



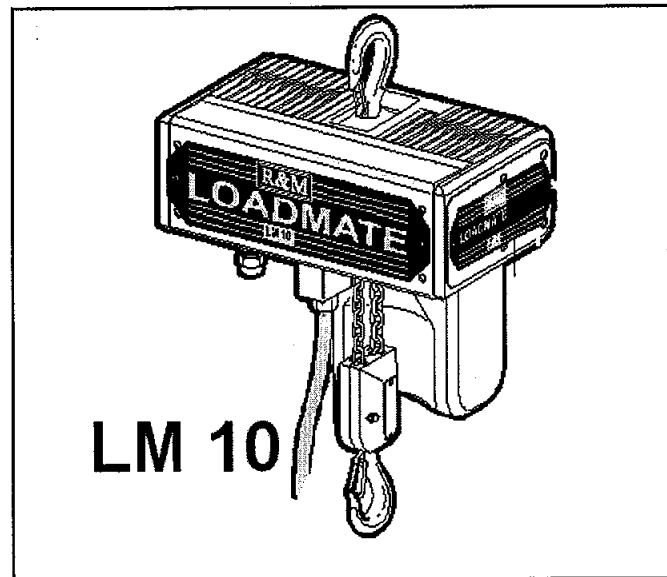
R&M Materials Handling, Inc  
Springfield, Ohio USA  
☎: 800 955-9967  
web: [www.rmhoist.com](http://www.rmhoist.com)

**LoadMate**® Chain Hoist  
LM10 Installation & Maintenance Manual

April 2005

# LoadMate®

## LM10 ELECTRIC CHAIN HOIST



### INSTALLATION & MAINTENANCE MANUAL

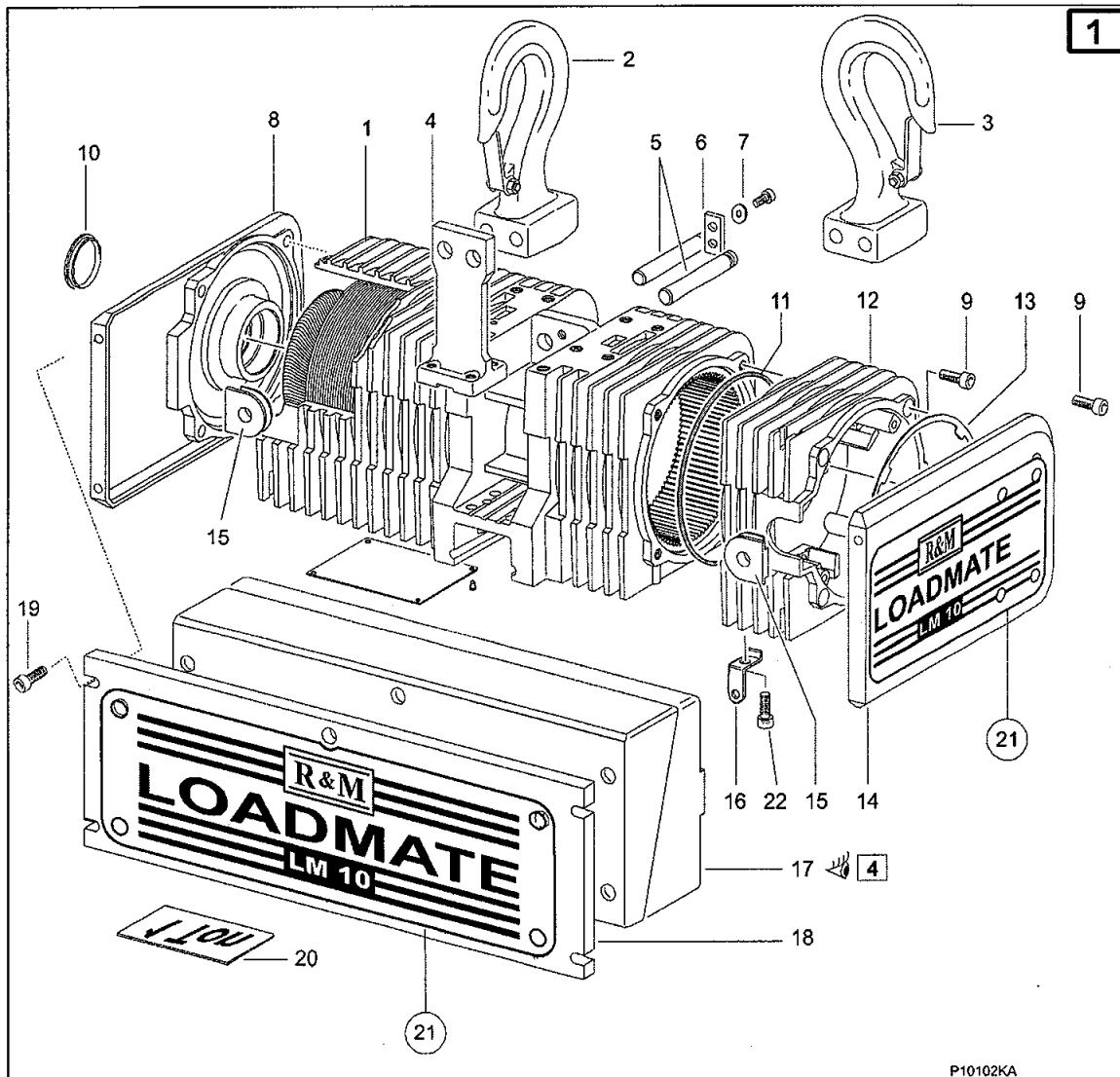
JOB No.: \_\_\_\_\_

SERIAL No.: \_\_\_\_\_

(RECORD HOIST SERIAL NUMBER FOR FUTURE  
REFERENCE)

