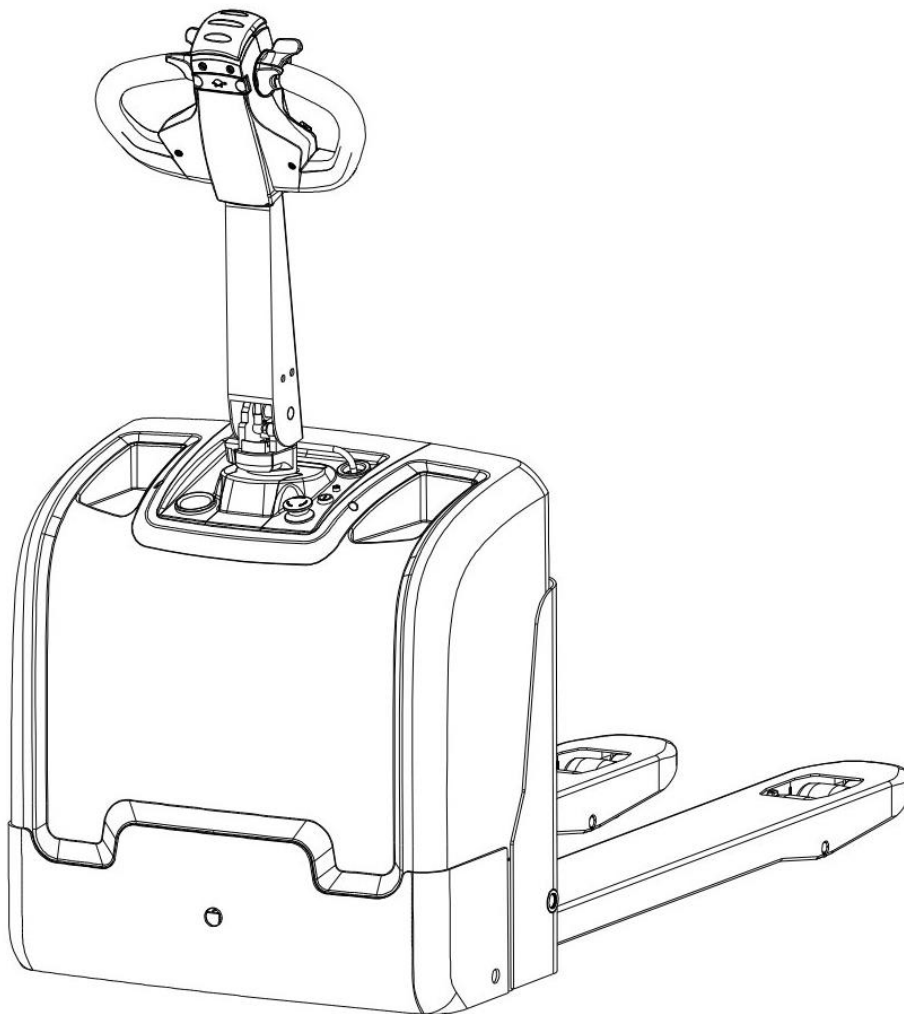




LEPT20N Electric Pallet truck

- Operation Manual



- **Please read the manual carefully before operation**
- **This manual is a universal manual. We reserve the right to modify technology of the electric stacker. If there is anything in the manual that is not consistent with the actual stacker, the actual stacker should be considered correct and the manual is only for reference.**

Warning

- **Operator of the truck must strictly follow ISO 3691:1980 "Safety Specification for Industrial Vehicles" and it is prohibited for untrained people to operate the truck.**

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1. Safety regulations



When operating the truck, one should always wear safe shoes.



When assembling or disassembling the truck, in order to avoid injury, one should always wear safety goggles.



Attention !

When the truck is damaged or any failure affecting safety occurs, do not use or operate the truck.



Attention !

The truck is designed to be used on hard and smooth ground only.

In the following situations, it is not advisable to operate the truck:

- The air contains dust or gas, which may be able to cause fire or explosion.
- In refrigerated warehouses or low temperatures, salt containing or other corrosive environments.
- Outdoors in rain or in wet areas.
- Operation on loose ground or grassland.



