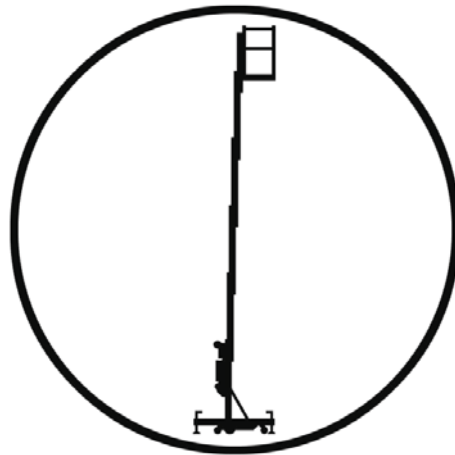


ULE-Series

(Standard/Industry/RT Models)

PARTS MANUAL

First Edition



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ULE-Series

This parts manual covers the Snorkel ULE-Series models.

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Section One

Exterior & Decals

Figure 1-1

Exterior & Decals, All Standard Models without Tilt-back Frame

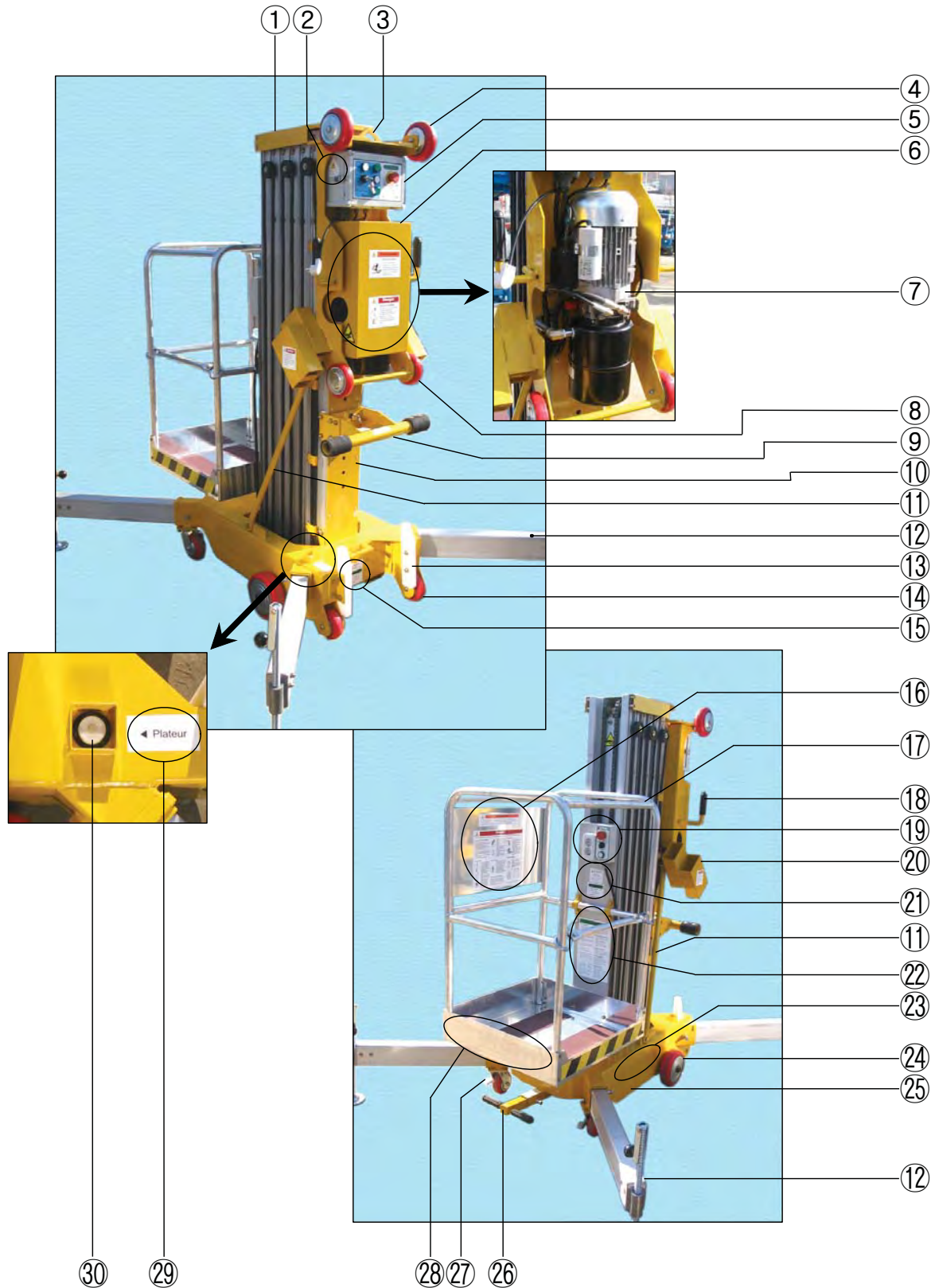


Figure 1-1

Index	Part No.	Description	Quantity This Figure
1	M1053	Roof - Mast, ULE15	1
	M1054	Roof - Mast, ULE20	1
	M1055	Roof - Mast, ULE25	1
	M1056	Roof - Mast, ULE30/40	1
	M1057	Roof - Mast, ULE35	1
	M1080	Roof - Mast, ULE38	1
	B2002	Screw - HHC, M6x35	4
	B2050	Washer - Flat, M6x18x1.2T	8
	M1058	Spacer - Roof	4
	M1059	Nut - Square, M6x22.5x13x4T	4
2	A1025	Label - Power Source	1
3	—	Lifting Ring	1
4	B1046	Upper Caster, 6 inch	1
5	—	Ground Controls (refer to Figure 3-2, page 3-6~9)	1
6	P1022	Cover - Power Pack, with Decals	1
	A1030	Decal - Danger, Overturning Hazard	1
	A1033	Decal - Warning, Impact Hazard	1
	A1016	Label - High Pressure Fluid	1
7	—	Power Pack (refer to Figure 3-1, page 3-2~5)	1
8	B1044	Middle Caster, 5 inch	2
9	B1028	Loading Pivot Assembly (refer to Figure 4-3, page 4-6,7)	1
10	M1015	Plate - Number 1 Column, ULE15~ULE38	1
	A1041	Name Plate	1
11	B1022	Mast Brace - 655mm, ULE40	4
	B1023	Mast Brace - 805mm, ULE40	2
	B1024	Mast Brace - 917mm, ULE35	2
	B1025	Mast Brace - 943mm, ULE15	2
	B1026	Mast Brace - 967mm, ULE20~ULE30	2
	B2074	Mast Brace - 995mm, ULE38	2
	B1027	Mast Brace - 1,020mm, ULE35/38, IULE15/20	2
12	—	Outrigger Assembly (refer to Figure 4-4, page 4-8,9)	4
13	B1011	Block - Glide	2

Figure 1-1

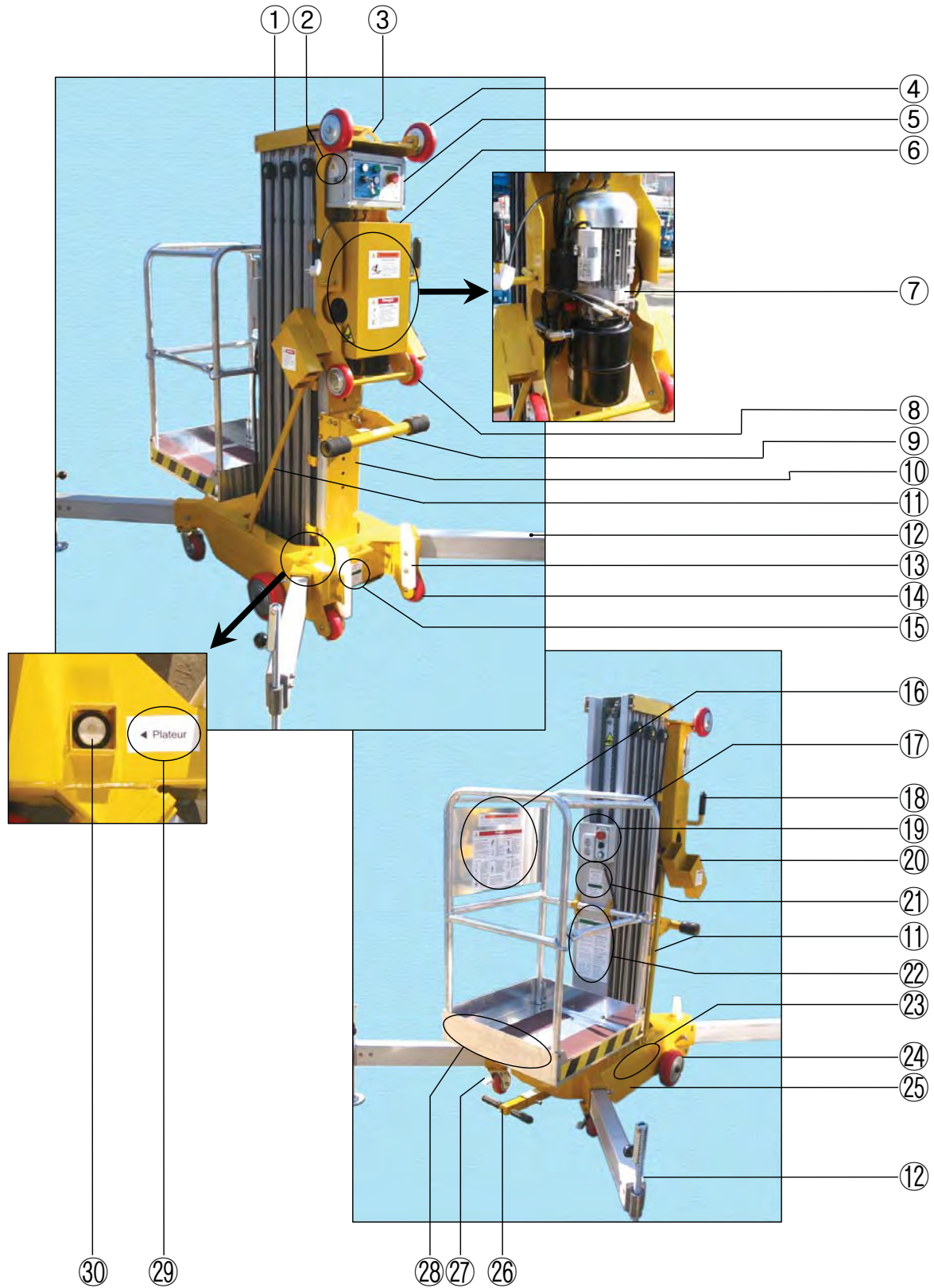


Figure 1-1

Index	Part No.	Description	Quantity This Figure
14	B1045	Lower Caster, 5 inch	2
15	A1022	Label - Manual Lowering Valve	1
	A1038	Decal - Notice, Manual Lowering Valve	1
16	A1034	Decal - Warning, Observe the Safety Instruction	1
	A1029	Decal - Danger, Collection	1
17	—	Platform Assembly (refer to Figure 6-1, page 6-2,3)	1
	A1013	Label - Helmet	1
	A1014	Label - No Access	1
	A1015	Label - Falling	1
	A1017	Label - Chain	1
	A1018	Label - Flash	1
	A1027	Label - "CE" Mark	1
	A1045	Label - Railroad	2
18	—	Steering Handle with Grip	2
	B1005	Grip - Rubber	4
19	E1020	Platform Controls (refer to Figure 6-2, page 6-4,5)	1
	—	Outlet Assembly (refer to Figure 6-2, page 6-4,5)	1
20	B1033	Weldment - Motor Mount (refer to Figure 4-2, page 4-4,5)	1
	A1031	Decal - Danger, No Modification	1
	A1032	Decal - Danger, Do not Lift the Platform	1
21	A1035	Decal - Caution, Component Damage	1
	A1037	Decal - Notice, Maximum Load	1
22	A1039	Decal - Notice, Operation Instruction	1
23	A1006	Label - ULE 15	2
	A1007	Label - ULE 20	2
	A1008	Label - ULE 25	2
	A1009	Label - ULE 30	2
	A1010	Label - ULE 35	2
	A1011	Label - ULE 38	2
	A1012	Label - ULE 40	2

Figure 1-1

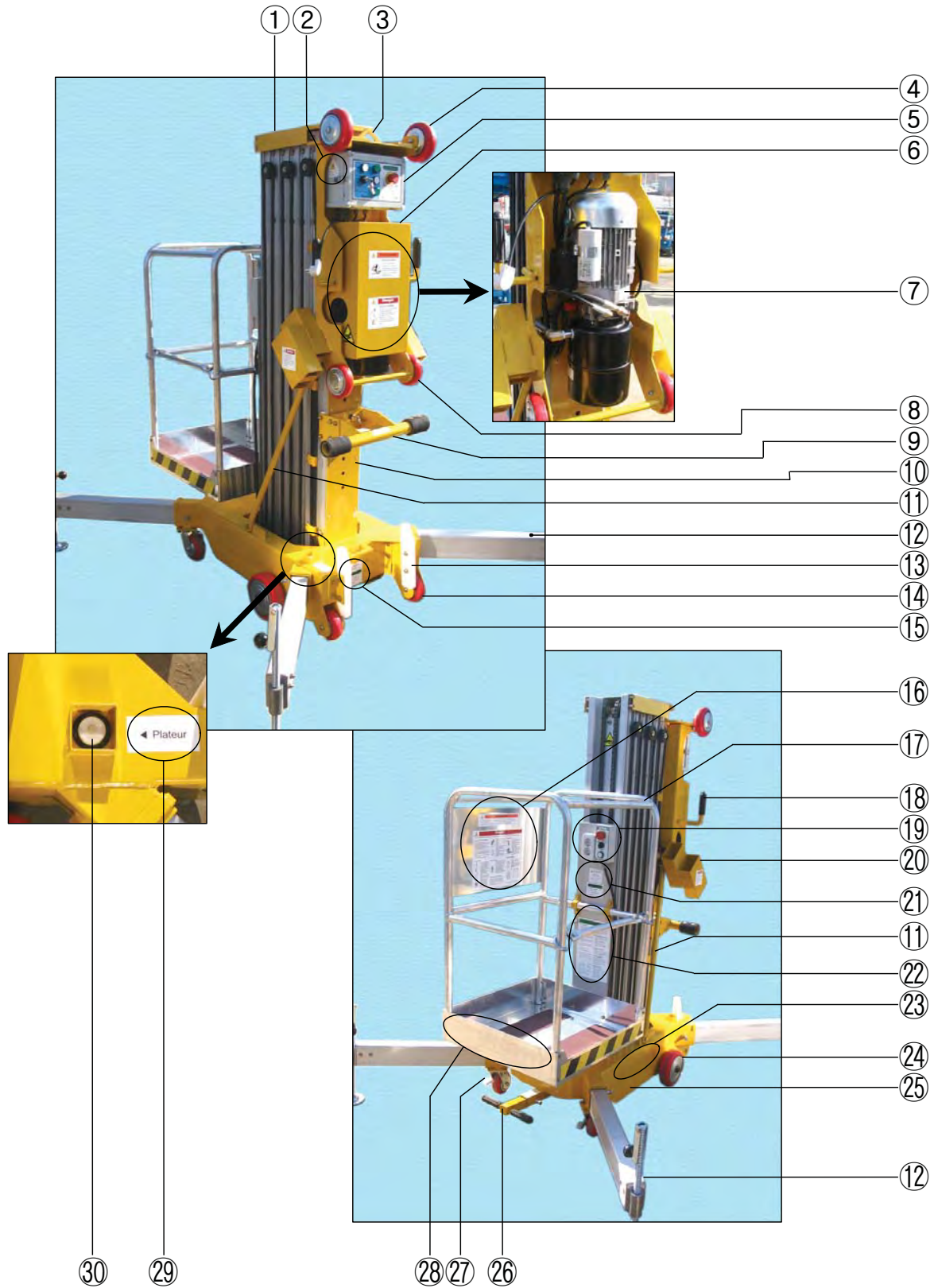


Figure 1-1

Index	Part No.	Description	Quantity This Figure
24	B1047	Caster, 8 inch	..... 2
25	—	Base Assembly (refer to Figure 4-1, page 4-2,3)	..... 1
	A1036	Decal - Caution, Impact Hazard	..... 1
26	B1004	T-Handle Assembly	..... 1
	A1023	Label - T-Handle	..... 1
27	B1048	Caster - Swivel with Brake, 6 inch	..... 2
28	A1026	Label - UpRight	..... 1
29	A1024	Label - Leveller	..... 1
30	B1010	Level - Bubble	..... 1

Figure 1-2

Exterior & Decals, All Models with Tilt-back Frame

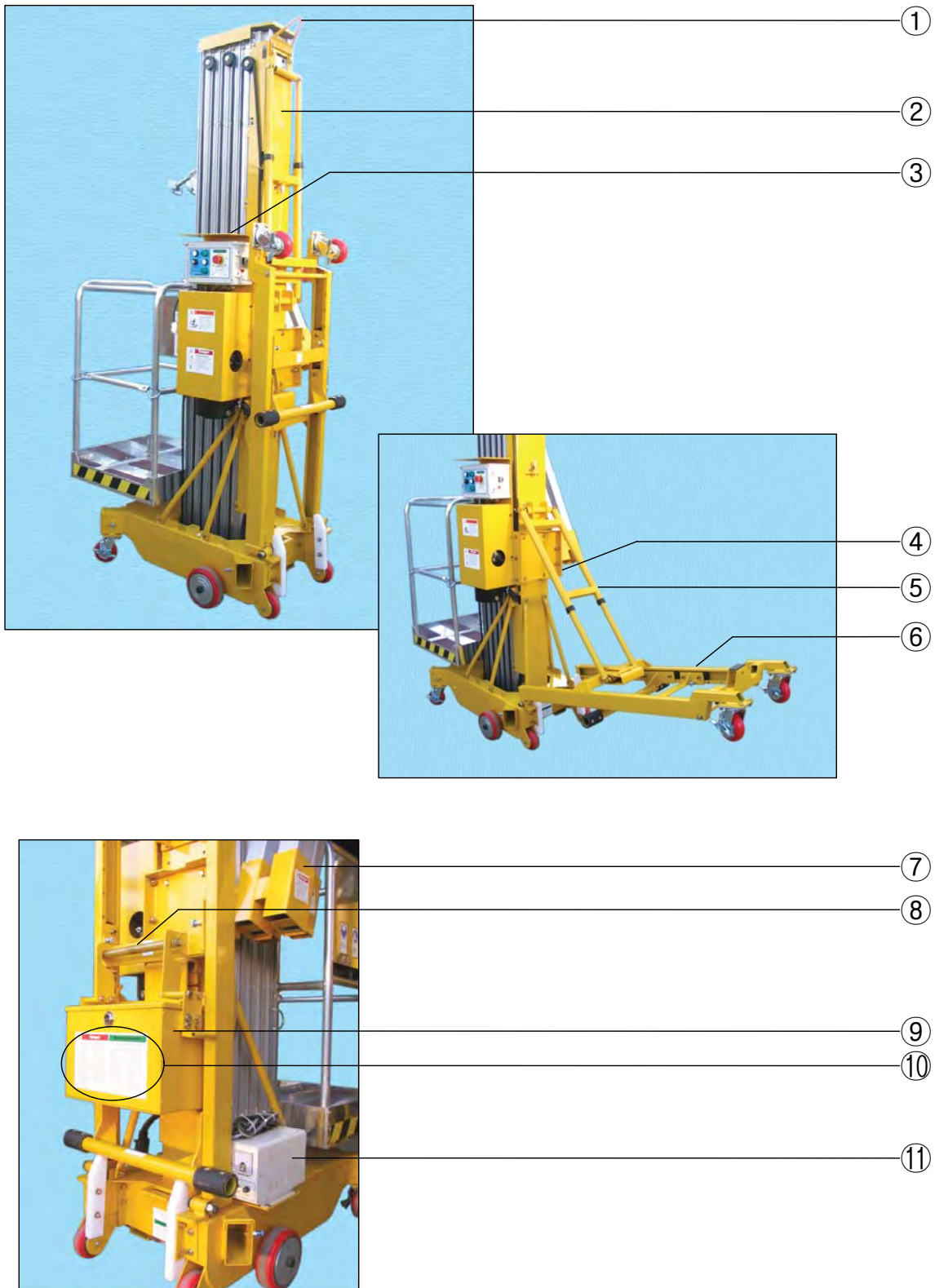


Figure 1-2

Index	Part No.	Description	Quantity	This Figure
1	B1055	Lifting Ring - ULE40	.....	1
2	M1016	Plate - Number 1 Column, ULE40	.....	1
3	B1043	Plate - Control Box Mount, ULE40	.....	1
4	B1057	Plate - Mounting Bracket	.....	1
	A1040	Decal - Notice, Tilt-back Instruction	.....	1
5	B1039	Shock Absorber Assembly - ULE40	.....	1
6	B1038	Tilt-back Frame Weldment - ULE40	.....	1
7	B1058	Outrigger Storage Bracket with Decal - ULE40	.....	1
8	B1059	Pivot Stop Assembly - ULE40 DC Models	.....	1
	B1035	Pivot Stop Assembly - ULE40, AC Models	.....	1
9	—	Battery Pack Assembly (refer to Figure 3-4, page 3-12,13)	.....	1
10	A1043	Decal - Danger&Notice, Battery Pack	.....	1
11	—	Battery Charger (refer to Figure 3-4, page 3-12,13)	.....	1

Figure 1-3

Exterior & Decals, All Industry Type Models

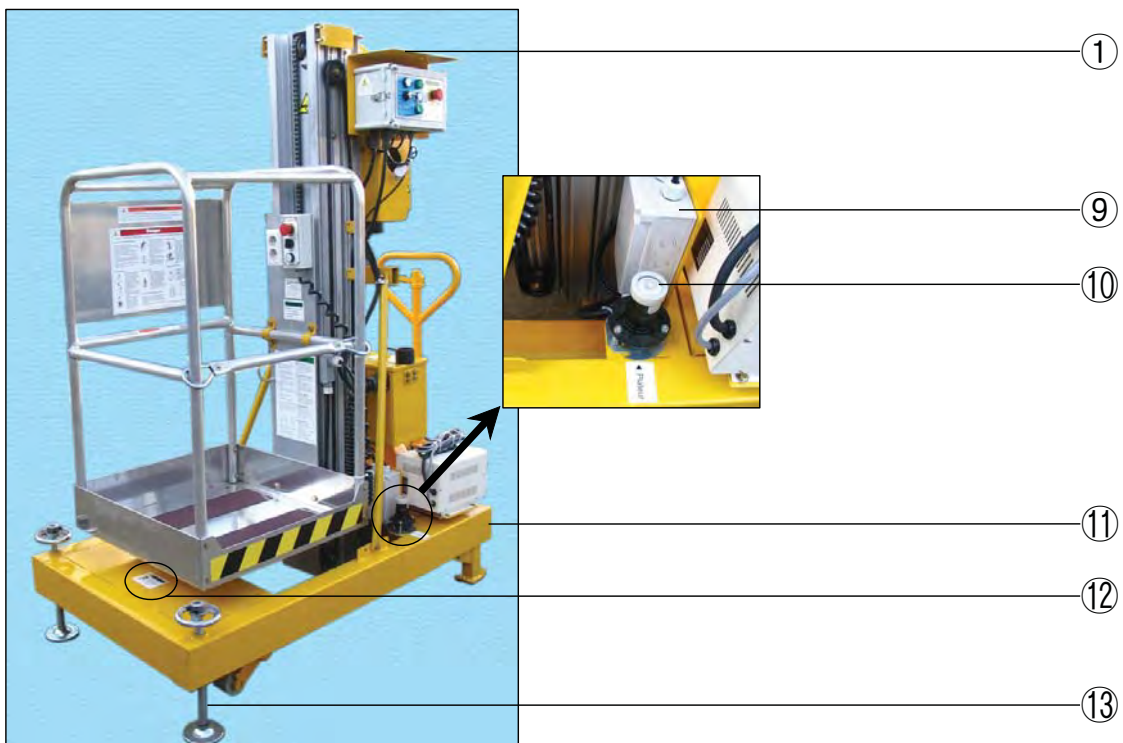
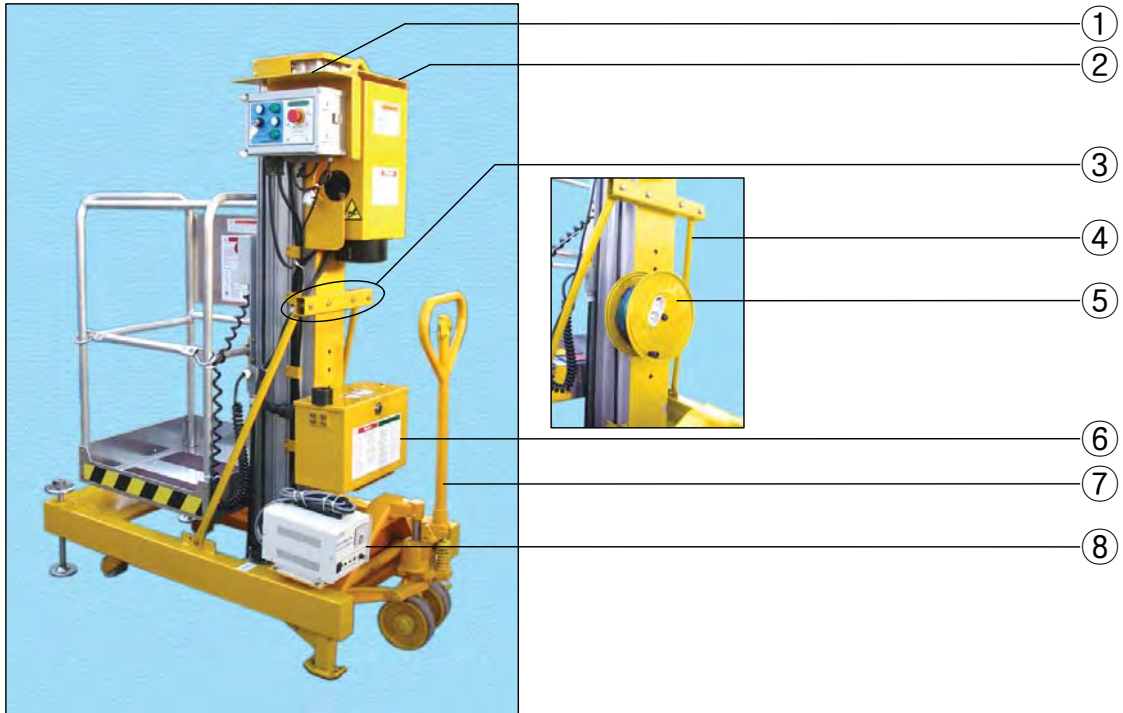