## 7 PARTS ILLUSTRATIONS

### 7.1 Hoist Body





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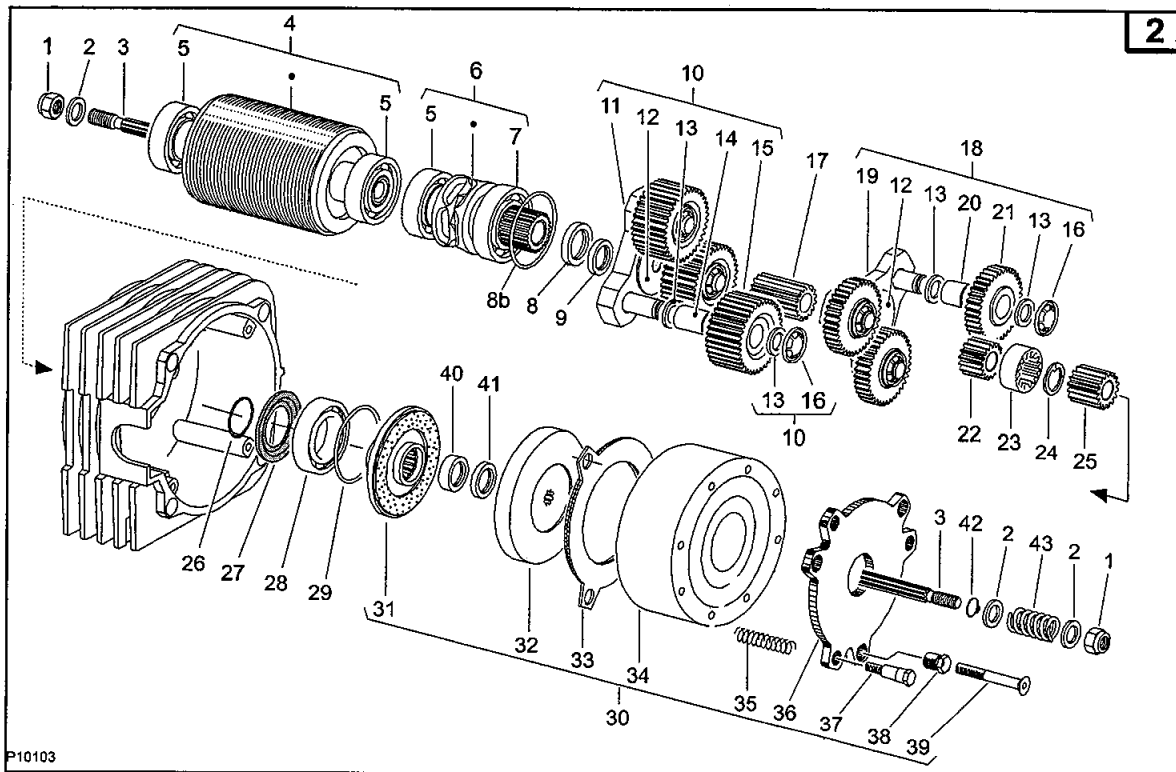
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ITEM	PART NUMBER	DESCRIPTION	QTY
-		HOIST BODY	1
1		STATOR	1
1a	2249961	COUPLING SET – PERPENDICULAR FOR PUSH / PARALLEL FOR TDU	1
1a	2249962	COUPLING SET – PARALLEL FOR PUSH / PERPENDICULAR FOR TDU	1
2	2249955	TOP HOOK SET (INCLUDES 5+6+7) – PERPENDICULAR	1
3	2249952	TOP HOOK SET (INCLUDES 5+6+7) – PARALLEL	1
4	2242011	TOP HOOK PLATE	1
5	-	TOP HOOK SUPPORT PIN	2
6	-	TOP HOOK KEEPER PLATE	1
7	-	SCREW	1
	2249904	MOTOR END CAP SET (8+9+10)	1
8	-	MOTOR END CAP	1
9	-	M6 SCREW	13
10	-	DUST CAP	1
11	2240013	O-RING	1
12	2240011	BRAKE HOUSING	1
13	2240013	SEAL	1
	2249903	BRAKE END CAP SET (14+9)	1
14	-	BRAKE END CAP	1
15	2218004	CABLE GLAND	2
16	2218000	PUSH BUTTON SUPPORT BRACKET SET (16+22)	1
17		ELECTRICAL ENCLOSURE	1
18	2243008	COUNTER WEIGHT	1
19		M6 SCREW	4
20	2213309008	CAPACITY STICKER – 500 kg	1
20	2213309009	CAPACITY STICKER – 1000 kg	1
20	2213309016	CAPACITY STICKER – 1500 kg	1
20	2213309010	CAPACITY STICKER – 2000 kg	1
20	2213309002	CAPACITY STICKER - ½ ton	1
60	2213309003	CAPACITY STICKER – 1 ton	1
20	2213309014	CAPACITY STICKER – 1.5 ton	1
20	2213309004	CAPACITY STICKER – 2 ton	1
21	2406879002	R&M BRANDING SET	1
22	-	M8 SCREW	1



## 7.2 Gear Mechanism With Motor Brake - Version A



Motor Brake Version A is REPLACED BY MOTOR BRAKE VERSION B. They are interchangeable.



