

BEFORE YOU BEGIN

Welcome to use our electric stacker. Your stacker is made of high quality steel and SPED mast and was designed to give a durable, reliable and easy to use product. For your safety and correct operation, please carefully read this instruction book and warnings on the stacker before using it. This Operation Instruction of the stacker is edited for you to completely acquire and master the safety operation of the stacker. All of the information reported herein is based on data available at the moment of printing. We reserve the right to modify our own products at any moment without notice and incurring in any sanction. So, it is suggested to always verify possible updates.



Semi-Electric Stacker
S15J

Eoslift Automation Technology Corp.
No.99, Yanjia Road, Yuantong Town, Haiyan, Zhejiang

Year of Manufacture: 2016

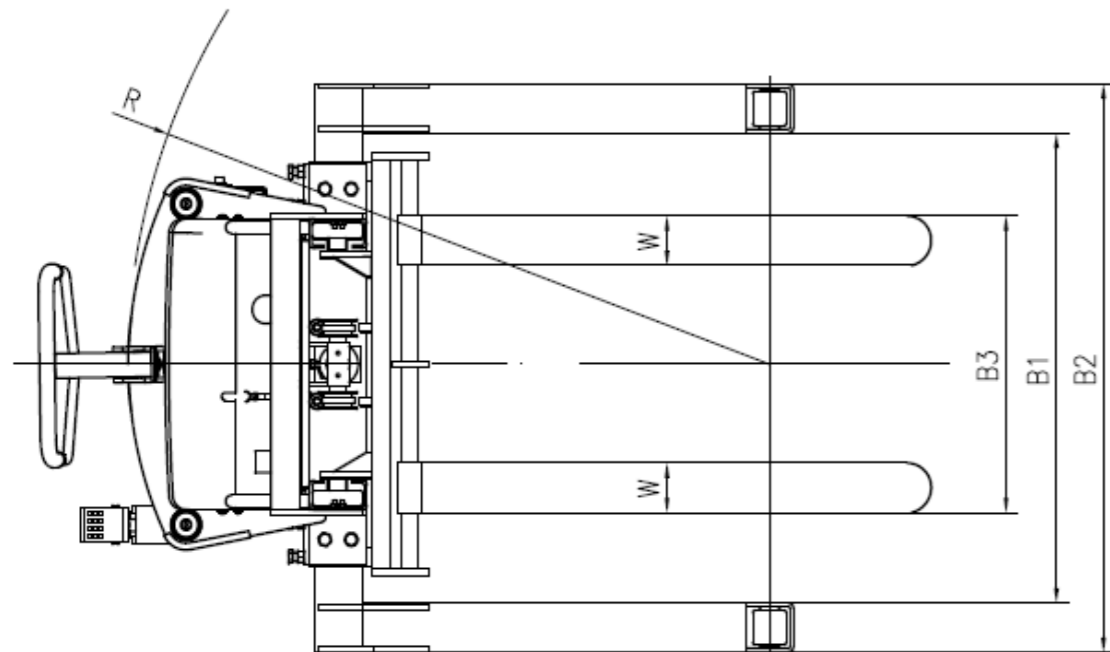
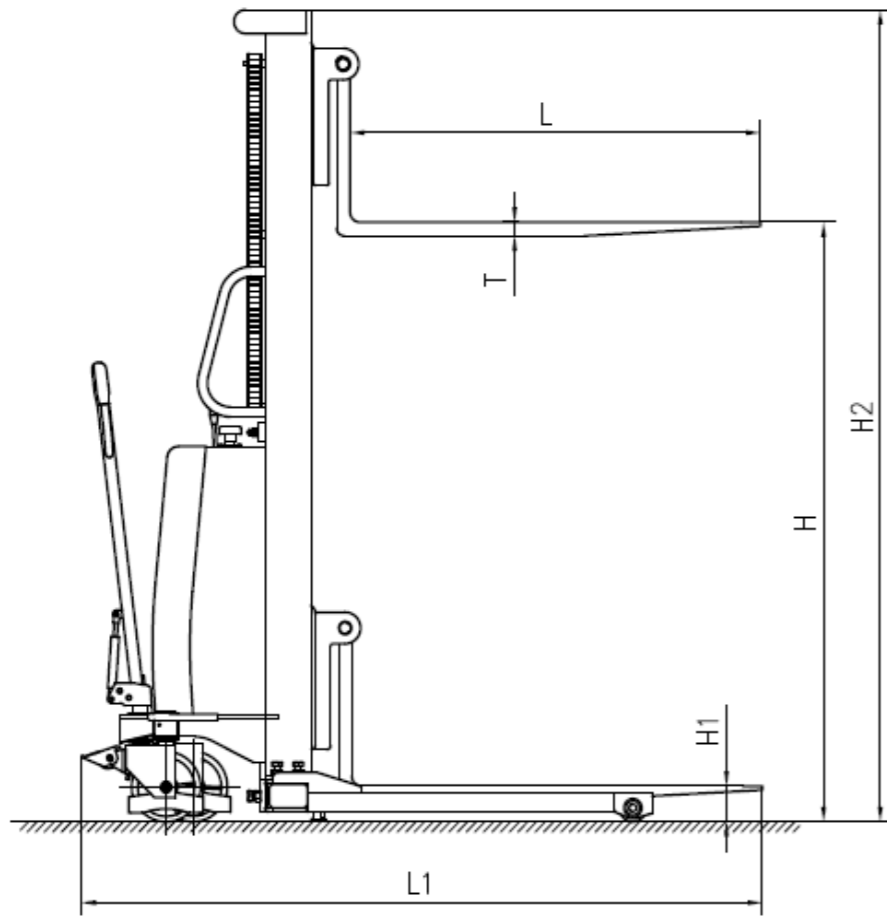
CONTENTS

1 Technical Specifications	Page 1
2 Installation & Adjustment	Page 3
3 Safety Guidance	Page 4
4 Maintenance	Page 4
5 Battery Power System	Page 5
6 Battery Charging	Page 5
7 Control Panel	Page 5
8 Transportation, Loading, Commission & Storage	Page 6
9 Trouble Shooting	Page 7
10 Electric Wires Diagram	Page 8
11 Hydraulic Flow Diagram	Page 9
12 Parts List	Page 10

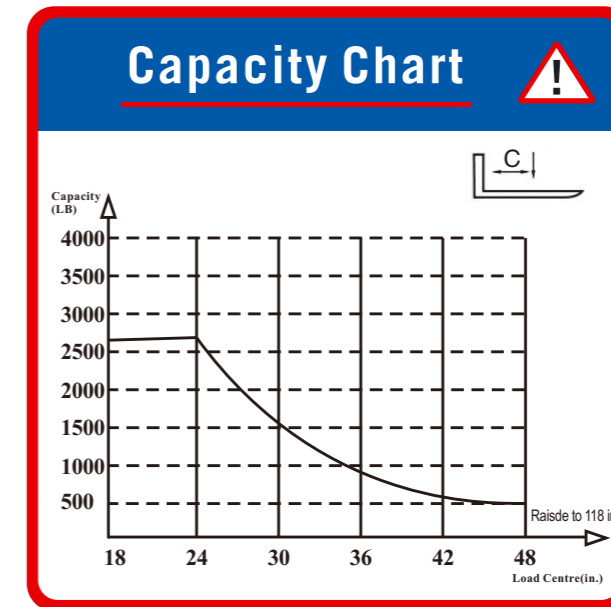
1.1 Technical Specifications KJ(Door frame)

Model		S15J
Manufacture		EOSLIFT
Load Capacity	lb	3300
Inner Width of Legs	B1(in)	33-49
Outer Width of Legs	B2(in)	41-57
Min.Fork Height	H1(in)	1.4
Lift Height	H(in)	118
Min.Mast Height	H2(in)	80
Fork Length	L(in)	42
Fork Width	W(in)	3.9
Fork Thickness	T(in)	1.4
Fork Ajustable	B3(in)	8.3-33
Load wheels	in	φ 2.8×2.8
Steer wheels	in	φ 7.1x2
Overall Length	L1(in)	70
Turning Radius	R(in)	57
Battery	V/AH	12V/160AH
Lifting Motor	V/Kw	12V/1.6Kw
Charger Output	V/A	12V/20A

KJ(Door frame)



1.2 Residual Capacity at different load centre with Lift height 118in.



2. Installation & Adjustment

- 2.1 Adjust the screws on the mast guard to removing and re-attaching it. The screws are always remaining on the guard.
- 2.2 Use of the removable load backrest extension: during operation of the truck, if lift height exceeds 1.8 m, it is suggested that an extension backrest should be added for the lifting part. The manufacturing and installation of backrest should be completed by professional personnel specialized in industrial vehicle. With regard to detailed requirements, you should contact the manufacturer.

