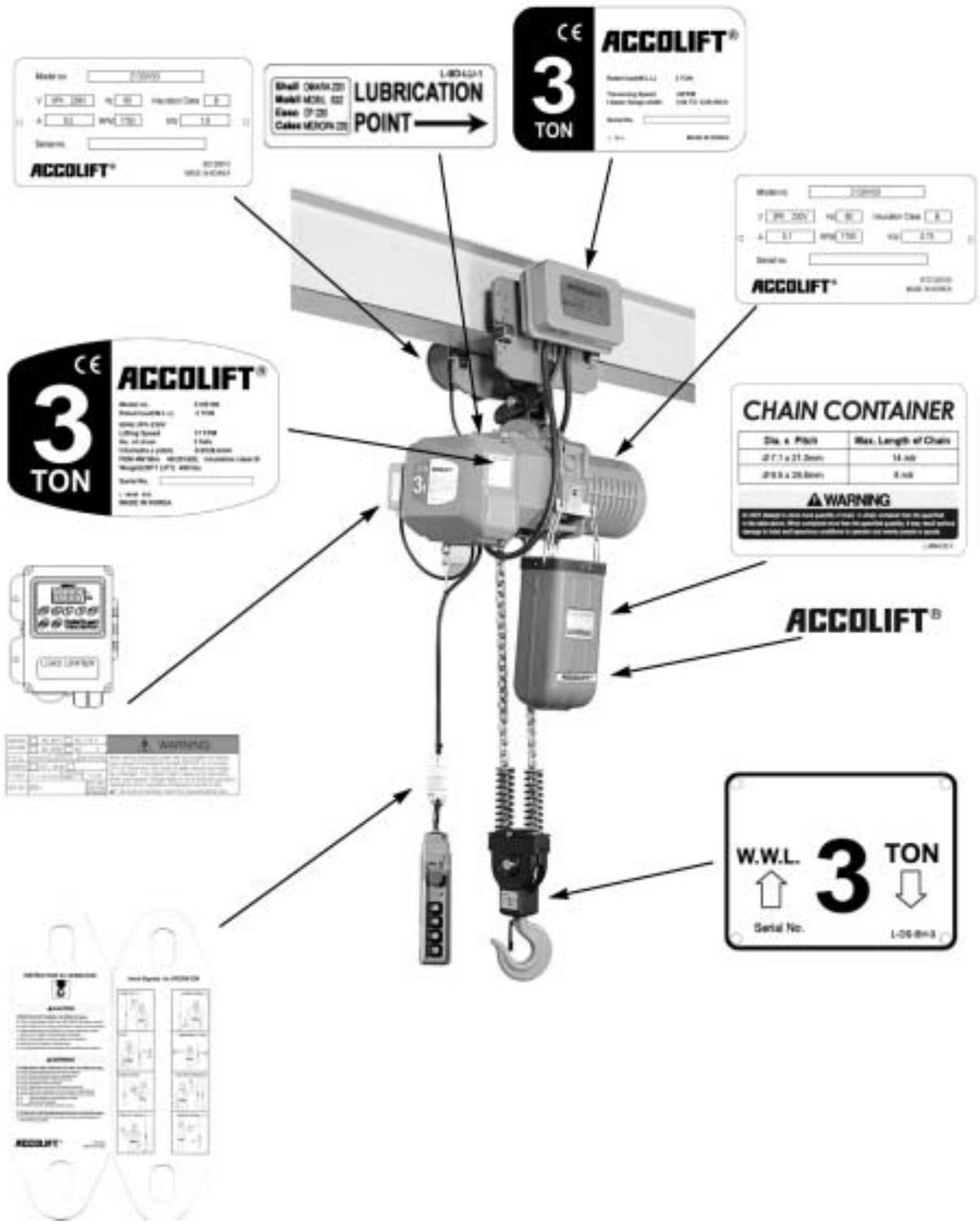
It is the responsibility of the owner / user to

1. Install, inspect, test, maintain, and operate the hoist in accordance with the instruction manual furnished by the manufacturer of the hoist...
2. Train and designate hoist operators, and
3. Train and designate hoist inspectors / maintenance personnel

3.2. Name plate and labels on products.

All labels and name plate shall be attached on the products at the same position where they were originally attached. Do not allow the labels and name plate to become obstructed or defaced.

<Example of MODEL NO. 2130160>



4. Installation

Each complete electric chain hoist is load tested at the factory at 125% of the nameplate-rated capacity. Always keep this manual near the hoist, available to the operator and the person in charge of maintenance. Make sure that all safety rules are followed.

4.1. Checking of product

1. Check the product if there is any damage or deformation during the transportation.
2. Check the specification of the hoist you purchase as listed below.
    a. Model no.
    b. Rated capacity (ton)
    c.. Lifting length of load chain (feet)
    d. Power supply
    e. Push button pendant assembly (2button or 4button)
    f. Specially ordered optional items
    g. Beam width for trolley installation

Store the hoist in its normal operating position without load, away from aggressive atmospheres such as dust or humidity. Make sure that the hoist is always clean and protected from corrosion and is lubricated.

4.2. Installation process

Follow other maintenance procedures outlined in this manual.

1. Handle the hoist by its structure, or by the devices provided for this purpose, or in its original packing.
2. Review the nameplate and warning tags attached to the unit before the installation is started.
3. The hoist should be installed by the technician with the necessary competence.
4. Check that the voltage is in accordance with both the hoist and the voltage at the jobsite (208/,230V, 460V).
5. Make sure that the hoist attaching structure is rigid.
6. Make sure that the safety rules are followed for harness, clearance of work areas, posting of instructions to be followed in the area.

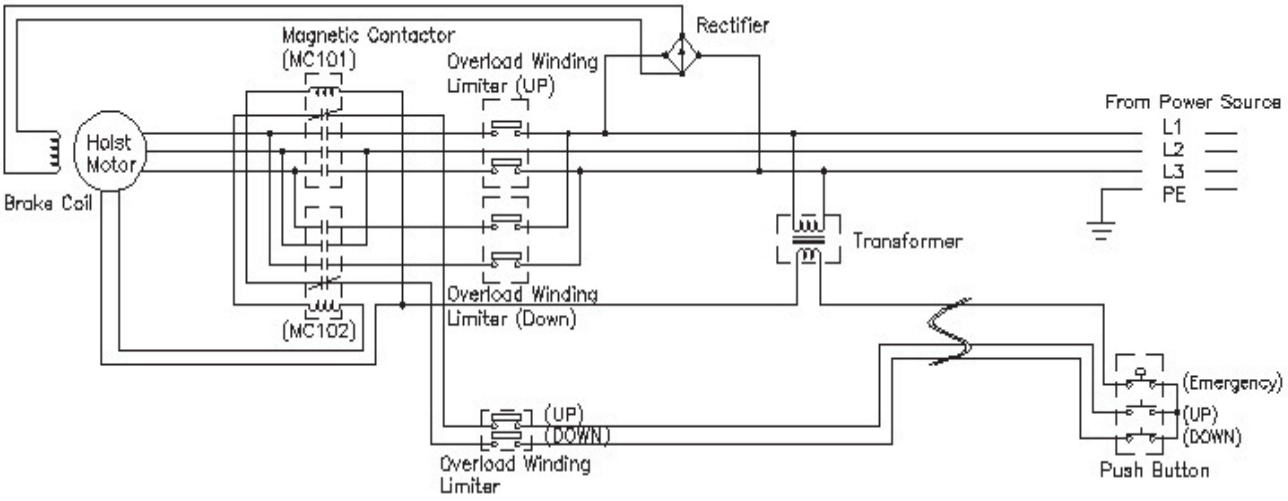
4.2.1. Checking of electricity

⚠WARNING

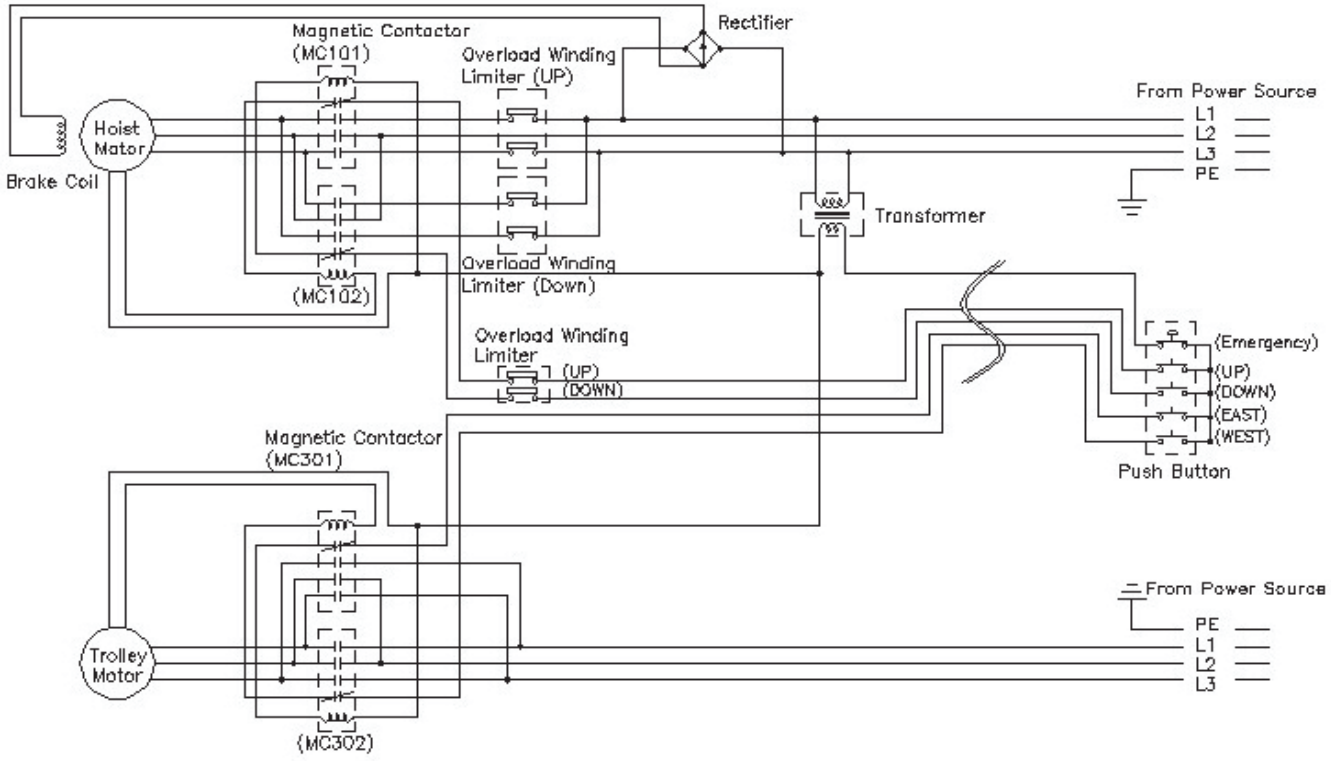
Before installing, removing, inspection, or performing any maintenance on the hoist, the main switch shall be de-energized and locked out and tagged out in accordance with ANSI Z244.1. Do not use this equipment in hazardous locations.

* the electric chain hoists shall be connected to an earth ground.
* Lock-out and tag-out the main disconnect switch, in the de-energized position, before performing any service on the hoist.
* The customer must supply the power supply cable, the fuses and the main disconnect switch.
* Check that the supply voltage is the same as the nameplate voltage on the hoist.
* Check that the voltage does not vary by more than ± 10% from the nominal value.
* Do not use conductors smaller than those listed in the manual, to supply power to the hoist.
* Never bypass limit switches, remove limit switch stops, or otherwise defeat limit switch devices.

* Electric Wiring Diagram of Hook Suspension Series



* Electric Wiring Diagram of Motorized Trolley Mounted Series



2.2. Installation of "BOLT with vent hole" (Vent Bolt)

ACCOLIFT Electric Chain Hoists are shipped with a "Bolt without Hole" (Solid Bolt) to prevent the possibility of oil leaking during the transportation of the product.

When the temperature of the gear assembly goes up with continued operation, the "BOLT with Vent Hole" (Vent Bolt) relieves the pressure in the gear assembly caused by the increase in temperature.

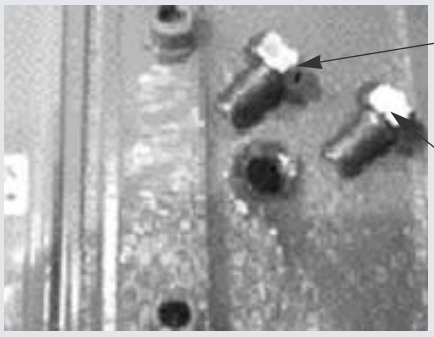
⚠WARNING

Replacement of Solid Bolt with Vent Bolt

On the hoist, the Solid Bolt is located at the lubrication point. Before the installation of the hoist, the customer shall change the bolt from "BEFORE installation" to "AFTER installation" as shown below.

The Vent Bolt functions as the air ventilation device to relieve pressure created by the increase in temperature from operation of the gearing. It helps prevent damage to the seal packing from high pressure.

If NOT changed to "Vent Bolt", a possible hazardous condition can result due to the high pressure in the gear assembly.



"AFTER installation"
With Vent Bolt

"BEFORE installation"
As shipped, the hoist has a Solid Bolt at the lubrication point to prevent the possibility of oil leaking due to movement in transportation.

4.2.3. Installation of Chain Container to hoist body

1) Insert the load chain into the chain container.
2) Place the Chain Container support chain onto the Support Metal Plate (part no.CH843) to secure the Chain Container.
3) Insert the Support Pin (part no.CH842) and lock both ends with Cotter Pin (part no.CH852).
4) Line up chains straight so as to not be twisted.
5) Place the remaining Chain Container support chain onto the Support Metal Plate.

4.2.4. Oil lubrication on load chain and into chain container

Please lubricate the load chain, using the plastic oil bottle which is included with the hoist.

NOTICE

Oil Lubrication into Chain Container

After installing the hoist, the oil shall be placed onto the chain and into the chain container (chain bag) before startup.

* If the load chain is used when it's dry, abrasion and noise will result.
* Depending on the oil lubrication, the life of the load chain can vary up to 10 times compared to non-oiled load chain.
* If the load chain is used without oil lubrication before startup, the manufacturer will not be held responsible for possible damage to the load chain.

* Maximum Chain-Lift-Length, according to each Chain Container

Longer lifts affect the chain container size. When exceeding the maximum lift specified for a Chain Container, it is strictly prohibited to operate the hoist. For a larger size chain container for longer lifts, please contact the factory or authorized dealer for the Steel Chain Container.

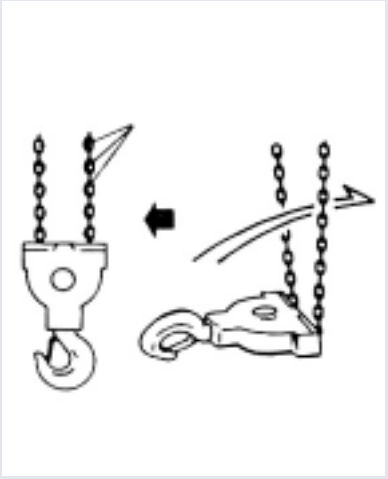
Applied Load Chain: (Dia. x Pitch)		0.280" x 0.827" (7.1mm x 21.0mm)		0.370" x 1.126" (9.5mm x 28.6mm)	0.441" x 1.339" (11.2mm x 34.0mm)		
Capacity (chain-fall reeving)		1ton (1fall)	2ton (2fall)	3ton (2fall)	2ton (1fall)	5ton (2fall)	10ton (4fall)
Plastic chain container	PCCA	80ft lift	40ft lift	N/A	26ft lift	N/A	N/A
	PCCB	130ft lift	65ft lift	39ft lift	58ft lift	29ft lift	N/A
Steel chain container	SCC	Made to order	Made to order	Made to order	Made to order	Made to order	20ft lift

⚠ WARNING

DO NOT attempt to store a greater quantity of chain in the chain container than is specified in the table above. When containing more than the specified quantity, it may result in serious damage to the hoist and a hazard to the operator and nearby people or goods.

4.2.5. Checking Load Chain after installation

⚠ CAUTION



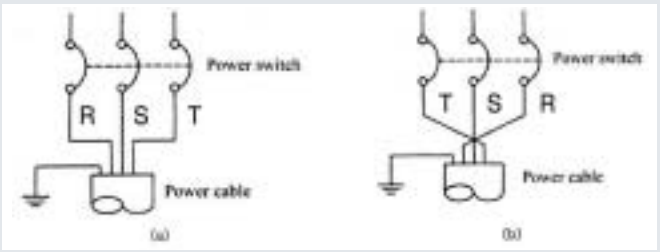
* Before start-up, the operator shall check the load chain. If it is twisted, it shall not be used until the twist is removed and the chain is straight in line.
* For double chain-falls, a capsized load chain shall not be used. When capsized, the operator shall turn over the bottom hook assembly as shown in the figure. If not, it will cause serious damage to the product.
* On load chain, oil lubrication shall be made with the oil bottle which is included with the hoist. When dry chain with no lubrication is used, it will cause shortened life of the load chain and a possible breakage of the load chain during operation, resulting in damage to the product and/or a hazardous condition to the operator and nearby people or goods.

4.2.6. Incorrect Phase Checking (by exchanging One of Three Black lines)

After installation, the operator shall check UP/DOWN motions by pressing the Push Button Pendant Switch. If hoist does not operate in the proper UP/DOWN direction, it indicates incorrect phasing of input power supply lines.

NOTICE

Before operation under load, operator shall check hoist operation with push button control.
If hoist operates in the opposite direction of the push button control, phasing of the input supply lines is incorrect.
<u>In this case, reverse TWO of the THREE power supply phase lines as illustrated.</u>



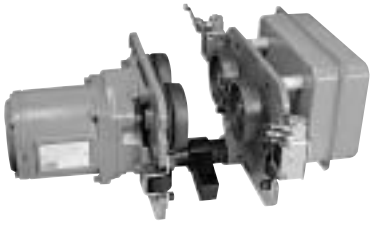
4.3. Installation of the Motorized Trolley Mounted Series

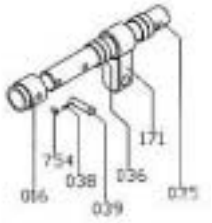
4.3.1. How to install Trolley on the runway I-beam

For Trolley, there are THREE types: Motorized trolley, Plain trolley, Geared trolley

First, check the difference between beam flange width and guide roller spacing.

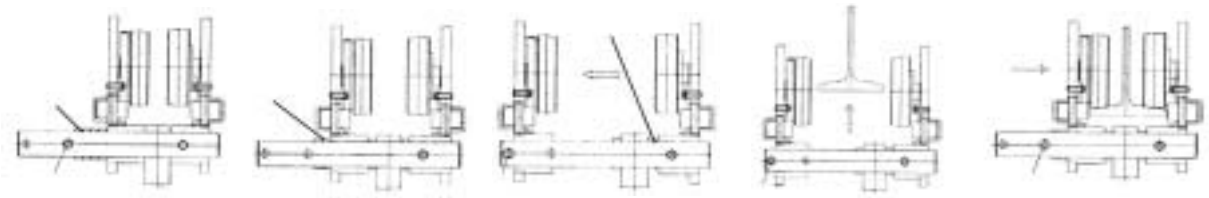
* Parts to adjust I-Beam Width





MT016. Bracket A
MT035. Shaft
MT036A. Adjusting Collar
MT036B. Adjusting Washer
MT038. Setting Pin
MT039. Stopper Pin
MT171. Connector
MT754. Setting Screw

* How to set up the I-Beam Width of Motorized Trolley

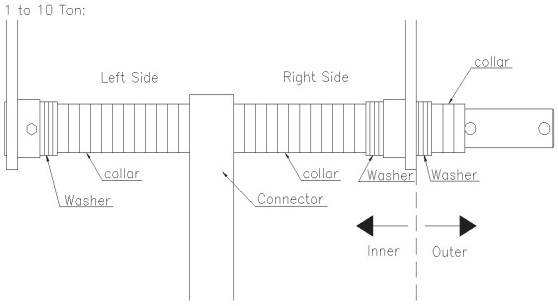


Process ① ② ③ ④ ⑤

Motorized trolley can be used on I-beams different in width only by inserting adjusting collars (0 pcs to 6 pcs).

① Pull out both "MT039.Stopper Pin" and "MT036.Adjusting Collar
② Widen TROLLEY up to the maximum width by pulling out "MT035. Shaft"
③ In accordance with the following I-Beam width instruction, please Insert the applied number of collars and washers at the right end and push the trolley to the direction of arrow mark.
④ Insert TROLLEY on I -Beam.
⑤ Locate "MT171 Connector" on the center and line up "MT036.Adjusting Collar" by setting the same number of collars and washers at both ends.

Applied Collar and Washer Numbers for Each Trolley Capacity or I-Beam.



Each collar width per pcs: 0.492 inch (12.5mm)
Each washer width per pcs: 0.118 inch (3mm)

WASHER	3mm
COLLAR	12.5mm

Beam Flange Width		(in)	$3^1/_4$	4	5	6	7	8	9	10	11	12
Cap. (Ton)	Spacer Type	(mm)	85	102	127	153	178	203	229	254	279	305
1	Washer	Inner	4	2	2	2	2	2	2	2	2	10
		Outer	6	8	8	8	8	8	8	8	8	0
	Collar	Inner	0	2	4	6	8	10	12	14	16	16
		Outer	16	14	12	10	8	6	4	2	0	0
2	Washer	Inner	2	0	0	0	0	0	0	0	0	8
		Outer	6	8	8	8	8	8	8	8	8	0
	Collar	Inner	0	2	4	6	8	10	12	14	16	16
		Outer	16	14	12	10	8	6	4	2	0	0
3	Washer	Inner	2	0	0	0	0	0	0	0	0	8
		Outer	6	8	8	8	8	8	8	8	8	0
	Collar	Inner	0	2	4	6	8	10	12	14	16	16
		Outer	16	14	12	10	8	6	4	2	0	0
5 and 10	Washer	Inner	0	6	6	6	6	6	6	6	6	12
		Outer	12	6	6	6	6	6	6	6	6	0
	Collar	Inner	0	0	2	4	6	8	10	12	14	14
		Outer	14	14	12	10	8	6	4	2	0	0

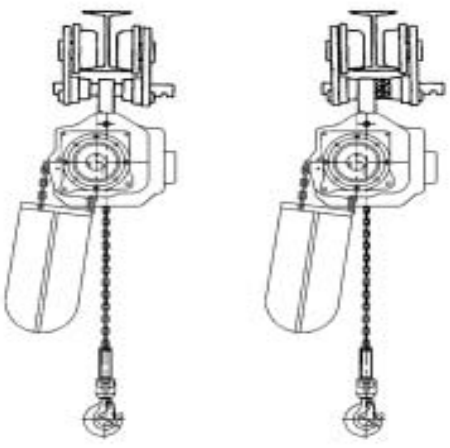
For Beam Flange Widths other than indicated, distribute collars and washers equally on Left Side and Right Side so that total clearance between Beam Flange Width and Trolley Side Guide Rollers is no less than 0.039 inch (1mm) and no more than 0.197 inch (5mm). A difference of one washer between Left Side and Right Side is permissible. No difference in quantity of collars between Left Side and Right Side is permissible.

