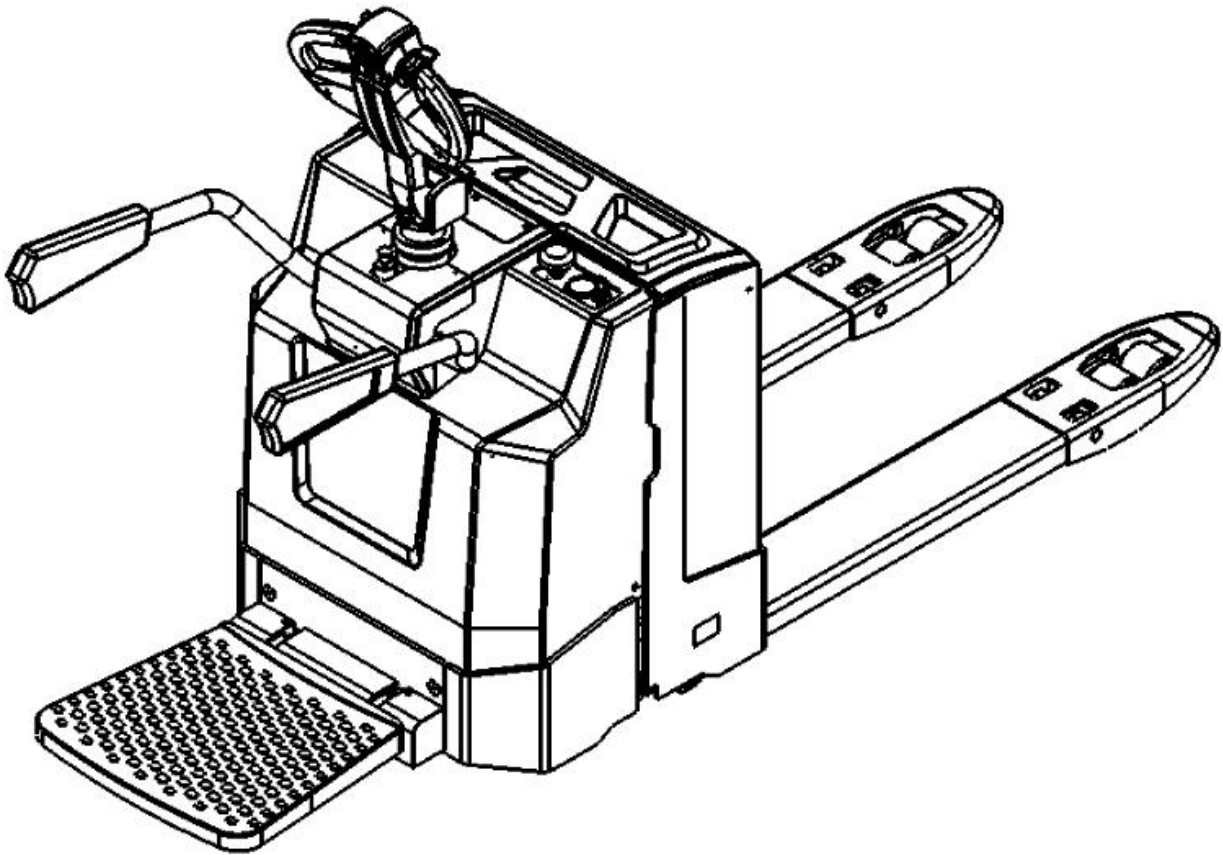




MATERIAL HANDLING EQUIPMENT DESIGNER & MANUFACTURER

Maintenance Instruction Manual

ME20/25 Series Pallet Truck



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PREFACE

Dear Customers:

ME20/25 series is one type of pallet trucks which used to transport the pallet point-to-point on the ground, powered by battery, suitable for long distance transportation of medium and heavy load goods, widely used in medium-big shopping mall, supermarkets and good yards, etc.

This instruction introduce the main components,working principle and maintenance of ME20/25 series pallet truck, benefit to help the operators use the equipment reasonably and correctly. By virtue of reading this original instruction,the user can obtain the technical skills for safety operation the forklift.

This instruction numbered according to different models, during the course of operation and maintenance, the operators must comply with the stipulation strictly on corresponding models.

We will continuously research-develop and optimize the forklift equipment, consequently appreciate your understanding the revising rights we owned on the appearance, assembly and technology, due to these reasons,the user can't extend in meaning of other specified functions from this instruction which against this forklift.

For above content, if you have any understanding or suggestions, please contact local after-sales department.

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CATALOGUE

Chapter 1 Safety.....	1
1 Safety regulation.....	1
2 Operating the forklift.....	1
3 Responsibility of operators.....	1
4 Workplace.....	1
5 Driving and guiding in the course of transportation.....	1
6 Transporting goods.....	2
7 Precaution of parking.....	2
8 Fixing and removing the batteries.....	2
9 Maintenance.....	2
Chapter 2 Caution,trade mark and sign.....	4
Chapter 3 Introduction to the pallet truck	4
1 Applicable occasion of the pallet truck.....	4
2 Forbidden occasion of the pallet truck	4
3 Forklift parameter.....	4
4 Main components	5
Chapter 4 Controlling device	7
1 Lifting control	7
2 Driving direction and speed control	7
3 The safety switch which prevents unexpected situations.....	7
4 Horn	7
5 Socket assembly	7
6 Key-switch	7
7 Hour meter	7
Chapter 5 Driving	8
1 Start up	8
2 Braking	8
3 Steering	8
4 Warning	9
Chapter 6 Transporting goods	10
Chapter 7 Battery&Charger	11

1 Changing the batteries	11
2 Charging	11
3 Battery maintenance	13
4 Maintenance of electromagnetic braking	13
Chapter 8 Fault diagnosis&solution	15
1 Fault diagnosis of controller	15
2 Fault diagnosis of EPS	17
Chapter 9 Maintenance	18
1 Safety regulation of maintenance	18
2 Maintenance which users can finish	19
3 Clean the forklift	19
4 Maintenance list	20
5 Form of lubrication position	22
6 The oil and fat of lubrication	23
Chapter 10 Transporting and preserving the forklift	24
1 Tow and transport the broken-down forklift.....	24
2 Preserve the forklift	24
3 Caution of reusing the forklift after preservation	24
Chapter 11 Electric system	25
1 Electric appliance principle diagram	25
2 Hydraulic principle diagram	26

Chapter 1 SAFETY

1. Safety regulation

1.1 Please check all the safety switches, equipment in advance everyday before using the forklift according to the requirement so as to ensure safety devices normal.