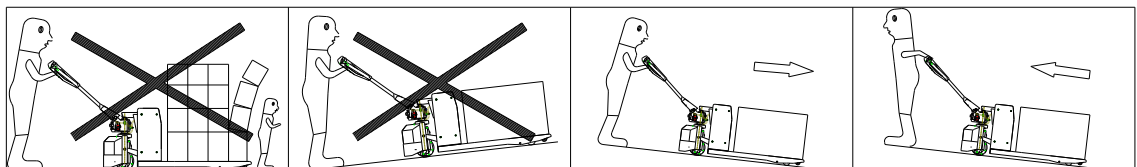
Attention !

- When operating the truck, careful judgement should be made and one should operate in a responsible manner.
- Do not operate the truck with hand or shoes contaminated with oil.
- The operator must not wear loose clothes or jewellery.



Attention !

- When operating the truck, ensure that the ground has sufficient load bearing capacity. Load here refers to the sum of the weight of the truck and the weight of the goods combined.
- Be aware of protruding objects on the truck or around it, which may cause human injury or forklift damage.
- It is strictly prohibited for people to stand around the truck in operation, doing so may cause human injury, for example, when goods fall down.



Be careful!

When handling goods on a slope, the operator must be positioned at the highest point of the slope to prevent goods toppling back and causing injury as shown in the figure above.



Warning !

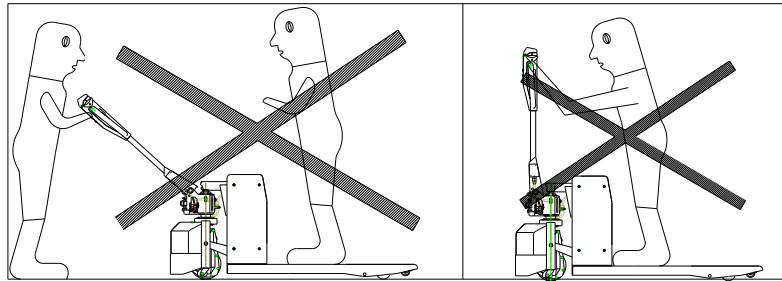
- When turning, high-speed operation should be avoided to prevent the truck from tipping over.
- The goods should not be stacked too high to avoid blocking the view.
- Braking should be conducted carefully to prevent the goods from sliding off the forks, which may damage the goods and cause injury to people around.
- Do not allow the truck to turn on a slope to prevent tipping.

Before driving the truck into an elevator, the operator must ensure that the elevator is able to bear the total weight of the truck and the goods, the total weight of the operator and other people in the elevator. When entering the elevator, make sure that the goods enter first and then the operator. When the truck and goods enter or leave the elevator, other people must not stay in the elevator.



Be careful !

- The load weight should not exceed the truck's rated capacity.
- The maximum lifting capacity of the truck is 2000Kg and the weight of the load must not exceed the lifting capacity.
- When stacking goods, the goods must not be stacked too high to avoid goods falling or truck tipping over when handling.
- It is strictly prohibited to use this truck to transport people.
- The truck should be operated in a clear area to avoid injuries if the truck suddenly fails in operation.
- It is prohibited to operate the truck when sitting or standing on the truck.



Attention!

- When parking the truck, the forks should be lowered to the minimum height.
- Do not park the truck on a slope.
 - Do not park the truck in an emergency passageway.
 - Do not park the truck in a place blocking traffic or affecting operation.
 - Do not operate the truck in the rain or a wet environment.
- When not in use ensure power is switched off correctly.

2. Description

Working principle of LEPT20N truck:

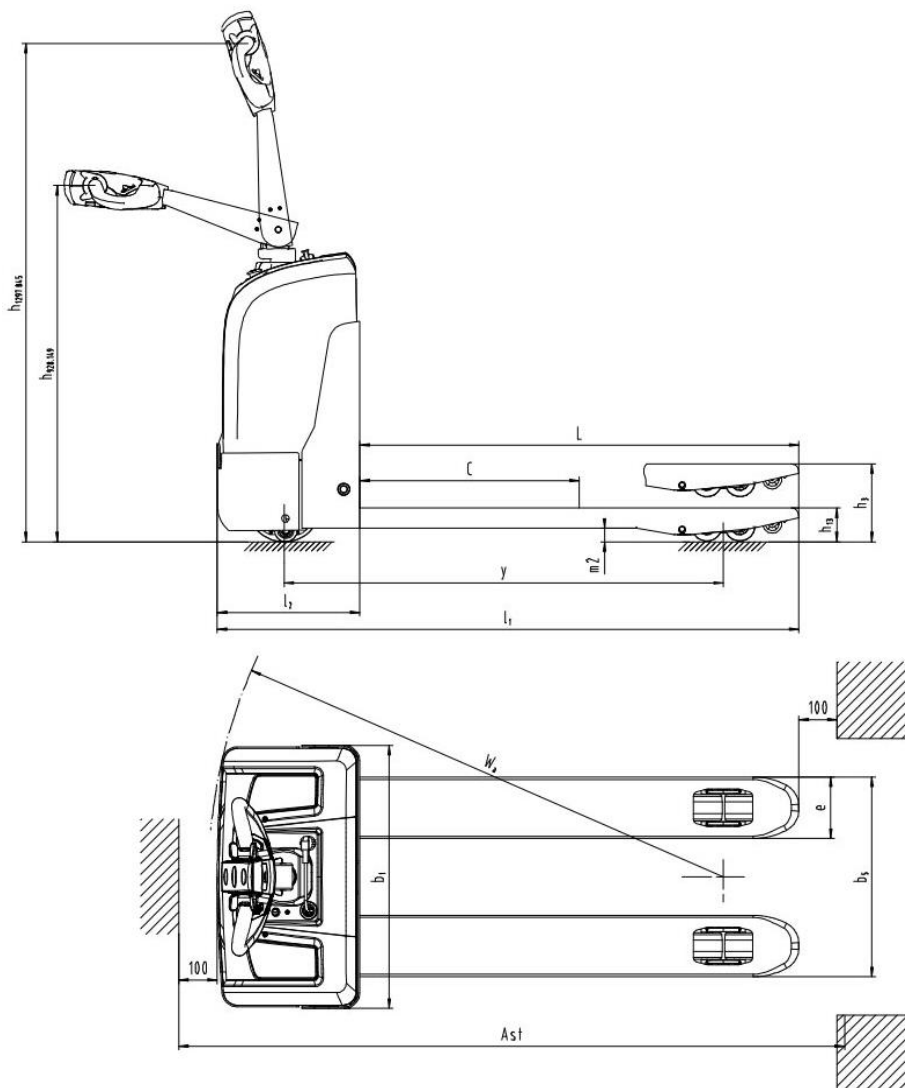
Driving system uses battery as power source and a motor as the drive power, through the gearbox to drive truck.

Lifting system uses storage battery as power source, with motor as the power, through the hydraulic drive to operate the fork lift cylinder.

This truck is suitable to operate on indoor hard and smooth ground. It is not advisable to operate the truck for unsuitable applications, for example:

- when the air contains dust or gas, which may cause fire or explosion.
- In refrigerated warehouses or in low temperature.
- In areas containing salt or other corrosive substances.
- In rain or very wet areas.
- On loose ground or grassland.
- Transporting passengers.

Some relevant technical parameters are given in the table below, which should help in routine operation and maintenance of the truck.