⚠WARNING

RIGHT installation : Fit both sides of the connector with the same number of adjusting collars.
WRONG installation : It can result in serious accidents.

RIGHT Installation

WRONG Installation

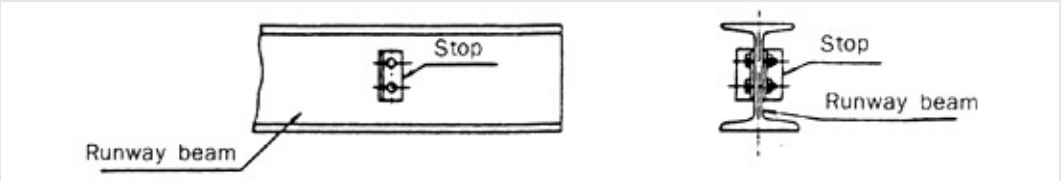


(A) Without collars, the seting of connector become loose and not secure.
(B) With One-sided seting of collars, it shall result in the un-balanced trolley installation.

⚠ WARNING

(Customer scope for installation)

1. Customer is strongly recommended to install END STOP as this is the customer's responsibility. To prevent possible falling of trolley from the runway beam, the customer shall install END STOP as follows.



2. For trolley limit switches used as a safety device, they shall be installed in parallel with I-beam at both ends to detect the runway limit of the end of trolley travel. Please refer to the figure for proper installation.

4.3.2. How to connect electric power source ("CIS" : customer installation scope under customer responsibility)

* In parallel with I -beam, install the power cable to optimize the trolley movement.
* With each interval of 1.5 meter, the cable wheel shall be installed.
* The minimum allowable curve radius of I - beam differs with each rated load of hoist.

Please refer to the specification of hoist in manual article no. 1.4. Motor Trolley Mounted Series, Single Speed

4.4. Initial start-up

Once these checks have been completed, proceed as follows (be ready to press the emergency stop button at all times).

1. Start operating the hoist without a load.
2. Check, when not under load, that the movement of the hook corresponds to the direction of the arrows on the pushbutton station.
3. Check the operation of the hoist limit switch: operate the hoist, without a load, until it reaches the upper and lower hook positions and let the limiter slip briefly.
4. Check the operation of the brake: lift up a nominal load and then lower it.
5. Perform a load test with +10% of the nominal load and static tests with +25% of the nominal load on your installation equipped with our hoist.
6. The hoist which you have just purchased should only be used with a maximum load equal to the hoist's rated load. The length of its useful service life depends on the demands placed upon it, the average operating time, the number of start-stops and proper maintenance.

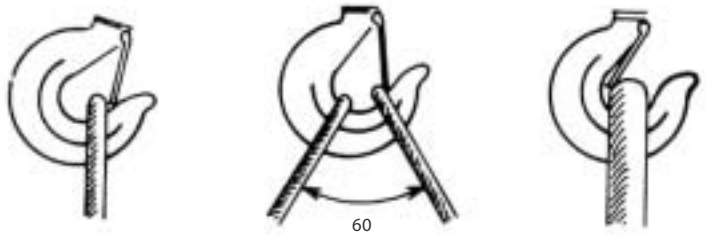
5. Precautions during operation

⚠ CAUTION

Indicates a potentially hazardous situation, which, if not avoided, MAY result in minor or moderate injury. To avoid such a potentially hazardous situation, THE OPERATOR SHALL

1. Perform a daily inspection according to the instruction manual.
2. Inspect the load chain for any type of deformation or damage and check the load chain lubrication.
3. Visually inspect hooks and hook latches for any type of deformation of throat opening, wear on saddle or load bearing point, and twisting.
4. Report missing or illegible warning labels to the supervisor.
5. Not Operate the hoist if any damage or malfunctions exist.
6. Know hand signals used for hoist operations as per instruction manual.
7. Always notify others when a load transport is about to begin.
8. Always make sure that the supporting structures are strong enough to support the weight of the load and hoist.
9. Maintain firm footing or be otherwise secured when operating the hoist.
10. Check brake function by tensioning the hoist prior to each lift operation.
11. Use hook latches. Latches are to retain slings, chains, etc. under slack conditions only.
12. Place slings balanced on the bottom hook. Avoid " Improper" slinging cases shown below.

" IMPROPER" SLINGING CASES



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13. Make sure the hook latches are closed and not supporting any parts of the load.
14. Make sure the load is free to move and will clear all obstructions.
15. Avoid swinging the load or hook.
16. Make sure hook travel is in the same direction as shown on the controls.
17. Inspect the hoist regularly, replace damaged or worn parts, and keep appropriate records of maintenance.
18. Use only manufacturer's recommended parts when repairing the unit.
19. Lubricate load chain per hoist manufacturer's recommendations.
20. NOT use the hoist's overload limiting clutch to measure load.

21. NOT use limit switches as routine operating stops. They are emergency devices only.
22. NOT allow your attention to be diverted from operating the hoist.
23. NOT allow the hoist to be subjected to sharp contact with other hoists, structures, or objects through misuse.
24. NOT adjust or repair the hoist unless qualified to perform such adjustments or repairs.
25. The hoist should be maintained regularly, following the instructions in this manual.
26. Keep the moving components clean and oiled as indicated in this manual.
27. Make sure that the limit switch stops are in place, and that all limit switches are functioning properly...
28. Before operation, check that the load is correctly fastened and installed on the hook.
29. When moving the load, make sure that it is sufficiently raised and distant from the surrounding machines and other objects so as to avoid all obstacles during operation.
30. Make sure that the hoist is vertical to the load before moving it.
31. If manually moving the hoist, push the load.
32. Avoid rocking the load or the hook when using the traveling trolley or crane, by limiting the starting and braking jerks.
33. Use the material under normal working conditions with ambient temperature, atmosphere.
34. Use only for indoor operation of hoist. For outdoor operation, provide adequate protection to ensure a rainproof environment.
35. NOT operate the hoist if any damage or malfunctions exist; and SHALL report any damage or malfunctions to the supervisor.
36. NOT operate the hoist if tagged-out.
37. NOT lift, lower, or transport personnel by means of the hoist, hoist trolley, hoist hook, or load.

NOTICE

Always read and follow the INSTRUCTION for OPERATOR, which contains the main CAUTION and WARNING instructions.
It shall be assembled onto the Push Button Switch Control regardless of working conditions.
For safer hoisting operation, please refer to the Hand Signals for OPERATOR on the backside.

6. Maintenance and servicing

6.1. Electrical connection

⚠ CAUTION

(customer responsible scope for installation)

Before removing the control box cover, check that the hoist power supply is disconnected and locked and tagged per ANSI Z244.1.

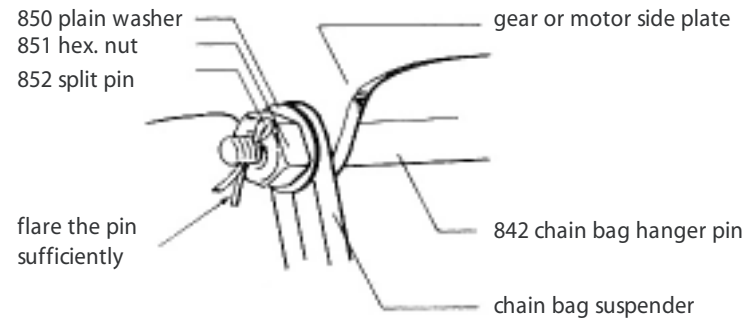
* The customer must supply the power supply cable, the fuses and the main disconnect switch (refer to the wiring diagram).
* Check that the power supply voltage is correct for the hoist.
* Check that the voltage does not vary by more than ±10% from the nominal value.
* Make sure that the main hoist power disconnect switch is de-energized.
* Do not use conductors smaller than those listed in the manual to supply power to the hoist.
* Never bypass limit switches, remove limit switch stops, or otherwise defeat limit switches.

6.2. Chain container (chain bag)

⚠WARNING

Do not attempt to store more quantity of chain in chain container than that specified in the table. When containing more than the maximum specified quantity, it may result in serious damage to hoist and hazardous conditions to the operator and nearby people or goods.
For the hoist with double chain-falls, the chain container should be installed with the unloaded load chain projecting by about 20 inches (50cm). When the chain container is pushed to the sides by the loads, the load chain may gush out or may not smoothly go through the chain hoist body, posing a danger.

* How to install Chain Container
  * Insert the load chain into the chain container.
  * Place the container support chain on "CH843 support metal plate" of Chain Container to secure the container.
  * Insert "CH842 chain bag support pin" and lock both ends with "CH852 split pin"



  * Line up chains strait so as not to be twisted.
  * Place the remaining container support chain on the Support Metal Plate.

6.3. Chain stopper in the chain container.

The chain stopper for slack fall stop is a safety component, not a functional one. Make sure that the stop is correctly fitted.
The chain stopper of non-loaded side must be fixed 6inch (15cm) from the load chain end as shown in the left figure.

Securely fix using the wrench.

At the time of product installation, securely fix using the wrench. Check monthly for the looseness of the socket bolts and tighten.

6.4. Chain stopper spring

For safe operation, the Chain Stopper Spring must be replaced when the free length "L" is short of the dimension in the following table.

* Standard "L" length

Capacity	Chainfall (reeving)	Standard "L" length	Replacement required
1ton	1 chain-fall	5.7inch(145mm)	5.1inch(130mm)
2ton	1 chain-fall	6.77inch(172mm)	6.30inch(160mm)
	2 chain-falls	5.70inch(145mm)	5.12inch(130mm)
3ton	2 chain-falls	6.70inch(170mm)	6.30inch(160mm)
5ton	2 chain-falls	6.77inch(172mm)	6.30inch(160mm)
10ton	4 chain-falls	6.77inch(172mm)	6.30inch(160mm)

* Replacement required

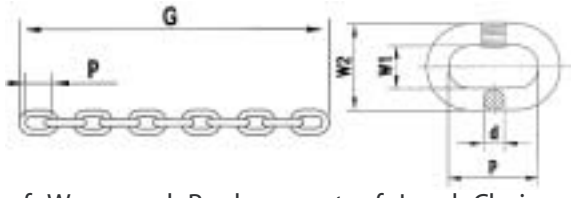
6.5. Load chain

⚠ WARNING

Check if the chain is twisted or not.
Never try to use the hoist when the load chains are entangled.
Pull the bottom hook to the normal vertical position before use.
Never use the lifting chain as a sling.
Never twist the lifting chain.
Do not bundle the chain into the chain bucket.
Always keep the chain clean and oiled and check that it is in good condition every day.
Only a genuine, manufacturer's chain may be used.

* Specification of Load Chain

Load chain: diameter x pitch		0.28"x0.827" (7.1mm x 21.0mm)	0.374"x1.126" (9.5mm × 28.6mm)	0.441"x1.339" (11.2mm × 34.0mm)
Class, Grade		DAT, HE G80 RS		
Surface hardness		520-620 HV10		
Manuf. test force min.	KN	39.60	71.00	98.50
Breaking force min.	KN	63.50	113.00	158.00
Stress at breaking force	N/mm2	800	800	800
Breaking elongation min.	%	10	10	10
Working load Limit, 1 fall		2204lbs(1000kgs)	3968lbs(1800kgs)	5511lbs(2500kgs)
Weight per meter		2.4lbs(1.11kgs)	4.3lbs(1.97kgs)	6.0lbs(2.73kgs)
Dimension	d	0.280" (7.1mm)	0.374" (9.5mm)	0.441" (11.2mm)
	p	0.827" (21.0mm)	1.126" (28.6mm)	1.339" (34.0mm)
	W1	0.331" (8.4mm)	0.441" (11.2mm)	0.539" (13.7mm)
	W2	0.929" (23.6mm)	1.232" (31.3mm)	1.488" (37.8mm)



6.5.1. Measurement of Wear and Replacement of Load Chain

Dimension of load chain: Dia. x Pitch	0.280"x0.827" (7.1mm x 21.0mm)	0.374"x1.126" (9.5mm × 28.6mm)	0.441"x1.339" (11.2mm × 34.0mm)
Minimum link diameter allowed (d):	0.267" (6.8mm)	0.358" (9.1mm)	0.421" (10.7mm)
Maximum pitch allowed (P):	0.850" (21.6mm)	1.157" (29.4mm)	1.378" (35.0mm)
Maximum Gage Length allowed (G) : (11 links pitch measurement)	9.350" (237.5mm)	12.727" (323.3mm)	15.158" (385mm)

NOTES: For link diameter, when the wear has increased by more than 5%.
For pitch, when the wear has increased by more than 3%.

Check the load chain for deformation or cracks. In this case, the wear on the chain guide and chain sheave should also be checked and they should be replaced if necessary. If a single link is defective in any way whatsoever, the chain must be replaced. If these limits are exceeded, the chain must be replaced immediately. The gage dimension to be checked shall be measured over 11 links from inside end of link to inside end of link (as shown in figure on previous page).

To remove the chain for 1-fall chain:

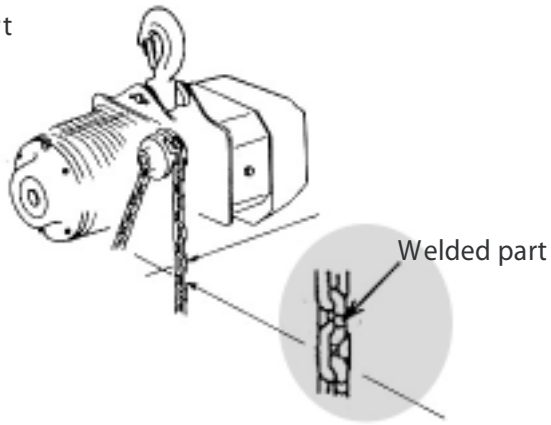
a. Remove the load from the hook.
b. Disassemble the hook block.
c. Lower the chain into the chain container.
d. Remove the chain container and unscrew and remove the lower chain guide.

To remove the chain for 2-fall chain:

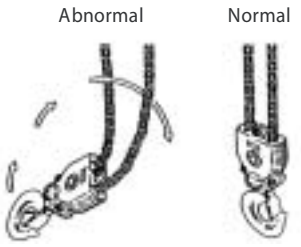
a. Raise the hook block to about 20 inches (50 cm) from the hoist body.
b. Remove the chain bucket.
c. Disassemble the fixed point of the chain.
d. Let the rest of the chain slide through the chain sheave.

6.5.2. Checking chain alignment (the welded part outward from the center)

* Before installation, the welded part position should be checked for safe operation. With the welded part of chain links outward from load sheave or hoist center, the load chain should be aligned before installation. If not aligned correctly outward, it can cause a hazardous condition.



* For the safe operation of load chain, make sure that the bottom hook assembly is not upside down or capsized. In this case, the operator shall restore the chain to normal and make sure the welds on the chain links are in alignment. Do NOT use the hoist with twisted chain. For "Abnormal" case, please turn the bottom hook assembly between the chains to align the load chain.

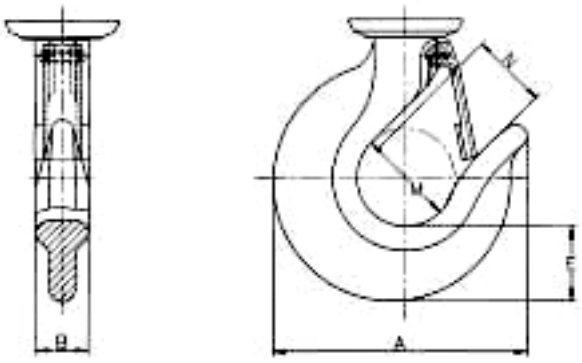


* For the inspection of idler sheave of bottom hook assembly, turn idler sheave by lifting the load chain up and down as per the figure.

6.6. Hook

6.6.1. Measurement of wear on the hook (inch)

Capacity	Standard Hook Dimension					For maintenance (replacement required)
	A	B	E	M	N	*maximum throat opening = N x 115%
1ton	3.819	0.945	1.280	1.378	0.866	0.996
2ton	5.728	1.181	1.732	2.106	1.654	1.902
3ton	6.496	1.378	2.047	2.362	1.732	1.992
5ton	7.441	1.713	2.441	2.756	2.047	2.354
10ton	13.496	3.543	4.396	4.724	3.661	4.211



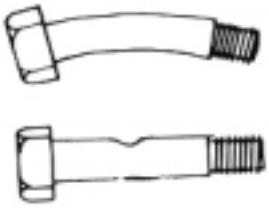
Check hooks for deformation or cracks. Hooks must be replaced if throat opening has increased by more than 15%, or if throat opening has more than 10-degree twist from plane of straight hook.
For the wear on the top hook and the load bottom hook, it shall be checked regularly. Measure the throat opening. If the throat opening exceeds the maximum opening allowed, replace the hook. Damaged safety latches shall be replaced immediately.

6.6.2. Chain fixing pin on hook

For the double chain-falls, the bottom hook assembly is fastened together with Chain Fixing Pin.

If any deformation is detected, it shall be replaced. Otherwise, the load chain and the hook assembly can fail.

Unusable



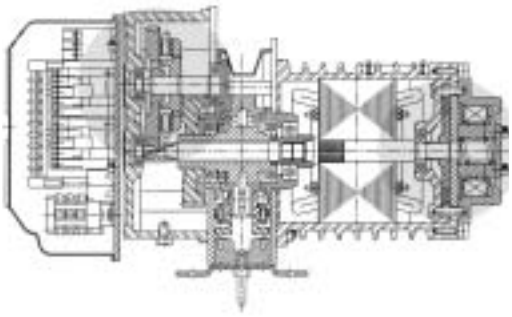
Pin that is bent or pressed is to be replaced.

6.7. Load sheave and Chain guide

Load sheave ensures perfect positioning of the chain with 5 or 4 pockets for better distribution of the load. Load chain is to be geometrically lined up in accordance with chain guide and load sheave.

Chain guide assures proper engagement of the chain on the load sheave and minimizes load chain wear. The chain guide also serves as the trip mechanism for the upper and lower hook travel limit switch. When contacted by the hook travel spring, the chain guide will actuate either the UP or DOWN travel limit switch and stop hoisting motion.

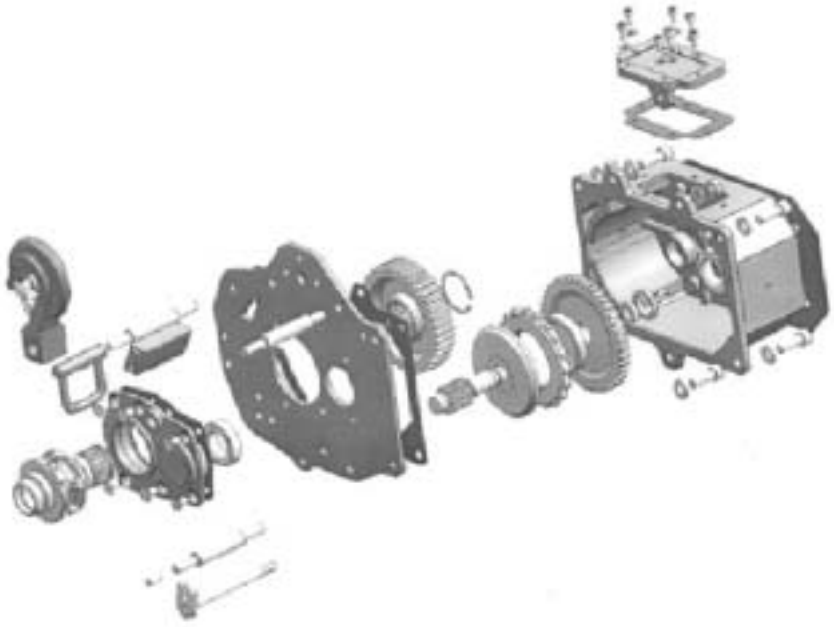
6.8. DUAL brake system.



The hoist has both an electrically operated motor brake and a mechanical load brake.

The electro-magnetic brake is

- equipped with a D.C. Solenoid which provides lower electric consumption throughout the process of hoist operation.
- combined with the mechanical brake to constitute a complete dual brake system



6.8.1. Replacement of brake linings

Before disassembling motor brake, the electric power supply shall be turned off.

When the braking function is detected as "POOR" or "ABNORMAL", the motor brake is to be checked. The thickness of the Brake disc assembly can be measured as per the picture on right. According to the following table of "Replacement Thickness of Brake Disc Assembly", the replacement of disc assembly shall be made when it is worn to the "To be Replaced" figures.

* Replacement of Brake Disc Assembly

Product	Chain Hoist Body		Motor Trolley
	Motor brake	Mechanical brake	Motor brake
Part no.	CH012. Brake disc ass'y	CH009. Ratchet brake disc ass'y	MT530. Brake disc ass'y
Recommended Inspection period	Every 3 months	Annually	Every 3 months
	Standard thickness -> To be Replaced Thickness		
1ton(1chain-fall) 2ton(2chain-falls)	0.394inch -> 0.362inch (10mm -> 9.2mm)	0.551inch -> 0.531inch (14mm -> 13.5mm)	4.488inch -> 4.331inch (114mm -> 110mm)
2ton(1chain-falls) 3ton(2chain-falls) 5ton(2chain-falls) 10ton(4chain-falls)	0.394inch -> 0.362inch (10mm -> 9.2mm)	0.709inch -> 0.689inch (18mm -> 17.5mm)	

6.9. Motor

Heavy-duty Motor with Overheat Thermal Sensor
High torque and heavy duty hoist motor with insulation class "B". Frequent operation is efficient with 30 min. rating.
With the built-in thermal sensor, it automatically stops the operation to cool down when the motor internal temperature exceeds 130C. A D.C. rectifier provides D.C. voltage for the motor brake.