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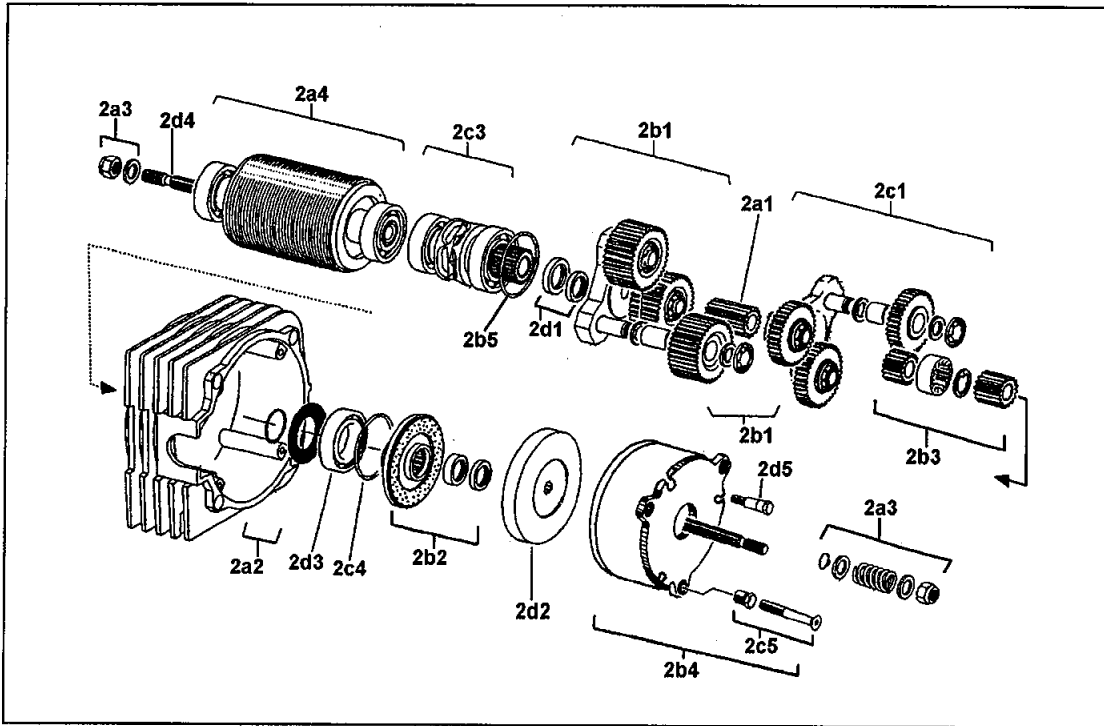
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**Gear Mechanism with Motor Brake - Version A**

ITEM	PART NUMBER	DESCRIPTION	QTY
1		TORQUE ADJUSTING NUT	2
2		WASHER	3
3	2241501	MOTOR SHAFT	1
4	2245025	ROTOR ASSEMBLY	1
5		BEARING	3
6	2249941	CHAIN SPROCKET ASSEMBLY (5+7+8+9)	1
7		BEARING	1
8		BUSHING	1
8b		RETAINING RING	1
9		SEAL	1
10	2249938	GEAR ASSEMBLY - 2 <sup>nd</sup> STEP - 16FPM	1
10	2249951	GEAR ASSEMBLY - 2 <sup>nd</sup> STEP - 32FPM	1
16		RETAINING RING	6
17	2240503	PINION - 2 <sup>nd</sup> STEP	1
18	2249937	GEAR ASSEMBLY - 1 <sup>st</sup> STEP	1
19		PLANET CARRIER	1
20		NEEDLE BEARING	3
21		PLANET GEAR - 1 <sup>st</sup> STEP	3
	2249981	COUPLING PINION SET (22+23+24+25)	1
22		PINION - 1 <sup>st</sup> STEP	1
23		COUPLING SLEEVE	1
24		SNAP RING	1
25		COUPLING	1
	2249972	METAL SEALING RING SET (26+27+28+29)	1
26		LOCK RING	1
28	8176214	BEARING	1
29		O-RING	1
30	2241075	BRAKE & LIMITER ASSY 190VDC / 380- 480VAC	1
30	2248000	BRAKE & LIMITER ASSY 100VDC / 208- 230VAC	1
30		BRAKE & LIMITER ASSY 240VDC / 575VAC	1
31	2241018	TORQUE LIMITER FRICTION DISC ASSY (31+40+41)	1
32	2241015	LIMITER & BRAKE DISC	1
33		FRICTION DISC	1
34	2241010	190VDC BRAKE COIL & FRICTION DISC 380- 480VAC	1
34	2241011	100VDC BRAEK COIL & FRICTION DISC 200- 230VAC	1
34	2241012	240VDC BRAKE COIL & FRICTION DISC 575VAC	1
35	2241030	BRAKE SPRING	1
36	2241070	ANCHOR DISC	1
37	2241027	SCREW	3
38		ADJUSTING NUT	3
39	2249951	SCREW M6x40 & NUT KIT (38+39)	3
40		LOCATING BUSHING	1
41		LIP SEAL	1
42		O-RING	1
43	2249940	TORQUE LIMITER SPRING SET (1+2+42+43)	1