1.2 Check that all the cautions and design parameter on the forklift are not destroyed.

1.3 The batteries must be fixed safely in the battery case.

1.4 It's forbidden to use the forklift when it's damaged or out of order and cause unsafe use.

1.5 When maintaining or adjusting the forklift, only professionals can do that.

2. Operating the forklift

When the forklift is used in the place of cold storage, it must be made specially. When the forklift is in design and manufacture, it has certain restriction for using occasions.

2.1 Air with inflammable and explosive dust or gas.

2.2 Use as a tractor of other trucks

2.3 Use for transport person

3. Responsibility of operators

3.1 People who have been trained and approved can operate the forklift.

3.2 Obey this instruction and local relevant security rules, regulations and traffic rules.

3.3 It's forbidden to operate the forklift when there's oil on your hands and feet.

4. Workplace

4.1 The forklift can only run on hard and flat roads such as concrete or pitch roads. Don't work in greasy and dirt area so as to skid.

4.2 Make sure the ground can bear the total weight of the forklift, that is the forklift weight, load weight and the operator's weight.

5. Driving and guiding in the course of transportation

5.1 Don't brake and turn suddenly under the condition of driving at high speed.

5.2 Slow down the speed on the slope and keep goods at the lowest position. Running should be straight up and down on the slope. It's forbidden to turn back on it.

5.3 If the road surface skids, the operator should slow down the speed in order to prevent the forklift from spinning or overturning.

5.4 If your sight is obstructed, you can put goods behind you and drive. If necessary, ask others to guide in order to ensure security.

5.5 Keep a safe distance with the vehicle, persons, objects in front. Ring the horn while you overtake.

5.6 It's forbidden to transport people.

5.7 Make sure the forklift can bear all the weight before it enters the lift.

6. Transporting goods

6.1 It's forbidden to transport when goods on the forks are unstable and unsafe.

6.2 Be more careful when transporting over high and over heavy goods. It is better to equip load backrest when the cargo is too high.

7. Precaution of parking

7.1 After the forklift stops completely, you should lower the forks to the minimum position and brake it.

7.2 It's forbidden to park the forklift on the slope.

7.3 Park the forklift at the appointed place.

7.4 It's forbidden to park the forklift at the urgent exit.

7.5 Don't park it at the place to hinder work.

7.6 Power off when it parks.

8. Fixing and removing the batteries

8.1 Be careful while fixing and removing the batteries and the plug. Read the instruction carefully first, see the chapter of the batteries in detail.

8.2 Please wear the protective glasses while changing or charging the batteries.

9. Maintenance

※ Maintenance can prevent mistakes and accidents. Please see the chapter of maintenance in detail.

※ All replacement parts and spare parts should be approved by our company.

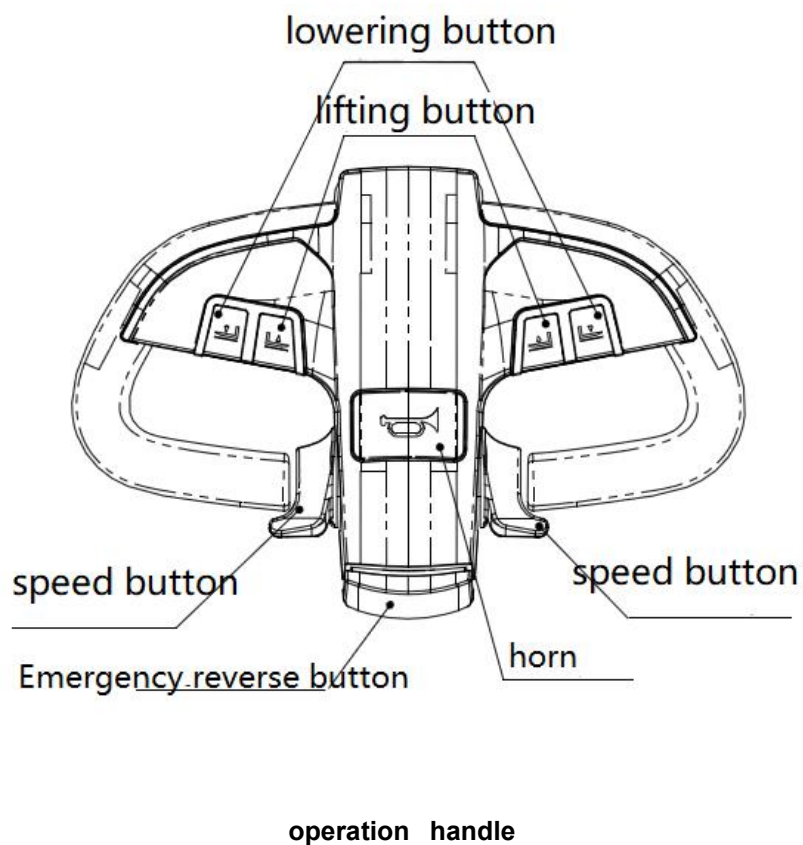
※ It's forbidden strictly to maintain or reequip the forklift, which can influence security or use function.

Chapter 2 CAUTION, TRADE MARK AND SIGN

The forklift has the following signs:

(Please read the signs on the forklift about relevant content)

1. Lifting and lowering hydraulic controlling button
2. Controlling switch of driving direction and speed
3. Horn sign
4. Trademark
5. Emergency stop Switch



Chapter 3 INTRODUCTION TO THE PALLET TRUCK

The pallet truck drives with electric energy. Walking is controlled by the switch on the operating handle. The operating arm controls steering.

ME20 Max.lifting weight is 2000kg,ME25 Max.lifting weight is 2500kg.