Figure 1-3

Index	Part No.	Description	Quantity This Figure
1	B1056	Plate - Control Box Mount, IULE15/20	..... 1
2	B1060	Weldment - Motor Mount, IULE15/20	..... 1
3	B1061	Tube - Mounting Bracket, IULE15/20	..... 1
	B2011	Screw - HHC, M10x65	..... 4
	B2054	Washer - Flat, M10x21x2T(KS)	..... 8
	B1084	Spacer - Mounting Bracket Tube, IULE15/20	..... 2
	B2044	Nut - Nylock, M10x14	..... 4
4	B1027	Mast Brace - 1,020mm, ULE35, IULE15/20	..... 2
5	E1099	Real Cable - IULE15/20 AC Models	..... 1
6	E1039	Battery Box Assembly - IULE15/20	..... 1
7	B1062	Hand Pallet with Steering Handle	..... 1
8	—	Battery Charger (refer to Figure 3-4, page 3-12,13)	..... 1
9	E1079	Box - Terminal, IULE15/20	..... 1
10	E1078	Level Sensor	..... 1
11	B1054	Base Assembly - All Industry Type Models with Decals	..... 1
12	A1036	Decal - Caution, Impact Hazard	..... 1
13	B1063	Outrigger Assembly - IULE15/20	..... 2
	B1064	Handle - Leveling, IULE15/20	..... 2

Figure 1-4

Exterior & Decals, All Rough Terrain Type Models

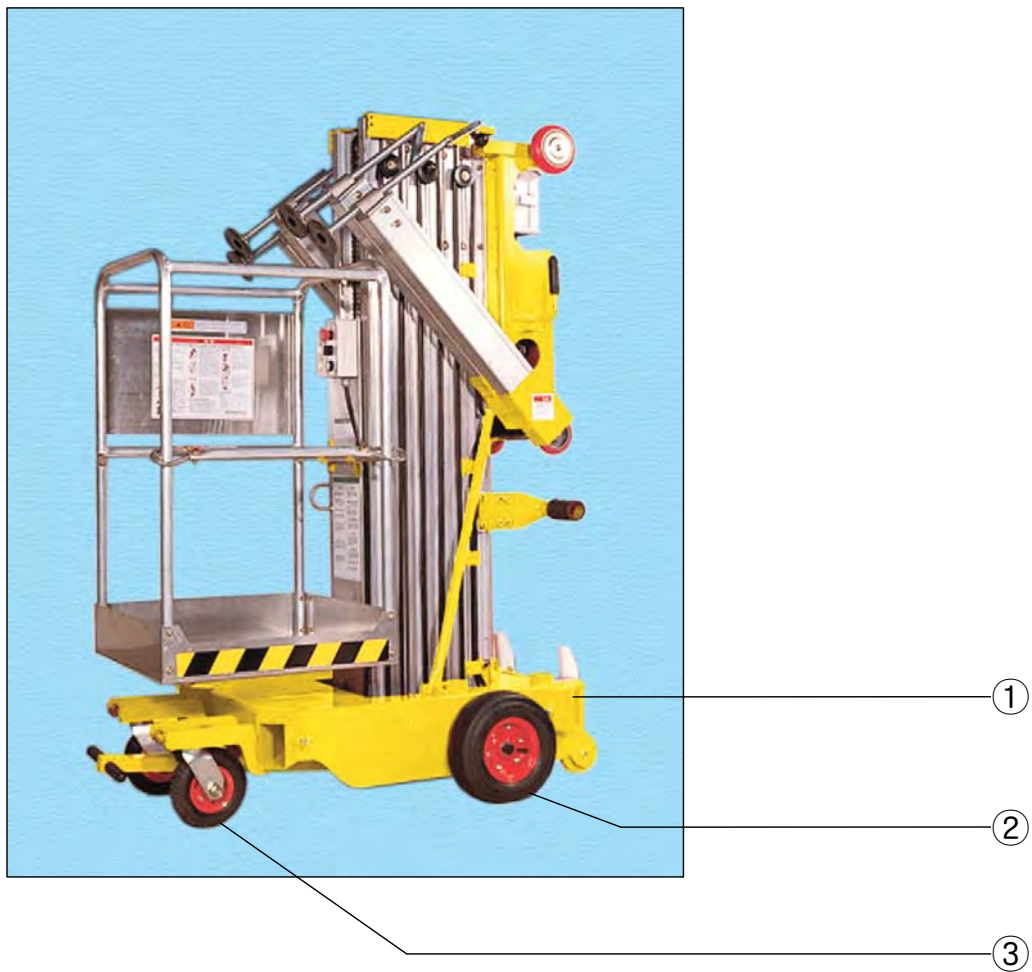


Figure 1-4

Index	Part No.	Description	Quantity This Figure
1	B1003	Base Assembly - All RT Models with Decals	..... 1
2	B1051	Caster - Pneumatic, RT, 12 inch	..... 2
	B2018	Screw - HHC, M 20x140(B)	..... 2
	B2059	Washer - Flat, M20(3/4)	..... 6
	B2049	Nut - Nylock, M20	..... 4
3	B1052	Caster - Swivel, RT, 8 inch	..... 2
	B2017	Screw - HHC, M20x120(W)	..... 8
	B2061	Washer - Spring, M20	..... 16
	B2040	Nut - Nylock, M20	..... 8

Section Two

Hydraulic Parts

Figure 2-1

Hydraulic Cylinder Assembly, All Models

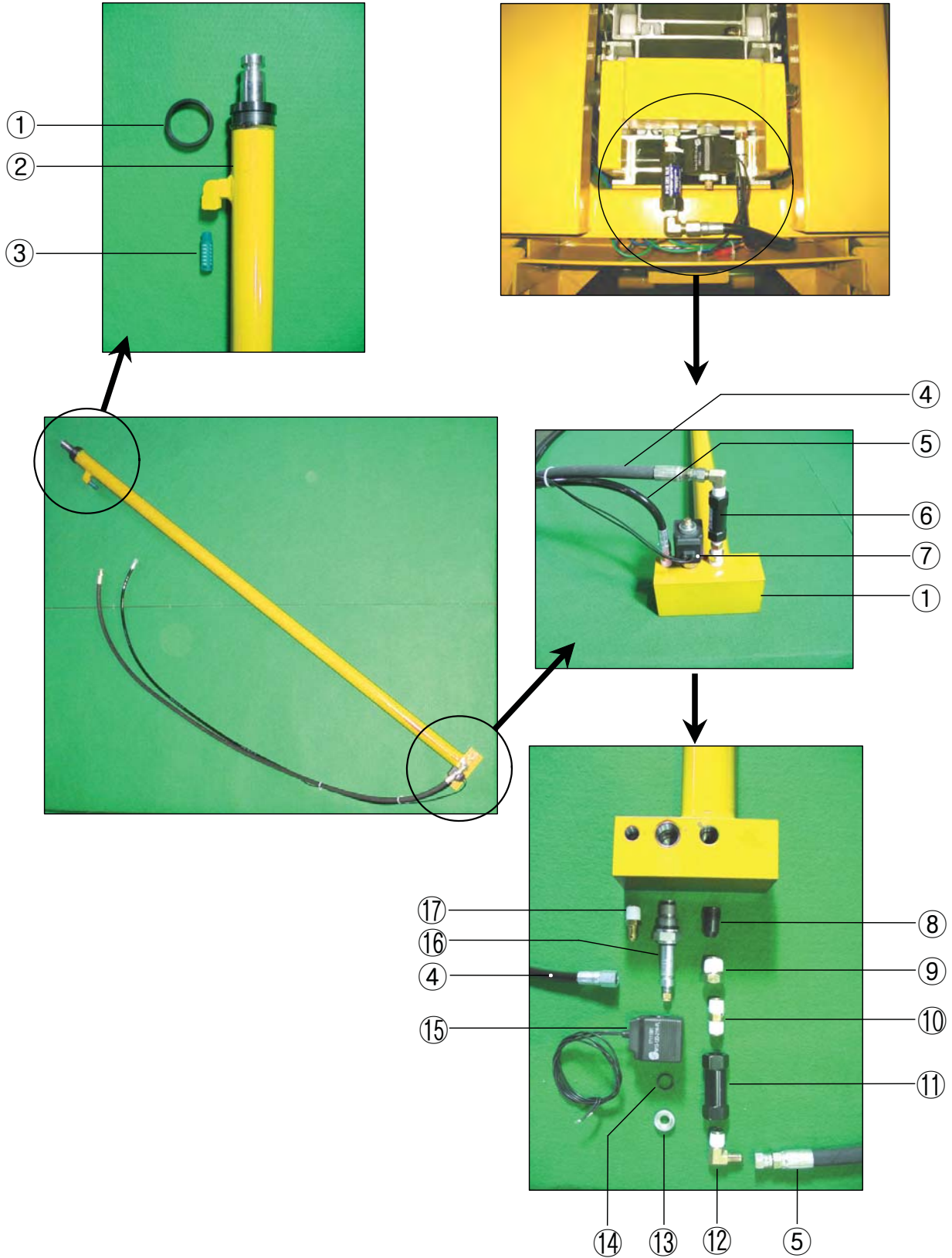


Figure 2-1

Index	Part No.	Description	Quantity	This Figure
1	H1016	O-ring - Cylinder	.....	1
2	H1001	Hydraulic Cylinder - Ø40x1400ST	.....	1
	H1002	Hydraulic Cylinder - Ø40x1900ST	.....	1
3	H1023	Silencer - Cylinder	.....	1
4	H1004	Hydraulic Hose Assembly - (3/16)"x1,650mm (ULE15~ULE30)	.....	1
	H1009	Hydraulic Hose Assembly - (3/16)"x2Wx1,650mm (ULE35~40)	.....	1
	H1005	Hydraulic Hose Assembly - (3/16)"x2,000mm (IULE Models)	.....	1
5	H1004	Hydraulic Hose Assembly - (3/16)"x1,650mm (All ULE Models)	.....	1
	H1005	Hydraulic Hose Assembly - (3/16)"x2,000mm (IULE Models)	.....	1
6	H1012	Check Valve Assembly	.....	1
7	H1011	Down Valve Assembly	.....	1
8	H1013	Valve - Flow Control	.....	1
9	H1021	Fitting - Connector, (1/4)"x(3/8)"	.....	1
10	H1019	Fitting - Connector, (1/4)"x(1/4)"	.....	1
11	H1014	Valve - Check	.....	1
12	H1022	Fitting - 90° Elbow, (1/4)"x(1/8)"	.....	1
13	H1015	Nut - Solenoid Valve	.....	1
14	H1017	O-ring - Down Valve	.....	1
15	H1018	Coil - DC 12V	.....	1
16	H1024	Valve - Manual Lowering	.....	1
17	H1020	Fitting - Connector, (1/4)"x(1/8)"	.....	1

Figure 2-2
Hydraulic Cylinder Assembly, All Models



Figure 2-2

Index	Part No.	Description	Quantity This Figure
-	H1035	Rod Cover Assembly - Cylinder	..... 1
-	H1036	Piston Assembly - Cylinder	..... 1
18	H1037	Rod Cover - Cylinder	..... 1
19	H1038	Wear Ring – Rod Cover	..... 1
20	H1039	Dust Seal – Rod Cover	..... 1
21	H1040	Piston - Cylinder	..... 1
22	H1041	O-Ring - Piston	..... 1
23	H1042	Wear ring - Piston	..... 1
24	H1043	O-Ring(BP22) - Piston	..... 1
25	H1044	U-Packing - Piston	..... 1
26	H1045	Cylinder Rod	..... 1

