Self propelled scissor lift manual

1.The provisions and requirements in the manual must be read carefully read before use.
2.In case of any violation of the operation regulations, all the consequences shall be borne by the operator.
3.After receiving the machine, please check the warning label. If there is any error, please contact the manufacturing company in time.

Catalogue

Safety Rule

Legend

Mark # #

Specification of the

controller

Check before the operation of the

Workplace inspection

Functional test of

Operating instructions #

Transport and citation instructions

Maintenance of the same time as

A Schematic of Figure

Service Record



danger

Do not follow the instructions and safety rules in this manual Will result in the occurrence of a death or a serious injury event.

Cannot be performed, unless:

☑ You have understood and practiced the rules for the safe operation of the machine in this operating manual.

1 Avoid dangerous situations.

Know and understand the safety rules before proceeding to the next step.

2 Always perform the pre-operation check.

3 Always perform pre-use functional tests.

4. Check the workplace.

5 Use the machine only with the design intention of the machine.

☑ Manufacturers, instructions and safety rules ——— Safety operation manual and machine labeling shall be read, understood and observed.

☑ Should read, understand and comply with user safety rules and work site regulations.

☑ Read, understand, and comply with all applicable government laws and regulations.

☑You are properly trained to safely operate the machine.

The classification of danger

The symbols, color symbols and symbolic characters used in the product are as follows:

 Safety warning sign —— used to warn in the personal injury. All safety tips after the sign are observed to avoid possible personal injury or death. ⚠危 险 Red color indicates a dangerous situation. If not avoided, it can cause death or

serious injury. ⚠警 告 Orange indicates a dangerous situation. For avoidance, it may lead to death or serious personal injury. 注 意 Yellow color indicates a dangerous situation. If not avoided, minor or moderate personal injury may occur. 注 意 Blue color indicates a dangerous situation. If not avoided, it may lead to property damage.

Design uses

The use of this machine is limited to lifting personnel and their tools and materials to aerial workplaces.

Security identification maintenance

Replace any lost or damaged safety signs to keep safety in mind.

Clean the safety mark with neutral soap and clean water.

Do not use solvent-based cleaners because such cleaners may damage safety-marked materials.

⚠ Electric shock danger

The machine is not insulated and does not provide electric shock protection in contact with or near the wire.



Maintain adequate safe distance from power lines and power equipment in accordance with applicable government laws and regulations and the table below.

voltage	The required gap
0～300V	No touch
300V～50KV	3.05 Meters
50KV～200KV	4.60 Meters
200KV～350KV	6.10 Meters
350KV～500KV	7.62 Meters
500KV～750KV	10.67 Meters
750KV～1000KV	13.72 Meters

Consider the effects of strong winds or gusts on the movement of the platform, the swing and relaxation of the wires.

If the machine touches a live wire, stay away from the machine. Do not touch or operate the machine by personnel on the ground or platform before cutting off the power supply.

Do not operate machines during lightning or storms.

Do not use the machine as a ground wire during welding.



Ride the danger

The personnel, equipment and materials on the platform shall not exceed the maximum carrying capacity of the platform and the extension platform.

Maximum load capacity of ZH PT 0608			
Maximum human capacity (indoor)	**Two people**	Maximum human capacity (outdoor)	**One person**
Platform maximum working load	**450kg**	Maximum working load of the extension platform	**113 kg**
Maximum load capacity of ZH PT 0810			
Maximum human capacity (indoor)	**Two people**	Maximum human capacity (outdoor)	**Two people**
Platform maximum working load	**450kg**	Maximum working load of the extension platform	**113 kg**
Maximum load capacity of ZH PT 1012			
Maximum human capacity (indoor)	**Two people**	Maximum human capacity (outdoor)	**One person**
Platform maximum working load	**320kg**	Maximum working load of the extension platform	**113 kg**
Maximum load capacity of ZH PT 1214			
Maximum human capacity (indoor)	**Two people**	Maximum human capacity (outdoor)	**0 People**
Platform maximum working load	**320kg**	Maximum working load of the extension platform	**113 kg**
Maximum load capacity of ZH PT 1416			
Maximum human capacity (indoor)	**Two people**	Maximum human capacity (outdoor)	**0 People**
Platform maximum working load	**230kg**	Maximum working load of the extension platform	**113 kg**
Maximum load capacity of ZH PT0608SP			
Maximum human capacity (indoor)	**Two peopl**	Maximum human capacity (outdoor)	**0 People**

	e		
Platform maximum working load	230kg	Maximum working load of the extension platform	113 kg

Platform retraction, platform extension



Extension platform only is platform only

Work area safety

The platform can only be lifted on a solid, flat level ground. The driving speed of the platform should not exceed 0.8 km/h.

safe rules



A tilt alarm cannot be treated as a horizontal indicator. The tilt alarm on the chassis and platform sound only when the machine is heavily tilted.

If the tilt alarm rings:
Reduce the platform. Move the machine to a solid horizontal ground. If the tilt alarm rings during the lifting platform, lower the platform very carefully.

The machine used outdoors can not raise the platform when the wind speed may be greater than 12.5m/s. If the wind speed exceeds 12.5m/s after rising, the platform should be lowered immediately and unable to operate the machine.

Do not operate the machine in strong wind or wind gusts. The surface area of the platform or load cannot be added. Increasing the area exposed to the wind will reduce the machine stability.



Do not use the platform controller to release the platform when the platform is tripped, stuck, or other objects nearby. All personnel must leave the platform before intending to release it using the ground controller.

In the closed state, the machine should be very careful and reduce the speed when driving in uneven terrain, gravel, unstable or smooth surfaces, near holes and steep slopes.

In the lifting state, the machine can not drive in uneven terrain, unstable or other dangerous conditions.

Do not push and pull any object outside the platform



model	Applicable occasion	Maximum manual operation force	Maximum number of passengers		model	Applicable occasion	Maximum manual operation force	Maximum number of passengers
ZHPT 0608	outdoor	400N	1		ZHPT 1214	outdoor	0	0
	indoor	400N	2			indoor	400N	2
ZHPT 0810	indoor	400N	2		ZHPT 1416	indoor	400N	2
	outdoor	400N	2			outdoor	0	0
ZHPT 1012	indoor	400N	2		ZHPT 0608SP	indoor	400N	2
	outdoor	400N	1			outdoor	0	0

Machines cannot be used as a crane. Should not be placed, tied, or suspended on any part of the machine. Do not push a machine or other objects with a platform. Cannot operate the machine with the chassis tray open. Platforms cannot be held together against adjacent buildings. The limit switch cannot be changed or disabled. The forms cannot be bundled to adjacent components. The load must not be placed outside of the platform barrier.





Do not modify or alter the aerial platform without the written permission. Adding

additional devices on the platform, skirting plate or guardrail will increase the weight and surface area of the platform or increases the load. Do not alter or damage any components that may affect the safety and stability of the machine.

Key parts that affect the stability of the machine cannot be replaced with parts of different weights or specifications.

Never use batteries weighing less than the original battery. The battery not only plays a counterweight role in the chassis, but also is crucial to maintain the stability of the machine. Each battery must weigh 28kg. The minimum weight of the chassis battery tray (with the battery) must be 175kg.

Do not place a ladder or scaffold inside the platform, or against any part of the machine.

Only transport tools and materials that are evenly distributed and can be safely moved by people on the platform.

Machine shall not be used on moving or moving surfaces or on vehicles. Ensure that all the tires are in good condition and that the nuts are properly tightened.

Stopping pressure danger

Do not put your hands and arms close to dangerous cuts or pressure.
When folding the railing, do not place your hands where they may be hurt.
When pulling out the guardrail lock pin, always grasp the guardrail to prevent the platform guardrail
fall.

When operating the machine by using the controller on the ground, maintain normal judgment and plan. Maintain a safe distance between the operator, the machine, and the fixed objects.

The danger of operating on a slope

Do not exceed the machine ramp and side slope rating
On the drive machine. The ramp rating applies to machines in the closed state.

Model closed state, closed state	Model closed state, closed state
Maximum slope rating, maximum lateral slope rating	Maximum slope rating, maximum lateral slope rating
ZH PT 0608 25%(14°) 25%(14°)	ZH PT1214 25%(14°) 25%(14°)
ZH PT 0810 25%(14°) 25%(14°)	ZH PT1416 25%(14°) 25%(14°)
ZH PT 1012 25%(14°) 25%(14°)	ZH PT0608SP 25%(14°) 25%(14°)

Note: slope rating is limited by ground conditions and traction.

Falling danger

During operation, workers on the platform must wear full-body safety devices and attach them to approved rope fixing points with seat belt hooks. Each rope fixation point can only be tied with one hook.

Do not climb or sit on the guard barrier of the platform. You should stand steadily on the platform floor at all times.



When the platform rises, you cannot climb down from the platform.

Keep the platform floor free of debris.

Close the entrance door before the operation.

Do not operate the machine if you do not properly install the fence, or if the entrance door does not guarantee the safe operation.

Do not enter or leave the platform unless the machine is in the closed state.

risk of collision



When starting or operating the machine, pay attention to the line of sight and blind spots.

Note the location of the extension platform when moving the machine.

Check the work area to avoid overhead obstacles or other possible hazards.



When grasping the platform fence, beware of the risk of extrusion.

Users must follow the rules of employer, workplace and government laws and regulations on the use of habeas protection equipment.

The driving and steering function direction arrow on the platform controller and platform label nameplate shall be observed and used.

Do not operate the machine on the route of any crane or moving overhead machinery unless the crane controller is locked and / or has taken precautions against any potential collision.

When operating the machine, do not drive or play in a dangerous operation.

The platform can only be lowered if there are no personnel and obstacles in the area below the platform.



According to the ground conditions, congestion degree, slope, people Member position, and any other factors that may cause a collision, limit travel speed.

Hazanger of component damage

Do not charge the battery using any battery charger greater than 24V. Do not use the machine as a ground wire during welding.

Explosion and fire hazards

Do not use or charge machines where flammable or explosive gases or particles may exist.

Hazanger of machine damage

A damaged or faulty machine cannot be used.

Before each shift, the machine before operation shall be thoroughly inspected and all functions tested. The damaged or faulty machines shall be immediately marked and the operation stopped.

Ensure that all maintenance operations have been performed as specified in this manual.

Ensure that all labels are properly located and easily identified.

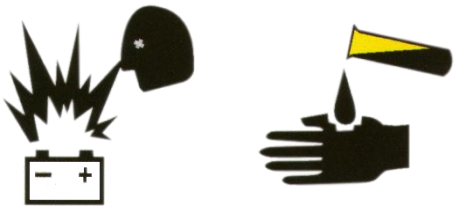
Ensure that this manual is kept in the manual box in the platform.

The danger of a physical injury

Do not operate the machine when the hydraulic oil or air leaks. Hydraulic oil or air leaks may penetrate or burn the skin.
Wrong contact with any components under the lid will cause serious injury. Only the trained maintenance personnel can repair the compartment. It is suggested that the operator should only repair the inspection before the operation. All compartments must remain closed and locked during operation.

Battery safety

Burn danger



The storage battery contains acid substances. Wear protective clothing and protective glasses when using the battery.
Avoid overflow or contact with acid in the battery. Use soda and water to neutralize the overflow battery with acid.

explosion danger



Never approach the sparks, flames and lit cigarettes to the battery. The battery can release the explosive gas.

The battery tray shall remain open throughout the charging period.
Do not contact battery terminals or cable clips using tools that may cause sparks.

Hazanger of component damage

Do not charge the battery using any battery charger greater than 24V.

Electric shock / burn hazard



Only connect the battery charger to a grounded AC three-wire power outlet.
Check daily for the cables, cables, and wiring for damage. Replace the damaged items before the operation.
Avoid electric shock due to contact with the battery terminals. Remove all the rings, watches, and other accessories.

Ride the danger

Never use batteries weighing less than the original battery. The battery not only plays a counterweight role in the chassis, but also is crucial to maintain the stability of the machine. Each battery must weigh to 28 Kg. The minimum weight of the chassis battery tray (including the battery) must be 175 Kg.

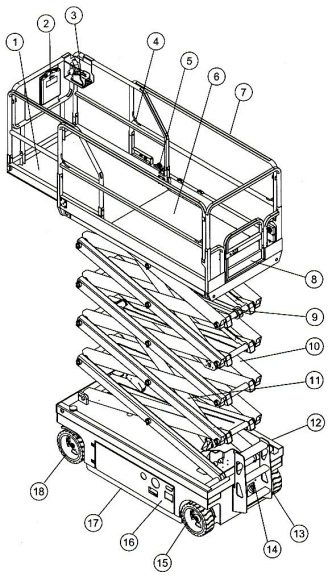
The danger of ascension

When lifting the battery, please use the appropriate number of people and the lifting method.

