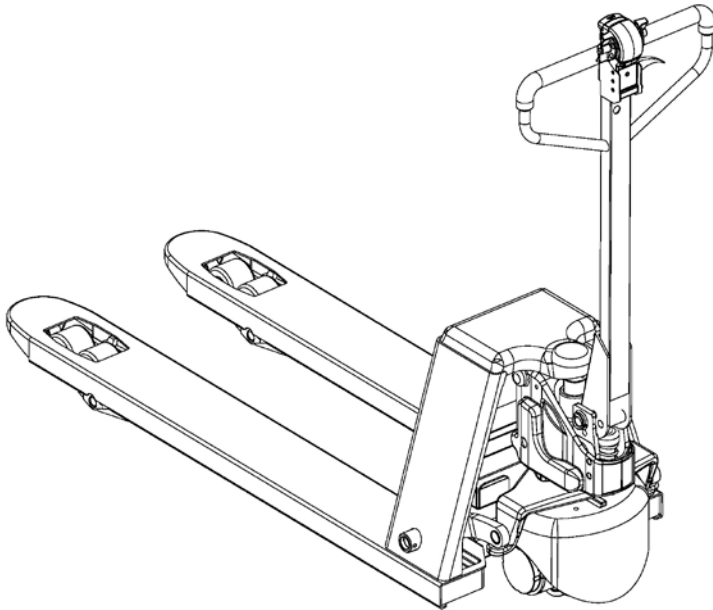


# Operation and Maintenance Manual



**Electric Pallet Truck**

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2019-10-20



## Quality Assurance

This pallet truck is made and assembled according to the design and the electric pallet truck standard of GB/T27542, which has complete technical specifications and is ready to service the clients after a final quality checking.

Test:

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Product Name: Electric Pallet Truck

Model:

Serial Number:

Frame Number:

Production Date:

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## Quality Warranty

The warranty policy of our company as below:

### 1. Quality Warranty:

1.1 Free repairing will be provided if some parts of the truck are damaged during the normal usage, because of the using of unqualified material or parts in the production, as long as the truck is within its warranty period.

1.2 This warranty is only available for the quality of truck, other indirect lost the user may face such as delaying of works, losing of credit and other extra lost are not within the coverage of this warranty.

1.3 The user must follow the instruction of OPERATION MANUAL whenever using this truck, any damages caused of illegal using will not be covered by the warranty.

### 2. Warranty Period and Coverage

2.1 The starting date of the quality warranty is the same date of invoice issuing.

2.2 The quality warranty period is 1-year or 1200 working hours, whichever comes first.

Driving Assembly (not including carbon brush or sealing parts) ,Electrical Control Assembly (not including the contactor) ,Driving Motor, Lifting Motor, Turning Motor, Lifting Oil Cylinder (not including the sealing parts) , Frame of Truck, Fork, Chain, Accelerator, Operating Handle, Wiring.

2.3 The warranty period of lithium battery is 2-year.

However the warranty period of below parts is half year or 600 working hours, whichever comes first.

2.4.1 High Pressure Rubber Tube and Bearings

2.4.2 Contactor and Instrument

2.5 The warranty period of the rest parts is half year or 600 working hours, whichever comes first, except for the parts mentioned in 2.2,2.3.

### **3. Requests of Quality Warranty**

The user must contact with the designated maintenance station nearby as soon as the problem happens.

### **4. Exclusion of the Quality Warranty**

4.1 The product is not within the warranty period or can't meet the policy.

4.2 The damage caused by illegal operation, maintenance or overload.

4.3 The damage caused by lacking of experience, accident or natural disaster and other force majeure.

4.4 The damage caused by illegal refit.

4.5 The damage caused by illegal spare parts not from our company.

4.6 The damage caused by illegal repair personal.

4.7 The damage caused collision, and corrosion of air and other chemicals.

4.8 Parts that can be easily recovered after a simple adjustment.

4.9 Easily damaged Parts that not within the coverage of warranty.

4.9.1 All kinds of liquids: working oil, lubricating oil, electrolyte and other consumptive parts which need regularly maintenance during the warranty period.

4.9.3 Other Consumptive Parts: all kind of sealing ring and washer, rubber tube, self-lubricating bearings, nut, bolt, cotter pin and other kind of standard parts.