Figure 2-2
Hydraulic Circuit (New Version), All AC Models

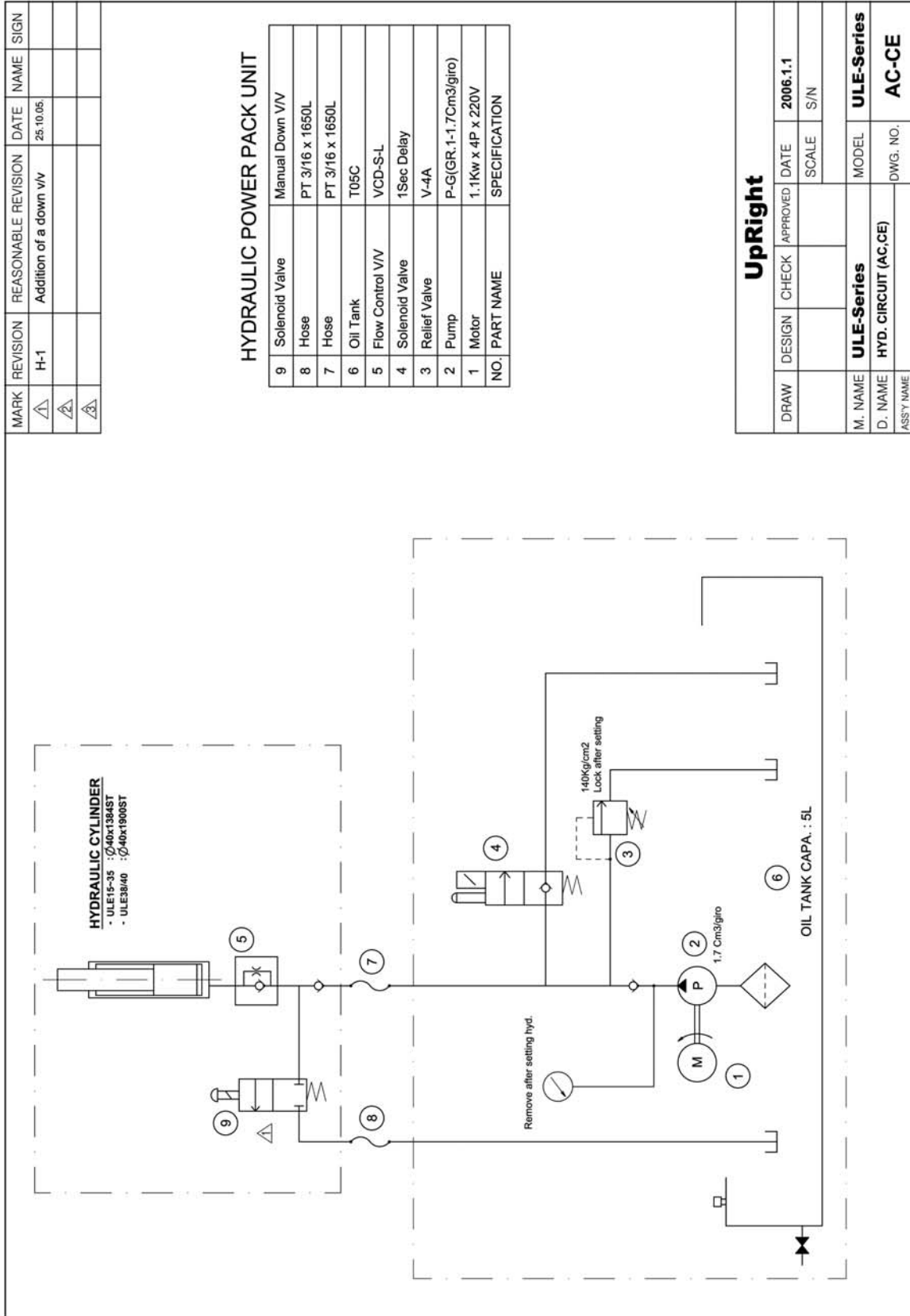


Figure 2-3
Hydraulic Circuit (New Version), All DC Models

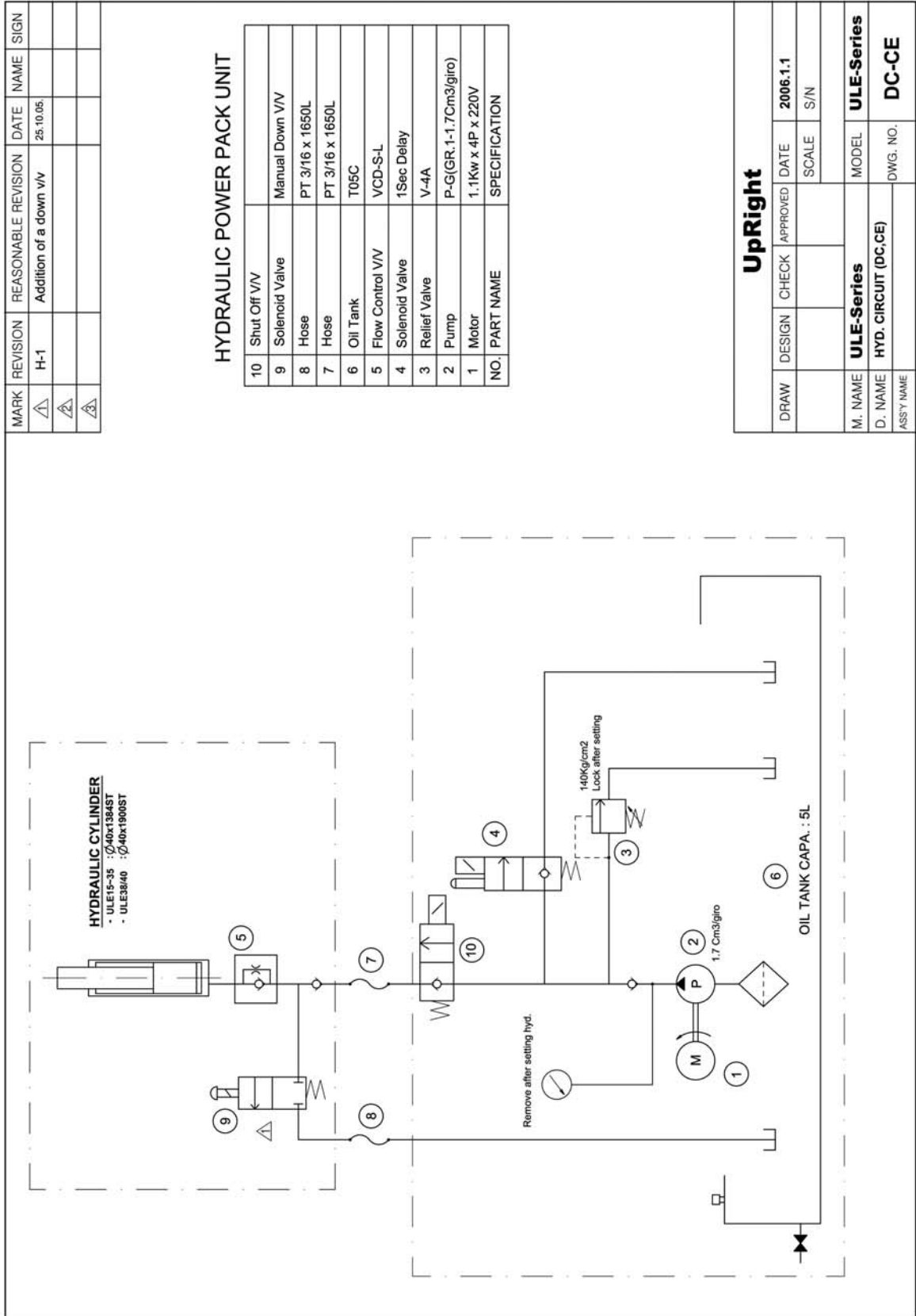


Figure 2-4
Hydraulic Circuit (Old Version), All AC Models

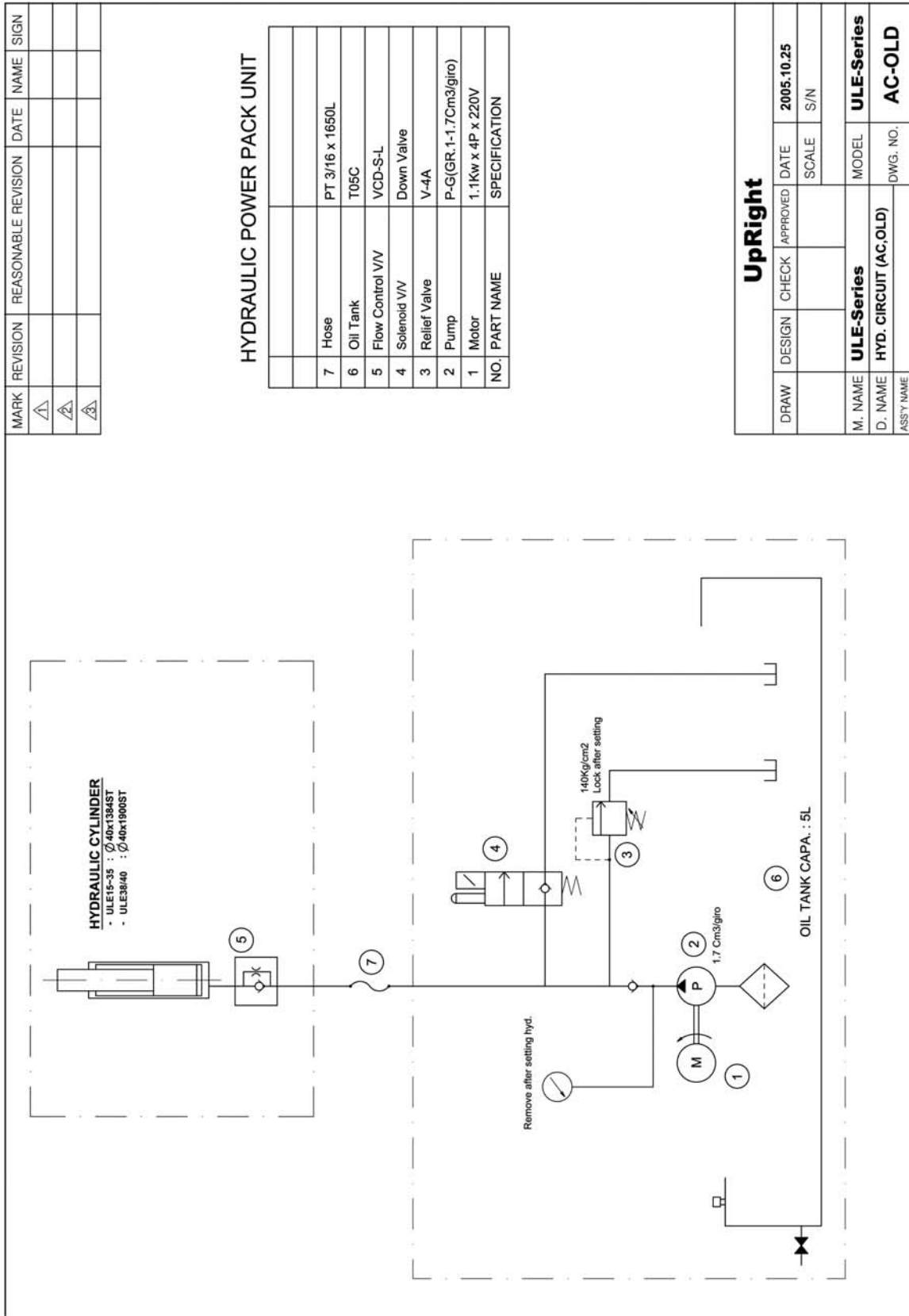
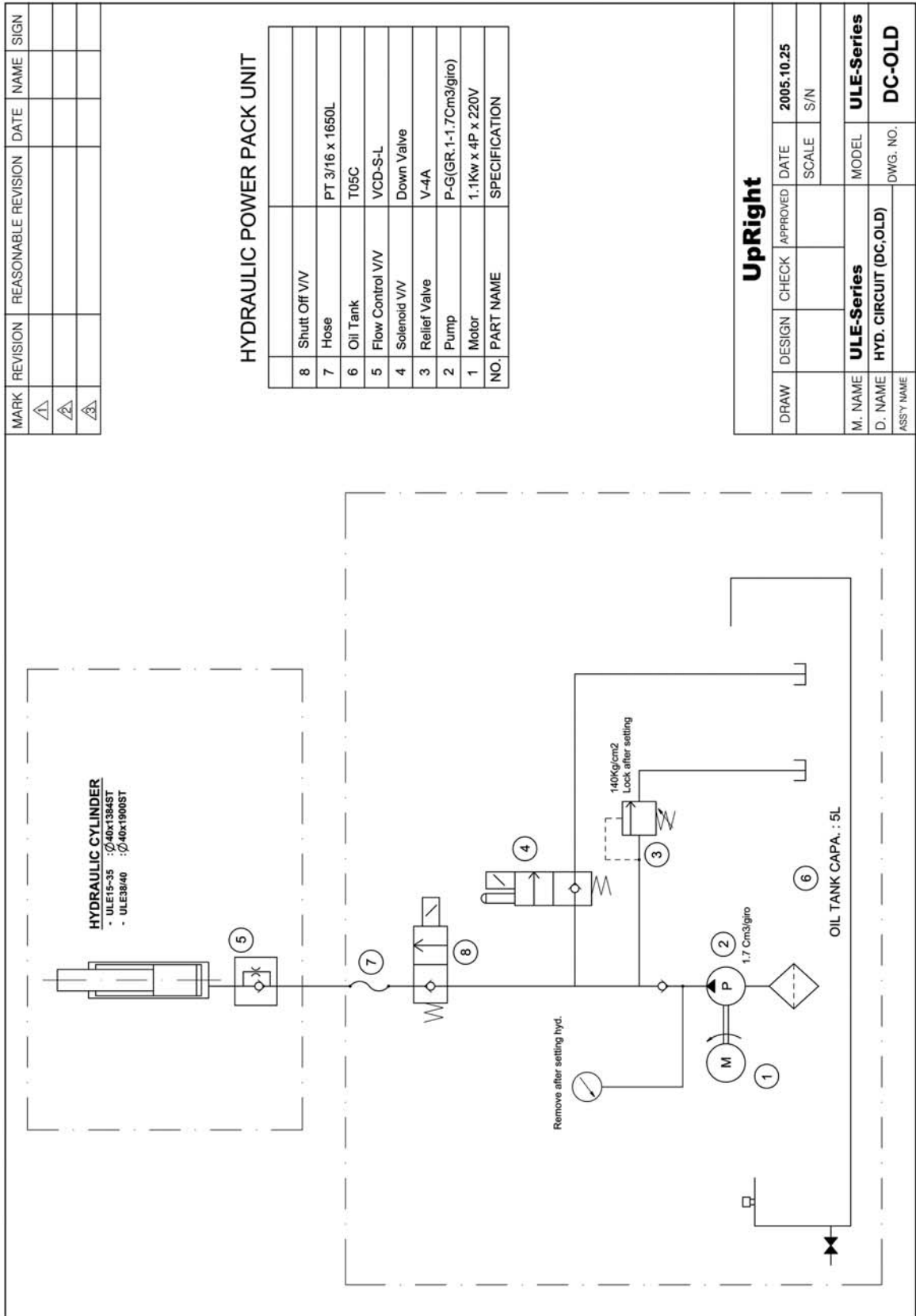


Figure 2-5
Hydraulic Circuit (Old Version), All DC Models



Section Three

Power Groups

Figure 3-1

Power Pack Groups, All Models

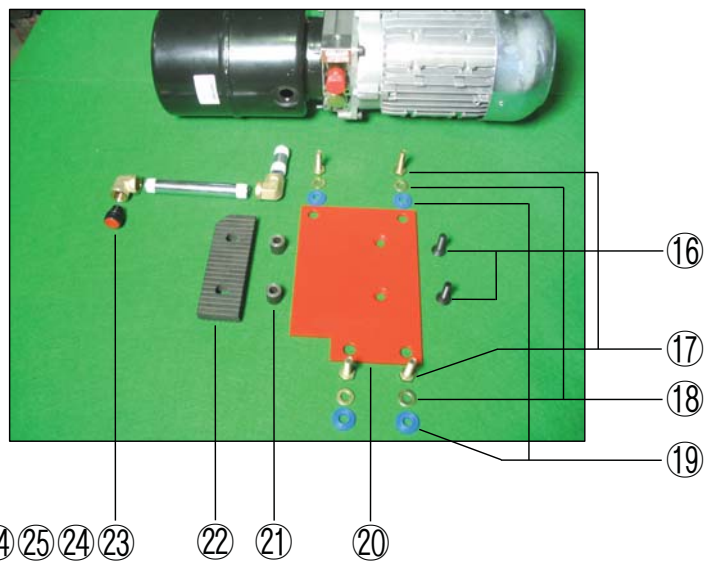
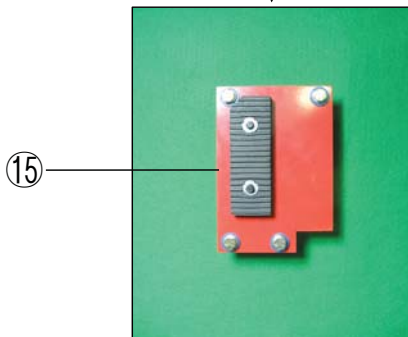
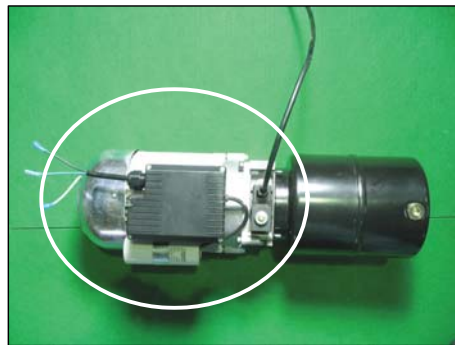
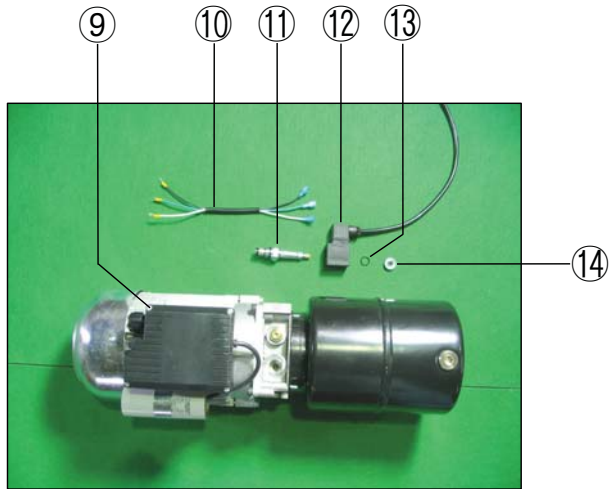
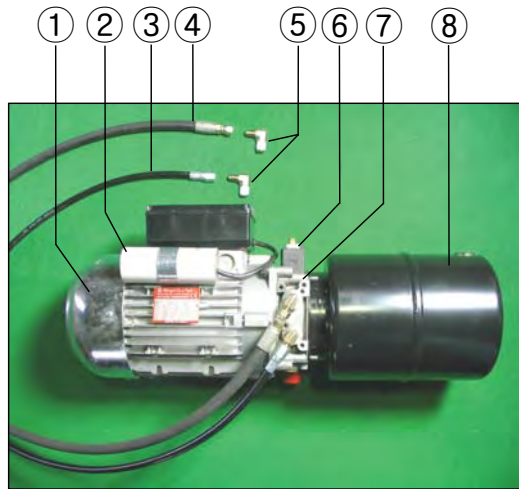


Figure 3-1

Index	Part No.	Description	Quantity	This Figure
—	P1001	AC Power Pack - 220V,60Hz,1.1kW,2P,1.2CC	.....	1
—	P1002	AC Power Pack - 220V,60Hz,1.8kW,4P,1.7CC	.....	1
—	P1003	AC Power Pack - 220V,50Hz,1.1kW,4P,1.7CC	.....	1
—	P1004	AC Power Pack - 220V,50Hz,1.8kW,4P,1.7CC	.....	1
—	P1005	AC Power Pack - 110V,50Hz,1.8kW,4P,0.75CC	.....	1
	P1036	AC Power Pack - 110V,50Hz,1.8kW,4P,1.2CC	.....	1
—	P1006	DC Power Pack - 12V,50Hz,1.8kW,4P,1.7CC	.....	1
1	P1007	AC Motor - AC220V,60Hz	.....	1
	P1008	AC Motor - AC220V,50Hz	.....	1
	P1009	AC Motor - AC100V,50Hz	.....	1
	P1010	DC Motor - DC 12V	.....	1
2	P1018	Capacitor - 75 μ F, AC220V, AC(100V) Models	.....	1
	P1019	Capacitor - 90 μ F, AC420V, AC(220V) Models	.....	1
	P1031	Relay - DC Motor, 12V	.....	1
3	H1004	Hydraulic Hose Assembly - (3/16)"x1,650mm (All ULE Models)	.....	1
	H1005	Hydraulic Hose Assembly - (3/16)"x2,000mm (IULE Models)	.....	1
4	H1004	Hydraulic Hose Assembly - (3/16)"x1,650mm (ULE15~ULE30)	.....	1
	H1009	Hydraulic Hose Assembly - (3/16)"x2Wx1,650mm (ULE35~40)	.....	1
	H1005	Hydraulic Hose Assembly - (3/16)"x2,000mm (IULE Models)	.....	1
5	H1022	Fitting - 90° Elbow, (1/4)"x(1/8)"	.....	1
6	P1035	1Sec Delay Valve Assembly	.....	1
7	P1011	Pump - Hydraulic, 0.75CC (ULE35/ULE38)	.....	1
	P1012	Pump - Hydraulic, 1.2CC (ULE15~ULE30/ULE40)	.....	1
	P1013	Pump - Hydraulic, DC, 1.7CC (All ULE Models)	.....	1
8	P1014	Tank - 4 ℓ	.....	1
9	P1025	Box - Power Pack	.....	1
10	P1026	Wire - Power Pack	.....	1
11	P1037	Valve - 1Sec Delay,100V, 50Hz	.....	1
12	P1038	Coil - DC 12V, Pump	.....	1
13	H1017	O-ring - 1Sec Delay and Down Valve	.....	1
14	H1015	Nut - Solenoid Valve	.....	1

Figure 3-1

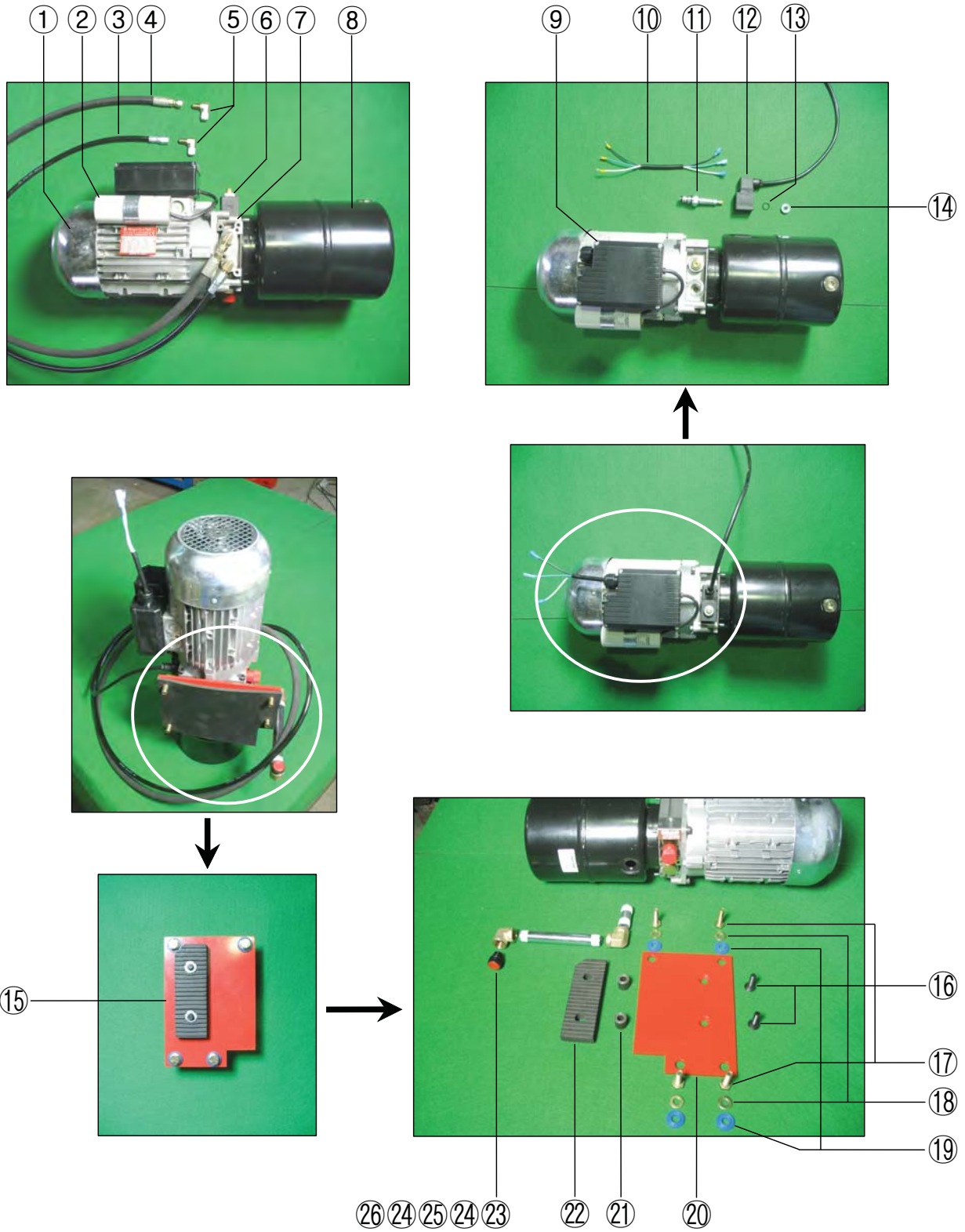


Figure 3-1

Index	Part No.	Description	Quantity This Figure
15	P1023	Plate Assembly - Power Pack Mount	..... 1
16	B2028	Screw - Wrench, Dish-Head, M10x45	..... 2
17	B2007	Screw - HHC, M10x35	..... 4
18	B2054	Washer - Flat, M10x21x2T(KS)	..... 4
19	P1030	Washer - Plastic	..... 4
20	P1027	Plate - Power Pack Mount	..... 1
21	P1028	Spacer - Rubber Pad	..... 2
22	P1024	Pad - Prevent Noise	..... 1
23	P1015	Cap - Tank	..... 1
24	P1029	Fitting - 90° Elbow, (1/2)"x(1/2)"	..... 1
25	P1021	Pipe1 - (1/2)"x150	..... 1
26	P1020	Pipe2 - (1/2)"x50	..... 1

Figure 3-2

Ground Controls, All Models

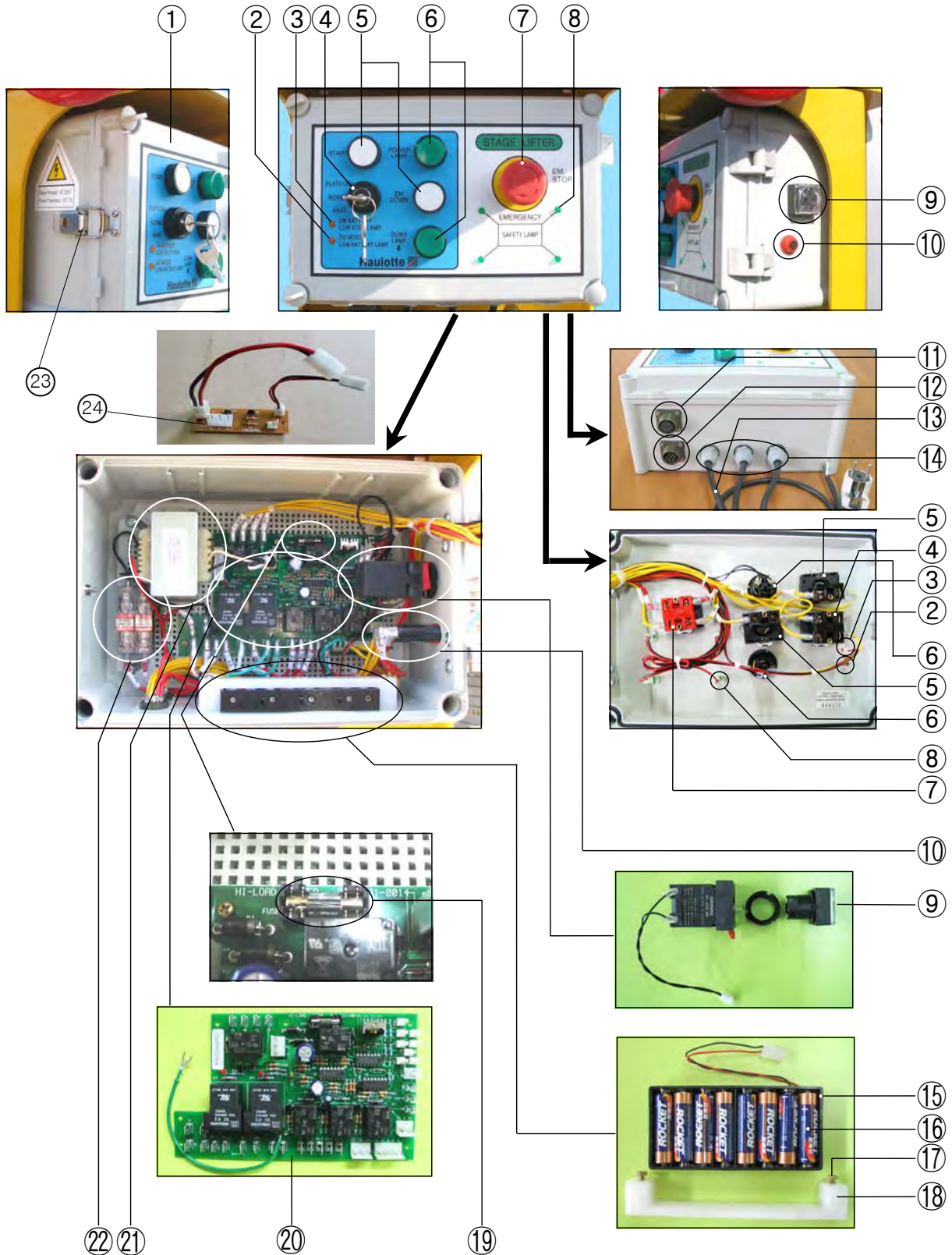


Figure 3-2

Index	Part No.	Description	Quantity	This Figure
—	E1001	Ground Controls - 220V/50-60Hz	.....	1
—	E1002	Ground Controls - 230V/50-60Hz	.....	1
—	E1003	Ground Controls - 100V/50-60Hz	.....	1
—	E1004	Ground Controls - DC12V	.....	1
—	E1057	Ground Controls - ULEI AC Models, 220V/50-60Hz	.....	1
—	E1058	Ground Controls - ULEI AC Models, 100V/50-60Hz	.....	1
—	E1059	Ground Controls - ULEI DC Models, DC12V	.....	1
1	E1005	Box - Ground Controls	.....	1
	A1021	Label - Circuit Breaker	.....	1
2	E1080	Indicator - Low Battery, DC Models	.....	1
3	E1081	Indicator - EM Battery, All Models	.....	1
4	E1008	Key Switch with Contact	.....	1
	E1009	Key Switch	.....	1
	E1017	Contact - Key Switch	.....	1
	E1010	Key	.....	2
5	E1013	Push Button with Contact	.....	1
	E1014	Push Button	.....	1
	E1019	Contact - Push Button	.....	1
6	E1015	Lamp Assembly	.....	1
	E1015-1	LED Type Lamp Assembly	.....	1
7	E1011	Stop Button with Contact	.....	1
	E1012	Stop Button - Red Mushroom Head	.....	1
	E1018	Contact - Stop Button	.....	1
8	E1016	Indicator - Outrigger	.....	4
9	E1082	Sound Indicator Assembly	.....	1
10	E1029	Circuit Breaker - 15amp, 220V	.....	1
	E1030	Circuit Breaker - 15amp, 110V	.....	1
11	E1083	Harness - Wire, Control, with 7 Sockets	.....	1
12	E1084	Harness - Wire, Interlock, with 7 Pins	.....	1
13	E1060	Power Cord Assembly - Standard	.....	1