Lock-down after each use

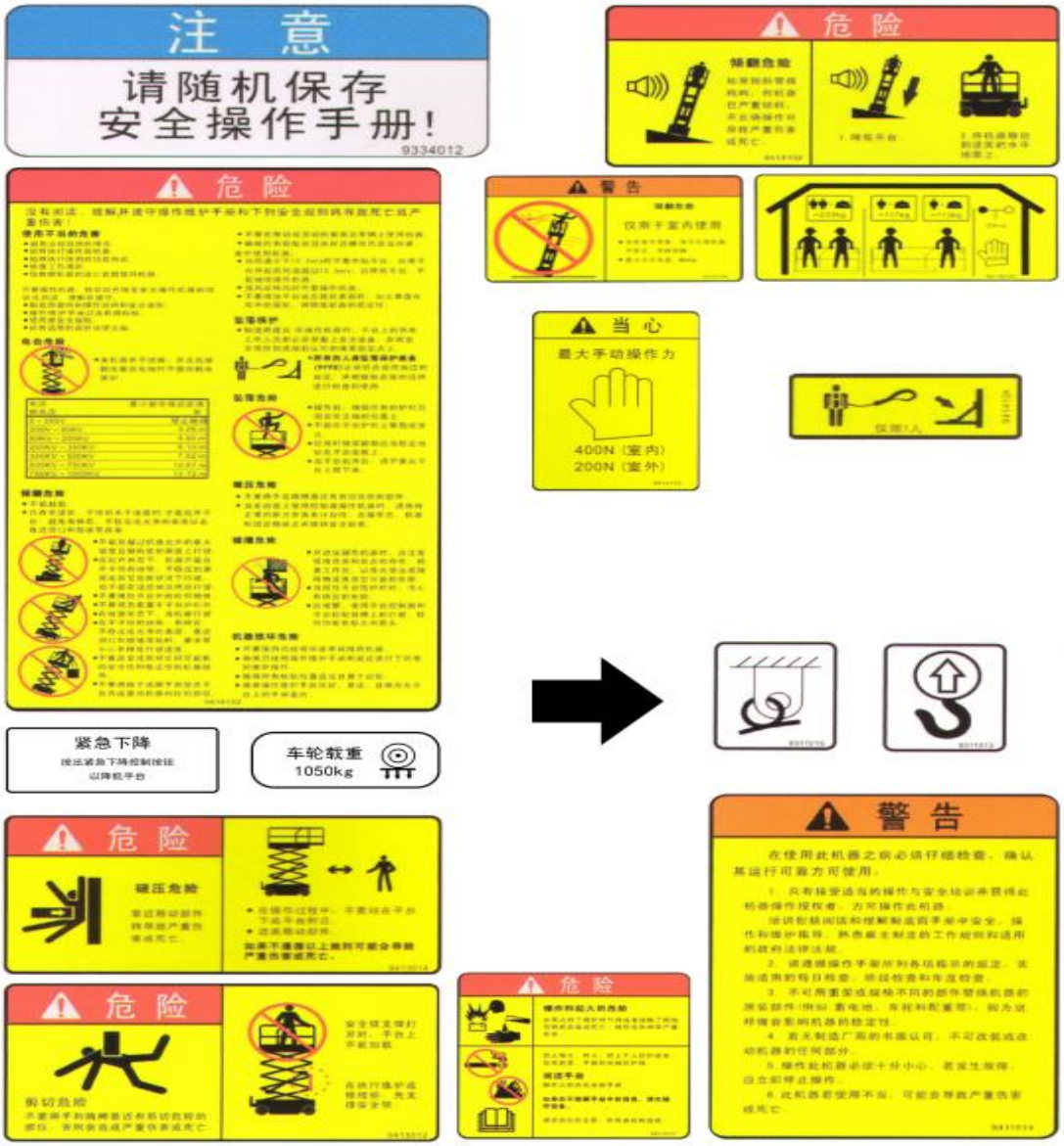
1 Choose a safe parking location that can be solid horizontal ground, have no obstacles and avoid busy transport places.
2. Reduce the platform.
3 Turn the key switch to the "off" position and remove the key to avoid unauthorized use.
4 pad the wheel with a wedge.
5. Charge the storage battery.

key



1 extension platform 2 manual box 3 platform controller 4 cable fixed point
5 platform extension release step foot plate 6 fixed platform 7 platform guardrail
8 platform entrance door
9 Safety arm 10 shear arm 11 lifting cylinder 12 ground controller (opposite the machine)
13 The inlet ladder 14 brake release pump 15 is not a steering wheel 16 charger

specifications



Model number, ZH PT 0608

maximum workingheight	8m
Maximum platform height	6m
Maxheight state maximum height (The railing stands up)	2.21m
Maxheight state maximum height (The railing falls down)	1.66m
Platform indentation length	2.48m
Platform extension length	3.38m

source	4×6V 225AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ381×127mm
Air noise radiation When the work area is operating normally	＜80dB (Level A test)

Platform size Long jujube width)	2.27×1.12m
Platform extension length	0.9m
specified load	450kg
Maximum allowable wind speed	12.5m/s
wheel base	1.87m
Radius of rotation (outside)	2.10m
Radius of rotation (inside)	0m
ground clearance	9cm
ground clearance Pit protection device is deployed	1.9cm
Weight (depending on the option configuration)	（2100kg）

Maximum noise level of	
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3.5km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Model number, ZH PT0810

maximum workingheight	10m
Maximum platform height	8m
Maxheight state maximum height (The railing stands up)	2.33m
Maxheight state maximum height (The railing falls down)	1.79m
Platform indentation length	2.48m
Platform extension length	3.38m
Platform size Long jujube width)	2.27×1.12m
Platform extension length	0.9m
specified load	450kg
Maximum allowable wind speed	12.5m/s
wheel base	1.87m
Radius of rotation (outside)	2.10m
Radius of rotation (inside)	0m
ground clearance	9cm
ground clearance Pit protection device is deployed	1.9cm
Weight (depending on the option configuration)	（2250kg）

source	4×6V 225AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ381×127mm
Air noise radiation When the work area is operating normally Maximum noise level of	＜80dB (Level A test)
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3.5km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Model number, ZH PT1012

maximum workingheight	12m
Maximum platform height	10m
Maxheight state maximum height (The railing stands up)	2.5m
Maxheight state maximum height (The railing falls down)	1.8m
Platform indentation length	2.4m
Platform extension length	3.33m
Platform size Long jujube width)	2.4×1.17m
Platform extension length	0.9m
specified load	320kg
Maximum allowable wind speed	12.5m/s
wheel base	1.87m
Radius of rotation (outside)	2.10m
Radius of rotation (inside)	0m
ground clearance	9cm
ground clearance Pit protection device is deployed	1.9cm
Weight (depending on the option configuration)	（2600kg）

source	4×6V 200AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ381×127mm
Air noise radiation When the work area is operating normally Maximum noise level of	＜80dB (Level A test)
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3.5km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Model number, ZH PT1214

maximum workingheight	14m
Maximum platform height	12m
Maxheight state maximum height (The railing stands up)	2.59m
Maxheight state maximum height (The railing falls down)	2.05m
Platform indentation length	2.48m
Platform extension length	3.38m
Platform size Long jujube width)	2.27×1.12m
Platform extension length	0.9m
specified load	320kg
Maximum allowable wind speed	12.5m/s
wheel base	1.87m
Radius of rotation (outside)	2.10m
Radius of rotation (inside)	0m
ground clearance	9cm
ground clearance Pit protection device is deployed	1.9cm
Weight (depending on the option configuration)	（2883kg）

source	4×12V 300AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ381×127mm
Air noise radiation When the work area is operating normally Maximum noise level of	＜80dB (Level A test)
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3.5km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Model number, ZH PT1416

maximum workingheight	16m
Maximum platform height	13.75m
Maxheight state maximum height (The railing stands up)	2.635m
Maxheight state maximum height (The railing falls down)	2.1m
Platform indentation length	2.85m
Platform extension length	3.75m
Platform size Long jujube width)	2.64×1.12m
Platform extension length	0.9m
specified load	230kg
Maximum allowable wind speed	12.5m/s
wheel base	2.23m
Radius of rotation (outside)	2.70m
Radius of rotation (inside)	0m
ground clearance	9cm
ground clearance Pit protection device is deployed	1.9cm
Weight (depending on the option configuration)	（3430kg）

source	4×12V 300AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ381×127mm
Air noise radiation When the work area is operating normally Maximum noise level of	＜80dB (Level A test)
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3.5km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Model number, ZH PT0608SP

maximum workingheight	8m
Maximum platform height	6m
Maxheight state maximum height (The railing stands up)	2.18m
Maxheight state maximum height (The railing falls down)	1.84m
Platform indentation length	1.86m
Platform extension length	2.76m
Platform size Long jujube width)	1.67×0.74m
Platform extension length	0.9m
specified load	230kg
Maximum allowable wind speed	12.5m/s
wheel base	1.08m
Radius of rotation (outside)	1.64m
Radius of rotation (inside)	0m
ground clearance	8cm
ground clearance Pit protection device is deployed	1.6cm
Weight (depending on the option configuration)	（1435kg）

source	4×6V 225AH
controller	scale
Platform AC electric socket	standard
maximum working pressure	240Bar
supply voltage	24V
Tire size	Φ 305×100mm
Air noise radiation When the work area is operating normally Maximum noise level of	＜80dB (Level A test)
The vibration value shall not exceed	2.5m/s²
Maximum SlRrating (closed status)	25%
Maximum side slope rating (closed state)	25%
Note: slope rating is limited by ground conditions and traction	
Maximum allowable tilt angle	X-1.5°,Y-3°
powered speed	
Platform closed state, maximum value	3km/h
Platform lifting state, the maximum value	0.8km/h
Ground bearing information	
Maximum wheel load	830kg
Tire local pressure	682kPa
Occupy pressure	9.4kPa

Note: The ground carrying information is approximate, and different option configuration factors are not included. This information can be used only if there has a high safety factor.

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Ground controller

1 The key switch turns the key switch to the platform position and the platform controller will run. Turn the key switch to the off position and the machine will turn off. Turn the key switch to the ground position and the ground controller will operate.

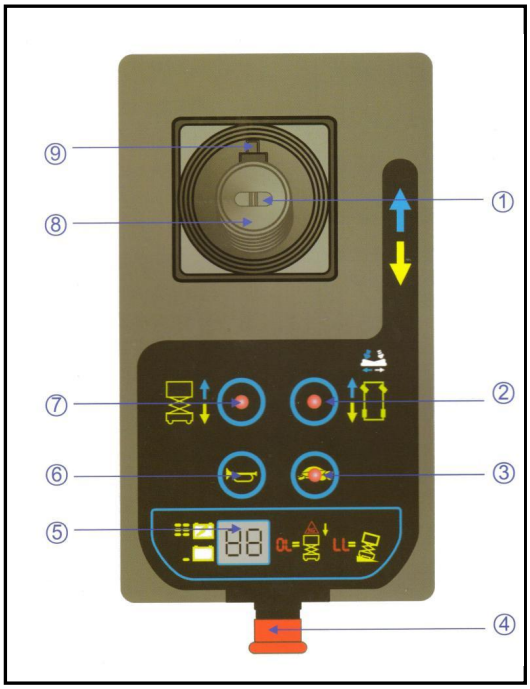
2 Platform lift switch Pull the platform lift switch up, the platform will rise, pull the platform lift switch down, and the platform will fall.

3 Self et the fuse

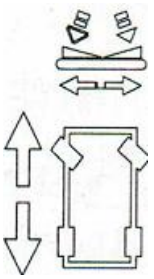
4. Red emergency stop button pushes the red emergency stop button inward to the "off" position, which can stop all functions. Turn red to the "on" position to operate the machine.

Platform controller

1. Thumb tick switch
2. Drive function selection button
3. Drive the speed selection button
4. Red emergency stop button
5. LED
6. Horn button
7. Lift function selection button
8. Control the handle
9. Function-enabled button



Platform controller



1 Press the thumb tick switch in either direction to activate the steering

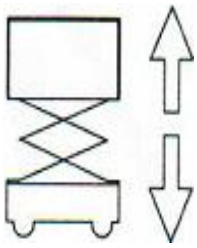
2 Drive Function Select button Press this button to activate the drive

3 Drive Speed Selection button Press this button to activate the slow or f function.

4. Red emergency stop button pushes the red emergency stop button inward to the "off" position, which can stop all functions. Pull the red emergency stop button out to the "on" position to operate the machine.

The 5-LED diagnostic reading device and the battery charging indicator.

6 The horn presses the horn button, and the horn will ring. Release the horn button, and the horn stops ringing.



7 Lift function selection button Press this button to activate the lifti

8 Control the handle

9 Function-enabled button

Lift function: Press and hold the function enable button on the platform control handle to enable the lifting function. Move the control handle in the direction indicated by the blue arrow and the platform rises. Move the control handle in the direction indicated by the yellow arrow, and the platform will drop down. When the platform drops, the drop alarm should sound.

Drive function: Press and hold down the function enable button on the platform control handle to enable the drive function. Move the control handle in the direction indicated by the blue arrow on the control panel, and the machine will move in the direction indicated by the blue arrow. Move the control handle in the direction indicated by the yellow arrow on the control panel, and the machine will move in the direction indicated by the yellow arrow.



Cannot be performed, unless:

You have understood and practiced the rules for the safe operation of the machine in this operating manual.

1 Avoid dangerous situations.

2 Always perform the pre-operation check.

Understand and understand the pre-operational inspection before proceeding to the next step.

3. Check the workplace.

4 Always perform pre-use functional tests.

5 Use the machine only with the design intention of the machine.

fundamental principle

Pre-operation inspection and routine maintenance are the responsibility of the operator. Pre-operation inspection is a very intuitive inspection process, performed by the operator before each change. The purpose of the inspection is to detect the machine before the operator performs the functional test.

Pre-operation checks can also be used to determine if routine maintenance procedures are required. The operator can only perform the routine maintenance items as specified in this manual.

Please review the list on the next page and check for each item.

If damage or any unauthorized change different from the factory status is found, the machine shall be marked and out from use.

Only qualified maintenance technicians can repair the machine according to the manufacturer's regulations. After the repair, the operator must perform another pre-operation inspection before continuing the functional test.

Periodic maintenance inspections shall be performed by qualified maintenance technicians according to the specifications and manuals provided by the manufacturer.

Check the entire machine to find that:

☐ Cracks in the weld seam or in the structural components
☐ The entation or damage of the machine
☐ Ensure that all structural parts and other key components are complete, and that all relevant fasteners and pins are in the correct position and are tightened.
☐ The guardrail has been installed, the guardrail pin is installed in place, and the bolts have been properly tightened.
☐ Ensure that the chassis battery tray and oil pump tray are closed and locked and the battery link is correct.

Pre-operation check

☐ Ensure that the manual is complete, readable and stored in the manual box in the platform.
☐ Ensure that all labels are clear, legible and properly positioned. See the labeling section.
☐ Check whether the hydraulic oil is leaking and whether the oil level is appropriate, and refuel as needed. Refer to the Maintenance ″ section.
☐ Check whether the battery fluid is leaking and whether the fluid level is appropriate. Add distilled water as needed. Refer to the Maintenance ″ section. Check the following parts or areas for damage, improper installation, or missing parts and unauthorized changes:
☐ Electrical components, wiring, and cables
☐ Hydraulic hose, joints, hydraulic cylinders, and hydraulic valve blocks
☐ Battery pack and its connection
☐ Drive the motor / electric motor
☐ Wear-resistant slide block and liner
☐ tires and wheels
☐ ground lead
☐ Limit switches, alarms, and speakers
☐ Nuts, bolts, and other fasteners
☐ Platform for overloaded parts
☐ platform entrance door
☐ Indicators and alarms (if equipped)
☐ safety arm
☐ extension platform
☐ Shear-arm pins and fasteners
☐ Platform control handle
☐ Brake release components
☐ Pit-hole protection device
Note: If the platform must be raised to check the machine, ensure that the safety arm is in the correct position.



fundamental principle

Workplace inspection help the operator decide whether the workplace ensures safe operation of the machine. The operator shall first perform this work before moving the machine to the workplace.