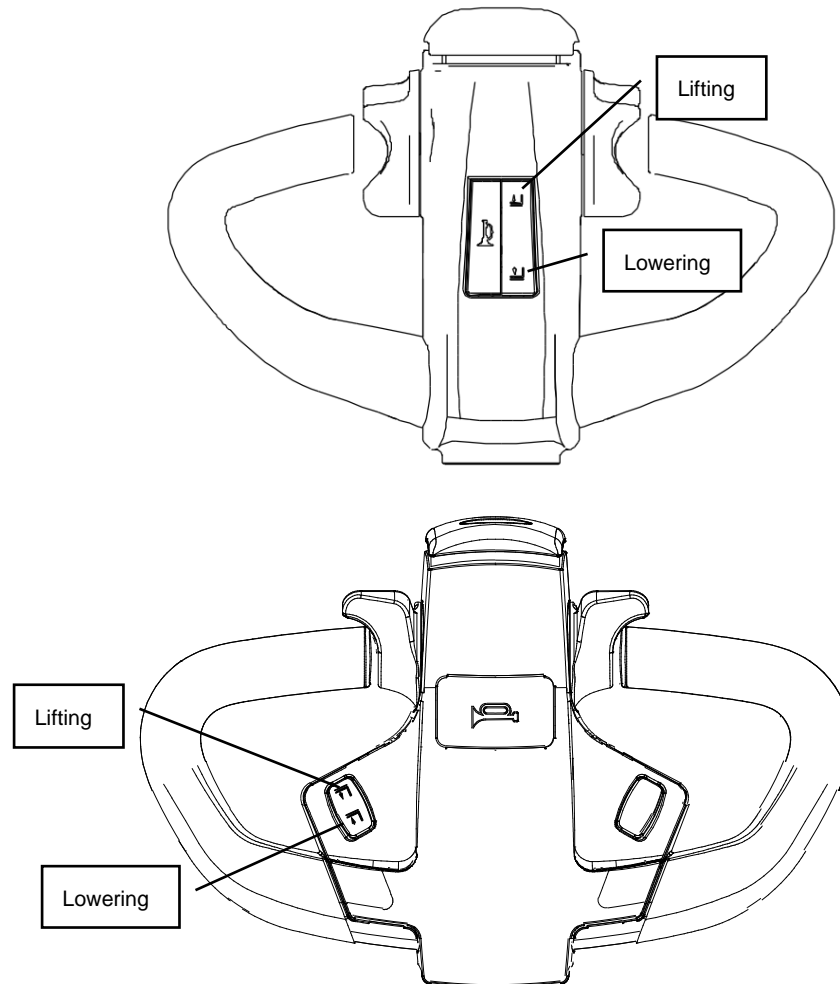


Model		LEPT20N
Drive type		electric
Operation type		walking
Rated capacity	Q(kg)	2000
Load centre distance	C (mm)	600
Height, fork lowered	h_{13} (mm)	85/75
Tread	Y(mm)	1130/1200
Tyre		polyurethane
Tyre size, front	mm	Φ195
Tyre size, rear	mm	Φ80/Φ74
Wheel number, front/rear (x = driving wheel)		1X-2/4
Lift height	h_3 (mm)	190/180
Min./Max. height of operation handle in the driving position	h_{14} (mm)	950/1310
Overall length	l_1 (mm)	1525/1595
Length to face of fork	l_2 (mm)	375
Overall width	b_1 (mm)	685
Fork dimension	s/e/l(mm)	53/160/1150(1220)
Fork width	b_5 (mm)	520/550/685
Wheelbase ground distance	h_1 (mm)	32/22
Aisle width for pallet 1000x1200 crossways	A_{st} (mm)	1725/1795
Aisle width for pallet 800x1200 lengthways	A_{st} (mm)	1775/1795
Turning radius	Wa (mm)	1335/1405
Travel speed, laden/unladen	Km/h	4/4.5
Lift speed, laden/unladen	mm/s	30/45
Lower speed, laden/ unladen	mm/s	80/37
Max. gradeability, laden/unladen	%	3/10
Drive motor power	KW	0.9
Lift motor power	KW	0.8
Battery voltage/rated capacity	V/Ah	24/80
Battery dimension (LXWXH)	mm	260/169/215
Battery weight	Kg	49
Service weight	Kg	250
Traveling brake		electric
Noise level at operator's ear, according to DIN12053	dB(A)	70

3. Operation

Fork lifting

- Ensure the keyswitch and emergency stop switch are on.
- Press the lifting button to raise forks. (see figure below.)

