

# **SST15G Electric Pallet Stacker**

**Service & Maintenance Instructions**

## **preface**

To meet environmental protection standards, reduce industrial pollution, and improve the quality of life, Sumachay Lifts developed the SST15G Electric Pallet Stacker. Leveraging advanced design features and the best practices from both domestic and international electric stackers, the SST15G is ideal for various industries, including food, banking, textiles, logistics, ports, and warehousing. This equipment supports efficient handling and transport operations.

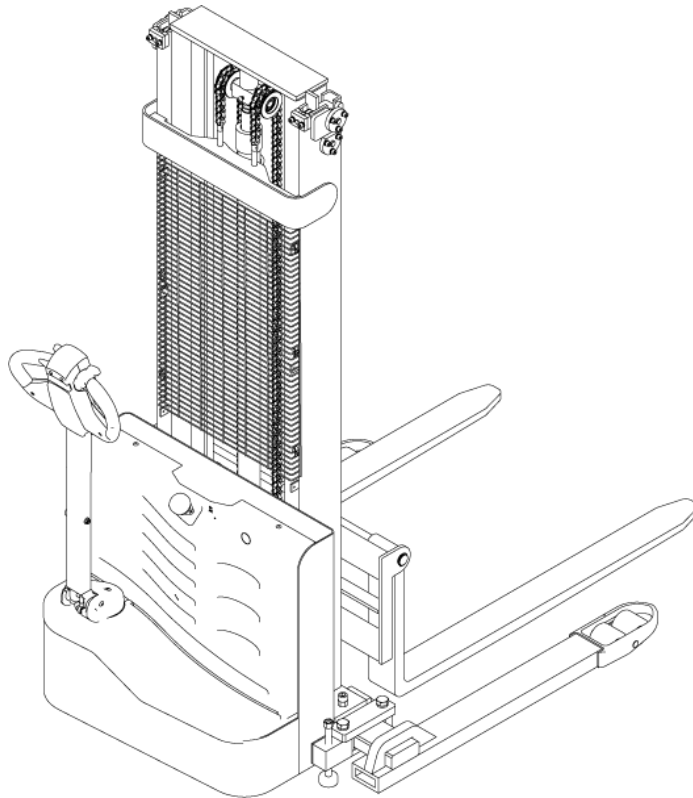
This manual covers the technical specifications, operating principles, usage instructions, and maintenance guidelines for the SST15G Electric Pallet Stacker. It is designed to help operators maximize the stacker's effectiveness and longevity.

We encourage operators to follow all guidelines and safety instructions carefully to ensure the SST15G operates in optimal condition, maintaining high efficiency and contributing positively to your organization.

## **statement**

The SST15G Electric Pallet Stacker, produced by Sumachay Lifts, is designed for use in controlled environments as per "Special Equipment Safety Supervision Regulations." It is intended for applications in specific industrial areas such as warehouses and controlled zones designated for material handling.

## 1. Product profile



SST15G type electric pallet stacker, is equipped with a high quality motor, battery and high-power pump station motor. Therefore, it has superior performance, convenient operation, broad vision, flexible steering, reliable braking, good power, less noise, no pollution, beautiful appearance and other characteristics.

The vehicle is suitable for cargo stacking and handling operations on hard, flat ground.

service environment:

- a. The altitude shall not exceed 1200 meters;
- b. Indoor environment at room temperature from + 5°C to + 40°C;
- c. When the ambient temperature is + 40°C, the relative humidity shall not exceed 50%, and at the lower temperature, a large relative humidity is allowed;
- d. Hard, flat ground ground.
- e. It is forbidden to use the vehicle in an inflammable, explosive or corrosive environment such as acid and alkali.

## 2. Correct use

It is only allowable to use this electric pallet stacker according to this instruction manual.

The forklift described in this manual is a self-controlled series battery tray stack truck with a handle handle button to control the forklift lift.

Improper use can cause personal injury or machine damage. The operator / operating company shall ensure proper use and that the forklift is operated only by persons trained and authorized to use the vehicle.

This forklift should be used on a firm, flat, intact plane and proper surface. This vehicle is intended for indoor conditions at room temperature from + 5°C to + 40°C

Use without a light load of passing through permanent barriers or pits. Not operate on slopes and the cargo must be placed approximately at the load center of the forklift.

No lifting or carrying personnel. If carried, the cargo must be lowered to the lifting point.

Do not use this vehicle on the lifting tail plate or loading platform.

The rated load is marked on the capacity labels and nameplates, and the operator must pay attention to these warning signs and safety instructions.

Operating lighting must be at least 50 lux.

### change

Any change or change that may affect the rated load, stability or safety operation of the vehicle shall be subject to prior written approval from Sumachay Lifts or its authorized Sumachay Lifts or its successor. This includes the effects of changes, such as increases in braking, steering, visibility, and removable accessories.

After the Sumachay Lifts or its successor approves the modification or change, the capacity nameplate, labels, identification marks, and operation and maintenance manuals shall be changed accordingly.

