

ELECTRIC PALLET TRUCK CBD15L,CBD20L

Operation Manual



WARNING

- Prior to operation, carefully read this operation manual and observe all warnings. Please always confirm that the safety components are undamaged.
- Never use this equipment before all the parts are installed.

Model: CBD15L
Model: CBD20L

Preface

I. Before using electric pallet truck, please carefully verify whether the products conform to your order requirements and working conditions, and whether technical documents such as product qualification certificate and operation manual are complete.

II. This operation manual shows you how to correctly use this electric pallet truck and gives you guidance about safety operation and preventive maintenance. Only in this way, you can fully exploit the functions of the electric pallet truck protect your safety.

III. As we keep updating and improving our products, some description in this manual may slightly deviate from your electric pallet truck. Due to special requirements of some clients, operation manuals of electric pallet truck may be different from each other, too.

If you have any questions, please contact our sales department or agents.

Warning

For your and others' safety, please strictly observe following safety instructions:

If appropriate maintenance is ignored, certain potential safety hazards may occur during use of electric pallet truck. Therefore, sufficient maintenance equipment, professional maintainers and maintenance plans must be provided.

Maintenance and inspections for modification shall be conducted according to following provisions:

Maintenance, lubrication and inspection plans for electric pallet truck should be conducted strictly.

Following operations should be conducted before leaving electric pallet truck:

- (1) Do not park it on a slope.
- (2) Completely lower the pallet fork.
- (3) Inspect whether the multiple valve handle is reset properly and whether the compression spring is normal.
- (4) Press down the emergency stop switch.
- (5) Turn the switch lock to stop position and remove the key.

Before operating:

- (1) Operators should be on operation position.
 - (2) Place the operation handle on its original position.
 - (3) Prior to operation, inspect whether regular functions as lifting, steering, speed control and braking are operational.
-
1. Try to avoid flame during operation, and the firefighting devices must be provided on the electric pallet truck. It is strictly forbidden to use open fire to inspect electrolyte or other oil and whether the electrolyte is leaking.
 2. Braking, manipulation, control and safety devices should be inspected and maintained regularly to maintain good performance.
 3. All nameplates and safety signs on electric pallet truck should be cleaned regularly to keep their content legible.
 4. Relevant hydraulic systems should be inspected regularly based on operation conditions. Oil cylinders, hydraulic valves and other hydraulic elements should be inspected for leakage.
 5. The electric pallet truck must be stored in clean and dry environment to minimize fire risk.
 6. Pallet fork should be lifted 300mm above ground and inclined back fully during driving. During operation, personnel are not allowed to stand at two sides of electric pallet truck and loads should be placed on the fork evenly. Uneven loading is strictly forbidden.
 7. When loads are approaching or on the ground, its mast should not be contracted so that loads will not contact with frame to cause unnecessary loss.
 8. Without approval by the manufacturer, user should not change or increase load of electric pallet truck. If approved, nameplate and safety signs on electric pallet truck should be changed accordingly.

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1. Preface & Range of Use

This is a hydraulic lifting multi-functional electric pallet truck driven by a battery. Its features such as compact structure, small body, light weight, easy operation, flexible movement, stable speed rising, safe& reliable and easy to maintain, especially design of multiple valve, greatly facilitate lifting and lowering operations for users.

This electric pallet truck is an ideal tool for goods loading/unloading in warehouse, workshop and plant, especially in narrow passage and warehouse. It can also go into elevators and building floor to operate.

The electric pallet truck introduced in this operation manual is a ground transport equipment which is applicable for goods lifting and transport. It should not be used for personnel transportation. Fork truck should be used, operated and maintained strictly according to the regulations in this operation instruction. Any other usage of the electric pallet truck is against the regulations and may cause personal injury and damage to electric pallet truck or other property. Most important of all, overload caused by overweight or uneven loading must be prevented. Max loading limit specified on equipment nameplate or loading schematic diagram must be observed. This electric pallet truck should not be used in the areas with explosion or fire risk or corrosive/dust-ridden areas.

Obligations and responsibilities of equipment users:

In this operation manual, "Equipment User" refers to any natural person or legal person directly utilizing this electric pallet truck or entrusting others to use this electric pallet truck. Under special conditions such as renting and leasing, "Equipment User" represents the undertaker of specified operation obligations based on the contract terms agreed by equipment owner and user.

Equipment user must ensure that the electric pallet truck is only used for specified purposes and to timely eliminate all dangers possibly endangering health or life of the user or a third party. In addition, the equipment user must also strictly observe accident prevention regulations, other safety regulations as well as equipment operation, maintenance and repair standards. The equipment user must ensure that all operators carefully read and fully understand the content in this operation manual.

Environmental temperature: Applicable in 5°C-40°C environment; if the electric pallet truck is used in environment with temperature lower than 5°C for long term, or inside refrigerator or under the condition of extreme temperature and humidity change, the special equipment should be installed additionally, and the permission by manufacturer should be obtained.

If this operation manual isn't observed, our quality guarantee will become void automatically. In case client and user or a third party operate the equipment improperly without consent by client service department of the factory, we will not be liable to any losses caused thereby.