# Prologue

Thank you for your trust of our product.

The manual is aiming to show you the operation and maintenance of this certain series of electric pallet truck. All operation and maintenance personal must read this manual carefully, which is necessary to keep your safety as well as achieving best performance of this truck.

The product you actually receiving might be different from this manual, because of product improvement and development which is undertaken all the time. And your product might also be different from the manual if you customized your truck.

Our truck is only applicable inside certain places such as factory workshop, tourism site, park and other places which is legal to use this kind of tools.

Any question, please contact of sales department or our local agent.

# Warning!

In order to keep the safety of yourself and other personal around, please from below instructions strictly.

Lacking of maintenance may result in some risks. Professional maintenance equipment, personal and plan are necessary.

**Please follow below instructions when carrying out the operation, maintenance and checking of the truck.**

1. The maintenance, lubrication and checking should be done according to the instructions.
2. You must take below steps before leaving the truck.
  - Do not park on a slope and make sure forks are at lowest position.
  - Press the scram button and take out the key.
3. Below are steps needed to take before operating the truck.
  - The operating personal must stand on the correct position.
  - Make sure the handle was at the stop position.
  - Check the wellness of lifting, turning, speed control, alarm and braking functions.
4. The work position should be equipped with fire equipment and do not using fire to check the electrolyte and oil.
5. To keep a good status, the braking, operating, controlling, alarm and other safety devices should be regularly checked.
6. All labels and marks on the truck should be cleaned regularly and make sure them are readable all the time.
7. All devices of lifting system should be checked regularly.
8. The hydraulic system should be checked regularly. And have cylinder, valve and other devices checked before using.
9. Park the truck at a clear position to avoid fire risk.
10. The user can't refit the truck without permission of our company. And the labels and marks should be revised according after a legal refit is done.

## Usage of this Truck

This truck is a tool which is used to lifting and carrying goods. The operation and maintenance should be followed this instruction strictly. Any other illegal usage might cause the damage of personal and other properties, as well as the truck itself. Overload or unbalanced load should be avoided. Do not use this truck in areas which have risk of fire, explosion, and corrosion. This truck can't be used in wet and dust areas as well.

**Below is the responsibility and obligation of the user.** The user means any direct user or those who authorize the usage of other personal. In the case of rental, the user means the personal who actual using it as stipulated on the contract between the owner and the tenant.

The user must make sure this truck is only used in specified usage and avoid any risk to the health and life of third party, as well as the user himself. The user must follow all the instructions when using the truck and carry out regular maintenance. The user must make sure all actual operating personal carefully read and fully understood the content on this manual.

The quality warranty will be invalid if fail to follow this manual. We do not responsible to any lost caused by the illegal operation of the client, user and third party.

Attachment Assembly: if the extra attachment will change the working status of the truck, a written approval from our company is necessary, as well as the permission of local authority.

And the opinion of local authority has no direct relation with ours.

## **1. Model Introduction**

### **1.1 Usage Range**

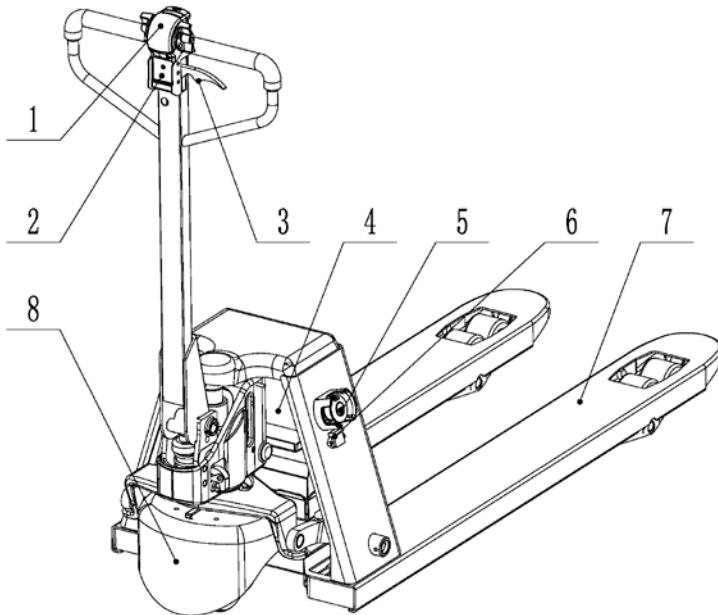
This truck is suit for using on even ground to carry goods placed on different pallets.

