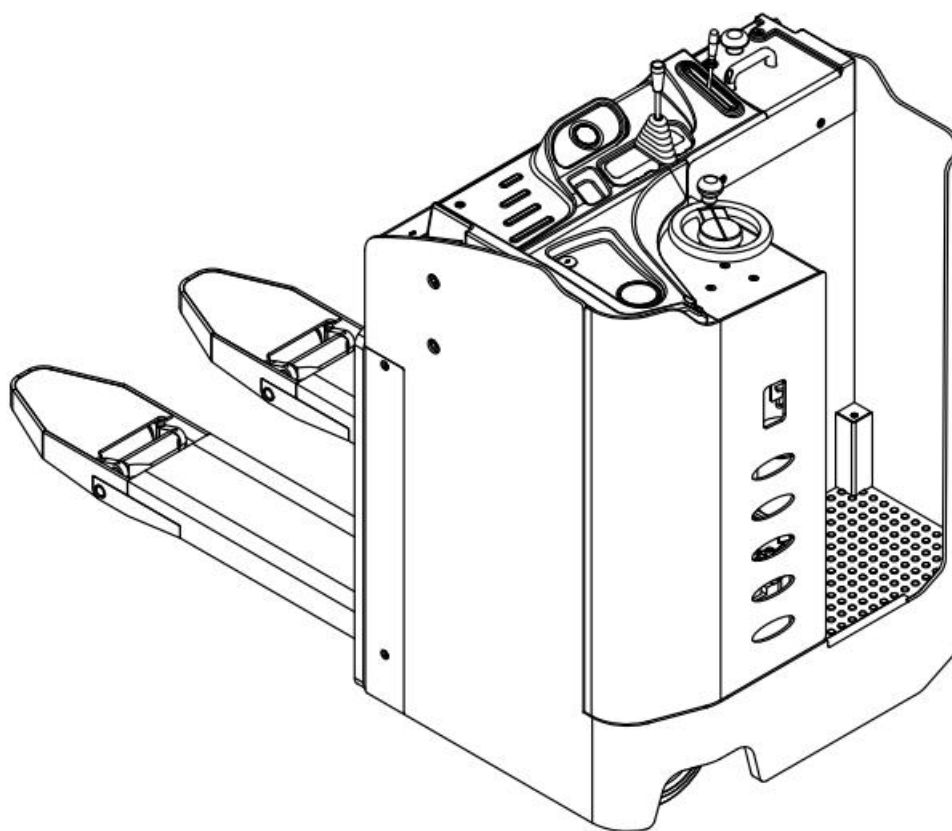




MATERIAL HANDLING EQUIPMENT DESIGNER & MANUFACTURER

Maintenance Instruction Manual

Electric Pallet Truck MEB60 Series



BANYITONG SCIENCE & TECHNOLOGY DEVELOPING CO.,LTD.

www.mimaforklift.com

Preface

MEB60 is used to transport the pallet point-to-point on the ground, powered by battery, suitable for long distance transportation of heavy load goods., widely used in good yards and workshops etc Due to EPS steering, it can be operated more comfortably.

This instruction introduces the main components, working principle and maintenance of MEB60 series pallet truck, which can 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 us freely.

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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. Operation

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 as transportation personnel

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.

5.6 Ring the horn while you overtake.

5.7 It's forbidden to transport people.

5.8 Make sure the forklift can bear all the weight before it enter the lift.

6. Transporting goods

6.1 Only at the time of loading and unloading goods, you can lift the forks.

6.2 It's forbidden to transport when goods on the forks is unstable and unsafe.

6.3 Be more careful when transporting over high and over heavy goods.

7. Precaution of parking

7.1 After the forklift stop 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 Must shut off power supply when not use

