

User Manual & Parts manual

VANGO1000-E



DO NOT REMOVE THIS MANUAL FROM THIS UNIT

Version No.: STX/VANGO-E/2507

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I. Specified Use

The forklift mentioned in this manual is a semi electric self-lift stacker. It is ground transport equipment. It is suitable to transport goods with cargo.

Warning!

1. This forklift cannot be used for other purpose.
2. This forklift need to avoid overload or overload caused because of incorrect goods placement.
3. It is forbidden to operate in dangerous circumstances, such as fire or explosion etc..
4. This forklift cannot be used in those following environment, which is easy to corrosion, rusty or full with dust. This forklift is forbidden to use on the uneven surface.
5. It is not allowed to use heavy load when the slope is greater than 5% and the length is greater than 5 meters.
6. Please do not press lifting or descending button when the vehicle is running. It's forbidden to change between lifting and descending rapidly and frequently. That may damage vehicle and goods!

User need to confirm this forklift is only used for prescribed use and needs to assure the safety and avoid danger of user-self or other third party . User needs to comply accident prevention regulations, other safe technology regulations, equipment' operation, maintenance and repair guidelines. User need to ensure all operators of this forklift will read and understand contents of this manual totally.

If do not comply this manual, all guarantee of our company will become invalid. Without permit of our company's customer service department, if the customer or the third party operates this equipment non-standard, our company shall not be liable for any lose arising therefrom.

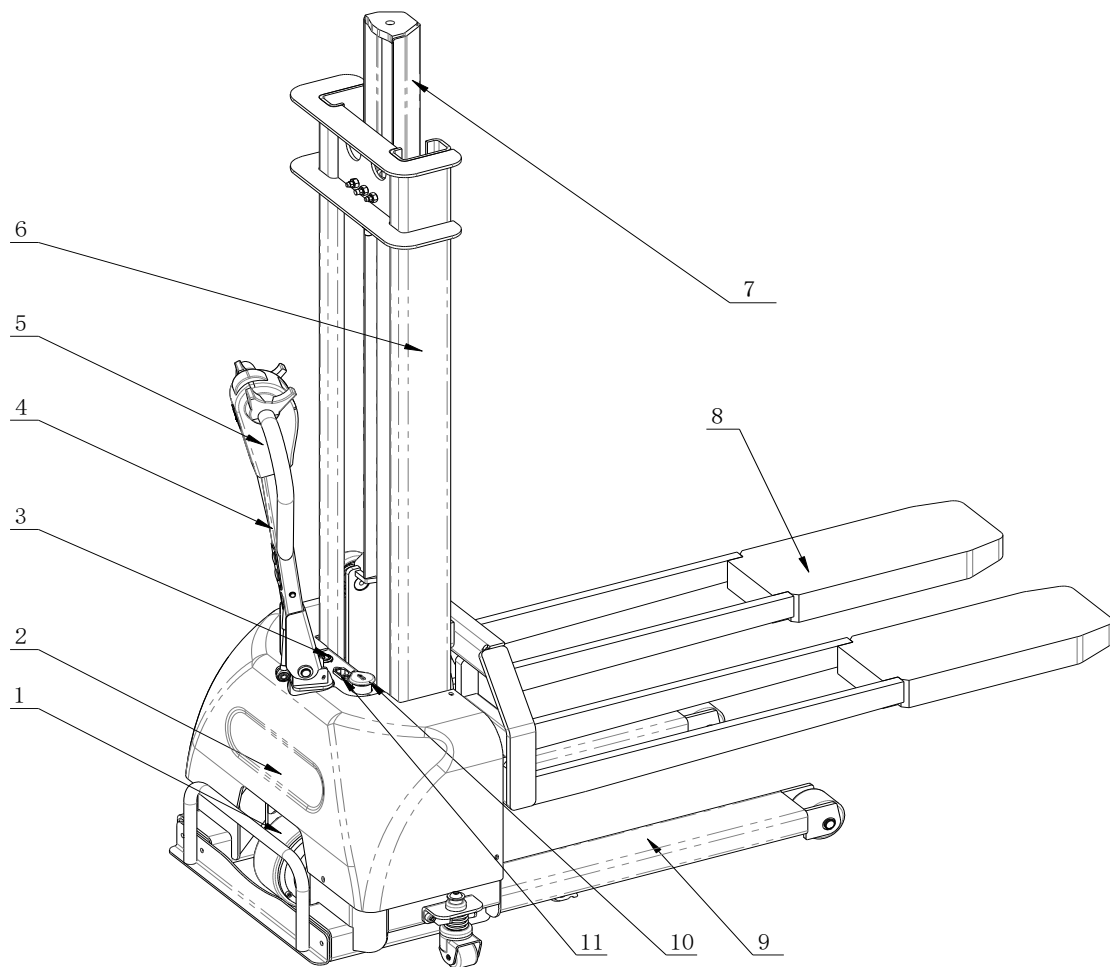
II. Forklift Introduction

1. Forklift's Model No. And Specification

Model. No.		VANGO1000-E
Max. Load	kg	1000
Total Weight	kg	332
Lift Motor Power	kW	DC1.6
Drive Motor Power	kW	DC0.6
Battery Voltage/Capacity	V/Ah	48/15
Max. Lift Speed(load/unload)	mm/s	55/60
Max. Descent Speed(Full-load)	mm/s	100
Load Center	mm	400
Max. Travelling Speed(Full-load)	km/h	3.5
Type of Operation		Walk
Material of Wheel		PU

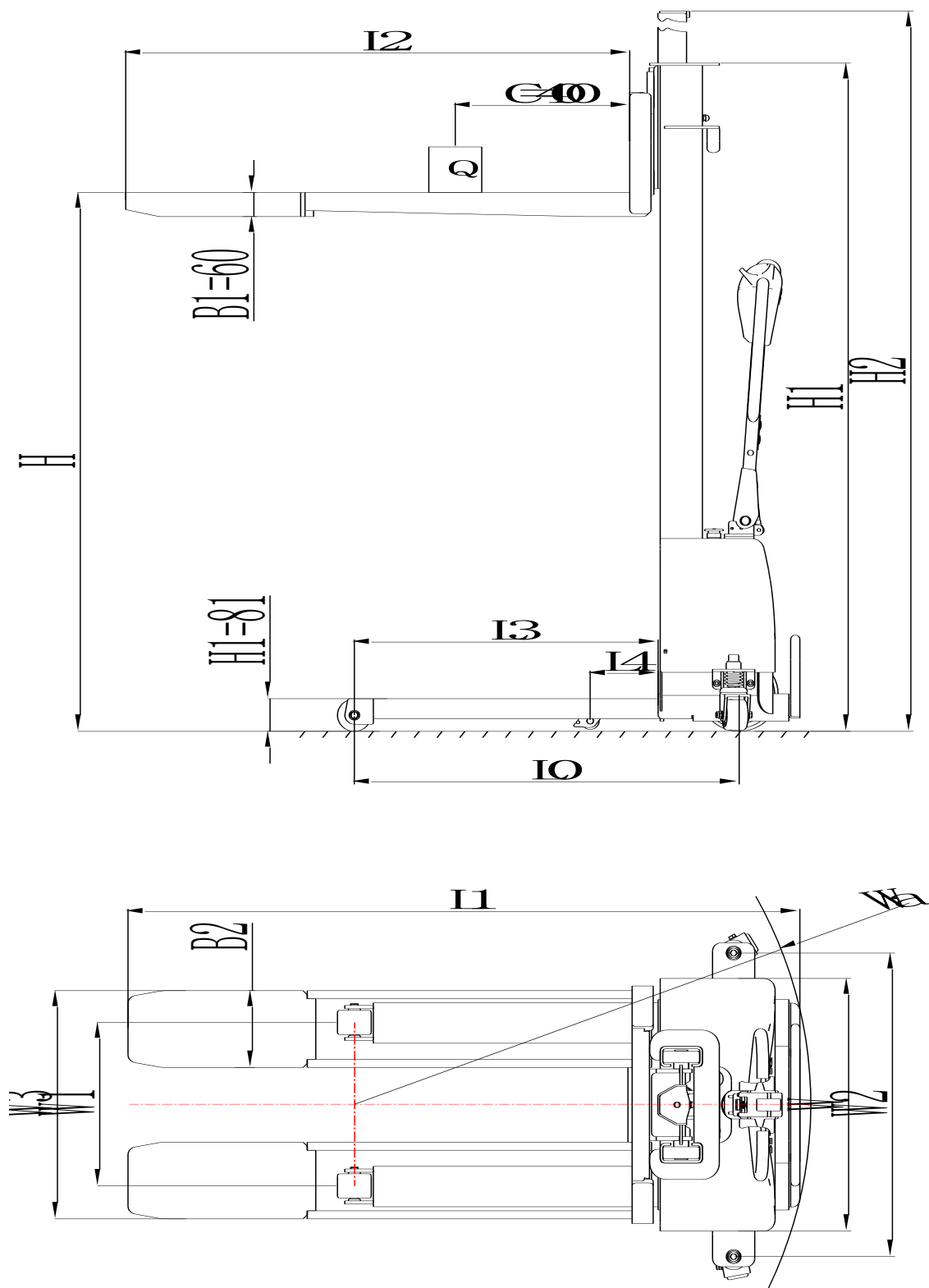
2. Forklift Components

No.	Description	No.	Description
1	Drive Motor	7	Frame Components
2	Cover	8	Fork
3	Key Switch	9	Elastic Outriggers
4	Operating Handle	10	Emergency Stop Switch
5	Accelerator	11	Charger Plug
6	Frame		



3. Standard Version Specifications

Features	1.1	Model No.			VANGO1000-E
	1.2	Type of Power			Full-Electric
	1.3	Max. Load	Q	kg	1000
	1.4	Load Center	C	mm	400
	1.5	External Distance Between Forks	W3	mm	565
	1.6	Length of Fork	L2	mm	1195
Wheel	2.1	Material of Wheel			Super PU
	2.2	Middle Wheel		mm	Φ45×30
	2.3	Driving Wheel		mm	Φ185×70
	2.4	Loading Wheel		mm	φ80×70
Size	3.1	Lifting Height	H	mm	800/1000/1100/1200/1300/1600
	3.2	Lowered mast height	H1	mm	1166/1366/1466/1566/1666/1966
	3.3	Extended mast height	H2	mm	1850/2250/2450/2650/2850/3450
	3.4	Min.Fork Height	H3	mm	81
	3.5	Wheelbase	L0	mm	914
	3.6	Overall Length	L1	mm	1602
	3.7	Length of Outriggers	L3	mm	760
	3.8	Middle Wheel Position	L4	mm	160
	3.9	Safe Distance	L5	mm	≤130
	3.10	Body thickness	L6	mm	331
	3.11	Overall Width	W	mm	802/870
	3.12	Wheel Distance: FR	W1	mm	405/525
	3.13	Width of Fork	B	mm	190
	3.14	Min.Turning Radius	Wa	mm	1082



III. Operation and Use

1. Safety Regulations of Forklift Use

Driving Permission: Only those professional training person can operate the forklift. Operator must be tested by equipment manufacturer, very skilled about equipment operation and load things, and also should be officially appointed by equipment manufacturer or manufacturer's entrusted party.

Demands of Driver: Driver must be trained professionally about forklift and its use. He/She needs to comprehend all contents of this manual.