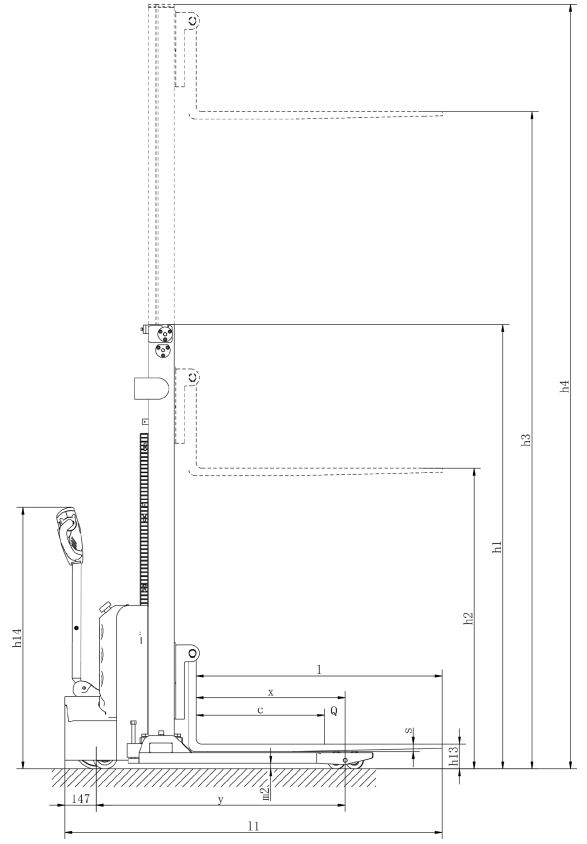
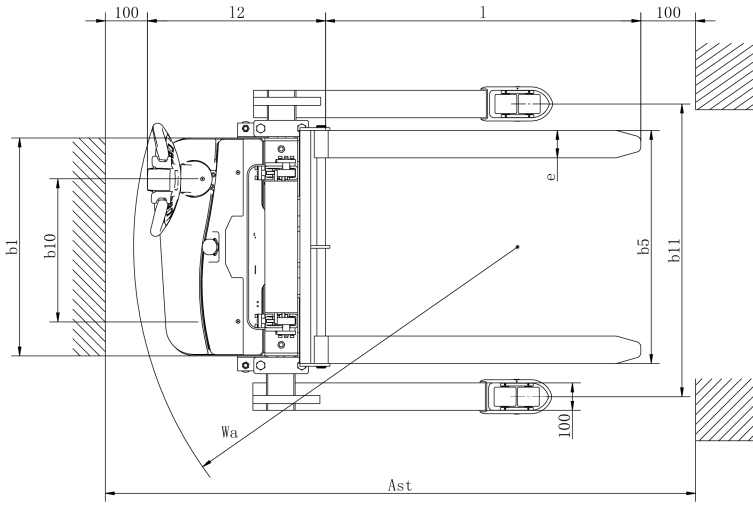
## **3. Model introduction**

### **3.1 Model Overview**

This operation manual is a collection of SST15G type 1.5-ton electric stacking trucks (hereinafter referred to as "stacking trucks").

The model of the stacker "SST15G rated load 1.5 tons" meets the requirements of JB / T8452-1996 "Battery Forklift Model Preparation Method", "JB" is the product code, and "Y" is the adjustable leg.

### **3.2 Vehicle schematic diagram and parameters**



## 4. operational principle

### 4.1 Walking system

The walking of the stacker is achieved by the battery providing energy and by controlling the DC motor on the drive wheel. The DC motor converts high speed and low torque to low speed and high torque through the gear gearbox, which is finally executed by the driving wheel. The speed of walking is achieved by controlling the motor speed by frequency conversion, which is controlled by the accelerator.

The gearbox has been filled with sufficient gearbox lubricating oil at the Sumachay Lifts. Normally, replace the gearbox lubricating oil for every 1,000 hours of use.

During use, if you hear the abnormal sound in the gear box, you should immediately stop to check, determine whether the bearing is damaged or the gear has problems, and can continue to use after replacement and repair.

### 4.2 Steering system

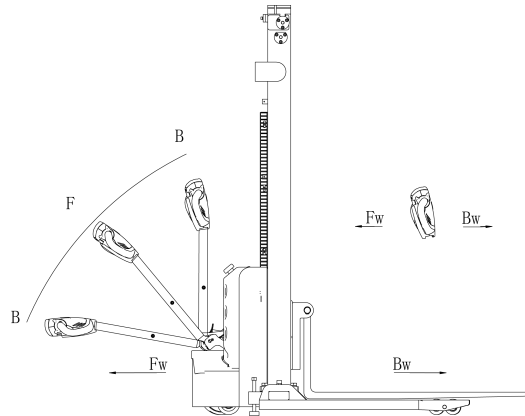
The steering of the stacker is driven by the operating handle through the handle lever, driving the drive motor to realize the steering.

### 4.3 Brake structure and brake schematic diagram

Braking performance depends on the road conditions and the load conditions of the vehicle.

4.3.1 The brake function can be activated by the following means:

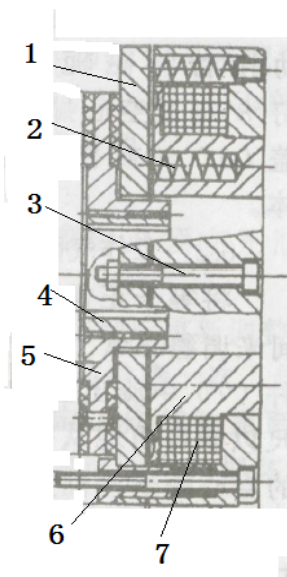
- Turn through the driving switch (2) to the '0' position or release the switch, and the vehicle brakes to its stop.
- With the driving switch (2) moving directly in the opposite direction, the vehicle regen brakes until it starts in the opposite direction.
- Move the handle up and down to the brake area ('B'), and the vehicle brakes. If the handle is released, the handle automatically moves up to the upper brake area ('B') by braking the vehicle to its stop.
- The belly switch (3) can prevent the operator from being squeezed. When the vehicle is driving ('Fw'), the body touches the vehicle to slow down or start to drive ('Bw') for a distance, and then stop. If the handle is in the operating area and the vehicle is not moving, consider that this button is still working in this situation.



