

OPERATING & MAINTENANCE INSTRUCTION MANUAL WITH SPARE PART LIST

(Guarantee Will be Void if not used as Instructed in this Manual)



CH-III (ELECTRON)

Capacity - 2.5t, 5t, 7.5t, 10t

ELECTRIC CHAIN HOIST

INDEX

1. Important Information and Warning	4
2. Commissioning Check List	10
3. Erection & Commissioning	11
4. Safe Operating Procedure	14
5. Assembly & List of Spare parts	15
6. User information Hoist & Trolley Brake	36
7. Wiring Diagrams & List of Electrical Spares	41

Important Information and Warnings

Terms and Summary

This manual provides important information for personnel involved with the installation, operation and maintenance of this product. Although you may be familiar with this or similar equipment, it is strongly recommended that you read this manual before installing, operating or maintaining the product.

Danger, Warning, Caution and Notice - Throughout this manual there are steps and procedures that can present hazardous situations. The following signal words are used to identify the degree or level of hazard seriousness.

DANGER :- Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury, and property damage

WARNING :- Warning indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury, and property damage.

CAUTION :- Caution indicates a potentially hazardous situation which, if not avoided, may result minor or moderate injury or property damage.

NOTICE :- Notice is used to notify people of installation, operation, or maintenance information which is important but not directly hazard-related.

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. For systems using the equipment covered by this manual, the supplier and owner of the system are responsible for the system's compliance with all applicable industry standards, and with all applicable federal, state and local regulations/codes.

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

Record your hoist and trolley's Product Code and 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, inspection, maintenance, or parts

Use only Indef authorized replacement parts in the service and maintenance of this trolley.

CAUTION

Equipment described herein is not designed for and **MUST NOT** be used for lifting, supporting, or transporting people, or for lifting or supporting loads over people.

Equipment described herein should not be used in conjunction with other equipment unless necessary and/or required safety devices applicable to the system, crane, 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.

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.

The angle between rope and plane perpendicular to the axis of the drum shall not exceed 5° (As per IS 3938 6.1.1.2).

Hoists shall not be operated unless the hoist unit is centered over the load, except when authorized by a qualified person who has determined that the components of the hoist and its mounting will not be overstressed. Should it be necessary to pick a load that is not centered under the hoist unit, precautions should be taken to control the swing of the load when it is picked clear of its support.

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.

Only trained and competent personnel should inspect and repair this equipment.

**Information**

This symbol indicates tips and useful information.

Warning Tag and Labels

The warning tag illustrated below in Figure is supplied with each hoist and trolley shipped from the factory. If the tag is not attached to the pendant cord for your hoist/trolley, order a tag from your dealer and fix it. Read and obey all warnings attached to this Hoist/Trolley. Tag is not shown in actual size.

WARNING

IMPROPER use of powered Hoist could result in death
Or serious injury.

To avoid these hazards:

- ▶ ALWAYS read owner's manual and safety instructions.
- ▶ Do NOT lift more than rated load.
- ▶ Do NOT lift or transport loads over or near people.
- ▶ Do NOT use a hoist for lifting supporting or transporting people.
- ▶ Do NOT operate unless load is centered under hoist.
- ▶ Do NOT support a load on the tip of the hook
- ▶ Do NOT use a hoist if the hook latch is missing or broken.
- ▶ Do NOT remove or obscure the warning labels.
- ▶ Do NOT run the load chain or wire rope over a sharp edge.
- ▶ Do NOT use the load chain or wire rope as a sling.
- ▶ Do NOT operate beyond the travel limits of the hook or load block.
- ▶ Do NOT use a twisted, kinked, damaged, or stretched load chain or wire rope.
- ▶ Do NOT operate a wire rope hoist with a wire rope that is not properly seated in its groove.

CONDITIONS WHERE WARRANTY WILL BE VOID / NOT APPLICABLE

HHL does not provide reimbursement for maintenance and visit charges for items such as: brake adjustments, lubrication oil changes, or any other item or activity deemed solely by HHL to be maintenance related.

HHL will not be liable for damage or malfunction and consequently warranty resulting from:

- a. Lack of maintenance.
- b. Use of improper or insufficient lubricants
- c. Supply voltage high/low or insufficient.
- d. Environmental conditions (including but not limited to extreme temperatures, humidity and corrosive environments).
- e. Outdoor applications where HHL is not intimated and recommendations for protection from the elements are not followed.
- f. Misuse or abuse (including but not limited to overloading, shock loading, or side / angular lifting / pulling).
- g. Use of parts other than genuine HHL replacement parts.
- h. Improper repairs or maintenance.
- i. Modifications not approved by HHL.
- j. Improper handling of product after it leaves HHL factory.
- k. Fire, accidents, or acts of God or nature, including but not limited to floods, hurricanes and lightning.
- l. Any piece of equipment not supplied by Hercules Hoists Limited, is installed on products.
- m. Malfunction or damage caused by items added to Hercules Hoists Limited products, including but not limited to controls and control components.
- n. Relocation of hoist / equipment without proper installation and commissioning by HHL / ABP.
- o. Misalignment in existing / installed Crane rail and hoist monorail, improper existing power feed track.

Operational cause Note

Overhead crane & hoists are typically designed to lift objects vertically. The specific guide lines are mentioned in respective IS standard .

Sometimes, however, operators attempt to make a side pull or cross pull or use the hoist horizontally to lift an object that is not directly underneath it.

This can cause damage to hoist.

Probable failures/Risks:

- ▶ Side pulling can cause damage to various hoist parts – Load Chain Wheel, Chain Guide Roller, Chain Stripper, Hook and hook latch assembly, in electric Chain Hoists the load chain guide and chain stripper and in Wire Rope Hoists the rope drum, rope guide and the rope itself.
- ▶ Additionally, it may place the operator and personnel working near the crane at risk for injury.
- ▶ One of the main risks for an operator is load swing, which can damage the load or cause injury to the operator. In extreme cases, there might be a load drop.
- ▶ A rope that has been worn by side pulls may also snap and lead to a loss in control of the load.
- ▶ Cross pull or side pull may affect on monorail beam flanges, the beam web may deflect / distort, and beam flanges may wear causing uneven sides of beam.
- Preventing side pulls could lead to increases in both the safety and the lifetime of the components, customer should be educated at every interaction opportunity.
- The unfortunate prevalence of cross pulling-related accidents and maintenance needs repeated replacement of parts like chain guider roller, chain stripper, hook latch assembly, rope guide related parts i.e set of rope guide ring, spring and rope guide joining bracket.

Operational Note:

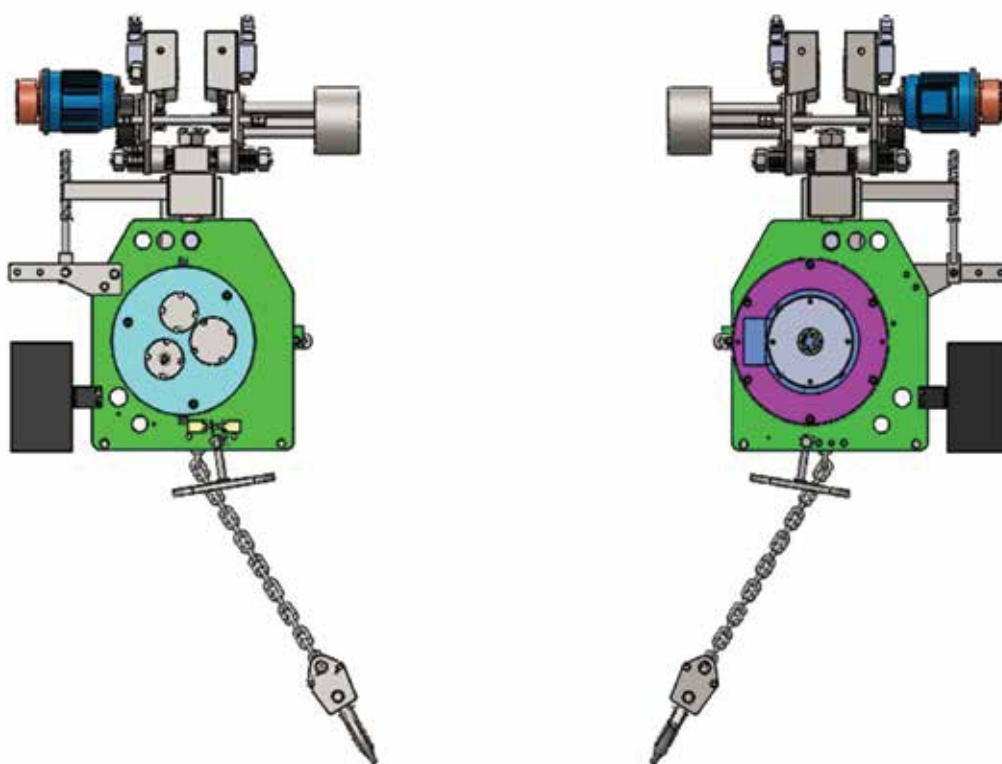
- Please be aware that as a safety feature, this rope guide ring is designed to snap in the event of the wrong usage of the rope hoist. As per IS 3938-2005 the angular lifting / pulling of dead weight is not allowed in wire rope hoist. If any user puts the rope hoist to such an application, the rope guide ring will not allow to perform the lifting. The rope guide ring will break if the fleet angle is more than 5 Deg. including angle between point of lift and dead weight kept on floor.
- The specific instruction in Do's and Don'ts is given hoist operating and maintenance manual. Those guidelines are based on past experience and safety standards of operation.
- The hoist in tandem application cannot be used because the load lifting speed and effort are not balanced in manual hoisting operation. Most important is load required to be centered under hoist and load line of trolley centre and hook seating diameter centre should match. The hoists are designed for lifting load vertically. This phenomenon is applicable for all hoisting equipment's.

If hoist not used in proper way as mentioned above the warranty claims will not be accepted.
Indicative list of parts not covered under warranty.

Indicative list of parts not covered under warranty:

1	Hoist Motor Winding
2	Load Chain
3	Safety Latch assembly
4	Brake Disc – Hoist and Trolley
5	Brake Coil – Hoist and Trolley
6	Hoist and Cross Travel Limit Switch
7	Trolley Motor Winding
8	Pendent control
9	Relay and Fuse
10	Chain Guide
11	Chain Stripper
12	VFD / Inverter
13	Special Control Switch Gear
14	Control Transformer

This can cause damage to hoist



COMMISSIONING CHECK LIST

1. I-Beam Flange width : Check actual width of beam, adjust washers to make equal running clearance on all trolley wheels.
2. Dimensional clearance : Ensure that enough clearance is available for hoist & trolley movement.
3. Power supply system : Ensure that 'T' section in case of trailing cable system or bus bar in case of Akapp system is parallel in both axis w.r.t. Beam in straight or curved path. Trolley pushers are designed correctly so that there is no pressure on trolley or current collector during travel.
4. Trolley Limit Switch (Optional) : Proper actuators are provided on beam for the stopping of CT.
5. Oil level & fasteners: Check levels are correct & all fasteners are correctly tightened.
6. Power supply Voltage : Check voltage in all 3 phases. R=Y=B= report under or over voltage.
7. Limit Switch : Check all limit switches like over hoisting, over lowering, right & left & emergency Check the direction of motions w.r.t. Pendant buttons change phase sequence if required. This is very important safety requirement.
8. Sufficiency of lift : Set the bottom Limit switch so that hook touches the floor & no further Loosening of chain takes place. Set the top limit switch so that safe headroom is maintained between hoist body and lower block.
9. Angular Loading : Check that equipment is not subjected to angular loading. Ensure that equipment is installed at proper place proper hook approaches are used to prevent this.
10. Overloading, Extra heavy duty : Observe there is no overloading and excessive use of hoist.
11. Counter weight assembly : Ensure that counter weights are correctly assembled for balancing of trolley bolts are properly locked & tightened.
12. Noise level : Observed that there is no abnormal noise in Hoist and travel motion.
13. Oiling : Apply oil to the chain for full length. Ensure free movement.
14. Name plate data: Note hoist, motor nos. & record them on Instruction manual for future use.
15. Instruction Manual: Read instruction manual of each product carefully & act accordingly.
16. Abnormal factors : Excessive dust, temp, humidity, chemical fumes, leakages etc. Report them.
17. Brake setting : Ensure that brake operation is not sluggish & load is not slipping. This is to certify that equipment is commissioned on and found satisfactory for use.