The pallet truck use 24V electronic system, and adjust its speed steplessly by a set of integrated circuit controller to ensure steady speed and acceleration while driving. The forks rise by the advanced electric hydraulic pump. Lifting and lowering the forks by lifting and lowering button on the operating handle.

If the forklift works in cold and moist environment, it should be equipped with low temperature oil in order to adapt to the environment.

1. Applicable occasion of the pallet truck.

The forklift is suitable for handling goods on a pallet.

2. Forbidden occasion of the pallet truck.

2.1 Places which can cause fire or explosion such as oil district.

2.2 The forklift is used as a tractor of other trucks.

2.3 It's used for transporting people.

2.4 It works on the meadow or the sand.

3. Forklift parameter

Model	ME20	ME25
Rated capacity	2000	2500
Speed without loading km/h	7.5	7.5
Speed with loading km/h	6	6
Max.gradability	6	6
Weight with batteries kg	676	676
Turning radius(pedal extended/closed)	2065/1645	2065/1645
Overall width	730	730
Max. lifting height of fork	115	115
Min. height of the fork	85	85

Allowed material for driving wheels	Polyurethane	Polyurethane
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4. Main components

1. Operating arm

In the course of driving, walking and steering is controlled by the operating arm. The operating arm can steer maximum 180°. When the operating arm is on the top, it will shut off the power and brakes automatically.

2. Plate of the forklift

The plate encloses the model, rated lifting weight, maximum lifting height, weight and the serial number when it's out of our company.

3. Case lid

It can be taken down and has a good visibility.

4. Instrument

The voltmeter shows voltage value at the time of working normally and reflects whether the batteries are sufficient.

5. Hydraulic control

The lifting and lowering button on the handle assembly controls lifting and lowering function.

6. Hydraulic device

The pump motor, pump and oil tank case are fixed tightly together.

7. Socket assembly

When charging the batteries, pull out the socket and insert the plug of the charger into it.

8. Driving equipment with the brake

Enclose electromagnetic brake, walking motor, gearbox and driving wheels. Steering bearing is equipped between the driving motor and the gearbox.

9. Speed-adjusting equipment

Normal running under 24V. Regulate speed by electric control.

10. Universal supporting wheels

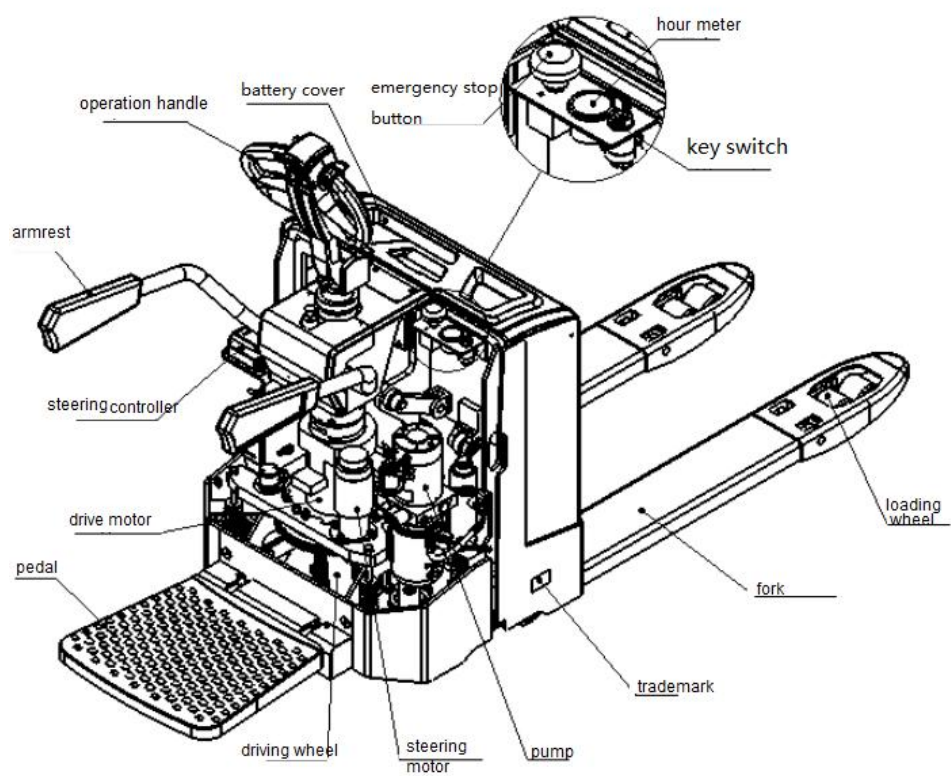
The left and right universal supporting wheels ensure the forklift stable.

11. Batteries

Batteries are fixed in the case, the voltage is 24V, the capacitance is 210Ah.

12. Pedal

Only standing for the pallet stacker operator.



Chapter 4 CONTROLLING DEVICE

1. Lifting control

Turn on the key switch, operate the handle button according to the instruction direction. You can lift or lower the forks.

2. Driving direction and speed control

Rotate the switch on the handle head to control driving direction, regulate speed and acceleration with it.

3. The safety switch which prevents unexpected situations

The operator operates facing to the forks and goods when you turn the forklift backwards by mistake and you have no enough time to avoid your body, the operating arm is interfered with your body, the control switch is closed, the forklift brakes promptly. Before continuing running, you must resume the direction switch at the middle position.

4. Horn

Press it and it can ring.

5. Socket assembly

Pull out the socket and turn off the power in the following situations.

5.1 Accident

5.2 Under the urgent and dangerous situation.

5.3 Welding

Note:

When you are welding around the forklift , the batteries are easy to be damaged. If the weld current scurries into the batteries, they will be destroyed. It's necessary to pull out the socket at this moment.

When charging, pull out the socket, and connect the plug of the charger with the movable socket. After finishing charging, resume the socket to where it is.

6. Key switch

This switch is used to control the circuit on or off.

7. Hour meter

When the key switch is turned on, the voltameter shows the battery allowance . There are ten grids indicated enough battery power left, when the LED indicator light of leftmost two grids glitters, it means the battery amount is insufficient, charge them as soon as possible .