Figure 3-2

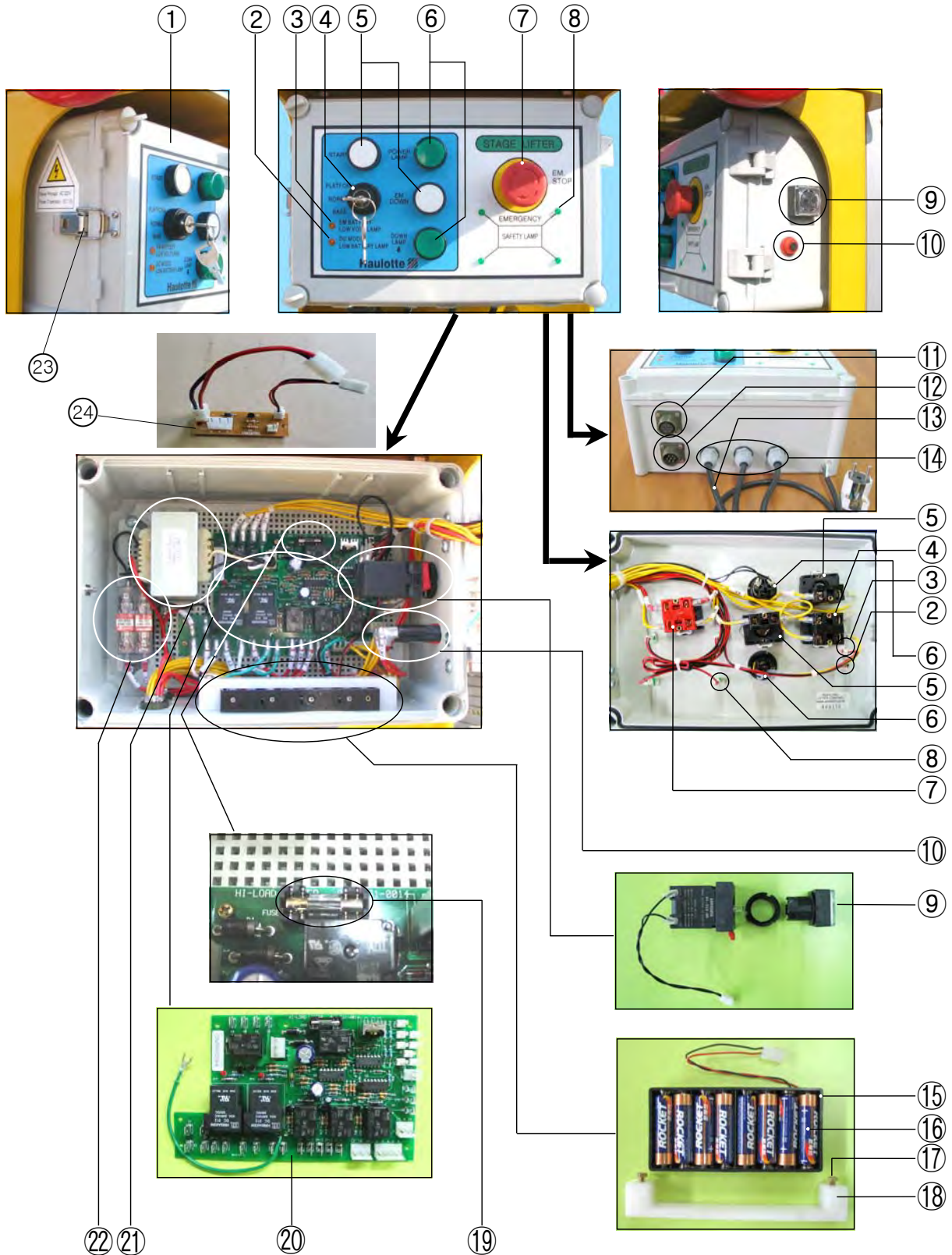


Figure 3-2

Index	Part No.	Description	Quantity	This Figure
	E1061	Power Cord Assembly - Japan Type	.....	1
	E1085	Plug - 2 Pins, Standard	.....	1
	E1086	Plug - 3 Pins, Japanese	.....	1
14	E1072	Connector - Squeeze, 12mm	.....	3
15	E1034	Holder - Battery (Old Type)	.....	1
	E1034-1	Holder - Battery (New Type)	.....
16	E1033	Battery - AA size, 1.5V	.....	8
17	B2037	Nut - M4x0.7	.....	2
	B2032	Screw - PHM, M4x30	.....	2
18	E1035	Cover - Battery	.....	1
19	E1032	Fuse - 5amp	.....	1
20	E1006	Printed Circuit Board - New Version, AC Models	.....	1
	E1007	Printed Circuit Board - New Version, DC Models	.....	1
	E1101	Printed Circuit Board - New Version, ULEI AC Models	.....	1
	E1102	Printed Circuit Board - New Version, ULEI DC Models	.....	1
	E1103	Printed Circuit Board - Old Version, AC Models	.....	1
	E1104	Printed Circuit Board - Old Version, DC Models	.....	1
21	E1087	Trans - 220V/50~60Hz	.....	1
	E1088	Trans - 230V/50~60Hz	.....	1
	E1089	Trans - 100V/50~60Hz	.....	1
22	E1090	Fuse - 250V,15amp	.....	2
23	E1126	Connecting link Assembly - Ground Controls	.....	1
24	E1127	Sensor Circuit Board - ULEI	.....	1

Figure 3-3

Control Cable Assembly, All Models

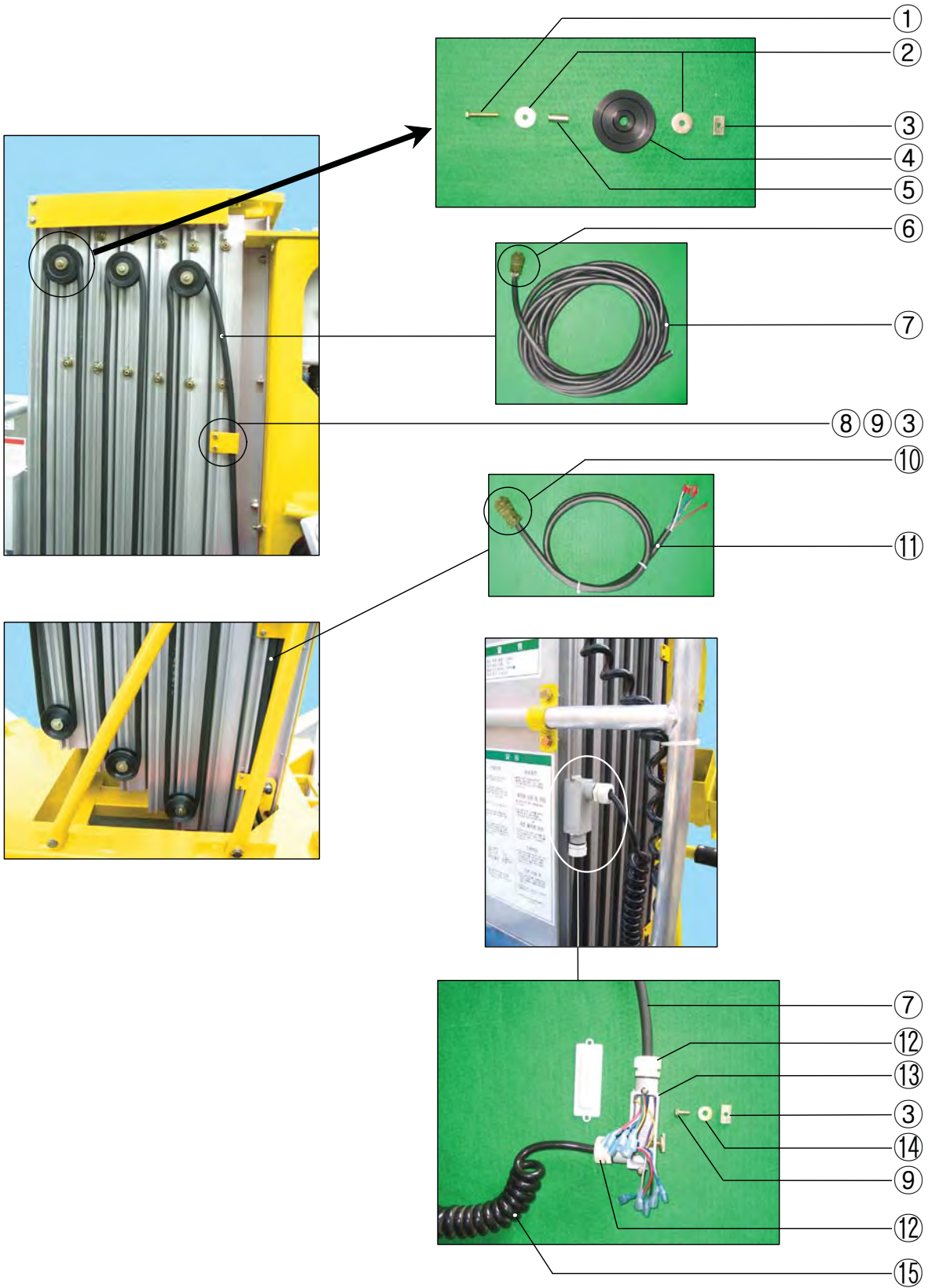


Figure 3-3

Index	Part No.	Description	Quantity	This Figure
1	B2002	Screw - HHC, M6x35	.....	-
2	B2051	Washer - Flat, M6x25x1.5T	.....	-
3	M1059	Nut - Square, M6x22.5x13x4T	.....	-
4	E1073	Sheave - Control Cable, All Models	.....	-
	E1074	Sheave - Control Cable, ULE15/25/35	.....	1
5	E1100	Spacer - Sheave	.....	-
6	E1076	Cable Connector - Power Cable, Ground to Platform	.....	1
7	E1062	Power Cable Assembly - Ground Controls to Platform, ULE15	.....	1
	E1063	Power Cable Assembly - Ground Controls to Platform, ULE20	.....	1
	E1064	Power Cable Assembly - Ground Controls to Platform, ULE25	.....	1
	E1065	Power Cable Assembly - Ground Controls to Platform, ULE30	.....	1
	E1066	Power Cable Assembly - Ground Controls to Platform, ULE35	.....	1
	E1067	Power Cable Assembly - Ground Controls to Platform, ULE38	.....	1
	E1068	Power Cable Assembly - Ground Controls to Platform, ULE40	.....	1
8	E1075	Bracket - Cable and Hose	.....	4
9	B2033	Screw - PHM, M6x14	.....	4
10	E1077	Cable Connector - Power Cable, Ground to Base	.....	1
11	E1069	Power Cable Assembly - Ground Controls to Base	.....	1
12	E1072	Connector - Squeeze, 12mm	.....	2
13	E1071	Box with Cover - Outlet, Oval, Drilled	.....	1
14	B2050	Washer - Flat, M6x18x1.2T	.....	2
15	E1070	Spring Cable Assembly - Tension, ULE15/25/35	.....	1

Figure 3-4

Battery Pack & Charger Assembly, All DC Models

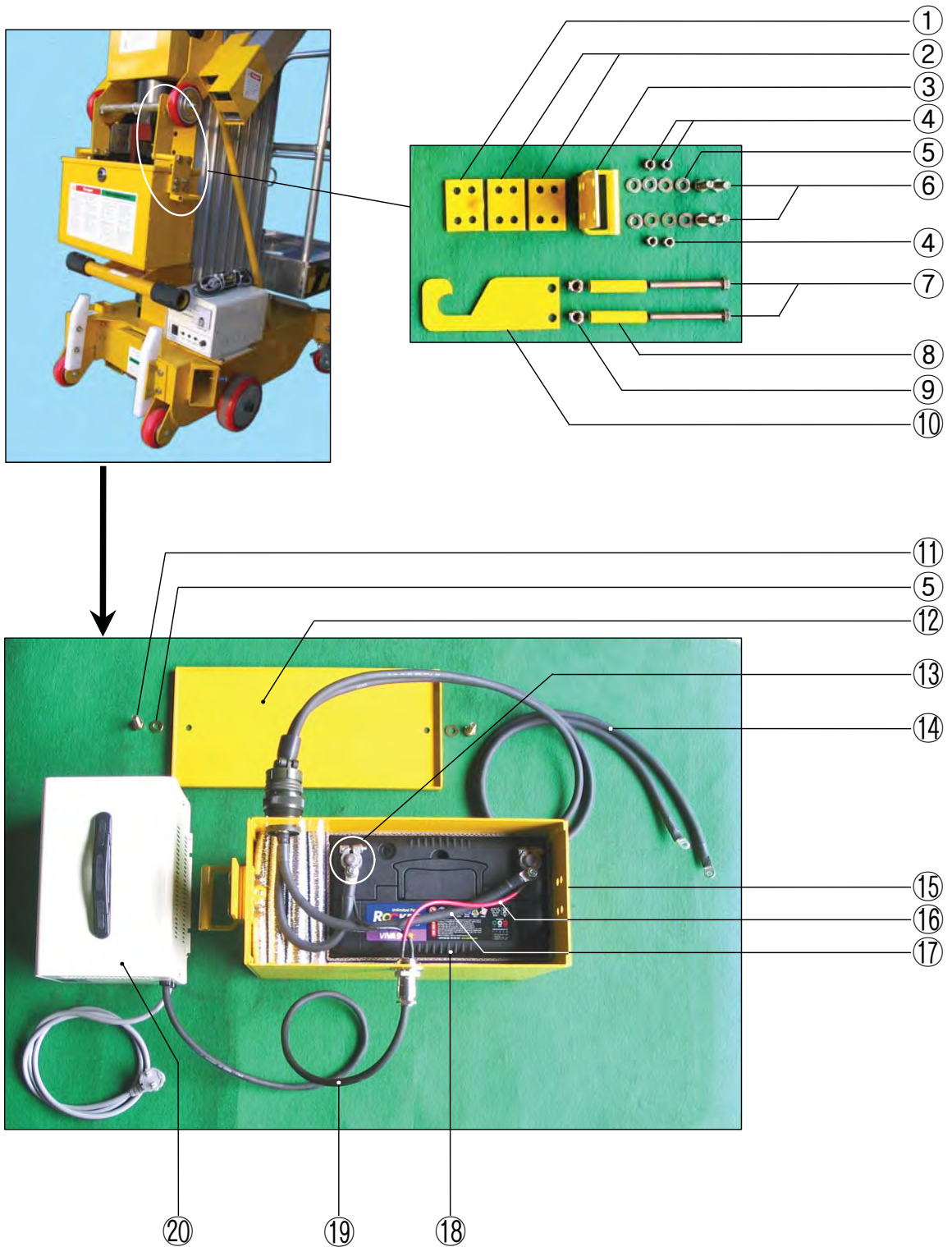


Figure 3-4

Index	Part No.	Description	Quantity This Figure
1	E1042	Plate - Battery Box Cover Mount	2
2	E1043	Plate - Battery Box Handle Mount	4
3	E1044	Handle - Battery Box	2
4	B2038	Nut - M10	8
5	B2054	Washer - Flat, M10x21x2T(KS)	16
6	B2008	Screw - HHC, M10x40	8
7	B2012	Screw - HHC, M12x100	4
8	E1045	Spacer - Battery Pack Hanger	2
9	B2046	Nut - Nylock, M12	4
10	E1041	Battery Pack Hanger	1
11	B2006	Screw - HHC, M10x30	2
12	E1036	Cover - Battery Box	1
13	E1054	Clamp - Power Cable, Battery Pack	2
14	E1046	Power Cable Assembly - Battery Pack, Outside	1
	E1050	Cable Connector - Battery Pack, Outside	1
15	E1037	Battery Box with Decal	1
	E1038	Battery Box Assembly - Standard DC Models	1
	E1039	Battery Box Assembly - IULE15/20	1
16	E1049	Cable Assembly - Battery Pack, from Charger, Inside	1
	E1053	Cable Connector - Battery Pack, from Charger, Inside	1
17	E1047	Power Cable Assembly - Batter Pack, Inside	1
	E1051	Cable Connector - Battery Pack, Inside	1
18	E1040	Battery - DC 12V, 90A	1
19	E1048	Cable Assembly - Battery Pack, from Charger, Outside	1
	E1052	Cable Connector - Battery Pack, from Charger, Outside	1
20	E1055	Battery Charger - 220V, 50~60Hz	1
	E1056	Battery Charger - 100V, 50~60Hz	1