It is the operator's duty to understand and remember dangerous matters in the workplace that can be noted and avoided when moving, installing and operating the machine.

Workplace inspection

Becareful and avoid the following dangerous situations:

Vacation steep slope or cave
Prousions, ground obstacles or debris
Admito tilt the surface
Unfirm or smooth surface
Air obstacles and high-voltage electrical wires
- man-trap
Surface support insufficient to withstand the full load applied by the machine
Wind and weather conditions
Unlicensed personnel appear
Other unsafe situations that may occur

Cannot be performed, unless:

You have understood and practiced the rules for the safe operation of the machine in this operating manual.
1 Avoid dangerous situations.
2 Always perform the pre-operation check.
3. Check the workplace.
4 Always perform pre-use functional tests.
5 Use the machine only with the design intention of the machine.



Cannot be operated, unless:

You have understood and practiced the rules for the safe operation of the machine in this operating manual.

1 Avoid dangerous situations.

2 Always perform the pre-operation check.

3. Check the workplace.

4 Always perform pre-use functional tests.

Understand and understand the pre-operational inspection before proceeding to the next step.

5 Use the machine only with the design intention of the machine.

fundamental principle

Functional tests are used to detect faults before starting to use the machine.

The operator must test all functions of the machine following the step-by-step instructions.

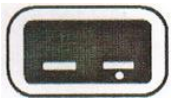
Prohibit the use of the faulty machines. If a fault is found, the machine must be marked and discontinued. Only qualified maintenance technicians can repair the machine according to the manufacturer's regulations.

After the repair, the operator must perform another pre-operation inspection and functional tests before starting using the machine.

1 Select a solid, horizontal, and unobstructed test area.
2 Ensure that the battery pack is connected.

On the ground-level controller

3 Pull the red emergency stop button on the platform and the ground out to the "on" position.
4 Turn the key switch to the ground controller.
5 Observe the LED on the platform controller

Diagnostic reading device. 

○ Results: The LED should be as shown in the right figure.

Test emergency shutdown

6 Push the red emergency stop button on the ground inside to the "off" position.
○ Result: No function can be run.
7 Pull the red emergency stop button to the On position.

Test the up / down functionality and features enabled

The central alarm system controls the alarm sound of the buzzer. The drop alarm sounds 60 times per minute. The pit protection is not in place and the machine tilts 150 times per minute. An optional car-type horn can also be provided.
8 Turn the key switch to the platform control or off position.
9 dial up and maintain the platform lift switch.
○ Results: The platform does not rise.
10 Turn the key switch to the ground control position.
11 dial up and maintain the platform lift switch.
○ Result: The platform should rise.
12 to dial down and maintain the platform lift switch.
○ Results: The platform should decrease. When the platform drops, the drop alarm should sound. The decrease stops when the platform drops to 2m.
13 dial again and maintain the platform lift switch.

○ Results: The platform shall be lowered to the lowest position. When the platform drops, the drop alarm should sound.

Test assist drop

14 The upper platform lift switch raises the platform by about 60cm.
15 Pull out the emergency descent control button located on the side of the machine

entry ladder.
○ Results: The platform should decrease. The descent alarm does not sound.
16 Turn the key switch to the platform controller.

Test on the platform controller

emergency shut down

17 Push the platform red emergency stop button to the "off" position.
○ Result: All features will not run.
18 Pull the red emergency stop button to the On position.
○ Result: The LED diagnostic reader indicator light will illuminate.

Test the horn

19 Press the horn button.
○ Result: The horn will sound.

Test the up / down functionality and features enabled

20 Do not hold the function enabled button on the control handle
21 Move the control handle slowly in the direction indicated by the blue arrow and then in the direction indicated by the yellow arrow.
○ Result: All features will not run.
22 Press the Lift function selection button.
23 Press and hold down the function enable button on the control handle.
24 Slowly move the control handle in the direction indicated by the blue arrow.
○ Result: The platform should rise. Ppit protection device shall be deployed.
25 Release the control handle.
○ Result: The platform should stop rising.
26 Press and hold down the function enable button. Move the control handle slowly in the direction indicated by the yellow arrow.
○ Results: The platform should decrease. When the platform drops, the drop alarm should sound.

Test steering

Note: When performing steering and drive function tests, stand on the platform facing the steering end of the machine.
27 Press the drive function selection button, and the indicator light is on.
28 Press and hold down the function enable button on the control handle.
29 In the direction indicated by the left arrow on the control panel, press the thumb rocker switch on the top of the control handle.
○ Results: The steering wheel shall be rotated in the direction indicated by the left-facing arrow on the control panel.
30 Press the thumb joystick switch in the direction indicated by the right arrow

on the control panel.

○ Results: The steering wheel shall be rotated in the direction indicated by the right arrow on the drive chassis.

Test the drive and brake functions

31 Press and hold down the function enable button on the control handle.

32 Follow the direction indicated by the upward arrow on the control panel, slowly move the control handle until the machine starts moving, and then restore the handle to the center position.

○ Result: The machine shall move in the direction indicated by the upward arrow on the control panel and then stop abruptly.

33 Press and hold down the function-enabled button on the control handle.

34 Follow the direction indicated by the down arrow on the control panel, slowly move the control handle until the machine starts moving, and then restore the handle to the center position.

○ Result: The machine shall move in the direction indicated by the down arrow on the control panel and then stop abruptly.

Note: The brakes must be able to stop the machine at any slope that it can climb.

Test the limited drive speed

35 Press the lifting function selection button, and the indicator light is on. Press the function enable button on the control handle to raise the platform approximately 2m from the ground.

○ Results: The pit protection device is deployed.

36 Press the drive function selection button, and the indicator light is on.

37 Press the function enable button on the handle and slowly move the handle to the full drive position.

○ Result: The maximum driving speed should not exceed 20 cm/s.

□Results: The maximum driving speed exceeds 20 cm/s, please mark the machine immediately and stop running.

Test the tilt-sensor operation

Note: Conduct this test on the ground with a platform controller. Don't stand on the platform.

38 Fully reduce the platform.

39 Drive two wheels on one side to a 3.520cm pad.

40 Lift the platform by at least 2m.

○ Results: The platform shall stop moving, and the tilt alarm shall sound 150 times per minute.

41 Move the drive control handle in the direction indicated by the upward arrow and then in the direction indicated by the downward arrow.

Result: The drive feature should not work in either direction.42 Lower the platform and remove the machine from the obstacle.

Test the pit protection device

Note: The hole protection device should deploy automatically when the platform is raised. The pit protector activates another restriction switch that allows the machine to continue running. If the hole protection is not deployed, the alarm rings and the machine stops driving.

43 Raise the platform.

○ Results: the pit protection device should be deployed when the platform rises 2m from the ground.

44 First press the side of the hole protection device, then hold the other side.

○ Result: The pit protector will not move.45 Lower the platform.

○ Results: The pit protection device should return to the retracted position.

46 Place a 3.5x20cm or similar size under the hole protector. Rising platform.

○ Results: When the platform rises 2m from the ground, the alarm will sound and the drive function cannot be run.

47 Lower the platform and remove the 3.5x20cm wood block.



Cannot be operated, unless:

You have understood and practiced the rules for the safe operation of the machine in this operating manual.

1 Avoid dangerous situations.

2 Always perform the pre-operation check.

3. Check the workplace.

4 Always perform pre-use functional tests.

5 Use the machine only with the design intention of the machine.

fundamental principle

This machine is a self-propelled hydraulic lifting equipment equipped with a working platform on the shear mechanism. The vibration generated by the machine while working is not dangerous to the operators standing on the working platform. The machine can be used to load the staff and their portable tools to reach a certain

height from the ground, or to reach a certain working area above the machine or equipment.

Only well-trained and authorized personnel can operate the machine. If more than one operator uses the same machine at different times on the same work shift, they must all be qualified operators and follow all safety rules and instructions in the OM manual. This means that every new operator should perform pre-operation checks, functional tests, and workplace inspections before using the machine.

SISTEMA It is a type of software that analyzes and diagnose the reliability of the subsystems of the machine to determine whether the safety level (PL level) of the safety level of the machine meets the requirements of clause 5.11 of EN280 standard. For MEWP series products using SISTEMA software, the safety level fully meets the requirements of EN280 standard 5.11 and meets the requirements of ENISO 13849-1 / 2 safety standard.

The operational instructions section provides specific instructions for the various aspects of the machine operation. It is the operator to follow all safety rules and instructions in the operation and maintenance manual.

In addition to lifting personnel and their tools and materials to aerial workplaces, the machine is unsafe and even dangerous for other purposes.

emergency shut down

Push the red emergency stop button of the ground or platform controller to the off position to stop all functions.
Repair of any operation function must be performed when the red emergency stop button is pressed.

emergency descent

1. Pull the emergency drop control pull button outward.

Operations on the ground

1. Turn the key switch to the ground controller.
2. Pull the red emergency stop button on the ground and platform to the "on" position.
3. Ensure that the battery is well connected before operating the machine.

Adjust the platform location

Move the platform lift switch following the mark on the control panel. The drive and steering functions cannot be used through the ground controller

Operate on the platform

1. Turn the key switch to the platform controller.
2. Pull the red emergency stop button on the ground and platform to the "on" position.
3. Ensure that the battery is fully connected before operating the machine.

Adjust the platform location

1. Press the Lift function selection button.
2. Press and hold down the function enable button on the control handle.
3. Move the handle according to the mark on the control panel.

turn

1. Press the drive function selection button.
2. Press and hold the function enabled button on the control handle.
3. Turn the steering wheel with the thumb tick switch at the top of the control handle.

drive

1. Press the drive function selection button.
2. Press and hold down the function enable button on the control handle.
3. Increase speed: Slowly move the control handle off the center.
Reduce speed: Move the control handle slowly to the center.

Stop: Return the controller to center or release the button.

Use the direction arrow on the platform controller and on the platform to determine the direction of the machine.

The movement speed of the machine is limited when the platform is raised. The state of the battery will affect the performance of the machine. When the level indicator light of the battery flashes, the driving speed and function speed of the machine will decrease.

Drive speed selection

The drive controller can operate in two different drive speed modes. The slow drive speed mode is active when the drive speed selection button light is on. The fast drive speed mode is active when the drive speed selection button light is off. Press the drive speed selection button to select the desired drive speed.

Drive driving on the slope

Determine the slope and side slope rating and slope of the machine.

ZH PT0608, ZH PT 0810, ZH PT0608SP ,

ZH PT1012, ZH PT1214, ZH PT1416

Maximum ramp rating, retracted position of 25%

Maximum side slope rating, fold position 25%

Note: slope rating is limited by ground conditions and traction.

Press the drive speed selection button to select the fast drive speed mode.

Determine the slope:

Measure the slope with a digital meter or follow the following steps.

You will need to have the following tools:

carpenter's rule

Straight wood block, with at least 1m in length

The tape measure places the wooden block on the inclined plane.

Place the wood block on the inclined plane.

At the end of the downhill, place the woodstick on the upper edge of the block and lift the end of the block to the level.

Keep the block level and measure the distance from the bottom to the ground.

Divide the tape measure distance (raised height) by the length of the block (stroke) and multiply it by 100.

for instance:

Stroke =3.6m

Elevated height =0.3m

0.3m÷3.6m=0.083 X 100=8.3%



If the slope exceeds the maximum slope or side slope rating, the machine must be

lifted or transported up and down along the slope. See "Transport and lifting" section.

Operating from the ground by using the controller

Maintain a safe distance between operator, machine and fixed object.

When using the controller, pay attention to the direction of the machine.

Battery-level indicator lamp

Use the LED diagnostic reading device to det



Use method of the safety arm

1. Raise the platform to about 2.5m height f
2. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate up to the vertical state.
3. Reduce the height of the platform until the safety arm has a safe contact with the shaft sleeve. When lowering the platform, move away from the movement.

⚠危 险 There shall be no load on the platform when using the safety arm support.

How to fold the guardrail

The platform barrier system contains a folding barrier portion of the extended platform and a folding barrier section of the main platform. All sections are fixed in place by four wire locking pins.

1. Completely reduce the platform and extend the platform.
2. Remove the platform controller.
3. From inside the platform, remove the two wire lock pins on the front of the extension platform.
4. Fold the front guardrail parts extending the platform inward. Do not place your hands where they may be hurt.
5. Install the two removed pins back to the guardrail bracket on each side.
6. Turn inward right to extend the platform guardrail. Do not place your hands where they may be hurt.
7. Turn the left side inward and extend the platform guardrail. Do not place your hands where they may be hurt.
8. Carefully open the door and move it to the ladder or ground.
9. Remove the steel wire lock pin at the back of the right guardrail of the main platform.
10. Fold the right guardrail parts of the main platform from the ladder or ground. Do not place your hands where they may be hurt.
11. Install the removed pin back to the guardrail bracket.
12. Remove the steel wire lock pin at the back of the left guardrail of the main platform.
13. Fold the left guardrail component of the main platform. Do not place your hands

where they may be hurt.

14. Install the removed pin back to the guardrail bracket.

15. Turn the guardrail forward and do not place your hands where they may be hurt.

How to raise the guardrail

Follow the instructions for the guardrail folding, but in the opposite order.

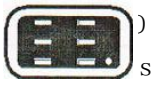
Extend and indent the platforms

1. Step on the positioning foot pedal on the extension platform.

2. Push the extension of the platform guardrail to extend the platform to the desired location.

Note: Do not stand on the extension platform when trying to extend it.

Fault code

) diagnostic reader displays an error code (such as the LL), pull the red stop button back and forth
to reset the system.

