GAZELLE®

G2517

Electric Order Picker
User Manual



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Ⅰ.The safety instructions

1.1 Dangerous notified

◆Please carefully read the instructions in the manual and safety instructions, Any violation of operating requirements, All the consequences arising from, Own responsibility by the operator.

◆Before operation，Make sure you understand and practice personal rules of safe operation in the operating manual machine：

(1) Avoid hazardous situations,

◆Know and understand the safety instructions before proceeding to the next step.

(2) Always perform pre-use check,

(3) Workplace inspection,

(4) According to the design intent of the machine to use the machine.

◆Should read, understand and follow the manufacturer's instructions and safety instructions - safety manual, operating manual and machine labeled stickers.

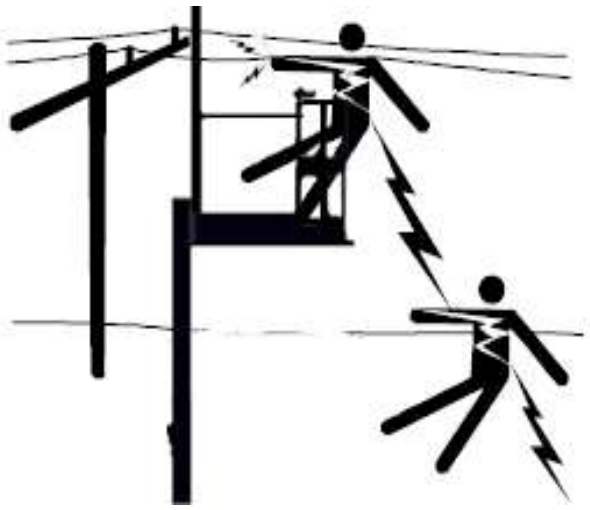
◆Should read, understand and comply with user safety instructions and work site regulations.

◆Required to read, understand and comply with all applicable government regulations.

◆Users appropriate safe machine operation training.

1.1.1 The risk of electric shock

●This machine is not insulated, and not provide protection from contact with or close to the wire.



Follow the applicable government regulations and the following table shows, keep a safe distance from the machine with wires.

Shortest safety close to the distance

Voltage range （Phase to **phase**）	Shortest **safety close to the distance**（Meter）
0～50 KV	**3**
50～200 KV	**5**
200～350 KV	**6**
350～500 KV	**8**
500～750 KV	**11**
750～1000 KV	**14**

●Move to the platform, the wire swing or relaxation, Beware of strong winds or gusts.

●If the machine has come into contact with live wires, away from the machine. Cut off the power before the personnel on the ground or platform must not touch or operate the machine.

●Do not use the machine in the outdoor lightning or storms.

●Do welding machine as a ground.

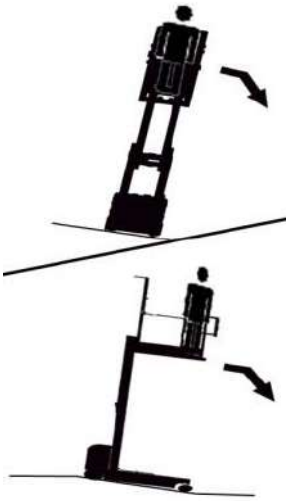
1.1.2 Danger of capsizing

●Personnel, equipment and materials shall not exceed the maximum carrying capacity of the platform.

The platform maximum carrying amount

Model	**The platform maximum carrying amount**	**Its maximum staff**
G2517	**300KG**	**1**

●Only in a sturdy, flat on the ground in order to enhance the platform.



●Do not alter or prohibit the use of limit switches.

●Raise the platform travel speed should not exceed **1.1Km / h**.

●Do not enhance the platform when the wind speed may exceed **12.5m/s**. Platform to enhance more than **12.5m/s** wind speed, care should be taken to reduce the platform and do not continue to operate the machine.

●Do not operate the machine in strong winds or gusts, not to increase the surface area of the platform or the load. Exposed to the wind in the area will reduce the stability of the machine.

●Platform when promoted, not flat, gravel unstable zone or smooth surface, close to the hole and steep slopes, etc. traveling. If you must pass, to reduce platform, slow moving.

●Do not use the machine on the road more than the machine slope and side slope rating. **(Slope rating applies only to the mast collapsed state machine)**

Model	Maximum slope rating Collapse status	Maximum side slope rating Collapse status
G2517	30%	30%

Note: Slope rating is subject to ground conditions and restrictions of traction

●Do not use the platform to get caught, stuck or near other objects that hinder its normal movement the platform controller release platform. If you intend to use the manual lowering valve release platform, you need the staff left on the platform before operation.

