

SPM15-BPT-002-1_EN



Parts & Components Manual

SPM15 Semi-electric Stacker

Date: 2012.08

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Fig.1 Portable Double Mast

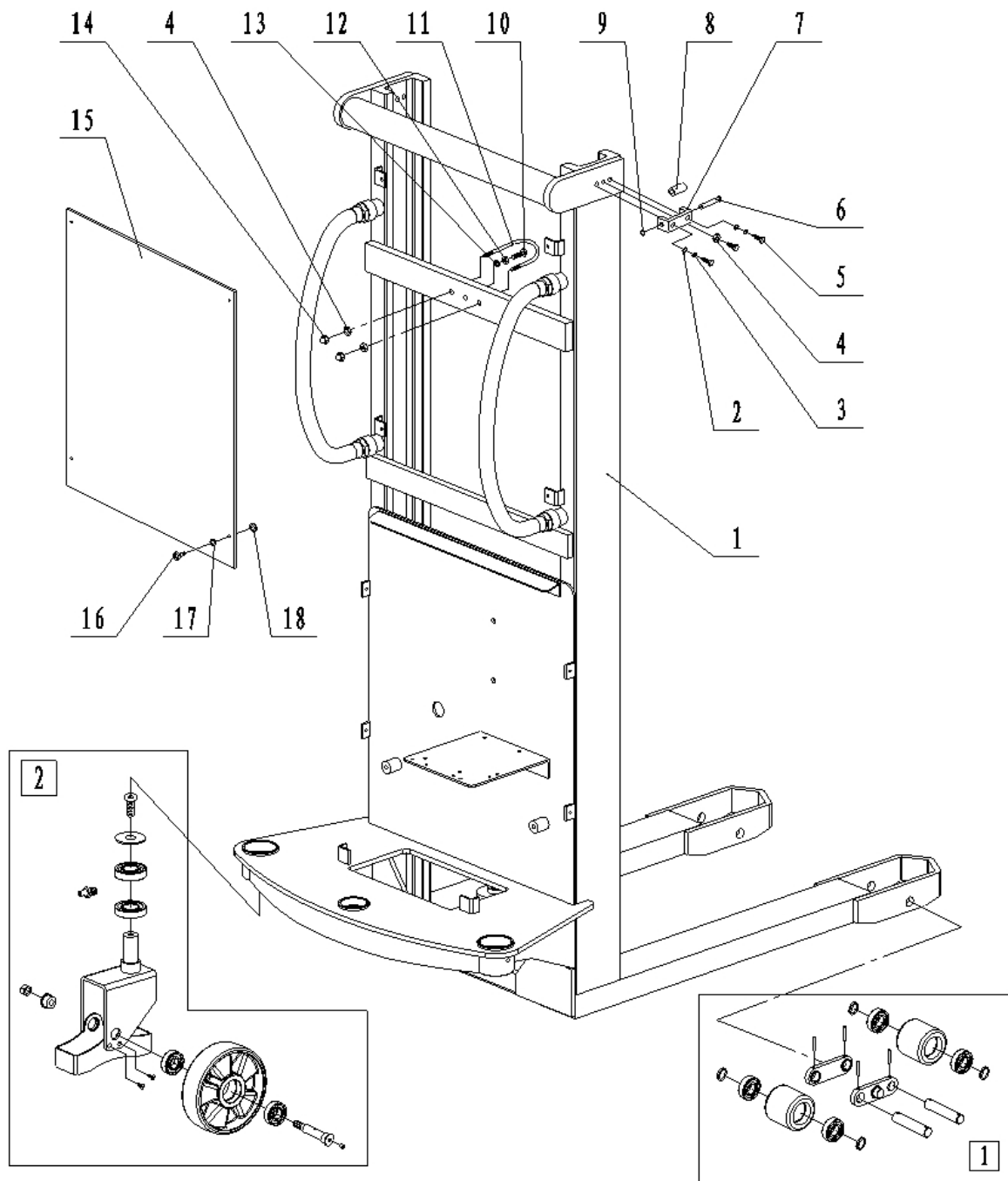


Fig.1 Parts List of Portable Double Mast

No.	Code number	Item	Quantity	Remarks
1	2530501023	Mast	1	2500
	2530501024			3000
	2530501025			3500
2	0000025005	Flat washer 8	4	
3	0000025004	Spring washer 8	4	
4	0000024086	Hex nut M8	4	
5	0000023487	Screw M8x35	6	
6	2500507003	Hinge pin	2	
7	2530504007	Wheel seat	2	
8	2530511004	Guide wheel	2	
9	0000026034	Circlip for shaft12	2	
10	0000023495	Bolt M10x40	1	
11	2530202002	Cylinder hoop	1	
12	0000024091	Hex nut M10	1	
13	0000025065	Spring washer 10	1	
14	0000024092	Cap nut M8	2	
15	2530503006	Protection plate	1	2500
	2530503007			3000
	2530503010			3500
16	0000023488	Screw M6x16	4	
17	0000025007	Flat washer 6	4	
18	2210618001	Rubber cushion	4	
□, 1	2500500009	Front wheel assembly	2	
□, 2	2500500007	Big wheel assembly	1	

Fig.2 Stationary Double Mast

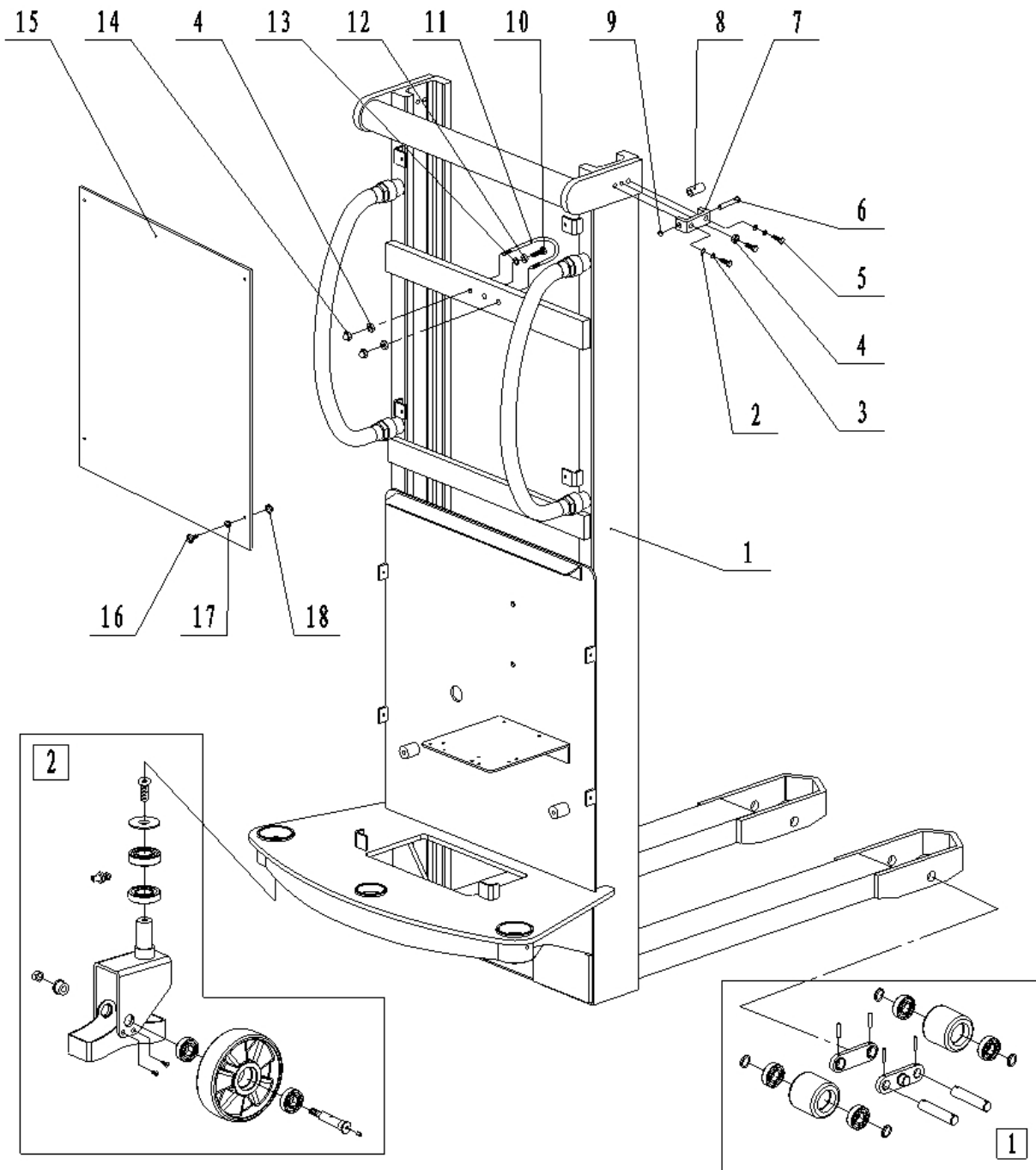


Fig.2 Parts List of Stationary Double Mast

No.	Code number	Item	Quantity	Remarks
1	2530501017	Mast	1	2500
	2530501041			
	2530501018			3000
	2530501042			
	2530501019			3500
	2530501043			
2	0000025005	Flat washer 8	4	
3	0000025004	Spring washer 8	4	
4	0000024086	Hex nut M8	4	
5	0000023487	Screw M8x35	6	
6	2500507003	Hinge pin	2	
7	2530504007	Wheel seat	2	
8	2530511004	Guide wheel	2	
9	0000026034	Circlip for shaft 12	2	
10	0000023495	Bolt M10x40	1	
11	2530202002	Cylinder hoop	1	
12	0000024091	Hex nut M10	1	
13	0000025065	Spring washer 10	1	
14	0000024092	Cap nut M8	2	
15	2530503003	Protection plate	1	2500
	2530503004			3000
	2530503009			3500
16	0000023488	Screw M6x16	4	
17	0000025007	Flat washer 6	4	
18	2210618001	Rubber cushion	4	
<input type="checkbox"/> , 1	2500500009	Front wheel assembly	2	
<input type="checkbox"/> , 2	2500500007	Big wheel assembly	1	