#### 4.3.2 Operating principle of braking:

As shown in the following figure: The brake is composed of magnetic yoke assembly 6, excitation coil 7, spring 2, brake disc 5, armature 1, gear sleeve 4, mounting screw 3, etc. The brakes are mounted on the end cover of the motor and adjust the mounting screws to the specified air gap value. The gear sleeve is fixed on the shaft, and its outer teeth cooperate with the inner teeth of the brake disc to transfer the torque when working. The brake disc can move axially on the gear sleeve.

When the excitation coil 7 of the brake is energized, the coil generates a magnetic field to draw the armature 1 toward the yoke assembly 6, and the armature 1 is detached (released) from the brake disc 5. At this time, the motor drive shaft starts and operates normally with the brake disc 5. When the coil 7 is powered off, the magnetic flux disappears and the armature 1 is released, and the spring 2 presses on the armature 1 to press the friction plate on the brake disc to generate friction force to achieve the purpose of braking.



Brake schematic diagram

#### **4.4 Operating system**

The main working mechanism of the stacking truck is the fork, which relies on the fork to carry the pallet or goods and short distance transportation operations. The expansion of the cylinder is realized by the control of the operating handle, and the pump station provides the pressure oil.

A slow drop valve is installed in the loop of the lifting cylinder to slow down the landing speed of the fork frame, to achieve the effect of safety drop.

#### **4.5 Electrical system**

The electrical system of the stacking truck includes walking and operation control. The stacker adopts a DC electric control assembly.

The instrument has the functions of power display prompt, working time display and undervoltage protection. When the battery power is too low, the power meter will cut off the start control line of the oil pump motor, and the stacker can only walk but not lift the fork, and suggests that it should be charged immediately.

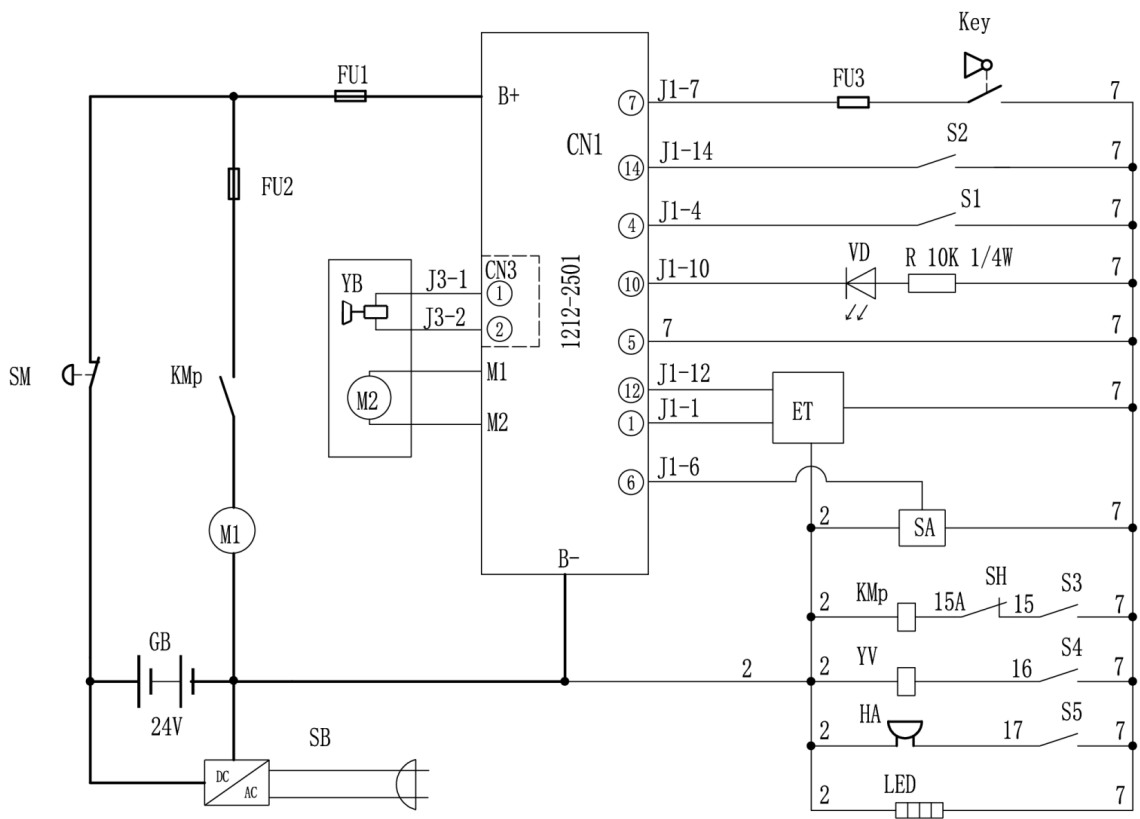
The oil pump motor is a 5-minute working DC motor, so the oil pump motor is not suitable for long-time continuous operation. That is, the lifting action should be a time interval, can not be continuous, otherwise it will make the motor heat, or even burned.