Chapter 5 DRIVING

1. Start up

Please do in proper order as following, otherwise the forklift doesn't run.

1.1 Make sure that the outlet is inserted firmly.

1.2 Turn the key switch to the on position

1.3 Make sure that the battery group has enough electricity.

Note:

Operating the forklift at a low electricity for a long time will diminish the life-span of the batteries. You mustn't start up the forklift before finishing charging.

Leave the supreme position when the operating handle is downwards.

Choose the driving direction correctly, control the speed in an ideal state. Accelerate it to the ideal speed slowly.

Warning!

Don't operate the forklift with serious function defect and danger The operator should check the following safe functions at first before working every day.

- ※ The horn function is normal.
- ※ The operation function is normal.
- ※ The brake function is normal.
- ※ The hydraulic function is normal.

2. Braking

2.1 When the operating arm moves upwards to the supreme or bottom position, the forklift will turn off the power and brake.

2.2 When the direction switch is in normal running and turns to the opposite direction, it can carry out the function of electric brake.

2.3 Parking the forklift

Make the forklift stop by loosening the driving direction switch and resuming it to the empty position.

3. Steering

3.1 Steering is controlled by the operating arm. Steering angle can be at the left and right direction in the range of 90°.

3.2 If the forklift meets barriers, it's forbidden to pass by force. You can detour the barriers by rotating the operating arm to move ahead or go backwards.

4. Warning!

The wheels are not allowed skid.

If there's grease and dirt on hands or shoes, it's easy to fail operation and make the forklift out of control.

So you should wipe your hands or the shoes before driving it.

5. Parking

5.1 Loosen the direction switch.

5.2 Lower the forks to the lowest position, make the hydraulic system have no pressure.

5.3 Loosen the operating arm, it will return to the braking position automatically.

5.4 Rotate the key switch to the off position.

Be careful!

Do not allow to drive without authorization.

If the operator leaves, please take the key away with you.

Chapter 6 TRANSPORTING GOODS

1. The weight of goods should be in the range of the forklift allowed.
2. Reduce speed when turning around.
3. Pay attention to safety when transporting irregular objects. When turning around, please pay attention to reserving space.
4. If the goods obstructs your sight, please drive with your back to the goods.
5. If your obverse sight is obstructed, you can ask others to guide the direction.
6. You should slow down the speed when going up and down the slope. It's forbidden to turn back and lift forks on the slope.

Warning!

The forklift has danger of overturning if you turn round on the slope.

When the forklift goes down the slope, the distance of brake of the forklift is lengthened, and braking time is increased. So you should lower down the speed to reduce braking time. Don't go up and down the slope by force.

7. Before the forklift enters the lift, you should make sure the lift can the whole weight (the forklift weight, goods weight, the operator weight). The forklift should enter firstly and leave at last.

Warning!

Before starting up the lift, you should make sure its loading capacity in order to avoid an accident.

8. Before the forklift passes a bridge board, you should reduce speed and keep a certain distance with the edges.

Danger!

Check the loading capacity of the bridge board in advance, verify its security in order to avoid overturning and falling.

Chapter 7 BATTERY&CHARGER

1. Changing the batteries

You can only change the batteries which weight is equal to the weight of the original batteries. The weight of the batteries influences stability and function of the forklift.

Warning!

Don't change the weight and the size of the batteries at random, otherwise it will influence the center of gravity of the forklift. The battery weight is too heavy or too light, it will influence stability and brake ability of the forklift. The weight must keep the same with the rated value on the forklift sign.

1.1 Order to remove the batteries with insufficient electric power.

1.1.1 Open the case lid of the batteries.

1.1.2 Cut off the connection between the plug and the cable line.

1.1.3 Take out the battery group from the forklift with a proper hook of the battery case.

1.1.4 Close the lid of the batteries.

1.2 Order to install the batteries.

1.2.1 open the case lid of the batteries;

1.2.2 Use the hanging device to hang the battery group with sufficient power and put it into the battery case in the forklift.

1.2.3 Connect the plug with the cable line.

1.2.4 Close the case lid of the batteries.

2. Charging

2.1 Forbid smoking and using flame while charging.

You can use the automatic charger. Pay attention to not charging insufficiently or overcharging so as not to damage the batteries.

The most electric current of the charger

Batteries (Ah)	Charger (A)
210	30

Danger!

The attenuant vitriol in the electrolyte of the batteries has corrosion. If it spatters to skin, you should wash it with water and soap as soon as possible. If it enters your eyes, please go see the doctor and wash your eyes with

clean water. While checking the batteries, you should wear protective glasses and gloves.

2.2 Preparation for charging

The batteries must be charged as soon as possible after the forklift is used. They can't exceed 24 hours.

2.2.1 Make the key switch to the off position after parking, and pull out the key.

2.2.2 Open the case lid, make sure it ventilates above the batteries.

2.2.3 Pull out the plug, connect the plug of the charger with the battery plug .

2.2.4 Open the lid of battery electrolyte holes for breath.

2.2.5 Turn on the charger to charge

Warning!

While charging, especially in a closed area, you should keep a ventilated environment. Oxygen and hydrogen emerge in the course of charging, if it meets flame or electric spark, it can cause explosion. So you should shut off the charge power before pulling out the plug.

2.3 In the term of charging

You should consult the instruction of the batteries about charging method and using maintenance.

Usually you can judge whether electricity is sufficient with the following methods.

- a. The proportion of the battery electrolyte keeps basic stable for over 2-3 hours continuously.
- b. The surface of the electrolyte in the batteries produces strong bubble, the electrolyte turns from milky to limpid.

The above mentioned situations show that electricity of the batteries is sufficient.

2.4 After charging sufficiently

- a. Shut off the charging power and the charger.
- b. Pull out the charger plug from the battery plug.
- c. Insert the battery outlet into the battery plug.
- d. Close the battery electrolyte lid.

The comparison table of sufficient battery temperature and electrolyte proportion is as follows:

Temperature ° C	Proportion g/cm3
-15	1.31
0	1.30
+15	1.29
+30	1.28
+45	1.27

If it dis-accords with the proportion of the form, you should adjust it by feeding acid or distilled water.