●Do not change or damage to any parts of the machine that may affect the security and stability.

●Without the prior written permission of the manufacturer, do not modify or alter the altitude vehicles. Additional means for tools or other material is placed on the platform, pedals or guardrail installed will increase Platform weight and surface area or an increase in the load.

●Do not push and pull on the platform outside the object.

Maximum allowable lateral force

Model	Maximum allowable lateral force	Its maximum staff
G2517	200N	1

●Should not be placed on any part of this machine, they finally saw fixed or overhanging loads.

●Do not use a ladder or scaffolding on the platform or eyes on any parts of the machine.

●Do not use the machine in mobile or surface or vehicle.

●The machine can only transport distribution is uniform and can be moved by the people on the platform security tools and materials.

●Make sure all tires in good condition, bolts, nuts installed correctly.

●Do not use the battery smaller than the original weight. Battery not only played a the counterweight role, and stability is essential to keep the machine. Each battery weight must reach **22.5KG**.

●Do not use the machine as a crane.

●Do not use the platform to push the machine or other objects.

●Do not let the platform contact with adjacent components.

●Do not be bundled with the platform in the adjacent member.

●Do not load is placed on the outside of the periphery of the platform.

1.1.3 The risk of falling

●The guard rail system provides fall protection. Workplace or requires the use of personal fall protection equipment, use of safety equipment should be based on the protection equipment manufacturer's instructions and applicable government requirements on the platform



●Do not sit, stand or climb on the fence on the platform, at any time should be maintained securely standing on the platform floor.

●Keep the platform floors clean, to prevent slipping.

●The entrance door is closed before the operation.

●Detect no fence or entry can not be properly installed to ensure safe operation, do not operate the machine.

1.1.4 Danger of a collision

Starting or operating machinery, it should be noted that the presence of the line-of-sight and blind spots.

●Before the release of the brakes, the machine must be in a horizontal plane or have been fixed.

●Check the work area to avoid overhead obstructions or other possible dangers.



●Do not operate the machine in dangerous driving or playing operation.

●Only the platform lower area of no persons or obstacles to decrease the platform.

●When the When seize platform guardrail, Beware of have squeeze the danger.

●Depending on the ground conditions, the degree of congestion, slope, location of personnel and may be caused by the collision of any other factors that limit the traveling speed.

●Do not operate the machine of any crane or moving overhead machinery in online, unless the crane controller is locked or has taken precautions to prevent any potential collision.

1.1.5 Crushing Hazard

●Do not place hands and arms close to the machine with crushing hazard areas.

●Security arm is not in the proper position, do not be operating under the platform or scissor chain section.

●When using the controller to operate the machine on the ground, to maintain a normal judgment has planned. Keep a distance between the operator, the machine and fixed objects.

1.1.6 The risk of component damage

●Do welding machine as a ground.

1.1.7 The risk of explosion and fire

●In dangerous or explosive gases or particles may be present, and not to use the machine, or to charge the battery.

1.1.8 The risk of damage to the machine

●Do not use a damaged or malfunctioning machine.

●Before each time you change jobs, should be thoroughly machine pre-use check. Damage or failure of the machine should be tagged immediately, and stop using it.

●Ensure all maintenance operations carried out in accordance with the provisions of the manual.

●Ensure the appropriate stickers position and easily identifiable.

●Ensure that the operating manual, safety and responsibilities manuals intact and legible.

1.1.9 Risk of injury

●Do not operate the machine when the case of hydraulic oil spill. Hydraulic oil oil spill may penetrate or burn the skin.

●Any error contact with the lid following parts may result in serious injury. Only trained service personnel to repair.

Recommendation: only during the pre-operational checks and checks by the operator. During the operation, all of the lid must be kept closed and locked state.

1.2 Battery Safety Instructions

1.2.1 Burn hazard

●Batteries contain acid substances, the use of batteries should wear protective clothing and to wear protective glasses.





●Overflow avoid the acidic substance in the battery or in contact therewith, if overflow the batteries acidic substance can be baking soda and water and overflow.

1.2.2 The danger of explosion





●Prohibited sparks, flames and lighted cigarettes near the battery, the battery can release explosive gases.

●Charger rack should be kept open during the entire charging.

●Do not use the tools that may cause sparks to contact the battery terminals or cable clamp.

1.2.3 The risk of component damage

●Do not use greater than **24V** battery charger to charge the battery.

●During charging the battery or charger is exposed to water or rain.

1.2.4 The risk of electric shock



●Only the battery charger is connected to the AC three-wire grounded power outlet.