Special note: when the stacker is used for a long time, the starter of the oil pump motor may fail, which specifically can not suction or cannot be disconnected after suction. The latter is not pulling the control handle, the oil pump motor is constantly rotating, at this time should immediately stop, cut off the power supply (pull out the battery plug), make the oil pump motor stop turning, and replace the starter in time.

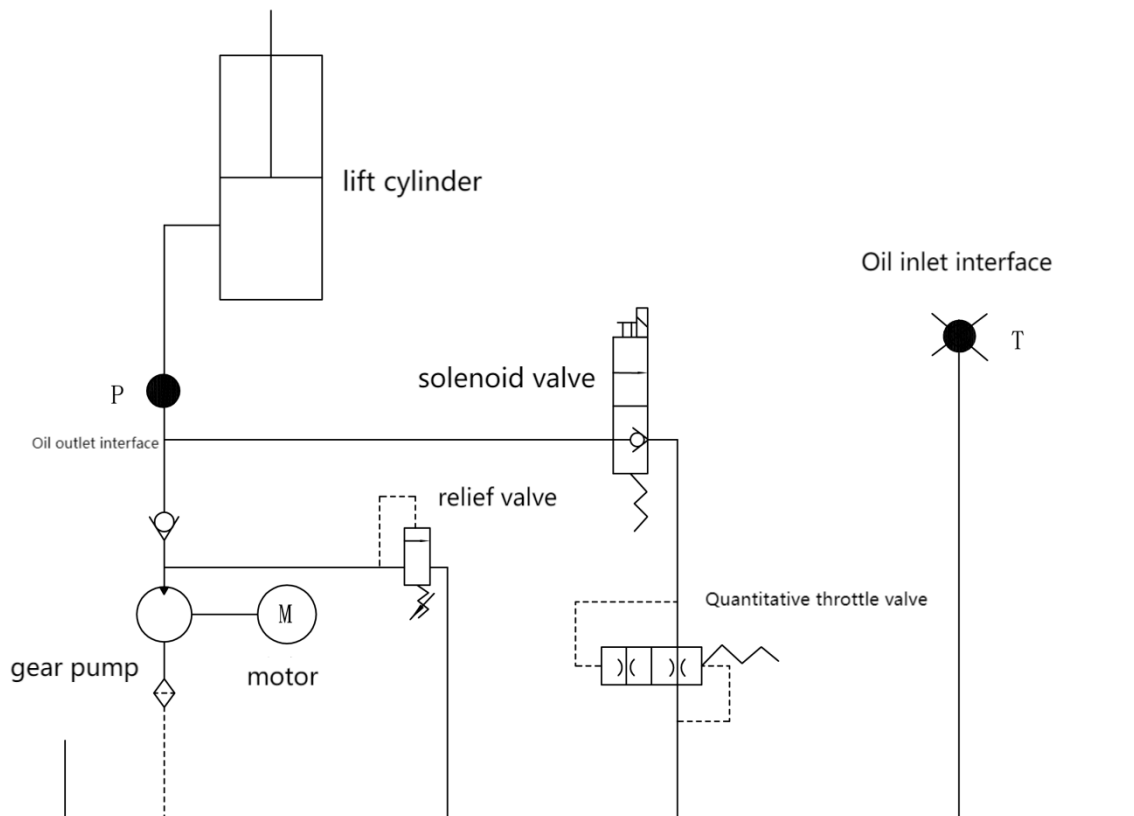
#### **4.6 Hydraulic system**

The oil pump motor drives the gear pump to provide hydraulic power, and the lifting cylinder is responsible for the rise and fall of the fork. The control of the lifting oil circuit is controlled by the button on the operating handle, and the lifting action is controlled by the single-acting oil circuit on the valve block. The pressure of the hydraulic system of this model can only be adjusted on the valve block, and has been adjusted before leaving the Sumachay Lifts. It is strictly prohibited for our after-sales personnel or professional maintenance personnel to adjust itself after leaving the Sumachay Lifts, so as to avoid safety accidents.

## 5. Electrical schematic diagram



S1	S1	Turtle speed switch	S2	Emergency reversal
S3	S3	Lifting switch	S4	Drop switch
S5	S5	Horn switch	KMp	Pump
SH	SH	Height limit switch	HA	megaphone
YV	YV	Lowering solenoid valve	SA	Interlock switch
LED	LED	Power supply indication	Key	Key switch
ET	ET	accelerator	M2	Travelling
YB	YB	Electromagnetic brake	SM	Scram switch
GB	GB	battery	SA	Interlock switch
SB	SB	recharger	VD	Trouble light
FU1 FU2 FU3	FU1 FU2 FU3	Fuse wire		



## 6. Operating procedures

Be familiar with the functions of each switch / button on the dashboard before operation.

### 6.1 Start-up, operation and parking

Insert the key into the key switch, turn right, gently remove the emergency power off safety switch and open the control circuit.

Lift the fork about 10CM off the ground.

Slowly open the driving switch until the required speed.

During the operation, the stacker has an abnormal fault, the power needs to be cut off quickly, please press the red emergency power off switch.

When the stacker turns, it should reduce the speed, and if possible, try not to make a sharp turn.

The full-load climbing degree of the stacker is 3%, so it is necessary to understand the slope situation when climbing the hill. The stacker must press the driving switch as far as possible, so as to achieve the maximum climbing force.