2. Main Technical Parameters

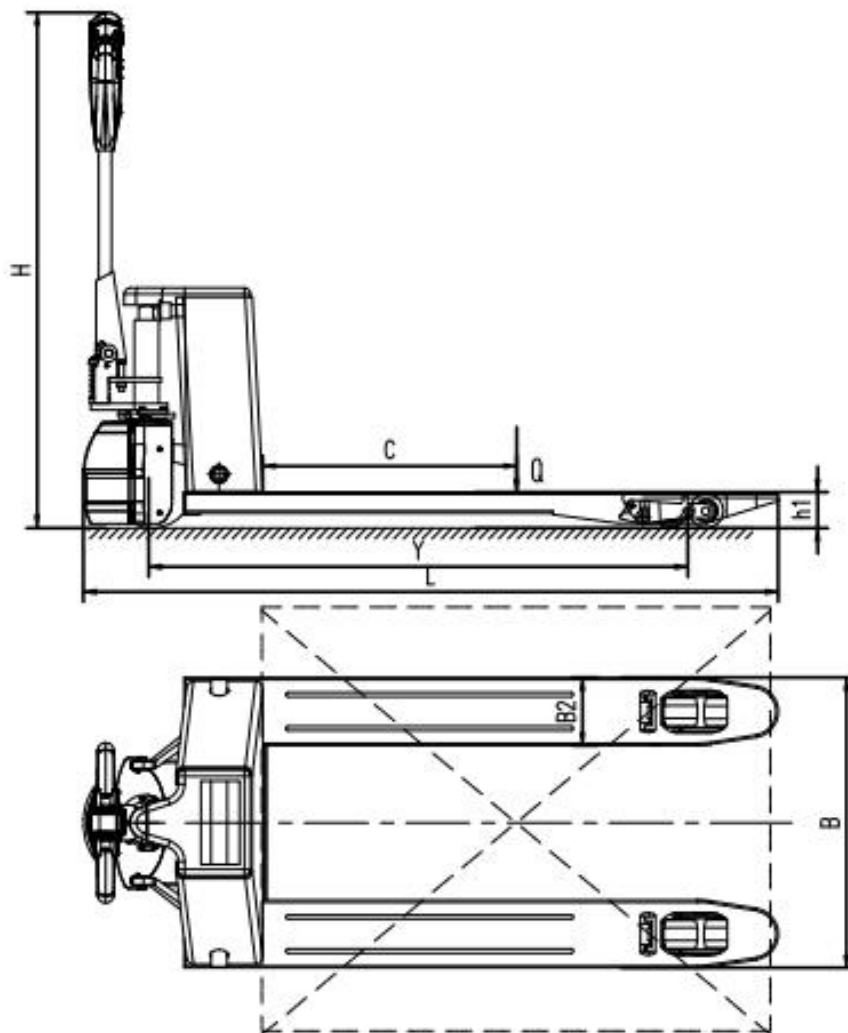


Figure 1

Table 1

ELECTRIC PALLET TRUCK				
General	1	Model		CBD15L/CBD20L
	2	Type		walkie
	3	Rated capacity	kg	1500/2000
	4	Fork type		covering
	5	Load center	mm	600
	6	Operator type		electric
	7	Wheel type		PU
	8	Front Wheel		Ø80×70
	9	Rear type		Ø168×80
	10	Ground clearance	mm	85
	11	wheel base	mm	1310
Dimensions	12	Lifting height	mm	200
	13	Fork width	mm	550/685
	15	Overall length	mm	1670
	16	Overall width	mm	685
	17	Overall height	mm	1320
	18	Brake type		electric
	19	Weight	kg	130/135
	20	Turning Radius	mm	1620
	21	Travelling Speed(laden/unload)	km/h	3.5/4
	22	Lifting Speed(laden/unload)	km/h	53/60
	23	Falling Speed(laden/unload)	km/h	52/59
	24	Climbing ability(laden/unload)	%	3/6
	25	Driving Motor	Kw	0.7
	26	Lifting Motor	Kw	0.7
	27	Battery	V/Ah	48V 10A/15A lithium

* The factory reserves the right to modify the product design and specification without prior notice. Refer to samples for specific parameters.

3.Operation Guideline

3.1 Description on application scope

This series of forklift is applicable on smooth ground, and the rated load is marked in details on the nameplate.

Environmental temperature:

1.Applicable in 5°C-40°C environment; if the forklift is used in environment with temperature lower than 5°C for long term, or inside refrigerator or under the condition of extreme temperature and humidity change, the special equipment should be installed additionally, and the permission by manufacturer should be obtained.

2. Use on a hard and flat surface, avoid sharp objects on the ground

3. Do not use in heavy dust environment

4. Do not use on water, oil, muddy ground

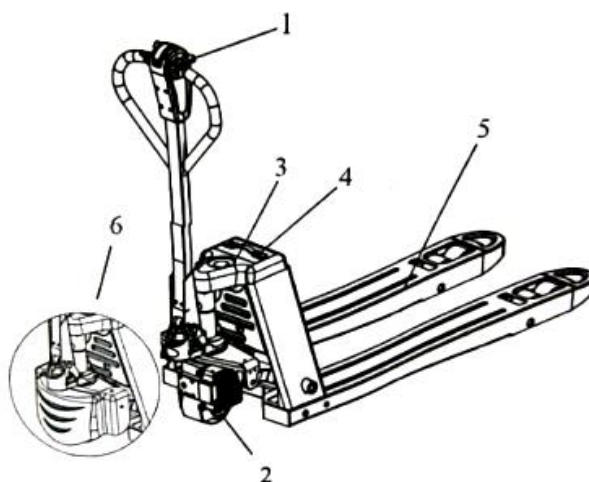
5. Do not expose to rain, use for 10 minutes in light rain

6. Do not use in flammable, explosive, corrosive environment.

3.2 Truck components

3.2.1 Truck components

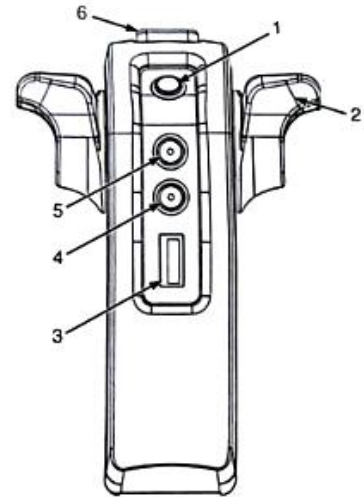
The following figure shows the main components of the transporter and their locations



No.	Name
1	Handle
2	Driving motor assembly
3	Power
4	Lithium battery
5	Frame
6	Cover

3.2.2 Handle

1. Horn button
2. Butterfly button
3. Battery discharge indicator (BDI), timer
4. Lift button
5. Lower button
6. Emergency reverse button



1. Horn button

Press this button to operate the horn.

2. Butterfly Rotary Button (Position 2)

The operating knob enables steering in the direction of the operator and the fork side.

Turning the knob towards the driver will move the truck towards the operator.

Turning the knob towards the fork will move the truck towards the fork.

The truck speed increases in proportion to the angle of rotation of the knob.

The reverse knob causes the truck to gradually slow down to a stop due to the electrical braking of the traction engine (reverse braking or reverse braking)

When the butterfly controls are released, they return to their center position, causing the truck to gradually slow down due to the electrical braking of the traction engine, and then engaging the electromechanical brake (release brake).

3. Battery Discharge Indicator (BDI) and Error Code Indicator (Position 3)

The display will show the remaining battery charge and will list any fault codes that have been activated.

4. Lower Button (Position 4)

Press this button to lower the forks.

5. Lift button (position 5)

Press this button to raise the forks.

6. Emergency reverse button (belly switch) (position 6)

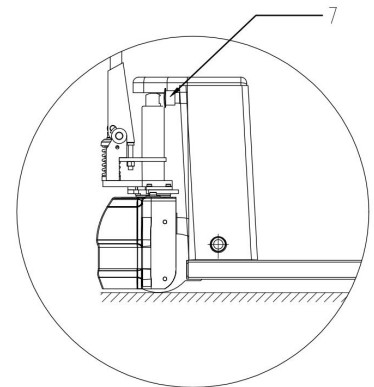
This device is located at the end of the tiller handle. Press this button to drive in reverse. It drives the truck in the direction of the operator. If this button is pressed, the truck will reverse and stop immediately. To reset the truck functions, the truck must be turned off and then on again.

7. Power switch (emergency brake button) (position 7)

When this button is pressed, the battery power is disconnected and all electrical controls are disabled (button pressed: electrical system disconnected)

To reset, pull the button out and move the tiller handle to the vertical position (button floated: electrical system connected).

Pressing this button can also be used as an emergency brake (electromagnetic brake engaged).