8. Fixing and removing the batteries

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

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

8. Maintenance

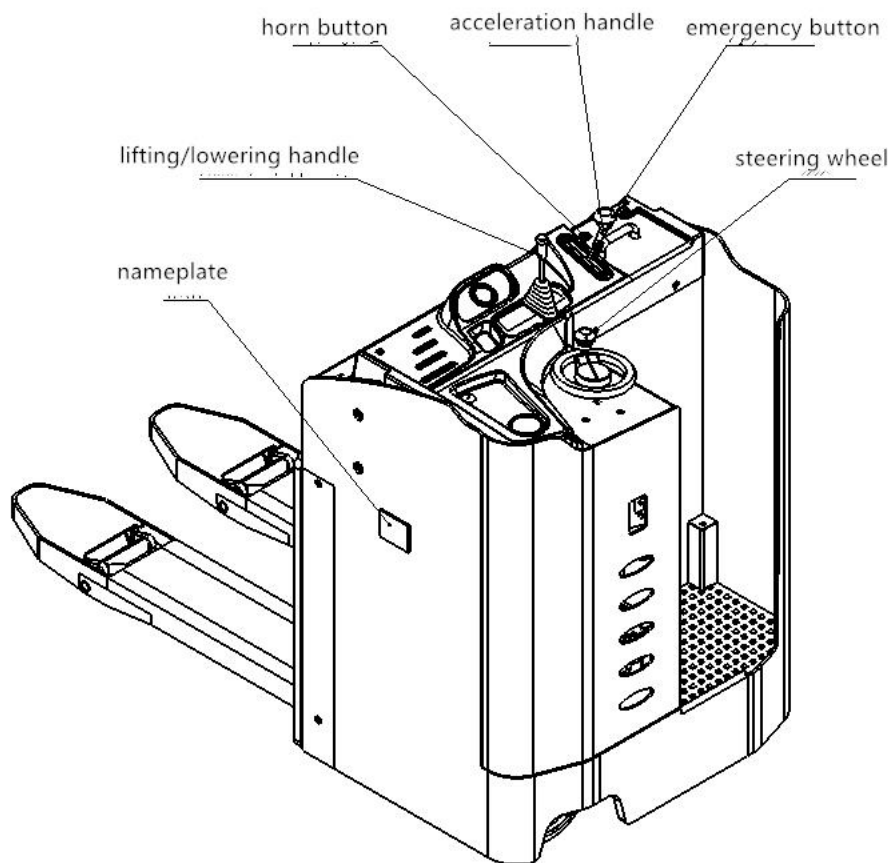
Maintenance can prevent mistakes and accidents. Please see the chapter of maintenance in detail, all replacement parts and spare parts should be approved by our company. It's forbidden strictly to maintain or reequip the forklift, which can influence security or use function.

Chapter 2 Caution, trade mark and sign

The pallet truck has the following signs:

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

1. Lifting and lowering hydraulic controlling button
2. Steering wheel
3. Acceleration handle
4. Horn button
5. Nameplate
6. Emergency button



Chapter 3 Introduction to the forklift

The pallet truck drives with electric energy. Walking and speed are controlled acceleration handle, direction is controlled by steering wheel.

MEB60 maximum loading capacity is 6000kg.

The pallet truck uses 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 pallet truck 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 forklift.

The forklift is suitable for handling goods on a pallet.

2. Forbidden occasion of the forklift.

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

2.2 The vehicle 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. Parameters

Model	MEB60
Rated Capacity kg	6000
Travel Speed without Load km/h	6
Travel Speed with Full Load km/h	6
Max. Gradeability with Full Load %	5
Service Weight (Ind. Battery) kg	1680
Turning Radius (Fork Length 1200)	1890
Overall Width	1000
Max. Fork Lifting Height	110
Min. Fork Height	100
Wheel Type	PU

4 Main components

4.1 Walking control

During the driving process, the forklift is controlled by the acceleration handle, the steering wheel controls the steering, and the brake function is under the foot of the platform of the station, stepping on the road and releasing the brake.

4.2 Pallet Truck Nameplate

The nameplate is attached with the model number; rated lifting weight; maximum lifting height; self-weight; factory number.

4.3 Hydraulic system

It includes components such as lifting motor, gear pump, fuel tank and oil cylinder, among which the lifting valve stem controls the lifting and lowering.

4.4 Electrical system

Includes components such as fuel gauge, key switch, horn button, reversing buzzer, emergency stop button, etc. When the power meter is working normally, it displays the power value, reflecting whether the battery power meets the requirements.

4.5 Battery and connector

The battery is fixed in the battery box with a voltage of 24 V and a standard capacity of 420 Ah.

When the battery is charging, the battery connector will be pulled out and inserted into the charger connector.

4.6 Drive with brake

It is equipped with an electromagnetic brake, a traveling motor, a gear box and a drive wheel, and a steering bearing is arranged between the drive motor and the gear box.

