

Instruction Manual

Electric Stacker



Note: Owner/Operator must read and understand this instruction manual before using the stacker.

RevB: 03/2012

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THANK YOU FOR YOUR CHOOSING OF OUR ELECTRIC STACKER, FOR YOUR SAFETY AND CORRECT OPERATION, PLEASE CAREFULLY READ THE MANUAL BEFORE USE.

NOTE:

All of the information reported herein is based on data available at the time of printing. The manufacturer reserves the right to modify its own products at any time without notice or incurring in any sanction. Please verify with the manufacturer for possible updates.

1. Introduction

HL Series Electric Stacker is mainly used in pallet stacking and short distance transportation at plants, warehouses and logistics systems. Powered by batteries and mounted with ferrous polyurethane wheels, the stacker is mainly operated on level surface.

The stacker has characters of low noise, no pollution and low maintenance cost. The big capacity batteries ensure long continuous work time. Please read and understand this instruction manual before operating the stacker. To avoid the damage to any person, vehicles and cargos, the stacker must be used and maintained according to the instruction in this operating manual. Any load exceeding the truck's maximum load or unbalanced load must be avoided. And any damage caused by the modification to the stacker without authorization, will not be responsive by the manufacturer.

2. Configuration and Parameters

2.1 Configuration

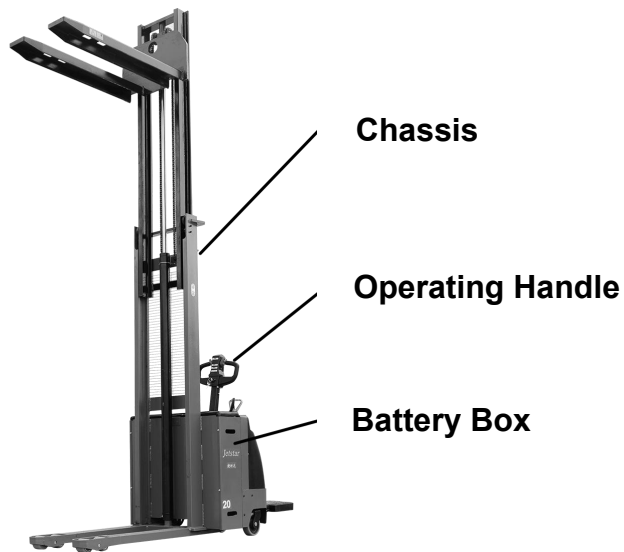
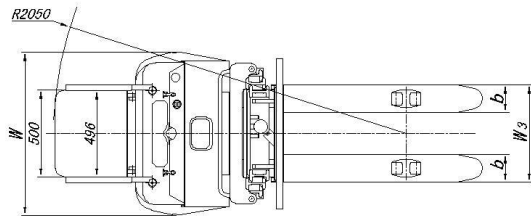
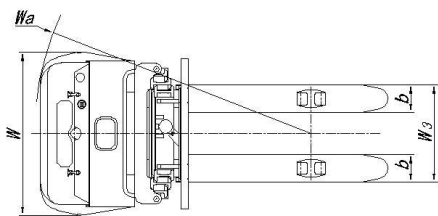
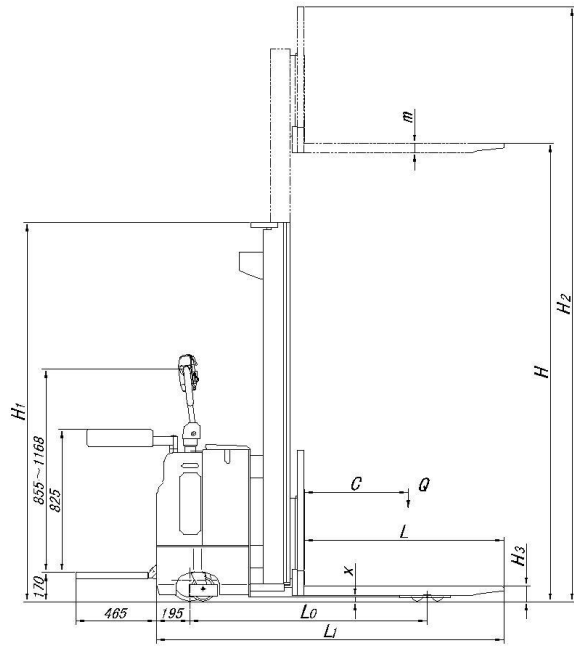
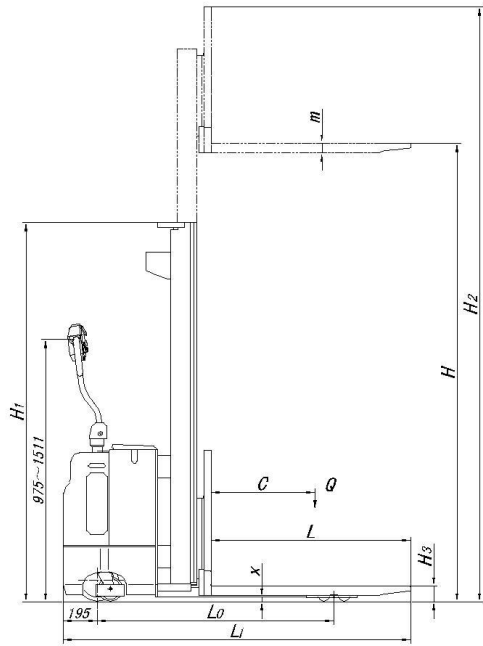


Figure1 Main Assemblies of the Stacker

2.2 Specifications

Table 1

Type (standard)		HL1530
Capacity	Kg	1500
Load Center (C)	mm	600
Max. Fork Height (h3)	mm	3000
Overall Length (L1)	mm	2100
Overall Width (W)	mm	850
Overall Height (H1)	mm	2050
Maximum Working Height (H2)	mm	3470
Lowered Fork Height (H3)	mm	100
Maximum Fork Width (W3)	mm	570
Fork Dimensions L×b×m	mm	1150×180×7
Wheel Base	mm	1350
Minimum Distance Over Ground (x)	mm	50
Minimum Turning Radius (Wa)	mm	2200
Traveling Speed (loaded/unloaded)	km/h	4.5/5.0
Lifting Speed (loaded/unloaded)	mm/s	130/100
Lowering Speed (loaded/unloaded)	mm/s	100/90
Front Roller, Tandem	mm	Φ 80×70
Rear Roller	mm	Φ 156×50
Driving Wheel	mm	Φ 250×80
Traction Battery	Ah/V	165/24
Traveling Motor	kw	1.2
Lifting Motor	kw	2.5
Net Weight (without battery)	kg	685
Battery Weight	kg	150



Standard

Platform

Figure2 Dimensions

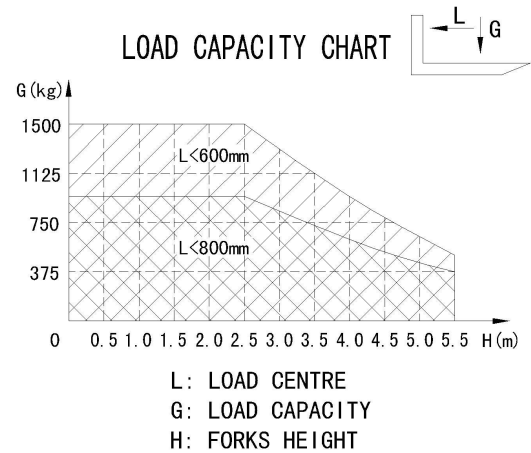
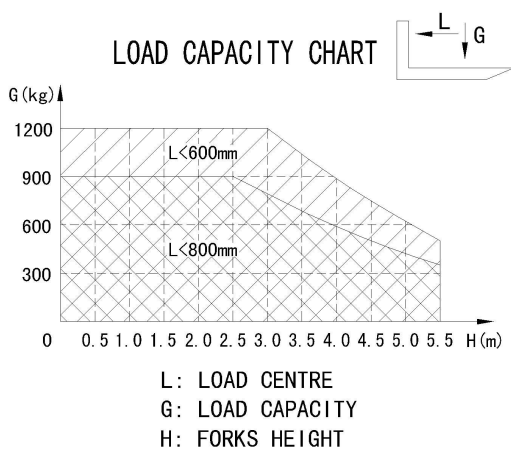


Figure3 Load Capacity Charts

3. Before Use Checking

3.1 Do not use the stacker in case of being damaged during transportation. And please contact with your vender immediately.

3.2 Lubrication and oil filling have been made by the manufacturer.

3.3 Check the batteries. Batteries have been charged before leaving factory. But maybe in low power after leaving the factory for a long time. Please pull up the red switch (emergency switch 7) and turn on the lock switch 5. If the voltage is below 21V, please charging the batteries.

3.4 If the Traction Battery is equipped, please open the battery cover before use. And put off the cap of batteries to check the level of electrolyte. (Please consult 5 Battery)

3.5 Battery Charger should be well kept, for the purpose of charging the Batteries when needed.

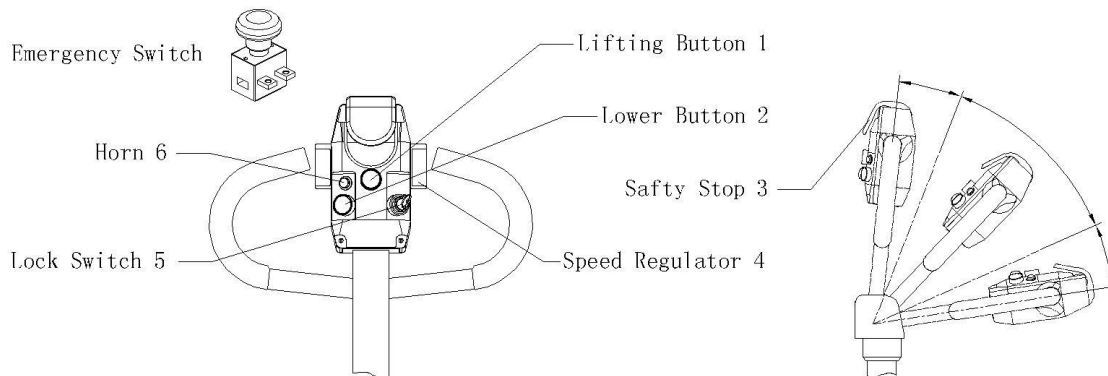


Figure4

4. Operating

4.1 Preparation before Use:

4.1.1 All operation functions are fixed on the operating handle. Figure 5 indicates their positions and functions.

4.1.2 The stacker can be mounted with a standing platform, and the operator can operate the stacker by standing on the platform. The platform is foldable, it can be turned up (see figure 6.)

4.1.3 The stacker can also be mounted with a pair of handrails, You can turn to open the handrails by press down them. (see figure 7.)

4.1.4 The emergency switch. is the power switch of the stacker. The button should be pressed down after use or in some emergency situation. And the button should be pulled up before use, then turn on the lock switch 5. Please notice that the voltage indicated by the coulometer should be about 24V and not below 21V. Then the stacker can be operated.

4.2 Stacking:

4.2.1 Turn on the Lock Switch 5, pull up the red emergency switch, press lifting button 1. the forks will lift. Loosen the button, the forks will stop.

4.2.2 Press lowering button 2, the forks will lower, loosen the button, the forks stop.

4.2.3 The stacker should be used on flat ground, when moving, the fork should not be higher than 300mm.

4.2.4 For the sake of safety, the stacker should move slowly and for a distance as short as possible with load.

4.2.5 Do not load a weight exceeding its capacity with the stacker, Please load the stacker

according to the load capacity chart.

4.2.6 Continuous lifting capacity: Because of the temperature rise effect of the oil pump motor, continuous full loaded lifting which should be avoided may cause over-heat of the motor.

According to the test, at normal temperature and full loaded condition, after lifting and lowering the forks at the height of 3300mm for 3 times, It should take 35 minutes to cool down the motor, So please notice that continuous full-loaded lifting should be avoided.