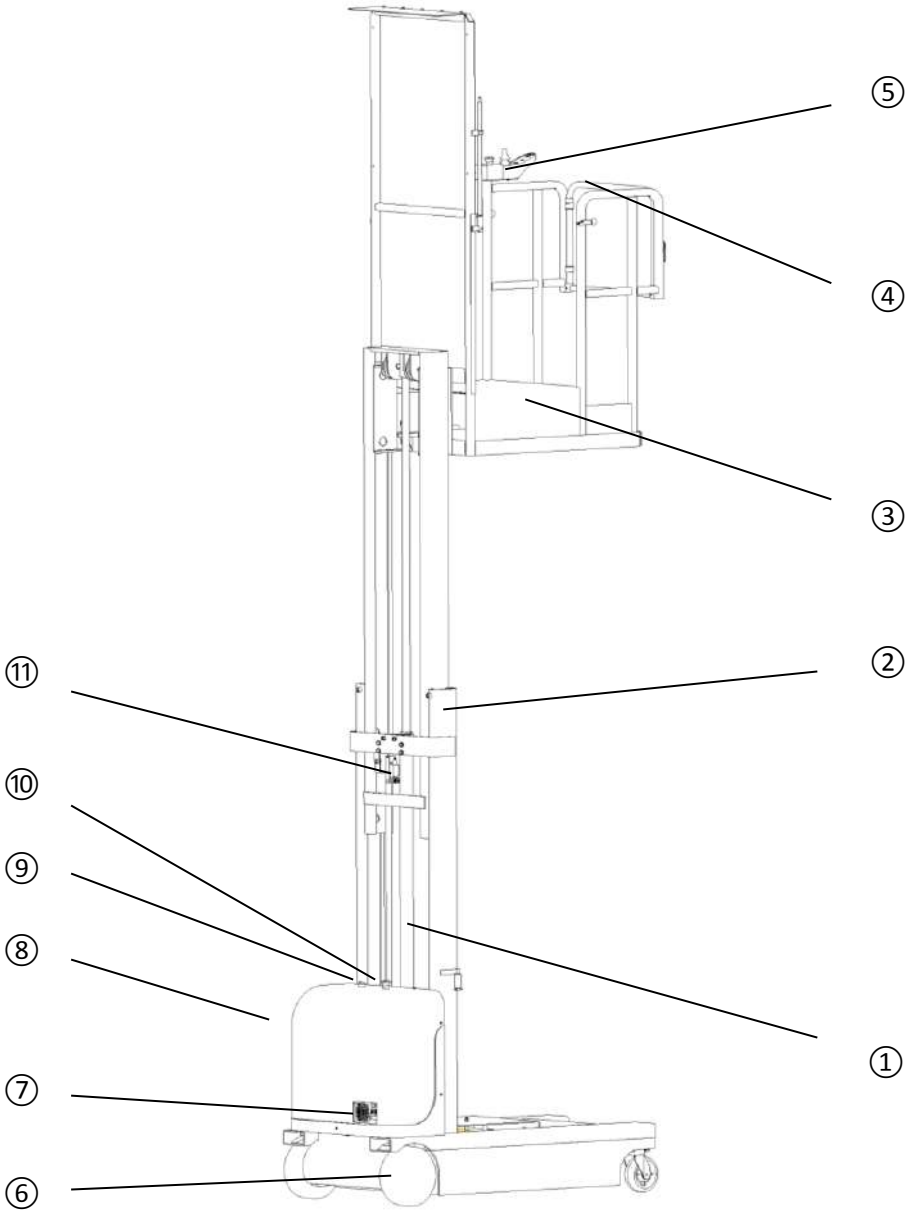
●Daily check the cables and wires for damage. If there is damage to be replaced before operating before operation.

●Avoid contact with the battery terminals and electric shock, remove all rings, watches and other metal jewelry before operation.