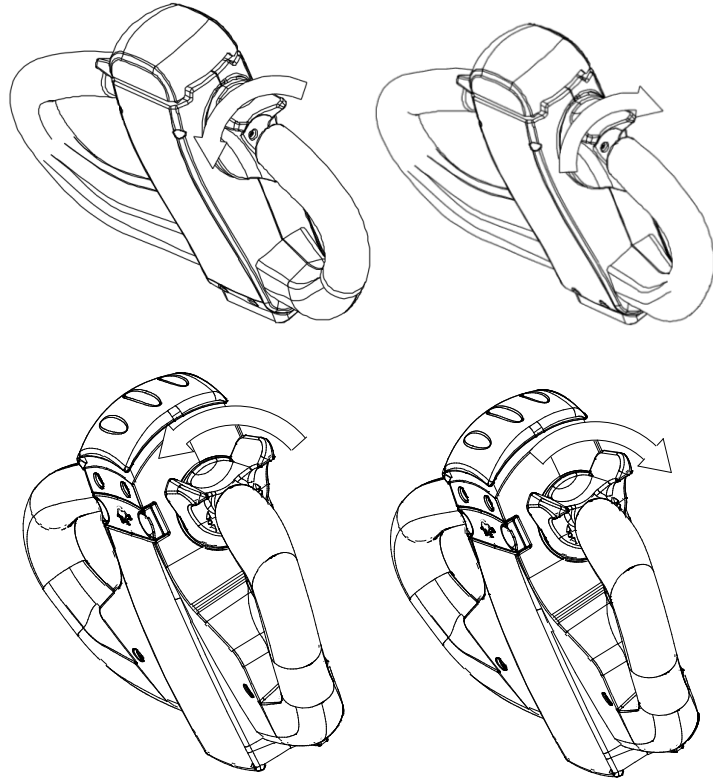


Fork lowering

Press the lowering button to lower the forks.

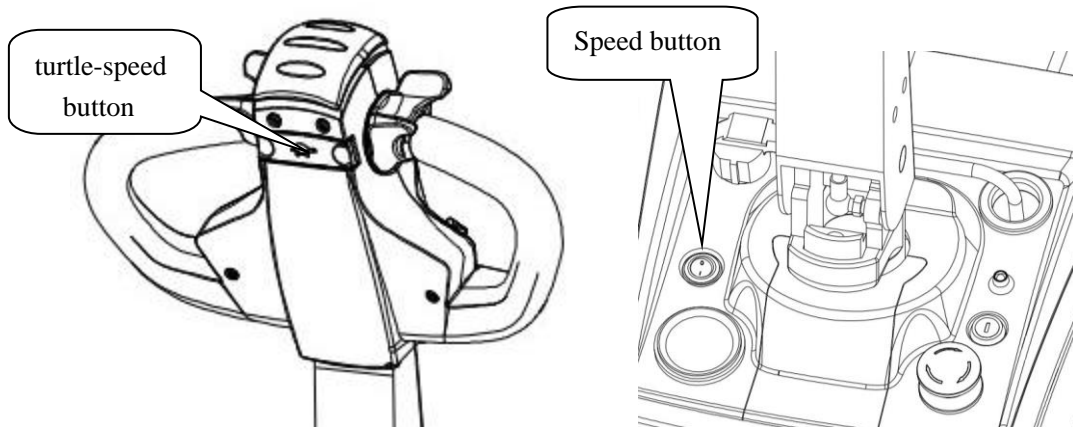
Pallet truck running

- Ensure the keyswitch and emergency stop switch are on.
- Rotate the accelerator lever in the direction you want the truck to move, see picture below.
- The speed of the truck will gradually increase the further the lever is moved in that direction.
- The lever will return to the central position when released. The speed of truck will reduce until it reaches a stop.



Low-speed travel

- The truck is equipped with a turtle-speed button on the back of the handle. While pressing the button and holding it, rotate the speed lever in the direction required. The truck will operate at a low speed, with the turtle button depressed the truck can be driven with the handle in its upright position or its lowest position. This will help turning in tight areas with the handle in the upright position. The truck returns back to the fast-speed setting when the low-speed button is released.
- The truck is fitted with a speed switch shown in the figure below. If switched to "0" position, the truck moves at low-speed. If switched to "1", the truck moves at fast-speed. When the truck is in low-speed or fast-speed mode it cannot be operated when the handle is in the upright position or in the lowest position.
- (Note: Travelling with handle in upright position can only be achieved by the turtle-speed button on the handle.)
-