4.3 Moving

4.3.1 The driving unit of the stacker consists of DC Motor, wheel speed reducer and braking unit. The rotation of the motor is controlled by a speed regulator. And step less speed control makes the operation smooth, safe and precise.

4.3.2 When moving, operating handle should be set at the middle position (between the angle range of 45° ,see Figure 5).When the handle is at a upper or low position, the stacker is braked and would not move.

4.3.3 Turn on the lock switch 5,turn the red speed regulator 4 forward or backward smoothly, the stacker then starts to move forward or backward, You can control the moving speed freely by turning the speed regulator 4. To avoid an accident do not turn the rotary switch violently.

4.3.4 Loosen the speed regulator 4 and put the operating handle to upper or low position, the stacker will be braked

4.3.5 Safety Stop 3 provides a safety when the stacker is driven backward and the button 3 makes a collision with the operator the stacker will move forward at once to keep the operator from being injured

4.4 Battery Charging

4.4.1 Battery charging is very important. When the battery voltage is lower than 21 volts, charging should be made immediately. If the stacker is operated at a low voltage, the large electric current may not only damage the batteries, but also destroy the circuit and the motor

4.4.2 An automatic charger is provided. The operating and main technical data are described in the operating manual.

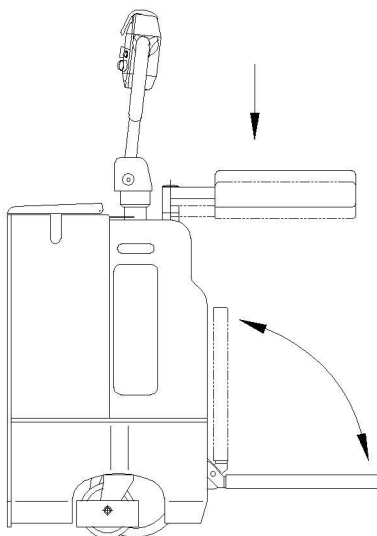


Figure5

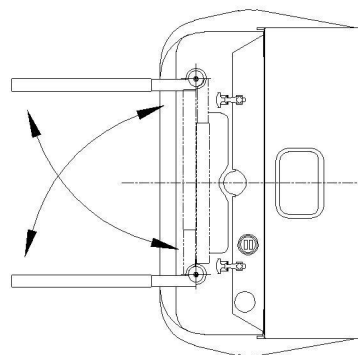


Figure6

4.5 Maintenance

4.5.1 Daily checking:

(1) Check the capacity of the batteries.

(2) Lift the forks to the top position to check the hydraulic oil volume. Fill in the oil YA-N32 if necessary.

4.5.2 Weekly checking:

(1) Check the abrasion wear of the chain, clean and lubricate it with oil.

(2) Ensure all screws and nuts are tightened.

(3) Check the abrasion wear of the brushes in the motor, make the brushes flat to keep good contact with the pole.

4.5.3 Replacement of the hydraulic oil:

Replace the hydraulic oil every 200 working hours is recommended. And if it is not often be used, replacement could be done every year

The process of replacing the hydraulic oil:

Lower the fork to the bottom and disassemble the sole pipe join at the bottom of the cylinder and put it into a container.

Press the Lifting button 1.to run the pump to evacuate the oil tank. Fill in YA-32 hydraulic oil or other similar oil .If the temperature of the working condition is rather low,YA-10 hydraulic oil is recommended. Then operate the forks up and down without load several times to evacuate the air in the unit. More oil should be filled in if the fork can not reach the highest position.

5. Battery

5.1 Charging should be made if the battery is in low power.

5.2 Check the level of electrolyte at least once a week, The level should be 1-2cm higher than the filter net of the battery. If the liquid level is lower than the net, distilled water should be filled in.

5.3 Keep the surface of the battery clean and dry. Dirt and dampness on the battery may cause electric leakage and decrease the capacity of the battery. Tighten the joints of the battery and coat them with acid-proof grease to avoid the sulfurized layer come into being. The layer will decrease the contacting surface which may cause reduction of the voltage,

5.4 Batteries produce potentially explosive gasses during charging and should be charged in a well-ventilated area, Be far away from the fire to avoid the explosion accident.

5.5 Check the charging status with electrolyte gravity meter. The gravity of the electrolyte should not be lower than 1.160(90% discharged).

Gravity (at 30°C)	Charging Status
1.260~1.280	100%
1.230~1.250	75%
1.200~1.220	50%
1.170~1.190	25%
1.140~1.160	10%(90% discharged)

6. Guidance of Safety Operating

1. Before using the electric stacker , it is necessary to check and ensure the joints of the accumulator tightened, the horn normal , the capacity of electricity sufficient, and the steering wheel flexible. The electric stacker is prohibited to dispatch with any failure.
2. Besides the above motioned ensurements, the electric stacker starts operating with alarms to ensure no people and barriers around. Loading weight must meet the requirements of load capacity chart, and it should reduce the loading capacity in accordance with the curve when the gravity center of goods exceeds the designed load center distance.
3. Sloping loading or single-fork loading is prohibited.
4. Lower the fork in a low height, and then move the stacker to the position where you want. When you load the goods at high position, please lower the fork to the safety height.
5. It is prohibited to lift people with the fork or truck when the fork truck is in operation. No people are allowed to stay or walk under the fork truck when it is lifting no matter whether there are goods on it or not.
6. Sharp turning is prohibited for the electric stacker, and it should operate in the uphill direction when it runs on the slope with the full load less than 5%: namely, reverse the fork truck to go down the slope with goods on the back.
7. Being a key carrying component, the fork truck is crucial to production safety. It is necessary to frequently check whether there is any distortion, crack or other failure. Operation should be stopped immediately once any failure is found.
8. It is prohibited to operate two buttons simultaneously.

7. Drawings of electric and hydraulic and hydraulic operating principle

Principle of electrical operation

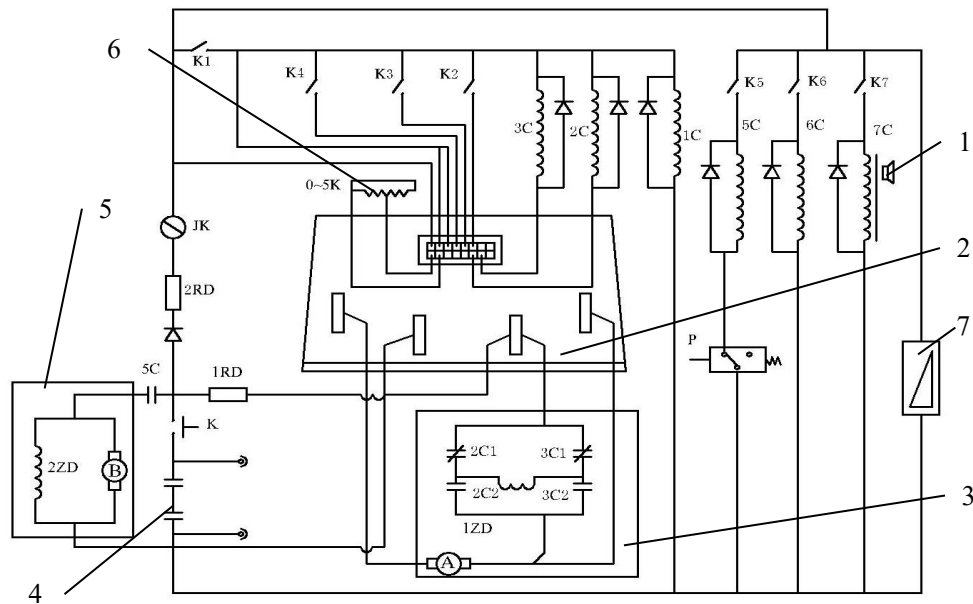


Figure 7 (only for reference)

1. horn 2. electronic velocity control panel 3. contactor
 4. rechargeable battery 5. hydraulic station 6. velometer 7. Coulometer
 K1~k7 primary switch and micro-brake button
 key open switch 1C~7C contactor

Principle of hydraulic operation

1. Side lift cylinder
 2. Filter
 3. One-way valve
 4. Overflow valve
 5. Electro-motor
 6. Gear pump
 7. Electro-release valve
 8. Control speed valve
 9. Main lift cylinder
 10. Pressure relay

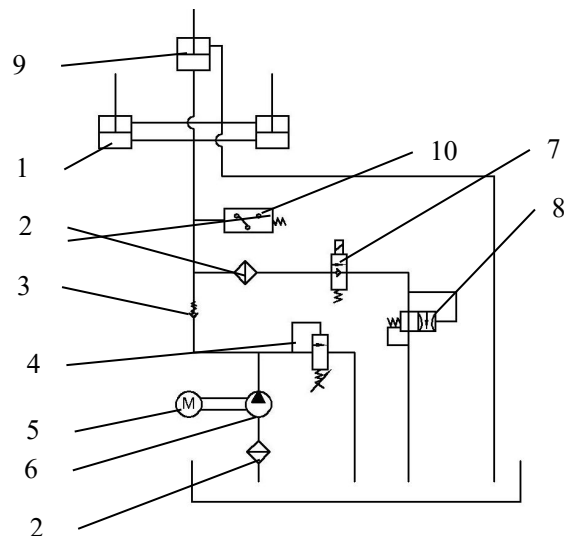


Figure 8

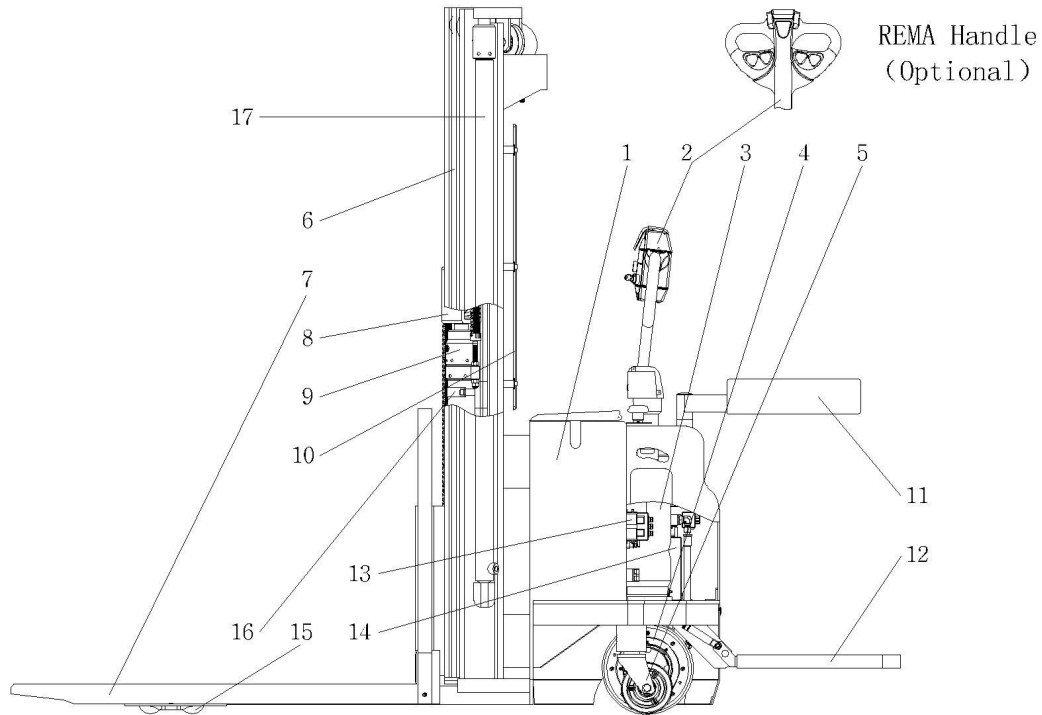
8. Easy-worn parts

No.	Position	Code	Name	specification	Qty
1	lifting cylinder assembly	30904	Dustproof ring	J35-47-5/10	1
		30908	O-ring	43.7×3.55	3
		30911	O-ring	15.8×2.4	2
		30915	Seal ring	D50×42×10	1
2	drive wheel assembly	30409	gasket	QDL250-5	1
		30424	oil seal	JC 140×180×12	1
		30428	driving wheel	φ 250×80	1
3	Electric Control system	10721	Fuse	5A	1
		10718	Fuse	150A	1
		31301	Battery	165AH/24V	1
		10702	Emergency switch	ZDK 200	1
		10712	DC contactor	DC88-317T/24V	1
		31303	charging plug	SC175	1
4	Balance wheel assembly &Front Wheel assembly	30509	Balance roller	φ 156×50	2
		31502	Front wheel	Φ 80×70	4
5	Handle Assembly	10108	microswitch	VP513A-4F	3
		10314	Pneumatic spring	CDD1.5 • 7-8	1
		10129	Lifting button	ZB2BA3C	1
		10130	lowering button	ZB2BA3C	1
		10118	Horn button	R13-507	1
		10125	Brake switch	BFK457-08	1
6	Platform Assembly	31202	pneumatic spring	CDD1.5 • 6-4	2
		31207	platform	CDD1.5 • 6 • 1	1