1.2.5 Upgrade when the danger

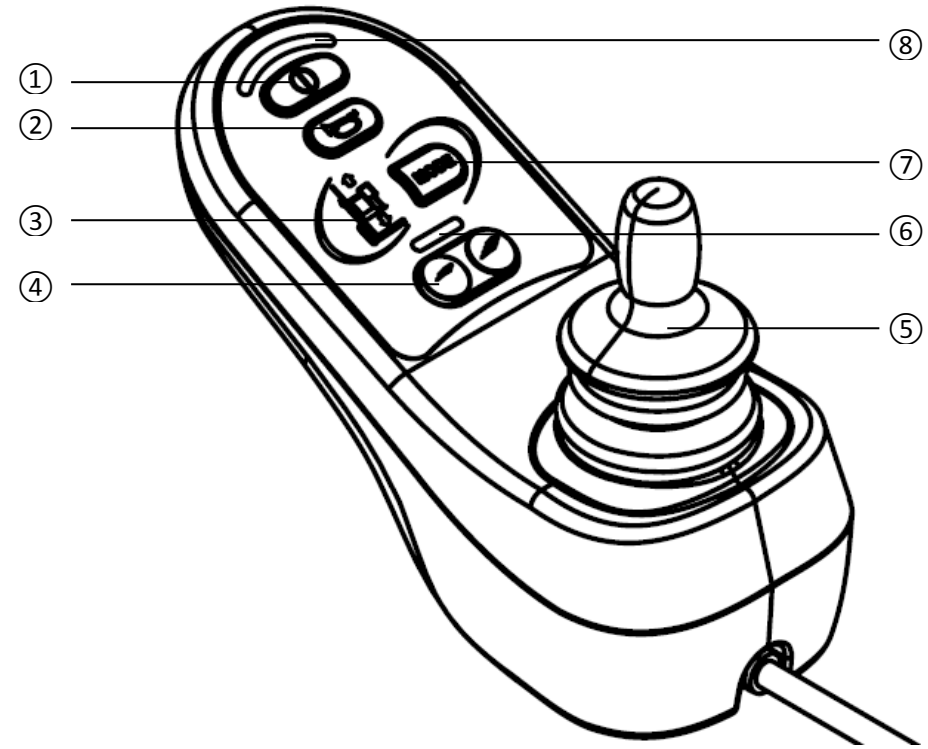
●Enhance the battery, make sure that the appropriate number of personnel and upgrading methods.

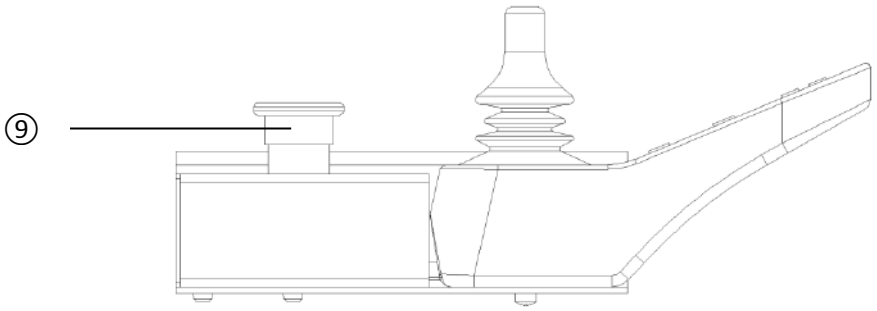
Ⅱ. The legend



1. Lifting cylinder
2. Mast
3. Material is placed at the
4. Platform doors
5. Platform Controller
6. Driving wheel
7. Charger
8. Manual lowering valve
9. Key switch
10. Ground "emergency stop" switch
11. Travel switch

Platform Controller





1. System Switch

2. Horn button

3. Lift indicator - lifting mode indicator

4. Growth / deceleration button

5. Thumb operating handle

● **LIFT MODE:**

Operating handle forward - **Platform rise**

The operating handle backwards - **Platform decline**

● **DRIVE MODE:**

Operating handle forward - **Machine forward**

Operating handle backwards - **Machine backward**

6. Driving lights - **drive mode and speed indicator**

7. Mode switch button

8. Battery power display table

9. Emergency stop button

Transportation, improve

Precautions

1. The transport vehicle must be parked on a level surface.

2. Loading or unloading machinery, transport vehicles must be secured to prevent rolling.

3. Ensure that the vehicle capacity, loading surfaces enough to support the weight of the machine. Specific weight refer to the nameplate on the machine.