Suitable Temperature: 0°C—40°C

Permission from our company is necessary if you want to use this truck in an environment with the temperature under 0°C, in a refrigeration house or extremely wet environment.



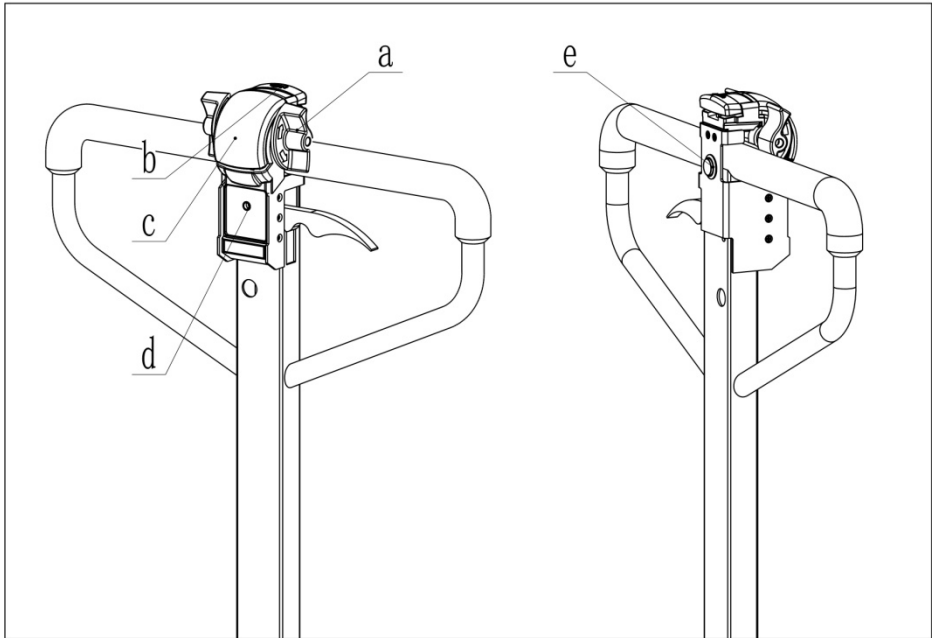
## 1.2 Components of the Truck



Pic (1)

No.	Name	No.	Name
1	Operation Handle	5	Emergency Braking Switch
2	Power Indicator	6	Charging Port
3	Pressure Release Handle	7	Body Components
4	Lithium Battery	8	Driving System

## 1.2.1 Operation Handle

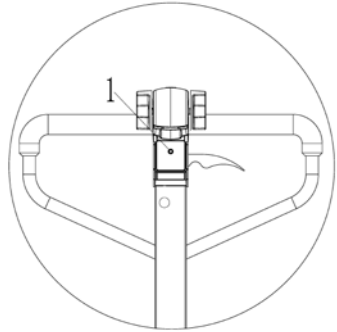


No.	Name	Function
a	Driving Switch	To control the driving direction and speed
b	Horn Button	To give sound warning
c	Collision Avoidance button	To prevent the truck move away from the operator
d	Power Indicator	To indicate the power and give maintenance notice for every 200 hours
e	Lifting Button	To lift the truck

## 1.2.2 Power Indicator

“1” is referring to the LED light.

It is to show the left power.



### **Power Indicator“1”**

Pull up the braking switch and start the truck. The color of LED light will change according to the remaining percentage of power.

If the LED light is green, it means the power left is 100%-70%.

If the LED light is blue, it means the power left is 70%-30%.

If the LED light is red, it means the power left is 30%-10% and it's time for re-charging.

If the LED light is twinkle repeatedly, it means the power left is 10%-0%. In this case the truck is unable to carry any goods and must be charged as soon as possible.