Fault code		
code	description	Machine reaction
01	System initialization error	All features are inoperable
02	System communication error	All features are inoperable
03	Invalid option setting error	All features are inoperable
12	The ground control platform lift switch is wrong on during startup	Ground control cannot operable
18	Wrong pit protection device	Unable to lift and walk
31	Pressure sensor error	All features are inoperable
32	Angle sensor error	All features are inoperable
34	reserve	
42	Platform thumb rocker switch (left) is wrong at startup	Just the signal
43	Platform thumb rocker switch (right) is wrong at startup	Just the signal
46	Platform function enabled button error at startup	Just the signal
47	Platform control handle is not at zero position error at startup	Just the signal
52	Forward coil error	Unable to lift and walk
53	Reverse coil error	Unable to lift and walk
54	Wrong lift-up coil	Unable to lift and walk
55	Wrong lift and drop coil	Unable to lift and walk
56	Right turn coil error	Unable to lift and walk
57	The left turn coil is wrong	Unable to lift and walk
58	Brake coil error	Unable to lift and walk
59	Wrong parallel valve coil	Unable to lift and walk
61	Motor controller current sensor error	The controller decides
62	Motor controller hardware is corrupted with error	The controller decides

The Code	describes	the machine reaction
63	Motor controller Motor output error	controller decision
64	Motor controller SRO error	controller decision
65	Motor controller throttle error	controller decision
66	Motor controller emergency reverse error	controller decision
67	Motor controller HPD wrong	controller decision
68	Low voltage error	All functions cannot operable
69	High zero current error (ZAPI only)	All functions cannot operable
70	Steering input out of range (ZAPI only)	All functions cannot operable
71	Motor Controller Main contactor error	unable to lift and walk
72	Motor controller over voltage error	controller decision
73	Motor controller heat reduction error	controller decision
74	Motor controller Motor error	controller decision
75	Motor Controller Pump Station Motor error	controller decision
76	Motor controller left drive motor error	controller decision
77	Motor controller right drive motor error	controller decision
78	Pump station motor short circuit error	cannot lift and walk
79	Left drive motor short circuit error	unable to lift and walk
80	Over 80% of the load is	just an alarm
81	Right drive motor short circuit error	unable to lift and walk
82	The right brake coil is wrong,	unable to lift and walk
83	Left brake coil error,	unable to lift and walk
90	Over 90% of the load is	just an alarm
99	Over 99% of the load is	just an alarm
OL	platform overload error	All functions cannot operable
LL	machine tilt beyond safety limit error	cannot lift and walk

ECM debugging	
Code	situation check
01	System initialization error: the ECU may fail, replace the ECU.
02	System communication error: Check the connection and other communication lines. If you still cannot resolve the problem, try more PCU or ECU.
03	Invalid option setting Error: Set the appropriate option for the machine.
12	Ground control platform lift switch opening error: check the wiring of the switch, or check whether the switch is stuck.
18.	Pit protection device error: check whether the pit protection device is extended, check the pit protection limit switch, check the wiring situation of the limit switch, and check the lower limit switch and wiring.
31	Pressure sensor error: Check the sensor wiring and the sensor. Also check for the correct fit of the weight sensor.Of the options were selected correctly.
32	Pressure sensor error: Check the sensor wiring and the sensor. Also check for the correct fit of the weight sensor Of the options were selected correctly.
42	Platform thumb switch (left) error: Determine that the thumb switch (left) on the control handle is in the release state. If normal, consider replacing the control handle or PCU.
43	Platform Thumb tick switch (right) error: Determine that the thumb joystick switch (right) on the control handle is in the release state. If normal, consider replacing the control handle or PCU.
46	Platform function enable button error on startup: Determine that the function enabled button on the control handle is in the release state and check the zero bit parameters. If normal, consider replacing the control handle or PCU.
47	The platform control handle is not in zero bit Error: Determine the control handle is in zero bit (vertical position) and check the zero bit parameter setting in the shear program. If OK, consider replacing the control handle or PCU.
52	Forward coil error: check the coil for reliable connection, if normal, check the coil for open circuit or short circuit.
53	Back coil error: Check the coil for reliable connection and check the coil for open circuit or short circuit.
54	Rising coil error: Check coil connection for reliability, if normal, check coil for open circuit or short circuit.
55	Lift down coil error: Check the coil for reliable connection and if normal, check the coil for open circuit or short circuit.
56	Right turn coil error: check the coil for reliable connection, if normal, check

	the coil for open circuit or short circuit.
57	Left turn coil error: check the coil for reliable connection, if normal, check the coil for open circuit or short circuit.
58	Brake coil error: Check the coil for reliable connection and if normal, check the coil for open circuit or short circuit.
59	Parallel valve coil error: check the coil for reliable connection, if normal, check the coil for open circuit or short circuit.
60	Motor Controller Current sensor error: Drive or lift motor may overheat, stop operation to cool it, restart the machine to reset the motor controller; if the problem persists, check the wiring and if correct, replace the motor controller.

Code	situation check
62	Motor controller hardware damage error: power off restart system; if no effect, check the noise source head; If the problem remains, replace the motor controller.
63	Motor controller motor output error: first check the wiring, then power off and restart the system; if necessary, Replace the motor controller.
64	Motor controller SRO error: check the motor enable delay parameter short. Ensure that the other motor controller parameters are correct.
65	Motor Controller throttle error: Check the wiring to ensure that the correct type of throttle is selected within the motor controller established house or power group.
66	Motor controller emergency reverse error: make sure the emergency reverse check parameter in the motor controller is set to off.
67	Motor controller HPD error: check the motor enable delay parameter Short, ensure that the other motor controller parameters are correct.
68	Low voltage error: Check the battery voltage and, if necessary, charge the battery. Check that the battery connection is too tight And clean.
69	High zero bit current error: The MC is detecting a current in the motor that should not be present. MC recognize With the controller on, the motor turns when this may occur at any time. This message sometimes just comes up Before other errors, this time can be ignored.
70	Steering input is out of range: Steering input voltage of the ZAPI motor controller is inappropriate, recalibrate the ZAPI Or check whether the wiring is loose resulting causes voltage fluctuation.
71	Motor Controller Master Contactor error: Check the wiring of the main contactor; if necessary to replace the main contactor; eg Fruit- -You need to replace the motor controller.
72	Motor controller overvoltage error: check the battery voltage and ensure the battery is not charging, restart the system If the problem is not resolved, try replacing the motor controller.
73	Motor controller heat reduction error: drive or lift the motor may overheat, stop the operation, and make it cool; If not, restart the machine to reset the motor controller; if the problem remains, replace the horse Up to the controller.
74	Motor Controller Motor error: Check wiring of motor and replace motor control
75	if the problem is not resolved implement. Motor controller pump station motor error: Check the pump station motor wiring. Restart the machine, and if the problem is not resolved,

Replace the motor controller.
76 Motor Controller Left drive motor error: Check the motor wiring. Restart the machine, and if the problem is not resolved, Replace the motor controller.
77 Motor controller right drive motor error: check the motor wiring. Restart the machine, and if the problem is not resolved, Replace the motor controller.
78 Pump station motor short circuit error: check the pump station motor wiring. Restart the machine, and if the problem is not resolved, then Replace the motor controller.
79 Left drive motor short circuit error: Check the motor wiring and ensure its connection is reliable. Check that the motor is short road.
80 More than 80% load alarm: the platform load is close to the rated load, it is recommended not to increase the load.
81 Right drive motor short circuit error: check the motor wiring and ensure that its connection is reliable. Check whether the motor short.

Code	situation check
82 Check	Right brake coil error: Check the wiring of the coil terminals to ensure its connection is reliable. If the connection is normal, the coil itself for an open or short circuit.
83	Left brake coil is wrong: check the wiring of the coil terminal to ensure its connection is reliable. If the connection is normal, Check the coil itself for an open or short circuit.
90	More than 90% load alarm: the platform load is close to the rated load, it is recommended not to increase the load.
99	More than 99% load alarm: the platform load has reached the rated load, do not increase the load.
OL	platform overload error: immediately remove the load exceeded.
LL	machine tilt over the safety limit error: if the machine leans, adjust the machine to the horizontal position; If the machine is not tilted, check the wiring of the horizontal sensor and the sensor itself.

For more detailed information, please contact our after-sales service department.



Description of the storage battery and the battery charger

Abide by and obey:

Do not use an external charger or a booster battery.
Charge the battery in a well-ventilated place.
Charge using the correct AC input voltage indicated on the charger.
Only use the batteries and chargers approved by our company.

to charge a battery

1. Make sure the battery is connected before charging.
2.Open the chassis battery tray. The battery tray shall remain open throughout the charging process.

maintenance free battery

3. Connect the battery charger to the grounded AC circuit.
4.The charger will give instructions when the battery is full.

Standard battery

5. Remove the battery vent hood and check the battery electrolyte level. If necessary, add only distilled water enough to pass the plate. Do not add an excessive amount before the charging process.
6. Install back the battery ventilation cover.
7. Connect the battery charger to the grounded AC circuit.
8. The charger will give instructions when the battery is full.
9.Check the battery electrolyte level at the end of the charging cycle. Supplement distilled water to the bottom of the addition tube. Do not add an excess amount.

Liid and charging instructions for dry battery

1. Remove the battery vent cap well from the battery vent and remove the plastic seal.
2. Fill the battery electrolyte (electrolyte) into each battery until the level fails the plate.
Do not fill up to the highest liquid level until the battery charging process ends. Excessive fluid addition can cause the battery electrolyte to overflow during

charging. Use soda and water to neutralize the overflow battery with acid.
3. Install the battery ventilation cover.
4. to charge a battery.
5. Check the battery electrolyte level at the end of the charging cycle. Supplement distilled water to the bottom of the addition tube. Do not add an excess amount.



Abide by and obey:

When using a crane to lift the machine, maintain normal judgment and planning to control its movement. Only the personnel with high-altitude lifting operation qualification can load and unload the machines. Transport vehicles must be parked on the horizontal ground. When loading the machine, the transport vehicle must be fixed to prevent movement. Ensure that the vehicle capacity, loading surface, chain or belt is sufficient to support the weight of the machine. Please refer to the nameplate for the machine weight. The machine must be on the horizontal plane or fixed before releasing the brake. Prevent the guardrail from falling when removing the pin. Always grasp the guardrail when folding it. Do not drive a machine on a slope above the uphill, downhill, or ramp rating. See "Driving on a slope" in the Operating Instructions section. If the slope of the transport vehicle exceeds the maximum ramp rating, the machine must be loaded and unloaded using the winch according to the instructions in the brake release operation.

For the motor-driven products

1. Cover the wheel with a wedge to prevent the machine from rolling.
2. Pull the red emergency stop buttons on the ground and the platform controller to the On position.
3. Pull the platform lift switch on the ground controller downward and turn the key switch to the ground control side to release the brakes.
4. If a brake reset is required, simply close the key switch on the ground controller.

Traction of hydraulically driven machines is not recommended, if indeed required, the traction speed must not exceed 3.5 km/h. Traction motor driven machines is not recommended, if traction is indeed required, the traction speed should not exceed 4.1 km/h.

Brake release operation

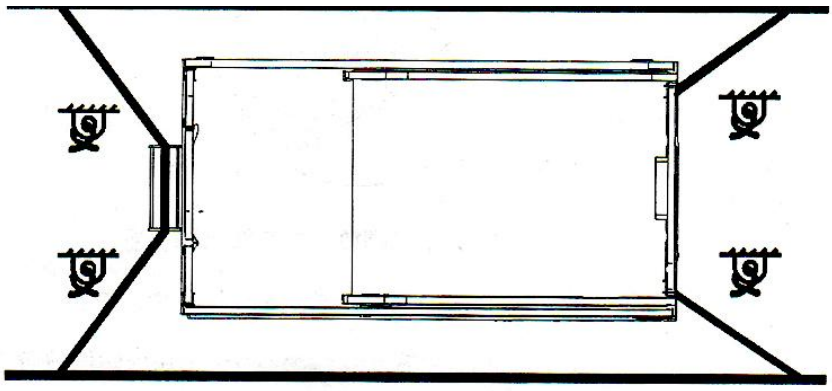
For the hydraulic-driven products

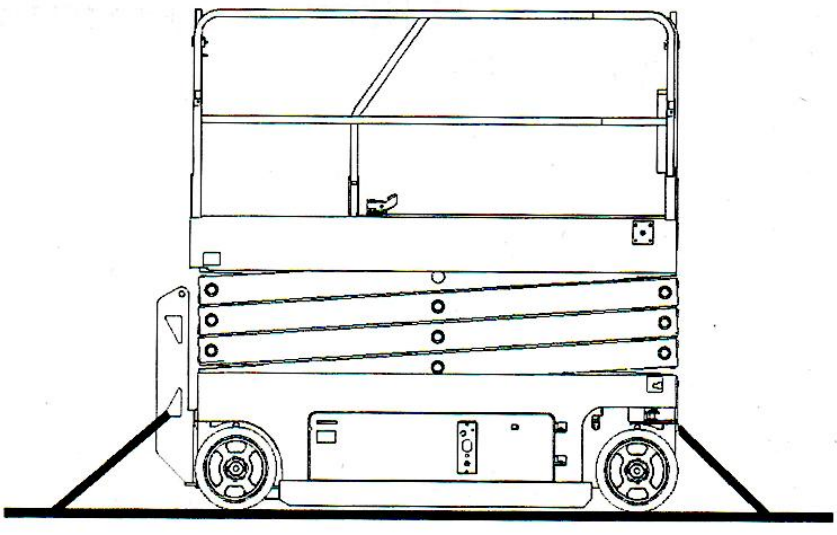
1. Cover the wheels with a wedge to prevent the machine from moving.
2. Ensure that the winch rope is properly fixed to the attachment point of the chassis and that there are no obstacles in the passage.
3. Push the black brake release knob to open the brake valve.
4. Push and pull the red brake release pump knob.

Ensure transport safety

The machine wheels should always be locked when preparing for transport. Indent and fixed extension platforms. Before shipping, turn the key switch to the Off position and remove the key. Check the machine thoroughly to prevent loose or unsecured parts. Attach the machine to the transport surface through the attachment on the chassis. Use a minimum of four chains or belts. Ensure that the chain or belt used has sufficient load strength.

If the railing has been folded, use a belt feed for fixation before shipping.