3.3 Operation specification

Note: When using the truck, there are a number of manoeuvres which, despite all safety precautions, may cause the truck to tip over if not performed with care.

The main causes of tipping over include:

- Turning too fast.
- Driving on slopes and turning.
- Driving with a raised load.
- Driving with a side-positioned load
- Driving on a slope with the load pointing downwards
- Load dimensions are incorrect.
- Driving with a swaying load.
- When transporting liquids, the centre of gravity inside one of the containers may change; this can cause the truck to tip due to inertial forces, for example when opening, braking or on bends.
- Slideways or steps
For example, when loading a truck, starting the truck engine while the forks are still raised above the loading area, the platform or steps are not in the correct position, or a truck is over an edge/limit.
- Driving on uneven surfaces.

Danger

If the truck overturns, try to keep the point of impact of the body part on the ground as far away as possible.

3.4 Use, maintenance and inspection rules of electric transport trucks

—Operation permission

1. Forklifts can only be operated and driven by specially trained technicians. Operators must be tested by the equipment user, master the skills of equipment operation and load handling, and be formally appointed by the equipment user or its client.
2. Instructors should be professional forklift users and should work with beginners for a period of time until they are judged to have sufficient proficiency.

Basic training in driving skills and load handling is essential to enable operators to effectively deal with dangerous and unexpected situations.

—Operator's rights, obligations and code of conduct

Operators must understand their rights and obligations, receive guidance and training on the operation and use of transport trucks, and be familiar with the contents of these operating instructions. Users must grant operators the rights they should have. If the operator needs to walk with the truck when operating the transport truck, he must wear protective boots.

—Non-staff members are prohibited from using the equipment

During the use of the transport truck, the operator is fully responsible for the equipment. Non-staff members are prohibited from operating the transport truck, and they are not allowed to

use the transport truck to transport or lift people.

—Damage and defects of equipment

If damage or other defects are found on the transporter and its accessories, the situation must be reported to the supervisor immediately. Transporters with imperfect operating performance, such as worn tires or brake failure, must not be used without proper repair.

—Equipment maintenance

Operators must not repair or modify the transporter without special training and permission. Operators must never disable or adjust safety devices and switches without authorization.

—Hazardous areas

Hazardous areas are areas where people are at risk of injury. These hazards mainly come from the transporter itself, its load-bearing parts, and the driving and lifting movements of the loaded goods.

Hazardous areas also include areas that may cause danger due to the falling of the load or the descent/fall of the working device.

—Safety devices and warning signs

All regulations regarding safety devices, warning signs, and warning instructions in this manual must be strictly observed. And keep the nameplates and warning stickers clean and easy to read.

3.4.1 Check before use:

If the truck is damaged during transportation, it must not be used and please contact the dealer immediately.

The truck is filled with lubricating oil before shipment and hydraulic oil is added to the hydraulic system.

If the truck is equipped with a battery, it is already charged.

Before operation, check the truck carefully to ensure that there are no faults.

Perform a comprehensive inspection of the truck, paying special attention to whether the wheels and load-bearing parts are damaged.

Check whether the emergency stop switch is turned on.

Insert the key into the switch lock and turn it to the right to the stop position.

The battery gauge shows the current battery charge status and operating hours.

Check the brake function of the joystick.

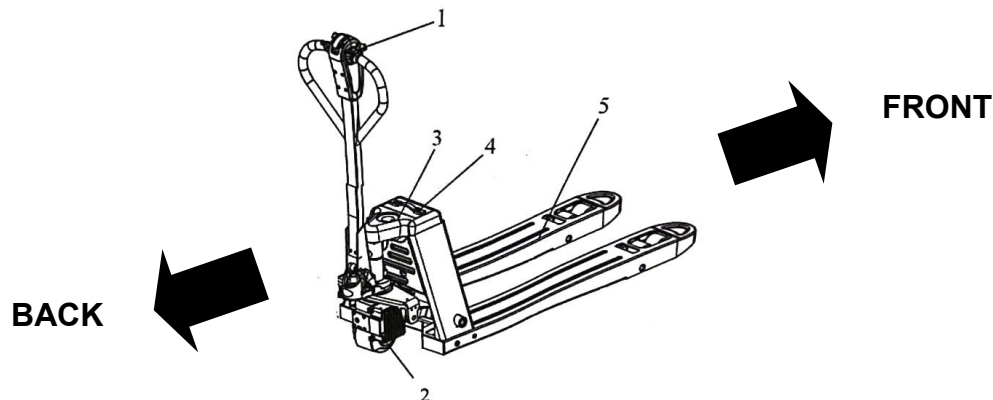
3.4.2 Operation of the transporter:

Before putting the equipment into use or lifting heavy objects, the operator must ensure that no other people are in danger.

Before the transporter drives, all flaps must be closed.

1. Driving

Move the operating handle to the driving area and use the driving switch (accelerator) to control the driving direction and speed.



2. Direction

Turn the operating handle left or right in the desired direction.

3. Braking

- Emergency stop switch

Press the emergency stop switch to interrupt all electric functions.

- Regenerative braking (feedback braking)

Release the driving button and the truck will start to decelerate in the regenerative braking state.

- Forced braking

Release the operating handle to force braking, and the operating handle will automatically turn to the braking area.

- Reverse braking

During driving, the driving switch can be switched to the opposite direction. The truck will brake with reverse current and start driving in the opposite direction directly.

Warning: When the truck is used on a slope or uneven road, please lift the fork leg to prevent the bottom of the fork leg from rubbing against the ground.

3.4.3 Loading instructions and precautions

Avoid loading with loads that could fall. You should remember that even when load-carrying brackets are installed to provide the operator with a reasonable level of protection against falling objects, it is not possible to prevent all possible risks.

Move only stable loads that the truck can support (see the overview plate on the truck). When lifting a load, keep its weight well distributed and balanced on the forks.

Even if the weight of the load does not exceed the weight indicated on the load capacity plate affixed to the truck, placing the weight entirely on the fork tips will cause a tipping hazard. The load must not extend too far beyond the fork tips.

Lifting the load from the ground

-Position the truck in alignment with the load to be lifted.

- Move the forks slowly into position under the load, ensuring that the load is correctly centered on the forks.
- After inserting the forks into the pallet, slightly raise the load to a height just high enough to move it.

Put the load on the ground

- Put the load on the ground.
- Lower the forks.
- Move slowly to remove the forks from the pallet.

NOTE: During all operations of lifting/placing loads, use the machine at the lowest speed permitted by the operation. During lifting/placing operations, always ensure that there is adequate aisle space to prevent the operator from coming into contact with other persons working in the same aisle.

Precautions

Goods that are not placed and secured as required are at risk of causing accidents.

- Instruct personnel to leave the danger zone of the forklift. If any personnel remain in the danger zone, stop the forklift immediately.

- Only transport goods that are placed and secured as required.

If there is a risk of the goods tipping over or falling during transportation, appropriate protective measures must be taken.