### **200h Maintenance Notice Indicator**

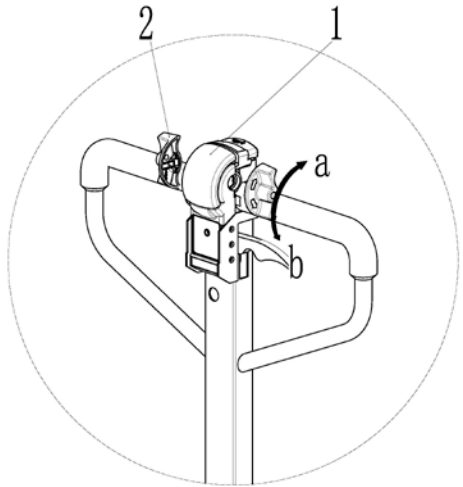
If the color of LED is changing form red, green, blue repeatedly for a minute when starting the truck, it means the truck has already worked for 200h and needs routine maintenance.

Below are aspects of Maintenance.

1. Check the bolt and tighten them up if loose.
2. Check the oil leak of the driving system.
3. Check the wheels to determine if need replace or not.
4. Check the brake and have it repaired if necessary.
5. Check the oil leak of the hydraulic system.
6. Check the whole truck and have it repaired if necessary.

**Below is how to close the 200h maintenance notice indicator.**

When the truck is power off, press the button 1 and press button 2 to the direction of b and restart the truck.



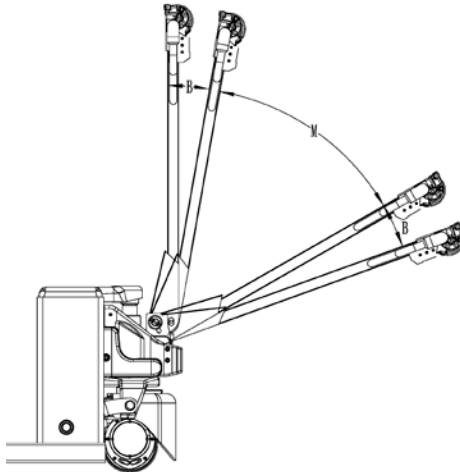
**1.2.3 Emergency Braking Switch**

This button can cut off the power of the truck.

**1.2.4 Braking**

The brake work range as below.

When the handle is within the driving range (M) , the brake is open and the truck can move around. When the handle is within the range (B) , the brake is close and the truck will stop shortly.

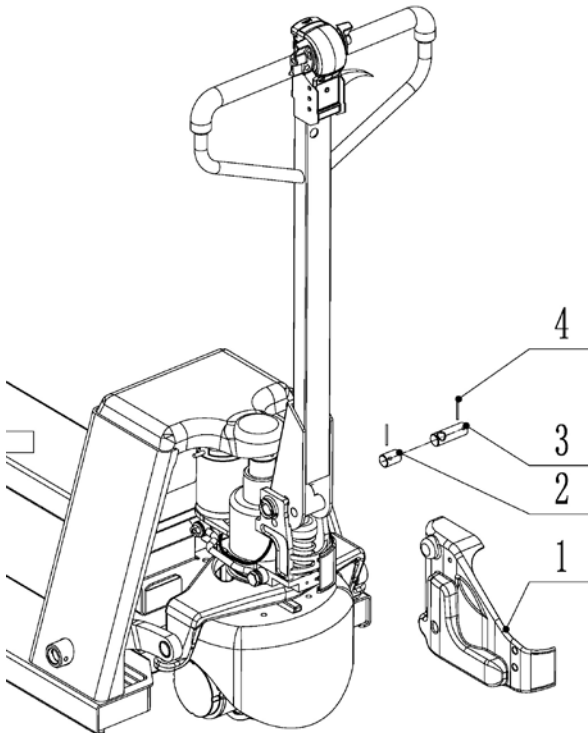


### 1.2.5 Handle Assembly

Take down the left cover (1) and take out the handle. Match the hole on the handle with the hole on the hydraulic system and assemble the handle pin (2) and (3) . Put the two sides of handle pin (2) and (3) inside the cotter pin (3) , and contact the chain with the pressure release board through the middle hole of the handle pin (3) . Then put the wiring of handle through the middle hole of handle pin (2) and (3) . At last, press the handle to the lowest position and remove the spring fixing shaft and assemble it on the left cover (1) to finish.

The wiring goes through the middle hole of handle pin (2) and (3) according to the way shows on the drawing and can't touch the pressure release chain. Or it might be damaged.

Please note the handle pin (2) is on the same side as the left cover (1) .