### 7.3 Gear Mechanism with Motor Brake - Version B





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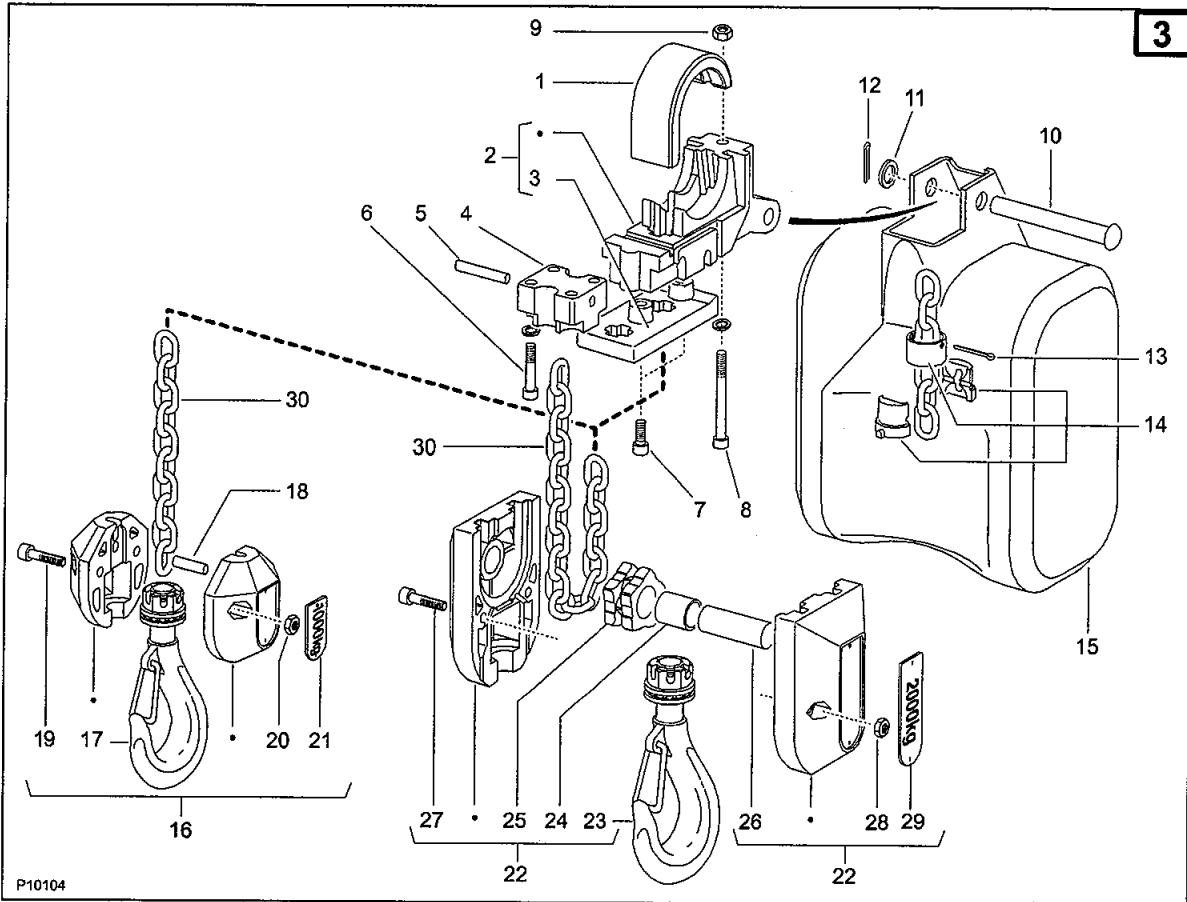
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Gear Mechanism with Motor Brake - Version B

ITEM	PART NUMBER	DESCRIPTION	QTY
2a1	2240503	PINION	1
2a2	2249970	SEAL / RING SET	1
2a3	2249940	LIMITER SPRING SET	1
2a4	2245001	ROTOR ASSEMBLY	1
2b1	2249938	GEAR ASSEMBLY, 2 <sup>nd</sup> STEP - 16 FPM	1
2b1	2240552	GEAR ASSEMBLY, 2 <sup>nd</sup> STEP 32 FPM	1
2b2	2241018	LIMITER FRICTION DISC SET	1
2b3	2249981	BRAKE COUPLING SET	1
2b4	2248001	COIL ASSEMBLY 190 VDC - 380 - 480VAC	1
2b4	2248000	COIL ASSEMBLY 100 VDC - 208-230VAC	1
2b4	2248003	COIL ASSEMBLY 240 VDC - 575VAC	1
2b5	8287225	RETAINING RING	1
2c1	2249937	GEAR ASSEMBLY 1 <sup>st</sup> STEP	1
2c3	2249941	SPROCKET ASSEMBLY	1
2c4	8386202	O-RING	1
2c5	2249951	BRAKE LIMITER SCREW SET	1
2d1	2249980	SPROCKET PARTS	1
2d2	2241015	CLUTCH DISC	1
2d3	8176214	BEARING	1
2d4	2241501	SHAFT	1
2d5	2241027	SCREW	3