3. Battery maintenance

3.1 In order to ensure the battery life,the battery should be fully charged before use, charging insufficient battery can not be used.

3.2 Avoid over charge and over discharge, it will seriously affect battery performance and life.

3.3 Keep the feeding hole and vent covers clean. Take them off or open when charging, after charge finished, install them or close them. Keep the battery surface, connecting wire and screws clean and dry . If there is sulfuric acid, clean them by cotton yarn dipped into lye wipe . Be careful do not let the lye into the battery.

3.4 After charging, check the battery acid level, timely add distilled water to maintain the liquid level. Under normal conditions, add the dilute sulfuric acid it strictly prohibited.

3.5 Charge battery in time after used ,generally not more than 24 hours.

3.6 Keep good ventilation when charging , no fireworks.

3.7 In the following cases, the battery needs to be balanced charging .

3.71 Normal battery .(balanced charge every 3 months)

3.72 Lay aside an unused battery for a long time.

3.73 There is a "lagging battery" in the battery pack (lagging battery refers to the voltage value of the charging and discharging process is lower than battery that has been repaired for a fault).

3.8 Balanced charging method.

3.8.1 General charge first.

3.8.2 When the battery is fully charged, stop charging for 1 hour, and then use 0.25I5 to charge for 1 hour.

Press 3.8.2 to repeat several times until the charger closes, there will be fierce bubbles in the battery.

3.9 When the battery is not in use, it shall be replenished by ordinary charging method one month after the storage period.

3.10The battery should avoid direct sunlight and be no less than 2M away from the heat source.

3.11 Avoid contact with any liquid or harmful substances . No mental impurities should fall into the

4. Maintenance of electromagnetic braking

4.1 Long time using under the condition of heavy humidity,need to prevent it getting rusty. The rust on the contact face will affect it using,please kindly remove it.

4.2 Keep the hands off the fabrication surface,and make it clean without grease,otherwise can't reach the Max.torsion,please clean the contact surface.

4.3 Under the using condition of high temperature please install it at vent place,generally suitable for the temperature between -10°C - 40°C 。

4.4 In the beginning of using, the torsion at low point, will keep stable after certain time using.

4.5 Please check regularly, including switch work or not? noise causing? abnormal heating?

Fabrication and reversing parts with foreign object, grease? Fabrication clearance and voltage normal or abnormal?

Chapter 8 FAULTS DIAGNOSIS AND SOLUTION

1. Fault diagnosis of controller

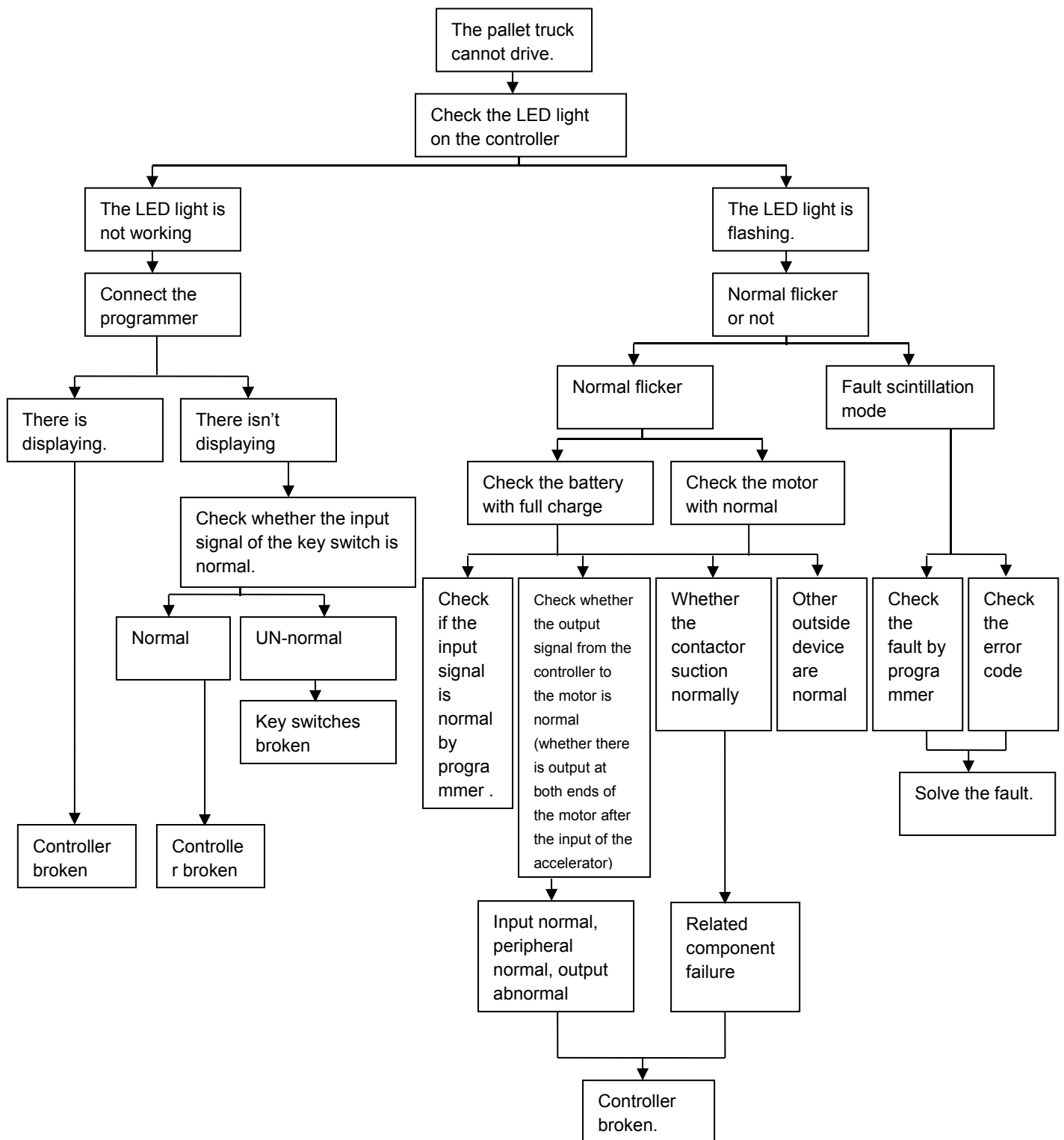
The machine installed with LED lights, display different information through the different light colors combination.