Shipping and lifting instructions

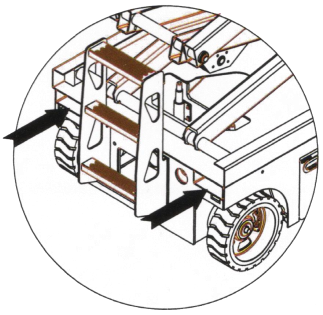


Abide by and obey:

Only qualified pegs can assemble the rigging and lift the machine. Only the personnel with the forklift operation qualification can use the forklift handling machine. Ensure that the lifting capacity of the crane, loading surface, belt or rope are sufficient to withstand the weight of the machine. See the serial number nameplate.

Lift the machine with a forklift truck

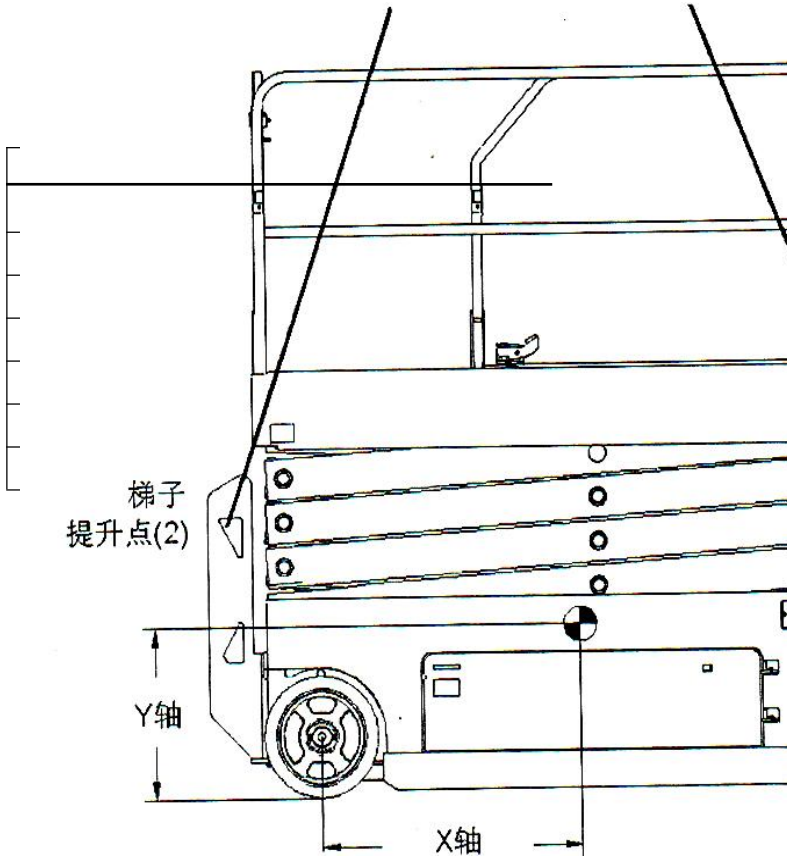
Ensure that the extension platform, controller and chassis tray are safe and secure. Remove all the active parts on the machine. Lower the platform completely. The platform must remain closed during all shipments. Use the forklift notch on either side of the ladder.



Place the forklift fork at the forklift slot. Drive forward and insert the fork completely into the slot. Lift the machine by 15 cm and then tilt the fork slightly back to keep the machine stable. Ensure the machine level when lowering the fork. 注 意 Raising the machine from the side will cause component damage.

Improve guidance

Lower the platform completely. Ensure safe and chassis tray. Remove all the active parts on the machine. Use the chart on this page to determine the center of gravity on the machine. Only connect the rigging to the specified lifting point on the machine. Each end of the machine has two lifting points. Adjust the rigging to avoid damage to the machine and maintain the machine level.





Abide by and obey:

☐ The operator can only perform the routine maintenance items specified in this manual.

☐ Regular maintenance inspection is completed by qualified maintenance technicians according to the requirements specified by the manufacturer.

Repair symbol legend

注 意 Use the following symbols in this manual to help express the implications in the usage instructions.maintenance routine

When one or more symbols appear before, the expressed meaning is as follows.

 Indicates that tools are required to perform this program.

 Indicates that new parts are required to perform this procedure.

Indicates that this procedure.

Check the battery



The intact battery condition is critical for the performance and safe operation. Improper electrolyte levels or damaged cables and wiring may cause component damage and hazardous conditions.

Note: Install a sealed battery or maintenance-free machine.

⚠警 告 The danger of electric shock

Live operation may result in serious personal injury or death. Remove all rings, watches and other accessories during operation. ⚠警 告 The danger of a physical injury

The battery electrolyte is corrosive. Avoid contact with your hands or other parts of the body with the overflowing electrolyte to avoid damage. For the spilled electrolyte using baking soda water and.

Note: The following checks should be performed with sufficient battery power.

1. Put on protective clothing and wear protective glasses.
2. Ensure that the battery cables are firmly wired and not corroded.
3. Ensure that the battery lock rod is stable.
4. Remove the battery vent cover.
5. Check the battery electrolyte fluid level. If necessary, replenish distilled water from the bottom of the battery to the liquid tube. Do not add an excess amount.
6. Install the ventilation cover.

Note: The addition of terminal protectors and preservative sealants will help to eliminate corrosion of battery terminals and cables.

Check the hydraulic oil oil level



The hydraulic oil level being in the proper position is critical to operating the machine. If the hydraulic oil is in an inappropriate position, it may damage the hydraulic parts. Through routine inspection, the inspector is able to determine the changes in the hydraulic oil level, which can indicate problems with the hydraulic system.

注 意 Perform this program when the platform is in closed.

1 Visually inspect the liquid level located on the side of the hydraulic oil tank.

○ Results: The hydraulic oil level shall be at the mark point of the oil tank.

2. Refueling as needed. Do not add an excess amount.

Hydraulic oil specification: L-HV 46

Prepare the report before delivery

Pre-delivery preparation report includes all types of inspection items.

Prepare the report before delivery for each inspection. Save it as required.

Maintenance schedule

There are five maintenance inspections: daily, quarterly, six annual, annual and two annual, which must be carried out according to the schedule. The product maintenance plan and delivery preparation report are divided into five ABCDE subitems. The steps of each inspection are shown in the table below.

search cycle	inspection item
Daily or every 8 hours	A
Quarterly or every 250 hours	A+B
Every six months or every 500 hours	A+B+C
Every year or every 1,000 hours	A+B+C+D
Every two years or every 2,000 hours	A+B+C+D+E

Maintenance inspection report

The maintenance inspection report includes all types of inspection items.

Maintenance inspection reports shall be prepared for each inspection. Retain for at least 4 years after the completion of the inspection, or perform in accordance with the laws and regulations issued by the employer, the workplace and the government.

Prepare the report before delivery

fundamental principle

The tor is obliged to complete pre-delivery preparation.

Pre-delivery preparation is a priority before each product delivery. This check was made to identify any obvious problems with the device prior to use.

Damaged and modified equipment will never be allowed to use. Upon damage or inconsistency with the delivery of equipment, the machine must be marked and stopped immediately.

Equipment repair must be done by a certified technician, according to the manufacturer's specifications.

Maintenance inspection must be performed by certified technicians according to the manufacturer's specifications and the requirements in this manual.

explain

Use the operator manual on the equipment.

Pre-delivery preparation consists of operational checks, maintenance items, and functional tests.

Use the forms to record the results. According to the instructions in the operation manual, the corresponding form is filled in after each item is completed.

If the result of any inspection is N, stop the device from working. Repair and re-check. Mareled at position R after completion

Y= Yes, completed N= No, unfinished R= repaired.

appraise

Preparation before delivery	Y	N	R
Operation check completed			
Maintenance project completed			
Functional test completed			
model			
serial number			
date			
Machine master			
Inspection unit (must			

maintenance

print)			
Signature of inspectors			
Inspector's title			
Check the company			

Maintenance inspection report

model
serial number
date
Tired time plan
Machine master
Inspection unit (must print)
Signature of inspectors
Inspector's title
Check the company

explain

- A single report was used for each examination.
- Select the appropriate checklist according to the inspection items.

Daily or every 8 hours	A
Quarterly or every 250 hours	A+B
Every six months or every 500 hours	A+B+C
Every year or every 1,000 hours	A+B+C+D
Every two years or every 2,000 hours	A+B+C+D+E

legend

check table A	B-9 the driving speed in the rising state
A-1 Inspection manual and label	B-10 slow drive
A-2 Check before the operation	B-11 Hydraulic oil analysis
A-3 Functional test	B-12 The exhaust system
After 40 hours	B-13 Chassis tray components
A-4 for 30 days of maintenance	B-14 Test lower limit level and pit protection switch
100, and then, hours later	B-15 Test the upper limit level switch
A5 for lubricating the steering knuckle	
	check table C
check table B	The C-1 platform overload system
B-1 battery	C-2 Replace the hydraulic mailbox ventilation tube
B-2 wire	
B-3 tires and wheel hub	**check table D**
B-4 emergency stop	D-1 Check the shear arm wear resistance sliding block
The B-5 key switch	D-2 hydraulic oil return filter

	replacement
B-6 horn	
The B-7 drives the brakes	**check table E**
B-8 Drive speed of the closed state	E-1 hydraulic oil

Check list A step

A-1

Check the manual and the label

Ensuring the intact operation and maintenance manual is the key to safe operation. Each device has a manual and is stored in the box of the platform. Manual with blurred or missing pages do not provide sufficient information to ensure safe operation.

In addition, be sure that all safety labels are good. The label warns the safety risks of the machine. It also provides operation and maintenance information for users. A fuzzy labeling will not serve as a warning and may lead to a dangerous operating environment.

1. Check and ensure that the operation and maintenance manual is in the manual box of the platform.

2. Check the manual to ensure the handwriting is clear without missing pages.
○ Results: Manual and model match, all manuals are clear handwriting, no missing pages.
□ Result: The manual does not match the model, or the manual is blurred or missing pages. Stop the machine before manual.

3. Open the label inspection map and carefully check the label for blur or damage.
○ Results: All the labels are complete, clear and complete.
□ Result: label is missing, blurred or damaged. Stop the machine operation before the label is replaced.

4.After the use of the manual, the object is in place.

Tip: If you need to change the manual or label, please contact us

A-2

Conduct a pre-operation inspection

Pre-operation inspection is critical to the safe operation of the machine. Pre-operation inspection is completed by visual inspection before the machine is

running. This check is used to detect any significant problem with the machine before functional testing and also to determine a routine maintenance procedure.

The complete inspection procedures can be according to the "Pre-operation inspection" section of this manual.

A-3 for functional tests

Complete functional testing is critical to the safe operation of the machine. Functional tests are used to detect whether the machine has functional defects before the machine is working. Defective machines cannot be used. Once a functional defect is found, mark the machine immediately and stop the use.

Complete inspection procedures are refer to the Functional Test section of this manual.

A-4 for 30 days of maintenance



The 30-day maintenance is a one-time maintenance after the first 30 days or 40 hours of machine operation. After this step is completed, continue checking the maintenance items on the list.
Conduct the following step of maintenance:

- B-3 tires and wheel hubs
- D-2 hydraulic oil return filter replacement

A-5 Lubricate the steering knuckle



This operation occurs every 100 hours.
Frequent lubricating steering knuckle is essential for machine performance and service life. Long-term use of the uneffectively lubricated steering knuckle will cause damage to the parts.

1. Open the lid on the steering knuckle.

2. At the top of the knuckle, locate the hole to fill the grease.

3. Fill enough grease in the knuckle until the bearings.

4. Put back the lid.

5.Repeat the above process for the other steering knuckle.

Grease specification:

Unified 3 # general lithium-based lipid

Check list B step

B-1 Check the storage battery



This inspection is conducted every 250 hours or every quarter, whichever comes first.

Good battery condition is critical to the performance and operational safety of the machine. Incorrect electrolyte levels and damaged cables or joints can cause machine parts damage and dangerous conditions.

⚠警 告 Electric shock danger

Live operation may result in serious personal injury or death. Remove all rings, watches and other accessories during operation.

⚠警 告 The danger of a physical injury

The battery electrolyte is corrosive. Avoid contact with your hands or other parts of the body with the overflowing electrolyte to avoid damage. To the spilled electrolyte with baking soda water and.

1. Wear protective clothing and goggles.
2. Release the door lock on the battery tray on the side of the chassis and turn the chassis battery tray outward.
3. Ensure that the battery cable connector is not corroded.

Tip: Add terminal protection device and apply corrosion-proof glue to avoid corrosion of battery joint cable.

4. Ensure that the battery and cables are firmly secured.
5. Fully charge the battery and stand for at least 24 hours.

Non-maintenance-free batteries and sealed batteries are applicable:

6. Open the battery lid, check the specific gravity with a liquid gravity meter and record.
7. Check the ambient temperature and adjust the liquid specific gravity of each cell as follows:

- Plus 0.004 per 5.5℃ above 26.7℃.
- minus 0.004 per 5.5℃ below 26.7℃.

○ Results: All battery blocks were adjusted to a specific gravity greater than 1.277. The battery is fully charged and proceed to step 12.

□ Result: One or more cells are less than 1.217. Step 9.

8. Charge evenly or fully charged. Stand still for at least 6 hours.
9. Open the battery lid, check the specific gravity with a liquid gravity meter and record.

maintenance

10. Check the ambient temperature and adjust the liquid gravity of each battery as described below

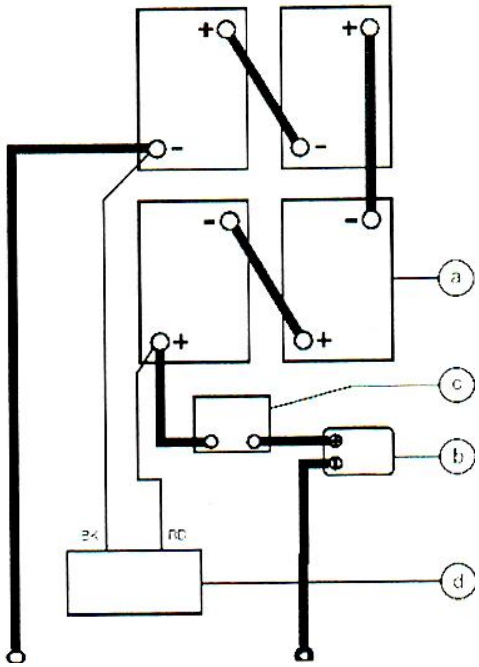
- Plus 0.004 per 5.5℃ above 26.7℃.
- minus 0.004 per 5.5℃ below 26.7℃.