COMMISSIONING / OPERATING INSTRUCTION MANUAL

HIGHER CAPACITY CHAIN ELECTRIC HOIST

1. Unpacking for Erection :

Open the packing box from Top' up to half the box height. For hoist with trolley, check the distance between wheel flanges. It should be approx. 5 mm more than the width of runway beam flange but not more than 10 mm. If necessary adjust the trolley, taking care to fit equal number of washers on both side between trolley side plate and square suspension plate.

In case the trolley can't be pushed in from one end of the runway beam, it must be opened and fitted back after the hoist has been fitted under the beam.

For lifting up the hoist, bring the whole box under the beam, hang the hoist on the lifting device and only now open the box completely and unscrew the hoist from the two angles which are bolted to the box frame.

2. Power supply :

Connect the hoist to 415V, 3 phase power supply. (DO NOT FORGET TO CONNECT EARTHING) press a bush button.

All push buttons along with limit switches will now be functioning properly.

3 Limit Switches :

Limit switches are provided for both hoisting and lowering. These trip the supply in event of accidental Over hoisting OR Over lowering. These are safety devices and hence, it is recommended to use the hoist in always in its extreme positions.

4. Cautions :

Don't make any change in circuit. And connection must be done as per the circuit diagram only.

5. Maintenance :

The hoist requires hardly any maintenance. Check from time to time the oil levels, indicator on the gear box. The oil level may be visible, but may be less than the half in height of the sight glass. Don't fill up more oil as to 1/2 or 3/4 of the sight glass. It may spoil the oil seals due to high oil pressure generated by the gears in motion. Drain oil once in a year and replace by new. (We recommend petrosil (Gulf-oil)) Harmony - 53.

For repair of the gear box, mark the identification lines on gearbox plate to gear box housing, the hoist should be brought down to rest vertical on the motor cover. After changing the parts, assembly is to be done in the same sequence as dismantling.

6. Take care for following points :

Each bearing in the inner plate of the gear box must sit on a distance washer and the taper roller bearings in the outer plate are to be exactly adjusted by sheet metal washers. Measure the depth frame plate to outer ring of the taper roller bearing with a depth gauge.

This measure gives thickness of the washer to be fitted. Uniform thickness is important

Fit bearing covers with a good sealing compound to gear box plate, allow it to dry for sometime before putting the parts together,

Load chain should be well lubricated at all times. Lubricate the chain with any medium Viscosity oil on no load condition. Then run the hoist on load condition only for sometime to ensure that the oil has penetrated the link chain joints.

Put few drops of oil regularly on all moving parts of limit switch to have them always efficient to keep away breakdowns.

Guideline for checking chain wear

- i) While measuring, there should not be any twist in chain and it should be held loose.
- ii) It should be measured within ± 1 mm accuracy and it should be measured at an interval of 2 metres.

Recommended max, 'X' for 17 links in mm-(D-12 mm)-609 mm

At any place if X is more, it is NOT advisable to use.

7. Hoist motor fitting :

If the motor had been removed, fit the main shaft first and then the motor, to fit the motor, release the motor and turn the motor shaft on the fan to and from until the coupling parts match.

For fitting the main shaft, slightly hammering may be necessary, but see always, the main shaft pinion is counter held on the gear box side in its centre and not on the ball bearing. The cap, which is closing the ball bearing, should be removed at this time.

8. Brake adjustment :

No any adjustment need to be done until the load needs more time to stop after releasing the push button by lowering. There will be slow increase of stopping time due to linear wear, but never sudden full slip of load. For adjustment of the brake, remove the motor cover. Open the nut under the plate on which the magnets are fitted one by one and tighten at the same time the nuts which are installed on the outside of the plate,

Control the nut opening correctly by moving them a quarter or half turn. So the brake magnets remains adjusted parallel but the gap gets reduced. It is better to check by a feeler gauge. The gap should be 0.6 to 0.7 mm uniform then, turn all counter nuts, which are fitted on the springs by the same amount

At least open the lock nuts of two 8 mm brake releasing screws and tighten the screws. Now the fan must run free and easily when moved by hand without friction otherwise, the gap of the brake magnets have to be increased slightly. At last bring the brake releasing screws back and lock with the nut, fit motor cover.

NOTE :- Never run the hoist with power with released brake

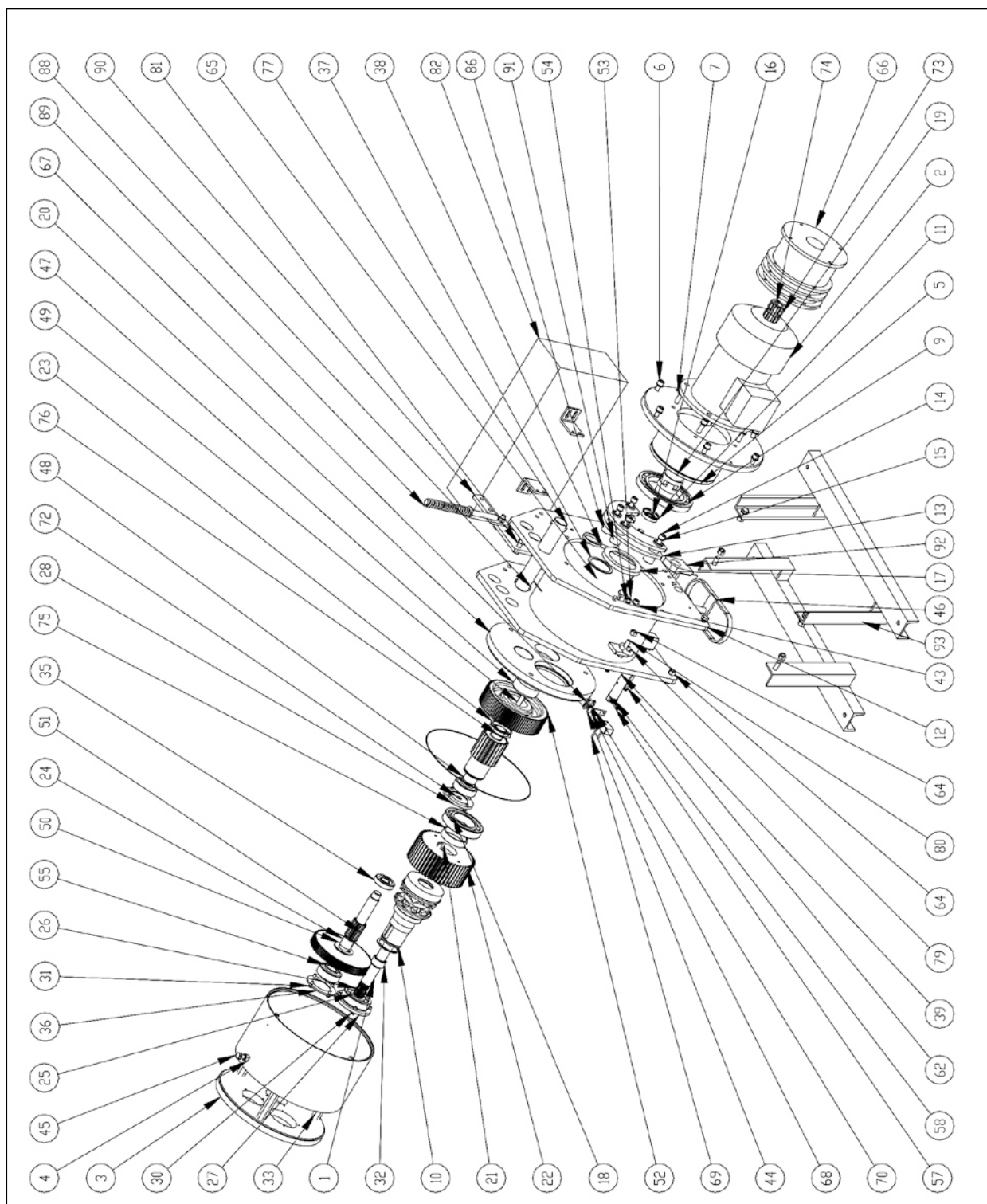
TROUBLE SHOOTING

TROUBLE	CAUSE	HOW TO SET RIGHT
Hoist does not start No contractor operates.	Phase sequence wrong or one phase failed or limit switch operated.	Change to phases of main supply. Check with lamp. Check movement of limit switch levers.
Hoist does not start Contractors are working.	Brake not opening or motor defect or overloaded.	Remove brake cover and see movement of brake plate. Check without load
Operation interrupted Chattering of contractors.	Loose connection or wire broken, current collector contact poor.	Tighten all connections. Check wires. Check sitting of shoe & free movement of arm
Push button gets stuck.	Push button sections shifted	Tighten the housing screw.
Braking time too long.	Brake liner is worn.	Adjust brake as per Instructions.
Brake & motor overheats	Brake not properly opening incorrect air-gap.	Check brake air gap (see the instructions).
Causes of excessive load chain wear.	Lack of lubrication excessive duty/load	Lubricate chain with harmony – 53 or equivalent oil. Check load & No of start / stop per day.
Fast wear load chain wheel.	Excessive worn out chain	Refer guide lines for chain.

SAFE OPERATING PROCEDURES FOR OVERHEAD CRANES / HOISTS & SLINGS

DO Not	CAUTIONS	DO
- Lift more than rated capacity of Hoist. - Operate Hoist with twisted, kinked or damaged hoist-rope - Operate if rope is not seated in drum or sheave grooves. - Lift unless load slings are centered on hook. - Lift people or travel with people on load. - Make side pulls which misalign rope with hoist. - Operate unless all travel limit devices are functioning. - Lower below point where less than two full wraps of rope remain on hoist drum. - Use upper limit switch to stop hoist limit which is emergency stop only. - Leave operating position with suspended load on hook. - Permit load to contact obstacles. - Exceed recommended duty cycle. - Use Hoist Rope or chain as a sling or as an earthing for welding. - Divert his attention while operating. - Remove or obliterate warning label - Exceed fuse rating.	WHENEVER LEAVING OR PARKING ANY HOIST OR CRANE - Raise all hook to-but not through-limit switches. - Place all controls in off position - Place main power switch in off position. - Make visual check for any dangerous condition & report any defect immediately. - Report to supervisor when Hoist is not in operation. - Take up slacks, than start load slowly. - Keep chains free from twists, knots & knits. - Lift form Center of hooks. Avoid lifting form points. - Distribute load evenly on all legs. - Inspect chain regularly. Remember elongation of links is a sign of overloading. - A sharp edge can cut the lift of your sling. Use blocking padding or a corner saddle. - Remove knots large enough for the load. - Don't jerk loads- jerking may double the stress in your sling. Lift load gradually. 	- Test hoist & travel limit devices at a start of each shift. - Position the Hoist so that lifting appliance is directly over the load. - Take load gently & avoid shock loads. - Ensure the travel path is clear before traveling. - Sound warning single when approaching personnel. - Balancer the loading sling before lifting more than few inches. - Test hoist brakes whenever lifting load approaching rated load capacity. Lift load a few inches & test hoist brakes before making complete lift. - Make visual checks on equipment at reasonable intervals & report the defects immediately. - Use controller to "stop" hoist not limit switch. - Watch for proper rigging on load before lifting. - Know standard hand signals. - Check Lubricants. - Check for proper phasing. - Always anchor outdoor hoists when not attended. - Keep load block safely overhead when not in use.