4. Transportation winch their description of the loading and unloading machine.

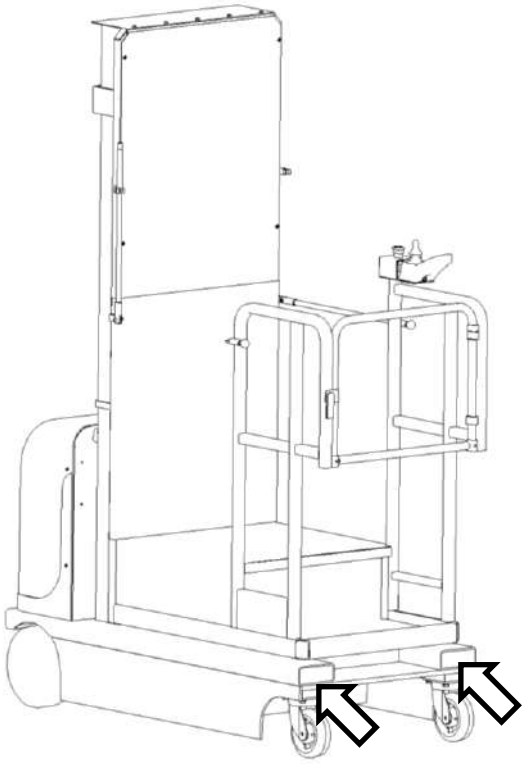
Safety matters

1. Only qualified forklift loaders to handling machine.

2. Prior to transport, the key switch to the off position and remove the key.

3. A comprehensive inspection of the machine, to prevent the machine from loose parts.

4. Confirmation forklift sufficient to enhance the weight of the machine.



Forklift loading and unloading fork into the mouth

Ⅲ.The matters before use

◆Before operation，Make sure you understand and practice personal rules of safe operation in the operating manual machine：

（1） Avoid hazardous situations,

◆**Know and understand the safety instructions before proceeding to the next step.**

（2） Always perform pre-use check,

（3） Workplace inspection,

（4） According to the design intent of the machine to use the machine.

Basic principles

◆Always perform a pre-use check and regular maintenance is the operator's responsibility.

◆Pre-use check is a visual inspection performed by the operator prior to each change jobs. The purpose of the inspection machine operator can be found in operation before the existence of obvious problems.

◆Pre-use check can also be used to determine the need for routine maintenance program, but the operator can only perform routine maintenance items specified in this manual.

◆Please refer to the following list and check each project.

◆If damage is found or the factory state any unauthorized changes should be marked on the machine and stop using.

◆According to the manufacturer's specifications, only qualified service personnel to repair the machine. In the repair has been completed, the operator must check once again perform pre-use check.

◆According to the requirements listed on the manufacturer's requirements and responsibilities manuals, qualified service personnel should perform regular maintenance checks.

3.1 Check before use.

●Ensure that the operating manual, safety and responsibilities manuals intact and legible.

●Ensure that all standard paste clear, easy to read and the appropriate location.

●Check for hydraulic oil leaks and proper oil level. Needed injection of hydraulic oil.

●Check the following components or areas for damage, improper installation or parts missing and unauthorized changes:

1. **Electrical components, wiring or cable**
2. **Hydraulic power unit, fuel tank, hose, fittings, hydraulic cylinders and integrated valve block**
3. **Battery and its connection**
4. **Drive motor**
5. **The wear pads**
6. **Tthe tire**
7. **Limit switches, horn**
8. **Platform entrance door**
9. **Indicator**
10. **The platform control handle**

●Check the machine to ensure that no following problems:

1. **Ensure that the weld or structural components without cracks phenomenon**
2. **Ensure the machine without a concave beams or damage phenomena**
3. **Ensure machine no serious rust, corrosion or oxidation phenomena**
4. **To ensure that no structural components or other critical parts missing**
5. **Ensure fasteners and pins in the improper position or not tighten the phenomenon**
6. **To ensure that no side bar bolts are not tightened phenomenon**

3. 2 Routine maintenance

◆The operator can only perform routine maintenance projects in this manual.

3.2.1 Regular maintenance: hydraulic oil level

●This maintenance can make the hydraulic oil is maintained in a suitable oil critical position on the machine work. Is inappropriate bit of oil such as hydraulic oil, will damage the hydraulic components. By a conventional inspection, the operator is able to determine the changes in the hydraulic oil, and this change can be prompted to the hydraulic system if a problem exists.

Note: 1. The platform collapsed state, manually increase platform to the safety arm to operate this program.
2. Determined by a conventional check the oil level in the hydraulic oil.
3. Add hydraulic oil according to the applicable specifications. (Do not add excess)

3.2.2 General Maintenance Second: the battery

●Battery status intact on a normal machine performance and security are critical to the operation. Damaged cables and wiring may lead to parts and dangerous happens.

3.3 Workplace inspection

Aware of and avoid the following hazardous situations occur:

1. Offs or holes
2. Protrusions, floor obstructions or debris
3. An inclined surface
4. Firm or smooth surface
5. A dangerous position
6. Withstand the machine total load force exerted surface supports
7. Wind and weather conditions
8. Unauthorized personnel appears
9. Other possible unsafe conditions

Ⅳ. The instructions for use

◆Before operation，Make sure you understand and practice personal rules of safe operation in the operating manual machine：

（1） Avoid hazardous situations,

◆Know and understand the safety instructions before proceeding to the next step.

（2） Always perform pre-use check,

（3） Workplace inspection,

（4） According to the design intent of the machine to use the machine.

Basic principles

◆Using the description the portion providing specific description of various aspects for use of the machine. Follow the operating manual, security manual and responsibilities manuals on all safety rules and instructions of

the operator's duties.

