Operation and Safety Manual of MEWP XG0807DCW

XCMG Fire-Fighting Safety Equipment Co., Ltd

XG0807DCW Mobile Elevating Work Platform

Operation and Safety Manual

1st version in October 2019

PIN	
Engine No.	
Manufacture date	Month Year

The operation manual is part of the product! Always keep on hand for reference!

Please read the manual before operating this machine.

The product is designed and manufactured by complying with standard of GB25849-2010!

Table of contents

Preface

This manual is a very important tool! Always keep it with the machine at all times.

This manual is intended to provide the necessary safety precautions and operation procedures for the owner, user, operator, lesser, and lessee to ensure the safe and correct operations of the machine within its application scope.

Due to the continuous improvement of the products of XCMG FIRE-FIGHTING SAFETY EQUIPMENT CO., LTD., the technical specification is subject to change at any time without further notice. For related updates, please contact XCMG FIRE-FIGHTING SAFETY EQUIPMENT CO., LTD.

Safety Warning Signs and Safety Signal Prompts

This is a safety warning sign. This sign is used to alert you to any possible personal injury hazards. Follow all safety information of this sign to avoid possible personal injury or death.

DANGER

It indicates an imminently hazardous situation. If not avoided, it will result in serious injury or death. This sign will have a red background.

WARNING

It indicates a potentiality hazardous situation. If not avoided, it will result in serious injury or death. This sign will have an orange background.

CAUTION

It indicates a potentiality hazardous situation. If not avoided, it could result in minor or moderate injury. It may also alert against unsafe practices. This sign will have an yellow background.

NOTICE

It indicates the information or company policy that relates directly or indirectly to the personnel safety or property protection.

Revision Record

Initial issue on October 21, 2019

Chapter 1 Safety notes

1.1 Overview

This chapter outlines the necessary precautions for proper and safe machine operation and maintenance. For the proper operations of this machine, routine maintenance schedule must be established according to contents of this manual. In addition, a maintenance schedule must be made and followed by a qualified person using the information provided in this manual and Service and Maintenance Manual to ensure that the machine can be safely operated.

The owner/user/operator/lessor/lessee of the machine must not accept operating responsibility until this manual has been read, training is accomplished, and all operation of the machine has been completed under the supervision of an experienced and qualified operator.

This chapter contains the responsibilities of the owner, user, operator, lessor, and lessee concerning safety, training, inspection, maintenance, application, and operation. If you have any question on safety, training, inspection, usage and operation, please contact XCMG.

⚠WARNING

Any failure to obey the safety precautions listed in this manual can result in machine damage, property damage, personal death or injury.

1.2 Preparation before operation

Training and knowledge of operator

Read and understand Operation and Safety Manual before operating the machine.

- For any clarification, question, or issue related to any part of this manual, please contact XCMG Fire-Fighting Safety Equipment CO., LTD.

- Only personnel who received adequate training from qualified authorized persons shall be permitted to operate this machine.
- Only authorized personnel shall be permitted to operate this machine, who must know how to operate and maintain the machine safely and properly.
- Read, understand, and obey all DANGERS, WARNINGS, CAUTIONS, and operating instructions on the machine and in this manual.
- Ensure that the machine is to be used in the range of applications defined by XCMG.
- All operating personnel must be familiar with the emergency controls and emergency operation as specified in this manual.
- Read, understand, and obey all employer, local, and governmental applicable regulations related to the application of the machine.

Workplace inspection

- Precautions to avoid all hazards in the work area must be taken by the user before and during operation of the machine.
- While the MEWP is on trucks, trailers, railway cars, floating vessels, scaffolds or other equipment, do not operate the machine or raise the work platform unless obtain the written permission of XCMG.
- Before operation, check above work area for overhead obstacles such as electric lines, bridge cranes, and other potential.
- Check working area ground for presence of void, bump, steep slope, obstacle, fragments, concealed cavity, and other potential dangers.
- Check the work area for hazardous positions. Do not operate the machine in hazardous environments unless approved for that purpose by XCMG.
- Check the ground are sufficient to support the maximum tire load indicated on the tire load signs next to each wheel.
- This machine can be used in nominal ambient temperatures from 0°F to 104°F (-20°C to 40°C). Consult XCMG to optimize operation outside of this temperature range.

Machine inspection

- Operate the machine only if the inspections and functional checks have been performed as specification of **Figure 2–1** in Chapter 2.
- Do not operate the machine unless maintenance and inspection are completed according to the maintenance and inspection requirements as specified in Service and Maintenance Manual.
- Ensure all safety devices are operated properly. Modifications of these devices will violate safety regulation.

⚠WARNING

The elevating platform cannot be modified or altered only the written permission is obtained from the manufacturer.

- It's prohibited to operate any machine without or lack of safety or operation label.
- Check if any original parts and components are modified and ensure all modifications was approved by XCMG.
- Keep the platform floor and floor slideway clear of debris. Do not allow residual dirt, oil stain, lubricating grease, and other slippery substances to remain on working shoes, platform floor, and surface of slide and slideways.

1.3 Operation

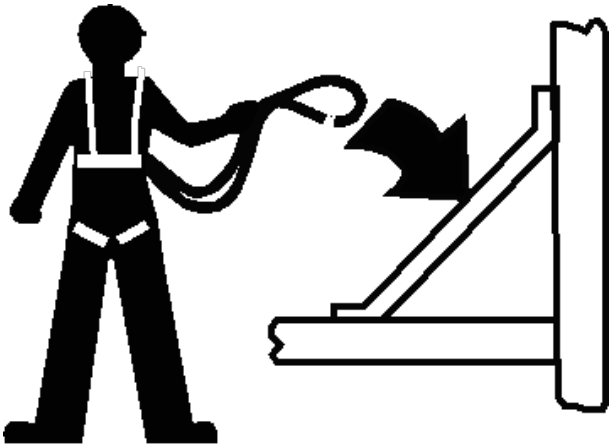
Overview

- Machine operation requires full attention of the operator. Bring the machine to a full stop before using any device like cell phones, wireless walkie-talkies, etc., which will distract operators' attention from safe operation.
- Do not use the machine for any purpose other than lifting personnel with their tools and materials.
- The operator must understand machine functions and performance characteristics of all functions.
- Do not operate a malfunctioning machine. If any failure occurs, shut down the machine. Remove the machine from service and inform the proper authorities.
- Do not dismount, modify, or disable any safety devices.
- Do not hard move any control switch or lever through neutral to an opposite direction. Ensure to return switch to neutral and stop before moving to the next function. Operate controls with slow and uniform force.
- In the presence of personnel in the platform, personnel is forbidden to regulate or operate the machine from the ground unless it is an emergency.
- Do not place any materials directly on the platform guard-rail unless approved by XCMG.
- If there are two or more workers on the platform, the operator must be responsible for all machine operations.
- Ensure that power tools are properly stored and never hang its wires in the working area of the platform.
- Do not assist a stuck or disabled machine by pushing or pulling without attaching ropes to plugs on chassis.
- Fully lower the work platform and shut off the power before leaving the machine.
- Remove all rings, watches, and jewelry when operating machine. Do not wear any loose fitting clothing or keep long hair unrestrained which may be caught or entangled in equipment.
- Personnel under the influence of drugs or alcohol or who are subject to seizures, dizziness or loss of physical control must not operate this machine.

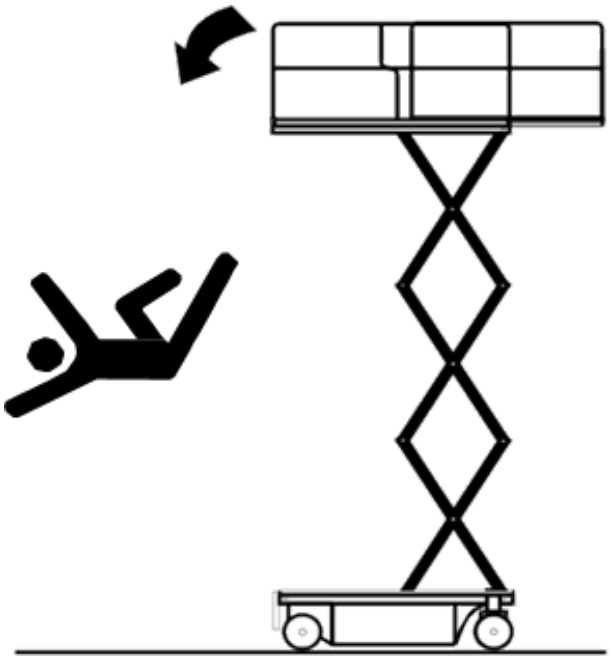
Tripping and falling hazards

- In prior to operation, ensure all doors and fences are fastened and secured in their proper position.

- During the operation, the workers on the platform must wear the whole-body safety belt and fix the safety belt to an approved anchorage fixing point by a hook.
- Identify the designated lanyard anchorage point(s) at the platform and securely attach the lanyard. Attach only one hook per fixing point.



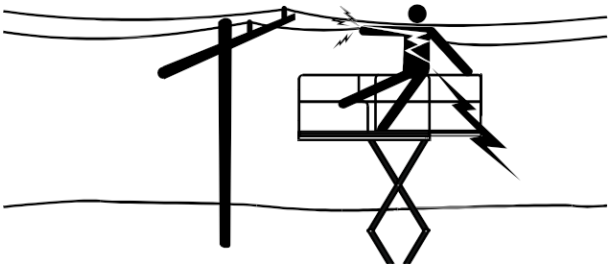
- Enter and exit through the door only. Pay extreme attention when entering or leaving the platform. Ensure that the work platform assembly is fully lowered. Face the machine when entering or leaving the platform. Ensure to maintain "three-point contact" with the machine, using two hands and one foot or two feet and one hand at all times during entry and exit.



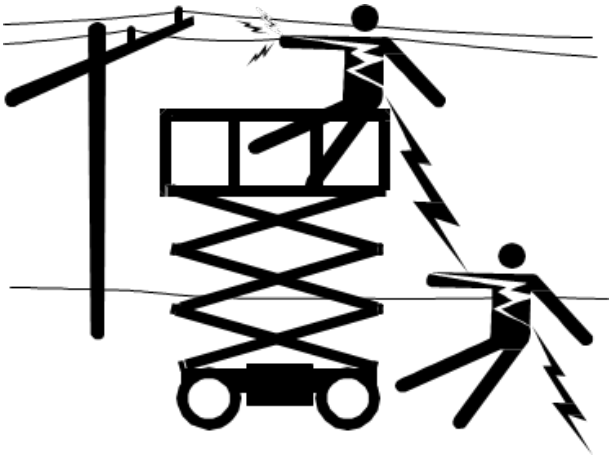
- Keep both feet firmly positioned on the platform floor at all times. Do not place ladders, boxes, steps, planks, or similar items in the platform to add additional stretch areas.
- Keep any oil, mud, and slippery substances away from the working shoes and the PLATFORM floor.

Electrocution hazard

- This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.



- Maintain safety distance from electrical power lines, apparatus, or any electrified (exposed or insulated electrical) parts according to the Minimum Approach Distance (MAD) as shown in **Table 1-1**.



- The factors of machine movement and electrical line swaying shall be taken into consideration.
- Any part of the machine, operators, tools and devices must keep at a distance of 3 m (10 ft) at least from any electrical line or apparatus with a maximum voltage of 50,000 V. 0.3m (1ft) additional clearance is required for every additional 30,000 volts or less.
- The minimum approach distance may be reduced if insulating barriers are installed to prevent contact, and the barriers are rated for the voltage of the line being guarded. These barriers shall not be part of (or attached to) the machine. The minimum approach distance shall be reduced to a distance within the designed working dimensions of the insulating barrier. This decision must be made by qualified personnel in accordance with the regulations of the employer, the local authority or the government regarding working near electric equipment.

⚠WARNING

Do not operate the machine or transport any personnel in prohibited area (MAD). Assume all electrical parts and wires are live unless known otherwise.

Table 1-1 Minimum approach distance (M.A.D.)

Voltage range (phase to phase)	Minimum approach distance Meter (feet)
0 KV~50 KV	3 (10)
>50 KV~200 KV	5 (15)
>200 KV~350 KV	6 (20)
>350 KV~500 KV	8 (25)
>500 KV~750 KV	11 (35)
>750 KV~1,000 KV	14 (45)
Notice: This rule must be followed unless there are more stringent laws and regulations from the employer, the local authorities or government.	

Tip-over hazard

- Check the ground are sufficient to support the maximum tire load indicated on the tire load signs next to each wheel. Do not drive on insufficient loading surfaces.
- The user must be familiar with road condition before driving. Do not exceed the allowable side slope grade and positive slope grade while driving.
- Do not elevate the platform or drive with platform elevated on or near a slope or an uneven, soft surface. Ensure the machine is on a firm, level and smooth surface before elevating the platform or driving with the platform elevated.
- Before driving onto rounds, bridges, trucks, and other surfaces, check the allowable capacity of the surfaces.
- Do not exceed the maximum working load as specified on the platform. Keep all loads within the loading capacity of the platform unless authorized by XCMG.
- Do not operate the machine when the wind condition is not complied with the specifications of the performance label on the sign of the elevating platform.