MAINS SPARE PART LIST - 2.5T - 5T

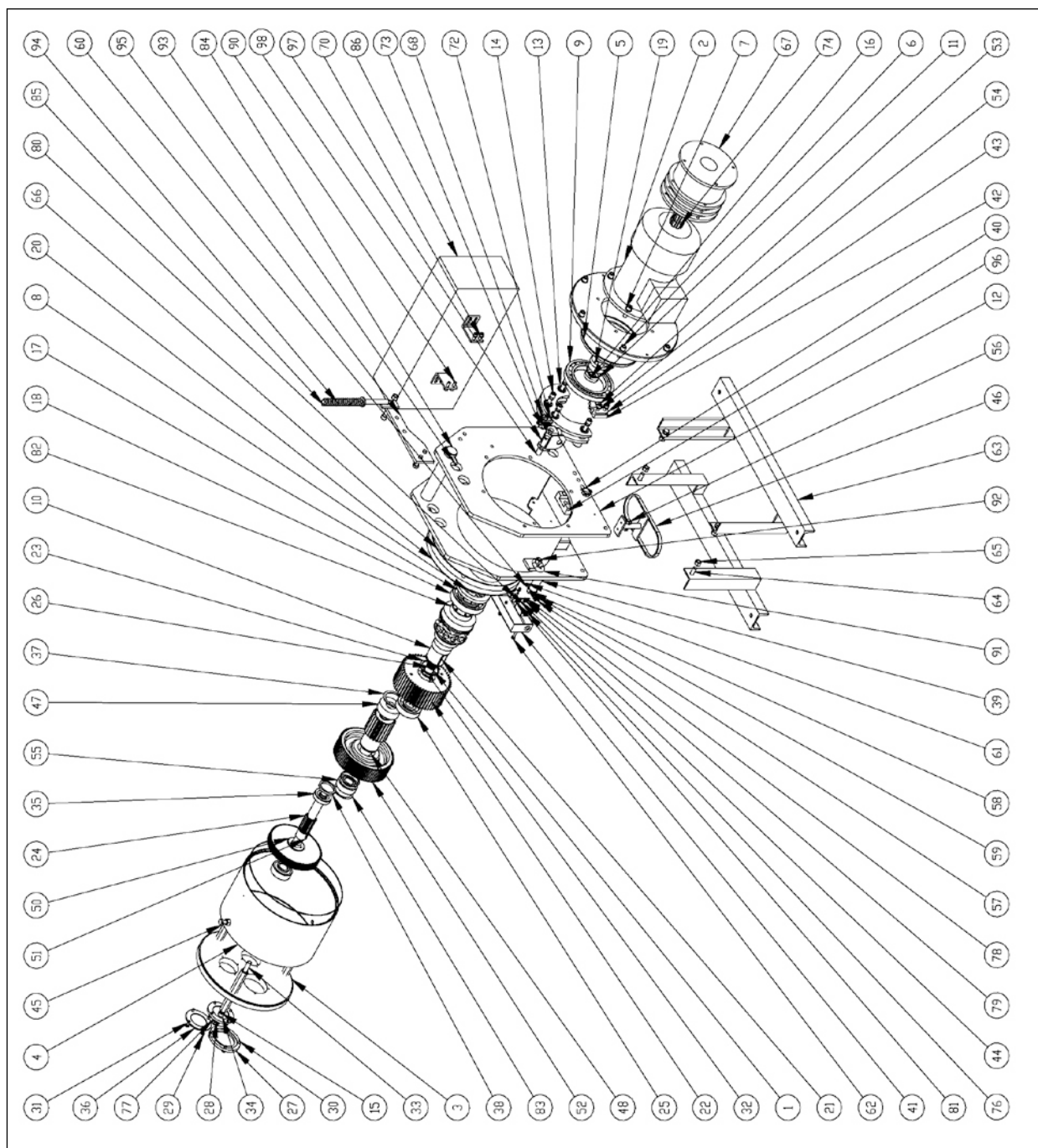


PART NO.	PART CODE	DESCRIPTION	QTY.
1	EDCM813021B	MAIN SHAFT	1
2	XMRP002000*	HOIST MOTOR	1
3	PCCA053027B	GEAR BOX PLATE OUTSIDE	1
4	PCCA123029A	GEAR BOX CASING TUBE	1
5	EDCM133030B	MOTOR END SHIELD ASSEMBLY	1
6	ASFM12035000	ALLEN SCREW (SHCS) M12*35	10
7	FLSPWB120000	FLAT SPRING WASHER B12	18
8	KB0800700250	KEY - BER 8*7*25 LG	1
9	BBR160240000	BALL BEARING 16024	1
10	EDCM373010B	LOAD CHAIN WHEEL	1
11	INCRB0500000	INTERNAL CIRCLIP B 50	1
12	EDDM133004B	HOUSING COMPLETE FOR E.T.	1
13	EDCM133080A	CHAIN GUIDE COMPLETE	1
14	ASHM12050000	ALLEN SCREW (SHCS) M 12*50	4
15	SQSPW0120000	SQURE SPRING WASHER 12MM	7
16	OS0300501000	OIL SEAL 30*50*10 (11)	1
17	OS0901251200	OIL SEAL 90*125*12	1
18	BBR062140000	BALL BEARING 6214	1
19	EDCM003520B	LOVE JOY FLEXIBLE COUPLING	1
20	PCCA053028B	GEAR BOX PLATE INSIDE	1
21	KB1600100500	KEY - BER 16*10*50	1
22	PCCA373024B	DRUM GEAR	1
23	EXCRA0650000	EXTERNAL CIRCLIP A 65	2
24	PCCA812221B	1 BACK GEAR PINION	1
25	BBR064060000	BALL BEARING 6406	1
26	EXCRA0300000	EXTERNAL CIRCLIP A30	1
27	EDCM833272A	GEAR BOX CAP FOR MAIN SHAFT	1
28	PCCA833271A	GEAR BOX CAP FOR 2 BACK GEAR	1
29	FLSPWB060000	FLAT SPRING WASHER B6	16
30	HBHM06020088	HT HEX BOLT M6*20. GR 8.8	4
31	HBHM06016088	HT HEX BOLT M6*16	8

PART NO.	PART CODE	DESCRIPTION	QTY.
32	BNB030040020	NEEDLE ROLLER BEARING	1
33	PCCA943025A	GEAR BOX BOLT	3
34	ASFM12030000	ALLEN SCREW (SHCS) M 12*30	3
35	BTR303050000	TAPER ROLLER BEARING	1
36	PCCA833273A	GEARBOX CAP FOR 1 BACK GEAR	1
37	PCCA833282A	BALL BEARING DISTANCE RING	1
38	PCCA833283A	BALL BEARING DISTANCE RING	1
39	EDCM833091A	SWITCH AXLE	1
40	EXCRA0280000	EXTERNAL CIRCLIP A28	1
41	EDCM113092A	LIMIT SWITCH BOX	1
42	EDCM852082A	PACKING FOR LOAD CHAIN STRIPPING	1
43	CCCM083005A	LOAD CHAIN STRIPPING FORK	1
44	EACM112309A	SPRING PLATE	1
45	HBMM12016046	MILD STEEL HEX BOLT M12*16	2
46	EDDM133090A	LIMIT SWITCH AXLE LEVER	1
47	BTR323070000	TAPER ROLLER BEARING	1
48	PCCA812231B	2ND BACK GEAR PINION	1
49	KO1400900500	KEY - OER 14*9*50	1
50	PCCA373222B	1ST BACK GEAR WHEEL	1
51	KB0800700270	KEY - BER 8*7*27	1
52	PCCA373232B	2ND BACK GEAR WHEEL	1
53	ASHM10040000	ALLEN SCREW (SHCS) M 10*40	2
54	FLSPWB100000	FLAT SPRING WASHER B10	2
55	BTR323060000	TAPPER ROLLER BEARING	2
56	ASFM06020000	ALLEN SCREW (SHCS) M 6*20	2
57	ASHM04040000	ALLEN SCREW M4*40	2
58	EACM243315A	SPIRNG ON SWITCH AXLE	2
59	PLW040090008	PLAIN WASHER 4.3 * 9 * 0.8	2
60	FLSPWB040000	FLAT SPRING WASHER B4	2
61	HNMM004000YZ	HEX NUT M4	4
62	MSFM06055000	CHEESE HEAD MACHINE SCREW M6*55	2

PART NO.	PART CODE	DESCRIPTION	QTY.
63	HBHM12035088	HT HEX NUT BOLT M 12*35	4
64	HNMM012000YZ	HEX NUT M12	8
65	RC0200000000	RUBBER CORD 2DIA	2
66	XBAP0020PTA	HOIST BRAKE	1
67	XLSE0010SLZ	LIMIT SWITCH	2
68	EACM243314A	PLUNGER SPRING	1
69	MSFM04030000	CHEESE HEAD MACHINE SCREW M4*30	4
70	EDCM243910A	PLUNGER SPRING	1
71	SQSPW0040000	SQUARE SPRING WASHER 4MM	4
72	PACE173301A	OIL LEVEL INDICATOR 3/8 BSP	1
73	PACA823612B	BUSH	1
74	KB0800700500	KEY-BER A 8*7*50	1
75	EDCM833101A	SPACER FOR LOAD CHAIN WHEEL	1
76	PCCA113277A	SHISM (71.5 X 60 X 1 THK.)	1
77	EDCF823061B	SUSPENSION AXLE	1
78	EDFG133063A	DAMPER ROD ASSLY	1
79	CHAL12033800	ALLOY CHAIN 12*33	1
80	ASHM12045000	ALLEN SCREW (SHCS) M 12*45	1
81	HBHM12040088	H T HEX BOLT M12 X 40	3
82	0221608B	CONTROL PANEL (2.5T)	1
	0221609B	CONTROL PANEL (5T)	1
86	ASFM08025000	ALLEN SCREW M 8*25	4
87	FLSPWB080000	FLAT SPRING WASHER B-8	4
88	DSP120050000	DOWEL SPRING PIN 12*50	2
89	PACF243712A	HELICAL SPRING	3
90	EDCF052062A	FLAT FOR TROLLEY DAMPER	1
91	EDGL822251B	AXLE FOR CHAIN SUSPENSION HOUSING (5T)	1
92	EDEL133024A	CHAIN SUSPENSION HOUSING (5T)	1
93	EDCM133077A	PACKING GIRDER	2
Please refer for Motor Part Code '** Details (BBL, IND)			