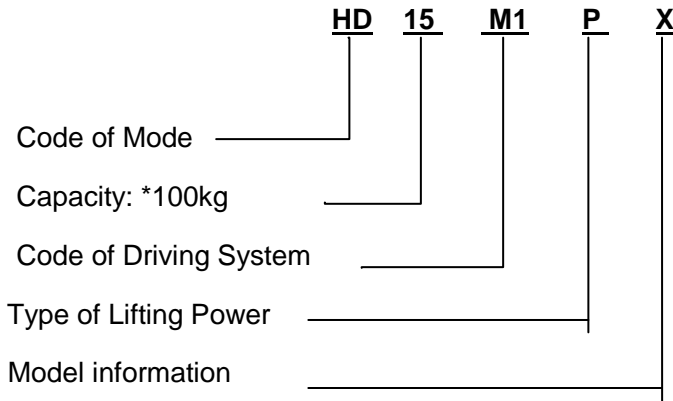
### 1.3 Label and Model

#### Label

Electric Pallet truck				
Model	<input type="text"/>	Equipment Code	<input type="text"/>	
Leave Factory No.	<input type="text"/>	Leave Factory Date	<input type="text"/>	
Load Capacity	<input type="text"/>	Maximun fork height	<input type="text"/>	Motive Power <input type="text"/>
Battery Rated Voltage	<input type="text"/>	Maximun Speed	<input type="text"/>	Total Weight <input type="text"/>

Please advise the model number when asking questions about the truck or buying spare parts.

#### Meaning of the Model



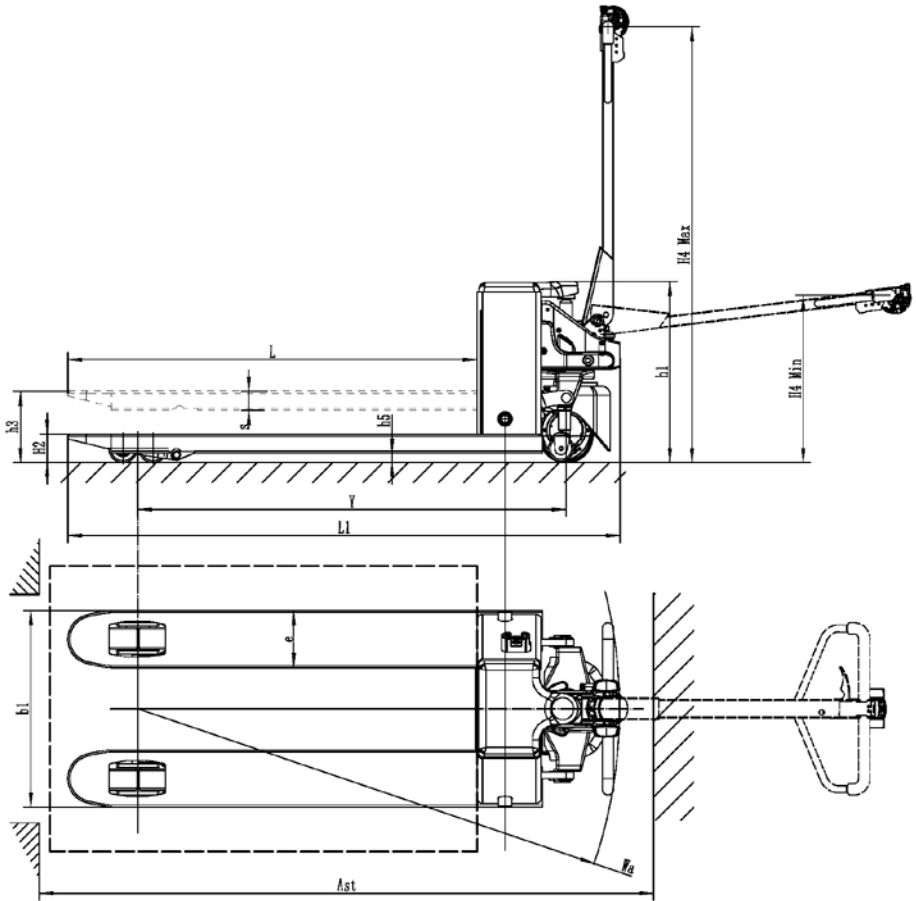
## 1.4 Specifications

Below data are conforming to the standard of GB/T27542-2011 and our company has the right to change and make supplement.