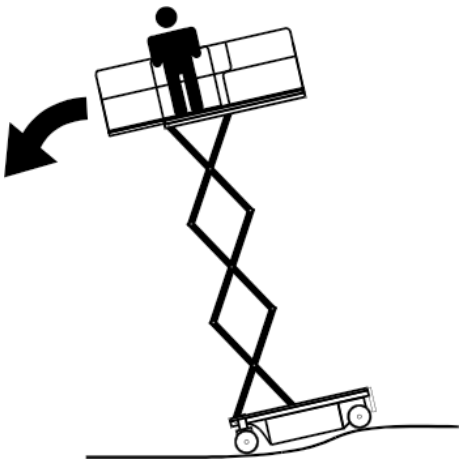
Table 1-2 Beaufort scale (for reference only)

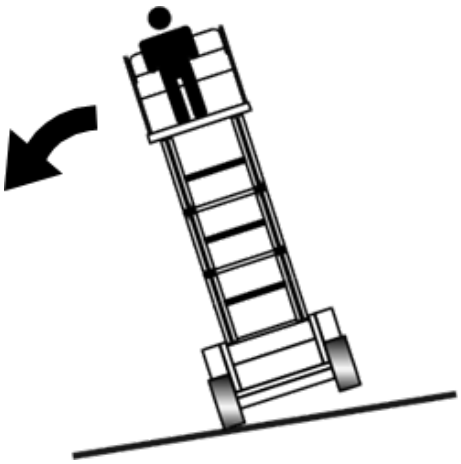
Beaufort scale	Wind speed		Description	Land conditions
	m/s	MPH		
0	0-0.2	0	Calm	Calm. Smoke rises vertically.
1	0.3-1.5	1-3	Light air	Wind motion visible in smoke.
2	1.6-3.3	4-7	Light breeze	Wind felt on exposed skin. Leaves rustle
3	3.4-5.4	8-12	Gentle breeze	Leaves and smaller twigs in constant motion.
4	5.5-7.9	13-18	Moderate breeze	Raises dust and loose paper. Small branches moved.

Table 1-2 Beaufort scale (for reference only)(continued)

5	8.0-10.7	19-24	Fresh breeze	Smaller trees begin to sway.
6	10.8-13.8	25-31	Strong wind	Large branches in motion. Flags waving near horizontal. Umbrellas used with difficulty.
7	13.9-17.1	32-38	Near gale/ moderate gale	Whole trees in motion. Inconvenience felt when walking against the wind.
8	17.2-20.7	39-46	Fresh gale	Twigs break off trees. Cars veer on road.
9	20.8-24.4	47-54	Strong gale	Slight structure damage.

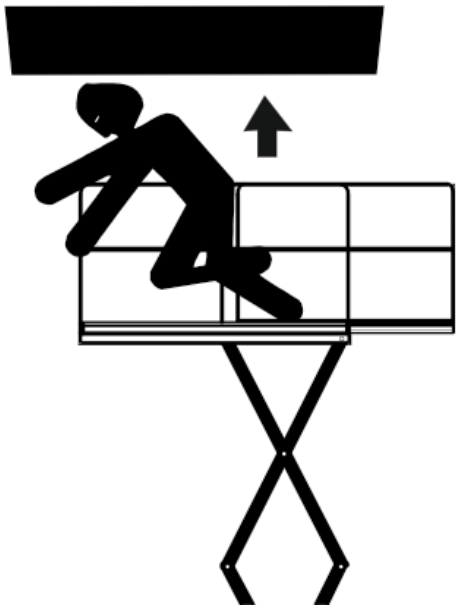
- Do not attempt to use the machine as a crane. Do not anchor this machine to any adjacent structure. Do not contact any wire, cable, or any similar items to the platform.
- During outdoor operations, do not cover any side face of work platform or carry any object with large surface area on the work platform. Carrying such additional parts will increase the exposed area of machine to the wind will decrease stability.
- It's prohibited to enlarge the dimension of work platform by extension platform face or adding accessory without permission.
- If the scissor arm assembly or platform is stuck so that one or more wheels are suspended off the ground, remove personnel before attempting to release the machine. Use cranes, forklift or other appropriate equipment to stabilize the machine and evacuated the personnel.





Crushing and collision hazards

- Approved safety helmet must be worn by all operators and ground personnel.
- Keep the hands and limbs away from the scissor arm assembly during operation and when elevating without safety support.
- Keep all body parts inside the platform guard-rail during operation.



- Assign a lookout when driving in areas where vision is obstructed.
- Keep non-operating personnel at least 1.8 m (6 ft) away from the machine during all operations.
- In the process of all operations, the operator must limit the travel speed according to the conditions of ground surface, congestion, visibility, slope, position of personnel, and other factors that may cause collision or injury to personnel.
- Be aware of braking distances in all driving speeds. When driving at high speed, switch to low speed before stopping. Only use low speed while driving the machine on a slope.
- Do not use high speed while driving the machine in confined space or close areas or reversing.
- Pay extreme attention at all times to prevent obstacles from striking or interfering with operating controls and personnel in the platform.
- Ensure that the operators from the equipment overhead or on floors are aware of the elevating platform's presence. Disconnect the power to overhead cranes. Apply roadblocks on the ground if necessary.
- Do not operate above the ground personnel who shall be warned not to work, stand, or walk under the elevated platform. Place roadblocks on the ground if necessary.

1.4 Towing, lifting and transportation

No personnel is allowed in the platform while traction, hoisting, or towing.

Do not tow the machine unless in event of emergency, malfunction, power failure, and loading/unloading.

(For detailed information,See：3-14 Page "3.13 Traction".)

Ensure the work platform is fully retracted and empty of tools in prior to traction, hoisting or towing.

When hoisting the machine with a forklift, position the forks only at designated areas of the machine. Use the forklift of adequate capacity.

1.5 Maintenance

This section contains general safety rules and instructions which must be observed during maintenance of the machine. Additional rules and instructions to be observed during machine maintenance are inserted in corresponding places of this manual and Maintenance Manual. It is of utmost importance that the maintenance personnel strictly observe these rules and instructions to avoid possible personnel casualties or damage to the machine or property. A maintenance procedure must be made by qualified personnel and must be followed to ensure that the machine is safe.

Crushing and collision hazards

- Shut off the power to all controls and ensure that all moving parts are secured from inadvertent motion in prior to any adjustments or repairs.
- Do not work under an elevated platform until it has been fully lowered to the full down position, if possible, or otherwise supported and restrained from movement with appropriate safety supports, blocking, or overhead supports.
- Do not attempt to repair or tighten any hydraulic hoses or fittings when the machine is powered on or the hydraulic system is under pressure.
- Release the hydraulic pressure from all hydraulic pipeline before loosening or removing hydraulic components.
- Do not check leakage with hand. Use a piece of cardboard or paper to search for leakage. Wear gloves to protect hands from spraying fluid.



- Ensure the replacing parts or components are identical or functionally equivalent to original parts or components.
- Do not move heavy parts without mechanical assistance. Do not place heavy items in unstable positions. Ensure the adequate support is provided when raising components of the machine.
- Use the approved non-flammable cleaning solvents only.
- Do not replace the original batteries or solid tyres with items of different weights or specifications, thus affecting the stability of the equipment. Do not modify the unit in any way to affect the stability.
- Refer to the Service and Maintenance Manual for the weights of critical stability items.

⚠WARNING

The elevating platform cannot be modified or altered only the written permission is obtained from the manufacturer.

Battery hazards

- Disconnect the batteries when maintaining electrical components or performing welding for the machine.
- No smoking, open flame, or sparks near the battery during charging or servicing.
- Do not lap any tool or metal objects between two wiring electrodes of battery.
- Ensure to put on protection devices of hands, eyes, and face while maintaining the batteries. Ensure that the battery acid does not come into contact with skin or clothing.

⚠ CAUTION

Battery fluid is highly corrosive. Avoid any contact with skin and clothing at all times. Immediately wash any contacted area with clean water and go to a doctor.

- Charge the battery only in a well-ventilated area.
- Avoid overfilling the battery fluid level. Replenish batteries with distilled water batteries only after the batteries are fully charged.

Chapter 2 User's responsibility, machine preparation and inspection

2.1 Training of operation personnel

The elevating platform is a personnel carrying device; so operation and maintenance must be completed by trained personnel.

Personnel under the influence of drugs or alcohol or who are subject to seizures, dizziness or loss of physical control must not operate this machine.

Training of the operator

Operator training must cover:

- Operations and restrictions of control systems, emergency controllers, and safety functions on work platform and from the ground.
- Labels, instructions, and warnings of controllers on the machine.
- Rules of the employer and government regulations.
- Use of approved falling protection equipment.
- Sufficient knowledge of machine operation and identification of failure or potential failure.
- The safest measures to operate the machine in the presence of overhead obstructions, other moving equipment, obstacles, depressions, holes, and drop-offs exist.
- Measures to avoid the hazards of unprotected electrical conductors.
- Specific working requirements or machine application.
- Reading and understanding the Operation and Safety Manual.

Training supervision

Training must be done under the supervision of qualified personnel in an open area free of obstructions until the trainee has developed the ability to safely control and operate the machine.

Operator responsibility

The operator must be instructed that he/she has the responsibility and authority to shut down the machine in case of a failure or other unsafe conditions of either the machine or the working site.

2.2 Preparation, checking and maintenance

The following table lists the periodical machine inspection and maintenance items required by XCMG. Please understand other regulatory requirements for mobile elevating work platform in your country,

region or position. Ensure to increase the inspection and maintenance frequency as required when the machine is working under severe or poor environment or is excessively used or the operating frequency of the machine is increased.

⚠ CAUTION

The engineer approved by XCMG Fire-Fighting shall have recognized grade, certificate, rich knowledge or experience, received comprehensive training, and successfully demonstrated the ability to maintain, repair and maintain the relevant mobile elevating work platform products of XCMG.

Table 2-1 Inspection and maintenance schedule

Type	Frequency	Major responsibility	Maintenance qualification	Reference
Pre-operation inspection	Before daily operation or each work shift.	User or operator	User or operator	Operation and Safety Manual
Pre-delivery inspection (refer to note)	Before each sale, lease, or lease delivery	Owner, agent or user	Qualified XCMG mechanical technician	Repair and Maintenance Manual and applicable XCMG checklist
Frequent inspection	In service for 3 months or 150 hours, whichever comes first; or out of service for a period of more than 3 months; or purchasing of the used equipment.	Owner, agent or user	Qualified XCMG mechanical technician	Repair and Maintenance Manual and applicable XCMG checklist
Annual inspection	Annually, no more than 13 months from the date of prior inspection.	Owner, agent or user	Qualified plant maintenance technician	Repair and Maintenance Manual and applicable XCMG checklist

Table 2-1 Inspection and maintenance schedule(continued)

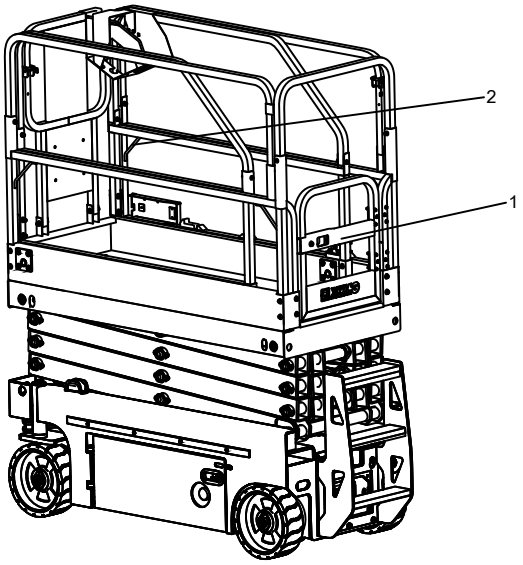
Preventive maintenance	At intervals as specified in the Service and Maintenance Manual.	Owner, agent or user	Qualified XCMG mechanical technician	Service and Maintenance Manual
Notice: The checklist is available from XCMG. Refer to the Repair and Maintenance Manual to complete the inspection.				

Pre-operation inspection

The Pre-operation inspection shall include each of the following:

1. **Cleanliness**—Check all surfaces for leakage (engine oil, fuel oil or battery fluid) or abnormal objects. Report to the proper maintenance personnel.
2. **Structure**—Inspect the machine structure for depression, damage, welding or base metal cracks or other discrepancies.
3. **Signs and labels**—Check all for cleanliness and legibility. Ensure none of the signs and labels is missing. Ensure that all ineligible markings and labels are already cleaned or replaced.
4. **Operator and safety manual—**Ensure that the Operation Manual, Maintenance Manual, and Parts Atlas are intact and are preserved on the machine.
5. **Routine inspection**—Check the following parts or areas for presence of damage, improper installation, missing part, and unauthorized modification:
   Electrical parts, wiring, and cables
   General safety requirements/warning signs
   Hydraulic hoses, connectors, hydraulic cylinders, and manifolds
   Storage battery pack and connections
   Drive motor
   Abrasion resistant slider
   Tyres and wheels;
   Anti-static adhesive tape
   Limit switches, alarms, and horn
   Alarms and indication lights (if equipped)
   Nuts, bolts, and other fasteners
   Door
   Pothole protection device
   Platform extension
   Scissor arm pins and fasteners
   Platform control lever
6. **Battery**—Check the battery electrolyte for leakage and check for appropriate electrolyte level. Please add distilled water as required.
7. **Hydraulic oil level**—Check the hydraulic oil level in hydraulic oil tank and add oil as required.

8. **Functional check**—Once the "Routine Inspection" is completed, perform the functional check of all systems in an area free of overhead and ground level obstructions.
9. **Platform door**—Keep the door and surrounding area clean without any obstacles. Check if the door can be closed properly and ensure it is not bended or damaged. Keep the door closed during operation.



1	Platform door
2	Rope fixing point

Rope fixing point—XCMG recommends all personnel in the work platform wearing the falling protection equipment and fixing such equipment to approved rope fixing points.