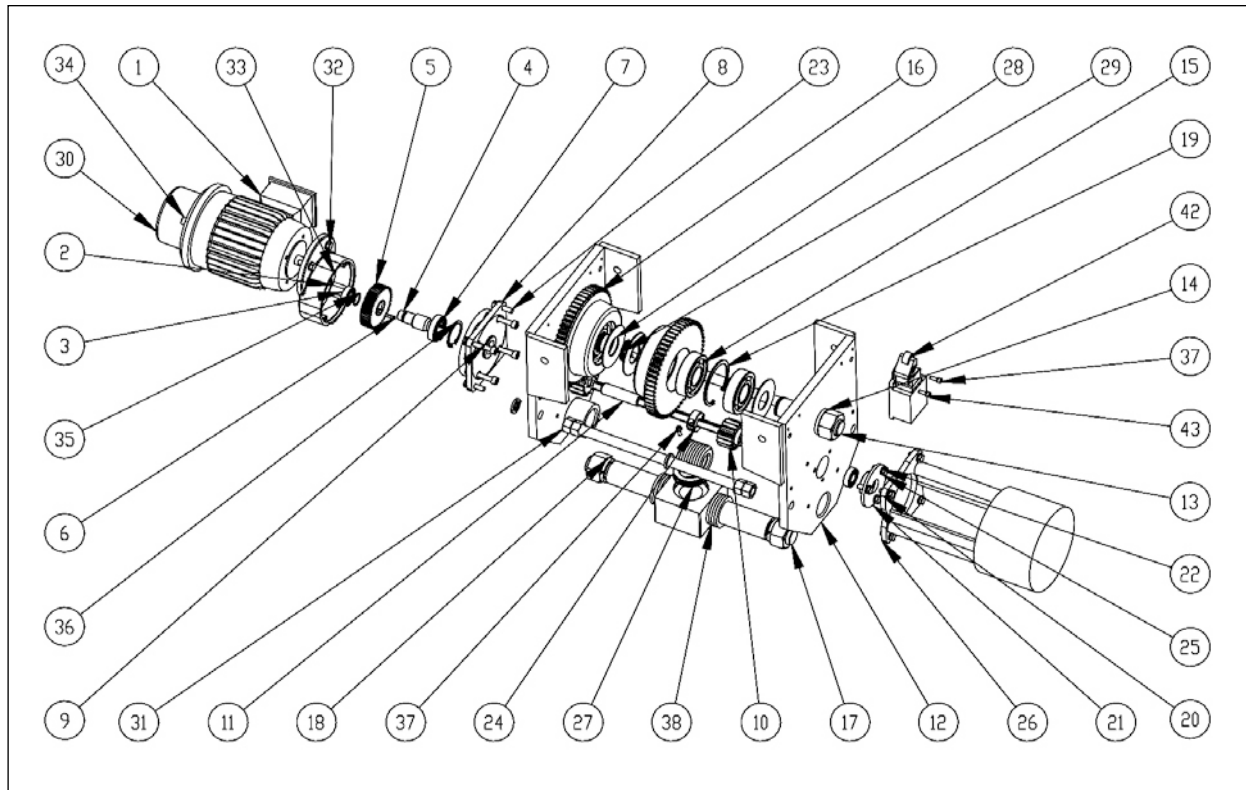
MAINS SPARE PART LIST – 7.5T - 10T



PART NO.	PART CODE	DESCRIPTION	QTY.
1	EDCM813021B	MAIN SHAFT	1
2	XMRP002000BBL	HOIST MOTOR	1
3	PCCA053027B	GEAR BOX PLATE OUTSIDE	1
4	PCCA123029A	GEAR BOX CASING TUBE	1
5	EDCM133030B	MOTOR END SHIELD ASSEMBLY	1
6	ASFM12035000	ALLEN SCREW (SHCS) M12*35	11
7	FLSPWB120000	FLAT SPRING WASHER B12	18
8	KB0800700250	KEY - BER 8*7*25 LG	1
9	BBR160240000	BALL BEARING 16024	1
10	EDCM373010B	LOAD CHAIN WHEEL	1
11	INCRB0500000	INTERNAL CIRCLIP B 50	1
12	EDDM133004B	HOUSING COMPLETE FOR E.T.	1
13	EDCM133080A	CHAIN GUIDE COMPLETE	1
14	ASHM12050000	ALLEN SCREW (SHCS) M 12*50	4
15	SQSPW0120000	SQURE SPRING WASHER 12MM	7
16	OS0300501000	OIL SEAL 30*50*10	1
17	OS0901251200	OIL SEAL 90*125*12	1
18	BBR062140000	BALL BEARING 6214	1
19	EDCM003520B	LOVE JOY FLEXIBLE COUPLING	1
20	PCCA053028B	GEAR BOX PLATE INSIDE	1
21	KB1600100500	KEY - BER 16*10*50	1
22	PCCA373024B	DRUM GEAR	1
23	EXCRA0650000	EXTERNAL CIRCLIP A 65	2
24	PCCA812221B	1 BACK GEAR PINION *P300-22A	1
25	BBR064060000	BALL BEARING 6406	1
26	EXCRA0300000	EXTERNAL CIRCLIP A30	1
27	EDCM833272A	GEAR BOX CAP FOR MAIN SHAFT	1
28	PCCA833271A	GEAR BOX CAP FOR 2 BACK GEAR	1
29	FLSPWB060000	FLAT SPRING WASHER B6	16
30	HBHM06020088	HT HEX BOLT M6*20. GR 8.8	4
31	HBHM06016088	HT HEX BOLT M6*16	8

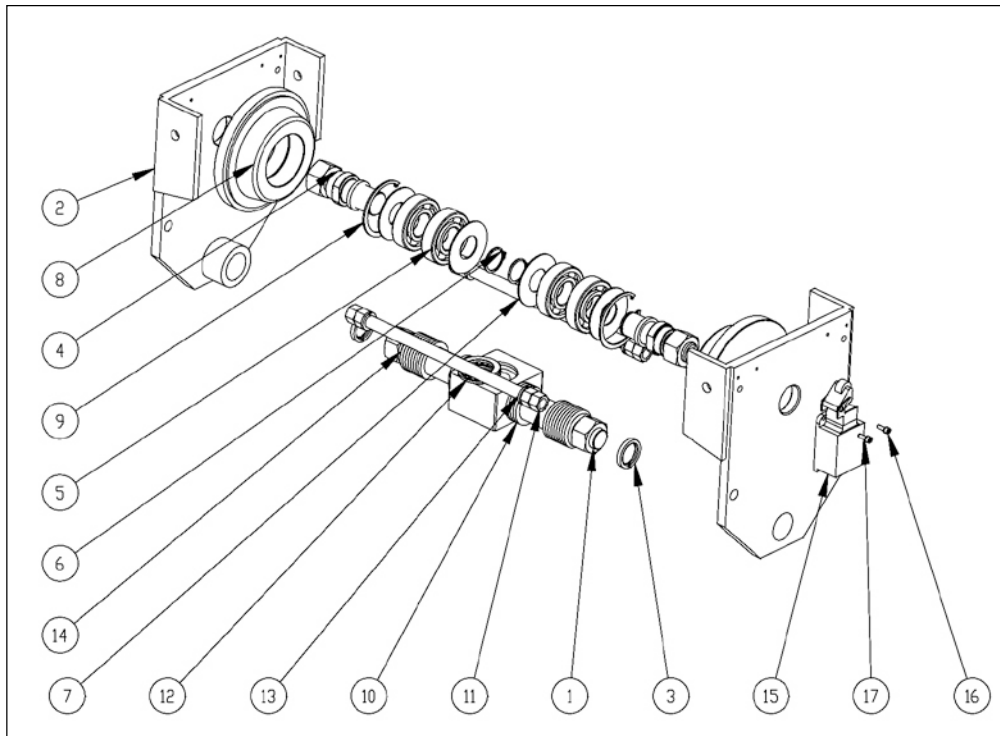
PART NO.	PART CODE	DESCRIPTION	QTY.
32	BNB030040020	NEEDLE ROLLER BEARING 30*40*20	1
33	PCCA943025A	GEAR BOX BOLT	3
34	ASFM12030000	ALLEN SCREW (SHCS) M 12*30	3
35	BTR303050000	TAPER ROLLER BEARING (30305)	1
36	PCCA833273A	GEARBOX CAP FOR 1 BACK GEAR	1
37	PCCA833282A	BALL BEARING DISTANCE RING	1
38	PCCA833283A	BALL BEARING DISTANCE RING	1
39	EDCM833091A	SWITCH AXLE	1
40	EXCRA0280000	EXTERNAL CIRCLIP A28	1
41	EDCM113092A	LIMIT SWITCH BOX	1
42	EDCM852082A	PACKING FOR LOAD CHAIN STRIPPING	1
43	CCCM083005A	LOAD CHAIN STRIPPING FORK	1
44	EACM112309A	SPRING PLATE	1
45	HBMM12016046	MILD STEEL HEX BOLT M12*16	2
46	EDDM133090A	LIMIT SWITCH AXLE LEVER	1
47	BTR323070000	TAPER ROLLER BEARING 32307	1
48	PCCA812231B	2 BACK GEAR PINION	1
49	KO1400900500	KEY - OER 14*9*50	1
50	PCCA373222B	1ST BACK GEAR WHEEL	1
51	KB0800700270	KEY - BER 8*7*27	1
52	PCCA373232B	2ND BACK GEAR WHEEL	1
53	ASHM10040000	ALLEN SCREW (SHCS) M 10*40	2
54	FLSPWB100000	FLAT SPRING WASHER B10	2
55	BTR323060000	TAPPER ROLLER BEARING 32306	2
56	ASFM06020000	ALLEN SCREW (SHCS) M 6*20	2
57	ASHM04040000	ALLEN SCREW M4*40	2
58	EACM243315A	SPIRNG ON SWITCH AXLE	2
59	PLW040090008	PLAIN WASHER 4.3 * 9 * 0.8	2
60	FLSPWB040000	FLAT SPRING WASHER B4	2
61	HNMM004000YZ	HEX NUT M4	4
62	MSFM06055000	CHEESE HEAD MACHINE SCREW M6*55	2
63	EDCM133077A	PACKING GIRDER	2

PART NO.	PART CODE	DESCRIPTION	QTY.
64	HBHM12035088	HT HEX NUT BOLT M 12*35	4
65	HNMM012000YZ	HEX NUT M12	8
66	RC0200000000	RUBBER CORD 2DIA	2
67	XBAP0020PTA	HOIST BRAKE	1
68	EDFL822221A	AXEL FOR UPPER L.C. WHEEL	1
69	CCFL852122A	LOCKING PLATE FOR AXEL	1
70	FLSPWB080000	FLAT SPRING WASHER B-8	5
71	ASFM08016000	ALLEN SCREW M8*16	1
72	CCFL023021B	LOAD CHAIN WHEEL	1
73	ND0505000000	NEEDLES 5 DIA * 50 LG	31
74	PACA823612B	BUSH *P100-N6110	1
75	KB0800700500	KEY-BER A 8**7*50	1
76	XLSE0010SLZ	LIMIT SWITCH	2
77	PACE173301A	OIL LEVEL INDICATOR 3/8 BSP	1
78	MSFM04030000	CHEESE HEAD MACHINE SCREW M4*30	4
79	SQSPW0040000	SQUARE SPRING WASHER 4MM	4
80	EDCM243910A	PLUNGER SPRING	1
81	EACM243314A	PLUNGER SPRING	1
82	EDCM833101A	SPACER FOR LOAD CHAIN WHEEL	1
83	PCCA113277A	SHISM (71.5 X 60 X 1 THK.)	1
84	EDCF823061B	SUSPENSION AXLE	1
85	EDFG133063A	DAMPER ROD ASSLY	1
86	CHAL12033800	ALLOY CHAIN 12*33	1
87	0741610B	CONTROL PANEL - 7.5T	1
	0741610B	CONTROL PANEL - 10T	1
91	ASFM08025000	ALLEN SCREW M 8*25	4
92	HBHM12040088	H T HEX BOLT M12 X 40 (GR. 8.8)	3
93	DSP120050000	DOWEL SPRING PIN 12*50	2
94	PACF243712A	HELICAL SPRING	3
95	EDCF052062A	FLAT FOR TROLLEY DAMPER	1
96	EDGL863026A	CHAIN FIXING PLATE	1
97	EDGL133024A	LOAD CHAIN WHEEL HOUSING * CH320-24	1
98	EDGL822251B	AXLE FOR CHAIN SUSPENSION	1
Please refer for Motor Part Code '**' Details (BBL, IND)			