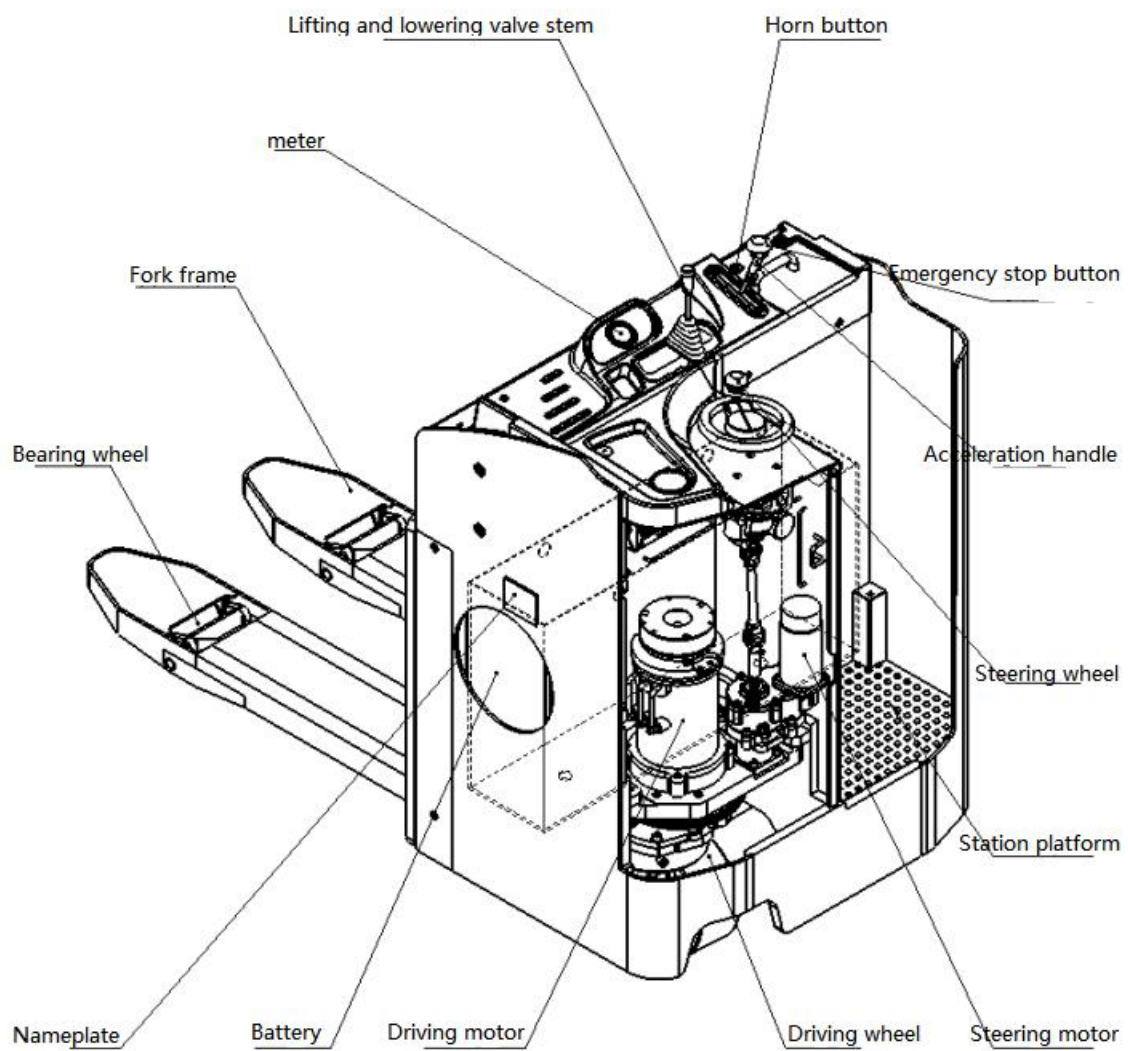
4.7 universal wheel assembly

The universal wheel assembly under the left station platform ensures the lateral stability of the car body.

4.8 Station Platform

4.9 Battery Replacement Cart

Use when replacing, servicing, or adding liquid to the battery.



Chapter 4 Control Devices

1 Lift control

Rotate the emergency stop switch, open the key switch, and operate the handle in the direction indicated to control the fork to lift or lower.

2 Driving direction and speed control

Press the foot switch and operate the handle in the direction indicated to control the direction of travel and adjust the speed and acceleration.

3 Emergency power off switch

When the switch is used in an emergency or during charging, the battery connector can be directly disconnected to ensure that the power supply of the vehicle is disconnected.

4 Horns

Press the horn button to sound

5 Battery connector

Unplug the battery connector under the following conditions.

5.1 Accident

5.2 Emergency, dangerous situations

5.3 When welding

Note!

When welding around the body, the battery is easily damaged, and if the welding current is broken into the battery, it will cause damage. At this time, the socket must be pulled out.

When charging, unplug the battery connector and connect the battery connector to the charger connector. After charging is complete, reset the battery connector.

6 Key switch

This switch function is to turn the control circuit on and off.

7 Voltmeter

When the key switch is in the open state, the power meter displays the battery remaining amount, a total of ten grids. When the leftmost two LED indicators are flashing, it indicates that the battery is insufficient and the battery needs to be charged.

Chapter 5 Driving

1 Start

Please proceed in the following order, otherwise the pallet truck will not run:

- 1.1 Make sure the battery connector is securely inserted.
- 1.2 Turn the key switch to the open position and turn the emergency stop switch.
- 1.3 Make sure the battery has enough power.

Note!

Operating the pallet truck for a long period of low power operation will damage the battery life. Do not start the pallet truck until the battery is charged.

※Press the foot switch.

※ Choose the driving direction correctly, control the speed to the ideal state, and slowly accelerate to the ideal speed.

Note!

Do not operate pallet trucks with serious functional defects that are dangerous to safety. The following safety functions should be checked before working every day:

※The horn function is normal.

※The handling function is intact.

※The brake function is normal.

※The hydraulic function is normal.

2 Brake

2.1 Loosen the foot switch and the pallet truck realizes electromagnetic braking.

2.2 When the acceleration handle is released to the neutral position during normal operation, the brake function can be performed.

2.3 Parking: Stop the pallet truck by releasing the acceleration handle and returning it to the neutral position.

3 Steering

3.1 Steering is controlled by the steering wheel.

3.2 The pallet truck encounters obstacles and should not be forced to pass. It can operate the steering wheel forward or backward to bypass obstacles.

4 Warning

The wheels are not allowed to slip.

If the operator's hands or shoes are stained with oil, it is easy to operate and the pallet truck is out of control, so dry hands or shoes should be used before driving.