- Damaged handling tools (such as forklifts, pallets, etc.) must not be used to transport goods.
- Never enter and stay under the raised load-bearing parts.
- Personnel are prohibited from entering the load-bearing parts.
- Do not use the forklift to lift personnel.
- The forks should be driven as far as possible under the goods.

3.4.4 Park the forklift safely as required

If the driver needs to leave the forklift, even if the time away is very short, he must park the forklift in a flat position in advance as required.

- Press the lowering handle to lower the load unit.
- Press the emergency stop switch.

4. Lithium-ion battery and charger use and maintenance

4.1 Battery use specifications

1. Batteries should be stored at room temperature and charged to approximately 30-50% of their capacity. When stored for a long time, it is recommended to charge the battery once every 3 months to prevent over-discharge.
2. Do not use unqualified equipment when charging and discharging, and follow the instructions. Do not mix batteries from different manufacturers or different types and models.
3. If the battery leaks and the electrolyte contacts the skin or clothing, rinse it with clean water immediately.

4. If the battery emits a special odor or becomes hot, discolored, deformed, or has any other abnormal conditions during use, storage, or charging, immediately move the battery from the device or charger to a safe place and stop using it.
5. Please read the battery warning label carefully
6. Do not weld directly on the battery.

4.2 lithium battery

Model	48V/10Ah, 48V/15Ah
capacity	10Ah/15Ah
voltage	48V
Lithium life time	800-1000 cycles

4.3 Battery installation

When replacing or installing the battery, the battery should be firmly fixed in the battery placement position on the forklift frame.

4.4 Battery Charging

—Charging Precautions

- The truck must be parked in a well-ventilated room.
- No metal objects should be present on the surface of the battery.
- Before starting to charge, all cable connections and plug connections must be checked for obvious damage.
- Before connecting or disconnecting the charger, make sure that the charger is not connected to the circuit.
- The relevant safety regulations of the battery and charger manufacturers must be strictly followed.

—Charging Environment

Warning

The battery should be charged in a room that is particularly well ventilated and isolated from the working environment, because the battery will produce flammable gases, which may cause an explosion if they come into contact with open flames or sparks.

In the case of forced ventilation, the flue is also used to extract combustion products that should not be used.

Note: If you have any questions about battery compatibility, please contact the manufacturer's engineer.

1. It is forbidden to charge the battery below 0 ° C, otherwise it will cause serious battery degradation and safety hazards.
2. The battery is forbidden to be charged at low temperatures, but it can be used in an environment not lower than 0 degrees Celsius. However, the capacity will be insufficient, which is a normal phenomenon.

Please do not clean the battery directly with water

It is strictly forbidden to use non-original chargers to charge the truck battery
It is strictly forbidden to use the truck charger to charge other batteries.

—Charging steps

Check the charging requirements against the precautions.

Move the transporter to the charging area

Turn off the transporter and press the emergency power switch.

Connect the charger plug to the battery plug, and then turn on the charger to charge the battery.

After charging, turn off the charger power and unplug the charger.

—Charging time

Using a 48V/10Ah battery and a 2A external charger, it takes about 5 hours to fully charge.

Using a 48V/15Ah battery and a 5A external charger, it takes about 3 hours to fully charge.

When storing the truck or battery for a long time, the battery should be charged to a charge state of 30-50% every three months.

4.5 Battery maintenance

The battery must be kept dry and clean, the terminal and cable lugs must be kept tight and clean, and a small amount of special grease should be applied. If the battery electrodes are not insulated, a non-slip insulating pad must be covered on the electrodes.

4.6 Disposal of used batteries

Disposal of used batteries must strictly comply with the environmental regulations of the country or the current regulations on waste disposal. During the waste disposal process, the manufacturer's instructions must also be strictly followed.

The weight and size of the battery have a great impact on the operating safety of the forklift. The replacement of battery equipment must be approved by the company in advance.

5. Maintenance Guide

5.1 Operational Safety and Environmental Protection

- All inspections and maintenance operations must be carried out as described in the "Maintenance and Inspection" section.
- Modifications to the forklift, especially its safety devices, are prohibited. The operating speeds of the forklift must never be changed.
- Only original spare parts meet the company's quality management requirements. In order to ensure stable and reliable operating performance of the equipment, only original spare parts produced by our company can be used. Aging parts and replaced liquid media must be handled in accordance with current environmental protection regulations. If the hydraulic oil needs to be replaced, please contact our after-sales service department.
- After the inspection and maintenance operations are completed, the operating steps specified in the "Re-commissioning" section must be performed.

5.2 Safety regulations for maintenance and repair

Maintenance and repair personnel: The maintenance and repair of the forklift can only be carried out by our professional technicians. Our service department has a group of technicians responsible for field work. These personnel have been specially trained and are competent for various maintenance and repair operations of the equipment. We recommend that users sign a maintenance contract with our service and repair point.

Lifting and jacking up the equipment: When lifting the forklift, the lifting tools can only be installed in the specified fixed positions. When jacking up the forklift, the equipment must be fixed with suitable tools, such as wedges, wooden blocks, etc., to prevent the risk of accidental rolling or tipping. If it is necessary to operate under the raised forks, the forks must be fixed and protected with sufficiently strong chains.

Cleaning operations: Do not clean the forklift with flammable liquids. Before starting the cleaning operation, all necessary safety measures must be taken and sparks (such as short circuits) must be prevented during the operation. If the forklift is powered by a battery, the battery plug must be unplugged. When cleaning electrical and electronic components, low-intensity suction gas or compressed air should be used, and non-conductive, anti-static brushes should be used to remove dust from the surface of the components.

If the truck is cleaned with water or high-pressure cleaning equipment, all electrical and electronic components must be covered beforehand, otherwise the components may be affected by moisture and cause malfunctions. Steam jet cleaning equipment must not be used.

After the cleaning operation, the operating steps specified in the "Re-commissioning" section must be carried out.

Working on the electrical system: Work related to the electrical system must be carried out by professionals who have received electrical technical training. Before starting the operation, the operator must take all necessary measures to prevent electrical accidents. If the forklift is powered by a battery, the battery plug must also be unplugged to remove the voltage of the forklift.

Welding operation: Before starting the welding operation, the electrical and electronic components on the forklift must be removed to prevent these components from being accidentally damaged during operation.

Specified parameters: When repairing and replacing hydraulic, electrical and electronic components, you must pay attention to the specified parameters related to the forklift.

Forklift wheels: The quality of the wheels directly affects the stability and driving performance of the equipment. If it is necessary to replace the wheels installed at the factory, you must use original spare parts provided by our company to meet the data indicators on the model list. When replacing the wheels, care must be taken to ensure that the position of the forklift does not tilt (for example, the left and right wheels should be replaced at the same time).

5.3 Maintenance and inspection

The forklift should be regularly inspected to prevent fatigue and wear of the parts and to detect potential hazards before serious damage occurs.