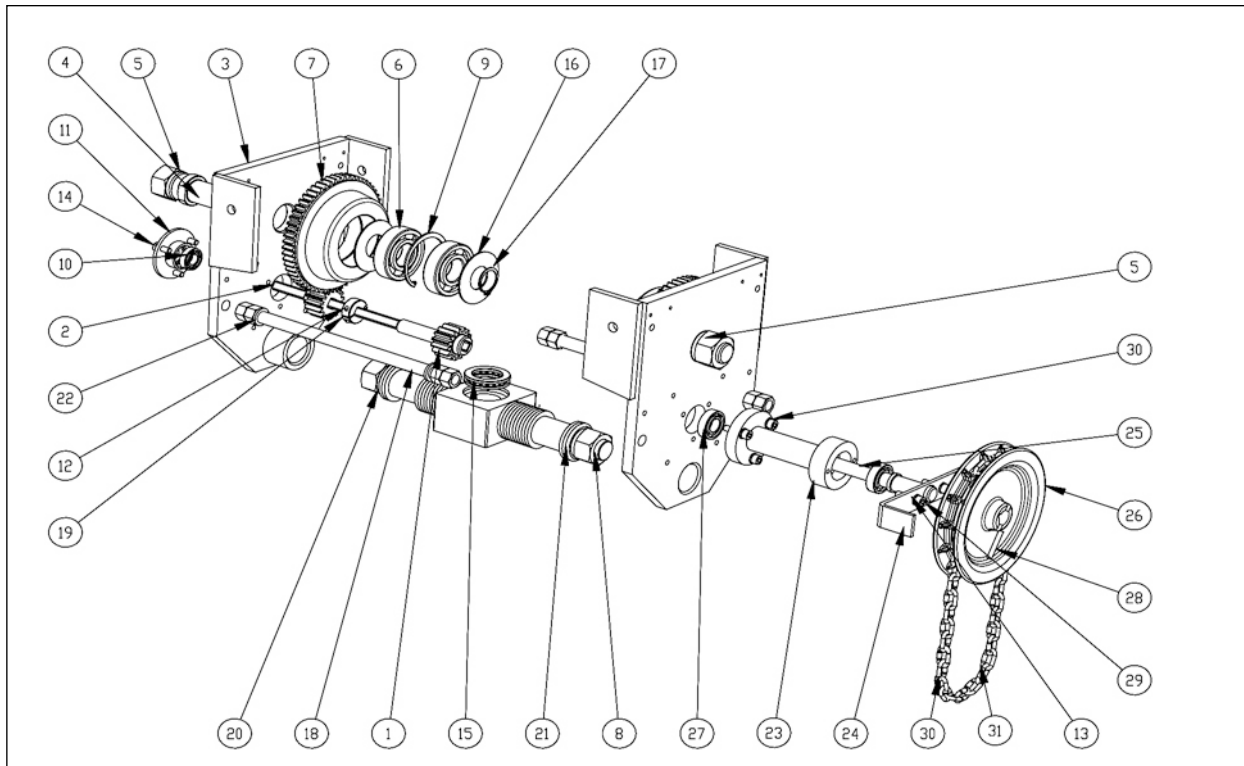
ELECTRIC TROLLEY - 2.5T - 5T

PART NO.	PART CODE	DESCRIPTION	QTY.
1	XMRP026000*	TROLLEY MOTOR	1
2	PACF023029B	GEAR BOX HOUSING	1
3	BBR060030000	BALL BEARING 6003	1
4	PACF813022C	DRIVE SHAFT (SQ. SECTION)	1
5	PACF813031B	GEAR WHEEL, NO.OF TEETH 50	1
6	KO0600600180	KEY 6X6X18	1
7	BBR060050000	BALL BEARING 6005	1
8	PACF013028B	GEAR BOX COVER	1
9	ASFM08030000	ALLEN SCREW M 8*30	4
10	PACF823017C	WHEEL PINION (SQ. HOLE)	2
11	PBCF823018C	PINION SHAFT (SQ.SECTION)	1
12	PBCF133001B	SIDE PLATE ASSEMBLY GT SIDE	2
13	PBCF823015B	WHEEL AXLE*P250-N15 WITH M30 NUT	2
14	FLSPWB300000	FLAT SPRING WASHER B 30	2

PART NO.	PART CODE	DESCRIPTION	QTY.
15	BBR063070000	BALL BEARING 6307	4
16	PBCG013013A	GEARED WHEEL (STRAIGHT & TAPERED)	2
17	PBCN053064A	LOAD AXLE	1
18	FLSPWB300000	FLAT SPRING WASHER B30	2
19	INCRB0800000	INTERNAL CIRCLIP B 80	2
20	BBR06003ZZ00	BALL BEARING 6003-ZZ/2RS	1
21	PACF833021B	BEARING HOUSING	1
22	FLSPWB080000	FLAT SPRING WASHER B-8	19
23	PACF193112B	MODIFIED HT HEX BOLT 8*30	4
24	PACF833020B	CLAMPING WASHER	1
25	HBHM08016088	HT HEX BOLT M8*16	7
26	PNC4133069A	COUNTER WEIGHT	1
27	BTB511080000	THRUST BEARING 51108	1
28	PBCF113016A	BALL BEARING COVER	4
29	EXCRA0350000	EXTERNAL CIRCLIP A 35	2
30	XBAP0060SYT	TROLLEY BRAKE	1
31	PCCF833027A	DISTANCE BOLT	2
32	HBHM08025088	HT HEX BOLT M8*25 GR 8.8	2
33	ASFM08025000	ALLEN SCREW M 8*25	2
34	ASFM08020000	ALLEN SCREW (SHCS) M 8*20	4
35	EXCRA0200000	EXTERNAL CIRCLIP A20	1
36	INCRB0470000	INTERNAL CIRCLIP B47	1
37	ASFM05016000	ALLEN SCREW (SHCS) M 5*16	3
38	PCCF113252A	WASHER FOR LOAD AXLE	24
39	SQSPW0080000	SQUARE SPRING WASHER M8	4
40	FLSPWB160000	FLAT SPRING WASHER B16	4
41	PACF113023A	SPACER 33 I.D * 50 * 5*P150-23	2
42	XLSP0090SLZ	LIMIT SWITCH	1
43	FLSPWB050000	FLAT SPRING WASHER B-5	2
Please refer for Motor Part Code ‘*’ Details (REM/IND/ELE)			

PLAIN TROLLEY - 2.5T - 5T

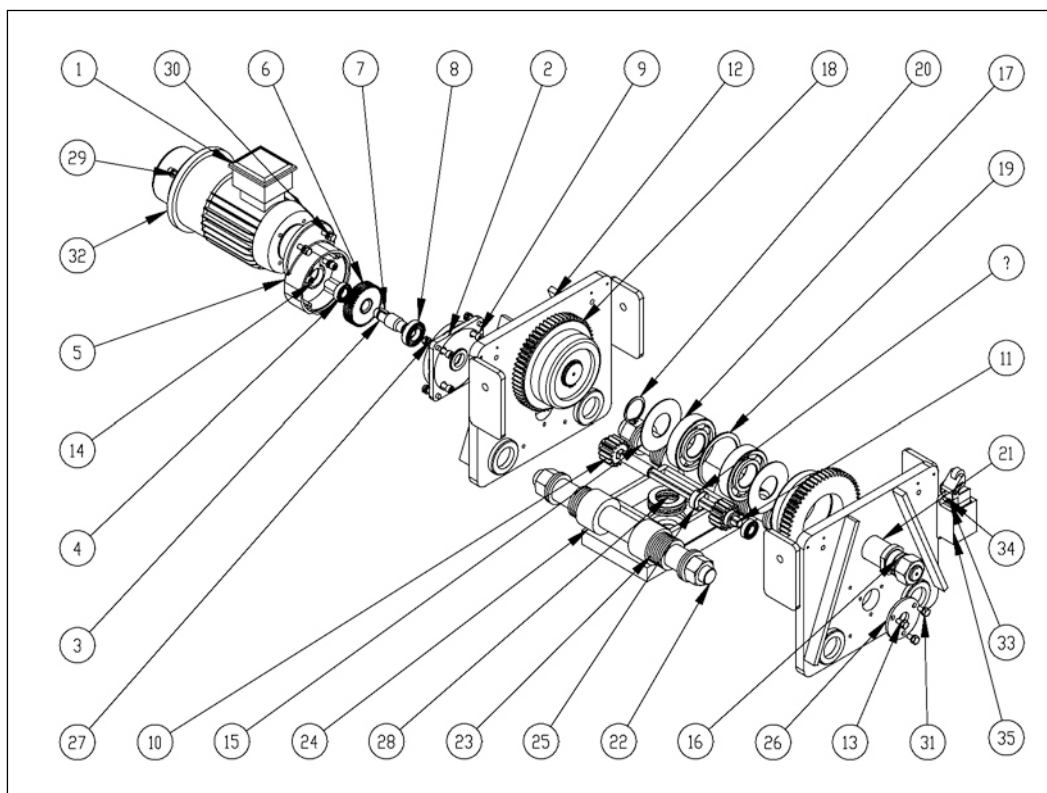
PART NO.	PART CODE	DESCRIPTION	QTY.
1	PBCN053064A	LOAD AXLE	1
2	PBCF133010B	SIDE PLATE ASSEMBLY PT SIDE	2
3	FLSPWB300000	FLAT SPRING WASHER B30	4
4	PBCF823015B	WHEEL AXLE	2
5	BBR063070000	BALL BEARING 6307	4
6	EXCRA0350000	EXTERNAL CIRCLIP A 35	2
7	PBCF113016A	BALL BEARING COVER	4
8	PBCG013014A	PLAIN WHEEL	2
9	INCRB0800000	INTERNAL CIRCLIP B 80	2
10	PCCF113252A	WASHER FOR LOAD AXLE	24
11	PCCF833027A	DISTANCE BOLT	2
12	BTB511080000	THRUST BEARING 51108	1
13	FLSPWB160000	FLAT SPRING WASHER B16	4
14	PACF113023A	SPACER 33 I.D * 50 * 5*	2
15	XLSP0090SLZ	LIMIT SWITCH	1
16	ASFM05016000	ALLEN SCREW (SHCS) M 5*16	2
17	FLSPWB050000	FLAT SPRING WASHER B-5	2

GEARED TROLLEY - 2.5T – 5T

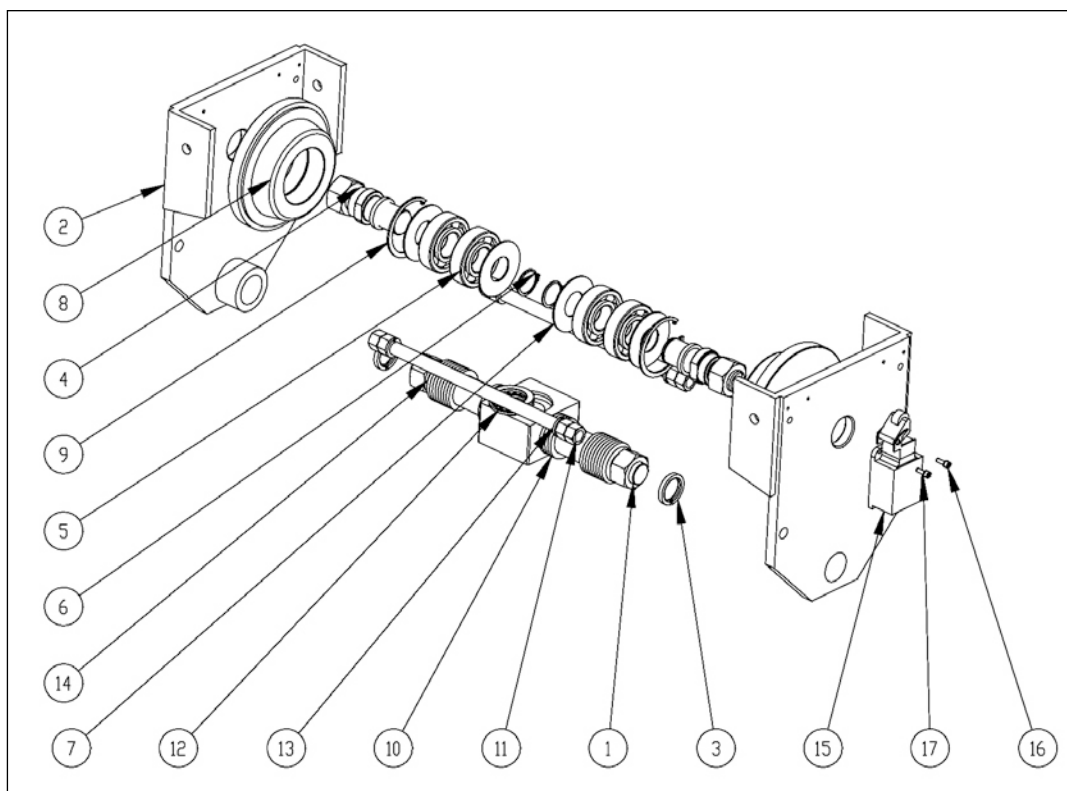
PART NO.	PART CODE	DESCRIPTION	QTY.
1	PACF823017C	WHEEL PINION	2
2	PBCF823018C	PINION SHAFT	1
3	PBCF133001B	SIDE PLATE ASSEMBLY GT SIDE	2
4	PBCF823015B	WHEEL AXLE	2
5	FLSPWB300000	FLAT SPRING WASHER B30	4
6	BBR063070000	BALL BEARING 6307	4
7	PBCG013013A	GEARED WHEEL	2
8	PBCN053064A	LOAD AXLE	1
9	INCRB0800000	INTERNAL CIRCLIP B 80	2
10	BBR06003ZZ00	BALL BEARING 6003-ZZ/2RS	1
11	PACF833021B	BEARING HOUSING	1
12	PACF833020B	CLAMPING WASHER	1
13	FLSPWB080000	FLAT SPRING WASHER B-8	8
14	HBHM08016088	HT HEX BOLT M8*16	3
15	BTB511080000	THRUST BEARING 51108	1
16	PBCF113016A	BALL BEARING COVER	4