Figure 3-5
Electric Circuit (New Version), AC Models

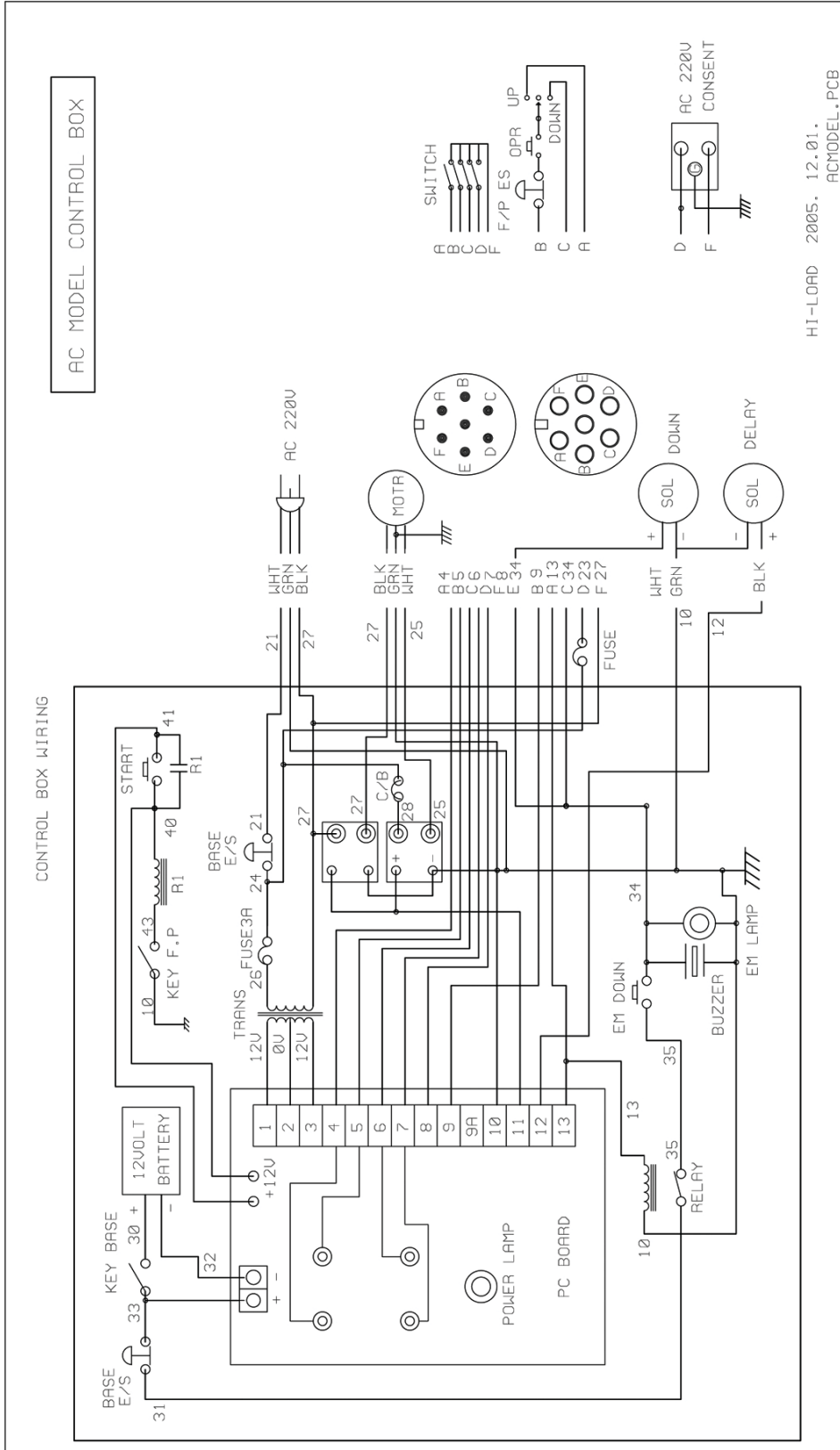


Figure 3-8
Electric Circuit (Old Version), DC Models

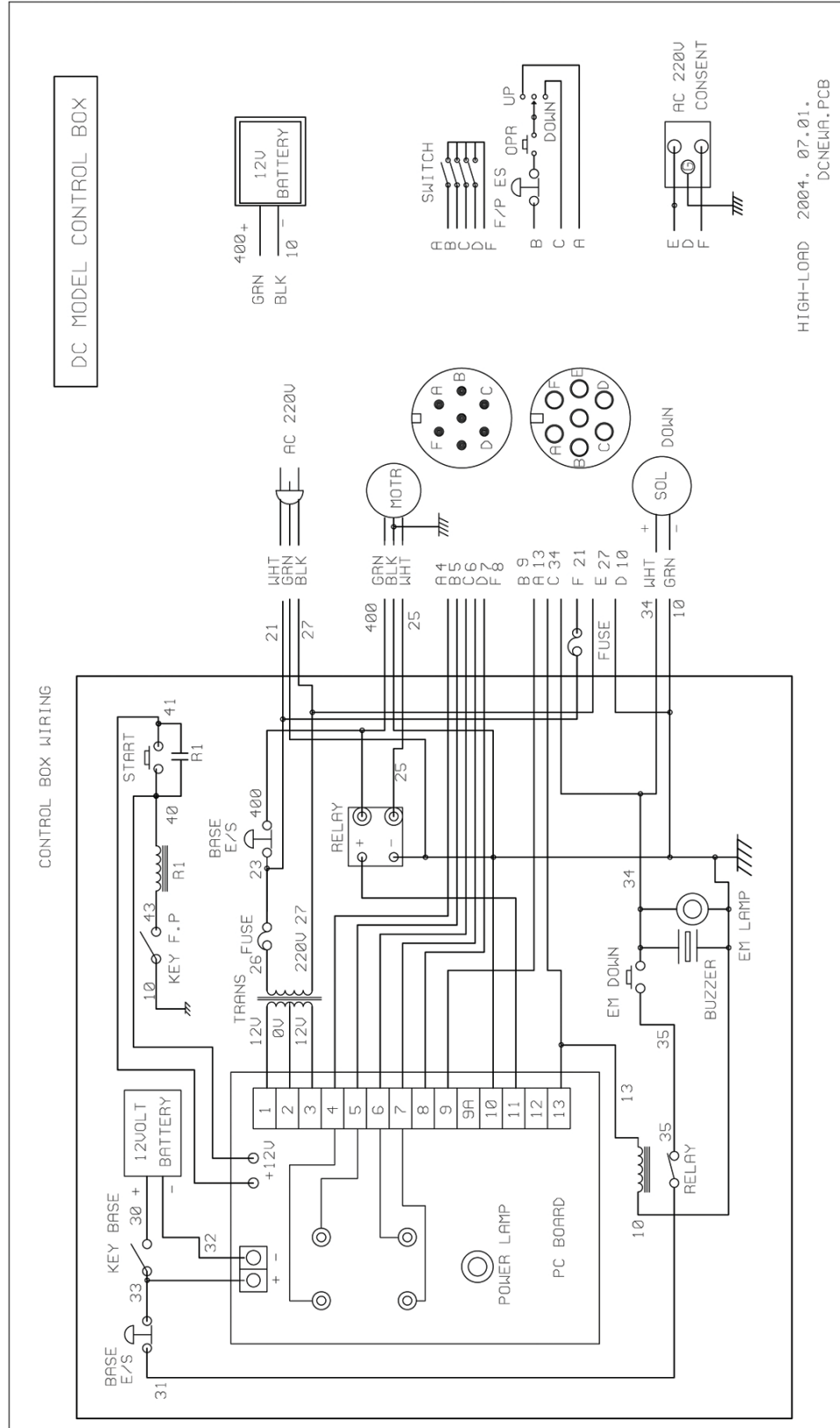


Figure 3-9

Electric Circuit (New Version), AC Industry Models

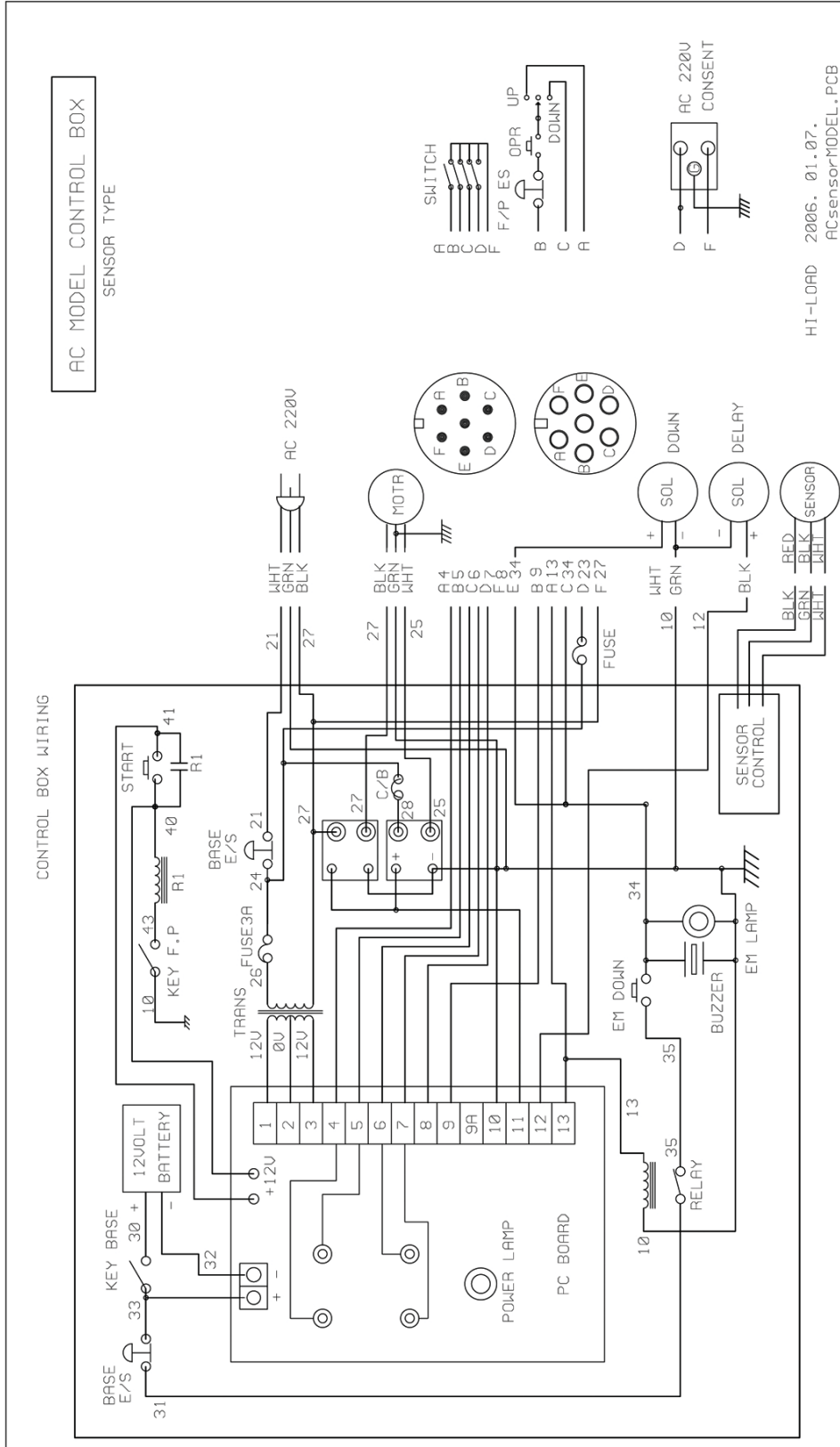
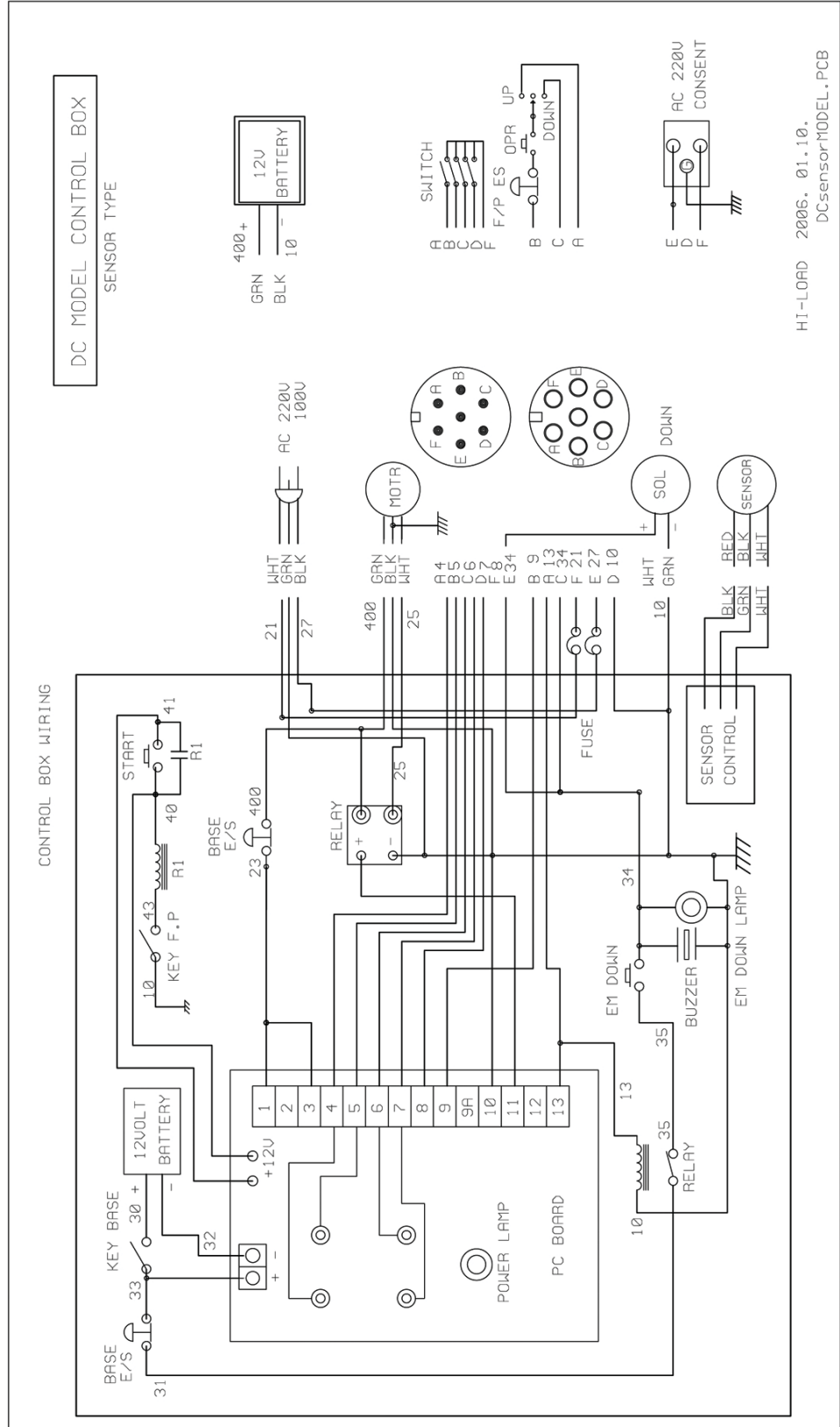


Figure 3-10
Electric Circuit (New Version), DC Industry Models



Section Four

Base Components

Figure 4-1

Base Assembly, All Standard Models

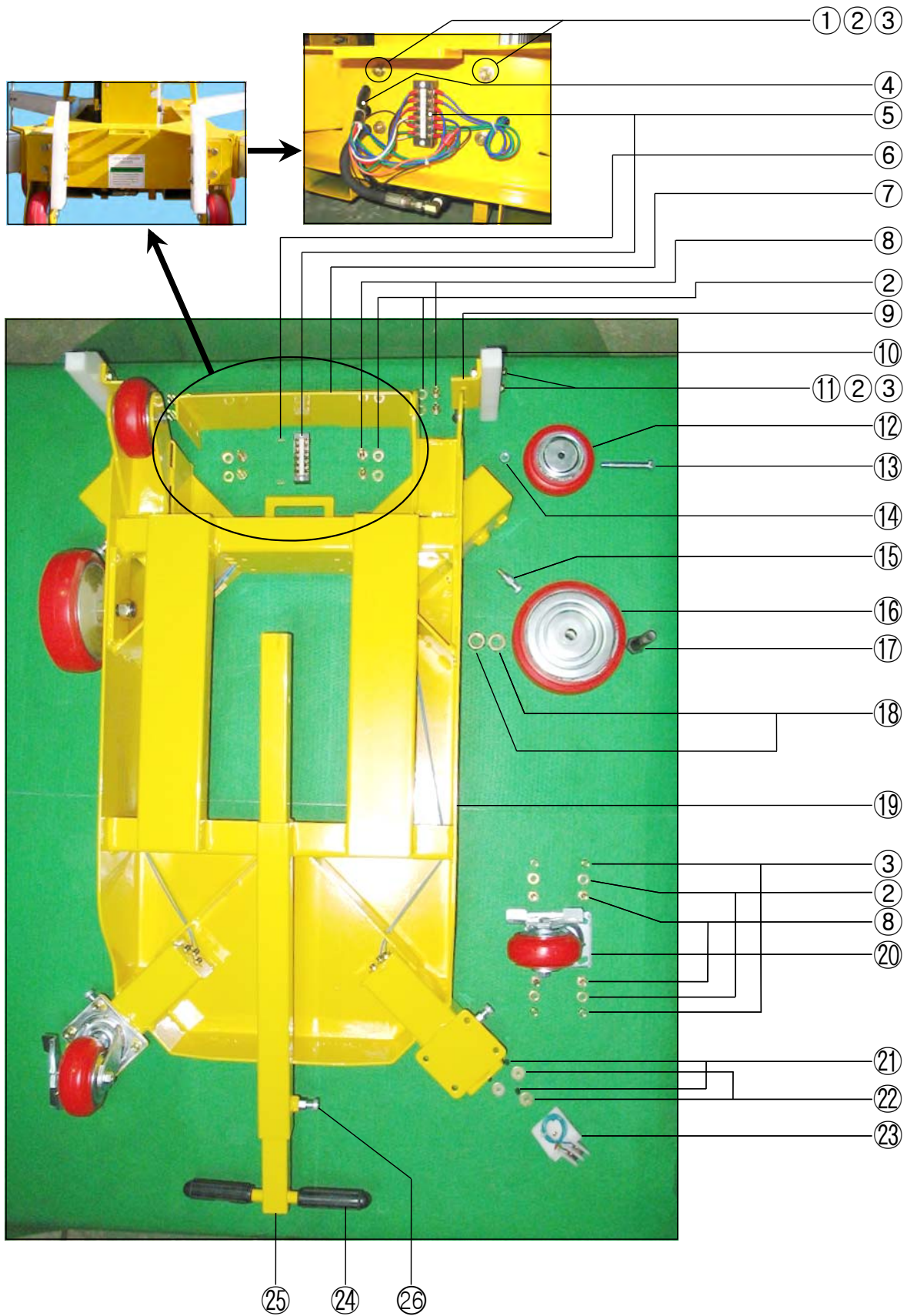


Figure 4-1

Index	Part No.	Description	Quantity	This Figure
1	B2006	Screw - HHC, M10x30	.....	4
2	B2054	Washer - Flat, M10x21x2T(KS)	.....	28
3	B2044	Nut - Nylock, M10x14	.....	16
4	E1069	Power Cable Assembly - Ground Controls to Base	.....	1
5	E1024	Contact - Base, N.O.	.....	1
6	B2030	Screw - PHM, M4x10	.....	2
7	B1050	Cover - Base	.....	1
8	B2005	Screw - HHC, M10x25	.....	4
9	B1012	Plate - Block Mount	.....	2
10	B1011	Block - Glide	.....	2
11	B2009	Screw - HHC, M10x50	.....	4
12	B1046	Caster - 6 inch	.....	2
13	B2014	Screw - HHC, (1/2)"x80(W)	.....	2
14	B2041	Nut - (1/2)"	.....	2
15	B1008	Lock Pin	.....	5
16	B1047	Caster - 8 inch	.....	2
	B1051	Caster - Pneumatic, RT, 12 inch	.....	2
17	B2016	Screw - HHC, M20x120(B)	.....	2
18	B2049	Nut - Nylock, M20	.....	2
19	B1001	Base Assembly - All Standard Models with Decals	.....	1
	B1002	Base Assembly - All Narrow Models with Decals	.....	1
	B1003	Base Assembly - All RT Models with Decals	.....	1
20	B1093	Caster - Swivel with Brake, 5 inch - Base	.....	2
	B1052	Caster - Swivel, RT, 8 inch	.....	2
21	B2019	Screw - Wrench, M6x15	.....	12
22	B2051	Washer - Flat, M6x25x1.5T	.....	12
23	B1006	Outrigger Interlock Bracket Assembly	.....	4
24	B1005	Grip - Rubber	.....	2
25	B1004	T-Handle Assembly	.....	1
26	B2076	Lock Pin - T-Handle	.....	1

Figure 4-2

Weldment Assembly (Motor Mount), All Models without Tilt-back Frame

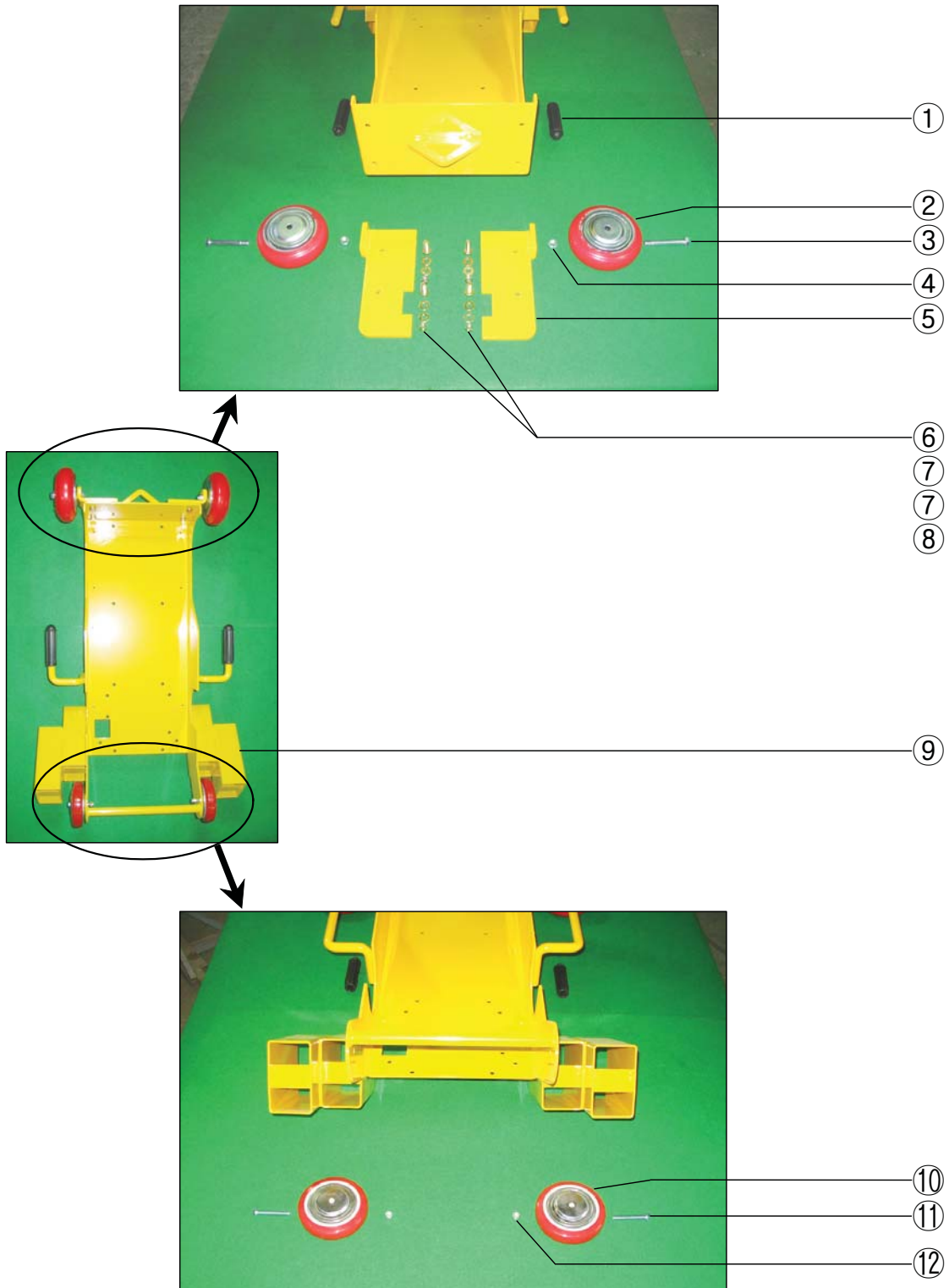


Figure 4-2

Index	Part No.	Description	Quantity This Figure
1	B1005	Grip - Rubber	..... 2
2	B1046	Caster - 6 inch	..... 2
3	B2014	Screw - HHC, (1/2)"x80(W)	..... 2
4	B2041	Nut - (1/2)"	..... 2
5	B1053	Plate - Upper Caster Mount	..... 2
6	B2044	Nut - Nylock, M10x14	..... 4
7	B2054	Washer - Flat, M10x21x2T(KS)	..... 8
8	B2006	Screw - HHC, M10x30	..... 4
9	B1033	Weldment - Motor Mount, Outrigger Storage Bracket	..... 1
10	B1044	Caster - Slide, 5 inch	..... 2
11	B2013	Screw - HHC, (3/8)"x65	..... 2
12	B2045	Nut - Nylock, (3/8)"	..... 2

Figure 4-3

Loading Pivot Assembly, All Models without Tilt-back Frame

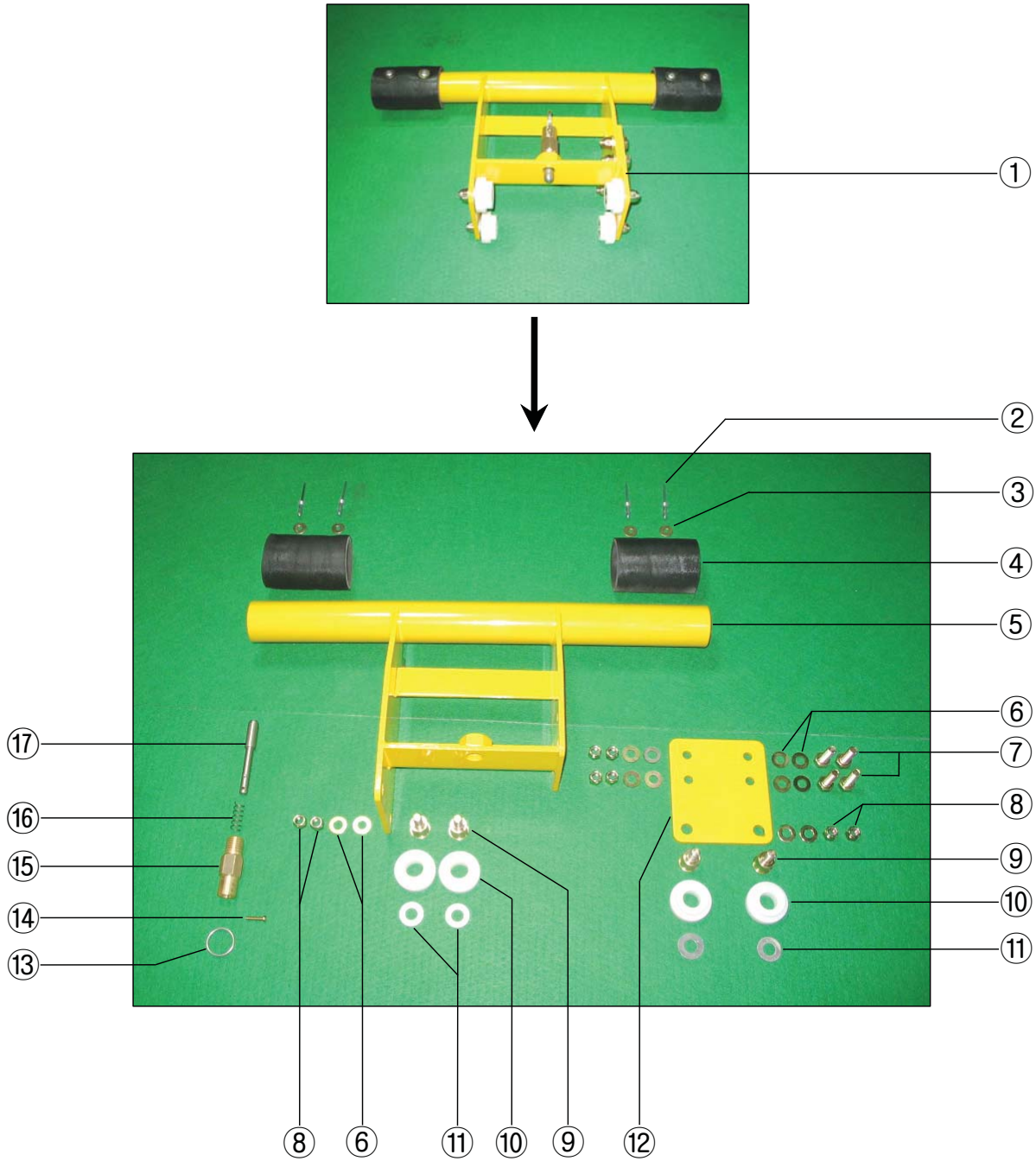


Figure 4-3

Index	Part No.	Description	Quantity	This Figure
1	B1028	Loading Pivot Assembly	.....	1
2	B2063	Rivet - Aluminum, 4.8x20	.....	4
3	B2050	Washer - Flat, M6x18x1.2T	.....	4
4	B1030	Rubber Bumper	.....	2
5	B1029	Pivot Slider Weldment, ULE15~ULE38	.....	1
6	B2054	Washer - Flat, M10x21x2T(KS)	.....	12
7	B2006	Screw - HHC, M10x30	.....	4
8	B2044	Nut - Nylock, M10x14	.....	4
9	B1085	Bolt - Roller, Loading Pivot	.....	4
10	B1032	Roller - Loading Pivot	.....	4
11	B2056	Washer - Flat, M12x32x2.3T	.....	4
12	B1031	Plate - Pivot Attachment	.....	1
13	B1086	Ring - Lock Pin	.....	1
14	B2031	Screw - PHM, M4x20	.....	1
15	B1087	Fitting - Lock Pin	.....	1
16	B1088	Spring - Lock Pin	.....	1
17	B1089	Pin - Lock Pin	.....	1
	B1009	Lock Pin Assembly - Tilt-back, Loading Pivot	.....	1
—	A1019	Label - Fixing Position for Truck Loading	.....	1
—	A1020	Label - Supporter for Truck Loading	.....	1

Figure 4-5

Outrigger Assembly, All Models

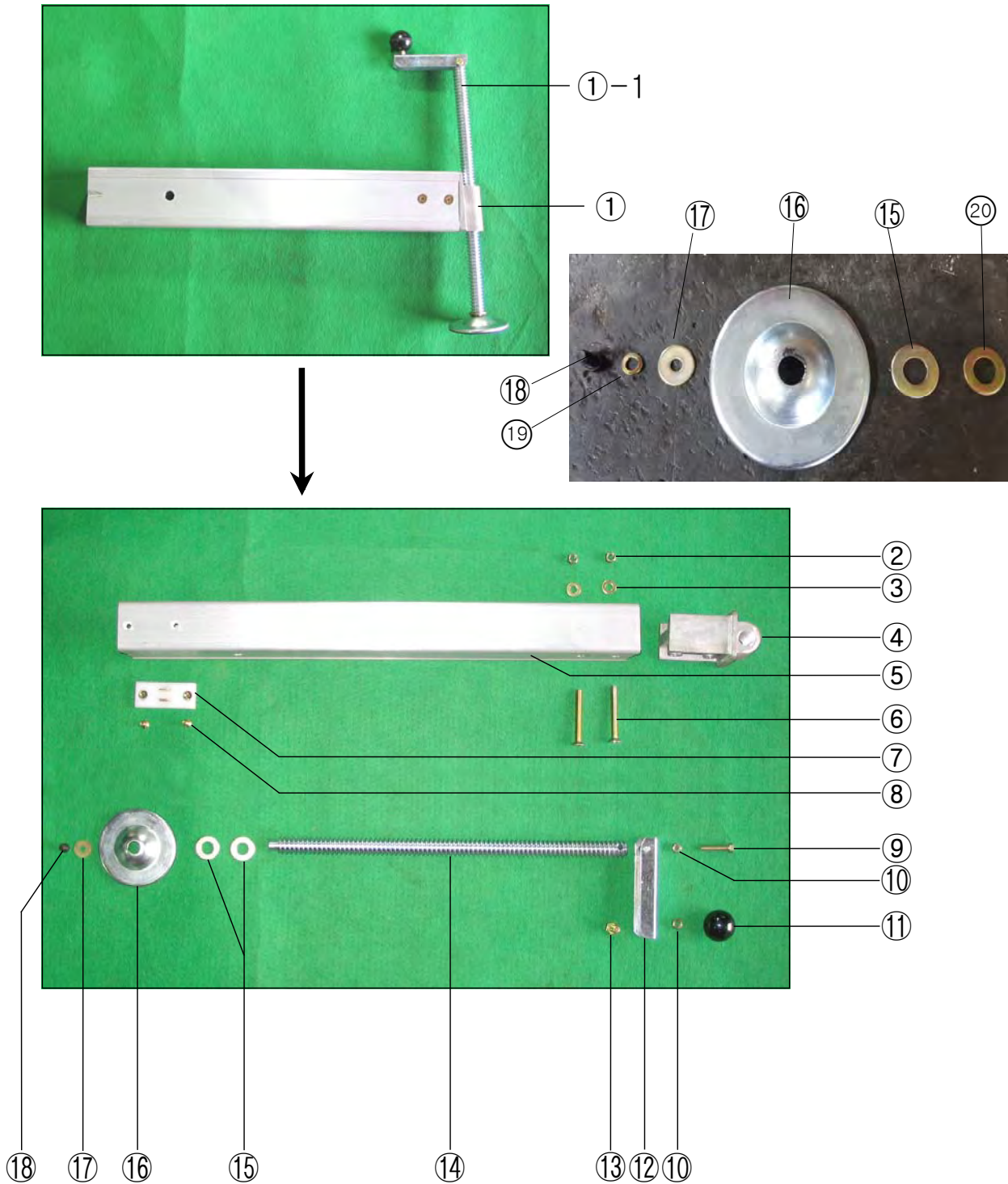


Figure 4-4

Index	Part No.	Description	Quantity	This Figure
1	B1013	Outrigger Assembly – ULE15~ULE25	.....	1
	B1014	Outrigger Assembly - ULE30	.....	1
	B1015	Outrigger Assembly - ULE35	.....	1
	B1016	Outrigger Assembly – ULE38/40	.....	1
	B2070	Outrigger Assembly – ULE38 (Nishio Spec)	.....	1
1-1	B1092	Leveling Jack Assembly	.....	1
	B2071	Leveling Jack Assembly (Nishio Spec)	.....	1
2	B2044	Nut - Nylock, M10x14	.....	2
3	B2054	Washer - Flat, M10x21x2T(KS)	.....	2
4	B1021	Casting - Leveling Jack	.....	1
5	B1065	Outrigger Tube – ULE15~ULE25	.....	1
	B1066	Outrigger Tube - ULE30	.....	1
	B1067	Outrigger Tube - ULE35	.....	1
	B1068	Outrigger Tube – ULE38/40	.....	1
6	B2035	Screw - FHM, M10x80	.....	2
7	B1007	Outrigger Contact Assembly	.....	1
8	B2034	Screw - FHM, M6x15	.....	2
9	B2004	Screw - HHC, M8x40	.....	1
10	B2043	Nut - Nylock, M8	.....	2
11	B1017	Ball Knob	.....	1
12	B1019	Handle - Leveling Jack	.....	1
13	B2006	Screw - HHC, M10x30	.....	1
14	B1020	Rod - Leveling Jack	.....	1
	B2072	Rod - Leveling Jack (Nishio Spec)	.....	1
15	B2058	Washer - Flat, M16x32x2.3T	.....	2
16	B1018	Foot Pad - Leveling Jack	.....	1
	B2073	Foot Pad - Leveling Jack (Nishio Spec)	.....	1
17	B2053	Washer - Flat, M8x25x1.6T	.....	1
18	B2021	Screw - Wrench, M8x15	.....	1
19	B2078	Washer – Spring, M8	.....	1
20	B2077	Washer – Flat M6x30x3T	.....	1