The wear of the parts that require maintenance depends largely on the actual operation and use conditions of the truck. If the intensity of the operating conditions is higher than the general level, such as dust, large temperature fluctuations, or shift work, the maintenance interval must be

shortened appropriately.

The specific maintenance operations and the time of performing the operations are shown in the following table (maintenance checklist);

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

A = every 500 operating hours

B = every 1000 operating hours, but at least once a year

C = every 2000 operating hours, but at least once a year

The equipment user is responsible for performing the operations with a maintenance interval of W.

When the forklift is in the running-in stage (after about 100 operating hours), the equipment user should check the fixing of the wheel nuts and bolts and re-tighten them if necessary.

5.3.1 Maintenance Checklist

		Maintenance interval●			
		W	A	B	C
Braking system Check electromagnetic brake for faults				●	
Electrical System	Check the function of operating switches, display devices and component switches	●			
	Check alarm systems and safety devices		●		
	Check whether the cable is damaged and whether the terminal is firm.			●	
	Check the functionality of the micro switch settings	●			
	Check the fixation of the controller cable and the motor			●	
Power	Check the battery by inspection		●		
	Check that the battery cable connections are tight and grease the electrodes if necessary.			●	
Driving system	Check the gearbox for abnormal noise or leakage			●	
	Check the travel mechanism, grease it, and check the reset function of the operating handle.		●		
	Check wheels for wear and damage			●	
	Check wheel bearings and mounting			●	
Whole frame	Check the frame for damage		●		
Hydraulic system	Check hydraulic system function		●		
	Check hoses, pipes and connections for tightness, sealing and damage		●		
	Check the cylinder and piston for damage, seal and fixation			●	
	Check forks and load-carrying parts for wear and damage			●	
	Check the fuel tank level			●	
	Renew hydraulic oil				●
	Check and clean the hydraulic oil filter and replace if necessary				●

5.3.2 Maintenance Instructions

—Preparation before maintenance operations

To avoid accidents during maintenance, please take all necessary safety measures. The following operations must be completed carefully:

- Park the forklift as required.
- If you need to operate under the raised forklift, you must take effective measures to prevent accidents, such as tipping or sliding.

—Replacing the drive wheel (1)

Only authorized maintenance personnel can replace it.

- Rotate the 4 screws.
- Remove the drive wheel rear cover.
- Rotate the 2 screws.
- Pull up and rotate counterclockwise to remove the emergency stop switch.
- Remove the outer cover.

—Check the hydraulic oil level

If there is a bursting sound in the oil pipe during lifting, it means that the hydraulic oil is insufficient and the hydraulic oil should be replenished in time.

Steps for replenishing hydraulic oil:

- Prepare for maintenance operations.
- Rotate the 2 screws.
- Pull up and rotate counterclockwise to remove the emergency stop switch.
- Remove the outer cover.
- If necessary, add hydraulic oil of the correct specification.

After the filling is completed, lift the truck again. If you no longer hear the popping sound, the filling is complete. If the popping sound is still heard, continue to fill the truck.

—Install in the reverse order.

—Refilling the gear oil

- Prepare for maintenance operations.
- Fill the grease fitting (1) with gear oil of the correct specification.
- Refill every 1000 operating hours, but at least once a year.

—Re-entry

After cleaning or maintenance, the following operations must be performed before the truck can be put back into operation:

- Check the function of the alarm.
- Check the function of the brakes.
- Lubricate the truck according to the maintenance diagram.

5.4. Decommissioning and storing the truck

If the truck is not used for more than 2 months, it must be stored in a frost-free dry space. The

operations that must be performed before and after storage and during storage are detailed in the following sections.

During storage, the truck must be supported by a stand and all wheels must be off the ground. Only in this way can the wheels and wheel bearings be protected from damage during storage. If the storage time exceeds 6 months, the user must contact our service department to clarify the need for additional operational measures.

5.4.1 Precautions before storage

- Place the forklift in a horizontal position to prevent the hydraulic oil and electrolyte from spilling.
- Clean the forklift thoroughly.
- Check the brakes.
- Check the hydraulic oil level.
- Apply a thin layer of lubricating oil or grease to all mechanical parts that have been surface treated.
- Lubricate the forklift according to the maintenance information.
- Charge the battery

Please also comply with the relevant operating instructions and regulations of the battery manufacturer.

Spray a suitable contact spray on all exposed contact surfaces.

5.4.2 Re-operation after storage

- Clean the forklift thoroughly.
- Lubricate the forklift according to the maintenance diagram.
- Clean the battery, apply professional grease to the electrode bolts, and install and fix the battery terminals.
- Charge the battery.
- Check whether there is condensed water in the gear oil. If necessary, replace the gear shaft.
- Check whether there is condensed water in the hydraulic oil. If necessary, replace the hydraulic oil.
- Put the forklift into operation.

If the switching operation of the electrical system is difficult, the exposed contact surface should be sprayed with contact spray, and the oxide layer on the contact surface of the operating element should be removed by repeatedly performing the switching operation.

After the forklift is put into operation, the operator should immediately test the braking performance repeatedly.

5.5 Safety inspection of the forklift regularly or in the event of abnormal conditions

Safety inspections are carried out in accordance with the relevant national regulations. The company provides trained professionals who can provide customers with thoughtful safety inspection services.

Forklifts must be inspected by professionals at least once a year (pay attention to the regulations of various countries) or after abnormal conditions occur. The inspector must objectively and accurately identify and evaluate the performance and status of the equipment based on

operational safety. The inspector must have sufficient professional knowledge and work experience and be able to judge the status of the equipment and the normal performance of the protective device according to the current technical regulations and the inspection standards of the forklift.