When the stacker stops driving, put the cargo fork to the lowest position, press the safety switch, and pull out the key.

## **6.2 Use of emergency power-off safety switch**

If the vehicle is out of control while driving, or causes smoke and burning smell in use, please press the emergency brake switch on the forklift dashboard, and the total power supply will be cut off. Find out the cause and clear the fault. Open the method is: gently pull up the red button, the button to pop up, open finished.

The button of the emergency power off switch is plastic. When you down, push or pull it too hard it may damage the switch.

## **6.3 Use of the speakers**

For driving safety, the vehicles are equipped with driving horns. When driving to remind others, press the horn button in the middle of the handle, the horn rings to remind pedestrians to pay attention.

## **6.4 Battery capacity display**

The instrument panel has the capacity display function of the battery power of the forklift truck, and can also calculate the electricity consumption time (cumulative hour calculation).

## **6.5 Handling and stacking operation**

### **(1) How to carry the goods**

Slowly drive the stacker towards the items to be carried, carefully inserting the fork under the load. Once the fork is fully positioned beneath the goods, stop and press the joystick button to lift the load to the desired height. Reverse slowly, ensuring not to disturb any adjacent items. Once the load has fully cleared the placement area, proceed to transport it to the desired location.

### **(2) How to place the goods**

Carrying goods to slow down when driving near the placing area. When the stacker is in a straight line with the placing area, then the stacker will slowly drive forward to the placing area to stop. Slowly press the drop button, once the heavy object is towed, the fork to the hollow position, the fork out of the heavy, first confirm the backward position barrier-free, before backward. Wait for the fork to completely leave the heavy object and then conduct a round of handling operation.

# **7. Maintenance and maintenance instructions**

The parts on the vehicle, especially the safety devices, shall not be modified without permission, and the driving speed of the vehicle is not allowed to be changed. All spare parts provided by the original Sumachay Lifts have undergone strict quality inspection. To ensure the safety and reliability of the vehicle, please use the original accessories. Replaced parts, including all oil, must be collected and treated in accordance with local environmental and health laws and regulations.

## **7.1 Safety regulations for repair and maintenance**

Maintenance personnel: The repair and maintenance of the vehicle must be carried out by specialized personnel trained by the Sumachay Lifts. The after-sales service organization of the

Sumachay Lifts has specially appointed technical personnel. After the maintenance is completed, the after-sales service personnel shall sign on the maintenance record.

**Vehicle lifting:** When a vehicle needs to be raised for maintenance, the lifting device must be safe and reliable, and strictly tied to the position of the lifting point. When the vehicle is lifted, appropriate measures must be taken to prevent the vehicle from slipping or overturning (with wedge, wood block).

**Cleaning operation:** do not use flammable liquid when cleaning the vehicle, before starting cleaning, must take safety measures to prevent the generation of electric spark (for example, caused by short circuit). When operating the vehicle battery, the battery connector must be disconnected. Only with a relatively weak air absorption or compressed air, not conductive and antistatic brush and other tools to clean the electrical components or electronic devices.

If the vehicle is cleaned with a water spray or high pressure cleaner, all electrical and electronic components must be carefully covered in advance

Cover well, because moisture can cause function error. Do not clean with a steam nozzle.

**Operation of the electrical system:** The operation of the vehicle electrical system is only allowed to be operated by professionally trained personnel in this field, and all measures to prevent the electrical shock must be in place before any operation of the electrical system. When operating on the battery, the battery connector must be disconnected.

**Welding operations:** To prevent damage to the electrical or electronic components, these electrical components must be removed from the vehicle before taking any welding operation.

**Installation:** After repairing or replacing the hydraulic components, electrical and electronic components, they must ensure that they are installed in the original position of the vehicle.

**Wheels:** The quality of the wheel has a great impact on the stability and driving performance of the vehicle. Changes must be approved by the Sumachay Lifts. When replacing the wheels, you must ensure that the vehicle maintains the same horizontal state as at the Sumachay Lifts time (the wheels must be replaced in pairs, for example, left and right together).

**Lift chains and rollers:** Without good lubrication, the chains and rollers will wear out quickly. It must be periodically lubricated as required in the maintenance table below, and the lubrication cycle should be shortened in a relatively harsh working environment (such as dust and high temperature).

**Hydraulic tubing:** The tubing must be replaced every 6 years. When replacing the hydraulic components, also replace the tubing of these hydraulic systems.

## **7.2 Daily maintenance**

7.2.91 Check the condition of each column, cable and its protective cover of the battery.

7.2.92 Check whether the battery box is firmly fixed.

7.2.93 Check whether the vehicle has any oil seepage condition.

7.2.94 Check the fork, tubing and horn.

7.2.95 Check for the brakes.

7.2.96 Check the wear of the drive wheel, load wheel, etc.

### 7.3 Professional maintenance manual

Comprehensive and professional maintenance is a very important work for the safe operation of vehicles. Failure to maintain at specified intervals will cause vehicle failure and pose a potential threat to personnel and equipment.

The maintenance cycle shown in this manual refers to the situation under single shift operation and normal working conditions. If it is used in a dusty environment, or if the ambient temperature changes more or more shifts, the maintenance period must be shortened.

Perform and follow their respective cycles on the maintenance list listed below, with maintenance cycles detailed below:

W = every 50 hours worked, but at least once a week.

A = 250 hours each worked, but at least once every 3 months.

B = 500 hours per job, but at least once every 6 months.