9. Parts List

1 Structure of the Electric Pallet Stacker	.....
2 Exploded View	.....
2.1 Chassis	.....
2.2 Handle Assembly	.....
2.3 Turning Shaft Assembly	.....
2.4 Drive Wheel Assembly	.....
2.5 Balance Wheel Assembly	.....
2.6 Middle Mast and Inner Mast	.....
2.7 Fork Carriage Assembly	.....
2.8 Chain Wheel Assembly	.....
2.9 Free Lifting Cylinder Assembly	.....
2.10 Protection Net	.....
2.11 Handrail Assembly	.....
2.12 Platform Assembly	.....
2.13 Electric Control System	.....
2.14 Hydraulic System	.....
2.15 Front Wheel Assembly	.....
2.16 Cylinder Fixing Assembly	.....
2.17 Lifting Cylinder Assembly	.....

1 Structure of the Electric Pallet Stacker

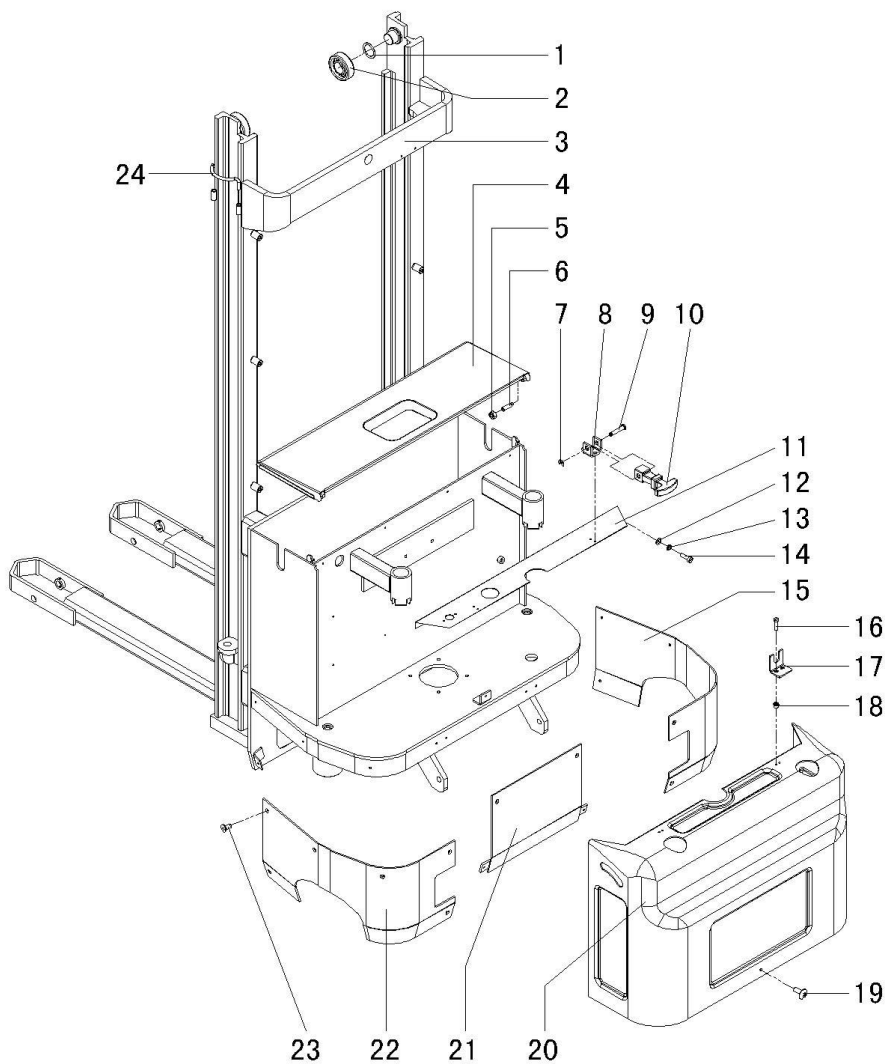


- 1. Chassis 2. Handle Assembly 3. Turning Shaft Assembly 4. Drive Wheel Assembly 5. Balance Wheel Assembly 6. Middle Mast and Inner Mast 7. Fork Carriage Assembly 8. Chain Wheel Assembly 9. Free Lifting Cylinder Assembly 10. Protection Net 11. Handrail Assembly 12. Platform Assembly 13. Electric Control System 14. Hydraulic System 15. Front Wheel Assembly 16. Cylinder Fixing Assembly 17. Lifting Cylinder Assembly**

2 Exploded View

2.1 Chassis

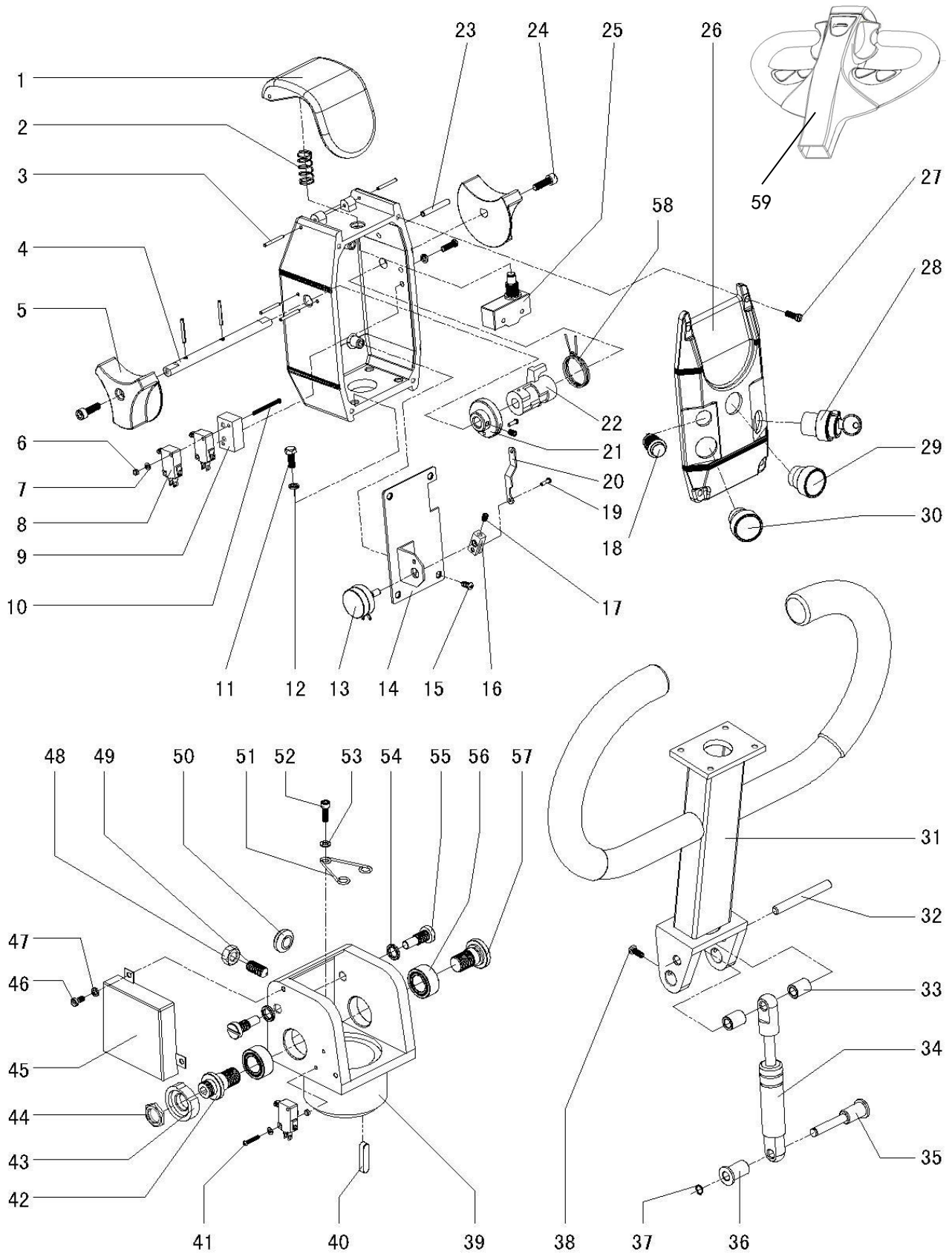
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	60110	mast bearing	2	13	30130	spring washer	4
2	60111	adjusting washer	N	14	30131	screw	4
3	60112	chassis	1	15	30132	right cover	1
4	30121	battery box cover	1	16	30133	screw	8
5	30122	nut	2	17	30134	holder	2
6	30123	screw	2	18	30135	lock nut	8
7	30124	holder	2	19	30136	screw	1
8	30125	rubber lock	2	20	30137	cover	1
9	30126	pin	2	21	30138	rear cover	1
10	30127	rubber lock	2	22	30139	left cover	1
11	30128	Indicator plate	1	23	30140	screw	16
12	30129	washer	4	24	60113	retaining ring	2