3. Safety Guidance

- 3.1 Operator should read all warning signs and instructions here and on the stacker before using it.
- 3.2 Do not operate a stacker unless you are familiar with it and have been trained or authorized to do so.
- 3.3 Do not operate a stacker unless you have checked its condition. Give special attention to the chain, the wheels, the handle, the guide frame, the pilot wheel, the mast, battery, etc.
- 3.4 Do not use on a slopping ground or on a barbaric or explosive danger environment.
- 3.5 Do not take up any people on the forks.
- 3.6 When forks lifting, forbid anyone to stand under the forks or pass through the forks.
- 3.7 The operator had better take on safety shoes and gloves for labor protecting against crushing and shearing hazards. Keep feet out from underneath load.
- 3.8 Do not move the stacker when the goods are lifted to the height more than 300mm.
- 3.9 When the goods have been transported or lifted, all people should be away from the forks for 600mm.
- 3.10 The weight of goods should be distributed on the two forks, do not use only one fork. The center of gravity of goods should be in the center of two forks.
- 3.11 Do not load over maximum capacity according to the capacity diagram. Heavy load should not be allowed to remain on the forks for a long time after operation is over.
- 3.12 Before using or charging it, check cell liquid, if not enough, full it with distilled water.
- 3.13 Charging should be in dry and ventilated location, and far away from the fire.
- 3.14 Keeping the forks in the lowest position if not using.
- 3.15 Do not use the truck when traveling on lorries.
- 3.16 Do not use the truck in a potentially explosive atmosphere.
- 3.17 Do not use the truck as a vehicle jack.
- 3.18 Do not use under wind forces.
- 3.19 Do not use the truck on places insufficiently illuminated.
- 3.20 Do not use the truck with guarding removed.
- 3.21 Stackers should be parked on a smooth place, keep power off, lower the forks to the min. height, and press on the brake. Stackers should not be parked in the unsafe area such as busy streets, intersections, narrow roads, blind curves, slopes, soft ground, place around the inflammable, fire fighting access.
- 3.22 At other special condition or place, the operator should be carefully to operate the stacker.
- 3.23 Unauthorized truck modification is not permitted. No modifications or alterations to a powered industrial truck, which may affect, for example, capacity, stability or safety requirements of the truck, shall be made without the prior written approval of the original truck manufacturer, its authorized representative, or a successor thereof. This includes changes affecting, for example braking, steering, visibility and the addition of removable attachments. When the manufacturer or its successor approve a modification or alteration, they shall also make and approve appropriate changes to capacity plate, decals, tags and operation and maintenance handbooks. Only in the event that the truck manufacturer is no longer in business and there is no successor in the interest to the business, the user may arrange for a modification or alteration to a powered industrial truck, provided, however, that the user shall:
 - a) Arrange for the modification or alteration to be designed, tested and implemented by an engineer(s) expert in industrial trucks and their safety.
 - b) Maintain a permanent record of the design, test(s) and implementation of the modification or alteration.
 - c) Approve and make appropriate changes to the capacity plate(s), decals, tags and instruction handbook.
 - d) Affix a permanent and readily visible label to the truck stating the manner in which the truck has been modified or altered together with the date of the modification or alteration, and the name and address of the organization that accomplished the tasks.

4. Maintenance

- 4.1 Hydraulic oil
Please check the oil level every six months. The oil can be hydraulic oil: ISO VG32, its viscosity should be 32cSt at 40°C, total volume is about 4.0lt. use temperature -20oC~50 oC
Replace the hydraulic oil (every 12 months).
- 4.2 Daily check and maintenance
It is necessary to check the stacker daily. Special attention should be paid to the wheels, the axles, as thread, rags, etc., it may block the wheels, the fork and the mast, the chain, the battery should be checked, too. The forks should be unloaded and lowered in the lowest position when the job is over.
- 4.3 Lubrication
Use motor oil or grease to lubricate all movable parts.
- 4.4 Maintenance of battery: Keep all the screw caps on each cell battery dry and clean. Each connecting terminal and cable terminal should be tightened and painted with clean grease. The exposed connecting terminal and connecting rod of battery should be covered with anti-slip insulated cover.
- 4.5 Recharge the battery fully and carry out usual battery maintenance. Charge the battery every third month and check the fluid level.
- 4.6 Change the wheels
Put the unladen stacker on a smooth place, keep power off, lower the forks to the min. height. Keep the wheels off the ground, take off the elastic retaining ring on one side of the wheel axle, take out the wheel, put in the new wheel, and put back the elastic retaining ring.

5. Battery Power System

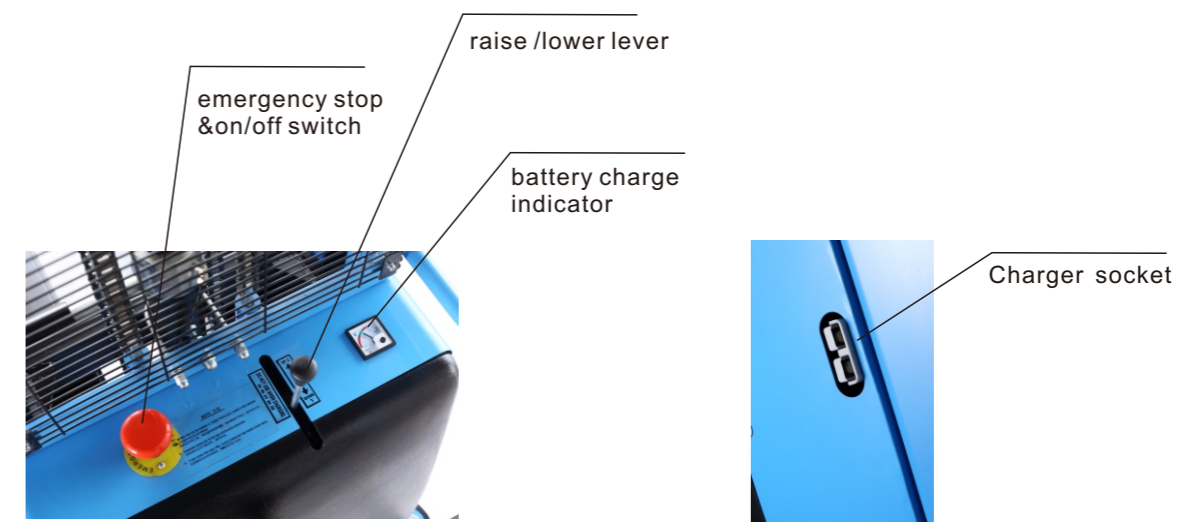
- 5.1 12V/120AH lead-acid storage battery is used in this series stacker.
- 5.2 The storage battery should be put in the special anti-spilling case which should be fixed with bolts.
- 5.3 The storage battery cannot be overturned during the process of installing and moving in case the acid liquor spills out.
- 5.4 Keep power off when the stacker is not in use.
- 5.5 Please use the assorted charger or charger with same specifications, and follow Article 6 to charge the battery.

6. Battery Charging

- 6.1 Charge storage battery when its voltage is less than 10 Volt.
- 6.2 Please check the battery liquid before charging, if it is not enough, add some distilled water.
- 6.3 The charging environment should be ventilated and far away from the fire.
- 6.4 If the stacker not use for long time, charge it for not less than two hours every week.
- 6.5 The voltage on the indicator should not be over 15 Volt when charging.
- 6.6 Do not use the stacker when charging.

7. Control Panel

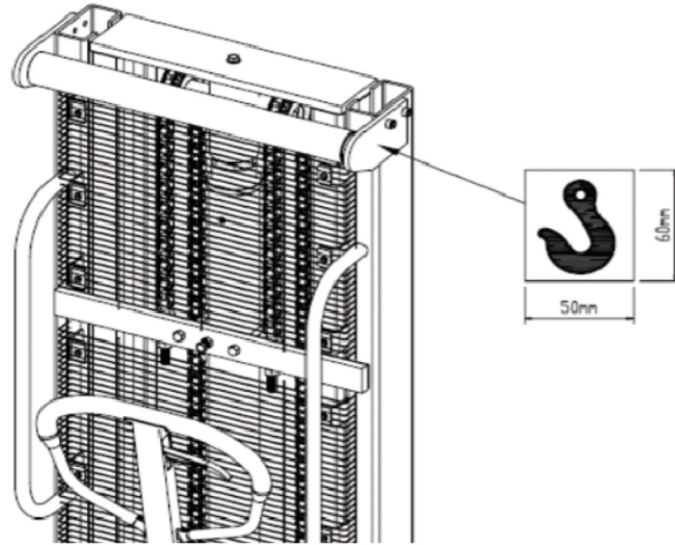
- 7.1 Emergency Stop
When you press down this switch, it will switch off the power, and then you turn it clockwise, it will switch on the power.
- 7.2 Battery indicator
It indicates the voltage of battery. When its voltage is less than 10 Volt, you should not use this stacker, you must charge it.
- 7.3 Control stick
This stick controls the forks to lower or lift. Push forward to make the motor start. Push backward and down to make the pressure released and the oil return to tank.
- 7.4 Charger socket



8. Transportation, Loading, Commissioning And Storage

If the truck has to be transported for a long distance, it should be packed in the container in order to avoid collision during transportation.

8.1 The truck is packed properly in a container and transported by hoisting apparatus. Lifting points are on both sides of the stacker, which are identified as the below picture.



8.2 Before loading, the operator shall make sure the truck weight on the nameplate to choose the suitable hoisting equipment. When the truck is unloaded, the operator shall look out for safety around to ensure slow landing of the truck.

8.3 On completion of commissioning, the truck shall be submitted to and verified according to the following function test: steering, traveling, braking, load handling controls and combined functions with rated capacity.

8.4 When a truck is inoperative, the load (if applicable) shall be removed with a proper tool and measure, the truck shall be transported out of the working zone with a proper way.