C = every 2,000 hours worked, but at least once every 12 months.

During the commissioning phase of the vehicle (50 to 100, hours or after 2 months)

Also complete the following additional actions:

-Check whether the nuts on the wheel are loose and tightened if necessary.

-Check the hydraulic components for leakage, if necessary and tighten.

-Replace the hydraulic filter.

			Maintenance time interval is ● Maintenance list			
			W	A	B	C
braking	1.1	Check the air gap of the electromagnetic brake			●	
Electrical system	2.1	Check the operation switch to display the functions of the equipment and components	●			
	2.2	Check the alarm system and the safety devices		●		
	2.3	Check the cable without damage and the terminal is firm			●	
	2.4	Check the function of the microswitch settings	●			
	2.5	Check the controller and the EPS controllers			●	
	2.6	Fixation of the cable and the motors			●	
Energy supply	3.1	By observing the battery		●		
	3.2	Visual inspection of the battery charging plug			●	
	3.3	Check the connection cable the cables and grease the electrode if necessary			●	
Driving system	4.1	Check that the gearbox has no different noise			●	
	4.2	Check the driving mechanism and grease, check the reset function of the operating handle		●		
	4.3	Check the drive wheels and bearing wheels for wear and damage			●	
	4.4	Check the wheel bearings and fixing conditions			●	
monolithic construction	5.1	Check that the frame is damaged			●	
	5.2	Check that the sign plate is complete			●	
	5.3	Check the fixing of the lifting gantry			●	

Hydraulic movement	6.1	Check the function of the hydraulic system		●		
	6.2	Check hoses, piping and interfaces for tightness, sealing and damage		●		
	6.3	Check the cylinder block and piston for damage, sealing and fixation			●	
	6.4	Check the setting of the load chain and tighten it again if necessary			●	
	6.5	Visually inspect the gantry roller and check the wear of the roller surface			●	
	6.6	Check the fork and load parts for wear and loss			●	
	6.7	Check the fuel tank oil level			●	
	6.8	Update hydraulic oil				●

## 7.4 Maintenance, charging and maintenance of the battery

Keep the battery before any operation and in a safe position.

### 7.4.1 Maintenance personnel

Charging, maintenance and replacement of batteries must be operated by qualified professionals. The manual, supply preparation and charging requirements must be carefully read before preparing operation.

### 7.4.2 Fire protection measures

Smoking and open fire are strictly prohibited when operating the battery. When storing batteries and charging, it must be kept away from flammable items, and keep at least 2 meters away. The place where the battery is placed must be well ventilated and equipped with fire fighting facilities.

### 7.4.3 Maintenance of the storage batteries

1) The nuts on each unit battery shall be kept dry and clean, and each terminal and cable end shall be tightened and painted with clean grease to prevent corrosion. The exposed terminals and terminals of the battery must be covered with a non-slip insulation cover.

2) The cables of each two cells should be in good contact. Check the nut of each pole column for loosening, once present, must be tightened.

3) Keep the battery surface clean and dry. After charging, apply the cotton thread yarn or brush to wipe the spilled acid trace clean, and wipe it clean with a wet towel if necessary.

4) The battery should avoid over charging and discharge, and fast charging and insufficient charging should also be prohibited. Otherwise it may affect the battery.

5) The conductive objects are forbidden to be placed on the battery (including metal tools), otherwise it may cause the battery to short circuit, or even explode.

- 6) No harmful liquid or solid substances are splashed on the surface of the battery. When a densitometer or thermometer is used, the surface shall be clean without any impurities.
- 7) After discharge, the battery should be charged in time. The delay may damage the battery for 24 hours at most. In very cold weather, the battery placed outside may not be able to charge it, so it should be moved indoors for charging.
- 8) If the battery is not used for a long time, it should be charged every month and should be filled every time.
- 9) In the process of charging or use, due to water evaporation, low electrolyte level, the use of pure water supplement.
- 10) When some battery units fail, the fault cause and the faulty unit should be quickly identified and repaired, and replaced when it cannot be repaired.
- 11) When charging, there should be sufficient ventilation equipment. Smoking and open fire are strictly prohibited on the site to avoid the danger of hydrogen explosion.
- 12) The electrolyte in the battery is toxic and corrosive, because of this reason, no matter in any case, you must wear good work clothes and protective glass, to avoid body contact with the electrolyte in the battery.
- 13) If clothes, skin or eyes are stained with acid in the battery, immediately rinse with a lot of water; when the skin or eyes are stained with acid, in addition to immediately with a lot of water to rinse, you must immediately go to the hospital for examination. The spilled acid must be neutralized immediately.
- 14) The weight and size of the battery have a considerable impact on the stability of the vehicle, so that the model of the battery can be changed only with the consent of the Sumachay Lifts.
- 15) High-current discharge is strictly prohibited, such as driving and lifting action at the same time.

#### 7.4.4 Disposal of waste storage batteries

The scrapped batteries must be recycled in accordance with the relevant laws and regulations of the area, storing the required environmental protection area or the required waste disposal area, and this work must be carried out by a qualified professional company.

#### 7.4.5, battery specification

cell		charger	
Rated voltage: 24V	Rated capacity: 100Ah	Input: AC 120V 60Hz	output: DC 24V 10A

Non-insulated terminals of the batteries must be protected by an insulating cover. When the battery is connected to the socket, the vehicle must be in the cut off state and the switch in the off position. When replaced or assembled, ensure that the battery is reliably fixed in the battery box.