Fig.3 All Free Lifting Mast

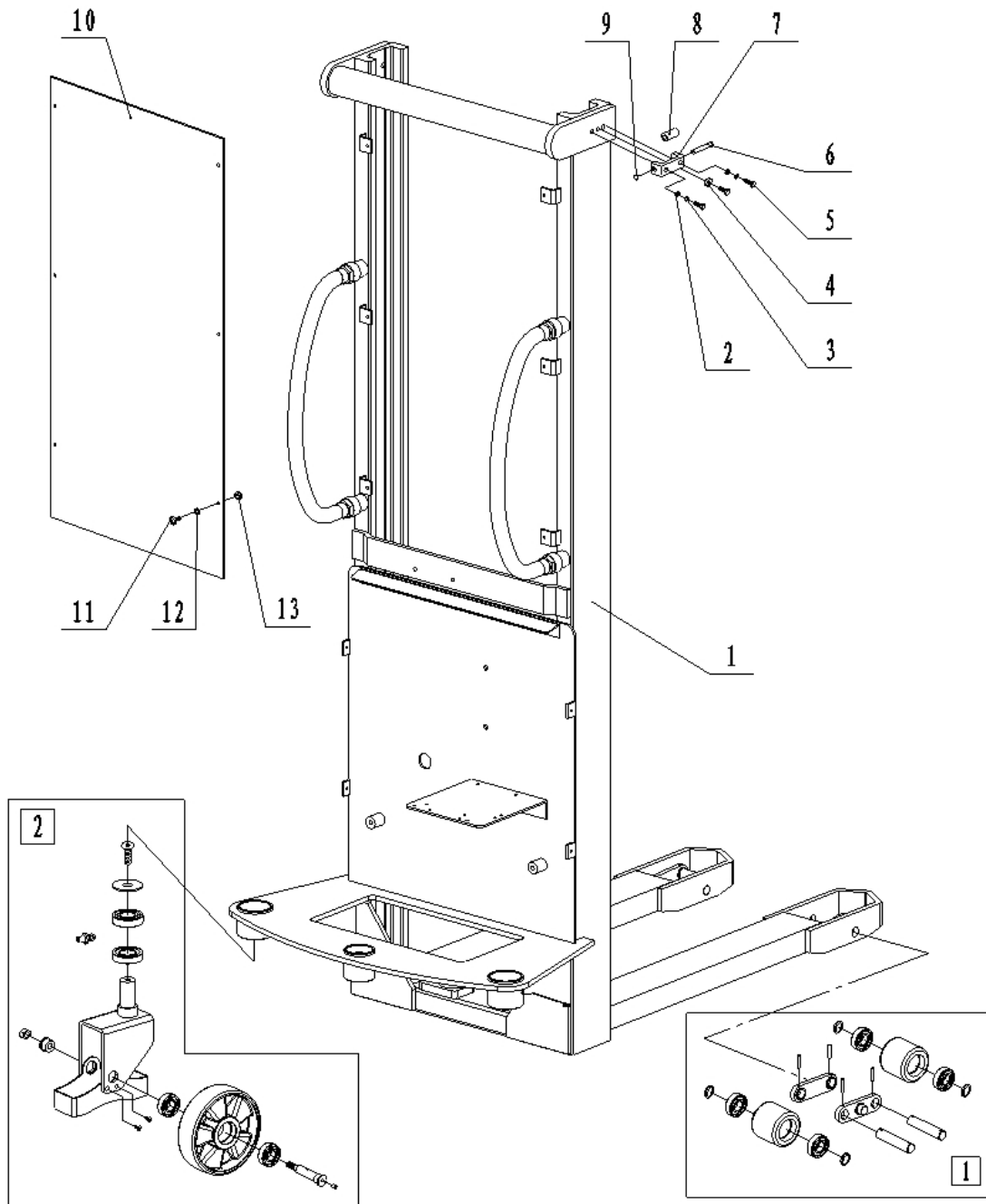


Fig. 3 Parts List of All Free Lifting Mast

No.	Code number	Item	Quantity	Remarks
1	2530501030	Mast(All free)	1	2900
	2530501045			2500
	2530501031			
	2530501046			
2	0000025005	Flat washer 8	4	
3	0000025004	Spring washer 8	4	
4	0000024086	Hex nut M8	4	
5	0000023487	Screw M8x35	6	
6	2500507003	Hinge pin	2	
7	2530504007	Wheel seat	2	
8	2530511004	Guide wheel	2	
9	0000026034	Circlip for shaft 12	2	
10	2530503004	Protection plate	1	2900
	2530503003			2500
11	0000023488	Screw M6x16	6	
12	0000025007	Flat washer 6	6	
13	2210618001	Rubber cushion	6	
<input type="checkbox"/> , 1	2500500009	Front wheel assembly	2	
<input type="checkbox"/> , 2	2500500007	Big wheel assembly	1	

Fig.4 Portable Single Mast

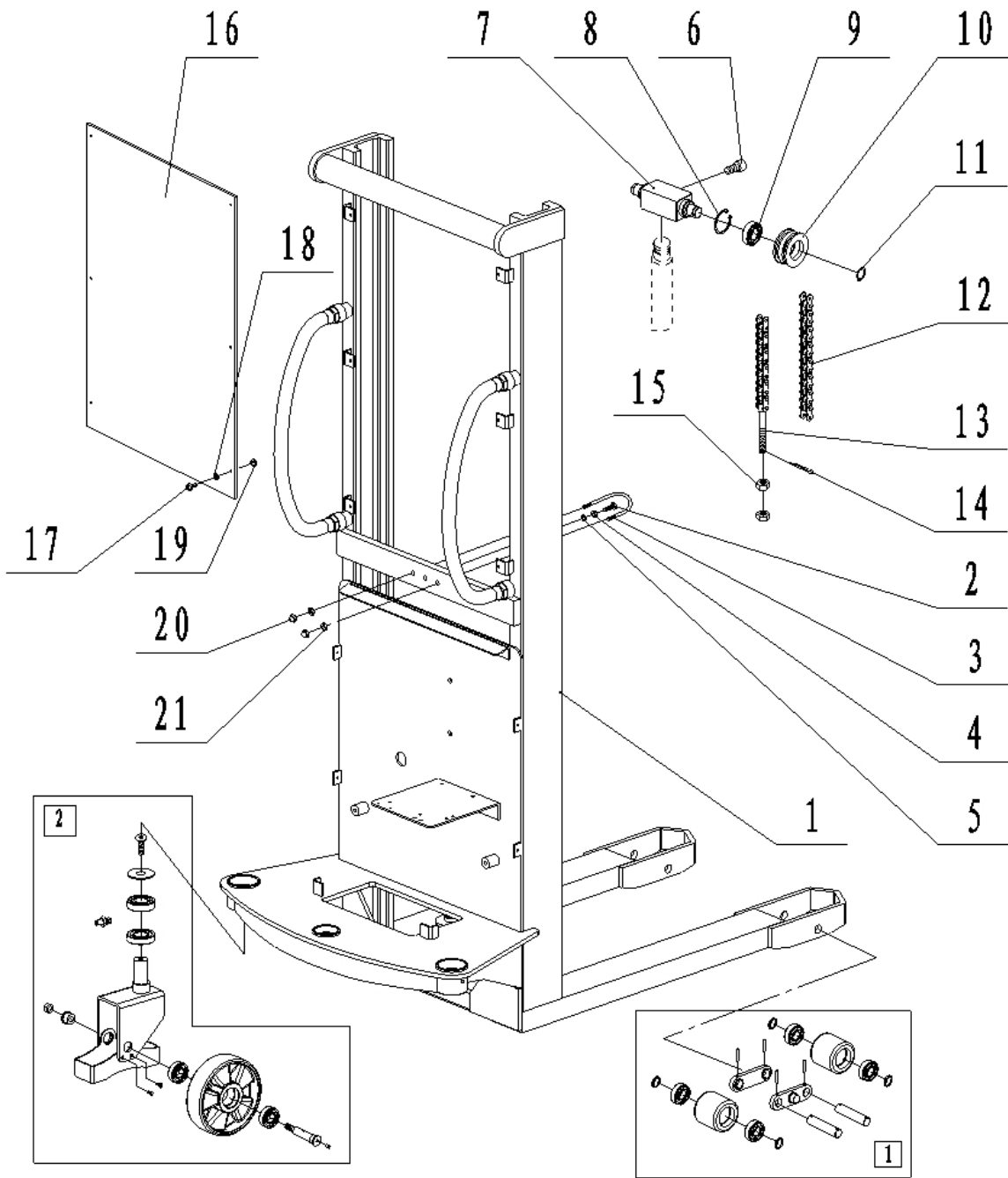


Fig.4 Parts List of Portable Single Mast

No.	Code number	Item	Quantity	Remarks
1	2530501034	Single mast	1	1600
2	0000023495	Bolt M10x40	1	
3	2530202002	Cylinder hoop	1	
4	0000024091	Hex nut M10	1	
5	0000025065	Spring washer 10	1	
6	0000023013	Screw M8x16	1	
7	2530502004	Footstock	1	
8	0000026002	Circlip for hole 52	2	
9	0000027011	Bearing 6205	2	
10	2530502003	Chain wheel	2	
11	0000026013	Circlip for shaft 25	2	
12	0000029300	Chain 12A-1 (65 joint)	2	
13	2500502007	Chain rod	2	
14	0000028076	Cotter pin 2x25	2	
15	0000024087	Hex nut M14	4	
16	2530503002	Protection plate	1	
17	0000023488	Screw M10x16	6	
18	0000025007	Flat washer 6	6	
19	2210618001	Rubber cushion	6	
20	0000024092	Cap nut M8	2	
21	0000024086	Hex nut M8	2	
<input type="checkbox"/> , 1	2500500009	Front wheel assembly	2	
<input type="checkbox"/> , 2	2500500007	Big wheel assembly	1	