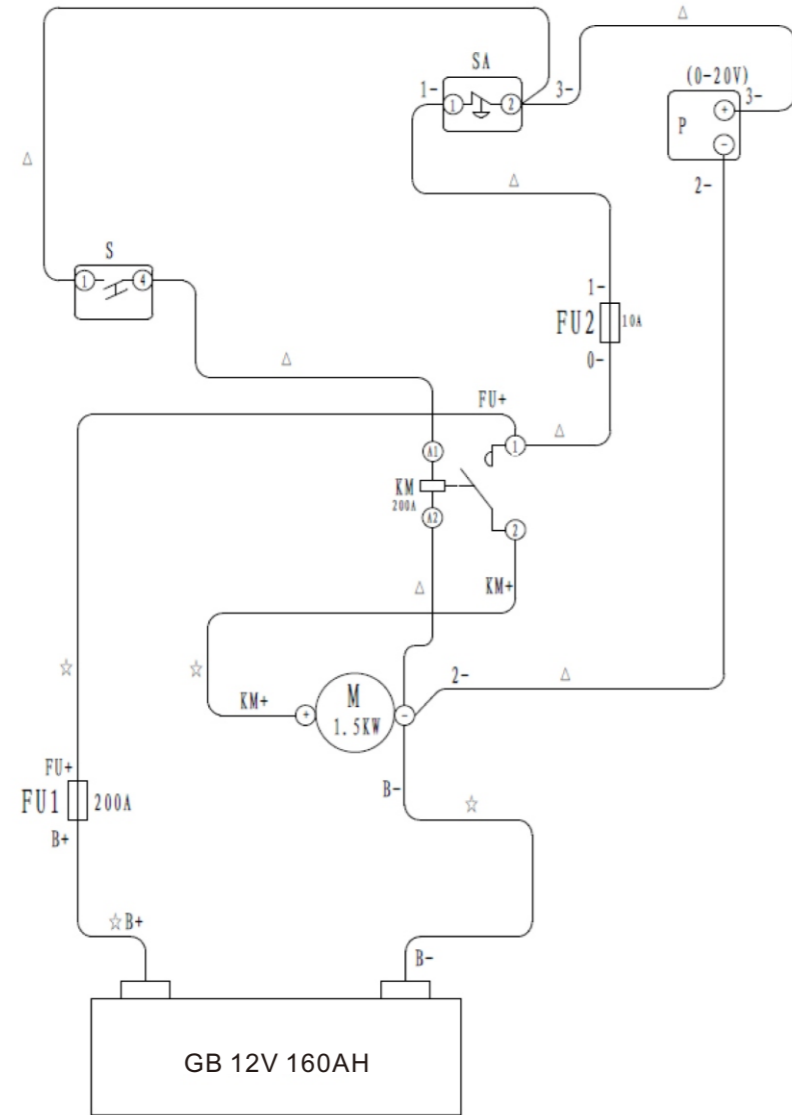
8.5 When the truck will be shutdown and in storage for a long time, the storage environment shall be kept dry and clean, fork shall be lowered to its lowest position.

9. Troubles Shooting

NO.	Trouble	Clause	Fixing Methods
1	The forks can not be up the max. height.	-The hydraulic oil is not enough.	-Pour in the oil.
2	The forks can not be lifted up.(Motor is rotary)	-Without hydraulic oil. -The oil has impurities.	-Fill in the oil. -Change the oil.
3	The motor cannot run.	-The urgent switch is pressed down, cut off the power. -The voltage is too lower. -The connectors of electrical wire is loose. -The contactor of DC motor is bad.	-Turn it clockwise, switch on the power -Charge it. -Turn it firm. -Replace with new one.
4	The forks cannot be descended.	-The piston rod or mast is deformed resulting from partial loading slanting to one side or over-loading. -The fork was kept in the high position for long time with piston rod bared to arise in rusting and jamming of the rod. -The release valve of pump is not opened.	- Replace with new one. -Keeping the fork in the lowest position if not using, and pay more attention to lubricate the rod. -Check it, if damaged, replace with new one.
5	Leaks	-Sealing parts worn or damaged. -Some part cracked or worn into small.	-Replace with the new one. -Replace with the new one.
6	The fork descends without the release valve worked.	-The impurities in the oil cause the release valve to be unable to close tight. -Sealing parts worn or damaged. -The release valve is damaged.	-Replace with new oil. -Replace with the new one. -Replace with the new one.
7	Battery cannot be Charged	-Battery is bad. -The charging plug is loose.	-Replace with the new one. -Turn it firm.