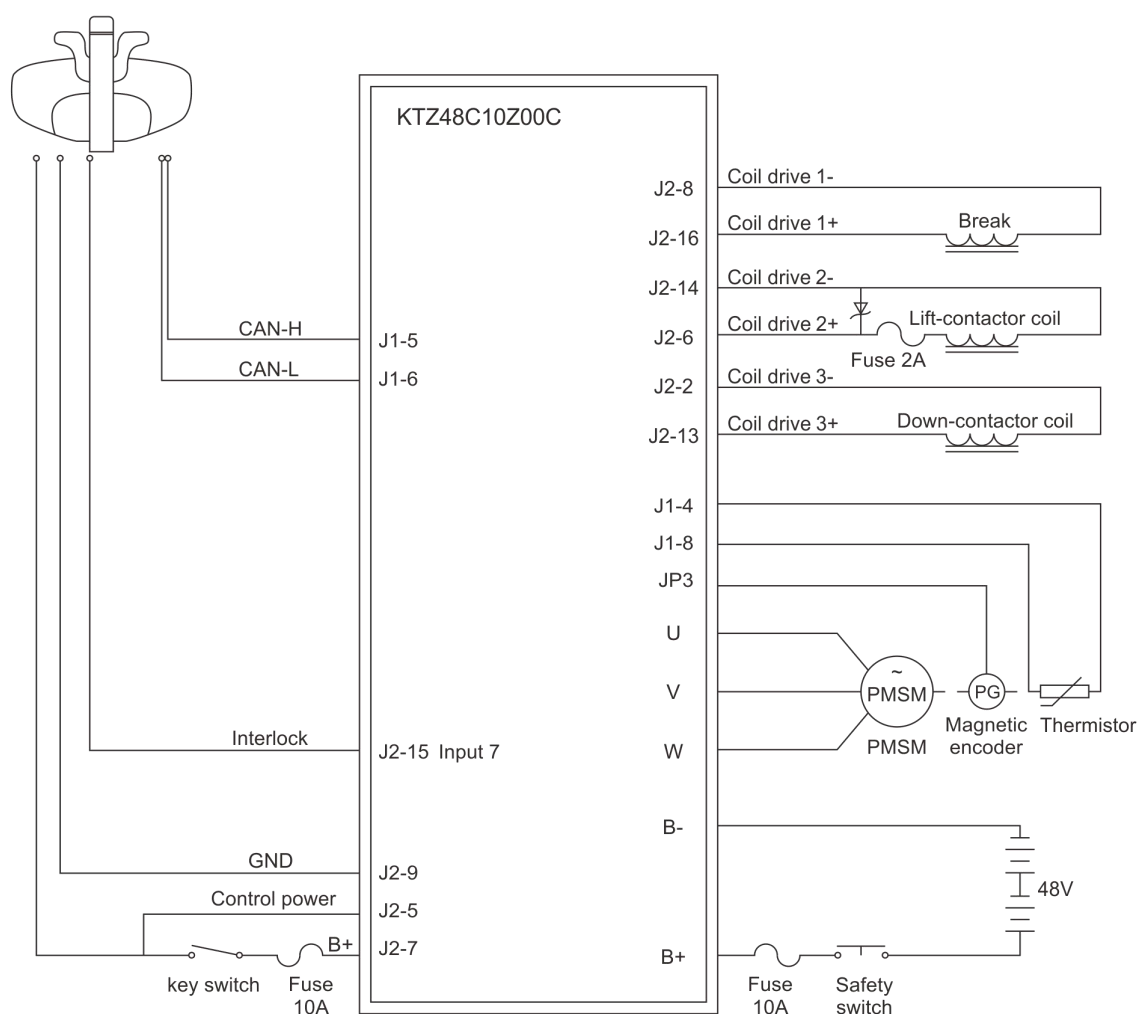
A comprehensive inspection must be carried out specifically for the safety and technical performance of the forklift in the event of an accident. In addition, the forklift must be thoroughly inspected for damage caused by improper use. The inspector must carefully record the inspection process and related data. The inspection results must be kept at least until the next inspection operation. The equipment user must take necessary measures to solve the problems found in a timely manner.

5.6 Equipment scrapping and waste disposal methods

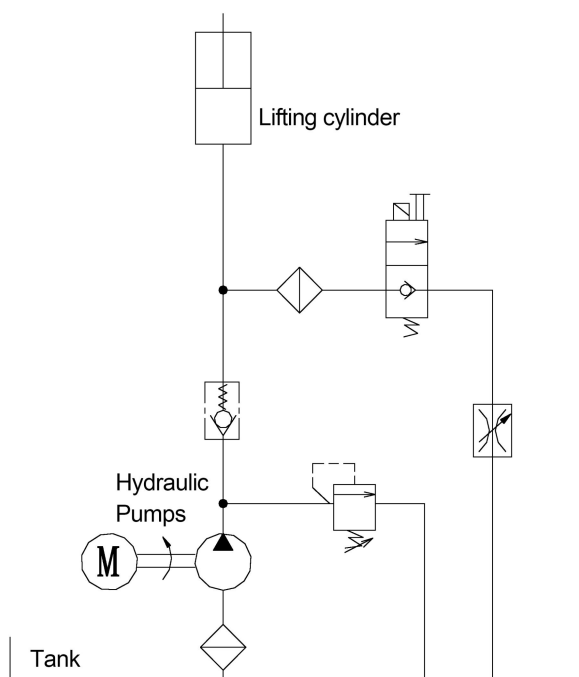
When the forklift is finally scrapped and scrapped, it must be carried out in accordance with the current laws and regulations of our country.

Special attention should also be paid to the regulations on the disposal of waste batteries, fuel, electronic and electric equipment, as well as local environmental protection regulations.

6. Electrical wiring diagram



7. Hydraulic schematic diagram



8. Troubleshooting

Please check step by step according to the operation sequence in the table below to determine the specific cause of the fault (if the fault cannot be solved by following the operation steps listed in the solution below, please contact our customer service department).

No.	Category	Error code	Fault number description	Truck status after alarm	Causes of failure and troubleshooting
1	Driving motor	1	Internal parameter error	Parking brake	The host computer parameter download error; replace the driver
2		2	Short circuit, over current	Parking brake	Check whether the motor connection is broken; Check the motor insulation; Replace the driver
3		3	high pressure	Parking brake	Check whether the battery specifications match; Avoid braking when the load is rushing downhill
4		4	Abnormally high pressure	Parking brake	
5		5	Low pressure	1)Parking brake. 2)After the handle is reset, the next operation will be run at a lower speed.	Check battery voltage and charge
6		6	Abnormally low pressure	Parking brake	Check the battery voltage and charge it; Check the battery connection to see if it is loose.

7		7	High temperature	1)Parking brake. 2)After the handle is reset, it will run at a lower speed and low torque. 3) If the temperature is lower than the alarm value, normal operation will resume after the handle is reset.	Avoid exposing the truck to high temperatures; Avoid overloading for long periods of time;
8		8	Abnormally high temperatures	Parking brake	
9	Motor	11	Overcurrent, out of control	Parking brake	Check the connection between the motor and encoder; Check whether they match the motor; Replace the driver
10		12	overload	1)Parking brake. 2)When it is lower than the alarm value, it will resume normal operation after the set time and the handle is reset.	Avoid long-term overload; Check whether the driver and motor have been adaptively adjusted.
11		13	Stall	Parking brake	Check whether the drive wheel is stuck, etc. Check the V.W connection sequence of the motor
12		14	Discontinued	Parking brake	Please check the motor connection
13		15	high temperature	1)Parking brake. 2)After the handle is reset, the system will run at a lower speed and torque. 3) If the temperature is lower than the alarm value, the system will resume normal operation after the handle is reset.	Avoid exposing the truck to high temperatures; Avoid long-term overloading; The motor temperature detection harness is damaged
14		16	Abnormally high temperatures	Parking brake	
15		19	Brake wire disconnected	Parking brake	Check the brake connection
16		20	Brake line short circuit	Parking brake	
17	Signal	21	Encoder signal abnormality	Parking brake	Check encoder connection; Replace encoder; Replace driver; Replace drive wheel
18		24	Abnormal signal inside the driver	Parking brake	Replacing the drive
19		25	Motor temperature feedback signal is abnormal	Parking brake	Confirm the motor temperature sensor wiring
20		26	Accelerator command signal abnormality	Parking brake	The handle signal is not within the normal setting range; The driver's handle type setting parameter is wrong; Check the connection between the handle and the driver