2.2 Handle Assembly

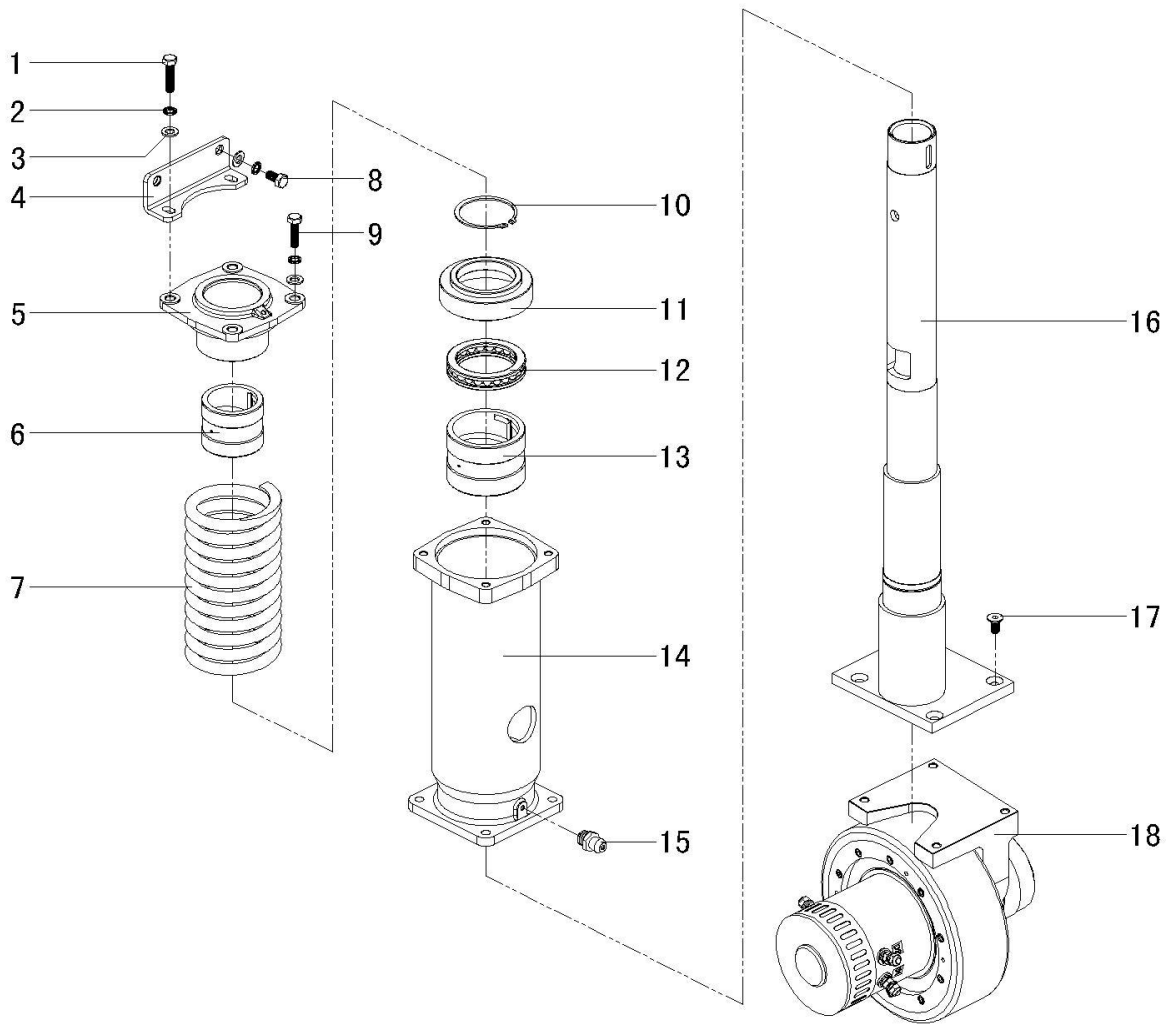
Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	10101	lever	1	31	10131	handle	1
2	10102	spring	1	32	10132	pin	1
3	10103	pin	6	33	10133	locating tube	2
4	10104	shaft	1	34	10134	pneumatic spring	1
5	10105	rotator	2	35	10135	pin	1
6	10106	nut	4	36	10136	bush	1
7	10107	washer	4	37	10137	retaining ring	1
8	10108	microswitch	3	38	10138	bolt	2
9	10109	block	1	39	10139	Handle base	1
10	10110	screw	2	40	10140	straight key	1
11	10111	bolt	4	41	10141	screw	2
12	10112	Spring washer	4	42	10142	long pin	1
13	10113	regulator	1	43	10143	cam	1
14	10114	baseplate	1	44	10144	lock nut	1
15	10115	screw	4	45	10145	Cover	1
16	10116	crank	1	46	10146	screw	2
17	10117	screw	2	47	10147	Spring washer	4
18	10118	horn button	1	48	10148	nut	1
19	10119	hollow rivet	2	49	10149	screw	1
20	10120	connecting rod	1	50	10150	rubber ring	1
21	10121	eccentric wheel	1	51	10151	Line block	1
22	10122	cam	1	52	10152	screw	1
23	10123	spring pin	1	53	10153	washer	1
24	10124	screw	2	54	10154	spring washer	2
25	10125	brake switch	1	55	10155	positional pin	2
26	10126	cover	1	56	10156	bearing	2
27	10127	screw	6	57	10157	short pin	1
28	10128	lock	1	58	10158	spring	1
29	10129	lifting button	1	59	10159	Rema handle	1
30	10130	lowering button	1				

2.2 Handle Assembly



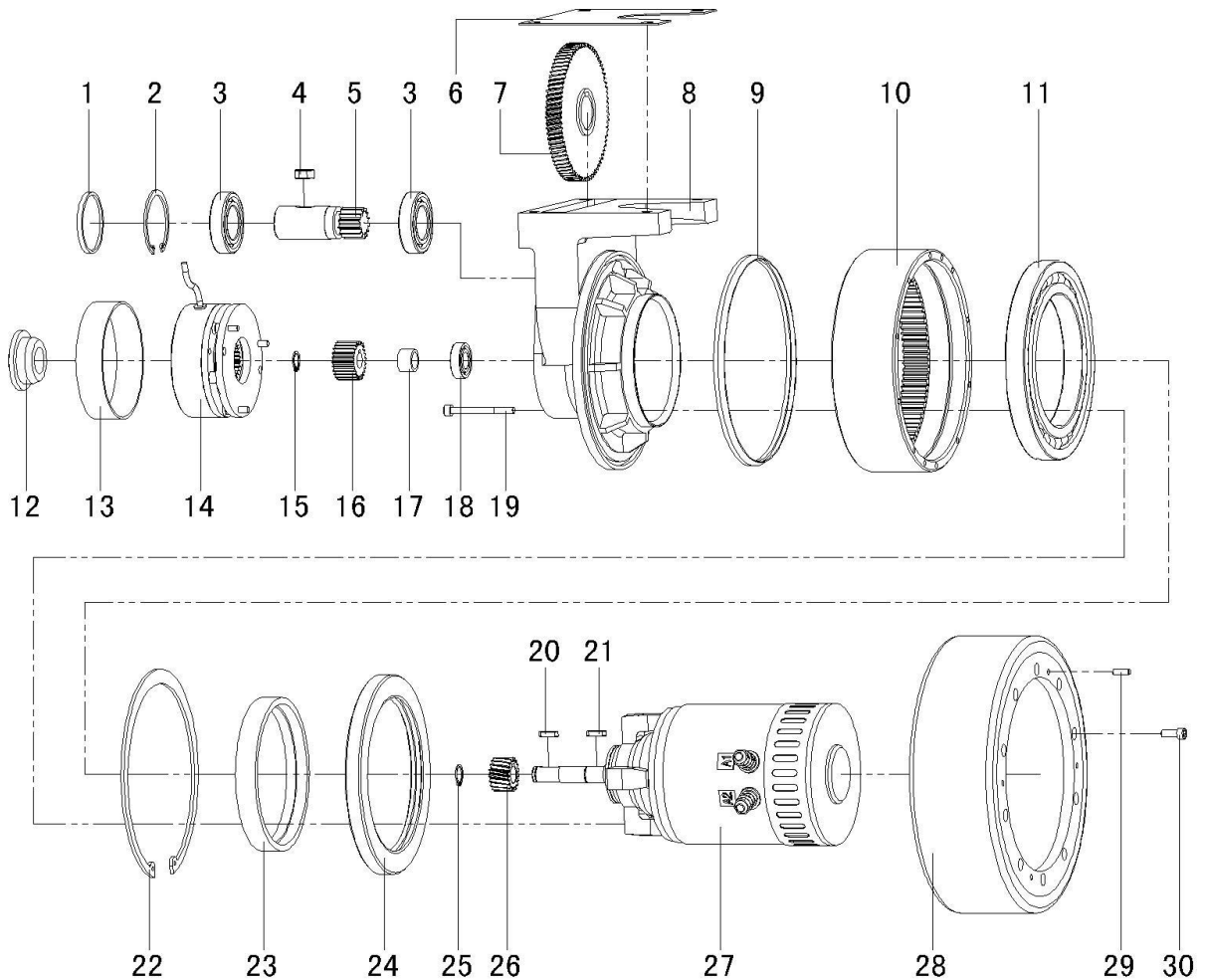
2.3 Turning Shaft Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	30201	bolt	2	11	30211	bearing base	1
2	30202	spring washer	10	12	30212	bearing	1
3	30203	washer	10	13	30213	bushing	1
4	30204	holder	1	14	30214	spring sleeve	1
5	30205	bearing cover	1	15	30215	oil cup	2
6	30206	bushing	1	16	30216	shaft	1
7	30207	spring	1	17	30217	screw	4
8	30208	bolt	2	18	30218A	DC driving wheel	1
9	30209	bolt	6	19	30218B	AC driving wheel	1
10	30210	retaining ring	1				



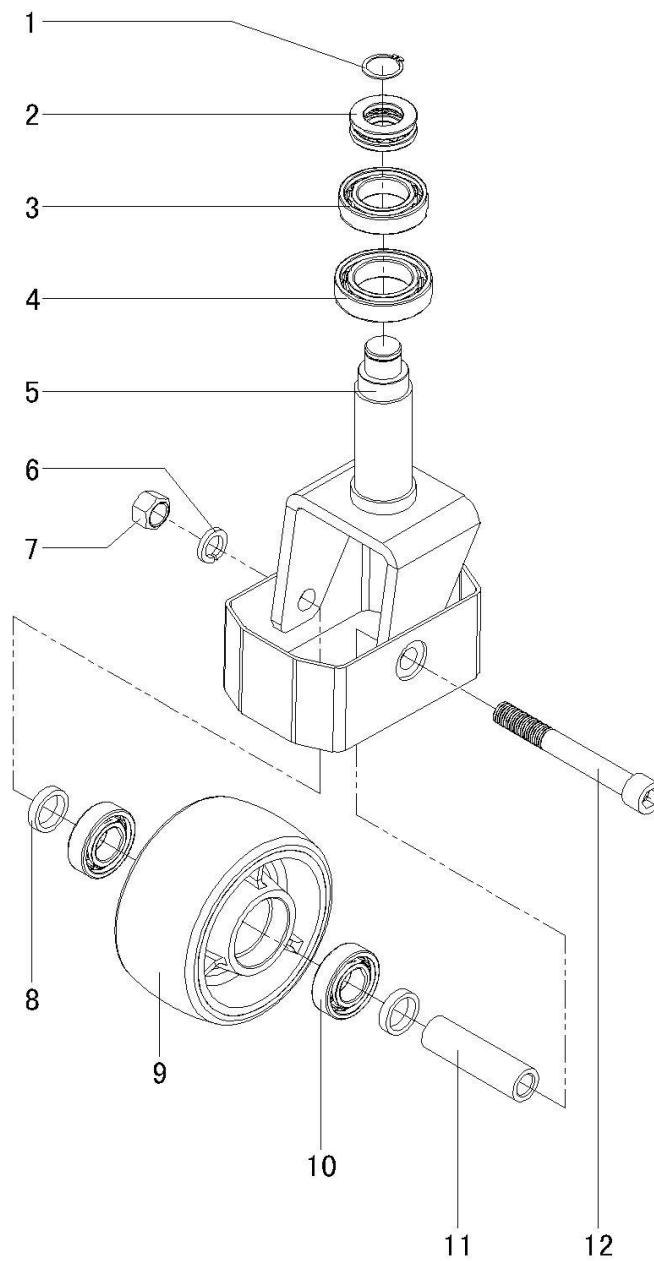
2.4 Drive Wheel Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	30401	bearing cover	1	17	30417	bushing	1
2	30402	retaining ring	1	18	30418	bearing	1
3	30403	bearing	2	19	30419	screw	3
4	30404	straight key	1	20	30420	straight key	1
5	30405	pinion gear	1	21	30421	straight key	1
6	30406	gasket	1	22	30422	retaining ring	1
7	30407	speed gear	1	23	30423A	DC motor ring	1
8	30408	housing	1		30423B	AC motor ring	1
9	30409	gasket	1	24	30424	oil seal	1
10	30410	crown gear	1	25	30425	retaining ring	1
11	30411	bearing	1	26	30426	motor shaft gear	1
12	30412	dustproof nut	1	27	30427A	DC motor	1
13	30413	break guard ring	1		30427B	AC motor	1
14	30414	electric brake	1	28	30428	driving wheel	1
15	30415	retaining ring	1	29	30429	pin	2
16	30416	hub	1	30	30430	screw	10