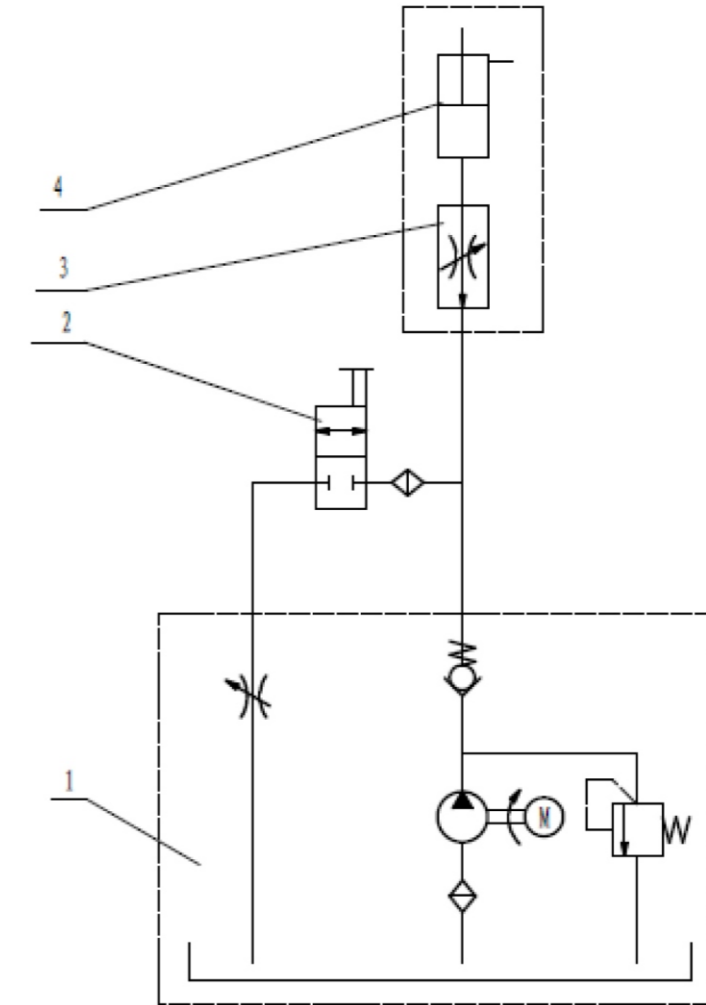
10. Electric Wires Diagram

Circuit Diagram



NOTE: Δ -----1.5mm²
 \star -----25mm²

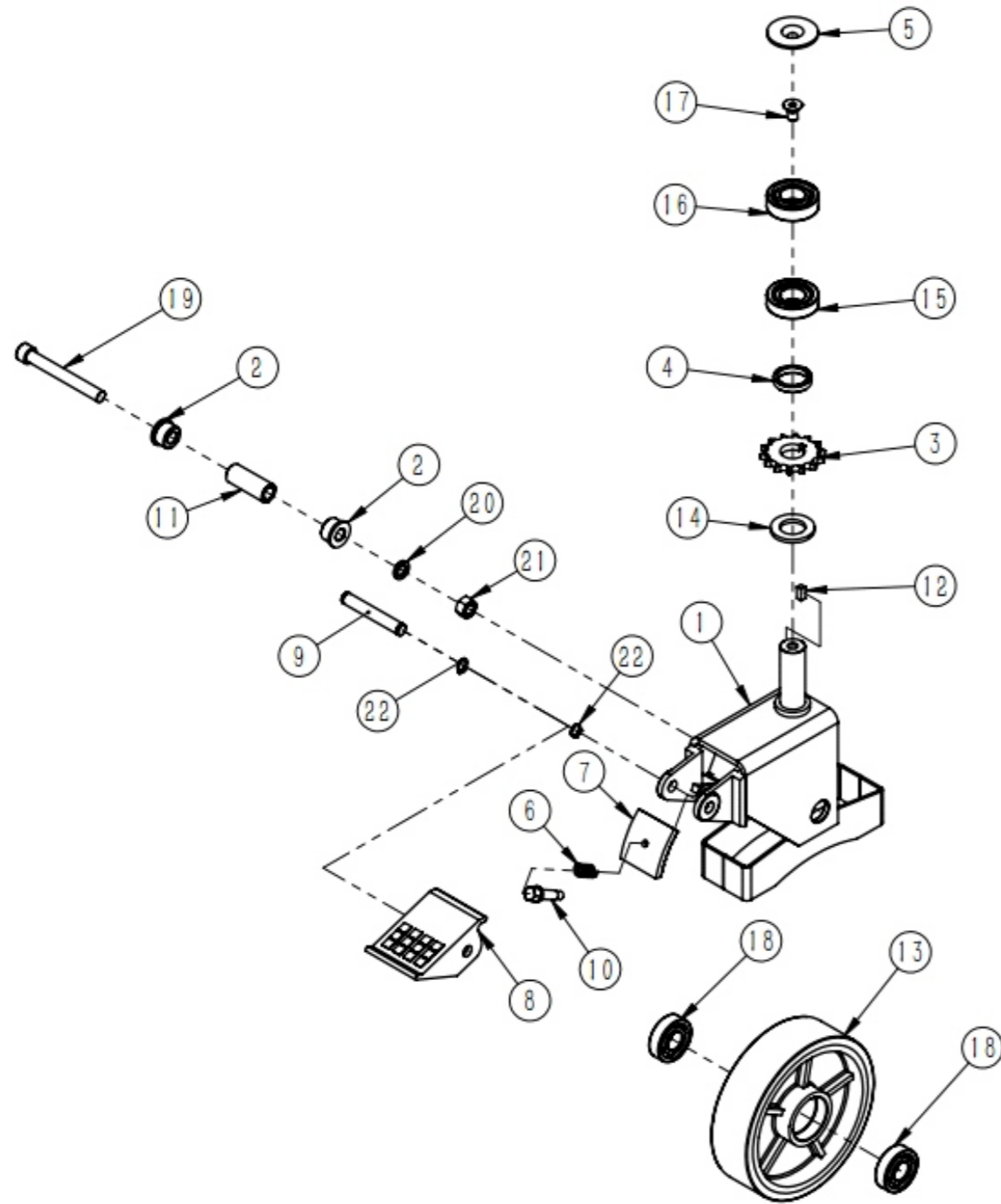
11. Hydraulic Flow Diagram



1.Pumping station
 2.Control valve
 3.Emergency valve
 4.Hydraulic cylinder

Working pressure P=122Bar

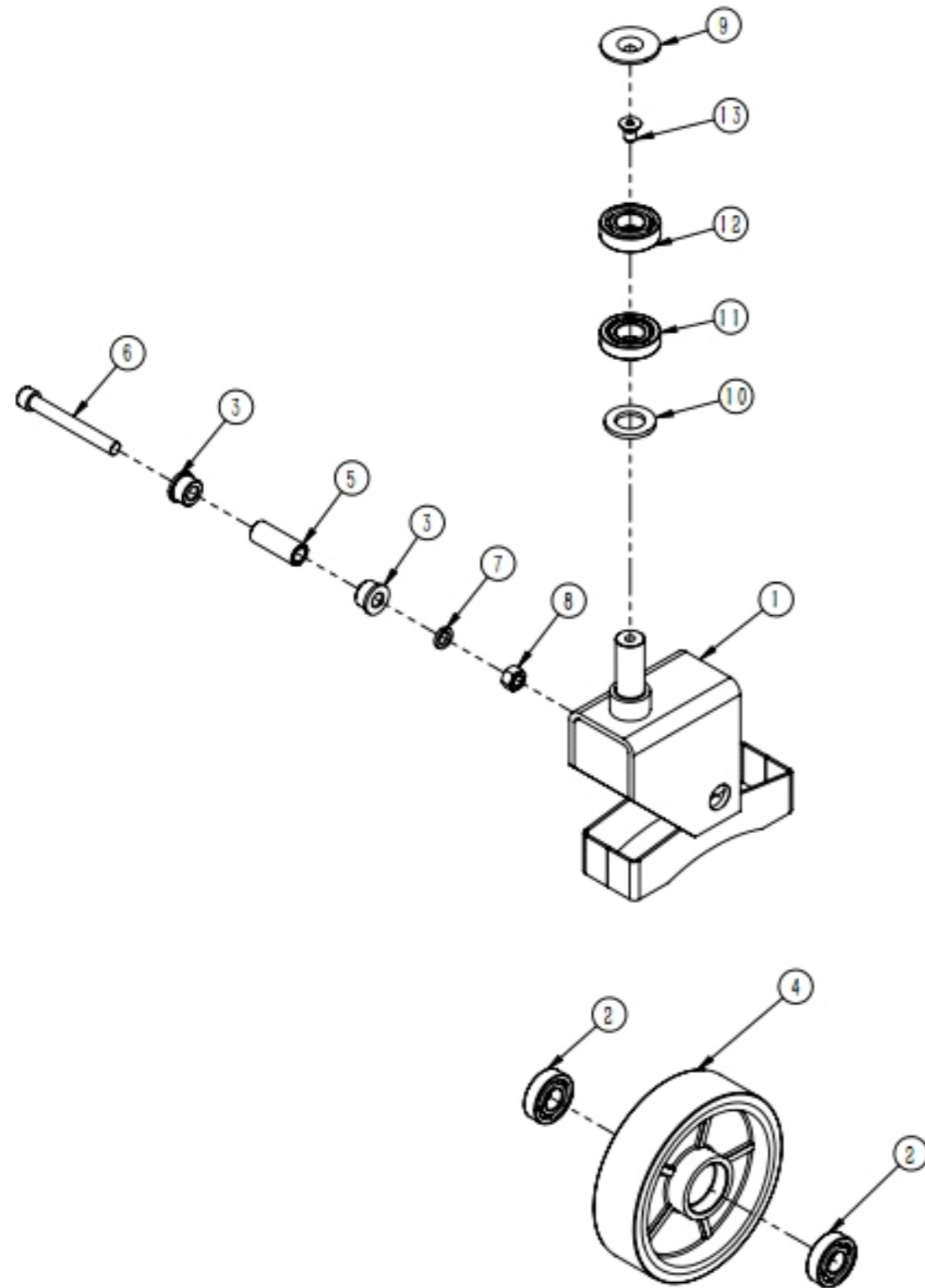
12 Parts List
Universal wheel with brake



Universal wheel with brake

No.	Stock Number	Description	Qty.
1	WC02000237	steering wheel frame with brake,black	1
2	WC02000234	steering axle sleeve 1	2
3	WC02000243	chain wheel	1
4	WC02000244	backing ring	1
5	WC02000245	wheel cap	1
6	WC02000240	pressure spring	1
7	WC02000238	brake plate,galvanized	1
8	WC02000241	brake pedal	1
9	WC02000242	brak pedal axis	1
10	WC02000239	axial view bolts	1
11	WC02000235	steering axle sleeve2	1
12	WC02000236	key	1
13	WC02000226	iron core PU wheelφ180×50,PU red, iron coreblack	1
	WC02000285	nylon wheelφ180×50(flower shape wheel)	
14	WE05000010	GB95 Plain washer 24,galvanized	1
15	WC02000225	GB297,circular cone running pulley bearing 30205	1
16	WC02000224	GB276,deep groove ball bearing6205, two-side dusty cover	1
17	WE03000013	GB2673,Inner hex screw M10×16, galvanized	1
18	WC02000022	GB276,deep groove ball bearing6204, two-side dusty cover	2
19	WE03000018	GB70.1 Hex socket screw M10×100, galvanized	1
20	WE05000006	GB93 Spring washer 12,galvanized	1
21	WE04000011	GB6170 Hex nut M12,galvanized	1
22	WE07000009	GB894.1 Circlip for Shaft 12,black	2

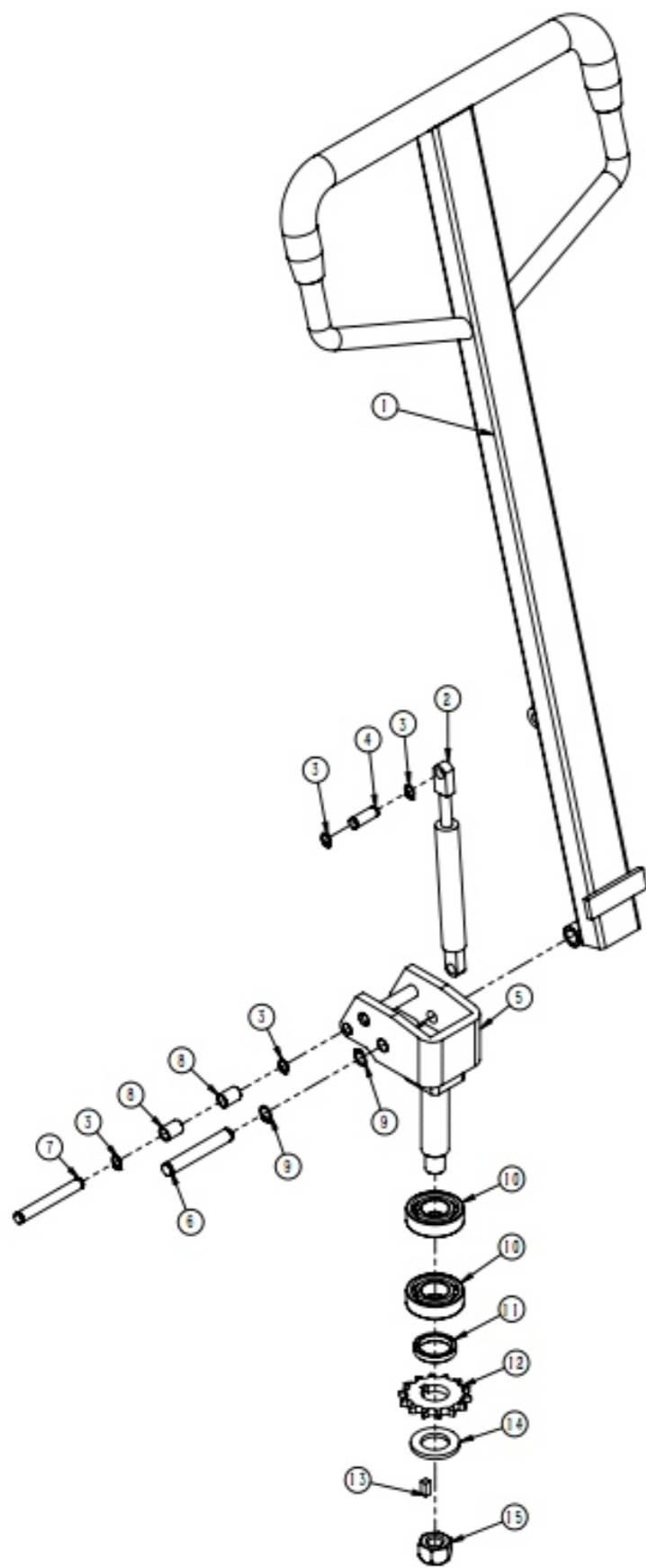
Universal wheel without brake



Universal wheel without brake

No.	Stock Number	Description	Qty.
1	WC02000246	guide pulley seat,black	1
2	WC02000022	GB276,deep groove ball bearing6204, two-side dusty cover	2
3	WC02000234	steering axle sleeve 1	2
4	WC02000226	iron core PU wheelφ180×50,PU red, iron coreblack	1
	WC02000285	nylon wheelφ180×50(flower shape wheel)	
5	WC02000235	steering axle sleeve2	1
6	WE03000018	GB70.1 Hex socket screw M10×100, galvanized	1
7	WE05000006	GB93 Spring washer 12,galvanized	1
8	WE04000011	GB6170 Hex nut M12,galvanized	1
9	WC02000245	wheel cap	1
10	WE05000010	GB95 Plain washer 24,galvanized	1
11	WC02000225	GB297,circular cone running pulley bearing 30205	1
12	WC02000224	GB276,deep groove ball bearing6205, two-side dusty cover	1
13	WE03000013	GB2673,Inner hex screw M10×16, galvanized	1