17	EXCRA0350000	EXTERNAL CIRCLIP A 35	2
18	PCCF833027A	DISTANCE BOLT	2
19	ASFM05016000	ALLEN SCREW (SHCS) M 5*16	1
20	PCCF113252A	WASHER FOR LOAD AXLE	24
21	PACF113023A	SPACER 33 I.D * 50 * 5	2
22	FLSPWB160000	FLAT SPRING WASHER B16	4
23	PACG133028A	DRIVE SHAFT HOUSING	1
24	PACG852024A	HAND CHAIR GUIDE	1
25	PACG823022D	DRIVE SHAFT	1
26	MECM023022A	HAND CHAIN WHEEL	1
27	BBR060040000	BALL BEARING 6004	2
28	DSP060040000	DOWEL SPRING PIN 6*40	1
29	ASFM08030000	ALLEN SCREW M 8*30	5
30	CHHYN0601804	HAND CHAIN 6*18	AS PER REQU.
31	CHJL050225YZ	JOINING LIMNK	1

ELECTRIC TROLLEY 7.5T – 10T

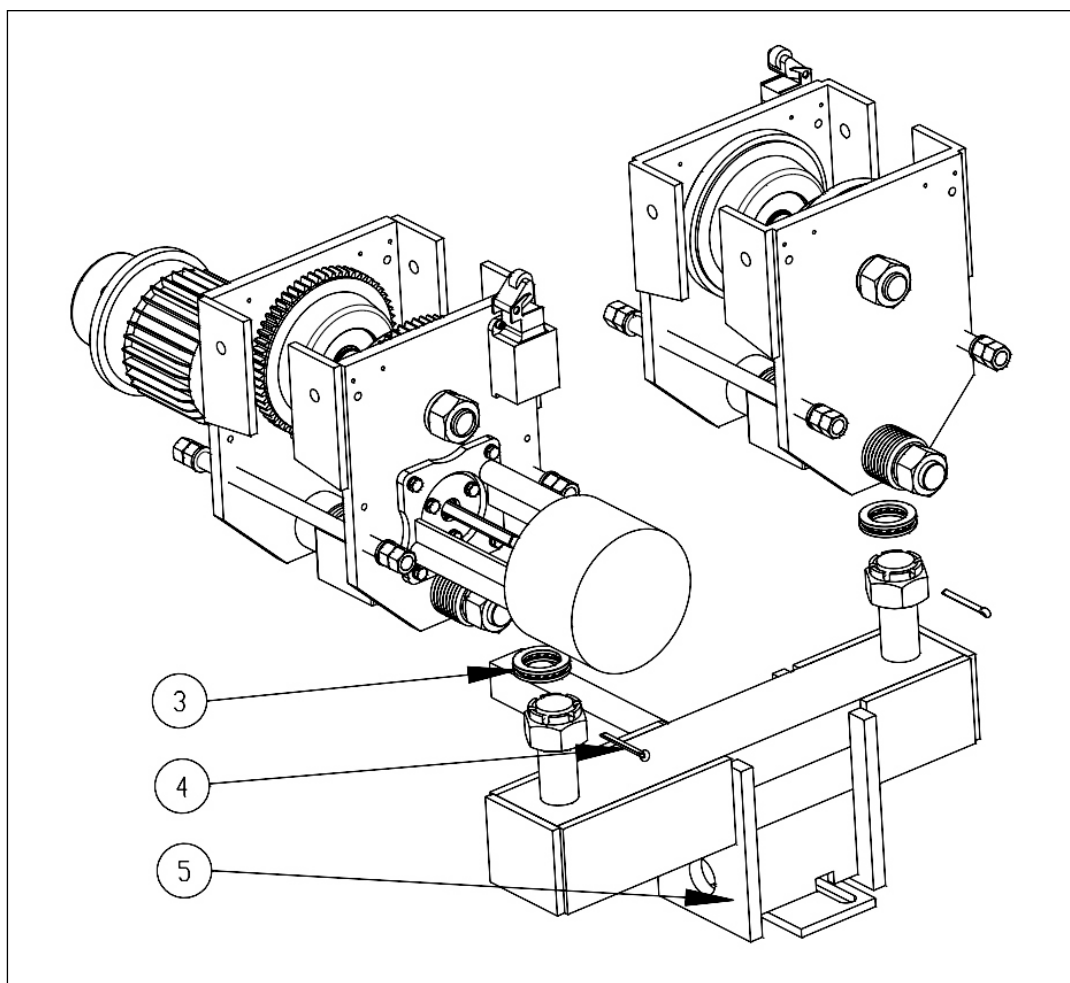


PART NO.	PART CODE	DESCRIPTION	QTY.
1	XMRP030000*	TROLLEY MOTOR	1
2	PACF013028B	GEAR BOX COVER	1
3	PACF813022C	DRIVE SHAFT	1
4	BBR060030000	BALL BEARING 6003	2
5	PACF023029B	GEAR BOX HOUSING	1
6	PACF813031B	GEAR WHEEL	1
7	K00600600220	KEY A6*6*22	1
8	BBR060050000	BALL BEARING 6005	1
9	ASFM08030000	ALLEN SCREW M8*30	4
10	PACF823017C	WHEEL PINION	2
11	PBCF823018C	PINION SHAFT	1
12	UDC5133011A	BOGIE TROLLEY GEAR SIDE PLATE	2
13	FLSPWB080000	FLAT SPRING WASHER B-8	15
14	ASFM08025000	ALLEN SCREW M 8*25	2
15	PCCF113016A	BALL BEARING COVER	4
16	FLSPWB300000	FLAT SPRING WASHER B30	2
17	BBR063090000	BALL BEARING 6309	4
18	PCCF013013A	GEARED WHEEL	2
19	INCRB1000000	INTERNAL CIRCLIP B 100	2
20	EXCRA0450000	EXTERNAL CIRCLIP A45	2
21	PCCF823015B	WHEEL AXEL WITH M30 NUT	2
22	PBCF823025B	LOAD AXLE	2
23	PCCF113252A	WASHER FOR LOAD AXLE	36
24	UDC5133064A	BOGIE CROSS PIECE	1
25	PACF833020B	CLAMPING WASHER	1
26	PACF833021B	BEARING HOUSING	1
27	PACF193112B	MODIFIED HT HEX BOLT 8*30	4
28	BTB512080000	THRUST BEARING 51208	1
29	XBAP0060SYT	TROLLEY BRAKE	1
30	HBHM08025088	HT HEX BOLT M8*25 GR 8.8	2
31	HBHM08016088	HT HEX BOLT M8*16	3
32	ASFM08020000	ALLEN SCREW (SHCS) M 8*20	4
33	ASFM05016000	ALLEN SCREW (SHCS) M 5*16	3
34	FLSPWB050000	FLAT SPRING WASHER B-5	3
35	XLSP0090SLZ	LIMIT SWITCH	1
Please refer for Motor Part Code '** Details (REM/IND/ELE)			

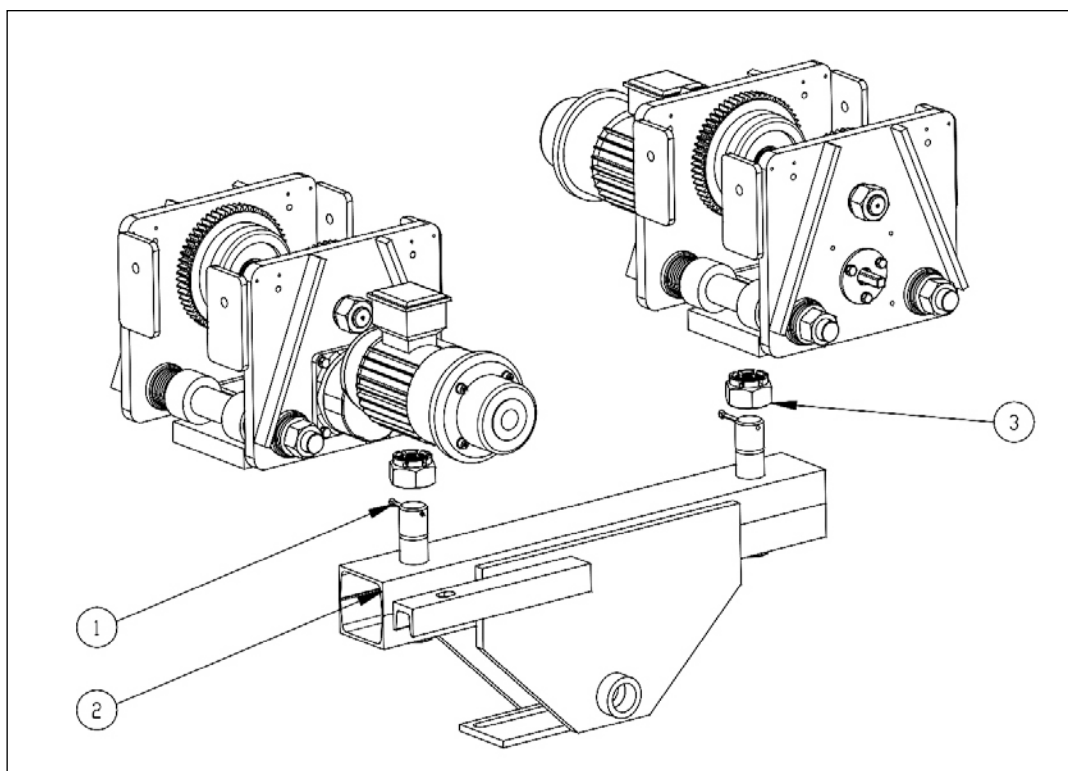
GEARED TROLLEY - 7.5T – 10T

PART NO.	PART CODE	DESCRIPTION	QTY.
1	EDCF133101B	GEAR SIDE PLATE	1
2	PCCF823015B	WHEEL AXLE	4
3	FLSPWB300000	FLAT SPRING WASHER B30	6
4	PCCF113016A	BALL BEARING COVER	8
5	BBR063090000	BALL BEARING 6309	8
6	INCRB1000000	INTERNAL CIRCLIP B 100	4
7	EXCRA0450000	EXTERNAL CIRCLIP A45	4
8	PCCF013013A	GEARED WHEEL	2
9	PCCF013014A	PLAIN WHEEL	2
10	PCCF833027A	DISTANCE BOLT	2
11	FLSPWB160000	FLAT SPRING WASHER B16	8
12	HNMM016000YZ	HEX NUT M16	8
13	EDCF133101B	GEAR SIDE PLATE	1
14	PBCF823025B	LOAD AXLE	1
15	MDCM113014A	ADJUSTMENT WASHER 33*56*4	4

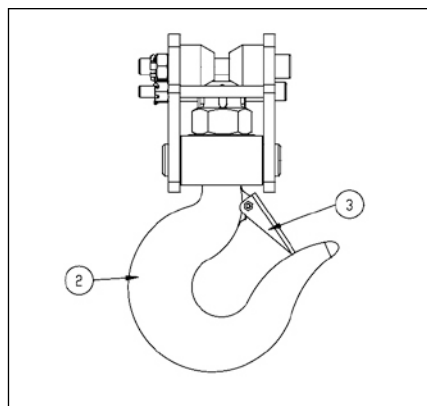
PART NO.	PART CODE	DESCRIPTION	QTY.
16	HNMM030000YZ	HEX NUT M30	2
17	PACF833021B	BEARING HOUSING	1
18	BBR06003ZZ00	BALL BEARING 6003-ZZ/2RS	1
19	PBCF823018C	PINION SHAFT	1
20	PACF823017C	WHEEL PINION SQ. HOLE	2
21	PCCZ133028C	DRIVE SHAFT HOUSING	1
22	TPCM853117A	HAND CHAIR GUIDE	1
23	BBR06004ZZ00	BALL BEARING 6004ZZ	1
24	TKCM021011A	HAND CHAIN WHEEL	1
25	PCCZ823022C	DRIVE SHAFT	1
26	DSP080060000	DOWEL SPRING PIN 8*60	1
27	ASFM08030000	ALLEN SCREW M 8*30	8
28	FLSPWB080000	FLAT SPRING WASHER B8	8
29	CHHYN0601804	HAND CHAIN 6*19	AS PER REQU.
30	CHJL060180YZ	JOINING LINK	1