Type of motor enclosure: TEFC

6.9.1. Motor rating of Hoist and Trolley

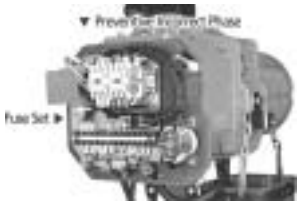
Motor	Capacity, chainfall (reeving)	ACOOLIFT Model no.		Motor KW (HP)	Rated current(A)		
		Hook suspension hoist	Motor trolley hoist		208-230V	380V	460V
Hoist motor	1ton, 1chain-fall	2130020 2130030	2130120 2130130	1.8Kw (2.4 HP)	9.2A	4.9A	4.2A
	2ton, 2chain-fall	2130040	2130140				
	2ton, 1chain-fall	2130050	2130150	3.5Kw (4.7 HP)	17A	9.1A	7.9A
	3ton, 2chain-fall	2130060	2130160				
	5ton, 2chain-fall	2130070	2130170				
	10ton, 4chain-fall	2130080	2130180	3.5Kw(4.7HP)X2	17AX2	9.1AX2	7.9AX2
Trolley motor	1ton, 1chain-fall 2ton, 2chain-fall 2ton, 1chain-fall	N/A	2130120 2130130 2130140 2130150	0.4Kw (0.54 HP)	3.3A	1.7A	1.5A
	3ton, 2chain-fall 5ton, 2chain-fall	N/A	2130160 2130170	0.75Kw (1.01 HP)	5.1A	2.5A	2.2A
	10ton, 4chain-fall		2130180	0.75Kw(1.01 HP)X2	5.1AX2	2.5AX2	2.2AX2

6.10. Double Action Over-winding Limiter (built-in inside)

This is the HOIST over-travel device.
The limit switch works in two steps.
- The 1st step: Interrupts the control circuit
- The 2nd step: Then interrupts the main power circuit.

Operation

When both the load chain and chain stopper spring, assembled to chain box, reaches the maximum upper or lower position, it contacts the chain guide.
Rotation of chain guide, rotates the limit assembly that is connected to the chain guide.
This automatically actuates limit and de-energizes either the raising or lowering circuit.



At the time of installation, it automatically checks the connected phase sequence (3ph) If the detected phase sequence will result in reverse operation of the hoist, the P.I.P.L. will prevent hoist operation until this condition is corrected.

* Control Transformer Fuses
Primary and secondary fusing if the control transformer is provided.

6.12. Push Button Pendant Switch - installed with Emergency stop button (red color)

Rain-proof, IP64 protection, with 2 or 4 buttons. All models are equipped with Emergency Stop function.
Easy to operate and designed with 115VAC control voltage. It is compact to enable easy one-handed sure grip control. The push button cable is provided with built-in strain relief to help prevent cable damage.

6.13. Overload Alert Sound Limiter (Protector) audible 'beeping' sound

When the hoist is overloaded with more than 110% of the rated load, it signals an audible alert to the operator. When the alert "beeping." sounds, the UP-motion will not operate but the DOWN motion will operate so the overload can be lowered.

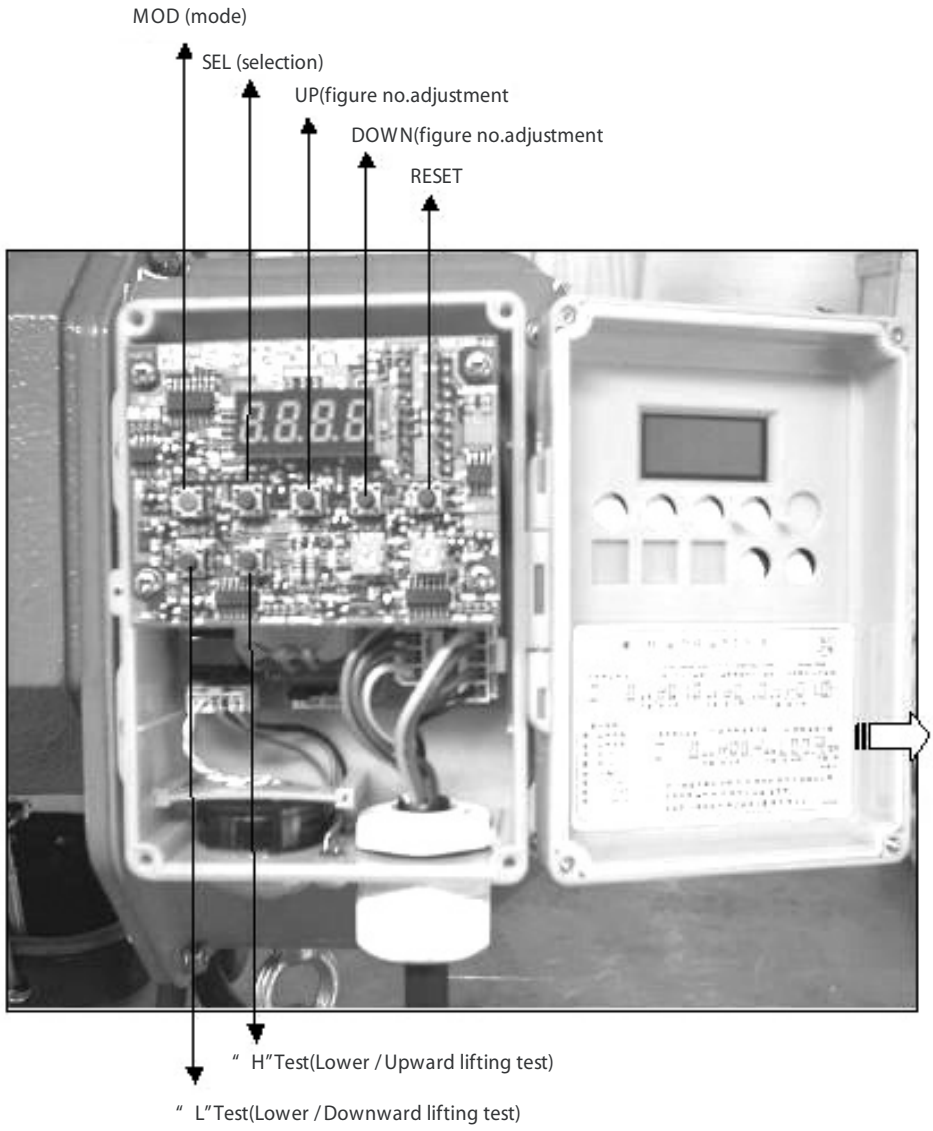
Key legend	Function
LED (display)	indicates the running current of motor and the overload status.
MOD (mode)	is used for inputting or memorizing data. Mode key cannot be controlled outside of the box. When using, open the plastic cover and operate inside the box panel..
SEL (selection)	is for position selection of the required setting value or number.
* UP * DOWN	Both keys are used to change or check the setting valve or number.
RESET	In case of operator's manual control after the overload of motor or the testing, the RESET key makes the reset of RELAY after TRIP from overloading.
"L" Test "H" Test	Both keys are used for testing the operation of high or low speed.

⚠WARNING

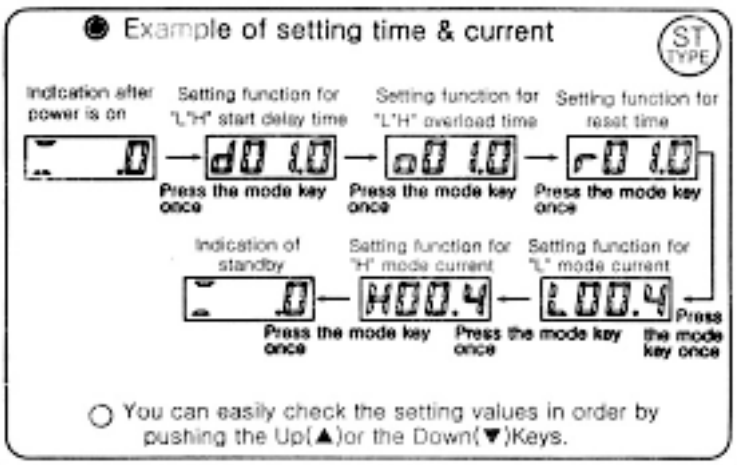
Do NOT open the outer enclosure. The stored value of the overload limiter shall NOT be changed or modified by anyone other than the manufacturer or an authorized agent. The value inscribed on the overload limiter is the optimal number and value for the hoist, changing this setting can cause equipment damage or personal injury. The manufacturer is not responsible for damage, injury, or death resulting from unauthorized tampering with this device .

The outer enclosure of the overload limiter is sealed by the manufacturer to ensure the alert warning enclosure is not opened.

* Description for the Inside Panel of Overload Alert Limiter (How to modify the setting figures)



Mode Display Instruction

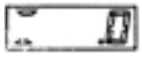


6.13.1. Featues

1. Reset time and time delay are stored in the Microcomputer. The overload limiter will allow the hoist to be lowered when the overload limiter is actuated.
2. Detail adjustment is available and the time and current can set digitally.
3. The setting is simplified and does not require measuring instruments. Motor current is displayed on the screen during operation.
4. The wiring is simplified by use of an exterior C.T.
5. Service is simplified because the main control P.C.B. is a " plug-in" type.

* MOD (mode) DISPLAY :

By pressing the inside panel button, it is possible to modify. From the outside of box, it is not available to modify the figures.

Step	Functions	Unit figures	Display Example	Reference
Step 1.	Power on			As the basic setting mode, it is displayed at the time of power-on. it is displayed at the time of power-on
Step 2.	Start delay time:	second		On the start operation, it allows One(1) second to protectfrom the excessive current flow.
Step 3.	Overload time:	second		When overloaded, it allows One(1) second to crosscheckthe instant over-current.
Step 4.	* "L" Test "H" Test	ampere		It indicates motor current on "Lower / Downward lifting" operation. It indicates motor current on "Higher / Upward lifting" operation
Step 5.	Power on			As the basic setting mode, it is displayed at the time of power-on. it is displayed at the time of power-on.

Notes: "L" test is only available for Dual Speed Chain Hoist.

For Single Speed Chain Hoist, please set the number of "L" test as the same of "H" test number.

NOTICE

For the setting of each function, set the display to H by pressing MOD key. Then press the key one more time.

When a beep sounds, the display will show STANDBY status and the input memorization of the setting is complete.

You can easily check the setting values in order by pushing ▲UP ▼DOWN keys.

6.13.2. How to arrange" Mode Setting"

⚠ WARNING

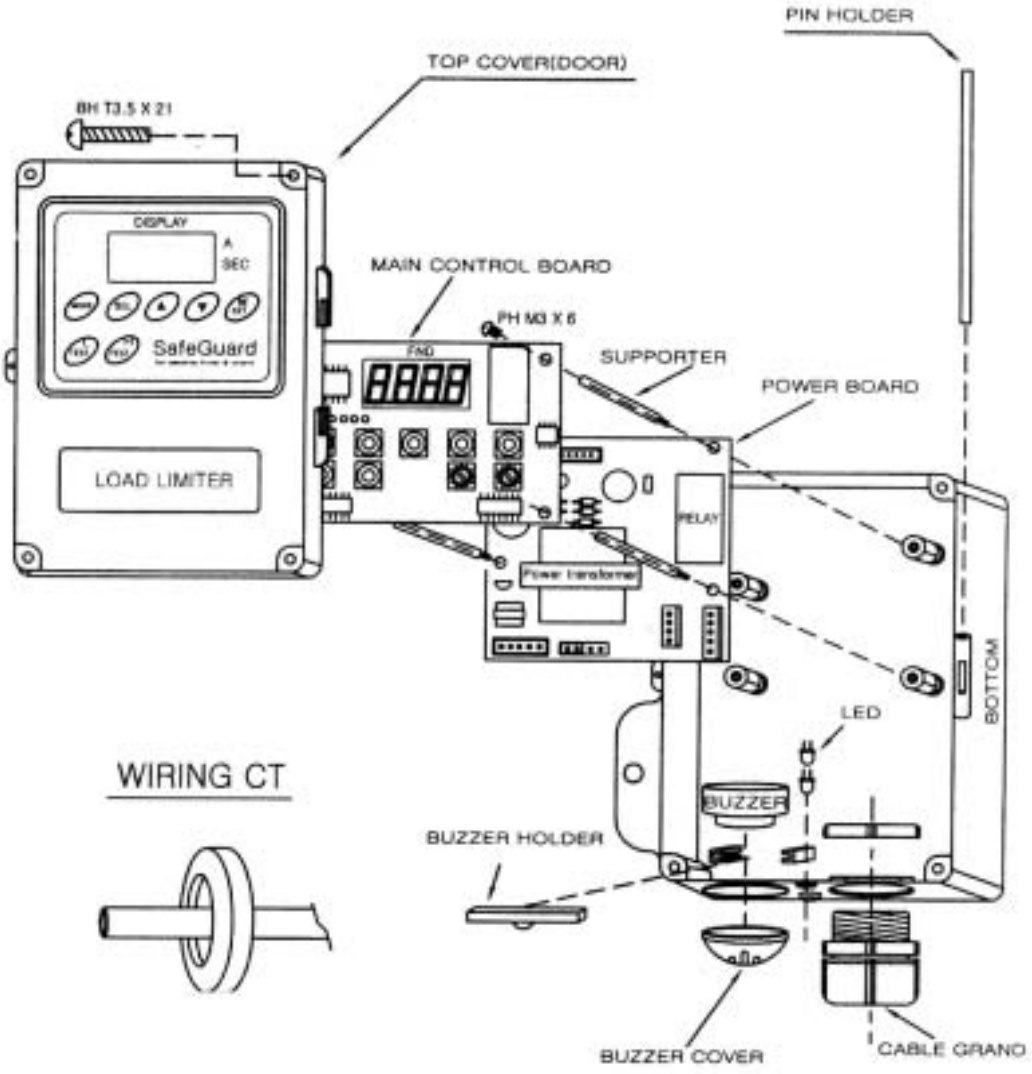
* Only authorized person(s) or the person shall service the electric load limiter.
* This device is composed of digitally controlled circuits. When programming changes are made by unauthorized personnel, it can allow the equipment to be overloaded and result in equipment damage, personal injury, or death.
* Before installing this device, be sure to read the instruction manual carefully.

MODE Setting Figures for Overload Alert Limiter(60hz, Single Speed)

ACCOLIFT		Capacity, chainfall	Hoist type	Standard Rating			Recommended Setting Figures of Overload Limiter (according to each MODE setting steps)						
				Motor output Kw (HP)	Current (ampere)		Step	Step	Step	Step		Step	
							Start delay time	Overload time	Reset time	"H" (high) modecurrent		"L" (low) modecurrent	
							(ampere)			(ampere)		(ampere)	
208 ~ 230V	460V				208 ~ 230V	460V				208 ~ 230V	460V	208 ~ 230V	460V
2130020		1Ton, 1chain-fall	Hook Suspension Hoist	1.8Kw (2.4HP)	7.3	3.8	1sec.	1sec.	1.5sec.	7.3	3.8	6.3	2.8
2130030													
2130040		2Ton, 2chain-fall											
2130050		2Ton, 1chain-falls		3.5Kw (4.7HP)	13.3	7.9	1sec.	1sec.	1.5sec.	13.3	7.9	8.8	4.8
2130060		3Ton, 2chain-fall											
2130070		5Ton, 2chain-fall											
2130080		10Ton, 4chain-fall		3.5Kw(4.7HP)X2	26.6	15.8				26.6	15.8	17.6	9.6
2130120		1Ton, 1chain-fall	Motor Trolley Hoist	1.8Kw (2.4HP)	7.3	3.8	1sec.	1sec.	1.5sec.	7.3	3.8	6.3	2.8
2130130													
2130140		2Ton, 2chain-fall											
2130150		2Ton, 1chain-fall		3.5Kw (4.7HP)	13.3	7.9	1sec.	1sec.	1.5sec.	13.3	7.9	8.8	4.8
2130160		3Ton, 2chain-fall											
2130170		5Ton, 2chain-fall											
2130180		10Ton, 4chain-fall		3.5Kw(4.7HP)X2	26.6	15.8				26.6	15.8	17.6	9.6

Notes: "L" (low) mode is only used for Dual Speed Chain Hoist. The figures have no effect on Single Speed Chain Hoists.
For Single Speed Chain Hoist, please set the number of "L" (low) mode the same as "H" (high) mode number.

6.13.3. Assembling figure



* Specification label

CONTROL VOLTAGE	☐ AC 48 V ☐ AC 110 V ☐ AC 220V ☐ AC V		
F R Q .	50/60Hz	CAPACITY OF CONTACTING POINT	5A/250VAC
CURRENT	☐ 0.8 ~ 99.9A ☐		
T I M E	0.1~25.0 SEC	CONSUMING POWER	1.0 VA
SER.NO.	EX-	PAT.NO.	0267456. 0240833

⚠ WARNING

When being operated under the circumstances where input power is frequently turned ON/OFF or is turned OFF for long time, the value of data memorized might be initialized. This matter might cause error operation when overloaded. Please keep in mind that the accident caused by error operation endangers person's life.

☞ Be sure to carefully read this manual before use.

7. Preventive maintenance

7.1. Recommended Periodic Maintenance and Inspection Table

Check	Interval	Qualification of the customer s personnel
Brake operation	Daily	Operator
Visual inspection of the chain	Daily	Operator
Suspension of the control box by the steel wire	Daily	Operator
Cleanness and lubrication of the chain	Monthly	Operator
Limiter operation	Monthly	Operator
Measuring of the wear on the chain	Every 3 months	Operator
Measuring of the wear on the hooks	Every 3 months	Operator
Tightening of the hook block screws	Every 3 months	Operator
Checking of the locking plate screws	Every 3 months	Operator
Lubrication of the idler sprocket	Annually	Operator
Checking of the screw tightening torques and checking for signs of corrosion	Annually	Qualified mechanic
Adjustment of the limiter and brake	Annually	Qualified mechanic
Lubrication of the gears	Lubricated for life	

7.2. Lubrication

Lubrication point	Possible brands	Quantity & Applied model no.	
Chain	Chain lubricating fluid	As required	
Gears	SHELL OMALA 220 MOBIL MOBILGEAR 630 ESSO SPARTAN EP220 CALTEX MEROPA220	1liter	1ton (chain-fall reeving 1) 2ton (chain-fall reeving 2)
		3liter	2ton (chain-fall reeving 1) 3ton (chain-fall reeving 2) 5ton (chain-fall reeving 2)
		3liter per gear box	10ton (chain-fall reeving 4)

7.3. Recommended Technical Support for Various Spare Parts

Spare part	To be replaced by	Qualification of the personnel
Upper chain guide	Authorized manufacturer personnel	Qualified electrician
Output shaft	Authorized manufacturer personnel	Qualified mechanic
Ratchet gear assembly	Authorized manufacturer personnel	Qualified mechanic
Gearing (1st/2nd stage)	Authorized manufacturer personnel	Qualified mechanic
Other sealing and O-rings	Authorized manufacturer personnel	Qualified mechanic
Load limiter	Authorized manufacturer personnel	Qualified electrician
Electric box	Authorized manufacturer personnel	Qualified electrician
PC-board	Authorized manufacturer personnel	Qualified electrician
Overload limiter	Authorized manufacturer personnel	Qualified electrician
Dual brake system	Authorized manufacturer personnel	Qualified electrician
Chain	Customer	Qualified mechanic
Chain container (chain bag)	Customer	Qualified mechanic
Chain stopper	Customer	Qualified mechanic
Suspension hook	Customer	Qualified mechanic
Hook assembly	Customer	Qualified mechanic
Fuses	Customer	Qualified electrician

7.4. Troubleshooting

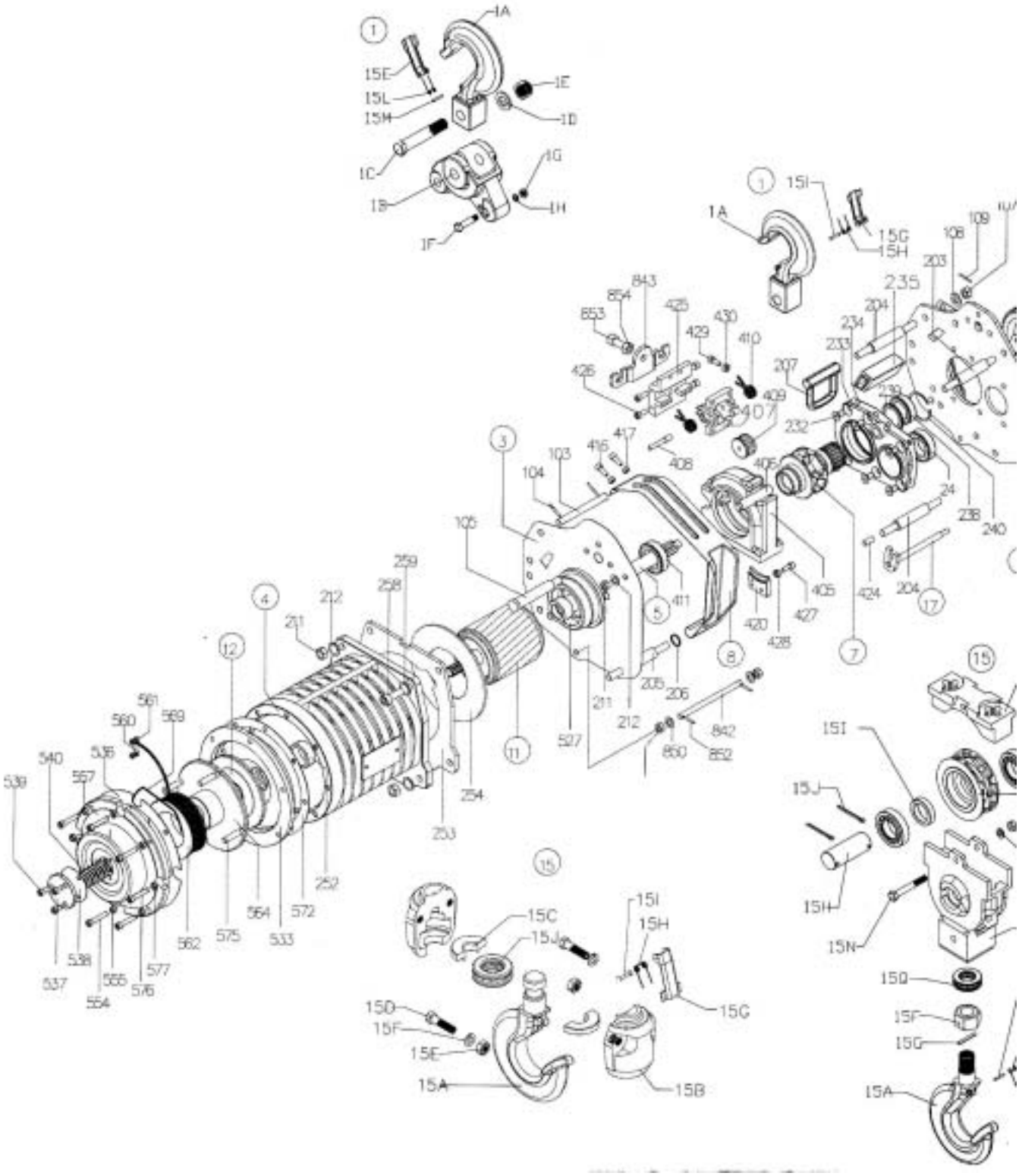
Problem	Cause	Solution
The chain hoist does not work	The emergency stop button is activated	Deactivate it
	Triggered fuse	Replace the fuse
	Temperature control (optional) activated	Allow to cool down
	Contactor terminal screws loose	Tighten them
	Main switch is off	Turn it on
Impossible to lift the load	Overload	Reduce the load
	Limiter worn or incorrectly adjusted	Adjust or replace it
Braking path of more than 4inch (10 cm)	Braking lining worn	Adjust the brake and replace the brake components if necessary
The travel direction does not correspond to that indicated on the control box	The power supply is incorrectly connected	Change two phases of the power supply
Abnormal noises while the load is being moved	The chain components are not lubricated	Lubricate the components
	Chain is worn	Replace it
	Load sheave or chain guide is worn	Replace the sheave or chain guide
	Idler sheave is worn	Replace it
	A supply phase is missing	Check the connection of the phases