### 1.4.1 Technical Specifications

No	Name		Specifications								Unit
			HD15		HD18		HD20				
1	Capacity Q		1500		1800		2000		2000		Kg
2	Loading Center Distance C		600		600		600		600		mm
3	Speed	Load ed	4.0		4.0		4.0		4.0		Km/h
		Unlo aded	4.5		4.5		4.5		4.5		Km/h
4	Max Grade -ability	Load ed	5		8		5		8		%
		Unlo aded	20		20		20		20		%
5	Braking		Electromagnetism								
6	Weigh t	With Batte ry	550x 1150	680x 1220	550x 1150	680x 1220	550x 1150	680x 1220	550x 1150	680x 1220	Kg
			125	140	125	140	125	140	125	140	
7	Power	Drivi ng	750		750		850		1000		W
		Liftin g	500		500		500		500		W
8	Tyre		PU								
9	Driving Wheel Size		Ø210x70		Ø190x70		Ø190x70		Ø210x70		mm
10	Bearing Wheel Size		2xØ74x70(double)/1xØ80x90 (single)								mm
11	Li Batter y	V/Ah	24/25		48/15		48/15				V/Ah
		Weig ht	5								Kg

## 1.4.2 Size





Code	Name	Specifications	Unit
Y	Wheel Base Distance	1200/1270	mm
h3	Lifting Height	190-200	mm
h1	Overall Height	460	mm
H2	Fork Height	Min. 76	mm
h4	Handle Working Range	Min. 460	mm
		Max. 1220	mm
L1	Overall Length	1550/1620	mm
b1	Overall Width	550/680	mm
s	Fork Size	Thickness 50	mm
e		W 160	mm
L		L 1150/1220	mm
h5	Ground Clearance	23	mm
Wa	Min. Turning Radius	1352/1422	mm
Ast	Space needed when turning	1000×1200 mm pallet 1980	mm
		800×1200 Mm pallet 1860	mm

## **2. Initial Using and Cargo Carrying**

### **2.1 Cargo Carrying**

#### **Loading and Unloading the Packed Pallet Truck**

1. To carry the truck with capable handling equipment only.
2. The capacity of handling equipment must larger the total weight of truck, battery and pallet.
3. The pallet should be large and strong enough to bear the weight of the truck.
  - Park the truck correctly.
  - Carry the packed truck carefully.

#### **Notice!**

- Pay attention to the fork when loading the truck on the pallet.
- Carry it on a clear and even ground.
- Pay attention to ground situation, when lifting up or down the pallet with packed trucks.

### **2.2 Initial Using**

Use the battery power only to drive the truck.

Check below aspects of the truck before and after using.

- Check the status of the truck.
- Check the status of hydraulic system.
- Assemble the battery without damage the wiring.
- Charge the battery if the power is low.
- If the truck is parked for a long time, the part of wheel touch the ground may be out of sharp slightly and it will be recovered after a short working time.

## **2.3 Notices of Run-in Period**

The truck can't be loaded with full capacity in initial using, especially for the first 100h.

- Prevent the battery from over discharge and charge it when the left power is around 30%.
- Maintenance should be taken accordingly.
- Do not use the truck rudely.
- Change the oil and lubrication timely.
- The actual using capacity should be 70~80% of the rated capacity.

## **3. Operation**

### **3.1 Safety Policy of Operation**

#### **Permission of Operation**

The truck can only be operated by well-trained personal. The operator should get the permission of the owner and must familiar with the truck and knows how to handle emergency situation.

#### **Responsibility and Obligation of the Operator**

The operator must be well-trained and familiar with the whole operation manual.

The operator must follow the truck during working and can't walk backwards, as well as wear the protective boots.

## **Unqualified Personal Can't Use this Truck**

The operator must be responsible for the truck and prevent the unqualified personal to use it, and can't use this truck to carry or lift people.

Please report to the authority as soon as possible, once found any damage on the truck, such as the tyre worn out or braking invalid. And the truck can only be used again after being repaired.

## **Equipment Repairing**

Only qualified personal can repair the truck and the operator can't stop or change the safety device and switch without permission.

## **Danger Area**

Danger Area means a certain area has the risk of personal injury. The risk is mainly caused by the truck itself, bearing parts, as well as the moving and lifting process of cargo. The area that may have the risk of cargo or equipment falling also should be included in danger area.