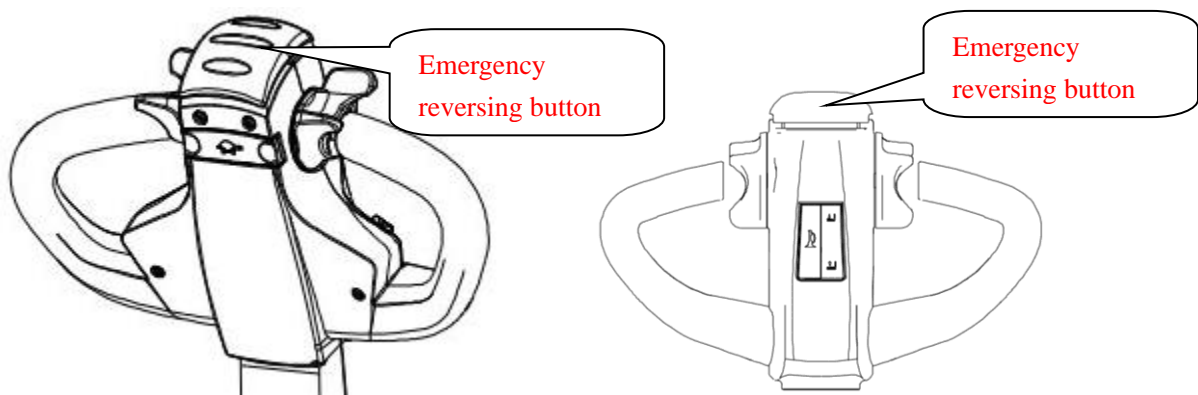


Pallet truck braking

- In fast-speed or low-speed releasing the handle to the fully raised position or pressing firmly down to the lowered position will engage the emergency brake and the truck will stop immediately.
- Release the direction lever slowly to reduce speed gradually or release quickly to engage the brake quicker.

Emergency reversing

- The red button at the end of the handle is the emergency reversing button, when pressed the truck will stop immediately and move backwards for a short distance when the body touches the emergency reversing button. It is a safety button which prevents crushing injury to the operator.

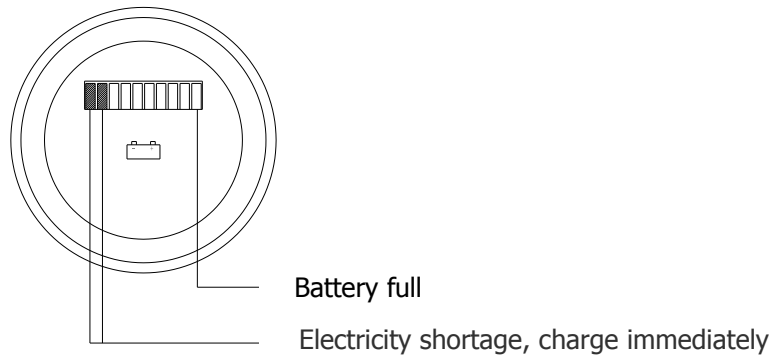


Pallet truck parking

- Release the direction lever to stop; this will slow down the truck and engage the brake.
- Lower the fork to the lowest position.
- Turn off the keyswitch and engage the emergency stop switch.

4. Maintenance and charging of storage battery

- When the battery indicator of the truck indicates that the charge of the battery is insufficient, charging should be carried out at once otherwise damage to the battery could occur.
- Turn off the keyswitch and emergency stop switch, connect the mains cable to a suitable power socket and charging will start automatically.



- When the green LED light of the charger turns on, it indicates that the battery is fully charged and the mains cable can be pulled out and inserted into the truck.
- If the battery is completely discharged, full charging must be conducted (about 12h).
- After discharging, the battery cannot be left for a long period of time as this may cause damage to battery cells, charging should be carried out as soon as the battery is discharged.
- When the truck is not in operation, the keyswitch and emergency stop switch must be pulled out and one supplementary charging must be conducted every five months during the period when the truck is in storage.
- It is strictly prohibited to open the storage battery air vent valve; otherwise, poor sealing of the battery will occur and the capacity and service life of the battery will be affected.

5. Maintenance

5.1 For the truck to be able to operate satisfactorily it must be maintained on a regular basis.

When maintenance is neglected, safety may be endangered and property may be damaged. When the truck is in operation, routine inspection should be conducted frequently. Do not operate truck with any defects or damage to ensure safety and prolong the service life of the truck.

5.2 Maintenance: The maintenance of the truck is usually divided into three levels, routine maintenance, level 1 maintenance and level 2 maintenance.

Routine maintenance: Daily visual inspection, clean and examination of the power supply cable for damage.