Figure 4-5

Shock Absorber Assembly, ULE40

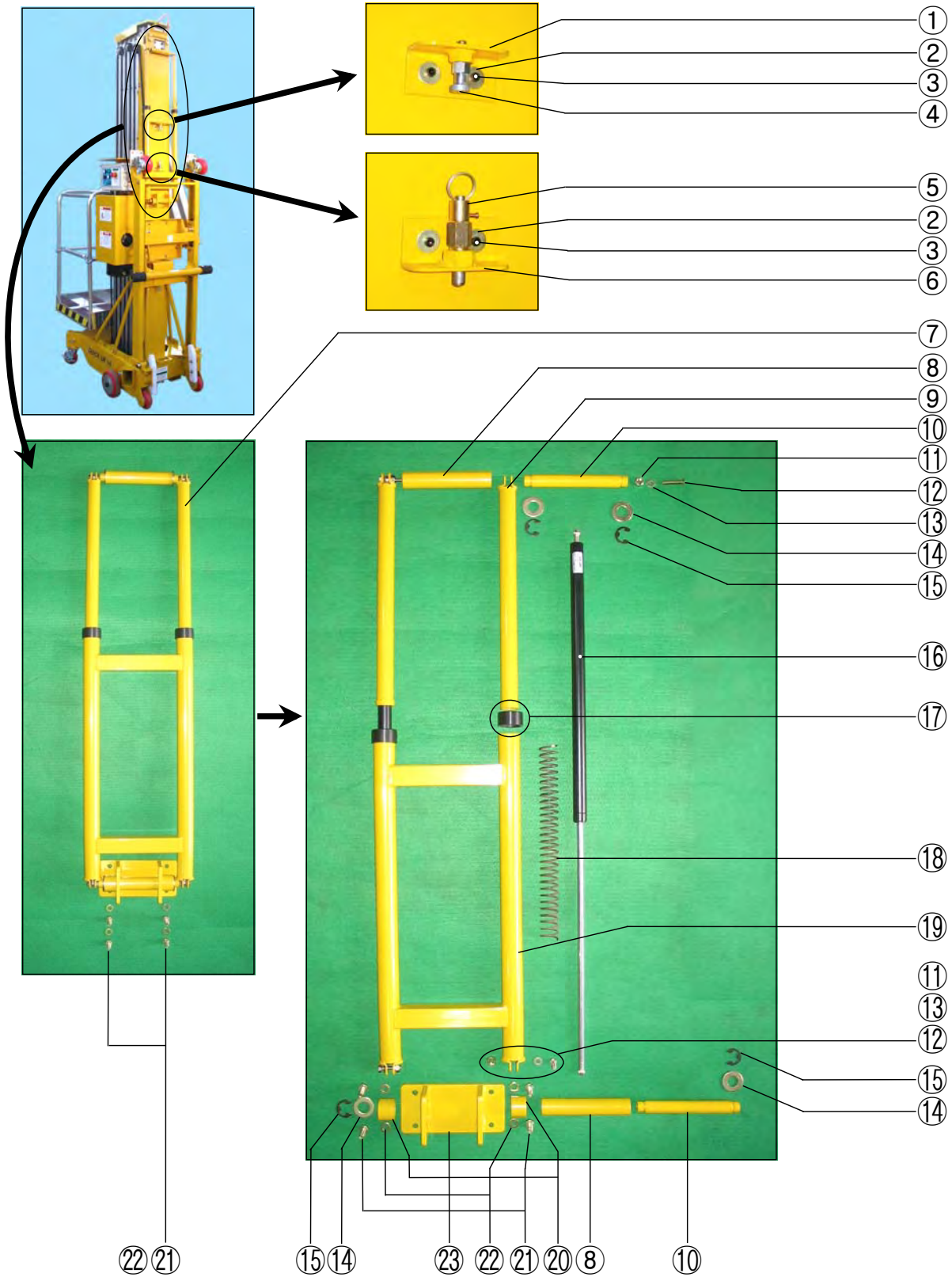


Figure 4-5

Index	Part No.	Description	Quantity This Figure
1	B1077	Weldment - Upper Lock Pin Mount, Tilt-back	1
2	B2051	Washer - Flat, M6x25x1.6T	4
3	B2019	Screw - Wrench, M6x15	4
4	B1008	Lock Pin	1
5	B1009	Lock Pin - Tilt-back, Loading Pivot	1
6	B1078	Weldment - Lower Lock Pin Mount, Tilt-back	1
7	B1039	Shock Absorber Assembly - ULE40	1
8	B1069	Tube - Outer, Shock Absorber	2
9	B1071	Tube - Shock Mount	1
10	B1070	Tube - Inner, Shock Absorber	2
11	B2038	Nut - M10	4
12	B2004	Screw - HHC, M8x40	4
13	B2052	Washer - Flat, M8	4
14	B2060	Washer - Flat, M22	4
15	B1072	Snap Ring	4
16	B1040	Shock - Gas, \varnothing 40x200ST	2
17	B1073	O-ring - Shock Absorber	2
18	B1042	Spring - Shock Absorber	2
19	B1074	Shock Absorber Weldment	1
20	B1075	Spacer - Shock Absorber	2
21	B2007	Screw - HHC, M10x35	4
22	B2054	Washer - Flat, M10x21x2T(KS)	4
23	B1076	Weldment - Shock Absorber Mount	1

Figure 4-6

Tilt-back Frame Assembly, ULE40

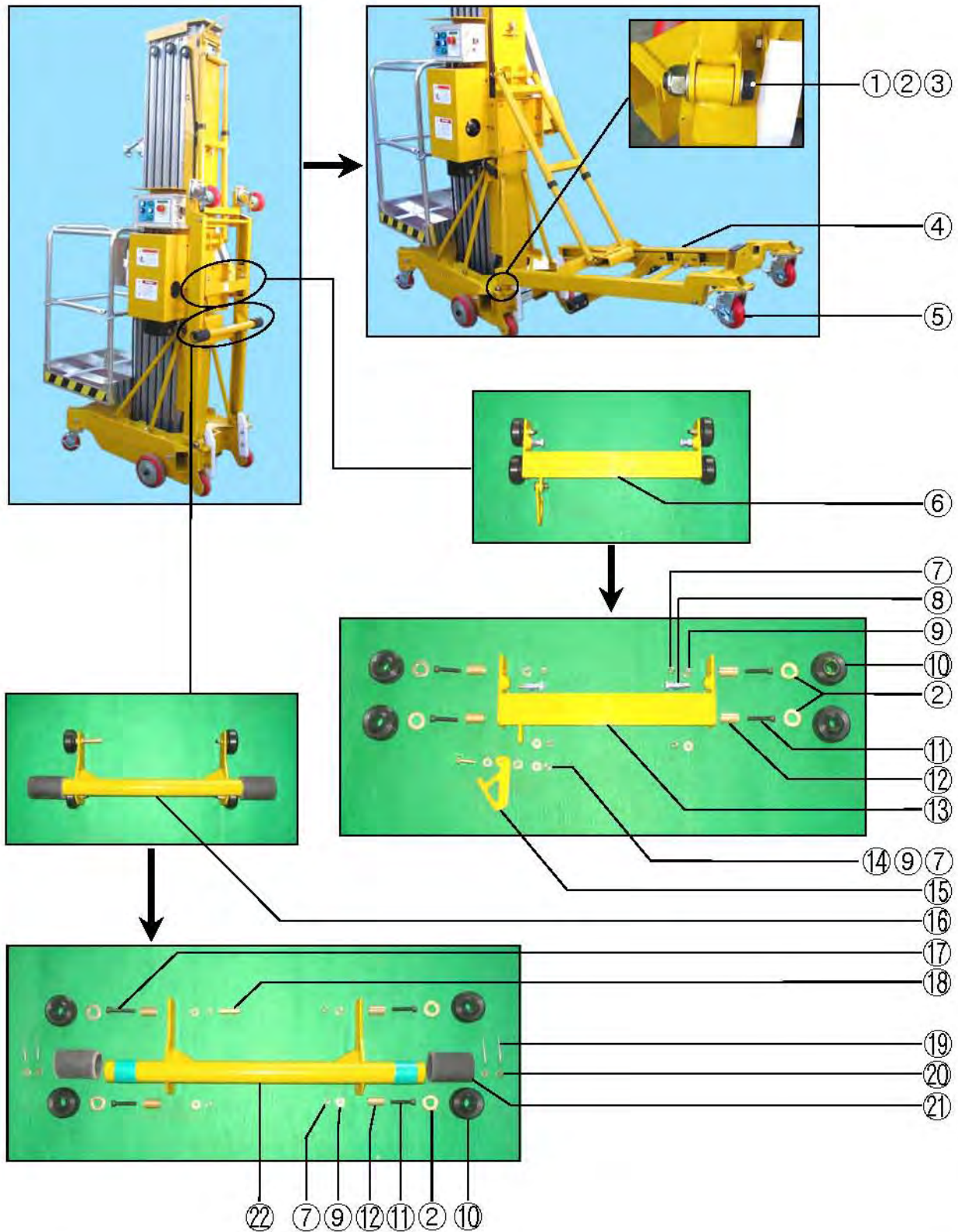


Figure 4-6

Index	Part No.	Description	Quantity	This Figure
1	B2015	Screw - HHC, M20x80(B)	.....	2
2	B2059	Washer - Flat, M20(3/4)	.....	12
3	B2049	Nut - Nylock, M20	.....	2
4	B1038	Tilt-back Frame Weldment - ULE40	.....	1
5	B1048	Caster - Swivel with Brake, 6 inch - Tilt	.....	2
6	B1035	Pivot Stop Assembly - ULE40, AC Models	.....	1
	B1059	Pivot Stop Assembly - ULE40, DC Models	.....	1
7	B2044	Nut - Nylock, M10x14	.....	8
8	B1008	Lock Pin	.....	2
9	B2054	Washer - Flat, M10x21x2T(KS)	.....	8
10	B1037	Roller - Tilt-back Frame	.....	8
11	B2022	Screw - Wrench, M10x50	.....	8
12	B1081	Spacer - Roller, Tilt-back Frame	.....	8
13	B1079	Weldment - Pivot Stop - ULE40, AC Models	.....	1
	B1080	Weldment - Pivot Stop - ULE40, DC Models	.....	1
14	B2006	Screw - HHC, M10x30	.....	1
15	B1036	Hook - Pivot Retainer, ULE40	.....	1
16	B1034	Pivot Slider Assembly - ULE40	.....	1
17	B2023	Screw - Wrench, M10x60	.....	1
18	B1083	Bushing - Pivot Slider, Tilt-back Frame	.....	1
19	B2063	Rivet - Aluminum, 4.8x20	.....	4
20	B2050	Washer - Flat, M6x18x1.2T	.....	4
21	B1030	Rubber Bumper	.....	2
22	B1082	Pivot Slider Weldment - ULE40	.....	1

Section Five

Mast Components

Figure 5-1

Number 1 Column Assembly, All Models

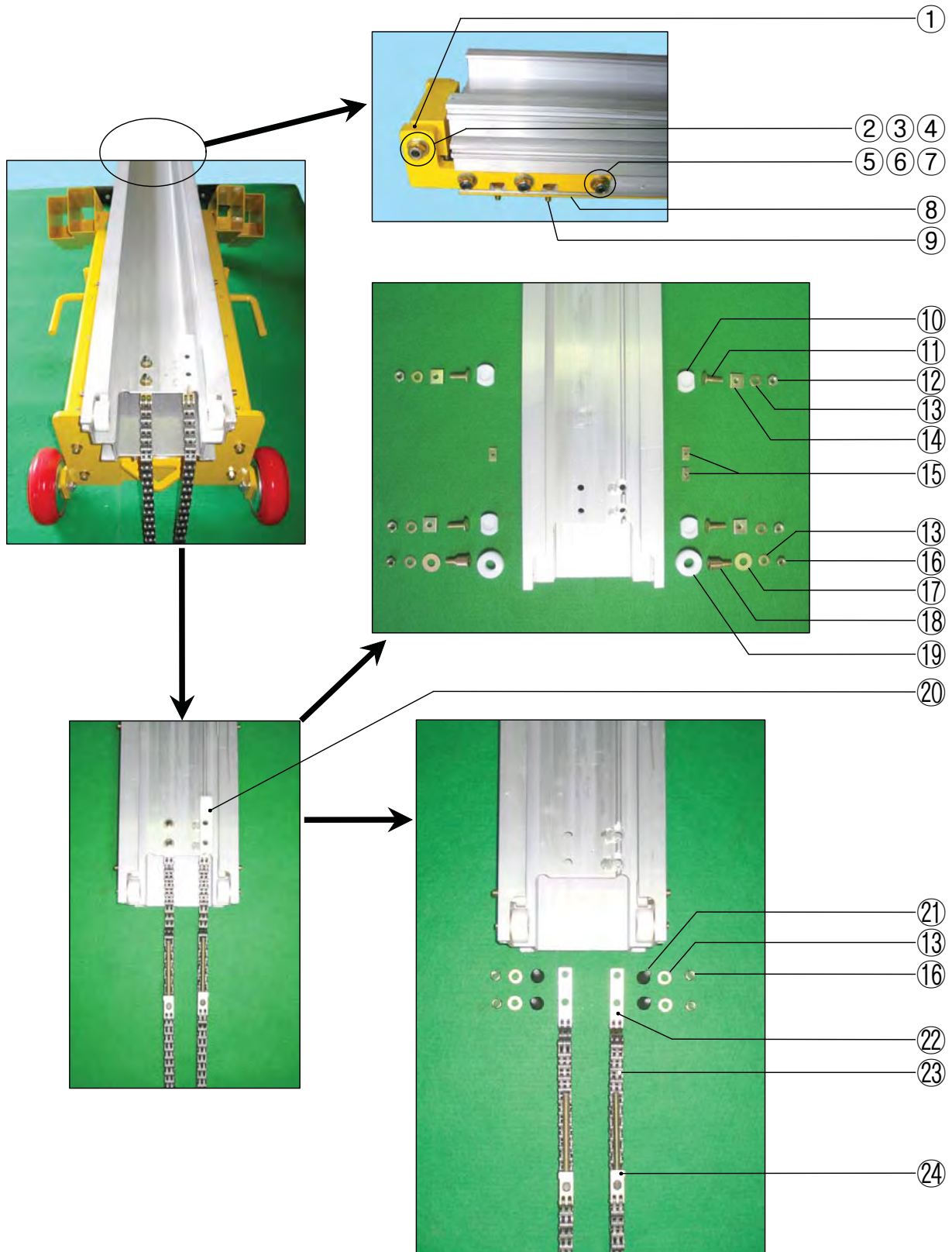


Figure 5-1

Index	Part No.	Description	Quantity This Figure
—	M1001	Column - Number 1, ULE15~ULE38	1
—	M1002	Column - Number 1, ULE40	1
1	M1064	Plate - Cylinder Mount	2
2	B2025	Screw - Wrench, M16x200	1
3	B2058	Washer - Flat, M16x32x2.3T	2
4	B2048	Nut - Nylock, M16	1
5	B2024	Screw - Wrench, M14x200	3
6	B2057	Washer - Flat, M14x32x2.3T	6
7	B2047	Nut - Nylock, M14	3
8	M1015	Plate - Number 1 Column, ULE15~ULE38	1
	M1016	Plate - Number 1 Column, ULE40	1
9	B2006	Screw - HHC, M10x30	4
10	M1061	Pad - Adjustable Guide	4
11	M1062	Bolt - Adjustable Guide Pad	4
12	B2038	Nut - M10	4
13	B2054	Washer - Flat, M10x21x2T(KS)	6
14	M1063	Nut - Lock, Adjustable Guide Pad	4
15	M1059	Nut - Square, M6x22.5x13x4T	3
16	B2044	Nut - Nylock, M10x14	2
17	B2056	Washer - Flat, M12x32x2.3T	2
18	M1046	Bolt - Roller	2
19	M1031	Roller - Plastic	2
20	M1036	Block - Slide Upper 1, Nylatron	1
21	B2029	Screw - Wrench, Dish-Head, M10x60	4
22	M1027	Chain Terminal - Upper, Number 1 Column	2
23	M1023	Chain - ULE15~ULE38	2
	M1024	Chain - ULE40	2
	M1017	Chain Assembly - Number 1 Column, ULE15~ULE38	2
	M1018	Chain Assembly - Number 1 Column, ULE40	2
	M1030	Pin - Grooved	4

Figure 5-1

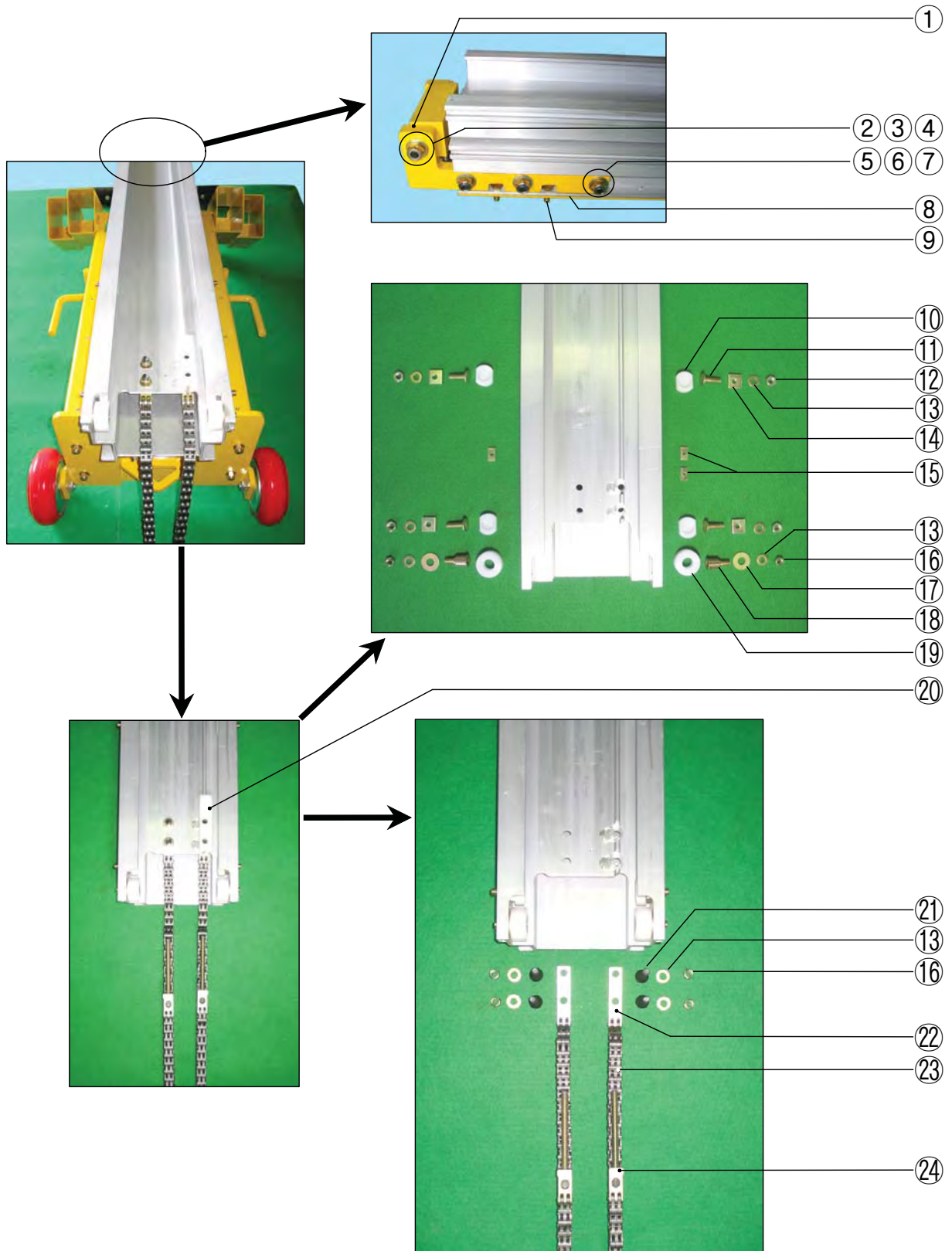


Figure 5-1

Index	Part No.	Description	Quantity This Figure
24	M1028	Chain Terminal - Lower	..... 2