Fig.5 Stationary Single Mast

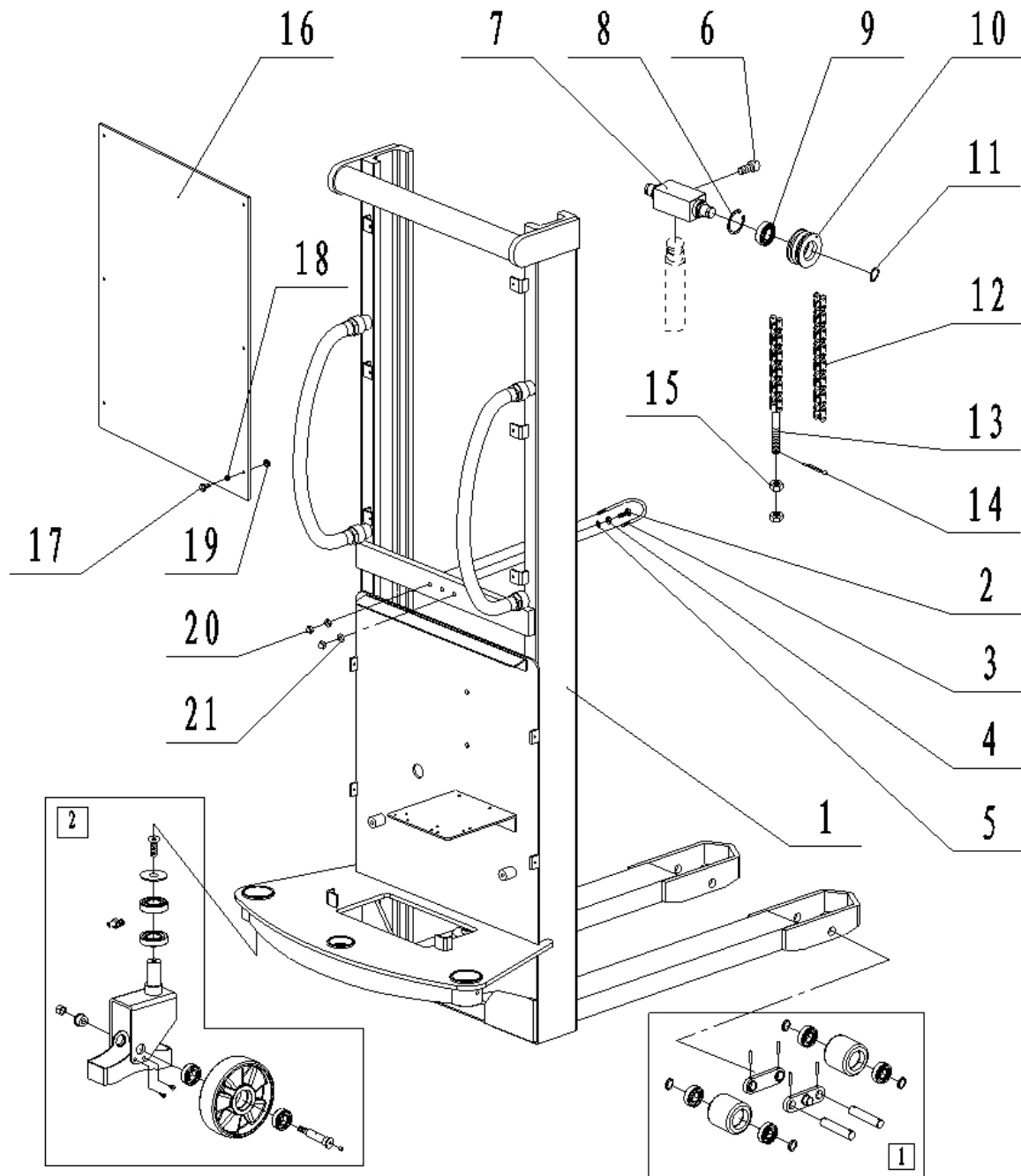


Fig.5 Parts List of Stationary Single Mast

No.	Code number	Item	Quantity	Remarks
1	2530501029	Single mast	1	1600
	2530501044			
2	0000023495	Bolt M10x40	1	
3	2530202002	Cylinder hoop	1	
4	0000024091	Hex nut M10	1	
5	0000025065	Spring washer10	1	
6	0000023013	Screw M8x16	1	
7	2530502004	Footstock	1	
8	0000026002	Circlip for hole 52	2	
9	0000027011	Bearing 6205	2	
10	2530502003	Chain wheel	2	
11	0000026013	Circlip for shaft 25	2	
12	0000029300	Chain 12A-1 (65 joint)	2	
13	2500502007	Chain rod	2	
14	0000028076	Cotter pin 2x25	2	
15	0000024087	Hex nut M14	4	
16	2530503001	Protection plate	1	
17	0000023488	Screw M6x16	6	
18	0000025007	Flat washer 6	6	
19	2210618001	Rubber cushion	6	
20	0000024092	Cap nut M8	2	
21	0000024086	Hex nut M8	2	
□, 1	2500500009	Front wheel assembly	2	
□, 2	2500500007	Big wheel assembly	1	

Fig.6 Big Wheel Assembly

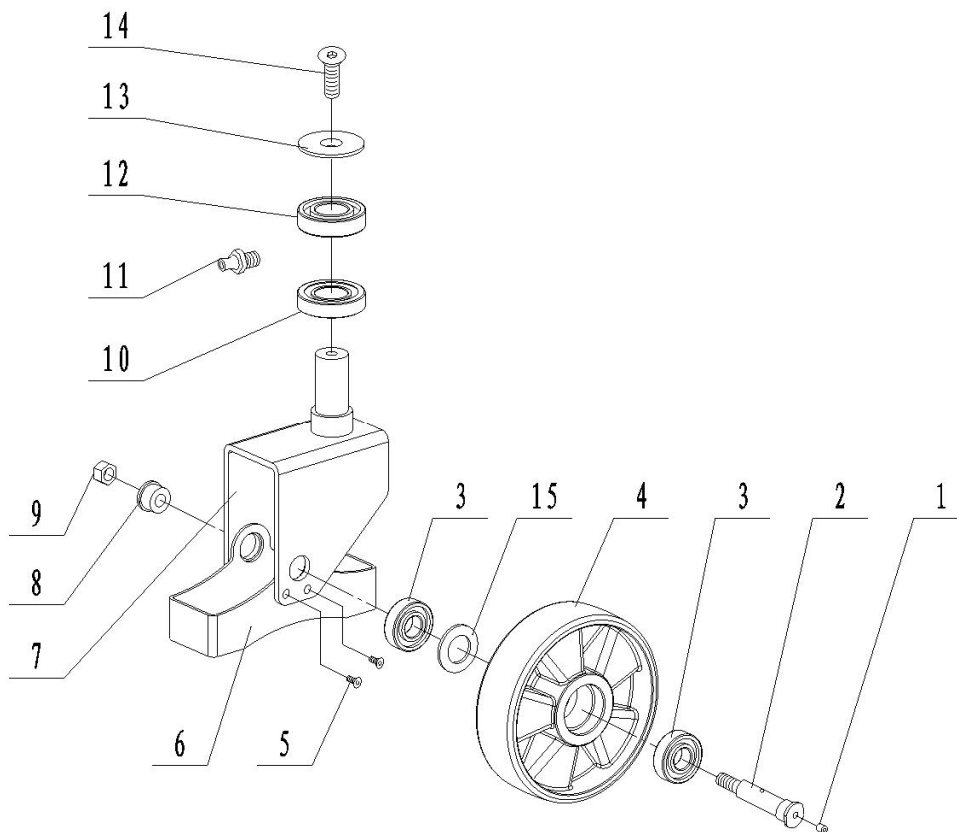


Fig.6 Parts List of Big Wheel Assembly

No.	Code number	Item	Quantity	Remarks
1	1010530001	Angled grease cup 6	1	
2	2500507001	Big wheel shaft	1	
3	0000027107	Bearing 62042Z	2	
4	2500516001	Big wheel ϕ 180x50	1	White
	2530516001	Big wheel ϕ 180x50		Black
	2800116001	PU Big wheel ϕ 180x50		Red
	2530516003	PU Big wheel ϕ 180x50		Yellow
5	0000023484	Sunk screw M6x10	4	
6	2500504002	Safety damper	1	
7	2500501012	Driven wheel frame	1	
8	2500525002	Washer	1	
9	0000024085	Lock nut M12	1	
10	0000027066	Roller bearing 30206	1	
11	0000030026	Greasing cup M8x1	1	
12	0000027012	Bearing 6206	1	
13	2500502006	Gland	1	
14	0000023867	Sunk nut M10x20	1	
15	2500502010	Washer	1	