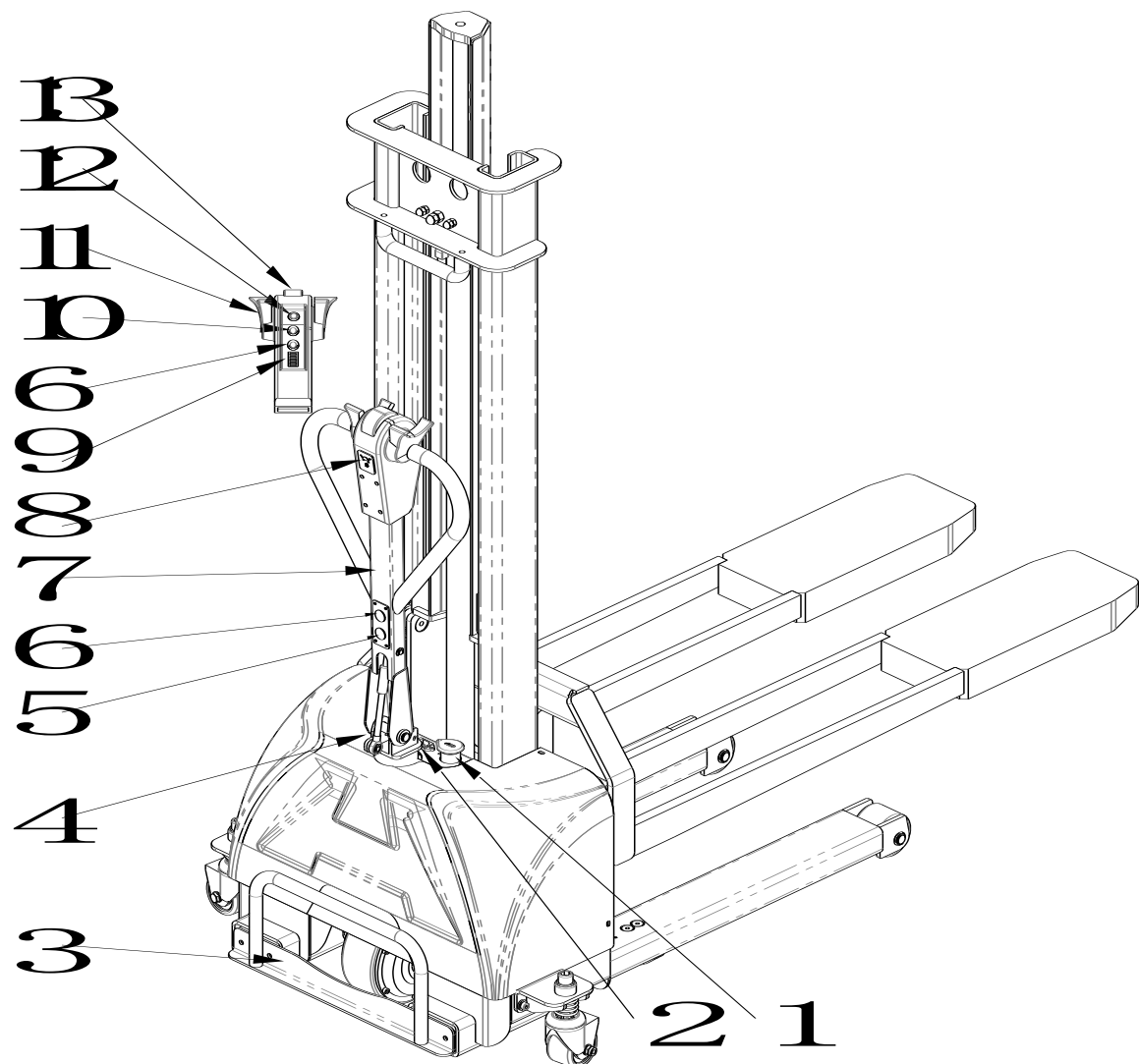
Non-staff Members are forbidden to use this equipment.: Driver needs to take all responsibilities during forklift use. Driver must prevent non-staff members driving or operate forklift. The forklift cannot be used for carrying people.

Equipment damage and defect: Once find damage or other defect on the forklift or its attachments, he/she need to report to the supervisor and do not operate this imperfect performance forklift immediately, such as wheel heavy wear, fork deformation and vehicle smoking etc.. He/She does not allowed to use forklift before equipment has been repaired well.

Equipment Maintenance: Without professional training and permission, driver cannot repair or change forklift without authorization. Driver absolutely cannot stop or adjust safety device and safety switch.

Safety and Warning Signs: Need to strictly comply with regulations in this manual all about device equipment, warn signs and warn instructions.

2. Description of Operating Parts



No.	Description	Explain
1	Emergency Stop Switch	Used to in case of emergency power off the vehicle
2	Charger Plug	Battery charging
3	Handle	Pull the leg while getting on and off
4	Key	Power off control power supply for normal use
5	Fork Descent Button (Body Lift Button) Herein after referred to as Button 1”	For fork drop or body lift
6	Fork Lift Button(Body Descent Button) Herein after referred to as “Button 3”	For fork lift or body drop
7	Operating Handle	Used for steering while the vehicle is moving
8	slow speed switch	The maximum speed of the vehicle slows down when pressed
9	Coulombmeter	It is used to display the remaining power of the battery
10	Fork Descent Button Herein after referred to as “Button 2”	Free drop for fork (This process does not consume electricity)
11	Accelerator	The knob rotates the vehicle forward and moves it forward,he knob rotates the vehicle backward
12	Horn Switch	Press the warning horn and sound
13	Emergency reverse switch	When the switch hits a person, the vehicle can implement an emergency reverse to protect the operator

3. Forklift Operation

3.1 Start and Travel

3.1.1 Pull up emergency stop switch

Note: This operation is only to be operated for the first time, and will be kept open daily thereafter.

3.1.2 Turn the key switch to ON.

3.1.3 Press the fork lift button to lift the fork to a certain height

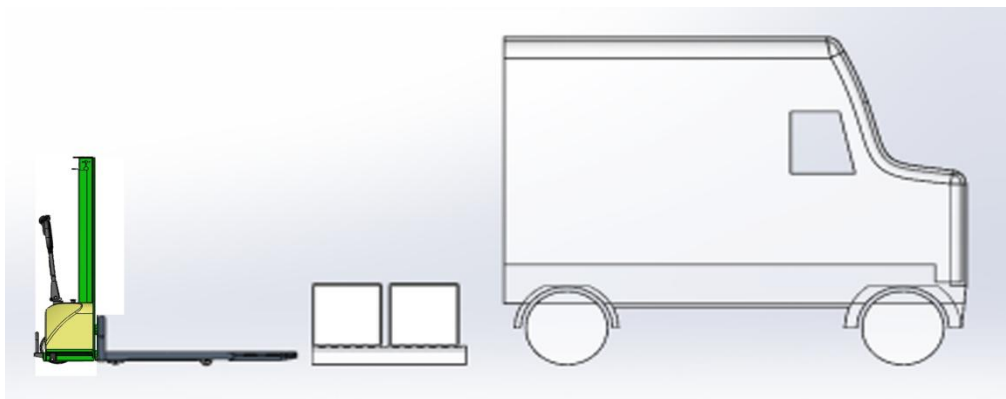
Note: When the upper surface of the fork is below 350mm from the ground, the forklift can be driven at high speed; When the upper surface of the fork is more than 350mm from the ground, the forklift is forced to drive at a low speed.

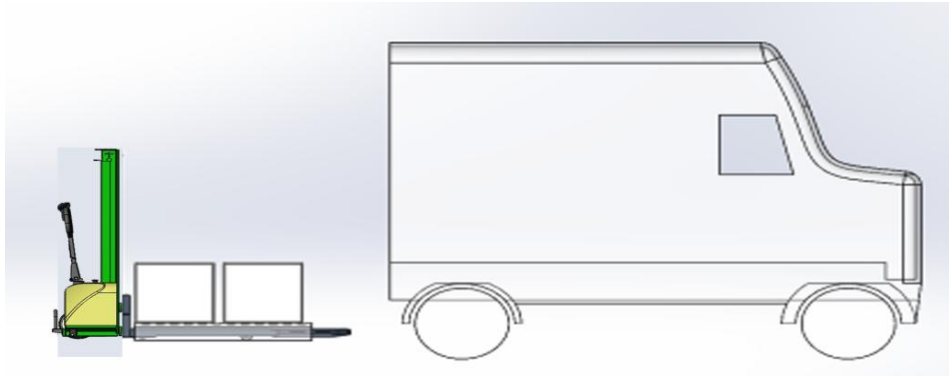
3.1.4 Press the handle down to 10°~60° and rotate the acceleration button. The car can be driven in the direction of rotation.

3.1.5 Change the direction of the forklift by turning the handle.

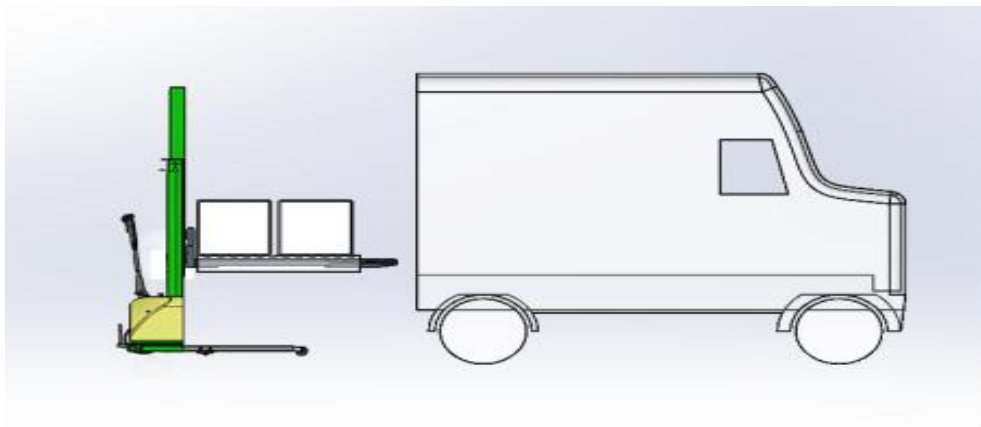
3.2 Steps of Fork and Goods to the Cargo

3.2.1 Press button 2 or Button 3 to adjust the forklift fork to an appropriate height and align it with the tray. Insert and press Button 3 to lift the fork 200mm~300mm from the ground.

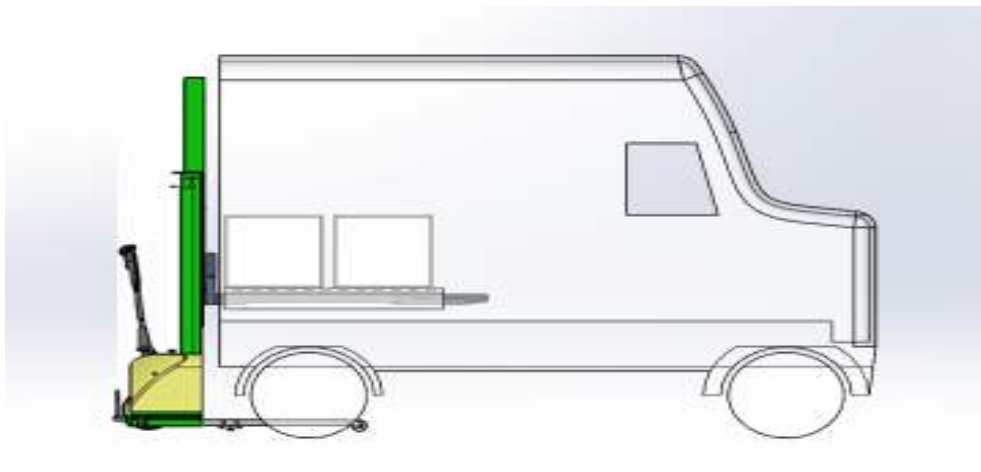




3.2.2 Turn the acceleration button and drive to the rear of the truck. Press the button 3 to lift the arrival fork just above the bottom of the truck.