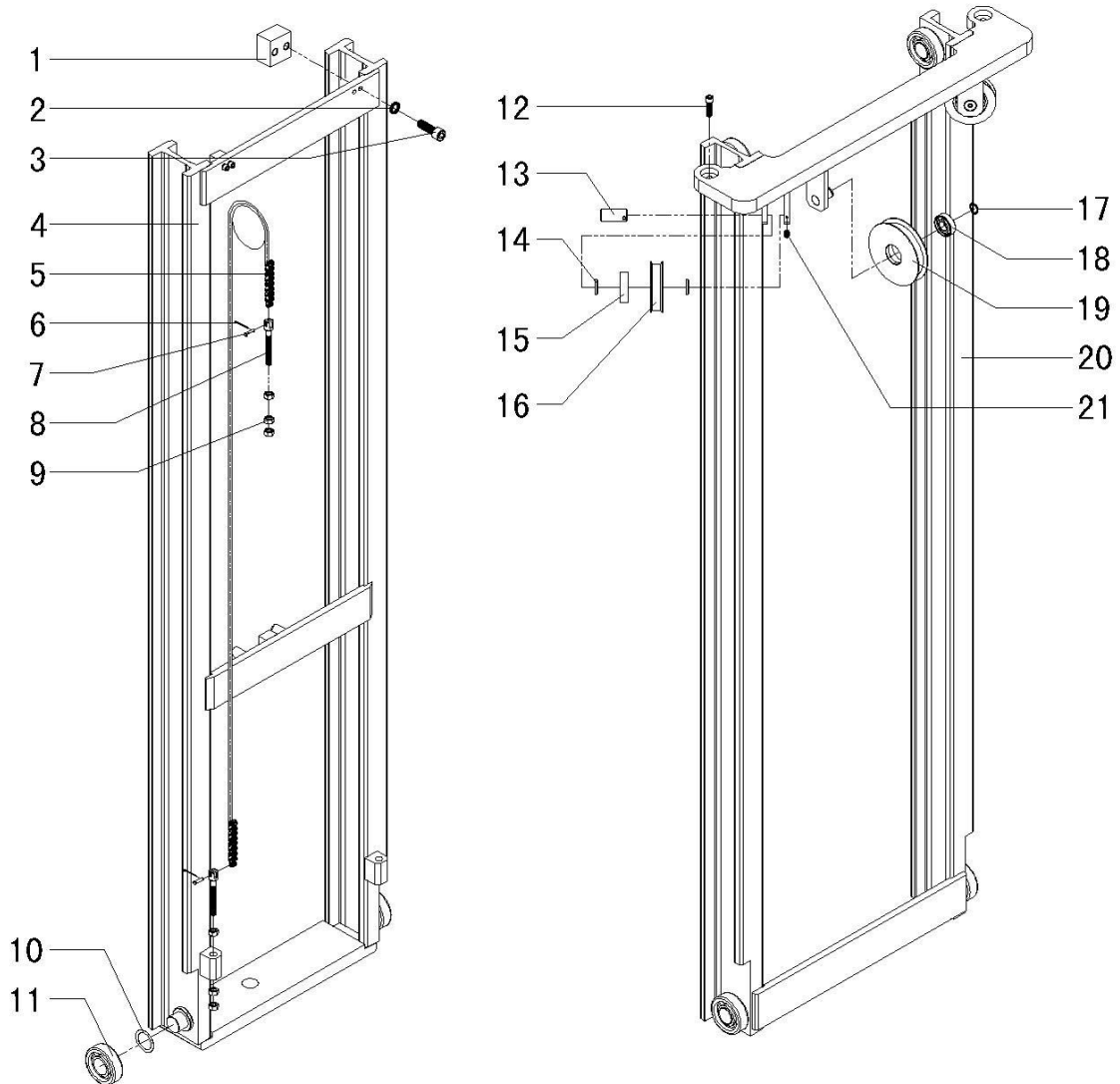
2.5 Balance Wheel Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	30501	retaining ring	2	7	30507	nut	2
2	30502	bearing	2	8	30508	locating ring	4
3	30503	bearing	2	9	30509	balance wheel	2
4	30504	bearing	2	10	30510	bearing	4
5	30505	wheel frame	2	11	30511	bush tube	2
6	30506	spring washer	2	12	30512	screw	2



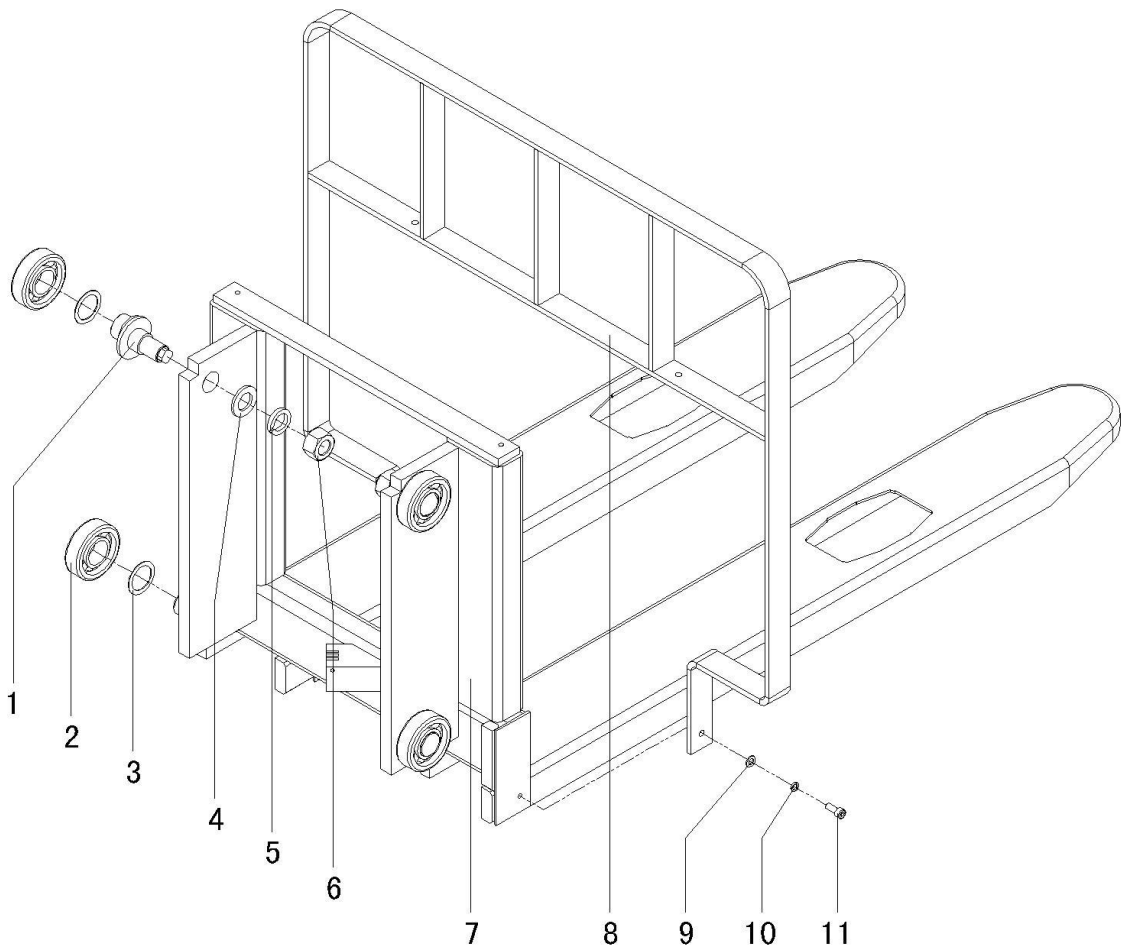
2.6 Middle Mast and Inner Mast

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	60620	block	2	12	60628	screw	2
2	60621	spring washer	4	13	60629	pin	2
3	60622	screw	4	14	60630	retaining ring	4
4	60623	inner mast	1	15	60631	bearing	2
5	60624	chain	2	16	60632	chain wheel	1
6	60625	split pin	4	17	60633	retaining ring	1
7	30802	pin	4	18	60634	bearing	1
8	60626	adjusting bolt	4	19	60635	oil pipe wheel	1
9	60627	nut	12	20	60636	middle mast	1
10	60110	adjusting washer	N	21	60637	screw	2
11	60111	bearing	6				



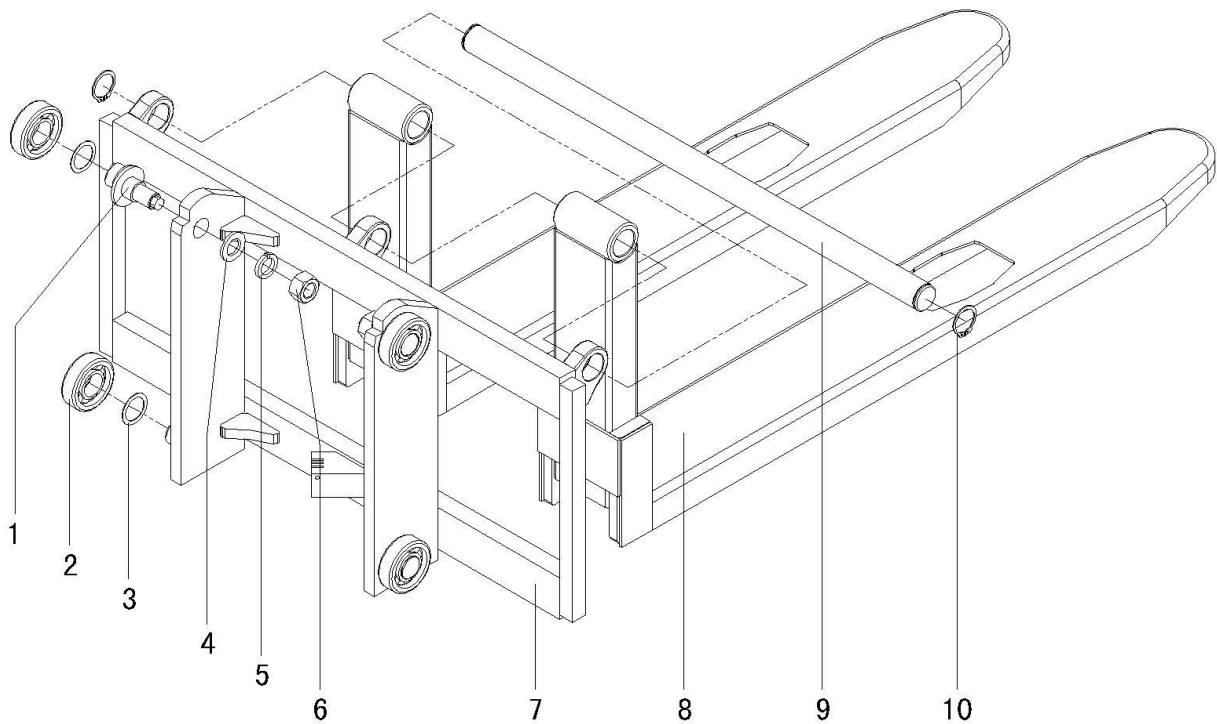
2.7(A) Fixed Fork Carriage Assembly

Item	Part No.	Description	Qty
1	60720	eccentric shaft	2
2	60110	bearing	4
3	60111	adjusting washer	N
4	60721	washer	2
5	60722	spring washer	2
6	60723	nut	2
7	60724	fork carriage body	1
8	60725	carriage baffle	1
9	60726	washer	4
10	60727	spring washer	4
11	60728	screw	4