- Non-staff should stay far away from danger area.
- Warning mark is necessary for danger area.
- If non-staff refuse to leave danger area, the operation should be stopped right away.

## **Safety Device and Warning Mark**

Please follow the policy of safety device and warning mark on this manual strictly.

## 3.2 Pallet Truck Operation

### 3.2.1 Preparation

Before using this truck, the operator must make sure there is no other personal stay in the danger area.

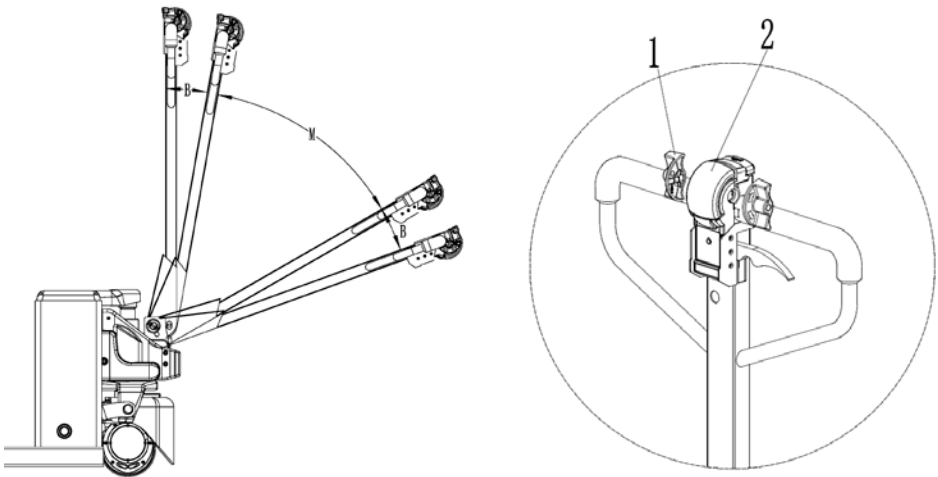
Checking and preparation is necessary before using this truck.

Check the whole truck to see if there is any damage, especially the fork and wheel.

### 3.2.2 Driving

#### Driving

Turn the handle to the driving area (M) and push the driving switch (1) to the moving direction needed. The larger angle pushed, the higher speed will be.



#### Start the Vertical Driving of the Handle

Press the button (1) and (2) in the same time and open the emergency stop switch (5) and keep it for 2 seconds. When the truck moving, releasing the button (1) and (2) to finish.

#### Cancel the Vertical Driving of the Handle

Press down the emergency stop switch and pull up again. Restart the truck to cancel the vertical driving function.

## **Warning!**

If the vertical driving function is on, the truck will move automatically when press the switch (1) and (2). Make sure there are no personal or other objects in the front for the purpose of safety.

## **Turning**

Turn the handle to left or right according to the direction needed. Do not turn the handle too quickly to avoid the falling of truck and cargo.

## **Braking**

### **Emergency Braking**

Press the emergency stop switch to cut off all function of the truck.

### **Forced Braking**

Releasing the handle or pressing the handle to the braking area (B) will active the forced braking.

### **Automatic Braking**

Release the driving switch and it will go back to original position (zero speed), the truck will stop gradually.

### **Reverse Current Braking**

Turn the driving switch to the opposite direction, the reverse current will slow down the truck and move to opposite direction.

#### **Notice!**

If the handle is moving too slowly when the handle in the braking area, please have it checked and repaired.

#### **Notice!**

If the driving switch goes back to its original position too slowly, please have it checked and repaired.

#### **Notice!**

Please either use forced braking or reverse current braking according to the actual situation in case of emergency.

### 3.2.3 Picking Up and Store the Cargo

Wrongly placed and fixed cargo has the risk of accident.

·Make sure the rest personal leaving the danger area before operating the truck. And stop the truck activities right away if any personal stay inside the danger area.

·Make sure to carry the correctly placed and fixed cargo only and

take necessary protective measures if there is a risk of falling during the operation.

·Do not use damaged truck or pallet to carry cargo.

·Do not stay under the lifting cargo.

·Do not stay on the loading components of the truck.

·Do not use the truck to carry any personal.

·Make sure the fork is under the cargo.