#### 7.4.6 Storage, transportation and installation of storage batteries

The vehicle must stop firmly on the horizontal ground. To avoid short circuit, the exposed terminals and terminals of the battery must be covered with insulation cover. When the battery is pulled out, the connector and cable of the removed battery must be properly placed, and they should not hinder the entry and exit of the battery.

#### 7.4.7 Battery power display device

Battery power display table: The situation of battery discharge is represented in the power display table by 10 display bars with 10% increase per battery display table.

As the battery capacity is consumed, the shiny display bar will drop from the top.

The color of the LED indicates the following different states:

name	LED pigment	parameter values
Remedial power of standard battery	green	70-100%
	orange	30-60%
	Red flashing	0-20%

The battery discharges 70%, and a red light flashes a "power storage" warning.

The battery discharge reaches 80%, the double lights flashing a "power out" alarm, the battery must be charged.

#### 7.4.8 Charging

Please read the user manual carefully before charging.

When charging the battery, confirm that no metal object is placed on the battery, and check the connection parts of all cables and plugs for obvious defects before starting the charging operation. All safety instructions such as battery recharge regulations and battery charging preparation must be strictly followed.

In the process of charging, the battery and battery charging room should be well ventilated to ensure the charging safety.

Before connecting or disconnecting the charger, make sure that the charger is not in the circuit state.

To ensure safe operation, the vehicle must be equipped with a protective cover before use.

Personnel should try to stay away from batteries to avoid danger.

## 8. Safety precautions

### 8.1, and the general rule of No

8.1.1 The operator must have the operation qualification of the forklift (approved by the training of relevant departments) before driving the forklift.

8.1.2 Operators must read all the contents of the use manual before use, and can only drive the forklift after fully understanding the operation method.

8.1.3 Forklift trucks shall not carry passengers in the running.

8.1.4 Operators shall pay special attention to the operating environment when working, including other personnel nearby and fixed objects.

8.1.5 Without the approval of the Sumachay Lifts, do not arbitrarily modify, add or remove the forklift parts, so as not to affect the performance of the forklift truck.

### 8.2 Transportation and storage

8.2.1 Note when using containers or automobiles:

The front and rear wheels are fixed with wedges to prevent sliding during transportation;

When using the lasso, attention not to be placed on the fragile structure of the stacker;

When handling with a stacking truck, pay attention to keep the center of gravity of the truck in the middle of the two forks.

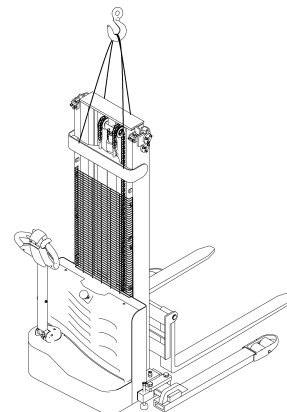
During transportation, remove the trailer to fix the stacking truck with the special binding belt according to the drawing below.

8.2.2 When the forklift is not working, it should be parked in a and ventilated garage to prevent the sun and rain. Also, note:

Close the electric lock, and power off the safety switch, unplug the power plug;

Pull up the parking system, handle, front and rear wheels pad;

If there is a long-term shutdown, the battery should be replenished every 15 days.



dry

with

### 8.3 Check before use

8.3.1 If the new car is damaged during the transportation process, please do not put it into use, and contact the supplier in time for proper treatment.

8.3.2 The running parts of the new car have been filled with lubricating oil and the hydraulic oil in the Sumachay Lifts.

8.3.3 Truck forklift with battery. The battery is fully charged at the Sumachay Lifts. If the Sumachay Lifts time is long, the power may be insufficient. Before use, attention should be paid to the display of the meter. When the meter appears to the last two warnings, it must be charged immediately. Before use, or before charging, open the battery cap and check the height of the liquid level. If the liquid level is too low, add distilled water before charging. See (charging and maintenance of the battery)

## **8.4 Safe operation**

8.4.1. Requirements of drivers: the vehicle must be operated by personnel trained in vehicle operation, who can demonstrate the operation of moving and manipulating the goods, and clearly guide the user on how to operate the vehicle.

8.4.2 Rights, Obligations and Responsibilities of the driver: The driver must clarify his rights and obligations and have been trained in the operation of the vehicle; and be familiar with the contents of the operation manual. If the vehicle used is in pedestrian control, the driver must also wear safety boots when operating.

8.4.3 Proof use by unauthorized personnel: The driver is responsible for the vehicle while working, and he must prevent the unauthorized person from driving or operating the vehicle. Do not use vehicles to transport or lift personnel.

8.4.4 Faults and defects: For faults or defects, the vehicle must be notified immediately. If the vehicle cannot operate safely (e. g., wheel wear or brake failure), always stop using it until they are completely repaired.

8.4.5 Safe Operation and Environmental Protection: The chapter of inspection and maintenance Operation must be performed at the time intervals on the maintenance list.

No parts on the vehicle, especially the safety device, shall be changed without permission, and the operation speed of the vehicle shall not be changed.

All the original spare parts are verified by the quality assurance department, and to ensure the safety and reliability of the vehicle operation, only the Sumachay Lifts's spare parts must be used. Subplaced parts such as oil and fuel must be treated in accordance with the corresponding environmental protection rules.