◆In addition to the personnel and tools and materials to enhance air workplace, this machine is used for other purposes is unsafe.

◆Only trained and authorized personnel shall be allowed to use the machine at different times in the same work shift, more than one operator using the same machine, then they must be qualified operating personnel and follow the operating manual, safety manual and all the safety rules and guidance responsibilities manual.

4.1 Boot

1. The ground controller and platform controller on the "emergency stop" button to pull out to the open position.
2. The key switch to the open position.

4.2 Emergency Stop

1. To boot.
2. On the ground / platform controller "emergency stop" pushed to the off position.

●If you press any "emergency stop" buttons are still functional in the run, you should repair the function.

4.3 Platform rise

1. To boot.
2. Press the "mode switch" button, switch to the lift mode.
3. The operating handle with your thumb slowly moved forward operating handle, its off-center position.

4.4 Platform lowering

1. To boot.
2. Press the "mode switch" button, switch to the lift mode.
3. With the thumb operating handle slow moving backward operating handle, its off-center position.

4.5 Platform for mobile and steering

●MOVE FORWARD

1. To boot.
2. Press the "mode switch" button, switch to the drive mode.
3. The operating handle with your thumb slowly moved forward operating handle, its off-center position.

●MOVE BACKWARD

1. To boot.
2. Press the "mode switch button, switch to the drive mode.
3. With the thumb operating handle slow moving backward operating handle, its off-center position.

●GROWTH RATE OF MOBILE

1. To boot.
2. Press the "mode switch" button, switch to the drive mode.
3. Press the "growth" button to increase the speed of movement of the machine.

●DECELERATION MOBILE

1. To boot.
2. Press the "mode switch" button, switch to the drive mode.
3. "Deceleration" button is pressed to reduce the speed of movement of the machine.

●STEERING

1. To boot.
2. Press the "mode switch button, switch to the drive mode.
3. Slow operating handle with your thumb to move in the desired direction operating handle to make it off-center position.

4.6 The system is powered off

1. To boot.
2. Go to the "switch" platform controller position.
3. The "system switch" button is pressed.

4.7 Shutdown

1. Press the "emergency stop" button and key switch to the closed position

4.8 Storage of

1. The platform collapsed state.
2. Select a safe parking position is a solid, level ground, there are no obstacles and avoid busy transport.
3. Shut down and unplug the key to prevent unauthorized use.
4. The locking wheel.
5. To charge the battery.

4. 9 Battery and charger

Precautions

1. Does not use an external charger or booster battery.
2. In the universal good place for battery charging.
3. Using the charger stickers correctly input AC voltage to be charged.
4. You must use the approved battery and charger.

Charging matters

1. To ensure that the battery is connected before charging.
2. Machine ventilation should be maintained throughout the charging process.
3. Ventilation cover, back into the battery.
4. The battery charger is connected to a grounded AC circuit.
5. Full battery charger will give directions.

Note: If you do not use the machine for a long time, on a regular basis to charge the battery. Failure to do so will cause battery damage.

V. Specifications

●Machine specifications

Specification	G2517
Overall weight	675KG
Overall height	2.03m
Overall Width	0. 7m
Overall length	1. 53m
Maximum tilt angle	0–3°
Maximum **gradeability**	30%
Traveling **speed - Shoulong state**	4Km/h
Travel speed **- Lifting**	1. 1Km/h
Minimum ground clearance	0.05m
Wheelbase	1. 24m
Front wheel	6in
Rear wheel	¢ 250*80