### 7.4 Lifting Assembly







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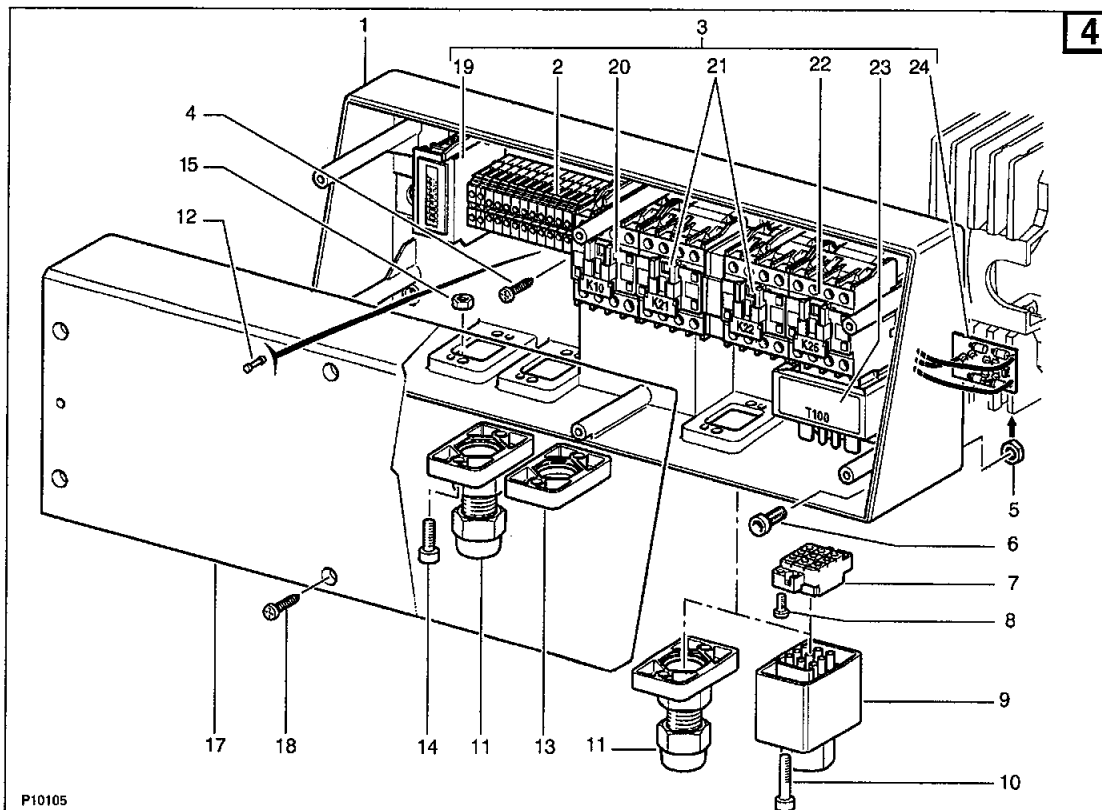
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ITEM	PART NUMBER	DESCRIPTION	QTY
	2242060	CHAIN GUIDE ASSEMBLY	
1	-	UPPER CHAIN GUIDE	1
2	-	LOWER CHAIN GUIDE SET (2+8+9)	1
	-	LOWER CHAIN GUIDE	1
3	2249936	RUBBER PLATE SET	1
		RUBBER PLATE	1
4	2243523	CHAIN ANCHOR SET	1
5		DOWEL	1
7		SCREW	1
8		SCREW	1
9		SCREW	1
10		SCREW	1
11		WASHER	1
12		SPLIT PIN	1
13		SPLIT PIN	1
14	2249942	SLACK FALL STOP ASSEMBLY	1
15	2249925	CHAIN CONTAINER & HARDWARE – 25 FT MAX. (10+11+12+15)	1
15	2249926	CHAIN CONTAINER & HARDWARE – 50 FT MAX. (10+11+12+15)	1
15	2249932	CHAIN CONTAINER & HARDWARE – 100 FT MAX. (10+11+12+15)	1
15	2249933	CHAIN CONTAINER & HARDWARE – 150 FT MAX. (10+11+12+15)	1
16	2249905	LOAD BLOCK ASSEMBLY – 1 FALL	1
17	2249926	HOOK ASSEMBLY – 1 FALL	1
	001515	SAFETY LATCH - 1 FALL	1
18		SHAFT	1
19		SCREW	2
20		SELF LOCKING NUT	2
21	2213333002	CAPACITY STICKER - 1/2 TON – 1 FALL	1
21	2213333004	CAPACITY STICKER - 1 TON – 1 FALL	1
21	2213333009	CAPACITY STICKER - 500 kg – 1 FALL	1
21	2213333011	CAPACITY STICKER – 1000 kg – 1 FALL	1
22	2249978	LOAD BLOCK ASSEMBLY – 2 FALL	1
23	2242021	HOOK ASSEMBLY – 2 FALL	1
23a	001513	SAFETY LATCH - 2 FALL	1
24		BUSHING – 2 FALL	1
25		IDLER SPROCKET ASSEMBLY (24+25+26)	1
26		SHAFT	1
27		SCREW	2
28		SELF LOCKING NUT	2
29	2213333004	CAPACITY STICKER – 1 TON - 2 FALL	2
29	2213333005	CAPACITY STICKER – 2 TON 2 FALL	2
29	2213333011	CAPACITY STICKER – 1000 kg – 2 FALL	2
29	2213333012	CAPACITY STICKER – 2000 kg – 2 FALL	2
30a	2243500	LOAD CHAIN – ZINC PLATED	N
30b	2243501	LOAD CHAIN – BLACK	