2.7(B) Adjustable Fork Carriage Assembly

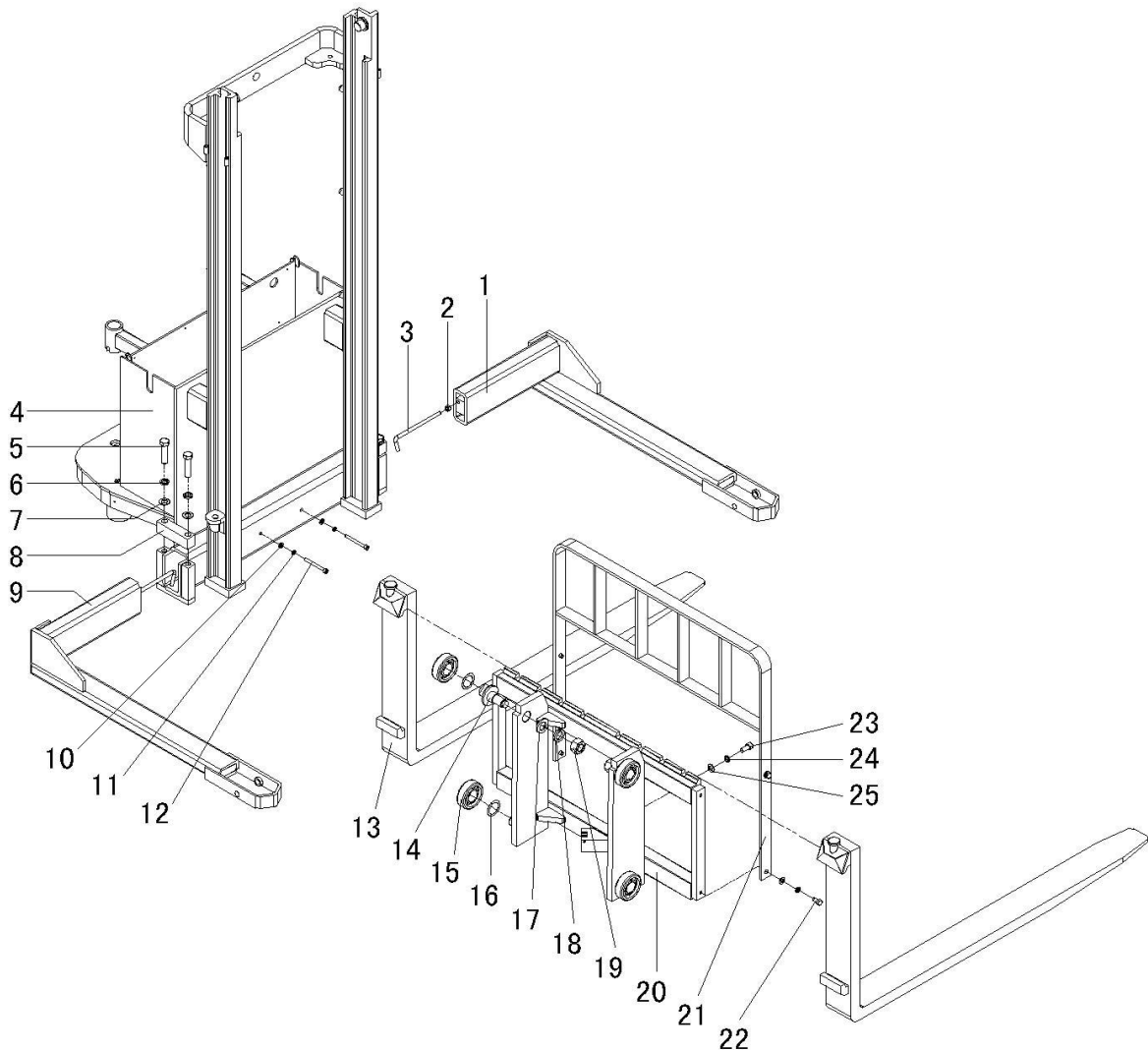
Item	Part No.	Description	Qty
1	60720	eccentric shaft	2
2	60110	bearing	4
3	60111	adjusting washer	N
4	60721	washer	2
5	60722	spring washer	2
6	60723	nut	2
7	60724	fork carriage body	1
8	30722	fork	2
9	30723	long shaft	1
10	60731	retaining ring	2



2.7(C) Forging Forks Carriage Assembly

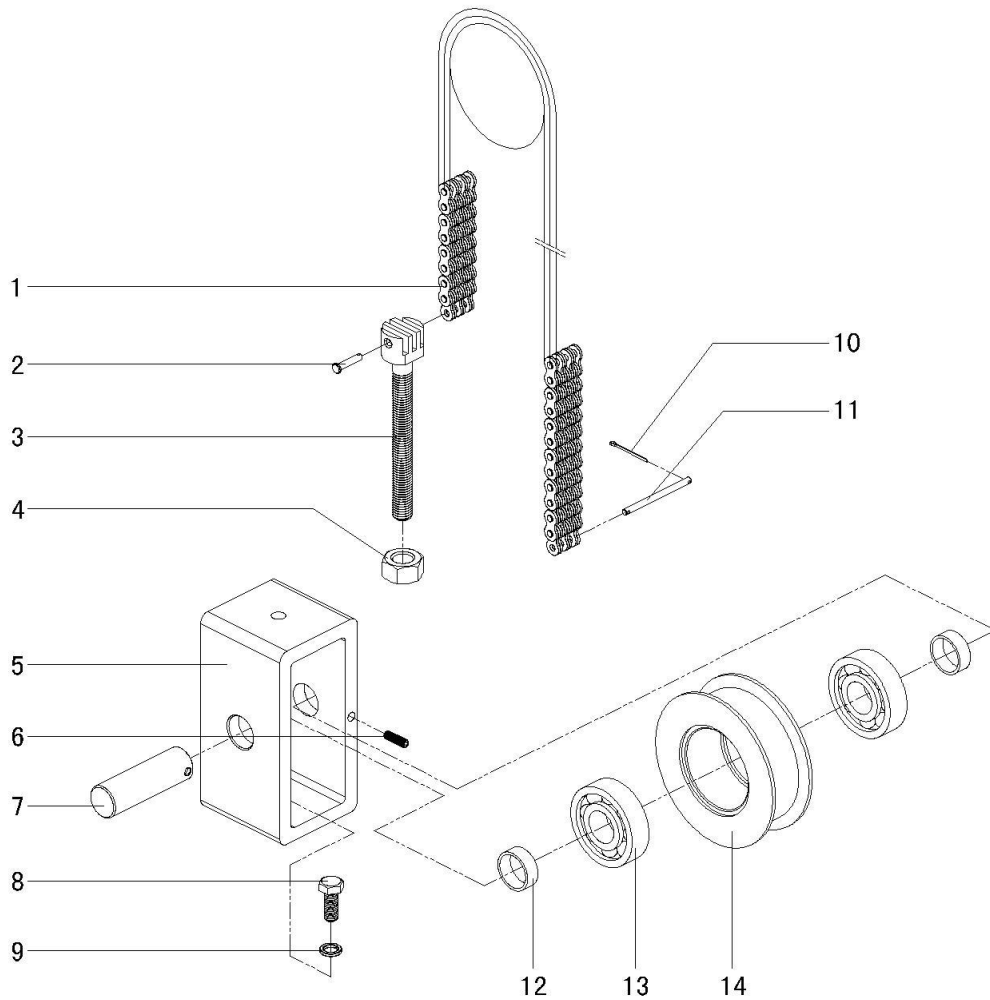
Chassis for Wide Straddle Type

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	60740	left leg-insert	1	14	60720	eccentric shaft	2
2	30731	nut	2	15	60110	bearing	4
3	30732	limit hook	2	16	60111	adjusting washer	N
4	60741	chassis	1	17	60721	washer	2
5	30734	bolt	4	18	60722	spring washer	2
6	30735	spring washer	4	19	60723	nut	2
7	30736	washer	4	20	60745	fork carriage body	1
8	60742	hoop	2	21	60746	carriage baffle	1
9	60743	right leg-insert	1	22	60747	bolt	4
10	30739	washer	6	23	60748	screw	1
11	30740	spring washer	6	24	60749	spring washer	1
12	30741	screw	2	25	60750	washer	1
13	60744	fork	2				



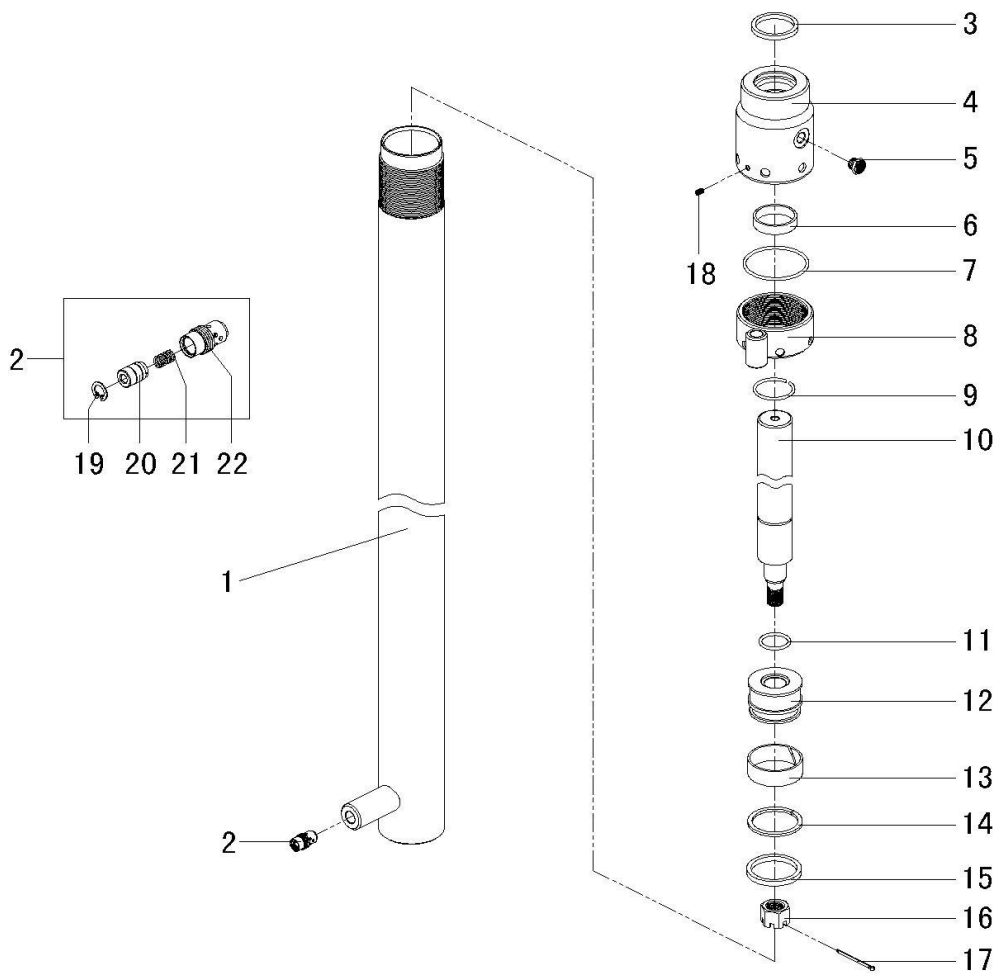
2.8 Chain Wheel Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	60830	chain	1	8	30809	bolt	1
2	60831	pin	1	9	30810	spring washer	1
3	60832	adjusting bolt	1	10	30811	split pin	3
4	60833	nut	3	11	30812	pin	1
5	30806	chain base	1	12	60834	locating ring	2
6	30807	screw	1	13	60835	bearing	2
7	30808	pin	1	14	60836	chain wheel	1