Figure 5-2

Number 2 Column Assembly, All Models

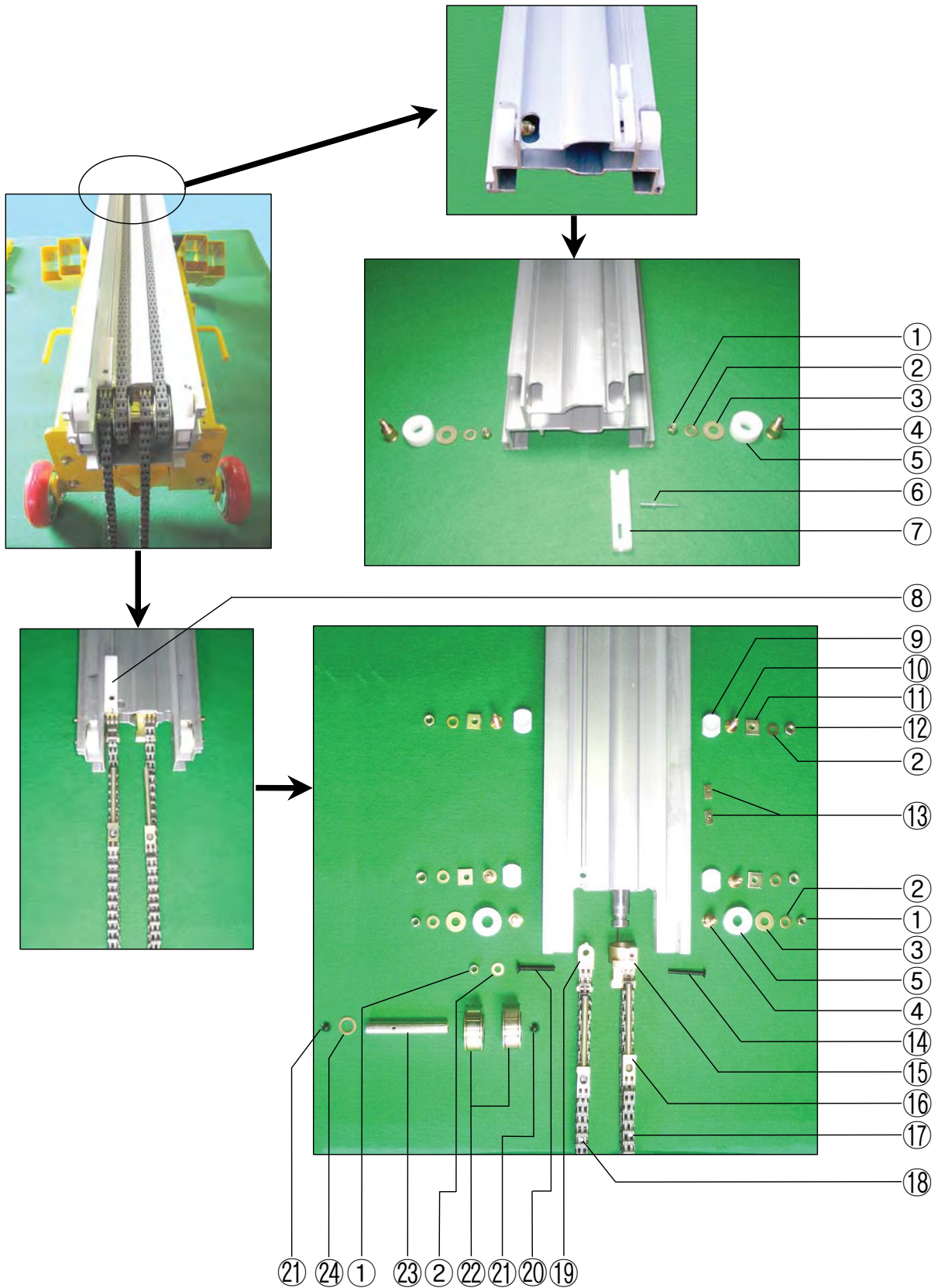


Figure 5-2

Index	Part No.	Description	Quantity This Figure
—	M1003	Column - Number 2, ULE15~ULE38	1
—	M1004	Column - Number 2, ULE40	1
1	B2044	Nut - Nylock, M10x14	5
2	B2054	Washer - Flat, M10x21x2T(KS)	9
3	B2056	Washer - Flat, M12x32x2.3T	4
4	M1046	Bolt - Roller	4
5	M1031	Roller - Plastic	4
6	M2062	Rivet - Aluminum, 4.8x16	1
7	M1039	Block - Slide Lower 1, Nylatron	1
8	M1037	Block - Slide Upper 2, Nylatron	1
9	M1061	Pad - Adjustable Guide	1
10	M1062	Bolt - Adjustable Guide Pad	1
11	M1063	Nut - Lock, Adjustable Guide Pad	1
12	B2038	Nut - M10	1
13	M1059	Nut - Square, M6x22.5x13x4T	2
14	B2026	Screw - Wrench, Dish-Head, M8x60	1
15	M1025	Chain Terminal - Clevis, Cylinder	1
16	M1028	Chain Terminal - Lower	2
17	M1023	Chain - ULE15~ULE38	2
	M1024	Chain - ULE40	2
	M1019	Chain Assembly - Number 2 Column, ULE15~ULE38	1
	M1020	Chain Assembly - Number 2 Column, ULE40	1
18	M1021	Chain Assembly - ULE15~ULE38	1
	M1022	Chain Assembly - ULE40	1
19	M1026	Chain Terminal - Pulley Support	1
20	B2029	Screw - Wrench, Dish-Head, M10x60	1
21	B2027	Screw - Wrench, Dish-Head, M10x20	2
22	M1041	Idler Wheel - Chain	2
23	M1042	Axle - Idler Wheel	1
24	M1043	Shim - 21x35x1.2mm	1

Figure 5-3

Number 3 Column Assembly, All Models

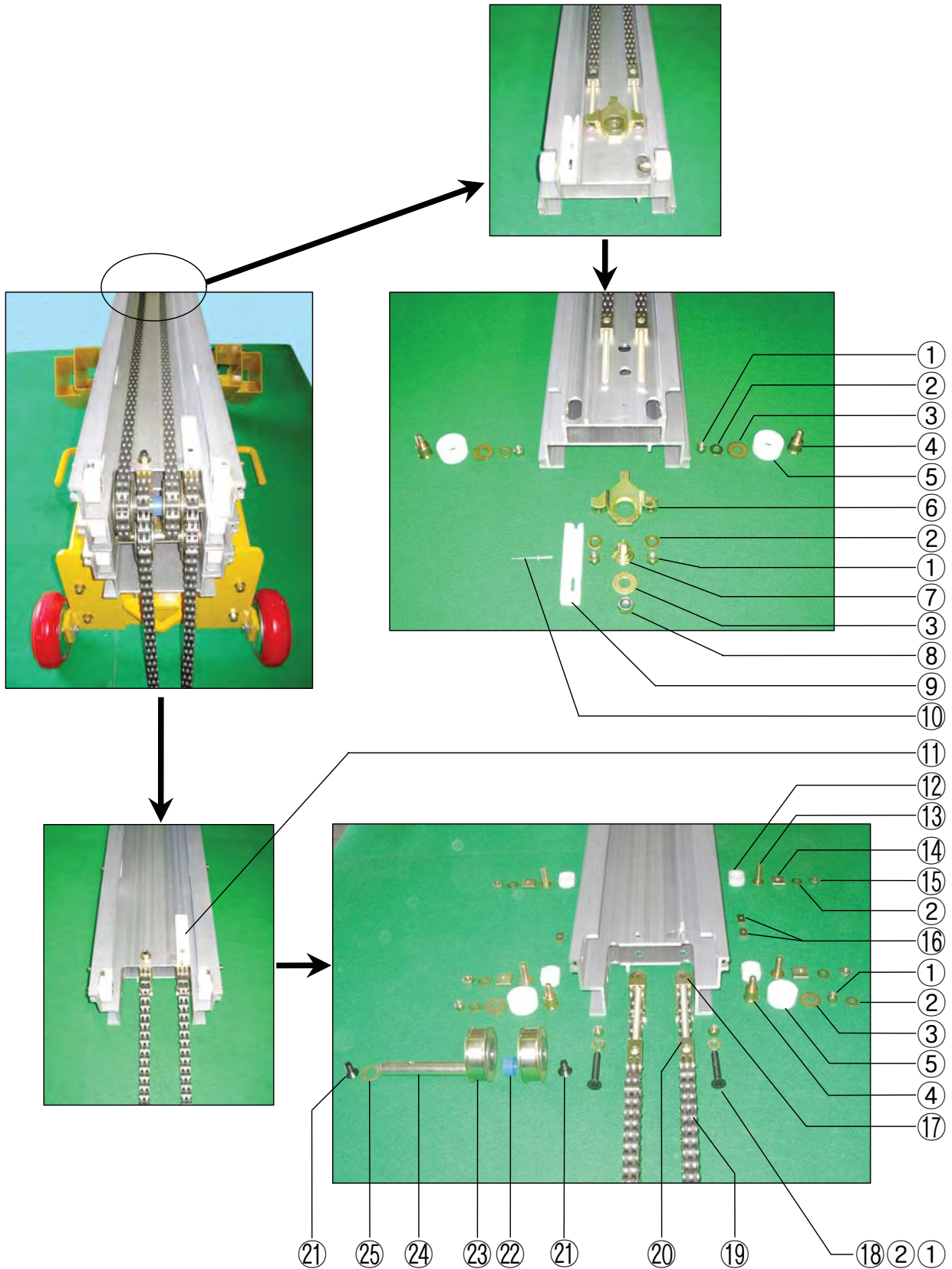


Figure 5-3

Index	Part No.	Description	Quantity	This Figure
—	M1005	Column - Number 3, ULE15~ULE38	.....	1
—	M1006	Column - Number 3, ULE40	.....	1
1	B2044	Nut - Nylock, M10x14	.....	8
2	B2054	Washer - Flat, M10x21x2T(KS)	.....	10
3	B2056	Washer - Flat, M12x32x2.3T	.....	4
4	M1046	Bolt - Roller	.....	4
5	M1031	Roller - Plastic	.....	4
6	M1029	Rocker - Chain Tension	.....	1
7	M1045	Bolt - Rocker	.....	1
8	B2046	Nut - Nylock, M12	.....	1
9	M1040	Block - Slide Lower 2, Nylatron	.....	1
10	B2062	Rivet - Aluminum, 4.8x16	.....	1
11	M1038	Block - Slide Upper 3, Nylatron	.....	1
12	M1061	Pad - Adjustable Guide	.....	1
13	M1062	Bolt - Adjustable Guide Pad	.....	1
14	M1063	Nut - Lock, Adjustable Guide Pad	.....	1
15	B2038	Nut - M10	.....	1
16	M1059	Nut - Square, M6x22.5x13x4T	.....	2
17	M1026	Chain Terminal - Pulley Support	.....	2
18	B2029	Screw - Wrench, Dish-Head, M10x60	.....	2
19	M1021	Chain Assembly - ULE15~ULE38	.....	2
	M1022	Chain Assembly - ULE40	.....	2
	M1023	Chain - ULE15~ULE38	.....	2
	M1024	Chain - ULE40	.....	2
	M1030	Pin - Grooved	.....	4
20	M1028	Chain Terminal - Lower	.....	2
21	B2027	Screw - Wrench, Dish-Head, M10x20	.....	2
22	M1065	Spacer 1 - Idler Wheel	.....	1
23	M1041	Idler Wheel - Chain	.....	2

Figure 5-3

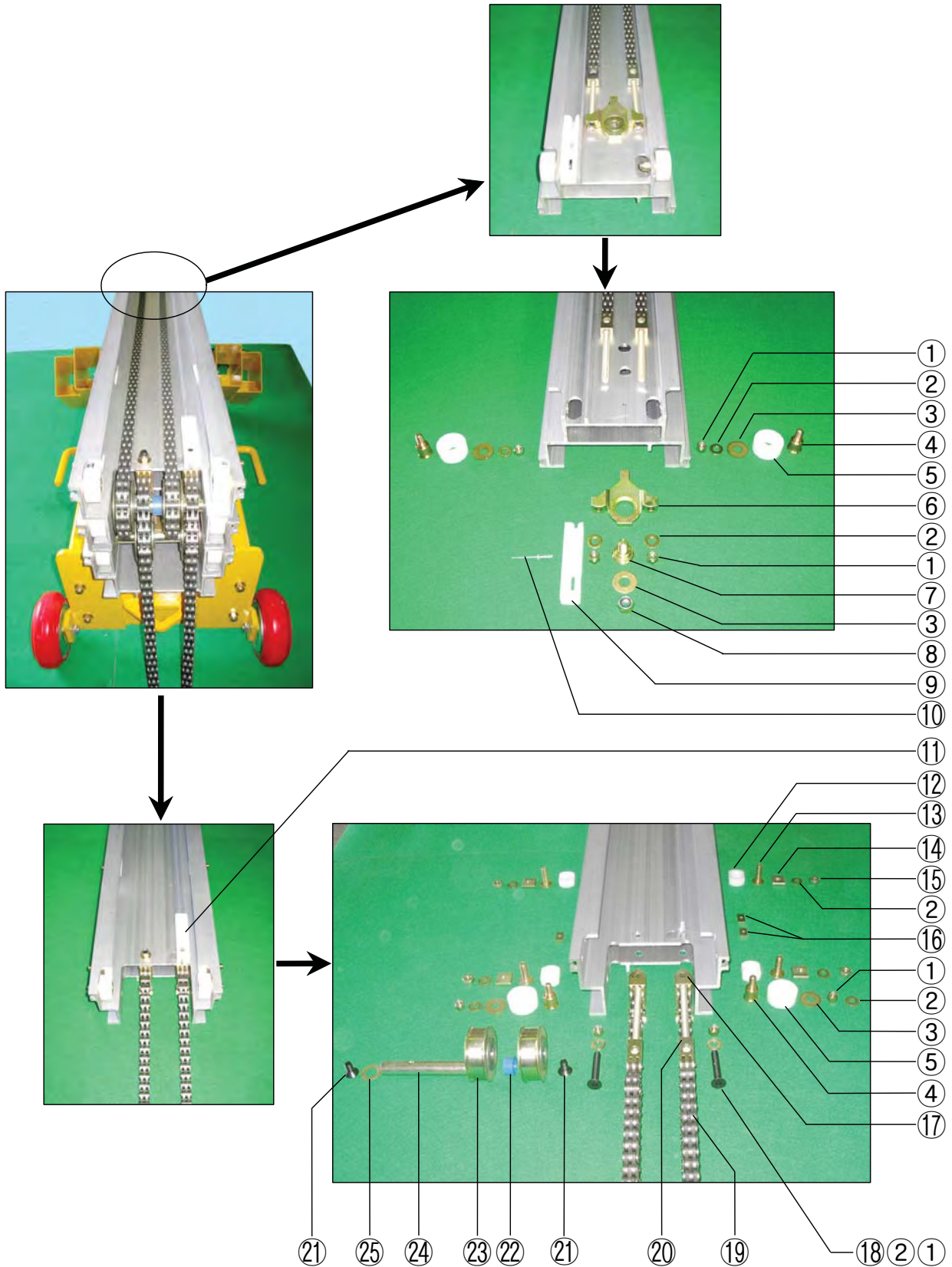


Figure 5-3

Index	Part No.	Description	Quantity This Figure
24	M1042	Axle - Idler Wheel	..... 1
25	M1043	Shim - 21x35x1.2mm	..... 1

Figure 5-4

Number 4 Column Assembly, All Models

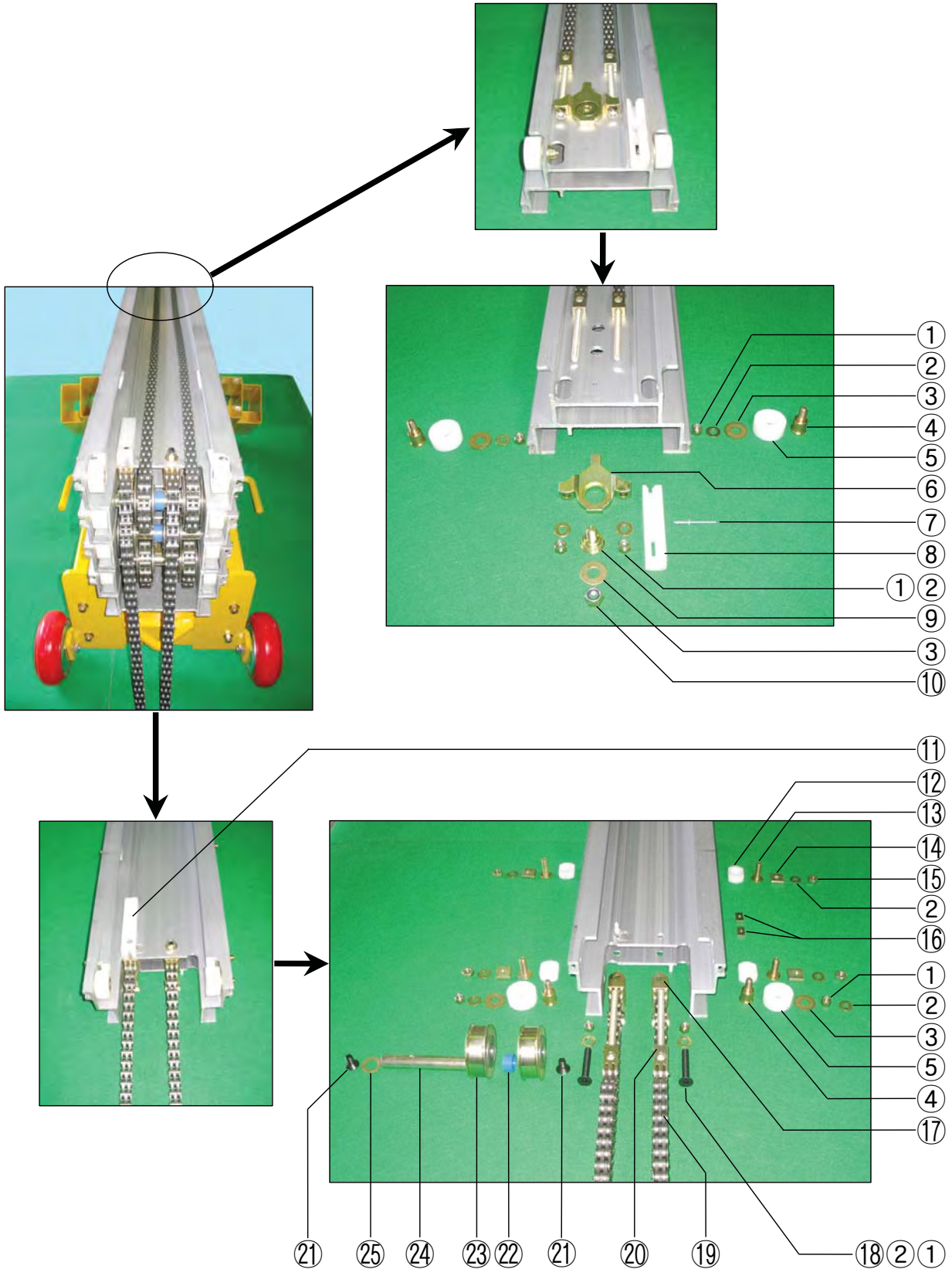


Figure 5-4

Index	Part No.	Description	Quantity This Figure
—	M1007	Column - Number 4, ULE15~ULE38	1
—	M1008	Column - Number 4, ULE40	1
1	B2044	Nut - Nylock, M10x14	8
2	B2054	Washer - Flat, M10x21x2T(KS)	10
3	B2056	Washer - Flat, M12x23x2.3T	4
4	M1046	Bolt - Roller	4
5	M1031	Roller - Plastic	4
6	M1029	Rocker - Chain Tension	1
7	B2062	Rivet - Aluminum, 4.8x16	1
8	M1039	Block - Slide Lower 1, Nylatron	1
9	M1045	Bolt - Rocker	1
10	B2046	Nut - Nylock, M12	1
11	M1037	Block - Slide Upper 2, Nylatron	1
12	M1061	Pad - Adjustable Guide	1
13	M1062	Bolt - Adjustable Guide Pad	1
14	M1063	Nut - Lock, Adjustable Guide Pad	1
15	B2038	Nut - M10	1
16	M1059	Nut - Square, M6x22.5x13.4T	2
17	M1026	Chain Terminal - Pulley Support	2
18	B2029	Screw - Wrench, Dish-Head, M10x60	2
19	M1021	Chain Assembly - ULE15~ULE38	2
	M1022	Chain Assembly - ULE40	2
	M1023	Chain - ULE15~ULE38	2
	M1024	Chain - ULE40	2
	M1030	Pin - Grooved	4
20	M1028	Chain Terminal - Lower	2
21	B2027	Screw - Wrench, Dish-Head, M10x20	2
22	M1065	Spacer 1 - Idler Wheel	1
23	M1041	Idler Wheel - Chain	2

Figure 5-4

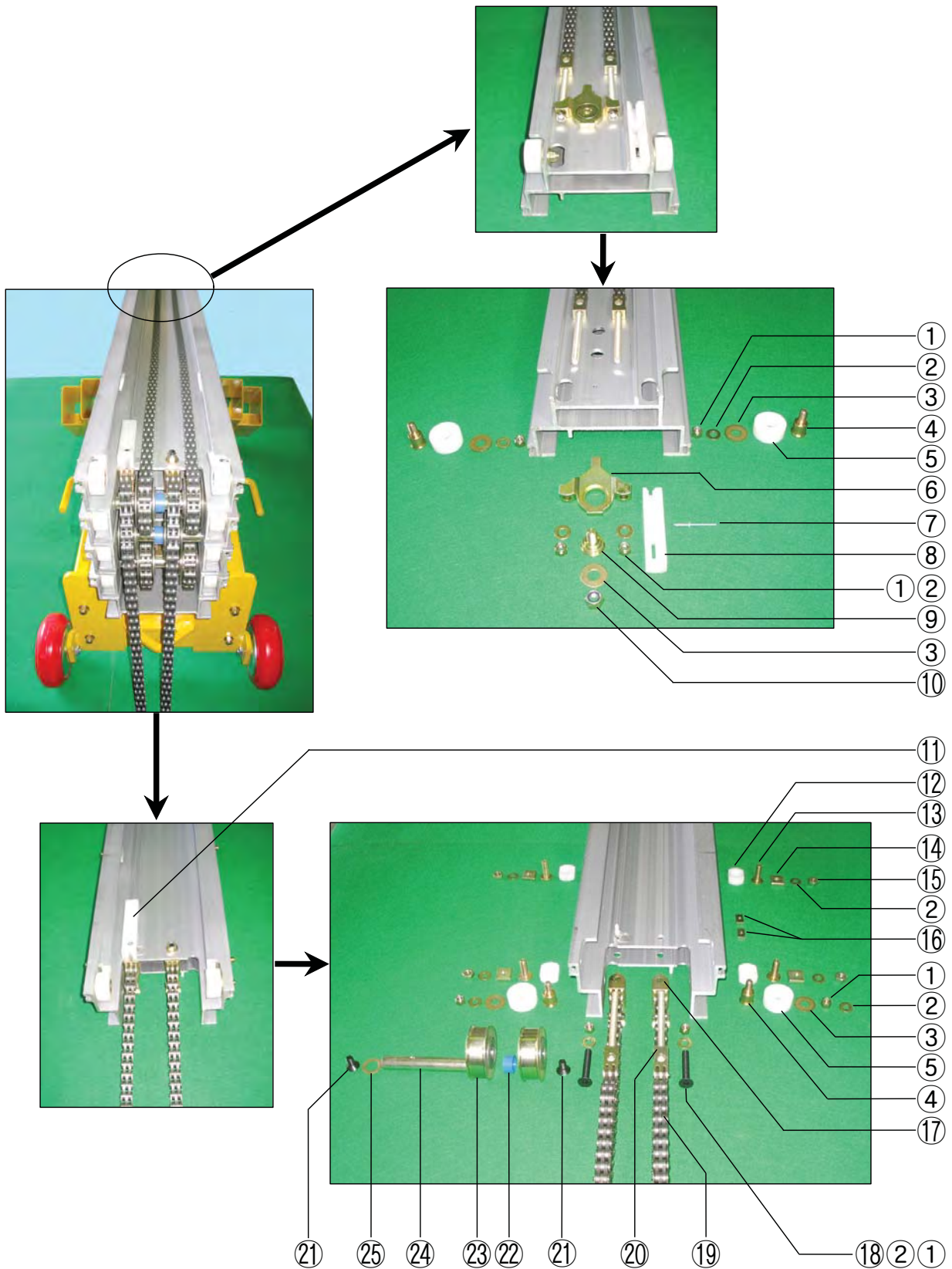


Figure 5-4

Index	Part No.	Description	Quantity This Figure
24	M1042	Axle - Idler Wheel	..... 1
25	M1043	Shim - 21x35x1.2mm	..... 1