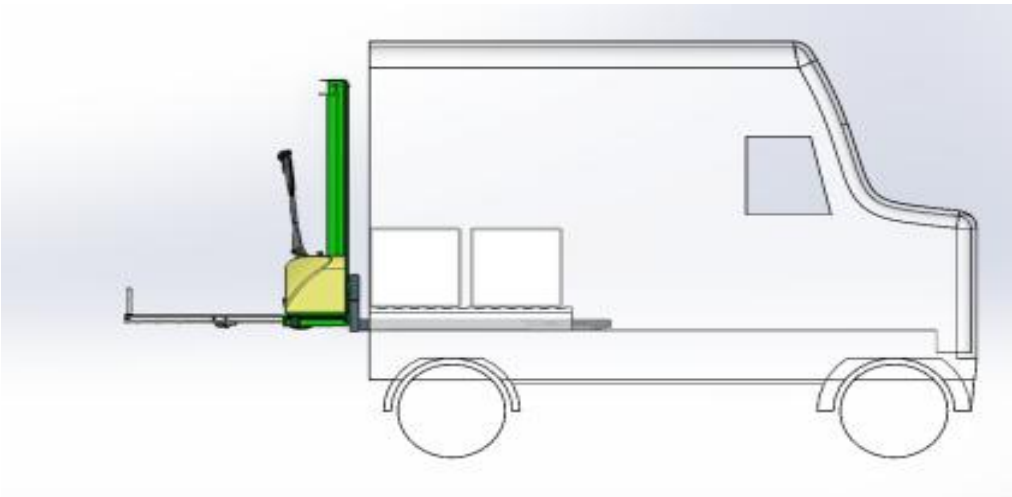
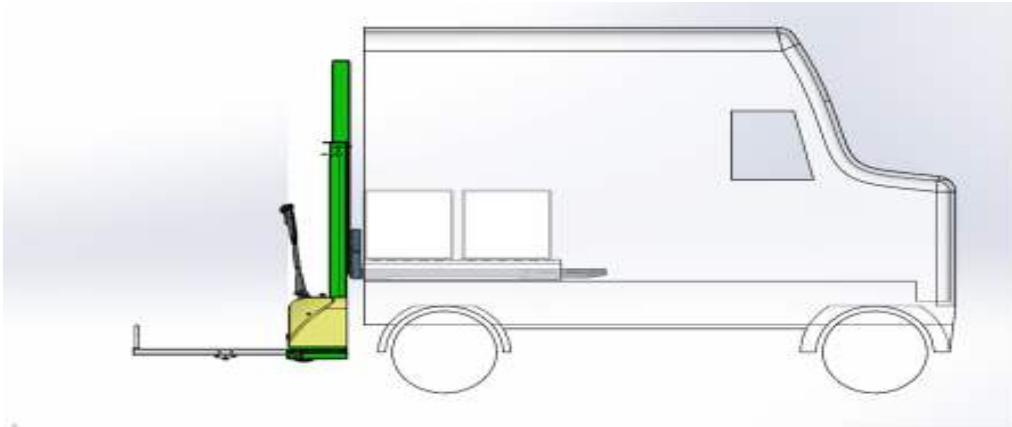


3.2.3 Drive the forklift into the car to ensure a 20-90mm distance between the vertical plane of the main beam of the forklift and the back of the car.

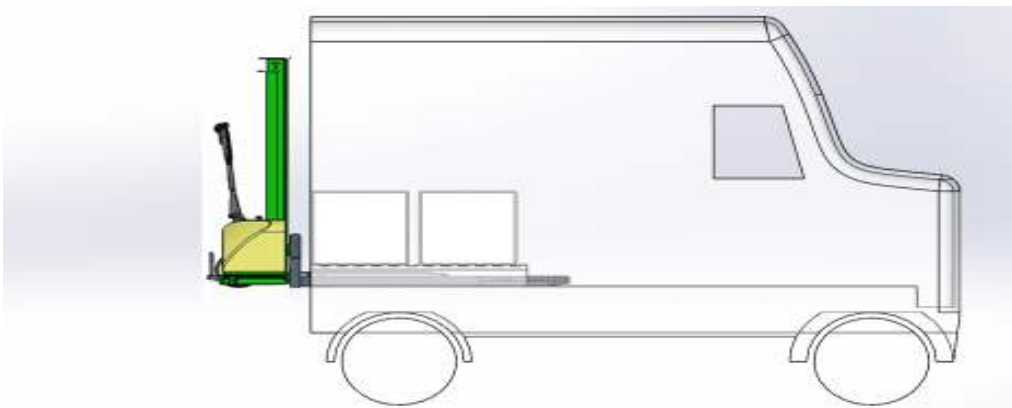


3.2.4 Press button 1 to place the cargo inside the carriage. Continue to press button 1 to lift the body off the ground and pull the movable leg out. Press button 1 again until the car is lifted to the top.

Note: Please observe the leg during lifting and do not bump with the truck. Press the button again until the car is lifted to the top.

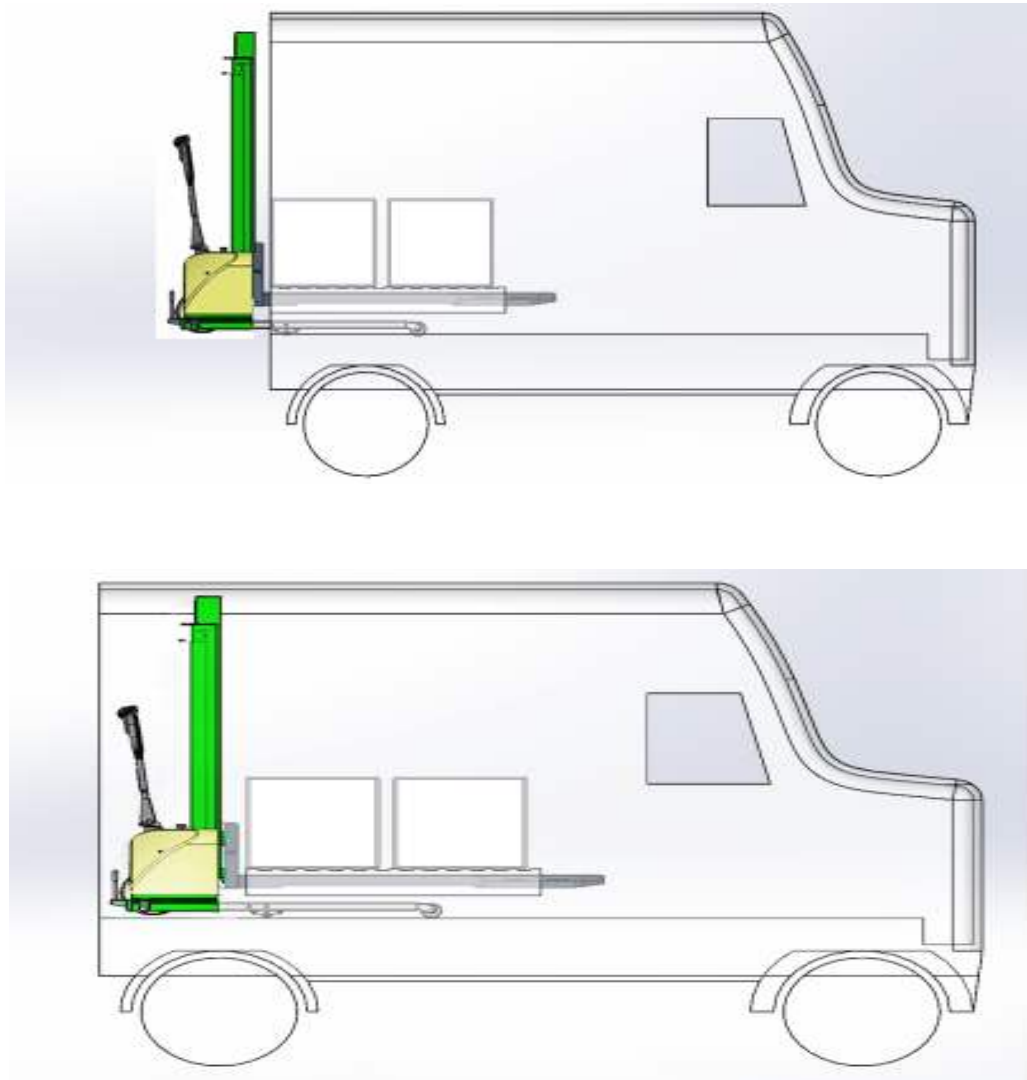


3.2.5 When the body reaches the top, push the movable legs into the body and observe to make sure that the intermediate wheels can fall completely on the container plane.

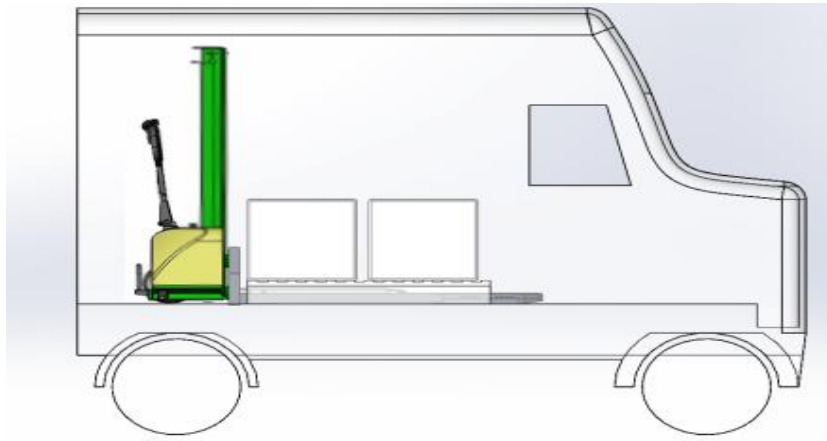


3.2.6 Press the button 3 to lift the goods to leave the bottom of the carriage, then turn off the key switch to make sure that the driving wheel direction is consistent with the propulsion direction, and then push the car and the goods into the carriage.

Note: Note that the top of the forklift may collide with the top of the truck box. Not turn off the key switch and improper position of the driving wheel will increase the propulsion power.

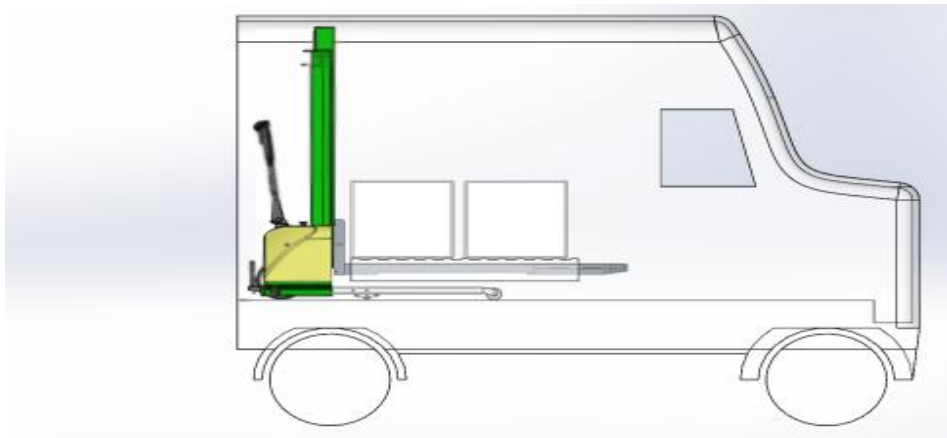


3.2.7 After the goods are in place, open the key switch, press the drop button 2 to the direction of the goods and drop the fork foot to the floor. Pull the car until it cannot move. Close the key switch and then close the door for transportation.