Daily routine inspection

Start the "Routine Inspection" from item 1 (refer to **Figure 2-1**). Continue checking each item in sequence for the conditions listed in the following checklist.

⚠WARNING

To avoid possible bodily injury, make sure the machine is powered OFF. Do not operate until all failures have been troubleshooted.

⚠ CAUTION

Ensure to perform the visual inspection of chassis underside. Checking this area may reveal conditions which could cause extensive machine damage.

Inspection instructions: Except criteria mentioned, make sure there are no loose or missing parts for all components, which are securely fastened and no visible damage, leakage or excessive abrasion.

1. Frame/Chassis/Ladder—Refer to Inspection instructions. Ensure that pothole protection (PHP) components on frame are in place, undamaged, not bent or worn. Side compartment doors shall be opened and closed properly.
2. Ground Controls—Marking is secure and legible, control switches return to neutral position, emergency stop switch functions properly. Control markings legible.
3. Hydraulic Pump/Motor, Control Valve Installation—No unsupported wires or hoses; no damaged or broken wires. Refer to "Inspection instructions".
4. Front Wheels, Tires, and Drive Motor—Steering connectors and steering hydraulic cylinder—Refer to "Inspection instructions".
5. Battery Compartment—Refer to "Inspection instructions" Rear Wheels, Tires and Hydraulic Brake—Wheel nut properly secured. Refer to "Tire Abrasion and Damage" to check wheels for damage and corrosion and hydraulic brake hoses for damage or leakage. Refer to "Inspection instructions".
6. Manual Declination Control—Refer to "Inspection instructions"
7. Signal light (s) (if equipped)—Refer to "Inspection instructions"
8. Scissor arm, pins and abrasion pads, and hoisting hydraulic cylinder—Refer to "Inspection instructions".
9. Platform/Handrail/Door Installation—Extending structure slides in and out and locks in place properly. Door closes properly. All down-folding fence pins (if equipped) are in place and secured. Refer to "Inspection instructions".
10. Work platform Console - Ensure that the console is securely fixed on appropriate position. The labels are clear and secure, the levers and switches are in neutral position, the emergency stop switch works normally, and the required manuals are preserved in the storage box.

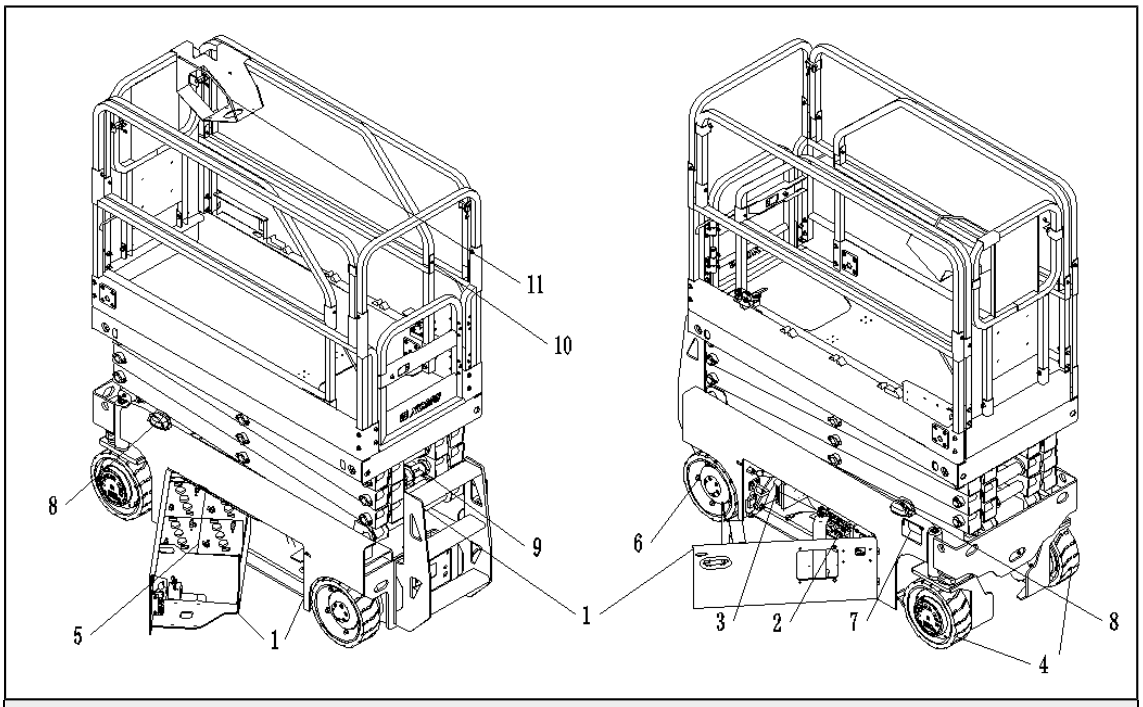


Figure 2-1 Daily routine inspection

Functional check

Fulfill the functional checking as per the following procedure:

1. Under no-load condition of platform, complete following inspection items from the ground control panel:

   1) Ensure that the key selection switch and the platform elevating switch operate properly.

   2) Ensure that all machine functions are disabled when the Emergency Stop Button is pressed.

   3) With the work platform elevated to 1m (3ft), ensure that the manual declination controller (The T-handle is located on the left rear side of machine and near the battery charger) can lower the work platform correctly.

   4) Check that pothole protection system fences are fully lowered when the platform is elevated.

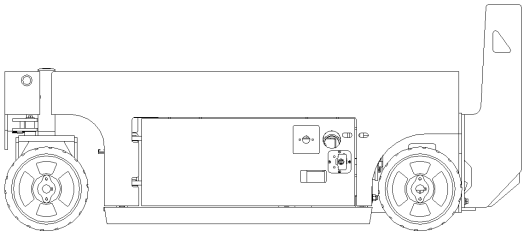


Figure 2-2 Pothole protection system−Elevating of work platform−The pit fence is lowered completely.

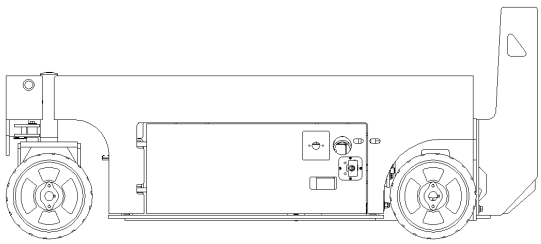


Figure 2-3 Pothole protection system−Complete declination of work platform−The pit fence is elevated.

2. From the platform control console:

   1) Ensure that the control panel console is firmly secured in the proper position;

   2) Ensure that all guards protecting switches are in place;

   3) Operate all switch functions, including driving/elevating mode selection switch and horn button;

   4) Operate all platform lever functions to ensure proper operation of drive, elevating, steering, and enable trigger switch operation.

   5) Ensure that all machine functions are disabled when the platform Emergency Stop Button is pressed;

3. When the work platform is under transportation (stowed) position:

   1) Drive the machine on a slope that do not exceed the rated slope rating of the machine and stop to test the brake for normal braking function.

   2) Check the tilt indicator light to ensure proper operation. The light shall be turned on if the inclination is beyond the allowed settings.

Note: When the tilt indicator is enabled, the following functions are affected; the driving and elevating functions will be disabled, platform must be fully lowered (retracted) for normal operation.

Chapter 3 Controller, indicator and operation of machine

3.1 Overview

⚠ CAUTION

The manufacturer can not directly control the applications and operations of the machine. The user and the operator are responsible for obeying proper safety specifications.

This chapter provides necessary information to understand control functions.

⚠ WARNING

- **Do not elevate the platform except it is on a smooth, firm and level ground free of obstructions and holes.**
- **To avoid death and serious injury, do not operate the machine if any control levers or toggle switches controlling the movement of platform are not turned off or on neutral position when released.**
- **If the platform does not stop when a control switch or lever is released, use the emergency stop switch to shut down the machine.**

3.2 Description

This machine is a mobile elevating work platform, of which the work platform is installed on the scissor arm capable of vertical elevation and declination. The purpose of the elevating platform is to lift the personnel and their tools and materials to an air work site. This machine can be used to access to the top of parked machine or the working area above the machine.

There is a primary control console in the platform of XCMG mobile elevating work platform. On this control console, the operator can control the platform moving forwards and backwards, raising and lowering.

The machine is also configured with a ground control console which can override the platform control console. The platform can also be raised and lowered from ground control console. Ground control is to be used to lower the platform to the ground only when the operator in the platform is unable to do so.

3.3 Working Characteristics and Limitations

Overview

No matter how many experiences the user has had with similar machines, the first requirement for the user is a comprehensive understanding of the working characteristics and limitations of this machine.

Labels

Matters need attentions is provided by DANGER, WARNING, CAUTION, NOTICE, and INSTRUCTION signs on the control console during operating. This warning sign is placed at various locations for

alerting the personnel with potential hazards caused by different operating characteristics and limitations. See above for definitions of safety signal labels.

3.4 Platform Loading

The maximum rated load of the working platform is indicated on the working platform sign and ground control console label, which is obtained when the machine is on a firm and level ground.

The platform is entered through the entry door at the rear of the platform. Keep the entry door closed during the operation of the machine.

Note: It is important to remember that the load shall be evenly distributed on the platform. The load shall be placed near the center of the platform if possible.

3.5 Machine control positions

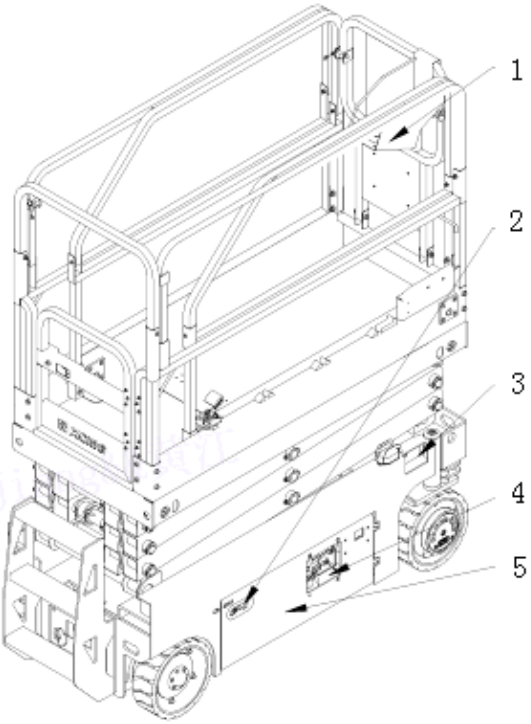


Figure 3-1 Machine control positions

1	Platform control console	2	Side compartment latch position (both sides)
3	Platform manual declination control device position	4	Ground control console
5	Side compartment door (both sides)		

3.6 Battery charging

Note: Make sure that the machine is parked in a well ventilated area before charging.

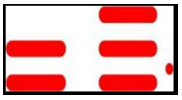
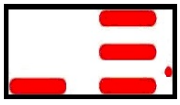
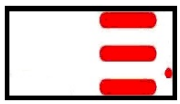
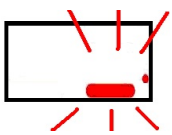
⚠ CAUTION

Only plug the charger into a properly installed and grounded outlet. Do not use the ground adapters or modify the plug. Do not touch non-insulated part of output connector or non-insulated battery terminal. Do not use the charger if the AC power cables are damaged or the charger is suddenly burned, fallen, or damaged in any other forms. Before connecting or disconnecting the battery (POS/NEG), ensure to turn off the AC power supply of charger.

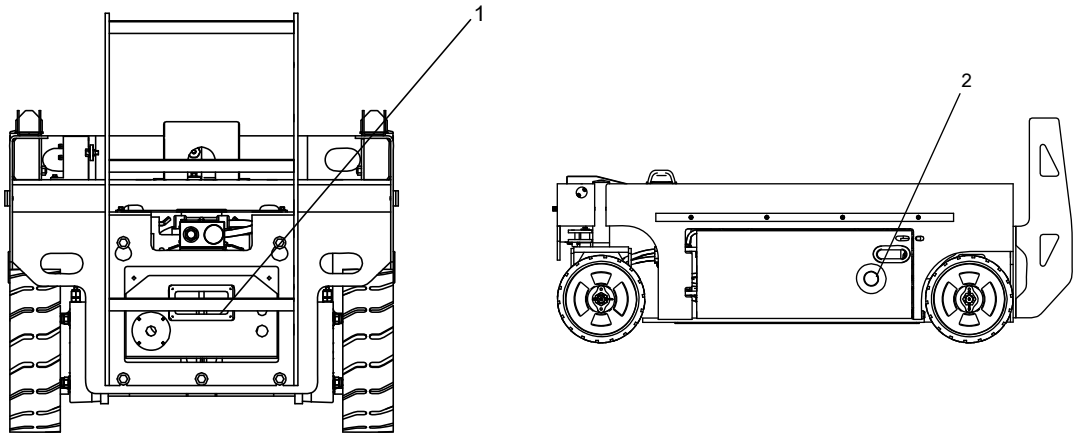
Do not open or disassemble the charger.

1. The battery charger AC input plug is located inside the frame at the left rear of the machine next to the battery charger.
2. Connect the charger AC input plug to a grounded outlet using a 3-core heavy duty extension cable.
3. While connecting the charger to an AC socket to start charging, check the indication light on the charger to ensure the normal operation of charger.
4. The current battery charging status can be observed by the platform display of upper control box. Refer to table below for details.

Note: If the charger is always plugged in, the charger will automatically restart a complete charging cycle if the voltage of battery drops below a minimum voltage or after thirty (30) days.