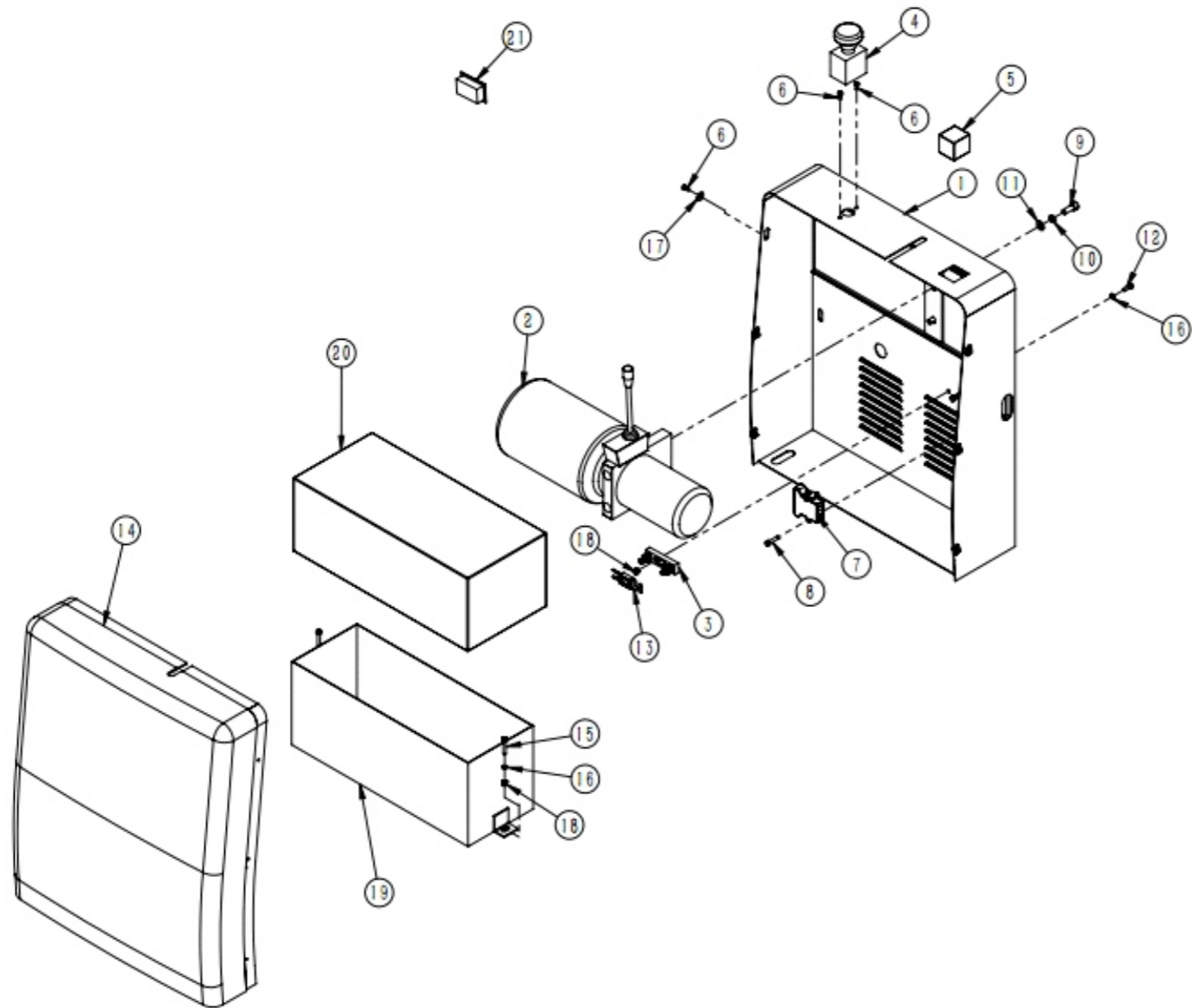
Handle assembly



Handle assembly

No.	Stock Number	Description	Qty.
1	WC02000252	handle assembly	1
2	WC02000248	gas spring	1
3	WE07000008	GB894.1 Circlip for Shaft 10,black	4
4	WC02000249	axle 2,galvanized	1
5	WC02000247	handle seat,black	1
6	WC02000242	brak pedal axis	1
7	WC02000251	axle 3,galvanized	1
8	WC02000250	axle sleeve,galvanized	2
9	WE07000009	GB894.1 Circlip for Shaft 12,black	2
10	WC02000224	GB276,deep groove ball bearing6205, two-side dusty cover	2
11	WC02000244	backing ring	1
12	WC02000243	chain wheel	1
13	WC02000236	key	1
14	WE05000010	GB95 Plain washer 24,galvanized	1
15	WE04000016	GB889.1 Hex lock nut M18,galvanized	1

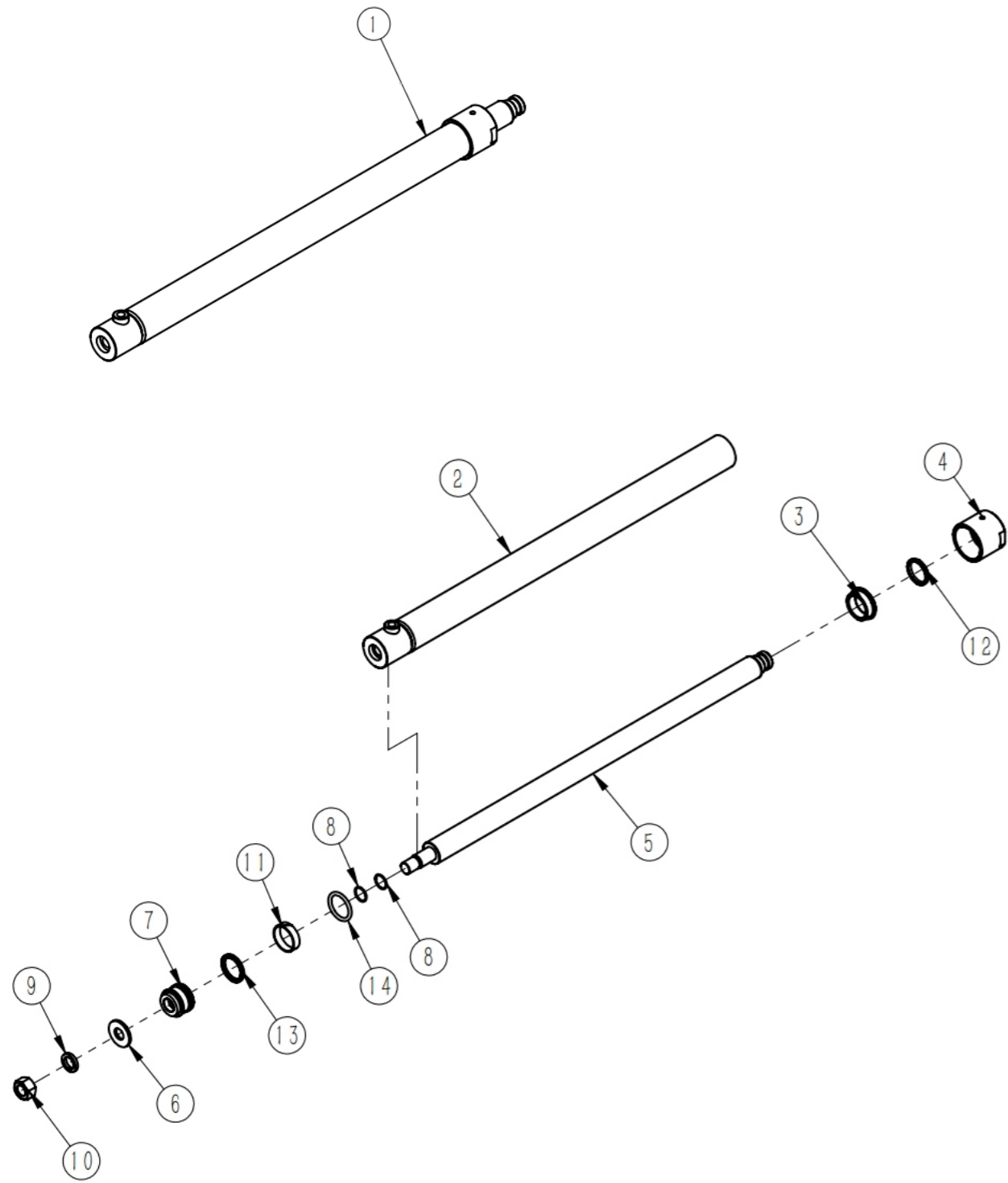
Motor Box



Motor Box

No.	Stock Number	Description	Qty.
1	WC02000253	Electrical Cabinet,5012	1
2	WC02000269	hydraulic pumpDC12160 12V 160KW	1
3	WC04000022	fuse connect seat RQD-1 220V 800A	1
4	WC04000020	The abrupt stop switch ZJK250A	1
5	WC04000013	nstrument JY-99 20V	1
6	WE03000006	GB818 Screw M5×12,galvanized	8
7	WC01000014	charger socket line	1
8	WE03000015	GB70.1 Hex socket screw M6×25, galvanized	2
9	WE03000004	GB70.1 Hex socket screw M10×25, galvanized	2
10	WE05000002	GB93 Spring washer 10,galvanized	2
11	WE05000009	GB95 Plain washer 10,galvanized	2
12	WE03000001	GB70.1 Hex socket screw M6×16, galvanized	2
13	WC04000011	CNL300 chip fuse	1
14	WC02000254	cover,black	1
15	WE01000003	GB5781 Hex bolt M6×35,galvanized	2
16	WE05000003	GB95 Plain washer 6,galvanized	4
17	WE05000007	GB96.1 Washer 6,galvanized	6
18	WE04000017	GB889.1 Hex lock nut M6,galvanized	4
19	WC02000255	battery box(120),black	1
20	WC02000268	Uniform dosing batteryN120Ah	1
21	WC01000044	Charger CZC7-20A/12V (American standard)	1