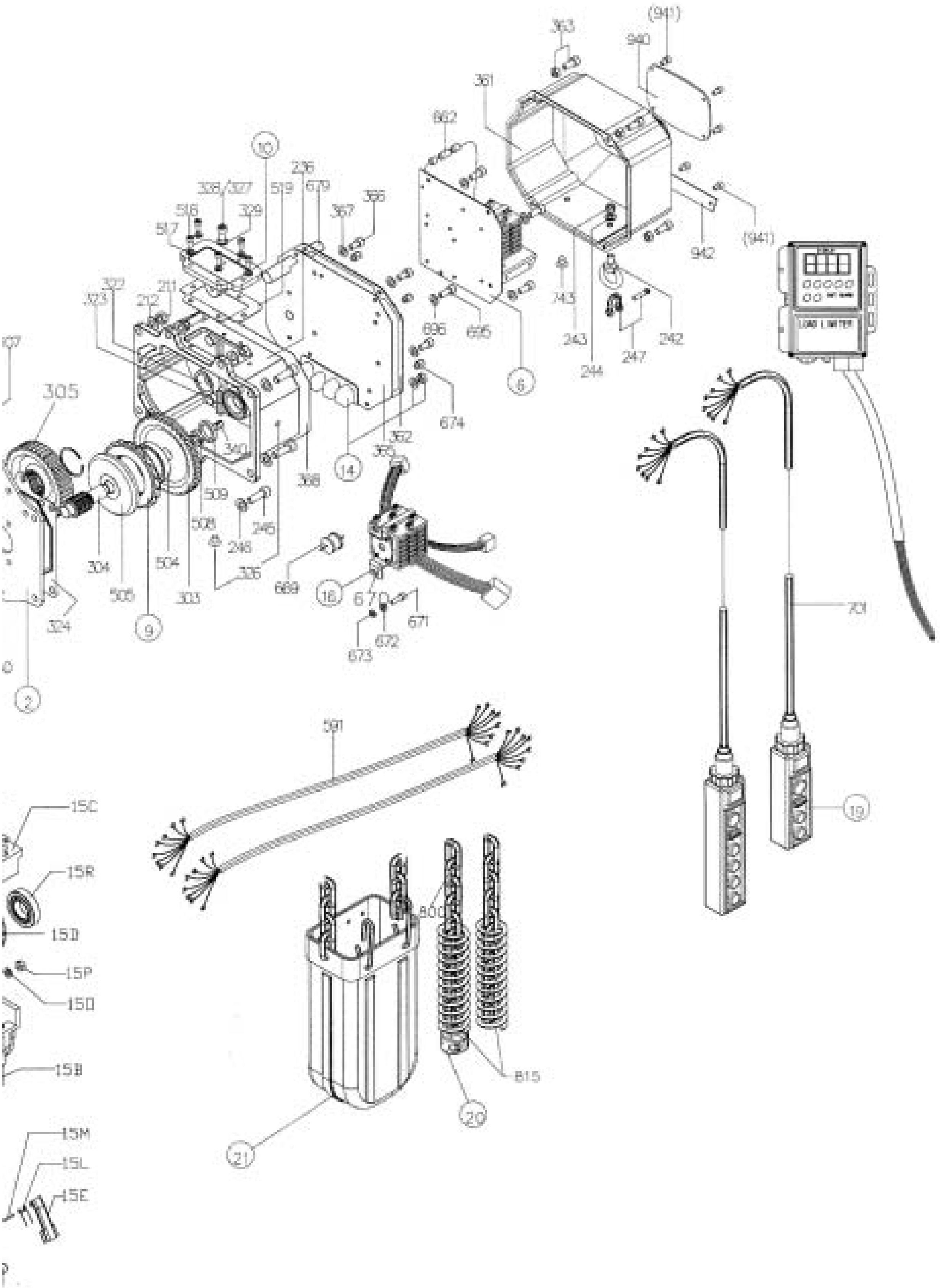
Once the hoist has been used for the FEM class duration, all of the components must be checked by an authorized agent or by the manufacturer. The hoist should no longer be used, unless agreement is obtained from the authorized agent or the manufacturer.

For discarding chain hoist, please remove all greases and oils from the hoist.

8. Parts illustrations

Exploded View of CH (chain hoist) Parts

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LOAD LIMITER
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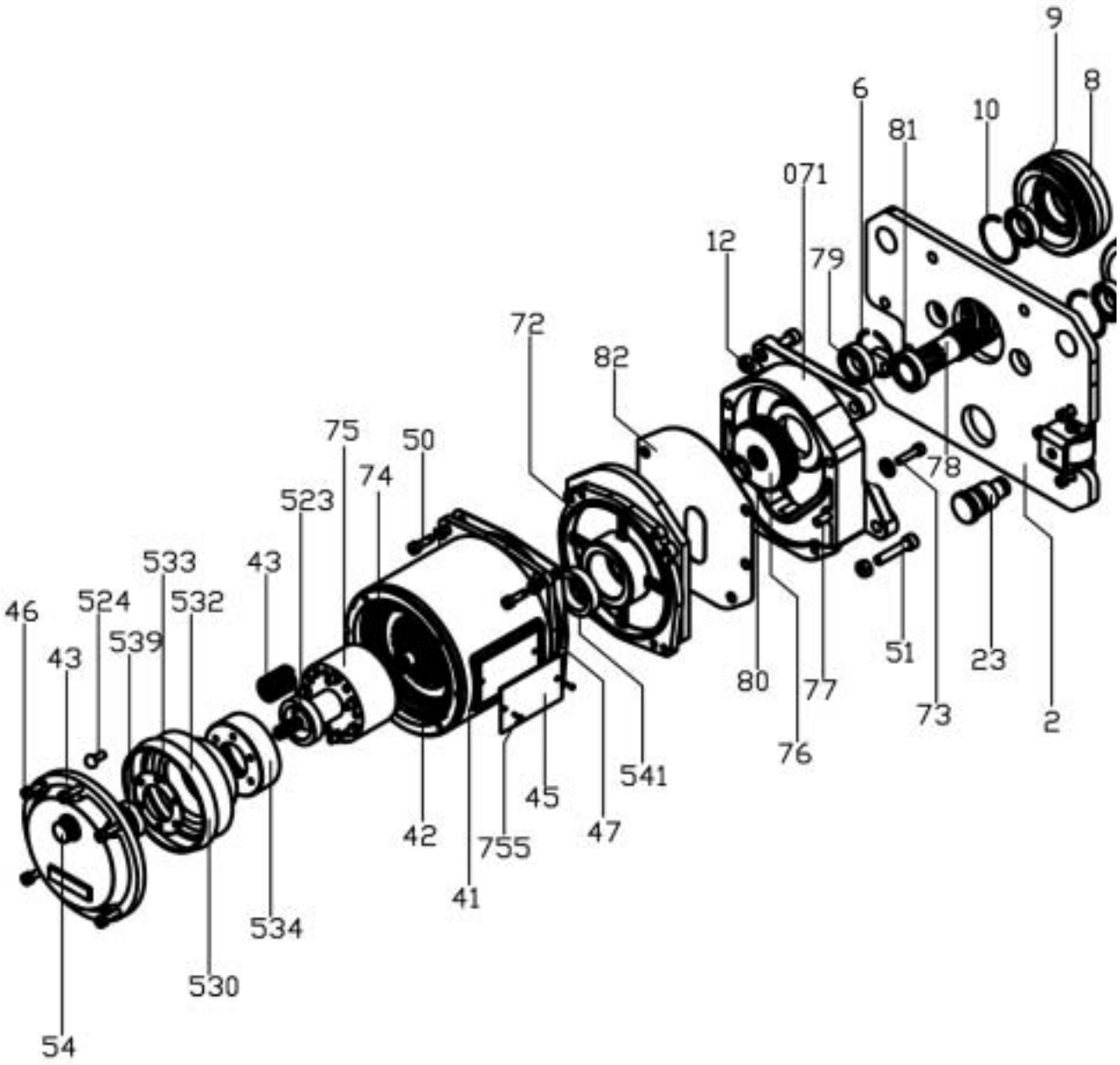
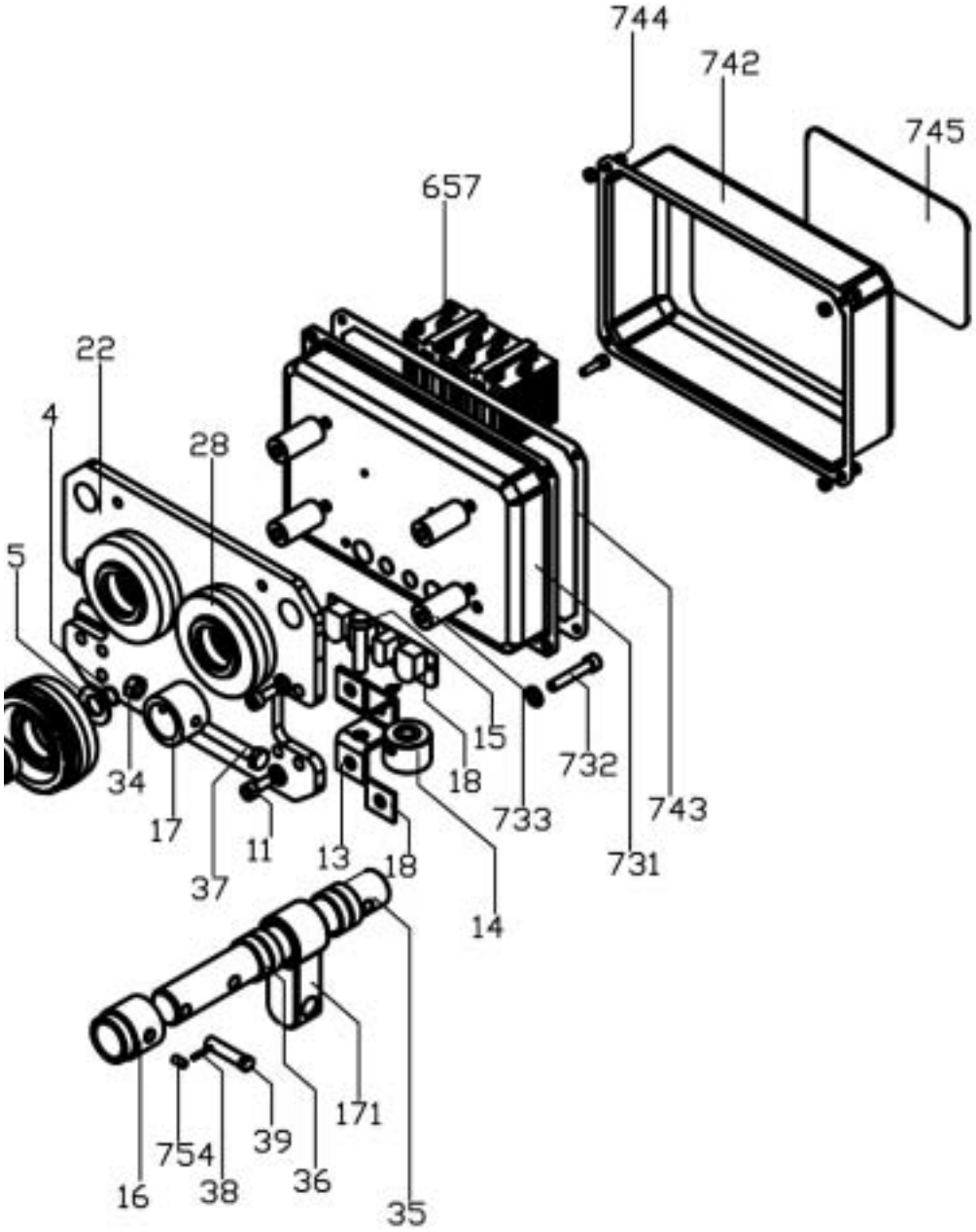
Exploded view of MT (motor trolley) Parts

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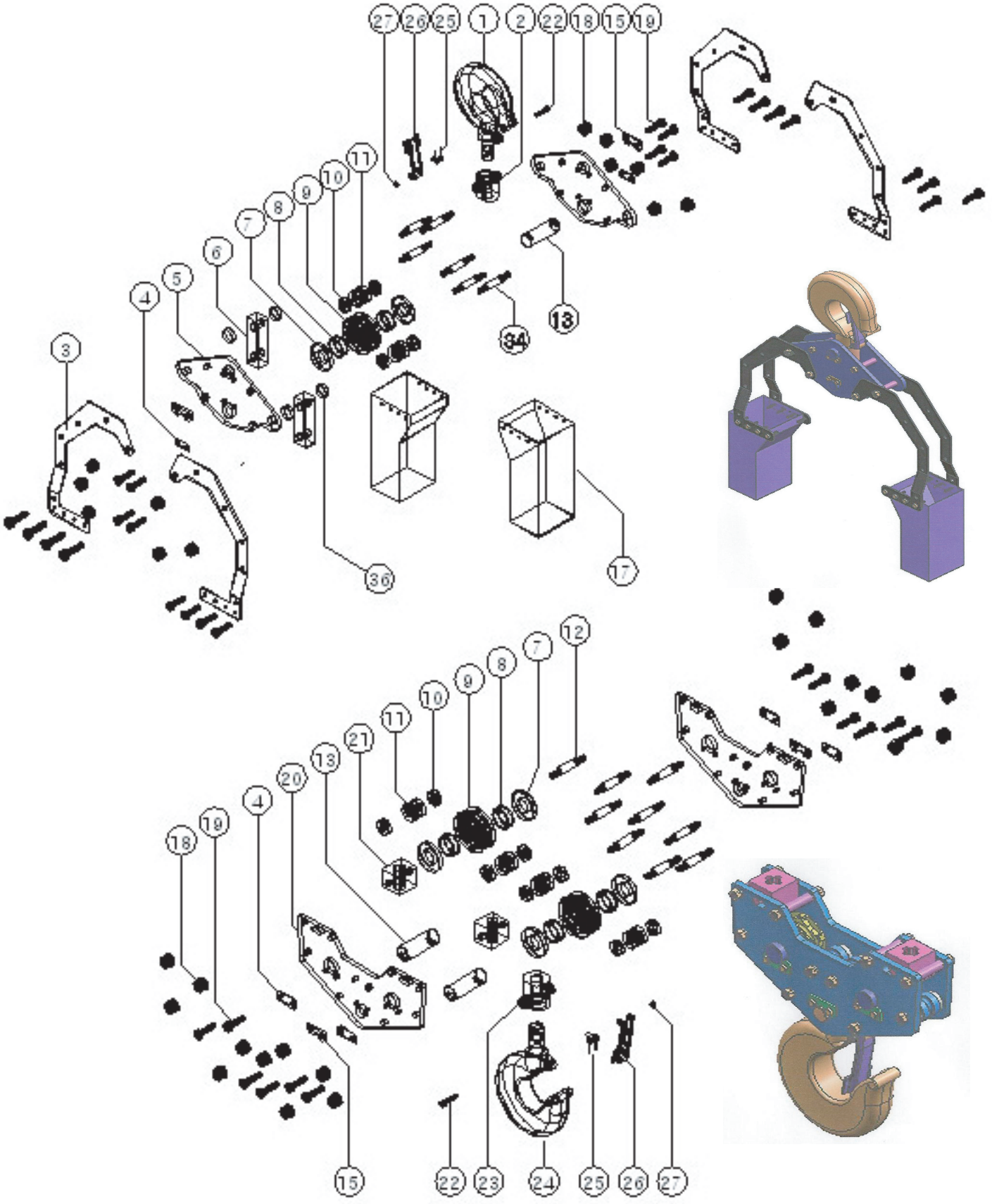
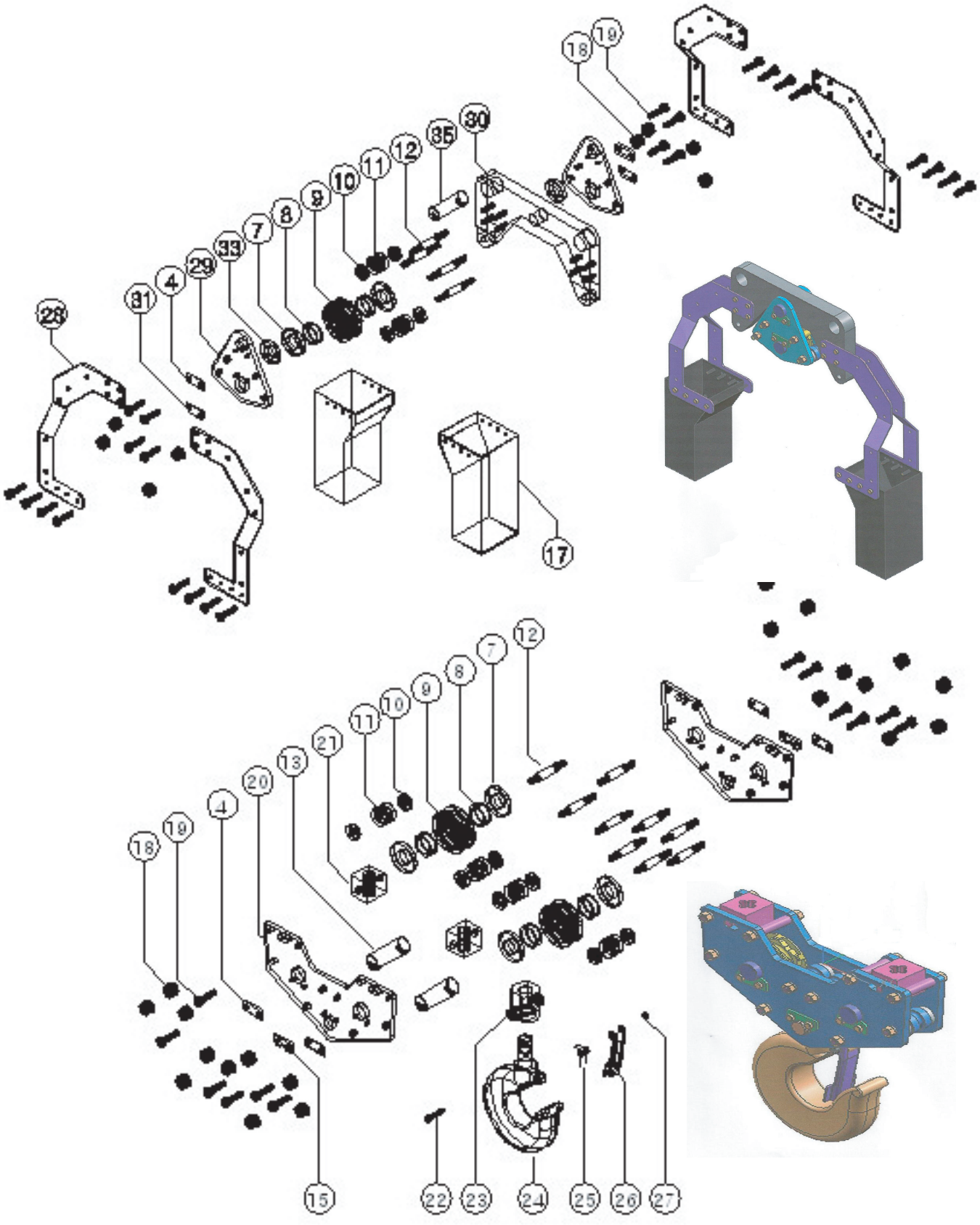
■ Exploded View of Hook mounted CH (chain hoist) Parts for 10Ton Capacity only



■ Exploded View of Trolley mounted CH (chain hoist) Parts for 10Ton Capacity only



Capacity-Chain-falls (How to read out)	1S 1Ton 1chain-fall	2W 2Ton 2chain-fall	3W 3Ton 2chain-fall	2S 2Ton 1chain-fall	5W 5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK SUSPENSION)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH001 TOP HOOK ASS'Y	71574-1001	71574-2001	71574-3001	71574-4001	71574-5001
CH001A SAFETY LATCH SET, FOR TOP HOOK	71574-1002	71574-2002		71574-4002	71574-5002
CH001B ARM OF TOP HOOK	N/A	71574-2003	71574-3003	N/A	71574-5003
CH001C CONNECTING BOLT, 16x65x20MM	N/A	71574-2004	71574-3004	N/A	71574-5004
CH001F CHAIN ANCHORAGE BOLT, 10x33x16MM	N/A	71574-2005	71574-3005	N/A	71574-5005
CH002 GEAR SIDE PLATE ASS'Y	71574-1006		71574-3006		
CH003 MOTOR SIDE PLATE ASS'Y	71574-1007		71574-3007		
CH004 MOTOR CASE & STATOR ASS'Y moter=> A : 1800RPM(27FPM) , B : 1200RPM(17FPM)	71574-1008A 71574-1008B	71574-2008	71574-3008		
CH005 1ST GEAR ASS'Y	71574-1009		71574-3009		
CH006 ELECTRIC EQUIPMENT ASS'Y, WITH THE BOARD SETTING OF PARTS	71574-1010		71574-3010		
CH006E MACHINE SCREW, 4MMx8MM	71574-1011				
CH007 LOAD SHEAVE	71574-1012		71574-3012	71574-4012	
CH008 SHEAVE COVER	71574-1013		71574-3013		
CH009 RATCHET GEAR ASS'Y	71574-1014		71574-3014		
CH010 PAWL COVER ASS'Y	71574-1015		71574-3015		
CH011 ROTOR ASS'Y	71574-1016		71574-3016		
CH012 BRAKE DISC ASS'Y	71574-1017		71574-3017		
CH014 CORD HOLDER ASS'Y	71574-1018				
CH015 BOTTOM HOOK ASS'Y	71574-1019	71574-2019	71574-3019	71574-4019	71574-5019
CH015A BOTTOM HOOK ONLY	71574-1020	71574-2020	71574-3020	71574-4020	71574-5020
CH015B BOTTOM HOOK COVER	71574-1021	71574-2021	71574-3021	71574-4021	71574-5021

* 10Ton Parts are Same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF ACCOLIFT CHAIN HOIST