Platform display	Battery percentage	Description
	90-100	The battery is fully charged.
	70	The power percentage for remaining.
	50	The power percentage for remaining.
	30	The power percentage for remaining.
	20	The battery must be charged.
	10	The power is excessively low. (Attention: The machine will automatically switch over to low speed mode.)

Battery drawer panel



S/N.	Description	Description
1	Charger charging indication light	There are 4 green charging indication lights. At the start of charging, 4 indication lights will be flashing. During the charging of battery, the first three indication lights represent 50%, 75% 100% battery power separately. During the charging, the 50% indication light flashes when the battery power is less than 50%; it will be on constantly when the battery power reaches 50%. In such case, the 75% indication light starts to flash and so on till 3 indication lights keeps on in green, indicating the completion of charging.
2	Power switch	The machine is operational only after this switch (red power switch) is pulled out.
3	Other non-specified issues	Refer to attached charger manual.

3.7 Ground Control Console

Figure 3-2 Ground control console

S/N.	Name	Description
1	Emergency stop button	In event of any special condition during operations, please push down this button. Pull out to release this switch.
2	Key switch	This switch is a three-position switch. Turn to top right to switch to upper control mode. Turn to level to turn off the machine and disable both upper and lower controls. Turn to bottom right to switch over to lower control mode.
3	Elevation/ Declination toggle switch	This witch works with lower control switches to realize elevation and declination functions.
4	Self-reset fuse	This fuse is the control system fuse. If the fuse protection is caused by open-circuit or other failure of vehicle, press this fuse to reset after the failure is solved.
5	Buzzer	During the elevation and declination of machine, the buzzer will sound “Beep Beep Beep” to alert keeping away from machine to avoid injuries.
6	Hourmeter	It can display the working time of machine.
7	ECU controller	This is the chassis ECU controller, which is provided with a display screen to indicate the information such as machine mode and trouble code.

⚠WARNING

Do not operate from ground control console with personnel in the platform except in an emergency. Pre-operation checks and inspections should be carried out from the ground control console as thorough as possible.

3.8 Superstructure control box device

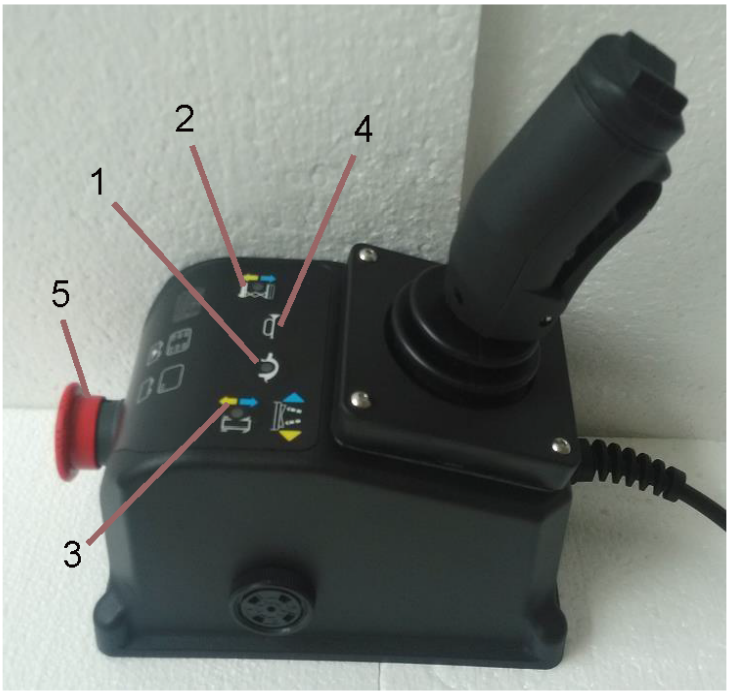
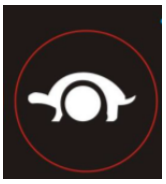


Figure 3-3 Superstructure control box device

S/N.	Description	Description	
1	Low speed		When the indicator lights on in high level mode of the platform, the machine will automatically switch to low speed mode; In low level mode of the platform, this button can be used to switch between high and low speed.
2	Raise		When this button is pressed and the indicator light goes on, the elevating mode is activated; press enable button of the lever and push forwards or pull backwards the lever to raise or lower the platform.
			When this button is pressed and the indicator light goes on, the elevating mode is activated; press enable button of the lever and push back or pull forwards the lever to raise or lower the platform.
3	Travel		When this button is pressed and the indication light goes on, traveling mode is activated: 1. Press enable button of the lever and push forward or pull backwards the lever to drive the machine forwards or backwards. 2. Press enable button of the lever and the left/right turn button at the same time to make the machine turn left/right.
4	Horn		When there is an obstacle on the path of driving of the machine or lowering of the platform, press this button and the horn will sound to remind of avoiding or warn.
5	Emergency stop switch		Press down this button when emergency situation occurs during operations. Pull out directly to release.

3.9 Safety devices

Model	Safety height
XG0807DCW	1.41 m

DANGER

Please use the safety device correctly and do not change, modify, or release any safety device without permission.

Pothole protection device

When mobile elevating work platform raises, the pothole protection device shall extend automatically. A detection switch is installed for the pothole protection device. If the pothole protection device fails to extend due to obstacle or other obstruction, the alarm will sound and the drive and elevating functions will fail. In such case, lower the platform for troubleshooting.

Body inclination motion restriction

Mobile elevating work platform is configured with body inclination protection system. When the platform descends to safety height, if the platform inclination is more than 1.5° in lateral direction or more than 3° in longitudinal direction, the drive and elevating functions will be disabled and the alarm will sound.

If the driving/elevating level sensor alarm sounds, lower the platform and move to a level ground.

The driving/elevating level sensor system is an additional protection device and is proved only for operations on a steady level surface.

Declination alarm

When the lever is shifted out of the neutral gear position to lower the platform, the alarm will give beep sound to alert the personnel in the working area to keep away.

DANGER

There are several crushing points in the scissor structure. It will cause death or serious injury when the scissor structure is lowered onto the personnel beneath the work platform. Please keep away during the elevation or declination of the platform.

Take cautions during the declination of the platform and keep your hands and fingers away from scissor structure.

Interruption of declination

The declination is stopped when the platforms is lowered to safety height (truncation height). The platform will not lower further before the operation personnel clear the space of scissor structure for complete declination of platform.

Shift the lever to neutral gear position to reset the declination function and continue to lower the platform after 3 s.

Overload protection (only used for installed weighing device)

DANGER

For the machine without weighing device, it's prohibited to exceed the loading capacity specified on the platform rating label; otherwise, all consequences arising thereof will be solely borne by the user.

- When the platform load is close to or at the rated loading capacity, the alarm will sound and the red indication light on the upper control box will flash.
- The alarm and the indication light will alert the operator of immediate overload of platform. All functions are still operational.

DANGER

If it becomes unstable, mobile elevating work platform could tip over. The tip-over accident will cause death or serious injury. It's prohibited to exceed the loading capacity specified on the platform rating label; otherwise, all consequences arising thereof will be solely borne by the user.

- The weighing device will be triggered when the platform is lower to safety height. If the platform is overloaded, the control module will stop all motions, the alarm will sound, and the warning light will flash. In such case, only the emergency cable can be used to lower the platform and release the excessive load.

CAUTION

In accordance with the principle of oil hydraulic weighing, there may have errors between the measuring result and actual weighting due to the impact of environment temperature; the default temperature of the hydraulic oil is calibrated as 38°C from the factory; With the decrease of the temperature, there will be an alarm when the load is not reach the rated load which is caused by the influence of temperature on hydraulic oil; this is the normal condition of the vehicle.

There will be errors on the measuring result due to the impact of environment temperature.

Weighing calibration need to be performed once every 250 hours or every quarter, whichever occurs first. When the machine occurs overloaded fault, calibration should be performed at once.

It is very important for safety operation of machine to calibrate platform weighing system often. Constant wrong operations on the platform will lead to system's failure in reacting to the platform overload information The stability of the machine will be influenced, and the machine will tip over.

Note: calibration should be performed on level and firm ground.

Special restrictions

When the platform declined to safety height and is overloaded by adding materials, the control module will stop all motions, the alarm will sound, and the warning light will flash. In such case, remove the loads

in excess of the rated capacity and turn off and restart the emergency stop button at the upper control box to restore normal operations.

3.10 Extending platform

(refer to **Figure 3-4**)

This machine is configured with an extension plate to allow the operator better access to certain work areas. The platform extension plate can increase the length of the front end of the platform.

WARNING

For the maximum loading capacity of the work platform extension plate, refer to in Chapter 5 or the performance label on the work platform sign.

CAUTION

Do not lower the platform without completely retraction of the extension plate.

Extend the extension plate:

1. Press down by foot and hold the locking device joystick and slide the top handrail till the locking mechanism pin disengages from the rear extension lock of the work platform.
2. Hold the top handrail of extension plate and extend the extension plate to stop position, and lock the locking mechanism pin into a front extension lock of the work platform.

Retract the extension plate:

1. Step down by foot and hold the locking device handle and slide backward the top handrail till the locking mechanism pin disengages from the front extension lock of the work platform.
2. Hold the top handrail of extension plate, retract the extension plate to stop position, and lock the locking mechanism pin into the rear extension lock of the work platform.

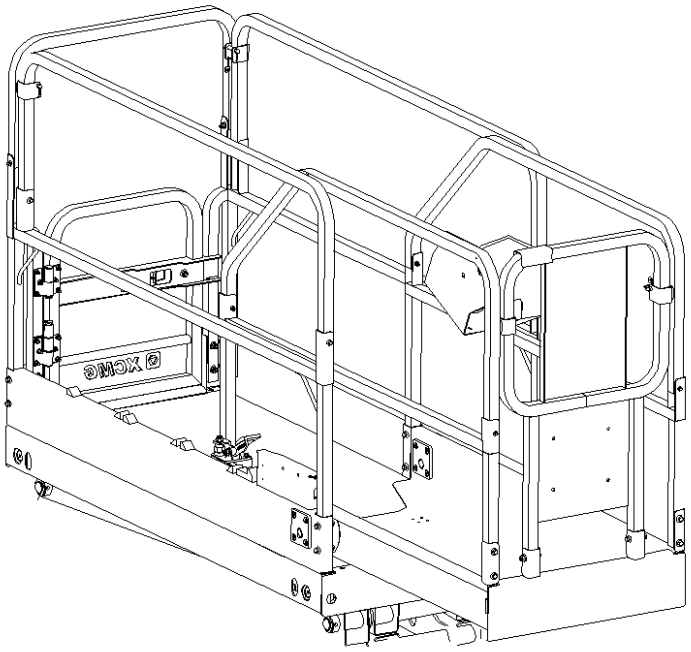


Figure 3-4 Extending platform

3.11 Parking and storage of machine

The elevating work platform shall be stored in the place protected against rain, moisture, sunshine, corrosive gas and with good ventilation.

To guarantee the normal reuse of elevating platform after storage, the following measures shall be taken:

1. Retract and lower the boom to the stowed position.
2. Close and lock all equipment compartment doors and tool cabinet doors of the MEWP.
3. Turn the key switch to OFF position and remove the key to avoid the unauthorized use.
4. Chock the wheels.
5. Wipe off the dusts and oil dirts from the machine body to keep it clean.
6. Apply the lubricating oil to the parts vulnerable to corrode for comprehensive lubrication.
7. If the long-term storage is required, disconnect the positive and negative electrodes of the battery.
8. If the storage period exceeds 3 months, idle the machine for at least one hour and carry out clean maintenance every 3 months.
9. If the storage period is more than one and half a year, besides the cleaning maintenance, carry out comprehensive inspection and maintenance for the whole machine and replace aged seals and filter elements before operation according to the actual situation.

⚠ CAUTION

When the machine is shut down for overnight parking or battery charging, the emergency stop and power selection switches must be turned off to prevent from draining the batteries.

1. At the ground control console, turn the key switch of platform- ground selector to OFF and remove the key to disable the machine and prevent unauthorized use.
   Note: For additional protection, place a padlock to the hole beneath every door latch to fix the side doors.
2. At the ground control console, press the emergency stop switch to the off position.
3. As required, cover the control box, instruction plate, and alert and warning signs of work platform to guard against the influence of external environment.
4. Stop at least two wheels when parking the machine for long-term parking.

3.12 Folding Fences

The platform fences can be folded to ease the transportation. Unfold the fences for use. The fence system includes a folding fence part for extension platform and a folding fence part for fixed platform. All parts are fixed to appropriate positions by four wire rope pins for safety.

1. Safely lower the platform and retract the extension platform.
2. Remove the platform controller.
3. From the inside of platform, disassemble two wire rope pins for safety on the front of extension platform and fold the front fence of extension platform. Do not place your hands to any place that will probably crush your hands.
4. Fold the fences on both sides of extension platform and do not place your hands to any place that will probably crush your hands.
5. Disassemble the other two wire rope pins for safety from the rear of fixed platform.
6. Carefully open and move to the ladder or ground.
7. Fold the entrance door and left and right fences of entrance door into one device. Do not place your hands to any place that will probably crush your hands.
8. Fold the both sides fences of the fixed platform. Do not place your hands to any place that will probably crush your hands.

Unfold the platform fences in reverse sequence for use. While unfold every fence, install the wire rope pins for safety to ensure accurate installation.

3.13 Traction

It’s not recommended to tow this machine unless in event of emergencies such as machine failure or completely power loss. If it’s necessary to tow the machine, the traction speed shall not exceed 3.2km/h.