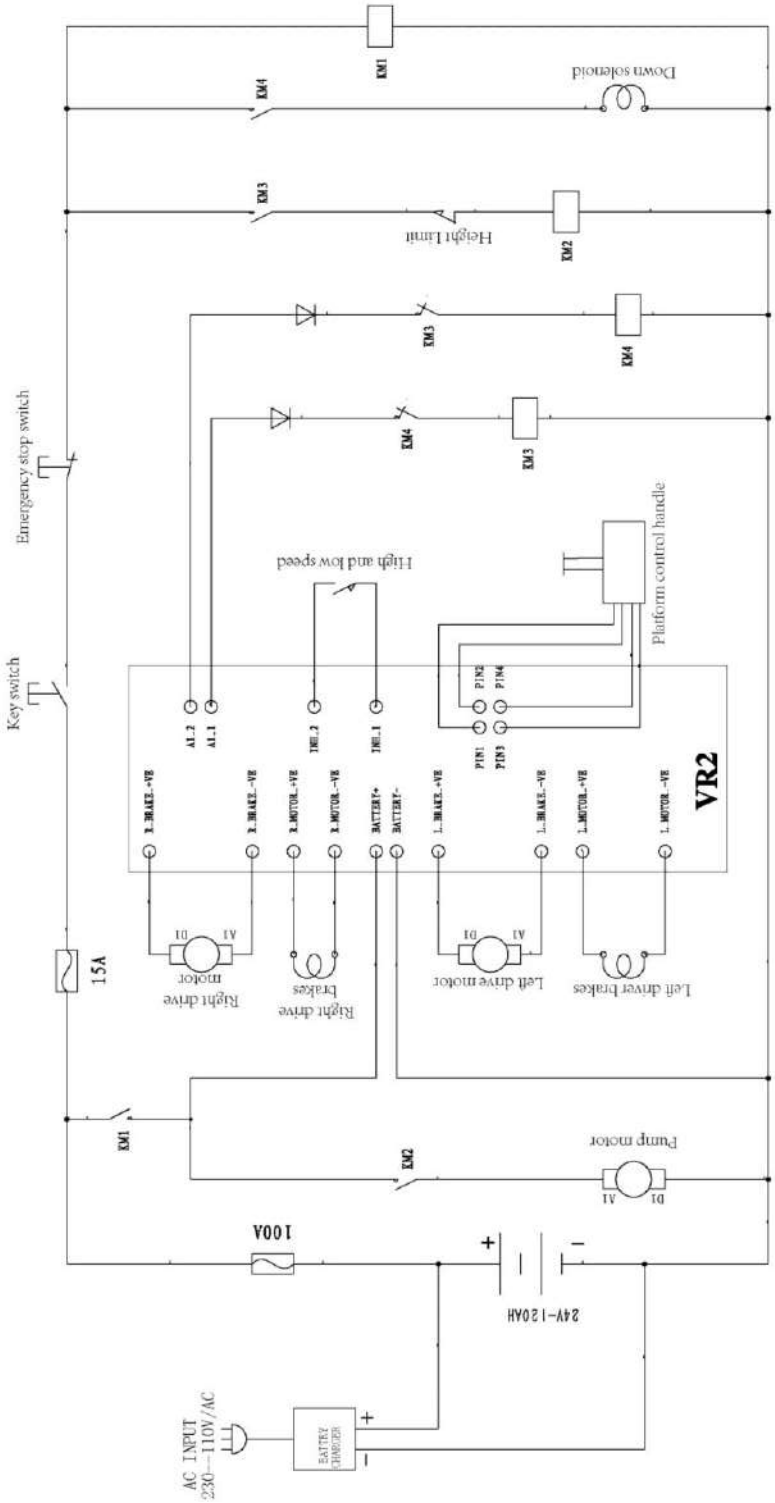
●Electrical Specifications

Specification	G2517
Battery	2–12V/120Ah
Charger	24V/15A
Drive motor	2–24V/0. 5KW
Lifting Motor (**DC**)	24VDC/1. 5KW