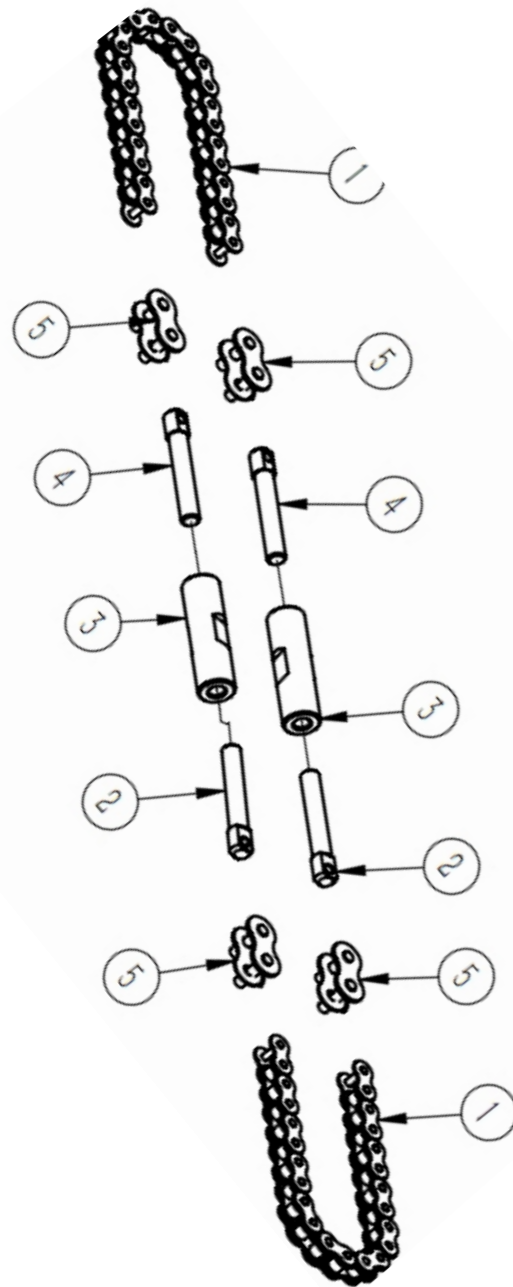
Cylinder assembly



Cylinder assembly

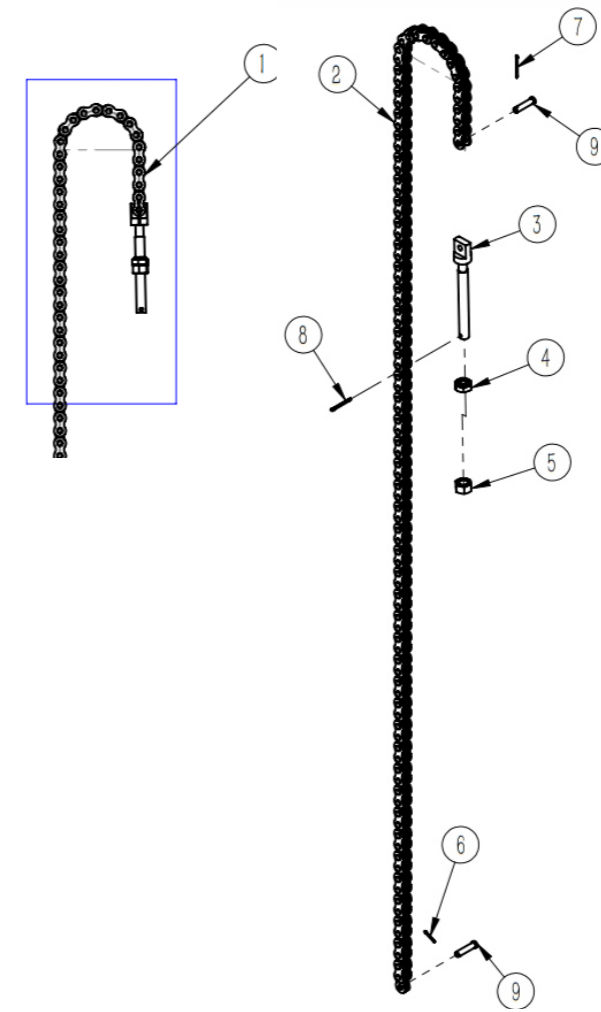
No.	Stock Number	Description	Qty.
1	WC01000017	Black cylinder assembly	1
2	WC02000303	oil cylinderseaming part,black	1
3	WC02000275	guide sleeve	1
4	WC02000272	hood,galvanized	1
5	WC02000304	piston rod	1
6	WC02000274	gasket,galvanized	1
7	WC02000273	piston	1
8	WC02000279	GB3452.1,O-ringφ26.2×2.4	2
9	WE05000011	GB93 Spring washer 24,galvanized	1
10	WE04000018	GB6171 Hex nut M24×1.5,galvanized	1
11	WC02000278	ZS50 guild ring 50×55×14.8	1
12	WC02000276	DH45 dusty ring 45×53×6.5	1
13	WC02000280	UHS45 seal ring 45×56×7	1
14	WC02000277	GB3452.1,O-ringφ50.8×3.1	1

Chain



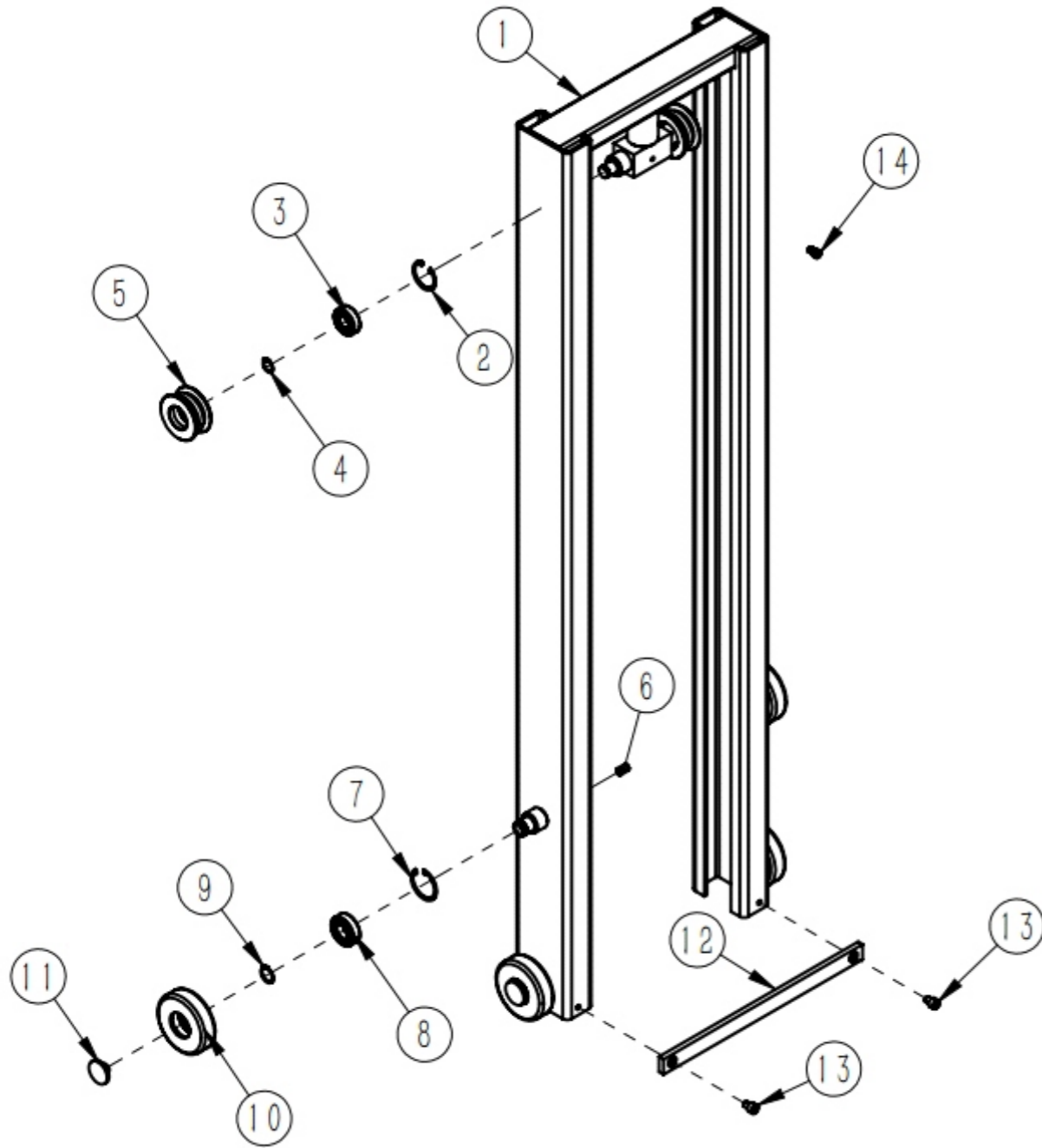
No.	Stock Number	Description	Qty.
1	WC02000219	chain	2
2	WC02000263	screw(right)	2
3	WC02000262	screw sleeve	2
4	WC02000265	screw(left)	2
5	WC02000220	single row running pulley chain CL contact 08A-1	4