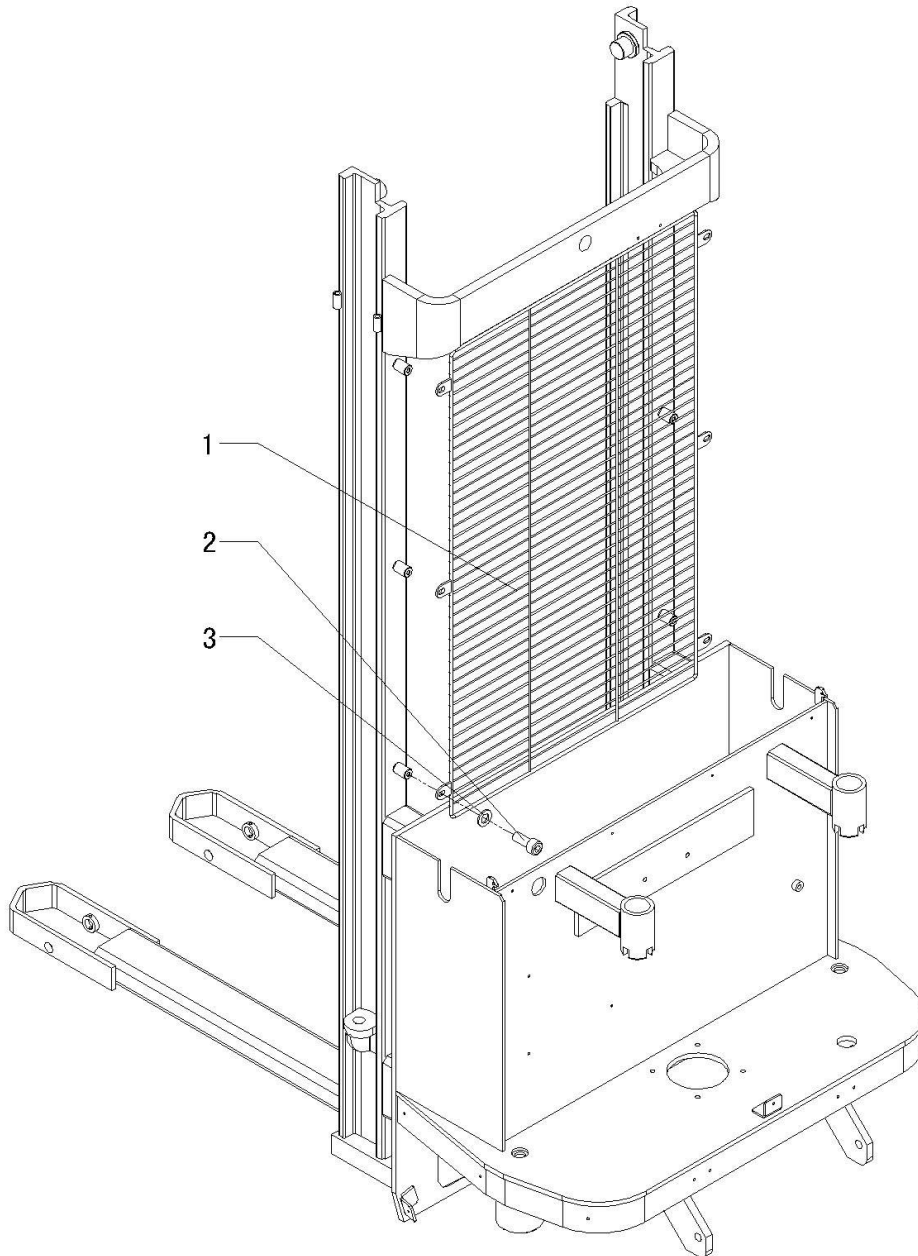
2.9 Free Lifting Cylinder Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	60910	cylinder	1	12	60919	piston	1
2	30902	speed reducing valve	1	13	60920	guiding ring	1
3	60911	dust-proof ring	1	14	60921	cut washer	1
4	60912	cylinder cap	1	15	60922	seal ring	1
5	30906	ventilating nut	1	16	30916	lock nut	1
6	60913	guiding ring	1	17	30917	split pin	1
7	60914	o-ring	1	18	60923	screw	1
8	60915	nut	1	19	30919	retaining ring	1
9	60916	retaining ring	1	20	30920	guiding ring	1
10	60917	piston rod	1	21	30921	spring	1
11	60918	o-ring	1	22	30922	valve tube	1



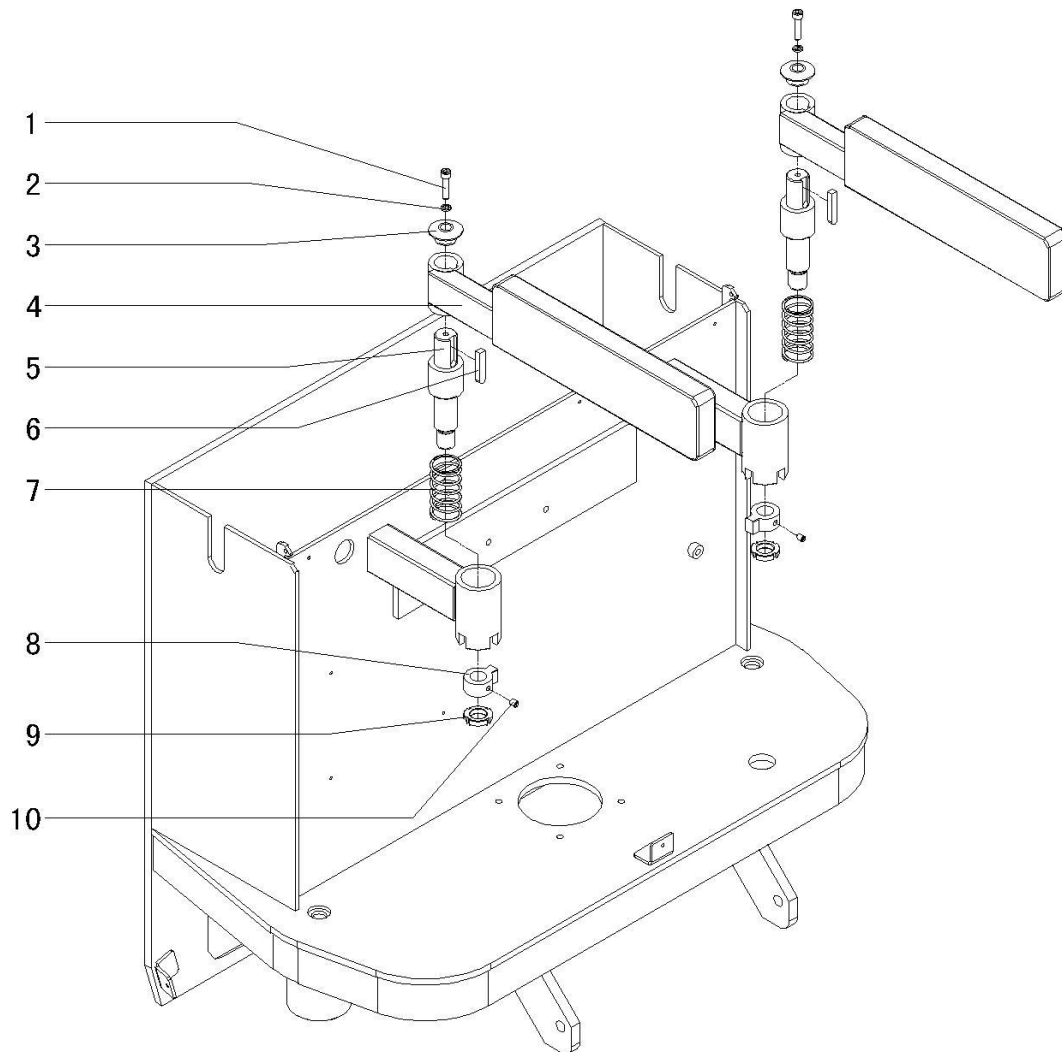
2.10 Protection Net

Item	Part No.	Description	Qty
1	61001	protection nut	1
2	61002	screw	6
3	61003	washer	6



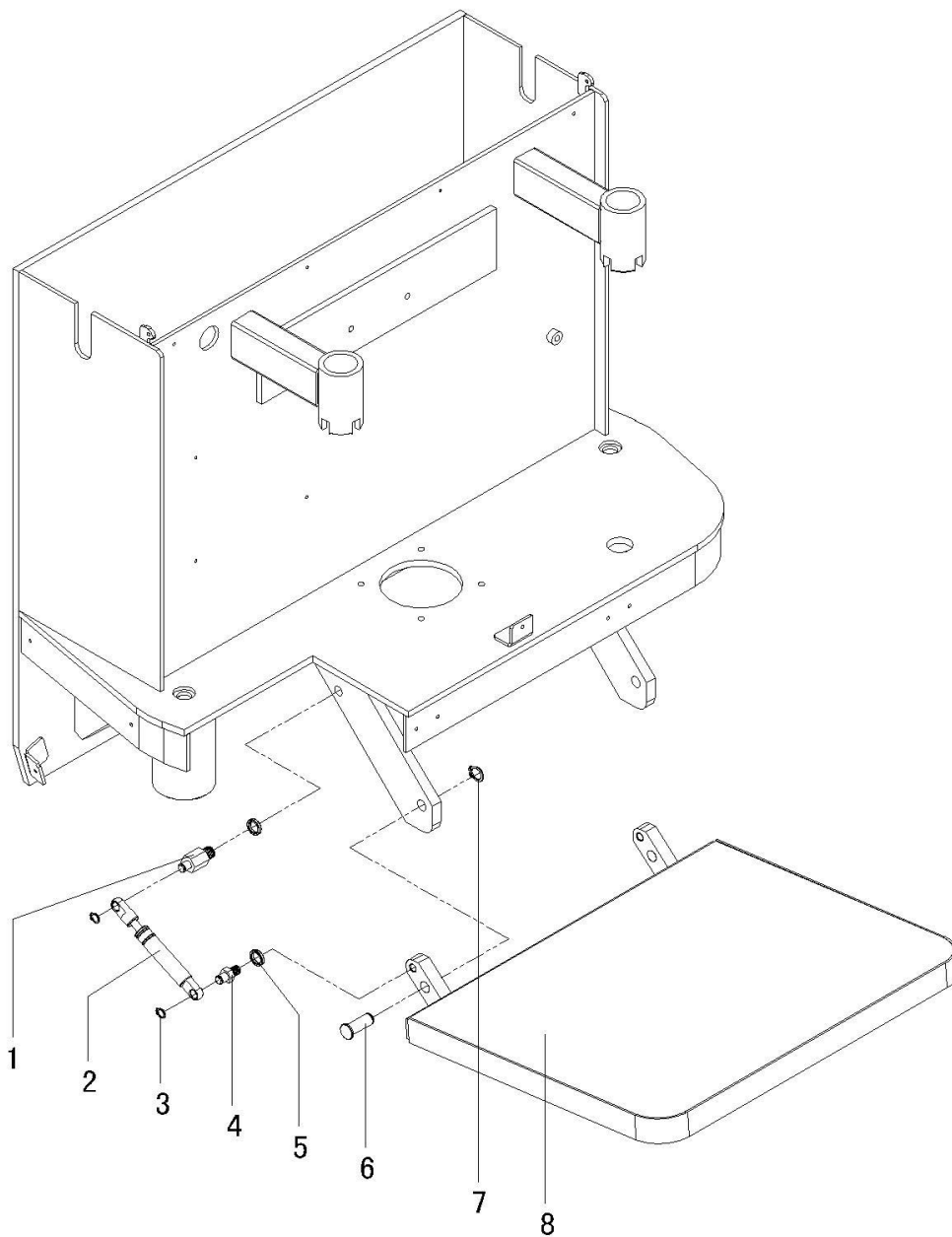
2.11 Handrail Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	31110	screw	2	6	31115	straight key	2
2	31111	spring washer	2	7	31116	spring	2
3	31112	handrail cap	2	8	31117	nut	2
4	31113	handrail	2	9	31118	round nut	2
5	31114	rotating shaft	2	10	31119	screw	2