5 Parking

5.1 Loosen the acceleration handle.

5.2 Lower the fork to the lowest position so that there is no system pressure in the hydraulic system.

5.3 Loosen the foot switch and brake the electromagnetic brake.

5.4 Turn the key switch to the off position.

Warning!

Driving without permission is not allowed.

If you leave, please take the key with you.

Chapter 6 Transportation of Goods

- 1 The weight of the goods should be within the lifting capacity of the pallet truck.
- 2 Decelerate when turning.
- 3 Irregular objects should be kept safe during transportation. When turning, pay attention to leaving room.
- 4 If the cargo affects the line of sight, drive back toward the cargo.
- 5 If the operator's front line of sight is affected, ask someone to direct directions.
- 6 Decelerate when going up and down the slope. It is forbidden to turn the head and lift the fork on the slope.

Caveat!

Turning on the slope, the pallet truck is in danger of overturning.

When going downhill, the brake distance of the pallet truck is extended and the braking time is increased. Therefore, you should slow down and reduce the braking time. Do not force the upper and lower slopes.

- 7 Before entering the elevator, the pallet truck should ensure that the elevator can withstand the entire load (the weight of the vehicle, the weight of the truck, the weight of the operator). The pallet truck should first enter the elevator and finally leave the elevator.

Caveat!

Before starting the elevator, you should clearly understand the carrying capacity of the elevator and avoid accidents.

- 8 Before the pallet truck drives over the bridge, it should be slowed down and kept at a certain distance from the edge of the platform.

Danger!

Check the load capacity of the bridge beforehand to verify its safety to avoid rollover and fall.

Chapter 7 Battery and Charger

1 Replacement of battery

Only replace batteries that match the original battery model and have the same weight. (The weight of the battery affects the stability of the vehicle and its braking function.)

Caveat!

Do not arbitrarily change the weight and size of the battery, otherwise it will affect the center of gravity of the car body. Excessive or too light battery weight will affect the stability and braking capacity of the pallet truck. The weight must match the value marked on the pallet truck battery label.

1.1 Replace the battery sequence:

1.1.1 Open the battery baffle.

1.1.2 Disconnect the battery connector.

1.1.3 Push the battery replacement cart to the appropriate position and pull out the battery.

1.1.4 Close the battery baffle.

1.2 Sequence of installing the battery:

1.2.1 Open the battery baffle.

1.2.2 Push the battery replacement cart to the appropriate position and push the battery into the battery compartment.

1.2.3 Plug in the battery connector.

1.2.4 Close the battery baffle (Note: When the battery is in use, the baffle must be installed in place so that the battery does not shake in the bin).

2 Charging

2.1 Do not smoke or use an open flame when charging.

To charge the battery, use an automatic charger, taking care not to overcharge or overcharge, so as not to damage the battery.

The maximum charging current of the charger is:

battery (Ah)	charger (A)
420	55-60

Danger!

The battery electrolyte contains dilute sulfuric acid and is corrosive. If splashed on the skin, rinse with water and soap as soon as possible. If you splash into your eyes, please contact a doctor and

wash your eyes with clean water. Wear protective goggles and gloves when checking the battery.

2.2 Charging preparation

The pallet truck must be charged as soon as possible after use, and the storage time must not exceed 24 hours.

2.2.1 After parking, turn the key switch to the off position and remove the key.

2.2.2 Remove the battery connector and insert the charger connector with the battery connector.

2.2.3 Open the battery filler cap to breathe.

2.2.4 Turn on the AC and turn on the charger.

Warning !

Maintain a good ventilation when charging, especially when charging in a closed area. During the charging process, hydrogen and oxygen are generated in the battery. When exposed to an open flame or an electric spark, it will cause an explosion!

Therefore, the charging power should be cut off before removing the power outlet.

2.2.6 During charging

The charging method and maintenance should refer to the battery instruction manual. In the common time, you can use the following methods to determine whether the power is sufficient or not:

- ※ The specific gravity of the battery electrolyte is kept stable for 2 to 3 hours or more.
- ※ The electrolyte surface of the battery generates strong bubbles, and the electrolyte turns from milky to clear.

The above situation indicates that the battery is fully charged.

2.2.7 After charger

- ※ Turn off the AC power and charger.
- ※ Remove the charger connector from the battery connector.
- ※ Connect the battery connector to the cable connector.
- ※ Close the breathable cover on the battery.

The comparison table of the fully charged battery temperature and the electrolyte specific gravity is following :

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

If the specific gravity is not met in the table, it should be adjusted by adding acid or distilled water.

3 Battery maintenance

3.1 In order to ensure the battery life, the battery should be fully charged before it is put into use, and the battery with insufficient charge cannot be used.

3.2 The battery should avoid overcharging and overdischarging as much as possible. Overcharge and overdischarge will seriously affect the performance and life of the battery.

3.3 The battery liquid plug and venting cover should be kept clean, removed or opened during charging, and should be installed or closed after charging. The battery surface, connecting wires and screws should be kept clean and dry. If there is sulfuric acid, wipe it off with a cotton yarn and lye. Be careful not to let the lye enter the battery.