Note: If the machine is disabled that the hydraulic system cannot operate, the steering circuit also can not operate. Then the machine will only move in the direction the front wheels are currently set.

Chapter 4 Emergency procedure

4.1 General Information

This chapter explains the steps to be taken in case of an emergency situation during operation.

4.2 Emergency Operation

Operator’s out-of-control of machine

If the operator in the working platform cannot operate or control the machine:

1. Other personnel will operate the machine from ground control console only as required.
2. Only qualified personnel in the platform can operate the platform control console. Do not continue the operation if the console does not operate properly.
3. Rescue equipment should be used to remove personnel from the platform. Cranes and forklifts can be used to stabilize the machine to reduce shaking.

Blocking of working platform top

If the platform or boom is stuck or blocked in overhead structures or equipment, remove all personnel from the platform before free the machine.

Uplifting of overturned machine

Place a forklift with sufficient capacity or a device of same function to the hoisting side beneath the chassis and lift the working platform. Meanwhile, keep the chassis lowered by forklift or other device.

4.3 Manual Declination of Working Platform

The platform manual declination control is used to lower the platform by gravity in the event of power total loss. The manual declination control T-handle is located on the right front of the machine. Check the instruction sign beside the release handle.

The declination procedure is as follows:

1. Find out the manual declination T-handle. (refers to **Figure 4-1**)

⚠ CAUTION

During the declination, keep your hands and arms out of the working paths of the scissor arm and working platform.

2. Hold the T-handle and slowly pull out to lower the scissor arms/platform; when the platform is lowered to specified height, push the T-handle back to OFF position.

Figure 4-1 Location of manual declination controller

4.4 Accident Notification

XCMG must be notified immediately with any accident involving an XCMG product. Even if no injury or property damage is evident, XCMG must be contacted by telephone and provided with all necessary details.

Add: No. 17 Zhujiang East Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu, China.

Tel: +86 0516-87981118

Post Code: 221100

Quality Assurance Tel: +86 0516-87986966

Spare Parts Tel: +86 0516-87989292

Failure to notify the manufacturer within 48 hours after the accident involving an XCMG product may result in the product's warranty being invalidated.

⚠ CAUTION

Thoroughly inspect should be performed after any accident. Do not elevate the platform until all damage parts have been repaired and all controls operate properly is confirmed. Test all functions first from the ground control panel, then from the platform control console.

Chapter 5 General technical parameters and maintenance

5.1 Introduction

This chapter provides additional necessary information to the operator for proper operation and maintenance of this machine.

Maintenance section in this chapter is intended only to assist the machine operator performing routine maintenance; it is not a substitute for the more thorough Preventive Maintenance and Inspection Schedule included in Maintenance Manual.

Other publications available specific to this machine:

Maintenance Manual

5.2 Working conditions

Ambient air temperature

The electrical devices works normally within the ambient air temperature range from -20ºC to 40ºC. For excessively hot environments (such as tropical climate, steel plant, and paper factory) and cold environments, the additional requirements shall be submitted before the ordering of product.

Humidity

The relative humidity shall not exceed 50% when the maximum environmental temperature is 40ºC; And the humidity is permitted to be higher under low temperature (such as 90% relative humidity at 20ºC); Otherwise, the electric devices cannot work normally.

Altitude

The altitude shall be less than 1000m for all working sites; Otherwise, the electric devices cannot work normally.

Carrying capacity of working site

The mobile elevating work platform shall be placed on a solid and level support surface. (The working site shall be free of sink during operations; otherwise, it will lead to rollover of the elevating platform.)

Vibration information

Vibration in the surrounding environment can cause problems such as resonance and impact of the mobile elevating work platform. Therefore, it is necessary to ensure that any vibration in the surrounding environment does not affect the work of the mobile elevating work platform and the safety of personnel, otherwise the operation shall be avoided in a vibrating environment.

The total vibration value to which the hand-arm system is subjected does not exceed 2.5 m/s^2. The highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 0.5 m/s^2.

Noise

The equivalent continuous A weighting sound pressure level of the elevating platform shall be less than 70 dB (A).

Table 5-1 Reference table for ground loading capacity

S/N.	Soil type	Ground loading capacity kg/cm^2
1	Natural soil:	
	Sludge, peat, and wetland	0
2	Non-compacted soil:	
	Construction debris	0~10
3	Non-cohesive soil:	
	Sand, gravel, rock, and mixture	20
4	Cohesive soil:	
	a. Mixture of clayed silt and topsoil	12
	b. Powdered coal, composed of coarse clay and few clay	13
	c. Pottery clay, composed of plastic clay and filler	
	Hard	9
	Half-solid	14
	Solid	20
	d. Mixed granule ground (mixture of clay, sand, gravel, and rock)	
	Hard	15
	Half-solid	22
	Solid	33
5	Uniform solid rock:	
	a. Fragile and easy decomposition	150
	b. Non-fragile	300
6	Artificially compacted road:	
	a. Asphalt road	5~15
	b. Concrete:	
	1) General concrete (grade BI concrete)	50~250
	2) High strength concrete (grade BII concrete)	350~550

5.3 Operation technical parameters

Table 5-2 Operation technical parameters

Description			
Platform			
Maximum height of work platform (elevated) (from ground to work platform floor)		5.8 m	19.0 ft
Elevating time of work platform (second/no-load)	Raising	13-30 s	
	Lowering	25 – 35 s	
Travel			
Maximum operating tilt angle (platform fully elevated)	(frontal inclination) From front to rear	3°	
	(lateral inclination) From left to right	1.5°	
Maximum travel speed (forward/backward)	Retracted	4.5 km/h	2.79 Mph
	Raising	0.8 km/h	0.50 Mph
Maximum travel slope grade under stowed position (positive slope)		25%	
Turning radius	Inside	0 m	0 ft
	(from curb to curb) Outside	1.75 m	5.74 ft
Chassis			
Approximate gross weight of machine		1580 kg	3483 lb
Maximum tire load (per wheel)		600 kg	1323 lb
Ground pressure		6.23 kg/cm^2	88.65 psi
Ground clearance	PHP retracted	71 mm	0.23 ft
	PHP deployed	20 mm	0.07 ft
Maximum hydraulic pressure	Main relief pressure	21 Mpa	210 bar
	Steering relief pressure	12 Mpa	120 bar

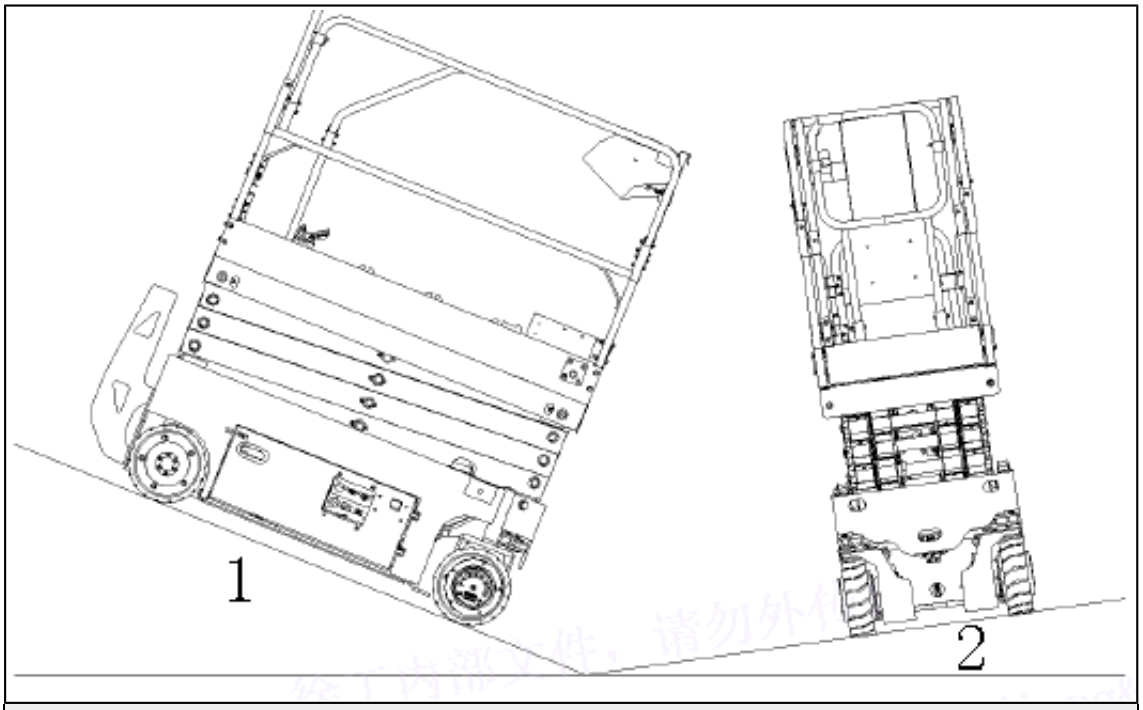


Figure 5-1 Definitions of front and lateral inclinations

1	(frontal inclination)
2	(lateral inclination)

Table 5-3 The loading capacity of the work platform

Model		
Maximum loading capacity of work platform	230 kg	507 lb
Maximum permissible personnel on work platform	2	
Maximum lateral force (Fully extended work platform under maximum load)	400 N	
Maximum operating wind speed	12.5 m/s	
Note: The maximum loading capacity of work platform includes platform part and extension platform.		

Machine dimensional data

Table 5-4 Dimension

Description	m	ft
Platform height - elevated (from ground to the floor of platform)	5.8	19.02
Platform height - retracted (from ground to the floor of platform)	1.05	3.44
The height of guard-rail (from the floor of work platform to the top of guard-rail)	1.12	3.67
The height of guard-rail (from the floor of work platform to the top of guard-rail)——Australia machine type	0.97	3.18
Overall height - fixed guard-rail (from ground to the top of guard-rail)	2.16	7.08
Overall height - fixed guard-rail (from ground to the top of guard-rail)——Australia machine type	2.01	6.59
Overall width of machine	0.81	2.66
Overall length of machine	1.90	6.23
Platform length (inside)	1.67	5.48
Platform width (inside)	0.74	2.43
Wheelbase	1.36	4.46

Tire

Table 5-5 Tire technical parameters

Description	Parameters
Dimension	323×100 mm×mm 1.06×0.03 ft×ft
Wheel nut torque N.m (M12×1.5)	90-100

Battery

Table 5-6 Battery technical parameters

Description	Parameters
Voltage	24 V
Rated ampere-hour	225 Ah
Weight	28 kg/62 lb

Electrical system

Table 5-7 Battery charger specification

Description		Parameters
Voltage of electrical system (DC)		24 V DC
Battery charger:		
Input:	AC input voltage: Nominal AC input voltage: Input frequency: Maximum protection AC input current: Protection level: Operating temperature:	100-240 V AC 220 V AC 50-60 HZ 8.5 A IP66 -40℃ to +50℃
Output:	Rated DC output voltage: Maximum DC output voltage: Maximum DC output current:	24 V 34 V 30 A
Protection:	Input inverse polarity: Output short circuit: AC overload:	Automatic reset of electronic protection Automatic reset of electronic protection High voltage protection (420 V)

Critical stability weight

WARNING

Do not replace the original batteries or solid tires with items of different weights or specifications, thus affecting the stability of the equipment. Do not modify the unit in any way to affect the stability.

Table 5-8 Critical stability weight

Component		Parameters	
		kg	lb
Wheel and tire assembly (each)		12.7	28.0
Battery (each)	Standard	28	61.7
Battery (combination)	Standard	112	246.9

5.4 Lubrication

Lubrication capacity

Table 5-9 Capacity

Component	Parameters	
Hydraulic oil tank (at full level marking)	8 L	2.08 gal
Hydraulic system (including oil tank)	11 L	2.86 gal

Lubrication specifications

Table 5-10 Technical specifications of hydraulic oil

Technical specification	Sinopec AE46	Sinopec HS22
ISO viscosity grade	VG46	VG22
Maximum pour point	-27°C	-48℃
Minimum flash point	210℃	187℃
Viscosity parameter		
At 40°C	46 cSt	22 cSt
At 100℃	7.3 cSt	9.5 cSt
Viscosity index	120	190
Operating temperature	-15-80°C	-30-70℃

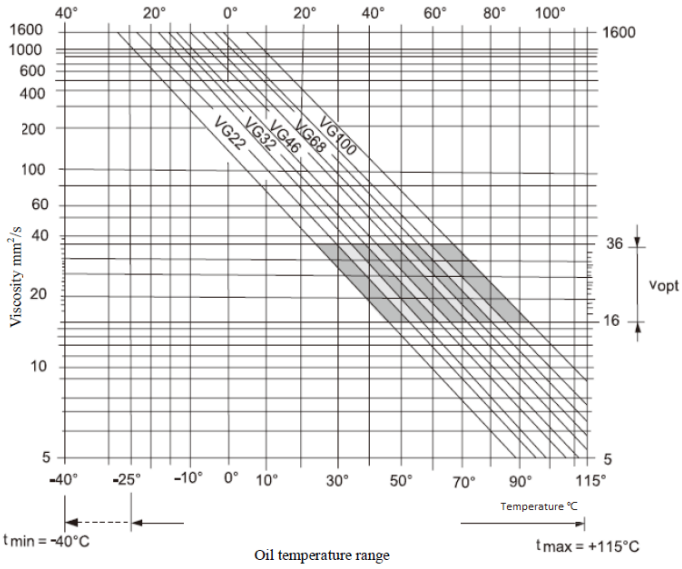


Figure 5-2 Hydraulic oil temperature−viscosity relation curve

Example of hydraulic oil choosing: Under X°C environmental temperature and 60°C (referring to oil tank temperature) working temperature in hydraulic system loop, the optimal working viscosity range is within the hatched area and the corresponding hydraulic oil viscosity grade is VG46 or VG68, the VG68 shall be preferably selected.