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chainfall	2Ton 2chainfall	3Ton 2chainfall	2Ton 1chainfall	5Ton 2chainfall
ACCOLIFT MODEL NO. (HOOK SUSPENSION)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH015C BOTTOM HOOK CHAIN GUIDE	N/A	71574-2022	71574-3022	N/A	71574-5022
CH015D IDLE SHEAVE	N/A	71574-2023	71574-3023	N/A	71574-5023
CH015H IDLE SHEAVE PIN	N/A	71574-2024	71574-3024	N/A	71574-5024
CH015I IDLE SHEAVE COLLAR,	N/A	71574-2025	71574-3025	N/A	71574-5025
CH015J COTTER PIN	N/A	71574-2026	71574-3026	N/A	71574-5026
CH015N HEX BOLT	N/A	71574-2027	71574-3027	N/A	71574-5027
CH015Q THRUST BEARING, FOR 1 CHAIN REEVING BOTTOM HOOK	71574-1028	71574-2028	71574-3028	71574-4028	71574-5028
CH015Q THRUST BEARING, FOR 2 CHAIN REEVING SHEAVE BEARING	71574-1029	71574-2029	71574-3029	71574-4029	71574-5029
CH015E/L/M SAFETY LATCH SET	71574-1030	71574-2030	71574-3030	71574-4030	71574-5030
CH016 LIMIT CAM SWITCH ASS'Y	71574-1032		71574-3032		
CH017 LIMIT SWITCH LEVER ASS'Y	71574-1033		71574-3033		
CH019A PUSH BUTTON ASS'Y, 2 POINTS (U/DW)	71574-1034				
CH019B PUSH BUTTON ASS'Y, 4 POINTS (U/DW/L/R)	71574-1035				
CH019C PUSH BUTTON ASS'Y, 6 POINTS (U/DW/L/R/S/N)	71574-1036				
CH020 CHAIN STOPPER	71574-1037		71574-3037	71574-4037	

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF ACCOLIFT CHAIN HOIST

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chain-fall	2Ton 2chain-fall	3Ton 2chain-fall	2Ton 1chain-fall	5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK Mounted)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH021A CHAIN CONTAINER ASS'Y FOR MAX LIFT =	80ft	40ft	N/A	26ft	N/A
(PCCA: PLASTIC CHAIN CONTAINER A-TYPE) To 24 METER OF 7.1MMx21.0MM CHAIN(1S,2W) To 12METER OF 9.5MMx28.6MM CHAIN(3W) To 8 METER OF 11.2MMx34.0MM CHAIN(2S,5W)	71574-1038				
CH021B CHAIN CONTAINER ASS'Y FOR MAX LIFT =	130ft	65ft	39ft	58ft	29ft
(PCCB: PLASTIC CHAIN CONTAINER B-TYPE) To 40METER of 7.1MMx21.0MM (1S, 2W) To 24METER of 9.5MMx28.6MM (3W) To 18METER of 11.2MMx34.0MM (2S, 5W)	71574-1039				
CH021C CHAIN CONTAINER ASS'Y (SCC: STEEL CHAIN CONTAINER) ABOVE 40METER of 7.1x21.0mm (1S, 2W) ABOVE 24METER of 9.5x28.6MM (3W) ABOVE 18METER of 11.2x34.0MM (2S, 5W)	MADE TO ORDER				
CH105 TOP HOOK PIN	71574-1040	71574-3040			
CH107 HEX, U-NUT 12MM	71574-1041	71574-3041			
CH203 STAY BOLT (A)	71574-1042	71574-3042			
CH204 STAY BOLT (B)	71574-1043	71574-3043			
CH205 STAY BOLT (C)	N/A	71574-3226			
CH206 O-RING	N/A	71574-3044			

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF ACCOLIFT CHAIN HOIST

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chain-fall	2Ton 2chain-fall	3Ton 2chain-fall	2Ton 1chainfall	5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK Mounted)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH207 HANGER HOLDING METAL	71574-1045				
CH211 HEX NUT, 10MM	71574-1046		71574-3046		
CH232 SUNK BOLT, 8MMx10MM	71574-1047		71574-3047		
CH233 FLANGE B	71574-1048		71574-3048		
CH236 GEAR CASE	71574-1049		71574-3049		
CH238 BALL BEARING, 6008ZZ(1,2ton) / 6010ZZ(3,2,5ton)	71574-1050		71574-3050		
CH239 OIL SEAL (A)	71574-1051		71574-3051		
CH240 SNAP RING	71574-1052		71574-3052		
CH241 BALL BEARING, 6204ZZ(1,2ton) / 6306ZZ(3,2,5ton)	71574-1053		71574-3053		
CH242 EYE BOLT ASS'Y, 8MM	71574-1054				
CH245 HEX BOLT	71574-1055		71574-3055		
CH246 SPRING WASHER	71574-1217				
CH247 SHACKLE	71574-1056				
CH252 BALL BEARING, 6204DD(1,2ton) / 6205DD(3,2,5ton)	71574-1057		71574-3057		
CH253 PACKING, MOTOR CASE	71574-1218		71574-3218		
CH254 PLATE, LOCATING	71574-1219		71574-3219		
CH258 HEX WRENCH BOLT	71574-1058		71574-3058		
CH303 2ND GEAR	71574-1303		71574-3033		
CH304 3RD GEAR	71574-1304		71574-3304	71574-4304	71574-5304
CH305 4TH GEAR	71574-1305		71574-3305	71574-4305	71574-5305
CH322 BALL BEARING, 6203ZZ(1,2ton) / 6203ZZ(3,2,5ton)	71574-1059		71574-3059		
CH323 BALL BEARING, 6301ZZ(1,2ton) / 6205ZZ(3,2,5ton)	71574-1060		71574-3060		
CH324 PACKING FOR GEAR CASE	71574-1061		71574-3061		
CH326 HEX BOLT	71574-1062				
CH327 VENT BOLT	71574-1064				
CH329 PACKING, VENT BOLT	71574-1220				
CH340 SPRING PIN	71574-1065				
CH361 ELECTRIC COMPONENT CASE	71574-1066		71574-3066		
CH362 PACKING COMPONENT CASE	71574-1067		71574-3067		

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF ACCOLIFT CHAIN HOIST

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chain-fall	2Ton 2chain-fall	3Ton 2chain-fall	2Ton 1chain-fall	5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK Mounted)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH363 HEX WRENCH BOLT	71574-1068				
CH366 HEX WRENCH BOLT	71574-1069		71574-3069		
CH368 ADIABATIC PACKING	71574-1070		71574-3070		
CH369 LEAD WIRE	71574-1071		71574-3071		
CH405 CHAIN GUIDE	71574-1072		71574-3072	71574-4072	
CH406 ANTIROTATION PIN	71574-1073		71574-3073		
CH407 ROLLER BOARD	71574-1074		71574-3074		
CH408 ROLLER PIN	71574-1075		71574-3075		
CH409 ROLLER	71574-1076		71574-3076	71574-4076	
CH410 INTERMEDIATE STICK SPRING	71574-1077		71574-3077		
CH411 BALL BEARING, 6008ZZ(1,2ton) / 6210ZZ(3,2,5ton)	71574-1078		71574-3078		
CH416 MACHINE SCREW S/W, 5MMx10MM	71574-1079				
CH420 STRIPPER	71574-1080		71574-3080	71574-4080	
CH424 SPRING PIN	71574-1081				
CH425 HOLDING BOARD FOR SPRING	71574-1082		71574-3082		
CH426 HEX WRENCH BOLT	71574-1083		71574-3083		
CH428 SPRING WASHER	71574-1084		71574-3084		
CH429 HEX WRENCH BOLT	71574-1085		71574-3085		
CH504 BUSHING FOR RATCHET DISC	71574-1086		71574-3086		
CH505 DISC HUB	71574-1087		71574-3087		
CH508 SPLIT RING	71574-1088		71574-3088		
CH509 STOPPER RING	71574-1089		71574-3089		
CH516 HEX WRENCH BOLT	71574-1090		71574-3090		
CH517 PAWL COVER	71574-1221		71574-3221		
CH519 PACKING, PAWL COVER	71574-1222		71574-3222		
CH527 BALL BEARING, 6206ZZ(1,2ton) /6008ZZ(3,2,5ton)	71574-1091		71574-3091		

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF ACCOLIFT CHAIN HOIST

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chain-fall	2Ton 2chain-fall	3Ton 2chain-fall	2Ton 1chain-fall	5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK Mounted)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH533 BEARING SUPPORT	71574-1092		71574-3092		
CH536 PACKING, BRAKE STATOR	71574-1223		71574-3223		
CH537 SPRING COVER	71574-1093		71574-3093		
CH538 PACKING, SPRING COVER	71574-1225		71574-3225		
CH539 HEX WRENCH BOLT, 6MMx20MM	71574-1094				
CH540 BRAKE SPRING	71574-1095		71574-3095		
CH554 HEX WRENCH BOLT	71574-1096		71574-3096		
CH557 BRAKE STATOR	71574-1097		71574-3097		
CH560 CORD PRESSING METAL	71574-1098				
CH562 BRAKE COIL ASS'Y	71574-1099		71574-3099		
CH564 MOVING CORE	71574-1100		71574-3100		
CH567 SNAP RING	71574-1101		71574-3101		
CH572 PACKING, BEARING SUPPORT	71574-1224		71574-3224		
CH575 HEX WRENCH BOLT	71574-1102		71574-3102		
CH576 HEX WRENCH BOLT, 6MMx25MM	71574-1103		71574-3103		
CH591 POWER+CONTROL ASS'Y	71574-1104		71574-3104		
CH600 MAGNETIC CONTACTOR, DM-12	71574-1105		N/A		
MAGNETIC CONTACTOR, DM-22	N/A		71574-3105		
CH602 TRANSFORMER, 50VA 220/380/440	71574-1107				
CH604A TERMINAL BLOCK, 6P	71574-1108		N/A		
CH601B TERMINAL BLOCK, 15P	N/A		71574-3109		
CH605 FUSE HOLDER	71574-1110				
CH662 FUSE, 250V 1A	71574-1111				
CH663 DPM (AC->DC RECTIFIER)	71574-1112				
CH667 LOAD LIMITER ASS'Y (OVERLOAD ALERT LIMITER)	71574-1113				
CH669 JOINT PIPE	71574-1114				

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

Capacity-Chain-falls (How to read out)	1S	2W	3W	2S	5W
	1Ton 1chain-fall	2Ton 2chain-fall	3Ton 2chain-fall	2Ton 1chain-fall	5Ton 2chain-fall
ACCOLIFT MODEL NO. (HOOK Mounted)	2130020 2130030	2130040	2130060	2130050	2130070
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140	2130160	2130150	2130170
DESCRIPTION					
CH695 HEX WRENCH BOLT	71574-1115		71574-3115		
CH701A PUSH BUTTON CABLE LINE 0.030" (0.75m2)DIA. x 5COND FOR U/DW	71574-1116				
CH701B PUSH BUTTON CABLE LINE 0.030" (0.75m2)DIA. x 7CONDUCTOR FOR U/DW/L/R	71574-1117				
CH701C PUSH BUTTON CABLE LINE 0.030" (0.75m2)DIA. x 9CONDUCTOR FOR U/DW/L/R/S/N	71574-1118				
CH800A LOAD CHAIN 0.280" DIA. (7.1x21.0MM)	70011-9		N/A		
CH800B LOAD CHAIN 0.370" DIA.(9.5x28.6MM)	N/A		70011-10	N/A	
CH800C LOAD CHAIN 0.441" DIA.(11.2x34.0MM)	N/A			70011-11	
CH815 CHAIN STOPPER SPRING	71574-1122		71574-3122	71574-4122	
CH842 CHAIN BAG SUPPORT PIN	71574-1123		71574-3123		
CH843 CHAIN BAG SUPPORT METAL	71574-1124		71574-3124		
CH850 PLAIN WASHER	71574-1125		71574-3125		
CH852 COTTER PIN, 1/8 INCH * 3/4 INCH	71574-1126				
CH853 HEX WRENCH BOLT, 10MM*20MM	71574-1127				
CH900 OIL BOTTLE FOR CHAIN LUBRICATION	71574-1128				
CH940 NAME PLATE, MAIN	71574-1129	71574-2129	71574-3129	71574-4129	71574-5129
CH942 NAME PLATE, MOTOR	71574-1130	71574-2130	71574-3130	71574-4130	71574-5130
CH943 LABEL, WARNING	71574-1131				
CH944 LABEL, OIL LUBRICATION	71574-1132				

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF MOTOR TROLLEY

CAPACITY of MOTOR TROLLEY	1TON	2TON	3TON	5TON
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140 2130150	2130160	2130170
PART NO. DESCRIPTION				
MT002 GEAR SIDE PLATE ASS'Y	71574-1133	71574-2133	71574-3133	71574-5133
MT004 SNAP RING,	71574-1134	71574-2134		71574-5134
MT005 PLAIN WASHER	71574-1135	71574-2135	71574-3135	71574-5135
MT006 SNAP RING	71574-1136			
MT008 GEAR ROLLER	71574-1137	71574-2137	71574-3137	71574-5137
MT009 BALL BEARING, 6203ZZ (1T), 6205ZZ (2T), 6305ZZ (3T), 6307ZZ (5T)	71574-1138	71574-2138	71574-3138	71574-5138
MT010 SNAP RING	71574-1139	71574-2139	71574-3139	71574-5139
MT011 BOLT WITH HEX, HOLE	71574-1140			
MT012 HEX NUT	71574-1141			
MT013 GUIDE ROLLER BODY	71574-1142			
MT014 GUIDE ROLLER	71574-1143		71574-3143	
MT015 GUIDE ROLLER PIN	71574-1144			
MT016 BRACKET A	71574-1145	71574-2145	71574-3145	71574-5145
MT017 BRACKET B	71574-1146	71574-2146	71574-3146	71574-5146
MT018 CORD HOLDER ASS'Y	71574-1147			
MT022 PLAIN SIDE PLATE ASS'Y	71574-1148	71574-2148	71574-3148	71574-5148
MT023 ROLLER PIN	71574-1149	71574-2149	71574-3149	71574-5149
MT028 PLAIN ROLLER WITH BEARING 6203ZZ	71574-1150	71574-2150	71574-3150	71574-5150
MT034 HEX NUT	71574-1151	71574-2151		71574-5151
MT035 SHAFT	71574-1152	71574-2152	71574-3152	71574-5152
MT036A ADJUSTING COLLAR	71574-1153	71574-2153	71574-3153	71574-5153
MT036B ADJUSTING WASHER	71574-1227	71574-2227	71574-3227	71574-5227
MT037 STOPPER BOLT	71574-1154	71574-2154	71574-3154	71574-5154
MT038 COTTER PIN	71574-1155			
MT041+MT042 MOTOR CASE & STATOR ASS'Y	71574-1156		71574-3156	
MT043 BRAKE COVER	71574-1157			
MT044 BRAKE SPRING	71574-1158			

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF MOTOR TROLLEY

CAPACITY of MOTOR TROLLEY	1TON	2TON	3TON	5TON
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140 2130150	2130160	2130170
PART NO. DESCRIPTION				
MT045 NAME PLATE, MOTOR	71574-1159		71574-3159	
MT046 H/T WITH WRENCH BOLT	71574-1160			
MT047 PACKING OF MOTOR CASE	71574-1161			
MT050 BOLT WITH HEX, HOLE, 8MMx25MM	71574-1162			
MT054 COVER PLUG	71574-1163			
MT071 GEAR CASE	71574-1164			
MT072 FLANGE	71574-1165			
MT075 ROTOR ASS'Y	71574-1166		71574-3166	
MT076 2ND GEAR	71574-1167			
MT077 SPRING PIN, 8MMx18MM	71574-1168			
MT078 3RD GEAR	71574-1169		71574-3169	71574-5169
MT079 BALL BEARING,	71574-1170			
MT080 SNAP RING	71574-1171			
MT081 COLLAR FOR 3RD GEAR	71574-1172			
MT082 PACKING FOR FLANGE	71574-1173			

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

* PARTS OF MOTOR TROLLEY

CAPACITY of MOTOR TROLLEY	1TON	2TON	3TON	5TON
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130120 2130130	2130140 2130150	2130160	2130170
PART NO. DESCRIPTION				
MT171 CONNECTOR	71574-1174	71574-2174	71574-3174	71574-5174
MT523 BUMPER RUBBER	71574-1175			
MT524 RIVET, 5MMx20mm	71574-1176			
MT530 BRAKE DISC ASS'Y	71574-1177			
MT539 BALL BEARING, 6202DD	71574-1178			
MT541 BALL BEARING, 6204DD	71574-1179			
MT657 MAGNETIC CONTACTOR AM-12	71574-1180		N/A	
MAGNETIC CONTACTOR AM-18	N/A		71574-3180	
MT701 CONTROL CABLE LINE 0.050" (1.25M2) x 8 CORE	71574-1181		71574-3181	
MT731 CONROL BOX	71574-1182			
MT732 BOLT WITH HEX, HOLE	71574-1183			
MT733 SUPPORT BAR	71574-1184			
MT742 CONTROL BOX COVER	71574-1185			
MT743 CONTROL BOX PACKING	71574-1186			
MT745 NAME PLATE, MAIN	71574-1187	71574-2187	71574-3187	71574-5187
MT754 SET SCREW	71574-1188	71574-2188	71574-3188	71574-5188
MT755 RIVET	71574-1189			
MT756 LEAD PACKING	71574-1190			
MT800 ELECTRIC PART A'SSY, INCLUDING ELECTRIC BOARD PANEL AND PARTS	71574-1191		71574-3191	

* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly.

■ 10 Ton Hook Mounted Hoist Parts

CAPACITY - CHAIN-FALLS	10TON 4 Chain-Fall
ACCOLIFT MODEL NO. (HOOK MOUNTED)	2130080
PART NO. DESCRIPTION	
CH001 TOP HOOK	71574-6228
CH002 UP TURNING	71574-6229
CH003 CHAIN BOX HANGER 2POINT	71574-6230
CH004 KEY PLATE (A)	71574-6231
CH005 UP LOAD BLOCK PLATE 2POINT	71574-6232
CH006 HOIST CONNECTOR	71574-6233
CH007 COLLAR (B)	71574-6025
CH008 NEEDLE BEARING(NA4910)	71574-6234
CH009 IDLE SHEAVE	71574-6023
CH010 COLLAR (A)	71574-6235
CH011 CHAIN GUIDE ROLLER	71574-6236
CH012 STAY BOLT (A)	71574-6237
CH013 IDLE SHEAVE PIN	71574-6024
CH015 KEY PLATE (C)	71574-6238
CH017 CHAIN BOX (10TON) TO 20FEET LIFT (4CHAIN-FALL) OF 11.2MM x 34.0MM * LIFT ABOVE 20FEET WILL BE MADE TO ORDER	71574-6239
CH018 HEX NUT & S/W	71574-6240
CH019 HEX BOLT & S/W	71574-6241
CH020 BOTTOM LOAD BLOCK PLATE	71574-6242
CH021 CHAIN GUIDE	71574-6022
CH022 HEX WRENCH BOLT	71574-6243
CH023 BOTTOM TURNING	71574-6244
CH024 BOTTOM HOOK	71574-6020
CH025 SAFETY LATCH SPRING	71574-6245
CH026 SAFETY LATCH	71574-6246
CH027 U-NUT	71574-6247
CH034 STAY BOLT (B)	71574-6254
CH036 COLLAR	71574-6255

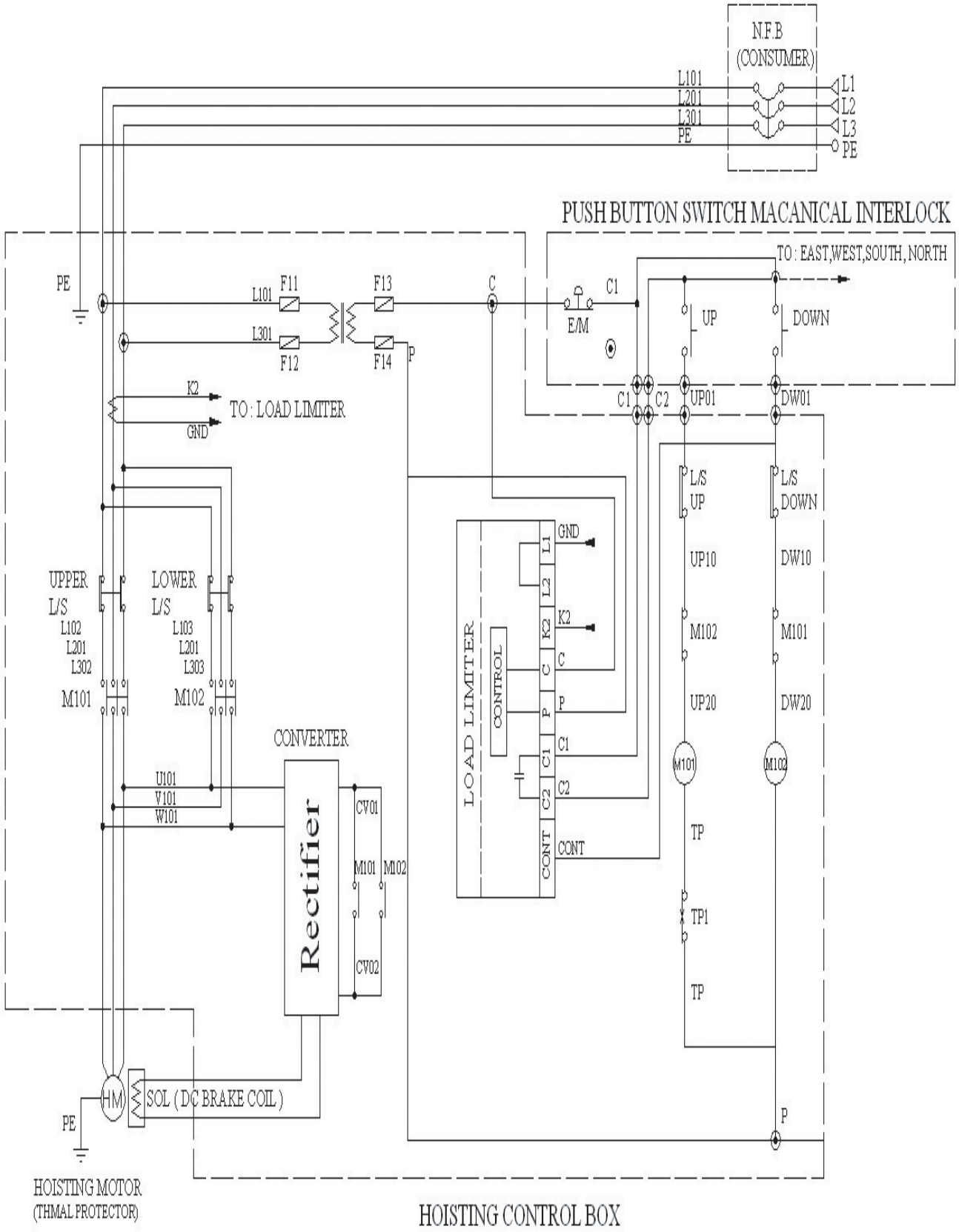
* 10Ton parts are same as 5ton(x2) except for top and bottom hook assembly. parts on this page.