HOIST SUSPENSION ARM 2.5T – 5T

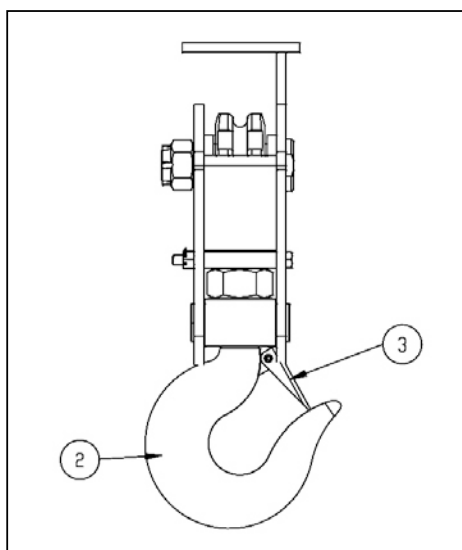
PART NO.	PART CODE	DESCRIPTION	QTY.
1	BTB511080000	THRUST BEARING 51108	2
2	SCP060060000	SPLIT COTTER PIN 6*60	2
3	EDEN133060A	HOIST SUSPENSION ARM	1

HOIST SUSPENSION ARM 7.5T – 10T

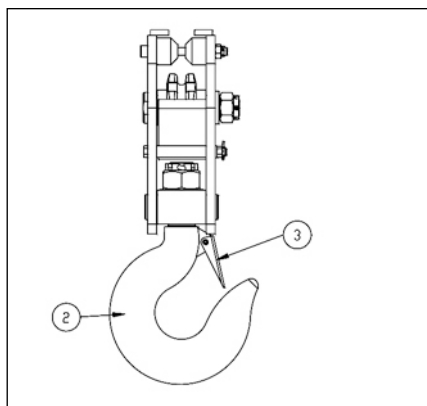
PART NO.	PART CODE	DESCRIPTION	QTY.
1	SCP060060000	SPLIT COTTER PIN 6*60	2
2	EDGN133601A	BOGIE HOIST SUSPENSION ARM	1
3	CNM039040000	CASTEL NUT M39	2

LOWER BLOCK – 2.5T (1 FALL)

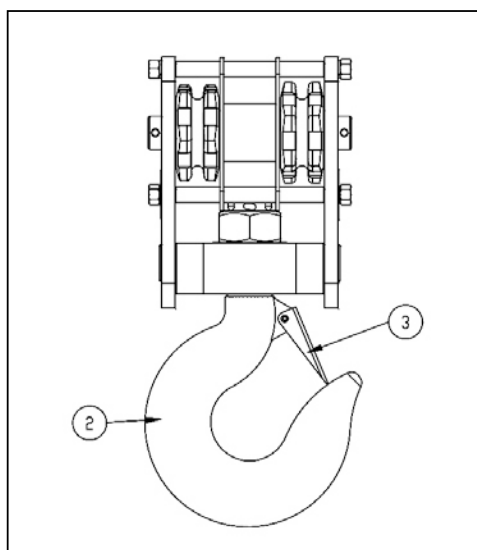
PART NO.	PART CODE	DESCRIPTION	QTY.
	0740601P	LOWER BLOCK ASSLY	
1	CBAT003343A	HOOK WITH SAFETY LATCH ASSLY	1
2	CAAS003140A	HOOK LATCH ASSLY	1

LOWER BLOCK – 5T (2 FALL)

PART NO.	PART CODE	DESCRIPTION	QTY.
	0740602P	LOWER BLOCK ASSLY	
1	EDEU003012A	HOOK WITH SAFETY LATCH ASSLY	1
2	CABS003127B	HOOK LATCH ASSLY	1

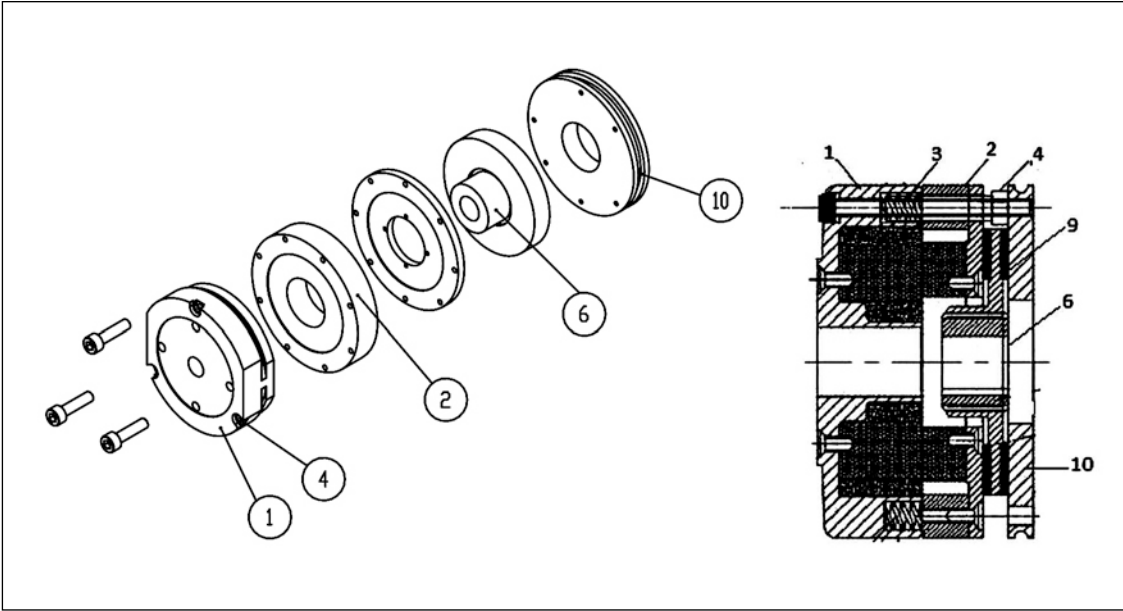
LOWER BLOCK – 7.5T (3 FALL)

PART NO.	PART CODE	DESCRIPTION	QTY.
	0740603P	LOWER BLOCK ASSLY	
1	CDDT003447A	HOOK WITH SAFETY LATCH ASSLY	1
2	CCDS003204A	HOOK LATCH ASSLY	1

LOWER BLOCK – 10T (4 FALL)

PART NO.	PART CODE	DESCRIPTION	QTY.
	0740606P	LOWER BLOCK ASSLY	
1	EDGU003012A	HOOK WITH SAFETY LATCH ASSLY	1
2	CCES003210B	HOOK LATCH ASSLY	1

TROLLEY BRAKE SPARE PART LIST



PART NO.	PART CODE	DESCRIPTION
	XBAP0060SYT	MAIN BRAKE
1	XBAP01610SSYT	STATOR
2		ARMATURE ASSEMBLY
3		TUBULAR SPRING EACH SET
4	XBAP87210SSYT	MOUNTING FLANGE ASSLY
6		BRAKE DISC & BRAKE LINER (ROTOR / GEAR HUB)
10	XBAP00510SYT	MOUNTING FLANGE

TROLLEY & HOIST BRAKE

MAINTENANCE / REPAIR

TROUBLE	POSSIBLE CAUSE	REQUIRED ACTION
Brake does not apply No braking action	No mains voltage. Stator (coil) open. Armature plate Jammed (without moment)	Check supply voltage. Brake coil resistance to be checked as per the technical data. Springs, guide bushes must be checked and overhauled (cleaned properly).
Brake action too slow, insufficient braking effect	Oil or grease on the friction lining Spring are present/broken Brake lining worn-out	Replace rotor, prevent oil/grease from coming in contact with friction liner. Dismantle brake, loosen sleeves insert new springs. Replace rotors (armature plate and flange if very badly worn-out).

To ensure safe & trouble free operation, Spring Loaded Brakes must be checked and maintained at regular intervals. SYTCO Spring Loaded Brakes are wear – resistant and designed for trouble free longer life. The Friction Liners are subject to function -related wear. The Brakes must be checked and readjusted at regular intervals & if necessary, it should be replaced.

PRINCIPLE OF OPERATION : This type of brake consists of stator, Armature, Rotor & Mounting flange. Current is given to stator (coil), the armature plate is attracted to the stator against the spring force thus releasing the rotor. When current is off, strong compression springs push the armature plate back to its position thus clamping the rotor in between armature & mounting flange and providing necessary braking torque.

INSTALLATION : Mounting flange (10) has to be mounted on motor/machine body which should be at right angle to the motor/machine shaft as well as centered internally and externally may be with the help of spigot. The hub (6) has to be fitted on shaft with the help of key and axial retainer (circlip) and Rotor (9) on that. Stator (1) with Armature Assembly (2) has to be fitted on the Mounting flange (10) with the help of provided Allen bolt (8) through adjustment Hollow Bushes (4). The air gap should be adjusted by adjustable Hollow Bushes. To reduce air gap, rotate all bushes equally clockwise. Air gap should be within limits as per following table, initially it should be nominal.

Brake size	05	10	20	40	70	90	160	250
Nominal air gap mm	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.5
Maximum air gap mm	0.5	0.7	0.7	0.7	0.8	1.0	1.0	1.0

MAINTANENCE : SYTCO Fail Safe Brakes are almost maintenance free. For this periodicity depends on application to application, operating frequency, system inertia to be stopped etc. air gap can be adjusted by rotating adjustable Hollow Bushes to reduce air gap. Rotate all bushes anti-clockwise and check from all sides by filler gauge and vice-versa.

TYPICAL CASES OF WRONG FITMENT

Typical case of uneven air gap in brake disc: This should be noticed and avoided during preventive maintenance.



Typical case of stator resting bolt head, which will restrict the stator lateral movement of brake disc: This should be noticed and avoided during preventive maintenance.



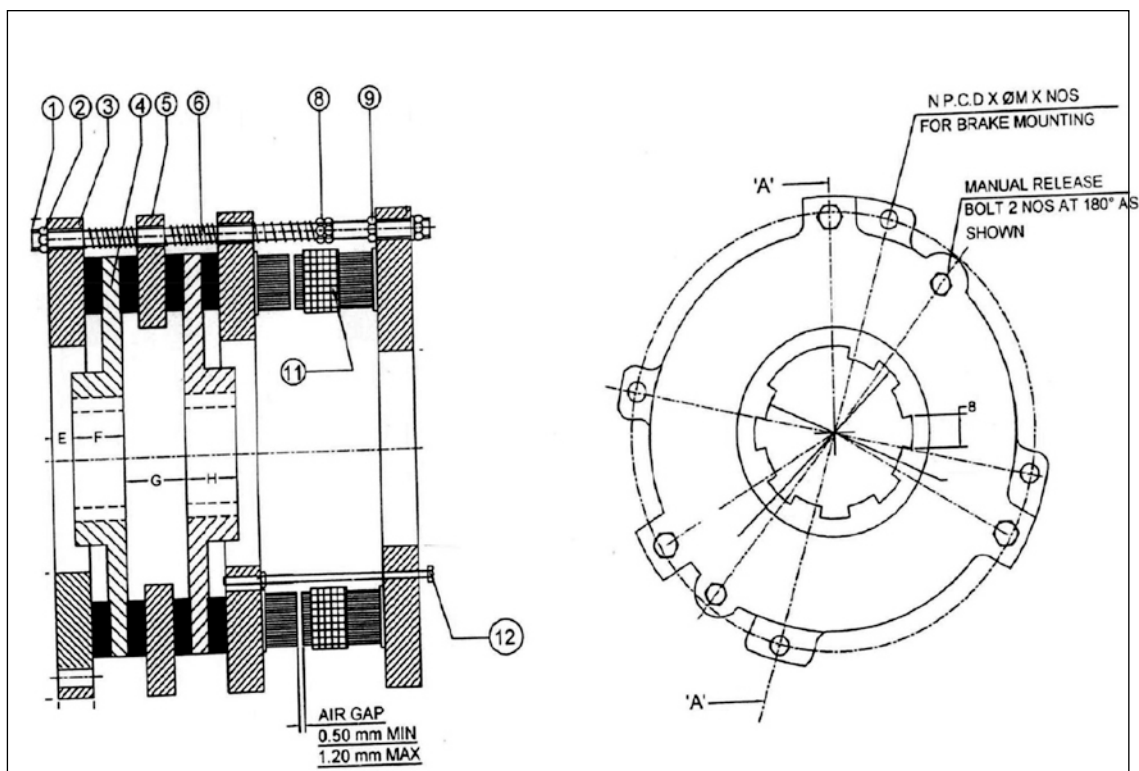
Typical case of stator fitting, the half-moon slot is to clear the bolt head, brake housing fitment wrong, which will obstruct the stator lateral movement of brake disc: This should be noticed and avoided during preventive maintenance.