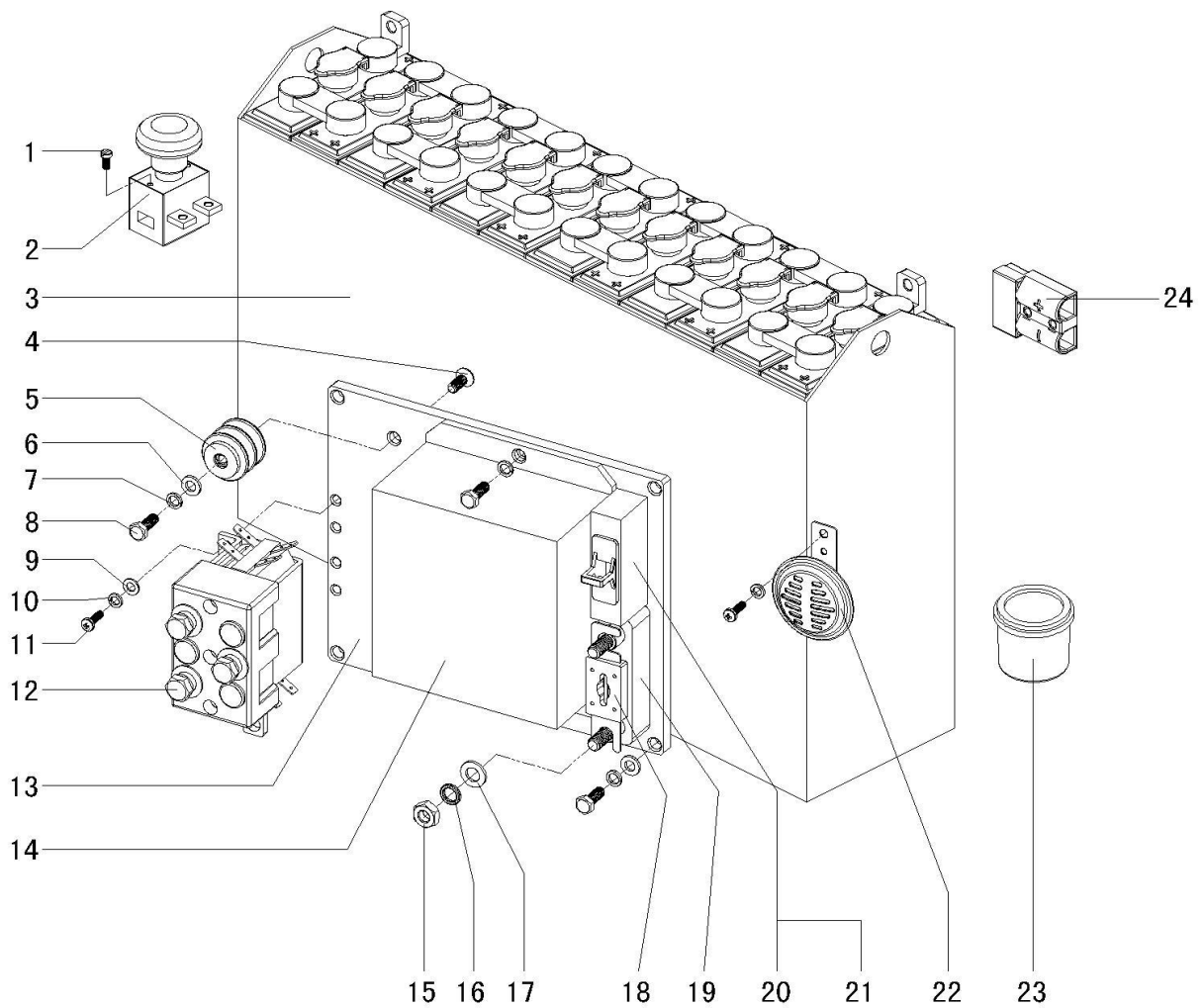
2.12 Platform Assembly

Item	Part No.	Description	Qty
1	31201	pin	2
2	31202	pneumatic spring	2
3	31203	retaining ring	4
4	31204	pin	2
5	31205	spring washer	4
6	31208	pin	2
7	31206	retaining ring	2
8	31207	platform	1



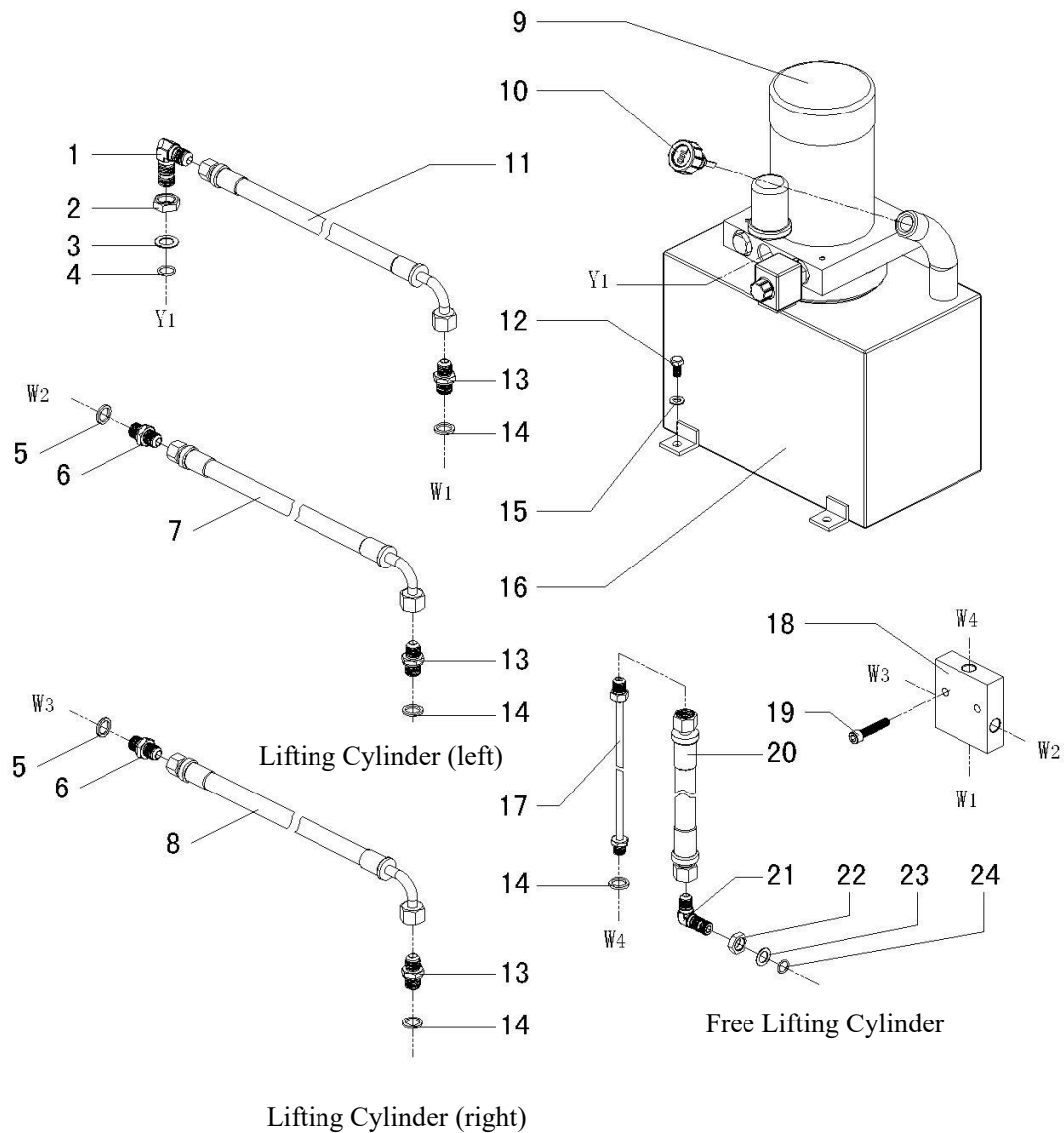
2.13 Electric Control System

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	10701	screw	2	13	10713	electric board	1
2	10702	emergency switch	1	14	10714	speed controller	1
3	31301	battery	1	15	10715	nut	2
4	10704	screw	1	16	10716	spring washer	14
5	10705	insulating base	2	17	10717	washer	12
6	10706	washer	1	18	10718	fuse	1
7	10707	spring washer	1	19	10719	fuse base	1
8	10708	bolt	1	20	10720	fuse base	1
9	10709	washer	2	21	10721	fuse	1
10	10710	spring washer	2	22	10722	horn	1
11	10711	screw	2	23	10726	digital meter	1
12	10712	DC contactor	1	24	31303	charging plug	1



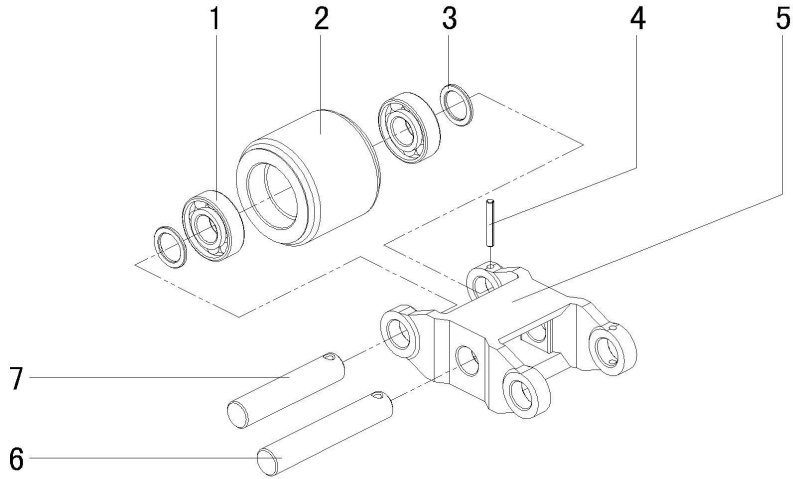
2.14 Hydraulic System

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	61401	right angle joint	1	13	61412	pipe joint	3
2	61402	nut	1	14	61413	seal washer	4
3	61403	washer	1	15	61414	washer	3
4	61404	o-ring	1	16	61415	oil tank	1
5	61405	seal washer	2	17	61416	hydraulic pipe	1
6	61406	pipe joint	2	18	61417	valve body	1
7	61407	hydraulic pipe	1	19	61418	screw	2
8	61408	hydraulic pipe	1	20	61419	hydraulic pipe	1
9	61409	pump unit	1	21	61420	right angle joint	1
10	31401	oil filling cap	1	22	61421	nut	1
11	61410	hydraulic pipe	1	23	61422	washer	1
12	61411	bolt	3	24	61423	o-ring	1



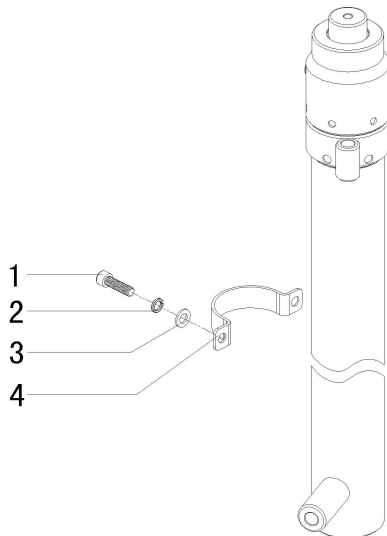
2.15 Front Wheel Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	31501	bearing	8	5	31505	wheel frame	2
2	31502	front wheel	4	6	31506	pin	2
3	31503	locating sleeve	8	7	31507	pin	4
4	31504	pin	6				



2.16 Cylinder Fixing Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	31501	bearing	8	5	31505	wheel frame	2
2	31502	front wheel	4	6	31506	pin	2
3	31503	locating sleeve	8	7	31507	pin	4
4	31504	pin	6				



2.17 Lifting Cylinder Assembly

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	61701	cylinder	2	9	61708	retaining ring	2
2	61702	dust-proof ring	2	10	61709	o-ring	2
3	61703	cylinder cap	2	11	61710	piston	2
4	30906	ventilating bolt	2	12	61711	cut washer	2
5	61704	guiding ring	4	13	61712	seal ring	2
6	61705	o-ring	2	14	30916	lock nut	2
7	61706	screw	2	15	30917	split pin	2
8	61707	piston rod	2				