Fig.7 Front Wheel Assembly

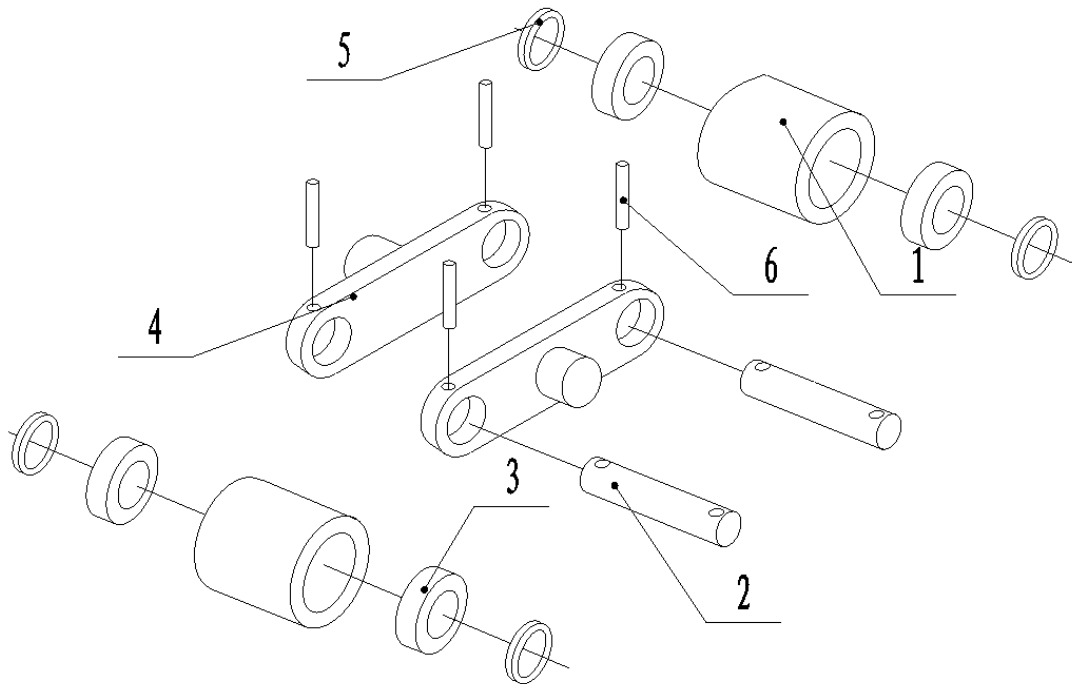


Fig.7 Parts List of Front Wheel Assembly

No.	Code number	Item	Quantity	Remarks
1	2500516002	Pinion ϕ 74X70	2	
	2520500003	PU Pinion ϕ 74X70		Red
	2530516004	PU Pinion ϕ 74X70		Yellow
2	2000407001	Pinion shaft	2	
3	0000027107	Bearing 62042Z	4	
4	2000405002	Linking board	2	
5	1000525001	Spacer	Quantity, specification optional	
6	0000028009	Elastic cylindrical pin 5x35	4	

Fig.8 Inner Mast

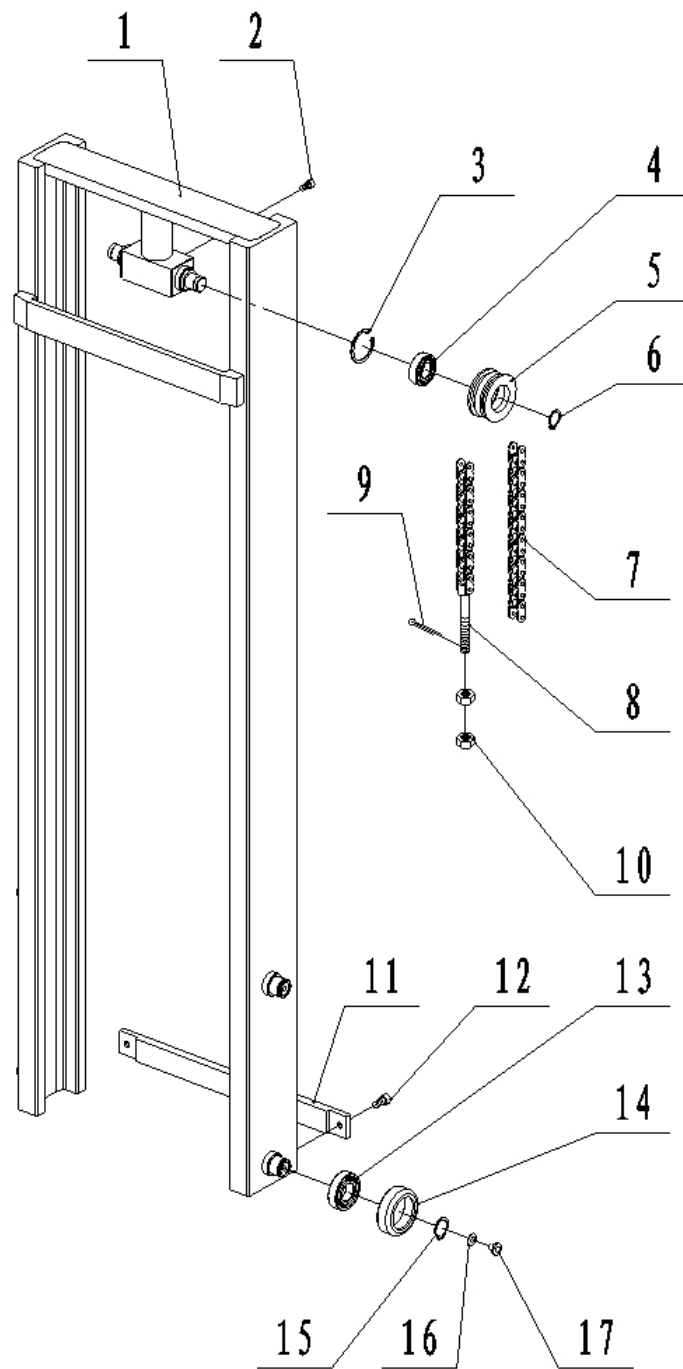


Fig.8 Parts List of Inner Mast

No.	Code number	Item	Quantity	Remarks
1	2530501026	Inner mast	1	2500 Portable
	2530501027			3000 Portable
	2530501028			3500 Portable
	2530501020			2500 Stationary
	2530501021			3000 Stationary
	2530501022			3500 Stationary
2	0000023013	Screw M8x16	1	
3	0000026002	Circlip for hole 52	2	
4	0000027011	Bearing 6205	2	
5	2530502003	Chain wheel	2	
6	0000026013	Circlip for shaft 25	2	
7	0000029267	Chain 12A-1 (91 joint)	2	2500 Stationary
	0000029279	Chain 12A-1 (93 joint)		2500 Portable
	0000029266	Chain 12A-1 (105 joint)		3000 Stationary
	0000029303	Chain 12A-1 (107 joint)		3000 Portable
	0000029271	Chain 12A-1 (119 joint)		3500 Stationary
	0000029180	Chain 12A-1 (117 joint)		3500 Portable
8	2500502007	Chain rod	2	
9	0000028076	Cotter pin 2x25	2	
10	0000024087	Hex nut M14	4	
11	2530504008	Pull rod	1	Stationary
	2530504009			Portable
12	0000023483	Screw M10x20	2	
13	0000027012	Bearing 6206	4	
14	2530411001	Roller	2	φ 76.5
	2530411002	Roller	2	φ 78
15	0000026008	Circlip for shaft 30	4	
16	2500525001	Helical washer	4	
17	2500502003	Side cushion block	4	

Fig.9 All Free Lifting Inner Mast

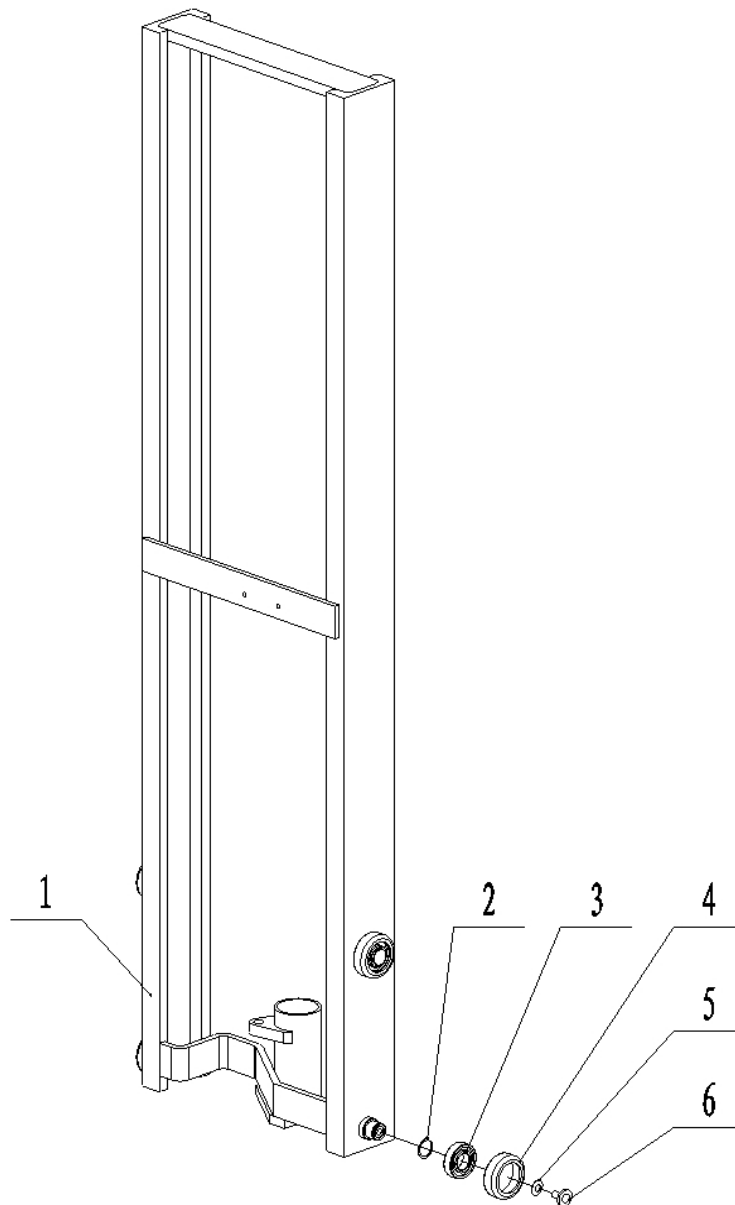


Fig.9 Parts List of All Free Lifting Inner Mast

No.	Code number	Item	Quantity	Remarks
1	2530501032	Inner mast (All free)	1	2900
	2530501033			2500
2	0000026008	Circlip for shaft 30	4	
3	0000027012	Bearing 6206	4	
4	2530411001	Roller	2	φ 76.5
	2530411002	Roller	2	φ 78
5	2500525001	Helical washer	4	
6	2500502003	Side cushion block	4	