Figure 5-5

The Last Column Assembly, All Models

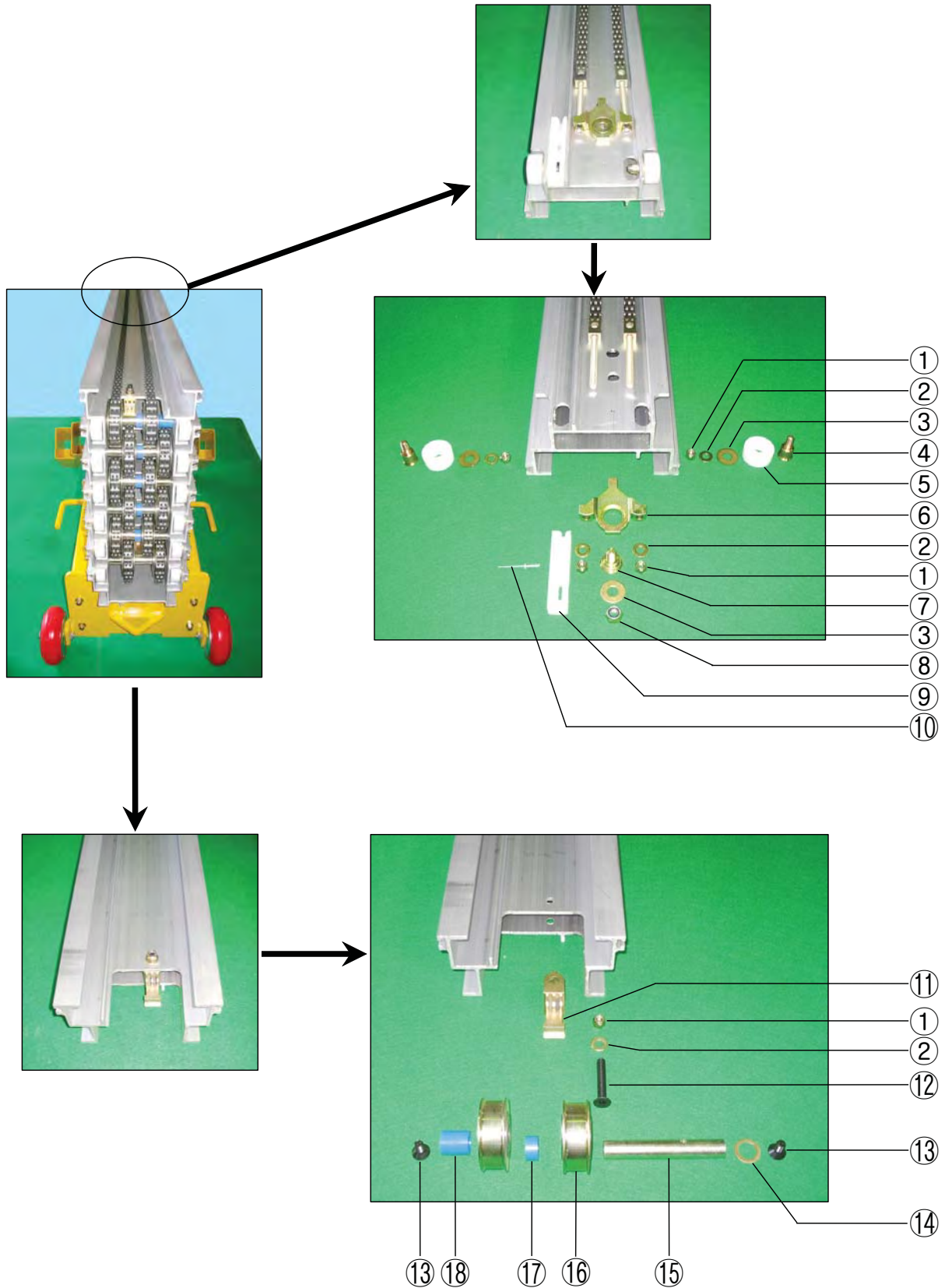


Figure 5-5

Index	Part No.	Description	Quantity This Figure
—	M1009	Column - The Last, ULE15/25/35	1
—	M1010	Column - The Last, ULE20/30/38	1
—	M1012	Column - The Last, ULE40	1
1	B2044	Nut - Nylock, M10x14	8
2	B2054	Washer - Flat, M10x21x2T(KS)	10
3	B2056	Washer - Flat, M12x32x2.3T	4
4	M1046	Bolt - Roller	4
5	M1031	Roller - Plastic	4
6	M1029	Rocker - Chain Tension	1
7	M1045	Bolt - Rocker	1
8	B2046	Nut - Nylock, M12	1
9	M1040	Block - Slide Lower 2, Nylatron	1
10	B2062	Rivet - Aluminum, 4.8x16	1
11	M1026	Chain Terminal - Pulley Support	1
12	B2029	Screw - Wrench, Dish-Head, M10x60	1
13	B2027	Screw - Wrench, Dish-Head, M10x20	2
14	M1043	Shim - 21x35x1.2mm	1
15	M1042	Axle - Idler Wheel	1
16	M1041	Idler Wheel - Chain	2
17	M1065	Spacer 1 - Idler Wheel	1
18	M1066	Spacer 2 - Idler Wheel	1

Figure 5-6

Platform Column Assembly, All Models

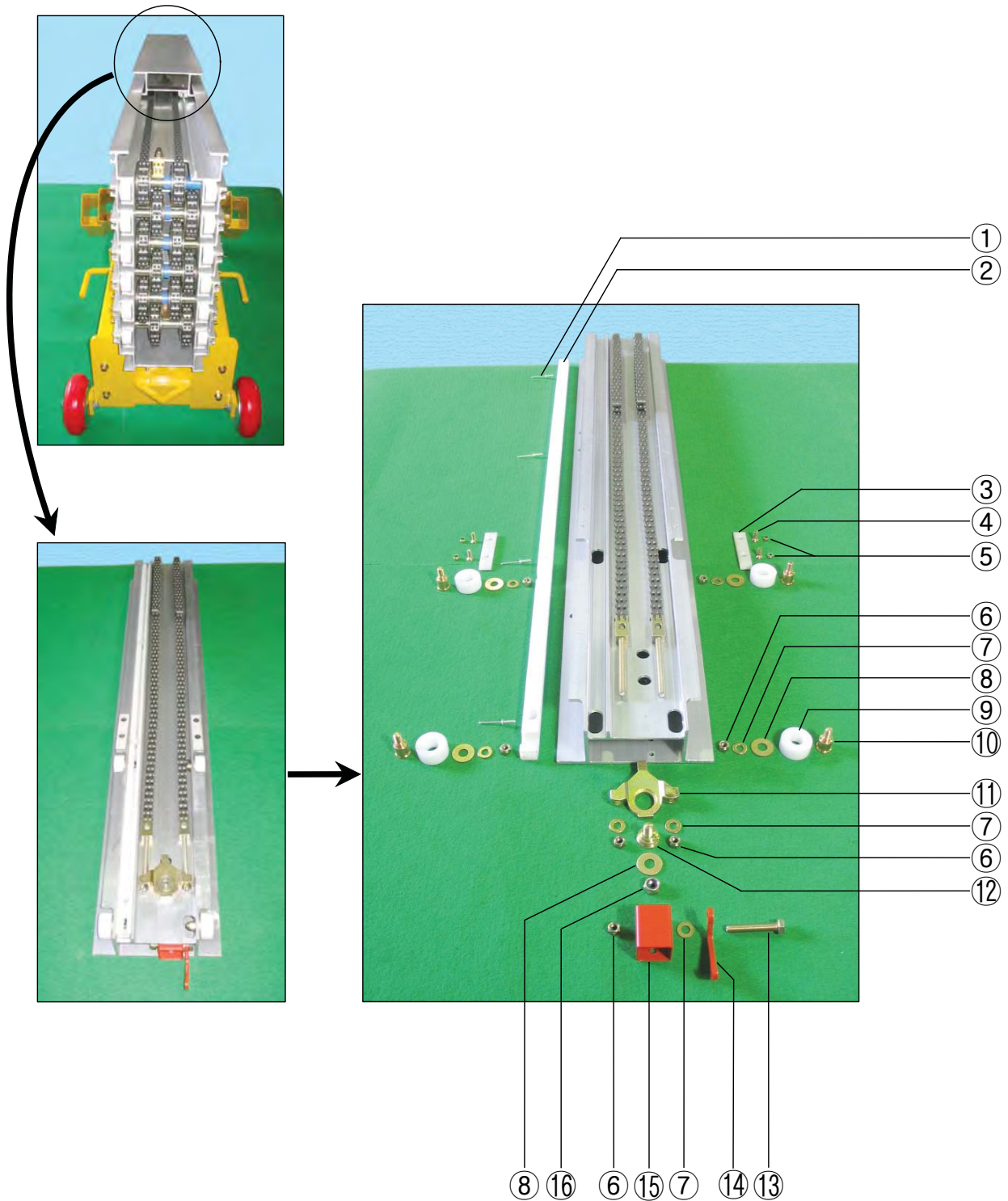


Figure 5-6

Index	Part No.	Description	Quantity This Figure
—	M1013	Column - Platform, ULE15/25/35	..... 1
—	M1014	Column - Platform, ULE20/30/38/40	..... 1
1	B2062	Rivet - Aluminum, 4.8x16	..... 4
2	M1034	Block - Slide, Carriage	..... 1
3	M1035	Shim - Carriage	..... 2
4	B2034	Screw - FHM, M6x15	..... 4
5	B2042	Nut - Nylock, M6	..... 4
6	B2044	Nut - Nylock, M10x14	..... 6
7	B2054	Washer - Flat, M10x21x2T(KS)	..... 6
8	B2056	Washer - Flat, M12x32x2.3T	..... 4
9	M1031	Roller - Plastic	..... 4
10	M1046	Bolt - Roller	..... 4
11	M1029	Rocker - Chain Tension	..... 1
12	M1045	Bolt - Rocker	..... 1
13	B2010	Screw - HHC, M10x60	..... 1
14	M1033	Hold-down Hook	..... 1
15	M1032	Tube - Hold-down Hook	..... 1
16	B2046	Nut - Nylock, M12	..... 1

Figure 5-7
Sequencing Cable Assemblies, All Models

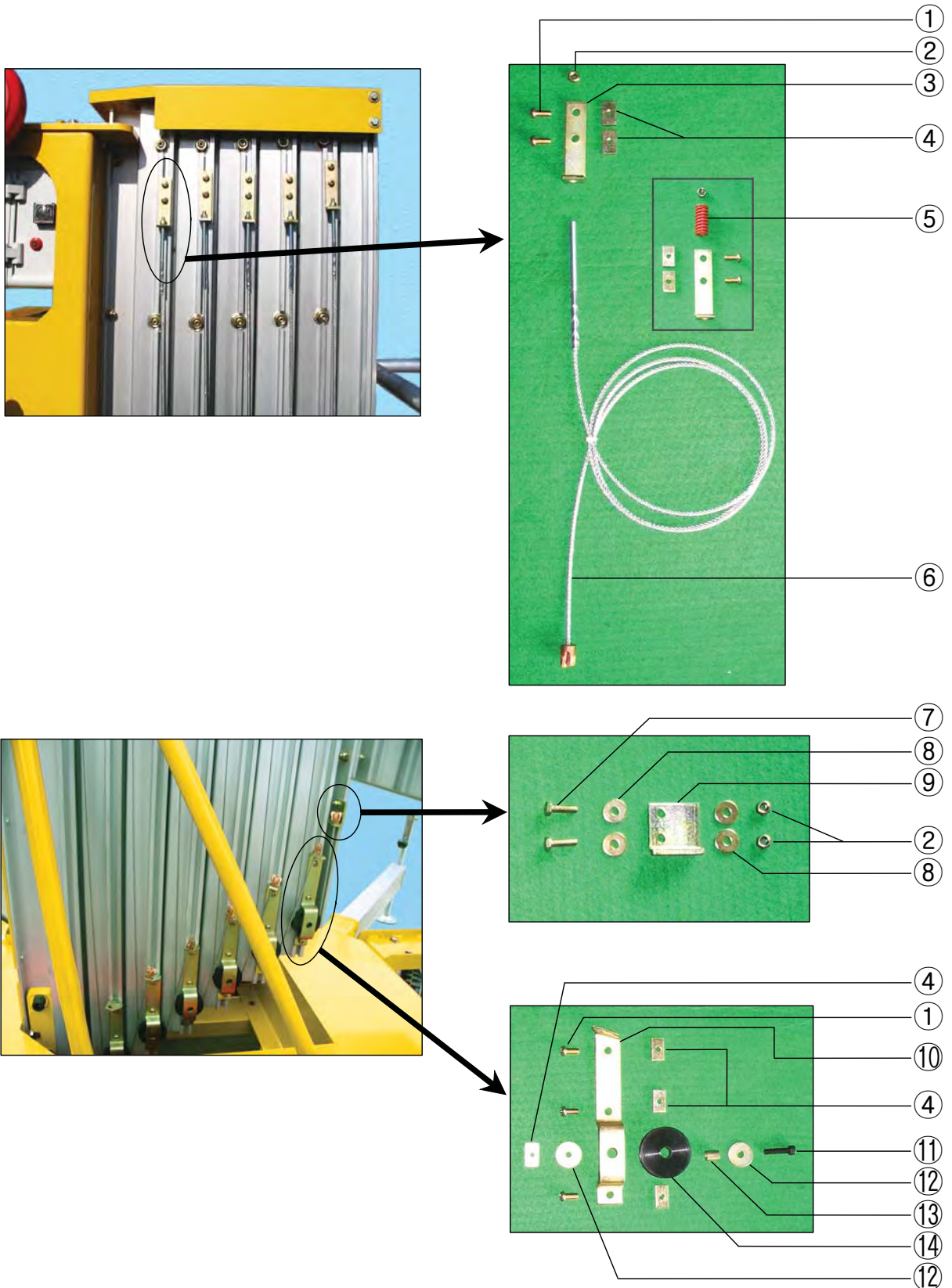


Figure 5-7

Index	Part No.	Description	Quantity This Figure
1	B2033	Screw - PHM, M6x14	5
2	B2042	Nut - Nylock, M6	1
3	M1048	Bracket - Sequencing, Upper	1
4	M1059	Nut - Square, M6x22.5x13x4T	6
5	M1060	Spring - Sequencing, QU13/14	1
6	M1050	Sequencing Cable Assembly - ULE15~ULE38	1
	M1051	Sequencing Cable Assembly - ULE40	1
7	B2001	Screw - HHC, M6x20	2
8	B2050	Washer - Flat, M6x18x1.2T	4
9	M1049	Bracket - Sequencing, Carriage	1
10	M1047	Bracket - Sequencing	1
11	B2020	Screw - Wrench, M6x25	1
12	B2051	Washer - Flat, M6x25x1.5T	2
13	M1044	Spacer - Sequencing, Pulley	1
14	M1052	Pulley - Sequencing	1
-	M1069	Sequencing Cable Assembly set- ULE15~ULE38	1
-	M1070	Sequencing Cable Assembly set - Platform, ULE15~ULE38	1
-	M1071	Sequencing Cable Assembly set - ULE40	1
-	M1072	Sequencing Cable Assembly set - Platform, ULE40	1

Section Six

Platform Components

Figure 6-1

Platform Assembly, All Models

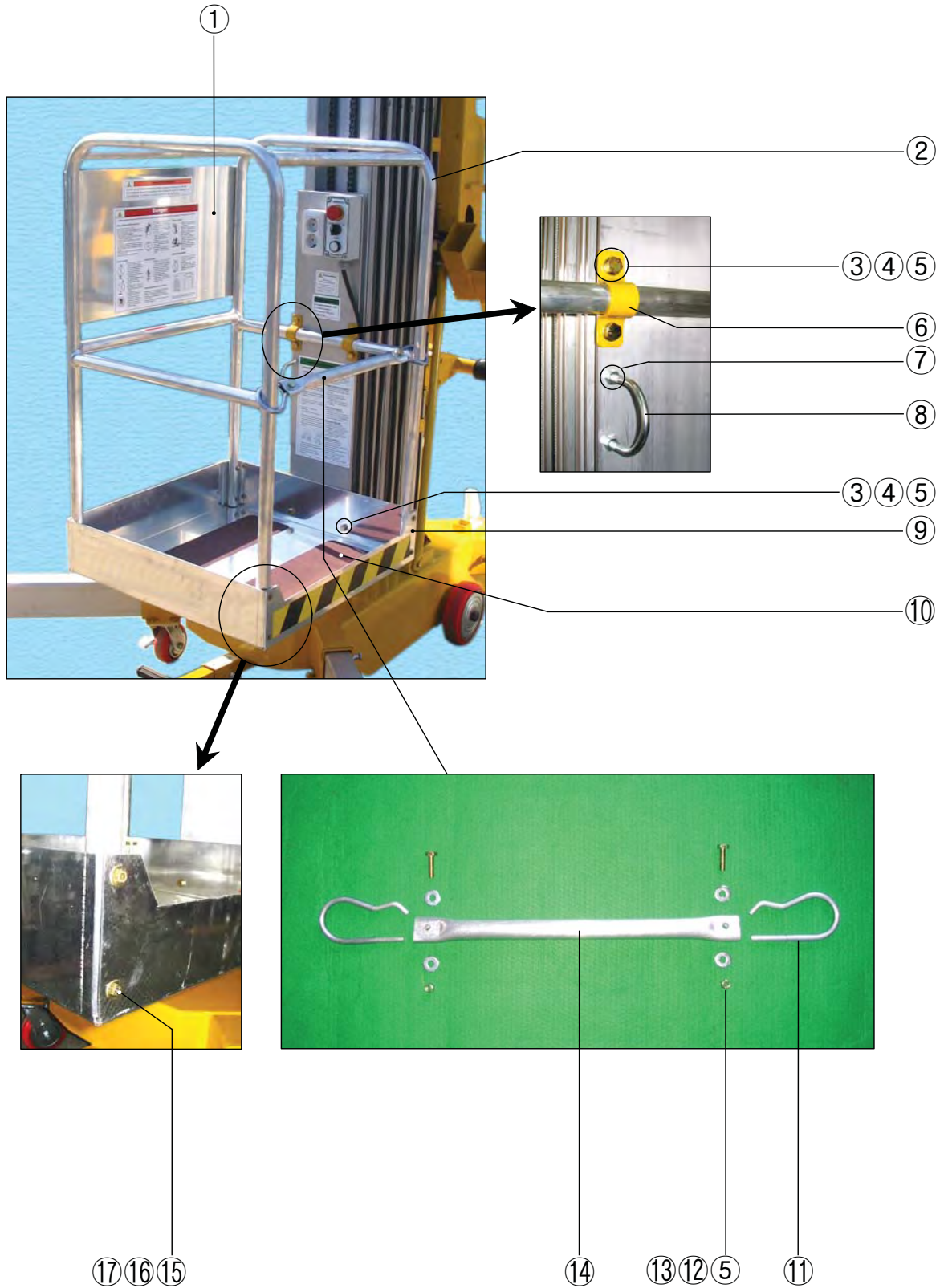


Figure 6-1

Index	Part No.	Description	Quantity This Figure
—	F1001	Platform Assembly with Decals - Standard	1
—	F1002	Platform Assembly with Decals - Narrow	1
1	F1011	Plate with Decals	1
	B2063	Rivet - Aluminum, 4.8x20	6
2	F1003	Railing Assembly - Standard	1
	F1004	Railing Assembly - Narrow	1
3	B2005	Screw - HHC, M10x25	6
4	B2054	Washer - Flat, M10x21x2T(KS)	12
5	B2044	Nut - Nylock, M10x14	6
6	F1010	Clamp - Platform Mount	2
7	B2039	Nut - M10(3/8)	4
8	F1012	Safety Ring	1
9	F1005	Toeboard - Standard	1
	F1006	Toeboard - Narrow	1
10	F1009	Sandpaper	2
11	F1013	Guide Ring with Hose - Platform Gate	2
12	B2055	Washer - Flat, M10x25x3T	4
13	B2007	Screw - HHC, M10x35	2
14	F1014	Gate Tube - Standard	1
	F1015	Gate Tube - Narrow	1
	F1007	Gate Assembly - Standard	1
	F1008	Gate Assembly - Narrow	1
15	B2003	Screw - HHC, M6x50	8
16	B2050	Washer - Flat, M6x18x1.2T	16
17	B2042	Nut - Nylock, M6	8

Figure 6-2

Platform Controls, All Models

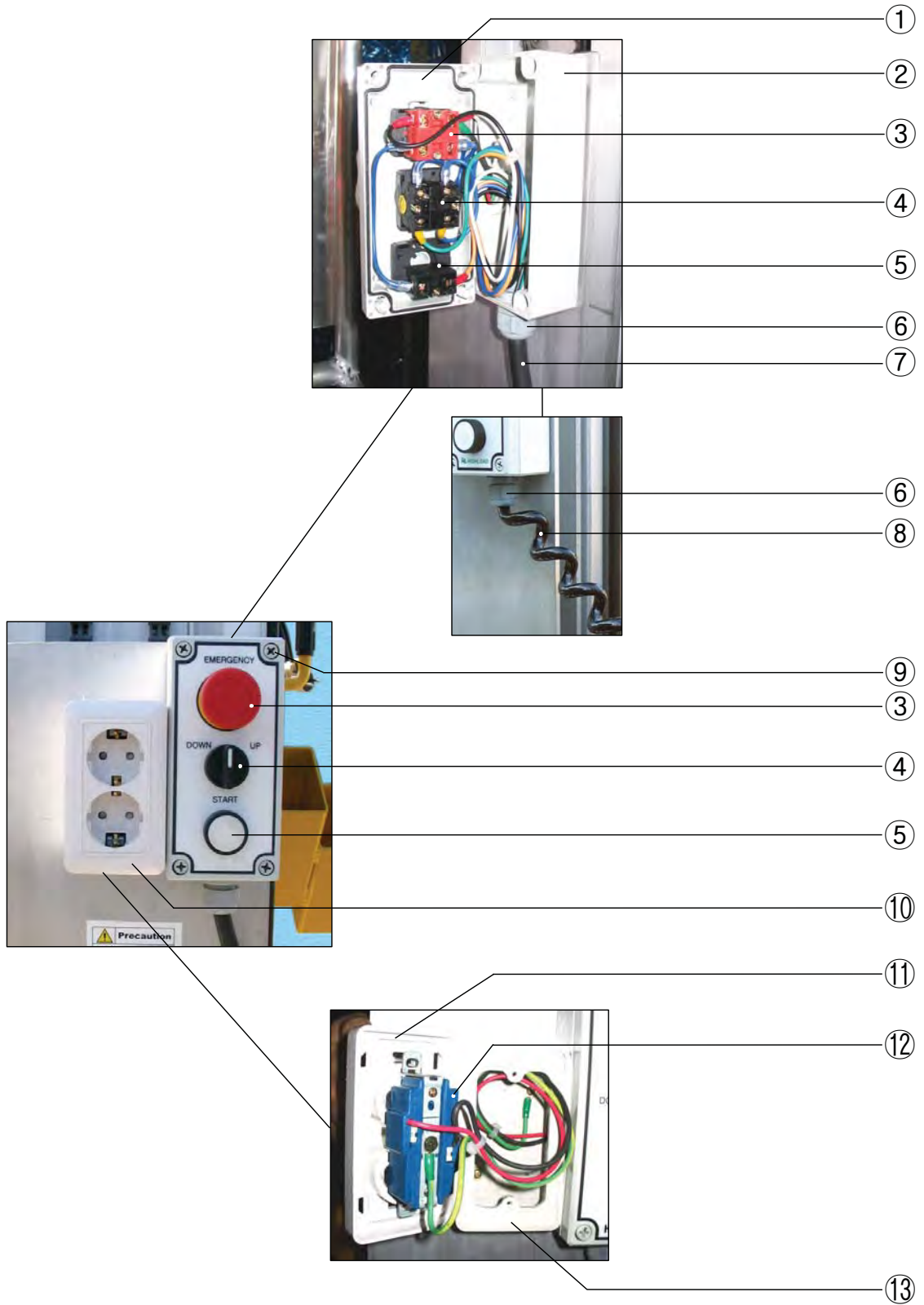


Figure 6-2

Index	Part No.	Description	Quantity	This Figure
—	E1020	Platform Controls	.....	1
1	E1093	Cover - Platform Controls	.....	1
2	E1094	Box - Platform Controls	.....	1
3	E1011	Stop Button with Contact	.....	1
	E1012	Stop Button - Red Mushroom Head	.....	1
	E1018	Contact - Stop Button	.....	1
4	E1021	Select Switch with Contact - Platform Controls	.....	1
	E1091	Select Switch - Platform Controls	.....	1
	E1092	Contact - Select Switch	.....	1
5	E1013	Push Button with Contact	.....	1
	E1014	Push Button	.....	1
	E1019	Contact - Push Button	.....	1
6	E1072-1	Connector - Squeeze	.....	1
7	E1062	Power Cable Assembly - Ground Controls to Platform, ULE15	.....	1
	E1063	Power Cable Assembly - Ground Controls to Platform, ULE20	.....	1
	E1064	Power Cable Assembly - Ground Controls to Platform, ULE25	.....	1
	E1065	Power Cable Assembly - Ground Controls to Platform, ULE30	.....	1
	E1066	Power Cable Assembly - Ground Controls to Platform, ULE35	.....	1
	E1067	Power Cable Assembly - Ground Controls to Platform, ULE38	.....	1
	E1068	Power Cable Assembly - Ground Controls to Platform, ULE40	.....	1
8	E1070	Spring Cable Assembly - Tension, ULE15/25/35	.....	1
9	B2036	Screw - Plastic, Platform Controls	.....	4
10	E1022	Outlet Assembly - Standard, 220V 50~60Hz	.....	1
	E1023	Outlet Assembly - Japan Type, 100V 50~60Hz	.....	1
11	E1026	Cover - Outlet, Standard	.....	1
	E1095	Cover - Outlet, Japan Type	.....	1
12	E1025	Receptacle - Outlet, Standard	.....	1
	E1096	Receptacle - Outlet, Japan Type	1
13	E1097	Box - Outlet, Standard	1
	E1098	Box - Outlet, Japan Type	1

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