30c	2243502	LOAD CHAIN – STAINLESS STEEL	
	2241045	CHAIN INSERTION TOOL	1

## 7.5 Controls





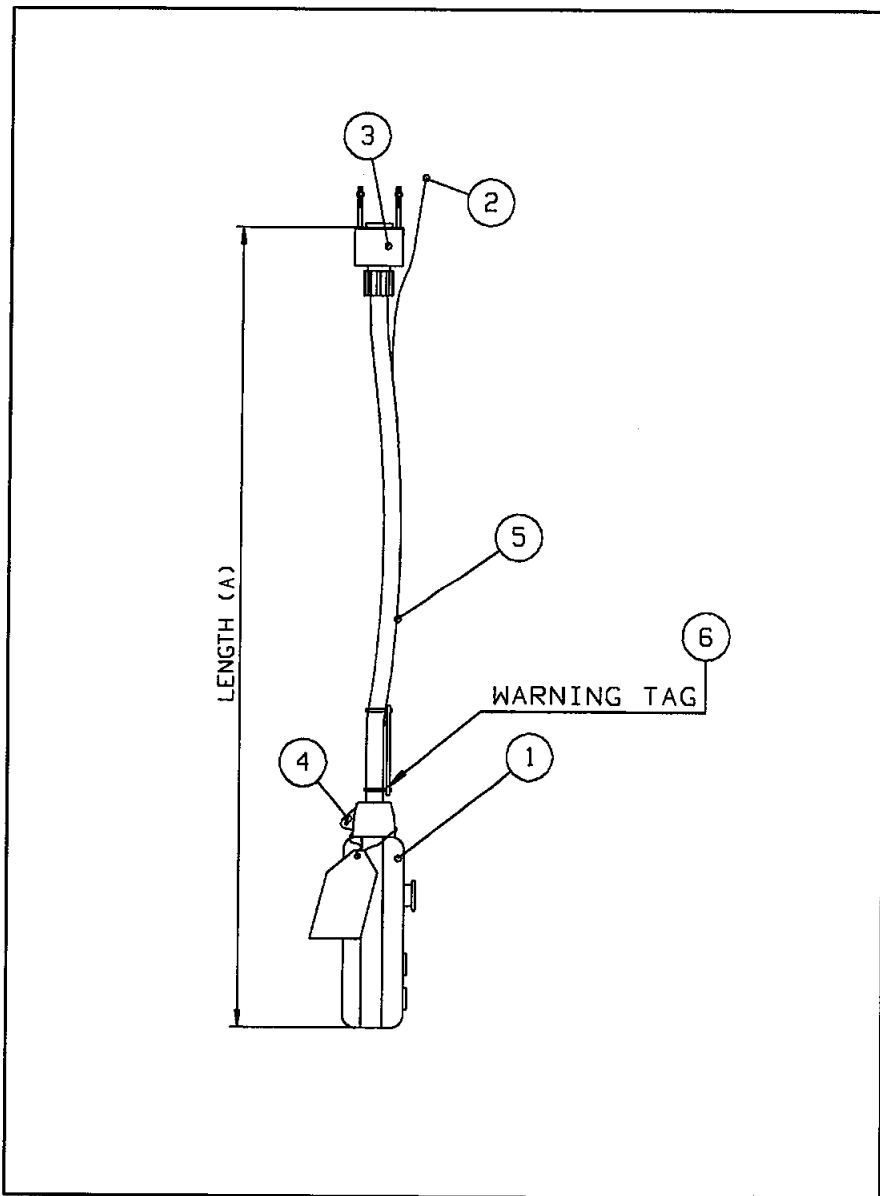
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ITEM	PART NUMBER	DESCRIPTION	QTY
1	2249965	CONTROL BOX BASE	1
2		TERMINIAL BOARD	1
3a	2243017	CONTROL PANEL ASSEMBLY – TWO SPEED – 460V / 115V / 60HZ	1
3b	2243016	CONTROL PANEL ASSEMBLY – TWO SPEED - 575V / 115V / 60Hz	1
3c	2243018	CONTROL PANEL ASSEMBLY TWO SPEED - 230V/115V/60Hz	1
3d	-	CONTROL PANEL ASSEMBLY – SINGLE SPEED – 230 / 460V / 115V	1
4		SCREW	9
5		STOP NUT	4
6		7.5.1.1 SCREW	4
7	7285039	RECEPTACLE WITH WIRES - PUSHBUTTON	1
8		PLASTIC SCREW	2
	2249945	PLUG SET – PUSHBUTTON	1
	2249946	PLUG SET – TROLLEY	1
	2249982	PLUG SET – POWER SUPPLY	1
9		PLUG	1
10		SCREW	2
11	2249947	POWER CABLE GLAND	1
12	2249979	FUSE (SET OF SET)	1
13	2219814	COVER PLATE	1
14		SCREW	4
15		NUT	4
17	2249965	CONTROL BOX COVER SET	1
18		PLASTIC SCREW	6
19	2213028	HOUR COUNTER	1
20	-	K10 MAINLINE CONTACTOR ( 208 - 575V / 115V )	1
21a	-	K21 CONTACTOR ( 208 - 575V / 115V )	2
21b	-	K22 CONTACTOR ( 208 - 575V / 115V )	1
22	-	K25 CONTACTOR ( 208 - 575V / 115V )	1
23a	7983026	CONTROL TRANSFORMER ( 208 / 230 / 460V / 115V )	1
23b	7983027	CONTROL TRANSFORMER ( 575V / 115V )	1
23c	7983028	TRANSFORMER	1
23d	7983029	TRANSFORMER	1
23e	7983030	TRANSFORMER	1
24a	2243060	RECTIFIER – 4 WIRES – 575V	1
24b	2243061	RECTIFIER – 5 WIRES – RECONNECTABLE – 208 / 230 / 460	1
	2218000	PENDANT SUSPENSION SET	1