3.4 After the charging is completed, the battery electrolyte level should be checked and distilled water should be added in time to maintain the liquid level. It is strictly forbidden to add dilute sulfuric acid under normal conditions.

3.5 After the battery is used, it should be charged in time, and the storage time is generally no more than 24 hours.

3.6 Good ventilation should be maintained during charging, and fireworks are strictly prohibited.

3.7 The battery needs to be balanced charging in the following cases.

3.7.1 Normally used batteries (balanced charging every 3 months).

3.7.2 Leave unused batteries for a long time.

3.7.3 There is a "backward battery" in the battery pack (the backward battery refers to the battery whose voltage value is lower than other batteries or has been repaired due to faults during charging and discharging).

3.8 Balanced charging method.

3.8.1 Perform normal charging first.

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

Repeat several times according to 3.8.2 until the charger is turned on, and there is a bubble in the battery.

3.9 When the battery is not in use, it must be recharged once according to the normal charging method for storage period one month .

3.10 The battery should be protected from direct sunlight, and the distance from the heat source should not be less than 2M.

3.11 Avoid contact with any liquids and hazardous materials, and any metal impurities should not fall into the battery.

4 Electromagnetic brake maintenance

4.1 Use it for a long time in an environment with high humidity, it should be protect from rust . Rust will affect the use on the suction surface. Please remove the rust.

4.2 The friction surface should not be in direct contact with the hand, and there must be no oil.

Otherwise, the maximum torque cannot be achieved. Please clean and wipe the clean friction surface.

4.3 When the temperature is high, please install it in a place with ventilation. Generally, the ambient temperature is -10 °C~40 °C.

4.4 The initial torque value is low at beginning. Please use the running torque for a period of time to stabilize.

4.5 Please check regularly and check the items regularly: Is the switch action normal? Is there any noise? Is there abnormal fever? Is there any foreign matter, oil stains, etc. in the friction part and the rotating part? Is the clearance at the friction part appropriate? Is the voltage normal?