Fig.10 Steering Operating System

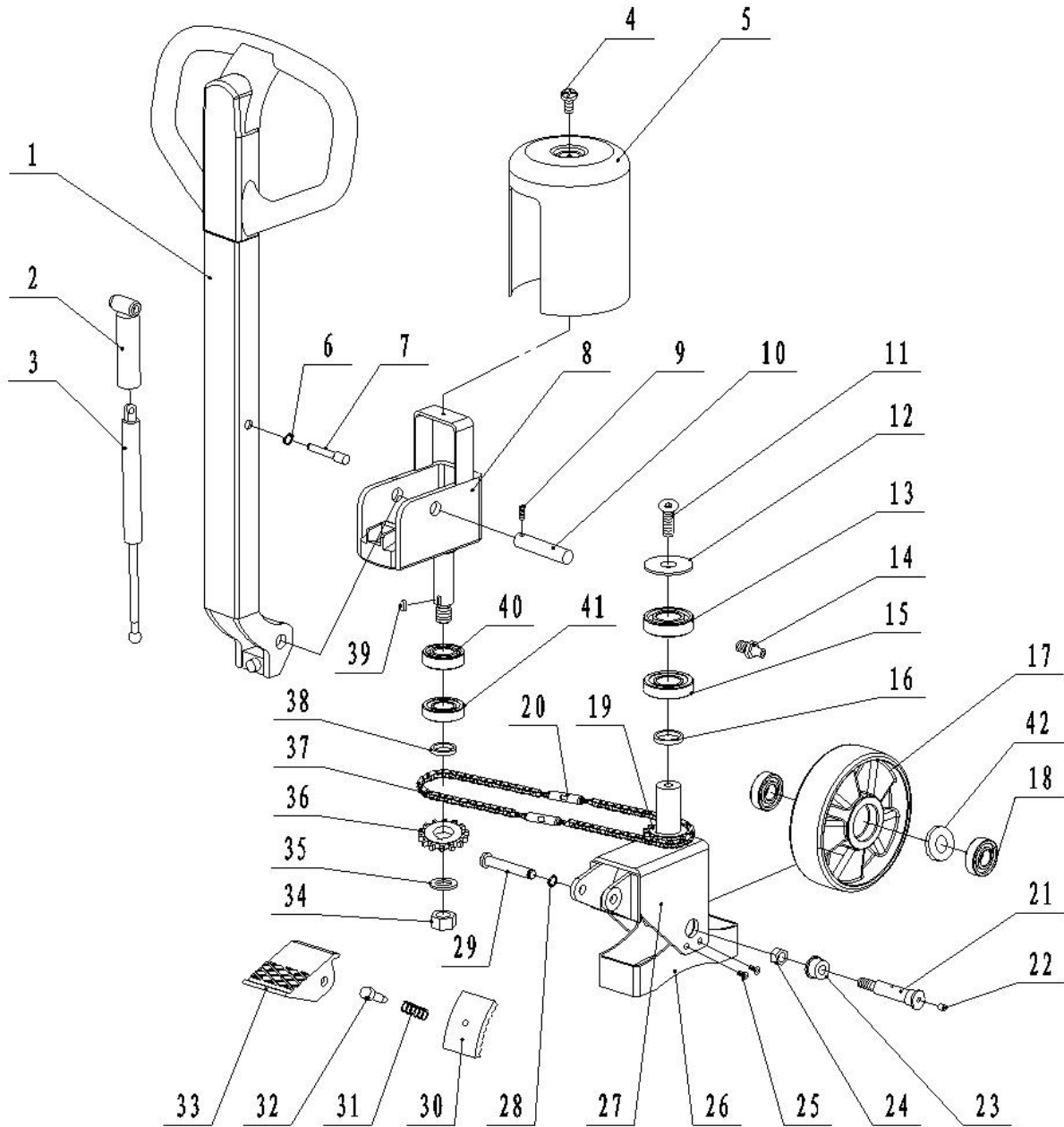


Fig. 10 Parts List of Steering Operating System

No.	Code number	Item	Quantity	Remarks
1	2530100002	Handle	1	
2	2530102001	Air spring seat	1	
3	2530121001	Air spring(handle)	1	
4	0000023280	Screw M5X10	1	
5	2530103001	Handgrip rotating seat cover	1	
6	0000026051	Circlip 8	1	
7	2530107002	Air spring shaft	1	
8	2530101001	Handle connection seat	1	
9	0000023511	Set screw M5x12	1	
10	2530107001	Handle lever	1	
11	0000023867	Sunk screw M10x20	1	
12	2500502006	Gland	1	
13	0000027012	Bearing 6206	1	
14	0000030026	Greasing cup M8x1	1	
15	0000027066	Roller bearing 30206	1	
16	2500125002	Washer	1	
17	2500516001	Big wheel ϕ 180x50	1	
	2800116001	PU Big wheel		
	2530516003	PU Big wheel(Yellow)		
	2530516002	PU Big wheel(Black)		
18	0000027107	Bearing 62042Z	2	
19	2500109002	Steering chain wheel	1	
20	2500100003	Tension screw	2	
21	2500507001	Big wheel shaft	1	
22	1010530001	Angled grease cup 6	1	
23	2500525002	Washer	1	
24	0000024085	Lock nut M12	1	
25	0000023484	Sunk screw M6x10	4	
26	2500504002	Safety damper	1	
27	2500501011	Braking wheel frame	1	
28	0000026034	Circlip for shaft 12	1	
29	2500507002	Hinge pin	1	
30	2500505001	Brake block	1	
31	2500531001	Spring	1	

32	2500523002	Push rod screw	1	
33	2500505002	Cam footpedal	1	
34	0000024095	Lock nut M18x1.5	1	
35	0000025104	Flat washer 18	1	
36	2500109001	Steering chain wheel	1	
37	0000029274	Roller drive chain (08B)	2	
38	2500125001	Washer	1	
39	0000036010	Flat pin C6X6	2	
40	0000027011	Bearing 6205	1	
41	0000027069	Roller bearing 30205	1	
42	2500502010	Washer	1	

Fig.11 Stationary Pallet Frame

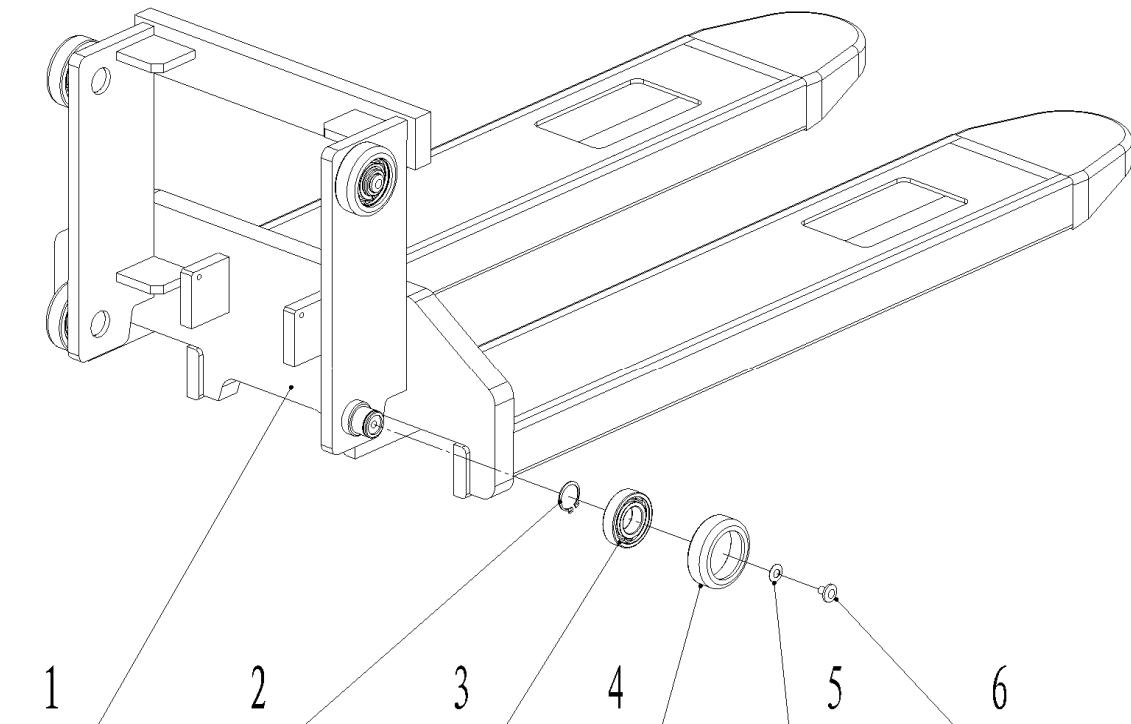


Fig.11 Parts List of Stationary Pallet Frame

No.	Code number	Item	Quantity	Remarks
1	2530401007	Pallet frame	1	1100 for double mast
	2530401016			1150
	2530401010	Pallet frame	1	1100 for single mast
	2530401017			1150
2	0000026008	Circlip for shaft 30	4	
3	0000027012	Bearing 6206	4	
4	2530411001	Roller	2	φ 76.5
	2530411002	Roller	2	φ 78
5	2500525001	Helical washer	4	
6	2500502003	Side cushion block	4	