Note: The hydraulic oil must contain anti-scuff agent complying to API GL-3 at least and possess the chemical stability enough to meet the operating requirement of mobile hydraulic system. XCMG recommends XCMG AE46 special anti-scuff hydraulic oil.

Note: Fill HS22 hydraulic oil in regions with ⩽ -15°C environmental temperature.

5.5 Operator maintenance

Scissor arm–Safety support (refer to **Figure 5-3**)

WARNING

Do not work under an elevated platform until it has been fixed by safety supports, blocks, or top chains.

WARNING

If it is necessary to lift scissor arm during the maintenance of the machine and the working platform cannot be loaded, safety supports must be used.

If the front and rear safety supports are configured, they must be used at the same time.

The safety supports are located on the right side of scissor arm of the machine.

Application method:

1. Hoist the work platform to an appropriate height from the ground.

2. Rotate the safety supports till they are off the machine and are under droop state.

3. Lower the work platform, till the safety supports are securely connected to the chain links. Stay away from safety supports when lowering the platform.

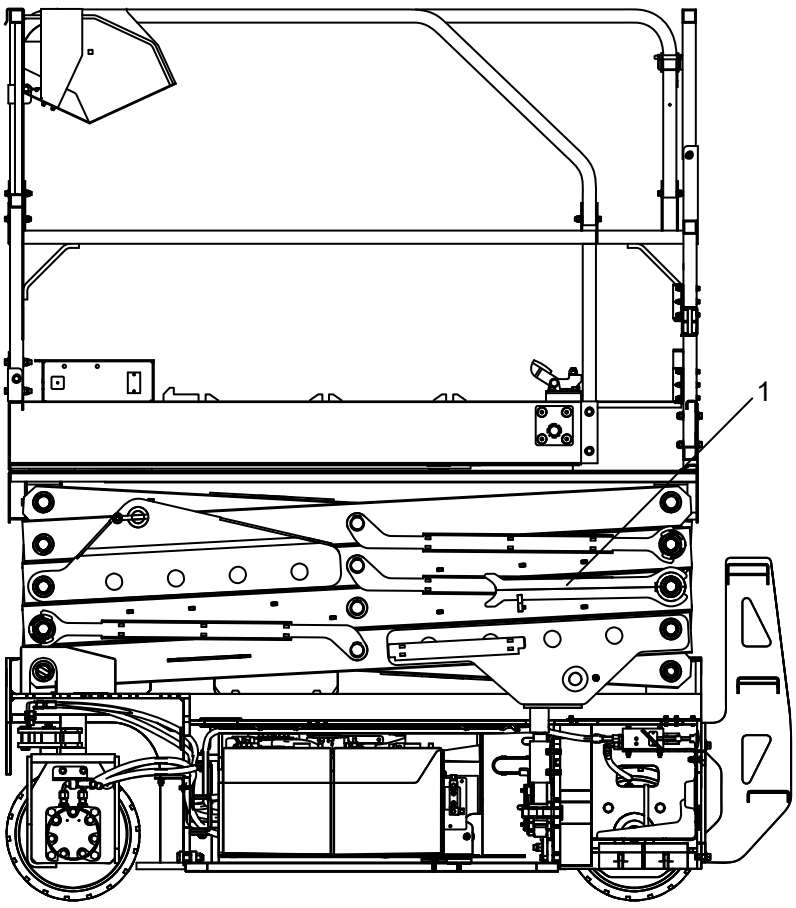


Figure 5-3 Scissor arm–Safety support (sectional view)

1	Safety support

Inspection and replacement procedure of hydraulic oil

Lubrication point(s) – hydraulic oil sump

Oil sump capacity

Lubrication – hydraulic oil

Interval – daily inspection

Note: Check the hydraulic oil level with the platform in the stowed position ONLY. Ensure the hydraulic oil has been preheated to the operating temperature before checking the oil level in the oil sump.

1. Disconnect and plug the oil suction pipe.
2. Disconnect and plug the oil return pipe at oil return filter.
3. Unscrew the fastening bolts of hydraulic oil tank.
4. Remove the oil tank from the machine.
5. Remove the oil return filter from hydraulic oil tank.
6. Remove the oil suction filter from oil tank and clean.
7. Flush the inside of oil tank with appropriate liquid and dry.

8. Install the hydraulic oil tank onto the machine.
9. Install the fastening bolts of hydraulic oil tank.
10. Install the oil suction pipe and oil return pipe back and fill with hydraulic oil to the appropriate level.

    Note: Be careful to not let foreign matters (dirt, water, etc.) in during the disassembling of filter element/ventilation cap.

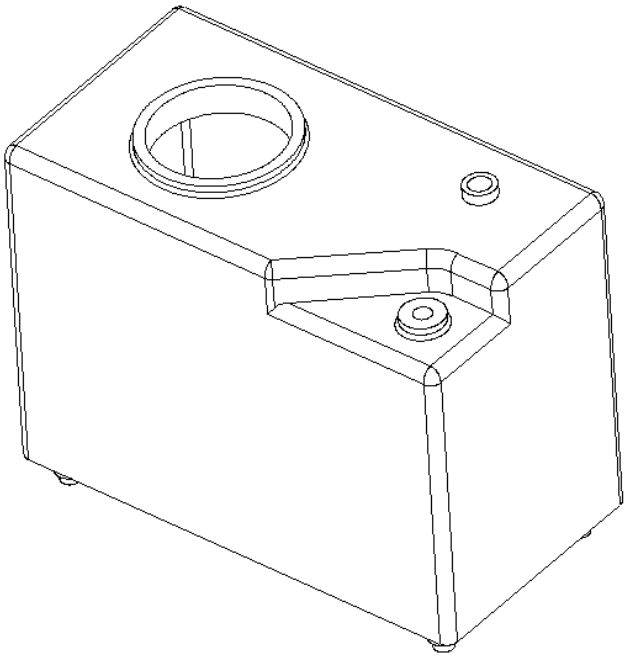


Figure 5-4 Hydraulic oil tank

Note: Recommended lubricating intervals are based on machine operations under normal conditions. For machines used in multi-shifting and/or in severe environments or conditions, lubrication frequencies must be increased accordingly.

Battery charger

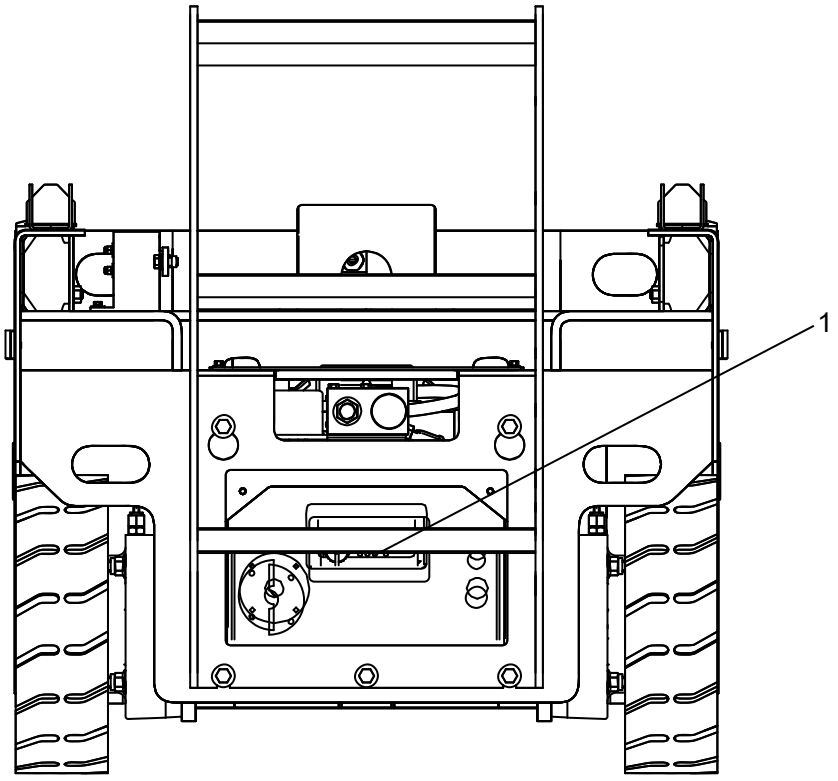


Figure 5-5 Location of charger

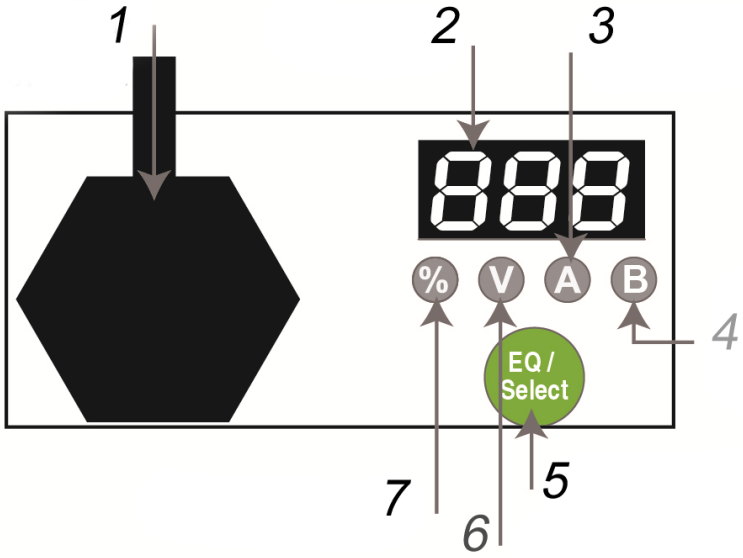
1	Charger

- LED display faults and indication

  Connect the charger to the battery and then connect to the power supply to make the charger enters the charging mode; the digital display will show: AC XXX (current AC input voltage), CPU X.XX (denote software version number); b** (display the current charging curve code).

- **Charging status indicator and digital display:**

  1. % capacity percentage indicator: display current charging %, the digital display shows the specific percentage value, such as 10 20 30……100 (%).
  2. V charging voltage indicator: display current charging voltage, the digital display shows the specific voltage value, such as 24.0 (V).
  3. A charging current indicator: display current charging current, the digital display shows the specific current value, such as 36.0 (A).



1	Battery program updating interface
2	Digital displayer
3	Charging current indicator light
4	Battery voltage indicator light
5	EQ/Select button
6	Charging voltage indicator light
7	Capacity % indicator light

- **Additional battery voltage function display:**

  B&V battery voltage indicator: connect battery and charger well and then disconnect AC electric supply; press Select for 1 second to display the current battery voltage value, such as 24.0 (V).

  .

Battery maintenance and safety operation instruction

Note: This instruction is only applicable for non-sealed (wet) battery. If the machine is configured with a sealed battery, it's only necessary to clean corroded battery wiring electrodes.

⚠WARNING

- **Ensure that the battery acid does not come into contact with skin or clothing. Put on protective clothing and eye wear when working with batteries. Neutralize battery acid spills with baking soda and water.**
- **During charging, the battery acid will release explosive gas; therefore, the open fire, spark, lighted cigarettes are prohibited in the charging area. Charge the battery only in a well-ventilated area.**
- **Only replenish distilled water to batteries. When replenish distilled water to the batteries, must use a non-metallic container and/or funnel.**

It is prohibited to add distilled water to a maintenance-free battery.

Frequently check the battery electrolyte level; if necessary, replenish distilled water only. When the battery is charged, the electrolyte level should be at 1/8 in of the ventilation tube.

- Do not fill to the bottom of vent tubes.
- Do not allow the level is lower than the top of the plates when charging or operating.

Main power isolation switch (if configured)

For the elevating platform configured with main power isolation switch, it is easy to cut off all power supplies at the battery, instead of disconnection of battery cables from its terminals. To disconnect power, find the RED quick-disconnecting connector on top of the batteries inside the battery compartment and separate the two halves.

Abrasion and damage of tires

The tire and rim assemblies installed on the machine are already approved by the manufacturer for the specific applications of these products. The tread pattern width, counterweight, and load capacity of the tire and rim assemblies installed on every product model are specially designed to meet the stability requirements. All changes without manufacturer's written approval, including the rim width, central position, increased or reduced diameter, and wheel counterweight, will probably constitute unsafe factors and impact the stability.

The tires and rims installed on the machines are to be inspected daily as part of the daily routine inspection. XCMG requires that the daily routine inspection to be performed upon the change of operators and prior to each work shift.

Wheel and tire replacement

XCMG recommends that any replacing tire with the same dimension and brand as originally installed on the machine or offered by XCMG as an approved replacement. Please refer to the XCMG Parts Atlas to obtain part no. of the tire approved for specific machine model.

If any of the following cases is discovered during tire inspection, measures must be taken to remove the XCMG product from service immediately. Ensure to immediately replace tyre or tyre assembly. Both tires/wheels on the same axle must be replaced at the same time:

- If the overall dimension of the tire is less than:
  100×323—311 mm (12.25 in)，
  127×381—369 mm (14.53 in).
- Uneven wear is found. If there is serious damage to the tread or sidewall, an immediate assessment should be taken for maintenance.
- If any cut, tear, chunk, or other discrepancy exceeds any one or more of the following dimensions, the tire must be replaced:
  Length 76 mm (3.0 in) and width 19 mm (0.75 in)
  Thickness 19 mm (0.75 in).
- If the metal wheel is visible through any area of the tire.
- If more than one unconformity to requirements exists in any quadrant of the wheel (within 90°).