Chapter 8 Fault Diagnosis

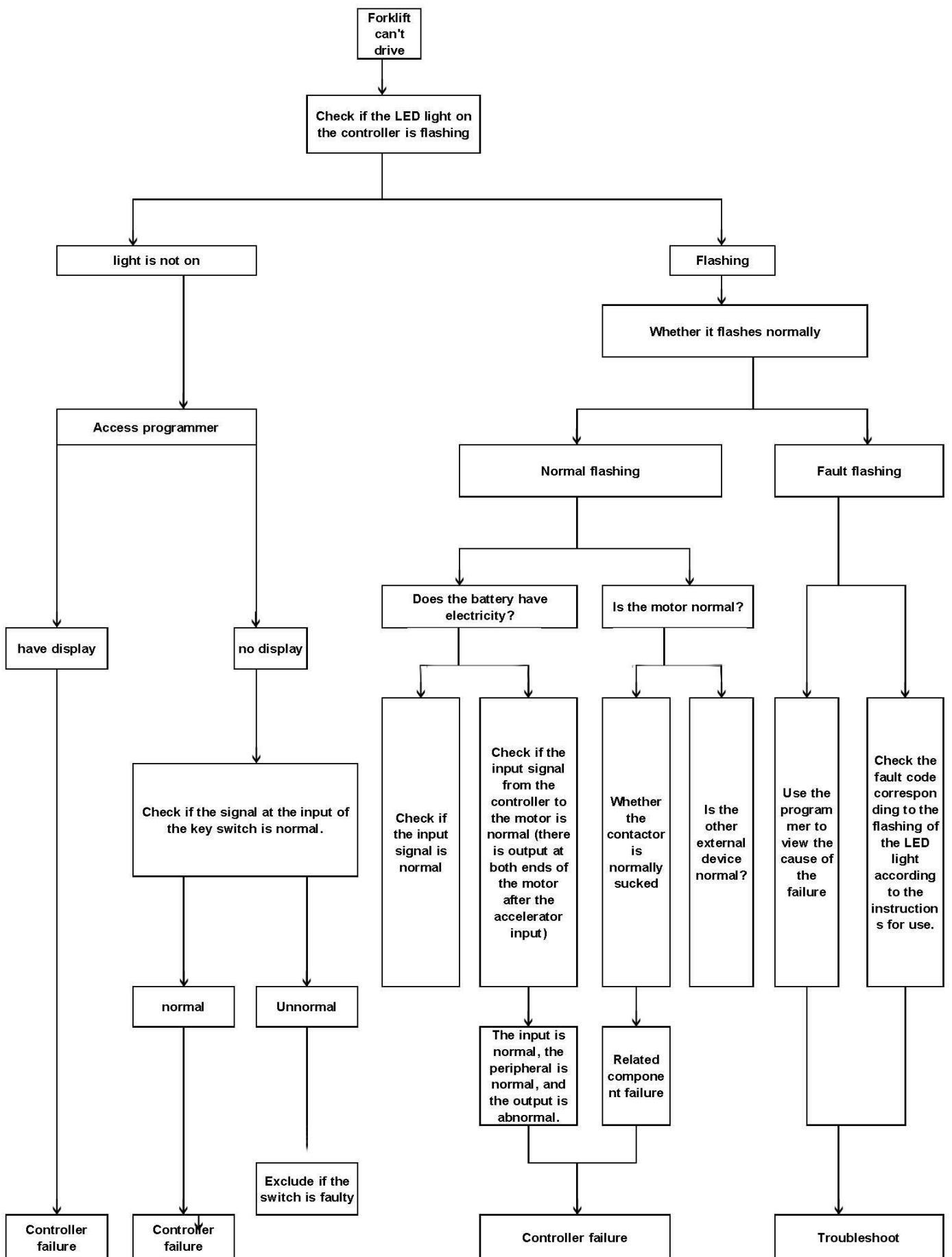
1 Controller troubleshooting

The controller of this product is equipped with LED display lights, which display different information through a combination of different color lights.

LED Display message description	
Display	message
LED light is not lit	The controller power is not turned on; Or the vehicle battery is exhausted; Or other serious failures.
Yellow LED light flashes	The controller is working properly
Yellow and red LED lights are always on	The controller is in the state where the program is loaded
Red LED light is always on	The watchdog is invalid or the software is not installed. Restart the key switch and restart. Reinstall the software if needed
Red and yellow LEDs flash alternately	The controller found the fault and the fault display code consisted of 2 digits. The red light flashing number indicates whether the code is the first digit or the second digit. The number of yellow flashes represents the specific digit of the corresponding digit.

In the event of a fault, if it is confirmed that it is not a wiring error or a mechanical failure of the vehicle, try restarting with the vehicle by key switch. If the fault persists, turn off the key switch and check that the 35-pin connector is properly connected or dirty. After repairing and cleaning, reconnect and try again.

When the vehicle electrical failure occurs, the fault flag on the electronic control flashes for diagnosis and maintenance. The following table is troubleshooting.



Customers can use the above methods to troubleshoot, please read the code by LED light, please contact our after-sales service.

2 Electric steering fault diagnosis

The electric steering forklift steering system is a high-precision, work-sensitive and energy-saving, environmentally-friendly and high-performance steering system. The correct use and maintenance can guarantee the performance of the steering system and improve the service life of the steering system. After the fault occurs, find the corresponding fault content according to the fault code displayed by the controller, and then check whether the corresponding components are loose or not, whether the harness is intact, whether the terminal is dropped or loose, resulting in poor contact, and whether the components are damaged.

The controller is equipped with LED display lights, which display different information through LED light changes.

LED Display message description	
Display	message
LED light is not lit	The controller power is not turned on; Or the vehicle battery is exhausted; Or other serious failures.
Red LED light flashes	The controller is working properly
Red LED lights are always on	The controller is in the state where the program is loaded
Different red lights alternately flash continuously	The controller found the fault and the fault display code consisted of 2 digits. The red light flashing for a long time interval indication code is the first digit, and the red light flashing for a short interval indicating code is the second digit

Customers can use the above methods to troubleshoot, please read the code by LED light, please contact our after-sales service.

Chapter 9 Maintenance

After the pallet truck has been in operation for 500 hours, it is routinely maintained. The efficiency, life and safety of the pallet truck depend on daily maintenance.

If the pallet truck should be repaired, the spare parts should be provided by the company to ensure the quality. It is recommended to contact the agent or the after-sales service department of the company to make your pallet truck safer and more economical.

1 Safety rules for maintenance work

Repair work can only be carried out after systematic study.

- 1.1 Keep the maintenance site clean and hygienic.
- 1.2 Do not carry loose or valuable items on your body during maintenance.

Notice !

When repairing the electrical system of the pallet truck, if the metal contact with the energized electronic components, it may cause short circuit or burning, so remove the watch, earrings or other accessories.

- 1.3 Before the pallet truck is repaired, unplug the power outlet and disconnect the power supply.
- 1.4 Turn off the key switch of the pallet truck before opening the enclosure or electrical system.
- 1.5 Before checking the hydraulic system, the fork should be lowered to release the system pressure.
- 1.6 When checking the oil leakage of the car body, please wipe it with paper or cardboard. Do not touch it directly with your hands to avoid burns.
- 1.7 Please note that the oil temperature in the transmission or hydraulic system may be high. The pallet truck should be cooled first, then the gear oil or hydraulic oil should be replaced to prevent the oil from burning and causing combustion.
- 1.8 The hydraulic system should be filled with new cleaning oil.

Notice!

If the hydraulic fluid is not clean, it will affect the precision hydraulic components and reduce the overall hydraulic system capacity.

If different grades of hydraulic oil are used, the hydraulic components are damaged and the system capacity is also affected. Therefore, when adding or replacing hydraulic fluids, pay attention to the use of uniform grades.

- 1.9 Please comply with relevant regulations, protect the environment, store and discharge oil as required, and do not discharge it into the sewer.
- 1.10 When welding the car body, disconnect the battery power supply. Because welding current may

enter the battery during welding. To avoid such a situation, please cut off the battery.

1.11 When work under pallet truck, pallet truck should be fixed by supporting rack

Warning!