○ Results: All battery blocks were adjusted to a specific gravity greater than 1.277. The battery is fully charged and proceed to step 12.

□ Results: the liquid proportion difference between battery blocks is greater than 0.1, or the proportion of more than one battery is less than 1.217, replace the battery.

11. Check the height of the battery electrolyte and, if necessary, add 3mm of distilled water. Don't add too much.

12. Cover the battery cover, use baking soda water and splashed electrolyte.



A battery b 250A fuse c fast circuit breaker d charger

Suitable for all batteries:

13. Check that the batteries in each battery pack are correctly connected.
14. Check the battery charger plug and wire insulation for excessive wear and damage, and replace them promptly, if so.
15. **Connect the battery charger correctly to the 110-230V50 / 60 HZ AC power supply.**

○ Result: The charger operates to charge the battery.

□ Results: the charger alarm sounds and the indicator flashes, check and correct the connection between the fuse and the charger. Make sure the charger is running properly and start charging the battery.

Note: In order to obtain good results, please choose the appropriate length of wire, the total length should not exceed 15m.

Note: If you want to know more about the charger operation, please contact our after-sales department.

B-2 Check the electrical wires



This check is conducted every 250 hours or every quarter, whichever comes first.

Keeping the wires in good condition is critical for safe operation and good machine performance. Failure to discover and replace wires with burns, abrasions, corrosion, or bending will lead to an unsafe operating environment and can cause damage to the parts.

⚠警 告 Electric shock / explosion hazard

Contact with heat or electrical conductors may lead to serious casualties. Do not wear rings, watches, and other jewelry.

1. Check whether the ground wire under the chassis is missing

2. Check the following areas for burned, scratched, corroded, bent or loose wires:
- Ground controller box inside
- The hydraulic valve set wire in the oil pump tray
- Wire of the battery area inside the battery tray
- Inside of the platform controller box

3. Turn the key switch to the platform controller and pull out the red emergency stop button on the ground and the platform controller.

4. Raise the platform to a height of about 2.5m from the ground.

5. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate upward to the vertical state.

6. Reduce the platform height until the safety arm is in full contact with the shaft sleeve.

⚠警 告 Stopping pressure danger

Make sure the platform is in the correct position of the safety arm.

7. Check the chassis and shear areas for burns, scratches, corrosion, bent, and loose wires

8. Check the following areas for burns, scratches, corrosion, bent and loose wires:
- Shaft arm wire
- ECU to the platform
- Connect to the wiring harness connector on the platform

9. Check the free coating of the insulating oil in the following position:
- Connect the wiring harness connector between the ECU and the platform controller
- Connect all the harness connectors for the horizontal sensor

10. Raise the platform and restore the safety arm to the installation position.

11. After lowering the platform to the closed position, turn off the machine.

B-3 Check the tires and the wheel hub



This check is conducted every 250 hours or every quarter, whichever comes first.

Keeping the tyres and hubs in good condition is critical for safe operation and good performance. Failure of the tires and the hub may cause the machine to roll over. If not found and repaired in time, it will also cause parts damage.

1. Check the tire tread and sides for scratches, cracks, puncture and other abnormal wear.

2.Check the hub for damage, bending, and cracking.

Suitable for hydraulic drive model

3. Remove the torque of the check nut.

Note: A new opening pin must be used for reinstallation.

4. Install and lock the new opening pin.

Unlubricated nut torque	406.7Nm
Lubricated nut torque	305Nm

Suitable for electric drive models

Check all the bolt torque	
Unlubricated bolt torque	50.5Nm
Bolt torque for lubrication	37.8Nm

B-4 Check for the emergency stop function

This inspection is conducted every 250 hours or quarterly, whichever comes first.
Normal emergency stop function is essential for the safe operation of the machine. The abnormal red emergency stop button will be unable to cut off the power supply and stop all functions of the machine, resulting in dangerous situations.
As a safety function, the selection and operation of the ground controller are preferred over the platform controller, except for the red emergency stop button function on the platform.

1. Turn the key switch to the ground control and pull out the red emergency stop button on the ground and platform controllers.

2. Press the ground controller red emergency stop button to the closed position.
○ Result: The machine has no action.

3. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and platform controller.
4. Press the platform controller red Emergency Stop button to the closed position.
○ Result: The machine has no action.
Note: The red emergency stop button of the ground controller stops all operation of the machine even if the key switch is switched to
Control platform.

B-5 Test the key switch

This check is conducted every 250 hours or every quarter, whichever comes first.
Proper key and switch action and response are critical to the safe operation of the device. The machine may be operated by a ground or platform controller and switched by a key switch. A failed switch may cause a hazardous operation.
Performing this step requires using the platform controller on the ground, so people do not stand on the platform.

1. Pull out the red emergency stop button on the ground and the platform controller.

2. Turn the key switch to the platform control.

3. Check the rise and descent functions in the ground controller.

○ Result: The machine has no action.

4. Turn the key switch to the ground control.

5. Check the rise and fall functions in the platform controller.

○ Result: The machine has no action.

6. Turn the key switch to the closed position.

○ Result: The machine has no action.

B-6 test car-type horn

This check is conducted every 250 hours or every quarter, whichever comes first.

The horns are used by personnel controlled on the platform to warn the sound of the ground personnel. Unfunctional speakers cannot alert personnel on the ground of dangerous or unsafe conditions.

1. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and the platform controller.
2. Press the horn button in the platform controller.

○ Result: the horn rings.

The B-7 tests the drive brake function



This check is conducted every 250 hours or every quarter, whichever comes first.

Proper braking action is critical to operational safety. The brake requires stability, no delay, turbulence and abnormal noise. Hydraulic release

The brake release system should also appear normal.

To complete the brake function test, the machine must be conducted on a solid, horizontal and unobstructed barrier ground to ensure that the machine is in a closed shape.

The state and the extension platform should be fully withdrawn.

1. Draw a reference test line on the ground.
2. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and the platform controller.
3. Lower the platform to the closed position.
4. Press the drive function selection button.
5. Select a point on the machine (example touch point on the wheel) as a marker for visually crossing the reference test line.
6. Drive the machine to the maximum speed and release the handle immediately over

the ground test line at the reference point.

7. Measure the distance between the reference point and the test line.

○ Result: The machine stops within the specified braking distance. No action is required.

□ Result: The machine does not stop within the specified braking distance.

Note: The brakes must be effective within the allowable climbing capacity of the machine.

8. Replace the brake and repeat the above process from step 1.

Maximum braking distance	
Maximum braking distance	**61cm±30cm**

B-8 Test drive speed-closed state



This check is conducted every 250 hours or every quarter, whichever comes first.

Normal driving function is critical to operational safety. The drive function should respond to the operator quickly and smoothly. No delay, turbulence and abnormal noise during normal operation.

The drive speed test must be completed on a firm, horizontal and unobstructed ground .

1. Draw two lines of 12.2 meters apart on the ground as the starting line and the finish line.
2. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and the platform controller.

3. Lower the platform to the closed position.
4. Press the drive function selection button.
5. Select a point on the machine (example touch point on the wheel) as a reference for visually crossing the starting line and the finish line.
6. Turn the machine on to the maximum speed and start the time when the reference point crosses the starting point.
7. Keep full speed and record the time over the termination line.

See the Specifications.

B-9 Test drive speed-up state



This check is conducted every 250 hours or every quarter, whichever comes first. Normal driving function is critical to operational safety. The drive function should respond to the operator quickly and smoothly. No delay, turbulence and abnormal noise during normal operation. The drive speed test must be completed on solid, horizontal and unfree ground.

1. Draw two lines of 12.2 meters apart on the ground as the starting line and the finish line.
2. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and the platform controller.
3. Press the lifting function selection button.
4. Hold down the function enable button.
5. The height of the lifting platform is about 2 meters from the ground.
6. Press the drive function selection button.
7. Select a point on the machine (example contact point on the wheel) as a reference for visually crossing the start and stop lines.
8. Turn the machine to the maximum speed and start the time when the reference point crosses the starting point.
9. Keep full speed and record the time over the termination line.

See the Specifications.

B-10 Test Drive Speed-Slow Speed



This check is conducted every 250 hours or every quarter, whichever comes first.

Normal driving function is critical to operational safety. The drive function should respond to the operator quickly and smoothly. No delay, turbulence and abnormal noise during normal operation.

The drive speed test must be completed on solid, horizontal and unfree ground.

1. Draw two lines of 12.2 meters apart on the ground as the starting line and the finish line.
2. Turn the key switch to the platform control and pull out the red emergency stop button on the ground and the platform controller.
3. Lower the platform to the closed position.
4. Press the drive speed selection button.
5. Select a point on the machine (example contact point on the wheel) as a reference for visually crossing the start and stop lines.
6. Turn the machine on to the maximum speed and start the time when the reference

point crosses the starting point.

7. Keep full speed and record the time over the termination line. Time is not less than 25 seconds.

B-11 for the hydraulic oil analysis



This check is conducted every 250 hours or every quarter, whichever comes first.

Replacing or testing the hydraulic oil is critical to the performance and service life of the equipment.The contaminated hydraulic oil may affect the equipment

Performance, continuous use will cause equipment damage. Bad working conditions should be checked more regularly.

Before replacing the hydraulic oil, test the necessity through the oil pollution separator.

If the hydraulic oil is not replaced for two years, it should be tested quarterly;if it cannot pass the test.

See E-1, test or replace the hydraulic oil.

B-12 Check the hydraulic fuel tank cover ventilation system



This check is conducted every 250 hours or every quarter, whichever comes first.

A hydraulic tank cap with smooth exhaust is crucial to achieving good mechanical properties and service life.
Dirty or blocked platoon

The gas cover may worsen the performance of the machine. Bad working condition should be checked more regularly.

1. Remove the exhaust cover from the hydraulic fuel tank.
2. Ventilation inspection.

○ Result: The air can pass through the exhaust cover.

□ Result: If the air cannot pass through the exhaust cover, clean or replace the exhaust cover. Continue with step3

Note: When checking the tank cover, the air should pass freely.

3. Carefully clean the exhaust cover of the oil tank with a mild solvent, and dry with low pressure compressed air.Repeat step 2.

4. Install the hydraulic oil tank exhaust cover.

B-13 Check the chassis tray lock components



This check is conducted every 250 hours or every quarter, whichever comes first.

The chassis tray lock part being in good condition is crucial to the performance and service life of the equipment. Damaged chassis tray lock parts may cause accidental opening of the tray, causing a safety hazard.

1. Check the wear and damage of each chassis tray lock component.
2. Lubricate the spring and rotary latch mechanism of each tray lock with light oil.

B-14 Check the lower limit level and the pit protection switch



This check is conducted every 250 hours or every quarter, whichever comes first.

Good limit switches are critical to the performance and safe operation of the machine. Operating machines with defective limit switches can reduce machine performance and cause a potentially unsafe working environment.

To complete this inspection, the machine must be performed on a solid, horizontal and obstacle-free ground.

Lower limit switch

1. Remove the platform controller.
2. Raise the platform to a height of about 2.5m above the ground.
3. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate upward to the vertical state.
4. Reduce the height of the platform until the safety arm is in full contact with the shaft casing.

⚠警 告 **Stopping pressure danger**

Make sure the platform is in the correct position of the safety arm.

5. Turn the key switch to the closed position.
6. Mark and separate the connector of the platform controller.
7. Open the battery box to find and unplug the connector for the connection platform.
8. Plug the platform controller connector into the cable connector of the ECU.
9. Open the lower limit switch seat cover, mark and open the two lines of the lower limit switch.
10. Turn the key switch to the platform control.
11. Raise the platform slightly and restore the safety arm.
12. Control with the platform controller on the ground, press the lifting function selection button, and drop the platform to the closed state.

○ Results: The diagnostic display will display code 18, the alarm sound sounds,

and the lifting function should be able to operate. The machine is functioning properly.

¤ Result: The diagnostic display does not display code 18, no alarm sound sounds, and the lifting function cannot operate, so replace the limit switch.

13. Press the drive function selection button to try to drive the machine.

○ Results: The diagnostic display will display code 18, the alarm sounds, and the steering and drive functions will not operate. The machine is functioning properly.

¤ Results: The diagnostic display does not display code 18, no alarm sound, steering and drive function action, need to replace the limit switch.

14. Press the lifting function selection button to raise the platform by about 0.3m.

○ Results: The diagnostic display will display code 18, the alarm sound sounds, and the lifting function can be operated. The machine is functioning properly.

¤ Results: The diagnostic display does not display code 18, no alarm sound, replace the limit switch.

15. Raise the platform until the pit protection device is deployed.

○ Result: The diagnostic display does not display code 18, no alarm sound sounded. The machine is functioning properly.

¤ Result: The diagnostic display will display code 18 and the alarm sounds. The ZZ needs to replace the limit switch.

16. Raise the platform to a height of about 2.5m from the ground.

17. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate up to the vertical state.

18. Reduce the platform height until the safety arm is in full contact with the shaft casing.

⚠警 告 Stopping pressure danger

As the platform drops, ensure that the hand is in the correct position of the safety arm.

19. Turn the key switch to the closed position.

20. Disassemble the platform control line for the chassis ECU connection.

21. Return the platform control connector to the chassis ECU.

22. Connect the platform control connector.

23. Safely and correctly connect the lower limit switch.

24. Install the lower limit switch box.

25. Turn the key switch to the platform control.

26. Raise the platform slightly and restore the safety arm.

27. Drop the platform to the closed state.

Pit hole protection switch

28. Move the machine to exceed the maximum tilt angle allowed by the horizontal sensor. See the nameplate for the maximum allowable tilt angle.
29. Press the lifting function selection button to lift the machine to about 2 meters on the sloping ground.

○ Result: The diagnostic display display code LL, the alarm sounded, the pit protection device deployed. The machine is functioning properly.
¤ Result: The diagnostic display does not display the code LL, no alarm sound, and the pit protection device is not deployed. Adjust or replace the hole limit switch.
30. Press the drive function selection button to try to drive the machine on the ramp.