Level 1 maintenance: Once every week. The maintenance contents, besides the contents of routine maintenance, should focus on checking if the operation of all the components is normal, if the fastened items are loose, if there is any oil leakage, if there is any abnormal wear on mechanical components, if there is abnormal temperature rise or if sparks occur in electrical components, etc. Adjustment and trouble shooting should be conducted if any abnormal situation is discovered.

Level 2 maintenance: It should be conducted periodically and overall inspection should be conducted according to the following requirements:

- a. Mechanical maintenance should be conducted every half a year. The main contents are to replace lubricating oil for the transmission gear and bearing of the drive wheel, apply lubricant to all rotating joints, while examining if the fastened items are loose, if the wheels are rotating flexibly, if the forks rise and decline normally. The operation noise of

- the truck after maintenance should be no greater than 70db.
- b. Maintenance of hydraulic system: Once every 12 months. Examine if the oil cylinders are in normal state, if there is any internal or external leakage and if the hydraulic oil is clean. The hydraulic oil is usually replaced every 12 months. ISO oil standard is applied to hydraulic oil. When the ambient temperature is -5 ~ 40°C, HL-N32 should be used and when the ambient temperature is -35 ~ -5°C, HV-N20 low temperature hydraulic oil is to be used. The waste oil should be treated according to the relevant local regulation and law. Examine if the operation of the load limit valve is correct.
 - c. Maintenance of electric equipment: It should be conducted every three months to examine if the connectors of electric components are reliable, if the switches work correctly and if the insulation of the electric equipment is in normal condition. (The insulation resistance of electric equipment and the truck body should be greater than 0.5MΩ.

6. Common failures and trouble shooting

The table below provides some common failures of the truck in operation and the trouble shooting:

No.	Failure	Analysis of Cause	Trouble shooting
1	Hydraulic oil leakage	<ol style="list-style-type: none"> 1. oil seal failed 2. slight damage or wear on the surface of some components 3. Loose connection 	<ol style="list-style-type: none"> 1. Replace the oil seal 2. Replace the damaged components 3. Re-tighten the connection
2	Fork does not rise	<ol style="list-style-type: none"> 1. Too great viscosity of hydraulic oil or it has not been injected 2. Foreign matter in the oil 3. Abnormal unloading device 	<ol style="list-style-type: none"> 1. Replace hydraulic oil 2. Remove the foreign matter in oil or replace hydraulic oil 3. Re-adjusting the unloading device, please see 3.2
3	Fork does not lower	<ol style="list-style-type: none"> 1. Solenoid valve coil of hydraulic power unit is damaged. 2. Solenoid valve of hydraulic power unit is blocked. 	<ol style="list-style-type: none"> 1. Replace the solenoid valve coil; 2. Clean the oil line of the solenoid valve;
4	The motor is unable to operate	<ol style="list-style-type: none"> 1. Power supply switch has not been turned on. 2. Battery has completely discharge. 3. Brake has not been release. 4. Contactor cannot work. 5. Fuse burns out. 	<ol style="list-style-type: none"> 1. Insert key and turn on power supply 2. Charging 3. Examine the stroke switch on the lever if it is pressed because of collision and if the braking switch has been reset. 4. Replace the contactor. 5. Replace the fuse.
5	The charger is unable to charge	Damaged charger	Replace the charger