Fig.12 Stationary All Free Lifting Pallet Frame

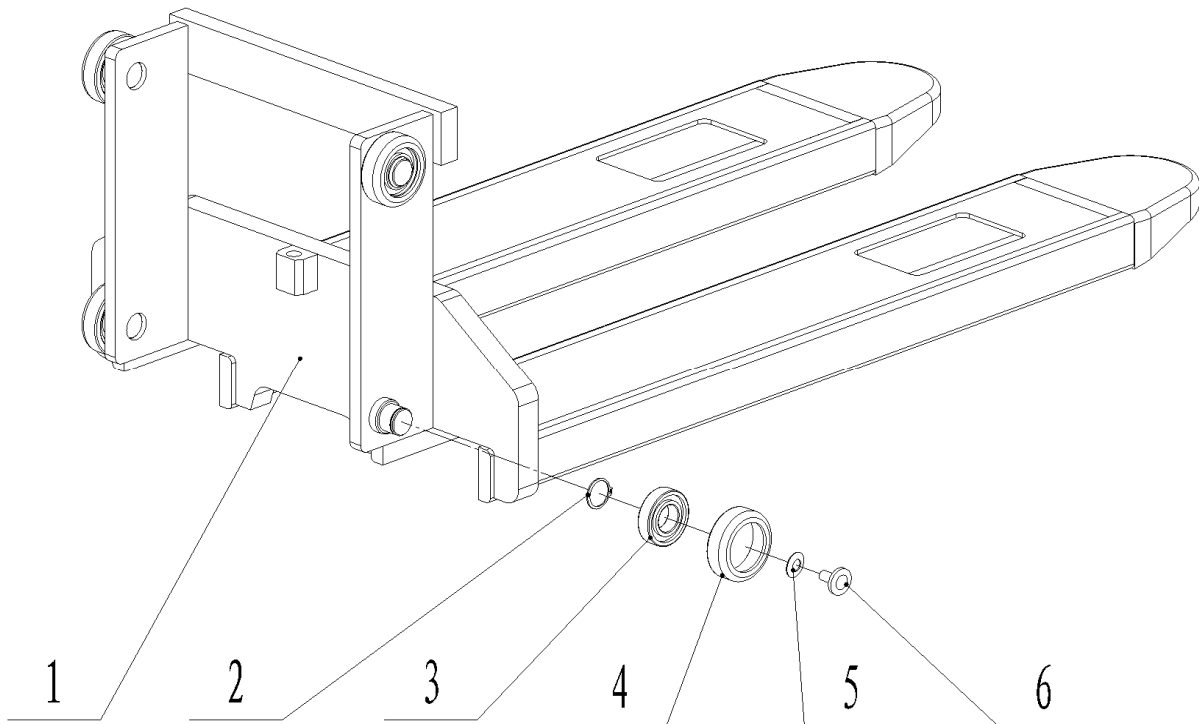


Fig.12 Parts List of Stationary All Free Lifting Pallet Frame

No.	Code number	Item	Quantity	Remarks
1	2530401013	Pallet frame	1	1100
	2530401018			1150
2	0000026008	Circlip for shaft 30	4	
3	0000027012	Bearing 6206	4	
4	2530411001	Roller	2	φ 76.5
	2530411002	Roller	2	φ 78
5	2500525001	Helical washer	4	
6	2500502003	Side cushion block	4	

Fig.13 Portable Pallet Frame

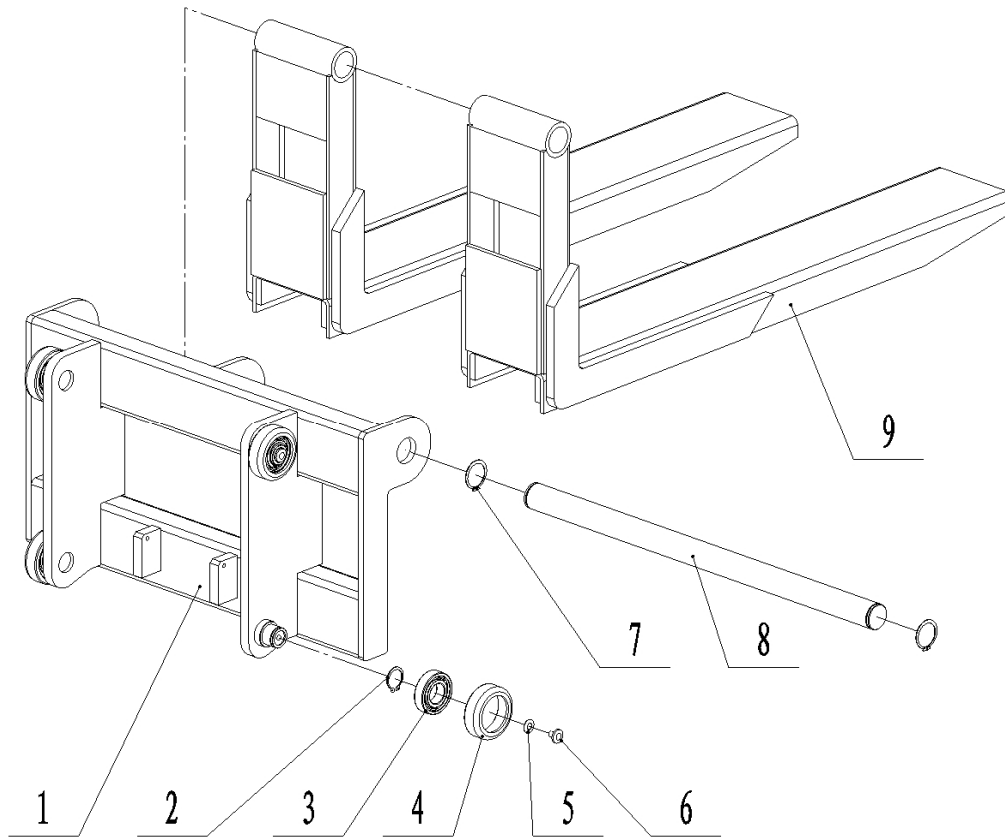


Fig.13 Parts List of Portable Pallet Frame

No.	Code number	Item	Quantity	Remarks
1	2530401008	Pallet frame	1	For double mast
	2530401011	Pallet frame		For single mast
2	000026008	Circlip for shaft 30	4	
3	000027012	Bearing 6206	4	
4	2530411001	Roller	2	φ 76.5
	2530411002	Roller	2	φ 78
5	2500525001	Helical washer	4	
6	2500502003	Side cushion block	4	
7	000026045	Circlip for shaft 38	2	
8	2530507002	Long shaft	1	
9	2530401009	Fork	2	900 for double mast
	2530401022			1100
	2530401023			1150
	2530401012	Fork	2	900 for single mast
	2530401024			1100
	2530401025			1150