Plate link chain



No.	Stock Number	Description	Qty.
1	WC02000325	Leaf chain	2
2	WJ11900012	Leaf chain	2
3	WJ11900006	LH1223 Long end joint	2
4	WJ11900005	Spherical nut	2
5	WJ11900004	GB6171,nut M14×1.5×12.8	2
6	WJ11900003	GB91,Cotter pin 2×16	2
7	WJ11900002	GB91,Cotter pin 2×32	2
8	WJ11900001	GB91,Cotter pin 3.2×32	2
9	WJ11900015	The chain pin shaft	4

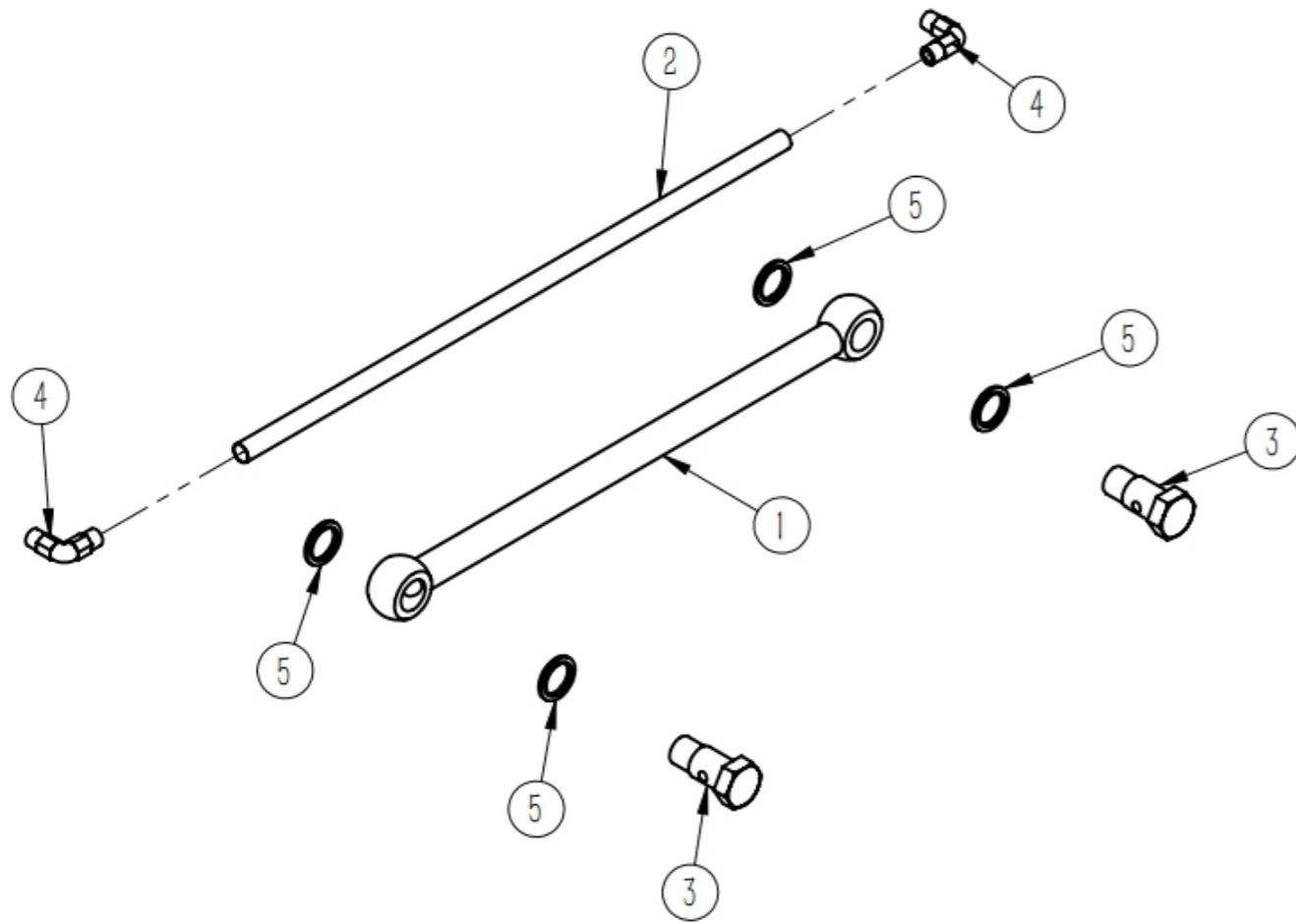
Mast assy - outer



Mast assy - outer

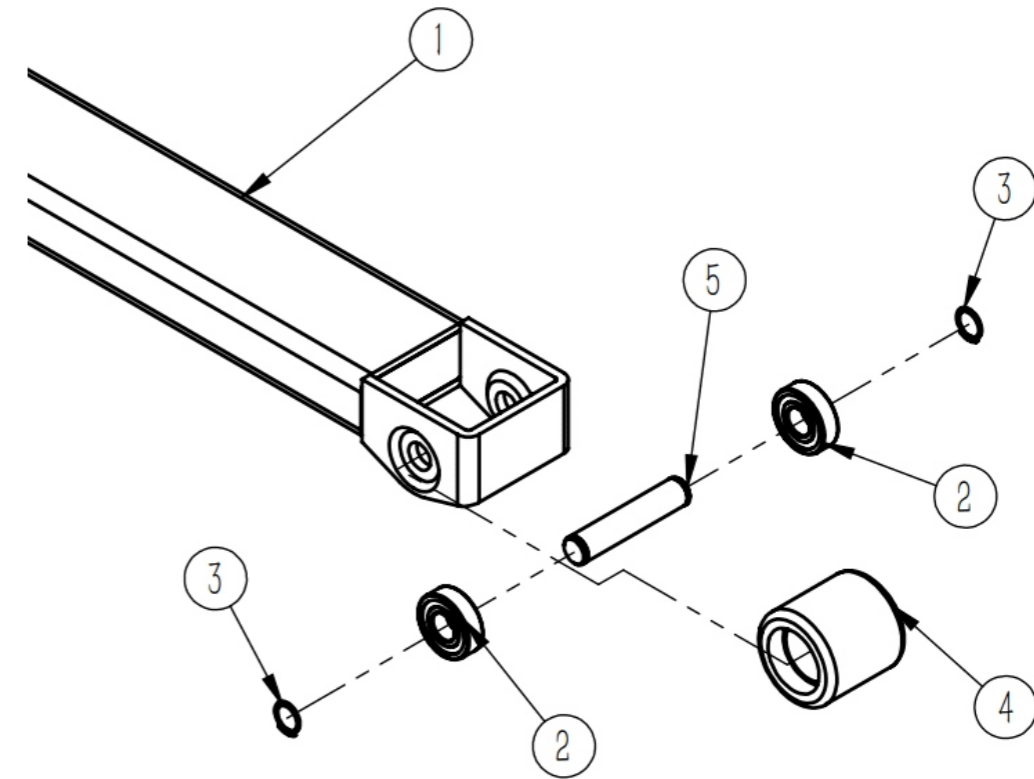
No.	Stock Number	Description	Qty.
1	WC02000299	inner mast,5012	1
2	WE07000006	GB893.1 Cieclip for hole 47,black	2
3	WC02000022	GB276,deep groove ball bearing6204, two-side dusty cover	2
4	WE07000004	GB894.1 Circlip for Shaft 20,black	2
5	WC02000317	chain wheel (Leaf chain)	2
6	WE03000019	Gb77 Hexagon flat set screw M12 x 20 galvanized	8
7	WE07000007	GB893.1 Cieclip for hole 52,black	4
8	WC02000224	GB276,deep groove ball bearing6205, two-side dusty cover	4
9	WE07000010	GB894.1 Circlip for Shaft 25,black	4
10	WC02000231	steel wheel	4
11	WC02000232	steel wheel cap	4
12	WD01000211	down support pole	1
13	WE03000020	GB70.1 Hex socket screw M10 x 12, galvanized	2
14	WE03000017	GB70.1 Hex socket screw M8 x 12, galvanized	1