8.4.6 Hazardous area: Hazardous area usually refers to the following areas: the vehicle or its load lifting device (such as a fork or accessory) in operation or lifting action, or the area where the load is being transported. Usually this range extends to the area where the load lands or the vehicle attachment lands.

Unauthorized personnel must ask him to leave the danger area. As long as the personnel may produce some injury to the situation, the driver must give a warning, if the driver asked it to leave but did not leave the dangerous area, must immediately stop the vehicle.

8.4.7 High-risk environment: When working in a high-risk environment, a special design must be provided to protect it.

The car is not specially designed for the high-risk environment.

8.4.8 Safety devices and warning signs: safety devices, warning signs and warning precautions introduced before the operation manual must be given enough attention.

8.4.9 Driving in public places: The car is prohibited from driving in public places other than special areas.

8.4.10 Distance between vehicles: Please remember that the vehicle in front may stop suddenly at any time, so please keep a proper distance.

8.4.11 Clearheight: in the environment where the clearance height is lower than the cargo load or door frame, the vehicle is prohibited to use.

8.4.12 Use in the elevator and manipulation of the loading platform: If there is enough carrying capacity not to affect the operation of the vehicle, and with the consent of the user of the vehicle, the elevator and the loading platform can be used for vehicle transportation. The vehicle driver must personally confirm before entering the elevator or station. The vehicle must put the goods in front and occupy a proper position so that it does not touch the walls around the elevator. When the personnel and the vehicle take the elevator together, the personnel must enter only after the vehicle enters safely and stops safely, and the personnel must leave before the vehicle leaves.

8.4.13 Driving channel and working area: the vehicle must drive on the specially designated passage, non-relevant personnel must leave the working area, and the goods should be stacked in the designated place.

8.4.14 Operation and management: the driving speed must be adapted to the local conditions. Vehicles must drive slowly when passing curves, narrow passages, rotary doors and in unobstructed places. The driver must be able to visually detect a sufficient braking distance between the vehicle and the vehicle in front, while he must always control his vehicle. Sudden stop (unless emergency need), rapid reverse turn, chase each other in the passage is not allowed, it is not prohibited to lean out to operate the vehicle.

8.4.15 Visibility: the driver must look at the direction of driving to ensure that the front passage is clearly visible. When the vehicle moves backward and the cargo blocks the view, appropriate guidance and warning must be provided with the second person to walk in front of the vehicle.

8.4.16 Pass the ramp: allow through only a known ramp which shall be clean and skid resistant. The weight loaded on the fork must face uphill. Turning around, walking or stopping on the ramp is not permitted. Passing the ramp must be slow, and you must be ready to brake at any time.

8.4.17 Load on the ground: Please pay attention to check whether the weight of the body and the load or the pressure of the wheels to the ground is exceeded when the vehicle is working.

8.4.18 Vehicle Changes: Any change or change that may affect the rated load, stability or safe operation of the vehicle shall be subject to prior written approval from the originator of the vehicle or its successor. After the vehicle Sumachay Lifts approves the change or change, the nameplate, labels, identification marks, operation and maintenance manuals shall be changed accordingly.

## 9. Fault handling

### 9.1, fault diagnosis

hitch	cause	processing method
The vehicle cannot move	The Battery connector is not connected	Check the battery connector and connect it if necessary
	The electric lock switch is in the "OFF" position	The electric lock switch is placed at the "0" position
	The emergency stop switch is not turned on	Turn on the emergency stop switch
	The battery capacity is exhausted	Check the battery and recharge it if necessary
	The forklift is in charging	Break the charging process
	Fuse damage	Check the fuse
Goods cannot be raised	The vehicle was not in operation	Follow the method listed in the Vehicle cannot Move fault
	There are too few hydraulic oils	Check the hydraulic oil
	Fuse damage	Check the fuse
	Load overweight	Pay attention to the rated load
	The lifting microdynamic switch is not well touched or damaged	Check the fuse
Goods must not fall	The oil blocks the control valve	Check hydraulic oil and cleaning control valve and replace hydraulic oil if necessary
	The drop solenoid is not open or damaged	Check the drop solenoid valve or replace it
cannot stop when rising	The lift micro-switch is damaged	Cut off the power supply and replace the lift microswitch
Move in one direction	Microswitch and connection cable contact	Check the microswitch and connecting cables in the control handle
Vehicles walk slowly	Battery power is insufficient or the corresponding cable contact is not good	Check the battery power display light and the corresponding cables
The sudden start of the vehicle	Controller damage	Replace the controller
	The control forward and backward handle is not reset	Repair to reset or replace it

If the fault cannot be eliminated through some of the processing methods listed above, please notify the Sumachay Lifts's after-sales service team for specially trained maintenance personnel to eliminate it.

### 9.2 Preparatory work before repair

In order to prevent accidents that may occur during repair and maintenance operations, some of the following preparations must be completed:

- -Parking the vehicles safely.

-Press the emergency stop switch and unplug the battery connector.

### **9.3 Check the amount of hydraulic oil**

- ready ready for repair and operation.
- Open the electrical box cover.
- Check the amount of hydraulic oil in the tank.

When checking the amount of hydraulic oil, the fork and frame must be lowered to a minimum position.

### **9.4 Preparatory work before use after maintenance**

The vehicle can only be used after the following.

- Clean the vehicle.
- Check the brake function.
- Check whether the function of the emergency stop switch is normal.
- Check the horn.

**Note: The Sumachay Lifts reserves the right to interpret this manual Subject to change without prior notice**