Fig.14 Hydraulic System

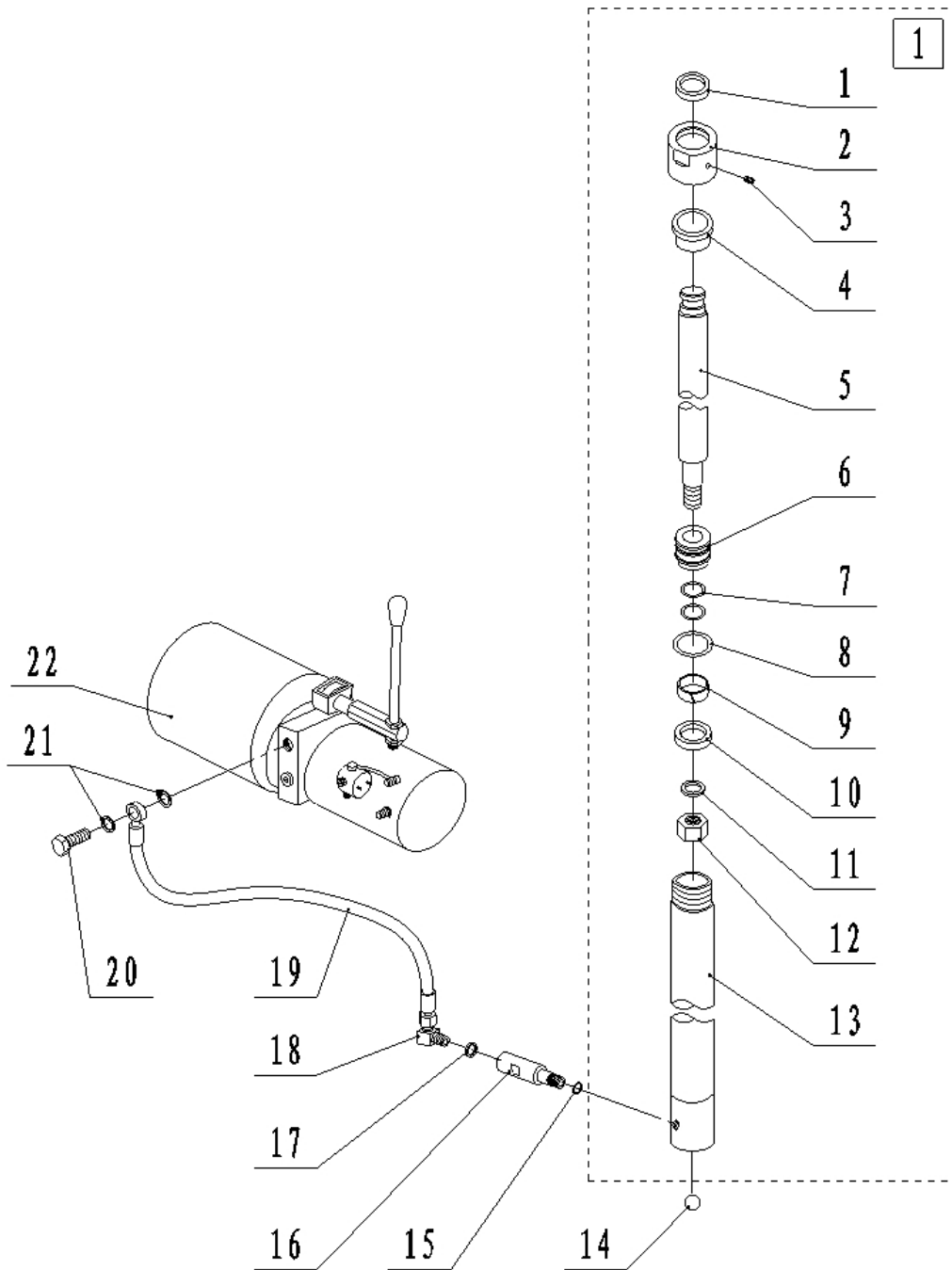


Fig.14 Parts List of Hydraulic System

No.	Code number	Item	Quantity	Remarks
1	0000022162	Dust ring 45x53x5	1	
2	2530202004	Shielding cover	1	
3	0000023502	Set screw M6X6	1	
4	2530202003	Guide sleeve	1	
5	2530207001	Piston rod	1	2500
	2530207002			3000
	2530207003			1600
	2530207004			3500
6	2530202005	Piston Φ 60	1	
7	0000022164	O-ring 30x3.1	2	
8	0000022163	O-ring 60x3.1	1	
9	2530202006	Support ring for hole 60x10x2	1	
10	0000022165	Y- ring 60*50*6	1	
11	0000025094	Spring washer 24	1	
12	0000024072	Hex nut M24X1.5	1	
13	2530208001	Cylinder body	1	2500
	2530208002			3000
	2530208003			1600
	2530208004			3500
14	0000037028	Steel ball 18	1	
15	0000022118	O-ring 18x2.4	1	
16	2520200004	Speed control valve	1	
17	0000022051	Washer assembly 16	1	
18	2520202007	Bend (1)	1	
19	2530217001	High pressure oil pipe	1	
20	2530217002	Oil pipe bolt	1	
21	0000022051	Washer assembly 16	2	
22	2530200002	Pump station 12V-1.5kw-2.3CC	1	
□, 1	2530200003	Cylinder assembly	1	2500
	2530200004			3000
	2530200005			1600
	2530200006			3500

Fig.15 All Free Lifting Hydraulic System

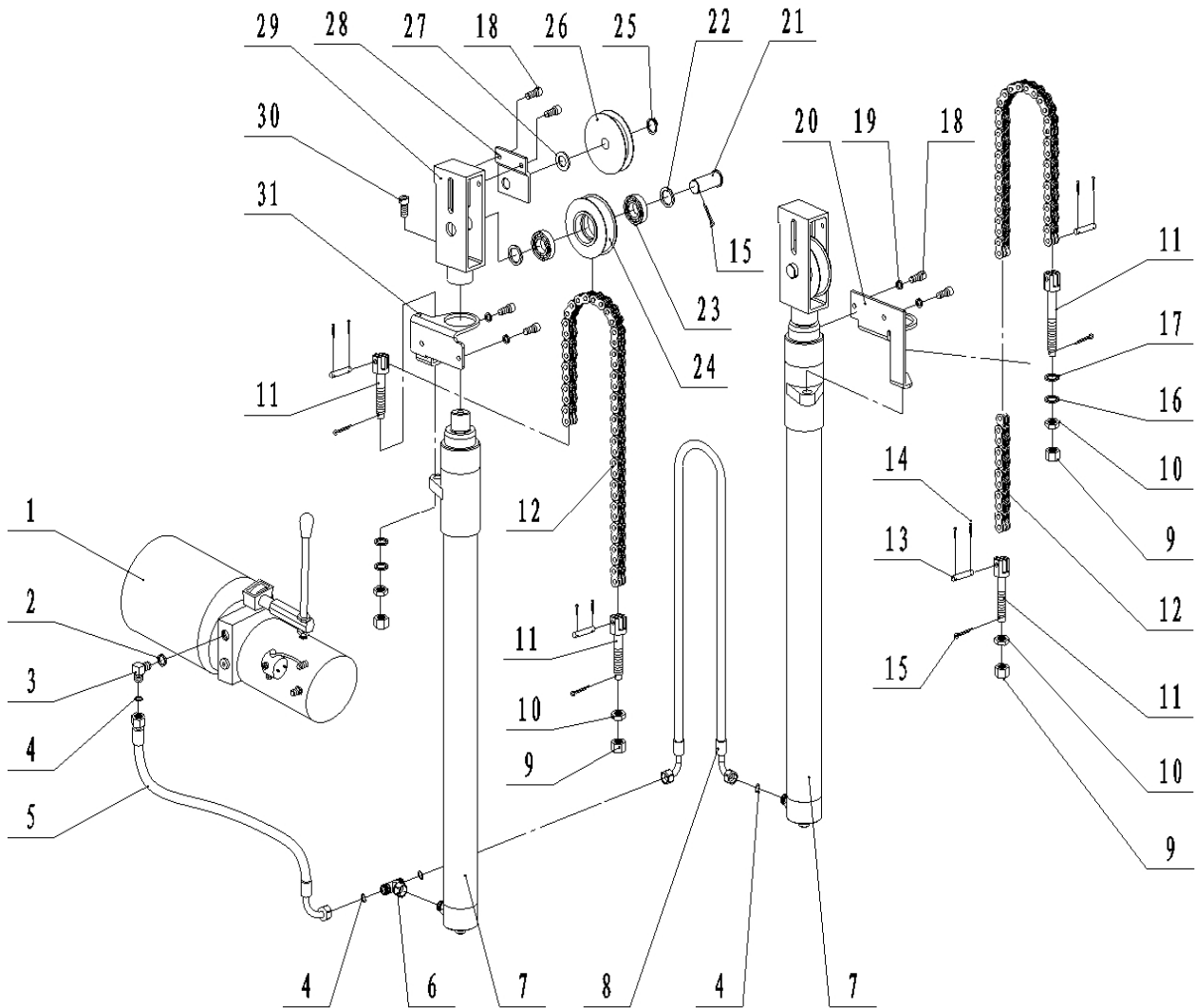


Fig. 15 Parts List of All Free Lifting Hydraulic System

No.	Code number	Item	Quantity	Remarks
1	2530200002	Pump station 12V-1.6kw-2.1CC	1	
2	0000022051	Washer assembly 16	1	
3	0000017004	Right angle adjustable adapter JTJ10-G3/8-M18X1.5	1	
4	0000022129	O-ring 13X1.9	5	
5	2530217003	High pressure oil pipe	1	
6	2530217004	Three-way joint	1	
7	2530200007	(All free) Cylinder	2	2900
	2530200008			2500
8	2000317006	High pressure oil pipe L2190	1	2900
	2530217005	High pressure oil pipe L1940		2500
9	0000024009	Hex nut M16	4	
10	0000024010	Thin nut M16	4	
11	2000312001	Chain rod	4	
12	0000029214	Heavy plate link chain LH1234/60 joint	2	2900
	0000029215	Heavy plate link chain LH1234/57 joint	2	2500
13	2000307001	Chain hinge pin	4	
14	0000028117	Cotter pin 2x18	8	
15	0000028011	Cotter pin 3x40	6	
16	0000025099	Conical washer 16	2	
17	0000025098	Spherical washer 16	2	
18	0000023013	Screw M8x16	6	
19	0000025004	Spring washer 8	4	
20	2530204001	Support (1)	1	2900
	2530204003			2500
21	2000107001	Chain wheel shaft	2	
22	2000302006	Washer 38X28X2	4	
23	0000027011	Bearing 6205	4	
24	2000310001	Chain wheel	2	
25	0000026003	Circlip for shaft 20	1	
26	2000310002	Pulley wheel	1	
27	0000025092	Flat washer 20	2	
28	2000301002	Pulley wheel frame	1	
29	2000305001	Chain wheel frame	2	
30	0000023608	Screw M12X20	2	
31	2530204002	Support (2)	1	2900
	2530204004			2500

Fig.16 All Free Lifting Cylinder

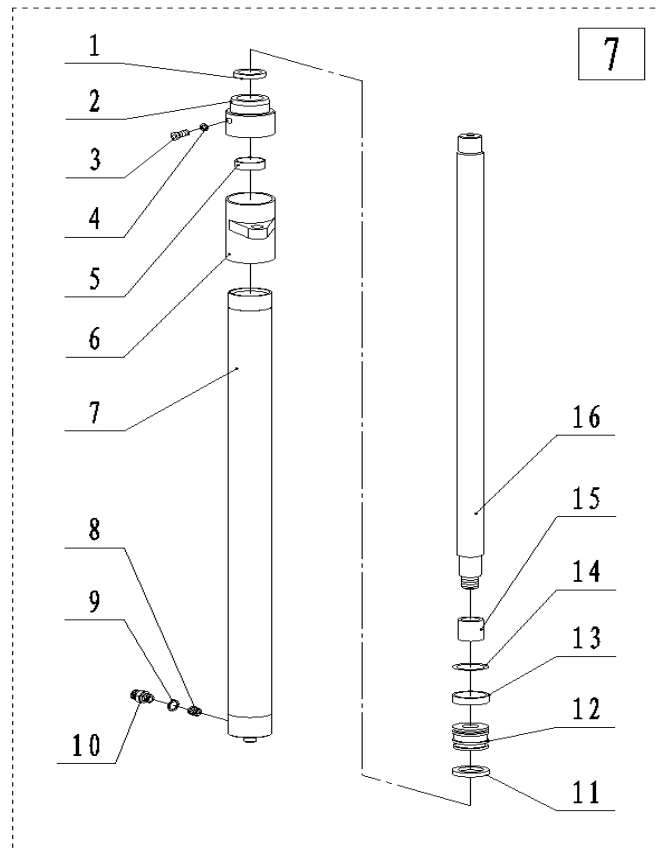


Fig. 16 Parts List of All Free Lifting Cylinder

No.	Code number	Item	Quantity	Remarks
1	2000322001	Dust ring 40X48-5/6.5	1	
2	2530202007	End cover	1	
3	0000023486	Screw M8x10	1	
4	0000022026	Washer assembly 8	1	
5	2000322002	Support ring for shaft 40X10-2	1	
6	2530201001	Pull rod seat	1	
7	2530208005	Cylinder body	1	2900
	2530208006			2500
8	2000337001	Safety stop valve	1	
9	0000022051	Washer assembly 16	1	
10	2000317003	Direct joint	1	
11	2040322009	Y-type sealing ring for shaft 56x45-7	1	
12	2530202008	Piston	1	
13	2260313001	Support ring for hole 56x15-2	1	
14	0000022166	O-type sealing ring 56x3.1	1	
15	2530202009	Spacer sleeve	1	
16	2530207005	Piston rod	1	2900
	2530207006			2500