Oil tube



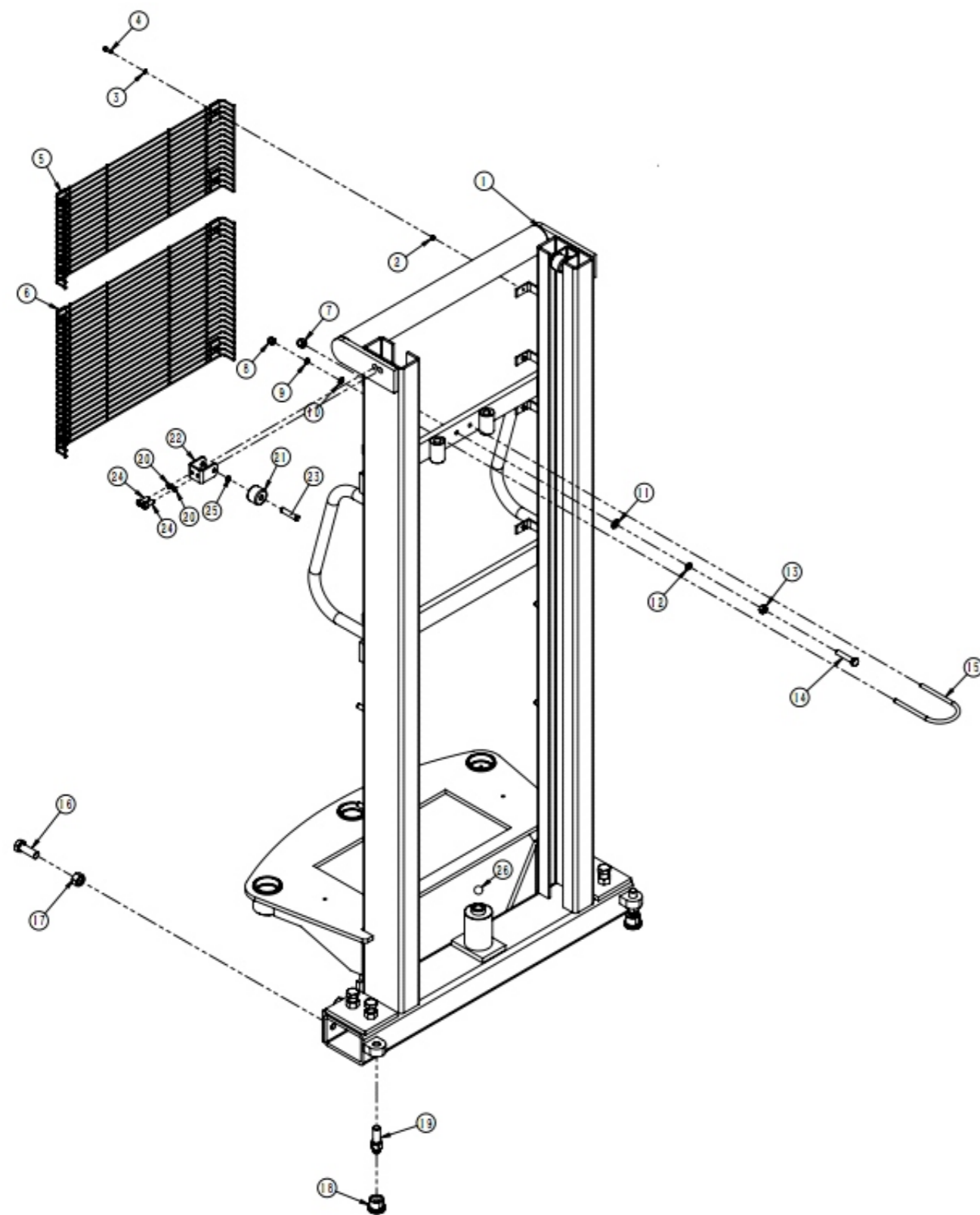
No.	Stock Number	Description	Qty.
1	WC02000266	fuel injection pipe	1
2	WC02000301	oil return pipe	1
3	WC02000267	bolt	2
4	WC02000223	rectangular connector	2
5	WC02000228	GB982,sseal washer 18	4

Front wheel assembly



No.	Stock Number	Description	Qty.
1	WC02000713	The right fork leg welded,5012	1
	WC02000712	The left fork leg welded,5012	
2	WC02000022	deep groove ball bearing6204	4
3	WE07000004	Circlip for Shaft 20,black	4
4	WC02000227	iron corePU wheel φ 70 × 70,PU red	2
	WC02000286	nylon wheel φ 70 × 70	
5	WC02000259	steering wheel axle	2

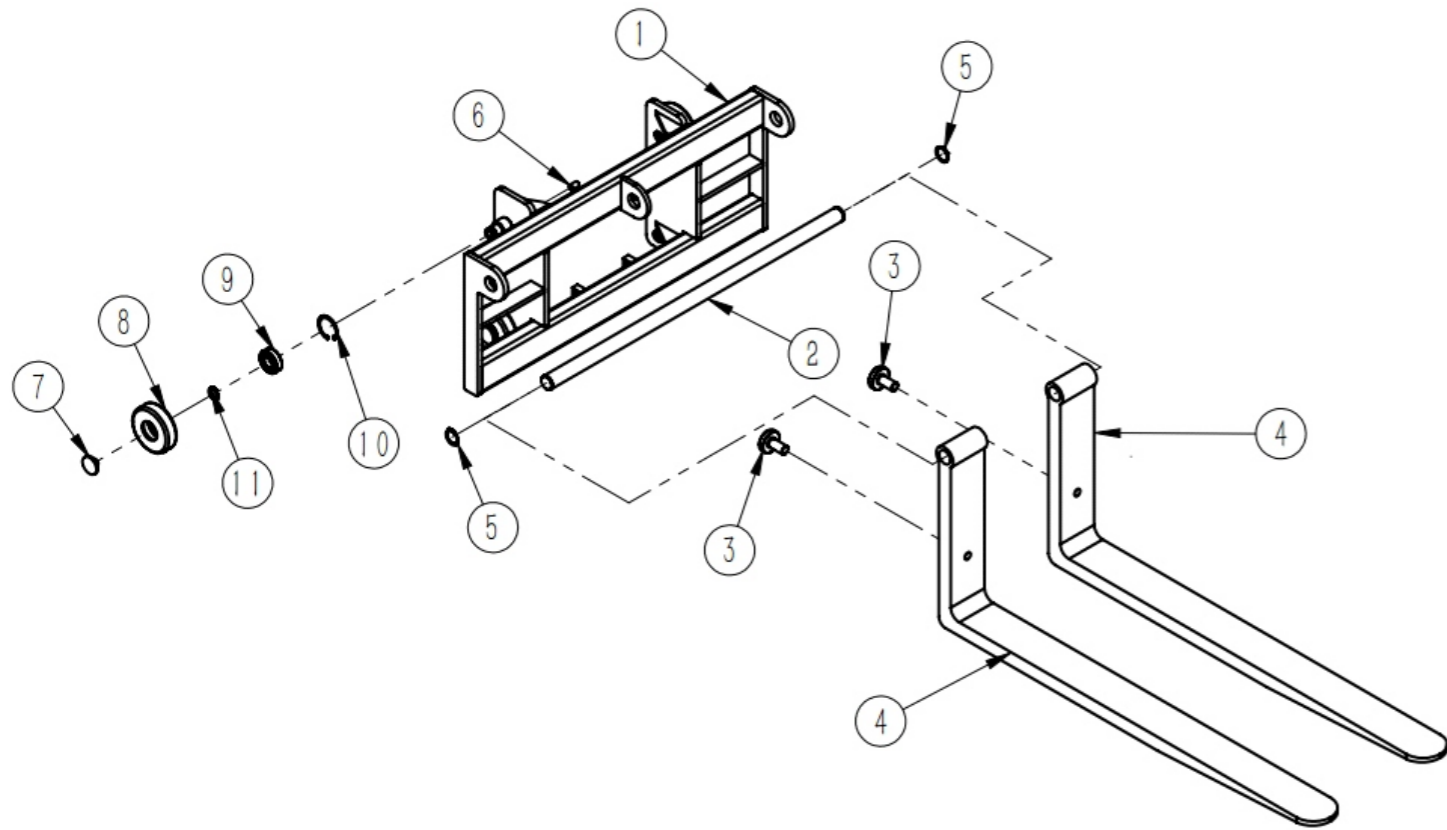
Mast assy - inner



Mast assy - inner

No.	Stock Number	Description	Qty.
1	WC02000832	outer mast,5012	1
2	WE04000005	GB6170 Hex nut M5,galvanized	8
3	WE05000004	GB95 Plain washer 5,galvanized	8
4	WE03000016	GB70.1 Hex socket screw M5 x 16, galvanized	8
5	WC02000292	gauze pad,black	1
6	WC02000302	gauze pad,black	1
7	WE04000013	GB802 Cap Nut M10,galvanized	1
8	WE04000014	GB802 Cap Nut M8,galvanized	2
9	WE05000005	GB93 Spring washer 8,galvanized	2
10	WE05000008	GB95 Plain washer 8,galvanized	2
11	WE05000009	GB95 Plain washer 10,galvanized	1
12	WE05000002	GB93 Spring washer 10,galvanized	1
13	WE04000009	GB6170 Hex nut M10,galvanized	1
14	WE01000002	GB5781 Hex bolt M10 x 50,galvanized	1
15	WC02000264	locking ring	1
16	WE01000006	GB5783 Hex bolt M16 x 40,galvanized	8
17	WE04000022	GB6170 Hex nut M16,galvanized	8
18	WC02000710	Support shaft II ,galvanized	2
19	WC02000709	Support shaft I,galvanized	2
20	WE05000005	GB93 Spring washer 8,galvanized	2
21	WC02000293	top guild wheel	2
22	WC02000294	top guild plate,galvanized	2
23	WC02000295	pin roll	2
24	WE03000014	GB70.1 Hex socket screw M8 x 20, galvanized	4
25	WE07000008	GB894.1 Circlip for Shaft 10,black	2
26	WC02000020	GB308,steel ball S18	1

Forks



No.	Stock Number	Description	Qty.
1	WC02000323	fork guide plate,black	1
2	WC02000283	axle (830),galvanized	1
3	WC02000284	adjustable bolt,galvanized	2
4	WC02000711	telescope-feed fork,black	2
5	WE07000011	GB894.1 Circlip for Shaft 32,black	2
6	WE03000019	Gb77 Hexagon flat set screw M12 x 20 galvanized	4
7	WC02000232	steel wheel cap	4
8	WC02000231	steel wheel	4
9	WC02000224	GB276,deep groove ball bearing6205, two-side dusty cover	4
10	WE07000007	GB893.1 Cieclip for hole 52,black	4
11	WE07000010	GB894.1 Circlip for Shaft 25,black	4