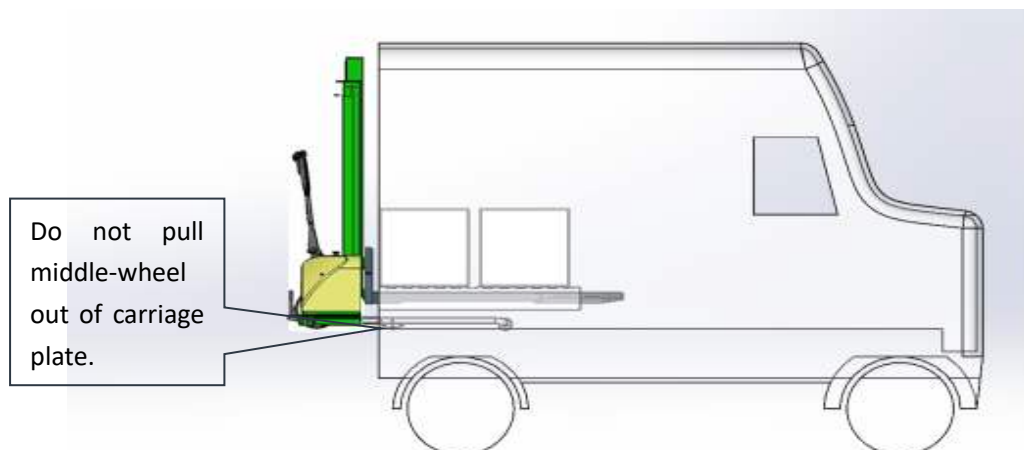


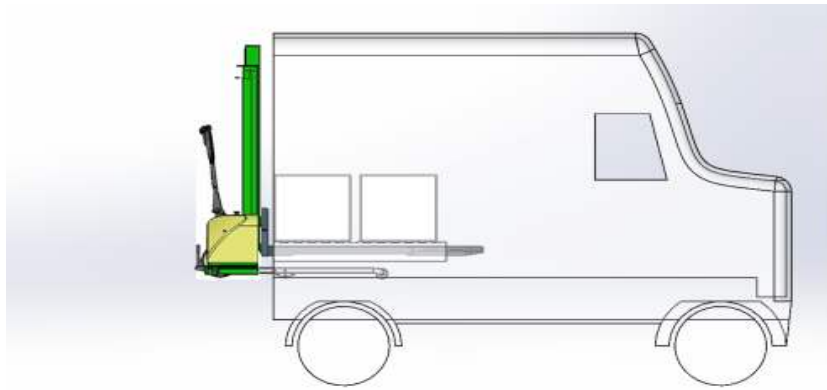
3.3 Steps of Fork and Goods Get off the Cargo

3.3.1 Open the door and then open the key switch to lift the cargo.

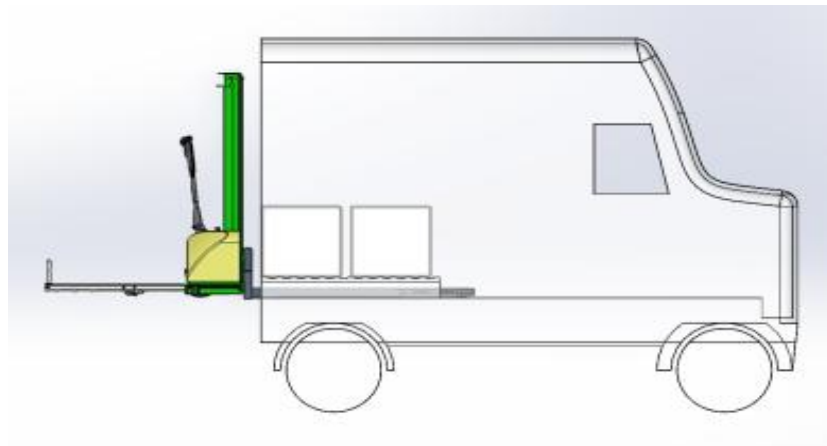
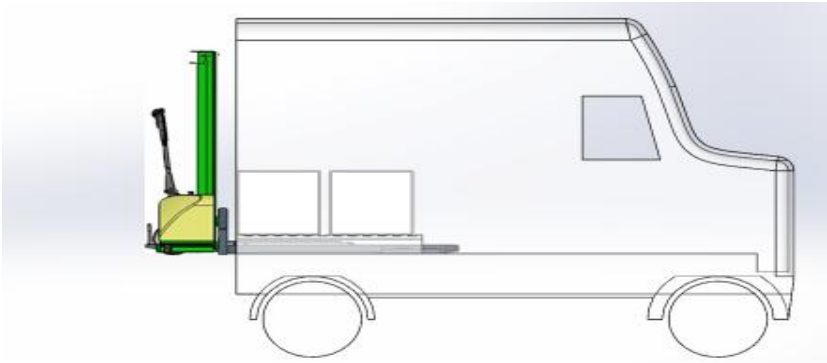


3.3.2 Pull the body of the forklift out of the carriage to ensure the distance between the vertical plane of the forklift and the rear of the carriage is 20~90mm.

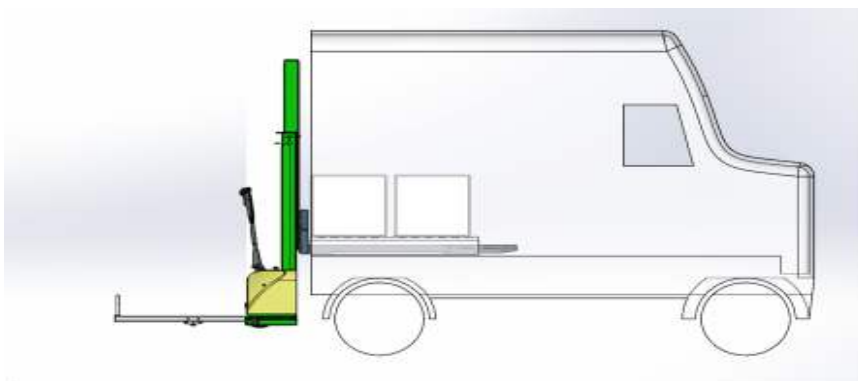




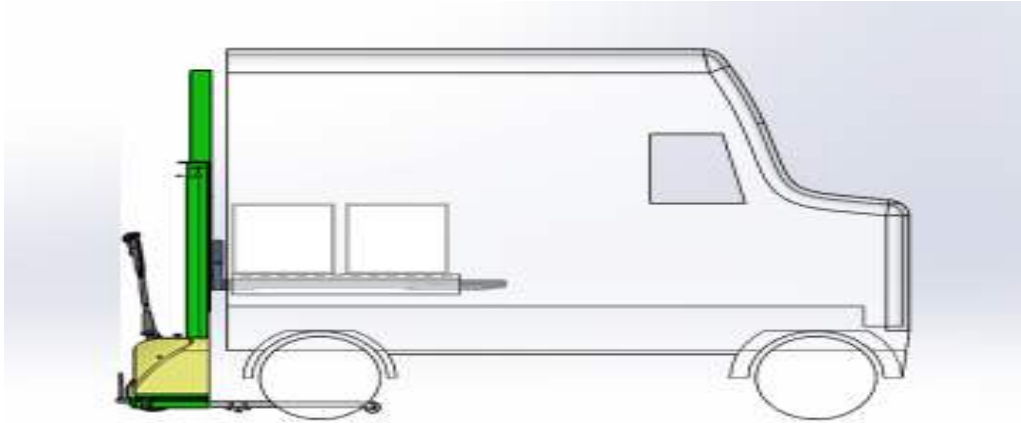
3.3.3 Press drop button 1 to lower the cargo and lift the body to the top.



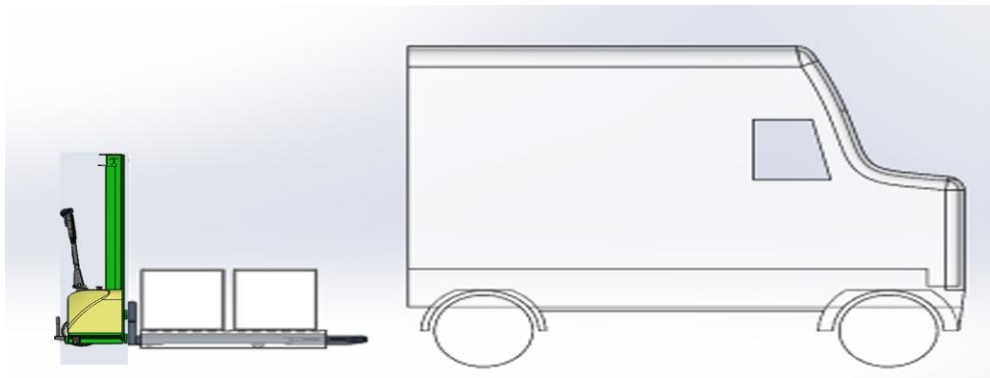
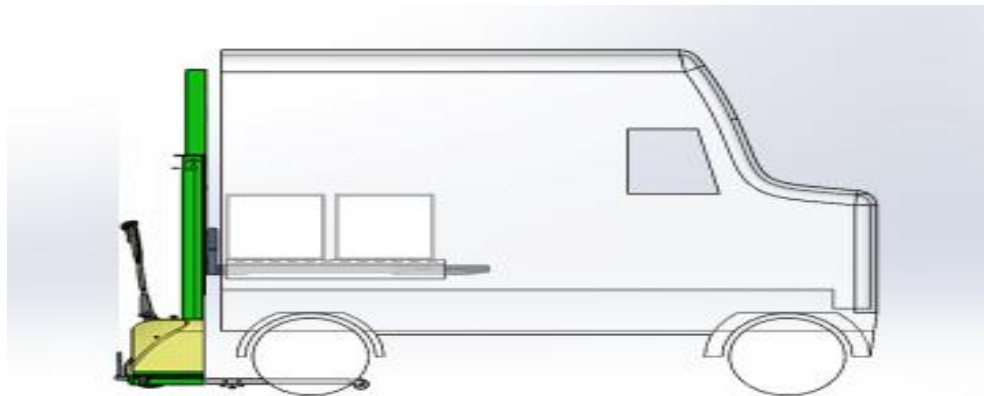
3.3.4 Press button 3 to lower the car body, and push the movable leg into the car after leaving the obstacle.



3.3.5 Press button 3 to lift the goods off the floor after the car has reached the bottom (It takes about 4-6 seconds to lift)



3.3.6 Press button 2 to lower the bottom of the goods to 200~300mm above the ground. Continue to turn the acceleration knob to transfer the goods to the specified location.



4. Checks Before Use

4.1 Checks before first use

1. Check and confirm all parts are installed firmly on the forklift. No parts are missing or loose.
2. Check appearance of forklift to ensure there is no damage or deformation.
3. Check and ensure battery voltage is in normal range (Battery voltage will be 20% higher than nominal voltage). All battery connect lines cannot be corrosion. Please charge the battery when use first time.
4. Check whether charging line, charging plug and socket is crazed or not. Check whether there is abrasion or connect loosen.

4.2 Checks in Daily Operation

1. Please check whether there is leakage of hydraulic oil or electrolyte on the ground which forklift parking.
2. Check whether the fork cracks or bends
3. Check whether the wheel cracks, damages or abnormal abrasion. Check whether wheel fastening piece loosen.
4. Check is there any lines or other goods en-lace on the wheels.
5. Check whether battery connection lines loose or damage. If yes, need to adjust or change the line.
6. Check the lift and descent function of fork
7. Check whether there is abnormal noise

5. Safety Operation Regulations

5.1 Start

Insert the key and then turn to ON

5.2 Deceleration and Braking

Motor deceleration and manual auxiliary control of vehicle deceleration braking.

5.3 Stop

If driver will leave the forklift, even only for a little while, he needs to stop forklift well.

1. Drive the forklift to the smooth ground
2. Descent fork to lowest position
3. Turn the key switch to OFF

Warning!

Do not put forklift on the ramp. Fork descends to lowest position.

5.4 Load and Discharge

Operate strictly according to manual steps

BE CAUTION:

1. Please move slowly when close to loading or discharge area.
2. Please ensure goods are put stable when fork lifts the plate
3. To avoid roll-over, please operate forklift carefully when turning with goods on the fork

Warning!

1. Know the weight of goods before load plate. Overload is forbidden.
2. Try to put good in the middle of two forks. Avoid load on one fork.
3. When forklift transports with goods, the fork height will be lower than 30mm.
4. Strictly prohibit illegal operation. Incorrect operate will caused vehicle tipping.

Notice: Please equip suitable plate according to fork size

6. Fault Help

6.1 Forklift moving means when having fault

If find forklift failure when use, but still need to move the forklift:

Use the cane or other forklift to move it. Need to notice whether the cane or other forklift can load it when moving.

BE CAUTION!

Need to take out the key, no matter what means you use to move this failure forklift.

6.2 The Reason of Fault and Solution

Following form is to help user check and solve small fault or those problems caused by incorrect operation. Please check fault according to this form and to confirm the reason to caused fault.