When faults occurred, can try re-starting the equipment after making sure not the wiring error and machinery malfunction. If the fault still not removed, please turn off and check the 35needle connector

LED Display Information Explanation	
Display	Information
LED off	Controller power off; Or battery capacity used out; Or other serious malfunction.
Yellow LED light flash	Working normal
Yellow& red LED lights keep on	Under the condition of program loading
Red LED light keep on	Software uninstallation Restart. Re-install software if need
Red &yellow LED lights flash alternately	Controller malfunction, code consist of 2 numbers. Red light flash times display the code sequence is first or second number, yellow light flash times display the corresponding specific number.

assemble correct or has dirty and damaged, re-start the machine after repairing and cleaning.

When the whole electric system get fault ,the marks flash on the electric controller for reference and diagnose, below is the form of malfunction diagnosis.



Customers can solve the malfunction through above methods and contact our after-sales departments to inform the malfunction code of LED lights.

2. Fault diagnosis of EPS

Full electric steering system is a type of high accuracy, sensitive & energy-saving, environmental and high performance steering system, only correct operation and maintenance can ensure the whole performance work properly, enhance the lifespan. After the malfunction occurs, find the malfunction code which display on the controller, and then check the components fastener, wiring harness good or not, terminal drop out or become less crowded cause poor contact, components damaged or not.

The machine installed with LED lights, display different information through the different light colors combination.

LED Display Information Explanation	
Display	Information
LED off	Controller powered off; Or battery capacity used out; Or other serious malfunction.
Red LED light flash	Working normal
Yellow & red LED lights keep on	Under the condition of program loading
Red LED light keep on	Program loading status
Different red LED lights flash alternately and continuously	Controller malfunction, code consist of 2 numbers. Red light flash times display the code sequence is first or second number, yellow light flash times display the corresponding specific number.

Customers can solve the malfunction through above methods and contact our after-sales departments to inform the malfunction code of LED lights.

Chapter 9 MAINTENANCE

Please carry on a routine maintenance after the forklift works for 500 hours. Efficiency, life-span and security of the forklift depends on daily maintenance.

When you maintain the forklift, the replacement parts should be offered by our company to ensure quality. We suggest you get in touch with the agent or the after sale service department of our company to make your forklift work safely and economically.

1. Safety regulation of maintenance

People who study systematically can maintain the forklift.

1.1 Keep maintaining place clean.

1.2 Don't bring loose or valuable object with you while maintaining.

Be careful!

When you maintain the electric system of the forklift, metal touch electrified electronic elements, which is easy to cause short circuit or burning. So please take off your watch, earrings or other ornaments.

1.3 Pullout the plug and shut off power at first before maintaining the forklift.

1.4 Turn off the key switch of the forklift before opening the left and right case covers or electric system.

1.5 Before checking the hydraulic system, you should lower the forks and release systematic pressure.

1.6 Check whether the forklift leaks oil or not, please wipe with paper or paper board. Be sure not to touch it with hands directly so as not to scald.

1.7 Please pay attention to that the oil temperature may be higher in driving device or hydraulic system, so you should make the forklift cool

1.8 Hydraulic system should be added with new clean oil.

Be careful!

If hydraulic oil is not clean, it will influence accurate hydraulic components, make ability of the whole hydraulic system reduce.

If The used hydraulic oil with different brand is harmful to hydraulic components and influence ability of the system too. So while adding or changing the hydraulic oil, pay attention to using the same brand.

Please obey relevant regulations, protect environment, store and discharge the oil according to the regulations. Don't discharge it to sewages.

1.9 When welding the forklift, please shut off the battery power. Because welding electric current may enter the batteries when you weld. In order to prevent this from taking place, please shut off the battery power.

1.10 When working under the forklift, you should fix it with a supporting shelf.

Warning!

If it is improper to support the forklift, it will overturn and hurt people. If the forklift has no protection of

hoisting equipment or supporting shelf, it's forbidden to work under it.

2. Maintenance which users can finish

2.1 Routine maintenance and safety inspection.

2.1.1 Carrying on routine maintenance and checking the forklift is the responsibility of operators.

2.1.2 If you don't carry on routine maintenance to the forklift, which will influence security and reliability of the forklift, it's easy to cause serious accidents.

2.1.3 While checking and finding out trouble, you should repair it at once and stop using it.

Position number	Check point	Check content
1	Operation control	Check whether its function is normal
2	Safety switch that prevents unexpected situations	Check whether its function is normal
3	Horn	Check whether its function is normal
4	Steering	Check whether its function is normal
5	Hydraulic device	Check whether its function is normal
6	Voltmeter	Check whether its function is normal
7	Hydraulic system	Check the oil level and whether it leaks
8	Driving device	Check whether it has unusual noise and oil leakage
9	Electromagnetic clutch	Check if it works normally and if it keeps in touch or not
10	Transmission	Check if its function is normal
11	Wheels	Check if they're damaged, get rid of greasy dirt and metal scrap
12	Frame	Check if it's damaged, get rid of dirt
13	Batteries	Check the level of electrolyte
14	Forks	Check if they are damaged
15	Lifting device	Check if it's damaged, get rid of dirt
16	Hydraulic cylinder	Check if it's damaged and it leaks oil

2.2 You can finish daily, weekly and monthly maintenance mentioned in the chart

3 Clean the forklift

3.1 Carrying on the routine cleaning every week is very important to guarantee its reliability. Please pull out the outlet before cleaning to avoid short circuit and damage electric system.

3.2 External clean

3.2.1 Remove adherent objects on the wheels every day to keep them rotate flexibly.

3.2.2 After finishing cleaning, you should add lubricating oil to the necessary lubricating positions of the forklift according to the lubricating position chart.