■ 10 Ton Trolley Mounted Hoist Parts

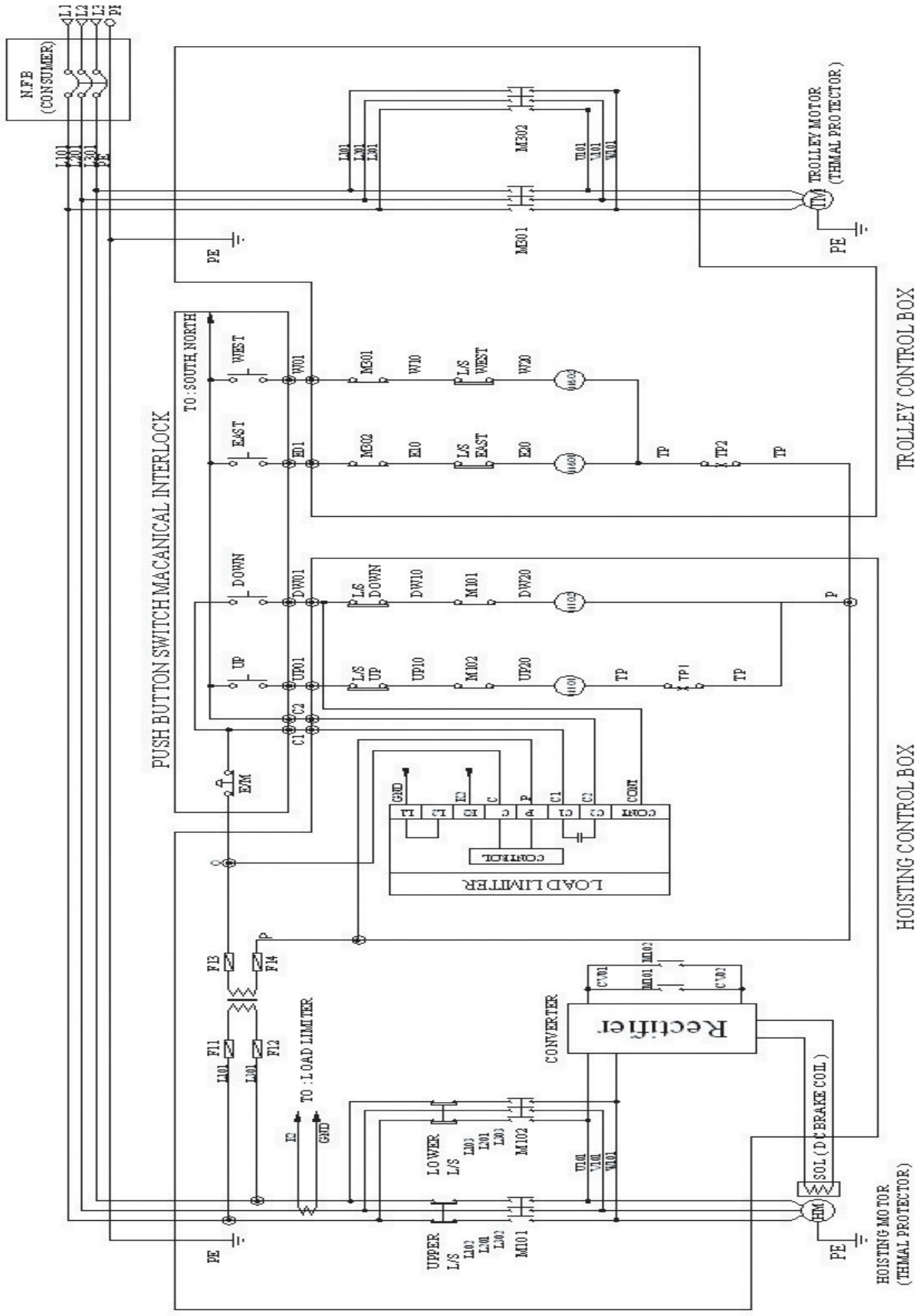
CAPACITY - CHAIN-FALLS	10TON 4 Chain-fall
ACCOLIFT MODEL NO. (MOTOR TROLLEY MOUNTED)	2130180
PART NO. DESCRIPTION	
CH004 KEY PLATE (A)	71574-6231
CH007 COLLAR (B)	71574-6025
CH008 NEEDLE BEARING(NA4910)	71574-6234
CH009 IDLE SHEAVE	71574-6023
CH010 COLLAR (A)	71574-6235
CH011 CHAIN GUIDE ROLLER	71574-6236
CH012 STAY BOLT (A)	71574-6237
CH013 IDLE SHEAVE PIN	71574-6024
CH015 KEY PLATE (C)	71574-6238
CH017 CHAIN BOX (10TON) TO 20FEET LIFT (4CHAIN-FALL) OF 11.2MM X 34.0MM * LIFT ABOVE 20FEET WILL BE MADE TO ORDER	71574-6239
CH018 HEX NUT & S/W	71574-6240
CH019 HEX BOLT & S/W	71574-6241
CH020 BOTTOM LOAD BLOCK PLATE	71574-6242
CH021 CHAIN GUIDE	71574-6022
CH022 HEX WRENCH BOLT	71574-6243
CH023 BOTTOM TURNING	71574-6244
CH024 BOTTOM HOOK	71574-6020
CH025 SAFETY LATCH SPRING	71574-6245
CH026 SAFETY LATCH	71574-6246
CH027 U-NUT	71574-6247
CH028 CHAIN BOX HANGER 4POINT	71574-6248
CH029 UP LOAD BLOCK PLATE (4)	71574-6249
CH030 CONNECTOR	71574-6250
CH031 KEY PLATE B	71574-6251
CH033 COLLAR (C)	71574-6252
CH035 CONNECTOR PIN	71574-6256

* 10Ton parts are same as 5ton(x2) except for top trolley mount and bottom hook assembly. parts on this page.

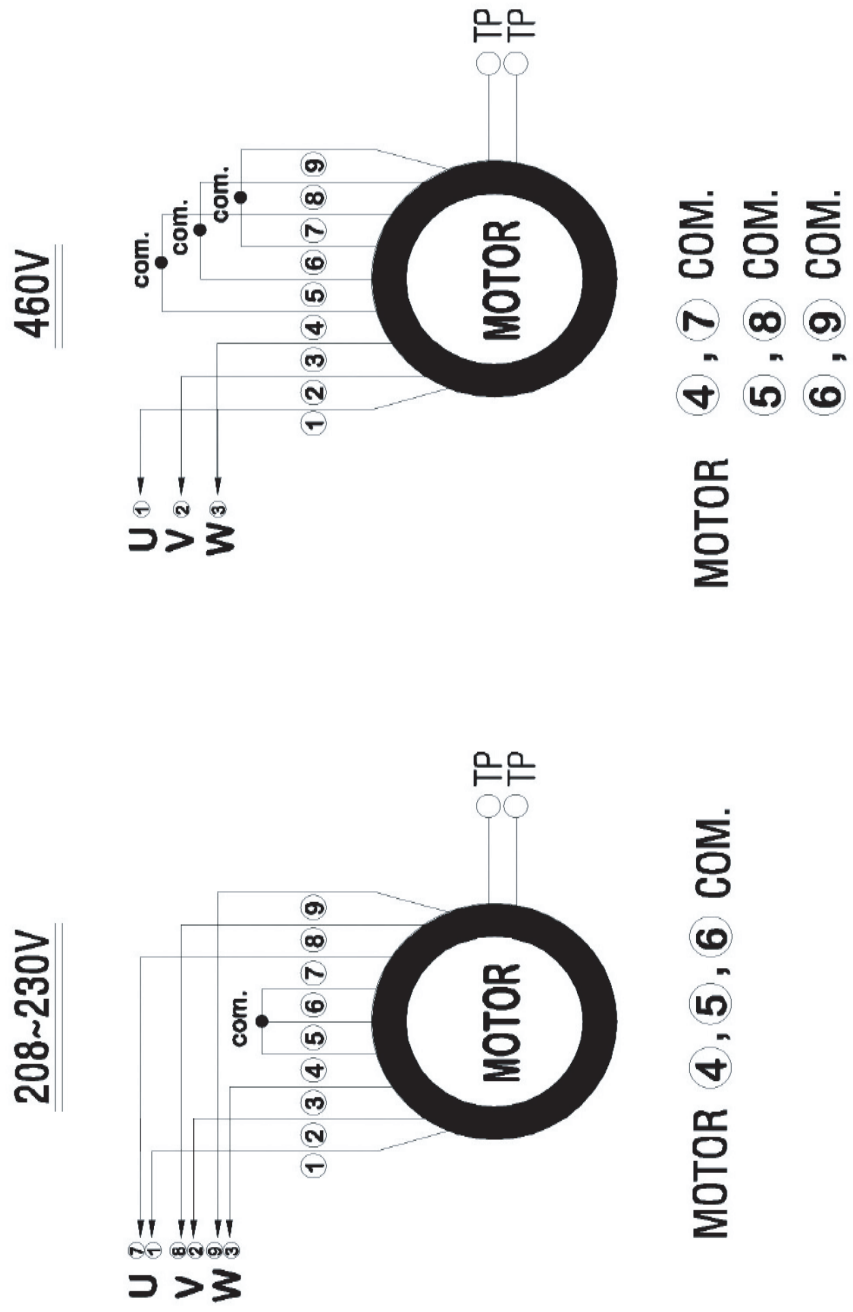
* Electric Connection Drawing of Hook Suspension Series



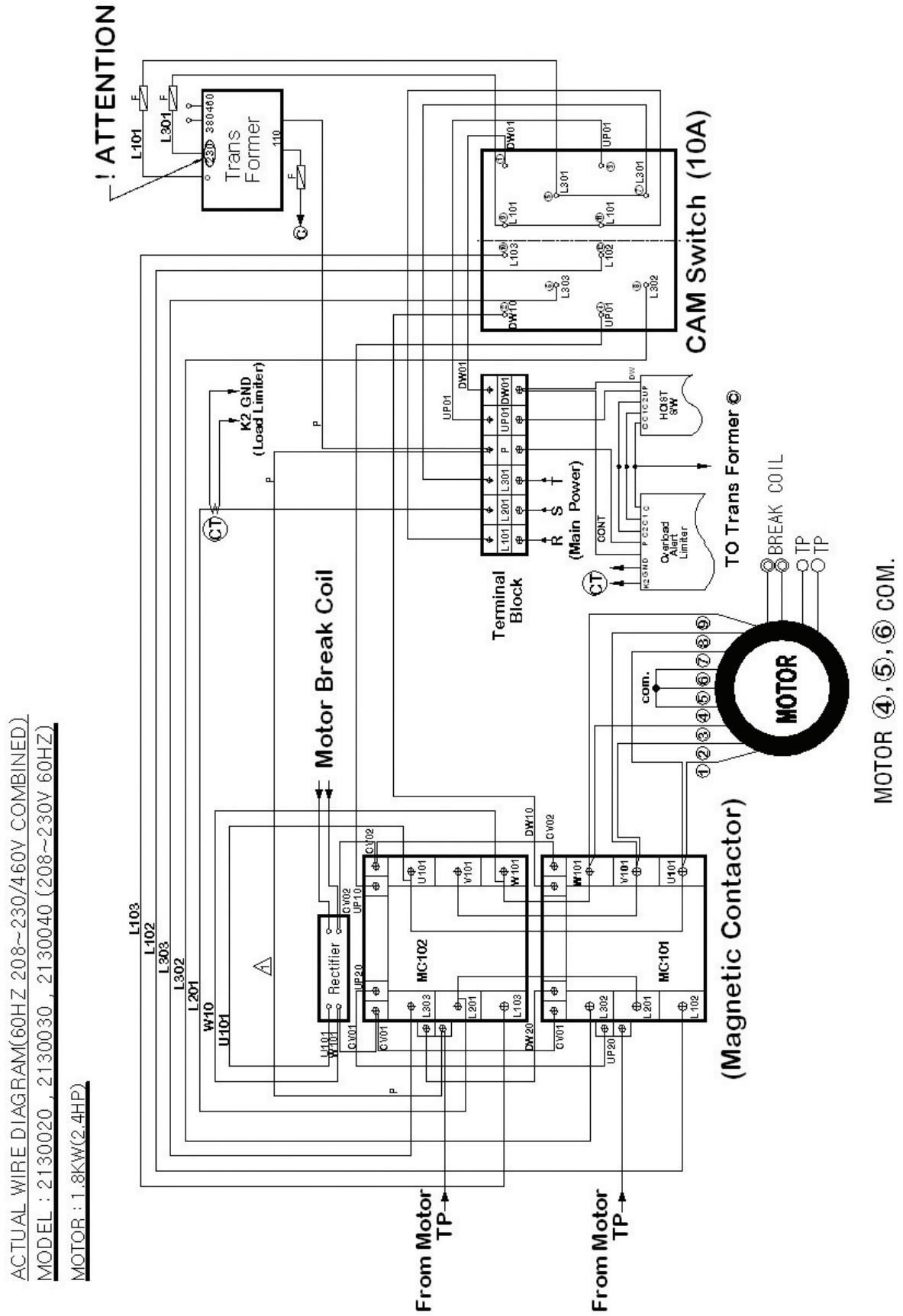
* Electric Connection Drawing of motorized Trolley mounted Series



Motor Diagram 208~230V/460V Combined

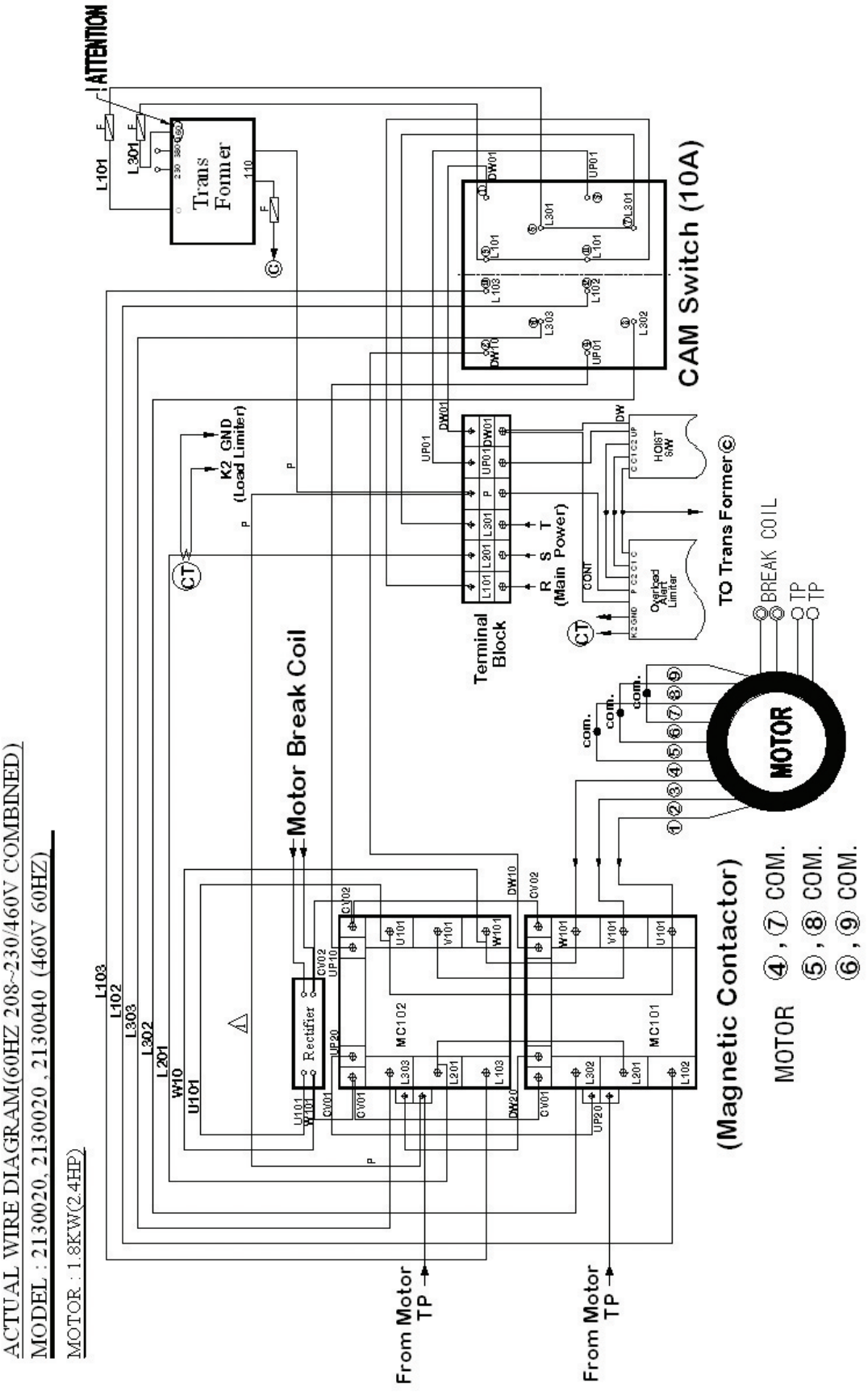


2130020, 2130030, 2130040 (208-230V 60Hz)



ACTUAL WIRE DIAGRAM(60HZ 208~230/460V COMBINED)
MODEL : 2130020 , 2130030 , 2130040 (208~230V 60HZ)
MOTOR : 1.8KW(2.4HP)

* 2130020, 2130030, 2130040 (460V 60Hz)

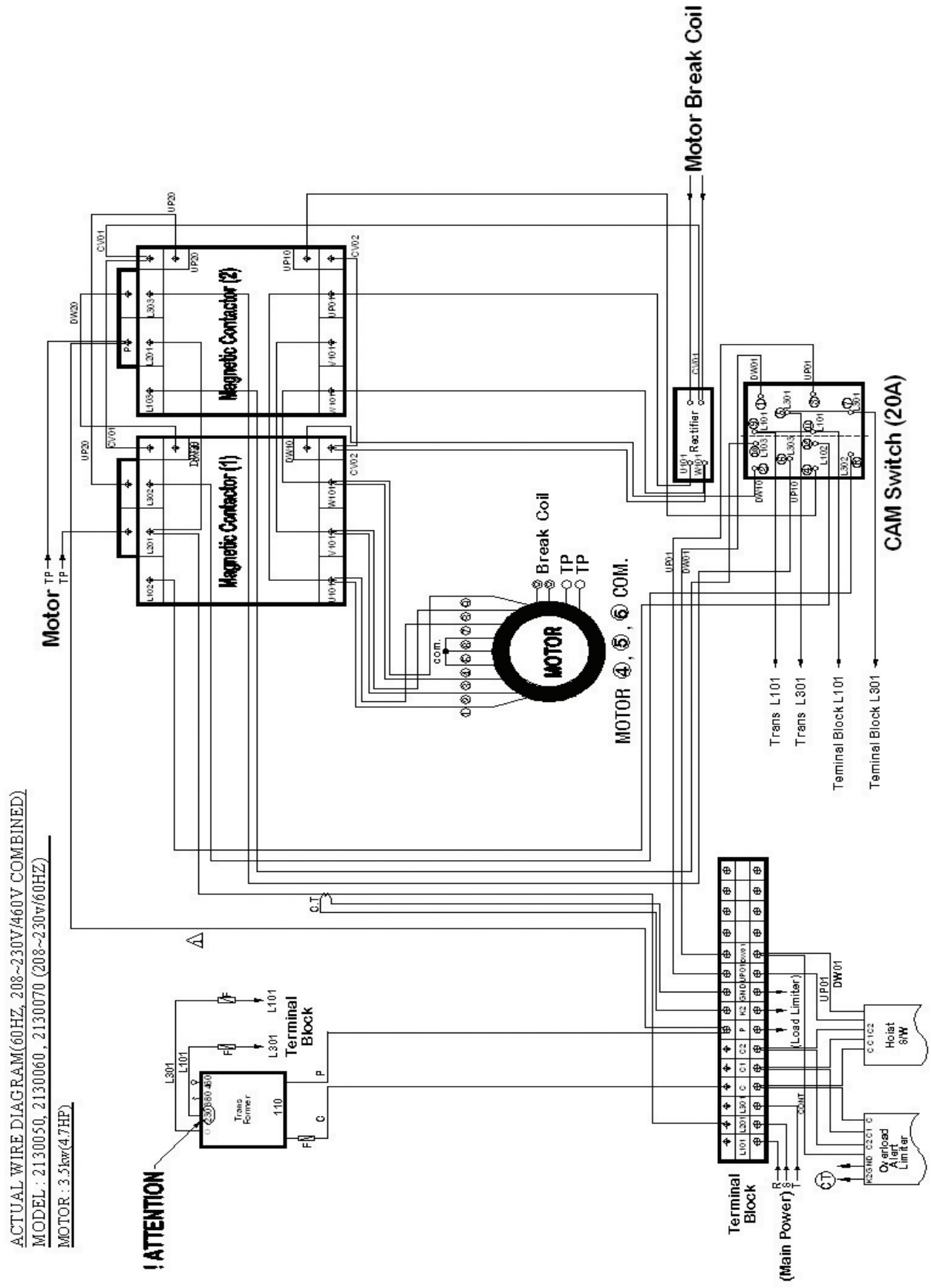


ACTUAL WIRE DIAGRAM(60HZ 208~230/460V COMBINED)