○ Results: diagnostic display display code LL, alarm sound, and the steering and drive function can not operate. The machine is functioning properly.
¤ Result: The diagnostic display does not display the code LL, no alarm sound, and the drive and steering functions operate normally. Adjust or replace the pit protection switch.
31. Lower the platform to close up and move the machine to a firm horizontal ground.
32. Place a wooden block about 5cm high under the right hole protection device.
33. Press the lifting function button to try to lift the machine to about 2.m.

○ Results: the pit protection device touched the wooden block, can not be fully expanded, the diagnostic display display code 18, the alarm sounded, the machine can rise to about 2m. The machine is functioning properly.
¤ Results: The pit protection device touched the wood block, can not fully deploy, the diagnostic display does not display code 18, no alarm sound,
The machine can continue to rise. Adjust or replace the pit protection limit switch.
34. Press the drive function selection button to try to drive and turn to the machine.

○ Results: The diagnostic display displays code 18, the alarm sounded, and the steering and drive functions do not operate. The machine is functioning properly.

¤ Result: The diagnostic display does not display code 18, no alarm sound, the drive and steering of the machine is normal. Adjust or replace the pit protection limit switch.
35. Lower the platform to the closed state, and remove the wooden block under the right pit protection device.

36. Repeat steps 31-34 under the left pit protector.

37. Lower the platform to close up and remove the wooden block under the left crater

protector.

38. Turn off the machine.

B-15 Check the upper limit level switch



This check is conducted every 250 hours or every quarter, whichever comes first.

Good limit switches are critical to the performance and safe operation of the machine. Operating machines with defective limit switches can reduce machine performance and cause a potentially unsafe working environment.

To complete this function check the machine must be on solid, horizontal and unfree ground.

1. Turn the key switch to the ground control and raise the platform to a height of about 2.5m from the ground.
2. Lift the safety arm, move the safety arm to the middle of the shear and shaft sleeve, and rotate up to the vertical state.
3. Reduce the height of the platform until the safety arm is in full contact with the shaft casing.

⚠警 告 Stopping pressure danger

As the platform drops, ensure that the hand is in the correct position of the safety arm.

4. Open the limit switch seat cover installed on the chassis.
5. Raise the platform slightly and restore the safety arm.
6. Press the upper switch arm with the ground controller to activate the upper switch switch.

○ Result: The platform stopped rising and the machine was functioning normally.

¤ Result: The platform continues to rise, adjust or replace the upper limit bit switch.

¤

Check C steps

C-1 test platform Overloading system



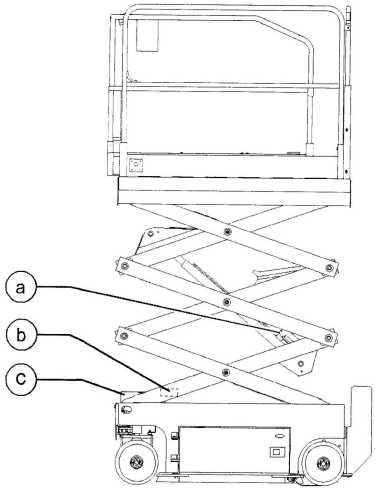
Follow this step every 500 hours or 6 months, whichever comes first, or check immediately if the machine is overloaded.

Frequent testing of the platform overload mechanism is critical to the safe operation of the machine. Continuous error operation on the platform will cause the system to overload the platform. The stability of the machine will be affected, causing the device to collapse.

The platform overload system is designed to prevent overloading under the operation of the machine. It is made up of two electrical components: an overload pressure switch and a tilt sensor.

The overload pressure switch is adjustable and is used to determine the pressure of the cylinder to feedback to the platform overload system. When the pressure is too high, the pressure switch will signal to the ECU and all functions of the machine will stop until the excess load is removed from the platform.

A tilt sensor located in the inner shear arm 1 for measuring the tilt angle of the shear fork, thereby determining the height of the platform.



a 过载压力开关

b 倾斜传感器

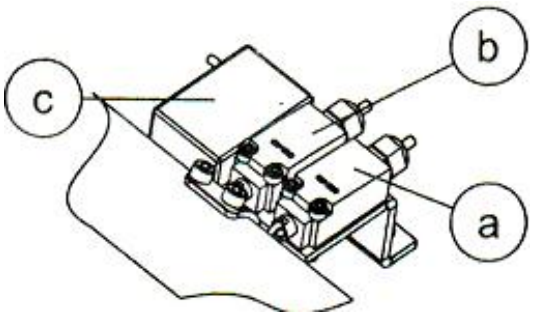
c 限位开关盖

1. Turn the key switch to the ground control and raise the platform to a height of about 2.5m from the ground.
2. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate upward to the vertical state.
3. Reduce the height of the platform until the safety arm is in full contact with the shaft casing.

⚠警 告 Stopping pressure danger

4. Make sure that the hand is in the correct position of the safety arm when the platform drops.

5. Open the limit switch seat cover installed on the chassis. Remove the lid of the limit switch.



A upper bit switch b lower bit switch c inclination sensor

6. Mark and open the two lines of the upper limit switch.
7. Shorten the two apart wires together.
8. Turn the key switch to the ground control and pull out the two red emergency stop buttons from the ground and platform control.
9. Raise the platform slightly and restore the safety arm.
10. Lift the platform to the highest position and continue to press the lifting function selection button.

○ Result: The alarm sound goes up

¤ Results: No alarm sound, calibrate the platform overload system.

11. Use the manual drop function to reduce the platform to the closed state.
12. Carefully disconnect the upper limit switch short cord.
13. Lift the platform to the highest position, and continue to press the lifting function selection button.

○ Result: The alarm is not sound. The system is functioning normally.

¤ Results: The alarm sounded and the platform overload system does not function properly. Eliminate the limit switch, the wire and installation bracket or overload system need to be calibrated.

14. Drop the platform to a height of about 2.5m from the ground.
15. Lift the safety arm, move the safety arm to the middle of the shear shaft sleeve, and rotate up to the vertical state.
16. Reduce the platform height until the safety arm is in full contact with the shaft casing.

⚠ 警 告 Stopping pressure danger

As the platform drops, ensure that the hand is in the correct position of the safety arm.

17. Connect the limit switch as is and install the limit switch cover.
18. Install back the limit switch seat lid.
19. Install the lid of the platform limit switch seat.
20. Raise the platform slightly and restore the safety arm.
21. Lower the platform to the closing position.

C-2 Replace the hydraulic fuel tank exhaust cover



This step is performed every 500 hours or semiannually, whichever comes first.

The hydraulic fuel tank is a ventilated fuel tank. There is an air filter inside the exhaust cover, which may become blocked over time. If the exhaust cover fails or is improperly installed, the impurities may enter the hydraulic system. The exhaust cover should be checked frequently in harsh working conditions.

1. Remove the exhaust cover of the hydraulic fuel tank.
2. Replace the new hydraulic oil tank exhaust cover.

Check list D step

D-1 Check the wear-resistant slide of the shear arm

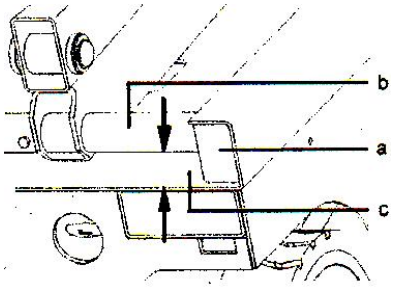


The step was performed every 1,000 hours or a year, whichever comes first.

The quality of the shear arm is crucial to the safe operation of the machine. Use of worn wear-resistant sliders may cause component damage and unsafe work hazards.

Check the wear pad when the platform is closed.

1. Measure the distance between the bottom plate plane of the inner link sleeve on the ground controller side of the non-steering end.



A wear slider b inner connecting rod sleeve c bottom plate plane

○ Results: Measurement result is greater than or equal to 34mm. Execution step 2.

□ Result: The measurement result is less than 34 mm. Replace the wear der.

2. Measure the distance between the bottom plate plane of the inner link sleeve on the side of the battery pack at the non-steering end.

○ Results: Measurement greater than or equal to 34 mm. Execution step 3.
⌑ Result: If the measurement result is less than 34 mm. Replace the wear der.
3.Apply lubricant between chassis slide and wear slide.

D-2 Replace the hydraulic oil tank oil return filter assembly



The step was performed every 1,000 hours or a year, whichever comes first.
Replacing the return oil filter is essential for the good performance and service life of the machine. Dirty or blocked filters may affect the machine
Device performance, continuous use causes damage to the parts. The filter should be replaced more frequently in harsh working conditions.

▲当 心 Scald danger

Beware of hot oil. Contact with hot oil may cause severe scald burns.

注 意 Return return of the hydraulic tank

The filter is installed in the middle area between the functional valve block and the hydraulic power unit.

1. Clean the hydraulic oil around the filter. Remove the filter with a wrench.
2. Apply a layer of hydraulic oil on the sealing ring of the new filter.
3. Install the new filters and tighten them by hand.
4. Use a marker to mark the replacement time and date on the filter replacement table.
5. Turn the key switch to the ground control and pull out the red emergency stop button on the ground and platform controllers.
6. Hold down and dial the lift function selection button down.
7. Check the filter parts for oil leakage.
8. Clean up the overflow of hydraulic oil around it.

Check list E step

E-1 to test or replace the hydraulic oil



This procedure is checked every 2000 hours or every two years, first arrival first.

Replacing or testing the hydraulic oil is essential for good machine performance and service life. Dirty hydraulic oil and oil absorption filter will affect the machine performance, and continuous use will cause damage to the parts. This operation should be performed more frequently in harsh working conditions.

Verify that the replacement is necessary with an oil grease separator before replacing the hydraulic oil.

If the hydraulic oil is not replaced for two years, it should be tested every quarter and replace the hydraulic oil when the test is unqualified.

Note: This procedure should be performed with the machine closed state.

1. Disconnect the battery pack on the machine.

⚠警 告 Electric shock / burn hazard

Operation in a charged circuit may result in serious injury or death. Remove the ring, watch and other accessories during the operation.

2. Open the hydraulic power unit installation tray.

3. Mark and disconnect the return pipe from the hydraulic filter to the hydraulic tank, and remove the line from the tank. Cover the pipe joint

To dust.

4. Mark and disconnect the suction pipe of the hydraulic pump and oil tank and remove the oil pipe. Cover the pipe fittings for dust prevention.

5. Release the hydraulic tank fastener and remove the hydraulic tank.

6. Remove the drain plug at the bottom of the hydraulic oil tank.

7. Place the oil in a suitable container.

⚠警 告 The danger of a physical injury

The ejected hydraulic oil can penetrate through the skin. When releasing the hydraulic joint, let the oil pressure gradually weaken.don't

Let the oil spray out.

8. Clean the spilled hydraulic oil, and use the released hydraulic oil correctly.

9. Clean the hydraulic fuel tank with a mild solvent and air-dry thoroughly.

10. Tighten the drain plug. Torque is required as follows:

Torque specification	
Unlubricated hydraulic oil tank drain plug	4.5Nm
Lubricated hydraulic oil tank drain plug	3.4Nm

11. Install the hydraulic tank and install the fasteners to tighten the hydraulic tank.

Press the following push-button requirements:

Torque specification	
Unlubricated hydraulic fuel tank fasteners	4Nm
Lubricated hydraulic fuel tank fasteners	2.9Nm

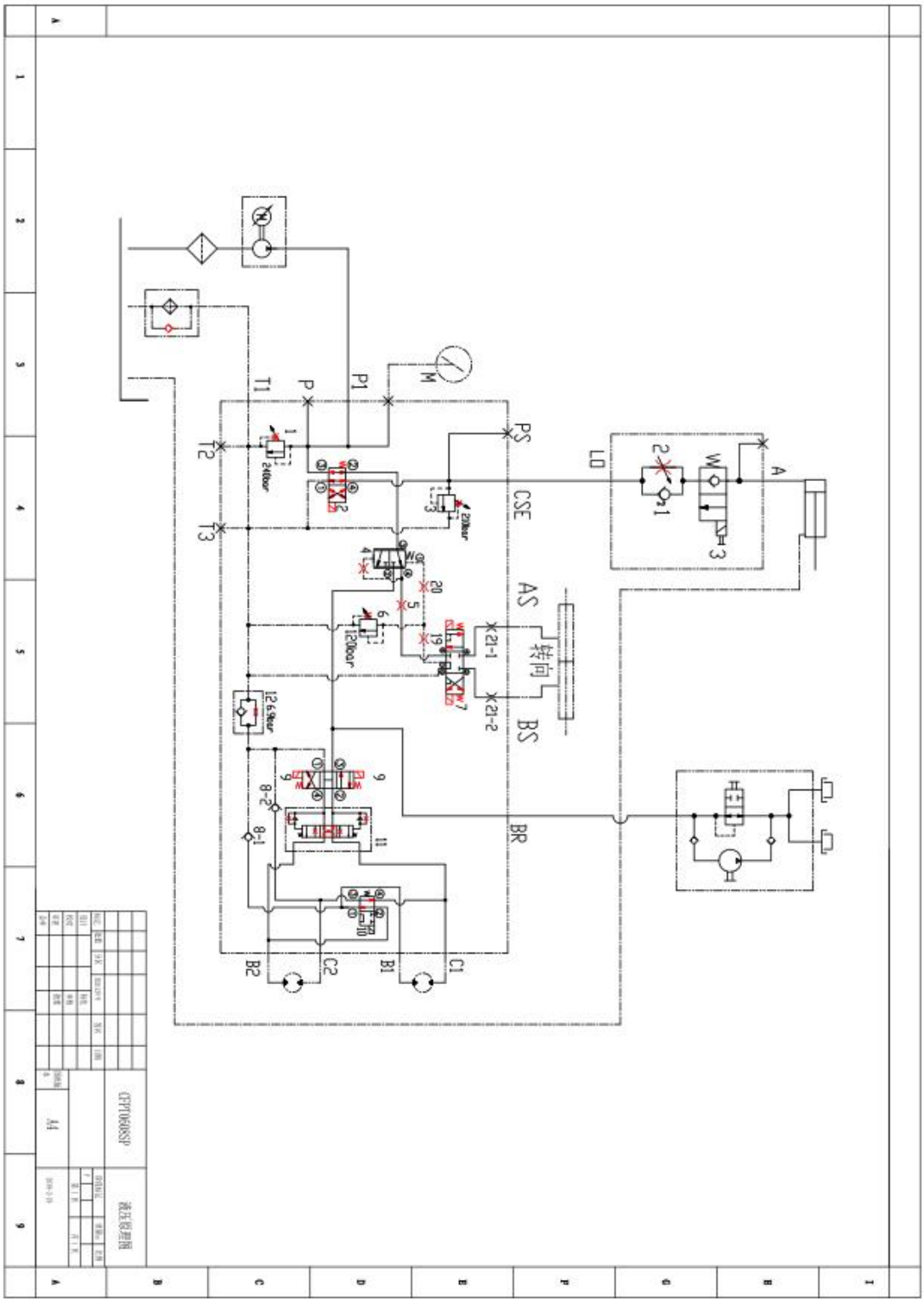
12. Connect the hydraulic pump into the oil pipe and the oil tank.
13. Connect the hydraulic pump back to the oil return filter.
14. Fill the tank with hydraulic oil and be careful not to overflow.
15. Start the oil pump to fill the hydraulic oil with the entire hydraulic system to remove the air in the hydraulic system.