21		29		Parking brake When the handle is released back to the neutral position, it returns to normal	After turning on the power or emergency reverse operation, the handle is not in the neutral position.
22		32	The handle CAN communication is abnormal	Parking brake	Confirm the connection; confirm whether the parameter settings match
23		33	Device CAN communication abnormality	warning	Confirm the connection; confirm whether the parameter settings match
24		34	CAN parking fault processing request	Parking brake	Confirm the connection; confirm whether the parameter settings match
25		36	Adaptation in progress	Adaptive process status	This display can be used to determine whether the adaptive process has begun.
26		37	Adaptive failure	Parking brake	The motor phase line sequence is wrong; the no-load current of the drive wheel is abnormally large; abnormalities in encoder installation and other reasons lead to encoder accuracy detection not meeting the standard;
27		38	No adaptation	Parking brake	No adaptation has been performed with any motor since leaving the factory

9. Quick-Wear Parts List

No.	Name	Quantity	Unit
1	Front wheel	4	pcs
2	Lift oil seal	1	set
3	Key	1	pcs
4	Coulombmeter	1	pcs
5	Emergency switch	1	pcs
6	Fuse100A	1	pcs
7	Travel switch	1	pcs
8	Horn	1	pcs
9	Cover	1	Pc.
10	Driver wheel	1	pcs
11	Gas spring	1	pcs
12	Power socket	1	pcs
13	Sensitive switch	1	pcs

Note: no warranty for quick-wear parts; one-year warranty for complete machine.

DECLARATION OF CONFORMITY (valid, if sold within the EU)

[GB] CE Declaration of Conformity

The signatory hereby declares that the industrial truck described below in detail complies with the European Directive 2006/42/EC (Machinery Directive) including amendments as well as the legislative decree to incorporate the directives in national law. The signatory is individually authorized to compile the technical documents.

[D] EG-KONFORMITÄTSERKLÄRUNG

Der Unterzeichner bescheinigt hiermit, dass das im Einzelnen bezeichnete Flurförderzeug den Europäischen Richtlinien 2006/42/EG (Maschinenrichtlinie) einschließlich deren Änderungen sowie dem entsprechenden Rechtserlaß zur Umsetzung der Richtlinien in nationales Recht entspricht. Der Unterzeichner ist bevollmächtigt, die technischen Unterlagen zusammenzustellen.

[E] DECLARACIÓN DE CONFORMIDAD CE

El signatario certifico por medio de la presente que la carretilla industrial descrita en esta documentación cumple con la Directiva Europea 2006/42/CE (Directiva de máquinas), incluyendo sus respectivas modificaciones, así como con los Reales Decretos de transposición de la directiva al derecho nacional. El signatario dispone de una autorización individual que le permite compilar la documentación técnica.

[F] DECLARATION DE CONFORMITE CE

Les signataires certifient par la présente que les chariots désignés individuellement satisfont aux directives européennes 2006/42/CE (directive machine), y compris leurs modifications ainsi que les décrets légaux concernant la mise en oeuvre des directives dans le droit national. Les signataires sont respectivement et individuellement autorisés à regrouper les documents techniques.

[NL] EG-CONFORMITEITSVERKLARING

De ondertekenaars verklaren hiermee, dat de hieronder genoemde interne transportmiddelen voldoen aan de Europese richtlijnen 2006/42/EG (Machinerichtlijn), inclusief de wijzigingen en wetgeving voor de omzetting van de richtlijnen in nationaal recht. Ondergetekenden zijn ieder individueel gemachtigd het technisch dossier samen te stellen.

[P] DECLARAÇÃO DE CONFORMIDADE CE

Os signatários vêm por este meio certificar que os veículos industriais descritos em pormenor cumprem as directivas europeias 2006/42/CE (directiva relativa a máquinas) incluindo as suas alterações e o respectivo documento legal com vista ao cumprimento das directivas no enquadramento legal nacional. Os signatários estão individualmente autorizados a compilar os documentos técnicos.

[I] DICHIARAZIONE DI CONFORMITÀ CE

Con la presente i firmatari attestano che il veicolo per movimentazione interna è conforme alla direttiva europea 2006/42/CE (Direttiva Macchine), comprese le relative modifiche, nonché al documento legale per la trasposizione di tali direttive nel diritto nazionale. I sottoscritti sono singolarmente autorizzati alla creazione della documentazione tecnica.

[BG] ЕВРОПЕЙСКА ОБЩНОСТ - ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

С настоящото подписаните удостоверяват, че специфицираното тук моторно подемно-транспортно средство отговаря на Европейските директиви 2006/42/ЕО (Директива за машините), включително на техните изменения, както и на съответното постановление за прилагане на директивите в националното право. Подписаните са съответно упълномощени поотделно да съставят техническата документация.

[CZ] EG - PROHLÁŠENÍ O SHODĚ

Níže podepsaní tímto potvrzují, že podrobný popis vozidla s motorovým pohonem odpovídá Evropským směrnici 2006/42/EC (směrnice pro strojní zařízení) včetně jejich pozdějších úprav, jakož i příslušným právním výnosům pro uplatnění příslušné směrnice v rámci národního práva. Každý z podepsaných je jednotlivě zplnomocněn k vytvoření technických podkladů.

[DK] EF-OVERENSSTEMMELSESESKLÆRING

Undertegnede erklærer hermed, at følgende truck overholder de væsentligste krav i Rådets direktiv 2006/42/EF (Maskindirektivet) om indbyrdes tilnærmelse af medlemsstaternes lovgivning. Alle undertegnede har fuldmagt til selvstændigt at sammensætte det tekniske materiale.

[EST] EL vastavusavaldus

Настоящим лица, подписавшие документ, удостоверяют, что напольное подъёмно-транспортное средство с силовым приводом в указанной спецификации соответствует Европейским директивам 2006/42/EG (Директива по машинам), включая изменения в них, а также соответствующему правовому документу по трансформации директив в национальное право. Каждое по отдельности лицо, подписавшее документ, имеет полномочия для составления технической документации.

[FIN] EU-YHDENMUKAISUUSSELOSTUS

Allekirjoittavat todistavat täten, että yksilöity moottoriajoneuvo vastaa eurooppalaista direktiiviä 2006/42/EY (konedirektiivi) kaikkinä muutoksineen sekä säädöksiä, jolla direktiivi on saatettu osaksi kansallista lainsäädäntöä. Allekirjoittajilla on kullakin erikseen valtuudet laatia teknisiä dokumentteja.