NO	Malfunctions	Reasons	Solutions
1	The forklift does not move	① Fuse, which controls circuit, has burnt out	Replace
		② Emergency stop switch is in poor contacting or has damaged.	Repair or Replace
		③ Fuse of main circuit is fused.	Replace
		④ Key Switch is in poor contacting or has damaged.	Repair or Replace
2	Stack only can move Forward (backward)	① Accelerator failure	Repair or Replace
		② Line fault	Repair or Replace
6	Fork cannot lift.(pump motor operation)	① Over-load Use	Less Loading
		② The pressure of relief valve is too low.	Turn Up
		③ There is abnormal internal leakage in lifting oil cylinder	Replace Seal Parts
		④ Hydraulic oil is not enough.	Add clean hydraulic Oil in moderation.
		⑤ Solenoid valve of hydraulic station is out of control.	Exclude the Fault of
		⑥ Oil pump is damaged.	Repair or Replace
7	Fork cannot lift.(pump motor is not working)	① Voltage of battery is not enough.	Charge the Battery
		② Motor of oil pump is damaged.	Repair or Replace
		③ Contactor damage	Repair or Replace
		④ The lift button switch is damaged	Repair or Replace
		⑤ Key switch is unopened or damaged.	Repair or Replace
8	Fork can lift, but cannot descend	① Inner frame is overload and deformed.	Repair or Replace
		② Oil return hole is blocking.	Clean
		③ Solenoid valve of hydraulic station is out of control.	Exclude the Fault of

If the problem is still existing, even have checked according to the above form, please contact our customer-service department. Only special trained after-sale service person can check and solve problem further.

IV. Maintenance, Charging and Replacement of Battery

1. Safety Operation Regulations of Battery

Please park the forklift well before having operate on the battery

Maintenance Person: Only those special trained person can maintain, charge or replace the battery. During operation, must strictly comply with this manual and the regulations of battery manufacturer.

Fire Prevention Measures: Cannot smoke or use fire around the battery. Please keep forklift 2 meters away from flammable materials and those work devices which easy to cause fire

Disposal of Waste Battery: To dispose waste battery, he/she must comply to environmental regulations or current laws about disposal of waste battery. He/she also must dispose under manufacturer's instruction.

2. Battery Model and Basic Specifications

Model	48V/15
Rated Voltage	48V
No. Of Battery	1
Battery Capacity	15Ah
Each Battery Size(mm)	223(L)×122(W)×177(H)
Each Battery Weight(kg)	5

3. Battery Maintenance

3.1 This forklift is used by Li battery, no need to be with special maintenance during using.

3.2 Checking the battery connection line, Whether the flat joint is corroded, if necessary, need to be replaced.

Caution: If the connection line or joint of the battery is damaged or corroded, it should be cleaned, when it is serious, it must be replaced immediately, otherwise it may cause overheating in the course of the drive and cause a fire.

3.3 After each use, the battery must be charged. As far as possible, avoid excessive discharge. When storing, keep the battery in full power. You must not wait until the battery is out of power.

4. Battery Charging

When the meter shows the shortage of electricity, please move the forklift to

the charge position, or take the battery down to the designated position, and remove the charge joint first and shut down the stop switch first. Then connect the charging power plug on the charger with the electricity. The charger will check the battery and start to start in 2~10 seconds. The charger will automatically fill the battery. When the battery is filled, the LED lights on the charger show green.

Caution: Ensure that the charging area is well ventilated.

Notice:

1. Check if there are any cracks or wear on wires and connecting devices. If problems are found, they should be replaced immediately. Ensure the cleaning and drying of terminal terminals.
2. Do not pull the charger and battery wires when the charger plug is connected with the fork lift socket.
3. The charger must be charged with a dedicated charger matching the battery

4.2 Charging instructions of the charger

1. LED 1 indicator light does not work.
2. LED 2 indicator light is red: battery is in charging
3. LED 2 indicator light is green: battery is full of power and charging is over.

Warning:

1. Do not try to repair the charger by himself/herself..
- 2, if the charger has any form of loosening and damage, it should be replaced immediately. Check whether wires and terminals are cracked or worn. If cracks or wear are found, replacement should be made immediately.
- 3, do not use chargers near volatile liquids such as gasoline, paints and their diluent and other combustibles. The charger can ignite flammable materials and volatile gases.
4. Keep the charger dry. Please do not expose it to rainwater or other liquids.
- 5, do not place anything on the charger or battery when charging.
- 6, fix all the leads and wires so that they will not be moved or twisted.
- 7, do not cover or block the heat sink of the charger, avoid overheating of the

charger.

Dangerous: if with the following situation, please don't use the charger

- 1, Charger plug loose or bad contact..
- 2, Charger plug or wire heating.
- 3, Charger plug, socket or terminal has any form of damage.
- 4, Charger with the above problems will cause fire or personnel injury.

5, Battery Replacement

1. Close the emergency stop switch and pull out the flat joint (avoid pulling to the wiring harness when pulling out the line).
2. Remove the battery from the top.

Install the battery in the opposite order.

V. Maintenance of Forklift

1. Cleaning of Forklift

- 1, Before cleaning, he/she must park the forklift safely and make sure to turn off all the power supply to avoid forklift move or slide accidentally.
- 2, Turn off the power before cleaning
- 3, Those parts, far away from electrical components, can be washed by water, such as front fork.
- 4, Front fork lifting parts can be wiped with a damp rag.
- 5, Forklift cover and handle need to be wiped with a dry rag. (There is no distinct traces of water after wiped.)
- 6, Before the cleaning of inner electrical components, must loosen connection bolt of battery and turn off the power.
- 7, Take off the body cover and then clean those inner electrical components with low intensity suction gas, dehydrated compressed air or non-conductive anti-static brush.
- 8, Battery can be cleaned by wet rag. But battery only can be used after dry.
- 9, Need to clean the appearance of forklift one time every day. Battery and electrical components need to be cleaned at least every 6 months.

After cleaning, please notice following things before use.

1. Check the function of key switch
2. Check whether the function of lift and descent is good.
3. Please follow the third chapter third section “Forklift Operation” to use forklift rightly.

Be Caution! Do not let the electrical components be damp or short circuit.

1. It is strictly prohibited to wash Electrical equipment by water. Otherwise, it may damage the electrical components and then caused function fault.
2. Cannot clean by combustible liquids. Take all necessary measures in the cleaning process to prevent electrical sparks during operation, for example, those spark caused because of short circuit.
3. Cannot clean by steam flow equipment.



Warning!

1. All operation involves electrical system only can be operated by professional electrical training person.
2. Please take off all conductive articles, such as ring and metal watch before electrical operation.

2. Inspection and Maintenance of Forklift

Periodic inspection and maintenance of forklift is necessary to ensure longer use, effective and orderly work of forklift. It is also important preventive measures to protect peoples' physical and mental health.

1. Check whether support parts is well not not. If steel parts is damaged, please repair it before use.
2. Check the wheel wear to make sure it can keep whole forklift stable. Otherwise replace the wheel.
3. After 24 hours' use of new forklift, user needs to check machine and those bolts and nuts of electrical system, especially bolts and nuts on roller. Please re-fasten them if necessary.
4. Check whether the air spring is normal, otherwise repair it or replace it.
6. Check whether move or back is normal, otherwise, need to use it after troubleshooting.

7. Check whether the button on handle is well, otherwise, repair it.
8. Check all connection places of hydraulic system and oil tube have oil spill or not when lifting and descent. Check whether it can lift and descent to specified location. Otherwise, repair and replace parts having problems.

Above inspection and maintenance should be checked before use every day.

Following points should be checked one time at least every 3 months.

1. Check lift and descent function is good or not when carrying goods.
2. Check battery total voltage and unit voltage is normal or not. If need to change battery, please follow instruction of the forth chapter fifth section "Replacing Battery".



Warning!

1. If operator find any problems when inspecting and maintaining, do not dis-assemble and maintain without permission. He/she must report to supervisor and then check and repair by professional person. Only can use forklift after all problems are solved.
2. The quality of wheel will directly affects the stability and driving performance of equipment, so it may leads to accident risk if using those wheels that do not conform to our specifications.
3. Do not use forklift any more if find abnormal thing and stink when checking.

3. Regular Maintenance of Forklift

Totally standardized maintenance is one of the most important necessities to ensure the stable and reliable performance of forklift. Ignore regular maintenance may cause the failure or malfunction of forklift. That maybe has potential safety threat to staff and operator.

3.1 The maintenance of normal use should pay attention to the following points.

1. Damaged steel parts need welding. Please dis-assemble electrical parts before welding to avoid damage.
2. Please add hydraulic oil immediately if hydraulic lifting height is insufficient. But do not add to much, otherwise it may overflows.
3. Keep battery clean and dry. Please charge battery everyday if have used

forklift.

3.2 Pay attention to following points before long-term storage:

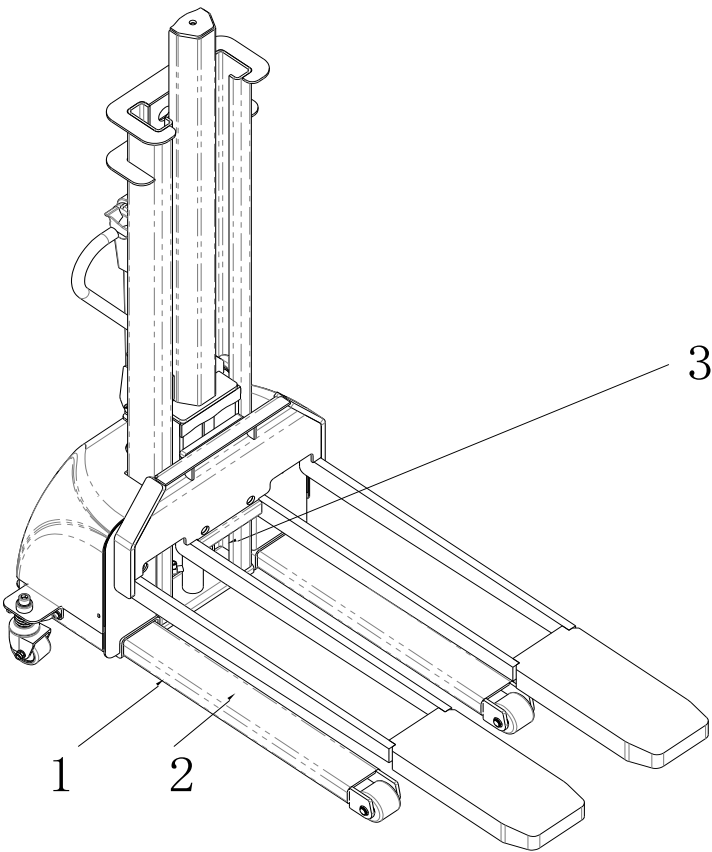
- 1. Check the level of hydraulic oil. Please add hydraulic oil if necessary.
- 2. Apply a thin layer of lubricating oil or grease on those mechanical parts without surface treatment.
- 3. The battery should be cleaned regularly and charged once a month to full capacity.

⚠ Warning!

Please deal with forklift according to the second section of this chapter “Inspection and Maintenance of Forklift” before re-use the forklift.

4. Lubrication

According to the lubrication position mentioned below, lubricate and maintain according to the lubrication and maintenance identification table.