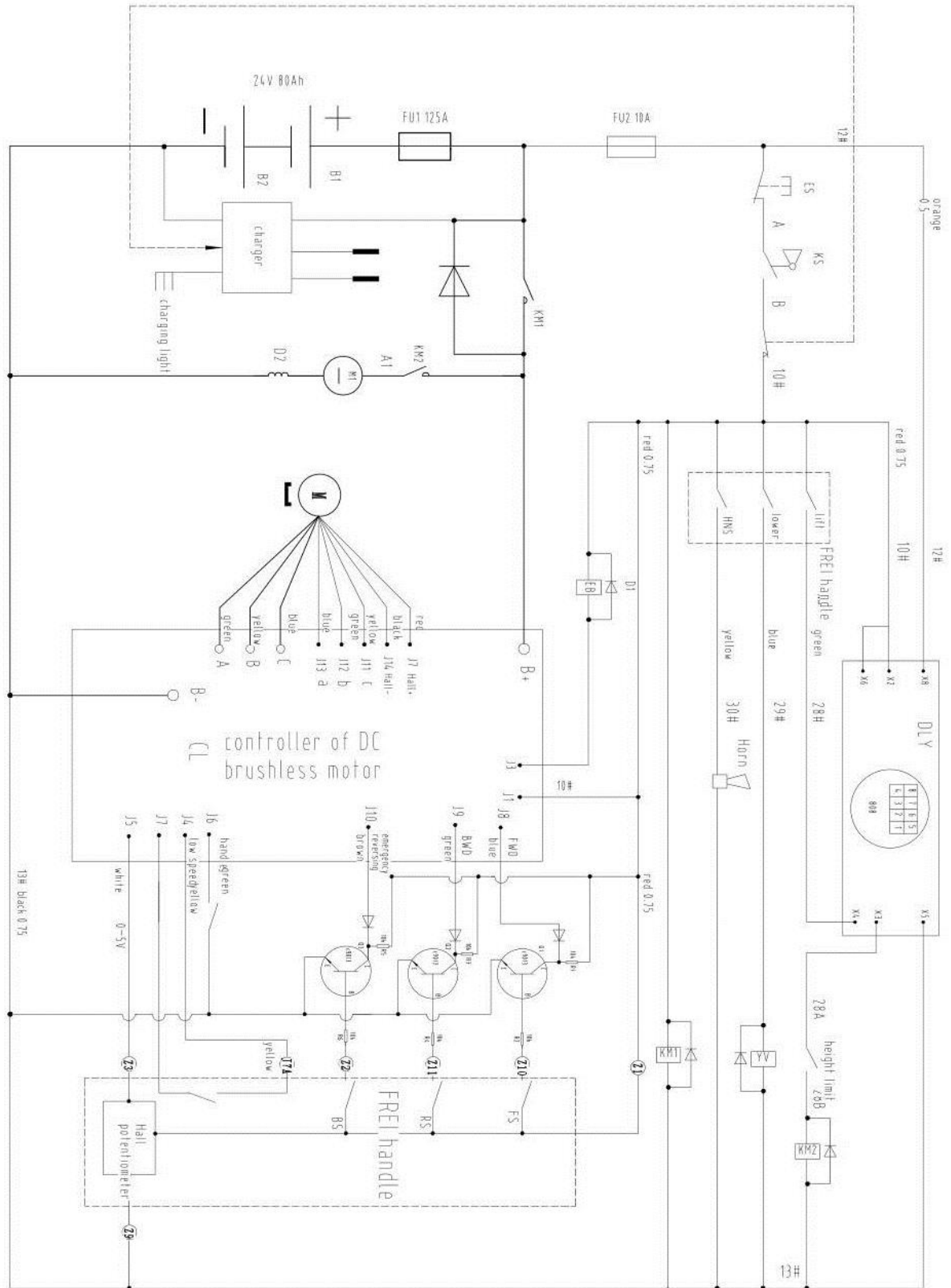
7. Treatment of waste materials

Waste batteries and hydraulic oil should be disposed of in accordance with the relevant local regulations and laws. Attention must be paid to environmental protection.

8. Accessories, spare parts and wearing parts

No.	Name	Application	Model and specification	Quantity	Remark
1	Key to the electric lock	Unlock the electric lock		2	
2	Fuse	Electrical parts	10A	1	
3	Fuse	Electrical parts	125A	1	

9. Electrical schematic diagram.



10.Packing list

Packing List of LEPT20N electric pallet truck

Consignee:

Ex-work No.:

Contract No.:

Ex-work Date:

:

No.	Name	Q'ty	Net weight (kg)	Dimension (L×W×H)	Remarks
1	electric pallet truck	1			A complete set
2	Accessory box	1			Technical documents, accessories and spare parts.

Note: 1. The following documents are in the file bag:

- | | | |
|---|--|----------|
| ① | Operation manual of CBD15W electric pallet truck | 1 volume |
| ② | CBD15W/18W/20W parts catalogue | 1 volume |
| ③ | Qualification certificate | 1 copy |
| ④ | Packing list | 1 copy |

2. Accessories and spare parts

No.	Name	Use position	Type & specification	Quantity	Remarks
1	Key to electric lock	Unlock the electric lock		2	
2	fuse	Electrical parts	10A	1	
3	fuse	Electrical parts	125A	1	