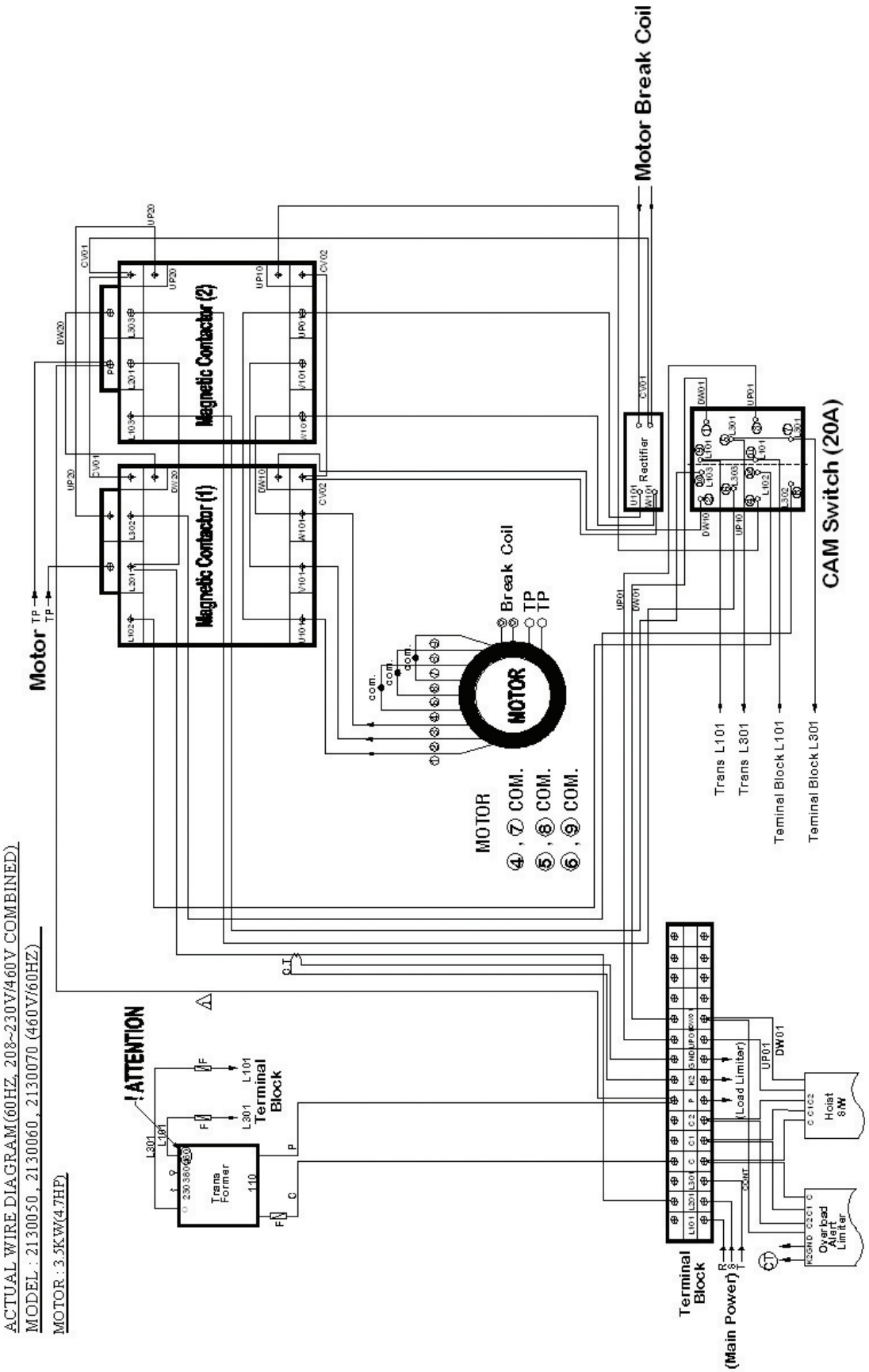
MODEL : 2130020, 2130020 , 2130040 (460V 60HZ)

MOTOR : 1.8KW(2.4HP)

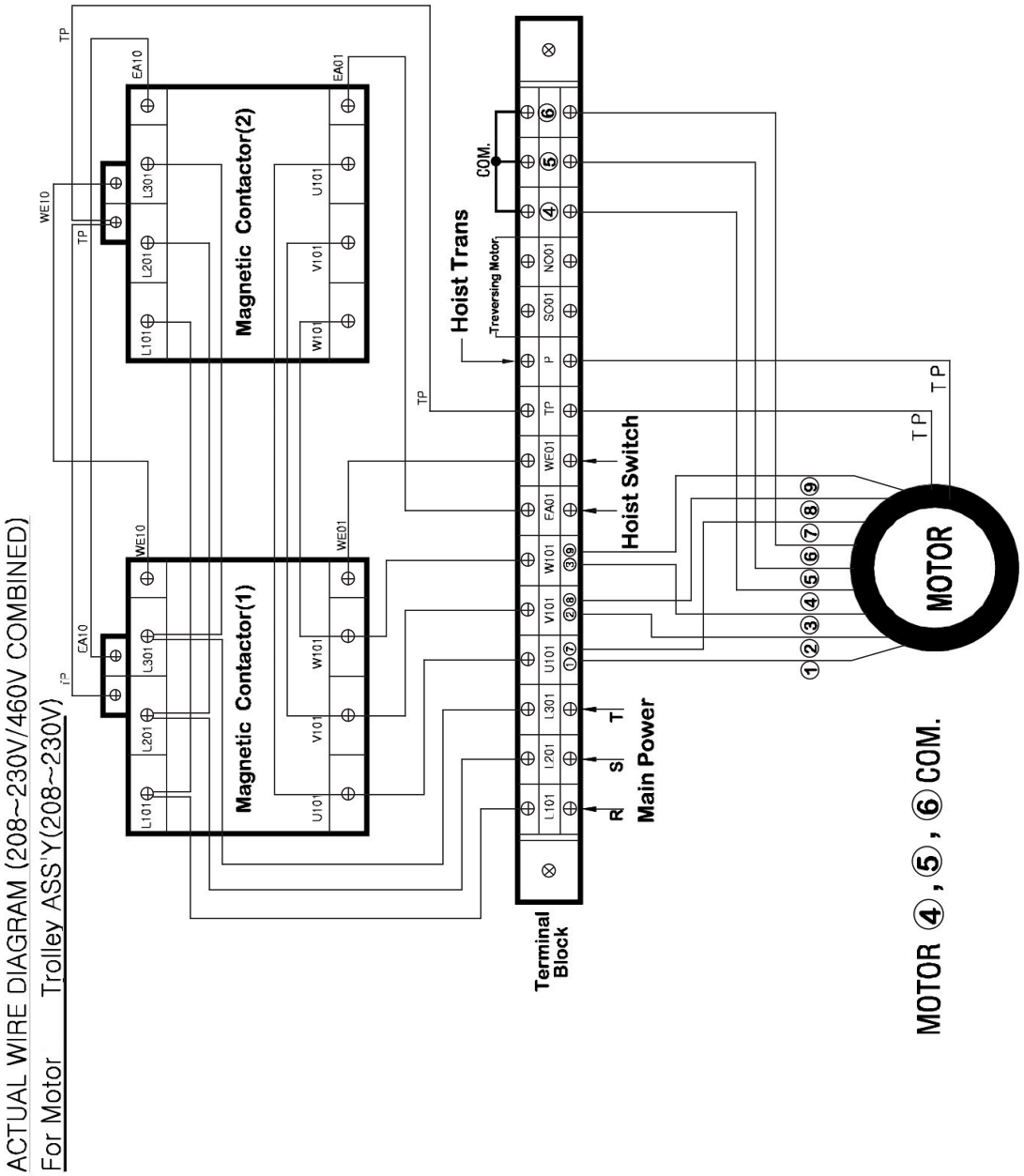
2130050, 2130060, 2130070 (208-230V 60Hz)



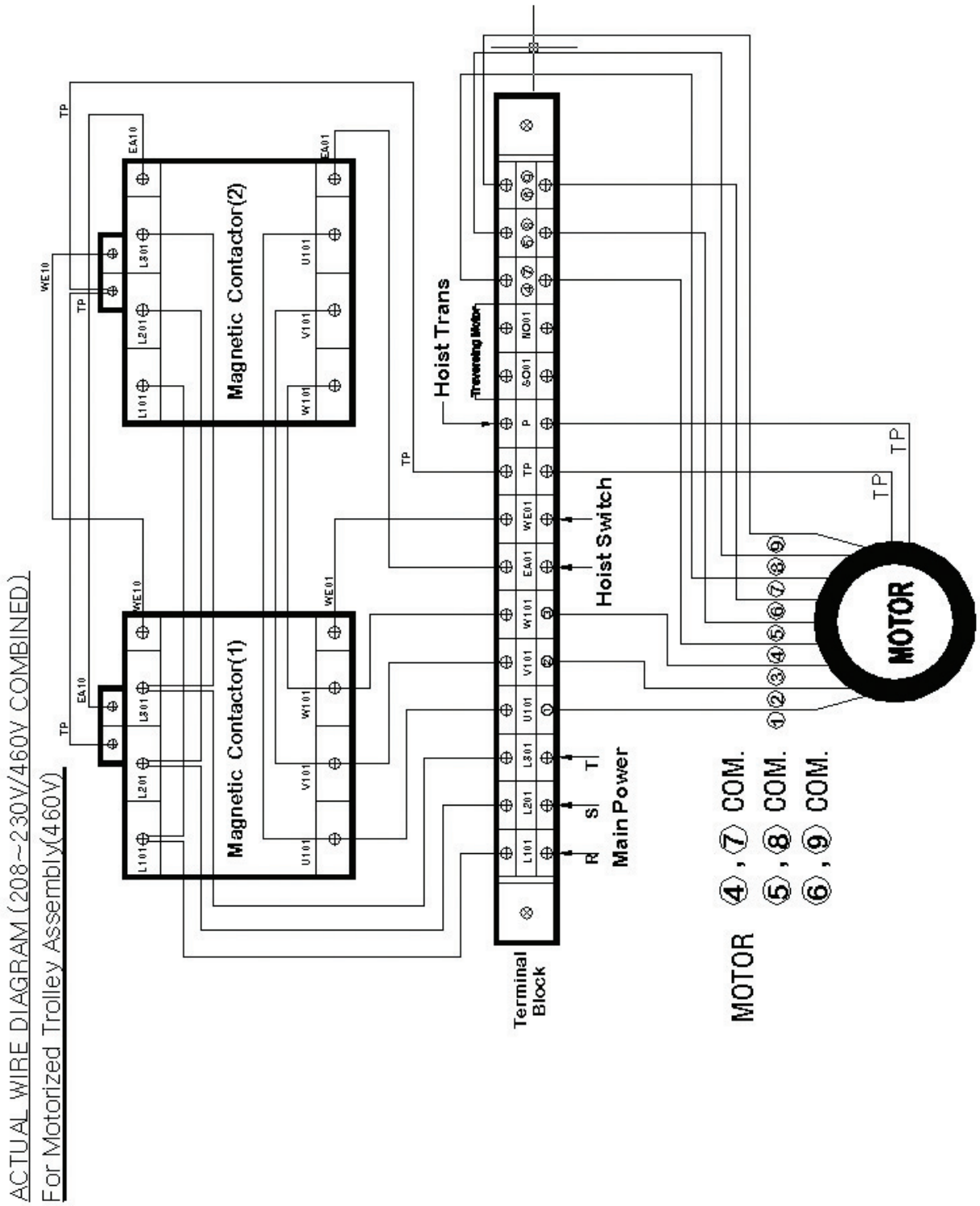
2130050, 2130060, 2130070(460V 60Hz)



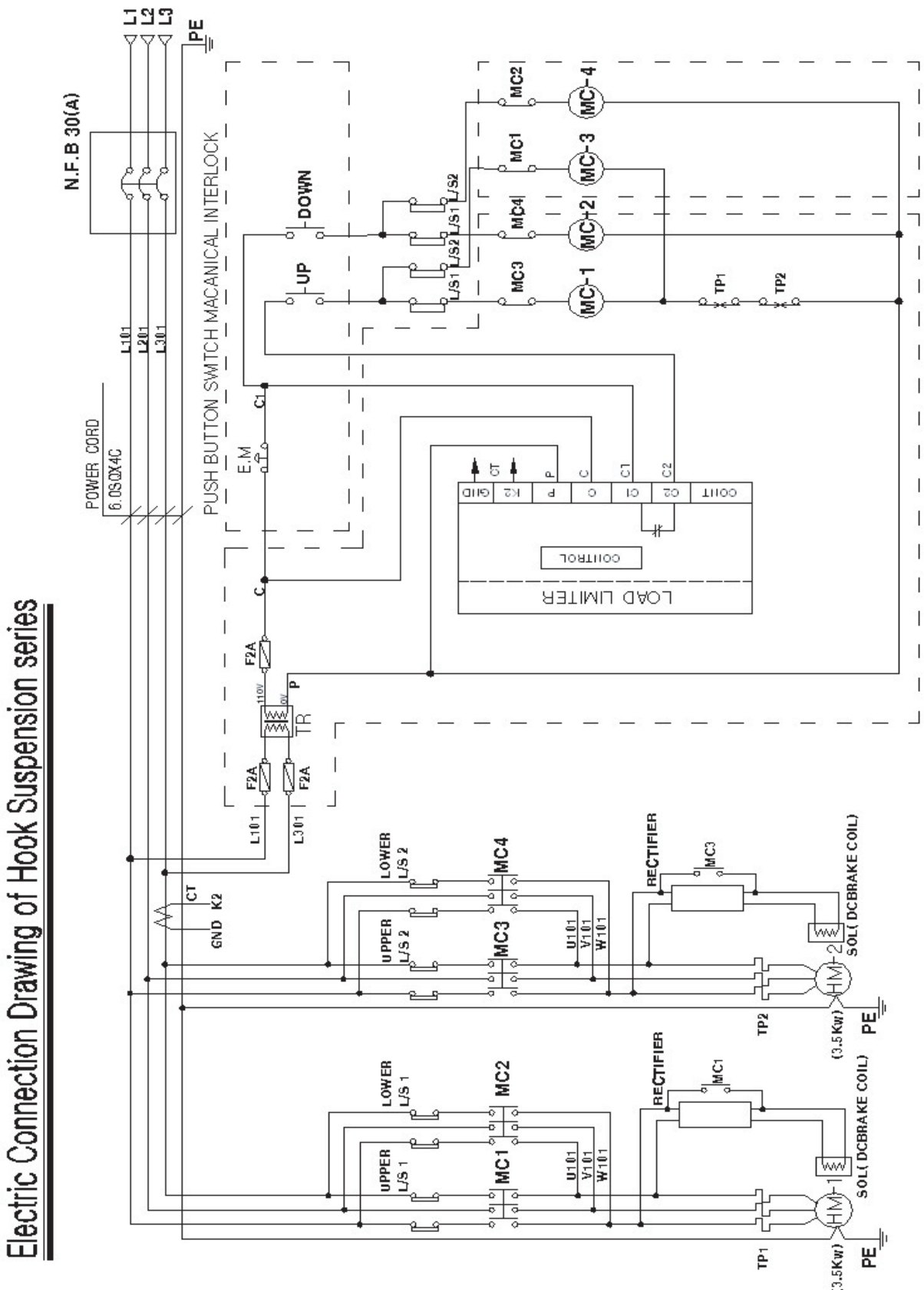
* For MotorizedTrolley Assembly (208~230V)



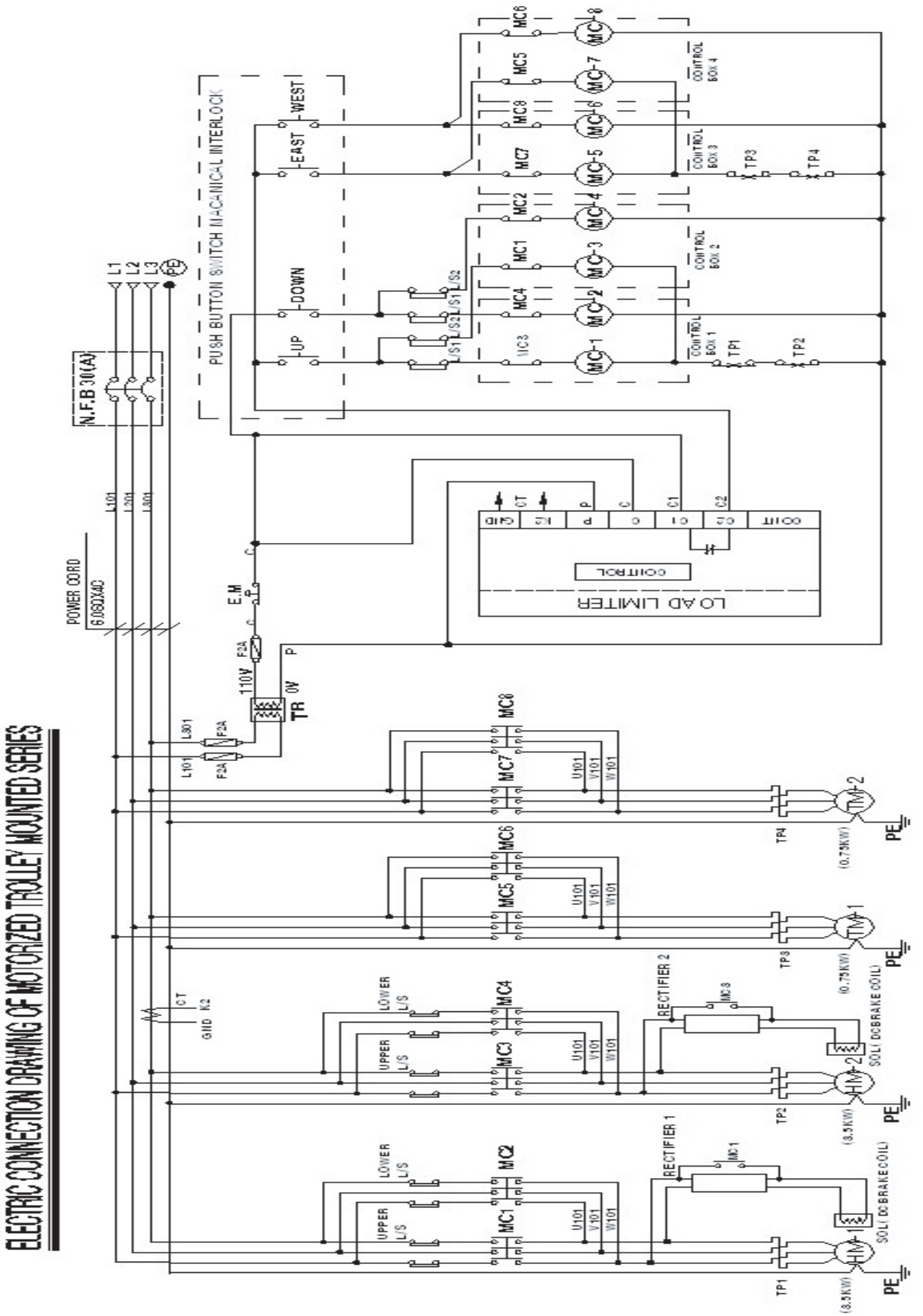
* For Motorized Trolley Assembly (460V)



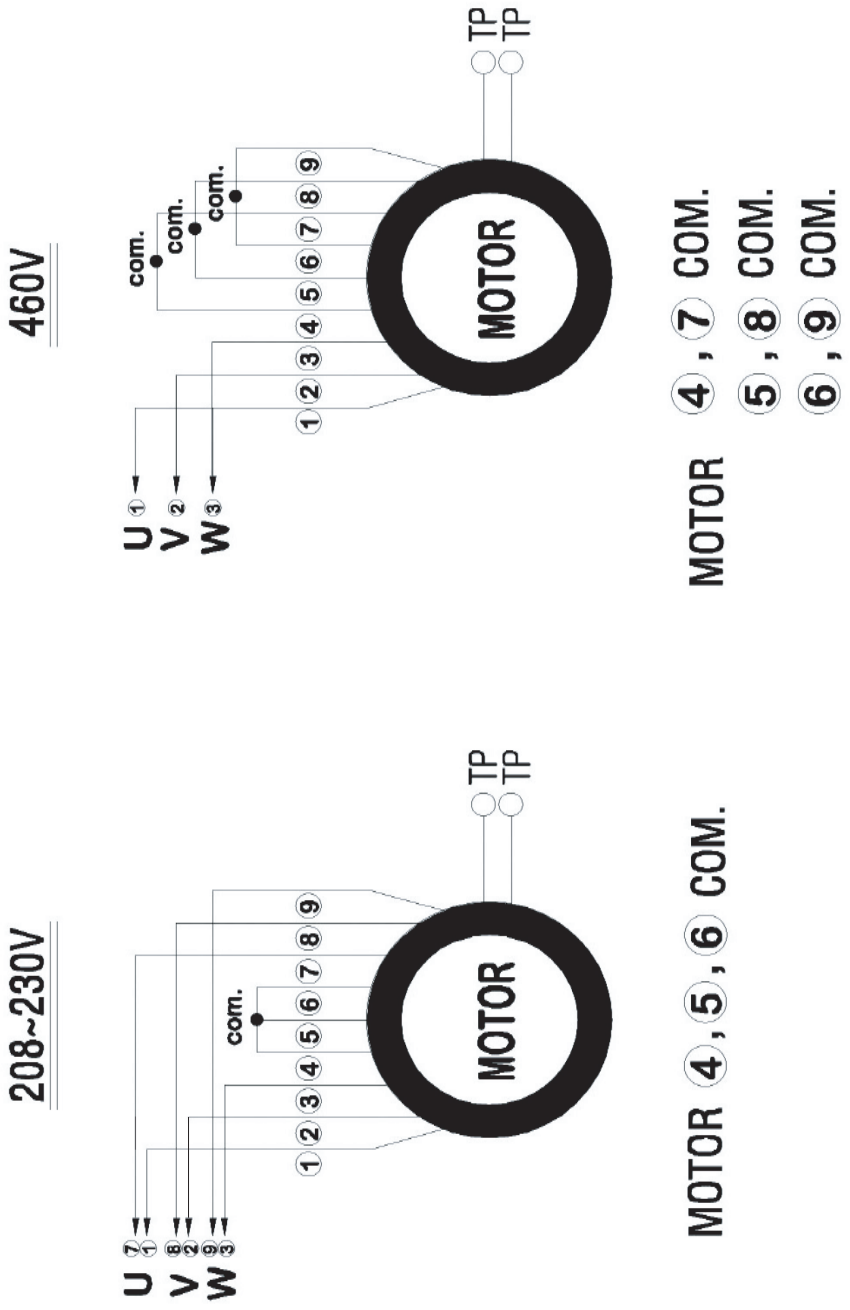
■ Electric Connection Drawing of Hook Suspension Series 2130080(10TON)