Lubrication Maintenance Table

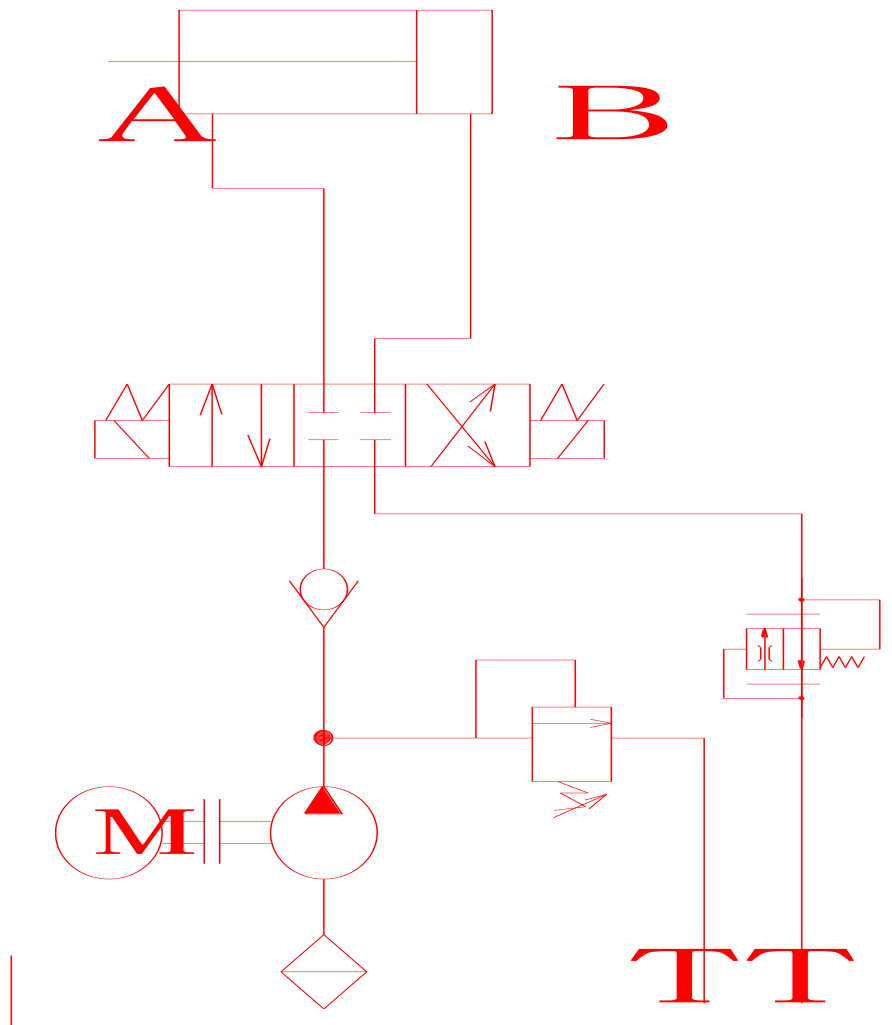
No	Lubrication	Lubrication	Lubrication time limit	Lubrication
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	Part	point	week	month	season	year	Method
1	Lower Surface of the Leg	2		L			Brushing
2	Upper Surface of the Leg	2		L			Brushing
3	Frame	2		L			Brushing

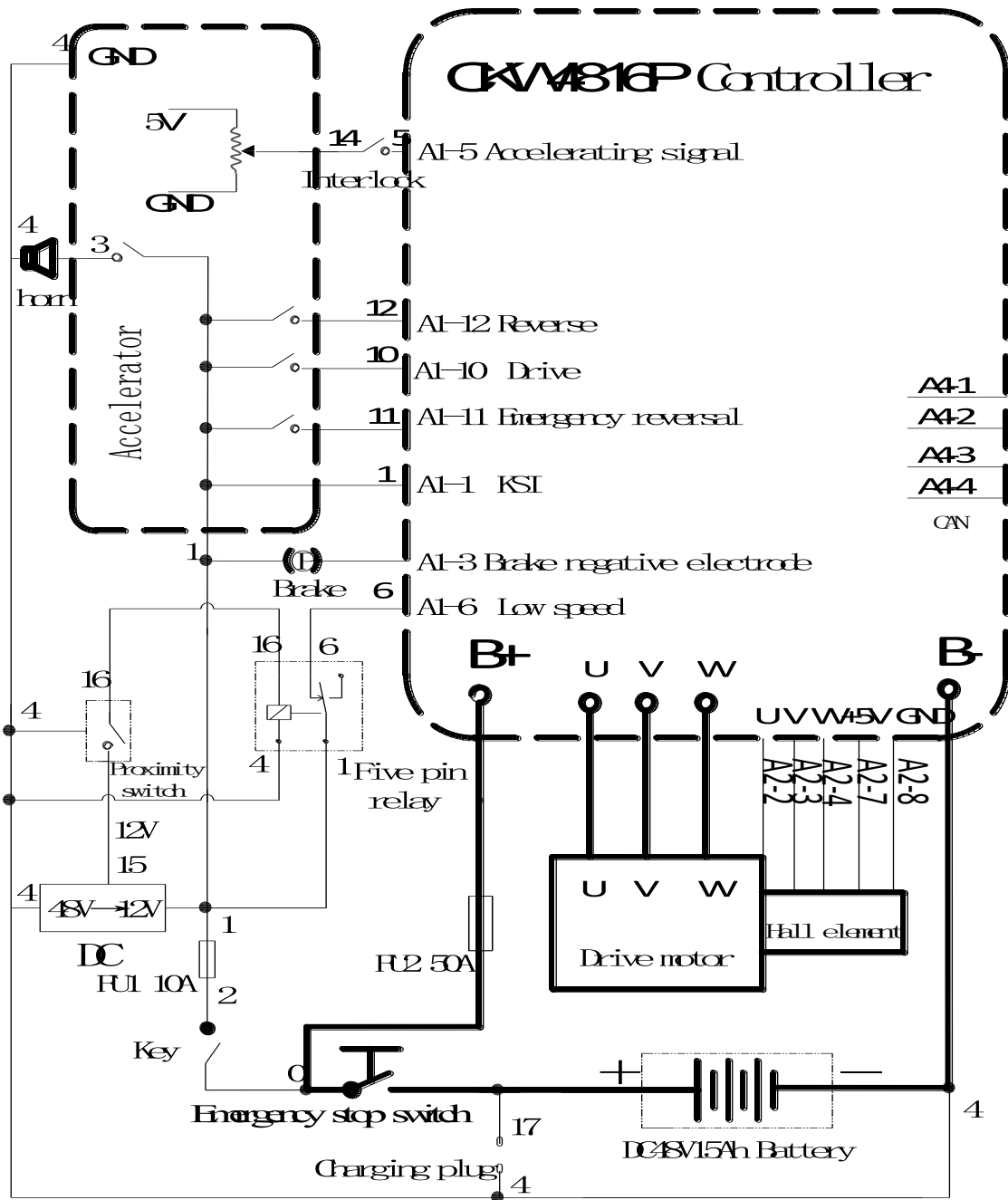
Memo: L means lithium grease

VI. Schematic Diagram

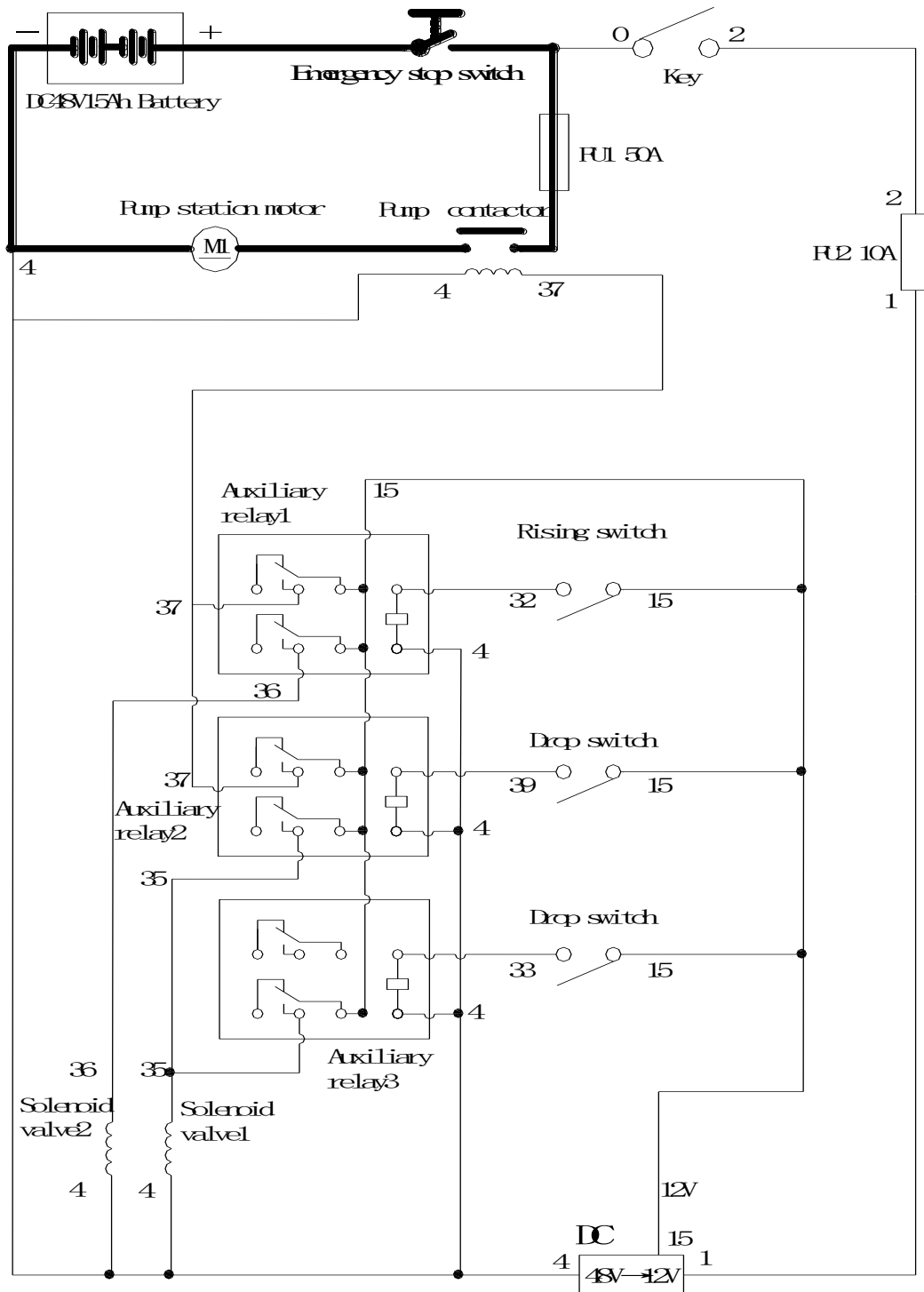
1. Hydraulic Schematic Diagram



2. Traveling Electrical Schematic Diagram



3. Lifting Electrical Schematic Diagram



VII. Quality Assurance Scope

1 Guarantee

1 year or 1000 hours since the date of forklift purchase

2 Scope of Exemption

2.1 The quality failure, parts damaged or other lose, causes by do not use and maintain forklift rightly and do not do following instructions,

2.2 Those quality problem causes by using non-designated oil,

2.3 The quality problem causes because of incorrect operate, overload and amplification work ability adjusted by oneself,

2.4 The lose causes by force majeure,

2.5 The circumstances occur because of the change of time, such as the small changes of paint and plating,

2.6 The quality problem causes because of unauthorized changes to the products' original structure or technical conditions without our permission,

2.7 Other Collateral loss causes by product quality, such as reputation loss and closing loss etc.,

2.8 Without the on-site treatment or authorized repair of our company's maintenance service personnel, the user disassemble, repair or replace parts by self, which destroyed the quality failure or quality accident scene, and cannot be identified as the quality problems of the company's products.

2.9 Exceeding the quality guarantee period,

2.10 Such vehicle cannot work properly problem, causes because user use non-original produced parts or parts without the approval of our company when he/she maintain it,

2.11 These parts lose or damage in transit which is not under our company's transportation.

2.12 This equipment is not waterproof, if the product parts caused by water damage is not covered by the warranty.

3 Confirmation of Replacement Parts

3.1 When Domestic customers need to repair because of products' failure, he/she must to contact with our repair shop. Then the forklift will be repaired

by our repair person or authorized personnel. Otherwise, our company will not be responsible for all losses and expenses incurred.

3.2 When asks for free replacement parts, export-products purchaser must provide clear damaged parts pictures and written materials about the damaged and analyzed by cause, that have been signed by the parties.