If it is improper to support pallet truck, it will overturn and hurt people. If pallet truck has no protection of hoisting equipment or supporting rack, it's forbidden to work under it.

2. Maintenance work for users

2.1 Routine maintenance and safety inspections.

2.1.1 It is the operator's responsibility to carry out routine maintenance and inspection of the pallet truck.

2.1.2 Pallet trucks do not carry out routine maintenance, which will affect the safety and reliability of the pallet trucks, and can easily lead to serious accidents.

2.1.3 Check for problems or find faults. Repair and stop using them immediately.

Part No.	Check Point	Content
1	Handle control	Check if its function is normal. 1.11 When the pallet truck is working underneath, the pallet truck applies brackets. caveat! With improper support, the pallet truck will tip over and injure people. If the pallet truck does not have lifting equipment or support support, it is prohibited to work under the pallet truck.
2	Horn	Function good or not
3	Steering	Function good or not
4	Hydraulic device	Function good or not
5	Meter	Function good or not
6	Hydraulic system	Check oil level or leak oil
7	Drive device	Check noise or leak oil
8	Brake	Work good or bad
9	Transmission	Function good or bad
10	Wheel	Check body hurt and wipe oil pollution and metal friction
11	Frame	Check body hurt and wipe oil pollution
12	Battery	Leak liquid
13	Fork	Deformation or cracks
14	Lift device	Check body hurt and wipe oil pollution
15	Hydraulic cylinder	Check body hurt and wipe oil pollution

2.2 The maintenance work completed within 1 day, 1 week and 1 month to check table

The other maintenance parts given in the maintenance table can only be completed by the maintenance personnel of this company or the maintenance organization approved by the company.

3. Cleaning pallet truck

3.1 Regular cleaning every week is very important to ensure its reliability. Before cleaning, please pay attention to removing the power outlet and avoid short circuit and damage to the electrical system.

3.2 External Cleaning

3.2.1 Remove the attachments on the wheel every day to keep it flexible.

3.2.2 After the cleaning is completed, lubricant oil should be filled according to the requirements of the lubrication part table.

3.3 Cleaning Electrical Components

Use compressed air to blow motor dust and dirt from the circuit.

Be careful!

Electrical components must not be flushed with a high-pressure flushing device. Do not wipe with a damp cloth.

Do not damage the electrical components on the circuit board to maintain the position of the electrical components and avoid short circuits.

4.Maintenance table

Part No.	Run interval time	1 d a y	1 w e e k	1 m o n t h	3 m o n t h s	6 m o n t h s	12 m o n t h s	36 m o n t h s
1	Frame system							
1.1	Check cover				★			
1.2	Battery box spare parts				★			
1.3	Check frame crack or not				★			
1.4	Frame firm or not				★			
2	Motor							
2.1	Joint loose or not			★				
2.2	Wipe motor			★				
2.3	Check bolt firm or not			★				
2.4	Check bearing			★				
3	Drive system							
3.1	Check leak situation					★		

3.2	Check oil level				★			
3.3	Check noise					★		
3.4	Change oil							★
4	Wheel							
4.1	Wipe wheel dirty	★						
4.2	Check drive wheel and shaft				★			
4.3	Check universal wheel and wheel shaft flexible and firm or not				★			
4.4	Check universal wheel				★			
4.5	Check supporting wheel to rotate and firm or not					★		
4.6	Check supporting wheel				★			
4.7	Discharge and make lube on wheel bearing					★		
5	Brake							
5.1	Wipe brake				★			
5.2	Check brake piece good or not				★			
5.3	Check brake			★				
6	Controller plate							
6.1	Wipe and install				★			
6.2	Check wire joint				★			
6.3	Check connector point					★		
6.4	Check connector					★		
7	Battery							
7.1	Check electrolyte level(should be over pole plate 10-15mm)		★					
7.2	Check pallet truck and charger joint is firmed or not		★					
7.3	Check each battery and insulating sheath		★					
7.4	Check electrolyte percent and temperature			★				
7.5	Wipe battery	★						
8	Hydraulic system							
8.1	Check pipe and joint leak or not					★		
8.2	Check oil pipe good or bad					★		
8.3	Check oil leak or not					★		
8.4	Check oil capacity					★		
8.5	Change oil						★	
9	Cylinder							

9.1	Check leak oil					★		
9.2	Check install situation					★		

5.Lubrication part table

Part No.	Part	Interval hour(H)			Lube oil ,grease
		500	1000	3000	
1	Wheel bearing(steering)		L		A
2	Hydraulic system	H	O		B
3	Drive gear box	H		O	C

L=Lubricate H=Check O=Oil

6.Lubricating grease

Grease type		Specification		Suitable parts
		-20℃～0℃	0℃～40℃	
A	Lubricate grease	3#Lithium grease drop point170		Bearing and sleeve set
B	Hydraulic oil	L-HV 32 Low temperature	L-HM 46 Wear resistant	Hydraulic system
C	Transmission oil	70W/75 (Abroad SAE75W)	85W/90 (Abroad SAE80W/90)	Gear box