3.3 Clean electric components

Blow off dust of the motor with compressed air.

Be carefully!

The electric components can't be washed with high pressure washing device. You can't destroy the electric components on the circuit board, and keep the position of them , avoid short circuit.

4.Maintenance list

Position number	Running interval time	1 day	1 week	1 month	3 months	6 months	12 months	36 months
1	Forklift system							
1.1	Check the cover boards (left, right)				★			
1.2	Check the fixed components of the battery case				★			
1.3	Check if there's crack on the forklift frame				★			
1.4	Check if the forklift is fixed firmly				★			
2	Electric motor							
2.1	Check if the joints are loose			★				
2.2	Clean the motor			★				
2.3	Check if the bolts are firm			★				
2.4	Check if there's abnormal noise of bearings					★		
3	Driving system							
3.1	Check disclosure					★		
3.2	Check oil level				★			
3.3	Check noise					★		
3.4	Change oil							★
4	Wheels							
4.1	Remove threads and impurity on the wheels	★						
4.2	Check if the driving wheels are worn and bolts				★			

4.3	Check if the universal wheels and axles are flexible and firm				★			
4.4	Check the universal wheels are worn				★			
4.5	Check if the supporting wheels can turn and the joints are firm					★		
4.6	Check if the supporting wheels are worn				★			
4.7	Remove and lubricate the wheel bearings					★		
5	Braking parts							
5.1	Clean the braking parts				★			
5.2	Check the braking friction flake is worn				★			
5.3	Test braking with the brake loose			★				
6	Electric control board							
6.1	Clean and installing check				★			
6.2	Fix the cable terminals				★			
6.3	Check the connectors					★		
6.4	Check if the connectors work					★		
7	Batteries							
7.1	Check the electrolyte level (it should be 10-15mm above the polar board)		★					
7.2	Check if the between the forklift and the batteries and the charger are firm		★					
7.3	Check every battery and its insulating covering		★					
7.4	Check the electrolyte proportion and temperature			★				
7.5	Clean battery	★						
8	Hydraulic system							
8.1	Check the pipe and the joints disclose					★		
8.2	Check if the pipe is worn					★		

8.3	Check if the oil box leaks oil					★		
8.4	Check oil amount					★		
8.5	Oil change						★	
9	Cylinder							
9.1	Check					★		
9.2	Check assembling					★		
10	Mast							
10.1	Check if it is damaged and has crack					★		
10.2	Check if it's fixed firmly				★			
10.3	Check if the wheels can move					★		
10.4	Check if the oil pipe and joints disclose					★		
10.5	Check if the forks have indication of braking and cracking					★		

5. Form of lubrication position

Position number	Lubricating places	Interval time (h)			Lubricating oil, fat type
		500	1000	3000	
1	Wheel bearings (including steering)		L		A
2	Hydraulic system	H	O		B
3	Driving gear box	H		O	C
4	Lifting system bearings	L			G

L=lubricate H=check O=oil change

6. The oil and fat of lubrication

Type		Specification		Apply components
		-20℃ ~0℃	0~40℃	
A	Lubricating fat	3# lithium lubricating fat gutta point 170		Bearings and bushes

B	Hydraulic oil	L-HV-32 (Low temperature hydraulic oil)	L-HV-36 (Low temperature hydraulic oil)	Hydraulic system
C	Driving oil	70W/75 (abroad SAE80W/90)	85W/90 (abroad SAE75W)	Gear box
D	Lubricating fat	3# lithium lubricating fat gutta point 170		Lifting system bearings

Chapter 10 TRANSPORTING & PRESERVING THE FORKLIFT

1 Tow and transport the broken-down forklift

1.1 When you use drawing or the rope to tow the forklift, the towed forklift must be operated by a driver to steer and removed braking.

1.2 When the braking function of the forklift is perfect, you can pull the operating arm to the running position to pull the forklift and ask others to push (pushing position is outside the mast), send the forklift to the destination or the maintenance department of our company to repair it.

1.3 If the driving wheels of the forklift must break down, you can pull the forklift with a trailer or a tow tractor.

Be careful!

The driving wheels of the forklift must be lifted over the ground, otherwise the wheels and the motor are damaged seriously.

1.4 If the electromagnetic brake of the forklift is out of order and can't brake, then the forklift will move with topography. At this moment you must underlay the wheels with wedge blocks in a proper way to prevent it from moving.

2 Preserve the forklift

If the forklift needs deposit for a long time, please take the following measures to the following parts.

2.1 Batteries

2.1.1 Charge the batteries again, then maintain them according to the daily method of maintaining the batteries.

2.1.2 Do a charging maintenance and check the electrolyte level once every 3 months.

2.2 Hydraulic system

If the forklift is deposited over one year, you need change the hydraulic oil of the hydraulic system. Please see the chapter about maintenance and the form of lubrication position.

2.3 Driving system

If the depositing time is over one week, you should fix and underlay the driving wheels or hang in the air. Do not let it move, unload goods at the same time.