### 7.6 Push Button Assembly – Vertical Pairs of Buttons





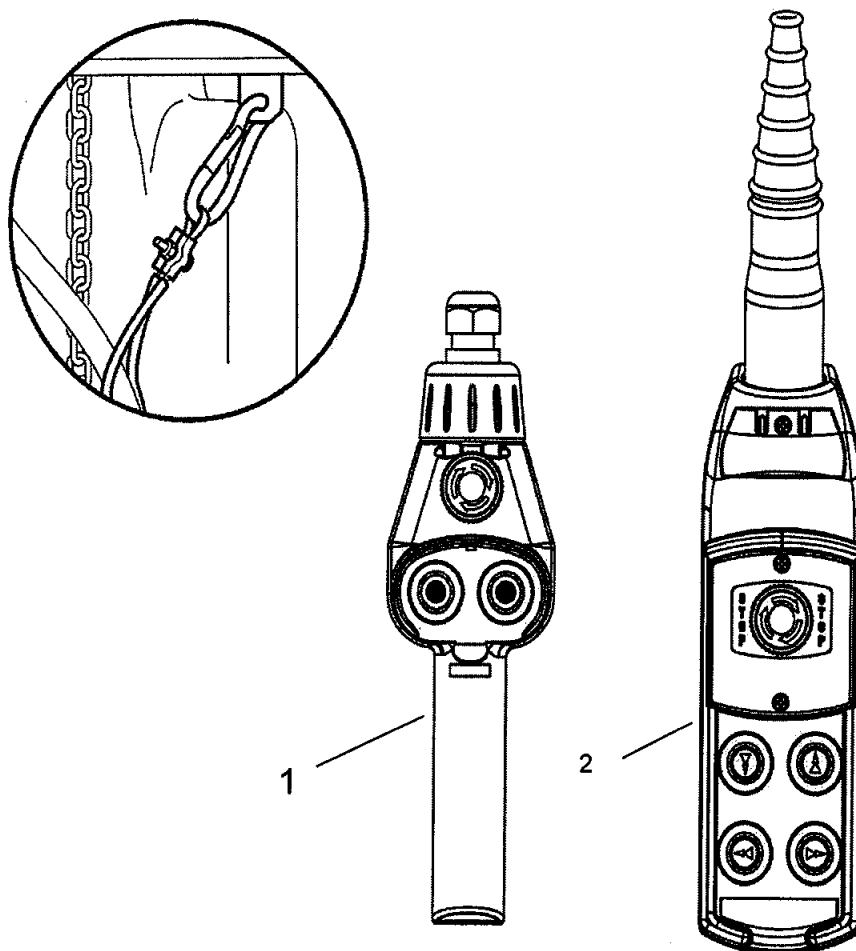
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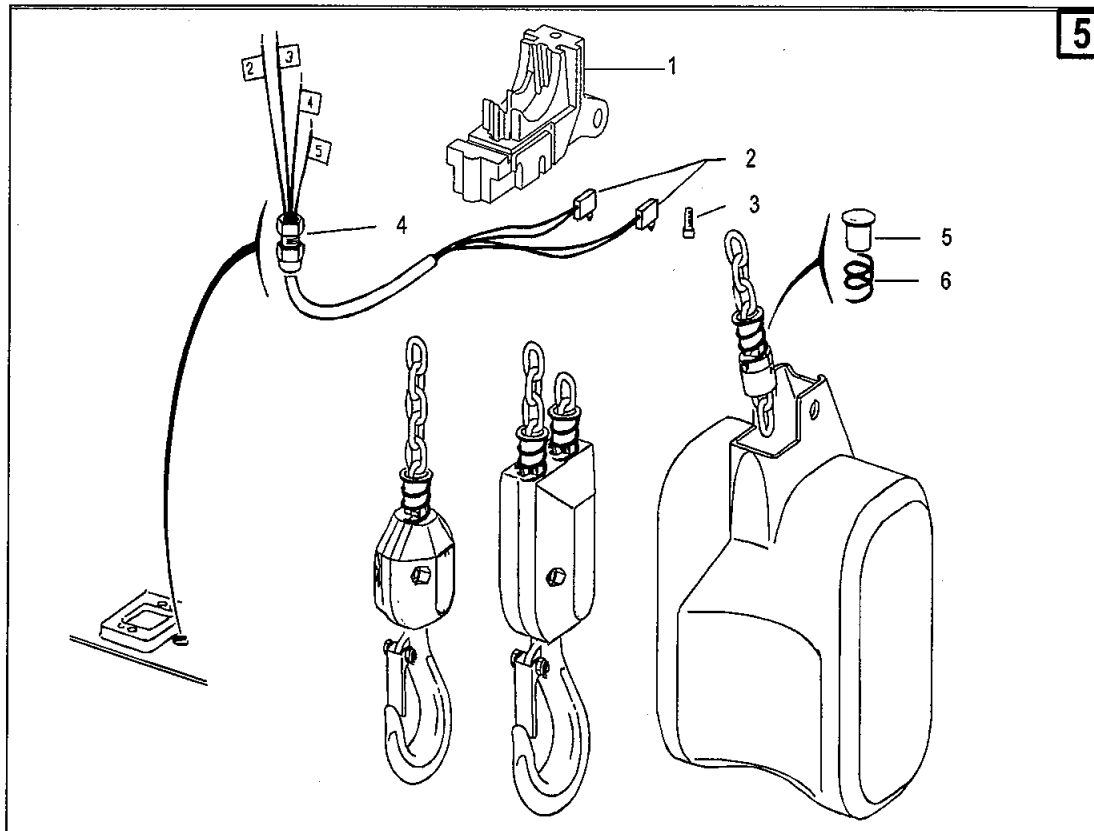
ITEM	PART NUMBER	DESCRIPTION	QTY
-	2309673010	P/B ASSEMBLY – 10 FT, E-STOP, SS HOIST	1
-	2309673015	P/B ASSEMBLY – 15 FT, E-STOP, SS HOIST	1
-	2309673020	P/B ASSEMBLY – 20 FT, E-STOP, SS HOIST	1
-	2309674010	P/B ASSEMBLY – 10 FT, E-STOP, TS HOIST	1
-	2309674015	P/B ASSEMBLY – 15 FT, E-STOP, TS HOIST	1
-	2309674020	P/B ASSEMBLY – 20 FT, E- STOP, TS HOIST	1
-	2309675010	P/B ASSEMBLY – 10 FT, E-STOP, SS HOIST, TS TROLLEY	1
-	2309675015	P/B ASSEMBLY – 15 FT, E-STOP, SS HOIST, TS TROLLEY	1
-	2309675020	P/B ASSEMBLY – 20 FT, E-STOP, SS HOIST, TS TROLLEY	1
-	2309676010	P/B ASSEMBLY – 10 FT, E-STOP, TS HOIST, TS TROLLEY	1
-	2309676015	P/B ASSEMBLY – 15 FT, E-STOP, TS HOIST, TS TROLLEY	1
-	2309676020	P/B ASSEMBLY – 20 FT, E-STOP, TS HOIST, TS TROLLEY	1