Wheels installation

It is extremely important to apply and maintain proper wheel mounting torque.

WARNING

All wheel slotted nuts must be installed and maintained at the proper torque to prevent loose wheels, a broken nut, and possible separation of wheel from the axle.

Tighten the slotted nuts to the proper torque to prevent wheels from coming loose. Use a torque wrench to tighten the slotted nuts.

The correct wheel installation sequence is as below:

1. If it is not already installed, install shaft key to the shaft and align with wheel key groove, and install the wheel and hub onto tapered shaft.
2. Tighten the slotted nut by hand to prevent cross threading. Do not apply lubricant to the threads or nuts.
3. Tighten the slotted nut to the torque of 203 N*m (150 lb-ft).
4. Install the cotter pin, if the hole in slots does not align with the cotter pin hole on the tapered shaft, continue to turn the nut clockwise to align with the hole. Do not loosen to align the hole.

Figure 5-6 Wheels installation

5.6 Supplementary Information

The following information is provided in accordance with the requirements of the European Machinery Directive 2006/42/EC and is only applicable to CE machines.

For electrical machines, the equivalent continuous A weighted sound pressure level at the working platform is less than 70dB(A).

For internal-combustion driving machines, in accordance with European Directive 2000/14/EC (Environmental noise emissions from equipment used outdoors), the guaranteed sound power level (LWA) is 109 dB by the test methods listed in Methods 1 and 0 of Part III of the Directive.

The total vibration value to which the hand-arm system is subjected does not exceed 2.5 m/s^2. The highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 0.5 m/ s^2.

5.7 Sign/label installation

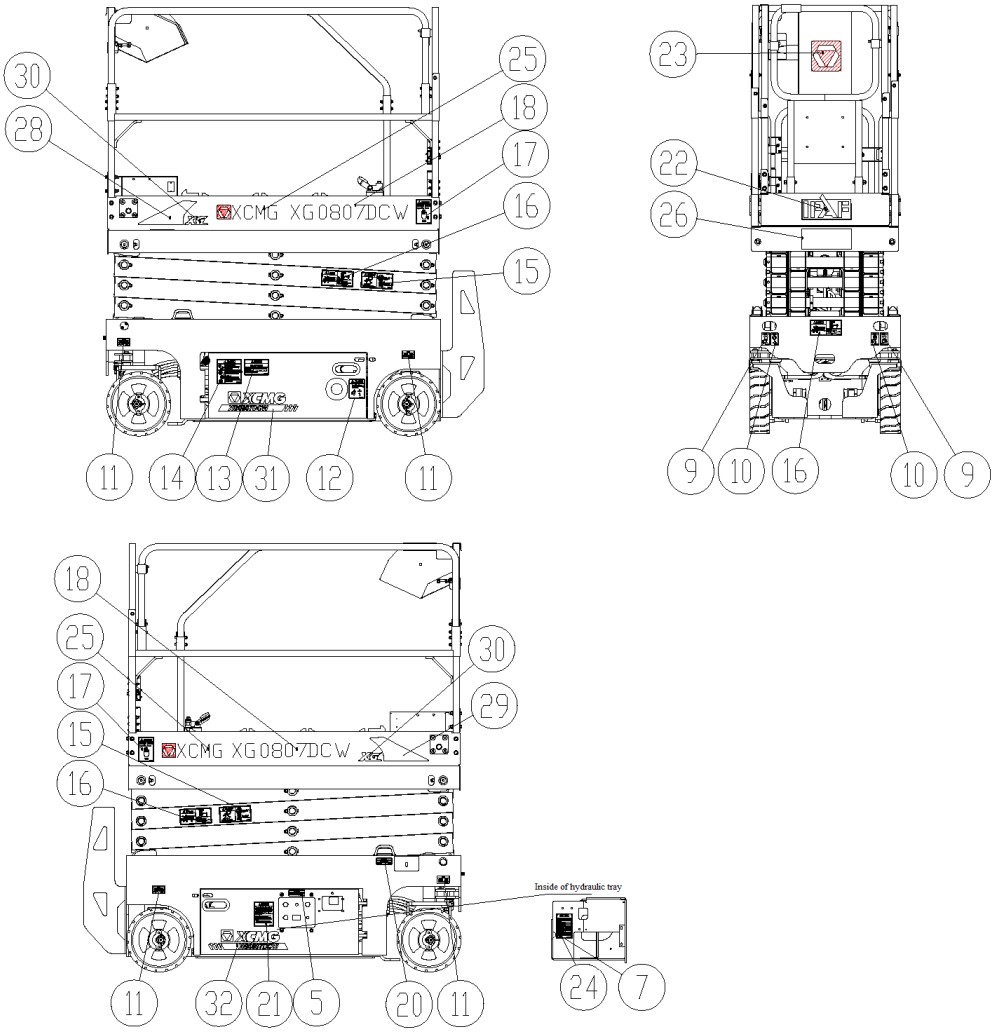
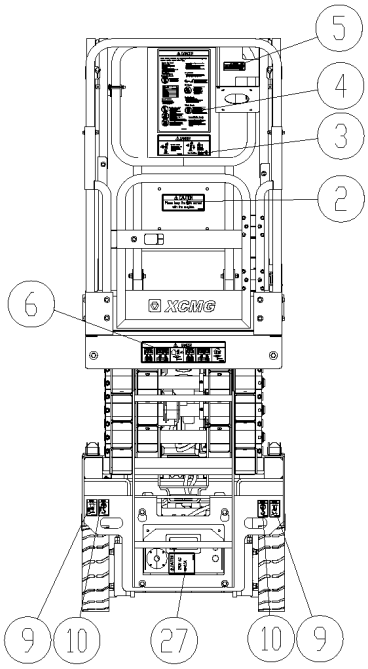


Figure 5-7 Label assembly - 1/2



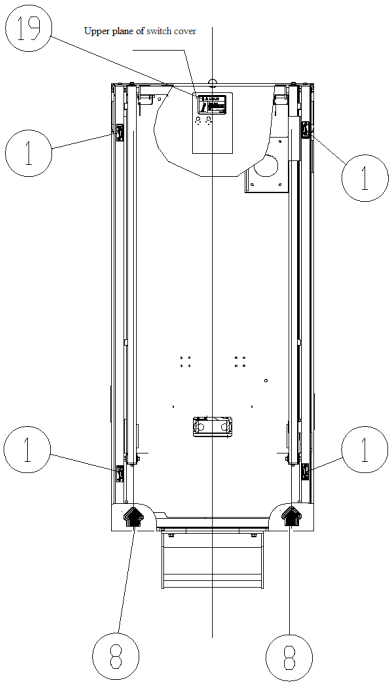


Figure 5-8 Label assembly - 2/2

S/N.	Material No.	Name	Qty.
1	130003387	Safety Belt Fastening Point Sign (EN)	4
2	130003395	Preserve Manual Warning Sign (EN)	1
3	130003397	Tip-over Warning Sign (EN)	1
4	130003402	Warning Sign for Basic Safety Rules (EN)	1
5	130003408	Warning Sign for Reading The Instruction Manual (EN)	2
6	130004178	Warning sign for Platform Load (XG0807DCW)	1
7	130004089	General machine nameplate for scissor work platform (small) (EN)	1
8	130003401	Fork hoisting hole location label (EN)	2
9	130003400	Bundling location label (EN)	4
10	130003403	Label of lifting Position (EN)	4
11	130003405	Label of Tyre Load （XG1930DC）	4
12	130003407	Warning Sign for Main Power Switch (EN)	1
13	130003399	Warning Sign for Replacing Battery (EN)	1
14	130003396	Hazard Warning Sign (EN)	1
15	130003392	Safety Boom Warning Sign (EN)	2
16	130003394	Keep Away from Moving Parts Label (EN)	3
17	130003409	Warning Sign for Maximum Manual Operating Force (EN)	2
18	130004180	Label of Product Model (XG0807DCW)	2
19	130003390	Warning Sign for Limit Switch (EN)	1
20	130003410	Emergency Declination Sign (EN)	1
21	130003393	Warning Sign for Pre-operation Check (EN)	1
22	130001621	IPAF Logo	1
23	130001900	GROUP Logo	1
24	805500003	Rivet 3×12	4
25	130003458	Group English Logo (70mm)	2
26	130003816	QR code sticker of MEWP	1
27	130004226	Power Warning Sign (EN)	1
28	130004249	Decorative graphics (Left)	1
29	130004248	Decorative graphics (Right)	1
30	130004233	Decorative graphics (XG)	2

31	130004282	Auxiliary Decal XG0807DCW (Left)	1
32	130004273	Auxiliary Decal XG0807DC (Right)	1

Chapter 6 Lifting, transportation and storage

6.1 Transportation and lifting

The mobile elevating work platform, as a non-road vehicle, is not allowed to run on a road; Therefore, it has to be transported by road, railway, waterway and other means of transportation.

⚠ CAUTION

Before transportation by means of railway (waterway), the battery shall have its positive and negative electrodes disconnected.
The loading/unloading of the elevating platform has to be carried out by qualified personnel.

Preparation before loading and transportation

1. This safety information is provided as a suggestion only. The driver shall take the full responsibility for the machine being secured correctly and selecting correct trailer according to the local department of transportation, local regulations and company rules.
2. If a container is used to contain the hoisting device or product for international freight transportation, it is needed to seek the qualified freight agency company with professional experience in preparing, loading, container protection and hoisting equipment.
3. Only the qualified aerial lift operator can lift the machine in and out of the truck.
4. The transporting vehicle must be parked on the level ground.
5. Before the loading of platform, the transporting vehicle has to be fixed to prevent against rolling.
6. Make sure the vehicle capacity, loading surface, chain or belt are strong enough to bear the machine weight. For machine weight, refer to the S/N marker.
7. Before the brake is released, the machine must be on the flat surface or is secured reliably.
8. Ensure to hold the handrail when removing the pin.
9. Do not drive the machine on uphill, downhill or side slope with gradeability exceeding the rated value.
10. If the transporting vehicle stands on a slope with gradient exceeding the max. rated value, a winch has to be used to load or unload the machine according to the illustration on the braking release.

Loading and transportation instruction

The braking release operation:

1. Wedge the wheels to prevent the machine from rolling.
2. Ensure that the winch cable is correctly fixed to the tying point on drive chassis and there is no obstacles on the passage.
3. Press down the black button of brake release valve on the inner side of ladder.
4. Repeatedly press the red manual pump of brake release valve on the inner side of ladder.

Please be noted after the loading of the machine:

1. Wedge the wheels to prevent the machine from rolling.
2. Clockwise rotate the knob on drive assembly near the ladder.
3. Counterclockwise rotate the knob on the main assembly inside of hydraulic drawer.

4. Evenly pull the red "E-stop" button on the ground and platform control console to the "Open" position.
5. Press down the drive function selection switch.
   Press the function starting switch on the control lever. The control lever leaves the neutral and then is immediately released to reset the brake.
6. Evenly push the red "E-stop" on the ground and platform control console to OFF position.
   It is suggested not to tow the work platform; if necessary, the speed cannot exceed 3.2km/h.

Ensure the truck or trailer is safe during transportation through the following operations:

For transportation, the platform-expanding lock could be used generally; before transportation, turn the key switch to "OFF" and pull out; ensure chain or belt has the sufficient load strength; 4pcs of chains or belts shall be used at least; adjust the rigging to prevent against damages to chain; thoroughly check the machine to prevent any loose or unfixed parts; the work platform is fixed reliably onto the truck or the container floor, as shown in **Figure 6-1**:

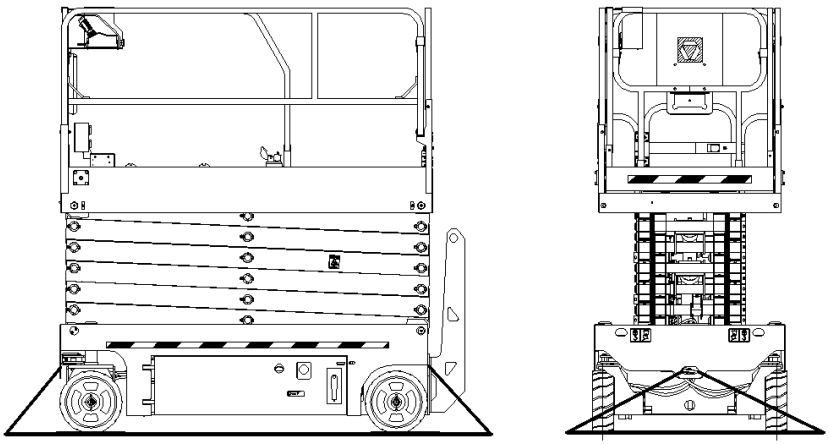


Figure 6-1 Fixing point diagram

Notes for forklift loading/unloading:

1. Only the qualified forklift and rigging can be used to load or unload the machine.
2. Only the qualified forklift operator can use the forklift for loading/unloading machine.
3. Make sure the forklift hoisting capacity, loading surface, belt or slings are strong enough to bear the machine weight. For machine weight, refer to the S/N marker.
4. Make sure the extension platform, controller and control panel are safe and reliable. Take down all loosened parts from the machine. Completely lower down the platform. During the loading/transportation, the platform shall be kept lowered. Remove all personnel, tools, materials and others from the platform. Use the forklift notches at both sides of ladder. Or place the fork rod directly under the designated hoisting points. Drive forward to completely unfold the forklift. Elevate the platform by 15cm and slightly tilt the fork backwards to keep the machine stationary. Ensure the machine is level before the fork lowers.