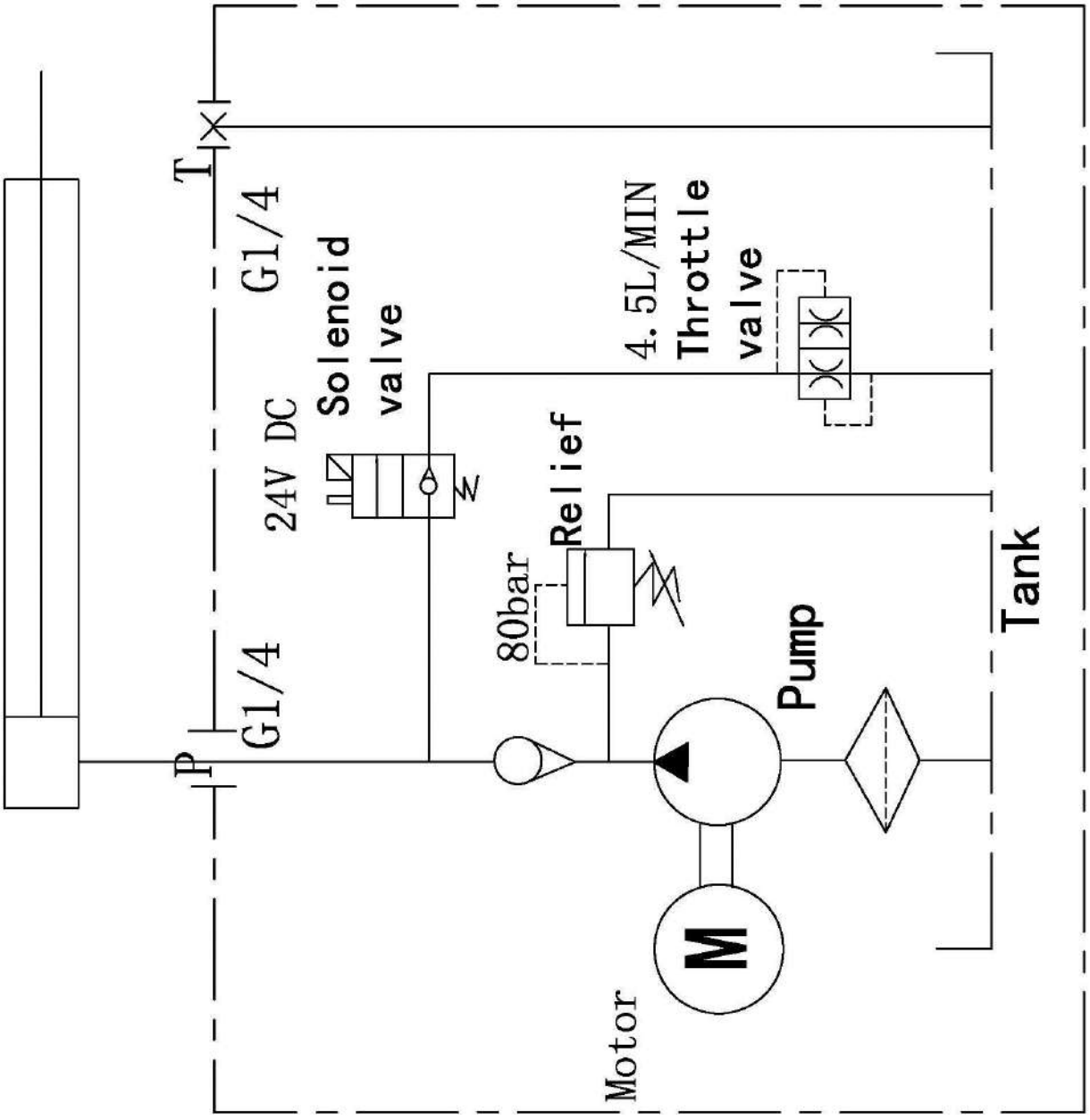
●Platform data

Specification	G2517
Safe Working Load	300KG
Platform size	0. 95*0. 64m
Maximum **working height**	6.5m
Maximum **platform height**	4.5m
Rise in **the rate of decline**	25 / 23sec

Ⅵ. Electrical schematics



Ⅶ.Hydraulic valve block schematic



Ⅷ. Regular care and maintenance

●Quarterly, annual and biennial maintenance must be performed by trained this machine maintenance training and qualified personnel. Use regular routine examination, and remove the abnormal phenomenon, do not use faulty car to ensure the safety and extended machine life.

●Machine idle for more than three months, must be carried out quarterly checks before back into use.

●Maintenance: The maintenance of the car is generally divided into day-to-day maintenance and regular maintenance of mechanical, hydraulic, and electrical parts.

●Routine maintenance: once a day, the main content is the battery surface clean, check the power cord is firmly keep the body surface clean.

●Mechanical Maintenance: every six months once the main content is to check the various fasteners are tightened, flexible rotation of each wheel.

●Hydraulic maintenance: once every six months, whether the main check the fuel tank in a normal state, whether internal leakage and leakage of hydraulic fittings, hydraulic hose, no leakage. The hydraulic oil is clean and generally changed every **12** months with hydraulic oil.

●Electrical maintenance: once every three months, battery terminals are clean, as otherwise the terminals clean and coated with a little Vaseline properly tightened. Last check various electrical connectors are reliable, the switch is normal, and check the electrical insulation is normal. (Electrical parts and body insulation resistance should be greater than **0.5Ω**).

Ⅸ. Faults and troubleshooting

No.	Fault	Cause Analysis	Workaround
01	Platform can not rise	Overload to use	Reduce load
		Lifting cylinder normal internal leakage	Replace the seals
		Hydraulic oil is not enough	Add appropriate amount of clean hydraulic oil
		Battery voltage is not enough	Charging
		Emergency stop button is not opened or damaged	Turn on the switch or repair
		Damage to the oil pump motor	Repair or replacement
		Pump suction pipe clogged	Clean up the suction pipe
02	Platform can not be dropped	The inner mast overload deformation	Repair or replacement
		The outer mast overload deformation	Repair or replacement
		Gantry wheel stuck	Adjustment
		Back hole clogging	Clear up

Ⅹ. Maintenance record form

Maintenance or failure of the project	Maintenance Content	Maintenance personnel	Overhaul date

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