1a	2212932011	P/B ENCLOSURE ASSEMBLY: E-STOP, SS HOIST	1
1b	2212932012	P/B ENCLOSURE ASSEMBLY: E-STOP, TS HOIST	1
1c	2212932032	P/B ENCLOSURE ASSEMBLY: E-STOP, SS HOIST, TS TROLLEY	1
1c	2212932033	P/B ENCLOSURE ASSEMBLY: E-STOP, TS HOIST, TS TROLLEY	1
2	2218000	UPPER SUSPENSION KIT	1
3	7285035	PLUG KIT – P/B ASSEMBLY	1
4	-	SUSPENSION UNIT – INCLUDED WITH ITEM 3	1
5	52292266	P/B ELECTRICAL CABLE – 16 GAUGE / 12 CONDUCTOR RPC	1
6	2309414001	R&M OPERATOR'S WARNING TAG - ENGLISH	1

### 7.7 Push Button Assembly – Horizontal Pairs of Buttons



ITEM	PART NUMBER	DESCRIPTION	QTY
1	52301832	PISTOL GRIP P/B CONTROL ASSEMBLY – TWO SPEED	1
-	2309414001	R&M OPERATOR'S WARNING TAG - ENGLISH	1

## 7.8 Upper & Lower Limit Switch



ITEM	PART NUMBER	DESCRIPTION	QTY
	2242061	LIMIT SWITCH ASSEMBLY (1+2+3+4+5+6)	1
1		SWITCH PLATE	1
2	7291040	MICRO SWITCH	2
3		M8 x 25 SCREW	1
4		CABLE GLAND	1
--	2241068	SPRING & SPRING PLATE SET (5+6)	N