A forklift is used to load or unload the aerial work platform in the steps shown below:

- Load the MEWP correctly.
- Remove all personnel, tools, materials and others from the platform.
- If lifting from the rear of the machine, the forklift fork shall be inserted into its groove.

⚠ CAUTION

If the fork arm is not located correctly, the loading of elevating platform may generate the force enough to damage components. If lifting from one side of the machine, the forklift arm shall be directly placed below the designated lifting points.

If lifting from both sides of the machine, the forklift arm could be directly placed below the designed hoisting points below the pit fence protector.

Do not lift the machine higher than the needed height for transportation. During the transferring of platform, slowly and carefully drive the forklift.

For the loading/unloading machine with a forklift, the hoisting position (from back of machine) is shown in **Figure 6-2**:

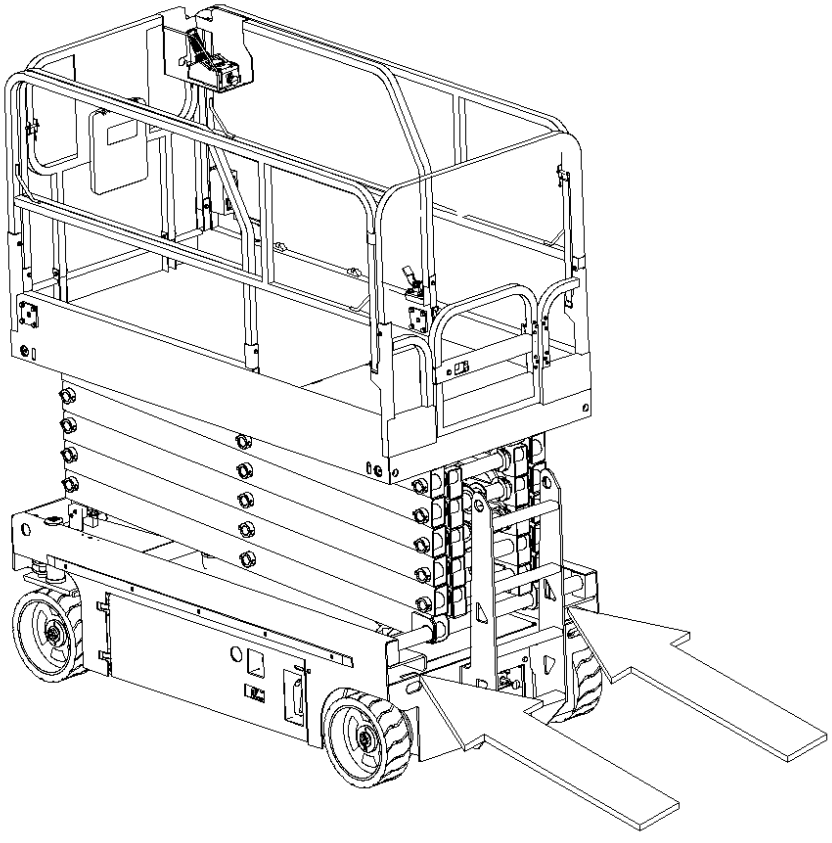


Figure 6-2 Schematic diagram of inserting points

Notes for winch traction and loading:

1. Use a winch to tow and load the mobile elevating work platform on a slope with gradient exceeding the climbing capacity.
2. Under the dangerous driving condition, such as poor traction, uneven surface or transition position of step and slope, the winch could be used.

Follow the following steps to tow the mobile elevating work platform onto the transport vehicle with a winch:

1. The transporting vehicle is fixed to ensure the MEWP do not roll forwards after loaded.
2. Remove the unnecessary tools, material or others from the platform.
3. Drive the elevating platform to the loading ramp with front wheels close to the ramp. Make sure the elevating platform is at center of ramp, and straighten the steering wheel.
4. Load the MEWP correctly.

⚠WARNING

When the brake is released, the MEWP can move freely. That may cause death or serious injury. Before operating the MEWP, restart the brake.

5. Wedge the wheels to prevent the MEWP from moving unexpectedly.
6. Unlock and rotate the hydraulic tray at right of chassis. Brake release valve and release pump are located at hydraulic valve box. Press the brake release valve and hold it until it is completely opened. Push and release the brake release pump knob a few times to release the brake.
7. The free rotary valve is on the drive valve at the rear of the chassis. Counterclockwise rotate the free rotary valve until it is completely opened.
8. Connect the rope socket to the lifting hole in the front of the chassis.
9. Remove the wedges and use the winch to fix the MEWP on the vehicle.
10. Pull up the brake release valve and shut down the free rotary valve.
11. Drive the MEWP back and forth, and then stop it to reset the parking brake. Before operating the MEWP, verify that the drive system and brake run normally.

Lifting

Before lifting the MEWP, use the four-point sling device connected to the lifting points. If the sling is connected to any other place, the machine may be damaged.

⚠WARNING

When lifting, improper lifting equipment and/ or lifting technology will increase the chance of accidents. This kind of accident may result in death or serious injury. Therefore, the proper lifting equipment and lifting technology should be used for lifting of the MEWP.

Before lifting, understand the weight of the MEWP and the hoisting equipment capacity. The lifting equipment includes the hoister, crane, chain, belt, rope, hook, pulley, buckle, slings and other hardware components supporting the machine.

- The unload machine weight is stamped on the serial number nameplate and listed out in the machine specification table.

Users shall undertake the following responsibilities:

- Ensure the equipment to be used is able to bear the weight of elevating platform.
- Ensure the compliance with all manufacturer's illustration, warning, specifications, safety specifications of staff, and/ or national laws.

Lift the MEWP onto the transporting vehicle in the steps shown below:

- Load the MEWP correctly.
- Check hoisting points to ensure they are free of any cracks and in good status. There are two hoisting points at the front and rear of chassis. Before attempting to lift the machine, check if there is any damage and solve it by the qualified maintenance repairman if so.
- Remove all personnel, tools, materials and others from the platform.
- The chain or belt is connected to the hoisting point by using bolts and buckles. It is possible to use the padlock that matches the hoisting point and is configured with locking mechanism, so as to prevent the wire rope from coming off at loose status.

⚠ CAUTION

Do not directly pass the sling through the hoisting point.

- If touching the sharp edges of hoisting point, the wire rope may be damaged or malfunction. Therefore, the protective materials could be equipped in the hoisting holes.

  The schematic diagram of center of gravity and hoisting point refer to **Figure 6-3**.

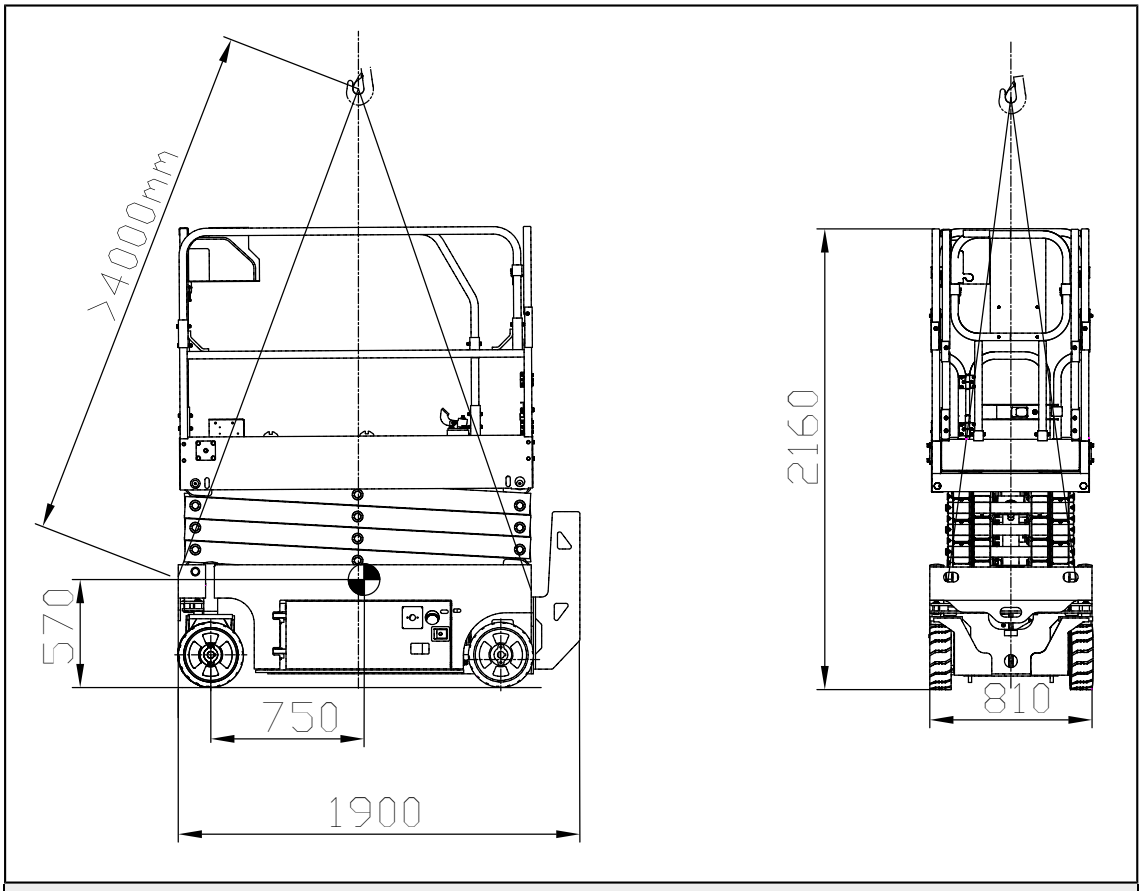


Figure 6-3 Schematic diagram of hoisting point

Before the hoisting, check the weight of elevating platform and other information on its nameplate, so as to select the proper hoisting equipment and sling. Ensure the capacity of hoisting device, hoisting type, chain or belt is enough to bear the weight of elevating platform.

⚠ CAUTION

The loading and hoisting of equipment shall be carried out only by the qualified rigging operator.

6.2 Storage

The elevating work platform shall be stored in the place protected against rain, moisture, sunshine, corrosive gas and with good ventilation.

To guarantee the normal reuse of elevating platform after storage, the following measures shall be taken:

1. Retract and lower the boom to the stowed position.
2. Close and lock all equipment compartment doors and tool cabinet doors of the MEWP.
3. Turn the key switch to OFF position and remove the key to avoid the unauthorized use.
4. Chock the wheels.
5. Wipe off the dusts and oil dirts from the machine body to keep it clean.
6. Apply the lubricating oil to the parts vulnerable to corrode for comprehensive lubrication.
7. If the long-term storage is required, disconnect the positive and negative electrodes of the battery.
8. If the storage period exceeds 3 months, idle the machine for at least one hour and carry out clean maintenance every 3 months.
9. If the storage period is more than one and half a year, besides the cleaning maintenance, carry out comprehensive inspection and maintenance for the whole machine and replace aged seals and filter elements before operation according to the actual situation.

Chapter 7 Inspection and repair record

7.1 Inspection and repair record

Date	Note

XCMG Fire-fighting Safety Equipment Co.,Ltd.
NO.17 Zhujiang East Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu Province, China 221100

EC Declaration of Conformity

Manufacturer: **XCMG Fire-fighting Safety Equipment Co.,Ltd.**
NO.17 Zhujiang East Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu Province, China 221100

Authorized representative: **XCMG Europe** / 99-416 Nieborow, Kompina, Poland,
Michielsens Trading NV / Bisschoppenhoflaan 275 B-2100 Deurne, Antwerp, Belgium

Person Authorized to Compile the Technical File: **Mr. Michal Myczkowski / XCMG Europe**
Mr. Yvon Michielsens / Michielsens Trading NV

Notified body information:

TÜV SÜD Product Service GmbH Zertifizierstellen, Address: Ridlerstraße 65, 80339 MÜNCHEN, Germany.

Identification number: 0123

Certificate No.

The Product(s) Covered by this Declaration

- *Product name:Mobile elevating work platforms*
- *Model: XG0807ACW*
- *Serial number:*

Declaration

We declare that the above mobile elevating work platform comply with the essential health and safety requirements of the Machinery Directive 2006/42/EC,Electromagnetic Compatibility Directive 2014/30/EU and Low VoltageDirective 2014/35/EU

The Basis on which Conformity is being Declared

The product identified above complies with the essential requirements of the above EU Directive(s) by meeting the following standards:

EN ISO 12100:2010	*Safety of machinery - General principles for design - Risk assessment and risk reduction*
EN 280:2013+A1:2015	*Mobile elevating work platforms — Design calculations — Stability criteria — Construction — Safety — Examinations and tests*
EN 60204-1:2018	*Safety of machinery - Electrical equipment of machines - Part 1: General requirements*

Person empowered to draw up the declaration on behalf of the manufacturer

Signature: Date:

Name:

Mr. Liu Zhijun

XCMG Fire-fighting Safety Equipment Co.,Ltd.

NO.17 Zhujiang East Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu Province, China 221100

Manufacturer: XCMG Fire-Fighting Safety Equipment Co., Ltd.

Address: No. 17 Zhujiang East Road, Hi-tech Industrial Development Zone, Xuzhou, Jiangsu, China.

Post Code: 221100

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Service Tel: 0516-87981166

Quality Assurance Tel: 0516-87986966

Spare parts Tel: 0516–87989292