Chapter 10 Transport & storage of pallet truck

1. Towing and transporting the forklift out of order

1.1 When you use towing 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. Storage of pallet trucks

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. Precautions for reuse of pallet trucks after storage

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 Schematic diagram

1. Electrical schematic diagram

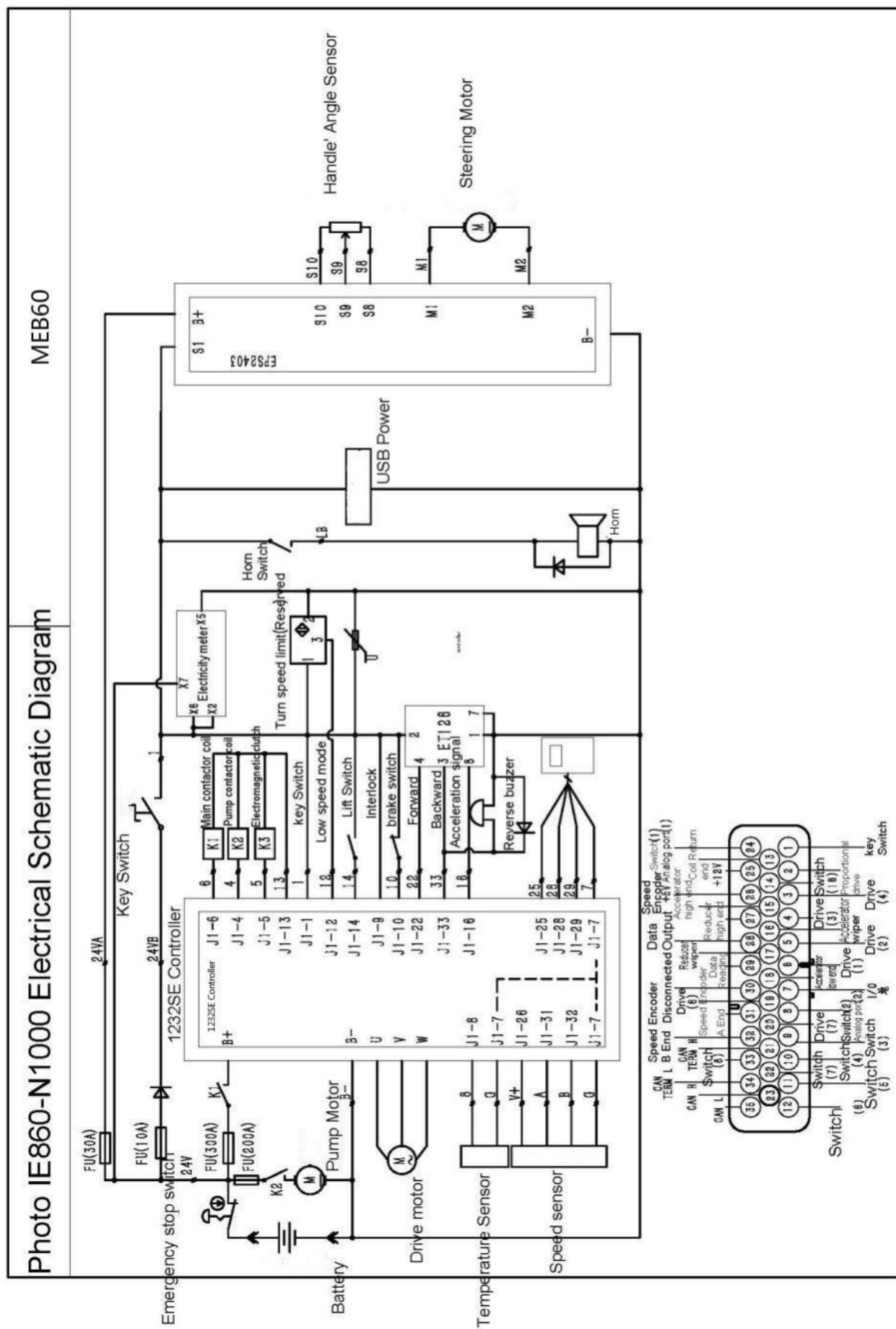


Photo 7-2 1E86-K1000 Hydraulic schematic

MEB60

_____ Hydraulic oil circuit

_____ Hydraulic control circuit or exhaust circuit

_____ Hydraulic components

4. Lift Cylinder

3. Quantitative throttle

2. Multi-way valve

1. Gear pump

Pump motor

Technical Parameters

1. Multi-way valve nominal flow $Q=50\text{L/min}$, Nominal pressure $P=18\text{MPa}$;
2. Gear pump rated pressure is 20.6MPa , Highest pressure is 22.6MPa ,
Theoretical displacement $V=7\text{ ml/r}$;
3. The maximum outlet pressure of quantitative throttle valve is 21MPa ,
limiting speed 13.2L/min ;
4. Pump motor model: XQD3.5-BYT1, rated power 3.5KW , rated speed 1700r/min ;

Selection of hydraulic Oil

1. When surroundings temperature is $0-40\text{ degree}$: use L-HM 46 Antiwear hydraulic oil;
2. When surroundings temperature is $-20-0\text{ degree}$: use L-HV 32 low temperature hydraulic oil;