#### **Notice!**

The operator must make sure the cargo is correctly placed and fixed before operating. The weight of cargo can't exceed the capacity of the truck. Do not carrying cargo with long length in horizontal direction.

#### **Notice!**

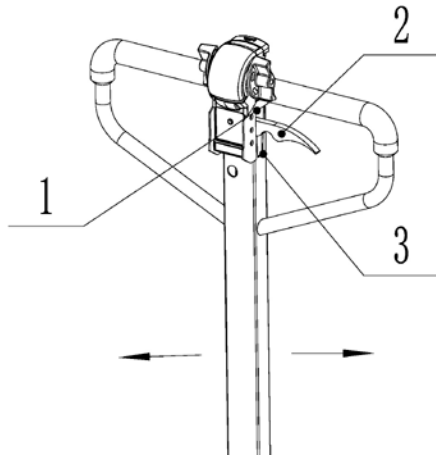
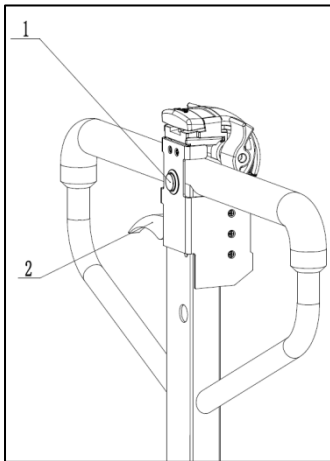
In order to extend the life time of oil cylinder as possible, please do not lift the fork to the max height position when using.

## Lifting

This oil cylinder has two operating models, electrical and manual.

Manual Mode: turn the pressure release handle to position (3) and wave the handle repeatedly as the arrow shows, until the truck is lifted to needed height.

Electrical Mode: turn the pressure release handle to position (3) and press the lifting button, until the truck is lifted to needed height.



## Descending

Turn the pressure release switch to the position (1) and turn it back to (2) when the fork reach the lowest height.



### 3.2.4 Sleep Mode

If the truck is not operated in more than 20 minutes, it will go into sleep mode automatically.

Press the emergency stop switch and pull up again, the sleep mode will be cancelled when restarting the truck.

### 3.2.5 Park the Truck

Whenever the operator is leaving the truck, even a short time, below steps must be taken.

Make sure the fork is in its lowest position, press down the emergency switch and take out the key.

#### Using and Maintenance of Battery

Check the power left of the lithium battery. Please charge the battery before initial using, because the battery is not fully charged in conform to the request of transportation.

#### Notice!

Please park the truck in right place with forks in the lowest position. Do not park on a slope.

### 4.1 Replace the Lithium Battery

This truck can only use lithium battery that has the same model and weight of the original one. (The weight of battery will affect the stable of the truck, as well as the braking function)

#### Warning!

The battery has high voltage and power. Do not touch the battery with tools to avoid spark or short circuit. The power should be cut off when doing the maintenance. Do not change the weight and size of battery will affect the balance of truck, as well as the braking function.

#### Change the Battery without Tools

Lift the fork to the max height—take out the power plug—turn the oil cylinder to 45 degree—take out the rope—take out the battery.

Lift the fork to the max height—turn the oil cylinder to 45 degree—put in the battery—fix the rope—put in the power plug.

## 4.2 Charging

### 4.2.1 Do not smoking or using open fire when charging.

Use the original battery charger only and prevent under charging or overcharging to avoid the damage of the lithium battery.

The max current of the charger is as below.

Battery Capacity (Ah)	Charger (A)
25	4A or 5A (10A optional)
15	2A or 3A (6A optional)

### Warning!

The short circuit of the positive and negative anodes may result in the risk of explosion.

### 4.2.2 Preparation of Charging

Please recharge the truck within 24 hours after finishing using.

(1) Press down the emergency stop switch and take out the key when parking the truck.

(2) Contacting with the external power to charge the truck.

### Warning!

Charging the truck in a ventilated area and prevent it from water, fire and spark and etc., which may result in explosion. Cut off the power before taking out the power plug.

### 4.2.3 Charging Time

Please follow the battery charging and maintenance method on the manual. The battery is fully charged if you find the power indicator is in green color.

## 5. Storage

**5.1** The truck should be stored in dry area and take out power plug if not using it for a long time.

**5.2** Before re-using it after storage, please check the whole truck and make sure the battery is well assembled, then recharging the battery.