TYPICAL CASES OF WRONG WIRING

The RYB colour code of connecting cables to be maintained and wiring connections to be followed accordingly. The supply voltage is $415 \pm 10\%$ for all AC brakes. The power supply fluctuations will have effect on brake coil first than motor as coil are more sensitive than motor windings.

HOIST BRAKE SPARE PART LIST



PART NO.	PART CODE	DESCRIPTION
	XBAP0020PTA	MAIN BRAKE
1	XBAP0033PTA	STUD
2	XBAP0032PTA	LOCK NUT
3	XBAP0038PTA	MOUNTING PLATE
4	XBAP0036PTA	FRICTION DISC
5	XBAP0037PTA	DUMMY PLATE
6	XBAP0034PTA	RELEASE SPRING
8	XBAP003APTA	SPRING COMP, NUT, & LOCK NUT
9	XBAP0830PTA	GAP ADJU. NUT & LOCK NUT
11	XBAP0026PTA	COIL
12	XBAP0730PTA	RELEASE BOLT



HOIST BRAKE

SAFETY PRECAUTIONS

- 1. To prevent electrical mishaps be sure to disconnect the power to the brake from its source before attempting to service or repair.
- 2. Look down or secure any load hold by this brake prior to service or repair
- 3. If this brake has been supplied with a manual hand release, do not override the brake by securing the hand release in an open position
- 4. Do not operate brake in atmospheres with explosive gases and dusts or corrosive substances

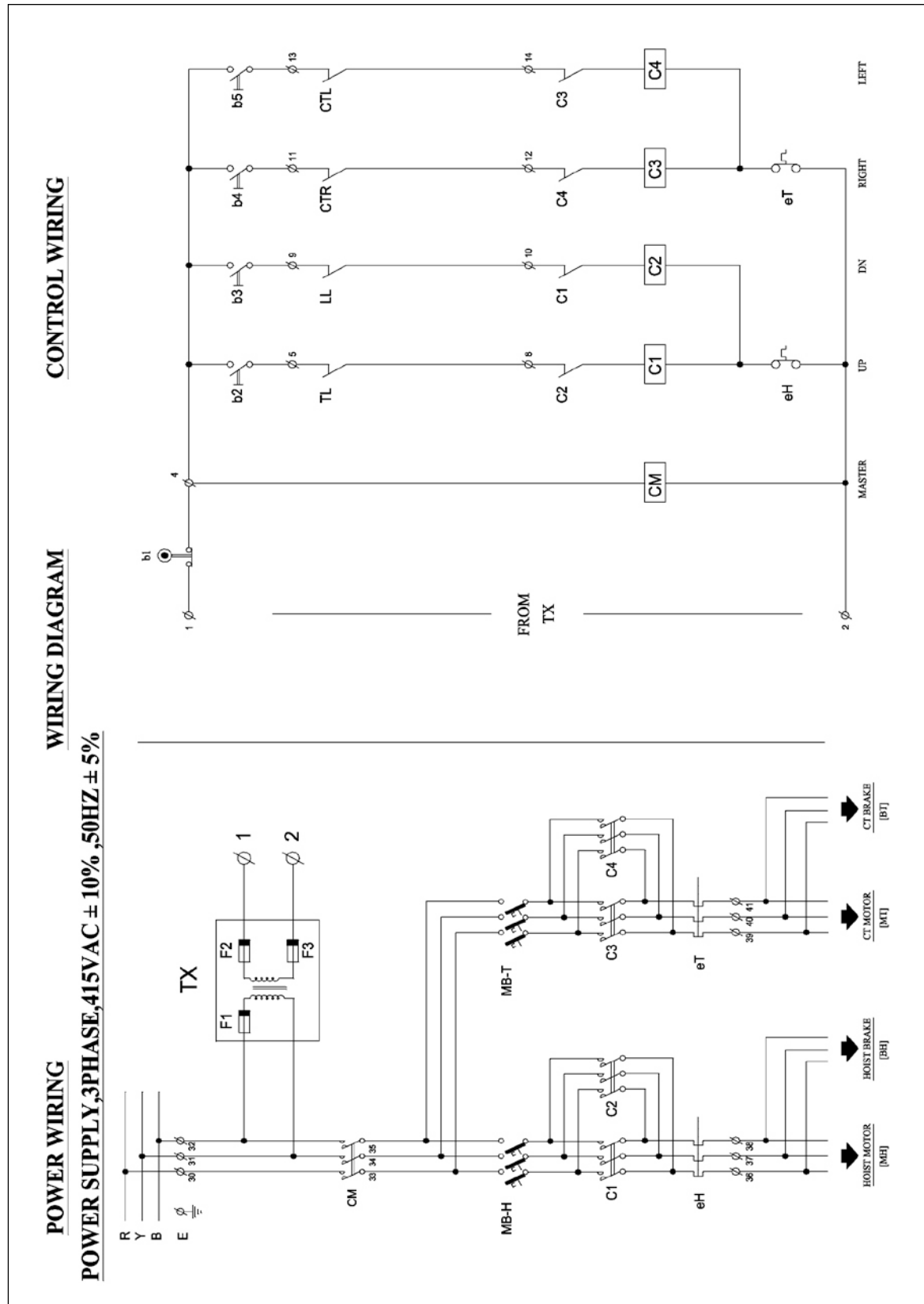
This brake can operate in non explosive dust or with optional seal in water splash and Almaden Atmospheres.

- 5. When storing or installing the friction rotor, ensure that oil or grease is kept from the friction material surface.

Air gap Hand Release Value

Brake Size	DAT 50X	DAT 75X	DAT 100X	DAT 125X	DAT 150X
Normal Air Gap mm	0.50	0.50	0.50	0.6	0.3
Max Air Gap mm	1.20	1.20	1.20	1.2	1.00

WIRING DIAGRAM



ELECTRICAL SPARE PARTS - 2.5T

PART CODE	DESCRIPTION	QTY
XCPP124000A	Enclosure for Baseplate XCPP124001A Size 560X260X150 mm	1
XCPP124001A	Baseplate for Enclosure XCPP124000A Size 490X220X2 mm	1
XCTP0001AVA	Avetronics/Prince Make Control Transformer Primary 415VAC $\pm 5\%$, $\pm 10\%$ & Secondary 24VAC,50VA	1
XMCP0060MDA	Schneider Make MCB 3P 20A Cat No A9N3P20D - Hoist Motor	1
XMCP0010MDA	Schneider Make MCB 3P 2A Cat No A9N3P02D - ET Motor	1
XACP0630SMA	Schneider Make Contactor 18A/24VAC Cat No LC1D18 B7 - Master, Hoist Motor	3
XACP0620SMA	Schneider Make Contactor 9A/24VAC Cat No LC1D09 B7 - ET Motor	2
XORE0140SMA	Schneider Make Overload Relay 7-10A Cat No LRD14 - Hoist Motor	1
XORE0110SMA	Schneider Make Overload Relay 0.63-1A Cat No LRD05 - ET Motor	1
XLSE0010SLZ	Indef Make Limit Switch Element 1NO+1NC, Normal Action, Rating 10A/500V Cat No. SL600N	2
XLSP0090SLZ	Indef Make Limit Switch in Oil Tight Housing, Normal Roller Lever 1NO+1NC, Normal Action, Rating 10A/500V Cat No.SL603N	2
XPBP0003HHL	Indef Make 5 Way Pendant (Emergency Stop,Hoist/ Low Single Speed, Right/Left Single Speed)	1

ELECTRICAL SPARE PARTS - 5T

PART CODE	DESCRIPTION	QTY
XCPP124000A	Enclosure for Baseplate XCPP124001A Size 560X260X150 mm	1
XCPP124001A	Baseplate for Enclosure XCPP124000A Size 490X220X2 mm	1
XCTP0001AVA	Avetronics/Prince Make Control Transformer Primary 415VAC $\pm 5\%$, $\pm 10\%$ & Secondary 24VAC,50VA	1
XMCP0060MDA	Schneider Make MCB 3P 20A Cat No A9N3P20D - Hoist Motor	1
XMCP0120MDA	Schneider Make MCB 3P 4A Cat No A9N3P04D - ET Motor	1
XACP0630SMA	Schneider Make Contactor 18A/24VAC Cat No LC1D18 B7 - Master, Hoist Motor	3
XACP0620SMA	Schneider Make Contactor 9A/24VAC Cat No LC1D09 B7 - ET Motor	2
XORE0140SMA	Schneider Make Overload Relay 7-10A Cat No LRD14 - Hoist Motor	1
XORP0350TMA	Schneider Make Overload Relay 1-1.6A Cat No LRD06 - ET Motor	1
XLSE0010SLZ	Indef Make Limit Switch Element 1NO+1NC, Normal Action, Rating 10A/500V Cat No. SL600N	2
XLSP0090SLZ	Indef Make Limit Switch in Oil Tight Housing, Normal Roller Lever 1NO+1NC, Normal Action, Rating 10A/500V Cat No.SL603N	2
XPBP0003HHL	Indef Make 5 Way Pendant (Emergency Stop,Hoist/ Low Single Speed, Right/Left Single Speed)	1

ELECTRICAL SPARE PARTS - 7.5T -10T

PART CODE	DESCRIPTION	QTY
XCPP124000A	Enclosure for Baseplate XCPP124001A Size 560X260X150 mm	1
XCPP124001A	Baseplate for Enclosure XCPP124000A Size 490X220X2 mm	1
XCTP0001AVA	Avetronics/Prince Make Control Transformer Primary 415VAC $\pm 5\%$, $\pm 10\%$ & Secondary 24VAC,50VA	1
XMCP0060MDA	Schneider Make MCB 3P 20A Cat No A9N3P20D - Hoist Motor	1
XMCP0040MDA	Schneider Make MCB 3P 10A Cat No A9N3P10D - ET Motor	1
XACP0630SMA	Schneider Make Contactor 18A/24VAC Cat No LC1D18 B7 - Master, Hoist Motor	3
XACP0620SMA	Schneider Make Contactor 9A/24VAC Cat No LC1D09 B7 - ET Motor	2
XORE0140SMA	Schneider Make Overload Relay 7-10A Cat No LRD14 - Hoist Motor	1
XORE0040SMA	Schneider Make Overload Relay 2.5-4A Cat No LRD08 - ET Motor	1

XLSE0010SLZ	Indef Make Limit Switch Element 1NO+1NC, Normal Action, Rating 10A/500V Cat No. SL600N	2
XLSP0090SLZ	Indef Make Limit Switch in Oil Tight Housing, Normal Roller Lever 1NO+1NC, Normal Action, Rating 10A/500V Cat No.SL603N	2
XPBP0003HHL	Indef Make 5 Way Pendant (Emergency Stop,Hoist/ Low Single Speed, Right/Left Single Speed)	1

ELECTRICAL SPARE PARTS - GT/PT

PART CODE	DESCRIPTION	QTY
XCPP123000A	Enclosure for Baseplate XCPP123001A Size 440X260X150 mm	1
XCPP123001A	Baseplate for Enclosure XCPP123000A Size 370X220X2 mm	1
XCTP0001AVA	Avetronics/Prince/Powerex Make Control Transformer Primary 415VAC $\pm 5\%$, $\pm 10\%$ & Secondary 24VAC,50VA	1
XMCP0060MDA	Schneider Make MCB 3P 20A Cat No A9N3P20D - Hoist Motor	1
XACP0630SMA	Schneider Make Contactor 18A/24VAC Cat No LC1D18 B7 - Master, Hoist Motor	3
XORE0140SMA	Schneider Make Overload Relay 7-10A Cat No LRD14 - Hoist Motor	1
XLSE0010SLZ	Indef Make Limit Switch Element 1NO+1NC, Normal Action, Rating 10A/500V Cat No. SL600N	2
XPBP0001HHL	Indef Make 3 Way Pendant (Emergency Stop,Hoist/Low Single Speed)	1

From harbouring a simple dream of becoming a provider of high-quality, truly Indian material handling solutions to becoming the national market leaders, **Bajaj Indef** has journeyed far and long. Right from our incorporation in 1962 till the present day, innovation, excellence, service and customer focus have been some of the key pillars that have carried us thus far and we only aim to take this legacy forward.

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