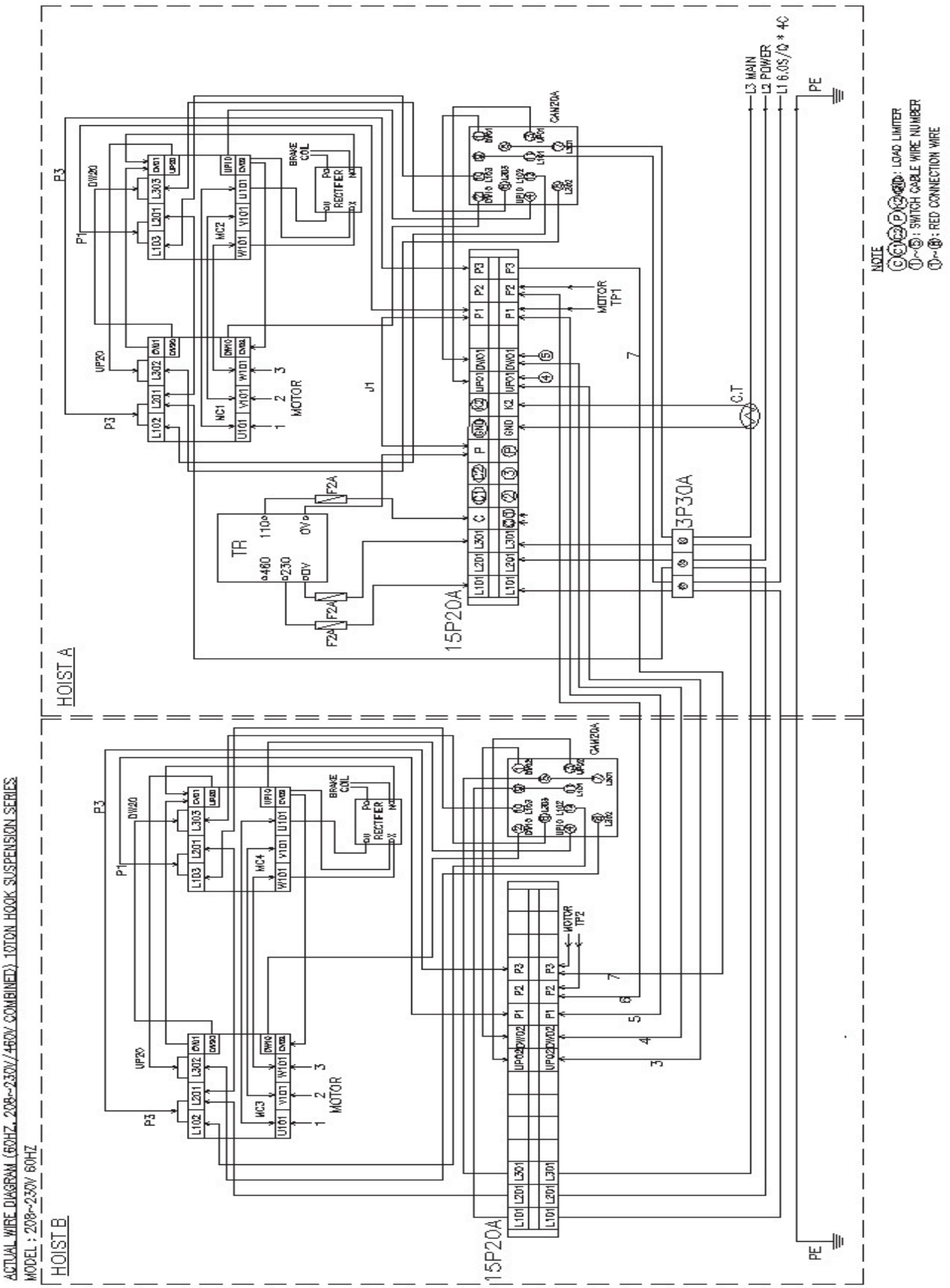
■ Electric Connection Drawing Of Motroized Trolley Mounted Series 2130180(10TON)



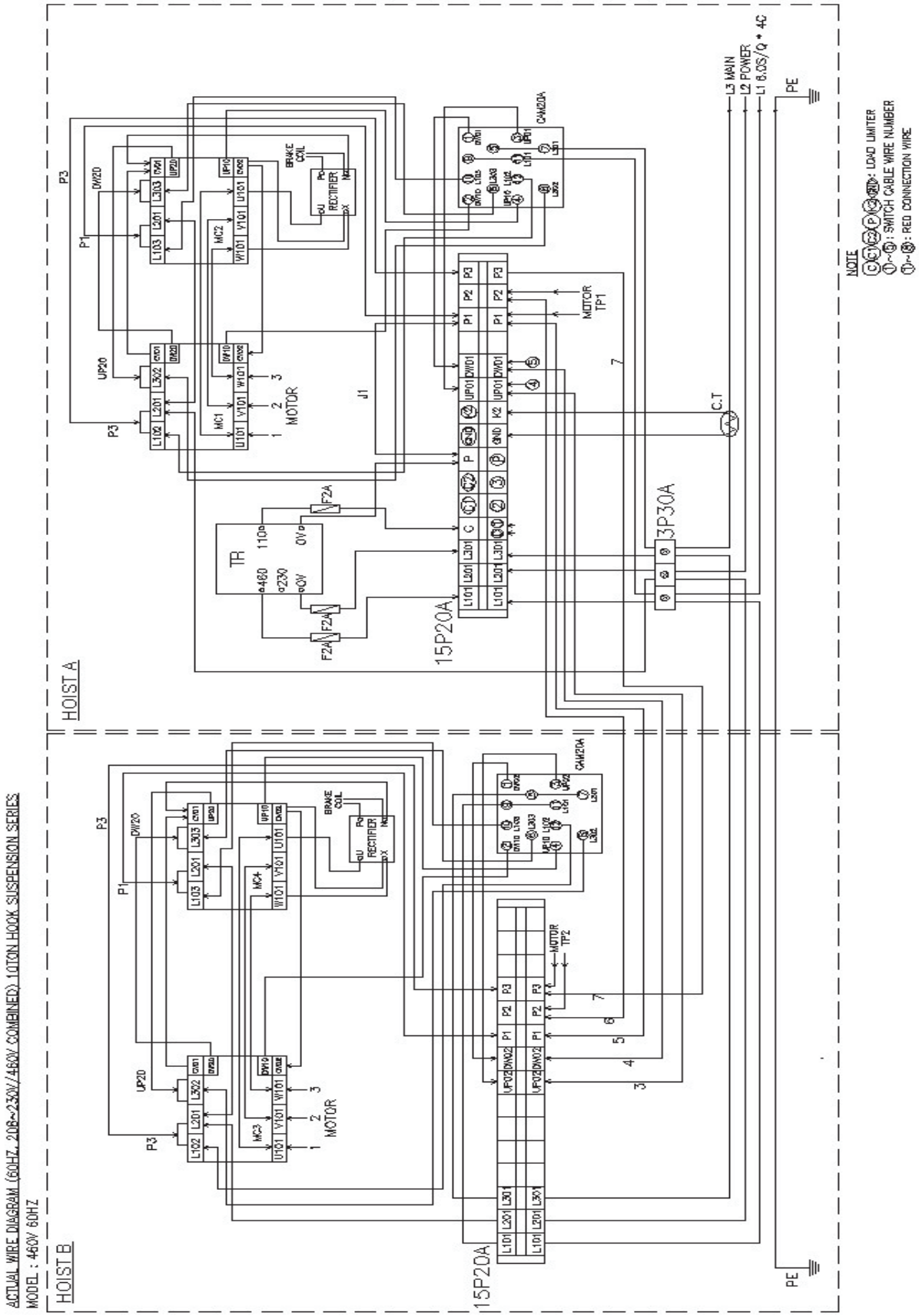
Motor Diagram 208~230V/460V Combined (10ton)



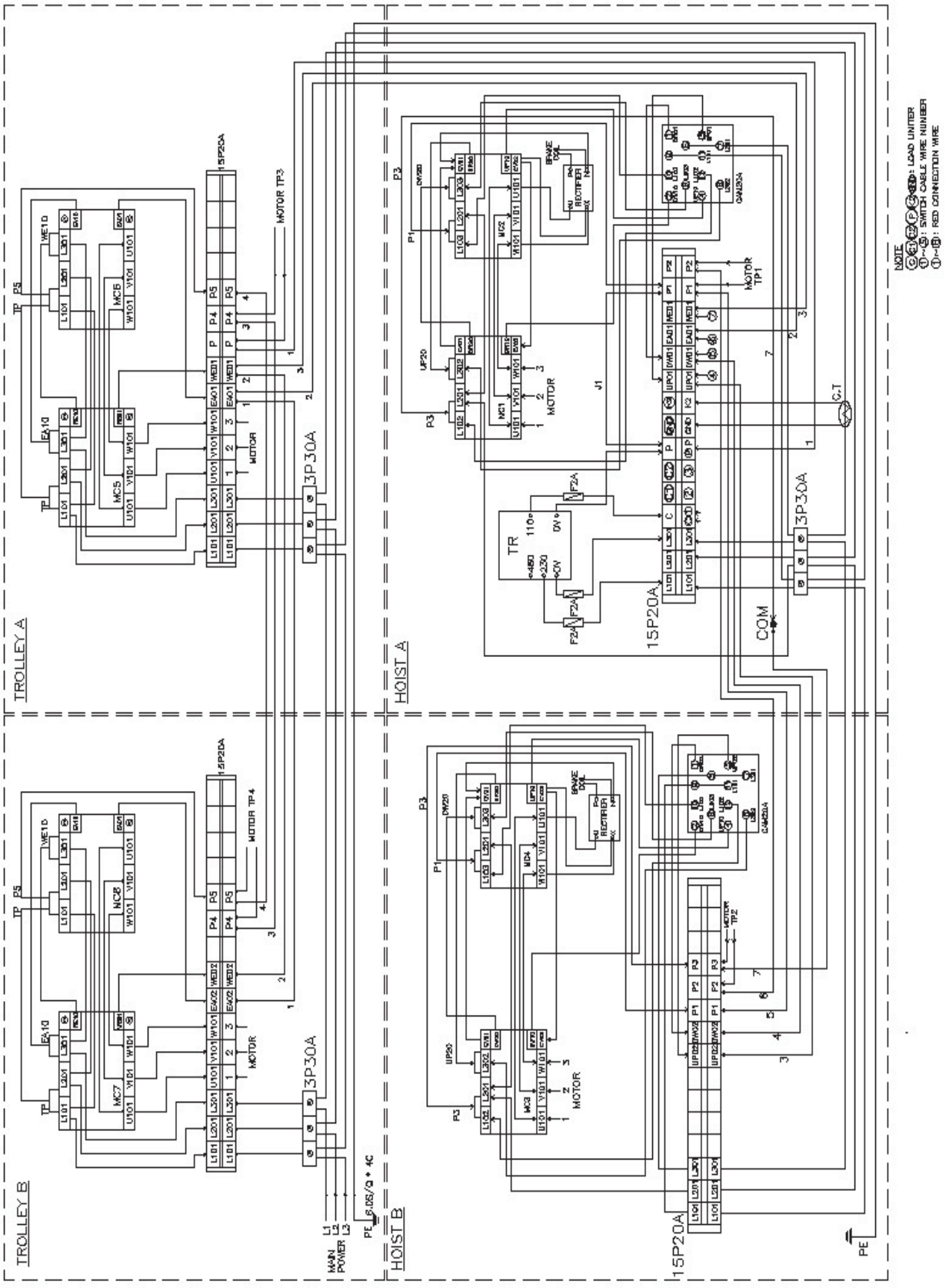
■ 2130080 (60hz, 208~230V)



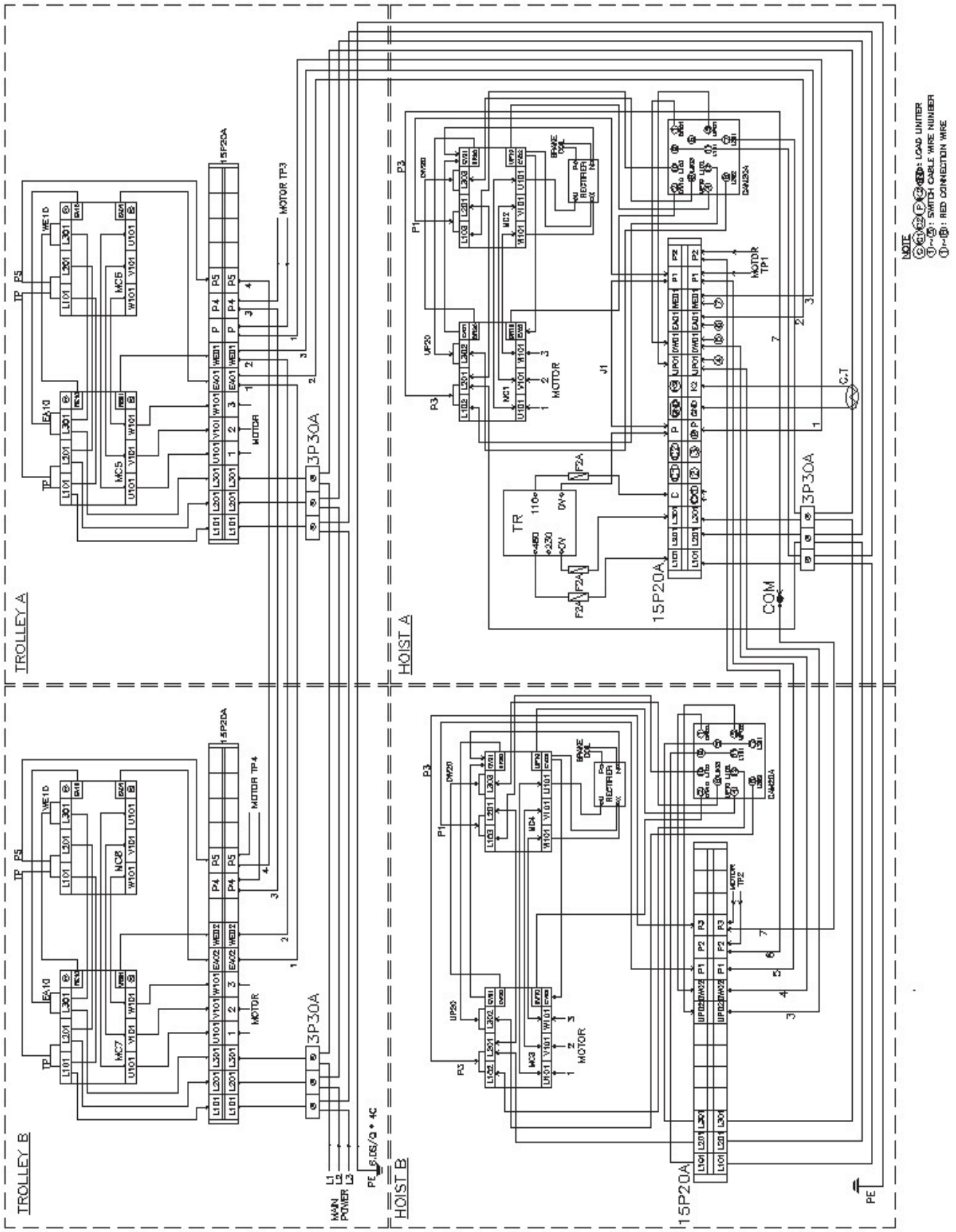
■ 2130080 (60hz, 460V)



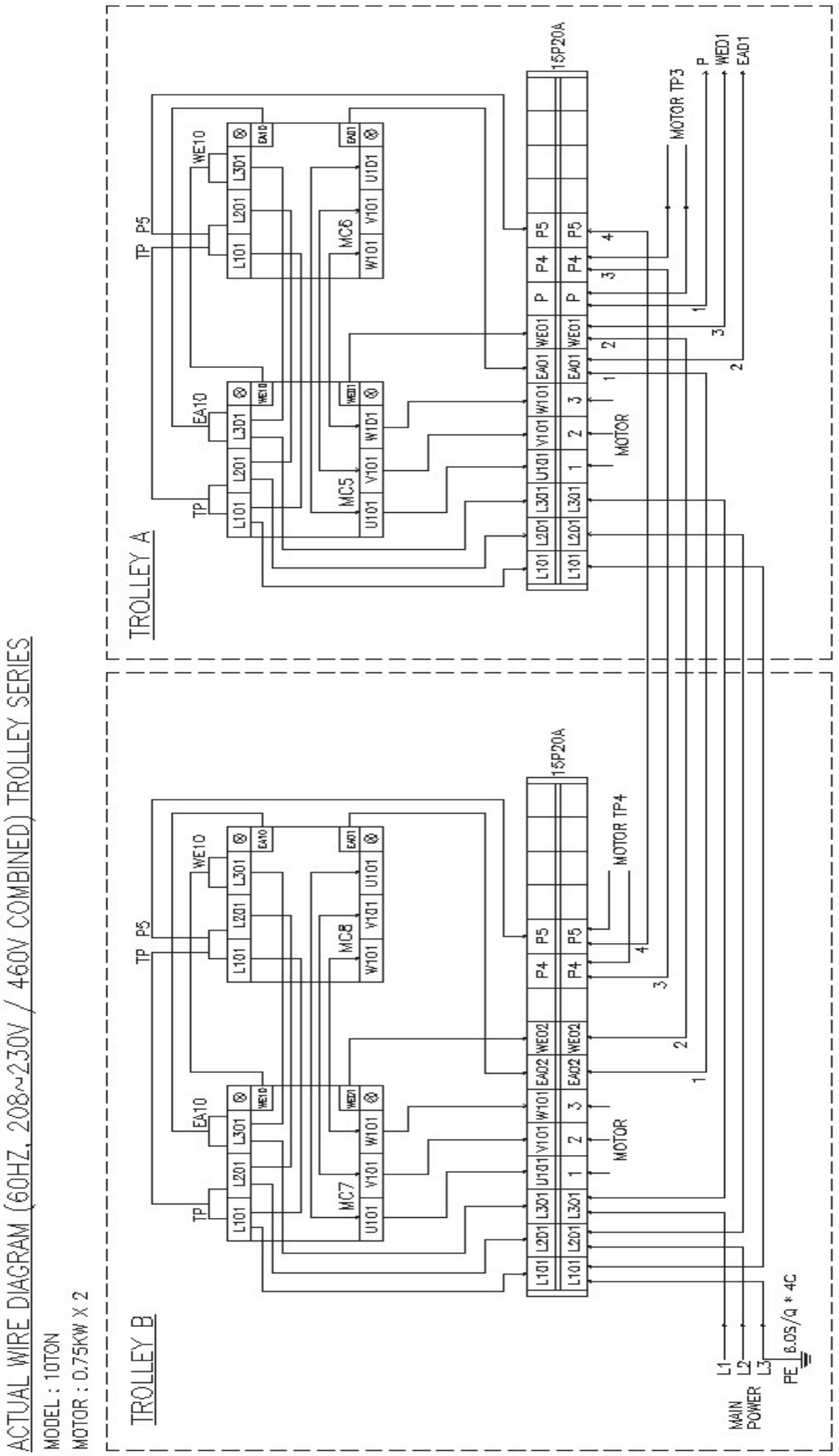
■ 2130180 (10TON 60hz, 208~230V)



■ 2130180 (10TON 60hz, 460V)



■ Actual Wire Diagram (60Hz, 2088~230v/460v Combined) Motorized Trolley series

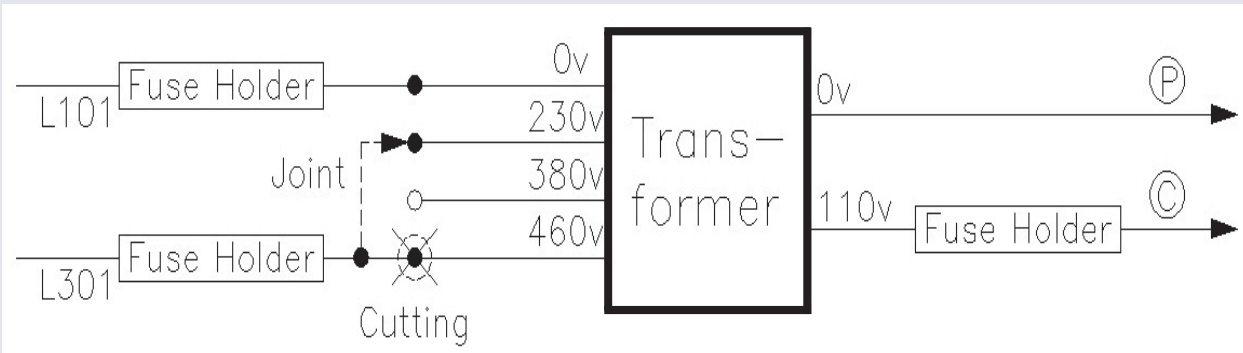


⚠ WARNING

- Motor Voltage change (Important)

1. Please connect the wire according to the motor wiring drawing
   - check the drawing from page 68~74 and 77 for the reference.
2. Please change the current setting figures of the load limiter to its appropriate voltage.
   - check the chart on page 43 and 84 for the reference.
3. Transformer Voltage Change

   Example : As shown below, disconnect the Fuse Holder Wire Which connected to 460V of the Transformer and connect the disconnected Fuse Holder wire to 230V of the Trans Former.



NOTE
Fuse : 250v 1A
250v 2A (10TON)

Load Limiter Setting Data (Acco 208-230/460V Combined)

POWER SOURCE	MODEL	Setting Current(A)	
		UP	DOWN
208-230V (60Hz)	2130020 2130030 2130040 2130120 2130130 2130140	7.3	6.3
	2130050 2130060 2130070 2130080 2130150 2130160 2130170 2130180	13.3	8.8
460V (60Hz)	2130020 2130030 2130040 2130120 2130130 2130140	3.8	2.8
	2130050 2130060 2130070 2130080 2130150 2130160 2130170 2130180	7.9	4.8

NOTICE

Above Setting figures are tested at 125% of rated capacity

GENERAL CONDITIONS OF WARRANTY

WARRANTIES: The seller warrants to the original using Buyer thereof that the goods sold under this Agreement are free from defects in workmanship and materials for a period of one year from the date of shipment to the original using Buyer. No other express warranties are given and no affirmation of Seller or Seller's agents, by word or action, shall constitute a warranty. No warranty is made for components and accessories made by others when such items are warranted by their respective manufacturers.

Installation or operation of the equipment in any manner other than as recommended by Seller, shall void the warranty.

Any variations in details between the goods furnished herein and those covered in Buyer's specifications are due to standards of manufacture not to be construed as exceptions to the specifications.

DISCLAIMER OF IMPLIED WARRANTIES:

(a) SELLER MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO THE GOODS SOLD UNDER THIS AGREEMENT.

(b) This sale is made WITHOUT ANY WARRANTY BY SELLER THAT THE GOODS ARE SUITABLE FOR ANY PARTICULAR PURPOSE.

(c) Buyer hereby waives all other warranties, guarantees, obligations, liabilities, rights, and remedies arising by law or otherwise including any obligation or liability of the Seller arising from tort, and Buyer shall indemnify Seller from any liability, loss, damage, or claim arising from Buyer's tortuous use of the goods sold hereby.

REMEDIES:

(a) Under no conditions shall any goods be returned to Seller without its prior written consent.

(b) The Buyer's sole and exclusive remedy for breach of any warranty is limited to Seller furnishing, at its expense, duplicate or repaired parts F.O.B. Seller's plant with installation at Buyer's expense if discovery of a claimed defect occurs during the allowable warranty period, and if Seller's inspection determines a defect exists.

(c) The quantity of material shown by invoice shall in all cases govern settlement for shortages, unless notice of shortage, appropriately documented, is given to the carrier and the Seller upon delivery by the Carrier.

(d) Claims for errors, deficiencies or imperfections shall be deemed waived by the Buyer unless Seller is notified in writing of the basis of such claims within 10 days after discovery of claimed defect and such discovery occurs within the warranted period.

(e) Neither Buyer nor User shall be entitled under this Agreement to recover from Seller any incidental or consequential damages of any nature including but not limited to the cost of any labor expended by others in connection with the goods sold hereby by reason of any alleged nonconformity or breach of warranty on the part of the Seller, nor costs of material or account thereof, nor any lost profits whether determinable or speculative.

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