[GR] ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΟΚ

Οι υπογράφοντες βεβαιώνουν διά της παρούσης ότι ο λεπτομερώς περιγραφόμενος μηχανοκίνητος φορέας διαδρόμου συμμορφώνεται προς την Κοινοτική Οδηγία 2006/42/ΕΚ («Μηχανές»), συμπεριλαμβανομένων των τροποποιήσεων, καθώς και των νομοθετικών διαταγμάτων για τη μεταφορά Οδηγιών στην εθνική νομοθεσία. Οι υπογράφοντες είναι σε κάθε περίπτωση εξουσιοδοτημένοι ατομικά να καταρτίσουν τα τεχνικά έγγραφα.

[H] EU KONFORMITÁSI NYILATKOZAT

Alulírottak ezennel igazolják, hogy a részletesen leírt, gépi meghajtású önjáró targonca megfelel a 2006/42/EK (Gép Irányelv) Európai Irányelveknek, beleértve azok módosításait, valamint az irányelvek nemzeti jogba történő átültetésére irányuló, megfelelő jogi rendelkezést. Továbbá az alulírottak mindegyike rendelkezik meghatalmazással arra nézve, hogy összeállíthatja a műszaki dokumentációt.

[LT] ES atitikimø deklaracija

Žemiau pasirašę asmenys patvirtina, kad atskirai aprašytas elektra varomas pramoninis vežimėlis atitinka Europos Sąjungos direktyvą 2006/42/EB (Mašinų direktyva), įskaitant ir jos pakeitimus bei tai atitinkantį teisės aktą dėl direktyvų įgyvendinimo nacionaliniuose teisės aktuose. Pasirašę asmenys yra atskirai atitinkamai įgalioti sudaryti techninius dokumentus.

[LV] ES atbilstības deklarācija

Ar šo zemāk parakstījušās personas apliecina, ka detalizēti aprakstītais mehāniskās piedziņas iekārtvējs atbilst Eiropas Savienības direktīvām 2006/42/EK (Mašīnu direktīva), ieskaitot to izmaiņas, kā arī atbilstošo tiesisko rīkojumu direktīvu pielāgošanai nacionālajai likumdošanai. Parakstījušās personas ir atsevišķi pilnvarotas sastādīt tehniskās dokumentācijas.dokumentācijas.

[IN] EU-KONFORMITETSERKLÆRING

Undertegnede bekrefter hermed at de enkelte betegnede gaffeltruckene med kraftdrift overensstemmer med de europeiske retningslinjene 2006/42/EC (masinretningslinje) med endringer, samt den tilsvarende rettsforordning til implementering i nasjonal lovgivning. De undertegnede er hver for seg bemyndiget til å sammenstille de tekniske dokumentene.

[PL] DEKLARACJA ZGODNOŚCI Z NORMAMI UE

Sygnatariusze potwierdzają niniejszym, że wyszczególniony wózek jezdniowy z napędem odpowiada dyrektywie europejskiej 2006/42/WE (Dyrektywa maszynowa) wraz ze zmianami oraz rozporządzeniem prawnym dotyczącym wdrożenia dyrektywy do prawa krajowego. Każdy z sygnatariuszy jest upoważniony do samodzielnego zestawienia dokumentacji technicznej.

[RO] DECLARAȚIE DE CONFORMITATE CE

Subsemnatii adeveresc prin prezenta că utilajul de transport uzinal cu motor, descris individual, corespunde directivelor europene 2006/42/CE (Directiva privind mașinile) inclusiv modificărilor lor, precum și actului legislativ corespunzător prentu transpunerea directivelor în dreptul național. Semnatarii sunt împuterniciți individual să redacteze documentația tehnică.

[RUS] Декларация соответствия стандартам ЕС

Настоящим лица, подписавшие документ, удостоверяют, что напольное подъёмно-транспортное средство с силовым приводом в указанной спецификации соответствует Европейским директивам 2006/42/EG (Директива по машинам), включая изменения в них, а также соответствующему правовому документу по трансформации директив в национальное право. Каждое по отдельности лицо, подписавшее документ, имеет полномочия для составления технической документации.

[S] EG-KONFORMITETSFÖRKLARING

Undertecknad intygar härmed att den specificerade trucken är tillverkad i överensstämmelse med de Europeiska direktiven 2006/42/EG (Maskindirektivet), inklusive ändringarna i dessa och motsvarande harmoniseringar i nationell rätt. Undertecknade är var och en för sig berättigad att sammanställa de tekniska dokumenten.

[SK] vyhlásenie o zhode

Podpísané osoby týmto potvrdzujú, že podrobne popísaný mechanicky poháňaný pozemný dopravník zodpovedá európskym smerniciam 2006/42/ES (smernica o strojných zariadeniach) vrátane ich zmien, ako aj príslušnému právnomu výnosu na uplatnenie smerníc v národnom práve. Podpísané osoby sú vždy jednotlivo splnomocnené na zostavovanie technickej dokumentácie.

[SLO] EU IZJAVA O SKLADNOSTI

Podpisani potrjujemo, da podrobno opisano gnano vozilo za talni transport ustreza Evropski direktivi 2006/42/ES (Direktiva o strojih), vključno z njenimi spremembami in ustrezno pravno uredbo za izvajanje direktiv v nacionalno zakonodajo. Podpisniki so posamično pooblašeni za sestavljanje tehnične dokumentacije.

[TR] AB Uygunluk Açıklaması

İmza sahipleri bu yazı ile, belirtilen kuvvet tahrikli istif aracının Avrupa Yönetmeliklerine 2006/42/EG (Makine Yönetmeliği), bunun getirdiği değişikliklere ve yasal yönetmeliklerin ulusal yasaya göre değişmesi için olan yasal genelgeye uygun olduğunu onaylamaktadırlar. Her bir imza sahibi teknik belgeleri oluşturma konusunda yetkilidir.

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- (3) Year of constr./ Baujahr/ Année de constr./ Bouwjaar/ Año de constr./ Anno di costruzione/ Produktionsår/ Byggeår/ Tillverkningsår/ Valmistusvuosi / Ano de fabrico / ΕΣΟ ΚΑΣΑ ΚΕΤΗ/ Rok výroby/ Gyártási év/ Rokprodukcji / Letnik / Год изготовления / Üretim yılı / Väljallaskeasta / Izgatavošanas gads / Gamybosmetai
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- (5) Date/ Datum/ Data/ Fecha/ datum/ Dato/ päiväys/ Kuupäev/ Datums/ / Dátum/ dátum/ tarih/
- (6) Authorised signatory/ Im Auftrag/ pour ordre/ Incaricato/ Por orden de/ por procuração/ op last van/ på vegne af/ på uppdrag/ Etter oppdrag/ psta./ Ülesandel / pavedus / v.i. / По поручению / megbízásából / длжносно лице / z pověření / z poverenia / po nalogu / na polecenie / din sarcina / adina / θαηλ εληνιή

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- Your truck might be sold outside the EU; this declaration is then not valid.
 - Or the declaration is not complete.
- In this case please ask for a copy