4 Special Note

4.1 The following components are wearing parts, there is no guarantee or after-sale service.

- All plugs, sockets, fuses, various kinds of oil (such as hydraulic oil etc.), all rubber products and other consumables (such as tires, friction pads and gaskets, etc.)

4.2 The quality guarantee period of the following components is half of the normal quality guarantee period.

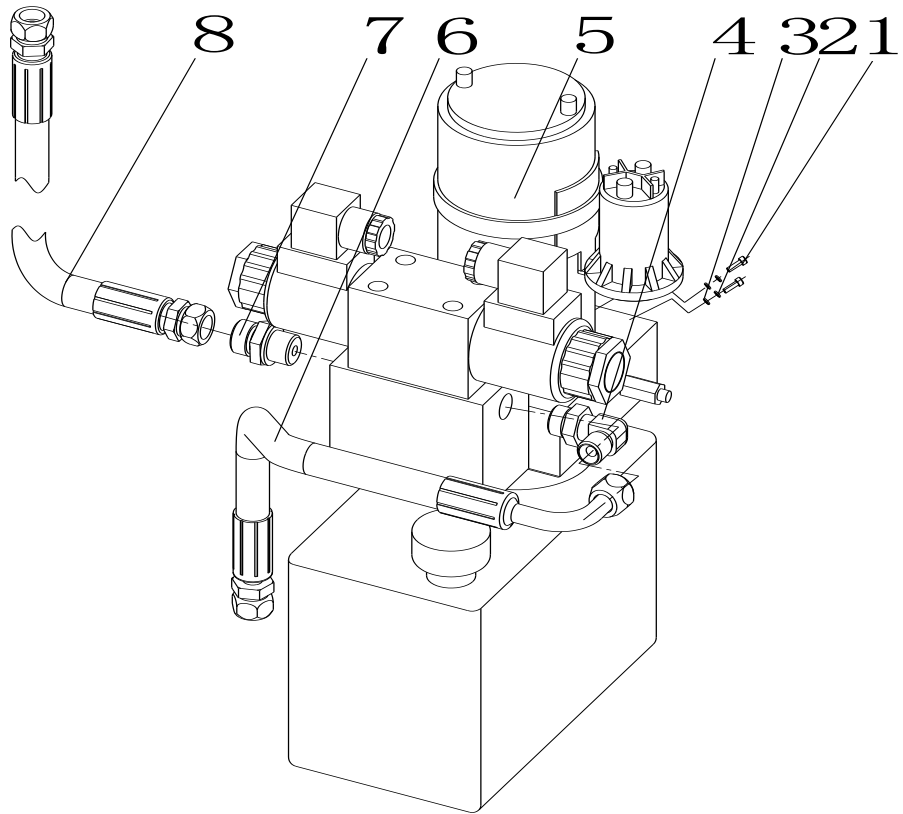
- Components with contacts, such as relay (electronic rely, starting reply, intermediate reply and safety reply) etc.

- Various switches (forward, backward, horn, proximity switch and micro-switch etc.)

4.3 Once exceeding the quality guarantee period, we will charge the material cost according to the regulations.

VIII.Parts Catalogue

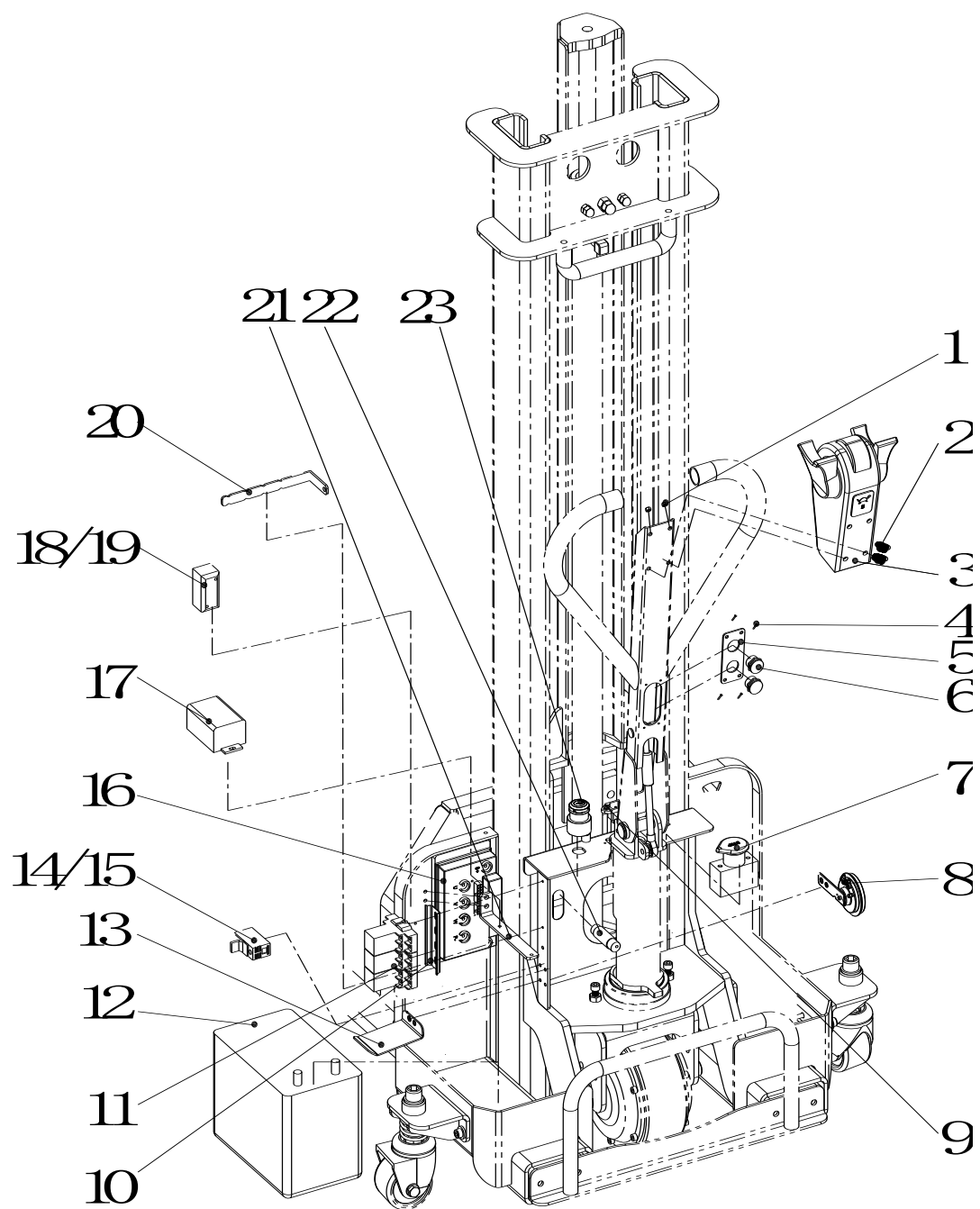
1. Hydraulic Power Assy



Hydraulic Power Assy

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030101	Hexagon Headed Bolt	2	M10×20
2	87030102	Spring Washer	2	10
3	87030103	Flat Washer	2	10
4	87030104	Right Angle Connector	1	G1/4-M14×1.5
5	87030105	Hydraulic Power Assy.	1	48V
6	87030106	Hydraulic Hose	1	
7	87030107	Straight Connector	1	G1/4-M14×1.5
8	87030108	Hydraulic Hose	1	

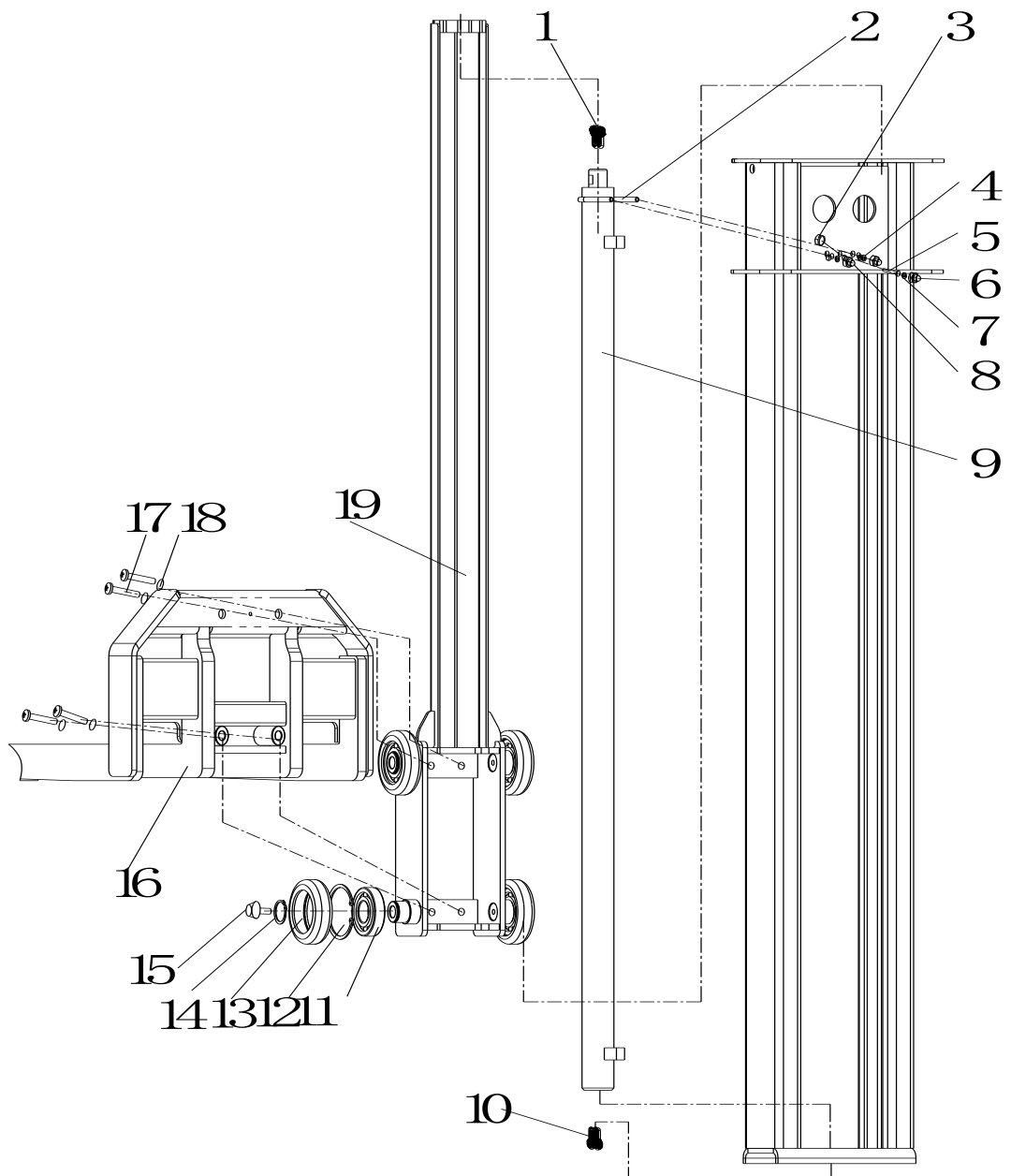
2. Electric System



Electric System

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030201	Lock Nut	2	M4
2	87030202	Screw	4	M4×50
3	87030203	Handle assembly	1	
4	87030204	Screw	4	M4×10
5	87030205	Button Mounting Plate	1	
6	87030206	Lift Switch Button	2	
7	87030207	Emergency Stop Switch	1	
8	87030208	Horn	1	
9	87030209	Charger Plug	1	
10	87030210	Relay Mounting Plate	1	
11	87030211	Intermediate Relay	3	12V
12	87030212	Battery	1	48V/15Ah
13	87030213	Battery platen	1	
14	87030214	Ceramic fuse base	1	
15	87030215	Ceramic fuse	1	RT14-20 10A
16	87030216	controller	1	
17	87030217	DC	1	48-12V 10A
18	87030218	High Current Fuse Base	1	
19	87030219	High Current Fuse	1	50A
20	87030220	Harness board	1	
21	87030221	DC mounting plate	1	
22	87030222	Lead limit switch	1	
23	87030223	Key Switch	1	