Fig.17 Distribution Box Components

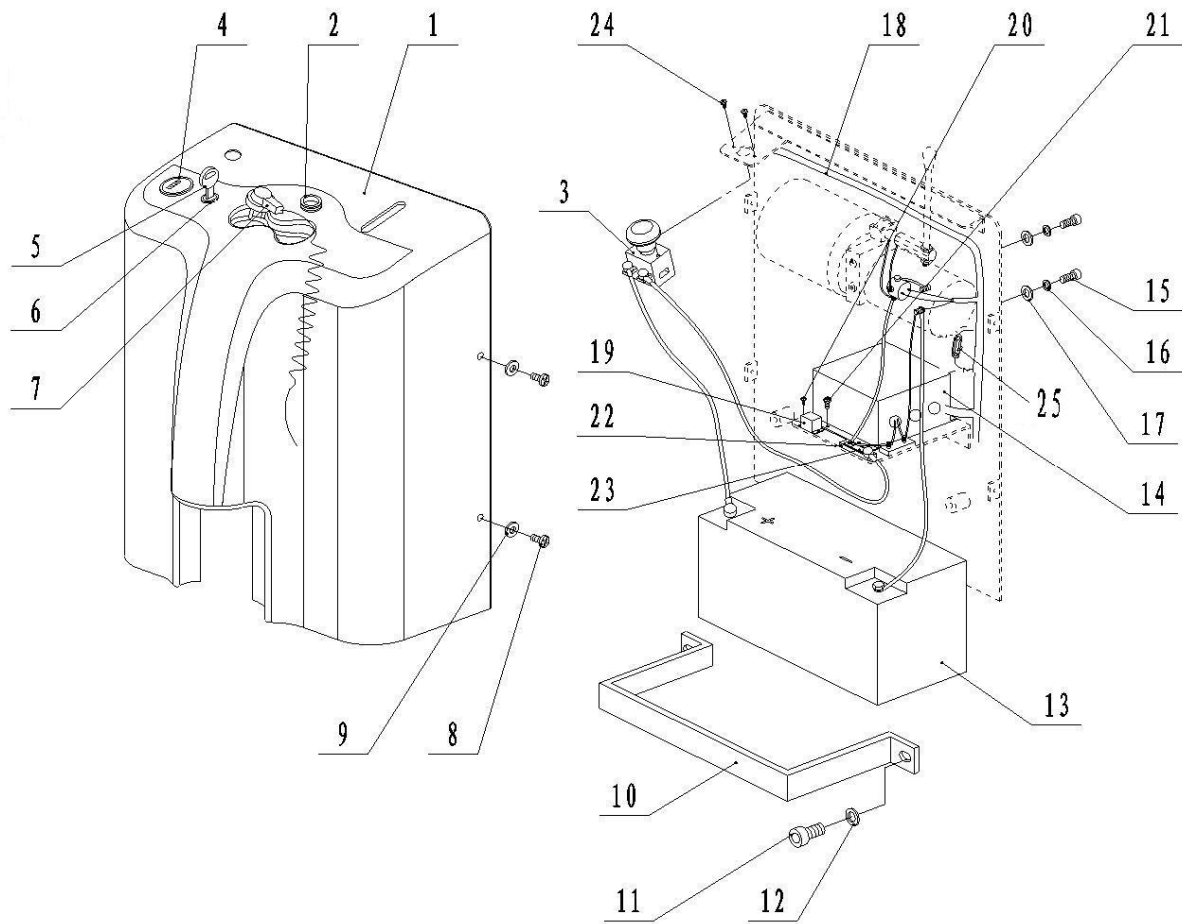


Fig. 17 Distribution Box Components

No.	Code number	Item	Quantity	Remarks
1	2530303002	Electrical box	1	
2	2210418003	Sheath	1	
3	2240434001	DC power switch ZDK31-250	1	
4	2530334003	Coulombmeter 12V BI1201A(B)	1	
5	1010434015	Key	1	
6	2530334002	Key switch LKS-101A	1	
7	1010434009	Double-end spring plug 3x0.75 (Australian)	1	
	1010434011	Double-end spring plug 3x0.75 (English)		
	1010434012	Double-end spring plug 3x0.75 (European)		
	1010434013	Double-end spring plug 3x0.75 (Italian)		
	1010434014	Double-end spring plug 3x0.75 (Swedish)		
	2530334005	Double-end spring plug 3x0.75 (American)		
	1010434023	Double-end spring plug 3x0.75 (Asian)		
8	0000023512	Screw M6x10	4	
9	0000025007	Flat washer 6	4	
10	2530304001	Battery pressure plate	1	
11	0000023013	Screw M8x16	2	
12	0000025004	Spring washer 8	2	
13	2530332001	Battery 12V150AH	1	
14	2530320001	Charger 12V/20A	1	230V
	2530320002	QQE240-5CH20-26-A		115V
15	0000023483	Screw M10x20	2	
16	0000025065	Spring washer 10	2	
17	0000025106	Flat washer 10	2	
18	2530333001	SPM harness	1	
19	2530334004	Protection module BD-V-12	1	
20	0000023052	Screw M4x8	2	
21	0000023512	Screw M6x10	4	
22	1000434007	Fuse seat SYY	1	
23	1020434001	Bolted fuse 200A	1	
24	0000023126	Screw M5x12	2	
25	2500334006	Fuse tube 6x30 6A	1	

Fig.18 Pump Station Components

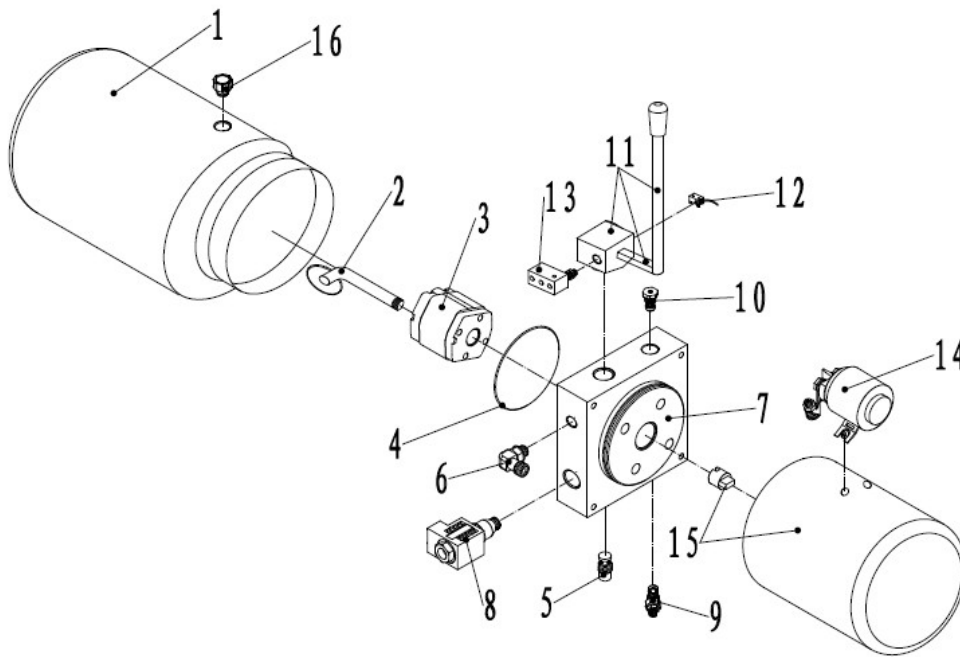


Fig.18 Pump Station Components

No.	Code number	Item	Specification	Quantity	Remarks
1	2500237006	Oil tank	TS120D300	1	
2	2500217001	Oil suction pipe	FB03B	1	with strainer
3	2500237001	Gear pump	CBK-F120	1	with bolt
4	2500222001	O-ring	112*4	1	
5	2500215001	Flow control valve	RPCV-02	1	
6	2500237002	Joint	FVC06	1	
7	2530237011	Center valve block	CMB2	1	
8	2530337012	Solenoid valve	SCV-012E	1	
9	2500235002	Overflow valve	RV-03	1	
10	2500235003	Check valve	CV-O1	1	
11	900002213	Hand valve	MV-03	1	
12	2500214001	Upper micro switch	UMS	1	
13	2500214002	Under micro switch	DMS	1	
14	2500214003	Starting switch	DK0212	1	
15	2500237004	Motor	MD12160	1	
16	2500237005	Oil tank cover	FC04	1	
17	2530337014	Carbon brush		1	