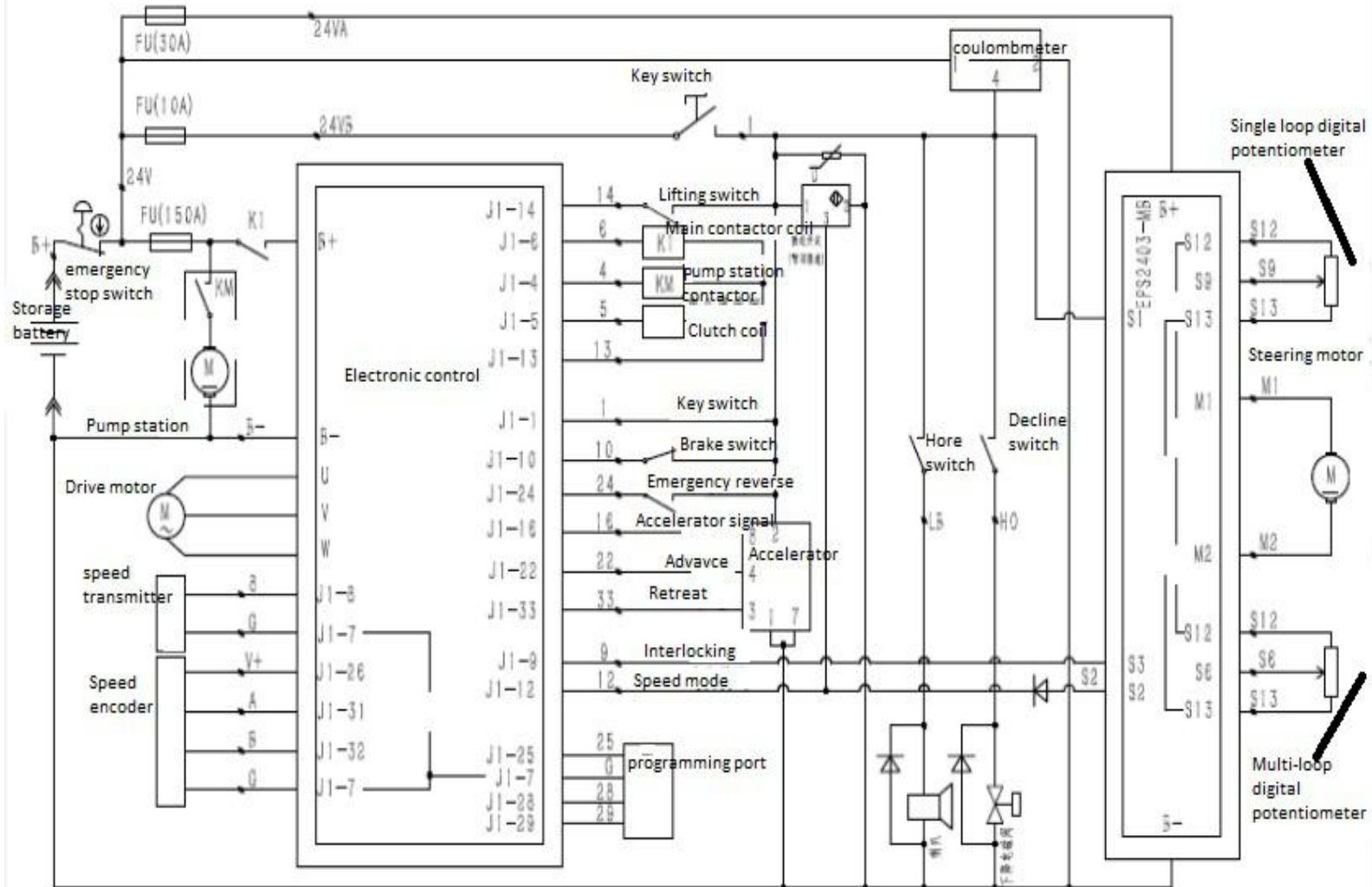
3 Caution of reusing the forklift after preservation

3.1 Before reusing the forklift after preserving it for a time, you should take the function and security inspection as usual.

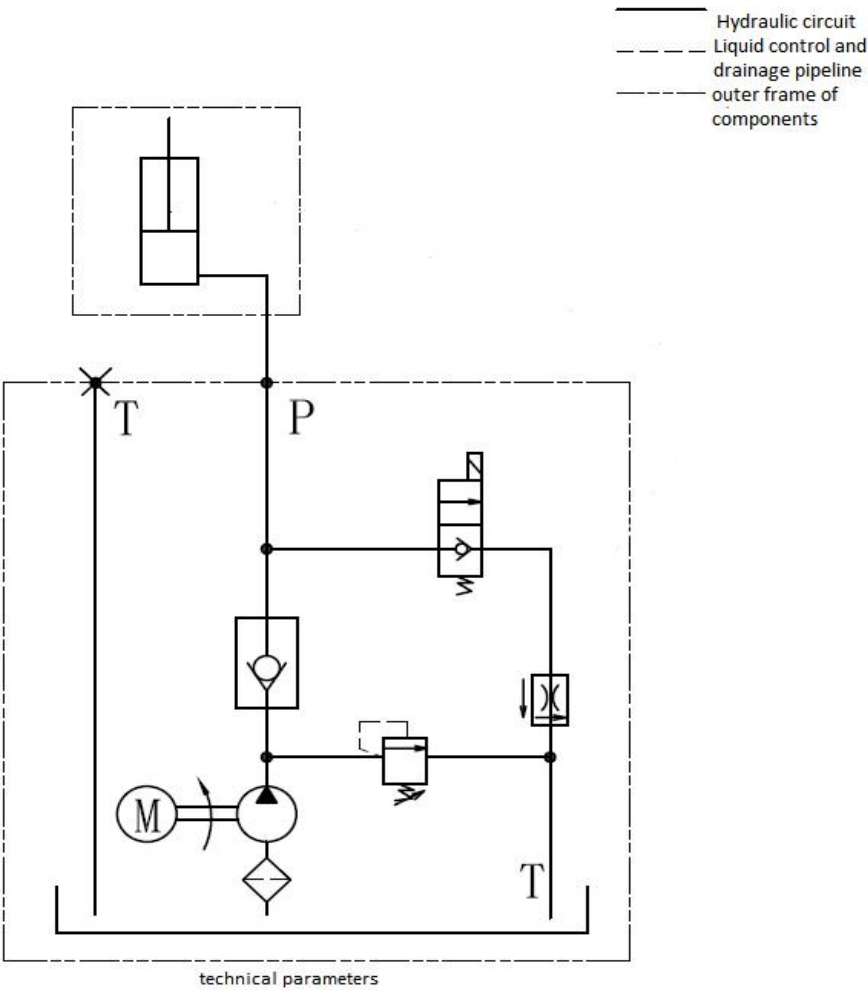
3.2 If the depositing time is over 3 months, you can maintain it according to this manual (interval) 500 hours preventively.

Chapter 11 ELECTRIC SYSTEM

1 Electric appliance principle diagram



2 Hydraulic principle diagram



1. Pump station motor .24V 2.2KW pump station displacement .2.5cc/t.

2. The rated pressure of the system is 18Mpa.