⚠警 告 Danger of component damage

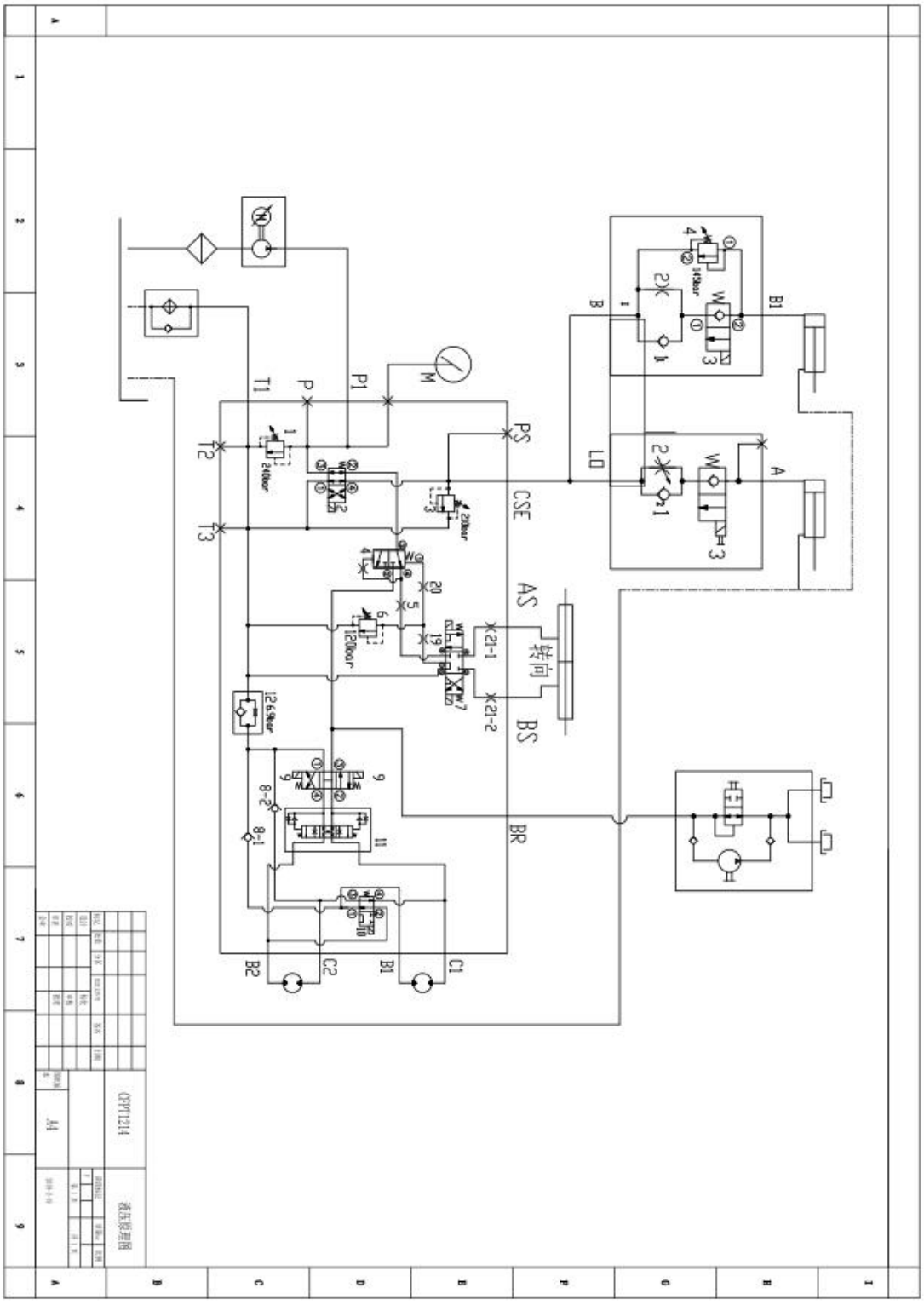
Operation without oil may cause damage to the hydraulic pump. Carefully drain the fuel tank while filling the hydraulic system. Do not allow the hydraulic pump to erode the gas condition.

Hydraulic schematic diagram

ZH PT0608 ZH PT0810 ZH PT0608SP

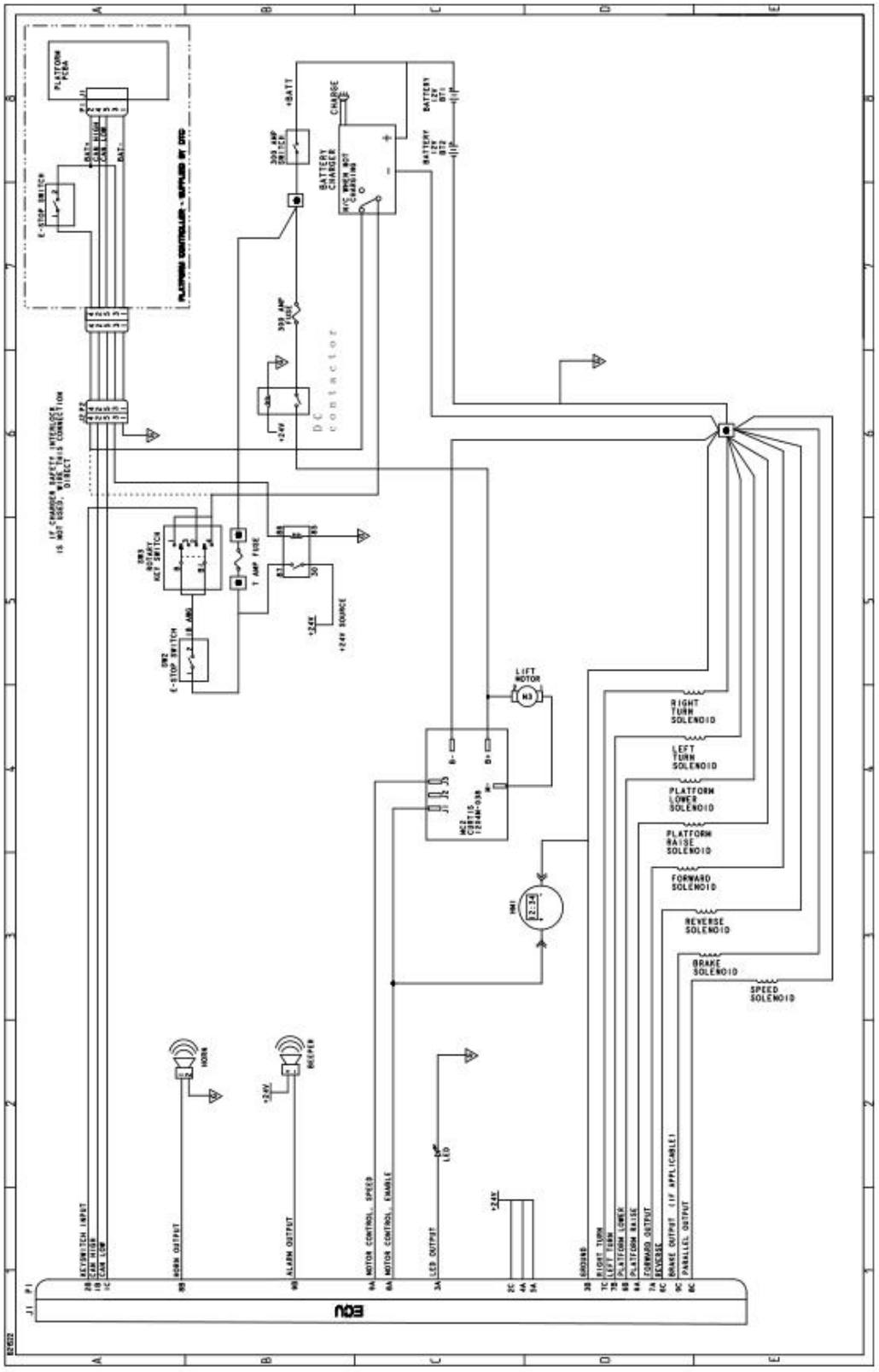

T1
P
P1
M
PS
T2
T3
CSE
LO
A
AS
转向
BS
BR
B2
C2
B1
C1
240bar
280bar
120bar
126.9bar
A4

GTJZ 1012 GTJZ 1214 GTJZ 1416

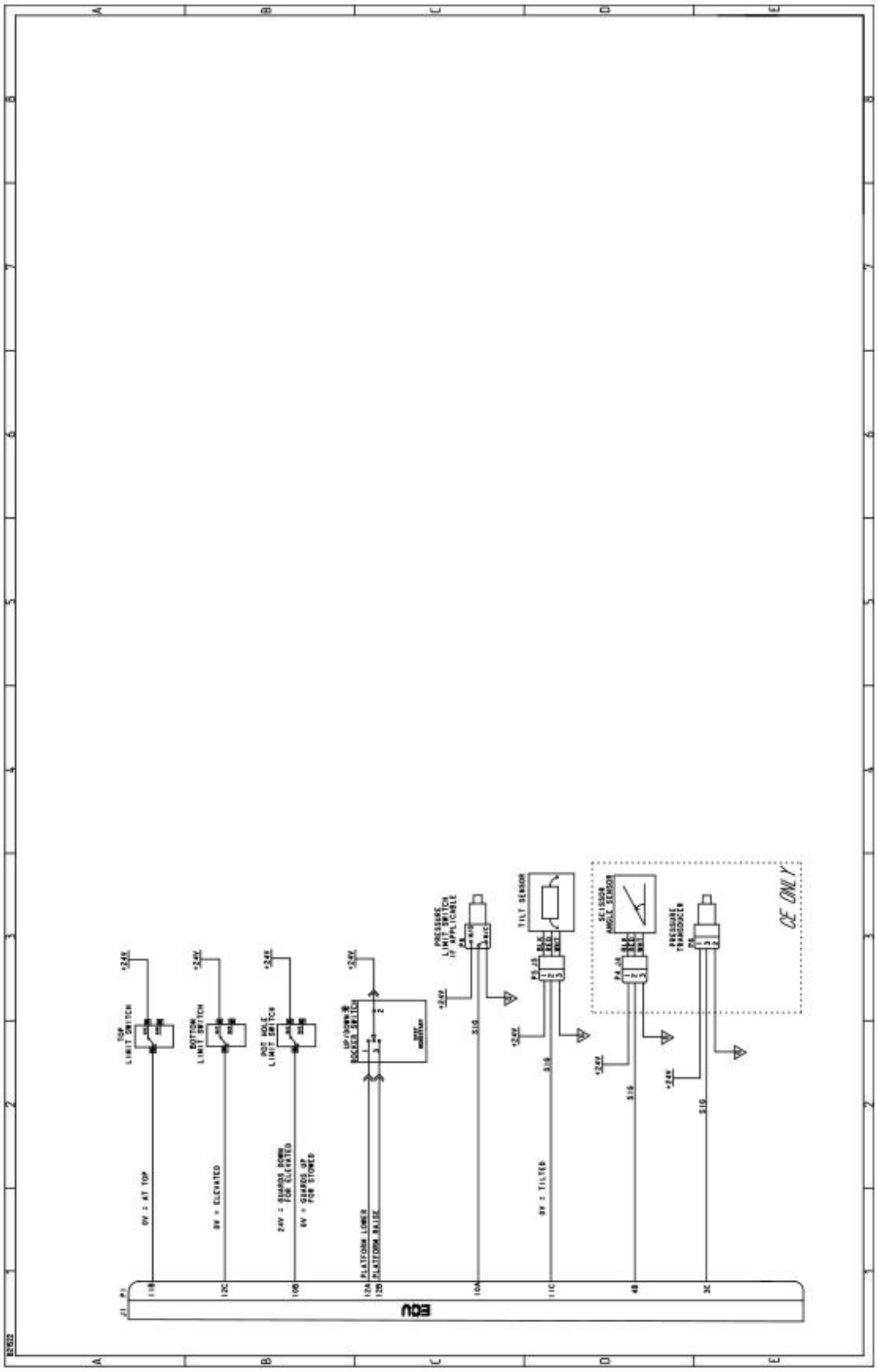


Electrical schematic diagram

GTJZ 0608 GTJZ 0810 GTJZ 0608SP GTJZ 1012 GTJZ 1214 GTJZ 1416



GTJZ 0608 GTJZ 0810 GTJZ 0608SP GTJZ 1012 GTJZ 1214 GTJZ 1416


CE ONLY
ECU
TOP LIMIT SWITCH
BOTTOM LIMIT SWITCH
PIT IDLE LIMIT SWITCH
UP/DOWN ROCKER SWITCH
PRESSURE LIMIT SWITCH (NON-ADJUSTABLE)
TILT SENSOR
ELEVATION ANGLE SENSOR
PRESSURE TRANSDUCER
0V = AT TOP
0V = ELEVATED
24V = GUARDS DOWN FOR ELEVATED
0V = GUARDS UP FOR STOWED
PLATFORM LOWER
PLATFORM RAISE
0V = TILTED

Maintenance record sheet

date	remarks