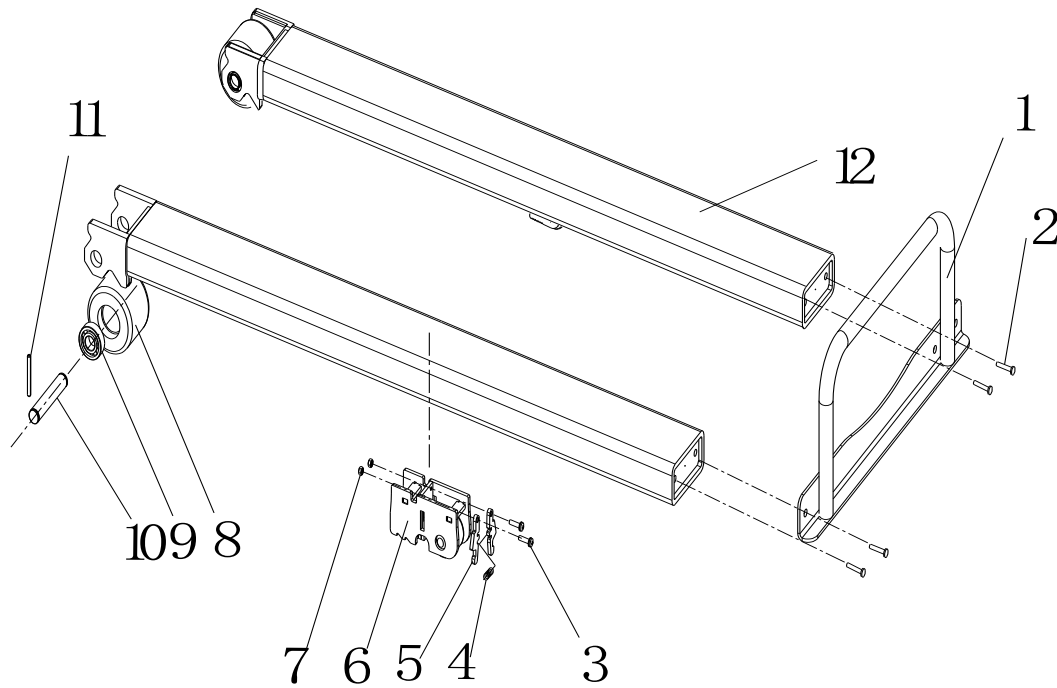
3. Lifting System



Lifting System

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030401	Hexagon Headed Bolt	1	M14×25
2	87030402	Cylinder Hoop	1	
3	87030403	Hexagon Nut	1	M10
4	87030404	Flat Washer	3	
5	87030405	Hexagon Headed Bolt	1	M10×40
6	87030406	Combination Cover Nut	1	M10
7	87030407	Spring Washer	3	
8	87030408	Combination Cover Nut	2	M8
9	87030409	Lifting Cylinder	1	
10	87030410	Hexagon Headed Bolt	1	M14×25
11	87030411	Deep Groove Ball Bearings	4	6307-2RS
12	87030412	Elastic Ring For Hole	4	80
13	87030413	Roller	4	
14	87030414	Elastic Ring For Axle	4	35
15	87030415	Stop Collar	4	
16	87030416	Fork Arm Carriages Assembly	1	
17	87030417	Screw	4	M14×40
18	87030418	Spring Washer	4	14
19	87030419	Frame Assembly	1	

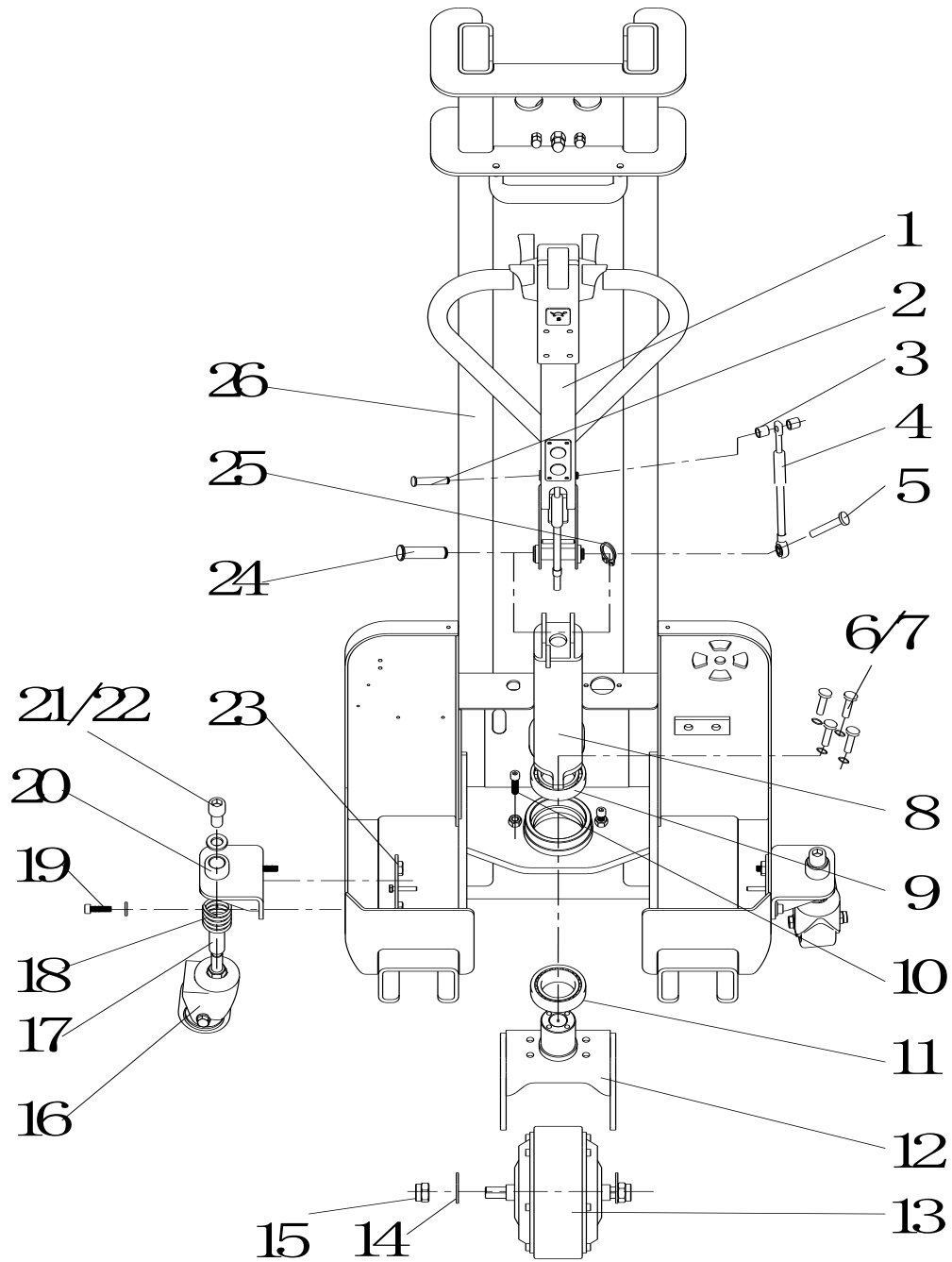
4. Handle Assembly



Handle Assembly

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030501	Handle assembly	1	
2	87030502	screw	4	M8×20
3	87030503	cross recessed screw	4	M5×20
4	87030504	spring	2	
5	87030505	snap-gauge	4	
6	87030506	Intermediate wheel assembly	2	
7	87030507	locking nut	2	M5
8	87030508	front wheel	2	Ø80×70
9	87030509	deep groove ball bearing	4	6204-2RS
10	87030510	front axle	2	
11	87030511	elastic cylindrical pin	8	4×40
12	87030512	Leg assembly	2	

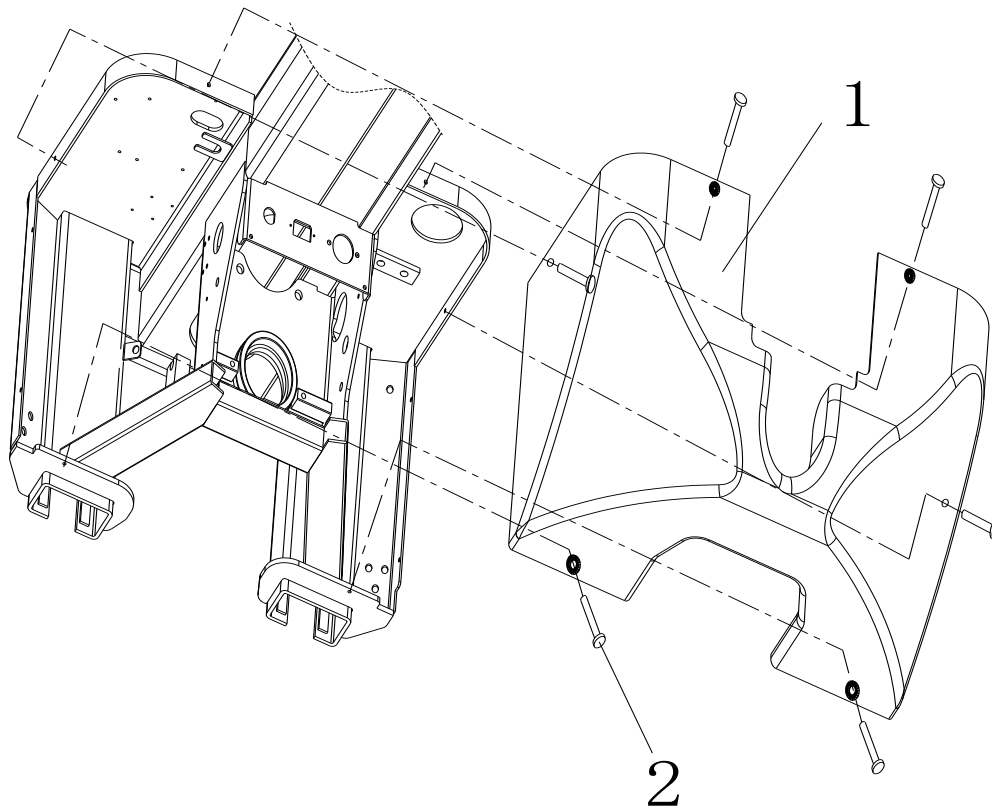
5. Parts Installation



Parts Installation

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030601	Handle torque tube assembly	1	
2	87030602	Gas spring installation shaft	1	
3	87030603	Gas spring limit sleeve	2	NL
4	87030604	Gas spring assembly	1	
5	87030605	Hexagon headed bolt	1	M8×20
6	87030606	screw	4	M8×25
7	87030607	washer	4	8
8	87030608	Handle steering seat assembly	1	
9	87030609	deep groove ball bearing	1	6010-2RS
10	87030610	screw	2	M8×20
11	87030611	Tapered roller bearing	1	32010
12	87030612	Drive bracket assembly	1	
13	87030613	in-wheel motor	1	
14	87030614	Anti detachment plate	2	
15	87030615	locking nut	2	M16
16	87030616	Universal wheel assembly	2	
17	87030617	Screw sleeve	2	
18	87030618	Universal wheel mounting spring	2	
19	87030619	screw	4	M8×20
20	87030620	Universal wheel installation component	2	
21	87030621	Hexagon headed bolt	2	M16×30
22	87030622	flat washer	4	16
23	87030623	Universal wheel fixing plate	2	
24	87030624	Handle mounting shaft	1	
25	87030625	Elastic Ring For Axle	1	16
26	87030626	Body Components	1	

5. Plastic Parts



Plastic Parts

No.	Parts No.	DESCRIPTION	QTY	Memo
1	87030701	Self-Lift Forklift Cover	1	
2	87030702	Screw	8	M6×16